US Army Corps
of Engineers®
St. Louis District

MELVIN PRICE LOCK AND DAM

MAIN LOCK BULKHEAD SLOT GRATING MODIFICATION

UPPER MISSISSIPPI

ALTON, ILLINOIS

Solicitation: W912P9-12-R-0734

AUGUST 2012

THIS PROJECT WAS DESIGNED BY THE ST. LOUIS DISTRICT CORPS OF ENGINEERS. THE INITIALS OR SIGNATURES AND REGISTRATION DESIGNATIONS OF INDIVIDUALS APPEAR ON THESE PROJECT DOCUMENTS WITHIN THE SCOPE OF THEIR EMPLOYMENT AS REQUIRED BY ER 1110-1-8152. SIGNATURES INDICATE OFFICIAL RECOMMENDATION OF ALL DRAWINGS IN THIS SET.

APPROVED BY:

DAVID BUSSE, P.E.
CHIEF, ENGINEERING & CONSTRUCTION DIVISION

APPROVAL RECOMMENDED BY:

THOMAS J. QUIGLEY, P.E.
CHIEF, DESIGN BRANCH

STEPHEN G. FARKAS, P.E.
CHIEF, STRU/ARCH/MECH/ELEC ENG SECTION

GARY J. LEE, P.E.
CHIEF, CIVIL/COST/SPEC ENG SECTION

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT
ST. LOUIS, MISSOURI 63103

DESIGNED BY: WILLIAM J. MOELLER
DWN BY: BMM
CKD BY:
SUBMITTED BY: STEPHEN G. FARKAS, P.E.
PLOT SCALE: None
PLOT DATE:
SIZE: ANSI D
FILE NAME: MAIP-20_G-001COV.dgn
FILE NUMBER: MAIP-001
CONTRACT NO.:
SOLICITATION NO.: W912P9-12-R-0734
DATE: 2012/08/07

MELVIN PRICE LOCK AND DAM
MAIN LOCK BULKHEAD SLOT GRATING MODIFICATION
UPPER MISSISSIPPI
ALTON, ILLINOIS
COVER SHEET

SHEET IDENTIFICATION
G-001

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S-101	GENERAL SITE PLAN AND LOCATION OF WORK ITEMS
S-102	CULVERT BULKHEAD SLOT GRATING AND FRAMING PLANS, SECTIONS AND DETAILS
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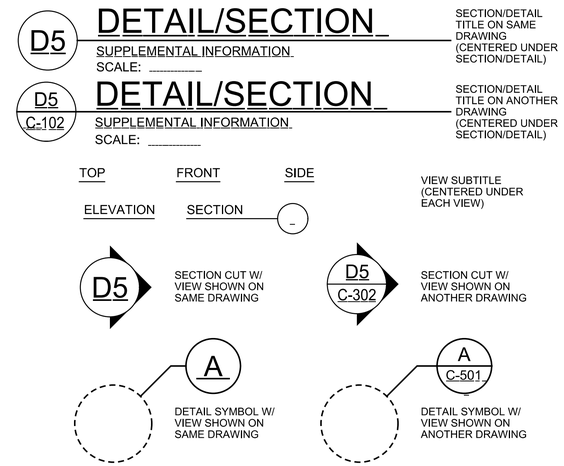
R-003	REFERENCE DRAWING - SHEET 3 OF 10
R-004	REFERENCE DRAWING - SHEET 4 OF 10
R-005	REFERENCE DRAWING - SHEET 5 OF 10
R-006	REFERENCE DRAWING - SHEET 6 OF 10
R-007	REFERENCE DRAWING - SHEET 6 OF 10
R-008	REFERENCE DRAWING - SHEET 4 OF 10
R-009	REFERENCE DRAWING - SHEET 5 OF 10
R-010	REFERENCE DRAWING - SHEET 6 OF 10

GENERAL CROSS-REFERENCING SYMBOLS



ABBREVIATIONS

* UNLESS OTHERWISE NOTED ON EACH SHEET

APPROX	APPROXIMATE	L/W	LANDWARD
ALT W/	ALTERNATE WITH	MAX	MAXIMUM
ALUM	ALUMINUM	MK.	MARK
BITUM	BITUMINOUS	MIN	MINIMUM
BOT	BOTTOM	MIRR	MIRRORED
C.C.	CENTER TO CENTER	MISC	MISCELLANEOUS
C/L	CENTER LINE	NF	NEAR FACE
C&G	CURB & GUTTER	NO	NUMBER
CLR	CLEAR	OF	OUTSIDE FACE
CJ	CONSTRUCTION JOINT	OC	ON CENTER
CMP	CORRUGATED METAL PIPE	OPP.	OPPOSITE
CONC	CONCRETE	P/L	PLATE
DIA	DIAMETER	REQ'D.	REQUIRED
DWG	DRAWING	R/W	RIVERWARD
EF	EACH FACE	SAN	SANITARY
EJ	EXPANSION JOINT	SECT.	SECTION
EL	ELEVATION	SPEC	SPECIFICATIONS
EW	EACH WAY	SST	STAINLESS STEEL
EXIST	EXISTING	T&B	TOP AND BOTTOM
FF	FAR FACE	TYP	TYPICAL
FES	FLARED END SECTION	UNO	UNLESS NOTED OTHERWISE
GALV	GALVANIZED	UGND	UNDERGROUND
HT	HEIGHT	W	WIDTH
IF	INSIDE FACE	WM	WATER MAIN
LG	LONG		

GENERAL NOTES:

GENERAL REGULATIONS AND DESIGN LOADS

GENERAL REGULATIONS:

- AISC MANUAL OF STEEL CONSTRUCTION, NINTH EDITION (ASD)
- ANSI/NAAMM MBG 532, HEAVY DUTY METAL BAR GRATING MANUAL
- ANSI/NAAMM MBG 534, METAL BAR GRATING ENGINEERING DESIGN MANUAL

SUPERIMPOSED DESIGN LOADS:

- MAXIMUM WHEEL LOAD W/IMPACT 5118 POUNDS
- MAXIMUM OUTRIGGER LOAD W/IMPACT 9055 POUNDS
- GRATING WEIGHT 32.2 PSF
- PEDESTRIAN LOAD 85 PSF

STRUCTURAL STEEL

REGULATIONS:

WELDING SHALL BE IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE, AWS D1.1-94 (STRUCTURAL STEEL)

MATERIALS:

SEE SECTION 05500 OF THE SPECIFICATIONS.

MISCELLANEOUS

DIMENSION VERIFICATION:

DIMENSIONS, ELEVATIONS AND OTHER ITEMS ON DRAWINGS FOLLOWED BY A \ OR SO NOTED ARE REQUIRED TO BE VERIFIED BY THE CONTRACTOR PRIOR TO FABRICATION OR CONSTRUCTION

VERIFY DIMENSIONS OF OPENINGS IN SLABS AND WALLS, AND ASSOCIATED SURROUNDING CONSTRUCTION, AND ANCHORAGE DETAILS AND LOCATIONS ASSOCIATED WITH STANDARD ARTICLES, WITH ACTUAL ITEMS FURNISHED FOR THE PROJECT.

ELEVATIONS:

ELEVATIONS SHOWN ARE REFERENCED FROM THE NATIONAL GEODETIC VERTICAL DATUM (N.G.V.D.) 1929.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.

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U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT
ST. LOUIS, MISSOURI 63103

DESIGNED BY: WILLIAM J. MOELLER
DWN BY: BMM
CKD BY:
SUBMITTED BY: STEPHEN G. FARKAS, P.E.
PLOT SCALE: 1:1
PLOT DATE: None
SIZE: ANSI D
FILE NAME: M-MIP-20_G-002LEG.dgn
DATE: 2012/08/07
SOLICITATION NO.: W912P5-12-R-0734
CONTRACT NO.:
FILE NUMBER: M-MIP-20

MELVIN PRICE LOCK AND DAM
MAIN LOCK BULKHEAD SLOT GRATING MODIFICATION
UPPER MISSISSIPPI
ALTON, ILLINOIS

INDEX OF DRAWINGS, ABBREVIATIONS AND GENERAL NOTES

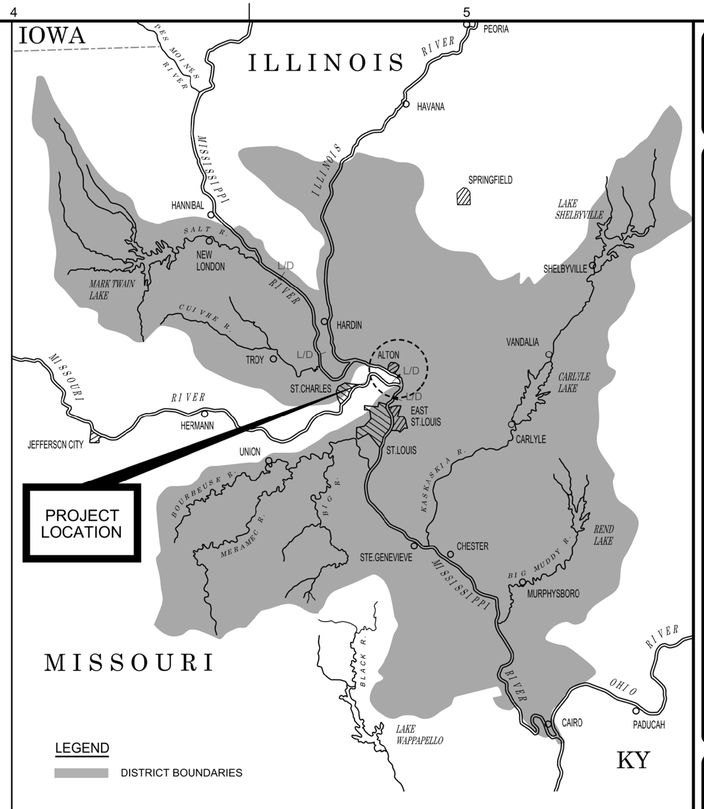
SHEET IDENTIFICATION
G-002

B1 PROJECT LOCATION MAP

SCALE 1" = 100'

0 100' 200'

N



C5 VICINITY MAP

APPROX. SCALE IN MILES

35 0 35 70

N

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ST. LOUIS DISTRICT
ST. LOUIS, MISSOURI 63103

DESIGNED BY: WILLIAM J. MOELLER
DWN BY: BMM
CKD BY:
SUBMITTED BY: STEPHEN G. FARKAS, P.E.
PLOT SCALE: 1:1
PLOT DATE: No
SIZE: ANSI D
FILE NAME: M-MP-20_G-003VIC.dgn
DATE: 2012/08/07
SOLICITATION NO.: W912P9-12-R-0734
CONTRACT NO.:
FILE NUMBER: M-MP-20

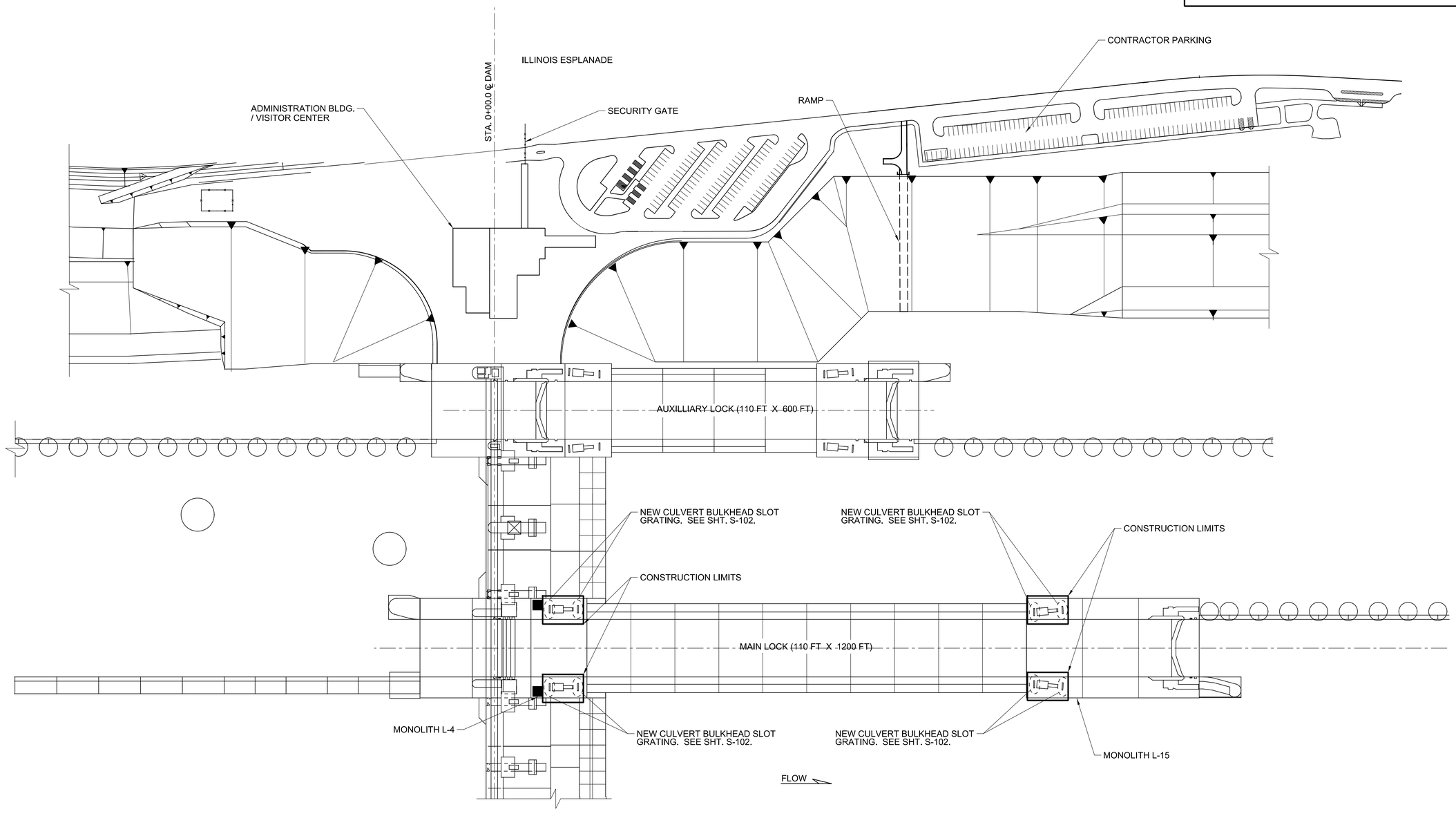
MELVIN PRICE LOCK AND DAM
MAIN LOCK BULKHEAD SLOT GRATING MODIFICATION
UPPER MISSISSIPPI
ALTON, ILLINOIS

PROJECT LOCATION AND VICINITY MAPS

SHEET IDENTIFICATION
G-003

GENERAL SHEET NOTES:

1. ALL AREAS USED FOR CONSTRUCTION LAYDOWN OR CONSTRUCTION STAGING SHALL BE COORDINATED WITH THE LOCKMASTER AND SHALL BE RESTORED TO THEIR ORIGINAL CONDITION FOLLOWING COMPLETION OF THE PROJECT.



DWG REF(S): _____

A1 GENERAL SITE PLAN AND LOCATION OF WORK ITEMS

SCALE 1" = 100'

0 100' 200'

N

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MARK	DESCRIPTION	DATE	APPR.

