

1. 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.
2. TYPICAL TRENCH BACKFILL/BEDDING FOR WATER MAIN AND FORCE MAIN INSTALLATIONS SHALL BE CLASS "A" AS SHOWN IN DETAIL.
3. TYPICAL TRENCH BACKFILL/BEDDING FOR GRAVITY SEWER INSTALLATION SHALL BE CLASS "B" AS SHOWN IN DETAIL.
4. TRENCH BACKFILL/BEDDING CLASS "C" AND CLASS "D" SHALL BE USED FOR PIPE INSTALLATIONS WHERE UNSUITABLE TRENCH MATERIALS ARE ENCOUNTERED.
5. 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).
6. 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).
7. 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).
8. 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

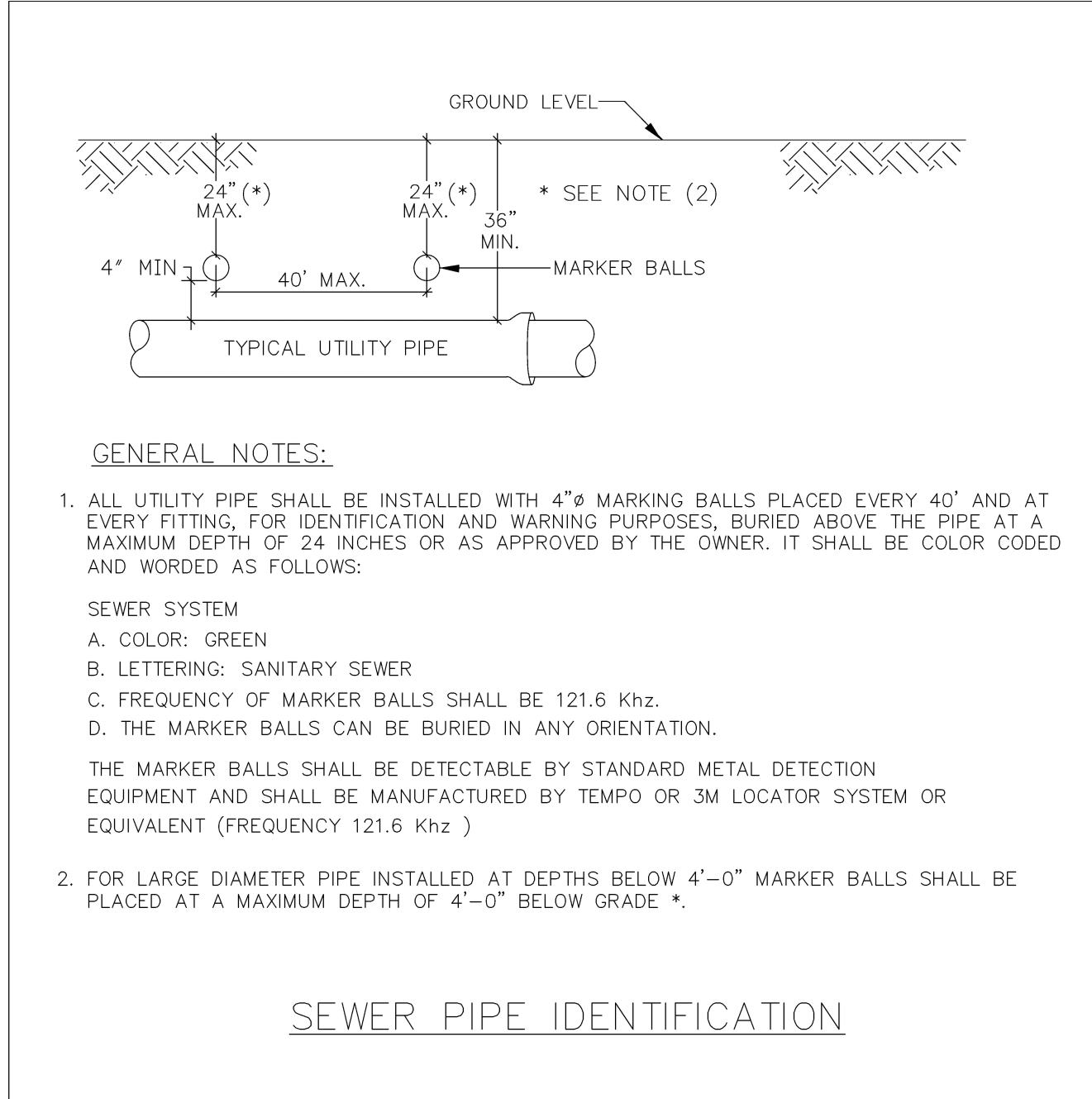
ENGINEERING STANDARDS 2022				
REVISIONS		ENGINEERING DIVISION	TRENCH BACKFILL / BEDDING	DATE: JUNE 2022 DWG. NO.
BY	DATE			
		CITY OF POMPAÑO BEACH		
		SCALE: N.T.S.		203-3

