614 Magnolia Avenue
Ocean Springs, Mississippi 39564
228.818.9626

ANCHOR QEA

Memorandum

May 12, 2020

To: Gary Baumgarten, U.S. Environmental Protection Agency

From: Wendell Mears, David Keith, John Laplante, Rick Coupe, and Christian Patterson, Anchor QEA

cc: Judy Armour, McGinnes Industrial Maintenance Corporation
Phil Slowiak, International Paper Company

Re: San Jacinto River Waste Pits TCRA Armored Cap
Post-Tropical Storm Imelda Channel Maintenance Completion Report

Introduction

This document provides a summary of inspection and maintenance activities completed in an area within the San Jacinto River channel (Channel Maintenance Area), adjacent to the Armored Cap installed as part of the Time Critical Removal Action (TCRA) at the San Jacinto River Waste Pits Superfund Site (TCRA Site). The TCRA was implemented by International Paper Company and McGinnes Industrial Maintenance Corporation (collectively, the Respondents) under an Administrative Settlement Agreement and Order on Consent (AOC) with the U.S. Environmental Protection Agency (USEPA) – Docket No. 06-12-10, effective May 17, 2010 (USEPA 2010).

The inspection and maintenance activities described in this report took place pursuant to a USEPA-approved Work Plan (Work Plan; Anchor QEA 2020, Attachment 1) that was developed at the request of USEPA following Tropical Storm Imelda's landfall on the Texas coast.

Background

On September 24 and 25, 2019, following Tropical Storm Imelda's landfall on the Texas coast, Anchor QEA, LLC, conducted probing and surveying of the Armored Cap and adjacent areas in accordance with the TCRA Operations, Monitoring, and Maintenance Plan (OMM Plan; Anchor QEA 2011).[1] Probing showed the Armored Cap to be intact along its perimeter. A topographic and bathymetric survey was performed between September 23 and October 17, 2019, which showed that elevations in the Channel Maintenance Area, an area of the main channel of the San Jacinto River

[1] The OMM Plan was attached to the Draft Final Removal Action Completion Report, submitted to USEPA on November 22, 2011, and authorization to implement the OMM Plan was contained in an email from USEPA dated January 18, 2012. The OMM Plan was also attached as an appendix to the Revised Draft Final Removal Action Completion Report submitted to USEPA on March 9, 2012. An addendum to the OMM plan, dated December 3, 2015, was developed at the request of USEPA to outline procedures and actions that will take place should a barge, or other vessel, strike and/or become grounded on the Armored Cap. A second addendum to the OMM Plan, dated February 29, 2016, was developed to describe the addition of security cameras, their monitoring, and notifications, and it was approved by USEPA on March 31, 2016. A third addendum, dated August 13, 2019, was developed to provide methods and procedures for conducting future monitoring of the Armored Cap taking into consideration the extensive changes the cap has undergone since initial construction of the TCRA was completed in July 2011. This third addendum is currently under review by USEPA.

adjacent to but outside of the footprint of the Armored Cap, were below the elevations measured during the July 2019 armored cap quarterly inspection survey. USEPA was present during visual inspections on September 23, 2020. USEPA was not present at the TCRA Site to observe probing or surveying of the Armored Cap.

Correspondence to USEPA from the Respondents, dated October 4, 2019, summarizes results of probing and surveying of the Channel Maintenance Area. The Respondents' TCRA Monthly Report No. 093 submitted to USEPA on October 15, 2019, summarizes the work performed between September 16, 2020, and October 15, 2020, including the post-Imelda probing. The Respondents' Post-TCRA Quarterly and Post-Imelda Inspection Report submitted to USEPA on November 26, 2020, provides further detail on the inspections and surveys performed on the TCRA Site for the September and October 2019 period, including survey comparisons that were used to identify the Channel Maintenance Area.

At the request of USEPA, the Respondents prepared and submitted the Work Plan on November 26, 2019, describing maintenance actions that would be taken to address conditions in the Channel Maintenance Area. In response to USEPA comments received on January 15, 2020, the Respondents prepared and submitted the revised Work Plan on February 27, 2020, incorporating modifications to the original submittal. On March 18, 2020, USEPA approved the revised Work Plan. Attachments 1 through 7 of the Work Plan contain the September 23 to October 17, 2019 survey results, associated cross sections, and the proposed geotextile panel layout. The Respondents' Contractor, USA Environment, LP (Contractor) and subcontractor, Crawley Shoreline Construction, Inc., mobilized to the TCRA Site on Monday, March 23, 2020, to begin maintenance activities. The Contractor and Crawley completed those activities on April 9, 2020.

Channel maintenance daily construction reports, including photographs, are provided as Attachment 2 of this Memorandum. The following provides a summary of those activities described in the reports.

Channel Maintenance Activities

Channel Maintenance Pre-Mobilization and Mobilization Activities: Monday, March 23 and Tuesday, March 24, 2020

Representatives of Anchor QEA, the Contractor, and its subcontractor were present at the TCRA Site on March 23 and 24, 2020, for pre-mobilization and construction mobilization activities. (See the daily reports for a complete list of personnel.) Channel maintenance pre-mobilization activities included reviewing the Contractor's Health and Safety Plan (HASP), the Site Access Plan and Work Plan, and insurance certificates; ordering materials and equipment; and notifying USEPA of the construction schedule.

Mobilization of construction equipment and material for use in the Channel Maintenance Area occurred between March 23 and 24, 2020, including the following:

- On March 23, 2020, a deck barge with an excavator, two spud barges, two skiffs, a long reach excavator, and a front-end loader were delivered to the TCRA Site.
- On March 24, 2020, a load of 1,500 square yards of geotextile was delivered and stockpiled at the San Jacinto River Fleet property under an agreement between the Contractor and the property owner.
- Approximately 735 tons of armor rock was delivered via truck on March 23 and 24, 2020. Armor rock was stored at the San Jacinto River Fleet property under an agreement between the Contractor and the property owner and then placed onto spud barges for transport and placement in the Channel Maintenance Area.

Channel Maintenance Activities: Wednesday, March 25 to Thursday, April 9, 2020

On March 25, 2020, the Contractor began pre-construction surveys and visually staking the perimeter of the Channel Maintenance Area to identify the locations referred to as Placement Areas in the Work Plan. The Contractor began loading armor rock onto barges with a long reach excavator and a front-end loader. The Contractor also began placing armor rock at Placement Area 1 of the Channel Maintenance Area (see Figure 1 of Attachment 1 for the location of Placement Areas), working east, and finished placing armor rock at Placement Area 1 on March 26, 2020.

The Contractor then began placing geotextile and armor rock at Placement Area 2 on March 26, 2020, working southeast. The geotextile panels used were 12.5 feet wide and were placed from the top to the bottom of the slope, perpendicular to the slope contours, and overlapped 3 feet. To keep them in place, the geotextile panels were anchored with armor rock at the top and toe of the slope. After placing the geotextile panels, the Contractor covered the panels with armor rock in accordance with design grades and slopes. Quality control surveys were conducted throughout the work to ensure geotextile and rock placement in each Placement Area met the requirements of the Work Plan. The procedures described for geotextile and armor rock placement were followed for both Placement Areas 2 and 3. Placement Area 1 did not require geotextile as described in the Work Plan.

The Contractor continued placing geotextile and armor rock at Placement Area 2 on March 27, 2020.

On March 30, 2020, the Contractor finished placing geotextile and armor rock at Placement Area 2 and began placing geotextile and armor rock at Placement Area 3 on the same date.

On March 31, 2020, Anchor QEA and the Contractor demobilized due to high winds and tide, then remobilized on April 1, 2020. The Contractor resumed placing armor rock in Placement Area 3.

On April 3, 2020, the Contractor finished placing geotextile and armor rock at Placement Area 3.

On April 6, 2020, the Contractor began rock placement corrections in Placement Areas based on quality control survey results.

On April 7, 2020, the Contractor continued rock placement corrections in Placement Areas.

On April 8, 2020, Anchor QEA and the Contractor did not perform work at the TCRA Site to allow for coordination between the Contractor and crews performing a quality control survey. Work to place additional rock resumed on Thursday, April 9, 2020. An additional 72 tons of armor rock were delivered and placed in areas identified by the quality control survey as requiring additional rock to meet the Work Plan design criteria.

Placement of armor rock was completed on Thursday, April 9, 2020. A total of 1,500 square yards of geotextile and 807 tons of armor rock were placed in the three Channel Maintenance Placement Areas.

A final bathymetric survey was conducted on April 9, 2020. Survey results were delivered to Anchor QEA and reviewed to confirm the requirements in the Work Plan had been met. Cross sections showing these survey results are provided in Attachment 3. Each cross section depicts the pre- and post-construction topographic survey data and includes a line depicting the minimum required rock thickness for reference purposes. Following review of the survey results, the Contractor began preparing equipment for demobilization.

Demobilization Activities: Thursday, April 9, 2020

All materials and equipment used in performing the channel maintenance were demobilized from the TCRA Site on Thursday, April 9, 2020.

References

Anchor QEA (Anchor QEA, LLC), 2011. *Removal Action Work Plan, San Jacinto River Waste Pits Superfund Site*. Prepared for U.S. Environmental Protection Agency (USEPA) Region 6 on behalf of McGinnes Industrial Maintenance Corporation and International Paper Company. February 2011.

Anchor QEA, 2011. *Operations, Monitoring, and Maintenance Plan, Time Critical Removal Action, San Jacinto River Waste Pits Superfund Site*. Prepared for USEPA Region 6 on behalf of McGinnes Industrial Maintenance Corporation and International Paper Company. October 2011.

Anchor QEA, 2012. *Revised Draft Final Removal Action Completion Report, San Jacinto River Waste Pits Superfund Site*. Prepared for USEPA Region 6, McGinnes Industrial Maintenance Corporation, and International Paper Company. Revised March 2012.

Anchor QEA, 2019. *San Jacinto River Waste Pits Superfund Site TCRA Monthly Report No. 093 September 2019/October 2019*. Prepared for USEPA Region 6 on behalf of McGinnes Industrial Maintenance Corporation and International Paper Company pursuant to the Administrative Settlement Agreement and Order on Consent for Removal Action: CERCLA Docket No. 06-12-10, Channelview, Texas, effective May 17, 2010. October 15, 2019.

Anchor QEA, 2019. *Post-TCRA Quarterly and Post-Imelda Inspection Report – September and October 2019*. Prepared for USEPA Region 6 on behalf of McGinnes Industrial Maintenance Corporation and International Paper Company pursuant to the Administrative Settlement Agreement and Order on Consent for Removal Action: CERCLA Docket No. 06-12-10, Channelview, Texas, effective May 17, 2010. November 26, 2019.

Anchor QEA, 2020. *Revised Plan for Post-Tropical Storm Imelda Armor Rock Placement Adjacent to the Time Critical Removal Action Armored Cap, San Jacinto River Waste Pits Superfund Site*. Prepared for USEPA Region 6 on behalf of McGinnes Industrial Maintenance Corporation and International Paper Company. Revised February 2020.

USEPA, 2010. *Administrative Settlement Agreement and Order on Consent for Removal Action*. U.S. Environmental Protection Agency Region 6 CERCLA Docket No. 06-03-10. In the matter of: San Jacinto River Waste Pits Superfund Site Pasadena, Harris County, Texas. International Paper Company and McGinnes Industrial Management Corporation, Respondents.

Attachments

Attachment 1 Respondents' February 27 Work Plan
Attachment 2 Respondents' (Anchor QEA) Channel Maintenance - Daily Construction Reports
Attachment 3 Post-Construction Survey Results

Attachment 1
Respondents' February 27 Work Plan

614 Magnolia Avenue
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ANCHOR QEA

February 27, 2020

Gary Baumgarten
Remedial Project Manager
U.S. Environmental Protection Agency, Region 6
Superfund Division (6SF-RA)
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Re: Revised Plan for Post-Tropical Storm Imelda Armor Rock Placement Adjacent to the Time Critical Removal Action Armored Cap, San Jacinto River Waste Pits Superfund Site, Channelview, Texas

Dear Gary,

This plan is submitted in response to a request by the U.S. Environmental Protection Agency (USEPA) that McGinnes Industrial Maintenance Corporation (MIMC) and International Paper Company (IP) perform work in certain areas adjacent to the Time Critical Removal Action (TCRA) armored cap (Armored Cap) at the San Jacinto River Waste Pits Superfund Site (TCRA Site), and it incorporates modifications to our November 26, 2019, submittal in response to USEPA comments received on January 15, 2020.

Following Tropical Storm Imelda's landfall on the Texas coast on September 17, 2019, heavy rains and flooding occurred throughout southeastern Texas. On Friday, September 20, nine barges broke loose from their moorings in the San Jacinto River upstream of the San Jacinto River Waste Pits. One of these barges became grounded on the Armored Cap over the eastern cell of the TCRA Site. The grounded barge was lightened of its load and removed from the Armored Cap on Monday, September 23, 2019, under the incident command and supervision of the U.S. Coast Guard. Representatives from USEPA, MIMC, and IP were on site to coordinate with U.S. Coast Guard during the planning for and removal of the barge.

Following the events of Tropical Storm Imelda, Anchor QEA, LLC, performed a survey of the Armored Cap as required by, and in accordance with the TCRA Operations, Monitoring, and Maintenance Plan (OMM Plan)[1].

[1] The OMM Plan was attached to the Draft Final Removal Action Completion Report, submitted to USEPA on November 22, 2011, and authorization to implement the OMM Plan was contained in an email from USEPA dated January 18, 2012. The OMM Plan was also attached as an appendix to the Revised Draft Final Removal Action Completion Report submitted to USEPA on March 9, 2012. An addendum to the OMM plan, dated December 3, 2015, was developed at the request of USEPA to outline procedures and actions that will take place should a barge, or other vessel, strike and/or become grounded on the Armored Cap. A second addendum to the OMM Plan, dated February 29, 2016, was developed to describe the addition of security cameras, their monitoring, and notifications, and it was approved by USEPA on March 31, 2016. A third addendum, dated August 13, 2019, was developed to provide methods and procedures for conducting future monitoring of the Armored Cap taking into consideration the extensive changes the cap has undergone since initial construction of the TCRA was completed in July 2011. This third addendum is currently under review by USEPA.

The post-storm bathymetric survey revealed two areas (Channel Areas) outside the footprint of the Armored Cap, in the river channel adjacent to the Armored Cap where riverbed elevations had decreased, relative to the July 2019 quarterly inspection survey (Figure 1). The Channel Areas are located in the vicinity of where the barge was grounded.

Review of the post-storm bathymetry at the interface between the Channel Areas and the Armored Cap suggested that some of the rock from the Armored Cap thickened edge may have "launched" during Tropical Storm Imelda, consistent with the approved design[2] of the thickened edge, and rolled into the depression at the edge of the Channel Areas. The OMM Plan does not require probing beyond the footprint of the Armored Cap, but MIMC and IP elected to manually probe the edges of the Channel Areas on September 25 and September 26, 2019, to evaluate whether armor rock from the thickened edge had launched. This probing confirmed the presence of armor rock both on the Armored Cap and at the edge of the Channel Areas, indicating that the self-protective launching mechanism had occurred as intended by the design of the thickened edge. Based on the probing, there was no indication that any release of waste material from beneath the Armored Cap had occurred associated with the decrease in riverbed elevations in the two Channel Areas adjacent to the Armored Cap.

As discussed during conference calls between USEPA, MIMC, and IP on October 2, 2019 and February 4, 2020, to address conditions at and near the interface between the Armored Cap and Channel Areas, the maintenance work outlined in the following section is proposed.

Proposed Maintenance

The proposed work involves placing additional rock in the three areas shown on Figures 1 through 3 (Placement Areas) to further protect the edge of the Armored Cap by providing additional slope stabilization and scour protection at those locations. Placement Areas 2 and 3, located along the southern edges of the two Channel Areas, were the areas originally proposed for maintenance in the November 26, 2019 submittal of this plan. Placement Area 1 is a new area incorporated into this revised plan in response to a request by USEPA. Final Removal Action Work Plan (Anchor QEA 2011) Type D[3] rock will be placed within the Placement Areas to provide slope stabilization and scour protection.

Cross sections depicting the pre-Tropical Storm Imelda and post-Tropical Storm Imelda bathymetry profiles, as well as the proposed armor rock placement, are provided on Figures 2, 4, 5, 6, and 7. In Placement Areas 2 and 3, a nonwoven geotextile will be placed prior to placement of the rock. The geotextile panels will be placed down the slope, perpendicular to the slope contours, and overlapped at least 3 feet, as shown on Figure 3. To keep the geotextile in place, the panels will be temporarily anchored at the top of the slope with sandbags, geotextile pins, rebar, or Type D rock. The geotextile

[2] Armor rock "launching" is a method of protecting the edge of armoring. When launching occurs, the extra thickness of rock placed at the edge of armoring moves, while the original armor rock thickness remains in the launch area. USACE (2014) provides more information regarding the design of this type of protective feature.

[3] Type D rock is crushed natural stone with D_{50} equaling 8 inches.

will be deployed down the slope and temporarily pinned at the toe of the slope with sandbags or Type D rock. Once the Type D rock has been placed on top of the geotextile, it will be anchored by the weight of the rock. The deep water in Placement Area 1 would make anchoring the geotextile difficult. Any unanchored geotextile in this area would be subject to currents that could tug on the geotextile, causing armor rock movement. To mitigate this potential issue, the nonwoven geotextile will not be used beneath the armor rock in Placement Area 1. An estimated 720 tons of rock will be placed within the three Placement Areas, in the approximate configurations shown on Figures 2, 4, 5, 6, and 7.

The maintenance may be performed using either a water-based or a land-based approach. If a water-based maintenance approach is used, Type D rock for this proposed work will be barge-loaded at a location near the TCRA Site. After loading, the barge will be transported to the Placement Areas. The rock will then be placed in the Placement Areas by a barge-mounted long-reach excavator, after placement of the nonwoven geotextile fabric (where applicable).

Alternately, the maintenance contractor may use a land-based maintenance approach if water levels and site access allow such an approach. If a land-based approach is used, the contractor would use protective matting to protect the surface of the Armored Cap for any areas to be traversed by land-based equipment. Type D rock would be delivered and installed by land using low ground pressure or marsh buggy mounted long-reach excavators.

Quality Control Procedures

Quality control measures will consist of rock tonnage calculations and bathymetric surveying to demonstrate that target rock placement quantity and configuration are achieved. The tonnage of rock placed over the Placement Areas will be calculated using the number of truckloads of rock hauled to the barge loading location and loaded barge displacement. Bathymetric surveying will be used to confirm relatively even rock placement and conformity with the approximate grades and slopes shown on the attached figures.

A hydrographic survey will be used to document the as-built condition of the work. A report documenting the work will be submitted to USEPA following completion of the as-built survey.

Schedule

MIMC and IP are coordinating with a marine contractor to establish the schedule for implementation of the work. The following is the estimated implementation schedule, based on key milestones:

- Start of mobilization (which includes ordering materials for transport to the work site): Due to fluctuations in the availability of marine-based equipment in the Houston area at this time, the timeframe for mobilization is uncertain. Upon USEPA approval of this plan, we will coordinate with the maintenance contractor to initiate work as soon as practicable and will keep USEPA informed of the schedule for mobilization.

- Completion of geotextile and rock placement: within 24 calendar days of the start of marine construction, assuming no significant weather delays and available tides and flow conditions that are compatible with the work described above
- Completion of final as-built survey: within 14 calendar days of the completion of geotextile and armor rock placement, assuming no significant weather delays and available tides and flow conditions that are compatible with the survey work
- Report submittal to USEPA: within 30 calendar days of completion of the final as-built survey

Please let us know if you have any questions about the proposed activities, and do not hesitate to contact me if you would like to discuss anything.

