

BART Fire Alarm Replacement.



Main Contractor: Patriot Contracting inc.



CPM Scheduling Consultant: HSE CONTRACTORS INC.

Baseline #1 Narrative (Data Date: February 6, 2023)

NTP	February 6, 2023
Final Completion and Acceptance	February 5, 2025

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1. Project Information

1.1. Scope of Work

This project provides a complete replacement of the fire alarm system for the following bay area rapid transit district (BART) passenger stations:

A10-LAKE MERRITT STATION

A30-COLISEUM STATION

A40-SAN LEANDRO STATION

C40-WALNUT CREEK STATION

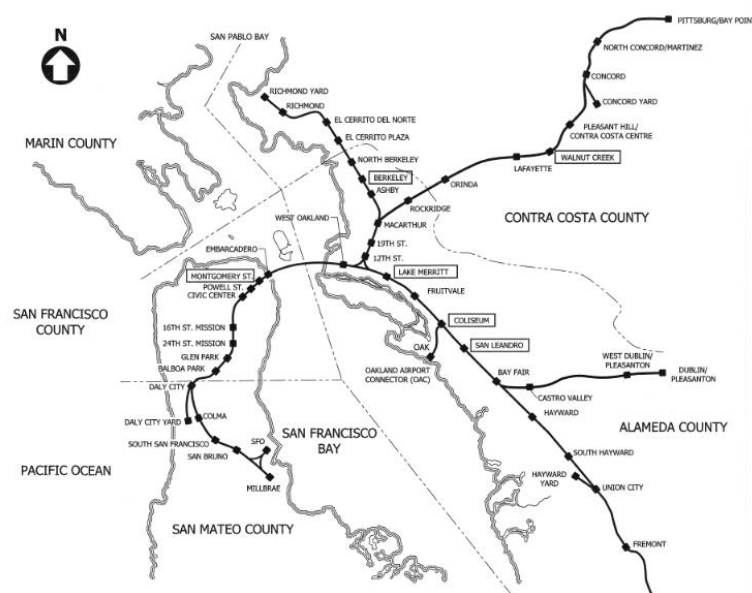
M20-MONTGOMERY STATION

R20-BERKELEY STATION

The design utilizes a new addressable fire alarm control unit (FACU) with voice evacuation/notification, photoelectric smoke detectors and heat detectors, manual fire alarm pull stations, audible/visual occupant notification appliances, visual occupant notification appliances, and audible occupant notification appliances.

1.2. Project Location

PROJECT LOCATIONS		
STATION ID	STATION NAME	ADDRESS
A10	LAKE MERRITT STATION	800 MADISON STREET, OAKLAND, CA 94621
A30	COLISEUM STATION	7200 SAN LEANDRO BLVD. OAKLAND, CA 94621
A40	SAN LEANDRO STATION	1401 SAN LEANDRO BLVD. SAN LEANDRO, CA 94577
C40	WALNUT CREEK STATION	200 YGNACIO VALLEY ROAD. WALNUT CREEK, CA 94569
M20	MONTGOMERY STATION	598 MARKET STREET, SAN FRANCISCO, CA 94104
R20	BERKELEY STATION	2160 SHATTUCK AVE., BERKELEY, CA 94704



Project Location

2. Project Phasing & Sequencing

2.1. Procurement

This phase of the project contains the activities for the procurement cycle for main project elements which is divided into Prepare and Submit, Review and Approve, Fabricate and Deliver. Procurement is a major stage for this project due to the long lead time for the arrival of the material delivery driving the start of the construction phase as a consequence.

2.2. Construction

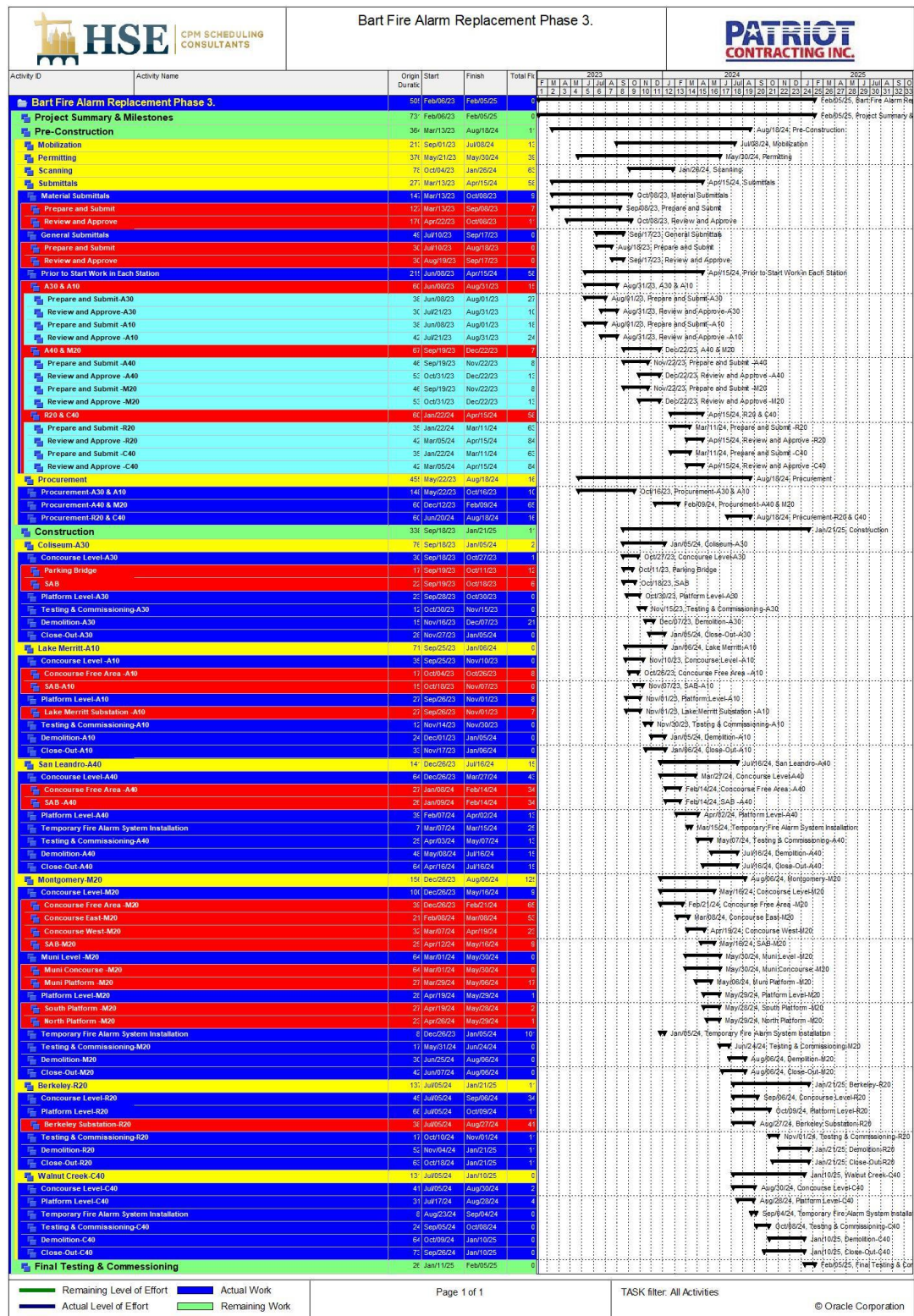
Construction works will be for every tow stations concurrently, A30-Coliseum Station and A10-Lake Merritt Station, A40-San Leandro Station and M20-Montgomery Station then C40-Walnut Creek Station and R20-Berkeley Station. Starting with installing the conduits, fire alarm appliances and modulars, installing FACU and panels, testing and commissioning then removal of the old fire alarm system.

3. Key Dates

Item	Baseline Dates
NTP	Feb/06/2023
Final Acceptance of 2 Stations	Jan/06/2024
Final Acceptance of 4 Stations	Aug/06/2024
Final Acceptance of 6 Stations	Feb/05/2025
Final Completion and Acceptance	Feb/05/2025
Submittals End Date	May/30/2024
Start Milestone for - A30	Sep/18/2023
Start Milestone for - A10	Sep/25/2023
Start Milestone for - A40	Jan/16/2024
Start Milestone for - M20	Jan/18/2024
Start Milestone for - R20	Jul/18/2024
Start Milestone for - C40	Jul/22/2024

4. WBS

The below figure is extracted from the baseline schedule of the project on the P6 software and shows all WBS levels. The table reflects how the contractor can manage all project components and monitor their progress separately and/ or collectively. The Milestones section includes all important milestones for the project. The Preconstruction & Procurement section includes major submittals required by the contract and specifications. The Procurement section includes the procurement cycle for important materials arranged by stage. And the Construction Section is divided into every station and its levels.



5. Calendars

This section contains details on the calendars which are assigned on all activities. The calendar usage and assignment demonstrate that the builder has taken into account all official Weekends specified by the contract, and has scheduled the project activities efficiently to minimize any risk on project completion. The Calendars used in this project are:

Bart 5 WD: the calendar is based on a 5-day week and recognizes weekends as non-working days and is assigned to procurement and construction activities. District recognized holidays and weather days are as follows:

- New Year's Day - January 1
- Dr. Martin Luther King, Jr. Day - First Monday after January 15
- President's Day - Third Monday in February
- Memorial Day - Last Monday in May
- Independence Day - July 4
- Labor Day - First Monday in September
- 7. Veteran's Day - November 11
- Thanksgiving Day - Fourth Thursday in November
- Christmas Day – December 25
- 14 Weather Days

6. Working hours

The working hours are 8 hours per day, totalling 40 hours per week and 172 hours per month. These work durations have been used throughout all scheduled construction activities to calculate durations and remaining time to complete.

Hours/Day	Hours/Week	Hours/Month	Hours/Year
8.0	40.0	172.0	2000.0

7. Critical path

The critical path for the Bart Fire Alarm Replacement Phase 3, project has been identified. The critical path encompasses a series of essential activities that must be completed in sequence to ensure the timely completion of the project.



