

EZ SEE HYDRANT MARKER (72610 W-R 10501) W/RED REFLECTIVE TAPE 65" OVERALL LENGTH.

APPROVED MATERIALS:

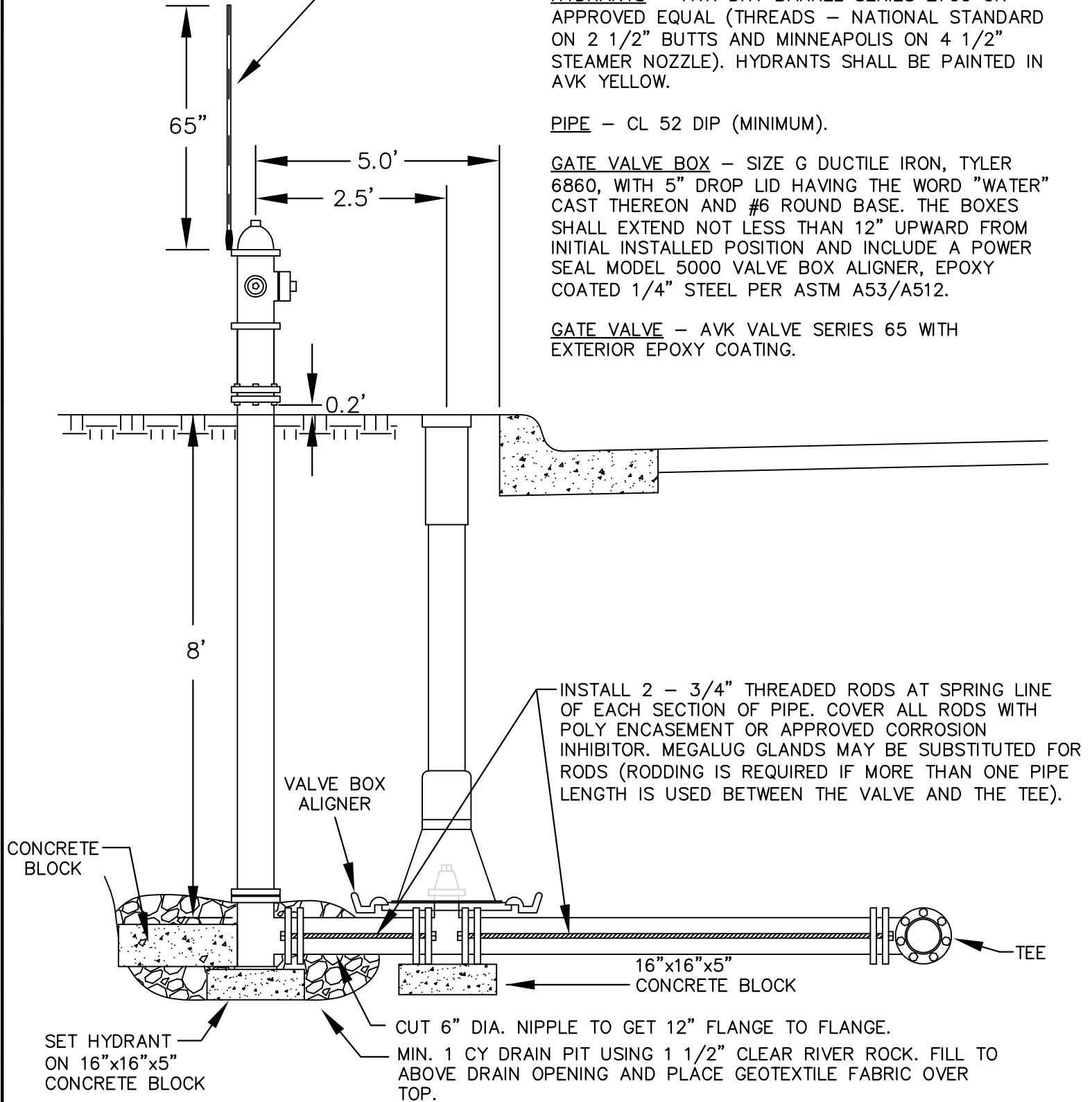
FITTINGS - ALL FITTINGS SHALL BE EPOXY COATED DUCTILE IRON AND BOLTED WITH EPOXY COATED STAINLESS STEEL OR COR-BLUE BOLTS AND NUTS.

HYDRANTS - AVK DRY BARREL SERIES 2700 OR APPROVED EQUAL (THREADS - NATIONAL STANDARD ON 2 1/2" BUTTS AND MINNEAPOLIS ON 4 1/2" STEAMER NOZZLE). HYDRANTS SHALL BE PAINTED IN AVK YELLOW.

PIPE - CL 52 DIP (MINIMUM).

GATE VALVE BOX - SIZE G DUCTILE IRON, TYLER 6860, WITH 5" DROP LID HAVING THE WORD "WATER" CAST THEREON AND #6 ROUND BASE. THE BOXES SHALL EXTEND NOT LESS THAN 12" UPWARD FROM INITIAL INSTALLED POSITION AND INCLUDE A POWER SEAL MODEL 5000 VALVE BOX ALIGNER, EPOXY COATED 1/4" STEEL PER ASTM A53/A512.

GATE VALVE - AVK VALVE SERIES 65 WITH EXTERIOR EPOXY COATING.



APPROVED JANUARY 1, 2018

*[Signature]*  
CITY ENGINEER REG 23110

**TYPICAL HYDRANT  
INSTALLATION**

City of **Golden Valley**  
**GV-WM-010**

EZ SEE HYDRANT MARKER (72610 W-R 10501) W/RED REFLECTIVE TAPE 65" OVERALL LENGTH.

