MINUTES OF THE SCDOT/CAGC BRIDGE SUBCOMMITTEE
August 20, 2009

Present:

Ted Geddis, Sloan Construction, Co-Chairman
Charles Matthews, SCDOT, Co-Chairman
Mark Foster, Lee Construction Company
Richard Nickel, Carolina Bridge Company
Donald White, Saddlebrook Construction
Sonny DuPre, Cape Romain Contracting
David Glenn, SCDOT District 6 Construction Engineer
Ken Johnson, FHWA
Doug McClure, SCDOT Assistant Bridge Construction Engineer
Barry Bowers, SCDOT Preconstruction Support
Mary Stepro, SCDOT Construction

Absent:

John Barrett, United Contractors, Inc.
Greg Canniff, Palmetto Structures Co., Inc.
Chad Curran, E S Wagner Company
Walter H. Deierlein, Republic Contracting Corp.
Mike Lively, Crowder Construction Company
Howard Wooten, A.M. Tuck, Inc.
Darryl Kennerly, SCDOT Dist 7 Resident Engineer
Sammy Hendrix, Carolinas AGC

Call to Order:

Charles Matthews called the meeting to order at 2:00 pm. Introductions were made and a sign-up sheet was passed around for each attendee to sign.

Old Business:

A. Bridge Deck Rideability – Surface Smoothness. Resident engineers compiled a questionnaire concerning various aspects of grinding, milling and screed. Discussed the difficulty in achieving rideability on the first DOT test, costs involved, length of straight edge, pipe rail support, screed, hand ground repairs, etc. Mr. Matthews stated that too much grinding causes a durability issue on the bridge. The contractors will submit recommendations to Ted Geddis concerning this questionnaire. (See attachment)

New Business:

A. Improve the Effectiveness / Efficiency of the Submittal Process. Discussed the number of copies needed for audit purposes. Ted Geddis provided a copy of a Standard Welding Specification (see attachment) and suggested that a specification like this might be helpful for SCDOT projects. Barry Bowers and Mr. Matthews will check to see if this is possible to add as a specification to SCDOT proposals. Discussed putting the shop drawing submittals on a website so they can be tracked. Shop plans should go directly to the consultant, the Resident Engineer should receive a copy of the transmittal only. It was suggested that a submittal list from SCDOT and the contractors should be brought to the preconstruction meeting and discussed. Request that all contractors submit recommendations for problems that are causing the most trouble to Ted Geddis, and he will compile a list for SCDOT. A review of the Specification Book is currently being looked at by the Joint taskforce.

B. CPM Scheduling Requirements for Small Projects. It was suggested that smaller projects be given more time or make it a simpler process. Send samples of a modified CPM to Ted Geddis. AGC will provide a proposed schedule.

C. Mentoring Program. Copy of Mentor Protégé Program is attached. According to the program, only 50% of the DBE work will be counted. This could make it hard to meet the goal.

D. Late "Notice to Proceed" Issues. Receiving a late Notice to Proceed is causing some scheduling delays for projects, especially near the end of the year (paving restrictions) or during poor weather conditions. Mr. Matthews suggested that the contractors contact the RCE when they have this problem and explain why there is a delay so that time adjustments can be reviewed. Each project will be reviewed on a case by case basis. Some major problems encountered are late preconstruction meetings, utility delays and clearing prior to construction. It was suggested that Clearing contracts be let early to clear the job sites prior to construction.
ACTION ITEM FOR JOINT COMMITTEE.

E. Discussion of color of Protective Clothing for Construction. Discussed and determined that is was not a problem.

Other Business:

A. Plans. Discussed the time available to check out a project prior to the letting. If you find a problem with the bid items, please call the SCDOT construction office or Jamie Kendall. Barry Bowers will check with Jamie to see if calls have been returned to contractors concerning these problems.

B. Barrier Parapet, Rebar Welding issues prior to slipforming (see attachment). Discussed welding of rebar, the use of supplemental bars, and templates at end of bents. Please send suggestions for a field welding specification to Ted Geddis so that the Design section can review.

Next Meeting Date:

The next meeting will be held on Thursday October 15, 2009.
Contractors will meet at 1 pm. Full committee at 2 pm.

Bridge Deck Rideability - Surface Smoothness Test Questionaire							
ID #	1	2	3	4	5	6	7
Date	12/1/2008	2/2/2009	2/2/2009	2/4/2009	4/7/2009	6/1/2009	6/1/2009
County	Lexington	Beaufort	Beaufort	Lexington	Oconee	Charleston	Charleston
Pass/Fail(First Try)	Fail	Fail	Fail	Fail	Fail	Fail	Fail
# Attempts	1	5	5	6	2	3	3
Repairs performed	Diamond Grinding	Milling	Milling	Grinding	Grind	Grind	Grind
Type of Superstructure							
Skewed (Degree Of Skew)	N	N	N	12	45	N	N
Curved	N	N	N	4	N	Y	Y
Super Elevated	N	N	N	0.047	N	3%	3%
Crowned Deck	Y	Y	Y	N	Y	N	N
Width of deck	42'	44'	44'	40'	59	87.75'	87.75'
Length of bridge	80'	720'	600'	174'	135	210'	210'
Number of lanes	3	2	2	2	2	4	4
Was deck checked with 10'/20' straightedge	10'	Y	Y	N	10'	N	N
Was deck checked with 10'/20' rolling straightedge	OMR	Y	Y	Y	Y	10'	10'
Did plans call for a longitudal joint	N	N	N	N	N	Y/Staged	Y/Staged
Construction Methods							
Spacing of overhang brackets	Flat Slab	Flat Slab	Flat Slab	4'	3.3'	N/A	N/A
Pipe Rail Support Spacing	2.5'	3'	3'	4'	N/A	5'	5'
Did deck grades include the deadload deflection	Y	Y	Y	Y	Y	Y	Y
Type of screed (longitudal or transverse)							
4 or 6 wheel	4	4	4	4	4	4	4
Burlap drag	Y	Y	Y	Y	Y	Y	Y
Pan	N/A	N	N	Y	N	N	N
Bull float	SW only	As Nec	As Nec	N	Some	Y	Y
Number of sceed passes-Location if more than one	2-End 15'					2-3	2-3
Type of Failure							
High Spots	Some	Y	Y	Nominal	Y	Y	Y
Low Spots	Some	Y	Y	Ea. End	N	Y	Y
Finishing chatter	N/A	N	N	N	N/A	N	N
Wheel path close to closure pour	N/A	N	N	N/A	N/A	Y	Y
Profilograph readings		30-46	22-34		13.1	40-78	40-78
Blanking band readings	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Bump meter per lane							
Problem at Joints / No. of Pours	N	Y	Y	N/2	N/A	Y	Y
Problems With Deck Pour							
Concrete Plant Breakdown	N	N	N	N	N	N	N
Equipment Breakdown(such as screed, concrete vibrator, pump truck, etc.)	Y-wheel	N	N	N	Screed/Pump Tk	N	N
Wet, Dry loads	N	N	N	N	One Wet	N	N
Slow Concrete Delivery	Short/Re-ordered	N	N	N	N	N	N
Form blow out	N	N	N	N	N	N	N
Weather (windy,dry, cold, hot, rain, etc.)	Light rain	W/D/C	W/D/C	W/Cool	Cloudy	W	W
NOTES							

QUALIFICATION OF WELDS AND PROCEDURES:

(7-21-09) SP10 R43

Page 10-143, Subarticle 1072-20(D) Qualification of Welds and Procedures, replace the third sentence of the first paragraph with the following:

For all prequalified field welds, submit Welding Procedure Specifications (WPS) for each joint configuration for approval at least 30 days prior to performing any welding. In lieu of this, use the WPS provided and preapproved by the Department. These preapproved WPS are available from the Materials and Tests Unit or at:
http://www.ncdot.org/doh/operations/materials/structural/appr_proc.html. Use non-prequalified welds only if approved by the Engineer. Submit WPS for all non-prequalified welds to the Engineer for approval. At no cost to the Department, demonstrate their adequacy in accordance with the requirements of the Bridge Welding Code.