The critical path begins with the "Mobilization for A40" and "Mobilization for M20" activities, scheduled to take place from December 12, 2023, to December 26, 2023. Following this, the "Prepare and Submit" and "Review and Approve" submittal activities, such as safety plans, quality control plans, and management plans, are crucial and extend from July 10, 2023, to September 17, 2023.



Subsequently, the project involves the "Prepare and Submit SSWP" and "Review and Approve SSWP" tasks for both A40 and M20, with deadlines from September 19, 2023, to December 11, 2023. The procurement phase for A40 and M20, including fabricating and delivering materials, is scheduled from December 12, 2023, to January 1, 2024.

Moving into the construction phase, activities at various stations, such as "Install Conduits & Boxes," "Install Fire Alarm Cables," and "Testing & Commissioning," are interdependent and critical to the project's success. These activities span from September 18, 2023, to November 30, 2023, and continue with similar tasks for other stations like Lake Merritt-A10, San Leandro-A40, Montgomery-M20, and Berkeley-R20.

The critical path extends further to the Walnut Creek-C40 station, with activities from July 22, 2024, to September 23, 2024. The project's critical path ultimately concludes with "Final Testing & Commissioning" activities, including computer monitoring system tests, substantial completion, final acceptance, and allowances for weather days, scheduled from December 19, 2024, to February 5, 2025.

It's imperative to manage and monitor these critical path activities diligently to ensure the project stays on schedule and within the specified timeline. Delays in any of these critical activities could potentially impact the overall project completion date.

		Bart Fire Alarm Replacement Phase 3. R2 Critical path Layout				
Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	Activity % Complete
Bart Fire Alarm Replacement Phase 3. R2		505	Feb/06/23 08	Feb/05/25 17	0	
Project Summary & Milestones		731	Feb/06/23 08	Feb/05/25 17	0	
MS-1000	NTP	0	Feb/06/23 08		0	0%
MS-1110	Start Milestone for - C40	0	Jul/22/24 08		199	0%
MS-1040	Final Acceptance of 6 Stations	0		Feb/05/25 17*	0	0%
MS-1050	Final Completion and Acceptance	0		Feb/05/25 17*	0	0%
Pre-Construction		121	Jul/10/23 08	Jan/01/24 17	0	
Mobilization		10	Dec/12/23 08	Dec/26/23 17	0	
PC-M-1020	Mobilization for A40	10	Dec/12/23 08	Dec/26/23 17	0	0%
PC-M-1040	Mobilization for M20	10	Dec/12/23 08	Dec/26/23 17	0	0%
Submittals		108	Jul/10/23 08	Dec/11/23 17	0	
General Submittals		49	Jul/10/23 08	Sep/17/23 17	0	
Prepare and Submit		30	Jul/10/23 08	Aug/18/23 17	0	
SUB-1020	Prepare and Submit Safety Plan	30	Jul/10/23 08	Aug/18/23 17	0	0%
SUB-1030	Prepare and Submit QC Plan	30	Jul/10/23 08	Aug/18/23 17	0	0%
SUB-1040	Prepare and Submit Site Specific Emergency Plan	30	Jul/10/23 08	Aug/18/23 17	0	0%
SUB-1050	Prepare and Submit Security Plan	30	Jul/10/23 08	Aug/18/23 17	0	0%
SUB-1060	Prepare and Submit Baseline Schedule	30	Jul/10/23 08	Aug/18/23 17	0	0%
SUB-1070	Prepare and Submit Schedule of Variance	30	Jul/10/23 08	Aug/18/23 17	0	0%
SUB-1080	Prepare and Submit Management Plan	30	Jul/10/23 08	Aug/18/23 17	0	0%
Review and Approve		30	Aug/19/23 08	Sep/17/23 17	0	
REV-1020	Review and Approve Safety Plan	30	Aug/19/23 08	Sep/17/23 17	0	0%
REV-1030	Review and Approve QC Plan	30	Aug/19/23 08	Sep/17/23 17	0	0%
REV-1040	Review and Approve Site Specific Emergency Plan	30	Aug/19/23 08	Sep/17/23 17	0	0%
REV-1050	Review and Approve Security Plan	30	Aug/19/23 08	Sep/17/23 17	0	0%
REV-1060	Review and Approve Baseline Schedule	30	Aug/19/23 08	Sep/17/23 17	0	0%
REV-1070	Review and Approve Schedule of Variance	30	Aug/19/23 08	Sep/17/23 17	0	0%
REV-1080	Review and Approve Management Plan	30	Aug/19/23 08	Sep/17/23 17	0	0%
Prior to Start Work in Each Station		58	Sep/19/23 08	Dec/11/23 17	0	
A40 & M20		58	Sep/19/23 08	Dec/11/23 17	0	
Prepare and Submit -A40		30	Sep/19/23 08	Oct/30/23 17	0	
SUB-A40-1	Prepare and Submit SSWP -A40	30	Sep/19/23 08	Oct/30/23 17	0	0%
Review and Approve -A40		42	Oct/31/23 08	Dec/11/23 17	0	
REV-A40-1	Review and Approve SSWP -A40	42	Oct/31/23 08	Dec/11/23 17	0	0%
Prepare and Submit -M20		30	Sep/19/23 08	Oct/30/23 17	0	
SUB-M20-1	Prepare and Submit SSWP -M20	30	Sep/19/23 08	Oct/30/23 17	0	0%
Review and Approve -M20		42	Oct/31/23 08	Dec/11/23 17	0	
REV-M20-1	Review and Approve SSWP -M20	42	Oct/31/23 08	Dec/11/23 17	0	0%
Procurement		21	Dec/12/23 08	Jan/01/24 17	0	
Procurement-A40 & M20		21	Dec/12/23 08	Jan/01/24 17	0	
PROC-1100	Fab. & Deliver Conduits and Boxes -A40 & M20	15	Dec/12/23 08	Dec/26/23 17	0	0%
PROC-1110	Fab. & Deliver Fire Alarm Cables -A40 & M20	21	Dec/12/23 08	Jan/01/24 17	0	0%
PROC-1160	Fab. & Deliver Misc. Materials -A40 & M20	14	Dec/12/23 08	Dec/25/23 17	0	0%
Construction		327	Sep/18/23 08	Jan/03/25 17	0	
Coliseum-A30		8	Sep/18/23 08	Sep/27/23 17	0	
Concourse Level-A30		3	Sep/18/23 08	Sep/27/23 17	0	
CONS-A30-1	Scanning -A30 (Concourse Level)	1	Sep/18/23 08	Sep/18/23 17	0	0%
CONS-A30-1	Core Drilling -A30 (Concourse Level)	3	Sep/18/23 08	Sep/20/23 17	0	0%
CONS-A30-1	Install Conduits & Boxes -A30 (Concourse Level) - Free Area	7	Sep/19/23 08	Sep/27/23 17	0	0%
SAB		6	Sep/19/23 08	Sep/26/23 17	0	
CONS-A30-1	Install Conduits & Boxes -A30 (SAB)	4	Sep/19/23 08	Sep/22/23 17	0	0%
CONS-A30-1	Install & Pull Fire Alarm Cables -A30 (SAB)	2	Sep/25/23 08	Sep/26/23 17	0	0%
CONS-A30-1	Pulling of Communication Wire (Fiber/Ethernet) (SAB)	2	Sep/25/23 08	Sep/26/23 17	0	0%
Lake Merritt-A10		57	Sep/25/23 08	Dec/14/23 17	0	
Concourse Level -A10		35	Sep/25/23 08	Nov/10/23 17	0	
CONS-A10-1	Scanning -A10 (Lake Merritt)	1	Sep/25/23 08	Sep/25/23 17	0	0%
CONS-A10-1	Install Conduits & Boxes -A10 (Concourse Level) Paid Area	6	Sep/26/23 08	Oct/03/23 17	0	0%
CONS-A10-1	Core Drilling -A10 (Lake Merritt)	2	Sep/26/23 08	Sep/27/23 17	0	0%
CONS-A10-1	Install Conduits & Boxes -A10 (Concourse Level) Elec. Room, Storage, Offices and Break Room	6	Sep/26/23 08	Oct/03/23 17	0	0%
CONS-A10-1	Install & Pull Fire Alarm Cables -A10 (Concourse Level)	5	Oct/04/23 08	Oct/10/23 17	0	0%
CONS-A10-1	Pulling of Communication Wire (Fiber/Ethernet) -A10 (Concourse Level)	5	Oct/04/23 08	Oct/10/23 17	0	0%
CONS-A10-1	Paint Exposed Conduits -A10 (Concourse Level)	1	Nov/10/23 08	Nov/10/23 17	0	0%
Concourse Free Area -A10		10	Oct/04/23 08	Oct/17/23 17	0	
CONS-A10-1	Install Conduits & Boxes -A10 (Concourse Free Area)	10	Oct/04/23 08	Oct/17/23 17	0	0%
SAB-A10		7	Oct/18/23 08	Oct/26/23 17	0	
CONS-A10-1	Install Conduits & Boxes -A10 (SAB)	7	Oct/18/23 08	Oct/26/23 17	0	0%
Testing & Commissioning-A10		12	Nov/14/23 08	Nov/30/23 17	0	
CONS-A10-1	Pre-testing by Contractor to be ready for testing in presence of BART -A10	1	Nov/14/23 08	Nov/14/23 17	0	0%
CONS-A10-1	Pre-testing by Contractor in presence of BART -A10	1	Nov/15/23 08	Nov/15/23 17	0	0%
CONS-A10-1	Fire Marshal and BART acceptance -A10	2	Nov/15/23 08	Nov/16/23 17	0	0%
CONS-A10-1	Installing and testing Remote monitoring system tied to BAR OSY -A10	2	Nov/17/23 08	Nov/20/23 17	0	0%
CONS-A10-1	NFPA72 checklist certified by the Contractor -A10	1	Nov/21/23 08	Nov/21/23 17	0	0%
CONS-A10-1	Connection to existing Tamper and Water-flow switches-A10	2	Nov/22/23 08	Nov/24/23 17	0	0%
CONS-A10-1	Fire Marshal approval -A10	1	Nov/27/23 08	Nov/27/23 17	0	0%
CONS-A10-1	BART Acceptance -A10	1	Nov/28/23 08	Nov/28/23 17	0	0%
CONS-A10-1	Punchlist and Substantial Completion -A10	2	Nov/29/23 08	Nov/30/23 17	0	0%
Demolition-A10		10	Dec/01/23 08	Dec/14/23 17	0	
CONS-A10-1	Removal of Old Fire Alarm System -A10	10	Dec/01/23 08	Dec/14/23 17	0	0%
CONS-A10-1	Removal of FA Devices -A10	6	Dec/01/23 08	Dec/08/23 17	0	0%
San Leandro-A40		2	Jan/16/24 08	Jan/17/24 17	0	
Concourse Level-A40		2	Jan/16/24 08	Jan/17/24 17	0	
CONS-A40-1	Scanning -A40 (Concourse Level)	2	Jan/16/24 08	Jan/17/24 17	0	0%
Montgomery-M20		132	Jan/18/24 08	Jul/24/24 17	0	
Concourse Level-M20		42	Jan/18/24 08	Mar/18/24 17	0	
Concourse Free Area -M20		29	Jan/18/24 08	Feb/28/24 17	0	

