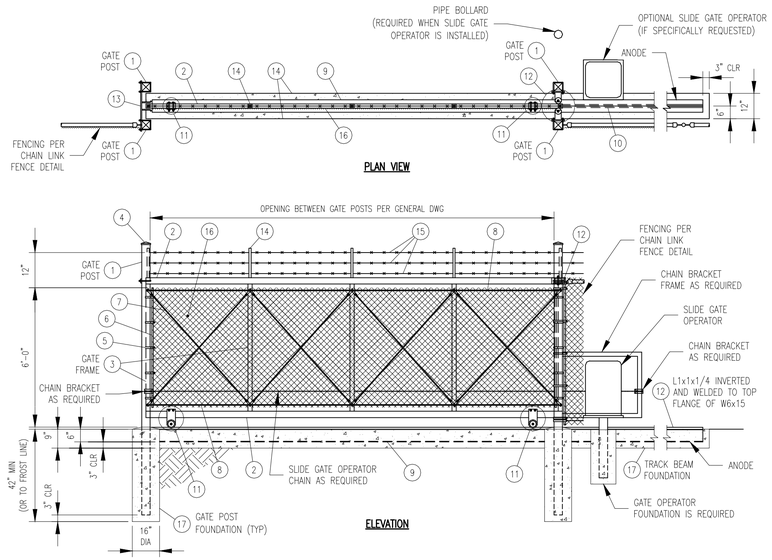
BILL OF MATERIALS	
ITEM	DESCRIPTION
1	4"x4"x.120"W GALVANIZED STEEL SQUARE TUBING OR APPROVED EQUAL
2	3"x2"x.120"W GALVANIZED STEEL RECTANGULAR TUBING OR APPROVED EQUAL
3	2"x2"x.120"W GALVANIZED STEEL SQUARE TUBING OR APPROVED EQUAL
4	GALVANIZED STEEL POST CAP OR APPROVED EQUAL
5	GALVANIZED STEEL TENSION BAND
6	GALVANIZED STEEL TENSION BAR
7	DOUBLE TRUSS ROD ASSEMBLY
	(FOUR) GALVANIZED STEEL TRUSS TIGHTNERS
	(TWO) 3/8"ø GALVANIZED STEEL TRUSS RODS
8	3/8"ø GALVANIZED STEEL TRUSS ROD
9	W6x15 GALVANIZED STEEL BEAM OR APPROVED EQUAL
10	L1x1x3/4 GALVANIZED STEEL ANGLE INVERTED AND WELDED TO THE TOP FLANGE OF THE W6 TRACK BEAM
11	TRACK WHEEL ASSEMBLY
	GALVANIZED STEEL V-GROOVE WHEEL WITH STAINLESS PRECISION ROLLER BEARINGS
12	GUIDE ROLLER ASSEMBLY
	BLACK POLY GUIDE ROLLER
	STAINLESS STEEL AND ALUMINUM COMPONENTS
13	GUIDE YOKE AND LATCH ASSEMBLY
14	1"x1"x.120"W GALVANIZED STEEL SQUARE TUBING BARB ARM OR APPROVED EQUAL
15	12-1/2-GUAGE GALVANIZED STEEL 4-POINT BARBED WIRE
16	9-GUAGE, ASTM-392, CLASS I, 2" MESH GALVANIZED CHAIN LINK FABRIC
17	ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI

GENERAL NOTES:

1. CONTRACTOR SHALL SUBMIT DETAIL MATERIAL SPECIFICATIONS FOR APPROVAL.
2. DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION UNLESS NOTED OTHERWISE.
3. ALL STEEL ANGLE, BAR, CHANNEL, FLATS, PLATE AND PIPE SHALL BE ASTM A36 HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123 UNLESS NOTED OTHERWISE.
4. ALL WELDING SHALL CONFORM TO AWS D1.1.
5. ALL GALVANIZED SURFACES DAMAGED DURING CONSTRUCTION SHALL BE COATED WITH AN APPROVED COLD ZINC COMPOUND. REMOVE ALL SCALE & FOREIGN MATTER FROM THE SURFACE BEFORE APPLYING THE ZINC COMPOUND.
6. GATE POST FOOTING SIZES ARE THE RECOMMENDED MINIMUM AND SHOULD BE REDESIGNED FOR POOR SOIL CONDITIONS.
6. CONTRACTOR TO SUPPLY AND INSTALL ALL MATERIALS UNLESS NOTED OTHERWISE.



