REBAR SPECIALIST, INC.

FURNISHED AND INSTALLED

6880 NORTH BROADWAY, P.O. BOX 470367, ST. LOUIS, MO 63147
314-382-6900 FAX: 314-382-9919

Contractor: Vee Jay Date: 8/15/16 Job #

Project: Webster ISB List No.: By

Delivery Address: Sht. Of

Weight Ck'd.

Delivery Needed per

IWL Supports Mesh Miscellaneous

Ref. Drwg.: Revision Date:

Mat'l. For: DBS Formsavers

QTY	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	K	O
110	5	4'-0F/4'-0M				4'-0 Female			4'-0 Male					
					Lenton Coupler									

CLARIFY INTENT OF CONSTRUCTION:

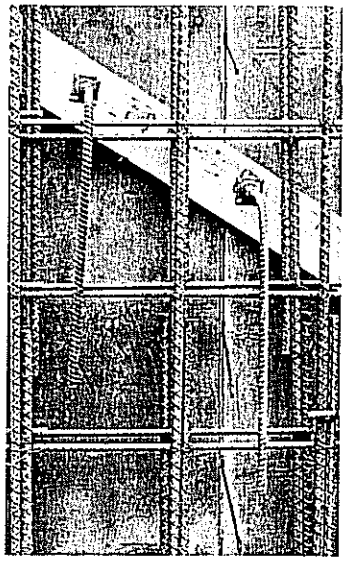
ORIGINAL DETAIL INDICATES FEMALE COUPLERS ON BOTH SIDES OF ANGLE AND THEN COUPLERS ARE WELDED TO VERTICAL LEG OF ANGLE. (WOULD REQUIRE 100 FEMALE BARS, EACH 4' LONG)

OPTION FOR ABOVE MATERIAL REQUIRES DRILLED HOLES IN THE BENT PLATE AT THE BAR LOCATIONS. EITHER - MALE END SET AND EXTENDED THRU BENT PLATE SUFFICIENT FOR FEMALE BAR TO ATTACH BEFORE SLAB INFILL POUR - OR - FEMALE END SLEEVED THRU HOLES WITH COUPLER EXPOSED ON SLAB INFILL SIDE. DRILLED HOLES WOULD BE SET 1/2" LOWER ON THE EAST & WEST SIDES. THESE ARE ACCEPTABLE ALTERNATES AT NO COST TO THE OWNER. (WOULD REQUIRE 50 FEMALE - 50 MALE, EACH 4' LONG)