 HSE CPM SCHEDULING CONSULTANTS		Bart Fire Alarm Replacement Phase 3.				
Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	
CONS-M20-	Scanning - M20 (Concourse Free Area)	2	Jan/18/24	Jan/19/24	0	
CONS-M20-	Core Drilling - M20 (Concourse Free Area)	3	Jan/22/24	Jan/24/24	0	
CONS-M20-	Install Conduits & Boxes -M20 (Concourse Free Area) (4-7)	7	Jan/25/24	Feb/02/24	0	
CONS-M20-	Install Conduits & Boxes -M20 (Concourse Free Area) BART Primary Paid Area (7-11)	7	Feb/05/24	Feb/13/24	0	
CONS-M20-	Install & Pull Fire Alarm Cables -M20 (Concourse Free Area)	10	Feb/14/24	Feb/28/24	0	
CONS-M20-	Install Notification Appliances -M20 (Concourse Free Area)	3	Feb/20/24	Feb/22/24	0	
Concourse East-M20		17	Feb/23/24	Mar/18/24	0	
CONS-M20-	Install Conduits & Boxes -M20 (Concourse East) Muni Secndry Paid Area	6	Feb/23/24	Mar/01/24	0	
CONS-M20-	Install Conduits & Boxes -M20 (Concourse East) (18-21)	6	Mar/04/24	Mar/11/24	0	
CONS-M20-	Install & Pull Fire Alarm Cables -M20 (Concourse East)	3	Mar/12/24	Mar/14/24	0	
CONS-M20-	Pulling of Communication Wire (Fiber/Ethernet)-M20 (Concourse East)	3	Mar/12/24	Mar/14/24	0	
CONS-M20-	Install Notification Appliances -M20 (Concourse East)	2	Mar/15/24	Mar/18/24	0	
Muni Level -M20		64	Mar/15/24	Jun/13/24	0	
Muni Concourse -M20		64	Mar/15/24	Jun/13/24	0	
CONS-M20-	Install Conduits & Boxes -M20 (Muni Concourse)	15	Mar/15/24	Apr/04/24	0	
CONS-M20-	Install Notification Appliances -M20 (Muni Concourse)	3	Apr/09/24	Apr/11/24	0	
CONS-M20-	Installation of FACU ,IRC, Amplifier, Sub FACU and Panels -M20 (Muni Concourse)	5	Jun/07/24	Jun/13/24	0	
Muni Platform -M20		20	Apr/12/24	May/09/24	0	
CONS-M20-	Install Conduits & Boxes -M20 (Muni Platform)	12	Apr/12/24	Apr/28/24	0	
CONS-M20-	Install & Pull Fire Alarm Cables -M20 (Muni Platform)	8	Apr/26/24	May/07/24	0	
CONS-M20-	Pulling of Communication Wire (Fiber/Ethernet)-M20 (Muni Platform)	6	Apr/30/24	May/07/24	0	
CONS-M20-	Install Smoke and Heat Detectors -M20 (Muni Platform)	5	May/03/24	May/09/24	0	
Platform Level-M20		25	May/03/24	Jun/07/24	0	
South Platform -M20		25	May/03/24	Jun/07/24	0	
CONS-M20-	Install Conduits & Boxes -M20 (South Platform)	15	May/03/24	May/23/24	0	
CONS-M20-	Install & Pull Fire Alarm Cables -M20 (South Platform)	10	May/24/24	Jun/07/24	0	
CONS-M20-	Install Smoke and Heat Detectors -M20 (South Platform)	4	Jun/03/24	Jun/06/24	0	
Testing & Commissioning-M20		18	Jun/14/24	Jul/16/24	0	
CONS-M20-1	Pre-testing by Contractor to be ready for testing in presene of BART -M20	2	Jun/14/24	Jun/17/24	0	
CONS-M20-1	Pre-testing by Contractor in presence of BART -M20	2	Jun/14/24	Jun/17/24	0	
CONS-M20-1	Cutover and tie-in to existing BART facilities -M20	2	Jun/18/24	Jun/19/24	0	
CONS-M20-1	Installing and testing Remote monitoring system tied to BAR OSY -M20	2	Jun/20/24	Jun/21/24	0	
CONS-M20-1	NFPA72 checklist certified by the Contractor -M20	1	Jun/24/24	Jun/24/24	0	
CONS-M20-1	Connection to existing Tamper and Water-flow switches-M20	5	Jun/25/24	Jul/01/24	0	
CONS-M20-1	Fire Marshall approval -M20	2	Jul/02/24	Jul/03/24	0	
CONS-M20-1	BART Acceptance -M20	1	Jul/05/24	Jul/05/24	0	
CONS-M20-1	Punchlist and Substantial Completion -M20	3	Jul/08/24	Jul/10/24	0	
Demolition-M20		10	Jul/11/24	Jul/24/24	0	
CONS-M20-1	Removal of Old Fire Alarm System -M20	10	Jul/11/24	Jul/24/24	0	
Berkeley-R20		18	Jul/18/24	Aug/12/24	1	
Concourse Level-R20		2	Jul/18/24	Jul/19/24	1	
CONS-R20-1	Scanning -R20	2	Jul/18/24	Jul/19/24	1	
Platform Level-R20		18	Jul/18/24	Aug/12/24	1	
Berkeley Substation-R20		18	Jul/18/24	Aug/12/24	1	
CONS-R20-1	Install Conduits & Boxes -R20 Sub	18	Jul/18/24	Aug/12/24	1	
Walnut Creek-C40		115	Jul/22/24	Jan/03/25	0	
Concourse Level-C40		46	Jul/22/24	Sep/24/24	0	
CONS-C40-1	Scanning -C40 (Concourse Level)	2	Jul/22/24	Jul/23/24	1	
CONS-C40-1	Install Flow Switches -C40 (Concourse Level)	5	Sep/03/24	Sep/09/24	0	
CONS-C40-1	Install Elevator(Escalator) Shutdown& Recall Modular-C40 (Concourse Level)	5	Sep/10/24	Sep/18/24	0	
CONS-C40-1	Installation of FACU ,IRC, Amplifier, Sub FACU and Panels -C40 (Concourse Level)	5	Sep/11/24	Sep/17/24	0	
CONS-C40-1	Paint Exposed Conduits -C40 (Concourse Level)	5	Sep/18/24	Sep/24/24	0	
Testing & Commissioning-C40		29	Sep/25/24	Nov/04/24	0	
CONS-C40-1	Pre-testing by Contractor to be ready for testing in presene of BART -C40	2	Sep/25/24	Sep/26/24	0	
CONS-C40-1	Pre-testing by Contractor in presence of BART -C40	2	Sep/27/24	Sep/30/24	0	
CONS-C40-1	Cutover and tie-in to existing BART facilities -C40	5	Oct/01/24	Oct/07/24	0	
CONS-C40-1	Installing and testing Remote monitoring system tied to BAR OSY -C40	2	Oct/08/24	Oct/09/24	0	
CONS-C40-1	Connection to existing Tamper and Water-flow switches -C40	5	Oct/10/24	Oct/16/24	0	
CONS-C40-1	NFPA72 checklist certified by the Contractor -C40	2	Oct/17/24	Oct/18/24	0	
CONS-C40-1	Fire Marshall approval -C40	4	Oct/21/24	Oct/24/24	0	
CONS-C40-1	BART Acceptance -C40	2	Oct/25/24	Oct/28/24	0	
CONS-C40-1	Punchlist and Substantial Completion -C40	5	Oct/29/24	Nov/04/24	0	
Demolition-C40		35	Nov/05/24	Dec/28/24	0	
CONS-C40-1	Removal of Old Fire Alarm System -C40	20	Nov/05/24	Dec/04/24	0	
CONS-C40-1	Decommissioning of existing FA system-C40	5	Dec/05/24	Dec/11/24	0	
CONS-C40-1	Remove excessive wire and conduits-C40	5	Dec/12/24	Dec/18/24	0	
CONS-C40-1	Connection to existing Tamper and Water-flow switches-C40	5	Dec/19/24	Dec/26/24	0	
Close-Out-C40		10	Dec/19/24	Jan/03/25	0	
CONS-C40-2	Demobilization for - R20	10	Dec/19/24	Jan/03/25	0	
Final Testing & Commissioning		32	Dec/19/24	Feb/05/25	0	
TEST-1000	Final testing Commissioning Computer monitoring System	20	Dec/19/24	Jan/17/25	0	
TEST-1010	Overall Substantial Completion	20	Dec/24/24	Jan/23/25	0	
TEST-1020	Final Acceptance	17	Dec/31/24	Jan/16/25	0	
TEST-1030	Weather Days	20	Jan/17/25	Feb/05/25	0	

8. Production Durations (Crew Size and Quantity)

The durations of activities related to the Coliseum and Lake Merritt stations have been adjusted to accommodate the new construction start date of September 18, 2023. This shift in the start date is a result of delays in obtaining the necessary permits. As a consequence, the timelines for these activities have been recalculated to align with the updated construction commencement date.

