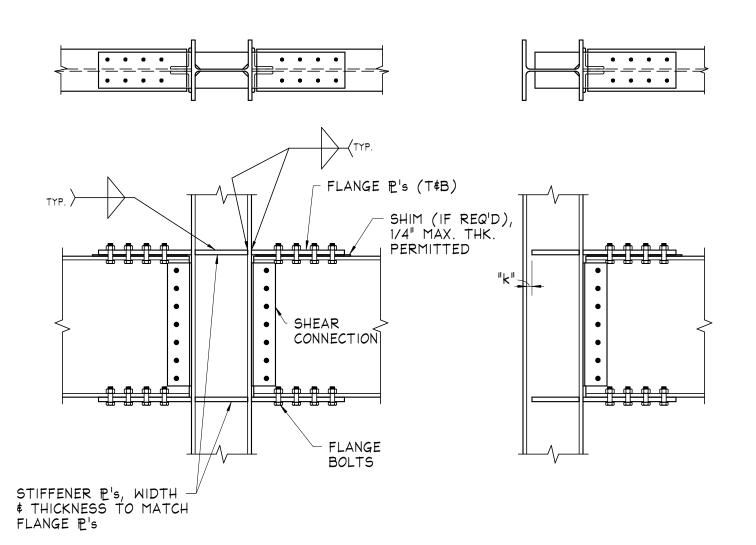


TYPICAL SLAB REINFORCING AT GIRDERS AND AT BEAMS/GIRDERS ALONG COLUMN LINES

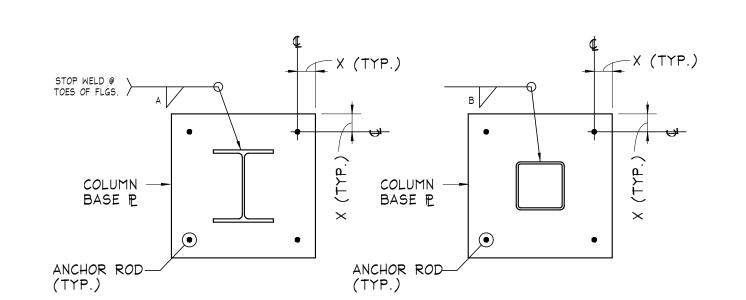
(FOR CONCRETE THICKNESS OVER COMPOSITE DECK NOT EXCEEDING 3 1/2")



TYPICAL BOLTED BEAM TO COLUMN FLANGE GRAVITY MOMENT CONNECTION

1) DETAILS SHOWN ARE NOT FULLY DESIGNED AND DETAILED AND ARE CONCEPTUAL IN NATURE. STEEL FABRICATOR'S ENGINEER TO FULLY DESIGN AND DETAIL MOMENT CONNECTIONS FOR FORCES SHOWN ON PLAN. THIS INCLUDES FLANGE PLATES, BOLTS AND WELDS. (IF NO FORCE IS SHOWN, DESIGN FOR FULL CAPACITY OF BEAM) 2) WELDS CAN BE SUBSTITUTED FOR BOLTS.

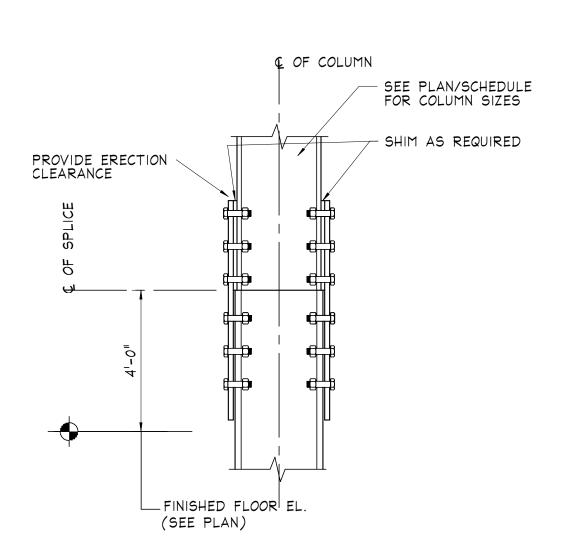
3) BOLTS SHALL BE ASTM A325/A490-SC, WITH STANDARD SIZE HOLES IN BEAM 4) STEEL FABRICATOR TO PROVIDE DECK SUPPORT AS REQUIRED.