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
STEEL GIRDER SIP ANGLE WELDING PROCEDURE SPECIFICATION (WPS)
AWS D1.5 : 2008

Specifications & Codes: **NCDOT Standard Specifications/AASHTO/AWS D1.5:2008, Section 2, 5 and 12**

Material Specifications: **ASTM A-36, A572, (A709-36, 50), (M270-GR250, 345) Unlimited Thickness**

Welding Process: **SMAW** Manual or Semi- Automatic or Automatic: **Manual**

Filler Metal Specification: **AWS A5.1** Classification: **E-7018**

Manufacturer: **NCDOT Approved Electrodes** Single or Multiple Pass: **single** Position of Weld: **Flat and Horizontal**

Welding Current: **DC** Polarity: **Positive** Progression: **N/A**

Root Treatment: **N/A**

Preheat Temp: **100° minimum** Interpass: **500° maximum** Post Heat: **N/A**

Pass Num.	Electrode Size	Welding Current Amperes	Welding Current Volts	Travel Speed		Joint Details
All	1/8"	90-140	20-23	6-9 ipm		SEE ATTACHMENT

PREHEAT	
Thickness	Temp.
Up to 3/4"	100°
Over 3/4" to 1 1/2"	100°
Over 1 1/2" to 2 1/2"	150°
Over 2 1/2"	225°

COMMENTS:

Remove all coating, rust, dirt and mill scale within one inch of the area to be welded prior to fit-up. Repair all weld discontinuities. Clean the completed weld of all debris, slag and spatter.

WPS Description: **Steel Girder SIP Angle**

WPS #: **010909005**

Revision #: **1**

Written By: **Randy Dempsey, CWI/CWE, TT IV**

Signature: Randy Dempsey

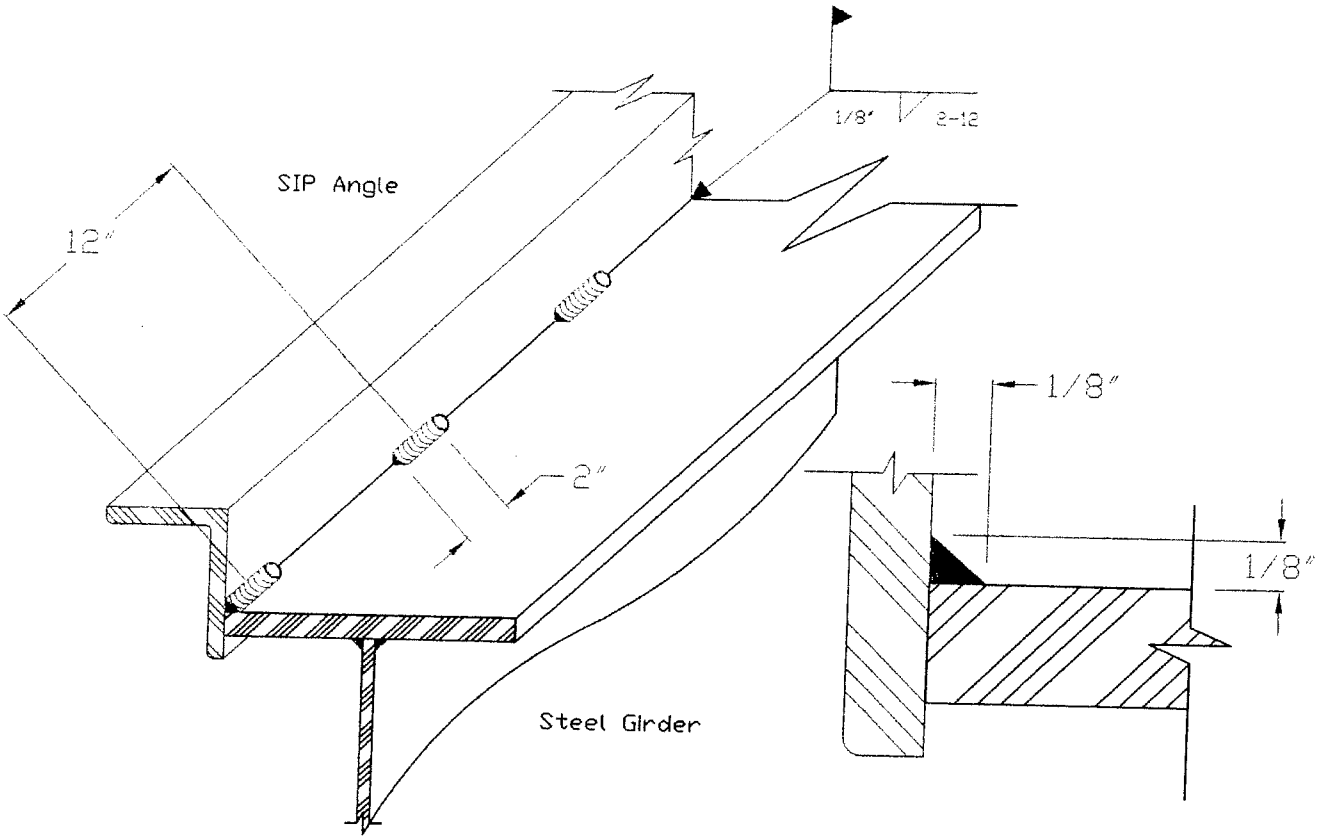
Authorized By: **Steve Walton, Metals Engineer**

Signature:

NCDOT MATERIALS & TESTS UNIT (STEEL SECTION)

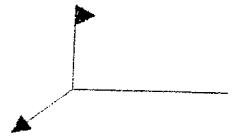
RANDY D. DEMPSEY
CWI 08051811
QC1 EXP. 05/01/11

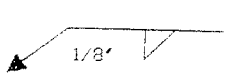
WPS STEEL GIRDER SIP ANGLE 010909005 R1
JOINT DETAIL ATTACHMENT



STEEL GIRDER
SIP ANGLE DETAILS

Weld Symbol definitions per AWS A2.4:2007


FIELD WELD SYMBOL



FILLET WELD, ARROW SIDE with WELD SIZE

EACH WELD SHALL BE 2" LONG on 12" CENTERS

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
STEEL GIRDER SIP ANGLE WELDING PROCEDURE SPECIFICATION (WPS)
AWS D1.5 : 2008

Specifications & Codes: **NCDOT Standard Specifications/AASHTO/AWS D1.5:2008, Section 2, 5 and 12**

Material Specifications: **ASTM A-36, A572, (A709-36, 50), (M270-GR250, 345) Unlimited Thickness**

Welding Process: **SMAW** Manual or Semi- Automatic or Automatic: **Manual**

Filler Metal Specification: **AWS A5.1** Classification: **E-7018**

Manufacturer: **NCDOT Approved Electrodes** Single or Multiple Pass: **single** Position of Weld: **Flat and Horizontal**

Welding Current: **DC** Polarity: **Positive** Progression: **N/A**

Root Treatment: **N/A**

Preheat Temp: **100° minimum** Interpass: **500° maximum** Post Heat: **N/A**

Pass Num.	Electrode Size	Welding Current Amperes	Welding Current Volts	Travel Speed		Joint Details
All	1/8"	90-140	20-23	6-9 ipm		SEE ATTACHMENT

PREHEAT	
Thickness	Temp.
Up to 3/4"	100°
Over 3/4" to 1 1/2"	100°
Over 1 1/2" to 2 1/2"	150°
Over 2 1/2"	225°

COMMENTS:

Remove all coating, rust, dirt and mill scale within one inch of the area to be welded prior to fit-up. Repair all weld discontinuities. Clean the completed weld of all debris, slag and spatter.