1. Coliseum Station

We have a team of six workers, divided into three groups of two. They will work for five hours in the concourse level areas and two hours at night at the platform level.

We'll begin by doing construction work on the walls and ceilings in the concourse level, specifically in the pedestrian underpass.

After that, we'll start pulling wires in the concourse level. Two workers will handle each area.

At the same time, all six workers will spend two hours each night pulling wires at the platform level.

Once all the wires are pulled and ready to be connected to the Fire Alarm panel, we'll turn off the power in panel LA124.

Next, we'll install the Fire Alarm devices in both the concourse and platform areas.

Finally, we'll start testing and making sure everything works properly. This is the last step before the project is complete and the Fire Alarm system is ready to use.

2. Lake Merritt Station

We have a team of 8 workers, split into 4 groups of 2. They'll work for 5 hours, and for 2 hours at the platform level each night.

We're kicking off by working on the overhead and wall rough-in in the Concourse Level.

Simultaneously, we're dedicating 2 hours every night to work at the Platform level.

In the next phase, we're moving on to pulling wires in the Concourse area. Two workers are assigned to each section. Additionally, all 8 workers are spending 2 hours each night installing rough-in components at the platform level.

As we transition to the installation of devices, we'll start with the Concourse area. Two workers will work for four days in each section, while all 8 workers will continue with 2-hour nightly shifts at the platform level to complete the rough-in installation.

Then comes the installation of devices, initially in the Concourse area, followed by the Platform level, including the substation

A key step is shutting down the power in panels LA75 and L01, which happens after installing the enclosures.

The final phase is testing and commissioning. We'll conduct testing for each area in the Concourse level in one day, and spend 2 hours each night at the platform level to install devices. We'll then proceed to test the platform level areas, ensuring everything works properly, and complete any necessary demolition work.

3. San Leandro Station

We're planning to have a team of 8 workers, divided into 4 groups of 2 each. They'll work for 5 hours in the areas shown in the Schedule, with an additional 2 hours each night at the platform level each night.

The construction will start by working on the ceilings and walls in the Concourse Level. At the same time, we'll dedicate 2 hours every night to work at the Platform level.

In the next phase, we'll begin pulling wires in the Concourse area. Two workers will be assigned to each section. Simultaneously, all 8 workers will spend 2 hours each night working on the rough installation at the platform level.

Once the wires are in place, the installation of devices will kick off in the Concourse area. Two workers will be responsible for each section, working for four days. They will also spend 2 hours each night at the platform level, ensuring the rough installation is completed.

After Concourse, we'll proceed to install devices, first in the Concourse area and then at the Platform level, which includes the substation.

Following this, the testing and commissioning phase will commence. We'll test each area in the Concourse level.

We'll focus on testing the Platform level areas, ensuring that all work is completed and addressing any potential demolition needs. This comprehensive approach ensures that the project progresses smoothly towards successful completion.

4. Montgomery Station

We're planning to have a team of 20 workers, divided into 10 groups of 2 each. They'll work for 5 hours each night in the areas shown in the Schedule, with an additional 2 hours each night at the platform level.

The construction will start by working on the ceilings and walls in the Concourse Level. At the same time, we'll dedicate 2 hours every night to work at the Platform level.

In the next phase, we'll begin pulling wires in the Concourse area. Four workers will be assigned to each section. Simultaneously, all 20 workers will spend 2 hours each night working on the rough installation at the platform level and the Muni levels.

Once the wires are in place, the installation of devices will kick off in the Concourse area. Four workers will be responsible for each section. All the twenty will also spend 2 hours each night at the platform level, ensuring the rough installation is completed.

After Concourse, we'll proceed to install devices, first in the Concourse area and then at the Platform level, which includes the substation.

Following this, the testing and commissioning phase will commence.

We'll focus on testing the Platform level areas, ensuring that all work is completed and addressing any potential demolition needs. This comprehensive approach ensures that the project progresses smoothly towards successful completion.

5. Berkeley and Walnut Creek Stations

For the successful completion of both the Berkeley and Walnut Creek Stations, our strategy revolves around a total of 24 dedicated workers, 12 for each station, meticulously divided into 6 groups of 2. This collaborative team effort ensures a balanced and efficient workflow throughout the project. Each night, our skilled workforce will commit 5 hours of focused effort to the areas indicated in the Schedule for concourse level, supplemented by an additional 2 hours dedicated to tasks on the platform level.

The project's inception involves enhancing the aesthetics and structure of the Concourse Level. Simultaneously, we allocate 2 hours every night to the crucial tasks on the Platform level, maintaining a harmonious balance between the two.

In the following phase, we transition to the wire-pulling process within the Concourse area. Our approach assigns two adept workers to each section, ensuring precision and expediency. During this phase, all 12 team members invest 2 hours each night to carry out intricate rough installations on the platform, including the essential substation work at Berkeley.

With the wiring meticulously in place, the subsequent phase involves the installation of devices within the Concourse area. Here, teams of 4 skilled workers are assigned to each section, guaranteeing meticulous implementation. Simultaneously, the entire 12-member team dedicates 2 hours each night to platform-level tasks, ensuring the completion of rough installations.

Having accomplished the Concourse phase, our focus shifts seamlessly to device installation. Beginning with the Concourse area, we subsequently progress to the Platform level, encompassing vital components, including the substation.

The pivotal testing and commissioning phase follows suit. With a primary emphasis on the Platform level areas, we subject them to rigorous testing and thorough evaluations. This approach ensures the meticulous completion of all tasks while remaining flexible enough to address any unforeseen demolition requirements.

In summary, our approach combines the expertise of 24 dedicated workers, equally split between the Berkeley and Walnut Creek Stations, as outlined in the Schedule. This concerted effort, harmonizing

both Concourse and platform levels, guarantees a seamless and successful progression towards project completion.

9. Table for Device Quantities

	Lake Merritt	Montgomery	Coliseum	San Leandro	Walnut Creek	Berkley
FACU	2	1	1	1	1	2
Smoke Detectors	30	59	32	15	17	65
Heat Detectors	8	10	13	9	12	4
Pull stations	9	23	20	18	20	20
Control Module	43	44	32	33	30	44
Monitor Module	14	16	3	3	6	19
Ceiling Horn/Strob	66	124	30	18	22	126
Wall Horn/Strob	12	22	48	31	27	31
Ceiling Strobes	0	0	0	0	3	3
Ceiling Horn	2	62	0	0	0	0
Wall Strobe	4	6	3	3	4	0
Wall Speaker	0	6	10	15	16	0
Amplifiers	2	4	1	1	1	2
ANN Panel	1	1	1	1	1	2
Beam type Smoke	3	0	0	0	0	0
FAB (FA box)	3	4	3	2	2	6
IRC	2	1	1	1	1	2

10. Activity Codes

The Baseline is coded by Location, Responsibility and Bid Item as shown in the following screenshots.

		Bart Fire Alarm Replacement Phase 3.					
Activity ID	Activity Name	Original Duration	Start	Finish	Actual Start	Actual Finish	Total Float
380	Conduits	Apr/07/23		Oct/07/24			22
385	Wires	Apr/07/23		Oct/14/24			22
308	Switches	Oct/06/23		Dec/26/24			22
329	FACU, Sub FACU, AMP & IRC	Jun/06/23		Sep/23/24			43
269	Smoke & Heat Detectors	Sep/27/23		Oct/18/24			26
309	Manul Pull Station & Addressables	Sep/27/23		Dec/17/24			30
348	Notification Appliance Circuit (NAC)	Jun/06/23		Oct/18/24			23
233	Interface to Escalators & Elevators	Oct/18/23		Sep/19/24			24
232	Faregates	Oct/19/23		Sep/19/24			24
505	No 15IJ-130-BID-ITEM	Feb/06/23		Feb/05/25			0

		Bart Fire Alarm Replacement Phase 3.					
Activity ID	Activity Name	Original Duration	Start	Finish	Actual Start	Actual Finish	Total Float
146	Coliseum Station	Jun/08/23		Jan/06/24			9
146	Lake meritt Station	Jun/08/23		Jan/06/24			0
212	San Leandro Station	Sep/19/23		Jul/22/24			136
232	Montgomery Station	Sep/19/23		Aug/19/24			62
242	Berkley Station	Jan/22/24		Jan/03/25			22
242	Walnut Creek Station	Jan/22/24		Jan/03/25			0
505	No 15IJ-130-LOC	Feb/06/23		Feb/05/25			0

		Bart Fire Alarm Replacement Phase 3.					
Activity ID	Activity Name	Original Duration	Start	Finish	Actual Start	Actual Finish	Total Float
322	Sadlerco	Sep/18/23		Dec/26/24			22
422	Siemens	May/22/23		Jan/23/25			0
459	Patriot	Mar/13/23		Jan/03/25			22
439	BART	Apr/22/23		Jan/17/25			12
259	Flores Drywall	Oct/17/23		Oct/24/24			22
505	No 15IJ-130-RESP	Feb/06/23		Feb/05/25			0

BART RTS #018R2 - CPM Baseline Schedule COMMENT TABLE

Appendix A – Open comments from previous updates 018R0 and 018R1:			
No	Comment	Contractor Response	District Response and Status
018-00.01	Missing narrative report.	R1: Attached.	R1: 6/20/2023 please make corrections on the narrative report per markups. R2: This comment has been addressed and can be closed.
018-00.02	Explain what demolition and site preparation means. There should not be any demolition until the commissioning of the new system or during cutover from old to new system.	It was selective Demolition not Fire Alarm System demolition	This comment has been answered and can be closed.
018-00.03	The baseline schedule is missing the following important work activities: procurement and installation of the computer monitoring system, programming of the fire alarm system, interface to existing BART facilities (escalators, elevators, faregates, flow switches, tempers, fan shutdowns, etc.), installation of FACU and IRC, painting, core drilling, installation of enclosures, breaker tie-in, etc. 6/20/2023 see item #7	Reflected now	This comment has been addressed and can be closed.
018-00.04	Did not mention weather days and holidays. 6/20/2023 The calendar should not include weather days. This method should not be used for a BART contract because the BART GCs have a specific mechanism for counting and preserving weather days that is prevented by including weather days in a calendar. Weather days are not included correctly. The Contractor should add an activity for Weather Day	Reflected Now,	This comment has been addressed and can be closed.