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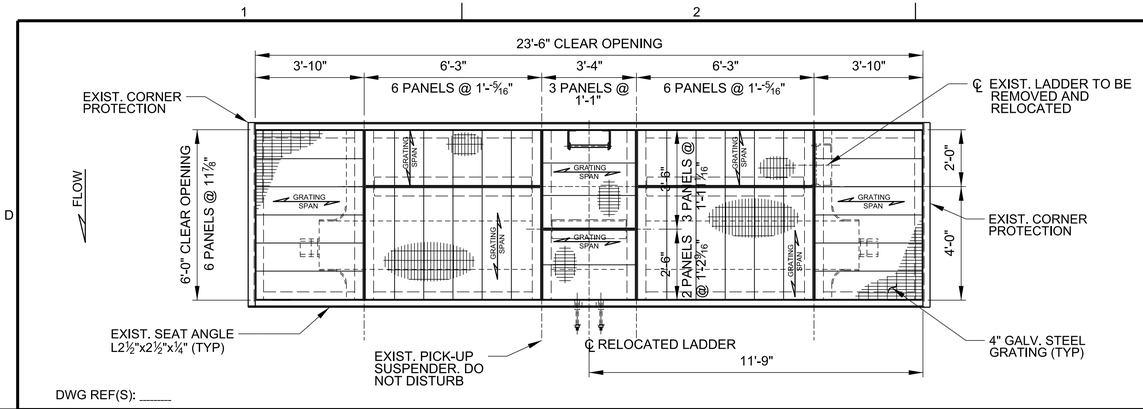
U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT
ST. LOUIS, MISSOURI 63103

DESIGNED BY: WILLIAM L. MOELLER
DWN BY: BMM
CKD BY:
SUBMITTED BY: STEPHEN G. FARKAS, P.E.
DATE: 2012/08/07
SOLICITATION NO.: W912PS-12-R-0734
CONTRACT NO.:
PLOT SCALE: 1:1
PLOT DATE: N/A
FILE NUMBER: MAMP-03
SIZE: ANSI D
FILE NAME: MAMP-03_S-101PLN.dgn

MELVIN PRICE LOCK AND DAM
MAIN LOCK BULKHEAD SLOT GRATING MODIFICATION
UPPER MISSISSIPPI
ALTON, ILLINOIS

GENERAL SITE PLAN AND LOCATION OF WORK ITEMS

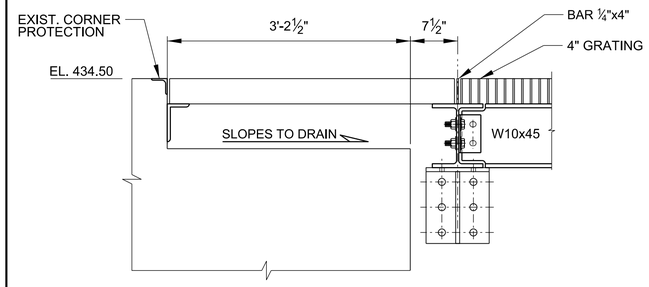
SHEET IDENTIFICATION
S-101



DWG REF(S): _____

D1 CULVERT BULKHEAD SLOT - GRATING PLAN

SCALE ⅜" = 1'-0"



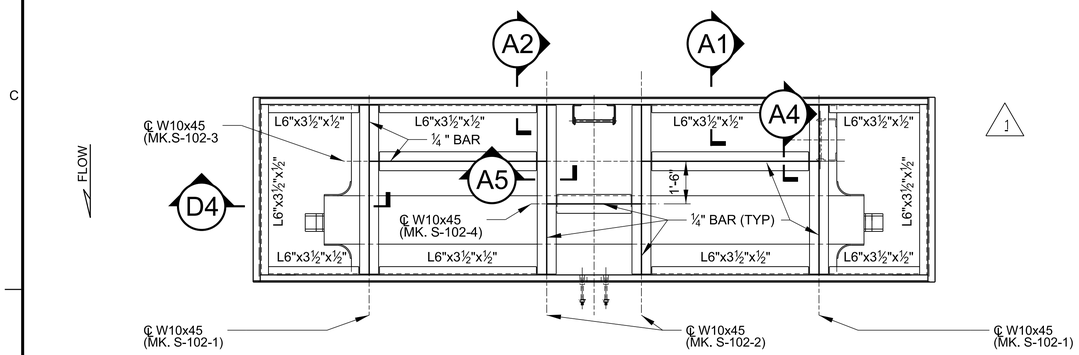
DWG REF(S): _____

D4 SECTION

SCALE ½" = 1'-0"

GENERAL SHEET NOTES:

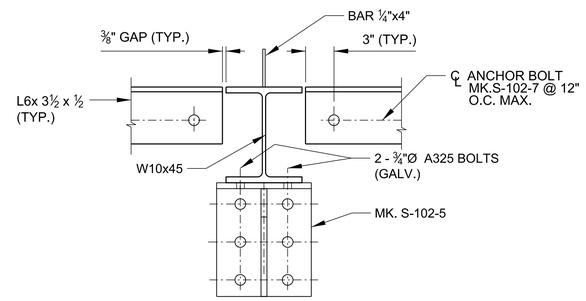
1. ALL GRATING SHALL BE 4x¼" BEARING BARS AT 1⅜" O.C. AND CROSS BARS AT 4". ALL EDGES SHALL BE BANDED. GRATING AND GRATING ATTACHMENTS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION.
2. THREADED WELD LUGS AND NUTS FOR PANELS SHALL BE LENGTH AND DIAMETER AS RECOMMENDED BY GRATING MANUFACTURER.
3. STUD LOCATIONS ARE APPROIMATE. USE PANELS AS TEMPLATES FOR PLACEMENT OF WELD LUG STUDS.
4. ALL PANELS SHALL HAVE POSITIVE ATTACHMENT TO SUPPORT MEMBERS AT STUDS.
5. DOWNSTREAM ILLINOIS SIDE SHOWN. UPSTREAN AND MISSOURI SIDE OPPOSITE HAND. ALL QUANTITIES SHOWN ARE BASED ON SINGLE BULKHEAD SLOT LOCATION.
6. ALL GRATING PANEL DIMENSIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY AND DETERMINE ACTUAL PANEL DIMENSIONS REQUIRED FOR PROPER CLEARANCE AND INSTALLATION.



DWG REF(S): _____

C1 CULVERT BULKHEAD SLOT - FRAMING PLAN

SCALE ⅜" = 1'-0"

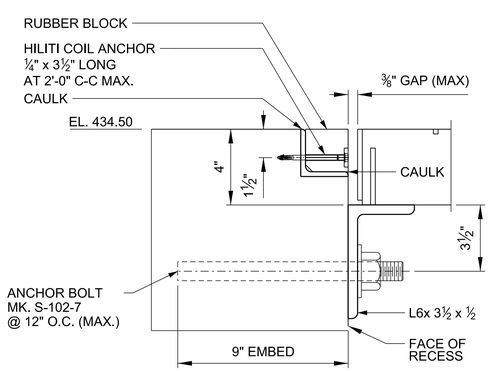


GRATING NOT SHOWN FOR CLARITY

DWG REF(S): _____

C4 SECTION

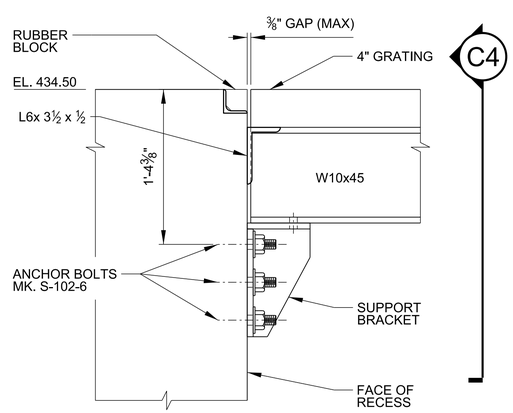
SCALE 1½" = 1'-0"



DWG REF(S): _____

A1 SECTION

SCALE 3" = 1'-0"

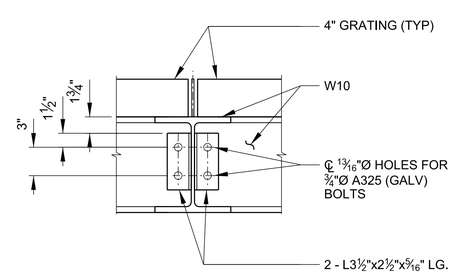


TYPICAL EACH END OF EACH W10 SUPPORT BEAM

DWG REF(S): _____

A2 SECTION

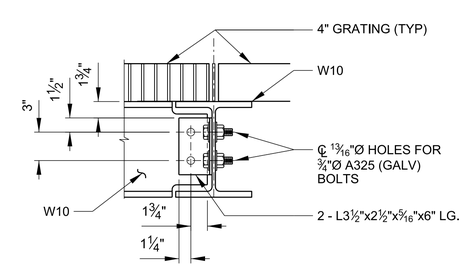
SCALE 1½" = 1'-0"



DWG REF(S): _____

A4 SECTION

SCALE 1½" = 1'-0"



DWG REF(S): _____

A5 SECTION

SCALE 1½" = 1'-0"

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
1	CHANGED PER AMENDMENT 0001	AUG-2012	J.R.S.

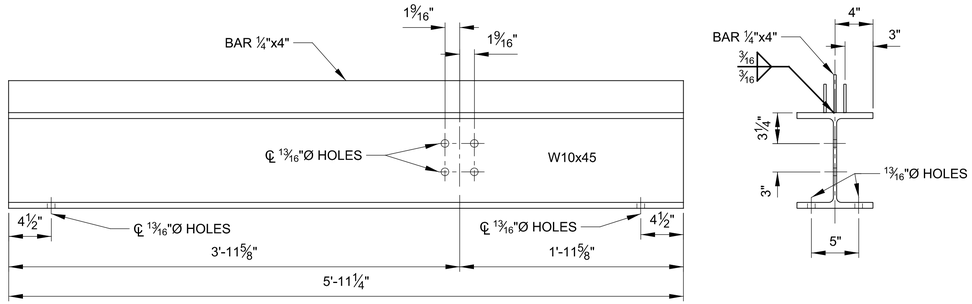
DESIGNED BY: WILLIAM J. MOELLER
DWN BY: BMM
CKD BY:
SUBMITTED BY: STEPHEN C. FARKAS, P.E.
PLOT SCALE: 1:1
PLOT DATE:
DATE: 2012/08/07
SOLICITATION NO.: W912PS-12-R-0734
CONTRACT NO.:
FILE NUMBER: M-MP-20
FILE NAME: M-MP-20_S-102PLN.dgn
SIZE: ANSI D

U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT
ST. LOUIS, MO 63103

MELVIN PRICE LOCKS AND DAM
MAIN LOCK BULKHEAD SLOT GRATING MODIFICATION
MISSISSIPPI RIVER
ALTON, ILLINOIS

CULVERT BULKHEAD SLOT GRATING AND FRAMING PLANS, SECTIONS AND DETAILS

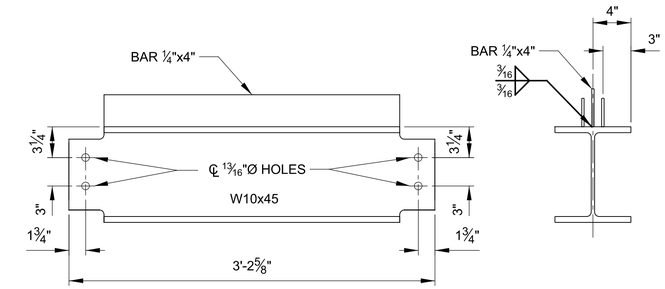
SHEET IDENTIFICATION
S-102.1



DWG REF(S): _____

D1 MK. S-102-1

(2 REQ'D)
SCALE 1½" = 1'-0"



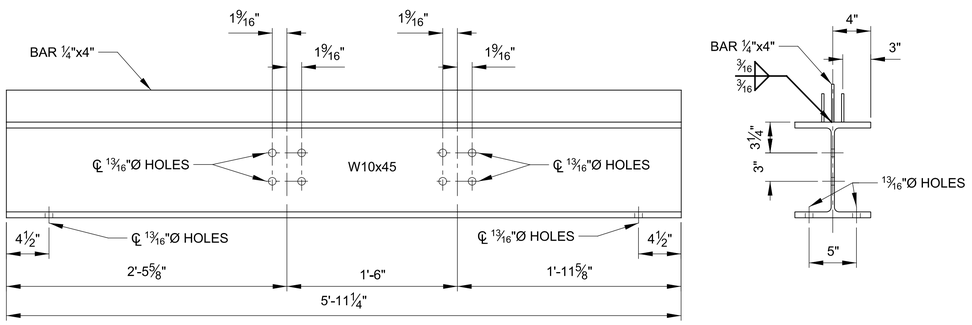
DWG REF(S): _____

D3 MK. S-102-4

(1 REQ'D)
SCALE 1½" = 1'-0"

GENERAL SHEET NOTES:

1. ANCHOR BOLTS TO BE ISSUED WITH HIT RE500 EPOXY ADHESIVE ANCHOR SYSTEM. PROVIDE A 1⅛"Ø HOLE IN THE CONCRETE.
2. SEE SHEET R-010 FOR LOCATION AND NUMBER OF ANCHORS REQUIRED FOR LADDER.



DWG REF(S): _____

C1 MK. S-102-2

(2 REQ'D)
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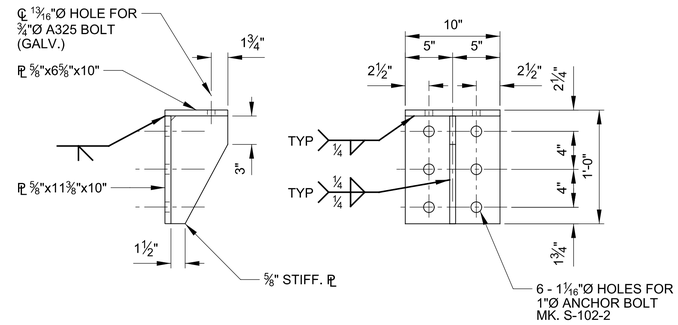

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C3 MK. S-102-5

(8 REQ'D)
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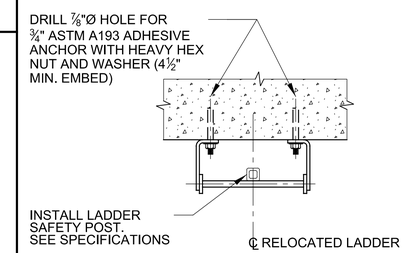
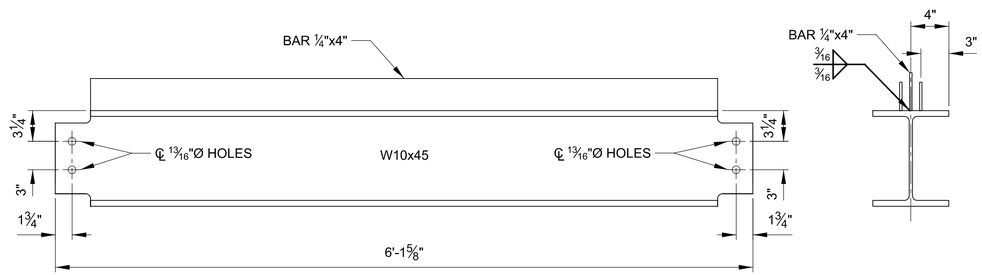


DWG REF(S): _____

C3 LADDER DETAIL

SCALE 1½" = 1'-0"



DWG REF(S): _____

A1 MK. S-102-3

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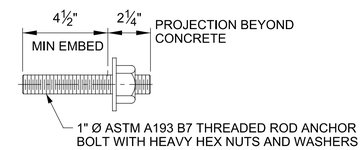
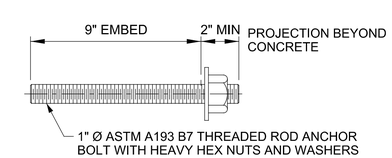


DWG REF(S): _____

A3 MK. S-102-6

(48 REQ'D)
SCALE 3" = 1'-0"



DWG REF(S): _____

A5 MK. S-102-7

SCALE 3" = 1'-0"

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.