Sincerely,

David C. Keith, Ph.D., PG, C. HG
Project Coordinator

John Laplante, PE
Engineer of Record

cc: Judy Armour, McGinnes Industrial Maintenance Corporation
Phil Slowiak, International Paper Company
John Verduin, PE, Anchor QEA, LLC
Wendell Mears, Anchor QEA, LLC

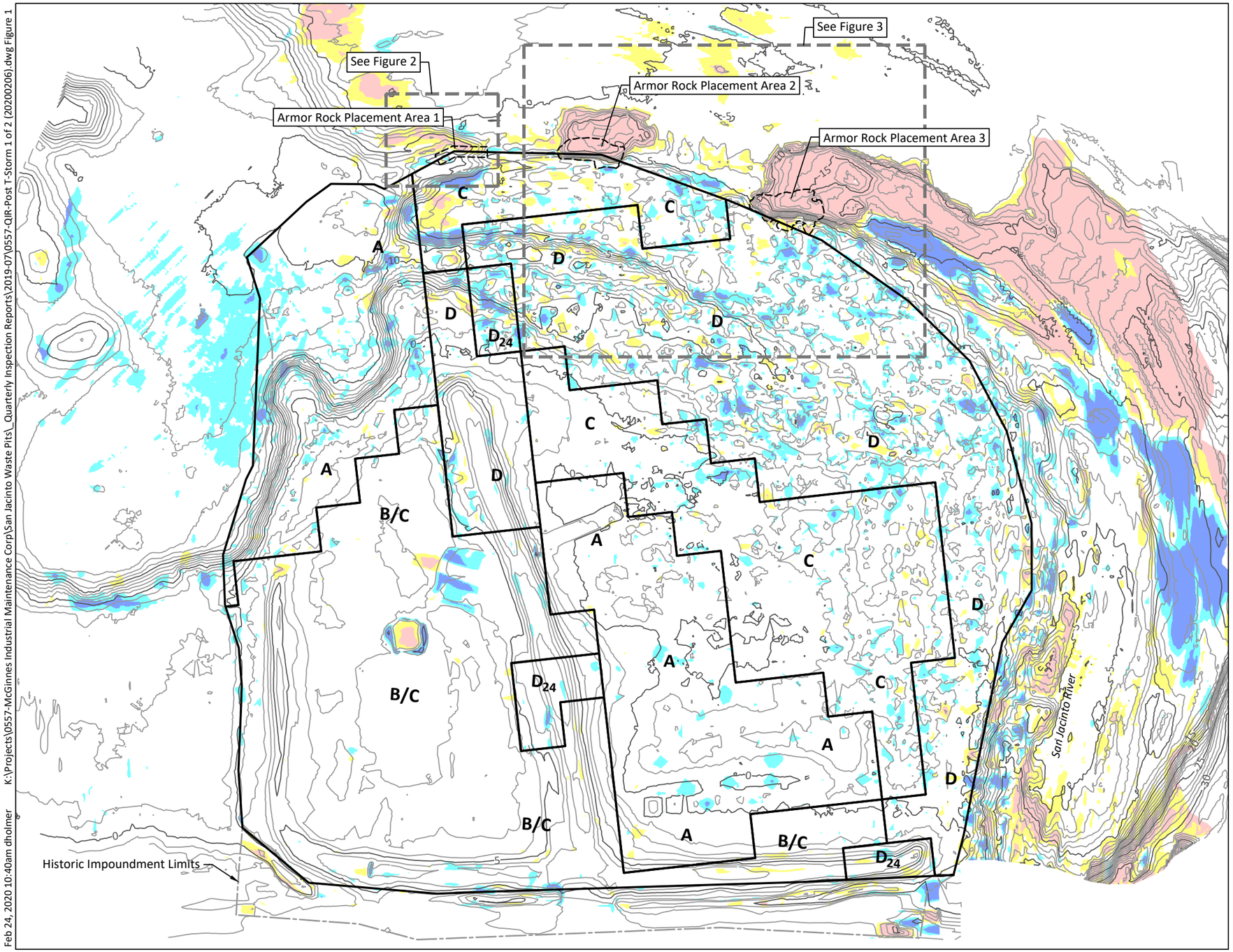
References

Anchor QEA, 2011. *Final Removal Action Work Plan, San Jacinto River Waste Pits Superfund Site*. Appendix C, Technical Specifications. Prepared for USEPA Region 6 on behalf of McGinnes Industrial Maintenance Corporation and International Paper Company. January 2011.

USACE 2014. *Hydraulic Design of Flood Channels*. U.S. Army Corps of Engineers Engineer Manual EM 1110-2-1601. June 30, 1994.

Attachments

Figure 1 Site-Wide Post-Flood Plan View
Figure 2 Armor Rock Placement Area 1
Figure 3 Plan View of Armor Rock Placement Areas 2 and 3
Figure 4 Armor Rock Placement Area 2 Cross Sections
Figure 5 Armor Rock Placement Area 2 Cross Sections
Figure 6 Armor Rock Placement Area 3 Cross Sections
Figure 7 Armor Rock Placement Area 3 Cross Sections



LEGEND:

- September 2019 Post-Flood Bathymetric and Topographic Contours (1-Foot Interval)
- B/C — Armored Cap Type and Boundary
- Historic Impoundment Limits
- Rock Armor Placement Area (See Figures 2 and 3)
- > 1.0-Foot Increase
- 0.5-Foot Increase to 1.0-Foot Increase
- 0.5-Foot Increase to 0.5-Foot Decrease
- 0.5-Foot Decrease to 1.0-Foot Decrease
- > 1.0-Foot Decrease
- 30' x 30' — Example 30-Foot x 30-Foot Area

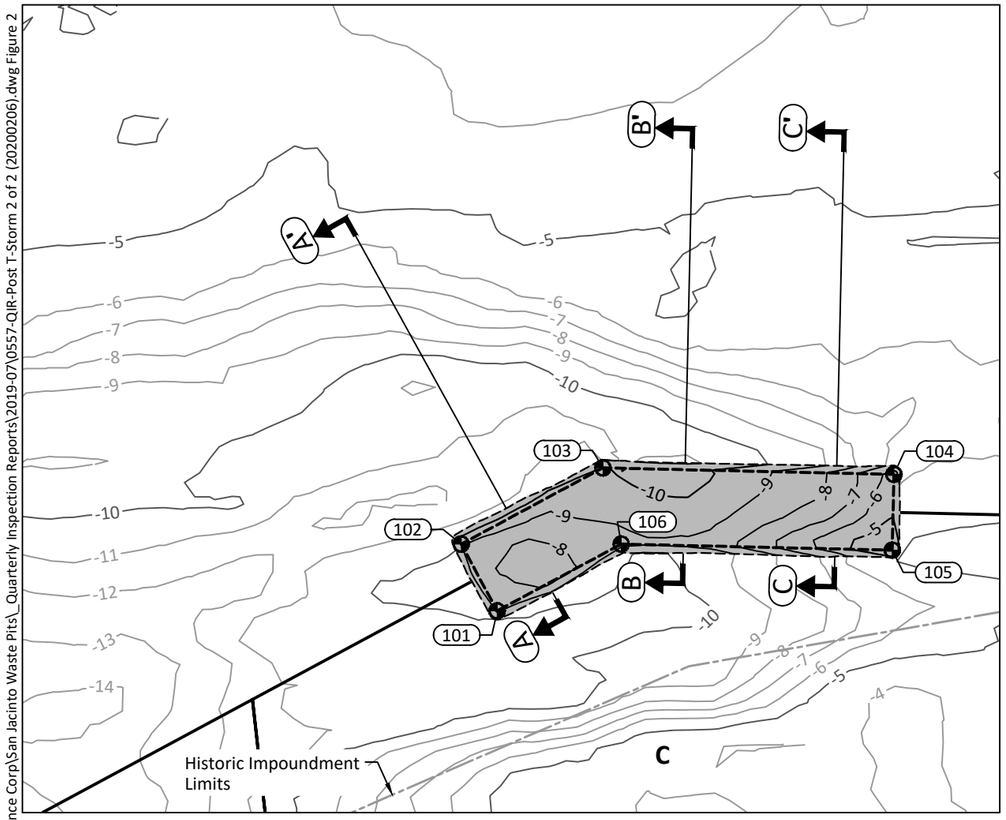
SOURCE: Drawing prepared from surveys provided by Hydrographic Consultants dated July 2019 and September 2019.
HORIZONTAL DATUM: Texas State Plane South Central, North American Datum of 1983 (NAD83), U.S. Survey Feet
VERTICAL DATUM: North American Vertical Datum of 1988 (NAVD 88)

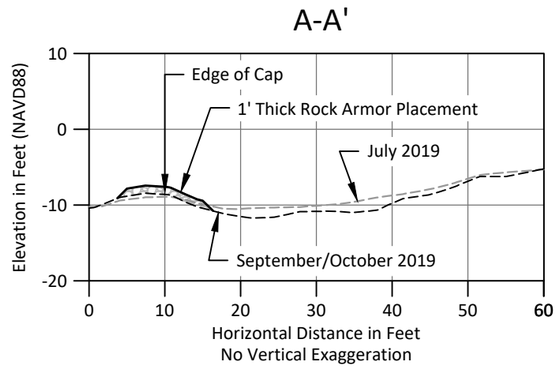
0 120
Scale in Feet

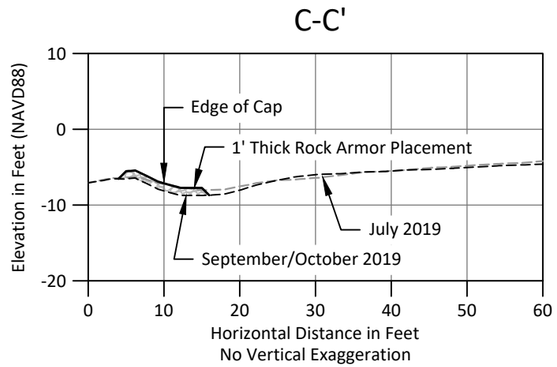
Feb 24, 2020 10:40am dholmer K:\Projects\0557-McGinnes Industrial Maintenance Corp\San Jacinto Waste Pits_Quarterly Inspection Reports\2019-07\0557-QIR-Post T-Storm 1 of 2 (20200206).dwg Figure 1

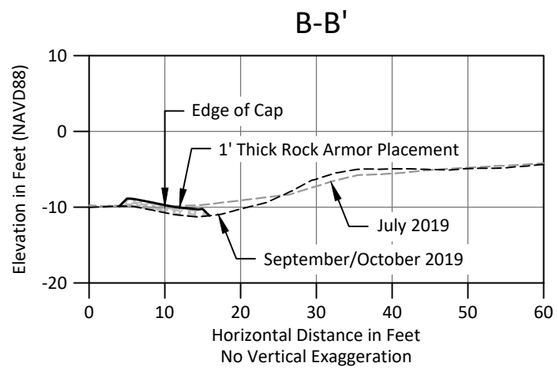
ANCHOR QEA

Figure 1
Site-Wide Post-Flood Plan View
Post-Tropical Storm Imelda Work Plan
San Jacinto River Waste Pits Superfund Site









LEGEND:

- September/October 2019 Bathymetric and Topographic Contours (1-Foot Interval)
- Rock Armor Placement Area Contours (1-Foot Interval)
- B/C — Armored Cap Type and Boundary
- Historic Impoundment Limits
- 1' Thick Rock Armor Placement Area
- (A) — Section Location and Designation
- (106) — Control Point Location and Number

CONTROL POINTS		
POINT #	NORTHING	EASTING
101	13858005.7	3217148.6
102	13858015.7	3217148.2
103	13858016.4	3217169.5
104	13857998.5	3217203.5
105	13857989.7	3217198.8
106	13858006.3	3217167.1

SOURCE: Drawing prepared from surveys provided by Hydrographic Consultants dated July 2019 and September/October 2019.
HORIZONTAL DATUM: Texas State Plane South Central, North American Datum of 1983 (NAD83), U.S. Survey Feet
VERTICAL DATUM: North American Vertical Datum of 1988 (NAVD 88)

0 20
Scale in Feet

K:\Projects\0557-McGinnes Industrial Maintenance Corp\San Jacinto Waste Pits_Quarterly Inspection Reports\2019-07\0557-QIR-Post T-Storm 2 of 2 (20200206).dwg Figure 2
Feb 24, 2020 10:40am dholmer

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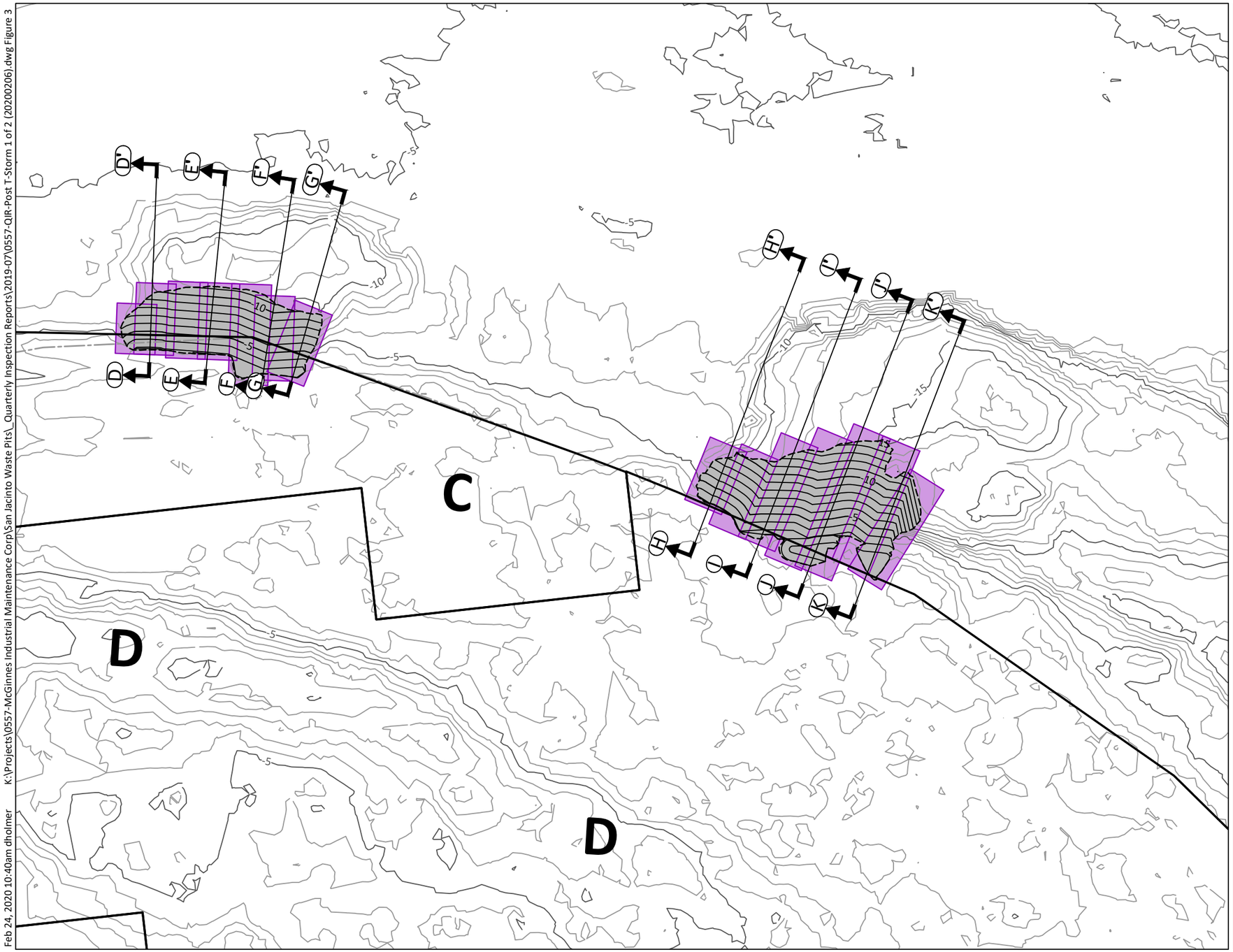
Figure 2
Armor Rock Placement Area 1
Post-Tropical Storm Imelda Work Plan
San Jacinto River Waste Pits Superfund Site



LEGEND:

- September 2019 Post-Flood Bathymetric and Topographic Contours (1-Foot Interval)
- Rock Armor Placement Area Contours (1-Foot Interval)
- Rock Armor Placement Area
- Geotextile Panel Location (Assuming 15 Foot-Wide Panels with 3' Overlap)
- Minimum 1-Foot Overlay of Type D Rock on Excess Geotextile
- B/C — Armored Cap Type and Boundary
- (D) — Cross Section Location and Designation (See Figures 4, 5, 6, and 7)

NOTES:

1. Geotextile panel locations are for conceptual purposes only. Actual panel locations to be determined by the contractor.
2. For areas of excess geotextile not covered by the Rock Armor Placement Areas, contractor to cover with minimum 1-foot overlay of Type D rock.

SOURCE: Drawing prepared from surveys provided by Hydrographic Consultants dated July 2019 and September 2019.
HORIZONTAL DATUM: Texas State Plane South Central, North American Datum of 1983 (NAD83), U.S. Survey Feet
VERTICAL DATUM: North American Vertical Datum of 1988 (NAVD 88)

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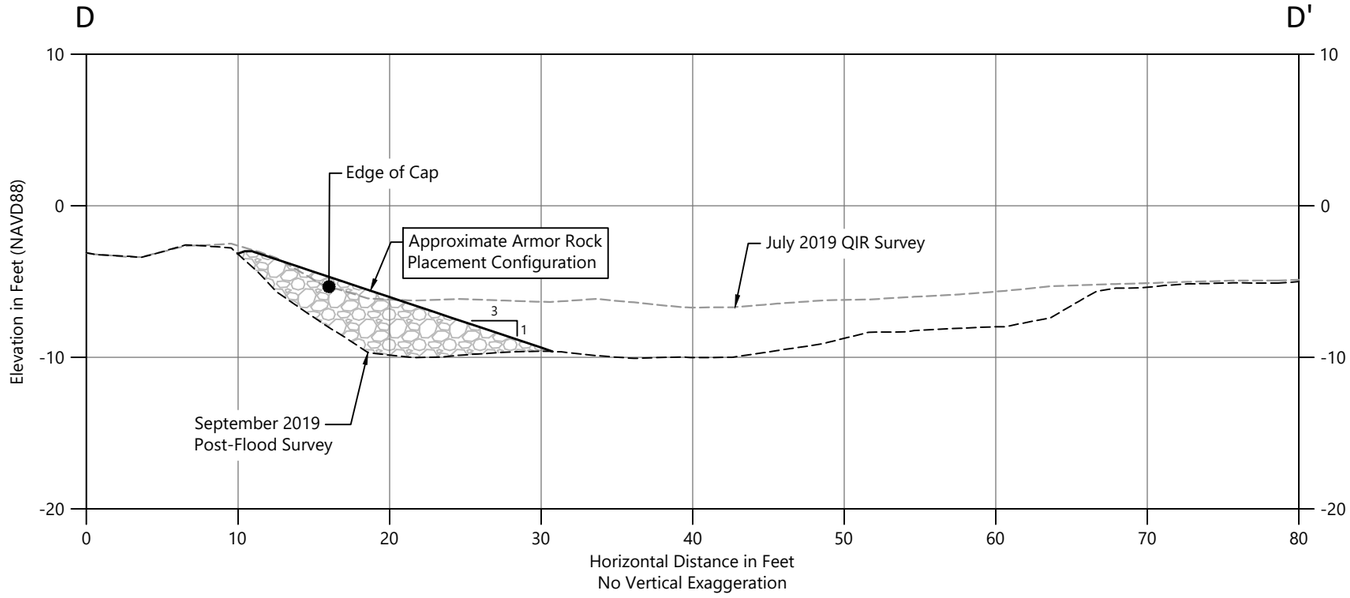
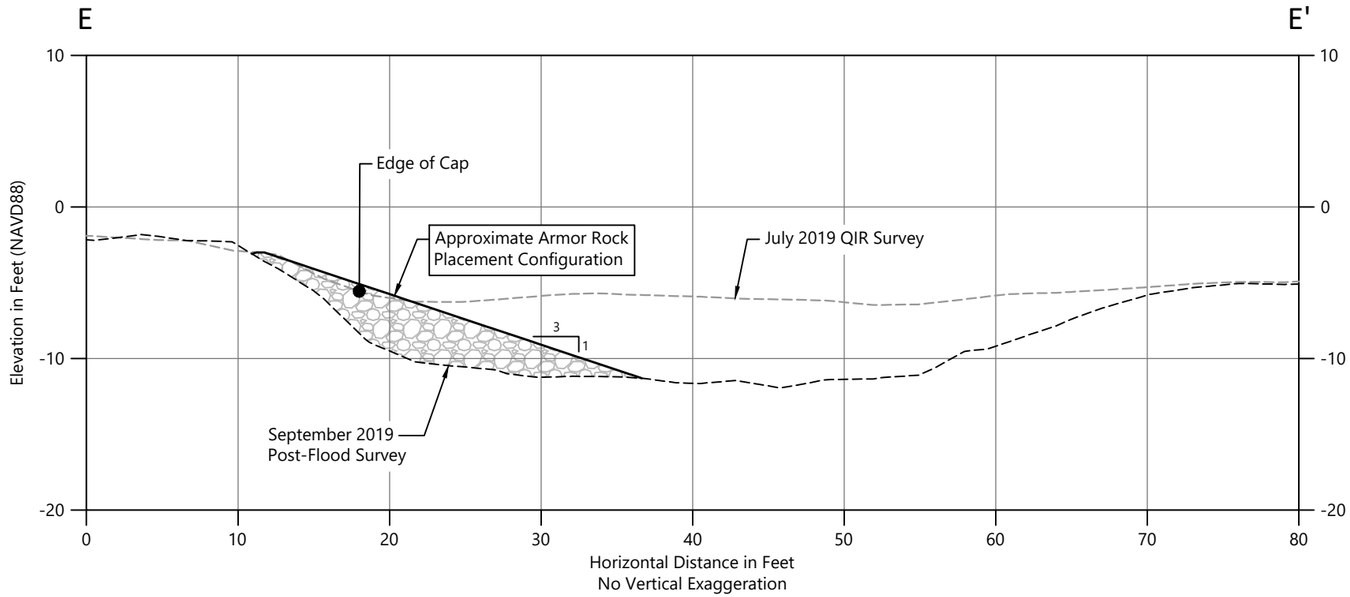
Scale in Feet

Feb 24, 2020 10:40am dholmer K:\Projects\0557-McGinnes Industrial Maintenance Corp\San Jacinto Waste Pits_Quarterly Inspection Reports\2019-07\0557-QIR-Post T-Storm 1 of 2 (20200206).dwg Figure 3

ANCHOR QEA

Figure 3
Plan View of Armor Rock Placement Areas 2 and 3
Post-Tropical Storm Imelda Work Plan
San Jacinto River Waste Pits Superfund Site