PERIMETER OF OPENING IS APPROXIMATELY 50' - VERIFY QUANTITY

PUT THE BLUE RHINO IN CHARGE!
LENTON
REBAR SPLICING

LENTON® FORM SAVER™

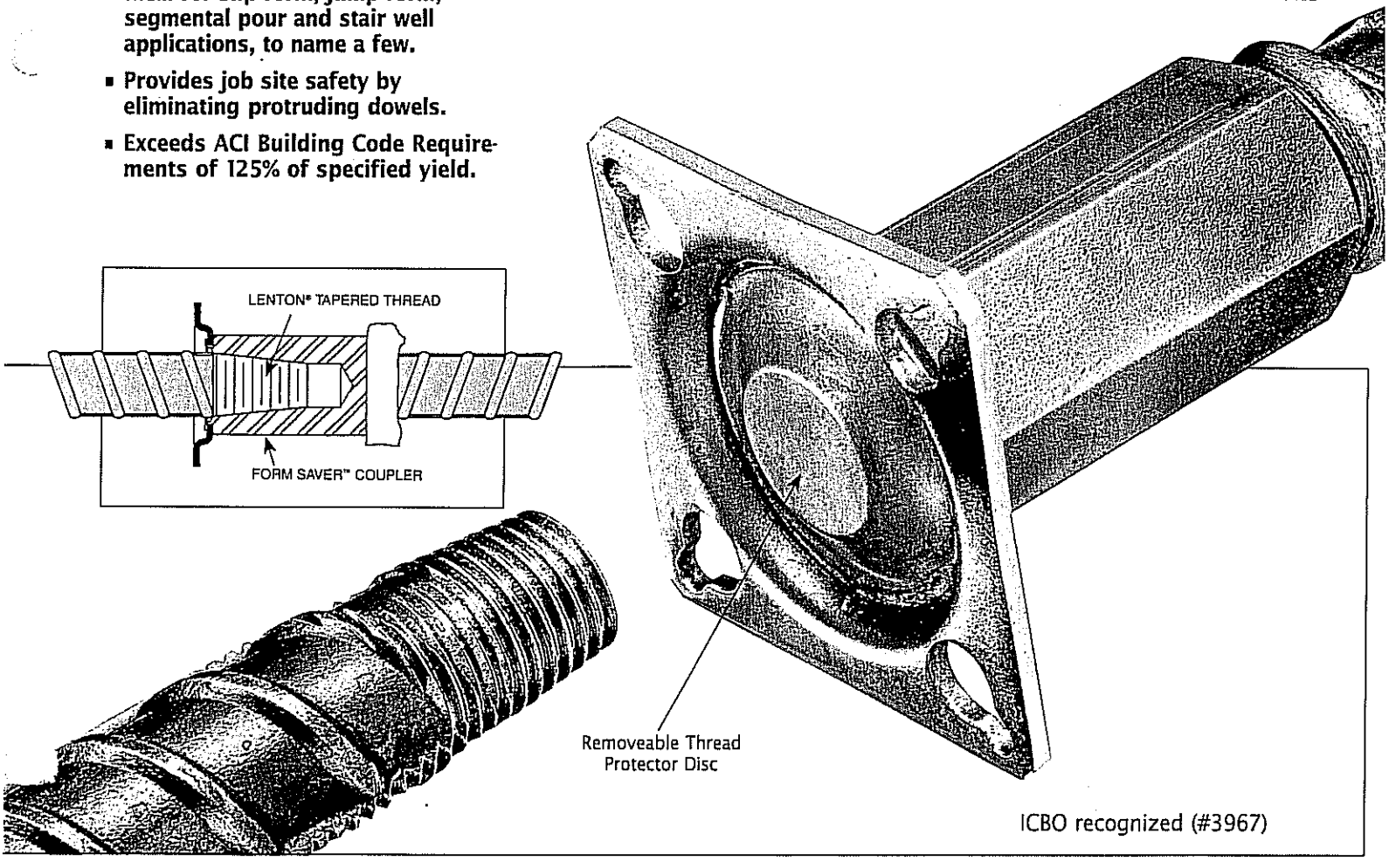


LENTON® Form Saver™ solves the age old problem of joining rebar through a concrete form. As an extension of the LENTON product line, Form Saver offers the LENTON advantages with additional features. All couplers are supplied pre-assembled to the rebar with built in internal coupler thread protection to eliminate concrete paste contamination. The plate designed to mount the coupler assembly is pre-attached and features keyed holes to ease attachment to the form.

- **Quality assurance tensile testing on every lot of 100 during production.**
- **Ideal for slip form, jump form, segmental pour and stair well applications, to name a few.**
- **Provides job site safety by eliminating protruding dowels.**
- **Exceeds ACI Building Code Requirements of 125% of specified yield.**

The system eliminates:

- The need to cut holes in expensive form work;
- Questionable condition of "bent and rebent" rebar;
- Bars breaking during straightening;
- Specifying Grade 40 rebar for the application.



ICBO recognized (#3967)

Project References

From simple commercial buildings to complex structures, the LENTON® FORM SAVER system is used in a wide variety of projects.

Partial List:

20th Century Tower	Kansas City, MO
Adelphia Coliseum	Nashville, TN
Bally's Casino Parking Garage	Atlantic City, NJ
Central Artery	Boston, MA
Caesars Palace Parking Structure	Las Vegas, NV
Chesapeake Bay Bridge	Annapolis, MD
Cleveland Browns Stadium	Cleveland, OH
Dallas-Fort Worth Airport Parking Garage	Ft. Worth, TX
FAA Control Tower	Denver, CO
Florida Panthers Arena	Sunrise, FL
Hard Rock Hotel & Casino	Ft. Lauderdale, FL
I44 Bridge Canadian River	Oklahoma City, OK
Imperial Palace Casino	Biloxi, MS
Intel	Hillsboro, OR
Island Tower Condo	Pensacola, FL
Jacobs Field	Cleveland, OH
LA Subway Station	North Hollywood, CA
Madison Financial	Seattle, WA
Micron	Salt Lake City, UT
Motorola	Austin, TX
Ohio Stadium Ohio State University	Columbus, OH
Paris Hotel and Parking Structure	Las Vegas, NV
Portland Air Traffic Control Tower	Portland, OR
Portland Tunnel	Portland, OR
Salt Lake City Air Traffic Control Tower	Salt Lake City, UT
Scott Air Force Base	Bellevill, IL
SF Bay Bridge	San Francisco, CA
SF Courthouse	San Francisco, CA
SF International Airport	San Francisco, CA
St. Louis ATCT	St. Louis, MO
Turnberry Condominiums	Las Vegas, NV
WWII Memorial	Washington DC

