



#### NOTES:

1. THESE STANDARD DETAILS ARE FOR CONSTRUCTION OF NEW CANAL RETAINING WALLS.
2. DESIGN TO BE REVIEWED AND ALTERED BY ENGINEER OF RECORD AS REQUIRED.
3. CITY OF MARGATE REQUIRES DESIGN DRAWINGS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF FLORIDA. SIGNED AND SEALED CALCULATIONS SHALL BE PROVIDED TO SUPPORT STRUCTURAL DESIGN.
4. DEPTH OF PILING PENETRATION INTO UNDISTURBED GROUND MUST BE DETERMINED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF FLORIDA. PILE PENETRATION (T-PILE, STEEL SHEET PILE, KING PILE, AND WALL PANEL) AS REQUIRED FOR BEARING, BUT NOT LESS THAN TEN (10) FEET BELOW BERM ELEVATION, EXCEPT THAT PILING MAY BE TERMINATED AT POINT OF REFUSAL. CONCRETE SHEET PILING PENETRATION AS REQUIRED FOR BEARING, BUT NOT LESS THAN FIVE (5) FEET BELOW BERM ELEVATION, EXCEPT THAT SHEETING MAY TERMINATE AT POINT OF REFUSAL.
5. THE FOLLOWING STRUCTURAL NOTES APPLY TO THE PRECAST REINFORCED CONCRETE (T-PILE, KING PILE, AND WALL PANEL) AND SHEET PILING STANDARD DETAILS. THE STANDARD DETAILS DESIGN IS BASED SOLELY ON THE PARAMETERS DESCRIBED IN THE NOTES AND DRAWINGS HEREIN. A STRUCTURAL ENGINEER LICENSED IN FLORIDA SHALL PREPARE CALCULATIONS AND STRUCTURAL DRAWINGS AS PER FLORIDA BUILDING CODE (FBC) LATEST VERSION AND IN ACCORDANCE WITH APPLICABLE CODES AND REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.
6. IT IS THE INTENT OF THESE PLANS TO COMPLY WITH LOCAL, STATE, AND FEDERAL ENVIRONMENTAL PERMITS ISSUED FOR THIS PROJECT. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO FAMILIARIZE AND GOVERN HIMSELF/HERSELF BY ALL PROVISIONS OF THESE PERMITS.
7. NO CANAL RETAINING WALL SHALL BE CONSTRUCTED IN THE CITY WITHOUT APPROPRIATE LOCAL, STATE, AND FEDERAL APPROVALS. THE CONTRACTOR SHALL COMPLY WITH ALL NECESSARY LOCAL, STATE, AND FEDERAL ENVIRONMENTAL PERMITS ISSUED FOR THE PROJECT. IT IS THE CONTRACTORS RESPONSIBILITY TO BECOME FAMILIAR WITH AND BE GOVERNED BY ALL PROVISIONS OF THESE PERMITS.
8. A BOUNDARY SURVEY PREPARED BY A FLORIDA LICENSED PROFESSIONAL SURVEYOR AND MAPPER FOR THE UPLAND OWNER DATED WITHIN ONE YEAR OF THE BUILDING PERMIT APPLICATION MUST BE PROVIDED.
9. UPON COMPLETION OF CONSTRUCTION AN AS-BUILT SURVEY AND/OR ENGINEER OF RECORD CERTIFICATION WILL BE REQUIRED TO CLOSE ENGINEERING PERMIT. ENGINEER OF RECORD (EOR) CERTIFICATION MUST CONFIRM THAT THE RETAINING WALL HAS BEEN CONSTRUCTED AS APPROVED IN THE PERMITTING PLANS AND INDICATE ANY DEVIATIONS.
10. THE CITY PREFERS CANAL RETAINING WALL TYPES AS INDICATED IN THE CODE. IT IS STRONGLY RECOMMENDED THAT ANY NEW RETAINING WALL MATCH EXISTING CONDITIONS IN THE AREA TO MAINTAIN AN UNIFORM AND COHESIVE LOOK ALONG THE WATERFRONT.

#### CONCRETE AND REINFORCING STEEL:

1. ALL CONCRETE (EXCEPT PRECAST PILES) SHALL HAVE A 0.40 WATER/CEMENT RATIO AND SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH ( $f'_c$ ) OF 5000 P.S.I. AT THE END OF 28 DAYS. SIX (6) CONCRETE CYLINDERS SHALL BE TAKEN FOR EACH 50 CUBIC YARDS OR FRACTION THEREOF AND SHALL BE TESTED AT 3, 7, AND 28 DAYS IN ACCORDANCE WITH ASTM C39. SLUMP SHALL NOT EXCEED 5" ( $\pm 1$ ").
2. ALL REINFORCEMENT SHALL BE 60000 PSI MINIMUM YIELD ( $F_y$ ) NEW BILLET STEEL IN ACCORDANCE WITH ASTM A615 GRADE 60. ALL REINFORCING STEEL SHALL BE FROM DOMESTIC MILLS AND SHALL HAVE THE MANUFACTURER'S MILL MARKING ROLLED INTO THE BAR WHICH SHALL INDICATE THE PRODUCER, SIZE, TYPE AND GRADE. ALL BAR LAPS SHALL BE A MINIMUM OF 48 BAR DIAMETERS. PLACING OF REINFORCEMENT SHALL CONFORM TO THE LATEST ACI MANUAL OF STANDARD PRACTICE CODES.
3. ALL CONCRETE SHALL BE PLACED WITHIN 90 MINUTES FROM BATCH TIME, AND VIBRATED AS REQUIRED BY THE ACI MANUAL OF CONCRETE PRACTICE. TEMPERATURE OF CONCRETE AT THE TIME OF PLACEMENT SHALL BE BETWEEN 75° AND 100° F.

#### ELEVATIONS:

1. ELEVATIONS OF PROPOSED AND EXISTING IMPROVEMENTS MUST BE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 1988) AND BE NOTED ON THE DRAWING.
2. THE SITE-SPECIFIC MEAN HIGH WATER (MHW) AND MEAN LOW WATER (MLW) LEVEL MUST BE INCLUDED IN THE PLANS.
3. CHECK LOCAL JURISDICTION REQUIREMENTS FOR CAP ELEVATION.

DATE: 12/24

DRAWN: KHA



CITY OF MARGATE, FLORIDA  
DEPARTMENT OF ENVIRONMENTAL  
AND ENGINEERING SERVICES

CANAL RETAINING WALL DETAIL

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