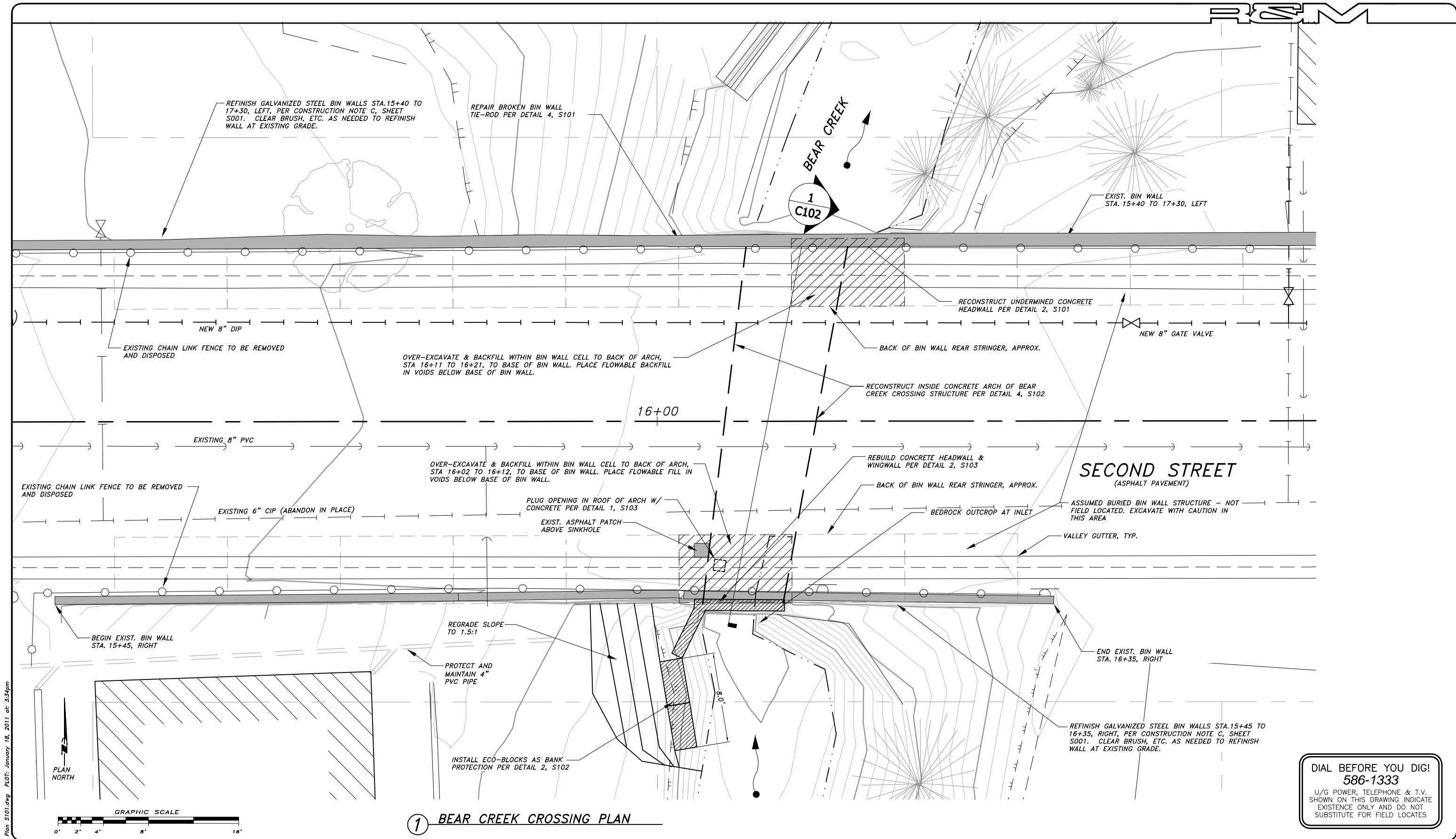


DATE: JANUARY 18, 2011  
& M NO. 101375.3

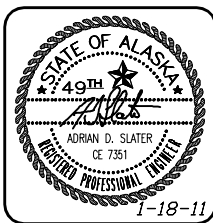
MEET **S001**



DIAL BEFORE YOU DIG!  
586-1333  
U/G POWER, TELEPHONE & T.V.  
SHOWN ON THIS DRAWING INDICATE  
EXISTENCE ONLY AND DO NOT  
SUBSTITUTE FOR FIELD LOCATES

DESIGN	ADS				
DRAWN	MLL				
CHECK	JMP				
APPROVED	JMP				
FILE:					
No.	DATE	REVISION	BY	APRVD.	

