

SHOP DRAWING REVIEW FORM AND TRANSMITTAL

DATE: August 11, 2021

TO: Carl Hendrickson
Project Manager
Veolia Water
825 West Water Street
Taunton, MA 02780

FROM: Michael Andrus, P.E.
Project Manager
BETA Group, Inc.
701 George Washington Hwy
Lincoln, Rhode Island 02865

RE: City of Taunton, MA
WWTF Solids Handling Improvements
Contract S-2020-3

Shop Drawing No. 01310-001 REV A - Construction Progress Schedule

BETA COMMENTS:

<u>Item</u>	<u>Action Code</u>	<u>Description/Comments</u>
1	5	Construction Progress Schedule

Action Codes

- 1 - No Exception Taken
- 2 - Make Corrections Noted
- 3 - Amend and Resubmit
- 4 - Rejected, See Remarks
- 5 - Record File Only

- a. Installation shall proceed only when Action Code is '1' or '2'.
- b. Submittals action coded '3' shall be resubmitted within time limit set in Contract.
- c. Review does not relieve Contractor from responsibility of compliance with the Contract Documents.



PROJECT: 9722. - Veolia/Taunton WWTP Solids Handling Improvements

DATE: 07/29/2021

SUBMITTAL: 01310-001 - Construction Progress Schedule

REVISION: A

STATUS: New

SPEC #: 01310

TO: Carl Hendrickson, Veolia North America, 125 S. 84th Street, Suite 175, Milwaukee, WI 53214, carl.hendrickson@veolia.com

FROM: Christiaan George, Hart Engineering Corporation, 800 Scenic View Drive, Cumberland, RI 02864, cgeorge@hartcompanies.com

Table with 6 columns: Item, Revision, Description, Status, Date Sent, Date Returned. Row 1: 01310-001, A, Construction Progress Schedule, New, 07/29/2021, (blank)

Notes:

Additional Notes:

Status Codes

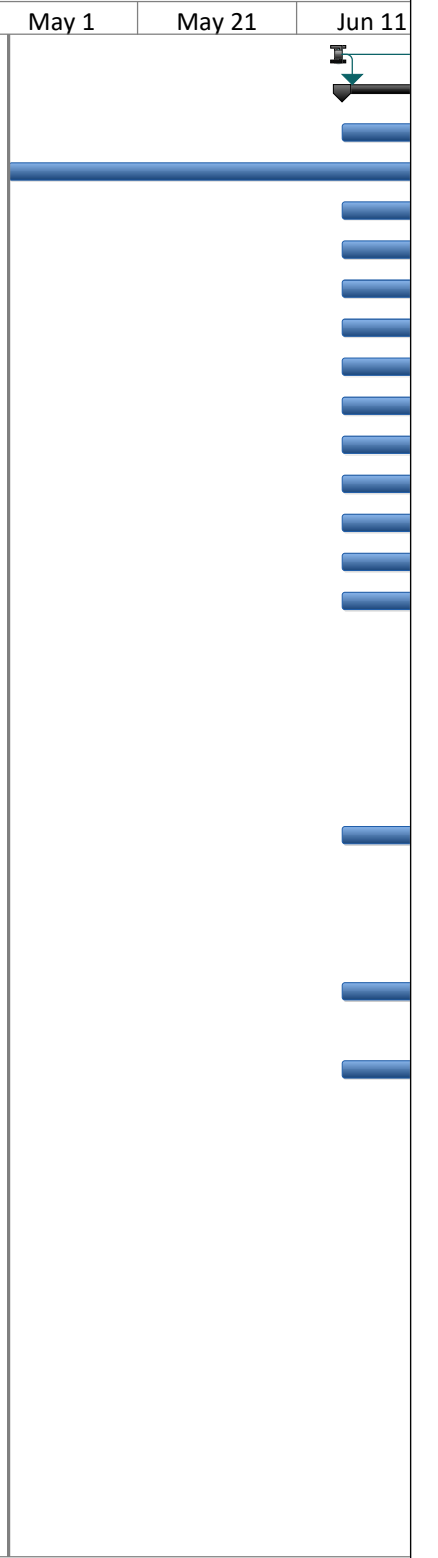
- 1-APP - No Exceptions Taken
2-ANR - Make Corrections Noted
3-R&R - Revise and Resubmit
4-REJ - Rejected
5-IPO - For Information Purposes Only
6-NRR - Not Required for Review
ENG - Submitted to Engineer

Sincerely, Hart Engineering Corporation

SHOP DRAWING REVIEW form with checkboxes for 1-5, a signature line for BETA GROUP, INC. (checked by BM), and a date line (8/11/2021).

