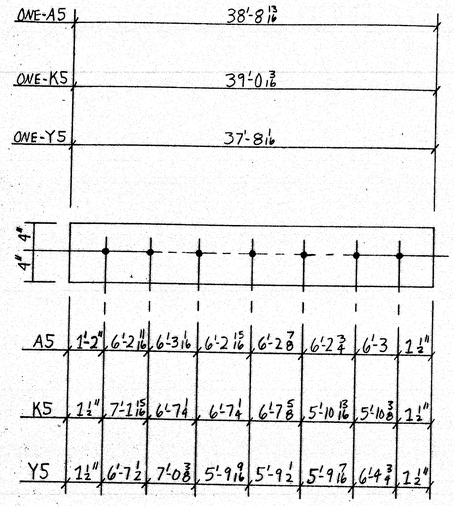
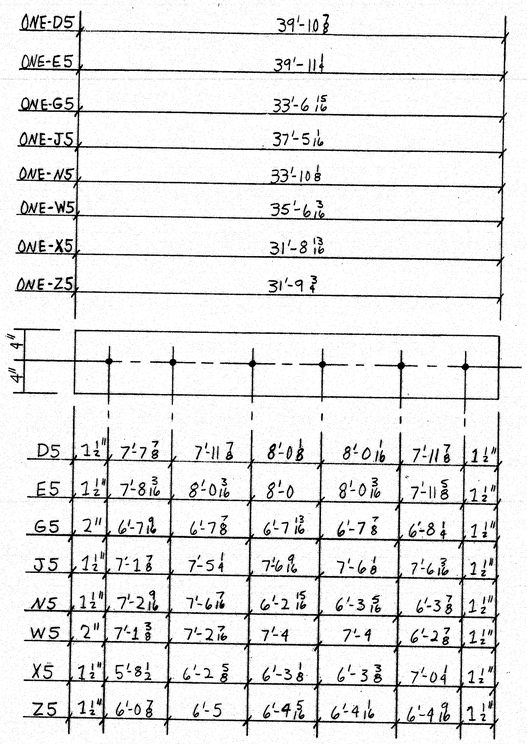
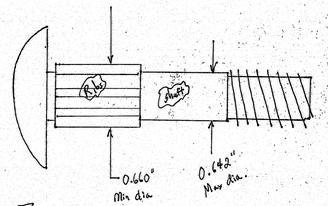


7 ~ 2" 5/8 ø ROUND HEAD RIBBED NECK A307 W/ NEW



6 ~ 2" 5/8 ø ROUND HEAD RIBBED NECK A307 W/ NEW

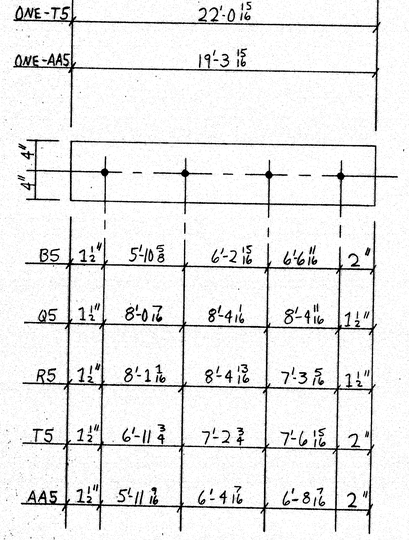


Holes For 5/8" ø Round Head Rubber Bolts should be:

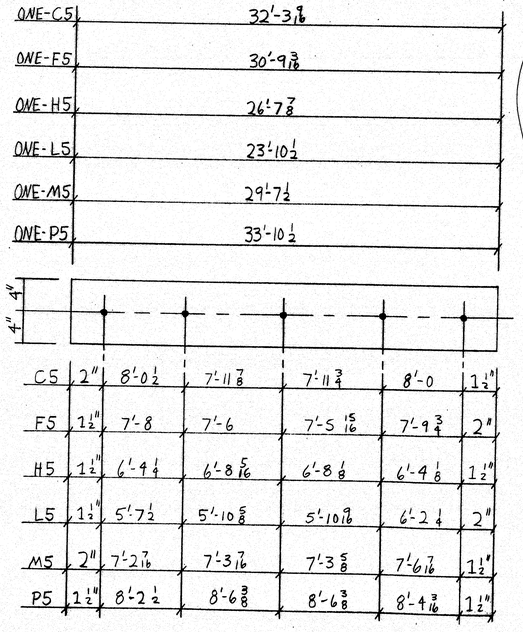
$0.642" < \phi \; 0.660"$

$2\frac{1}{32}" = 0.656"$

for Correct interference Fit?



4 ~ 2" 5/8 ø ROUND HEAD RIBBED NECK A307 W/ NEW



5 ~ 2" 5/8 ø ROUND HEAD RIBBED NECK A307 W/ NEW

APPROVER PLEASE VERIFY

120-342

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
☒ Approved ☐ Returned for Corrections
JUL 08 1997
☒ Approved as Noted ☐ Rejected

PROJ.#: BH-043-1(34)
ITEM#: 509.70

BILL OF MATERIALS

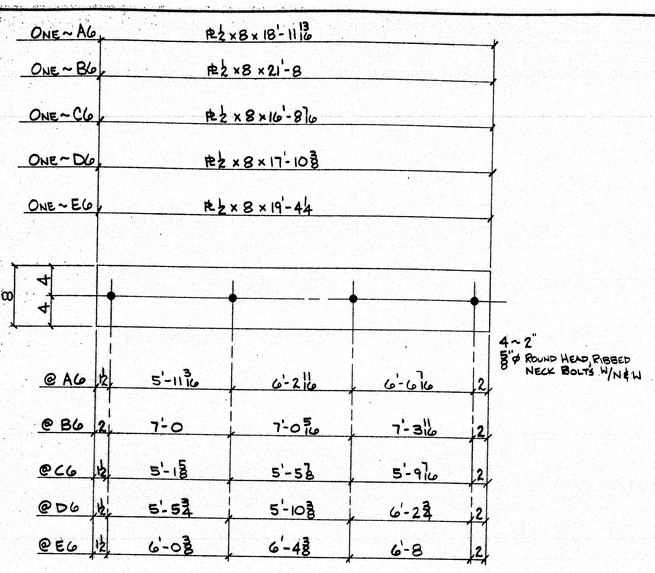
SHIPPING MARK	SHOP MARK	QTY.	DESCRIPTION
A5		1	PL 1/2 x 8 x 38'-8 13/16
B5		1	PL 1/2 x 8 x 18'-11 13/16
C5		1	PL 1/2 x 8 x 32'-3 7/16
D5		1	PL 1/2 x 8 x 39'-10 7/8
E5		1	PL 1/2 x 8 x 39'-11 1/4
F5		1	PL 1/2 x 8 x 30'-9 3/16
G5		1	PL 1/2 x 8 x 33'-6 15/16
H5		1	PL 1/2 x 8 x 26'-7 7/8
J5		1	PL 1/2 x 8 x 37'-5 1/16
K5		1	PL 1/2 x 8 x 39'-0 3/16
L5		1	PL 1/2 x 8 x 23'-10 1/2
M5		1	PL 1/2 x 8 x 29'-7 1/2
N5		1	PL 1/2 x 8 x 33'-10 1/8
P5		1	PL 1/2 x 8 x 33'-10 1/2
Q5		1	PL 1/2 x 8 x 25'-0 3/16
R5		1	PL 1/2 x 8 x 23'-0 3/16
T5		1	PL 1/2 x 8 x 22'-0 15/16
W5		1	PL 1/2 x 8 x 35'-6 3/16
X5		1	PL 1/2 x 8 x 31'-8 13/16
Y5		1	PL 1/2 x 8 x 37'-8 1/16
Z5		1	PL 1/2 x 8 x 31'-9 3/4
AA5		1	PL 1/2 x 8 x 19'-3 15/16
			FIELD BOLTS (THIS SHT.)
		122	5/8 ø 0'-2 ROUND HEAD, RIBBED NECK BOLT W/NUT A307 GALV.
		122	5/8 ø WASH. ASTM F436 A325 GALV.

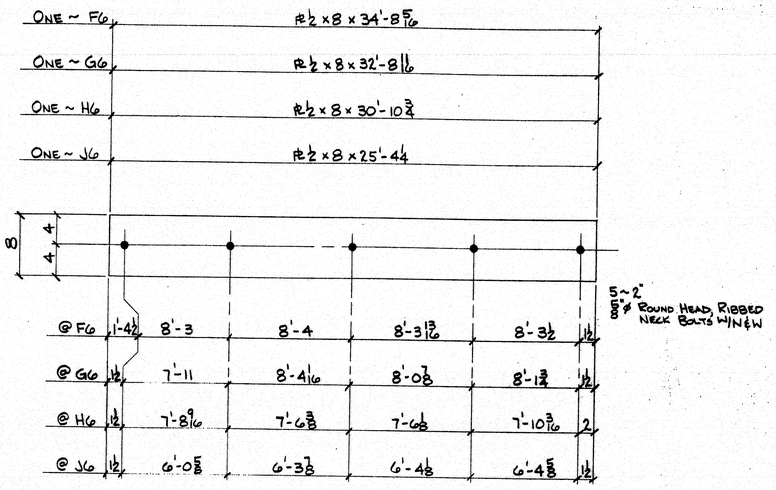
FOR APPROVAL ONLY

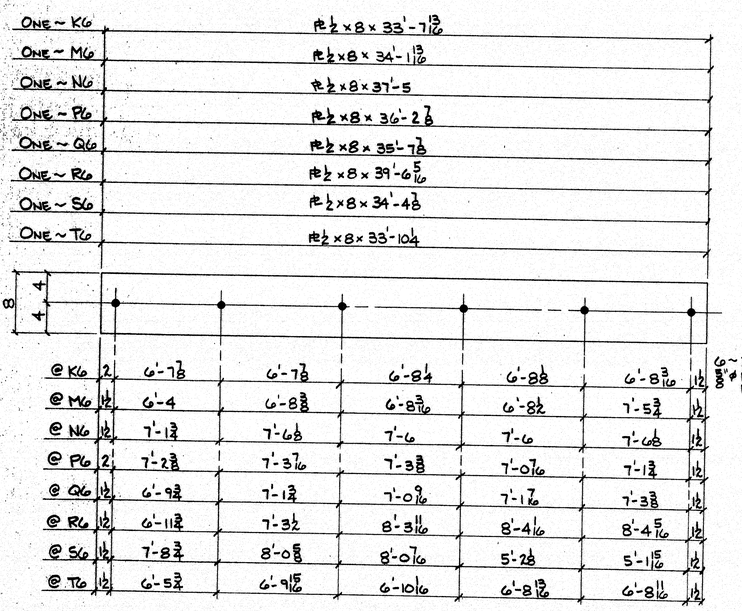
MAT'L: A36 DOM. HOLES: 13/16
WELD: NONE GK
SURFACE PREP: SSPC-SP6
FINISH: GALV. PER A.S.T.M A123 OR ASTM A153 AS APPLICABLE

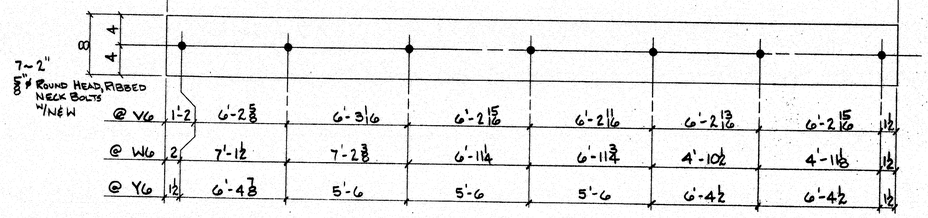
ARC ENTERPRISES, INC
ADVANCED RESOURCES & CONSTRUCTION
P.O. BOX 120 KINGFIELD, ME 04947
PHONE: (207) 265-2648 • FAX: (207) 265-4054

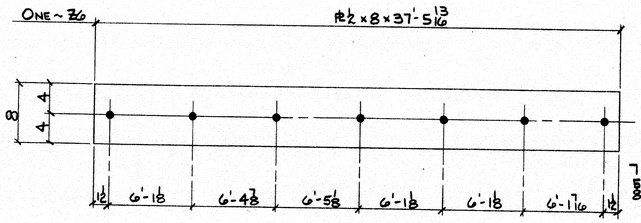
DESCRIPTION: PLOW BARRIER DETAILS
PROJECT: JOSHUA CHAMBERLAIN BRIDGE
LOCATION: BANGOR/BREWER, ME.
DESIGNER: ME. D.O.T.
CUSTOMER: REED & REED
DRAWN BY: McCLURE DATE: 6-4-97
CHK'D. BY: DATE:
JOB NUMBER: 97-49
DWG. NO.: 5











BILL OF MATERIALS

SHIPPING MARK	SHOP MARK	QTY.	DESCRIPTION
A6		1	PL ½ x 8 x 18'-11 13/16
B6		1	PL ½ x 8 x 21'-8
C6		1	PL ½ x 8 x 16'-8 1/16
D6		1	PL ½ x 8 x 17'-10 3/8
E6		1	PL ½ x 8 x 19'-4 1/4
F6		1	PL ½ x 8 x 34'-8 5/16
G6		1	PL ½ x 8 x 32'-8 1/16
H6		1	PL ½ x 8 x 30'-10 3/4
J6		1	PL ½ x 8 x 25'-4 1/4
K6		1	PL ½ x 8 x 33'-7 13/16
M6		1	PL ½ x 8 x 34'-1 13/16
N6		1	PL ½ x 8 x 37'-5
P6		1	PL ½ x 8 x 36'-2 7/8
Q6		1	PL ½ x 8 x 35'-7 1/8
R6		1	PL ½ x 8 x 39'-6 5/16
S6		1	PL ½ x 8 x 34'-4 1/8
T6		1	PL ½ x 8 x 33'-10 1/4
V6		1	PL ½ x 8 x 38'-8 1/16
W6		1	PL ½ x 8 x 38'-4
Y6		1	PL ½ x 8 x 35'-10 7/8
Z6		1	PL ½ x 8 x 37'-5 13/16
			FIELD BOLTS (THIS SHT)
	119		5/8"ø Round Head, Ribbed Neck Bolts W/NUT — A307 Galv.
	119		5/8"ø WASH. — A325 Galv.

FOR APPROVAL ONLY

MAT'L: A36 Dom.
WELD: None
SURFACE PREP: SSPC - SP6
FINISH: Galv. Per A.S.T.M. A123
HOLES: 13/16"ø

See Dwg. No. 5

Approver Please Verify.

120-343

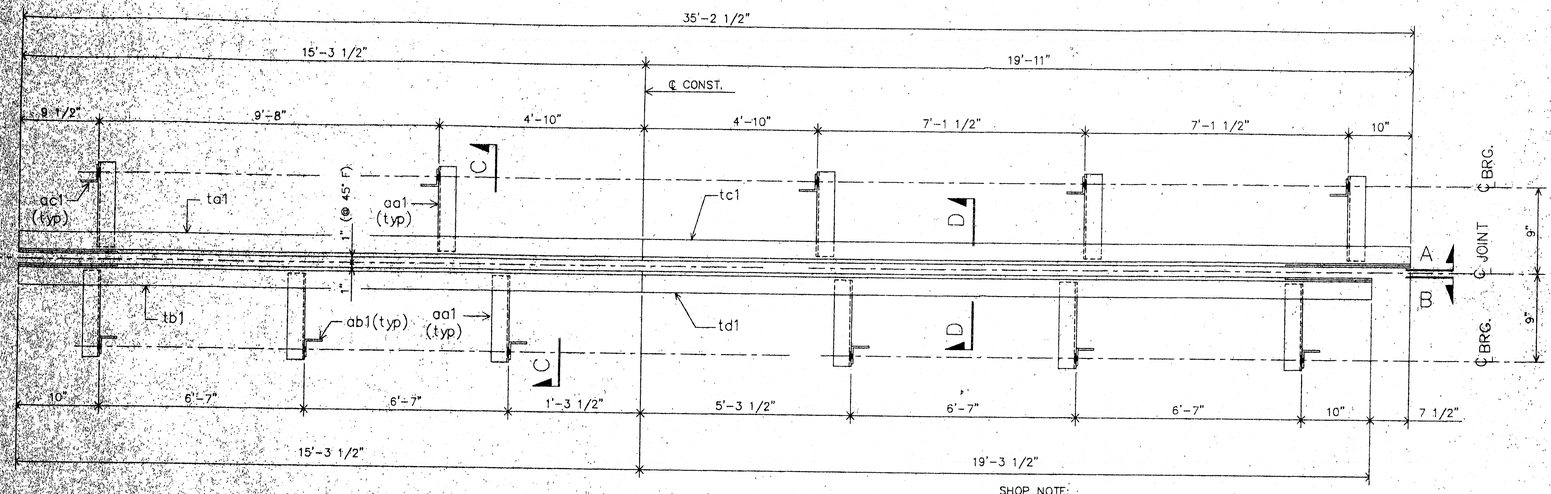
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
☐ Approved ☐ Returned for Corrections
JUL 08 1997
☑ Approved as noted ☐ Rejected

PROJ.#: BH-043-1(34)
ITEM#: 504.70

ARC ENTERPRISES, INC
ADVANCED RESOURCES & CONSTRUCTION
P.O. BOX 120 KINGFIELD, ME 04947
PHONE: (207) 265-2646 • FAX: (207) 265-4054

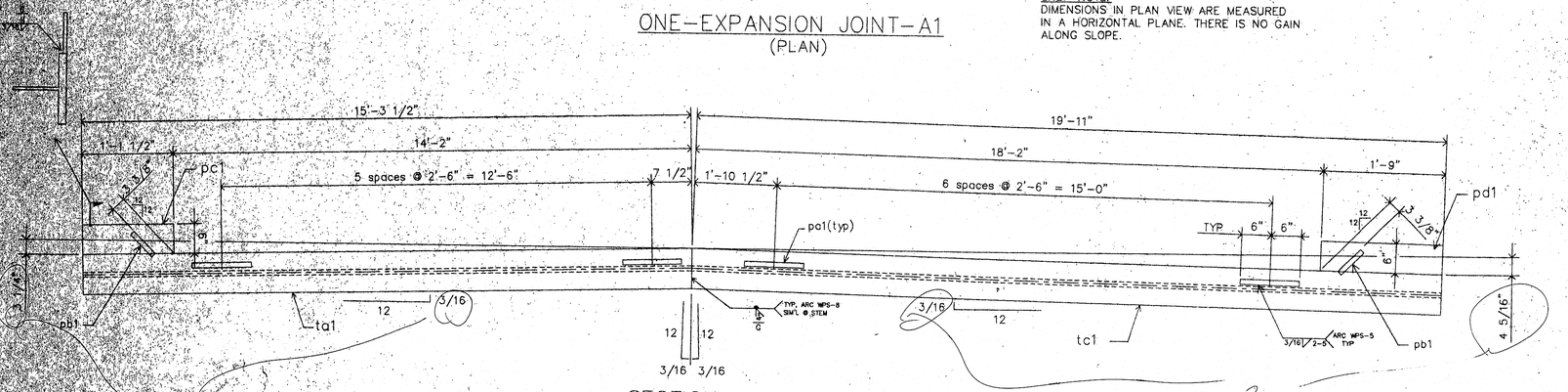
DESCRIPTION Plow Barrier Details
PROJECT Joshua Chamberlain Bridge
LOCATION Bangor / Brewer, ME.
DESIGNER ME. D.O.T
CUSTOMER Reed & Reed

