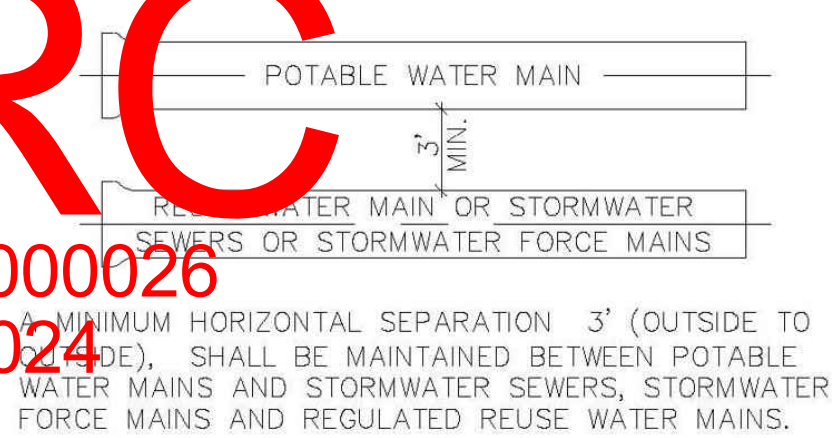
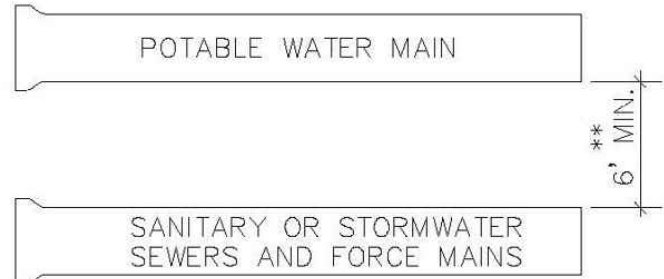


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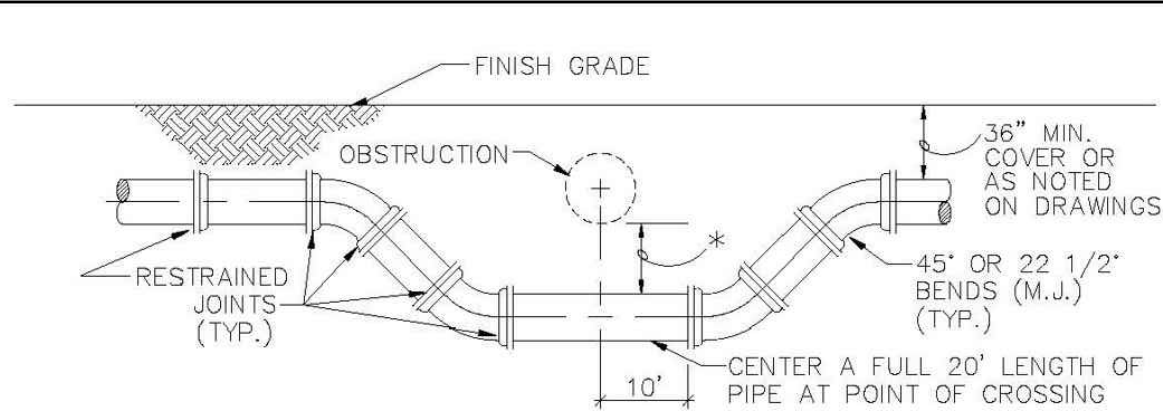


A MINIMUM HORIZONTAL SEPARATION OF 3' (OUTSIDE TO OUTSIDE), SHALL BE MAINTAINED BETWEEN EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER. * SEE NOTE D(1)(B).



A MINIMUM HORIZONTAL SEPARATION OF 6' (OUTSIDE TO OUTSIDE), SHALL BE MAINTAINED BETWEEN POTABLE WATER MAINS AND EXISTING OR PROPOSED GRAVITY-OR PRESSURE TYPE SANITARY SEWER, WASTEWATER FORCE MAIN OR NOT REGULATED REUSE WATER MAIN. ** SEE NOTE D(1)(C).