9. BEDDING TYPES - THE FOLLOWING TYPES OF SUITABLE MATERIALS ARE DESIGNATED AND DEFINED AS FOLLOWING:
- TYPE A: CRUSHED LIMEROCK OR SAND WITH 100 PERCENT PASSING A 1 INCH SIEVE AND A SAND EQUIVALENT VALUE NOT LESS THAN 50.
- TYPE B: CRUSHED LIMEROCK 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 LIMEROCK WITH 100 PERCENT PASSING A 1 INCH SIEVE AND NOT MORE THAN 10 PERCENT A NUMBER 4 SIEVE.
- TYPE E: CRUSHED LIMEROCK 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 LIMEROCK 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	TRENCH BACKFILL / BEDDING	DATE: JUNE 2022 DWG. NO.
BY	DATE			
		CITY OF POMPAÑO BEACH		
		SCALE: N.T.S.		203-4

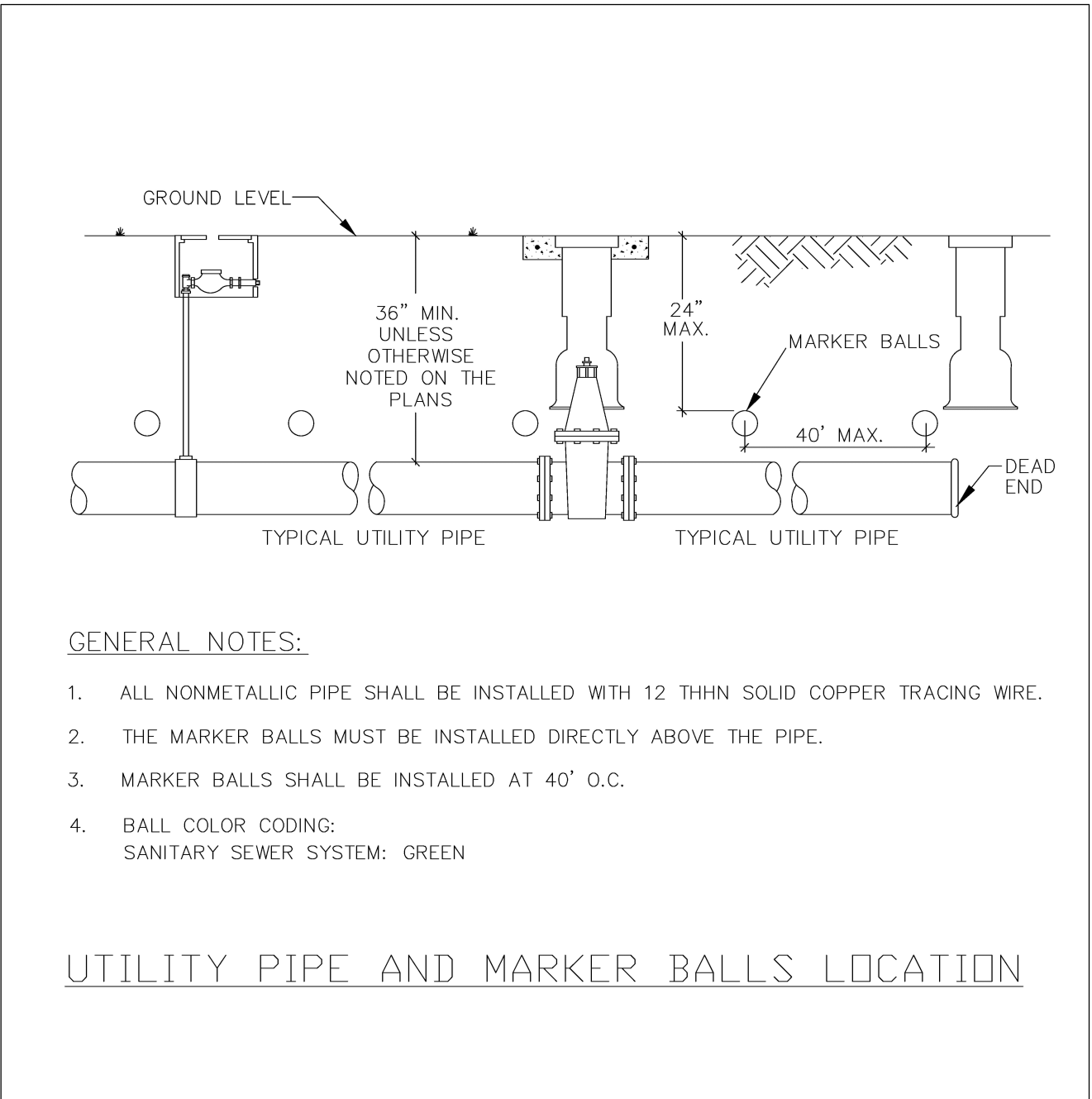


GENERAL NOTES:

1. ALL UTILITY PIPE SHALL BE INSTALLED WITH 4"Ø MARKING BALLS PLACED EVERY 40' AND AT EVERY FITTING, FOR IDENTIFICATION AND WARNING PURPOSES, BURIED ABOVE THE PIPE AT A MAXIMUM DEPTH OF 24 INCHES OR AS APPROVED BY THE OWNER. IT SHALL BE COLOR CODED AND WORDED AS FOLLOWS:
- SEWER SYSTEM
- A. COLOR: GREEN
- B. LETTERING: SANITARY SEWER
- C. FREQUENCY OF MARKER BALLS SHALL BE 121.6 Khz.
- D. THE MARKER BALLS CAN BE BURIED IN ANY ORIENTATION.
- THE MARKER BALLS SHALL BE DETECTABLE BY STANDARD METAL DETECTION EQUIPMENT AND SHALL BE MANUFACTURED BY TEMPO OR 3M LOCATOR SYSTEM OR EQUIVALENT (FREQUENCY 121.6 Khz)
2. FOR LARGE DIAMETER PIPE INSTALLED AT DEPTHS BELOW 4'-0" MARKER BALLS SHALL BE PLACED AT A MAXIMUM DEPTH OF 4'-0" BELOW GRADE *.

SEWER PIPE IDENTIFICATION

ENGINEERING STANDARDS 2022				
REVISIONS		ENGINEERING DIVISION	SEWER PIPE IDENTIFICATION	DATE: JUNE 2022 DWG. NO.
BY	DATE			
S.S.	01/30/12	CITY OF POMPAÑO BEACH		
		SCALE: N.T.S.		207-1