	Allowance. This activity should be on the Critical Path.		
018-00.05	Include line items for submittals such as baseline schedule, shop drawings, as-builts for each station, O&M manuals, training manuals, etc. Include estimated review date and approval.	Reflected now	This comment has been addressed and can be closed.
018-00.06	Provide more details to install devices. Divide them to detectors, strobes and speakers, pull stations, beam detectors, control and monitor modules. Include number of devices in the area for reference. 6/20/2023 Please doublecheck and verify quantities. For examples, 32 smoke detectors in Coliseum is incorrect.	Reflected now The R2 narrative does include the table for device quantities by Station	The R1 narrative does not appear to include the table for device quantities by Station Location. This comment remains open for discussion.
018-00.07	Include line items for the installation of FACU, IRC, Amplifier, sub FACU, etc. 6/20/23 no mentioning of IRC, Amplifier, sub FACU. Please add.	Reflected now - DESCRIPTION MODIFIED, AT 2 STATIONS (R30, A10)	This comment has been addressed and can be closed.
018-00.08	Include line item for pulling of communication wire (fiber/ethernet).	We did considered Fiber pulling as of Pulling wire activity We added a line item for pulling of communication wire (fiber/ethernet).	Contractor is requested to add separate activities for FO cable. This comment is open.
018-00.09	Include line item for substantial completion including computer monitoring system for each station.	Consider as part of Final Testing and Commissioning.	This comment has been addressed and can be closed.
018-00.10	Include line items for pre-testing (before real test), Fire Marshal and BART acceptance, punch-list, final inspection and final acceptance for each station.	Reflected now	This comment has been partially addressed and will be closed. Please see new comment regarding punchlist.

018-00.11	Procurement activity's duration does not seem realistic. Please provide a more detailed assessment on procurement including what is being procured. 6/20/2023 See item #26, 27, 28	Confirmed- REQUEST BATTERIES TO BE SPLIT OUT, (batteries included in shipment)	This comment has been partially addressed and will be closed. Please see new comment regarding punchlist.
018-00.12	Milestone #1 finish date should be 1/6/2024 or earlier according to the Contract. Adjust on the baseline schedule item A1030.	Corrected Comment adjusted	This comment remains open pending action.
018-00.13	Submittal submission dates and approval dates are unrealistic, some have already passed without submittal or approval. 6/20/2023 Submission dates and approval dates are unrealistic upon the current status of the project. Construction start dates are also unrealistic upon the current status of the project. It is likely for construction to start in A30 toward end of July. Please adjust the dates and resubmit.	Confirmed The dates adjusted to be realistic as much as we can. Consider that some submittals have already been submitted.	Contractor has action to revise the CPM schedule for completing the submittal process and starting field work. Contractor's schedule shows field work commencing in June 2023. This date is unrealistic. The baseline schedule should show a realistic date for starting construction in September 2023. This comment is open.
018-00.14	Please review and fulfill all requirements on 01 32 16 in terms of Contract Schedule. 6/20/2023 See item #16	Reviewed	This comment has been answered and can be closed. Specified requirements not fully addressed in the submittal are called out in other open comments.
018-00.15	Include line items for overall substantial completion and final acceptance	Reflected now, Considered as Final Commissioning and testing	This comment has been partially addressed and will be closed. Please see new comment regarding punchlist.
018-01.16	6/20/2023 The schedule provided does not comply with key items in the contract specification 01 32 16	No response provided in R1 narrative.	This comment has been addressed and can be closed.

	including: Work needs to be broken out by station. Contractor should not have combined submittals for A30 & A10 together in the same activity. We can have an activity to approve a product data item for multiple stations (general) but we cannot accept an SSWP or a shop drawing for multiple stations.		
018-01.17	6/20/2023 Work needs to be coded and broken out by location. Contractor should include a project activity code for location to a greater detail than Station location. i.e. Concourse, Platform, Equipment room, etc. (or break down by drawings)	No response provided in R1 narrative. Activity Codes are now reflected on the R2 narrative	This comment has been partially addressed and remains open pending action.
018-01.18	6/20/2023 Work needs to be coded and broken out by responsible party. A Project Activity Code should be used to assign work to each Subcontractor listed in the bid form and BART for review activities.	No response provided in R1 narrative. Activity Codes are now reflected on the R2 narrative	This comment has been partially addressed and remains open pending action.
018-01.19	6/20/2023 Work needs to be coded and broken out by Bid Item. The bid item coding should match the bid items in the contract	No response provided in R1 narrative.	This comment has been addressed and can be closed. The Engineer reserves the right to ask for additional bid item coding on progress updates, if needed.
018-01.20	6/20/2023 Calendars are not correct. Contractor should use two calendars for work: 7 day no holidays for paperwork and procurement 5 days with BART holidays for field construction	No response provided in R1 narrative.	This comment has been addressed and can be closed. See separate comments on electrical trade blackout dates.
018-01.21	6/20/2023 Contractor should use Project Calendars, not Global ones.	No response provided in R1 narrative.	This comment has been addressed and can be closed.
018-01.22	6/20/2023 Review and Approval durations are not correct. Contractor must give BART 30 calendar days for submittal review	No response provided in R1 narrative.	This comment has been addressed and can be closed.

	and 42 Calendar Days for SSWP Submittal review. While, not a contract requirement, Contractor should realistically include two review cycles for each submittal.		
018-01.23	6/20/2023 Schedule does not include all of the scope required under the contract. For submittals, it would be helpful to compare these activities to their latest CDRL.	No response provided in R1 narrative.	This comment has been addressed and can be closed. The Engineer reserves the right to ask for additional activities on progress updates, if needed.
018-01.24	6/20/2023 The activity lagging relationships for Pull wire activities are not correct and should not be accepted.	No response provided in R1 narrative. Corrected as much as possible as agreed. Table for the SS relations is included with the submittal package.	This comment is open pending action.
018-01.25	6/20/2023 Field work is not always tied back to a procurement activity.	No response provided in R1 narrative. Adjusted.	This comment is partially addressed and remains open pending action.
018-01.26	6/20/2023 We question the logic of having three separate procurement activities for each procurement item, especially when they are mostly the same. For purchasing purposes, the Contractor should buy-out all cabling at one time. The Contractor might want the supplier to deliver the materials at three separate times, but that is not what is shown or described in the narrative.	No response provided in R1 narrative.	This comment is withdrawn and can be closed.
018-01.27	6/20/2023 Fab & Deliver Procurement activities should be tied to all six successor activities,	No response provided in R1 narrative.	This comment has been addressed and can be closed.

	not just the first two. Include activities for "procurement of misc. material" in order to account for any outstanding procurement items.		
018-01.28	6/20/2023 Long lead items are not adequately address. Battery procurement duration should be looked at. The activity to Fab. & Deliver FACU including "(Batteries, Elev. Capture & Recall, Escalator Shutdown modular and fare gate Modular) -A40" (PC-S-P-A40-1030) should be split out. This procurement will come from multiple vendors at multiple times and will impact different field activities.	No response provided in R1 narrative.	This comment has been addressed and can be closed.
018-01.29	6/20/2023 Contractor should run spell check on their work.	No response provided in R1 narrative. adjusted	This comment is open pending action.
018-01.30	6/20/2023 Procurement successor lags are not right.	No response provided in R1 narrative. adjusted	The use of an activity relationship with a positive lag is allowed subject to the approval by the Engineer. See Specification 01 32 16 Part 1, Subsection 1.07.G. The Engineer has reviewed this logic is disinclined to accept start-to-start logic ties with positive lags. All successor ties with a start to start logic tie with a lag should be changed to a finish-to-start logic tie with no lag. This comment is open pending action.
018-01.31	6/20/2023 Cutover, testing and commissioning process is not thoroughly presented. For each station include the following	No response provided in R1 narrative.	This comment has been addressed and can be closed. See

	<p>activities:</p> <ul style="list-style-type: none"> - Pre-testing by Contractor to be ready for testing in presence of BART - Pre-testing by Contractor in presence of BART - Cutover (for some station, old FA system need to be demoed) and tie-in to existing BART facilities - Installing and testing Remote monitoring system tied to BAR OSY - NFPA72 checklist certified by the Contractor - Fire Marshall approval - BART Acceptance - Punchlist and Substantial Completion 		new comment on punchlist.
018-01.32	<p>6/20/2023 For A40, C40 and M20, Contractor needs to install new FACU at temporary location, conduct pretesting, demo existing FACU, relocate new FACU, conduct another pretest before official test. This is not yet captured in the baseline schedule.</p>	No response provided in R1 narrative.	With the inclusion of "Temporary Fire Alarm System Installation", this comment has been addressed and can be closed. See new comments regarding cut-overs and fire watch.

