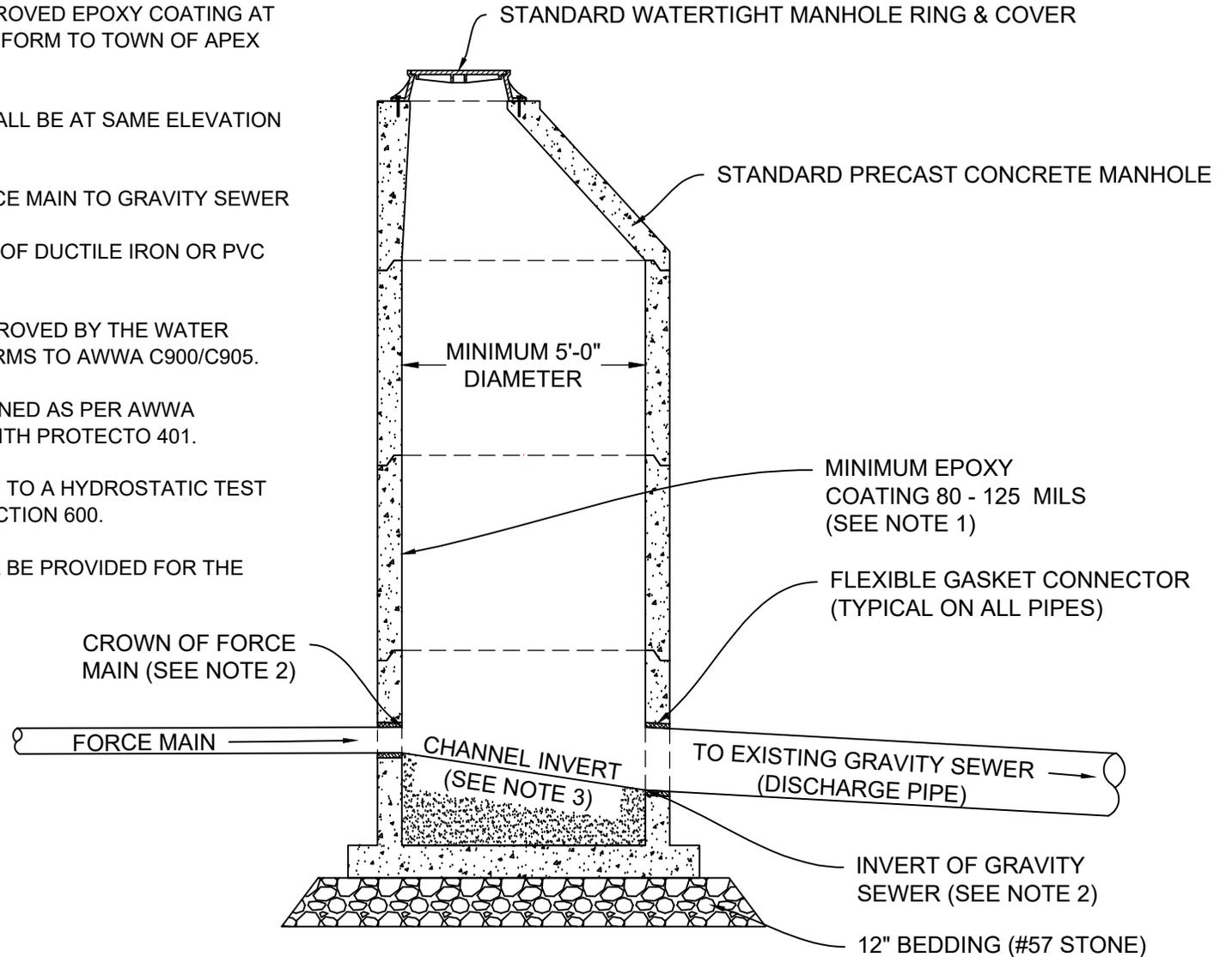


NOTES:

1. COAT INTERIOR OF MANHOLE WITH APPROVED EPOXY COATING AT MINIMUM 80 MILS. COATINGS SHALL CONFORM TO TOWN OF APEX SPECIFICATION SECTION 800.
2. ELEVATION OF FORCE MAIN CROWN SHALL BE AT SAME ELEVATION AS THE GRAVITY SEWER CROWN.
3. PROVIDE SMOOTH CHANNEL FROM FORCE MAIN TO GRAVITY SEWER
4. FORCE MAINS SHALL BE CONSTRUCTED OF DUCTILE IRON OR PVC PIPE.
5. C900 PVC PIPE MAY BE USED WHEN APPROVED BY THE WATER RESOURCES DEPARTMENT AND CONFORMS TO AWWA C900/C905.
6. ALL DUCTILE IRON PIPE SHALL BE DESIGNED AS PER AWWA STANDARD C150 AND SHALL BE LINED WITH PROTECTO 401.
7. ALL FORCE MAINS SHALL BE SUBJECTED TO A HYDROSTATIC TEST ACCORDING TO THE PROVISIONS OF SECTION 600.
8. A CHECK VALVE AND PLUG VALVE SHALL BE PROVIDED FOR THE DISCHARGE LINE OF EACH PUMP.