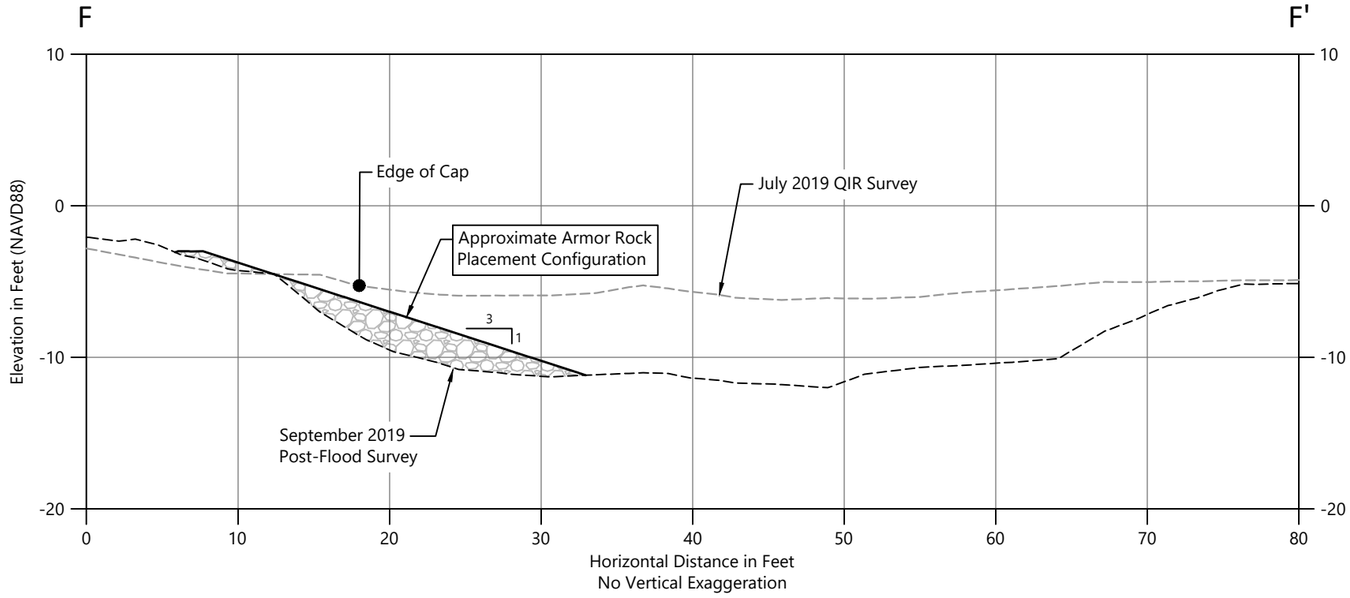


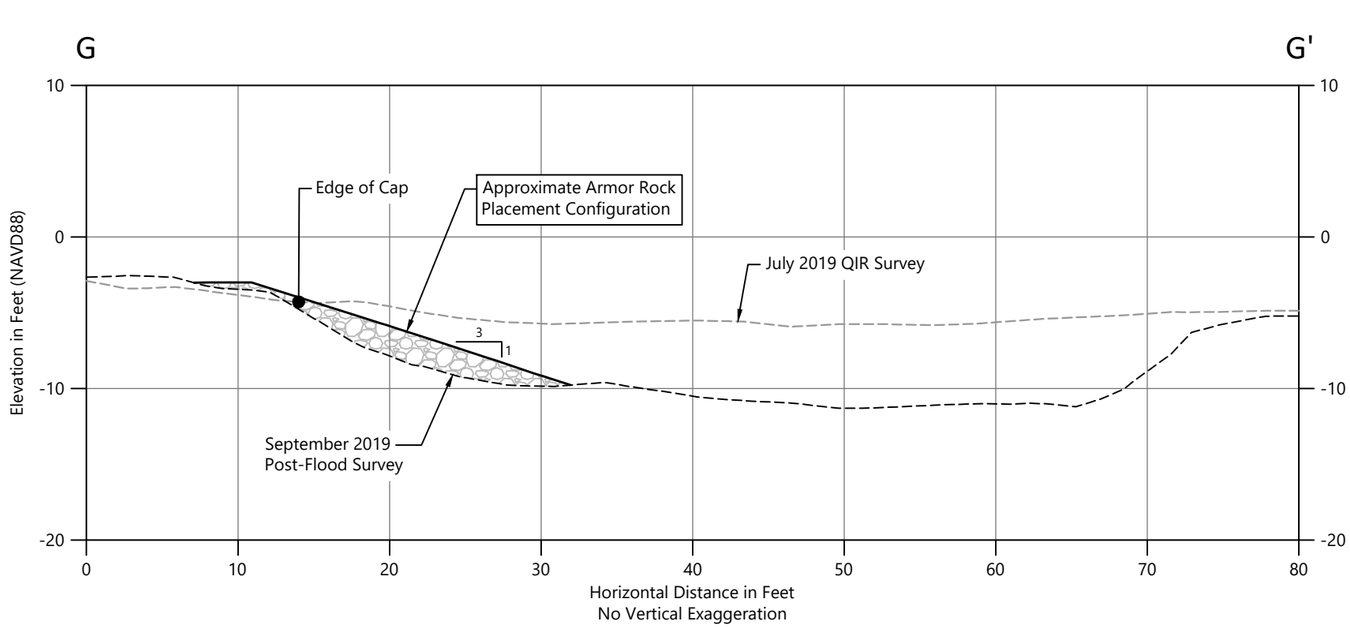


Feb 24, 2020 10:40am dholmer K:\Projects\0557-McGinnes Industrial Maintenance Corp\San Jacinto Waste Pits_Quarterly Inspection Reports\2019-07\0557-QIR-Post T-Storm 1 of 2 (20200206).dwg Figure 4

ANCHOR QEA

Figure 4
Armor Rock Placement Area 2 Cross Sections
Post-Tropical Storm Imelda Work Plan
San Jacinto River Waste Pits Superfund Site

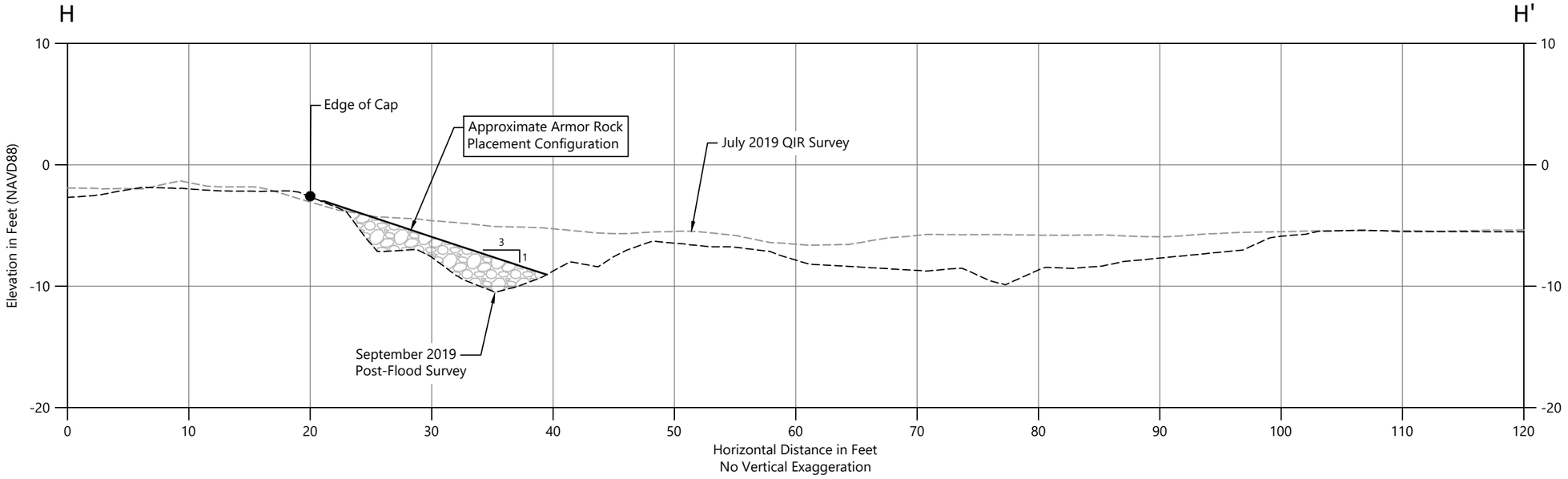


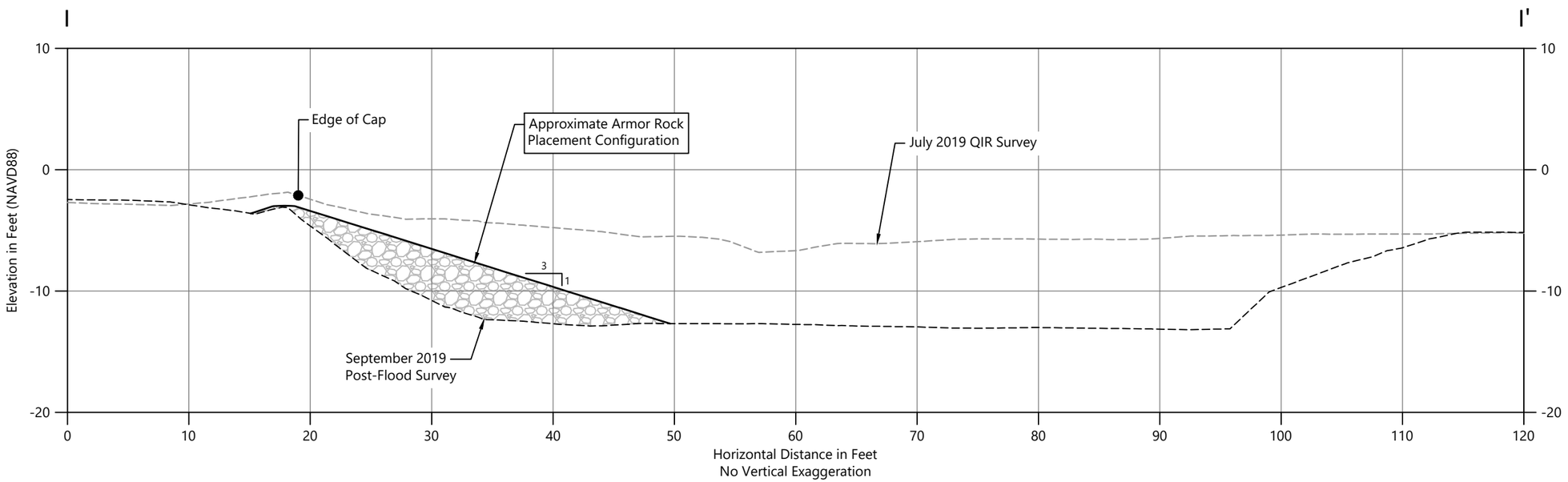


Feb 24, 2020 10:40am dholmer K:\Projects\0557-McGinnes Industrial Maintenance Corp\San Jacinto Waste Pits_Quarterly Inspection Reports\2019-07\0557-QIR-Post T-Storm 1 of 2 (20200206).dwg Figure 5

ANCHOR QEA

Figure 5
Armor Rock Placement Area 2 Cross Sections
Post-Tropical Storm Imelda Work Plan
San Jacinto River Waste Pits Superfund Site

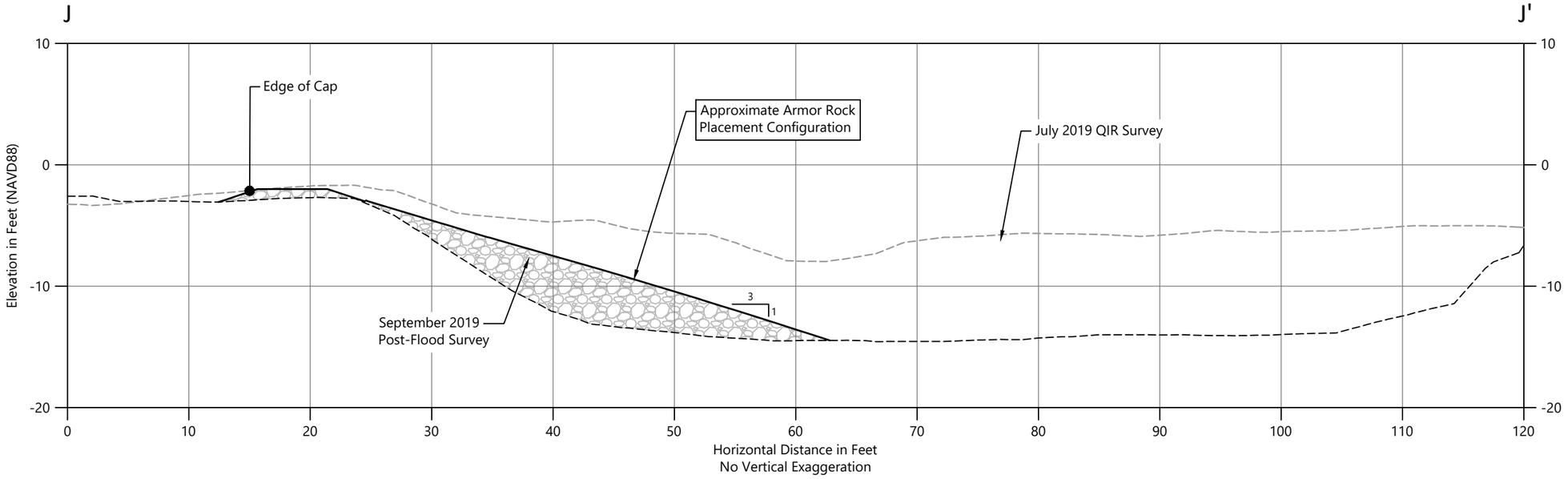


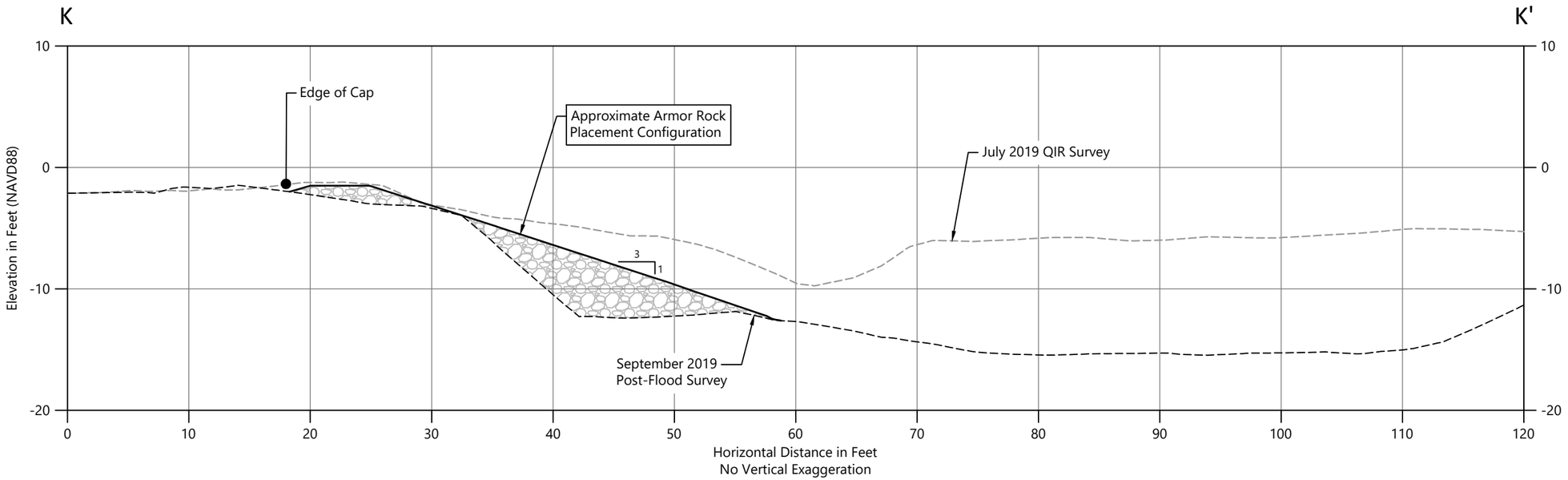


Feb 24, 2020 10:40am dholmer K:\Projects\0557-McGinnes Industrial Maintenance Corp\San Jacinto Waste Pits_Quarterly Inspection Reports\2019-07\0557-QIR-Post T-Storm 1 of 2 (20200206).dwg Figure 6

ANCHOR QEA

Figure 6
Armor Rock Placement Area 3 Cross Sections
Post-Tropical Storm Imelda Work Plan
San Jacinto River Waste Pits Superfund Site





Feb 24, 2020 10:40am dholmer K:\Projects\0557-McGinnes Industrial Maintenance Corp\San Jacinto Waste Pits_Quarterly Inspection Reports\2019-07\0557-QIR-Post T-Storm 1 of 2 (20200206).dwg Figure 7

ANCHOR QEA

Figure 7
Armor Rock Placement Area 3 Cross Sections
Post-Tropical Storm Imelda Work Plan
San Jacinto River Waste Pits Superfund Site

Attachment 2
Respondents' (Anchor QEA)
Channel Maintenance – Daily Construction Reports

ANCHOR QEA

DAILY REPORT

PROJECT	Post-Imelda Channel Maintenance	**CONTRACT NO.**	
CONTRACTOR	USA Environment / Crawley Shoreline Construction	**SUPERINTENDENT**	Ron Griffith
DAY OF WEEK & DATE:	Monday, March 23, 2020	**REPORT NO.**	1
WEATHER	Hot and Sunny	**TEMPERATURE**	L: 67 H: 82 degrees F

NUMBER/CLASS OF CONTRACTOR'S PERSONNEL:	**MAJOR EQUIPMENT ON JOB:**
2 – USA Environment Operators/Crew 1 – USA Environment Superintendent	John Deere 544k Loader (USA) Dynamic Acera SK16Lc Excavator (Crawley) 3 modular spud barges (Crawley)
TIDE INFORMATION:	**HEALTH AND SAFETY INFORMATION:**
Time: n/a **Height:** n/a	No incidents or near misses on this date.

CHRONOLOGICAL ACCOUNT OF DAY'S WORK:

1200 – Anchor and USA personnel onsite.

1305 – Anchor QEA team Health and Safety tailgate.

1205-1445 – Rock delivery from Gulf Coast Limestone to the San Jacinto River Fleet property.

1415 – Anchor QEA personnel offsite.

1500 – Crawley mobilizes barges and excavator to the San Jacinto River Fleet property.

Summary of Progress on this Date:

- USA and Anchor QEA personnel mobilized to the site.
- USA began receiving Type D rock from Gulf Coast Limestone and stockpiling it at the San Jacinto River Fleet property.
- Crawley mobilized 3 modular spud barges and an excavator to the San Jacinto River Fleet property.

Persons Onsite on this Date:

Rick Coupe (Anchor QEA)
Christian Patterson (Anchor QEA)
Ron Griffith (USA Superintendent)
Luis Morales (USA)
Lee Fulcher (USA)

ANCHOR QEA

DAILY REPORT

Material Delivery Summary as of this Date:

Material	Units	Delivered (units)	Delivery Verification Method	Preceding Delivered Total	Total Delivered for Project
Type D Rock	Tons	369	Weigh Tickets	0	369

TESTS PERFORMED:	None

PHONE LOG:
None

SITE PHOTOS/VIDEOS TAKEN: (attached below)	**FORCE ACCOUNT WORK/ CHANGES ENCOUNTERED:**
Two photographs with captions	None

AQ REPRESENTATIVE	Rick Coupe	HRS	4	DATE	3/23/2020
AQ REPRESENTATIVE	Christian Patterson	HRS	4	DATE	3/23/2020

Photograph 1 – Rock stockpile at San Jacinto River Fleet property.

Photograph 2 – Crawley barges and excavator at San Jacinto River Fleet property.

ANCHOR QEA

DAILY REPORT

PROJECT	Post-Imelda Channel Maintenance	**CONTRACT NO.**	
CONTRACTOR	USA Environment / Crawley Shoreline Construction	**SUPERINTENDENT**	Ron Griffith
DAY OF WEEK & DATE:	Tuesday, March 24, 2020	**REPORT NO.**	2
WEATHER	Mostly Sunny, 65% Humidity, Wind SW 15 mph	**TEMPERATURE**	L: 66 H: 86 degrees F

NUMBER/CLASS OF CONTRACTOR'S PERSONNEL:	**MAJOR EQUIPMENT ON JOB:**
2 – USA Environment Operators/Crew 1 – USA Environment Superintendent	John Deere 544k Loader (USA) Dynamic Acera SK16Lc Excavator (Crawley) 3 modular spud barges (Crawley) Link-Belt 250 X4 Long Front Excavator (Crawley)
TIDE INFORMATION:	**HEALTH AND SAFETY INFORMATION:**
Time: n/a **Height:** n/a	No incidents or near misses on this date.

CHRONOLOGICAL ACCOUNT OF DAY'S WORK:

0900 – Anchor and USA personnel onsite.

0905 – Anchor QEA team Health and Safety tailgate.

0945 – Rock delivery from Gulf Coast Limestone to the San Jacinto River Fleet property.

1025-1130 – Anchor QEA personnel offsite to inspect rock at Blue Bonnet Landfill facility.

1415 – Anchor QEA personnel return to site.

1445 – Final rock delivery from Gulf Coast Limestone to the San Jacinto Fleet property.

1500 – Anchor QEA personnel offsite.

1530 – USA personnel offsite.

Summary of Progress on this Date:

- USA and Anchor QEA personnel mobilized to the site.
- USA continued to receive Type D rock from Gulf Coast Limestone and stockpiled it at the San Jacinto River Fleet property. 366 tons delivered.
- Crawley mobilized 1 long-reach excavator to the San Jacinto River Fleet property.

Persons Onsite on this Date:

Rick Coupe (Anchor QEA)
Christian Patterson (Anchor QEA)
Ron Griffith (USA Superintendent)
Luis Morales (USA)
Lee Fulcher (USA)
Lance Sustaita (USA)

ANCHOR QEA

DAILY REPORT

Material Delivery Summary as of this Date:

Material	Units	Delivered (units)	Delivery Verification Method	Preceding Delivered Total	Total Delivered for Project
Type D Rock	Tons	366	Weigh Tickets	369	735

TESTS PERFORMED:	None

PHONE LOG:
None

SITE PHOTOS/VIDEOS TAKEN: (attached below)	**FORCE ACCOUNT WORK/ CHANGES ENCOUNTERED:**
Three photographs with captions	None

AQ REPRESENTATIVE	Rick Coupe	HRS	3	DATE	3/24/2020
AQ REPRESENTATIVE	Christian Patterson	HRS	4	DATE	3/24/2020

Photograph 1 – Rock delivered to stockpile at San Jacinto River Fleet property.

Photograph 2 – Crawley long-reach excavator at San Jacinto River Fleet property.

