CITY OF CORONA
Department of Water and Power
WRF3 Sewer Lift Station
CONTRACT CHANGE ORDER NO. 2

PROJECT DESCRIPTION: Construct a sewer lift station.

PROJECT NO: NIB 21-012CA, 2018-11 **PURCHASE ORDER NO:** P21893

CONTRACTOR: Pacific HydroTech Corporation **JL NO:** 69880572

DESCRIPTION OF CHANGES AND/OR EXTRA WORK: Extra work to install lift station shoring resulting from unknown groundwater conditions.

The Contractor is hereby directed to make the herein described changes from the plans and specifications and/or perform the following described work not included in the Plans and Specifications for this project.

ITEM	DESCRIPTION	U/M	QUANTITY	UNIT PRICE	TOTAL
5	Install soldier beam and steel plate shoring system in unexpected groundwater conditions.	LS	1.00	$130,394.49	$130,394.49
TOTAL ESTIMATED PRICE FOR THIS CHANGE ORDER:					$130,394.49

This document shall become an amendment to the Contract and all provisions of the Contract will apply hereto. This Change Order constitutes a complete and final resolution of all claims of the Contract for additional time or additional compensation related to or affected by work that is the subject of this Change Order. Quantities of items other than Lump Sum are not to exceed the amounts indicated.

JUSTIFICATION:

A time extension of 84 working days to complete the project is granted. The time extension of 45 days granted in CCO#1 corrected an administrative error in the purchase order and did not affect the original completion date. See details below.

Item 5	The exploratory work performed by NMG Geotechnical, Inc. in May 2017 for the geotechnical study and report included two borings to 27 feet below ground surface (BGS). No groundwater was observed in either boring. The geotechnical report was provided as an appendix to the bid documents and a reference for contractors bidding the job. The shoring sub-contractor began drilling the first soldier pile for the shoring system on 2/22/2021 and encountered groundwater on 2/24/2021. The remaining work encountered groundwater consistently at 21 ft BGS. The shoring system design prepared by the shoring sub-contractor includes installation of 22 soldier piles to approximately 37 feet below ground and steel plates and lagging between the piles to approximately 27-30 feet below ground. The productivity impact caused by the unknown groundwater conditions has been estimated at 4.5 hours per soldier pile plus additional equipment and materials costs based on daily inspection records and cost information provided by the contractor. The contract change order for **$130,394.49** includes all extra work of any nature associated with installation of the shoring system. The contractor has requested 84 noncompensable additional working days on the contract.

CONTRACT VARIANCE SUMMARY

CCO #	Amount	%	Time Working Days	Date Approved
1	$9,359.75	0.18%	*45*	5/5/2021
2	$130,394.49	2.50%	84	6/9/2021
Total	$139,754.24	2.68%	84	Number of days impacting the schedule.
Original Contract Amount:		$5,208,096.00		Revised Contract Amount: $5,347,850.24
Date Started: 01/4/2021		Original Completion Date:	2/8/2022	Revised Completion Date: 6/8/2022

AUTHORIZATION BY CITY:

Recommended for approval by:

_____ Date: 6/10/2021
Steve Patterson
Consultant Construction Manager

Gull Nawaz _____ Date: 6/10/2021
Gull Nawaz
Project Manager

Approved by:

Vernon R. Weisman _____ Date: 6/10/2021
Vernon R. Weisman, P.E.
District Engineer

Savat Khamphou _____ Date: 6/14/2021
Savat Khamphou
Acting Public Works Director & City Engineer

Tom Moody _____ Date: 6/14/2021
Tom Moody
DWP General Manager

ACCEPTANCE BY CONTRACTOR:

We, the undersigned Contractor, have given careful consideration to the above described changes and/or extra work and hereby agree that said work is the subject of this Change Order. Quantities of items other than Lump Sum are not to exceed the amounts indicated.

Accepted by: Greg Chehey _____ Title: Project Manager
(Please print name and title)

Signature: Greg Chehey _____ Date: 6/10/2021

DocuSign Envelope ID: 79225A20-BF10-4B73-B3DF-ECC43A56F7D5

PACIFIC HYDROTECH CORPORATION
314 E. 3RD ST, PERRIS, CA 92570
(951) 943-8803 FAX (951) 943-1093

June 9, 2021

City of Corona
755 Public Safety Way
Corona, CA 92880

Attn: Vernon Weisman

Reference: WRF-3 Lift Station Project
Project No. 2018-11

Subject: Proposal for Changed Conditions - FINAL

The following is our revised proposal for the subject changed conditions. This proposal reflects our agreement with the City's letter dated June 7, 2021, accepting a total extra work cost of $130,394.49 as shown in the City's attached cost adjustment work sheet. PHC has corrected and attached our backup worksheet to reflect the agreed changes:

TOTAL Extra Work as Agreed $130,394.49

PHC is also requesting that this change order include a non-compensable time extension to the contract completion date of 84 working Days to the new proposed contract completion date of June 3, 2022. Reference attached proposed schedule update to include impacts for Unforseen Conditions, Groundwater and Underground Utility Relocation for added reference.

Respectfully,
PACIFIC HYDROTECH CORPORATION

Greg Chehey
Project Manager

Att: PHC Extra Work Cost Breakdown Worksheets (Revised to reflect City's requested changes)
PHC Schedule Update 003 (May 2021)

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COST PROPOSAL
(Changed Condition)

McMahon Changed Condition
(FINAL)

Printed: 6/8/2021

McMahon Extra Cost Breakdown

McMahon Additional Work due to Changed Conditions

McMahon Labor Charges						
Qty		Item	HRS/UM	Rate	Total	
1	EA	Operator	4.5	$ 91.38	$ 411.21	
1	EA	Laborer	4.5	$ 67.07	$ 301.82	
				Subtotal Labor Per Hole		$ 713.03
				x 16 Holes		$ 15,686.55
				McMahon MU 15%		$ 2,352.98
				Total		**$ 18,039.53**

McMahon Equipment Charges						
Qty		Item	HRS/UM	Rate	Total	
1	EA	Drill Rig	4.5	$ 352.25	$ 1,585.13	
1	EA	ABI Mobilram	4.5	$ 463.58	$ 2,086.11	
1	EA	RT Crane	4.5	$ 97.66	$ 439.47	
				Equipment Subtotal		$ 4,110.71
				x 16 Holes		$ 65,771.36
				McMahon MU 15%		$ 9,865.70
				Total		**$ 75,637.06**

McMahon Equipment Charges						
Qty		Item	HRS/UM	Rate	Total	
1	EA	Drill Rig	4.5	$ 352.25	$ 1,585.13	
1	EA	Hyimdio 290LC	4.5	$ 112.69	$ 507.11	
1	EA	RT Crane	4.5	$ 97.66	$ 439.47	
				Equipment Subtotal		$ 2,531.71
				x 6 Holes		$ 15,190.26
				McMahon MU 15%		$ 2,278.54
				Total		**$ 17,468.80**

McMahon MISC Charges						
Qty		Item	HRS/UM	Rate	Total	
1	EA	Service Truck	4.5	$ 31.00	$ 139.50	
2	EA	31" Temp Casing	4.5	$ 2.34	$ 21.06	
3	EA	30" Core Barrel	4.5	$ 1.80	$ 24.30	
1	EA	Rock Auger	4.5	$ 2.94	$ 13.23	
13	EA	Rock Teeth	1	$ 7.65	$ 99.45	
1	EA	Casing Adapter	4.5	$ 2.64	$ 11.88	
				MISC Subtotal		$ 309.42
				x 22 Holes		$ 6,807.24
				McMahon MU 15%		$ 1,021.09
				Total		**$ 7,828.33**

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COST PROPOSAL
(Changed Condition)

McMahon Changed Condition
(FINAL)

Printed: 6/8/2021

McMahon Tooling Repair Charges						
Qty		Item	HRS/UM	Rate	Total	
1	EA	Welder	4	$ 70.43	$ 281.72	
1	EA	Welding Truck	4	$ 31.00	$ 124.00	
1	EA	Welding Machine	4	$ 11.85	$ 47.40	
1	EA	Welding Outfit	4	$ 0.29	$ 1.16	
				Tooling Repair Subtotal		$ 454.28
				McMahon MU 15%		$ 68.14
				Total		**$ 522.42**

McMahon Shoring Design Engineering Charges						
Qty		Item	HRS/UM	Rate	Total	
1	EA	Shoring Redesign	1	2940	$ 2,940.00	
McMahon Consultant Charges						
Qty		Item	HRS/UM	Rate	Total	
1	EA	Consultant	1	0	$ -	

Subtotal		$ 122,436.14
5.0%	PHC Markup	$ 6,121.81
1.5%	Bonds/Ins.	$ 1,836.54
	Total Extra for Drilling Holes	**$ 130,394.49**

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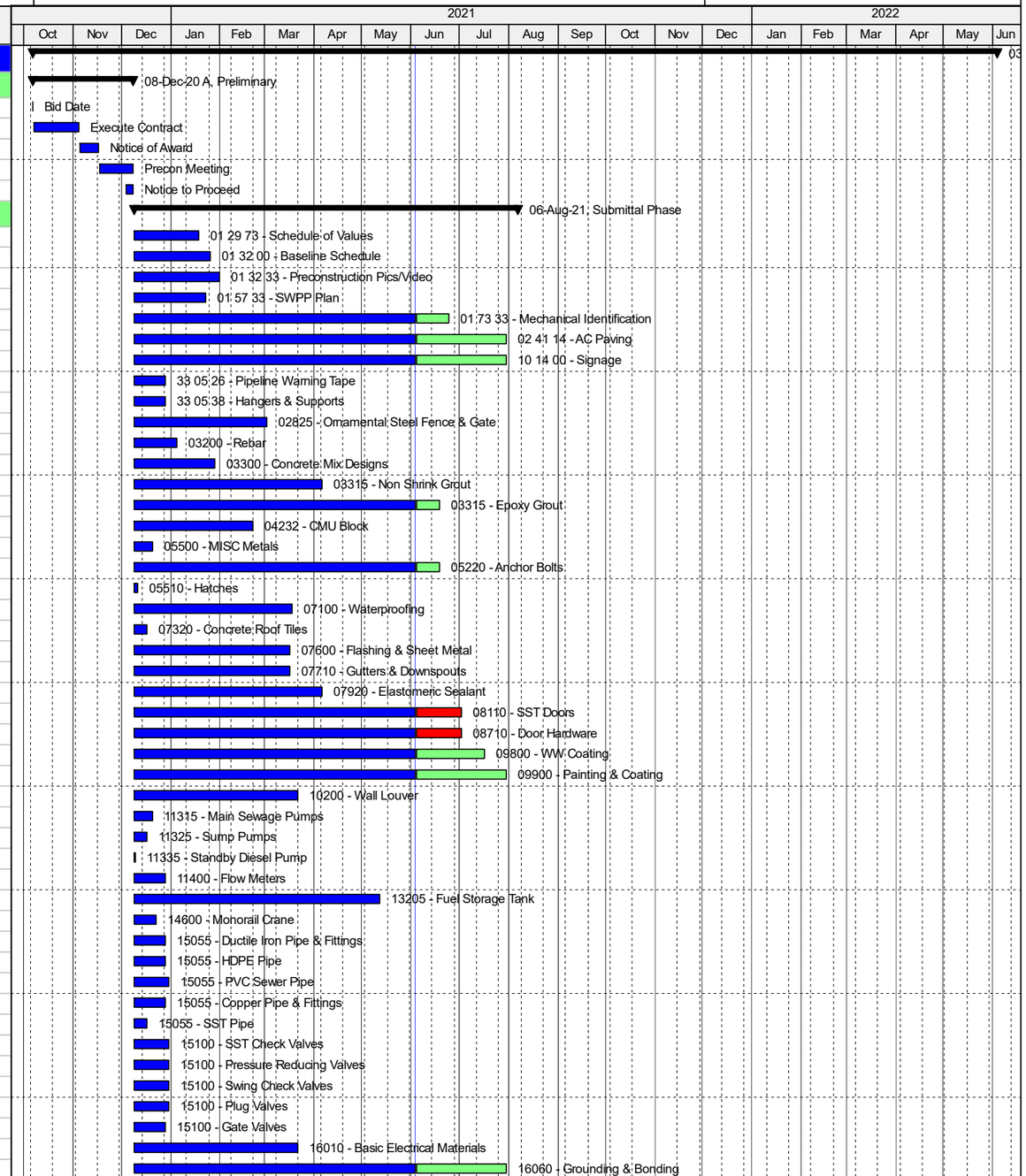
Activity ID	Activity Name	Orig. Dur.	Rem. Dur.	% Compl	Start	Finish	Free Float	Total Float	Expected Finish
WRF 3 LS Project		416	248		06-Oct-20 A	03-Jun-22	0	-82	
Preliminary		46	0		06-Oct-20 A	08-Dec-20 A	0		
PRELIM 001	Bid Date	1	0	100%	06-Oct-20 A	06-Oct-20 A			
PRELIM 004	Execute Contract	21	0	100%	07-Oct-20 A	04-Nov-20 A			
PRELIM 002	Notice of Award	8	0	100%	05-Nov-20 A	16-Nov-20 A			
PRELIM 003	Precon Meeting	16	0	100%	17-Nov-20 A	08-Dec-20 A			
PRELIM 005	Notice to Proceed	3	0	100%	04-Dec-20 A	08-Dec-20 A			
Submittal Phase		167	45		09-Dec-20 A	06-Aug-21	0	71	
SUBM1050	01 29 73 - Schedule of Values	7	0	100%	09-Dec-20 A	19-Jan-21 A			
SUBM1030	01 32 00 - Baseline Schedule	15	0	100%	09-Dec-20 A	26-Jan-21 A			
SUBM1020	01 32 33 - Preconstruction Pics/Video	33	0	100%	09-Dec-20 A	01-Feb-21 A			
SUBM1010	01 57 33 - SWPP Plan	30	0	100%	09-Dec-20 A	22-Jan-21 A			
SUBM1420	01 73 33 - Mechanical Identification	15	15	0%	09-Dec-20 A	24-Jun-21	0	50	
SUBM1520	02 41 14 - AC Paving	40	40	0%	09-Dec-20 A	30-Jul-21	0	63	
SUBM1570	10 14 00 - Signage	40	40	0%	09-Dec-20 A	30-Jul-21	0	64	
SUBM1360	33 05 26 - Pipeline Warning Tape	15	0	100%	09-Dec-20 A	29-Dec-20 A			
SUBM1350	33 05 38 - Hangers & Supports	15	0	100%	09-Dec-20 A	29-Dec-20 A			
SUBM1440	02825 - Ornamental Steel Fence & Gate	20	0	100%	09-Dec-20 A	02-Mar-21 A			
SUBM1070	03200 - Rebar	20	0	100%	09-Dec-20 A	05-Jan-21 A			
SUBM1060	03300 - Concrete Mix Designs	33	0	100%	09-Dec-20 A	29-Jan-21 A			
SUBM1100	03315 - Non Shrink Grout	15	0	100%	09-Dec-20 A	06-Apr-21 A			
SUBM1240	03315 - Epoxy Grout	15	11	26.67%	09-Dec-20 A	18-Jun-21	0	15	
SUBM1330	04232 - CMU Block	15	0	100%	09-Dec-20 A	22-Feb-21 A			
SUBM1480	05500 - MISC Metals	20	0	100%	09-Dec-20 A	21-Dec-20 A			
SUBM1250	05220 - Anchor Bolts	15	11	26.67%	09-Dec-20 A	18-Jun-21	0	15	
SUBM1130	05510 - Hatches	15	0	100%	09-Dec-20 A	11-Dec-20 A			
SUBM1260	07100 - Waterproofing	15	0	100%	09-Dec-20 A	18-Mar-21 A			
SUBM1270	07320 - Concrete Roof Tiles	20	0	100%	09-Dec-20 A	17-Dec-20 A			
SUBM1280	07600 - Flashing & Sheet Metal	20	0	100%	09-Dec-20 A	17-Mar-21 A			
SUBM1290	07710 - Gutters & Downspouts	20	0	100%	09-Dec-20 A	17-Mar-21 A			
SUBM1190	07920 - Elastomeric Sealant	15	0	100%	09-Dec-20 A	06-Apr-21 A			
SUBM1170	08110 - SST Doors	40	21	47.5%	09-Dec-20 A	02-Jul-21	0	-34	
SUBM1180	08710 - Door Hardware	40	21	47.5%	09-Dec-20 A	02-Jul-21	0	-14	
SUBM1150	09800 - WW Coating	40	30	25%	09-Dec-20 A	16-Jul-21	0	20	
SUBM1540	09900 - Painting & Coating	40	40	0%	09-Dec-20 A	30-Jul-21	0	64	
SUBM1210	10200 - Wall Louver	40	0	100%	09-Dec-20 A	22-Mar-21 A			
SUBM1040	11315 - Main Sewage Pumps	15	0	100%	09-Dec-20 A	21-Dec-20 A			
SUBM1530	11325 - Sump Pumps	15	0	100%	09-Dec-20 A	17-Dec-20 A			
SUBM1090	11335 - Standby Diesel Pump	5	0	100%	09-Dec-20 A	10-Dec-20 A			
SUBM1160	11400 - Flow Meters	15	0	100%	09-Dec-20 A	29-Dec-20 A			
SUBM1390	13205 - Fuel Storage Tank	40	0	100%	09-Dec-20 A	12-May-21 A			
SUBM1430	14600 - Monorail Crane	30	0	100%	09-Dec-20 A	23-Dec-20 A			
SUBM1400	15055 - Ductile Iron Pipe & Fittings	15	0	100%	09-Dec-20 A	29-Dec-20 A			
SUBM1410	15055 - HDPE Pipe	15	0	100%	09-Dec-20 A	29-Dec-20 A			
SUBM1470	15055 - PVC Sewer Pipe	15	0	100%	09-Dec-20 A	30-Dec-20 A			
SUBM1560	15055 - Copper Pipe & Fittings	15	0	100%	09-Dec-20 A	29-Dec-20 A			
SUBM1230	15055 - SST Pipe	15	0	100%	09-Dec-20 A	17-Dec-20 A			
SUBM1110	15100 - SST Check Valves	15	0	100%	09-Dec-20 A	30-Dec-20 A			
SUBM1120	15100 - Pressure Reducing Valves	15	0	100%	09-Dec-20 A	30-Dec-20 A			
SUBM1000	15100 - Swing Check Valves	15	0	100%	09-Dec-20 A	30-Dec-20 A			
SUBM1080	15100 - Plug Valves	15	0	100%	09-Dec-20 A	30-Dec-20 A			
SUBM1220	15100 - Gate Valves	15	0	100%	09-Dec-20 A	29-Dec-20 A			
SUBM1370	16010 - Basic Electrical Materials	40	0	100%	09-Dec-20 A	22-Mar-21 A			
SUBM1460	16060 - Grounding & Bonding	40	40	0%	09-Dec-20 A	30-Jul-21	0	29	

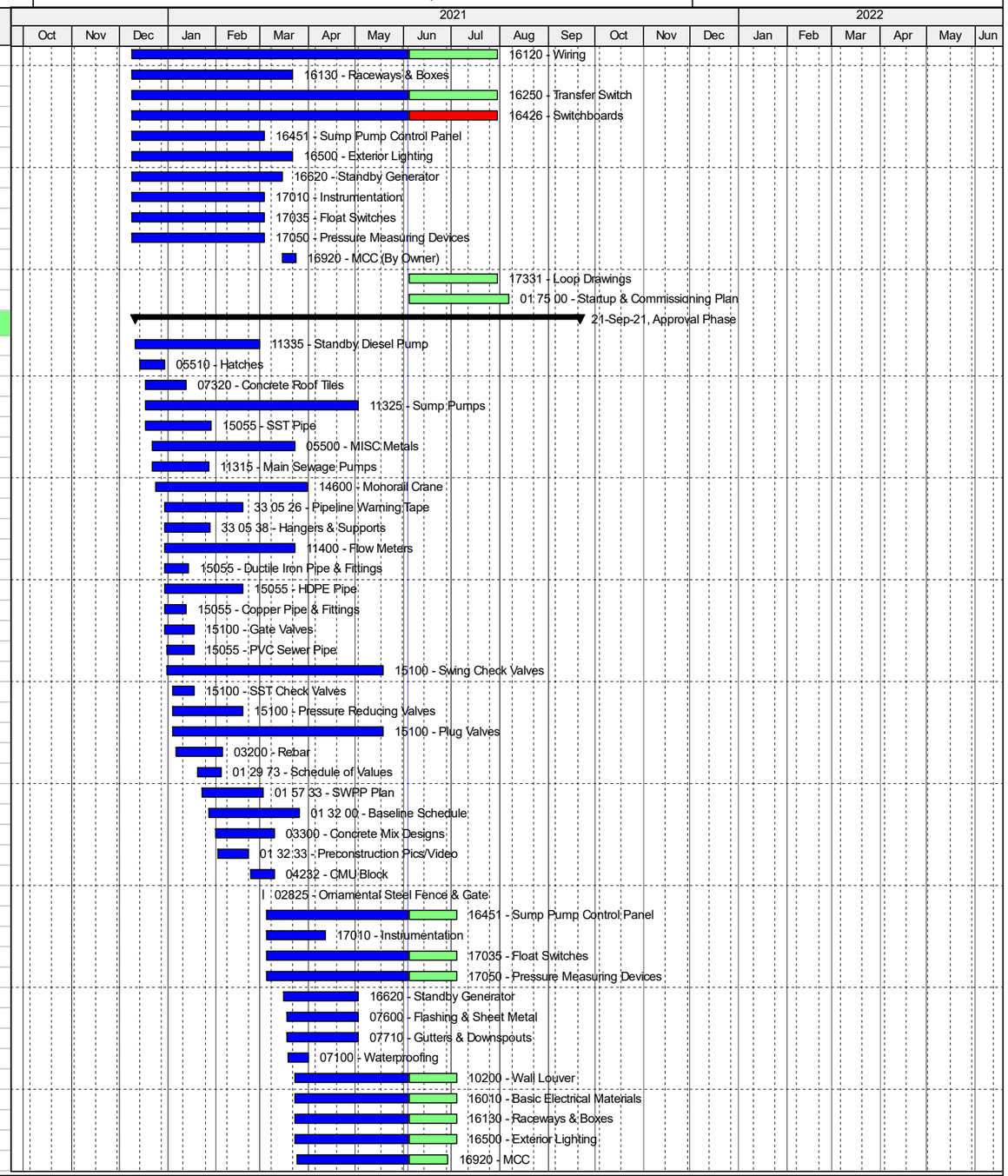


Remaining Level of Effort | Actual Work | Critical Remaining Work
Actual Level of Effort | Remaining Work | Milestone

