

GENERAL NOTES

EXPANSION JOINT MATERIAL SHALL CONFORM TO AASHTO SPECIFICATION M-213.

THE FOLLOWING TABLE GIVES THE MINIMUM LAP SPLICE LENGTH FOR EPOXY COATED REINFORCING BARS PLACED IN ACCORDANCE WITH SUBSECTION 602.06. THESE SPLICE LENGTHS SHALL BE INCREASED BY 25% FOR BARS SPACED AT LESS THAN 6" ON CENTER.

BAR SIZE #4 #5 #6 #7 #8 #9 #10 #11

SPLICE LENGTH FOR CONCRETE PATCHING 1'-3" 1'-6" 1'-10" 2'-2" 3'-8" 4'-8" 5'-11" 7'-3"

WHEN THE CONTRACTOR ELECTS TO SUBSTITUTE EPOXY COATED REINFORCEMENT FOR BLACK REINFORCING BARS, THE MINIMUM LAP SPLICE SHALL BE AS DESCRIBED ABOVE.

THE FOLLOWING TABLE GIVES THE MINIMUM LAP SPLICE LENGTH FOR BLACK REINFORCING BARS PLACED IN ACCORDANCE WITH SUBSECTION 602.06. THESE SPLICE LENGTHS SHALL BE INCREASED BY 25% FOR BARS SPACED AT LESS THAN 6" ON CENTER.

BAR SIZE #4 #5 #6 #7 #8 #9 #10 #11

SPLICE LENGTH FOR CONCRETE PATCHING 1'-0" 1'-4" 1'-7" 1'-10" 2'-5" 3'-1" 3'-11" 4'-10"

GRADE 60 REINFORCING STEEL IS REQUIRED.

DIMENSIONS AND ELEVATIONS CONTAINED IN THESE PLANS ARE CALCULATED FROM THE "AS CONSTRUCTED" PLANS. THESE DIMENSIONS AND ELEVATIONS MAY BE ADJUSTED TO MEET THE EXISTING STRUCTURE. THE CONTRACTOR SHALL VERIFY ALL DEPENDENT DIMENSIONS AND ELEVATIONS BEFORE FABRICATING OR ORDERING ANY MATERIALS.

CONSTRUCTION SHALL CONFORM WITH THE 2011 COLORADO DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

FABRICATION AND WELDING OF STRUCTURAL STEEL FOR THE EXPANSION DEVICE SHALL CONFORM TO THE REQUIREMENTS OF ANSI/AWS D1.1:2004.

ALL SURFACES IN JOINT OPENING SHALL BE CLEANED ACCORDING TO MANUFACTURER'S PROCEDURES.

SEALS SHALL BE CONTINUOUS THE FULL WIDTH OF THE DEVICE AND INSTALLED USING THE MANUFACTURER'S PLACEMENT TOOLS AND PROCEDURES.

ALL WORK NECESSARY FOR EXISTING JOINT REMOVALS OR CLEAN UP INCLUDING CONCRETE REMOVAL, FENCE REMOVAL AND REPLACEMENT, HBP REMOVAL, OR REMOVAL & REPLACEMENT OF RAIL COVER PLATE WILL NOT BE MEASURED AND PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.

THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.

THE CONTRACTOR WILL CALL THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) AT 1-800-922-1987 FOR UTILITY LOCATION AT LEAST TWO BUSINESS DAYS (NOT INCLUDING THE DAY OF ACTUAL NOTIFICATION) PRIOR TO ANY EXCAVATION.

ALL FALSEWORK SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 601.11 OF THE CDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

THE CONTRACTOR SHALL PROTECT ALL STORM SEWER FACILITIES AND WATERWAYS ADJACENT TO ANY LOCATION WHERE PAVEMENT CUTTING OPERATIONS INVOLVING WHEEL CUTTING, SAW CUTTING OR ABRASIVE WATER JET CUTTING ARE TO TAKE PLACE. THE CONTRACTOR SHALL PROTECT, REMOVE & PROPERLY DISPOSE OF ALL WATER PRODUCTS GENERATED BY SAID CUTTING OPERATIONS ON A DAILY BASIS BY MEANS OF INLET PROTECTION PER CDOT 208 STANDARDS. THE DISCHARGE OF ANY WATER CONTAMINATED BY WASTE PRODUCTS FROM CUTTING OPERATIONS TO THE STORM SEWER SYSTEM OR WATERWAY IS PROHIBITED.

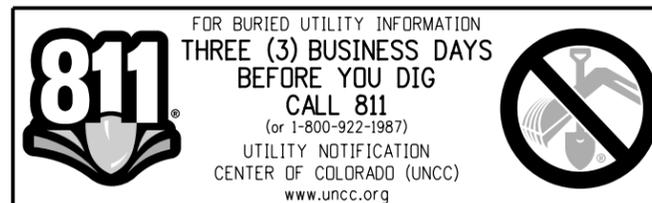
SUMMARY OF QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	F-17-KL	TOTAL
202-00504	REMOVAL OF EXPANSION DEVICE	LF	276	276
509-08120	TEMPORARY BRIDGE DECK	SF	876	876
* 518-01004	BRIDGE EXPANSION DEVICE (0 to 4 INCH)	LF	238	238
601-03041	CONCRETE CLASS D (BRIDGE) (SPECIAL)	CY	20.0	20.0
602.00020	REINFORCING STEEL (EPOXY)	LB	1,093	1,093

* New coverplates for sidewalk and medians are Included in the work.