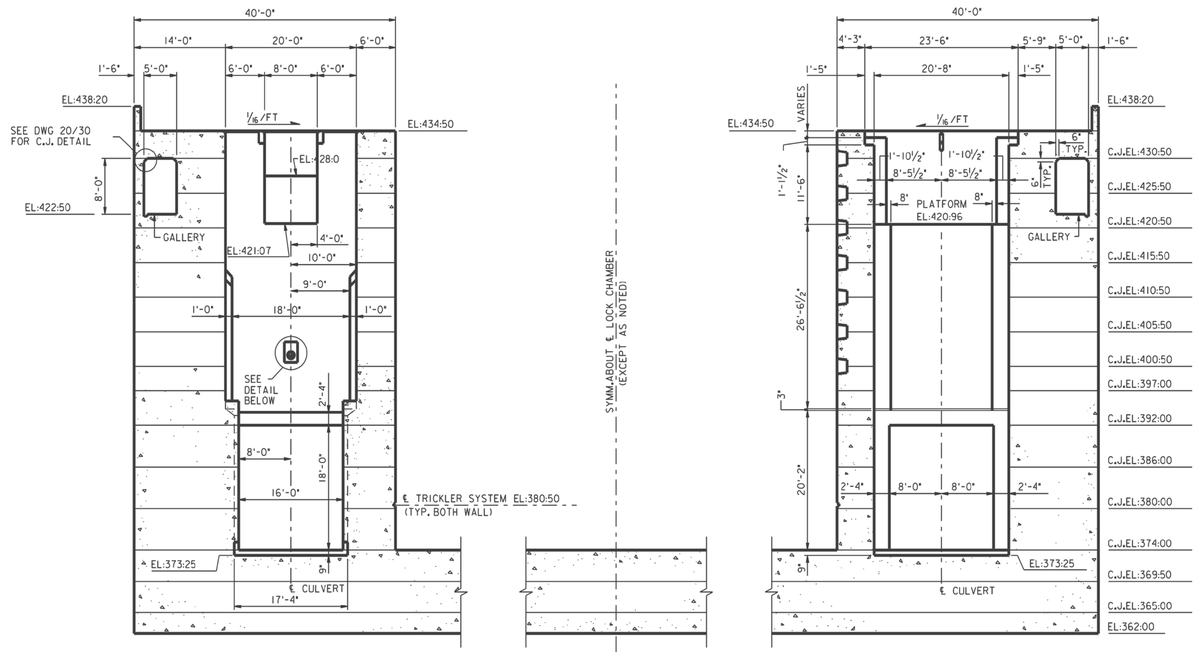
MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: WILLIAM J. MOELLER
DWN BY: BMM
CKD BY:
SUBMITTED BY: STEPHEN C. FARKAS, P.E.
PLOT SCALE: 1:1
PLOT DATE:
SIZE: ANSI D
FILE NAME: M-MP-20-S-501DET.dgn
DATE: 2012/08/07
SOLICITATION NO.: W912P9-12-R-0734
CONTRACT NO.:
FILE NUMBER: MVM-2-3

U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT
ST. LOUIS, MISSOURI 63103

MELVIN PRICE LOCKS AND DAM
MAIN LOCK BULKHEAD SLOT GRATING MODIFICATION
MISSISSIPPI RIVER
ALTON, ILLINOIS
DETAILS

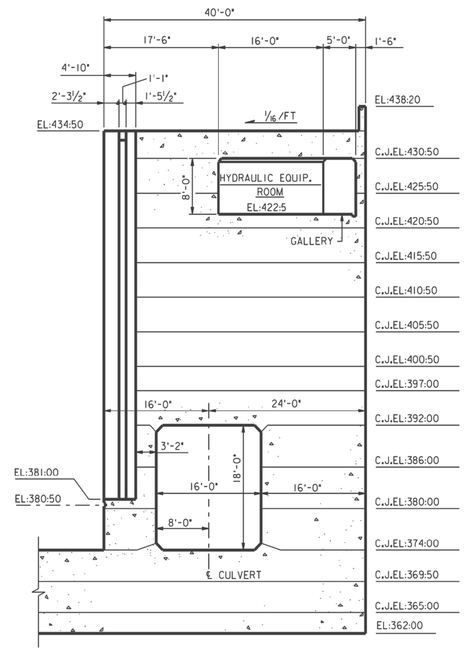
SHEET IDENTIFICATION
S-501



SECTION B-B

20/81

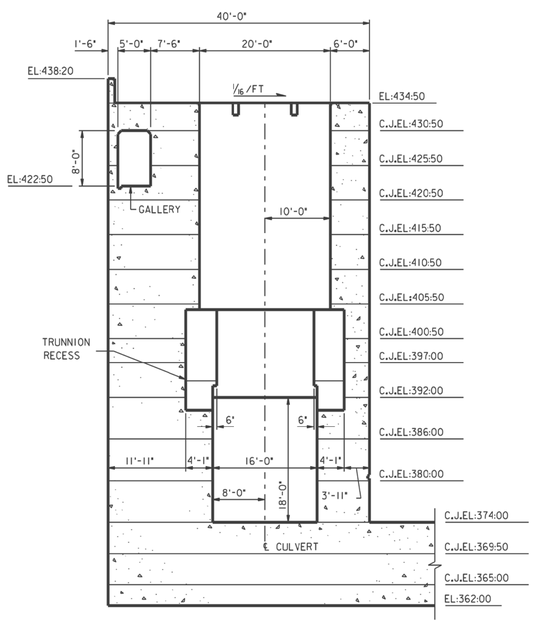
SCALE: -1/8"=1'-0"



SECTION D-D

20/81

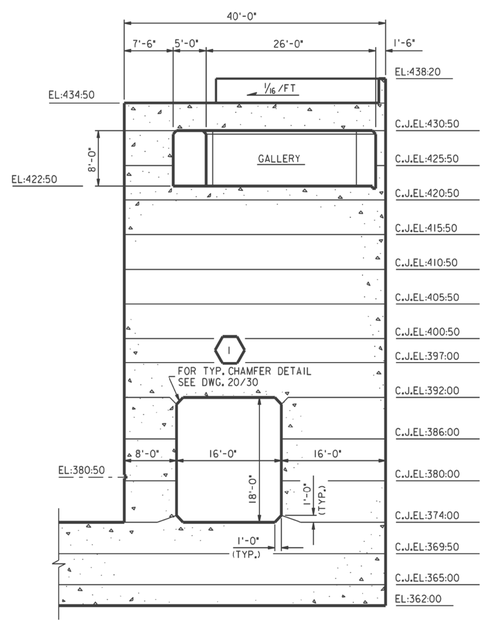
SCALE: -1/8"=1'-0"



SECTION E-E

20/81

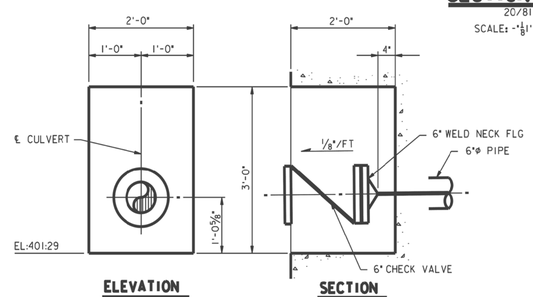
SCALE: -1/8"=1'-0"



SECTION F-F

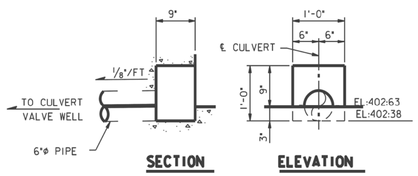
20/81

SCALE: -1/8"=1'-0"



ELEVATION
CULVERT VALVE WELL

SECTION



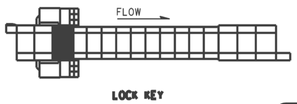
SECTION

ELEVATION

DRAINAGE DETAILS

20/82

SCALE: 1"=1'-0"



LOCK KEY

AS BUILT PLANS

Date Received JUNE 1990

Date Tracings Corrected NO CORRECTION MADE

SYMBOL	DESCRIPTION	DATE	APPROVED
1	CHANGED TO AGREE WITH AMENDMENT 0003	7/84	J.J.J.

REVISIONS

DESIGNED BY: J.J. JAEGER
DRAWN BY: R.L. HOLT
CHECKED BY: J.J. JAEGER
DATE: MAY 1984

SUBMITTED: JOHN J. JAEGER, DESIGN ENGINEER

SUBMITTED: JAMES L. CRONIN, CHIEF, STRUCTURAL SECTION

APPROVED: BOBBY R. HUGHEY, CHIEF, DESIGN BRANCH

U.S. ARMY ENGINEER DISTRICT, ST. LOUIS
CORPS OF ENGINEERS
ST. LOUIS, MISSOURI

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER-ALTON, ILLINOIS
LOCK AND DAM NO. 26 (REPLACEMENT)
LOCK

LOCK - STRUCTURE
CONCRETE
MONOLITH L-4
SECTIONS AND DETAILS

SIZE: F | CODE IDENT. NO.: DACW 49 | DRAWING NO.: M-L26(R)20/83.1
DESIGN FILE: PS20X930
PLOT SCALE: 1 | REV. NO. DACW 43 -84-B-0025 | SHEET 55 OF 107

AUTOMATED DRAFTING SYSTEM

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.

MARK	DESCRIPTION	DATE	APPR.

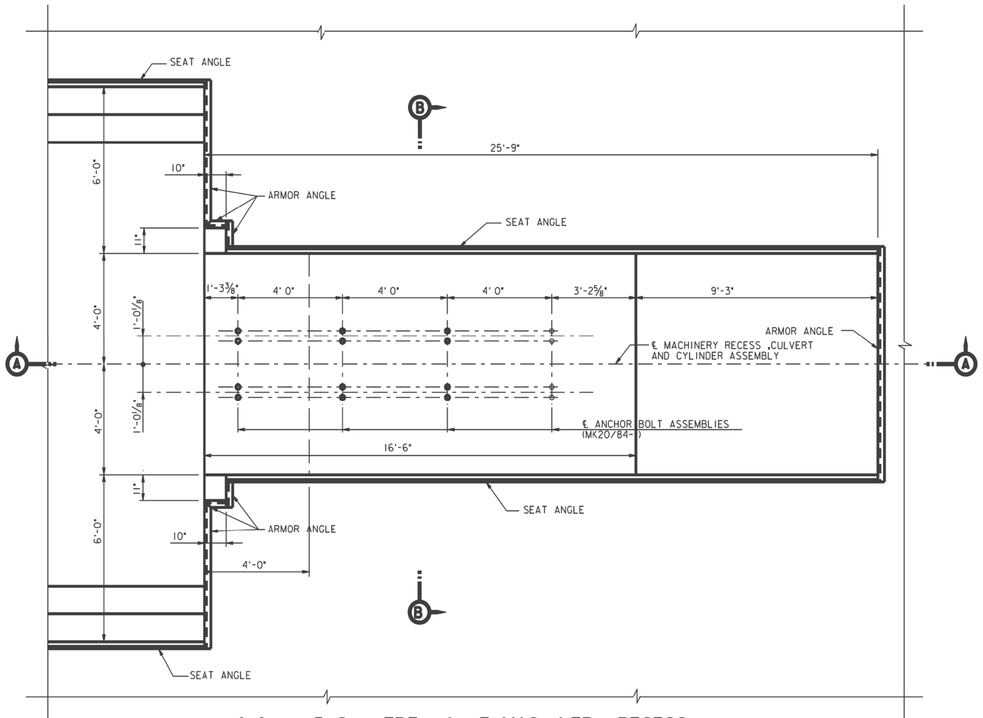
U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT
ST. LOUIS, MISSOURI 63103

DESIGNED BY: WILLIAM J. MOELLER
DWN BY: BMM
CKD BY:
SUBMITTED BY: STEPHEN G. FARKAS, P.E.
DATE: 2012/08/07
SOLICITATION NO.: W912P9-12-R-0734
CONTRACT NO.:
PLOT SCALE: 1
PLOT DATE: No. 11
FILE NUMBER: MMP-20
SIZE: ANSI D
FILE NAME: M-MP-20_R-001REF.dgn

MELVIN PRICE LOCK AND DAM
MAIN LOCK BULKHEAD SLOT GRATING MODIFICATION
UPPER MISSISSIPPI
ALTON, ILLINOIS

REFERENCE DRAWING
SHEET 1 OF 10

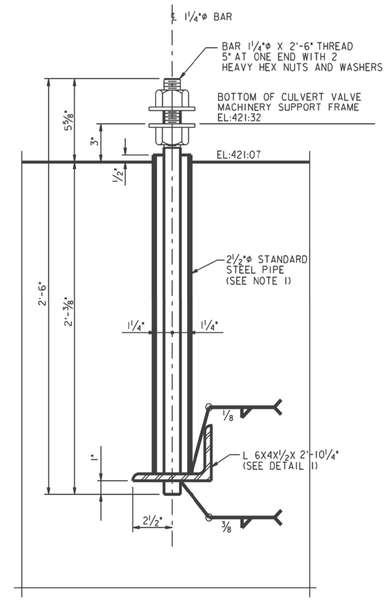
SHEET IDENTIFICATION
R-001



L-4 & L-15 CULVERT VALVE MACHINERY RECESS

20/81 & 20/102

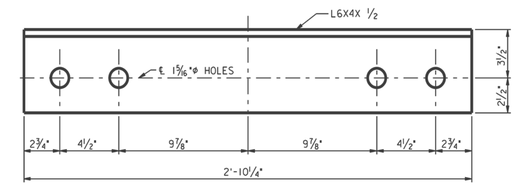
SCALE: -1/2"=1'-0"



ANCHOR BOLT ASSEMBLY MK20/84-1

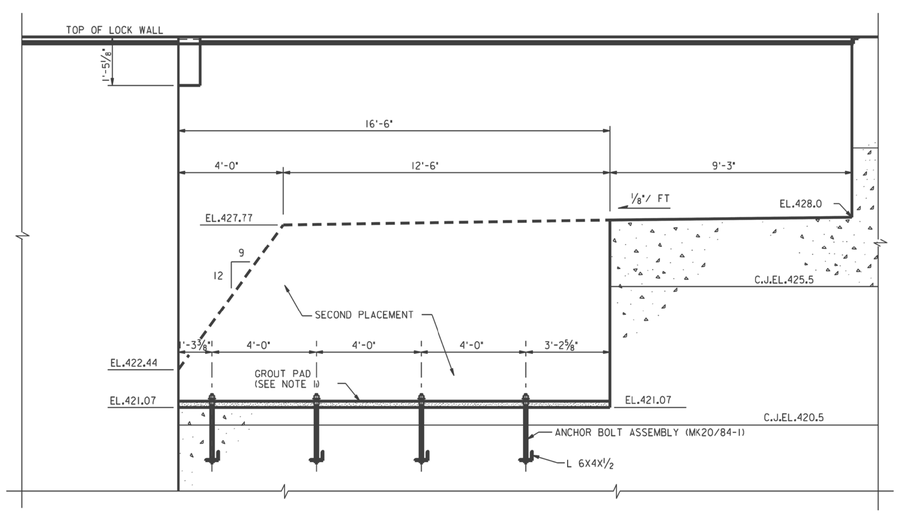
(16 REQUIRED)

SCALE: 3"=1'-0"



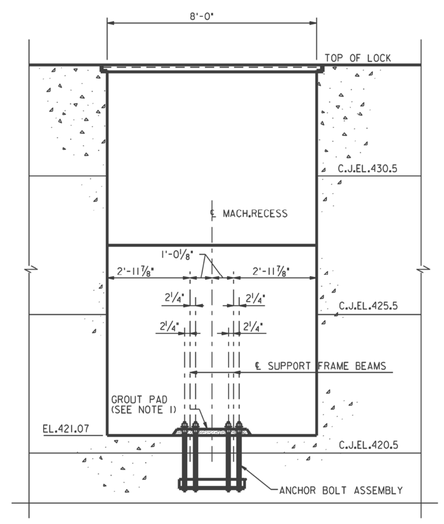
DETAIL 1

SCALE: 3"=1'-0"



SECTION A-A

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



SECTION B-B

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

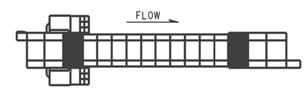
NOTES:

1. 3"GROUT PAD TO BE PLACED BENEATH MACHINERY FRAME, EL:421:07 TO EL:421:32:FILL 2 1/2"Φ PIPES WITH GROUT AFTER FINAL MACHINERY FRAME ADJUSTMENT.
2. FOR ARMOR ANGLE AND SEAT ANGLE DETAILS,SEE DWG:20/156 & 157:
3. FOR GRATING DETAILS,SEE DWG:20/156 & 20/157:
4. REFER TO DWG:32/8 FOR CULVERT VALVE MACHINERY FRAME (MK32/8-1)

SYMBOL	DESCRIPTION	DATE	APPROVED
1	CHANGED TO AGREE WITH AMENDMENT 0003	7/84	T.J.L.