TOWN OF APEX
STANDARDS

FORCE MAIN DISCHARGE MANHOLE

EFFECTIVE: MARCH 23, 2021

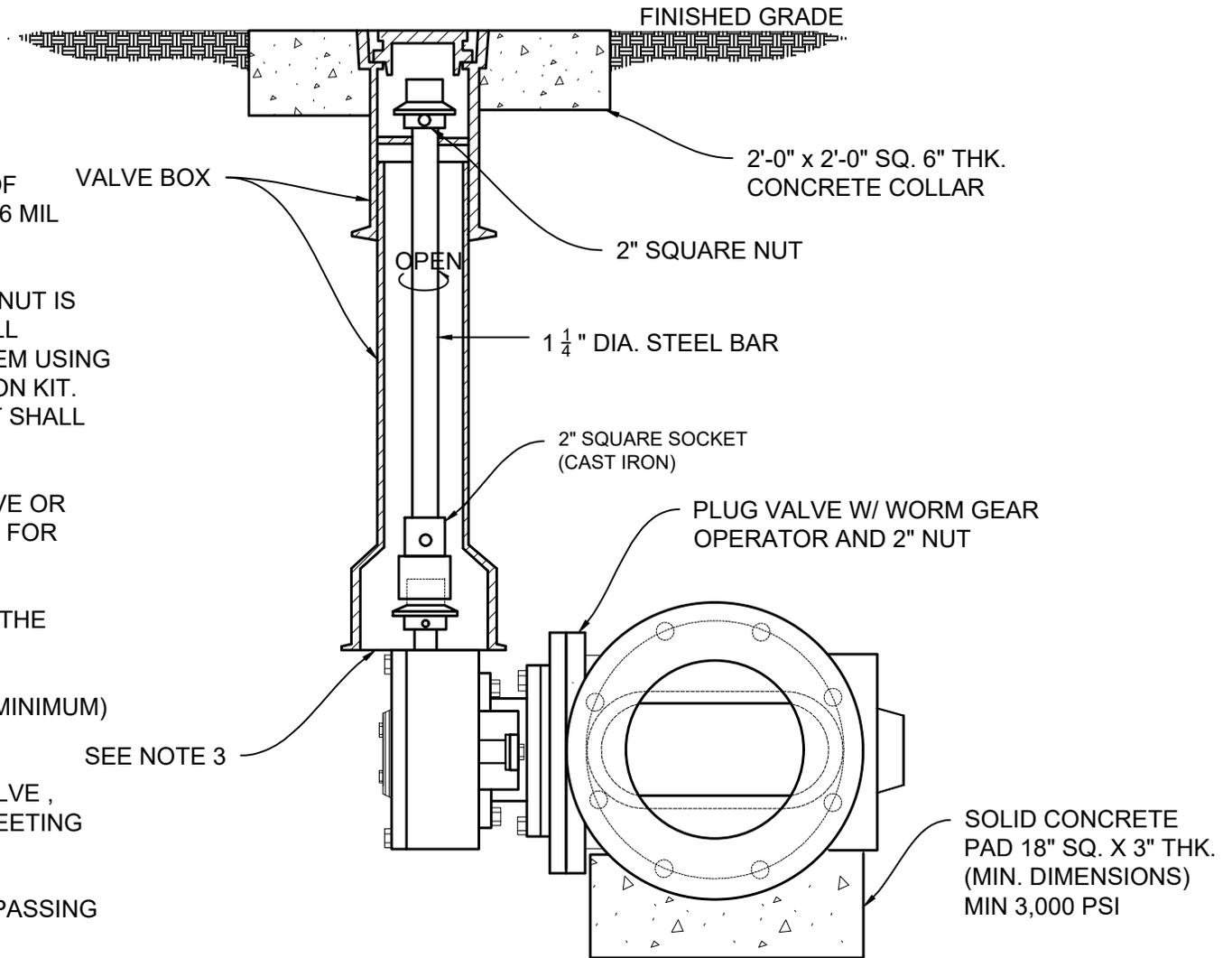
STD. NO.

800.01

SHEET 1 OF 1

NOTES:

1. NO CONCRETE SHALL TOUCH BOLTS OF GLANDS. WRAP BOLTS AND GLAND W/ 6 MIL POLYETHYLENE SHEETING.
2. WHERE DEPTH OF VALVE OPERATING NUT IS GREATER THAN 5', CONTRACTOR SHALL PROVIDE AND INSTALL EXTENSION STEM USING MANUFACTURER APPROVED EXTENSION KIT. DEPTH OF EXTENDED OPERATING NUT SHALL BE NO GREATER THAN 2'.
3. VALVE BOX SHALL NOT CONTACT VALVE OR MAIN. PLACE PEA GRAVEL UNDER BOX FOR SUPPORT.
4. PLUG VALVE MUST BE PROVIDED FOR THE DISCHARGE LINE OF EACH PUMP.
5. VALVES SHALL BE RATED TO 175 PSI (MINIMUM) WORKING PRESSURE.
6. ALL PIPING, COUPLINGS, FITTINGS, VALVE , ETC. SHALL BE CLASS 125 FLANGES MEETING ANSI B18.7 SPECIFICATIONS.
7. PLUG VALVES SHALL BE CAPABLE OF PASSING 3-INCH SOLIDS.



NOT TO SCALE

**TOWN OF APEX
STANDARDS**

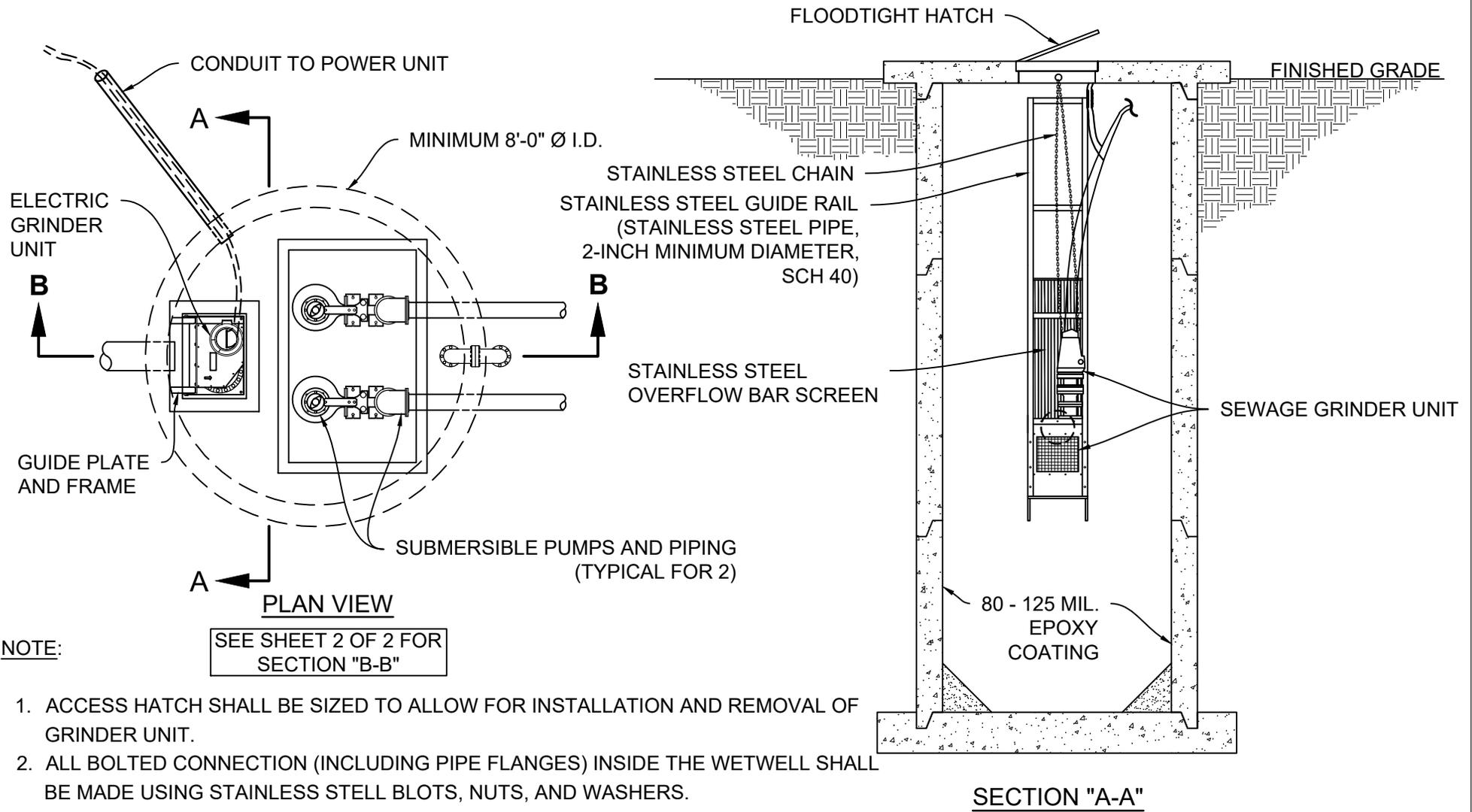
PLUG VALVE BOX INSTALLATION

EFFECTIVE: MARCH 23, 2021

STD. NO.