STR. F-17-KL EXISTING CONDITIONS

Located on Mississippi Avenue over I-225
 Structure Type: 2 Span (134'-6", 134'-6") Continuous composite Prestressed Girder and concrete Slab Bridge
 Year Built: 1997
 Deck Thickness: 8" (Approx.)
 Expansion Joint: Plug Joint at Approach slabs
 Bridge Rail Type: 4 (Special)



INDEX OF DRAWINGS

- B01 GENERAL INFORMATION & SUMMARY OF QUANTITIES
- B02 GENERAL LAYOUT AND TYPICAL SECTION
- B03 BRIDGE EXPANSION DEVICE (0-4 INCH) W/ SIDEWALK AND COVER PLATE
- B04 BRIDGE EXPANSION DEVICE (0-4 INCH)
- B05 TEMPORARY BRIDGE DECK DETAILS 1
- B06 TEMPORARY BRIDGE DECK DETAILS 2

NOTES:

All pay Item are to be paid under CDOT Roadway.

NOTES:

Concrete sidewalk repair shall be included in the work Item 518 and will not be paid for separately.

The Contractor may change the sequence of work above if approved by the Engineer.

WORK DESCRIPTION

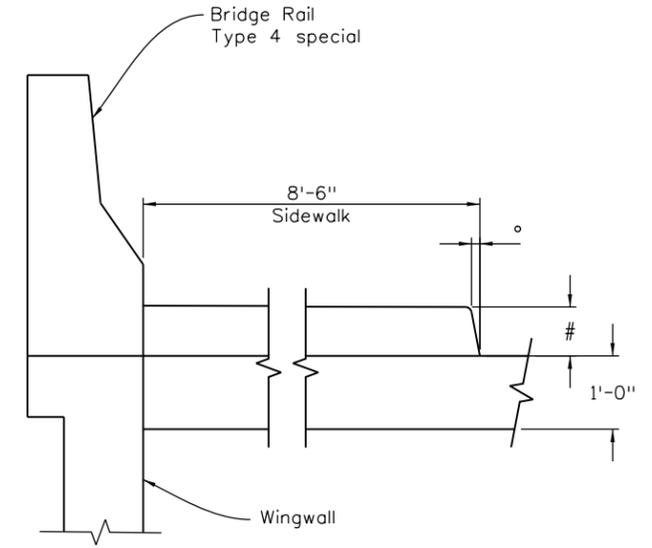
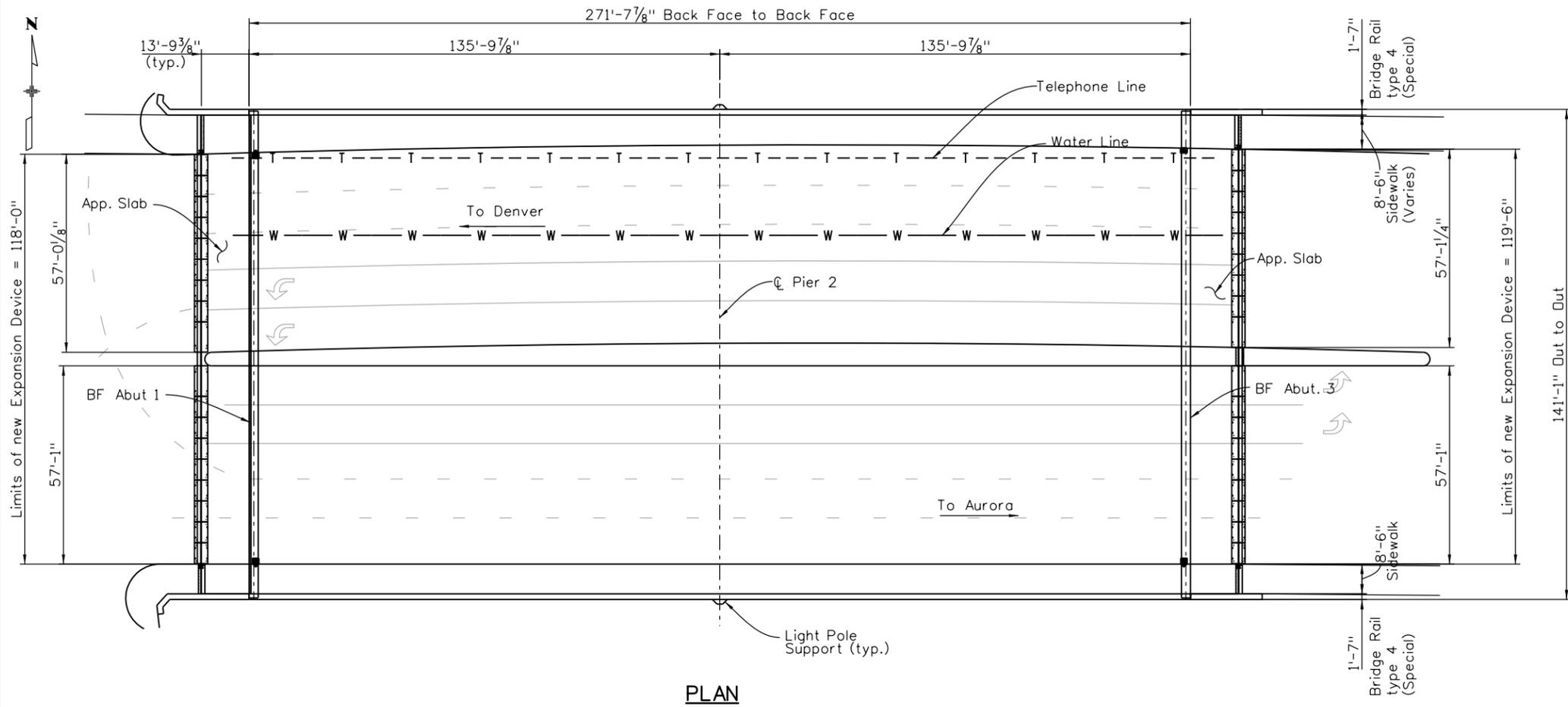
Remove existing plug joint at App. Slab and replace with new Bridge Expansion Device (0-4 Inch) (LF). See B02, B03, and B04.