Appendix A1 – New Comments from this Update 00R2:		
No	Comment	Contractor Response
018-02.33	Contractor is requested to add a Finish-on-or-before constraint date to activity MS-1010 - Completion of 2 Stations, with a date value of 1/6/24, and relabel the Activity Name "Final Acceptance of 2 stations".	Done
018-02.34	Contractor is requested to add a Finish-on-or-before constraint date to activity MS-1030 - Completion of 4 Stations, with a date value of 8/6/24, and relabel the Activity Name "Final Acceptance of 4 stations".	Done
018-02.35	Contractor is requested to relabel "Punchlist" as "Punchlist for Fire Marsal acceptance" and add six Owner Punchlist activities. Owner punchlist activities should be completed prior to Substantial Completion. Owner punchlist should follow demolition and all other work required for Substantial Completion. See Specification 01 32 16, Part 1, Subsection 1.07.B.7.f.	Done
018-02.36	Contractor is requested to revise the baseline schedule to realistically reflect the likely planned start date for construction in September 2023.	Done
018-02.37	Contractor is requested to add a Finish on or Before constraint date to activity MS-1040 - Completion of 6 Stations, with a date value of 2/5/25, and relabel the Activity Name "Final Acceptance of 6 stations".	Done
018-02.38	Contractor is requested to block-out Electrician's "Black Fridays" to the 5-day Workday with Holidays calendar.	The Black Fridays is not included in BART holidays.
018-02.39	Contractor is requested to change the 5-day work calendar for Memorial Day from Wednesday, May 29, 2024 to Monday, May 27, 2024.	Done
018-02.40	Contractor should add a calendar for weekend blanket work.	Done
018-02.41	Contractor is requested to revise the Project Activity Codes to be unique to this project. It is suggested that "Responsibility" becomes 15IJ-130-RESP, "Bid Item" becomes 15IJ-130-BID-ITEM, and that "Location" becomes 15IJ-130-LOC.	Done
018-02.42	Contractor needs to add activities for; prepare and submittal Coring locations after scanning, and review and approval coring locations, prior to core drilling.	Done

018-02.43	Contractor is requested to revise its schedule relationship ties from start-to-start to finish-to-start.	Done as possible
018-02.44	Contractor is requested to add weekend blanket activities for shutdowns.	The Contractor approved there will be no testing on the weekends. However, the calendar is added just in case.
018-02.45	Contractor is requested to add activities for fire watch.	Done

11. Conclusion

Scope of Work:

This project provides a complete replacement of the fire alarm system for the following bay area rapid transit district (BART) passenger stations:

A10-LAKE MERRITT STATION

A30-COLISEUM STATION

A40-SAN LEANDRO STATION

C40-WALNUT CREEK STATION

M20-MONTGOMERY STATION

R20-BERKELEY STATION

The design utilizes a new addressable fire alarm control unit (FACU) with voice evacuation/notification, photoelectric smoke detectors and heat detectors, manual fire alarm pull stations, audible/visual occupant notification appliances, visual occupant notification appliances, and audible occupant notification appliances.

Key Dates:

Item	Baseline Dates
NTP	Feb/06/2023
Final Acceptance of 2 Stations	Jan/06/2024
Final Acceptance of 4 Stations	Aug/06/2024
Final Acceptance of 6 Stations	Feb/05/2025
Final Completion and Acceptance	Feb/05/2025
Submittals End Date	May/30/2024
Start Milestone for - A30	Sep/18/2023
Start Milestone for - A10	Sep/25/2023
Start Milestone for - A40	Jan/16/2024
Start Milestone for - M20	Jan/18/2024
Start Milestone for - R20	Jul/18/2024
Start Milestone for - C40	Jul/22/2024

Calendars:

This section contains details on the calendars which are assigned on all activities. The calendar usage and assignment demonstrate that the builder has taken into account all official Weekends specified by the contract, and has scheduled the project activities efficiently to minimize any risk on project completion. The Calendars used in this project are:

Bart 5 WD: the calendar is based on a 5-day week and recognizes weekends as non-working days and is assigned to procurement and construction activities. District recognized holidays are as follows:

- New Year's Day - January 1
- Dr. Martin Luther King, Jr. Day - First Monday after January 15

-
- President's Day - Third Monday in February
 - Memorial Day - Last Monday in May
 - Independence Day - July 4
 - Labor Day - First Monday in September
 - 7. Veteran's Day - November 11
 - Thanksgiving Day - Fourth Thursday in November
 - Christmas Day – December 25
 - 14 Weather Days.

Critical path:

The critical path of the project is driven by the preconstruction phase and submittals going through the construction phase for every station.

Baseline Schedule

<div style="display: flex; justify-content: space-between;"> <div> <div style="width: 20px; height: 10px; background-color: #008000; margin-bottom: 2px;"></div> Remaining Level of Effort </div> <div> <div style="width: 20px; height: 10px; background-color: #0000FF; margin-bottom: 2px;"></div> Actual Work </div> <div> <div style="width: 20px; height: 10px; background-color: #FF0000; margin-bottom: 2px;"></div> Critical Remaining ... </div> </div> <div style="display: flex; justify-content: space-between;"> <div> <div style="width: 20px; height: 10px; background-color: #000080; margin-bottom: 2px;"></div> Actual Level of Effort </div> <div> <div style="width: 20px; height: 10px; background-color: #90EE90; margin-bottom: 2px;"></div> Remaining Work </div> <div> <div style="display: flex; align-items: center;"> <div style="width: 0; height: 0; border-left: 5px solid transparent; border-right: 5px solid transparent; border-bottom: 8px solid black; margin-right: 5px;"></div> <div style="font-size: 10px;">Milestone</div> </div> </div> </div>	Page 1 of 11	TASK filter: All Activities © Oracle Corporation
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Remaining Level of Effort
 Actual Work
 Critical Remaining ...

Actual Level of Effort
 Remaining Work

 Milestone

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Remaining Level of Effort
 Actual Work
 Critical Remaining ...

Actual Level of Effort
 Remaining Work

 Milestone

 Remaining Level of Effort
  Actual Work
  Critical Remaining ...

 Actual Level of Effort
  Remaining Work
  Milestone

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Start to Start Relationship Table