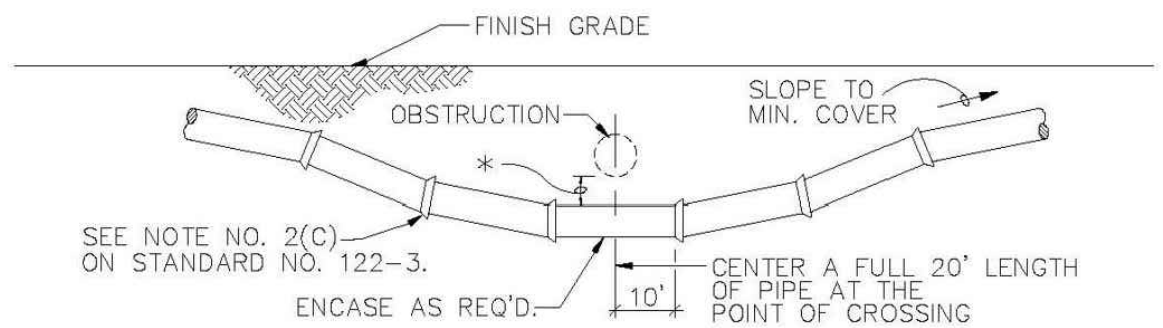
MINIMUM HORIZONTAL SEPARATION REQUIREMENTS FOR POTABLE WATER, REUSE, STORMWATER AND SEWER LINES



SPECIAL UTILITY CROSSING - FITTING TYPE

* 12" MINIMUM CLEARANCE REQUIRED FOR PRESSURE TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN OR REUSE WATER MAIN CROSSINGS. IF MINIMUM CLEARANCE CANNOT BE OBTAINED, REFER TO "PROTECTION OF POTABLE WATER SUPPLY" FOR WATER MAIN CROSSINGS. SEE NOTE 2(B), ON STANDARD NO. 122-3

6" MINIMUM CLEARANCE REQUIRED FOR WATER AND STORMWATER, SEWER MAIN CROSSINGS. SEE NOTE 2(A), ON STANDARD NO. 122-3.



STANDARD UTILITY CROSSING - DEFLECTION TYPE

- NOTES:
- THE DEFLECTION TYPE CROSSING SHALL BE USED WHEREVER POSSIBLE. ONLY UNDER SPECIFIC ORDERS BY THE ENGINEER SHALL THE FITTING TYPE CROSSING BE ALLOWED.
 - CONSTRUCT STANDARD CROSSING USING NO MORE THAN 75% OF MANUFACTURERS' MAXIMUM JOINT DEFLECTION.
 - FOR POTABLE WATER MAINS, REFER TO "PROTECTION OF POTABLE WATER SUPPLY".

UTILITY CROSSINGS

PROTECTION OF POTABLE WATER SUPPLY NOTES

A. GENERAL

IN ADDITION TO THESE REQUIREMENTS, ALL POTABLE WATER MAINS CONSTRUCTED IN THE VICINITY OF STORM SEWERS, SANITARY SEWERS OR FORCE MAINS SHALL COMPLY WITH THE APPLICABLE PROVISIONS OF FLORIDA ADMINISTRATIVE CODE CHAPTER 62-555, GREAT LAKES-UPPER MISSISSIPPI RIVER BOARD OF STATE SANITARY ENGINEERS (GLUMRB) "RECOMMENDED STANDARDS FOR WATER WORKS", AND GLUMRB "RECOMMENDED STANDARDS FOR WASTEWATER FACILITIES".

B. DEFINITIONS

FOR THE PURPOSES OF THIS SPECIFICATION, THE WORDS "OTHER PIPE" OR "OTHER PIPES" SHALL MEAN SANITARY SEWER MAIN, SEWAGE FORCE MAIN, STORMWATER MAIN OR ANY COMBINATION THEREOF.

