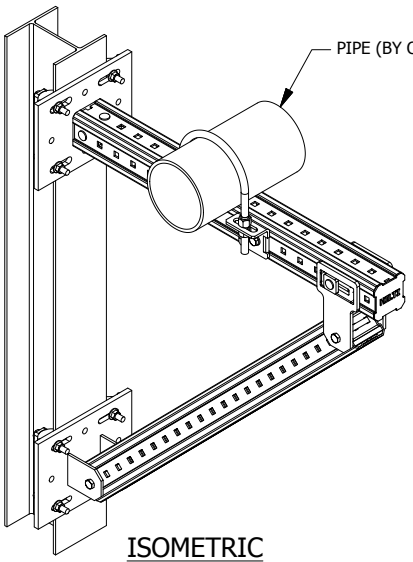
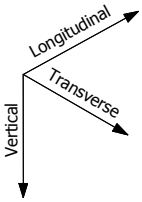
Piece Mark	Item No.*	Description	Qty.*
1	304798	GIRDER MI-90	1
2	304798	GIRDER MI-90	1
3	VARIES	CONNECTOR MIC-S90-XH STEEL - SEE TABLE	1
4	VARIES	CONNECTOR MIC-SX-MAH STEEL - SEE TABLE	1
5	304806	CONNECTOR MIC-U-MA	1
6	304834	CONNECTOR U-BOLT MIC-UB90-M16	1
7	387398	BEAM CLAMP MI-SGC-M16	8
8	432077	END CAP - MIA-EC-90	1
9	SPECIAL	U-BOLT BASED ON PIPE DIAMTER	1

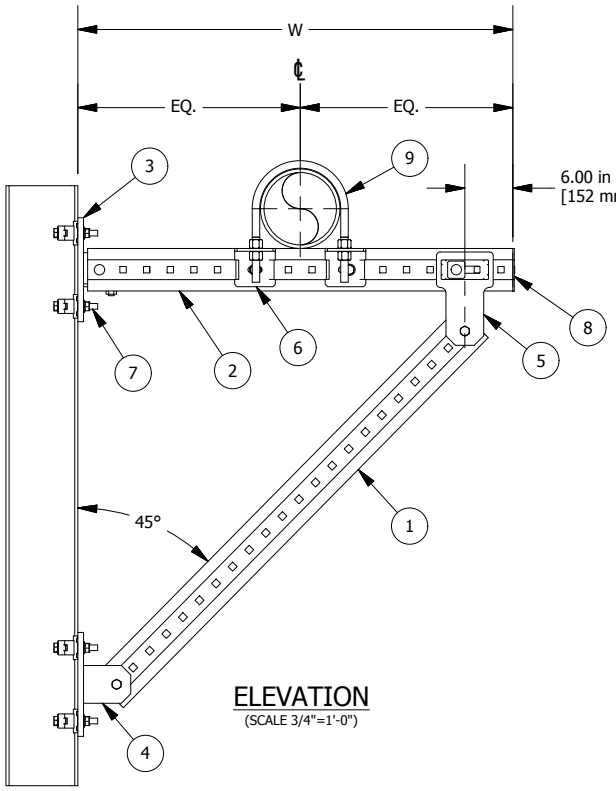


ISOMETRIC
(SCALE 3/4"=1'-0")



MIC-S90-XH BEAM WIDTH TABLE		
X	Beam Width	Item No.
A	3 to 6.5	2174665
B	6.5 to 9.3	2174666
C	9.2 to 12.0	2174667

MIC-SX-MAH BEAM WIDTH TABLE		
X	Beam Width	Item No.
A	3 to 6.5	2174671
B	6.5 to 9.3	2174672
C	9.2 to 12.0	2174673



ELEVATION
(SCALE 3/4"=1'-0")

	Max W, in	12	24	36
LRFD, lbs	Vertical	3168	2544	1968
	Transverse	1584	1266	966
	Longitudinal	1584	1266	966

NOTE(S):
1. THIS DRAWING REPRESENTS A COMMON CONFIGURATION FOR THIS APPLICATION. THE PIPE SUPPORT IS LOAD RATED AND DIMENSIONALLY LIMITED BASED ON STATIC LOADS, AND THE PUBLISHED HILTI LOAD DATA, DESIGN METHODOLOGIES, AND DEFAULT GENERIC NON-PROJECT SPECIFIC ASSUMPTIONS AS SET FORTH IN PROFIS INSTALL, VERSION 2.12. THE CAPACITY OF THE CONNECTION TO THE STRUCTURE MUST BE EVALUATED SEPARATELY. THE ENGINEERING OF RECORD SHALL EVALUATE THIS SUPPORT TO DETERMINE ITS SUITABILITY FOR THE ACTUAL, PROJECT SPECIFIC DESIGN CRITERIA AND REQUIREMENTS.
2. ALL LOADS ASSUMED TO ACT ON THE SUPPORT, NO ECCENTRIC LOADS INCLUDED. PIPE CONNECTION HARDWARE MUST BE CHECKED SEPARATELY.
3. DESIGN ASSUMPTIONS: IBC 2012 BUILDING CODE; SEE TABLE FOR DESIGN LOADS (STATIC U.N.O.)
4. REFER TO COMPONENT MANUFACTURER'S IFU'S FOR REQUIRED INSTALLATION INFORMATION.
5. FOR APPLICABLE CONCRETE OR STEEL ANCHOR DESIGN CONTACT HILTI OR THE PROJECT SITE ENGINEER OF RECORD.
6. CAPACITIES SHOWN ABOVE ARE BASED ON VERTICAL COMBINED WITH TRANSVERSE OR VERTICAL COMBINED WITH LONGITUDINAL. A SEPERATE ANALYSIS MUST BE PERFORMED IF VERTICAL, TRANSVERSE AND LONGITUDINAL LOADS OCCUR SIMULTANEOUSLY.

REVISION HISTORY

NO:	DESCRIPTION:	DATE:
A	NOT FOR CONSTRUCTION	11/14/2017
B	UPDATED PER COMMENTS	3/9/2018
C	ADDED 6 IN MAX DIM	4/23/2018

TYPICAL DETAIL NAME:

TYPICAL DETAILS
TD-P-BC08-S

TYPICAL DETAIL DESCRIPTION:

PIPE BRACED CANTILEVER STEEL

DRAWN:	CHECKED:	DESIGNED:	REVIEWED:
GAB	JRS	OMO	JWP

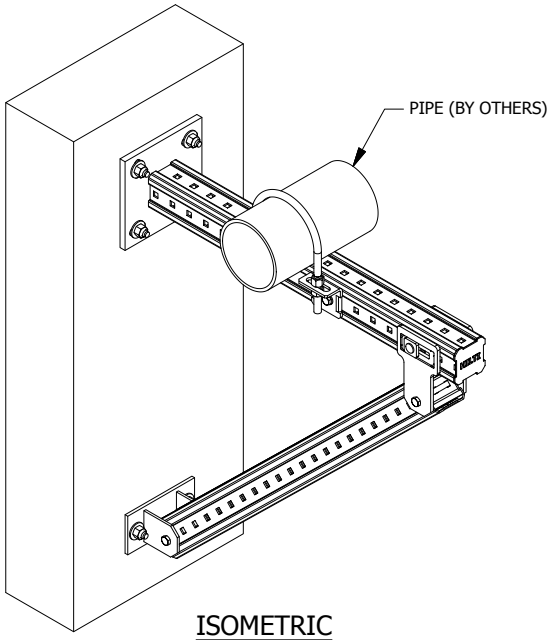
PAPER SIZE: ANSI A

TYPICAL DETAIL NUMBER:

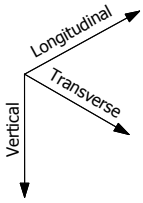
DETAIL: TD-P-BC08-S - SHEET: 1

C:\Hilti Vault\Designs\Projects\10000 Internal Projects\10017 Typicals\PIPING\TD-P-BC08-S\TD-P-BC08-S.dwg

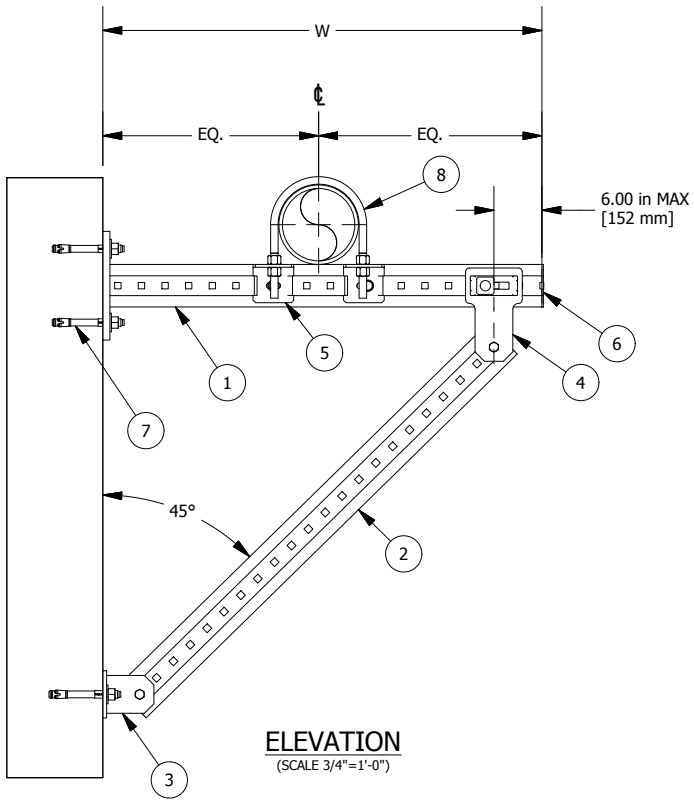
Piece Mark	Item No.*	Description	Qty.*
1	VARIES	BRACKET MIC-C90-DH-XXXX - SEE TABLE	1
2	304798	GIRDER MI-90	1
3	2174664	CONNECTOR MIC-CU-MAH CONCRETE	1
4	304806	CONNECTOR MIC-U-MA	1
5	304834	CONNECTOR U-BOLT MIC-UB90-M16	1
6	432077	END CAP - MIA-EC-90	1
7	VARIES	USE APPROPRIATE HILTI ANCHOR	6
8	SPECIAL	U-BOLT BASED ON PIPE DIAMTER	1



ISOMETRIC
(SCALE 3/4"=1'-0")



MIC-C90-DH-XXXX TABLE	
LENGTH XXXX	Item No.
500	2174678
750	2174679
1000	2174680



ELEVATION
(SCALE 3/4"=1'-0")

	Max W, in	12	24	36
LRFD, lbs	Vertical	4896	3240	2400
	Transverse	2448	1620	1200
	Longitudinal	2448	1620	1200

NOTE(S):
1. THIS DRAWING REPRESENTS A COMMON CONFIGURATION FOR THIS APPLICATION. THE PIPE SUPPORT IS LOAD RATED AND DIMENSIONALLY LIMITED BASED ON STATIC LOADS, AND THE PUBLISHED HILTI LOAD DATA, DESIGN METHODOLOGIES, AND DEFAULT GENERIC NON-PROJECT SPECIFIC ASSUMPTIONS AS SET FORTH IN PROFIS INSTALL, VERSION 2.12. THE CAPACITY OF THE CONNECTION TO THE STRUCTURE MUST BE EVALUATED SEPARATELY. THE ENGINEERING OF RECORD SHALL EVALUATE THIS SUPPORT TO DETERMINE ITS SUITABILITY FOR THE ACTUAL, PROJECT SPECIFIC DESIGN CRITERIA AND REQUIREMENTS.
2. ALL LOADS ASSUMED TO ACT ON THE SUPPORT, NO ECCENTRIC LOADS INCLUDED. PIPE CONNECTION HARDWARE MUST BE CHECKED SEPARATELY.
3. DESIGN ASSUMPTIONS: IBC 2012 BUILDING CODE; SEE TABLE FOR DESIGN LOADS (STATIC U.N.O.)
4. REFER TO COMPONENT MANUFACTURER'S IFU'S FOR REQUIRED INSTALLATION INFORMATION.
5. FOR APPLICABLE CONCRETE OR STEEL ANCHOR DESIGN CONTACT HILTI OR THE PROJECT SITE ENGINEER OF RECORD.
6. CAPACITIES SHOWN ABOVE ARE BASED ON VERTICAL COMBINED WITH TRANSVERSE OR VERTICAL COMBINED WITH LONGITUDINAL. A SEPERATE ANALYSIS MUST BE PERFORMED IF VERTICAL, TRANSVERSE AND LONGITUDINAL LOADS OCCUR SIMULTANEOUSLY.
7. ANCHOR CAPACITIES NOT CONSIDERED.

