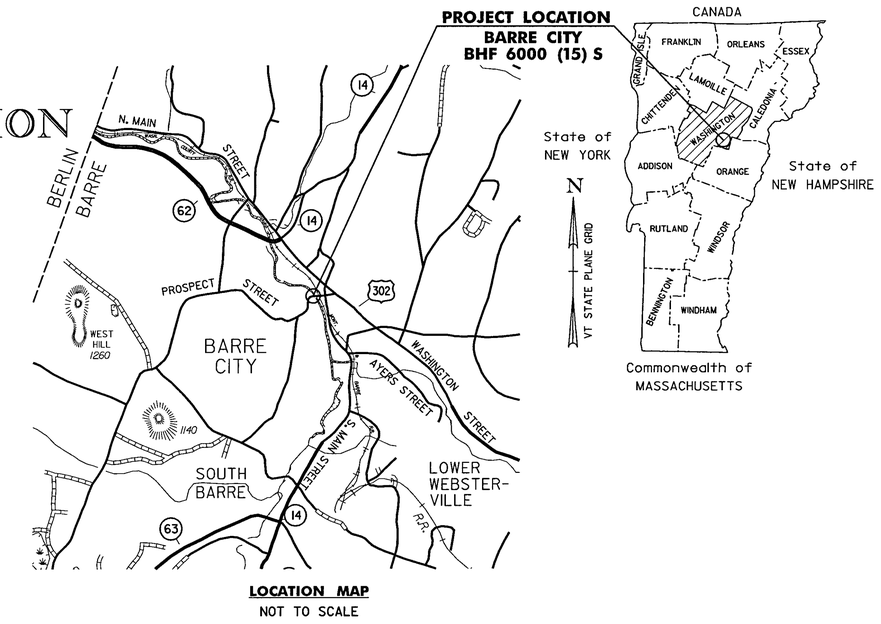
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SEE SHEET 2

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PROPOSED IMPROVEMENT
BRIDGE PROJECT
CITY OF BARRE
COUNTY OF WASHINGTON



LOCATION MAP
NOT TO SCALE

ROUTE NO : TH NO. 7 BRIDGE NO : 7
FUNCTIONAL CLASSIFICATION: URBAN COLLECTOR

PROJECT LOCATION : BEGINNING ON PROSPECT STREET TH NO. 7 AT A POINT APPROXIMATELY 603 FEET WEST OF THE INTERSECTION OF MAIN ST. (VT. 14) IN THE CITY OF BARRE AND EXTENDING EAST 325 FEET ALONG PROSPECT STREET.

PROJECT DESCRIPTION : REMOVAL OF EXISTING SUPERSTRUCTURE AND CONCRETE ABUTMENT CAPS, CONSTRUCTION OF A NEW CAST-IN-PLACE CONCRETE/STEEL BEAM COMPOSITE SUPERSTRUCTURE, CAST-IN-PLACE CONCRETE ABUTMENT CAPS AND CAST-IN-PLACE CONCRETE SIDEWALK WITH ASSOCIATED ROADWAY APPROACH AND UTILITY IMPROVEMENTS.

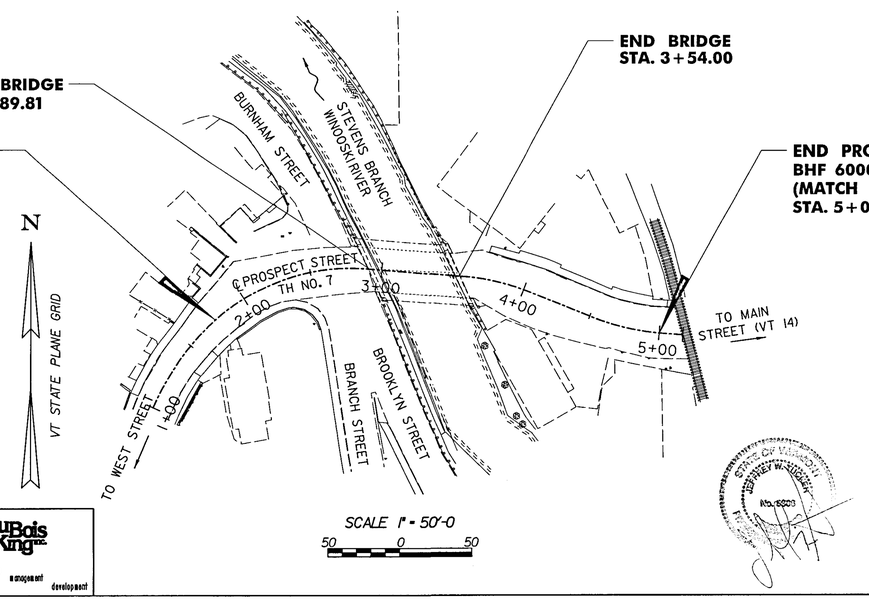
LENGTH OF STRUCTURE : 64.19 FEET.
LENGTH OF ROADWAY : 260.81 FEET.
LENGTH OF PROJECT : 325.00 FEET.

BEGIN BRIDGE
STA. 2+89.81

BEGIN PROJECT
BHF 6000 (15) S
(MATCH EXISTING)
STA. 1+75.00

END BRIDGE
STA. 3+54.00

END PROJECT
BHF 6000 (15) S
(MATCH EXISTING)
STA. 5+00.00



SCALE 1" = 50'-0
50 0 50

CONVENTIONAL SYMBOLS

COUNTY LINE	COUNTY LINE
TOWN LINE	TOWN LINE
LIMITS OF ACCESS	
POINT OF ACCESS	X
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	SR SR SR
TOP OF CUT	
TOE OF SLOPE	

SURVEYED BY : VTRANS
SURVEYED DATE : 1996 (UPDATED 2001)

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83/92

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RECORD PLANS

CONTRACTOR: S. D. IRELAND CONCRETE CONST. CORP.– BURLINGTON, VT
RESIDENT ENGINEER: DAVID F. HALE
CONSTRUCTION BEGAN: MAY 15, 2009
CONSTRUCTION COMPLETE: MAY 6, 2010
RECORD PLANS BY: DAVID F. HALE & NICK GARBACIK

I HEREBY CERTIFY THAT ALL THE CONSTUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.
BY David F. Hale RESIDENT ENGINEER
DATE 5/25/11

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.

STATE OF VERMONT JEFFREY W. GIBBS No. 6628

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 2006, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 15, 2006 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

PLOTTED 2/2/2009

DIRECTOR OF PROGRAM DEVELOPMENT
APPROVED Richard Tetreault DATE 2-2-09
PROJECT MANAGER : SHERWARD FARNSWORTH, P.E.
PROJECT NAME : BARRE CITY
PROJECT NUMBER : BHF 6000 (15)S
SHEET 1 OF 56 SHEETS

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DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83/92

PLOTTED 2/2/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BARRE CITY	Bridge No. 7
Highway No. PROSPECT ST.	Log Sta.
	Surv. Sta.

PROSPECT ST. OVER STEVENS BRANCH

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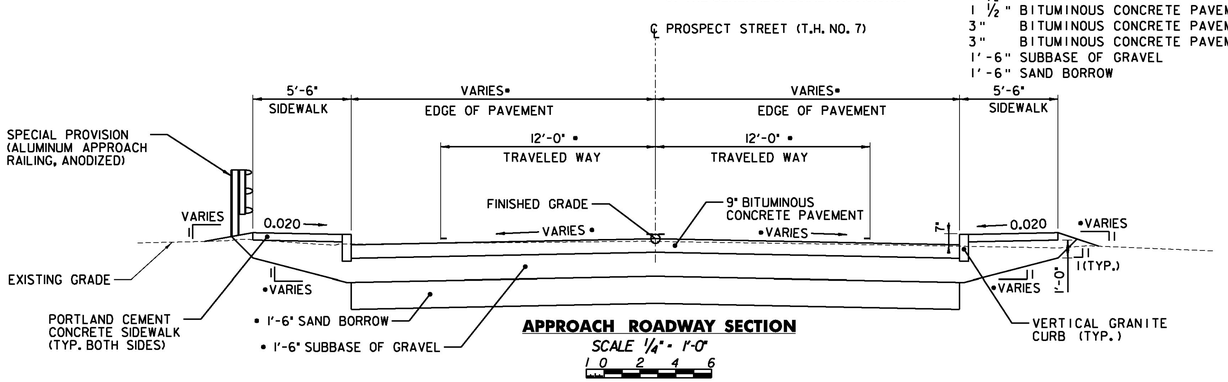
Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By Date	Bridge Design Supervisor
E. P. DETRICK 1/09	J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 2 of 56

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FOR PG BINDER GRADE, SEE SECTION 406 OF THE GENERAL SPECIAL PROVISIONS.

TYPICAL ROADWAY SECTION

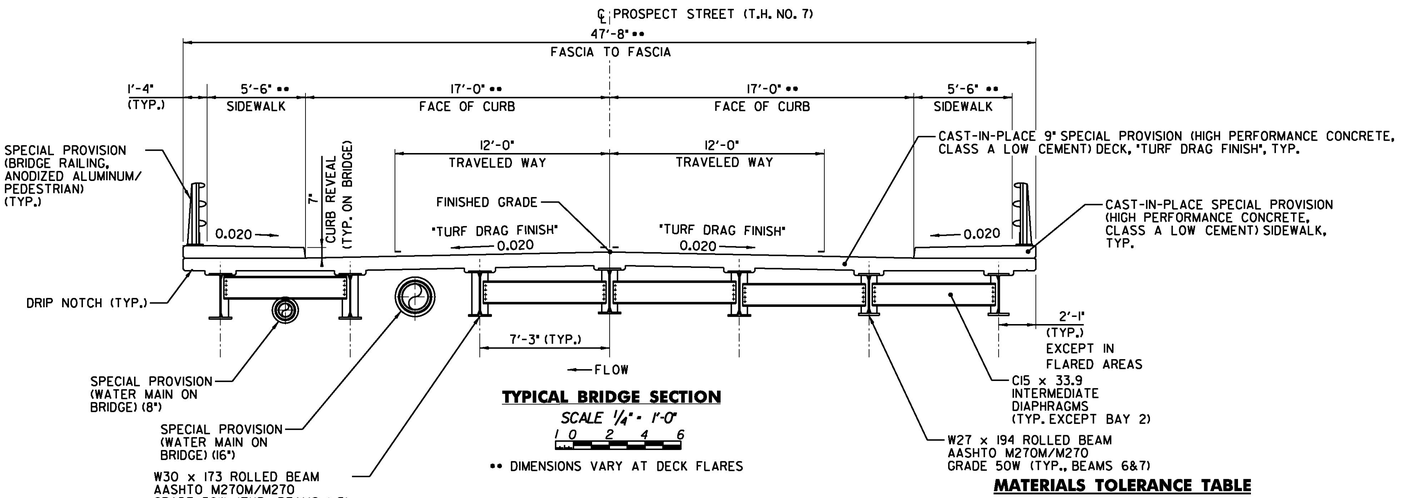
1 ½" BITUMINOUS CONCRETE PAVEMENT (TYPE IV), TOP LIFT
1 ½" BITUMINOUS CONCRETE PAVEMENT (TYPE IV)
3" BITUMINOUS CONCRETE PAVEMENT (TYPE II)
3" BITUMINOUS CONCRETE PAVEMENT (TYPE II)
1'-6" SUBBASE OF GRAVEL
1'-6" SAND BORROW



APPROACH ROADWAY SECTION

SCALE 1/4" = 1'-0"
1 0 2 4 6

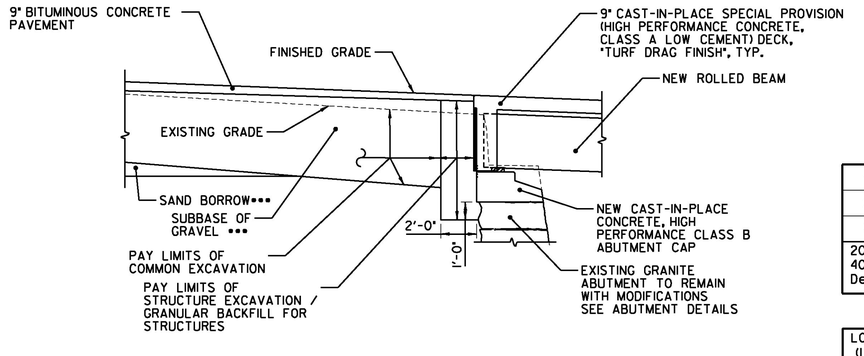
• WIDTH AND CROSS SLOPES VARIES THROUGHOUT PROJECT. REFER TO ROADWAY CROSS SECTIONS FOR SPECIFIC STATIONS



TYPICAL BRIDGE SECTION

SCALE 1/4" = 1'-0"
1 0 2 4 6

•• DIMENSIONS VARY AT DECK FLARES



TYPICAL ABUTMENT SECTION

SCALE 1/4" = 1'-0"
1 0 2 4 6

•••DEPTH VARIES. SEE SUBBASE TRANSITION DETAIL, SHEET 43

MATERIALS TOLERANCE TABLE

MATERIAL ITEM	TOLERANCE
PAVEMENT	± 1/4" TOTAL THICKNESS
BASE COURSE	± 1/2"
SUBBASE	± 1"
SAND BORROW	± 1"

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2009	5500	720	69	1.7	150
2029	5900	770	69	1.0	100

20 Year ESAL for flexible pavement from 2009 to 2029: 534,000
40 Year ESAL for flexible pavement from 2009 to 2049: 1,020,000
Design speed: 25 mph

LOAD FACTOR LOAD RATING (TONS)

LOADING LEVELS (LOAD FACTOR)	TRUCK						
	H	HS	3S2	6 AXLE	3A.STR.	4A.STR.	5A.SEMI
INVENTORY A=2.17; B=1.00	42	53					
POSTED A=1.55; B=1.40	59	75	95		66	68	84
OPERATING A=1.30; B=1.67		89	113	135	79	81	

STRENGTH RF = $\frac{\phi M_N - 1.3\, M_{DL}}{A \times M_{LL+I}}$

SERVICEABILITY RF = $B\left[\frac{.95\, F_y S_{LL+I} - M_{DL}\frac{S_{LL+I}}{S_{DL}} - M_{SDL}\frac{S_{LL+I}}{S_{SDL}}}{1.67\, M_{LL+I}}\right]$

FINAL HYDRAULICS REPORT

HYDROLOGIC DATA

DRAINAGE AREA=
CHARACTER OF TERRAIN:
CHARACTER & TYPE OF STREAM:
NATURE OF STREAMBED:

Q2.33= Q50=
Q10= Q100=
Q25= Q500=

DATE OF FLOOD OF RECORD:
WATER SURFACE ELEV.: ESTIMATED DISCHARGE:
NATURAL STREAM VELOCITY @ Q
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 ____

EXISTING STRUCTURE

STRUCTURE TYPE: SINGLE SPAN STEEL BEAM YEAR BUILT: 1940
CLEAR SPAN (NORMAL TO STREAM): 49.0 ft
VERTICAL CLEARANCE ABOVE STREAMBED: APPROX. 14.5 ft
WATERWAY OF FULL OPENING:
DISPOSITION OF STRUCTURE: EXISTING SUPERSTRUCTURE TO BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
TYPE OF MATERIAL UNDER SUBSTRUCTURE:

WATER SURFACE ELEV. @ Q2.33: VELOCITY=
Q10= ft
Q25= ft
Q50= ft
Q100= ft

LONG TERM STREAM BED CHANGES:

IS THE ROADWAY OVERTOPPED BELOW THE Q100? FREQUENCY:
RELIEF ELEVATION: DISCHARGE OVER ROAD @ Q100:

UPSTREAM STRUCTURE: TOWN: BARRE CITY DISTANCE: 0.63 mi.
HIGHWAY NO.: MILL STREET STRUCTURE NO.: B6
NOTE:

DOWNSTREAM STRUCTURE: TOWN: BARRE CITY DISTANCE: 0.25 mi.
HIGHWAY NO.: GRANITE STREET STRUCTURE NO.: B11
NOTE:

PROPOSED STRUCTURE

STRUCTURE TYPE: SINGLE SPAN, NEW STEEL BEAMS WITH COMPOSITE CONCRETE DECK

CLEAR SPAN (NORMAL TO STREAM): 53'-5½"
VERTICAL CLEARANCE ABOVE STREAMBED:
WATERWAY OF FULL OPENING:

WATER SURFACE ELEV. @ Q2.33: VELOCITY=
Q10= ft =
Q25= ft =
Q50= ft =
Q100= ft =

IS THE ROADWAY OVERTOPPED BELOW THE Q100? FREQUENCY:
RELIEF ELEVATION: DISCHARGE OVER ROAD @ Q100:

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE:
VERTICAL CLEARANCE @ Q 25

SCOUR:
REQUIRED CHANNEL PROTECTION:

PERMIT INFORMATION

AVERAGE DAILY FLOW: 180 CFS
ORDINARY LOW WATER: 80 CFS DEPTH: 0.5 FT
ORDINARY HIGH WATER: 1070 CFS DEPTH: ELEV. 592.0 FT

ADDITIONAL COMMENTS

NO HYDRAULIC ANALYSIS WAS PERFORMED, THEREFORE NO HYDROLOGIC OR HYDRAULIC DATA IS PROVIDED EXCEPT AS NOTED IN PERMIT INFORMATION ABOVE.

TEMPORARY PEDESTRIAN BRIDGE REQUIREMENTS (SEE SHEET 15).

DESIGN CRITERIA:
1. DESIGN LIVE LOAD AASHTO HS-25-44
2. DESIGN SPAN 61.7 ft ℄ BRG. TO ℄ BRG.
3. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL N/A ON LEDGE N/A
4. ALLOWABLE LOAD FOR PILING N/A TYPE N/A ESTIMATED LENGTH N/A
5. STRUCTURAL STEEL AASHTO GRADE AASHTO M270 M / M270 GRADE 50 W
6. REINFORCING STEEL GRADE 60
7. SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT) f'c = 4000 PSI
   CONCRETE, HIGH PERFORMANCE CLASS B fc = 3500 PSI

TRAFFIC MAINTENANCE:
1. IS TRAFFIC TO BE MAINTAINED? NO • IF YES, ON EXISTING STRUCTURE N/A OR ON TEMPORARY BRIDGE N/A
   • TRAFFIC WILL BE DETOURED AROUND THE BRIDGE SITE, OFF PROJECT DETOUR SIGNING WILL BE RESPONSIBILITY OF CITY.
   TEMPORARY PEDESTRIAN BRIDGE IS REQUIRED, SEE SHEET 15 FOR DETAILS.
2. TEMPORARY BRIDGE REQUIREMENTS: ONE OR TWO WAY N/A TRAFFIC CONTROL SIGNALS REQUIRED NO
   ARE SIDEWALKS REQUIRED? NO IF SO, ON WHAT SIDE? N/A

PLOTTED 2/2/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BARRE CITY	Bridge No. 7
Highway No. PROSPECT ST.	Log Sta.
	Surv. Sta.

PROSPECT ST. OVER STEVENS BRANCH
PRELIMINARY INFORMATION SHEET

Designed By A. P. GUYETTE	Drawn By S. J. BIJOLLE
Checked By Date	Bridge Design Supervisor
E. P. DETRICK 1/09	J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 3 of 56

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GENERAL NOTES:

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT AGENCY OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2006, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION, DATED 2002, AND ITS LATEST REVISIONS.

2. DIMENSIONS, ANGLES, BEARINGS, AND ELEVATIONS OF THE EXISTING BRIDGE SHOWN ON THESE PLANS HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND LIMITED FIELD INVESTIGATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING FIELD MEASUREMENTS OF ALL EXISTING STRUCTURE COMPONENTS TO ASSURE CONSISTENCY WITH THE PROPOSED MODIFICATIONS. ANY DISCREPANCIES IN DIMENSIONS, CHARACTER OR EXTENT OF THE EXISTING FEATURES SHALL BE BROUGHT TO THE ATTENTION OF THE RESIDENT ENGINEER BEFORE ADVANCING THE WORK. WORKING DRAWINGS REQUIRED FOR VARIOUS ITEMS OF WORK SHALL INDICATE THE ACTUAL FIELD MEASUREMENTS AND SHALL BE SO NOTED.

3. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL, AND ARE GIVEN AT 68 DEGREES FAHRENHEIT, UNLESS NOTED OTHERWISE.

4. THE CONTRACTOR SHALL REVIEW AND UNDERSTAND ALL APPLICABLE ENVIRONMENTAL PERMITS AND ENSURE THAT ALL CONSTRUCTION CONDITIONS ARE MET.

CONSTRUCTION NOTES:

1. NO BACKFILL WILL BE PLACED AGAINST ANY STRUCTURAL ELEMENTS UNTIL THE RESIDENT ENGINEER HAS APPROVED THIS WORK. THE HEIGHT OF BACKFILL BEHIND THE ABUTMENTS SHALL BE LIMITED TO THE BRIDGE SEAT ELEVATIONS UNTIL THE NEW SUPERSTRUCTURE BEAMS HAVE BEEN SET.

REMOVAL NOTES:

1. ITEM 529.20, "PARTIAL REMOVAL OF STRUCTURE" SHALL INCLUDE:
   a) REMOVAL AND DISPOSAL OF EXISTING BRIDGE AND APPROACH RAILING AND POSTS, METAL BRIDGE DECK, AND CONCRETE CURTAIN WALLS.
   b) REMOVAL AND DISPOSAL OF STRUCTURAL STEEL BEAMS AND DIAPHRAGMS.
   c) REMOVAL AND SALVAGING OF NEEDLE BEAMS AND CHANNELS.
   d) REMOVAL AND DISPOSAL OF BEARING DEVICES.
   e) REMOVAL AND DISPOSAL OF EXISTING BRIDGE SEATS, GRANITE BLOCKS AND TOP OF BOX CULVERT AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
   f) PURGING, REMOVAL AND DISPOSAL OF AN ABANDONED GAS LINE (LIMITS EXTEND 10-FT BEYOND BACK OF ABUTMENTS)

2. LIMITS OF ABUTMENT AND WINGWALL REMOVAL ARE APPROXIMATE. THE ENGINEER SHALL ESTABLISH ACTUAL LIMITS AFTER A COOPERATIVE INSPECTION BY THE CONTRACTOR AND THE ENGINEER. EXISTING ELEVATIONS SHALL BE FIELD VERIFIED TO ENSURE THAT THE REMOVAL LIMITS ARE ADEQUATE TO OBTAIN THE REQUIRED DIMENSIONS AND ELEVATIONS OF THE NEW CONSTRUCTION.

3. EXISTING GAS LINE SHALL BE REMOVED FROM EXISTING BRIDGE STRUCTURE. REMOVAL LIMITS SHALL EXTEND FROM 10-FT BEHIND ABUTMENT NO. 1 TO 10-FT BEHIND ABUTMENT NO. 2. REMAINING GAS LINE SHALL BE CAPPED AND ABANDONED IN PLACE. IF REMAINING GAS LINE IS WITHIN THE LIMITS OF EXCAVATION, CONTRACTOR MAY AT HIS OPTION AND HIS EXPENSE, REMOVE GAS LINE TO THE LIMITS OF EXCAVATION.

4. THE EXISTING STRUCTURAL STEEL ON THIS PROJECT WAS PAINTED WITH A MATERIAL WHICH MAY CONTAIN LEAD. EXCEPT AS NOTED IN NOTES #5 AND #6 BELOW, THE REMOVED STRUCTURAL STEEL IS THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE STATE, ITS OFFICERS, AND EMPLOYEES HARMLESS CONCERNING THE CONTRACTOR'S USE OR DISPOSITION OF THE STRUCTURAL STEEL.

5. THE NEEDLE BEAMS SHALL REMAIN THE PROPERTY OF THE CITY OF BARRE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE CITY OF BARRE PRIOR TO THE REMOVAL OF THE BEAMS FOR THE PROPER PROCEDURE IN SALVAGING MATERIALS. THE TELEPHONE NUMBER FOR THE BARRE CITY ENGINEER'S OFFICE IS 802-476-0250.

6. THE STATE WILL RETAIN OWNERSHIP OF THE CHANNEL MEMBERS THAT ARE BOLTED TO THE BEAMS AS WEB REINFORCEMENT, ALONG WITH ALL BOLTS THAT ARE PART OF THE CONNECTIONS. FOR ALL INTERIOR BAYS, THE CHANNELS WILL BE REMOVED AS UNITS, WITH CHANNELS FROM ADJACENT BEAMS LEFT INTACT WITH THE DIAPHRAGMS IN PLACE. THIS MATERIAL SHALL BE STOCKPILED ON SITE FOR REMOVAL BY OTHERS. THE BOLTS WILL BE PLACED IN WOODEN KEGS OR OTHER SUITABLE CONTAINERS AND STOCKPILED WITH THE CHANNELS. VERMONT AGENCY OF TRANSPORTATION, DISTRICT 6, SHALL BE NOTIFIED TWO WEEKS PRIOR TO THE ANTICIPATED TIME THAT THE FIRST OF THE CHANNELS WILL BE PLACED IN THE STOCKPILE AREA. THE TELEPHONE NUMBER FOR THE DISTRICT OFFICE IS 802-828-2691. ALL OTHER COMPONENTS OF THE BRIDGE AND APPROACHES REMOVED AS PART OF THIS PROJECT, EXCEPT FOR THE NEEDLE BEAMS, WILL BECOME THE PROPERTY OF THE CONTRACTOR, AND IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE THEM FROM THE PROJECT SITE.

CONCRETE NOTES:

1. CONCRETE PAYMENT AND CLASSIFICATION SHALL BE AS FOLLOWS:
   ITEM 900.608, SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT) (DECK, CURTAIN WALLS, SIDEWALKS, HAUNCH)
   ITEM 501.34, CONCRETE, HIGH PERFORMANCE CLASS B (SUBSTRUCTURES, ROADWAY CURBING)

2. ITEM 514.10, WATER REPELLENT, SILANE SHALL BE APPLIED TO ALL EXPOSED CONCRETE ON THE BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE, EXCEPT THE BOTTOM OF THE DECK BETWEEN THE DRIP NOTCHES. IT SHALL ALSO BE APPLIED TO THE CONCRETE CURBS SUPPORTING BRIDGE AND APPROACH RAILING IN THE ROADWAY.

3. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1 INCH BY 1 INCH, UNLESS OTHERWISE NOTED. A ONE-HALF INCH RADIUS SHALL BE USED ON THE TOP INSIDE CORNER OF THE CURBS.

4. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

5. THE KEY IN CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT UNLESS OTHERWISE INDICATED. ANY UPWARD KEY SHALL BE PLACED INTEGRALLY WITH THE CONCRETE BELOW THE JOINT.

6. THE CONCRETE DECK SHALL BE PLACED IN ONE CONTINUOUS POUR, NOT TO EXCEED 8 HOURS. NO COLD JOINTS WILL BE ALLOWED. IF CIRCUMSTANCES BEYOND THE CONTRACTOR'S CONTROL PREVENT THIS FROM BEING ACCOMPLISHED, A CONSTRUCTION JOINT SHALL BE USED. THERE SHALL BE A MINIMUM DELAY PERIOD OF 96 HOURS BETWEEN POURS.

7. THE CONCRETE BRIDGE DECK SHALL RECEIVE A "TURF DRAG FINISH" IN ACCORDANCE WITH THE CONCRETE SPECIAL PROVISION. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 900.608, "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT)".

STRUCTURAL STEEL NOTES:

1. THE CONTRACTOR SHALL FIELD VERIFY THE CENTERLINE OF BEARING TO CENTERLINE OF BEARING LENGTH AND THE SKEW ANGLE AT EACH ABUTMENT. THAT VERIFIED INFORMATION SHALL BE PROVIDED TO THE ENGINEER AND TO THE FABRICATOR BEFORE FABRICATION DRAWINGS ARE COMPLETED.

2. ALL STRUCTURAL STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE "AMERICAN INSTITUTE OF STEEL CONSTRUCTION" (AISC).

3. ALL BOLTED FIELD CONNECTIONS SHALL BE MADE WITH 7/8-IN DIA. HIGH-STRENGTH, TYPE 3 BOLTS, CONFORMING TO AASHTO M 164M IN 15/16-IN DIA. HOLES, UNLESS OTHERWISE NOTED.

4. STRUCTURAL STEEL CONNECTIONS NOT DETAILED ON PLANS SHALL BE DETAILED BY FABRICATOR AND SUBMITTED TO THE ENGINEER FOR APPROVAL.

5. ALL WELDS SHALL HAVE CORROSION RESISTANCE AND WEATHERING APPEARANCE AS SPECIFIED FOR WEATHERING STEEL.

6. ALL WELDING AND DIMENSIONAL TOLERANCES OF WELDED MEMBERS SHALL BE IN ACCORDANCE WITH VTRANS REQUIREMENTS AND SHALL CONFORM TO THE LATEST ANSI/AASHTO/AWS CODES AND THEIR LATEST REVISIONS.

7. SHEAR STUD CONNECTORS SHALL BE FIELD WELDED USING AUTOMATICALLY TIMED STUD WELDING EQUIPMENT AND SHALL BE PAID AS ITEM 508.15, SHEAR CONNECTORS.

8. ANY HOLES IN FASCIA BEAM WEBS NOT OTHERWISE FILLED SHALL BE FILLED WITH BUTTON HEAD OR HEX HEAD BOLTS PER AASHTO M 164M, TYPE 3.

9. AFTER THE SUPERSTRUCTURE STEEL HAS BEEN ERECTED, ELEVATIONS ALONG THE TOP OF BEAMS SHALL BE TAKEN UNDER DIRECTION OF THE RESIDENT ENGINEER FOR USE IN DETERMINING THE FINAL GRADE AND HAUNCH DEPTHS.

10. THE ENDS OF THE BEAMS SHALL BE VERTICAL UNDER FULL DEAD LOAD DEFLECTION.

11. THE TEMPORARY DIAPHRAGMS IN BAY #2 SHALL REMAIN IN PLACE UNTIL THE CONCRETE DECK IS FULLY CURED. FOLLOWING APPROVAL FROM THE ENGINEER THE DIAPHRAGMS ARE TO BE REMOVED AND SHALL BECOME THE PROPERTY OF THE CONTRACTOR. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR 506.50, "STRUCTURAL STEEL, ROLLED BEAM".

REINFORCING STEEL NOTES:

1. ALL REINFORCING STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE "CONCRETE REINFORCING STEEL INSTITUTE".

2. REINFORCING STEEL IN THE DECK, BACKWALL, SIDEWALK, AND CURB SHALL BE EPOXY COATED.

3. MINIMUM CLEAR COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

ALONG BACK FACES OF WALLS AGAINST EARTH:	2-IN
ALONG TOP SURFACE OF DECK SLAB:	3-IN
ALONG BOTTOM SURFACE OF DECK SLAB:	1 1/2-IN
ELSEWHERE UNLESS OTHERWISE INDICATED:	3-IN

4. REINFORCEMENT STEEL PLACEMENT TOLERANCES SHALL BE:
   SPACING = +/- 1-IN
   CLEARANCE = +/- 1/4-IN

5. DRILLING AND GROUTING DOWELS SHALL BE PAID AS ITEM 507.16, DRILLING AND GROUTING DOWELS. ALL DRILLED HOLES SHALL HAVE A MINIMUM OF 6-INCH CLEAR COVER.

TRAFFIC CONTROL NOTES:

1. THE EXISTING BRIDGE IS TO BE CLOSED DURING CONSTRUCTION. THROUGH TRAFFIC WILL BE DETOURED AROUND THE PROJECT LIMITS. THE CONTRACTOR MUST ORGANIZE THE WORK SUCH THAT CONTINUOUS ACCESS TO BRANCH AND BROOKLYN STREETS IS MAINTAINED, ALLOWING ACCESS AND EGRESS VIA PROSPECT STREET. ALL OFF PROJECT DETOUR SIGNING SHALL BE PROVIDED, INSTALLED, MAINTAINED AND REMOVED BY THE CITY. THE CONTRACTOR SHALL INSTALL A TEMPORARY PEDESTRIAN BRIDGE UPSTREAM OF THE EXISTING BRIDGE AS SHOWN IN THESE PLANS. THE CONTRACTOR SHALL NOTIFY THE CITY IN WRITING AT LEAST 2 WEEKS PRIOR TO CLOSURE OF THE EXISTING BRIDGE.

2. ALL WORK ASSOCIATED WITH THE INSTALLATION AND REMOVAL OF THE TEMPORARY PEDESTRIAN BRIDGE, APPROACHES, RAILINGS, APPROACH SIGNING, BARRICADES AND ALL OTHER NECESSARY ITEMS EXCEPT FOR TEMPORARY TRAFFIC BARRIER SHALL BE PAID UNDER ITEM 528.12 "TEMPORARY PEDESTRIAN BRIDGE".

3. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVES DURING CONSTRUCTION. COST SHALL BE PAID UNDER ITEM 641.10 "TRAFFIC CONTROL".

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ON PROJECT CONSTRUCTION SIGNING AND BARRICADES. ALL SIGNING AND BARRICADES REQUIRED FOR BRIDGE CLOSURE SHALL BE INSTALLED AND MAINTAINED AS SHOWN ON THE APPLICABLE VTRANS E SERIES STANDARD DRAWINGS AND IN ACCORDANCE WITH THE LATEST MUTCD AND ITS LATEST REVISIONS. THE COST OF SIGNING AND BARRICADES REQUIRED, EXCEPT TEMPORARY TRAFFIC BARRIERS, SHALL BE PAID FOR UNDER ITEM 641.10 "TRAFFIC CONTROL".

5. THE CONTRACTOR SHALL PROVIDE ADEQUATE LENGTHS OF ITEM 621.90, "TEMPORARY TRAFFIC BARRIER" DURING THE CONSTRUCTION PERIOD TO PREVENT VEHICLES FROM DRIVING OFF THE BRIDGE OR APPROACHES.

PLOTTED 2/11/2009

DuBois & King inc.
engineering planning management development

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BARRE CITY	Bridge No. 7
	Log Sta.
Highway No. PROSPECT ST.	Surv. Sta.

PROSPECT ST. OVER STEVENS BRANCH

PROJECT NOTES

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By Date	Bridge Design Supervisor
E. P. DETRICK 1/09	J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info....ZJ683GN.DGN	
Bridge Sheet No.	Sheet 4 of 56

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES									TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ROADWAY	TRAINING	EROSION CONTROL	UTILITIES	UTILITIES - NON PART.	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
1020							1020		CY	COMMON EXCAVATION	203.15				
10							10		CY	SOLID ROCK EXCAVATION	203.16				
10							10		CY	EXCAVATION OF SURFACES AND PAVEMENTS	203.28				
115							115		CY	SAND BORROW	203.31				
75							75		CY	TRENCH EXCAVATION OF EARTH	204.20				
1			1				2		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22				
50					55		105		CY	STRUCTURE EXCAVATION	204.25				
80							80		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30				
400							400		SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10				
575							575		CY	SUBBASE OF GRAVEL	301.15				
6							6		CWT	EMULSIFIED ASPHALT	404.65				
625							625		TON	BITUMINOUS CONCRETE PAVEMENT	406.25				
1							1		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50				
50					65		115		CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34				
					86000		86000		LB	STRUCTURAL STEEL, ROLLED BEAM	506.50				
3250			1500		7000		11750		LB	REINFORCING STEEL	507.15				
220					270		490		LF	DRILLING AND GROUTING DOWELS	507.16				
					35000		35000		LB	EPOXY COATED REINFORCING STEEL	507.17				
					1		1		LS	SHEAR CONNECTORS (2286 - 7/8" X 7")	508.15				
4					28		32		GAL	WATER REPELLENT, SILANE	514.10				
					145		145		LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10				
1							1		LS	TEMPORARY PEDESTRIAN BRIDGE (335 SF - EST.)	528.12				
					1		1		EACH	PARTIAL REMOVAL OF STRUCTURE	529.20				
					15		15		EACH	BEARING DEVICE ASSEMBLY, PREFORMED FABRIC PAD	531.10				
			30				30		CY	CONCRETE, CLASS B	541.25				
35							35		LF	18" CPEP	601.0915				
					355		355		SY	REPOINTING MASONRY	602.30				
2							2		EACH	PRECAST REINFORCED CONCRETE CURB DI WITH CAST IRON GRATE	604.30				
2							2		EACH	CHANGING ELEVATION OF DROP INLETS, CATCH BASINS, OR MANHOLES	604.40				
5							5		EACH	CHANGING ELEVATION OF SEWER MANHOLES	604.42				
10							10		MGAL	DUST CONTROL WITH WATER	609.10				
210							210		LF	VERTICAL GRANITE CURB	616.21				
1							1		TON	BITUMINOUS CONCRETE GUTTERS AND TRAFFIC ISLANDS	616.47				
160							160		SY	PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH	618.10				
75							75		SY	PORTLAND CEMENT CONCRETE SIDEWALK, 8 INCH	618.11				
15							15		SF	DETECTABLE WARNING SURFACE	618.30				
220							220		LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80				
200							200		LF	TEMPORARY TRAFFIC BARRIER	621.90				
			25				25		LF	PVC SEWER PIPE (6")	628.35				
4							4		EACH	ADJUST ELEVATION OF VALVE BOX	629.20				

PROJECT NAME: BARRE CITY
PROJECT NUMBER: BHF 6000 (15) S

FILE NAME: z95j302qs.dgn
PROJECT LEADER: J.W. TUCKER
DESIGNED BY: A.P. GUYETTE
QUANTITY SHEET #1

PLOT DATE: 2/11/2009
DRAWN BY: A.P. GUYETTE
CHECKED BY: E.P. DETRICK
SHEET 5 OF 56

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ROADWAY	TRAINING	EROSION CONTROL	UTILITIES	UTILITIES - NON PART.	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
			20				20		LF	DUCTILE IRON PIPE, CEMENT-LINED (16")	629.24				
			20				20		LF	DUCTILE IRON PIPE, CEMENT-LINED (8")	629.24				
			2				2		EACH	GATE VALVE WITH VALVE BOX (8")	629.27				
			1				1		LS	TRANSFER TO NEW SYSTEM, WATER SYSTEM (16")	629.42				
			1				1		LS	TRANSFER TO NEW SYSTEM, WATER SYSTEM (8")	629.42				
400							400		HR	UNIFORMED TRAFFIC OFFICERS	630.10				
1500							1500		HR	FLAGGERS	630.15				
						1	1		LS	FIELD OFFICE, ENGINEERS	631.10				
						1	1		LS	TESTING EQUIPMENT, CONCRETE	631.16				
						1	1		LS	TESTING EQUIPMENT, BITUMINOUS	631.17				
						1	1		LU	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.25				
	520						520		HR	EMPLOYEE TRAINEESHIP	634.10				
1							1		LS	MOBILIZATION / DEMOBILIZATION	635.11				
1							1		LS	TRAFFIC CONTROL	641.10				
950							950		LF	4 INCH WHITE LINE	646.20				
675							675		LF	4 INCH YELLOW LINE	646.21				
35							35		LF	24 INCH STOP BAR	646.26				
8							8		EACH	LETTER OR SYMBOL	646.30				
135							135		LF	CROSSWALK MARKING	646.31				
1							1		EACH	RAILROAD CROSSING SYMBOL	646.32				
60							60		LF	TEMPORARY CROSSWALK MARKING	646.700				
		40					40		SY	GEOTEXTILE FOR SILT FENCE	649.51				
		25					25		LB	SEED	651.15				
		125					125		LB	FERTILIZER	651.18				
		0.5					0.5		TON	AGRICULTURAL LIMESTONE	651.20				
		0.5					0.5		TON	HAY MULCH	651.25				
		10					10		CY	TOPSOIL	651.35				
		1					1		LS	EPSC PLAN	652.10				
		80					80		HR	MONITORING EPSC PLAN	652.20				
		1					1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30				
		40					40		CY	VEHICLE TRACKING PAD	653.35				
		3					3		EACH	INLET PROTECTION DEVICE, TYPE I	653.40				
100							100		LF	BARRIER FENCE	653.50				
450							450		LF	PROJECT DEMARCATION FENCE	653.55				
32							32		SF	TRAFFIC SIGNS, TYPE A	675.20				
135							135		LF	FLANGED CHANNEL SIGN POST	675.301				
12							12		EACH	REMOVING SIGNS	675.50				
4							4		EACH	ERECTING SALVAGED SIGNS	675.60				
1							1		LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50				
2							2		CY	SPECIAL PROVISION (CORING CONCRETE)	900.608				

PROJECT NAME: BARRE CITY
PROJECT NUMBER: BHF 6000 (15) S

FILE NAME: z95j302qs.dgn
PROJECT LEADER: J.W. TUCKER
DESIGNED BY: A.P. GUYETTE
QUANTITY SHEET #2

PLOT DATE: 2/11/2009
DRAWN BY: A.P. GUYETTE
CHECKED BY: E.P. DETRICK
SHEET 5A OF 56

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 3

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
			ROADWAY	TRAINING	EROSION CONTROL	UTILITIES	UTILITIES - NON PART.	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
								140		140		CY	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT)	900.608				
						2				2		EACH	SPECIAL PROVISION (BUTTERFLY VALVE WITH VALVE BOX) (16")	900.620				
			55							55		LF	SPECIAL PROVISION (ALUMINUM APPROACH RAILING, ANODIZED)	900.640				
			40							40		LF	SPECIAL PROVISION (ALUMINUM GUARDRAIL, ANODIZED 2 RAIL)	900.640				
								275		275		LF	SPECIAL PROVISION (BRIDGE RAILING, ANODIZED ALUMINUM/PEDESTRIAN)	900.640				
						1				1		LS	SPECIAL PROVISION (WATER MAIN ON BRIDGE) (16")	900.645				
						1				1		LS	SPECIAL PROVISION (WATER MAIN ON BRIDGE) (8")	900.645				
							1			1		LS	SPECIAL PROVISION (WATERLINE, MUNICIPAL)	900.645				

PROJECT NAME:	BARRE CITY
PROJECT NUMBER:	BHF 6000 (15) S
FILE NAME: z95j302qs.dgn	PLOT DATE: 2/11/2009
PROJECT LEADER: J.W. TUCKER	DRAWN BY: A.P. GUYETTE
DESIGNED BY: A.P. GUYETTE	CHECKED BY: E.P. DETRICK
QUANTITY SHEET #3	SHEET 5B OF 56

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

RIGHT - OF - WAY DETAIL SHEET

TABLE OF PROPERTY ACQUISITION

PARCEL NO.	PROPERTY OWNER	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKE	REMAINDER	RIGHT			RECORDING DATA					REMARKS
					AREA±	AREA±	TYPE	(T)/(P)	AREA ±	TITLE	DATE	TOWN / CITY	BOOK	PAGE	
1	MULLEN, JOHN R. & NANCY L.	12	2+42.83 LT	2+44.94 LT			INSTALL & MAINTAIN	P	15 .4 SF	WDOE	08/24/07	BARRE CITY	241	875-	CURB & SIDEWALK
			2+43.59 LT	2+44.44 LT			INSTALL & MAINTAIN	P						876	GUARDRAIL
			2+43.59 LT	2+44.44 LT			REMOVE	T							SIDEWALK RAIL
2	PEYERL, GODFREY M. & CYNTHIA W.	12	3+34.41 RT	3+71.25 RT			INSTALL & MAINTAIN	P	97.2 SF	WDOE	08/16/07	BARRE CITY	241	683	BRIDGE & ABUTMENT
			3+70.53 RT	3+83.84 RT			INSTALL & MAINTAIN	P							GUARDRAIL TO BUILDING
			3+45.29 RT	3+84.85 RT			DETOUR	T	157.1 SF						PEDESTRIAN BRIDGE & WALKWAY
			3+69.30 RT	4+26.55 RT			SLOPE	T	111.6 SF						GRADED AWAY FROM BUILDING
			4+49.80 RT				DRIVE	T							33' PAVED
			3+70.53 RT	3+83.84 RT			REMOVE	T							RAIL
3	GREEN MOUNTAIN POWER CORPORATION														UTILITY
4	VERIZON NEW ENGLAND, INC.														UTILITY
5	CHARTER ONE COMMUNICATIONS														UTILITY
6	BARRE CITY (SEWER & WATER)														UTILITY

TABLE OF REVISIONS

REVISION NO.	SHEET NO.	DESCRIPTION	DATE
		ELECTRONIC FILES TO STRUCTURES	01/13/09

PLOT DATE 01/12/09

PLAN LEGEND

- EXISTING RIGHT-OF-WAY
- TAKING WITH ACCESS
- TAKING WITHOUT ACCESS
- CLEAR ZONE (CZ)
- PROPERTY LINE (P/L)
- TOE OF SLOPE
- TOP OF CUT
- SLOPE RIGHT (SR (P))
- CONSTRUCTION RIGHT (CONST. (T))
- PROJECT DEMARCATION FENCE (PDF)

EC	-EROSION CONTROL
(P)	-PERMANENT
(T)	-TEMPORARY
DR.	-DRAINAGE RIGHT
DIT.	-DITCHING RIGHT
CH.	-CHANNEL RIGHT
DRIVE	-DRIVE RIGHT
CUL.	-CULVERT RIGHT
C&T	-CLEARING & TRIMMING RIGHT
SR	-SLOPE RIGHT
UE	-UTILITY EASEMENT

APPROVED: ROGER P. DUMAS DATE: 10-6-06
CHIEF, PLANS & TITLES

PROJECT NAME: **BARRE CITY**
PROJECT NUMBER: **BHF 6000(15)S**

FILE NAME: **r95J302det.xls**
PROJECT LEADER: **W. TRIPP**
DESIGNED BY: **DUBOIS & KING**
R.O.W. SHEET 11 OF 12

PLOT DATE:
DRAWN BY: **MR**
CHECKED BY: **FM**
SHEET **6** OF **56**

BRIDGE RAILING – ALUMINUM/PEDESTRIAN (MOD. – BLACK ANODIZED)
STA. 2+72.90 LT - STA. 3+35.31 RT (83'-1") (EXTEND 10'-0" ONTO METRO WAY)
STA. 3+54.56 RT - STA. 3+83.83 RT (183'-11") (EXTEND 100' ONTO BROOKLYN ST.) (EXTEND TO MATTRESS LAND BUILDING)

ALUMINUM APPROACH RAILING (MOD. – BLACK ANODIZED)
STA. 2+35.00 LT - STA. 2+44.35 LT (EXTEND 25' ONTO BURNHAM ST.)
STA. 2+64.76 LT - STA. 2+72.90 LT (EXTEND 35' ONTO BURNHAM ST.)
STA. 3+54.56 RT - STA. 4+14.48 RT (25' ON BROOKLYN ST.)

4 INCH YELLOW LINE
STA. 1+75.00 - STA. 2+45.00 (DOUBLE CENTERLINE)
STA. 2+90.30 - STA. 5+00.00 (DOUBLE CENTERLINE)
45 FT. TO STOP BAR (BURNHAM ST.)

4 INCH WHITE LINE
STA. 1+75.00 LT - STA. 2+22.34 LT
STA. 1+75.00 RT - STA. 2+18.75 RT
STA. 2+18.75 RT - STA. 2+62.24 RT (EXTEND 68' ONTO BRANCH ST.)
STA. 2+18.75 RT - STA. 3+17.55 RT (DASHED)
STA. 2+22.34 LT - STA. 2+46.29 LT (EXTEND 70' ONTO BURNHAM ST.)
STA. 2+22.34 LT - STA. 3+03.78 LT (DASHED)
STA. 2+60.48 LT - STA. 3+03.78 LT (EXTEND 84' ONTO BURNHAM ST.)
STA. 3+03.83 LT - STA. 5+00.00 LT
STA. 3+10.20 RT - STA. 3+17.55 RT (EXTEND 48' ONTO BROOKLYN ST.)
STA. 3+17.55 RT - STA. 5+00.00 RT

24 INCH STOP BARS
STA. 2+46.00 LT - STA. 2+57.00 LT (BURNHAM ST.)
STA. 2+88.50 RT - STA. 3+06.50 RT (BROOKLYN ST.)

CROSSWALK MARKING W/ DIAGONAL LINE (MOD. – NON DIAGONAL)
STA. 2+31.90 LT - STA. 2+90.00 LT
STA. 2+56.50 RT - STA. 3+05.50 RT
STA. 4+96.00 LT & RT

LETTER OR SYMBOL
STA. 2+52.50 RT "STOP" (BURNHAM STREET)
STA. 2+99.50 RT "STOP" (BROOKLYN STREET)

PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH
STA. 1+75.00 LT - STA. 2+37.64 LT
STA. 2+47.17 RT - STA. 2+53.01 RT
STA. 3+06.91 RT - STA. 3+06.79 RT
STA. 3+64.69 RT - STA. 4+33.23 RT
STA. 3+72.03 LT - STA. 3+89.80 LT
STA. 4+12.88 LT - STA. 4+58.05 LT
STA. 4+66.39 RT - STA. 5+00.00 RT
STA. 4+86.33 LT - STA. 5+00.00 RT

PORTLAND CEMENT CONCRETE SIDEWALK, 8 INCH
STA. 3+42.74 LT - STA. 3+72.03 LT
STA. 3+89.80 LT - STA. 4+12.88 LT
STA. 4+33.23 RT - STA. 4+66.39 RT
STA. 4+58.05 LT - STA. 4+86.33 LT

REMOVAL AND DISPOSAL OF GUARDRAIL
STA. 2+64.76 LT - STA. 2+78.07 LT
STA. 2+76.20 LT - STA. 2+79.92 LT
STA. 3+03.01 RT - STA. 3+06.89 RT
STA. 3+35.24 LT - STA. 3+41.21 LT
STA. 3+68.39 RT - STA. 3+81.68 RT

DETECTABLE WARNING SURFACE
STA. 2+35.00 LT
STA. 2+55.00 RT
STA. 2+85.00 LT
STA. 3+06.00 RT
STA. 4+96.00 LT
STA. 4+96.00 RT

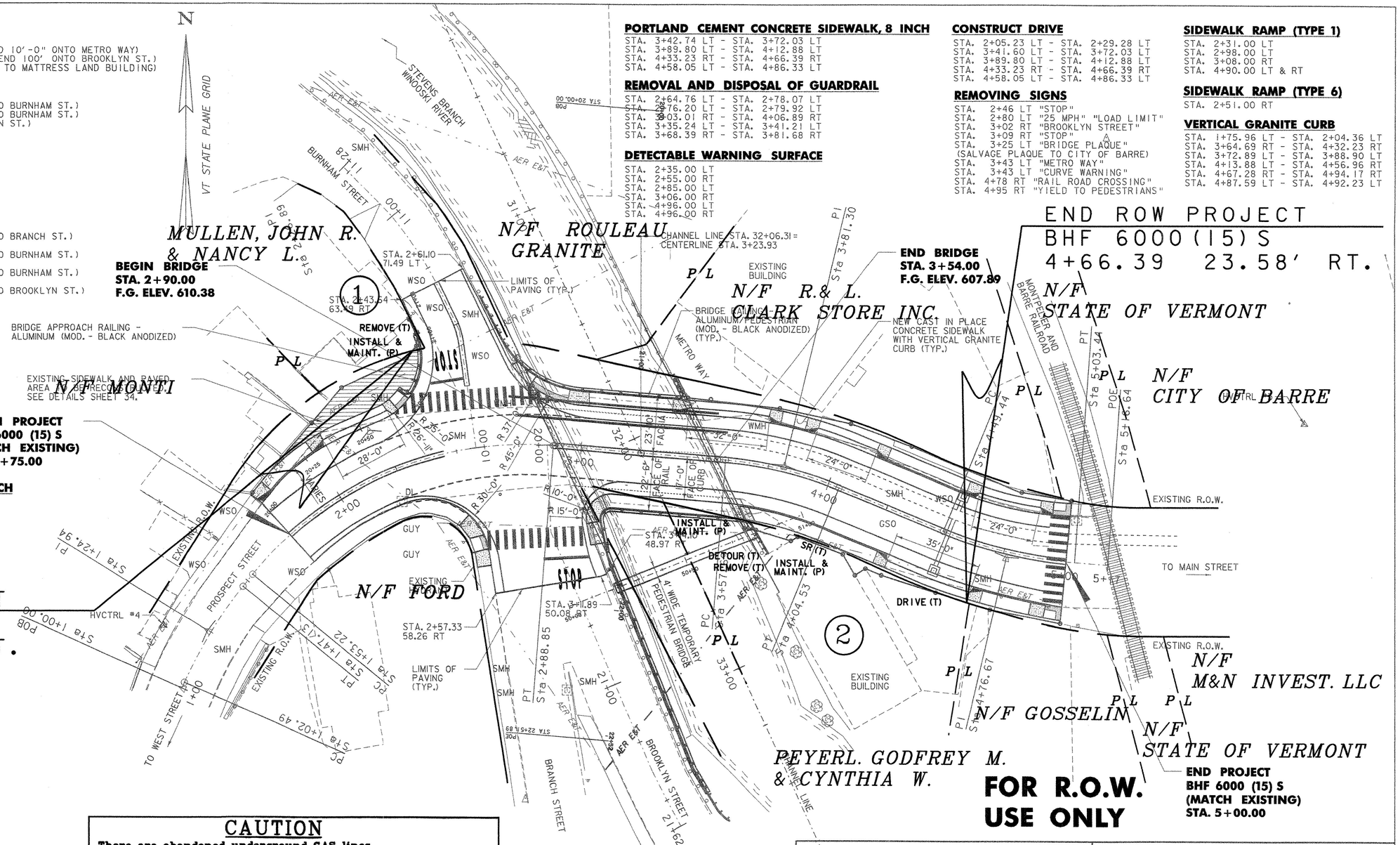
CONSTRUCT DRIVE
STA. 2+05.23 LT - STA. 2+29.28 LT
STA. 3+41.60 LT - STA. 3+72.03 LT
STA. 3+89.80 LT - STA. 4+12.88 LT
STA. 4+33.23 RT - STA. 4+66.39 RT
STA. 4+58.05 LT - STA. 4+86.33 LT

REMOVING SIGNS
STA. 2+46 LT "STOP"
STA. 2+80 LT "25 MPH" "LOAD LIMIT"
STA. 3+02 RT "BROOKLYN STREET"
STA. 3+09 RT "STOP" (A)
STA. 3+25 LT "BRIDGE PLAQUE" (SALVAGE PLAQUE TO CITY OF BARRE)
STA. 3+43 LT "METRO WAY"
STA. 3+43 LT "CURVE WARNING"
STA. 4+78 RT "RAIL ROAD CROSSING"
STA. 4+95 RT "YIELD TO PEDESTRIANS"

SIDEWALK RAMP (TYPE 1)
STA. 2+31.00 LT
STA. 2+98.00 LT
STA. 3+89.80 LT
STA. 4+90.00 LT & RT

SIDEWALK RAMP (TYPE 6)
STA. 2+51.00 RT

VERTICAL GRANITE CURB
STA. 1+75.96 LT - STA. 2+04.36 LT
STA. 3+64.69 RT - STA. 4+32.23 RT
STA. 3+72.89 LT - STA. 3+88.90 LT
STA. 4+13.88 LT - STA. 4+56.96 RT
STA. 4+67.28 RT - STA. 4+94.17 RT
STA. 4+87.59 LT - STA. 4+92.23 LT



LEGEND

EXISTING EDGE OF RIVER	
EXISTING TRAVELED WAY	
EXISTING GUARD RAIL	
STORM DRAIN	
SIDEWALK RAMP	
DETECTABLE WARNING SURFACE	
UTILITY POLE	
TELEPHONE POLE	
TREES	
OVERHEAD LINES	AER E&T
WATER LINE	W
EXISTING SIGN	
SEWER LINE	S
RIGHT OF WAY	
SEWER MANHOLE	SMH
WATER MANHOLE	WMH
WATER SHUTOFF	WSO
GAS SHUTOFF	GSO

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83/92

CAUTION
There are abandoned underground GAS lines and shutoffs in project area. If these are encountered they should be handled according to the City of Barre's, Permit to work within Right-of-Way, by contacting the Barre City's Engineering and Water Departments before being disturbed.

EXISTING BRIDGE DATA
SINGLE SPAN STEEL BEAM WITH OPEN GRATE STEEL DECK AND SIDEWALK, AND STEEL RAILING ON GRANITE ABUTMENTS.
CLEAR WIDTH: 30'-0"
SIDEWALK WIDTH: 5'-6"
FASCIA TO FASCIA WIDTH: 41'-0"

NOTES:
1. THE EXISTING R.O.W. FOR PROSPECT STREET IS APPROXIMATE, AS PROVIDED BY THE CITY OF BARRE.
2. SEE SHEET 35 FOR APPROACH RAIL AND BRIDGE RAIL LAYOUT.
3. FOR DETAILS AND LOCATION OF NEW AND SALVAGED SIGNS SEE SHEET 40.
4. SEE SHEET 6 FOR DRAINAGE AND UTILITY INFORMATION

PLAN
SCALE: 1" = 20'-0"
0 20 40
SCALE IN FEET

LINES SHOWN ON THIS PLAN AS EXISTING PROPERTY LINES P/L ARE BELIEVED TO BE ACCURATE BUT SHOULD NOT BE RELIED UPON FOR PURPOSES UNRELATED TO THE CITY OF BARRE'S ACQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

PLOTTED 12-JAN-2009

REVISIONS		
NO.	DESCRIPTION	BY & DATE
1	STA 33+93	

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engineering planning management development

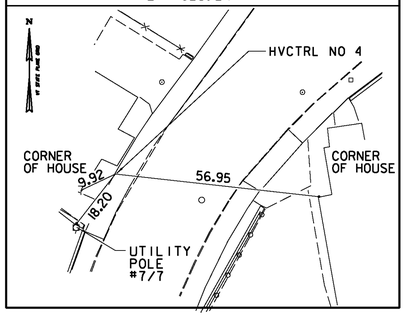
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BARRE CITY	Bridge No. 7
Highway No. PROSPECT ST.	Log Sta. / Surv. Sta.

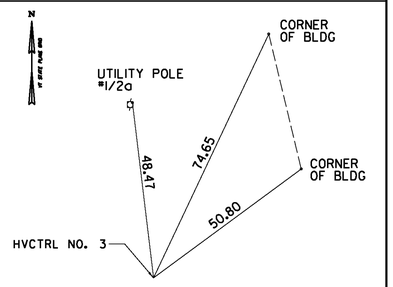
PROSPECT ST. OVER STEVENS BRANCH
SITE PLAN

Designed By A. P. GUYETTE	Drawn By S. J. BIJOLLE
Checked By E.P. DETRICK Date 03/06	Bridge Design Supervisor J. W. TUCKER Date 03/06
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
R.O.W. SHEET 12 OF 12	SHEET 7 OF 56

TIE
HVCTRL NO. 4
N = 18311.86
E = 39378.19
Z = 625.24

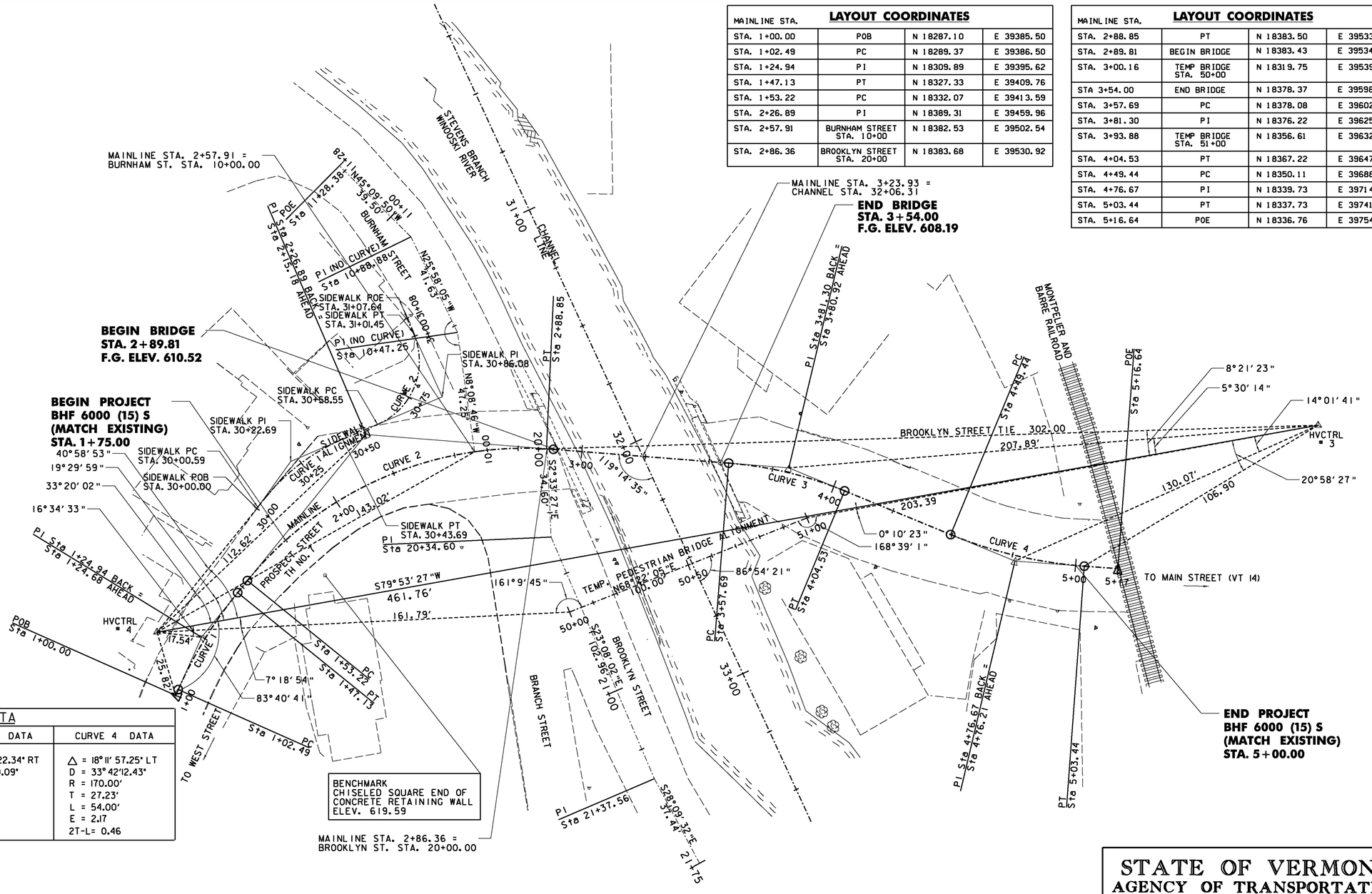


TIE
HVCTRL NO. 3
N = 18392.92
E = 39832.79
Z = 604.96



LAYOUT COORDINATES			
MAINLINE STA.			
STA. 1+00.00	POB	N 18287.10	E 39385.50
STA. 1+02.49	PC	N 18289.37	E 39386.50
STA. 1+24.94	PI	N 18309.89	E 39395.62
STA. 1+47.13	PT	N 18327.33	E 39409.76
STA. 1+53.22	PC	N 18332.07	E 39413.59
STA. 2+26.89	PI	N 18389.31	E 39459.96
STA. 2+57.91	BURNHAM STREET STA. 10+00	N 18382.53	E 39502.54
STA. 2+86.36	BROOKLYN STREET STA. 20+00	N 18383.68	E 39530.92

LAYOUT COORDINATES			
MAINLINE STA.			
STA. 2+88.85	PT	N 18383.50	E 39533.40
STA. 2+89.81	BEGIN BRIDGE	N 18383.43	E 39534.36
STA. 3+00.16	TEMP BRIDGE STA. 50+00	N 18319.75	E 39539.71
STA 3+54.00	END BRIDGE	N 18378.37	E 39598.35
STA. 3+57.69	PC	N 18378.08	E 39602.03
STA. 3+81.30	PI	N 18376.22	E 39625.57
STA. 3+93.88	TEMP BRIDGE STA. 51+00	N 18356.61	E 39632.67
STA. 4+04.53	PT	N 18367.22	E 39647.39
STA. 4+49.44	PC	N 18350.11	E 39688.91
STA. 4+76.67	PI	N 18339.73	E 39714.09
STA. 5+03.44	PT	N 18337.73	E 39741.24
STA. 5+16.64	POE	N 18336.76	E 39754.41



PLAN

SCALE 1" = 20'-0

MAINLINE CURVE DATA			
CURVE 1 DATA	CURVE 2 DATA	CURVE 3 DATA	CURVE 4 DATA
△ = 15°02'52.69" RT	△ = 55°30'20.00" RT	△ = 17°53'22.34" RT	△ = 18°11'57.25" LT
D = 33°42'12.43"	D = 40°55'32.24"	D = 38°11'50.09"	D = 33°42'12.43"
R = 170.00'	R = 140.00'	R = 150.00'	R = 170.00'
T = 22.45'	T = 73.67'	T = 23.61'	T = 27.23'
L = 44.65'	L = 135.63'	L = 46.83'	L = 54.00'
E = 1.48	E = 18.20	E = 1.85	E = 2.17
2T-L= 0.25	2T-L= 11.71	2T-L= 0.39	2T-L= 0.46

SIDEWALK CURVE DATA	
CURVE 1 DATA	CURVE 2 DATA
△ = 31°13'53.29" RT	△ = 91°15'21.06" LT
D = 72°28'08.29"	D = 212°41'56.22"
R = 79.06'	R = 26.94'
T = 22.10'	T = 27.53'
L = 43.10'	L = 42.90'
E = 3.03	E = 11.58
2T-L= 1.10	2T-L= 12.16

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83/92

NOTE: ALL SURVEY PERFORMED BY VTRANS AND PROVIDED TO DUBOIS & KING, INC. FOR USE ON THIS PROJECT.
* MAIN TRAVERSE COMPLETED 08/12/96 BY VTRANS (R. GILMAN P.C. & R. MOREAU) IN METRIC AND CONVERTED TO FEET ON 8/13/01 BY R. GILMAN

PLOTTED 2/2/2009

DuBois & King inc.
engineering planning management development

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BARRE CITY	Bridge No. 7
	Log Sta.
Highway No. PROSPECT ST.	Surv. Sta.

PROSPECT ST. OVER STEVENS BRANCH

TIE SHEET

Designed By A. P. GUYETTE	Drawn By S. J. BIJOLLE
Checked By Date	Bridge Design Supervisor
E. P. DETRICK 1/09	J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 8 of 56

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SPECIAL PROVISION (BRIDGE RAILING, ANODIZED ALUMINUM/PEDESTRIAN)
BURNHAM STREET STA. 10+35.58 RT - MAINLINE STA. 3+35.31 LT
(EXTEND 10'-0" ONTO METRO WAY)
BROOKLYN STREET STA. 21+44.59 LT - MAINLINE STA. 3+83.83 RT
(EXTEND TO FACE OF BUILDING)

SPECIAL PROVISION (ALUMINUM GUARDRAIL, ANODIZED 2 RAIL)
MAINLINE STA. 2+35.00 LT - BURNHAM STREET STA. 10+60.38 LT

SPECIAL PROVISION (ALUMINUM APPROACH RAILING, ANODIZED)
BURNHAM STREET STA. 10+35.58 RT - STA. 10+56.12 RT
BROOKLYN STREET STA. 21+44.59 LT - STA. 21+69.16 LT

4 INCH YELLOW LINE
STA. 1+75.00 - STA. 2+45.00 (DOUBLE CENTERLINE)
STA. 2+90.30 - STA. 5+00.00 (DOUBLE CENTERLINE)
BURNHAM STREET STA. 10+24.95 - STA. 10+68.46 (DOUBLE CENTERLINE)

4 INCH WHITE LINE
MAINLINE STA. 1+75.00 LT - BURNHAM STREET STA. 10+68.46 LT
MAINLINE STA. 1+75.00 RT - BROOKLYN STREET STA. 20+49.13 RT
STA. 2+18.75 RT - STA. 3+17.55 RT (DASHED)
STA. 2+22.34 LT - STA. 3+03.78 LT (DASHED)
BURNHAM STREET STA. 10+68.46 RT - MAINLINE STA. 5+00.00 LT
BROOKLYN STREET STA. 20+57.98 LT - MAINLINE STA. 5+00.00 RT

24 INCH STOP BAR
STA. 10+28.09 (BURNHAM STREET)
STA. 20+46.35 (BROOKLYN STREET)

CROSSWALK MARKING
STA. 2+31.90 LT - STA. 2+90.00 LT
STA. 2+56.50 RT - STA. 3+05.50 RT
STA. 4+96.00 LT & RT

LETTER OR SYMBOL
STA. 2+52.50 LT "STOP" (BURNHAM STREET)
STA. 2+99.50 RT "STOP" (BROOKLYN STREET)

RAILROAD CROSSING SYMBOL
STA. 4+37.50 RT (RAILROAD SYMBOL)

PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH
STA. 1+75.00 LT - STA. 2+37.64 LT
STA. 2+50.04 RT - STA. 20+37.29 RT (BROOKLYN STREET)
STA. 20+26.90 LT (BROOKLYN STREET) STA. 20+45.49 LT (BROOKLYN STREET)
STA. 3+64.69 RT - STA. 4+33.23 RT
STA. 3+72.03 LT - STA. 3+89.80 LT
STA. 4+12.88 LT - STA. 4+58.05 LT
STA. 4+66.39 RT - STA. 5+00.00 RT
STA. 4+86.33 LT - STA. 5+00.00 LT

PORTLAND CEMENT CONCRETE SIDEWALK, 8 INCH
STA. 3+41.60 LT - STA. 3+72.03 LT
STA. 3+89.80 LT - STA. 4+12.88 LT
STA. 4+33.23 RT - STA. 4+66.39 RT
STA. 4+58.05 LT - STA. 4+86.33 LT

REMOVAL AND DISPOSAL OF GUARDRAIL
STA. 3+35.24 LT - STA. 3+41.21 LT
STA. 3+68.39 RT - STA. 3+81.68 RT
STA. 10+20.32 RT - STA. 10+56.12 RT (BURNHAM)
STA. 10+20.36 RT - STA. 10+30.11 RT (BURNHAM)
STA. 20+26.52 LT - STA. 121+36.18 LT (BROOKLYN)

DETECTABLE WARNING SURFACE
STA. 2+35.00 LT
STA. 2+55.00 RT
STA. 2+85.00 LT
STA. 3+06.00 RT
STA. 4+96.00 LT
STA. 4+96.00 RT

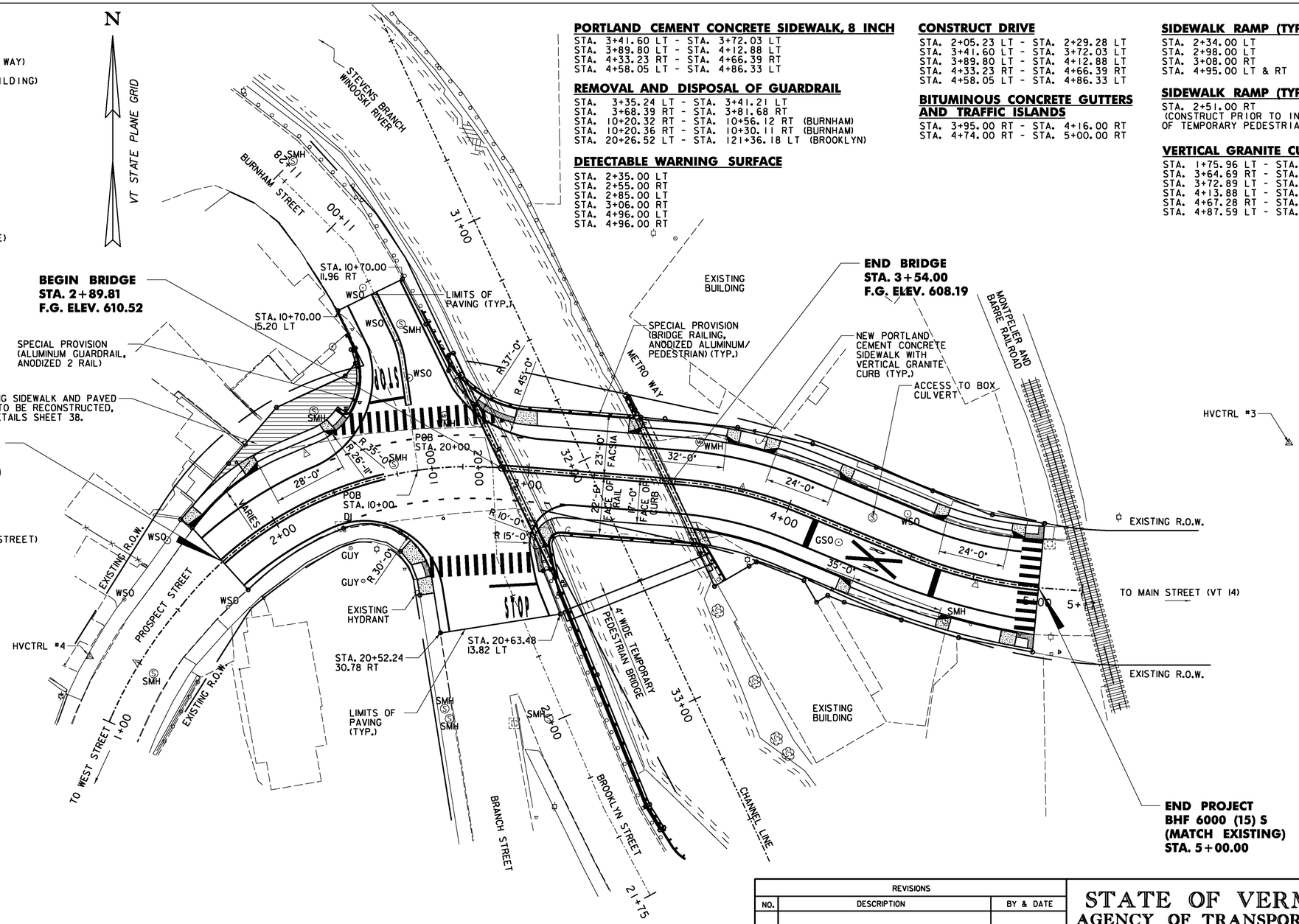
CONSTRUCT DRIVE
STA. 2+05.23 LT - STA. 2+29.28 LT
STA. 3+41.60 LT - STA. 3+72.03 LT
STA. 3+89.80 LT - STA. 4+12.88 LT
STA. 4+33.23 RT - STA. 4+66.39 RT
STA. 4+58.05 LT - STA. 4+86.33 LT

BITUMINOUS CONCRETE GUTTERS AND TRAFFIC ISLANDS
STA. 3+95.00 RT - STA. 4+16.00 RT
STA. 4+74.00 RT - STA. 5+00.00 RT

SIDEWALK RAMP (TYPE 1)
STA. 2+34.00 LT
STA. 2+98.00 LT
STA. 3+08.00 RT
STA. 4+95.00 LT & RT

SIDEWALK RAMP (TYPE 6)
STA. 2+51.00 RT
(CONSTRUCT PRIOR TO INSTALLATION OF TEMPORARY PEDESTRIAN BRIDGE)

VERTICAL GRANITE CURB
STA. 1+75.96 LT - STA. 2+04.36 LT
STA. 3+64.69 RT - STA. 4+32.23 RT
STA. 3+72.89 LT - STA. 3+88.90 LT
STA. 4+13.88 LT - STA. 4+56.96 RT
STA. 4+67.28 RT - STA. 4+94.17 RT
STA. 4+87.59 LT - STA. 4+92.23 LT



LEGEND

EXISTING EDGE OF RIVER	
EXISTING TRAVELED WAY	
EXISTING GUARD RAIL	
STORM DRAIN	
SIDEWALK RAMP	
DETECTABLE WARNING SURFACE	
UTILITY POLE	
TELEPHONE POLE	
TREES	
OVERHEAD LINES	AER E&T
WATER LINE	W
EXISTING SIGN	
SEWER LINE	S
RIGHT OF WAY	
SEWER MANHOLE	SMH
WATER MANHOLE	WMH
WATER SHUTOFF	WSO
GAS SHUTOFF	GSO

EXISTING BRIDGE DATA

SINGLE SPAN STEEL BEAM WITH OPEN GRATE AND PARTIALLY CONCRETE FILLED STEEL DECK AND SIDEWALK, AND STEEL RAILING ON GRANITE ABUTMENTS.

CLEAR WIDTH: 30'-0"
SIDEWALK WIDTH: 5'-6"
FASCIA TO FASCIA WIDTH: 41'-0"

NOTES:

1. THE EXISTING R.O.W. FOR PROSPECT STREET IS APPROXIMATE, AS PROVIDED BY THE CITY OF BARRE.
2. SEE SHEET 36 FOR APPROACH RAIL AND BRIDGE RAIL LAYOUT.
3. FOR DETAILS AND LOCATION OF NEW AND SALVAGED SIGNS SEE SHEETS 15A & 15B.
4. SEE SHEET 10 FOR DRAINAGE AND UTILITY INFORMATION

PLAN
SCALE 1" = 20'-0
20 0 20

PLOTTED 2/2/2009

REVISIONS		
NO.	DESCRIPTION	BY & DATE

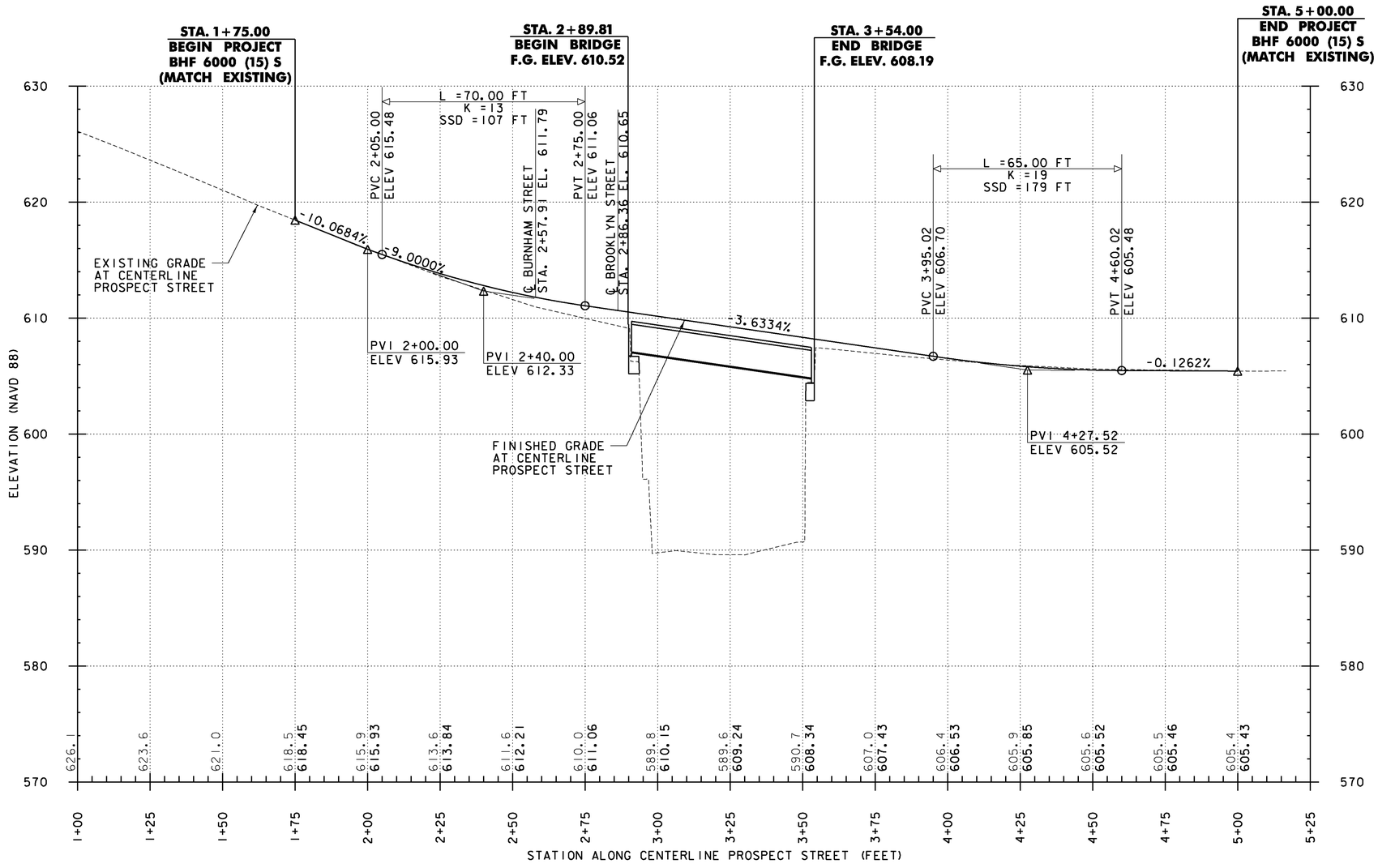
DuBois & King inc.
engineering planning management development

STATE OF VERMONT
AGENCY OF TRANSPORTATION

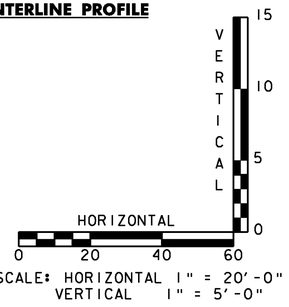
Town Of BARRE CITY	Bridge No. 7
Highway No. PROSPECT ST.	Log Sta. / Surv. Sta.
PROSPECT ST. OVER STEVENS BRANCH	
PLAN SHEET	
Designed By A. P. GUYETTE	Drawn By S. J. BIJOLLE
Checked By E.P. DETRICK Date 1/09	Bridge Design Supervisor J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 9 of 56

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DROP INLET
4+90 RT
18" CPEP
4+87 LT to 4+90 RT.
DROP INLET
4+90 RT
18" CPEP
4+87 LT to 4+90 RT.



CENTERLINE PROFILE



SCALE: HORIZONTAL 1" = 20'-0"
VERTICAL 1" = 5'-0"

NOTE: GRADES SHOWN TO THE NEAREST TENTH REPRESENT EXISTING GROUND ELEVATION ALONG THE PROPOSED CENTERLINE.
GRADES SHOWN TO THE NEAREST HUNDREDTH REPRESENT FINISHED GRADE ELEVATION ALONG THE PROPOSED CENTERLINE.

DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83/92

PLOTTED 2/2/2009 PLOTTED 2/2/2009

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engineering planning management development

STATE OF VERMONT
AGENCY OF TRANSPORTATION

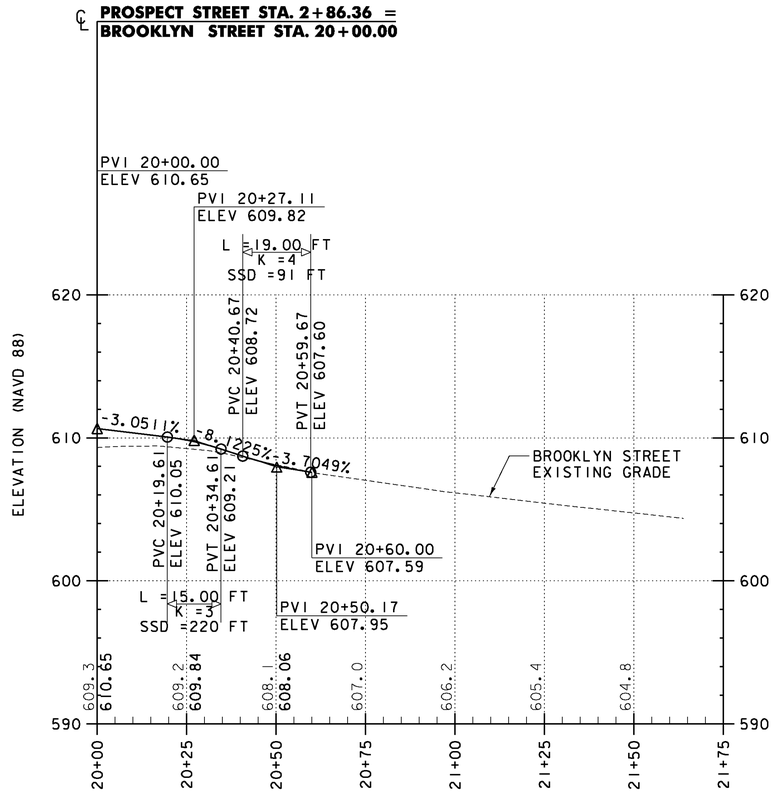
Town Of BARRE CITY	Bridge No. 7
Highway No. PROSPECT ST.	Log Sta. / Surv. Sta.

PROSPECT ST. OVER STEVENS BRANCH

PROFILE

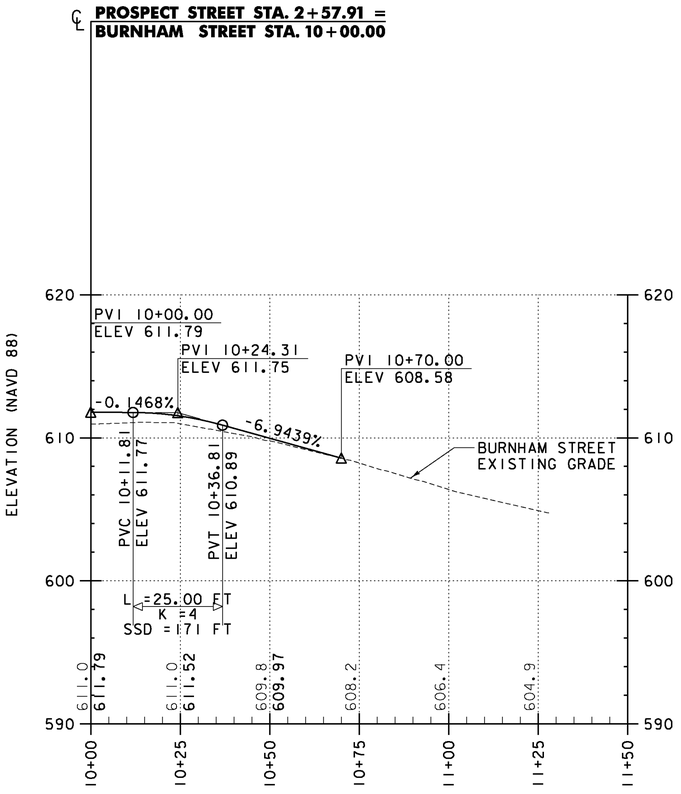
Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By E. P. DETRICK Date 1/09	Bridge Design Supervisor J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 11 of 56

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STATION ALONG CENTERLINE BROOKLYN STREET (FEET)

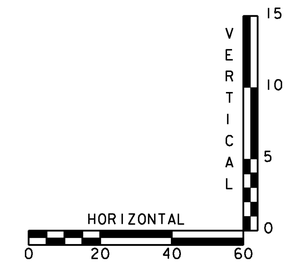
CENTERLINE PROFILE



STATION ALONG CENTERLINE BURNHAM STREET (FEET)

CENTERLINE PROFILE

NOTE: GRADES SHOWN TO THE NEAREST TENTH REPRESENT EXISTING GROUND ELEVATION ALONG THE PROPOSED CENTERLINE.
GRADES SHOWN TO THE NEAREST HUNDREDTH REPRESENT FINISHED GRADE ELEVATION ALONG THE PROPOSED CENTERLINE.



SCALE: HORIZONTAL 1" = 20'-0"
VERTICAL 1" = 5'-0"

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83/92

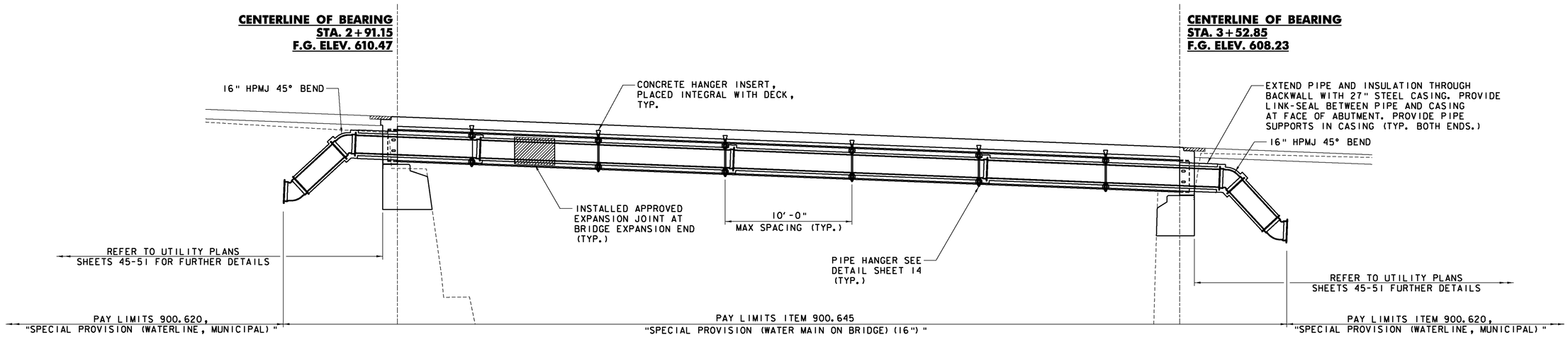
PLOTTED 2/2/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

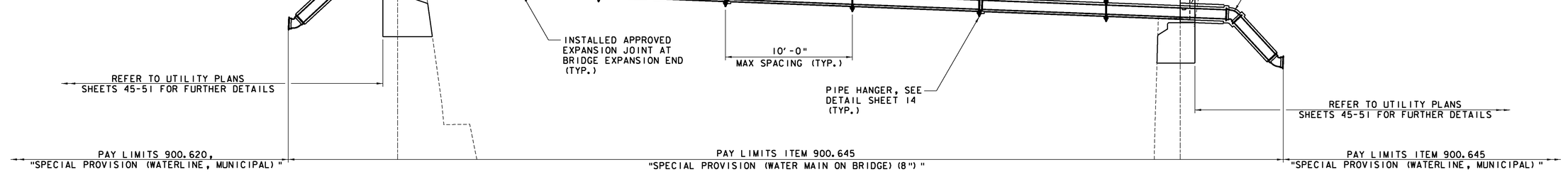
Town Of BARRE CITY	Bridge No. 7
Highway No. PROSPECT ST.	Log Sta. / Surv. Sta.
PROSPECT ST. OVER STEVENS BRANCH	
SIDE STREET PROFILES	
Designed By A. P. GUYETTE	Drawn By S. J. BIJOLLE
Checked By E. P. DETRICK Date 1/09	Bridge Design Supervisor J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 12 of 56

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16" WATERLINE ELEVATION

SCALE 1/4" = 1'-0



8" WATERLINE ELEVATION

SCALE 1/4" = 1'-0

MJ = MECHANICAL JOINT
HPMJ = HIGH PRESSURE MECHANICAL JOINT

NOTES:
1. PAYMENT FOR ITEM 900.645, "SPECIAL PROVISION (WATER MAIN ON BRIDGE)" SHALL EXTEND TO AND INCLUDE LOWER 45° FITTING FOR BOTH PIPES. ALL WORK ASSOCIATED WITH THE WATER MAINS BEYOND THE 45° FITTING, EXCEPT FOR ISOLATION VALVES, SHALL BE PAID FOR UNDER ITEM 900.645, "SPECIAL PROVISION (WATERLINE, MUNICIPAL)". THE ISOLATION VALVES (2 EACH PER PIPE, 4 TOTAL) SHALL BE PAID FOR UNDER ITEM 629.27, "GATE VALVE WITH VALVE BOX (8")" AND 900.620, "SPECIAL PROVISION (BUTTERFLY VALVUE WITH VALVE BOX) (16")".

2. THE CONCRETE HANGER INSERTS SHALL BE "ANVIL INTERNATIONAL IRON CROSS DESIGN" OR EQUAL APPROVED BY THE VTRANS STRUCTURES ENGINEER. INSERT SHALL BE PLACED INTEGRALLY WITH THE CONRETE DECK. PAYMENT SHALL BE INCLUDED IN THE UNIT BID FOR 900.645, SPECIAL PROVISION (WATER MAIN ON BRIDGE) (16").

PLOTTED 2/2/2009

DuBois & King inc.
engineering planning management development

STATE OF VERMONT
AGENCY OF TRANSPORTATION

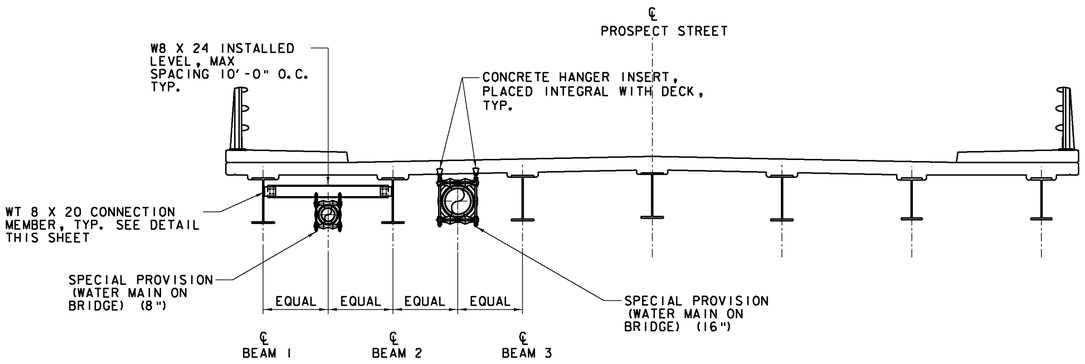
Town Of BARRE CITY	Bridge No. 7
	Log Sta.
Highway No. PROSPECT ST.	Surv. Sta.

PROSPECT ST. OVER STEVENS BRANCH

BRIDGE WATERLINE PROFILES

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By E. P. DETRICK Date 1/09	Bridge Design Supervisor J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 13 of 56

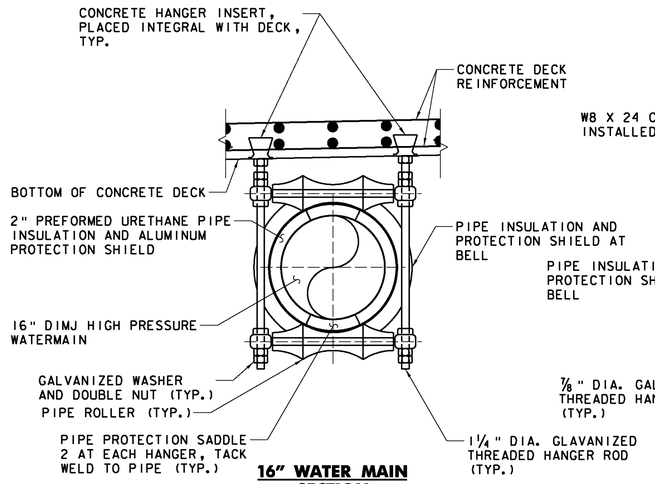
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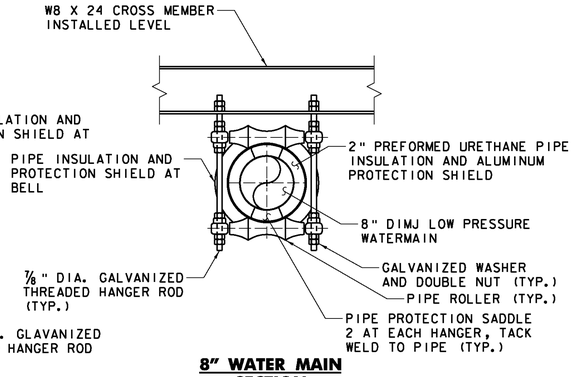
BRIDGE SECTION

SCALE 1/4" = 1'-0

NOTE:
SEE FRAMING PLAN, SHEET 28 FOR LOCATIONS OF THE WATERLINE SUPPORTS.



16" WATER MAIN SECTION

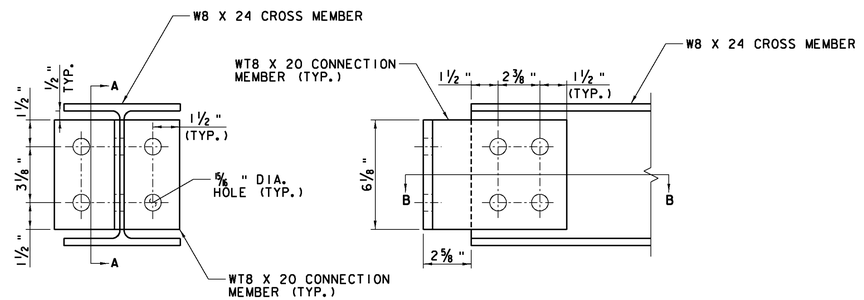


8" WATER MAIN SECTION

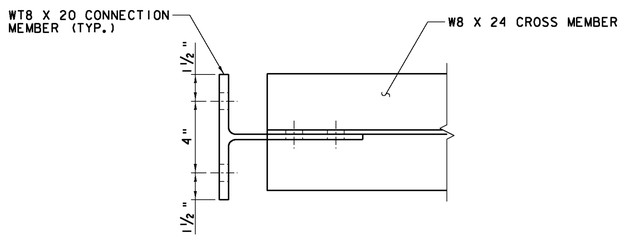
SCALE 3" = 1'-0

SCALE 3" = 1'-0

NOTE:
1. FINAL LOCATION OF PIPE SUPPORTS SHALL BE FIELD LOCATED IN RELATION TO THE PIPE JOINTS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.



SECTION A–A



SECTION B–B

CONNECTION PLATE AND CROSS MEMBER DETAIL

SCALE 3" = 1'-0

NOTES:
1. BOLTED FIELD CONNECTIONS SHALL BE MADE WITH AASHTO M 164M ⅞" HIGH-STRENGTH BOLTS, TYPE 3.
2. CONNECTION HOLES IN THE W30 WEB SHALL BE FIELD DRILLED.

WATER LINE INSTALLATION NOTES:

1. THE WATER LINE CONSTRUCTION SHALL TAKE PLACE IN ACCORDANCE WITH INFORMATION SHOWN ON THESE PLANS, THE NON-PARTICIPATING UTILITY PLANS, AND THE VTRANS STANDARD SPECIFICATIONS FOR CONSTRUCTION INCLUDING ALL SUPPLEMENTAL AND SPECIAL PROVISIONS.
2. ALL WATER LINES ON THE BRIDGE SHALL USE RESTRAINED MECHANICAL JOINTS. THE LOW PRESSURE PIPE SHALL USE MEGA-LUG SERIES 1100 RETAINER GLANDS OR APPROVED EQUAL. THE HIGH PRESSURE PIPE SHALL USE MEGA-LUG SERIES 1100 TDM RETAINER GLANDS OR APPROVED EQUAL.
3. A MANUAL AIR RELEASE SHALL BE INSTALLED AT THE HIGH POINT OF BOTH WATER LINES ON THE BRIDGE. THE COSTS SHALL BE INCIDENTAL TO THE WATER MAIN ON BRIDGE ITEMS.
4. THE 16" AND 8" WATER LINES SUSPENDED FROM THE BRIDGE, PASSING THROUGH THE BACKWALLS AND EXTENDING DOWNWARD AT 45°, UP TO AND INCLUDING THE SECOND LOWER 45° FITTING, SHALL BE CONSIDERED PART OF THE PARTICIPATING PROJECT COSTS. ALL PIPE, FITTINGS, JOINT RESTRAINTS, HARDWARE, BRIDGE HANGERS, CONCRETE INSERTS, SLEEVES, PIPE SUPPORTS, LINK-SEAL, INSULATION AND OTHER ITEMS REQUIRED FOR INSTALLATION OF THE WATER LINES, EXCLUDING THE HEAT TRACE AND WT8X20 CONNECTION MEMBERS AND W8X24 CROSS MEMBERS, SHALL BE PAID FOR UNDER ITEM 900.645, SPECIAL PROVISION (WATER MAIN ON BRIDGE) (16") AND ITEM 900.645, SPECIAL PROVISION (WATER MAIN ON BRIDGE) (8") RESPECTIVELY. THE WT8X20 CONNECTION MEMBERS AND W8X24 CROSS MEMBERS SHALL BE PAID FOR AS ITEM 506.50, "STRUCTURAL STEEL, ROLLED BEAM". ALL OTHER WATERLINE WORK, INCLUDING NON-PARTICIPATING AREAS AND THE HEAT TRACE SHALL BE PAID FOR UNDER ITEM 900.645, SPECIAL PROVISION (WATERLINE, MUNICIPAL).
5. CONCRETE AND STEEL REINFORCEMENT USED IN THE PIPE ANCHOR DETAIL, SHOWN ON THE NON-PARTICIPATING UTILITY SHEETS, SHALL BE CONSIDERED A PARTICIPATING COST AND SHALL BE PAID FOR UNDER ITEM 541.25, "CONCRETE, CLASS B" AND ITEM 507.15, "REINFORCING STEEL". REINFORCEMENT IS NOT INCLUDED ON REINFORCING STEEL SCHEDULE, BUT SHALL BE FABRICATED ACCORDING TO NON-PARTICIPATING UTILITY PLANS.

PLOTTED 2/2/2009

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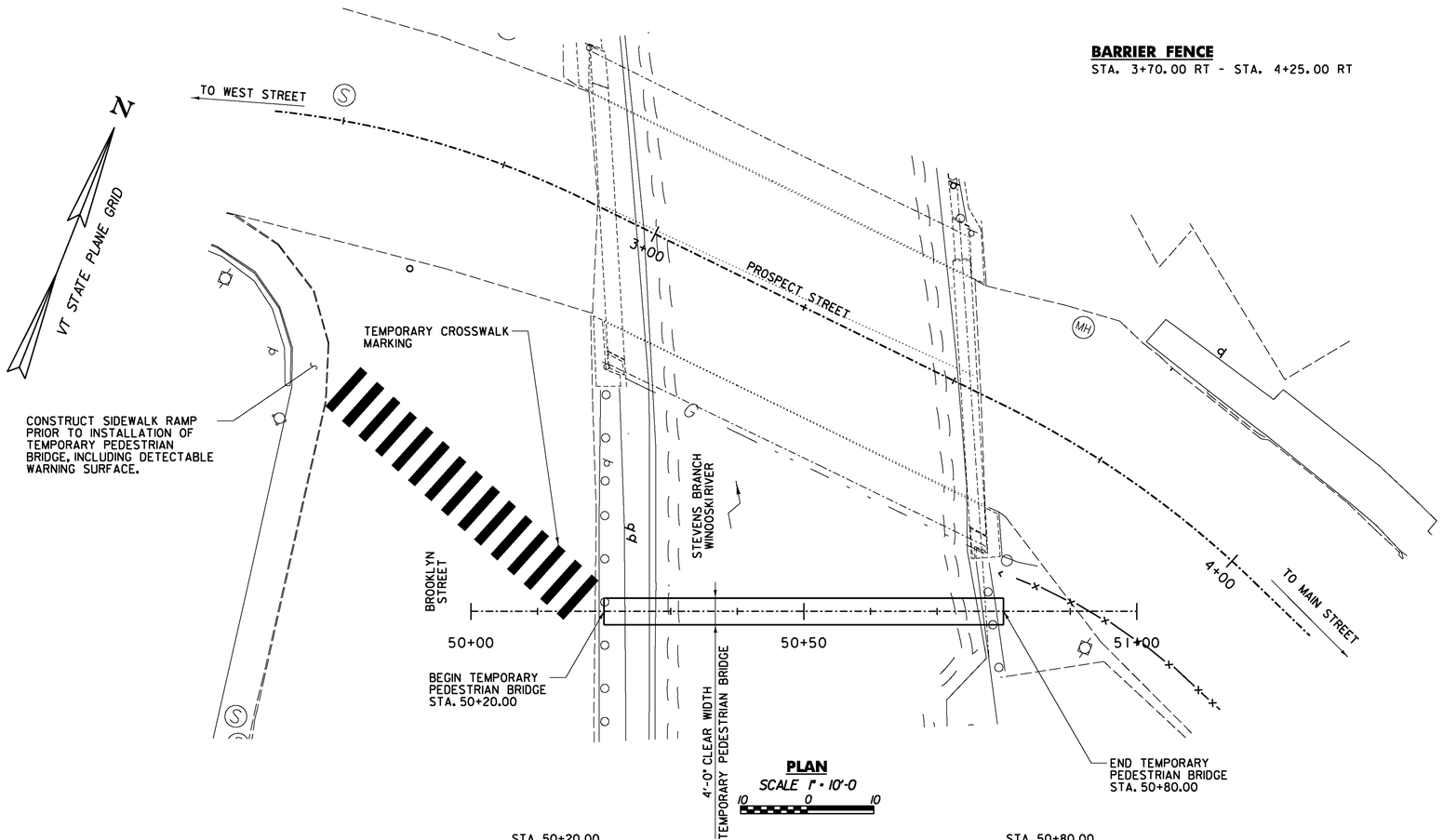
Town Of BARRE CITY	Bridge No. 7
Highway No. PROSPECT ST.	Log Sta. / Surv. Sta.