C. CROSS CONNECTIONS PROHIBITED

THERE SHALL BE NO PHYSICAL CONNECTIONS BETWEEN A PUBLIC OR PRIVATE POTABLE WATER SUPPLY SYSTEM AND ANY OTHER PIPE OR APPURTENANCE THERETO WHICH WOULD PERMIT THE PASSAGE OF ANY WASTEWATER, POLLUTED WATER OR ANY OTHER WATER INTO THE POTABLE SUPPLY. NO WATER PIPE SHALL PASS THROUGH OR COME INTO CONTACT WITH ANY PART OF A SANITARY SEWER MANHOLE OR STORMWATER MANHOLE.

D. RELATION OF OTHER PIPES TO POTABLE WATER MAINS

1. HORIZONTAL SEPARATION

A. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM WATER, STORM WATER FORCE MAIN, OR PIPELINE CONVEYING REUSE WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610.F.A.C.

B. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER.

C. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY-OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING REUSE WATER NOT REGULATED UNDER CHAPTER 62-610, F.A.C. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY TYPE SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER.

D. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST TEN FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND ALL PARTS OF ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM".

2. VERTICAL SEPARATION

A. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY-OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES, AND PREFERABLY 12 INCHES, ABOVE OR AT LEAST 12 INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.

B. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORM WATER FORCE MAIN, OR PIPELINE CONVEYING REUSE WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES, ABOVE OR BELOW THE OUTSIDE THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.