Date	Revision	Checked	Approved
10-Jun-20	Progress Schedule Update		

DocuSign Envelope ID: 79225A20-BF10-4B73-B3DF-ECC43A56F7D5

Activity ID	Activity Name	Orig. Dur.	Rem. Dur.	% Compl	Start	Finish	Free Float	Total Float	Expected Finish
SUBM1500	16120 - Wiring	40	40	0%	09-Dec-20	30-Jul-21	0	45	
SUBM1490	16130 - Raceways & Boxes	40	0	100%	09-Dec-20	22-Mar-21 A			
SUBM1510	16250 - Transfer Switch	40	40	0%	09-Dec-20	30-Jul-21	0	59	
SUBM1340	16426 - Switchboards	40	40	0%	09-Dec-20	30-Jul-21	0	0	
SUBM1300	16451 - Sump Pump Control Panel	40	0	100%	09-Dec-20	04-Mar-21 A			
SUBM1450	16500 - Exterior Lighting	40	0	100%	09-Dec-20	22-Mar-21 A			
SUBM1140	16620 - Standby Generator	40	0	100%	09-Dec-20	15-Mar-21 A			
SUBM1310	17010 - Instrumentation	40	0	100%	09-Dec-20	04-Mar-21 A			
SUBM1380	17035 - Float Switches	40	0	100%	09-Dec-20	04-Mar-21 A			
SUBM1320	17050 - Pressure Measuring Devices	40	0	100%	09-Dec-20	04-Mar-21 A			
SUBM1200	16920 - MCC (By Owner)	40	0	100%	15-Mar-21	24-Mar-21 A			
SUBM1550	17331 - Loop Drawings	40	40	0%	04-Jun-21	30-Jul-21	0	58	
SUBM1580	01 75 00 - Startup & Commissioning Plan	45	45	0%	04-Jun-21	06-Aug-21	0	69	
Approval Phase		193	76		11-Dec-20	21-Sep-21	0	69	
APPR1000	11335 - Standby Diesel Pump	31	0	100%	11-Dec-20	01-Mar-21 A			
APPR1090	05510 - Hatches	31	0	100%	14-Dec-20	30-Dec-20 A			
APPR1270	07320 - Concrete Roof Tiles	31	0	100%	18-Dec-20	13-Jan-21 A			
APPR1240	11325 - Sump Pumps	31	0	100%	18-Dec-20	03-May-21 A			
APPR1130	15055 - SST Pipe	31	0	100%	18-Dec-20	29-Jan-21 A			
APPR1310	05500 - MISC Metals	31	0	100%	22-Dec-20	23-Mar-21 A			
APPR1040	11315 - Main Sewage Pumps	31	0	100%	22-Dec-20	27-Jan-21 A			
APPR1330	14600 - Monorail Crane	31	0	100%	24-Dec-20	31-Mar-21 A			
APPR1190	33 05 26 - Pipeline Warning Tape	31	0	100%	30-Dec-20	18-Feb-21 A			
APPR1180	33 05 38 - Hangers & Supports	31	0	100%	30-Dec-20	28-Jan-21 A			
APPR1100	11400 - Flow Meters	31	0	100%	30-Dec-20	23-Mar-21 A			
APPR1200	15055 - Ductile Iron Pipe & Fittings	31	0	100%	30-Dec-20	14-Jan-21 A			
APPR1210	15055 - HDPE Pipe	31	0	100%	30-Dec-20	18-Feb-21 A			
APPR1250	15055 - Copper Pipe & Fittings	31	0	100%	30-Dec-20	13-Jan-21 A			
APPR1120	15100 - Gate Valves	31	0	100%	30-Dec-20	18-Jan-21 A			
APPR1230	15055 - PVC Sewer Pipe	31	0	100%	31-Dec-20	18-Jan-21 A			
APPR1020	15100 - Swing Check Valves	31	0	100%	31-Dec-20	19-May-21 A			
APPR1070	15100 - SST Check Valves	31	0	100%	04-Jan-21 A	18-Jan-21 A			
APPR1080	15100 - Pressure Reducing Valves	31	0	100%	04-Jan-21 A	18-Feb-21 A			
APPR1050	15100 - Plug Valves	31	0	100%	04-Jan-21 A	19-May-21 A			
APPR1260	03200 - Rebar	31	0	100%	06-Jan-21 A	05-Feb-21 A			
APPR1010	01 29 73 - Schedule of Values	14	0	100%	20-Jan-21 A	04-Feb-21 A			
APPR1320	01 57 33 - SWPP Plan	14	0	100%	23-Jan-21 A	03-Mar-21 A			
APPR1030	01 32 00 - Baseline Schedule	14	0	100%	27-Jan-21 A	26-Mar-21 A			
APPR1350	03300 - Concrete Mix Designs	31	0	100%	01-Feb-21	10-Mar-21 A			
APPR1340	01 32 33 - Preconstruction Pics/Video	7	0	100%	02-Feb-21	22-Feb-21 A			
APPR1170	04232 - CMU Block	31	0	100%	23-Feb-21	10-Mar-21 A			
APPR1300	02825 - Ornamental Steel Fence & Gate	31	0	100%	03-Mar-21	03-Mar-21 A			
APPR1420	16451 - Sump Pump Control Panel	31	31	0%	05-Mar-21	04-Jul-21	1	50	
APPR1430	17010 - Instrumentation	31	0	100%	05-Mar-21	12-Apr-21 A			
APPR1470	17035 - Float Switches	31	31	0%	05-Mar-21	04-Jul-21	1	67	
APPR1440	17050 - Pressure Measuring Devices	31	31	0%	05-Mar-21	04-Jul-21	1	50	
APPR1360	16620 - Standby Generator	31	0	100%	16-Mar-21	03-May-21 A			
APPR1280	07600 - Flashing & Sheet Metal	31	0	100%	18-Mar-21	03-May-21 A			
APPR1290	07710 - Gutters & Downspouts	31	0	100%	18-Mar-21	03-May-21 A			
APPR1160	07100 - Waterproofing	31	0	100%	19-Mar-21	01-Apr-21 A			
APPR1410	10200 - Wall Louver	31	31	0%	23-Mar-21	04-Jul-21	1	36	
APPR1460	16010 - Basic Electrical Materials	31	31	0%	23-Mar-21	04-Jul-21	1	65	
APPR1510	16130 - Raceways & Boxes	31	31	0%	23-Mar-21	04-Jul-21	1	120	
APPR1490	16500 - Exterior Lighting	31	31	0%	23-Mar-21	04-Jul-21	1	100	
APPR1400	16920 - MCC	31	25	19.35%	25-Mar-21	28-Jun-21	0	27	



Remaining Level of Effort | Actual Work | Critical Remaining Work
Actual Level of Effort | Remaining Work | Milestone

Date	Revision	Checked	Approved
10-Jun-20	Progress Schedule Update		

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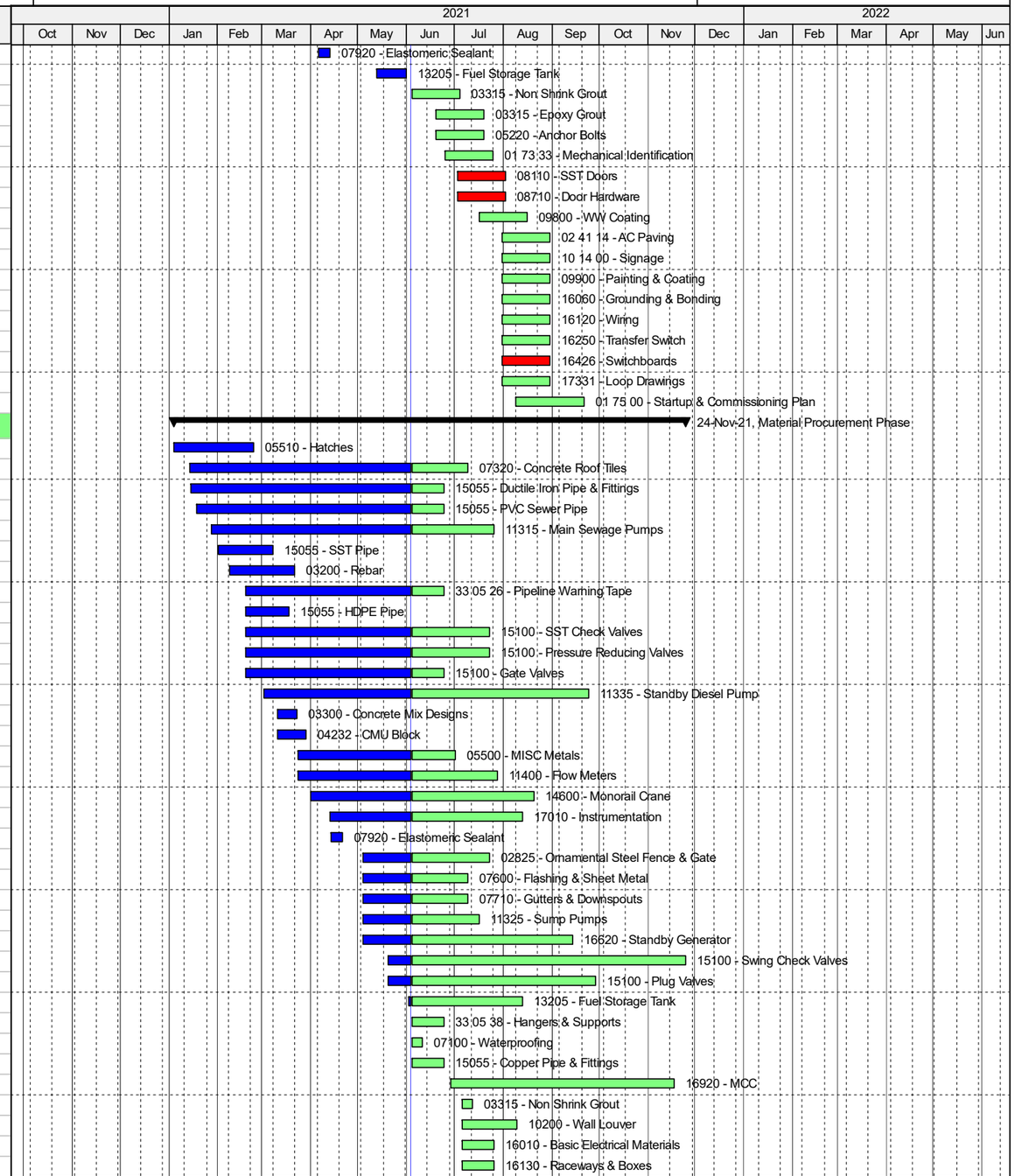
Activity ID	Activity Name	Orig. Dur.	Rem. Dur.	% Compl	Start	Finish	Free Float	Total Float	Expected Finish
APPR1110	07920 - Elastomeric Sealant	31	0	100%	06-Apr-21 A	13-Apr-21 A			
APPR1480	13205 - Fuel Storage Tank	31	0	100%	13-May-21	01-Jun-21 A			
APPR1060	03315 - Non Shrink Grout	31	31	0%	04-Jun-21	04-Jul-21	1	39	
APPR1140	03315 - Epoxy Grout	31	31	0%	19-Jun-21	19-Jul-21	0	24	
APPR1150	05220 - Anchor Bolts	31	31	0%	19-Jun-21	19-Jul-21	0	24	
APPR1220	01 73 33 - Mechanical Identification	31	31	0%	25-Jun-21	25-Jul-21	0	72	
APPR1380	08110 - SST Doors	31	31	0%	03-Jul-21	02-Aug-21	0	-49	
APPR1390	08710 - Door Hardware	31	31	0%	03-Jul-21	02-Aug-21	0	-18	
APPR1370	09800 - WW Coating	31	31	0%	17-Jul-21	16-Aug-21	0	28	
APPR1540	02 41 14 - AC Paving	31	31	0%	31-Jul-21	30-Aug-21	0	90	
APPR1570	10 14 00 - Signage	31	31	0%	31-Jul-21	30-Aug-21	0	92	
APPR1550	09900 - Painting & Coating	31	31	0%	31-Jul-21	30-Aug-21	0	92	
APPR1500	16060 - Grounding & Bonding	31	31	0%	31-Jul-21	30-Aug-21	0	44	
APPR1520	16120 - Wiring	31	31	0%	31-Jul-21	30-Aug-21	0	66	
APPR1530	16250 - Transfer Switch	31	31	0%	31-Jul-21	30-Aug-21	0	84	
APPR1450	16426 - Switchboards	31	31	0%	31-Jul-21	30-Aug-21	0	0	
APPR1560	17331 - Loop Drawings	31	31	0%	31-Jul-21	30-Aug-21	0	83	
APPR1580	01 75 00 - Startup & Commissioning Plan	31	31	0%	09-Aug-21	21-Sep-21	144	69	
Material Procurement Phase		217	122		04-Jan-21 A	24-Nov-21	0	17	
MATL1070	05510 - Hatches	40	0	100%	04-Jan-21 A	24-Feb-21 A			
MATL1240	07320 - Concrete Roof Tiles	25	25	0%	14-Jan-21 A	09-Jul-21	0	39	
MATL1180	15055 - Ductile Iron Pipe & Fittings	15	15	0%	15-Jan-21 A	24-Jun-21	20	82	
MATL1200	15055 - PVC Sewer Pipe	15	15	0%	19-Jan-21 A	24-Jun-21	20	86	
MATL1020	11315 - Main Sewage Pumps	84	36	57.14%	28-Jan-21 A	26-Jul-21	0	18	
MATL1110	15055 - SST Pipe	40	0	100%	01-Feb-21 A	08-Mar-21 A			
MATL1230	03200 - Rebar	10	0	100%	08-Feb-21 A	22-Mar-21 A			
MATL1170	33 05 26 - Pipeline Warning Tape	15	15	0%	19-Feb-21 A	24-Jun-21	0	70	
MATL1190	15055 - HDPE Pipe	15	0	100%	19-Feb-21 A	18-Mar-21 A			
MATL1050	15100 - SST Check Valves	50	35	30%	19-Feb-21 A	23-Jul-21	0	21	
MATL1060	15100 - Pressure Reducing Valves	50	35	30%	19-Feb-21 A	23-Jul-21	0	21	
MATL1100	15100 - Gate Valves	15	15	0%	19-Feb-21 A	24-Jun-21	0	41	
MATL1000	11335 - Standby Diesel Pump	100	79	21%	02-Mar-21 A	24-Sep-21	0	18	
MATL1300	03300 - Concrete Mix Designs	10	0	100%	11-Mar-21 A	23-Mar-21 A			
MATL1150	04232 - CMU Block	5	0	100%	11-Mar-21 A	29-Mar-21 A			
MATL1280	05500 - MISC Metals	40	20	50%	24-Mar-21 A	01-Jul-21	0	106	
MATL1080	11400 - Flow Meters	40	38	5%	24-Mar-21 A	28-Jul-21	0	18	
MATL1290	14600 - Monorail Crane	55	55	0%	01-Apr-21 A	20-Aug-21	0	84	
MATL1380	17010 - Instrumentation	50	50	0%	13-Apr-21 A	13-Aug-21	0	56	
MATL1090	07920 - Elastomeric Sealant	5	0	100%	14-Apr-21 A	21-Apr-21 A			
MATL1270	02825 - Ornamental Steel Fence & Gate	40	35	12.5%	04-May-21	23-Jul-21	0	82	
MATL1250	07600 - Flashing & Sheet Metal	25	25	0%	04-May-21	09-Jul-21	0	42	
MATL1260	07710 - Gutters & Downspouts	25	25	0%	04-May-21	09-Jul-21	0	42	
MATL1210	11325 - Sump Pumps	30	30	0%	04-May-21	16-Jul-21	0	100	
MATL1310	16620 - Standby Generator	112	71	36.61%	04-May-21	14-Sep-21	0	54	
MATL1010	15100 - Swing Check Valves	111	122	0%	20-May-21	24-Nov-21	0	12	
MATL1030	15100 - Plug Valves	70	81	0%	20-May-21	28-Sep-21	0	53	
MATL1430	13205 - Fuel Storage Tank	50	50	0%	02-Jun-21 A	13-Aug-21	0	79	
MATL1160	33 05 38 - Hangers & Supports	15	15	0%	04-Jun-21	24-Jun-21	0	65	
MATL1140	07100 - Waterproofing	5	5	0%	04-Jun-21	10-Jun-21	0	33	
MATL1220	15055 - Copper Pipe & Fittings	15	15	0%	04-Jun-21	24-Jun-21	20	113	
MATL1350	16920 - MCC	100	100	0%	28-Jun-21	17-Nov-21	0	18	
MATL1040	03315 - Non Shrink Grout	5	5	0%	06-Jul-21	12-Jul-21	0	28	
MATL1360	10200 - Wall Louver	25	25	0%	06-Jul-21	09-Aug-21	0	25	
MATL1410	16010 - Basic Electrical Materials	15	15	0%	06-Jul-21	26-Jul-21	0	45	
MATL1460	16130 - Raceways & Boxes	15	15	0%	06-Jul-21	26-Jul-21	0	84	

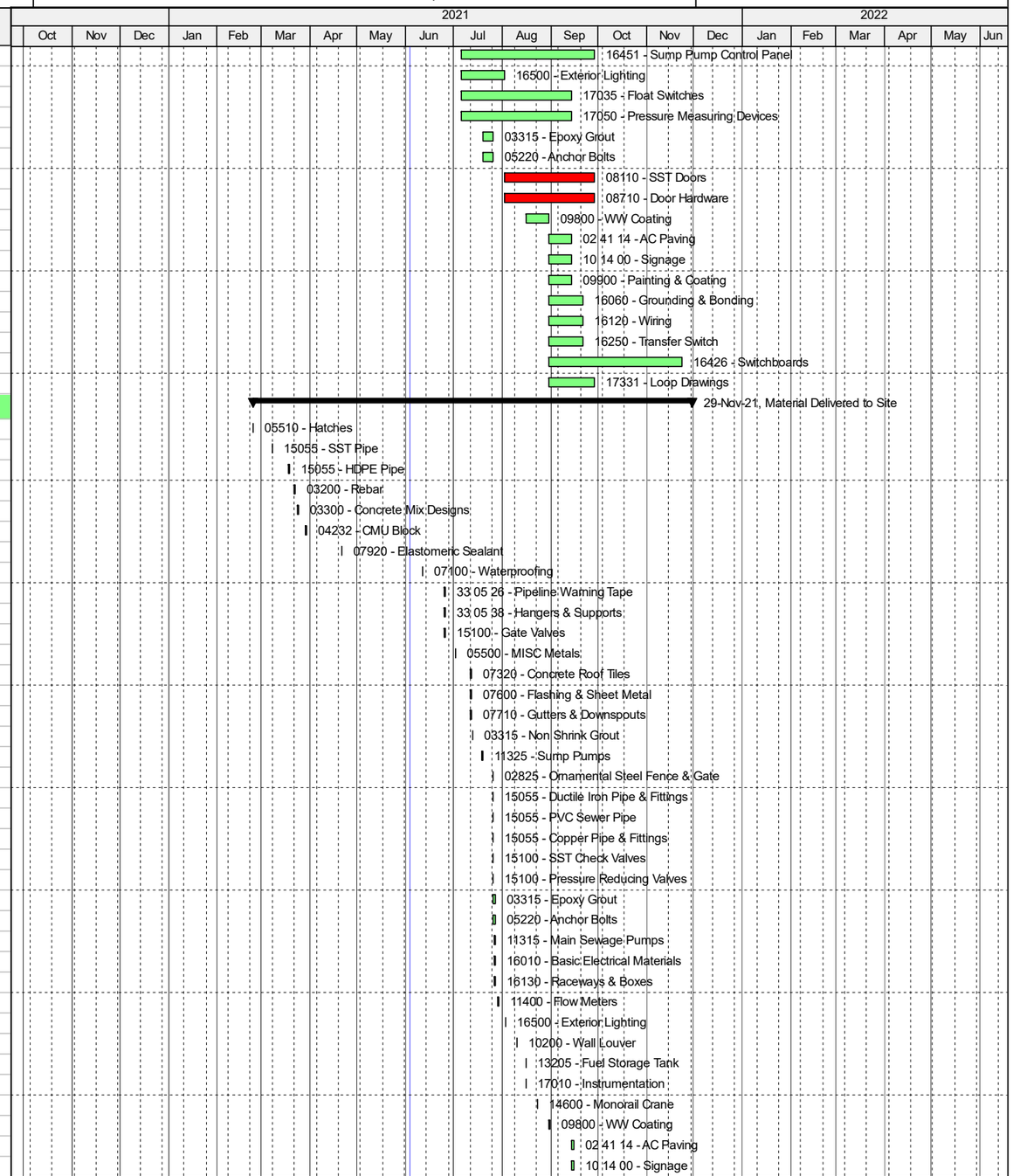


Remaining Level of Effort | Actual Work | Critical Remaining Work
Actual Level of Effort | Remaining Work | Milestone