REVISION HISTORY		
NO:	DESCRIPTION:	DATE:
A	NOT FOR CONSTRUCTION	11/14/2017
B	UPDATED PER COMMENTS	3/9/2018
C	ADDED 6 IN MAX DIM	4/23/2018

TYPICAL DETAIL NAME:

TYPICAL DETAILS
TD-P-BC10-C

TYPICAL DETAIL DESCRIPTION:

PIPE BRACED CANTILEVER CONCRETE

DRAWN:	CHECKED:	DESIGNED:	REVIEWED:
GAB	GAB	OMO	JWP

PAPER SIZE: ANSI A

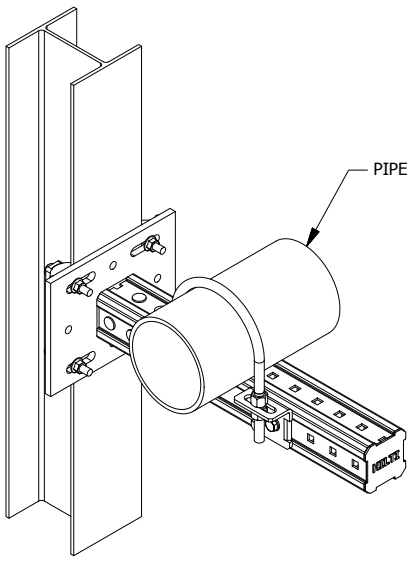
TYPICAL DETAIL NUMBER:

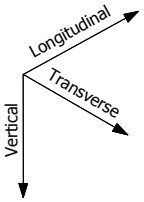
DETAIL: TD-P-BC10-C - SHEET: 1

C:\Hilti Vault\Designs\Projects\10000 Internal Projects\10017 Typicals\PIPING\TD-P-BC10-C\TD-P-BC10-C.dwg

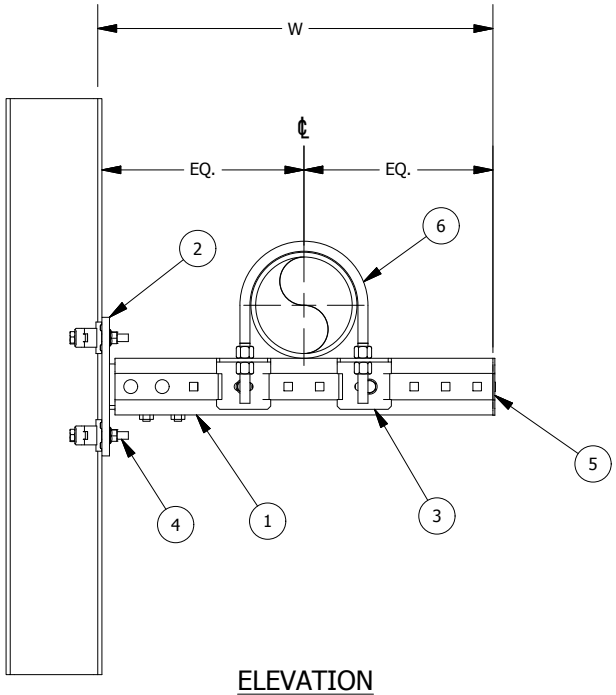
Piece Mark	Item No.*	Description	Qty.*
1	304798	GIRDER MI-90	1
2	VARIES	CONNECTOR MIC-S90-XH STEEL - SEE TABLE	1
3	304834	CONNECTOR U-BOLT MIC-UB90-M16	1
4	387398	BEAM CLAMP MI-SGC-M16	4
5	432077	END CAP - MIA-EC-90	1
6	SPECIAL	U-BOLT BASED ON PIPE DIAMTER	1

MIC-S90-XH BEAM WIDTH TABLE		
X	Beam Width	Item No.
A	3 to 6.5	2174665
B	6.5 to 9.3	2174666
C	9.2 to 12.0	2174667





ISOMETRIC
(SCALE 1"=1'-0")



ELEVATION
(SCALE 1"=1'-0")

	Max W, in	12	24	36
LRFD, lbs	Vertical	1800	1104	792
	Transverse	894	546	390
	Longitudinal	894	546	390

NOTE(S):
1. THIS DRAWING REPRESENTS A COMMON CONFIGURATION FOR THIS APPLICATION. THE PIPE SUPPORT IS LOAD RATED AND DIMENSIONALLY LIMITED BASED ON STATIC LOADS, AND THE PUBLISHED HILTI LOAD DATA, DESIGN METHODOLOGIES, AND DEFAULT GENERIC NON-PROJECT SPECIFIC ASSUMPTIONS AS SET FORTH IN PROFIS INSTALL, VERSION 2.12. THE CAPACITY OF THE CONNECTION TO THE STRUCTURE MUST BE EVALUATED SEPARATELY. THE ENGINEERING OF RECORD SHALL EVALUATE THIS SUPPORT TO DETERMINE ITS SUITABILITY FOR THE ACTUAL, PROJECT SPECIFIC DESIGN CRITERIA AND REQUIREMENTS.
2. ALL LOADS ASSUMED TO ACT ON THE SUPPORT, NO ECCENTRIC LOADS INCLUDED. PIPE CONNECTION HARDWARE MUST BE CHECKED SEPARATELY.
3. DESIGN ASSUMPTIONS: IBC 2012 BUILDING CODE; SEE TABLE FOR DESIGN LOADS (STATIC U.N.O.)
4. REFER TO COMPONENT MANUFACTURER'S IFU'S FOR REQUIRED INSTALLATION INFORMATION.
5. FOR APPLICABLE CONCRETE OR STEEL ANCHOR DESIGN CONTACT HILTI OR THE PROJECT SITE ENGINEER OF RECORD.
6. CAPACITIES SHOWN ABOVE ARE BASED ON VERTICAL COMBINED WITH TRANSVERSE OR VERTICAL COMBINED WITH LONGITUDINAL. A SEPERATE ANALYSIS MUST BE PERFORMED IF VERTICAL, TRANSVERSE AND LONGITUDINAL LOADS OCCUR SIMULTANEOUSLY.

REVISION HISTORY		
NO:	DESCRIPTION:	DATE:
A	NOT FOR CONSTRUCTION	11/14/2017
B	UPDATED PER COMMENTS	3/9/2018

TYPICAL DETAIL NAME:

TYPICAL DETAILS
TD-P-C08-S

TYPICAL DETAIL DESCRIPTION:

PIPE CANTILEVER STEEL

HILTI

DRAWN:	CHECKED:	DESIGNED:	REVIEWED:
GAB	JRS	OMO	JWP

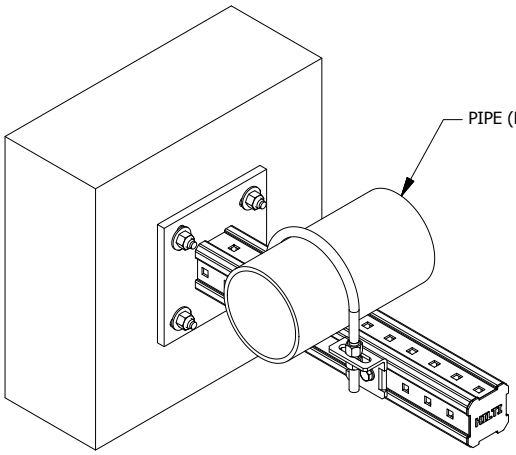
PAPER SIZE: ANSI A

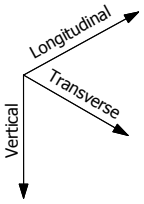
TYPICAL DETAIL NUMBER:

DETAIL: TD-P-C08-S - SHEET: 1

C:\Hilti Vault\Designs\Projects\10000 Internal Projects\10017 Typicals\PIPING\TD-P-C08-S\TD-P-C08-S.dwg

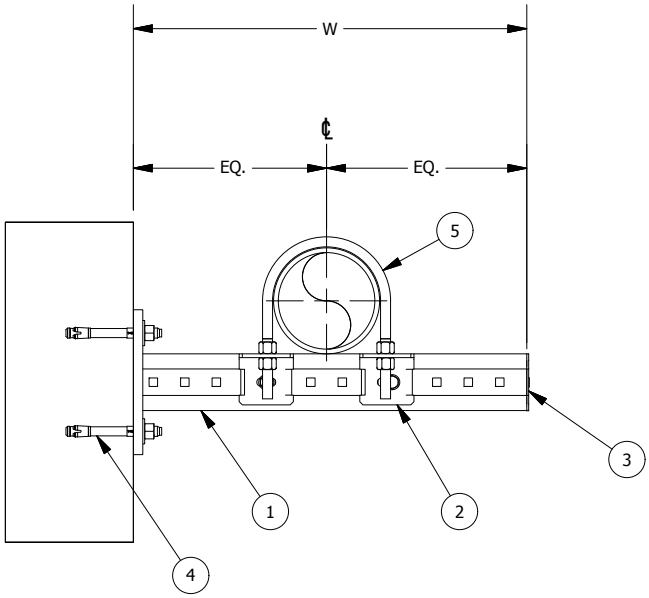
Piece Mark	Item No.*	Description	Qty.*
1	VARIES	BRACKET MIC-C90-DH-XXXX - SEE TABLE	1
2	304834	CONNECTOR U-BOLT MIC-UB90-M16	1
3	432077	END CAP - MIA-EC-90	1
4	VARIES	USE APPROPRIATE HILTI ANCHOR	4
5	SPECIAL	U-BOLT BASED ON PIPE DIAMTER	1





MIC-C90-DH-XXXX TABLE	
LENGTH XXXX	Item No.
500	2174678
750	2174679
1000	2174680

ISOMETRIC
(SCALE 1"=1'-0")



ELEVATION
(SCALE 1"=1'-0")

	Max W, in	12	24	36
LRFD, lbs	Vertical	3156	2040	1500
	Transverse	1572	1020	750
	Longitudinal	1572	1020	750

NOTE(S):
1. THIS DRAWING REPRESENTS A COMMON CONFIGURATION FOR THIS APPLICATION. THE PIPE SUPPORT IS LOAD RATED AND DIMENSIONALLY LIMITED BASED ON STATIC LOADS, AND THE PUBLISHED HILTI LOAD DATA, DESIGN METHODOLOGIES, AND DEFAULT GENERIC NON-PROJECT SPECIFIC ASSUMPTIONS AS SET FORTH IN PROFIS INSTALL, VERSION 2.12. THE CAPACITY OF THE CONNECTION TO THE STRUCTURE MUST BE EVALUATED SEPARATELY. THE ENGINEERING OF RECORD SHALL EVALUATE THIS SUPPORT TO DETERMINE ITS SUITABILITY FOR THE ACTUAL, PROJECT SPECIFIC DESIGN CRITERIA AND REQUIREMENTS.
2. ALL LOADS ASSUMED TO ACT ON THE SUPPORT, NO ECCENTRIC LOADS INCLUDED. PIPE CONNECTION HARDWARE MUST BE CHECKED SEPARATELY.
3. DESIGN ASSUMPTIONS: IBC 2012 BUILDING CODE; SEE TABLE FOR DESIGN LOADS (STATIC U.N.O.)
4. REFER TO COMPONENT MANUFACTURER'S IFU'S FOR REQUIRED INSTALLATION INFORMATION.
5. FOR APPLICABLE CONCRETE OR STEEL ANCHOR DESIGN CONTACT HILTI OR THE PROJECT SITE ENGINEER OF RECORD.
6. CAPACITIES SHOWN ABOVE ARE BASED ON VERTICAL COMBINED WITH TRANSVERSE OR VERTICAL COMBINED WITH LONGITUDINAL. A SEPERATE ANALYSIS MUST BE PERFORMED IF VERTICAL, TRANSVERSE AND LONGITUDINAL LOADS OCCUR SIMULTANEOUSLY.
7. ANCHOR CAPACITIES NOT CONSIDERED.