LENTON®

LENTON® FORM SAVER
The easiest, most efficient dowel on the market today

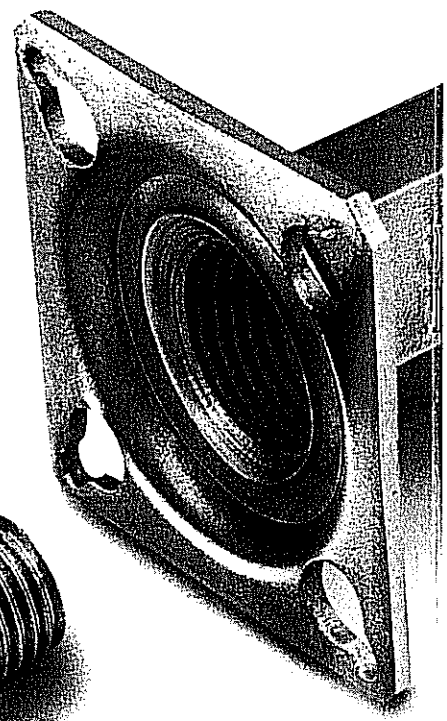
LENTON® FORM SAVER dowel bar assemblies provide continuity and structural integrity to reinforced concrete construction in segmental pour applications. The LENTON FORM SAVER is designed with our unique LENTON tapered thread system, factory installed thread protectors, and durable mounting plates for easy attachment to forms. The taper threaded design, like the complete family of LENTON couplers, provides load path continuity in tension, compression and stress reversal applications.

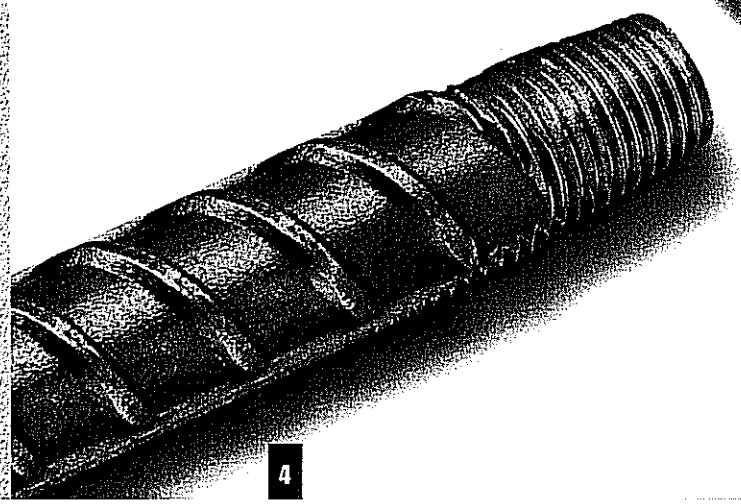
LENTON FORM SAVER mechanical splices provide superior performance well beyond the yield strength of the reinforcing bar. In fact, LENTON FORM SAVERS exceed the requirements for Type 1 and Type 2, and are recognized under ICBO report ER3967.

FORM SAVER is recognized by or meets the standards of:

- ICBO-ES Report #3967
- ACI 318 Section 12.14.3.2 and 21.2.6
- UBC Section 1912.14.3.4 and 1921.2.6.1.2 (1997)
- IBC 2003
- A.A.S.H.T.O. Section 8.32.2.3
- U.S. Army Corp of Engineers #CW03210
- State Departments of Transportation Including:

California	New York
Florida	North Carolina
Georgia	Texas
Illinois	Pennsylvania
Washington	Ohio
Oregon	Massachusetts