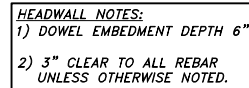
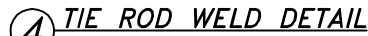
BEAR CREEK CROSSING  
PLAN



**R & M ENGINEERING, INC.**  
ENGINEERS      GEOLOGISTS      SURVEYORS  
6205 GLACIER HIGHWAY      Phone 907-780-6060  
JUNEAU, AK. 99801      Fax 907-780-4611  
mengineering@rmjuneau.com

**SECOND STREET  
DOUGLAS RECONSTRUCTION**  
CBJ CONTRACT No. E11-152  
CITY & BOROUGH OF JUNEAU, ALASKA

DATE: JANUARY 18, 2011 R & M NO. 101375-3
SHEET S100



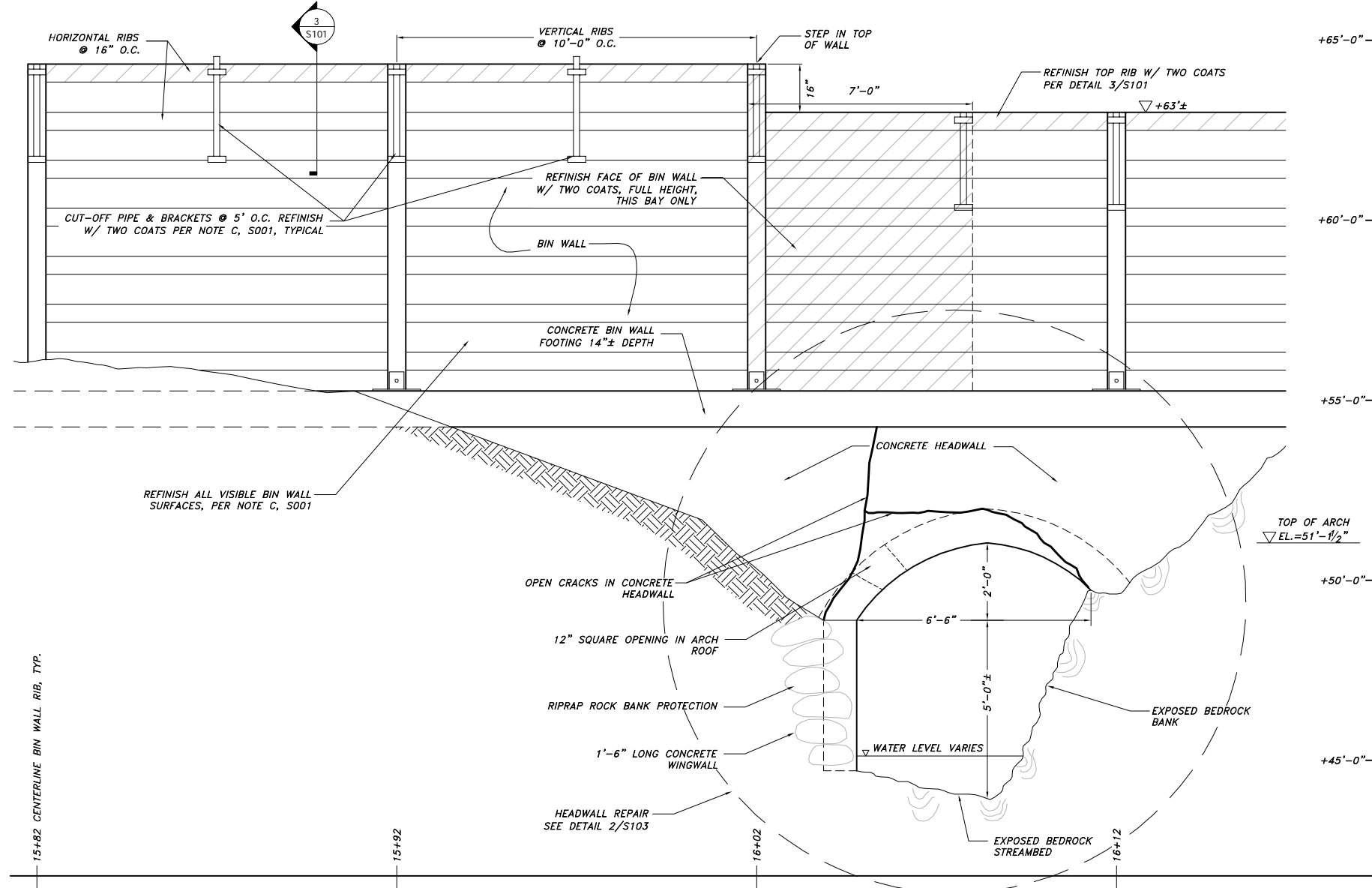
### ② DOWNSTREAM HEADWALL DETAIL



DESIGN <u>ADS</u> DRAWN <u>MLL</u> CHECK <u>JMP</u> APPROVED <u>JMP</u> FILE:				
	No.	DATE	REVISION	BY
				APRVD.

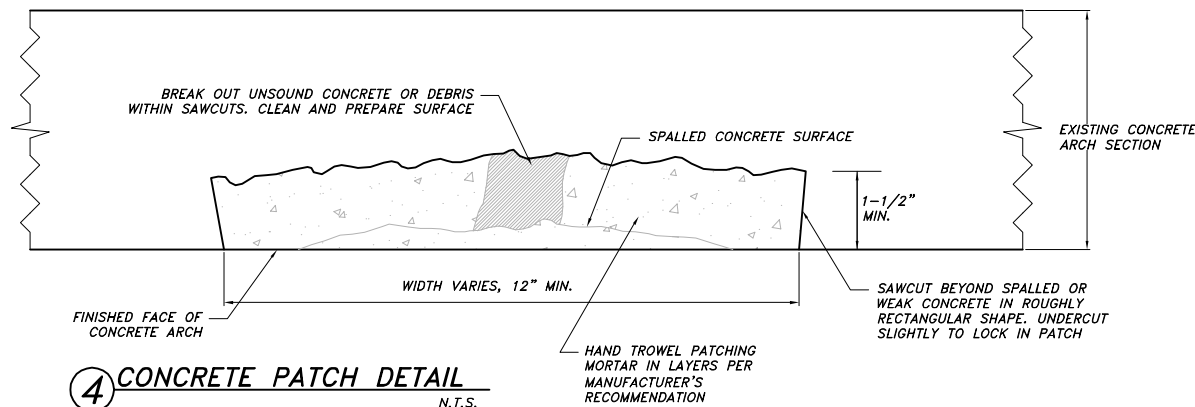
DATE: JANUARY 18, 2011  
& M NO. 101375.3