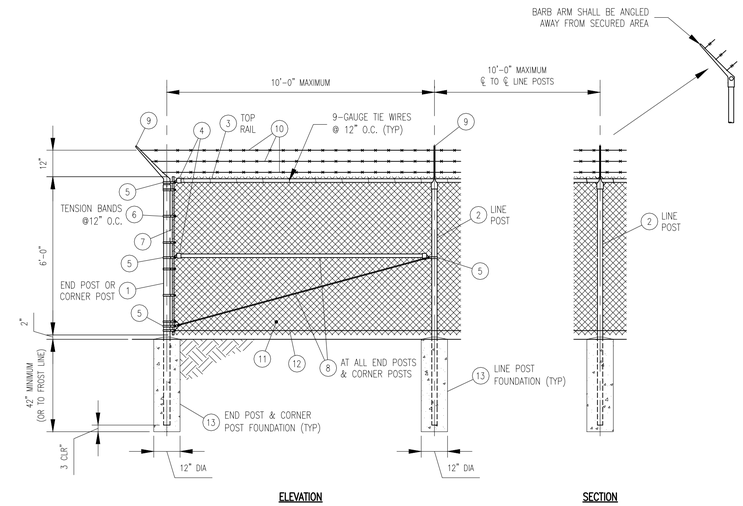
TRACK SLIDE GATE DETAIL

SCALE: NTS

BILL OF MATERIALS	
ITEM	DESCRIPTION
1	2-1/2" SCH 40 GALVANIZED STEEL PIPE
2	2" SCH 40 GALVANIZED STEEL PIPE
3	1-1/4" SCH 40 GALVANIZED STEEL PIPE
4	1-1/4" GALVANIZED STEEL RAIL END CAP
5	GALVANIZED STEEL BRACE BAND
6	GALVANIZED STEEL TENSION BAND
7	GALVANIZED STEEL TENSION BAR
8	BRACE RAIL & TRUSS ASSEMBLY
	1-1/4" SCH 40 GALVANIZED STEEL PIPE
	GALVANIZED STEEL TRUSS TIGHTENERS
	5/16" DIA GALVANIZED STEEL TRUSS ROD
9	3-WIRE 45 GALVANIZED STEEL BARB ARM
10	12-1/2 GAUGE GALVANIZED STEEL 4-POINT BARBED WIRE
11	9-GAUGE, ASTM-392, CLASS I, 2" MESH, GALVANIZED CHAIN LINK FABRIC
12	7-GAUGE GALVANIZED STEEL TENSION WIRE
13	ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI

GENERAL NOTES:

1. DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION UNLESS NOTED OTHERWISE.
2. ALL STEEL ANGLE, BAR, CHANNEL, FLATS, PLATE AND PIPE SHALL BE ASTM A36 HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123 UNLESS NOTED OTHERWISE.
3. ALL WELDING SHALL CONFORM TO AWS D1.1.
4. ALL GALVANIZED SURFACES DAMAGED DURING CONSTRUCTION SHALL BE COATED WITH AN APPROVED COLD ZINC COMPOUND. REMOVE ALL SCALE & FOREIGN MATTER FROM THE SURFACE BEFORE APPLYING THE ZINC COMPOUND.
5. GATE POST FOOTING SIZES ARE THE RECOMMENDED MINIMUM AND SHOULD BE REDESIGNED FOR POOR SOIL CONDITIONS.
6. CONTRACTOR TO SUPPLY AND INSTALL ALL MATERIALS UNLESS NOTED OTHERWISE.