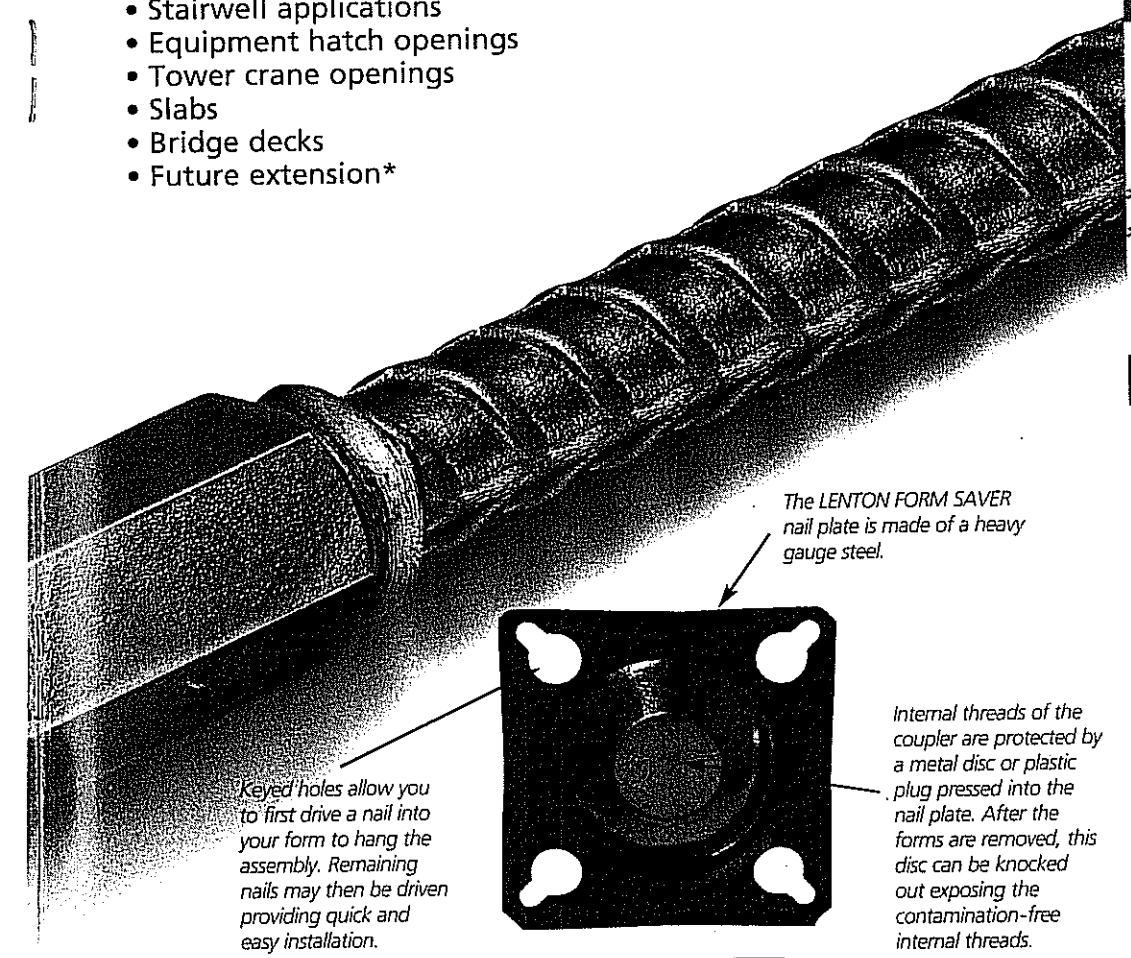
bar substitute

LENTON® FORM SAVER Benefits:

LENTON FORM SAVER splices outperform dowel bars because of their ability to develop strength requirements independent of concrete cover. Their ease of installation, consistent performance, and durability add value and integrity to your structure.

LENTON® FORM SAVERS are ideal for:

- Slip and jump forming
- Segmental pours
- Stairwell applications
- Equipment hatch openings
- Tower crane openings
- Slabs
- Bridge decks
- Future extension*



The LENTON FORM SAVER nail plate is made of a heavy gauge steel.

Keyed holes allow you to first drive a nail into your form to hang the assembly. Remaining nails may then be driven providing quick and easy installation.

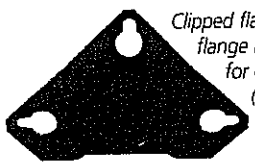
Internal threads of the coupler are protected by a metal disc or plastic plug pressed into the nail plate. After the forms are removed, this disc can be knocked out exposing the contamination-free internal threads.

Nail Plate Dimensions:	
#4 - #8	2-1/4" x 2-1/4"
#9 - #11	2-1/2" x 2-1/2"

LENTON FORM SAVER is also available in epoxy and hot-dipped galvanized finishes.