Design		Detail		Quantities	
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MM	DD/YY	MM	DD/YY	MM	DD/YY
Designed By	08/11	Detailed By	08/11	Quantities By	08/11
Checked By	08/11	Checked By	08/11	Checked By	08/11

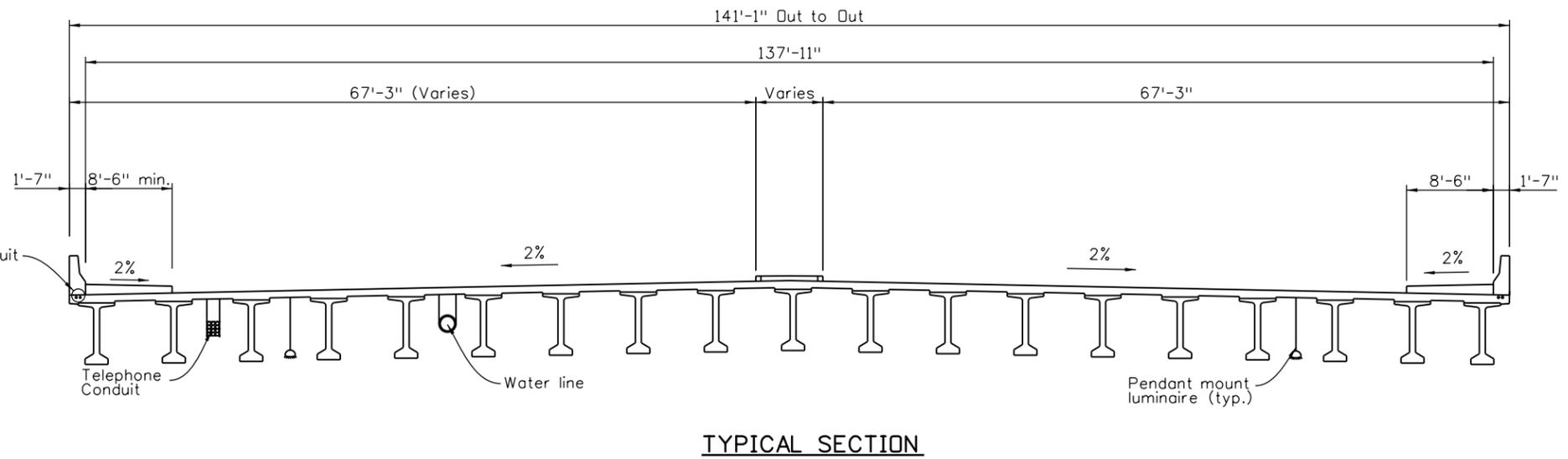
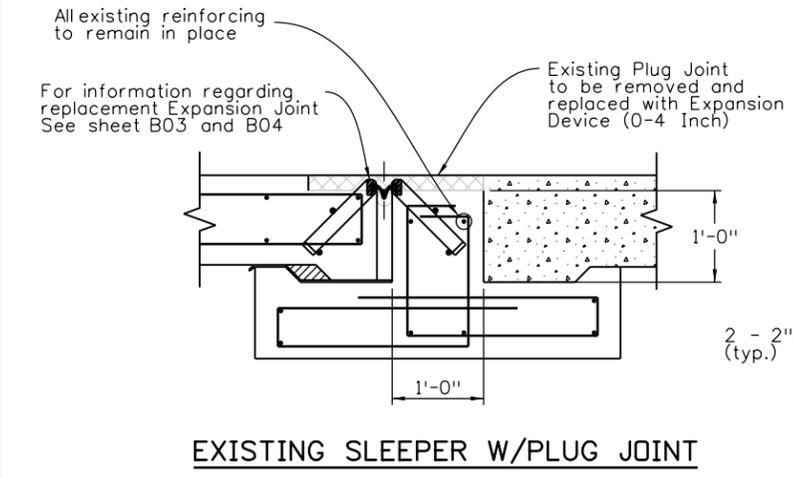
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File Name: 17083 01General Inf. and Quantities.dgn		Date:	Comments	Init.		No Revisions:	Designer: M. Mohseni			IM 2254-076	
Horiz. Scale: None Vert. Scale: As Noted						Revised:	Detailer: R. Olmos			17083	
Staff Bridge Branch - Unit 0224 Unit Leader: AJP						Void:	Sheet Subset: Bridge			Sheet Number	
						Structure Numbers: F-17-KL			Subset Sheets: B01 of 06		