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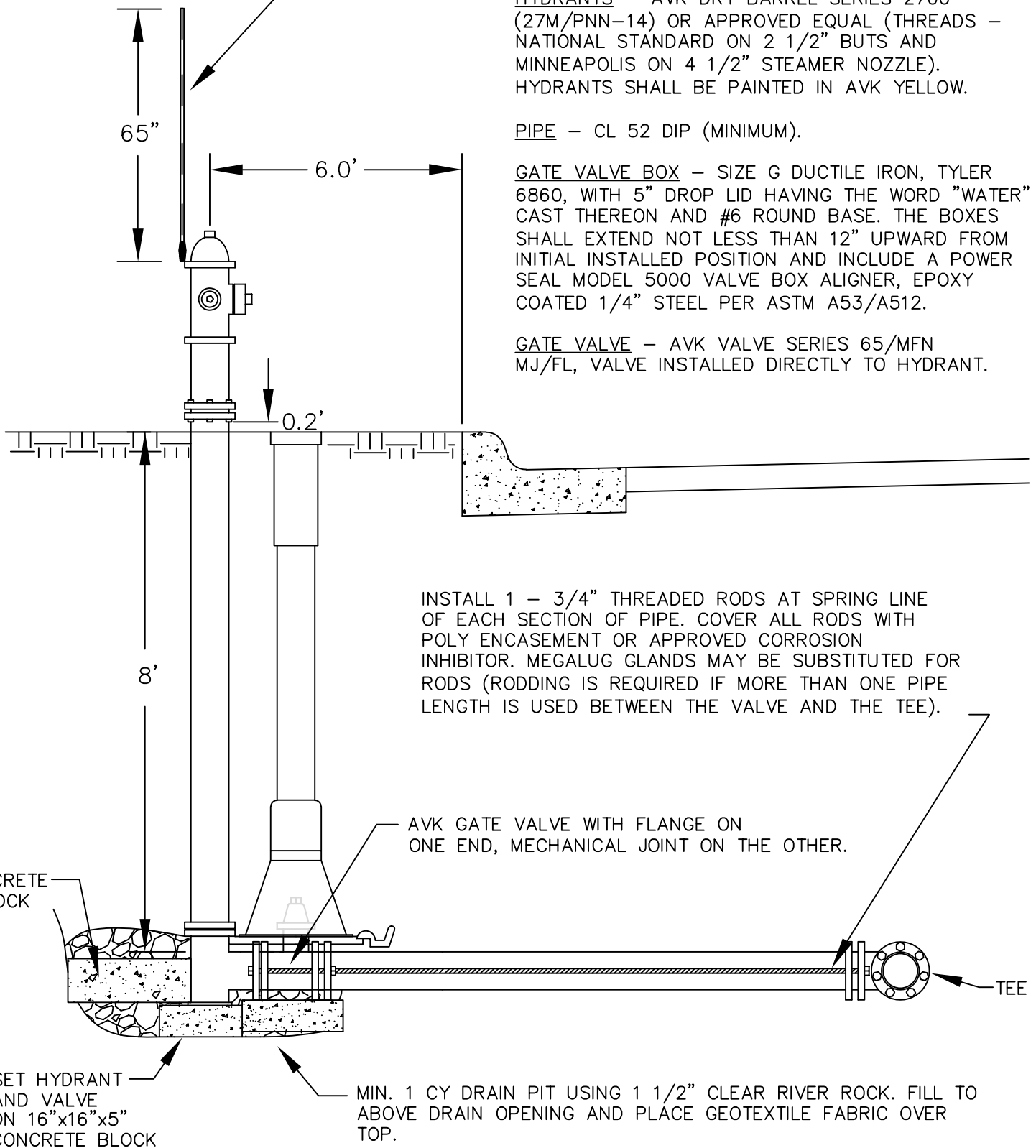
FITTINGS - ALL FITTINGS SHALL BE EPOXY COATED DUCTILE IRON AND BOLTED WITH EPOXY COATED STAINLESS STEEL OR COR-BLUE BOLTS AND NUTS.

HYDRANTS - AVK DRY BARREL SERIES 2700 (27M/PNN-14) OR APPROVED EQUAL (THREADS - NATIONAL STANDARD ON 2 1/2" BUTS AND MINNEAPOLIS ON 4 1/2" STEAMER NOZZLE). HYDRANTS SHALL BE PAINTED IN AVK YELLOW.

PIPE - CL 52 DIP (MINIMUM).

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GATE VALVE - AVK VALVE SERIES 65/MFN MJ/FL, VALVE INSTALLED DIRECTLY TO HYDRANT.



INSTALL 1 - 3/4" THREADED RODS AT SPRING LINE OF EACH SECTION OF PIPE. COVER ALL RODS WITH POLY ENCASEMENT OR APPROVED CORROSION INHIBITOR. MEGALUG GLANDS MAY BE SUBSTITUTED FOR RODS (RODDING IS REQUIRED IF MORE THAN ONE PIPE LENGTH IS USED BETWEEN THE VALVE AND THE TEE).

