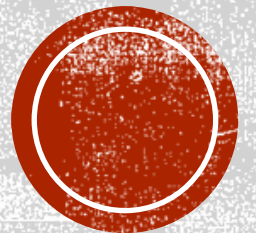


BREAKWATERS & JETTIES: A CONTRACTOR'S PERSPECTIVE

Mike Ellis

CMANC Spring Meeting

May 19, 2022





CONNOLLY-PACIFIC CO.

Mainland Office: Long Beach, CA.

Pebbly Beach Quarry, Santa Catalina Island, CA.





- Connolly-Pacific Co. (CPC) is a vertically integrated rock quarrying and marine construction company.
- Tom Connolly starts T.E Connolly Co. in 1920, with Calif. Contractors Lic. No.220.
- In 1934, Rohl-Connolly (Joint Venture) was the low bidder for the Federal Breakwater in Los Angeles Harbor for the US Army Corps of Engineers....which started Connolly's relationship with Santa Catalina Island and the Pebbly Beach Quarry.



PEBBLY BEACH QUARRY



EMPIRE QUARRY





WHEN DOES THE CONTRACTOR GET INVOLVED?

- Emergency Repair Contracts
- Maintenance Repair Contracts
- New Construction Contracts

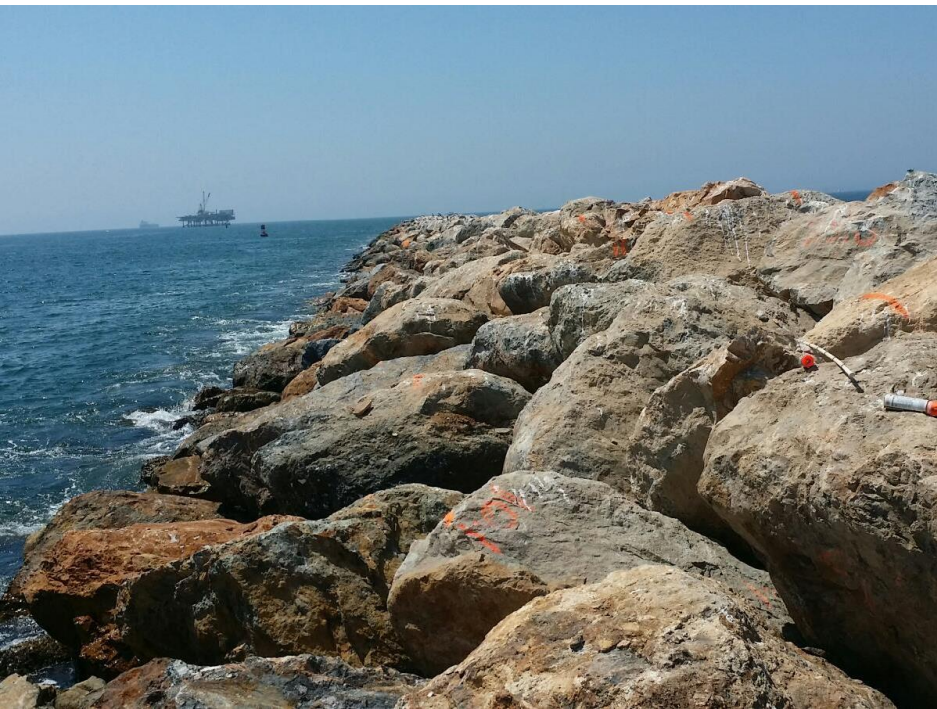


EMERGENCY REPAIRS



- Limited survey information (\$\$)
- Limited time to “make” (quarry) the required stone / gradation (\$\$\$)
- Many times, work required to be conducted during adverse weather (\$\$\$)
- Potentially more onsite standby time (\$\$\$)
- Can have a higher safety exposure
- High risk of not having the right equipment, material and / or personnel available