WPS Description: **Steel Girder SIP Angle**

WPS #: **010909005**

Revision #: **1**

Written By: **Randy Dempsey, CWI/CWE, TT IV**

Signature: Randy Dempsey

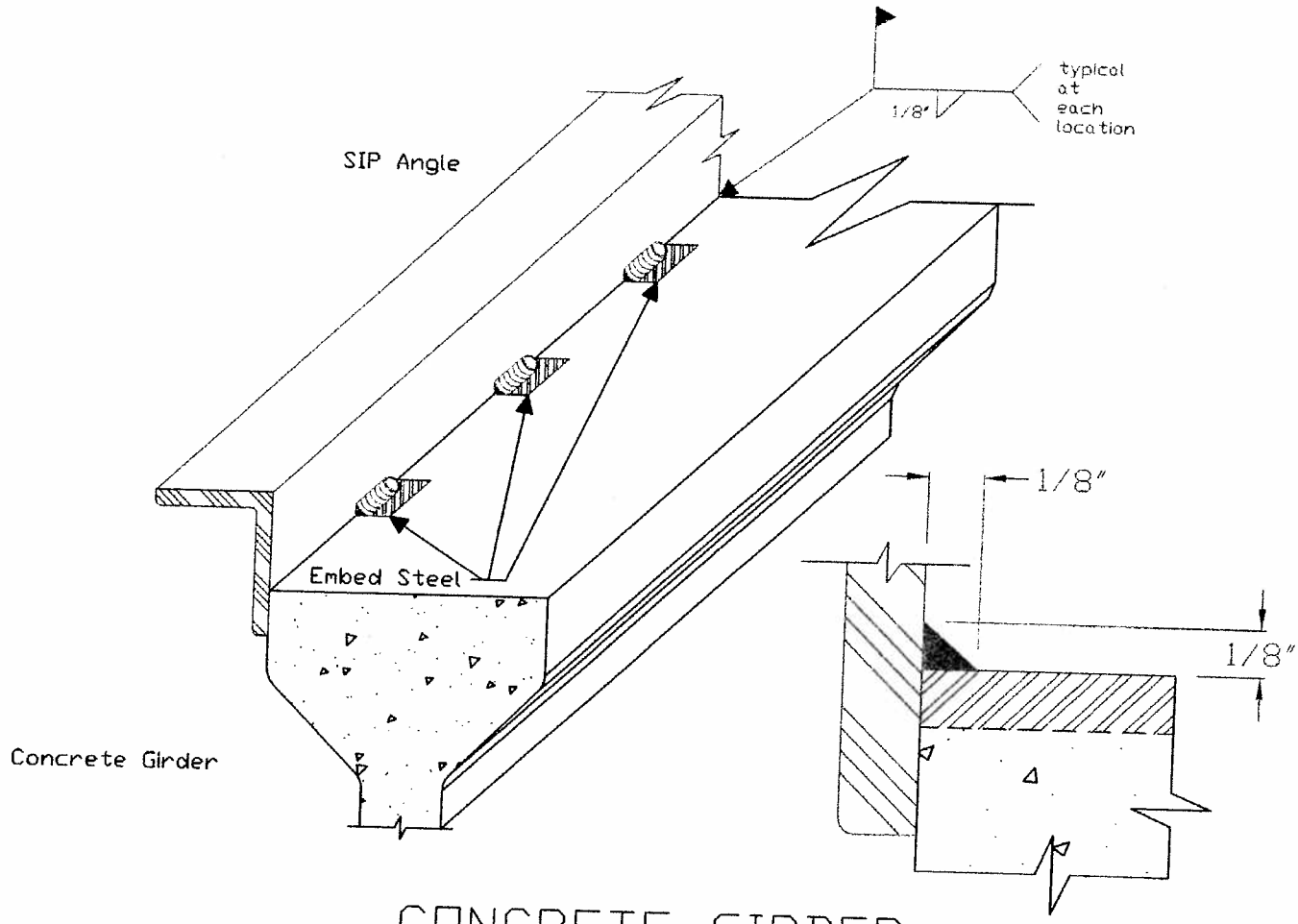
Authorized By: **Steve Walton, Metals Engineer**

Signature:

NCDOT MATERIALS & TESTS UNIT (STEEL SECTION)

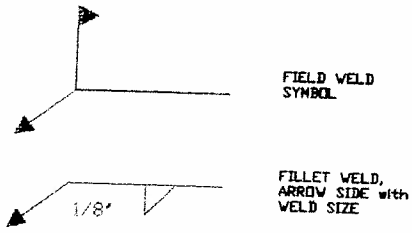
RANDY D. DEMPSEY
CWI 08051811
QC1 EXP. 05/01/11

WPS CONCRETE GIRDER SIP ANGLE 011609006 R1
JOINT DETAIL ATTACHMENT



CONCRETE GIRDER SIP ANGLE DETAILS

Weld Symbol definitions per AWS A2.4:2007



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
STUD WELDING PROCEDURE SPECIFICATION (WPS)
AWS D1.5 : 2008

Specifications & Codes: **NCDOT Standard Specifications/AASHTO/AWS D1.5:2008, Section 2, 5 and 12**

Material Specifications: **ASTM A-36, A572, (A709-36, 50), (M270-GR250, 345) Unlimited Thickness**

Welding Process: **SMAW** Manual or Semi- Automatic or Automatic: **Manual**

Filler Metal Specification: **AWS A5.1** Classification: **E-7018**

Manufacturer: **NCDOT Approved Electrodes** Single or Multiple Pass: **both** Position of Weld: **Flat, Horizontal, Vertical and Overhead**

Welding Current: **DC** Polarity: **Positive** Progression: **Vertical up**

Root Treatment: **N/A**

Preheat Temp: **100° minimum** Interpass: **500° maximum** Post Heat: **N/A**

Pass Num.	Electrode Size	Welding Current Amperes	Welding Current Volts	Travel Speed		Joint Details
All	1/8" 5/32"	90-140 150-220	20-23 21-24	6-9 ipm 6-10 ipm		SEE ATTACHMENT

PREHEAT	
Thickness	Temp.
Up to 3/4"	100°
Over 3/4" to 1 1/2"	100°
Over 1 1/2" to 2 1/2"	150°
Over 2 1/2"	225°

COMMENTS:
Remove all coating, rust, dirt and mill scale within one inch of the area to be welded prior to fit-up. Remove all slag, spatter and weld discontinuities between passes. Clean the completed weld of all debris, slag and spatter.