Date	Revision	Checked	Approved
10-Jun-20	Progress Schedule Update		

DocuSign Envelope ID: 79225A20-BF10-4B73-B3DF-ECC43A56F7D5

Activity ID	Activity Name	Orig. Dur.	Rem. Dur.	% Compl	Start	Finish	Free Float	Total Float	Expected Finish
MATL1370	16451 - Sump Pump Control Panel	60	60	0%	06-Jul-21	28-Sep-21	0	35	
MATL1440	16500 - Exterior Lighting	20	20	0%	06-Jul-21	02-Aug-21	0	70	
MATL1420	17035 - Float Switches	50	50	0%	06-Jul-21	14-Sep-21	0	47	
MATL1390	17050 - Pressure Measuring Devices	50	50	0%	06-Jul-21	14-Sep-21	0	35	
MATL1120	03315 - Epoxy Grout	5	5	0%	19-Jul-21	26-Jul-21	0	18	
MATL1130	05220 - Anchor Bolts	5	5	0%	19-Jul-21	26-Jul-21	0	18	
MATL1330	08110 - SST Doors	40	40	0%	02-Aug-21	28-Sep-21	0	-34	
MATL1340	08710 - Door Hardware	40	40	0%	02-Aug-21	28-Sep-21	0	-12	
MATL1320	09800 - WW Coating	10	10	0%	16-Aug-21	30-Aug-21	0	19	
MATL1490	02 41 14 -AC Paving	10	10	0%	30-Aug-21	14-Sep-21	0	61	
MATL1520	10 14 00 - Signage	10	10	0%	30-Aug-21	14-Sep-21	0	63	
MATL1500	09900 - Painting & Coating	10	10	0%	30-Aug-21	14-Sep-21	0	63	
MATL1450	16060 - Grounding & Bonding	15	15	0%	30-Aug-21	21-Sep-21	0	31	
MATL1470	16120 - Wiring	15	15	0%	30-Aug-21	21-Sep-21	0	47	
MATL1480	16250 - Transfer Switch	15	15	0%	30-Aug-21	21-Sep-21	0	59	
MATL1400	16426 - Switchboards	60	60	0%	30-Aug-21	23-Nov-21	0	0	
MATL1510	17331 - Loop Drawings	20	20	0%	30-Aug-21	28-Sep-21	0	58	
Material Delivered to Site		205	118		24-Feb-21 A	29-Nov-21	0	17	
DELIV1280	05510 - Hatches	1	0	100%	24-Feb-21 A	24-Feb-21 A			
DELIV1300	15055 - SST Pipe	1	0	100%	08-Mar-21 A	08-Mar-21 A			
DELIV1110	15055 - HDPE Pipe	1	0	100%	18-Mar-21 A	18-Mar-21 A			
DELIV1060	03200 - Rebar	1	0	100%	22-Mar-21 A	22-Mar-21 A			
DELIV1140	03300 - Concrete Mix Designs	1	0	100%	24-Mar-21 A	24-Mar-21 A			
DELIV1050	04232 - CMU Block	1	0	100%	29-Mar-21 A	29-Mar-21 A			
DELIV1010	07920 - Elastomeric Sealant	1	0	100%	21-Apr-21 A	21-Apr-21 A			
DELIV1040	07100 - Waterproofing	1	1	0%	11-Jun-21	11-Jun-21	115	33	
DELIV1090	33 05 26 - Pipeline Warning Tape	1	1	0%	25-Jun-21	25-Jun-21	20	70	
DELIV1080	33 05 38 - Hangers & Supports	1	1	0%	25-Jun-21	25-Jun-21	74	65	
DELIV1070	15100 - Gate Valves	1	1	0%	25-Jun-21	25-Jun-21	50	41	
DELIV1340	05500 - MISC Metals	1	1	0%	02-Jul-21	02-Jul-21	108	106	
DELIV1150	07320 - Concrete Roof Tiles	1	1	0%	12-Jul-21	12-Jul-21	121	39	
DELIV1160	07600 - Flashing & Sheet Metal	1	1	0%	12-Jul-21	12-Jul-21	124	42	
DELIV1170	07710 - Gutters & Downspouts	1	1	0%	12-Jul-21	12-Jul-21	124	42	
DELIV1000	03315 - Non Shrink Grout	1	1	0%	13-Jul-21	13-Jul-21	37	28	
DELIV1180	11325 - Sump Pumps	1	1	0%	19-Jul-21	19-Jul-21	105	100	
DELIV1330	02825 - Ornamental Steel Fence & Gate	1	1	0%	26-Jul-21	26-Jul-21	0	82	
DELIV1100	15055 - Ductile Iron Pipe & Fittings	1	1	0%	26-Jul-21	26-Jul-21	20	62	
DELIV1120	15055 - PVC Sewer Pipe	1	1	0%	26-Jul-21	26-Jul-21	0	66	
DELIV1130	15055 - Copper Pipe & Fittings	1	1	0%	26-Jul-21	26-Jul-21	23	93	
DELIV1360	15100 - SST Check Valves	1	1	0%	26-Jul-21	26-Jul-21	30	21	
DELIV1370	15100 - Pressure Reducing Valves	1	1	0%	26-Jul-21	26-Jul-21	30	21	
DELIV1020	03315 - Epoxy Grout	1	1	0%	26-Jul-21	27-Jul-21	27	18	
DELIV1030	05220 - Anchor Bolts	1	1	0%	26-Jul-21	27-Jul-21	27	18	
DELIV1460	11315 - Main Sewage Pumps	1	1	0%	27-Jul-21	27-Jul-21	27	18	
DELIV1230	16010 - Basic Electrical Materials	1	1	0%	27-Jul-21	27-Jul-21	119	45	
DELIV1250	16130 - Raceways & Boxes	1	1	0%	27-Jul-21	27-Jul-21	127	84	
DELIV1290	11400 - Flow Meters	1	1	0%	29-Jul-21	29-Jul-21	27	18	
DELIV1310	16500 - Exterior Lighting	1	1	0%	03-Aug-21	03-Aug-21	126	70	
DELIV1350	10200 - Wall Louver	1	1	0%	10-Aug-21	10-Aug-21	107	25	
DELIV1450	13205 - Fuel Storage Tank	1	1	0%	16-Aug-21	16-Aug-21	25	79	
DELIV1420	17010 - Instrumentation	1	1	0%	16-Aug-21	16-Aug-21	138	56	
DELIV1400	14600 - Monorail Crane	1	1	0%	23-Aug-21	23-Aug-21	86	84	
DELIV1190	09800 - WW Coating	1	1	0%	30-Aug-21	31-Aug-21	67	19	
DELIV1200	02 41 14 -AC Paving	1	1	0%	14-Sep-21	15-Sep-21	0	61	
DELIV1220	10 14 00 - Signage	1	1	0%	14-Sep-21	15-Sep-21	127	63	



Remaining Level of Effort | Actual Work | Critical Remaining Work
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Date	Revision	Checked	Approved
10-Jun-20	Progress Schedule Update		

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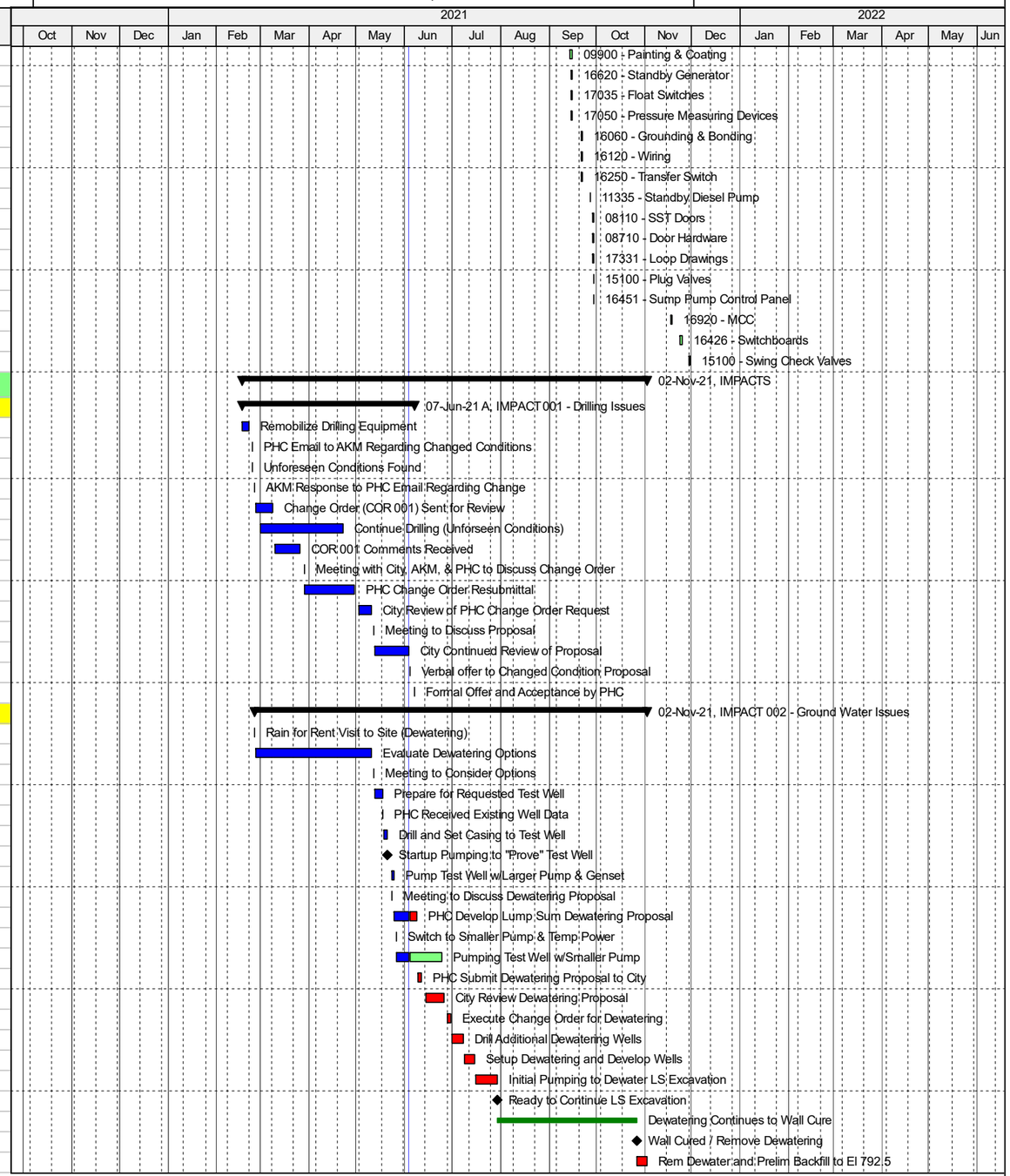
Activity ID	Activity Name	Orig. Dur.	Rem. Dur.	% Compl	Start	Finish	Free Float	Total Float	Expected Finish
DELIV1210	09900 - Painting & Coating	1	1	0%	14-Sep-21	15-Sep-21	138	63	
DELIV1520	16620 - Standby Generator	1	1	0%	15-Sep-21	15-Sep-21	0	54	
DELIV1440	17035 - Float Switches	1	1	0%	15-Sep-21	15-Sep-21	129	47	
DELIV1430	17050 - Pressure Measuring Devices	1	1	0%	15-Sep-21	15-Sep-21	117	35	
DELIV1240	16060 - Grounding & Bonding	1	1	0%	21-Sep-21	22-Sep-21	79	31	
DELIV1260	16120 - Wiring	1	1	0%	21-Sep-21	22-Sep-21	81	47	
DELIV1270	16250 - Transfer Switch	1	1	0%	21-Sep-21	22-Sep-21	79	59	
DELIV1490	11335 - Standby Diesel Pump	1	1	0%	27-Sep-21	27-Sep-21	66	18	
DELIV1380	08110 - SST Doors	1	1	0%	28-Sep-21	29-Sep-21	48	-34	
DELIV1390	08710 - Door Hardware	1	1	0%	28-Sep-21	29-Sep-21	70	-12	
DELIV1320	17331 - Loop Drawings	1	1	0%	28-Sep-21	29-Sep-21	119	58	
DELIV1410	15100 - Plug Valves	1	1	0%	29-Sep-21	29-Sep-21	128	53	
DELIV1470	16451 - Sump Pump Control Panel	1	1	0%	29-Sep-21	29-Sep-21	117	35	
DELIV1510	16920 - MCC	1	1	0%	17-Nov-21	18-Nov-21	38	18	
DELIV1480	16426 - Switchboards	1	1	0%	23-Nov-21	24-Nov-21	82	0	
DELIV1500	15100 - Swing Check Valves	1	1	0%	29-Nov-21	29-Nov-21	87	12	
IMPACTS		164	106		17-Feb-21 A	02-Nov-21	0	60	
IMPACT 001 - Drilling Issues		43	0		17-Feb-21 A	07-Jun-21 A	0		
IMPACT01-1	Remobilize Drilling Equipment	3	0	100%	17-Feb-21 A	22-Feb-21 A			
IMPACT01-4	PHC Email to AKM Regarding Changed Condition	1	0	100%	24-Feb-21 A	24-Feb-21 A			
IMPACT01-3	Unforeseen Conditions Found	1	0	100%	24-Feb-21 A	24-Feb-21 A			
IMPACT01-5	AKM Response to PHC Email Regarding Change	1	0	100%	25-Feb-21 A	25-Feb-21 A			
IMPACT01-7	Change Order (COR 001) Sent for Review	8	0	100%	26-Feb-21 A	09-Mar-21 A			
IMPACT01-2	Continue Drilling (Unforseen Conditions)	20	0	100%	01-Mar-21 A	23-Apr-21 A			
IMPACT01-8	COR 001 Comments Received	12	0	100%	10-Mar-21 A	26-Mar-21 A			
IMPACT01-9	Meeting with City, AKM, & PHC to Discuss Change	1	0	100%	29-Mar-21 A	29-Mar-21 A			
IMPACT01-10	PHC Change Order Resubmittal	15	0	100%	29-Mar-21 A	30-Apr-21 A			
IMPACT01-11	City Review of PHC Change Order Request	5	0	100%	03-May-21	11-May-21 A			
IMPACT01-12	Meeting to Discuss Proposal	1	0	100%	12-May-21	12-May-21 A			
IMPACT01-13	City Continued Review of Proposal	15	0	100%	13-May-21	03-Jun-21 A			
IMPACT01-14	Verbal offer to Changed Condition Proposal	1	0	100%	04-Jun-21 A	04-Jun-21 A			
IMPACT01-15	Formal Offer and Acceptance by PHC	1	0	100%	07-Jun-21 A	07-Jun-21 A			
IMPACT 002 - Ground Water Issues		148	106		25-Feb-21 A	02-Nov-21	0	60	
IMPACT02-1	Rain for Rent Visit to Site (Dewatering)	1	0	100%	25-Feb-21 A	25-Feb-21 A			
IMPACT02-11	Evaluate Dewatering Options	40	0	100%	26-Feb-21 A	11-May-21 A			
IMPACT02-12	Meeting to Consider Options	1	0	100%	12-May-21	12-May-21 A			
IMPACT02-2	Prepare for Requested Test Well	5	0	100%	13-May-21	18-May-21 A			
IMPACT02-3	PHC Received Existing Well Data	1	0	100%	18-May-21	18-May-21 A			
IMPACT02-4	Drill and Set Casing to Test Well	2	0	100%	19-May-21	20-May-21 A			
IMPACT02-5	Startup Pumping to "Prove" Test Well	0	0	100%	21-May-21				
IMPACT02-6	Pump Test Well w/Larger Pump & Genset	2	0	100%	24-May-21	25-May-21 A			
IMPACT02-7	Meeting to Discuss Dewatering Proposal	1	0	100%	24-May-21	24-May-21 A			
IMPACT02-8	PHC Develop Lump Sum Dewatering Proposal	15	3	80%	25-May-21	08-Jun-21	0	-82	
IMPACT02-9	Switch to Smaller Pump & Temp Power	1	0	100%	26-May-21	26-May-21 A			
IMPACT02-10	Pumping Test Well w/Smaller Pump	15	15	0%	27-May-21	24-Jun-21	233	151	
IMPACT02-13	PHC Submit Dewatering Proposal to City	3	3	0%	09-Jun-21	11-Jun-21	0	-82	
IMPACT02-14	City Review Dewatering Proposal	10	10	0%	14-Jun-21	25-Jun-21	0	-82	
IMPACT02-15	Execute Change Order for Dewatering	3	3	0%	28-Jun-21	30-Jun-21	0	-82	
IMPACT02-16	Drill Additional Dewatering Wells	5	5	0%	01-Jul-21	08-Jul-21	0	-82	
IMPACT02-17	Setup Dewatering and Develop Wells	5	5	0%	09-Jul-21	15-Jul-21	0	-82	
IMPACT02-18	Initial Pumping to Dewater LS Excavation	10	10	0%	16-Jul-21	29-Jul-21	0	-82	
IMPACT02-19	Ready to Continue LS Excavation	0	0	0%		29-Jul-21	0	-82	
IMPACT02-20	Dewatering Continues to Wall Cure	62	62	0%	30-Jul-21	26-Oct-21	0	-4	
IMPACT02-21	Wall Cured / Remove Dewatering	0	0	0%		26-Oct-21	0	-4	
IMPACT02-22	Rem Dewater and Prelim Backfill to El 792.5	5	5	0%	27-Oct-21	02-Nov-21	0	-4	