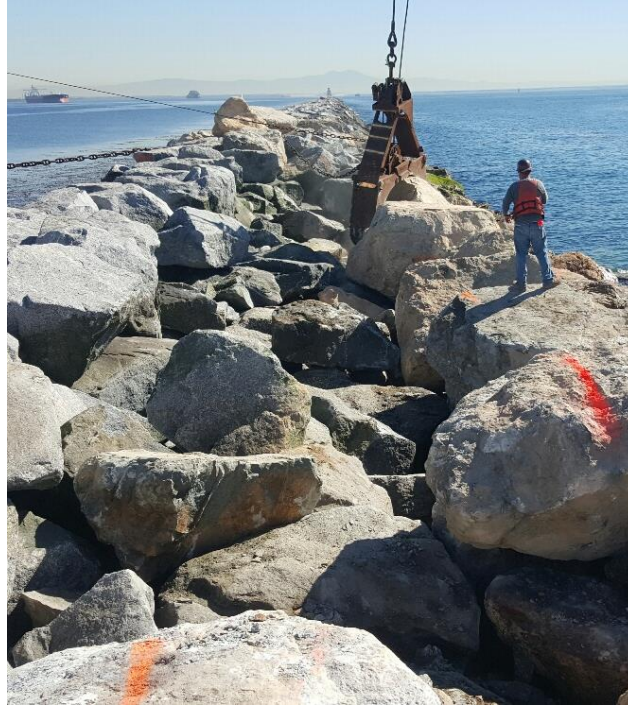




MAINTENANCE REPAIRS / NEW WORK

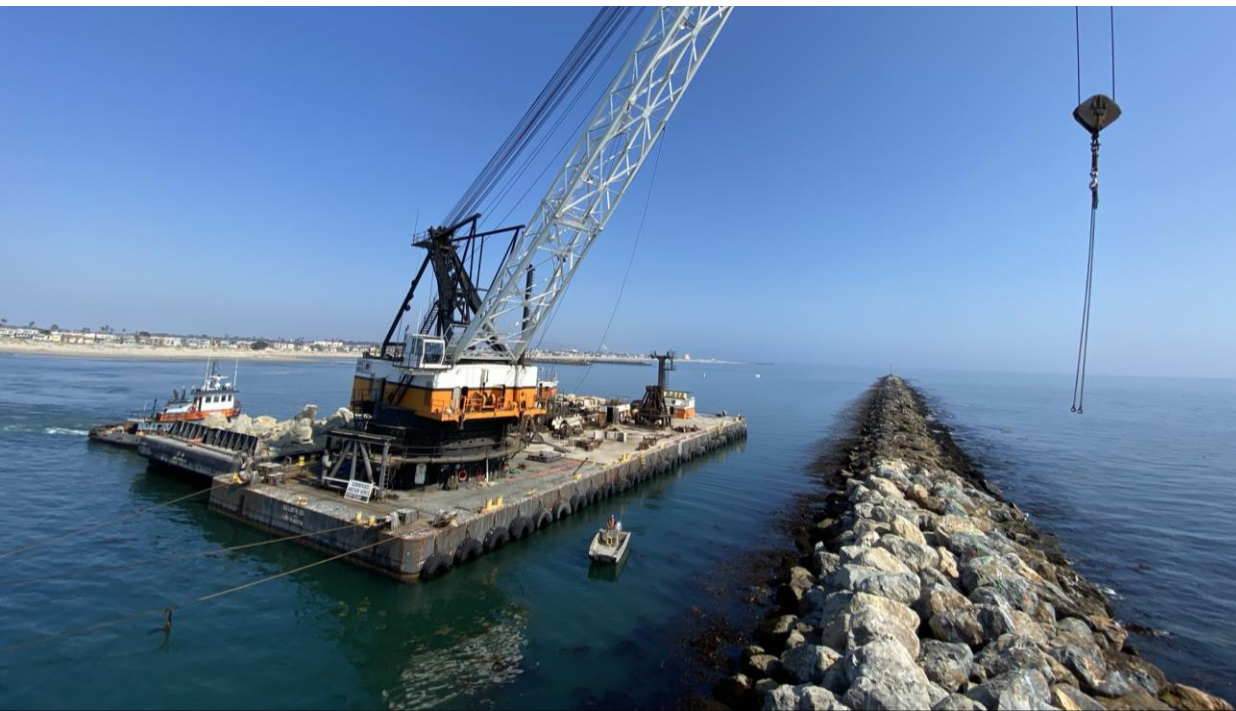
- Up to date survey information should be available (\$)
- More time to “make” the armor stone (\$\$)
- Work usually performed during good weather conditions (\$)
- Reduces safety exposure to the workforce
- Lower risk of not having the equipment / personnel available

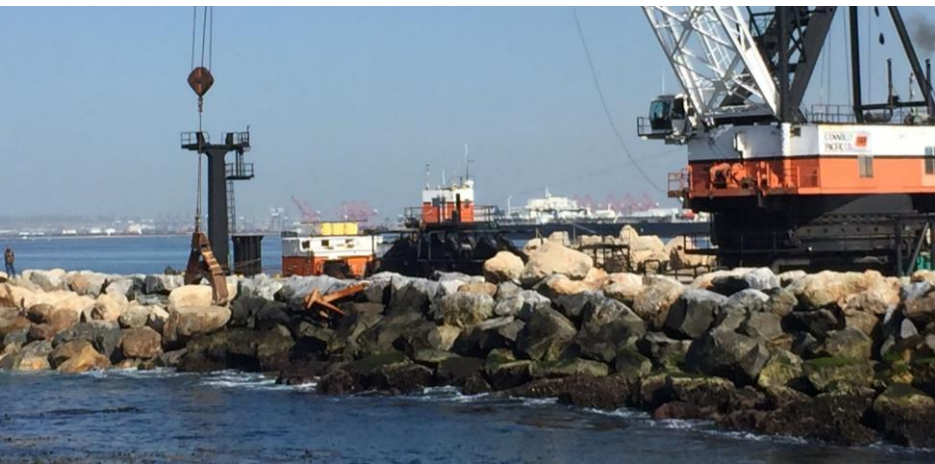




WHAT DRIVES THE COST & SCHEDULE?

- Mobilization / Demobilization Effort
- Stone source location & transportation to project site
- Size & Gradation of the stone
- Physical features at the project site such as:
 - Reach from the crane to the placement location
 - Water depth where the floating equipment must be positioned
 - Wave and Wind exposure
- Project Schedule requirements
 - Onsite
 - Quarry site (Time to produce the stone)





WHERE IS THE DAMAGE?

- Head section
- Seaward side
- Top / Crest
- Leeward side (harbor side)





HOW TO REPAIR?

- Reset Existing Stone
- Add New Rock
- Salvage Stone





DAMAGE AT WATERLINE

- Not always visible
- 0.0 FT MLLW line
- Use tidal differential to rebuild properly




THE X-FACTOR



- **Local Sponsor's Support**
 - Harbor Department Staff
 - Harbor Patrol
 - Keeping the Public Informed
 - Sharing Local Knowledge
 - Participating in Progress Meeting with the Right Personnel Attending
 - Actively Assisting in Local Public Safety Concerns





FINAL THOUGHTS... FROM A CONTRACTOR...

- No Bad News on Friday...

Chuck Cowan (Charles Cowan & Associates)

- “The Project is the Champion”

Mike Gough (NAVFAC-SW)





THANK YOU

