EXERCISE

NON-COMPLIANCE NOTICE AND CHANGE ORDER

Project Number: NHSX-032-1(41)—3H-31

Contract ID: 31-0321-041

Accounting ID: 34755

Item: 0250

Item Number: 2301-0690203

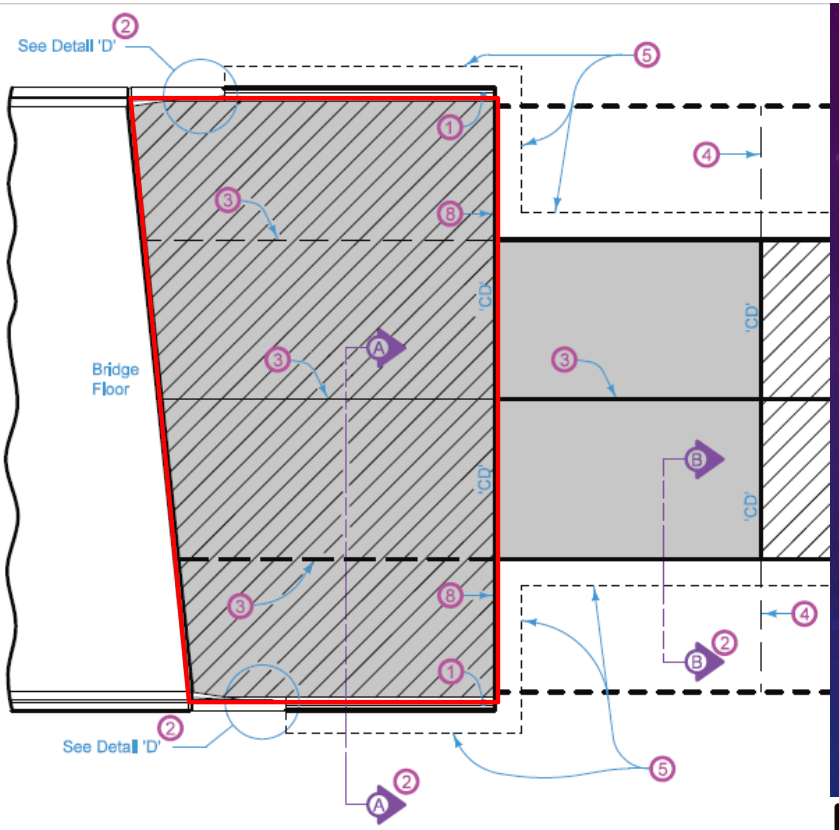
Item Description: Bridge Approach, BR-203

Item Quantity and Unit: 477.200 SY

Unit Price: $175.00

Bid Amount: $83,510.00

When placing concrete for the Bridge Approach, the contractor elected to begin placement of the first load of concrete before testing had been completed. The result of the test for entrained air was 9.2%. At the time of discovery, approximately 3-1/2 Cubic yards had already been placed. Placement was halted, the remainder of the load was mixed for 5 minutes and another test was run. Results of this second test were 7.8%, so the remainder of the load was then placed. The second load was also tested, results of that test were 8.0%. After concrete placement was completed, the contractor was going to place the white curing compound and the sprayer was not working. The contractor had another sprayer on a project 5 miles away. He drove to that site to get it, but by the time the curing was applied it had been 45 minutes since the concrete placement had been done.



PLAN VI

Pay limits for contract item
Include the following areas:

- Double Reinforced Section
- Single Reinforced Section
- Non-Reinforced Section

IOWADOT

REVISION
1 | 10-17-17

STANDARD ROAD PLAN

BR-211

SHEET 1 of 1

REVISIONS: Changed DR-304 to DR-306.

Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

BRIDGE APPROACH (ABUTTING PCC OR COMPOSITE PAVEMENT)

IOWA DOT

REVISION	
1	10-17-17

STANDARD ROAD PLAN

BR-203

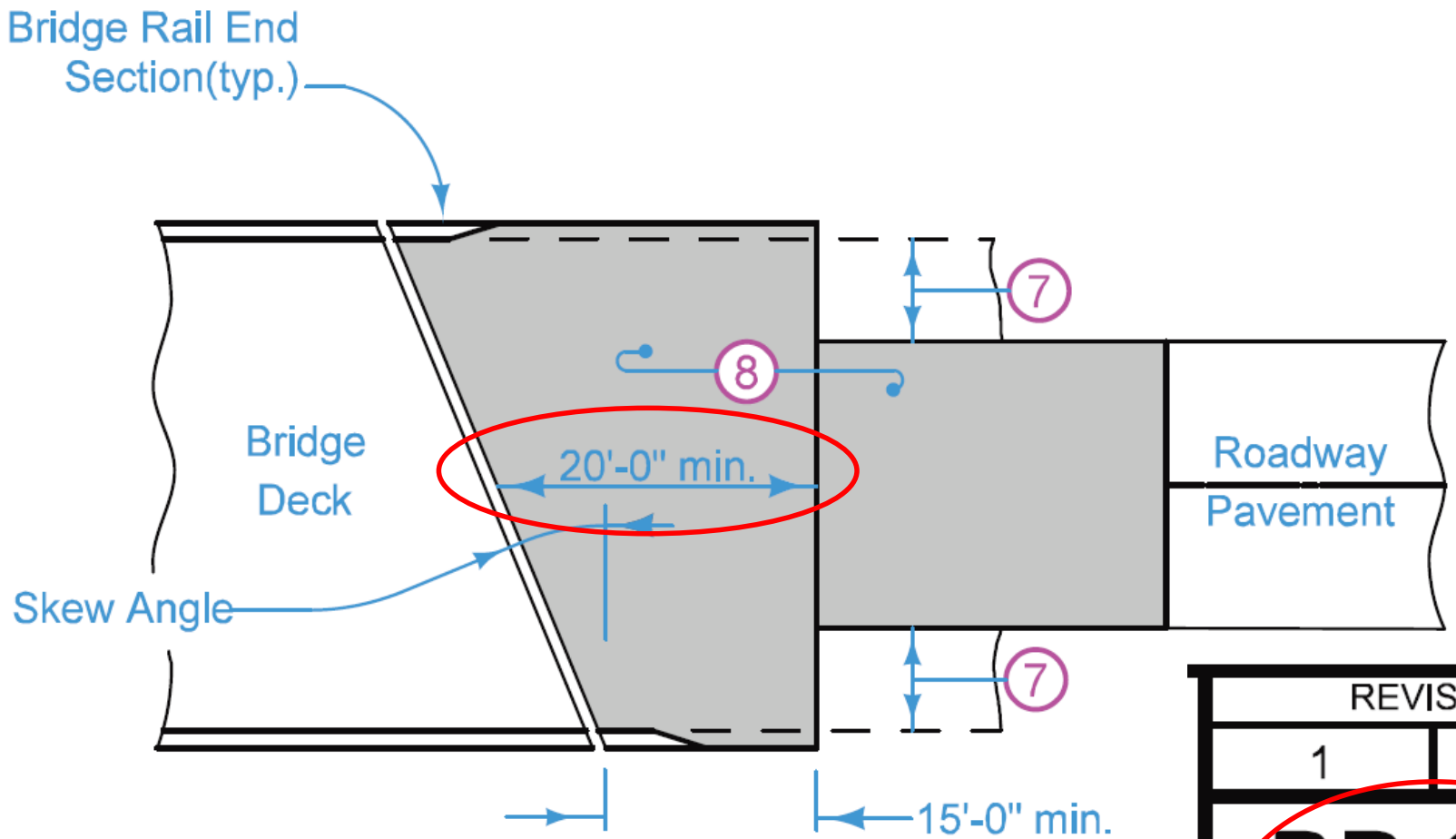
SHEET 1 of 3

REVISIONS: Changed dimension from 6" to 7" and added 6" dimension to U shaped Bent Bar Shapes on Page 3.

