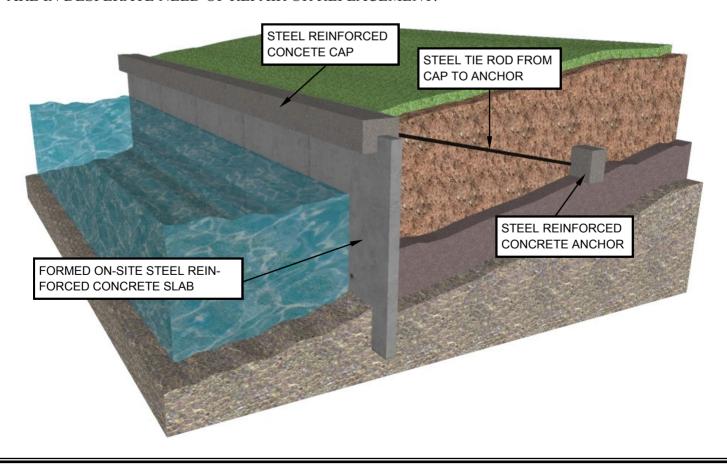


THERE ARE MANY FACTORS AND DECISIONS TO THINK ABOUT WHEN CONSIDERING REPAIRING OR REPLACING YOUR SEAWALL. THIS SHORT GUIDE WELL HELP YOU TO QUICKLY UNDERSTAND YOUR CURRENT SEAWALL, THE TYPES OF REPAIRS OR REPLACEMENT OPTIONS AVAILABLE TO YOU, AND ANY QUESTIONS YOU MIGHT HAVE REGARDING YOUR CURRENT SEAWALL OR WHAT SHOULD BE DONE WHEN TAKING THE NEXT STEP. REMEMBER, A SEAWALL IS A VALUABLE INVESTMENT IN PROTECTING YOUR PROPERTY, AS WELL AS YOUR HOME.

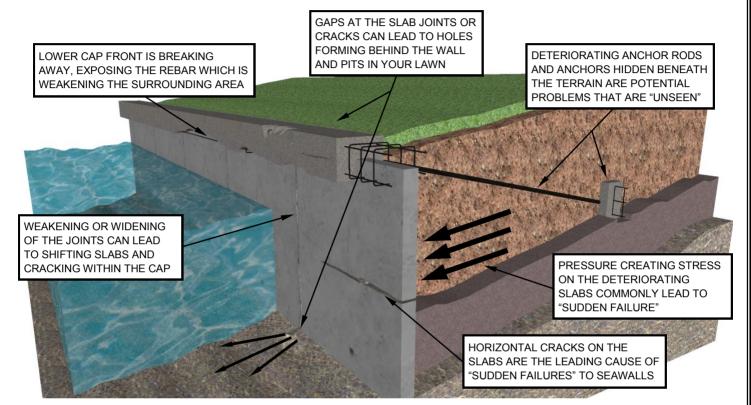
THE ANATOMY OF A TYPICAL FLORIDA SEAWALL

THE TYPICAL SEAWALL USUALLY CONSISTS OF SEVERAL VERTICAL CONCRETE SLABS, EACH HELD IN PLACE BY AN ANCHOR SYSTEM AND A STEEL REINFORCED CONCRETE CAP. ON AVERAGE, THESE SEAWALLS ARE APPROXIMATELY 40 TO 50+ YEARS OLD, AND MANY ARE IN DESPERATE NEED OF REPAIR OR REPLACEMENT.



THE TYPICAL "FAILING" SEAWALL

THERE ARE MANY SIGNS AND PREDICTORS THAT A SEAWALL IS FAILING. SOME ARE VISIBLE, WHILE OTHERS ARE NOT. BECAUSE OF THE AGE AND THE INCLEMENT WEATHER PATTERNS THAT FLORIDA ENCOUNTERS, CHECKING YOUR SEAWALL PERIODICALLY AFTER MAJOR STORMS OR HEAVY RAINFALLS CAN HELP YOU TO AVOID MAJOR PROBLEMS OR POTENTIAL "SUDDEN FAILURE." SHOWN BELOW ARE A FEW REASONS WHY SEAWALLS FAIL.