APPROVED JANUARY 1, 2018

CITY ENGINEER REG 23110

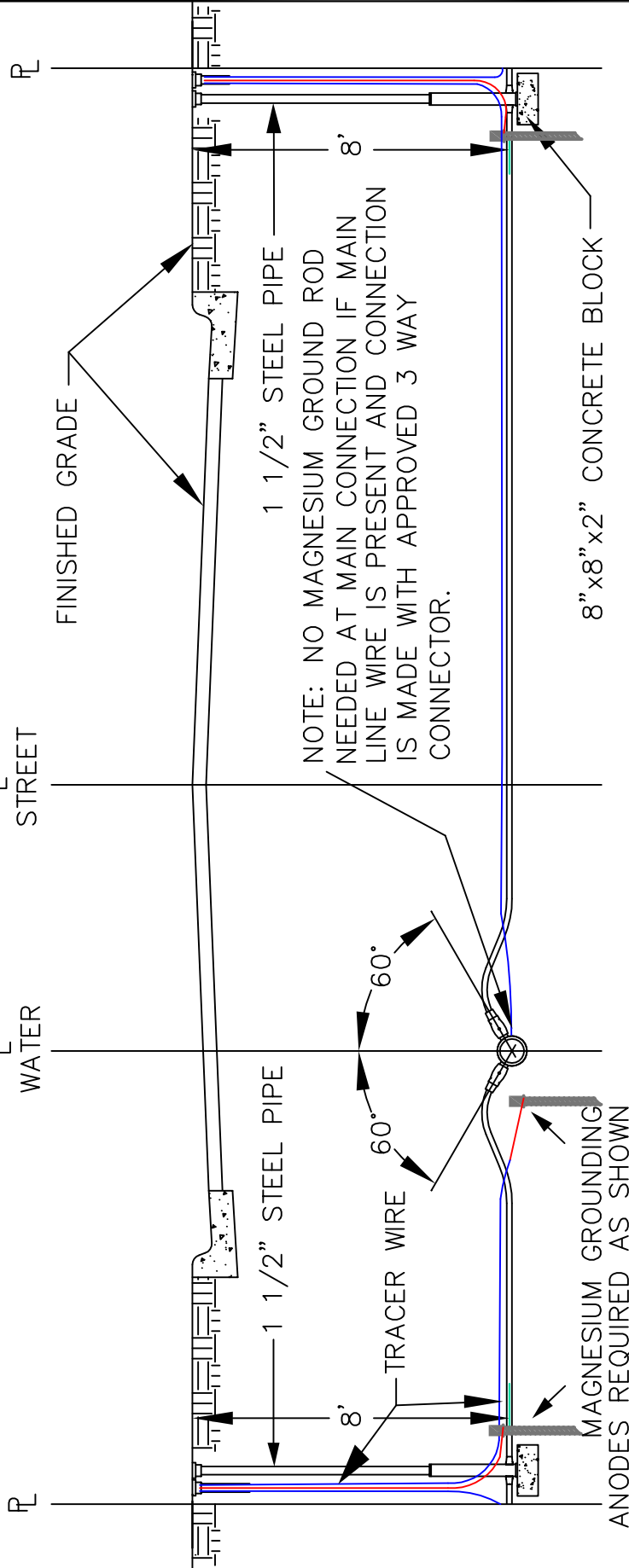
**TYPICAL HYDRANT  
INSTALLATION**

City of  
**Golden Valley**  
GV-WM-015

NOTE:

FORM GOOSENECK 6" ABOVE TAP TO ALLOW FOR SETTLEMENT  
 MAINTAIN A MINIMUM OF 8' OF COVER OVER SERVICE.

ANY SERVICE LARGER THAN 1" TO BE 1.5"/2" C-900 SDR 7 OR (4"STUB) TO PROPERTY  
 LINE WITH 4" GATE VALVE AND FLANGED REDUCER.



APPROVED MATERIALS FOR COPPER & (PLASTIC) PIPING:

CURB STOP – 1" CURB STOP AY MCDONALD 76104 OR (PLASTIC 76104--33)

CURB BOX – AY MCDONALD SERIES 5622A 8 CURB BOX COMPLETE W/5623LTW LID-- NO EXTENSION

CORPORATION STOP – 1" AY MCDONALD 74701B OR (PLASTIC 74701B--33)

TAPS – 1" SMITH-BLAIR SERIES 372 STAINLESS STEEL SERVICE SADDLE

WATER SERVICE – COPPER TYPE K OR C900 (PLASTIC W/ 1" SS INSERT AY MCDONALD 6136)  
 W/TRACER WIRE AS SHOWN OR MINNESOTA RURAL WATER ASSOCIATION STANDARDS.

APPROVED JANUARY 1, 2018

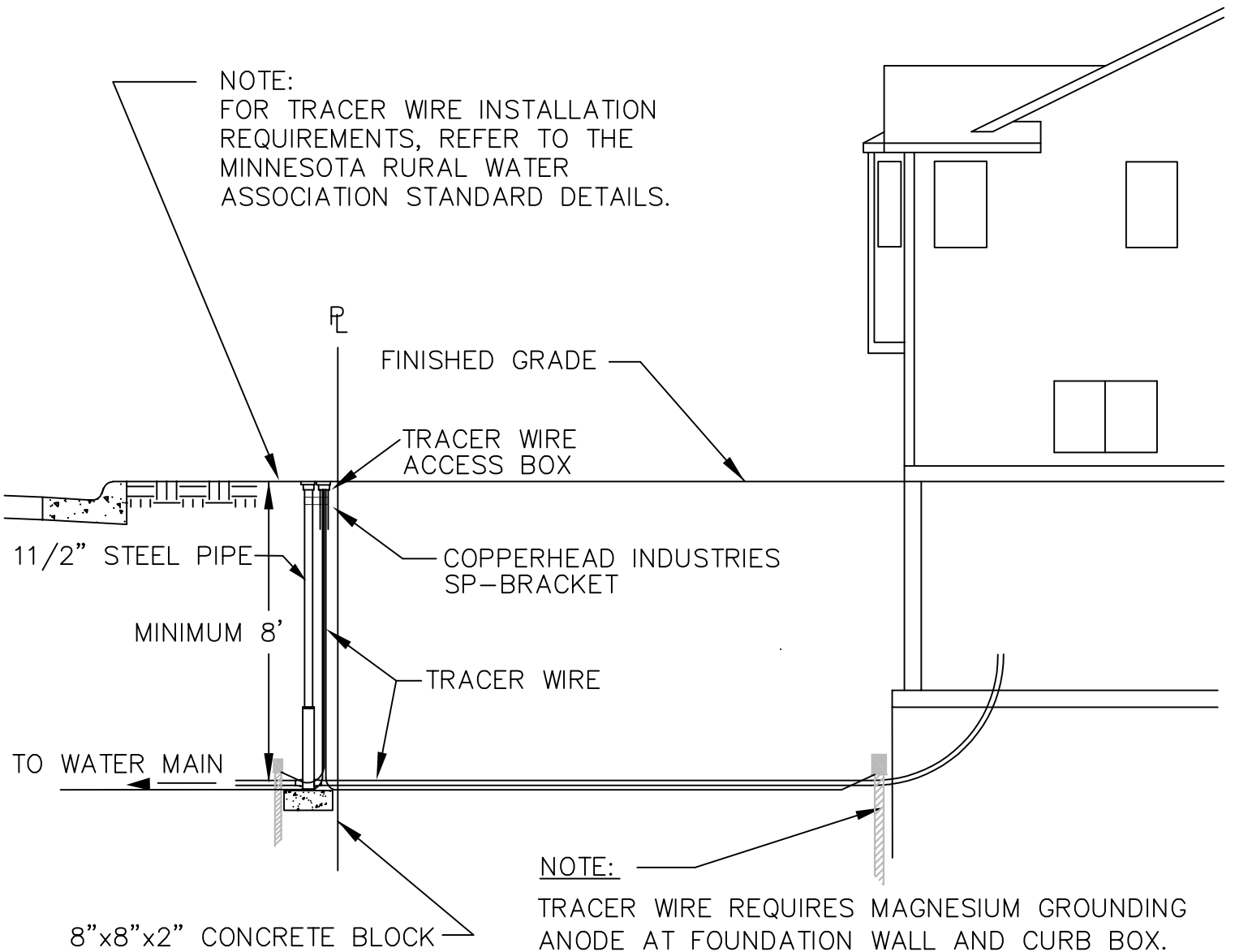
CITY ENGINEER REG 23110

TYPICAL WATER SERVICE  
 (ON 6" TO 8" MAIN)



GV-WM-020

NOTE:  
FOR TRACER WIRE INSTALLATION  
REQUIREMENTS, REFER TO THE  
MINNESOTA RURAL WATER  
ASSOCIATION STANDARD DETAILS.