PROSPECT ST. OVER STEVENS BRANCH

BRIDGE WATERLINE DETAILS

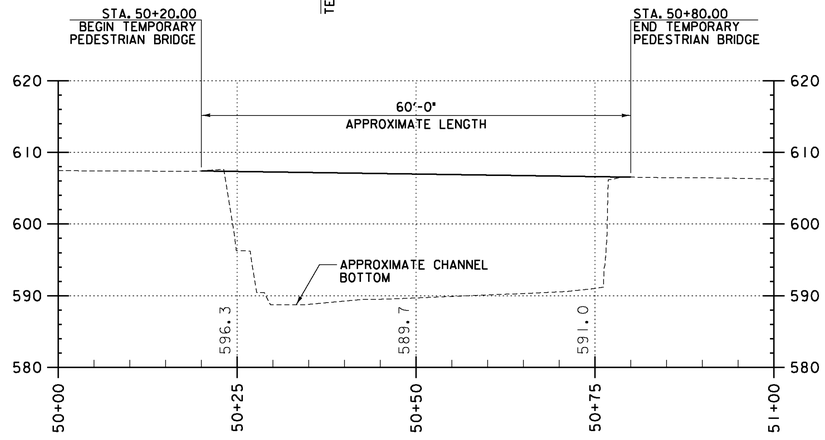
Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By E. P. DETRICK Date 1/09	Bridge Design Supervisor J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 14 of 56

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

BARRIER FENCE
STA. 3+70.00 RT - STA. 4+25.00 RT



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

NOTES:

1. THE SIDEWALK RAMP TYPE 6 AT STATION 2+51.00 RT SHALL BE CONSTRUCTED PRIOR TO INSTALLATION OF THE TEMPORARY PEDESTRIAN BRIDGE.
2. PEDESTRIAN ACCESS OVER THE STEVENS BRANCH SHALL BE MAINTAINED AT ALL TIMES THROUGHOUT THE PROJECT. THE TEMPORARY BRIDGE SHALL BE INSTALLED PRIOR TO CLOSING THE PROSPECT STREET BRIDGE, AND SHALL BE REMOVED AFTER THE PROPOSED BRIDGE HAS BEEN OPENED TO PEDESTRIAN TRAFFIC.
3. THE TEMPORARY PEDESTRIAN BRIDGE SHALL BE HAVE A CLEAR WIDTH OF 4-FEET.
4. ALL TEMPORARY BRIDGE LIMITS SHALL BE WITHIN THE EXISTING OR TEMPORARY R.O.W. LIMITS.
5. THE LOW CHORD OF THE TEMPORARY PEDESTRIAN BRIDGE SHALL BE AT OR ABOVE THE ELEVATION OF THE EXISTING BRIDGE LOW CHORD.
6. ALL COSTS ASSOCIATED WITH THE TEMPORARY PEDESTRIAN BRIDGE SHALL BE PAID UNDER ITEM 528.12 "TEMPORARY PEDESTRIAN BRIDGE".
7. FOLLOWING INSTALLATION OF THE TEMPORARY PEDESTRIAN BRIDGE, THE CONTRACTOR SHALL REMOVE A PORTION OF THE GUARDRAIL AT THE WEST END OF THE TEMPORARY BRIDGE TO ALLOW PEDESTRIANS TO ACCESS THE BRIDGE.
8. THE CONTRACTOR SHALL ERECT ORANGE BARRIER FENCE TO DELINEATE THE SIDEWALK ON THE EAST SIDE OF THE RIVER FROM THE TEMPORARY PEDESTRIAN BRIDGE TO APPROXIMATELY STA. 4+25 RT. THE PURPOSE OF THE FENCE SHALL BE TO ISOLATE PEDESTRIANS FROM CONSTRUCTION ACTIVITY. THE FENCE SHALL BE PAID FOR UNDER ITEM 653.50 "BARRIER FENCE".
9. THE CONTRACTOR SHALL INSTALL A TEMPORARY CROSSWALK ON THE WEST SIDE OF THE RIVER, SPANNING FROM THE PROPOSED RAMP AT STA. 2+51.00 RT ON THE CORNER OF BRANCH STREET AND PROSPECT STREET TO THE TEMPORARY PEDESTRIAN BRIDGE. THE TEMPORARY CROSSWALK SHALL BE INSTALLED PRIOR TO OPENING THE TEMPORARY PEDESTRIAN BRIDGE. FOLLOWING THE REMOVAL OF THE TEMPORARY PEDESTRIAN BRIDGE, THE TEMPORARY CROSSWALK SHALL BE REMOVED. THIS WORK SHALL BE PAID FOR UNDER ITEM 646.700, "TEMPORARY CROSSWALK MARKING".

LEGEND

EXISTING EDGE OF RIVER	
EXISTING TRAVELED WAY	
EXISTING GUARD RAIL	
STORM DRAIN	
SIDEWALK RAMP	
UTILITY POLE	
TELEPHONE POLE	
TREES	
OVERHEAD LINES	
WATER LINE	W
EXISTING SIGN	
SEWER LINE	S
RIGHT OF WAY	
SEWER MANHOLE	SMH
WATER MANHOLE	WMH
WATER SHUTOFF	WSO
GAS SHUTOFF	GSO

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83/92

PLOTTED 2/2/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BARRE CITY	Bridge No. 7
Highway No. PROSPECT ST.	Log Sta. / Surv. Sta.
PROSPECT ST. OVER STEVENS BRANCH	
TEMPORARY PEDESTRIAN BRIDGE	
Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By E. P. DETRICK Date 1/09	Bridge Design Supervisor J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 15 of 56

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REMOVING SIGNS

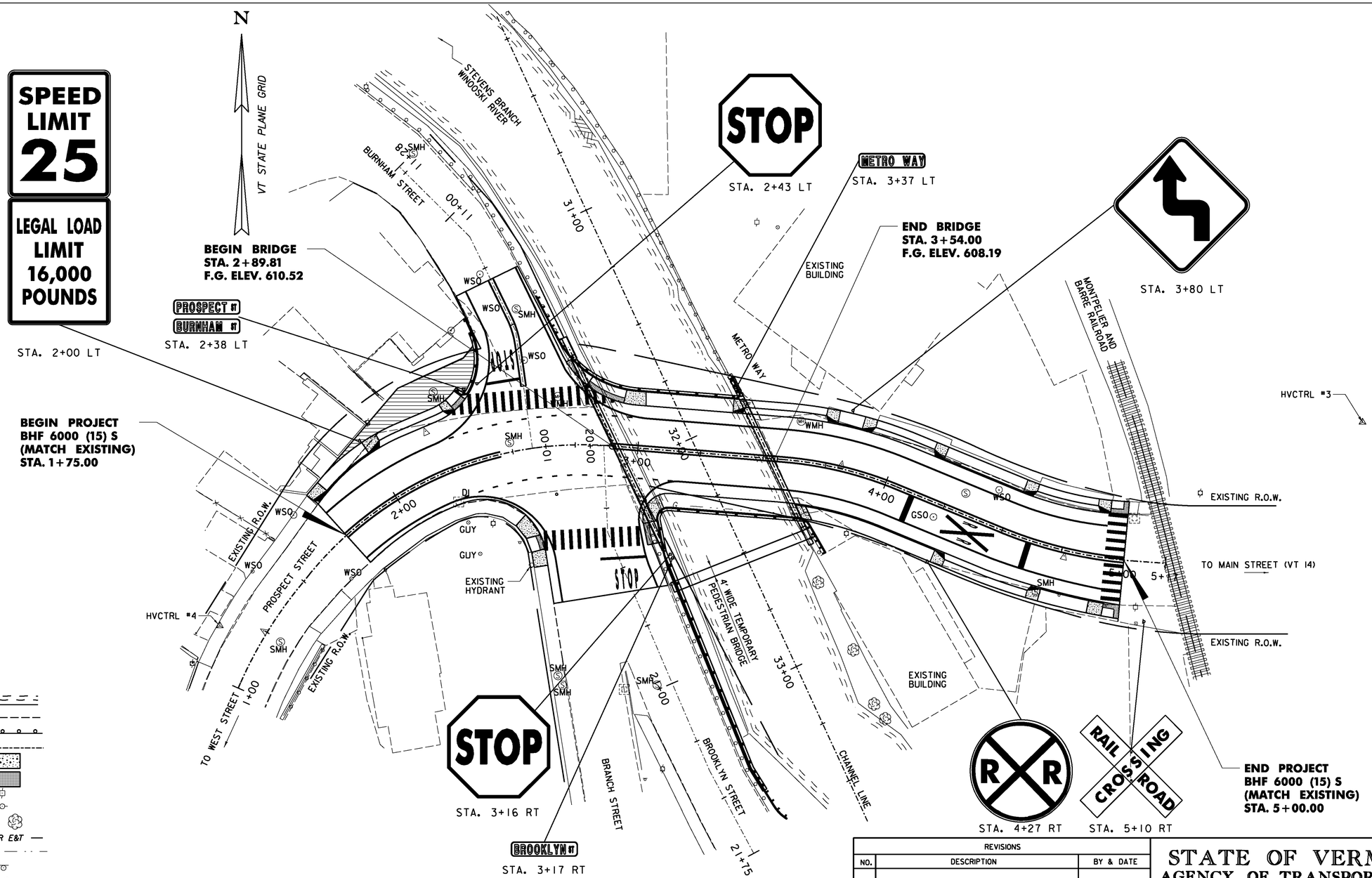
STA. 2+46 LT "STOP"
STA. 2+80 LT "25 MPH" "LOAD LIMIT"
STA. 2+80 LT "PROSPECT STREET"
STA. 2+80 LT "BURNHAM STREET"
STA. 3+02 RT "BROOKLYN STREET"
STA. 3+09 RT "STOP"
STA. 3+25 LT "BRIDGE PLAQUE"
(SALVAGE PLAQUE TO CITY OF BARRE)
STA. 3+43 LT "METRO WAY"
STA. 3+43 LT "CURVE WARNING"
STA. 4+78 RT "RAIL ROAD CROSSING"
STA. 4+95 RT "YIELD TO PEDESTRIANS"

ERECTING SALVAGED SIGNS

STA. 2+38 LT "PROSPSECT STREET"
STA. 2+38 LT "BURNHAM STREET"
STA. 3+17 RT "BROOKLYN STREET"
STA. 3+37 LT "METRO WAY"

TRAFFIC SIGNS, TYPE A

STA. 2+43 LT "STOP"
STA. 2+00 LT "25 MPH" "LOAD LIMIT"
STA. 3+16 RT "STOP"
STA. 3+80 LT "CURVE WARNING"
STA. 4+27 RT "RAIL ROAD CROSSING"
STA. 5+10 RT "RAIL ROAD CROSSBUCKS"



LEGEND

EXISTING EDGE OF RIVER
EXISTING TRAVELED WAY
EXISTING GUARD RAIL
STORM DRAIN
SIDEWALK RAMP
DETECTABLE WARNING SURFACE
UTILITY POLE
TELEPHONE POLE
TREES
OVERHEAD LINES — AER E&T —
WATER LINE — W —
EXISTING SIGN
SEWER LINE — S —
RIGHT OF WAY
SEWER MANHOLE SMH
WATER MANHOLE WMH
WATER SHUTOFF WSO
GAS SHUTOFF GSO

NOTES:

1. FOR DETAILS AND LOCATION OF NEW AND SALVAGED SIGNS SEE SHEET 15B.

PLAN
SCALE 1" = 20'-0
20 0 20

PLOTTED 2/11/2009

REVISIONS		
NO.	DESCRIPTION	BY & DATE

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BARRE CITY	Bridge No. 7
Highway No. PROSPECT ST.	Log Sta. / Surv. Sta.

PROSPECT ST. OVER STEVENS BRANCH
TRAFFIC SIGN LAYOUT SHEET

Designed By A. P. GUYETTE	Drawn By S. J. BIJOLLE
Checked By Date E.P. DETRICK 10/08	Bridge Design Supervisor J. W. TUCKER Date 10/08
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
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STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (in) lb/ft 1.75 1.88	2.0 2.16	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) lb/ft 3.0 1.3	4.0 1.7	4.0 MOD 1.7	FOUND-ATION	TUBULAR STEEL Ø (in) lb/ft 3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
											OPTION ITEMS																									
STA. 2+00 LT	SPEED LIMIT 25 / LEGAL LOAD LIMIT 16,000 POUNDS	1	24	30	5.00						1			X																			R2-1		E-142
		1	24	30	5.00																											VR-017		E-141
STA. 2+38 LT	PROSPECT ST / BURNHAM ST						2				1			X																					
STA. 2+43 LT	STOP	1	24	24	4.00						1			X																			R1-1		E-143
STA. 3+16 RT	STOP	1	24	24	4.00						1			X																			R1-1		E-143
STA. 3+17 RT	BROOKLYN ST						1				1			X																					
STA. 3+80 LT		1	24	24	4.00						1			X																			W1-3		
STA. 3+37 LT	METRO WAY						1				1			X																					
STA. 4+27 RT	RAIL ROAD CROSSING	1	24	24	4.00						1			X																			W10-1		E-190
STA. 5+10 RT	RAIL ROAD CROSSING	1	36	36	6.00						1			X																			R15-1		E-190
												FT	FT	FT 135.0	FT	FT	FT		EA	LB	LB	LB		LB	LB	LB	LB								
TOTALS		SF 32.00	SF	EA. 4	SF							FT 135.0			FT					LB			EA.	LB				EA.	EA.	LB				

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S 'SIGN POST DESIGN GUIDELINE.'

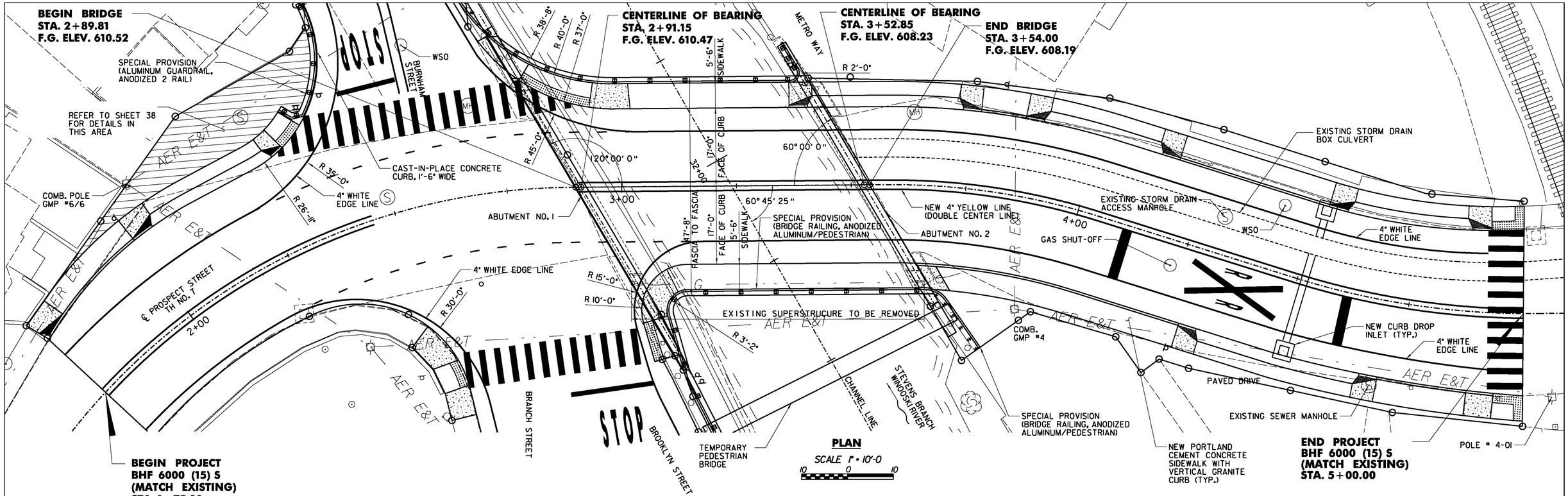
PLOTTED 2/2/2009

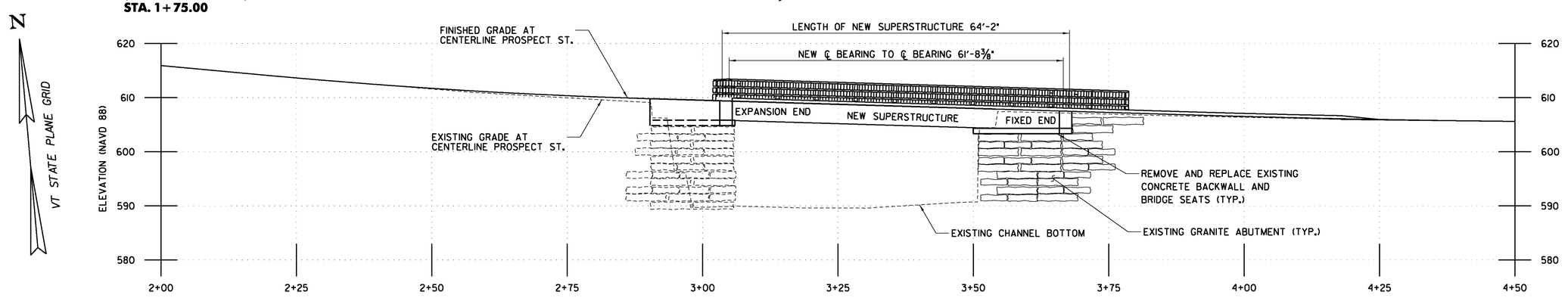
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STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BARRE CITY	Bridge No. 7
Highway No. PROSPECT ST.	Log Sta. / Surv. Sta.
PROSPECT ST. OVER STEVENS BRANCH	
TRAFFIC SIGN SUMMARY SHEET	
Designed By A. P. GUYETTE	Drawn By S.J. BIJOLLE
Checked By E. P. DETRICK Date 1/09	Bridge Design Supervisor J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
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ELEVATION

HORIZONTAL AND VERTICAL
SCALE 1" = 10'-0
10 0 10

NOTE: REFER TO SHEET 36 FOR APPROACH RAILING LENGTHS

LEGEND

- EXISTING EDGE OF RIVER
- EXISTING TRAVELED WAY
- EXISTING GUARD RAIL
- EXISTING STORM DRAIN
- SIDEWALK RAMP
- UTILITY POLE
- HYDRANT
- TREES
- OVERHEAD LINES (AER E&T)
- EXISTING WATER LINE (W)
- EXISTING SIGN
- EXISTING CATCH BASIN
- EXISTING SEWER MANHOLE (S)
- EXISTING WATER MANHOLE (WS)
- EXISTING WATER SHUTOFF (WSO)
- DETECTABLE WARNING SURFACE
- PROPOSED CATCH BASIN

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83/92

PLOTTED 2/2/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BARRE CITY	Bridge No. 7
Highway No. PROSPECT ST.	Log Sta. / Surv. Sta.

PROSPECT ST. OVER STEVENS BRANCH
PLAN AND ELEVATION

Designed By A. P. GUYETTE	Drawn By S. J. BIJOLLE
Checked By E. P. DETRICK Date 1/09	Bridge Design Supervisor J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 16 of 56

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1.1 PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF REPLACEMENT OF THE EXISTING SUPERSTRUCTURE WITH A NEW CAST-IN-PLACE CONCRETE/STEEL BEAM COMPOSITE SUPERSTRUCTURE, WITH CAST-IN-PLACE ABUTMENT CAPS, AND CAST-IN-PLACE SIDEWALKS. ASSOCIATED APPROACH WORK, NEW SIDEWALKS, CULVERTS AND DRAINAGE DI'S, THE REMOVAL AND REPLACEMENT OF THE EXISTING GUARDRAIL AND RECONSTRUCTION OF THE SIDESLOPES ALONG THE IMPACTED ROADWAY.

THE PROJECT IS LOCATED ON PROSPECT STREET (T.H. NO. 7), APPROXIMATELY 603 FEET WEST OF THE INTERSECTION OF MAIN STREET (VT 14) AND SPANS THE STEVENS BRANCH OF THE WINOOSKI RIVER. PROSPECT STREET IS A PAVED STREET IN THE CITY OF BARRE. PRIOR TO CONSTRUCTION, A TEMPORARY PEDESTRIAN BRIDGE WILL BE INSTALLED UPSTREAM OF THE EXISTING BRIDGE AND WILL BE USED TO MAINTAIN PEDESTRIAN TRAFFIC DURING CONSTRUCTION. THE TEMPORARY PEDESTRIAN BRIDGE WILL HAVE A TOTAL LENGTH OF APPROXIMATELY 60 FEET AND WILL BE REMOVED UPON COMPLETION OF CONSTRUCTION. THIS PROJECT IS EXPECTED TO LAST ONE CONSTRUCTION SEASON.

THE MATERIAL TO BE EXCAVATED FROM THE SITE WILL INCLUDE EXISTING BITUMINOUS CONCRETE SURFACE AND SUBBASE WITHIN THE EXISTING ROADWAY AS WELL AS EXCAVATION FOR THE PLACEMENT OF THE NEW ABUTMENT CAPS. ADDITIONAL EXCAVATION WILL BE NEEDED FOR THE TEMPORARY ABUTMENTS USED TO SUPPORT THE TEMPORARY PEDESTRIAN BRIDGE. STOCKPILING OF ANY EXCAVATED MATERIAL TO BE REUSED IS EXPECTED TO TAKE PLACE WITHIN THE PROJECT LIMITS. LIKEWISE, STOCKPILING OF ANY NEW MATERIAL TO BE USED IS EXPECTED TO TAKE PLACE WITHIN THE PROJECT LIMITS. THE LIMIT OF CONSTRUCTION AND ASSOCIATED MAXIMUM SOIL DISTURBANCE AREA FOR THE ROADWAY AND BRIDGE CONSTRUCTION IS APPROXIMATELY 0.33 ACRES. ADDITIONALLY THERE WILL BE APPROXIMATELY 0.01 ACRES OF DISTURBED SOIL ASSOCIATED WITH THE CONSTRUCTION, USE, AND REMOVAL OF THE TEMPORARY PEDESTRIAN BRIDGE. THE TOTAL FOOTPRINT AREA OF DISTURBED SOILS IS CALCULATED TO BE 0.34 ACRES.

THE ONLY EXISTING ENVIRONMENTAL RESOURCE ELEMENT IN THE VICINITY OF THE PROJECT IS THE STEVENS BRANCH. THERE ARE NO KNOWN SENSITIVE ENVIRONMENTAL AREAS IN CLOSE PROXIMITY TO THIS PROJECT. THERE ARE NO CRITICAL HABITATS, OTHER THAN THE STEVENS BRANCH, WHICH NEED SPECIAL ATTENTION AND PROTECTION DURING OR AFTER CONSTRUCTION. THE BANKS OF THE STEVENS BRANCH WITHIN THE PROJECT LIMITS ARE A GRANITE BLOCK WALL EXTENDING FROM THE EXISTING GRADES OR ABUTMENTS TO THE ELEVATION OF THE WATER WITHIN THE RIVER.

1.2 SITE INVENTORY

1.2.1 OFFSITE DRAINAGE CHARACTERISTICS

THIS PROJECT SITE IS LOCATED IN AN URBAN, HIGHLY TRAVELED AREA OF THE CITY OF BARRE. THE AREA SURROUNDING THE PROJECT IS MODERATELY SLOPED WITH ESTABLISHED, GRASS LAWNS, AND PAVED AND GRAVEL PARKING LOTS. MUCH OF THE RUNOFF FROM THE SURROUNDING TERRAIN DRAINS INTO CATCH BASINS LOCATED THROUGHOUT THE PROJECT, OR DIRECTLY INTO THE STEVENS BRANCH. THE CATCH BASINS ARE SITUATED ALONG THE ROADWAYS TYPICALLY AT LOW POINTS OR CURB CUTS. THE CATCH BASINS DRAIN DIRECTLY INTO THE STEVENS BRANCH OR INTO OTHER DRAINAGE STRUCTURES.

1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

THE PROJECT SPANS THE STEVENS BRANCH WITH MAJOR CONSTRUCTION TAKING PLACE ON BOTH SIDES OF THE RIVER. THERE ARE NO OTHER WETLANDS WITHIN THE PROJECT LIMITS OR SURROUNDING AREA. THE PRIMARY OBJECTIVE FOR THIS EROSION PROTECTION AND SEDIMENT CONTROL PLAN WILL BE TO PREVENT THE MOBILIZATION AND TRANSPORT OF SEDIMENT INTO THE STEVENS BRANCH.

1.2.3 TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES

THE TOPOGRAPHY OF THE PROJECT AREA CONSISTS OF MODERATE SLOPES AND ROLLING HILLS. SEVERAL PERMANENT RESIDENTS AND BUSINESSES ARE LOCATED WITHIN THE PROJECT LIMITS AND NEAR THE BRIDGE. OVERHEAD AND UNDERGROUND UTILITIES ARE LOCATED ALONG PROSPECT STREET WITH THE NECESSARY RELOCATIONS BEING PERFORMED AS PART OF THIS PROJECT.

1.2.4 VEGETATION

THE PROJECT AREA CONSISTS OF GRASSY LAWNS. IMPACTS TO VEGETATED AREAS WILL BE LIMITED TO THE SIDE SLOPES OF THE ROAD, LOCATION OF NEW SIDEWALK AREAS ADJACENT TO THE BRIDGE AND THE AREA OF THE TEMPORARY PEDESTRIAN BRIDGE. FOLLOWING THE COMPLETION OF CONSTRUCTION, THE TEMPORARY PEDESTRIAN BRIDGE AND ASSOCIATED FILL WILL BE REMOVED AND THE VEGETATION WILL BE REESTABLISHED USING STANDARD SEED AND MULCH PRACTICES.

1.2.5 SOILS

THE SOIL CONSERVATION SERVICE HAS MAPPED THE SOILS THROUGHOUT WASHINGTON COUNTY. THE SOIL TYPE IDENTIFIED FOR THIS PROJECT IS URBAN LAND - UPIDSAMMENTS COMPLEX, OCCASIONALLY FLOODED WITH A PARENT GROUP BEING DESCRIBED AS MISCELLANEOUS UNITS. THIS SITE IS LISTED AS NOT HIGHLY ERODIBLE. NO SUBSURFACE INVESTIGATIONS WERE PERFORMED FOR THE PROJECT.

1.2.6 SENSITIVE RESOURCE AREAS

THERE ARE NO KNOWN SENSITIVE AREAS THAT NEED TO BE PROTECTED, OTHER THAN THE STEVENS BRANCH. NO THREATENED AND ENDANGERED SPECIES, PRIME AGRICULTURAL SOILS, HISTORICAL OR ARCHEOLOGICAL SITES, WETLANDS OR OTHER CRITICAL HABITATS EXIST WITHIN THE PROJECT AREA.

1.3 RISK EVALUATION

SHOULD CHANGES PRIOR TO OR DURING CONSTRUCTION RESULT IN ONE OR MORE ACRES OF EARTH DISTURBANCE OR SHOULD THE PROJECT BECOME PART OF A LARGER PLAN OF DEVELOPMENT THEN THE SELECTED CONTRACTOR WILL BE RESPONSIBLE FOR ADDITIONAL PERMITTING WITH VANR VIA FILING OF THE APPROPRIATE NOTICE OF INTENT UNDER THE CONSTRUCTION GENERAL PERMIT PROCESS.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

TO MINIMIZE THE POTENTIAL FOR STORM WATER RUNOFF TO TRANSPORT SEDIMENT INTO THE RIVER, SEVERAL KEY EROSION CONTROL DEVICES AND GENERAL PRACTICES WILL BE USED. DETAILS OF THE DEVICES AND THE LOCATION OF THEIR PLACEMENT CAN BE FOUND IN THE EROSION CONTROL PLANS AND DETAILS. ALL EROSION CONTROL MEASURES SHALL BE PLACED IN ACCORDANCE WITH THE EROSION CONTROL DETAILS IN THESE PLANS.

1.4.1 MARK SITE BOUNDARIES

MARKING THE SITE BOUNDARIES WILL HELP TO LIMIT THE AREA OF SOIL DISTURBANCE. THE SITE BOUNDARY SHALL BE MARKED WITH PROJECT DEMARCATION FENCE.

1.4.2 LIMIT DISTURBANCE AREA

LIMITING THE DISTURBANCE AREA WILL HELP TO REDUCE THE POTENTIAL FOR SEDIMENT TRANSPORT FROM THE SITE. THE AREA OF DISTURBANCE SHALL BE LIMITED BY PHASING THE CONSTRUCTION WHEN APPROPRIATE, BY ESTABLISHING VEGETATION IN AREAS IMMEDIATLY FOLLOWING GRADING AND BY MULCHING STOCKPILED EARTHEN MATERIALS. THE EXISTING MAINLINE WILL BE CLOSED DURING CONSTRUCTION; THEREFORE IT CAN BE USED AS A STAGING AND STOCKPILE AREA. THESE AREAS WILL BE COMPLETELY WITHIN THE PROJECT LIMITS AND WILL UTILIZE THE TEMPORARY EROSION CONTROL MEASURES CALLED FOR.

1.4.3 STABILIZE CONSTRUCTION EXIT

A STABILIZED CONSTRUCTION EXIT WILL HELP TO REMOVE EARTHEN MATERIALS FROM CONSTRUCTION EQUIPMENT EXITING THE SITE. A VEHICLE TRACKING PAD SHALL BE CONSTRUCTED AT THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES.

1.4.4 INSTALL SILT FENCE

SILT FENCE WILL REDUCE THE AMOUNT OF SEDIMENT TRANSFERED FROM THE SITE THROUGH STORMWATER RUNOFF. SILT FENCE SHALL BE LOCATED ALONG THE TOP OF THE GRANITE WALLS ALONG THE RIVER OR 5 FEET TO 10 FEET DOWN GRADIENT FROM THE TOES OF SLOPE. THE SILT FENCE SHALL BE PLACED PARALLEL TO, OR ALONG, THE CONTOUR, SO THE STORM WATER WILL RUN PERPENDICULAR TO THE SILT FENCE. THE ENDS SHALL BE "J" HOOKED UP GRADIENT TO CREATE A PONDING EFFECT FOR WATER TRYING TO RUN ALONG THE FENCE AND AROUND THE ENDS.

1.4.5 DIVERT UPLAND RUNOFF

DIVERSION OF UPLAND RUNOFF WILL REDUCE THE AMOUNT OF STORMWATER ENTERING THE SITE AND WILL HELP TO REDUCE THE POTENTIAL FOR STORMWATER TO TRANSPORT SEDIMENT FROM THE SITE. UPLAND RUNOFF SHALL BE DIVERTED USING SILT FENCE WHERE APPROPRIATE.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF

SLOWING DOWN CHANNELIZED RUNOFF WILL HELP TO ALLOW SEDIMENT TO FALL OUT OF STORMWATER THEREFORE REDUCING THE AMOUNT OF SEDIMENT TRANSPORTED FROM THE SITE. EACH DROP INLET OR CATCH BASIN SHALL RECEIVE TEMPORARY ROCK BARRIER PROTECTION IN PAVED AREAS AND TEMPORARY SILT FENCE PROTECTION IN UNPAVED AREAS. THESE TEMPORARY MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS IN THESE PLANS.

1.4.7 CONSTRUCT PERMANENT CONTROLS

NOT APPLICABLE

1.4.8 STABILIZE EXPOSED SOILS

STABILIZING THE EXPOSED SOILS WILL HELP TO REDUCE THE POTENTIAL FOR STORMWATER TRANSPORTING SEDIMENT FROM THE SITE. ALL TEMPORARY STOCKPILES SHALL BE MULCHED AND SEEDED AND SHALL HAVE SILT FENCE INSTALLED AT THE TOE OF SLOPE.

1.4.9 WINTER STABILIZATION

SPECIALIZED WINTER EPSC PROCEDURES SHALL BE FOLLOWED DURING WINTER CONSTRUCTION AND DURING ANY WINTER SHUT DOWN.

1.4.10 STABILIZE SOIL AT FINAL GRADE

STABILIZING SOIL AT FINAL GRADE WILL HELP TO REDUCE THE AREA OF DISTURBANCE AND WILL THEREFORE REDUCE THE POTENTIAL FOR SEDIMENT TRANSPORT FROM THE SITE. FOLLOWING FINAL GRADING ALL DISTURBED AREAS OUTSIDE OF THE ROADWAY, SIDEWALK AND PARKING AREAS SHALL RECEIVE TOPSOIL, SEED AND MULCH TO REESTABLISH GRASS AND VEGETATION. TOPSOILING, SEEDING AND MULCHING SHALL BE IN ACCORDANCE WITH THE SEEDING FORMULA FOR URBAN AREAS AND ASSOCIATED NOTES AS SHOWN ON THIS SHEET.

1.4.11 DEWATERING ACTIVITIES

NOT APPLICABLE

1.4.12 INSPECT YOUR SITE

THE EROSION CONTROL MEASURES SHALL BE PERIODICALLY INSPECTED AND MAINTAINED ON A REGULAR BASIS. INSPECTION OF THE EROSION CONTROL MEASURES SHALL TAKE PLACE BEFORE AND AFTER MAJOR STORM EVENTS TO INSURE THEY ARE IN GOOD CONDITION AND TO REMOVE EXCESSIVE BUILDUP OF SILT AND DEBRIS AFTER THE STORM EVENTS. A REPORT ON THE EFFECTIVENESS OF THE EROSION CONTROL MEASURES SHALL BE PRESENTED TO THE RESIDENT ENGINEER AND ONSITE COORDINATOR UPON THE COMPLETION OF EACH INSPECTION. MODIFICATIONS OR IMPROVEMENTS TO THE EROSION CONTROL PLAN SHOULD BE COORDINATED WITH THE RESIDENT ENGINEER AND ONSITE COORDINATOR.

SEEDING FORMULA
URBAN AREAS

% WT.	LBS./A.	NAME	PUR %	GERM %
42.5	34.0	CREEPING RED FESCUE	98	85
10.0	8.0	PERENNIAL RYE GRASS	95	90
42.5	34.0	KENTUCKY BLUE GRASS	85	85
5.0	4.0	ANNUAL RYE GRASS	95	85
100.00	80.0			

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.

PLOTTED 2/2/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

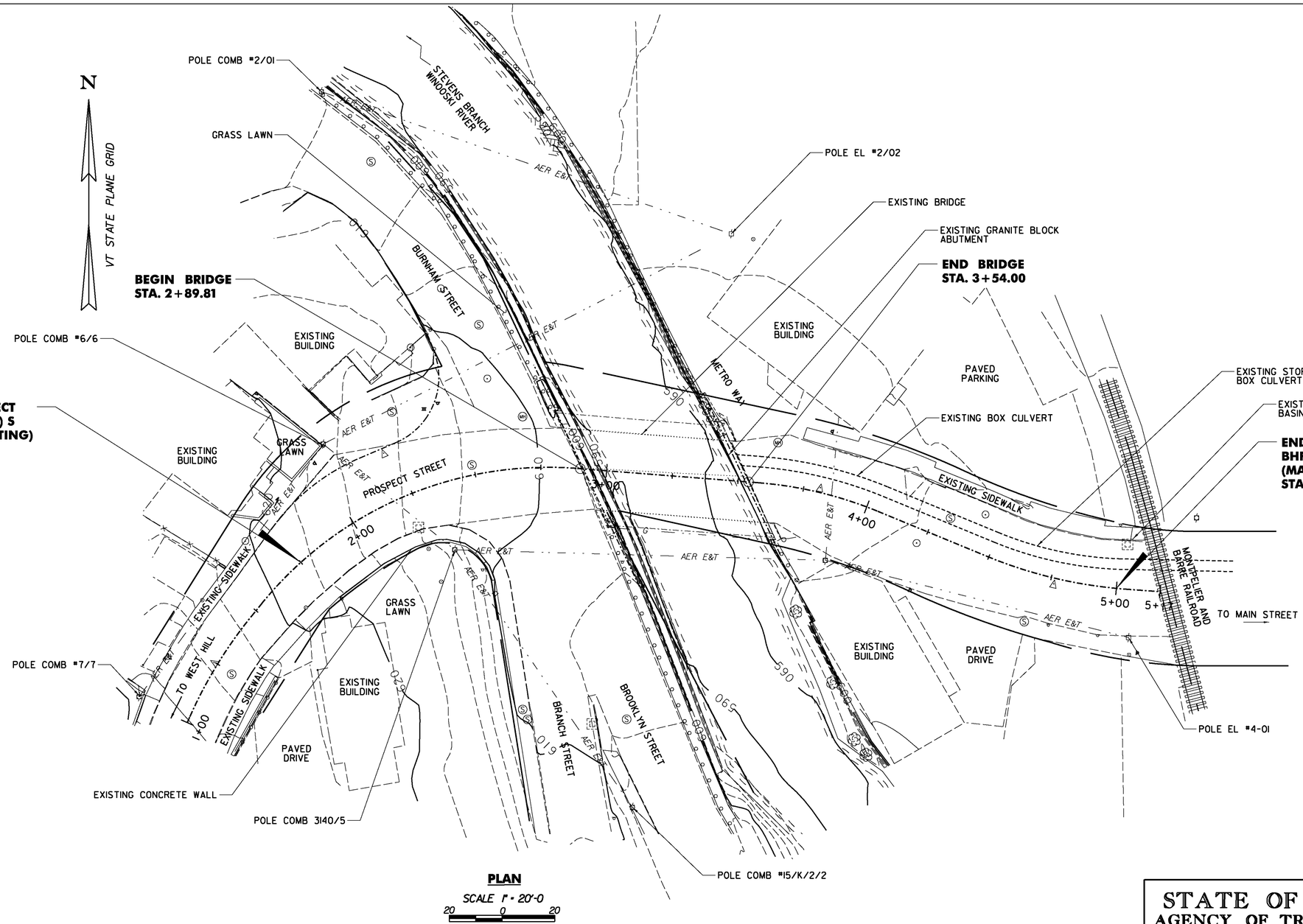
Town Of BARRE CITY	Bridge No. 7
Highway No. PROSPECT ST.	Log Sta.
	Surv. Sta.

PROSPECT ST. OVER STEVENS BRANCH

EPSC NARRATIVE

Designed By A. P. GUYETTE	Drawn By S. J. BIJOLLE
Checked By Date	Bridge Design Supervisor
E. P. DETRICK 1/09	J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 17 of 56

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PLAN

SCALE 1" = 20'-0

20 0 20

LEGEND

- EXISTING EDGE OF RIVER
- EXISTING TRAVELED WAY
- EXISTING GUARD RAIL
- STORM DRAIN
- UTILITY POLE
- TELEPHONE POLE
- TREES
- TREE LINE
- OVERHEAD LINES — AER E&T —
- WATER LINE
- EXISTING SIGN
- SEWER LINE — S —

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83/92

NOTES:

1. THE STEVENS BRANCH IS THE ONLY RESOURCE OF SPECIFIC CONCERN IDENTIFIED IN THE VICINITY OF THE PROJECT.

SOILS INFORMATION

2. THE SOIL CONSERVATION SERVICE HAS MAPPED THE SOILS THROUGHOUT WASHINGTON COUNTY. THE SOIL TYPE IDENTIFIED FOR THIS PROJECT IS URBAN LAND - UPIDSAMMENTS COMPLEX, OCCASIONALLY FLOODED WITH A PARENT GROUP BEING DESCRIBED AS MISCELLANEOUS UNITS. THIS SITE IS LISTED AS NOT HIGHLY ERODIBLE.

3. NO SUBSURFACE INVESTIGATIONS WERE PERFORMED FOR THE PROJECT.

PLOTTED 2/2/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BARRE CITY	Bridge No. 7
	Log Sta.
Highway No. PROSPECT ST.	Surv. Sta.

PROSPECT ST. OVER STEVENS BRANCH

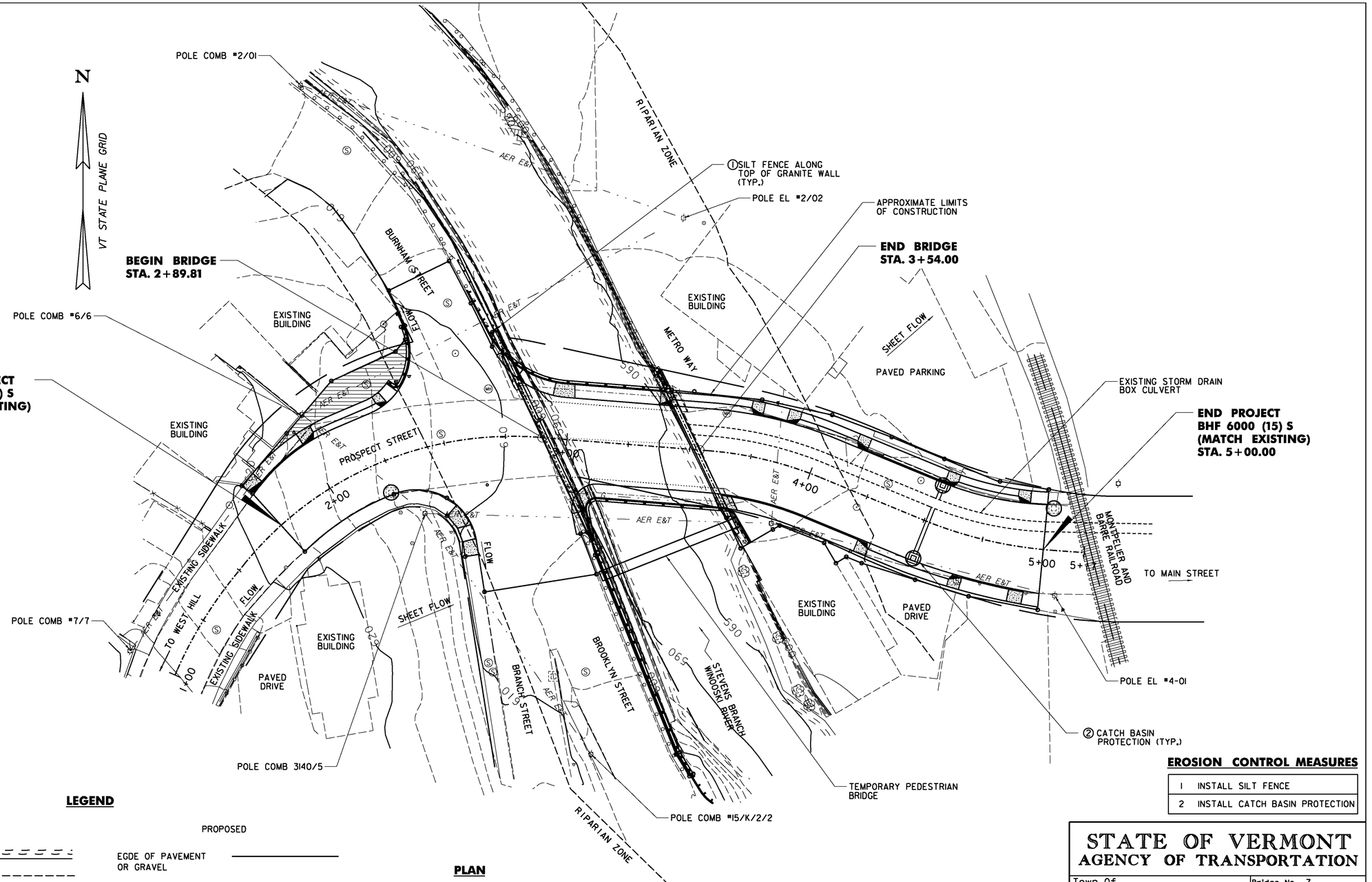
ESPC EXISTING CONDITIONS SITE PLAN

Designed By A. P. GUYETTE	Drawn By S. J. BIJOLLE
Checked By Date	Bridge Design Supervisor
E. P. DETRICK 1/09	J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 18 of 56

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NOTES:

1. ALL TEMPORARY EROSION CONTROL MEASURES WILL BE IN PLACE PRIOR TO THE BEGINNING OF CONSTRUCTION, WHERE POSSIBLE.
2. SILT FENCE INSTALLATION MAY REQUIRE PHASING TO MAXIMIZE EFFECTIVENESS. INSTALL AND/OR MOVE SILT FENCE AS CONSTRUCTION PROGRESSES TO OBTAIN THE GREATEST PREVENTION OF SEDIMENT TRANSPORT. ALL SILT FENCE INSTALLATION SHALL BE PROPERLY KEYED INTO THE GROUND AND SUPPORTED AS DETAILED ON THE EPSC DETAILS (1) SHEET. THE SILT FENCE SHOULD BE INSTALLED ALONG THE CONTOURS TO PREVENT CONCENTRATION OF RUNOFF. THE ENDS OF EACH RUN OF SILT FENCE SHOULD BE TURNED UPHILL TO PROVIDE A SMALL POOL FOR SEDIMENT SHOULD WATER TRY TO RUN AROUND THE END OF THE SILT FENCE.
3. IN AREAS WHERE EXISTING FEATURES PREVENT THE PROPER INSTALLATION OF THE SILT FENCE, AN ALTERNATIVE MEANS OF EROSION CONTROL SHALL BE PRESENTED TO THE ENGINEER AND ON-SITE COORDINATOR FOR APPROVAL TO BE USED IN THOSE AREAS ONLY.
4. SURFACE ROUGHENING HELPS REDUCE RUNOFF VELOCITIES AND INCREASES INFILTRATION RATES. ROUGHENING MAY BE ACCOMPLISHED BY A NUMBER OF METHODS SUCH AS TRACKING UP AND DOWN THE SLOPE WITH A BULLDOZER. TRACKING ACROSS THE SLOPE WITH A WHEELED VEHICLE OR ANY METHOD OF SCARIFYING THE SLOPE SUCH THAT THE GROOVES CREATED RUN PERPENDICULAR TO THE DIRECTION OF WATER RUNOFF.



EROSION CONTROL MEASURES

1	INSTALL SILT FENCE
2	INSTALL CATCH BASIN PROTECTION

LEGEND

EXISTING		PROPOSED	
EXISTING EDGE OF RIVER		EGDE OF PAVEMENT OR GRAVEL	
EXISTING TRAVELED WAY		GUARDRAIL	
EXISTING GUARD RAIL		SIDEWALK RAMP	
WATER MAIN	— W —	TOE OF SLOPE	
CATCH BASIN		DRAINAGE PIPE	
UTILITY POLE		NEW CATCH BASIN	
TREES		SILT FENCE	
OVERHEAD LINES	— AER E&T —		
EXISTING SIGN			

PLAN
SCALE 1" = 20'-0
20 0 20

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83/92

PLOTTED 2/2/2009

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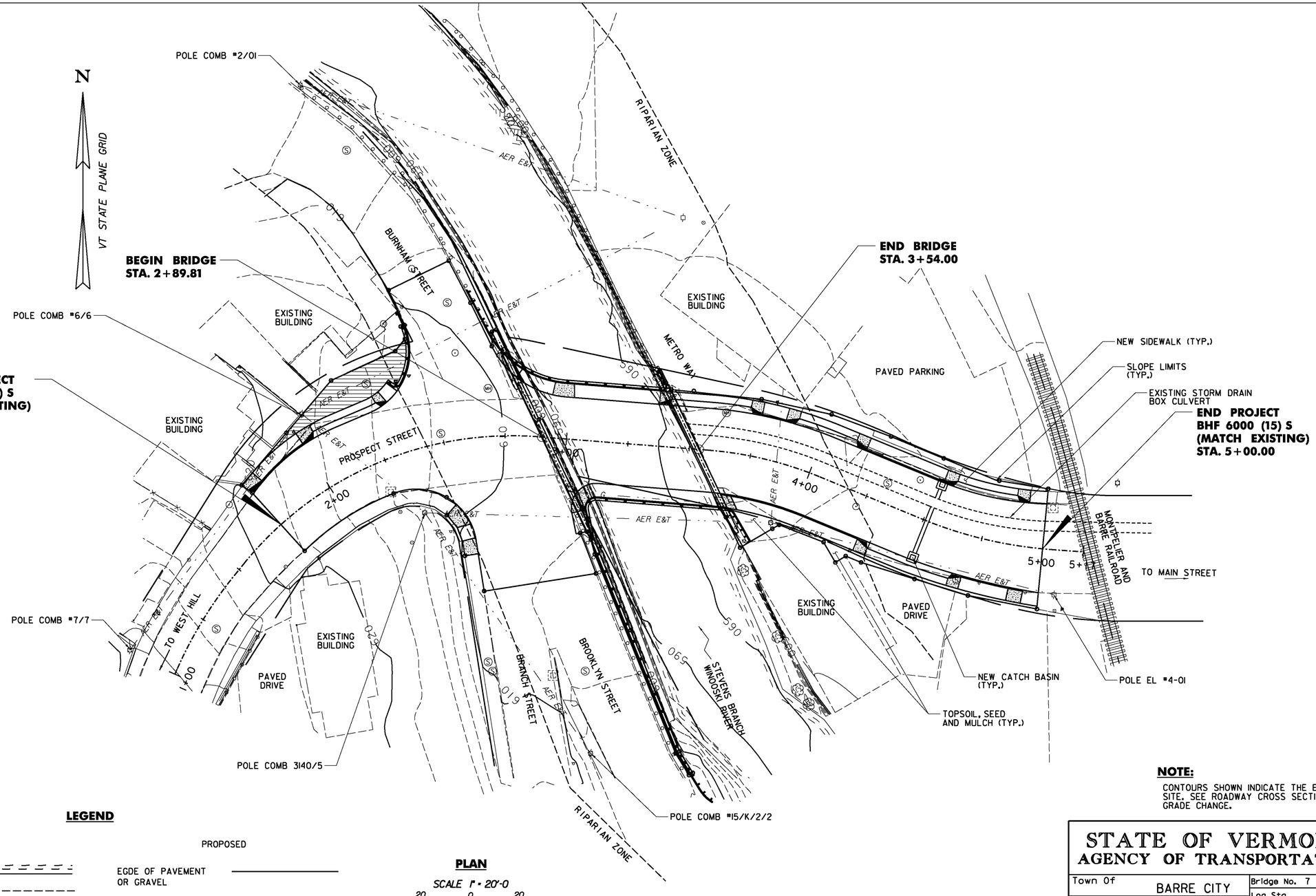
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BARRE CITY	Bridge No. 7
	Log Sta.
Highway No. PROSPECT ST.	Surv. Sta.

PROSPECT ST. OVER STEVENS BRANCH
EPSC CONSTRUCTION SITE PLAN

Designed By A. P. GUYETTE	Drawn By S. J. BIJOLLE
Checked By Date	Bridge Design Supervisor
E. P. DETRICK 1/09	J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 19 of 56

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NOTE:

CONTOURS SHOWN INDICATE THE EXISTING SITE. SEE ROADWAY CROSS SECTIONS FOR GRADE CHANGE.

LEGEND

EXISTING	PROPOSED
EXISTING EDGE OF RIVER	EGDE OF PAVEMENT OR GRAVEL
EXISTING TRAVELED WAY	GUARDRAIL
EXISTING GUARD RAIL	SIDEWALK RAMP
WATER MAIN — W —	TOE OF SLOPE
CATCH BASIN	DRAINAGE PIPE
UTILITY POLE	NEW CATCH BASIN
TREES	
OVERHEAD LINES — AER E&T —	
EXISTING SIGN	

PLAN

SCALE 1" = 20'-0

20 0 20

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83/92

PLOTTED 2/2/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BARRE CITY	Bridge No. 7
Highway No. PROSPECT ST.	Log Sta. / Surv. Sta.

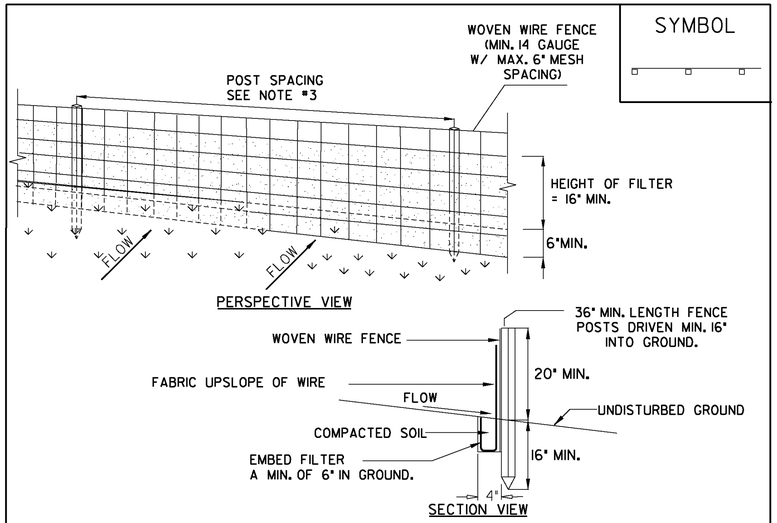
PROSPECT ST. OVER STEVENS BRANCH

EPSC FINAL CONDITIONS SITE PLAN

Designed By A. P. GUYETTE	Drawn By S. J. BIJOLLE
Checked By Date E. P. DETRICK 1/09	Bridge Design Supervisor J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 20 of 56

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SYMBOL



CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE REINFORCEMENT IS ONLY REQUIRED WITHIN 100 FT UPSLOPE OF RECEIVING WATERS.

2. WHERE REQUIRED FENCE SHALL BE WOVEN WIRE, MIN. 14 GAUGE WITH A 6" MAXIMUM MESH OPENING. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI100X, STABILINKA T140N OR APPROVED EQUIVALENT.

3. POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10' MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4'. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6'.

4. WOVEN WIRE FENCE IS TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FILTER CLOTH IS TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.

5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED.

6. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.

7. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.

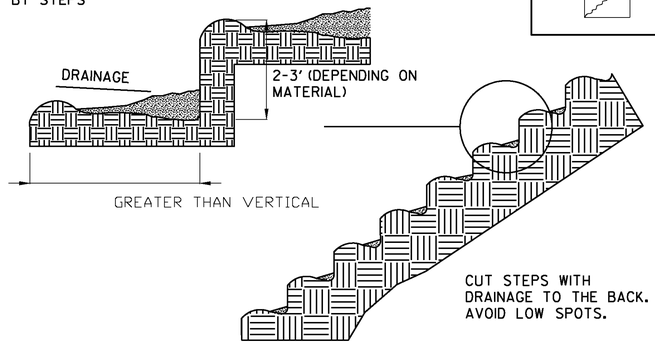
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION	SILT FENCE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

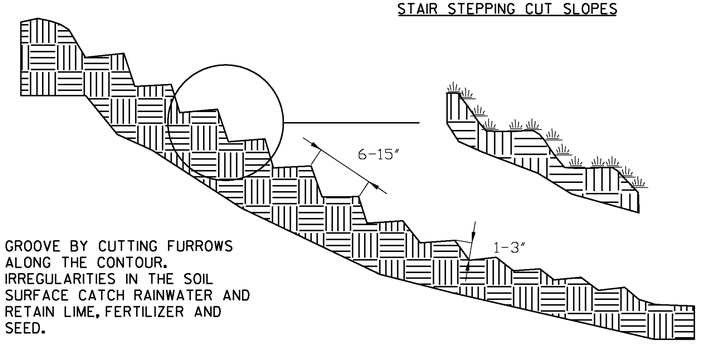
THIS ITEM SHALL BE PAID FOR UNDER ITEM
649.51 GEOTEXTILE FOR SILT FENCE OR
~~649.515 GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED~~

SYMBOL

DEBRIS FROM SLOPE ABOVE IS CAUGHT BY STEPS



STAIR STEPPING CUT SLOPES



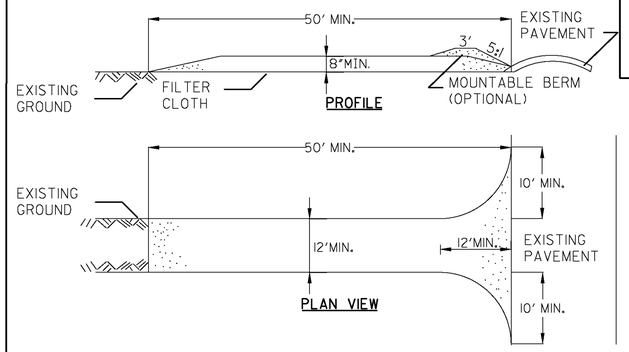
GROOVING SLOPES

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION	SURFACE ROUGHENING DETAILS

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS ITEM SHALL BE CONSIIDERED INCIDENTAL TO THE MATERIAL ITEM SPECIFIED

SYMBOL



CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 1-4" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH APPLIES).
3. THICKNESS - NOT LESS THAN EIGHT (8) INCHES.
4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE MUST BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED ACCORDING TO PERMIT REQUIREMENTS.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION	STABILIZED CONSTRUCTION ENTRANCE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS ITEM SHALL BE PAID FOR UNDER ITEM
653.35 VEHICLE TRACKING PAD

REVISIONS	
FEBRUARY 9, 2007	WHF
MARCH 8, 2007	JMF

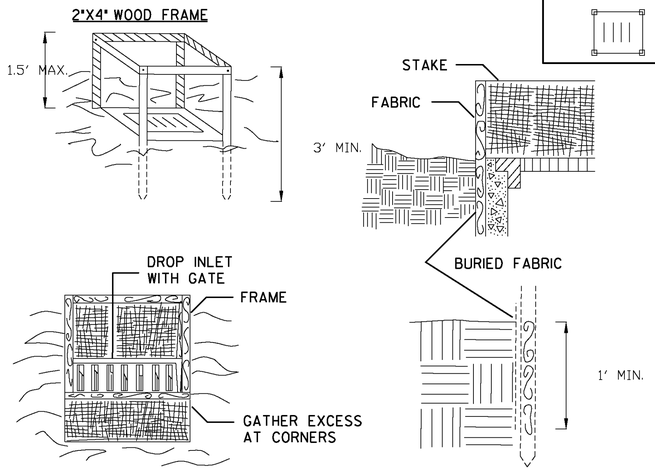
PLOTTED 2/11/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BARRE CITY	Bridge No. 7
Highway No. PROSPECT ST.	Log Sta. / Surv. Sta.
PROSPECT ST. OVER STEVENS BRANCH	
EPSC DETAILS (1)	
Designed By A. P. GUYETTE	Drawn By S. J. BIJOLLE
Checked By E. P. DETRICK Date 1/09	Bridge Design Supervisor J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 21 of 56

SYMBOL



CONSTRUCTION SPECIFICATIONS

1. FILTER FABRIC SHALL HAVE AN EOS OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2" x 4" WOOD OR EQUIVALENT METAL WITH A MINIMUM LENGTH OF 3 FEET.
4. SPACE STAKES EVENLY AROUND INLET 3 FEET APART AND DRIVE A MINIMUM 18 INCHES DEEP. SPANS GREATER THAN 3 FEET MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1FOOT MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.

MAXIMUM DRAINAGE AREA 1ACRE

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

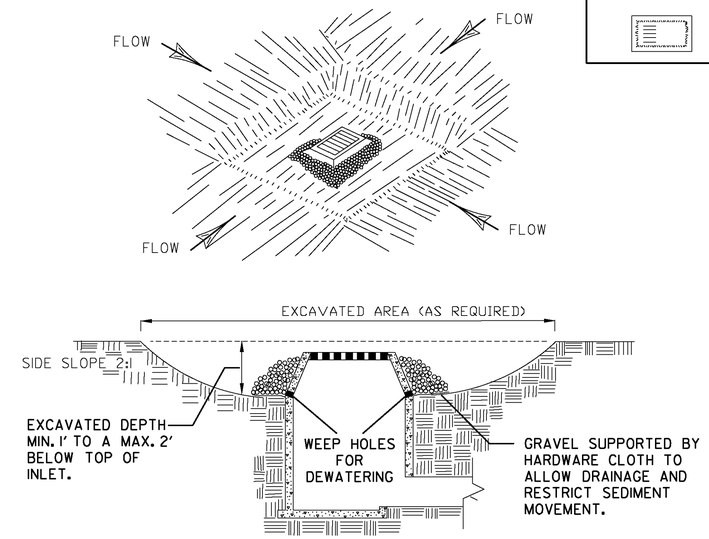
FILTER FABRIC DROP INLET PROTECTION

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS ITEM SHALL BE PAID FOR UNDER ITEM
653.40 INLET PROTECTION DEVICE, TYPE I

REVISIONS	
MARCH 8, 2007	JMF

SYMBOL



CONSTRUCTION SPECIFICATIONS

1. CLEAR THE AREA OF ALL DEBRIS THAT WILL HINDER EXCAVATION.
2. GRADE APPROACH TO THE INLET UNIFORMLY AROUND THE BASIN.
3. WEEP HOLES SHALL BE PROTECTED BY GRAVEL.
4. UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA, SEAL WEEP HOLES, FILL BASIN WITH STABLE SOIL TO FINAL GRADE, COMPACT IT PROPERLY AND STABILIZE WITH PERMANENT SEEDING.

MAXIMUM DRAINAGE AREA 1ACRE

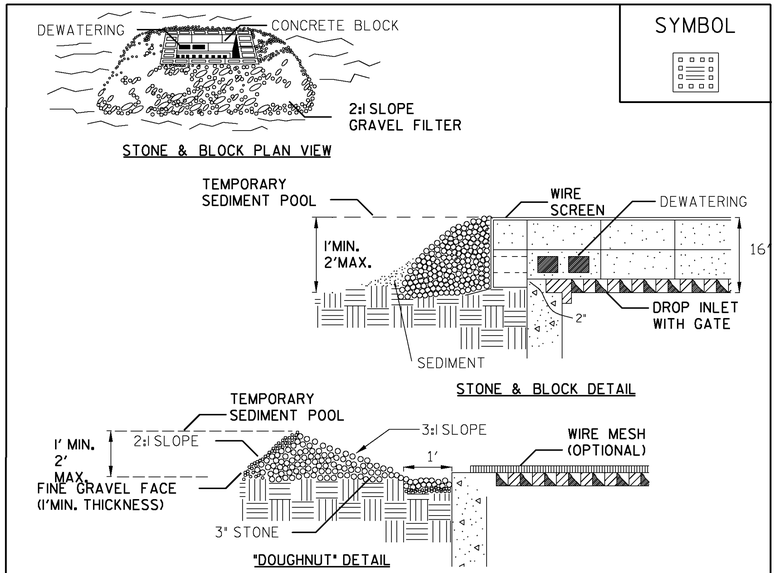
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

EXCAVATED DROP INLET PROTECTION

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS ITEM SHALL BE PAID FOR UNDER ITEM
653.40 INLET PROTECTION DEVICE, TYPE I

SYMBOL



CONSTRUCTION SPECIFICATIONS

1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2 INCHES MINIMUM BELOW REST OF INLET AND BLOCKS SHALL BE PLACED AGAINST INLET FOR SUPPORT.
2. HARDWARE CLOTH OR ½" WIRE MESH SHALL BE PLACED OVER BLOCK OPENINGS TO SUPPORT STONE.
3. USE CLEAN STONE OR GRAVEL ½- ¾ INCH IN DIAMETER PLACED 2 INCHES BELOW TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER.
4. FOR STONE STRUCTURES ONLY, A 1FOOT THICK LAYER OF THE FILTER STONE WILL BE PLACED AGAINST THE 3 INCH STONE AS SHOWN ON THE DRAWINGS.

MAXIMUM DRAINAGE AREA 1ACRE

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

STONE & BLOCK DROP INLET PROTECTION

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS ITEM SHALL BE PAID FOR UNDER ITEM
653.40 INLET PROTECTION DEVICE, TYPE I

PLOTTED 2/11/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

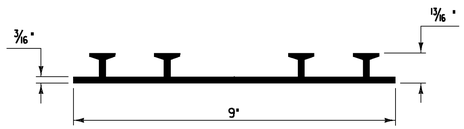
Town Of BARRE CITY	Bridge No. 7
Highway No. PROSPECT ST.	Log Sta. / Surv. Sta.

PROSPECT ST. OVER STEVENS BRANCH

EPSC DETAILS (2)

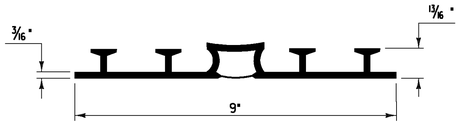
Designed By A. P. GUYETTE	Drawn By S. J. BIJOLLE
Checked By E. P. DETRICK Date 1/09	Bridge Design Supervisor J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 22 of 56

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P. V. C. WATERSTOP FOR CONSTRUCTION JOINTS

NOT TO SCALE

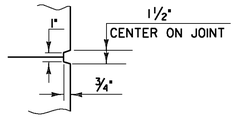


P. V. C. WATERSTOP FOR EXPANSION JOINTS

NOT TO SCALE

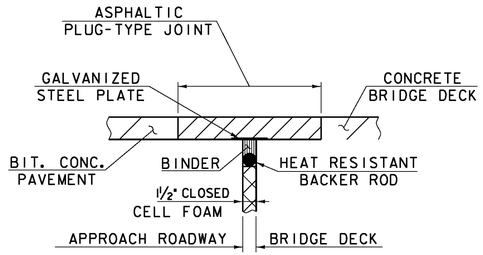
NOTE:

PAYMENT FOR WATERSTOP WILL BE MADE INCIDENTAL TO THE ADJACENT CONCRETE PAY ITEM.



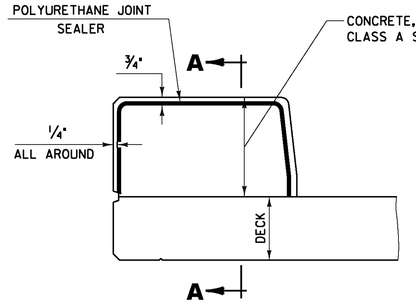
SCORE MARK DETAIL

NOT TO SCALE



ASPHALTIC PLUG-TYPE JOINT DETAIL

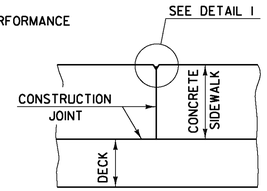
NTS



TYPICAL SECTION THROUGH

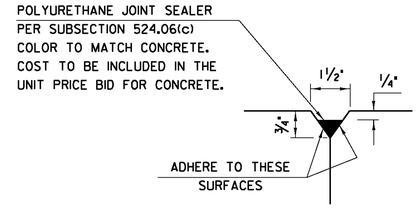
CONCRETE SIDEWALK CONSTRUCTION JOINT

NOT TO SCALE



SECTION A - A

NOT TO SCALE



DETAIL 1

NOT TO SCALE

NOTES:

1. CONSTRUCTION JOINTS THROUGH CONCRETE SIDEWALKS SHALL BE SPACED MAXIMUM 15'-0" CENTER TO CENTER AND SHALL BE 1'-6" MINIMUM FROM THE CENTER OF THE NEAREST BRIDGE RAIL POST. CONCRETE SHALL BE PLACED IN ALTERNATING SECTIONS WITH A MINIMUM OF 48 HOURS DELAY BETWEEN ADJACENT POURS.
2. LONGITUDINAL REINFORCING SHALL PASS THROUGH CONCRETE SIDEWALK CONSTRUCTION JOINTS.
3. THE CONTRACTOR MAY ELIMINATE THE CURB JOINTS AND MAKE EACH CURB IN ONE PLACEMENT USING AN APPROVED SHRINKAGE REDUCING ADMIXTURE AS NOTED IN THE SPECIAL PROVISIONS. THE COST OF ANY SUCH ADMIXTURE SHALL BE INCIDENTAL TO THE CONCRETE PAY ITEM.

ASPHALTIC PLUG JOINT NOTES

1. INSTALLATION

A. LOCATE THE JOINT CENTRALLY OVER THE DECK OVERLAY EXPANSION GAP OR FIXED JOINT MARKED OUT TO THE MANUFACTURER'S RECOMMENDED WIDTH.

B. EXCAVATE THE JOINT AS SHOWN ON THE PLANS WITH SAWS AND PNEUMATIC HAMMER OR A HAMMER AND CHISEL.

C. BLAST CLEAN THE JOINT AREA OF DEBRIS AND ASPHALT. THOROUGHLY DRY THE JOINT AREA WITH HOT COMPRESSED AIR PRIOR TO APPLYING BINDER MATERIAL.

D. REPAIR SPALLED AND DEFECTIVE CONCRETE WITH AN APPROVED MATERIAL AS AGREED UPON BY THE ENGINEER.

E. PLACE PROPERLY SIZED HEAT RESISTANT BACKER ROD IN THE MOVEMENT GAP ALLOWING FOR 1" +/- OF BINDER ABOVE THE ROD.

F. HEAT AND PLACE THE BINDER MATERIAL AS RECOMMENDED BY THE MANUFACTURER.

G. PLACE 1/4" THICK BY 8" WIDE SECTIONS OF STEEL PLATE OVER THE CENTER OF THE MOVEMENT GAP. SECURE THE PLATES FROM MOVING BY INSERTING LOCATING PINS THROUGH THE PRESTAMPED HOLES INTO BACKER ROD AND COVER WITH HOT BINDER. THE STEEL PLATES MAY BE OMITTED WHERE THE APPROACH SLAB IS COVERED WITH A STONE BASE OR BITUMINOUS PAVEMENT AND VERTICAL MOVEMENT OF THE PLATES MIGHT OCCUR.

H. HEAT AND MIX THE BINDER MATERIAL AND AGGREGATE AS RECOMMENDED BY THE MANUFACTURER.

I. INSTALLATION OF MATERIAL, COMPACTION, AND TOP COATING SHALL BE AS RECOMMENDED BY THE MANUFACTURER.

J. IMMEDIATELY AFTER TOP COATING, CAST AN ANTI-SKID MATERIAL OVER THE JOINT TO REDUCE THE RISK OF TRACKING.

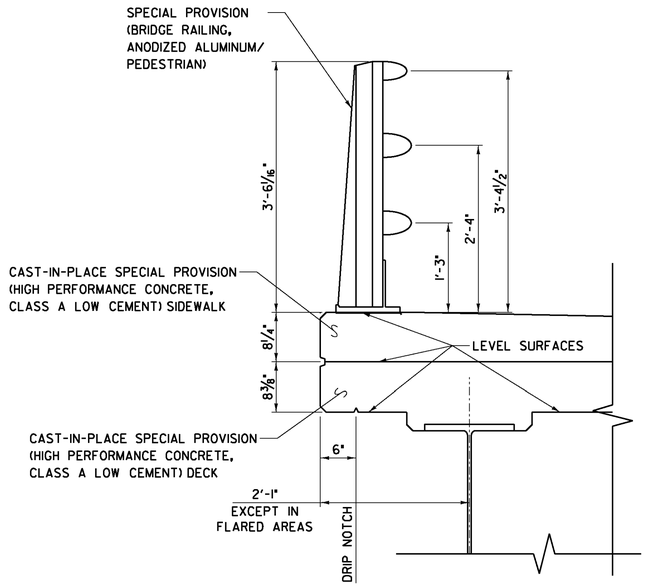
K. PROTECTED JOINT FROM TRAFFIC UNTIL THE MATERIAL HAS COOLED TO 125 DEG F +/-.

2. WEATHER LIMITATIONS. (APPLY BINDER MATERIAL ONLY WHEN THE FOLLOWING CONDITIONS PREVAIL):

A. THE AMBIENT AIR TEMPERATURE IS AT LEAST 50 DEG F AND RISING.

B. THE ROAD SURFACE IS SUFFICIENTLY DRY.

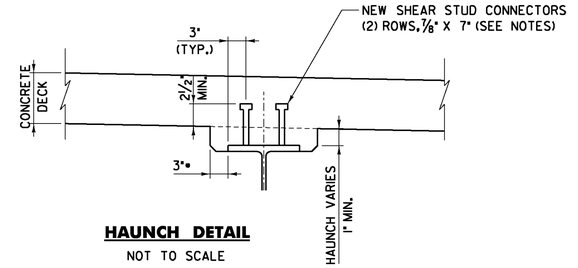
C. WEATHER CONDITIONS OR OTHER CONDITIONS ARE FAVORABLE AND ARE EXPECTED TO REMAIN SO FOR THE PERFORMANCE OF SATISFACTORY WORK.



TYPICAL RAIL SECTION

SCALE: 1" = 1' - 0"

SEE BRIDGE AND APPROACH RAILING DETAILS SHEETS FOR ADDITIONAL INFORMATION.



HAUNCH DETAIL

NOT TO SCALE

NOTES:

CONTRACTOR SHALL SUPPLY LONGER SHEAR STUDS WHERE NEEDED TO COMPLY WITH MINIMUM EMBEDMENT OF 2 1/2" INCHES ABOVE THE BOTTOM OF THE DECK.

• - THE 3" HORIZONTAL SECTION MAY BE ELIMINATED FOR FORMING SYSTEMS DESIGNED FOR THE CONSTRUCTION OF VERTICAL HAUNCHES. ANY VOIDS RESULTING FROM FORMING SYSTEM ELEMENTS SHALL BE FILLED WITH JOINT SEALER, POLYURETHANE MEETING THE REQUIREMENTS OF SECTION 524. THE COST OF THE JOINT SEALER, POLYURETHANE SHALL BE INCIDENTAL TO THE ADJACENT CONCRETE.

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

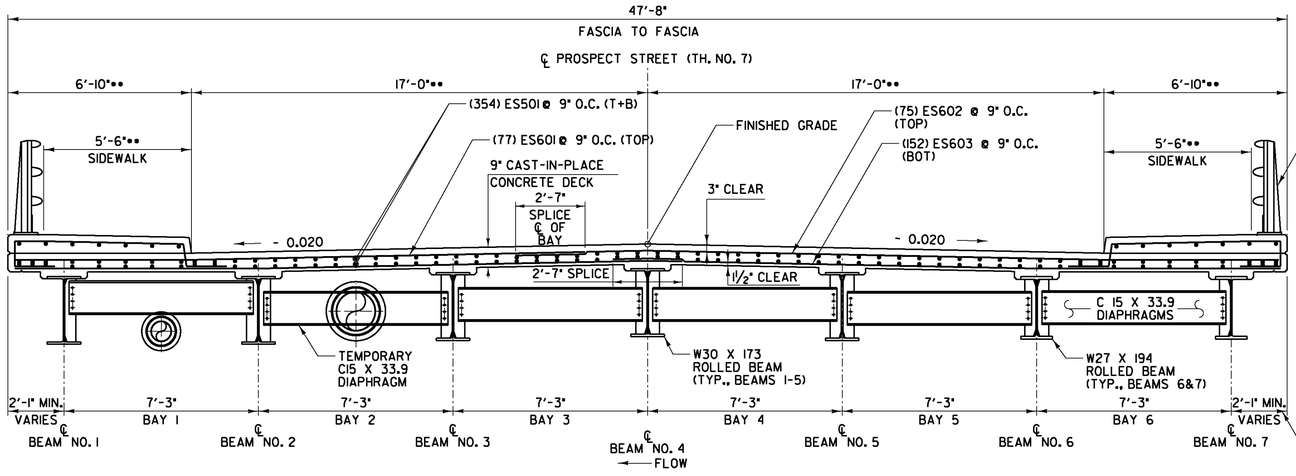
Town Of BARRE CITY	Bridge No. 7
	Log Sta.
Highway No. PROSPECT ST.	Surv. Sta.

PROSPECT ST. OVER STEVENS BRANCH

DECK DETAILS

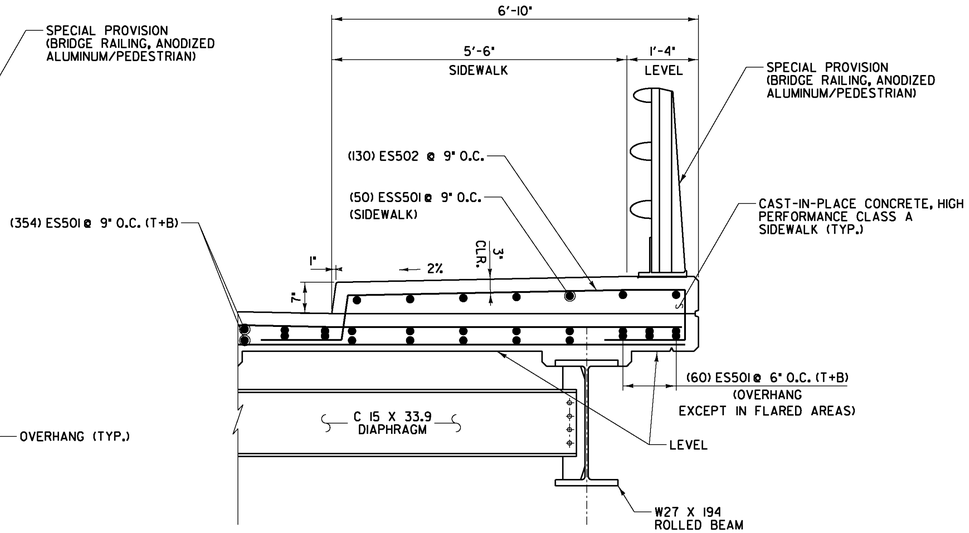
Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By Date	Bridge Design Supervisor
E. P. DETRICK 1/09	J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 24 of 56

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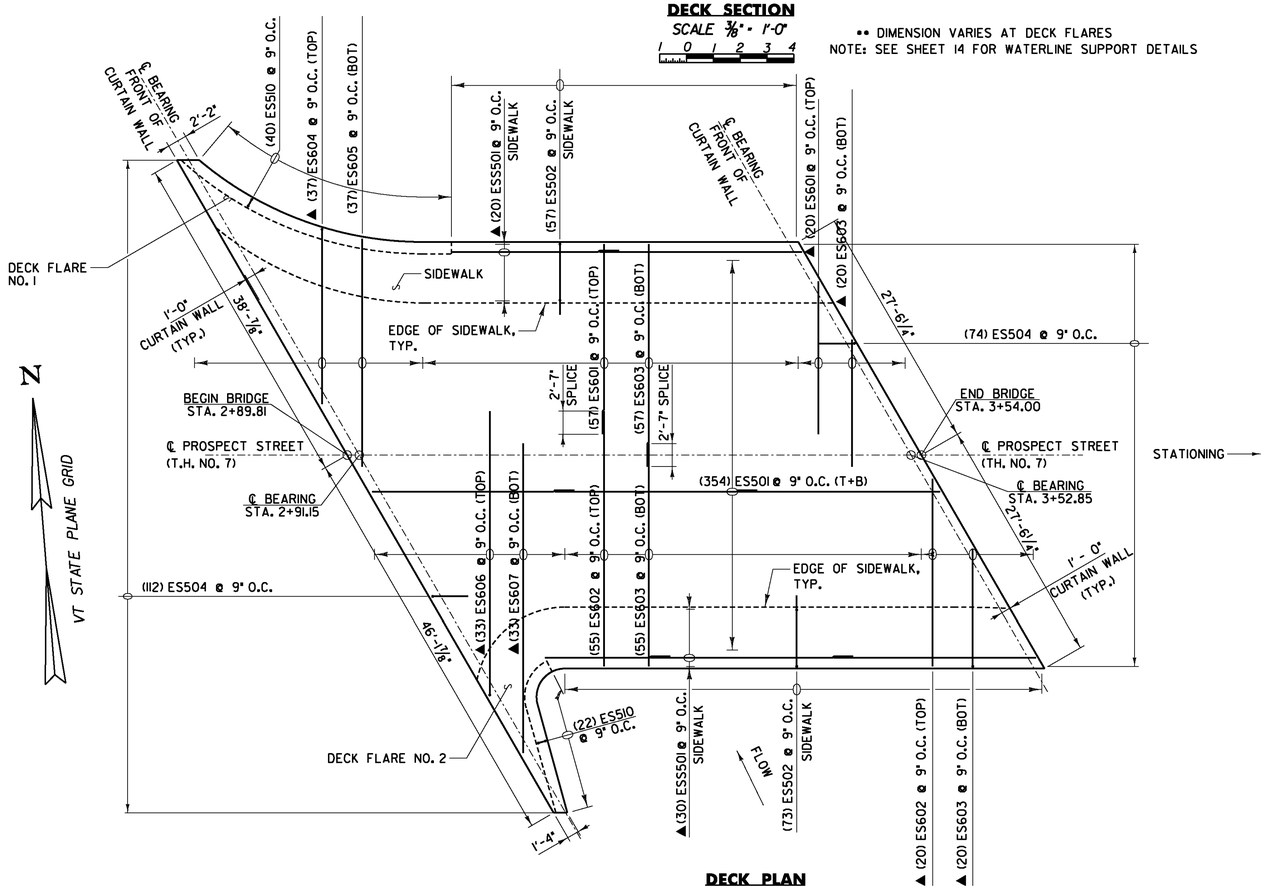


DECK SECTION
SCALE 3/8" = 1'-0"
1 0 1 2 3 4

•• DIMENSION VARIES AT DECK FLARES
NOTE: SEE SHEET 14 FOR WATERLINE SUPPORT DETAILS



SIDEWALK DETAIL
SCALE ½" = 1'-0"
1 0 1 2



DECK PLAN
SCALE 1/8" = 1'-0"
1 0 2 4 6 8

NOTES:

1. MINIMUM SPLICE DISTANCE SHALL BE 2' - 2" FOR #5 BARS, AND 2' - 7" FOR #6 BARS.
2. ES601 AND ES602 SHALL BE PLACED ALTERNATING WITH THE SPLICE ALTERNATING BETWEEN BAY 3 AND BAY 4.
3. SEE SHEET 26 AND 27 FOR ADDITIONAL REINFORCING DETAILS OF THE DECK ENDS AND FLARES.
4. CONTRACTOR SHALL FILL EXPANSION JOINT BETWEEN DECK SIDEWALK AND STREET SIDEWALK WITH POLYURETHANE FILLER MATERIAL PER SUBSECTION 524.06(c), COST SHALL BE INCIDENTAL TO DECK CONCRETE.

KEY

N.F. = NEAR FACE
F.F. = FAR FACE
E.F. = EACH FACE
S = DECK OR SLAB
A = ABUTMENT
C = CURBING
▲ = CUT TO FIT IN FIELD
T + B = TOP AND BOTTOM

PLOTTED 2/2/2009

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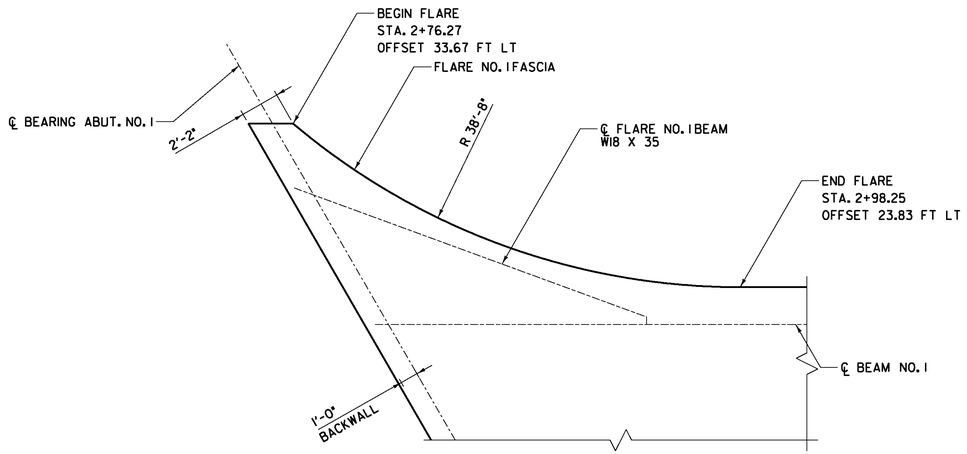
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BARRE CITY	Bridge No. 7
Highway No. PROSPECT ST.	Log Sta. / Surv. Sta.

PROSPECT ST. OVER STEVENS BRANCH
DECK REINFORCEMENT

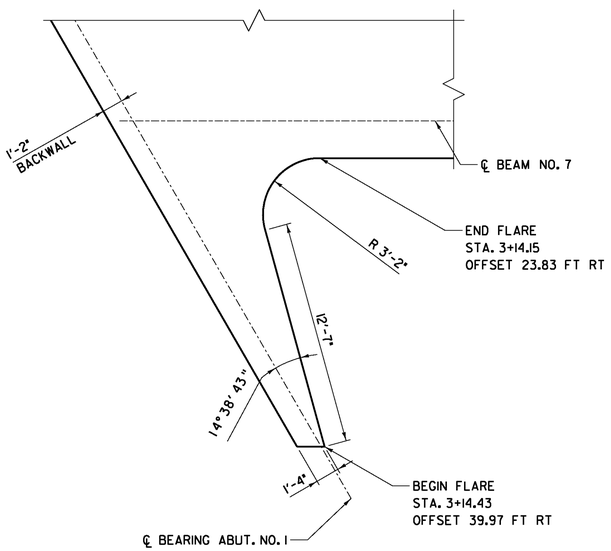
Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By E. P. DETRICK Date 1/09	Bridge Design Supervisor J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 25 of 56

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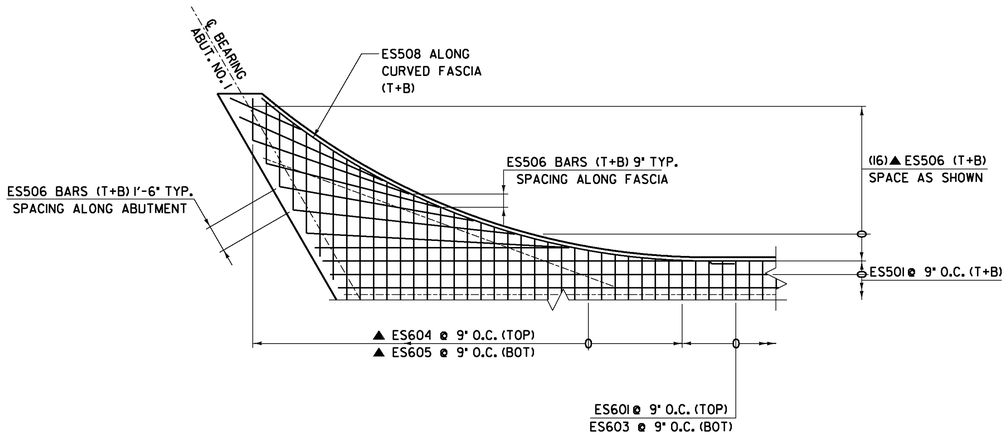
DECK FLARE NO. 1 DETAIL

SCALE 1/4" = 1'-0"



DECK FLARE NO. 2 DETAIL

SCALE 1/4" = 1'-0"

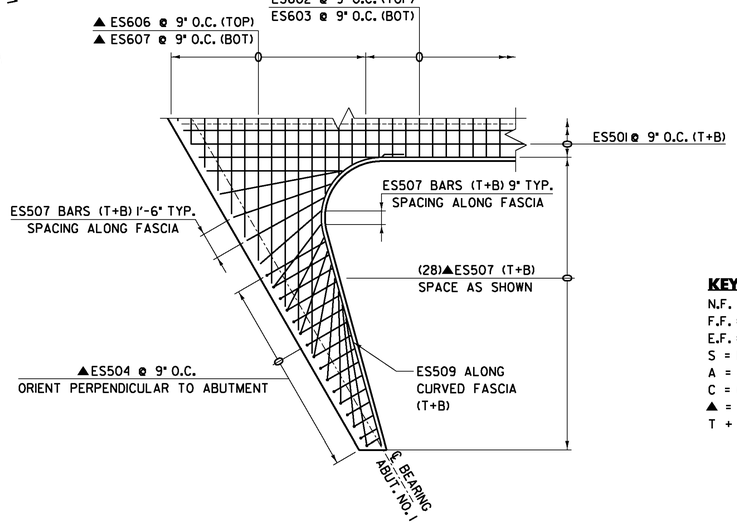


DECK FLARE NO. 1 REINFORCEMENT

SCALE 1/4" = 1'-0"

N

VT STATE PLANE GRID



DECK FLARE NO. 2 REINFORCEMENT

SCALE 1/4" = 1'-0"

KEY

N.F. = NEAR FACE
F.F. = FAR FACE
E.F. = EACH FACE
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A = ABUTMENT
C = CURBING
▲ = CUT TO FIT IN FIELD
T + B = TOP AND BOTTOM

PLOTTED 2/2/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

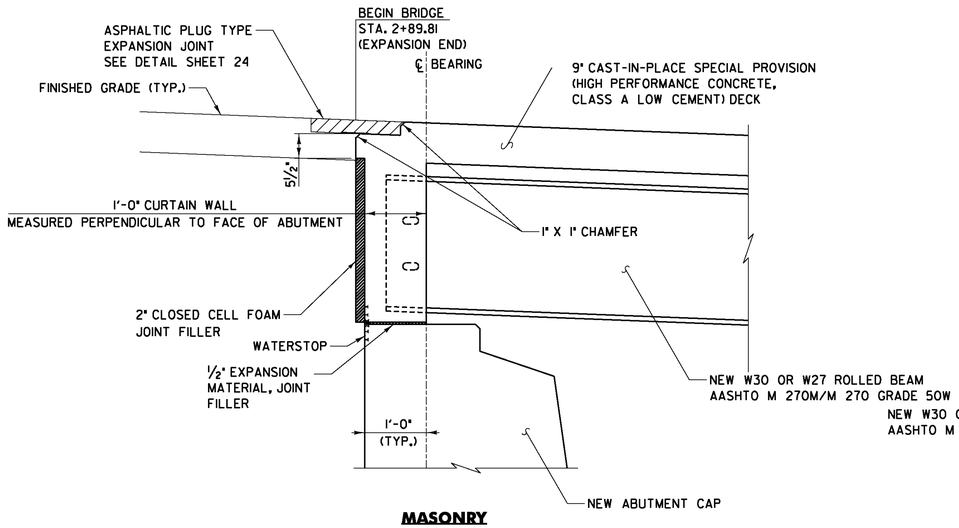
Town Of BARRE CITY	Bridge No. 7
	Log Sta.
Highway No. PROSPECT ST.	Surv. Sta.

PROSPECT ST. OVER STEVENS BRANCH

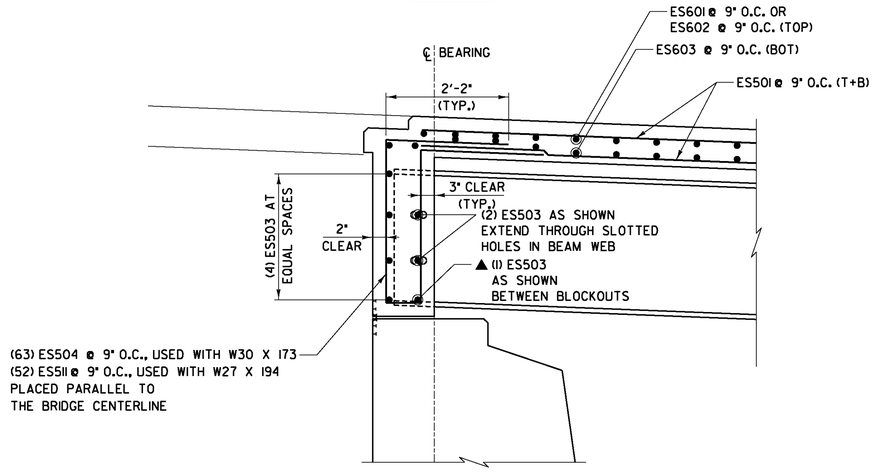
FLARE DETAILS

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By Date	Bridge Design Supervisor
E. P. DETRICK 1/09	J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 26 of 56

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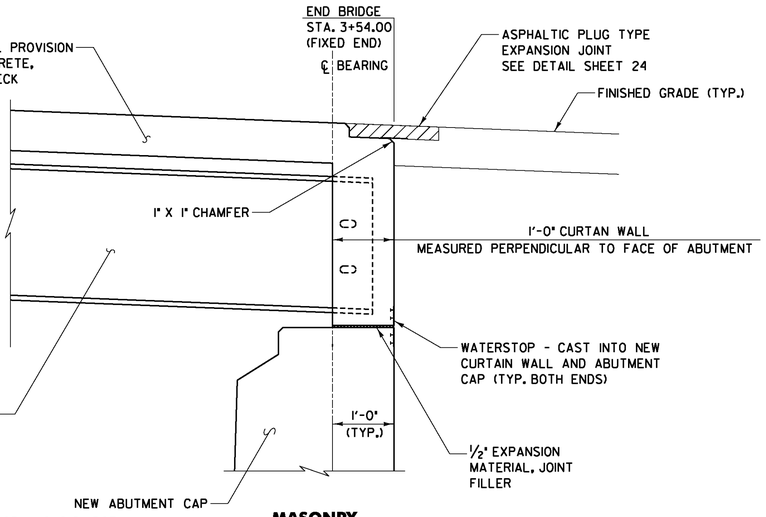
MASONRY



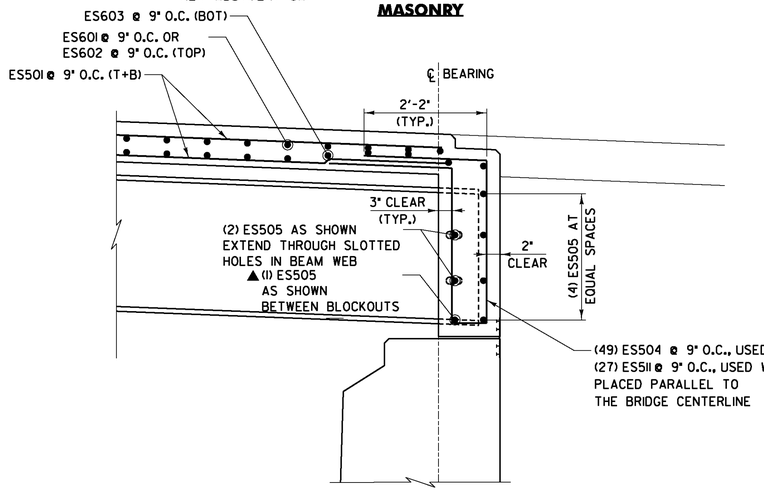
REINFORCING

BRIDGE END DETAIL AT ABUTMENT NO. 1
(EXPANSION END)

SCALE ¾" = 1'-0"
0 1 2



MASONRY

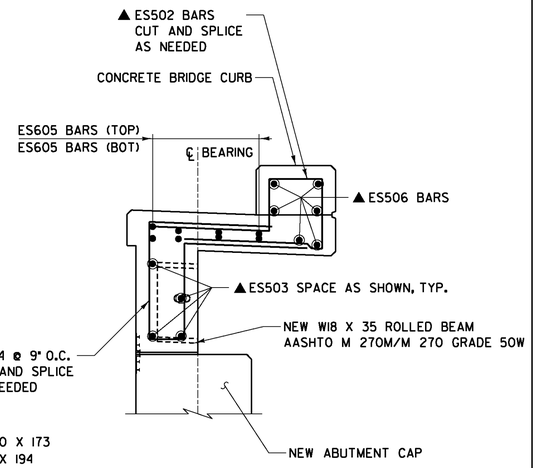


REINFORCING

BRIDGE END DETAIL AT ABUTMENT NO. 2
(FIXED END)

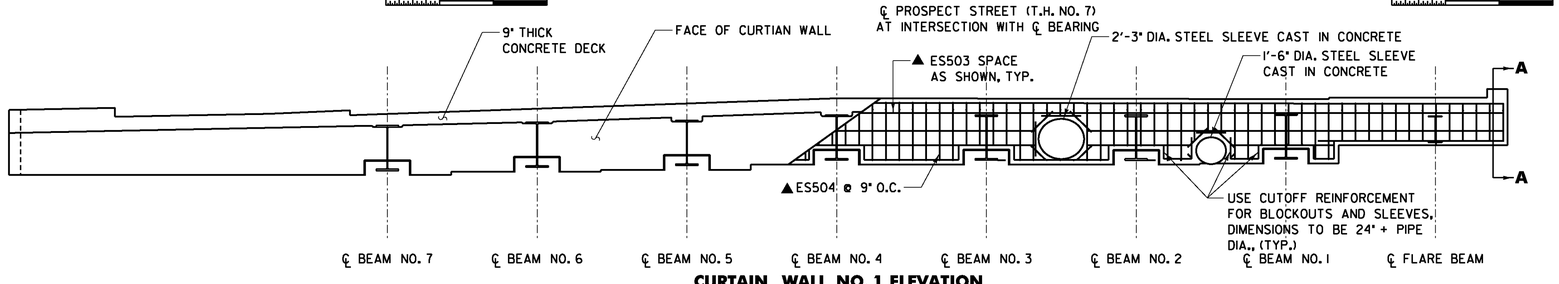
SCALE ¾" = 1'-0"
0 1 2

NOTE:
PAYMENT FOR JOINT FILLER AND WATERSTOPS WILL BE MADE INCIDENTAL TO THE ADJACENT CONCRETE PAY ITEM.



SECTION A-A
SCALE ¾" = 1'-0"
1 0 1 2

KEY
N.F. = NEAR FACE
F.F. = FAR FACE
E.F. = EACH FACE
S = DECK OR SLAB
A = ABUTMENT
C = CURBING
▲ = CUT TO FIT IN FIELD



CURTAIN WALL NO. 1 ELEVATION
SCALE 1/4" = 1'-0"
0 2 4 6

ABUTMENT NO. 2 BACKWALL ELEVATION DETAIL SHALL BE SIMILAR

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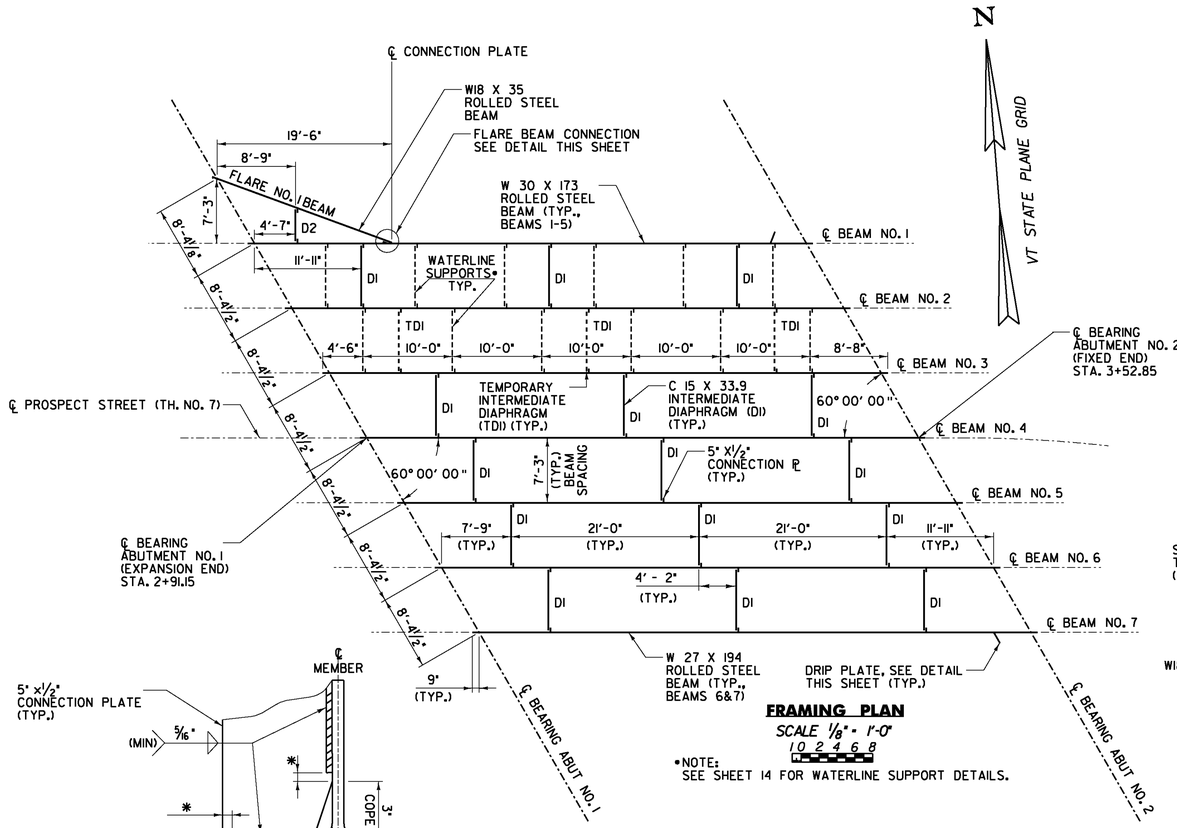
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BARRE CITY	Bridge No. 7
Highway No. PROSPECT ST.	Log Sta.
	Surv. Sta.

PROSPECT ST. OVER STEVENS BRANCH
DECK END DETAILS

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By E. P. DETRICK Date 1/09	Bridge Design Supervisor J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 27 of 56

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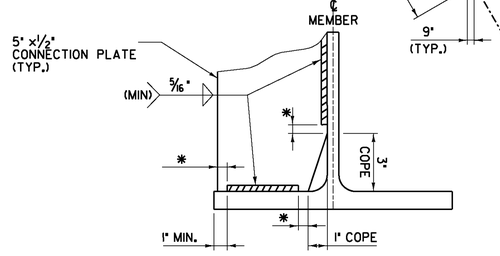


FRAMING PLAN

SCALE 1/8" = 1'-0"

0 2 4 6 8

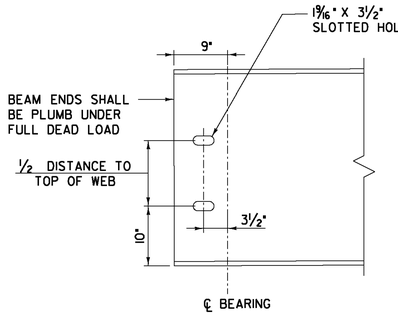
•NOTE:
SEE SHEET 14 FOR WATERLINE SUPPORT DETAILS.