SHEET **S101**

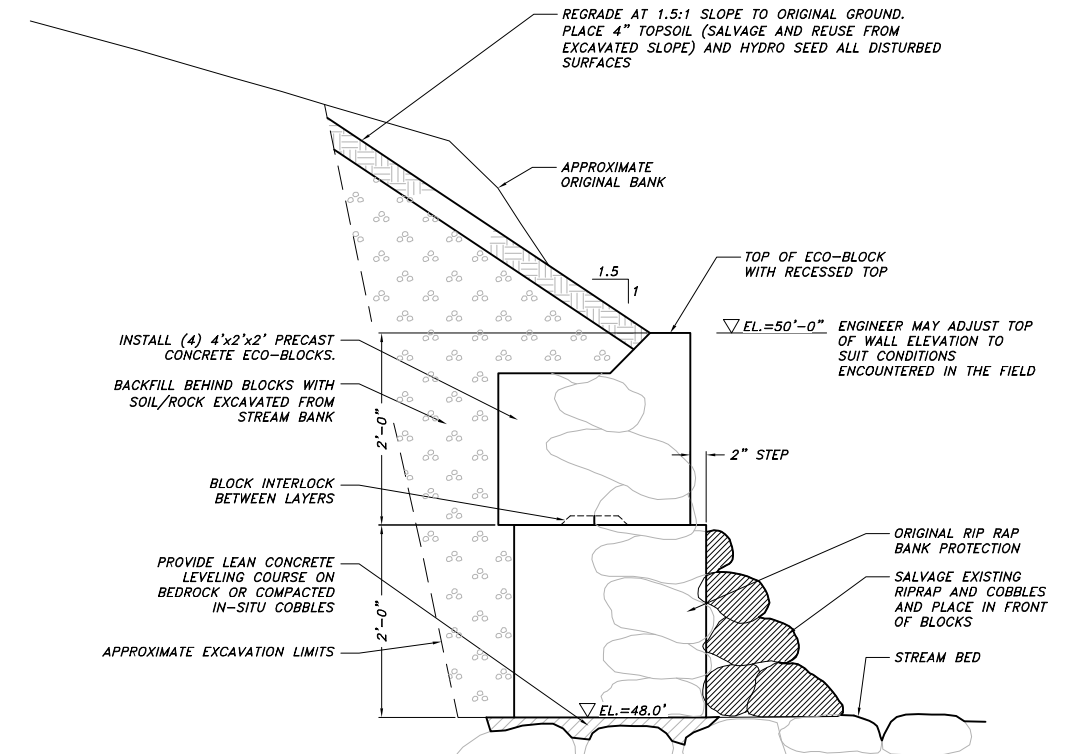


1 UPSTREAM HEADWALL ELEVATION  
EXISTING CONDITIONS

SCALE: 0 1' 2'

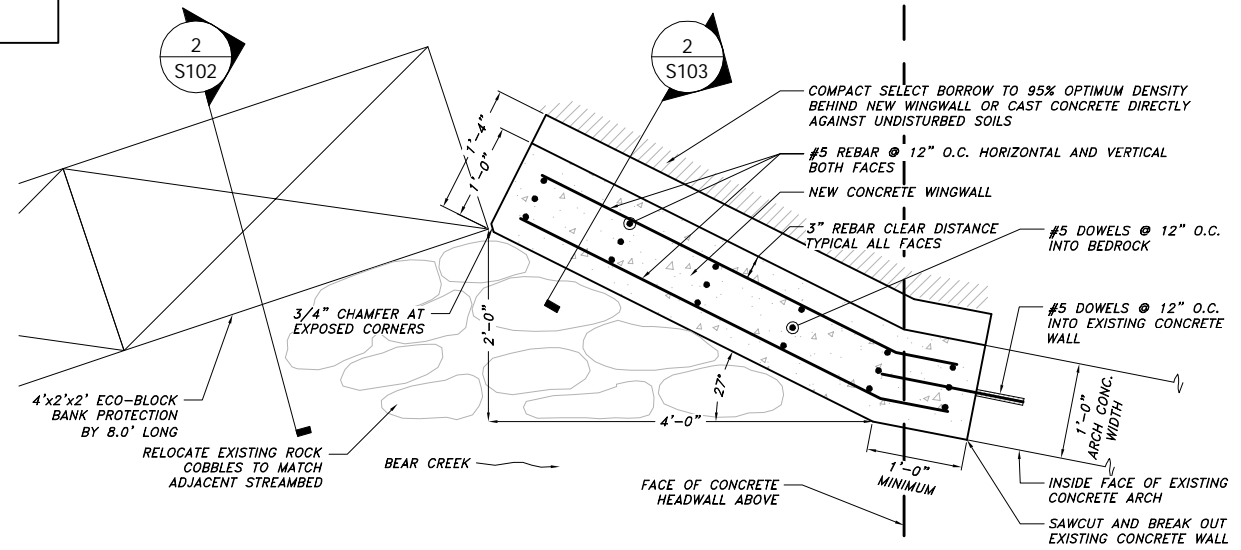


4 CONCRETE PATCH DETAIL  
N.T.S.



2 ECO-BLOCK WALL SECTION

SCALE: 0 6\"/>



3 REINFORCED CONCRETE WINGWALL DETAIL

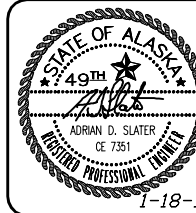
SCALE: 0 6\"/>

I:\2010\101375.3\Drawings\Sections and Details ADS.dwg PLOT: January 18, 2011 at: 3:33pm

DESIGN ADS  
DRAWN MLL  
CHECK JMP  
APPROVED JMP  
FILE:

No.	DATE	REVISION	BY	APRVD.