REVISION HISTORY		
NO:	DESCRIPTION:	DATE:
A	NOT FOR CONSTRUCTION	11/14/2017
B	UPDATED PER COMMENTS	3/9/2018

TYPICAL DETAIL NAME:

TYPICAL DETAILS
TD-P-C10-C

TYPICAL DETAIL DESCRIPTION:

PIPE CANTILEVER CONCRETE

HILTI

DRAWN:	CHECKED:	DESIGNED:	REVIEWED:
GAB	JRS	OMO	JWP

PAPER SIZE: ANSI A

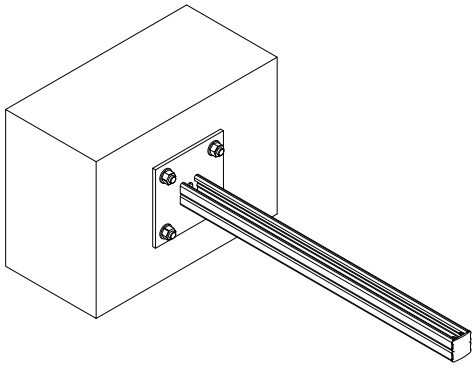
TYPICAL DETAIL NUMBER:

DETAIL: TD-P-C10-C - SHEET: 1

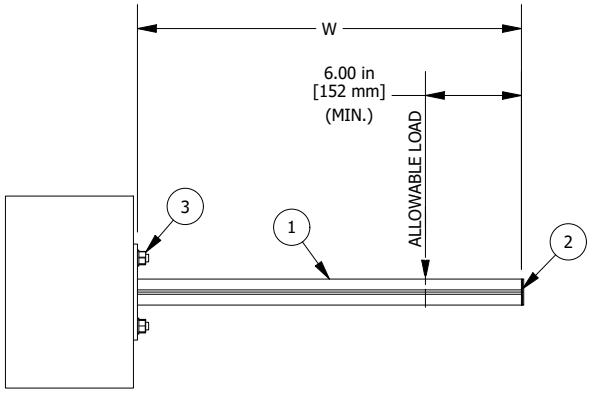
C:\Hilti Vault\Designs\Projects\10000 Internal Projects\10017 Typicals\PIPING\TD-P-C10-C\TD-P-C10-C.dwg

Piece Mark	Item No.*	Description	Qty.*
1	VARIES	MQK-158/4-F-XX (SEE TABLE A)	1
2	244886	CHANNEL END CAP MEK RED	1
3	387527	KB-TZ SS304 1/2 X 4 1/2 (SEE NOTE G)	4

TABLE - A	
MQK-158/4-F-XX ITEM NO.	MQK-158/4-F-XX DESCRIPTION
2248531	MQK-158/4-F-24
2248530	MQK-158/4-F-36
2248532	MQK-158/4-F-48



ISOMETRIC
(SCALE 1"=1'-0")



ELEVATION
(SCALE 1"=1'-0")

ALLOWABLE LOAD TABLE			
Max W, in	24	36	48
ALLOWABLE LOADS, lbs	205	115	60

NOTE(S):
A. THE TYPICAL SUPPORT IS LOAD RATED AND DIMENSIONALLY LIMITED BASED ON DESIGN METHODOLOGY AND GENERIC NON-PROJECT SPECIFIC ASSUMPTIONS SET FORTH IN PROFIS INSTALL SOFTWARE VERSION 2.23. SEE ALLOWABLE LOAD TABLE FOR MAXIMUM ALLOWABLE LOAD AND DIMENSION. THE ENGINEER OF RECORD SHALL EVALUATE THIS TYPICAL SUPPORT TO DETERMINE ITS SUITABILITY FOR THE ACTUAL PROJECT SPECIFIC DESIGN CRITERIA AND REQUIREMENTS.
B. THE EVALUATION OF EXISTING STRUCTURE IS OUTSIDE OF THE TYPICAL DESIGN SCOPE AND SHALL BE PERFORMED BY THE ENGINEER OF RECORD.
C. TYPICAL SUPPORT DESIGN IS BASED ON INTERNATIONAL BUILDING CODE (IBC) 2015. SEE TABLES IN DETAILS FOR ALLOWABLE DESIGN LOADS (STATIC U.N.O.)
D. ALL LOADS ASSUMED TO ACT ON THE SUPPORT, NO ECCENTRICITY CONSIDERED.
E. MAXIMUM ALLOWABLE LOAD TABLE SHOWN IN THE TYPICAL DETAILS ARE BASED ON THE VERTICAL LOAD ONLY. A SEPARATE ANALYSIS MUST BE PERFORMED WHEN TRANSVERSE AND LONGITUDINAL LOAD OCCUR SIMULTANEOUSLY WITH VERTICAL LOAD.
F. REFER TO COMPONENT MANUFACTURER'S IFU's FOR REQUIRED INSTALLATION INFORMATION.
G. MIN. CONCRETE COMPRESSIVE STRENGTH F'C=3000 PSI, MIN. CONCRETE EDGE DISTANCE = 4" INCHES, MIN. EFFECTIVE EMBEDMENT Heff = 2.0 INCHES
H. CONCRETE ANCHORS NOTED IN THE BILL OF MATERIAL ARE DESIGNED ONLY FOR REACTIONS AT BASE DUE TO VERTICAL DEAD LOAD.

REVISION HISTORY	
DATE:	COMMENT:
07/28/2020	ISSUE FOR USE

TYPICAL DETAIL NAME:

TYPICAL DETAILS
TD-P/CT-C01-C

TYPICAL DETAIL DESCRIPTION:

MQK-158/4-F CANTILEVER CONCRETE

HILTI

DRAWN:	CHECKED:	DESIGNED:	REVIEWED:
JRS	GAB	ISE	ISE

PAPER SIZE: ANSI A

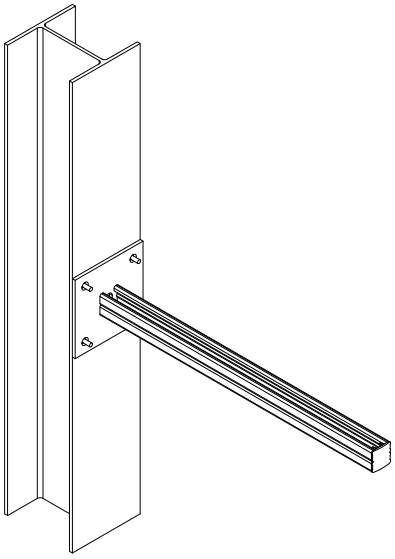
TYPICAL DETAIL NUMBER:

DETAIL: TD-P/CT-C01-C - SHEET: 1

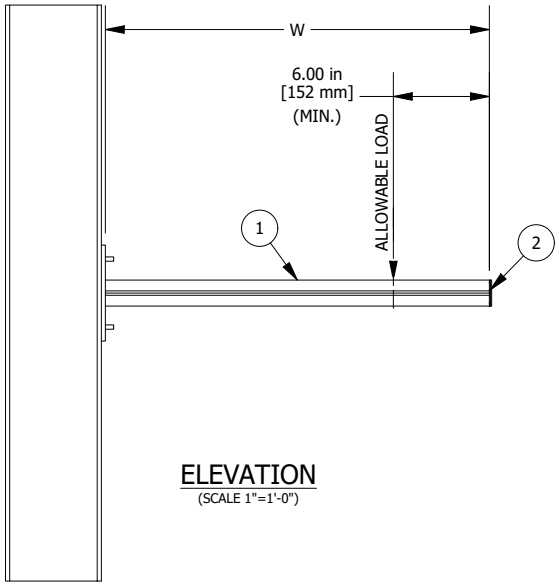
C:\Hilti Vault\Designs\Typical_Details\TD-MQK-PIPING-CABLE_TRAY\TD-P_CT-C01-C\DWG\TD-F

Piece Mark	Item No.*	Description	Qty.*
1	VARIES	4-HOLE BRACKET MQK-158/4-F-XX (SEE TABLE A)	1
2	244886	CHANNEL END CAP MEK RED	1
3	2194340	THREADED STUD X-BT-M10/15 SN 8 (SEE NOTE G)	4

TABLE A	
MQK-158/4-F-XX ITEM NO.	MQK-158/4-F-XX DESCRIPTION
2248531	MQK-158/4-F-24
2248530	MQK-158/4-F-36
2248532	MQK-158/4-F-48



ISOMETRIC
(SCALE 1"=1'-0")



ELEVATION
(SCALE 1"=1'-0")

ALLOWABLE LOAD TABLE			
Max W, in	24	36	48
ALLOWABLE LOADS, lbs	205	115	60

NOTE(S):
A. THE TYPICAL SUPPORT IS LOAD RATED AND DIMENSIONALLY LIMITED BASED ON DESIGN METHODOLOGY AND GENERIC NON-PROJECT SPECIFIC ASSUMPTIONS SET FORTH IN PROFIS INSTALL SOFTWARE VERSION 2.23. SEE ALLOWABLE LOAD TABLE FOR MAXIMUM ALLOWABLE LOAD AND DIMENSION. THE ENGINEER OF RECORD SHALL EVALUATE THIS TYPICAL SUPPORT TO DETERMINE ITS SUITABILITY FOR THE ACTUAL PROJECT SPECIFIC DESIGN CRITERIA AND REQUIREMENTS.
B. THE EVALUATION OF EXISTING STRUCTURE IS OUTSIDE OF THE TYPICAL DESIGN SCOPE AND SHALL BE PERFORMED BY THE ENGINEER OF RECORD.
C. TYPICAL SUPPORT DESIGN IS BASED ON INTERNATIONAL BUILDING CODE (IBC) 2015. SEE TABLES IN DETAILS FOR ALLOWABLE DESIGN LOADS (STATIC U.N.O.)
D. ALL LOADS ASSUMED TO ACT ON THE SUPPORT, NO ECCENTRICITY CONSIDERED.
E. MAXIMUM ALLOWABLE LOAD TABLE SHOWN IN THE TYPICAL DETAILS ARE BASED ON THE VERTICAL LOAD A SEPARATE ANALYSIS MUST BE PERFORMED WHEN TRANSVERSE AND LONGITUDINAL LOAD OCCUR SIMULTANEOUSLY WITH VERTICAL LOAD.
F. REFER TO COMPONENT MANUFACTURER'S IFU's FOR REQUIRED INSTALLATION INFORMATION.
G. MIN. STEEL BASE THICKNESS SHALL BE 5/16". MIN EDGE DISTANCE SHALL BE 3/8". MIN YIELD STRENGTH OF STEEL SHALL BE F_Y=36KSI

REVISION HISTORY	
DATE:	COMMENT:
07/28/2020	ISSUE FOR USE

TYPICAL DETAIL NAME:

TYPICAL DETAILS
TD-P/CT-C02-S

TYPICAL DETAIL DESCRIPTION:

MQK-158/4-F CANTILEVER STEEL

HILTI

DRAWN:	CHECKED:	DESIGNED:	REVIEWED:
JRS	GAB	ISE	ISE

PAPER SIZE: ANSI A

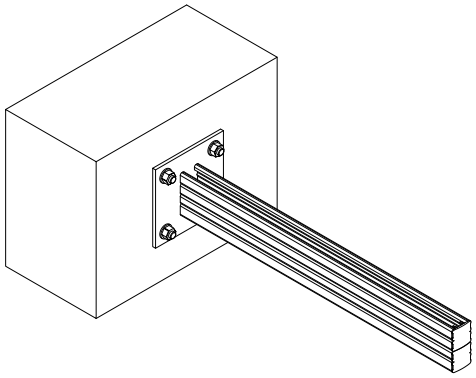
TYPICAL DETAIL NUMBER:

DETAIL: TD-P/CT-C02-S - SHEET: 1

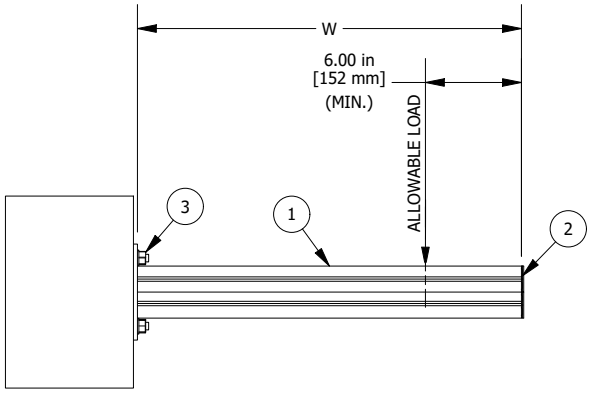
C:\Hilti Vault\Designs\Typical_Details\TD-MQK-PIPING-CABLE_TRAY\TD-P_CT-C02-S\DWG\TD-P