* NO WELD FOR ¼" MIN. ½" MAX.
(EXCEPT MUST MAINTAIN 1" MINIMUM FROM EDGE OF FLANGE)

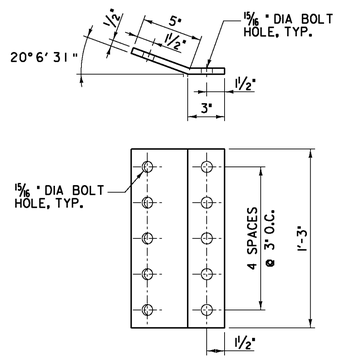
WELD TERMINATION AND COPING DETAILS FOR STEEL BEAMS

NOT TO SCALE



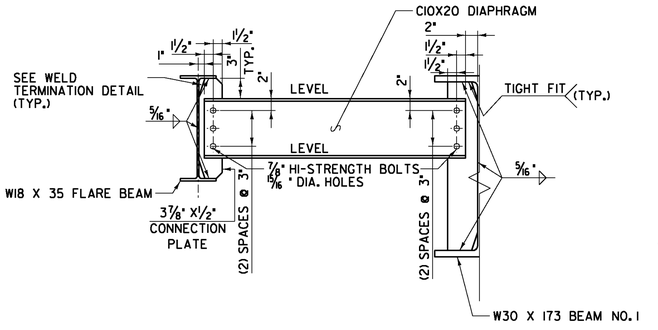
ELEVATION - END OF W BEAM

NOT TO SCALE



BENT CONNECTION PLATE DETAIL

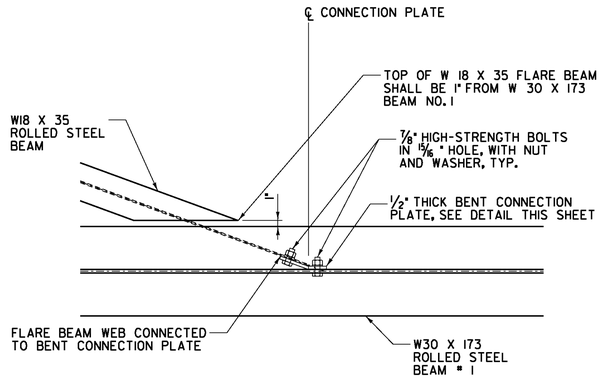
NOT TO SCALE



FLARE BEAM DIAPHRAGM (D2)

NOTES: NOT TO SCALE
DIAPHRAGM TO BE LEVEL AFTER APPLICATION OF ALL DEAD LOADS.

FLARE BEAM CONNECTION PLATE TO BE ANGLED SO THAT DIAPHRAGM D2 IS PARALLEL TO ALL OTHER DIAPHRAGMS.



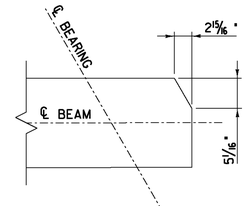
FLARE BEAM CONNECTION DETAIL

NOT TO SCALE

NOTE:
SEE SHEET 30 FOR FLARE BEAM DETAILS

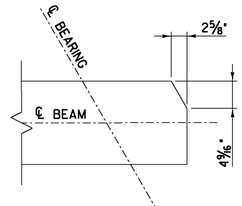
FOR CONNECTION OF FLARE BEAM TO CONNECTION PLATE, USE SAME BOLTING PATTERN AS FOR ROLLED SECTION DIAPHRAGMS, CENTERED VERTICALLY ON CONNECTION PLATE.

CONNECTION PLATE SHALL BE BOLTED TO W 18 X 35 FLARE BEAM PRIOR TO BOLTING TO W 30 X 173 BEAM NO. 1. FOR CONNECTION BETWEEN CONNECTION PLATE AND W 18 X 35 FLARE BEAM, BOLT HEADS SHALL BE PLACED ON ACUTE ANGLE SIDE.



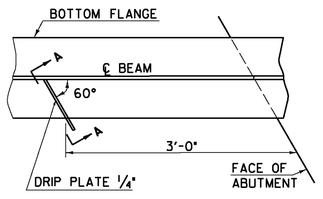
W30 x 173 FLANGE CLIP

NOT TO SCALE

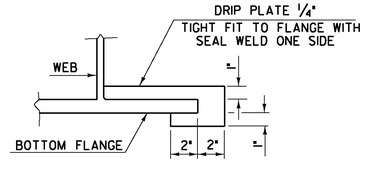


W27 x 194 FLANGE CLIP

NOT TO SCALE

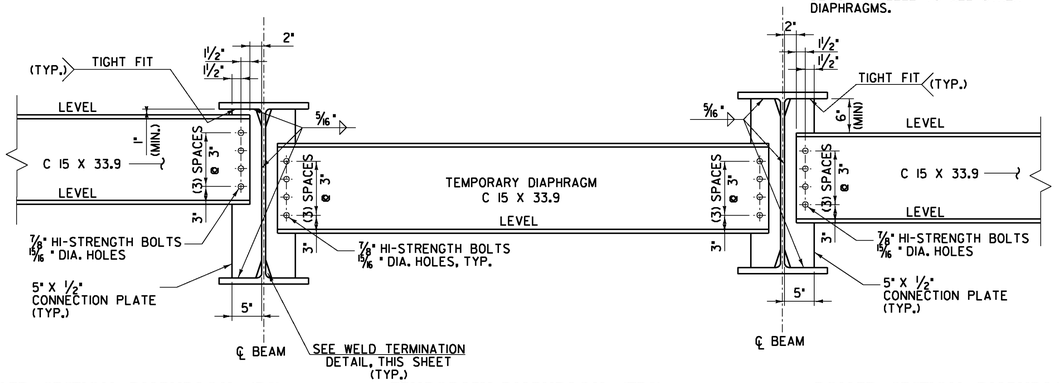


PLAN DRIP PLATE



SECTION A - A

NOTE: DRIP PLATES SHALL BE PLACED ON OUTSIDE EDGE OF FASCIA BEAMS AS INDICATED ON THE FRAMING PLAN.



ROLLED SECTION DIAPHRAGM (D1) (BAY 1)

TEMPORARY DIAPHRAGM (TD1) (BAY 2)

ROLLED SECTION DIAPHRAGM (D1) (BAY 3 - BAY 6)

INTERMEDIATE DIAPHRAGMS

NOT TO SCALE

NOTES:
DIAPHRAGMS TO BE LEVEL AFTER APPLICATION OF ALL DEAD LOADS.

ALL WELDS SHALL BE 5/16" FILLET WELDS CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATION.

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

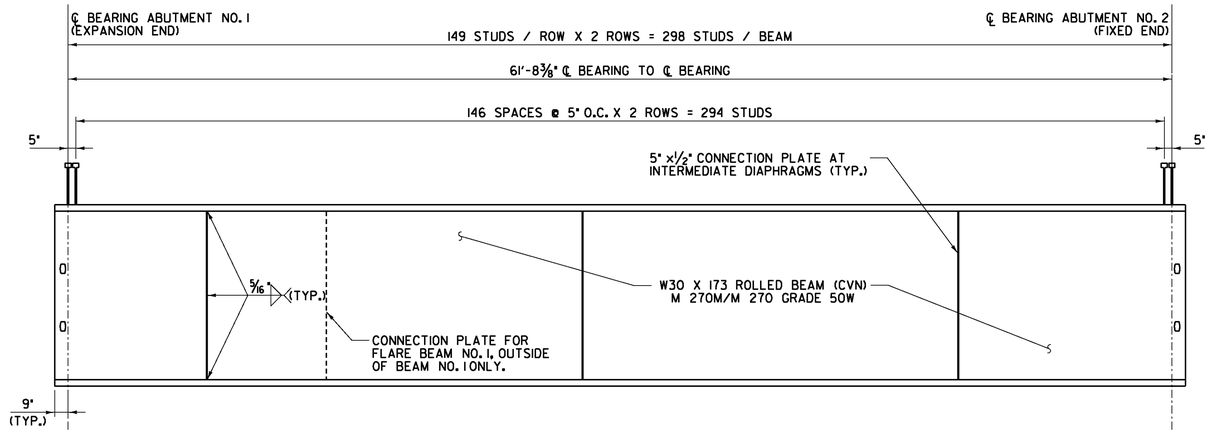
Town Of BARRE CITY	Bridge No. 7
	Log Sta.
Highway No. PROSPECT ST.	Surv. Sta.

PROSPECT ST. OVER STEVENS BRANCH

FRAMING PLAN AND DETAILS

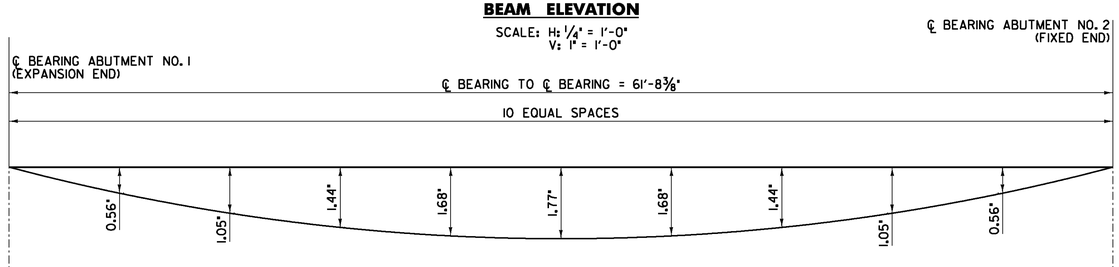
Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By E. P. DETRICK Date 1/09	Bridge Design Supervisor J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 28 of 56

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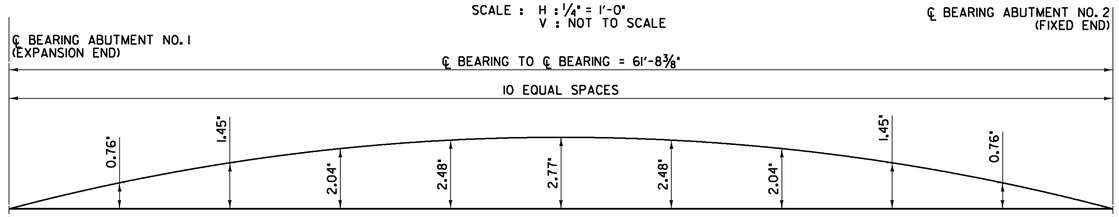
BEAM ELEVATION

SCALE: H: ¼" = 1'-0"
V: 1" = 1'-0"



DEAD LOAD DEFLECTION DIAGRAM

SCALE : H : ¼" = 1'-0"
V : NOT TO SCALE



CAMBER DIAGRAM

SCALE : H : ¼" = 1'-0"
V : NOT TO SCALE

NOTES:

1. CONNECTION PLATES SHALL BE PERPENDICULAR TO THE FLANGES AND THE WEBS AFTER APPLICATION OF ALL DEAD LOADS.
2. ENDS OF THE BEAMS SHALL BE FABRICATED SO THAT THEY WILL BE PLUMB UNDER FULL DEAD LOAD.
3. CVN = CHARPY V-NOTCH REQUIRED PER SPECIFICATION.
4. SEE HAUNCH DETAIL SHEET 24 FOR ADDITIONAL SHEAR STUD INFORMATION.

NOTE:

DEAD LOAD DEFLECTIONS INCLUDE ALL DEAD LOADS AND SUPERIMPOSED DEAD LOADS INCLUDING BEAM AND DIAPHRAGM WEIGHTS.

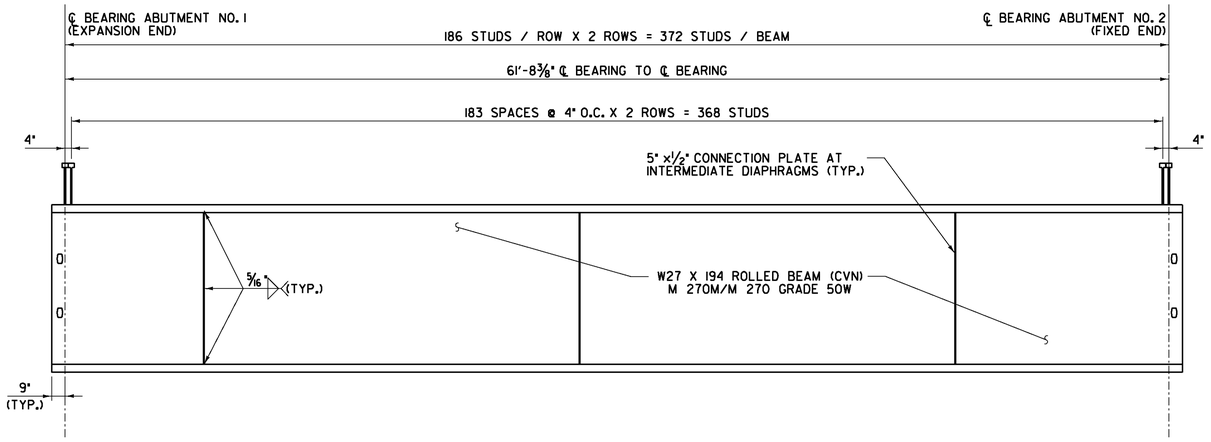
PLOTTED 2/2/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

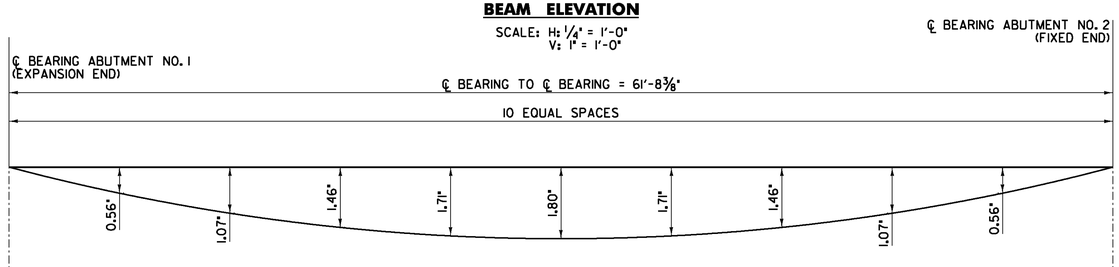
Town Of BARRE CITY	Bridge No. 7
Highway No. PROSPECT ST.	Log Sta. / Surv. Sta.
PROSPECT ST. OVER STEVENS BRANCH	
BEAM ELEVATION AND DETAILS (W30 X 173)	
Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By E. P. DETRICK Date 1/09	Bridge Design Supervisor J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 29 of 56

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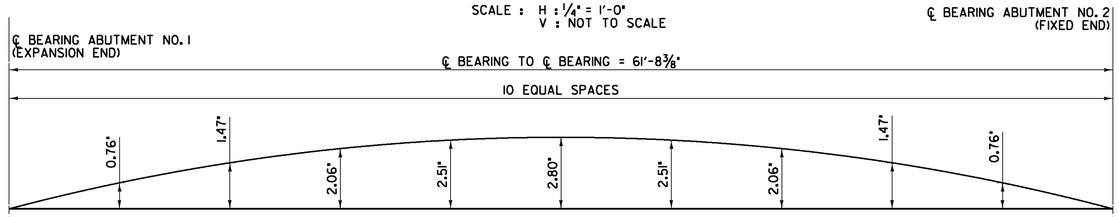
BEAM ELEVATION

SCALE: H: ¼" = 1'-0"
V: 1" = 1'-0"



DEAD LOAD DEFLECTION DIAGRAM

SCALE : H : ¼" = 1'-0"
V : NOT TO SCALE



CAMBER DIAGRAM

SCALE : H : ¼" = 1'-0"
V : NOT TO SCALE

NOTES:

1. CONNECTION PLATES SHALL BE PERPENDICULAR TO THE FLANGES AND THE WEBS AFTER APPLICATION OF ALL DEAD LOADS.
2. ENDS OF THE BEAMS SHALL BE FABRICATED SO THAT THEY WILL BE PLUMB UNDER FULL DEAD LOAD.
3. CVN = CHARPY V-NOTCH REQUIRED PER SPECIFICATION.
4. SEE HAUNCH DETAIL SHEET 24 FOR ADDITIONAL SHEAR STUD INFORMATION.

NOTE:

DEAD LOAD DEFLECTIONS INCLUDE ALL DEAD LOADS AND SUPERIMPOSED DEAD LOADS INCLUDING BEAM AND DIAPHRAGM WEIGHTS.

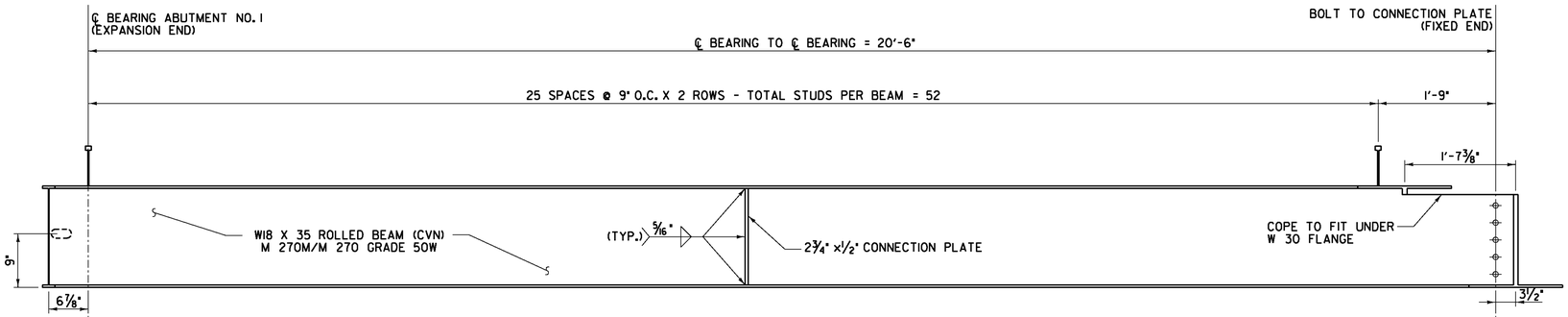
PLOTTED 2/2/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BARRE CITY	Bridge No. 7
Highway No. PROSPECT ST.	Log Sta. / Surv. Sta.
PROSPECT ST. OVER STEVENS BRANCH	
BEAM ELEVATION AND DETAILS (W27 X 194)	
Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By E. P. DETRICK Date 1/09	Bridge Design Supervisor J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 29A of 56

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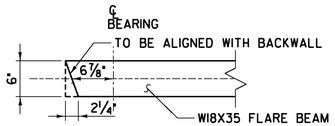


BEAM ELEVATION

SCALE: 1" = 1'-0"

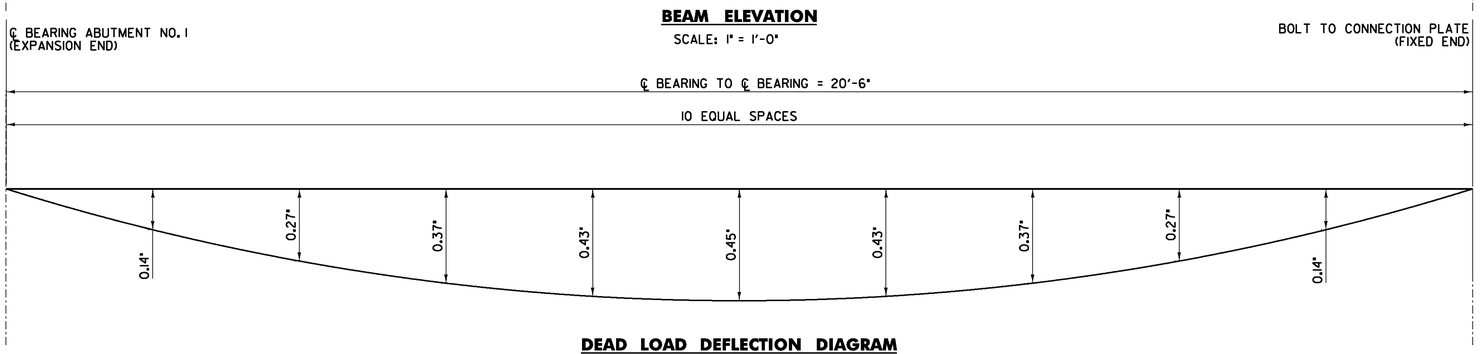
NOTES:

1. CONNECTION PLATES SHALL BE PERPENDICULAR TO THE FLANGES AFTER APPLICATION OF ALL DEAD LOADS.
2. ENDS OF THE BEAMS SHALL BE FABRICATED SO THAT THEY WILL BE PLUMB UNDER FULL DEAD LOAD.
3. CVN = CHARPY V-NOTCH REQUIRED PER SPECIFICATION.



FLARE BEAM CLIP AT ABUTMENT

SCALE: 1" = 1'-0"

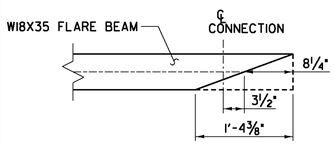


DEAD LOAD DEFLECTION DIAGRAM

SCALE : H : 1" = 1'-0"
V : NOT TO SCALE

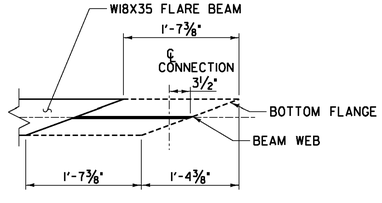
NOTE:

DEAD LOAD DEFLECTIONS INCLUDE ALL DEAD LOADS AND SUPERIMPOSED DEAD LOADS INCLUDING BEAM AND DIAPHRAGM WEIGHTS.



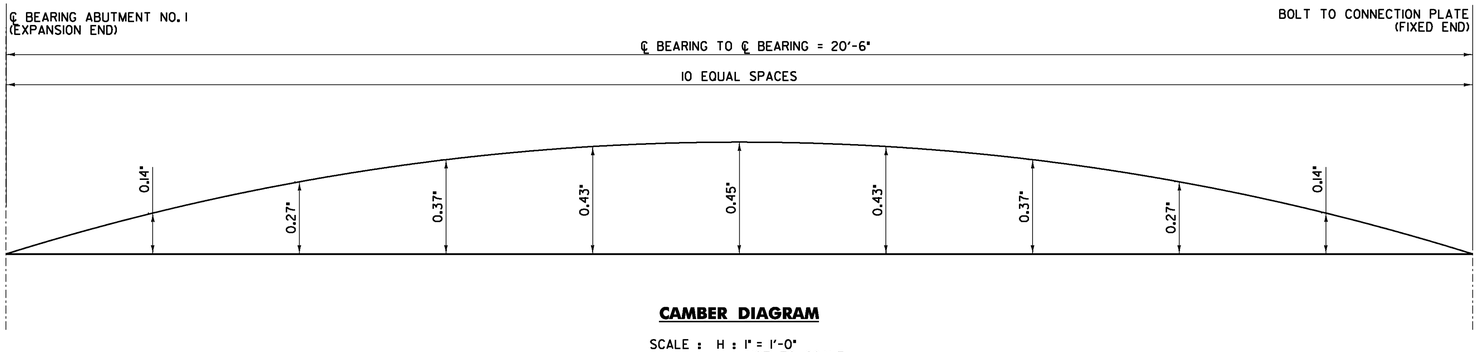
BOTTOM FLANGE AND WEB CLIP AT CONNECTION TO W 30 FASCIA

SCALE: 1" = 1'-0"



TOP FLANGE CLIP AT CONNECTION TO W 30 FASCIA

SCALE: 1" = 1'-0"



CAMBER DIAGRAM

SCALE : H : 1" = 1'-0"
V : NOT TO SCALE

PLOTTED 2/2/2009

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STATE OF VERMONT
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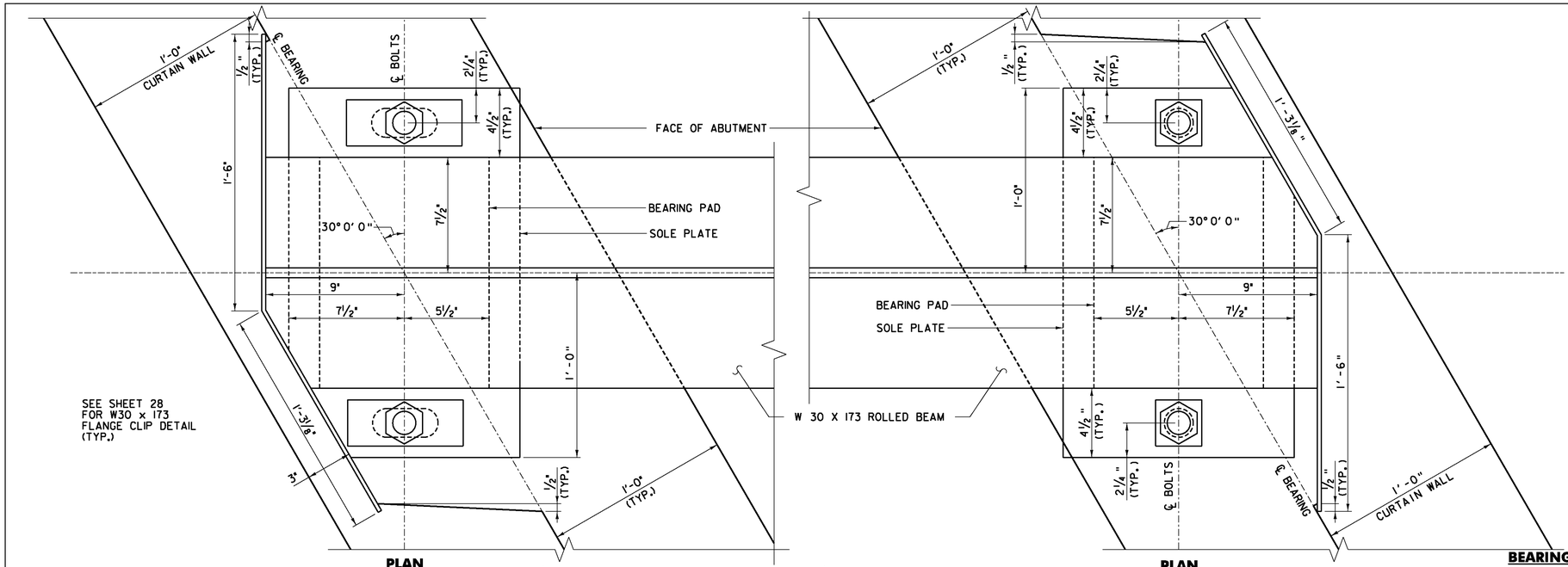
Town Of BARRE CITY	Bridge No. 7
	Log Sta.
Highway No. PROSPECT ST.	Surv. Sta.

PROSPECT ST. OVER STEVENS BRANCH

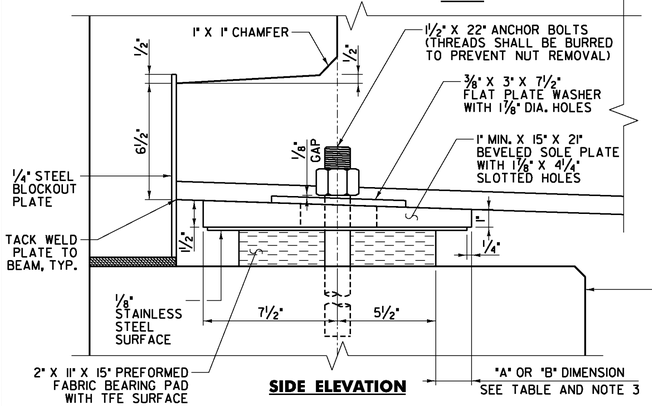
FLARE BEAM ELEVATION AND DETAILS

Designed By A.P. GUYETTE	Drawn By R.H. BARNES
Checked By Date	Bridge Design Supervisor
E. P. DETRICK 1/09	J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 30 of 56

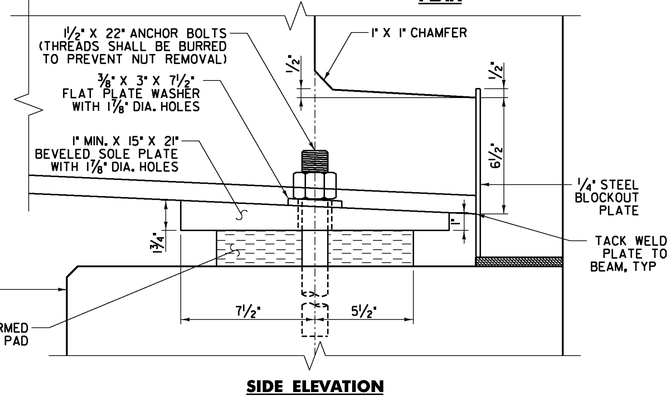
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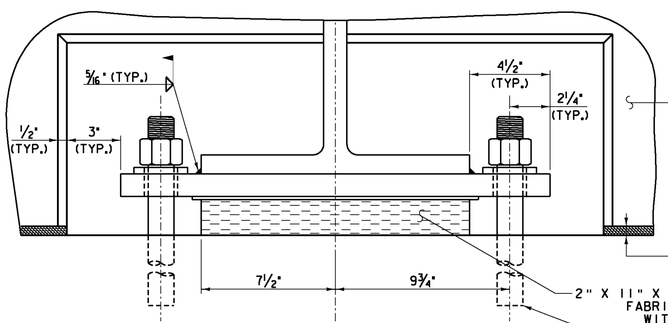
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SIDE ELEVATION



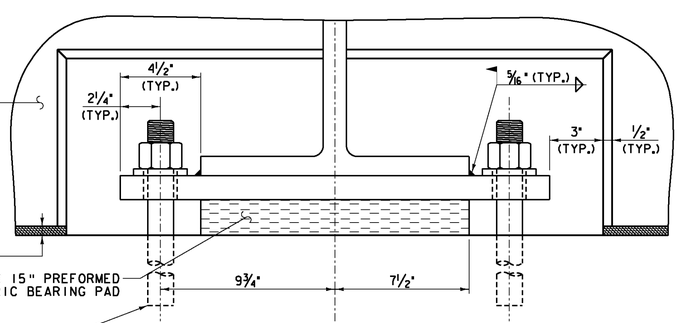
SIDE ELEVATION



FRONT ELEVATION

EXPANSION BEARING DETAILS AT ABUT. NO. 1

SCALE 3" = 1'-0



FRONT ELEVATION

FIXED BEARING DETAILS AT ABUT. NO. 2

SCALE 3" = 1'-0

TEMPERATURE ADJUSTMENT TABLE		
TEMP (F)	"A" DISTANCE (INCHES)	"B" DISTANCE (INCHES)
120	1 ⅜"	1 ⅞"
105	1 ½"	2"
90	1 ⅝"	2 ⅛"
75	1 ¾"	2 ¼"
60	1 ⅞"	2 ⅜"
45	2"	2 ½"
30	2 ⅛"	2 ⅝"
15	2 ¼"	2 ¾"
0	2 ⅜"	2 ⅞"
-15	2 ½"	3"
-30	2 ⅝"	3 ⅛"

SEE NOTE 3

BEARING NOTES

1. BEARINGS SHALL CONFORM TO APPLICABLE SUBSECTIONS OF SECTIONS 531 AND 731.
2. FABRICATION DRAWINGS CONFORMING TO SUBSECTION 531.03 SHALL BE SUBMITTED TO INCLUDE WELDING AND BONDING PROCEDURES.
3. THE "A" DISTANCE IS THE SOLE PLATE ADJUSTMENT TO BE USED AFTER THE DECK SYSTEM, CURB, PAVEMENT, AND BRIDGE RAIL ARE PLACED. THE "B" DISTANCE IS THE SOLE PLATE ADJUSTMENT TO BE USED BEFORE DEAD LOAD IS ADDED TO THE BEAM SELFWEIGHT. THE FINAL "A" DISTANCE, AS SHOWN IN THE TABLE, MUST BE ATTAINED TO WITHIN ⅛".
4. DESIGN CRITERIA:
   A. ALLOWABLE BEARING PRESSURE ON CONCRETE = 1000 P.S.I.
   B. MINIMUM ALLOWABLE DESIGN ROTATION = 0.015 RADIANS
   C. HORIZONTAL CAPACITY SHALL BE A MINIMUM OF 6% OF THE VERTICAL LOAD
   D. DESIGN LOAD PER BEARING = 125 KIPS (DEAD LOAD + LIVE LOAD)
5. ALL STEEL IN BEARING DEVICES (EXCEPT STAINLESS) SHALL BE AASHTO M270, GRADE 36, AND GALVANIZED PER SPECIFICATION 531.04(b).
6. ANCHOR BOLTS SHALL HAVE A MINIMUM OF 15" EMBEDMENT INTO THE CONCRETE AND SHALL CONFORM TO SUBSECTION 714.08.
7. ALL ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED. ALL WASHERS SHALL BE ⅜" PLATE (MINIMUM). PAYMENT FOR ANCHOR BOLTS, NUTS AND WASHERS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 531.10, "BEARING DEVICE ASSEMBLY, PREFORMED FABRIC PAD."
8. DRILL HOLES IN NEW ABUTMENT CAP FOR NEW ANCHOR BOLTS. HOLES FOR ANCHOR BOLTS SHALL BE 3" DIAMETER IF ANCHOR BOLTS ARE TO BE GROUTED IN AND 2½" DIAMETER IF ANCHOR BOLTS ARE TO BE INSTALLED USING MORTAR, TYPE IV.
9. EXISTING ANCHOR BOLTS ON EXISTING ABUTMENTS SHALL BE CUT TO 1" MINIMUM BELOW EXISTING BRIDGE SEAT. BLAST CLEAN AND FILL VOID WITH MORTAR TYPE IV. PAYMENT SHALL BE INCIDENTAL TO ITEM 531.10, "BEARING DEVICE ASSEMBLY, PREFORMED FABRIC PAD."

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BARRE CITY	Bridge No. 7
Highway No. PROSPECT ST.	Log Sta. / Surv. Sta.

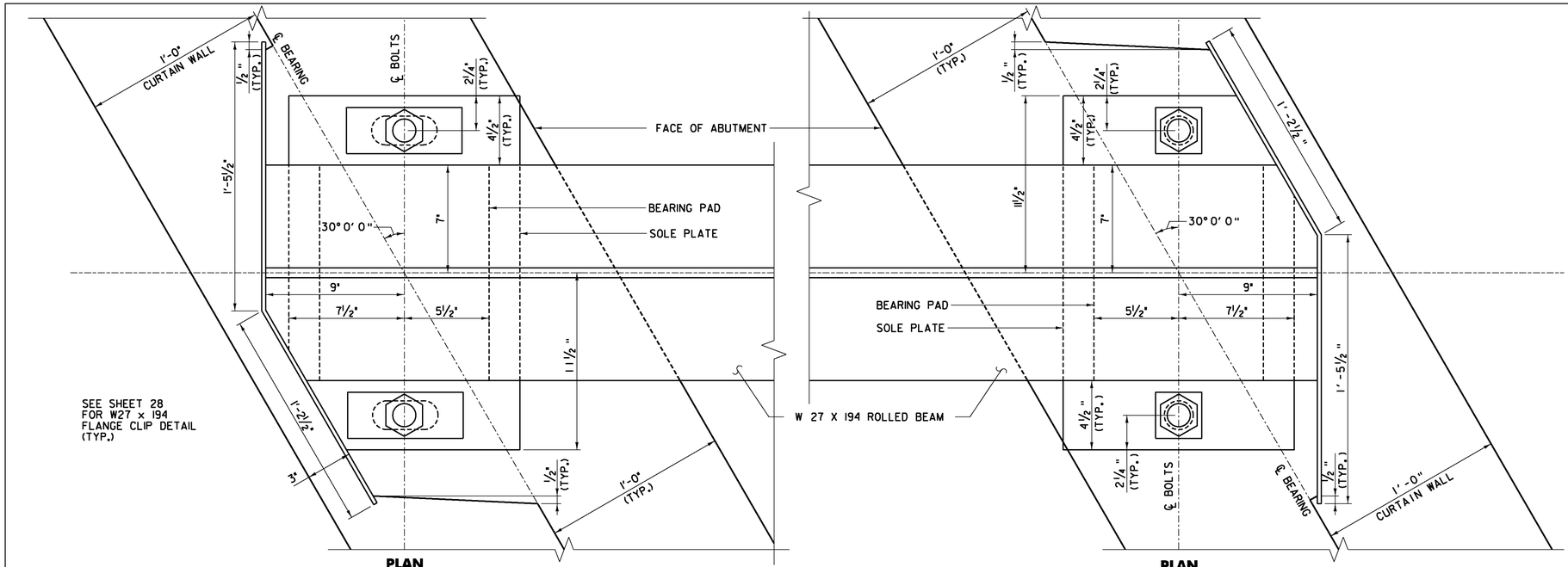
PROSPECT ST. OVER STEVENS BRANCH

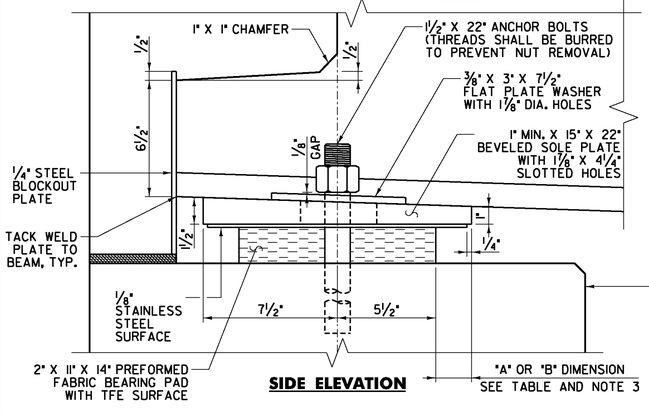
BEARING DETAILS (W30X173)

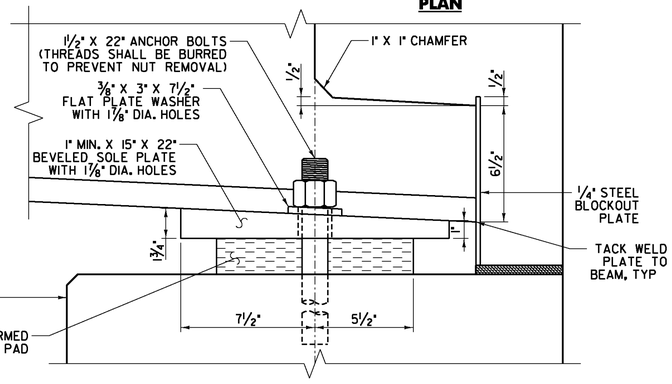
Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By E. P. DETRICK Date 1/09	Bridge Design Supervisor J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 31 of 56

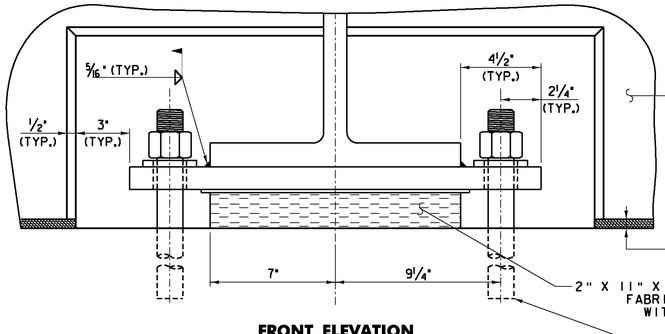
PLOTTED 2/2/2009

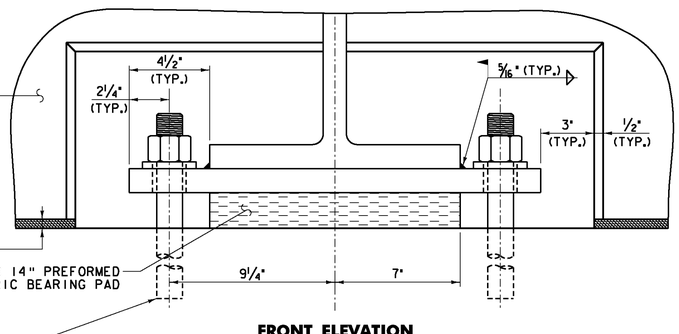
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BEARING NOTES

1. REFER TO SHEET 31 FOR BEARING NOTES.
2. FOR NOTE 4D, DESIGN LOAD FOR W27 X 194 BEARING IS 120 KIPS (DEAD LOAD + LIVE LOAD).
3. "A" AND "B" DIMENSIONS FROM SHEET 31 SHALL BE APPLICABLE FOR FLARE BEARING.
4. THE BEARING DEVICE FOR THE W27 X 194 BEAM WILL BE PAID AT THE SAME UNIT PRICE AS FOR THE OTHER BEARING DEVICES.

PLOTTED 2/2/2009

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STATE OF VERMONT
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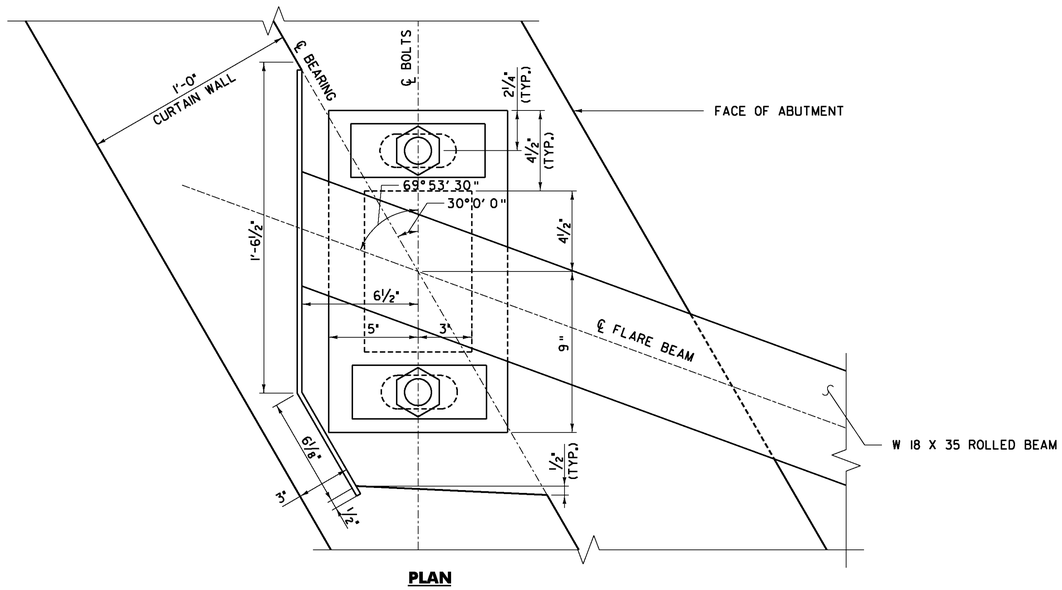
Town Of BARRE CITY	Bridge No. 7
	Log Sta.
Highway No. PROSPECT ST.	Surv. Sta.

PROSPECT ST. OVER STEVENS BRANCH

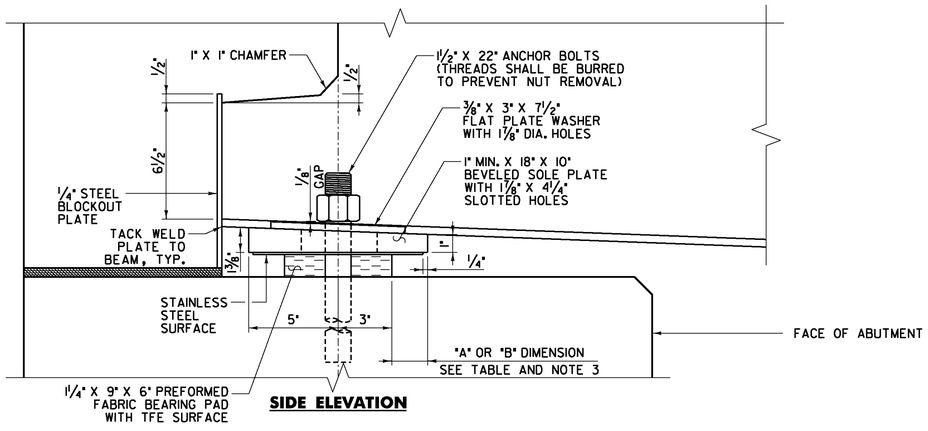
BEARING DETAILS (W27X194)

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By Date E. P. DETRICK 1/09	Bridge Design Supervisor J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 31A of 56

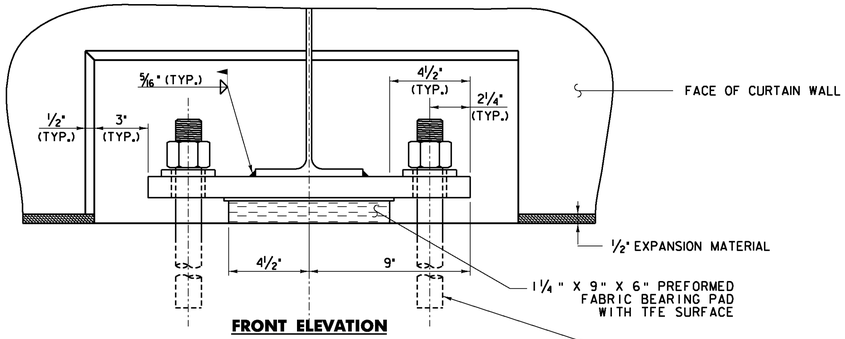
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PLAN



SIDE ELEVATION



FRONT ELEVATION

EXPANSION BEARING DETAILS AT ABUT. NO. 1

SCALE 3" = 1'-0

1 9 6 3 0 1

BEARING NOTES

1. REFER TO SHEET 31 FOR BEARING NOTES.
2. FOR NOTE 4D, DESIGN LOAD FOR FLARE BEARING IS 20 KIPS (DEAD LOAD + LIVE LOAD).
3. "A" AND "B" DIMENSIONS FROM SHEET 31 SHALL BE APPLICABLE FOR FLARE BEARING.
4. THE BEARING DEVICE FOR THE FLARE BEAM WILL BE PAID AT THE SAME UNIT PRICE AS FOR THE OTHER BEARING DEVICES.

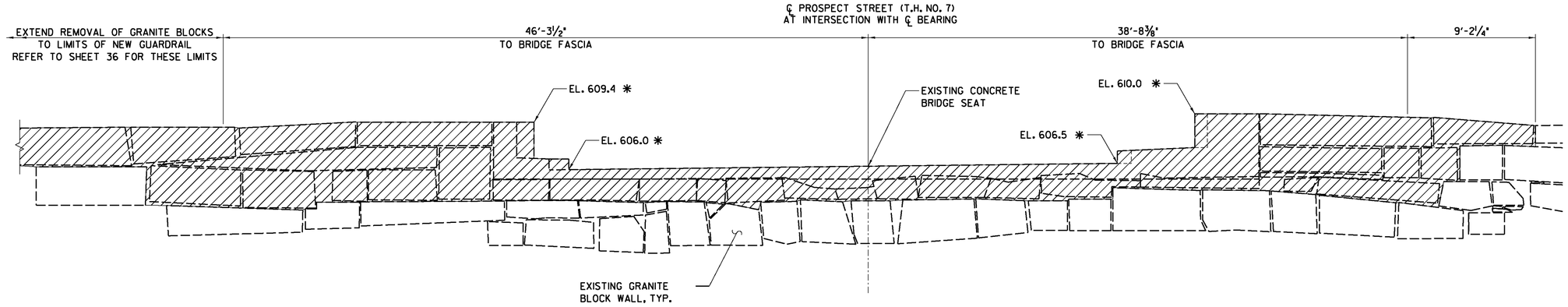
PLOTTED 2/2/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

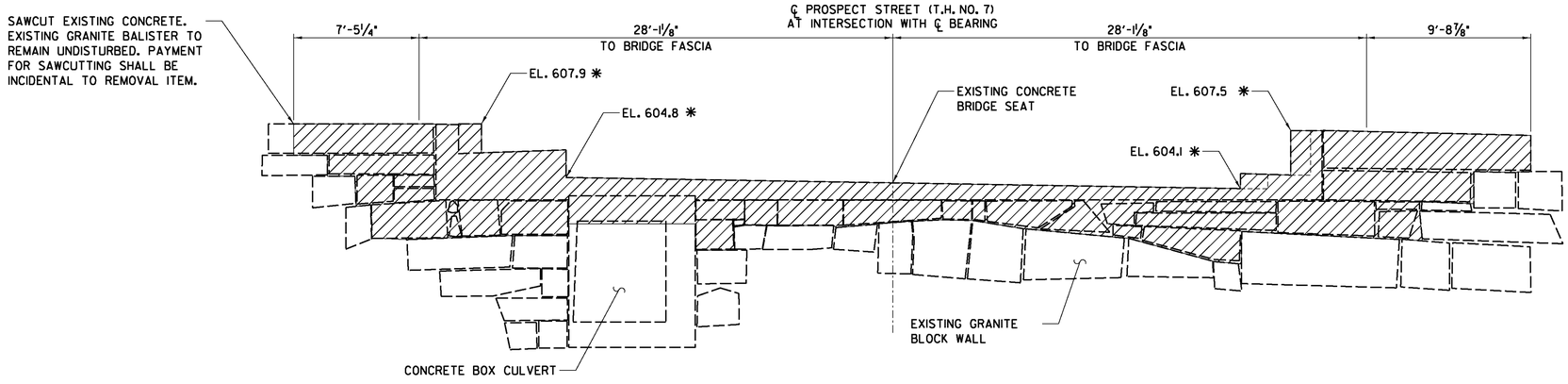
Town Of BARRE CITY	Bridge No. 7
Highway No. PROSPECT ST.	Log Sta. / Surv. Sta.
PROSPECT ST. OVER STEVENS BRANCH	
FLARE BEAM BEARING DETAILS	
Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By E. P. DETRICK Date 1/09	Bridge Design Supervisor J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 32 of 56

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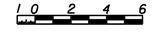
ABUTMENT NO. 1 – ELEVATION

SCALE ¼" = 1'-0"



ABUTMENT NO. 2 – ELEVATION

SCALE ¼" = 1'-0"



APPROXIMATE AREA OF MINIMUM ABUTMENT REMOVAL

* APPROXIMATE ELEVATION

NOTES

1. EXISTING GRANITE BLOCKS AND JOINTS ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. THE DIMENSIONS AND ELEVATIONS ARE NOT BASED ON FIELD SURVEY. THE CONTRACTOR SHALL TAKE FIELD MEASUREMENTS TO DETERMINE AND CONFIRM THE EXTENTS OF GRANITE BLOCK REMOVAL.
2. EXISTING CONCRETE AND GRANITE BLOCKS SHALL BE REMOVED TO PROVIDE FOR A MINIMUM OF 24" OF NEW CONCRETE BELOW THE PROPOSED BRIDGE SEAT ELEVATIONS. REMOVAL SHALL BE PAID FOR UNDER ITEM 529.20 "PARTIAL REMOVAL OF STRUCTURE".
3. THE LIMITS OF GRANITE BLOCK REMOVAL SHALL BE MARKED BY THE CONTRACTOR AND APPROVED BY THE RESIDENT ENGINEER PRIOR TO THE ACTUAL REMOVAL OF THE BLOCKS.
4. AT ABUTMENT NO. 2 THE TOP OF CONCRETE BOX CULVERT SHALL BE REMOVED TO THE VERTICAL PLANE OF THE BACK OF THE CURTAIN WALL. REMOVAL SHALL BE PAID FOR UNDER ITEM 529.20 "PARTIAL REMOVAL OF STRUCTURE".
5. ALL VERTICAL REINFORCING STEEL IN THE WALLS OF THE BOX CULVERT AND LONGITUDINAL REINFORCING STEEL IN THE TOP OF THE BOX CULVERT SHALL BE RETAINED IN PLACE.
6. BOTH EXISTING GRANITE BLOCK ABUTMENTS CONTAIN SEVERAL SIGNIFICANT VOIDS. ALL VOIDS GREATER THAN 1-INCH IN WIDTH, WITHIN THE LIMITS OF THE ABUTMENT TO REMAIN, SHALL BE REPAIRED. THE LIMITS OF THIS WORK SHALL BE HORIZONTALLY BETWEEN THE DRIP NOTCHES OF THE PROPOSED SUPERSTRUCTURE AND VERTICALLY FROM THE BOTTOM OF THE NEW ABUTMENT CAP TO THE TOP OF THE CONCRETE PAD AT THE BASE OF THE GRANITE BLOCKS. ALL WORK REQUIRED FOR THESE REPAIRS SHALL BE PAID FOR UNDER ITEM 602.30, "REPOINTING MASONRY".

PLOTTED 2/2/2009

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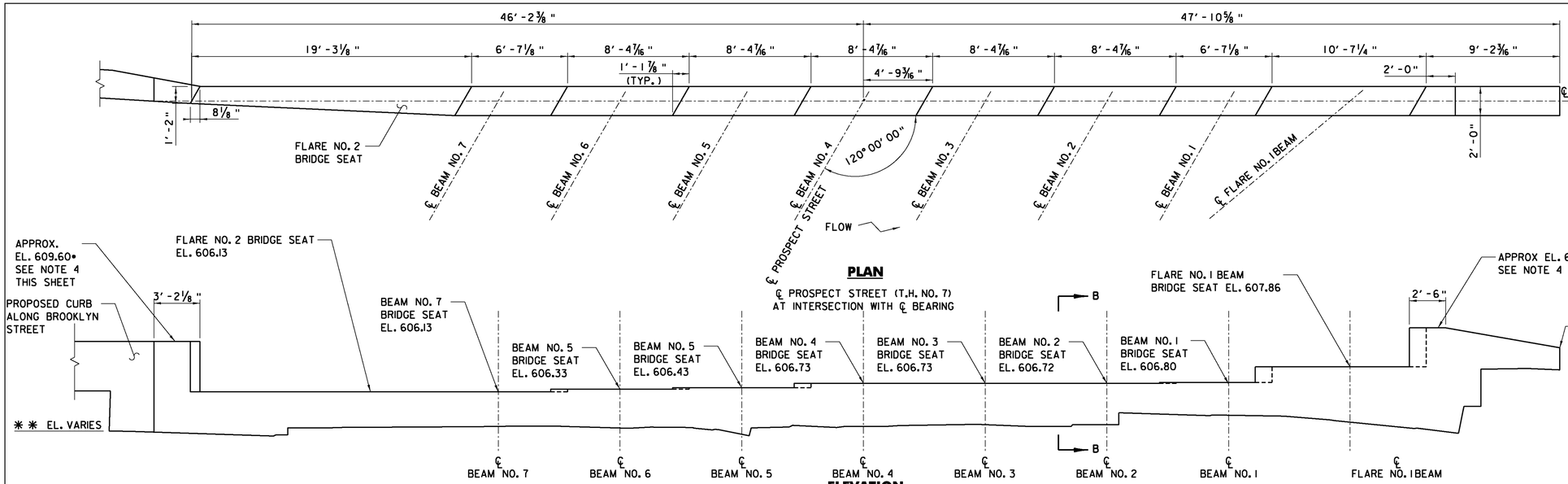
Town Of BARRE CITY	Bridge No. 7
Highway No. PROSPECT ST.	Log Sta. / Surv. Sta.

PROSPECT ST. OVER STEVENS BRANCH

ABUTMENT MODIFICATIONS – DEMOLITION

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By E. P. DETRICK Date 1/09	Bridge Design Supervisor J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 33 of 56

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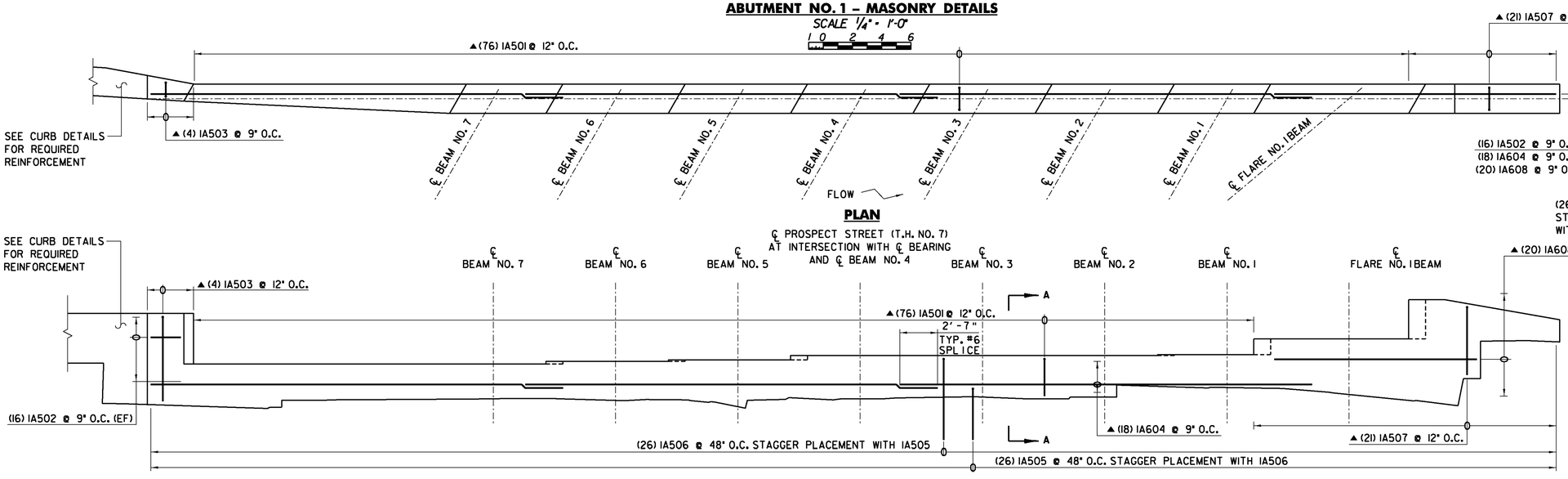


PLAN

℄ PROSPECT STREET (T.H. NO. 7)
AT INTERSECTION WITH ℄ BEARING

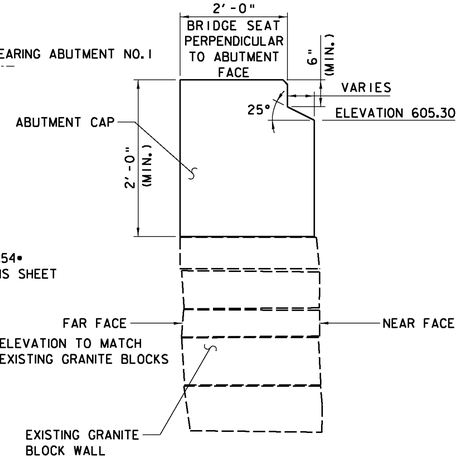
ELEVATION
ABUTMENT NO. 1 – MASONRY DETAILS

SCALE 1/4" = 1'-0"



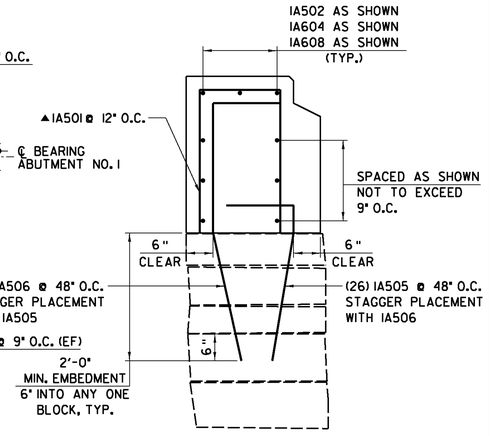
PLAN

℄ PROSPECT STREET (T.H. NO. 7)
AT INTERSECTION WITH ℄ BEARING
AND ℄ BEAM NO. 4



SECTION B–B

SCALE: 3/4" = 1'-0"



SECTION A–A

SCALE: 3/4" = 1'-0"

NOTE:
DRILL AND GROUT IA505 AND IA506 DOWELS INTO EXISTING GRANITE BLOCKS.

ADJUST SPACING OF THE DOWELS TO INSURE THAT NO HOLES ARE DRILLED LESS THAN SIX INCHES HORIZONTALLY FROM THE EDGE OF ANY STONE.

NOTE:

1. •• = ELEVATION VARIES AND SHALL PROVIDE FOR A MINIMUM OF 24" THICK BRIDGE SEAT.
2. ABUTMENT TOP WIDTH SHALL BE 2'-0 AT THE BRIDGE SEAT LOCATION. BOTTOM WIDTH SHALL VARY TO MATCH THE WIDTH OF THE GRANITE WALL.
3. ABUTMENT DIMENSIONS ARE ONLY APPROXIMATE. FOLLOWING THE PARTIAL REMOVAL OF THE EXISTING GRANITE BLOCKS, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND LENGTHS.
4. • = ELEVATION IS APPROXIMATE. FINAL TOP OF WINGWALL ELEVATION SHALL MATCH ELEVATION OF LEVEL PORTION OF BRIDGE SIDEWALK AT THE JOINT BETWEEN SUPERSTRUCTURE AND WINGWALL.

ELEVATION
ABUTMENT NO. 1 – REINFORCING DETAILS

SCALE 1/4" = 1'-0"

PLAN

N.F. = NEAR FACE
F.F. = FAR FACE
E.F. = EACH FACE
S = DECK OR SLAB
A = ABUTMENT
C = CURBING
△ = CUT TO FIT IN FIELD

PLOTTED 2/2/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

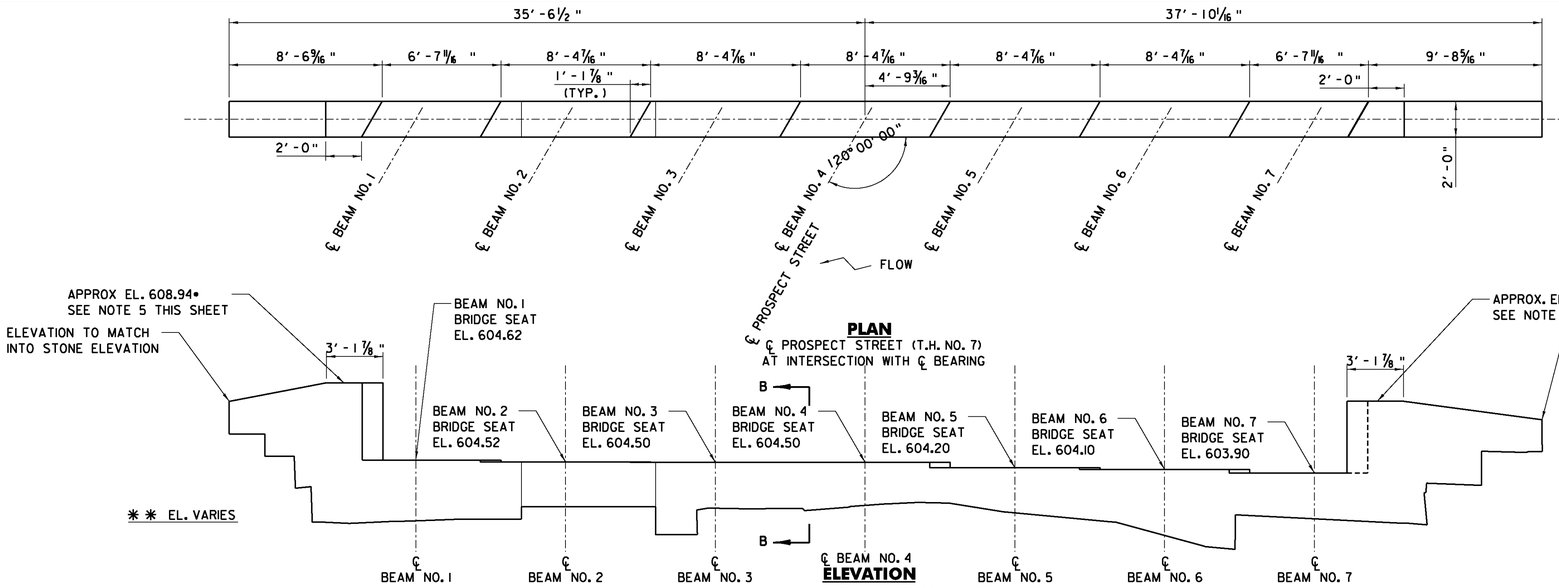
Town Of BARRE CITY	Bridge No. 7
	Log Sta.
Highway No. PROSPECT ST.	Surv. Sta.

PROSPECT ST. OVER STEVENS BRANCH

ABUTMENT NO. 1 MODIFICATIONS

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By E. P. DETRICK Date 1/09	Bridge Design Supervisor J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.C.C. Info.	
Bridge Sheet No.	Sheet 34 of 56

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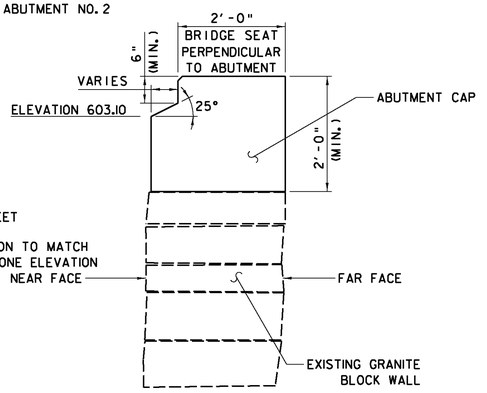
PLAN

℄ PROSPECT STREET (T.H. NO. 7)
AT INTERSECTION WITH ℄ BEARING

ELEVATION

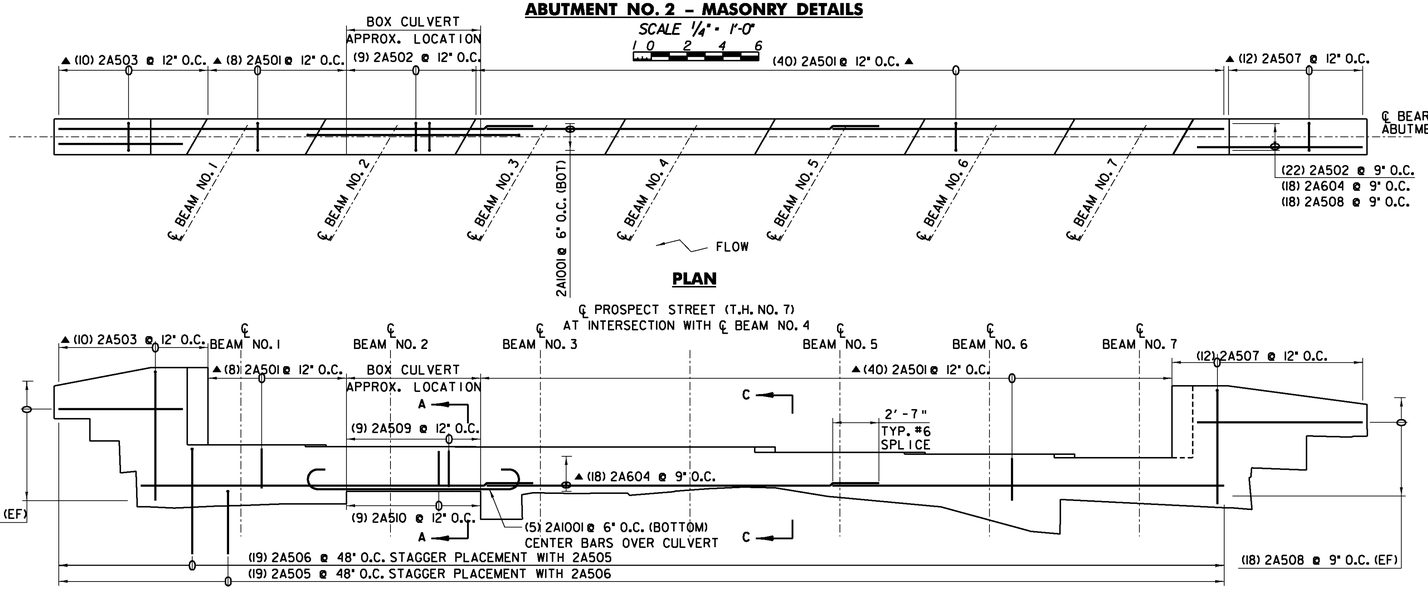
ABUTMENT NO. 2 – MASONRY DETAILS

SCALE 1/4" = 1'-0"



SECTION B–B

SCALE: ¾" = 1'-0"

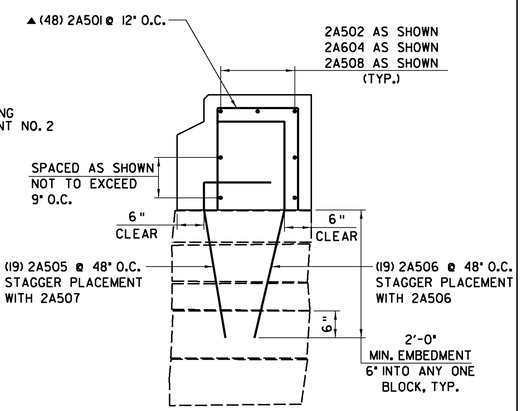


PLAN

ELEVATION

ABUTMENT NO. 2 – REINFORCING DETAILS

SCALE 1/4" = 1'-0"



SECTION C–C

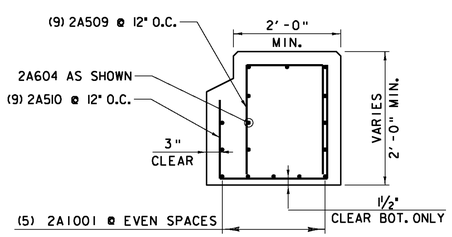
SCALE: ¾" = 1'-0"

NOTE:
DRILL AND GROUT 2A505 AND 2A506 DOWELS INTO EXISTING GRANITE BLOCKS.

ADJUST SPACING OF THE DOWELS TO INSURE THAT NO HOLES ARE DRILLED LESS THAN SIX INCHES HORIZONTALLY FROM THE EDGE OF ANY STONE.

NOTES:

1. LOCATION OF EXISTING CULVERT UNDERNEATH NEW ABUTMENT IS APPROXIMATE. LOCATION SHALL BE CONFIRMED IN THE FIELD AND REINFORCEMENT POSITIONED APPROPRIATELY.
2. •• = ELEVATION VARIES AND SHALL PROVIDE FOR A MINIMUM OF 24" THICK BRIDGE SEAT.
3. ABUTMENT TOP WIDTH SHALL BE 2'-0 AT THE BRIDGE SEAT LOCATION. BOTTOM WIDTH SHALL VARY TO MATCH THE WIDTH OF THE GRANITE WALL.
4. ABUTMENT DIMENSIONS ARE ONLY APPROXIMATE. FOLLOWING THE PARTIAL REMOVAL OF THE EXISTING GRANITE BLOCKS, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND LENGTHS.
5. • = ELEVATION IS APPROXIMATE. FINAL TOP OF WINGWALL ELEVATION SHALL MATCH ELEVATION OF LEVEL PORTION OF BRIDGE SIDEWALK AT THE JOINT BETWEEN SUPERSTRUCTURE AND WINGWALL.



SECTION A–A
TO SPAN EXISTING BOX CULVERT

SCALE: ¾" = 1'-0"

PLAN

N.F. = NEAR FACE
F.F. = FAR FACE
E.F. = EACH FACE
S = DECK OR SLAB
A = ABUTMENT
C = CURBING
△ = CUT TO FIT IN FIELD

PLOTTED 2/2/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

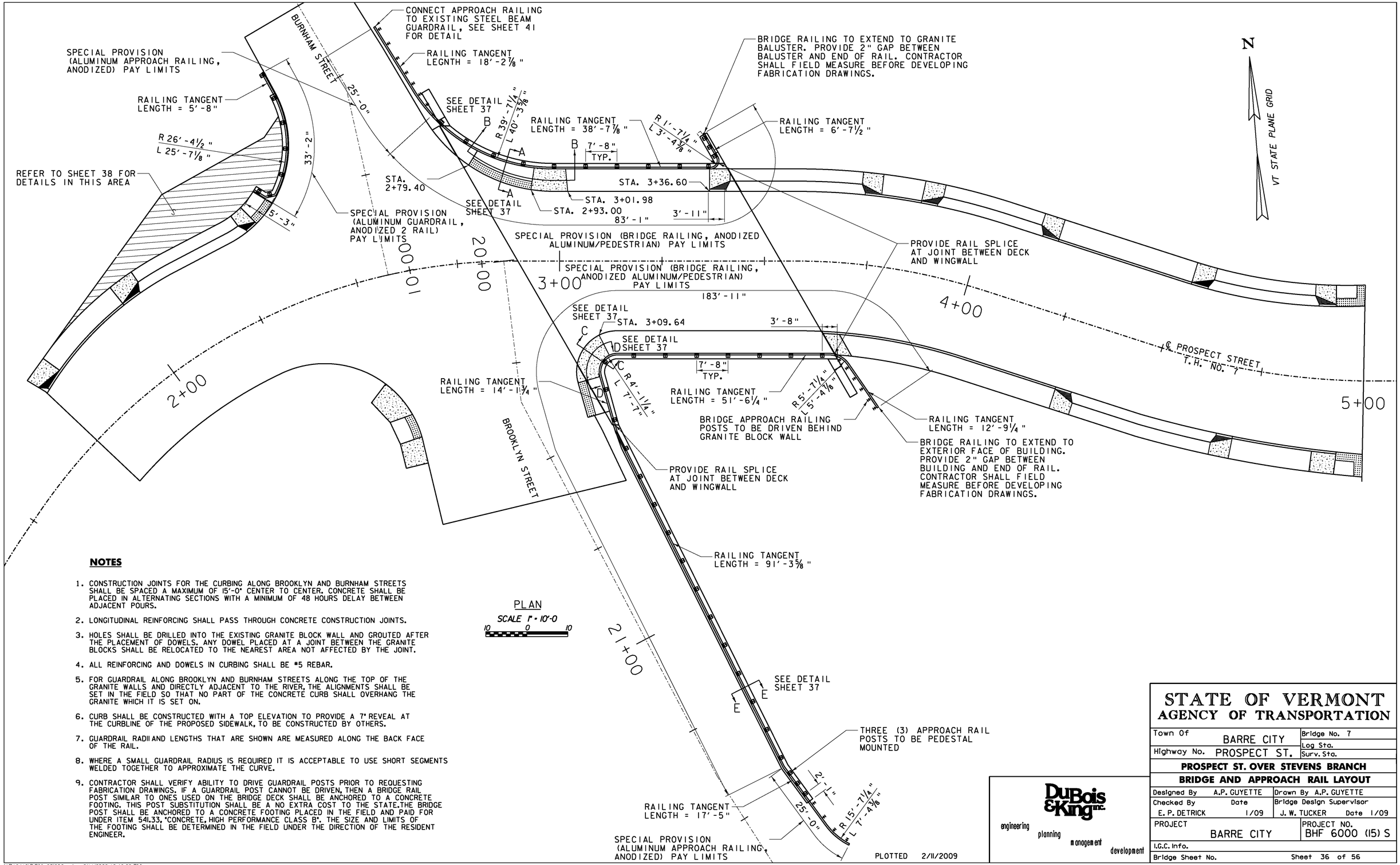
Town Of BARRE CITY	Bridge No. 7
Highway No. PROSPECT ST.	Log Sta.
	Surv. Sta.

PROSPECT ST. OVER STEVENS BRANCH

ABUTMENT NO. 2 MODIFICATIONS

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By E. P. DETRICK Date 1/09	Bridge Design Supervisor J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 35 of 56

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

NOTES

1. CONSTRUCTION JOINTS FOR THE CURBING ALONG BROOKLYN AND BURNHAM STREETS SHALL BE SPACED A MAXIMUM OF 15'-0" CENTER TO CENTER. CONCRETE SHALL BE PLACED IN ALTERNATING SECTIONS WITH A MINIMUM OF 48 HOURS DELAY BETWEEN ADJACENT POURS.
2. LONGITUDINAL REINFORCING SHALL PASS THROUGH CONCRETE CONSTRUCTION JOINTS.
3. HOLES SHALL BE DRILLED INTO THE EXISTING GRANITE BLOCK WALL AND GROUTED AFTER THE PLACEMENT OF DOWELS. ANY DOWEL PLACED AT A JOINT BETWEEN THE GRANITE BLOCKS SHALL BE RELOCATED TO THE NEAREST AREA NOT AFFECTED BY THE JOINT.
4. ALL REINFORCING AND DOWELS IN CURBING SHALL BE #5 REBAR.
5. FOR GUARDRAIL ALONG BROOKLYN AND BURNHAM STREETS ALONG THE TOP OF THE GRANITE WALLS AND DIRECTLY ADJACENT TO THE RIVER, THE ALIGNMENTS SHALL BE SET IN THE FIELD SO THAT NO PART OF THE CONCRETE CURB SHALL OVERHANG THE GRANITE WHICH IT IS SET ON.
6. CURB SHALL BE CONSTRUCTED WITH A TOP ELEVATION TO PROVIDE A 7" REVEAL AT THE CURBLINE OF THE PROPOSED SIDEWALK, TO BE CONSTRUCTED BY OTHERS.
7. GUARDRAIL RADII AND LENGTHS THAT ARE SHOWN ARE MEASURED ALONG THE BACK FACE OF THE RAIL.
8. WHERE A SMALL GUARDRAIL RADIUS IS REQUIRED IT IS ACCEPTABLE TO USE SHORT SEGMENTS WELDED TOGETHER TO APPROXIMATE THE CURVE.
9. CONTRACTOR SHALL VERIFY ABILITY TO DRIVE GUARDRAIL POSTS PRIOR TO REQUESTING FABRICATION DRAWINGS. IF A GUARDRAIL POST CANNOT BE DRIVEN, THEN A BRIDGE RAIL POST SIMILAR TO ONES USED ON THE BRIDGE DECK SHALL BE ANCHORED TO A CONCRETE FOOTING. THIS POST SUBSTITUTION SHALL BE A NO EXTRA COST TO THE STATE. THE BRIDGE POST SHALL BE ANCHORED TO A CONCRETE FOOTING PLACED IN THE FIELD AND PAID FOR UNDER ITEM 541.33, "CONCRETE, HIGH PERFORMANCE CLASS B". THE SIZE AND LIMITS OF THE FOOTING SHALL BE DETERMINED IN THE FIELD UNDER THE DIRECTION OF THE RESIDENT ENGINEER.

PLOTTED 2/11/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

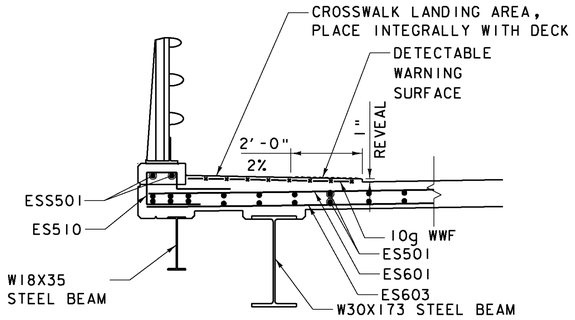
Town Of BARRE CITY	Bridge No. 7
Highway No. PROSPECT ST.	Log Sta. / Surv. Sta.

PROSPECT ST. OVER STEVENS BRANCH

BRIDGE AND APPROACH RAIL LAYOUT

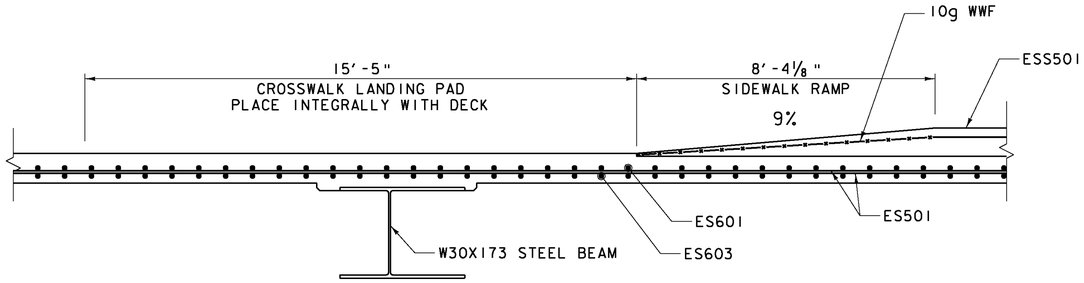
Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By E. P. DETRICK Date 1/09	Bridge Design Supervisor J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 36 of 56

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SECTION A-A

SCALE ½" = 1'-0

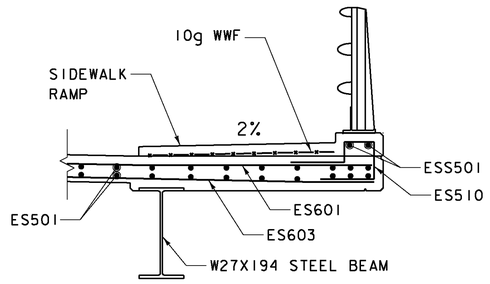


SECTION B-B

SCALE ½" = 1'-0

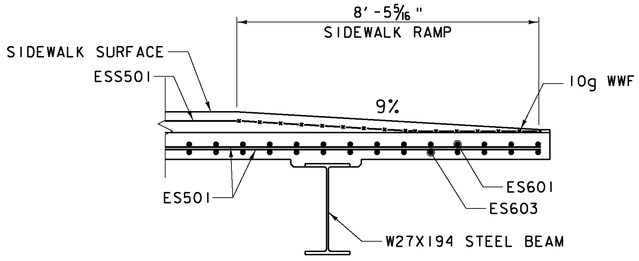
NOTES

1. CONCRETE SIDEWALK LANDING AREAS SHALL BE PLACED INTEGRALLY WITH THE CONCRETE BRIDGE DECK.
2. PORTIONS OF THE CONCRETE SIDEWALK RAMPS SHALL BE PLACED INTEGRALLY WITH THE CONCRETE BRIDGE DECK. THE CONTRACTOR SHALL DETERMINE IN THE FIELD THE EXTENT OF THE RAMPS TO PLACED INTEGRALLY WITH THE DECK SO THAT REINFORCEMENT CAN BE PROPERLY PLACED AND CLEARANCES MAINTAINED.



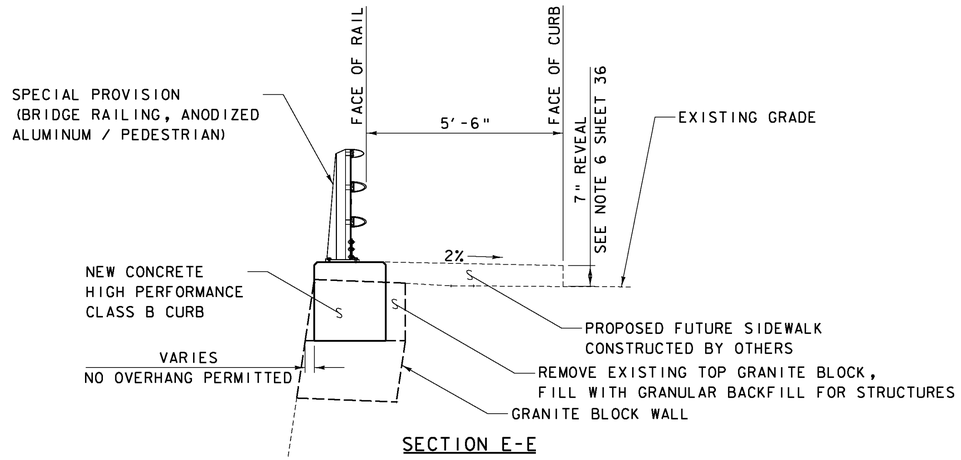
SECTION C-C

SCALE ½" = 1'-0



SECTION D-D

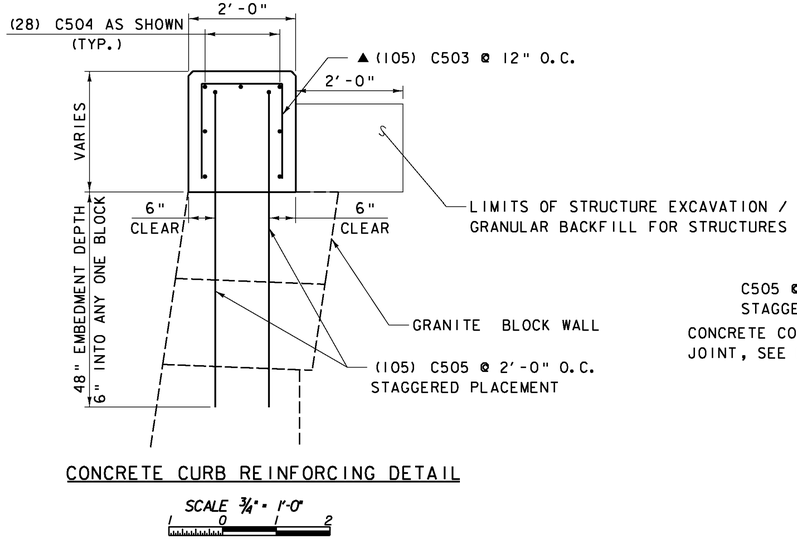
SCALE ½" = 1'-0



SECTION E-E

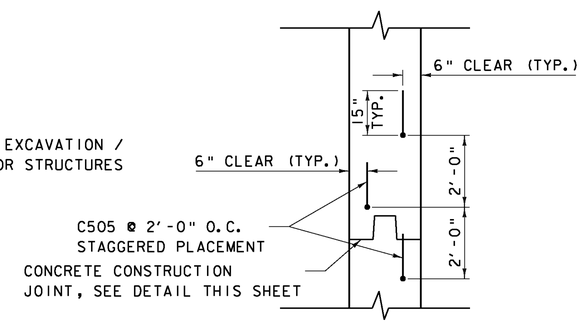
SCALE ½" = 1'-0"

NOTE:
GUARDRAIL ALIGNMENT SHALL BE SET IN FIELD SO THAT THERE WILL BE NO OVERHANG OF THE PROPOSED CONCRETE CURB.



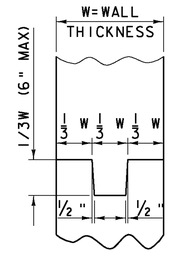
CONCRETE CURB REINFORCING DETAIL

SCALE ¾" = 1'-0"



CONCRETE CURB DOWEL REINFORCING PLAN

SCALE ½" = 1'-0"



TYPICAL CONCRETE CONSTRUCTION JOINT

NOT TO SCALE

PLOTTED 2/2/2009

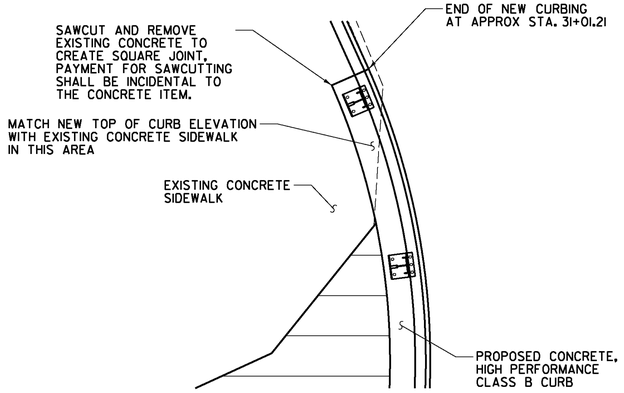
DuBois & King inc.

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

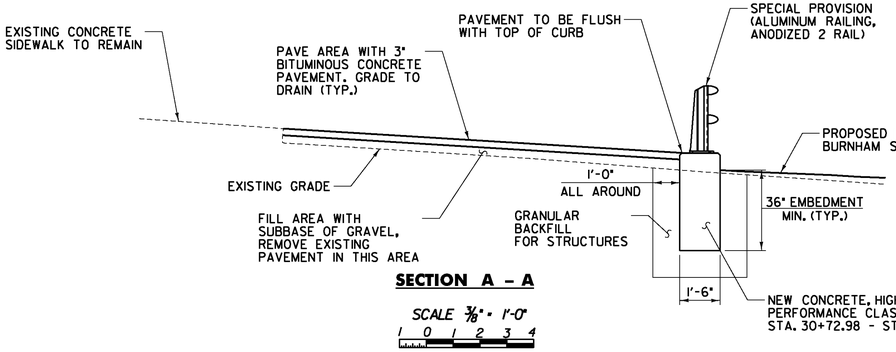
Town Of BARRE CITY	Bridge No. 7
Highway No. PROSPECT ST.	Log Sta. / Surv. Sta.
PROSPECT ST. OVER STEVENS BRANCH	
BRIDGE AND GRANITE BLOCK DETAILS	
Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By E. P. DETRICK Date 1/09	Bridge Design Supervisor J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 37 of 56

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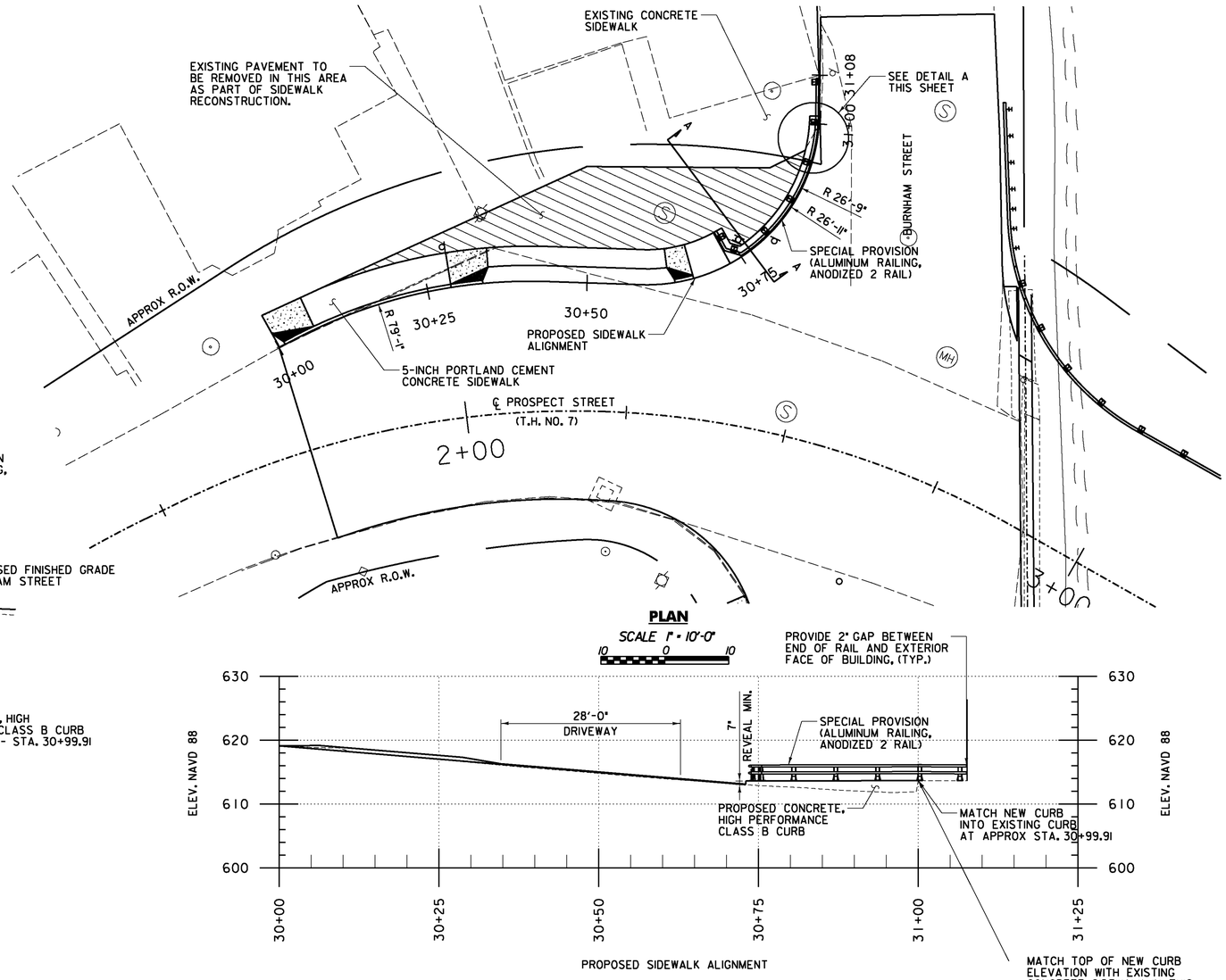
DETAIL A

SCALE 3/8" = 1'-0"



SECTION A - A

SCALE 3/8" = 1'-0"



PLAN

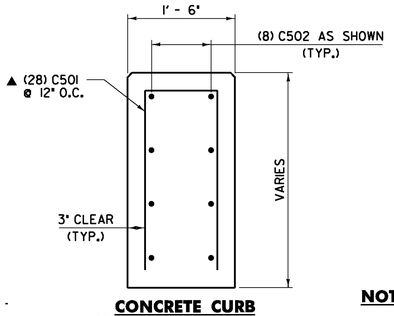
SCALE 1" = 10'-0"

PROFILE

SCALE 1" = 10'-0"

LEGEND

- EXISTING EDGE OF RIVER
- EXISTING TRAVELED WAY
- EXISTING GUARD RAIL
- STORM DRAIN
- SIDEWALK RAMP
- UTILITY POLE
- TELEPHONE POLE
- TREES
- OVERHEAD LINES — AER E&T
- WATER LINE — W
- EXISTING SIGN
- SEWER LINE — S
- RIGHT OF WAY
- SEWER MANHOLE — SMH
- WATER MANHOLE — WMH
- WATER SHUTOFF — WSO
- GAS SHUTOFF — GSO

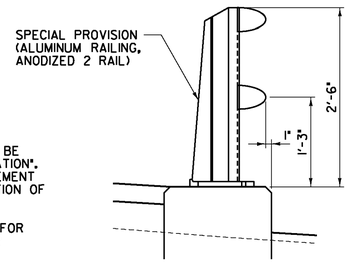


CONCRETE CURB REINFORCING DETAIL

SCALE 1" = 1'-0"

NOTES

1. REMOVAL OF EXISTING CONCRETE SIDEWALK SHALL BE PAID FOR UNDER ITEM 203.16 "SOLID ROCK EXCAVATION". REMOVAL OF EXISTING BITUMINOUS CONCRETE PAVEMENT SHALL BE PAID FOR UNDER ITEM 203.28 "EXCAVATION OF SURFACES AND PAVEMENTS".
2. REFER TO SHEETS 39-41 FOR ADDITIONAL DETAILS FOR SPECIAL PROVISION (ALUMINUM RAILING, ANODIZED 2 RAIL).



SPECIAL PROVISION (ALUMINUM RAILING, ANODIZED 2 RAIL) SECTION

SCALE 1" = 1'-0"

PLOTTED 2/11/2009

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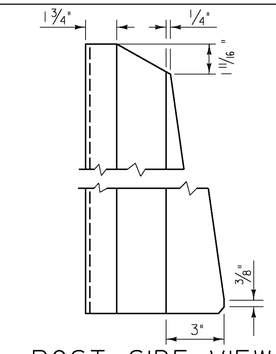
Town Of BARRE CITY	Bridge No. 7
Highway No. PROSPECT ST.	Log Sta. / Surv. Sta.

PROSPECT ST. OVER STEVENS BRANCH

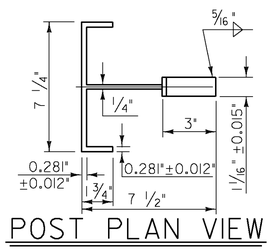
BURNHAM STREET CORNER DETAIL

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By E. P. DETRICK Date 1/09	Bridge Design Supervisor J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 38 of 56

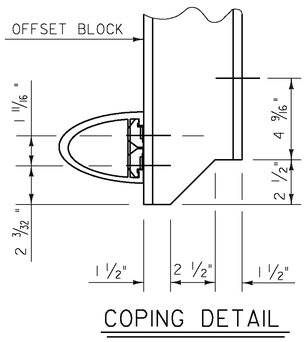
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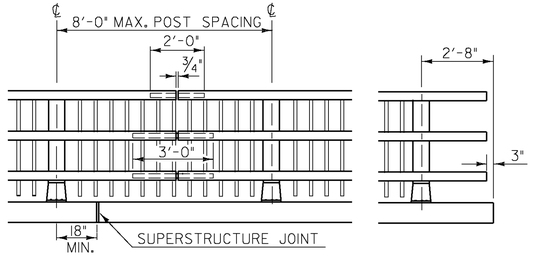
POST SIDE VIEW



POST PLAN VIEW



COPING DETAIL



FRONT ELEVATION OF THREE RAIL WITH SPINDLES

NOTE : RAIL POSTS ARE TO BE SET NORMAL TO GRADE UNLESS OTHERWISE DESIGNATED ON BRIDGE PLANS. ALL DIMENSIONS ARE TYPICAL UNLESS OTHERWISE DESIGNATED ON BRIDGE PLANS.

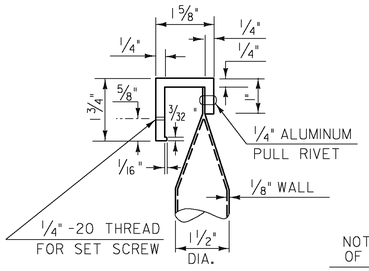
THIS REFLECTORIZED ALUMINUM DELINEATOR IS TO BE ERECTED EVERY 30 FEET (OR CLOSEST POST) WITH 2 NO. 8 X 3/4" SELF-TAPPING SCREWS.

DELINEATORS SHALL MEET SPECIFICATION REQUIREMENTS FOR ASTM B209 ALLOY 5052-H32.

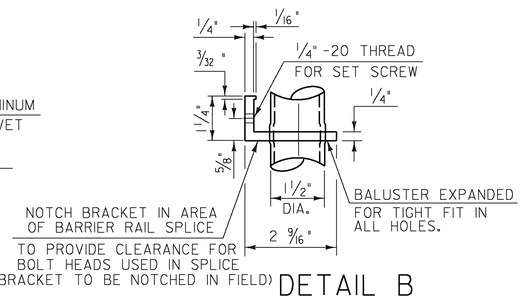
REFLECTIVE MATERIAL SHALL MEET THE REQUIREMENTS OF SUBSECTION 750.08 AND SHALL BE OF ENCAPSULATED LENS SILVER OR AMBER. AMBER IS TO BE INSTALLED ON THE DRIVER'S LEFT AND SILVER ON THEIR RIGHT.

ON BRIDGES WITH A SIDEWALK, DELINEATORS ARE NOT TO BE INSTALLED ON THE SIDEWALK SIDE OF THE BRIDGE (I.E. DELINEATORS INSTALLED ONLY ON THE CURB SIDE AND ON THE APPROACH RAIL ON THE CURB SIDE)

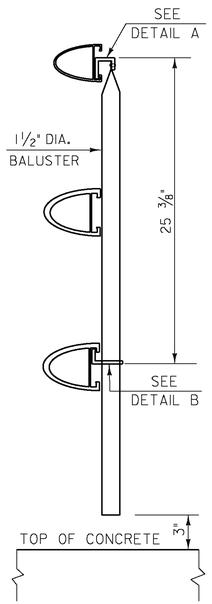
PAYMENT SHALL BE INCIDENTAL TO ALL OTHER ITEMS.



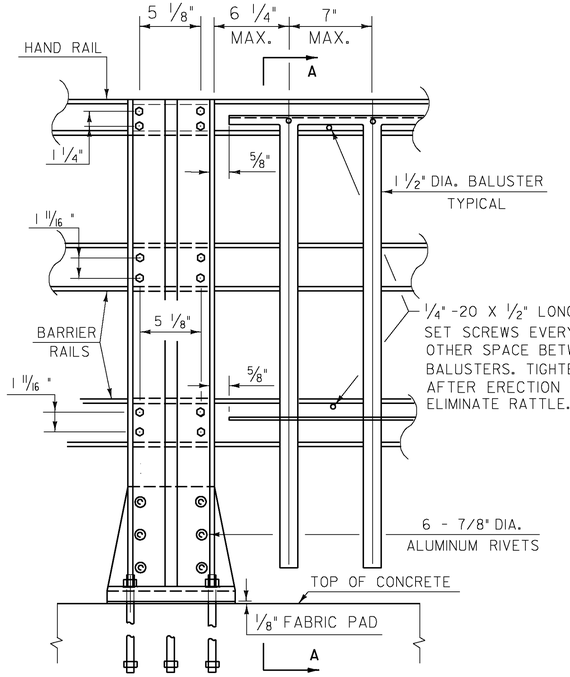
DETAIL A



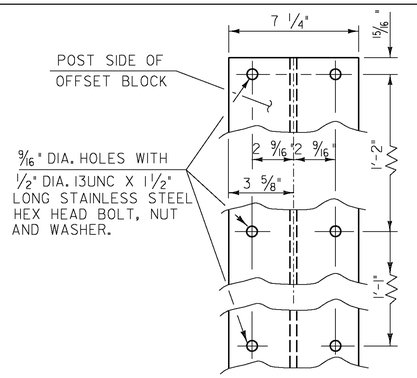
DETAIL B



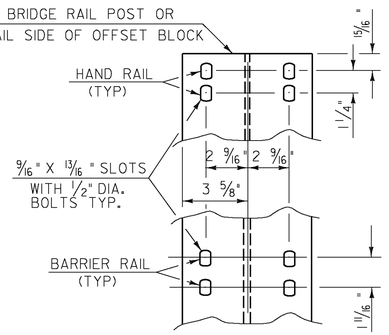
SECTION AA



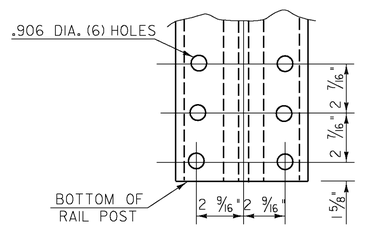
OUTSIDE ELEVATION OF THREE RAIL POST & SPINDLES



OFFSET BLOCK CONNECTION

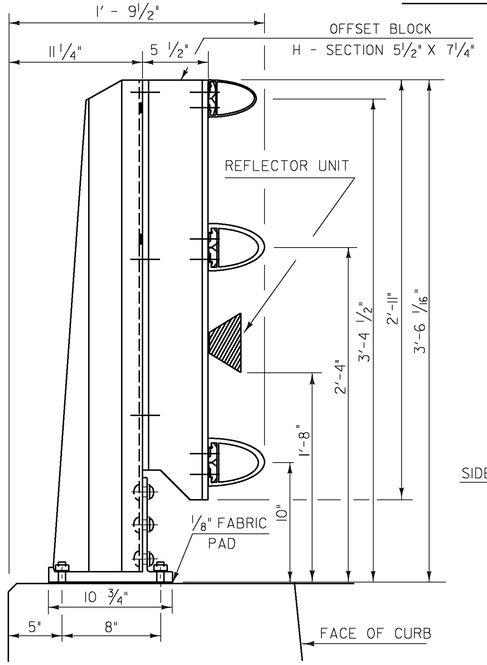


RAIL CONNECTION

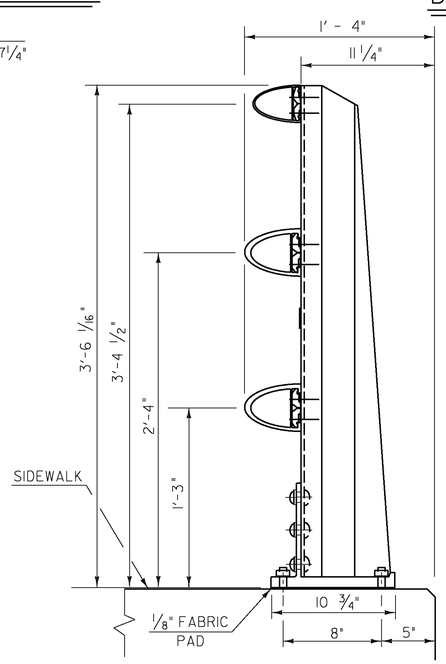


POST BASE BOLT HOLE DETAILS

DETAILS OF SPINDLES FOR ALUMINUM RAILING

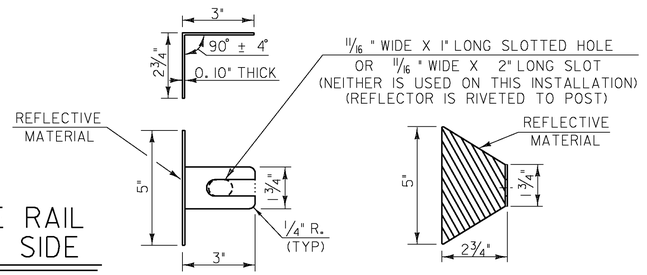


SIDE ELEVATION OF THREE RAIL TO BE USED ON CURB SIDE



SIDE ELEVATION OF THREE RAIL TO BE USED ON SIDEWALK SIDE

RAIL POST DETAILS ON SUPERSTRUCTURE



REFLECTOR DETAILS

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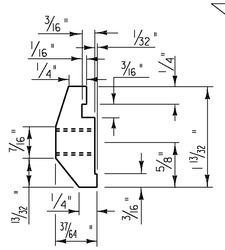
Town Of BARRE CITY	Bridge No. 7
Highway No. PROSPECT ST.	Log Sta.
	Surv. Sta.