Brian Smith

APPROVED BY DESIGN METHODS ENGINEER

DOUBLE REINFORCED 12" APPROACH

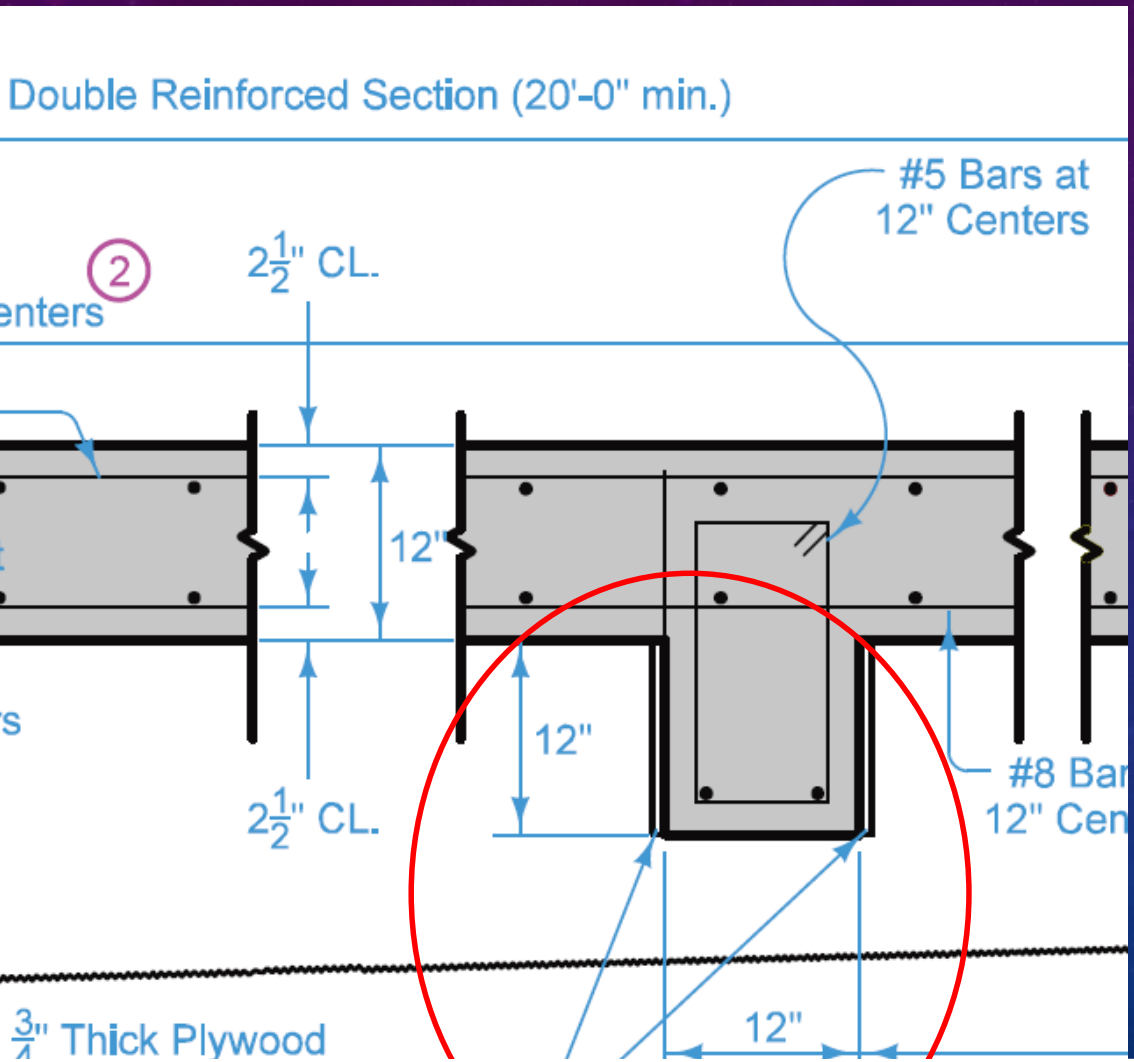


APPROACH PAVEMENT
LAYOUT AT A SKEW

REVISION	
1	10-17-17

BR-203

SHEET 3 of 3



IOWA DOT

STANDARD ROAD PLAN

REVISION	
1	10-17-17

BR-203

SHEET 1 of 3

REVISIONS: Changed dimension from 6" to 7" and added 6" dimension to U-shaped Bent Bar Shapes on Page 3.