800.02

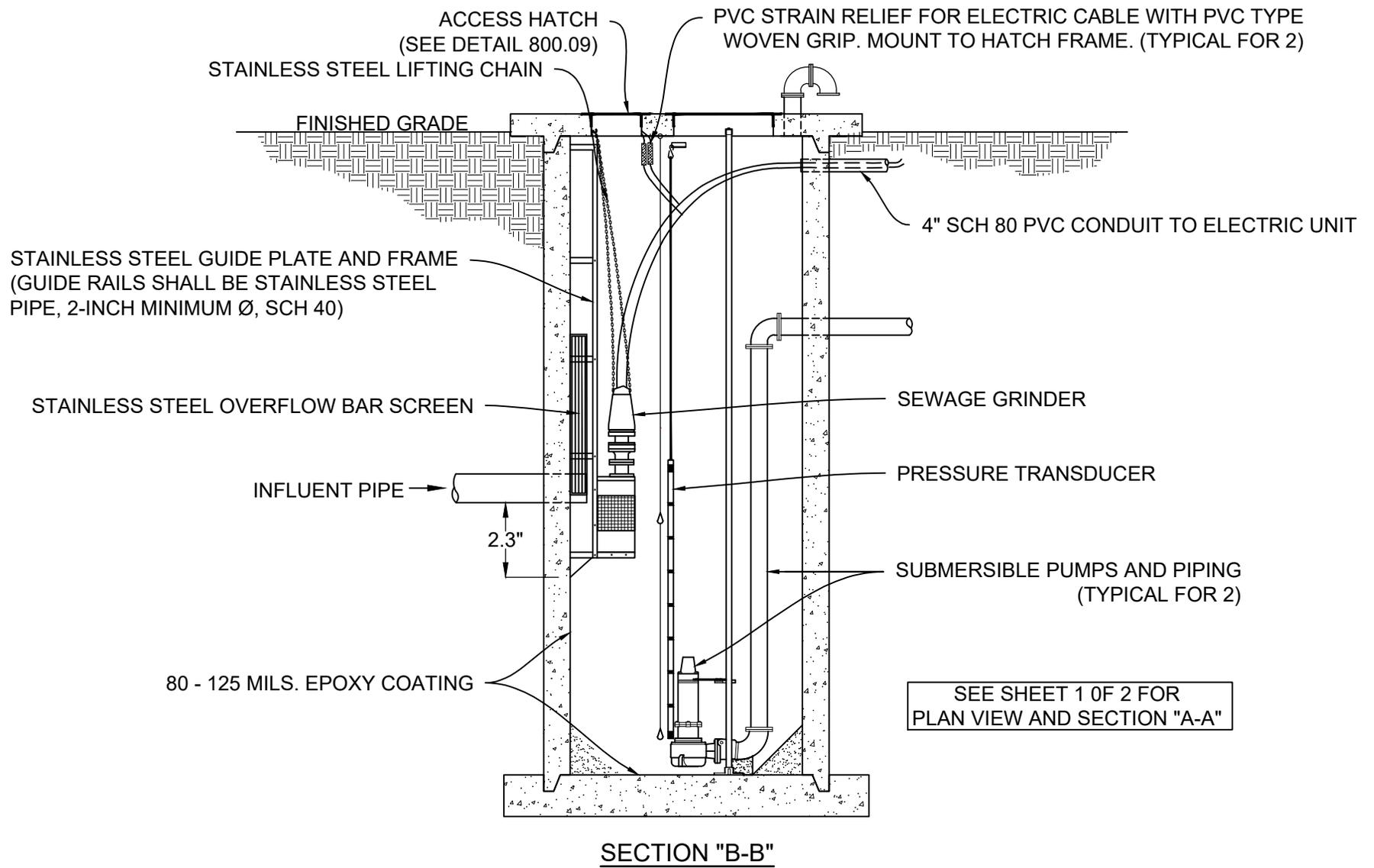
SHEET 1 OF 1



NOTE:

SEE SHEET 2 OF 2 FOR SECTION "B-B"

1. ACCESS HATCH SHALL BE SIZED TO ALLOW FOR INSTALLATION AND REMOVAL OF GRINDER UNIT.
2. ALL BOLTED CONNECTION (INCLUDING PIPE FLANGES) INSIDE THE WETWELL SHALL BE MADE USING STAINLESS STEEL BOLTS, NUTS, AND WASHERS.
3. ALL WETWELLS MUST BE CONCENTRIC.
4. ENGINEER SHALL ENSURE WETWELL HAS SUFFICIENT CONCRETE FOR ANCHORING. SEE PLAN VIEW & SECTION "B-B" FOR SUBMERSIBLE PUMPS AND PIPING.
5. STATION SHALL MEET REQUIREMENTS FROM NCDEQ INCLUDING ELEVATION AND/OR PROTECTION FROM FLOODING.