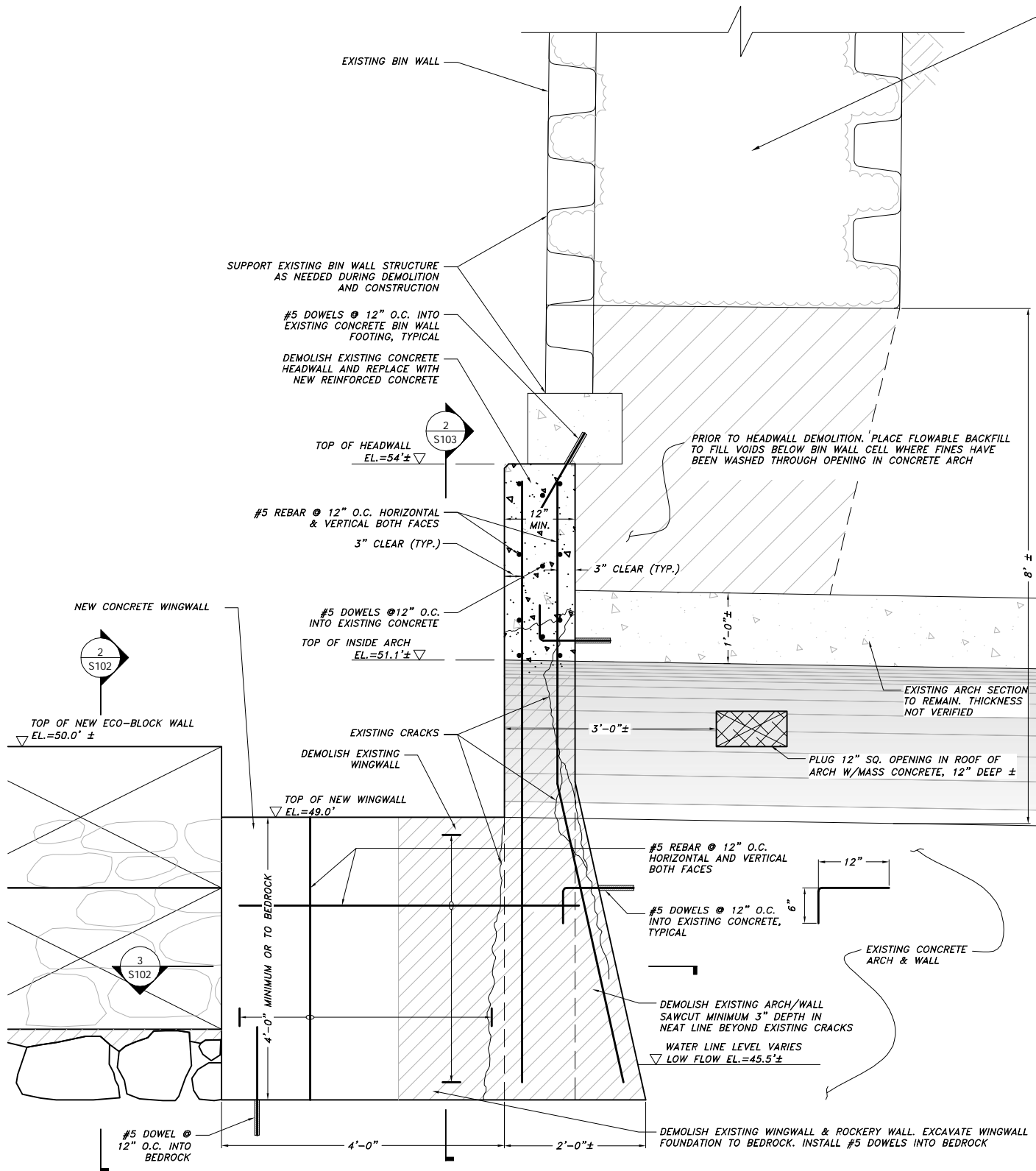
## BEAR CREEK CROSSING CONSTRUCTION DETAILS



**R & M ENGINEERING, INC.**  
ENGINEERS GEOLOGISTS SURVEYORS  
6205 GLACIER HIGHWAY Phone 907-780-6060  
JUNEAU, AK. 99801 Fax 907-780-4611  
mengineering@rmjuneau.com