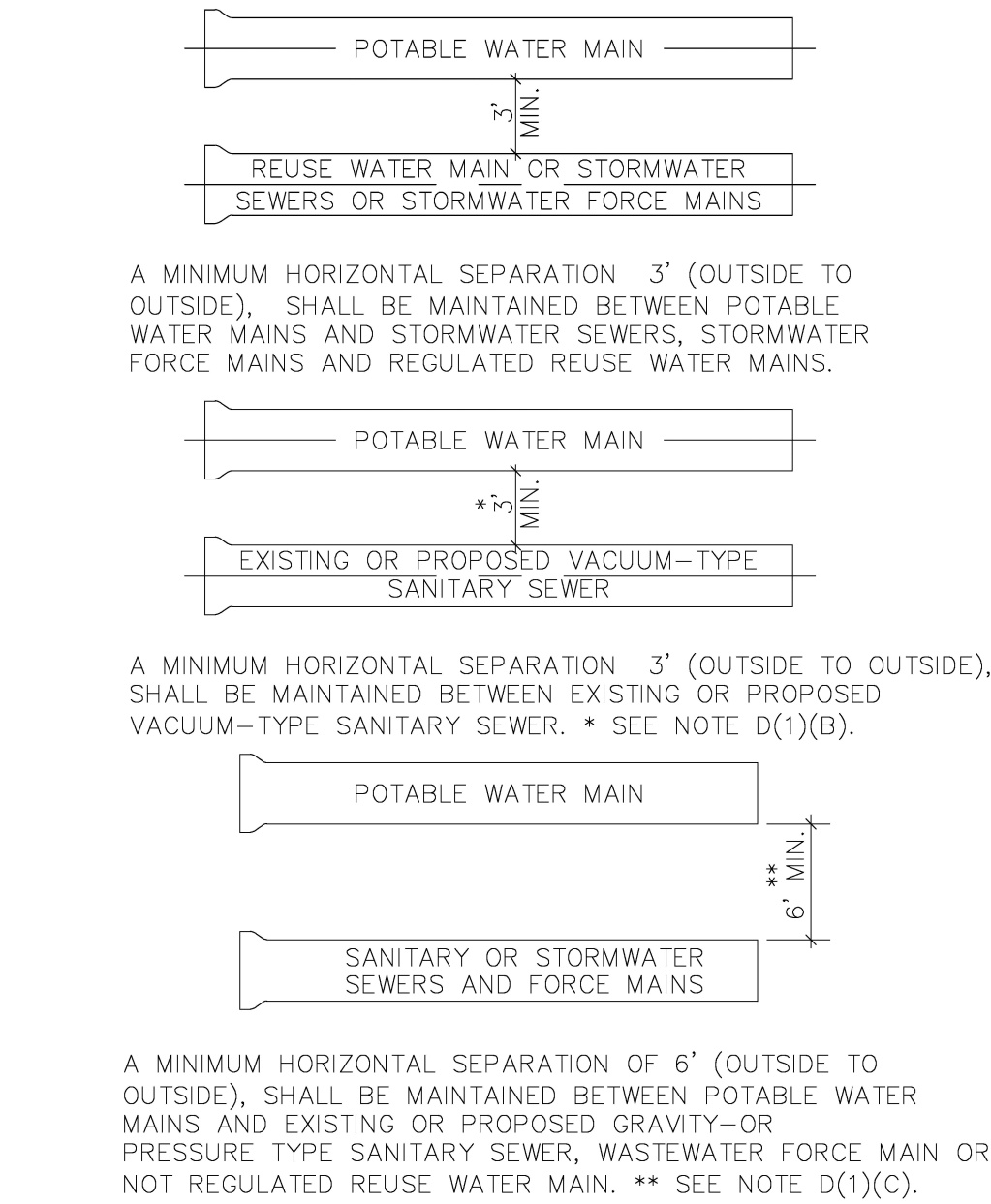
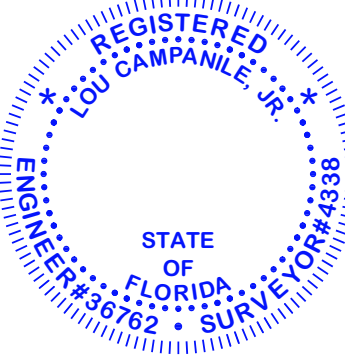
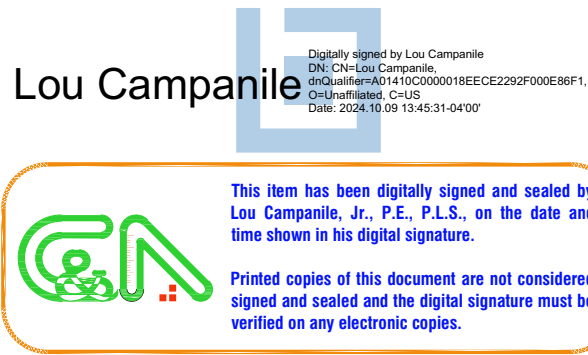