Photograph 3 – Rock stockpiles at Blue Bonnet Landfill Facility.

ANCHOR QEA

DAILY REPORT

PROJECT	Post-Imelda Channel Maintenance	**CONTRACT NO.**	
CONTRACTOR	USA Environment / Crawley Shoreline Construction	**SUPERINTENDENT**	Ron Griffith
DAY OF WEEK & DATE:	Wednesday, March 25, 2020	**REPORT NO.**	3
WEATHER	Mostly Sunny, 70% Humidity, Wind S 15 mph	**TEMPERATURE**	L: 66 H: 87 degrees F

NUMBER/CLASS OF CONTRACTOR'S PERSONNEL:	**MAJOR EQUIPMENT ON JOB:**
2 – USA Environment Operators/Crew 1 – USA Environment Superintendent	John Deere 544k Loader (USA) Dynamic Acera SK16Lc Excavator (Crawley) 3 modular spud barges (Crawley) Link-Belt 250 X4 Long Front Excavator (Crawley)
TIDE INFORMATION:	**HEALTH AND SAFETY INFORMATION:**
Time: n/a **Height:** n/a	No incidents or near misses on this date.

CHRONOLOGICAL ACCOUNT OF DAY'S WORK:

0645 – Anchor QEA and USA personnel onsite.

0700 – Health and Safety tailgate held with Anchor QEA, USA, Crawley, and Hydrographic Consultants.

0745 – Tailgate concludes. Construction activities begin.

0800-1200 – Rock loaded onto barge at San Jacinto River Fleet property with Long Front Excavator. Crawley personnel transport Dynamic Excavator to Placement Areas to stake placement locations.

0800-1500 - Hydrographic Consultants conduct bathymetric survey of Placement Areas.

0955-1020 – Anchor QEA personnel inspect areas surrounding cap.

1310 – Rock placement begins at Placement Area 1.

1500 – Rock placement concludes. Barges and personnel transported back to San Jacinto River Fleet property.

1520 – End-of-day tailgate held.

1545 – Crawley personnel offsite.

1600 – Anchor QEA personnel offsite.

1630 – USA and Hydrographic Consultants personnel offsite.

Summary of Progress on this Date:

- Hydrographic Consultants completed bathymetric survey of Placement Areas.
- USA and Crawley loaded Type D rock onto barge at the San Jacinto River Fleet property.
- Crawley placed 30 tons of rock at Placement Area 1 (Figure 1). Rock placement at Area 1 is partially complete. Approximately 10 tons remain to be placed.

ANCHOR QEA

DAILY REPORT

Persons Onsite on this Date:
Rick Coupe (Anchor QEA)
Christian Patterson (Anchor QEA)
Ron Griffith (USA Superintendent)
Luis Morales (USA)
Lee Fulcher (USA)
Troy Woodard (Crawley)
Jason Ewell (Crawley)
Dennis Moses (Crawley)
John Cline (Crawley)
Ty Cooper (Crawley)
Eric Nelson (Crawley)
Mitchel Harmon (Crawley)
Russell Nelson (Crawley)
Miles Beck (Hydrographic Consultants)
Scott McDonald (Hydrographic Consultants)

Material Delivery Summary as of this Date:

Material	Units	Delivered (units)	Delivery Verification Method	Preceding Delivered Total	Total Delivered for Project
Type D Rock	Tons	0	Weigh Tickets	366	735

TESTS PERFORMED:	None

PHONE LOG:
None

SITE PHOTOS/VIDEOS TAKEN: (attached below)	**FORCE ACCOUNT WORK/ CHANGES ENCOUNTERED:**
Four photographs with captions	None

AQ REPRESENTATIVE	Rick Coupe	HRS	5	DATE	3/25/2020
AQ REPRESENTATIVE	Christian Patterson	HRS	9	DATE	3/25/2020

Photograph 1 – Rock being loaded with Long Front Excavator at San Jacinto River Fleet property.

Photograph 2 – Barge loaded with rock at San Jacinto River Fleet property.

Photograph 3 – Staking and bathymetric survey being conducted at Placement Areas.

Photograph 4 – Rock being placed at Placement Area 1 with Dynamic Excavator.

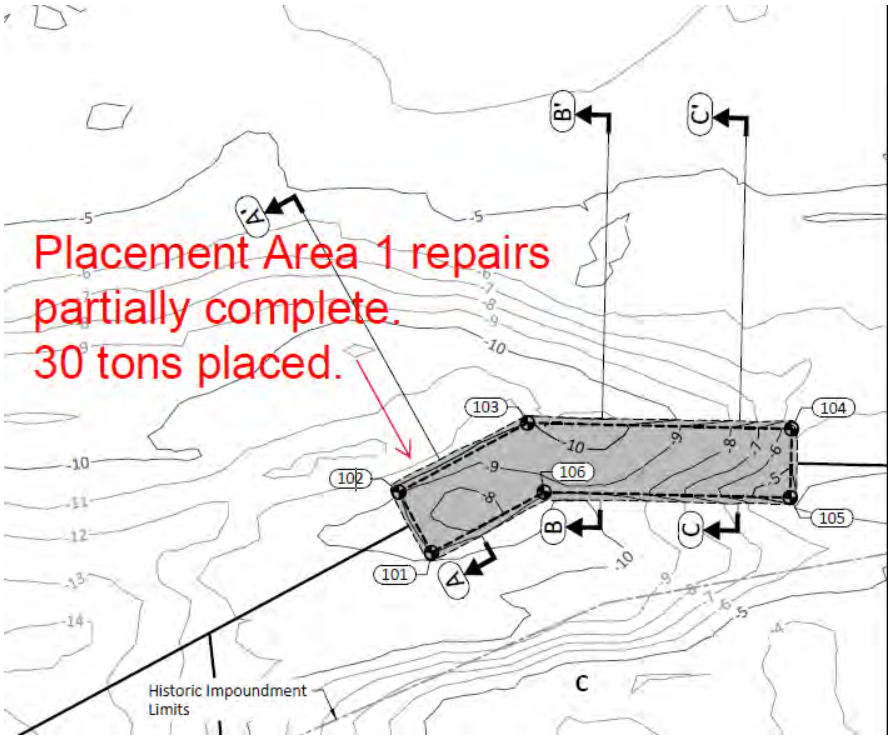


Figure 1 – CAD Detail of Placement Area 1

ANCHOR QEA

DAILY REPORT

PROJECT	Post-Imelda Channel Maintenance	**CONTRACT NO.**	
CONTRACTOR	USA Environment / Crawley Shoreline Construction	**SUPERINTENDENT**	Ron Griffith
DAY OF WEEK & DATE:	Thursday, March 26, 2020	**REPORT NO.**	4
WEATHER	Mostly Sunny, 90% Humidity, Wind S 10-15 mph	**TEMPERATURE**	L: 70 H: 84 degrees F

NUMBER/CLASS OF CONTRACTOR'S PERSONNEL:	**MAJOR EQUIPMENT ON JOB:**
1 – USA Environment Operators/Crew 1 – USA Environment Superintendent 7 – Crawley Operators/Crew	John Deere 544k Loader (USA) Dynamic Acera SK16Lc Excavator (Crawley) 3 modular spud barges (Crawley) Link-Belt 250 X4 Long Front Excavator (Crawley)
TIDE INFORMATION:	**HEALTH AND SAFETY INFORMATION:**
Time: n/a **Height:** n/a	No incidents or near misses on this date.

CHRONOLOGICAL ACCOUNT OF DAY'S WORK:

0645 – Anchor QEA and USA personnel onsite.

0700 – Health and Safety tailgate held with Anchor QEA, USA, and Crawley.

0710 – Tailgate concludes. Construction activities begin.

0755 – Crawley personnel transport Dynamic Excavator and rock barges to Placement Area 1.

0830 – Rock placement begins at Placement Area 1.

0910 – Rock placement concludes at Placement Area 1.

0930 – Dynamic Excavator is re-positioned to Placement Area 2.

1000 – Geotextile fabric is measured, cut, and transported to Placement Area 2.

1020 – Crawley personnel begin placing geotextile fabric at Placement Area 2.

1130 – Rock placement begins at Placement Area 2.

1445 – Rock placement concludes. Barges and personnel transported back to San Jacinto River Fleet property.

1530 – End-of-day tailgate held.

1540 – Crawley personnel offsite.

1545 – Anchor QEA and USA personnel offsite.

Summary of Progress on this Date:

DAILY REPORT

- USA and Crawley continued to load Type D rock onto barges at the San Jacinto River Fleet property.
- Crawley placed 10 tons of rock at Placement Area 1 (Figure 1). Rock placement at Area 1 is complete.
- Crawley began placing geotextile fabric and rock in Placement Area 2 (Figure 2). Approximately 80 tons of rock were placed. Rock placement at Area 2 is partially complete.

Persons Onsite on this Date:

Christian Patterson (Anchor QEA)
Ron Griffith (USA Superintendent)
Lee Fulcher (USA)
Troy Woodard (Crawley)
Jason Ewell (Crawley)
Dennis Moses (Crawley)
John Cline (Crawley)
Eric Nelson (Crawley)
Mitchel Harmon (Crawley)
Russell Nelson (Crawley)

Material Delivery Summary as of this Date:

Material	Units	Delivered (units)	Delivery Verification Method	Preceding Delivered Total	Total Delivered for Project
Type D Rock	Tons	0	Weigh Tickets	366	735

Material Placement Summary as of this Date:

Rock Placement Area	Units	Placed (units)	Placement Verification Method	Preceding Placement Total	Total Placed in Area
1	Tons	10	Barge Loads	30	40
2	Tons	80	Barge Loads	0	80
3	Tons	0	Barge Loads	0	0

TESTS PERFORMED:	None

PHONE LOG:
None

SITE PHOTOS/VIDEOS TAKEN: (attached below)	**FORCE ACCOUNT WORK/ CHANGES ENCOUNTERED:**
Four photographs with captions	None

AQ REPRESENTATIVE	Christian Patterson	HRS	9	DATE	3/26/2020

Photograph 1 – Barges loaded with Dynamic Excavator and rock at San Jacinto River Fleet property.

Photograph 2 – Remaining 10 tons of rock being placed at Placement Area 1.

Photograph 3 – Placement of geotextile fabric being conducted at Placement Area 2.

Photograph 4 – Rock being placed at Placement Area 2 with Dynamic Excavator.

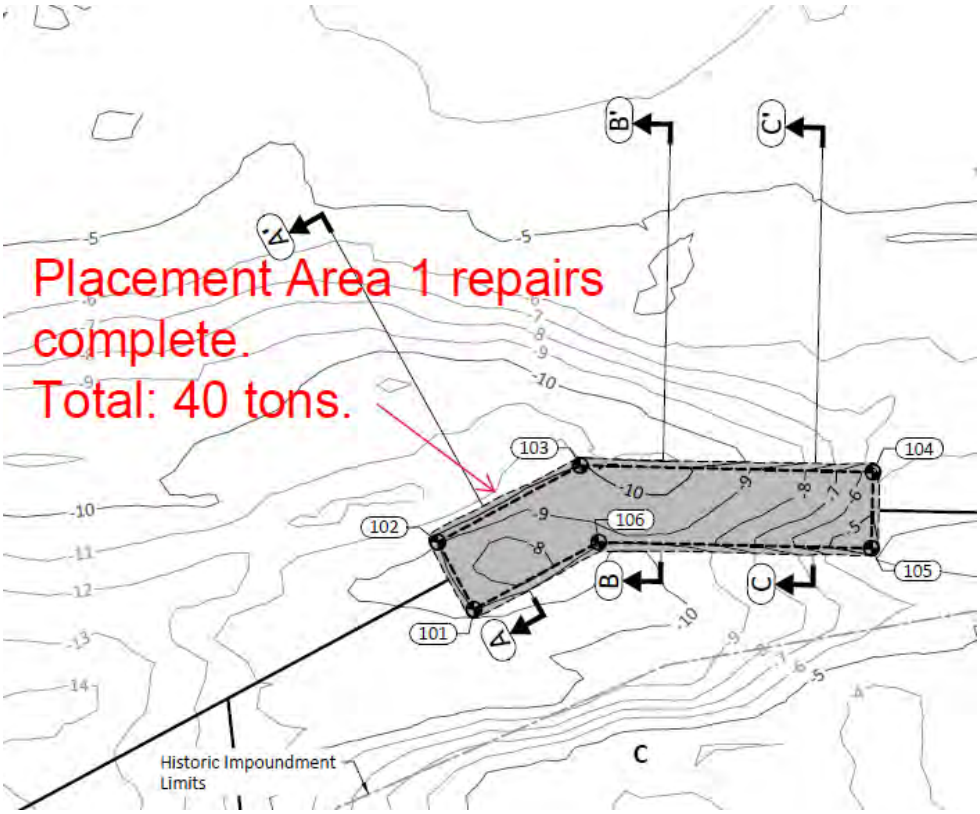


Figure 1 – CAD Detail of Placement Area 1

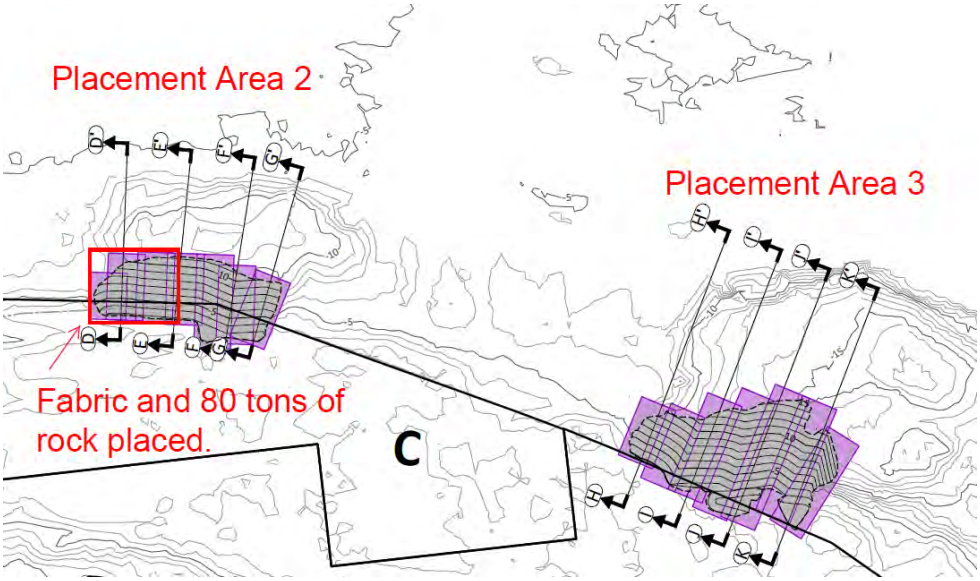


Figure 2 – CAD Detail of Placement Areas 2 and 3

ANCHOR QEA

DAILY REPORT

PROJECT	Post-Imelda Channel Maintenance	**CONTRACT NO.**	
CONTRACTOR	USA Environment / Crawley Shoreline Construction	**SUPERINTENDENT**	Ron Griffith
DAY OF WEEK & DATE:	Friday, March 27, 2020	**REPORT NO.**	5
WEATHER	Mostly Sunny, 90% Humidity, Wind SW 10-15 mph	**TEMPERATURE**	L: 73 H: 86 degrees F

NUMBER/CLASS OF CONTRACTOR'S PERSONNEL:	**MAJOR EQUIPMENT ON JOB:**
1 – USA Environment Operators/Crew 1 – USA Environment Superintendent 7 – Crawley Operators/Crew	John Deere 544k Loader (USA) Dynamic Acera SK16Lc Excavator (Crawley) 3 modular spud barges (Crawley) Link-Belt 250 X4 Long Front Excavator (Crawley)
TIDE INFORMATION:	**HEALTH AND SAFETY INFORMATION:**
Time: n/a **Height:** n/a	No incidents or near misses on this date.

CHRONOLOGICAL ACCOUNT OF DAY'S WORK:

0645 – Anchor QEA and USA personnel onsite.

0700 – Health and Safety tailgate held with Anchor QEA, USA, and Crawley.

0710 – Tailgate concludes. Construction activities begin.

0745 – Crawley personnel transport Dynamic Excavator and rock barges to Placement Area 2.

0800 – Rock placement begins at Placement Area 2.

0815 – Geotextile fabric is measured, cut, and transported to Placement Area 2.

0905 – Rock placement stops. Barge and Dynamic Excavator re-positioned.

0920-0935 – Crawley personnel places geotextile fabric at Placement Area 2.

0940 – Rock placement resumes at Placement Area 2.

1510 – Rock placement concludes. Barges and personnel transported back to San Jacinto River Fleet property.

1550 – End-of-day tailgate held.

1600 – Anchor QEA, USA, and Crawley personnel offsite.

Summary of Progress on this Date:

- USA and Crawley continued to load Type D rock onto barges at the San Jacinto River Fleet property.
- Crawley continued placing geotextile fabric and rock in Placement Area 2 (Figure 1). Approximately 135 tons of rock were placed. Rock placement at Area 2 is partially complete.

DAILY REPORT

Persons Onsite on this Date:
Christian Patterson (Anchor QEA)
Ron Griffith (USA Superintendent)
Lee Fulcher (USA)
Troy Woodard (Crawley)
Jason Ewell (Crawley)
Dennis Moses (Crawley)
John Cline (Crawley)
Ty Cooper (Crawley)
Mitchel Harmon (Crawley)
Russell Nelson (Crawley)

Material Delivery Summary as of this Date:

Material	Units	Delivered (units)	Delivery Verification Method	Preceding Delivered Total	Total Delivered for Project
Type D Rock	Tons	0	Weigh Tickets	366	735

Material Placement Summary as of this Date:

Rock Placement Area	Units	Placed (units)	Placement Verification Method	Preceding Placement Total	Total Placed in Area
1	Tons	0	Barge Loads	10	40
2	Tons	135	Barge Loads	80	215
3	Tons	0	Barge Loads	0	0

TESTS PERFORMED:	None

PHONE LOG:
None

SITE PHOTOS/VIDEOS TAKEN: (attached below)	**FORCE ACCOUNT WORK/ CHANGES ENCOUNTERED:**
Four photographs with captions	None

AQ REPRESENTATIVE	Christian Patterson	HRS	9	DATE	3/27/2020

Photograph 1 – Barge loaded with rock at San Jacinto River Fleet property.

Photograph 2 – Rock being placed at Placement Area 2 with Dynamic Excavator.

Photograph 3 – Placement of geotextile fabric being conducted at Placement Area 2.

Photograph 4 – Stockpiled rock at San Jacinto River Fleet property.

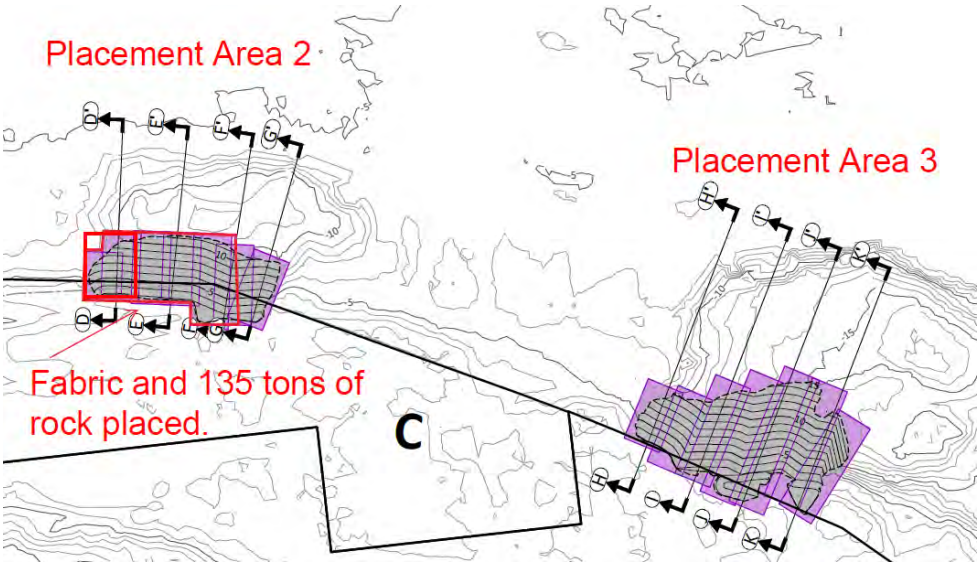


Figure 1 – CAD Detail of Placement Areas 2 and 3

ANCHOR QEA

DAILY REPORT

PROJECT	Post-Imelda Channel Maintenance	**CONTRACT NO.**	
CONTRACTOR	USA Environment / Crawley Shoreline Construction	**SUPERINTENDENT**	Ron Griffith
DAY OF WEEK & DATE:	Monday, March 30, 2020	**REPORT NO.**	6
WEATHER	Overcast, showers, 90% Humidity, Wind S 10-15 mph	**TEMPERATURE**	L: 70 H: 81 degrees F

NUMBER/CLASS OF CONTRACTOR'S PERSONNEL:	**MAJOR EQUIPMENT ON JOB:**
1 – USA Environment Operators/Crew 1 – USA Environment Superintendent 8 – Crawley Operators/Crew	John Deere 544k Loader (USA) Dynamic Acera SK16Lc Excavator (Crawley) 3 modular spud barges (Crawley) Link-Belt 250 X4 Long Front Excavator (Crawley)
TIDE INFORMATION:	**HEALTH AND SAFETY INFORMATION:**
Time: n/a **Height:** n/a	No incidents or near misses on this date.

CHRONOLOGICAL ACCOUNT OF DAY'S WORK:

0645 – Anchor QEA and USA personnel onsite.

0700 – Health and Safety tailgate held with Anchor QEA, USA, and Crawley.

0710 – Tailgate concludes. Construction activities begin.

0730 – Crawley personnel transport Dynamic Excavator and rock barges to Placement Area 2.

0755 – Rock placement begins at Placement Area 2.