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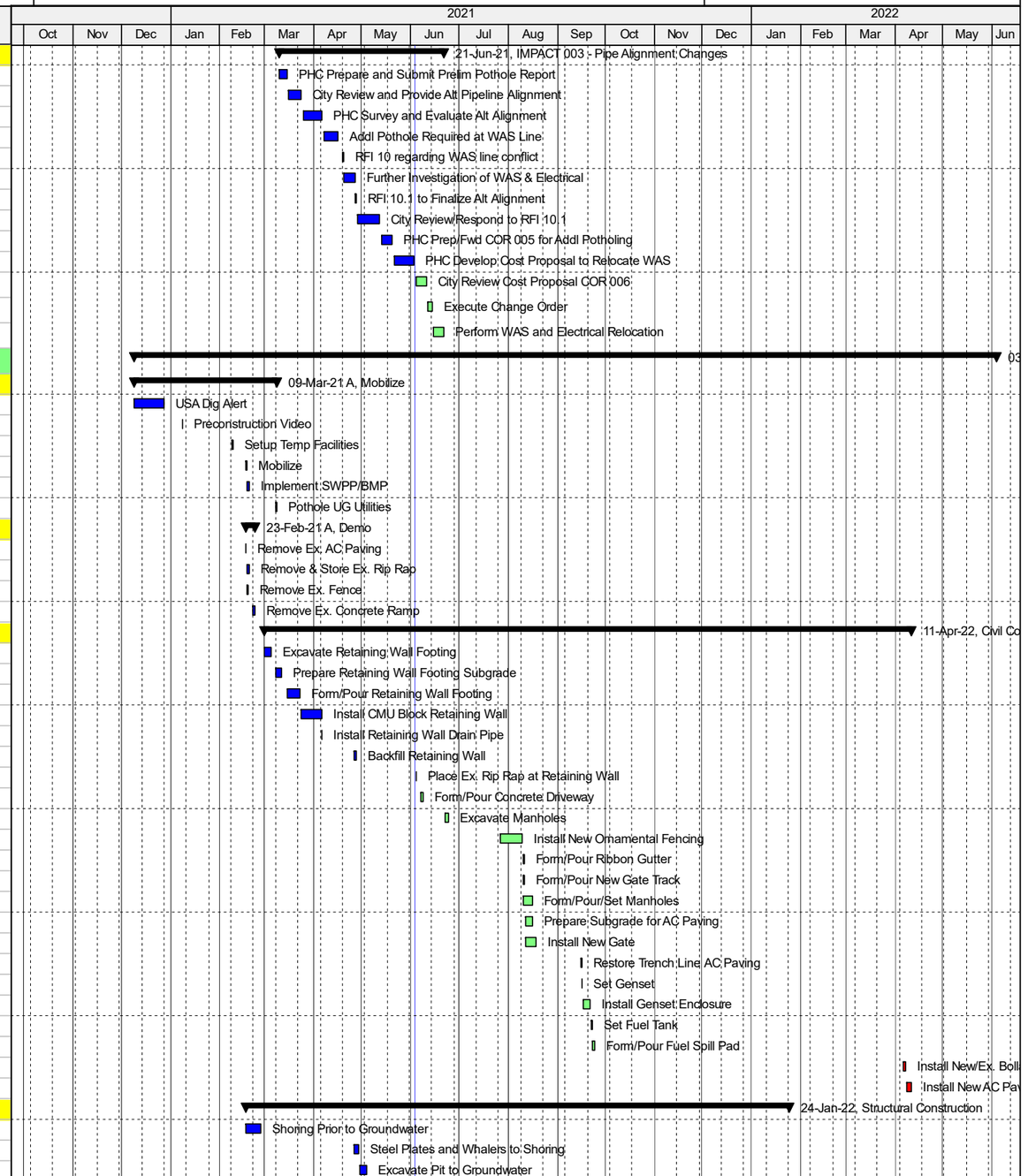
Activity ID	Activity Name	Orig. Dur.	Rem. Dur.	% Compl	Start	Finish	Free Float	Total Float	Expected Finish
IMPACT 003 - Pipe Alignment Changes		70	12		10-Mar-21 A	21-Jun-21	0	154	
IMPACT03-1	PHC Prepare and Submit Prelim Pothole Report	3	0	100%	10-Mar-21 A	15-Mar-21 A			
IMPACT03-2	City Review and Provide Alt Pipeline Alignment	10	0	100%	16-Mar-21 A	24-Mar-21 A			
IMPACT03-3	PHC Survey and Evaluate Alt Alignment	10	0	100%	25-Mar-21 A	06-Apr-21 A			
IMPACT03-4	Addl Pothole Required at WAS Line	10	0	100%	07-Apr-21 A	16-Apr-21 A			
IMPACT03-5	RFI 10 regarding WAS line conflict	1	0	100%	19-Apr-21 A	19-Apr-21 A			
IMPACT03-6	Further Investigation of WAS & Electrical	5	0	100%	20-Apr-21 A	26-Apr-21 A			
IMPACT03-7	RFI 10.1 to Finalize Alt Alignment	1	0	100%	27-Apr-21 A	27-Apr-21 A			
IMPACT03-8	City Review/Respond to RFI 10.1	10	0	100%	28-Apr-21 A	12-May-21 A			
IMPACT03-9	PHC Prep/Fwd COR 005 for Addl Potholing	5	0	100%	13-May-21	20-May-21 A			
IMPACT03-10	PHC Develop Cost Proposal to Relocate WAS	10	0	100%	21-May-21	03-Jun-21 A			
IMPACT03-11	City Review Cost Proposal COR 006	5	5	0%	04-Jun-21 A	10-Jun-21	0	87	
IMPACT03-12	Execute Change Order	2	2	0%	11-Jun-21	14-Jun-21	0	87	
IMPACT03-13	Perform WAS and Electrical Relocation	5	5	0%	15-Jun-21	21-Jun-21	0	87	
Onsite Construction		370	248		09-Dec-20 A	03-Jun-22	0	-82	
Mobilize		51	0		09-Dec-20 A	09-Mar-21 A	0		
MOBIL1000	USA Dig Alert	20	0	100%	09-Dec-20 A	28-Dec-20 A			
MOBIL1010	Preconstruction Video	1	0	100%	08-Jan-21 A	08-Jan-21 A			
MOBIL1050	Setup Temp Facilities	1	0	100%	08-Feb-21 A	09-Feb-21 A			
MOBIL1020	Mobilize	1	0	100%	17-Feb-21 A	17-Feb-21 A			
MOBIL1040	Implement SWPP/BMP	2	0	100%	18-Feb-21 A	19-Feb-21 A			
MOBIL1030	Pothole UG Utilities	10	0	100%	08-Mar-21 A	09-Mar-21 A			
Demo		40	0		17-Feb-21 A	23-Feb-21 A	0		
DEMO1010	Remove Ex. AC Paving	2	0	100%	17-Feb-21 A	17-Feb-21 A			
DEMO1000	Remove & Store Ex. Rip Rap	2	0	100%	18-Feb-21 A	19-Feb-21 A			
DEMO1030	Remove Ex. Fence	1	0	100%	18-Feb-21 A	19-Feb-21 A			
DEMO1020	Remove Ex. Concrete Ramp	1	0	100%	22-Feb-21 A	23-Feb-21 A			
Civil Construction		252	210		01-Mar-21 A	11-Apr-22	0	-65	
CIVIL1110	Excavate Retaining Wall Footing	2	0	100%	01-Mar-21 A	05-Mar-21 A			
CIVIL1120	Prepare Retaining Wall Footing Subgrade	1	0	100%	08-Mar-21 A	12-Mar-21 A			
CIVIL1130	Form/Pour Retaining Wall Footing	2	0	100%	15-Mar-21 A	23-Mar-21 A			
CIVIL1150	Install CMU Block Retaining Wall	5	0	100%	24-Mar-21 A	06-Apr-21 A			
CIVIL1160	Install Retaining Wall Drain Pipe	1	0	100%	06-Apr-21 A	06-Apr-21 A			
CIVIL1170	Backfill Retaining Wall	2	0	100%	26-Apr-21 A	28-Apr-21 A			
CIVIL1180	Place Ex. Rip Rap at Retaining Wall	1	1	0%	04-Jun-21	04-Jun-21	0	130	
CIVIL1190	Form/Pour Concrete Driveway	2	2	0%	07-Jun-21	08-Jun-21	205	130	
CIVIL1000	Excavate Manholes	3	3	0%	22-Jun-21	24-Jun-21	21	87	
CIVIL1010	Install New Ornamental Fencing	10	10	0%	27-Jul-21	09-Aug-21	0	82	
CIVIL1020	Form/Pour Ribbon Gutter	2	2	0%	10-Aug-21	11-Aug-21	0	82	
CIVIL1030	Form/Pour New Gate Track	2	2	0%	10-Aug-21	11-Aug-21	0	92	
CIVIL1100	Form/Pour/Set Manholes	5	5	0%	10-Aug-21	16-Aug-21	0	66	
CIVIL1040	Prepare Subgrade for AC Paving	3	3	0%	12-Aug-21	16-Aug-21	157	82	
CIVIL1050	Install New Gate	5	5	0%	12-Aug-21	18-Aug-21	168	92	
CIVIL1140	Restore Trench Line AC Paving	1	1	0%	15-Sep-21	16-Sep-21	137	62	
CIVIL1060	Set Genset	1	1	0%	16-Sep-21	16-Sep-21	0	54	
CIVIL1070	Install Genset Enclosure	3	3	0%	17-Sep-21	21-Sep-21	0	54	
CIVIL1080	Set Fuel Tank	1	1	0%	22-Sep-21	22-Sep-21	0	54	
CIVIL1090	Form/Pour Fuel Spill Pad	2	2	0%	23-Sep-21	24-Sep-21	0	54	
CIVIL1200	Install New/Ex. Bollards	2	2	0%	06-Apr-22	07-Apr-22	0	-75	
CIVIL1210	Install New AC Paving	2	2	0%	08-Apr-22	11-Apr-22	0	-75	
Structural Construction		198	156		17-Feb-21 A	24-Jan-22	0	10	
STRUC1010	Shoring Prior to Groundwater	15	0	100%	17-Feb-21 A	27-Feb-21 A			
STRUC1011	Steel Plates and Whalers to Shoring	4	0	100%	26-Apr-21 A	29-Apr-21 A			
STRUC1000	Excavate Pit to Groundwater	5	0	100%	30-Apr-21 A	04-May-21 A			



Remaining Level of Effort | Actual Work | Critical Remaining Work
Actual Level of Effort | Remaining Work | Milestone

Date	Revision	Checked	Approved
10-Jun-20	Progress Schedule Update		

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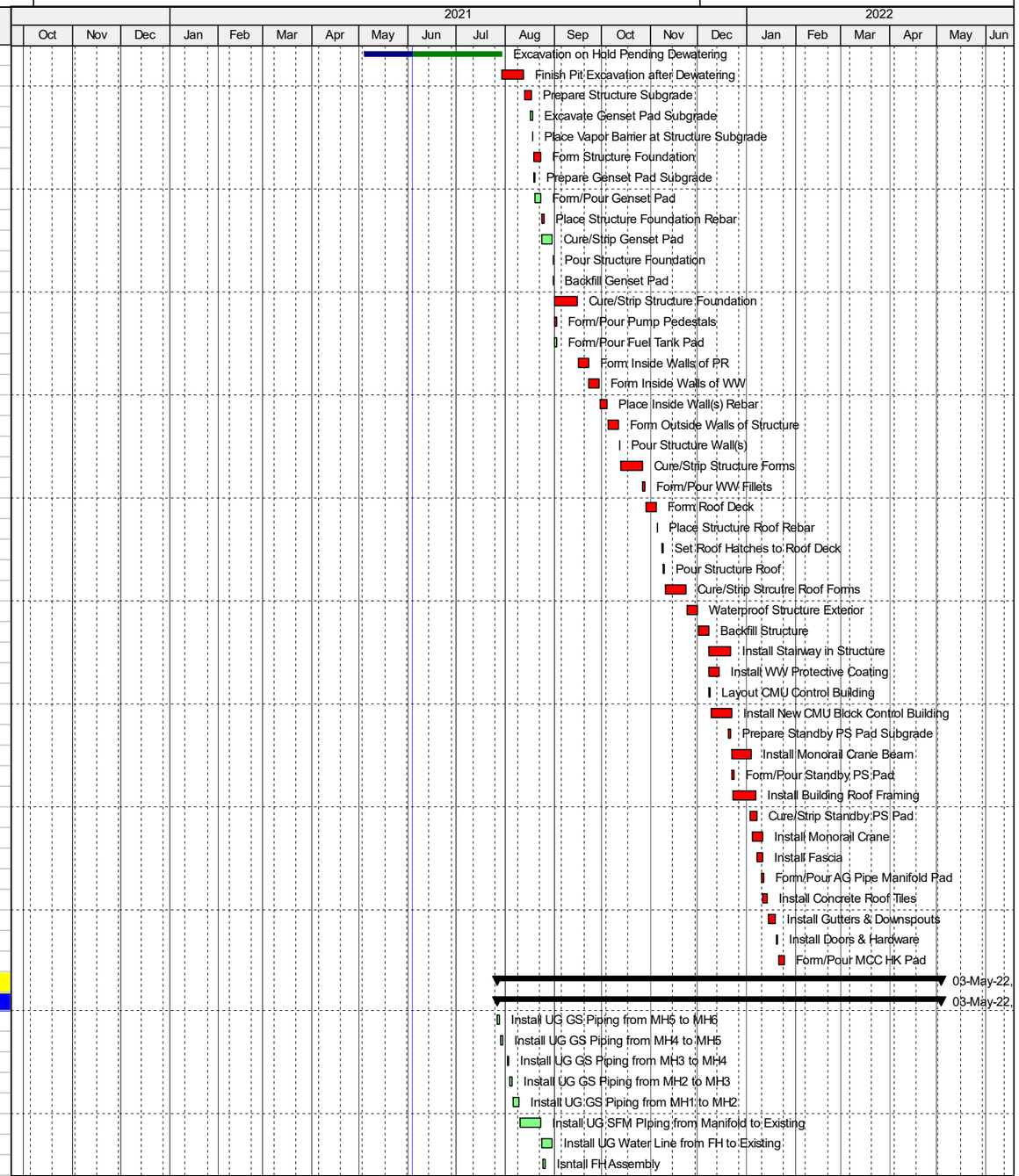
Activity ID	Activity Name	Orig. Dur.	Rem. Dur.	% Compl	Start	Finish	Free Float	Total Float	Expected Finish
STRUC1002	Excavation on Hold Pending Dewatering	1	39	0%	04-May-21	29-Jul-21	0	-82	
STRUC1001	Finish Pit Excavation after Dewatering	10	10	0%	30-Jul-21	12-Aug-21	0	-82	
STRUC1020	Prepare Structure Subgrade	3	3	0%	13-Aug-21	17-Aug-21	0	-82	
STRUC1350	Excavate Genset Pad Subgrade	2	2	0%	17-Aug-21	18-Aug-21	0	66	
STRUC1030	Place Vapor Barrier at Structure Subgrade	1	1	0%	18-Aug-21	18-Aug-21	0	-82	
STRUC1040	Form Structure Foundation	3	3	0%	19-Aug-21	23-Aug-21	0	-82	
STRUC1360	Prepare Genset Pad Subgrade	1	1	0%	19-Aug-21	19-Aug-21	0	66	
STRUC1370	Form/Pour Genset Pad	2	2	0%	20-Aug-21	23-Aug-21	0	66	
STRUC1050	Place Structure Foundation Rebar	2	2	0%	24-Aug-21	25-Aug-21	0	-82	
STRUC1380	Cure/Strip Genset Pad	5	5	0%	24-Aug-21	30-Aug-21	0	66	
STRUC1070	Pour Structure Foundation	1	1	0%	31-Aug-21	31-Aug-21	0	-82	
STRUC1390	Backfill Genset Pad	1	1	0%	31-Aug-21	31-Aug-21	0	66	
STRUC1080	Cure/Strip Structure Foundation	10	10	0%	01-Sep-21	15-Sep-21	0	-82	
STRUC1060	Form/Pour Pump Pedestals	2	2	0%	01-Sep-21	02-Sep-21	0	-9	
STRUC1400	Form/Pour Fuel Tank Pad	2	2	0%	01-Sep-21	02-Sep-21	12	66	
STRUC1090	Form Inside Walls of PR	5	5	0%	16-Sep-21	22-Sep-21	0	-82	
STRUC1100	Form Inside Walls of WW	5	5	0%	23-Sep-21	29-Sep-21	0	-82	
STRUC1110	Place Inside Wall(s) Rebar	3	3	0%	30-Sep-21	04-Oct-21	0	-82	
STRUC1120	Form Outside Walls of Structure	5	5	0%	05-Oct-21	11-Oct-21	0	-82	
STRUC1130	Pour Structure Wall(s)	1	1	0%	12-Oct-21	12-Oct-21	0	-82	
STRUC1140	Cure/Strip Structure Forms	10	10	0%	13-Oct-21	26-Oct-21	0	-82	
STRUC1150	Form/Pour WW Fillets	2	2	0%	27-Oct-21	28-Oct-21	0	-82	
STRUC1160	Form Roof Deck	5	5	0%	29-Oct-21	04-Nov-21	0	-82	
STRUC1170	Place Structure Roof Rebar	1	1	0%	05-Nov-21	05-Nov-21	0	-82	
STRUC1200	Set Roof Hatches to Roof Deck	1	1	0%	08-Nov-21	08-Nov-21	0	-82	
STRUC1180	Pour Structure Roof	1	1	0%	09-Nov-21	09-Nov-21	0	-82	
STRUC1190	Cure/Strip Strcutre Roof Forms	10	10	0%	10-Nov-21	23-Nov-21	0	-82	
STRUC1220	Waterproof Structure Exterior	3	3	0%	24-Nov-21	30-Nov-21	0	-82	
STRUC1230	Backfill Structure	5	5	0%	01-Dec-21	07-Dec-21	0	-82	
STRUC1250	Install Stairway in Structure	10	10	0%	08-Dec-21	21-Dec-21	0	-2	
STRUC1210	Install WW Protective Coating	5	5	0%	08-Dec-21	14-Dec-21	0	-48	
STRUC1240	Layout CMU Control Building	1	1	0%	08-Dec-21	08-Dec-21	0	-82	
STRUC1260	Install New CMU Block Control Building	10	10	0%	09-Dec-21	22-Dec-21	0	-82	
STRUC1410	Prepare Standby PS Pad Subgrade	2	2	0%	20-Dec-21	21-Dec-21	0	-48	
STRUC1270	Install Monorail Crane Beam	3	3	0%	22-Dec-21	03-Jan-22	0	-2	
STRUC1420	Form/Pour Standby PS Pad	2	2	0%	22-Dec-21	23-Dec-21	0	-48	
STRUC1280	Install Building Roof Framing	5	5	0%	23-Dec-21	06-Jan-22	0	-82	
STRUC1430	Cure/Strip Standby PS Pad	5	5	0%	03-Jan-22	07-Jan-22	0	-48	
STRUC1290	Install Monorail Crane	5	5	0%	04-Jan-22	10-Jan-22	54	-2	
STRUC1300	Install Fascia	2	2	0%	07-Jan-22	10-Jan-22	0	-82	
STRUC1440	Form/Pour AG Pipe Manifold Pad	2	2	0%	10-Jan-22	11-Jan-22	58	-17	
STRUC1310	Install Concrete Roof Tiles	3	3	0%	11-Jan-22	13-Jan-22	0	-82	
STRUC1320	Install Gutters & Downspouts	2	2	0%	14-Jan-22	18-Jan-22	0	-82	
STRUC1330	Install Doors & Hardware	2	2	0%	19-Jan-22	20-Jan-22	0	-82	
STRUC1340	Form/Pour MCC HK Pad	2	2	0%	21-Jan-22	24-Jan-22	0	-20	
Mechanical Construction		190	190		27-Jul-21	03-May-22	0	-60	
Yard Piping and Misc		190	190		27-Jul-21	03-May-22	0	-60	
MECH1200	Install UG GS Piping from MH5 to MH6	2	2	0%	27-Jul-21	28-Jul-21	0	66	
MECH1190	Install UG GS Piping from MH4 to MH5	2	2	0%	29-Jul-21	30-Jul-21	0	66	
MECH1180	Install UG GS Piping from MH3 to MH4	2	2	0%	02-Aug-21	03-Aug-21	0	66	
MECH1170	Install UG GS Piping from MH2 to MH3	2	2	0%	04-Aug-21	05-Aug-21	0	66	
MECH1160	Install UG GS Piping from MH1 to MH2	2	2	0%	06-Aug-21	09-Aug-21	0	66	
MECH1130	Install UG SFM PIping from Manifold to Existing	10	10	0%	10-Aug-21	23-Aug-21	0	70	
MECH1150	Install UG Water Line from FH to Existing	5	5	0%	24-Aug-21	30-Aug-21	187	105	
MECH1140	Isntall FH Assembly	2	2	0%	25-Aug-21	26-Aug-21	0	70	



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Date	Revision	Checked	Approved
10-Jun-20	Progress Schedule Update		