DATE: 07/29/2021

ID	Task Mode	Task Name	Duration	Early Start	Early Finish	Late Start	Late Finish	Predecessors	Successors	Start Slack	Text1	Gantt Chart		
												May 1	May 21	Jun 11
1	✓	Notice to Proceed (NTP=6/16/2021 ; SC=6/16/2022)	1 day	Wed 6/16/21	Wed 6/16/21	Wed 6/16/21	Wed 6/16/21		2,70	0 days				
2		Procurement/Submittals	272 days	Wed 6/16/21	Tue 10/5/21	Thu 6/17/21	Sat 7/16/22	1		0 days				
3		02660 Biofilter	30 days	Thu 6/17/21	Thu 7/29/21	Thu 2/24/22	Wed 4/6/22		37	172 days	ECW/HDPE			
4		03200 Concrete Reinforcement	40 days	Thu 6/17/21	Fri 8/13/21	Tue 5/4/21	Thu 7/8/21		38	-25 days				
5		03300 Cast-In-Place Concrete	40 days	Thu 6/17/21	Fri 8/13/21	Tue 4/12/22	Tue 6/7/22		39	205 days				
6		03604 Non-Shrink Construction Grout	40 days	Thu 6/17/21	Fri 8/13/21	Thu 5/12/22	Fri 7/8/22		40	227 days				
7		03930 Concrete Rehabilitation	40 days	Thu 6/17/21	Fri 8/13/21	Thu 5/12/22	Fri 7/8/22		41	227 days				
8		03940 Crack Repairs by Epoxy Injection	40 days	Thu 6/17/21	Fri 8/13/21	Thu 5/12/22	Fri 7/8/22		42	227 days				
9		04100 Mortar and Masonry Grout	35 days	Thu 6/17/21	Thu 8/5/21	Tue 4/12/22	Tue 5/31/22		43	205 days	SPINO			
10		04200 Unit Masonry	35 days	Thu 6/17/21	Thu 8/5/21	Tue 4/5/22	Mon 5/23/22		44	200 days	SPINO			
11		05500 Metal Fabrications	40 days	Thu 6/17/21	Fri 8/13/21	Thu 4/21/22	Thu 6/16/22		45	212 days	RI WELDING			
12		05520 Aluminum Handrails and Railings	30 days	Thu 6/17/21	Thu 7/29/21	Thu 3/31/22	Wed 5/11/22		46	197 days	RI WELDING			
13		06600 FRP Products and Fabrications	30 days	Thu 6/17/21	Thu 7/29/21	Thu 3/31/22	Wed 5/11/22		47	197 days	MONA			
14		08331 Overhead Coiling Doors	20 days	Thu 6/17/21	Thu 7/15/21	Fri 4/15/22	Thu 5/12/22		48	208 days	HQI			
15		09900 Painting	20 days	Thu 6/17/21	Thu 7/15/21	Fri 6/3/22	Thu 6/30/22		49	242 days	SOEP			
16		09880 Concrete Protective Coating	25 days	Thu 6/17/21	Thu 7/22/21	Thu 5/19/22	Thu 6/23/22		50	232 days	SOEP			
17		11305 Thickened Sludge Pumps(Submittal=2-3 wks)(3 week review)	30 days	Mon 7/12/21	Mon 8/23/21	Mon 7/12/21	Mon 8/23/21		51	0 days	SEEPEX			
18		11310 Thickened Sludge Grinders(Submittal=3wks)(3 week review)	30 days	Mon 7/12/21	Mon 8/23/21	Mon 7/12/21	Mon 8/23/21		52	0 days	JWC			
19		11326 Sludge Thickener Equipment(Submittal=6-8wks)(3 week review)	55 days	Mon 7/12/21	Tue 9/28/21	Mon 7/12/21	Tue 9/28/21		53	0 days	AMWELL			
20		11350 Sludge Dewatering Centrifuges-VNA	0 days	Wed 6/16/21	Wed 6/16/21	Fri 2/11/22	Fri 2/11/22		54	164 days	VNA			
21		11373 Odor Control Fans	55 days	Thu 6/17/21	Fri 9/3/21	Thu 6/17/21	Fri 9/3/21		55	0 days				
22		11500 Dome Aluminum Covers	55 days	Mon 7/19/21	Tue 10/5/21	Mon 7/19/21	Tue 10/5/21		56	0 days	CST			
23		11555 Shaftless Screw Conveyors	40 days	Mon 7/12/21	Tue 9/7/21	Mon 7/12/21	Tue 9/7/21		57	0 days	JDV			
24		11601 FRP Weirs and Launderers(Submittal=3 wks)(3 week review)	30 days	Mon 7/12/21	Mon 8/23/21	Mon 7/12/21	Mon 8/23/21		58	0 days	MIDWEST			
25		11961 Interior and Exterior Process Piping	40 days	Thu 6/17/21	Fri 8/13/21	Thu 6/17/21	Fri 8/13/21		59	0 days	EJP/OC DUCT			
26		13320 Instrumentation-VNA	0 days	Wed 6/16/21	Wed 6/16/21	Sat 7/16/22	Sat 7/16/22		60	272 days	VNA			
27		15400 Plumbing	30 days	Thu 6/17/21	Thu 7/29/21	Thu 6/17/21	Thu 7/29/21		61	0 days				
28		16060 Grounding and Bonding	30 days	Thu 6/17/21	Thu 7/29/21	Thu 5/12/22	Thu 6/23/22		62	227 days	WATERMARK			
29		16085 Misc Equipment	40 days	Thu 6/17/21	Fri 8/13/21	Thu 3/24/22	Wed 5/18/22		63	192 days	WATERMARK			
30		16120 Electrical Wire and Cables	30 days	Thu 6/17/21	Thu 7/29/21	Thu 5/12/22	Thu 6/23/22		64	227 days	WATERMARK			
31		16130 Raceways and Fittings	30 days	Thu 6/17/21	Thu 7/29/21	Tue 8/17/21	Tue 9/28/21		65	41 days	WATERMARK			
32		16442 Panelboards	30 days	Thu 6/17/21	Thu 7/29/21	Thu 4/21/22	Thu 6/2/22		66	212 days	WATERMARK			
33		16495 Variable Frequency Drives	50 days	Thu 6/17/21	Fri 8/27/21	Thu 3/10/22	Wed 5/18/22		67	182 days	WATERMARK			
34		16500 Lighting Systems	40 days	Thu 6/17/21	Fri 8/13/21	Thu 4/7/22	Thu 6/2/22		68	202 days	WATERMARK			
35		16721 Fire Alarm Systems	40 days	Thu 6/17/21	Fri 8/13/21	Thu 4/7/22	Thu 6/2/22		69	202 days	WATERMARK			
36		Delivery	252 days	Wed 6/16/21	Thu 2/17/22	Fri 7/16/21	Sat 7/16/22			20 days				
37		02660 Biofilter	30 days	Fri 7/30/21	Mon 9/13/21	Thu 4/7/22	Wed 5/18/22	3	76	172 days	ECW/HDPE			
38		03200 Concrete Reinforcement	25 days	Mon 8/16/21	Mon 9/20/21	Fri 7/9/21	Fri 8/13/21	4	99	-25 days				
39		03300 Cast-In-Place Concrete	5 days	Mon 8/16/21	Fri 8/20/21	Wed 6/8/22	Tue 6/14/22	5	99	205 days				



Project: Tauntons Solids Handling Date: Wed 7/28/21

Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Deadline	
Split		External Tasks		Inactive Summary		Manual Summary		Progress	
Milestone		External Milestone		Manual Task		Start-only			
Summary		Inactive Task		Duration-only		Finish-only			

ID	Task Mode	Task Name	Duration	Early Start	Early Finish	Late Start	Late Finish	Predecessors	Successors	Start Slack	Text1	Gantt Chart		
												May 1	May 21	Jun 11
40		03604 Non-Shrink Construction Grout	5 days	Mon 8/16/21	Fri 8/20/21	Mon 7/11/22	Fri 7/15/22	6		227 days				
41		03930 Concrete Rehabilitation	5 days	Mon 8/16/21	Fri 8/20/21	Mon 7/11/22	Fri 7/15/22	7		227 days				
42		03940 Crack Repairs by Epoxy Injection	5 days	Mon 8/16/21	Fri 8/20/21	Mon 7/11/22	Fri 7/15/22	8		227 days				
43		04100 Mortar and Masonry Grout	10 days	Fri 8/6/21	Fri 8/20/21	Wed 6/1/22	Tue 6/14/22	9	99	205 days	SPINO			
44		04200 Unit Masonry	15 days	Fri 8/6/21	Fri 8/27/21	Tue 5/24/22	Tue 6/14/22	10	99	200 days	SPINO			
45		05500 Metal Fabrications	20 days	Mon 8/16/21	Mon 9/13/21	Fri 6/17/22	Fri 7/15/22	11		212 days	RI WELDING			
46		05520 Aluminum Handrails and Railings	45 days	Fri 7/30/21	Mon 10/4/21	Thu 5/12/22	Fri 7/15/22	12		197 days	RI WELDING			
47		06600 FRP Products and Fabrications	45 days	Fri 7/30/21	Mon 10/4/21	Thu 5/12/22	Fri 7/15/22	13		197 days	MONA			
48		08331 Overhead Coiling Doors	40 days	Fri 7/16/21	Mon 9/13/21	Fri 5/13/22	Mon 7/11/22	14	102	208 days	HQI			
49		09900 Painting	10 days	Fri 7/16/21	Thu 7/29/21	Fri 7/1/22	Fri 7/15/22	15		242 days	SOEP			
50		09880 Concrete Protective Coating	15 days	Fri 7/23/21	Fri 8/13/21	Fri 6/24/22	Fri 7/15/22	16		232 days	SOEP			
51		11305 Thickened Sludge Pumps(10 weeks of approval)	50 days	Tue 8/24/21	Wed 11/3/21	Thu 3/17/22	Wed 5/25/22	17	137	141 days	SEEPEX			
52		11310 Thickened Sludge Grinders(6 weeks after approval)	30 days	Tue 8/24/21	Tue 10/5/21	Thu 4/14/22	Wed 5/25/22	18	137	161 days	JWC			
53		11326 Sludge Thickener Equipment(16-20 wks from approval)	80 days	Wed 9/29/21	Mon 1/24/22	Wed 9/29/21	Mon 1/24/22	19	111	0 days	AMWELL			
54		11350 Sludge Dewatering Centrifuges-VNA(install on 2/17/22)	5 days	Fri 2/11/22	Thu 2/17/22	Fri 2/11/22	Thu 2/17/22	20	148FS-10 day	0 days	VNA			
55		11373 Odor Control Fans	50 days	Tue 9/7/21	Wed 11/17/21	Tue 9/7/21	Wed 11/17/21	21	89	0 days				
56		11500 Dome Aluminum Covers	80 days	Wed 10/6/21	Mon 1/31/22	Thu 3/24/22	Fri 7/15/22	22		116 days	CST			
57		11555 Shaftless Screw Conveyors(14-16 wks after approval)	80 days	Wed 9/8/21	Fri 12/31/21	Thu 3/24/22	Fri 7/15/22	23		136 days	JDV			
58		11601 FRP Weirs and Launderers(15 weeks from approval)	75 days	Tue 8/24/21	Fri 12/10/21	Mon 10/25/21	Wed 2/9/22	24	113	42 days	MIDWEST			
59		11961 Interior and Exterior Process Piping	35 days	Mon 8/16/21	Mon 10/4/21	Mon 8/16/21	Mon 10/4/21	25	84,93,96,134,	0 days	EJP/OC DUCT			
60		13320 Instrumentation-VNA	0 days	Wed 6/16/21	Wed 6/16/21	Sat 7/16/22	Sat 7/16/22	26		272 days	VNA			
61		15400 Plumbing	20 days	Fri 7/30/21	Fri 8/27/21	Fri 7/30/21	Fri 8/27/21	27	158	0 days				
62		16060 Grounding and Bonding	15 days	Fri 7/30/21	Fri 8/20/21	Fri 6/24/22	Fri 7/15/22	28		227 days	WATERMARK			
63		16085 Misc Equipment	40 days	Mon 8/16/21	Tue 10/12/21	Thu 5/19/22	Fri 7/15/22	29		192 days	WATERMARK			
64		16120 Electrical Wire and Cables	15 days	Fri 7/30/21	Fri 8/20/21	Fri 6/24/22	Fri 7/15/22	30		227 days	WATERMARK			
65		16130 Raceways and Fittings	30 days	Fri 7/30/21	Mon 9/13/21	Wed 9/29/21	Wed 11/10/21	31	178	41 days	WATERMARK			
66		16442 Panelboards	30 days	Fri 7/30/21	Mon 9/13/21	Fri 6/3/22	Fri 7/15/22	32		212 days	WATERMARK			
67		16495 Variable Frequency Drives	40 days	Mon 8/30/21	Tue 10/26/21	Thu 5/19/22	Fri 7/15/22	33		182 days	WATERMARK			
68		16500 Lighting Systems	30 days	Mon 8/16/21	Mon 9/27/21	Fri 6/3/22	Fri 7/15/22	34		202 days	WATERMARK			
69		16721 Fire Alarm Systems	30 days	Mon 8/16/21	Mon 9/27/21	Fri 6/3/22	Fri 7/15/22	35		202 days	WATERMARK			
70		Construction	232 days	Mon 8/16/21	Fri 6/24/22	Mon 8/16/21	Fri 7/15/22	1		0 days				
71		Site Preparation	16 days	Mon 8/16/21	Tue 9/7/21	Mon 8/16/21	Tue 9/7/21			0 days				
72		Mobilize	1 day	Mon 8/16/21	Mon 8/16/21	Mon 8/16/21	Mon 8/16/21		73,106	0 days				
73		Clear trees, grub area and strip/stockpile loam	5 days	Tue 8/17/21	Mon 8/23/21	Thu 4/28/22	Wed 5/4/22	72	74	176 days	ECW			
74		Excavate, install 8" gravel with filter fabric for staging area and grade off south side of Solids Handling Building	10 days	Tue 8/24/21	Tue 9/7/21	Thu 5/5/22	Wed 5/18/22	73	77,161,169	176 days	ECW			
75		OC System	203 days	Tue 9/14/21	Thu 1/13/22	Tue 9/14/21	Fri 7/1/22		200	0 days				
76		Biofilter(Dwg M8.1)	24 days	Tue 9/14/21	Mon 10/18/21	Tue 9/14/21	Mon 10/18/...	37	98	0 days	ECW			
77		Excavate and grade off for new Biofilter	3 days	Tue 9/14/21	Thu 9/16/21	Thu 5/19/22	Mon 5/23/22	74	78	172 days				