Specifications:

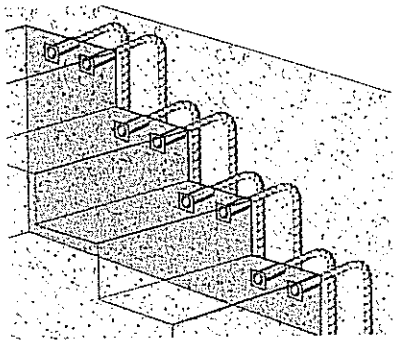
Epoxy:	ASTM A775
Hot Dipped Galvanized:	ASTM A767**



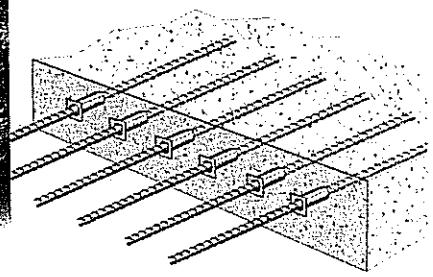
Clipped flange or double clipped flange available (epoxy shown) for concrete cover concerns (sizes #4-7).

* *For "long-term" protection, ERICO recommends our plastic taper threaded plugs.*
** *Contact ERICO for availability of hot dip galvanized.*

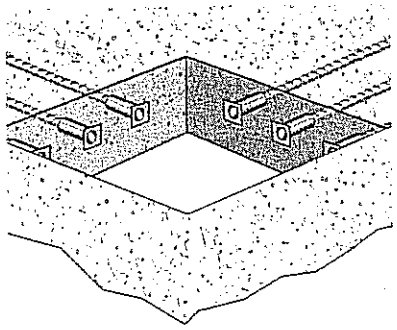
APPLICATIONS



Stairwell



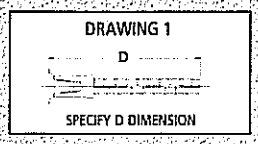
Highway/Bridge Slabs

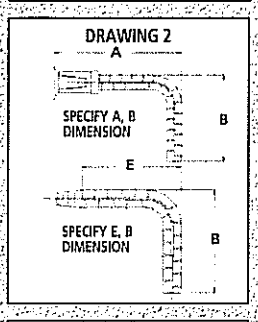


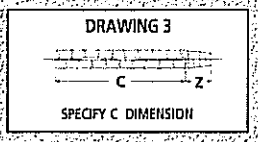
Equipment and Crane Openings

ERICO®

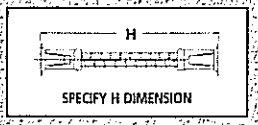
LENTON® FORM SAVERS

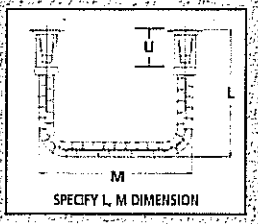


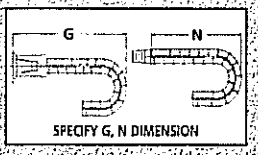




Other configurations available as shown. Contact ERICO.







LENTON® FORM SAVER Product Line

LENTON FORM SAVER is available in sizes #4 - #11 (Metric sizes-12 mm through 36 mm) factory standard sizes (lengths) or in custom lengths. Unique bend configurations are also available. When ordering, please inquire about size availability per line item. LENTON FORM SAVER is available nationwide through our network of remote manufacturing centers, assuring prompt delivery.

How to Order by Part Number

FS | SIZE | STYLE | LENGTH | X | LENGTH | E

- Epoxy – (optional)
- In Inches of "B" – (optional)
- Indicates Bent Rebar – (optional)
- In Inches of "A", "C" or "D"
- F indicates Coupler/Rebar
  M Indicates Threaded Rebar
  (other styles available upon request)
- Rebar Size
- Attached Nailer Plate FORM SAVER

EXAMPLE:

FS4F20	#4 Coupler/Rebar with "D" Length of "20" (see drawing 1)
FS5F6X10	#5 Coupler/Rebar with "A" Length of "6" with "B" Length of "10"(see drawing 2)
FS7M36	#7 Threaded/Rebar with "C" Length of "36" (see drawing 3)