WPS Description: **Stud Welding**

WPS #: **012009007**

Revision #: **1**

Written By: **Randy Dempsey, CWI/CWE, Transportation Technician IV**

Signature: Randy Dempsey

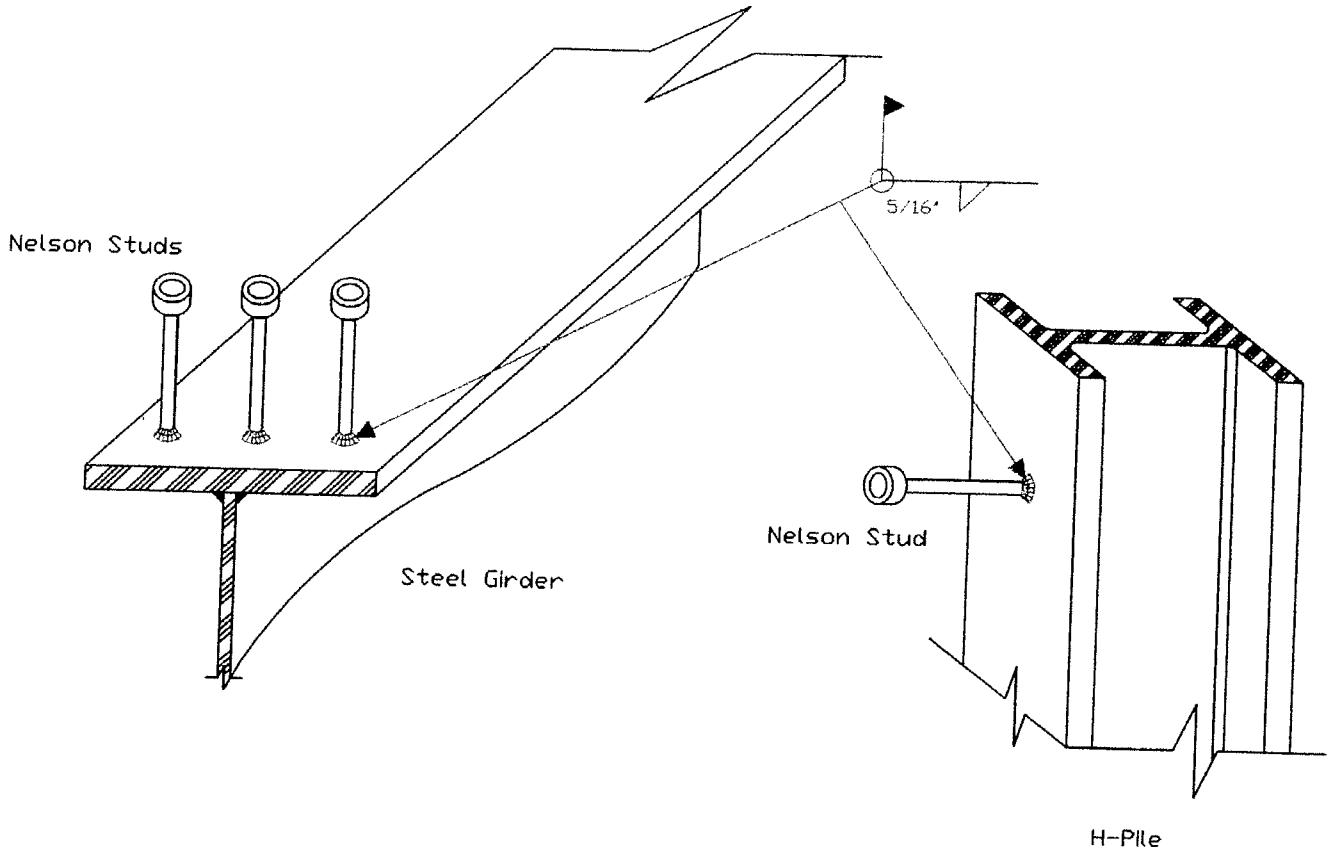
Authorized By: **Steve Walton, Metals Engineer**

Signature:

NCDOT MATERIALS & TESTS UNIT (STEEL SECTION)

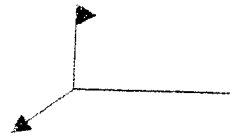
RANDY D. DEMPSEY
CWI 08051811
QC1 EXP. 05/01/11

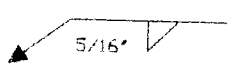
WPS STUD WELDING 012009007 R1 JOINT DETAIL ATTACHMENT



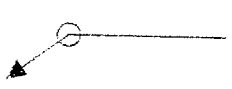
STUD WELDING DETAILS

Weld Symbol definitions per AWS A2.4:2007


FIELD WELD SYMBOL



FILLET WELD, ARROW SIDE with WELD SIZE


WELD ALL AROUND

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
H-PILE WELDING PROCEDURE SPECIFICATION (WPS) AWS D1.5 : 2008

Specifications & Codes: **NCDOT Standard Specifications/AASHTO/AWS D1.5:2008, Section 2, 5 and 12**

Material Specifications: **ASTM A-36, A572, (A709-36, 50), (M270-GR250, 345) Unlimited Thickness**

Welding Process: **SMAW** Manual or Semi- Automatic or Automatic: **Manual**

Filler Metal Specification: **AWS A5.1** Classification: **E-7018**

Manufacturer: **NCDOT Approved Electrodes** Single or Multiple Pass: **both** Position of Weld: **Flat, Horizontal, Vertical & Overhead**

Welding Current: **DC** Polarity: **Positive** Progression: **Vertical – up**

Root Treatment: **Back Gouge with a grinder to sound metal prior to welding.**

Preheat Temp: **100° minimum** Interpass: **500° maximum** Post Heat: **N/A**

Pass Num.	Electrode Size	Welding Current Amperes	Welding Current Volts	Travel Speed		Joint Details
All	1/8"	90-140	20-23	6-9 ipm		SEE ATTACHMENT

PREHEAT	
Thickness	Temp.
Up to 3/4"	100°
Over 3/4" to 1 1/2"	100°
Over 1 1/2" to 2 1/2"	150°
Over 2 1/2"	225°

COMMENTS:
Remove all coating, rust, dirt and mill scale within one inch of the area to be welded prior to fit-up. Remove all slag, spatter and weld discontinuities between passes. Clean the completed weld of all debris, slag and spatter.