0800 – Geotextile fabric is measured, cut, and transported to Placement Area 2.

1110 – Rock placement concludes at Placement Area 2.

1130 – Barge and Dynamic Excavator re-positioned to Placement Area 3.

1200 – Crawley personnel places geotextile fabric at Placement Area 3.

1215 – Rock placement begins at Placement Area 3.

1325 – Rock placement stops. Geotextile fabric placed at Placement Area 3.

1355 – Rock placement resumes at Placement Area 3.

1500 – Rock placement concludes. Barges and personnel transported back to San Jacinto River Fleet property.

1525 – End-of-day tailgate held.

1545 – Anchor QEA, USA, and Crawley personnel offsite.

DAILY REPORT

Summary of Progress on this Date:

- USA and Crawley continued to load Type D rock onto barges at the San Jacinto River Fleet property.
- Crawley finished placing rock in Placement Area 2 (Figure 1). Approximately 40 tons of rock were placed. Rock placement at Area 2 is complete. Total placement is 255 tons.
- Crawley began placing geotextile fabric and rock in Placement Area 3 (Figure 1). Approximately 50 tons of rock were placed. Rock placement at Area 3 is partially complete.

Persons Onsite on this Date:

Christian Patterson (Anchor QEA)
Ron Griffith (USA Superintendent)
Lee Fulcher (USA)
Troy Woodard (Crawley)
Jason Ewell (Crawley)
Dennis Moses (Crawley)
John Cline (Crawley)
Ty Cooper (Crawley)
Mitchel Harmon (Crawley)
Russell Nelson (Crawley)
Eric Nelson (Crawley)

Material Delivery Summary as of this Date:

Material	Units	Delivered (units)	Delivery Verification Method	Preceding Delivered Total	Total Delivered for Project
Type D Rock	Tons	0	Weigh Tickets	735	735

Material Placement Summary as of this Date:

Rock Placement Area	Units	Placed (units)	Placement Verification Method	Preceding Placement Total	Total Placed in Area
1	Tons	0	Barge Loads	40	40
2	Tons	40	Barge Loads	215	255
3	Tons	50	Barge Loads	0	50

TESTS PERFORMED:	None

PHONE LOG:
None

SITE PHOTOS/VIDEOS TAKEN: (attached below)	**FORCE ACCOUNT WORK/ CHANGES ENCOUNTERED:**
Four photographs with captions	None

AQ REPRESENTATIVE	Christian Patterson	HRS	9	DATE	3/30/2020

Photograph 1 – Rock being placed at Placement Area 2 with Dynamic Excavator.

Photograph 2 – Rock being placed at Placement Area 3 with Dynamic Excavator.

Photograph 3 – Placement of geotextile fabric being conducted at Placement Area 3.

Photograph 4 – Equipment and stockpiled rock at San Jacinto River Fleet property.

DAILY REPORT

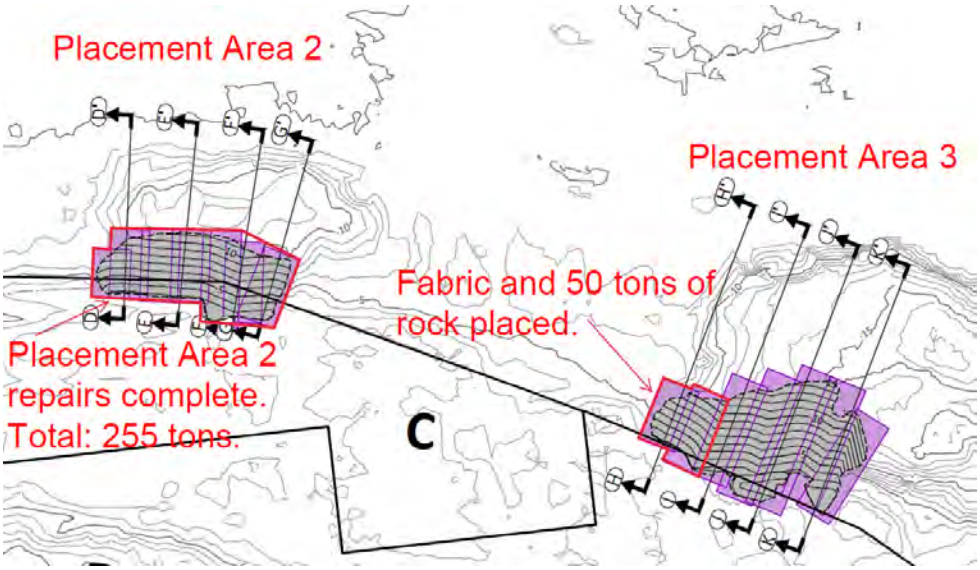


Figure 1 – CAD Detail of Placement Areas 2 and 3

ANCHOR QEA

DAILY REPORT

PROJECT	Post-Imelda Channel Maintenance	**CONTRACT NO.**	
CONTRACTOR	USA Environment / Crawley Shoreline Construction	**SUPERINTENDENT**	Ron Griffith
DAY OF WEEK & DATE:	Tuesday, March 31, 2020	**REPORT NO.**	7
WEATHER	Partly cloudy, 95% Humidity, Wind NW 10-20 mph	**TEMPERATURE**	L: 54 H: 76 degrees F

NUMBER/CLASS OF CONTRACTOR'S PERSONNEL:	**MAJOR EQUIPMENT ON JOB:**
1 – USA Environment Operators/Crew 1 – USA Environment Superintendent 6 – Crawley Operators/Crew 2 – Hydrographic Consultants Operators/Crew	John Deere 544k Loader (USA) Dynamic Acera SK16Lc Excavator (Crawley) 3 modular spud barges (Crawley) Link-Belt 250 X4 Long Front Excavator (Crawley)
TIDE INFORMATION:	**HEALTH AND SAFETY INFORMATION:**
Time: n/a **Height:** n/a	No incidents or near misses on this date.

CHRONOLOGICAL ACCOUNT OF DAY'S WORK:

0645 – Anchor QEA and USA personnel onsite.

0655 – Health and Safety tailgate held with Anchor QEA, USA, and Crawley.

0700 – Tailgate concludes. Construction activities begin.

0730 – Crawley personnel transport Dynamic Excavator and rock barges to Placement Area 3.

0825 – Rock placement begins at Placement Area 3.

0845 – Geotextile fabric is measured, cut, and transported to Placement Area 3.

0925 – Hydrographic Consultants onsite.

0945 – Bathymetric survey of Placement Areas 1 and 2 begins.

1010 – Rock placement at Placement Area 3 concludes due to wind gusts exceeding 20 mph and low tide. Barges and personnel transported back to San Jacinto River Fleet property.

1100 – End-of-day tailgate held for Crawley personnel.

1115 – Crawley personnel offsite.

1200 – Bathymetric survey of Placement Areas 1 and 2 complete.

1215 – End-of-day tailgate held for Hydrographic Consultants personnel.

1230 – Anchor QEA, USA, and Hydrographic Consultants personnel offsite.

DAILY REPORT

Summary of Progress on this Date:

- Hydrographic Consultants completed bathymetric surveys of Placement Areas 1 and 2.
- USA and Crawley continued to load Type D rock onto barges at the San Jacinto River Fleet property.
- Crawley continued placing rock in Placement Area 3 (Figure 1). Approximately 30 tons of rock were placed. Rock placement at Area 3 is partially complete.
- USA and Crawley stood down for the day due to high wind gusts (exceeding 20 mph) and low tide conditions. Operations will resume Wednesday, April 1, 2020 at 0700.

Persons Onsite on this Date:

Christian Patterson (Anchor QEA)
Ron Griffith (USA Superintendent)
Lee Fulcher (USA)
Troy Woodard (Crawley)
Jason Ewell (Crawley)
Dennis Moses (Crawley)
John Cline (Crawley)
Mitchel Harmon (Crawley)
Russell Nelson (Crawley)
Miles Beck (Hydrographic Consultants)
Scott McDonald (Hydrographic Consultants)

Material Delivery Summary as of this Date:

Material	Units	Delivered (units)	Delivery Verification Method	Preceding Delivered Total	Total Delivered for Project
Type D Rock	Tons	0	Weigh Tickets	735	735

Material Placement Summary as of this Date:

Rock Placement Area	Units	Placed (units)	Placement Verification Method	Preceding Placement Total	Total Placed in Area
1	Tons	0	Barge Loads	40	40
2	Tons	0	Barge Loads	255	255
3	Tons	30	Barge Loads	50	80

TESTS PERFORMED:	None

PHONE LOG:
None

SITE PHOTOS/VIDEOS TAKEN: (attached below)	**FORCE ACCOUNT WORK/ CHANGES ENCOUNTERED:**
Four photographs with captions	None

AQ REPRESENTATIVE	Christian Patterson	HRS	5.75	DATE	3/31/2020

Photograph 1 – Rock being loaded onto barges at San Jacinto River Fleet property.

Photograph 2 – Rock being placed at Placement Area 3 with Dynamic Excavator.

Photograph 3 – Placement Areas at 1015 low tide.

Photograph 4 – Bathymetric survey being conducted at Placement Areas 1 and 2.

DAILY REPORT

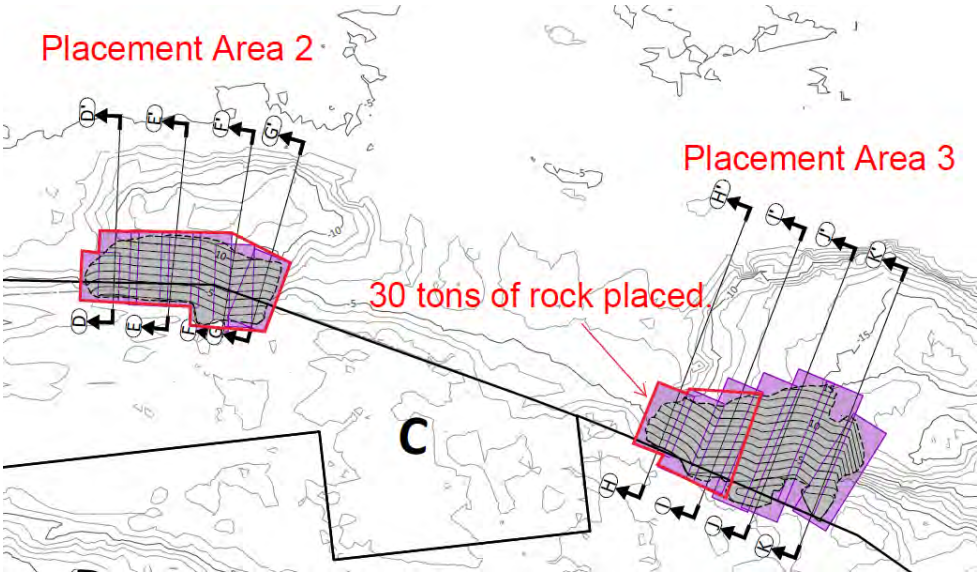


Figure 1 – CAD Detail of Placement Areas 2 and 3

ANCHOR QEA

DAILY REPORT

PROJECT	Post-Imelda Channel Maintenance	**CONTRACT NO.**	
CONTRACTOR	USA Environment / Crawley Shoreline Construction	**SUPERINTENDENT**	Ron Griffith
DAY OF WEEK & DATE:	Wednesday, April 1, 2020	**REPORT NO.**	8
WEATHER	Mostly sunny, 55% Humidity, Wind SE 5-10 mph	**TEMPERATURE**	L: 54 H: 76 degrees F

NUMBER/CLASS OF CONTRACTOR'S PERSONNEL:	**MAJOR EQUIPMENT ON JOB:**
1 – USA Environment Operators/Crew 1 – USA Environment Superintendent 6 – Crawley Operators/Crew	John Deere 544k Loader (USA) Dynamic Acera SK16Lc Excavator (Crawley) 3 modular spud barges (Crawley) Link-Belt 250 X4 Long Front Excavator (Crawley)
TIDE INFORMATION:	**HEALTH AND SAFETY INFORMATION:**
Time: n/a **Height:** n/a	No incidents or near misses on this date.

CHRONOLOGICAL ACCOUNT OF DAY'S WORK:

0645 – Anchor QEA and USA personnel onsite.

0700 – Health and Safety tailgate held with Anchor QEA, USA, and Crawley.

0705 – Tailgate concludes. Construction activities begin.

0735 – Crawley personnel transport Dynamic Excavator and rock barges to Placement Area 3.

0805 – Rock placement begins at Placement Area 3.

1035 – Crawley personnel place geotextile fabric at Placement Area 3.

1055 – Rock placement resumes at Placement Area 3.

1500 – Rock placement concludes at Placement Area 3. Barges and personnel transported back to San Jacinto River Fleet property.

1530 – End-of-day tailgate held.

1545 – Anchor QEA, USA, and Crawley personnel offsite.

Summary of Progress on this Date:

- USA and Crawley continued to load Type D rock onto barges at the San Jacinto River Fleet property.
- Crawley continued placing rock and geotextile fabric in Placement Area 3 (Figure 1). Approximately 200 tons of rock were placed. Rock placement at Area 3 is partially complete.

DAILY REPORT

Persons Onsite on this Date:
Christian Patterson (Anchor QEA)
Ron Griffith (USA Superintendent)
Lee Fulcher (USA)
Troy Woodard (Crawley)
Dennis Moses (Crawley)
Mitchel Harmon (Crawley)
Russell Nelson (Crawley)
Eric Nelson (Crawley)
Ty Cooper (Crawley)

Material Delivery Summary as of this Date:

Material	Units	Delivered (units)	Delivery Verification Method	Preceding Delivered Total	Total Delivered for Project
Type D Rock	Tons	0	Weigh Tickets	735	735

Material Placement Summary as of this Date:

Rock Placement Area	Units	Placed (units)	Placement Verification Method	Preceding Placement Total	Total Placed in Area
1	Tons	0	Barge Loads	40	40
2	Tons	0	Barge Loads	255	255
3	Tons	200	Barge Loads	80	280

TESTS PERFORMED: None

PHONE LOG:
None

SITE PHOTOS/VIDEOS TAKEN: (attached below)	**FORCE ACCOUNT WORK/ CHANGES ENCOUNTERED:**
Four photographs with captions	None

AQ REPRESENTATIVE	Christian Patterson	HRS	9	DATE	4/1/2020

Photograph 1 – Rock and equipment being loaded onto barges at San Jacinto River Fleet property.

Photograph 2 – Rock being placed at Placement Area 3 with Dynamic Excavator.

Photograph 3 – Geotextile fabric being placed at Placement Area 3.

Photograph 4 – Remaining stockpiled rock at San Jacinto River Fleet property as of 1500.

DAILY REPORT

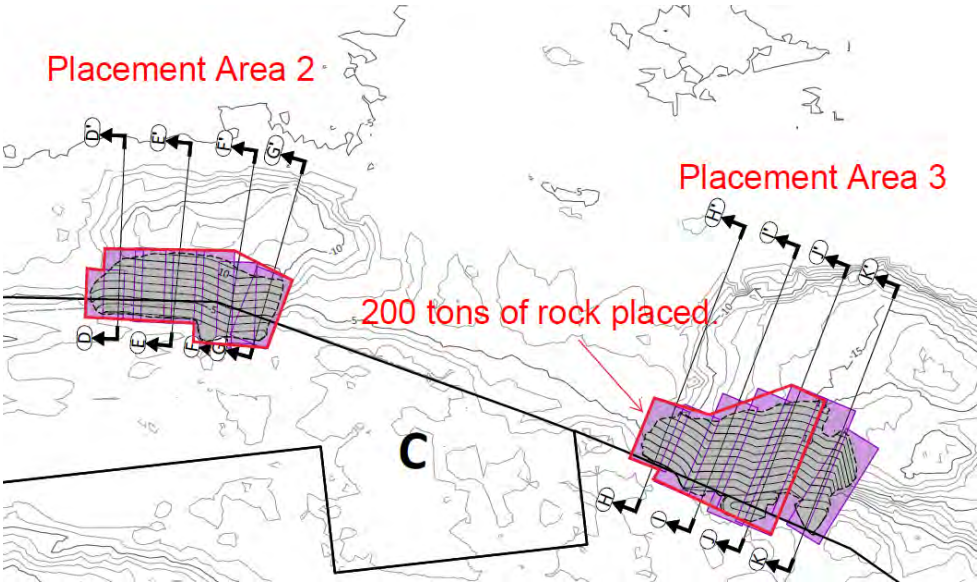


Figure 1 – CAD Detail of Placement Areas 2 and 3

ANCHOR QEA

DAILY REPORT

PROJECT	Post-Imelda Channel Maintenance	**CONTRACT NO.**	
CONTRACTOR	USA Environment / Crawley Shoreline Construction	**SUPERINTENDENT**	Ron Griffith
DAY OF WEEK & DATE:	Thursday, April 2, 2020	**REPORT NO.**	9
WEATHER	Overcast, 75% Humidity, Wind SE 5-15 mph	**TEMPERATURE**	L: 69 H: 74 degrees F

NUMBER/CLASS OF CONTRACTOR'S PERSONNEL:	**MAJOR EQUIPMENT ON JOB:**
1 – USA Environment Operators/Crew 1 – USA Environment Superintendent 6 – Crawley Operators/Crew	John Deere 544k Loader (USA) Dynamic Acera SK16Lc Excavator (Crawley) 3 modular spud barges (Crawley) Link-Belt 250 X4 Long Front Excavator (Crawley)
TIDE INFORMATION:	**HEALTH AND SAFETY INFORMATION:**
Time: n/a **Height:** n/a	No incidents or near misses on this date.

CHRONOLOGICAL ACCOUNT OF DAY'S WORK:

0645 – Anchor QEA and USA personnel onsite.

0700 – Health and Safety tailgate held with Anchor QEA, USA, and Crawley.

0705 – Tailgate concludes. Construction activities begin.

0725 – Crawley personnel transport Dynamic Excavator and rock barges to Placement Area 3.

0800 – Rock placement begins at Placement Area 3.

1430 – Rock placement concludes at Placement Area 3.

1445 – Barges and personnel transported back to San Jacinto River Fleet property.

1530 – End-of-day tailgate held.

1545 – Anchor QEA, USA, and Crawley personnel offsite.

Summary of Progress on this Date:

- USA and Crawley continued to load Type D rock onto barges at the San Jacinto River Fleet property.
- Crawley continued placing rock in Placement Area 3 (Figure 1). Approximately 100 tons of rock were placed. Rock placement at Area 3 is partially complete.

DAILY REPORT

Persons Onsite on this Date:
Christian Patterson (Anchor QEA)
Ron Griffith (USA Superintendent)
Lee Fulcher (USA)
Troy Woodard (Crawley)
Dennis Moses (Crawley)
Mitchel Harmon (Crawley)
Russell Nelson (Crawley)
John Cline (Crawley)
Jason Ewell (Crawley)

Material Delivery Summary as of this Date:

Material	Units	Delivered (units)	Delivery Verification Method	Preceding Delivered Total	Total Delivered for Project
Type D Rock	Tons	0	Weigh Tickets	735	735

Material Placement Summary as of this Date:

Rock Placement Area	Units	Placed (units)	Placement Verification Method	Preceding Placement Total	Total Placed in Area
1	Tons	0	Barge Loads	40	40
2	Tons	0	Barge Loads	255	255
3	Tons	100	Barge Loads	280	380

TESTS PERFORMED:	None

PHONE LOG:
None

SITE PHOTOS/VIDEOS TAKEN: (attached below)	**FORCE ACCOUNT WORK/ CHANGES ENCOUNTERED:**
Two photographs with captions	None

AQ REPRESENTATIVE	Christian Patterson	HRS	9	DATE	4/2/2020

Photograph 1 – Rock being placed at Placement Area 3 with Dynamic Excavator.

Photograph 2 – Remaining stockpiled rock at San Jacinto River Fleet property as of 1400.

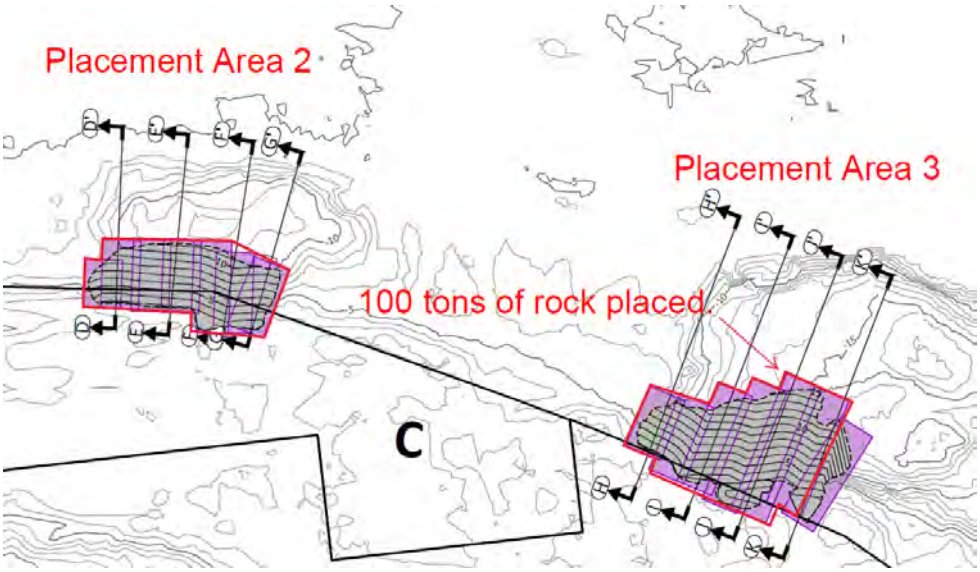


Figure 1 – CAD Detail of Placement Areas 2 and 3

ANCHOR QEA

DAILY REPORT

PROJECT	Post-Imelda Channel Maintenance	**CONTRACT NO.**	
CONTRACTOR	USA Environment / Crawley Shoreline Construction	**SUPERINTENDENT**	Ron Griffith
DAY OF WEEK & DATE:	Friday, April 3, 2020	**REPORT NO.**	10
WEATHER	Partly cloudy, 95% Humidity, Wind SE 5-10 mph	**TEMPERATURE**	L: 61 H: 76 degrees F

NUMBER/CLASS OF CONTRACTOR'S PERSONNEL:	**MAJOR EQUIPMENT ON JOB:**
1 – USA Environment Operators/Crew 1 – USA Environment Superintendent 7 – Crawley Operators/Crew 2 – Hydrographic Consultants Operators/Crew	John Deere 544k Loader (USA) Dynamic Acera SK16Lc Excavator (Crawley) 3 modular spud barges (Crawley) Link-Belt 250 X4 Long Front Excavator (Crawley)
TIDE INFORMATION:	**HEALTH AND SAFETY INFORMATION:**
Time: n/a **Height:** n/a	No incidents or near misses on this date.