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RD	08/11	MM	08/11	MM	08/11
Designed By	Detailed By	Quantities By	Checked By	Checked By	Checked By
Checked By	Checked By	Checked By	Checked By	Checked By	Checked By



8¹/₄" on south side }
 # 8¹/₂" on north side } For information only sizes shall be verified in the field.
 ° 1¹/₂" on south side }
 ° 1¹/₂" on north side }



Print Date: 10/18/2011

File Name: 17083 02GeneralLayout_F-17-KL.dgn

Horiz. Scale: 1:1 Vert. Scale: As Noted

Staff Bridge Branch - Unit 0224 Unit Leader AJP

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Colorado Department of Transportation

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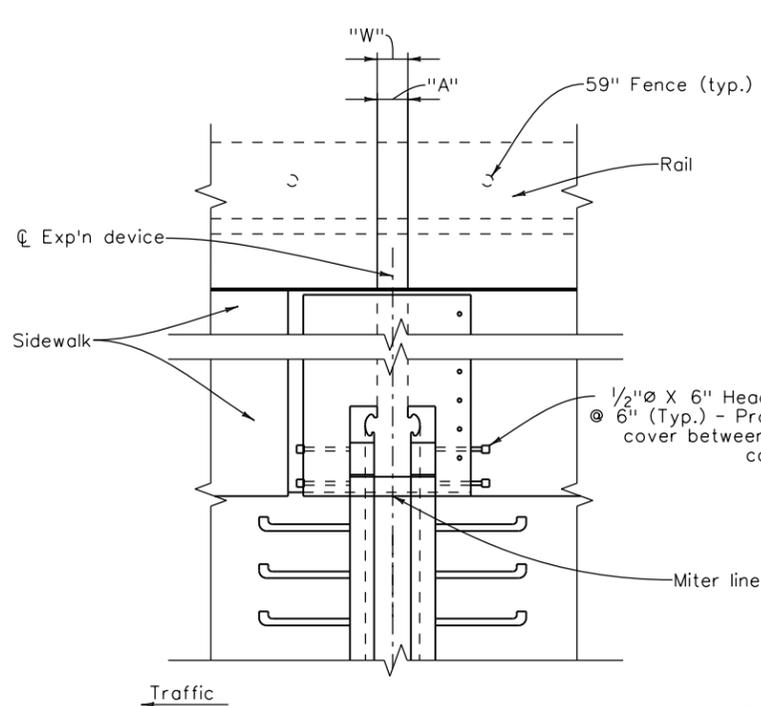
Region 6 **RJE**

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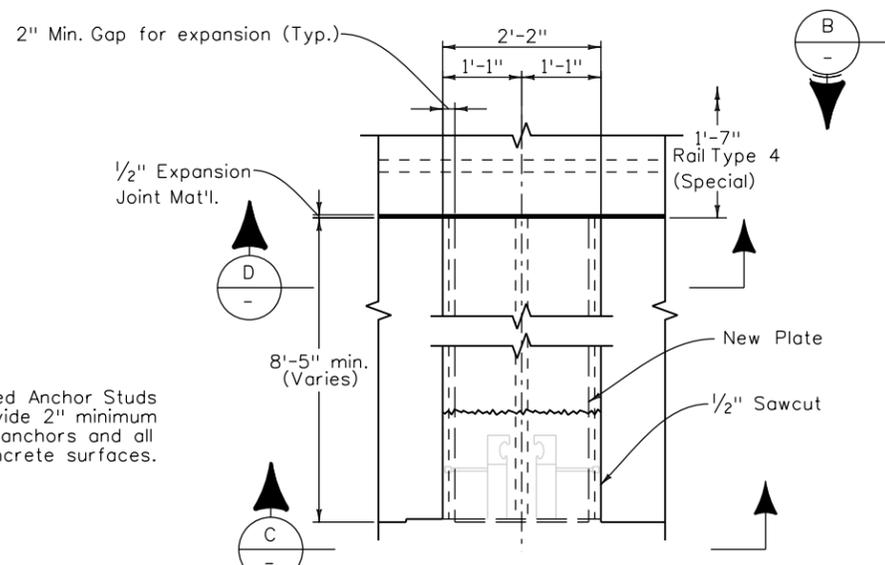
GENERAL LAYOUT AND TYPICAL SECTION			
Designer:	M. Mohseni	Structure Numbers	F-17-KL
Detailer:	R. Olmos	Subset Sheets:	B02 of 06
Sheet Subset:	BRIDGE		