WPS Description: **H-PILE**

WPS #: **080508001**

Revision #: **1**

Written By: **Randy Dempsey, CWI/CWE, TT IV**

Signature: Randy Dempsey

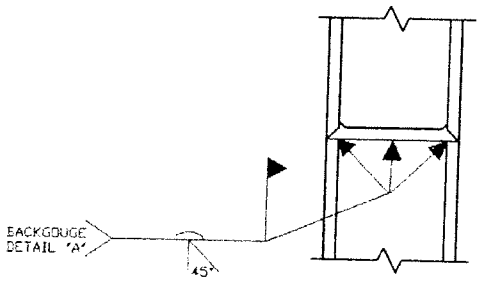
Authorized By: **Steve Walton, Metals Engineer**

Signature:

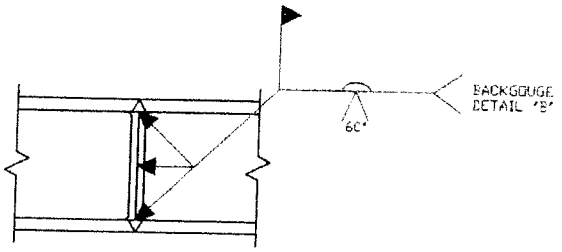
NCDOT MATERIALS & TESTS UNIT (STEEL SECTION)

RANDY D. DEMPSEY
CWI 08051811
EXP. 05/01/11

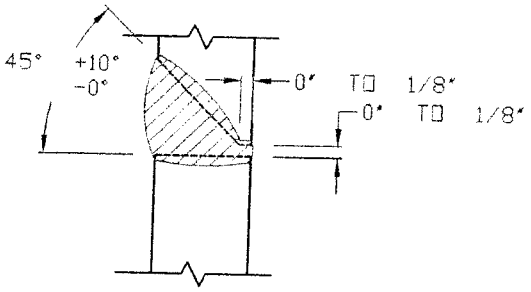
WPS H-PILE 080508001 R1 JOINT DETAIL ATTACHMENT



△ PILE VERTICAL

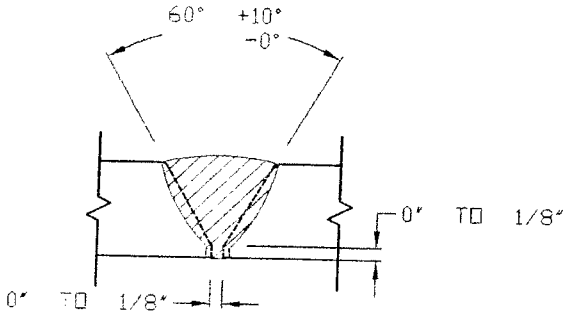


△ PILE HORIZONTAL
OR VERTICAL



DETAIL "A"

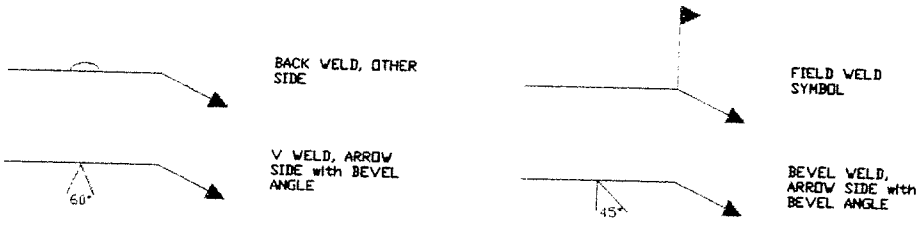
△ POSITION OF PILE DURING WELDING



DETAIL "B"

H-PILE SPLICE DETAILS

Weld Symbol definitions per AWS A2.4:2007



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
PIPE-PILE WELDING PROCEDURE SPECIFICATION (WPS) AWS D1.5 : 2008

Specifications & Codes: **NCDOT Standard Specifications/AASHTO/AWS D1.5:2008, Section 2, 5 and 12**

Material Specifications: **ASTM A-36, A572, (A709-36, 50), (M270-GR250, 345) Unlimited Thickness**

Welding Process: **SMAW** Manual or Semi- Automatic or Automatic: **Manual**

Filler Metal Specification: **AWS A5.1** Classification: **E-7018**

Manufacturer: **NCDOT Approved Electrodes** Single or Multiple Pass: **both** Position of Weld: **Flat & Horizontal**

Welding Current: **DC** Polarity: **Positive** Progression: **N/A**

Root Treatment: **N/A**

Preheat Temp: **100° minimum** Interpass: **500° maximum** Post Heat: **N/A**

Pass Num.	Electrode Size	Welding Current Amperes	Welding Current Volts	Travel Speed		Joint Details
All	1/8"	90-140	20-23	6-9 ipm		SEE ATTACHMENT

PREHEAT	
Thickness	Temp.
Up to 3/4"	100°
Over 3/4" to 1 1/2"	100°
Over 1 1/2" to 2 1/2"	150°
Over 2 1/2"	225°

COMMENTS:
Remove all coating, rust, dirt and mill scale within one inch of the area to be welded prior to fit-up. Remove all slag, spatter and weld discontinuities between passes. Clean the completed weld of all debris, slag and spatter.

WPS Description: **PIPE PILE**

WPS #: **082508003**

Revision #: **1**

Written By: **Randy Dempsey, CWI/CWE, TT IV**

Signature: Randy Dempsey

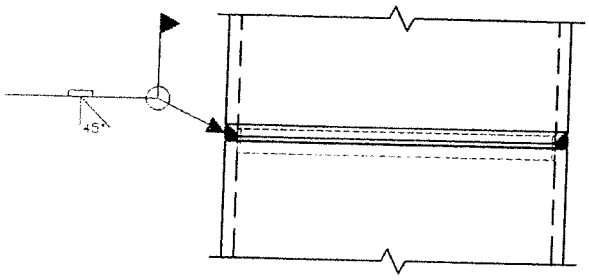
Authorized By: **Steve Walton, Metals Engineer**

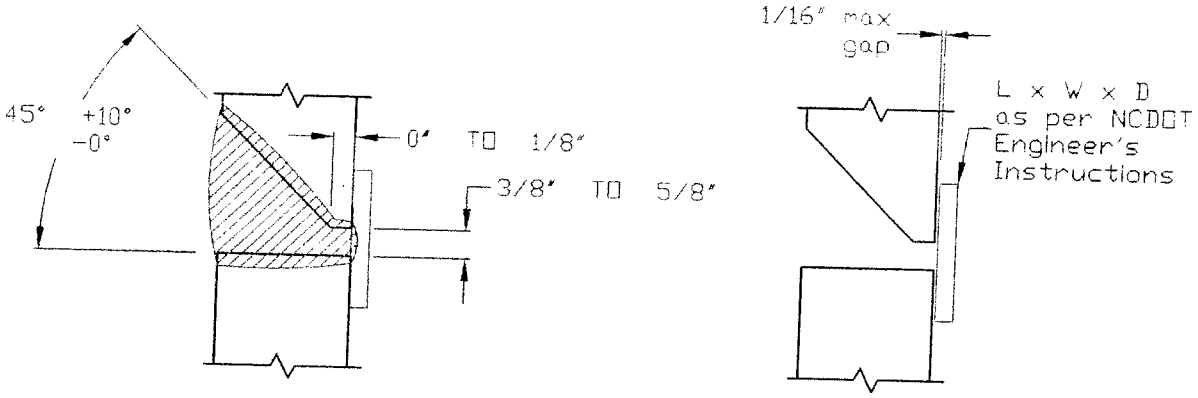
Signature:

NCDOT MATERIALS & TESTS UNIT (STEEL SECTION)