activity ID	Activity Name	Relationship Type	Lag(d)	Successor ID	Successor Activity Name	Comments
CONS-A40-1440	As-built Drawings -A40	SS	24	CONS-A40-1490	Approval of As-built Drawings -A40	Has a FF or FS Successor
CONS-C40-2500	As-built Drawings -C40	SS	0	CONS-C40-2520	Training Manuals -C40	Has a FF or FS Successor
CONS-M20-2500	As-built Drawings -M20	SS	0	CONS-M20-2530	Training Manuals -M20	Has a FF or FS Successor
CONS-C40-1390	Connection to existing Tamper and Water-flow switches -C40	SS	0	CONS-C40-1440	Cut over and Fire Watch Inspection -C40	Has a FF or FS Successor
CONS-A10-1020	Core Drilling -A10 (Lake Merritt)	SS	0	CONS-A10-1030	Install Conduits & Boxes -A10 (Concourse Level) Paid Area	Has a FF or FS Successor
CONS-A30-1010	Core Drilling -A30 (Concourse Level)	SS	1	CONS-A30-1020	Install Conduits & Boxes -A30 (Concourse Level) - Free Area	Has a FF or FS Successor
CONS-A10-1440	Decommissioning of existing FA system-A10	SS	0	CONS-A10-1430	Remove excessive wire and conduits-A10	Has a FF or FS Successor
CONS-A30-1390	Decommissioning of existing FA system-A30	SS	0	CONS-A30-1380	Remove excessive wire and conduits-A30	Has a FF or FS Successor
CONS-A40-1480	Decommissioning of existing FA system-A40	SS	0	CONS-A40-1470	Remove excessive wire and conduits-A40	Has a FF or FS Successor
CONS-M20-1720	Decommissioning of existing FA system-M20	SS	0	CONS-M20-1740	Remove excessive wire and conduits-M20	Has a FF or FS Successor
CONS-R20-1340	Decommissioning of existing FA system-R20	SS	0	CONS-R20-1330	Remove excessive wire and conduits-R20	Has a FF or FS Successor
PROC-1100	Fab. & Deliver Conduits and Boxes -A40 & M20	SS	0	PROC-1110	Fab. & Deliver Fire Alarm Cables -A40 & M20	Has a FF or FS Successor
PROC-1100	Fab. & Deliver Conduits and Boxes -A40 & M20	SS	0	PROC-1120	Fab. & Deliver Smoke Detectors & Heat Detectors -A40 & M20	Has a FF or FS Successor
PROC-1100	Fab. & Deliver Conduits and Boxes -A40 & M20	SS	0	PROC-1130	Fab. & Deliver FACU , IRC, Amplifier and Sub FACU -A40 & M20	Has a FF or FS Successor
PROC-1100	Fab. & Deliver Conduits and Boxes -A40 & M20	SS	0	PROC-1140	Fab. & Deliver Notification Appliances -A40 & M20	Has a FF or FS Successor
PROC-1100	Fab. & Deliver Conduits and Boxes -A40 & M20	SS	0	PROC-1150	Fab. & Deliver Painting Materials -A40 & M20	Has a FF or FS Successor
PROC-1170	Fab. & Deliver Conduits and Boxes -R20 & C40	SS	0	PROC-1220	Fab. & Deliver Painting Materials -R20 & C40	Has a FF or FS Successor
PROC-1170	Fab. & Deliver Conduits and Boxes -R20 & C40	SS	0	PROC-1180	Fab. & Deliver Fire Alarm Cables -R20 & C40	Has a FF or FS Successor
PROC-1170	Fab. & Deliver Conduits and Boxes -R20 & C40	SS	0	PROC-1210	Fab. & Deliver Notification Appliances -R20 & C40	Has a FF or FS Successor
PROC-1170	Fab. & Deliver Conduits and Boxes -R20 & C40	SS	0	PROC-1190	Fab. & Deliver Smoke Detectors & Heat Detectors -R20 & C40	Has a FF or FS Successor
PROC-1170	Fab. & Deliver Conduits and Boxes -R20 & C40	SS	0	PROC-1200	Fab. & Deliver FACU , IRC, Amplifier and Sub FACU -R20	Has a FF or FS Successor
PROC-1170	Fab. & Deliver Conduits and Boxes -R20 & C40	SS	0	PROC-1230	Fab. & Deliver Misc. Materials -R20 & C40	Has a FF or FS Successor
PROC-1130	Fab. & Deliver FACU , IRC, Amplifier and Sub FACU -A40 & M20	SS	0	PROC-1020	Fab. & Deliver Batteries -A40 & M20	Has a FF or FS Successor
PROC-1200	Fab. & Deliver FACU , IRC, Amplifier and Sub FACU -R20	SS	0	PROC-1030	Fab. & Deliver Batteries --R20 & C40	Has a FF or FS Successor
PROC-1110	Fab. & Deliver Fire Alarm Cables -A40 & M20	SS	0	PROC-1160	Fab. & Deliver Misc. Materials -A40 & M20	Has a FF or FS Successor
CONS-A10-1130	Install & Pull Fire Alarm Cables -A10 (Concourse Free Area)	SS	5	CONS-A10-1230	Install Notification Appliances -A10 (Concourse Free Area)	Has a FF or FS Successor
CONS-A10-1130	Install & Pull Fire Alarm Cables -A10 (Concourse Free Area)	SS	5	CONS-A10-1220	Install Manual Fire Alarm Pull Station -A10 (Concourse Free Area)	Has a FF or FS Successor
CONS-A10-1130	Install & Pull Fire Alarm Cables -A10 (Concourse Free Area)	SS	3	CONS-A10-1180	Install Flow Switches -A10 (Concourse Free Area)	Has a FF or FS Successor
CONS-A10-1130	Install & Pull Fire Alarm Cables -A10 (Concourse Free Area)	SS	3	CONS-A10-1170	Install Smoke and Heat Detectors -A10 (Concourse Free Area)	Has a FF or FS Successor
CONS-A10-1080	Install & Pull Fire Alarm Cables -A10 (Concourse Level)	SS	14	CONS-A10-1200	Install Notification Appliances -A10 (Concourse Level)	Has a FF or FS Successor
CONS-A10-1080	Install & Pull Fire Alarm Cables -A10 (Concourse Level)	SS	14	CONS-A10-1190	Install Manual Fire Alarm Pull Station -A10 (Concourse Level)	Has a FF or FS Successor
CONS-A10-1080	Install & Pull Fire Alarm Cables -A10 (Concourse Level)	SS	10	CONS-A10-1160	Install Flow Switches -A10 (Concourse Level)	Has a FF or FS Successor
CONS-A10-1080	Install & Pull Fire Alarm Cables -A10 (Concourse Level)	SS	10	CONS-A10-1150	Install Smoke and Heat Detectors -A10 (Concourse Level)	Has a FF or FS Successor
CONS-A10-1080	Install & Pull Fire Alarm Cables -A10 (Concourse Level)	SS	0	CONS-A10-1070	Install Conduits & Boxes -A10 (Concourse Free Area)	Has a FF or FS Successor
CONS-A10-1330	Install & Pull Fire Alarm Cables -A10 (Platform Level)	SS	5	CONS-A10-1340	Install Smoke and Heat Detectors -A10 (Platform Level)	Has a FF or FS Successor
CONS-A10-1330	Install & Pull Fire Alarm Cables -A10 (Platform Level)	SS	5	CONS-A10-1350	Install Manual Fire Alarm Pull Station -A10 (Platform Level)	Has a FF or FS Successor
CONS-A30-1060	Install & Pull Fire Alarm Cables -A30 (Concourse Level)	SS	5	CONS-A30-1170	Install Notification Appliances -A30 (Concourse Level)	Has a FF or FS Successor
CONS-A30-1060	Install & Pull Fire Alarm Cables -A30 (Concourse Level)	SS	5	CONS-A30-1150	Install Smoke and Heat Detectors -A30 (Concourse Level)	Has a FF or FS Successor
CONS-A30-1060	Install & Pull Fire Alarm Cables -A30 (Concourse Level)	SS	5	CONS-A30-1230	Install Flow Switches -A30 (Concourse Level)	Has a FF or FS Successor
CONS-A30-1090	Install & Pull Fire Alarm Cables -A30 (Parking Bridge)	SS	7	CONS-A30-1120	Install Manual Fire Alarm Pull Station -A30 (Parking Bridge)	Has a FF or FS Successor
CONS-A30-1090	Install & Pull Fire Alarm Cables -A30 (Parking Bridge)	SS	5	CONS-A30-1110	Install Flow Switches -A30 (Parking Bridge)	Has a FF or FS Successor
CONS-A30-1090	Install & Pull Fire Alarm Cables -A30 (Parking Bridge)	SS	5	CONS-A30-1100	Install Smoke and Heat Detectors -A30 (Parking Bridge)	Has a FF or FS Successor
CONS-A30-1180	Install & Pull Fire Alarm Cables -A30 (Platform Level)	SS	5	CONS-A30-1280	Install Manual Fire Alarm Pull Station -A30 (Platform Level)	Has a FF or FS Successor
CONS-A30-1140	Install & Pull Fire Alarm Cables -A30 (SAB)	SS	0	CONS-A10-1000	Scanning -A10 (Lake Merritt)	Has a FF or FS Successor
CONS-A40-1130	Install & Pull Fire Alarm Cables -A40 (Concourse Free Area)	SS	4	CONS-A40-1160	Install Flow Switches -A40 (Concourse Free Area)	Has a FF or FS Successor
CONS-A40-1130	Install & Pull Fire Alarm Cables -A40 (Concourse Free Area)	SS	4	CONS-A40-1150	Install Smoke and Heat Detectors -A40 (Concourse Free Area)	Has a FF or FS Successor
CONS-A40-1170	Install & Pull Fire Alarm Cables -A40 (Concourse Level)	SS	14	CONS-A40-1270	Install Manual Fire Alarm Pull Station -A40 (Concourse Level)	Has a FF or FS Successor
CONS-A40-1170	Install & Pull Fire Alarm Cables -A40 (Concourse Level)	SS	14	CONS-A40-1260	Install Flow Switches -A40 (Concourse Level)	Has a FF or FS Successor
CONS-A40-1170	Install & Pull Fire Alarm Cables -A40 (Concourse Level)	SS	14	CONS-A40-1250	Install Smoke and Heat Detectors -A40 (Concourse Level)	Has a FF or FS Successor
CONS-A40-1140	Install & Pull Fire Alarm Cables -A40 (SAB)	SS	5	CONS-A40-1200	Install Smoke and Heat Detectors -A40 (SAB)	Has a FF or FS Successor
CONS-A40-1140	Install & Pull Fire Alarm Cables -A40 (SAB)	SS	5	CONS-A40-1210	Install Flow Switches -A40 (SAB)	Has a FF or FS Successor
CONS-C40-1150	Install & Pull Fire Alarm Cables -C40 (Concourse Level)	SS	5	CONS-C40-1200	Install Notification Appliances -C40 (Concourse Level)	Has a FF or FS Successor
CONS-C40-1150	Install & Pull Fire Alarm Cables -C40 (Concourse Level)	SS	5	CONS-C40-1190	Install Manual Fire Alarm Pull Station -C40 (Concourse Level)	Has a FF or FS Successor
CONS-C40-1150	Install & Pull Fire Alarm Cables -C40 (Concourse Level)	SS	0	CONS-C40-1180	Install Flow Switches -C40 (Concourse Level)	Has a FF or FS Successor
CONS-C40-1150	Install & Pull Fire Alarm Cables -C40 (Concourse Level)	SS	5	CONS-C40-1170	Install Smoke and Heat Detectors -C40 (Concourse Level)	Has a FF or FS Successor
CONS-C40-1150	Install & Pull Fire Alarm Cables -C40 (Concourse Level)	SS	0	CONS-C40-1230	Installation of FACU , IRC, Amplifier, Sub FACU and Panels -C40 (Concourse Level)	Has a FF or FS Successor
CONS-C40-1130	Install & Pull Fire Alarm Cables -C40 (Platform Level)	SS	2	CONS-C40-1160	Install Flow Switches -C40 (Platform Level)	Has a FF or FS Successor
CONS-M20-1200	Install & Pull Fire Alarm Cables -M20 (Concourse East)	SS	0	CONS-M20-1240	Install Conduits & Boxes -M20 (Concourse West) - Muni Primary Paid Area	Has a FF or FS Successor
CONS-M20-1100	Install & Pull Fire Alarm Cables -M20 (Concourse Free Area)	SS	3	CONS-M20-1120	Install Flow Switches -M20 (Concourse Free Area)	Has a FF or FS Successor
CONS-M20-1100	Install & Pull Fire Alarm Cables -M20 (Concourse Free Area)	SS	3	CONS-M20-1130	Install Notification Appliances -M20 (Concourse Free Area)	Has a FF or FS Successor
CONS-M20-1340	Install & Pull Fire Alarm Cables -M20 (Concourse West)	SS	3	CONS-M20-1370	Install Flow Switches -M20 (Concourse West)	Has a FF or FS Successor
CONS-M20-1350	Install & Pull Fire Alarm Cables -M20 (Muni Platform)	SS	5	CONS-M20-1390	Install Smoke and Heat Detectors -M20 (Muni Platform)	Has a FF or FS Successor