QUESTIONS TO ASK YOURSELF

- DOES MY SEAWALL HAVE HORIZONTAL CRACKS IN THE SLABS?
 - TYPICALLY, HORIZONTAL CRACKS ARE THE LEADING CAUSE OF "SUDDEN FAILURE." THE TREMENDOUS PRESSURE BEHIND THE WALL CAUSES THEM TO SPONTANEOUSLY BUCKLE, USUALLY RESULTING IN THE LOSS OF SEVERAL SLABS OR LAND. BECAUSE OF THE NATURE OF THIS KIND OF FAILURE, IT CAN EASILY DOUBLE THE COST OF REPLACING YOUR WALL DEPENDING ON THE SEVERITY OF THE FAILURE.
- ARE MY SLABS SHIFTING OUTWARD? DO I HAVE LARGE GAPS BETWEEN THEM?

 SHIFTING SLABS ARE USUALLY THE RESULT OF ANCHOR FAILURES. THE TREMENDOUS PRESSURE BEHIND THE

 SEAWALLS CAUSES THEM TO SHIFT OUTWARD. ON AVERAGE, ONCE SHIFTING OCCURS, IT USUALLY SOESN'T STOP

 UNTIL THE WHOLE SLAB OR SECTION FALLS OUT, CAUSING YOU TO LOSE LAND AND DOUBLING THE COST OF

 REPLACEMENT.
- AM I LOSING LAND FROM BEHIND MY SEAWALL? ANY EROSION?
 - THE PROBLEM WITH LOSING LAND OR EROSION IS THAT IT BECOMES A CONSTANT PROBLEM. IN SOME CASES, HOMEOWNERS HAVE POOL DECKS THAT BACK RIGHT UP TO THE SEAWALL. THE GROUND BENEATH BECOMES HOLLOW RESULTING IN THE CRACKING OF THE POOL OR THE COLLAPSE OF THE DECK. THE CAUSE OF THIS PROBLEM USUALLY LIES BENEATH THE SLABS OR AT THE SLAB JOINTS. IT MAY BE THAT YOUR SLABS ARE NO LONGER PENETRATING THE BERM, OR THAT YOU HAVE WIDENING GAPS AT YOUR SLAB JOINTS. THIS CAN LEAD TO SHIFTING SLABS AND RESULT IN FAILURE.
- IS THE UNDERSIDE OF MY CAP BREAKING OFF AND EXPOSING THE REBAR?

 USUALLY THIS RESULTS FROM HAVING CRACKS WITHIN THE CAP WHERE SALTWATER COMES IN CONTACT WITH

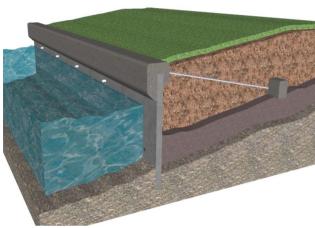
 THE REBAR CAUSING IT TO EXPAND AND CORRODE, FORCING SECTIONS OF YOUR CAP TO BREAK OFF AND

 ULTIMATELY WEAKENING THE SURROUNDING AREA.

MOST COMMON SEAWALL REPAIR OPTIONS

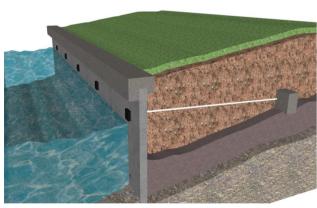
THERE ARE MANY OPTIONS AND CONSIDERATIONS TO MAKE, AND A NEW SEAWALL MAY NOT ALWAYS FIT WITHIN YOUR BUDGET. AT GULF COAST MARINE, WE UNDERSTAND THIS, AND OUR QUALIFIED CONSULTING ESTIMATORS AND DESIGNERS WILL HELP YOU TO DECIDE WHAT OPTIONS WILL BEST SUIT YOUR PROPERTY BASED ON THE CURRENT CONDITION OF YOUR SEAWALL. SHOWN BELOW ARE ILLUSTRATIONS OF THE BASIC REPAIRS THAT WE ENGINEER TO PROLONG THE LIFE OF YOUR SEAWALL. PLEASE NOTE THAT SOME OF THE REPAIRS SHOWN BELOW MAY NOT ALWAYS BE THE BEST OPTION GIVEN THE CONDITION OF YOUR SEAWALL, AND A RECCOMENDATION FOR A NEW SEAWALL MAY BE NECESSARY IF THE SEAWALL IS IN SUCH A STATE OF DISREPAIR