NOTE:  
TRACER WIRE REQUIRES MAGNESIUM GROUNDING  
ANODE AT FOUNDATION WALL AND CURB BOX.

APPROVED MATERIALS FOR COPPER & (PLASTIC) PIPING:

CURB STOP – 1" CURB STOP AY MCDONALD 76104 OR (PLASTIC 76104-33)

CURB BOX – CURB BOX AY MCDONALD SERIES 5622A 8 CURB BOX COMPLETE  
W/ 5623LTW LID

PIPE MATERIAL – ACCORDING TO STATE PLUMBING CODE: COPPER AND PLASTIC  
(PLASTIC PIPE REQUIRES 1" STAINLESS STEEL INSERT AY MCDONALD 6136)

TRACER BOX ACCESS BOX – SHALL INCLUDE SNAKEPIT BRACKET BY COPPERHEAD

APPROVED JANUARY 16, 2020

CITY ENGINEER REG 23110

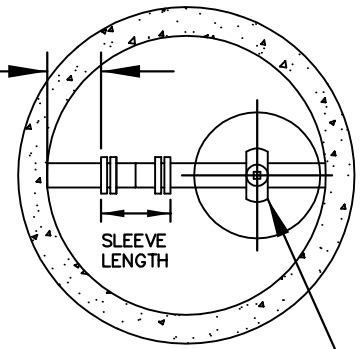
**TYPICAL WATER SERVICE  
(PROPERTY LINE TO  
HOUSE)**

City of  
**Golden Valley**  
GV-WM-030

TOP VIEW

MUST BE GREATER THAN SLEEVE LENGTH TO ALLOW FOR REMOVAL OF SLEEVE AND VALVE.

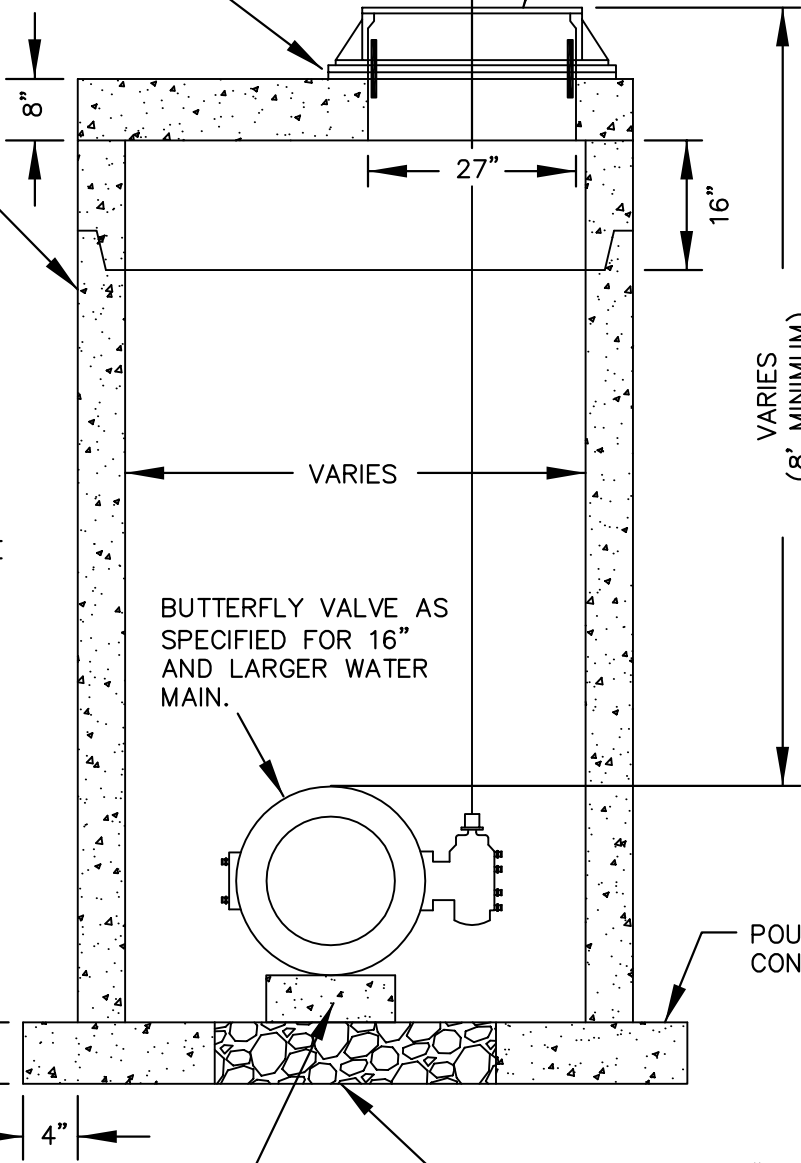
NEENAH R-1733 SERIES SOLID COVER, ESS BROS. 301, OR APPROVED EQUAL WITH "WATER" ON IT



CENTER VALVE IN COVER HOLE

PLASTIC HDPE ADJUSTING RINGS (MIN. 2 MAX. 5)

WALL SHALL BE PRECAST CONCRETE



NOTE:

THE MANHOLE SHALL BE SET SO THE OPERATING NUT IS CENTERED ON THE OPENING IN THE COVER.

THE WALL OPENING FOR PIPE SHALL HAVE A 2" MIN. CLEARANCE ALL AROUND.

PRECAST CONCRETE MANHOLE PIPE SHALL CONFORM TO A.S.T.M. C-478.

BUTTERFLY VALVE AS SPECIFIED FOR 16" AND LARGER WATER MAIN.