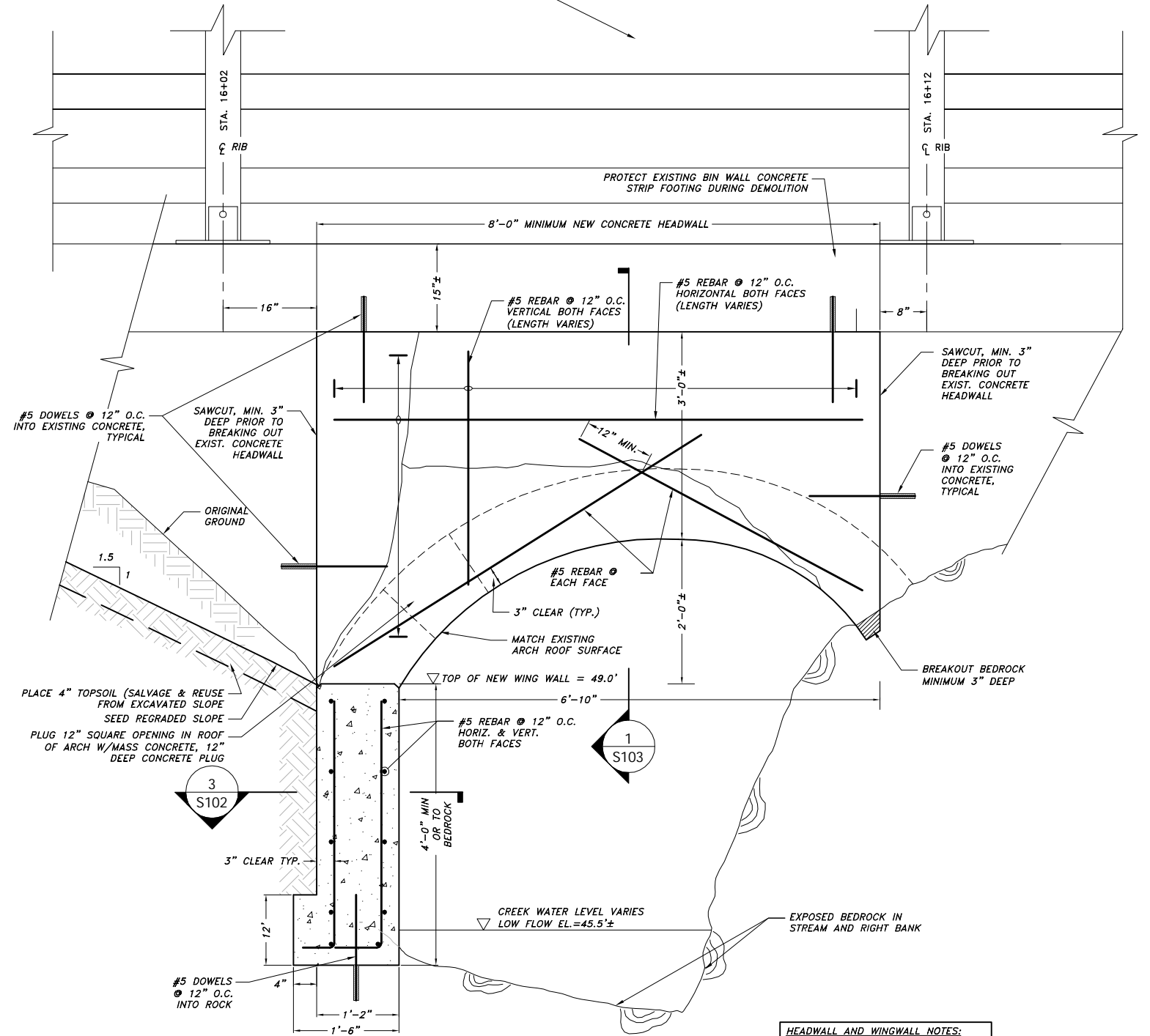
**SECOND STREET  
DOUGLAS RECONSTRUCTION**  
CBJ CONTRACT No. E11-152  
CITY & BOROUGH OF JUNEAU, ALASKA

DATE: JANUARY 18, 2011  
R & M NO. 101375.3  
SHEET  
**S102**



① UPSTREAM HEADWALL DETAIL

SCALE: 0 6" 1'



② UPSTREAM HEADWALL DETAIL

SCALE: 0 6" 1'

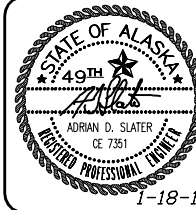
HEADWALL AND WINGWALL NOTES:  
1) DOWEL EMBEDMENT DEPTH 6".  
2) 3" CLEAR TO ALL REBAR UNLESS OTHERWISE NOTED.

I:\2010\101375.3\Drawings\Sections and Details\ADS.dwg PLOT: January 18, 2011 at: 3:33pm

DESIGN ADS  
DRAWN MLL  
CHECK JMP  
APPROVED JMP  
FILE:

No.	DATE	REVISION	BY	APRVD.