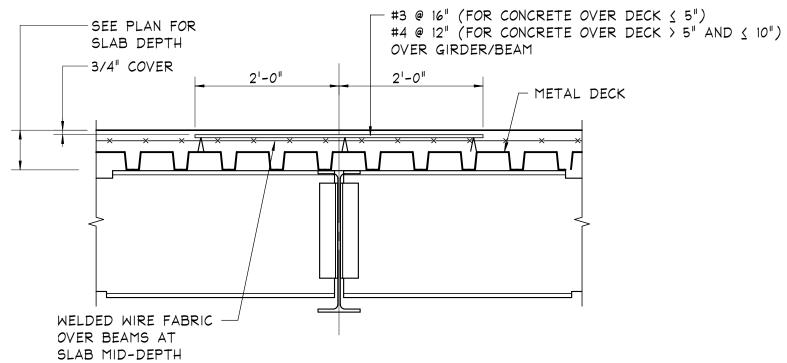
		MIN. PLATE WASHER		
ANCH. ROD DIA.	DIMENSION "X"	THICK.	SIZE	
3/4"	1 1/2"	1/4"	2"	
1 ^{II}	2 1/4"	3/8"	3"	
1 1/4"	2 1/2"	1/2"	3"	
1 1/2"	3"	1/2"	3 1/2"	
1 3/4"	3 1/4"	5/8"	4"	
2"	4"	3/4"	5"	
2 1/2"	4 1/2"	7/8"	5 1/2"	

COLUMN MARK	WELD SIZE (IN.) A B		
C1-C4	1/4		
C3A-C4A	5/16		
C5-C7	5/16		
C8, C10	1/4		
C9, C11		1/4	

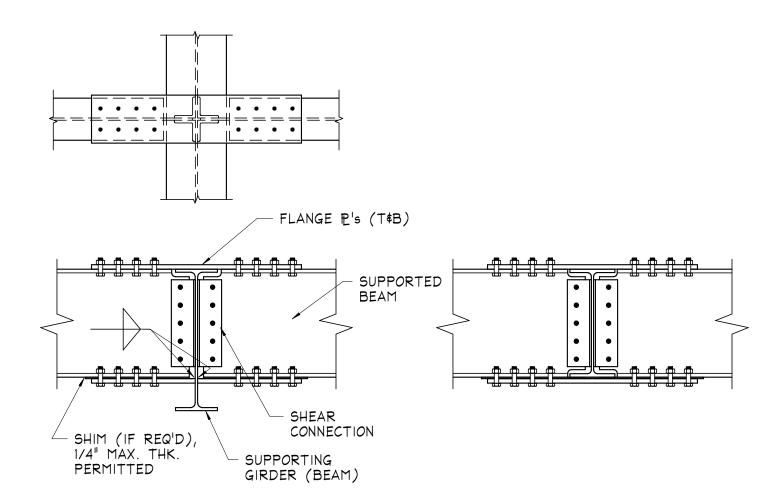
COLUMN BASE PLATE DETAIL (USE ONLY AT COLUMNS INDICATED)



TYPICAL COLUMN SPLICE DETAIL (COLUMNS WITH SAME DEPTH)



TYPICAL SLAB REINFORCING AT GIRDERS AND AT BEAMS/GIRDERS ALONG COLUMN LINES (FOR CONCRETE THICKNESS OVER COMPOSITE DECK EXCEEDING 3 1/2")



BEAMS DIFFERENT DEPTHS

48x6x1x0'-7" w/ $7/8"\phi$ BOLTS (LLH)

STEEL DETAILER NOTE: USE

THE MIN. GAGE POSSIBLE TO

LOCATE BOLTS IN VERT. LEG

FULL DEPTH -CONNECTION

CONNECTION, THIS DETAIL.

3) SEE OTHER SECTIONS, IF CAP P IS REQUIRED.