GENERAL NOTES:

1. ALL NONMETALLIC PIPE SHALL BE INSTALLED WITH 12 THHN SOLID COPPER TRACING WIRE.
2. THE MARKER BALLS MUST BE INSTALLED DIRECTLY ABOVE THE PIPE.
3. MARKER BALLS SHALL BE INSTALLED AT 40' O.C.
4. BALL COLOR CODING:
SANITARY SEWER SYSTEM: GREEN

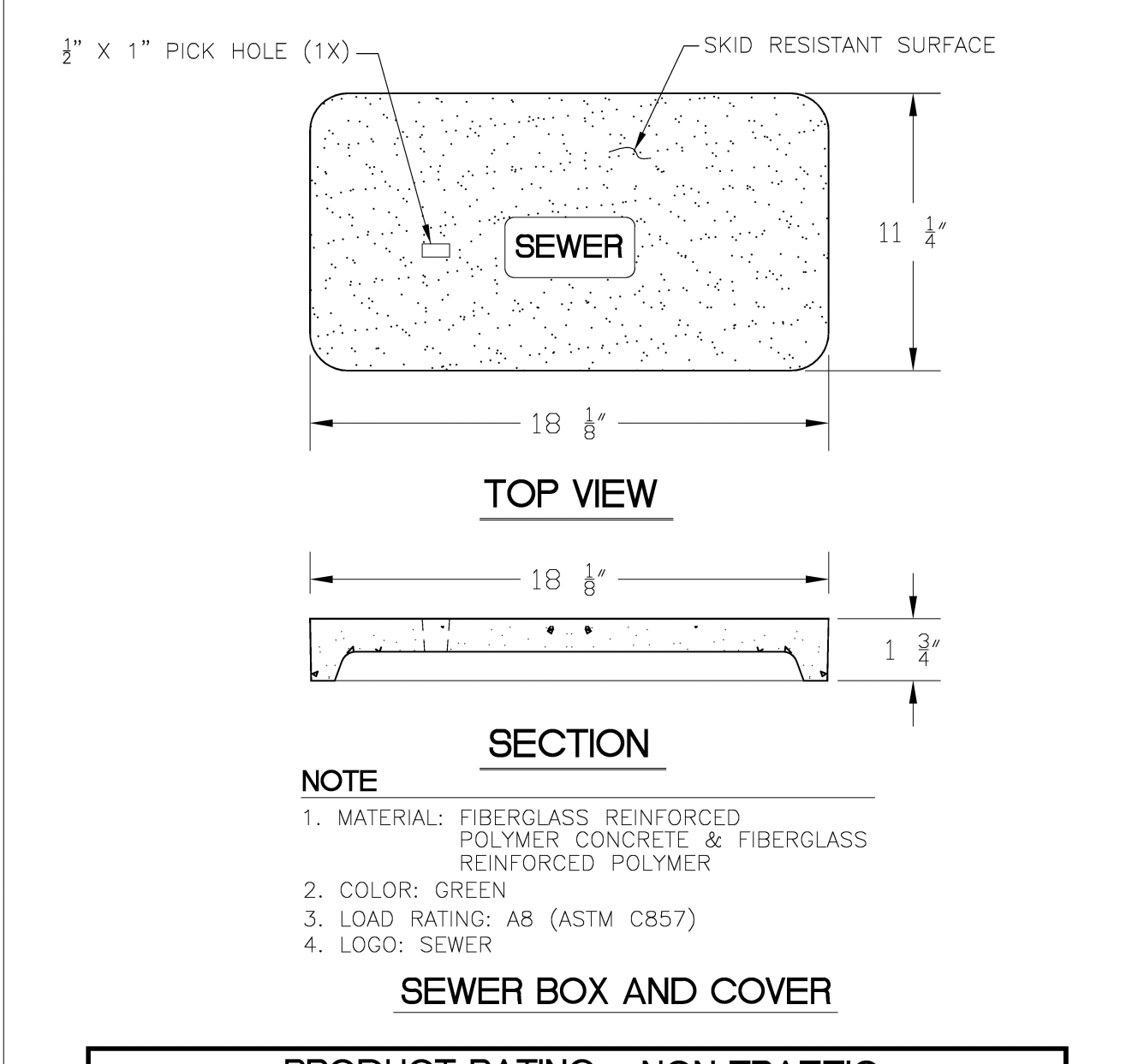
UTILITY PIPE AND MARKER BALLS LOCATION