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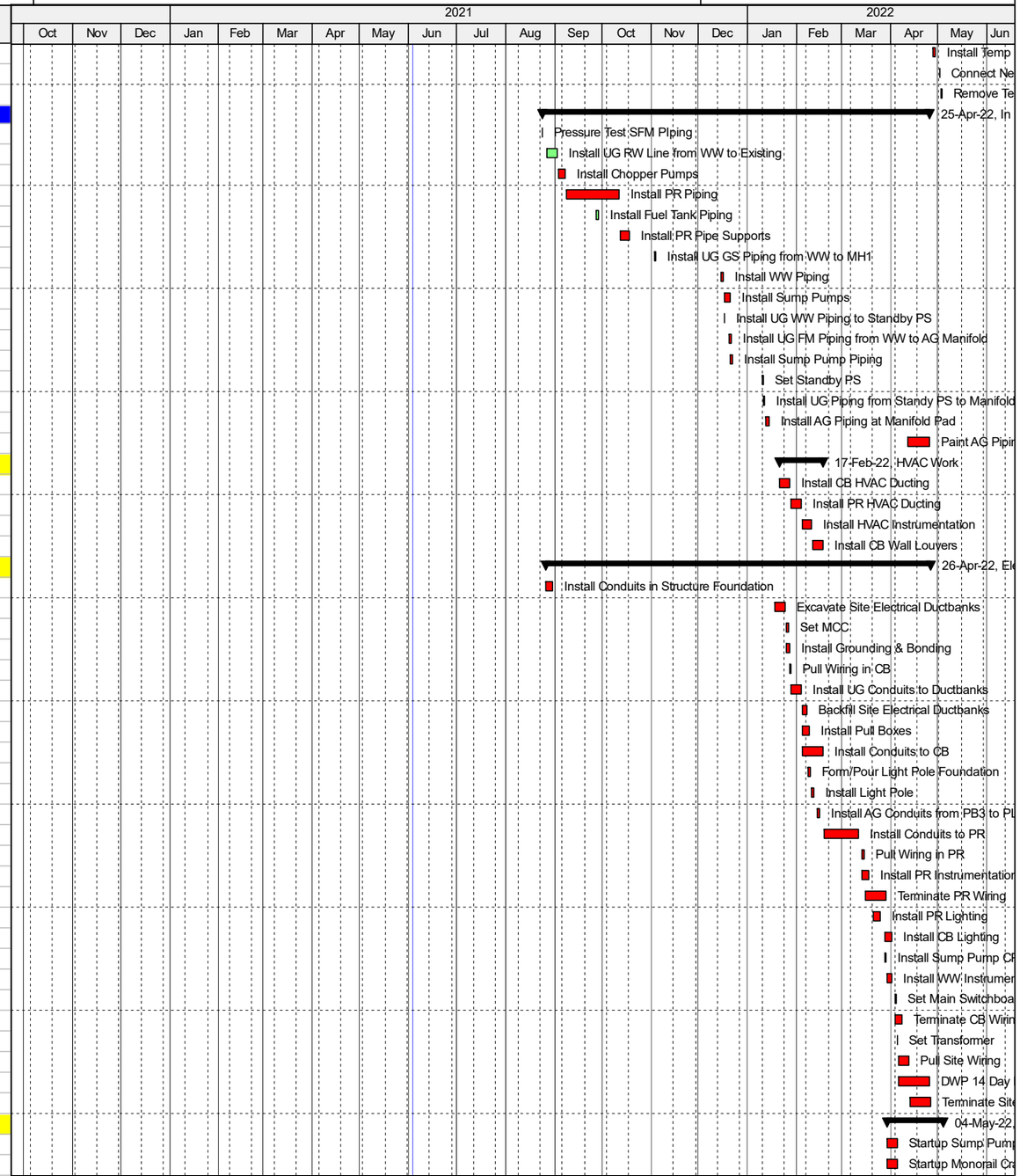
Activity ID	Activity Name	Orig. Dur.	Rem. Dur.	% Compl	Start	Finish	Free Float	Total Float	Expected Finish
MECH1210	Install Temp Bypass	2	2	0%	28-Apr-22	29-Apr-22	0	-61	
MECH1220	Connect New GS Line to Existing	1	1	0%	02-May-22	02-May-22	0	-61	
MECH1230	Remove Temp Bypass System	1	1	0%	03-May-22	03-May-22	21	-61	
In and Around Lift Station		164	164		24-Aug-21	25-Apr-22	0	-75	
MECH1260	Pressure Test SFM Piping	1	1	0%	24-Aug-21	24-Aug-21	0	70	
MECH1240	Install UG RW Line from WW to Existing	5	5	0%	27-Aug-21	02-Sep-21	8	70	
MECH1010	Install Chopper Pumps	2	2	0%	03-Sep-21	07-Sep-21	0	-9	
MECH1040	Install PR Piping	24	24	0%	08-Sep-21	11-Oct-21	0	-9	
MECH1050	Install Fuel Tank Piping	2	2	0%	27-Sep-21	28-Sep-21	129	54	
MECH1060	Install PR Pipe Supports	5	5	0%	12-Oct-21	18-Oct-21	39	-9	
MECH1000	Install UG GS Piping from WW to MH1	1	1	0%	03-Nov-21	03-Nov-21	44	-4	
MECH1070	Install WW Piping	2	2	0%	15-Dec-21	16-Dec-21	0	-48	
MECH1090	Install Sump Pumps	2	2	0%	17-Dec-21	20-Dec-21	0	-5	
MECH1080	Install UG WW Piping to Standby PS	1	1	0%	17-Dec-21	17-Dec-21	0	-48	
MECH1100	Install UG FM Piping from WW to AG Manifold	2	2	0%	20-Dec-21	21-Dec-21	9	-39	
MECH1110	Install Sump Pump Piping	2	2	0%	21-Dec-21	22-Dec-21	70	-5	
MECH1020	Set Standby PS	1	1	0%	10-Jan-22	10-Jan-22	0	-48	
MECH1030	Install UG Piping from Standy PS to Manifold	1	1	0%	11-Jan-22	11-Jan-22	0	-48	
MECH1120	Install AG Piping at Manifold Pad	3	3	0%	12-Jan-22	14-Jan-22	0	-48	
MECH1250	Paint AG Piping	10	10	0%	12-Apr-22	25-Apr-22	0	-75	
HVAC Work		20	20		21-Jan-22	17-Feb-22	0	-8	
HVAC1000	Install CB HVAC Ducting	5	5	0%	21-Jan-22	27-Jan-22	0	-82	
HVAC1010	Install PR HVAC Ducting	5	5	0%	28-Jan-22	03-Feb-22	0	-82	
HVAC1020	Install HVAC Instrumentation	5	5	0%	04-Feb-22	10-Feb-22	0	-8	
HVAC1030	Install CB Wall Louvers	5	5	0%	11-Feb-22	17-Feb-22	74	-8	
Electrical Work		163	163		26-Aug-21	26-Apr-22	0	-76	
ELEC1020	Install Conduits in Structure Foundation	3	3	0%	26-Aug-21	30-Aug-21	0	-82	
ELEC1100	Excavate Site Electrical Ductbanks	5	5	0%	18-Jan-22	24-Jan-22	0	-48	
ELEC1030	Set MCC	2	2	0%	25-Jan-22	26-Jan-22	0	-20	
ELEC1130	Install Grounding & Bonding	3	3	0%	25-Jan-22	27-Jan-22	0	-48	
ELEC1040	Pull Wiring in CB	2	2	0%	27-Jan-22	28-Jan-22	44	-20	
ELEC1150	Install UG Conduits to Ductbanks	5	5	0%	28-Jan-22	03-Feb-22	0	-48	
ELEC1180	Backfill Site Electrical Ductbanks	2	2	0%	04-Feb-22	07-Feb-22	0	-48	
ELEC1190	Install Pull Boxes	3	3	0%	04-Feb-22	08-Feb-22	39	-43	
ELEC1060	Install Conduits to CB	10	10	0%	04-Feb-22	17-Feb-22	0	-82	
ELEC1200	Form/Pour Light Pole Foundation	2	2	0%	08-Feb-22	09-Feb-22	0	-48	
ELEC1210	Install Light Pole	2	2	0%	10-Feb-22	11-Feb-22	0	-48	
ELEC1230	Install AG Conduits from PB3 to PLC	2	2	0%	14-Feb-22	15-Feb-22	34	-48	
ELEC1070	Install Conduits to PR	15	15	0%	18-Feb-22	11-Mar-22	0	-82	
ELEC1000	Pull Wiring in PR	2	2	0%	14-Mar-22	15-Mar-22	0	-61	
ELEC1080	Install PR Instrumentation	5	5	0%	14-Mar-22	18-Mar-22	0	-82	
ELEC1010	Terminate PR Wiring	10	10	0%	16-Mar-22	29-Mar-22	0	-61	
ELEC1090	Install PR Lighting	5	5	0%	21-Mar-22	25-Mar-22	0	-82	
ELEC1120	Install CB Lighting	5	5	0%	28-Mar-22	01-Apr-22	0	-64	
ELEC1110	Install Sump Pump CP	2	2	0%	28-Mar-22	29-Mar-22	0	-82	
ELEC1140	Install WW Instrumentation	3	3	0%	30-Mar-22	01-Apr-22	0	-82	
ELEC1160	Set Main Switchboard	1	1	0%	04-Apr-22	04-Apr-22	0	-82	
ELEC1050	Terminate CB Wiring	5	5	0%	04-Apr-22	08-Apr-22	0	-64	
ELEC1170	Set Transformer	1	1	0%	05-Apr-22	05-Apr-22	0	-82	
ELEC1220	Pull Site Wiring	5	5	0%	06-Apr-22	12-Apr-22	0	-82	
ELEC1250	DWP 14 Day Notice for Transformer Energ.	14	14	0%	06-Apr-22	25-Apr-22	0	-75	
ELEC1240	Terminate Site Wiring	10	10	0%	13-Apr-22	26-Apr-22	0	-82	
Startup		26	26		30-Mar-22	04-May-22	0	-77	
START1000	Startup Sump Pumps	5	5	0%	30-Mar-22	05-Apr-22	26	-56	
START1020	Startup Monorail Crane	5	5	0%	30-Mar-22	05-Apr-22	26	-56	



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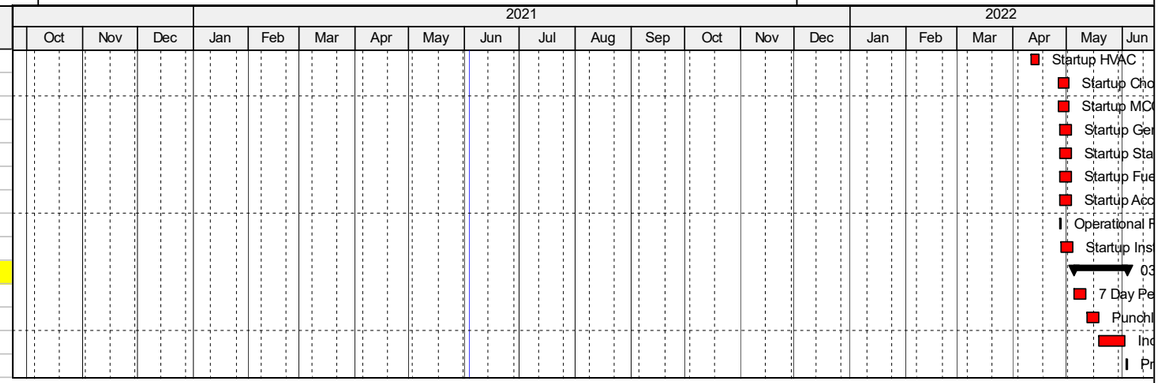
Activity ID	Activity Name	Orig. Dur.	Rem. Dur.	% Compl	Start	Finish	Free Float	Total Float	Expected Finish
START1040	Startup HVAC	5	5	0%	11-Apr-22	15-Apr-22	18	-64	
START1090	Startup Chopper Pumps	5	5	0%	26-Apr-22	02-May-22	7	-75	
START1030	Startup MCC	5	5	0%	26-Apr-22	02-May-22	7	-75	
START1050	Startup Genset	5	5	0%	27-Apr-22	03-May-22	6	-76	
START1060	Startup Standby PS	5	5	0%	27-Apr-22	03-May-22	6	-76	
START1070	Startup Fuel Tank	5	5	0%	27-Apr-22	03-May-22	6	-76	
START1080	Startup Access Gate	5	5	0%	27-Apr-22	03-May-22	6	-76	
START1100	Operational Readiness Test	1	1	0%	27-Apr-22	27-Apr-22	0	-82	
START1010	Startup Instrumentation	5	5	0%	28-Apr-22	04-May-22	0	-82	
Project Completion		21	21		05-May-22	03-Jun-22	0	-82	
COMP1020	7 Day Performance Test	5	5	0%	05-May-22	11-May-22	0	-82	
COMP1000	Punchlist	5	5	0%	12-May-22	18-May-22	0	-82	
COMP1030	Inclement Weather	10	10	0%	19-May-22	02-Jun-22	0	-82	
COMP1010	Project Complete	1	1	0%	03-Jun-22	03-Jun-22	0	-82	



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City of Corona
Administrative Services Department
OFFICE OF: Purchasing Division

Office: 951.279.3620
Remote: 951.395.1941

400 South Vicentia Avenue, Suite 320
Corona, CA 92882 – www.CoronaCA.gov

June 7, 2021

Mr. Greg Chehey
Pacific Hydrotech Corporation
314 East 3rd Street
Perris, CA 92570

SUBJECT: **WRF3 LIFT STATION**
PROPOSED CHANGE ORDER NO. 1
CHANGED CONDITIONS

Dear Mr. Chehey:

In response to your letter dated April 28, 2021 on the above subject the City will accept a total extra work cost of $130,394.49 as shown in the attached cost adjustment based on an installation impact of 4.5 hours per soldier pile and adjustments to equipment and miscellaneous charges as determined from daily construction reports. The extra work is a result of the presence of previously unknown groundwater at the lift station site. The contract change order for $130,394.49 includes all extra work of any nature associated with installation of the shoring system.

Although the City disagrees with much of the information and many of the opinions presented in the March 21, 2021 letter prepared by Mr. Michael Cornelius, the City believes it is in the best interest of all parties to reach an agreement with respect to the shoring installation cost impacts caused by the groundwater.

Please feel free to contact me at (951) 739-4912 or by e-mail at vernon.weisman@CoronaCA.gov with any questions or concerns.

Vernon R. Weisman, P.E.
District Engineer

c: Gull Nawaz

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COST PROPOSAL
(Changed Condition)

/2021

Drill Rig	4.5	$352.25	$1,585.13
Hyundai 290LC	4.5	$112.69	$507.11
RT Crane	4.5	$97.66	$439.47
Subtotal			$2,531.71
x6 holes			$15,190.26
MU (15%)			$2,278.54
TOTAL			$17,468.80

McMahon Extra Cost Breakdown

McMahon Additional Work due to Changed Conditions

McMahon Labor Charges

Qty		Item	HRS/UM	Rate	Total	
1	EA	Operator	~~5~~ 4.5	$ 91.38	$ $411.21	~~456.90~~
1	EA	Laborer	~~5~~ 4.5	$ 67.07	$ $301.82	~~335.35~~

Subtotal Labor Per Hole	$ ~~792.25~~	$713.03
16 holes ~~x 22 Holes~~	$ ~~17,429.50~~	$15,686.55
McMahon MU 15%	$ ~~2,614.43~~	$2,352.98
Total	**$ ~~20,043.93~~**	$18,039.53

McMahon Equipment Charges

Qty		Item	HRS/UM	Rate	Total	
1	EA	Drill Rig	~~5~~ 4.5	$ 352.25	$ $1,585.13	~~1,761.25~~
1	EA	ABI Mobilram	~~5~~ 4.5	$ 463.58	$ $2,086.11	~~2,317.90~~
1	EA	RT Crane	~~5~~ 4.5	$ 97.66	$ $439.47	~~488.30~~

Equipment Subtotal	$ ~~4,567.45~~	$4,110.71
16 x ~~22~~ Holes	$ ~~100,483.90~~	$65,771.36
McMahon MU 15%	$ ~~15,072.59~~	$9,865.70
Total	**$ ~~115,556.49~~**	$75,637.06

McMahon MISC Charges

Qty		Item	HRS/UM	Rate	Total	
1	~~2~~ EA	Service Truck	~~5~~ 4.5	$ 31.00	$ $139.50	~~310.00~~
	2 EA	31" Temp Casing	~~5~~ 4.5	$ 2.34	$ $21.06	~~23.40~~
	3 EA	30" Core Barrel	~~5~~ 4.5	$ 1.80	$ $24.30	~~27.00~~
	1 EA	Rock Auger	~~5~~ 4.5	$ 2.94	$ $13.23	~~14.70~~
	13 EA	Rock Teeth	1	$ 7.65	$	99.45
	1 EA	Casing Adapter	~~5~~ 4.5	$ 2.64	$ $11.88	~~13.20~~

MISC Subtotal	$ ~~487.75~~	$309.42
x 22 Holes	$ ~~10,730.50~~	$6,807.24
McMahon MU 15%	$ ~~1,609.58~~	$1,021.09
Total	**$ ~~12,340.08~~**	$7,828.33

McMahon Tooling Repair Charges

Qty		Item	HRS/UM	Rate	Total	
1	EA	Welder	~~40~~ 4	$ ~~70.43~~	$ $281.72	~~2,817.02~~
1	EA	Welding Truck	~~40~~ 4	$ ~~31.00~~	$ $124.00	~~1,240.00~~
1	EA	Welding Machine	~~40~~ 4	$ ~~11.85~~	$ $47.40	~~474.00~~
1	EA	Welding Outfit	~~40~~ 4	$ ~~0.29~~	$ $1.16	~~11.60~~

Tooling Repair Subtotal	$ 4,542.62	$454.28
McMahon MU 15%	$ 681.39	$68.14
Total	**$ 5,224.02**	$522.42

McMahon Shoring Design Engineering Charges

Qty		Item	HRS/UM	Rate	Total
1	EA	Shoring Redesign	1	2940	$ 2,940.00

McMahon Consultant Charges

Qty		Item	HRS/UM	Rate	Total
~~1~~	~~EA~~	~~Consultant~~	~~1~~	~~3500~~	~~$ 3,500.00~~

Subtotal	$ 159,604.50	$122,436.14
5.0% PHC Markup	$ 7,980.23	$6,121.81
1.5% Bonds/Ins.	$ 2,394.07	$1,836.54
Total Extra for Drilling Holes	**$ 169,978.80**	
		$130,394.49

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PACIFIC HYDROTECH CORPORATION
314 E. 3RD ST, PERRIS, CA 92570
(951) 943-8803 FAX (951) 943-1093

April 28, 2021

City of Corona
755 Public Safety Way
Corona, CA 92880

Attn: Vernon Weisman

Reference: WRF-3 Lift Station Project
Project No. 2018-11

Subject: Proposal for Changed Conditions - Revised

As outlined in our original cost proposal, and subsequent correspondence, PHC considers the ground water we have encountered at approximately 21ft below ground level to be a changed condition to the contract. Additionally, after consideration and discussion with McMahon we also feel that consistent refusal at 21ft +/- rather than 27ft as noted in the soils report to be changed condition as well and further impacting our ability to deal with the groundwater. In consideration of these changed conditions, we have attached the following cost proposal which is summarized as follows:

TOTAL Extra Work.....$169,978.80

As noted by McMahon in their cost proposal narrative (also attached) we have proceeded to maintain production and move forward on the shoring holes in good faith with the expectation that our request for extra work will be considered justified and that we will work together to finalize this change order in a spirit of cooperation and good faith. It is our hope that we can finalize this change promptly as our subcontractor is incurring significant unexpected additional cost which deserves compensation.

As for time impact, PHC has prepared a schedule update for progress through April 8, 20201 which allows 3 weeks for pit excavation starting April 19th, 2021. We would propose to use this updated progress schedule as the basis for a no-cost time extension to the project completion with a new project completion date of March 1, 2022.

Further to our earlier correspondence, McMahon has enlisted the help of Cornelius Consultants to assist them in their presentation of facts related to their request for additional compensation due to changed conditions. The full report is attached for added information. The attached report has certain key sections highlighted which are paraphrased as follows:

- Cornelius points out that “refusal” to the relatively small CME-75 geotechnical drill would not necessarily mean refusal to the more powerful MAIT HR130 rig first employed by McMahon.

- Cornelius clarifies the Plan A and Plan B approaches envisioned by McMahon to deal with the indicated soils and expected gravel/cobble layer below 27ft with “Plan A” being to utilize a continuous flight auger to drill to 27ft without extracting soil and then vibrating beams to depth through loosened soil and beyond through the gravel/cobble layer to completion. If gravel/cobble prohibited vibrating the beams, then “Plan “B would provide for removal of soil from the holes with the continuous flight auger making multiple passes. In neither case, did McMahon consider anything less than 4 holes per day in their plans.

- From the start, McMahon instead discovered that at a depth of just 21ft, drilling became “markedly different” indicating that the auger was encountering much larger material than indicated or anticipated. Additionally, subsequent investigations confirmed the presence of groundwater at 21ft. The combination

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PACIFIC HYDROTECH CORPORATION
314 E. 3RD ST, PERRIS, CA 92570
(951) 943-8803 FAX (951) 943-1093

of groundwater and cobbles/boulders caused the shaft walls to collapse.

- Continued attempts to advance drilling below 21ft resulted in inconsistent return of soil being removed to the surface with the water washing even the sandy soil off the flights leaving very little to be spun off at the surface.

- In consultation with our dewatering expert (Rain-for-Rent) and out of an abundance of caution, it was determined that using slurry may have a detrimental effect on our dewatering efforts. Therefore, PHC did advise McMahon that drilling slurry would not be allowed for the 22ea holes. Additionally, in discussing with McMahon at the time, it was decided that the significant additional cost of adding slurry to the drilling operation (not part of their cost proposal) would likely not offset any potential time savings.

In summary, while PHC and McMahon appreciate the offer of 1.5hrs/hole as additional compensation, we feel that that amount is far short of reasonable compensation for this unfortunate changed condition. Given that McMahon's production rate diminished drastically from even their lowest anticipated rate of installation to barely 1 per day, we respectfully request that the City consider allowing 5.0hrs/hole with the other 3.0hrs/hole providing compensation for both the changes in equipment and the extra time/expense experienced when drilling from 27ft to completion.

Per McMahon, the reason for the increase from 4.0hrs to 5.0hrs is justified as Cornelius Consultants discussed in the Differing Site Conditions letter that if it took approximately 15 - 20 minute to get from 0' to 21', and you could reasonably estimate another 5 to 10 minutes to reach 27.5' if there was no groundwater or refusal present between 21-27.5. With this timing in mind, it's a fairly conservative estimate to core a dry hole an additional 7.5' to 9.5' in 2 to 2.5 hours seems more than reasonable timeframe. With that noted, that left McMahon with 5 hours of added time to complete each shaft with refusal and groundwater starting at 21'.

Additionally, per the original proposal comments, McMahon has attached and highlighted the labor and equipment rates that were incurred while drilling.

It should be noted that in the spirit of cooperation, PHC is requesting a non-compensable time extension. In addition, PHC has not included our additional cost for manpower and equipment needed to support this extended time spent drilling and setting these beams. While we have been somewhat productive with potholing efforts and building the block wall, this is far short of the total additional effort needed to support the extended drilling time.

As requested, PHC will prepare and forward a separate cost proposal for dewatering of the completion of our "test well" dewatering efforts and return of RFI 009 (Structure backfill).

Respectfully,
PACIFIC HYDROTECH CORPORATION

Dustin Chehey
Project Coordinator

Att: PHC Extra Work Cost Breakdown Worksheets
McMahon Drilling Cost Proposal
Cornelius Consultants Report
Labor Surcharge Rate & Equipment Rates

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COST PROPOSAL
(Changed Condition)

McMahon Changed Condition

Printed: 4/28/2021

McMahon Extra Cost Breakdown

McMahon Additional Work due to Changed Conditions

McMahon Labor Charges						
Qty		Item	HRS/UM	Rate	Total	
1	EA	Operator	5	$ 91.38	$ 456.90	
1	EA	Laborer	5	$ 67.07	$ 335.35	
				Subtotal Labor Per Hole		$ 792.25
				x 22 Holes		$ 17,429.50
				McMahon MU 15%		$ 2,614.43
				Total		**$ 20,043.93**

McMahon Equipment Charges						
Qty		Item	HRS/UM	Rate	Total	
1	EA	Drill Rig	5	$ 352.25	$ 1,761.25	
1	EA	ABI Mobilram	5	$ 463.58	$ 2,317.90	
1	EA	RT Crane	5	$ 97.66	$ 488.30	
				Equipment Subtotal		$ 4,567.45
				x 22 Holes		$ 100,483.90
				McMahon MU 15%		$ 15,072.59
				Total		**$ 115,556.49**

McMahon MISC Charges						
Qty		Item	HRS/UM	Rate	Total	
2	EA	Service Truck	5	$ 31.00	$ 310.00	
2	EA	31" Temp Casing	5	$ 2.34	$ 23.40	
3	EA	30" Core Barrel	5	$ 1.80	$ 27.00	
1	EA	Rock Auger	5	$ 2.94	$ 14.70	
13	EA	Rock Teeth	1	$ 7.65	$ 99.45	
1	EA	Casing Adapter	5	$ 2.64	$ 13.20	
				MISC Subtotal		$ 487.75
				x 22 Holes		$ 10,730.50
				McMahon MU 15%		$ 1,609.58
				Total		**$ 12,340.08**

McMahon Tooling Repair Charges						
Qty		Item	HRS/UM	Rate	Total	
1	EA	Welder	40	$ 70.43	$ 2,817.02	
1	EA	Welding Truck	40	$ 31.00	$ 1,240.00	
1	EA	Welding Machine	40	$ 11.85	$ 474.00	
1	EA	Welding Outfit	40	$ 0.29	$ 11.60	
				Tooling Repair Subtotal		$ 4,542.62
				McMahon MU 15%		$ 681.39
				Total		**$ 5,224.02**

McMahon Shoring Design Engineering Charges						
Qty		Item	HRS/UM	Rate	Total	
1	EA	Shoring Redesign	1	2940	$ 2,940.00	
McMahon Consultant Charges						
Qty		Item	HRS/UM	Rate	Total	
1	EA	Consultant	1	3500	$ 3,500.00	

Subtotal		$ 159,604.50
5.0%	PHC Markup	$ 7,980.23
1.5%	Bonds/Ins.	$ 2,394.07
	Total Extra for Drilling Holes	**$ 169,978.80**

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From: Kevin McMahon
To: Dustin Chehey
Cc: Greg Chehey; Brian McMahon; Ashley Collins
Subject: WRF-3 labor and Equipment rates C/O cost
Date: Wednesday, April 28, 2021 1:21:48 PM
Attachments: WRF-3 Rates.pdf
PastedGraphic-2.tiff

Dustin

I have listed below a breakdown of the additional costs associated with installation of the 22 piles using Caltrans rates for equipment and labor. Now that we have completed this work and know the additional amount of time I am requesting 5 hours per hole. In addition 40 hours for repair work to the augers, core barrels and casing. engineering and consultant cost.