NEW CAP AND ANCHOR SYSTEM



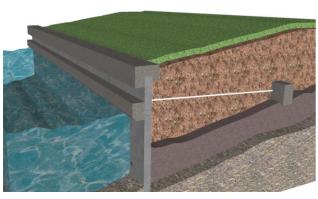
WHEN THE CONCRETE SLABS ARE IN GOOD CONDITION, WITH LITTLE OR NO CRACKS OR SPACING BETWEEN THE JOINTS, A NEW CAP AND ANCHOR SYSTEM WILL BE INSTALLED, AND IN SOME CASES, DRAIN PIPES TO HELP RELIEVE PRESSURE. THIS METHOD OF REPAIR IS THE MOST COMMON BEHIND THAT OF A NEW SEAWALL AND CAN TYPICALLY ADD ABOUT 10+YEARS IF THE SLABS ARE IN GOOD CONDITION.

NEW SECONDARY ANCHOR SYSTEM



A SECONDARY ANCHOR SYSTEM CAN BE USED IF BOTH THE CAP AND THE CONCRETE SLABS ARE IN GOOD CONDITION. ONCE INSTALLED, THE ANCHOR PLATES ARE COATED WITH COAL TAR EPOXY TO HELP PREVENT MARINE CONTAMINENTS AND SALT WATER CORROSION. GIVEN THE SLAPS AND CAP ARE IN GOOD CONDITION, THIS CAN ADD UP TO 10 YEARS IF ANCHOR PLATES ARE RECOATED PERIODICALLY.

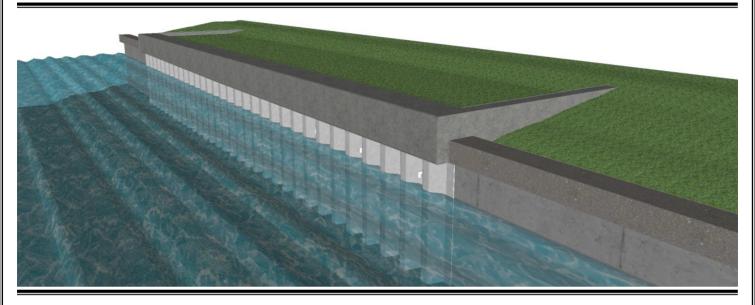
NEW BEAM AND ANCHOR SYSTEM



RATHER THAN SUPPORTING EACH CONCRETE SLAB INDIVIDUALLY, A POURED-IN-PLACE STEEL REIFORCED BEAM SUPPORTS THE ENTIRE STRUCTURE AND HELPS PREVENT FURTHER SHIFTING. THIS SYSTEM IS ONLY RECCOMENDED IF THE SECONDARY ANCHOR STYSTEM IS NOT SUITABLE AND ONLY MINOR SHIFTING HAS OCCURRED.

NEW VINYL SEAWALL

THE MOST COST EFFECTIVE DECISION IN REPAIRING A FAILING SEAWALL IS TO HAVE A NEW SEAWALL INSTALLED DIRECTLY IN FRONT OF THE EXISTING SEAWALL. NEW SEAWALLS TYPICALLY HAVE A LIFESPAN OF 50+ YEARS, AND DRASTICALLY IMPROVE YOUR PROPERTY, BOTH IN VALUE AND IN PROTECTION.