ENGINEERING STANDARDS 2022				
REVISIONS		ENGINEERING DIVISION	UTILITY PIPE AND MARKER BALLS LOCATION	DATE: JUNE 2022 DWG. NO.
BY	DATE			
S.S.	01/30/12	CITY OF POMPAÑO BEACH		
		SCALE: N.T.S.		208-1



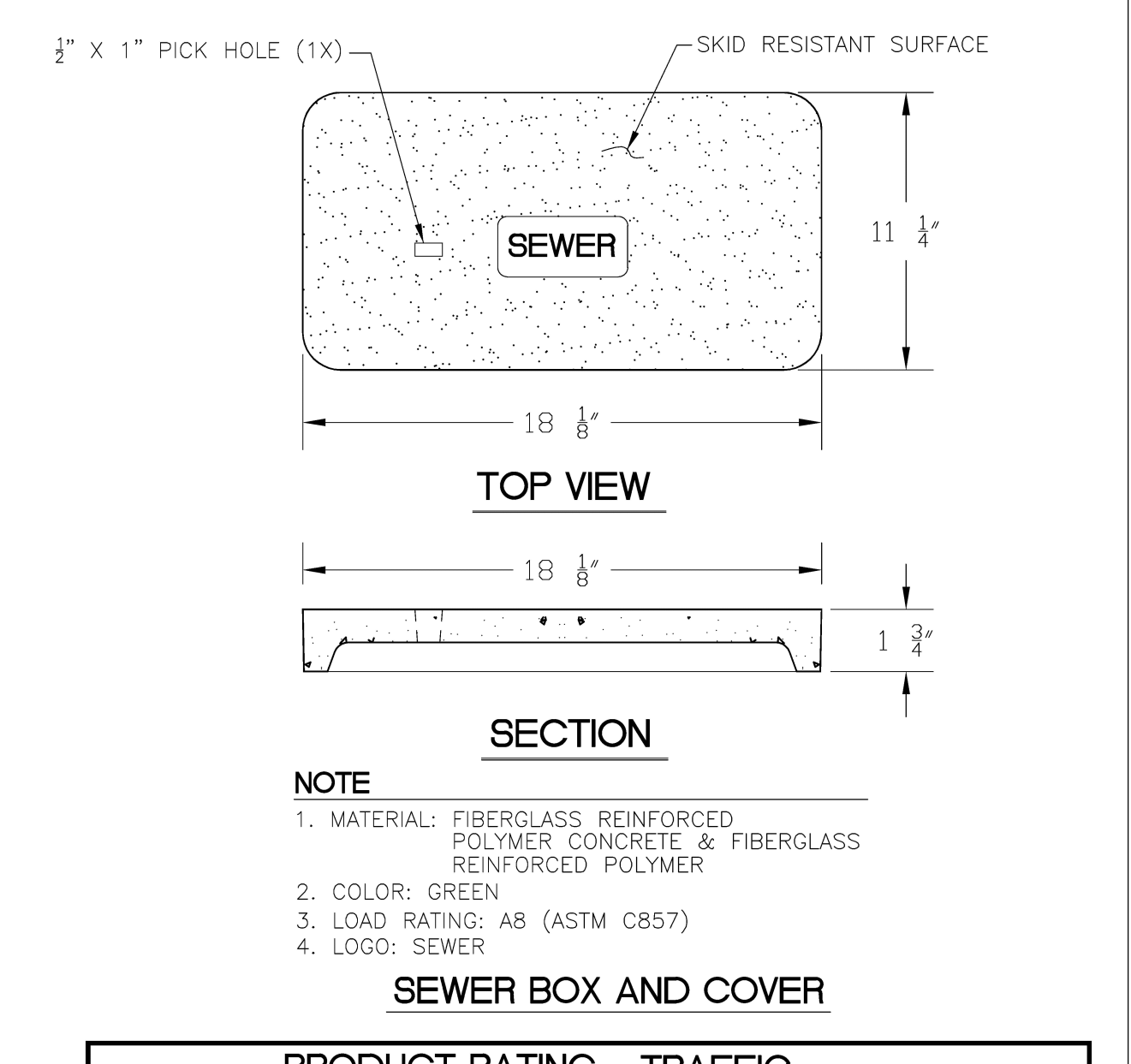
MINIMUM HORIZONTAL SEPARATION REQUIREMENTS FOR POTABLE WATER, REUSE, STORMWATER AND SEWER LINES