TOWN OF APEX
STANDARDS

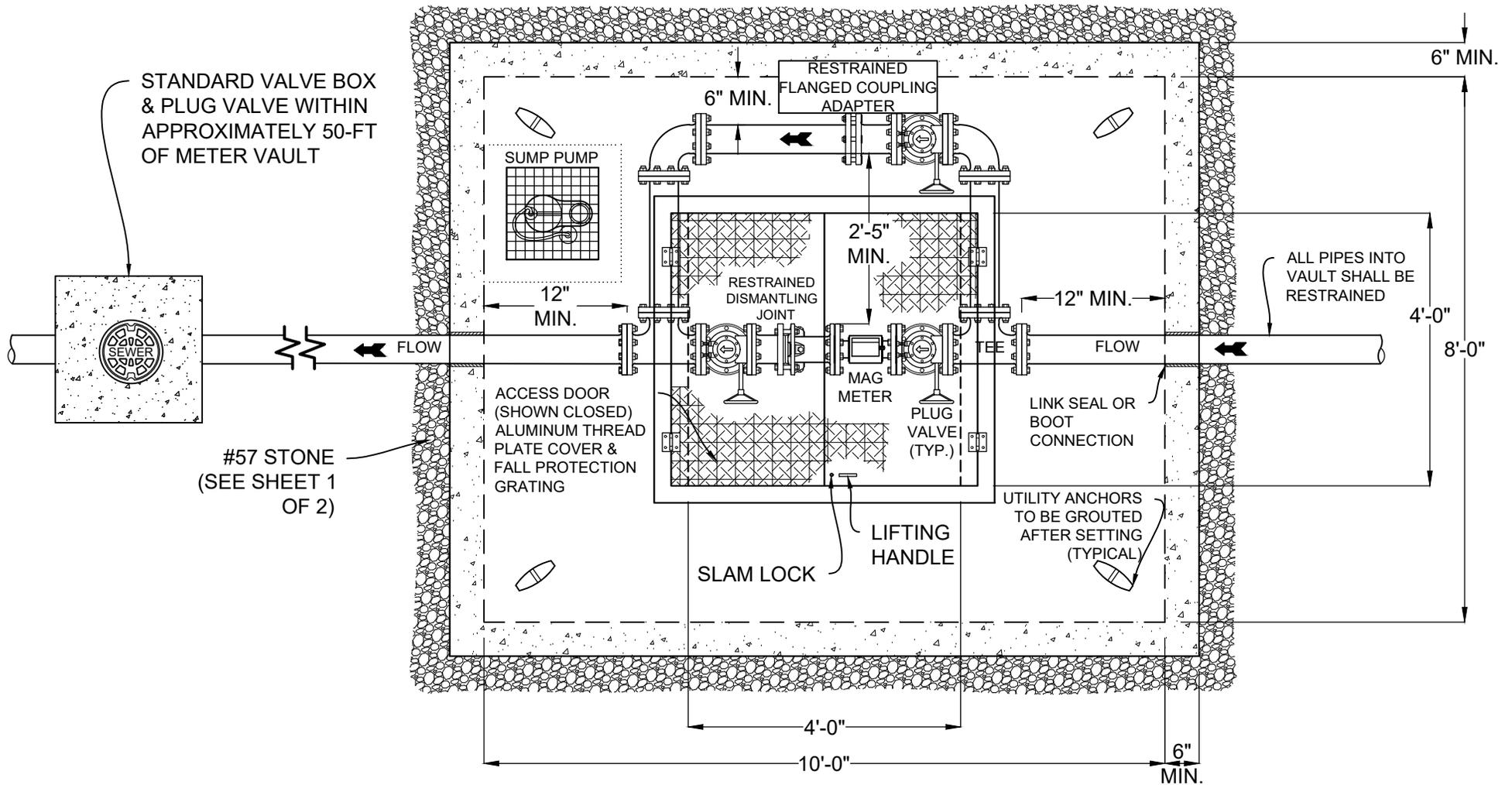
EFFECTIVE: MARCH 23, 2021

SEWAGE GRINDER UNIT (WET WELL INSTALLATION)

STD. NO.

800.03

SHEET 2 OF 2



PLAN VIEW
(SEE SHEET 1 OF 2 FOR SECTION VIEW)

TOWN OF APEX
STANDARDS

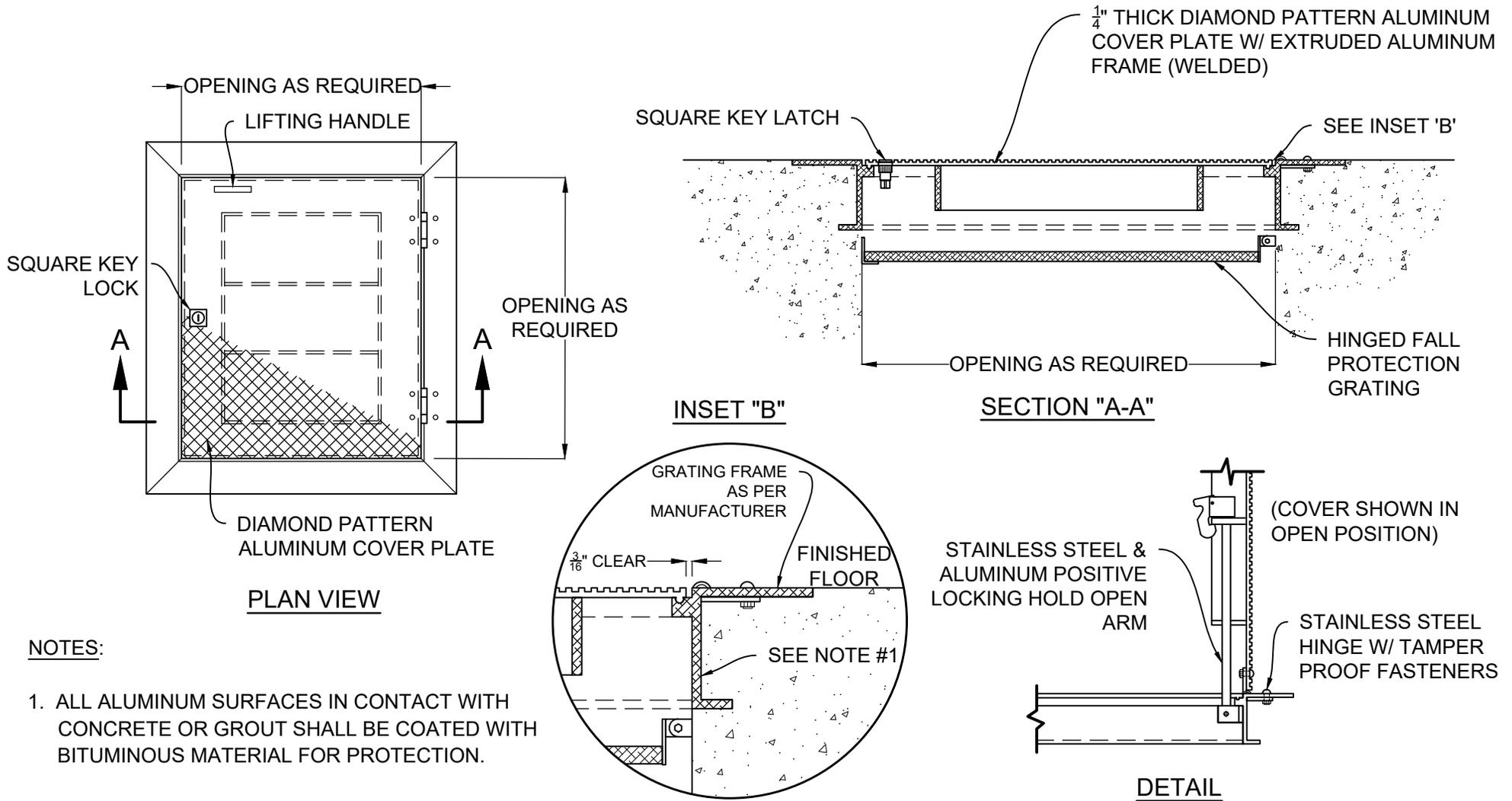
EFFECTIVE: MARCH 23, 2021

STANDARD MAG METER INSTALLATION

STD. NO.