OF THIS ANGLE

 $\Delta 8 \times 4 \times 1 \times 0^{1} - 7^{\parallel} \omega / 7/8^{\parallel} \phi$ BOLTS (LLH)

(TOP, TYP. @

ROOF/TOP OF COLUMN)

(BOTT., TYP. @

ROOF/TOP OF COLUMN)

BEAMS SAME DEPTHS

TYPICAL BEAM TO GIRDER MOMENT CONNECTION - FIELD BOLTED

1) DETAILS SHOWN ARE NOT FULLY DESIGNED AND DETAILED AND ARE CONCEPTUAL IN NATURE. STEEL FABRICATOR'S ENGINEER TO FULLY DESIGN AND DETAIL MOMENT CONNECTIONS FOR FORCES SHOWN ON PLAN. THIS INCLUDES FLANGE PLATES, BOLTS AND WELDS. (IF NO FORCE IS SHOWN, DESIGN FOR FULL CAPACITY OF BEAM). 2) WELDS CAN BE SUBSTITUTED FOR BOLTS.

3) BOLTS SHALL BE ASTM A325/A490-SC, WITH STANDARD SIZE HOLES IN BEAM. 4) STEEL FABRICATOR TO PROVIDE DECK SUPPORT AS REQUIRED

ROOF/TOP OF COLUMN

<u>FLOOR</u>

TYPICAL BEAM/GIRDER @ COLUMN

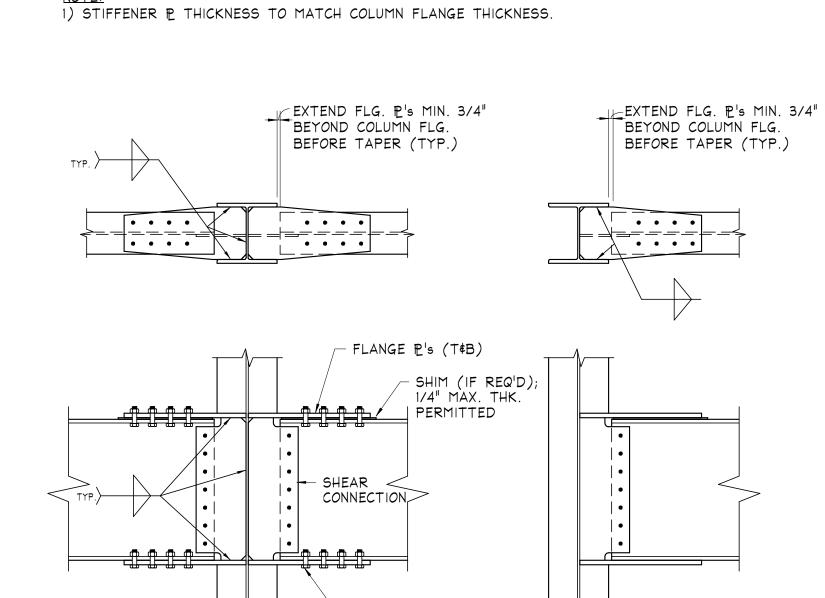
FLEXIBLE MOMENT CONNECTION

(TO BE USED @ ALL BEAM/GIRDER TO COLUMN CONNECTIONS.)

1) ALL BOLTS ARE TO BE 3/4" A325-N IN STANDARD HOLES, U.N.O.

2) AT HSS COLUMNS AND LOCATIONS WHERE THE FRAMING CONFIGURATION

DOES NOT ALLOW BOLTED CLIP ANGLES, USE BOLTED / WELDED FLANGE P



- TRANSFER → FITTED STIFF. P.,

COLUMN WEB PARALLEL

TO GIRDER WEB

BOTH SIDES

3/4" BASE P

ROOF/TOP OF COLUMN

FLOOR

1) SUBSTITUTE BOLTED / WELDED FLANGE P

NECESSARY DUE TO BOLTED CLIP 4

INTERFERENCE, OR AT HSS COLUMNS.

2) ALL BOLTS TO BE IN STANDARD SIZE HOLES.

3) SEE OTHER SECTIONS, IF CAP P IS REQUIRED.

CONNECTION TO COLUMN FLANGE ONLY WHERE

- FULL DEPTH

CONNECTION

TYP. AT FLR. A # TOP OF COL.

SHIM AS REQ'D.