Brian Smith

APPROVED BY DESIGN METHODS ENGINEER

DOUBLE REINFORCED 12" APPROACH

IOWADOT
SMARTER | SIMPLER | CUSTOMER DRIVEN

12/22/2017 08:03:28

AASHTOWare Project v3.01.164.01

Contract Schedule

Contract ID: 31-0321-041

Awarded Vendor: SC320 JIM SCHROEDER CONSTRUCTION, INC.

SECTION 0001	**DESIGN NO. 1917; 260'-0 X 36'-0 CONTINUOUS WELDED GIRDER BRIDGE**	**$1,279,603.68**

- What is the tolerance for Entrained air Content for non-slip form paving?

2302.02 MATERIALS.

- Air content for non slip form paving is 7.0% ± 1.5%.

- Why is it important to ensure entrained air is within allowable tolerance?
- Entrained air develops into capillaries which can carry water through the concrete during periods of freeze thaw to prevent damage and increase durability of the concrete.

- What can result if the entrained air content is too low?
- Not enough capillary formation causing water to be trapped and freeze causing popouts.

- What can result if the entrained air content is too high?
- Excess air can have the opposite effect in that it can allow infiltration of water, salt, and other chemicals that can cause early deterioration and a decrease in the lifetime of the pavement.

- What is the corrective action for the concrete affected by this air test that was out of tolerance?
- Pull the truck off to the side and agitate the concrete to attempt to decrease the entrained air. Then retest and if it is within tolerance, and there is still time before discharge must be completed, the concrete can be incorporated.

- How long after finishing has been completed must curing compound be placed?
- As soon as the free water has appreciably disappeared, but no later than 30 minutes after finishing.

- Why is it important to make sure to place the white curing compound as quickly as possible?
- To prevent loss of surface moisture.

- What could happen if the contractor delays applying the cure?
- Loss of moisture can result in improper curing and microcracking on the surface of the concrete. This will eventually result in spalling of the surface.

- What is the corrective action for the concrete that was not cured within the required time limit?
- 95% Payment of Unit Price for concrete affected.

- How wide is the double reinforced section of the bridge approach?
- 36’-0”
- 260’-0 x 36’-0 Continuous Welded Girder Bridge

- If the double reinforced section of the bridge approach is constructed full width and to the minimum length, how many cubic yards of concrete will be used (including the concrete in the Pavement Lug) in this section of the approach?

- 36’ x 20’ x 1 ‘ (12” section) = 720 CF
- 36’ x 1’ x 1’ = 36 CF
- 720 CF + 36 CF = 756 CF
- 756 CF / 27 CF per CY = 28 CY

- What is the Concrete Air Content Price Adjustment in % Payment of Unit Price according to the table?

2302.02 MATERIALS.

- Air content for non slip form paving is 7.0% ± 1.5%.

9.2
- 8.5

0.7

TABLE C1
CONCRETE AIR CONTENT PRICE ADJUSTMENTS

Air Content Range			% Payment of Unit Price
Minimum		**Maximum**	
1.1*	and	below	0%
0.6	to	1.0	50%
0.1	to	0.5	75%
Low air tolerance limit			100%
Target			100%
High air tolerance limit			100%
0.1	to	0.5	98%
0.6	to	1.0	90%
1.1	to	1.5	80%
1.6	to	2.0	65%
2.1	to	3.0	50%
3.1	and	above	0%

*The Engineer may require concrete represented by air content more than 1.1% below the low air tolerance limit to be removed and replaced.