PROSPECT ST. OVER STEVENS BRANCH

BRIDGE AND APPROACH RAILING DETAILS (1)

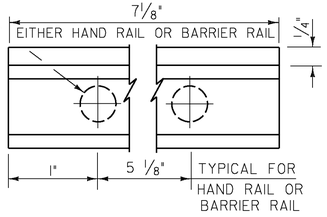
Designed By A. P. GUYETTE	Drawn By S. J. BIJOLLE
Checked By Date	Bridge Design Supervisor
E. P. DETRICK 1/09	J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 39 of 56

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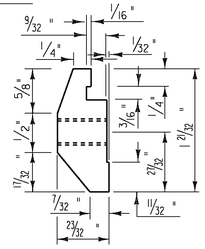


POST CONNECTION HAND RAIL SECTION

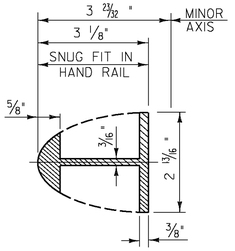
(2) 1/2" - 13 UNC THREADED HOLES FOR (2) 1/2" - 13 UNC X 1" STAINLESS STEEL HEX HEAD BOLTS WITH 1 1/16" O. D. X 17/32" I. D. X 3/32" THICK ALUMINUM WASHERS.



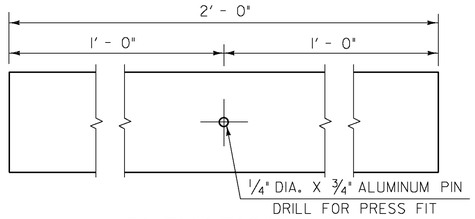
POST CONNECTION ELEVATION



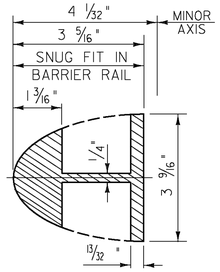
POST CONNECTION BARRIER RAIL SECTION



HAND RAIL SPLICE SECTION

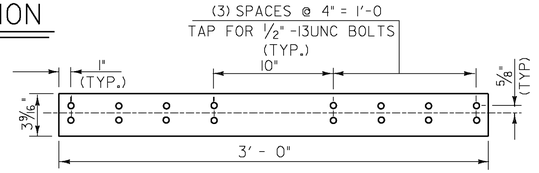


ELEVATION OF HAND RAIL SPLICE BAR

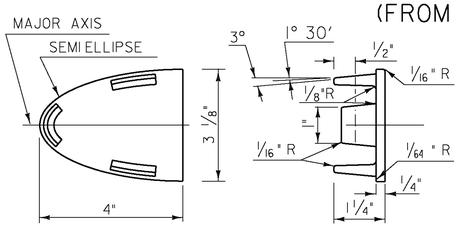


BARRIER RAIL SPLICE SECTION

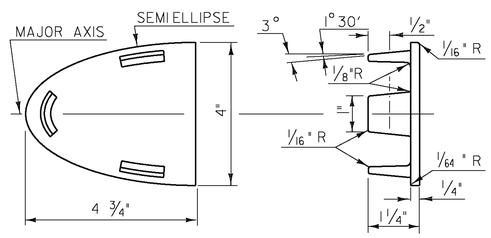
(SEE SHEET 41 FOR ELEVATION OF BARRIER RAIL SPLICE BAR)



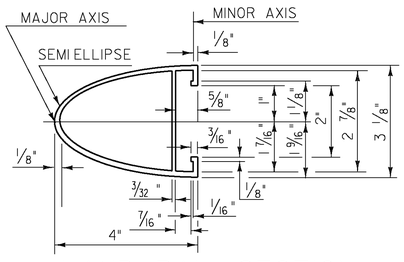
ELEVATION OF STD. BARRIER RAIL SPLICE BAR (FROM BACK)



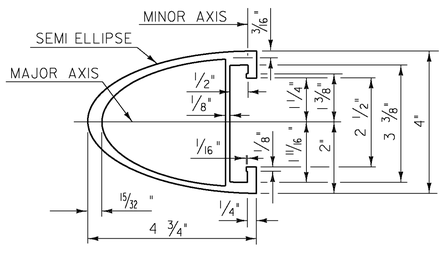
HAND RAIL END CAP



BARRIER RAIL END CAP

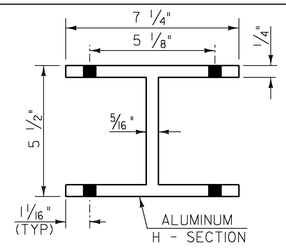


HAND RAIL SECTION

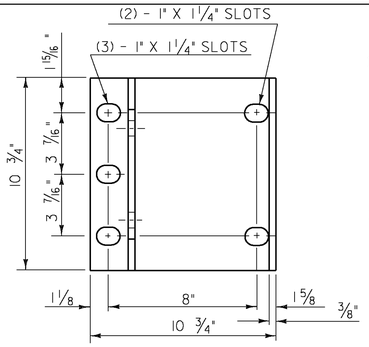


BARRIER RAIL SECTION

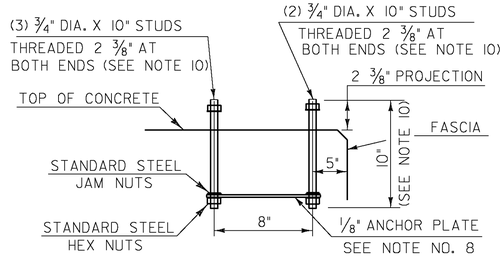
(SEE SHEET 41 FOR ELEVATION OF BARRIER RAIL)



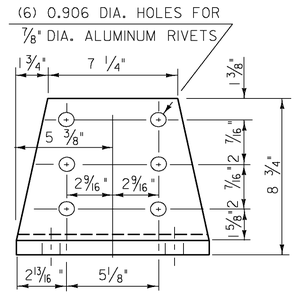
PLAN VIEW OF OFFSET BLOCK (TO BE USED ON SUPERSTRUCTURE ON CURB SIDE)



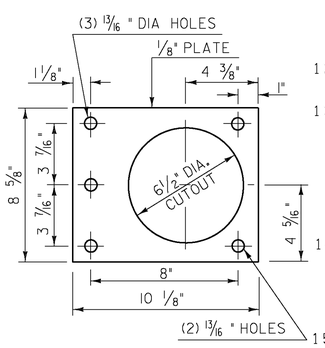
POST BASE PLAN



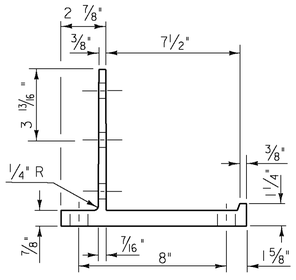
POST ANCHOR ASSEMBLY



POST BASE FRONT ELEVATION



ANCHOR PLATE



POST BASE SECTION

NOTES

1. ANCHOR BOLTS, WASHERS AND HEAVY HEX NUTS MAY BE ANY OF THE FOLLOWING:
   - A. ASTM A449 GALVANIZED, OR
   - B. AASHTO M164 (ASTM A325) GALVANIZED
   - C. BOLTS AND WASHERS OF STAINLESS STEEL ASTM A276, TYPE 304 (MINIMUM ULTIMATE STRENGTH OF 100,000 PSI) WITH STAINLESS STEEL NUTS OF ASTM A194, GRADE 8NA.
2. ALUMINUM POSTS, POST BASES, SPLICE BARS, CONNECTION BARS, RAILS AND BALUSTER FRAMES SHALL CONFORM TO ASTM B221 ALLOY 6061-T6 OR ALLOY 6351-T5. MINIMUM ALLOWABLE STRESS F_y = 35,000 PSI.
3. ALUMINUM BALUSTER TUBES SHALL CONFORM TO ASTM B210 ALLOY 6061-T5 OR 6063-T5.
4. ALUMINUM RAIL END CAPS SHALL CONFORM TO ASTM B26 ALLOY 356-T6.
5. THE POST, RAIL, AND OFFSET BLOCK CONNECTION BOLTS SHALL BE EITHER ASTM A193 OR ASTM A320. EITHER ONE SHALL BE CLASS 1, B8 GRADE AISI 304 WITH AN ULTIMATE TENSILE STRENGTH OF 75,000 PSI. NUTS FOR EITHER OF THE ABOVE BOLTS SHALL BE ASTM A194, GRADE 8, STAINLESS STEEL WITH AN ULTIMATE TENSILE STRENGTH OF 75,000 PSI.
6. SET SCREWS FOR ATTACHING BALUSTERS TO RAILING SHALL BE ASTM F880, TYPE 303 MATERIAL.
7. RIVETS SHALL BE COLD DRIVEN HIGH BUTTON HEAD "CONE POINT", CONFORMING TO ASTM B316 ALLOY 6061-T6.
8. THE ANCHOR PLATE FOR THE POST ANCHOR ASSEMBLY SHALL BE ASTM A36 STRUCTURAL STEEL.
9. WELDING SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 506.10 USING THE GMAW-INERT GAS PROCESS AND AWS ER 5356 ELECTRODE WIRE.
10. UNLESS OTHERWISE SPECIFIED, ANCHOR BOLTS SHALL BE CAST INTO THE CONCRETE AS DETAILED.
11. WHENEVER FEASIBLE BARRIER RAIL AND HAND RAIL SECTIONS, SHALL BE FULL LENGTH SECTIONS (40' ±) AND WHEN POSSIBLE SHALL BE ATTACHED TO THREE POSTS. RAILS SHALL BE SPLICED AT EACH DECK JOINT AND INTERMITTENTLY AS REQUIRED. SPLICES SHALL OCCUR WITHIN THE SAME PANEL.
12. ENDS OF RAILS SHALL BE CUT SQUARE AND GROUND FREE OF BURRS OR RAGGED EDGES. EXPOSED ENDS SHALL BE CAPPED.
13. THE CONCRETE CONTACT SURFACE AT THE POST BASE SHALL BE BUSH HAMMERED AND/OR SHIMMED AS REQUIRED FOR PROPER POST ALIGNMENT. POST HEIGHT ADJUSTMENTS LESS THAN 1/4" SHALL BE WITH 1/16" AND 1/8" SHIMS. CORRECTIONS EXCEEDING 1/4" SHALL BE WITH MORTAR, TYPE IV CONFORMING WITH SECTION 525. FABRIC BEARING PADS AND ANY REQUIRED SHIMS OR MORTAR, TYPE IV ARE INCIDENTAL TO THE UNIT PRICE BID FOR THE RAILING.
14. SHIMS AND 1/8" FABRIC BEARING PADS SHALL BE 10 3/4" SQUARE WITH SLOTTED HOLES SIZED AND LOCATED THE SAME AS THE POST BASE DETAIL. FABRIC BEARING PADS SHALL CONFORM TO SUBSECTION 731.01 OR 731.02, SHIM MATERIAL SHALL BE ASTM B 209 ALLOY 1100-0.
15. EXTRUDED SECTIONS ARE DETAILED TO COMPLY WITH CURRENT AASHTO-AGC-ARTBA STANDARDS. MINOR VARIATIONS OF THE DETAILS SHOWN MAY BE CONSIDERED PROVIDING THEY DO NOT REDUCE THE STRENGTH CAPACITY OF THE RAIL SYSTEM.
16. ALUMINUM WASHERS SHALL BE ASTM B209 ALLOY ACLAD 2024-T4.

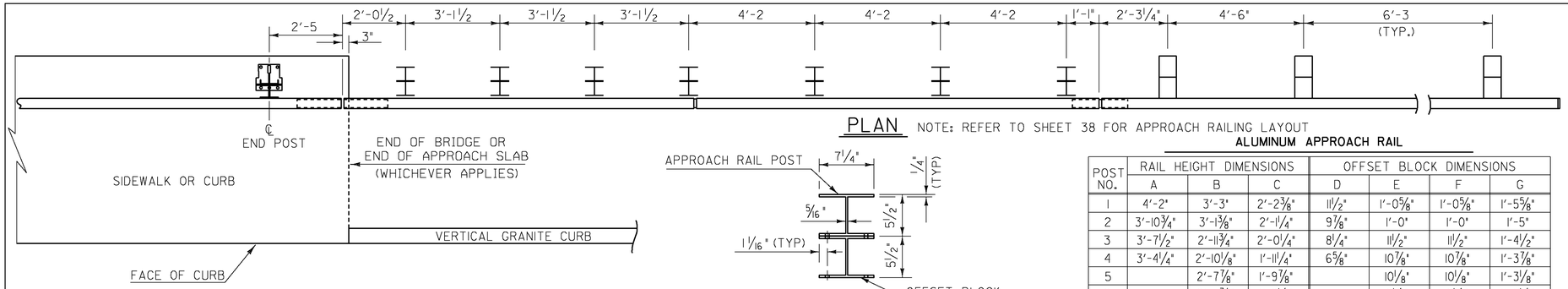
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BARRE CITY	Bridge No. 7
Highway No. PROSPECT ST.	Log Sta. / Surv. Sta.
PROSPECT ST. OVER STEVENS BRANCH	
BRIDGE AND APPROACH RAILING DETAILS (2)	
Designed By A. P. GUYETTE	Drawn By S. J. BIJOLLE
Checked By E. P. DETRICK Date 1/09	Bridge Design Supervisor J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 40 of 56

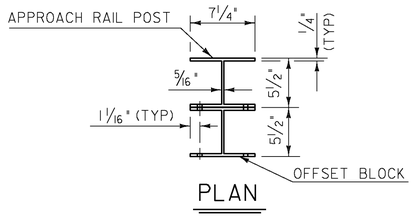
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engineering planning management development

PLOTTED 2/11/2009

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PLAN NOTE: REFER TO SHEET 38 FOR APPROACH RAILING LAYOUT



PLAN

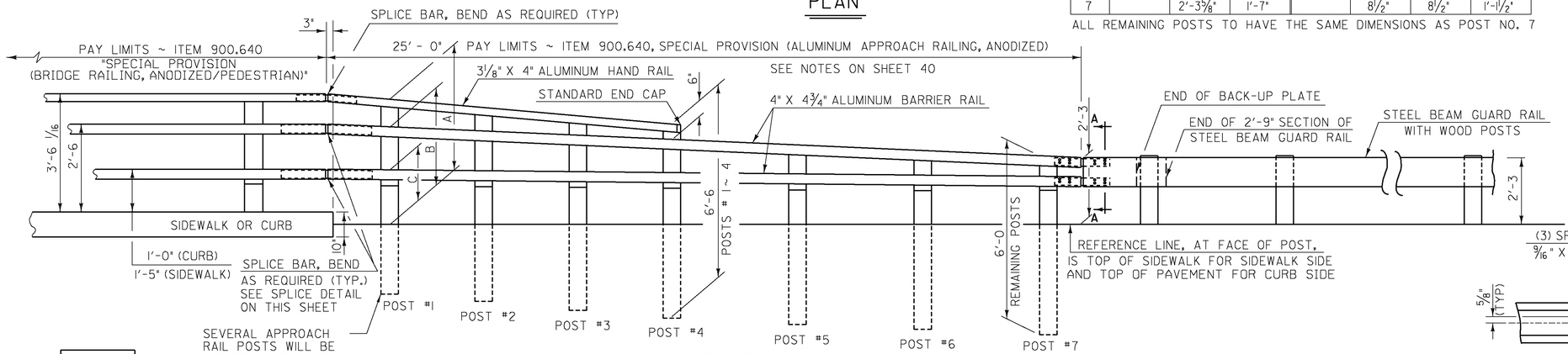
ALUMINUM APPROACH RAIL

POST NO.	RAIL HEIGHT DIMENSIONS			OFFSET BLOCK DIMENSIONS			
	A	B	C	D	E	F	G
1	4'-2"	3'-3"	2'-2⅜"	11½"	1'-0⅝"	1'-0⅝"	1'-5⅝"
2	3'-10¾"	3'-1⅜"	2'-1¼"	9⅞"	1'-0"	1'-0"	1'-5"
3	3'-7½"	2'-11¾"	2'-0¼"	8¼"	11½"	11½"	1'-4½"
4	3'-4¼"	2'-10⅛"	1'-11¼"	6⅝"	10⅞"	10⅞"	1'-3⅞"
5		2'-7⅞"	1'-9⅞"		10⅛"	10⅛"	1'-3⅛"
6		2'-5¾"	1'-8½"		9¼"	9¼"	1'-2¼"
7		2'-3⅝"	1'-7"		8½"	8½"	1'-1½"

ALL REMAINING POSTS TO HAVE THE SAME DIMENSIONS AS POST NO. 7

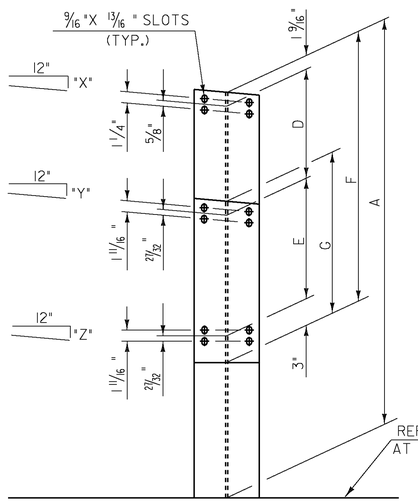
NOTES

1. POST 1 THROUGH 7 SHALL BE EXTRUDED ALUMINUM.
2. ALL STRUCTURAL STEEL SHALL BE AASHTO M270 GRADE 36 GALVANIZED AFTER FABRICATION.
3. ALL ITEMS NOT OTHERWISE INDICATED SHALL MEET THE SPECIFICATION REQUIREMENTS OF THE STANDARD SHEETS ON WHICH THEY ARE DETAILED.
4. SEE STANDARD G-1 FOR STEEL BEAM GUARD RAIL DETAILS. SEE SHEETS 39 AND 40 FOR ALUMINUM BRIDGE RAILING DETAILS.
5. THE COST OF ALL MATERIALS AND LABOR FOR THE SPLICE BETWEEN THE ALUMINUM APPROACH RAILING AND THE STEEL BEAM GUARD RAIL SHALL BE INCIDENTAL TO ITEM 900.640, "SPECIAL PROVISION (ALUMINUM APPROACH RAILING, ANODIZED)".
6. DETAILS ARE SHOWN FOR TRANSITION TO A 3 RAIL ALUMINUM BRIDGE RAILING.
7. DIMENSIONS SHOWN ARE FROM A REFERENCE LINE AT THE FACE OF POST FOR A NORMAL CROWNED SECTION. APPROPRIATE CORRECTIONS SHALL BE MADE FOR CROSS SLOPES OTHER THAN A NORMAL SECTION.

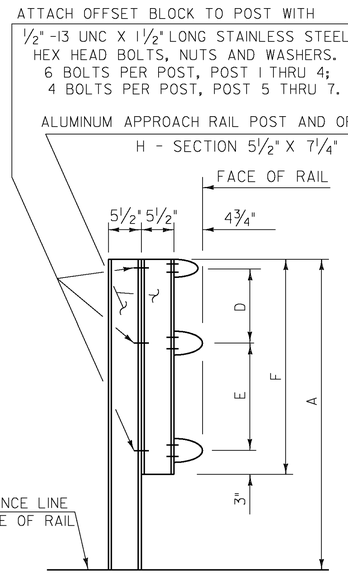


ELEVATION

	DIMENSION
"X"	1"
"Y"	½"
"Z"	⅜"

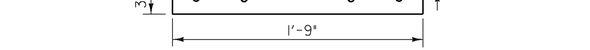


FRONT ELEVATION

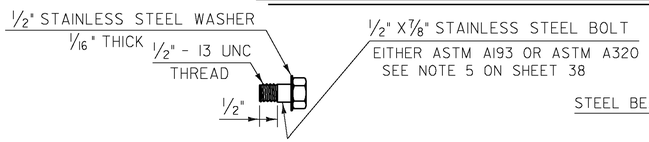


SIDE ELEVATION

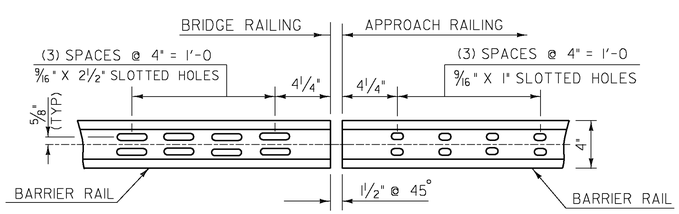
APPROACH RAIL DETAILS



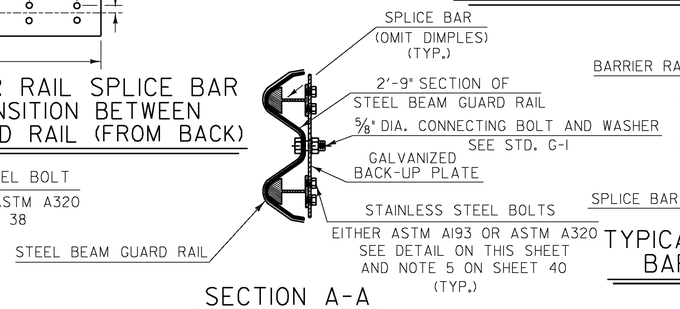
ELEVATION OF BARRIER RAIL SPLICE BAR TO BE USED AT TRANSITION BETWEEN APPROACH RAIL & GUARD RAIL (FROM BACK)



STAINLESS STEEL BOLT DETAILS

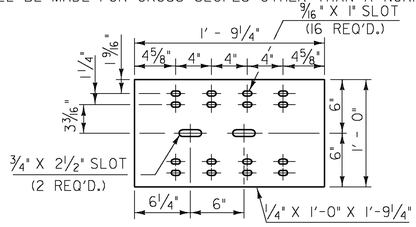


ELEVATION OF BARRIER RAIL (FROM BACK)

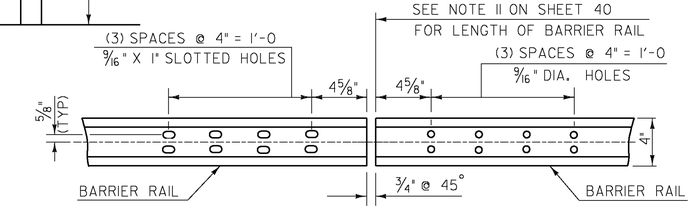


SECTION A-A

TYPICAL SECTION THROUGH BARRIER RAIL SPLICE



BACK-UP PLATE DETAILS



ELEVATION OF BARRIER RAIL (FROM BACK) AT ALL INTERMEDIATE RAIL SPLICES

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BARRE CITY	Bridge No. 7
Highway No. PROSPECT ST.	Log Sta. / Surv. Sta.
PROSPECT ST. OVER STEVENS BRANCH	
BRIDGE AND APPROACH RAILING DETAILS (3)	
Designed By A. P. GUYETTE	Drawn By S. J. BIJOLLE
Checked By E. P. DETRICK Date 1/09	Bridge Design Supervisor J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 41 of 56

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2+32.5

2+32.5

4+37

4+37

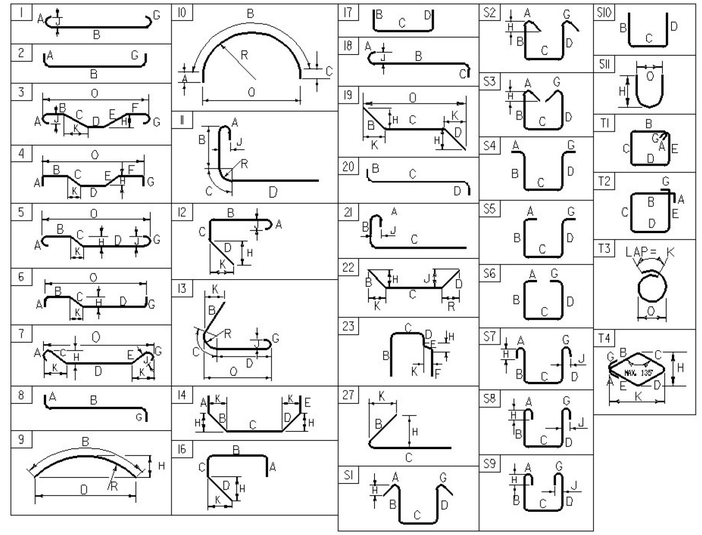
STATE OF VERMONT
AGENCY OF TRANSPORTATION

REINFORCING STEEL SCHEDULE

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
SUPERSTRUCTURE																	
✳ ▲	425	5	22'- 8"	ES501	STR												
✳ ▲	29	5	21'- 11"	ES503	STR												
▲	21	5	19'- 8"	ES505	STR												
▲	16	5	14'- 8"	ES506	STR												
▲	28	5	7'- 8"	ES507	STR												
✳ ▲	78	6	21'- 3"	ES601	STR												
✳ ▲	76	6	28'- 6"	ES602	STR												
▲	152	6	24'- 11"	ES603	STR												
▲	37	6	25'- 6"	ES605	STR												
▲	33	6	35'- 11"	ES607	STR												
▲	130	5	14'- 5"	ES502	S5	2'- 2"	1'- 0"	6'- 4"	0'- 11"			2'- 2"					
▲	112	5	10'- 11"	ES504	S5	2'- 2"	3'- 0"	0'- 9"	2'- 10"			2'- 2"					
	2	5	28'- 5"	ES508	11	---	1'- 3"	27'- 2"	---					---		38'- 11"	
	2	5	19'- 9"	ES509	11	---	12'- 3"	6'- 3"	1'- 3"					---		3'- 5"	
▲	62	5	6'- 8"	ES510	S5	2'- 2"	0'- 11"	0'- 10"	0'- 7"			2'- 2"					
▲	37	6	23'- 0"	ES604	1	0'- 8"	22'- 4"					---					
▲	33	6	40'- 2"	ES606	1	0'- 8"	39'- 6"					---					
▲	79	5	10'- 5"	ES511	S5	2'- 2"	2'- 9"	0'- 9"	2'- 7"			2'- 2"					
SUPERSTRUCTURE SIDEWALK																	
✳ ▲	50	5	22'- 8"	ESS501	STR												
	2	10g	50'- 0"	SSWWF	WWF												
ABUTMENT NO. 1																	
▲	18	5	2'- 8"	1A502	STR												
▲	30	6	28'- 3"	1A604	STR												
▲	22	6	19'- 0"	1A608	STR												
▲	76	5	8'- 6"	1A501	S10		3'- 6"	1'- 6"	3'- 6"								
✳ ▲	5	5	15'- 6"	1A503	S10		7'- 0"	1'- 6"	7'- 0"								
	26	5	4'- 5"	1A505	22		1'- 2"	0'- 3"	3'- 0"				1'- 2"	0'- 6"	---	2'- 11"	
	26	5	5'- 0"	1A506	16	---	1'- 3"	0'- 9"	3'- 0"				2'- 11"		0'- 6"		
✳	22	5	17'- 6"	1A507	S10		8'- 0"	1'- 6"	8'- 0"								
ABUTMENT NO. 2																	
✳ ▲	23	5	8'- 3"	2A502	STR												
▲	42	6	21'- 11"	2A604	STR												
✳ ▲	21	5	10'- 6"	2A508	STR												
▲	48	5	8'- 6"	2A501	S10		4'- 3"	1'- 6"	4'- 3"								
▲	10	5	17'- 6"	2A503	S10		8'- 0"	1'- 6"	8'- 0"								
	19	5	4'- 5"	2A505	22		1'- 2"	0'- 3"	3'- 0"				1'- 2"	0'- 6"	---	2'- 11"	
	19	5	5'- 0"	2A506	16	---	1'- 3"	1'- 6"	3'- 0"				2'- 11"		0'- 6"		
	12	5	15'- 6"	2A507	S10		8'- 0"	1'- 6"	8'- 0"								
	9	5	4'- 3"	2A509	S10		2'- 1"	1'- 6"	2'- 1"								
	9	5	4'- 7"	2A510	S10		1'- 5"	2'- 0"	2'- 1"								
✳	6	10	14'- 8"	2A1001	1	1'- 5"	11'- 10"					1'- 5"					
CURBING																	
✳	9	5	26'- 6"	C502	STR												
	28	5	30'- 0"	C504	STR												
▲	28	5	9'- 8"	C501	S10		4'- 4"	1'- 0"	4'- 4"								
▲	105	5	7'- 6"	C503	S10		3'- 0"	1'- 6"	3'- 0"								
✳	106	5	8'- 3"	C505	2	1'- 3"	7'- 0"					---					

~ NOTES ~

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31 (ASTM A 615-SI). ALL BARS SHALL BE GRADE 60, UNLESS OTHERWISE DESIGNATED.
2. FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
3. BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
5. "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
6. "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
7. WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
8. ▲ DENOTES BARS TO BE CUT IN FIELD.
9. ✳ DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
10. △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
11. E IN BAR MARK PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



ASTM STANDARD REINFORCING BARS

BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION		
		DIAMETER INCHES	AREA INCHES ^{2}	PERIMETER INCHES
#3	0.376	0.375	0.11	1.178
#4	0.668	0.500	0.20	1.571
#5	1.043	0.625	0.31	1.963
#6	1.502	0.750	0.44	2.356
#7	2.044	0.875	0.60	2.749
#8	2.670	1.000	0.79	3.142
#9	3.400	1.128	1.00	3.544
#10	4.303	1.270	1.27	3.990
#11	5.313	1.410	1.56	4.430
#14	7.65	1.693	2.25	5.32
#18	13.60	2.257	4.00	7.09

PROJECT NAME: **BARRE CITY**
PROJECT NUMBER: **BHF 6000 (15)S**

FILE NAME: **z95j302rss.dgn** PLOT DATE: **1/30/2009**
PROJECT MANAGER: **J.W. TUCKER** DRAWN BY: **A.P. GUYETTE**
DESIGNED BY: **A.P. GUYETTE** CHECKED BY: **E.P. DETRICK**
REINFORCING STEEL SCHEDULE SHEET **44** OF **56**

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GENERAL NOTES:

1. SURVEY PROVIDED TO DUFRESNE & ASSOCIATES PC BY DUBOIS & KING. LOCATION OF EXISTING UTILITIES ARE APPROXIMATE BASED ON INFORMATION PROVIDED BY CITY OF BARRE. THIS IS NOT A BOUNDARY SURVEY.
2. CONTRACTOR IS TO PROVIDE TEMPORARY WATER SERVICE TO HOUSES WITH AN ASTERISK (*) AND ALL HOUSES ON BRANCH AND BROOKLYN STREETS. FOR TEMPORARY WATER SERVICE, THE CONTRACTOR SHALL FURNISH AND INSTALL ISOLATION/CORPORATION STOPS AS NECESSARY TO ISOLATE THE TEMPORARY SERVICE FROM THE EXISTING MAIN FOR EACH BUILDING. WATER SERVICE SHALL NOT BE INTERRUPTED FOR MORE THAN FOUR (4) HOURS. ALL CUSTOMERS THAT MAY BE TEMPORARILY OUT OF WATER SHALL BE NOTIFIED TWENTY-FOUR (24) HOURS PRIOR TO ACTIVITY BY CONTRACTOR.
3. EXPLORATORY EXCAVATION IS REQUIRED TO LOCATE UNDERGROUND UTILITIES. CONTRACTOR SHALL USE EXTREME CAUTION TO PREVENT DAMAGE TO EXISTING UTILITIES. PAYMENT WILL BE MADE UNDER PAY ITEM 204.22 TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.P.B.I.) CONTRACTOR SHALL COORDINATE WITH DIG SAFE (1-888-DIG SAFE) A MINIMUM OF 72 HOURS PRIOR TO EXCAVATION.
4. LOCATION OF PROPOSED WATER MAIN IS INTENDED NOT TO DISTURB ROOT SYSTEMS OF EXISTING TREES OR SHRUBS. CONTRACTOR SHALL EXERCISE DUE CARE TO PREVENT DAMAGE THERETO. ALL DISTURBED AREAS SHALL BE RESTORED TO PRECONSTRUCTION CONDITIONS.
5. ALL WORK IS TO BE DONE IN PUBLIC RIGHT-OF-WAY OR EASEMENT AREAS.
6. LISTING OF ADAPTERS, FITTINGS, NIPPLES, ETC. IS FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. ADDITIONAL MATERIAL MAY BE REQUIRED. SOLID SLEEVE COUPLINGS WILL BE REQUIRED FOR CONNECTION TO EXISTING MAINS.
7. MINIMUM VERTICAL CLEARANCE BETWEEN NEW WATER MAINS AND ALL EXISTING UTILITIES, EXCEPT SEWERS AND STORM DRAINS TO BE SIX (6) INCHES AT CROSSING LOCATIONS. FOR SEWER, SEE NOTES ON DRAWING C5.
8. ALL BURIED FITTINGS MUST BE BLOCKED. REFER TO THRUST BLOCK DETAILS, AND TRENCH DETAIL SHOWN ON DRAWING C5.
9. MECHANICAL JOINT RESTRAINTS SHALL BE USED WHERE VALVES BE WILL SUBJECTED TO SERVICE PRESSURES ON ONE SIDE BEFORE BEING FULLY INCORPORATED INTO THE DISTRIBUTION SYSTEM.
10. WATER MAINS TO HAVE 5.5 FEET MINIMUM COVER UNLESS OTHERWISE STATED OR SHOWN ON THE PROFILES. WHEN 5.5 FEET OF COVER CANNOT BE MAINTAINED 4" RIGID BOARD INSULATION SHALL BE USED. DEPTH OF COVER SHALL NOT BE LESS THAN 4 FEET EVEN WITH INSULATION. SEE VAOT MATERIAL SPECIFICATION SUBSECTION 735.01.
11. ALL MECHANICAL JOINT FITTING AND VALVES SHALL INCORPORATE A MEGA-LUG RETAINER GLAND, WITH MEGA-BOND COATING SYSTEM, INSTEAD OF THE COMMON FOLLOWER GLAND.
12. ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN USING THE BEST AVAILABLE INFORMATION. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL UTILITIES WHETHER OR NOT THEY ARE SHOWN ON THE PLANS. ALL REPAIRS TO DAMAGED UTILITIES SHALL BE MADE BY THE CONTRACTOR USING MATERIAL APPROVED BY THE ENGINEER PRIOR TO INSTALLATION, AT CONTRACTOR'S EXPENSE.
13. CONTRACTOR IS RESPONSIBLE FOR FLUSHING, PRESSURE TESTING AND DISINFECTION OF ALL NEW WATER MAIN. CHLORINE INJECTION POINTS SHALL BE INSTALLED WHERE REQUIRED AND APPROVED BY THE ENGINEER PRIOR TO INSTALLATION AND REMOVED UPON COMPLETION OF TESTING.
14. CONTRACTOR SHALL VERIFY LOCATION OF ALL OVERHEAD AND UNDERGROUND ELECTRIC, CABLE AND TELEPHONE LINES AND TAKE NECESSARY PRECAUTIONS IN STRICT ACCORDANCE WITH OSHA STANDARDS DURING CONSTRUCTION. CONTRACTOR SHALL CONTACT THE LOCAL POWER UTILITY AND TELEPHONE UTILITY REGARDING ANY NECESSARY SUPPORT OF ANY UTILITY POLES DURING CONSTRUCTION. LOCAL ELECTRIC UTILITY IS GREEN MOUNTAIN POWER COMPANY. LOCAL COMMUNICATION UTILITIES ARE FAIRPOINT, CHARTER, AND LEVEL 1.
15. GENERALLY HEAVY OR DARK LINE WORK OR NOTES REFER TO PROPOSED IMPROVEMENTS. LIGHT LINE WORK OR SCREENED GENERALLY DENOTES EXISTING FEATURES.
16. TECHNICAL SPECIFICATIONS PROVIDE NECESSARY INFORMATION AND ARE PART OF THE CONTRACT DOCUMENTS FOR THIS PROJECT.
17. CONTRACTOR SHALL CONNECT WATER SERVICES TO IDENTIFIED WATER USERS UPON COMPLETION OF INSTALLATION OF WATER MAIN AND RECEIPT OF TWO SUCCESSFUL BACTERIOLOGICAL TESTS.
18. PAYMENT FOR UTILITY WORK WILL BE MADE IN ACCORDANCE WITH WATER LINE INSTALLATION NOTE 5 ON SHEET C2.

LOCAL VALVE OPERATION

1. EXISTING AND PROPOSED MAIN LINE GATE VALVES AND BUTTERFLY VALVES SHALL BE OPEN RIGHT OR CLOCKWISE. OPERATION OF GATE VALVES WILL BE PERFORMED BY THE OWNER'S STAFF ONLY.
2. ALL INTERCONNECTIONS TO EXISTING SYSTEM CAN ONLY BE MADE WITH THE WRITTEN PERMISSION OF THE CITY ENGINEER.

QUANITIES FOR NON-PARTICIPATING PAY ITEM 900.645 SPECIAL PROVISION (WATERLINE, MUNICIPAL)

DECRIPTION	UNIT	QUANTITIES
16" DI PIPE	LF	100
12" DI PIPE	LF	20
8" DI PIPE	LF	440
6" DI PIPE	LF	60
DI FITTINGS	LBS	7000
RIGID INSULATION	SF	200
16" BUTTERFLY VALVE	EA	1
8" GATE VALVE	EA	7
6" GATE VALVE	EA	4
FIRE HYDRANT	EA	1
HYDRANT EXTENTION	VF	1
3/4" COPPER PIPE	LF	20
3/4" CORPORATIONS STOPS	EA	1
3/4" CURB STOPS	EA	1
MANUAL AIR RELEASE	EA	8
INTERCONNECT TO EXISTING	EA	7
LEDGE EXCAVATION	CY	50
BOULDER EXCAVATION	CY	50
EXPLORATORY EXCAVATION	CY	250
3000 PSI CONCRETE	CY	15
TEMP TRENCH PATCH L-I-P	SY	700
WOOD SHEETING L-I-P	MBF	1
STEEL SHEETING L-I-P	TON	1
UNIFORM TRAFFIC OFFICER	HRS	400
HEAT TRACE SYSTEM	LS	1

LEGEND

PROPOSED:	EXISTING:
HPW — HIGH PRES. WATERLINE	ROW
LPW — LOW PRES. WATERLINE	EDGE OF RIVER
SOLID SLEEVE	EDGE OF PAVEMENT
REDUCER	EDGE OF GRAVEL
GATE VALVE	OHL — OVERHEAD WIRE
BUTTERFLY VALVE	W — WATERLINE
CURB STOP	D — STORM DRAIN
END CAP	G — GAS LINE
M.J. PIPE FITTINGS	S — SEWER LINE
MANUAL AIR RELEASE	622 — CONTOUR
W — EXISTING WATERLINE TO BE ABANDONED IN PLACE	GUARDRAIL
	UTILITY POLE
	GUY WIRE
	CATCH BASIN
	STORM MANHOLE
	SEWER MANHOLE
	FIRE HYDRANT
	WATER SHUT OFF
	GATE VALVE
	REDUCER
	GAS VALVE
	GUARD RAIL POST
	ROAD SIGN
	BUILDING
	TRUNCATED DOME
	GRANITE CURB
	EXPOSED AGGREGATE

ABBREVIATION LIST

ABB	DESCRIPTION
CI	CAST IRON PIPE
CIP	CHLORINE INJECTION POINT
CMP	CORRUGATED METAL PIPE
CPP	CORRUGATED PLASTIC PIPE
CU	COPPER PIPE
D	DRAIN
DI	DUCTILE IRON PIPE
DMH	DRAINAGE MANHOLE
EL	ELEVATION
ER	EROSION
HPW	HIGH PRESSURE WATER
HYD	FIRE HYDRANT
INV	INVERT
IP	IRON PIPE
LPW	LOW PRESSURE WATER
MAR	MANUAL AIR RELEASE
MJ	MECHANICAL JOINT
ROW	RIGHT OF WAY
S	SEWER
SMH	SEWER MANHOLE
STA	STATION
TBM	TEMPORARY BENCH MARK
TYP	TYPICAL
W	WATER
WSO	WATER SHUT OFF
WV	WATER VALVE

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STATE OF VERMONT — ROBERT E. DUFRESNE — NO. 3834 — CIVIL — LICENSED PROFESSIONAL ENGINEER
1-29-09

REVISIONS

DATE	COMMENTS	BY
1/29/09	FINAL REVIEW COMMENTS	BLB

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PROSPECT STREET OVER STEVENS BRANCH

WATER MAIN GENERAL NOTES

BARRE, VERMONT

Project #	416008
Project Mgr.	R.N. GOODWIN
Design by	R.N. GOODWIN
Drawn by	GLW
Reviewed by	R.E. DUFRESNE
Approved by	R.E. DUFRESNE
Date	JANUARY 29, 2009
Scale	AS SHOWN

C1

SHEET 45 OF 56

FILE: P:\416008-PROSPECT STREET BRIDGE CROSSING\CAD\416008-C1.dwg Jan 30, 2009 - 12:40pm

FUTURE STUB
- 8" D.I. NIPPLE, LENGTH AS REQUIRED
- 8" GATE VALVE, MJ W/BOX
- 8" D.I. NIPPLE, FULL LENGTH REQUIRED
- MAR/CIP
- 8" D.I. END CAP, MJ
- 8"X6" D.I. ANCHOR TEE, MJ
- 6" GATE VALVE, MJ
- 6" D.I. NIPPLE, LENGTH AS REQUIRED
- HYDRANT

INTERCONNECTION
- 8"x6" D.I. ANCHOR TEE, MJ
- 6" GATE VALVE, MJ W/BOX
- 6" D.I. NIPPLE, LENGTH AS REQUIRED
- 6"-90° D.I., BEND, MJ
- 6" D.I. NIPPLE, LENGTH AS REQUIRED
- 6" D.I. SOLID SLEEVE, MJ

INTERCONNECTION
- 6" D.I. SOLID SLEEVE, MJ
- 6" D.I. NIPPLE, LENGTH AS REQUIRED
- 8"X6" D.I, REDUCER,MJ
- 8" D.I. NIPPLE, LENGTH AS REQUIRED
- 8" - 45° D.I. BEND, MJ
- MAR / CIP

INTERCONNECTION
- 12" D.I. SOLID SLEEVE, MJ
- 12" D.I. NIPPLE, LENGTH AS REQUIRED
- 16"X12" D.I, REDUCER,MJ
- 16" D.I. NIPPLE, LENGTH AS REQUIRED
- 16"-45° D.I., BEND, MJ
- 16" D.I. NIPPLE, LENGTH AS REQUIRED
- 16" BUTTERFLY VALVE, MJ W/BOX
- MAR / CIP

EXISTING 12" (HIGH PRESSURE) WATER MAIN TO BE ABANDONED

8" - 45° D.I. BEND, MJ

EXISTING SMH
RIM = 611.64
INV. IN = 595.42 (24")
INV. OUT = 595.38 (24")
INV. IN = 595.50 (10")

- 16"x8" D.I. TEE, MJ
- 8" D.I. NIPPLE, LENGTH AS REQUIRED
- 8" GATE VALVE, MJ W/BOX
- 8" D.I. NIPPLE, LENGTH AS REQUIRED
- 8" -45°D.I. BEND,MJ

8" - 22½° D.I. BEND, MJ

INTERCONNECTION
- 8"X6" D.I. ANCHOR TEE, MJ
- 6" GATE VALVE, MJ W/BLOCK
- 6" D.I. NIPPLE, LENGTH AS REQUIRED
- 6" D.I. SOLID SLEEVE, MJ

INTERCONNECTION
- 8"X6" D.I. ANCHOR TEE, MJ
- 6" GATE VALVE, MJ W/BOX
- 6" D.I. NIPPLE, LENGTH AS REQUIRED
- 6" 90° D.I. BEND, MJ
- 6" D.I. NIPPLE, LENGTH AS REQUIRED
- 6" D.I. SOLID SLEEVE, MJ
- MAR / CIP

FUTURE STUB
- 8" D.I. NIPPLE, LENGTH AS REQUIRED
- 8" GATE VALVE, MJ W/BOX
- 8" D.I. NIPPLE, LENGTH AS REQUIRED
- MAR / CIP
- 8" D.I. END CAP, MJ

EXISTING 6" (LOW PRESSURE) WATER MAIN TO BE ABANDONED

8" - 45° D.I. BEND, MJ

EXISTING DRAINAGE MH
RIM = 614.19
INV. IN = 602.19
INV. OUT = 602.19

8" - 45° D.I. BEND, MJ

EXISTING 6" (LOW PRESSURE) WATER MAIN TO BE ABANDONED

EXPLORATORY EXCAVATION REQUIRED

EXISTING 8" (HIGH PRESSURE) WATER MAIN TO BE ABANDONED

EXISTING HYDRANT (HIGH PRESSURE)

EXISTING 6" (LOW PRESSURE) WATER MAIN

EXISTING SMH
RIM = 604.83
INV. IN = 594.23 (24")
INV. OUT = 594.15 (24")

EXISTING SMH
RIM = 609.22
INV. IN = 594.95
INV. OUT = 594.90

NEW ¾" WATER SERVICE SEE DETAIL ON SHEET C5

- 8" GATE VALVE, MJ W/BOX
- 8"x8" D.I. TEE, MJ
- 8" D.I. NIPPLE, LENGTH AS REQUIRED
- 8" GATE VALVE, MJ W/BOX
- 8" D.I. NIPPLE, LENGTH AS REQUIRED

- 8"x8" D.I. TEE, MJ
- 8" D.I. NIPPLE, LENGTH AS REQUIRED
- 8" GATE VALVE, MJ W/BOX
- 8" D.I. NIPPLE, LENGTH AS REQUIRED

8" - 11¼° D.I. BEND, MJ

EXPLORATORY EXCAVATION REQUIRED

8" - GATE VALVE, MJ W/BOX

INTERCONNECTION
- 8"x6" D.I. REDUCER, MJ
- 6" D.I. NIPPLE, LENGTH AS REQUIRED
- 6" SOLID SLEEVE, MJ
- MAR / CIP

8" - 45° D.I. BEND, MJ

16" - 45° D.I. BEND, MJ

16" - BUTTERFLY VAVLE, MJ W/BOX

FUTURE STUB
- 8" D.I. NIPPLE, LENGTH AS REQUIRED
- 8" GATE VALVE, MJ W/BLOCK
- 8" D.I. FULL LENGTH
- MAR / CIP
- 8" D.I. END CAP, MJ

EXISTING SMH
RIM = 606.10
INV. IN = 595.55 (24")
INV. OUT = 595.52 (24")

EXPLORATORY EXCAVATION REQUIRED

INTERCONNECTION
- 16"x12" D.I. REDUCER, MJ
- 12" D.I. NIPPLE, LENGTH AS REQUIRED
- 12" SOLID SLEEVE, MJ
- MAR / CIP

16" - BUTTERFLY VALVE, MJ W/BOX

16" - 11¼° D.I. BEND, MJ

EXISTING 12" HIGH PRESSURE WATER MAIN

EXISTING 6" LOW PRESSURE WATER MAIN

EXISTING 6'x7' BOX CULVERT

EXISTING BUILDING

EXISTING ROW

TO MAIN STREET

TO WEST STREET

PROSPECT STREET

BURNHAM STREET

STEVENS BRANCH
WINOOSKI RIVER

METRO WAY

BROOKLYN STREET

BRANCH ST.

MONTPELIER & BARRE RAILROAD

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)

WATER MAIN PLAN
SCALE: 1" = 20'

NOTES:
1. ALL WATER FITTING AND VALVES THAT ARE REPLACED CAN BE ABANDONED IN PLACE OR REMOVED IF NECESSARY TO FACILITATE PIPING. ANY MATERIAL REMOVED SHALL BE DISPOSED OF BY THE CONTRACTOR.
2. THE EXISTING VALVE VAULT ON THE EAST SIDE OF THE RIVER IS ADJACENT TO THE 5'X7' BOX CULVERT. CARE SHALL BE TAKEN WHEN REMOVING VAULT. BOX CULVERT SHALL BE REPAIRED OR PATCHED AS NECESSARY AFTER REMOVAL OF VAULT.
3. REFER TO SHEET C1 FOR GENERAL NOTES AND LEGENDS.
4. REFER TO SHEETS E1 & E2 FOR HEAT TRACE INSULATION FOR WATER MAINS ON BRIDGE.
5. BUILDING WITH A * SHOWN WILL REQUIRE TEMPORARY WATER SERVICE. SEE SPECIFICATION.
6. CONTRACTOR MUST TEMPORARILY CUT AND CAP ALL EXISTING WATER MAINS AT FINAL INTERCONNECTION LOCATIONS PRIOR TO INSTALLATION OF NEW MAINS. THIS CANNOT OCCUR UNTIL TEMPORARY WATER SYSTEM IS IN PLACE.

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STATE OF VERMONT
ROBERT E. DUFRESNE
NO. 6934
CIVIL
LICENSED PROFESSIONAL ENGINEER
1-21-09

REVISIONS

DATE	COMMENTS	BY
1/29/09	FINAL REVIEW COMMENTS	BLB

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PROSPECT STREET OVER STEVENS BRANCH

WATER MAIN PLAN

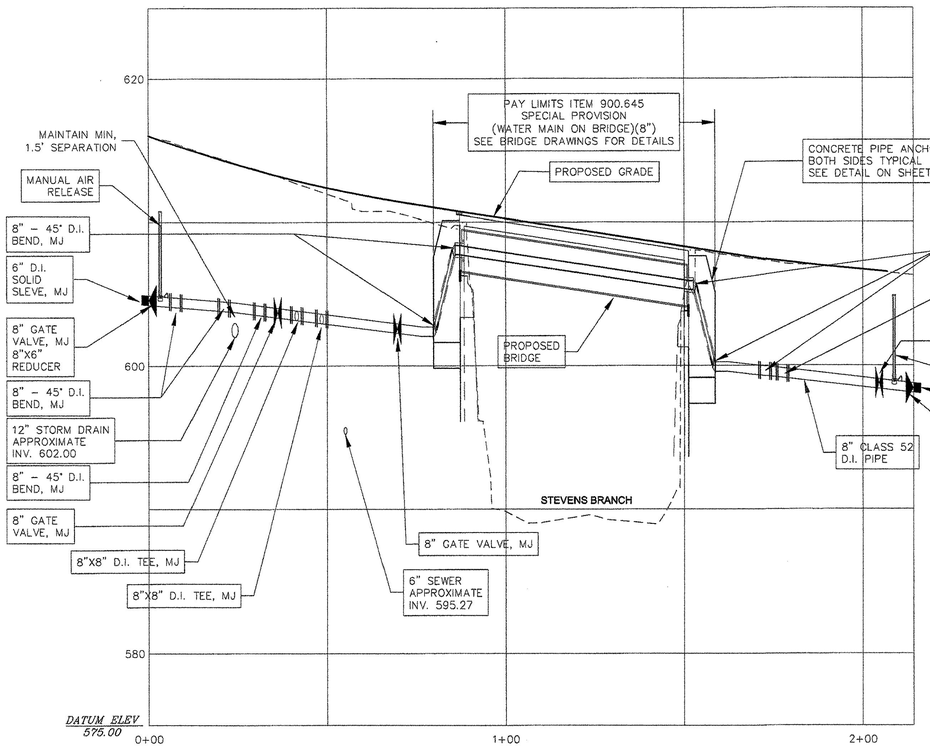
BARRE, VERMONT

Project #	416008
Project Mgr.	R.N. GOODWIN
Design by	R.N. GOODWIN
Drawn by	GLW
Reviewed by	R.E. DUFRESNE
Approved by	R.E. DUFRESNE
Date	JANUARY 29, 2009
Scale	AS SHOWN

C2

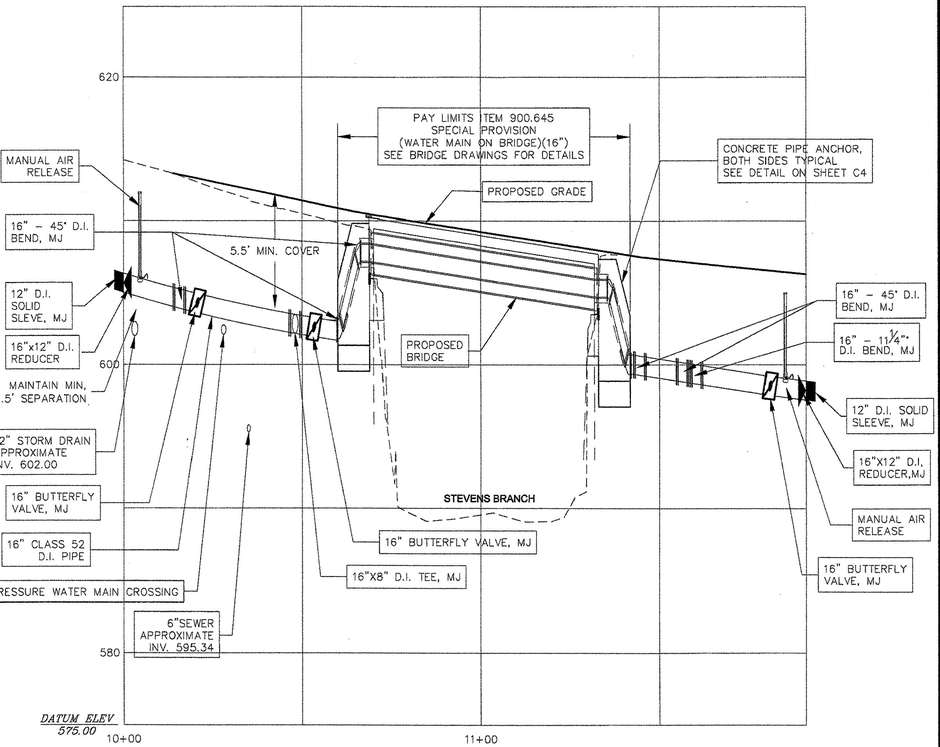
SHEET 46 OF 56

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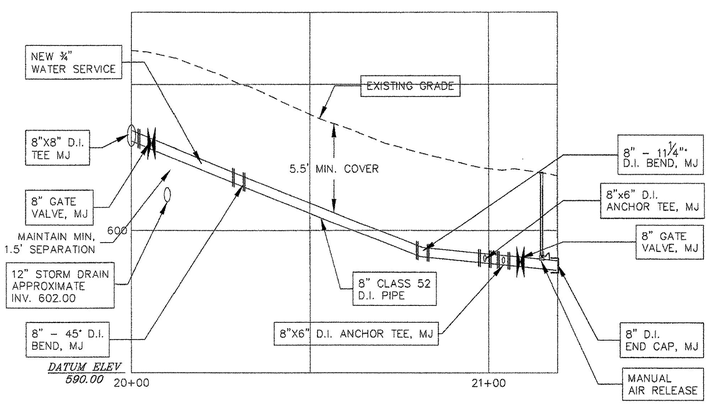
8" D.I. LOW PRESSURE WATER MAIN

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 5'



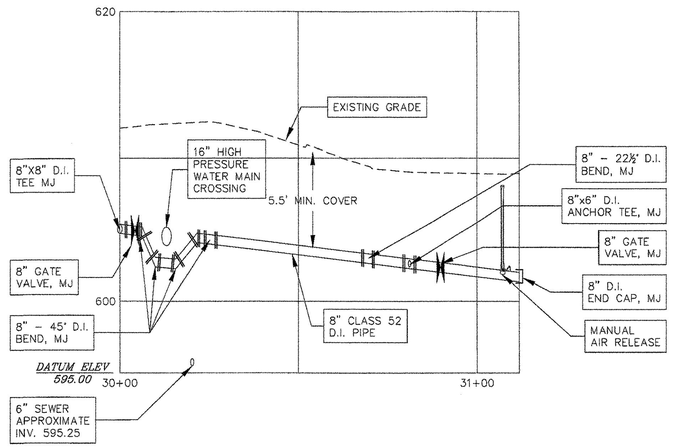
16" D.I. HIGH PRESSURE WATER MAIN

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 5'



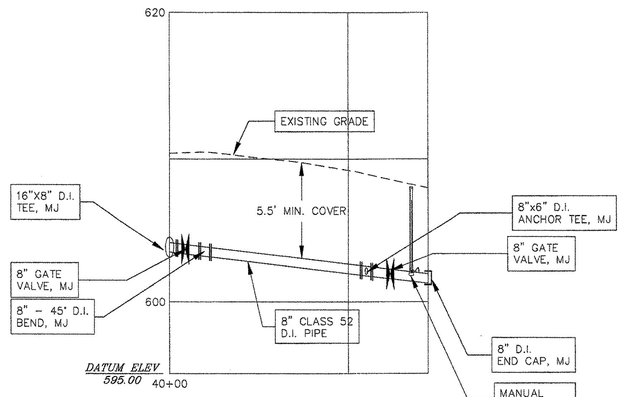
8" D.I. LOW PRESSURE WATER MAIN - BURNHAM STREET

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 5'



8" D.I. LOW PRESSURE WATER MAIN - BRANCH STREET

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 5'



8" D.I. HIGH PRESSURE WATER MAIN - BROOKLYN STREET

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 5'

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1-29-09

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DATE	COMMENTS	BY
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PROSPECT STREET OVER STEVENS BRANCH

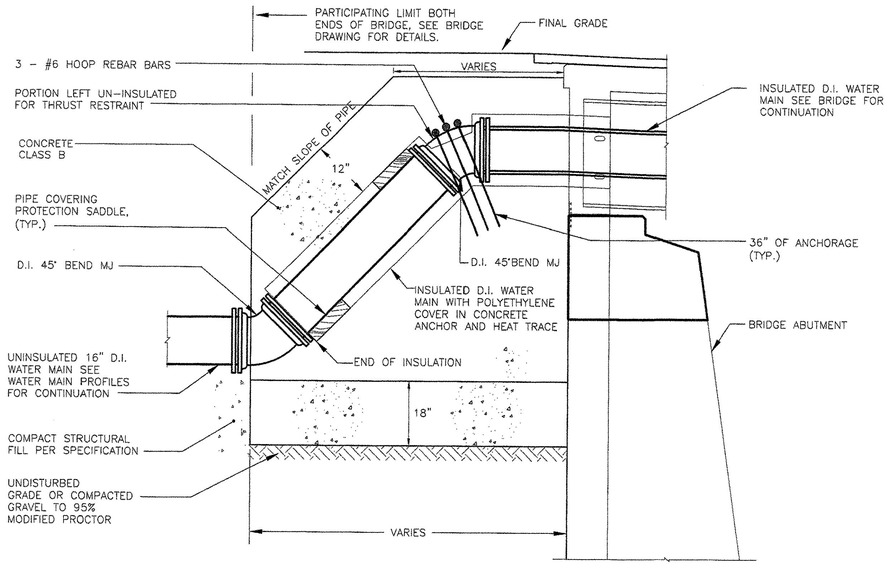
WATER MAIN PROFILES

BARRE, VERMONT

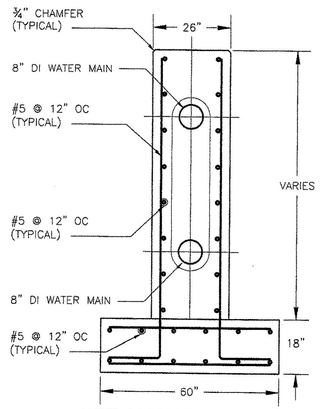
Project #	416008
Project Mgr.	R.N. GOODWIN
Design by	R.N. GOODWIN
Drawn by	GLW
Reviewed by	R.E. DUFRESNE
Approved by	R.E. DUFRESNE
Date	JANUARY 29, 2009
Scale	AS SHOWN

C3

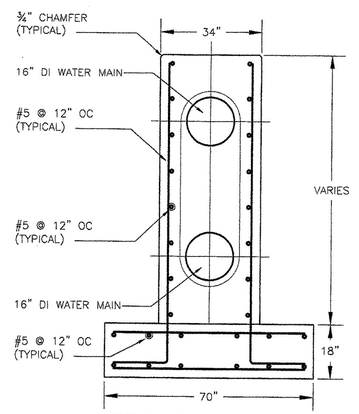
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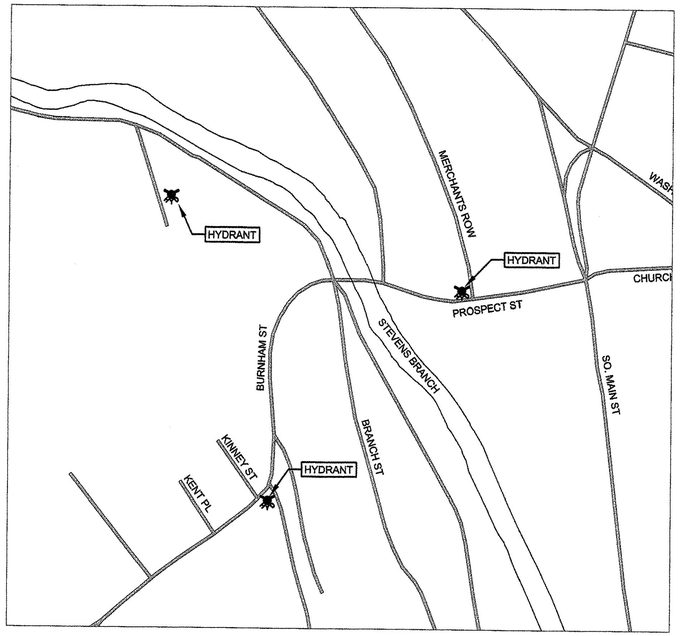
TYPICAL PIPE ANCHOR DETAIL
NOT TO SCALE



PIPE ANCHOR SECTION FOR 8" WATER MAIN
NOT TO SCALE



PIPE ANCHOR SECTION FOR 16" WATER MAIN
NOT TO SCALE



HYDRANT LOCATIONS FOR TEMPORARY WATER
NOT TO SCALE

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1-29-09

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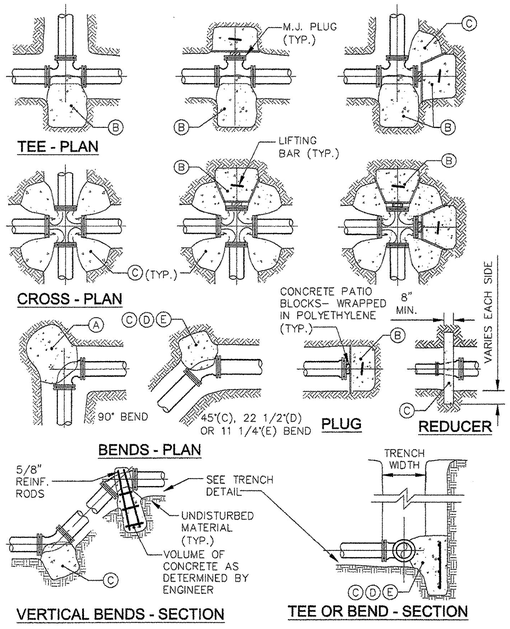
WATER MAIN DETAIL SHEET

BARRE, VERMONT

Project #	416008
Project Mgr.	R.N. GOODWIN
Design by	R.N. GOODWIN
Drawn by	GLW
Reviewed by	R.E. DUFRESNE
Approved by	R.E. DUFRESNE
Date	JANUARY 29, 2009
Scale	AS SHOWN

C4

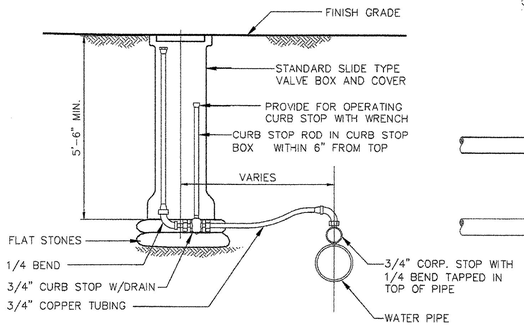
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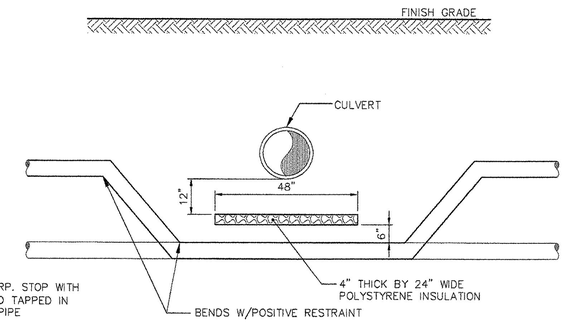
THRUST BLOCK SCHEDULE SQUARE FEET OF CONCRETE THRUST BLOCKING BEARING ON UNDISTURBED MATERIAL													
REACTION TYPE		PIPE SIZE											
		4"	6"	8"	10"	12"	14"	16"	18"	20"	24"	30"	36"	48"
TEST PRESSURE = 100 PSIG	Ⓐ	1.71	2.49	4.29	6.45	9.12	12.26	15.85	19.91	24.43	34.85	53.62	76.81	135.12
	Ⓑ	1.21	3.53	6.06	9.12	12.70	17.33	22.42	28.16	34.55	49.29	75.83	108.62	191.09
	Ⓒ	0.92	0.95	3.28	4.94	6.98	9.38	12.13	15.24	18.70	26.68	41.04	58.78	103.42
	Ⓓ	0.47	0.97	1.67	2.52	3.56	4.78	6.19	7.77	9.53	13.60	20.92	29.97	52.72
	Ⓔ	0.24	0.49	0.84	1.26	1.79	2.40	3.41	3.90	4.79	6.83	10.51	15.06	26.49
OTHER TEST PRESSURES FOR THE ABOVE REACTIONS		TEST PRESSURE TO BE 200 PSI MIN. AT LOW END OF THE TEST SECTION. SQUARE FEET OF CONCRETE THRUST BLOCKING FOR OTHER TEST PRESSURES IS DIRECTLY PROPORTIONAL TO THE ABOVE TABLE. FOR INSTANCE, AT 200 PSI TEST PRESSURE FOR ABOVE NUMBERS DOUBLE.											

NOTES:
1. POUR THRUST BLOCKS AGAINST UNDISTURBED MATERIAL. WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE LOOSE MATERIAL AND EXTEND THRUST BLOCK TO UNDISTURBED MATERIAL. NO JOINTS SHALL BE COVERED WITH CONCRETE.
2. ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH OF FITTING.
3. PLACE CONCRETE PATIO BLOCKS IN FRONT OF ALL PLUGS BEFORE POURING THRUST BLOCK.
4. REQUIREMENTS OF THE ABOVE TABLE PRESUME MINIMUM SOIL BEARING OF 1 TON PER SQUARE FOOT, AND MAY BE VARIED BY THE ENGINEER TO MEET OTHER CONDITIONS ENCOUNTERED.
5. MEGA-LUG RETAINER GLANDS, WITH MEGA-BOND COATING SYSTEM, ARE REQUIRED FOR ALL MECHANICAL JOINTS. THESE GLANDS DO NOT REDUCE THE REQUIREMENTS FOR THRUST RESTRAINT.
6. ALL FITTINGS SHALL BE WRAPPED IN POLYETHYLENE OR BUILDING PAPER PRIOR TO INSTALLATION OF CONCRETE RESTRAINT.
7. THREADED ROD SHALL BE ANSI A242 FY50 PIPE RESTRAINT NUTS TO MATCH AWWA C111. THREADED RODS AND NUTS TO BE FIELD COATED WITH BITUMINOUS PAINT.
8. THRUST RESTRAINT IS REQUIRED FOR ALL TEES, BENDS, REDUCERS, CAPS, PLUGS, OR CROSSES.
9. INSTALL LIFT HOOKS INTO THRUST BLOCKS AT END CAPS AND PLUGS.
10. THRUST BLOCK AREA IS BASED ON SILT SOILS WITH A BEARING STRENGTH OF 1500 LBS/SF AND A SAFETY FACTOR OF 1.5.
11. PRE-FORMED OR PRE-POURED THRUST BLOCKS ARE UNACCEPTABLE.

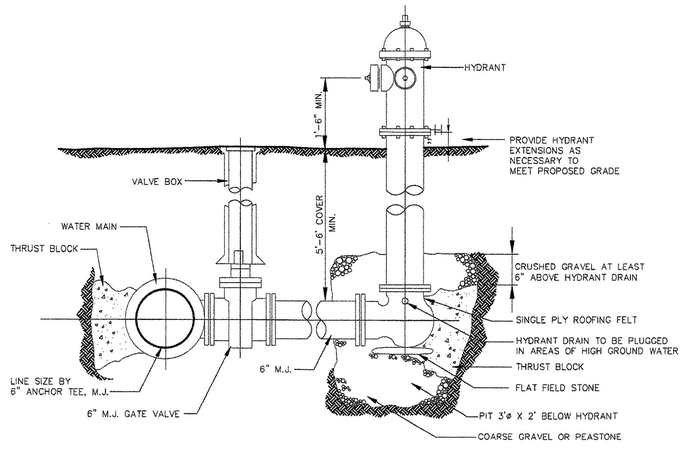
THRUST BLOCK DETAILS
NOT TO SCALE



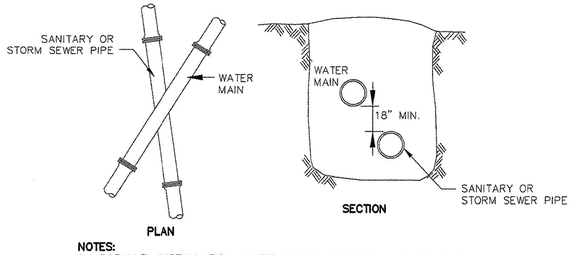
TYPICAL INSTALLATION-TRAVEL WAY FOR MANUAL AIR RELEASE OR CHLORINATION INJECTION
NOT TO SCALE



WATERLINE/CULVERT CROSSING
NOT TO SCALE

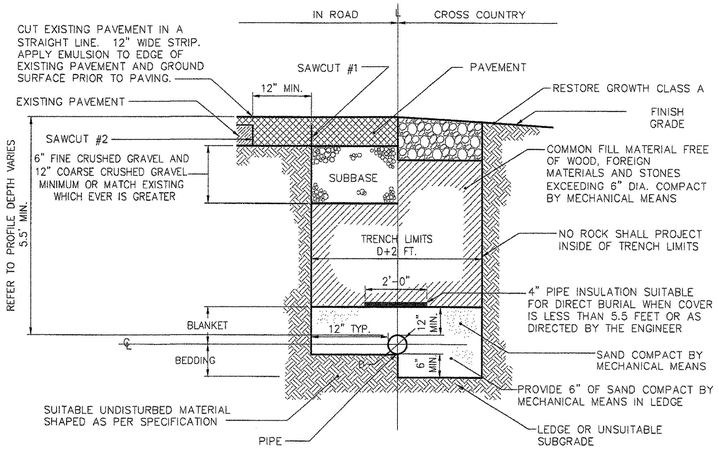


HYDRANT ASSEMBLY DETAIL
NOT TO SCALE



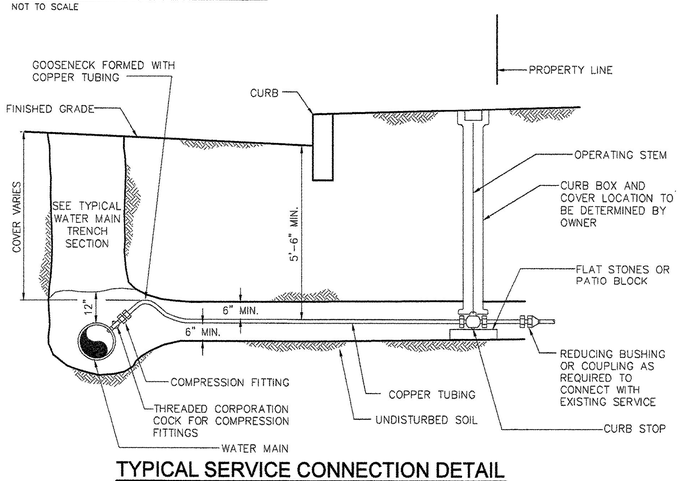
NOTES:
1. PARALLEL INSTALLATION: WATER MAINS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED MANHOLE OR SANITARY SEWER. THIS DISTANCE CAN BE REDUCED TO 5 FEET FOR STORM SEWERS. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE.
2. CROSSINGS: WATER MAINS CROSSING SEWERS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SANITARY OR STORM SEWER. THIS SHALL BE THE CASE WHERE THE WATER MAIN IS EITHER ABOVE OR BELOW THE SEWER. AT CROSSINGS, ONE FULL LENGTH OF WATER PIPE SHALL BE LOCATED SO BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. IF THE SEWER MAIN IS OVER THE WATER MAIN, THE FIRST SEWER PIPE JOINTS ON EACH SIDE OF THE WATER MAIN MUST BE CONCRETE ENCASED. SPECIAL STRUCTURAL SUPPORT FOR THE WATER AND SEWER PIPES MAY BE REQUIRED. WATER MAINS SHALL NOT PASS THROUGH SEWER MANHOLES OR BE SUBMERGED IN BASINS CONTAINING SEWAGE OR OTHER GROSSLY CONTAMINATED OR HAZARDOUS MATERIAL.
3. EXCEPTION: THE ENGINEER MUST SPECIFICALLY APPROVE ANY VARIANCE FROM THESE REQUIREMENTS WHEN IT IS IMPOSSIBLE TO OBTAIN THE SPECIFIED SEPARATION DISTANCES.

SANITARY AND/OR STORM SEWER PIPE AND WATER MAIN CROSSING DETAIL
NOT TO SCALE



TYPICAL WATER MAIN TRENCH SECTION
NOT TO SCALE

NOTES:
1. WHERE PIPE IS INSTALLED IN GRAVEL SHOULDER OR IN GRAVELED ROAD, TRENCH SHALL BE RESTORED WITH 18" OF CRUSHED GRAVEL AS SHOWN ABOVE WITH 4" OF SURE-PAK TOP.
2. REFER TO SPECIFICATION FOR PAVEMENT THICKNESS REQUIRED.



TYPICAL SERVICE CONNECTION DETAIL
NOT TO SCALE

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STATE OF VERMONT ROBERT E. DUFRESNE NO. 3834 CIVIL REGISTERED PROFESSIONAL ENGINEER
1-29-09

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PROSPECT STREET OVER STEVENS BRANCH

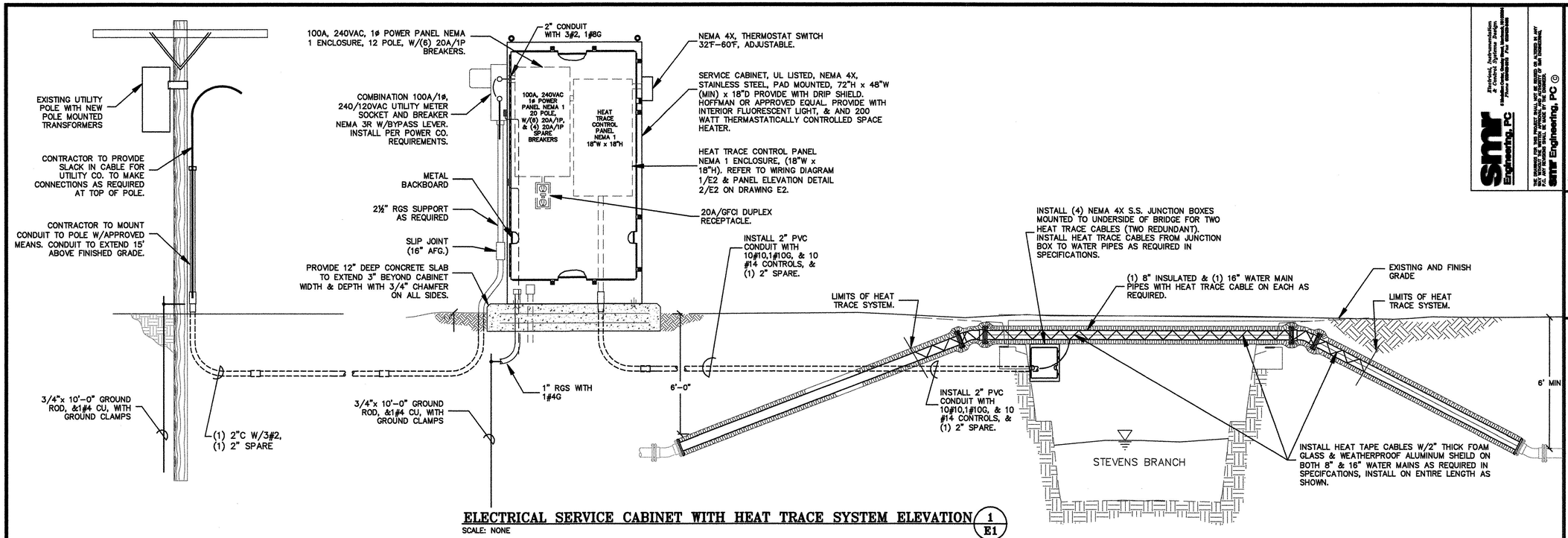
WATER MAIN DETAIL SHEET

BARRE, VERMONT

Project #	416008
Project Mgr.	R.N. GOODWIN
Design by	R.N. GOODWIN
Drawn by	GLW
Reviewed by	R.E. DUFRESNE
Approved by	R.E. DUFRESNE
Date	JANUARY 29, 2009
Scale	AS SHOWN

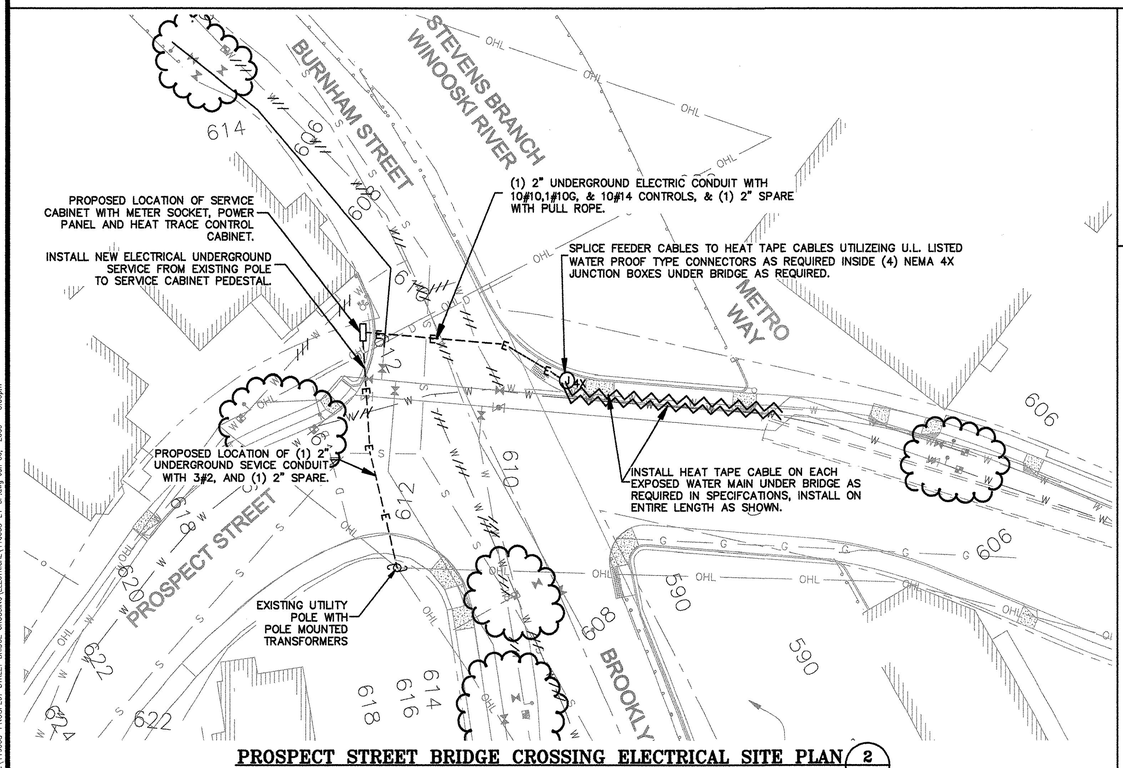
C5

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ELECTRICAL SERVICE CABINET WITH HEAT TRACE SYSTEM ELEVATION (1/E1)

SCALE: NONE



PROSPECT STREET BRIDGE CROSSING ELECTRICAL SITE PLAN (2/E1)

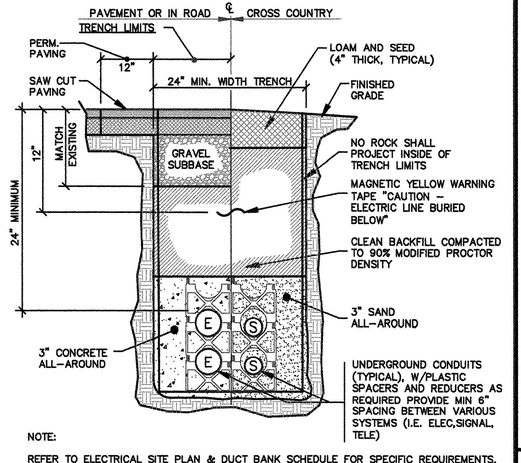
SCALE: 1"=20'-0"

ELECTRICAL SITE LEGEND

- UTILITY POLE
- —OHP— PROPOSED OVERHEAD PRIMARY CABLE
- ----EXP---- EXISTING UNDERGROUND PRIMARY CONDUIT
- ----EX---- EXISTING UNDERGROUND ELECTRICAL CONDUIT
- ----SX---- EXISTING UNDERGROUND SIGNAL CONDUIT
- ----E---- PROPOSED NEW UNDERGROUND ELECTRICAL CONDUIT
- ----S---- PROPOSED NEW UNDERGROUND SIGNAL CONDUIT

NOTES:

1. PROVIDE RIGID GALVANIZED SWEEPS ON ALL 90° TURNS.
2. UTILIZE RIGID GALVANIZED STEEL CONDUIT & SWEEPS AT THE RISER POLE FOR PRIMARY SECONDARY & TELEPHONE CONDUITS, GROUND AS REQUIRED.
3. COORDINATE NEW UNDERGROUND CONDUIT LOCATION WITH EXISTING UNDERGROUND ELECTRIC CONDUIT, PROCESS PIPING AND STRUCTURES PRIOR TO EXCAVATION.
4. REPAIR EXISTING PAVED AND GRASSED AREAS TO CONDITION EXISTING PRIOR TO EXCAVATION.
5. ALL UTILITY COMPANIES, PUBLIC AND PRIVATE, MUST BE NOTIFIED, INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THIS PLAN, PRIOR TO DESIGNING, EXCAVATING, BLASTING, INSTALLING, BACKFILLING, GRADING, PAVEMENT RESTORING OR REPAVING.
6. REFER TO DETAIL 4/E1 FOR TYPICAL TRENCHING DETAIL FOR ELECTRICAL/SIGNAL CONDUITS.



NOTE:

REFER TO ELECTRICAL SITE PLAN & DUCT BANK SCHEDULE FOR SPECIFIC REQUIREMENTS.

TYPICAL ELECTRICAL TRENCHING DETAIL (4/E1)

SCALE: NONE

SUBSURFACE WORK NOTE:

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR IT'S REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT "DIG SAFE" AT 1(888)344-7233 (1(888)DIG-SAFE)AND COORDINATE ACTIVITIES PRIOR TO ANY EXCAVATIONS.

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STATE OF VERMONT
SADEGH M. RADVAR
No. 6523
REGISTERED PROFESSIONAL ENGINEER

REVISIONS		
DATE	COMMENTS	BY

PROSPECT STREET OVER STEVENS BRANCH

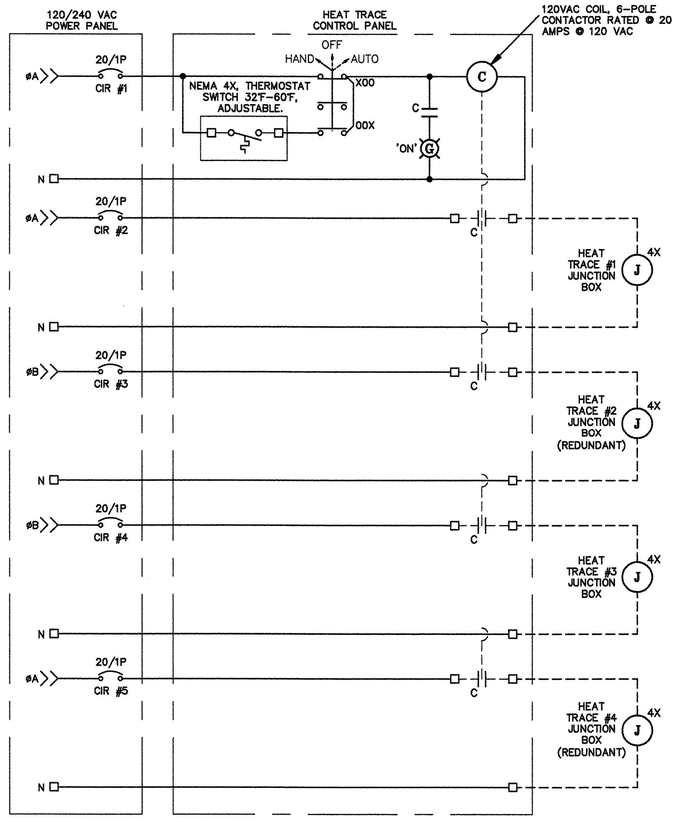
ELECTRICAL SITE PLAN WITH DETAILS

BARRE, VERMONT

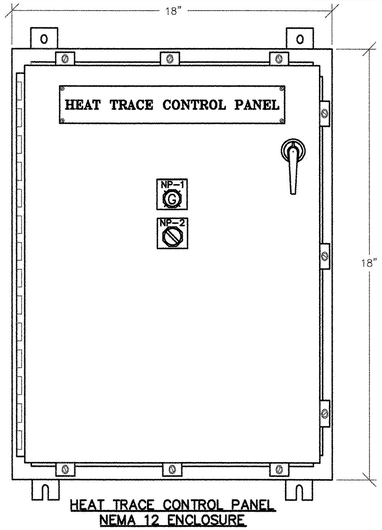
Project #	416008
Project Mgr.	R.N. GOODWIN
Design by	JWC
Drawn by	JWC
Reviewed by	R.E. DUFRESNE
Approved by	R.E. DUFRESNE
Date	JANUARY 29, 2009
Scale	AS SHOWN

E1

SHEET 50 OF 56



HEAT TRACE CONTROL PANEL WIRING DIAGRAM (1/E2)
SCALE: NONE



HEAT TRACE CONTROL PANEL
NEMA 12 ENCLOSURE

PLC PANEL NAMEPLATE SCHEDULE:

NP-1	HEAT TRACE 'ON'
NP-2	HEAT TRACE 'H-O-A' SWITCH (PUSH TO TEST TYPE)

TYPICAL CONTROL PANEL SYMBOLS:

(R) INDICATING LIGHTS PUSH TO TEST TYPE
A: AMBER
B: BLUE
G: GREEN
R: RED
W: WHITE
Y: YELLOW

HEAT TRACE CONTROL PANEL ELEVATION (2/E2)
SCALE: NONE

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PROSPECT STREET OVER STEVENS BRANCH

ELECTRICAL WIRING DIAGRAMS AND DETAILS

BARRE, VERMONT

Project #	416008
Project Mgr.	R.N. GOODWIN
Design by	JWC
Drawn by	JWC
Reviewed by	R.E. DUFRESNE
Approved by	R.E. DUFRESNE
Date	JANUARY 29, 2009
Scale	AS SHOWN

E2

SHEET 51 OF 56

FILE: I:\416008-PROPOSAL\ SHEET BRIDGE DRAWING\ELECTRICAL\416008-E1-SHT.DWG JAN 29, 2009 - 10:05PM

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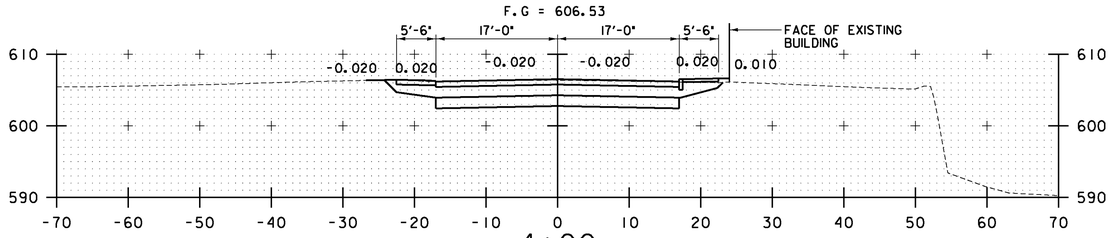
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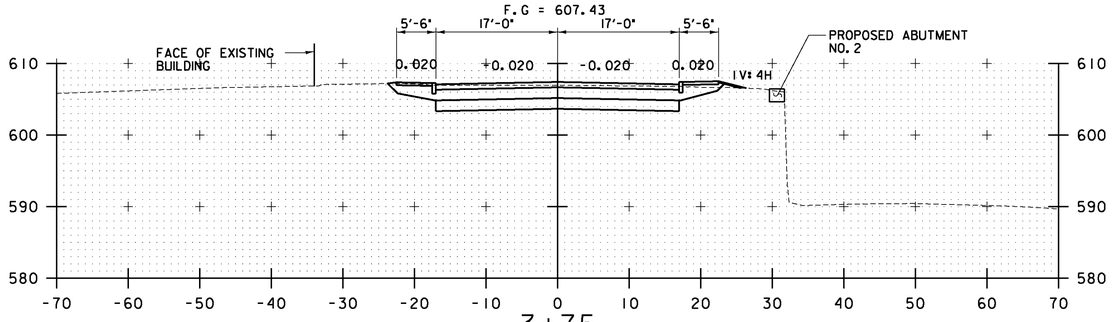
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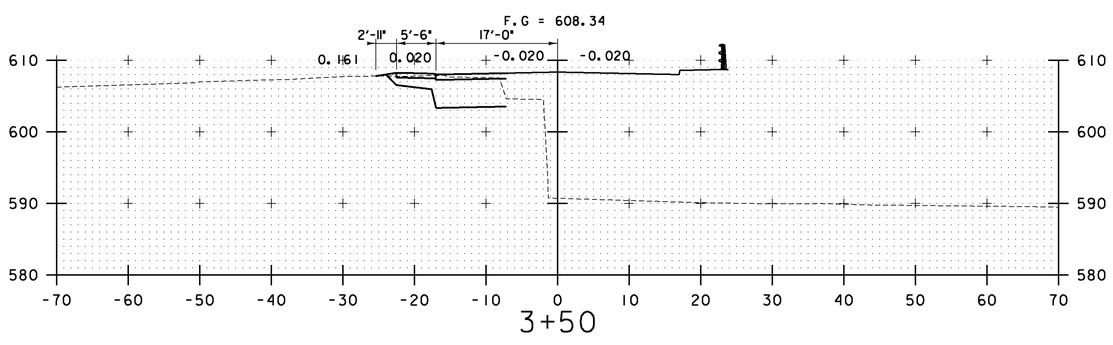
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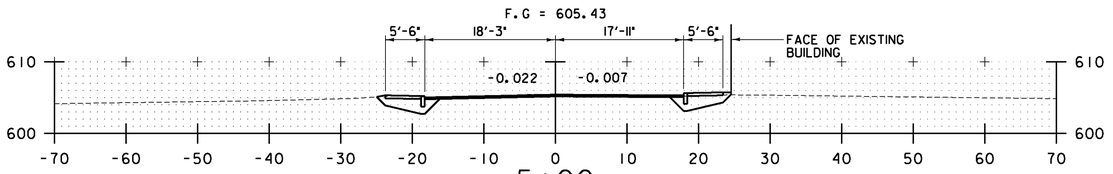
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3+75

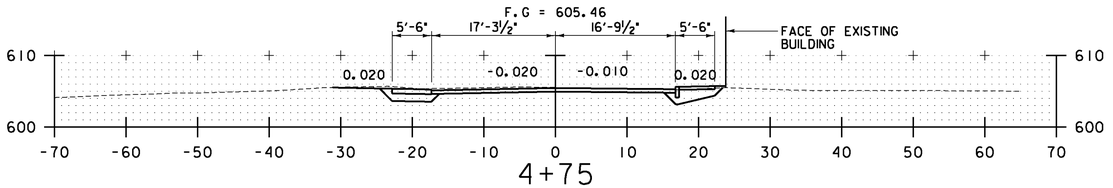


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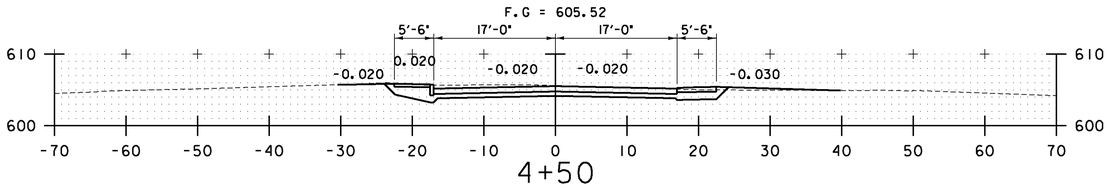


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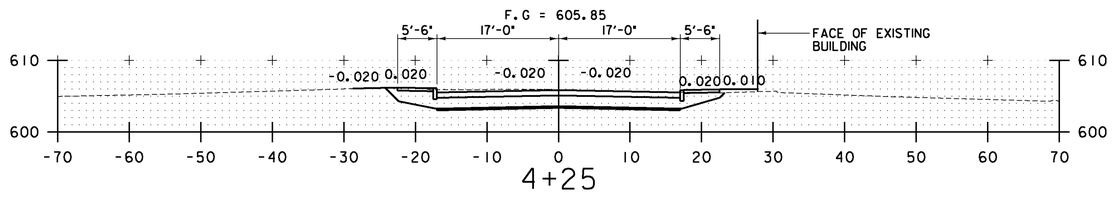
END PROJECT
BHF 6000 (15)S
STA. 5+00.00
MATCH EXISTING



4+75



4+50



4+25

SCALE 1" = 10'-0

10 0 10

PLOTTED 2/2/2009

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engineering planning management development

STATE OF VERMONT
AGENCY OF TRANSPORTATION

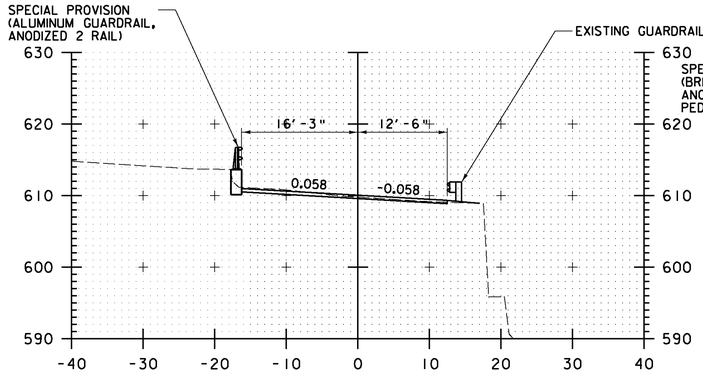
Town Of BARRE CITY	Bridge No. 7
	Log Sta.
Highway No. PROSPECT ST.	Surv. Sta.

PROSPECT ST. OVER STEVENS BRANCH

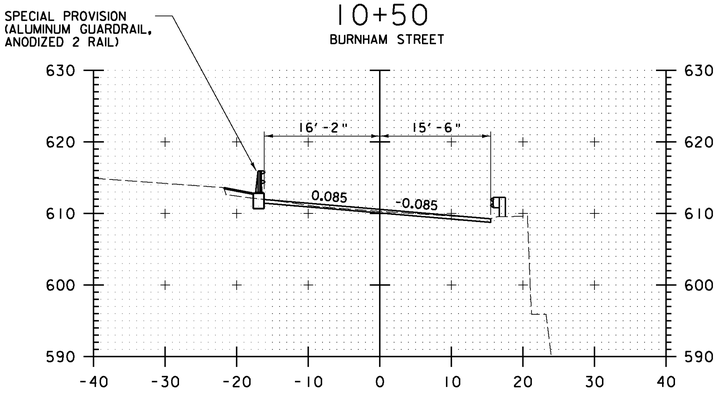
ROADWAY CROSS SECTIONS

Designed By A. P. GUYETTE	Drawn By S. J. BIJOLLE
Checked By Date	Bridge Design Supervisor
E. P. DETRICK 1/09	J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 53 of 56

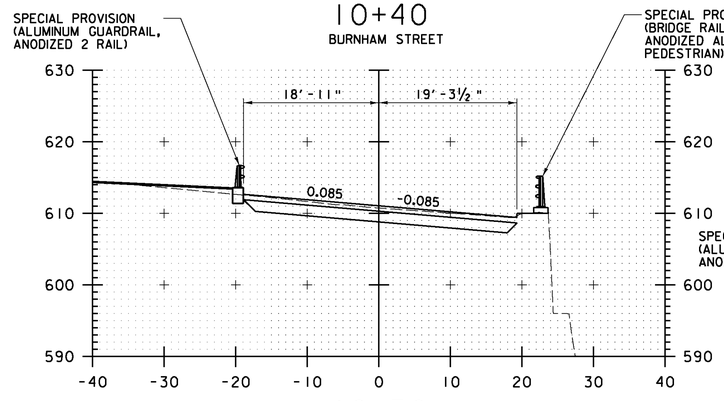
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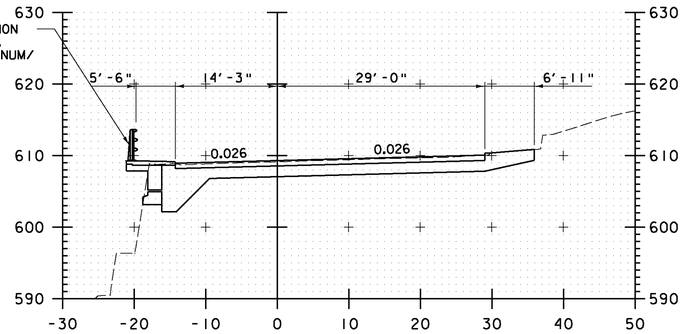
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BURNHAM STREET



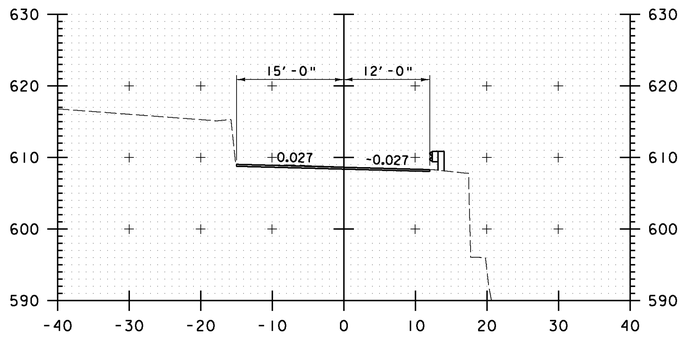
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BURNHAM STREET



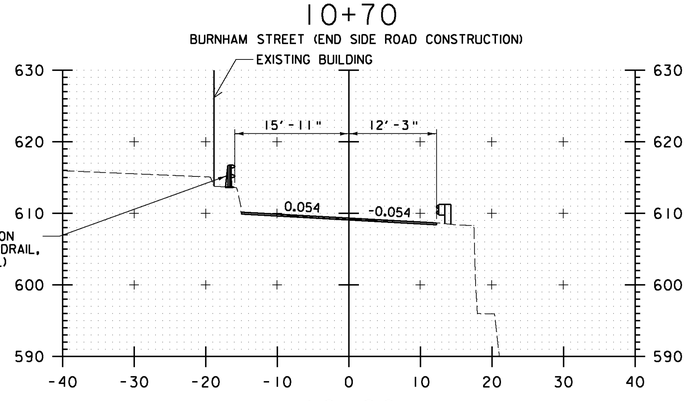
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BURNHAM STREET



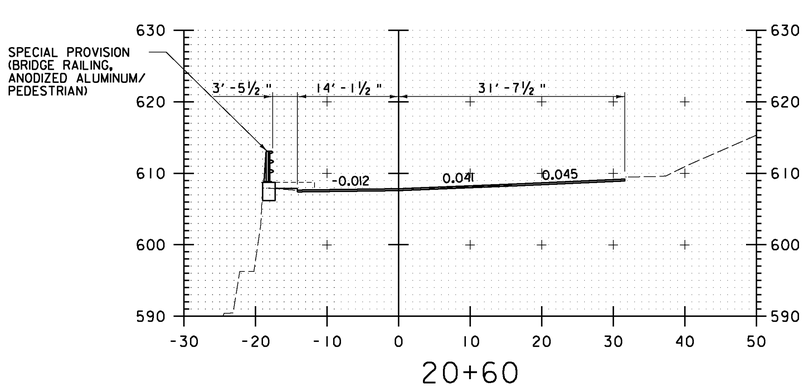
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BROOKLYN STREET



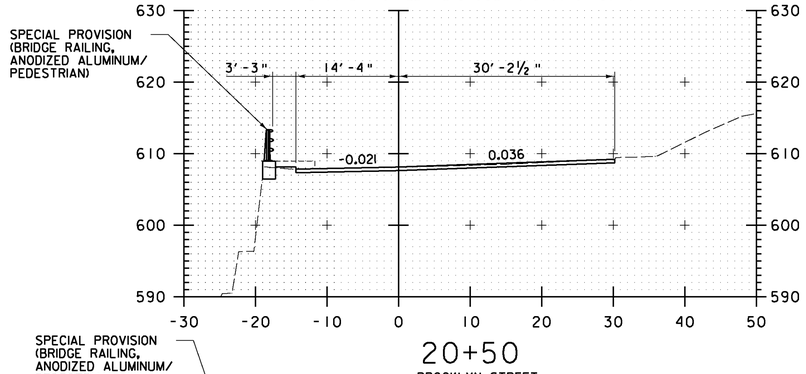
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BURNHAM STREET (END SIDE ROAD CONSTRUCTION)



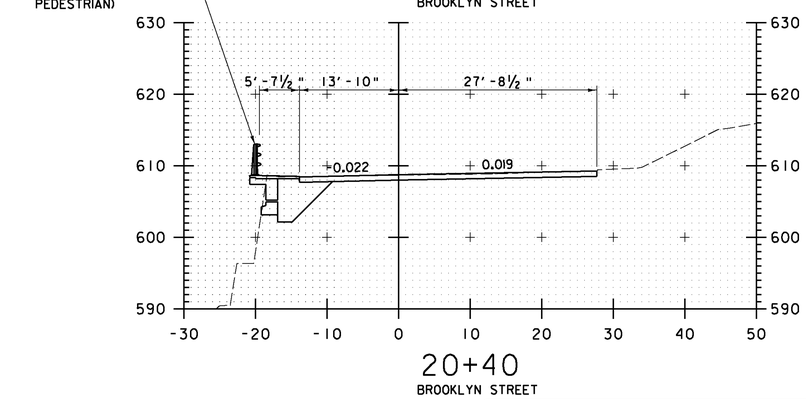
10+60
BURNHAM STREET



20+60
BROOKLYN STREET (END SIDE ROAD CONSTRUCTION)



20+50
BROOKLYN STREET



20+40
BROOKLYN STREET

SCALE 1" = 10'-0
10 0 10

PLOTTED 2/2/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

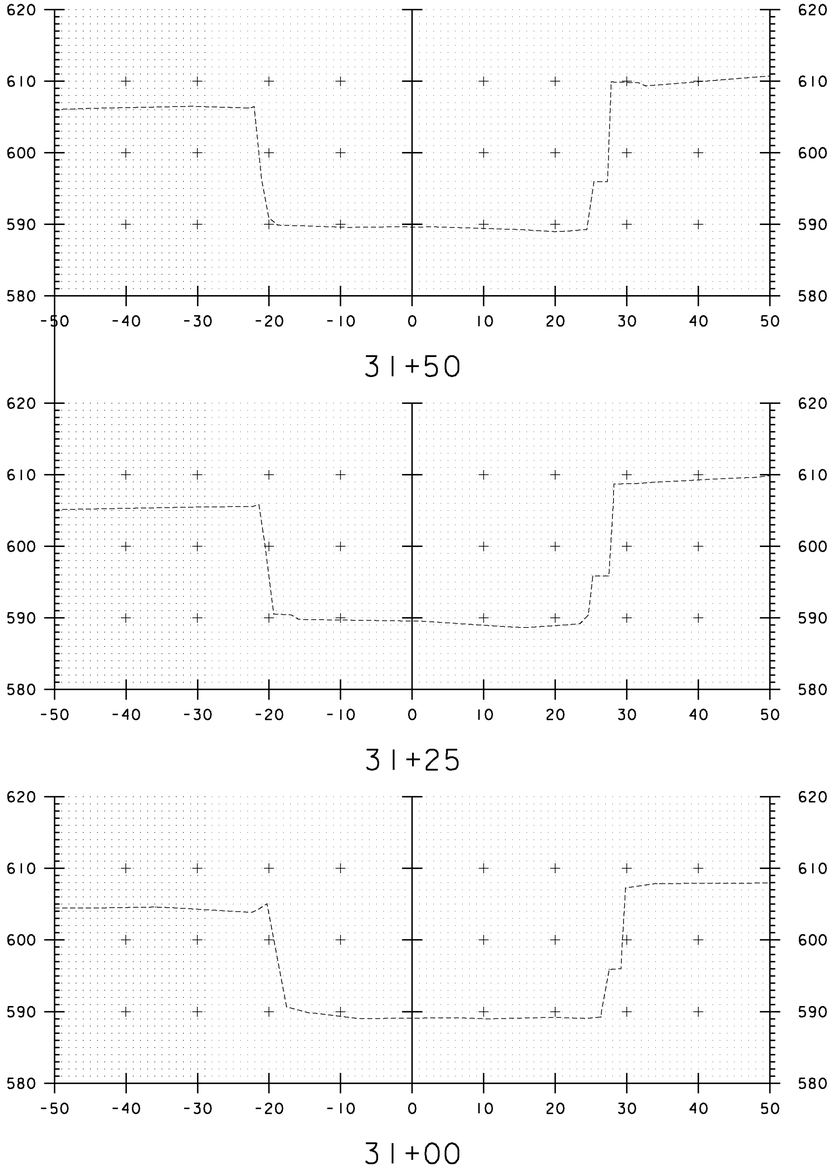
Town Of BARRE CITY	Bridge No. 7
Highway No. PROSPECT ST.	Log Sta. / Surv. Sta.