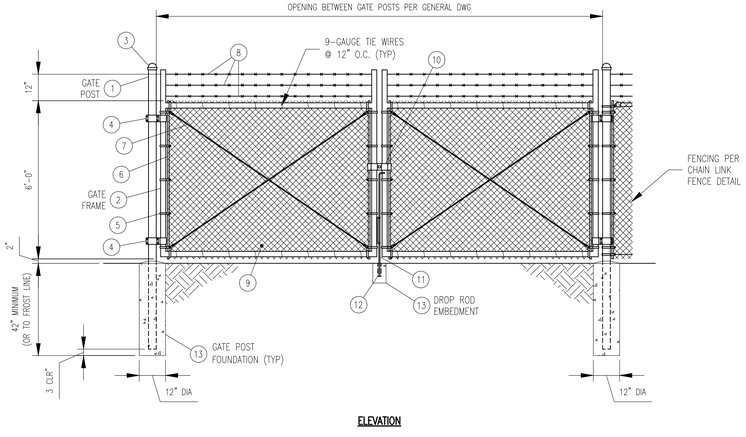
CHAIN LINK FENCE DETAIL

SCALE: NTS

BILL OF MATERIALS	
ITEM	DESCRIPTION
1	3" SCH 40 GALVANIZED STEEL PIPE
2	2" SCH 40 GALVANIZED STEEL PIPE
3	GALVANIZED STEEL POST CAP
4	1-1/4" INDUSTRIAL GATE POST HINGE
5	GALVANIZED STEEL TENSION BAND
6	GALVANIZED STEEL TENSION BAR
7	DOUBLE TRUSS ROD ASSEMBLY
	(FOUR) GALVANIZED STEEL TRUSS TIGHTNERS
	(TWO) 3/8"ø GALVANIZED STEEL TRUSS RODS
8	12-1/2" GAUGE GALVANIZED STEEL 4-POINT BARBED WIRE
9	9-GAUGE, ASTM-392, CLASS I, 2" MESH, GALVANIZED CHAIN LINK FABRIC
10	GALVANIZED STEEL LOCKING LATCH ASSEMBLY
11	GALVANIZED STEEL DROP ROD ASSEMBLY
12	GALVANIZED STEEL DROP ROD SLEEVE
13	ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI

GENERAL NOTES:

1. DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION UNLESS NOTED OTHERWISE.
2. ALL STEEL ANGLE, BAR, CHANNEL, FLATS, PLATE AND PIPE SHALL BE ASTM A36 HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123 UNLESS NOTED OTHERWISE.
3. ALL WELDING SHALL CONFORM TO AWS D1.1.
4. ALL GALVANIZED SURFACES DAMAGED DURING CONSTRUCTION SHALL BE COATED WITH AN APPROVED COLD ZINC COMPOUND. REMOVE ALL SCALE & FOREIGN MATTER FROM THE SURFACE BEFORE APPLYING THE ZINC COMPOUND.
5. GATE POST FOOTING SIZES ARE THE RECOMMENDED MINIMUM AND SHOULD BE REDESIGNED FOR POOR SOIL CONDITIONS.
6. CONTRACTOR TO SUPPLY AND INSTALL ALL MATERIALS UNLESS NOTED OTHERWISE.