VARIES (8' MINIMUM)

POURED OR PRECAST CONCRETE BASE

CONCRETE BLOCK

PLACE ON MIN. 18" DEEP 1 1/2" ROCK SUMP

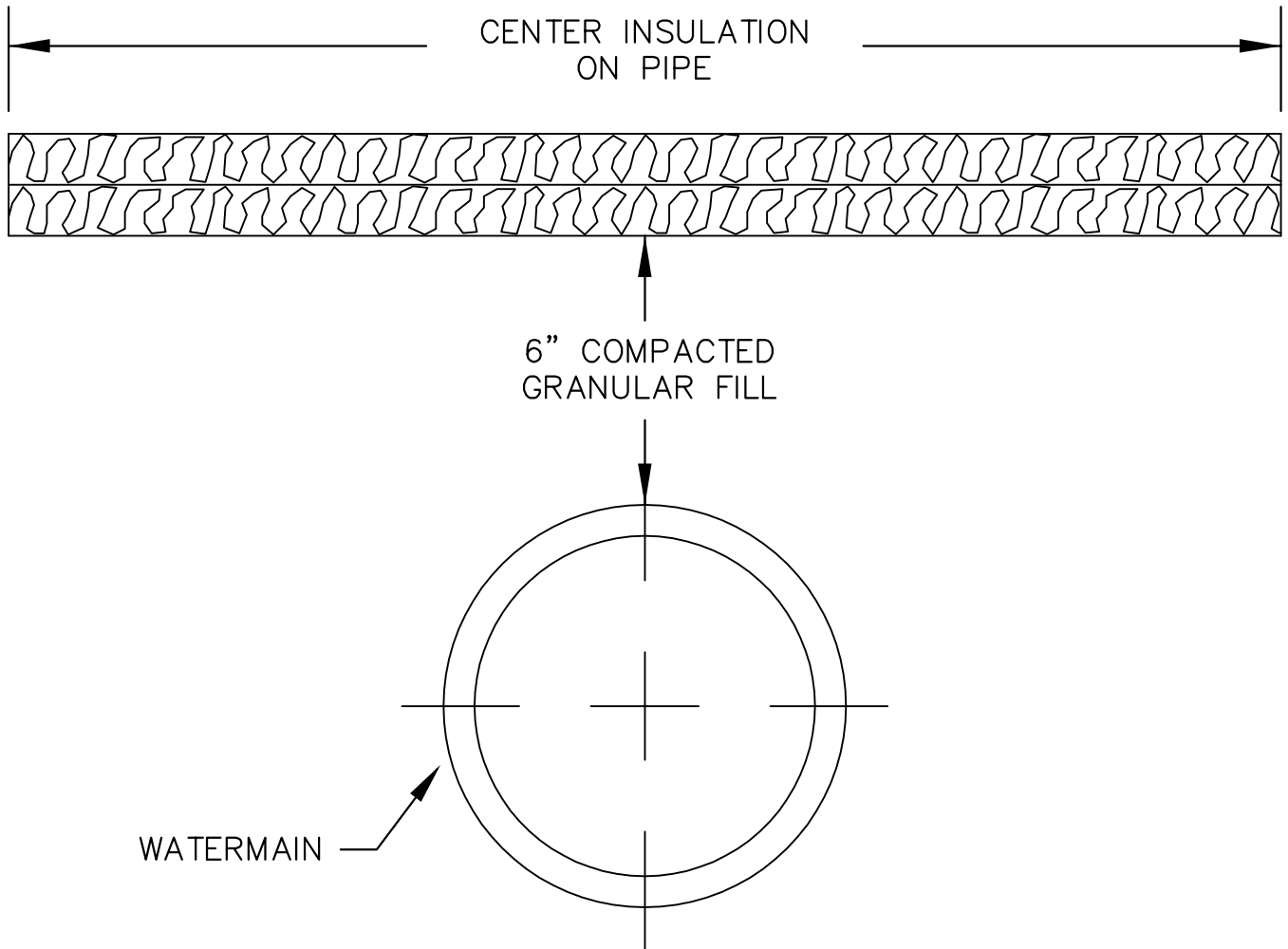
APPROVED JANUARY 1, 2018

CITY ENGINEER REG 23110

# WATERMAIN VALVE MANHOLE

City of Golden Valley

GV-WM-040



NOTE:  
 MINIMUM 2" PER FOOT UNDER 8' OF  
 COVER – 2" THICK HIGH DENSITY  
 POLYSTYRENE INSULATION (MINIMUM  
 TOTAL R VALUE OF 20) LAYERS WITH  
 JOINTS STAGGERED AND EXTENDING A  
 MINIMUM OF 2' EACH WAY FROM  
 WATERMAIN C/L OR AS DIRECTED BY  
 THE ENGINEER.

APPROVED JANUARY 1, 2018

CITY ENGINEER REG 23110

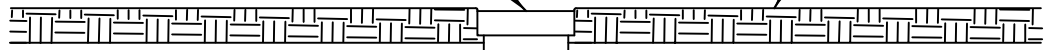
**WATERMAIN  
 INSULATION**

City of  
**Golden Valley**

**GV-WM-050**

SET 1/4" BELOW FINISHED  
BITUMINOUS ELEVATION

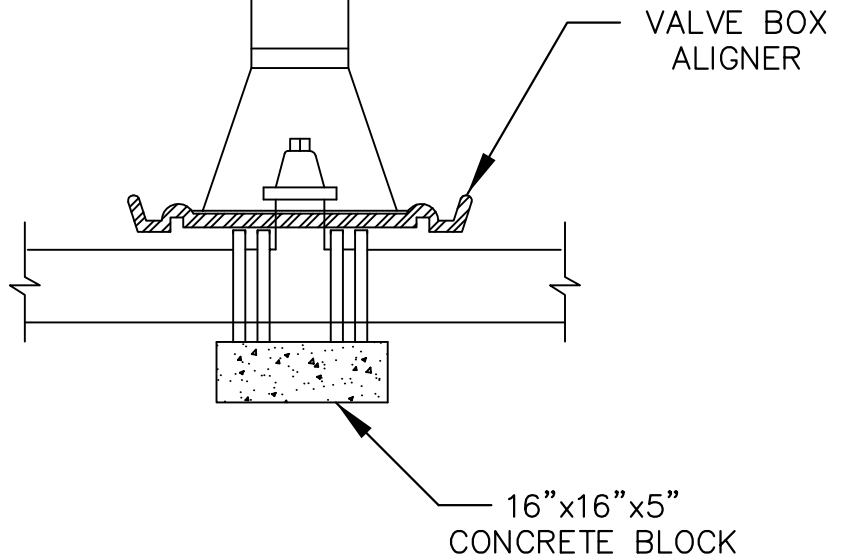
FINISHED  
GRADE



FITTINGS – ALL FITTINGS SHALL BE EPOXY COATED DUCTILE IRON AND BOLTED WITH EPOXY COATED STAINLESS STEEL OR COR-BLUE BOLTS AND NUTS.