RANDY D. DEMPSEY
CWI 08051811
EXP. 05/01/11

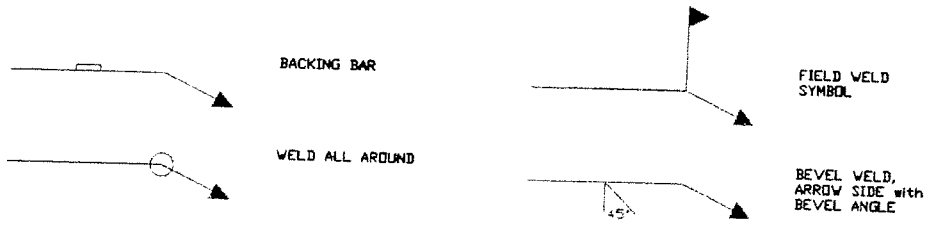
WPS PIPE-PILE 082508003 R1 JOINT DETAIL ATTACHMENT





PIPE-PILE SPLICE DETAILS

Weld Symbol definitions per AWS A2.4:2007



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
STEEL GIRDER BEARING PLATE WELDING PROCEDURE SPECIFICATION (WPS)
AWS D1.5 : 2008

Specifications & Codes: **NCDOT Standard Specifications/AASHTO/AWS D1.5:2008, Section 2, 5 and 12**

Material Specifications: **ASTM A-36, A572, (A709-36, 50), (M270-GR250, 345) Unlimited Thickness**

Welding Process: **SMAW** Manual or Semi- Automatic or Automatic: **Manual**

Filler Metal Specification: **AWS A5.1** Classification: **E-7018**

Manufacturer: **NCDOT Approved Electrodes** Single or Multiple Pass: **both** Position of Weld: **Flat and Horizontal**

Welding Current: **DC** Polarity: **Positive** Progression: **N/A**

Root Treatment: **N/A**

Preheat Temp: **100° minimum** Interpass: **500° maximum** Post Heat: **N/A**

Pass Num.	Electrode Size	Welding Current Amperes	Welding Current Volts	Travel Speed		Joint Details
All	1/8" 5/32" 3/16"	90-140 150-220 200-275	20-23 21-24 21-24	6-9 ipm 6-10 ipm 6-11 ipm		SEE ATTACHMENT

PREHEAT	
Thickness	Temp.
Up to 3/4"	100°
Over 3/4" to 1 1/2"	100°
Over 1 1/2" to 2 1/2"	150°
Over 2 1/2"	225°

COMMENTS:

Remove all coating, rust, dirt and mill scale within one inch of the area to be welded prior to fit-up. Remove all slag, spatter and weld discontinuities between passes. Clean the completed weld of all debris, slag and spatter.

Care shall be taken to not exceed 250° in the proximity of the Elastomeric Bearing material.

WPS Description: **Steel Girder Bearing Plate**

WPS #: **080708002**

Revision #: **1**

Written By: **Randy Dempsey, CWI/CWE, Transportation Technician IV**

Signature: Randy Dempsey

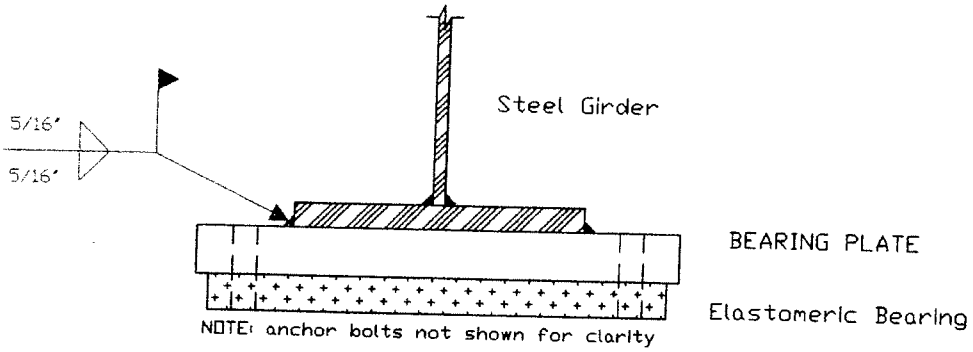
Authorized By: **Steve Walton, Metals Engineer**

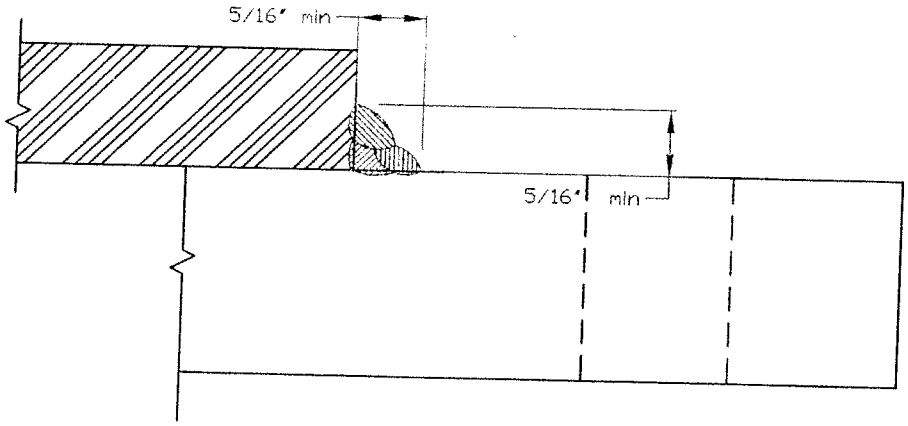
Signature:

NCDOT MATERIALS & TESTS UNIT (STEEL SECTION)

RANDY D. DEMPSEY
CWI 08051811
EXP. 05/01/11

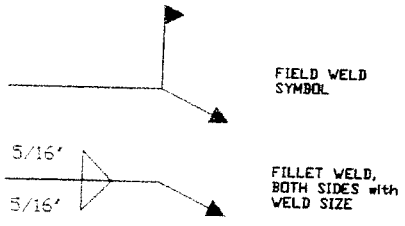
WPS STEEL GIRDER BEARING PLATE 080708002 R1
JOINT DETAIL ATTACHMENT





STEEL GIRDER BEARING PLATE DETAILS

Weld Symbol definitions per AWS A2.4:2007



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
CONCRETE GIRDER SOLE PLATE WELDING PROCEDURE SPECIFICATION (WPS)
AWS D1.5 : 2008

Specifications & Codes: **NCDOT Standard Specifications/AASHTO/AWS D1.5:2008, Section 2, 5 and 12**

Material Specifications: **ASTM A-36, A572, (A709-36, 50), (M270-GR250, 345) Unlimited Thickness**

Welding Process: **SMAW** Manual or Semi- Automatic or Automatic: **Manual**

Filler Metal Specification: **AWS A5.1** Classification: **E-7018**

Manufacturer: **NCDOT Approved Electrodes** Single or Multiple Pass: **both** Position of Weld: **Flat and Horizontal**

Welding Current: **DC** Polarity: **Positive** Progression: **N/A**

Root Treatment: **N/A**

Preheat Temp: **100° minimum** Interpass: **500° maximum** Post Heat: **N/A**

Pass Num.	Electrode Size	Welding Current Amperes	Welding Current Volts	Travel Speed		Joint Details
All	1/8"	90-140	20-23	6-9 ipm		SEE ATTACHMENT
	5/32"	150-220	21-24	6-10 ipm		
	3/16"	200-275	21-24	6-11 ipm		

PREHEAT	
Thickness	Temp.
Up to 3/4"	100°
Over 3/4" to 1 1/2"	100°
Over 1 1/2" to 2 1/2"	150°
Over 2 1/2"	225°

COMMENTS:

Remove all coating, rust, dirt and mill scale within one inch of the area to be welded prior to fit-up. Remove all slag, spatter and weld discontinuities between passes. Clean the completed weld of all debris, slag and spatter.