DRAWN BY	DATE	JOB NUMBER	DWG. NO.
JEC	6/4/97	97-49	6
CHK'D. BY	DATE		



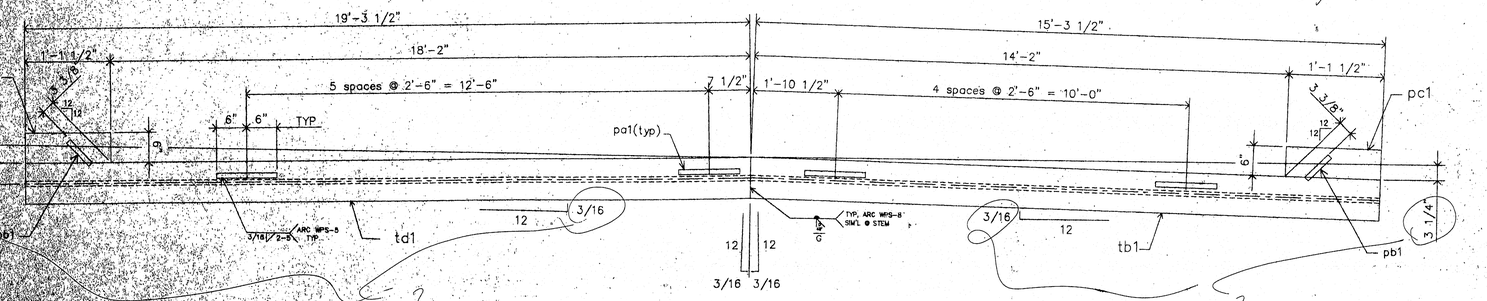
ONE-EXPANSION JOINT-A1
(PLAN)

SHOP NOTE:
DIMENSIONS IN PLAN VIEW ARE MEASURED IN A HORIZONTAL PLANE. THERE IS NO GAIN ALONG SLOPE.



SECTION A-A

See Sht 8 of 49 Contract Dwg.



SECTION B-B

WORK THIS DWG. WITH DWG. 2

MATERIALS LIST

MK	QTY	DESCRIPTION
A1.	ONE	EXPANSION JOINT ASSEMBLY
ta1	1	WT 4 X 24 X 15'-3 1/2 B1E
tb1	1	WT 4 X 24 X 15'-3 1/2 B1E
tc1	1	WT 4 X 24 X 19'-11 B1E
td1	1	WT 4 X 24 X 19'-3 1/2 B1E
aa1	11	L 3 1/2 X 3 1/2 X 3/8 X 0'-8 3/4
ab1	6	L 3 1/2 X 3 1/2 X 3/8 X 0'-9 1/2
ac1	5	L 3 1/2 X 3 1/2 X 3/8 X 0'-10 1/2
ad1	14	L 3 1/2 X 3 1/2 X 3/8 X 1'-0
pa1	24	BAR 1 X 3/8 X 1'-0"
pb1	4	BAR 1 X 3/8 X 0'-6"
pc1	3	PL 1/4 X 6 X 1'-1 1/2
pd1	1	PL 1/4 X 6 X 1'-9
ma1	7	ROD 1/2ø X 0'-9" w/ 2N&2W
mb1	78	1/2ø X 0'-8" CONC. STUDS
mc1	11	7/8ø X 0'-2 1/4" H.S. BOLTS A325 w/N&2W
md1	14	3/4ø X 0'-2" H.S. BOLTS A325 w/N&2W
me1	1	WATSON-BOWMAN WA300 COMPRESSION SEAL X 36'-0 WITH ADHESIVE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
☐ Approved ☐ Approved for Corrections
☒ Approved as noted ☐ Rejected
DATE: [illegible] 1997

PROJ. NO.: BH-043-1(34)
ITEM NO.: 520.22

MATL: A36, UN HOLES: AS NOTED
WELD: PER PROCEDURES NOTED
PREP: SP6
PAINT: ~~3 COATS~~ ZINC RICH PRIMER 3 MDFT PER COAT

Two Coats OK

120-344
FOR APPROVAL ONLY

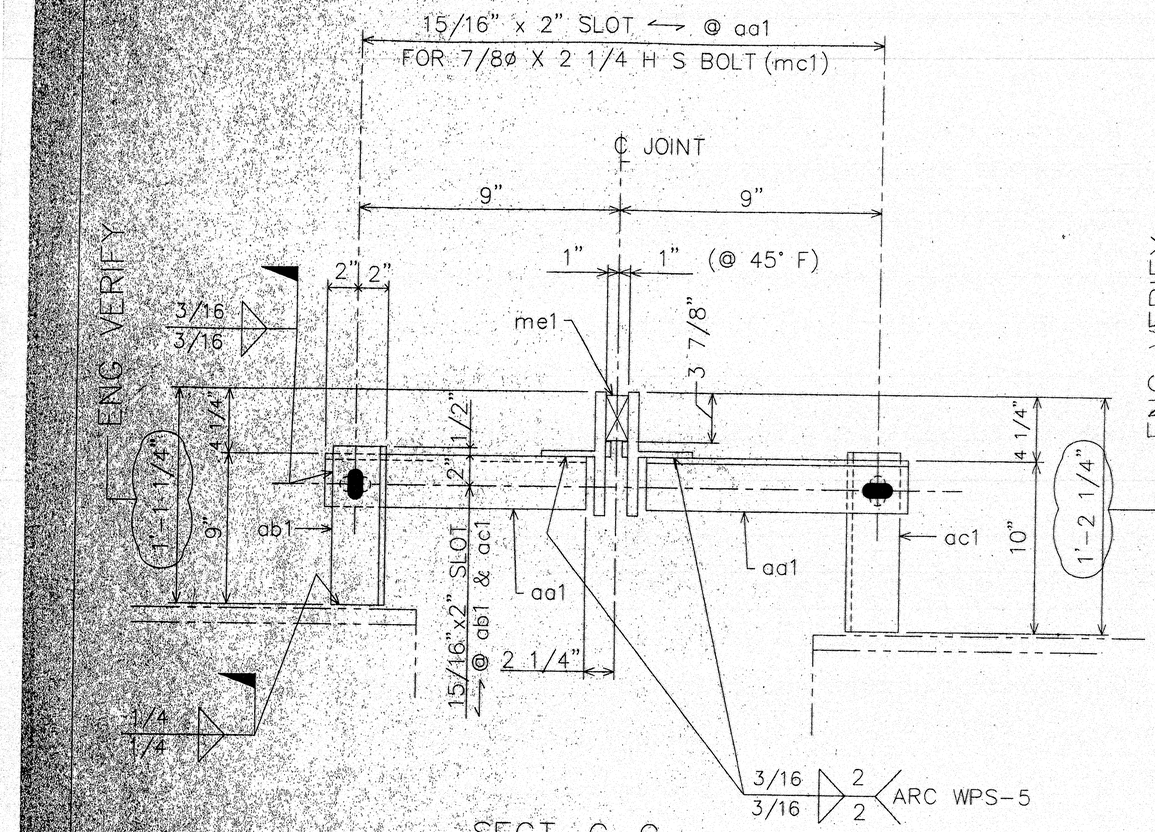
A.R.C. ENTERPRISES
KINGFIELD, MAINE

PROJECT: JOSHUA CHAMBERLAIN BRIDGE OVER THE PENOBSCOT RIVER, BANGOR-BREWER, ME.

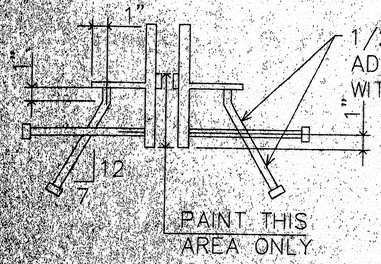
SCALE: ~	APPROVED BY:	DRAWN BY:	BB
DATE: 6/97		CHKD. BY:	

EXPANSION JOINT DETAIL @ PIER 1

REED & REED | JOB NO. 97-49 | DWG. NO. 7

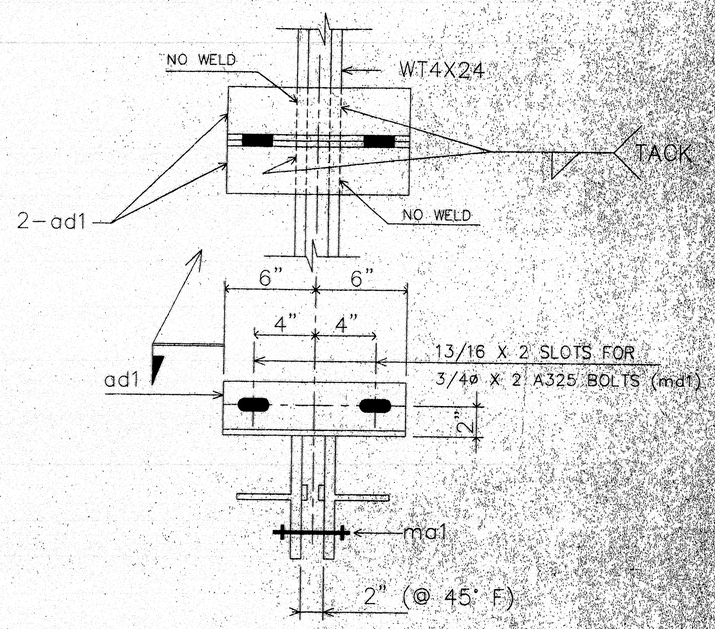


SECT. C–C



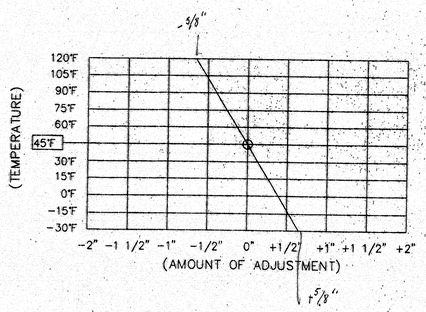
1/2ø X 8" STUDS (mb1) 12" o/c ALTERNATING. ADJUST LOC. AS REQ'D TO AVOID INTERFERENCE WITH ADJUSTMENT DEVICES.

SECT. D–D



TEMPERATURE ADJUSTING DEVICE

NOTE:
SHOP PLACE ADJUSTING DEVICES AT APPROX. 5'-0" O/C.
SHOP TO PRESET THE JOINT OPENING TO THE 45° F SETTING.
CONTRACTOR TO REFER TO THE DESIGN DWG'S & SPEC'S FOR INSTALLATION INSTRUCTIONS.



COMP. SEAL ADJUSTMENT CHART

FIELD NOTE:
ADJUST JOINT OPENING FOR TEMPERATURE AT TIME OF INSTALLATION. ADJUSTMENT IS TO BE MEASURED PARALLEL TO THE WORKING LINE.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
☐ Approved ☐ Returned for Corrections
AUG 8 1997
☑ Approved as noted ☐ Rejected

FOR APPROVAL ONLY

PROJ. NO. : BH-043-1(34)
ITEM NO. 520.22
120-345

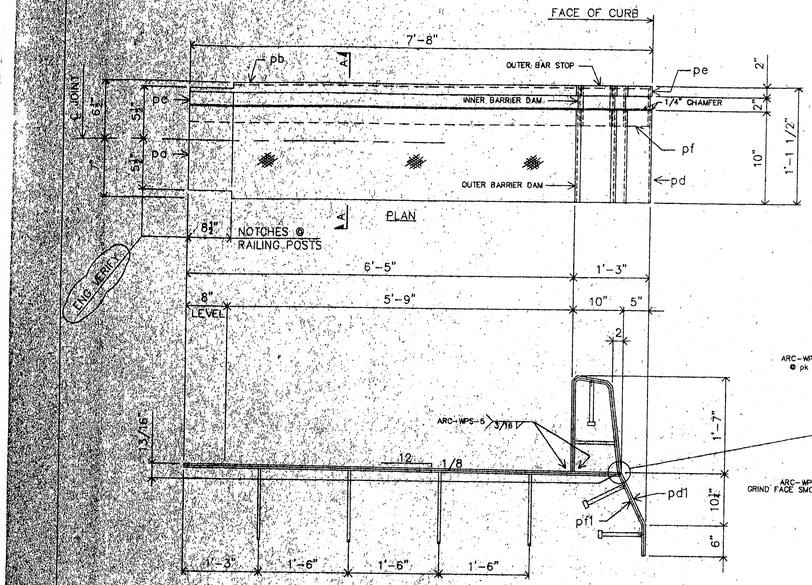
A.R.C. ENTERPRISES
KINGFIELD, MAINE

PROJECT: JOSHUA CHAMBERLAIN BRIDGE OVER THE PENOBSCOT RIVER, BANGOR-BREWER, ME.

SCALE: AS DRAWN BY: RB
DATE: 6/97 APPROVED BY: CHKD BY:

EXPANSION JOINT DETAIL @ PIER 1

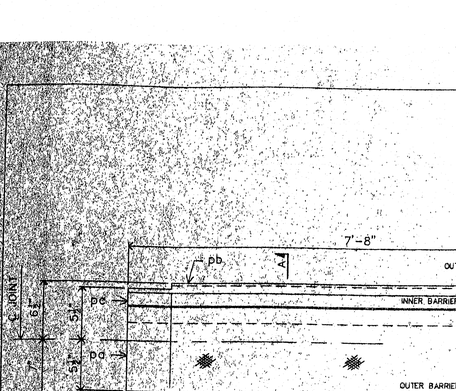
REED & REED JOB NO. 97-49 DWG. NO. 8



ELEVATION

ONE-EXP. JOINT-A3 (AS SHOWN)

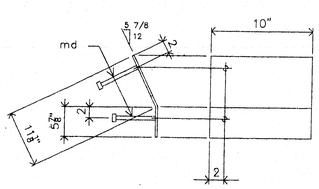
ONE-EXP. JOINT-B3 (OPP. HAND)



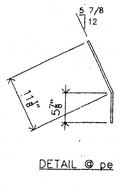
Submit WPS for the weld including elevated temperature Requirements for welding Reinforcing Steel. i.e. AWS D1.4

(OR)

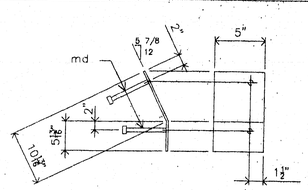
Substitute a Flatbar of Appropriate ~~Size~~ Size and Strength and use an existing Fillet weld Procedure.



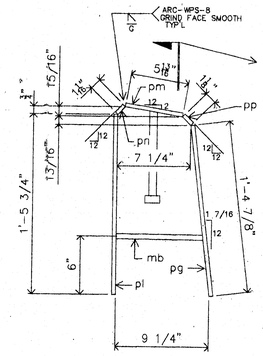
DETAIL @ pd



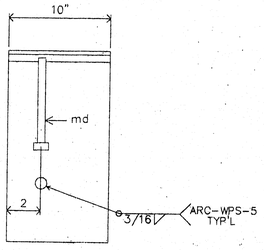
DETAIL @ pe

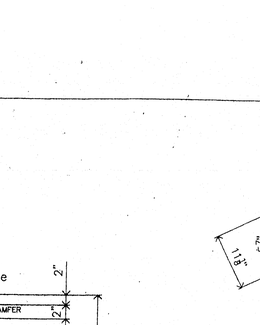


DETAIL @ pf
(BEND TO FIT INSIDE pd)

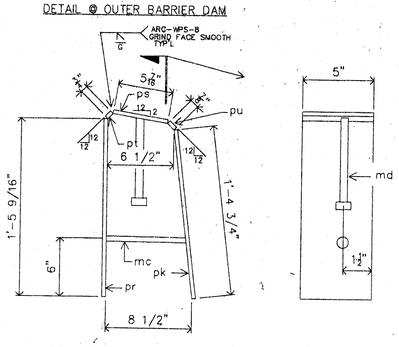


DETAIL @ OUTER BARRIER DAM





DETAIL @ OUTER BAR STOP



DETAIL @ INNER BARRIER DAM

* Prefer - Get Price on Galvanizing Assembly.

or

Use different Paint System.
Use NepCoat List:
Typical Systems:
Carboline
Wasser
Keeler & Long
1) Should Use
2) Zinc Rich Primer
3) 2 Part epoxy
Urethane.