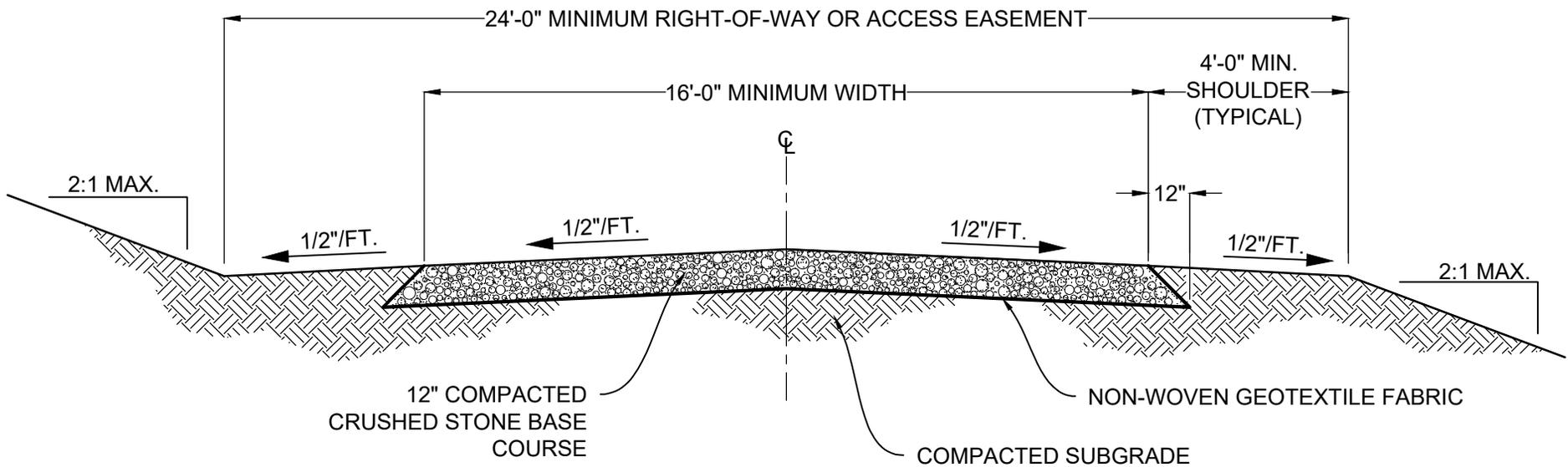
800.04

SHEET 2 OF 2



NOTES:

1. ALL ALUMINUM SURFACES IN CONTACT WITH CONCRETE OR GROUT SHALL BE COATED WITH BITUMINOUS MATERIAL FOR PROTECTION.
2. HATCHES SHALL BE SINGLE OR DOUBLE HATCH DEPENDING ON OPENING SIZE AND MANUFACTURER'S RECOMMENDATIONS.
3. HANDRAIL AROUND HATCH OPENING (SEE SECTION 802-G.5)



NOTES:

1. MAXIMUM ROADWAY SHALL BE 10%.
2. THE SITE SHALL FEATURE ADEQUATE TURN AROUND AREAS FOR SERVICE VEHICLES IN ACCORDANCE WITH SPECIFICATION SECTION 800.

TOWN OF APEX
STANDARDS

PUMP STATION ACCESS ROAD

EFFECTIVE: MARCH 23, 2021

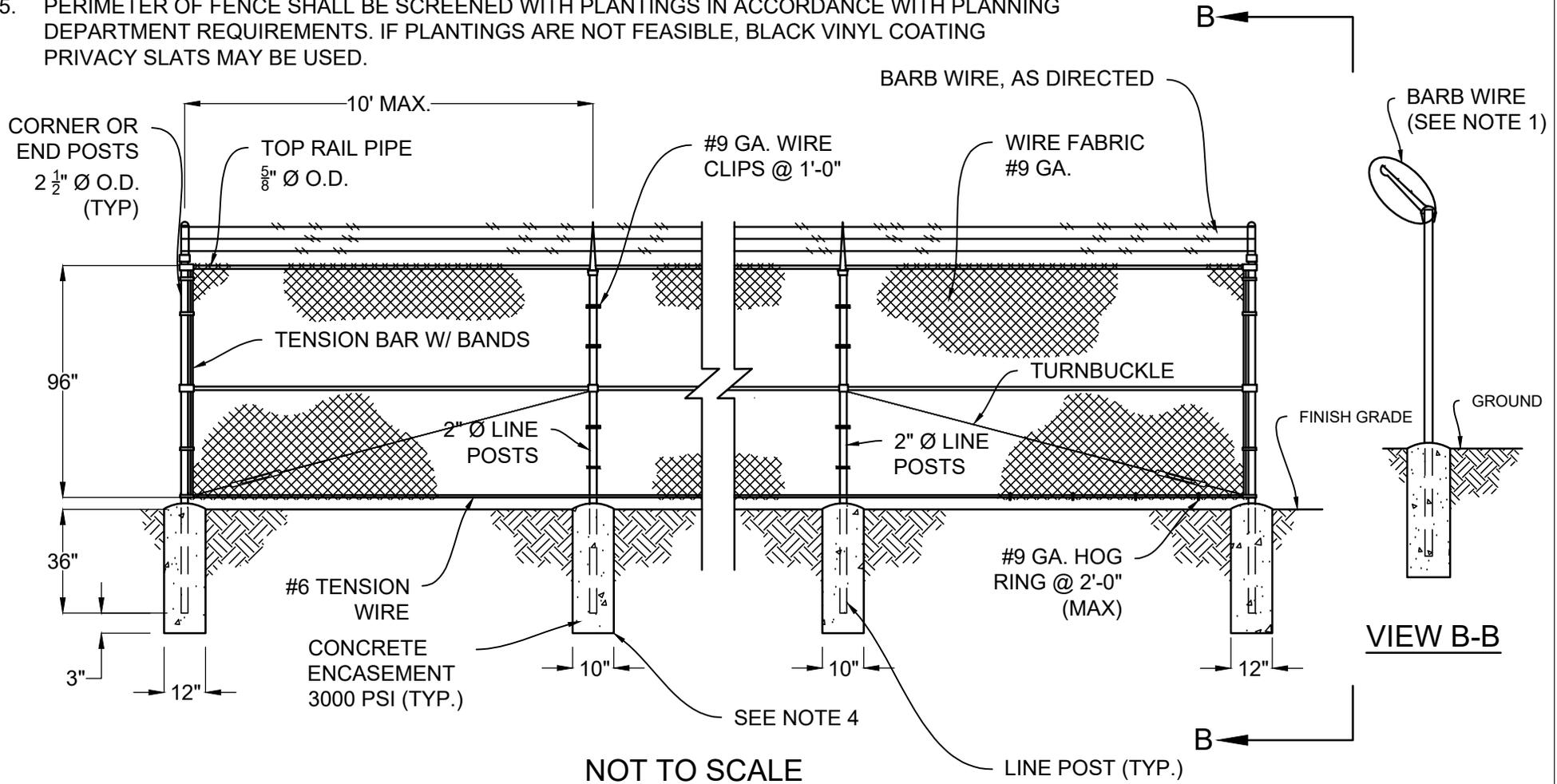
STD. NO.