Project No./Code
IM 2254-076
17083
Sheet Number

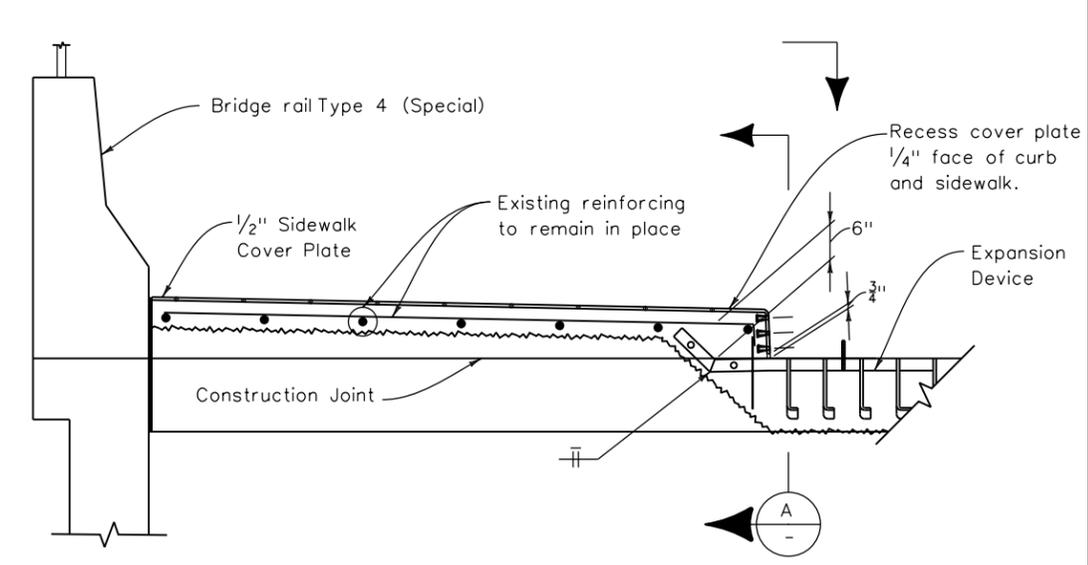
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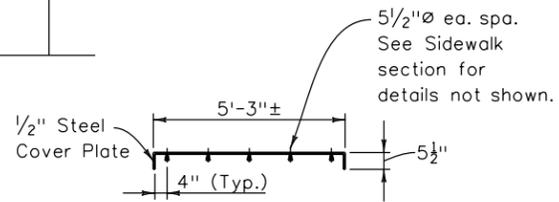
SECTION B



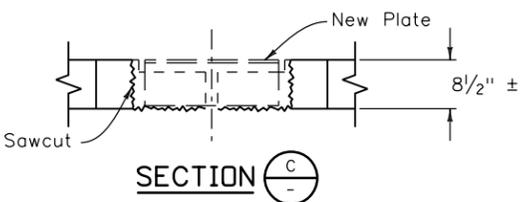
SIDEWALK PLAN VIEW



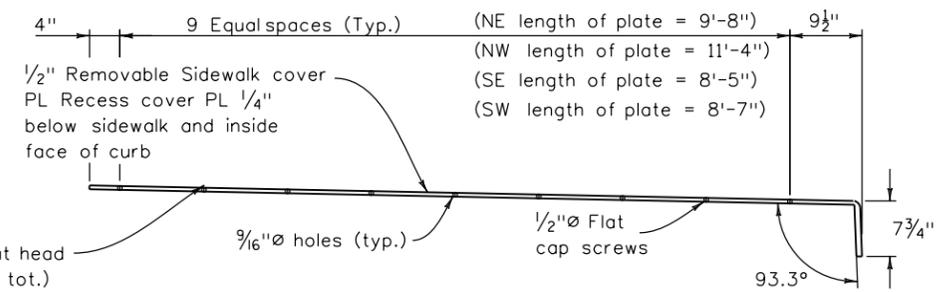
RAIL TYPE 4 (SPECIAL) DETAILS
With Sidewalk and cover plate