CHRONOLOGICAL ACCOUNT OF DAY'S WORK:

0645 – Anchor QEA and USA personnel onsite.

0650 – Health and Safety tailgate held with Anchor QEA, USA, and Crawley.

0655 – Tailgate concludes. Construction activities begin.

0725 – Crawley personnel transport Dynamic Excavator and rock barges to Placement Area 3.

0730 – All stockpiled rock at San Jacinto River Fleet property loaded onto barges. No rock remains on property.

0755 – Rock placement begins at Placement Area 3.

0830 – Rock placement stops at Placement Area 3. Crawley personnel stand down for survey.

0900 – Hydrographic Consultants personnel onsite.

0930 – Surveyors begin survey of Placement Area 3

1350 – Surveyors conclude activities for the day.

1415 – Hydrographic Consultants offsite.

1430 – Rock placement at Placement Area 3 resumes.

1540 – Rock placement concludes at Placement Area 3.

1545 – Barges and personnel transported back to San Jacinto River Fleet property.

1610 – End-of-day tailgate held.

1630 – Anchor QEA, USA, and Crawley personnel offsite.

DAILY REPORT

Summary of Progress on this Date:

- USA and Crawley finished loading Type D rock onto barges at the San Jacinto River Fleet property.
- Crawley finished placing rock in Placement Area 3 (Figure 1). Approximately 45 tons of rock were placed. Rock placement at Area 3 is complete. Total placement is approximately 425 tons.
- Hydrographic Consultants began a post-bathymetric survey of Placement Area 3.

Persons Onsite on this Date:

Christian Patterson (Anchor QEA)
Ron Griffith (USA Superintendent)
Lee Fulcher (USA)
Troy Woodard (Crawley)
Dennis Moses (Crawley)
Mitchel Harmon (Crawley)
Russell Nelson (Crawley)
Jason Ewell (Crawley)
Ty Cooper (Crawley)
Eric Nelson (Crawley)
Miles Beck (Hydrographic Consultants)
Tim Seward (Hydrographic Consultants)

Material Delivery Summary as of this Date:

Material	Units	Delivered (units)	Delivery Verification Method	Preceding Delivered Total	Total Delivered for Project
Type D Rock	Tons	0	Weigh Tickets	735	735

Material Placement Summary as of this Date:

Rock Placement Area	Units	Placed (units)	Placement Verification Method	Preceding Placement Total	Total Placed in Area
1	Tons	0	Barge Loads	40	40
2	Tons	0	Barge Loads	255	255
3	Tons	45	Barge Loads	380	425

TESTS PERFORMED:	None

PHONE LOG:
None

SITE PHOTOS/VIDEOS TAKEN: (attached below)	**FORCE ACCOUNT WORK/ CHANGES ENCOUNTERED:**
Two photographs with captions	None

AQ REPRESENTATIVE	Christian Patterson	HRS	9.5	DATE	4/3/2020

Photograph 1 – Rock being placed at Placement Area 3 with Dynamic Excavator.

Photograph 2 – Bathymetric survey being conducted at Placement Areas.

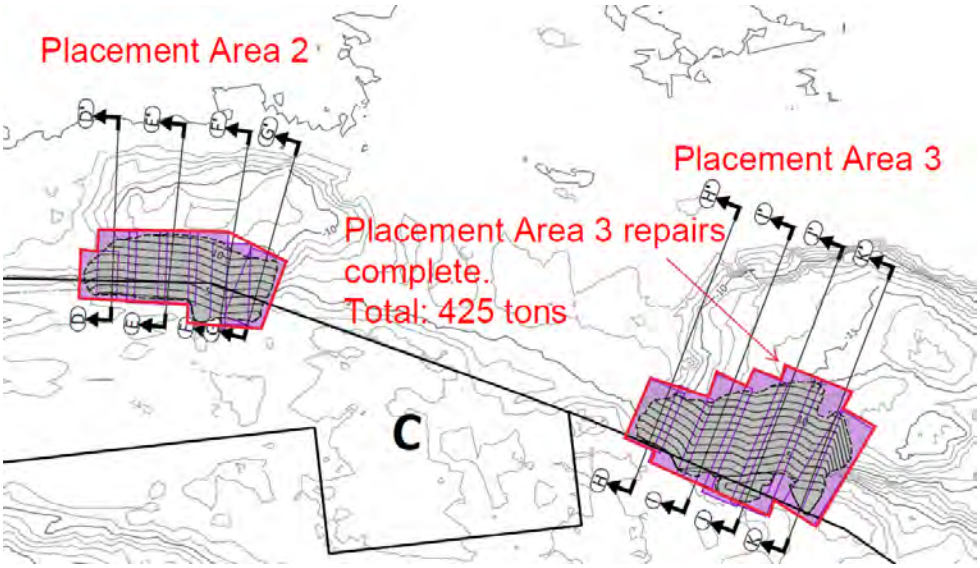


Figure 1 – CAD Detail of Placement Areas 2 and 3

ANCHOR QEA

DAILY REPORT

PROJECT	Post-Imelda Channel Maintenance	**CONTRACT NO.**	
CONTRACTOR	USA Environment / Crawley Shoreline Construction	**SUPERINTENDENT**	Ron Griffith
DAY OF WEEK & DATE:	Monday, April 6, 2020	**REPORT NO.**	11
WEATHER	Overcast, 95% Humidity, Wind SE 5-10 mph	**TEMPERATURE**	L: 70 H: 74 degrees F

NUMBER/CLASS OF CONTRACTOR'S PERSONNEL:	**MAJOR EQUIPMENT ON JOB:**
1 – USA Environment Superintendent 7 – Crawley Operators/Crew 2 – Hydrographic Consultants Operators/Crew	John Deere 544k Loader (USA) Dynamic Acera SK16Lc Excavator (Crawley) 3 modular spud barges (Crawley) Link-Belt 250 X4 Long Front Excavator (Crawley)
TIDE INFORMATION:	**HEALTH AND SAFETY INFORMATION:**
Time: n/a **Height:** n/a	No incidents or near misses on this date.

CHRONOLOGICAL ACCOUNT OF DAY'S WORK:

0645 – Anchor QEA and USA personnel onsite.

0655 – Health and Safety tailgate held with Anchor QEA, USA, and Crawley.

0705 – Tailgate concludes. Construction activities begin.

0725 – Crawley personnel transport Dynamic Excavator and rock barges to Placement Area 3.

0745 – Rock placement corrections begin at Placement Area 3.

0825 – Hydrographic Consultants personnel onsite.

0830 – Rock placement stops at Placement Area 3. Crawley personnel re-position to Placement Area 2.

0900 – Surveyors continue post-bathymetric survey of Placement Areas 3 and 2, consecutively.

1540 – Rock placement corrections conclude.

1540 – Barges and personnel transported back to San Jacinto River Fleet property.

1605 – End-of-day tailgate held for Crawley personnel.

1615 – Anchor QEA and Crawley personnel offsite.

1715 – Surveyors conclude activities for the day.

1730 – USA and Hydrographic Consultants personnel offsite.

DAILY REPORT

Summary of Progress on this Date:

- Crawley conducted rock placement corrections based on post-bathymetric surveys in Placement Areas 2 and 3 (Figure 1).
- Hydrographic Consultants continued conducting a post-bathymetric survey of Placement Area 3 and began subsequent survey of Placement Area 2.

Persons Onsite on this Date:

Christian Patterson (Anchor QEA)
Ron Griffith (USA Superintendent)
Troy Woodard (Crawley)
Dennis Moses (Crawley)
Mitchel Harmon (Crawley)
Russell Nelson (Crawley)
Jason Ewell (Crawley)
Ty Cooper (Crawley)
Eric Nelson (Crawley)
Miles Beck (Hydrographic Consultants)
Tim Seward (Hydrographic Consultants)

Material Delivery Summary as of this Date:

Material	Units	Delivered (units)	Delivery Verification Method	Preceding Delivered Total	Total Delivered for Project
Type D Rock	Tons	0	Weigh Tickets	735	735

Material Placement Summary as of this Date:

Rock Placement Area	Units	Placed (units)	Placement Verification Method	Preceding Placement Total	Total Placed in Area
1	Tons	0	Barge Loads	40	40
2	Tons	0	Barge Loads	255	255
3	Tons	0	Barge Loads	425	425

TESTS PERFORMED:	None

PHONE LOG:
None

SITE PHOTOS/VIDEOS TAKEN: (attached below)	**FORCE ACCOUNT WORK/ CHANGES ENCOUNTERED:**
One photograph with caption	None

AQ REPRESENTATIVE	Christian Patterson	HRS	9	DATE	4/6/2020

Photograph 1 – Bathymetric survey and rock placement corrections being conducted at Placement Areas 2 and 3.

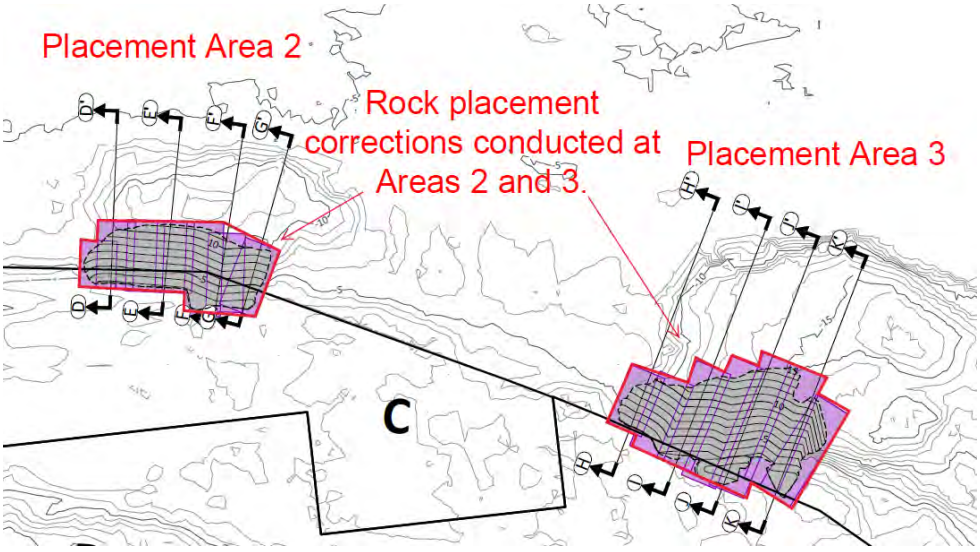


Figure 1 – CAD Detail of Placement Areas 2 and 3

ANCHOR QEA

DAILY REPORT

PROJECT	Post-Imelda Channel Maintenance	**CONTRACT NO.**	
CONTRACTOR	USA Environment / Crawley Shoreline Construction	**SUPERINTENDENT**	Ron Griffith
DAY OF WEEK & DATE:	Tuesday, April 7, 2020	**REPORT NO.**	12
WEATHER	Mostly cloudy, 100% Humidity, Wind S 5 mph	**TEMPERATURE**	L: 71 H: 83 degrees F

NUMBER/CLASS OF CONTRACTOR'S PERSONNEL:	**MAJOR EQUIPMENT ON JOB:**
1 – USA Environment Superintendent 3 – Crawley Operators/Crew 2 – Hydrographic Consultants Operators/Crew	John Deere 544k Loader (USA) Dynamic Acera SK16Lc Excavator (Crawley) 3 modular spud barges (Crawley) Link-Belt 250 X4 Long Front Excavator (Crawley)
TIDE INFORMATION:	**HEALTH AND SAFETY INFORMATION:**
Time: n/a **Height:** n/a	No incidents or near misses on this date.

CHRONOLOGICAL ACCOUNT OF DAY'S WORK:

0645 – Anchor QEA and USA personnel onsite.

0655 – Health and Safety tailgate held with Anchor QEA, USA, and two Crawley personnel.

0700 – Tailgate concludes. Crawley personnel begin barge maintenance activities.

0715 – Conference call between USA and Anchor QEA superintendents.

0845 – Hydrographic Consultants personnel onsite.

1250 – Crawley excavator operator onsite.

1310 – Crawley personnel transport Dynamic Excavator to Placement Areas 2 and 3.

1325 – Rock placement corrections begin at Placement Areas 2 and 3 with assistance from Hydrographic Consultants.

1615 – Rock placement corrections conclude.

1620 – Barge and personnel transported back to San Jacinto River Fleet property.

1625 – Surveyors conclude activities for the day.

1650 – End-of-day tailgate held for Crawley personnel.

1700 – Anchor QEA, USA, Crawley, and Hydrographic Consultants personnel offsite.

Summary of Progress on this Date:

- Crawley continued rock placement corrections based on post-bathymetric surveys in Placement Areas 2 and 3 (Figure 1).
- Hydrographic Consultants assisted Crawley personnel in identifying problem areas in Placement Areas 2 and 3.

DAILY REPORT

Persons Onsite on this Date:
Christian Patterson (Anchor QEA)
Ron Griffith (USA Superintendent)
Troy Woodard (Crawley)
Dennis Moses (Crawley)
Jason Ewell (Crawley)
Miles Beck (Hydrographic Consultants)
Scott McDonald (Hydrographic Consultants)

Material Delivery Summary as of this Date:

Material	Units	Delivered (units)	Delivery Verification Method	Preceding Delivered Total	Total Delivered for Project
Type D Rock	Tons	0	Weigh Tickets	735	735

Material Placement Summary as of this Date:

Rock Placement Area	Units	Placed (units)	Placement Verification Method	Preceding Placement Total	Total Placed in Area
1	Tons	0	Barge Loads	40	40
2	Tons	0	Barge Loads	255	255
3	Tons	0	Barge Loads	425	425

TESTS PERFORMED:	None

PHONE LOG:
None

SITE PHOTOS/VIDEOS TAKEN: (attached below)	**FORCE ACCOUNT WORK/ CHANGES ENCOUNTERED:**
One photograph with caption	None

AQ REPRESENTATIVE	Christian Patterson	HRS	10	DATE	4/7/2020

Photograph 1 – Rock placement corrections being conducted at Placement Areas 2 and 3 with assistance from surveyors.

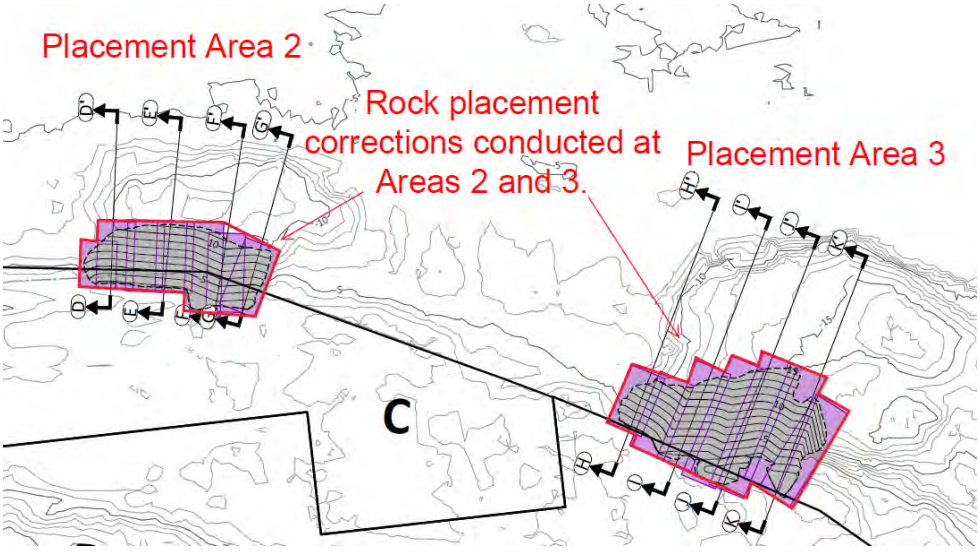


Figure 1 – CAD Detail of Placement Areas 2 and 3

ANCHOR QEA

DAILY REPORT

PROJECT	Post-Imelda Channel Maintenance	**CONTRACT NO.**	
CONTRACTOR	USA Environment / Crawley Shoreline Construction	**SUPERINTENDENT**	Ron Griffith
DAY OF WEEK & DATE:	Thursday, April 9, 2020	**REPORT NO.**	13
WEATHER	Cloudy, 70% Humidity, Wind NW 5 mph	**TEMPERATURE**	L: 67 H: 86 degrees F

NUMBER/CLASS OF CONTRACTOR'S PERSONNEL:	**MAJOR EQUIPMENT ON JOB:**
1 – USA Environment Superintendent 5 – Crawley Operators/Crew 2 – Hydrographic Consultants Operators/Crew	Dynamic Acera SK16Lc Excavator (Crawley) 3 modular spud barges (Crawley) Link-Belt 250 X4 Long Front Excavator (Crawley)
TIDE INFORMATION:	**HEALTH AND SAFETY INFORMATION:**
Time: n/a **Height:** n/a	No incidents or near misses on this date.

CHRONOLOGICAL ACCOUNT OF DAY'S WORK:

0640 – Anchor QEA and USA personnel onsite.

0645 – Health and Safety tailgate held with Anchor QEA, USA, and two Crawley personnel.

0655 – Tailgate concludes. Crawley personnel begin barge maintenance activities.

0720 – Crawley personnel transport Dynamic Excavator to Placement Areas.

0730 – Hydrographic Consultants personnel onsite.

0735 – Trucks arrive at San Jacinto River Fleet property to offload Type-D rock from Blue Bonnet.

0750 – Rock placement corrections begin at Placement Areas with assistance from Hydrographic Consultants.

1345 – Rock placement corrections conclude.

1400 – Surveyors conclude activities for the day. Crawley personnel return buoys to original positions.

1430 – Barges and personnel transported back to San Jacinto River Fleet property.

1455 – End-of-day tailgate held for Crawley personnel.

1500 – Anchor QEA, USA, Crawley, and Hydrographic Consultants personnel offsite.

Summary of Progress on this Date:

- Approximately 48 cubic yards (72 tons) of Type-D rock were delivered to San Jacinto River Fleet property from Blue Bonnet. Rock was used in Placement Areas to fill void space.
- Hydrographic Consultants performed post-bathymetric surveys and assisted Crawley personnel in identifying rework in Placement Areas.
- Crawley finished rock placement corrections based on post-bathymetric surveys in Placement Areas 1, 2, and 3 (Figures 1 and 2).

ANCHOR QEA

DAILY REPORT

Persons Onsite on this Date:
Christian Patterson (Anchor QEA)
Ron Griffith (USA Superintendent)
Troy Woodard (Crawley)
Russell Nelson (Crawley)
Mitchel Harmon (Crawley)
Ty Cooper (Crawley)
Jason Ewell (Crawley)
Miles Beck (Hydrographic Consultants)
Scott McDonald (Hydrographic Consultants)

Material Delivery Summary as of this Date:

Material	Units	Delivered (units)	Delivery Verification Method	Preceding Delivered Total	Total Delivered for Project
Type D Rock	Tons	72	Weigh Tickets	735	807

Material Placement Summary as of this Date:

Rock Placement Area	Units	Placed (units)	Placement Verification Method	Preceding Placement Total	Total Placed in Area
1	Tons	0	Barge Loads	40	40
2	Tons	50	Barge Loads	255	305
3	Tons	22	Barge Loads	425	447

TESTS PERFORMED:	None

PHONE LOG:
None

SITE PHOTOS/VIDEOS TAKEN: (attached below)	**FORCE ACCOUNT WORK/ CHANGES ENCOUNTERED:**
Three photographs with captions	None

AQ REPRESENTATIVE	Christian Patterson	HRS	9	DATE	4/9/2020

Photograph 1 – Rock from Blue Bonnet being delivered to San Jacinto River Fleet property.

Photograph 2 – Rock placement corrections being conducted at Placement Areas with assistance from surveyors.

Photograph 3 – View of Placement Areas and buoys from cap after corrective measures.