TYP. @ BOTT. P

INTO COL FLG. / 1/4 /

FOR ALL 1/2" \$ 3/4" THICK SPECIFIED -

∆'s USE A 1/2" P. FOR ALL 1" THICK

SPECIFIED 4's USE 5/8" P. MATCH

ANGLES (TYP. AT BOTT. P INTO

INTO COL FLG. / 1/4

WIDTH TO THAT OF SPECIFIED

COLUMN FLANGE)

TYP. @ BOTT. F

FULL DEPTH

CONNECTION

-48x4x1x0'-7" w/ 7/8" ϕ BOLTS (LLH)

w/ W=4.5" \$ L=12.5" (SEE PLAN VIEW A)

(T\$B) (TYP. @ FLOORS)

\$ 1"Φ BOLTS (TOP)

SEE PLAN/SCHEDULE

- FULL DEPTH CONNECTION

FOR COLUMN SIZE

@ W24 BM PROVIDE 7/8" ₽

MIN. GAGE AS REQ'D. (TYP. @ BOTT. P.)

SHIM AS REQ'D.

w/ (4) BOLTS

COLUMN -

1" TYP.

FITTED STIFF. P.

BOTH SIDES

- TRANSFER

COLUMN WEB PERPENDICULAR

TO GIRDER WEB

1 1/2" MIN. BASE ₽

w/ (4) BOLTS

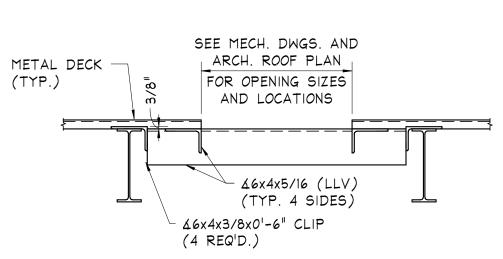
TYPICAL WF COLUMN CONNECTION TO TRANSFER GIRDER

TYPICAL BOLTED BEAM TO COLUMN WEB GRAVITY MOMENT CONNECTION

─ FLANGE

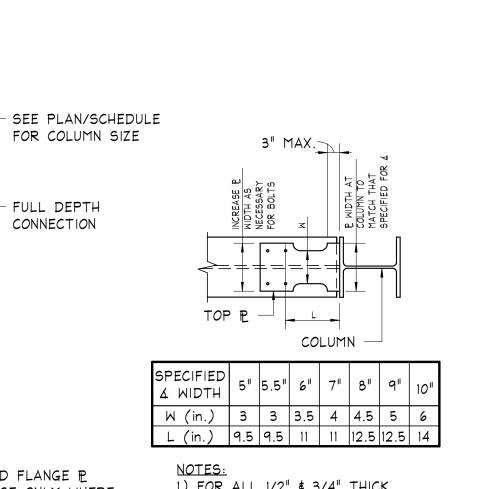
4) STEEL FABRICATOR TO PROVIDE DECK SUPPORT AS REQUIRED.

NOTES: 1) DETAILS SHOWN ARE NOT FULLY DESIGNED AND DETAILED AND ARE CONCEPTUAL IN NATURE. STEEL FABRICATOR'S ENGINEER TO FULLY DESIGN AND DETAIL MOMENT CONNECTIONS FOR FORCES SHOWN ON PLAN. THIS INCLUDES FLANGE PLATES, BOLTS AND WELDS. (IF NO FORCE IS SHOWN, DESIGN FOR FULL CAPACITY OF BEAM) 2) WELDS CAN BE SUBSTITUTED FOR BOLTS 3) BOLTS SHALL BE ASTM A325/A490-SC, WITH STANDARD SIZE HOLES IN BEAM.



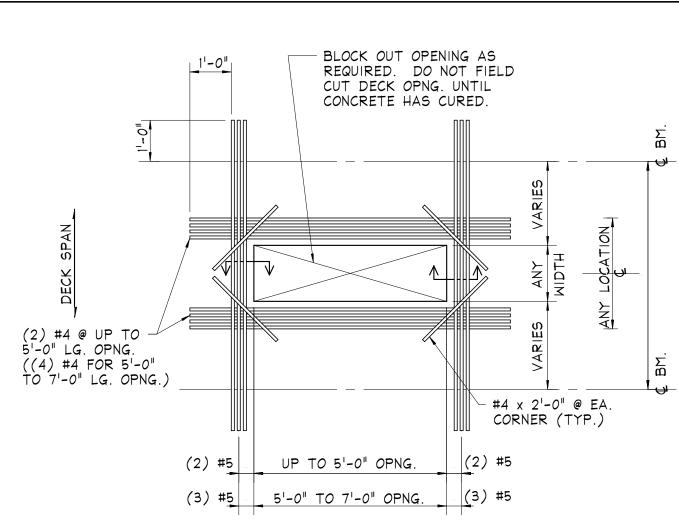
TYPICAL ROOF OPENING \$ RTU CURB SUPPORT DETAIL - MAXIMUM BEAM SPACING OF 6'-0"