MEDIAN COVER PLATE SECTION

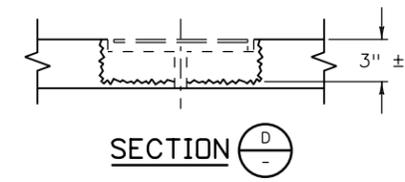


SECTION C

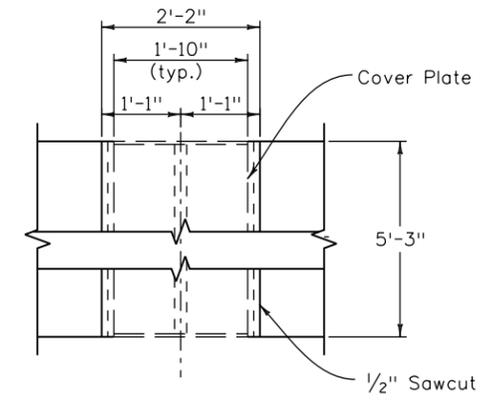


SIDEWALK COVER PLATE SECTION

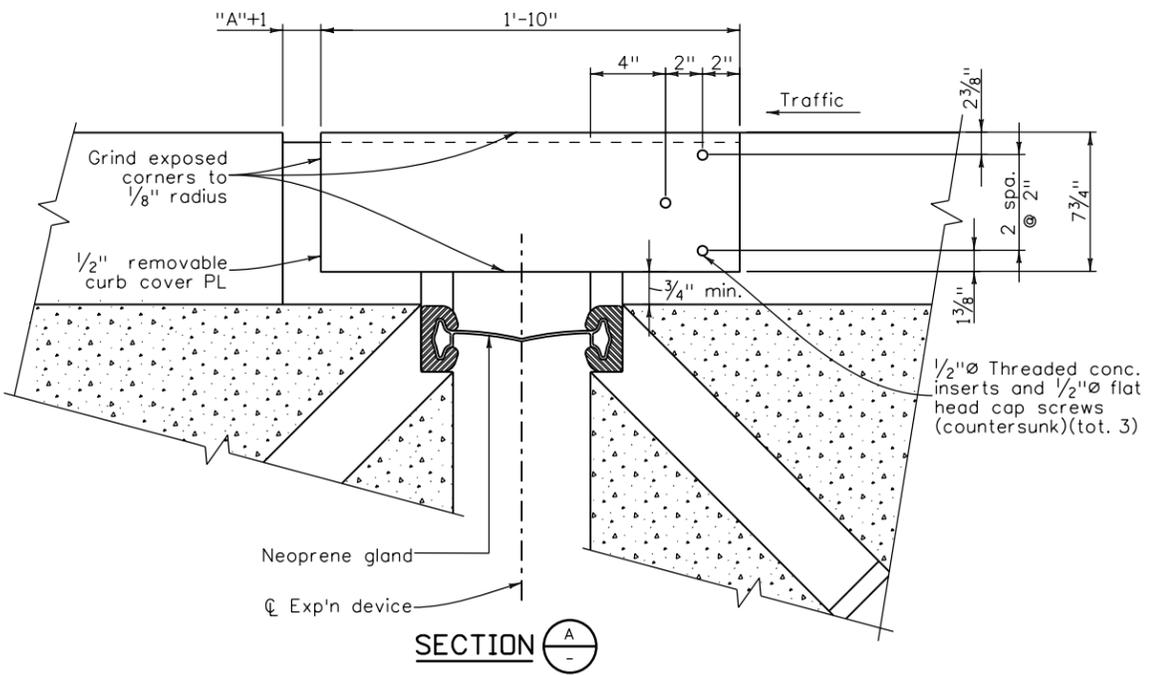
1/2" SS flat head screws (10 tot.) countersunk into cover plate attached with 1/2" threaded concrete inserts (not shown).



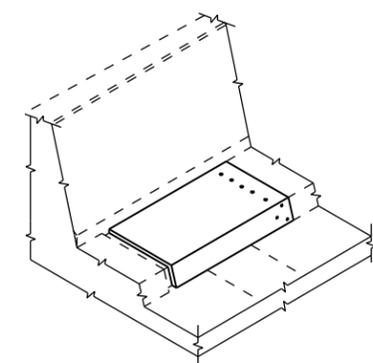
SECTION D



MEDIAN PLAN VIEW



SECTION A



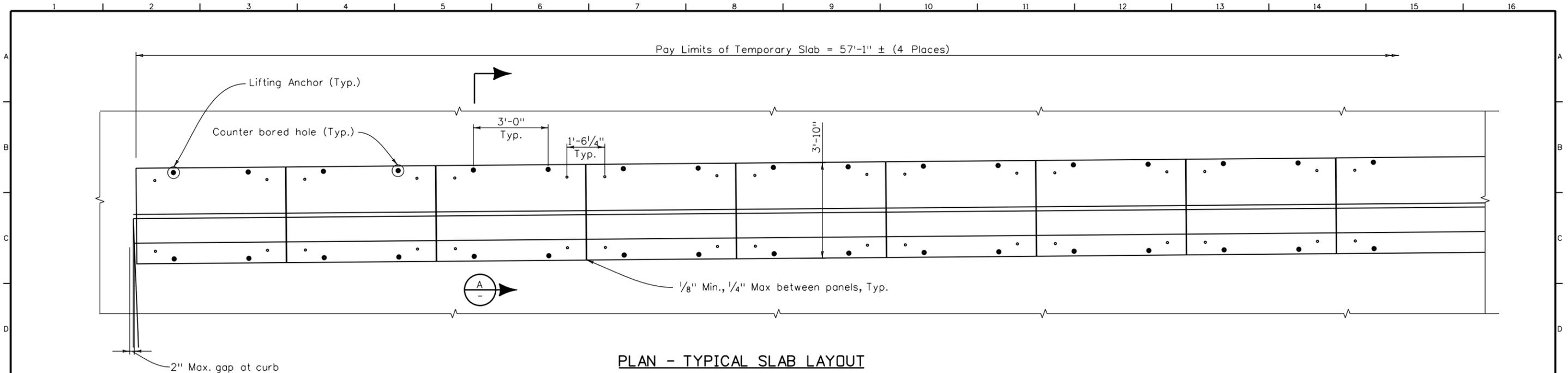
ISOMETRIC VIEW

NOTES:

- Provide 2" minimum cover between anchors and all concrete surfaces.
- All screws shall be stainless steel.
- Walking surface of the Sidewalk Cover Plate shall be Ryerson Inland Safety Plate or Engineer approved equivalent. All cover plates and concrete inserts shall be galvanized after fabrication. The cost of the cover plates and appurtenances shall be included in item 518, Bridge expansion device (0-4 inch).
- See Dwg. No. B04 for expansion device notes and details.
- See Dwg. No. B04 for "A" dimension.