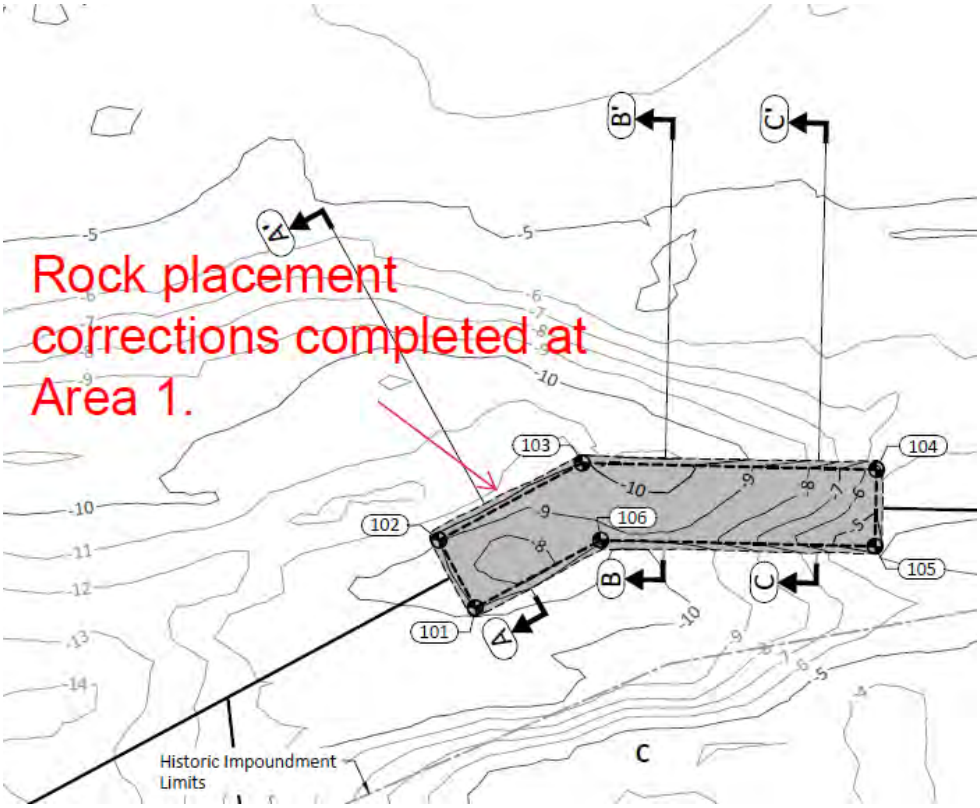


Figure 1 – CAD Detail of Placement Area 1

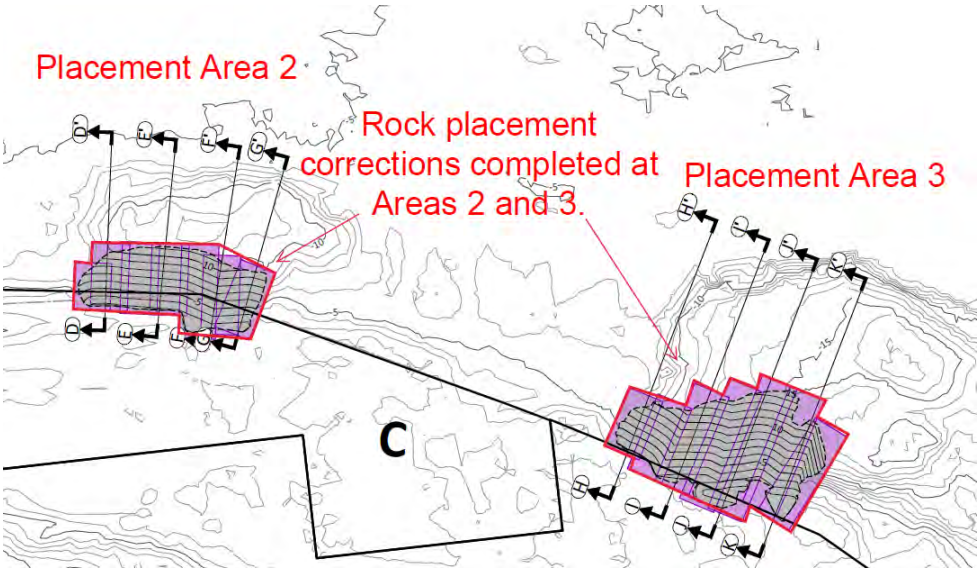
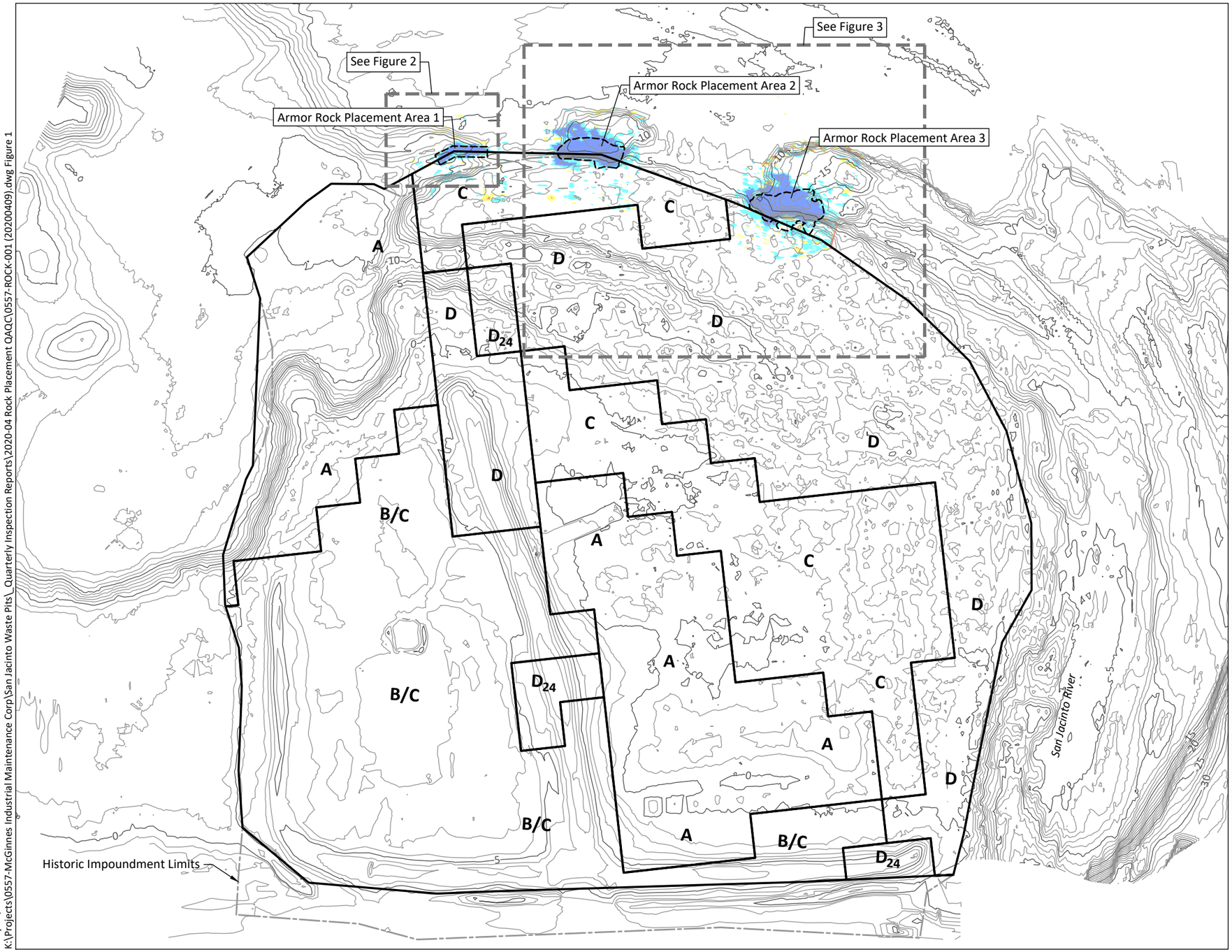


Figure 2 – CAD Detail of Placement Areas 2 and 3

Attachment 3
Post-Construction Survey Results



LEGEND:

- September 2019 Post-Flood Bathymetric and Topographic Contours (1-Foot Interval)
- B/C — Armored Cap Type and Boundary
- Historic Impoundment Limits
- Rock Armor Placement Area (See Figures 2 and 3)
- > 1.0-Foot Increase
- 0.5-Foot Increase to 1.0-Foot Increase
- 0.5-Foot Increase to 0.5-Foot Decrease
- 0.5-Foot Decrease to 1.0-Foot Decrease
- > 1.0-Foot Decrease
- 30' x 30' — Example 30-Foot x 30-Foot Area

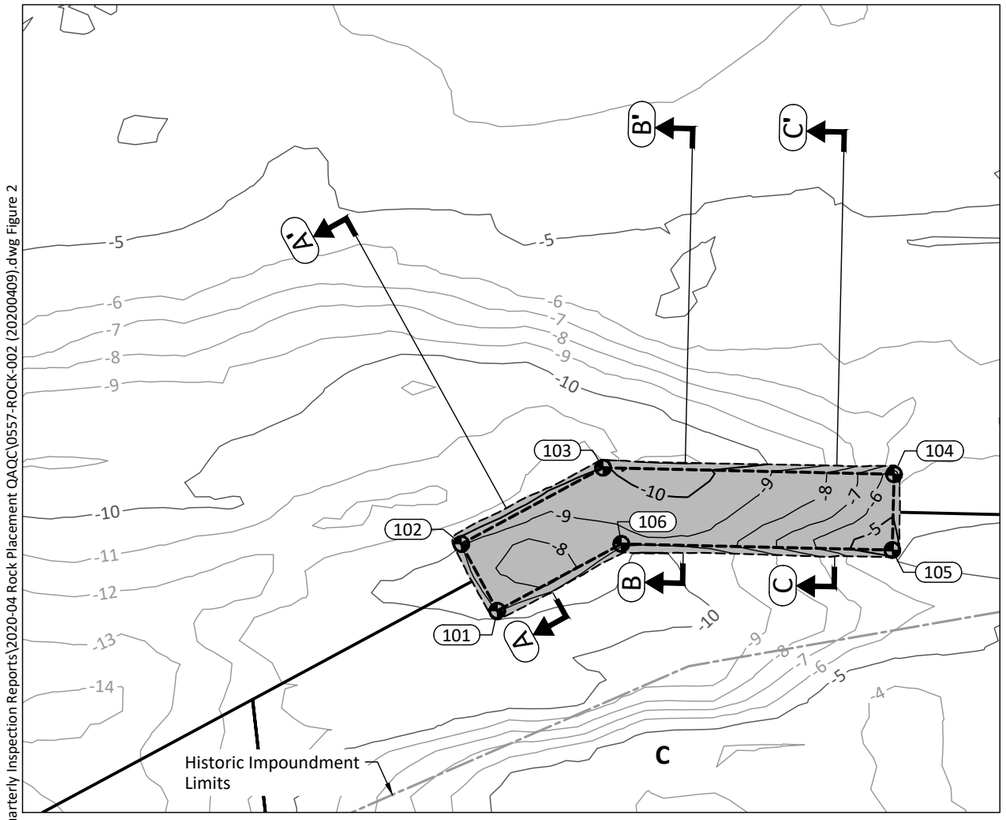
SOURCE: Drawing prepared from surveys provided by Hydrographic Consultants dated September 2019, March 25, 2020 and April 9, 2020.
HORIZONTAL DATUM: Texas State Plane South Central, North American Datum of 1983 (NAD83), U.S. Survey Feet
VERTICAL DATUM: North American Vertical Datum of 1988 (NAVD 88)

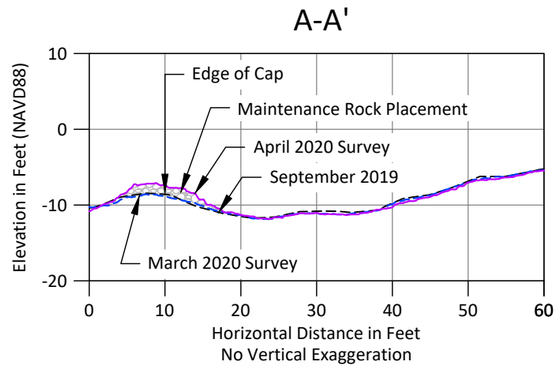
0 120
Scale in Feet

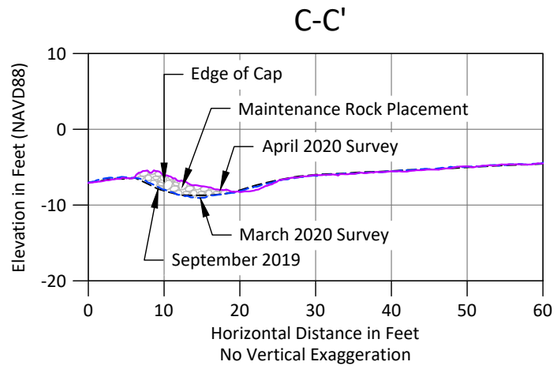
May 01, 2020 6:44am dholmer
K:\Projects\0557-McGinnes Industrial Maintenance Corp\San Jacinto Waste Pits_Quarterly Inspection Reports\2020-04 Rock Placement QAQC\0557-ROCK-001 (20200409).dwg Figure 1

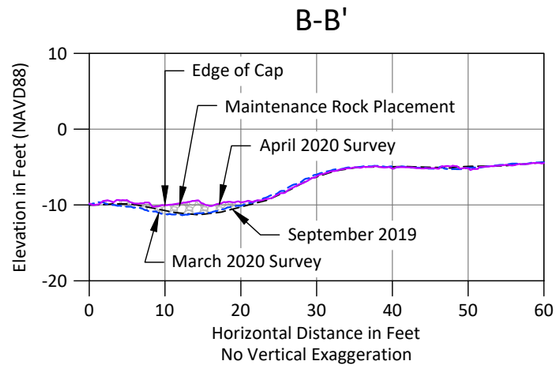
ANCHOR QEA

Figure 1
Site-Wide Plan View
Post-Tropical Storm Imelda Work Plan
San Jacinto River Waste Pits Superfund Site









LEGEND:

- September 2019 Post-Flood Bathymetric and Topographic Contours (1-Foot Interval)
- Proposed Rock Armor Placement Area Contours (1-Foot Interval)
- B/C — Armored Cap Type and Boundary
- Historic Impoundment Limits
- 1' Thick Rock Armor Placement Area
- A — Section Location and Designation
- 106 — Control Point Location and Number

CONTROL POINTS		
POINT #	NORTHING	EASTING
101	13858005.7	3217148.6
102	13858015.7	3217148.2
103	13858016.4	3217169.5
104	13857998.5	3217203.5
105	13857989.7	3217198.8
106	13858006.3	3217167.1

SOURCE: Drawing prepared from surveys provided by Hydrographic Consultants dated September 2019, March 25, 2020 and April 9, 2020.
HORIZONTAL DATUM: Texas State Plane South Central, North American Datum of 1983 (NAD83), U.S. Survey Feet
VERTICAL DATUM: North American Vertical Datum of 1988 (NAVD 88)

0 20
Scale in Feet

May 01, 2020 6:44am dholmer
K:\Projects\0557-McGinnes Industrial Maintenance Corp\San Jacinto Waste Pits_Quarterly Inspection Reports\2020-04 Rock Placement QAQC\0557-ROCK-002 (20200409).dwg Figure 2

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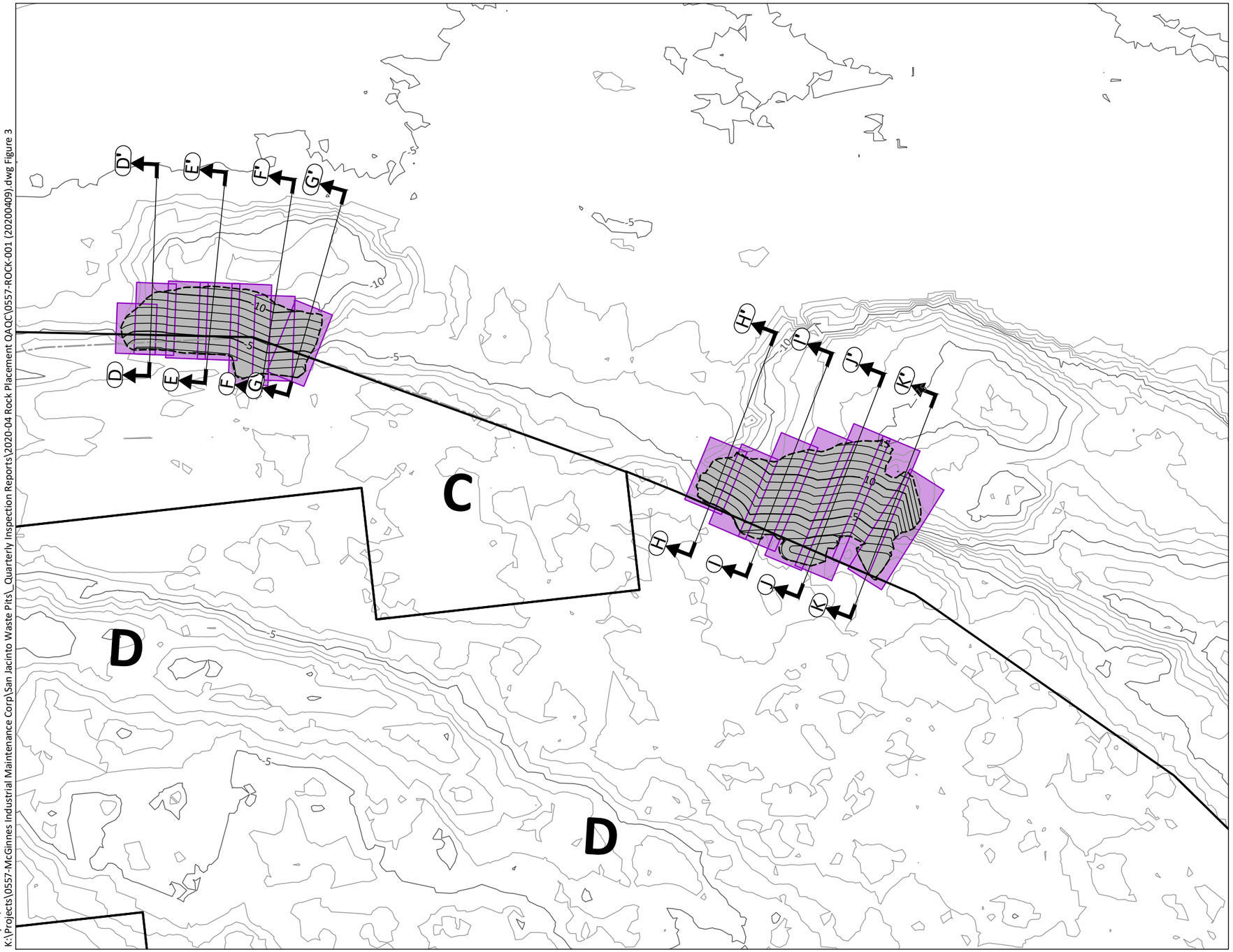
Figure 2
Armor Rock Placement Area 1
Post-Tropical Storm Imelda Work Plan
San Jacinto River Waste Pits Superfund Site



LEGEND:

- September 2019 Post-Flood Bathymetric and Topographic Contours (1-Foot Interval)
- Proposed Rock Armor Placement Area Contours (1-Foot Interval)
- Rock Armor Placement Area
- Geotextile Panel Location (Assuming 15 Foot-Wide Panels with 3' Overlap)
- Minimum 1-Foot Overlay of Type D Rock on Excess Geotextile
- B/C — Armored Cap Type and Boundary
- (D) — Cross Section Location and Designation (See Figures 4, 5, 6, and 7)

NOTES:

1. Geotextile panel locations are for conceptual purposes only. Actual panel locations to be determined by the contractor.
2. For areas of excess geotextile not covered by the Rock Armor Placement Areas, contractor to cover with minimum 1-foot overlay of Type D rock.