MATERIALS LIST

MK	QTY	DESCRIPTION
A3	1	EXPANSION DEVICE ASSEMBLY
B3	1	EXPANSION DEVICE ASSEMBLY
pa3	2	CHK'D PL 3/8 x 10 x 7'-2 3/4 BEND/SHP'D 1L-1R
pb3	2	PL 3/8 X 2 X 7'-2 3/4 BEND/SHP'D 1L-1R
pc3	2	PL 3/8 X 5 X 7'-2 1/2 BEND
pd3	2	PL 3/8 X 10 X 1'-5 BEND 1L-1R
pe3	2	PL 3/8 X 2 X 1'-5 BEND
pf3	2	PL 3/8 X 5 X 1'-4 5/8 BEND
pg3	2	PL 3/8 X 10 X 1'-4 7/8 BEND 1L-1R
ph3	2	PL 3/8 X 2 X 1'-4 7/8 BEND
pk3	2	PL 3/8 X 5 X 1'-4 3/4 BEND
pl3	2	PL 3/8 X 10 X 1'-5 3/4 1L-1R
pm3	2	PL 3/8 X 5 13/16 X 0'-10 1L-1R
pn3	2	PL 3/8 X 1 1/16 X 0'-10 1L-1R
pp3	2	PL 3/8 X 1 1/8 X 0'-10 1L-1R
pr3	2	FB 3/8 X 2 X 1'-5 3/4
ps3	2	FB 3/8 X 2 X 0'-5 13/16
pt3	2	FB 3/8 X 2 X 0'-1 1/16
pu3	2	PL 3/8 X 2 X 0'-1 1/8
pv3	2	PL 3/8 X 5 X 1'-5 9/16
pw3	2	PL 3/8 X 5 X 0'-5 7/16
px3	2	PL 3/8 X 3/4 X 0'-5
py3	2	PL 3/8 X 7/8 X 0'-5
ma3	16	#6 REBAR X 1'-6 BEND A615,GR 60
mb3	2	#6 REBAR X 1'-5 A615,GR 60
mc3	2	#6 REBAR X 1'-3 1/2 A615,GR 60
md3	12	1/2-0 x 0'-8 CONC STUDS

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
☐ Approved ☐ Returned for Corrections
AUG 2 8 1997
☒ Approved as noted ☐ Rejected

PROJ. NO. BH-043-1(34)
ITEM NO. 520.22

MATL: A36 UN HOLES: AS NOTED
WELD: PER PROCEDURES NOTED
PREP: SP6
FINISH: 3 COATS ZINC RICH PRIMER 3 MDFT PER COAT

FOR APPROVAL ONLY
120-346

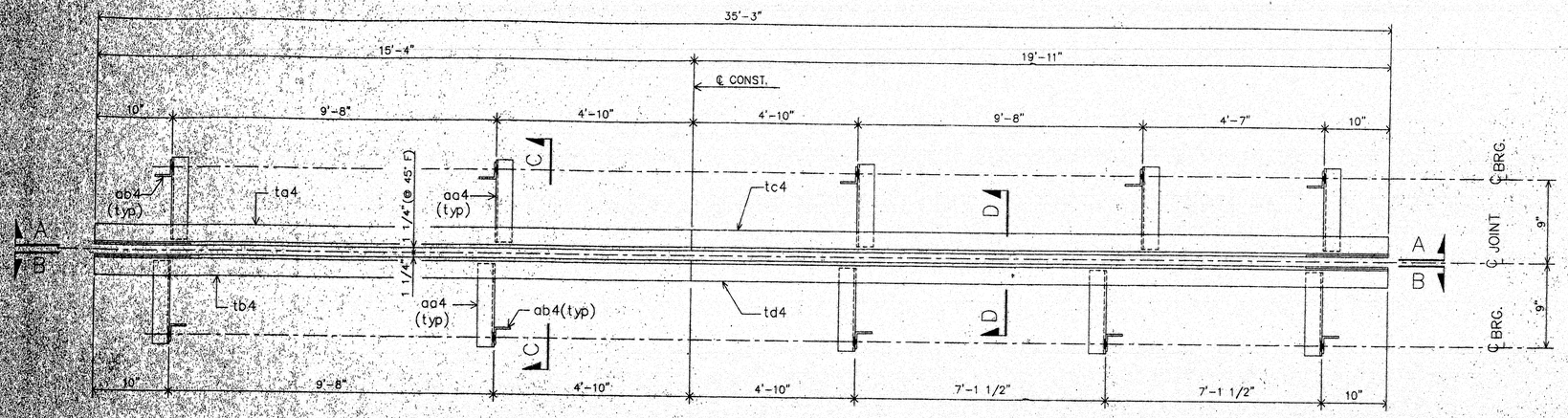
A.R.C. ENTERPRISES
KINGFIELD, MAINE

PROJECT: JOSHUA CHAMBERLAIN BRIDGE OVER THE PENOBSCOT RIVER, BANGOR-BREWER, ME.

SCALE: ~	APPROVED BY:	DRAWN BY:	BB
DATE: 6/97		CHKD. BY:	

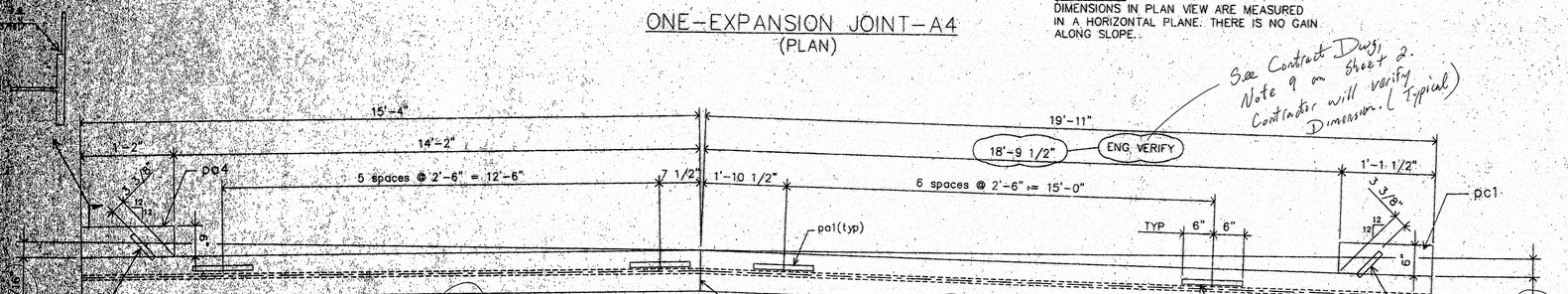
SIDEWALK DAM DETAIL @ PIER

REED & REED | JOB NO. 97-49 | DWG. NO. 4

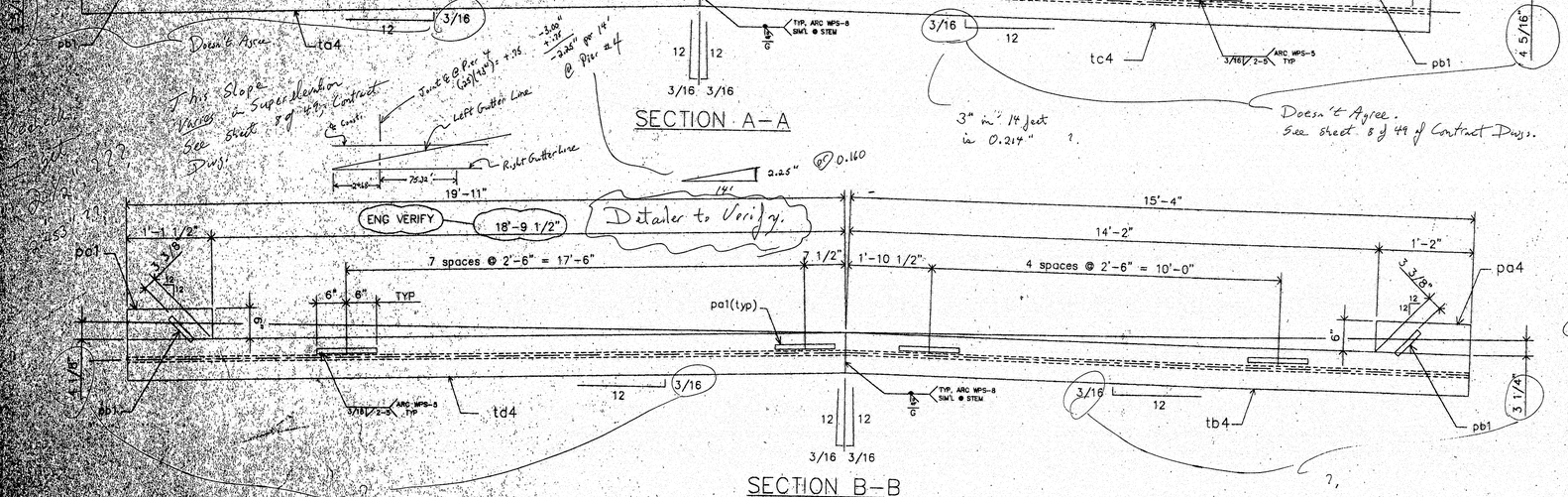


ONE-EXPANSION JOINT-A4
(PLAN)

SHOP NOTE:
DIMENSIONS IN PLAN VIEW ARE MEASURED IN A HORIZONTAL PLANE. THERE IS NO GAIN ALONG SLOPE.



SECTION A-A



SECTION B-B

WORK THIS DWG. WITH DWG. 5

MATERIALS LIST

MK	QTY	DESCRIPTION
A4	ONE	EXPANSION JOINT ASSEMBLY
ta4	1	WT 4 X 24 X 15'-4 B1E
tb4	1	WT 4 X 24 X 15'-4 B1E
tc4	1	WT 4 X 24 X 19'-11 B1E
td4	1	WT 4 X 24 X 19'-11 B1E
aa4	10	L 3 1/2 X 3 1/2 X 3/8 X 0'-8 1/2
ab4	10	L 3 1/2 X 3 1/2 X 3/8 X 0'-10 1/2
ad1	14	L 3 1/2 X 3 1/2 X 3/8 X 1'-0
pa1	26	BAR 1 X 3/8 X 1'-0"
pb1	4	BAR 1 X 3/8 X 0'-6"
pc1	2	PL 1/4 X 6 X 1'-1 1/2
pa4	2	PL 1/4 X 6 X 1'-2
ma1	7	ROD 1/2ø X 0'-9" w/ 2N&2W
mb1	78	1/2ø X 0'-6" CONC. STUDS
mc1	11	7/8ø X 0'-2 1/4" H.S.BOLTS A325 w/N&2W
md1	14	3/4ø X 0'-2" H.S.BOLTS A325 w/N&2W
me4	1	2" DEEP, 1" WIDE COMPRESSION SEAL X 36'-0" WITH ADHESIVE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
☐ Approved ☐ Returned for Correction
AUG 6 1997
☐ Approved as noted ☐ Rejected

PROJ. NO.: BH-043-1(34)
ITEM NO.: 520.22

MATL: A36, UN HOLES: AS NOTED
WELD: PER PROCEDURES NOTED
PREP: SP6
PAINT: 3 COATS ZINC RICH PRIMER
3 MDFT PER COAT

2 Coats Ok.

FOR APPROVAL ONLY
120-347

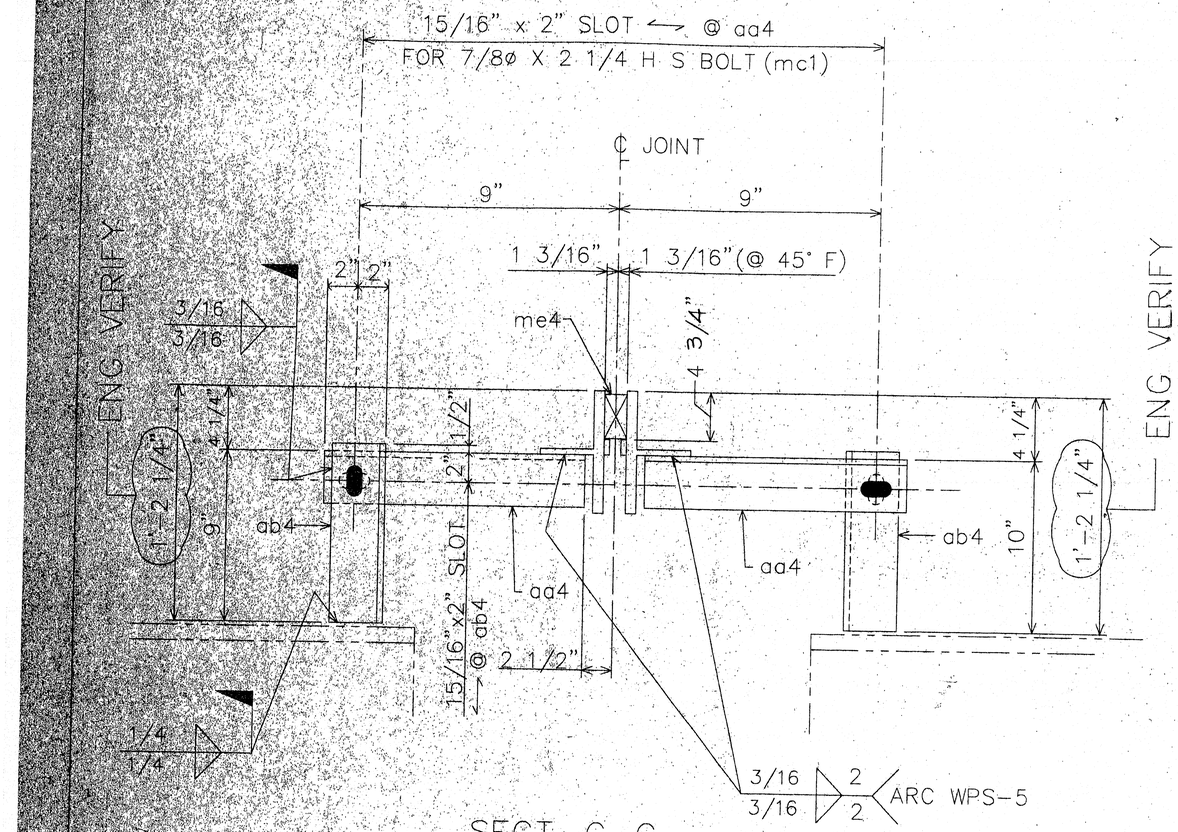
A.R.C. ENTERPRISES
KINGFIELD, MAINE

PROJECT: JOSHUA CHAMBERLAIN BRIDGE OVER THE PENOBSCOT RIVER, BANGOR-BREWER, ME.

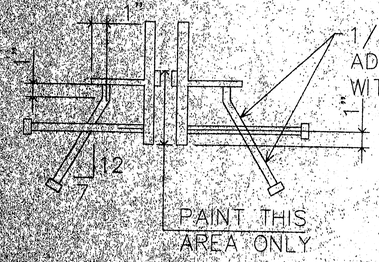
SCALE: ~ APPROVED BY: DRAWN BY: BB
DATE: 6/97 CHKD. BY:

EXPANSION JOINT DETAIL @ PIER 4

REED & REED JOB NO.: 97-49 DWG. NO. 10

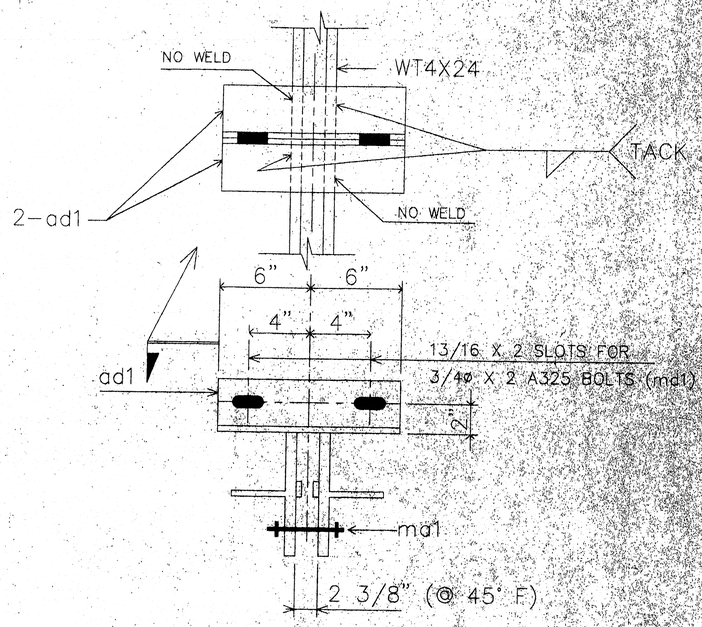


SECT. C-C



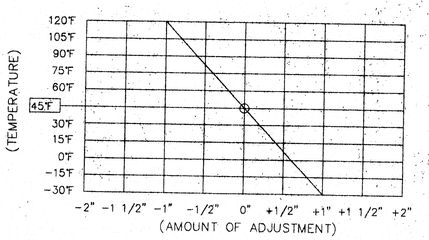
1/2ø X 8" STUDS (mb1) 12" o/c ALTERNATING. ADJUST LOC. AS REQ'D TO AVOID INTERFERENCE WITH ADJUSTMENT DEVICES.

SECT. D-D



TEMPERATURE ADJUSTING DEVICE

NOTE:
SHOP PLACE ADJUSTING DEVICES AT APPROX. 5'-0" O/C.
SHOP TO PRESET THE JOINT OPENING TO THE 45° F. SETTING.
CONTRACTOR TO REFER TO THE DESIGN DWG'S & SPEC'S FOR INSTALLATION INSTRUCTIONS.



COMP. SEAL ADJUSTMENT CHART

FIELD NOTE:
ADJUST JOINT OPENING FOR TEMPERATURE AT TIME OF INSTALLATION. ADJUSTMENT IS TO BE MEASURED PARALLEL TO THE WORKING LINE.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
☐ Approved ☐ Returned for Corrections
AUG 2 8 1997
☑ Approved as noted ☐ Rejected

FOR APPROVAL ONLY

PROJ. NO. BH-043-1(34)
ITEM NO. 520.22
120-348

A.R.C. ENTERPRISES
KINGFIELD, MAINE

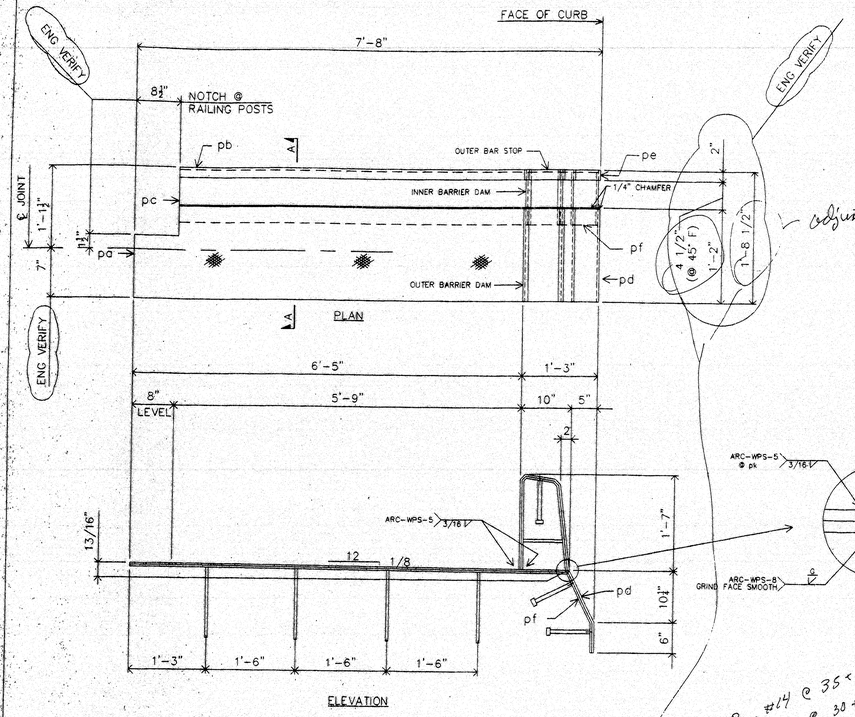
PROJECT: JOSHUA CHAMBERLAIN BRIDGE OVER THE PENOBSCOT RIVER, BANGOR-BREWER, ME.