REVISIONS

AS BUILT PLANS
Date Received JUNE 1990
Date Tracings Corrected NO CORRECTION MADE



LOCK KEY

DESIGNED BY: J.JAEGER
DRAWN BY: D.HASKETT
CHECKED BY: J.JAEGER
DATE: MAY 1984
SUBMITTED: JOHN J.JAEGER, DESIGN ENGINEER
SUBMITTED: JAMES L.CRONIN, CHIEF, STRUCTURAL SECTION
APPROVED: BOBBY R.HUGHEY, CHIEF, DESIGN BRANCH

U.S.ARMY ENGINEER DISTRICT,ST.LOUIS
CORPS OF ENGINEERS
ST.LOUIS, MISSOURI

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER-ALTON,ILLINOIS
LOCK AND DAM NO.26(REPLACEMENT)
LOCK
LOCK-STRUCTURE
CONCRETE
MONOLITHS L-4 AND L-15
CULVERT VALVE MACHINERY RECESS

SIZE F | CODE IDENT. NO. DACW 43 | DRAWING NO. M-L26(R)20/84.1
DESIGN FILE: PS20X940
PLOT SCALE: 2 | INV. NO. DACW 43 -84-B-0025 | SHEET 56 OF 107

AUTOMATED DRAFTING SYSTEM

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

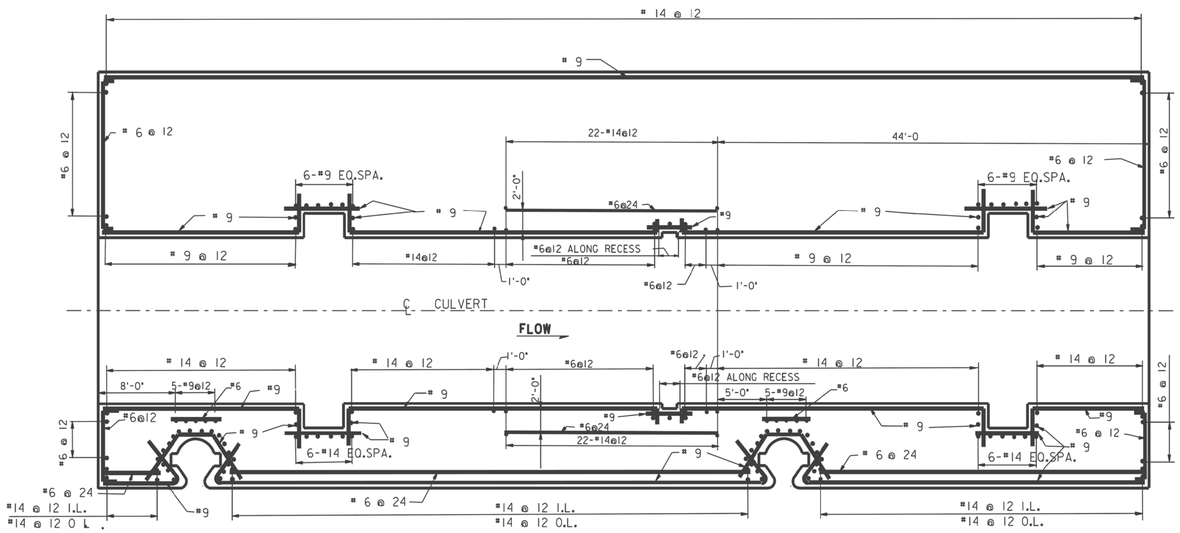
U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT
ST. LOUIS, MISSOURI 63103

DESIGNED BY: WILLIAM J. MOELLER
DWN BY: BMM
CKD BY:
SUBMITTED BY: STEPHEN G. FARKAS, P.E.
PLOT SCALE: 1:1
PLOT DATE: Nov 1
SIZE: ANSI D
FILE NAME: MAIP-20_R-002REF.dgn
DATE: 2012/08/07
SOLICITATION NO.: W912P9-12-R-0734
CONTRACT NO.:
FILE NUMBER: MAIP-20

MELVIN PRICE LOCK AND DAM
MAIN LOCK BULKHEAD SLOT GRATING MODIFICATION
UPPER MISSISSIPPI
ALTON, ILLINOIS

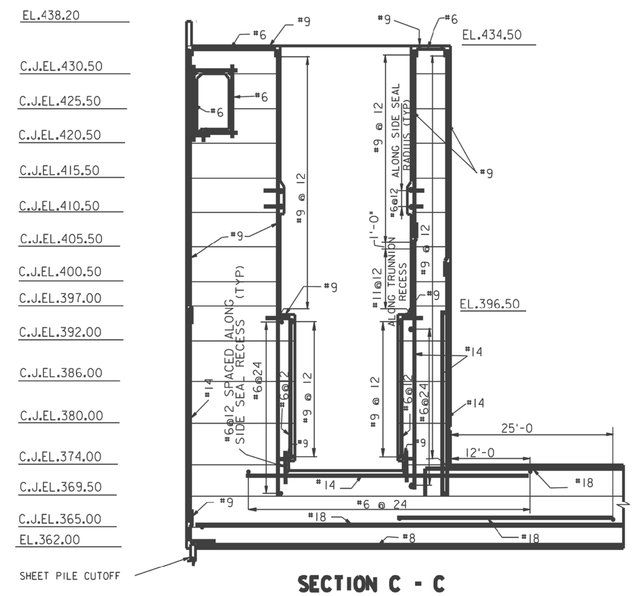
REFERENCE DRAWING
SHEET 2 OF 10

SHEET IDENTIFICATION
R-002



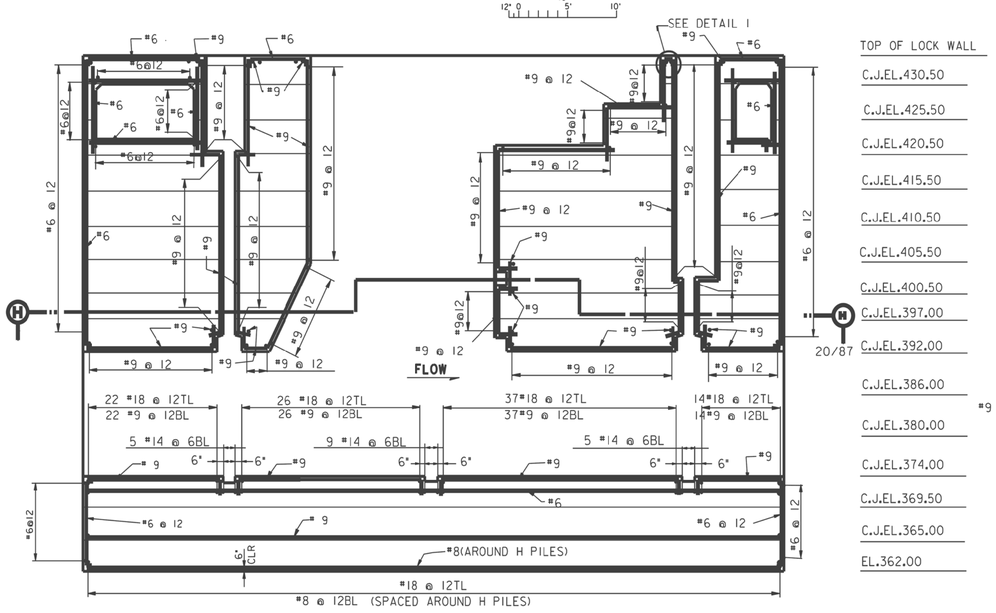
SECTIONAL PLAN AT ELEVATION 381.50

SCALE: - 3/16"=1'-0"



SECTION C - C

SCALE: - 1/8"=1'-0"

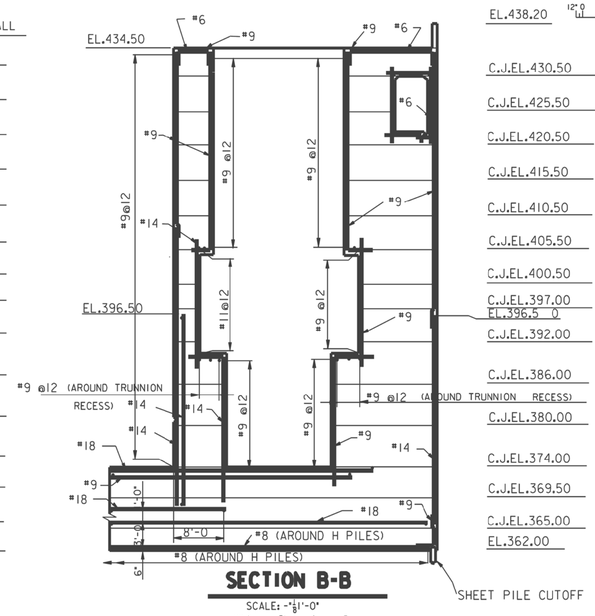


SECTION G - G

SCALE: - 1/8"=1'-0"

20/85

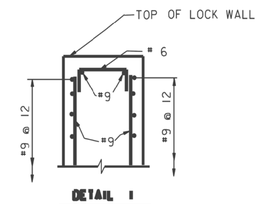
TOP OF LOCK WALL
C.J.EL.430.50
C.J.EL.425.50
C.J.EL.420.50
C.J.EL.415.50
C.J.EL.410.50
C.J.EL.405.50
C.J.EL.400.50
C.J.EL.397.00
C.J.EL.392.00
C.J.EL.386.00
C.J.EL.380.00
C.J.EL.374.00
C.J.EL.369.50
C.J.EL.365.00
EL.362.00



SECTION B-B

SCALE: - 1/8"=1'-0"

20/85



DETAIL I

(NOT TO SCALE)

AS BUILT PLANS

Date Received JUNE 1990

Date Tracings Corrected NO CORRECTION MADE

SYMBOL	DESCRIPTION	DATE	APPROVED
	REVISIONS		

DESIGNED BY: J. JAEGER
DRAWN BY: DJHASKETT
CHECKED BY: J. JAEGER
DATE: MAY 1984

SUBMITTED: JOHN J. JAEGER, DESIGN ENGINEER
SUBMITTED: JAMES L. CRONIN, CHIEF, STRUCTURAL SECTION
APPROVED: BOBBY R. HUCHEY, CHIEF, DESIGN BRANCH

U.S. ARMY ENGINEER DISTRICT, ST. LOUIS
CORPS OF ENGINEERS
ST. LOUIS, MISSOURI

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER-ALTON, ILLINOIS
LOCK AND DAM NO. 26 (REPLACEMENT)
LOCK
CONCRETE

UPSTREAM CULVERT VALVE MONOLITH L-4 REINFORCEMENT

SIZE: F | CODE IDENT. NO.: DACW 49 | DRAWING NO.: M-L26(R)20/86
DESIGN FILE: PS20X980
PLOT SCALE: 1 | INV. NO. DACW 43 -94-B-0025 | SHEET 58 OF 107

LOCK KEY

AUTOMATED DRAFTING SYSTEM

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.

MARK	DESCRIPTION	DATE	APPR.