## BEAR CREEK CROSSING CONSTRUCTION DETAILS



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**SECOND STREET  
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CITY & BOROUGH OF JUNEAU, ALASKA

DATE: JANUARY 18, 2011  
R & M NO. 101375.3

SHEET  
**S103**





① DOWNSTREAM ELEVATION

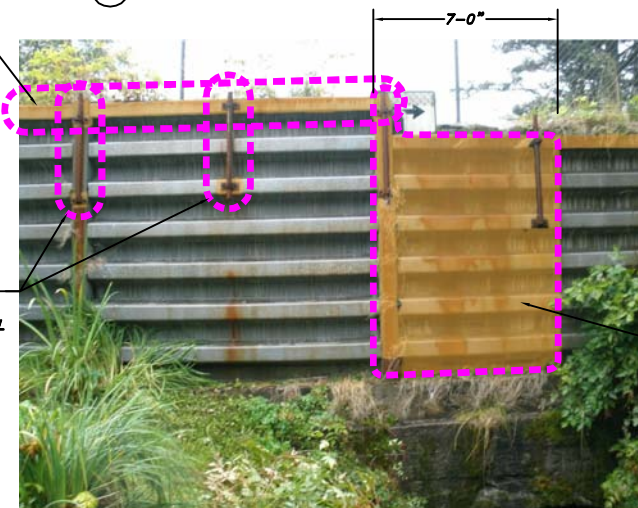


② UPSTREAM ELEVATION



③ TYPICAL BIN WALL

REFINISH TOP RIB W/ TWO COATS PER DETAIL 3/S101, TYPICAL



REMOVE PIPE & BRACKETS, REFINISH W/ TWO COATS, TYPICAL. 53 LOCATIONS TOTAL

REFINISH 7" WIDE SECTION, FULL HEIGHT, W/ TWO COATS, THIS BAY ONLY

④ UPSTREAM BIN WALL

CONCRETE PATCH #2

CONCRETE PATCH #1

HEADWALL REPAIR PER DETAIL 2/S101



REFINISH TIE ROD PLATES W/ TWO COATS, TYPICAL

REPAIR BROKEN TIE ROD PER DETAIL 4/S101

CONCRETE PATCH #3

⑤ DOWNSTREAM BIN WALL

REFINISH TOP RIB W/ TWO COATS, PER DETAIL 3/S101, TYPICAL

REMOVE PIPE & BRACKETS, REFINISH W/ TWO COATS, TYPICAL. 53 LOCATIONS TOTAL



HEADWALL REPAIR PER DETAIL 4/S101

⑥ UPSTREAM HEADWALL

ECO-BLOCK



NEW WINGWALL PER DETAIL 3/S102

⑦ UPSTREAM WINGWALL

DEMOLISH EXISTING CONCRETE

CONCRETE PATCH #5

CONCRETE PLUG



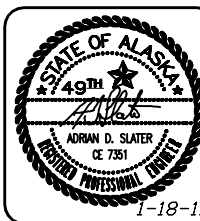
⑧ UPSTREAM HEADWALL AT ARCH SOFFIT

I:\2010\101375\Drawings\Photo Sheets S204.dwg PLOT: January 18, 2011 at 3:51pm

DESIGN	ADS
DRAWN	MLL
CHECK	JMP
APPROVED	JMP
FILE:	

No.	DATE	REVISION	BY	APPRD.

## BEAR CREEK CROSSING PHOTOS OF IMPROVEMENTS



**R & M ENGINEERING, INC.**  
ENGINEERS GEOLOGISTS SURVEYORS  
6205 GLACIER HIGHWAY Phone 907-780-6060  
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**SECOND STREET  
DOUGLAS RECONSTRUCTION**  
CBJ CONTRACT No. E11-152  
CITY & BOROUGH OF JUNEAU, ALASKA

DATE: JANUARY 18, 2011 R & M NO. 101375-3
SHEET <b>S104</b>





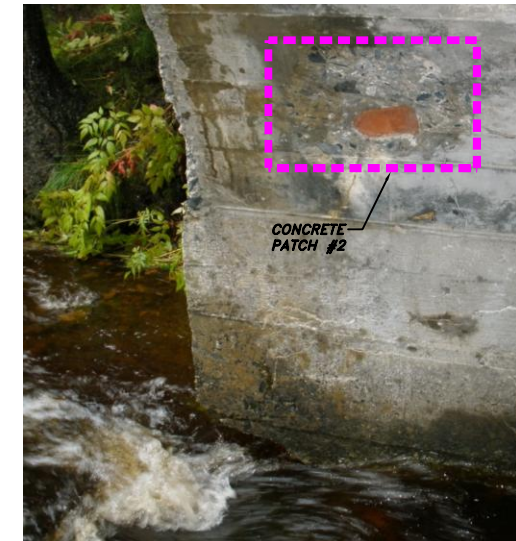
CONCRETE  
PLUG IN  
12" SQUARE  
OPENING