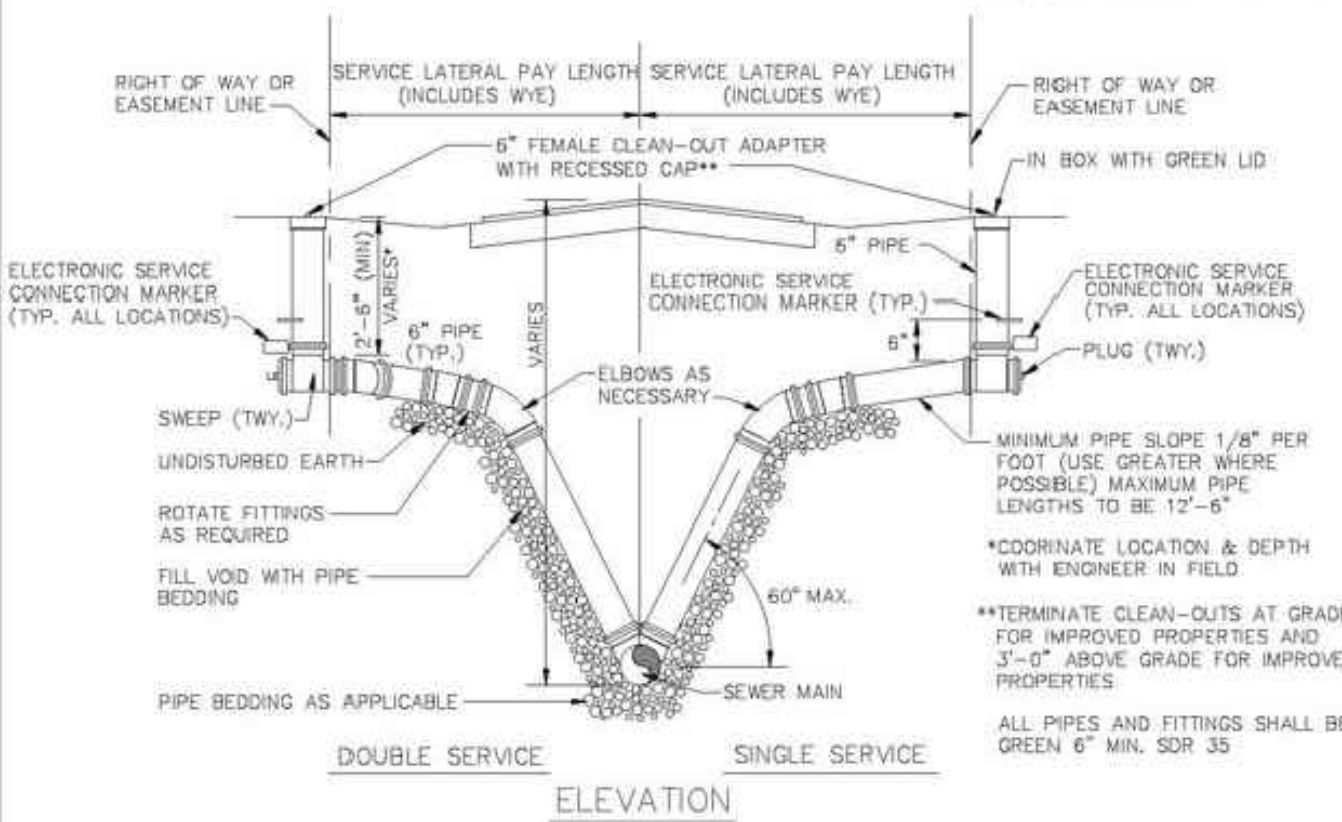
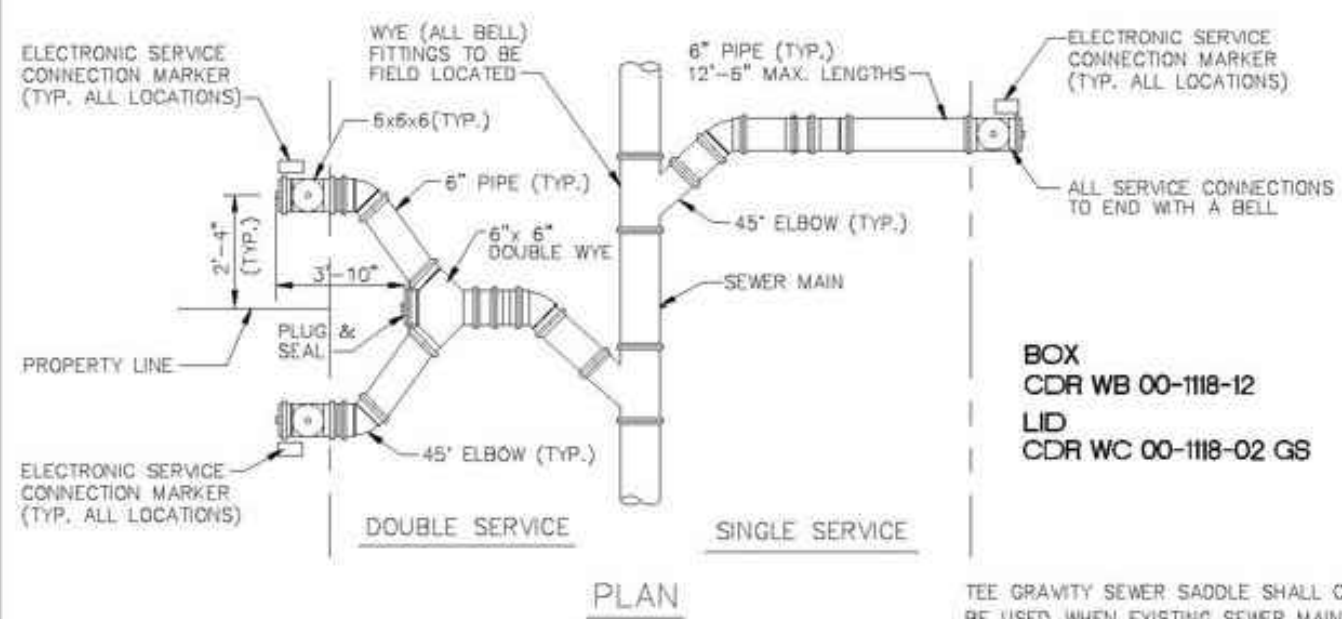
C. AT THE UTILITY CROSSINGS DESCRIBED IN PARAGRAPHS (A) AND (B) ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORM WATER FORCE MAINS, OR PIPELINES CONVEYING REUSE WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY- OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING REUSE WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.