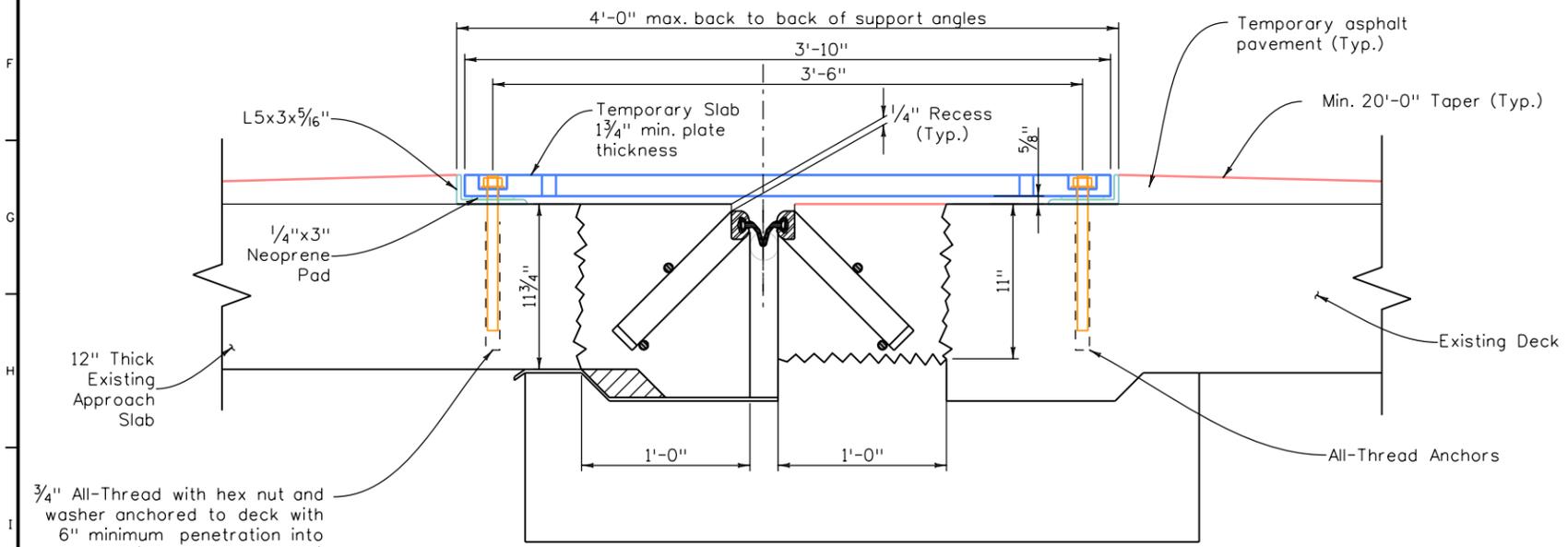
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MM	08/11	RD	08/11	RD	08/11
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Checked By		Checked By		Checked By	

Print Date: 10/18/2011	Sheet Revisions			Colorado Department of Transportation		As Constructed		BRIDGE EXP. DEVICE (0-4 INCH) W/ SIDEWALK AND COVER PLATE		Project No./Code	
Drawing File Name: 17083 03Bridge Exp. Dev. (0-4 Inch) w. sidewalk and cover plate	Date	Comments	Init.	2000 S. Holly Street Denver, Co 80222 Phone: 303-757-9350 FAX: 303-757-9004		No Revisions:		IM 2254-076		17083	
Horiz. Scale: None Vert. Scale: As Noted				Region 6 RJE		Revised:		Designer: M. Mohseni Structure Numbers F-17-KL		17083	
Unit Information 0224 AJP						Void:		Detailer: R. Olmos Subset Sheets: B03 of 06		Sheet Number	



PLAN - TYPICAL SLAB LAYOUT

Recess is not required. Support angles or Temporary Slab shall not extend above surrounding asphalt



TYPICAL SECTION AT EXPANSION JOINTS

SECTION A-A

GENERAL NOTES

The cost for pavement mat removal from bridge including all equipment and labor shall not be paid for separately but will be included in the cost of the work. See Roadway Quantities.

Minimum width of temporary slab parallel to joint shall be 6 feet. Contractor shall field verify width required for panels. All temporary slabs and pavement shall be installed full width at a joint prior to removal work, unless approved by the Engineer.

Top of slabs shall be set flush with the top of temporary pavement as shown. Slabs that do not meet this requirement shall be reset prior to opening to traffic.

Grout shall be placed on sound concrete free of loose material. Use quick setting grout with a minimum compressive strength of 3000 psi. Remove grout pads at conclusion of work.

Support Angle shall be continuous across a minimum of 2 panels.

Minimum clearance required over existing and new concrete header shall be field verified by the Contractor prior to installing the pavement. The clearance is controlled by clearing the concrete header for the new expansion device by 1/2 inch. Changes to method of concrete removal as a result of not meeting these clearance requirements shall be performed by the Contractor at no additional expense to the project.

Furnishing L5 support angles will not be paid for separately but shall be included in the cost of the work.

Anchor holes shall be filled with approved grout after removal.