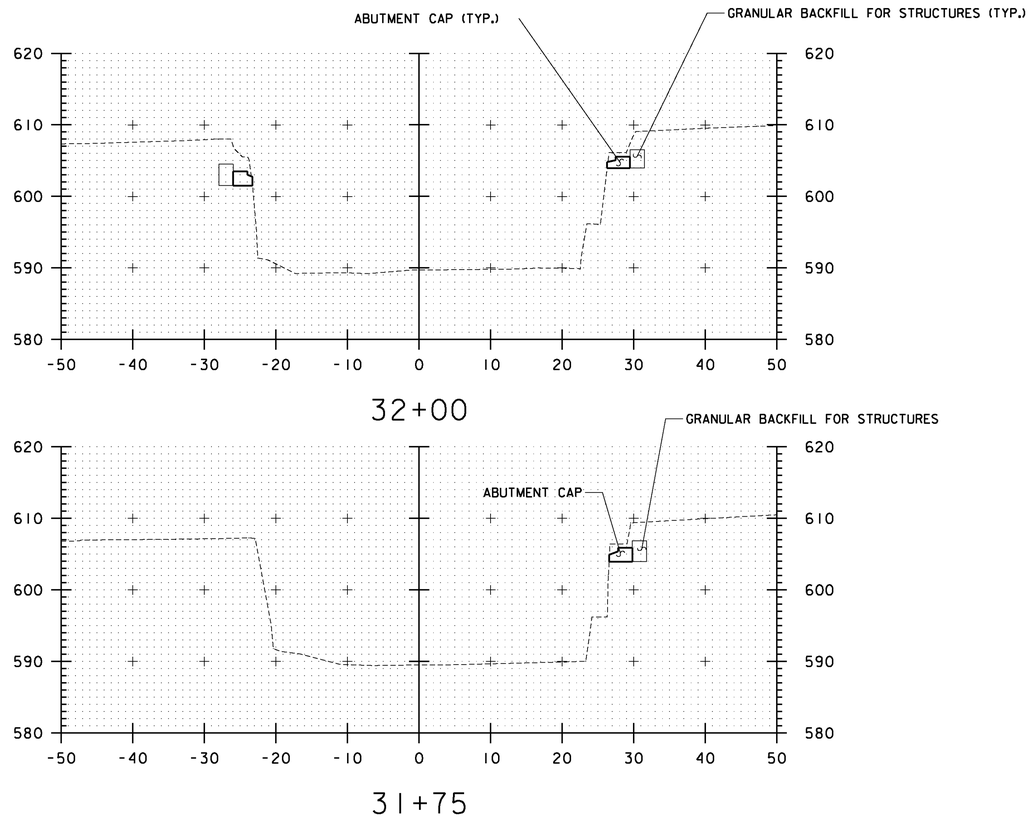
PROSPECT ST. OVER STEVENS BRANCH

SIDE ROAD CROSS SECTIONS

Designed By A. P. GUYETTE	Drawn By S. J. BIJOLLE
Checked By Date	Bridge Design Supervisor
E. P. DETRICK 1/09	J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 54 of 56

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SCALE 1" = 10'-0
10 0 10

PLOTTED 2/2/2009

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STATE OF VERMONT
AGENCY OF TRANSPORTATION

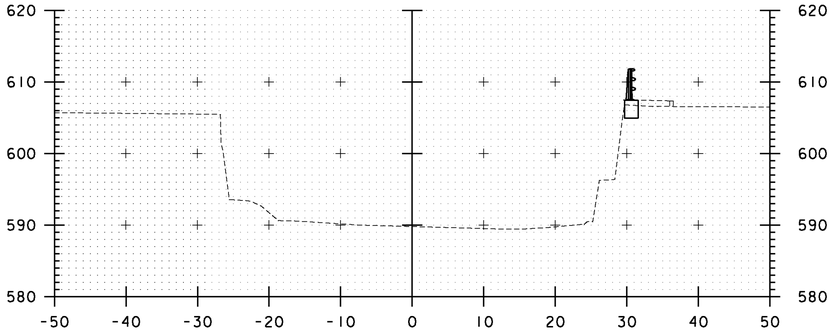
Town Of BARRE CITY	Bridge No. 7
Highway No. PROSPECT ST.	Log Sta.
	Surv. Sta.

PROSPECT ST. OVER STEVENS BRANCH

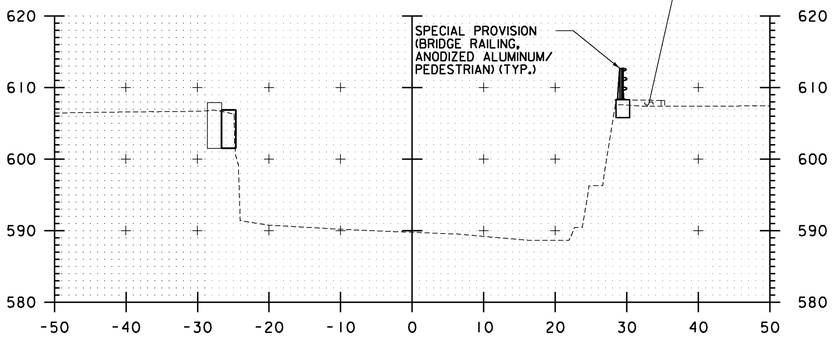
CHANNEL CROSS SECTIONS

Designed By A.P. GUYETTE	Drawn By A.P. GUYETTE
Checked By Date	Bridge Design Supervisor
E. P. DETRICK 1/09	J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 55 of 56

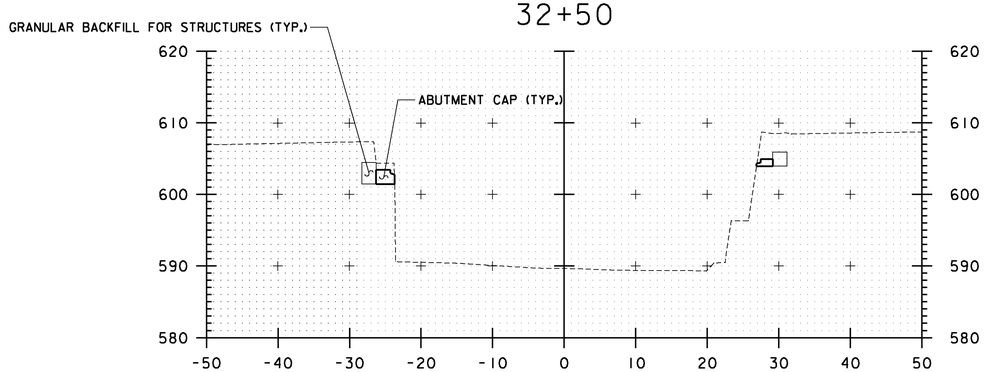
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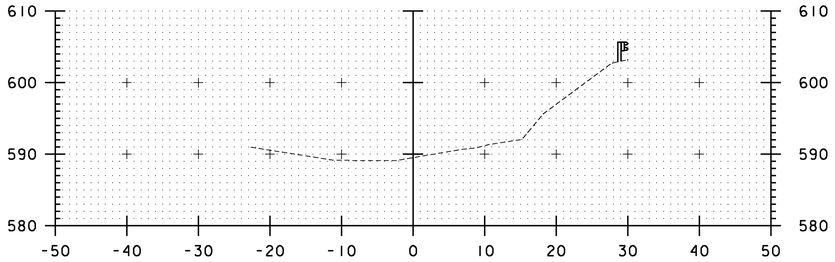
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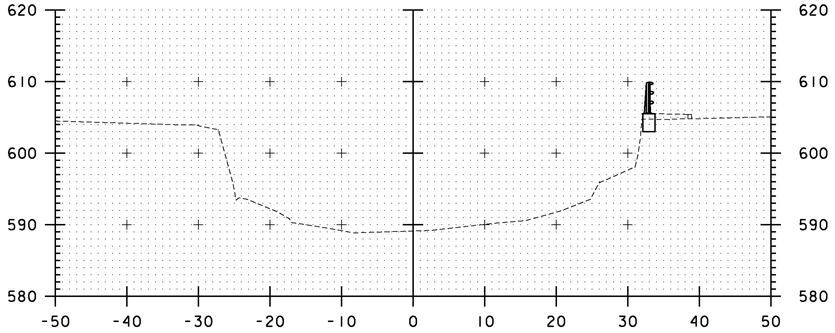
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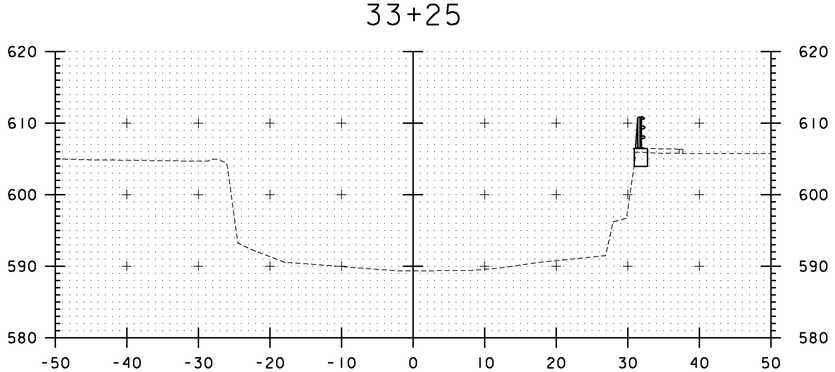
32+25



33+50



33+25



33+00

SCALE 1" = 10'-0
10 0 10

PLOTTED 2/2/2009

DuBois & King inc.
engineering planning management development

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BARRE CITY	Bridge No. 7
Highway No. PROSPECT ST.	Log Sta.
	Surv. Sta.

PROSPECT ST. OVER STEVENS BRANCH

CHANNEL CROSS SECTIONS

Designed By A. P. GUYETTE	Drawn By S. J. BIJOLLE
Checked By Date E. P. DETRICK 1/09	Bridge Design Supervisor J. W. TUCKER Date 1/09
PROJECT BARRE CITY	PROJECT NO. BHF 6000 (15) S
I.G.C. Info.	
Bridge Sheet No.	Sheet 56 of 56

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DuBois & King INC.

ENGINEERING • PLANNING • DEVELOPMENT • MANAGEMENT

616410
June 3, 2009

6/9/09

D.S. Brown Company
300 E. Cherry Street
North Baltimore, Ohio 45872

RE: Barre City
BHF 6000(15)S
Prospect Street over Stevens Branch

NOT EASY SHEET STAMPED

Details for the following items,

- Item 531.10 – Bearing Device Assembly, Preformed Fabric Pad

transmitted with S.D. Ireland's letter dated May 7, 2009 (S.D. Ireland job # 6040) have been reviewed and are being returned herewith.

All drawings are approved as noted.

Upon receipt of these "as noted" or "approved" plans, please make appropriate changes and submit white prints for our use in the record plans for this project. You must provide written notice to Vermont Agency of Transportation (VTRANS) Structures Section office as to the date fabrication represented by these drawings will begin. **That notice must be received at least seven days prior to that date, as per Specifications 506.03. Any material fabricated prior to the notification date is subject to rejection without further cause.**

Sincerely,
DuBOIS & KING, INC.

Evan P. Detrick, P.E.
Transportation Department Manager

Attachments: One set of prints

cc: [ ] VTRANS Resident Engineer (Rick Hale) w/prints
[ ] Contractor (S.D. Ireland) w/prints
[ ] Subcontractor (D.S. Brown) w/prints
[ ] VTRANS Construction Section - letter only
[✓] VTRANS Consultant Project Manager – Sherward G. Farnsworth - w/prints
[ ] VTRANS Materials & Research Section (C&IA Unit)- letter only
[ ] VTRANS Structures Section - Shop Inspector Jeff Clark letter only

28 North Main Street • P.O. Box 339 • Randolph, Vermont 05060 (802) 728-3376 (802) 728-4930 (FAX) http://www.dubois-king.com
Williston, Vermont Nashua, New Hampshire

DSBROWN

Production Joint Welding Procedure Specification (D1.5-02)

Procedure No: **A-GTF-01** Date Issued: 1-9-04 Revision No: 0 Rev. Date: _____

Contractor (Fabricator) D.S. Brown Company Prepared by: James R. Connor, Quality Assurance Manager

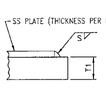
1. Non-Fracture Critical [X] Fracture Critical [ ] WPS Expiration Date: _____
2. Qualified in accordance with: AWS D1.5- 2002 , AWS D1.6-99
   Referenced PQR No(s). PQR-GTAW-01-(03) __ , __ , ____
   Referenced FWST No(s). PQR-GTAW-01(03) , , , ____
3. Material specification(s) ASTM A709 Gr. 36, 50, 50W, 304SS, 316SS
4. Material Thickness (es) Unlimited
5. Welding process GTAW
6. Manual [X] , machine [ ] , or semiautomatic [ ]
7. Position(s) of welding 1F, 2F
8. Filler metal specification AWS A5.9
9. Filler metal class and brand name ER309L (Murrex)
10. Flux class & brand N/A , Type N/A
11. Shielding gas 100% Argon Flow rate 20 CFH
12. Single pass [X] Or multiple pass [ ]
13. Single arc [X] Or multiple arc [ ]
14. Welding Current DCEN
15. Polarity Straight
16. Welding progression stringers
17. Root treatment Clean to bright sound metal or per AWS D1.5 (3.2.1 & 3.11)
18. Postheat treatment N/A
19. Calculated Heat Input (KJ/In) Min 10.9 KJ Max 20.4 KJ
20. Electrode extension (electrical stickout) N/A

For DOT Approval

VTRANS
RECEIVED
CK'D BY _____ OK'D BY JWC
MAY 18 2009
PROJECT _____ APPROVED
BY DATE 5/27/09

Weld size (In)	Pass No(s)	Electrode Size (In)	Welding Process Variables AMPS/WFS*	VOLTS	Travel Speed (IPM)
20 ga.	1	1/8"	170-200	15-17	10-14
16 ga.	1	1/8"	170-200	15-17	10-14
14 ga.	1	1/8"	170-200	15-17	10-14
12 ga.	1	1/8"	170-200	15-17	10-14
11 ga.	1	1/8"	170-200	15-17	10-14
10 ga.	1	1/8"	170-200	15-17	10-14
8 ga.	1	1/8"	170-200	15-17	10-14
3/16"	1	1/8"	170-200	15-17	10-14

Joint Detail (Flare Bevel)
Show all dimensions, weld sizes, passes, and AWS symbols



T_1 = Varies
S = Fillet Weld Size (Fillet weld must not exceed thickness of stainless steel)

* Wire feed speed may be used along with amperage (include chart)

Prepared By: James R. Connor DSB QA Manager

Project: _____

DSB Job: 26271-1106-VT

Preheat and Interpass Temperature Chart

Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
≤3/4"	50°F	450°F
>3/4" to ≤1.5"	70°F	450°F
>1.5" to ≤2.5"	150°F	450°F
>2.5"	225°F	450°F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.

D.S. BROWN

The D.S. Brown Company • 300 East Cherry Street • North Baltimore, Ohio 45872-0158
Phone: (419) 257-3561 • General Fax: (419) 257-2200 • Engineering Fax: (419) 257-0332

The D.S. Brown Company
300 E. Cherry Street
North Baltimore, Ohio 45872
419.257.3561
Fax: 419.257.2200
e-mail: dsb@dsbrown.com
www.dsbrown.com

Lewis Engineering Company
4201 Norex Drive
Chaska, Minnesota 55318
907.368.3000
Fax: 952.448.7000

International Division
57 Pioneer Road
Singapore 628508
65.862.6266
Fax: +65.862.6255
e-mail:
dsbrown@mbox2.singnet.com.sg

Bonding Procedure

The bonding process for laminating PTFE to the fabric pad is as follows:

The fabric pad surface to be bonded is prepared for lamination. A two-part structural grade epoxy is then applied per the manufacture's instructions. The PTFE is cut slightly oversize to account for the possible drift. The PTFE is then applied to the fabric pad and put into a vacuum press at the appropriate pressure for the necessary time period.

Once the fabric pad PTFE is removed from the press, the PTFE is trimmed to plan size and the pads are submitted for quality control review.

TRANS
RECEIVED
CK'D BY _____ OK'D BY JWC
MAY 18 2009
RESUBMIT ____ APPROVED √
BY DATE 5/27/09

Equal Opportunity Employer

GENERAL NOTES

1. MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE VERMONT AGENCY OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2006 EDITION", INCLUDING ITS LATEST REVISIONS, THE SPECIAL PROVISIONS, THE CONTRACT PLANS AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DATED 2002 AND ITS LATEST REVISIONS. GENERAL SHOP PRACTICES, STRUCTURAL FABRICATION, WELDING AND ASSEMBLY SHALL BE GOVERNED BY ANSI/AASHTO/AWS D1.5 BRIDGE WELDING CODE.

2. THESE SHOP DRAWINGS WERE PREPARED IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS. THE D.S. BROWN COMPANY DOES NOT ACCEPT LIABILITY FOR THE DESIGN OF THE PRODUCTS DETAILED IN THESE SHOP DRAWINGS.

3. THE D.S. BROWN COMPANY TO SUPPLY ONLY THE PARTS SHOWN ON THIS DRAWING.

4. ALL STEEL SHALL BE PRODUCED IN THE UNITED STATES OF AMERICA.

5. PTFE (TEFLON) SHALL BE VIRGIN, UNFILLED POLYTETRAFLUOROETHYLENE SATISFYING THE REQUIREMENTS OF ASTM D4894.

6. PTFE IS TO BE PURCHASED ETCHED ON ONE SIDE FOR BONDING. THE BONDING PROCESS FOR LAMINATING PTFE TO THE FABRIC PAD IS AS FOLLOWS: THE FABRIC PAD SURFACE TO BE BONDED IS PREPARED FOR LAMINATION. A TWO-PART STRUCTURAL GRADE EPOXY IS THEN APPLIED PER THE MANUFACTURE'S INSTRUCTIONS. THE PTFE IS CUT SLIGHTLY OVERSIZE TO ACCOUNT FOR POSSIBLE DRIFT. THE PTFE IS THEN APPLIED TO THE FABRIC PAD AND PUT INTO A VACUUM PRESS AT THE APPROPRIATE PRESSURE FOR THE NECESSARY TIME PERIOD. ONCE THE FABRIC PAD AND PTFE IS REMOVED FROM THE PRESS, THE PTFE IS TRIMMED TO PLAN SIZE AND THE PADS ARE SUBMITTED FOR QUALITY CONTROL REVIEW.

7. STAINLESS STEEL SHALL CONFORM TO ASTM A240 – TYPE 304 AND SHALL BE 11GA. (0.12"). STAINLESS STEEL SLIDING SURFACES IN CONTACT WITH PTFE SHALL HAVE A NO. 8 MIRROR FINISH AND ALL OTHERS SHALL HAVE A 2B FINISH.

8. ALL CORNERS AND EDGES OF STEEL PLATES SHALL BE GROUND TO A $\frac{1}{16}$" RADIUS FOR GALVANIZING.

9. THE TEMPERATURE OF THE STEEL SHALL NOT EXCEED 250°F (121°C) FOR SURFACES IN CONTACT WITH THE PTFE, WHERE APPLICABLE. TEMPERATURE SHALL BE CONTROLLED BY THE USE OF TEMPERATURE INDICATING CRAYON OR OTHER DEVICES APPROVED BY THE ENGINEERS.

PROTECTIVE COATING NOTES:

1. ALL EXTERNAL STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123. GALVANIZATION LIFTING DEVICES MAY BE WELDED TO PARTS IF NECESSARY. WHEN THEIR USE IS COMPLETE, REMOVE AND GRIND FLUSH ALL CONNECTION LOCATIONS. REPAIR ALL GALVANIZATION IN ACCORDANCE WITH ASTM A780. GALVANIZING REPAIR PAINTS CONTAINING ALUMINUM SHALL NOT BE USED ON SURFACES TO BE IN CONTACT WITH FRESH CONCRETE.

2. ALL SURFACES DAMAGED BY FIELD WELDING OR HANDLING SHALL BE REPAIRED IN CONFORMANCE WITH SUBSECTION 513.06 (f).

TOLERANCE TABLE	
SOLE PL. PLAN DIMENSIONS	± 1/16"
SOLE PL. THICKNESS	± 1/16"
HOLE LOCATION	± 1/16"
PTFE THICKNESS	± 1/16"
PTFE PLAN DIMENSION, TOTAL DESIGN AREA	± 1/16"
STAINLESS STEEL FINISH	≤20μ" RMS #8 MIRROR

10μ" ACCORDING TO VTRANS SPEC 731.05

TOLERANCE NOTES

BEARING SURFACES SHALL BE FLAT WITH A MAXIMUM PERMISSIBLE VARIATION OF 0.01" FROM A PLANE DETERMINED BY ANY THREE CORNERS OF THE PLATE.

FOR STAINLESS STEEL MATING TO PTFE BONDED TO FABRIC BEARING PAD MATERIAL THE TOLERANCE SHALL BE 0.01" FROM A PLANE DETERMINED BY ANY THREE CORNERS OF THE PLATE.

Accepted
Accepted as Noted ✓
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable
Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Engineer assumes no liability for errors or omissions that may be contained herein. The Contractor, by approving and submitting these documents, verifies their accuracy as stipulated on the Contractors Shop Drawing Stamp.
Date 5/22/09 DuBOIS AND KING By

REV.	DESCRIPTION	DATE	DET.	CKD.

D.S. BROWN

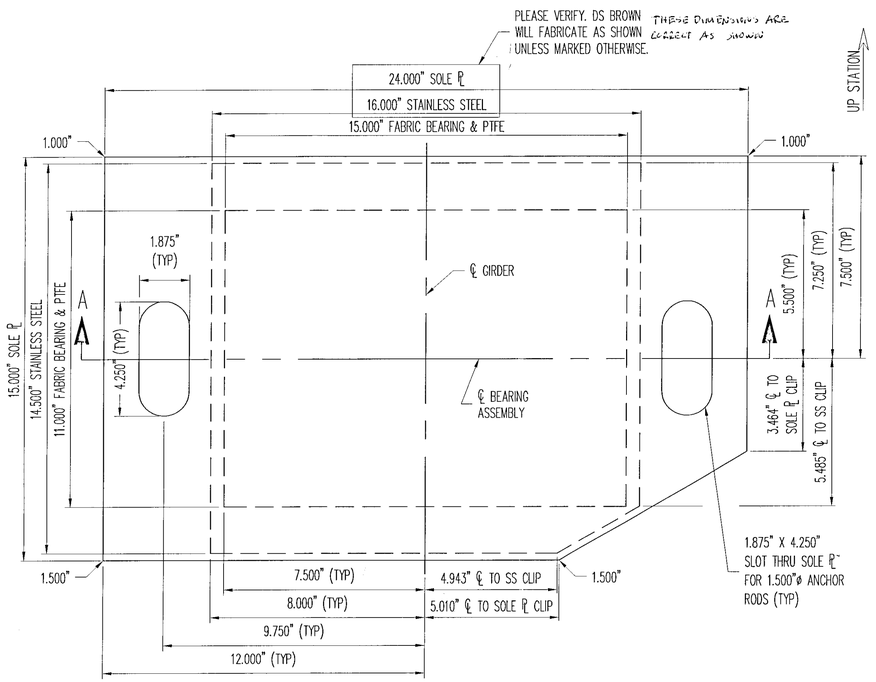
THE D.S. BROWN COMPANY
300 E. CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419.257.3561
FAX: 419.257.0332
WWW.DSBROWN.COM

LOCATION — PROSPECT ST. OVER STEVENS BRANCH
BRIDGE — 7
PROJECT — BHF 6000 (15)S
—
P.O. NO. — 6040
DESIGNER — DUBOIS & KING INC
CUSTOMER — SD IRELAND INDUSTRIES

ITEM	QUANTITY
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DESCRIPTION: GENERAL NOTES
WASHINGTON CO., VT

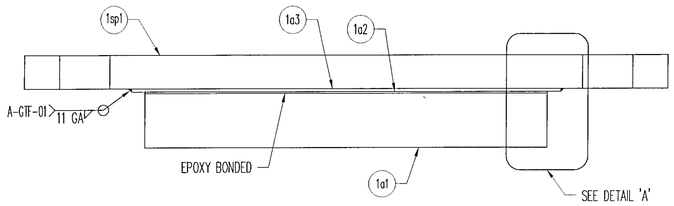
SCALE:	DRAWN BY:	CHECKED BY:	DATE:	
N.T.S.	NRA	EK	5/4/09	–
PROJECT NUMBER:	PRODUCT CODE:	RELEASE:	SHEET:	
26271	1106	1	GN1	



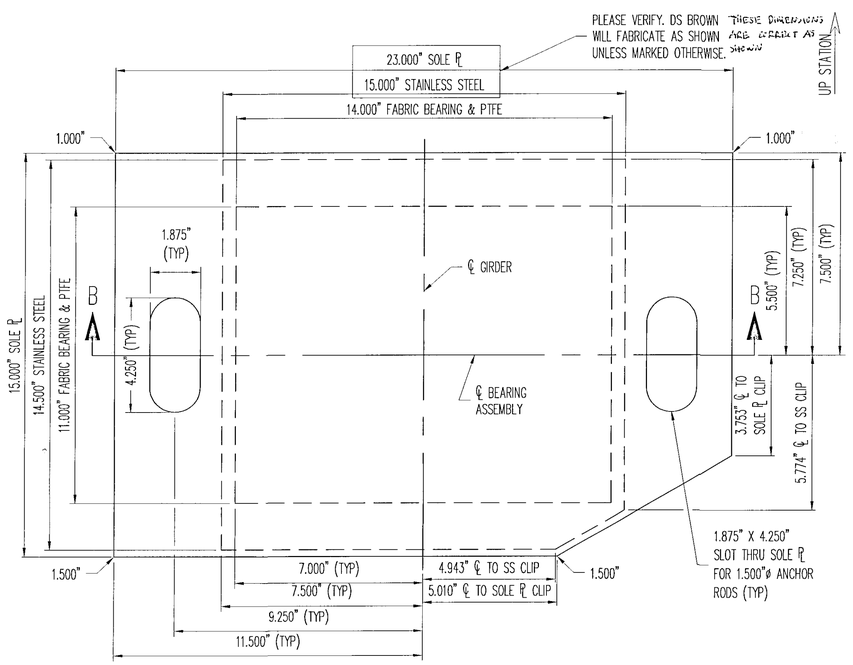
PLAN VIEW

FABRIC BEARING ASSEMBLY

(5) REQ'D @ ABUTMENT 1, BEAMS 1-5



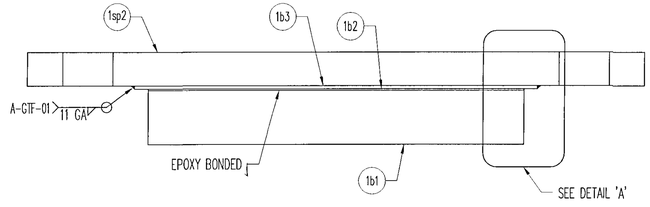
SECTION 'A-A'



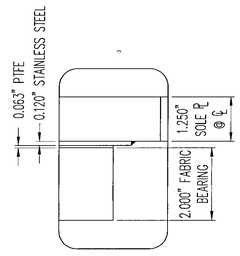
PLAN VIEW

FABRIC BEARING ASSEMBLY

(2) REQ'D @ ABUTMENT 1, BEAMS 6 & 7

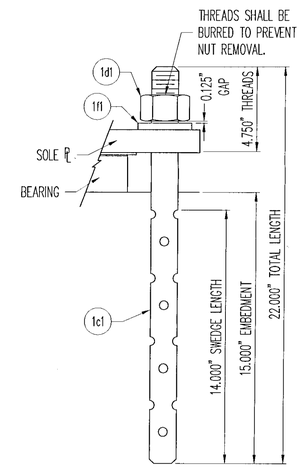


SECTION 'B-B'



DETAIL 'A'

MK	QTY	DESCRIPTION	MATERIAL	LENGTH	REMARKS	REV
1A	5	FABRIC BEARING				-
1a1	5	2.000" X 15.000"	VT 731.01	11.000"		-
1a2	5	0.063" X 15.000"	PTFE	11.000"	PURE VIRGIN UNFILLED	-
1a3	5	11 GA. X 16.000"	A240 T304, #8 & 2B	14.500"	CLIPPED; PLAIN	-
1sp1	5	1.500" X 24.000"	A709 GR 36	15.000"	CLIPPED; A123-HDG	-
1B	2	FABRIC BEARING				-
1b1	2	2.000" X 14.000"	VT 731.01	11.000"		-
1b2	2	0.063" X 14.000"	PTFE	11.000"	PURE VIRGIN UNFILLED	-
1b3	2	11 GA. X 15.000"	A240 T304, #8 & 2B	14.500"	CLIPPED; PLAIN	-
1sp2	2	1.500" X 23.000"	A709 GR 36	15.000"	CLIPPED; A123-HDG	-
1C	14	SWEGED ANCHOR ROD				-
1c1	14	Ø1.500" X 22.000" SWEDGED ROD	A307 GR A		4.75" THREADS, 14" SWEDGE; A153-HDG	-
1D	14	HEAVY HEX NUT				-
1d1	14	Ø1.500" HEX NUT	A563-DH OR A194-2H		A153-HDG	-
1F	14	WASHER PLATE				-
1f1	14	0.375" X 3.000"	A-36	7.500"	1.875" DIA HOLE CENTERED; A123-HDG	-
					5/4/2009 1:19:56 PM	



ANCHOR ROD DETAIL

LOAD DATA	
DESIGN LOAD (BEAMS 1-5) DL + LL (KIPS)	125.0
DESIGN LOAD (BEAMS 6 & 7) DL + LL (KIPS)	120.0

SEE SHEET GN1 FOR GENERAL NOTES.

REV.	DESCRIPTION	DATE	DET.	CKD.

D.S. BROWN

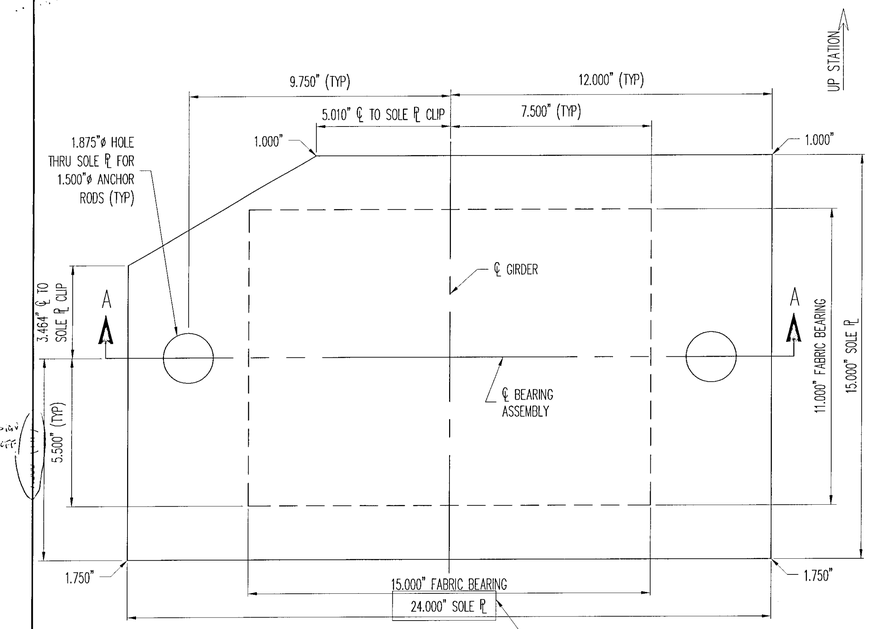
THE D.S. BROWN COMPANY
300 E. CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419.257.3561
FAX: 419.257.0332
WWW.DSBROWN.COM

LOCATION — PROSPECT ST. OVER STEVENS BRANCH
BRIDGE — 7
PROJECT — BHF 6000 (15)S
—
P.O. NO. — 6040
DESIGNER — DUBOIS & KING INC
CUSTOMER — SD IRELAND INDUSTRIES

ITEM	QUANTITY
26271-1106-1	5 OF 5
26271-1106-2	2 OF 2
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DESCRIPTION:
FABRIC BEARING DETAILS
WASHINGTON CO., VT

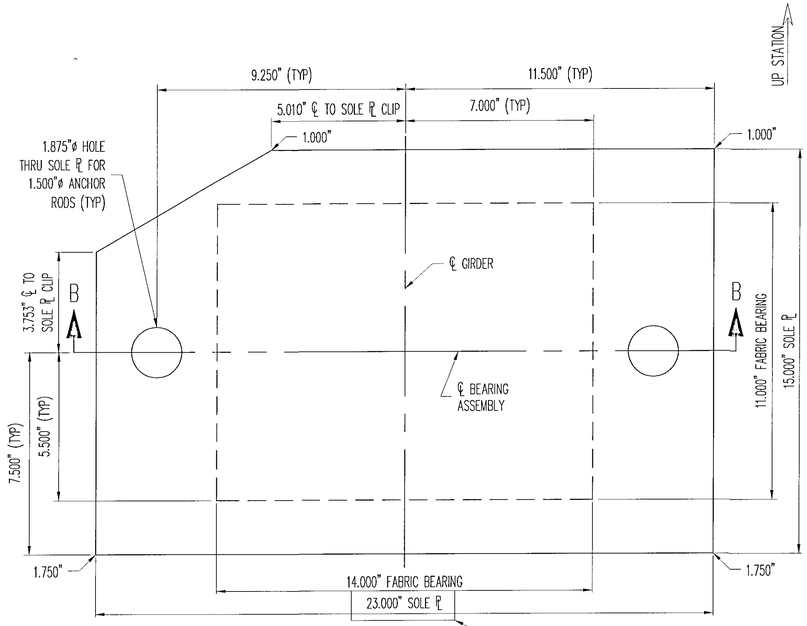
SCALE:	DRAWN BY:	CHECKED BY:	DATE:	
N.T.S.	NRA	EK	5/4/09	–
PROJECT NUMBER	PRODUCT CODE	RELEASE	SHEET	
26271	1106	1	1	



PLAN VIEW

FABRIC BEARING ASSEMBLY

(5) REQ'D @ ABUTMENT 2, BEAMS 1-5



PLAN VIEW

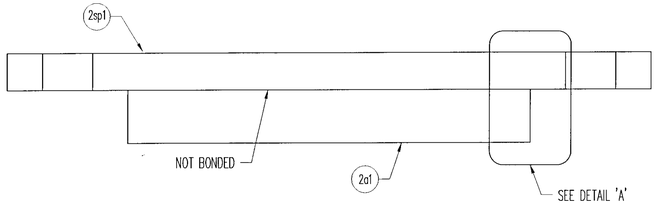
FABRIC BEARING ASSEMBLY

(2) REQ'D @ ABUTMENT 2, BEAMS 6 & 7

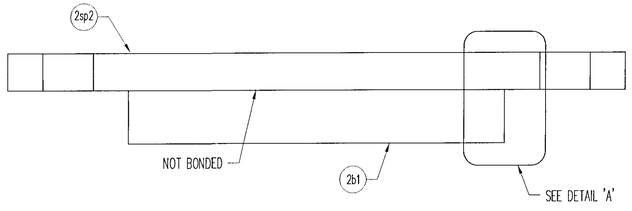
LOAD DATA	
DESIGN LOAD (BEAMS 1-5) DL + LL (KIPS)	125.0
DESIGN LOAD (BEAMS 6 & 7) DL + LL (KIPS)	120.0

MK	QTY	DESCRIPTION	MATERIAL	LENGTH	REMARKS	REV
2A	5	FABRIC BEARING				-
2a1	5	2.000" X 15.000"	VT 731.01	11.000"		-
2sp1	5	1.750" X 24.000"	A709 GR 36	15.000"	CLIPPED; A123-HDG	-
2B	2	FABRIC BEARING				-
2b1	2	2.000" X 14.000"	VT 731.01	11.000"		-
2sp2	2	1.750" X 23.000"	A709 GR 36	15.000"	CLIPPED; A123-HDG	-
2C	14	SWEDGED ANCHOR ROD				-
2c1	14	Ø1.500" X 22.000" SWEDGED ROD	A307 GR A		4.75" THREADS, 14" SWEDGE; A153-HDG	-
2D	14	HEAVY HEX NUT				-
2d1	14	Ø1.500" HEX NUT	A563-DH OR A194-2H		A153-HDG	-
2F	14	PLATE WASHER				-
2f1	14	0.375" X 3.000"	A-36	3.000"	1.875" DIA HOLE CENTERED; A123-HDG	-
					5/4/2009 1:19:56 PM	

PLEASE VERIFY. DS BROWN WILL FABRICATE AS SHOWN UNLESS MARKED OTHERWISE.
THIS IS CORRECT AS SHOWN

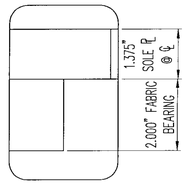


SECTION 'A-A'



SECTION 'B-B'

ANCHOR ROD DETAIL



DETAIL 'A'

SEE SHEET GN1 FOR GENERAL NOTES.

REV.	DESCRIPTION	DATE	DET.	CKD.

D.S. BROWN

THE D.S. BROWN COMPANY
300 E. CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419.257.3561
FAX: 419.257.0332
WWW.DSBROWN.COM

LOCATION — PROSPECT ST. OVER STEVENS BRANCH
BRIDGE — 7
PROJECT — BHF 6000 (15)S
—
P.O. NO. — 6040
DESIGNER — DUBOIS & KING INC
CUSTOMER — SD IRELAND INDUSTRIES

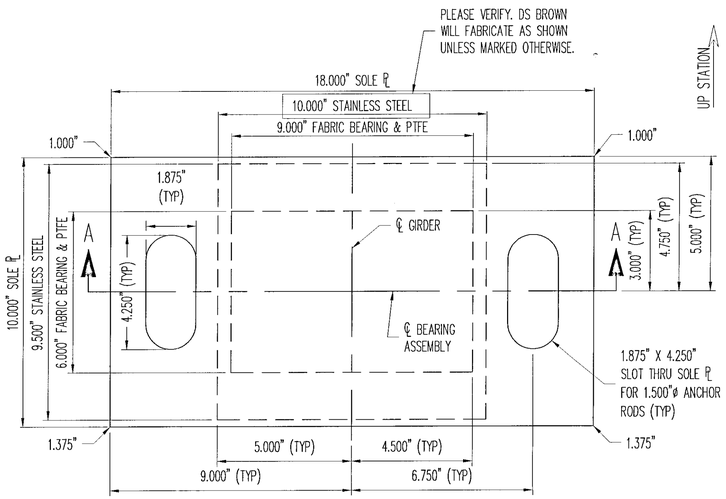
ITEM	QUANTITY
26271-1106-4	5 OF 5
26271-1106-5	2 OF 2
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—	—

DESCRIPTION:
FABRIC BEARING DETAILS
WASHINGTON CO., VT

SCALE:	DRAWN BY:	CHECKED BY:	DATE:	
N.T.S.	NRA	EK	5/4/09	-

PROJECT NUMBER	PRODUCT CODE	RELEASE	SHEET
26271	1106	1	2

MK	QTY	DESCRIPTION	MATERIAL	LENGTH	REMARKS	REV
3A	1	FABRIC BEARING				-
3a1	1	1.250" X 9.000"	VT 731.01	6.000"		-
3a2	1	0.063" X 9.000"	PTFE	6.000"	PURE VIRGIN UNFILLED	-
3a3	1	11 GA. X 10.000"	A240 T304, #8 & 2B	9.500"	PLAIN	-
3sp1	1	1.375" X 18.000"	A709 GR 36	10.000"	A123-HDG	-
3B	2	SWEDGED ANCHOR ROD				-
3b1	2	Ø1.500" X 22.000" SWEDGED ROD	A307 GR A		4.75" THREADS, 14" SWEDGE; A153-HDG	-
3C	2	HEAVY HEX NUT				-
3c1	2	Ø1.500" HEX NUT	A563-DH OR A194-2H		A153-HDG	-
3D	2	PLATE WASHER				-
3d1	2	0.375" X 3.000"	A-36	7.500"	1.875" DIA HOLE CENTERED; A123-HDG	-
					5/4/2009 1:19:56 PM	

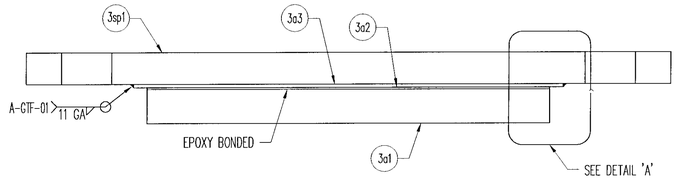


PLAN VIEW

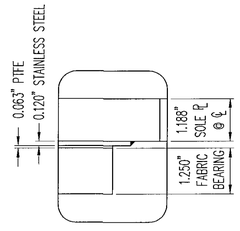
FABRIC BEARING ASSEMBLY

(1) REQ'D @ ABUTMENT 1, FLARE BEAM

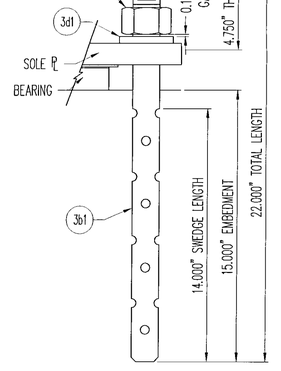
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SECTION 'A-A'



DETAIL 'A'



ANCHOR ROD DETAIL

SEE SHEET GN1 FOR GENERAL NOTES.

REV.	DESCRIPTION	DATE	DET.	CKD.

D.S. BROWN

THE D.S. BROWN COMPANY
300 E. CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419.257.3561
FAX: 419.257.0332
WWW.DSBROWN.COM

LOCATION — PROSPECT ST. OVER STEVENS BRANCH
BRIDGE — 7
PROJECT — BHF 6000 (15)S
—
P.O. NO. — 6040
DESIGNER — DUBOIS & KING INC
CUSTOMER — SD IRELAND INDUSTRIES

ITEM	QUANTITY
26271-1106-3	1 OF 1
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DESCRIPTION:
FABRIC BEARING DETAILS
WASHINGTON CO., VT

SCALE:	DRAWN BY:	CHECKED BY:	DATE	
N.T.S.	NRA	EK	5/4/09	–
PROJECT NUMBER	PROJECT CODE	RELEASE	SHEET	
26271	1106	1	3	

DuBois & King inc.

ENGINEERING • PLANNING • DEVELOPMENT • MANAGEMENT

616410
June 8, 2009

Megquier & Jones, Inc.
1156 Broadway
South Portland, ME 04116-2649

6/9/09
BUT MISSING WELDING PROCEDURE & NOT EACH SHEET WAS STAMPED

RE: Barre City
BHF 6000(15)S
Prospect Street over Stevens Branch

Details for the following items,

- Item 506.50 – Structural Steel, Rolled Beam

transmitted with Megquier & Jones' letter dated June 5, 2009 (M&J job # J-80) have been reviewed and are being returned herewith.

All drawings are approved.

Upon submitting extended weights for our approval, please make appropriate changes as indicated on these "as noted" or "approved" drawings and submit white prints for our use in the record plans for this project. You must provide written notice to Vermont Agency of Transportation (VTRANS) Structures Section office as to the date fabrication represented by these drawings will begin. **That notice must be received at least seven days prior to that date, as per Specifications 506.03. Any material fabricated prior to the notification date is subject to rejection without further cause.**

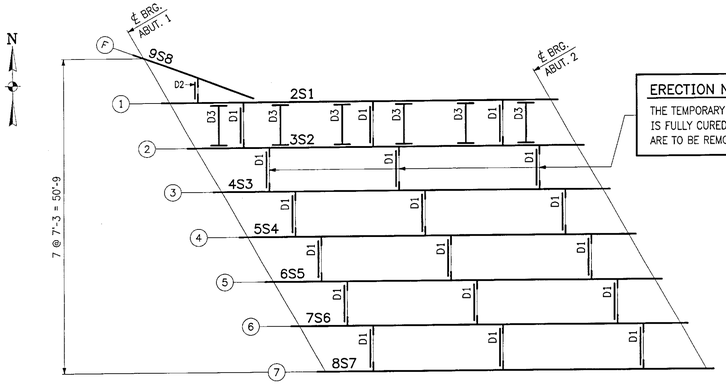
Sincerely,
DuBOIS & KING, INC.

Evan P. Detrick, P.E.
Transportation Department Manager

Attachments: One set of prints

cc: [ ] VTRANS Resident Engineer (Rick Hale) w/prints
[ ] Contractor (S.D. Ireland) w/prints
[ ] Subcontractor (Megquier & Jones Corp.) w/prints
[ ] VTRANS Construction Section - letter only
[X] VTRANS Consultant Project Manager – Sherward G. Farnsworth - w/prints
[ ] VTRANS Materials & Research Section (C&IA Unit)- Letter only
[ ] VTRANS Structures Section - Shop Inspector Jeff Clark w/prints

28 North Main Street • P.O. Box 339 • Randolph, Vermont 05060 (802) 728-3376 (802) 728-4930 (FAX) http://www.dubois-king.com
Williston, Vermont Nashua, New Hampshire



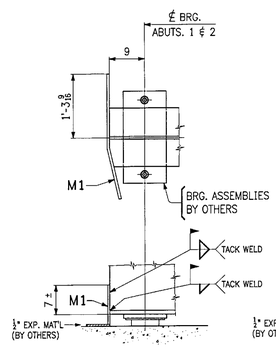
ERECTION PLAN

ERECTION NOTE:

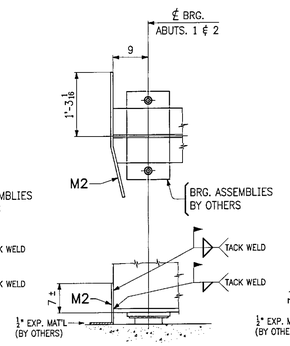
THE TEMPORARY DIAPHRAGMS SHALL REMAIN IN PLACE UNTIL THE CONCRETE DECK IS FULLY CURED. FOLLOWING APPROVAL FROM THE ENGINEER THE DIAPHRAGMS ARE TO BE REMOVED AND SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

FIELD BOLT CONNECTION LIST

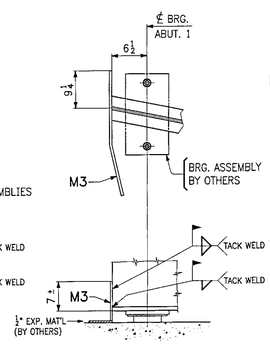
QTY.	DIAM.	LENGTH	GRIP	THICKNESS OF PIECES CONNECTED				CONNECTION
144	7/8	0'-2 1/4	7/8	1/2	3/8			INTERMEDIATE DIAPHRAGMS TO STRINGERS
6	7/8	0'-2 1/4	7/8	1/2	3/8			DIAPHRAGM BETWEEN 9SB ℄ 2S1
48	7/8	0'-2	9/16	1/4	5/16			WATER LINE SUPPORTS (TEE TO WF)
48	7/8	0'-2 1/2	1 1/8	1/2	5/8			WATER LINE SUPPORTS (D3 TO STRINGER)
5	7/8	0'-2 1/2	1 1/8	1/2	5/8			BENT PLATE @ STR. 9S8 TO STR. 2S1



PROTECTION PL LOCATION
(ABUT. 1 - LINES 1 thru 5 SHOWN)
(ABUT. 2 - ROTATE 180°)



PROTECTION PL LOCATION
(ABUT. 1 - LINES 6 and 7 SHOWN)
(ABUT. 2 - ROTATE 180°)



PROTECTION PL LOCATION
(ABUT. 1 - LINE F)

Accepted ✓
Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable

Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Engineer assumes no liability for errors or omissions that may be contained herein. The Contractor, by approving and submitting these documents, verifies their accuracy as stipulated on the Contractor's Shop Drawing Stamp.

Date 6/8/09 DuBOIS AND KING By

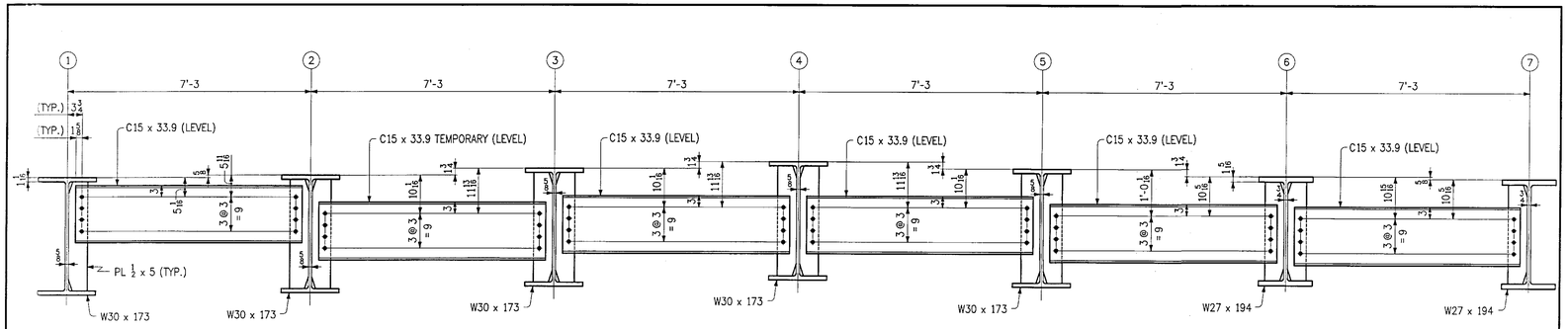
REVISIONS			PRINT RECORD		
NO.	DATE	DESCRIPTION	DATE	QTY.	ISSUED
			5/7	IP	APPR.
			5/29	IP	APPR.
			6/5	IP	APPR.

MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

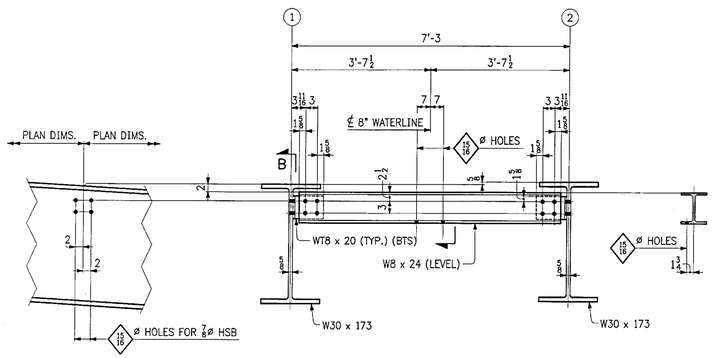
PAINT:	HOLES U.N.	WELD U.N.	Q.C. REVIEW
PROJECT: PROSPECT ST. OVER STEVENS BRANCH PROJECT NO. BHF 6000 (15) S BRIDGE NO. 7 BARRE CITY, VERMONT			DATE: 5-4-09 DRAWN BY: MB
DESCRIPTION: ERECTION PLAN			CHK'D BY: GDC/JS
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO. J-80
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT. NO. E1

996-41 EKSNT996

Sheet E1 - Plotted: 06/05/2009 @ 13:16 (GMES)

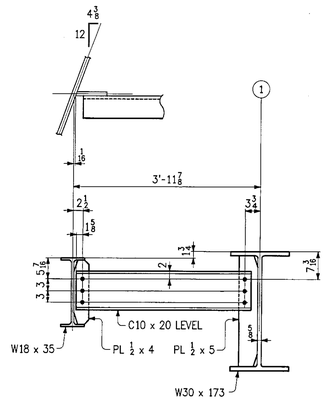


TYP. INTERMEDIATE SECTION
(LOOKING EAST)



SECT. B

TYP. 8" WATER LINE SUPPORT
(LOOKING EAST)



DIAPHRAGM (D2)
(LOOKING EAST)

THIS IS A WORK DRAWING. ITS FUNCTION IS TO PROVIDE BASIC DIMENSIONS AND CONCEPTS FOR USE IN THE PREPARATION OF THE SHOP DETAILS. IT IS NOT INTENDED TO BE USED FOR ERECTION OR FABRICATION.

REVISIONS			PRINT RECORD		
NO.	DATE	DESCRIPTION	DATE	QTY.	ISSUED
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			5/29	1P.	APPD.
			6/5	7P.	APPD.

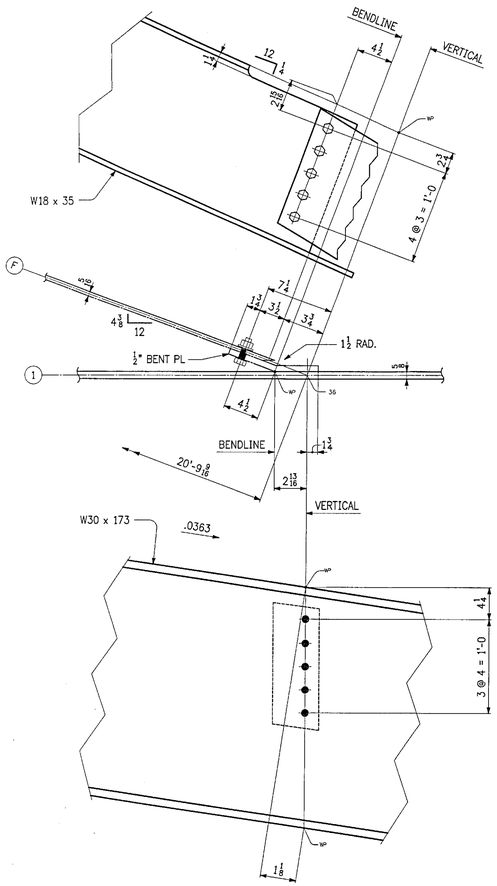
MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

PAINT:	HOLES U.N. 15/16ø	WELD U.N.	Q.C. REVIEW
PROJECT: PROSPECT ST. OVER STEVENS BRANCH PROJECT NO. BHF 6000 (15) S BRIDGE NO. 7 BARRE CITY, VERMONT			DATE: 5-5-09
			DRAWN BY: WCG
DESCRIPTION: LAYOUTS			CHK'D BY: CK
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO. J-80
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT. NO. TD1

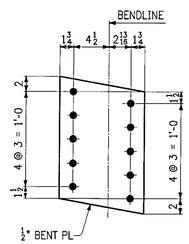
996-31

LYDS-9986

Sheet 'D1' - Plotted: 05/07/2009 @ 13:15 (DAVIS)



FLARE BEAM CONNECTION TO BEAM 1



DEVELOPED DETAIL OF BENT PL

THIS IS A WORK DRAWING. ITS FUNCTION IS TO PROVIDE BASIC DIMENSIONS AND CONCEPTS FOR USE IN THE PREPARATION OF THE SHOP DETAILS. IT IS NOT INTENDED TO BE USED FOR ERECTION OR FABRICATION.

REVISIONS			PRINT RECORD		
NO.	DATE	DESCRIPTION	DATE	QTY.	ISSUED
			5/7	IP	APPR.
			6/5	IP	APPR.

MEGQUIER & JONES CORP.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

PAINT:	HOLES U.N. 13/16ø	WELD U.N.	Q.C. REVIEW
PROJECT: PROSPECT ST. OVER STEVENS BRANCH PROJECT NO. BHF 6000 (15) S BRIDGE NO. 7 BARRE CITY, VERMONT			DATE: 5-6-09 DRAWN BY: WCG
DESCRIPTION: LAYOUTS			CHK'D BY: GAT
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO. J-80
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT. NO. TD2

Sheet: TD2 - Plotted: 05/07/2009 @ 14:38 (MEGHER)

GENERAL SHOP NOTES

SPECIFICATIONS

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT AGENCY OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION, DATED 2002, AND ITS LATEST REVISIONS.

MATERIAL

1. MATERIAL SHALL CONFORM TO AASHTO M270, GRADE 50W.
2. MATERIAL NOTED (CVN) ON DETAIL DRAWINGS SHALL REQUIRE CHARPY V-NOTCH TESTING IN ACCORDANCE WITH AASHTO T 243.
3. HIGH STRENGTH BOLTS SHALL CONFORM TO AASHTO M164 TYPE 3 WITH ONE AASHTO M291 HVY. HEX NUT & ONE AASHTO M293 TYPE 3 WASHER.

FABRICATION & WORKMANSHIP

1. "BEARING AREA" AS NOTED ON STRINGER DETAILS, INDICATES AREA THAT MUST BE FLAT AND TRUE TO RECEIVE SOLE PLATE.
2. RE-ENTRANT CUTS TO HAVE A 1" MIN. RADIUS (2" ON MAIN MEMBERS).
3. BTS ~ INDICATES "BOLT TO SHIP".

SHOP WELDING AND TESTING NOTES:

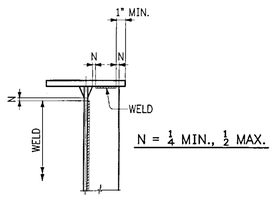
1. WELDING AND NON-DESTRUCTIVE TESTING SHALL BE IN ACCORDANCE WITH ANSI/AASHTO/AWS BRIDGE WELDING CODE, D1.5.
2. FOR WELDING CONNECTION PLATES TO BEAMS SEE "TYP. WELD TERMINATION DETAIL".

SHOP CLEANING NOTES:

1. BLAST CLEAN ALL STEEL TO SSPC-SP10 (NEAR WHITE) AFTER FABRICATION .

SHOP PAINTING NOTES:

1. NO PAINT



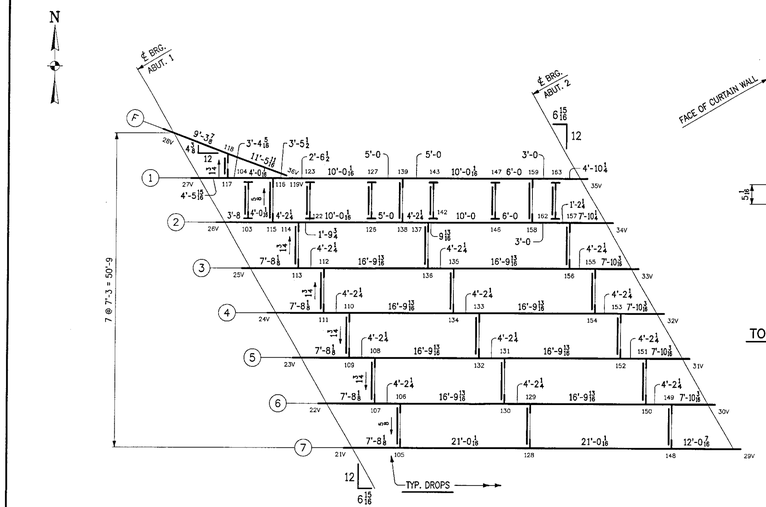
TYP. WELD TERMINATION DETAIL

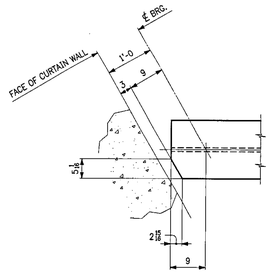
REVISIONS			PRINT RECORD		
NO.	DATE	DESCRIPTION	DATE	QTY.	ISSUED
			5/7	1P	APPR.
			6/5	7P	APPR.

MEGQUIER & JONES CORP.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

PAINT:	HOLES U.N.	WELD U.N.	Q.C. REVIEW
PROJECT: PROSPECT ST. OVER STEVENS BRANCH PROJECT NO. BHF 6000 (15) S BRIDGE NO. 7 BARRE CITY, VERMONT			DATE: 5-6-09
			DRAWN BY: WCG
DESCRIPTION: GENERAL NOTES			CHK'D BY: SDC
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO. J-80
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT. NO. GN1

Sheet Qkt - Plotted: 05/07/2009 @ 14:38 (MEGPLOT)

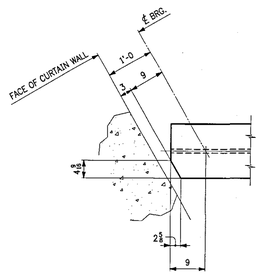




TOP ℄ BOTT. FLG. CLIP @ W30 x 173

ABUT. 1 (SHOWN)

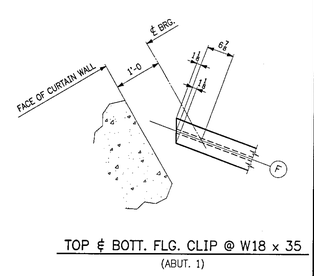
ABUT. 2 (SIMILAR)



TOP ℄ BOTT. FLG. CLIP @ W27 x 194

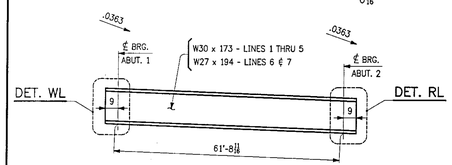
ABUT. 1 (SHOWN)

ABUT. 2 (SIMILAR)



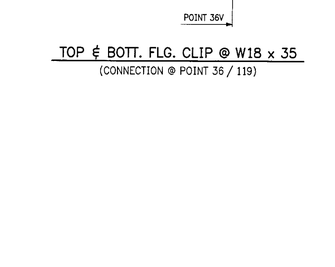
TOP ℄ BOTT. FLG. CLIP @ W18 x 35

(ABUT. 1)



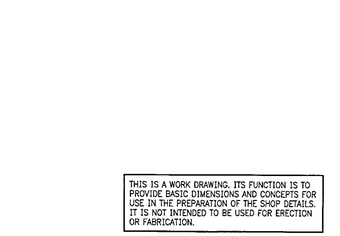
TYP. ELEVATION

(BEAM LINES 1 THRU 7)

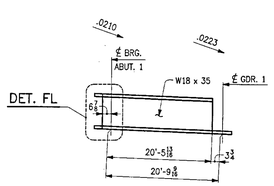


DET. WL (SHOWN)

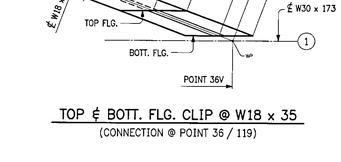
DET. RL (OPP. HAND)



DET. FL



FLARE BEAM F



TOP ℄ BOTT. FLG. CLIP @ W18 x 35

(CONNECTION @ POINT 36 / 119)

NOTES:

1. LONGITUDINAL DIMS. ARE SLOPING ALONG BOTTOM OF BEAM IN CAMBERED POSITION.
2. TRANSVERSE DIMS. ARE HORIZONTAL.
3. —→ DENOTES DROP @ TOP (FINAL). ARROW POINTS TO LOW END.
4. ENDS OF BEAMS ARE VERTICAL IN FINAL POSITION.
5. INT. CONN. PLATES ARE NORMAL TO BOTTOM FLANGE.
6. FOR LAYOUTS SEE DWG. TD1 ℄ TD2.

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REVISIONS			PRINT RECORD		
NO.	DATE	DESCRIPTION	DATE	QTY.	ISSUED
			5/7	IP	APPR.
			6/5	7P	APPR.

MEGQUIER & JONES CORP.

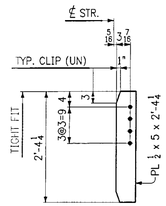
STRUCTURAL STEEL SINCE 1895

1156 BROADWAY

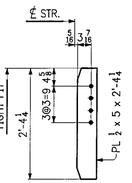
SOUTH PORTLAND, MAINE 04106

PAINT:	HOLES U.N.	WELD U.N.	Q.C. REVIEW
PROJECT: PROSPECT ST. OVER STEVENS BRANCH PROJECT NO. BHF 6000 (15) S BRIDGE NO. 7 BARRE CITY, VERMONT			DATE: 5-5-09
DESCRIPTION: CALC. PLAN			DRAWN BY: WCG
			CHK'D BY: CT
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO. J-80
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT. NO. WS1

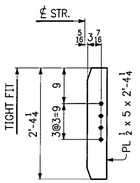
Sheet WS1 - Plotted: 05/07/2009 @ 14:35 (MEAUNEP)



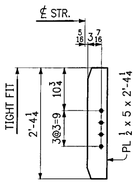
3 ~ p1
(LINE 1 / NS)



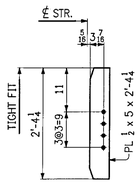
3 ~ p2
(LINE 2 / FS)



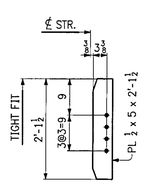
9 ~ p3
(LINE 2 / NS)
(LINE 3 / NS)
(LINE 5 / FS)



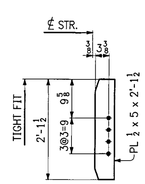
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(LINE 3 / FS)
(LINE 4 / NS ℄ FS)



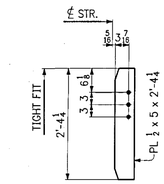
3 ~ p5
(LINE 5 / NS)



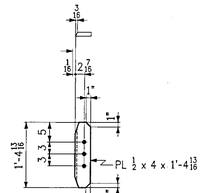
6 ~ p6
(LINE 6 / FS)
(LINE 7 / FS)



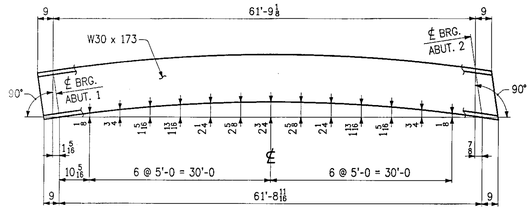
3 ~ p7
(LINE 6 / NS)



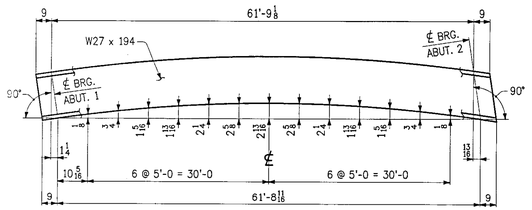
1 ~ p8
(LINE 1 / D2)



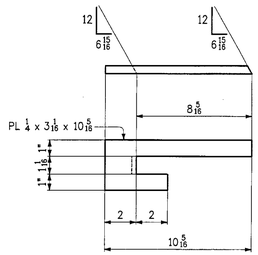
1 ~ p9
(LINE F / D2)



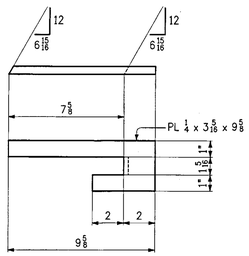
CAMBER DIAGRAM FOR 2S1 thru 6S5



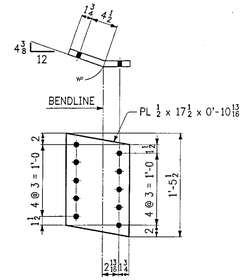
CAMBER DIAGRAM FOR 7S6 and 8S7



1 ~ DRIP BAR ~ p10
(LINE 1)



1 ~ DRIP BAR ~ p11
(LINE 7)



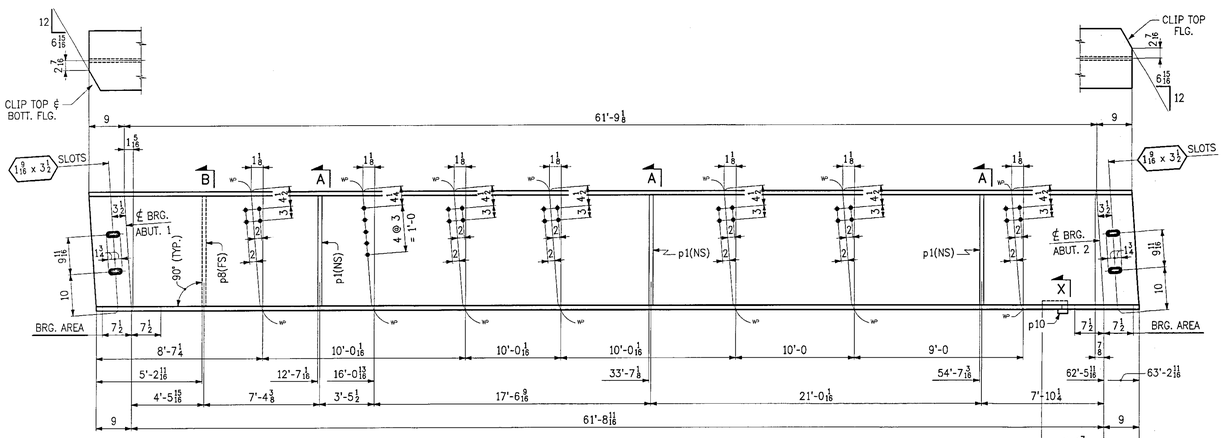
1 ~ p12

REVISIONS			PRINT RECORD		
NO.	DATE	DESCRIPTION	DATE	QTY.	ISSUED
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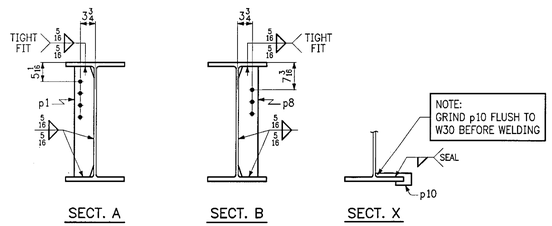
MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

PAINT:	HOLES U.N. 15/16	WELD U.N.	Q.C. REVIEW
PROJECT: PROSPECT ST. OVER STEVENS BRANCH PROJECT NO. BHF 6000 (15) S BRIDGE NO. 7 BARRE CITY, VERMONT			DATE: 5-4-09
DESCRIPTION: STRINGER STANDARDS			DRAWN BY: JF
			CHK'D BY: GDC
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO. J-80
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT. NO. 1

Sheet 1 - Plotted: 05/29/2009 @ 14:31 (MADAIRE)



1 ~ STRINGER ~ 2S1



NOTES:

1. FOR STRINGER STANDARDS, SEE SHT. NO. 1.
2. FOR CAMBER DIAGRAM, SEE SHT. NO. 1.
2. FOR GENERAL NOTES, SEE SHT. NO. GN1.

BILL OF MATERIAL

SHIP MARK	QTY	PIECE MARK	DESCRIPTION	LENGTH FT	LENGTH IN	REMARKS	PAGE LINE
2S1	1		W30 x 173	63	4	(CVN)	1 / 10
	3	p1	PL ½ x 5	2	4¼		2 / 2
	1	p8	PL ½ x 5	2	4¼		2 / 3
	1	p10	PL 1 x 3 1/16	0	10 5/16		2 / 5

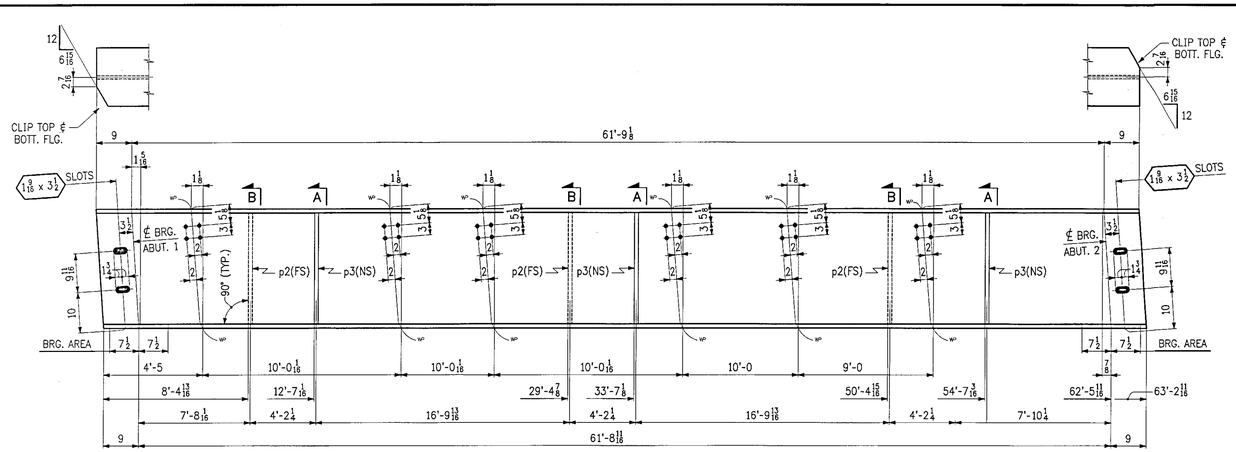
REVISIONS NO.	DATE	DESCRIPTION	PRINT RECORD DATE	QTY.	ISSUED
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			5/29	1P	APPR.
			6/5	7P	APPR.

MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

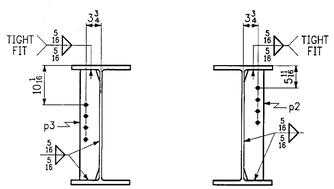
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PROJECT: PROSPECT ST. OVER STEVENS BRANCH PROJECT NO. BHF 6000 (15) S BRIDGE NO. 7 BARRE CITY, VERMONT			DATE: 5-4-09 DRAWN BY: JF
DESCRIPTION: STRINGER ~ 2S1			CHK'D BY: GDC
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO. J-80
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT. NO. 2

986-10 XSHT986

Sheet 2 - Plotted: 06/05/2009 @ 10:15 (GMT-5)



1 ~ STRINGER ~ 3S2



NOTES:

1. FOR STRINGER STANDARDS, SEE SHT. NO. 1.
2. FOR CAMBER DIAGRAM, SEE SHT. NO. 1.
2. FOR GENERAL NOTES, SEE SHT. NO. GN1.

BILL OF MATERIAL

SHIP MARK	QTY	PIECE MARK	DESCRIPTION	LENGTH FT	LENGTH IN	REMARKS	PAGE LINE
3S2	1		W30 x 173	63	4	(CVN)	1 / 15
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	3	p3	PL ½ x 5	2	4¼		2 / 2

REVISIONS NO.	DATE	DESCRIPTION	PRINT RECORD DATE	QTY.	ISSUED
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			6/5	7P	APPR.

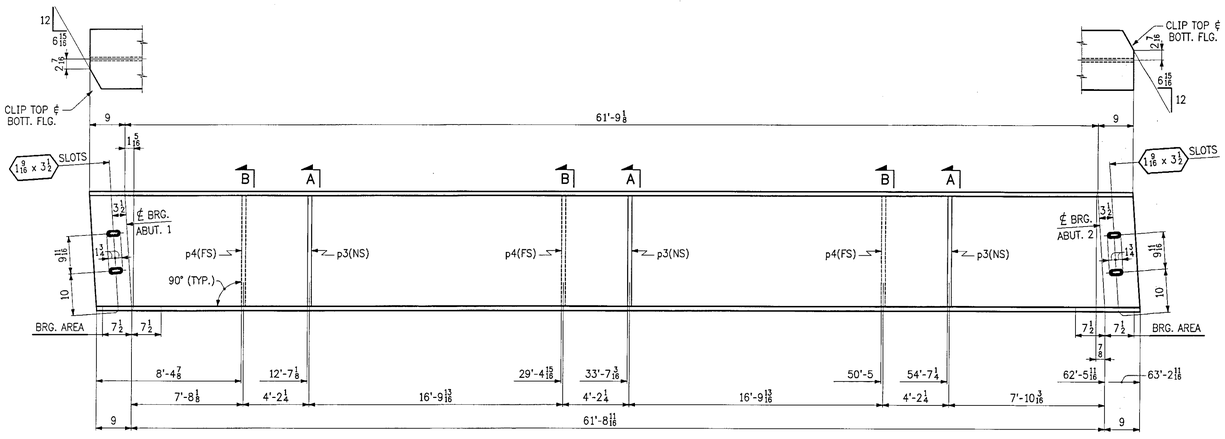
MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

PAINT:	HOLES U.N. 13/32ø	WELD U.N.	Q.C. REVIEW
PROJECT: PROSPECT ST. OVER STEVENS BRANCH PROJECT NO. BHF 6000 (15) S BRIDGE NO. 7 BARRE CITY, VERMONT			DATE: 5-5-09
DESCRIPTION: STRINGER ~ 3S2			DRAWN BY: JF
			CHK'D BY: GDC
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO. J-80
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT. NO. 3

996-10

XSBT996

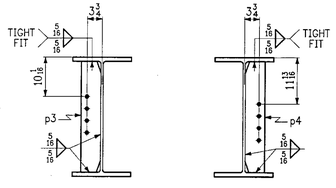
Sheet 3 - Printed: 06/05/2009 @ 15:16 (DWES)



1 ~ STRINGER ~ 4S3

BILL OF MATERIAL

SHIP MARK	QTY	PIECE MARK	DESCRIPTION	LENGTH FT	LENGTH IN	REMARKS	PAGE LINE
4S3	1		W30 x 173	63	4	(CVN)	1/10
	3	p3	PL 1/2 x 5	2	4 1/4		2/2
	3	p4	PL 1/2 x 5	2	4 1/4		2/2



SECT. A

SECT. B

NOTES:

1. FOR STRINGER STANDARDS, SEE SHT. NO. 1.
2. FOR CAMBER DIAGRAM, SEE SHT. NO. 1.
2. FOR GENERAL NOTES, SEE SHT. NO. GN1.

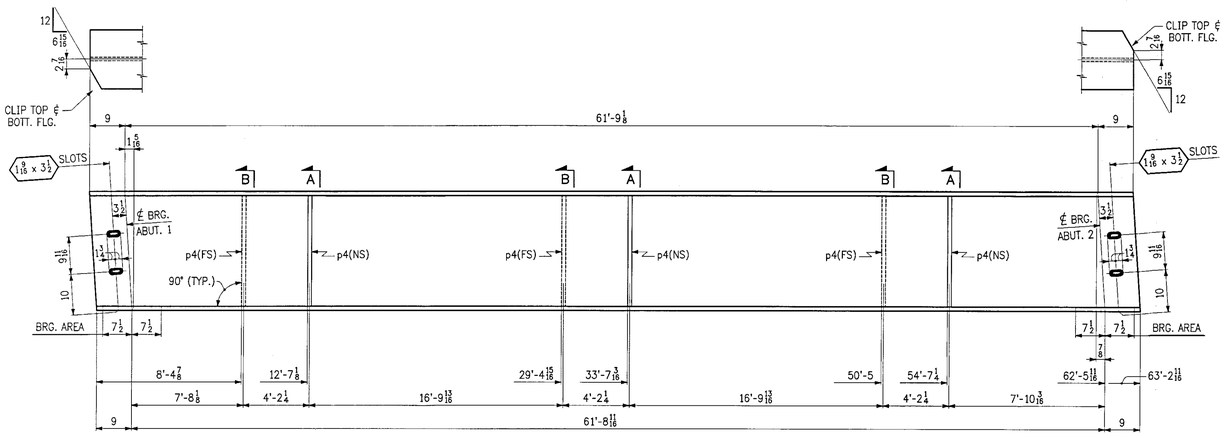
REVISIONS			PRINT RECORD		
NO.	DATE	DESCRIPTION	DATE	QTY.	ISSUED
			5/7	IP	APPR.
			6/5	TP	APPR.

MEGQUIER & JONES CORP.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

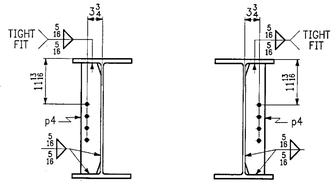
PAINT:	HOLES U.N. 15/16ø	WELD U.N.	O.C. REVIEW
PROJECT: PROSPECT ST. OVER STEVENS BRANCH PROJECT NO. BHF 6000 (15) S BRIDGE NO. 7 BARRE CITY, VERMONT			DATE: 5-5-09 DRAWN BY: JF
DESCRIPTION: STRINGER ~ 4S3			CHK'D BY: GGC
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO. J-80
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT. NO. 4

996-10 S3-996

Sheet 4 - Plotted: 05/07/2009 @ 14:33 (HEAVEY)



1 ~ STRINGER ~ 5S4



NOTES:

1. FOR STRINGER STANDARDS, SEE SHT. NO. 1.
2. FOR CAMBER DIAGRAM, SEE SHT. NO. 1.
2. FOR GENERAL NOTES, SEE SHT. NO. GN1.

BILL OF MATERIAL

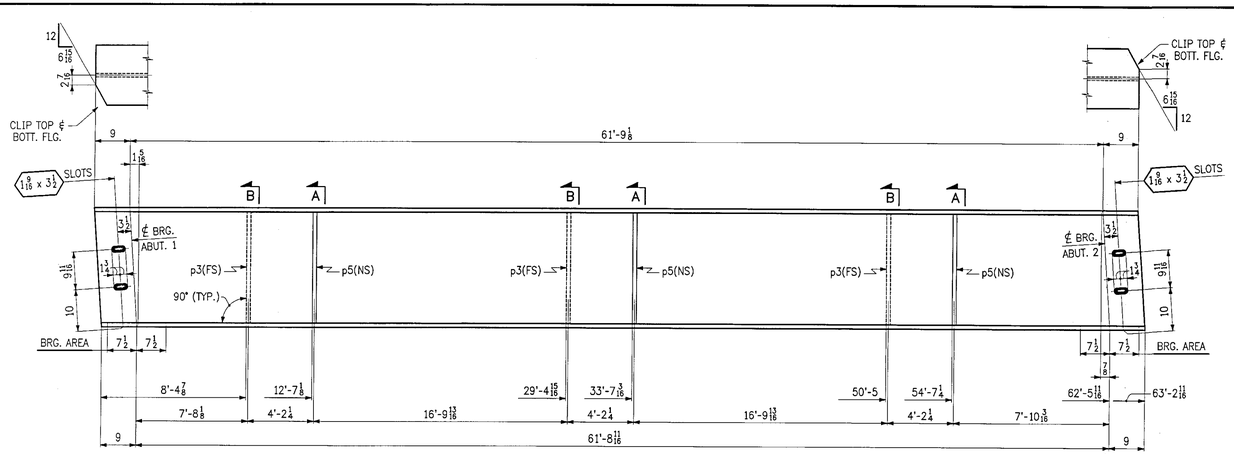
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	6	p4	PL 1/2 x 5	2	4 1/4		2/2

REVISIONS NO.	DATE	DESCRIPTION	PRINT RECORD DATE	QTY.	ISSUED
			5/7	1P	APPD.
			6/5	7P	APPD.

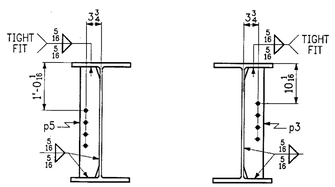
MEGQUIER & JONES CORP.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

PAINT:	HOLES U.N. 1/16 Ø	WELD U.N.	Q.C. REVIEW
PROJECT: PROSPECT ST. OVER STEVENS BRANCH PROJECT NO. BHF 6000 (15) S BRIDGE NO. 7 BARRE CITY, VERMONT			DATE: 5-5-09
			DRAWN BY: JF
DESCRIPTION: STRINGER ~ 5S4			CHK'D BY: GDC
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO. J-80
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT. NO. 5

Sheet 5 - Plotted: 05/07/2009 @ 14:31 (kdutch)



1 ~ STRINGER ~ 6S5



NOTES:

1. FOR STRINGER STANDARDS, SEE SHT. NO. 1.
2. FOR CAMBER DIAGRAM, SEE SHT. NO. 1.
2. FOR GENERAL NOTES, SEE SHT. NO. GN1.

BILL OF MATERIAL

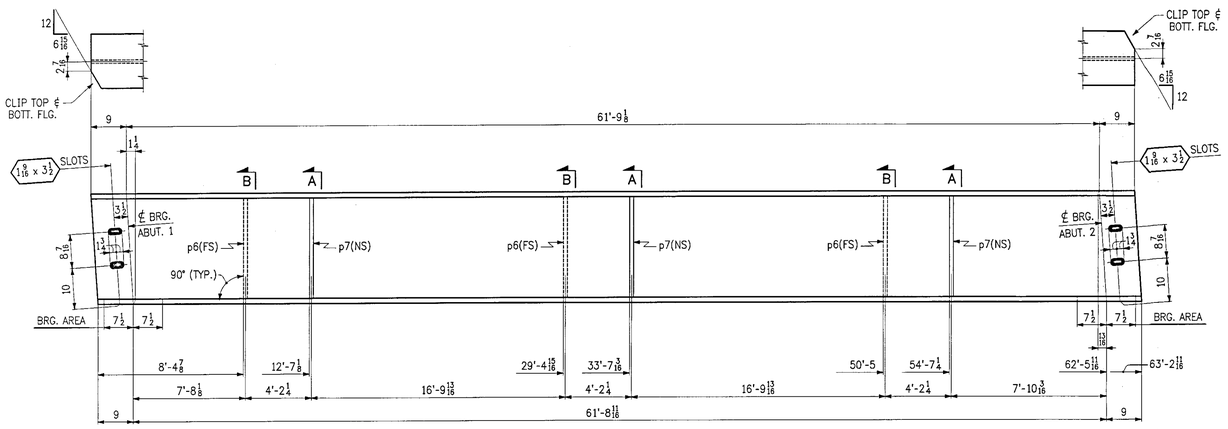
SHIP MARK	QTY	PIECE MARK	DESCRIPTION	LENGTH FT	LENGTH IN	REMARKS	PAGE LINE
6S5	1		W30 x 173	63	4	(CVN)	1/10
	3	p3	PL 1/2 x 5	2	4 1/4		2/2
	3	p5	PL 1/2 x 5	2	4 1/4		2/2

REVISIONS NO.	DATE	DESCRIPTION	PRINT RECORD DATE	QTY.	ISSUED
			5/7	1P	APPR.
			6/5	7P	APPR.

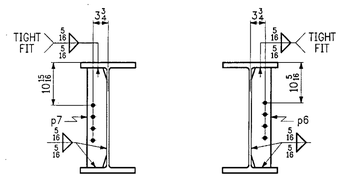
MEGQUIER & JONES CORP.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

PAINT:	HOLES U.N. 15/16	WELD U.N.	Q.C. REVIEW
PROJECT: PROSPECT ST. OVER STEVENS BRANCH PROJECT NO. BHF 6000 (15) S BRIDGE NO. 7 BARRE CITY, VERMONT			DATE: 5-5-09
			DRAWN BY: JF
DESCRIPTION: STRINGER ~ 6S5			CHK'D BY: GDC
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO. J-80
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT. NO. 6

Sheet 6 - Plotted: 05/07/2009 @ 14:24 (EDGHEY)



1 ~ STRINGER ~ 7S6



SECT. A SECT. B

NOTES:

1. FOR STRINGER STANDARDS, SEE SHT. NO. 1.
2. FOR CAMBER DIAGRAM, SEE SHT. NO. 1.
2. FOR GENERAL NOTES, SEE SHT. NO. GN1.

BILL OF MATERIAL

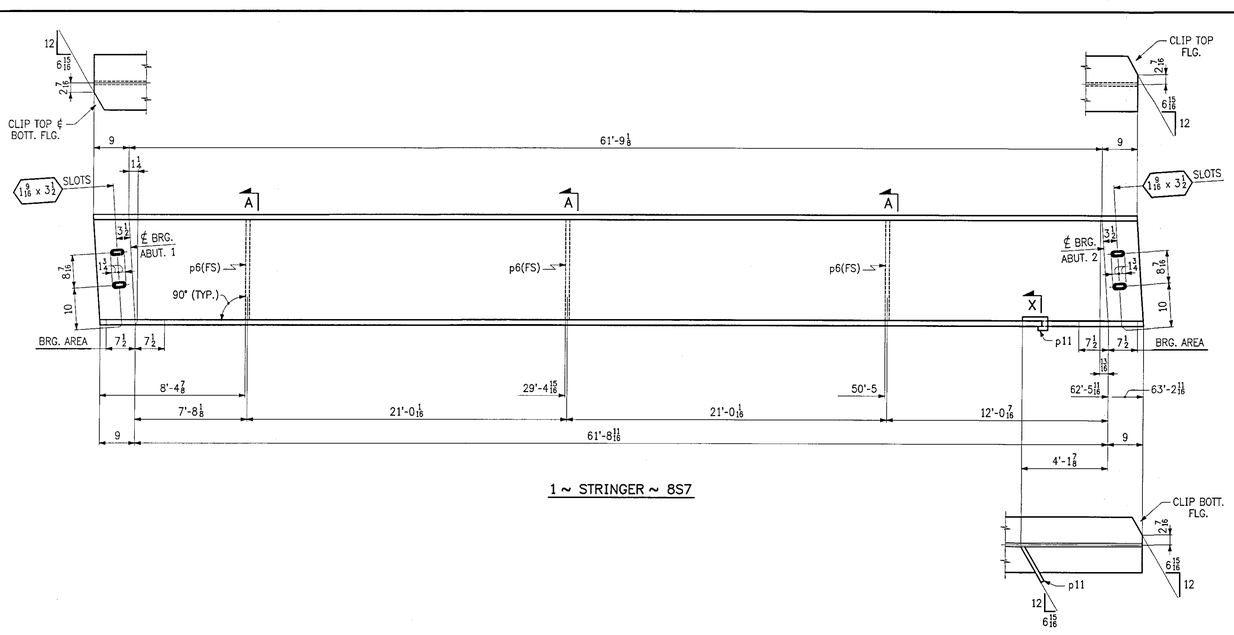
SHIP MARK	QTY	PIECE MARK	DESCRIPTION	LENGTH FT	LENGTH IN	REMARKS	PAGE LINE
7S6	1		W27 x 194	63	3 13/16	(CVN)	1 11
	3	p6	PL 1/2 x 5	2	1 1/2		2 3
	3	p7	PL 1/2 x 5	2	1 1/2		2 2

REVISIONS NO.	DATE	DESCRIPTION	PRINT RECORD DATE	QTY.	ISSUED
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			6/5	7P	APPR.

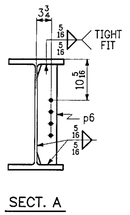
MEGQUIER & JONES CORP.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

PAINT:	HOLES U.N. 1/8	WELD U.N.	Q.C. REVIEW
PROJECT: PROSPECT ST. OVER STEVENS BRANCH PROJECT NO. BHF 6000 (15) S BRIDGE NO. 7 BARRE CITY, VERMONT			DATE: 5-5-09
DESCRIPTION: STRINGER ~ 7S6			DRAWN BY: JF CHK'D BY: GDC
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO. J-80
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT. NO. 7

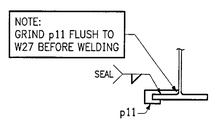
Sheet 7 - Plotted: 05/07/2009 @ 14:31 (MEAGHER)



1 ~ STRINGER ~ 8S7



SECT. A



SECT. X

NOTES:

1. FOR STRINGER STANDARDS, SEE SHT. NO. 1.
2. FOR CAMBER DIAGRAM, SEE SHT. NO. 1.
2. FOR GENERAL NOTES, SEE SHT. NO. GN1.

BILL OF MATERIAL

SHIP MARK	QTY	PIECE MARK	DESCRIPTION	LENGTH FT	LENGTH IN	REMARKS	PAGE LINE
8S7	1		W27 x 194	63	3 13/16	(CVN)	1 / 11
	3	p6	PL 1/2 x 5	2	1 1/2		2 / 2
	1	p11	PL 1/4 x 3 5/16	0	9 5/8		2 / 5

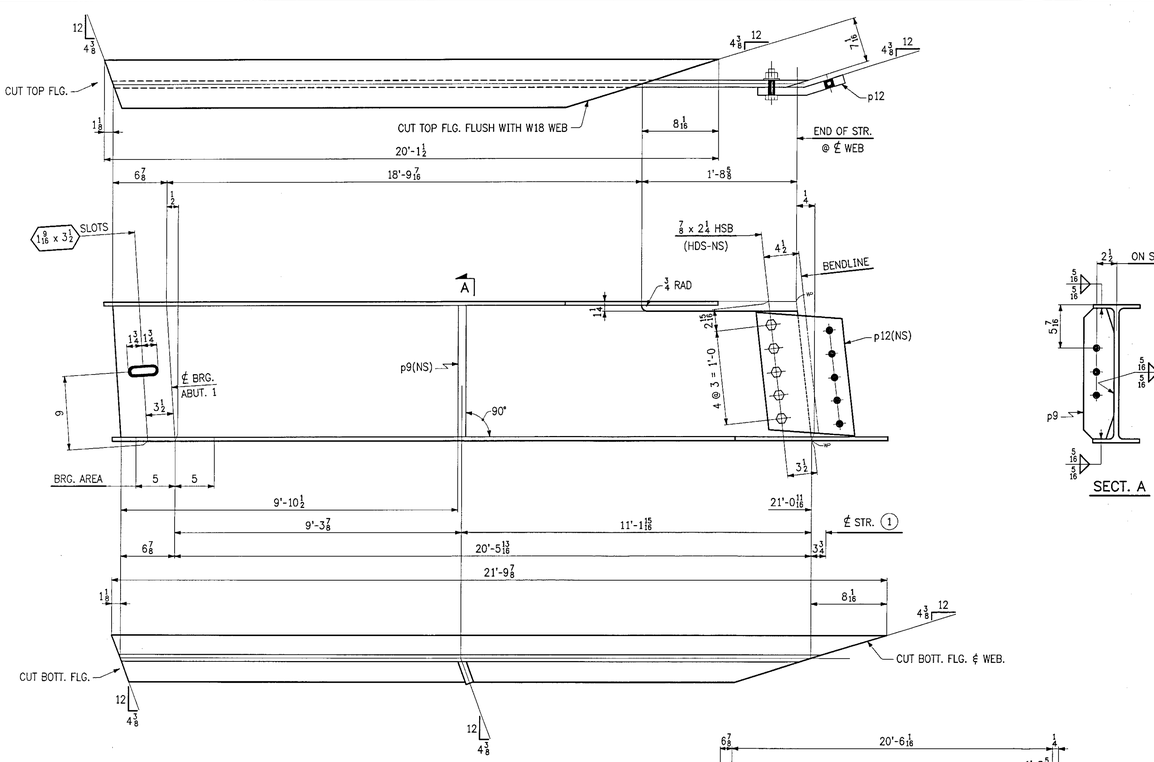
REVISIONS NO.	DATE	DESCRIPTION	PRINT RECORD DATE	QTY.	ISSUED
			5/7	IP	APPR.
			6/5	JP	APPR.

MEGQUIER & JONES CORP.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

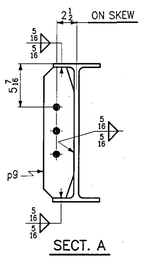
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PROJECT: PROSPECT ST. OVER STEVENS BRANCH PROJECT NO. BHF 6000 (15) S BRIDGE NO. 7 BARRE CITY, VERMONT			DATE: 5-5-09 DRAWN BY: JF
DESCRIPTION: STRINGER ~ 8S7			CHK'D BY: GPC
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO. J-80
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT. NO. 8

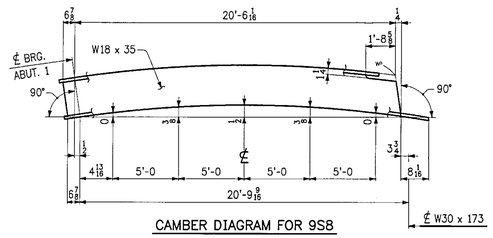
996-10 S7-996

Sheet 8 - Plotted: 05/07/2009 @ 14:33 (NEAVES)



1 ~ STRINGER ~ 9S8





CAMBER DIAGRAM FOR 9S8

BILL OF MATERIAL

SHIP MARK	QTY	PIECE MARK	DESCRIPTION	LENGTH FT	LENGTH IN	REMARKS	PAGE LINE
9S8	1		W18 x 35	21	9¼	(CVN)	1/4
	1	p9	PL ½ x 4	1	4 13/16		2/3
	1	p12	PL ½ x 17½	0	10 13/16		2/4
	5		⅞ø HSB	0	2¼	M164, TYPE-3 W/NUT	4/2
	5		⅞ø WASHER			M293-3	4/3

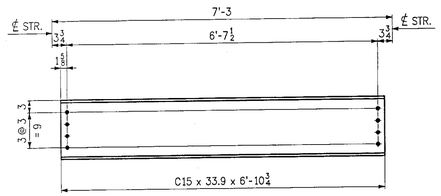
NOTES:

1. FOR STRINGER STANDARDS, SEE SHT. NO. 1.
2. FOR CAMBER DIAGRAM, SEE SHT. NO. 1.
2. FOR GENERAL NOTES, SEE SHT. NO. GN1.

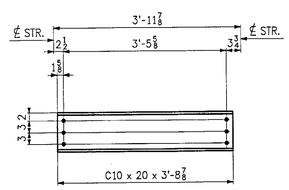
REVISIONS NO.	DATE	DESCRIPTION	PRINT RECORD DATE	QTY.	ISSUED
			5/7	IP	APPR.
			6/5	JP.	APPR.

MEGQUIER & JONES CORP.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

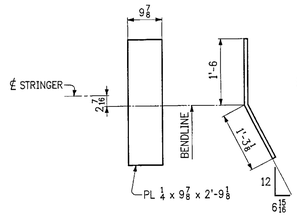
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PROJECT: PROSPECT ST. OVER STEVENS BRANCH PROJECT NO. BHF 6000 (15) S BRIDGE NO. 7 BARRE CITY, VERMONT			DATE: 5-5-09
DESCRIPTION: STRINGER ~ 9S8			DRAWN BY: JF CHK'D BY: SDC
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO. J-80
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT. NO. 9



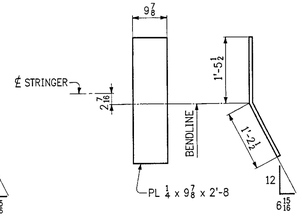
18 ~ DIAPHRAGMS ~ D1



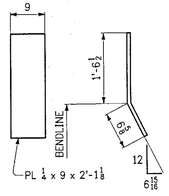
ONE ~ DIAPHRAGM ~ D2



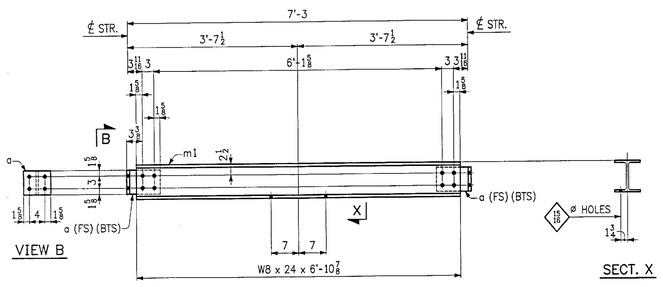
10 ~ PROTECTION PL'S ~ M1



4 ~ PROTECTION PL'S ~ M2



1 ~ PROTECTION PL ~ M3



6 ~ DIAPHRAGMS ~ D3

BILL OF MATERIAL

SHIP MARK	QTY	PIECE MARK	DESCRIPTION	LENGTH FT	LENGTH IN	REMARKS	PAGE LINE
D1	18		DIAPHRAGMS				
	18		C15 x 33.9	6	10¾		3/2
D2	1		DIAPHRAGM				
	1		C10 x 20	3	8⅛		3/3
D3	6		DIAPHRAGMS				
	6	m1	W8 x 24	6	10⅛		3/4
	12	a	WT8 x 20	0	6½		3/5
	24		⅞ MB	0	2	A307 W/NUT	4/6
	24		⅞ MW			A307	4/7
M1	10		PROTECTION PL'S				
			PL ¼ x 9⅞	2	9⅛	BENT	2/3
M2	4		PROTECTION PL'S				
			PL ¼ x 9⅞	2	8	BENT	2/8
M3	1		PROTECTION PL				
			PL ¼ x 9	2	1⅛	BENT	2/9

REVISIONS NO.	DATE	DESCRIPTION	PRINT RECORD DATE	QTY.	ISSUED
			5/7	IP	APPR.
			5/29	IP	APPR.
			6/5	TR	APPR.