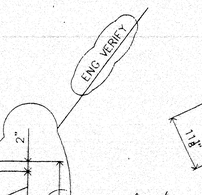
SCALE: 3/4"	APPROVED BY:	DRAWN BY: BD
DATE: 6/97		CHKD. BY:

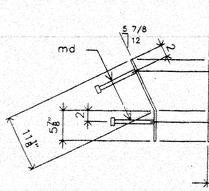
EXPANSION JOINT DETAIL @ PIER 4

REED & REED

JOB NO. 97-49 DWG. NO. 11





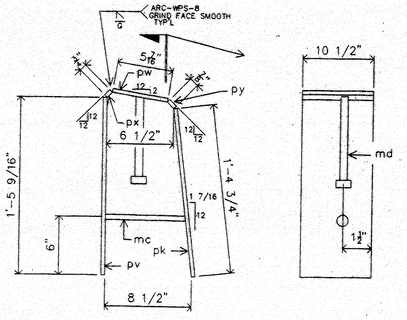


DETAIL @ pd

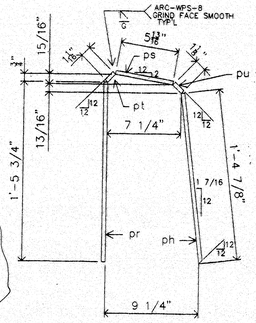
DETAIL @ pe

DETAIL @ pf
(BEND TO FIT INSIDE pd)

DETAIL @ OUTER BARRIER DAM



DETAIL @ INNER BARRIER DAM



DETAIL @ OUTER BAR STOP

SHOP NOTE:
OUTER BARRIER & OUTER BAR STOP TO BE FABRICATED TO FIT OVER THE INNER BARRIER UNIT.

MATERIALS LIST

MK	QTY	DESCRIPTION
A22	1	EXPANSION DEVICE ASSEMBLY
B22	1	EXPANSION DEVICE ASSEMBLY
pa22	2	CHK'D PL 3/8 x 14 x 7'-2 3/4 BEND/SHP'D 1L-1R
pb22	2	PL 3/8 X 2 X 7'-2 3/4 BEND/SHP'D 1L-1R
pc22	2	PL 3/8 X 10 1/2 X 7'-2 1/2 BEND
pd22	2	PL 3/8 X 14 X 1'-5 BEND 1L-1R
pe22	2	PL 3/8 X 2 X 1'-5 BEND
pf22	2	PL 3/8 X 10 1/2 X 1'-4 5/8 BEND
pg22	2	PL 3/8 X 14 X 1'-4 7/8 B1E 1L-1R
ph22	2	PL 3/8 X 2 X 1'-4 7/8 B1E
pk22	2	PL 3/8 X 10 1/2 X 1'-4 3/4
pl22	2	PL 3/8 X 14 X 1'-5 3/4 1L-1R
pm22	2	PL 3/8 X 5 13/16 X 1'-2 1L-1R
pn22	2	PL 3/8 X 1 1/16 X 1'-2 1L-1R
pp22	2	PL 3/8 X 1 1/8 X 1'-2 1L-1R
pr22	2	FB 3/8 X 2 X 1'-5 3/4
ps22	2	FB 3/8 X 2 X 0'-5 13/16
pt22	2	FB 3/8 X 2 X 0'-1 1/16
pu22	2	PL 3/8 X 2 X 0'-1 1/8
py22	2	PL 3/8 X 10 3/2 X 1'-5 9/16
pw22	2	PL 3/8 X 5 7/16 X 0'-10 1/2
px22	2	PL 3/8 X 3/4 X 0'-10 1/2
py22	2	PL 3/8 X 7/8 X 0'-10 1/2
ma22	16	#6 REBAR X 1'-6 BEND A615,GR 60
mb22	2	#6 REBAR X 0'-8 1/2 A615,GR 60
mc22	2	#6 REBAR X 0'-7 3/4 A615,GR 60
md22	12	1/2"ø x 0'-8 CONC STUDS

PROJ. NO. BH-043-1(34)
ITEM NO. 520.22

MATL: A36 UN HOLES: AS NOTED
WELD: PER PROCEDURES NOTED
PREP: SP6
FINISH: 3 COATS ZINC RICH PRIMER 3 MDFT PER COAT

120-349
FOR APPROVAL ONLY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
☐ Approved ☐ Returned for Corrections
AUG 21 1997
☑ Approved as noted ☐ Rejected

A.R.C. ENTERPRISES
KINGFIELD, MAINE

PROJECT: JOSHUA CHAMBERLAIN BRIDGE OVER THE PENOBSCOT RIVER, BANGOR-BREWER, ME.

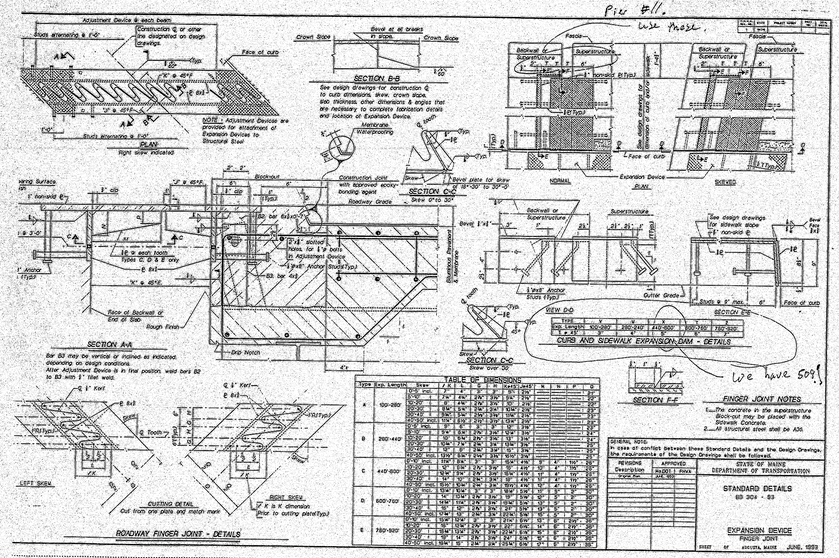
SCALE: ~	APPROVED BY:	DRAWN BY:	BB
DATE: 7/97		CHKD. BY:	

SIDEWALK DAM DETAIL @ PIER 11

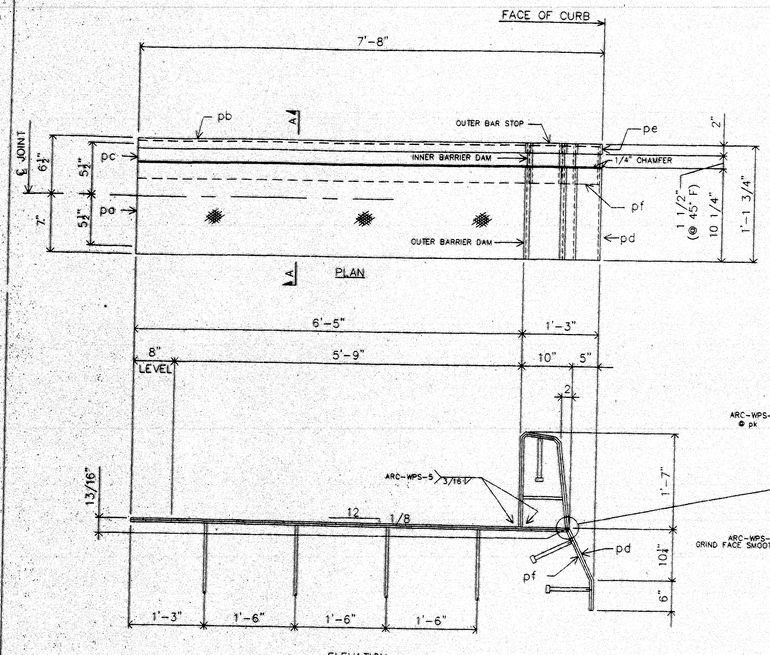
REED & REED	JOB NO. 97-49	DWG. NO. 22

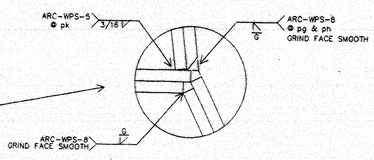
Pier #11.

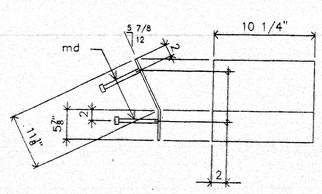
use Phase.

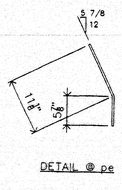


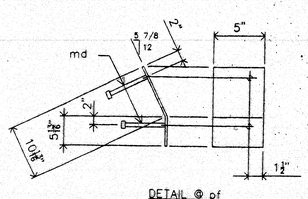
we have 509!

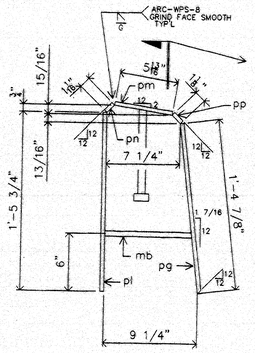


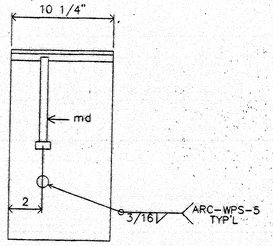


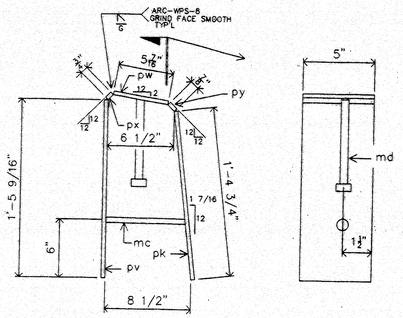


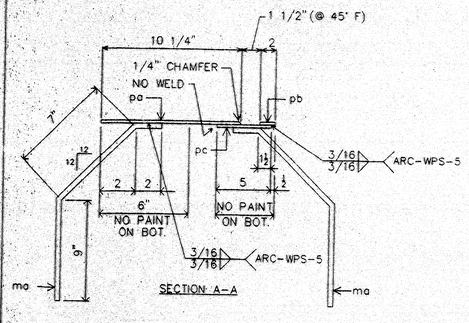


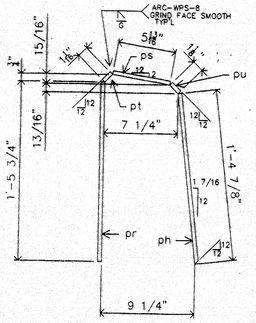












ONE-EXP. JOINT-A21 (AS SHOWN)

ONE-EXP. JOINT-B21 (OPP. HAND)

SHOP NOTE:
OUTER BARRIER & OUTER BAR STOP TO BE FABRICATED TO FIT OVER THE INNER BARRIER UNIT.

See Sht 15 for Comments.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
☐ Approved ☐ Returned for Corrections
AUG 21 1997
☑ Approved as noted ☐ Rejected

MATERIALS LIST

MK	QTY	DESCRIPTION
A21	1	EXPANSION DEVICE ASSEMBLY
B21	1	EXPANSION DEVICE ASSEMBLY
pa21	2	CHK'D PL 3/8 X 10 1/4 x 7'-2 3/4 BEND/SHP'D 1L-1R
pb21	2	PL 3/8 X 2 X 7'-2 3/4 BEND/SHP'D 1L-1R
pc21	2	PL 3/8 X 5 X 7'-2 1/2 BEND
pd21	2	PL 3/8 X 10 1/4 X 1'-5 BEND 1L-1R
pe21	2	PL 3/8 X 2 X 1'-5 BEND
pf21	2	PL 3/8 X 5 X 1'-4 5/8 BEND
pg21	2	PL 3/8 X 10 1/4 X 1'-4 7/8 B1E 1L-1R
ph21	2	PL 3/8 X 2 X 1'-4 7/8 B1E
pk21	2	PL 3/8 X 5 X 1'-4 3/4
pl21	2	PL 3/8 X 10 1/4 X 1'-5 3/4 1L-1R
pm21	2	PL 3/8 X 5 13/16 X 0'-10 1/4 1L-1R
pn21	2	PL 3/8 X 1 1/16 X 0'-10 1/4 1L-1R
pp21	2	PL 3/8 X 1 1/8 X 0'-10 1/4 1L-1R
pr21	2	FB 3/8 X 2 X 1'-5 3/4
ps21	2	FB 3/8 X 2 X 0'-5 13/16
pt21	2	FB 3/8 X 2 X 0'-1 1/16
pu21	2	PL 3/8 X 2 X 0'-1 1/8
pv21	2	PL 3/8 X 5 X 1'-5 9/16
pw21	2	PL 3/8 X 5 X 0'-5 7/16
px21	2	PL 3/8 X 3/4 X 0'-5
py21	2	PL 3/8 X 7/8 X 0'-5
mg21	16	#6 REBAR X 1'-6 BEND A615,GR 60
mb21	2	#6 REBAR X 0'-8 1/2 A615,GR 60
mc21	2	#6 REBAR X 0'-7 3/4 A615,GR 60
md21	12	1/2 ø x 0'-8 CONC STUDS

PROJ. NO. BH-043-1(34)
ITEM NO. 520.22

MATL: A36 UN HOLES: AS NOTED
WELD: PER PROCEDURES NOTED
PREP: SP6
FINISH: 3 COATS ZINC RICH PRIMER 3 MDFT PER COAT.

120-350
FOR APPROVAL ONLY

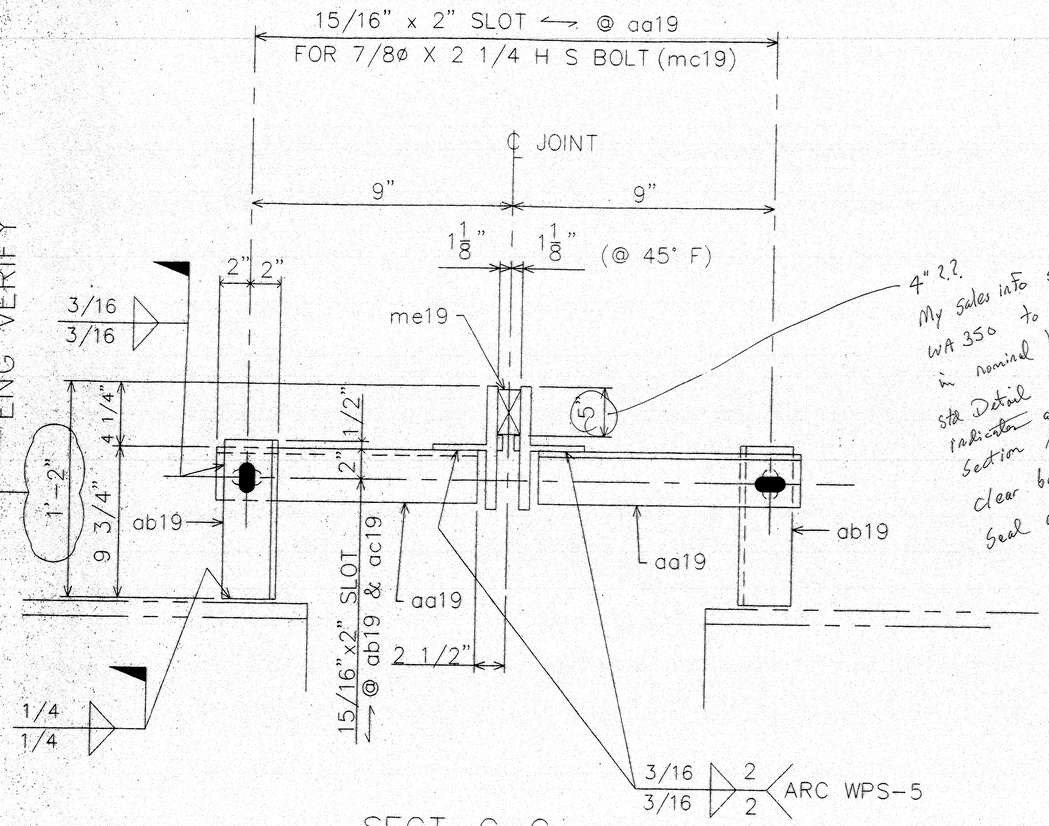
A.R.C. ENTERPRISES
KINGFIELD, MAINE

PROJECT: JOSHUA CHAMBERLAIN BRIDGE OVER THE PENOBSCOT RIVER, BANGOR-BREWER, ME

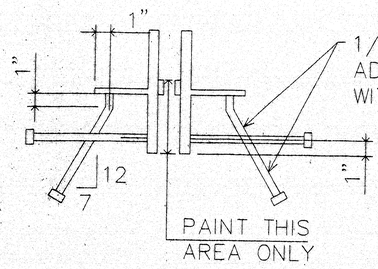
SCALE: ~	APPROVED BY:	DRAWN BY:	BB
DATE: 7/97		CHKD. BY:	

SIDEWALK DAM DETAIL @ HINGE SPAN 9

REED & REED | JOB NO. 97-49 | DWG. NO. 21

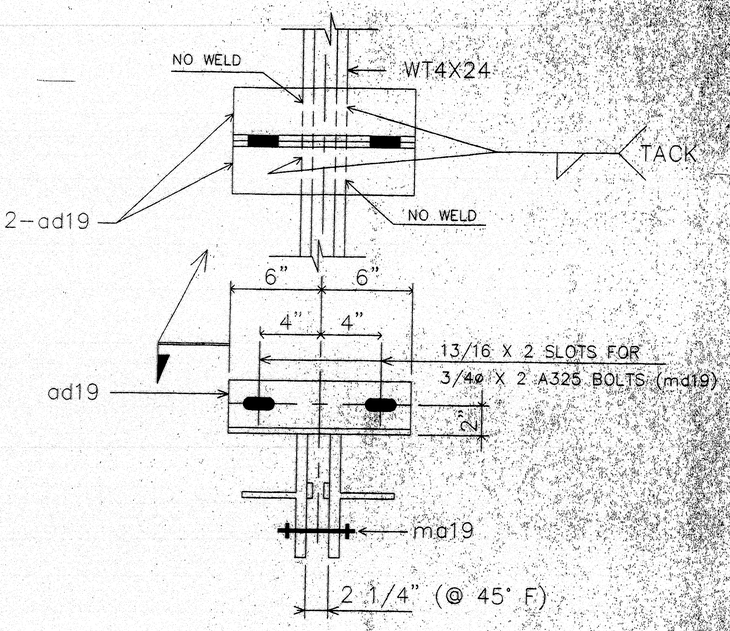


SECT. C–C



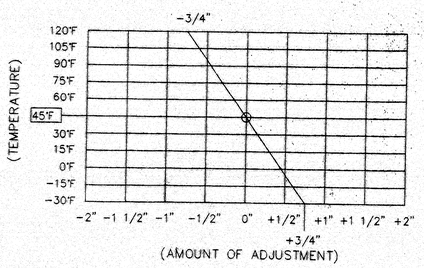
1/2ø X 8" STUDS (mb19) 12" o/c ALTERNATING. ADJUST LOC. AS REQ'D TO AVOID INTERFERENCE WITH ADJUSTMENT DEVICES.