Piece Mark	Item No.*	Description	Qty.*
1	VARIES	MQK-158/4-D-F-XX (SEE TABLE A)	1
2	244886	CHANNEL END CAP MEK RED	2
3	387527	KB-TZ SS304 1/2 X 4 1/2 (SEE NOTE G)	4

TABLE-A	
MQK-158/4-D-F-XX ITEM NO.	MQK-158/4-D-F-XX DESCRIPTION
2248533	MQK-158/4-D-F-24
2248534	MQK-158/4-D-F-36
2248535	MQK-158/4-D-F-48



ISOMETRIC
(SCALE 1"=1'-0")



ELEVATION
(SCALE 1"=1'-0")

ALLOWABLE LOAD TABLE			
Max W, in	24	36	48
ALLOWABLE LOADS, lbs	619	375	256

NOTE(S):
A. THE TYPICAL SUPPORT IS LOAD RATED AND DIMENSIONALLY LIMITED BASED ON DESIGN METHODOLOGY AND GENERIC NON-PROJECT SPECIFIC ASSUMPTIONS SET FORTH IN PROFIS INSTALL SOFTWARE VERSION 2.23. SEE ALLOWABLE LOAD TABLE FOR MAXIMUM ALLOWABLE LOAD AND DIMENSION. THE ENGINEER OF RECORD SHALL EVALUATE THIS TYPICAL SUPPORT TO DETERMINE ITS SUITABILITY FOR THE ACTUAL PROJECT SPECIFIC DESIGN CRITERIA AND REQUIREMENTS.
B. THE EVALUATION OF EXISTING STRUCTURE IS OUTSIDE OF THE TYPICAL DESIGN SCOPE AND SHALL BE PERFORMED BY THE ENGINEER OF RECORD.
C. TYPICAL SUPPORT DESIGN IS BASED ON INTERNATIONAL BUILDING CODE (IBC) 2015. SEE TABLES IN DETAILS FOR ALLOWABLE DESIGN LOADS (STATIC U.N.O.)
D. ALL LOADS ASSUMED TO ACT ON THE SUPPORT, NO ECCENTRICITY CONSIDERED.
E. MAXIMUM ALLOWABLE LOAD TABLE SHOWN IN THE TYPICAL DETAILS ARE BASED ON THE VERTICAL LOAD A SEPARATE ANALYSIS MUST BE PERFORMED WHEN TRANSVERSE AND LONGITUDINAL LOAD OCCUR SIMULTANEOUSLY WITH VERTICAL LOAD.
F. REFER TO COMPONENT MANUFACTURER'S IFU's FOR REQUIRED INSTALLATION INFORMATION.
G. MIN. CONCRETE COMPRESSIVE STRENGTH F'C=3000 PSI, MIN. CONCRETE EDGE DISTANCE = 4" INCHES, MIN. EFFECTIVE EMBEDMENT Heff = 2.0" INCHES.
H. CONCRETE ANCHORS NOTED IN THE BILL OF MATERIAL ARE DESIGNED ONLY FOR REACTION AT BASE PLATE DUE TO VERTICAL DEAD LOAD.

REVISION HISTORY	
DATE:	COMMENT:
07/28/2020	ISSUE FOR USE

TYPICAL DETAIL NAME:

TYPICAL DETAILS
TD-P/CT-C03-C

TYPICAL DETAIL DESCRIPTION:

MQK-158/4-D-F CANTILEVER CONCRETE

HILTI

DRAWN:	CHECKED:	DESIGNED:	REVIEWED:
JRS	GAB	ISE	ISE

PAPER SIZE: ANSI A

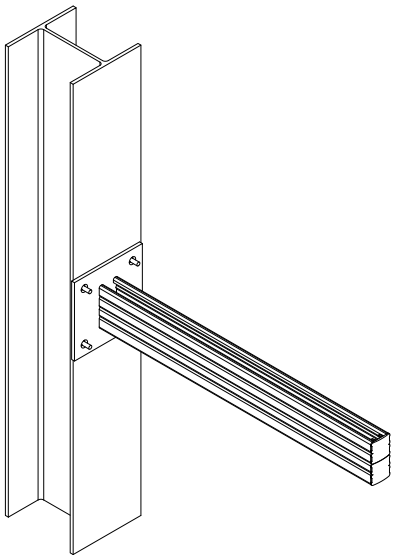
TYPICAL DETAIL NUMBER:

DETAIL: TD-P/CT-C03-C - SHEET: 1

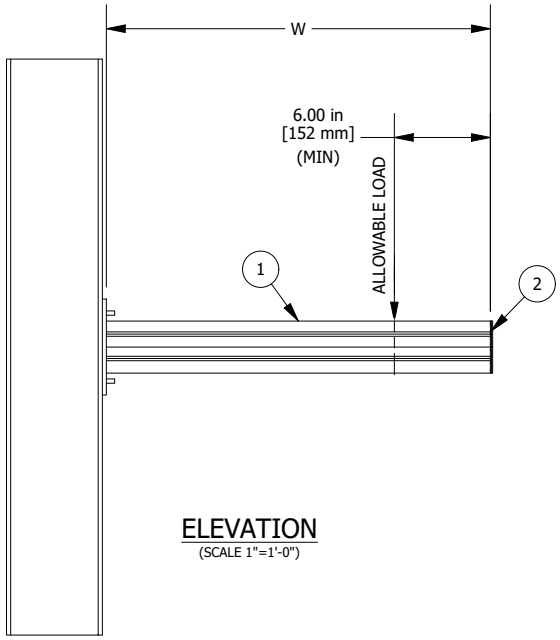
C:\Hilti Vault\Designs\Typical_Details\TD-MQK-PIPING-CABLE_TRAY\TD-P_CT-C03-C\DWG\TD-F

Piece Mark	Item No.*	Description	Qty.*
1	VARIES	MQK-158/4-D-F-XX (SEE TABLE A)	1
2	244886	CHANNEL END CAP MEK RED	2
3	2194340	THREADED STUD X-BT-M10/15 SN 8 (SEE NOTE G)	4

TABLE A	
MQK-158/4-D-F-XX ITEM NO.	MQK-158/4-D-F-XX DESCRIPTION
2248533	MQK-158/4-D-F-24
2248534	MQK-158/4-D-F-36
2248535	MQK-158/4-D-F-48



ISOMETRIC
(SCALE 1"=1'-0")



ELEVATION
(SCALE 1"=1'-0")

ALLOWABLE LOAD TABLE			
Max W, in	24	36	48
ALLOWABLE LOADS, lbs	345	220	155

NOTE(S):
A. THE TYPICAL SUPPORT IS LOAD RATED AND DIMENSIONALLY LIMITED BASED ON DESIGN METHODOLOGY AND GENERIC NON-PROJECT SPECIFIC ASSUMPTIONS SET FORTH IN PROFIS INSTALL SOFTWARE VERSION 2.23. SEE ALLOWABLE LOAD TABLE FOR MAXIMUM ALLOWABLE LOAD AND DIMENSION. THE ENGINEER OF RECORD SHALL EVALUATE THIS TYPICAL SUPPORT TO DETERMINE ITS SUITABILITY FOR THE ACTUAL PROJECT SPECIFIC DESIGN CRITERIA AND REQUIREMENTS.
B. THE EVALUATION OF EXISTING STRUCTURE IS OUTSIDE OF THE TYPICAL DESIGN SCOPE AND SHALL BE PERFORMED BY THE ENGINEER OF RECORD.
C. TYPICAL SUPPORT DESIGN IS BASED ON INTERNATIONAL BUILDING CODE (IBC) 2015. SEE TABLES IN DETAILS FOR ALLOWABLE DESIGN LOADS (STATIC U.N.O.)
D. ALL LOADS ASSUMED TO ACT ON THE SUPPORT, NO ECCENTRICITY CONSIDERED.
E. MAXIMUM ALLOWABLE LOAD TABLE SHOWN IN THE TYPICAL DETAILS ARE BASED ON THE VERTICAL LOAD A SEPARATE ANALYSIS MUST BE PERFORMED WHEN TRANSVERSE AND LONGITUDINAL LOAD OCCUR SIMULTANEOUSLY WITH VERTICAL LOAD.
F. REFER TO COMPONENT MANUFACTURER'S IFU's FOR REQUIRED INSTALLATION INFORMATION.
G. MIN. STEEL BASE THICKNESS SHALL BE 5/16". MIN EDGE DISTANCE SHALL BE 3/8". MIN YIELD STRENGTH OF STEEL SHALL BE F_Y=36KSI

REVISION HISTORY	
DATE:	COMMENT:
07/28/2020	ISSUE FOR USE

TYPICAL DETAIL NAME:

TYPICAL DETAILS
TD-P/CT-C04-S

TYPICAL DETAIL DESCRIPTION:

MQK-158/4-D-F CANTILEVER STEEL

DRAWN:	CHECKED:	DESIGNED:	REVIEWED:
JRS	GAB	ISE	ISE

PAPER SIZE: ANSI A

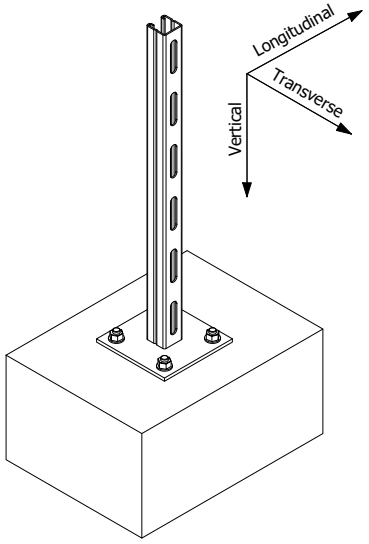
TYPICAL DETAIL NUMBER:

DETAIL: TD-P/CT-C04-S - SHEET: 1

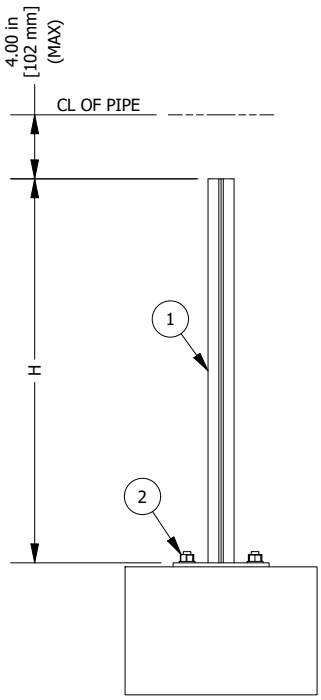
C:\Hilti Vault\Designs\Typical_Details\TD-MQK-PIPING-CABLE_TRAY\TD-P_CT-C04-S\DWG\TD-P

Piece Mark	Item No.*	Description	Qty.*
1	VARIES	MQK-158/4-F-XX (SEE TABLE A)	1
2	387527	KB-TZ SS304 1/2 X 4 1/2 (SEE NOTE G)	4

TABLE A	
MQK-158/4-F-XX ITEM NO.	MQK-158/4-F-XX DESCRIPTION
2248531	MQK-158/4-F-24
2248530	MQK-158/4-F-36
2248532	MQK-158/4-F-48



ISOMETRIC
(SCALE 1"=1'-0")



ELEVATION
(SCALE 1"=1'-0")

	Max H, in	24	36	48
ALLOWABLE LOADS, lbs	Vertical	425	300	250
	Transverse	127	90	75
	Longitudinal	127	90	75

NOTE(S):
A. THE TYPICAL SUPPORT IS LOAD RATED AND DIMENSIONALLY LIMITED BASED ON DESIGN METHODOLOGY AND GENERIC NON-PROJECT SPECIFIC ASSUMPTIONS SET FORTH IN PROFIS INSTALL SOFTWARE VERSION 2.23. THE ENGINEER OF RECORD SHALL EVALUATE THIS TYPICAL SUPPORT TO DETERMINE ITS SUITABILITY FOR THE ACTUAL PROJECT SPECIFIC DESIGN CRITERIA AND REQUIREMENTS.
B. THE EVALUATION OF EXISTING STRUCTURE IS OUTSIDE OF THE TYPICAL DESIGN SCOPE AND SHALL BE PERFORMED BY THE ENGINEER OF RECORD.
C. TYPICAL SUPPORT DESIGN IS BASED ON INTERNATIONAL BUILDING CODE (IBC) 2015. SEE TABLES IN DETAILS FOR ALLOWABLE DESIGN LOADS (STATIC U.N.O.); LATERAL LOADS CALCULATED AS 30% OF DEAD LOAD.
D. ALL LOADS ASSUMED TO ACT ON THE SUPPORT, NO ECCENTRICITY CONSIDERED.
E. MAXIMUM ALLOWABLE LOAD TABLE SHOWN IN THE TYPICAL DETAILS ARE BASED ON THE COMBINATION OF VERTICAL LOAD WITH TRANSVERSE LOAD OR VERTICAL LOAD WITH LONGITUDINAL LOAD. A SEPARATE ANALYSIS MUST BE PERFORMED WHEN TRANSVERSE AND LONGITUDINAL LOAD OCCURS SIMULTANEOUSLY.
F. REFER TO COMPONENT MANUFACTURER'S FOR REQUIRED INSTALLATION INFORMATION.
G. MIN. CONCRETE COMPRESSIVE STRENGTH F'C=3000 PSI, MIN. CONCRETE EDGE DISTANCE = 4.0 INCHES, MIN. EFFECTIVE EMBEDMENT Heff = 2.0 INCHES.
H. CONCRETE ANCHORS NOTED IN THE BILL OF MATERIAL ARE DESIGNED ONLY FOR REACTIONS AT BASE PLATE DUE TO VERTICAL DEAD LOAD.