WHERE THE HORIZONTAL CAN BEING LOCATED LESS THAN THE REQUIRED MINIMUM DISTANCES FROM JOINTS IN THE OTHER PIPELINE OR THE HORIZONTAL IS LESS THAN THREE FEET FROM ANOTHER PIPELINE OR THE UNDERGROUND WATER MAIN IS CROSSING ANOTHER PIPELINE AND IS LESS THAN THE REQUIRED MINIMUM VERTICAL DISTANCE FROM THE OTHER PIPELINE, THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY FOR RECOMMENDED SOLUTIONS TO MEET THE FLORIDA OF DEPARTMENT OF ENVIRONMENTAL PROTECTION REQUIREMENTS PER CHAPTER 62-555, F.A.C.

PROTECTION OF POTABLE WATER SUPPLY NOTES

ENGINEERING STANDARDS 2022

REVISIONS		ENGINEERING DIVISION CITY OF POMPAÑO BEACH	MIN. HORIZONTAL SEPARATION FOR POTABLE WATER	DATE: JAN. 2022 DWG. NO.
BY	DATE			
S.S.	01/12			
		SCALE: N.T.S.		121-1



SERVICE LATERALS WITH RISERS

ENGINEERING STANDARDS 2022

REVISIONS		ENGINEERING DIVISION CITY OF POMPAÑO BEACH	SERVICE LATERALS	DATE: JUNE 2022 DWG. NO.
BY	DATE			
T.W.	11-2007			
S.S.	01/27/12			
S.S.	07/10/12			
S.S.	02/05/16	SCALE: N.T.S.		200-1

ENGINEERING STANDARDS 2022

REVISIONS		ENGINEERING DIVISION CITY OF POMPAÑO BEACH	UTILITY CROSSINGS	DATE: JAN. 2022 DWG. NO.
BY	DATE			
S.S.	01/12			
		SCALE: N.T.S.		122-1

INLET: GASKETED BELL - SDR-35 PVC

Base Coating is ASTM A-48 Class 30 Cast Iron

(Remove Coatings outside to R 6.25" - 30.00" O.D. Min)

PVC Adapter is an ASTM D3034, SDR-35 Gasketed Bell

Coatings and Adapter cemented permanently in place with two-part urethane adhesive

Base of Saddle dip-coated in Waterbased Bituminous Coating

Strap is 24 ga. X 2.5" wide Type 304 Stainless Steel

Strap Pins are .75" dia. Type 303 Stainless Steel

T-Bolts are .375" - 16 Type 304 Stainless Steel

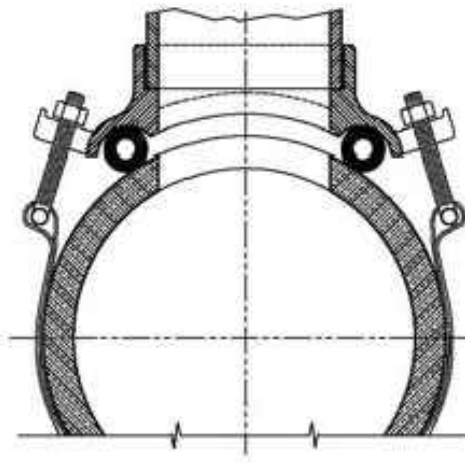
Nuts and Washers are Type 18-8 Stainless Steel