ENGINEERING STANDARDS 2022				
REVISIONS		ENGINEERING DIVISION	MIN. HORIZONTAL SEPARATION FOR SANITARY SEWER	DATE: JUNE 2022 DWG. NO.
BY	DATE			
S.S.	01/30/12	CITY OF POMPAÑO BEACH		
		SCALE: N.T.S.		209-1



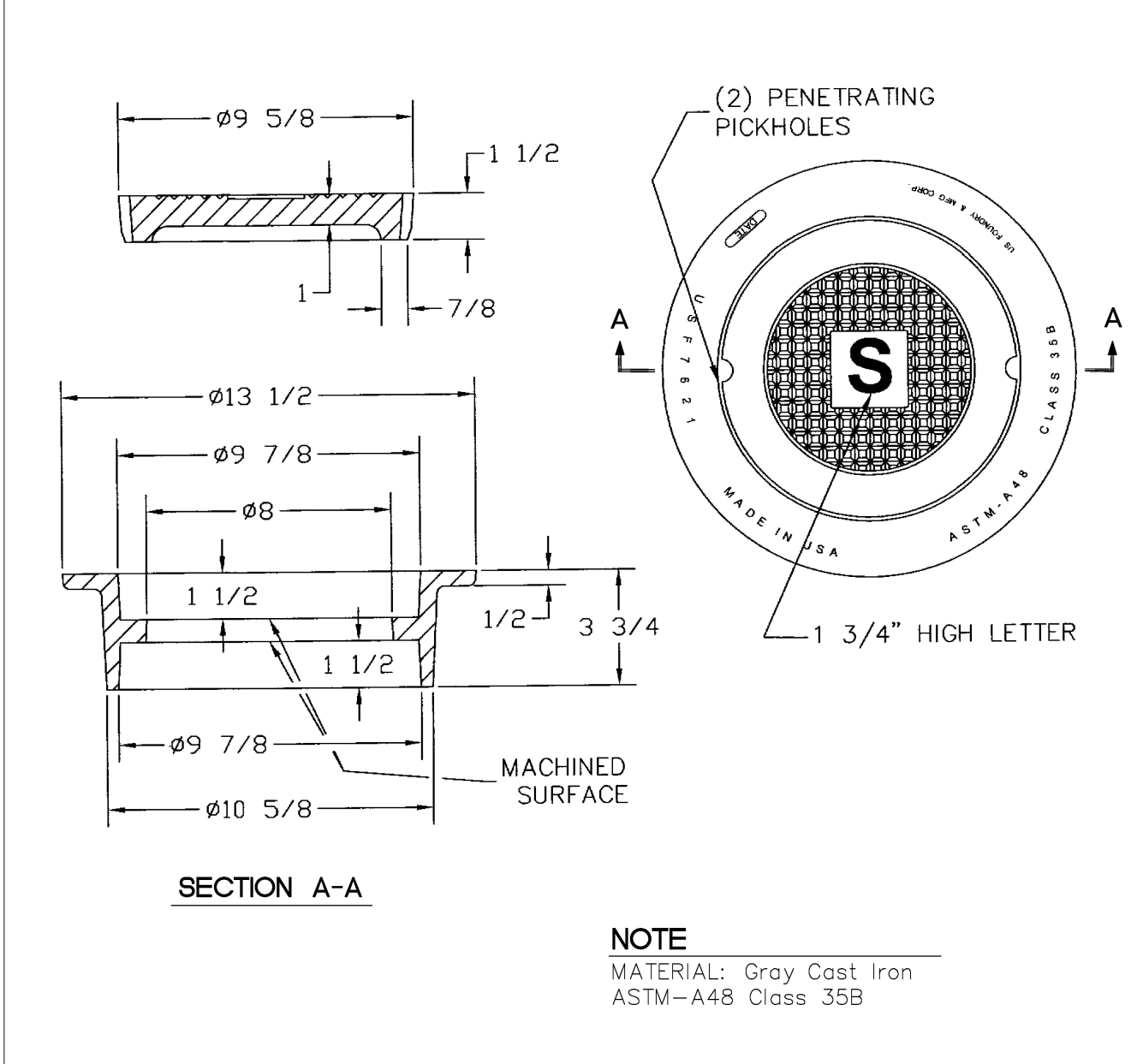
PRODUCT RATING - NON TRAFFIC					
LOAD DESIGNATION	DESCRIPTION	DESIGN LOADS			TESTING
		LIVE LB/WHEEL (2)	LIVE + IMPACT LB/WHEEL	SIDE PSF (3)	LOAD/LBS SAFETY FACTOR
AASHTO H10	LIGHT TRUCK TRAFFIC	8,000	10,400	N/A	22,568 (4) 2.82