LENTON® FORM SAVER

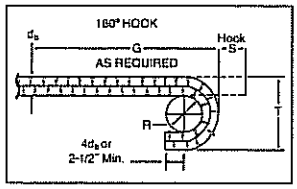
ASTM (in lb)	REBAR DESIGNATION Metric (mm)	Canada	Soft Metric	TAPER THREADED REBAR (Male) PART NO	LENGTH "C" (in)	mm	COUPLER/REBAR ASSEMBLY (Female) PART NO	LENGTH "D" (in)	mm
4	12 mm	10M	13	FS4M24	24	610	FS4F20	20	508
				FS4M36	36	914	FS4F24	24	610
5	16 mm	15M	16	FS5M24	24	610	FS5F24	24	610
				FS5M30	30	762	FS5F30	30	762
				FS5M36	36	914	FS5F36	36	914
6	20 mm	20M	19	FS6M36	36	914	FS6F24	24	610
							FS6F36	36	914
7	22 mm	—	22	FS7M36	36	914	FS7F36	36	914
				FS7M48	48	1219			
8	25 mm	25M	25	FS8M48	48	1219	FS8F52	52	1321
9	28 mm	30M	29	FS9M48	48	1219	FS9F52	52	1321
10	32 mm	—	32	FS10M60	60	1524	FS10F64	64	1626
11	36 mm	35M	36	FS11M60	60	1524	FS11F64	64	1626

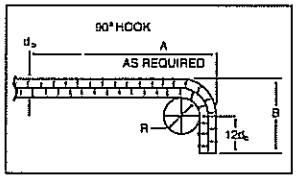
[1]Includes Rebar Thread Protector.
[2]Includes Coupler Thread Protector.