SECT. D–D



TEMPERATURE ADJUSTING DEVICE

NOTE:
SHOP PLACE ADJUSTING DEVICES AT APPROX. 5'-0" O/C.
SHOP TO PRESET THE JOINT OPENING TO THE 45° F SETTING.
CONTRACTOR TO REFER TO THE DESIGN DWG'S & SPEC'S FOR INSTALLATION INSTRUCTIONS.



COMP. SEAL ADJUSTMENT CHART

FIELD NOTE:
ADJUST JOINT OPENING FOR TEMPERATURE AT TIME OF INSTALLATION. ADJUSTMENT IS TO BE MEASURED PARALLEL TO THE WORKING LINE.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
☐ Approved ☐ Returned for Corrections
AUG 21 1997
☑ Approved as noted ☐ Rejected

FOR APPROVAL ONLY

PROJ. NO. : BH-043-1(34)
ITEM NO. : 520.22
120-351

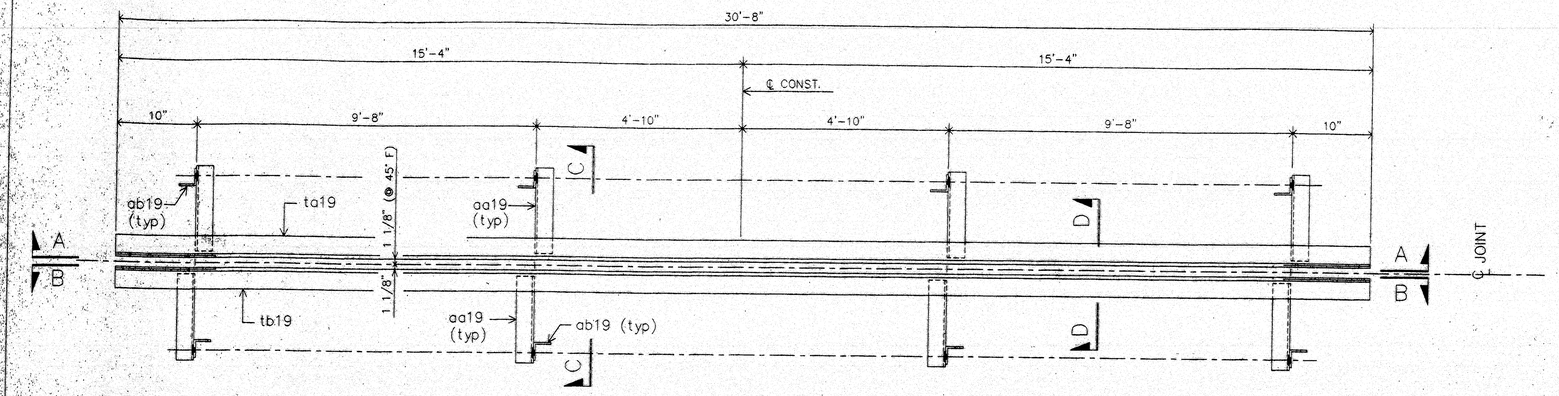
A.R.C. ENTERPRISES
KINGFIELD, MAINE

PROJECT: JOSHUA CHAMBERLAIN BRIDGE OVER THE PENOBSCOT RIVER, BANGOR-BREWER, ME.

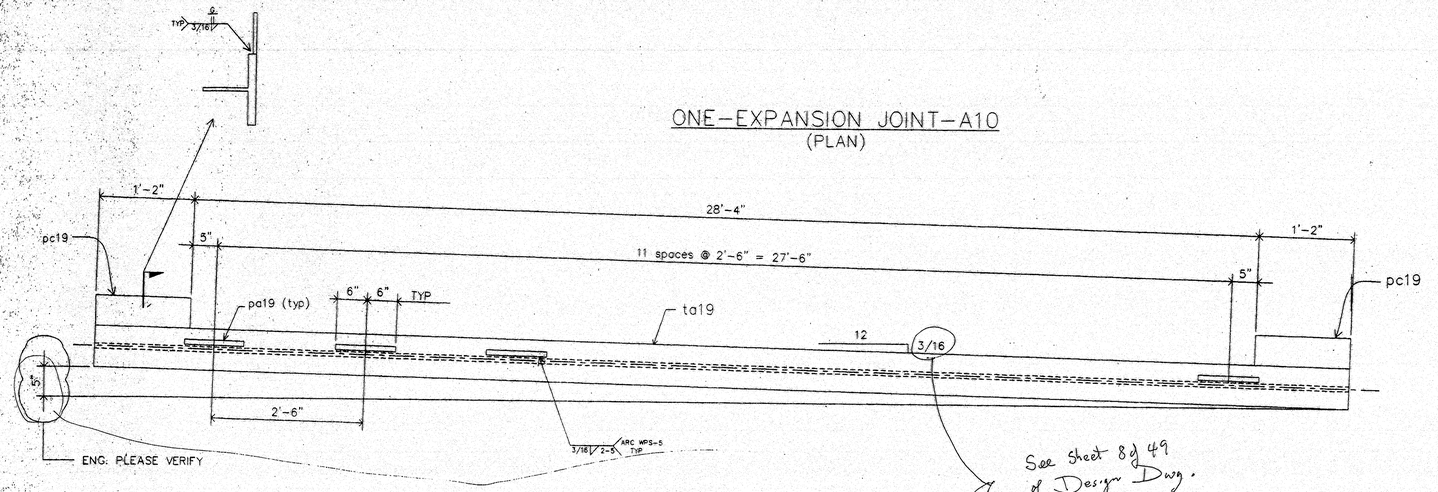
SCALE:	APPROVED BY:	DRAWN BY: BB	
DATE: 7/97		CHKD. BY:	

EXPANSION JOINT DETAIL @ HINGE SPAN 9

REED & REED | JOB NO. 97-49 | DWG NO. 20

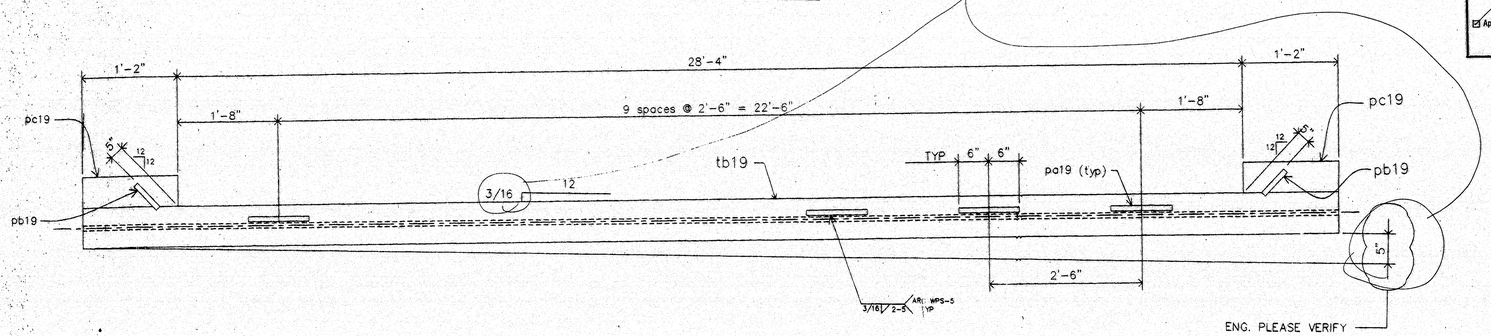


ONE-EXPANSION JOINT-A10
(PLAN)



SECTION A-A

See Sheet 8 of 49 of Design Dwg.



SECTION B-B

MATERIALS LIST

MK	QTY	DESCRIPTION
A19	ONE	EXPANSION JOINT ASSEMBLY
ta19	1	WT 4 X 24 X 30'-8
tb19	1	WT 4 X 24 X 30'-8
aa19	8	L 3 1/2 X 3 1/2 X 3/8 X 0'-8 1/2
ab19	8	L 3 1/2 X 3 1/2 X 3/8 X 0'-10 1/4
ad19	12	L 3 1/2 X 3 1/2 X 3/8 X 1'-0
pa19	22	BAR 1 X 3/8 X 1'-0"
pb19	2	BAR 1 X 3/8 X 0'-6"
pc19	4	PL 1/4 X 6 X 1'-2
ma19	6	THR'D ROD 1/2ø X 0'-9" w/ 2N&2W
mb19	68	1/2ø X 0'-8" CONC. STUDS
mc19	8	7/8ø X 0'-2 1/4" H S BOLTS A325 w/N&2W
md19	12	3/4ø X 0'-2" H S BOLTS A325 w/N&2W
me19	1	WATSON-BOWMAN WA 350 COMPRESSION SEAL X 32'-0" WITH ADHESIVE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
☐ Approved ☐ Returned for Corrections
AUG 21 1997
☑ Approved as noted ☐ Rejected

PROJ. NO.: BH-043-1(34)
ITEM NO.: 520.22

MATL: A36, UN HOLES: AS NOTED
WELD: PER PROCEDURES NOTED
PREP: SP6
PAINT: 3 COATS - ZINC RICH PRIMER
3 MDFT PER COAT

FOR APPROVAL ONLY
120-352

WORK THIS DWG. WITH DWG. 20.

A.R.C. ENTERPRISES
KINGFIELD, MAINE

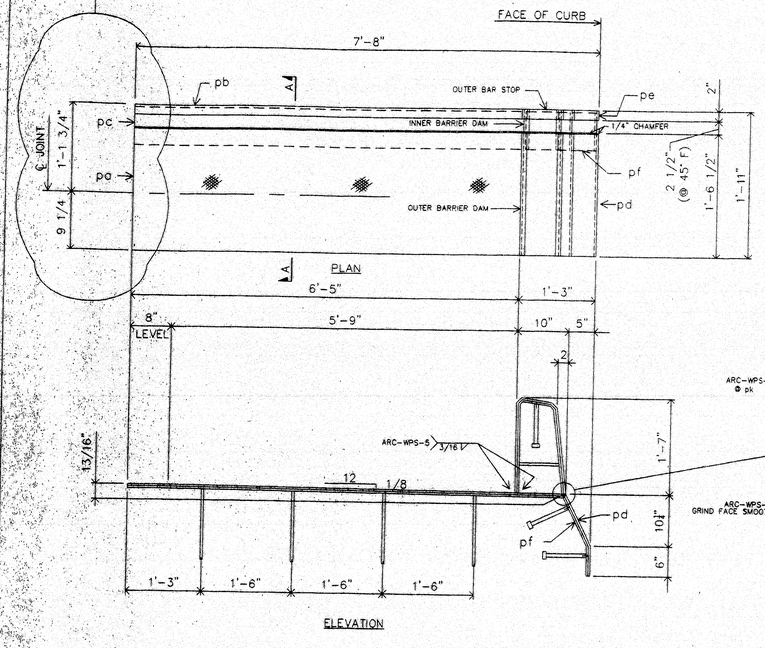
PROJECT: JOSHUA CHAMBERLAIN BRIDGE OVER THE PENOBSCOT RIVER, BANGOR-BREWER, ME

SCALE: ~	APPROVED BY:	DRAWN BY: BB
DATE: 7/97		CHKD. BY:

EXPANSION JOINT DETAIL @ HINGE SPAN 9

REED & REED | JOB NO. 97-49 | DWG. NO. 19

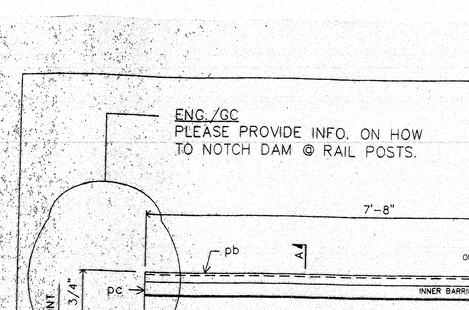
ENG./GC
PLEASE PROVIDE INFO. ON HOW
TO NOTCH DAM @ RAIL POSTS.



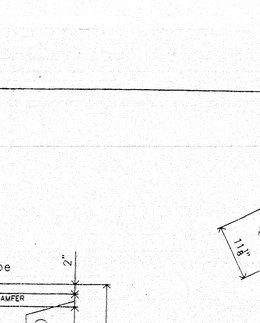
ELEVATION

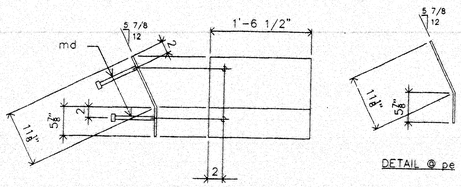
ONE-EXP. JOINT-A18 (AS SHOWN)

ONE-EXP. JOINT-B18 (OPP. HAND)



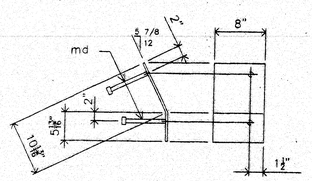
SECTION A-A



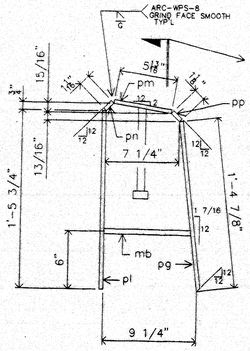


DETAIL @ pd

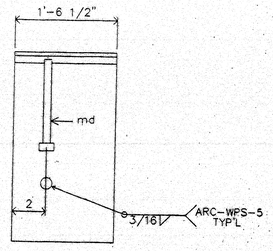
DETAIL @ pe

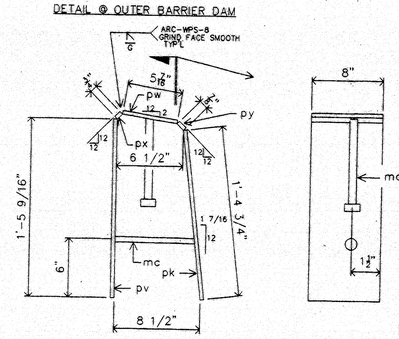


DETAIL @ pf
(BEND TO FIT INSIDE pd)

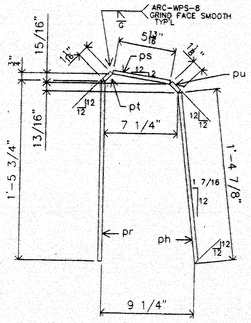


DETAIL @ OUTER BARRIER DAM





DETAIL @ INNER BARRIER DAM



DETAIL @ OUTER BAR STOP

SHOP NOTE:
OUTER BARRIER & OUTER BAR STOP TO BE FABRICATED TO FIT OVER THE INNER BARRIER UNIT.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
☐ Approved ☐ Returned for Corrections
AUG 2 1 1997
☒ Approved as noted ☐ Rejected

See Comments on Sht 15

MATERIALS LIST

MK	QTY	DESCRIPTION
A18	1	EXPANSION DEVICE ASSEMBLY
B18	1	EXPANSION DEVICE ASSEMBLY
pa18	2	CHK'D PL 3/8 x 18 1/2 x 7'-2 3/4 BEND/SHP'D 1L-1R
pb18	2	PL 3/8 X 2 X 7'-2 3/4 BEND/SHP'D 1L-1R
pc18	2	PL 3/8 X 8 X 7'-2 1/2 BEND
pd18	2	PL 3/8 X 17 X 1'-6 1/2 BEND 1L-1R
pe18	2	PL 3/8 X 2 X 1'-5 BEND
pf18	2	PL 3/8 X 8 X 1'-4 5/8 BEND
pg18	2	PL 3/8 X 16 7/8 X 1'-6 1/2 B1E 1L-1R
ph18	2	PL 3/8 X 2 X 1'-4 7/8 B1E
pk18	2	PL 3/8 X 8 X 1'-4 3/4
pl18	2	PL 3/8 X 17 3/4 X 1'-6 1/2 1L-1R
pm18	2	PL 3/8 X 5 13/16 X 1'-6 1/2 1L-1R
pn18	2	PL 3/8 X 1 1/16 X 1'-6 1/2 1L-1R
pp18	2	PL 3/8 X 1 1/8 X 1'-6 1/2 1L-1R
pr18	2	FB 3/8 X 2 X 1'-5 3/4
ps18	2	FB 3/8 X 2 X 0'-5 13/16
pt18	2	FB 3/8 X 2 X 0'-1 1/16
pu18	2	PL 3/8 X 2 X 0'-1 1/8
pv18	2	PL 3/8 X 8 X 1'-5 9/16
pw18	2	PL 3/8 X 5 7/16 X 0'-8
px18	2	PL 3/8 X 3/4 X 0'-8
py18	2	PL 3/8 X 7/8 X 0'-8
ma18	18	#6 REBAR X 1'-6 BEND A615,GR 60
mb18	2	#6 REBAR X 0'-8 1/2 A615,GR 60
mc18	2	#6 REBAR X 0'-7 3/4 A615,GR 60
md18	12	1/2 ø x 0'-8 CONC STUDS

PROJ. NO. : BH-043-1(34)
ITEM NO. 520.21

MATL: A36 UN HOLES: AS NOTED
WELD: PER PROCEDURES NOTED
PREP: SP6
FINISH: 3 COATS ZINC RICH PRIMER
3 MDFT PER COAT

120-853 FOR APPROVAL ONLY

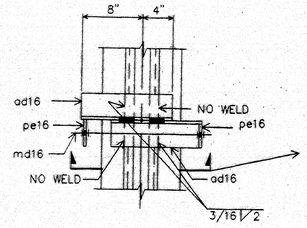
A.R.C. ENTERPRISES
KINGFIELD, MAINE

PROJECT: JOSHUA CHAMBERLAIN BRIDGE OVER THE PENOBSCOT RIVER, BANGOR-BREWER, ME

SCALE: ~	APPROVED BY:	DRAWN BY: BB
DATE: 7/97		CHK'D. BY:

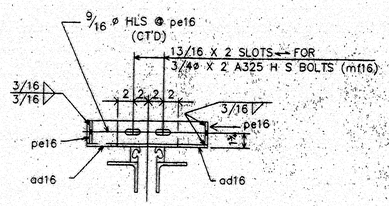
SIDEWALK DAM DETAIL @ ABUT. # 2

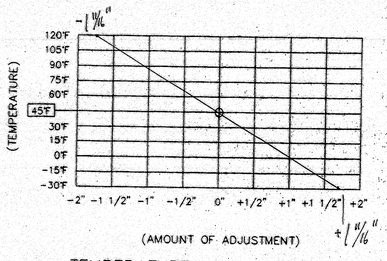
REED & REED	JOB NO: 97-49	DWG. NO. 18



PLAN

TEMP. ADJUSTING & SHIPPING DEVICE





TEMPERATURE ADJUSTMENT CHART

FIELD NOTE:
ADJUST JOINT OPENING FOR TEMPERATURE AT TIME OF INSTALLATION.