O-Ring is ASTM C-361-77 Tubular Polyisoprene

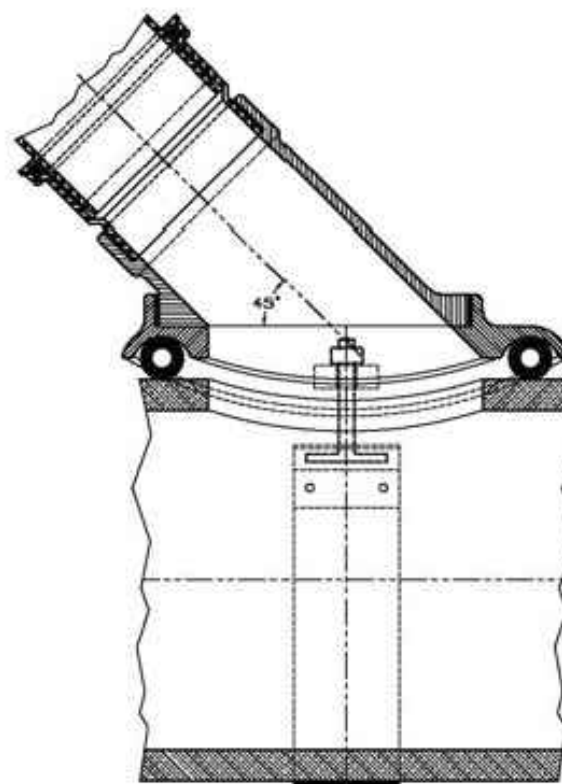
4" inlet requires a 4" x 6.50" oval top in the Sewer Main

6" inlet requires a 6" x 9.25" oval top in the Sewer Main (Sewer Main must be at least 6" dia.)

Note: This Dwg. supersedes Dwg. No. R-3157-01



VIEW 1



VIEW 2

WYE GRAVITY SEWER SADDLE

TO BE USED WHEN A SEWER MAIN HAS BEEN LINED WITH A CURED IN PLACE MATERIAL.

ENGINEERING STANDARDS 2022

REVISIONS		ENGINEERING DIVISION CITY OF POMPAÑO BEACH	WYE GRAVITY SEWER SADDLE	DATE: MAY 2022 DWG. NO.
BY	DATE			
		SCALE: N.T.S.		201-2

ENGINEERING STANDARDS 2022

REVISIONS		ENGINEERING DIVISION CITY OF POMPAÑO BEACH	POTABLE WATER SUPPLY NOTES	DATE: JAN. 2022 DWG. NO.
BY	DATE			
S.S.	01/12			
		SCALE: N.T.S.		122-2

- OUTLINE OF TRENCH EXCAVATION IS FOR ILLUSTRATIVE PURPOSES ONLY. ACTUAL TRENCH WIDTH AND SHAPE WILL VARY WITH SOIL CONDITIONS. TRENCH EXCAVATION SHALL BE IN ACCORDANCE WITH THE "FLORIDA TRENCH SAFETY ACT" AND OSHA TRENCH SAFETY STANDARDS.
- TYPICAL TRENCH BACKFILL/BEDDING FOR WATER MAIN AND FORCE MAIN INSTALLATIONS SHALL BE CLASS "A" AS SHOWN IN DETAIL.
- TYPICAL TRENCH BACKFILL/BEDDING FOR GRAVITY SEWER INSTALLATION SHALL BE CLASS "B" AS SHOWN IN DETAIL.
- TRENCH BACKFILL/BEDDING CLASS "C" AND CLASS "D" SHALL BE USED FOR PIPE INSTALLATIONS WHERE UNSUITABLE TRENCH MATERIALS ARE ENCOUNTERED.
- TRENCH ZONE BACKFILL SHALL BE MATERIAL TYPE 1 OR TYPES A THRU H, OR ANY MIXTURE THEREOF, WHERE SURFACE RESTORATION TYPE "1" IS APPLICABLE, TRENCH ZONE BACKFILL SHALL BE PLACED IN 12" LIFTS, COMPACTED TO 90% OF THE MATERIAL'S MAXIMUM DENSITY AS DETERMINED BY ASTM D-697 (AASHTO T-99). WHERE SURFACE RESTORATION TYPES "2", "3" AND "4" ARE APPLICABLE, TRENCH BACKFILL SHALL BE PLACED IN 8" LIFTS COMPACTED TO 98% OF THE MATERIAL'S DENSITY AS DETERMINED BY ASTM D-698 (AASHTO T-99).
- BEDDING MATERIAL FOR TYPICAL WATER MAIN AND FORCE MAIN INSTALLATION SHALL BE TYPE C. BEDDING SHALL BE COMPACTED TO 95% OF THE MATERIAL'S MAXIMUM DENSITY AS DETERMINED BY ASTM D-1557 (AASHTO T-180).
- BEDDING MATERIAL FOR TYPICAL GRAVITY SEWER INSTALLATION AND ANY INSTALLATION WHERE UNSUITABLE TRENCH BOTTOM CONDITIONS ARE FOUND SHALL BE TYPE E. BEDDING SHALL BE PLACED IN LIFTS NOT TO EXCEED 6" AND COMPACTED TO 95% OF THE MATERIAL'S MAXIMUM DENSITY AS DETERMINED BY ASTM D-1557 (AASHTO T-180).
- UNSUITABLE MATERIAL SHALL BE REMOVED TO UNDISTURBED ROCK OR SAND OR TO DEPTH AS SPECIFIED BY ENGINEER. BACKFILL MATERIAL SHALL BE TYPE C. BACKFILL SHALL BE PLACED IN 8" LIFTS COMPACTED TO 95% OF THE MATERIAL'S MAXIMUM DENSITY AS DETERMINED BY ASTM D-1557 (AASHTO T-180).