Project: Tauntons Solids Handling
Date: Wed 7/28/21

Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Deadline	
Split		External Tasks		Inactive Summary		Manual Summary		Progress	
Milestone		External Milestone		Manual Task		Start-only			
Summary		Inactive Task		Duration-only		Finish-only			

ID	Task Mode	Task Name	Duration	Early Start	Early Finish	Late Start	Late Finish	Predecessors	Successors	Start Slack	Text1	Gantt Chart		
												May 1	May 21	Jun 11
78		Install precast block foundation	3 days	Fri 9/17/21	Tue 9/21/21	Tue 5/24/22	Thu 5/26/22	77	79	172 days				
79		Install 40 mil poly liner	1 day	Wed 9/22/21	Wed 9/22/21	Fri 5/27/22	Fri 5/27/22	78	80	172 days				
80		Install HDPE OC header piping and related perforated lateral branches	2 days	Tue 10/5/21	Wed 10/6/21	Tue 5/31/22	Wed 6/1/22	79,59	81	164 days				
81		Install 6" PVC drain pipe from Biofilter to interior building sump	2 days	Thu 10/7/21	Fri 10/8/21	Thu 6/2/22	Fri 6/3/22	80	82	164 days				
82		Backfill crushed stone bedding	2 days	Tue 10/12/21	Wed 10/13/21	Mon 6/6/22	Tue 6/7/22	81	83	164 days				
83		Backfill biofilter media	3 days	Thu 10/14/21	Mon 10/18/21	Wed 6/8/22	Fri 6/10/22	82	86	164 days				
84		OC Piping System	174 days	Tue 10/19/21	Thu 1/6/22	Tue 10/19/21	Fri 6/24/22	59	98	0 days				
85		OC(Discharge)-FRP Exterior above Ground Piping(Dwg C-1.3)	10 days	Tue 10/19/21	Mon 11/1/21	Tue 10/19/21	Mon 11/1/21			0 days				
86		Excavate for sonotube OC duct supports	2 days	Tue 10/19/21	Wed 10/20/21	Mon 6/13/22	Tue 6/14/22	83	87	164 days	ECW			
87		Install new concrete OC duct pipe support foundations	3 days	Thu 10/21/21	Mon 10/25/21	Wed 6/15/22	Fri 6/17/22	86	88	164 days				
88		Install new above ground FRP OC piping from Biofilter to Blower 2 , Blower 3 and Headworks OC system(connect to existing 20" OC duct)	5 days	Tue 10/26/21	Mon 11/1/21	Mon 6/20/22	Fri 6/24/22	87,59		164 days				
89		OC Blowers & Suction Pipe	153 days	Thu 11/18/21	Thu 1/6/22	Thu 11/18/21	Fri 6/24/22	55		0 days				
90		Install Blower 2	1 day	Thu 11/18/21	Thu 11/18/21	Mon 6/20/22	Mon 6/20/22		94,91	148 days				
91		Install Blower 3	1 day	Fri 11/19/21	Fri 11/19/21	Tue 6/21/22	Tue 6/21/22	90	95,92	148 days				
92		Electrcial Work	3 days	Tue 1/4/22	Thu 1/6/22	Wed 6/22/22	Fri 6/24/22	91,184		118 days				
93		OC(Suction) - Sludge Thickener Tanks	4 days	Fri 11/19/21	Wed 11/24/21	Fri 11/19/21	Wed 11/24/...	59		0 days				
94		Install FRP duct from OC Fan 2 to Tank 1	3 days	Fri 11/19/21	Tue 11/23/21	Wed 6/22/22	Fri 6/24/22	90		149 days				
95		Install FRP duct from OC Fan 2 to Tank 2	3 days	Mon 11/22/21	Wed 11/24/21	Wed 6/22/22	Fri 6/24/22	91		148 days				
96		OC(Suction) - Solids Handling Building	2 days	Thu 11/18/21	Fri 11/19/21	Thu 11/18/21	Fri 11/19/21	59		0 days				
97		Install FRP duct from OC Fan 3 into SH Building Existing Branch	2 days	Thu 11/18/21	Fri 11/19/21	Thu 6/23/22	Fri 6/24/22			151 days				
98		Startup of Fans & OC Biofilter	5 days	Fri 1/7/22	Thu 1/13/22	Mon 6/27/22	Fri 7/1/22	76,84		118 days				
99		OH Garage Door Widening Work - Dwg S-7.1/7.2	207 days	Tue 9/21/21	Thu 10/21/21	Tue 9/21/21	Fri 7/15/22	38,39,43,44		0 days				
100		Install temporary support system to allow for demo/reconstruction work to proceed	3 days	Tue 9/21/21	Thu 9/23/21	Wed 6/15/22	Fri 6/17/22		101	185 days	SPINO			
101		Reconstruct opening	15 days	Fri 9/24/21	Fri 10/15/21	Mon 6/20/22	Mon 7/11/22	100	102	185 days	SPINO			
102		Install new OH Door	2 days	Mon 10/18/21	Tue 10/19/21	Tue 7/12/22	Wed 7/13/22	101,48	103	185 days	HQI			
103		Electrical Work	2 days	Wed 10/20/21	Thu 10/21/21	Thu 7/14/22	Fri 7/15/22	102		185 days	WATERMARK			
104		Sludge Thickener Tanks-Dwgs M-7.1 & 7.5	217 days	Tue 8/17/21	Fri 6/24/22	Tue 8/17/21	Fri 6/24/22		200	0 days				
105		Sludge Thickener Tank 1(offline)	144 days	Tue 8/17/21	Mon 3/14/22	Tue 8/17/21	Mon 3/14/22			0 days				
106		R&D of residual sludge, grit and debris -BID ITEM 5	1 day	Tue 8/17/21	Tue 8/17/21	Tue 9/21/21	Tue 9/21/21	72	107	24 days				
107		Demo existing mechanism and trough/weirs	2 days	Wed 8/18/21	Thu 8/19/21	Wed 9/22/21	Thu 9/23/21	106	108	24 days				
108		Pressure wash tanks	1 day	Fri 8/20/21	Fri 8/20/21	Fri 9/24/21	Fri 9/24/21	107	109	24 days				
109		Concrete repairs as needed - BID ITEMS 2, 3	10 days	Mon 8/23/21	Fri 9/3/21	Mon 9/27/21	Fri 10/8/21	108	110	24 days				
110		Protective Coatings Work - Tank Walls - BID ITEM 4	15 days	Tue 9/7/21	Mon 9/27/21	Tue 10/12/21	Mon 11/1/21	109	111	24 days	SOEP			