NOTES:

SHOP TO PLACE ADJUSTING & SHIPPING DEVICES ON EXP. JOINT AFTER PAINTING & SEAL INSTALLATON AT APPROX. 5'-0 O/C.

PRESET THE OPENING TO THE 45°F SETTING SHOWN ON PLANS.

CONTRACTOR TO REFER TO DESIGN DWG'S & SPECS FOR INSTALLTION INSTRUCTIONS.

CONTRACTOR TO TOUCH-UP PAINT AFTER REMOVAL OF SHIPPING DEVICES.

ENG. PLEASE PROVIDE THE AMOUNT OF MOVEMENT FOR THIS JOINT. NOT SHOWN ON DESIGN DWGS.

Sheet 23 of 49 Design Dwg:
Note 2 says use BD 302-93.
BD 302-93, Note 4 depicts formula:
Correction per 10°F = $\frac{0.0125" \times L(exp)}{15}$
Sheet 8 of 49 Design Dwg:
Distance is appx. Pier 14 to Brewer Abut.
Sta 38+08
Sta 35+38
270 feet
$\frac{\text{Correction}}{10°F} = \frac{0.0125 \times (270)}{15} = 0.225$
45° to -30° is 75°... so, 7.5 X 0.225 = 1.6875 each side of 45°F.
∴ = 1 11/16"

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
☐ Approved ☐ Returned for Corrections
AUG 21 1997
☑ Approved as noted ☐ Rejected

PROJ. NO. : BH-043-1(34)
ITEM NO. 520.21

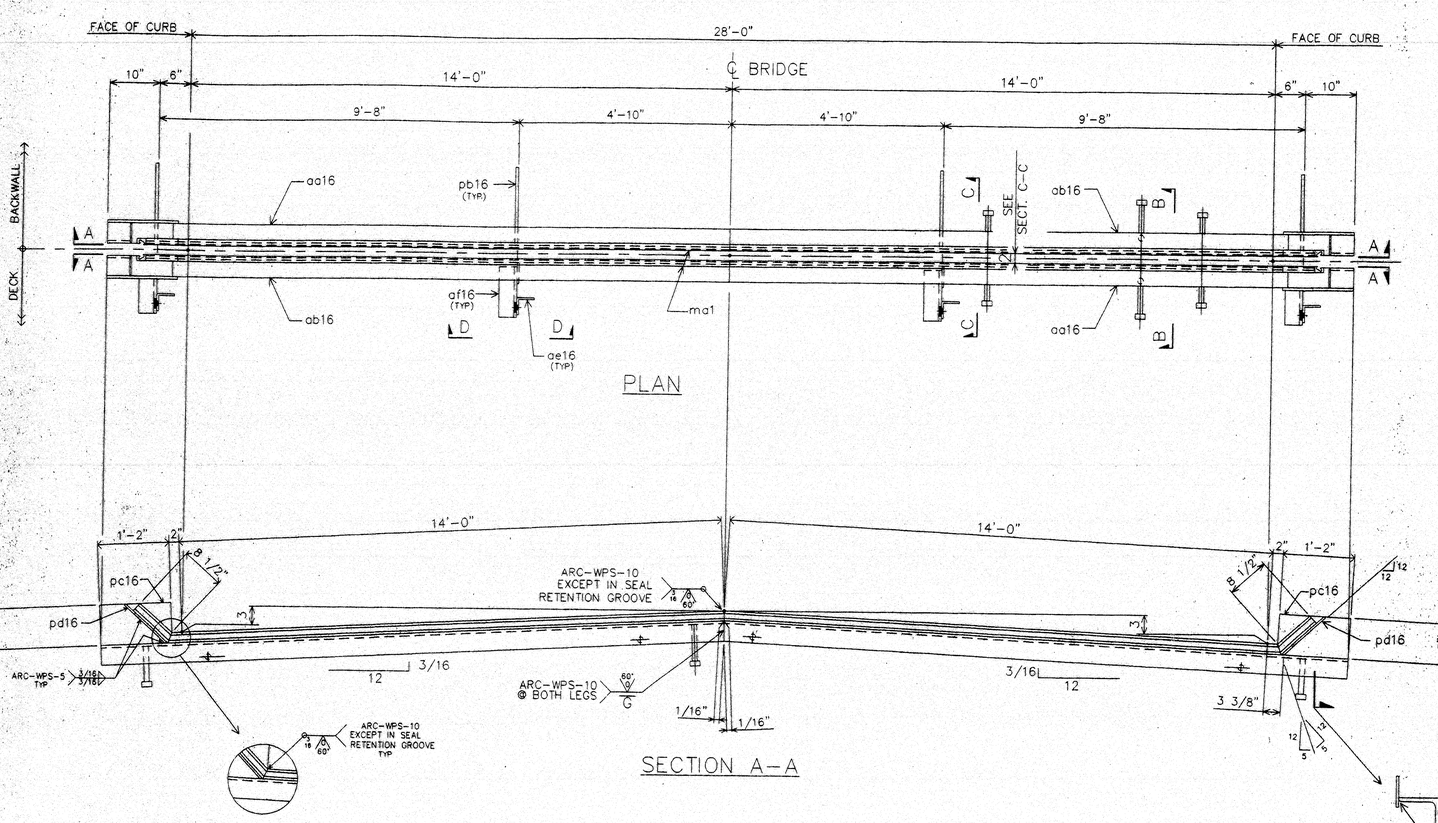
MATL: A36 UN HOLES: AS NOTED
WELD: PER PROCEDURES NOTED
PREP: SP6
FINISH: (3) COATS ZINC RICH PRIMER
3 MDFT PER COAT
2 coats ok.

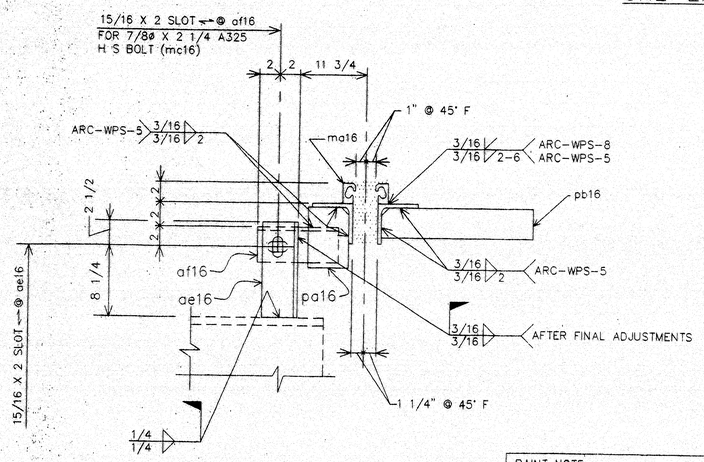
120-354
FOR APPROVAL ONLY

WORK THIS DWG. W/ DWG. 16

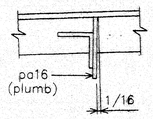
A.R.C. ENTERPRISES
KINGFIELD, MAINE

PROJECT: JOSHUA CHAMBERLAIN BRIDGE OVER THE PENOBSCOT RIVER, BANGOR-BREWER, ME			
SCALE: ~	APPROVED BY:	DRAWN BY: BB	
DATE: 7/97		CHKD. BY:	
EXPANSION JOINT DETAIL @ ABUT. # 2			
REED & REED		JOB NO. 97-49	DWG. NO. 17





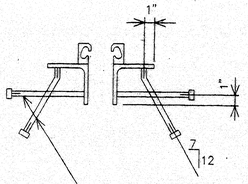
SECTION C-C



SECTION D-D

SHOP NOTE
KICK pa16 IN OPPOSITE DIRECTION ON OTHER SIDE OF CENTER LINE.

PAINT NOTE :
PAINT ONLY SURFACES IN THE SHADED AREAS.
NO PAINT IN THE AREA WHERE SEAL IS TO BE SEATED.



1/2"ø x 8" Studs (mb16) 12" o/c Alternating. Adjust stud location as required to avoid interference with adjusting devices.

SECTION B-B

WORK THIS DWG W/ DWG 17

MATERIALS LIST

MK	QTY	DESCRIPTION
A16	1	EXPANSION DEVICE ASSEMBLY
aa16	2	L 4 x 4 x 3/8 x 15'-4" B1E
ab16	2	L 4 x 4 x 3/8 x 15'-4" B1E
ad16	12	L 3 1/2 x 3 1/2 x 3/8 x 1'-0
ae16	4	L 3 1/2 x 3 1/2 x 3/8 x 0'-10 3/4
af16	4	L 3 1/2 x 3 1/2 x 3/8 x 1'-1
pc16	4	PL 3/8 x 4 x 0'-6
pb16	4	PL 1/2 x 3 x 1'-3
pc16	4	PL 1/4 X 8 X 1'-2
pd16	4	FB 4 X 1/4 x 0'-11
pe16	12	PL 3/8 X 3 1/2 X 0'-3 1/2
ma16	LF	Watson Bowman Acme type A extrusion x 60'-0
mb16	68	1/2 ø x 0'-8 CONC STUDS
mc16	4	7/8 ø x 0'-2 1/4 H S BOLTS w/N&2W A325
md16	6	THREADED ROD 1/2 ø X 1'-8 w/ 4-NUTS/EA
mf16	12	3/4 ø x 0'-2 H S BOLTS w/N&2W A325
shop	1	Watson Bowman Acme SE400 Gland Seal x 32'-0 with Adhesive

PROJ. NO. : BH-043-1(34)
ITEM NO. 520.21

See Sht 13 For Comments,

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
☐ Approved ☐ Returned for Corrections
AUG 21 1997
☑ Approved as noted ☐ Rejected

MATL: A36 UN HOLES AS NOTED
WELD: PER PROCEDURES NOTED
PREP: SP6
FINISH: 3 COATS ZINC RICH PRIMER 3 MDFT PER COAT

120-355
FOR APPROVAL ONLY

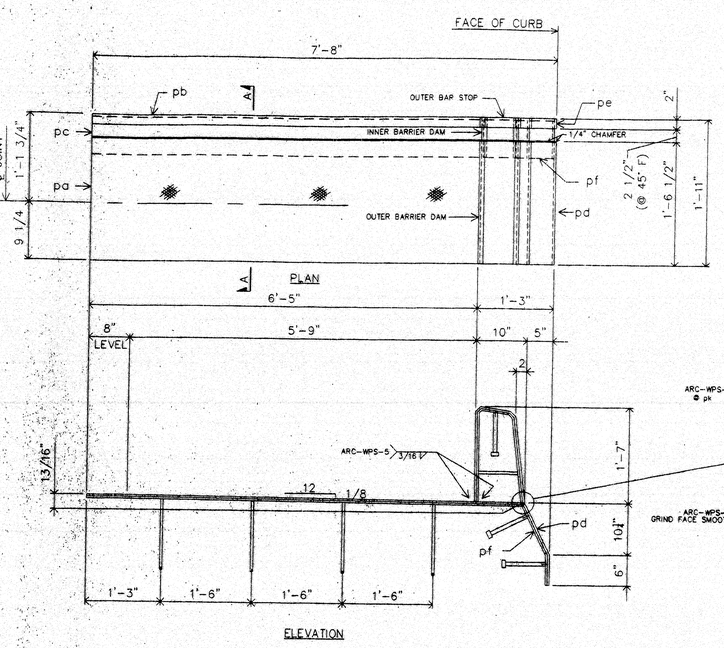
A.R.C. ENTERPRISES
KINGFIELD, MAINE

PROJECT: JOSHUA CHAMBERLAIN BRIDGE OVER THE PENOBSCOT RIVER, BANGOR-BREWER, ME

SCALE: ~	APPROVED BY:	DRAWN BY: BB
DATE: 7/97		CHKD. BY:

EXPANSION JOINT @ ABUT. # 2

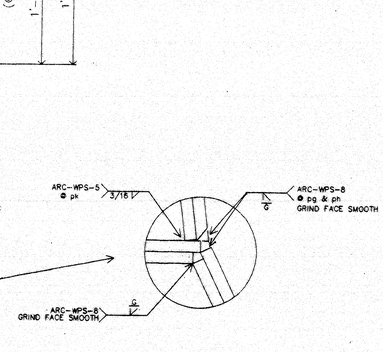
REED & REED | JOB NO. 97-49 | DWG. NO. 16

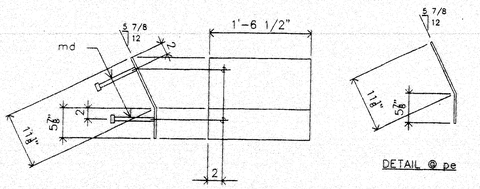


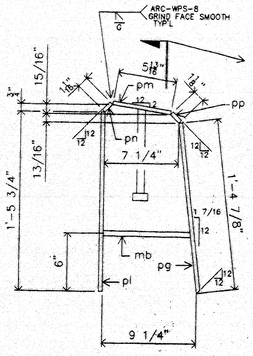
ELEVATION

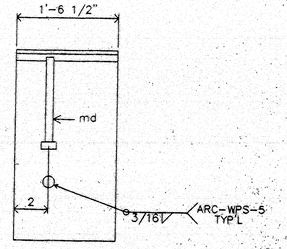
ONE-EXP. JOINT-A15 (AS SHOWN)

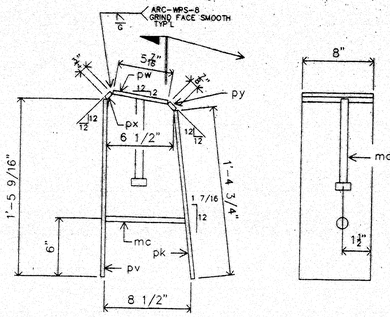
ONE-EXP. JOINT-B15 (OPP. HAND)

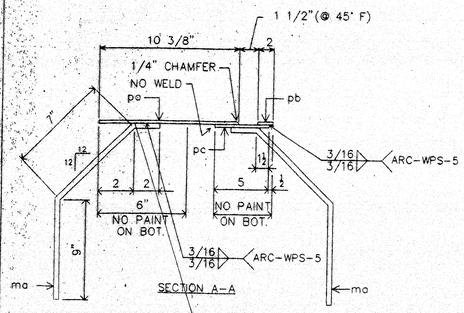




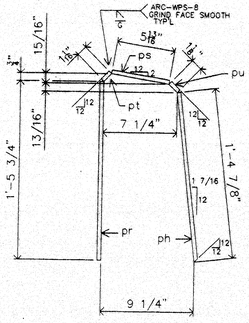








Submit WPS for this Weld including elevated temperatures requirements for welding Reinforcing Steel AWS D 1.4.



DETAIL @ OUTER BAR STOP

(OR) Substitute a Flatbar of appropriate size and strength and use an existing fillet WPS.

MATERIALS LIST

MK	QTY	DESCRIPTION
A15	1	EXPANSION DEVICE ASSEMBLY
B15	1	EXPANSION DEVICE ASSEMBLY
pa15	2	CHK'D PL 3/8 x 18 1/2 x 7'-2 3/4 BEND/SHP'D 1L-1R
pb15	2	PL 3/8 X 2 X 7'-2 3/4 BEND/SHP'D 1L-1R
pc15	2	PL 3/8 X 8 X 7'-2 1/2 BEND
pd15	2	PL 3/8 X 17 X 1'-6 1/2 BEND 1L-1R
pe15	2	PL 3/8 X 2 X 1'-5 BEND
pf15	2	PL 3/8 X 8 X 1'-4 5/8 BEND
pg15	2	PL 3/8 X 16 7/8 X 1'-6 1/2 B1E 1L-1R
ph15	2	PL 3/8 X 2 X 1'-4 7/8 B1E
pk15	2	PL 3/8 X 8 X 1'-4 3/4
pl15	2	PL 3/8 X 17 3/4 X 1'-6 1/2 1L-1R
pm15	2	PL 3/8 X 5 13/16 X 1'-6 1/2 1L-1R
pn15	2	PL 3/8 X 1 1/16 X 1'-6 1/2 1L-1R
pp15	2	PL 3/8 X 1 1/8 X 1'-6 1/2 1L-1R
pr15	2	FB 3/8 X 2 X 1'-5 3/4
ps15	2	FB 3/8 X 2 X 0'-5 13/16
pt15	2	FB 3/8 X 2 X 0'-1 1/16
pu15	2	PL 3/8 X 2 X 0'-1 1/8
pv15	2	PL 3/8 X 8 X 1'-5 9/16
pw15	2	PL 3/8 X 5 7/16 X 0'-8
px15	2	PL 3/8 X 3/4 X 0'-8
py15	2	PL 3/8 X 7/8 X 0'-8
ma15	16	#6 REBAR x 1'-6 BEND A615,GR 60
mb15	2	#6 REBAR X 0'-8 1/2 A615,GR 60
mc15	2	#6 REBAR X 0'-7 3/4 A615,GR 60
md15	12	1/2 ø x 0'-8 CONC STUDS

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
☐ Approved ☐ Returned for Corrections
AUG 2 1 1997
☑ Approved as noted ☐ Rejected

PROJ. NO. BH-043-1(34)
ITEM NO. 520.21

MATL: A36 UN HOLES: AS NOTED
WELD: PER PROCEDURES NOTED
PREP: SP6
FINISH: 3 COATS ZINC RICH PRIMER 3 MDFT PER COAT

X-tra Work
Protocol Option: Get Price for Galvanizing Assembly.

SHOP NOTE:
OUTER BARRIER & OUTER BAR STOP TO BE FABRICATED TO FIT OVER THE INNER BARRIER UNIT.