1) PROVIDE AT PERIMETER OF ALL ROOFTOP MECHANICAL UNITS AND ROOF OPENINGS LARGER THAN 12" SQ. AS REQUIRED. 2) FOR OPENINGS LARGER THAN 6" UP TO 12", PROVIDE 2'-0"x2'-0"x0.071" STEEL P WELDED TO DECK, OR SCREWED w/ SHEET METAL SCREWS @ 6" o/c (PROVIDE 43x3x5/16 AT ROOF SUMPS).

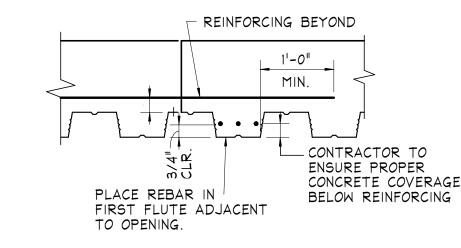


1) FOR ALL 1/2" \$ 3/4" THICK SPECIFIED 4's, USE A 1/2" P ω / (4) 7/8" ϕ BOLTS. 2) FOR ALL 1" THICK SPECIFIED Δ, USE A 5/8" P ω/ (4) 1"φ BOLTS.

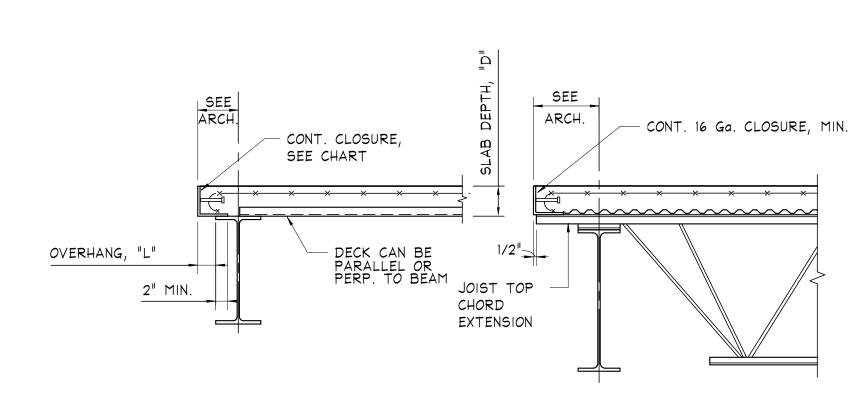
PLAN VIEW 'A' OF TOP PLATE



NOTE:
FOR OPENINGS LONGER THAN 7'-0" (PERPENDICULAR TO DECK SPAN) NOTIFY ENGINEER.



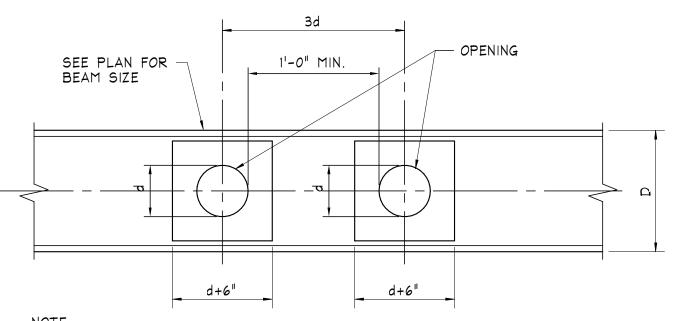
TYPICAL FLOOR OPENING REINFORCING DETAIL



TYPICAL SECTION @ INTERIOR SLAB EDGE

1) GAGE P OR BENT P PER CHART FOR SPECIFIC CONDITION. 2) AT LOCATIONS WHERE ITEMS (RAILING POST, METAL STUD, ETC.) ARE CONNECTED TO VERTICAL FACE OF CLOSURE P, PROVIDE MIN. 1/4" BENT P w/ 1/2" \$\phi x6" HEADED STUD @ 24" o/c. G.C. TO COORDINATE LOCATIONS. 3) PROVIDE AT ALL INTERIOR SLAB EDGES, U.N.O. 4) SEE SPECIFIC SECTIONS FOR ADDITIONAL REQUIREMENTS