Engineering costs = **$2,940.00**

Consultant costs = **$3,500.00**

Tooling repair costs -
Labor : Welder $62.88 hour x 40 hours = $2,515.20 + 12% surcharge and 15% markup = $3,239.57
Equipment : welding truck $31.00 hour x 40 hour = $1,240.00 welding machine $11.85 hour x 40 = $474.00 welding outfit = .29 hour x 40 = $11.60 equipment $1,725.60 + 15% markup = $1,984.44

Tooling repair total = **$5,224.01**

Equipment costs for drilled shafts

Drill Rig - $352.25 hour x 5 hours = $1,761.25
ABI - $463.58 hour x 5 hours = $2,317.90
Crane - $97.66 hour x 5 hours = $488.30
Service truck - $31.00 hour x 5 hours = $155.00
Service truck - $31.00 hour x 5 hours = $155.00
Auger rock 30”x5’ = $2.94 hour x 5 hours = $14.70
Core Barrel - 30”x5’ $1,80 hour x 5 hours = $9.00
Core Barrel - 30”x5’ $1.80 hour x 5 hours = $9.00
Core Barrel - 30”x5’ $1.80 hour x 5 hours = $9.00
Casing - 31”x26’ .09LF x 26’ $2.34 hour x 5 hours = $11.70
Casing - 31”x26’ .09LF x 26’ $2.34 hour x 5 hours = $11.70
Casing Adaptor - $2.64 hour x 5 hours = $13.20
Rock Teeth - $7.65 each x 13 = $99.45

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Per hole Total = $5,055.20 + 15% markup $758.28 = $5,813.48 x 22 shafts = $127,896.56

Equipment total 22 shafts = **$127,896.56**

Labor Costs for drilled shafts

Operator = $81.59 hour x 5 hours = $407.95 + 12% labor surcharge ($48.96) and 15% markup ($68.54) = $518.10 x 22 shafts = $11,559.68
Laborer = $59.88 hour x 5 hours = $299.40 + 12% labor surcharge ($35.93) and 15% markup ($50.30) = $385.63 x 22 shafts = $8,483.86

Labor total 22 shafts = **$20,043.54**

Total C/O # 1 = $159,604.11

Kevin McMahon
619-491-9355 office
951-553-8372 cell
634 Rock Springs Road
Escondido Ca, 92025
www.shoring-drilling.com

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CORNELIUS CONSULTANTS
www.corneliusconsultants.com
2196 Kirkcaldy Road, Fallbrook, Ca. 92028

2196 KIRKCALDY ROAD
FALLBROOK, CA. 92028
P. 760-519-3891

March 21, 2021

Mr. Greg Chehey
Pacific Hydrotech
314 E. 3rd Street
Perris, CA 92570

RE: **WRF-3 LIFT STATION PROJECT NO. 2018-11**

Subject: McMahon Engineering Construction
Differing Site Conditions – Cobbles/Boulders and Groundwater
Phone Conversation of 4/09/21

Dear Mr. Chehey,

This letter is written on behalf of McMahon Engineering Construction (McMahon), and upon its authorization to do so.

As discussed in the above referenced phone conversation, both Pacific Hydrotech, (Pacific) and the City of Corona (City) have been notified of, and are aware of, the fact that while installing the soldier beams for the shoring system on the above referenced project, McMahon has encountered subsurface conditions that materially differ from those reasonably anticipated from the City's Bidding Documents. Specifically, McMahon has encountered cobles and boulders at elevations higher than what was represented to exist in the City's geotechnical report, and, to make matters worse, McMahon has also encountered groundwater when no groundwater, within the vertical limits of the site, was represented to exist.

As you know, McMahon was to install the shoring system depicted in Figure 1, which consisted to drilling and setting 22 soldier piles to a maximum depth of approximately 37' below the ground surface.

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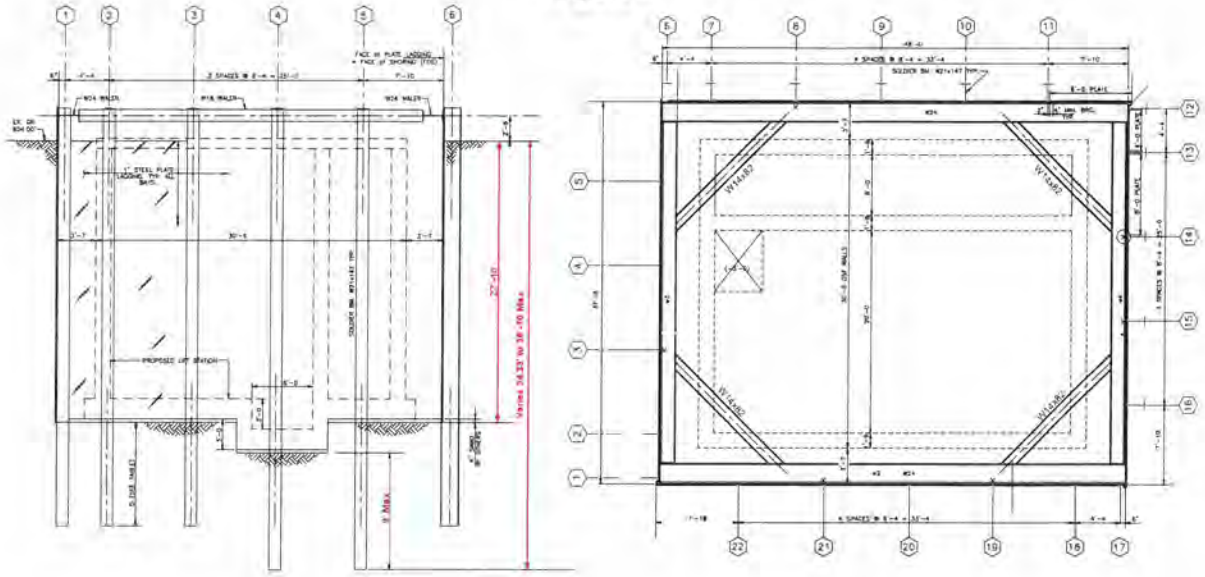
Figure 1



In preparing its bid to perform this work, McMahon reasonably relied upon the Bidding Documents provided by the City in its bid solicitation. As set forth in the Technical Specifications at Section 01 00 01, Paragraph 1.3, the Bidding Documents included the following:

> *"A geotechnical study report titled, "Geotechnical Study for Design and Construction of Sewer Lift Station at the Water Reclamation Facility 3, City of Corona, California", dated May 16, 2017 is* ***provided to bidders in the appendices for informational purposes****." [emphasis added]*

As we all know, the design and construction of any structure that is supported by the earth, or that supports the earth, is dependent upon the content, character, and behavior of the ground types on which, or in which, the structure is to be built. All too often however, when preparing the Bidding Documents, owners such as the City, insert into their project specifications various (but unenforceable) exculpatory clauses which mask the true intent of such geotechnical studies in an attempt to shift the risk of unanticipated subsurface conditions from residing with the owner to residing with the bidding contractors.

Such is the case on this project, with the Technical Specifications' use of the phrase *"for informational purposes"*, as if to preclude the bidders from being able to reasonably relying upon the same information the City relied upon to design the structure(s) it wants the lucky low bidder to construct.

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Not only does such **equivocal** language run afoul of the applicable Statutes and case Law, but it also directly conflicts with the language contained within the City's own geotechnical study.

With respect to the Statutes and case Law, the following examples demonstrate the doctrine of a contractor's reasonable reliance upon an Owner's bidding documents.

1. Implied Warranty of Complete and Accurate Contract Documents

i. *Condon-Johnson & Associates, Inc. v. Sacramento Mun. Utility Dist., (Cal. App. 3d Dist. 2007)*:

"The contract also contained general disclaimers that inter alia provided "[i]t is the sole responsibility of the Contractor to evaluate the jobsite and make his own technical assessment of subsurface soil conditions for determining the proposed drilling process, equipment and make his own financial impact assessment prior to bidding....

The sole issue on appeal is whether the trial court properly excluded the disclaimers from jury consideration. Resolution of the issue turns on the meaning of the term "indicated" in section 7104 and incorporated in the changed conditions clause of the contract.

We will conclude that "indicated" refers to contract information provided prospective bidders from which an inference reasonably might be drawn as to the actual subsurface conditions at the work site. In this case the contract set forth the soil boring information for a purpose that invited Condon-Johnson to infer that the type of rock in the test samples would be the type of rock that may be "expected" or "encountered" in performing the work. Since the disclaimers wholly denied responsibility for the subsurface conditions indicated, in violation of section 7104, they were properly excluded from jury consideration.

We will affirm the judgment". [emphasis added]

ii. *Western Contracting Corporation, Eng BCA 3835 et al., 82-1 BCA 15,486 at p.76,806 (1982):*

"a contractor may rely exclusively on the indications of subsurface conditions contained in the contract and is not required to make additional investigations of his own". [emphasis Added]

iii. *Stock & Grove, Inc. v. United States, 493 F.2d 629 (Ct.Cl. 1974)*

"In determining what the contract indicated, we think the Board erred as a matter of law, in a Category 1 claim, by imposing upon the bidder in these circumstances an obligation to make a scientifically educated and skeptical analysis of the contract."

ARTICLE 36. SOILS INVESTIGATIONS

When a soils investigation report for the Project site is available, such report shall not be a part of the Contract Documents, except in cases where it is expressly referenced by other Contract Documents as the appropriate Reference Specification. Any information obtained from such report as to subsurface soil condition, or to elevations of existing grades or elevations of underlying rock, is approximate only and is not guaranteed. Contractor acknowledges that any soils investigation report (including any borings) was prepared for purposes of design only and Contractor is required to examine the site before submitting its bid and must make whatever tests it deems appropriate to determine the underground condition of the soil.

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iv. Souza & McCue Construction, Co., Inc. v. Superior Court 57 Cal.2d 508:

"A contractor of public works who, acting reasonably, is misled by incorrect plans and specifications issued by the public authorities as the basis for bids and who, as a result, submits a bid which is lower than he would have otherwise made may recover in a contract action for extra work or expenses necessitated by the conditions being other than as represented". [emphasis added]

v. The warranty of accurate and complete bidding information also extends to subcontractors as set forth in Coleman Engineering Co. v. North American Aviation, Inc. (1966) 65 Cal.2d 396:

"A contractor who, acting reasonably, is misled by incorrect plans and specifications issued by another contracting party as the basis for bids and who, as a result, submits a bid which is lower than he would otherwise have made may recover in a contract action for extra work necessitated by the incorrect plans and specifications". [emphasis added]

2. Implied Warranty of Full Disclosure of Material Bidding Information

(Superior Knowledge)

I. Los Angeles Unified School Dist. v. Great American Ins., 49 Cal. 4th 738, 2010 WL 2720825:

"we hold that a contractor on a public works contract may be entitled to relief for a public entity's nondisclosure in the following limited circumstances: (1) the contractor submitted its bid or undertook to perform without material information that affected performance costs; (2) the public entity was in possession of the information and was aware the contractor had no knowledge of, nor any reason to obtain, such information; (3) any contract specifications or other information furnished by the public entity to the contractor misled the contractor or did not put it on notice to inquire; and (4) the public entity failed to provide the relevant information. [emphasis added]

3. Ambiguities

I. California Civil Code Section 1654 provides that:

"In cases of uncertainty not removed by the preceding rules, the language of a contract should be interpreted most strongly against the party who caused the uncertainty to exist".[emphasis added]

II. Peter Kiewit Sons' Co. v. United States, 109 Ct.Cl. 390, 418:

"Where the Government draws specifications, which are fairly susceptible of a certain construction and the contractor actually and reasonably so construes them, justice and equity require that that construction be adopted."[emphasis added]

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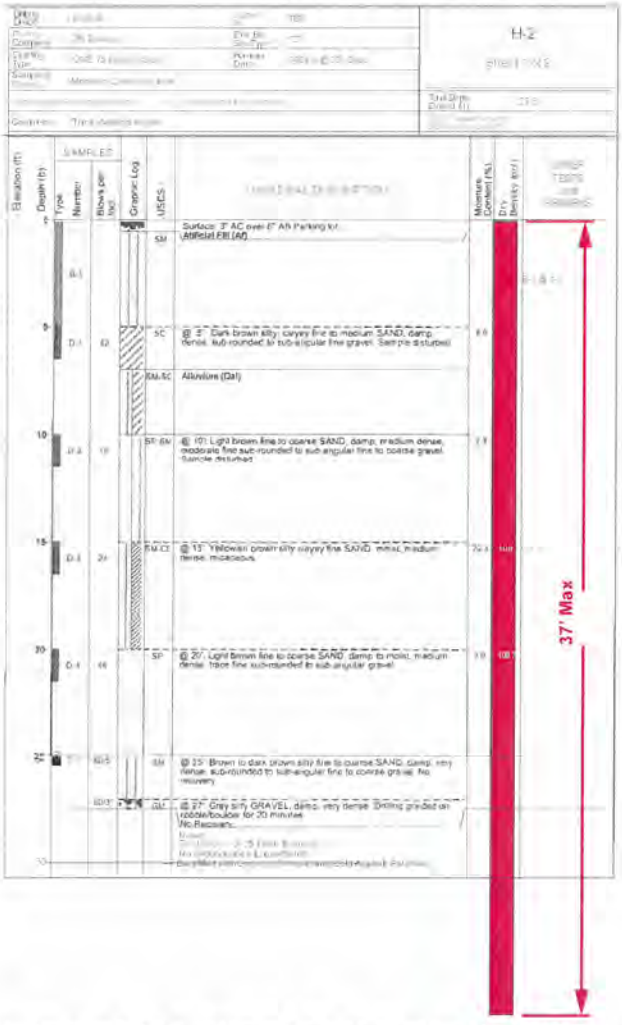
With respect to conflicting with its geotechnical study, the introduction section of the geotechnical study specifically states the study's purpose as follows:

> *"The purpose of this study was to evaluate the existing geotechnical conditions at the subject* ***site that may impact the design and construction of the proposed sewer lift station****". [emphasis added]*

In the present case, McMahon reasonably relied upon the information and representations provided by the City with respect to the content, character and behavior or the underlying soil mass into which the shoring system was to be constructed. Specifically, the Geotechnical Report indicated both graphically and texturally, that groundwater resided at lower depths than the depth to which McMahon was to drill for the soldier piles, and that cobbles may exist at a depth of 27' below the ground surface.

Graphically, Figure 2 duplicates Test Boring H-2 with the depth range of soldier pile drilling superimposed upon it (Boring H-1 similar).

Figure 2



The log indicates that the test boring was drilled with a CME-75 drill rig with a 12" diameter, hollow-stem drill tool. The groundwater table is not shown to exist within the depths explored, and that through the depth of 25', the ground consisted of silty-sands (SM), clayey sands (SC), gravely sands (SP) and silty gravels (GW).

Note that at 27' of depth, the log indicates that the drilling tool encountered *"grey silty gravel, damp, very dense. Drilling grinded on cobble/boulder for 20 minutes"* and, at a depth of 27.25' the CME's auger encountered *"refusal"* to further auger advancement.

In contrast, the notes at the bottom of Boring H-1 state the following at the exact same depth of 27': *"grey silty*

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*gravel, damp, very dense. **Sample pounded on 1" rock**. Drilling went [to] 2" in 45 minutes." [emphasis added]*

It must be understood, that "refusal" to a relatively small CME-75 geotechnical drill rig does not necessarily connote refusal to either a large vibratory hammer or to a much larger and more powerful drill rig such as the MAIT HR130 drill rig McMahon deployed to the project. Figure 3 compares the size, and torque between the two rigs.

Figure 3

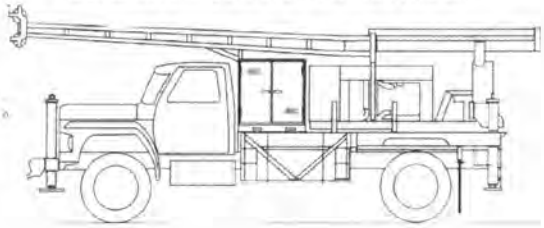
MAIT

Technical Data / Données Techniques			
Rotary	***Tête de rotation***		
Nominal torque	*Couple nominale*	170 KNm	125 500 lbsft
Unloading speed	*Vitesse de déchargement*	150 rpm	
Stroke	*Course*	4.300 mm	14 ft
Max nominal pulldown	*Poussés nominale Max*	135 KN	30 375 lbs
Max nominal pullback	*Traction nominale Max*	170 KN	38 250 lbs
1st Winch	***1er Treuil***		
Nominal pullback	*Traction nominale*	140 KN	31 500 lbs

CME-75

Rotary Drive

Clutch, heavy duty	13 in. (33 cm)
Transmission	5 speed fwd., 1 speed rev.
Rotary torque	10,445 ft. lbs. (14,160 Nm)
Rotary torque (optional)	13,225 ft. lbs. (17,930 Nm)
Rotary speed	745 rpm max
Rotary speed (optional)	930 rpm max
Hollow spindle I.D.	2 3/4 in. (7 cm) (3 3/4 in.(9.5 cm) avail.)



The available torque of the MAIT, at 125,000 ft*lbs is roughly 12 times greater than the 10,445 ft*lbs of torque deliverable by the CME-75 to advance its auger.

Given that the geotechnical study represented that no groundwater would be encountered, that the upper 27' consisted of predominately sandy soil, and that gravels, and potentially cobbles, may be encountered below 27' of depth, McMahon reasonably determined that it could achieve 6 to 7 beam installations per day by pre-drilling the upper 27' with a continuous flight auger, attach a vibratory hammer to the rig, pick the soldier pile and drive the pile through the pre-drilled portion very quickly and through the lower 10' cobble zone at a slower rate to allow the vibratory energy to shift the cobbles so the beam could slide past. After

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the beams had been placed, steel plates would be driven between the soldier piles so as to support the ground spanning between the beams to the depth of lift station excavation which was above the gravel/cobble layer. The sequence of intended installation is depicted in Figure 4.

McMahon also reasonably concluded that if the lower gravel and cobble would not sufficiently displace under the energy provided by the vibratory hammer and thereby impede pile advancement, then McMahon would simply drill the entire shaft with the Mait HR 130, set the beam into a dry shaft and backfill with either sand, gravel or a lean cement/sand mix.

Steel lagging plates would still be installed with the vibratory hammer because, in both cases, the plates extend to the same depth required for the excavation which terminated above the represented gravel/cobble layer. The full-drill method is graphically depicted in Figure 5, and McMahon reasonably determined that using the full-depth method would produce 4 to 5 beam installations per day.