(OR)

Select Paint System from Nepcoat List.
Typical Systems
1. Inorganic Zinc Primer. — Carboline, Wasser, Keeler & Long, Valspar
2. 2 Part Epoxy.
3. Urethane Topcoat.

120-356 FOR APPROVAL ONLY

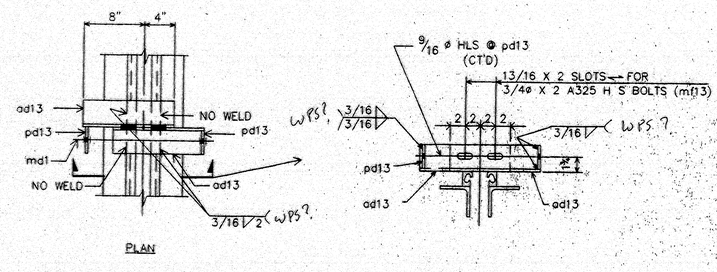
A.R.C. ENTERPRISES
KINGFIELD, MAINE

PROJECT: JOSHUA CHAMBERLAIN BRIDGE OVER THE PENOBSCOT RIVER, BANGOR-BREWER, ME

SCALE: ~	APPROVED BY:	DRAWN BY:	BB
DATE: 7/97		CHK'D. BY:	

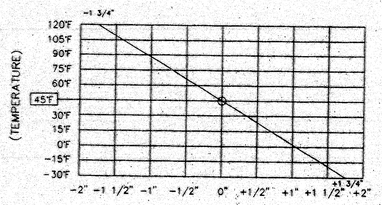
SIDEWALK DAM DETAIL @ HINGE SPAN 7

REED & REED | JOB NO. 97-49 | DWG. NO. 15



PLAN

TEMP. ADJUSTING & SHIPPING DEVICE



(AMOUNT OF ADJUSTMENT)

TEMPERATURE ADJUSTMENT CHART

FIELD NOTE:
ADJUST JOINT OPENING FOR TEMPERATURE AT TIME OF INSTALLATION.

NOTES:

SHOP TO PLACE ADJUSTING & SHIPPING DEVICES ON EXP. JOINT AFTER PAINTING & SEAL INSTALLATON AT APPROX. 5'-0 O/C.

PRESET THE OPENING TO THE 45°F SETTING SHOWN ON PLANS.

CONTRACTOR TO REFER TO DESIGN DWG'S & SPECS FOR INSTALLTION INSTRUCTIONS.

CONTRACTOR TO TOUCH-UP PAINT AFTER REMOVAL OF SHIPPING DEVICES.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
☐ Approved ☐ Returned for Corrections
AUG 21 1997
☑ Approved as noted ☐ Rejected

PROJ. NO. : BH-043-1(34)
ITEM NO. 520.21

MATL: A36 UN HOLES: AS NOTED
WELD: PER PROCEDURES NOTED Wps noted
PREP: SP6
FINISH: (3) COATS ZINC RICH PRIMER
3 MDFT PER COAT

2 coats OK.

FOR APPROVAL ONLY

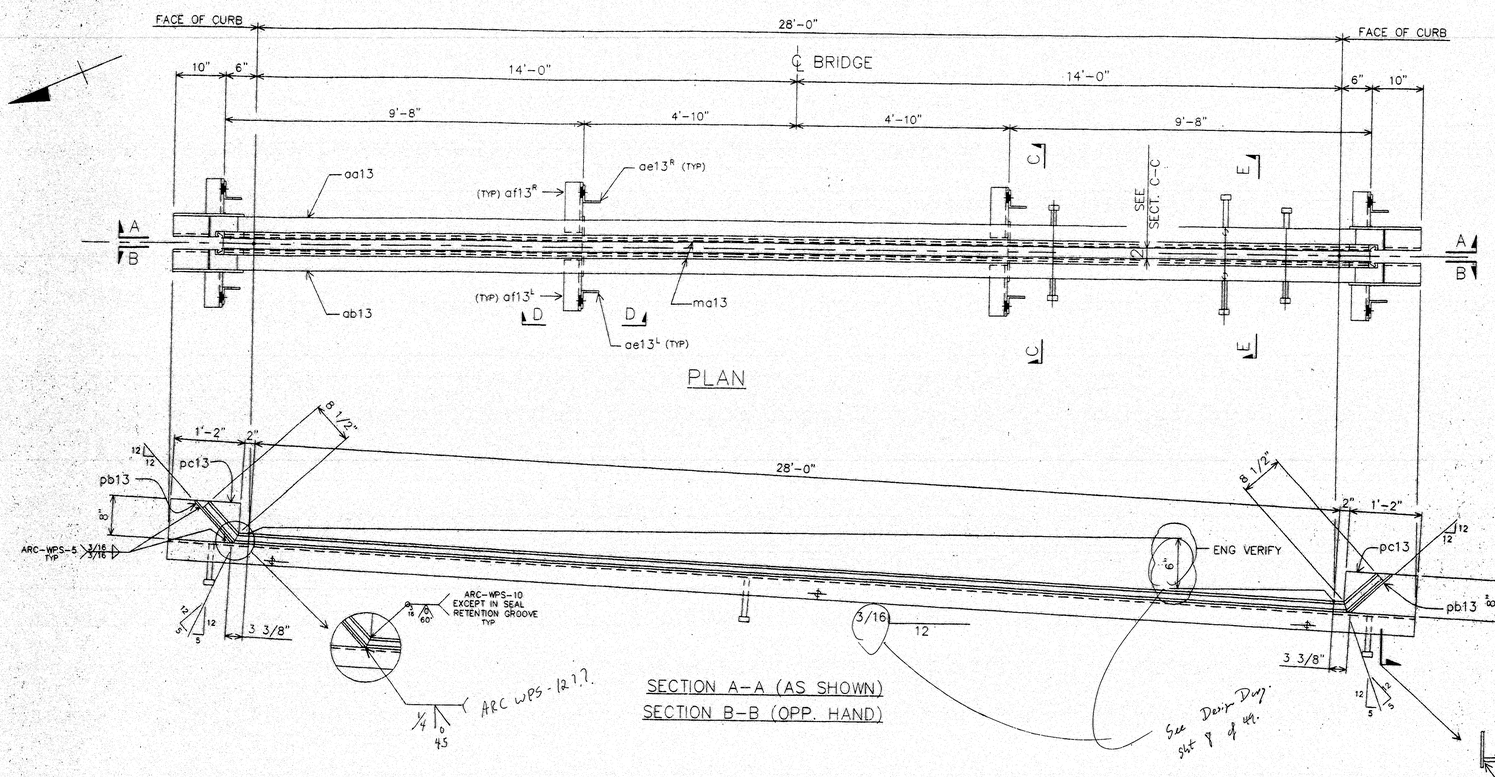
120-357

WORK THIS DWG. W/ DWG. 13

A.R.C. ENTERPRISES
KINGFIELD, MAINE

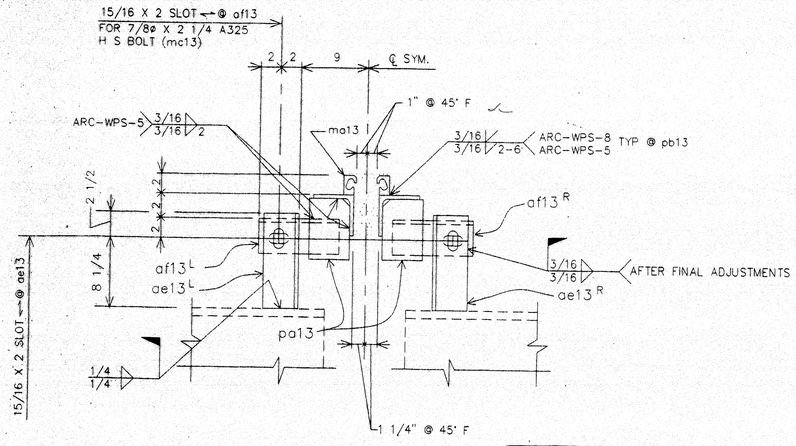
PROJECT: JOSHUA CHAMBERLAIN BRIDGE OVER THE PENOBSCOT RIVER, BANGOR-BREWER, ME

SCALE: ~	APPROVED BY:	DRAWN BY: BB	
DATE: 6/97		CHKD. BY:	
EXPANSION JOINT DETAIL @ HINGE SPAN 7			
REED & REED	JOB NO. 97-49	DWG. NO. 14	

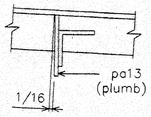


SECTION A–A (AS SHOWN)
SECTION B–B (OPP. HAND)

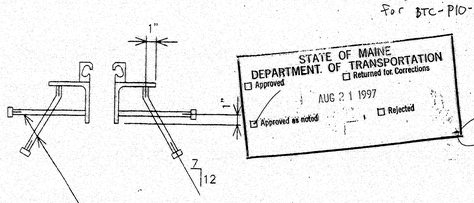
ONE–EXPANSION DEVICE–A13



SECTION C–C



SECTION D–D



1/2"ø x 8" Studs (mb13) 12" o/c Alternating. Adjust stud location as required to avoid interference with adjusting devices.

SECTION E–E

PAINT NOTE :
PAINT ONLY SURFACES IN THE SHADED AREAS.
NO PAINT IN THE AREA WHERE SEAL IS TO BE SEATED.

WORK THIS DWG W/ DWG 14

MATERIALS LIST

MK	QTY	DESCRIPTION
A13	2	EXPANSION DEVICE ASSEMBLY
aa13	4	L 4 x 4 x 3/8 x 30'-8
ab13	4	L 4 x 4 x 3/8 x 30'-8
ad13	12	L 3 1/2 x 3 1/2 x 3/8 x 1'-0
$ae13^L_R$	8	L 3 1/2 x 3 1/2 x 3/8 x 0'-10 3/4 4L-4R
$af13^L_R$	8	L 3 1/2 x 3 1/2 x 3/8 x 0'-11 4L-4R
pa13	8	PL 3/8 x 4 x 0'-6
pb13	4	FB 4 X 1/4 X 0'-11
pc13	4	PL 1/4 X 8 X 1'-2
pd13	12	PL 3/8 X 3 1/2 X 0'-3 1/2
ma13	LF	Watson Bowman Acme type A extrusion x 60'-0
mb13	68	1/2 ø x 0'-8 CONC STUDS
mc13	8	7/8 ø x 0'-2 1/4 H S BOLTS w/N&2W A325
md13	6	THREADED ROD 1/2 ø X 1'-8 w/ 4-NUTS/EA
mf13	12	3/4 ø x 0'-2 H S BOLTS w/N&2W A325
shop	1	Watson Bowman Acme SE400 Gland Seal x 32'-0 with Adhesive

PROJ. NO. BH-043-1(34)
ITEM NO. 520.21

MATL: A36 UN HOLES: AS NOTED
WELD: PER PROCEDURES NOTED
PREP: SP6
FINISH: 3 COATS ZINC RICH PRIMER 3 MDFT PER COAT

2 Coats is Sufficient.

FOR APPROVAL ONLY
120-358

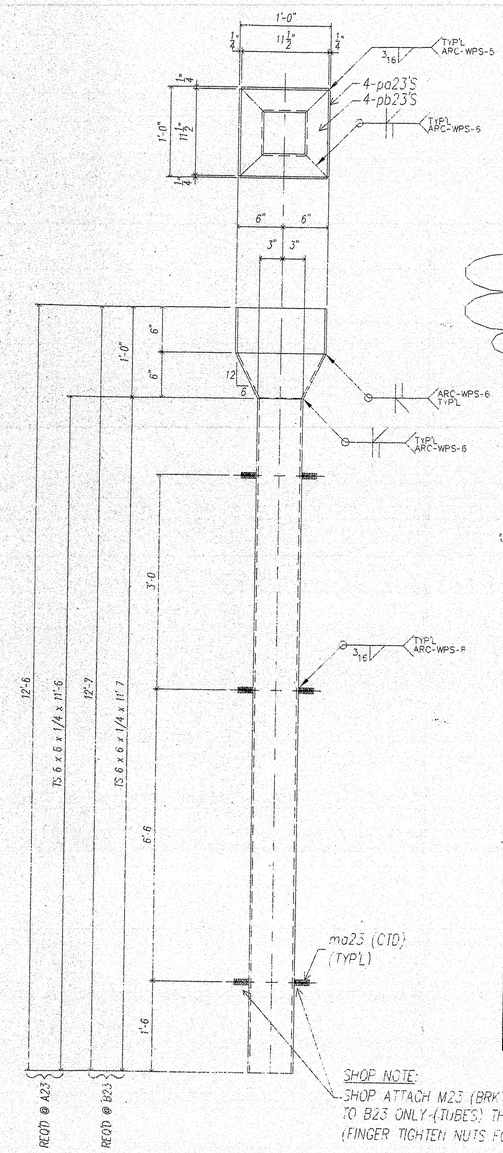
A.R.C. ENTERPRISES
KINGFIELD, MAINE

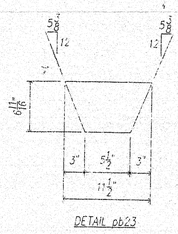
PROJECT: JOSHUA CHAMBERLAIN BRIDGE OVER THE PENOBSCOT RIVER, BANGOR-BREWER, ME

SCALE: ~	APPROVED BY:	DRAWN BY:	BB
DATE: 7/97		CHKD. BY:	

EXPANSION JOINT @ HINGE SPAN 7

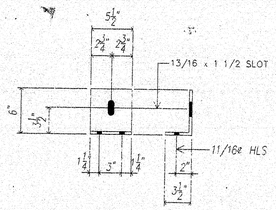
REED & REED | JOB NO. 97-49 | DWG. NO. 13



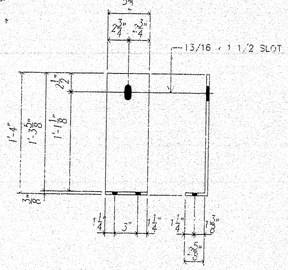


DETAIL pb23

SHOP NOTE:
SHOP ATTACH K23 (BRKT)W/ 3/4ø (NUT W/WASH) TO MK~ma23 (THRD'D STUDS) ALL LOCATIONS UNO (FINGER TIGHTEN NUTS FOR SHIPPING ONLY)



64 - ANGLE BRKT - K23
(6 REQ'D @ A23)
(4 REQ'D @ B23)
(6 REQ'D @ C23)
(6 REQ'D @ D23)
(6 REQ'D @ F23)
(8 REQ'D @ G23)
(8 REQ'D @ H23)
(20 REQ'D @ J23)

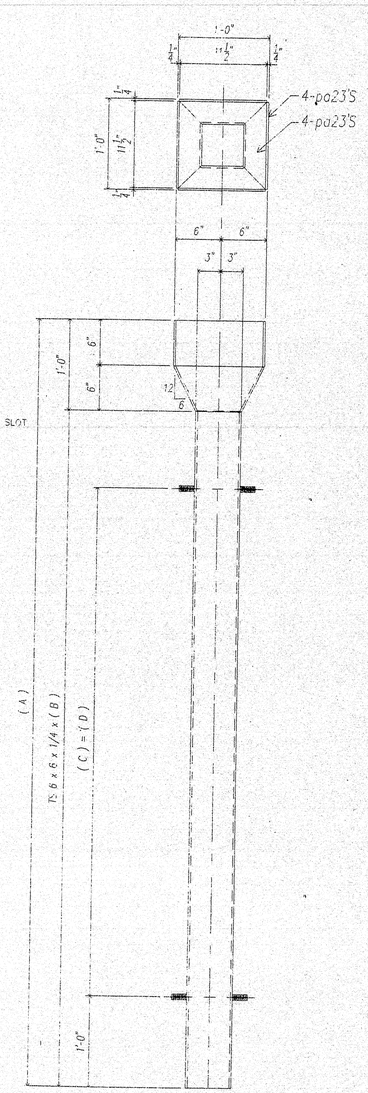


2 - ANGLE BRKT - M23
(2 REQ'D @ B23)

TABLE A					
MKS	A	B	C	D	LOCATION
C23	14'-6	13'-6	2 @ 5'-9	11'-6	PIER #2 UP STREAM
D23	18'-6	17'-6	2 @ 7'-9	15'-6	PIER #3 DN STREAM
F23	19'-0	18'-0	2 @ 8'-0	16'-0	PIER #4 UP STREAM
G23	23'-0	21'-0	3 @ 6'-4	19'-0	PIER #5 UP STREAM
H23	25'-0	24'-0	3 @ 7'-4	22'-0	PIER #6 DN STREAM
J23	28'-6	27'-6	4 @ 6'-4 1/2	25'-6	PIERS #9 & 10 DN STREAM

SHOP NOTE:
SHOP ATTACH M23 (BRKT)W/ 3/4ø (NUT W/WASH) TO B23 ONLY-(TUBES) THIS LOCATION ONLY (FINGER TIGHTEN NUTS FOR SHIPPING ONLY)

ONE - DOWN SPOUT - A23 (AS NOTED) - PIER #1 UP STREAM
ONE - DOWN SPOUT - B23 (AS NOTED) - PIER #1 DN STREAM



SEE TABLE A FOR DIMS NOT SHOWN

F.B THIS DWG

132 - 5/8ø EXPANSION ANCHORS W/Nut & W - GALV

MATERIALS LIST

MK	QTY	DESCRIPTION
A23	ONE	TS 6 x 6 x 1/4 x 11'-6
B23	ONE	TS 6 x 6 x 1/4 x 11'-7
C23	ONE	TS 6 x 6 x 1/4 x 13'-6
D23	ONE	TS 6 x 6 x 1/4 x 17'-6
F23	ONE	TS 6 x 6 x 1/4 x 18'-0
G23	ONE	TS 6 x 6 x 1/4 x 21'-0
H23	ONE	TS 6 x 6 x 1/4 x 24'-0
J23	2	TS 6 x 6 x 1/4 x 27'-6
pa23	36	FB 1/4 x 6 x 0'-11 1/2
pb23	36	FB 1/4 x 6 11/16 x 0'-11 1/2 - SHP'D
ma23	66	3/4ø ROD x 0'-2 THRD'D
K23	64	L 6 x 3 1/2 x 3/8 x 0'-5 1/2
M23	2	PL 3/8 x 5 1/2 x 1'-6 1/4 BENT
SHOP	66	3/4ø NUTS W/ WASH. - GALV.