TRENCH BACKFILL / BEDDING NOTES

ENGINEERING STANDARDS 2022

REVISIONS		ENGINEERING DIVISION CITY OF POMPAÑO BEACH	POTABLE WATER SUPPLY NOTES	DATE: JAN. 2022 DWG. NO.
BY	DATE			
S.S.	01/12			
		SCALE: N.T.S.		122-3

9. BEDDING TYPES - THE FOLLOWING TYPES OF SUITABLE MATERIALS ARE DESIGNATED AND DEFINED AS FOLLOWS:

TYPE A: CRUSHED LIMESTONE OR SAND WITH 100 PERCENT PASSING A 1 INCH SIEVE AND A SAND EQUIVALENT VALUE NOT LESS THAN 50.

TYPE B: CRUSHED LIMESTONE OR SAND WITH 100 PERCENT PASSING A 1/2 INCH SIEVE AND A SAND EQUIVALENT VALUE NOT LESS THAN 50.

TYPE C: SAND WITH 100 PERCENT PASSING A 3/8 INCH SIEVE, AT LEAST 90 PERCENT PASSING A NUMBER 4 SIEVE, AND A SAND EQUIVALENT VALUE NOT LESS THAN 30.

TYPE D: CRUSHED LIMESTONE WITH 100 PERCENT PASSING A 1 INCH SIEVE AND NOT MORE THAN 10 PERCENT A NUMBER 4 SIEVE.

TYPE E: CRUSHED LIMESTONE OR SAND WITH 100 PERCENT PASSING A 3/4 INCH SIEVE AND NOT MORE THAN 10 PERCENT PASSING A NUMBER 4 SIEVE.

TYPE F: CRUSHED LIMESTONE MEETING THE FOLLOWING GRADATION REQUIREMENTS.

SIEVE SIZE	PERCENTAGE PASSING
2 INCH	100
1-1/2 INCH	90-100
1 INCH	20-55
3/4 INCH	0-15
NO. 200	0-3

TRENCH BACKFILL / BEDDING NOTES

ENGINEERING STANDARDS 2022

REVISIONS		ENGINEERING DIVISION CITY OF POMPAÑO BEACH	TRENCH BACKFILL / BEDDING	DATE: JUNE 2022 DWG. NO.
BY	DATE			
		SCALE: N.T.S.		203-4



Digitally signed by John Iravani
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Water & Wastewater Details

DATE	SCALE	DESIGNED BY	DRAWN BY	JOB NO.
01/28/2023	N.T.S.	JBI	JBI	2208-1411

SEAL

FR # 6986
SHEET NO.
C-12