ENGINEERING STANDARDS 2022				
REVISIONS		ENGINEERING DIVISION	SEWER BOX AND COVER CDR Part No. WB03-1118-12 CDR Part No. WC00-1118-02	DATE: JUNE 2022 DWG. NO.
BY	DATE			
		CITY OF POMPAÑO BEACH		
		SCALE: N.T.S.		210-1



PRODUCT RATING - TRAFFIC					
LOAD DESIGNATION	DESCRIPTION	DESIGN LOADS			TESTING
		LIVE LB/WHEEL (2)	LIVE + IMPACT LB/WHEEL	SIDE PSF (3)	LOAD/LBS SAFETY FACTOR
AASHTO H15	MEDIUM TRUCK TRAFFIC	12,000	15,600	N/A	27,000 (5) 2.25

ENGINEERING STANDARDS 2022				
REVISIONS		ENGINEERING DIVISION	SEWER BOX AND COVER CDR Part No. WB04-1118-12 CDR Part No. WC02-1118-02	DATE: JUNE 2022 DWG. NO.
BY	DATE			
		CITY OF POMPAÑO BEACH		
		SCALE: N.T.S.		210-2



SEWER BOX AND COVER - HEAVY TRAFFIC

ENGINEERING STANDARDS 2022				
REVISIONS		ENGINEERING DIVISION	SEWER BOX AND COVER HEAVY TRAFFIC	DATE: JUNE 2022 DWG. NO.
BY	DATE			
S.S.	12/06/18	CITY OF POMPAÑO BEACH		
		SCALE: N.T.S.		210-3

DRG
PZ24-12000023
12/18/2024

CAMPANILE & ASSOCIATES, INC.
ENGINEERS PLANNERS SURVEYORS
6420 MAHI DRIVE
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TEL: (305) 971-1988
LB 1678

10/9/24
Lou Campanile, Jr.
Professional Engineer No. 36762
Professional Surveyor No. 4338
State of Florida

R/S ARCHITECTS, INC.

ELIAS APARTMENT BUILDING
216 SE 23 AVENUE
POMPAÑO BEACH, FLORIDA 33062-5304
POMPAÑO BEACH SEWER DETAILS

PROJECT NO. 5391
DATE 10/9/24
REVISIONS

DRAWING
NS-7
SHEET
OF 10

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