800.06

SHEET 1 OF 1

NOTES:

1. ADD 3 STRANDS OF BARB WIRE ALONG THE TOP OF FENCE AS DIRECTED (SEE SPECS).
2. ALL RAILS AND POSTS TO BE SCH. 40 GALV. STEEL PIPE WITH BLACK VINYL COATING.
3. POSTS TO BE SET IN CONCRETE.
4. IF ROCK IS ENCOUNTERED WHEN SETTING POSTS, DRILL HOLES 4-INCHES LARGER IN DIAMETER THAN POSTS AND BACKFILL TO GRADE WITH CLASS "B" CONCRETE.
5. PERIMETER OF FENCE SHALL BE SCREENED WITH PLANTINGS IN ACCORDANCE WITH PLANNING DEPARTMENT REQUIREMENTS. IF PLANTINGS ARE NOT FEASIBLE, BLACK VINYL COATING PRIVACY SLATS MAY BE USED.



TOWN OF APEX
STANDARDS

EFFECTIVE: FEBRUARY 28, 2023

TYPICAL CHAIN LINK FENCE

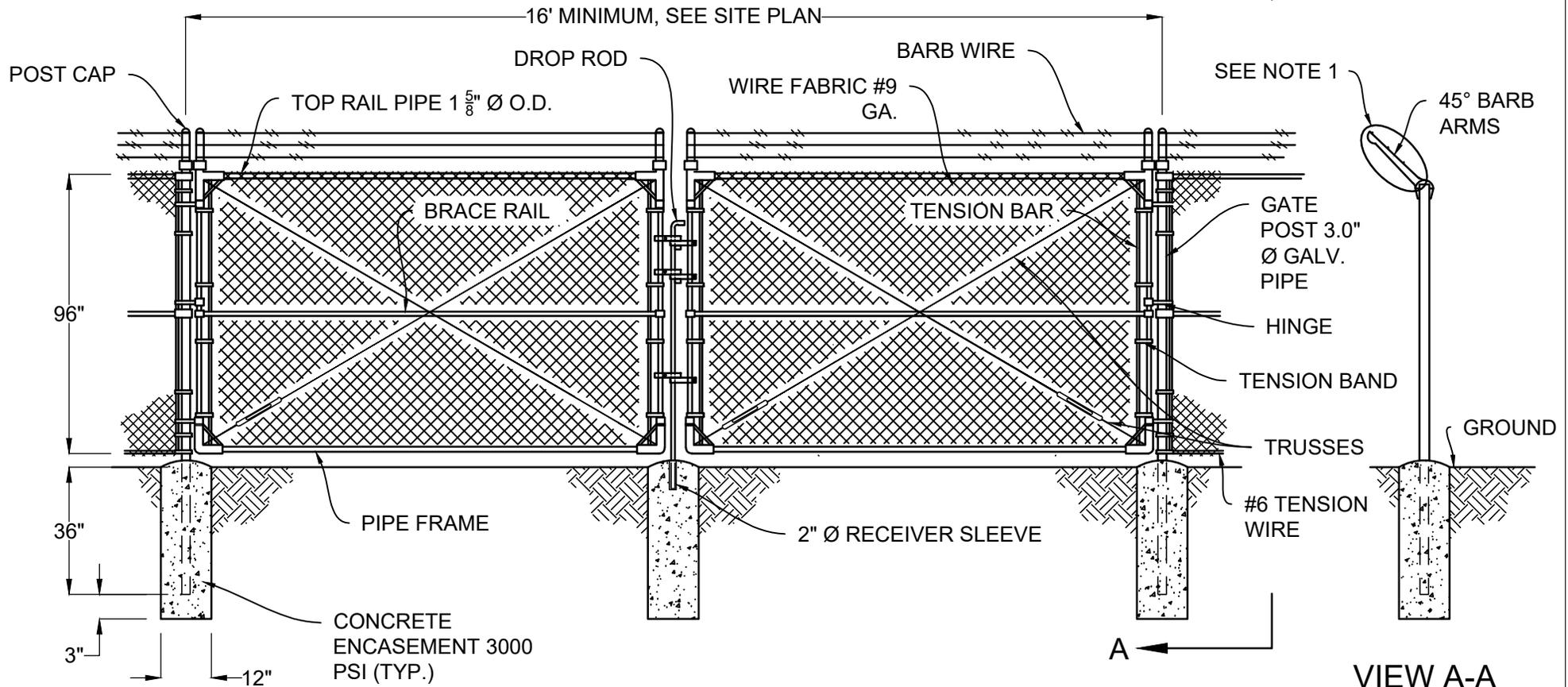
STD. NO.

800.07

SHEET 1 OF 1

NOTES:

1. ADD 3 STRANDS OF BARB WIRE ALONG THE TOP OF FENCE AS DIRECTED (SEE SPECS).
2. ALL RAILS AND POSTS TO BE SCH. 40 GALV. STEEL PIPE WITH BLACK VINYL COATING.
3. POSTS TO BE SET IN CONCRETE
4. IF ROCK IS ENCOUNTERED WHEN SETTING POSTS, DRILL HOLES 4-INCHES LARGER IN DIAMETER THAN POSTS AND BACKFILL TO GRADE WITH CLASS "B" CONCRETE.
5. DOUBLE GATE SHALL HAVE A STRONG LOCK MECHANISM, DROP ROD, AND TRUSS ROD
6. GATES SHALL HAVE BLACK VINYL COATED PRIVACY SLATS.