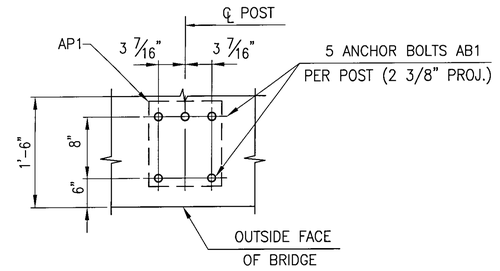
MEGQUIER & JONES INC.
STRUCTURAL STEEL SINCE 1895
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

PAINT:	HOLES U.N. 15/16 12 ø	WELD U.N.	Q.C. REVIEW
PROJECT: PROSPECT ST. OVER STEVENS BRANCH PROJECT NO. BHF 6000 (15) S BRIDGE NO. 7 BARRE CITY, VERMONT			DATE: 5-4-09
DESCRIPTION: DIAPHRAGMS			DRAWN BY: PDW CHK'D BY: SDC
ARCH: N/A	ENGR: VERMONT AGENCY OF TRANSPORTATION		JOB NO. J-80
CUSTOMER: S.D. IRELAND CONCRETE CONSTRUCTION CORP.			SHT. NO. 10

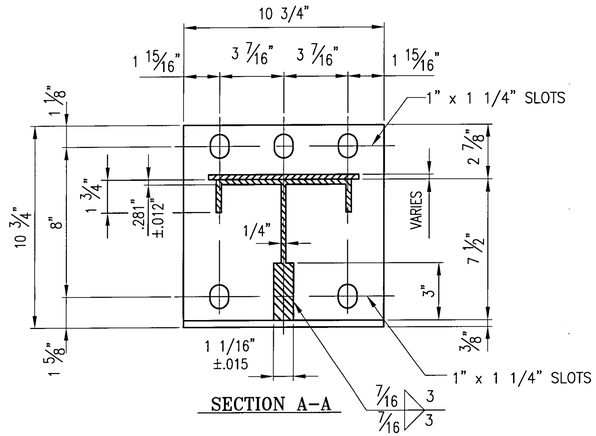
996-12

BSHT996

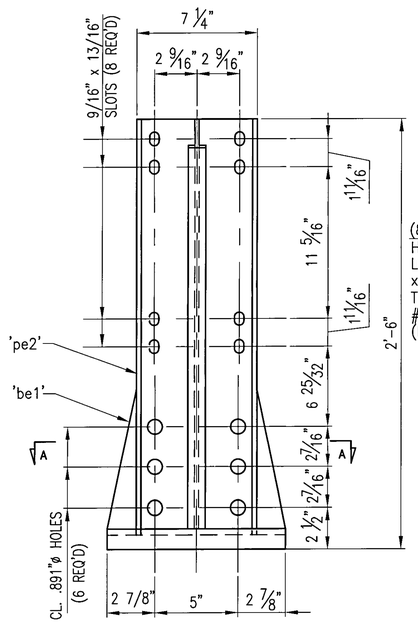
Sheet Id: Plotted: 05/29/2009 @ 14:31 (JSCHER)

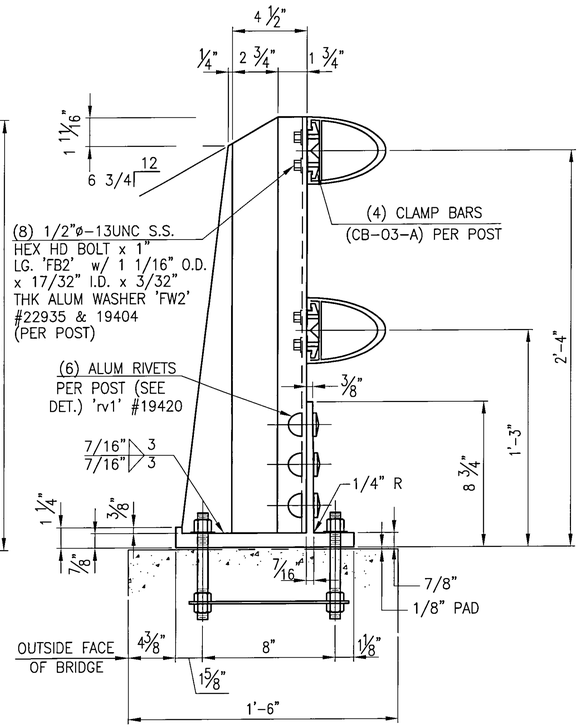


TYPICAL ANCHOR BOLT SETTING



SECTION A-A





7 ~ REQ'D FABRICATED RAIL POSTS P-201-Spec (SIDEWALK)

GENERAL NOTES

ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006 AND ITS LATEST REVISIONS.

DESCRIPTION	ASTM	ALLOY/GR.	REMARKS
RAILS, POSTS, BASES, SPLICES, CLAMP BARS, PINS,	B221	6061-T6 OR 6351-T5	MIN. YIELD STRENGTH Fy = 35,000 psi.
RIVETS	B316	6061-T6	BUTTON HD., CONE PT.
	F880	TYPE 303	
STAINLESS STEEL BOLTS	A193	GRADE B8	
ANCHOR RODS	A449		GALV. A153
STEEL HEX. NUTS	A563	GRADE DH	GALV. A153
STEEL WASHERS	F436		GALV. A153
ANCHOR PLATES	A569		COMMERCIAL QUALITY (PLAIN)
ALUMINUM WASHERS	B209	2024-T4	
END CAPS	B26		356-F
PREFORMED PADS			SECTION 731.01 OR 731.02
ELECTRODES FOR WELDING	AWS A5.10 ER5356		

POSTS TO BE NORMAL TO GRADE AND RAILS SHALL BE PARALLEL TO GRADE.
RAILS TO BE ATTACHED TO A MINIMUM OF THREE POSTS WHEN POSSIBLE.

ALL RAILS AND WELDS TO BE FREE FROM ALL BURRS AND ROUGH EDGES.
ENDS OF TUBE SECTIONS SHALL BE SAWED OR MILLED.
GRIND ALL CUT EDGES SMOOTH.

ALL THREADS TO BE UNC CLASS 2A/2B.

ALL EXTRUSION TOLERANCES NOT SHOWN SHALL BE IN ACCORDANCE WITH ASTM B221.

IF CUT THREADS ARE USED, BOLT DIAMETER SHALL NOT BE LESS THAN NOMINAL DIAMETER. IF ROLLED THREADS ARE USED, BOLT DIAMETER SHALL NOT BE LESS THAN THE ROOT DIAMETER OF THREADS

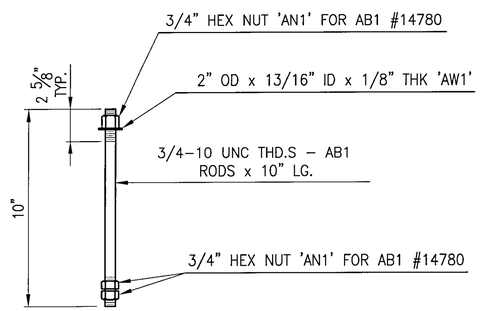
THE SPLICE BAR SHALL BE ATTACHED TO THE RAIL ELEMENT AS FOLLOWS:
THE RAIL SPLICE AT THE BRIDGE EXPANSION JOINT SHALL BE FASTENED ON BOTH SIDES OF THE RAIL SPLICE USING THE FULLY THREADED WASHER FACED BOLTS, TIGHTENED SECURELY TO THE END OF THREADS, AND LEAVING A 1/8" GAP, THIS ALLOWS EXPANSION ON BOTH SIDES OF THE JOINT.

ALL NUTS SHALL COMPLY WITH AMERICAN HEXAGON ANSI SPECIFICATIONS B18.2

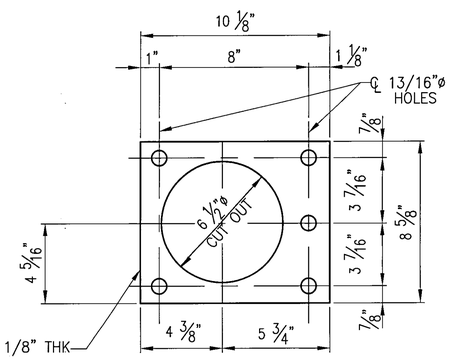
ANODIZED

- ALL ALUM. COMPONENTS SHALL BE ANODIZED TO A BLACK (HARD SATIN FINISH) COLOR, FED. STD. COLOR No. 27038. THE ANODIC COATING SHALL BE ARCHITECTURAL CLASS I WITH A MIN. THICKNESS OF 0.7 mils AND A MIN. WEIGHT OF 35 mg/sq in
- ALL VISIBLE STN. STL. HARDWARE SHALL BE FIELD PAINTED BLACK TO MATCH THE ANODIZED RAIL. TOUCH UP PAINT SHALL BE PROVIDED.
- SAMPLES SHALL BE SUBMITTED FOR THE ENGINEER'S APPROVAL.

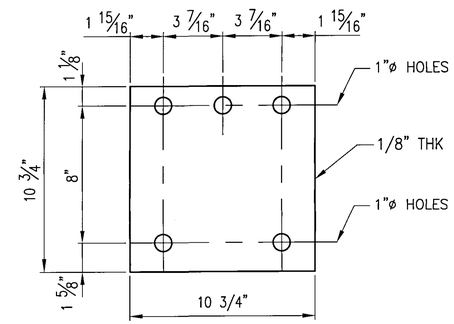
Accepted ✓
Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable
Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Engineer assumes no liability for errors or omissions that may be contained herein. The Contractor, by approving and submitting these documents, verifies their accuracy as stipulated on the Contractor's Shop Drawing Stamp.
Date 9/25/09 DUBOIS AND KING By EPD



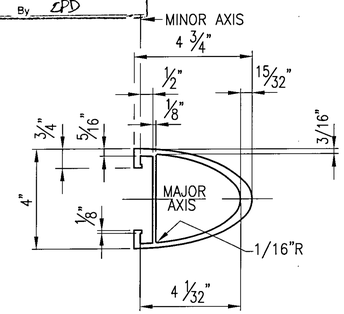
35 ~ REQ'D ANCHOR BOLTS AB1



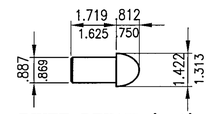
7 ~ REQ'D ANCHOR ℄ AP1



7 ~ REQ'D ELASTOMERIC PADS 'EP1'



TYPICAL SECTION THRU RAIL



RIVET DETAIL 'rv1'
#19420

BRIDGE No. 7
PROJECT No. BHF 6000 (15) S
ITEM No: 900.640

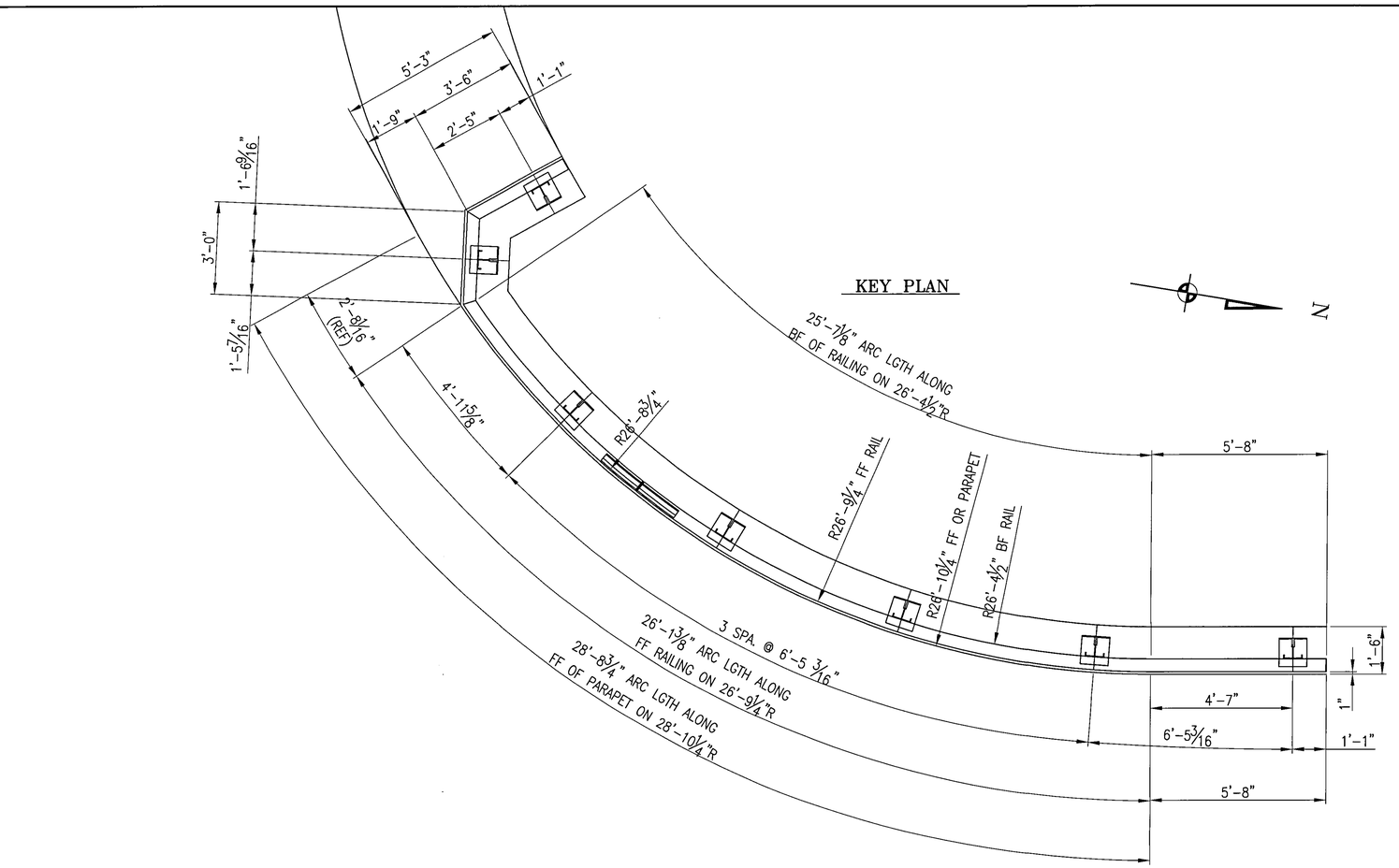
APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

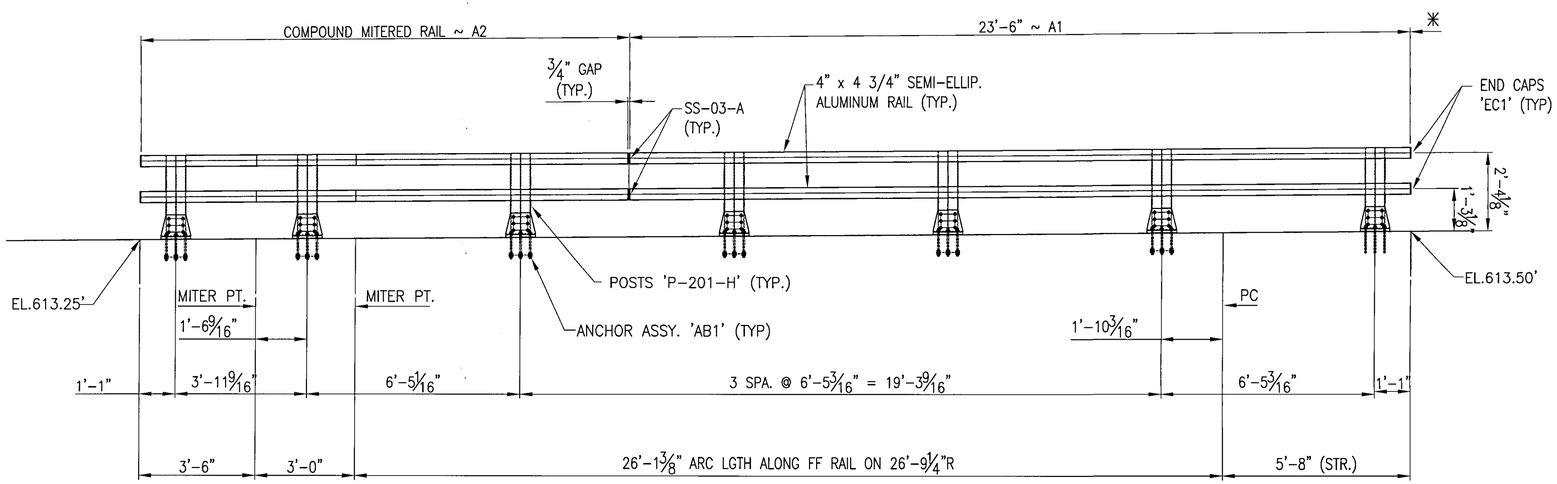
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT DEPARTMENT OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON - BURNHAM STREET
CORNER DETAIL - BRIDGE RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
2L ALUMINUM RAILING ~ GENERAL NOTES AND TYP. DETAILS

MADE CMS DATE 06/26/09 JOB No. AR0569 CUST. No.
CHECK BLJ DATE 07/06/09 DRAWING LB1 REV. No.

REV.	DESCRIPTION	BY	DATE





INSIDE ELEVATION

NOTE:

- THIS CONTRACT IS BASED UPON THE CONTRACTOR SETTING AND SPACING THE ANCHOR BOLTS TO THE MEASUREMENTS SHOWN ON THE APPROVED SHOP DRAWINGS. THE L.B. FOSTER CO. WILL NOT BE RESPONSIBLE FOR WORK NECESSITATED BY ANY OTHER SETTING AND SPACING.
- THIS DRAWING IS NOT TO SCALE.
- FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWING LB1.
- LENGTH OF RAILING ON THIS SHEET IS 38.42 LF PAY LENGTH.
- POST SPACING IS MEASURED ALONG THE FRONT FACE OF RAIL.
- COMPENSATION FOR VERTICAL CURVE IS NOT REQUIRED FOR THIS AREA.
- ✳ RAIL LENGTHS DO NOT INCLUDE END CAPS AND/OR GAPS.
- SPLICE GAP AT SLEEVE = 3/4" TYP..

Accepted ✓
Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable

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Date 9/25/09 DuBOIS AND KING By ZPD

ANODIZED
(SEE LB1 FOR NOTES)

BRIDGE No. 7
PROJECT No. BHF 6000 (15) S ITEM No: 900.640

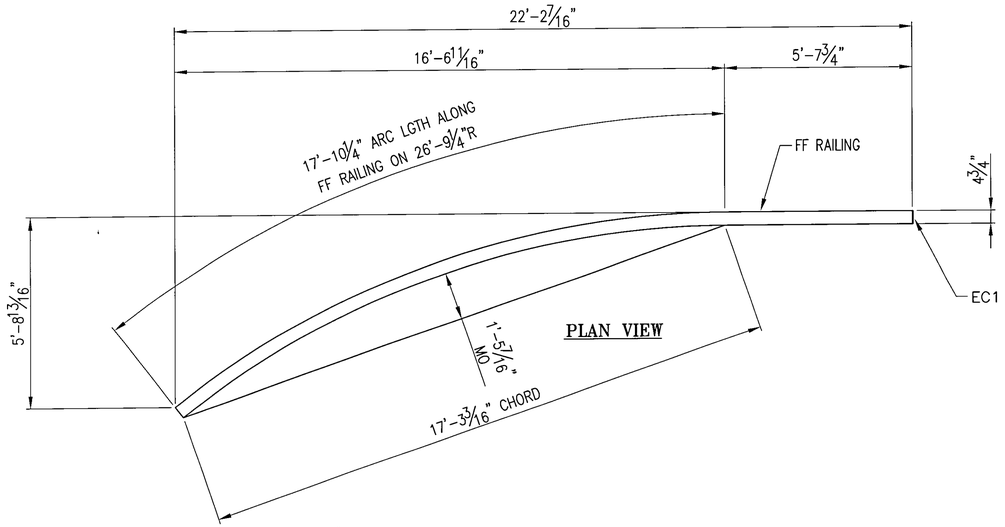
APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

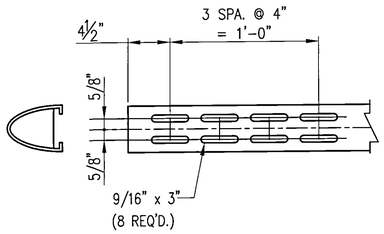
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT DEPARTMENT OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON – BURNHAM STREET
CORNER DETAIL – BRIDGE RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
2L ALUMINUM RAILING ~ ELEVATION AND PLAN VIEW

MADE CMS DATE 06/26/09 JOB No. AR0569 CUST. No.
CHECK BLJ DATE 07/06/09 DRAWING LB2 REV. No.

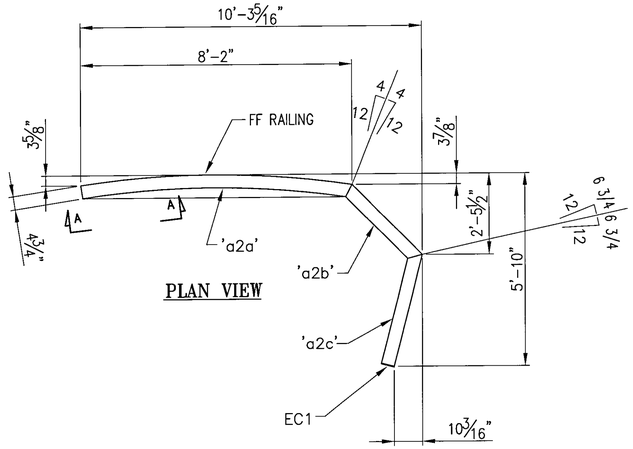
REV.	DESCRIPTION	BY	DATE



PLAN VIEW



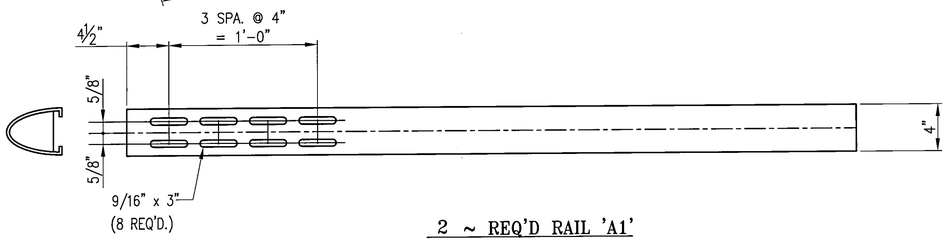
END DETAIL 'A'-'A'
(REAR VIEW)



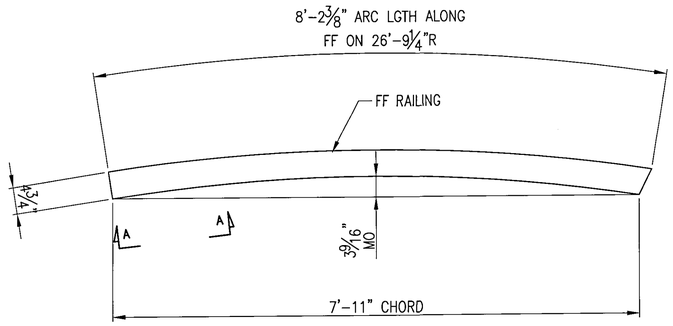
PLAN VIEW

2 ~ REQ'D COMPOUND MITERED RAIL 'A2'

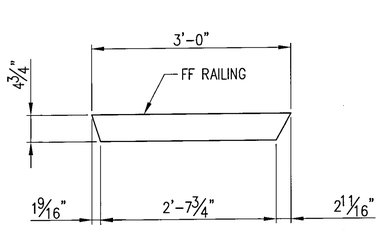
2 PCS. RAILING 'a2a' x 8'-2 3/8" LG.
2 PCS. RAILING 'a2b' x 3'-0" LG.
2 PCS. RAILING 'a2c' x 3'-5 3/4" LG.



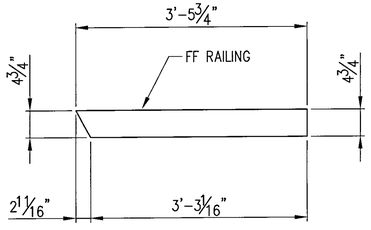
2 ~ REQ'D RAIL 'A1'
(REAR VIEW)
2 PCS. RAILING x 23'-6" LG. (ALONG FF RAILING)



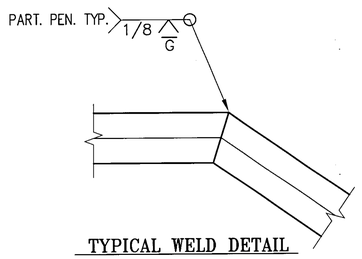
2 ~ REQ'D BENT/MITERED RAIL 'a2a'
(PLAN VIEW)



2 ~ REQ'D MITERED RAIL 'a2b'
(PLAN VIEW)



2 ~ REQ'D MITERED RAIL 'a2c'
(PLAN VIEW)



TYPICAL WELD DETAIL
@ MITERED PANELS

Accepted ✓
Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable
Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Engineer assumes no liability for errors or omissions that may be contained herein. The Contractor, by approving and submitting these documents, verifies their accuracy as stipulated on the Contractor's Shop Drawing Stamp.
Date 9/25/09 DuBOIS AND KING By ZPD

ANODIZED
(SEE LB1 FOR NOTES)

REV.	DESCRIPTION	BY	DATE

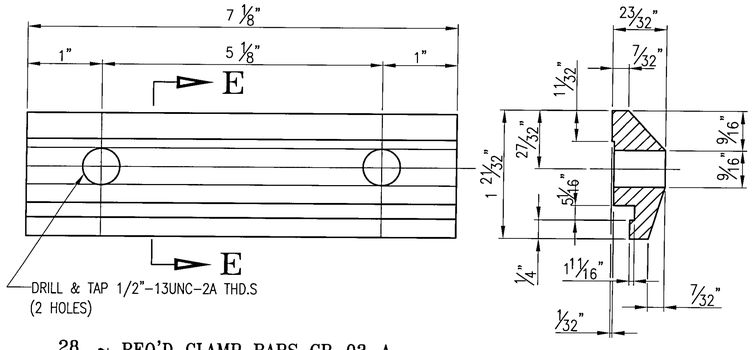
BRIDGE No. 7
PROJECT No. BHF 6000 (15) S
ITEM No: 900.640

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

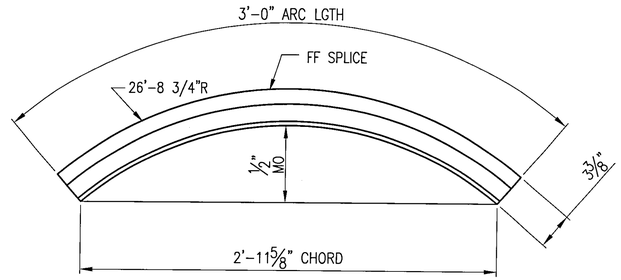
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT DEPARTMENT OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON – BURNHAM STREET
CORNER DETAIL – BRIDGE RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
RAILING DETAILS

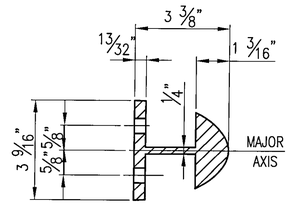
MADE CMS DATE 06/26/09 JOB No. AR0569 CUST. No.
CHECK BLJ DATE 07/06/09 DRAWING LB3 REV. No.



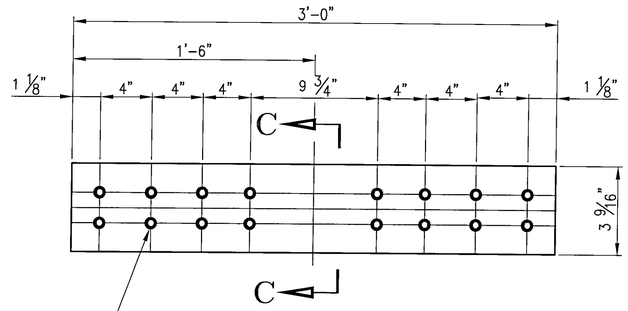
28 ~ REQ'D CLAMP BARS CB-03-A
#19447

SECTION "E"-"E"



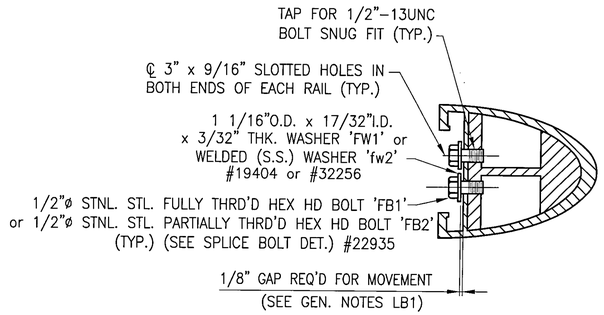


SECTION C-C

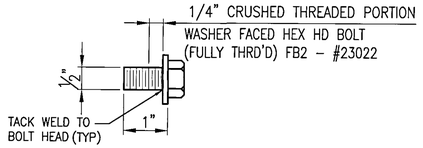


2 ~ REQ'D SPLICES SS-03-A
(REAR VIEW) #19502

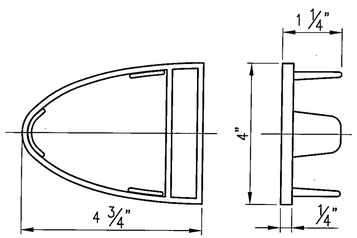
TAP FOR 1/2"-13UNC
BOLT (TYP. 16 PLACES)(PARTIALLY THRD'D)
TIGHTEN SECURELY TO THE END
OF THREADS AND LEAVING AN 1/8" GAP.



BRIDGE RAIL AND SPLICE BAR - ASSEMBLY DETAIL



SPLICE BOLT DETAILS



4 ~ REQ'D. ALUM
END CAPS EC1
#19345

ANODIZED
(SEE LB1 FOR NOTES)

Accepted ✓
Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable
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Date 9/25/09 — DuBOIS AND KING By ZPD

BRIDGE No. 7
PROJECT No. BHF 6000 (15) S — ITEM No: 900.640

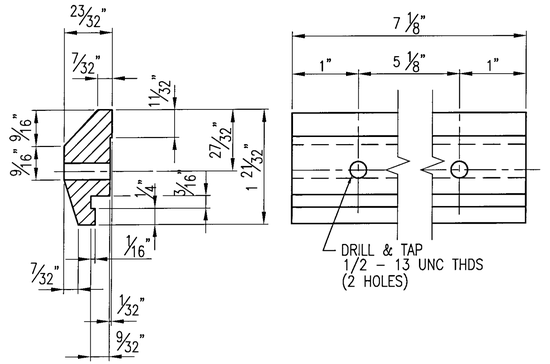
APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

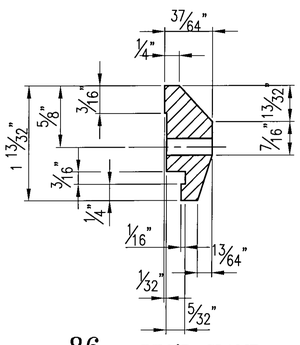
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT DEPARTMENT OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON - BURNHAM STREET
CORNER DETAIL - BRIDGE RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
MISC. RAILING DETAILS

MADE CMS DATE 06/27/09 JOB No. AR0569 CUST. No.
CHECK BLJ DATE 07/06/09 DRAWING LB4 REV. No.

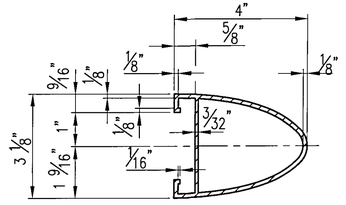
REV.	DESCRIPTION	BY	DATE



172 ~ REQ'D CLAMP BAR CB-03-A #19447
(BARRIER RAIL)



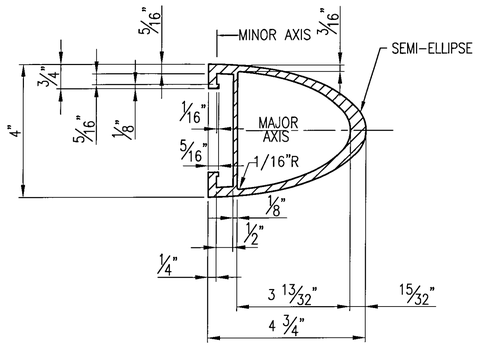
86 ~ REQ'D CLAMP BAR CB-01-H #28596
(HANDRAIL)



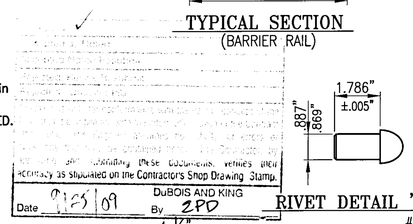
TYPICAL SECTION
(HANDRAIL)

ANODIZED

- ALL ALUM. COMPONENTS SHALL BE ANODIZED TO A BLACK (HARD SATIN FINISH) COLOR, FED. STD. COLOR No. 27038. THE ANODIC COATING SHALL BE ARCHITECTURAL CLASS I WITH A MIN. THICKNESS OF 0.7 mils AND A MIN. WEIGHT OF 35 mg/sq in
- ALL VISIBLE STN. STL. HARDWARE SHALL BE FIELD PAINTED BLACK TO MATCH THE ANODIZED RAIL. TOUCH UP PAINT SHALL BE PROVIDED.
- SAMPLES SHALL BE SUBMITTED FOR THE ENGINEER'S APPROVAL.



TYPICAL SECTION
(BARRIER RAIL)



RIVET DETAIL 'rv1'
#19420

GENERAL NOTES

ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006 AND ITS LATEST REVISIONS.

DESCRIPTION	ASTM	ALLOY/GR.	REMARKS
RAILS, POSTS, BASES, SPLICES, CLAMP BARS, PINS, & BALUSTER FRAMES	B221	6061-T6 OR 6351-T5	MIN. YIELD STRENGTH Fy = 35,000 psi.
BALUSTERS	B221	6061 OR 6063	T4 - USED FOR SUPERIOR EXPANDING QUALITIES
RIVETS	B316	6061-T6	BUTTON HD., CONE PT.
SET SCREWS FOR BALUSTERS	F880	TYPE 303	
STAINLESS STEEL BOLTS	A193	GRADE B8	
ANCHOR RODS	A449		GALV. A153
STEEL HEX. NUTS	A563	GRADE DH	GALV. A153
STEEL WASHERS	F436		GALV. A153
ANCHOR PLATES	A569		COMMERCIAL QUALITY (PLAIN)
ALUMINUM WASHERS	B209	2024-T4	
BACKUP PLATE	A36		GALV. A153
END CAPS	B26		356-F
PREFORMED PADS			SECTION 731.01 OR 731.02
ELECTRODES FOR WELDING	AWS A5.10 ER5356		

POSTS TO BE NORMAL TO GRADE AND RAILS SHALL BE PARALLEL TO GRADE.
RAILS TO BE ATTACHED TO A MINIMUM OF THREE POSTS WHEN POSSIBLE.

ALL RAILS AND WELDS TO BE FREE FROM ALL BURRS AND ROUGH EDGES.
ENDS OF TUBE SECTIONS SHALL BE SAWED OR MILLED.
GRIND ALL CUT EDGES SMOOTH.

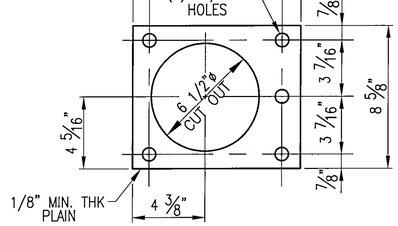
ALL THREADS TO BE UNC CLASS 2A/2B.

ALL EXTRUSION TOLERANCES NOT SHOWN SHALL BE IN ACCORDANCE WITH ASTM B221.

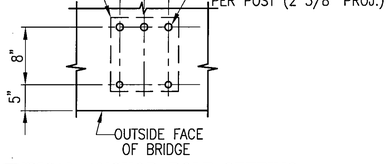
IF CUT THREADS ARE USED, BOLT DIAMETER SHALL NOT BE LESS THAN NOMINAL DIAMETER. IF ROLLED THREADS ARE USED, BOLT DIAMETER SHALL NOT BE LESS THAN THE ROOT DIAMETER OF THREADS

THE SPLICE BAR SHALL BE ATTACHED TO THE RAIL ELEMENT AS FOLLOWS:
THE RAIL SPLICE AT THE BRIDGE EXPANSION JOINT SHALL BE FASTENED ON BOTH SIDES OF THE RAIL SPLICE USING THE FULLY THREADED WASHER FACED BOLTS, TIGHTENED SECURELY TO THE END OF THREADS, AND LEAVING A 1/8" GAP, THIS ALLOWS EXPANSION ON BOTH SIDES OF THE JOINT.

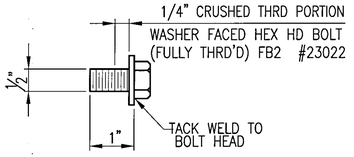
ALL NUTS SHALL COMPLY WITH AMERICAN HEXAGON ANSI SPECIFICATIONS B18.2



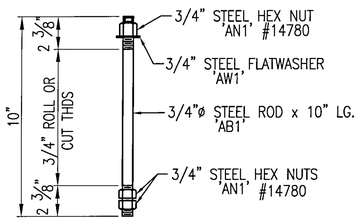
38 ~ REQ'D ANCHOR PLATE AP1
#31286



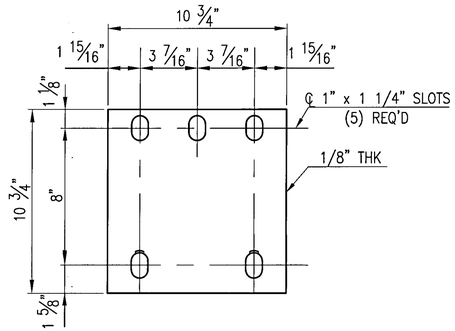
TYPICAL ANCHOR BOLT SETTING



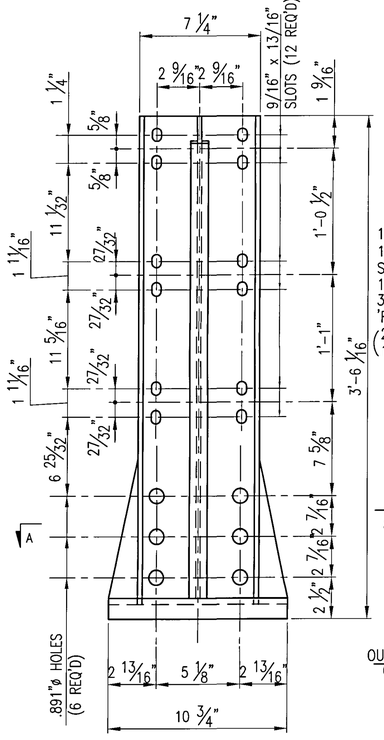
SPLICE BOLT DETAILS

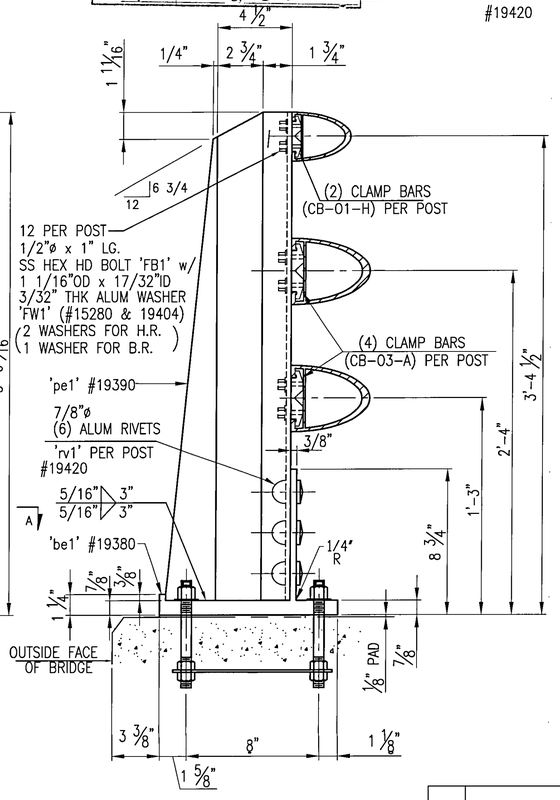


190 ~ REQ'D ANCHOR BOLTS AB1

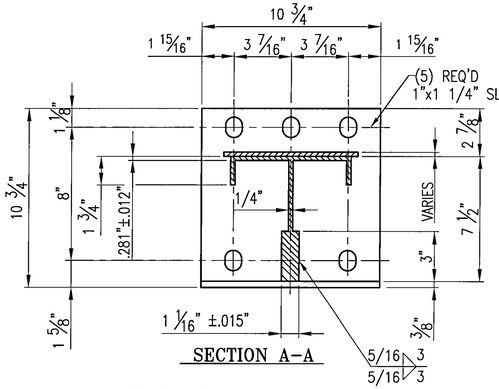


38 ~ REQ'D FABRIC PADS 'EP1'





38 ~ REQ'D FABRICATED RAIL POSTS P-301-K
(SIDEWALK)



SECTION A-A

BRIDGE No. 7
PROJECT No. BHF 6000 (15) S
ITEM No: 900.640

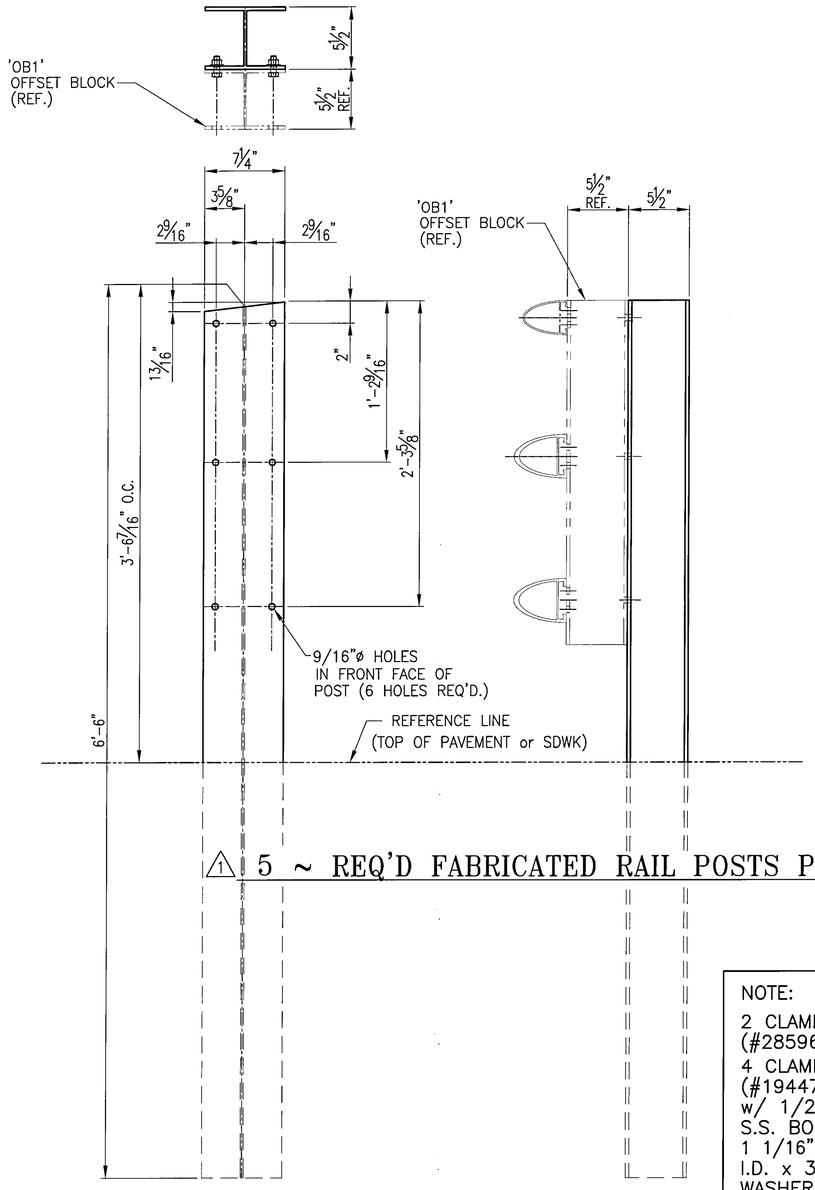
APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON
BRIDGE RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
3L ALUM BRIDGE RAILING ~ GENERAL NOTES & TYP. DETAILS

MADE CMS DATE 06/29/09 JOB No. AR0569 CUST. No.
CHECK BLJ DATE 08/14/09 DRAWING LB5 REV. No.

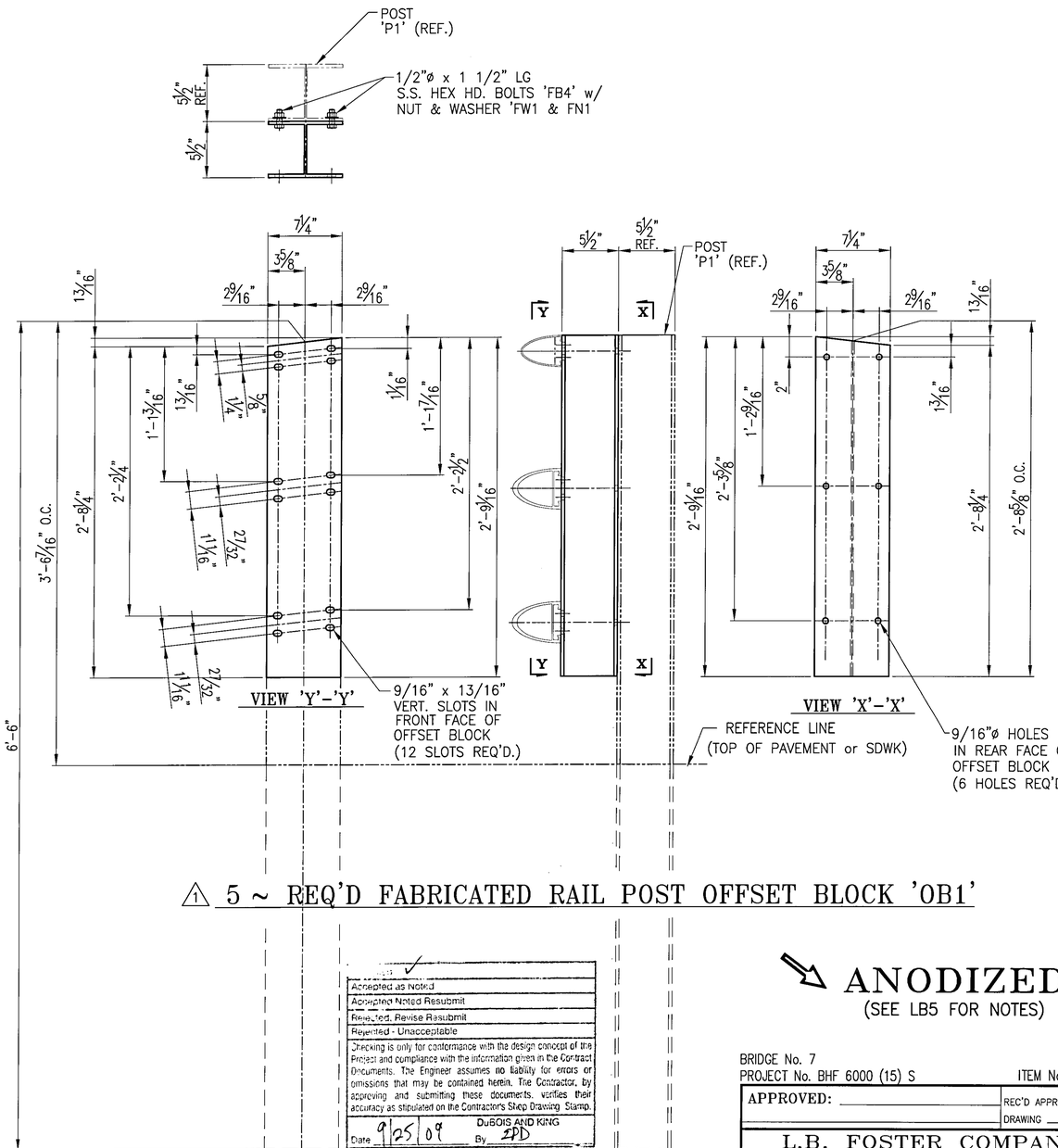
REV.	DESCRIPTION	BY	DATE



⚠1 5 ~ REQ'D FABRICATED RAIL POSTS P1

NOTE:

2 CLAMPING BARS CB–01–H (#28596) PER POST
4 CLAMPING BARS CB–03–A (#19447) PER POST
w/ 1/2"ø–13 UNC
S.S. BOLT x 1" LG. 'FB1',
1 1/16" O.D. x 17/32"
I.D. x 3/32" THK. ALUM
WASHER 'FW1'
(#15280 & # 19404)
(16 PER POST)



⚠1 5 ~ REQ'D FABRICATED RAIL POST OFFSET BLOCK 'OB1'

Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable

Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Engineer assumes no liability for errors or omissions that may be contained herein. The Contractor, by approving and submitting these documents, verifies their accuracy as stipulated on the Contractor's Shop Drawing Stamp.

Date 9/25/09 DuBOIS AND KING By ZPD

ANODIZED
(SEE LB5 FOR NOTES)

BRIDGE No. 7
PROJECT No. BHF 6000 (15) S ITEM No: 900.640

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

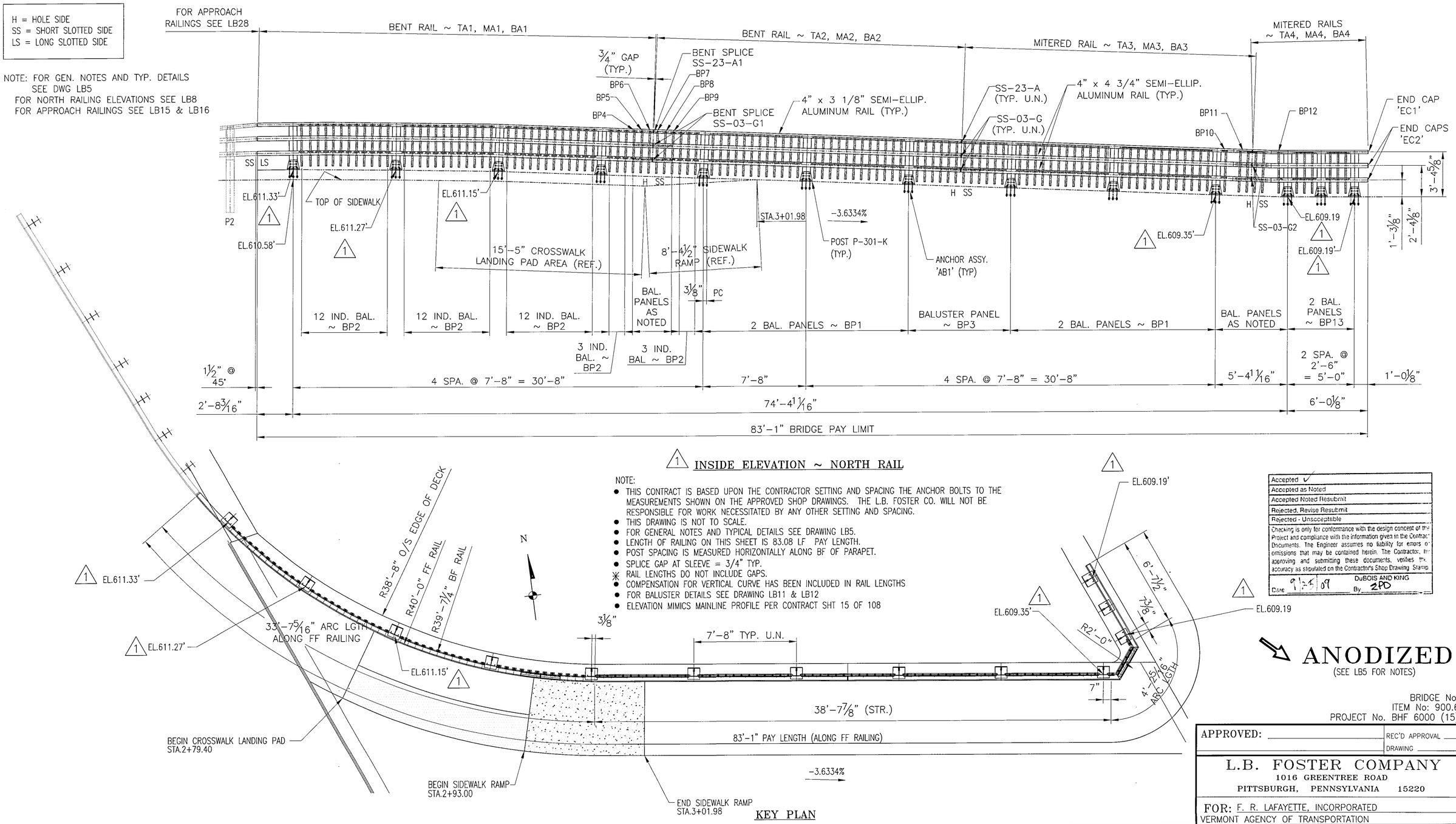
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON
BRIDGE RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
3L ALUM BRIDGE RAILING ~ POST DETAILS BEHIND BLOCK WALL

MADE CMS DATE 07/01/09 JOB No. AR0569 CUST. No.
CHECK BLJ DATE 08/14/09 DRAWING LB6 REV. No. ONE

REV.	DESCRIPTION	BY	DATE
⚠1	REVISED PER APPROVER COMMENTS	CMS	09 13 09

H = HOLE SIDE
SS = SHORT SLOTTED SIDE
LS = LONG SLOTTED SIDE

NOTE: FOR GEN. NOTES AND TYP. DETAILS SEE DWG LB5
FOR NORTH RAILING ELEVATIONS SEE LB8
FOR APPROACH RAILINGS SEE LB15 & LB16



1 INSIDE ELEVATION ~ NORTH RAIL

NOTE:
- THIS CONTRACT IS BASED UPON THE CONTRACTOR SETTING AND SPACING THE ANCHOR BOLTS TO THE MEASUREMENTS SHOWN ON THE APPROVED SHOP DRAWINGS. THE L.B. FOSTER CO. WILL NOT BE RESPONSIBLE FOR WORK NECESSITATED BY ANY OTHER SETTING AND SPACING.
- THIS DRAWING IS NOT TO SCALE.
- FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWING LB5.
- LENGTH OF RAILING ON THIS SHEET IS 83.08 LF PAY LENGTH.
- POST SPACING IS MEASURED HORIZONTALLY ALONG BF OF PARAPET.
- SPLICE GAP AT SLEEVE = 3/4" TYP.
- ✳ RAIL LENGTHS DO NOT INCLUDE GAPS.
- COMPENSATION FOR VERTICAL CURVE HAS BEEN INCLUDED IN RAIL LENGTHS
- FOR BALUSTER DETAILS SEE DRAWING LB11 & LB12
- ELEVATION MIMICS MAINLINE PROFILE PER CONTRACT SHT 15 OF 108

KEY PLAN

Accepted ✓
Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable
Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Engineer assumes no liability for errors or omissions that may be contained herein. The Contractor, in approving and submitting these documents, verifies the accuracy as stipulated on the Contractor's Shop Drawing Stamp
Date 9/25/09 — DuBOIS AND KING By ZPD

ANODIZED
(SEE LB5 FOR NOTES)

BRIDGE No. 7
ITEM No: 900.640
PROJECT No. BHF 6000 (15) S

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

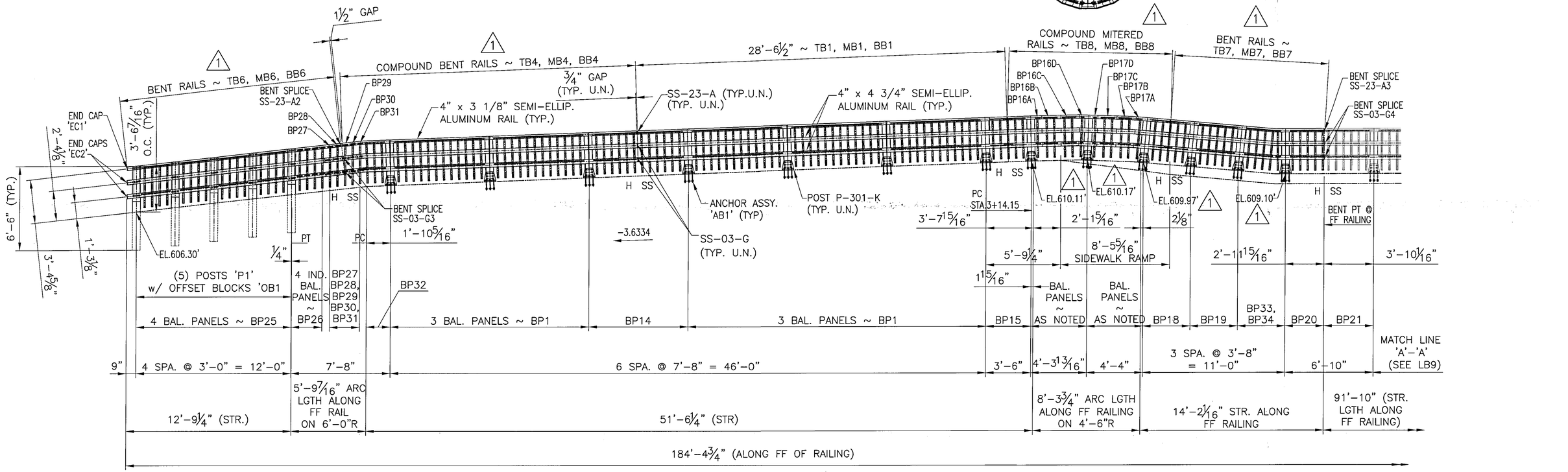
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON
BRIDGE RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
3L ALUM BRIDGE RAILING ~ NORTH RAIL ELEV. & KEY PLAN

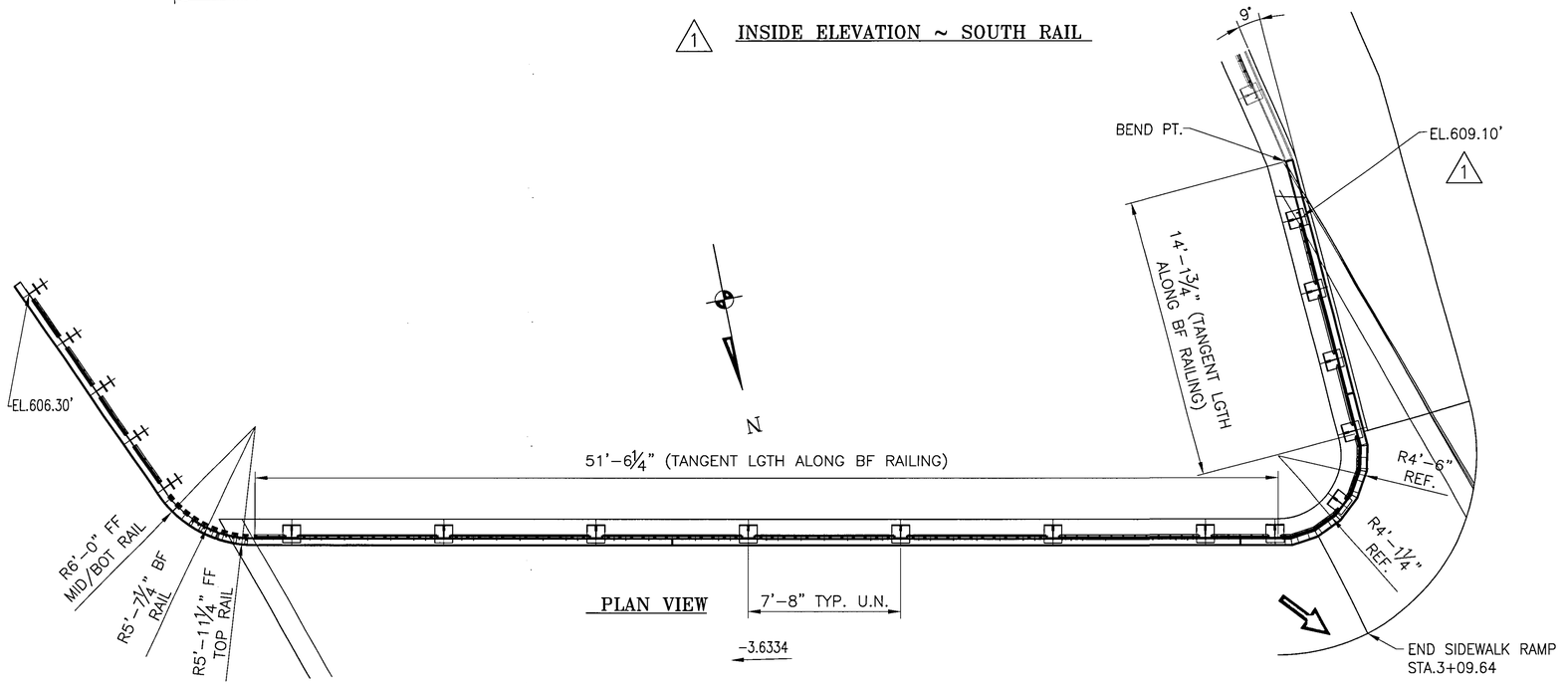
REV.	DESCRIPTION	BY	DATE
1	REVISED PER APPROVER COMMENTS	CMS	09 13 09

MADE CMS DATE 08/05/09 JOB No. AR0569 CUST. No.
CHECK BLJ DATE 08/14/09 DRAWING LB7 REV. No. ONE

PLAN VIEW



1 INSIDE ELEVATION ~ SOUTH RAIL



H = HOLE SIDE
SS = SHORT SLOTTED SIDE
LS = LONG SLOTTED SIDE

ANODIZED
(SEE LB5 FOR NOTES)

NOTE: FOR GEN. NOTES AND TYP. DETAILS SEE DWG LB5
FOR RAILING KEY PLAN SEE DWG LB10

Accepted ✓
Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable

Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Engineer assumes no liability for errors or omissions that may be contained herein. The Contractor, by approving and submitting these documents, verifies their accuracy as stipulated on the Contractor's Shop Drawing Stamp.

Date 9/25/09 DuBOIS AND KING By ZPD

REV.	DESCRIPTION	BY	DATE
1	REVISED PER APPROVER COMMENTS	CMS	09 13 09

BRIDGE No. 7
ITEM No: 900.640
PROJECT No. BHF 6000 (15) S

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

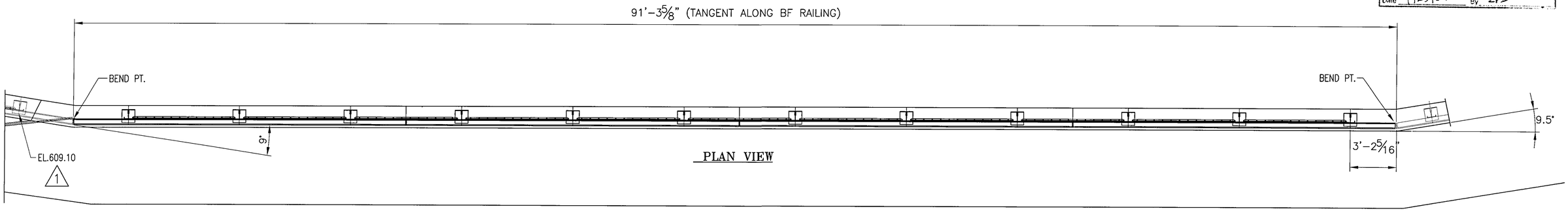
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON
BRIDGE RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
3L ALUM BRIDGE RAILING ~ ELEVATION @ SOUTH RAIL

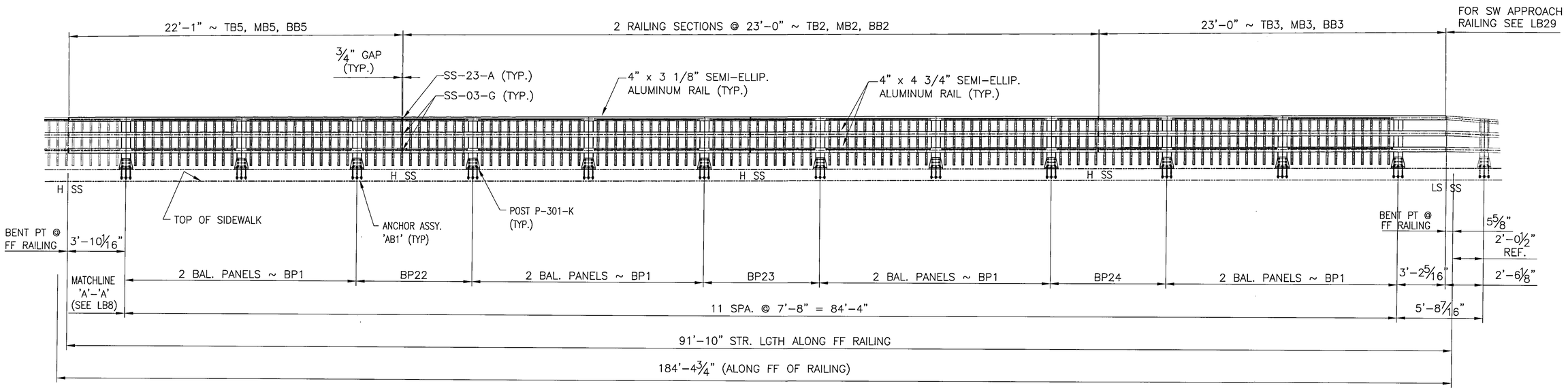
MADE CMS DATE 08/05/09 JOB No. AR0569 CUST. No.
CHECK BLJ DATE 08/14/09 DRAWING LB8 REV. No. ONE

H = HOLE SIDE
SS = SHORT SLOTTED SIDE
LS = LONG SLOTTED SIDE

Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable
Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Engineer assumes no liability for errors or omissions that may be contained herein. The Contractor, by approving and submitting these documents, verifies their accuracy as stipulated on the Contractor's Shop Drawing Stamp.
Date 9/23/09 DuBOIS AND KING By EPD



PLAN VIEW



1 INSIDE ELEVATION ~ SOUTH RAIL (ALONG BROOKLYN STREET)

NOTE:
- THIS CONTRACT IS BASED UPON THE CONTRACTOR SETTING AND SPACING THE ANCHOR BOLTS TO THE MEASUREMENTS SHOWN ON THE APPROVED SHOP DRAWINGS. THE L.B. FOSTER CO. WILL NOT BE RESPONSIBLE FOR WORK NECESSITATED BY ANY OTHER SETTING AND SPACING.
- THIS DRAWING IS NOT TO SCALE.
- FOR GENERAL NOTES AND TYPICAL DETAILS SEE DRAWING LB5.
- LENGTH OF RAILING ON THIS SHEET & LB8 IS 184.396 LF PAY LENGTH.
- POST SPACING IS MEASURED HORIZONTALLY ALONG BF OF PARAPET.
- SPLICE GAP AT SLEEVE = 3/4" TYP. U.N.
- ✳ RAIL LENGTHS DO NOT INCLUDE GAPS.
- COMPENSATION FOR VERTICAL CURVE HAS BEEN INCLUDED IN RAIL LENGTHS
- FOR BALUSTER DETAILS SEE DRAWING LB11 & LB12.

ANODIZED
(SEE LB5 FOR NOTES)

NOTE: FOR GEN. NOTES AND TYP. DETAILS SEE DWG LB5
FOR RAILING KEY PLAN SEE DWG LB10

REV.	DESCRIPTION	BY	DATE
1	REVISED PER APPROVER MARK UPS	CMS	09 12 09

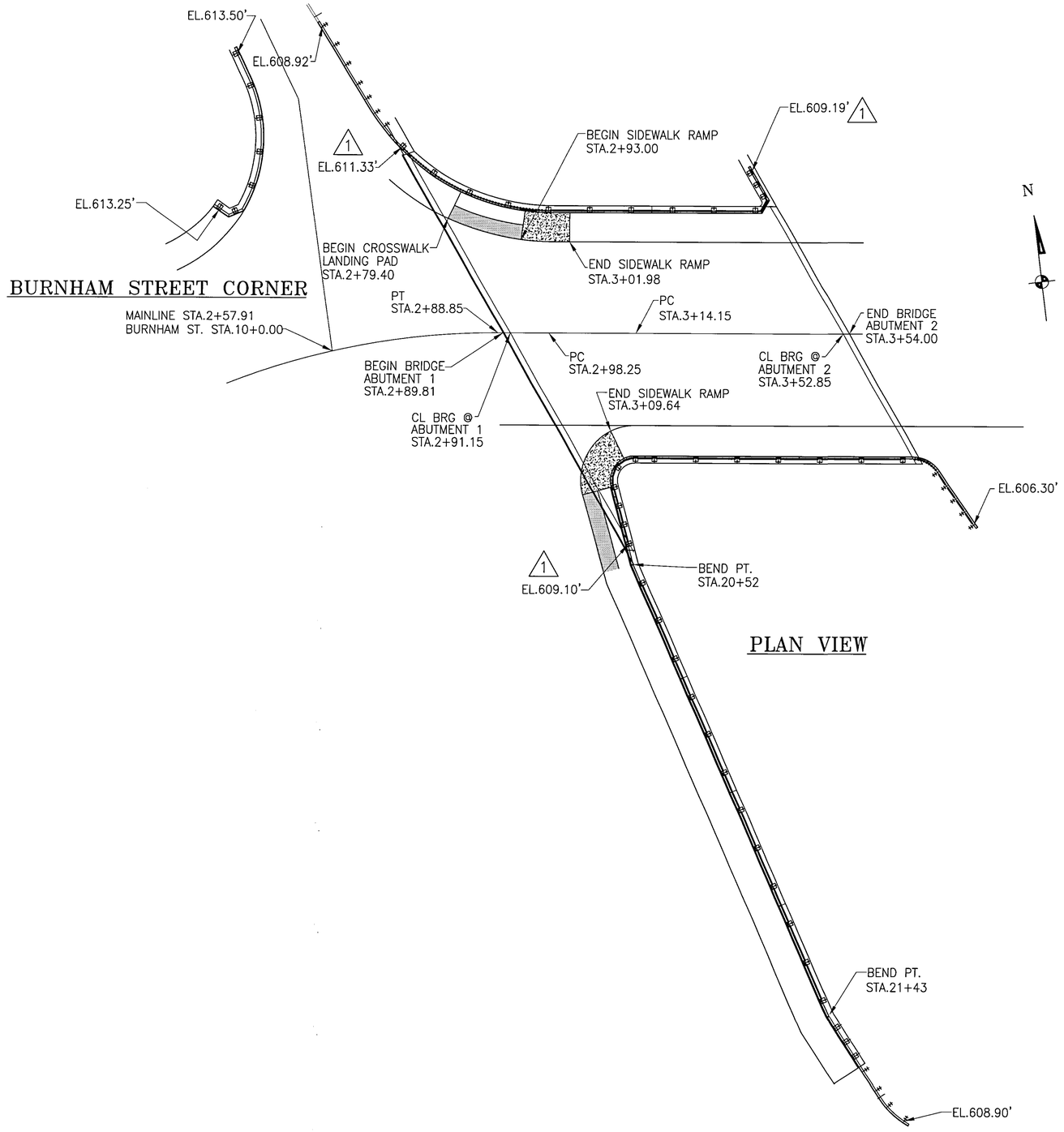
BRIDGE No. 7
ITEM No: 900.640
PROJECT No. BHF 6000 (15) S

APPROVED: _____ REC'D APPROVAL _____
DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON
BRIDGE RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
3L ALUM BRIDGE RAILING ~ ELEVATION @ SOUTH RAIL

MADE CMS DATE 06/30/09 JOB No. AR0569 CUST. No.
CHECK BLJ DATE 08/14/09 DRAWING LB9 REV. No. ONE



PLAN VIEW

ANODIZED
(SEE LB5 FOR NOTES)

NOTE: FOR GEN. NOTES AND TYP. DETAILS
SEE DWG LB5
FOR RAILING ELEVATIONS SEE LB6 – LB9
FOR APPROACH RAILINGS SEE LB15 & LB16

Accepted	✓		
Accepted as Noted			
Accepted Noted Resubmit			
Rejected, Revise Resubmit			
Rejected - Unaccep			
Checking is only f			
Project and cor			
Document			
omissions			
approval			
accord			
9/25/09	EPD		

REV.	DESCRIPTION	BY	DATE
1	REVISED PER APPROVER COMMENTS	CMS	09 13 09

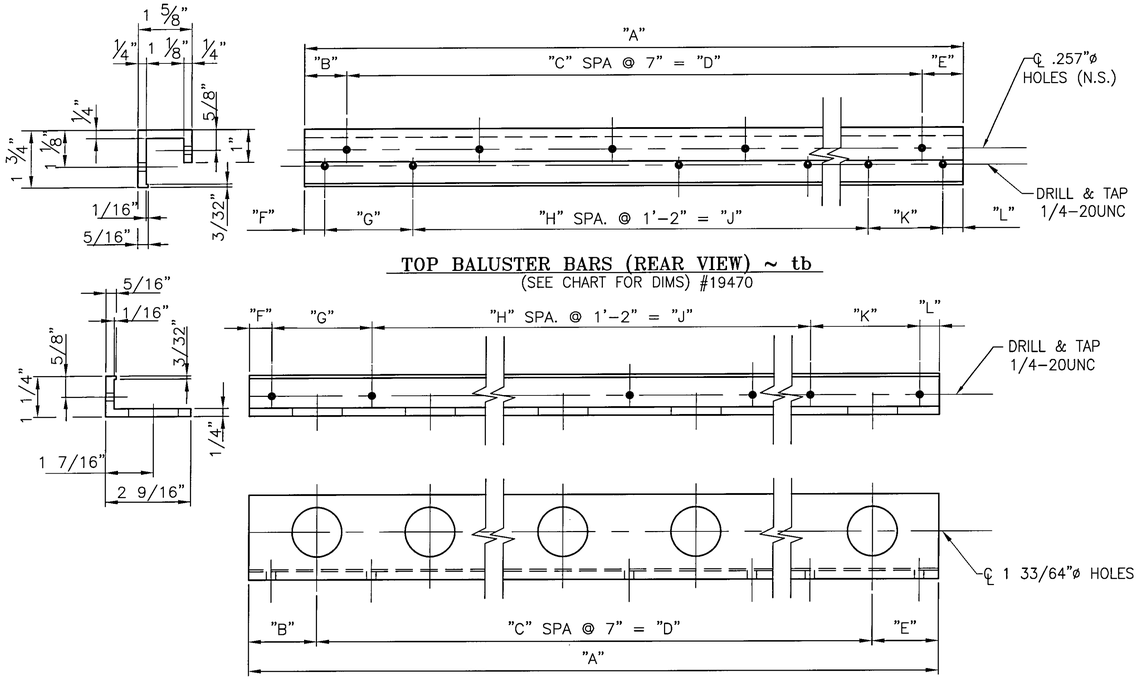
BRIDGE No. 7
ITEM No: 900.640
PROJECT No. BHF 6000 (15) S

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON
BRIDGE RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
3L ALUM BRIDGE RAILING ~ KEY PLAN

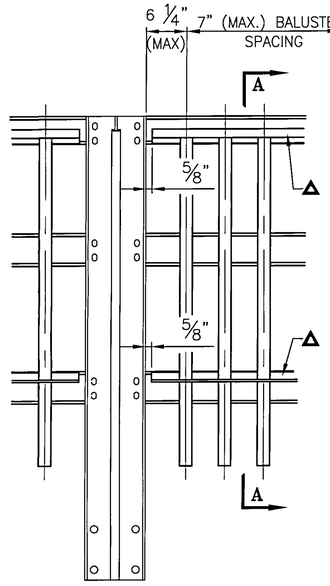
MADE CMS DATE 07/01/09 JOB No. AR0569 CUST. No.
CHECK BLJ DATE 08/14/09 DRAWING LB10 REV. No. ONE



TOP BALUSTER BARS (REAR VIEW) ~ tb
(SEE CHART FOR DIMS) #19470

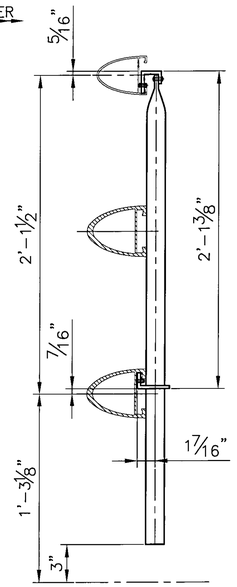
BOTTOM BALUSTER BARS (REAR VIEW) ~ bb
(SEE CHART FOR DIMS) #19471

MARK	QTY	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"J"	"K"	"L"	PANEL ASSY.
tb1 / bb1	17	6'-11 9/16"	3 1/4"	11	6'-5"	3 5/16"	1 1/4"	5 1/2"	5	5'-10"	5 1/2"	1 5/16"	BP1
tb13 / bb13	2	1'-9 1/2"	3 3/4"	2	1'-2"	3 3/4"	1 1/2"	1'-0 3/4"	–	–	5 3/4"	1 1/2"	BP13
tb19 / bb19	1	2'-11 11/16"	3 7/8"	4	2'-4"	3 7/8"	1 9/16"	5 3/4"	1	1'-2"	1'-0 3/4"	1 5/8"	BP19

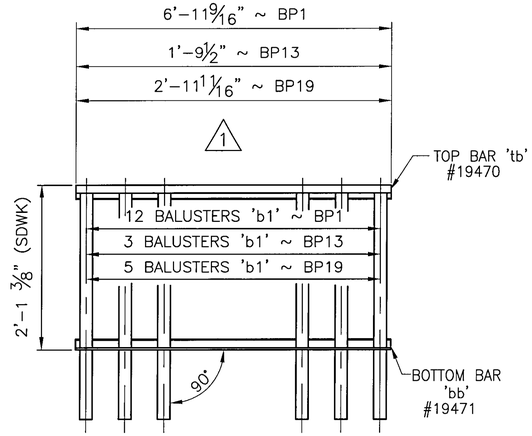


TYPICAL ELEVATION

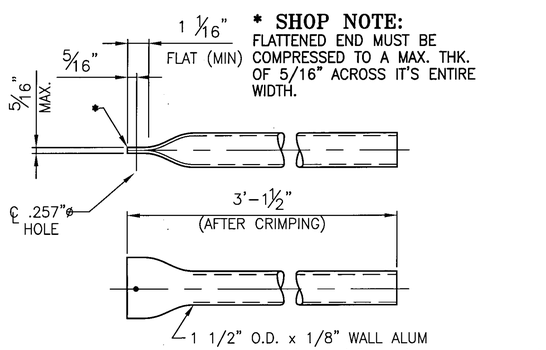
△ 1/4"-20UNC S.S. SOCKET SET SCREW x 1/2" - 'SS1' (#22079) EVERY OTHER SPACE BETWEEN BALUSTERS IF POSSIBLE



SECTION A-A



17 REQ'D. ~ BALUSTER PANEL ASSEMBLY 'BP1'
2 REQ'D. ~ BALUSTER PANEL ASSEMBLY 'BP13'
1 ONE REQ'D. ~ BALUSTER PANEL ASSEMBLY ' BP19'
1



*** SHOP NOTE:** FLATTENED END MUST BE COMPRESSED TO A MAX. THK. OF 5/16" ACROSS IT'S ENTIRE WIDTH.

1 257 ~ REQ'D BALUSTERS 'b1'
#19451

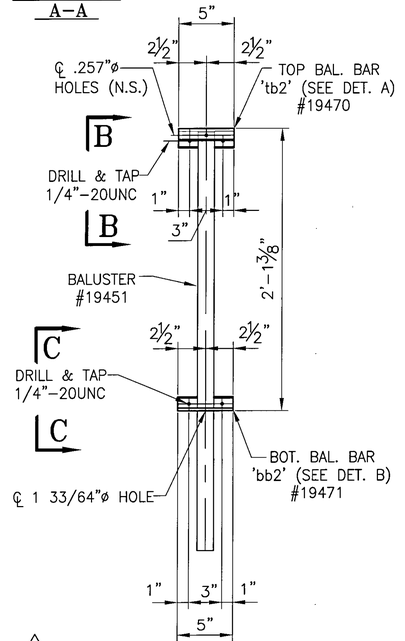
ANODIZED
(SEE LB5 FOR NOTES)

Accepted	✓
Accepted as Noted	
Accepted Noted Resubmit	
Rejected, Revise Resubmit	
Rejected - Unacceptable	

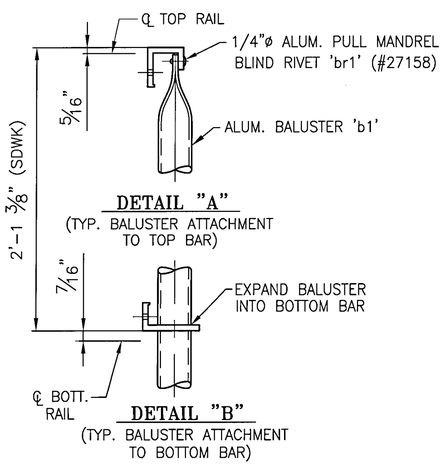
Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Engineer assumes no liability for errors or omissions that may be contained herein. The Contractor, by approving and submitting these documents, verifies their accuracy as stipulated on the Contractor's Shop Drawing Stamp.

Date 9/25/09 DuBOIS AND KING By ZPD

NOTE: FOR GEN. NOTES AND TYP. DETAILS SEE DWG LB5



1 42 REQ'D. ~ BALUSTER PANEL ASSEMBLY 'BP2'
(REAR VIEW)



BRIDGE No. 7
PROJECT No. BHF 6000 (15) S ITEM No: 900.640

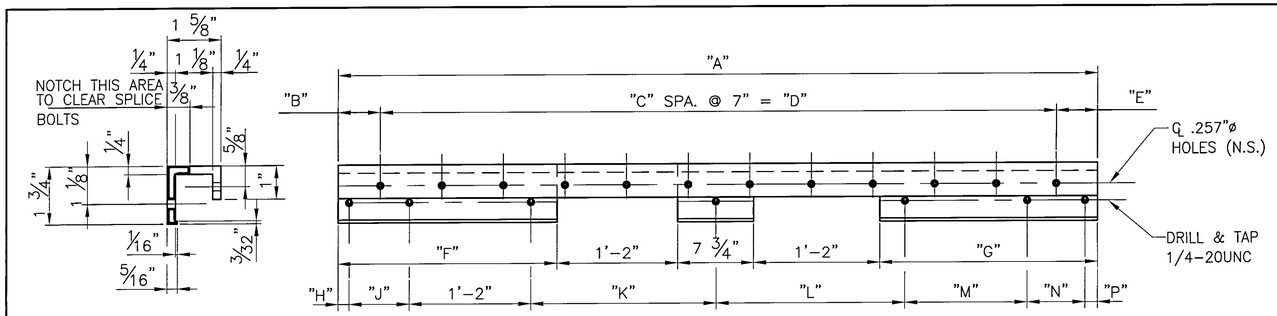
APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

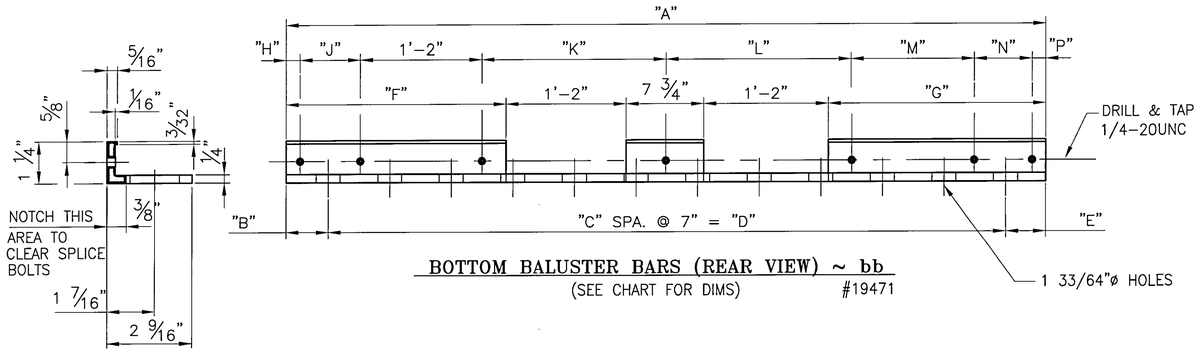
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON
BRIDGE RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
3L ALUM BRIDGE RAILING ~ BALUSTER PANEL DETAILS

REV.	DESCRIPTION	BY	DATE
1	REVISED PER APPROVER COMMENTS	CMS	09 13 09

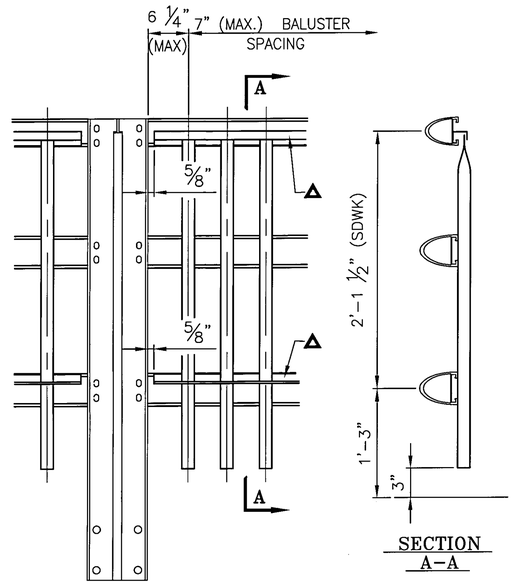
MADE CMS DATE 08/06/09 JOB No. AR0569 CUST. No.
CHECK BLJ DATE 8/17/09 DRAWING LB11 REV. No. ONE



TOP BALUSTER BARS (REAR VIEW) ~ tb
(SEE CHART FOR DIMS) #19470



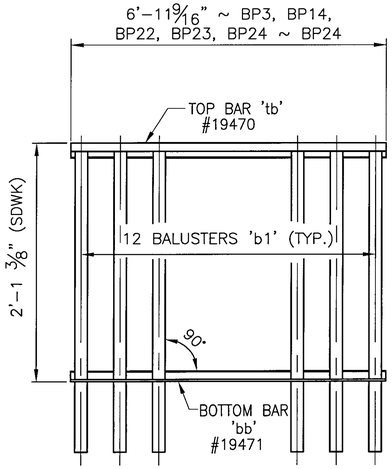
BOTTOM BALUSTER BARS (REAR VIEW) ~ bb
(SEE CHART FOR DIMS) #19471



TYPICAL ELEVATION

△ 1/4"-20UNC S.S. SOCKET SET SCREW x 1/2" - 'SS1' (#22079) EVERY OTHER SPACE BETWEEN BALUSTERS IF POSSIBLE

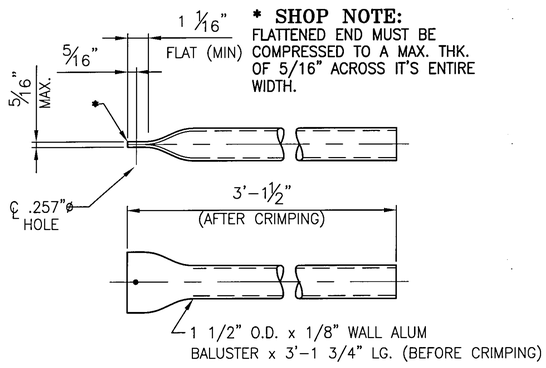
SECTION A-A



ONE REQ'D. ~ BALUSTER PANEL ASSEMBLY 'BP3'
ONE REQ'D. ~ BALUSTER PANEL ASSEMBLY 'BP14'
ONE REQ'D. ~ BALUSTER PANEL ASSEMBLY 'BP22'
ONE REQ'D. ~ BALUSTER PANEL ASSEMBLY 'BP23'
ONE REQ'D. ~ BALUSTER PANEL ASSEMBLY 'BP24'

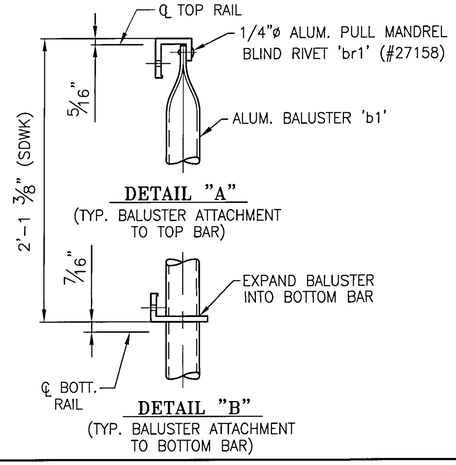
MARK	QTY	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"J"	"K"	"L"	"M"	"N"	"P"	PANEL ASSY.
tb3 / bb3	1	6'-11 9/16"	3 1/4"	11	6'-5"	3 5/16"	1'-11 3/8"	2'-0 7/16"	1 1/4"	5 1/2"	1'-9 9/16"	1'-8 7/16"	1'-2"	5 1/2"	1 5/16"	BP3
tb14 / bb14	1	6'-11 9/16"	3 5/16"	11	6'-5"	3 1/4"	2'-0 1/4"	1'-11 9/16"	1 5/16"	5 1/2"	1'-10 1/2"	1'-7 1/2"	1'-2"	5 1/2"	1 1/4"	BP14
tb22 / bb22	1	6'-11 9/16"	3 5/16"	11	6'-5"	3 1/4"	2'-10 1/8"	1'-1 11/16"	1 5/16"	1'-0 1/2"	1'-9"	2'-4"	-	5 1/2"	1 1/4"	BP22
tb23 / bb23	1	6'-11 9/16"	3 5/16"	11	6'-5"	3 1/4"	2'-9 3/8"	1'-2 7/16"	1 5/16"	1'-0 1/2"	1'-9"	1'-9"	-	1'-0 1/2"	1 1/4"	BP23
tb24 / bb24	1	6'-11 9/16"	3 5/16"	11	6'-5"	3 1/4"	2'-8 5/8"	1'-3 3/16"	1 5/16"	1'-0 1/2"	1'-9"	1'-9"	-	1'-0 1/2"	1 1/4"	BP24

1 / 1



*** SHOP NOTE:** FLATTENED END MUST BE COMPRESSED TO A MAX. THK. OF 5/16" ACROSS IT'S ENTIRE WIDTH.

60 ~ REQ'D BALUSTERS 'b1'
#19451



DETAIL "A"
(TYP. BALUSTER ATTACHMENT TO TOP BAR)

DETAIL "B"
(TYP. BALUSTER ATTACHMENT TO BOTTOM BAR)

NOTE: FOR GEN. NOTES AND TYP. DETAILS SEE DWG LB1

Accepted ✓
Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable
Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Engineer assumes no liability for errors or omissions that may be contained herein. The Contractor, by approving and submitting these documents, verifies their accuracy as stipulated on the Contractor's Shop Drawing Stamp.
Date 9/25/09 DuBOIS AND KING By CPD

ANODIZED
(SEE LB5 FOR NOTES)

BRIDGE No. 7
PROJECT No. BHF 6000 (15) S ITEM No: 900.640

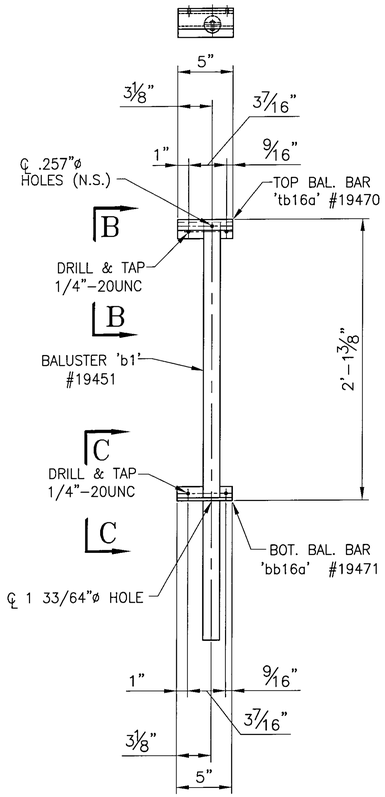
APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

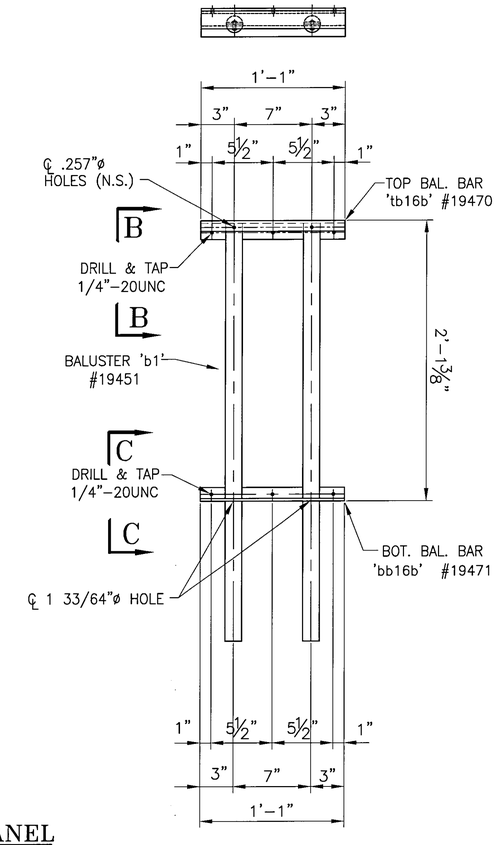
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON
BRIDGE RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
3L ALUM BRIDGE RAILING ~ BALUSTER PANEL DETAILS

MADE CMS DATE 08/09/09 JOB No. AR0569 CUST. No.
CHECK BLJ DATE 08/17/09 DRAWING LB12 REV. No. ONE

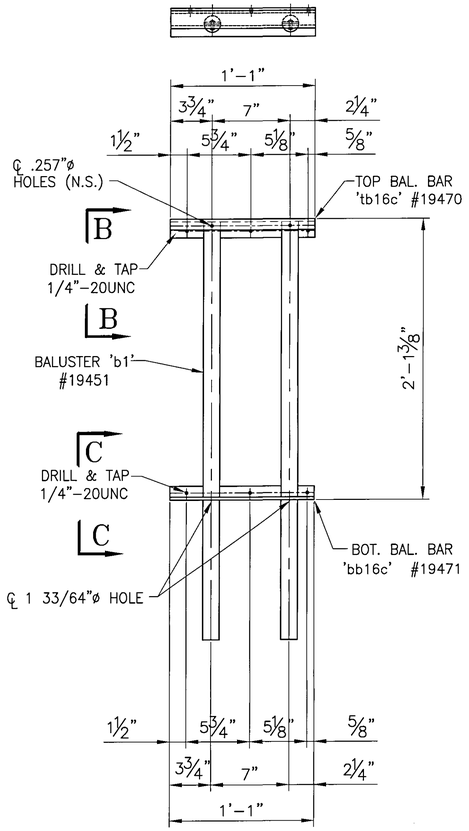
REV.	DESCRIPTION	BY	DATE
1	REVISED PER APPROVER COMMENTS	CMS	09 13 09



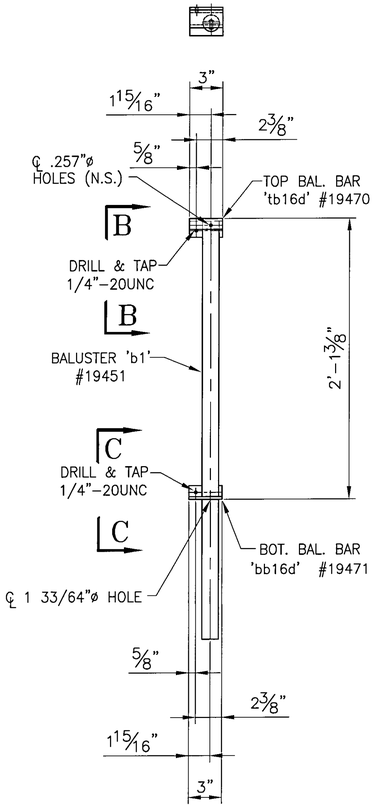
ONE REQ'D. ~ BALUSTER PANEL ASSEMBLY 'BP16A' (1)
(REAR ELEVATION VIEW)



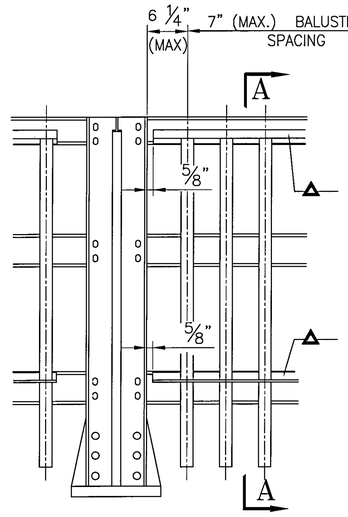
ONE REQ'D. ~ BALUSTER PANEL ASSEMBLY 'BP16B' (1)
(REAR ELEVATION VIEW)



ONE REQ'D. ~ BALUSTER PANEL ASSEMBLY 'BP16C' (1)
(REAR ELEVATION VIEW)

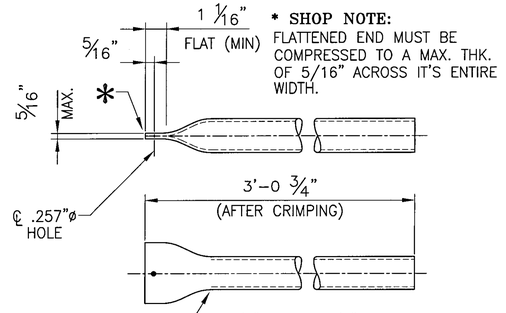


ONE REQ'D. ~ BALUSTER PANEL ASSEMBLY 'BP16D' (1)
(REAR ELEVATION VIEW)



TYPICAL ELEVATION
△1/4"–20UNC S.S. SOCKET SET SCREW x 1/2" LG. 'SS1' #22079, SCREW EVERY OTHER SPACE BETWEEN BALUSTERS IF POSSIBLE

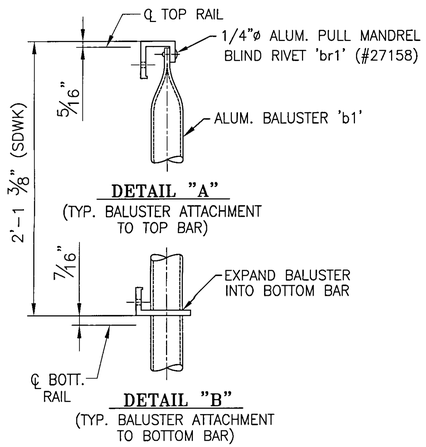
SECTION A–A



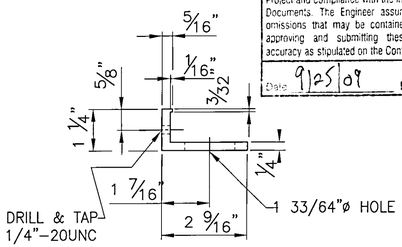
*** SHOP NOTE:** FLATTENED END MUST BE COMPRESSED TO A MAX. THK. OF 5/16" ACROSS IT'S ENTIRE WIDTH.

6 ~ REQ'D BALUSTERS 'b1' #19451
BALUSTERS WITH 1/8" WALL & T4 TEMPER USED IN LIEU OF 1/16" WALL & T6 TEMPER DUE TO SUPERIOR EXPANDING

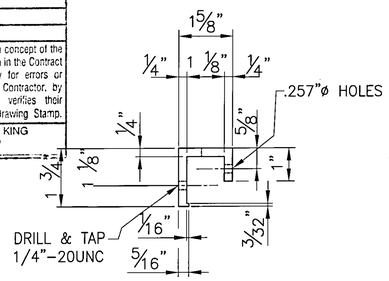
NOTE: FOR GEN. NOTES AND TYP. DETAILS SEE DWG LB5
FOR RAILING ELEVATION SEE DWG LB7 – LB9



SEE LB13A FOR BP17 DETAILS



VIEW 'C'–'C'



VIEW 'B'–'B'

Accepted ✓
Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable
Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Engineer assumes no liability for errors or omissions that may be contained herein. The Contractor, by approving and submitting these documents, verifies their accuracy as stipulated on the Contractor's Shop Drawing Stamp.
Date 9/25/09 DuBOIS AND KING By ZPD

ANODIZED (SEE LB5 FOR SPECS.)