Care shall be taken to not exceed 250° in the proximity of the Elastomeric Bearing material and 300° in the proximity of the concrete.

WPS Description: **Concrete Girder Sole Plate**

WPS #: **082508004**

Revision #: **1**

Written By: **Randy Dempsey, CWI/CWE, TT IV**

Signature: Randy Dempsey

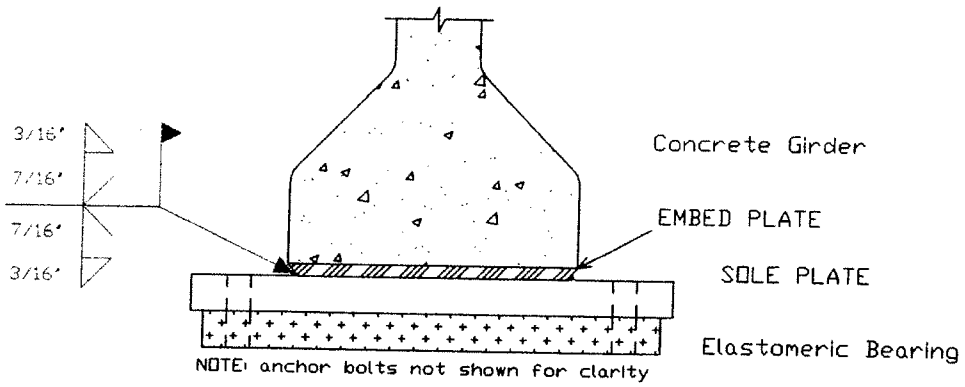
Authorized By: **Steve Walton, Metals Engineer**

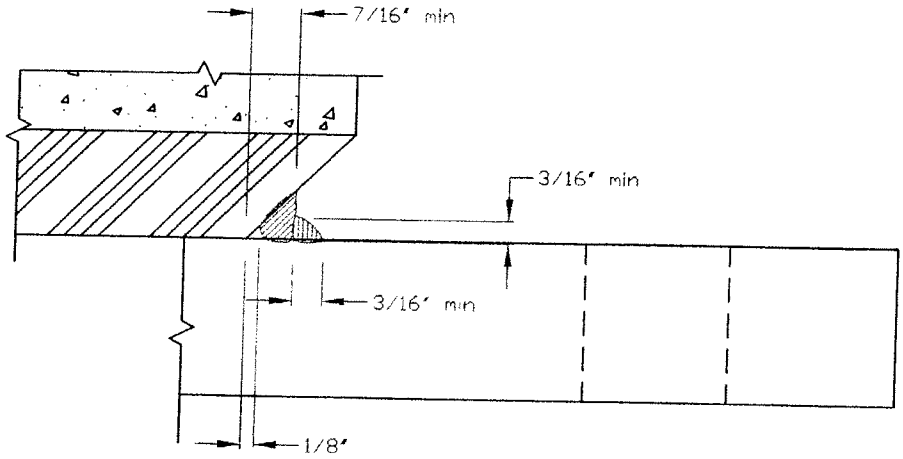
Signature:

NCDOT MATERIALS & TESTS UNIT (STEEL SECTION)

RANDY D. DEMPSEY
CWI 03051811
QC1 EXP. 05/01/11

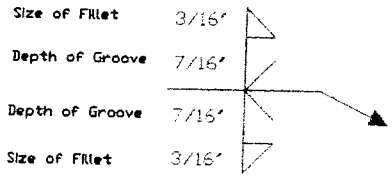
WPS CONCRETE GIRDER SOLE PLATE 082508004 R1
JOINT DETAIL ATTACHMENT





CONCRETE GIRDER SOLE PLATE DETAILS

Weld Symbol definitions per AWS A2.4:2007



SC DEPARTMENT OF TRANSPORTATION MENTOR PROTOGÉ PROGRAM

MPP

MENTOR PROTÉGÉ PROGRAM

Table of Contents

South Carolina Department of Transportation

The South Carolina Department of Transportation (SCDOT) has initiated a Mentor Protégé Program for federal-aided and state-funded highway projects. The Mentor Protégé Program is a purposeful undertaking in line with SCDOT's Strategic Plan initiative to conserve resources.

This is an excellent program that pairs a successful contractor/service provider experienced and familiar with SCDOT policies and practices with a Disadvantaged Business Enterprise (DBE) seeking to become a competitive, proficient resource for SCDOT contracts. By promoting the practices and performance of the more established prime contractor who provides consultation and guidance to DBEs, SCDOT will continue to meet federal guidelines for the support of DBE firms and gain an avenue to assist with building relationships to enhance contract performance.

It is exciting to initiate a service that will advance the economic development of South Carolina and eventually benefit the goal of increasing the number of women-owned and minority-owned contractors performing on SCDOT projects. We believe that transportation stakeholders, especially the traveling public, will benefit from the Mentor Protégé Program.

We thank you for your participation and commitment in ensuring the accomplishment of the program's goals and objectives. By instituting a method to link businesses certified under the South Carolina Unified Certification Program (UCP) with flourishing professional service providers and general contractors who contract with the SCDOT on highway design/engineering and construction projects, the Mentor Protégé Program will build a more effective, competitive and diverse pool of contractors.

H. B. Limehouse, Jr.
Secretary of Transportation
South Carolina Department of Transportation

Robert L. Lee
South Carolina - Division Administrator
Federal Highway Administration

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DBE Supportive Services Program
Mentor-Protégé Program

Purpose:

The purpose of the Mentor-Protégé Program (MPP) is to establish a link between businesses certified under the South Carolina Unified Certification Program (UCP), successful professional service providers, and general contractors who contract with the South Carolina Department of Transportation (SCDOT) on highway design/engineering and construction projects. The program is sponsored by SCDOT in coordination with the Federal Highway Administration (FHWA) and is designed to build a more effective, competitive and diverse pool of contractors capable of bidding on future projects.

Objectives:

The objectives of the Mentor-Protégé Program include:

1. Promoting the development of business management and technical skills for certified Disadvantaged Business Enterprises (DBEs) to compete more successfully.
2. Developing an effective method for engineering consultants, general contractors and subcontractors who desire participation in the SCDOT Mentor Protégé Program (MPP) and helping certified DBEs to acquire greater access to business support systems that facilitate growth and development.
3. Identifying appropriate construction projects that support business partnerships and foster cooperative, compatible relationships.
4. Establishing review sessions with Mentors and Protégés to access and monitor the progress of the Protégés toward their achievement of the Program goals.

Scope:

The program is designed to allow the Mentor firm to provide the Protégé with guidance, technical support as well as the benefit of the Mentor's expertise and experience in:

- Strategic Planning
- Marketing and Business Development
- Financial Management
- Contract Procurement
- Purchasing/Leasing
- Bid Preparation and Procedures
- Business Management
- Personnel Management
- Operational Management

The Program will be conducted over a period no longer than (twenty four months) during which time, the Mentor-Protégé team will identify strategies for accelerating growth, securing resources and entering target markets. A final report documenting "lessons learned" by both the Mentor and Protégé will be submitted to SCDOT and FHWA.

At the end of the program, the Protégé should be empowered to grow and thrive as a successful growing business.