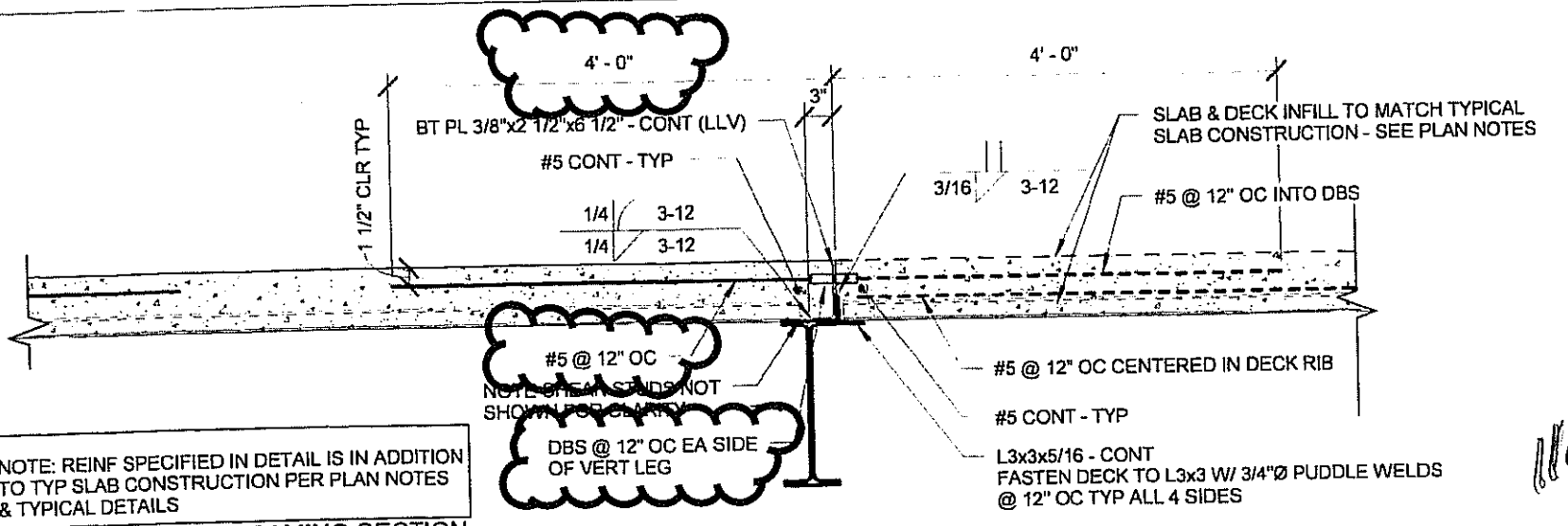
Standard Hooks and Bends

ASTM (in lb)	REBAR DESIGNATION Metric (mm)	Canada	Soft Metric	PIN DIAMETER R (in)	mm	MINIMUM BEND A (in)	mm	180° HOOKS[1] S (in)	mm	T (in)	mm	90° HOOKS B (in)	mm	BAR ENGAGEMENT Z (in)	mm	COUPLER LENGTH U (in)	mm
4	12 mm	10M	13	3	76	4-1/2	114	6	152	4	102	8	203	9/16	14	1-1/2	38
5	16 mm	15M	16	3-3/4	95	5-1/2	140	7	178	5	127	10	254	7/8	22	2	51
6	20 mm	20M	19	4-1/2	114	6-1/2	165	8	203	6	152	12	305	1-1/8	29	2-1/2	64
7	22 mm	—	22	5-1/4	133	7-1/4	184	10	254	7	178	14	356	1-1/4	32	2-3/4	70
8	25 mm	25M	25	6	152	10-1/2	267	11	279	8	203	16	406	1-3/8	35	3-1/2	89
9	28 mm	30M	29	9-1/2	241	12-1/4	311	15	381	11-3/4	298	19	483	1-1/2	38	3-3/4	95
10	32 mm	—	32	10-3/4	273	13-3/4	349	17	432	13-1/4	337	22	559	1-9/16	40	3-15/16	100
11	36 mm	35M	36	12	305	14-3/4	375	19	483	14-3/4	375	24	610	1-11/16	43	4-1/8	105

*ACI 318 Chapter 7.1



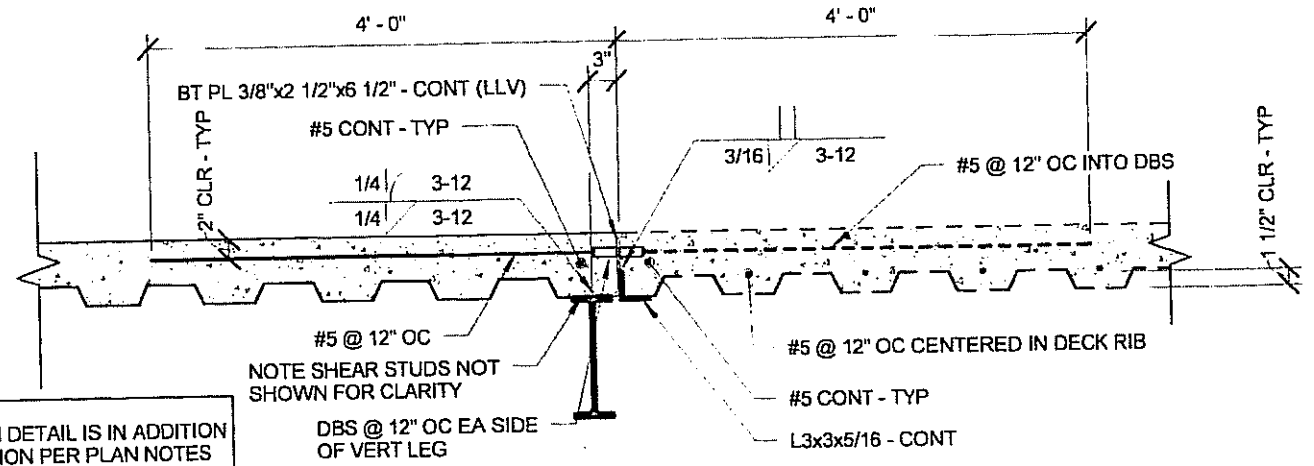




NOTE: REINF SPECIFIED IN DETAIL IS IN ADDITION TO TYP SLAB CONSTRUCTION PER PLAN NOTES & TYPICAL DETAILS

(14) FRAMING SECTION
3/4" = 1'-0"

110 EA. DBS's



NOTE: REINF SPECIFIED IN DETAIL IS IN ADDITION TO TYP SLAB CONSTRUCTION PER PLAN NOTES & TYPICAL DETAILS

(15) FRAMING SECTION
3/4" = 1'-0"

CANNONDESIGN

SUBMITTAL IDENTIFICATION SHEET

To be completed by Contractor/CM

WEBSTER UNIVERSITY ISB
PROJECT NAME

8274 BIG BEND BLVD
ADDRESS

NUMBER

WEBSTER UNIVERSITY
OWNER

CANNON DESIGN
ARCHITECT / ENGINEER

Joe Voypick
SUBMITTED BY

033000-027
CONTRACTOR / CM SUBMITTAL NO.

CANNON DESIGN SUBMITTAL NO.