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APPROVED JANUARY 1, 2018

CITY ENGINEER REG 23110

**TYPICAL GATE VALVE  
INSTALLATION**

City of  
**Golden Valley**

**GV-WM-060**

● GRADE LEVEL /  
IN-GROUND TRACE WIRE  
ACCESS BOX

--- HDPE INSULATED  
#12 AWG COPPER CLAD  
STEEL - BLUE  
(TYP)

× DRIVE-IN MAGNESIUM  
GROUNDING ANODE (SEE  
WATER SERVICE DETAIL)  
PART # ANO-12

TRACE WIRE ON NORTH  
SIDE OF WATER MAIN  
PIPE

TRACE WIRE ON EAST  
SIDE OF WATER MAIN  
PIPE

4-WAY CONNECTOR OR  
TWO 3-WAY  
CONNECTORS WITH  
SHORT JUMPER WIRE

WATER MAIN  
(TYP)

WATER MAIN  
CROSS

WATER SERVICE (TYP)

MAINLINE TO LATERAL  
LUG CONNECTOR  
(TYP)

GRADE LEVEL /  
IN-GROUND TRACE WIRE  
ACCESS BOX AND  
DRIVE-IN MAGNESIUM  
GROUNDING ANODE (SEE  
WATER SERVICE DETAIL)

CURB STOP (TYP)

ABOVE GROUND ACCESS  
BOX SECURED TO  
HYDRANT FLANGE  
(SEE HYDRANT DETAIL)

HYDRANT

#12 AWG COPPER CLAD  
STEEL - BLUE  
(TYP)

DRIVE-IN MAGNESIUM  
GROUNDING ANODE  
(TYP)

**NOTES:**

1. WIRE SHOWN AWAY FROM PIPE FOR CLARITY. WIRE SHALL BE INSTALLED ON THE BOTTOM SIDE OF THE PIPE BELOW THE SPRING LINE. THE WIRE SHALL BE FASTENED TO THE PIPE WITH TAPE OR PLASTIC TIES AT 5' INTERVALS.