REVISION HISTORY	
DATE:	COMMENT:
07/28/2020	ISSUE FOR USE

TYPICAL DETAIL NAME:

TYPICAL DETAILS
TD-P-PS05-C

TYPICAL DETAIL DESCRIPTION:

MQK-158/4-F STANCHION CONCRETE

HILTI

DRAWN:	CHECKED:	DESIGNED:	REVIEWED:
JRS	GAB	ISE	ISE

PAPER SIZE: ANSI A

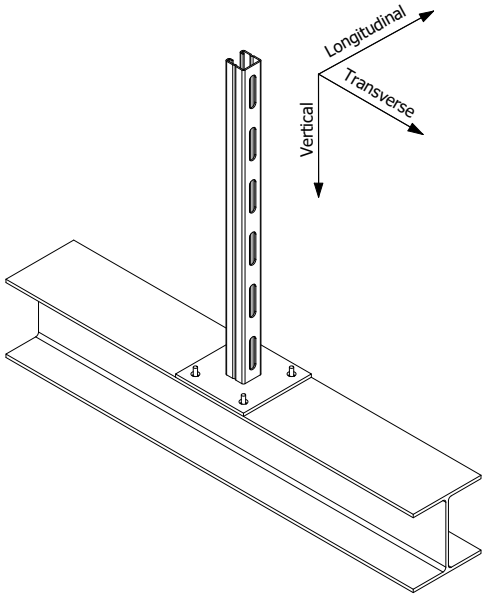
TYPICAL DETAIL NUMBER:

DETAIL: TD-P-PS05-C - SHEET: 1

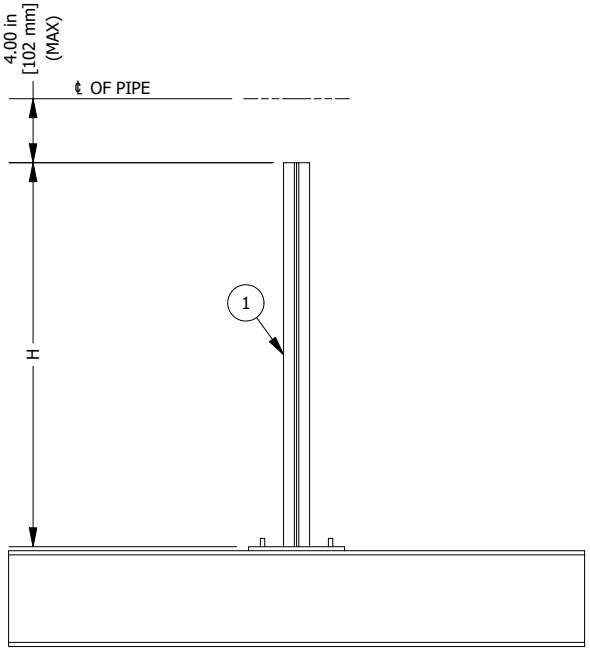
C:\Hilti Vault\Designs\Typical_Details\TD-Piping\TD-P-PS05-C\DWG\TD-P-PS05-C.dwg

Piece Mark	Item No.*	Description	Qty.*
1	VARIES	MQK-158/4-F-XX (SEE TABLE A)	1
2	2194340	THREADED STUD X-BT-M10/15 SN 8 (SEE NOTE G)	4

TABLE A	
MQK-158/4-F-XX ITEM NO.	MQK-158/4-F-XX DESCRIPTION
2248531	MQK-158/4-F-24
2248530	MQK-158/4-F-36
2248532	MQK-158/4-F-48



ISOMETRIC
(SCALE 1"=1'-0")



ELEVATION
(SCALE 1"=1'-0")

	Max H, in	24	36	48
ALLOWABLE LOADS, lbs	Vertical	425	300	250
	Transverse	127	90	75
	Longitudinal	127	90	75

NOTE(S):
A. THE TYPICAL SUPPORT IS LOAD RATED AND DIMENSIONALLY LIMITED BASED ON DESIGN METHODOLOGY AND GENERIC NON-PROJECT SPECIFIC ASSUMPTIONS SET FORTH IN PROFIS INSTALL SOFTWARE VERSION 2.23. SEE ALLOWABLE LOAD TABLE FOR MAXIMUM ALLOWABLE LOAD AND DIMENSION. THE ENGINEER OF RECORD SHALL EVALUATE THIS TYPICAL SUPPORT TO DETERMINE ITS SUITABILITY FOR THE ACTUAL PROJECT SPECIFIC DESIGN CRITERIA AND REQUIREMENTS.
B. THE EVALUATION OF EXISTING STRUCTURE IS OUTSIDE OF THE TYPICAL DESIGN SCOPE AND SHALL BE PERFORMED BY THE ENGINEER OF RECORD.
C. TYPICAL SUPPORT DESIGN IS BASED ON INTERNATIONAL BUILDING CODE (IBC) 2015. SEE TABLES IN DETAILS FOR ALLOWABLE DESIGN LOADS (STATIC U.N.O.) LATERAL LOADS CALCULATED AT 30% OF DEAD LOAD.
D. ALL LOADS ASSUMED TO ACT ON THE SUPPORT, NO ECCENTRICITY CONSIDERED.
E. MAXIMUM ALLOWABLE LOAD TABLE SHOWN IN THE TYPICAL DETAILS ARE BASED ON THE COMBINATION OF VERTICAL LOAD WITH TRANSVERSE LOAD OR VERTICAL LOAD WITH LONGITUDINAL LOAD. A SEPARATE ANALYSIS MUST BE PERFORMED WHEN TRANSVERSE AND LONGITUDINAL LOAD OCCURS SIMULTANEOUSLY.REFER TO COMPONENT MANUFACTURER'S IFU's FOR REQUIRED INSTALLATION INFORMATION.
F. REFER TO COMPONENT MANUFACTURER'S FOR REQUIRED INSTALLATION INFORMATION.
G. MIN. STEEL BASE THICKNESS SHALL BE 5/16 INCH. MIN EDGE DISTANCE SHALL BE 3/8 INCH. MIN YIELD STRENGTH OF STEEL SHALL BE Fy=36KSI

REVISION HISTORY	
DATE:	COMMENT:
07/28/2020	ISSUE FOR USE

TYPICAL DETAIL NAME:

TYPICAL DETAILS
TD-P-PS06-S

TYPICAL DETAIL DESCRIPTION:

MQK-158/4-F STANCHION STEEL

DRAWN:	CHECKED:	DESIGNED:	REVIEWED:
JRS	GAB	ISE	ISE

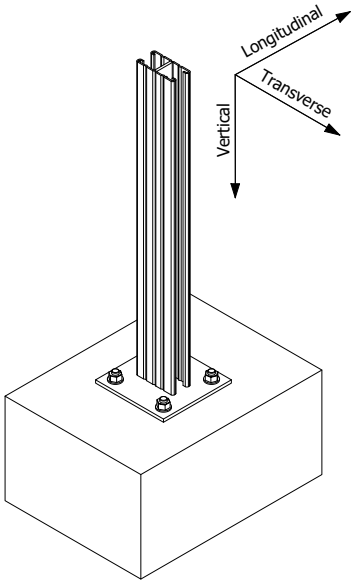
PAPER SIZE: ANSI A

TYPICAL DETAIL NUMBER:

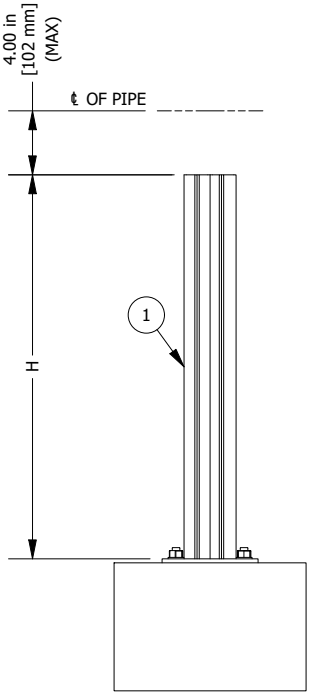
DETAIL: TD-P-PS06-S - SHEET: 1

Piece Mark	Item No.*	Description	Qty.*
1	VARIES	MQK-158/4-D-F-XX (SEE TABLE A)	1
2	387527	KB-TZ SS304 1/2 X 4 1/2 (SEE NOTE G)	4

TABLE A	
MQK-158/4-D-F-XX ITEM NO.	MQK-158/4-D-F-XX DESCRIPTION
2248533	MQK-158/4-D-F-24
2248534	MQK-158/4-D-F-36
2248535	MQK-158/4-D-F-48



ISOMETRIC
(SCALE 1"=1'-0")



ELEVATION
(SCALE 1"=1'-0")

	Max H, in	24	36	48
ALLOWABLE LOADS, lbs	Vertical	425	300	250
	Transverse	127	90	75
	Longitudinal	127	90	75

NOTE(S):
A. THE TYPICAL SUPPORT IS LOAD RATED AND DIMENSIONALLY LIMITED BASED ON DESIGN METHODOLOGY AND GENERIC NON-PROJECT SPECIFIC ASSUMPTIONS SET FORTH IN PROFIS INSTALL SOFTWARE VERSION 2.23. THE ENGINEER OF RECORD SHALL EVALUATE THIS TYPICAL SUPPORT TO DETERMINE ITS SUITABILITY FOR THE ACTUAL PROJECT SPECIFIC DESIGN CRITERIA AND REQUIREMENTS.
B. THE EVALUATION OF EXISTING STRUCTURE IS OUTSIDE OF THE TYPICAL DESIGN SCOPE AND SHALL BE PERFORMED BY THE ENGINEER OF RECORD.
C. TYPICAL SUPPORT DESIGN IS BASED ON INTERNATIONAL BUILDING CODE (IBC) 2015. SEE TABLES IN DETAILS FOR ALLOWABLE DESIGN LOADS (STATIC U.N.O.); LATERAL LOADS CALCULATED AS 30% OF DEAD LOAD.
D. ALL LOADS ASSUMED TO ACT ON THE SUPPORT, NO ECCENTRICITY CONSIDERED.
E. MAXIMUM ALLOWABLE LOAD TABLE SHOWN IN THE TYPICAL DETAILS ARE BASED ON THE COMBINATION OF VERTICAL LOAD WITH TRANSVERSE LOAD OR VERTICAL LOAD WITH LONGITUDINAL LOAD. A SEPARATE ANALYSIS MUST BE PERFORMED WHEN TRANSVERSE AND LONGITUDINAL LOAD OCCURS SIMULTANEOUSLY.
F. REFER TO COMPONENT MANUFACTURER'S FOR REQUIRED INSTALLATION INFORMATION.
G. MIN. CONCRETE COMPRESSIVE STRENGTH F'C=3000 PSI, MIN. CONCRETE EDGE DISTANCE = 4.0 INCHES, MIN. EFFECTIVE EMBEDMENT Heff = 2.0 INCHES.
H. CONCRETE ANCHORS NOTED IN THE BILL OF MATERIAL ARE DESIGNED ONLY FOR WIND LATERAL LOADING. EOR TO VERIFY ADEQUACY OF ANCHOR WHEN TYPICAL IS BEING USED FOR SEISMIC LATERAL LOADING.