Methodology:

The Mentor Protégé Program (MPP) will be introduced through a series of public informational meetings and a carefully planned advertisement initiative that will explain the intent and purpose of the program, along with a list of the requirements. An informational packet will be distributed to professional service providers and contractors who perform design, engineering, and other professional and construction services on SCDOT projects and firms certified with the South Carolina UCP.

An orientation/overview session will be held to review the key components of the MPP and solicit potential mentors and protégés. Based upon the criteria established, the Office of Busi-

ness Development and Special Programs, along with Construction, Pre-construction and Capital Improvements offices will determine which firms will be recommended as mentors and protégés. An application list will be maintained by the Office of Business Development and Special Programs.

SCDOT will identify potential projects for MPP relationships and will solicit proposals from professional service providers and contractors. A Memorandum of Understanding will be developed by SCDOT, the mentor and the protégé outlining the responsibilities of each entity and the monitoring requirements established for participation in the program.

The MPP relationship will have periodic reviews to ascertain the progress of the relationship and consider any further assistance SCDOT may be able to provide. Upon completion of the Mentor-Protégé relationship, a final review will be conducted to evaluate the goals and objectives established for the MPP.

Mentor Requirements:

The Mentor must submit the following:

1. A brief outline of the type of assistance, services and/or resources it will provide to the Protégé and describe how this assistance will benefit the Protégé.
2. Information that demonstrates the firm's ability to provide management and technical assistance to the Protégé.
3. Assurance of a solid financial foundation and in good-standing with state and federal agencies, and maintaining a minimum CPS (Contractor Performance Score) score of 75 or above.

Protégé Requirements:

The Protégé must submit the following:

1. Complete the application forms and agree to the Program requirements.
2. Complete a company assessment and business plan, which includes a marketing plan prior to the implementation of the Mentor-Protégé Team.
3. Provide a written description of the anticipated benefits that will be gained from the relationship with the Mentor firm.
4. Become pre-qualified as a prime bidder with SCDOT.

The Mentor-Protégé team will identify areas for improvement; set targets for improvements; and establish deadlines to accomplish the goals and objectives of the MPP team.

SCDOT Participation:

The South Carolina Department of Transportation will provide support to the Mentor Protégé Program as follows:

1. Host periodic networking session for Mentors and Protégés.
2. Review all Mentor Protégé applications and announce the firms that are approved for the Mentor Protégé program.
3. Facilitate a "Partnering Session" with the Mentor and Protégé.
4. Identify projects that are potentially feasible for mentor protégé relationships.
5. Conduct periodic reviews with the Mentor and/or Protégé to establish the status of the program.

Deliverables:

1. Memorandum of Understanding

The Department and Mentor will execute a Memorandum of Understanding, and each party will identify the resources allocated to the MPP. The MOU must be signed by authorized representatives and will be retained on file.

2. Action Plan

The Mentor-Protégé team will develop an action plan outlining the goals and objectives of the MPP relationship, along with measurable statements of desired outcome. The action plan will identify the roles and responsibilities of the Mentor, the Protégé and SCDOT. Also, review inter-

vals for the MPP relationship and target dates will be established. The action plan will serve as a contract agreement between the Mentor and the Protégé and this document will be legally binding. The action plan must be signed by an authorized representative from each entity prior to the implementation of the Mentor Protégé relationship.

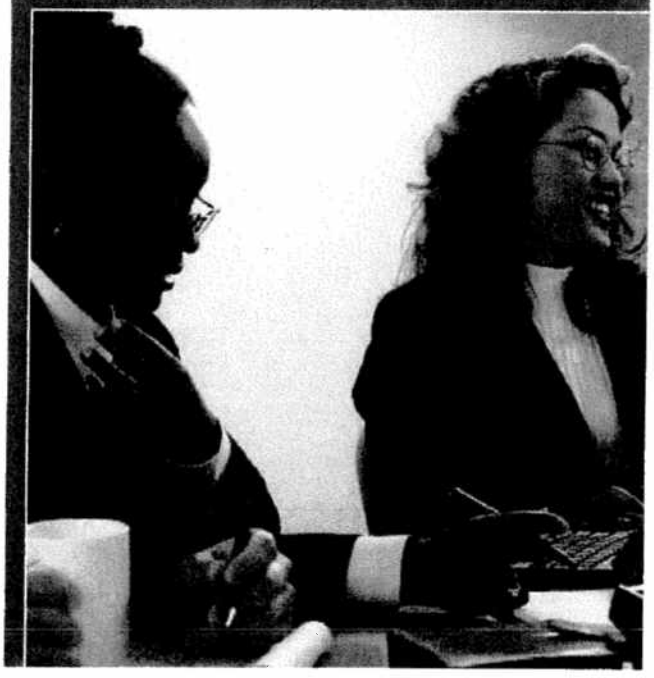
3. Monitoring and Reporting

SCDOT will monitor the progress of the Mentor-Protégé relationship and request information for periodic status reports. The Department may require representatives of the Mentor and/or Protégé to provide verbal and written intermediate reports of the MPP. A final report will be submitted prior to the termination of the MPP relationship and shall be developed with narratives from all parties including input/data regarding major accomplishments/challenges for the program.

Incentives for the Mentor:

The South Carolina Department of Transportation (SCDOT) has established an incentive program for mentors who desire to participate in the MPP program. For construction projects that are identified as Mentor Protégé opportunities, the Mentor will be eligible for compensation as part of the contract by submitting a line item for costs associated with the MPP. However, this amount will not be counted against the bid amount.

For professional services and construction design-build contracts, SCDOT will count an acceptable MPP relationship toward the percentage value of the DBE utilization. This will be considered in conjunction with the other points that will count in the consultant's final ranking.



Please complete the appropriate form and mail to:
ATT: SCDOT Mentor Protégé Program, 955 Park St. Ste 213, PO Box 191, Columbia, SC 29202-0191 or fax to (803) 737-4681

APPENDIX I

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
Mentor-Protégé Program
MENTOR INTEREST APPLICATION

Name of firm: _____

Address: _____

City: _____ County: _____ State: _____ Zip: _____

Telephone: (_____) _____ Fax: (_____) _____

Email: _____

Website: _____

Pre-qualification #: _____ Current CPS score: _____

Please list areas that you would be interested in mentoring: (check all that apply)

- ☐ Strategic Planning
- ☐ Marketing & Business Dev.
- ☐ Financial Management
- ☐ Bid Preparation/Procedures
- ☐ Contract Procurement
- ☐ Purchasing/Leasing
- ☐ Personnel Management
- ☐ Operational Management
- ☐ Business Management
- ☐ Other: _____

APPENDIX II

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
Mentor-Protégé Program
PROTÉGÉ APPLICATION

Name of firm: _____

Address: _____

City: _____ County: _____ State: _____ Zip: _____

Telephone: (_____) _____ Fax: (_____) _____

Email: _____

Website: _____

DBE Certification #: _____ Pre-qualification #: _____

Please check the area(s) below that you would like mentoring assistance: (check all that apply)

- ☐ Strategic Planning
- ☐ Marketing & Business Dev.
- ☐ Financial Management
- ☐ Bid Preparation/Procedures
- ☐ Contract Procurement
- ☐ Purchasing/Leasing
- ☐ Personnel Management
- ☐ Operational Management
- ☐ Business Management
- ☐ Other: _____