Design		Detail		Quantities	
INITIAL	DATE	INITIAL	DATE	INITIAL	DATE
By	MM/RO	By	MM/RO	By	MM/RO
Designed By	08/11	Detailed By	08/11	Quantities By	08/11
Checked By	08/11	Checked By	08/11	Checked By	08/11

Print Date: 10/18/2011
 File Name: 17083 05 Temporary Bridge Deck Details 1.dgn
 Horiz. Scale: Varies Vert. Scale: As Noted
 Staff Bridge Branch - Unit 0224 AJP

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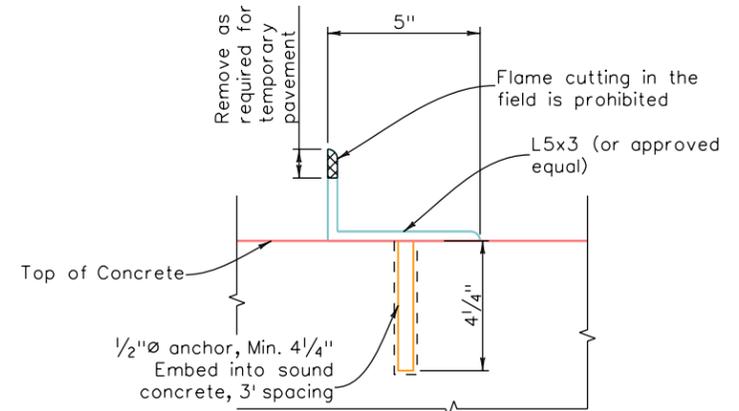
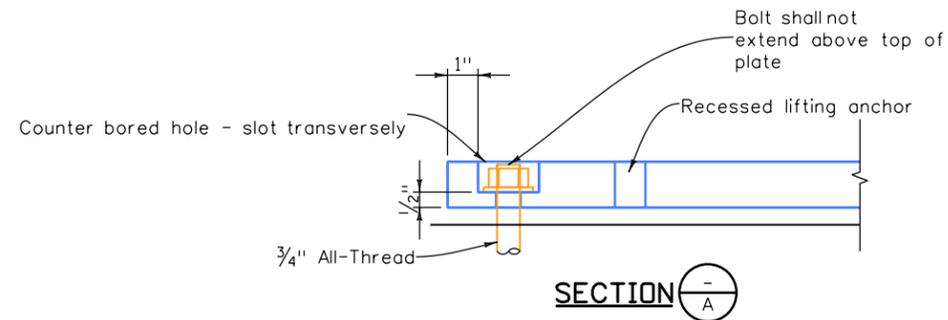
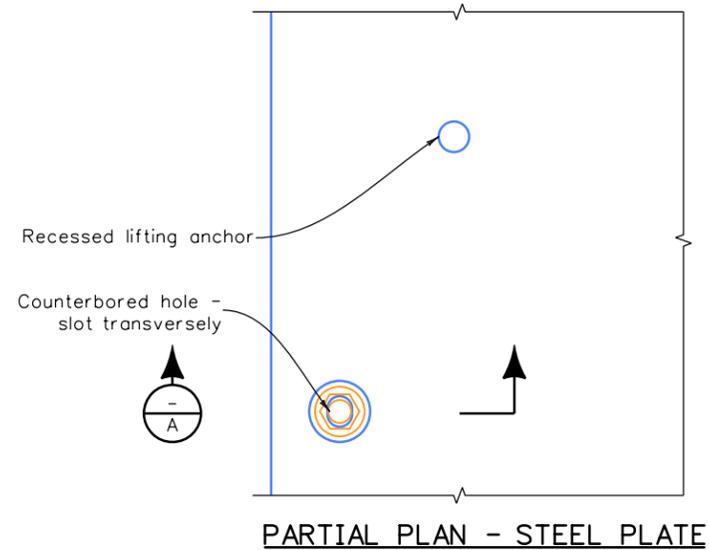
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TEMPORARY BRIDGE DECK DETAILS 1			
Designer:	M. Mohseni	Structure Numbers	F-17-KL
Detailer:	R. Olmos	Subset Sheets:	B05 of 06
Sheet Subset:	Bridge		

Project No./Code
IM 2254-076
17083
Sheet Number

Design		Detail		Quantities	
INITIAL	DATE	INITIAL	DATE	INITIAL	DATE
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Checked By	Designed By	Checked By	Detailed By	Checked By	Quantities By
RD	MM	RD	MM	RD	MM



SUPPORT ANGLE DETAIL

DETAIL A-A

DESIGN DATA

AASHTO, Fifth Edition LRFD
Design Method: Load and Resistance Factor Design

Colorado Permit Vehicle
Load Factor - 1.3, 30% Impact

Structural Steel: AASHTO M270 (ASTM A709) Grade 36 F
All Thread Bolts & Nuts: ASTM A307

Notes

Temporary Steel Plate Slabs shall be fabricated in accordance with Revision of Section 509 of the Specifications.

Payment for Temporary Slabs shall include furnishing, installation and removal of the steel plate, support angles, grout, all-thread bars, and neoprene pads, when applicable.

Print Date: 10/18/2011
File Name: 17083 06 Temporary Bridge Deck Details 2.dgn
Horiz. Scale: Varies Vert. Scale: As Noted
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TEMPORARY BRIDGE DECK DETAILS 2			
Designer:	M. Mohseni	Structure Numbers	F-17-KL
Detailer:	R. Olmos	Subset Sheets:	B06 of 06
Sheet Subset:	Bridge		

Project No./Code
IM 2254-076
17083
Sheet Number