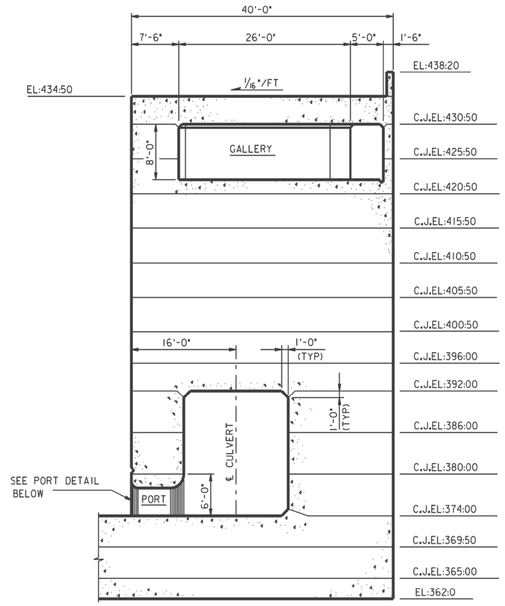
U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT
ST. LOUIS, MISSOURI 63103

DESIGNED BY: WILLIAM J. MOELLER
DWN BY: BMM
CKD BY:
SUBMITTED BY: STEPHEN G. FARKAS, P.E.
DATE: 2012/08/07
SOLICITATION NO.: W912P8-12-R-0734
CONTRACT NO.:
PLOT SCALE: 1:1
PLOT DATE:
FILE NUMBER: MMP-20
SIZE: ANSI D
FILE NAME: MMP-20_R-003REF.dgn

MELVIN PRICE LOCK AND DAM
MAIN LOCK BULKHEAD SLOT GRATING MODIFICATION
UPPER MISSISSIPPI
ALTON, ILLINOIS

REFERENCE DRAWING
SHEET 3 OF 10

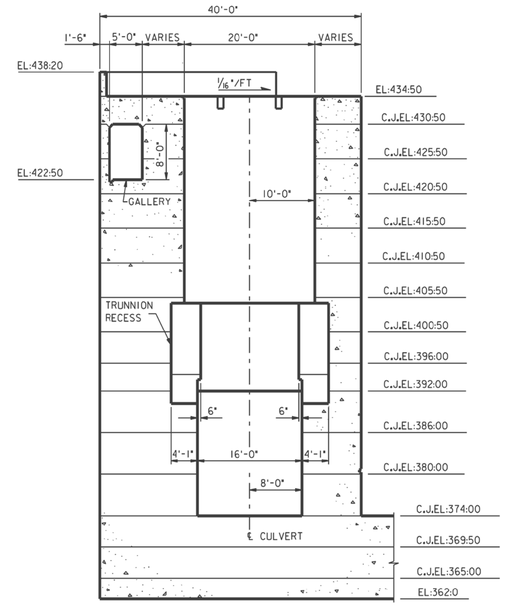
SHEET IDENTIFICATION
R-003



SECTION C-C

20/102

SCALE: $\frac{1}{8}$"=1'-0"

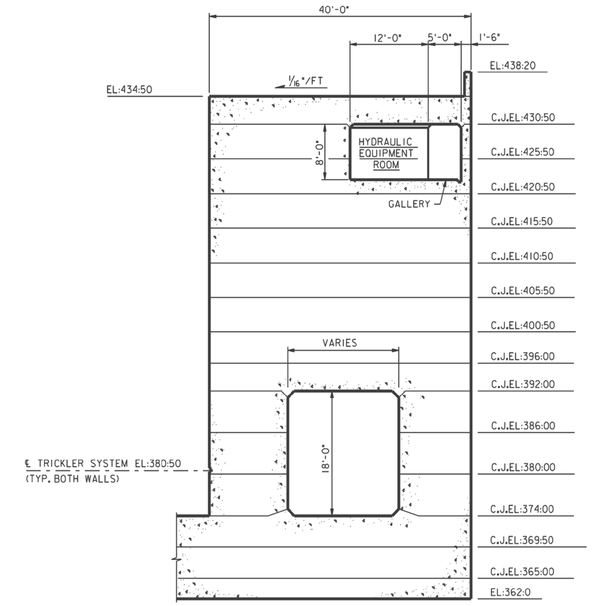


SECTION D-D

20/102

SCALE: $\frac{1}{8}$"=1'-0"

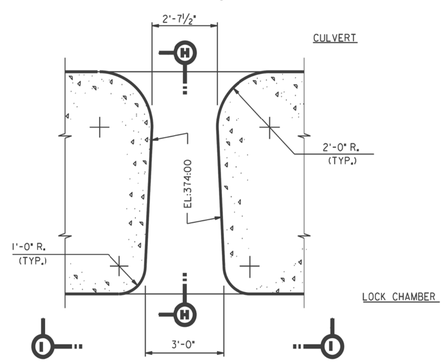
12" 0 5' 10' 15'



SECTION E-E

20/102

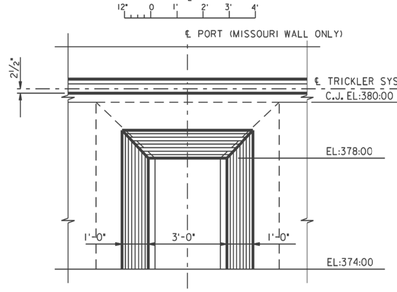
SCALE: $\frac{1}{8}$"=1'-0"



DETAIL PLAN

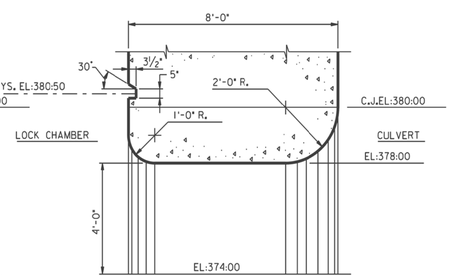
SCALE: $\frac{1}{2}$"=1'-0"

12" 0 1' 2' 3' 4'



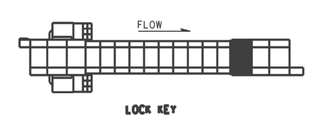
ELEVATION I-I

SCALE: $\frac{1}{2}$"=1'-0"



SECTION H-H

SCALE: $\frac{1}{2}$"=1'-0"



LOCK KEY

AS BUILT PLANS

Date Received JUNE 1990

Date Tracings Corrected NO CORRECTION MADE

SYMBOL	DESCRIPTION	DATE	APPROVED

REVISIONS

DESIGNED BY: J.JAEGER
DRAWN BY: R.HOLT
CHECKED BY: J.JAEGER
DATE: MAY 1984

SUBMITTED: JOHN J. JAEGER, DESIGN ENGINEER

SUBMITTED: JAMES L. CRONIN, CHIEF, STRUCTURAL SECTION

APPROVED: BOBBY R. HUGHEY, CHIEF, DESIGN BRANCH

U.S. ARMY ENGINEER DISTRICT, ST. LOUIS
CORPS OF ENGINEERS
ST. LOUIS, MISSOURI

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER-ALTON, ILLINOIS
LOCK AND DAM NO. 26 (REPLACEMENT)
LOCK
LOCK - STRUCTURE
CONCRETE
MONOLITH L-15
SECTIONS AND DETAILS

SIZE: F | CODE IDENT. NO.: DACW 43 | DRAWING NO.: M-L26(R)20/104

DESIGN FILE: PS201190

PLOT SCALE: 1 | INV. NO. DACW 43 -84-B-0005 | SHEET 76 OF 107

AUTOMATED DRAFTING SYSTEM

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.

MARK	DESCRIPTION	DATE	APPR.

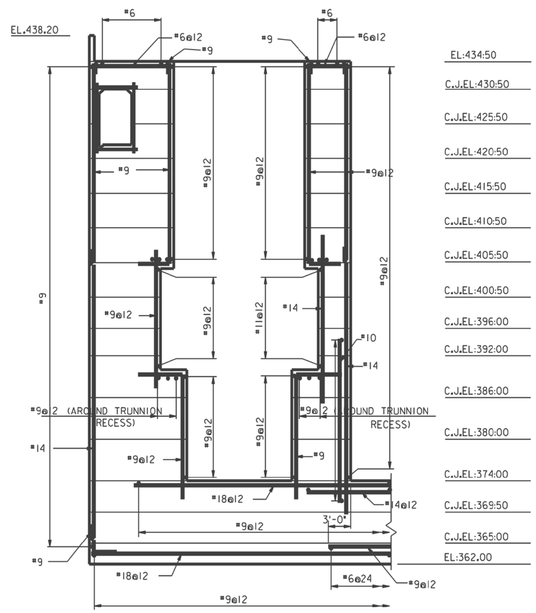
U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT
ST. LOUIS, MISSOURI 63103

DESIGNED BY: WILLIAM J. MOELLER
DWN BY: BMM
CKD BY:
SUBMITTED BY: STEPHEN G. FARKAS, P.E.
PLOT SCALE: 1:1
PLOT DATE: N/A
SIZE: ANSI D
FILE NAME: M-MP-20, R-004REF.dgn
DATE: 2012/08/07
SOLICITATION NO.: W912P8-12-R-0734
CONTRACT NO.:
FILE NUMBER: M-MP-20
FILE NAME: M-MP-20, R-004REF.dgn

MELVIN PRICE LOCK AND DAM
MAIN LOCK BULKHEAD SLOT GRATING MODIFICATION
UPPER MISSISSIPPI
ALTON, ILLINOIS

REFERENCE DRAWING
SHEET 4 OF 10

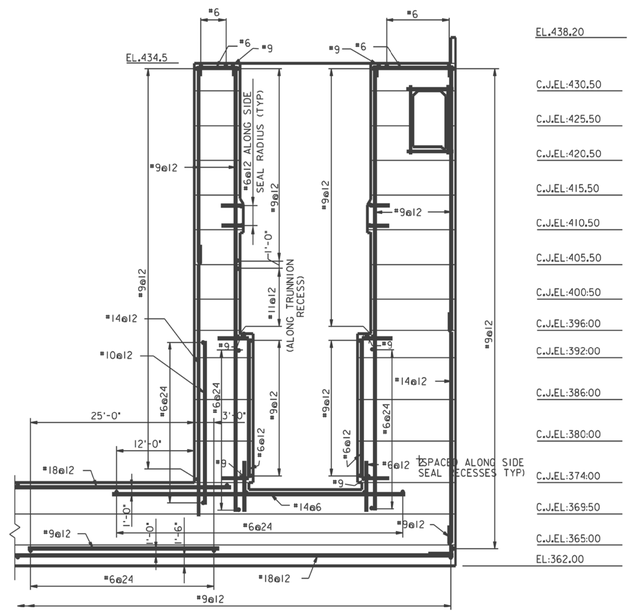
SHEET IDENTIFICATION
R-004



SECTION C-C

SCALE: -1/8"=1'-0"

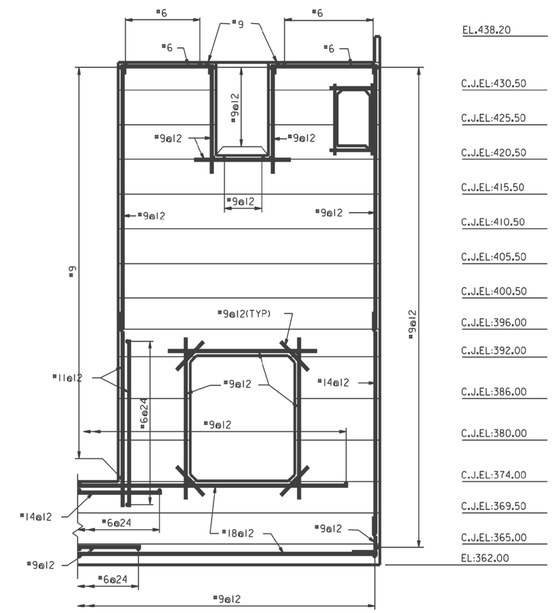
20/105



SECTION D-D

SCALE: -1/8"=1'-0"

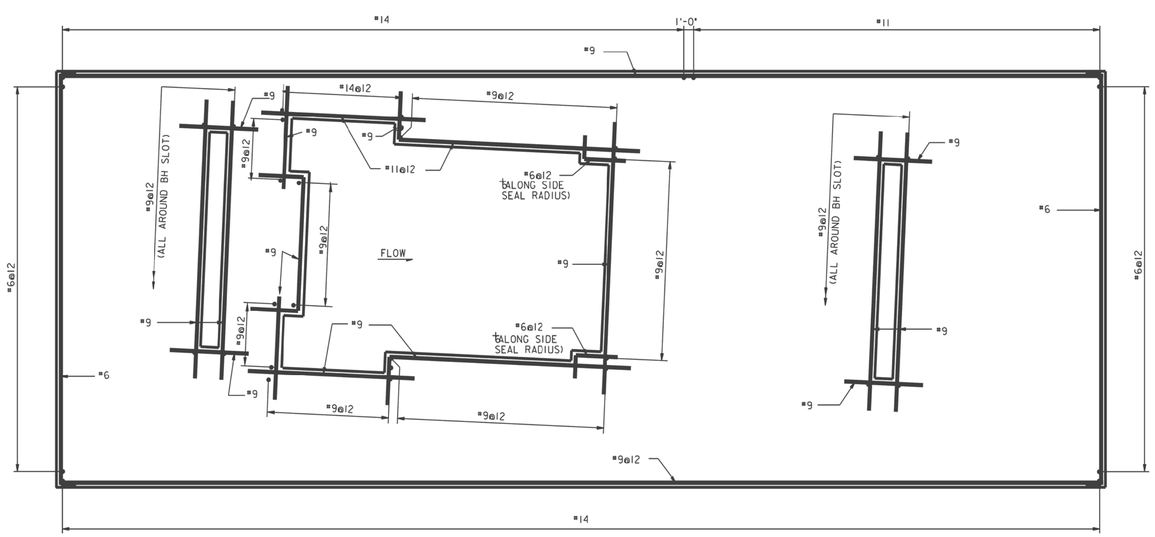
20/105
20/108



SECTION E-E

SCALE: -1/8"=1'-0"

20/105



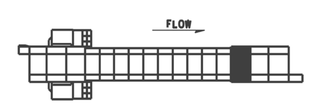
SECTIONAL PLAN H-H

SCALE: -3/16"=1'-0"

20/106

NOTE:
1. REINFORCING AROUND GALLERY NOT SHOWN FOR CLARITY, SEE TYPICAL SECTION ON DWG 20 /87

AS BUILT PLANS
Date Received JUNE 1990
Date Tracings Corrected NO CORRECTION MADE



LOCK KEY

SYMBOL	DESCRIPTION	DATE	APPROVED

REVISIONS

DESIGNED BY: J.JAEGER
DRAWN BY: D.HASKETT
CHECKED BY: J.JAEGER
DATE: MAY 1984
SUBMITTED: JOHN J JAEGER, DESIGN ENGINEER
SUBMITTED: JAMES L.CRONIN, CHIEF, STRUCTURAL SECTION
APPROVED: ROBBY R. HUCHEY, CHIEF, DESIGN BRANCH

U.S.ARMY ENGINEER DISTRICT,ST.LOUIS
CORPS OF ENGINEERS
ST.LOUIS, MISSOURI

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER-ALTON,ILLINOIS
LOCK AND DAM NO.26(REPLACEMENT)
LOCK
LOCK-STRUCTURE
CONCRETE
MONOLITH L-15
REINFORCEMENT

SIZE: F | CODE IDENT. NO.: DACW 43 | DRAWING NO.: M-L26(R)20/107
DESIGN FILE: PS20X1240
PLOT SCALE: 1 | INV. NO. DACW 43 -84-B-0005 | SHEET 19 OF 107

AUTOMATED DRAFTING SYSTEM

US Army Corps of Engineers®

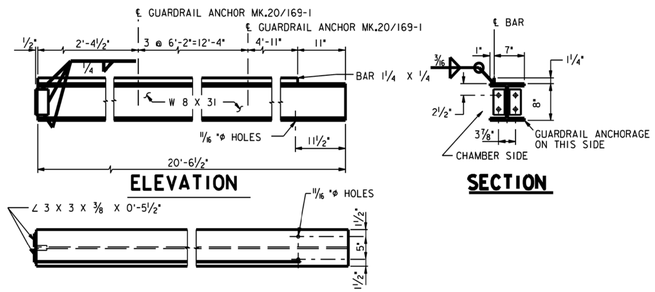
MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT
ST. LOUIS, MISSOURI 63103

DESIGNED BY: WILLIAM J. MOELLER
DWN BY: BMM
CKD BY:
SUBMITTED BY: STEPHEN G. FARKAS, P.E.
PLOT SCALE: 1:1
PLOT DATE: N/A
SIZE: ANSI D
FILE NAME: M-MP-20, R-005REF.dgn
DATE: 20120/08/07
SOLICITATION NO.: W912PS-12-R-0734
CONTRACT NO.:
FILE NUMBER: M-MP-20

MELVIN PRICE LOCK AND DAM
MAIN LOCK BULKHEAD SLOT GRATING MODIFICATION
UPPER MISSISSIPPI
ALTON, ILLINOIS
REFERENCE DRAWING
SHEET 5 OF 10