TRACE WIRE PLAN  
(WATER)  
NO SCALE

APPROVED JANUARY 1, 2018



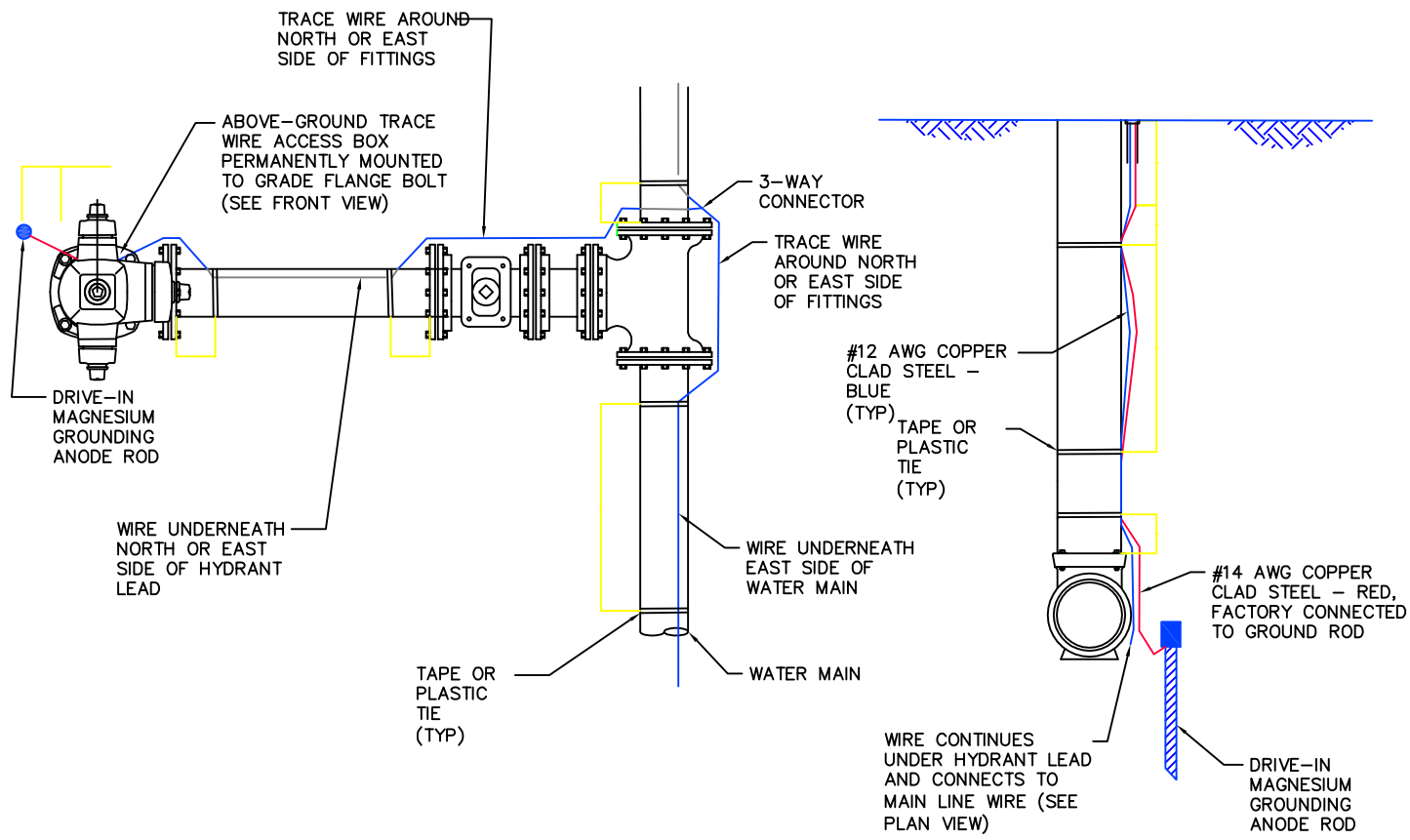
CITY ENGINEER REG 23110

**TRACER WIRE PLAN  
(WATER)**

MINNESOTA RURAL WATER  
ASSOCIATION STANDARD DETAIL







HYDRANT - PLAN VIEW

NO SCALE

HYDRANT - SECTION VIEW

NO SCALE

APPROVED DECEMBER 31, 2015

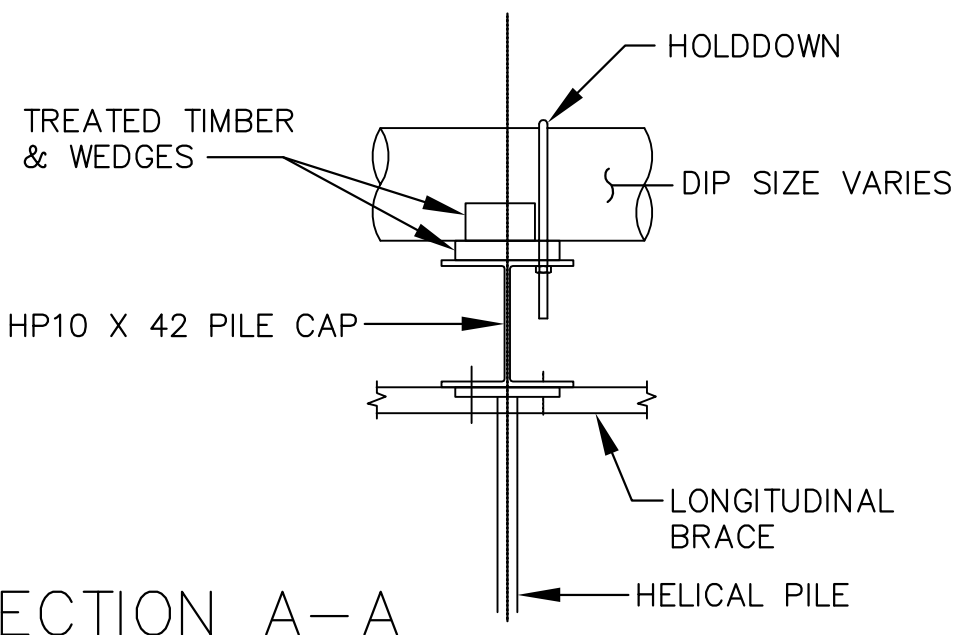
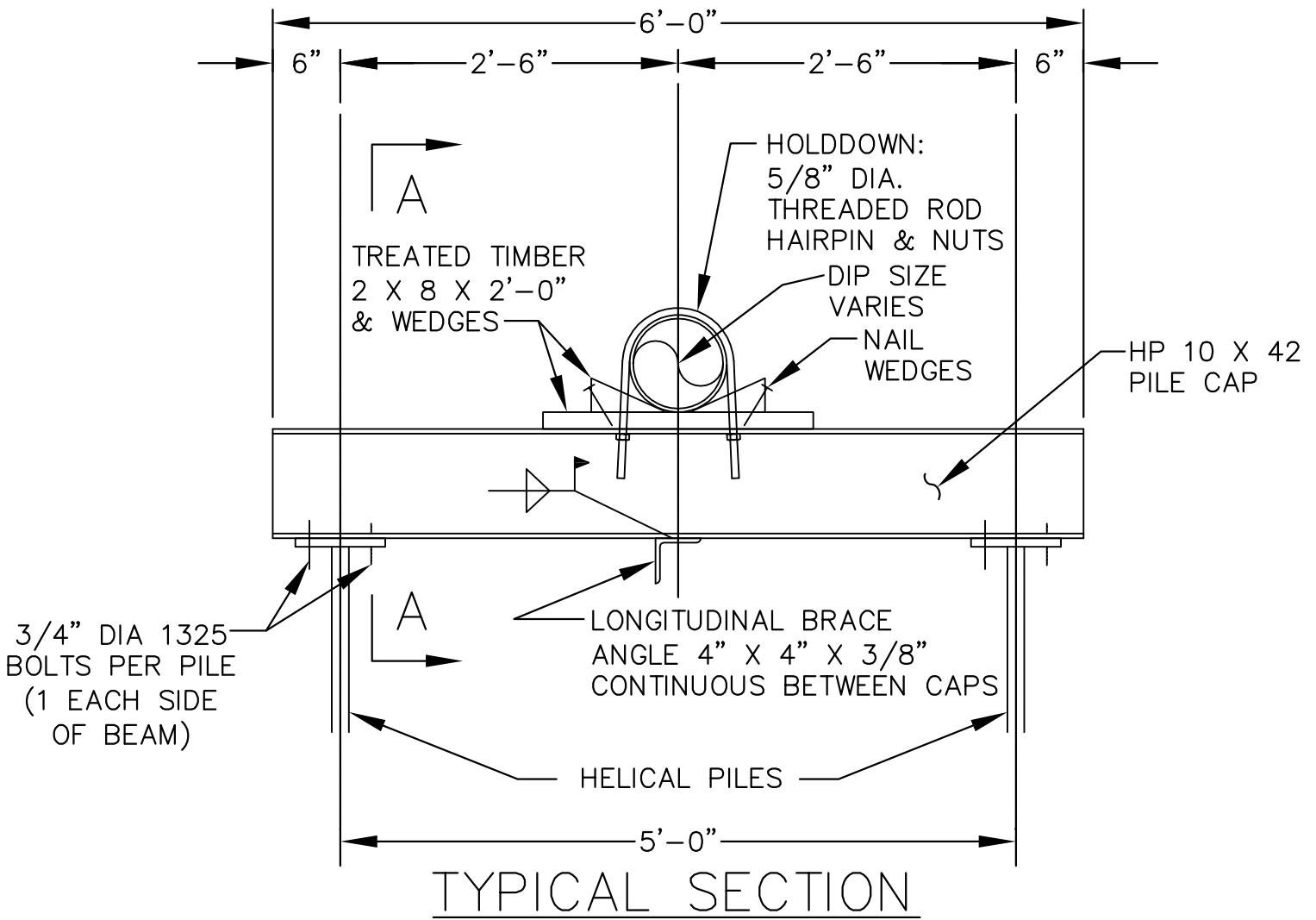
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TRACER WIRE PLAN  
(HYDRANT)

MINNESOTA RURAL WATER  
ASSOCIATION STANDARD DETAIL



GV-WM-080



NOTE:  
HELICAL PILE - SEE  
SPECIFICATIONS FOR  
DIMENSIONS, LENGTH  
& LOADS.

STEEL CAP, ANGLES  
AND RODS SHALL BE  
COVERED WITH AN  
APPROVED CORROSION  
INHIBITOR.