REV.	DESCRIPTION	BY	DATE
1	GENERAL REVISION	CMS	09 13 09

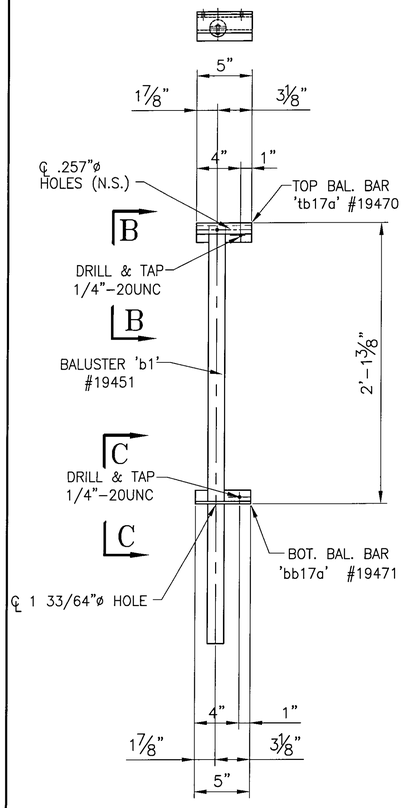
BRIDGE No. 7
PROJECT No. BHF 6000 (15) S ITEM No: 900.640

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

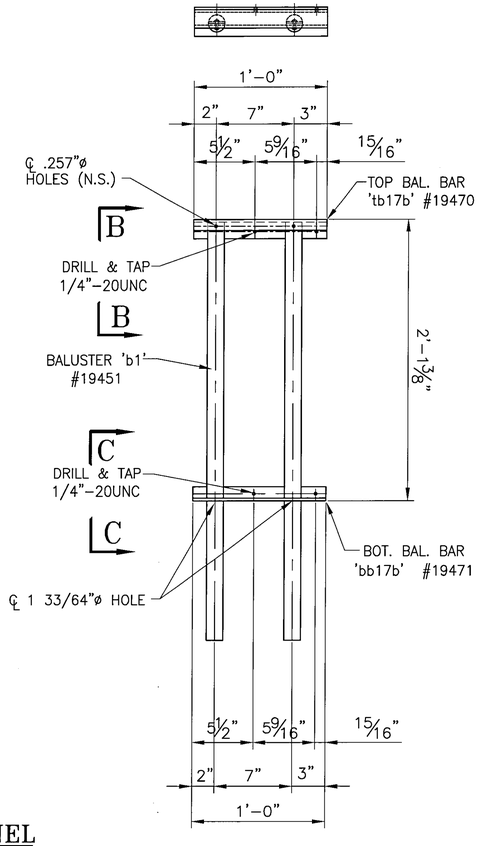
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON
BRIDGE RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
3L ALUM BRIDGE RAILING ~ MITERED BALUSTER PANEL DETAILS

MADE CMS DATE 08/09/09 JOB No. AR0569 CUST. No.
CHECK BLJ DATE 08/17/09 DRAWING LB13 REV. No. ONE



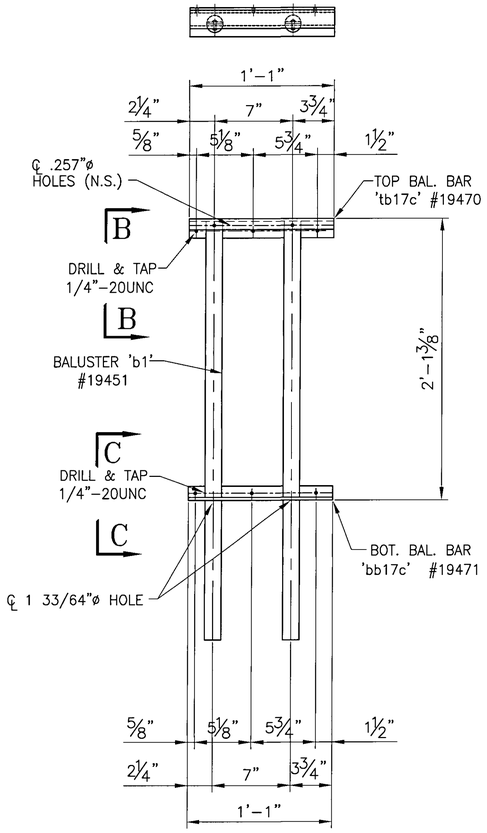
ONE REQ'D. ~ BALUSTER PANEL ASSEMBLY 'BP17A'

(1) (REAR ELEVATION VIEW)



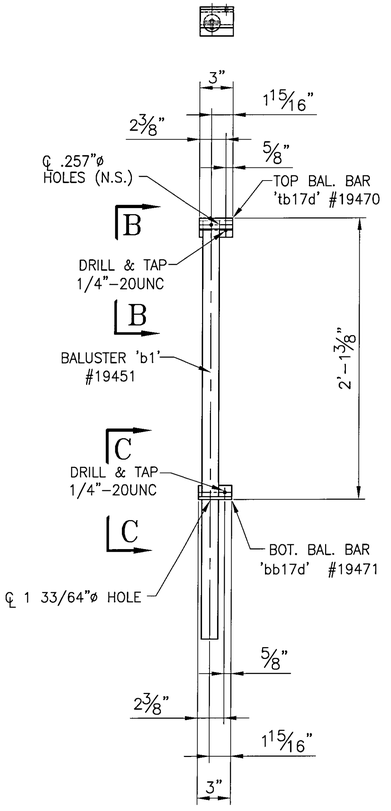
ONE REQ'D. ~ BALUSTER PANEL ASSEMBLY 'BP17B'

(1) (REAR ELEVATION VIEW)



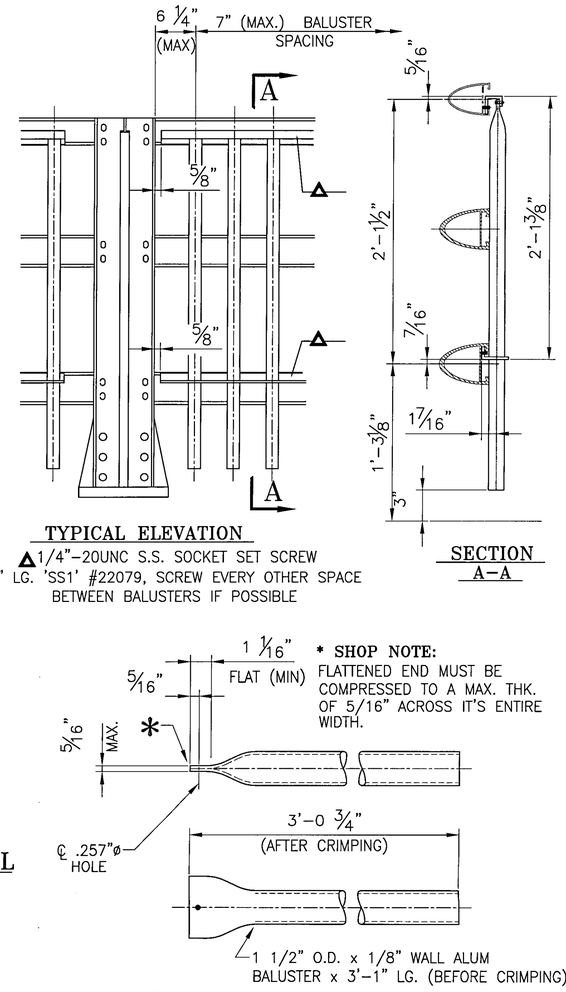
ONE REQ'D. ~ BALUSTER PANEL ASSEMBLY 'BP17C'

(1) (REAR ELEVATION VIEW)



ONE REQ'D. ~ BALUSTER PANEL ASSEMBLY 'BP17D'

(1) (REAR ELEVATION VIEW)



TYPICAL ELEVATION

(1) 1/4"–20UNC S.S. SOCKET SET SCREW x 1/2" LG. 'SS1' #22079, SCREW EVERY OTHER SPACE BETWEEN BALUSTERS IF POSSIBLE

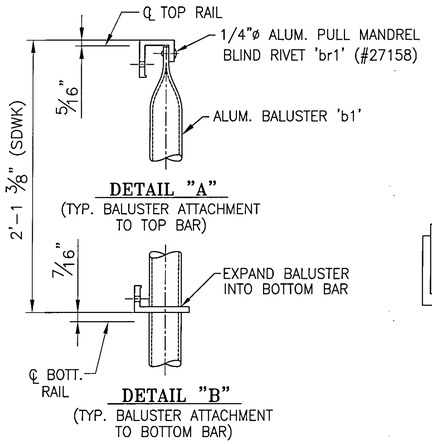
SECTION A–A

*** SHOP NOTE:** FLATTENED END MUST BE COMPRESSED TO A MAX. THK. OF 5/16" ACROSS IT'S ENTIRE WIDTH.

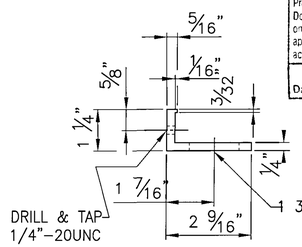
6 ~ REQ'D BALUSTERS 'b1' #19451

BALUSTERS WITH 1/8" WALL & T4 TEMPER USED IN LIEU OF 1/16" WALL & T6 TEMPER DUE TO SUPERIOR EXPANDING

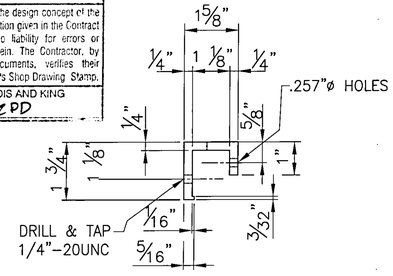
NOTE: FOR GEN. NOTES AND TYP. DETAILS SEE DWG LB5
FOR RAILING ELEVATION SEE DWG LB7 – LB9



SEE LB13 FOR BP16 DETAILS



VIEW 'C'–'C'



VIEW 'B'–'B'

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Accepted ✓
Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable

Date 9/25/09 DuBOIS AND KING By ZPD

ANODIZED (SEE LB5 FOR SPECS.)

REV.	DESCRIPTION	BY	DATE
(1)	GENERAL REVISION PER APPROVAL COMMENTS	CMS	05 12 09

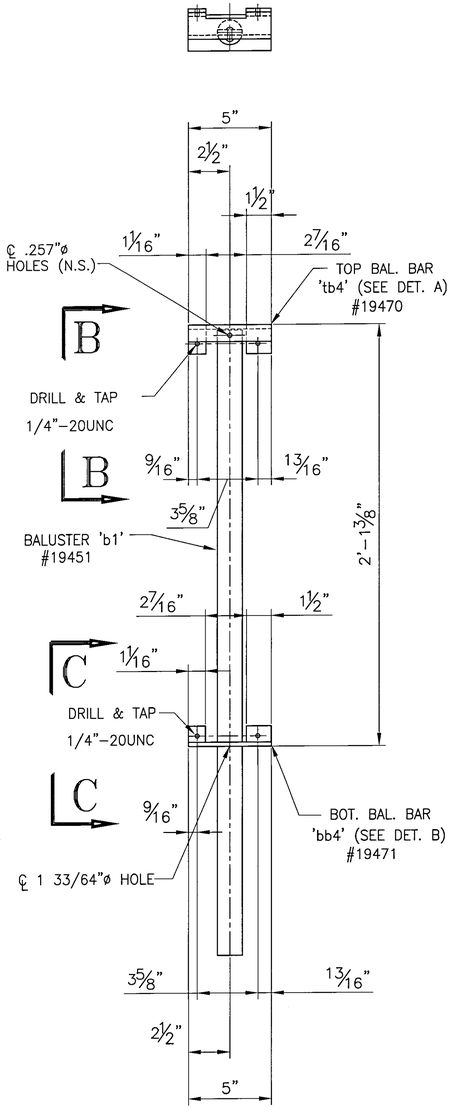
BRIDGE No. 7
PROJECT No. BHF 6000 (15) S ITEM No: 900.640

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON
BRIDGE RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
3L ALUM BRIDGE RAILING ~ MITERED BALUSTER PANEL DETAILS

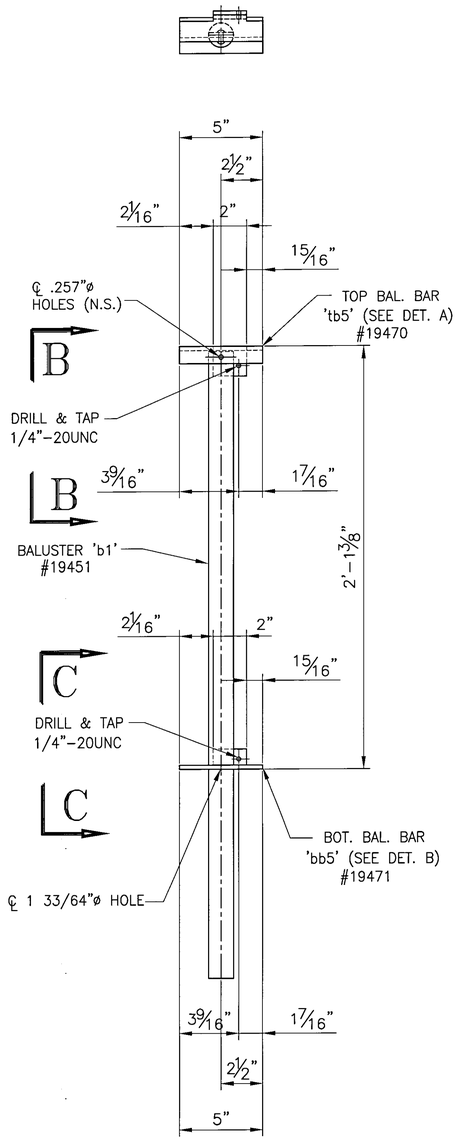
MADE CMS DATE 08/09/09 JOB No. AR0569 CUST. No.
CHECK BLJ DATE 08/17/09 DRAWING LB13A REV. No. ONE



ONE REQ'D. ~ BALUSTER PANEL

ASSEMBLY 'BP4'

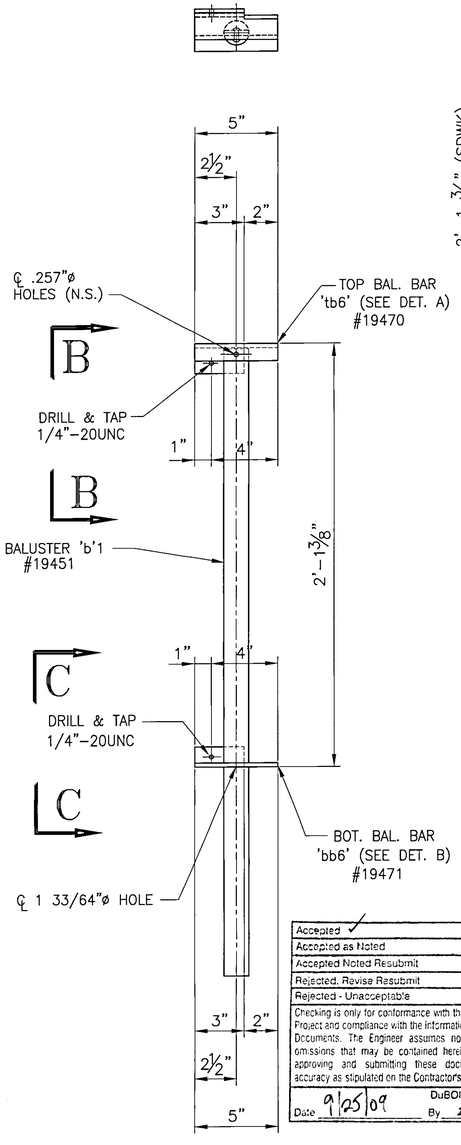
(REAR VIEW)



1 ONE REQ'D. ~ BALUSTER PANEL

ASSEMBLY 'BP5'

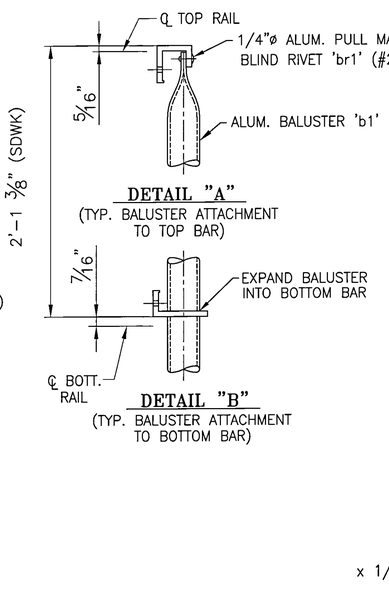
(REAR VIEW)

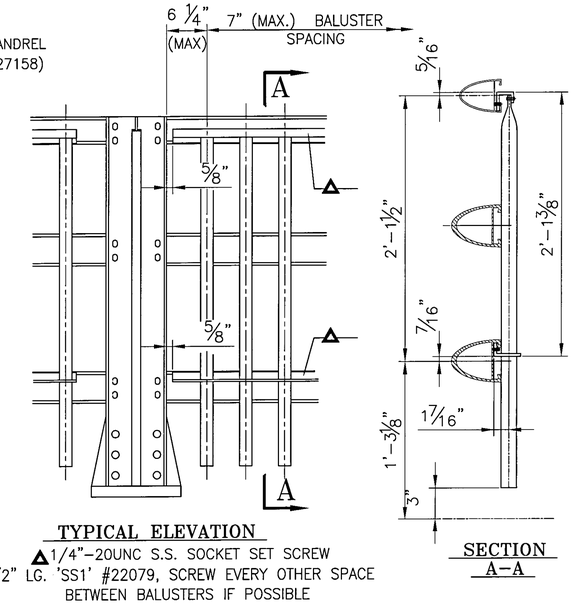


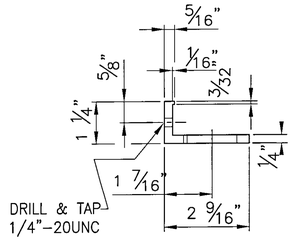
ONE REQ'D. ~ BALUSTER PANEL

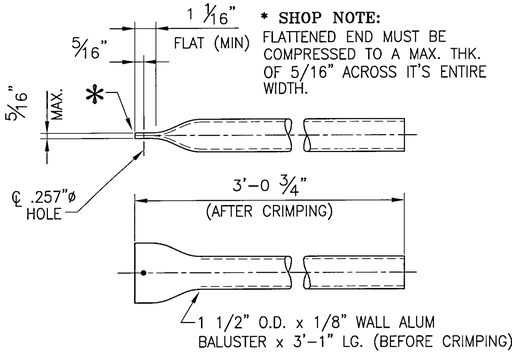
ASSEMBLY 'BP6'

(REAR VIEW)







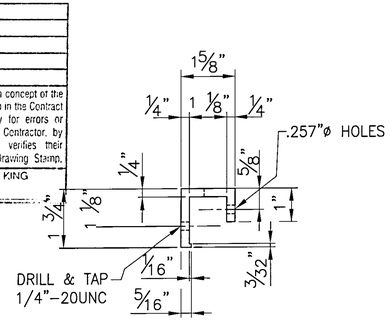


*** SHOP NOTE:** FLATTENED END MUST BE COMPRESSED TO A MAX. THK. OF 5/16" ACROSS IT'S ENTIRE WIDTH.

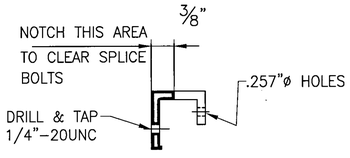
3 ~ REQ'D BALUSTERS 'b1' #19451

BALUSTERS WITH 1/8" WALL & T4 TEMPER USED IN LIEU OF 1/16" WALL & T6 TEMPER DUE TO SUPERIOR EXPANDING

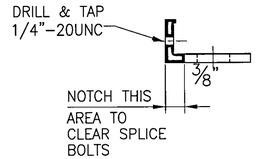
NOTE: FOR GEN. NOTES AND TYP. DETAILS SEE DWG LB5
FOR RAILING ELEVATION SEE DWG LB7 – LB9



VIEW 'B'–'B'



TOP BAR NOTCH AREA



BOTTOM BAR NOTCH AREA

ANODIZED
(SEE LB5 FOR SPECS.)

REV.	DESCRIPTION	BY	DATE
1	GENERAL REVISION	CMS	09 13 09

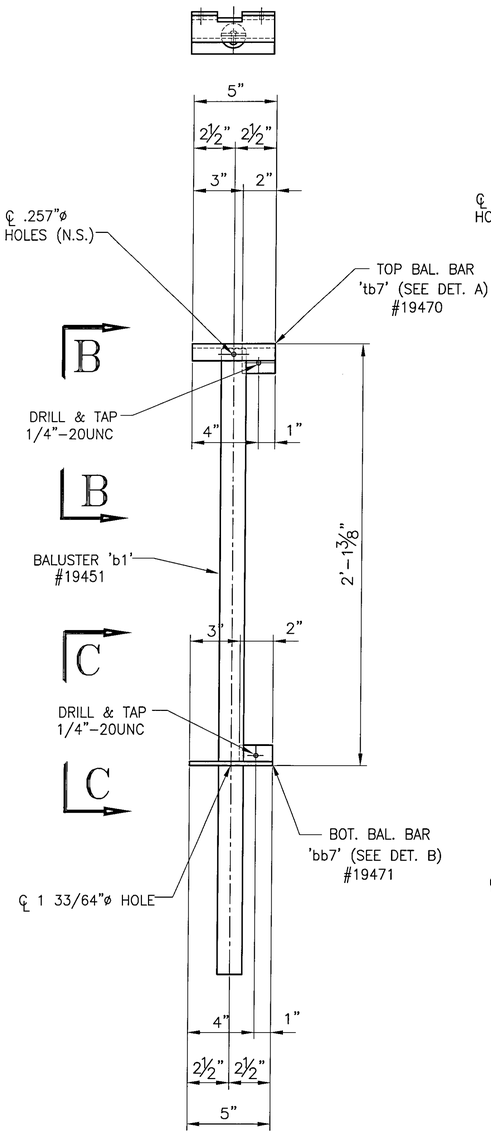
BRIDGE No. 7
PROJECT No. BHF 6000 (15) S — ITEM No: 900.640

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

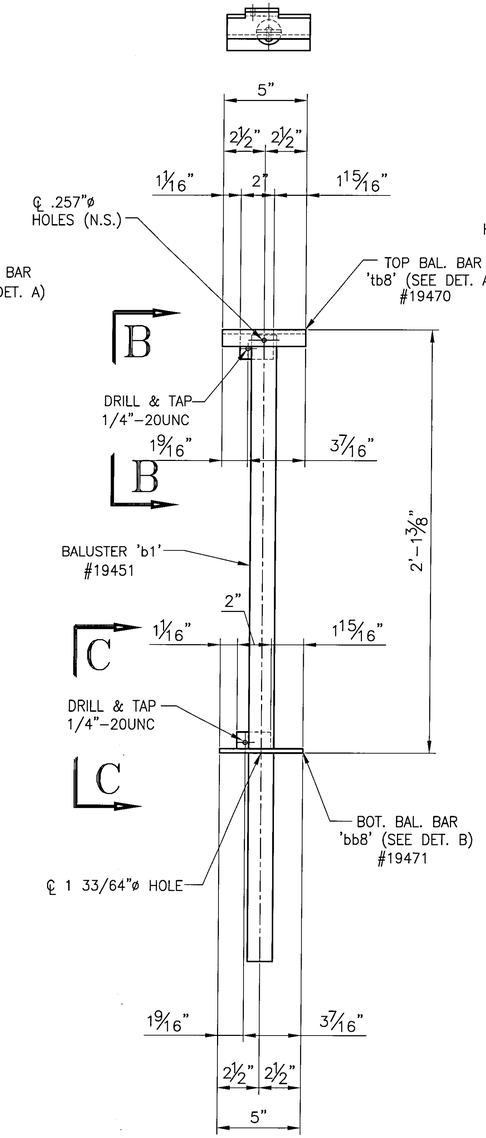
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON
BRIDGE RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
3L ALUM BRIDGE RAILING ~ BALUSTER PANEL DETAILS

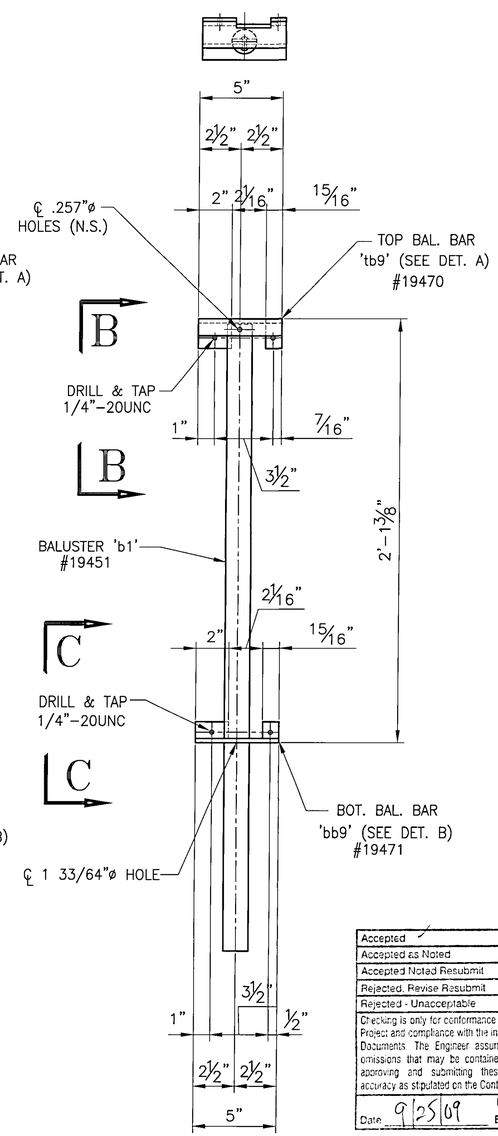
MADE CMS DATE 08/07/09 JOB No. AR0569 CUST. No.
CHECK BLJ DATE 08/17/09 DRAWING LB14 REV. No. ONE



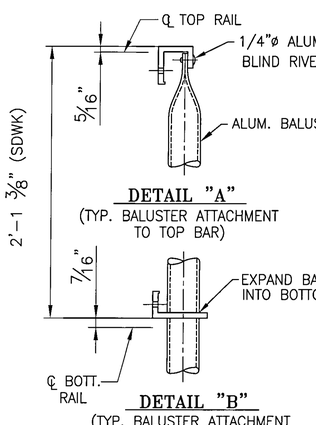
ONE REQ'D. ~ BALUSTER PANEL ASSEMBLY 'BP7'
(REAR VIEW)

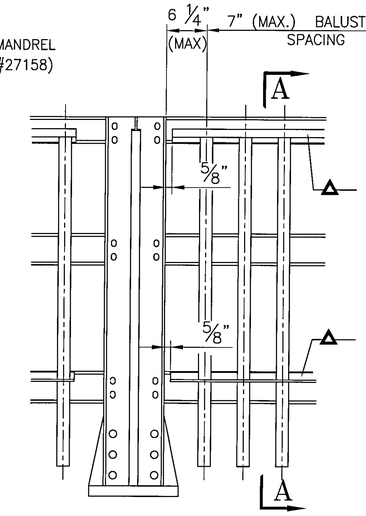


ONE REQ'D. ~ BALUSTER PANEL ASSEMBLY 'BP8'
(REAR VIEW)



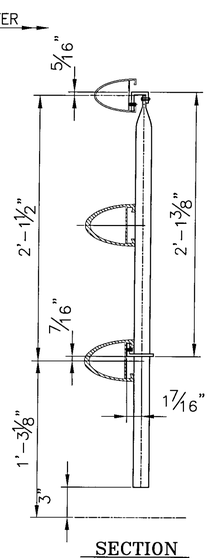
ONE REQ'D. ~ BALUSTER PANEL ASSEMBLY 'BP9'
(REAR VIEW)



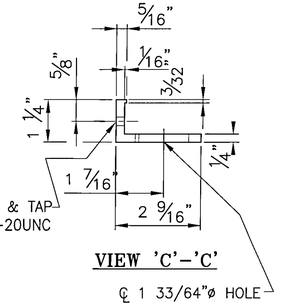


TYPICAL ELEVATION

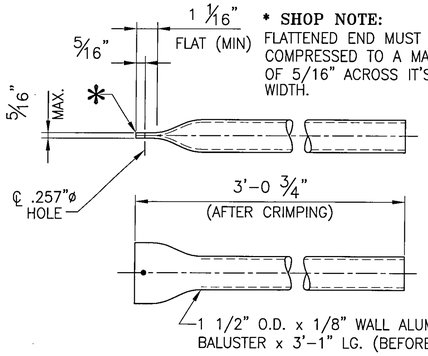
△1/4"–20UNC S.S. SOCKET SET SCREW x 1/2" LG. 'SS1' #22079, SCREW EVERY OTHER SPACE BETWEEN BALUSTERS IF POSSIBLE



SECTION A–A



VIEW 'C'–'C'

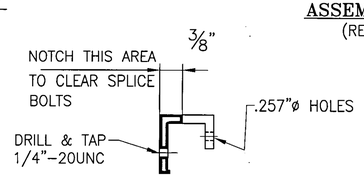


*** SHOP NOTE:** FLATTENED END MUST BE COMPRESSED TO A MAX. THK. OF 5/16" ACROSS IT'S ENTIRE WIDTH.

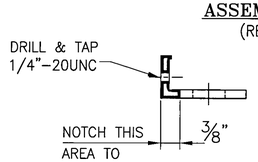
3 ~ REQ'D BALUSTERS 'b1' #19451

BALUSTERS WITH 1/8" WALL & T4 TEMPER USED IN LIEU OF 1/16" WALL & T6 TEMPER DUE TO SUPERIOR EXPANDING

NOTE: FOR GEN. NOTES AND TYP. DETAILS SEE DWG LB5
FOR RAILING ELEVATION SEE DWG LB7 – LB9



TOP BAR NOTCH AREA

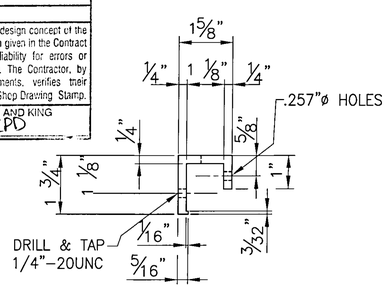


BOTTOM BAR NOTCH AREA

Accepted
Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable

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Date 9/25/09 DuBOIS AND KING By ZPD



VIEW 'B'–'B'

ANODIZED
(SEE LB5 FOR SPECS.)

REV.	DESCRIPTION	BY	DATE

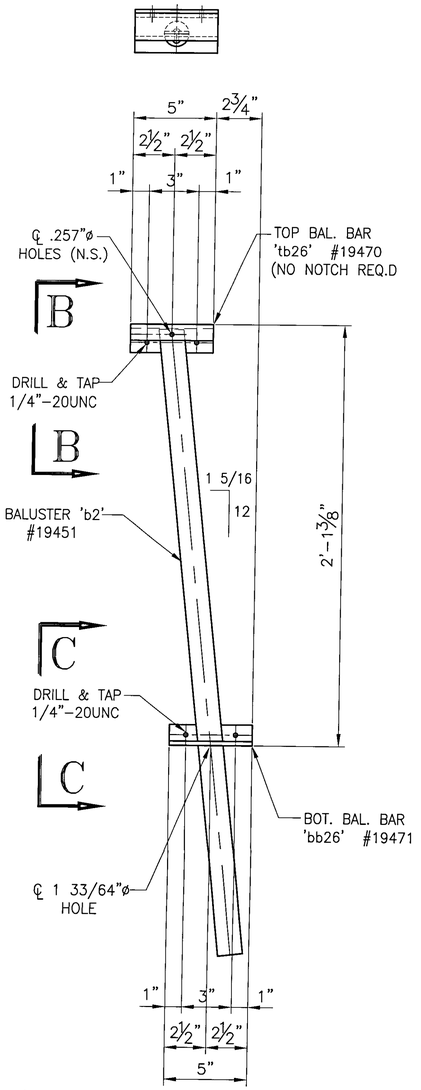
BRIDGE No. 7
PROJECT No. BHF 6000 (15) S — ITEM No: 900.640

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON
BRIDGE RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
3L ALUM BRIDGE RAILING ~ BALUSTER PANEL DETAILS

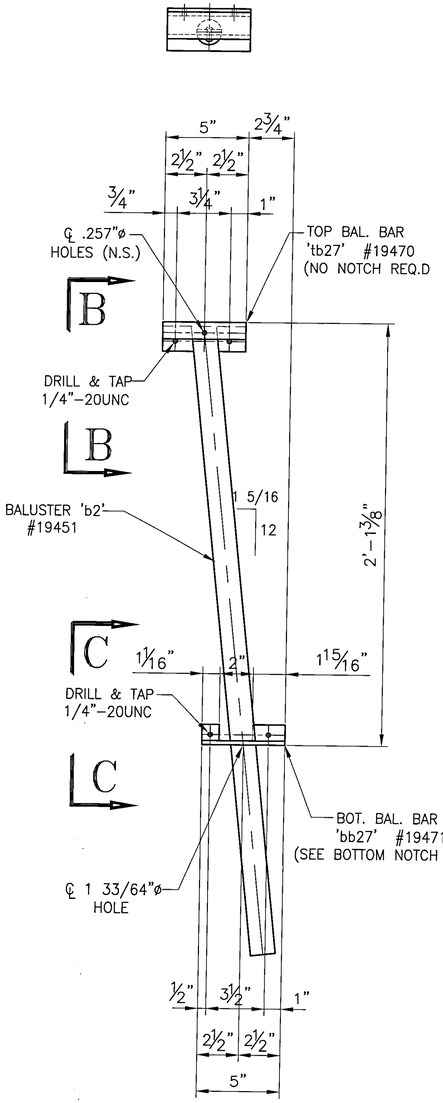
MADE CMS DATE 08/05/09 JOB No. AR0569 CUST. No.
CHECK BLJ DATE 08/17/09 DRAWING LB15 REV. No.



1 4 REQ'D. ~ BALUSTER PANEL

ASSEMBLY 'BP26'

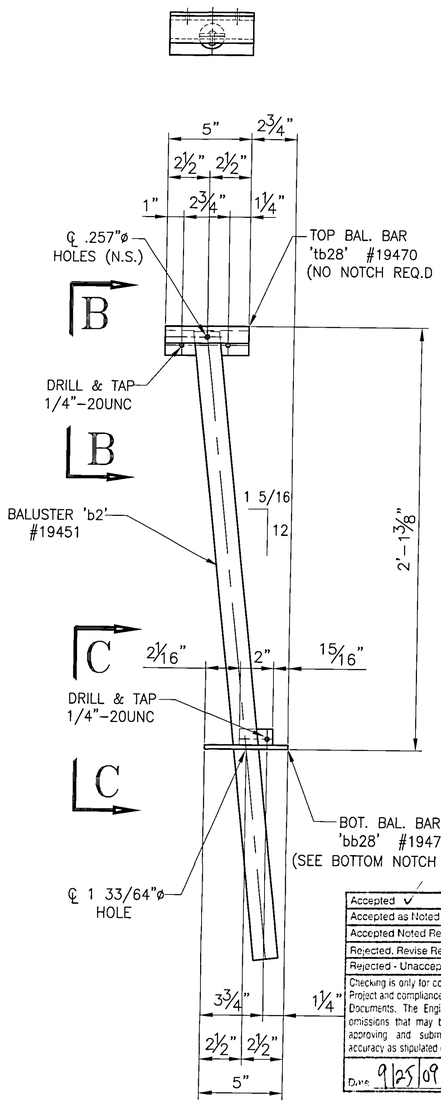
(REAR VIEW)



1 ONE REQ'D. ~ BALUSTER PANEL

ASSEMBLY 'BP27'

(REAR VIEW)



1 ONE REQ'D. ~ BALUSTER PANEL

ASSEMBLY 'BP28'

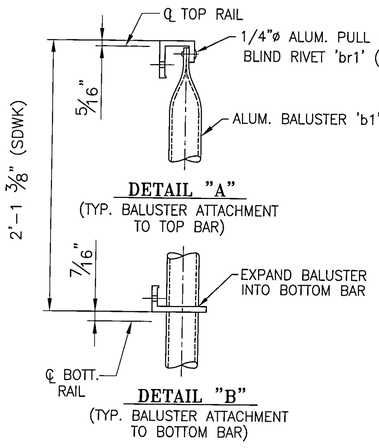
(REAR VIEW)

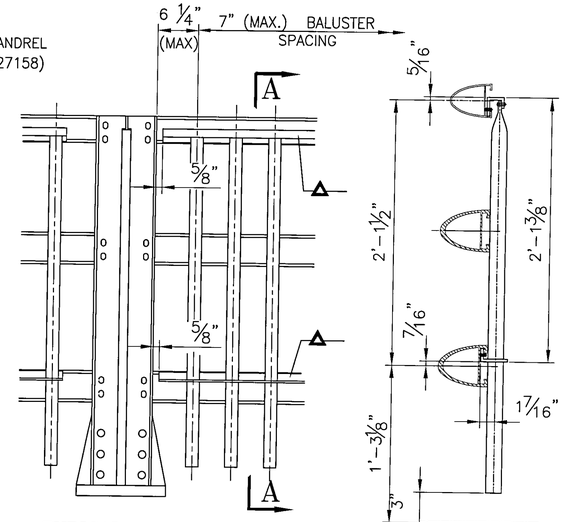
Accepted ✓
Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable

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DuBOIS AND KING

Date 9/25/09 By EPD

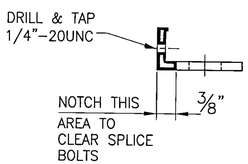




1 6 ~ REQ'D BALUSTERS 'b2' #19451

BALUSTERS WITH 1/8" WALL & T4 TEMPER USED IN LIEU OF 1/16" WALL & T6 TEMPER DUE TO SUPERIOR EXPANDING

NOTE: FOR GEN. NOTES AND TYP. DETAILS SEE DWG LB5
FOR RAILING ELEVATION SEE DWG LB7 – LB9



BOTTOM BAR NOTCH AREA

ANODIZED
(SEE LB5 FOR SPECS.)

REV.	DESCRIPTION	BY	DATE
1	GENERAL REVISION PER APPROVAL MARKUPS	CMS	09 13 09

MADE CMS DATE 08/09/09 JOB No. AR0569 CUST. No.
CHECK BLJ DATE 08/17/09 DRAWING LB16

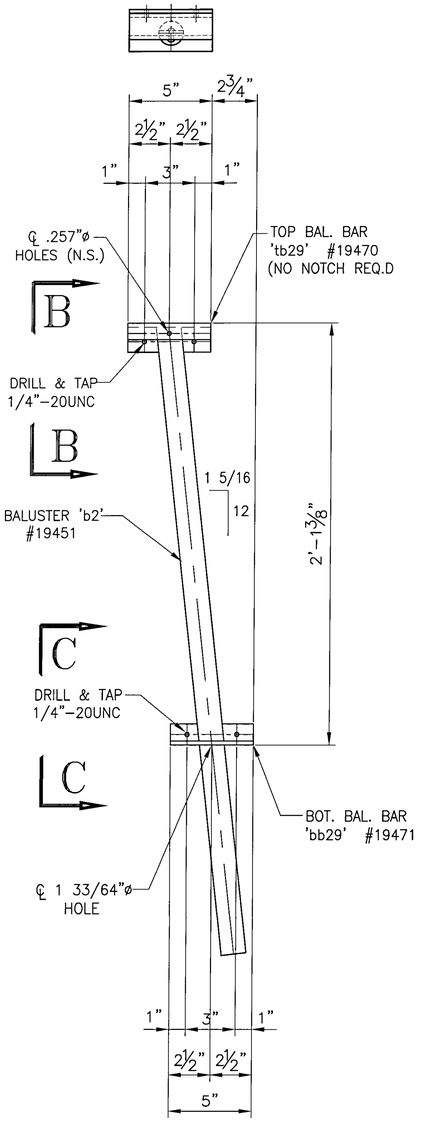
REV. No. ONE

BRIDGE No. 7
PROJECT No. BHF 6000 (15) S ITEM No: 900.640

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

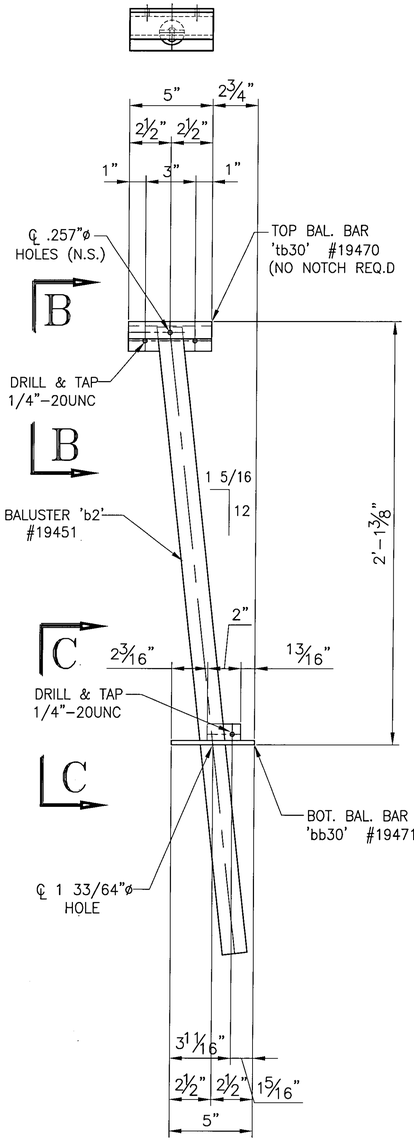
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON
BRIDGE RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
3L ALUM BRIDGE RAILING ~ BALUSTER PANEL DETAILS



⚠1 ONE REQ'D. ~ BALUSTER PANEL

ASSEMBLY 'BP29'

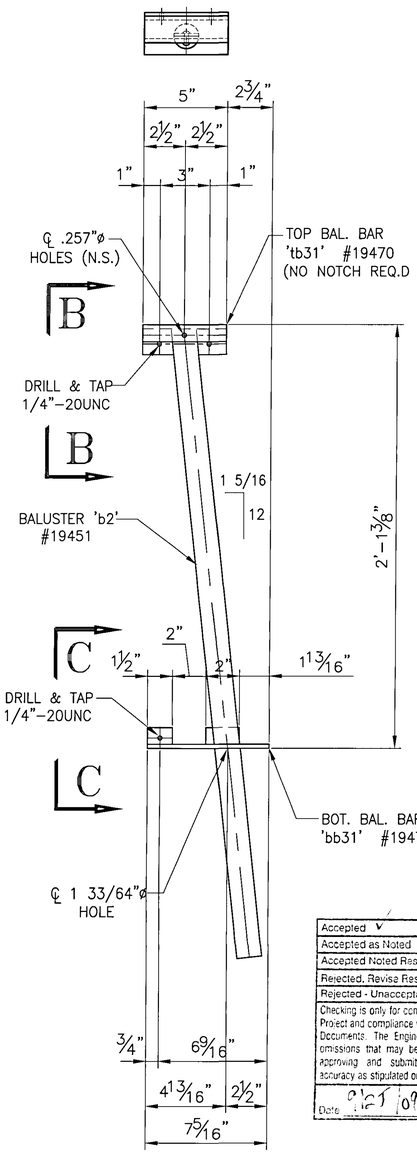
(REAR VIEW)



⚠1 ONE REQ'D. ~ BALUSTER PANEL

ASSEMBLY 'BP30'

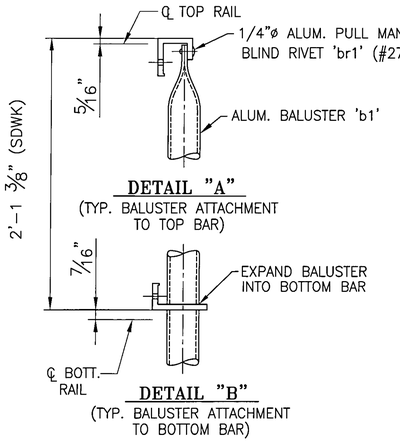
(REAR VIEW)

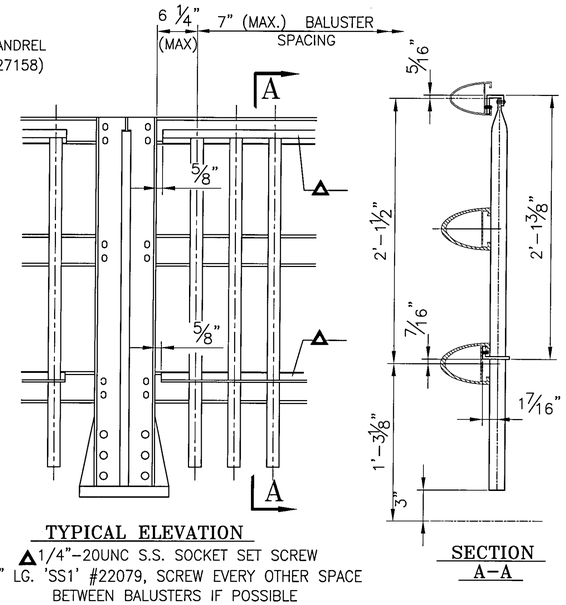


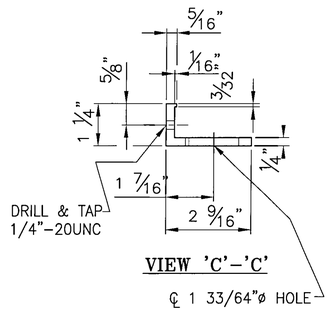
⚠1 ONE REQ'D. ~ BALUSTER PANEL

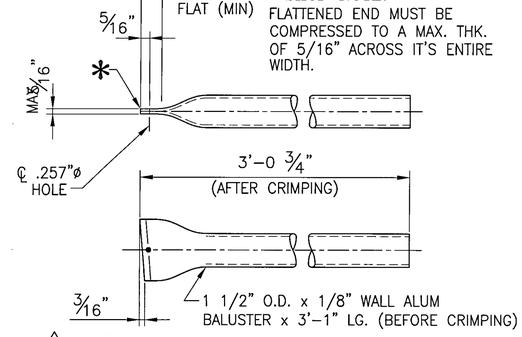
ASSEMBLY 'BP31'

(REAR VIEW)





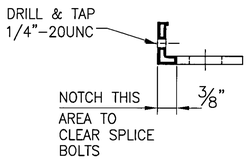




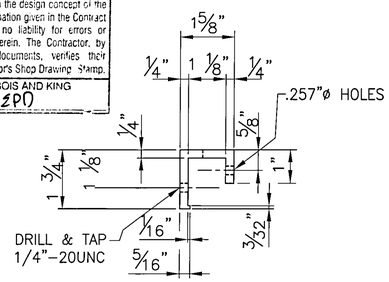
⚠1 3 ~ REQ'D BALUSTERS 'b2' #19451

BALUSTERS WITH 1/8" WALL & T4 TEMPER USED IN LIEU OF 1/16" WALL & T6 TEMPER DUE TO SUPERIOR EXPANDING

NOTE: FOR GEN. NOTES AND TYP. DETAILS SEE DWG LB5
FOR RAILING ELEVATION SEE DWG LB7 – LB9



BOTTOM BAR NOTCH AREA



Accepted ✓
Accepted as Noted
Accepted Noted Resubmit
Rejected. Revise Resubmit
Rejected - Unacceptable

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Date 9/25/09 DuBOIS AND KING By ZPO

ANODIZED
(SEE LB5 FOR SPECS.)

REV.	DESCRIPTION	BY	DATE
⚠1	GENERAL REVISION	CMS	09 13 09

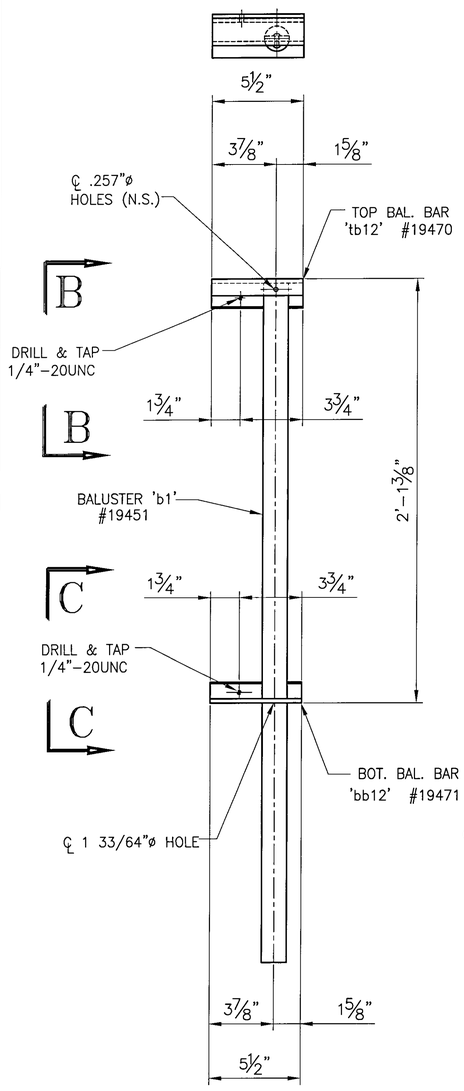
BRIDGE No. 7
PROJECT No. BHF 6000 (15) S ITEM No: 900.640

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

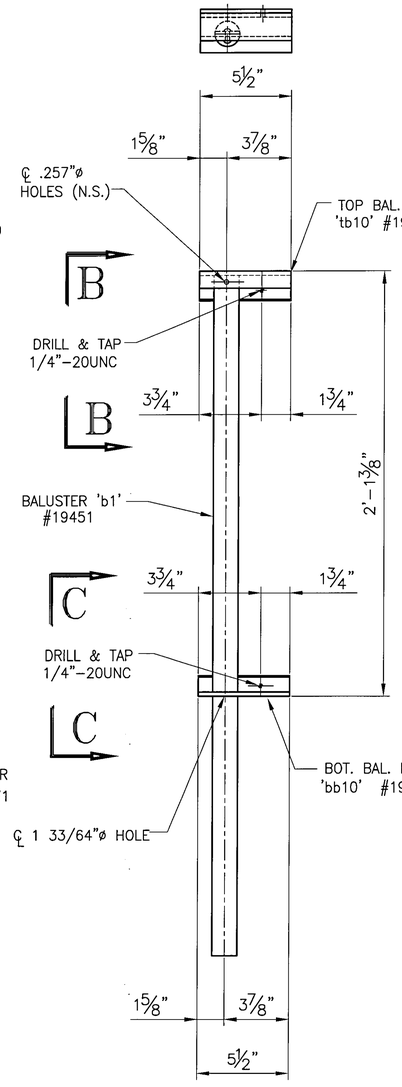
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON
BRIDGE RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
3L ALUM BRIDGE RAILING ~ BALUSTER PANEL DETAILS

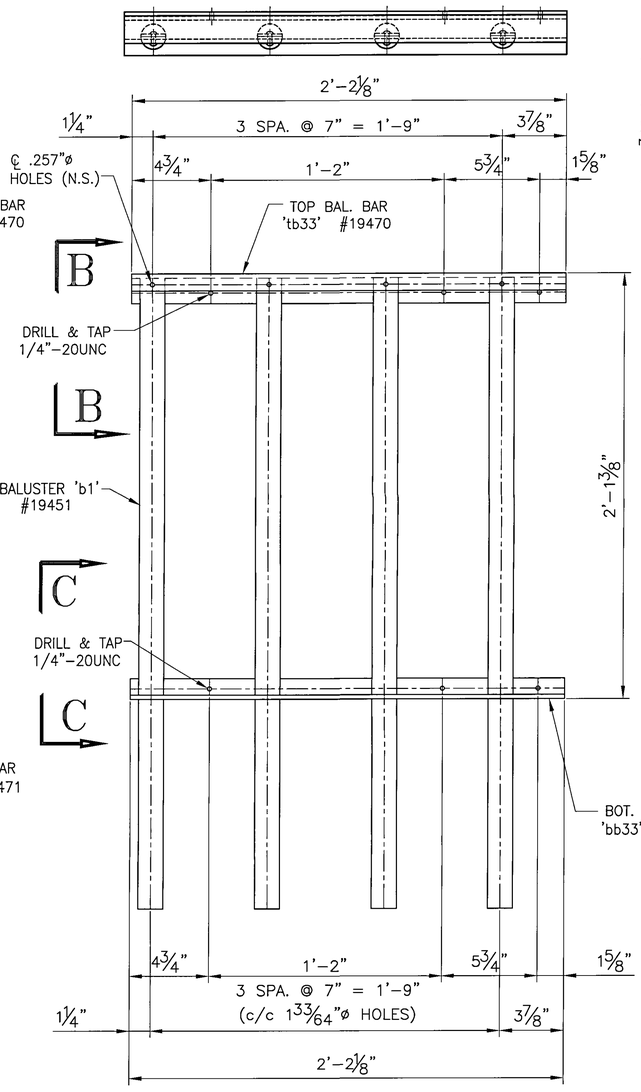
MADE CMS DATE 08/07/09 JOB No. AR0569 CUST. No.
CHECK BLJ DATE 08/17/09 DRAWING LB17 REV. No. ONE



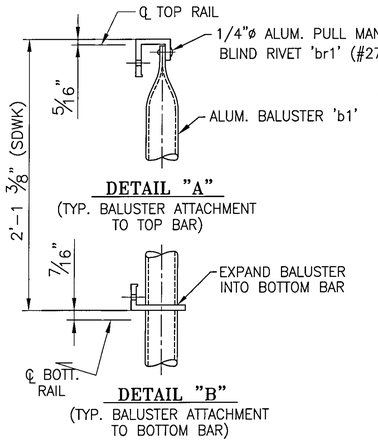
ONE REQ'D. ~ BALUSTER PANEL
ASSEMBLY 'BP12' 1
(REAR VIEW)

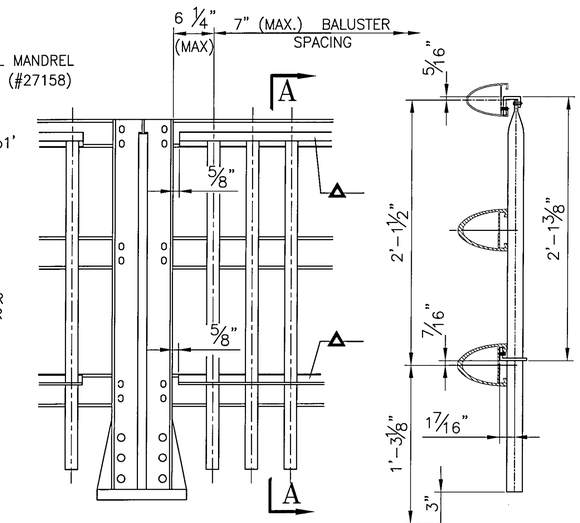


ONE REQ'D. ~ BALUSTER PANEL
1 ASSEMBLY 'BP10'
(REAR VIEW)



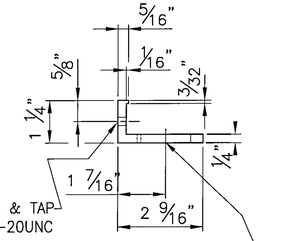
ONE REQ'D. ~ BALUSTER PANEL
1 ASSEMBLY 'BP33'
(REAR VIEW)



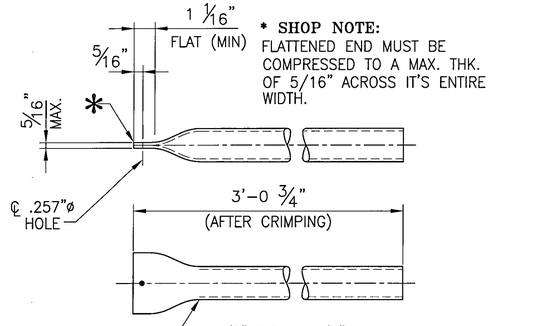


TYPICAL ELEVATION
1/4"–20UNC S.S. SOCKET SET SCREW x 1/2" LG. 'SS1' #22079, SCREW EVERY OTHER SPACE BETWEEN BALUSTERS IF POSSIBLE

SECTION A–A

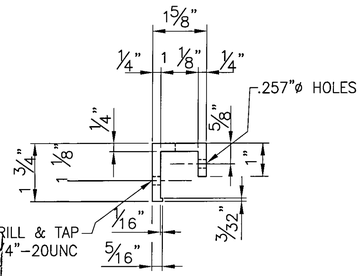


VIEW 'C'–'C'
℄ 1 33/64"ø HOLE



1 6 ~ REQ'D BALUSTERS 'b1' #19451
BALUSTERS WITH 1/8" WALL & T4 TEMPER USED IN LIEU OF 1/16" WALL & T6 TEMPER DUE TO SUPERIOR EXPANDING

NOTE: FOR GEN. NOTES AND TYP. DETAILS SEE DWG LB5
FOR RAILING ELEVATION SEE DWG LB7 – LB9



VIEW 'B'–'B'

Accepted ✓
Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable
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Date 9/25/09 DuBOIS AND KING By: ZPD

ANODIZED
(SEE LB5 FOR SPECS.)

REV.	DESCRIPTION	BY	DATE
1	GENERAL REVISION PER APPROVAL COMMENTS	CMS	09 11 09

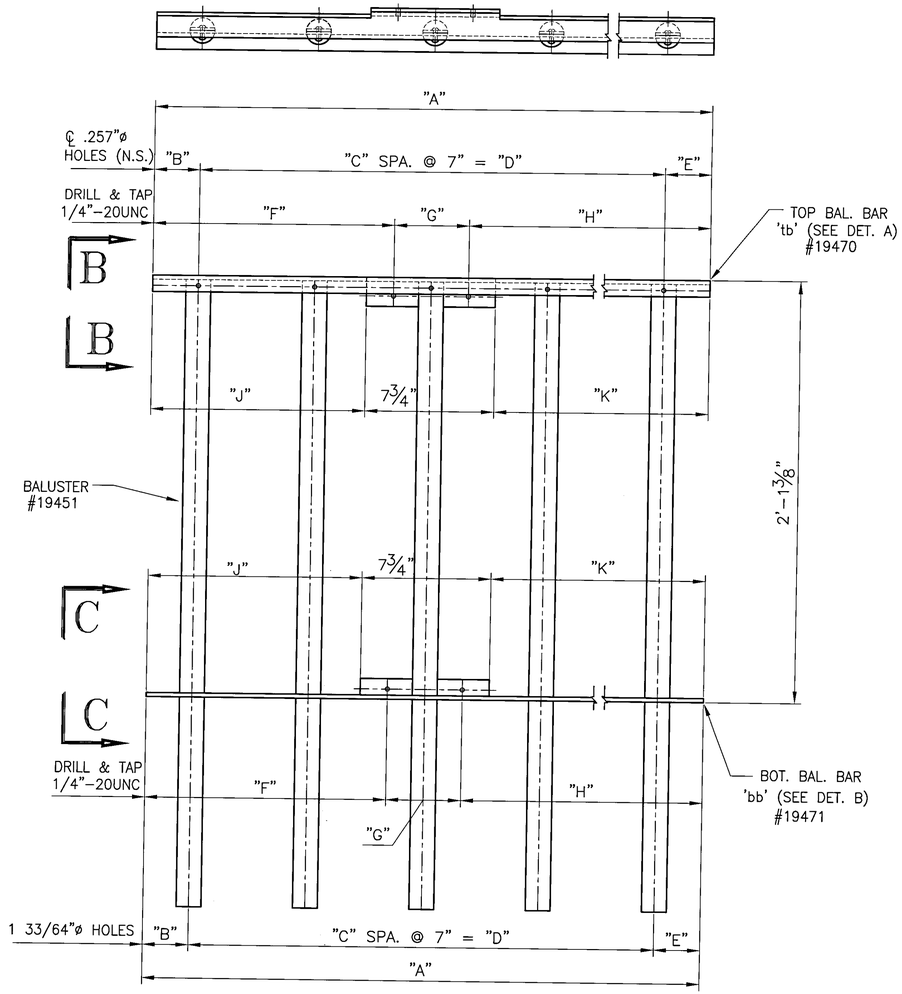
BRIDGE No. 7
PROJECT No. BHF 6000 (15) S — ITEM No: 900.640

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON
BRIDGE RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
3L ALUM BRIDGE RAILING ~ BALUSTER PANEL DETAILS

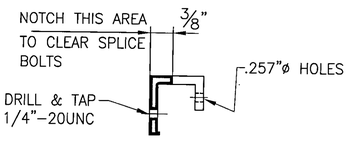
MADE CMS DATE 08/07/09 JOB No. AR0569 CUST. No.
CHECK BLJ DATE 08/17/09 DRAWING LB18 REV. No. ONE



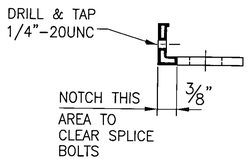
BALUSTER PANEL ASSEMBLY 'BP'

(REAR ELEVATION VIEW)

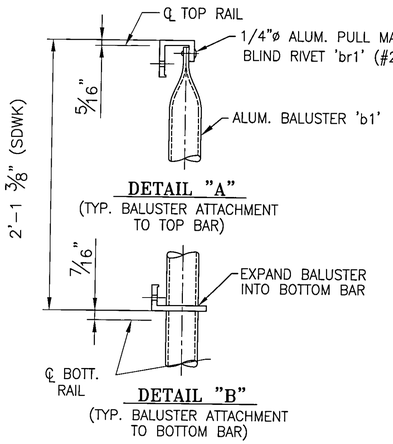
MARK	QTY	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"J"	"K"	PANEL ASSY.
tb11 / bb11	1	2'–4"	3 5/8"	3	1'–9"	3 3/8"	1'–0 1/8"	3 3/4"	1'–0 1/8"	10 1/8"	10 1/8"	BP11
tb15 / bb15	1	2'–9 1/2"	2 3/4"	4	2'–4"	2 3/4"	1'–2 1/2"	4 1/2"	1'–2 1/2"	1'–0 7/8"	1'–0 7/8"	BP15
tb18 / bb18	1	2'–11 11/16"	3 7/8"	4	2'–4"	3 7/8"	1'–3 7/16"	5 3/4"	1'–2 1/2"	1'–2 7/16"	1'–1 1/2"	BP18

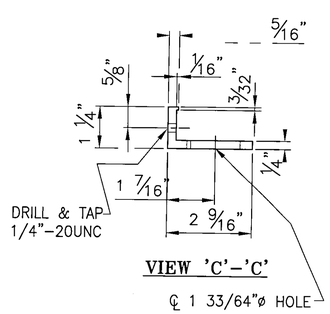


TOP BAR NOTCH AREA



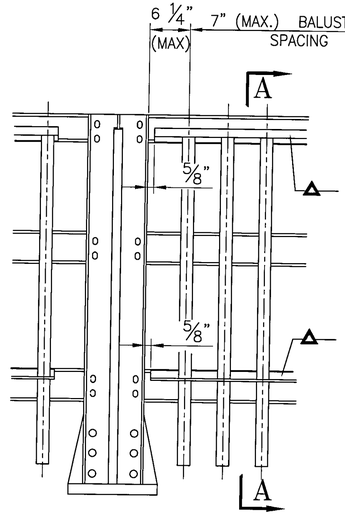
BOTTOM BAR NOTCH AREA





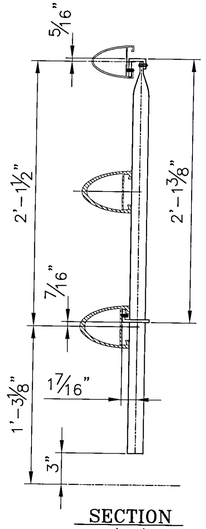
VIEW 'C'–'C'

℄ 1 33/64"ø HOLE

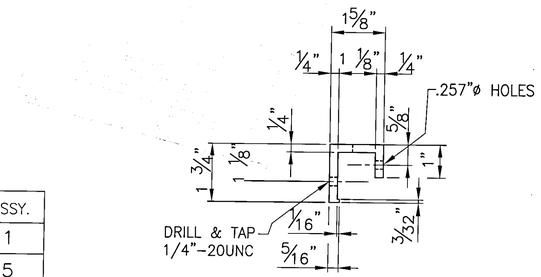


TYPICAL ELEVATION

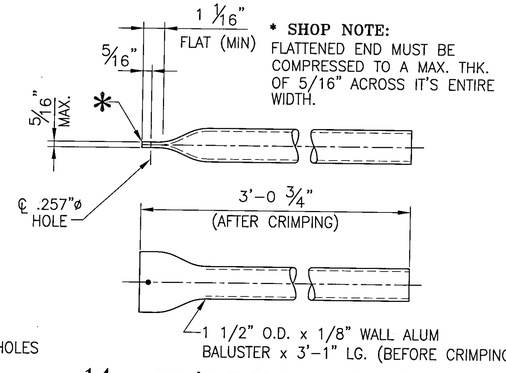
△1/4"–20UNC S.S. SOCKET SET SCREW x 1/2" LG. 'SS1' #22079, SCREW EVERY OTHER SPACE BETWEEN BALUSTERS IF POSSIBLE



SECTION A–A



VIEW 'B'–'B'



14 ~ REQ'D BALUSTERS 'b1' #19451

BALUSTERS WITH 1/8" WALL & T4 TEMPER USED IN LIEU OF 1/16" WALL & T6 TEMPER DUE TO SUPERIOR EXPANDING

NOTE: FOR GEN. NOTES AND TYP. DETAILS SEE DWG LB5
FOR RAILING ELEVATION SEE DWG LB7 – LB9

△1

Accepted ✓
Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable

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Date 9/25/09 DuBOIS AND KING By EDD

ANODIZED

(SEE LB5 FOR SPECS.)

REV.	DESCRIPTION	BY	DATE
1	GENERAL REVISION PER APPROVAL COMMENTS	CMS	09 13 09

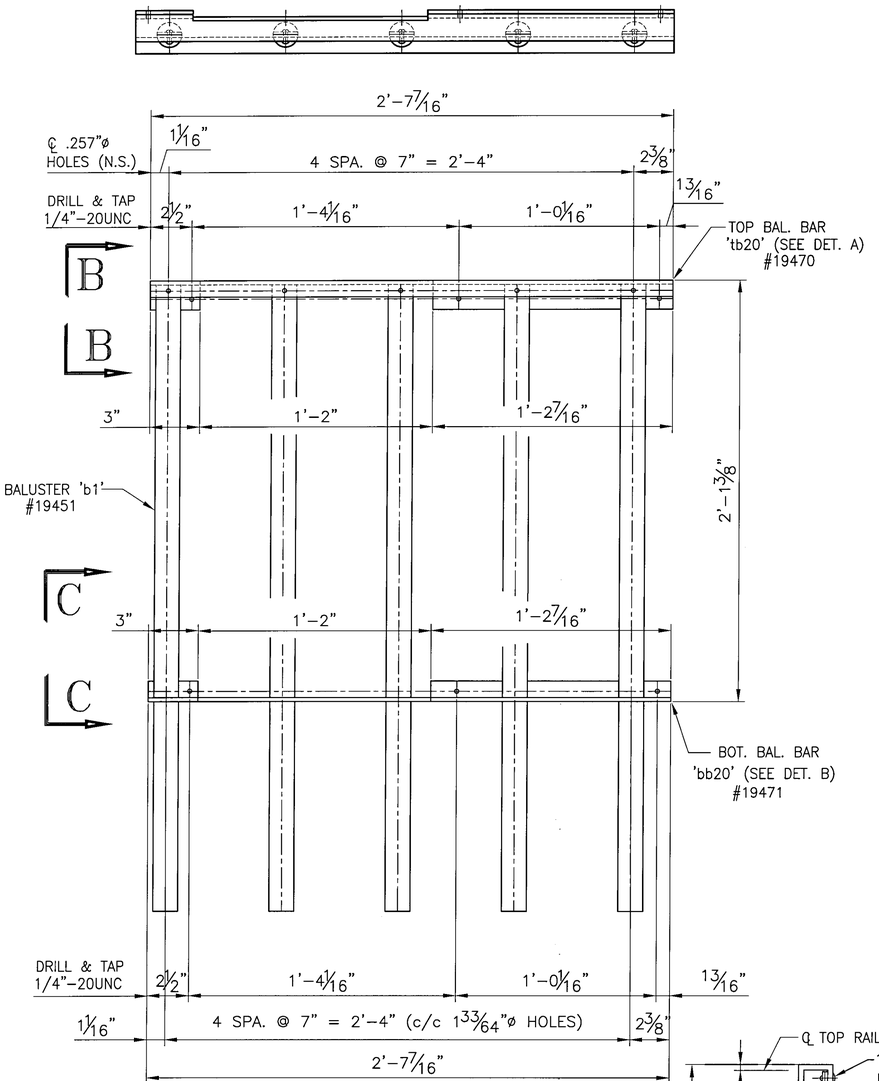
BRIDGE No. 7
PROJECT No. BHF 6000 (15) S ITEM No: 900.640

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

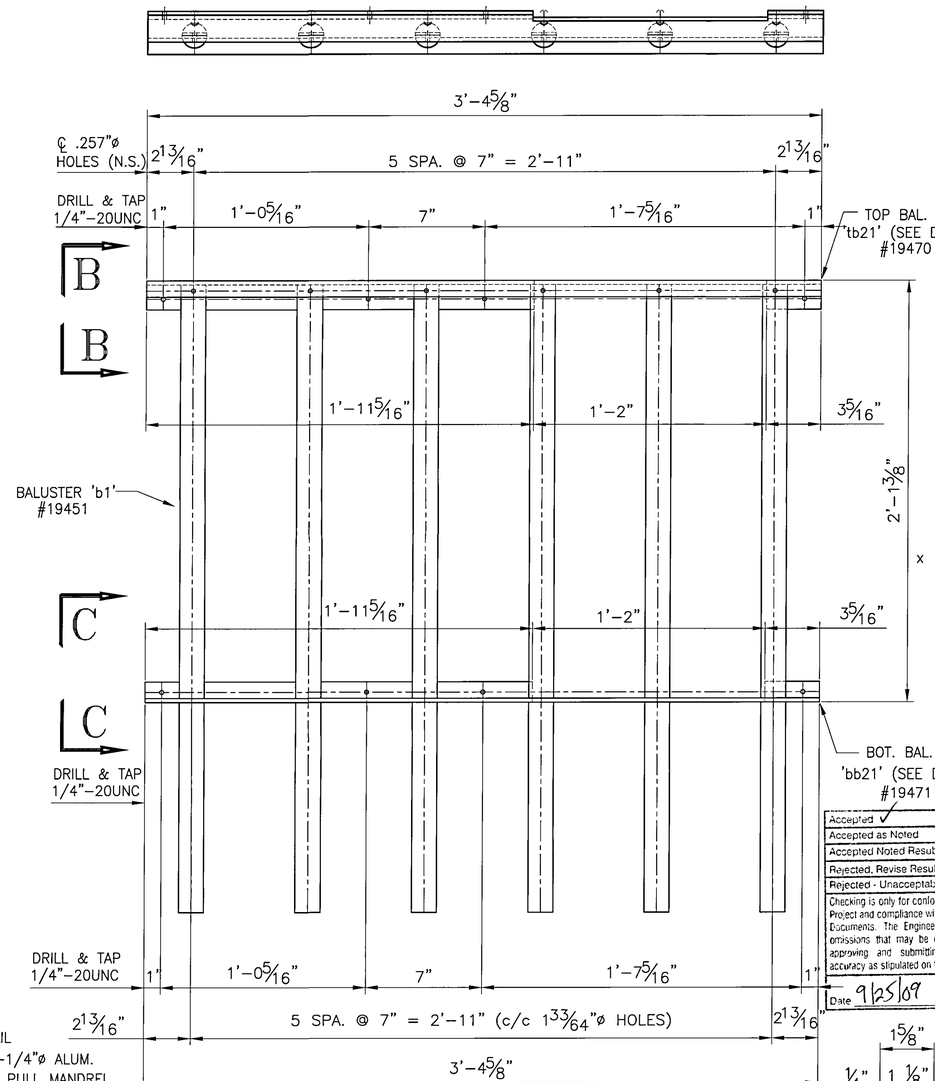
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
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FOR: F. R. LAFAYETTE, INCORPORATED
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BRIDGE RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
3L ALUM BRIDGE RAILING ~ BALUSTER PANEL DETAILS

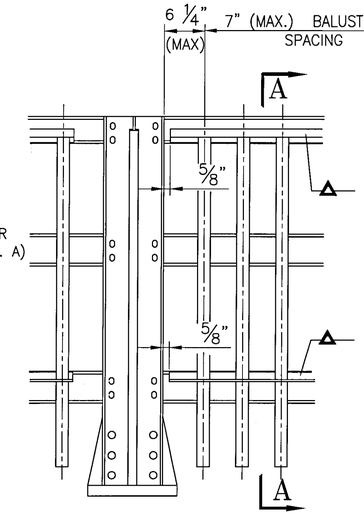
MADE CMS DATE 08/07/09 JOB No. AR0569 CUST. No.
CHECK BLJ DATE 08/17/09 DRAWING LB19 REV. No. ONE



1 ONE REQ'D. ~ BALUSTER PANEL ASSEMBLY 'BP20'
(REAR ELEVATION VIEW)

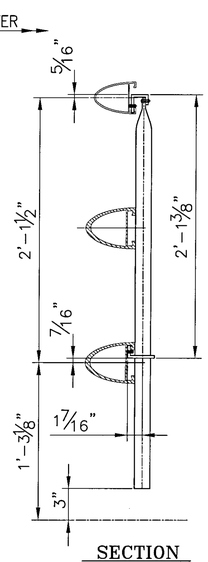


1 ONE REQ'D. ~ BALUSTER PANEL ASSEMBLY 'BP21'
(REAR ELEVATION VIEW)

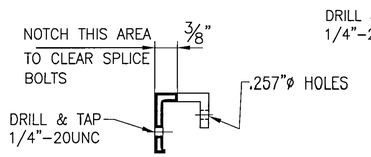


TYPICAL ELEVATION

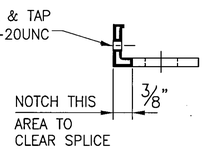
△ 1/4"-20UNC S.S. SOCKET SET SCREW x 1/2" LG. 'SS1' #22079, SCREW EVERY OTHER SPACE BETWEEN BALUSTERS IF POSSIBLE



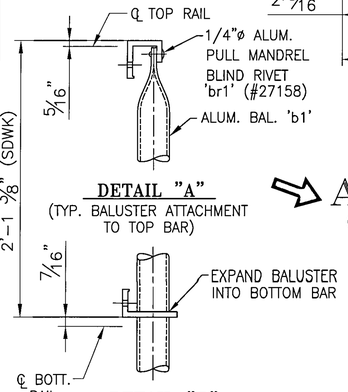
SECTION A–A



TOP BAR NOTCH AREA



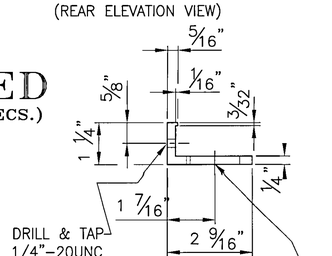
BOTTOM BAR NOTCH AREA



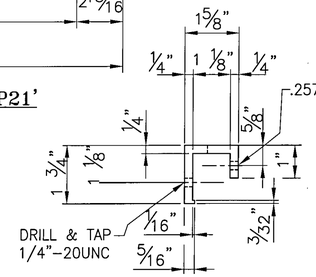
DETAIL "A"
(TYP. BALUSTER ATTACHMENT TO TOP BAR)

DETAIL "B"
(TYP. BALUSTER ATTACHMENT TO BOTTOM BAR)

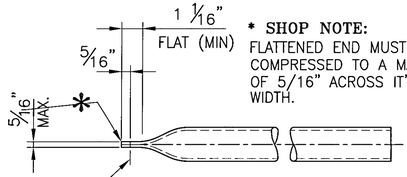
ANODIZED
(SEE LB5 FOR SPECS.)



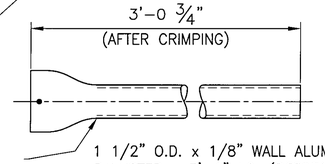
VIEW 'C'–'C'



VIEW 'B'–'B'



*** SHOP NOTE:** FLATTENED END MUST BE COMPRESSED TO A MAX. THK. OF 5/16" ACROSS IT'S ENTIRE WIDTH.



1 1/2" O.D. x 1/8" WALL ALUM BALUSTER x 3'-1" LG. (BEFORE CRIMPING)

11 REQ'D BALUSTERS 'b1' #19451

BALUSTERS WITH 1/8" WALL & T4 TEMPER USED IN LIEU OF 1/16" WALL & T6 TEMPER DUE TO SUPERIOR EXPANDING

Checking Stamp
Accepted ✓
Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable
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DuBOIS AND KING
Date 9/25/09 By EPD

NOTE: FOR GEN. NOTES AND TYP. DETAILS SEE DWG LB5
FOR RAILING ELEVATION SEE DWG LB7 – LB9

BRIDGE No. 7
PROJECT No. BHF 6000 (15) S ITEM No: 900.640

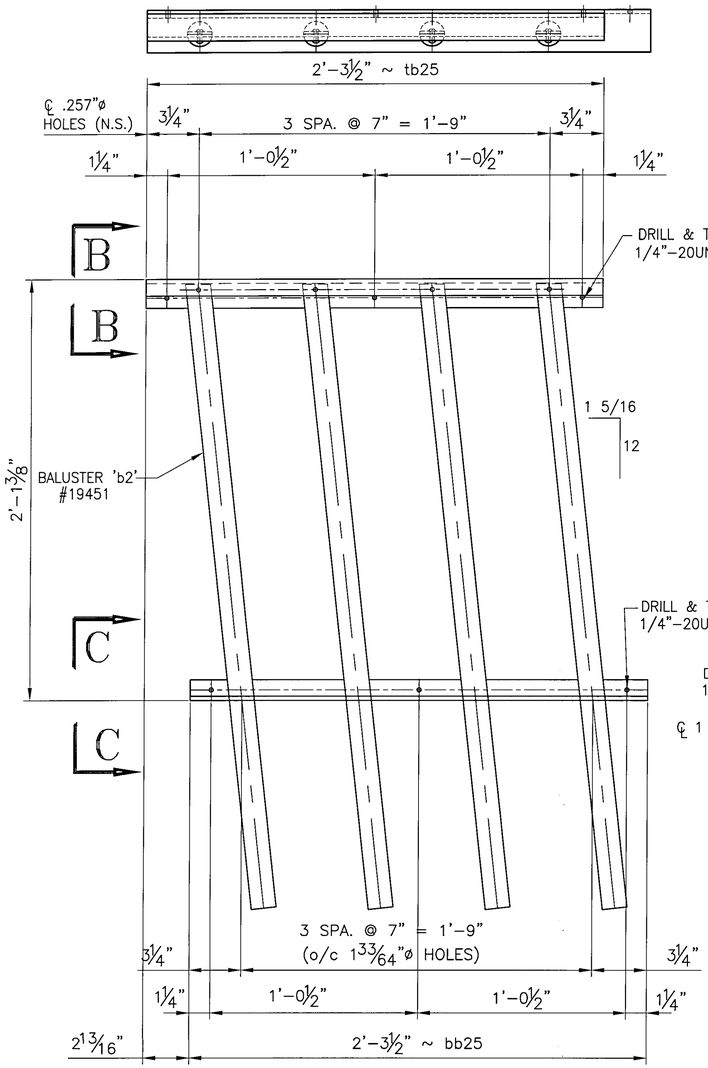
APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON
BRIDGE RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
3L ALUM BRIDGE RAILING ~ BALUSTER PANEL DETAILS

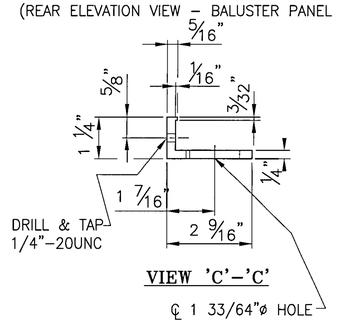
MADE CMS DATE 08/07/09 JOB No. AR0569 CUST. No.
CHECK BLJ DATE 08/17/09 DRAWING LB20 REV. No. ONE

REV.	DESCRIPTION	BY	DATE
1	GENERAL REVISION PER APPROVAL COMMENTS	CMS	09 13 09

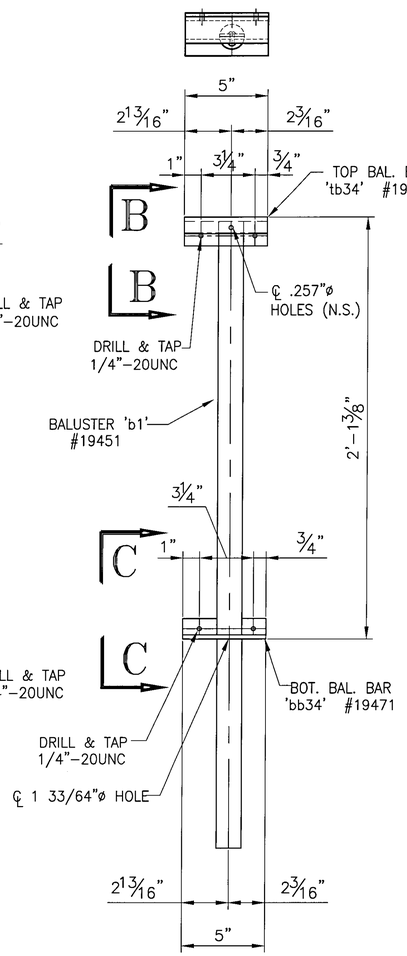


1 4 REQ'D. ~ BALUSTER PANEL ASSEMBLY 'BP25'

(REAR ELEVATION VIEW – BALUSTER PANEL BP25)

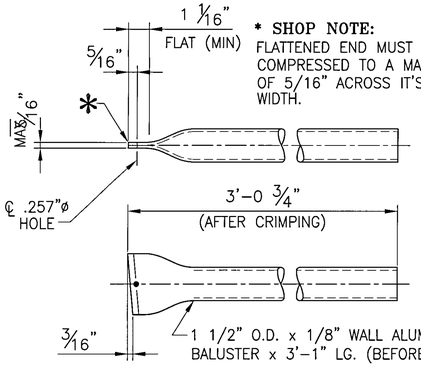


VIEW 'C'–'C'



BAL. PANEL ASSEMBLY 'BP34' ONE REQ'D. 1

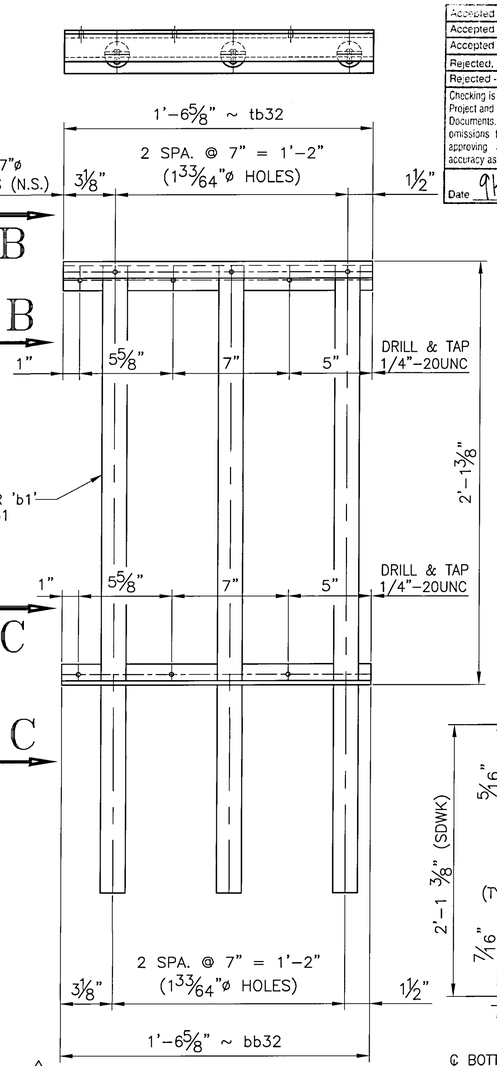
(REAR ELEVATION VIEW)



* SHOP NOTE: FLATTENED END MUST BE COMPRESSED TO A MAX. THK. OF 5/16" ACROSS IT'S ENTIRE WIDTH.

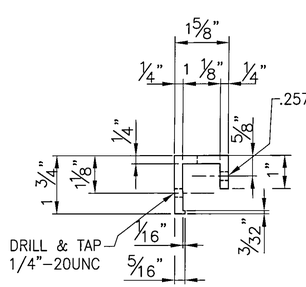
16 ~ REQ'D BALUSTERS 'b2' #19451

BALUSTERS WITH 1/8" WALL & T4 TEMPER USED IN LIEU OF 1/16" WALL & T6 TEMPER DUE TO SUPERIOR EXPANDING



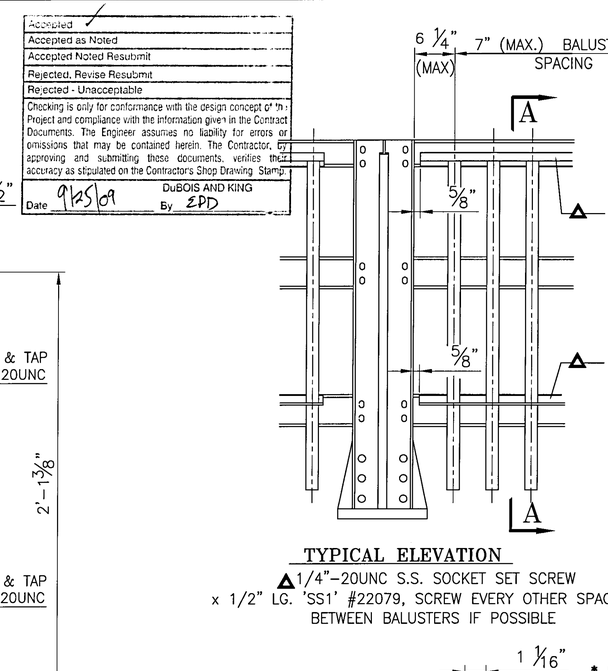
1 BAL. PANEL ASSEMBLY 'BP32' ONE REQ'D.

(REAR ELEVATION VIEW – BALUSTER PANEL BP32)



VIEW 'B'–'B'

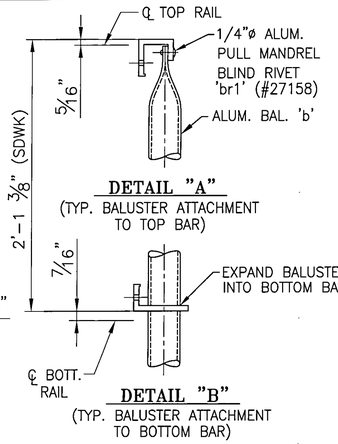
ANODIZED (SEE LB5 FOR SPECS.)

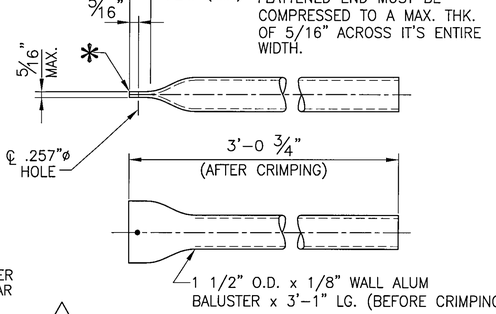


TYPICAL ELEVATION

△1/4"–20UNC S.S. SOCKET SET SCREW x 1/2" LG. 'SS1' #22079, SCREW EVERY OTHER SPACE BETWEEN BALUSTERS IF POSSIBLE

SECTION A–A





* SHOP NOTE: FLATTENED END MUST BE COMPRESSED TO A MAX. THK. OF 5/16" ACROSS IT'S ENTIRE WIDTH.

1 4 ~ REQ'D BALUSTERS 'b1' #19451

BALUSTERS WITH 1/8" WALL & T4 TEMPER USED IN LIEU OF 1/16" WALL & T6 TEMPER DUE TO SUPERIOR EXPANDING

NOTE: FOR GEN. NOTES AND TYP. DETAILS SEE DWG LB5
FOR RAILING ELEVATION SEE DWG LB7 – LB9

Accepted ✓
Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable
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Date 9/25/09 DuBOIS AND KING By ZPD

BRIDGE No. 7
PROJECT No. BHF 6000 (15) S ITEM No: 900.640

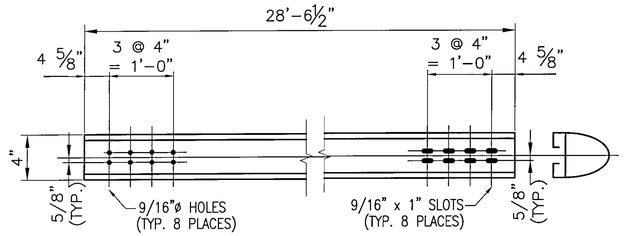
APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON
BRIDGE RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
3L ALUM BRIDGE RAILING ~ BALUSTER PANEL DETAILS

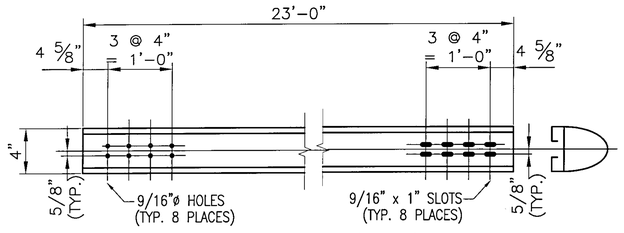
REV.	DESCRIPTION	BY	DATE
1	GENERAL REVISION PER APPROVAL COMMENTS	CMS	09 12 09

MADE CMS DATE 08/07/09 JOB No. AR0569 CUST. No.
CHECK BLJ DATE 08/17/09 DRAWING LB21 REV. No. ONE



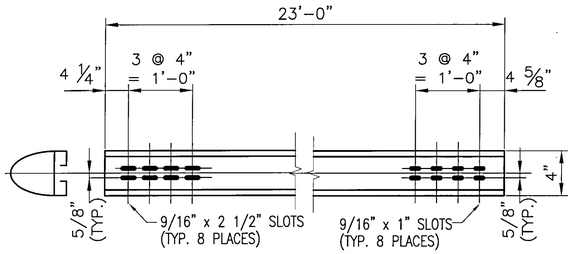
ONE REQ'D. ~ RAIL 'MB1'
(BACK ELEVATION VIEW)

ONE REQ'D. ~ RAIL 'BB1'
(BACK ELEVATION VIEW)



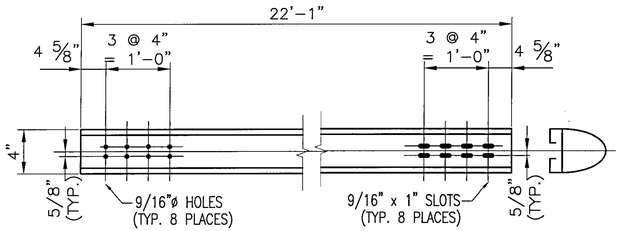
2 REQ'D. ~ RAIL 'MB2'
(BACK ELEVATION VIEW)

2 REQ'D. ~ RAIL 'BB2'
(BACK ELEVATION VIEW)



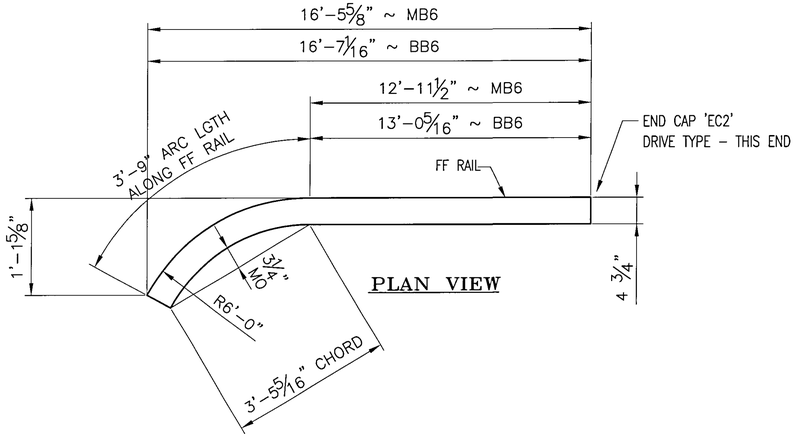
ONE REQ'D. ~ RAIL 'MB3'
(BACK ELEVATION VIEW)

ONE REQ'D. ~ RAIL 'BB3'
(BACK ELEVATION VIEW)

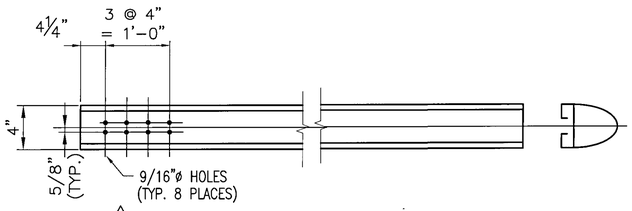


ONE REQ'D. ~ RAIL 'MB5'
(BACK ELEVATION VIEW)

ONE REQ'D. ~ RAIL 'BB5'
(BACK ELEVATION VIEW)

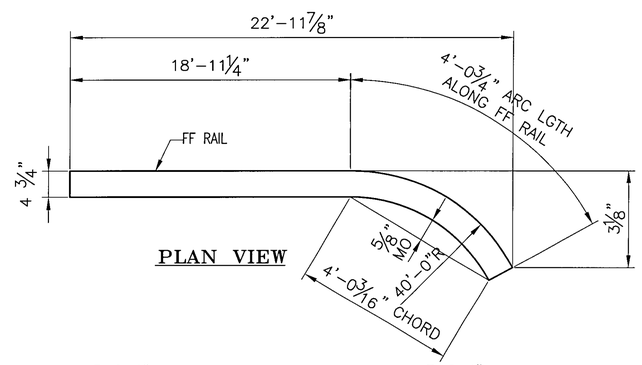


PLAN VIEW



1 ONE REQ'D. ~ BENT RAIL 'MB6'
(BACK ELEVATION VIEW)(FINISHED LGTH ALONG FF RAIL = 16'-8 1/2" + 2'-6" FOR SHOP BENDING)

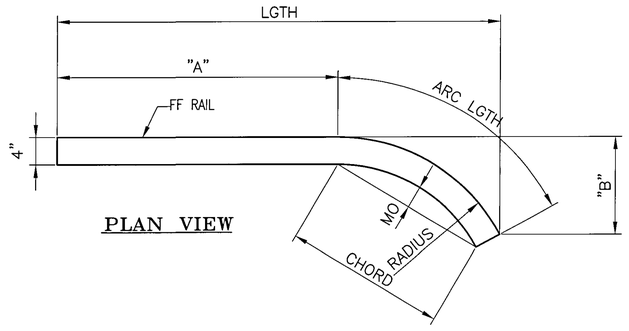
1 ONE REQ'D. ~ BENT RAIL 'BB6'
(BACK ELEVATION VIEW)(FINISHED LGTH ALONG FF RAIL = 16'-9 15/16" + 2'-6" FOR SHOP BENDING)



PLAN VIEW

ONE REQ'D. ~ BENT RAIL 'MA2'
(BACK ELEVATION VIEW)(FINISHED LGTH ALONG FF RAIL = 23'-0" + 2'-6" FOR SHOP BENDING)

ONE REQ'D. ~ BENT RAIL 'BA2'
(BACK ELEVATION VIEW)(FINISHED LGTH ALONG FF RAIL = 23'-0" + 2'-6" FOR SHOP BENDING)



PLAN VIEW

ANODIZED
(SEE NOTES ON LB5)

BENT TOP RAILS										MATL FOR BENDING
MK.	QTY	OAL (ALONG FF RAIL)	ARC LGTH	LGTH	"A"	"B"	MO	CHORD	RADIUS	
TA2	1	22'-11 13/16"	4'-0 11/16"	22'-11 13/16"	18'-11 5/16"	3 1/8"	5/8"	4'-0 3/16"	39'-11 1/4"	+2'-6"
TB6	1	16'-7 3/16"	3'-8 9/16"	16'-4 5/16"	12'-10 5/8"	1'-1 7/16"	3 1/4"	3'-5 5/16"	5'-11 1/4"	+2'-6"

REV.	DESCRIPTION	BY	DATE
1	REVISED PER APPROVER MARKUP	CMS	09 13 09

Accepted ✓
Accepted as Noted
Accepted Noted Resubmit
Rejected. Revise Resubmit
Rejected - Unacceptable
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Date 9/25/09 DuBOIS AND KING By ZPD

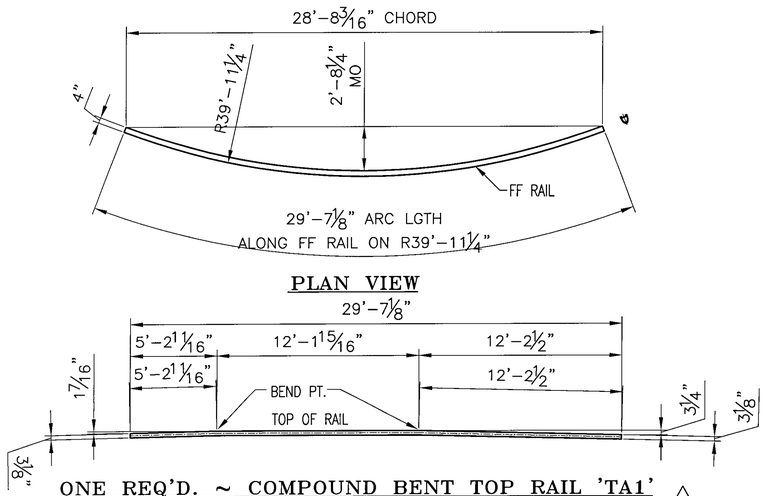
BRIDGE No. 7
ITEM No: 900.640
PROJECT No. BHF 6000 (15) S

APPROVED: _____ REC'D APPROVAL _____
DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON
BRIDGE RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
3-LINE ALUM BRIDGE RAIL ~ MISC RAIL DETAILS

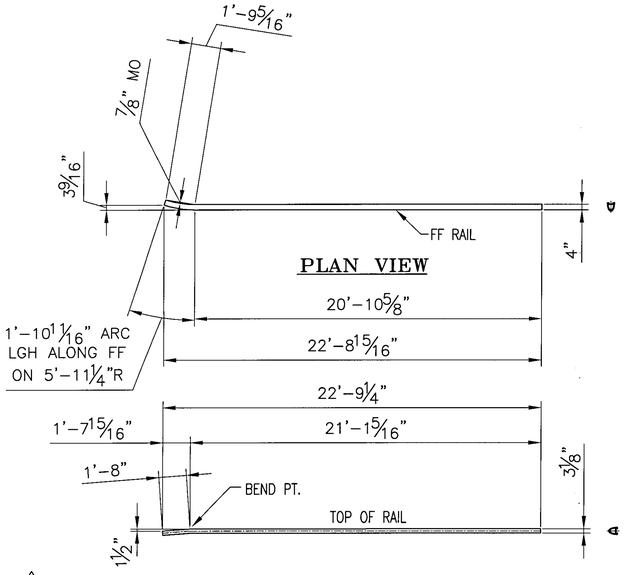
MADE CMS DATE 08/10/09 JOB No. AR0569 CUST. No.
CHECK BLJ DATE 08/17/09 DRAWING LB22 REV. No. ONE



PLAN VIEW

1 ONE REQ'D. ~ COMPOUND BENT TOP RAIL 'TA1'

(FRONT ELEVATION VIEW)(FINISHED LGTH ALONG FF RAIL = 29'-7 1/8" + 4'-0" FOR SHOP BENDING)

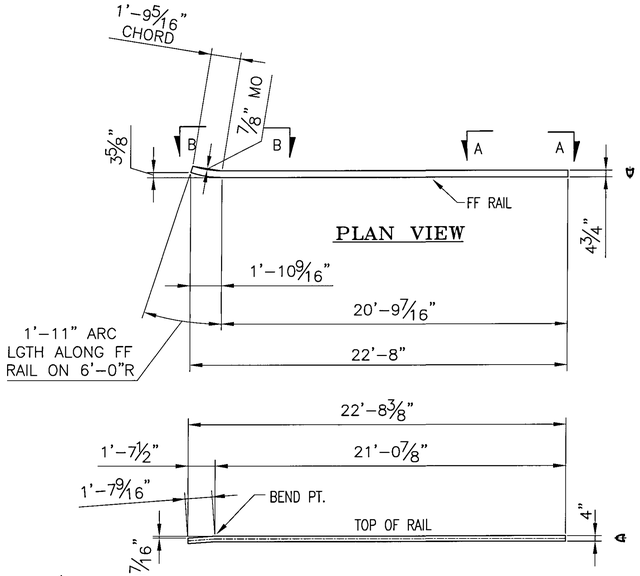


1 ONE REQ'D. ~ COMPOUND BENT TOP RAIL 'TB4'

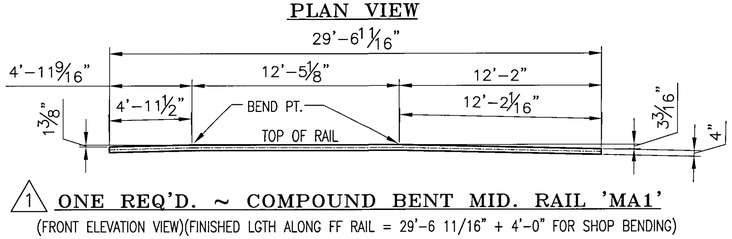
(FRONT ELEVATION VIEW)(FINISHED LGTH ALONG FF RAIL = 22'-9 5/16" + 2'-6" FOR SHOP BENDING)

SECT. 'A'-'A'

(REAR ELEVATION)



PLAN VIEW



1 ONE REQ'D. ~ COMPOUND BENT MID. RAIL 'MA1'

(FRONT ELEVATION VIEW)(FINISHED LGTH ALONG FF RAIL = 29'-6 11/16" + 4'-0" FOR SHOP BENDING)

1 ONE REQ'D. ~ COMPOUND BENT MID. RAIL 'MB4'

(FRONT ELEVATION VIEW)(FINISHED LGTH ALONG FF RAIL = 22'-8 7/16" + 2'-6" FOR SHOP BENDING)

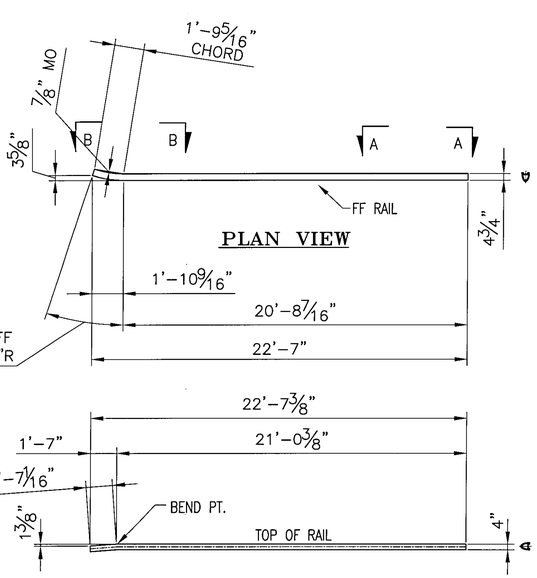
SECT. 'B'-'B'

(REAR ELEVATION)

Accepted ✓
Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable

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Date 9/25/09 DuBOIS AND KING By EPD



1 ONE REQ'D. ~ COMPOUND BENT MID. RAIL 'BB4'

(FRONT ELEVATION VIEW)(FINISHED LGTH ALONG FF RAIL = 22'-7 7/16" + 2'-6" FOR SHOP BENDING)

SECT. 'C'-'C'

(REAR ELEVATION)

ANODIZED

(SEE NOTES ON LB5)

BRIDGE No. 7

PROJECT No. BHF 6000 (15) S ITEM No: 900.640

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY

1016 GREENTREE ROAD

PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED

VERMONT AGENCY OF TRANSPORTATION

CITY OF BARRE, COUNTY OF WASHINGTON

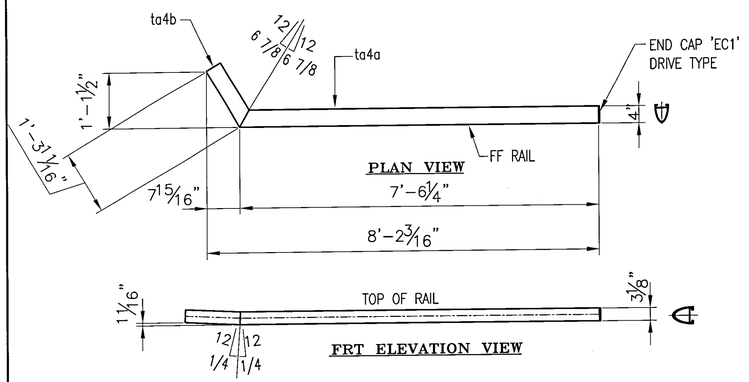
BRIDGE RAILING FOR PROSPECT ST. OVER STEVENS BRANCH

3-LINE ALUM BRIDGE RAIL ~ MISC RAIL DETAILS

REV.	DESCRIPTION	BY	DATE
1	REVISED PER APPROVER MARKUP	CMS	03 22 07

MADE CMS DATE 08/10/09 JOB No. AR0569 CUST. No.