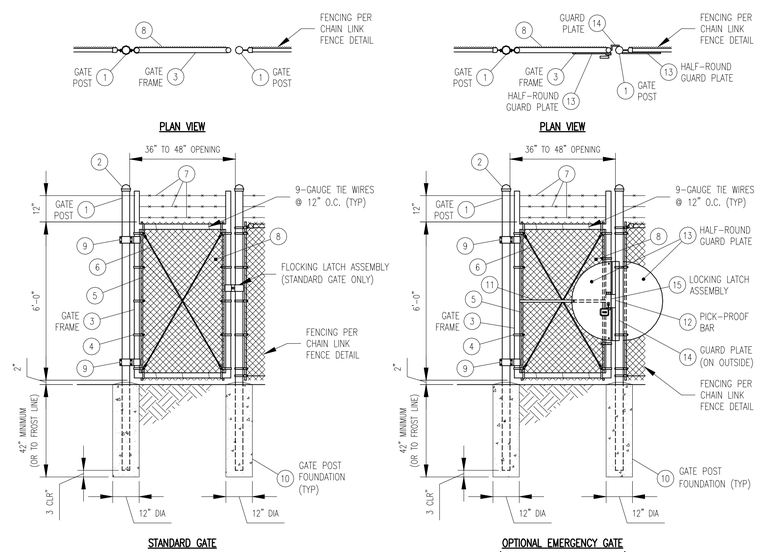
SWING GATE DETAIL

SCALE: NTS

BILL OF MATERIALS	
ITEM	DESCRIPTION
1	SCH 40 GALVANIZED STEEL GATE POST, OR APPROVED EQUAL
2	GALVANIZED STEEL POST CAP
3	GALVANIZED STEEL GATE FRAME
4	GALVANIZED STEEL TENSION BAND
5	GALVANIZED STEEL TENSION BAR
6	DOUBLE TRUSS ROD ASSEMBLY
	(FOUR) GALVANIZED STEEL TRUSS TIGHTENERS
	(TWO) 3/8"ø GALVANIZED STEEL TRUSS RODS
7	12-1/2" GAUGE GALVANIZED STEEL 4-POINT BARBED WIRE
8	9-GAUGE, ASTM-392, CLASS I, 2" MESH, GALVANIZED CHAIN LINK FABRIC
9	INDUSTRIAL HINGE ASSEMBLY
10	ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 300 PSI
	BILL OF MATERIALS FOR EMERGENCY GATE ONLY
11	GALVANIZED STEEL CENTER BRACE
12	PICK-PROOF BAR
13	1/8" THICK GALVANIZED STEEL PL WITH 18" RADIUS BOLTED TO GATE FRAME WITH 1/4" STAINLESS STEEL BUTTON HEAD ALLEN BOLTS
14	18" LONG GALVANIZED STEEL PL OR ANGLE WELDED TO THE OUTSIDE OF THE VERTICAL GATE FRAME SO THAT IT OVERLAPS THE ADJACENT GATE POST WHEN GATE IS IN THE CLOSED POSITION TO PREVENT INTRUSION OR ACCESS TO LATCH ASSEMBLY BETWEEN THE FRAME AND POST
15	LOCKING LATCH ASSEMBLY
	CAST ALUMINUM BODY
	CAST ALUMINUM PADDLE
	BRONZE AND STAINLESS INTERNALS (OR APPROVED EQUAL)

GENERAL NOTES:

1. DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION UNLESS NOTED OTHERWISE.
2. ALL STEEL ANGLE, BAR, CHANNEL, FLATS, PLATE AND PIPE SHALL BE ASTM A36 HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123 UNLESS NOTED OTHERWISE.
3. ALL WELDING SHALL CONFORM TO AWS D1.1.
4. ALL GALVANIZED SURFACES DAMAGED DURING CONSTRUCTION SHALL BE COATED WITH AN APPROVED COLD ZINC COMPOUND. REMOVE ALL SCALE & FOREIGN MATTER FROM THE SURFACE BEFORE APPLYING THE ZINC COMPOUND.
5. GATE POST FOOTING SIZES ARE THE RECOMMENDED MINIMUM AND SHOULD BE REDESIGNED FOR POOR SOIL CONDITIONS.
6. CONTRACTOR TO SUPPLY AND INSTALL ALL MATERIALS UNLESS NOTED OTHERWISE.



PERSONNEL GATE DETAIL

SCALE: NTS

ISSUED FOR BID

REV	BY	DATE	DESCRIPTION	DWG NO.	REFERENCE DRAWINGS	SEAL AND SIGNATURE

PRJ MANAGER: MARK D. WOOD
PRJ ENGINEER: MARK D. WOOD
PRJ NAME: WEST COMMERCIAL STREET
PRJ NUMBER: 5183
PRJ MILESTONE: ISSUED FOR BID
PRJ PHASE: ISSUED FOR BID

DESIGNED BY:	MDW	05/20/16
DRAFTED BY:	RPG	05/20/16
CHECKED BY:	SMR	05/20/16
APPROVED BY:	MDW	05/20/16

CLIENT INFORMATION: Unitil, ME GAS OPERATIONS

DESIGN MANAGER: TIM BICKFORD
DESIGN ENGINEER: BOB SCHUMMRICK
AUTH NO: 6039 167616
REVIEWED BY:
CHECKED BY:
APPROVED BY:

SHEET TITLE: STANDARDS DETAILS SHEET 1 OF 3

PROJECT NAME: WEST COMMERCIAL STREET REGULATOR STATION

PROJECT LOCATION: PORTLAND, ME 04101

PROCESS PIPELINE SERVICES
1600 Providence Highway
Walpole, MA 02081
781.829.0524
processpipelineservices.com

FILE NAME: 5183_C00.DWG
PLOT DATE: 05/25/2016 2:58 PM
SCALE: AS SHOWN

SIZE	SHEET	REV
22X34	C01	F

SHEET 33 OF 35

Reviewed for Code Compliance
Joseph Corbett
Fire Marshal
Portland, Maine
Date: 08/03/16