REVISION HISTORY	
DATE:	COMMENT:
07/28/2020	ISSUE FOR USE

TYPICAL DETAIL NAME:

TYPICAL DETAILS
TD-P-PS07-C

TYPICAL DETAIL DESCRIPTION:

MQK-158/4-D-F STANCHION CONCRETE

DRAWN:	CHECKED:	DESIGNED:	REVIEWED:
JRS	GAB	ISE	ISE

PAPER SIZE: ANSI A

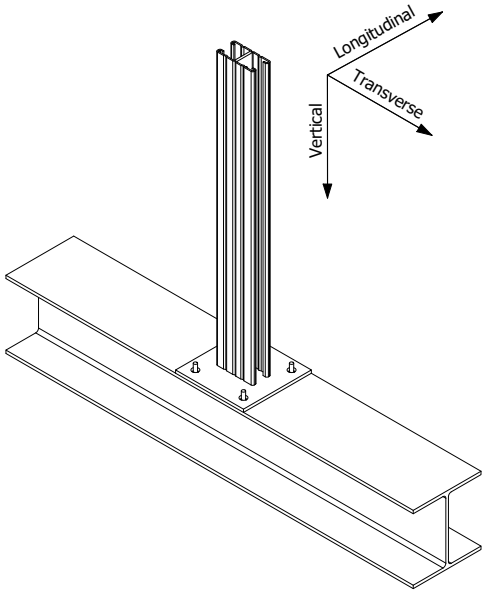
TYPICAL DETAIL NUMBER:

DETAIL: TD-P-PS07-C - SHEET: 1

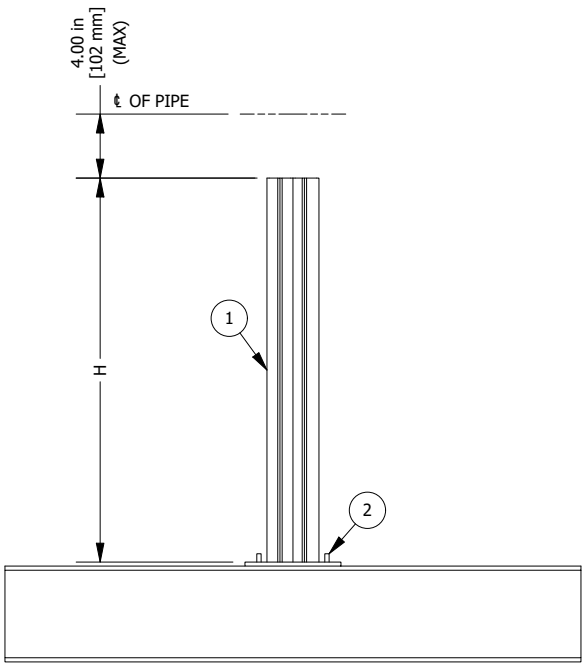
C:\Hilti Vault\Designs\Typical_Details\TD-Piping\TD-P-PS07-C\DWG\TD-P-PS07-C.dwg

Piece Mark	Item No.*	Description	Qty.*
1	VARIES	MQK-158/4-D-F-XX (SEE TABLE A)	1
2	2194340	THREADED STUD X-BT-M10/15 SN 8 (SEE NOTE G)	4

TABLE A	
MQK-158/4-D-F-XX ITEM NO.	MQK-158/4-D-F-XX DESCRIPTION
2248533	MQK-158/4-D-F-24
2248534	MQK-158/4-D-F-36
2248535	MQK-158/4-D-F-48



ISOMETRIC
(SCALE 1"=1'-0")



ELEVATION
(SCALE 1"=1'-0")

	Max H, in	24	36	48
ALLOWABLE LOADS, lbs	Vertical	425	300	250
	Transverse	127	90	75
	Longitudinal	127	90	75

NOTE(S):
A. THE TYPICAL SUPPORT IS LOAD RATED AND DIMENSIONALLY LIMITED BASED ON DESIGN METHODOLOGY AND GENERIC NON-PROJECT SPECIFIC ASSUMPTIONS SET FORTH IN PROFIS INSTALL SOFTWARE VERSION 2.23. SEE ALLOWABLE LOAD TABLE FOR MAXIMUM ALLOWABLE LOAD AND DIMENSION. THE ENGINEER OF RECORD SHALL EVALUATE THIS TYPICAL SUPPORT TO DETERMINE ITS SUITABILITY FOR THE ACTUAL PROJECT SPECIFIC DESIGN CRITERIA AND REQUIREMENTS.
B. THE EVALUATION OF EXISTING STRUCTURE IS OUTSIDE OF THE TYPICAL DESIGN SCOPE AND SHALL BE PERFORMED BY THE ENGINEER OF RECORD.
C. TYPICAL SUPPORT DESIGN IS BASED ON INTERNATIONAL BUILDING CODE (IBC) 2015. SEE TABLES IN DETAILS FOR ALLOWABLE DESIGN LOADS (STATIC U.N.O.) C. LATERAL LOADS CALCULATED AT 30% OF DEAD LOAD.
D. ALL LOADS ASSUMED TO ACT ON THE SUPPORT, NO ECCENTRICITY CONSIDERED.
E. MAXIMUM ALLOWABLE LOAD TABLE SHOWN IN THE TYPICAL DETAILS ARE BASED ON THE COMBINATION OF VERTICAL LOAD WITH TRANSVERSE LOAD OR VERTICAL LOAD WITH LONGITUDINAL LOAD. A SEPARATE ANALYSIS MUST BE PERFORMED WHEN TRANSVERSE AND LONGITUDINAL LOAD OCCURS SIMULTANEOUSLY.
F. REFER TO COMPONENT MANUFACTURER'S IFU's FOR REQUIRED INSTALLATION INFORMATION.
G. MIN. STEEL BASE THICKNESS SHALL BE 5/16 INCH. MIN EDGE DISTANCE SHALL BE 3/8 INCH. MIN YIELD STRENGTH OF STEEL SHALL BE F_Y=36KSI

REVISION HISTORY	
DATE:	COMMENT:
07/28/2020	ISSUE FOR USE

TYPICAL DETAIL NAME:

TYPICAL DETAILS
TD-P-PS08-S

TYPICAL DETAIL DESCRIPTION:

MQK-158/D-F STANCHION STEEL

HILTI

DRAWN:	CHECKED:	DESIGNED:	REVIEWED:
JRS	GAB	ISE	ISE

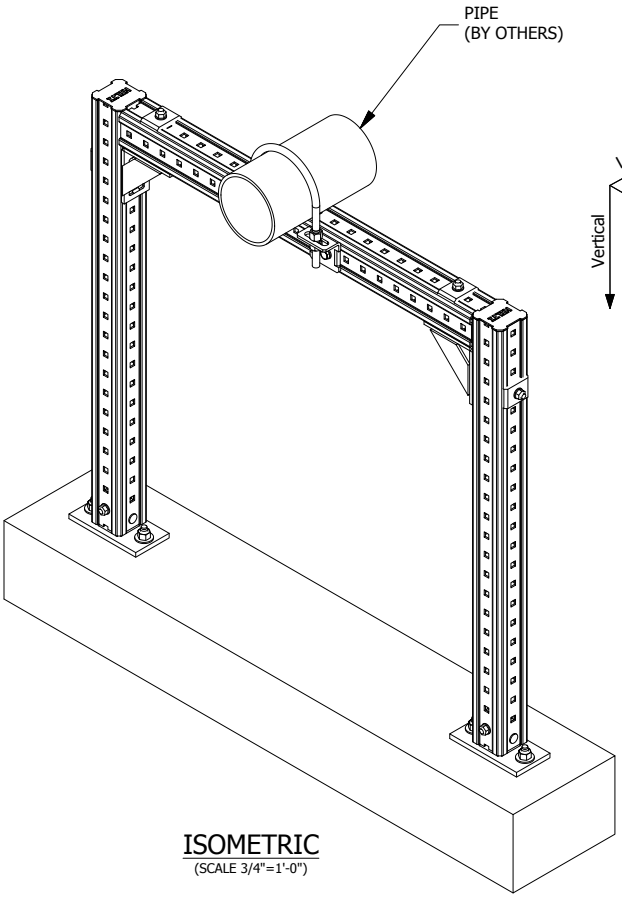
PAPER SIZE: ANSI A

TYPICAL DETAIL NUMBER:

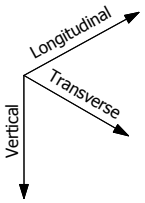
DETAIL: TD-P-PS08-S - SHEET: 1

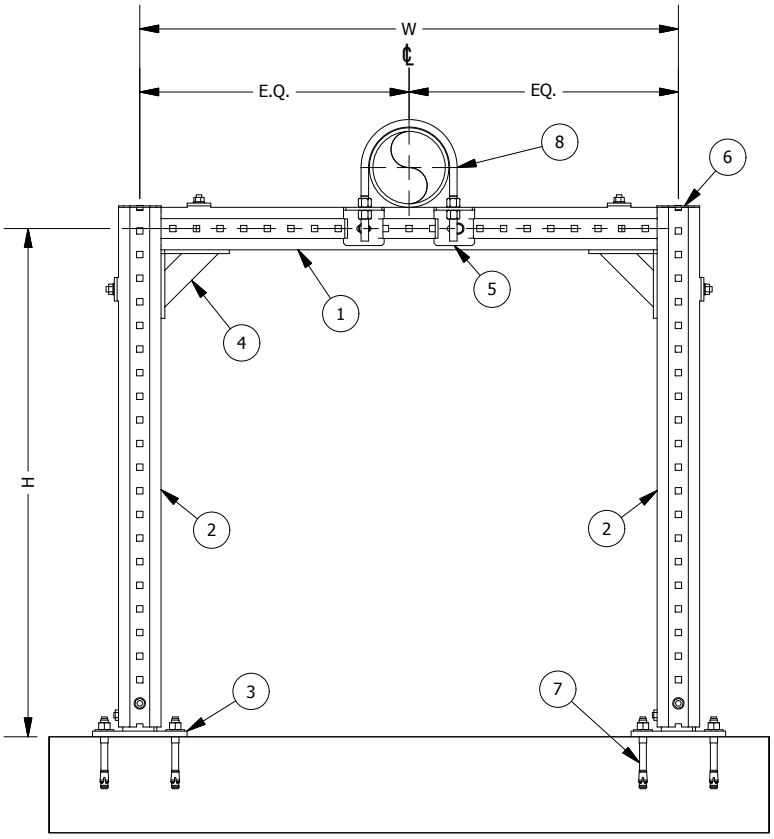
C:\Hilti Vault\Designs\Typical_Details\TD-Piping\TD-P-PS08-S\DWG\TD-P-PS08-S.dwg

Piece Mark	Item No.*	Description	Qty.*
1	304798	GIRDER MI-90	1
2	304798	GIRDER MI-90	2
3	304825	CONNECTOR MIC-C90-AA CONCRETE	2
4	2179532	CONNECTOR MIC-BAH	2
5	304834	CONNECTOR U-BOLT MIC-UB90-M16	1
6	432077	END CAP - MIA-EC-90	2
7	VARIES	USE APPROPRIATE HILTI ANCHOR	4
8	SPECIAL	U-BOLT BASED ON PIPE DIAMTER	1



ISOMETRIC
(SCALE 3/4"=1'-0")





ELEVATION
(SCALE 3/4"=1'-0")

	Max H, in	24	24	48	48	72	72
	Max W, in	48	72	48	72	48	72
LRFD, lbs	Vertical	1416	1404	924	912	912	900
	Transverse	666	666	348	384	234	234
	Longitudinal	666	666	348	384	234	234

NOTE(S):
1. THIS DRAWING REPRESENTS A COMMON CONFIGURATION FOR THIS APPLICATION. THE PIPE SUPPORT IS LOAD RATED AND DIMENSIONALLY LIMITED BASED ON STATIC LOADS, AND THE PUBLISHED HILTI LOAD DATA, DESIGN METHODOLOGIES, AND DEFAULT GENERIC NON-PROJECT SPECIFIC ASSUMPTIONS AS SET FORTH IN PROFIS INSTALL, VERSION 2.12. THE CAPACITY OF THE CONNECTION TO THE STRUCTURE MUST BE EVALUATED SEPARATELY. THE ENGINEERING OF RECORD SHALL EVALUATE THIS SUPPORT TO DETERMINE ITS SUITABILITY FOR THE ACTUAL, PROJECT SPECIFIC DESIGN CRITERIA AND REQUIREMENTS.
2. ALL LOADS ASSUMED TO ACT ON THE SUPPORT, NO ECCENTRIC LOADS INCLUDED. PIPE CONNECTION HARDWARE MUST BE CHECKED SEPARATELY.
3. DESIGN ASSUMPTIONS: IBC 2012 BUILDING CODE; SEE TABLE FOR DESIGN LOADS (STATIC U.N.O.)
4. REFER TO COMPONENT MANUFACTURER'S IFU'S FOR REQUIRED INSTALLATION INFORMATION.
5. FOR APPLICABLE CONCRETE OR STEEL ANCHOR DESIGN CONTACT HILTI OR THE PROJECT SITE ENGINEER OF RECORD.
6. CAPACITIES SHOWN ABOVE ARE BASED ON VERTICAL COMBINED WITH TRANSVERSE OR VERTICAL COMBINED WITH LONGITUDINAL. A SEPERATE ANALYSIS MUST BE PERFORMED IF VERTICAL, TRANSVERSE AND LONGITUDINAL LOADS OCCUR SIMULTANEOUSLY.
7. ANCHOR CAPACITIES NOT CONSIDERED.