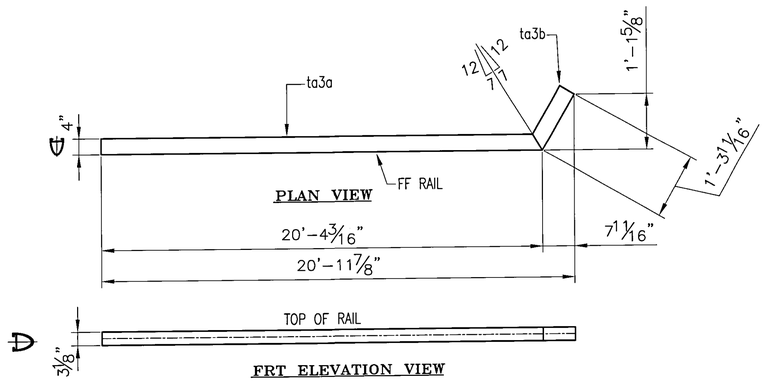
CHECK BLJ DATE 08/17/09 DRAWING LB23 REV. No. ONE



1 ONE REQ'D. ~ MITERED TOP RAIL 'TA4'

ONE REQ'D. ~ 'ta4a' x 7'-6 1/4" (ALONG LONGEST EDGE)

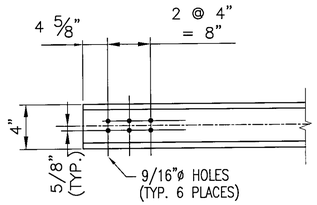
ONE REQ'D. ~ 'ta4b' x 1'-3 11/16" (ALONG LONGEST EDGE)



1 ONE REQ'D. ~ MITERED TOP RAIL 'TA3'

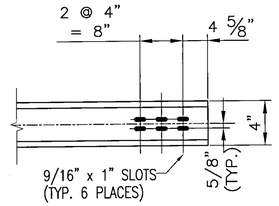
ONE REQ'D. ~ 'ta3a' x 20'-4 3/16" (ALONG LONGEST EDGE)

ONE REQ'D. ~ 'ta3b' x 1'-3 1/16" (ALONG LONGEST EDGE)



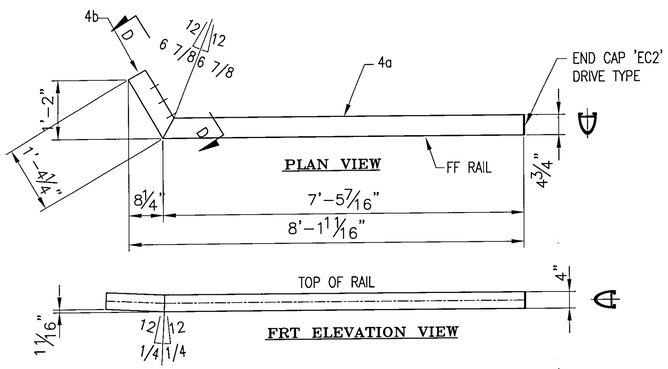
SECT. 'E'–'E'

(REAR ELEVATION)



SECT. 'D'–'D'

(REAR ELEVATION)



1 ONE REQ'D. ~ MITERED MID RAIL 'MA4'

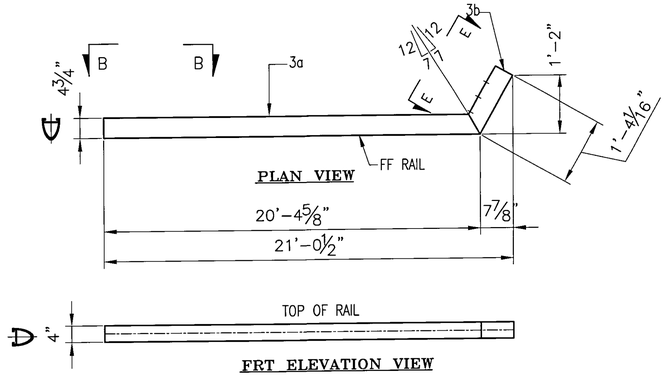
ONE REQ'D. ~ 'ma4a' x 7'-5 7/16" (ALONG LONGEST EDGE)

ONE REQ'D. ~ 'ma4b' x 1'-4 1/4" (ALONG LONGEST EDGE)

1 ONE REQ'D. ~ MITERED BOT. RAIL 'BA4'

ONE REQ'D. ~ 'ba4a' x 7'-5 7/16" (ALONG LONGEST EDGE)

ONE REQ'D. ~ 'ba4b' x 1'-4 1/4" (ALONG LONGEST EDGE)



1 ONE REQ'D. ~ MITERED MID RAIL 'MA3'

ONE REQ'D. ~ 'ma3a' x 20'-4 5/8" (ALONG LONGEST EDGE)

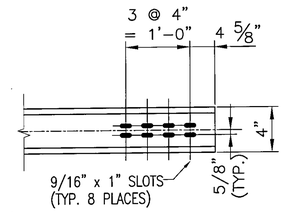
ONE REQ'D. ~ 'ma3b' x 1'-4 1/16" (ALONG LONGEST EDGE)

1 ONE REQ'D. ~ MITERED BOT. RAIL 'BA3'

ONE REQ'D. ~ 'ba3a' x 20'-4 5/8" (ALONG LONGEST EDGE)

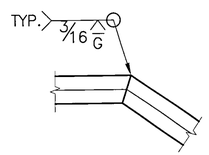
ONE REQ'D. ~ 'bma3b' x 1'-4 1/16" (ALONG LONGEST EDGE)

Accepted ✓
Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable
Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Engineer assumes no liability for errors or omissions that may be contained herein. The Contractor, by approving and submitting these documents, verifies their accuracy as stipulated on the Contractor's Shop Drawing Stamp.
Date 9/25/09 DUBOIS AND KING By EPD



SECT. 'B'–'B'

(REAR ELEVATION)



TYPICAL WELD DETAIL @ MITERED BAL. RAILS

ANODIZED
(SEE NOTES ON LB5)

BRIDGE No. 7
PROJECT No. BHF 6000 (15) S
ITEM No: 900.640

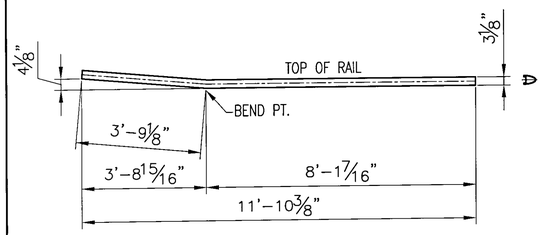
APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

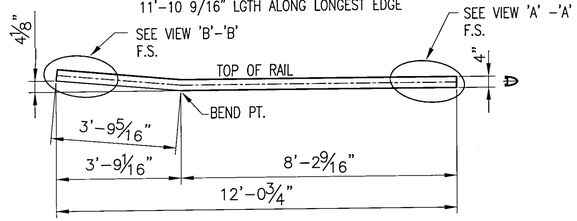
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON
BRIDGE RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
3-LINE ALUM BRIDGE RAIL ~ MISC RAIL DETAILS

MADE CMS DATE 08/10/09 JOB No. AR0569 CUST. No.
CHECK BLJ DATE 08/17/09 DRAWING LB24 REV. No. ONE

REV.	DESCRIPTION	BY	DATE
1	REVISED PER APPROVER MARKUP	CMS	03 22 07

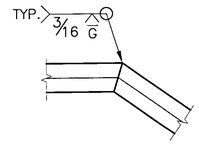


1 ONE REQ'D. ~ BENT RAIL 'TB7'
(FRONT ELEVATION VIEW)
11'-10 9/16" LGTH ALONG LONGEST EDGE

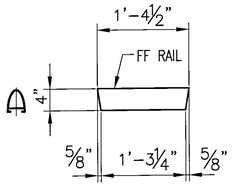


1 ONE REQ'D. ~ BENT RAIL 'MB7'
(FRONT ELEVATION VIEW)
11'-11 7/8" LGTH ALONG LONGEST EDGE

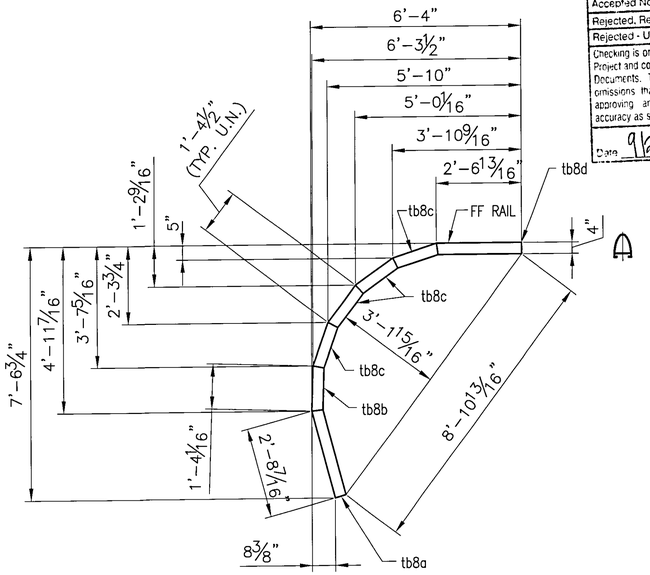
1 ONE REQ'D. ~ BENT RAIL 'BB7'
(FRONT ELEVATION VIEW)
11'-11 7/8" LGTH ALONG LONGEST EDGE



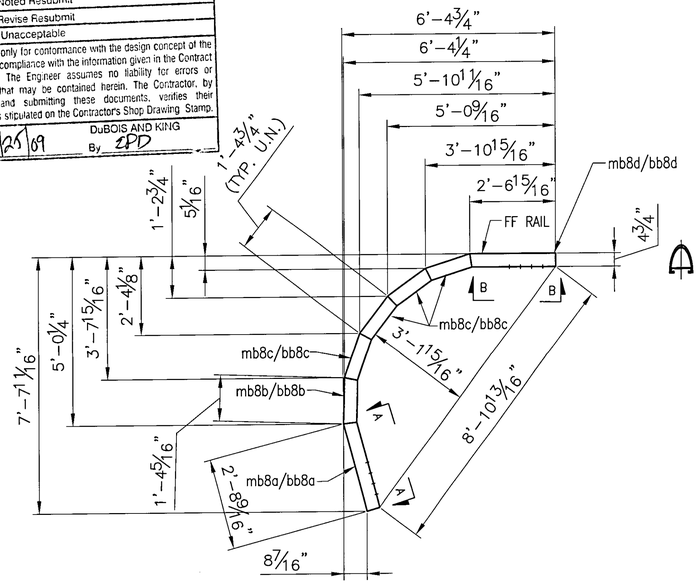
TYPICAL WELD DETAIL
@ MITERED BAL. RAILS



MITERED TOP RAIL 'tb8c'
4 REQ'D.
ONE REQ'D. ~ 'tb8c' x 1'-4 1/2" (ALONG LONGEST EDGE)

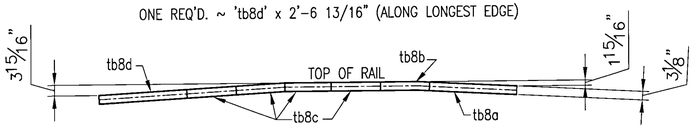


ONE REQ'D. ~ MITERED TOP RAIL 'TB8'
ONE REQ'D. ~ 'tb8a' x 2'-8 7/16" (ALONG LONGEST EDGE)
ONE REQ'D. ~ 'tb8b' x 1'-4 1/16" (ALONG LONGEST EDGE)
4 REQ'D. ~ 'tb8c' x 1'-4 1/2" (ALONG LONGEST EDGE)
ONE REQ'D. ~ 'tb8d' x 2'-6 13/16" (ALONG LONGEST EDGE)

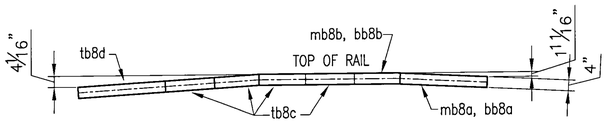


ONE REQ'D. ~ MITERED MID RAIL 'MB8'
ONE REQ'D. ~ 'mb8a' x 2'-8 916" (ALONG LONGEST EDGE)
ONE REQ'D. ~ 'mb8b' x 1'-4 5/16" (ALONG LONGEST EDGE)
4 REQ'D. ~ 'mb8c' x 1'-4 3/4" (ALONG LONGEST EDGE)
ONE REQ'D. ~ 'mb8d' x 2'-6 15/16" (ALONG LONGEST EDGE)

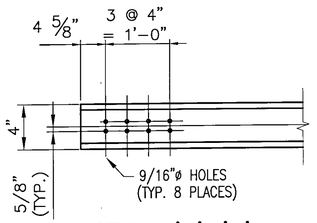
ONE REQ'D. ~ MITERED BOT. RAIL 'BB8'
ONE REQ'D. ~ 'bb8a' x 2'-8 916" (ALONG LONGEST EDGE)
ONE REQ'D. ~ 'bb8b' x 1'-4 5/16" (ALONG LONGEST EDGE)
4 REQ'D. ~ 'bb8c' x 1'-4 3/4" (ALONG LONGEST EDGE)
ONE REQ'D. ~ 'bb8d' x 2'-6 15/16" (ALONG LONGEST EDGE)



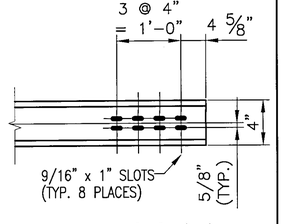
1 DEVELOPED FRT ELEV. OF 'TB8'



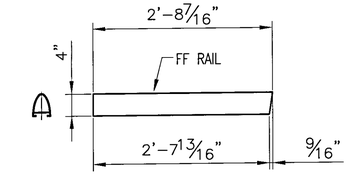
1 DEVELOPED FRT ELEV. OF 'MB8' & 'BB8'



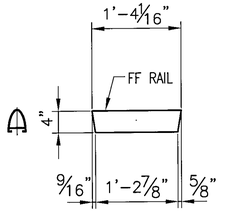
SECT. 'A'-'A'
(REAR ELEVATION)



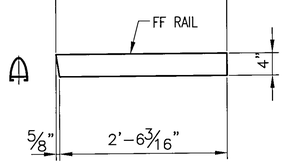
SECT. 'B'-'B'
(REAR ELEVATION)



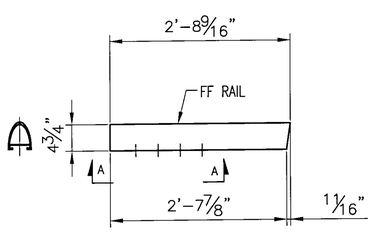
MITERED TOP RAIL 'tb8a'
ONE REQ'D.
ONE REQ'D. ~ 'tb8a' x 2'-8 7/16" (ALONG LONGEST EDGE)



MITERED TOP RAIL 'tb8b'
ONE REQ'D.
ONE REQ'D. ~ 'tb8b' x 1'-4 1/16" (ALONG LONGEST EDGE)

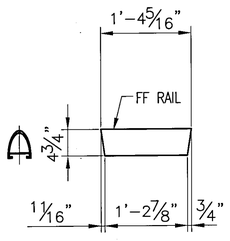


MITERED TOP RAIL 'tb8d'
ONE REQ'D.
ONE REQ'D. ~ 'tb8d' x 2'-6 13/16" (ALONG LONGEST EDGE)



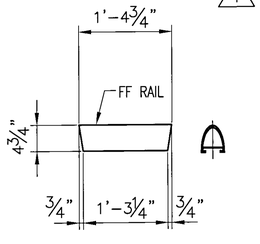
MITERED MID RAIL 'mb8a'
ONE REQ'D.
ONE REQ'D. ~ 'mb8a' x 2'-8 9/16" (ALONG LONGEST EDGE)

MITERED BOTTOM RAIL 'bb8a'
ONE REQ'D.
ONE REQ'D. ~ 'bb8a' x 2'-8 9/16" (ALONG LONGEST EDGE)



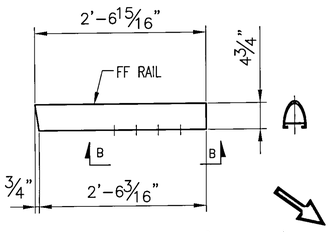
MITERED MID RAIL 'mb8b'
ONE REQ'D.
ONE REQ'D. ~ 'mb8b' x 1'-4 5/16" (ALONG LONGEST EDGE)

MITERED BOTTOM RAIL 'bb8b'
ONE REQ'D.
ONE REQ'D. ~ 'bb8b' x 1'-4 5/16" (ALONG LONGEST EDGE)



MITERED MID RAIL 'mb8c'
4 REQ'D.
ONE REQ'D. ~ 'mb8c' x 1'-4 3/4" (ALONG LONGEST EDGE)

MITERED BOTTOM RAIL 'bb8a'
4 REQ'D.
ONE REQ'D. ~ 'bb8c' x 1'-4 3/4" (ALONG LONGEST EDGE)



MITERED MID RAIL 'mb8d'
ONE REQ'D.
ONE REQ'D. ~ 'mb8d' x 2'-6 15/16" (ALONG LONGEST EDGE)

MITERED BOTTOM RAIL 'bb8a'
ONE REQ'D.
ONE REQ'D. ~ 'bb8d' x 2'-6 15/16" (ALONG LONGEST EDGE)

ANODIZED
(SEE NOTES ON LB1)

Accepted ✓
Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable
Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Engineer assumes no liability for errors or omissions that may be contained herein. The Contractor, by approving and submitting these documents, verifies their accuracy as stipulated on the Contractors Shop Drawing Stamp.
Date 9/25/09 DuBOIS AND KING By ZPD

REV.	DESCRIPTION	BY	DATE
1	REVISED PER APPROVER MARKUP	CMS	03 22 07

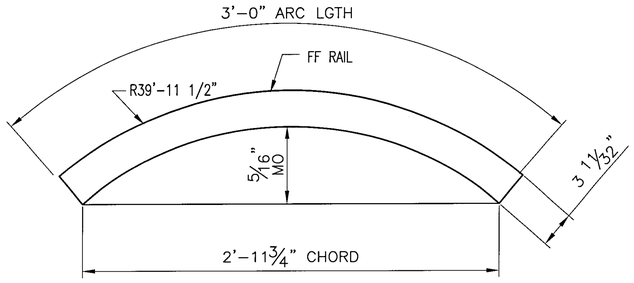
BRIDGE No. 7
PROJECT No. BHF 6000 (15) S
ITEM No: 900.640

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

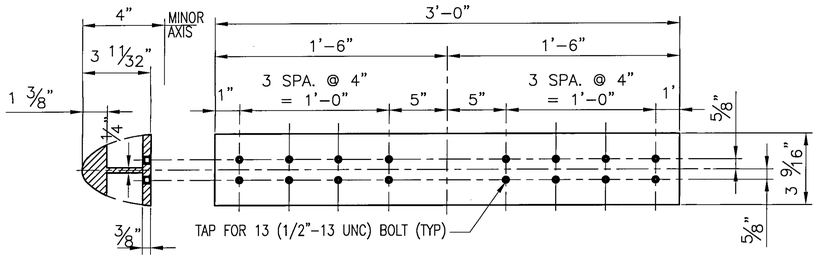
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON
BRIDGE RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
3-LINE ALUM BRIDGE RAIL ~ MISC RAIL DETAILS

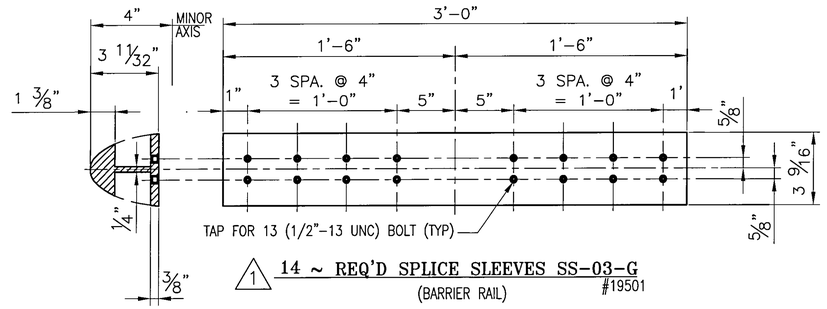
MADE CMS DATE 08/10/09 JOB No. AR0569 CUST. No.
CHECK BLJ DATE 08/17/09 DRAWING LB25 REV. No. ONE



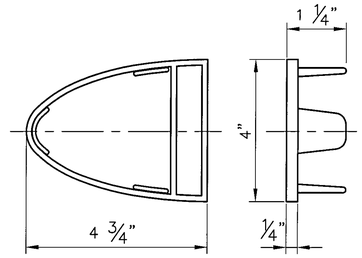
PLAN VIEW



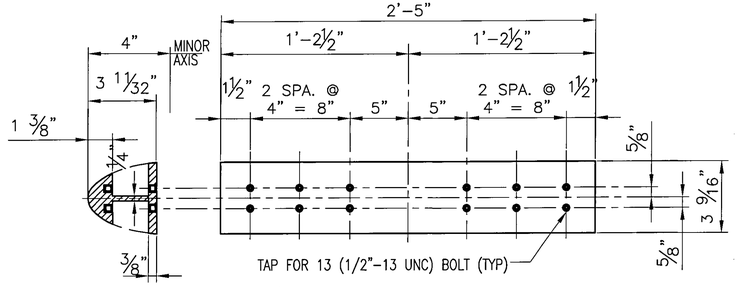
1 2 ~ REQ'D BENT SPLICE SLEEVES SS-03-G1
(BARRIER RAIL) #19501



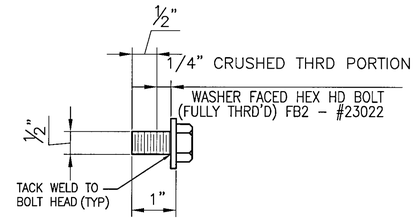
1 14 ~ REQ'D SPLICE SLEEVES SS-03-G
(BARRIER RAIL) #19501



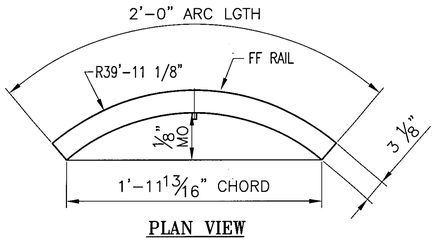
4 ~ REQ'D. ALUM END CAPS EC2
#19345



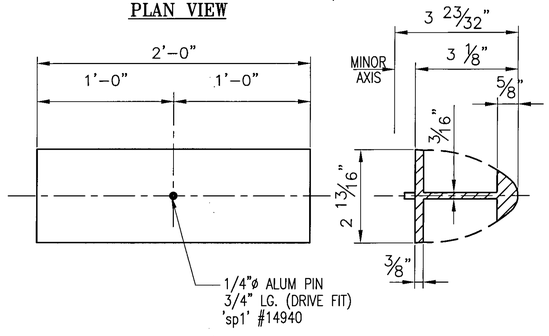
1 2 ~ REQ'D SPECIAL SPLICE SLEEVES SS-03-G2
(BARRIER RAIL) #19501



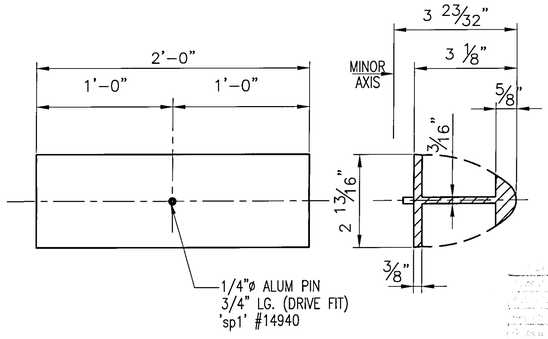
SPLICE BOLT DETAILS



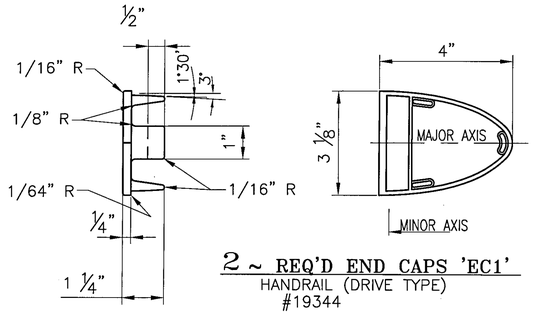
PLAN VIEW



1 ONE ~ REQ'D BENT SPLICE SLEEVES SS-23-A1
(REAR ELEVATION)(HANDRAIL) #20204



9 ~ REQ'D SPLICE SLEEVES SS-23-A
(REAR ELEVATION)(HANDRAIL) #20204



2 ~ REQ'D END CAPS 'EC1'
HANDRAIL (DRIVE TYPE)
#19344

...that may be contained herein. The Contractor, by ...ing and submitting these documents, verifies their accuracy as stipulated on the Contractors Shop Drawing Stamp.
Date 9/25/09 DuBOIS AND KING By ZPD

ANODIZED
(SEE NOTES ON LB5)

REV.	DESCRIPTION	BY	DATE
1	REVISED DWG NO.	CMS	09 13 09

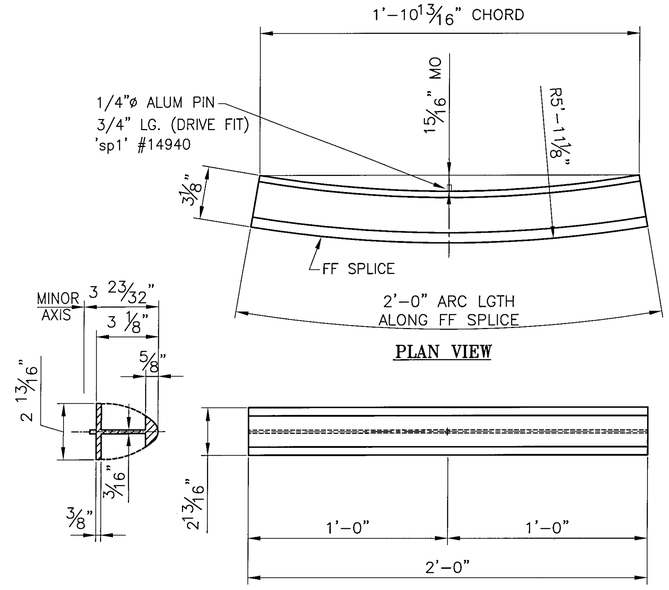
BRIDGE No. 7
PROJECT No. BHF 6000 (15) S ITEM No: 900.640

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

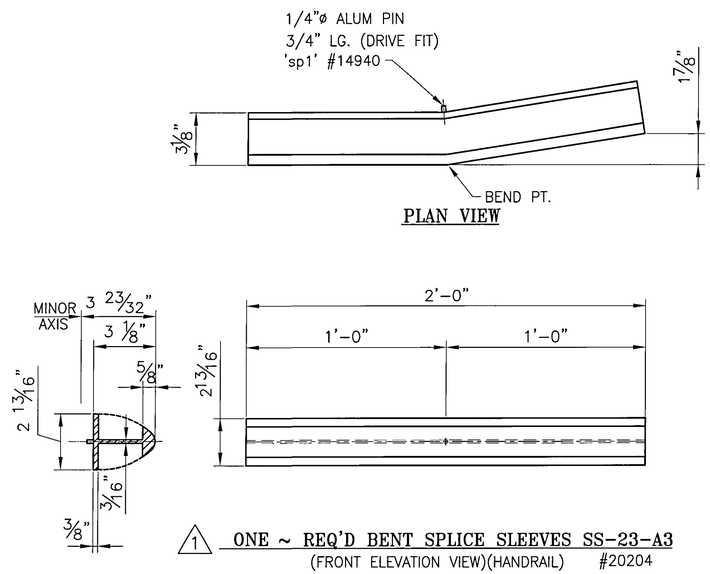
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON
APPROACH RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
3-LINE ALUM BRIDGE RAIL ~ SPLICE DETAILS

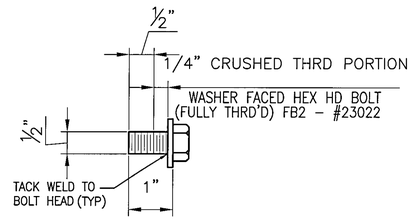
MADE CMS DATE 08/10/09 JOB No. AR0569 CUST. No.
CHECK BLJ DATE 08/17/09 DRAWING LB26 REV. No. ONE



1 ONE ~ REQ'D BENT SPLICE SLEEVES SS-23-A2
(FRONT ELEVATION VIEW)(HANDRAIL) #20204

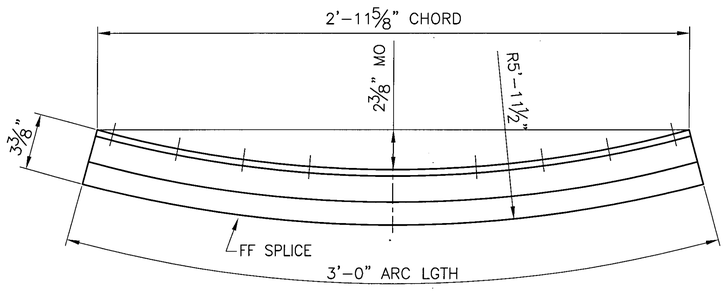


1 ONE ~ REQ'D BENT SPLICE SLEEVES SS-23-A3
(FRONT ELEVATION VIEW)(HANDRAIL) #20204

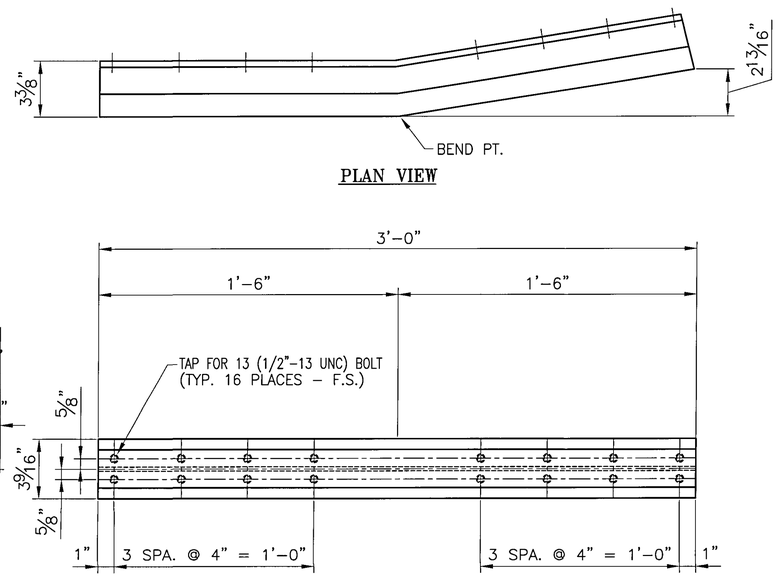


SPLICE BOLT DETAILS

ANODIZED
(SEE NOTES ON LB5)



1 2 ~ REQ'D BENT SPLICE SLEEVES SS-03-G3
(FRONT ELEVATION VIEW)(BARRIER RAIL) #19501



1 2 ~ REQ'D BENT SPLICE SLEEVES SS-03-G4
(FRONT ELEVATION VIEW)(BARRIER RAIL) #19501

Accepted ✓
Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable
Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Engineer assumes no liability for errors or omissions that may be contained herein. The Contractor, by approving and submitting these documents, verifies their accuracy as stipulated on the Contractor's Shop Drawing Stamp.
Date 9/25/09 DuBOIS AND KING By EPD

BRIDGE No. 7
PROJECT No. BHF 6000 (15) S ITEM No: 900.640

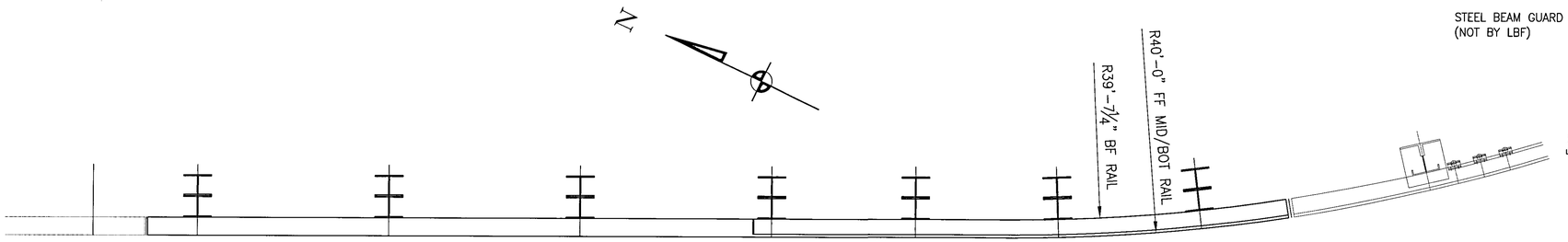
APPROVED: _____ REC'D APPROVAL _____
DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

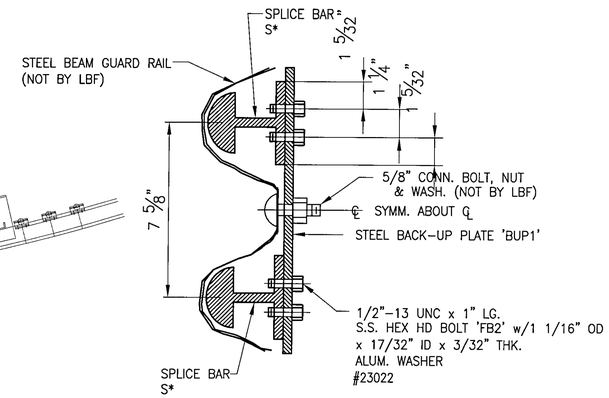
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON
APPROACH RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
3-LINE ALUM BRIDGE RAIL ~ SPLICE DETAILS

MADE CMS DATE 08/11/09 JOB No. AR0569 CUST. No.
CHECK BLJ DATE 08/17/09 DRAWING LB27 REV. No. ONE

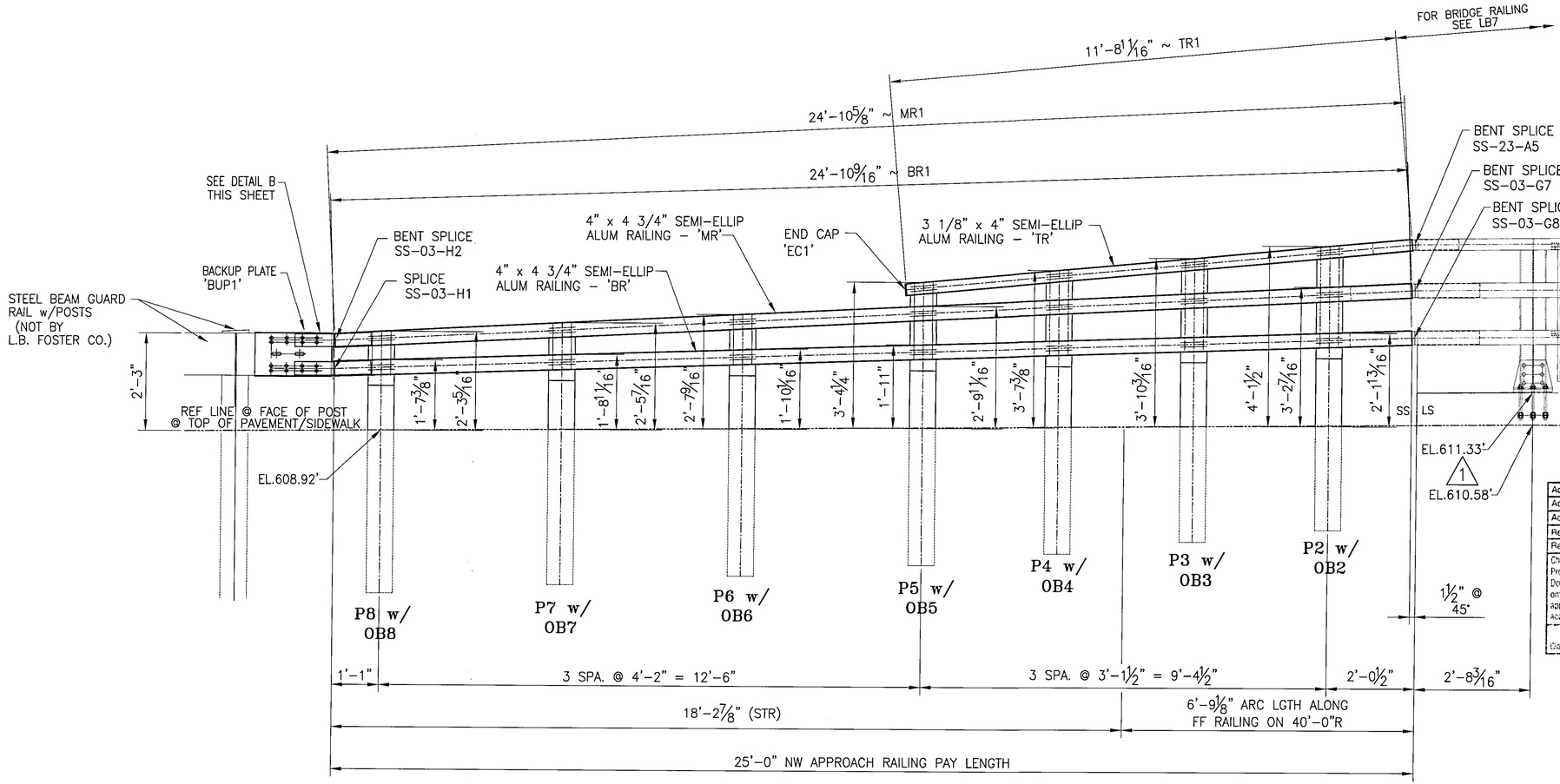
REV.	DESCRIPTION	BY	DATE
1	REVISED PER APPROVER MARKUP	CMS	09 13 09



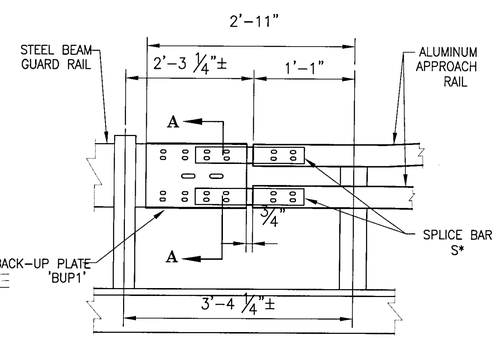
PLAN VIEW



SECTION A-A



1 INSIDE ELEVATION ~ NW APPROACH RAIL



DETAIL "B"

NOTE:
- RAIL LENGTHS DO NOT INCLUDE END CAPS AND/OR GAPS.
- LENGTH OF APPROACH RAILING ON THIS SHEET IS 25.0 LF PAY LENGTH ALONG FF OF RAILING.

Accepted ✓
Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable

Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Engineer assumes no liability for errors or omissions that may be contained herein. The Contractor, by approving and submitting these documents, verifies their accuracy as stipulated on the Contractors Shop Drawing Stamp.

Date 9/25/07 DuBOIS AND KING By ZPD

ANODIZED
(SEE LB5 FOR NOTES)

BRIDGE No. 7
ITEM No: 900.640
PROJECT No. BHF 6000 (15) S

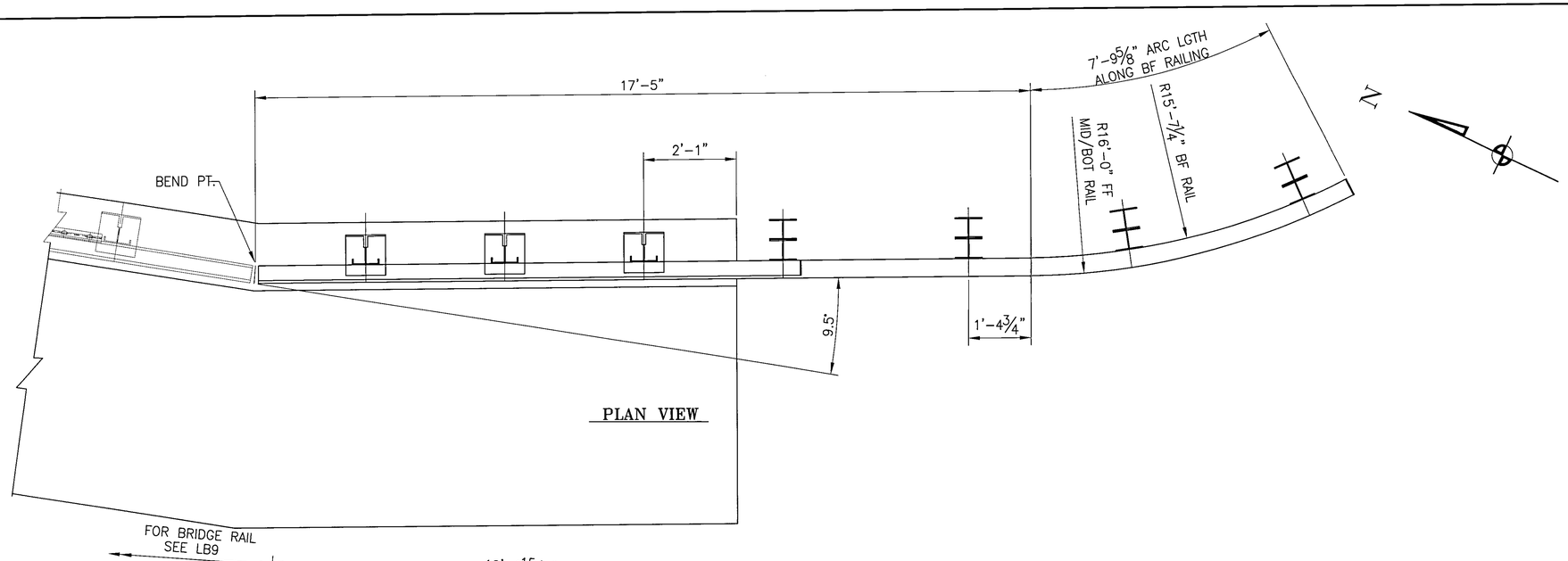
APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON
BRIDGE RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
3L ALUMINUM NW APPROACH RAIL ELEVATIONS

MADE CMS DATE 06/30/09 JOB No. AR0569 CUST. No.
CHECK BLJ DATE 08/18/09 DRAWING LB28 REV. No. ONE

REV.	DESCRIPTION	BY	DATE
1	GEN. REVISIONS PER APPROVAL PRINT	CMS	09 13 09



1 INSIDE ELEVATION OF SW APPROACH RAIL

Checking is only for conformance to Project and compliance with the information given in the Contract Documents. The Engineer assumes no responsibility for errors or omissions that may be contained herein. The Contractor, by approving and submitting these documents, verifies their accuracy as stipulated on the Contractors Shop Drawing Stamp.
Date 9/25/09 DuBOIS AND KING By ZDD

NOTE:
- RAIL LENGTHS DO NOT INCLUDE END CAPS AND/OR GAPS.
- LENGTH OF APPROACH RAILING ON THIS SHEET IS 25 LF PAY LENGTH ALONG FF RAILING.

ANODIZED
(SEE LB5 FOR NOTES)

BRIDGE No. 7
ITEM No: 900.640
PROJECT No. BHF 6000 (15) S

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

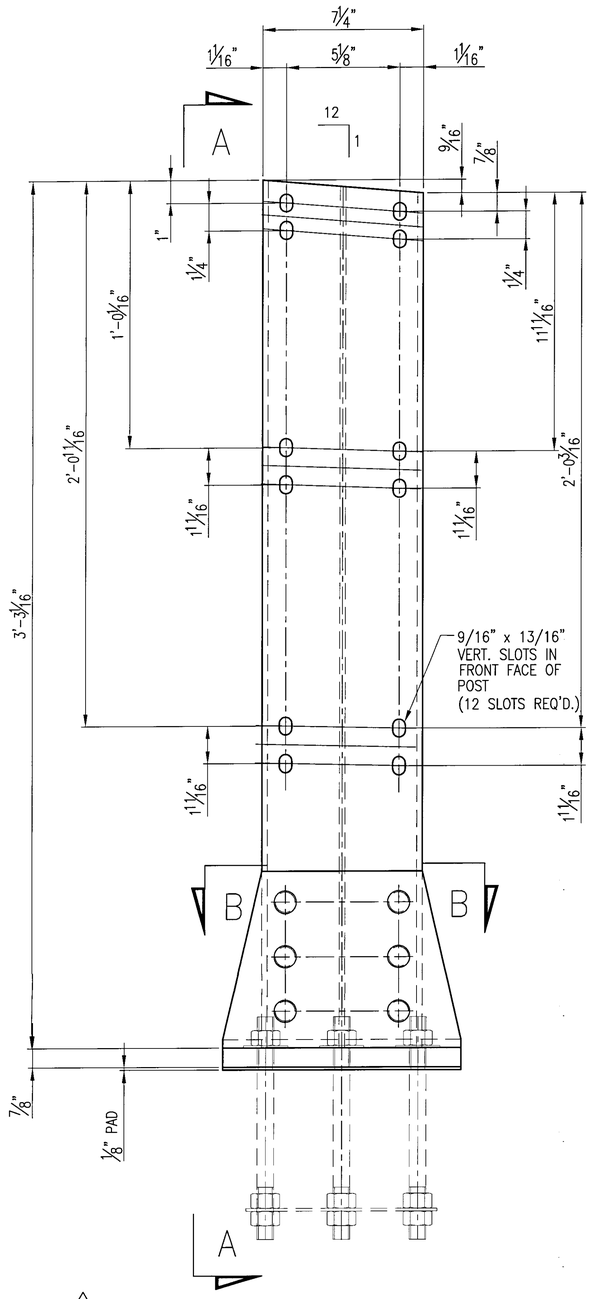
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON
BRIDGE RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
3L ALUMINUM SW APPROACH RAIL ELEVATIONS

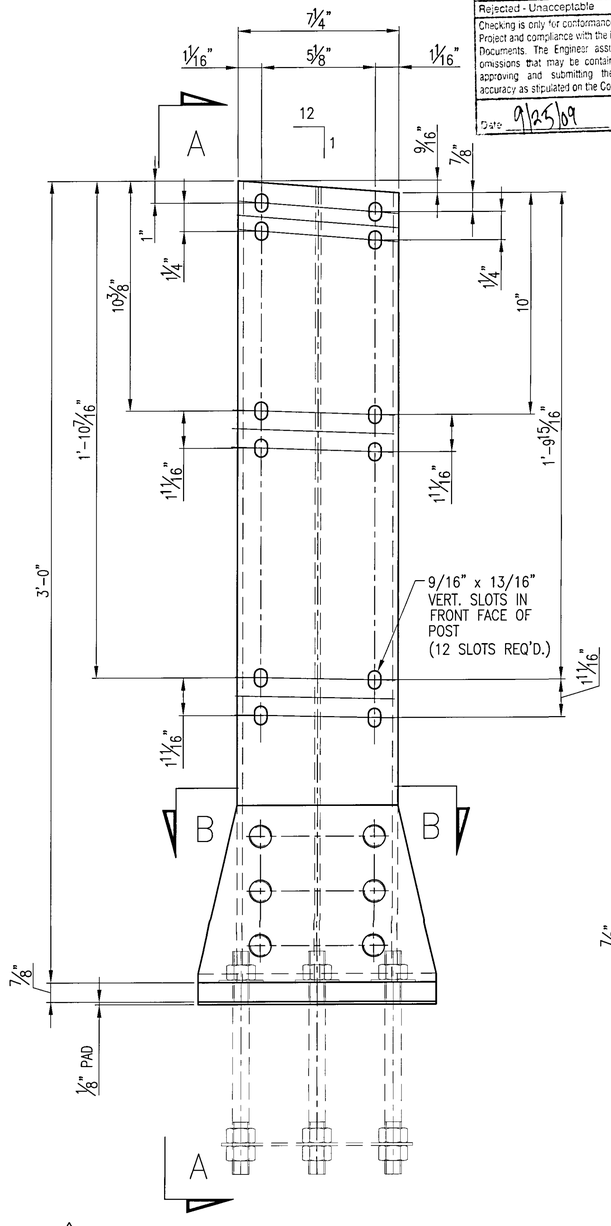
MADE CMS DATE 06/30/09 JOB No. AR0569 CUST. No.
CHECK BLJ DATE 08/18/09 DRAWING LB29 REV. No. ONE

REV.	DESCRIPTION	BY	DATE
1	GEN. REVISIONS PER APPROVAL PRINT	Dd	07 11 03

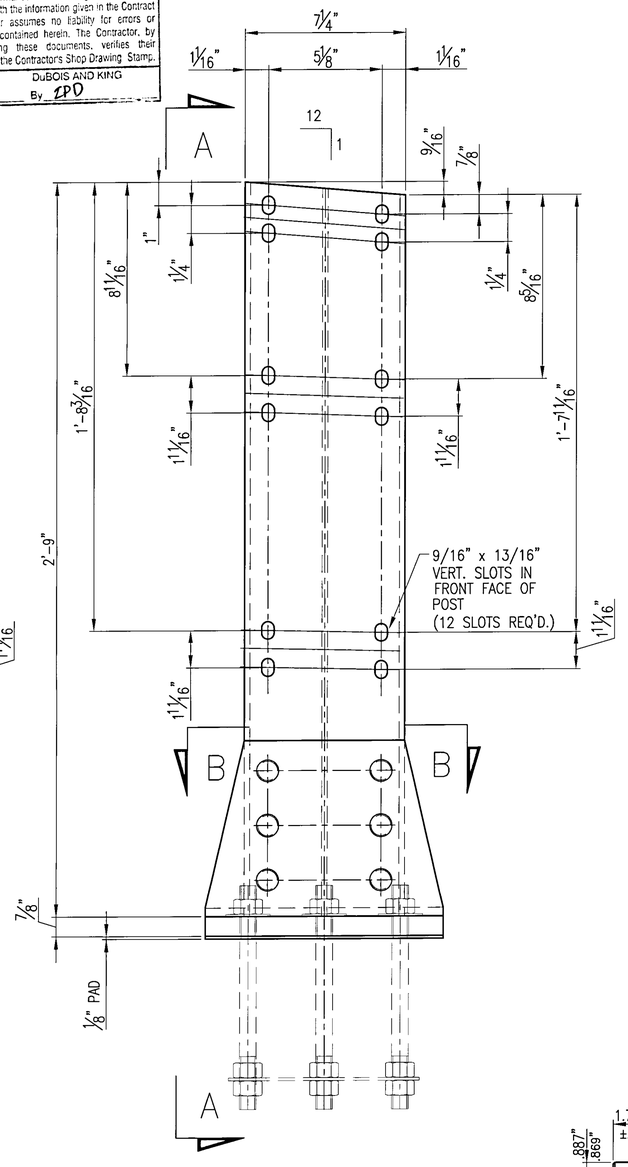
Accepted ✓
Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable
Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Engineer assumes no liability for errors or omissions that may be contained herein. The Contractor, by approving and submitting these documents, verifies their accuracy as stipulated on the Contractors Shop Drawing Stamp.
DuBOIS AND KING
Date 9/25/09 By ZPD



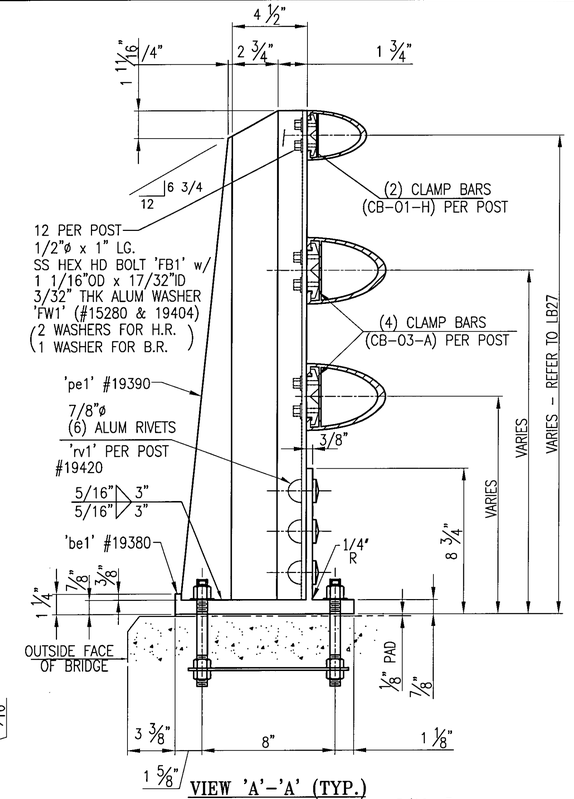
1 ONE ~ REQ'D SPECIAL APPROACH POST 'P9'
(FRONT ELEVATION)



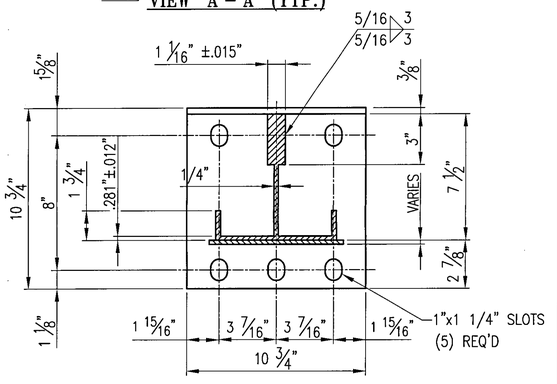
1 ONE ~ REQ'D SPECIAL APPROACH POST 'P10'
(FRONT ELEVATION)



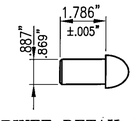
1 ONE ~ REQ'D SPECIAL APPROACH POST 'P11'
(FRONT ELEVATION)



VIEW 'A'-'A' (TYP.)



SECTION 'B'-'B'



RIVET DETAIL 'rv1'
#19420

ANODIZED
(SEE LB5 FOR NOTES)

FOR ADDITIONAL POST/ANCHOR DETAILS SEE LB29

REV.	DESCRIPTION	BY	DATE
1	REVISED PER APPROVER MARKUPS	CMS	03 22 07

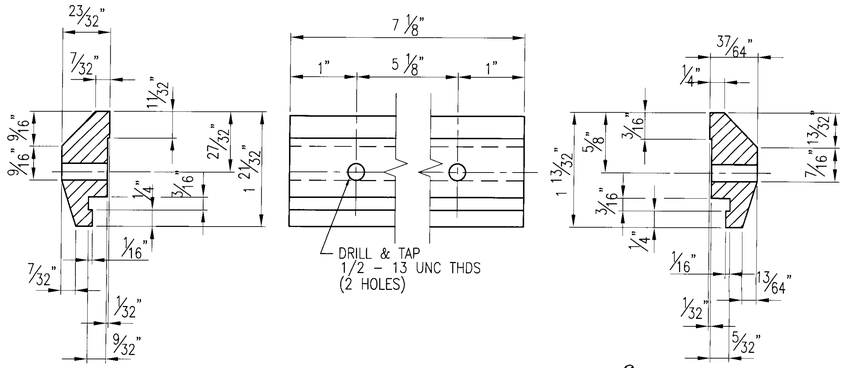
BRIDGE No. 7
PROJECT No. BHF 6000 (15) S
ITEM No: 900.640

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

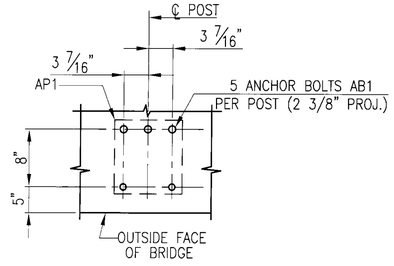
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON
BRIDGE RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
3L ALUM APPROACH RAILING ~ SPECIAL POSTS

MADE CMS DATE 08/11/09 JOB No. AR0569 CUST. No.
CHECK BLJ DATE 08/18/09 DRAWING LB30 REV. No. ONE

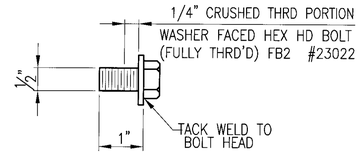


12 ~ REQ'D CLAMP
BAR CB-03-A #19447
(BARRIER RAIL)

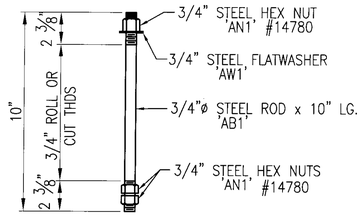
6 ~ REQ'D CLAMP
BAR CB-01-H #28596
(HANDRAIL)



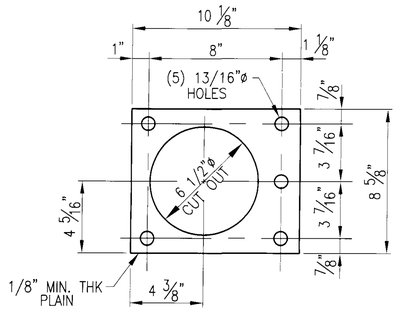
TYPICAL ANCHOR BOLT SETTING



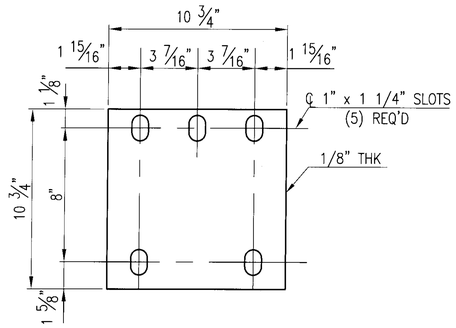
SPLICE BOLT DETAILS



15 ~ REQ'D ANCHOR BOLTS AB1



3 ~ REQ'D ANCHOR PLATE AP1
#31286



3 ~ REQ'D FABRIC PADS 'EP1'

ANODIZED

● ALL ALUM. COMPONENTS SHALL BE ANODIZED TO A BLACK

REV.	DESCRIPTION	BY	DATE
1	REVISED DWG NO.	CMS	09 12 09

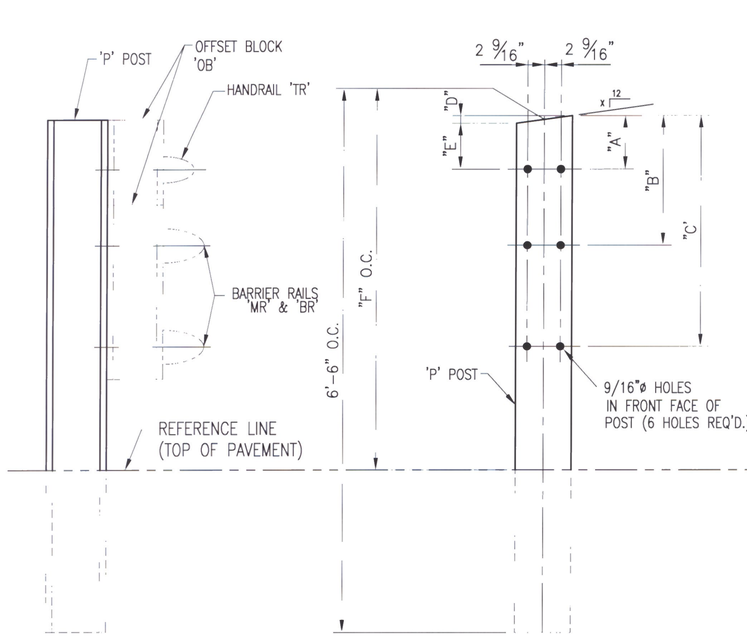
BRIDGE No. 7
PROJECT No. BHF 6000 (15) S ITEM No: 900.640

APPROVED: _____ REC'D APPROVAL _____
DRAWING _____

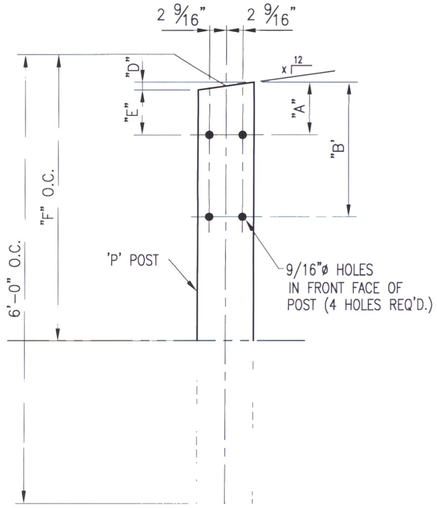
L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON
BRIDGE RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
3L ALUM APPROACH RAILING ~ SPECIAL POST DETAILS

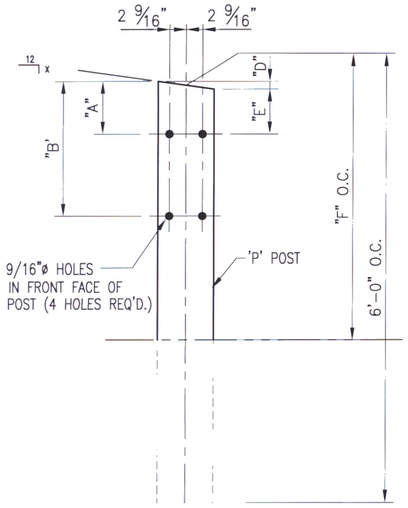
MADE CMS DATE 08/11/09 JOB No. AR0569 CUST. No.
CHECK BLJ DATE 08/18/09 DRAWING LB31 REV. No. ONE



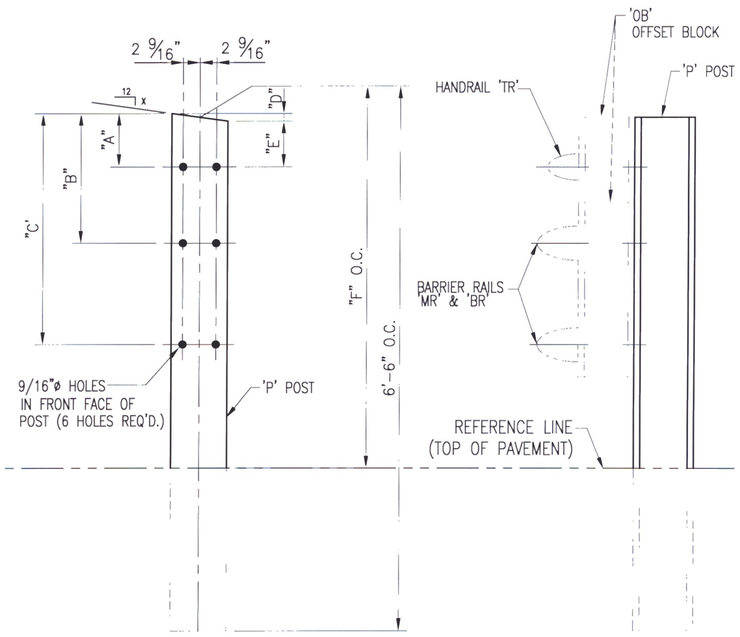
P2–P5



P6–P8



P13–P15



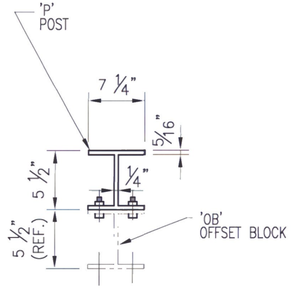
P12

POST DETAIL CHART FOR NW APPROACH

		OFFSET BLOCK MTG. DIMENSIONS						BEV
POST No.	QTY.	A	B	C	D	E	F (0.C.)	X
P2	1	1 7/8"	1'-1 3/8"	2'-2"	5/8"	1 1/4"	4'-1 1/2"	1 1/16
P3	1	1 7/8"	11 7/8"	1'-11 7/8"	5/8"	1 1/4"	3'-10 3/16"	1 1/16
P4	1	1 7/8"	10 3/8"	1'-9 11/16"	5/8"	1 1/4"	3'-7 3/8"	1 1/16
P5	1	1 7/8"	8 15/16"	1'-7 9/16"	5/8"	1 1/4"	3'-4 1/4"	1 1/16
P6	1	2 3/16"	11 15/16"		3/8"	1 13/16"	2'-7 9/16"	5/8
P7	1	2 3/16"	11 1/16"		3/8"	1 13/16"	2'-5 7/16"	5/8
P8	1	2 3/16"	10 3/16"		3/8"	1 13/16"	2'-3 5/16"	5/8

NOTE:
2 CLAMPING BARS CB–01–H (#28596) PER POSTS P2–P4, P12
4 CLAMPING BARS CB–03–A (#19447) PER POSTS P2–P8
w/ 1/2"ø–13 UNC
S.S. BOLT x 1" LG. 'FB1',
1 1/16" O.D. x 17/32"
I.D. x 3/32" THK. ALUM
WASHER 'FW1'
(#15280 & # 19404)
(16 PER POST)

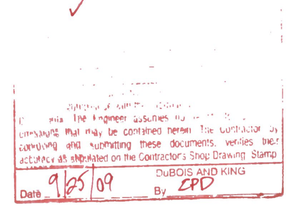
NOTE:
4 CLAMPING BARS CB–03–A (#19447) PER POSTS P12–P15
w/ 1/2"ø–13 UNC
S.S. BOLT x 1" LG. 'FB1',
1 1/16" O.D. x 17/32"
I.D. x 3/32" THK. ALUM
WASHER 'FW1'
(#15280 & # 19404)
(8 PER POST)



TYP. SECT. POST & OFFSET BLOCK

POST DETAIL CHART FOR SW APPROACH

	OFFSET BLOCK MTG. DIMENSIONS							BEV
POST No.	QTY.	A	B	C	D	E	F (0.C.)	X
P12	1	1 13/16"	7 15/16"	1'-6 13/16"	9/16"	1 1/4"	3'-3 5/8"	15/16
P13	1	2 1/8"	1'-0 1/4"		1/4"	1 7/8"	2'-8 1/4"	3/8
P14	1	2 1/8"	11 1/2"		1/4"	1 7/8"	2'-6 7/16"	3/8
P15	1	2 1/8"	10 3/4"		1/4"	1 7/8"	2'-4 5/8"	3/8



ANODIZED
(SEE NOTES ON LB5)

REV.	DESCRIPTION	BY	DATE
1	REVISED ALL POST HGHTS. PER APPROVER COMMENTS	CMS	09 13 09

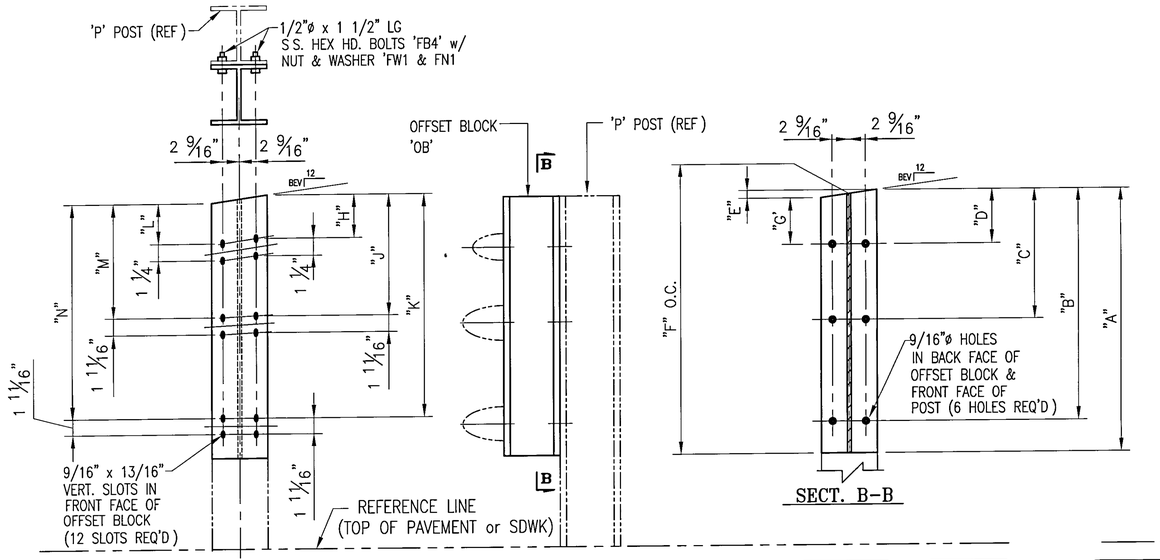
BRIDGE No. 7
PROJECT No. BHF 6000 (15) S
ITEM No: 900.640

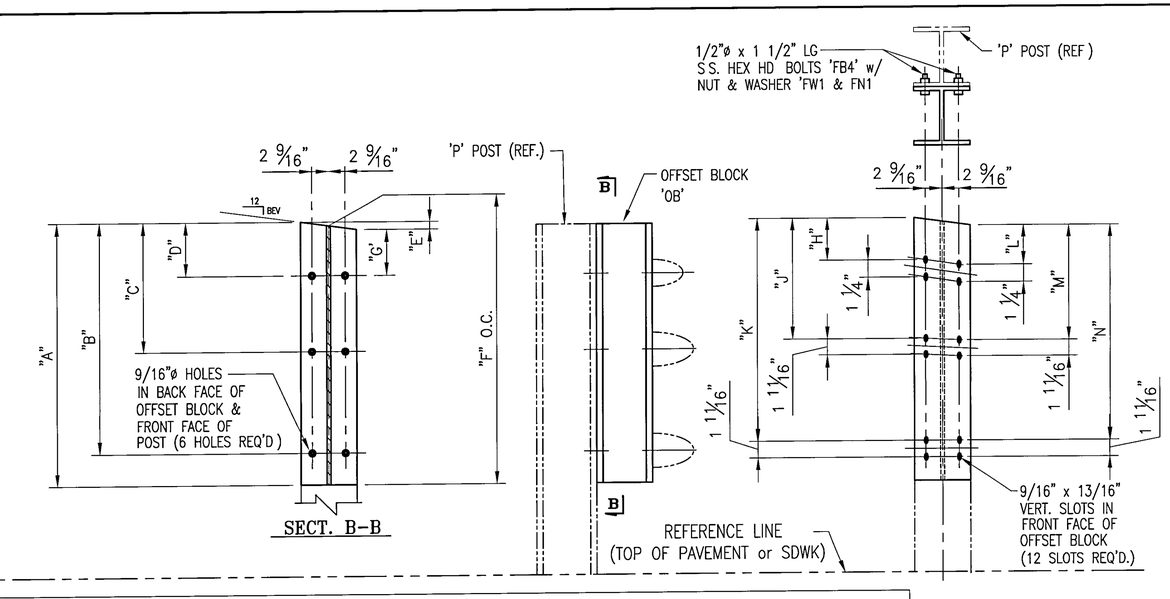
APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON
APPROACH RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
3L ALUMINUM APPROACH RAIL POST DETAILS

MADE CMS DATE 08/11/09 JOB No. AR0569 CUST. No.
CHECK BLJ DATE 08/18/09 DRAWING LB32 REV. No. ONE





OFFSET BLOCK CHART FOR NW APPROACH POSTS P2 – P5

	POST No	OFFSET BLOCK	QTY.	OFFSET BLOCK ~ POST MTG. DIMENSIONS A	B	C	D	E	F (0.C.)	G	BEV X
1	P2	OB2	1	2'-7 1/16"	2'-2"	1'-1 3/8"	1 7/8"	5/8"	2'-6 3/4"	1 1/4"	1 1/16
	P3	OB3	1	2'-4 7/8"	1'-11 7/8"	11 7/8"	1 7/8"	5/8"	2'-4 1/2"	1 1/4"	1 1/16
	P4	OB4	1	2'-2 11/16"	1'-9 11/16"	10 3/8"	1 7/8"	5/8"	2'-2 3/8"	1 1/4"	1 1/16
1	P5	OB5	1	2'-0 9/16"	1'-7 9/16"	8 15/16"	1 7/8"	5/8"	2'-0 1/4"	1 1/4"	1 1/16

OFFSET BLOCK ~ RAIL MTG. DIMENSIONS

	POST No.	OFFSET BLOCK	H	J	K	L	M	N
1	P2	OB2	1 1/16"	1'-0 5/8"	2'-1 5/16"	7/8"	1'-0 1/4"	2'-0 13/16"
	P3	OB3	1 1/16"	11 1/8"	1'-11 3/16"	7/8"	10 3/4"	1'-10 11/16"
	P4	OB4	1 1/16"	9 5/8"	1'-9"	7/8"	9 1/4"	1'-8 1/2"
1	P5	OB5	1 1/16"	8 3/16"	1'-6 7/8"	7/8"	7 3/4"	1'-6 3/8"

OFFSET BLOCK CHART FOR SW APPROACH POST P12

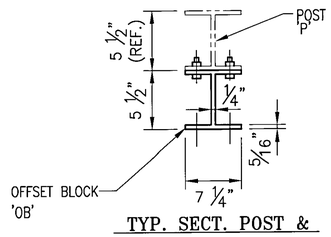
	POST No	OFFSET BLOCK	QTY.	OFFSET BLOCK ~ POST MTG. DIMENSIONS A	B	C	D	E	F (0.C.)	G	BEV X
1	P12	OB12	1	1'-11 7/8"	1'-6 13/16"	7 15/16"	1 13/16"	9/16"	1'-11 9/16"	1 1/4"	15/16

OFFSET BLOCK ~ RAIL MTG. DIMENSIONS

	POST No.	OFFSET BLOCK	H	J	K	L	M	N
1	P12	OB12	1"	7"	1'-5 15/16"	7/8"	6 9/16"	1'-5 7/16"

NOTE:
2 CLAMPING BARS CB-01-H (#28596) PER POSTS P2 – P5, P12
4 CLAMPING BARS CB-03-A (#19447) PER POSTS P2 – P8 w/ 1/2"ø-13 UNC S.S. BOLT x 1" LG. 'FB1', 1 1/16" O.D. x 17/32" I.D. x 3/32" THK. ALUM WASHER 'FW1' (#15280 & #19404) (16 PER POST)

NOTE:
4 CLAMPING BARS CB-03-A (#19447) PER POST P12 w/ 1/2"ø-13 UNC S.S. BOLT x 1" LG. 'FB1', 1 1/16" O.D. x 17/32" I.D. x 3/32" THK. ALUM WASHER 'FW1' (#15280 & #19404) (8 PER POST)



TYP. SECT. POST & OFFSET BLOCK

ANODIZED
(SEE NOTES ON LB5)

Accepted as Noted
Accepted as Noted Resubmit
Rejected Revise Resubmit
Rejected - Unacceptable
Checking is only for conformance with the design concept. Project and compliance with the information given in the Contract Documents. The Engineer assumes no liability for errors or omissions that may be contained herein. The Contractor by approving and submitting these documents, verifies their accuracy as stipulated on the Contractors Shop Drawing Stamp.
Date 9/25/09 DuBOIS AND KING By ZPD

REV	DESCRIPTION	BY	DATE
1	REVISED ALL POST HGHTS. PER APPROVER COMMENTS	CMS	09 13 09

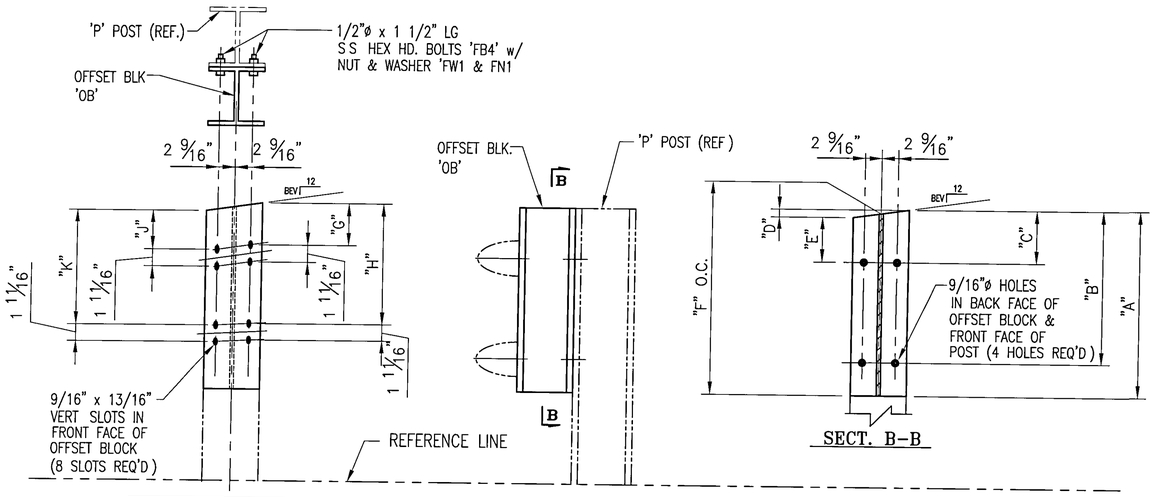
BRIDGE No. 7
PROJECT No. BHF 6000 (15) S
ITEM No: 900.640

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON
APPROACH RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
OFFSET BOX DETAILS

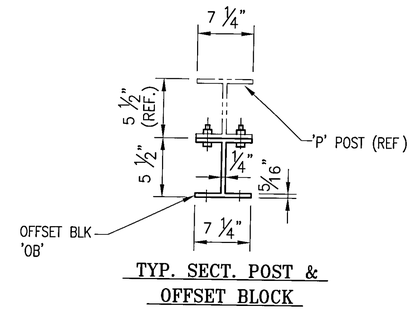
MADE CMS DATE 08/11/09 JOB No AR0569 CUST No.
CHECK BLJ DATE 08/18/09 DRAWING LB33 REV. No. ONE



OFFSET BLOCK CHART FOR NW APPROACH POSTS P6 – P8

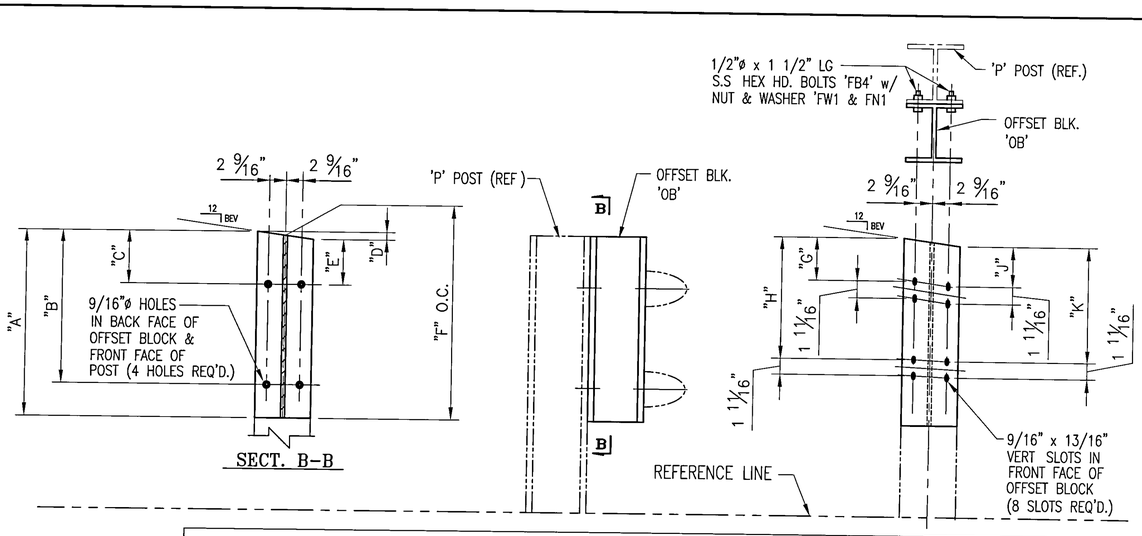
POST No.	OFFSET BLOCK	QTY	OFFSET BLOCK ~ POST MTG. DIMENSIONS A	B	C	D	E	F (O.C.)	BEV X
P6	OB6	1	1'-4 15/16"	11 15/16"	2 3/16"	3/8"	1 13/16"	1'-4 3/4"	5/8
P7	OB7	1	1'-4 1/16"	11 1/16"	2 3/16"	3/8"	1 13/16"	1'-3 7/8"	5/8
P8	OB8	1	1'-3 3/16"	10 3/16"	2 3/16"	3/8"	1 13/16"	1'-3"	5/8

POST No.	OFFSET BLOCK	OFFSET BLOCK ~ RAIL MTG. DIMENSIONS G	H	J	K
1 P6	OB6	1 7/16"	11 1/4"	1 5/16"	11 1/16"
1 P7	OB7	1 7/16"	10 3/8"	1 5/16"	10 1/8"
1 P8	OB8	1 7/16"	9 7/16"	1 5/16"	9 1/4"



TYP. SECT. POST & OFFSET BLOCK

NOTE:
4 CLAMPING BARS CB-03-A
(#19447) PER POSTS P6 – P8, P13 – P15
w/ 1/2"ø-13 UNC
S.S. BOLT x 1" LG. 'FB1',
1 1/16" O.D. x 17/32"
I.D. x 3/32" THK. ALUM
WASHER 'FW1'
(#15280 & #19404)
(8 PER POST)



OFFSET BLOCK CHART FOR BRIDGE SW APPROACH POSTS P13 – P15

POST No.	OFFSET BLOCK	QTY.	OFFSET BLOCK ~ POST MTG. DIMENSIONS A	B	C	D	E	F (O.C.)	BEV X
1 P13	OB13	1	1'-5 5/16"	1'-0 1/4"	2 1/8"	1/4"	1 7/8"	1'-5 3/16"	3/8
1 P14	OB14	1	1'-4 9/16"	11 1/2"	2 1/8"	1/4"	1 7/8"	1'-4 7/16"	3/8
1 P15	OB15	1	1'-3 13/16"	10 3/4"	2 1/8"	1/4"	1 7/8"	1'-3 11/16"	3/8

POST No	OFFSET BLOCK	OFFSET BLOCK ~ RAIL MTG. DIMENSIONS G	H	J	K
1 P13	OB13	1 3/16"	11 3/8"	1 1/8"	11 1/4"
1 P14	OB14	1 3/16"	10 5/8"	1 1/8"	10 1/2"
1 P15	OB15	1 3/16"	9 7/8"	1 1/8"	9 3/4"

Accepted ✓
Accepted as Noted
Accepted Noted Resubmit
Rejected, Revise Resubmit
Rejected - Unacceptable
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Date 9/25/09 DuBOIS AND KING By ZPD

ANODIZED
(SEE NOTES ON LB5)

REV	DESCRIPTION	BY	DATE
1	REVISED ALL POST HGHTS. PER APPROVERS COMMENTS	CMS	09 13 09

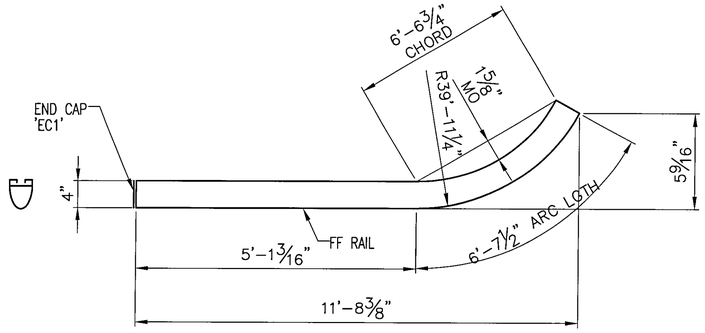
BRIDGE No. 7
PROJECT No. BHF 6000 (15) S ITEM No: 900.640

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON
BRIDGE RAILING FOR PROSPECT ST. OVER STEVENS BRANCH
OFFSET BLOCK DETAILS

MADE CMS DATE 08/11/09 JOB No AR0569 CUST No
CHECK BWJ DATE 08/18/09 DRAWING LB34 REV No ONE

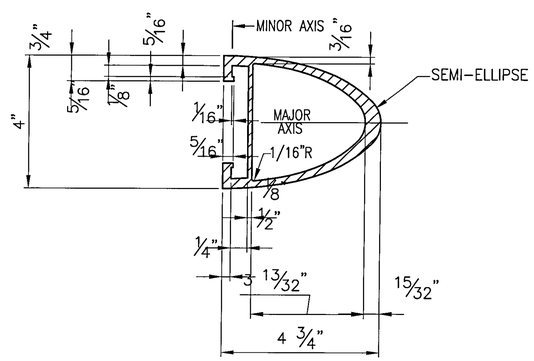


PLAN VIEW

1 ONE REQ'D – HANDRAIL 'TR1'

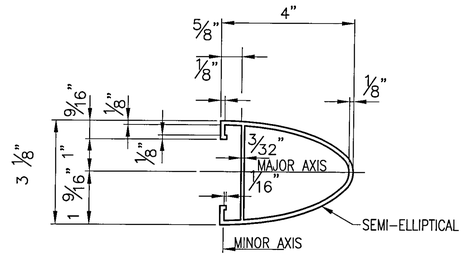
(REAR ELEVATION VIEW)

11'-8 11/16" LGTH ALONG FF RAIL (+2'-6" FOR SHOP BENDING = 14'-2 11/16")



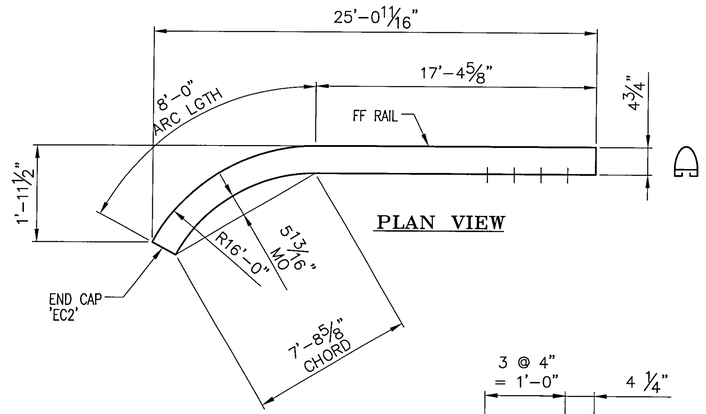
TYPICAL SECTION

(BARRIER RAIL)



TYPICAL SECTION

(HANDRAIL)



PLAN VIEW

ONE REQ'D – HANDRAIL 'MR2'

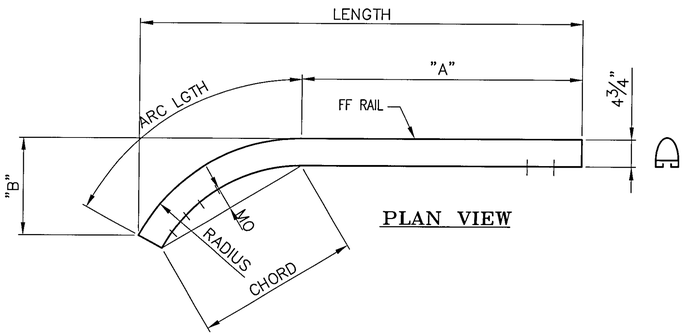
(REAR ELEVATION VIEW)

25'-4 5/8" LGTH ALONG FF RAIL (+2'-6" FOR SHOP BENDING = 27'-10 5/8")

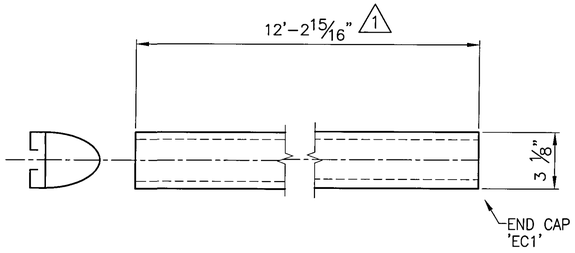
ONE REQ'D – HANDRAIL 'BR2'

(REAR ELEVATION VIEW)

25'-4 5/8" LGTH ALONG FF RAIL (+2'-6" FOR SHOP BENDING = 27'-10 5/8")

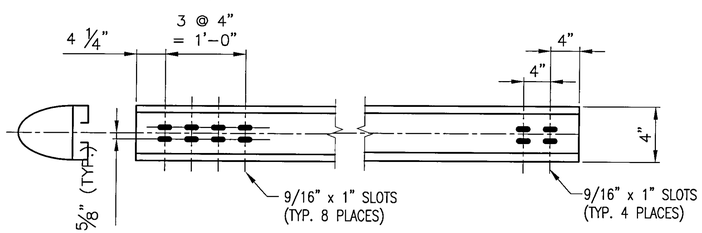


PLAN VIEW



ONE REQ'D – HANDRAIL 'TR2'

(FRONT ELEVATION VIEW)



BENT TOP RAILS										MATL FOR BENDING
MK.	QTY	OAL (ALONG FF RAIL)	LENGTH	ARC LGTH	"A"	"B"	MO	CHORD	RADIUS	
1 MR1	1	24'-10 5/8"	24'-10 5/16"	6'-7 5/8"	18'-3"	5 9/16"	1 5/8"	6'-6 3/4"	40'-0"	+2'-6"
1 BR1	1	24'-10 9/16"	24'-10 1/4"	6'-7 5/8"	18'-2 15/16"	5 9/16"	1 5/8"	6'-6 3/4"	40'-0"	+2'-6"

Accepted
Accepted as Noted
Accepted Noted Resubmit
Rejected Revise Resubmit
Rejected - Unacceptable

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Date 9/25/09 DuBOIS AND KING By EPD

ANODIZED

(SEE NOTES ON LB1)

REV	DESCRIPTION	BY	DATE
1	REVISED PER APPROVAL MARKUP	CMS	09 13 09

BRIDGE No 7

PROJECT No. BHF 6000 (15) S

ITEM No: 900.640

APPROVED: _____ REC'D APPROVAL ____ DRAWING ____

L.B. FOSTER COMPANY

1016 GREENTREE ROAD

PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED

VERMONT AGENCY OF TRANSPORTATION

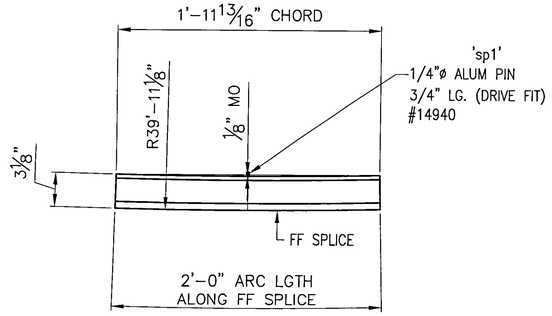
CITY OF BARRE, COUNTY OF WASHINGTON

APPROACH RAILING FOR PROSPECT ST. OVER STEVENS BRANCH

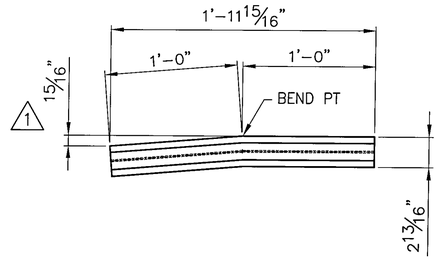
3L ALUMINUM APPROACH RAIL – RAIL DETAILS

MADE CMS DATE 08/11/09 JOB No AR0569 CUST No

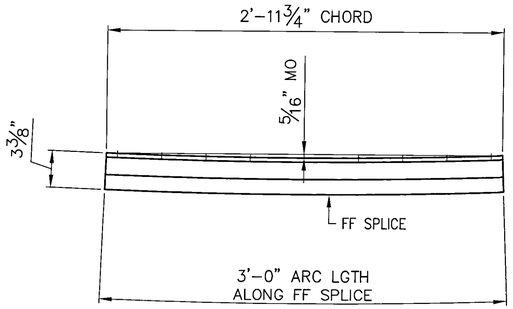
CHECK BLJ DATE 08/18/09 DRAWING LB35 REV. No. ONE



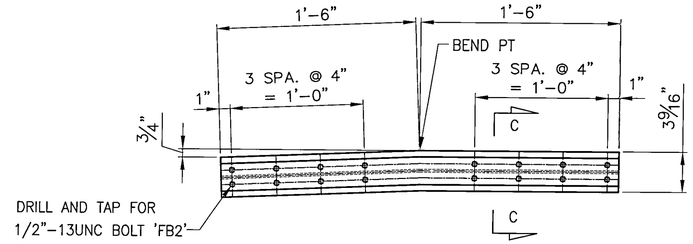
PLAN VIEW



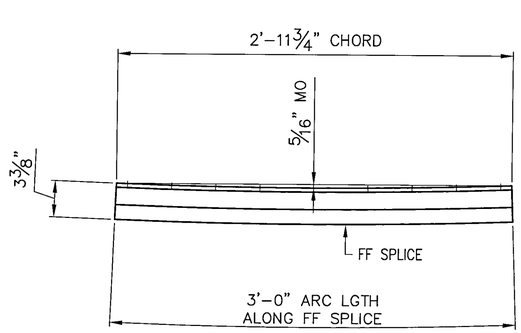
ONE ~ REQ'D BENT SPLICE SLEEVES SS-23-A5
(FRONT ELEVATION VIEW)(HANDRAIL) #20204



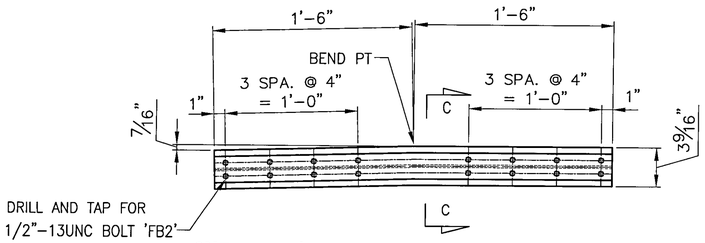
PLAN VIEW



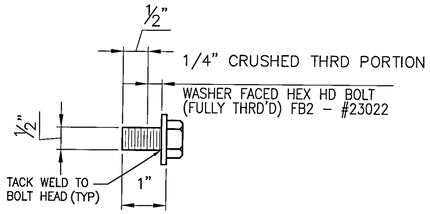
ONE ~ REQ'D BENT SPLICE SLEEVES SS-03-G7
(FRONT ELEVATION VIEW)(BARRIER RAIL) #19501



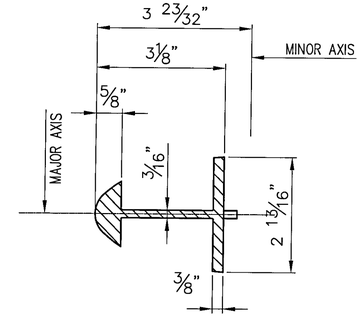
PLAN VIEW



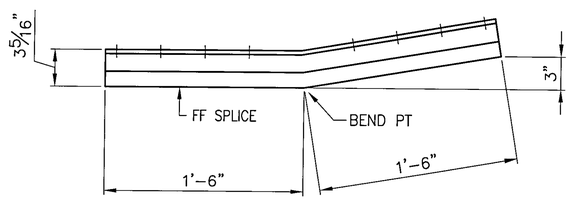
ONE ~ REQ'D BENT SPLICE SLEEVES SS-03-G8
(FRONT ELEVATION VIEW)(BARRIER RAIL) #19501



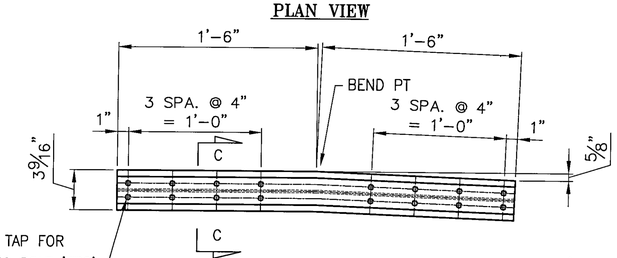
SPLICE BOLT DETAILS



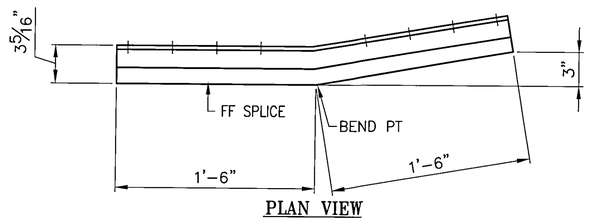
SECTION B-B



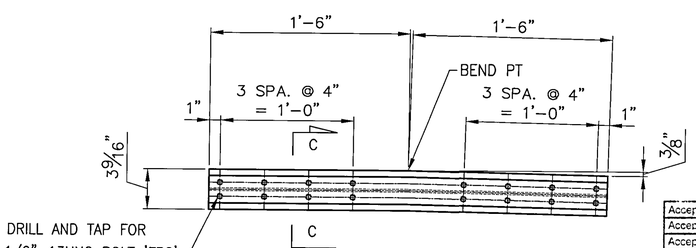
PLAN VIEW



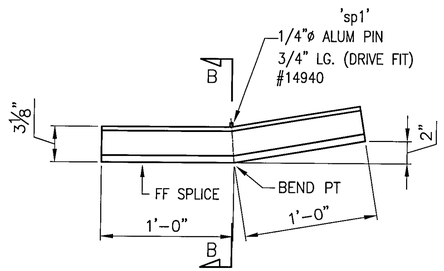
ONE ~ REQ'D BENT SPLICE SLEEVES SS-03-G5
(FRONT ELEVATION VIEW)(BARRIER RAIL) #19501



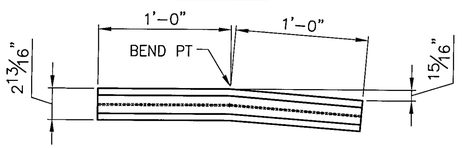
PLAN VIEW



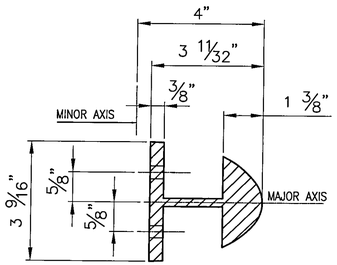
ONE ~ REQ'D BENT SPLICE SLEEVES SS-03-G6
(FRONT ELEVATION VIEW)(BARRIER RAIL) #19501



PLAN VIEW



ONE ~ REQ'D BENT SPLICE SLEEVES SS-23-A4
(FRONT ELEVATION VIEW)(HANDRAIL) #20204



SECTION C-C

ANODIZED
(SEE NOTES ON LB5)

Accepted	✓
Accepted as Noted	
Accepted Noted Resubmit	
Rejected Revise Resubmit	
Rejected - Unacceptable	

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DuBOIS AND KING
Date 9/25/09 By ZPD

REV	DESCRIPTION	BY	DATE
1	GENERAL REVISION	CMS	09 13 09

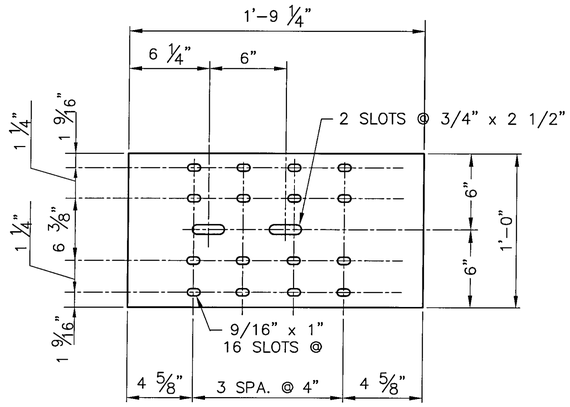
BRIDGE No. 7
PROJECT No. BHF 6000 (15) S
ITEM No: 900.640

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY
1016 GREENTREE ROAD
PITTSBURGH, PENNSYLVANIA 15220

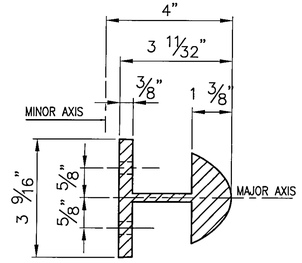
FOR: F. R. LAFAYETTE, INCORPORATED
VERMONT AGENCY OF TRANSPORTATION
CITY OF BARRE, COUNTY OF WASHINGTON
APPROACH RAILING FOR PROSPECT ST OVER STEVENS BRANCH
3L ALUMINUM APPROACH ~ SPLICE DETAILS

MADE CMS DATE 08/11/09 JOB No AR0569 CUST No
CHECK BLJ DATE 08/18/09 DRAWING LB36 REV. No ONE

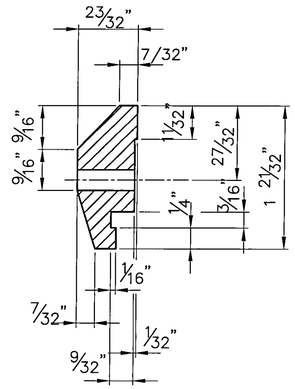


ONE REQ'D. ~ BACK-UP PLATE BUP1

(1/4" THK. PLATE ~ A36 - GALV.)



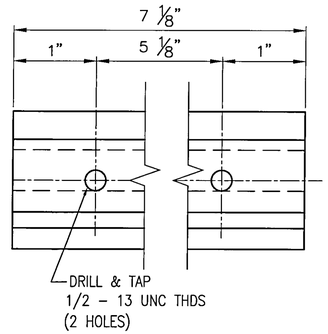
SECTION C-C

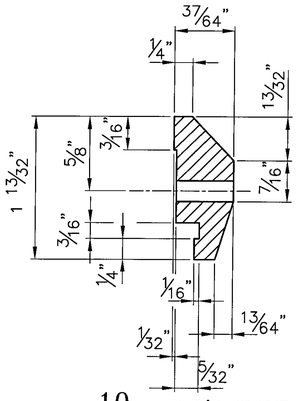


44 ~ REQ'D CLAMP BAR CB-03-A

(BARRIER RAIL - 4 PER POST)

(#19447)

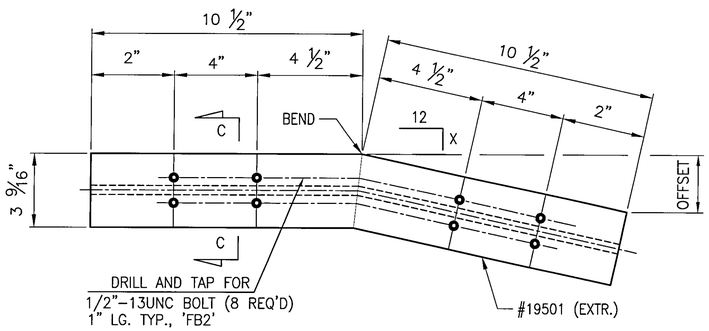




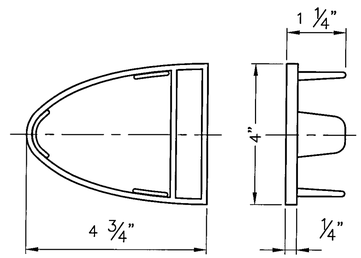
10 ~ REQ'D CLAMP BAR CB-01-H

(HANDRAIL - 2 PER POST)

(#28596)

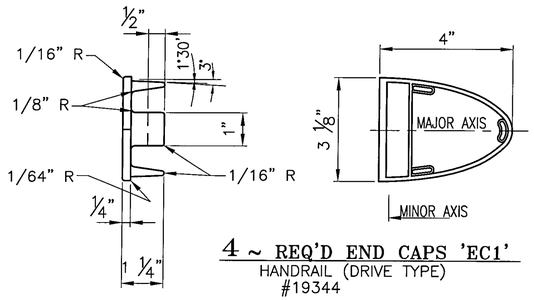


BENT BARRIER RAIL SPLICES			
MK.	X	QTY.	OFFSET
SS-03-H1	7/16	1	3/8"
SS-03-H2	5/8	1	9/16"



2 ~ REQ'D. ALUM END CAPS EC2

#19345



4 ~ REQ'D END CAPS 'EC1'

HANDRAIL (DRIVE TYPE)

#19344

ANODIZED

(SEE NOTES ON LB5)

Accepted ✓
Accepted as Noted
Accepted Noted Resubmit
Rejected Revise Resubmit
Rejected - Unacceptable

Checking is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Engineer assumes no liability for errors or omissions that may be contained herein. The Contractor, by approving and submitting these documents verifies their accuracy as stipulated on the Contractor's Shop Drawing Stamp.

DuBOIS AND KING

Date 9/25/09 By EPD

BRIDGE No. 7

PROJECT No. BHF 6000 (15) S

ITEM No: 900.640

APPROVED: _____ REC'D APPROVAL _____ DRAWING _____

L.B. FOSTER COMPANY

1016 GREENTREE ROAD

PITTSBURGH, PENNSYLVANIA 15220

FOR: F. R. LAFAYETTE, INCORPORATED

VERMONT AGENCY OF TRANSPORTATION

CITY OF BARRE, COUNTY OF WASHINGTON

APPROACH RAILING FOR PROSPECT ST. OVER STEVENS BRANCH

3L ALUMINUM APPROACH RAIL ~ MISC DETAILS

MADE CMS DATE 08/11/09 JOB No AR0569 CUST No

CHECK BLJ DATE 08/18/09 DRAWING LB37 (LAST) REV. No ONE

REV	DESCRIPTION	BY	DATE
1	REVISED DRAWING NUMBER	CMS	09 13 09