TOWN OF APEX
STANDARDS

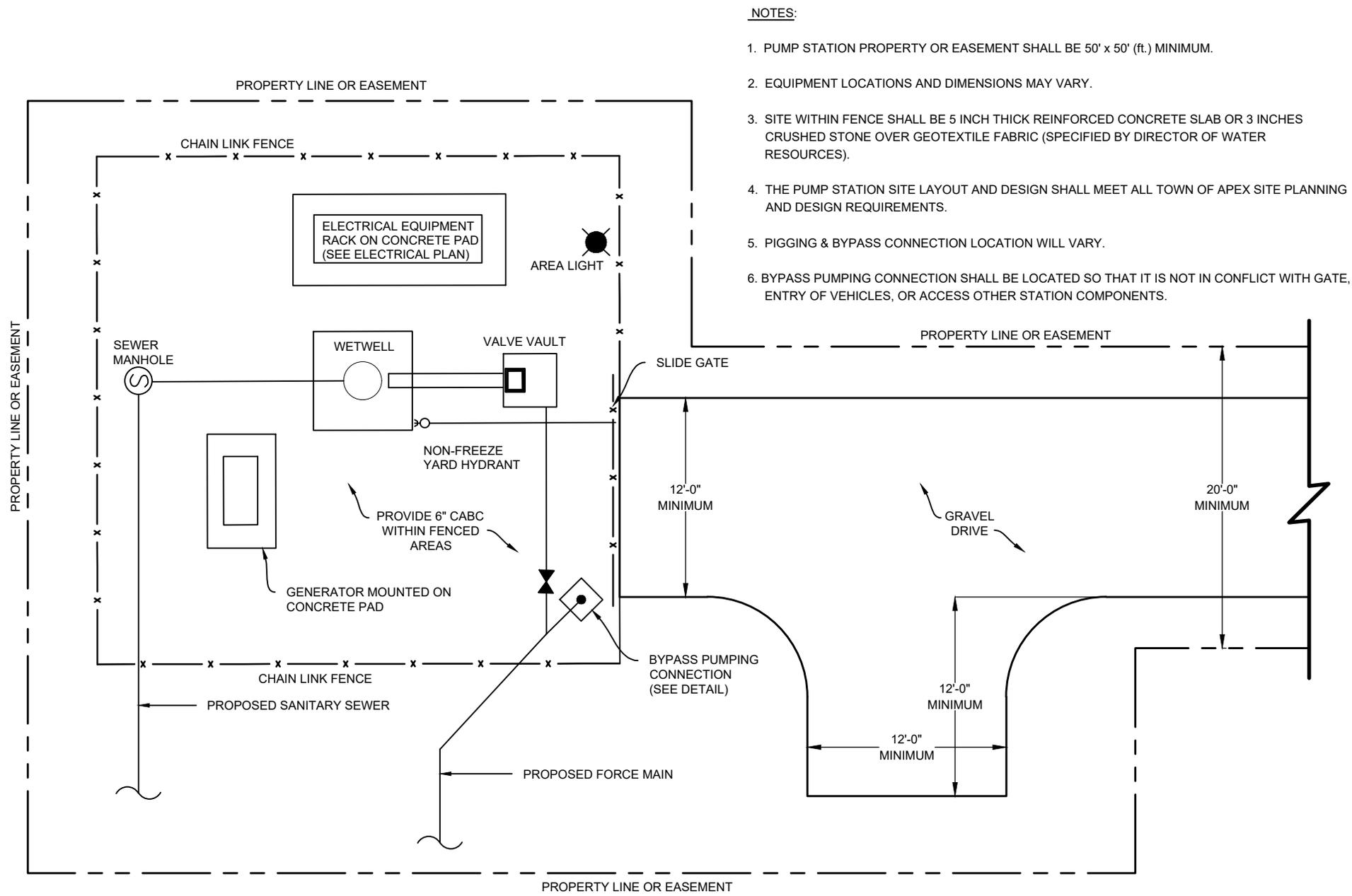
TYPICAL SECURITY DOUBLE GATE

EFFECTIVE: MARCH 23, 2021

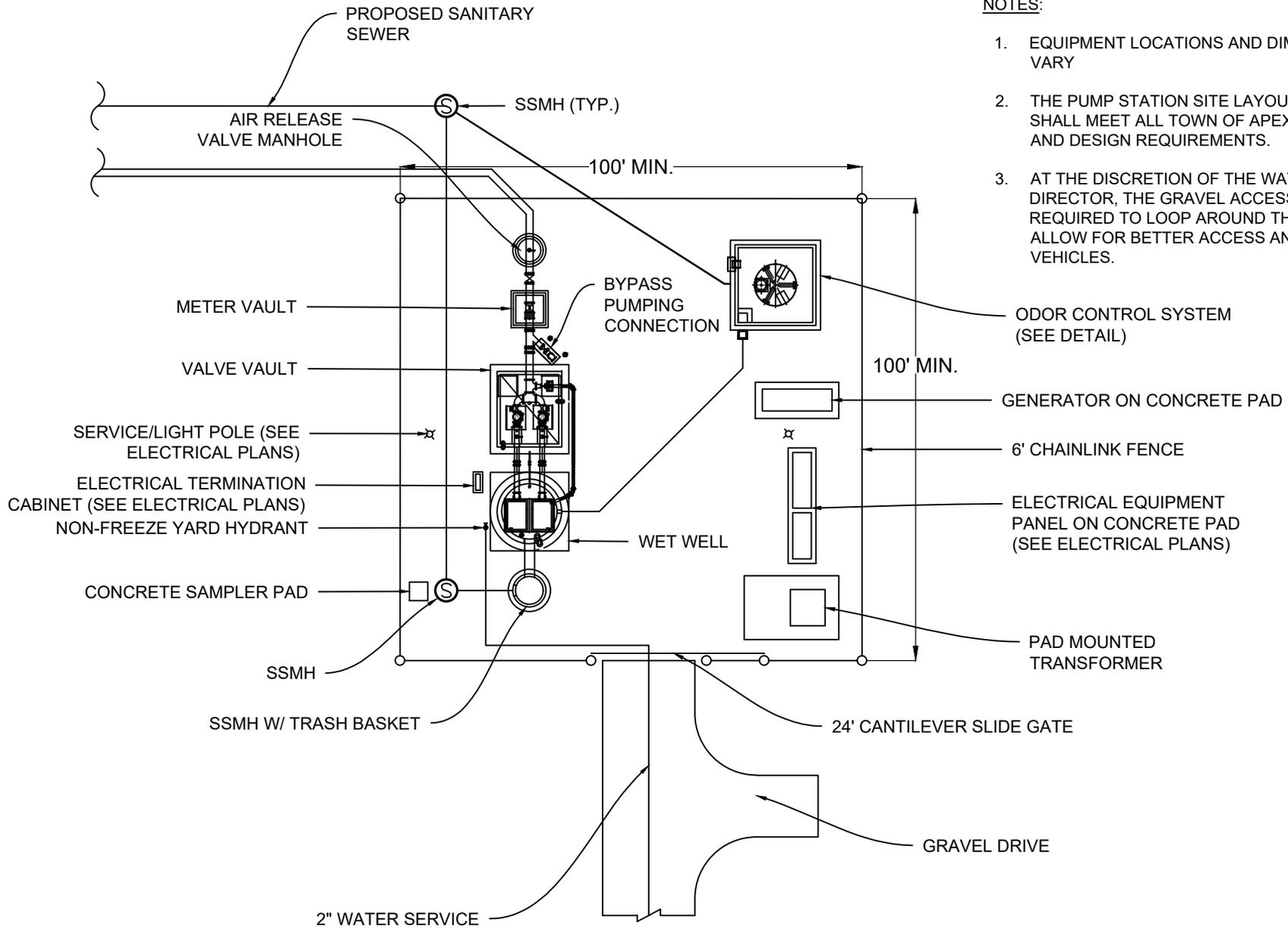
STD. NO.