EDGE CLOSURE CHART										
SLAB DEPTH "D"	OVERHANG "L"									
	<u> </u>	3" < L <u><</u> 5"	5" < L <u><</u> 9"	9" < L <u><</u> 12"	12" ⟨ L <u>⟨</u> 15"	15" 〈 L <u>〈</u> 18"				
<u> </u>	16 Ga.	14 Ga.	10 Ga.	1/4"	1/4"	5/16"				
4" < D ≤ 6"	16 Ga.	14 Ga.	10 Ga.	1/4"	1/4"	5/16"				
6" ⟨ D <u>⟨</u> 9"	12 Ga.	10 Ga.	10 Ga.	1/4"	1/4"	3/8"				



ALL HOLES IF POSSIBLE SHALL BE LOCATED IN THE MIDDLE THIRD OF SPAN. 1. IF THE OPENING IS IN THE MIDDLE THIRD OF SPAN AND: a) "d" IS 1/4 D OR SMALLER - NO REINFORCEMENT IS REQUIRED b) "d" IS LARGER THAN 1/4 D BUT SMALLER THAN 1/3 D -ADD WEB REINFORCING PLATE SAME THICKNESS ON ONE SIDE ONLY c) "d" IS LARGER THAN 1/3 D - CONTACT STRUCTURAL ENGINEER.

2. IF THE OPENINGS ARE LOCATED OUT OF THE MIDDLE THIRD OF THE SPAN AND: a) "d" IS 1/5 D OR SMALLER - NO REINFORCEMENT IS REQUIRED b) "d" IS LARGER THAN 1/5 D BUT SMALLER THAN 1/4 D -ADD WEB REINFORCING PLATE SAME THICKNESS ON ONE SIDE ONLY. c) "d" IS LARGER THAN 1/4 D - CONTACT STRUCTURAL ENGINEER.

TYPICAL DETAIL FOR OPENINGS IN WEB OF STEEL BEAMS

RIVERHOUSE AT Odette's 274 SOUTH RIVER ROAD NEW HOPE. PA 18938

OWNER/ OPERATOR: GATEWAY TO NEW HOPE, LLC 274 South River Road

New Hope, PA 18938

ARCHITECT STOKES ARCHITECTURE 2103 Sansom Street Philadelphia, PA 19103 tel: (215) 523-9190

INTERIOR DESIGNER BALONGUE DESIGN INC 707 Matsonford Road Villanova, PA 19085 tel: (610) 525-7593 fax: (610) 525-7594

VAN CLEEF ENGINEERING ASSOCIATES, LLC 501 North Main Street Dovlestown, PA 18901 tel: (215) 345-1876 fax: (215) 345-1730 STRUCTURAL ENGINEER: O'DONNELL & NACCARATO 701 Market Street Suite 6000

CIVIL ENGINEER:

Philadelphia, PA 19106

tel: (215) 925-3788

fax: (215) 627-8240

Project No. 0411.0046.00 MEP ENGINEER: **WICK FISHER WHITE** 111 S. Independence Mall East Suite 400 Philadelphia, PA 19106 tel: (215) 627-0200

LIGHTING DESIGNER BRIAN ORTER LIGHTING DESIGN LLC 227 W. 29th St 8th Floor New York, NY 10001 tel: (646) 502-7568

MARK REVISIONS DATE ALL DIMENSIONS AND RELATIONSHIPS MUST BE VERIFIED BY CONTRACTOR. THE ARCHITECT IS TO BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE CONSTRUCTION DO NOT SCALE FROM DRAWINGS.

> FILENAME: DRAWN: CHECKED: 06/18/18

CONSTRUCTION SET

TYPICAL FRAMING **DETAILS**

ISSUED FOR CONSTRUCTION 10/26/18

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