Project: Tauntons Solids Handling
Date: Wed 7/28/21

Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Deadline	
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Milestone		External Milestone		Manual Task		Start-only			
Summary		Inactive Task		Duration-only		Finish-only			

ID	Task Mode	Task Name	Duration	Early Start	Early Finish	Late Start	Late Finish	Predecessors	Successors	Start Slack	Text1	Gantt Chart		
												May 1	May 21	Jun 11
111		Install new Thickener mechanism	10 days	Tue 1/25/22	Mon 2/7/22	Tue 2/1/22	Mon 2/14/22	110,53	112	5 days				
112		Install new 8-inch PS and 14" WAS piping	2 days	Tue 2/8/22	Wed 2/9/22	Tue 2/15/22	Wed 2/16/22	111	113	5 days				
113		Install new FRP launder and weir	5 days	Thu 2/10/22	Wed 2/16/22	Thu 2/17/22	Thu 2/24/22	112,58	114	5 days				
114		Install new Aluminum Tank Cover	10 days	Thu 2/17/22	Thu 3/3/22	Fri 2/25/22	Thu 3/10/22	113	115,116	5 days				
115		Connect FRP OC duct system	1 day	Fri 3/4/22	Fri 3/4/22	Fri 7/1/22	Fri 7/1/22	114		84 days				
116		Electrical Work	5 days	Fri 3/4/22	Thu 3/10/22	Fri 3/11/22	Thu 3/17/22	114,184	117	5 days	WATERMARK			
117		Testing & startup	2 days	Fri 3/11/22	Mon 3/14/22	Fri 3/18/22	Mon 3/21/22	116	119FS+10 da	5 days				
118		Sludge Thickener Tank 2(active)	63 days	Tue 3/29/22	Fri 6/24/22	Tue 3/29/22	Fri 6/24/22			0 days				
119		VNA to drain and empty tank	5 days	Tue 3/29/22	Mon 4/4/22	Tue 4/5/22	Mon 4/11/22	117FS+10 da	120	5 days				
120		R&D of residual sludge, grit and debris -BID ITEM 5	1 day	Tue 4/5/22	Tue 4/5/22	Tue 4/12/22	Tue 4/12/22	119	121	5 days				
121		Remove & store existing aluminum tank cover	2 days	Wed 4/6/22	Thu 4/7/22	Wed 4/13/22	Thu 4/14/22	120	122	5 days				
122		Demo existing mechanism and trough/weirs	2 days	Fri 4/8/22	Mon 4/11/22	Fri 4/15/22	Mon 4/18/22	121	123	5 days				
123		Pressure wash tanks	1 day	Tue 4/12/22	Tue 4/12/22	Tue 4/19/22	Tue 4/19/22	122	124	5 days				
124		Concrete repairs as needed - BID ITEMS 2, 3	10 days	Wed 4/13/22	Tue 4/26/22	Wed 4/20/22	Tue 5/3/22	123	125	5 days				
125		Protective Coatings Work - Tank Walls - BID ITEM 4	15 days	Wed 4/27/22	Tue 5/17/22	Wed 5/4/22	Tue 5/24/22	124	126	5 days	SOEP			
126		Install new Thickener mechanism	10 days	Wed 5/18/22	Wed 6/1/22	Wed 5/25/22	Wed 6/8/22	125	127	5 days				
127		Install new 8-inch PS and 14" WAS piping	2 days	Thu 6/2/22	Fri 6/3/22	Thu 6/9/22	Fri 6/10/22	126	128	5 days				
128		Install new FRP launder and weir	5 days	Mon 6/6/22	Fri 6/10/22	Mon 6/13/22	Fri 6/17/22	127	129	5 days				
129		Re-install existing Aluminum Tank Cover	3 days	Mon 6/13/22	Wed 6/15/22	Mon 6/20/22	Wed 6/22/22	128	130,131	5 days				
130		Connect FRP OC duct system	1 day	Thu 6/16/22	Thu 6/16/22	Fri 7/1/22	Fri 7/1/22	129		11 days				
131		Electrical Work	5 days	Thu 6/16/22	Wed 6/22/22	Thu 6/23/22	Wed 6/29/22	129	132	5 days	WATERMARK			
132		Testing & startup	2 days	Thu 6/23/22	Fri 6/24/22	Thu 6/30/22	Fri 7/1/22	131		5 days				
133		Thickened Sludge PS - Dwg M-7.5 to 7.7	188 days	Tue 10/5/21	Wed 2/9/22	Tue 10/5/21	Fri 7/1/22		200	0 days				
134		Piping - Dwg Dwg M-7.6 & 7.7	15 days	Tue 10/5/21	Tue 10/26/21	Tue 10/5/21	Tue 10/26/21	59		0 days				
135		Install new 4-inch TS piping from Lower Level(E=34.0) to Upper Level(E=49.0)	10 days	Tue 10/5/21	Tue 10/19/21	Mon 6/13/22	Fri 6/24/22		136	173 days				
136		Install piping and valve modifications for PS & WAS systems - Dwg M-7.6	5 days	Wed 10/20/21	Tue 10/26/21	Mon 6/27/22	Fri 7/1/22	135		173 days				
137		Pumps & Grinders	26 days	Tue 1/4/22	Wed 2/9/22	Thu 5/26/22	Fri 7/1/22	51,52		100 days				
138		System 1	8 days	Tue 1/4/22	Thu 1/13/22	Thu 5/26/22	Tue 6/7/22	184		100 days				
139		Install Thickened Sludge Grinder 1	2 days	Tue 1/4/22	Wed 1/5/22	Thu 5/26/22	Fri 5/27/22		140	100 days				
140		Install Sludge Pump 1	2 days	Thu 1/6/22	Fri 1/7/22	Tue 5/31/22	Wed 6/1/22	139	141	100 days				
141		Electrical Work	2 days	Mon 1/10/22	Tue 1/11/22	Thu 6/2/22	Fri 6/3/22	140	142	100 days				
142		Testing and startup	2 days	Wed 1/12/22	Thu 1/13/22	Mon 6/6/22	Tue 6/7/22	141	144FS+10 da	100 days				
143		System 2	8 days	Mon 1/31/22	Wed 2/9/22	Wed 6/22/22	Fri 7/1/22			100 days				
144		Install Thickened Sludge Grinder 2	2 days	Mon 1/31/22	Tue 2/1/22	Wed 6/22/22	Thu 6/23/22	142FS+10 days	145	100 days				
145		Install Sludge Pump 2	2 days	Wed 2/2/22	Thu 2/3/22	Fri 6/24/22	Mon 6/27/22	144	146	100 days				
146		Electrical Work	2 days	Fri 2/4/22	Mon 2/7/22	Tue 6/28/22	Wed 6/29/22	145	147	100 days	WATERMARK			