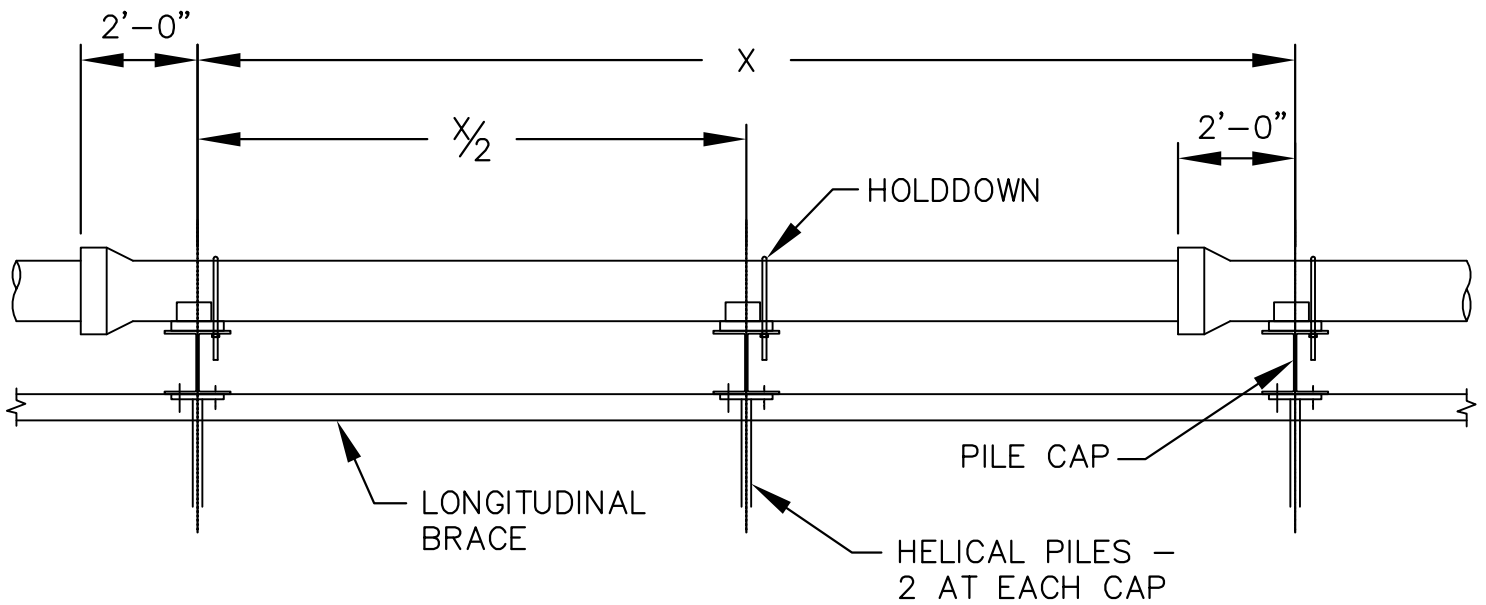
NOT TO SCALE

APPROVED JANUARY 1, 2018

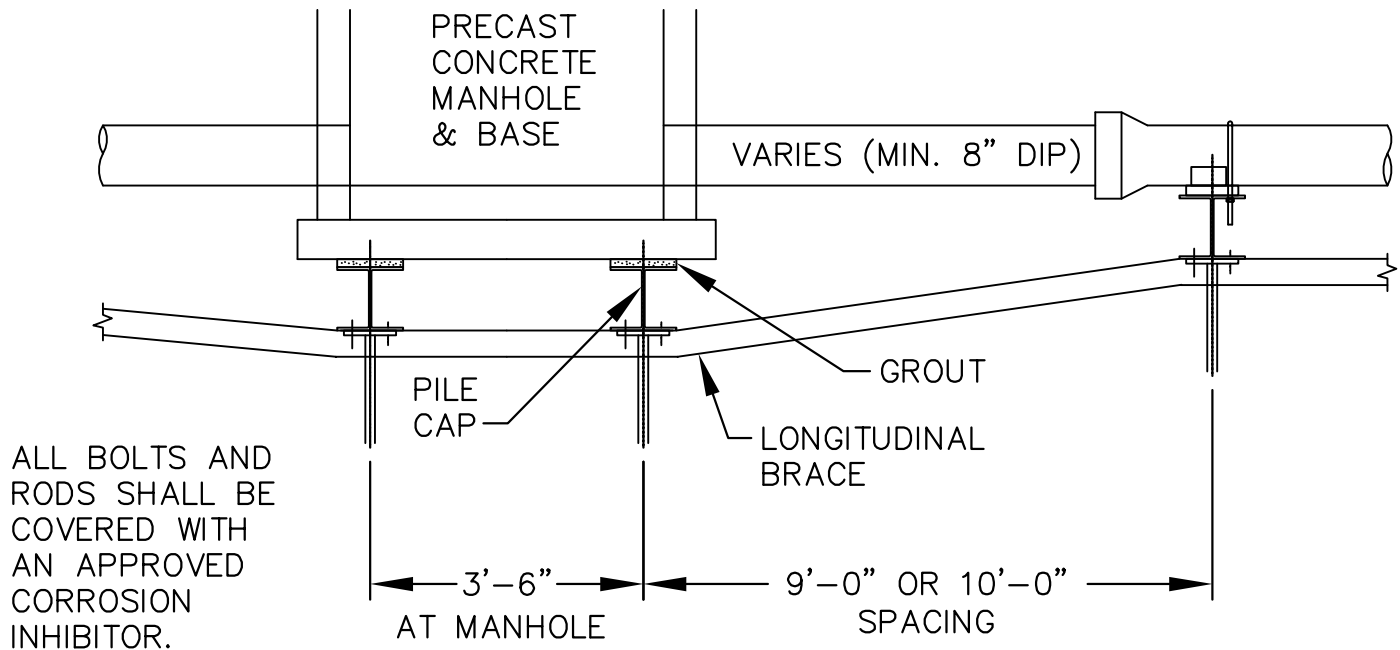
CITY ENGINEER REG 23110

**PIPE SUPPORT PILING  
(1 OF 2)**

City of  
**Golden Valley**  
GV-WM-090



## ELEVATION



## ELEVATION AT MANHOLE

NOT TO SCALE

APPROVED JANUARY 1, 2018

CITY ENGINEER REG 23110

**PIPE SUPPORT PILING  
(2 OF 2)**

City of  
**Golden Valley**  
GV-WM-100