SHEET IDENTIFICATION
R-005



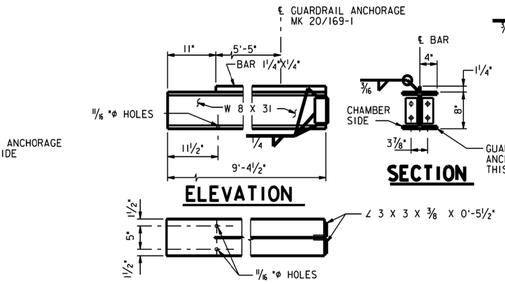
ELEVATION

SECTION

PLAN

SUPPORT BEAM MK 20/160-1

1 REQUIRED
1 REQ'D OPP.HAND



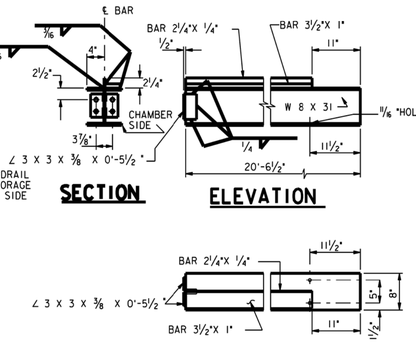
ELEVATION

SECTION

PLAN

SUPPORT BEAM MK 20/160-2

1 REQUIRED
1 REQ'D OPP.HAND



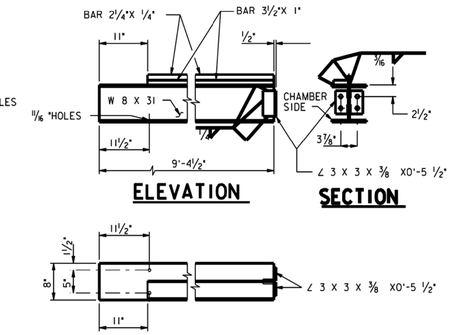
SECTION

ELEVATION

PLAN

SUPPORT BEAM MK 20/160-3

1 REQUIRED
1 REQ'D OPP.HAND



ELEVATION

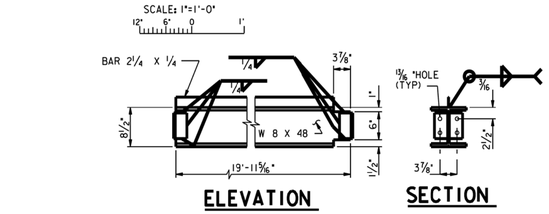
SECTION

PLAN

SUPPORT BEAM MK 20/160-4

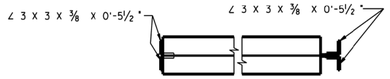
1 REQUIRED
1 REQ'D OPP.HAND

SCALE: 1"=1'-0"



ELEVATION

SECTION

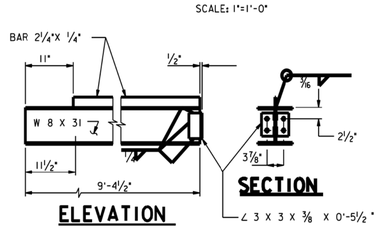


PLAN

SUPPORT BEAM MK 20/160-5

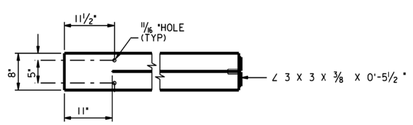
2 REQUIRED

SCALE: 1"=1'-0"



ELEVATION

SECTION

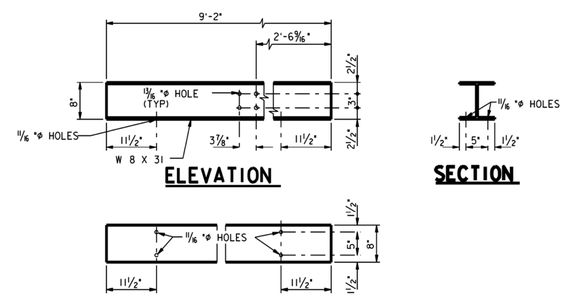


PLAN

SUPPORT BEAM MK 20/160-6

2 REQUIRED

SCALE: 1"=1'-0"



ELEVATION

SECTION

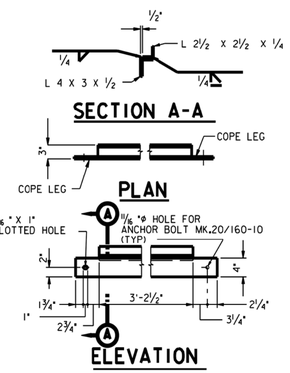
PLAN

SUPPORT BEAM MK 20/160-7

2 REQUIRED

SCALE: 1"=1'-0"

SCALE: 1"=1'-0"



SECTION A-A

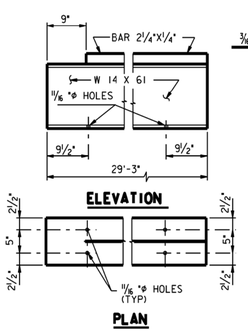
PLAN

ELEVATION

SUPPORT ANGLE MK 20/160-8

2 REQUIRED

SCALE: 1"=1'-0"



ELEVATION

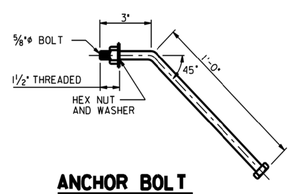
SECTION

PLAN

SUPPORT BEAM MK 20/160-9

8 REQUIRED

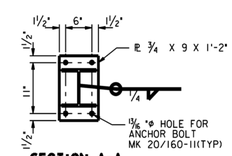
SCALE: 1"=1'-0"



ANCHOR BOLT MK 20/160-10

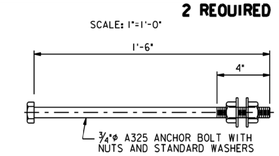
ASTM A325 12 REQUIRED

SCALE: 3"=1'-0"



SECTION A-A

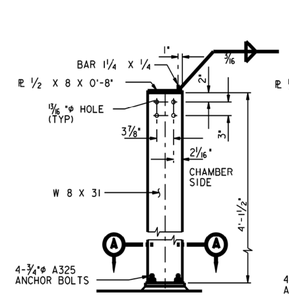
SCALE: 1"=1'-0"



ANCHOR BOLT MK 20/160-11

24 REQUIRED

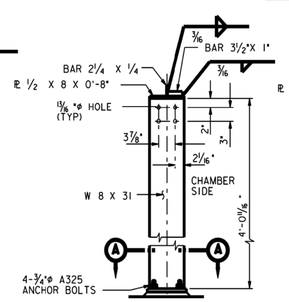
SCALE: 3"=1'-0"



MK 20/160-12

2 REQUIRED

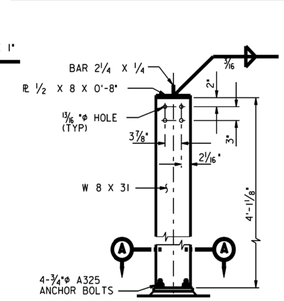
SCALE: 1"=1'-0"



MK 20/160-13

2 REQUIRED

SCALE: 1"=1'-0"



MK 20/160-14

2 REQUIRED

SCALE: 1"=1'-0"

AS BUILT PLANS

Date Received JUNE 1990

Date Tracings Corrected NO CORRECTION MADE

NOTES:

1. ALL SUPPORT BEAMS,ANGLES AND COLUMNS TO BE ASTM A36.
2. FOR GENERAL GRATING NOTES AND DETAILS SEE DWG.20/159.

SYMBOL	DESCRIPTION	DATE	APPROVED

REVISIONS

DESIGNED BY: T.RUF
DRAWN BY: J.SOEHNGEN
CHECKED BY: T.RUF
DATE: MAY 1984

SUBMITTED: THOMAS R.RUF, DESIGN ENGINEER

SUBMITTED: JAMES L.CRONIN, CHIEF, STRUCTURAL SECTION

APPROVED: BOBBY R. HUGHEY, CHIEF, DESIGN BRANCH

U.S.ARMY ENGINEER DISTRICT,ST.LOUIS
CORPS OF ENGINEERS
ST.LOUIS, MISSOURI

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER-ALTON,ILLINOIS
LOCK AND DAM NO.26(REPLACEMENT)
LOCK
LOCK-STRUCTURE

MISCELLANEOUS DETAILS
MONOLITH L-1 THRU L-17
GRATING DETAILS

SIZE: F | CODE IDENT. NO.: DACW 43 | DRAWING NO.: M-L26(R)20/160

DESIGN FILE: PS201800

PLOT SCALE: 1 | INV. NO. DACW 43 -94-B-0005 | SHEET 25 OF 43

COMPUTER AIDED DESIGN & DRAFTING

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

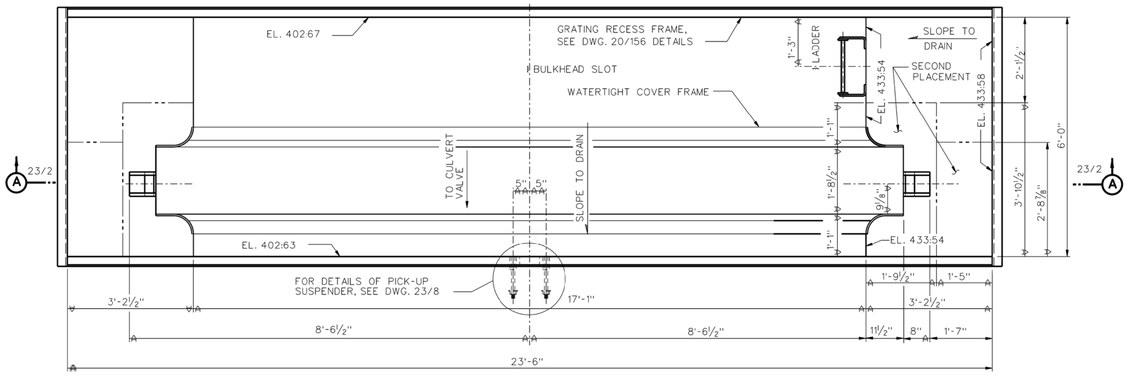
U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT
ST. LOUIS, MISSOURI 63103

DESIGNED BY: WILLIAM J. MOELLER
DWN BY: BMM
CKD BY:
SUBMITTED BY: STEPHEN G. FARKAS, P.E.
DATE: 20120906/07
SOLICITATION NO.: W912PS-12-R-0734
CONTRACT NO.:
PLOT SCALE: 1:1
PLOT DATE: N/A
FILE NUMBER: MAMP-03
SIZE: ANSI D
FILE NAME: MAMP-20_R-006REF.dgn

MELVIN PRICE LOCK AND DAM
MAIN LOCK BULKHEAD SLOT GRATING MODIFICATION
UPPER MISSISSIPPI
ALTON, ILLINOIS

REFERENCE DRAWING
SHEET 6 OF 10

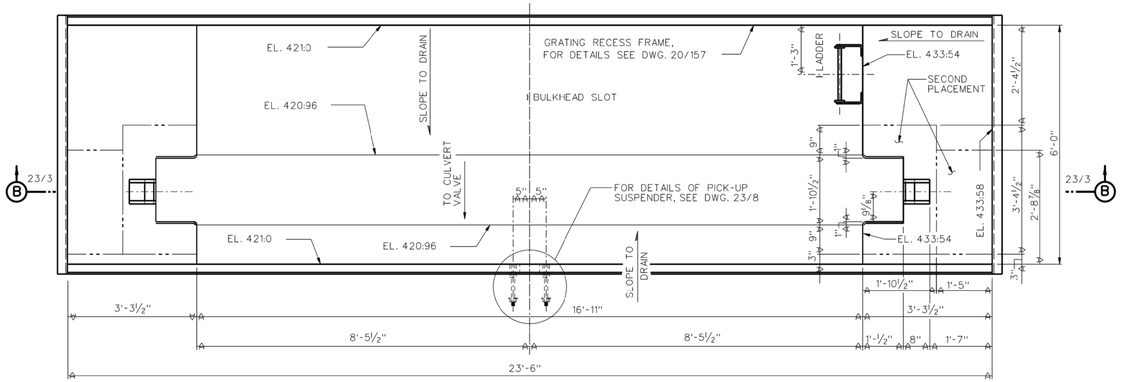
SHEET IDENTIFICATION
R-006



PLAN
DOWNSTREAM RECESS MONOLITH L-4

NOTE:
ILLINOIS SIDE SHOWN. MISSOURI SIDE OPPOSITE HAND.

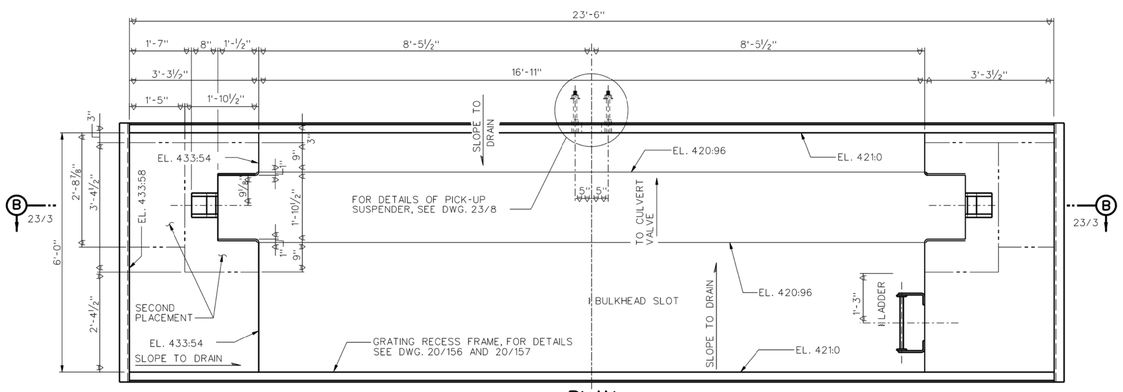
SCALE: -¾ 1'-0"



PLAN
DOWNSTREAM RECESS MONOLITH L-15

NOTE:
ILLINOIS SIDE SHOWN. MISSOURI SIDE OPPOSITE HAND.

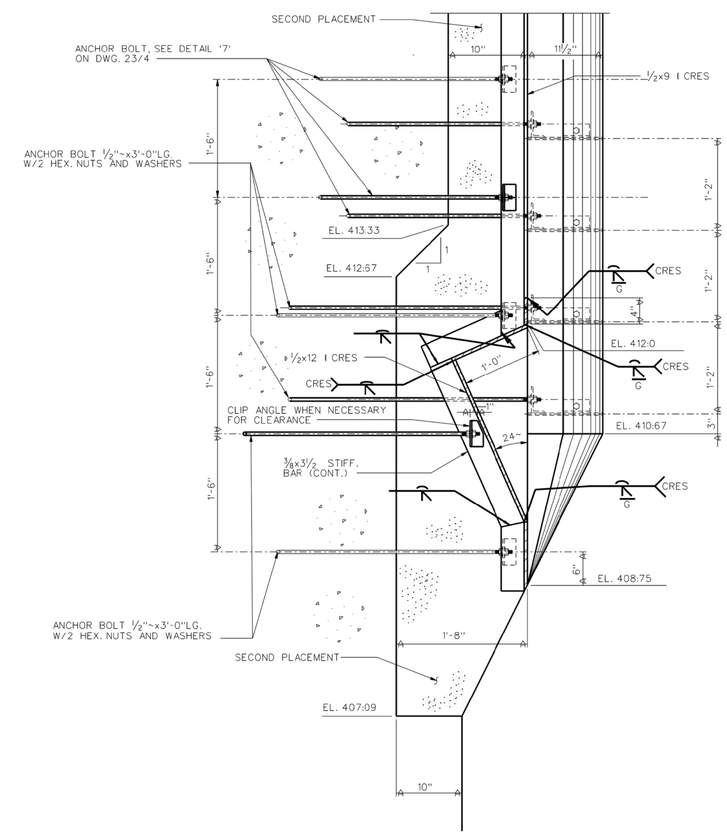
SCALE: -¾ 1'-0"



PLAN
UPSTREAM RECESS MONOLITHS L-4 AND L-15

NOTE:
ILLINOIS SIDE SHOWN. MISSOURI SIDE OPPOSITE HAND.