- How many square yards of concrete will be price adjusted for the concrete that was placed out of tolerance for air content?

- 3.5 CY / 0.333 Yd depth = 10.5 SY

- What will be the dollar amount of the price adjustment for the concrete that was out of tolerance for air content?

- 10.5 CY x $175 / SY = $1837.50
- $1837.50 x 10% (90% pay factor) = $183.75 Cr

- What is the Late Curing Application price Adjustment % Payment of Unit Price according to the table?

2301.03 CONSTRUCTION.

- Apply curing compound as soon as the free water has appreciably disappeared, but no later than 30 minutes after finishing.

- Curing Compound was applied 45 minutes after concrete placement.

TABLE C5

LATE CURING APPLICATION PRICE ADJUSTMENTS

Time After Finishing (hrs)			% Payment of Unit Price
½	to	<1	95%
1	to	<1½	80%
1½	to	<2	65%
2	to	<3	50%
		More than 3	40%

- How many square yards of concrete will be price adjusted for failure to apply cure within the required time and what will the dollar amount of that price adjustment be?

- 36’ x 20’ = 720 SF
- 720 SF / 9 SF per SY = 80 SY

- What will be the dollar amount of the price adjustment for the concrete that was out of tolerance for time of placement of curing compound?

- 80 SY x $175.00 / SY = $14,000.00
- $14,000.00 x 5% deduction (95% full payment) = $700.00

- The Contractor must be notified of the issues encountered, what is the acceptable method of documentation?

- A Non-Compliance Notice

Form 830245
11-18

IOWADOT

NONCOMPLIANCE NOTICE

Contractor: Tschiggfrie Excavating, Inc., subcontractor for Jim Schroeder Const., Inc.
Project No.: NHSX-032-1(41)—3H-31

County: Dubuque
Contract ID: 31-0321-041
Date: 8- 30-2018
Time: 4:32 p.m.

To: Joe Smith (Name) | Subcontractor Foreman (Title) | *Joe Smith* (Signature)

You are hereby notified that the following observation and/or test noted

3.5 CY of concrete with entrained air content exceeding the upper limit was placed in the west bridge approach.

and is a violation of Article

2301.02 B.4.

The test data value is

9.2% Entrained Air

and the specification limits are

7.0 +/- 1.5% for non slip form paving

- Additional tests may be performed.
- The violation identified in this notice shall be ceased and/or corrected. This may require a modification of current practices or removal and replacement of materials, including labor, at no cost to the Contracting Authority.
- You are to determine corrective action necessary.
- You are to determine if you wish to discontinue operations until the violation is corrected or additional tests confirm or refute this failing test.

Remarks:

Contractor elected to begin concrete placement prior to completion of test for entrained air. Upon notification of the test result, the placement was stopped and the truck was sent to the side remix. After remixing, another test was performed and the remainder of the load was placed within specifications. The second load was tested and found to be within required test limits.

Correction:

A price adjustment on the 3-1/2 CY of concrete that was placed out of specification will be imposed.

Brenda L. Boell

Inspector's Signature

Distribution: Contractor, Project Engineer, Inspector

Form 830245
11-18

IOWADOT

NONCOMPLIANCE NOTICE

Contractor: Tschiggfrie Excavating, Inc., subcontractor for Jim Schroeder Const., Inc.
Project No.: NHSX-032-1(41)—3H-31

County: Dubuque
Contract ID: 31-0321-041
Date: 8- 30-2018
Time: 4:32 p.m.

To: Joe Smith (Name) | Subcontractor Foreman (Title) | *Joe Smith* (Signature)

You are hereby notified that the following observation and/or test noted

White pigmented liquid curing compound was placed on 80 SY of concrete was placed in the west bridge approach more than 30 minutes after finishing was completed.

and is a violation of Article

2301.03 K.2.b.

The test data value is

White pigmented liquid curing compound was placed 45 minutes after finishing was completed.

and the specification limits are

No later than 30 minutes after finishing.