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Summary		Inactive Task		Duration-only		Finish-only			

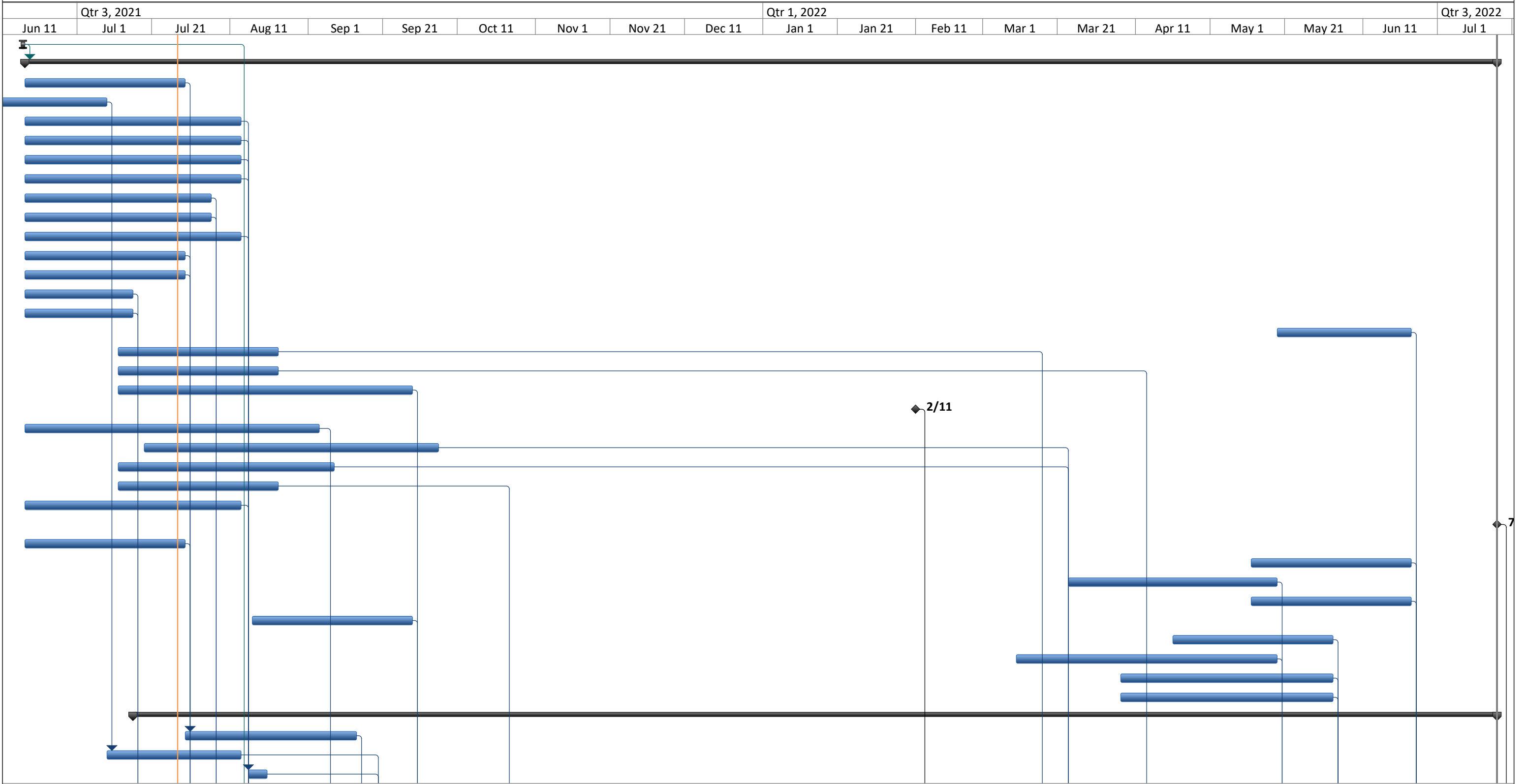
EGWWTP - Upgrades Project												Hart Engineering Corp.,Inc. - 800 Scenic View Drive Cumberland, RI 02864			as of Wed 7/28/21		
ID	Task Mode	Task Name	Duration	Early Start	Early Finish	Late Start	Late Finish	Predecessors	Successors	Start Slack	Text1						
												May 1	May 21	Jun 11			
147		Testing and startup	2 days	Tue 2/8/22	Wed 2/9/22	Thu 6/30/22	Fri 7/1/22	146		100 days							
148		Sludge Thickener Centrifuges	40 days	Fri 2/4/22	Fri 4/1/22	Fri 2/4/22	Fri 4/1/22	54FS-10 days	200	0 days							
149		R&D existing North Centrifuge, concrete supports/curbs and related piping	5 days	Fri 2/4/22	Thu 2/10/22	Fri 5/6/22	Thu 5/12/22		150	64 days							
150		Install new concrete knee walls - coordinate with new Centrifuge base plates(Dwg S-7.3)	5 days	Fri 2/11/22	Thu 2/17/22	Fri 5/13/22	Thu 5/19/22	149	151	64 days							
151		Install new Centrifuge 1 and 2(supplied by VNA)	5 days	Fri 2/18/22	Fri 2/25/22	Fri 5/20/22	Thu 5/26/22	150,182	152,155	64 days							
152		Install new screw conveyors	3 days	Mon 2/28/22	Wed 3/2/22	Mon 6/27/22	Wed 6/29/22	151	153	84 days							
153		Connect 4-inch TS piping to new Centrifuges	1 day	Thu 3/3/22	Thu 3/3/22	Thu 6/30/22	Thu 6/30/22	152	154	84 days							
154		Connect 1" polymer piping to polymer injection points	1 day	Fri 3/4/22	Fri 3/4/22	Fri 7/1/22	Fri 7/1/22	153		84 days							
155		Electrical	5 days	Mon 2/28/22	Fri 3/4/22	Fri 5/27/22	Fri 6/3/22	151	156	64 days							
156		Testing & Startup	5 days	Mon 3/7/22	Fri 3/11/22	Mon 6/6/22	Fri 6/10/22	155	157FS+10 da	64 days							
157		R&D existing South Centrifuge and concrete supports/curbs, Belt Conveyors and related piping	5 days	Mon 3/28/22	Fri 4/1/22	Mon 6/27/22	Fri 7/1/22	156FS+10 days		64 days							
158		Plumbing Upgrades	213 days	Mon 8/30/21	Tue 5/3/22	Mon 8/30/21	Fri 7/1/22	61	200	0 days							
159		1st Floor - Dwg P-7.3	16 days	Mon 8/30/21	Tue 9/21/21	Mon 8/30/21	Tue 9/21/21			0 days							
160		Drain piping	10 days	Wed 9/8/21	Tue 9/21/21	Wed 9/8/21	Tue 9/21/21			0 days							
161		Install new waste drain piping	5 days	Wed 9/8/21	Tue 9/14/21	Mon 6/20/22	Fri 6/24/22	74	162	197 days							
162		Install new roof leader piping	5 days	Wed 9/15/21	Tue 9/21/21	Mon 6/27/22	Fri 7/1/22	161		197 days							
163		Tempered Water System	7 days	Mon 8/30/21	Wed 9/8/21	Mon 8/30/21	Wed 9/8/21			0 days							
164		Install new oil fired water heater(7DWH-1) in Boiler room	2 days	Mon 8/30/21	Tue 8/31/21	Thu 6/23/22	Fri 6/24/22		165	206 days							
165		Install 1.25"/0.75" TW piping from water heater to mixing valve station	2 days	Wed 9/1/21	Thu 9/2/21	Mon 6/27/22	Tue 6/28/22	164	166	206 days							
166		Install 1.25" CW piping from SH city water BFV to mixing valve station/water heater/future HVAC makeup system	2 days	Fri 9/3/21	Tue 9/7/21	Wed 6/29/22	Thu 6/30/22	165	167	206 days							
167		Install new eyewash station (EWU-1)	1 day	Wed 9/8/21	Wed 9/8/21	Fri 7/1/22	Fri 7/1/22	166		206 days							
168		Sump Pump Systems	4 days	Wed 9/8/21	Mon 9/13/21	Wed 9/8/21	Mon 9/13/21			0 days							
169		Install duplex sump pump system (7-SP1) & piping - 1st Floor	2 days	Wed 9/8/21	Thu 9/9/21	Tue 6/28/22	Wed 6/29/22	74	170	203 days							
170		Install single sump pump system (7-SP2) & piping - Lower Level	2 days	Fri 9/10/21	Mon 9/13/21	Thu 6/30/22	Fri 7/1/22	169		203 days							
171		2nd Floor - Dwg P-7.4	6 days	Mon 8/30/21	Tue 9/7/21	Mon 8/30/21	Tue 9/7/21			0 days							
172		Install new grates for floor drains	1 day	Mon 8/30/21	Mon 8/30/21	Fri 6/24/22	Fri 6/24/22		173	207 days							
173		Install new roof leader piping	5 days	Tue 8/31/21	Tue 9/7/21	Mon 6/27/22	Fri 7/1/22	172		207 days							
174		Roof	2 days	Mon 5/2/22	Tue 5/3/22	Thu 6/30/22	Fri 7/1/22			42 days							
175		Replace roof drains(coordinate with future roof replacement work)	2 days	Mon 5/2/22	Tue 5/3/22	Thu 6/30/22	Fri 7/1/22			42 days							