RELEASED FOR FABRICATION
PLANT MANAGER
Q.C. MANAGER
DEC 10 1997

MATL: ASTM A709/A709M GR250 HOLES: AS NOTED
WELD: AS NOTED
PREP: SSPC – SP6
PAINT: GALV. PER ASTM A123

120-359

PROJECT NO. BH-043-1(34)
ITEM NO. : 520.21

ARC ENTERPRISES, INC
KINGFIELD, MAINE

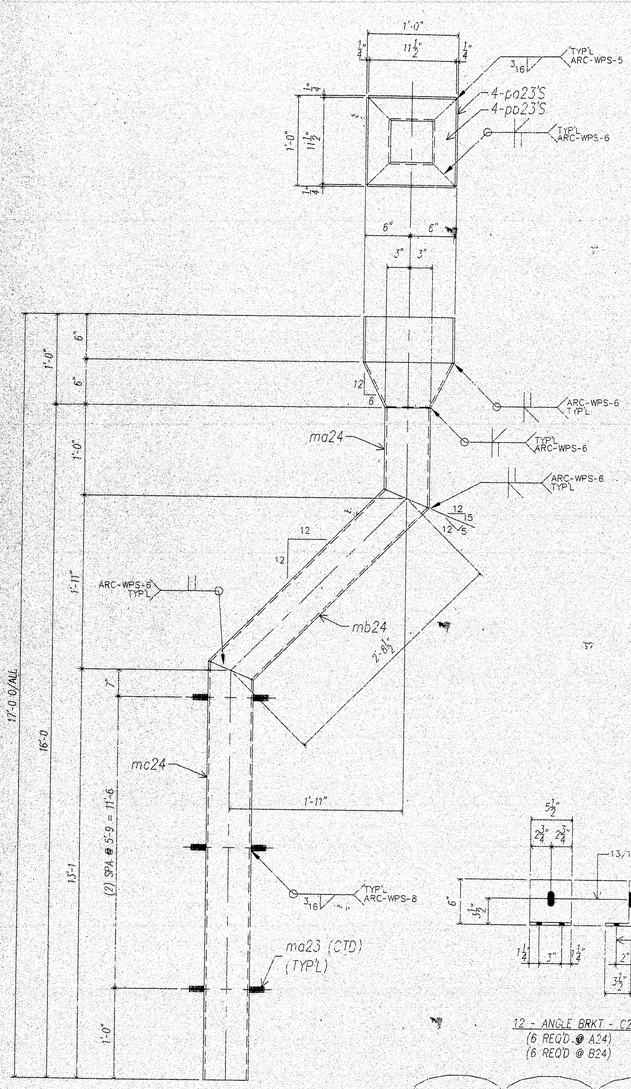
PROJECT: JOSHUA CHAMBERLAIN BRIDGE
PENOBSCOT RIVER – BANGOR/BREWER

SCALE: ~	APPROVED BY:	DRAWN BY: RMD	
DATE: 12/97		CHKD. BY: CMDS	

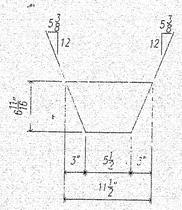
DRAIN ASSEMBLY DETAILS

REED & REED / W/O 97-49 | DWG. NO. 23

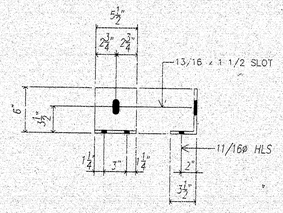
Last Plotted: Dec 09, 14:29:19 1997



ONE - ANGLE BRKT - A24
(LOC. PIER #3 UP STREAM)

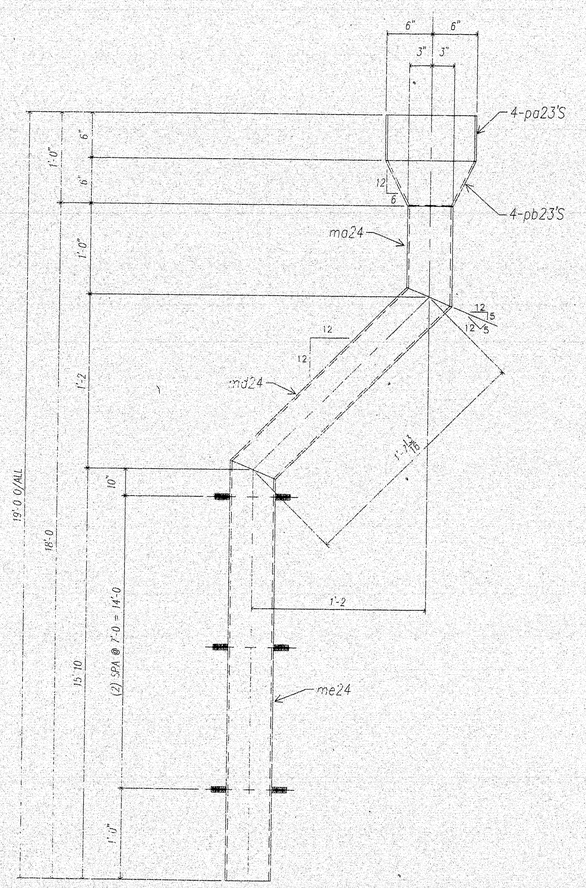


DETAIL pb23



12 - ANGLE BRKT - C24
(6 REQ'D @ A24)
(6 REQ'D @ B24)

SHOP NOTE:
SHOP ATTACH C24 (BRKT)W/ 3/4ø (NUT W/WASH) TO MK~ma23 (THRD'D STUDS) ALL LOCATIONS (FINGER TIGHTEN NUTS FOR SHIPPING ONLY)



ONE - ANGLE BRKT - B24
(LOC. PIER #4 DN STREAM)

F.B. THIS DWG

24 - 5/8ø EXPANSION ANCHORS W/N&W

MATERIALS LIST

MK	QTY	DESCRIPTION
A24	ONE	DOWN SPOUT
ma24	1	TS 6 x 6 x 1/4 x 1'-1 1/4 BC1E
mb24	1	TS 6 x 6 x 1/4 x 2'-11 BC2E
mc24	1	TS 6 x 6 x 1/4 x 13'-2 1/4 BC1E
pa23	4	FB 1/4 x 6 x 0'-11 1/2
pb23	4	FB 1/4 x 6 11/16 x 0'-11 1/2 " SHP'D
ma23	6	3/4ø ROD x 0'-2 THRD'D
B24	ONE	DOWN SPOUT
ma24	1	TS 6 x 6 x 1/4 x 1'-1 1/4 BC1E
md24	1	TS 6 x 6 x 1/4 x 1'-10 5/16 BC2E
me24	1	TS 6 x 6 x 1/4 x 15'-11 1/4 BC1E
pa23	4	FB 1/4 x 6 x 0'-11 1/2
pb23	4	FB 1/4 x 6 11/16 x 0'-11 1/2 SHP'D
ma23	6	3/4ø ROD x 0'-2 THRD'D
C24	12	L 6 x 3 1/2 x 3/8 x 0'-5 1/2
SHOP	12	3/4ø NUTS W/ WASH.

RELEASED FOR FABRICATION
PLANT MANAGER
Q.C. MANAGER
DEC 10 1997

MATL: ASTM A709/A709M GR250 HOLES: AS NOTED.
WELD: AS NOTED.
PREP: SSPC - SP6
PAINT: GALV. PER ASTM A123

120-360

PROJECT NO. BH-043-1(34)
ITEM NO. . 520.21

ARC ENTERPRISES, INC
KINGFIELD, MAINE

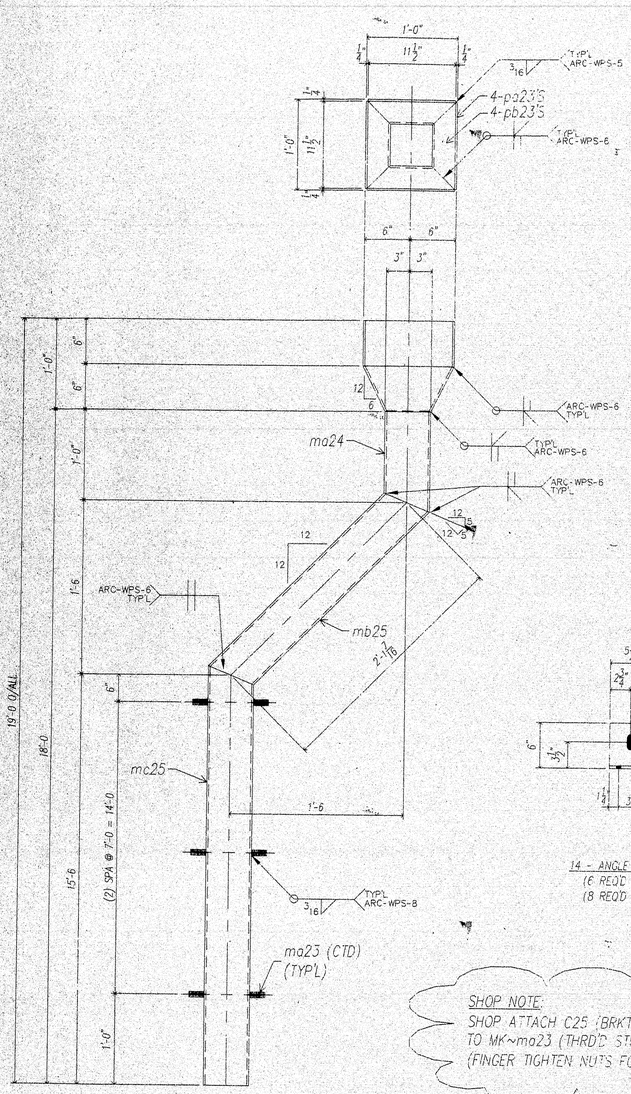
PROJECT: JOSHUA CHAMBERLAIN BRIDGE
PENOBSCOT RIVER - BANGOR/BREWER

SCALE: ~	APPROVED BY:	DRAWN BY: RMD
DATE: 12/97		CHKD. BY: CWDS

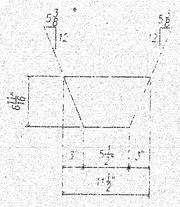
DRAIN ASSEMBLY DETAILS

REED & REED / W/O 97-49 — DWG. NO. 24

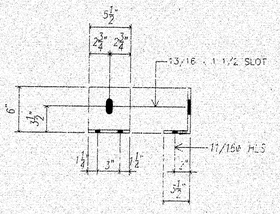
FR Doc. 98-1053-Filed 1-16-1998



ONE - ANGLE BRKT - A25
(LOC. PIER #5 DN STREAM)

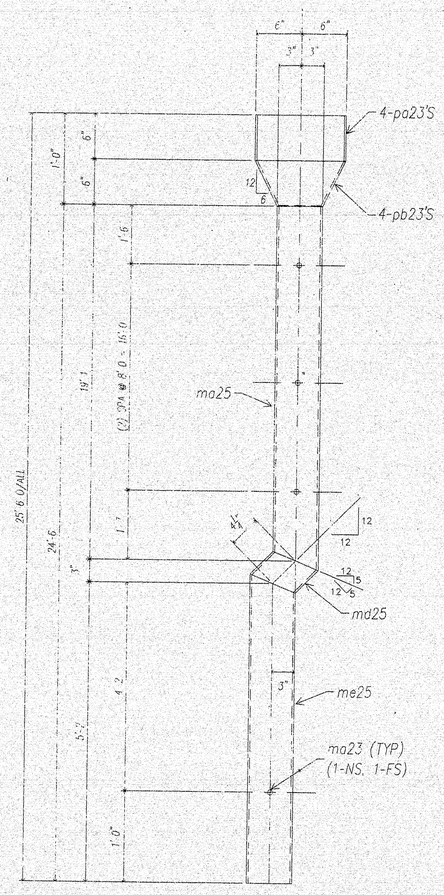


DETAIL pb23



14 - ANGLE BRKT - C25
(6 REQD @ A25)
(8 REQD @ B25)

SHOP NOTE:
SHOP ATTACH C25 (BRKT)W/ 3/4ø (N.T W/WASH) TO MK~ma23 (THRD'D STUDS) ALL LOCATIONS.
(FINGER TIGHTEN NUTS FOR SHIPPING ONLY)



ONE - ANGLE BRKT - B25
(LOC. PIER #7 DN STREAM)

F.B. THIS DWG

28 - 5/8ø EXPANSION ANCHORS W/N&W

MATERIALS LIST

MK	QTY	DESCRIPTION
A25	ONE	DOWN SPOUT
ma24	1	TS 6 x 6 x 1/4 x 1'-1 1/4 BC1E
mb25	1	TS 6 x 6 x 1/4 x 2'-3 15/16 BC2E
mc25	1	TS 6 x 6 x 1/4 x 15'-7 1/4 BC1E
pa23	4	FB 1/4 x 6 x 0'-11 1/2
pb23	4	FB 1/4 x 6 11/16 x 0'-11 1/2 SHP'D
ma23	6	3/4ø ROD x 0'-2 THRD'D
B25	ONE	DOWN SPOUT
ma25	1	TS 6 x 6 x 1/4 x 19'-2 1/4 BC1E
md25	1	TS 6 x 6 x 1/4 x 0'-6 3/4 BC2E
me25	1	TS 6 x 6 x 1/4 x 5'-3 1/4 BC1E
pa23	4	FB 1/4 x 6 x 0'-11 1/2
pb23	4	FB 1/4 x 6 11/16 x 0'-11 1/2 SHP'D
ma23	8	3/4ø ROD x 0'-2 THRD'D
C25	14	L 6 x 3 1/2 x 3/8 x 0'-5 1/2
SHOP	14	3/4ø NUTS W/ WASH

RELEASED FOR FABRICATION
PLANT MANAGER
ENGINEER
Q.C. MANAGER
DEC 10 1997

MATL: ASTM A709/A709M, GR250 HOLES: AS NOTED
WELD: AS NOTED
PREP: SSPC – SP6
PAINT: GALV. PER ASTM A123

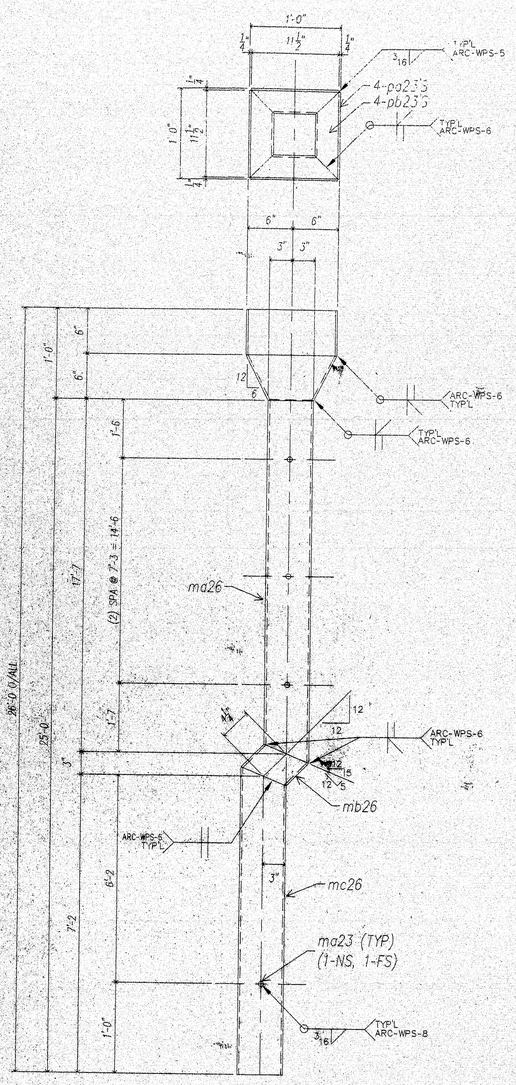
PROJECT NO. BH-043-1(34)
ITEM NO. : 520.21

120-361

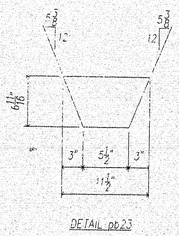
ARC ENTERPRISES, INC
KINGFIELD, MAINE

PROJECT:	JOSHUA CHAMBERLAIN BRIDGE PENOBSCOT RIVER – BANGOR/BREWER	
SCALE: ~	APPROVED BY:	DRAWN BY: RND
DATE: 12/97		CHKD. BY: CMDS
DRAIN ASSEMBLY DETAILS		
REED & REED / W/O-97-49		DWG. NO. 25

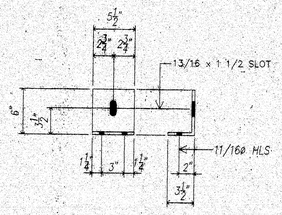
[redacted]



ONE - ANGLE BRKT - B25
(LOC. PIER #8 DN STREAM)



DETAIL pb23



8 - ANGLE BRKT - B26

SHOP NOTE:
SHOP ATTACH B26 (BRKT)W/ 3/4ø (NUT W/WASH) TO MK~ma23 (THRD'D STUDS) ALL LOCATIONS UNO.
(FINGER TIGHTEN NUTS FOR SHIPPING ONLY)

F.B. THIS DWG

16 - 5/8ø EXPANSION ANCHORS W/N&W

MATERIALS LIST

MK	QTY	DESCRIPTION
A25	ONE	DOWN SPOUT
ma26	1	TS 6 x 6 x 1/4 x 17'-8 1/4 BC1E
mb26	1	TS 6 x 6 x 1/4 x 0'-6 3/4 BC2E
mc26	1	TS 6 x 6 x 1/4 x 7'-3 1/4 BC1E
pa23	4	FB 1/4 x 6 x 0'-11 1/2
pb23	4	FB 1/4 x 6 11/16 x 0'-11 1/2 SHP'D
ma23	8	3/4ø ROD x 0'-2 THRD'D
B26	8	L 6 x 3 1/2 x 3/8 x 0'-5 1/2
SHOP	8	3/4ø NUTS W/ WASH.

RELEASED FOR FABRIC...
PLANT ...
DEC 10 1997

MATL: ASTM A709/A709M GR250 HOLES AS NOTED
WELD: AS NOTED.
PREP: SSPC - SP6
PAINT: GALV. PER ASTM A123

PROJECT NO. BH-043-I(34)
ITEM NO. 520.21

120-362

ARC ENTERPRISES, INC.
KINGFIELD, MAINE

PROJECT: JOSHUA CHAMBERLAIN BRIDGE
PENOBSCOT RIVER - BANGOR/BREWER

SCALE:	APPROVED BY:	DRAWN BY:	RMD
DATE: 12/97		CHK'D BY:	DMDB

DRAIN ASSEMBLY DETAILS

REED & REED / W/O 97-49 — DWG. NO. 26