REVISION HISTORY

NO:	DESCRIPTION:	DATE:
A	NOT FOR CONSTRUCTION	11/14/2017
B	UPDATED PER COMMENTS	3/9/2018

TYPICAL DETAIL NAME:

TYPICAL DETAILS
TD-P-GP02-C

TYPICAL DETAIL DESCRIPTION:

PIPE GOALPOST CONCRETE

DRAWN:	CHECKED:	DESIGNED:	REVIEWED:
GAB	JRS	OMO	JWP

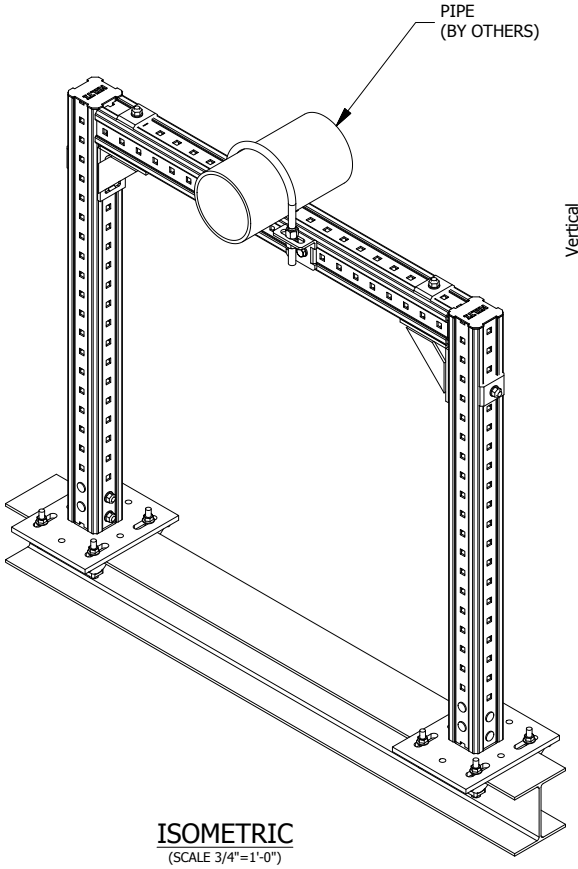
PAPER SIZE: ANSI A

TYPICAL DETAIL NUMBER:

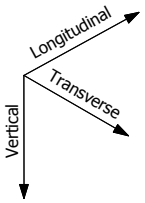
DETAIL: TD-P-GP02-C - SHEET: 1

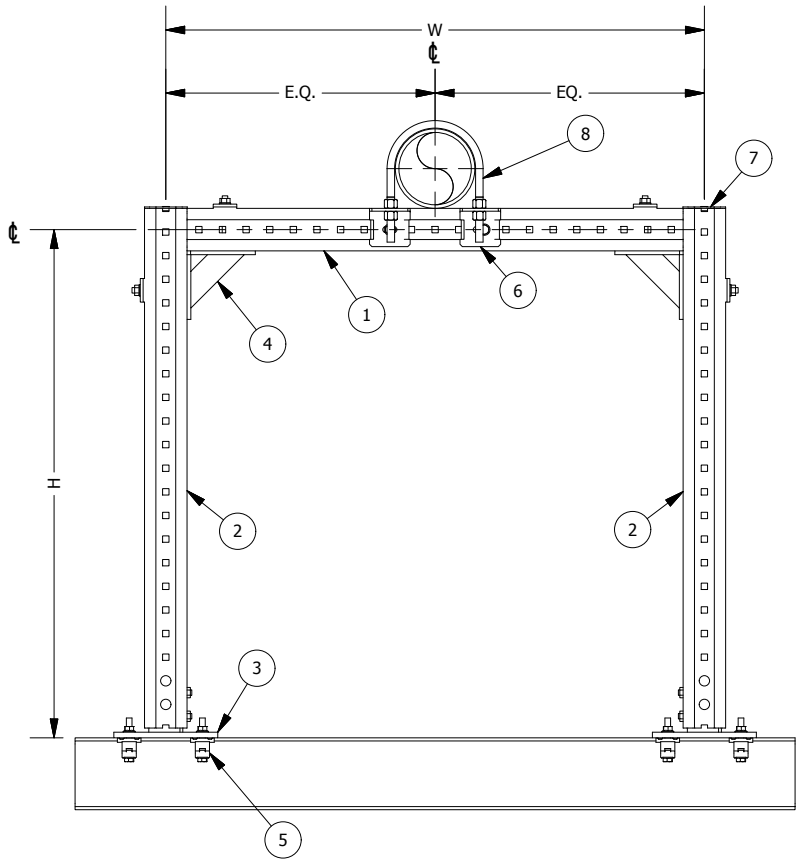
C:\Hilti Vault\Designs\Projects\10000 Internal Projects\10017 Typicals\PIPING\TD-P-GP02-C\TD-P-GP02-C.dwg

Piece Mark	Item No.*	Description	Qty.*
1	304798	GIRDER MI-90	1
2	304798	GIRDER MI-90	2
3	VARIES	CONNECTOR MIC-S90-XH STEEL - SEE TABLE	2
4	2179532	CONNECTOR MIC-BAH	2
5	387398	BEAM CLAMP MI-SGC-M16	8
6	304834	CONNECTOR U-BOLT MIC-UB90-M16	1
7	432077	END CAP - MIA-EC-90	2
8	SPECIAL	U-BOLT BASED ON PIPE DIAMTER	1



ISOMETRIC
(SCALE 3/4"=1'-0")





ELEVATION
(SCALE 3/4"=1'-0")

MIC-S90-XH BEAM WIDTH TABLE		
X	Beam Width	Item No.
A	3 to 6.5	2174665
B	6.5 to 9.3	2174666
C	9.2 to 12.0	2174667

	Max H, in	24	48	48	72	72
	Max W, in	72	48	72	48	72
LRFD, lbs	Vertical	1920	1920	1644	1428	1308
	Transverse	960	470	410	360	570
	Longitudinal	960	749	653	514	878

NOTE(S):
1. THIS DRAWING REPRESENTS A COMMON CONFIGURATION FOR THIS APPLICATION. THE PIPE SUPPORT IS LOAD RATED AND DIMENSIONALLY LIMITED BASED ON STATIC LOADS, AND THE PUBLISHED HILTI LOAD DATA, DESIGN METHODOLOGIES, AND DEFAULT GENERIC NON-PROJECT SPECIFIC ASSUMPTIONS AS SET FORTH IN PROFIS INSTALL, VERSION 2.12. THE CAPACITY OF THE CONNECTION TO THE STRUCTURE MUST BE EVALUATED SEPARATELY. THE ENGINEERING OF RECORD SHALL EVALUATE THIS SUPPORT TO DETERMINE ITS SUITABILITY FOR THE ACTUAL, PROJECT SPECIFIC DESIGN CRITERIA AND REQUIREMENTS.
2. ALL LOADS ASSUMED TO ACT ON THE SUPPORT, NO ECCENTRIC LOADS INCLUDED. PIPE CONNECTION HARDWARE MUST BE CHECKED SEPARATELY.
3. DESIGN ASSUMPTIONS: IBC 2012 BUILDING CODE; SEE TABLE FOR DESIGN LOADS (STATIC U.N.O.)
4. REFER TO COMPONENT MANUFACTURER'S IFU'S FOR REQUIRED INSTALLATION INFORMATION.
5. FOR APPLICABLE CONCRETE OR STEEL ANCHOR DESIGN CONTACT HILTI OR THE PROJECT SITE ENGINEER OF RECORD.
6. CAPACITIES SHOWN ABOVE ARE BASED ON VERTICAL COMBINED WITH TRANSVERSE OR VERTICAL COMBINED WITH LONGITUDINAL. A SEPERATE ANALYSIS MUST BE PERFORMED IF VERTICAL, TRANSVERSE AND LONGITUDINAL LOADS OCCUR SIMULTANEOUSLY.

REVISION HISTORY		
NO:	DESCRIPTION:	DATE:
A	NOT FOR CONSTRUCTION	11/14/2017
B	UPDATED PER COMMENTS	3/9/2018

TYPICAL DETAIL NAME:

TYPICAL DETAILS
TD-P-GP15-S

TYPICAL DETAIL DESCRIPTION:

PIPE GOALPOST STEEL

HILTI

DRAWN:	CHECKED:	DESIGNED:	REVIEWED:
GAB	JRS	OMO	JWP

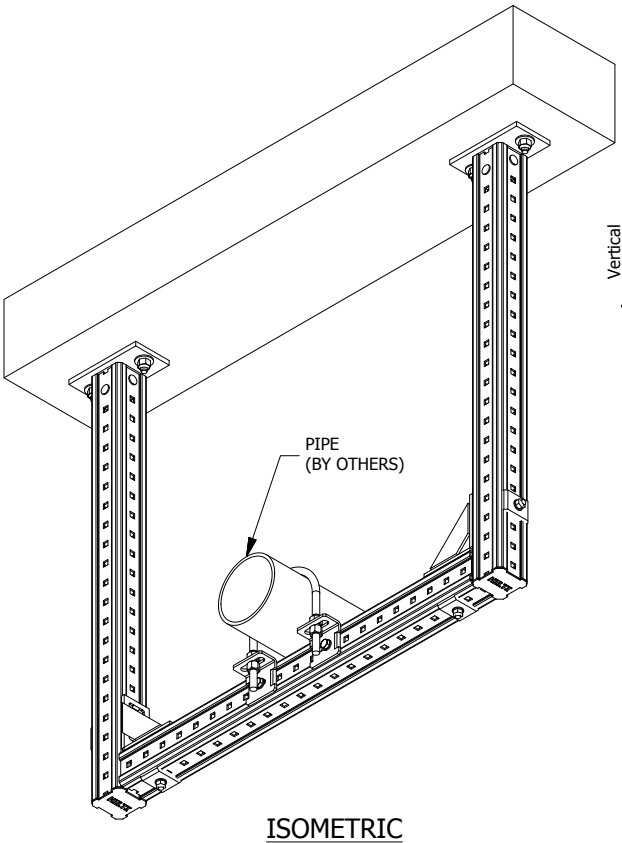
PAPER SIZE: ANSI A

TYPICAL DETAIL NUMBER:

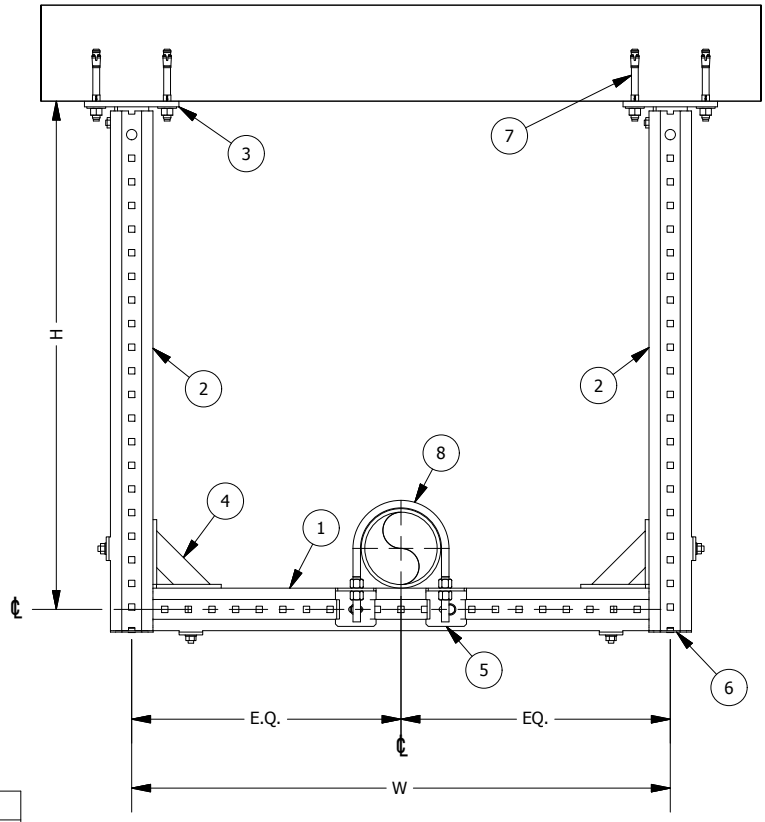
DETAIL: TD-P-GP15-S - SHEET: 1

C:\Hilti Vault\Designs\Projects\10000 Internal Projects\10017 Typicals\PIPING\TD-P-GP15-S\TD-P-GP15-S.dwg

Piece Mark	Item No.*	Description	Qty.*
1	304798	GIRDER MI-90	1
2	304798	GIRDER MI-90	2
3	304825	CONNECTOR MIC-C90-AA CONCRETE	2
4	2179532	CONNECTOR MIC-BAH	2
5	304834	CONNECTOR U-BOLT MIC-UB90-M16	1
6	432077	END CAP - MIA-EC-90	2
7	VARIES	USE APPROPRIATE HILTI ANCHOR	4
8	SPECIAL	U-BOLT BASED ON PIPE DIAMTER	1



ISOMETRIC
(SCALE 3/4"=1'-0")



ELEVATION
(SCALE 3/4"=1'-0")

	Max H, in	24	24	48	48	72	72
	Max W, in	48	72	48	72	48	72
LRFD, lbs	Vertical	1140	990	790	800	780	630
	Transverse	618	594	336	330	228	228
	Longitudinal	618	594	336	330	228	228

NOTE(S):
1. THIS DRAWING REPRESENTS A COMMON CONFIGURATION FOR THIS APPLICATION. THE PIPE SUPPORT IS LOAD RATED AND DIMENSIONALLY LIMITED BASED ON STATIC LOADS, AND THE PUBLISHED HILTI LOAD DATA, DESIGN METHODOLOGIES, AND DEFAULT GENERIC NON-PROJECT SPECIFIC ASSUMPTIONS AS SET FORTH IN PROFIS INSTALL, VERSION 2.12. THE CAPACITY OF THE CONNECTION TO THE STRUCTURE MUST BE EVALUATED SEPARATELY. THE ENGINEERING OF RECORDS SHALL EVALUATE THIS SUPPORT TO DETERMINE ITS SUITABILITY FOR THE ACTUAL, PROJEC SPECIFIC DESIGN CRITERIA AND REQUIRMENTS.
2. ALL LOADS ASSUMED TO ACT ON THE SUPPORT, NO ECCENTRIC LOADS INCLUDED. PIPE CONNECTION HARDWARE MUST BE CHECKED SEPARATELY.
3. DESIGN ASSUMPTIONS: IBC 2012 BUILDING CODE; SEE TABLE FOR DESIGN LOADS (STATIC U.N.O.)
4. REFER TO COMPONENT MANUFACTURER'S IFU'S FOR REQUIRED INSTALLATION INFORMATION.
5. FOR APPLICABLE CONCRETE OR STEEL ANCHOR DESIGN CONTACT HILTI OR THE PROJECT SITE ENGINEER OF RECORD.
6. CAPACITIES SHOWN ABOVE ARE BASED ON VERTICAL COMBINED WITH TRANSVERSE OR VERTICAL COMBINED WITH LONGITUDINAL. A SEPERATE ANALYSIS MUST BE PERFORMED IF VERTICAL, TRANSVERSE AND LONGITUDINAL LOADS OCCUR SIMULTANEOUSLY.
7. ANCHOR CAPACITIES NOT CONSIDERED.

REVISION HISTORY

NO:	DESCRIPTION:	DATE:
A	NOT FOR CONSTRUCTION	3/30/2018

TYPICAL DETAIL NAME:

TYPICAL DETAILS
TD-P-TR01-C

TYPICAL DETAIL DESCRIPTION:

PIPE TRAPEZE CONCRETE

DRAWN:	CHECKED:	DESIGNED:	REVIEWED:
GAB	JRS	OMO	JWP

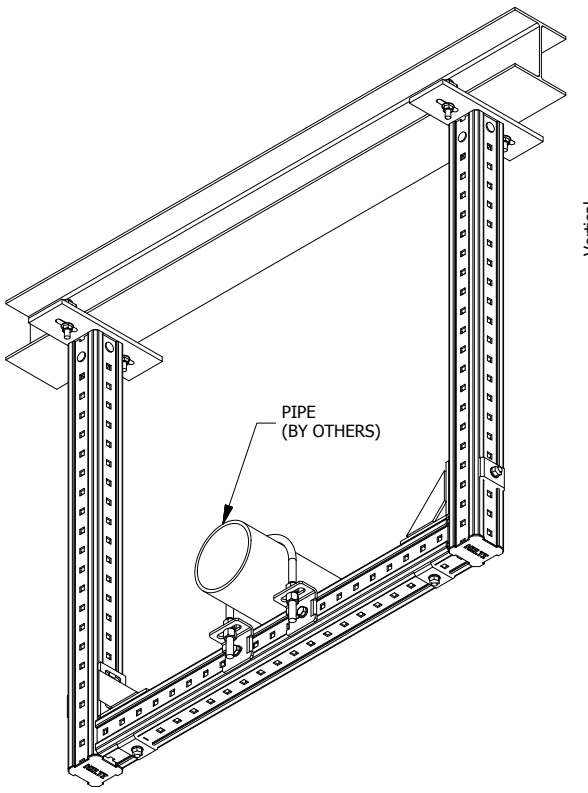
PAPER SIZE: ANSI A

TYPICAL DETAIL NUMBER:

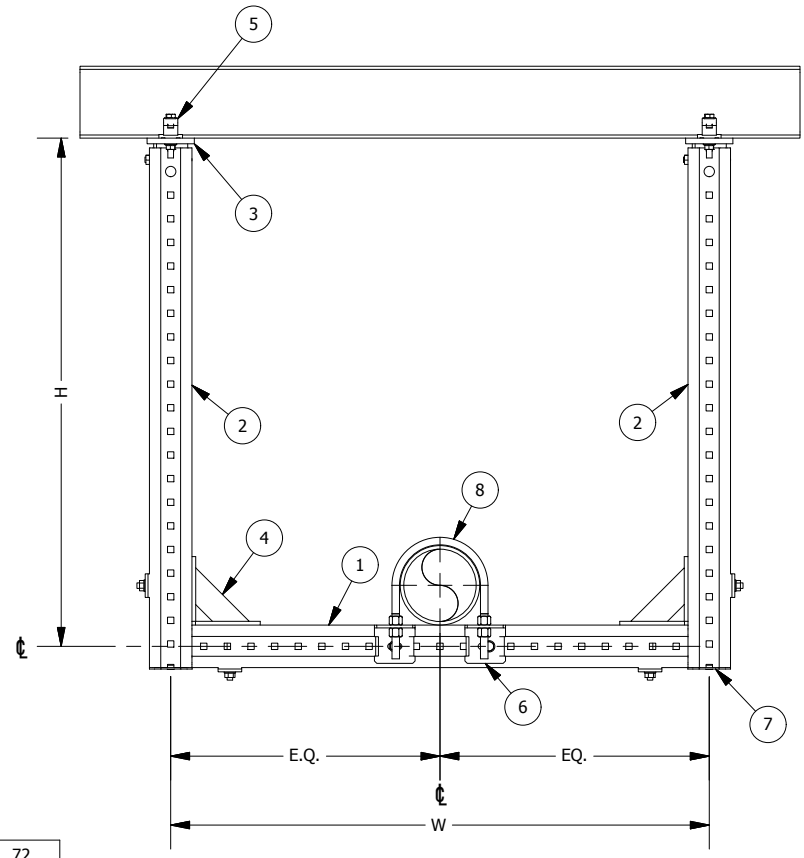
DETAIL: TD-P-TR01-C - SHEET: 1

C:\Hilti Vault\Designs\Projects\10000 Internal Projects\10017 Typicals\PIPING\TD-P-TR01-C\TD-P-TR01-C.dwg

Piece Mark	Item No.*	Description	Qty.*
1	304798	GIRDER MI-90	1
2	304798	GIRDER MI-90	2
3	304811	CONNECTOR MIC-S90-AA STEEL	2
4	2179532	CONNECTOR MIC-BAH	2
5	233859	BEAM CLAMP MI-SGC-M12	4
6	304834	CONNECTOR U-BOLT MIC-UB90-M16	1
7	432077	END CAP - MIA-EC-90	2
8	SPECIAL	U-BOLT BASED ON PIPE DIAMTER	1



ISOMETRIC
(SCALE 3/4"=1'-0")



ELEVATION
(SCALE 3/4"=1'-0")

	Max H, in	24	24	48	48	72	72
	Max W, in	48	72	48	72	48	72
LRFD, lbs	Vertical	816	564	600	588	348	336
	Transverse	408	282	222	222	156	156
	Longitudinal	408	282	222	222	156	156

NOTE(S):
1. THIS DRAWING REPRESENTS A COMMON CONFIGURATION FOR THIS APPLICATION. THE PIPE SUPPORT IS LOAD RATED AND DIMENSIONALLY LIMITED BASED ON STATIC LOADS, AND THE PUBLISHED HILTI LOAD DATA, DESIGN METHODOLOGIES, AND DEFAULT GENERIC NON-PROJECT SPECIFIC ASSUMPTIONS AS SET FORTH IN PROFIS INSTALL, VERSION 2.12. THE CAPACITY OF THE CONNECTION TO THE STRUCTURE MUST BE EVALUATED SEPARATELY. THE ENGINEERING OF RECORD SHALL EVALUATE THIS SUPPORT TO DETERMINE ITS SUITABILITY FOR THE ACTUAL, PROJECT SPECIFIC DESIGN CRITERIA AND REQUIREMENTS.
2. ALL LOADS ASSUMED TO ACT ON THE SUPPORT, NO ECCENTRIC LOADS INCLUDED. PIPE CONNECTION HARDWARE MUST BE CHECKED SEPARATELY.
3. DESIGN ASSUMPTIONS: IBC 2012 BUILDING CODE; SEE TABLE FOR DESIGN LOADS (STATIC U.N.O.)
4. REFER TO COMPONENT MANUFACTURER'S IFU'S FOR REQUIRED INSTALLATION INFORMATION.
5. FOR APPLICABLE CONCRETE OR STEEL ANCHOR DESIGN CONTACT HILTI OR THE PROJECT SITE ENGINEER OF RECORD.
6. CAPACITIES SHOWN ABOVE ARE BASED ON VERTICAL COMBINED WITH TRANSVERSE OR VERTICAL COMBINED WITH LONGITUDINAL. A SEPERATE ANALYSIS MUST BE PERFORMED IF VERTICAL, TRANSVERSE AND LONGITUDINAL LOADS OCCUR SIMULTANEOUSLY.
7. TRAPEZE TO FIT FLANGE WIDTH OF 75 - 165 MM.

REVISION HISTORY

NO:	DESCRIPTION:	DATE:
1	NOT FOR CONSTRUCTION	3/30/2018

TYPICAL DETAIL NAME:

TYPICAL DETAILS
TD-P-TR01-S

TYPICAL DETAIL DESCRIPTION:

PIPE TRAPEZE STEEL

DRAWN:	CHECKED:	DESIGNED:	REVIEWED:
GAB	JRS	OMO	JWP

PAPER SIZE: ANSI A

TYPICAL DETAIL NUMBER:

DETAIL: TD-P-TR01-S - SHEET: 1

C:\Hilti Vault\Designs\Projects\10000 Internal Projects\10017 Typicals\PIPING\TD-P-TR01-S\TD-P-TR01-S.dwg