Project: Tauntons Solids Handling Date: Wed 7/28/21	Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Deadline	
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ID	Task Mode	Task Name	Duration	Early Start	Early Finish	Late Start	Late Finish	Predecessors	Successors	Start Slack	Text1	Gantt Chart		
												May 1	May 21	Jun 11
176		Electrical Upgrades	162 days	Tue 9/14/21	Wed 2/23/22	Fri 11/12/21	Fri 7/1/22		200	41 days	WATERMARK			
177		Existing MCC 4 Work	162 days	Tue 9/14/21	Wed 9/29/21	Fri 11/12/21	Fri 7/1/22			41 days				
178		Conduit	5 days	Tue 9/14/21	Mon 9/20/21	Fri 11/12/21	Thu 11/18/21	65	179	41 days				
179		Devices(Panelboard 7DP1)	2 days	Tue 9/21/21	Wed 9/22/21	Fri 11/19/21	Mon 11/22/21	178	185,180	41 days				
180		Wiring	2 days	Thu 9/23/21	Fri 9/24/21	Mon 2/14/22	Tue 2/15/22	179	181	98 days				
181		Temporary wire new Panelboard 7DP1 feed from MCC4	1 day	Mon 9/27/21	Mon 9/27/21	Wed 2/16/22	Wed 2/16/22	180	182	98 days				
182		Install temporary feeders to Centrifuges 1 & 2 from MCC4	1 day	Tue 9/28/21	Tue 9/28/21	Thu 2/17/22	Thu 2/17/22	181	183,151	98 days				
183		Energize Panel 7DP1	1 day	Wed 9/29/21	Wed 9/29/21	Fri 7/1/22	Fri 7/1/22	182		191 days				
184		Panelboard 7DP1 Feed	70 days	Thu 9/23/21	Mon 1/3/22	Tue 11/23/21	Thu 3/3/22		116,92,138	41 days				
185		Conduit	30 days	Thu 9/23/21	Thu 11/4/21	Tue 11/23/21	Tue 1/4/22	179	190,186	41 days				
186		Devices	10 days	Fri 11/5/21	Fri 11/19/21	Wed 1/5/22	Wed 1/19/22	185	195,187	41 days				
187		Wiring	20 days	Mon 11/22/21	Mon 12/20/21	Thu 1/20/22	Wed 2/16/22	186	188	41 days				
188		Terminations	10 days	Tue 12/21/21	Mon 1/3/22	Thu 2/17/22	Thu 3/3/22	187		41 days				
189		Lighting Panel 7LP1	75 days	Fri 11/5/21	Wed 2/23/22	Fri 3/18/22	Fri 7/1/22			91 days				
190		Conduit	30 days	Fri 11/5/21	Mon 12/20/21	Fri 3/18/22	Thu 4/28/22	185	191	91 days				
191		Devices(lights, receptacles, switches)	20 days	Tue 12/21/21	Tue 1/18/22	Fri 4/29/22	Thu 5/26/22	190	192	91 days				
192		Wiring	15 days	Wed 1/19/22	Tue 2/8/22	Fri 5/27/22	Fri 6/17/22	191	193	91 days				
193		Terminations	10 days	Wed 2/9/22	Wed 2/23/22	Mon 6/20/22	Fri 7/1/22	192		91 days				
194		Fire Alarm	50 days	Mon 11/22/21	Tue 2/1/22	Fri 4/22/22	Fri 7/1/22			106 days				
195		Conduit	20 days	Mon 11/22/21	Mon 12/20/21	Fri 4/22/22	Thu 5/19/22	186	196	106 days				
196		Wiring	10 days	Tue 12/21/21	Mon 1/3/22	Fri 5/20/22	Fri 6/3/22	195	197	106 days				
197		Devices	10 days	Tue 1/4/22	Tue 1/18/22	Mon 6/6/22	Fri 6/17/22	196	198	106 days				
198		Terminations	5 days	Wed 1/19/22	Tue 1/25/22	Mon 6/20/22	Fri 6/24/22	197	199	106 days				
199		Startup & Commissioning	5 days	Wed 1/26/22	Tue 2/1/22	Mon 6/27/22	Fri 7/1/22	198		106 days				
200		Punchlist	6 days	Mon 6/27/22	Tue 7/5/22	Tue 7/5/22	Tue 7/12/22	75,104,133,1201	201	5 days				
201		Final Cleanup & Demobilization	3 days	Wed 7/6/22	Fri 7/8/22	Wed 7/13/22	Fri 7/15/22	200		5 days				