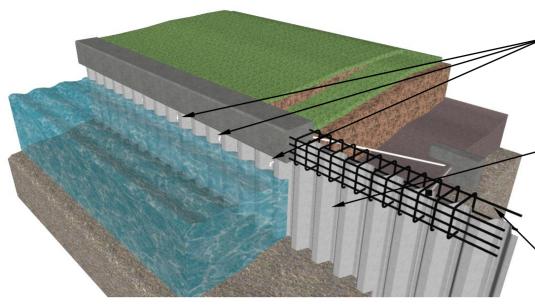


WHAT COMES WITH A NEW SEAWALL

DEPENDING ON THE CONDITIONS OF YOUR PROPERTY, THERE ARE SEVERAL WAYS THAT A SEAWALL MAY BE ENGINEERED DEPENDING ON THE MATERIAL USED WHETHER IT BE VINYL, ALUMINUM, OR CONCRETE. BECAUSE OF OUR SUCCESS WITH VINYL, WE RECOMMEND IT OVER MOST OTHER MATERIALS DUE TO TESTED DURABILITY, STRENGTH, AND IT'S ABILITY TO RESIST CORROSION AND LOWER BARNACLE GROWTH.

- NEW SEAWALLS COME WITH A GCMC 10 YEAR STRUCTURAL WARRANTY, AS WELL AS A 50 YEAR MANUFACTURERS WARRANTY FOR THE VINYL PRODUCT ITSELF.
- THE NEW SEAWALL IS INSTALLED WITHIN ONE FOOT OF THE EXISTING SEAWALL, AND TYPICALLY PENETRATES THE BERM 50+/- PERCENT.
- THE VOID BETWEEN THE NEW SHEET PILES AND THE EXISTING CONCRETE SEAWALL IS FILLED WITH CONCRETE, CREATING A SOLID STRUCTURE BETWEEN THE TWO.
- A NEW ANCHOR SYSTEM CONSIDTING OF 48" X 24" X 12" THICK OF STEEL REINFORCED CONCRETE ANCHORS TIED TO THE NEW SEAWALL AND CAP USING 16' TIE RODS, EPOXY COATED AND ENCASED IN PVC PIPE.
- A NEW STEEL REINFORCED CAP. IN MOST CASES, THE CAP IS OFTEN RAISED TO LEVEL THE TERRAIN BEHIND THE SEAWALL, AND RETURNS ARE CONSTRUCTED AT EACH
- PROPERTY LINE, IF NECESSARY.
- DRAIN PIPES ARE INSTALLED EVERY 6' TO RELIEVE HYDROSTATIC WATER PRESSURE BUILD UP BEHIND THE SEAWALL.

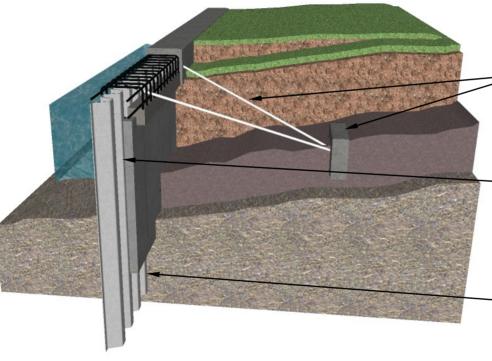
ANATOMY OF A NEW VINYL SEAWALL



DRAINS ALLOW HYDROSTATIC WATER PRESSURE BEHIND THE SEAWALL TO BE RELIEVED, LESSENING THE AMOUNT OF STRESS PLACED ON THE WALL

DEEP CORRUGATIONS ABSORB AND BREAK ROUGH WATERS THAT BEAT AGINANST THE SEA-WALL, AS WELL AS PROVIDING A SOLID. INPENETRABLE SURFACE

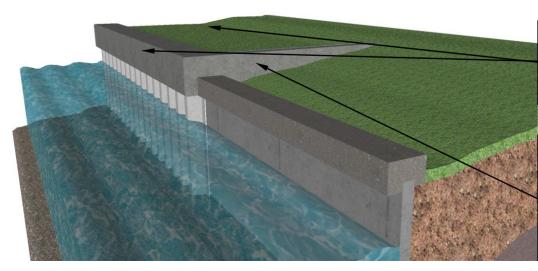
STEEL REINFORCED CAP PROVIDES A SOLID CAGE THAT PENETRATES THE VINYL SHEET PILES