SCALE: -¾ 1'-0"



SECTION M-M
23/4
SCALE: 1-½"1'-0"

NOTES:
1. FOR LOCATION OF CULVERT BULKHEAD RECESSES, SEE DWGS. 20/81 AND 20/102.
2. FOR GENERAL WELDING NOTES, SEE DWG. 21/22.
3. WELDS INDICATED CRES=CORRISION RESISTANT WELDS.

AS BUILT PLANS
Date Recieved JUNE 1990
Date Tracings Corrected NO CORRECTION MADE

SYMBOL	DESCRIPTION	DATE	APPROVED
2	REVISE TO AGREE WITH AMENDMENT 0004	JUL84	D.W.S.
1	REVISE TO AGREE WITH AMENDMENT 0003	JUL84	D.W.S.

REVISIONS

DESIGNED BY: D.W. SPENCER
DRAWN BY: E.H. RIFF
CHECKED BY: D.W. SPENCER
DATE: MAY 1984

SUBMITTED: DAVID W. SPENCER, DESIGN ENGINEER
SUBMITTED: JAMES L. CRONIN, CHIEF, STRUCTURAL SECTION
APPROVED: BOBBY R. HUGHEY, CHIEF, DESIGN BRANCH

U.S.ARMY ENGINEER DISTRICT,ST.LOUIS
CORPS OF ENGINEERS
ST.LOUIS, MISSOURI

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER-ALTON,ILLINOIS
LOCK AND DAM NO.26(REPLACEMENT) LOCK
STRUCTURAL STEEL
CULVERT BULKHEAD RECESSES
MONOLITHS L-4 AND L-15
PLANS AND SECTION

SIZE F | CODE IDENT. NO. DACW 43 | DRAWING NO. M-L26(R)23/1.2
DESIGN FILE: PS23X09
PLOT SCALE: 1.3333 | REV. NO. DACW 43 -84-B-0025 | SHEET 1 OF 8

Computer Aided Design & Drafting

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.

MARK	DESCRIPTION	DATE	APPR.

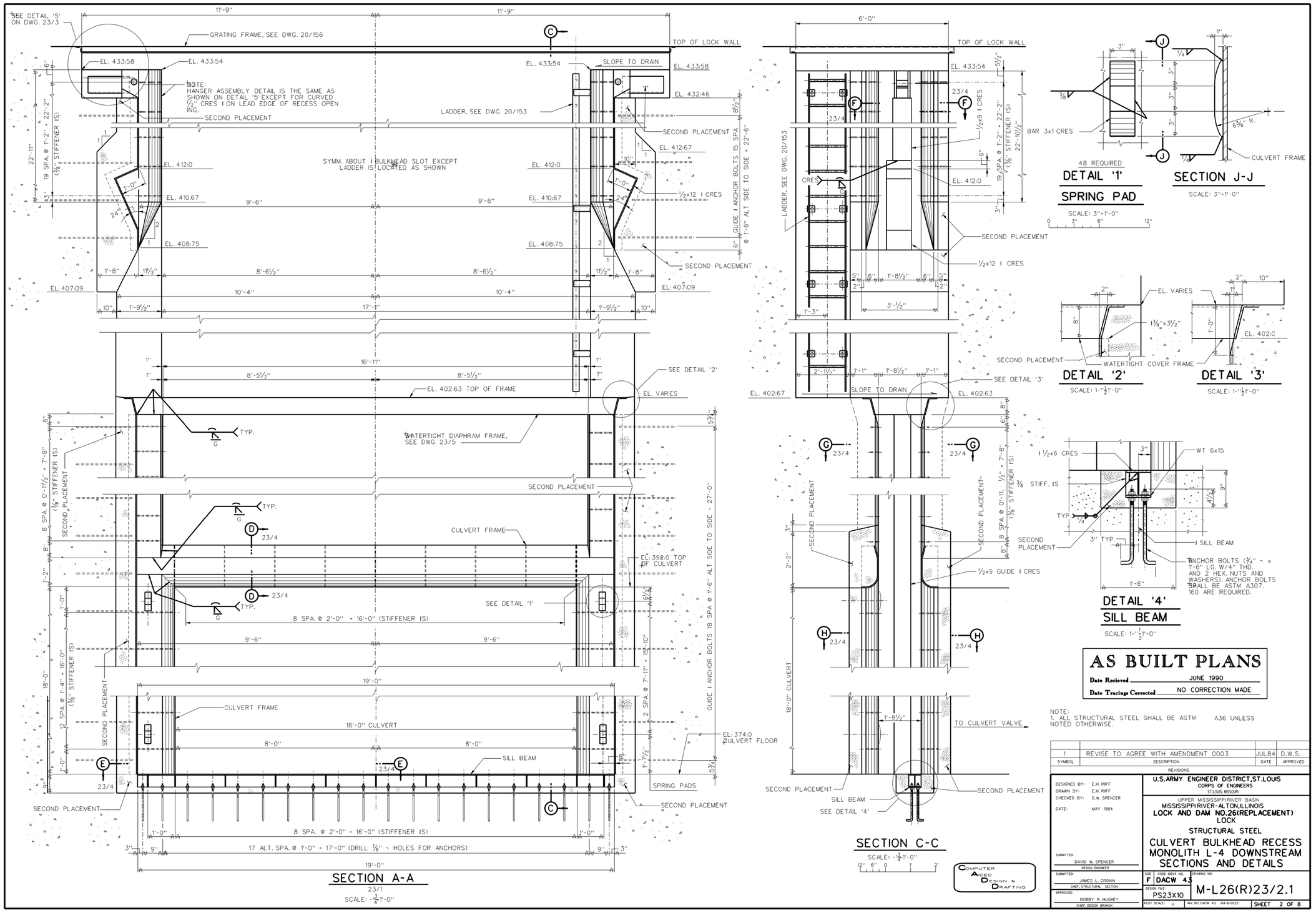
U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT
ST. LOUIS, MISSOURI 63103

DESIGNED BY: WILLIAM J. MOELLER
DWN BY: BMM
CKD BY:
SUBMITTED BY: STEPHEN G. FARKAS, P.E.
PLOT SCALE: 1:1
SIZE: ANSI D
DATE: 2012/09/07
SOLICITATION NO.: W912P9-12-R-0734
CONTRACT NO.:
FILE NUMBER: M-MP-20
PLOT DATE:
FILE NAME: M-MP-20_R-007REF.dgn

MELVIN PRICE LOCK AND DAM
MAIN LOCK BULKHEAD SLOT GRATING MODIFICATION
UPPER MISSISSIPPI
ALTON, ILLINOIS

REFERENCE DRAWING
SHEET 7 OF 10

SHEET IDENTIFICATION
R-007



US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

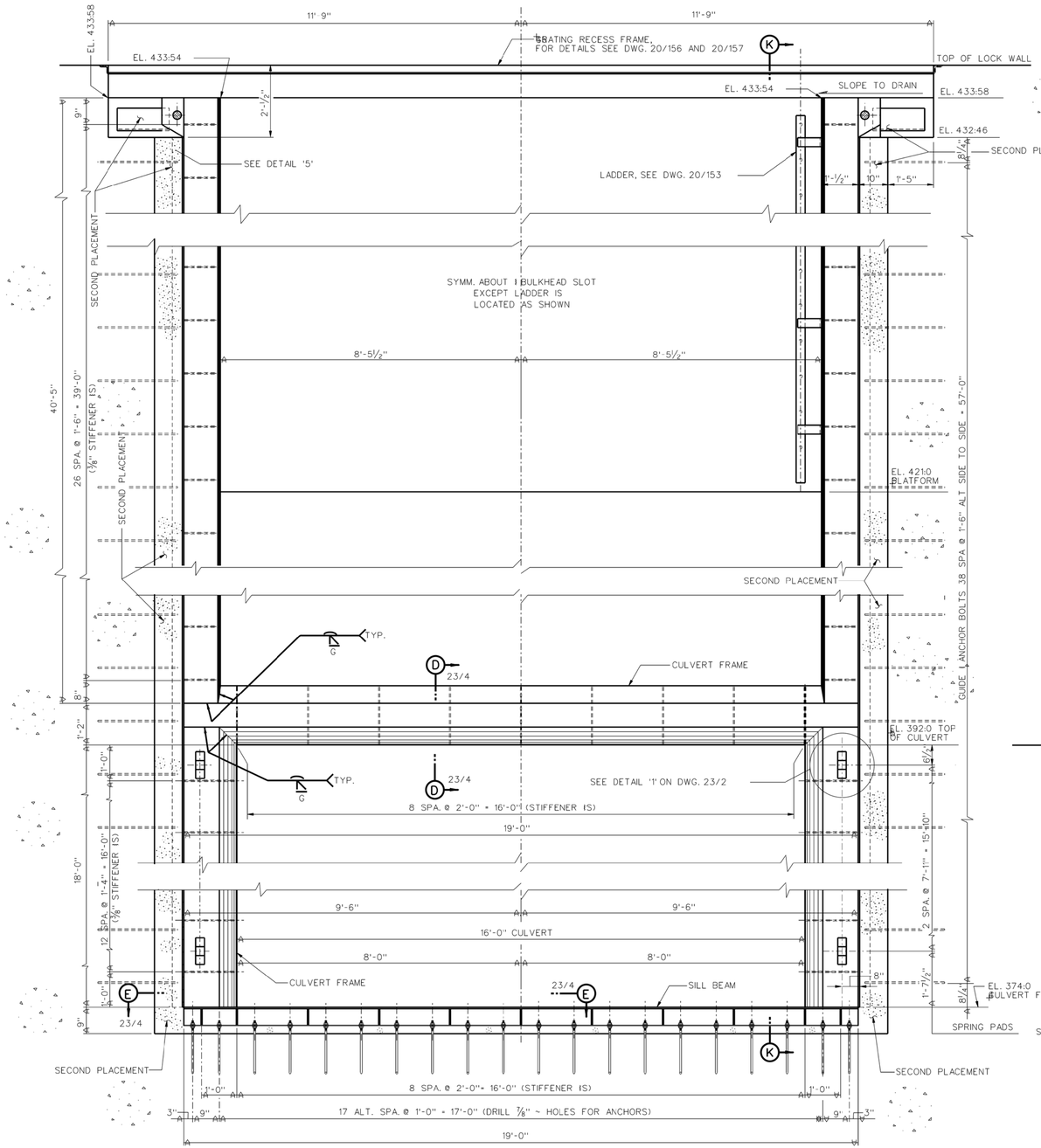
U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT
ST. LOUIS, MISSOURI 63103

DESIGNED BY: WILLIAM J. MOELLER
DWN BY: BMM
CKD BY:
SUBMITTED BY: STEPHEN G. FARKAS, P.E.
PLOT SCALE:
PLOT DATE:
DATE: 2012/08/07
SOLICITATION NO.: W912P9-12-R-0734
CONTRACT NO.:
FILE NUMBER: M-MIP-20
FILE NAME: M-MIP-20_R-008REF.dgn
SIZE: ANSI D

MELVIN PRICE LOCK AND DAM
MAIN LOCK BULKHEAD SLOT GRATING MODIFICATION
UPPER MISSISSIPPI
ALTON, ILLINOIS

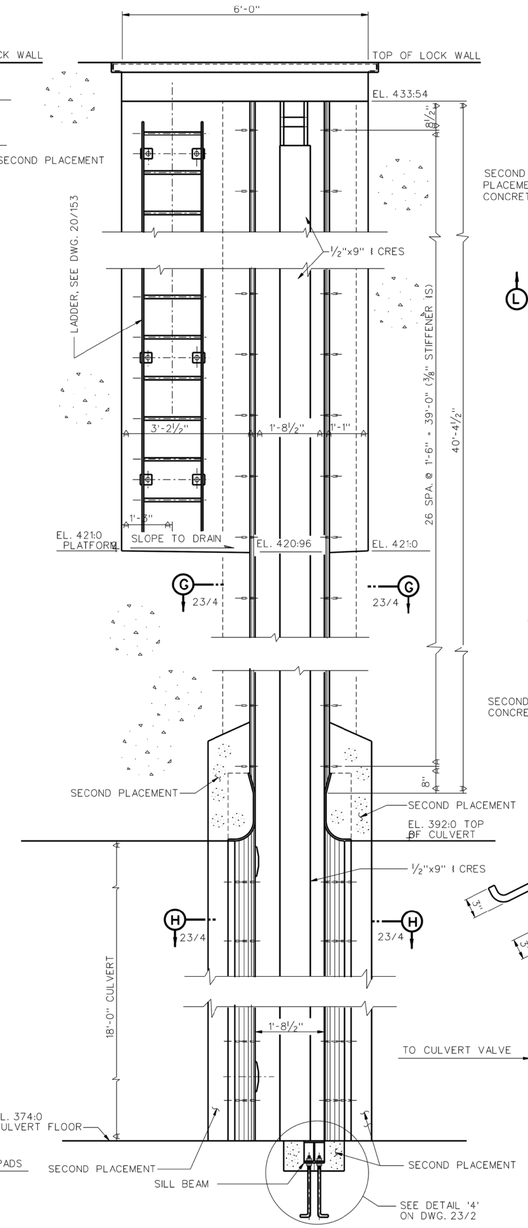
REFERENCE DRAWING
SHEET 8 OF 10

SHEET IDENTIFICATION
R-008



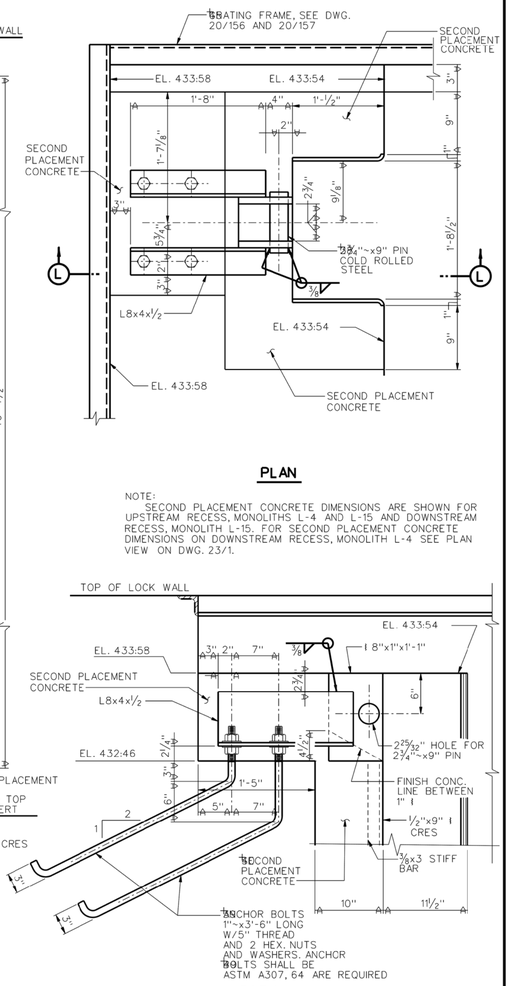
SECTION A-A

SCALE: -¼"1'-0"



SECTION K-K

SCALE: -¼"1'-0"



PLAN

NOTE:
SECOND PLACEMENT CONCRETE DIMENSIONS ARE SHOWN FOR UPSTREAM RECESS, MONOLITHS L-4 AND L-15 AND DOWNSTREAM RECESS, MONOLITH L-15. FOR SECOND PLACEMENT CONCRETE DIMENSIONS ON DOWNSTREAM RECESS, MONOLITH L-4 SEE PLAN VIEW ON DWG. 23/1.