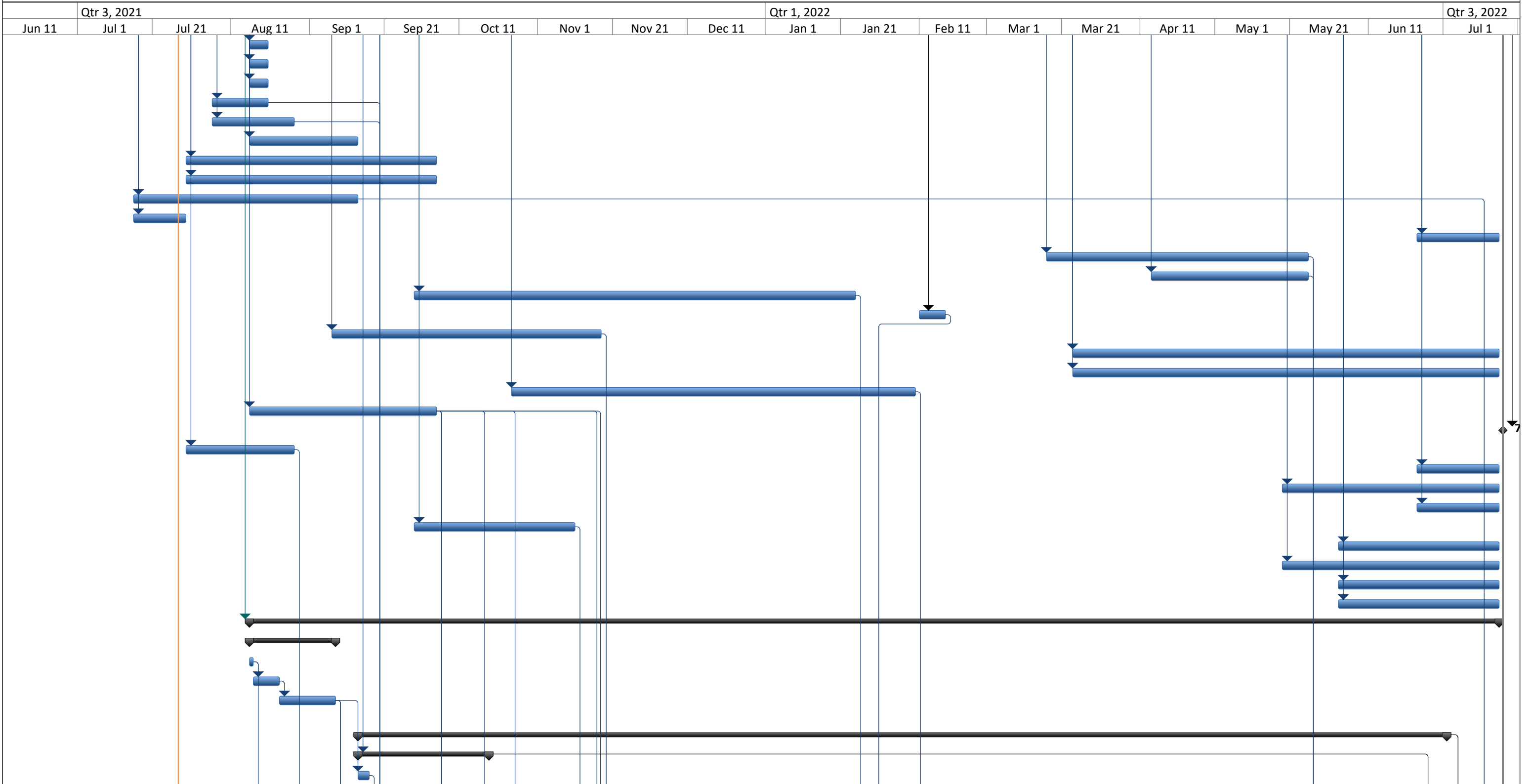
Project: Tauntons Solids Handling
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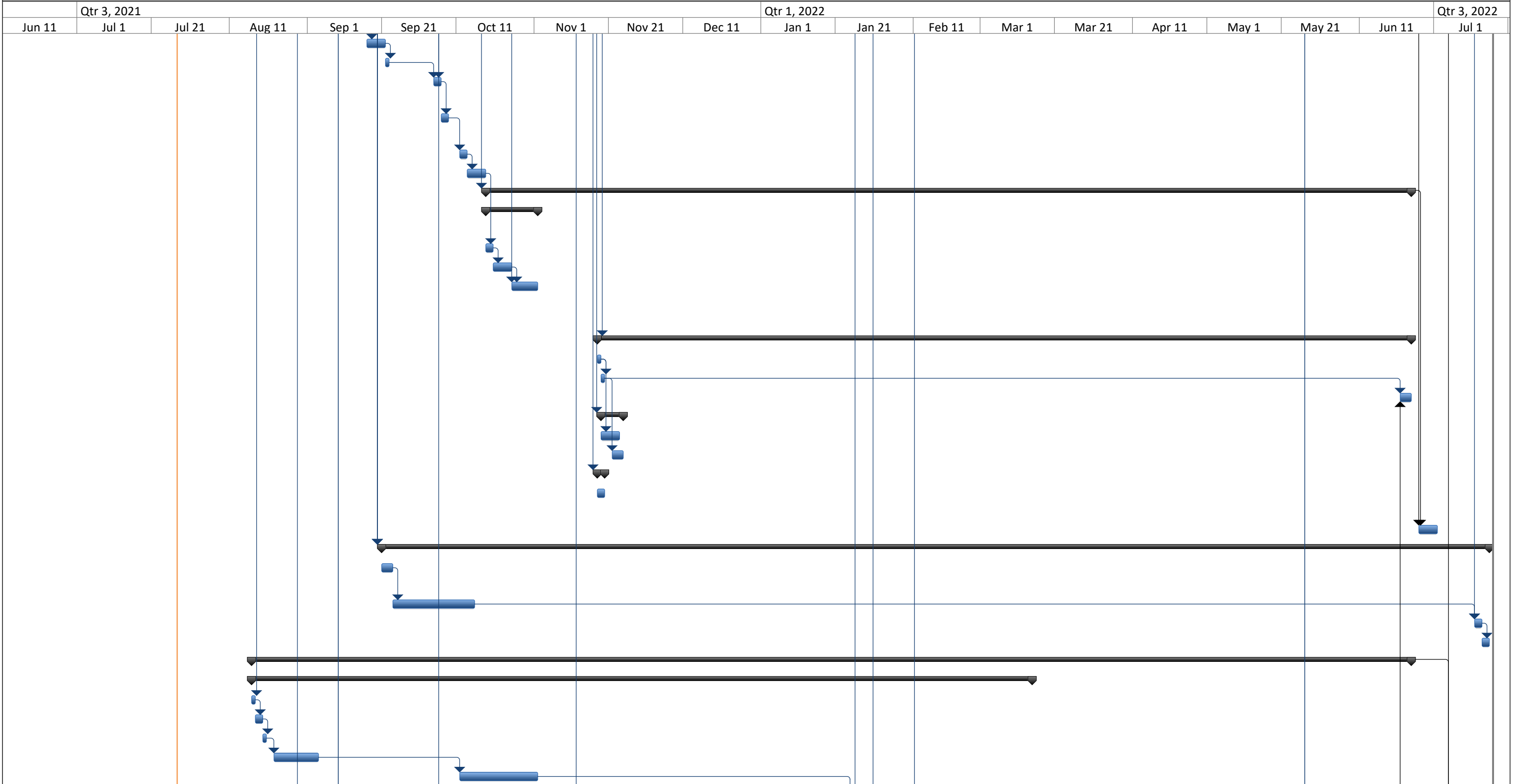
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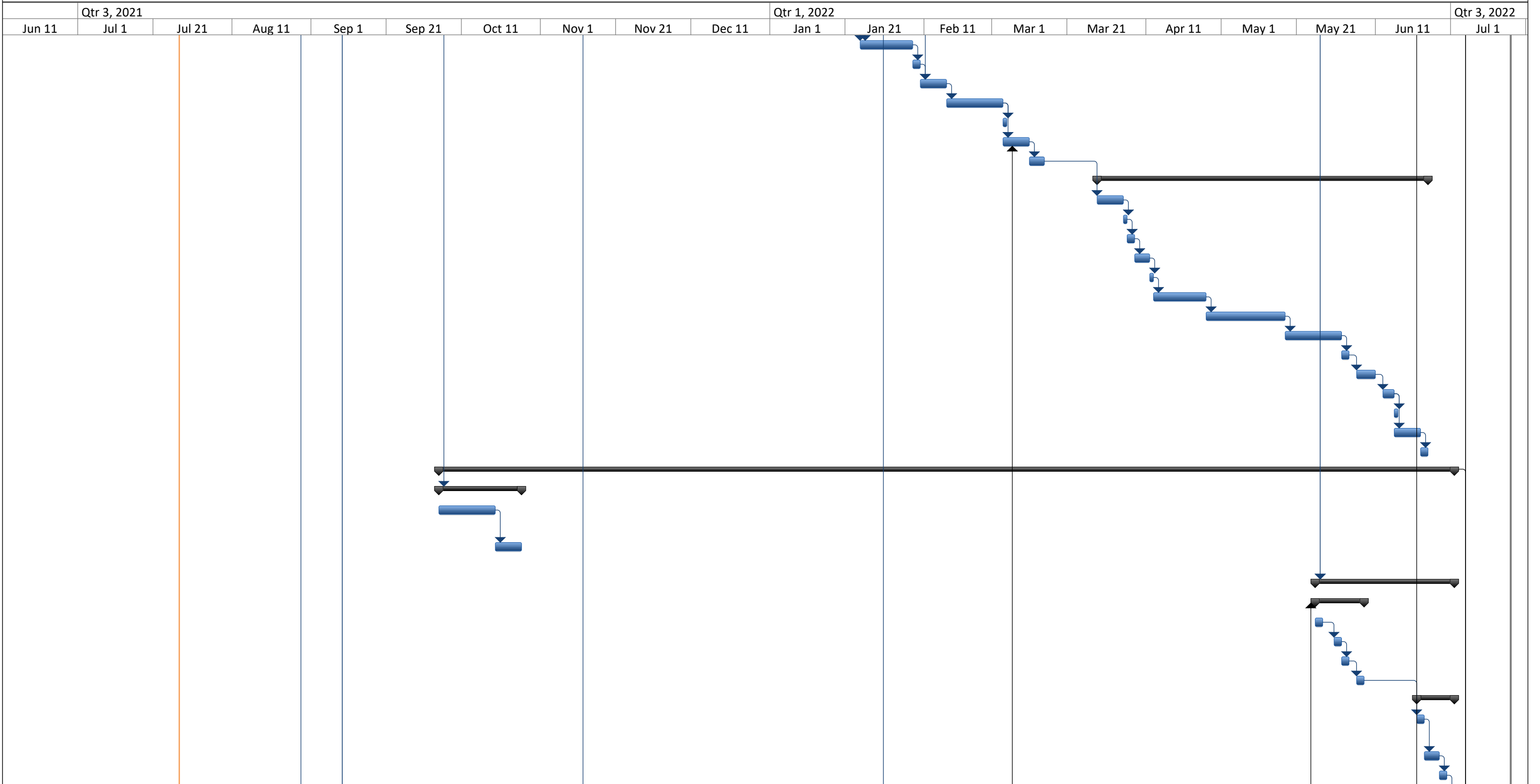