800.08

SHEET 1 OF 1



- NOTES:
1. PUMP STATION PROPERTY OR EASEMENT SHALL BE 50' x 50' (ft.) MINIMUM.
 2. EQUIPMENT LOCATIONS AND DIMENSIONS MAY VARY.
 3. SITE WITHIN FENCE SHALL BE 5 INCH THICK REINFORCED CONCRETE SLAB OR 3 INCHES CRUSHED STONE OVER GEOTEXTILE FABRIC (SPECIFIED BY DIRECTOR OF WATER RESOURCES).
 4. THE PUMP STATION SITE LAYOUT AND DESIGN SHALL MEET ALL TOWN OF APEX SITE PLANNING AND DESIGN REQUIREMENTS.
 5. PIGGING & BYPASS CONNECTION LOCATION WILL VARY.
 6. BYPASS PUMPING CONNECTION SHALL BE LOCATED SO THAT IT IS NOT IN CONFLICT WITH GATE, ENTRY OF VEHICLES, OR ACCESS OTHER STATION COMPONENTS.



NOTES:

1. EQUIPMENT LOCATIONS AND DIMENSIONS MAY VARY
2. THE PUMP STATION SITE LAYOUT AND DESIGN SHALL MEET ALL TOWN OF APEX SITE PLANNING AND DESIGN REQUIREMENTS.
3. AT THE DISCRETION OF THE WATER RESOURCES DIRECTOR, THE GRAVEL ACCESS DRIVE MAY BE REQUIRED TO LOOP AROUND THE SITE TO ALLOW FOR BETTER ACCESS AND /OR LARGE VEHICLES.

**TOWN OF APEX
STANDARDS**

EFFECTIVE: MARCH 23, 2021

TYPICAL PUMP STATION LAYOUT > 500 GPM

STD. NO.

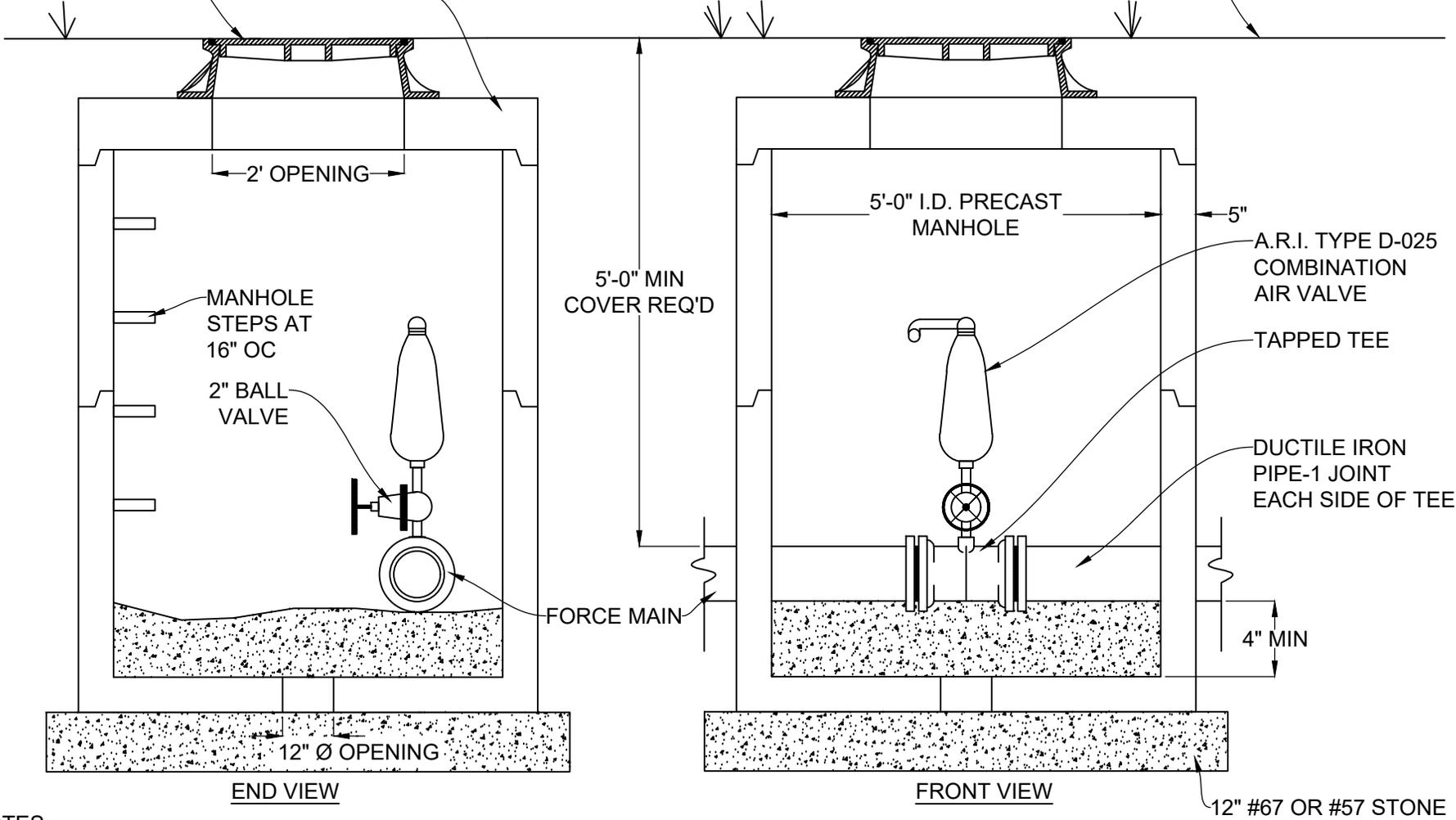
800.10

SHEET 1 OF 1

STANDARD CAST IRON RING & COVER

PRECAST LID

EXISTING GRADE



NOTES:

1. ALL THREADED PIPING SHALL BE BRASS W/ BRONZE FITTINGS AND VALVES.
2. MANHOLE INTERIOR SHALL RECEIVE 2 COATS SHERWIN WILLIAMS SHER-FLEX OR EQUIVALENT WITH A TOTAL DRY FILM THICKNESS OF 80-125 MILS.

**TOWN OF APEX
STANDARDS**

EFFECTIVE: MARCH 23, 2021

AIR RELEASE MANHOLE FOR SANITARY SEWER FORCE MAINS

STD. NO.

800.11

SHEET 1 OF 1