Figure 4

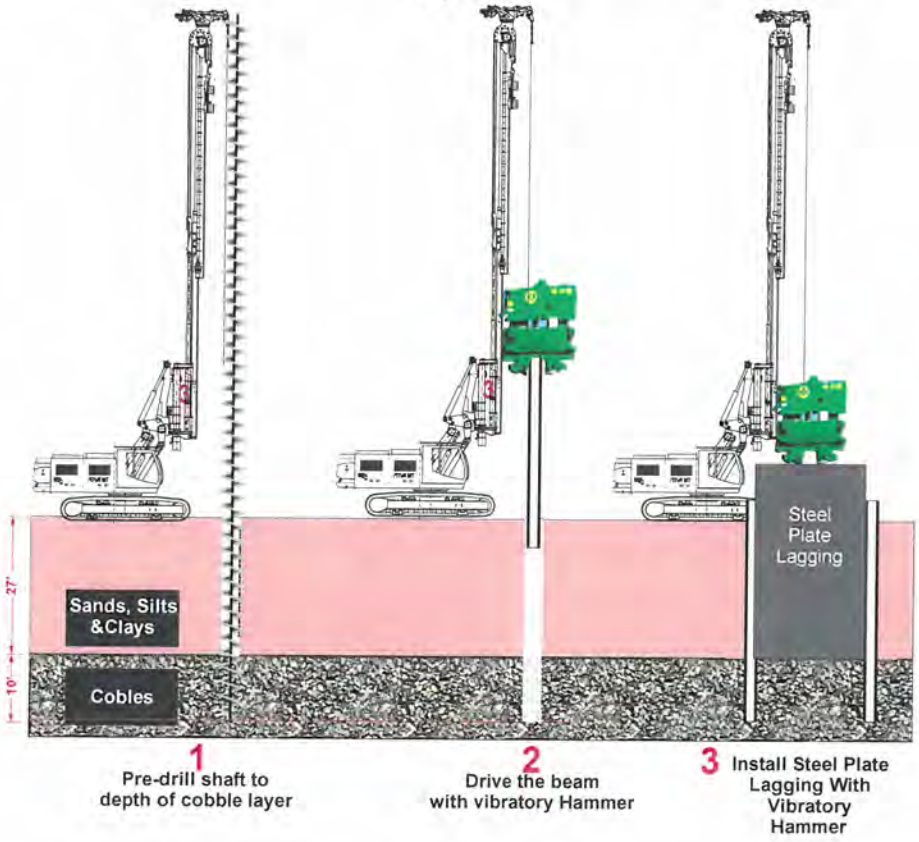

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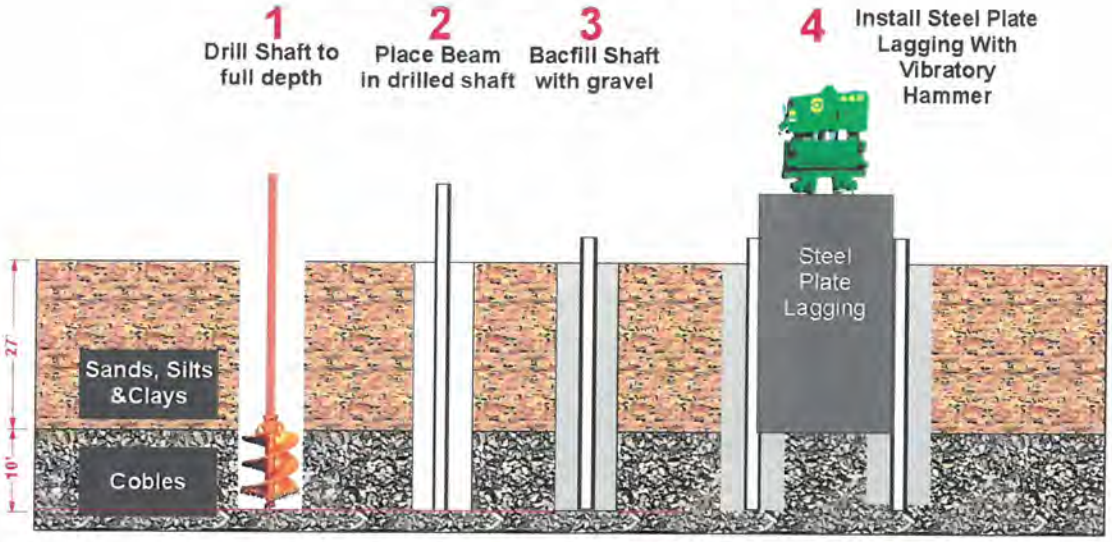
Figure 5

Drill Rig and Hammer Crane Not Shown



Accordingly, McMahon started the shoring installation with the continuous flight auger (CFA) system. When using that method, the CFA is screwed straight into the ground to the required soldier beam depth but does not extract the material. The CFI is first screwed into the ground full depth and then the auger is reversed to screw out of the ground. As the CFA rotates on the way down and on the way back up, it loosens the soil matrix to facilitate subsequent driving. Because the CFA never exists the shaft until after reaching the required depth, no hole is created where one could otherwise shine a light beam into to hole see what is in the shaft at a particular depth.

On its very first pile, McMahon advanced the auger as expected through the first 21' of depth. At a depth just below 21' the drill action became markedly different as it chattered and shook the rig indicating that the auger was encountering much larger material than the sandy material represented to exist at that depth. Acting prudently, McMahon then abandoned the CFA method (Figure 4) and started drilling as shown in Figure 5. Unlike the CFA method, this method requires the auger to make multiple up and down passes thus creating an open shaft. When the auger reached just below a depth of 21', McMahon encountered the groundwater that was represented to reside well below the zone of drilling. To make matters worse, at the same depth, McMahon also encountered an abundance of nested cobbles **and** boulders within the shaft at an elevation 6.5' to 7.5' higher than the elevation the cobbles were(27.5') represented to exist by the City's geotechnical study.

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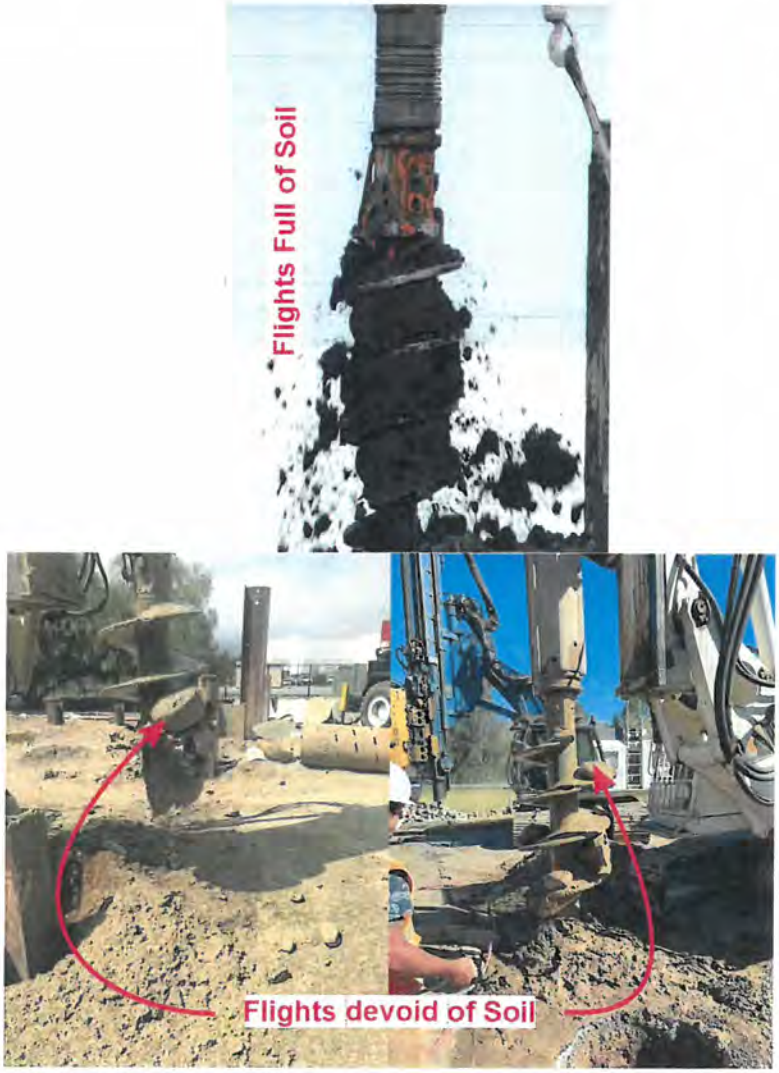
The combination of the inflow of groundwater, and the presence of abundant cobbles/boulders of various sizes and orientations, caused the shaft walls to collapse.

When drilling above the water and cobble layer (0' to 21' below the ground surface), as the auger cleared the top of the shaft when being extracted, its flights were full of soil such that rig operator would swing away from the hole and spin the auger at a high speed where upon the soil would be ejected from the auger flights and fall to the ground surface. However, once the auger was advanced below the groundwater table and into the elevated cobble zone, when the rig operator raised the auger to the surface expecting to see the auger flights full of soil and/or gravel as shown in the upper photo of Figure 6 (photo from different project), all too often the operator saw what the lower photos show in Figure 6 (photos from this project).

Figure 6



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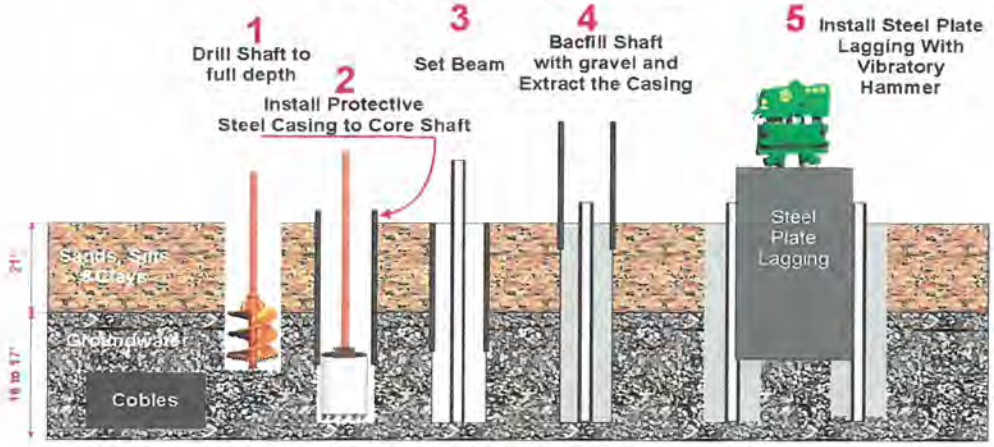
On the one hand, even if the hole was entirely dry, as was represented by the City's Bidding Documents, when the auger enters a zone of nested cobbles and boulders, whatever amount of smaller sized soil material the auger flights initially capture, gets shaken off the flights by the turbulence and vibration that occurs as the auger gets knocked back and forth by the much larger and harder cobble and boulder material. On the other hand, when below the groundwater table, even if the hole consisted entirely of the sandy material represented to exist in the upper 27' of the shaft, and every downward pass fills all the flights with soil, then, when the auger is raised through the column of water, the water washes the sandy soil off the flights leaving very little to be spun off at the ground surface.

McMahon was faced with both conditions simultaneously, and pursuant to Standard Industry Practice, McMahon realized that polymer drilling slurry should be introduced into the shaft to stabilize the shaft walls and help maintain more material onto the flights during its assent. The polymer slurry coats the shaft walls and increases the viscosity of the water to that similar to molasses. It is a benign substance and specifically designed with a relatively short life span and to break down to water at the end of its short life. Though it performs in a like manner as a bentonite slurry to stabilize the shaft and reduce auger wash-off (bentonite is clay particles mixed with water to form a clayey mud-like substance that does not break back down to water), when a site needs to be dewatered, as this site was discovered to require, polymer use is superior to that of bentonite because it will not clog the dewatering pumps.

However, McMahon was verbally informed that no drilling slurries could be used for fear of clogging the now required dewatering pumps. Left with no other choice, McMahon was forced into the use of temporary steel casing to protect and stabilize the shaft walls from collapse. This method is illustrated in Figure 7. McMahon would drill the shaft to 21'-22', install a 30" diameter casing to 25'.

Figure 7

Drill Rig and Hammer Crane Not Shown



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However, instead of auguring the material out of the shaft, as illustrated in Figure 8, McMahon was effectively forced to use a core barrel to alternately core though large boulders, or to otherwise "pack" (i.e., wedge) one or more smaller sized boulders into the core barrel, bring it to the surface and dislodge the rocks from the barrel to fall onto the surface.

Figure 8

Single Boulder Wedged Into Core Barrel

Cores of Large Boulders

Wedged Cobbles/Boulders

Boulders "Packed"
Into Core Barre;

The project photos to the left provide explicit examples of the core barrel extracting single rock cores, a single boulder not cored but wedged, and several cobbles/boulder wedged into the core barrel.

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It is my understanding, that the City has acknowledge entitlement to the Differing Site Condition(s), but only to the extent that they are willing to attribute 1.5hours of compensable additional time for each shaft. It is hard to understand how the City unilaterally determined only 1.5 hours of compensable impacts, other than to assume that the City has little experience in the art of foundation drilling. Far from achieving its reasonably determined production rates, between 4 to 7 beams per day, McMahon's impacted production has been reduced to one pile per day.

It is also difficult to understand how the City failed to check the groundwater surface elevation prior to the start of construction, given its representation to do so to other governmental authorities. Specifically, in a report dated June 2020 and entitled, ***"WRF-Lift Station: Initial Study-Mitigative Negative Declaration"***, the City represents to the authorities for which the report was generated, the following statement regarding its expectation that no groundwater is expected to be encountered during construction of the project but to make sure, prior to the start of construction, a nearby monitoring well will be checked to verify that expectation. As shown in Figure 9, the monitoring well's position is shown relative to the project site as plotted by the well's coordinates upon Google Earth.

Figure 9

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The June 2020 report states the following pertinent passages on Page 48 and 65 respectively:

Page 48:

> *"A geotechnical study for the project was prepared in May 2017 and found that groundwater was not encountered in any of the bores at the site, which were taken to a maximum depth of 50 feet below ground surface (bgs). Well data from a nearby well indicates groundwater in the area can fluctuate and recorded groundwater at depths of 26 bgs in 2013 (NMG Geotechnical, Inc [NMG] 2017)."*

Page 65:

> *"The California Department of Water Resources website has non-potable Well No.W001 (Station 33827N1175072) located adjacent to the site and has measured groundwater between 26 to 44.3 feet below ground surface between 2011 and 2016 (NMG 2017). Based on groundwater levels in the project area, it is not anticipated that pipeline construction activities would encounter groundwater as project excavations will be within the upper 26 feet. However, information from groundwater monitoring Well No. W001 would be utilized to assess the ground level prior to construction. If dewatering is required, dewatering activities would be temporary and short-term as construction activities are expected to occur over a period of six months. Therefore, dewatering during project construction would not substantially decrease groundwater supplies."*

Unfortunately, it was left to McMahon to establish, at a huge cost of men, equipment and time, the groundwater elevation that the City promised to establish prior to construction with the lifting of a monitoring well cover.

It should also be noted that the presence of the groundwater, the higher elevation at which the gravel/cobble layer was found, and the large boulders discovered in that higher layer, will most likely impede the advancement of the planned steel plate lagging system McMahon reasonably anticipated for use, designed and submitted for use and ultimately approved for use by the City. It is probable that timber lagging will need to be placed instead and that site dewatering will be required to affect the excavation.

It is my professional Opinion the McMahon is entitled to an equitable adjustment in both quantum and time as measured by daily impacts to its work rather than the 1.5 hours of impacts currently tabled by the City.

This report is prepared in accordance with the professional standards in the engineering/construction industry and represents my Professional Opinion(s) as to the proximate cause(s) for the problems encountered by McMahon when installing the soldier beams and the pending lagging system.

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No warranties, express, or implied are associated with the opinion(s) contained herein. This report and the opinion(s) expressed within are subject to change/modification/clarification pending receipt of new information that could be material to this Report's content and/or opinion(s).

Best Regards,

Michael Cornelius, P.E., MASCE

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EXCEPTIONS

Type of Work Performed	Labor Surcharge Percent	
	RT	OT
Concrete Construction - Bridge	10	10
Drilling	12	12
Fence & Guardrail Construction	10	10
Erection of structural metal for metal bridges, excluding sign bridge	13	12
Landscape Gardener	10	10
Mobil Crane & Hoist Service	12	12
Painting Steel Structures or Bridges	13	12
Pile Driving, not including drilled, cast-in-place concrete piles	18	16
Sign Erection or Repair	13	12
Wrecking & Demolition	12	12

An appropriate labor surcharge will be established by the Division of Construction for work that is determined by the resident engineer to be covered by Longshoreman and Harbor Worker's Act.

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NON-OPERATED EQUIPMENT (DAILY RATES) [NONOP]

DELAY FACTOR = 0.56 **OVERTIME FACTOR = 1.00**

Note various units for different items. The following allowance is entered on the extra work bill by using the (unit listed x number of days) in the hours worked column. The following list is limited to items with long estimated lives. Additional traffic related items such as cones and barricades, are still listed under TRAFC in this publication. Other non-operated items with short estimated lives should be treated as materials and should not be "rented". Non rented items are 1) intended to be job specific (amortized over the life of the project) and 2) have an estimated life measured by number of uses rather than a length of time.

MISCELLANEOUS [MISC]

Model	Code	Rate
Casing, 450 mm dia, per 0.3 m (Casing, 18" dia, per lf)	**0120**	$0.04
Casing, 650 mm dia, per 0.3 m (Casing, 26" dia, per lf)	**0130**	$0.06
Casing, 900 mm dia, per 0.3 m (Casing, 36" dia, per lf)	**0140**	$0.09
Casing, 1800 mm dia, per 0.3 m (Casing, 72" dia, per lf)	**0150**	$0.21
Casing, 2400 mm dia, per 0.3 m (Casing, 96" dia, per lf)	**0160**	$0.26
Casing, 2700 mm dia, per 0.3 m (Casing, 108" dia, per lf)	**0170**	$0.30
Casing, 3000 mm dia, per 0.3 m (Casing, 120" dia, per lf)	**0180**	$0.40
Pile, all depths "H" pile, per 45.0 kg (Pile, all depths "H" pile, per hundred-weight)	**0190**	$0.04
Pipe, 250-300 mm dia, per 0.3 m (Pipe, 10-12" dia, per lf)	**0200**	$0.02
Plate, 22 mm thick, per 9.3 sm (Plate, 7/8" thick, per 100 sf)	**0210**	$1.27
Plate, 25 mm thick, per 9.3 sm (Plate, 1" thick, per 100 sf)	**0220**	$1.45
Plate, 38 mm thick, per 9.3 sm (Plate, 1.5" thick, per 100 sf)	**0230**	$2.18

SCAFFOLDING, SHORING, FALSEWORK [SSFW]

Model	Code	Rate
Metal form, 1.8 m x3.0 m, per 14.6 m (Metal form, 6x10 box culvert, per 48 lf)	**0310**	$44.37
Metal form, 2.4 m x3.7 m, per 15.2 m (Metal form, 8x12 box culvert, per 50 lf)	**0320**	$49.17
Metal form, 2.1 m x4.3 m, per 15.2 m (Metal form, 7x14 box culvert, per 50 lf)	**0330**	$54.04
Metal form, type 25 barrier, per 3.0 m (Metal form, type 25 barrier, per 10 lf)	**0340**	$2.70
Metal form, type 26 barrier, per 3.0 m (Metal form, type 26 barrier, per 10 lf)	**0350**	$2.86
Metal form, type 27 barrier, per 3.0 m (Metal form, type 27 barrier, per 10 lf)	**0360**	$2.46
Metal form, type 50 barrier, per 3.0 m (Metal form, type 50 barrier, per 10 lf)	**0370**	$2.66
Metal form, 1.8 m x 3.7 m girder panel, per 0.1 sm (6x12 girder panel, per sf)	**0380**	$0.17
Metal form, all heights paving, per 3.0 m (Metal form, all heights paving, per 10 lf)	**0390**	$0.04
Scaffolding, 1.5 m section, per section (Scaffolding, 5' section, per section)	**0410**	$0.55
Scaffolding, 3.0 m section, per section (Scaffolding, 10' section, per section)	**0420**	$1.24
Scaffolding, 4.6 m section, per section (Scaffolding, 15' section, per section)	**0430**	$1.63
Scaffolding, bottom/top section, per 1.5 m section (per 5 ft section)	**0440**	$0.77
Scaffolding, 2.1 m high, rolling (Scaffolding, 7' high, rolling)	**0450**	$1.16
Scaffolding, spider staging, plus air compressor	**0460**	$24.69
Shoring, 1.1 m deep x 2235 mm wide, per section (Shoring,3.5' deep x 88" wide trench, per section)	**0510**	$1.27
Shoring, 1.2 m deep x 3.7 m wide box, per 7.3 m (Shoring, 4' deepx12' wide trench box, per 24')	**0515**	$11.69
Shoring, 1.5 m deep x 2235 mm wide, per section (Shoring, 5' deep x 88" wide trench, per section)	**0520**	$1.34
Shoring, 2.1 m deep x 1397 mm wide, per section (Shoring, 7' deep x 55" wide trench, per section)	**0530**	$1.18
Shoring, 2.1 m deep x 2235 mm wide, per section (Shoring, 7' deepx88" wide trench, per section)	**0540**	$1.41
Shoring, 2.4 m deep x 4.6 m wide, per 3.0 m (Shoring, 8' deepx15' wide trench box, per 10')	**0550**	$9.64
Shoring, 2.4 m deep x 2.4 m max width, per 7.3 m(8' deep x 8' max width trench box, per 24')	**0560**	$19.01
Shoring, 3.0 m deep x 2.4 m max box, per 4.9 m (Shoring, 10' deepx8' max trench box, per 16')	**0570**	$17.07
Shoring, 3.0 m deep x 2.4 m max box, per 7.3 m (Shoring, 10' deepx8' max trench box, per 24')	**0580**	$23.74
Wood, 50 mm x255 mm, per 30.5 m (Wood, 2"x10", per 100 lf)	**0605**	$0.16
Wood, 50 mm x305 mm, per 30.5 m (Wood, 2"x12", per 100 lf)	**0610**	$0.20
Wood, 100mm x100mm, per 30.5 m (Wood, 4"x4", per 100 lf)	**0615**	$0.14
Wood, 100 mm x150 mm, per 30.5 m (Wood, 4"x6", per 100 lf)	**0620**	$0.20
Wood, 100 mm x205 mm, per 30.5 m (Wood, 4"x8", per 100 lf)	**0625**	$0.28
Wood, 100 mm x305 mm, per 30.5 m (Wood, 4"x12", per 100 lf)	**0630**	$0.42
Wood, 150 mm x305 mm, per 30.5 m (Wood, 6"x12", per 100 lf)	**0635**	$0.70
Wood, 150 mm x455 mm, per 30.5 m (Wood, 6"x18", per 100 lf)	**0640**	$1.12
Wood, 205 mm x405 mm, per 30.5 m (Wood, 8"x16", per 100 lf)	**0645**	$1.38
Wood, 305 mm x455 mm, per 30.5 m (Wood, 8"x18", per 100 lf)	**0650**	$1.55

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2200	**5650**	$16.72
2300	**5660**	$25.26
2310	**5662**	$26.57
3210	**5670**	$28.76
3210 Combo	**5675**	$29.63
3500	**5676**	$33.90
4010	**5677**	$43.49
4010 Combo	**5678**	$33.71
5010	**5679**	$33.82
6510	**5680**	$40.28
6510 Combo	**5685**	$43.38

MIDMARK **[MDMK]**

Model	Code	Rate
300 A	**7945**	$25.03
321	**7950**	$26.30
400 A	**7955**	$31.97
440	**7960**	$40.20

VERMEER **[VERM]**

Model	Code	Rate
CC-135	**8350**	$88.06
M 220	**8380**	$16.68
M 455 / M455A	**8480**	$39.19
M 475	**8570**	$41.42
M 475A	**8571**	$46.99
M 485	**8580**	$45.26
M 495	**8585**	$73.49
T 300B, T 300A	**8718**	$25.84
T 400C, T 400B, T 400A	**8781**	$56.17
T 600D, C, B, A	**8842**	$80.98
T 650	**8843**	$136.31
T 800B, T 800A, T800	**8870**	$129.70
T 800C	**8871**	$141.57
T 850	**8875**	$252.30
V 430	**8950**	$29.48
V 430A	**8951**	$33.12
V 434 / M 434	**9000**	$28.43
V 440	**9015**	$31.49
V 450	**9017**	$37.21
V 454	**9020**	$32.33
V 1550	**9025**	$15.58

TRUCK, TRUCK TRAILERS, EXCL. DUMP TRUCKS & EQPT TRAIL [TRUCK]

DELAY FACTOR = 0.12 **OVERTIME FACTOR = 0.89**

Includes all attachments and accessories related to hauling, with and without trailers as needed. Includes water trucks, freight trucks and passenger vehicles, including 4wd option. Listed by Mfr's Gross Vehicle Weight in Kilograms(pounds). For tractor-trailer units, the gross vehicle weight of the cargo carrying unit or units will control. In the case of water trucks, the tank capacity expressed in kilograms (pounds) of water plus 20%, will determine the gross vehicle weight. For attachment allowance, see attachment class.