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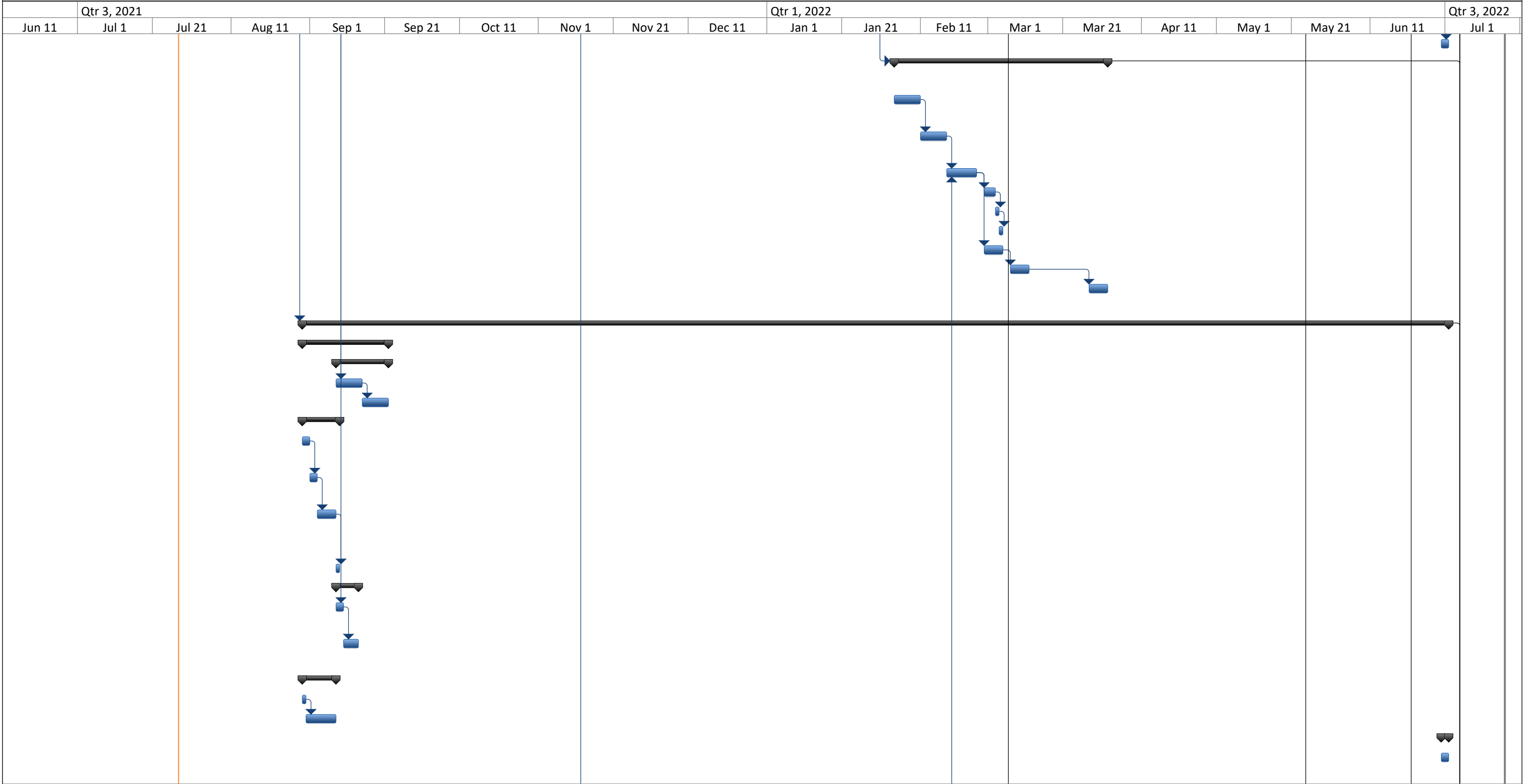
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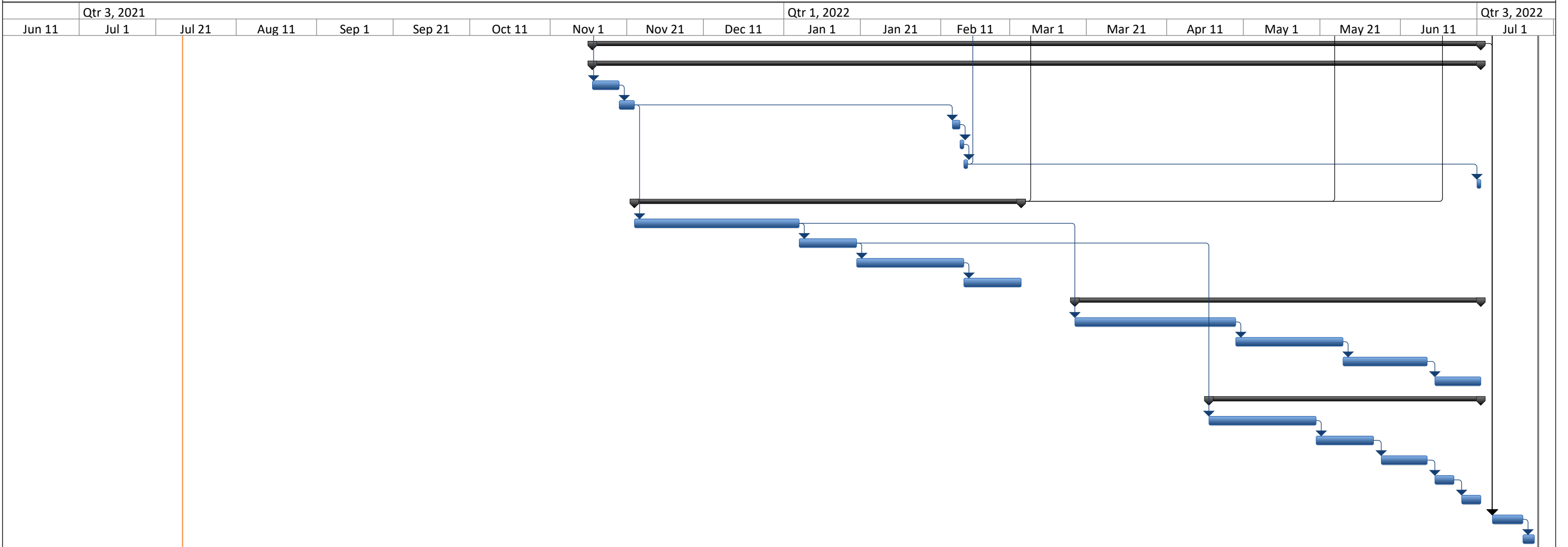
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