NEW ANCHOR SYSTEM WITH DOUBLE TIE RODS, EPOXY COATED AND ENCASED IN PVC PIPE, PROTECT AGAINST SALTWATER CONTAMINANTS THAT CAUSE CORROSION

THE VOID BETWEEN THE EXIST-ING CONCRETE SEAWALL AND THE NEW VINYL SHEET PILES IS FILLED WITH CONCRETE

50+/- % PENETRATION INTO THE BERM INSURES LASTING PROTECTION, STRENGTH, AND SECURITY AGAINST SHIFTING AND MOVEMENT OF THE SHEET PILES



ON AVERAGE, MOST CAPS ARE RAISED AND DIRT IS BROUGHT IN TO GIVE THE EXISTING SLOPING TERRAIN A MUCH MORE LEVELED SURFACE

BECAUSE OF THE NEW LEVEL OF TERRAIN, SOMETIMES A RETURN IS CONSTRUCTED TO RETAIN DIRT FROM WASHING AWAY INTO THE NEIGHBORS YARD. IT IS NOT REQUIRED IF THE LEVEL IS TO STAY THE SAME THOUGH.

ABOUT US

ESTABLISHED IN 1970 AND INCORPORATED IN 1977, GULF COAST MARINE CONSTRUCTION, INC. IS A DESIGN/BUILD RESIDENTIAL AND COMMERCIAL SEAWALL CONTRACTING FIRM THAT OFFERS A WIDE RANGE OF SEAWALL ENGINEERING AND SEAWALL CONSTRUCTION SERVICES THAT ARE BOTH HIGHLY VISIBLE AND "UNSEEN."

OUR HISTORY

SINCE THE 1940s, OUR REPUTATION IN BUILDING SEAWALLS HAS BEEN AT THE FOREFRONT OF THE INDUSTRY IN PINELLAS COUNTY. IT WASN'T UNTIL 1977 THAT GULF COAST MARINE CONSTRUCTION WAS INCORPORATED, MAKING IT PART OF A SECOND GENERATION MARINE CONTRACTOR. OVER THIRTY YEARS LATER AND STILL IN THE FAMILY, GCMC IS NOW A FOURTH GENERATION FAMILY MARINE CONTRACTING FIRM SPECIALIZING IN THE CONSTRUCTION OF SEAWALLS. WE CONSIDER EVERY PROJECT AS AN OPPORTUNITY TO REINFORCE OUR EXCELLENT REPUTATION FOR THOROUGH PLANNING, ACCURATE BUDGETS, AND AN OUTSTANDING SAFETY RECORD.

OUR GOAL

OUR GOAL AT GCMC IS TO PERFORM TO THE HIGHEST LEVEL OF QUALITY AND CUSTOMER SATISFACTION. GCMC SPECIALIZES IN DESIGNING, ENGINEERING, AND INSTALLING MARINE CONSTRUCTION PROJECTS IN TODAY'S CONFINED COMMUNITIES, ADHERING TO STRICT LOCAL, STATE, AND FEDERAL CODES WHILE MAXIMIZING AESTHETIC QUALITY TO ENHANCE THE OWNERS PROPERTY VALUE AND RETURN ON THEIR INVESTMENT.



CONTACT

IF YOU HAVE ANY QUESTIONS ABOUT YOUR SEAWALL, PLEASE FEEL FREE TO CONTACT OUR OFFICE AT (727) 531-3030 OR FAX US AT (727) 531-3913.

WE WILL BE HAPPY TO CONSULT WITH YOU IN PLANNING YOUR NEXT STEP

GULF COAST MARINE CONSTRUCTION, INC. 13185 FAXTON STREET CLEARWATER, FL 33760

WWW.SEAWALLGUY.COM

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