- Additional tests may be performed.
- The violation identified in this notice shall be ceased and/or corrected. This may require a modification of current practices or removal and replacement of materials, including labor, at no cost to the Contracting Authority.
- You are to determine corrective action necessary.
- You are to determine if you wish to discontinue operations until the violation is corrected or additional tests confirm or refute this failing test.

Remarks:

Contractor's sprayer was not working properly. Extra sprayer was at another job site and had to go to get it.

Correction:

A price adjustment on 80 SY of concrete will be imposed for the late curing compound application.

Brenda L. Boell

Inspector's Signature

Distribution: Contractor, Project Engineer, Inspector

IOWADOT
Form 831240 (08-18)

Accounting ID No.(5-digit number): 34755

Change Order No.: 4

CHANGE ORDER

For Local Public Agency Projects

No.: 4

Non-Substantial: [X]

Substantial: [ ]

Dec. 3, 2018
Administering Office Concurrence Date

Accounting ID No. (5-digit number): 34755

Project Number: NHSX-032-1(41)—3H-31

Contract Work Type: Bridge New – Steel Girder

Local Public Agency: Manchester RCE

Contractor: Jim Schroeder Const., Inc.

Date Prepared: December 3, 2018

You are hereby authorized to make the following changes to the contract documents.

A - Description of change to be made:

8001 – Add an item for price adjustment for out of compliance entrained air content.

8002 – Add and item for price adjustment for late application of white pigmented liquid curing compound.

B - Reason for change:

8001 – Contractor elected to begin placement of concrete before entrained air test was completed and results of test (9.2% test result) were out of tolerance of 7.0% +/- 1.5% for 3.5 CY of concrete used for nonslip form paving in the double reinforced section of the west bridge approach.
8002 - Contractor placed white pigmented curing compound more than 30 minutes (actual placement 45 minutes) after finishing operation was completed on 80 SY of the double reinforced section of the west bridge approach.

C - Settlement for cost(s) of change as follows with items addressed in Sections F and/or G:

8001 – 3.5 CY / 0.333 Yd depth = 10.5 SY
10.5 SY x $175 / SY = $1837.50
$1837.50 x 10% (90% pay factor for 0.6 to 1.0 high air tolerance limit) = $183.75 Credit
8002 - 36’ x 20’ = 720 SF
720 SF / 9 SF per SY = 80 SY
80 SY x $175.00 / SY = $14,000.00
$14,000.00 x 5% deduction (95% pay factor for placement ½ to 1 hour after finishing) = $700.00 Credit

D - Justification for cost(s) (See I.M. 3.805, Attachment D, Chapter 2.36, for acceptable justification):

8001 – Construction Manual Appendix 2-34 (C) Table C1 CONCRETE AIR CONTENT PRICE ADJUSTMENTS
8002 – Construction Manual Appendix 2-34 (C) Table C5 LATE CURING APPLICATION PRICE ADJUSTMENTS

E - Contract time adjustment: [X] No Working Days added [ ] Working Days added: _____ [ ] Unknown at this time

Justification for selection:

These price adjustments have no effect on working days.

IOWA DOT

Form 831240 (08-18)

Accounting ID No.(5-digit number): _____

Change Order No.: _____

F - Items included in contract:

Participating				For deductions enter as "-x.xx"		
Federal-aid	State-aid	Line Number	Item Description	Unit Price .xx	Quantity .xxx	Amount .xx
		Add Row	Delete Row	TOTAL		

G - Items not included in contract:

Participating					For deductions enter as "-x.xx"		
Federal-aid	State-aid	Change Number	Item Number	Item Description	Unit Price .xx	Quantity .xxx	Amount .xx
X		8001	6200-5000031	Price Adj – Air Test Deviation	-183.75	1.000	-183.75
X		8002	2599-9999010	Price Adj – Late Curing Application Lump Sum	-1.00	700.000	-700.00

Add Row | Delete Row

TOTAL -883.75

H. Signatures

Signatures will be applied through DocExpress.