TRUCKS **[T&TT]**

OVER	TO	Code	Rate
CARS , LIGHT TRUCKS		**00-06**	$27.42
3175 (7000)	5443 (12000) No small pickups	**06-12**	$31.00
5443 (12000)	9072 (20000)	**12-20**	$40.16
9072 (20000)	12701(28000)	**20-28**	$42.49
12701 (28000)	16330 (36000)	**28-36**	$47.91
16330 (36000)	21773 (48000)	**36-48**	$64.07
21773 (48000)	27216 (60000)	**48-60**	$70.62
27216(60000) & Over		**60**	$79.48

TRUCKS, OFF-HIGHWAY [TRUOF]

DELAY FACTOR = 0.22 **OVERTIME FACTOR = 0.80**

Includes all attachments and accessories. Includes end dump, belly dump and earthmover types. Listed in accordance with Mfr's rated capacity in tonnes (tons). In the case of earthmover types, rated by Mfr's volumetric capacity, a factor of 1.4 tonnes per cubic meter (1-1/2 tons per cubic yard) of struck capacity shall be used.

TRUCK OFF-HIGHWAY **[TRU]**

OVER	TO	Code	Rate
9.1 (10)	13.6 (15)	**10-15**	$49.67
16.3 (18)	20.0 (22)	**18-22**	$88.77
20.0 (22)	24.5 (27)	**22-27**	$110.88
24.5 (27)	29.0 (32)	**27-32**	$126.75
29.0 (32)	36.3 (40)	**32-40**	$172.22
36.3 (40)	49.9 (55)	**40-55**	$255.55
49.9 (55)	60.8 (67)	**55-67**	$286.99

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KOMATSU **[KOMA]**

Model	Code	Rate
PW 210-1	**9580**	$100.25

LINK-BELT **[L-B]**

Model	Code	Rate
HSP 15	**5500**	$68.42
HSP 18	**5505**	$68.42
HSP 20	**5510**	$74.40
HSP 22	**5530**	$75.80
HSP 25	**5535**	$80.62
HSP 8015	**5538**	$79.05
HSP 8018	**5538E**	$79.05
HSP 8018XL	**5538G**	$96.22
HSP 8018C	**5538H**	$72.06
HSP 8025	**5538P**	$82.64
HSP 8025 S	**5538PF**	$83.67
HSP 8030	**5538Q**	$94.69
HSP 8035	**5538R**	$137.78
HSP 8040	**5538S**	$137.92
HSP 8050	**5538T**	$140.06
HSP 8055	**5538V**	$126.18
HSP 8060	**5539**	$153.67

LORAIN **[LORN]**

Model	Code	Rate
LRT 15H	**5730**	$69.83
LRT 15U	**5735**	$71.09
LRT 18U	**5740**	$71.56
LRT 35U	**5745**	$104.34
LRT 40U	**5750**	$105.13
LRT 150	**5755**	$69.11
LRT 150D	**5756**	$84.46
LRT 180	**5760**	$69.08
LRT 180D	**5760D**	$84.46
LRT 200	**5765**	$68.89
LRT 200D	**5765D**	$84.63
LRT 220	**5767**	$71.34
LRT 230	**5768**	$75.73
LRT 230D	**5768D**	$84.65
LRT 250	**5769**	$75.76
LRT 250D	**5769D**	$84.65
LRT 275	**5770**	$75.76
LRT 275D	**5770D**	$84.65
LRT 330	**5772**	$97.66
LRT 400	**5773**	$111.93
LRT 450	**5774**	$115.08
LRT 500	**5775**	$118.11
LRT 550	**5790**	$123.38

P&H **[P&H]**

Model	Code	Rate
OMEGA 14	**5790**	$65.41
OMEGA 15	**5792**	$65.41
OMEGA 18	**5794**	$65.84
OMEGA 25	**5795**	$87.83
OMEGA 20	**5796**	$66.52
OMEGA 23	**5796E**	$69.27
OMEGA 30	**5796J**	$90.26
OMEGA 35	**5796P**	$91.22
OMEGA 40	**5797**	$122.87
OMEGA 45	**5797E**	$124.59
OMEGA 50	**5797J**	$125.97
OMEGA 60	**5798**	$129.96
OMEGA 65	**5799**	$152.87
OMEGA 114	**5799C**	$74.36
OMEGA 114D	**5799G**	$72.41
OMEGA 118	**5799Q**	$75.87
OMEGA 118D	**5799S**	$72.55
OMEGA 120	**5799U**	$77.51
OMEGA 120D	**5799W**	$73.26
OMEGA 122	**5799X**	$78.50
OMEGA 122D	**5799Y**	$73.84
OMEGA 125	**5799Z**	$78.88
OMEGA 128	**5799ZA**	$77.37
R 150	**5890**	$55.84
R 150-1	**5910**	$55.35
R 180	**5975**	$56.17
R 200	**6060**	$56.49
OMEGA S-15	**6062**	$90.54
OMEGA S-18	**6063**	$90.54
OMEGA S-20	**6064**	$93.11
S-35	**6064E**	$127.77

PETTIBONE **[PET]**

Model	Code	Rate
16 MK P Series	**6500**	$60.85
20 MK P Series	**6580**	$61.48
25	**6740**	$57.58
25 MK P Series	**6750**	$62.26
29 MK P Series	**6880**	$63.30
30	**6900**	$57.58
30 MK P Series	**6903**	$64.29
30 SC, 30 SC P Series	**6910**	$89.54
60 SC	**6990**	$95.63
60 SC P Series	**6995**	$102.09
70	**7100**	$101.28
70 SC	**7165**	$101.57
70 SC P Series	**7170**	$107.61
80 MK P Series	**7250**	$100.09

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TRUCKS, DUMP, ON-HIGHWAY [TRUON]

DELAY FACTOR = 0.18 **OVERTIME FACTOR = 0.83**

Includes all end dump, side dump and belly dump types; including all attachments and accessories.

TRUCK ON-HIGHWAY [TRUN]

Model	Code	Rate
2 axles	**2AXL**	$54.69
3 axles	**3AXL**	$71.55
4 axles	**4AXL**	$80.63
5 axles	**5AXL**	$90.06

WELDING EQUIPMENT [WELD]

DELAY FACTOR = 0.20 **OVERTIME FACTOR = 0.83**

ARC WELDING MACHINES [AWM]

Diesel, gas or electric powered. Includes helmets, holders, cable and all attachments and accessories. Rate capacity in amps.

OVER	TO	Code	Rate
0	250	**0-250**	$6.13
250	500	**250-500**	$11.85
over	500	**500**	$12.27

GAS WELDING OUTFIT [GWO]

Includes regulator, 7.6 meters (25 feet) of hose, torch, goggles, lighter and attachments and accessories. Gas and rod shall be paid separately.

Model	Code	Rate
ALL	**ALL**	$0.29

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HAMMR ABI MRZV30V 31-MAR-2018 M HAMMERS, DEMOLITION & PILE,
VIBRATORY PILE HAMMER ABI MRZV30VV
01-APR-2017 31-MAR-2018 21-NOV-2017 .25 .78 $229.93
RATE PLUS CARRIER.

HAMMR ABI TM12/15 31-MAR-1999 M HAMMERS, DEMOLITION & PILE,
VIBRATORY PILE HAMMER. ABI TM12/15
HAMMER ON CAT 245B 01-JAN-1980 31-MAR-1999 10-FEB-2005
.39 .65 $130.11

HAMMR ABI TM16/20 31-MAR-2017 M HAMMERS, DEMOLITION & PILE
ABI TM 16/20 W/ CARRIER 01-APR-2016 31-
MAR-2017 24-MAY-2017 .23 .79 $463.58
RATE INCLUDES CARRIER, VIBRO HAMMER & AUGER DRIVE.

HAMMR ABI TM18/22 31-MAR-2018 M HAMMERS, DEMOLITION & PILE
ABI TM 18/22 MOBILE RAM 01-APR-2017 31-
MAR-2018 21-NOV-2017 .25 .78 $617.99
RATE INCLUDES UNDERCARRIAGE.

HAMMR AIRM RMIOZ 31-MAR-2002 M HAMMERS, DEMOLITION.
AIR-MAN / HOKUETSU RMIOZ 2000-2500 FTLB 01-APR-1995 31-
MAR-2002 10-FEB-2005 .36 .67 $11.45

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EQUIP EQUIP
LAST DELAY
CLASS MAKE CODE DATE TYPE CLASS DESCRIPTION
MAKE DESCRIPTION CODE DESCRIPTION BEGIN DATE END
DATE UPDATE DATE FACTOR OVERTIME RENTAL RATE

HAMMR APE 100-13 31-MAR-2010 M HAMMERS, DEMOLITION & PILE,
DIESEL APE D100-13 PILE
HAMMER 01-OCT-2009 31-MAR-2010 16-SEP-2009 .25
.77 $194.79
RATE INCLUDES POWERPACK.

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MAR-2021 28-JAN-2021 .28 .74 $815.51
RATE PLUS CONSUMABLE BITS, IF ANY, PER INVOICE/WEAR
ALLOWANCE.

AUGCL SMDF SR20 31-MAR-2021 M AUGERS, CRAWLER MOUNTED
SOILMEC DRILLING & F SR20 01-APR-2020 31-
MAR-2021 14-JAN-2021 .28 .74 $177.08

AUGCL SMDF SR30 31-MAR-2018 M AUGERS, CRAWLER MOUNTED
SOILMEC DRILLING & F SR30 01-APR-2017 31-
MAR-2018 08-AUG-2017 .31 .72 $234.69

Extra Work Bill
Date April 27 2021
Miscellaneous Equipment Rates Current File

EQUIP EQUIP
LAST DELAY
CLASS MAKE CODE DATE TYPE CLASS DESCRIPTION
MAKE DESCRIPTION CODE DESCRIPTION BEGIN DATE END
DATE UPDATE DATE FACTOR OVERTIME RENTAL RATE

AUGCL SMDF SR50 31-MAR-2021 M AUGERS, CRAWLER MOUNTED
SOILMEC DRILLING & F SR-50 01-APR-2020 31-
MAR-2021 22-JAN-2021 .28 .74 $352.25
RATE PLUS CONSUMABLE BITS, IF ANY, PER INVOICE/WEAR
ALLOWANCE. (COMPARABLE TO HR130 WEIGHT, TORQUE, KELLY BAR)

AUGCL SMDF SR60 31-MAR-2013 M AUGERS, CRAWLER MOUNTED
SOILMEC DRILLING & F SR-60 01-APR-2012 31-
MAR-2013 09-APR-2013 .29 .74 $404.77
RATE PLUS CONSUMABLE BITS, IF ANY, PER INVOICE/WEAR
ALLOWANCE.

AUGCL SMDF SR65 31-MAR-2021 M AUGERS, CRAWLER MOUNTED
SOILMEC DRILLING & F SR-65 01-APR-2020 31-
MAR-2021 22-JAN-2021 .28 .74 $462.82
RATE PLUS CONSUMABLE BITS, IF ANY, PER INVOICE/WEAR
ALLOWANCE.

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AUGAC CHPN 2280 31-MAR-2007 M AUGER, ACCESSORIES
CHAMPION EQUIPMENT 2200/2080 MM CASING ADPTR 01-APR-2006 31-
MAR-2007 24-OCT-2006 .56 .48 $3.90

AUGAC CHPN 24C 31-MAR-2021 M AUGER, ACCESSORIES
CHAMPION EQUIPMENT 24 INCH CORE BARREL 01-APR-2020 31-
MAR-2021 25-JAN-2021 .52 .52 $1.30
RATE PLUS CONSUMABLE BITS, IF ANY, PER INVOICE/WEAR
ALLOWANCE.

AUGAC CHPN 24CB 31-MAR-2018 M AUGER, ACCESSORIES
CHAMPION EQUIPMENT 24 INCH CLEANOUT BUCKET 01-APR-2017 31-
MAR-2018 08-AUG-2017 .51 .53 $1.29
RATE PLUS CONSUMABLE BITS, IF ANY, PER INVOICE/
WEAR ALLOWANCE.

AUGAC CHPN 24RA 31-MAR-2021 M AUGER, ACCESSORIES
CHAMPION EQUIPMENT 24 INCH ROCK AUGER 01-APR-2020 31-
MAR-2021 07-APR-2020 .52 .52 $1.71

AUGAC CHPN 30CB 31-MAR-2021 M AUGER, ACCESSORIES
CHAMPION EQUIPMENT 30 INCH CLEANOUT BUCKET 01-APR-2020 31-
MAR-2021 07-APR-2020 .52 .52 $1.92

AUGAC CHPN 30RA 31-MAR-2021 M AUGER, ACCESSORIES
CHAMPION EQUIPMENT 30 INCH ROCK AUGER 01-APR-2020 31-
MAR-2021 07-APR-2020 .52 .52 $2.94
RATE PLUS CONSUMABLE BITS PER INVOICE/WEAR
ALLOWANCE.

AUGAC CHPN 31DB 31-MAR-2007 M AUGER, ACCESSORIES
CHAMPION EQUIPMENT 31 INCH DRILLING BUCKET 01-APR-2006 31-
MAR-2007 23-OCT-2006 .56 .48 $2.63
RATE PLUS CONSUMABLE BITS PER INVOICE/WEAR
ALLOWANCE.

AUGAC CHPN 31RA 31-MAR-2007 M AUGER, ACCESSORIES
CHAMPION EQUIPMENT 31 INCH ROCK AUGER 01-APR-2006 31-
MAR-2007 24-OCT-2006 .56 .48 $2.85
RATE PLUS CONSUMABLE BITS PER INVOICE/WEAR
ALLOWANCE.

AUGAC CHPN 36C 31-MAR-2021 M AUGER, ACCESSORIES
CHAMPION EQUIPMENT 36 INCH CORE BARREL 01-APR-2020 31-
MAR-2021 25-JAN-2021 .52 .52 $1.90
RATE PLUS CONSUMABLE BITS, IF ANY, PER INVOICE/WEAR

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                   EQUIP        EQUIP
LAST        DELAY
CLASS MAKE CODE    DATE         TYPE  CLASS DESCRIPTION
MAKE DESCRIPTION     CODE DESCRIPTION              BEGIN DATE  END
DATE    UPDATE DATE FACTOR   OVERTIME RENTAL RATE
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                   RATE PLUS CARRIER.

AUGAC BUMA T160H   31-MAR-2014 M     AUGER, ACCESSORIES, CHISEL
BUMA                 BM-T160H                      01-APR-2013 31-
MAR-2014 22-APR-2014      .53      .51       $10.98
                   RATE PLUS CARRIER.

AUGAC BUMA T220CH  31-MAR-2014 M     AUGER, ACCESSORIES, CHISEL
BUMA                 BM-T220CH                     01-APR-2013 31-
MAR-2014 22-APR-2014      .53      .51       $18.57
                   RATE PLUS CARRIER.

AUGAC CAIS 34193   31-MAR-2000 M     AUGER ACCESSORIES, CAISSON GRAB
BUCKET                           CAISSON             MKTW GRAB BUCKET
1.5 M        01-APR-1999 31-MAR-2000 10-FEB-2005      .56      .47
$24.69
                   RATE PLUS CARRIER.

AUGAC CHPN 1514-5  31-MAR-2007 M     AUGER, ACCESSORIES
CHAMPION EQUIPMENT   1500/1400 MM CASING ADPTR       01-APR-2006 31-
MAR-2007 24-OCT-2006      .56      .48        $2.64

AUGAC CHPN 203-10  31-MAR-2007 M     AUGER, ACCESSORIES
CHAMPION EQUIPMENT   203 MM TO 10 INCH STUB KELLY A 01-APR-2006 31-
MAR-2007 24-OCT-2006      .56      .48        $0.70

AUGAC CHPN 203-5   31-MAR-2007 M     AUGER, ACCESSORIES
CHAMPION EQUIPMENT   203 MM TO 5 INCH STUB KELLY AD 01-APR-2006 31-
MAR-2007 24-OCT-2006      .56      .48        $1.17

AUGAC CHPN 20CB    31-MAR-2021 M     AUGER, ACCESSORIES
CHAMPION EQUIPMENT   20 INCH CLEANOUT BUCKET         01-APR-2020 31-
MAR-2021 07-APR-2020      .52      .52        $0.95
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AUGAC AUGF 24X10 30-JUN-1994 M AUGER ACCESSORIES, FLITE
FLITE 24"DIA X 10'W/O TEE. 01-JAN-1980 30-
JUN-1994 10-FEB-2005 .56 1.00 $0.39

AUGAC AUGF 24X5 31-MAR-2019 M AUGER ACCESSORIES, AUGER FLITE
FLITE 24-INCH DIA.X5' AUGER FLITE 01-APR-2018 31-
MAR-2019 08-MAY-2018 .52 .52 $0.75
REPLACEMENT BITS BY INVOICE.

AUGAC AUGF 30X5 31-MAR-2020 M AUGER ACCESSORIES, CORE BARREL
FLITE 30-INCH X 5-FOOT W/ TEETH 01-APR-2019 31-
MAR-2020 18-JUN-2019 .52 .52 $1.80
REPLACEMENT BITS BY INVOICE/WEAR ALLOWANCE.

AUGAC AUGF 30X6WOT 31-MAR-1991 M AUGER ACCESSORIES
FLITE 30"DIA.X 6'W/O TEETH 01-APR-1990 31-
MAR-1991 10-FEB-2005 .50 1.00 $0.50

AUGAC AUGF 30X9 31-MAR-2020 M AUGER ACCESSORIES, FLITE
PENGO 30 IN DIA. X 9 FT FLITE 01-APR-2019 31-
MAR-2020 15-AUG-2019 .52 .52 $2.22
RATE PLUS CARRIER.

AUGAC AUGF 36X5 31-MAR-2019 M AUGER ACCESSORIES, FLITE
DESCO DRILLING EQUIP 36-IN X 5' 01-APR-2018 31-
MAR-2019 09-JUL-2018 .52 .52 $1.30

AUGAC AUGF 36X6WOT 31-MAR-1987 M AUGER, ACCESSORIES
FLITE 36"DIA.X 6'W/O TEETH 01-APR-1986 31-
MAR-1987 10-FEB-2005 .50 1.00 $3.75

AUGAC AUGF 42R 31-MAR-2021 M AUGER ACCESSORIES, AUGER FLITE
PENGO 42R 72L- ROCK AUGER W/ 42 IN D 01-APR-2020 31-
MAR-2021 25-JAN-2021 .52 .52 $2.40
RATE PLUS REPLACEMENT BITS BY INVOICE/WEAR
ALLOWANCE.

AUGAC AUGF 42X10 31-MAR-2004 M AUGER ACCESSORIES, AUGER FLITE.
MICHAEL BYRNE MFG. 42" DIA X 10 LF 01-APR-1999 31-
MAR-2004 10-FEB-2005 .56 .48 $0.63

AUGAC AUGF 48X10 31-MAR-2007 M AUGER, ACCESSORIES, FLIGHT
AMERICAN AUGERS 48INCHX10FT AUGER FLIGHT 01-APR-2006 31-
MAR-2007 02-AUG-2007 .56 .48 $0.91

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SALES ORDER

Sales Order Number: **SO-59164**

Sales Order Date: 04/28/21
Page: 1

This is an order confirmation. An invoice will follow.

Sold To

Superior Shoring and Drilling
Lynne Stelfox
DBA: McMahon Engineering Constructio
634 Rock Springs Rd
ESCONDIDO, CA 92025

Shipping To:

Superior Shoring and Drilling
Lynne Stelfox
DBA: McMahon Engineering Const
634 Rock Springs Rd
ESCONDIDO, CA 92025

Order Details

Item No.	Description	Unit	QTY	Unit Price	Total Price	Currency US $ if Blank
PE-C-387BF	C-387BF/SM02/SC1-01 BIT	Each	1	7.10	7.10	

Order Totals

	Gross	Tax Rate	Total Sales Tax:	Total	Currency US $ if Blank
Amt Subject to Sales Tax	7.10	7.75%	0.55	7.65	
Amt Exempt from Sales Tax	0.00			0.00	
Total	**7.10**		**0.55**	**7.65**	

This is an order confirmation. An invoice will follow.

Our Reference and Contact Information

Customer ID	C55370	Phone No.:	206-762-3550
SalesPerson	Mike Hagy	Fax No.:	206-763-4232
Ship Via		Email:	AR@PacoEquip.com
Ship Date	04/28/21		

Customer Reference Information

P.O. Number	
P.O. Date	04/28/21