9 INSIDE ARCH - UPSTREAM END



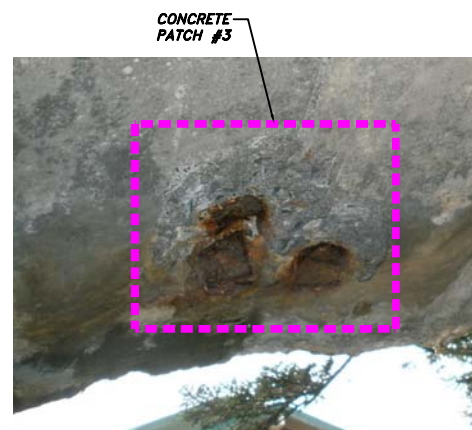
CONCRETE  
PATCH #4

10 INSIDE ARCH - LOOKING DOWNSTREAM



CONCRETE  
PATCH #2

11 INSIDE ARCH - DOWNSTREAM END



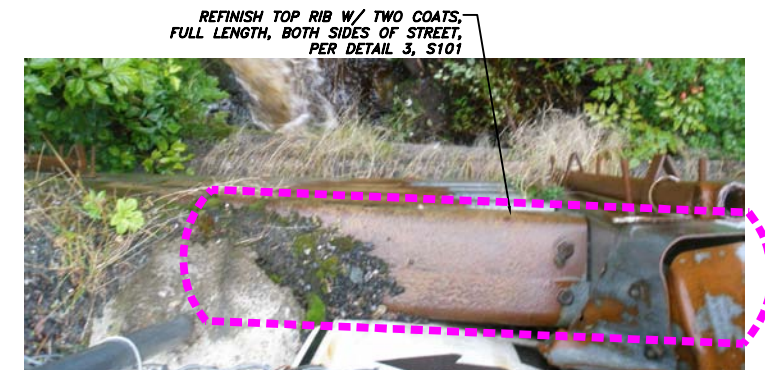
CONCRETE  
PATCH #3

12 INSIDE ARCH - DOWNSTREAM END ROOF



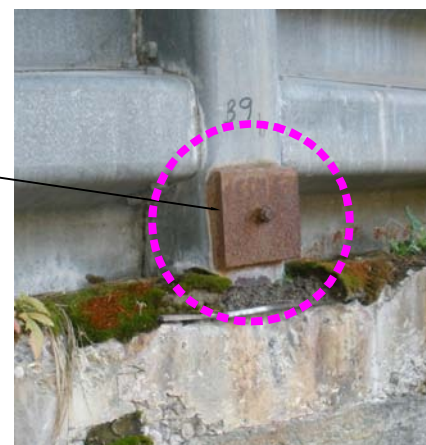
REMOVE PIPE & BRACKET  
AND REFINISH BIN WALL  
SURFACE W/ TWO COATS

13 TYPICAL RUSTED PIPE AND BRACKET



REFINISH TOP RIB W/ TWO COATS,  
FULL LENGTH, BOTH SIDES OF STREET,  
PER DETAIL 3, S101

14 TYPICAL TOP OF BIN WALL VIEW



REFINISH ALL PLATES W/ TWO COATS.  
7 NO. PLATES TOTAL

15 TYPICAL TIE ROD PLATE



16 TIE ROD REPAIR PER DETAIL 4/S101,  
STA. 16+01 LEFT



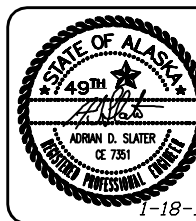
17 12" SQUARE OPENING - TO BE  
PLUGGED WITH CONCRETE

I:\2010\101375\Drawings\Photo Sheets S204.dwg PLOT: January 18, 2011 at 3:51pm

DESIGN ADS  
DRAWN MLL  
CHECK JMP  
APPROVED JMP  
FILE:

No.	DATE	REVISION	BY	APPRD.

## BEAR CREEK CROSSING PHOTOS OF IMPROVEMENTS



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**SECOND STREET  
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DATE: JANUARY 18, 2011  
R & M NO. 101375-3  
SHEET  
**S105**