SOURCE: Drawing prepared from surveys provided by Hydrographic Consultants dated September 2019, March 25, 2020, and April 9, 2020.
HORIZONTAL DATUM: Texas State Plane South Central, North American Datum of 1983 (NAD83), U.S. Survey Feet
VERTICAL DATUM: North American Vertical Datum of 1988 (NAVD 88)

0 40
Scale in Feet

May 01, 2020 6:44am dholmer
K:\Projects\0557-McGinnes Industrial Maintenance Corp\San Jacinto Waste Pits_Quarterly Inspection Reports\2020-04 Rock Placement QAQC\0557-ROCK-001 (20200409).dwg Figure 3

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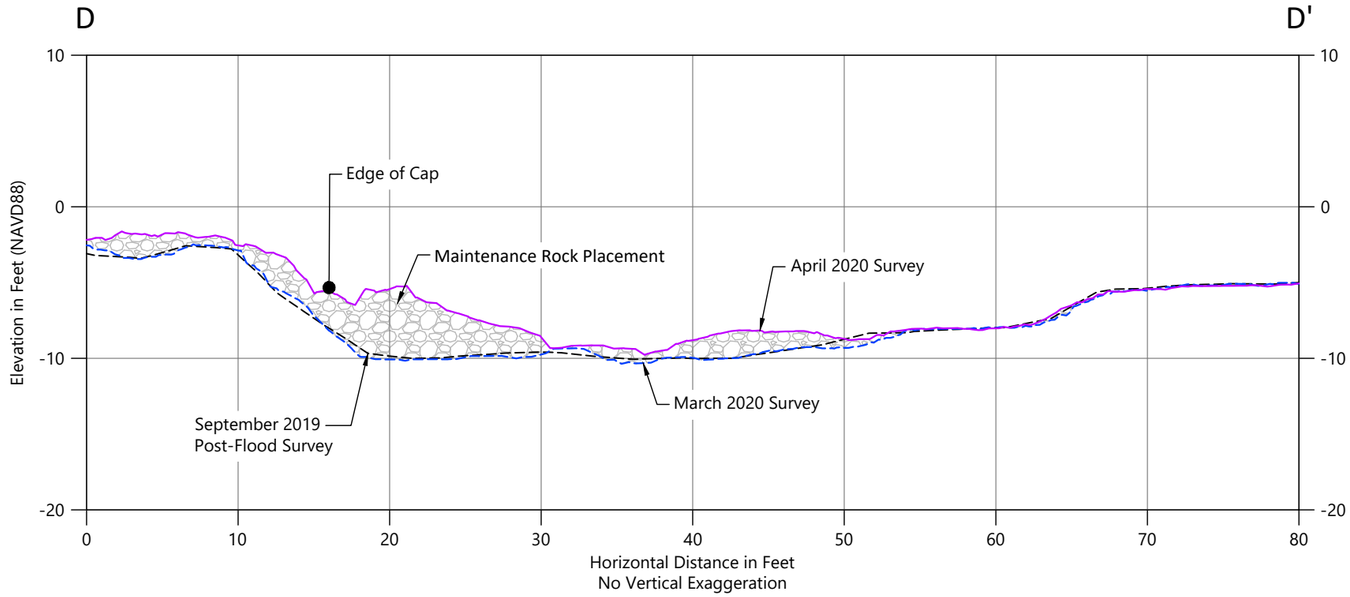
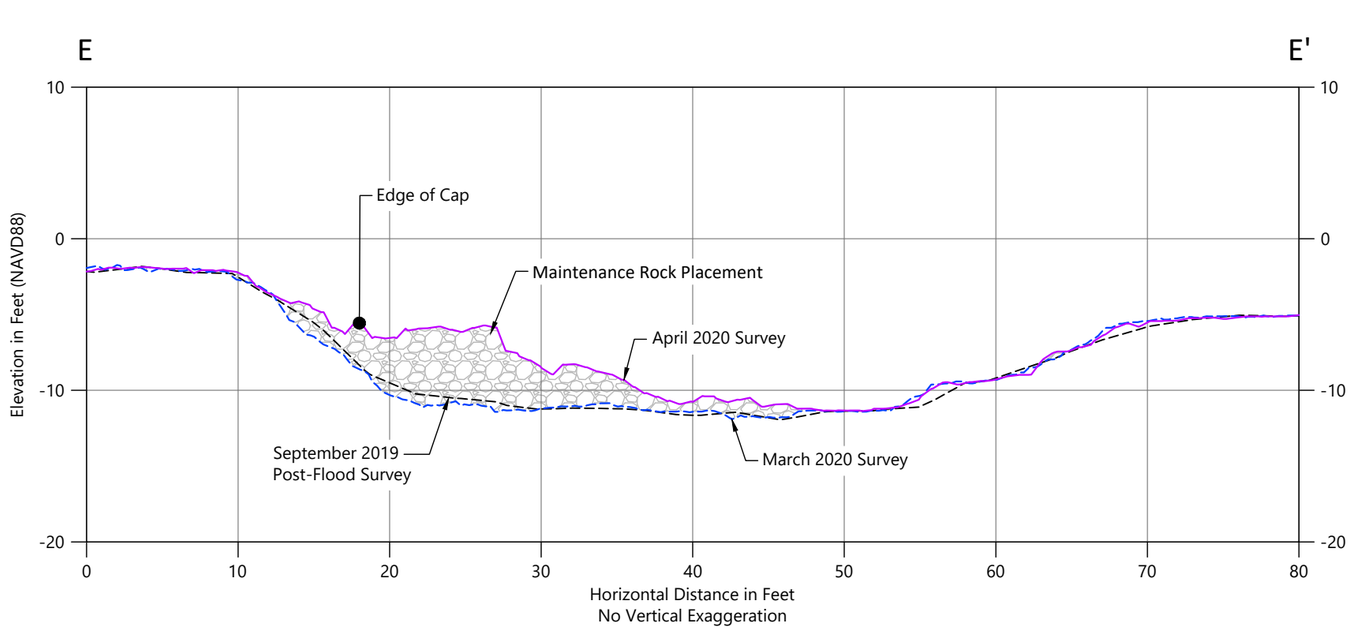
Figure 3
Plan View of Armor Rock Placement Areas 2 and 3
Post-Tropical Storm Imelda Work Plan
San Jacinto River Waste Pits Superfund Site





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K:\Projects\0557-McGinnes Industrial Maintenance Corp\San Jacinto Waste Pits_Quarterly Inspection Reports\2020-04 Rock Placement QAQC\0557-ROCK-001 (20200409).dwg Figure 4

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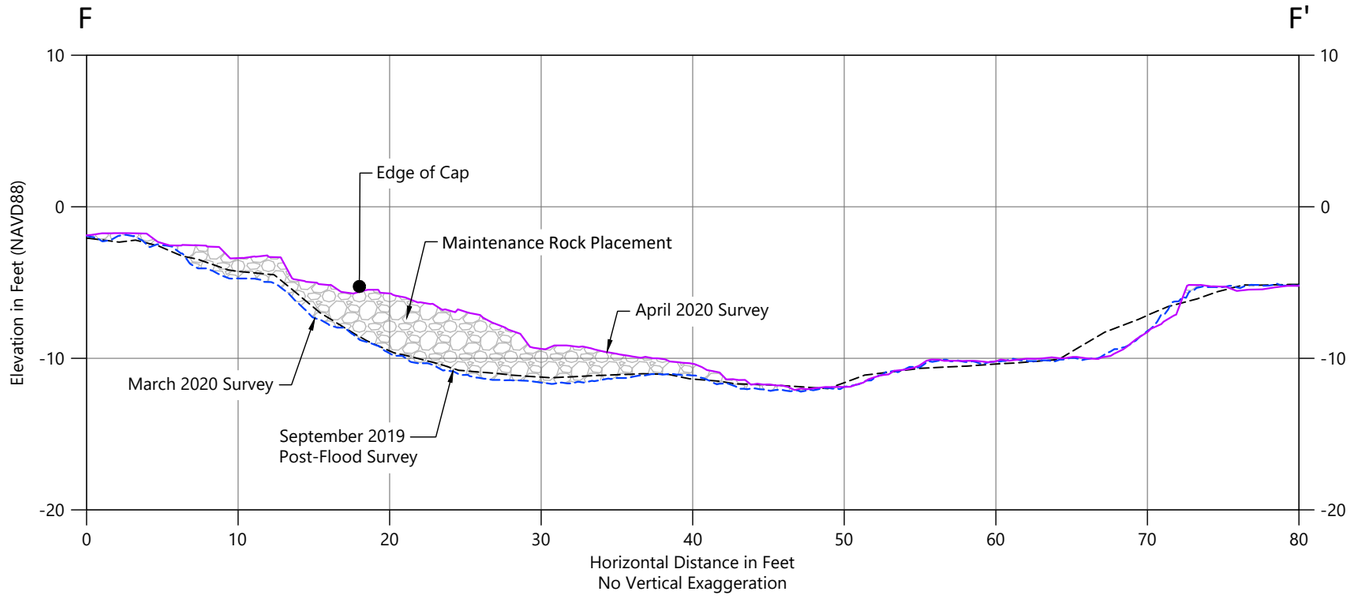
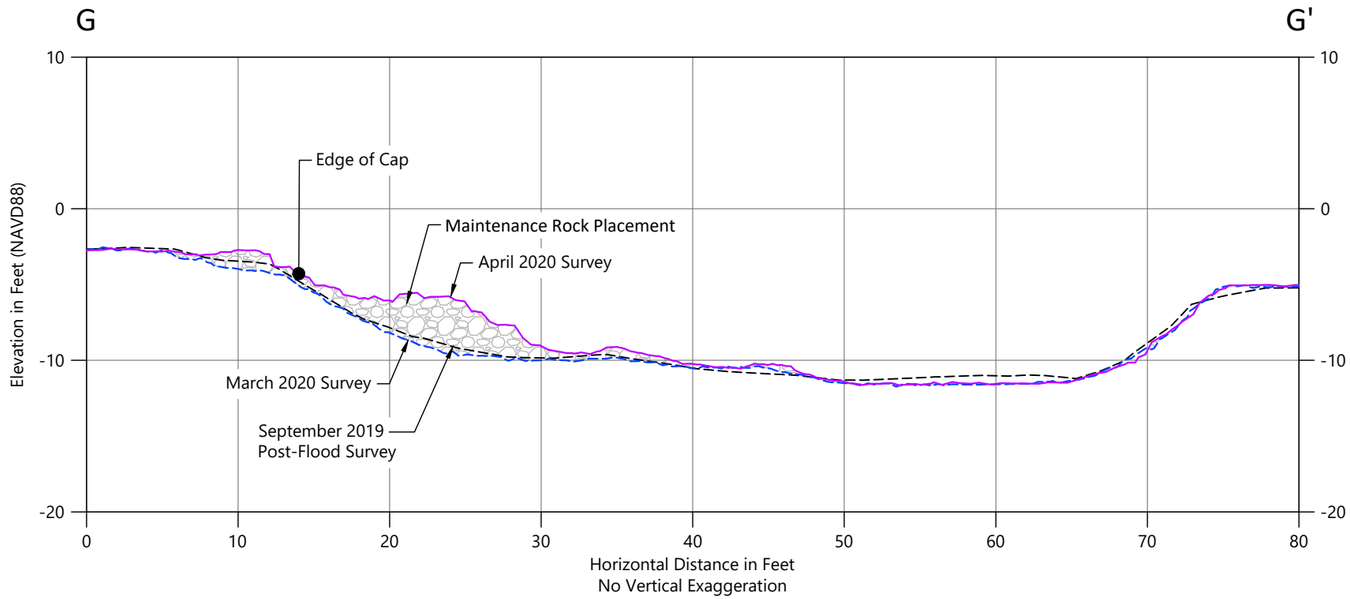
Figure 4
Armor Rock Placement Area 2 Cross Sections
Post-Tropical Storm Imelda Work Plan
San Jacinto River Waste Pits Superfund Site





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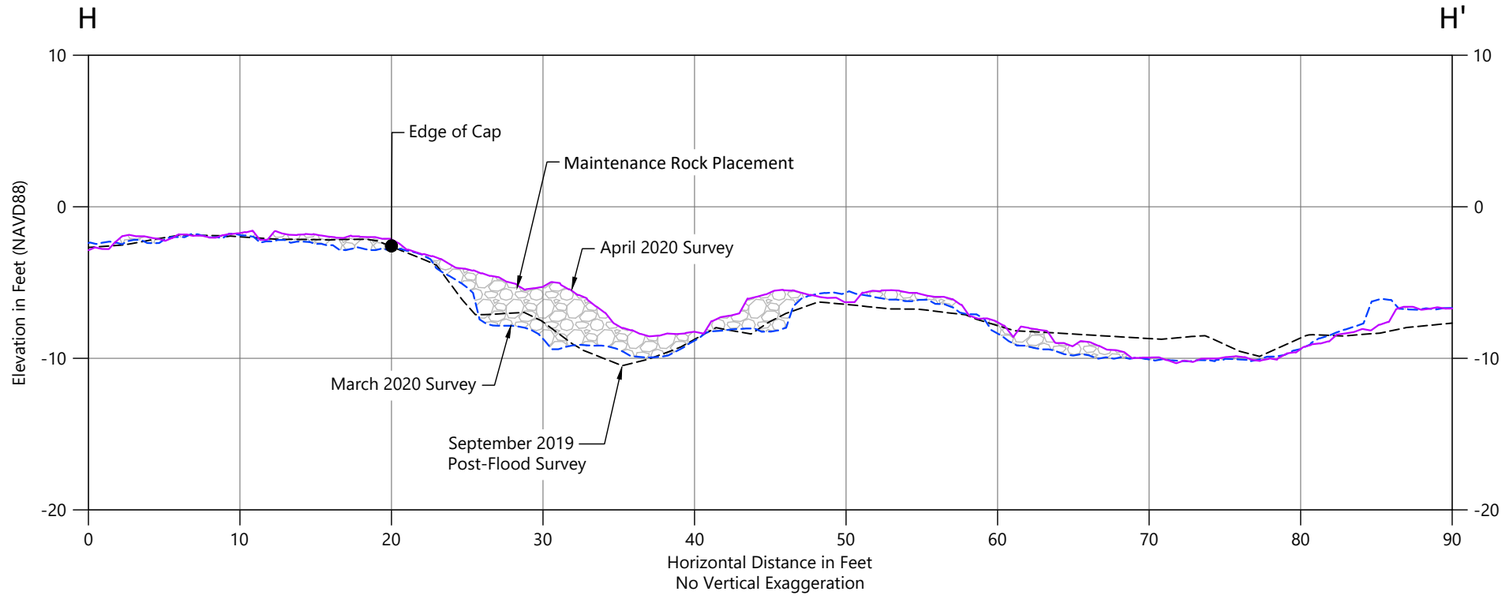
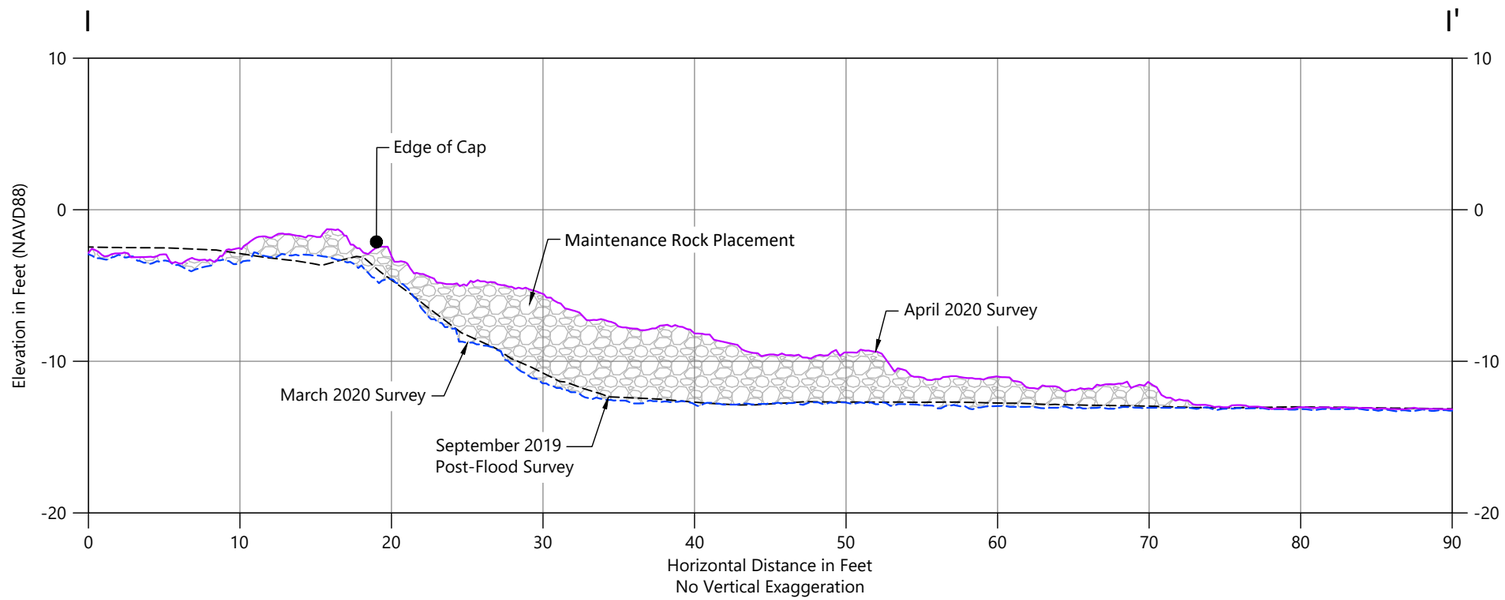
K:\Projects\0557-McGinnes Industrial Maintenance Corp\San Jacinto Waste Pits_Quarterly Inspection Reports\2020-04 Rock Placement QAQC\0557-ROCK-001 (20200409).dwg Figure 5

ANCHOR QEA

Figure 5
Armor Rock Placement Area 2 Cross Sections
Post-Tropical Storm Imelda Work Plan
San Jacinto River Waste Pits Superfund Site





May 01, 2020 6:45am dholmer
K:\Projects\0557-McGinnes Industrial Maintenance Corp\San Jacinto Waste Pits_Quarterly Inspection Reports\2020-04 Rock Placement QAQC\0557-ROCK-001 (20200409).dwg Figure 6

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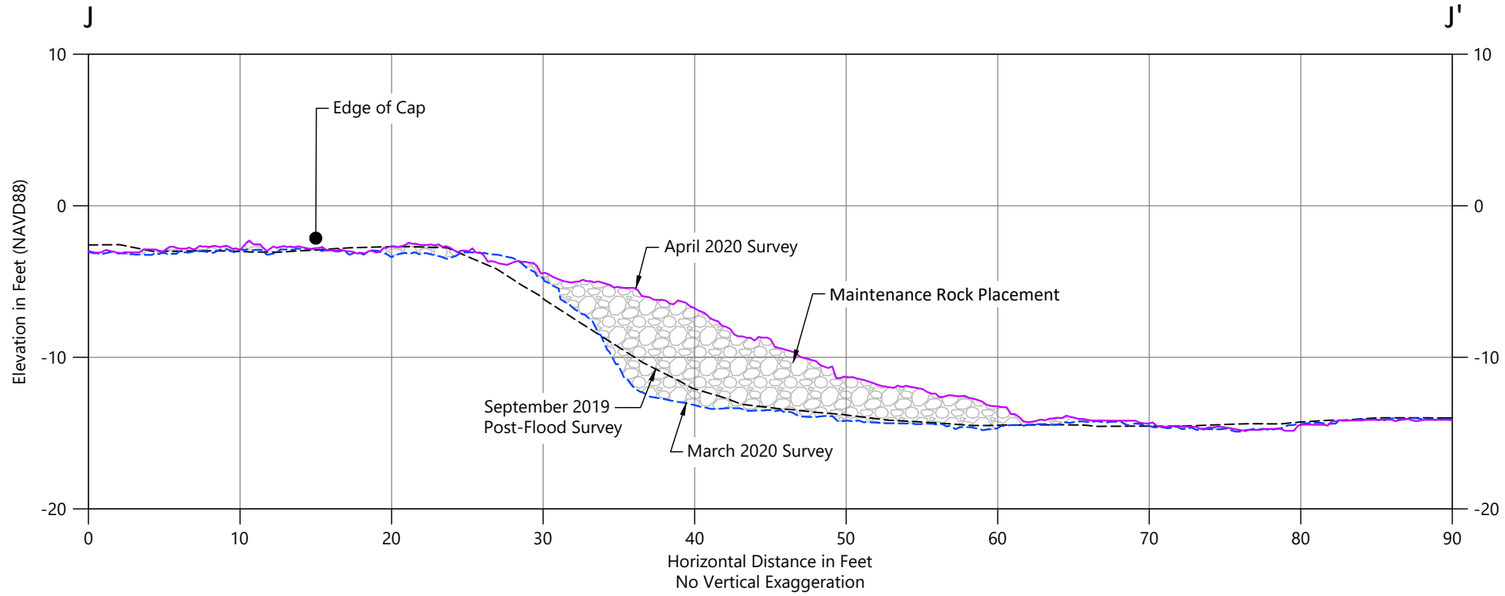
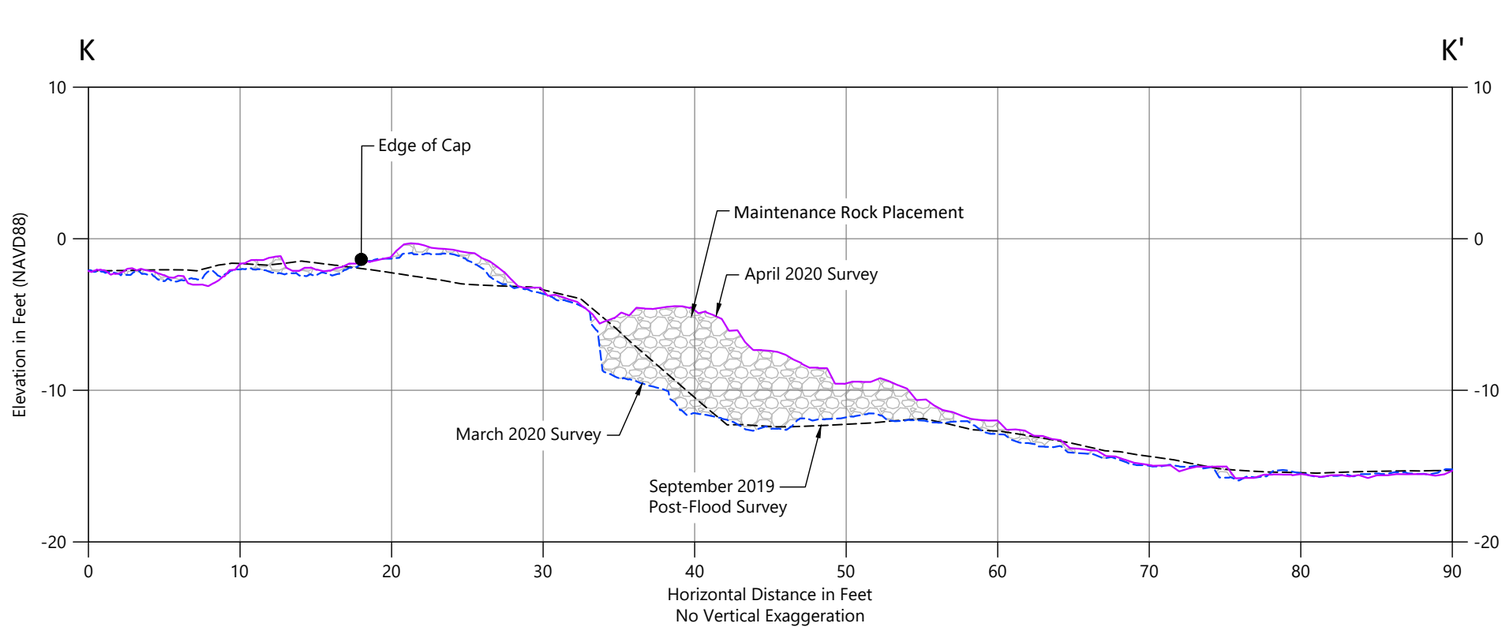
Figure 6
Armor Rock Placement Area 3 Cross Sections
Post-Tropical Storm Imelda Work Plan
San Jacinto River Waste Pits Superfund Site





May 01, 2020 6:45am dholmer
K:\Projects\0557-McGinnes Industrial Maintenance Corp\San Jacinto Waste Pits_Quarterly Inspection Reports\2020-04 Rock Placement QAQC\0557-ROCK-001 (20200409).dwg Figure 7

ANCHOR QEA

Figure 7
Armor Rock Placement Area 3 Cross Sections
Post-Tropical Storm Imelda Work Plan
San Jacinto River Waste Pits Superfund Site