SECTION L-L

DETAIL '5'
BULKHEAD SUSPENDER ASSEMBLY

SCALE: 1-½"1'-0"

NOTES:
1. ALL STRUCTURAL STEEL SHALL BE ASTM A36 UNLESS NOTED OTHERWISE.

SYMBOL	DESCRIPTION	DATE	APPROVED
2	REVISE TO AGREE WITH AMENDMENT 0004	JUL84	D.W.S.
1	REVISE TO AGREE WITH AMENDMENT 0003	JUL84	D.W.S.

REVISIONS

DESIGNED BY: D.W. SPENCER
DRAWN BY: E.H. RIFF
CHECKED BY: D.W. SPENCER
DATE: MAY 1984

SUBMITTED: DAVID W. SPENCER, DESIGN ENGINEER
SUBMITTED: JAMES L. CRONIN, CHIEF, STRUCTURAL SECTION
APPROVED: BOBBY R. HUGHEY, CHIEF, DESIGN BRANCH

U.S.ARMY ENGINEER DISTRICT,ST.LOUIS
CORPS OF ENGINEERS
ST.LOUIS, MISSOURI
UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER-ALTON,ILLINOIS
LOCK AND DAM NO.26(REPLACEMENT)
LOCK
STRUCTURAL STEEL
CULVERT BULKHEAD RECESSES MONO. L-4 AND L-15 U.S. AND MONO. L-15 D.S. SECTIONS AND DETAILS

SIZE: F | CODE IDENT. NO.: DACW 43 | DRAWING NO.: M-L26(R)23/3.2
DESIGN FILE: PS23X11
PLOT SCALE: -½- | INV. NO. DACW 43 -84-B-0025 | SHEET 3 OF 8

AS BUILT PLANS
Date Recieved JUNE 1990
Date Tracings Corrected NO CORRECTION MADE

COMPUTER AIDED DESIGN & DRAFTING

US Army Corps of Engineers®

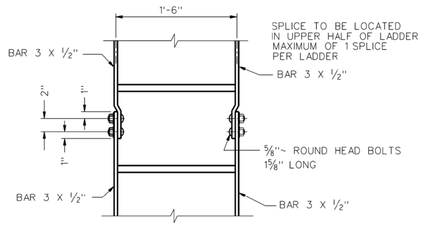
MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: WILLIAM J. MOELLER
DWN BY: BMM
CKD BY:
SUBMITTED BY: STEPHEN G. FARKAS, P.E.
DATE: 20120807
SOLICITATION NO.: W912P5-12-R-0734
CONTRACT NO.:
FILE NUMBER: MMIP-20
PLOT DATE:
PLOT SCALE:
SIZE: ANSI D
FILE NAME: MMIP-20_R-009REF.dgn

U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT
ST. LOUIS, MISSOURI 63103

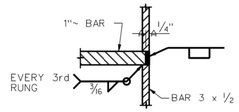
MELVIN PRICE LOCK AND DAM
MAIN LOCK BULKHEAD SLOT GRATING MODIFICATION
UPPER MISSISSIPPI
ALTON, ILLINOIS
REFERENCE DRAWING
SHEET 9 OF 10

SHEET IDENTIFICATION
R-009



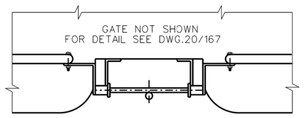
LADDER SPLICE DETAIL

SCALE: 1½" = 1'-0"



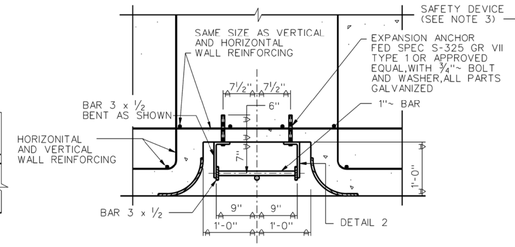
DETAIL 1

SCALE: 3"=1'-0"



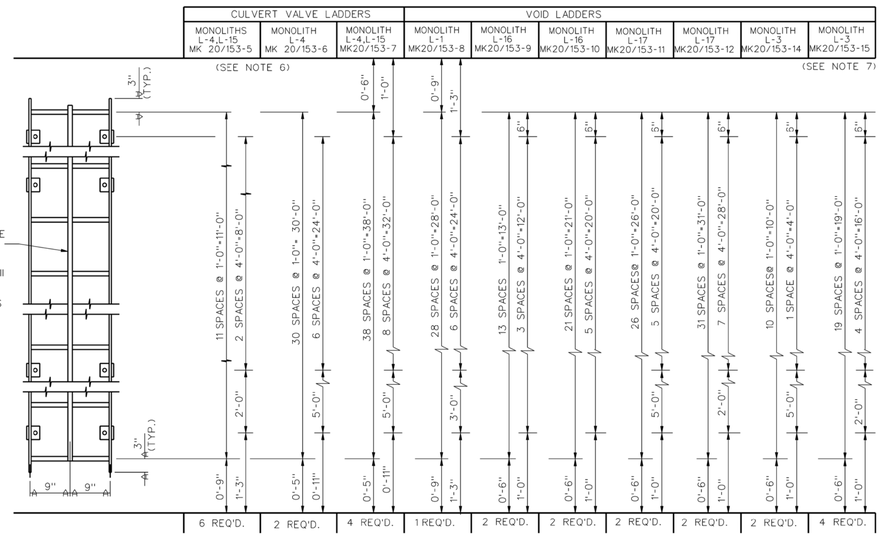
PLAN

SCALE: 1"=1'-0"



SECTION A-A

SCALE: 1"=1'-0"



CULVERT VALVE AND VOID LADDERS-ELEVATION

SCALE: 1"=1'-0"

LOCK AND GUIDEWALL LADDER LOCATIONS		
LADDER MARK	REQ'D	MONOLITHS
MK 20/153-1	11	L-2,L-7,L-10, L-14,DG-4,DG-10 DG-15
MK 20/153-2	2	L-3
MK 20/153-3	2	L-16
MK 20/153-4	2	L-17
MK 20/153-13	7	UG-1(2),UG-5,UG-8, UG-12,UG-16,UG-19

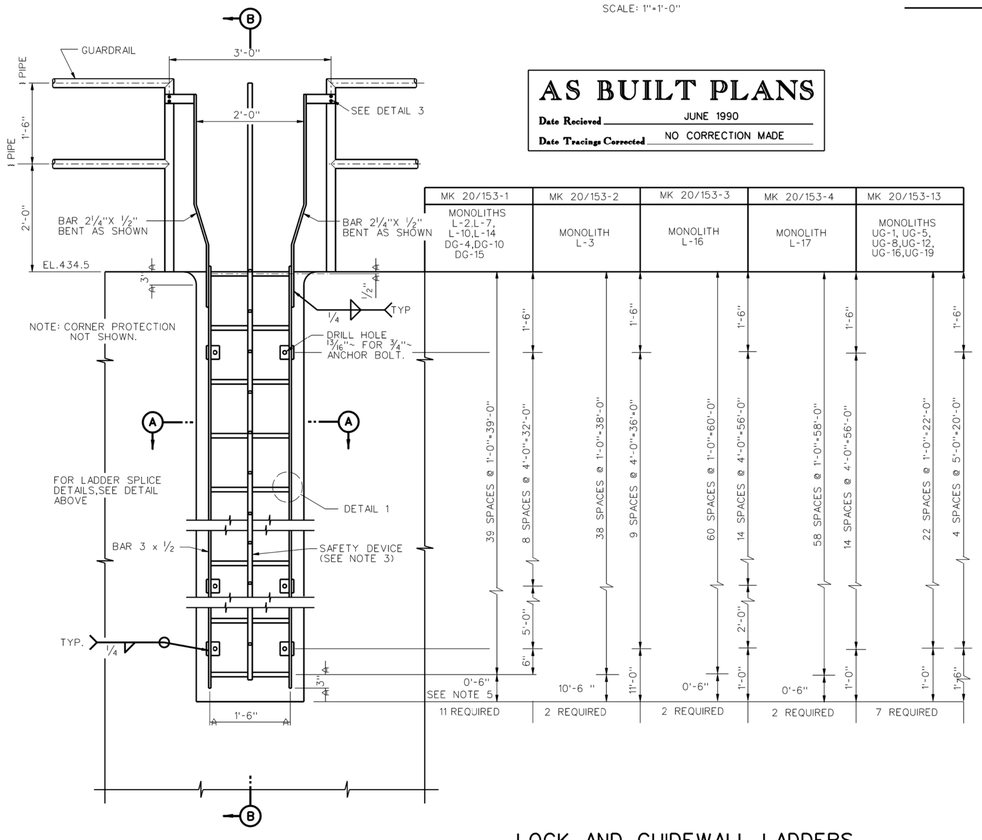
CULVERT VALVE LADDER LOCATIONS		
LADDER MARK	REQ'D	MONOLITHS
MK 20/153-5	6	L-4,L-15
MK 20/153-6	2	L-4
MK 20/153-7	4	L-4,L-15

VOID LADDER LOCATIONS		
LADDER MARK	REQ'D	MONOLITHS
MK 20/153-8	1	L-1
MK 20/153-9	2	L-16
MK 20/153-10	2	L-16
MK 20/153-11	2	L-17
MK 20/153-12	2	L-17
MK 20/153-14	2	L-3
MK 20/153-15	4	L-3,SERVICE BRIDGE PIER

AS BUILT PLANS

Date Recieved JUNE 1990

Date Tracings Corrected NO CORRECTION MADE

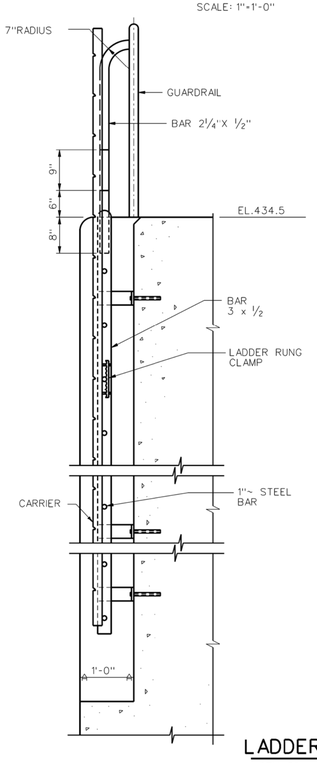


ELEVATION

SCALE: 1"=1'-0"

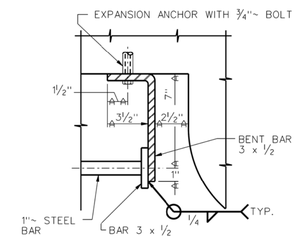
LOCK AND GUIDEWALL LADDERS

ASTM A36 SCALE: 1"=1'-0"



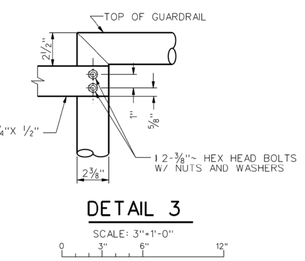
SECTION B-B

SCALE: 1"=1'-0"



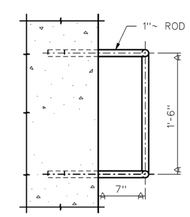
DETAIL 2

SCALE: 3"=1'-0"

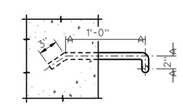


DETAIL 3

SCALE: 3"=1'-0"



PLAN



ELEVATION

LADDER RUNG-MK 20/153-16

ASTM 36 SCALE: 1½" = 1'-0"

NOTES:

1. WELDING SHALL CONFORM TO CONTRACT SPECIFICATION REQUIREMENTS
2. ALL LADDERS,BRACKETS,BOLTS,AND ACCESSORIES TO BE HOT DIPPED GALVANIZED AFTER FABRICATION.
3. LADDER SAFETY DEVICES SIMILAR AND EQUAL TO THAT MANUFACTURED BY "NORTON CO."SAFETY PRODUCTS DIVISION CERRITOS, CALIF. SHALL BE FURNISHED FOR LOCK LADDERS MK 20/153-2,MK 20/153-3 AND MK 20/153-4,AND TAINTER VALVE LADDERS MK 20/153-6,AND MK 20/153-7,AND VOID LADDERS MK 20/153-8,MK 20/153-11,AND MK 20/153-12.
4. FOR LADDER RECESSES AT STA.0+11.375. DS (MONOLITH L-3) SEE DRAWING 20/152.
5. CORNER PROTECTION ON D.S.GUIDEWALL TO EXTEND TO BOTTOM OF BEAM.
6. USE MK 20/153-5 FOR BOTH CULVERT BULKHEAD SLOTS IN MONOLITH L-15 AND FOR UPSTREAM SLOT IN MONOLITH L-4 USE MK 20/153-6 FOR DOWNSTREAM CULVERT BULKHEAD SLOT IN MONOLITH L-4.
7. PROVIDE MK 20/153-15 FOR SUMP PITS 4 AND 5 AND SERVICE BRIDGE PIERS.

SYMBOL	DESCRIPTION	DATE	APPROVED
1	CHANGED TO AGREE WITH AMENDMENT 0003	7/84	T.R.R.

REVISIONS

DESIGNED BY: T.RUF
DRAWN BY: J.SOEHNGEN
CHECKED BY: T.RUF
DATE: MAY 1984

SUBMITTED: THOMAS R.RUF, DESIGN ENGINEER

SUBMITTED: JAMES L.CRONIN, CHIEF, STRUCTURAL SECTION

APPROVED: BOBBY R.HUGHEY, CHIEF, DESIGN BRANCH

U.S.ARMY ENGINEER DISTRICT,ST.LOUIS
CORPS OF ENGINEERS
ST.LOUIS, MISSOURI

UPPER MISSISSIPPI RIVER BASIN
MISSISSIPPI RIVER-ALTON,ILLINOIS
LOCK AND DAM NO.26(REPLACEMENT)
LOCK
LOCK-STRUCTURE

MISCELLANEOUS DETAILS
LADDER DETAILS

SIZE F | CODE IDENT. NO. DACW 43 | DRAWING NO. M-L26(R)20/153.1

DESIGN FILE: PS201880

PLOT SCALE: 1 | INV. NO. DACW 43 -84-B-0025 | SHEET 18 OF 43

AUTOMATED DRAFTING SYSTEM

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.

MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: WILLIAM J. MOELLER
DWN BY: BMM
CKD BY:
SUBMITTED BY: STEPHEN G. FARKAS, P.E.
PLOT SCALE:
SIZE: ANSI D
DATE: 20120807
SOLICITATION NO.: W912P9-12-R-0734
CONTRACT NO.:
FILE NUMBER: M-MIP-20
PLOT DATE:
FILE NAME: M-MIP-20_R-010REF.dgn

U.S. ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT
ST. LOUIS, MISSOURI 63103

MELVIN PRICE LOCK AND DAM
MAIN LOCK BULKHEAD SLOT GRATING MODIFICATION
UPPER MISSISSIPPI
ALTON, ILLINOIS

REFERENCE DRAWING
SHEET 10 OF 10

SHEET IDENTIFICATION
R-010