DRAWING / DETAIL REFERENCE

033000
SPECIFICATION SECTION / PARAGRAPH

Vee Jay Cement
MANUFACTURER / SUPPLIER

ITEM / PRODUCT ID

REQUIRED DATE

PRIORITY

◯ CRITICAL

ITEM BEING SUBMITTED (check only one)

- ◉ Shop Drawings
- ◯ Samples (_____ copies)
- ◯ LEED Submittal
- ◯ Certification / Qualifications
- ◯ Record Documents
- ◯ Product Data
- ◯ Coordination Drawing
- ◯ Calculations
- ◯ Schedules
- ◯ O&M Manuals
- ◯ Other _____

ITEM BEING SUBMITTED FOR (check only one)

- ◉ Action
- ◯ Information Only
- ◯ Record

REMARKS OR DEVIATIONS

CONTRACTOR / CM CERTIFICATION
(SUBMITTALS NOT CERTIFIED WILL BE RETURNED WITHOUT REVIEW)

PARIC

PARIC CORPORATION
SUBMITTAL STAMP

THIS SHOP DRAWING HAS BEEN REVIEWED BY PARIC CORPORATION

Subcontractor remains responsible for dimensions, quantities, coordination with other trades and compliance with contract documents.

By:
Devin D. Gates

Joe Voypick — REVIEWED BY
8/18/16 — DATE

To be completed by Reviewer

03 3000-027
CANNON DESIGN SUBMITTAL NUMBER

8/19/16
RECEIVED DATE

- ◯ A. No Exceptions Taken
  No further review of submittal is required.
- ◯ B. Make Corrections Noted
  Incorporate corrections in work; resubmission is not required.
- ◯ C. Revise and Resubmit
  Revise as noted, and resubmit for review.
- ◯ D. Rejected
  Submittal is not in compliance with Contract Documents; provide new submittal.
- ◯ E. For Record / Information Only
  Submittal was reviewed for Record / Information purposes only.
- ◯ F. Not Required for Review
  Submittal is not required by Contract Documents and has not been reviewed.

Review is for conformance with the design concept of this project and for general compliance with contract documents. Contractor is responsible for quantities, dimensions and compliance with contract documents and for information that pertains to fabrication processes, construction techniques and coordination of this work with all trades which will be affected thereby. This review is null and void if submittal deviates from contract documents and does not indicate or note deviations.

A/E COMMENTS ◯ See attached sheet(s) for additional comments

SHOP DRAWING / SUBMITTAL REVIEW

- ☐ NO EXCEPTION TAKEN
- ☒ EXCEPTIONS NOTED, RESUBMITTAL NOT REQUIRED
- ☐ REJECTED
- ☐ REVIEWED FOR INFORMATION ONLY
- ☐ REVISE AND RESUBMIT AS NOTED

Checking is only for general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. Any action shown is subject to the requirements of the plans and specifications. Contractor is responsible for: Dimensions which shall be confirmed and correlated at the job site, fabrication processes and techniques of the construction, coordination of his work with that of all other trades and the satisfactory performance of his work.

DAVID MASON & ASSOCIATES, INC.

REVIEW BY: JYW DATE: 08/22/2016

JILL WALKER / DMA — REVIEWED BY
08/22/2016 — DATE

77 Westport Plaza
Suite 250
St. Louis, MO 63146

TRANSMITTAL

No. 15051-0190

Paric Corporation

PROJECT: 15051-Webster University Interdisciplinary Science Building

DATE: 08/18/2016

TO: Cannon Design
1100 Clark Ave
St Louis MO 63102

RE: DBS shops for slab reinforcement per addendum 1-8

ATTN: Kelvin Patel

JOB: 15051

WE ARE SENDING:	SUBMITTED FOR:	ACTION TAKEN:
☐ Shop Drawings	☑ Approval	☐ Approved as Submitted
☐ Letter	☐ Your Use	☐ Approved as Noted
☐ Prints	☐ As Requested	☐ Returned After Loan
☐ Change Order	☐ Review and Comment	☐ Resubmit
☐ Plans		☐ Submit
☐ Samples	**SENT VIA:**	☐ Returned
☐ Specifications	☐ Attached	☐ Returned for Corrections
☑ Other: Prodcut Data	☐ Separate Cover Via:	☐ Due Date:

Item	*Package*	*Code*	*Rev.*	*Copies*	*Date*	*Description*	*Status*
Submittal		033000-027	1		08/18/2016	DBS shops for slab reinforcement per addendum 1-8	Submitted

NOTES:

CC:

Signed: _____

Devin Gates