activity ID	Activity Name	Relationship Type	Lag(d)	Successor ID	Successor Activity Name	Comments
CONS-M20-1350	Install & Pull Fire Alarm Cables -M20 (Muni Platform)	SS		7 CONS-M20-1400	Install Flow Switches -M20 (Muni Platform)	Has a FF or FS Successor
CONS-M20-1350	Install & Pull Fire Alarm Cables -M20 (Muni Platform)	SS		5 CONS-M20-1410	Install Manual Fire Alarm Pull Station -M20 (Muni Platform)	Has a FF or FS Successor
CONS-M20-1350	Install & Pull Fire Alarm Cables -M20 (Muni Platform)	SS		5 CONS-M20-1420	Install Notification Appliances -M20 (Muni Platform)	Has a FF or FS Successor
CONS-M20-1490	Install & Pull Fire Alarm Cables -M20 (SAB)	SS		0 CONS-M20-1550	Install Manual Fire Alarm Pull Station -M20 (SAB)	Has a FF or FS Successor
CONS-M20-1540	Install & Pull Fire Alarm Cables -M20 (South Platform)	SS		5 CONS-M20-1580	Install Smoke and Heat Detectors -M20 (South Platform)	Has a FF or FS Successor
CONS-M20-1540	Install & Pull Fire Alarm Cables -M20 (South Platform)	SS		5 CONS-M20-1590	Install Flow Switches -M20(South Platform)	Has a FF or FS Successor
CONS-R20-1090	Install & Pull Fire Alarm Cables -R20 (Concourse Level)	SS		0 CONS-R20-1210	Install & Pull Fire Alarm Cables -R20 (Platform Level)	Has a FF or FS Successor
CONS-R20-1090	Install & Pull Fire Alarm Cables -R20 (Concourse Level)	SS		8 CONS-R20-1130	Install Notification Appliances -R20 (Concourse Level)	Has a FF or FS Successor
CONS-R20-1090	Install & Pull Fire Alarm Cables -R20 (Concourse Level)	SS		8 CONS-R20-1120	Install Manual Fire Alarm Pull Station -R20 (Concourse Level)	Has a FF or FS Successor
CONS-R20-1090	Install & Pull Fire Alarm Cables -R20 (Concourse Level)	SS		8 CONS-R20-1110	Install Flow Switches -R20 (Concourse Level)	Has a FF or FS Successor
CONS-R20-1090	Install & Pull Fire Alarm Cables -R20 (Concourse Level)	SS		8 CONS-R20-1100	Install Smoke and Heat Detectors -R20 (Concourse Level)	Has a FF or FS Successor
CONS-A10-1030	Install Conduits & Boxes -A10 (Concourse Level) Paid Area	SS		0 CONS-A10-1300	Install Conduits & Boxes -A10 (Platform Level)	Has a FF or FS Successor
CONS-A10-1030	Install Conduits & Boxes -A10 (Concourse Level) Paid Area	SS		0 CONS-A10-1050	Install Conduits & Boxes -A10 (Concourse Level) Elec. Room, Storage, Offices and Break Room	Has a FF or FS Successor
CONS-A30-1020	Install Conduits & Boxes -A30 (Concourse Level) - Free Area	SS		0 CONS-A30-1040	Install Conduits & Boxes -A30 (Parking Bridge)	Has a FF or FS Successor
CONS-A30-1020	Install Conduits & Boxes -A30 (Concourse Level) - Free Area	SS		0 CONS-A30-1070	Install Conduits & Boxes -A30 (SAB)	Has a FF or FS Successor
CONS-A30-1020	Install Conduits & Boxes -A30 (Concourse Level) - Free Area	SS		0 CONS-A10-1010	Install Conduits & Boxes -A10 Sub (Lake Merritt Substation)	Has a FF or FS Successor
CONS-A30-1030	Install Conduits & Boxes -A30 (Concourse Level) - Paid Area	SS		0 CONS-A30-1050	Install Conduits & Boxes -A30 (Concourse Level) - (FAN- Battery- Train Control) Rooms	Has a FF or FS Successor
CONS-A30-1040	Install Conduits & Boxes -A30 (Parking Bridge)	SS		0 CONS-A30-1080	Install Conduits & Boxes -A30 (Platform Level)	Has a FF or FS Successor
CONS-A40-1070	Install Conduits & Boxes -A40 (Concourse Free Area)	SS		10 CONS-A40-1130	Install & Pull Fire Alarm Cables -A40 (Concourse Free Area)	Has a FF or FS Successor
CONS-A40-1050	Install Conduits & Boxes -A40 (Concourse Level) Paid Area	SS		3 CONS-A40-1070	Install Conduits & Boxes -A40 (Concourse Free Area)	Has a FF or FS Successor
CONS-A40-1050	Install Conduits & Boxes -A40 (Concourse Level) Paid Area	SS		4 CONS-A40-1090	Install Conduits & Boxes -A40 (SAB)	Has a FF or FS Successor
CONS-A40-1240	Install Conduits & Boxes -A40 (Platform Level) (3-7)	SS		8 CONS-A40-1340	Install & Pull Fire Alarm Cables -A40 (Platform Level)	Has a FF or FS Successor
CONS-A40-1090	Install Conduits & Boxes -A40 (SAB)	SS		8 CONS-A40-1140	Install & Pull Fire Alarm Cables -A40 (SAB)	Has a FF or FS Successor
CONS-C40-1060	Install Conduits & Boxes -C40 (Platform Level) West	SS		3 CONS-C40-1130	Install & Pull Fire Alarm Cables -C40 (Platform Level)	Has a FF or FS Successor
CONS-C40-1060	Install Conduits & Boxes -C40 (Platform Level) West	SS		5 CONS-C40-1110	Install Conduits & Boxes -C40 (Platform Level) East	Has a FF or FS Successor
CONS-C40-1040	Install Conduits & Boxes -C40 (Concourse Level) Free Area.	SS		5 CONS-C40-1150	Install & Pull Fire Alarm Cables -C40 (Concourse Level)	Has a FF or FS Successor
CONS-C40-1040	Install Conduits & Boxes -C40 (Concourse Level) Free Area.	SS		5 CONS-C40-1060	Install Conduits & Boxes -C40 (Platform Level) West	Has a FF or FS Successor
CONS-M20-1040	Install Conduits & Boxes -M20 (Concourse Free Area) (4-7)	SS		10 CONS-M20-1150	Install Smoke and Heat Detectors -M20 (Concourse Free Area)	Has a FF or FS Successor
CONS-M20-1430	Install Conduits & Boxes -M20 (South Platform)	SS		5 CONS-M20-1500	Install Conduits & Boxes -M20 (North Platform)	Has a FF or FS Successor
CONS-M20-1140	Install Conduits & Boxes -M20 (Concourse East) Muni Secondry Paid Area	SS		12 CONS-M20-1220	Install Flow Switches -M20 (Concourse East)	Has a FF or FS Successor
CONS-M20-1240	Install Conduits & Boxes -M20 (Concourse West) - Muni Primary Paid Area	SS		10 CONS-M20-1340	Install & Pull Fire Alarm Cables -M20 (Concourse West)	Has a FF or FS Successor
CONS-M20-1330	Install Conduits & Boxes -M20 (Muni Platform)	SS		10 CONS-M20-1350	Install & Pull Fire Alarm Cables -M20 (Muni Platform)	Has a FF or FS Successor
CONS-M20-1450	Install Conduits & Boxes -M20 (SAB)	SS		4 CONS-M20-1490	Install & Pull Fire Alarm Cables -M20 (SAB)	Has a FF or FS Successor
CONS-R20-1080	Install Conduits & Boxes -R20 (Concourse Level)	SS		11 CONS-R20-1090	Install & Pull Fire Alarm Cables -R20 (Concourse Level)	Has a FF or FS Successor
CONS-R20-1000	Install Conduits & Boxes -R20 Sub	SS		0 CONS-C40-1040	Install Conduits & Boxes -C40 (Concourse Level) Free Area.	Has a FF or FS Successor
CONS-R20-1000	Install Conduits & Boxes -R20 Sub	SS		0 CONS-R20-1030	Install & Pull Fire Alarm Cables -R20 Sub	Has a FF or FS Successor
CONS-R20-1000	Install Conduits & Boxes -R20 Sub	SS		0 CONS-R20-1020	Core Drilling -R20	Has a FF or FS Successor
CONS-R20-1000	Install Conduits & Boxes -R20 Sub	SS		0 MS-1100	Start Milestone for - R20	Has a FF or FS Successor
CONS-R20-1000	Install Conduits & Boxes -R20 Sub	SS		0 CONS-C40-1150	Install & Pull Fire Alarm Cables -C40 (Concourse Level)	Has a FF or FS Successor
CONS-R20-1000	Install Conduits & Boxes -R20 Sub	SS		0 CONS-C40-1030	Core Drilling -C40 (Concourse Level)	Has a FF or FS Successor
CONS-R20-1000	Install Conduits & Boxes -R20 Sub	SS		0 MS-1110	Start Milestone for - C40	Has a FF or FS Successor
CONS-A30-1260	Install Elevator & Escalator Shutdown& Recall Modular-A30 (Concourse Level)	SS		0 CONS-A30-1300	Installation of FACU , IRC, Amplifier, Sub FACU. -A30 (Concourse Level)	Has a FF or FS Successor
CONS-A40-1320	Install Elevator(Escalator) Shutdown& Recall Modular-A40 (Concourse Level)	SS		0 CONS-A40-1290	Installation of FACU , IRC, Amplifier, Sub FACU and Panels -A40 (Concourse Level)	Has a FF or FS Successor
CONS-A40-1260	Install Flow Switches -A40 (Concourse Level)	SS		0 CONS-A40-1320	Install Elevator(Escalator) Shutdown& Recall Modular-A40 (Concourse Level)	Has a FF or FS Successor
CONS-A40-1260	Install Flow Switches -A40 (Concourse Level)	SS		0 CONS-A40-1310	Install Faregate Control & Emergency Barrier Opening-A40 (Concourse Level)	Has a FF or FS Successor
CONS-C40-1180	Install Flow Switches -C40 (Concourse Level)	SS		0 CONS-C40-1240	Install Faregate Control & Emergency Barrier Opening-C40 (Concourse Level)	Has a FF or FS Successor
CONS-A30-1160	Install Manual Fire Alarm Pull Station -A30 (Concourse Level)	SS		5 CONS-A30-1250	Install Faregate Control & Emergency Barrier Opening-A30 (Concourse Level)	Has a FF or FS Successor
CONS-A40-1270	Install Manual Fire Alarm Pull Station -A40 (Concourse Level)	SS		0 CONS-A40-1320	Install Elevator(Escalator) Shutdown& Recall Modular-A40 (Concourse Level)	Has a FF or FS Successor
CONS-A40-1270	Install Manual Fire Alarm Pull Station -A40 (Concourse Level)	SS		0 CONS-A40-1310	Install Faregate Control & Emergency Barrier Opening-A40 (Concourse Level)	Has a FF or FS Successor
CONS-C40-1190	Install Manual Fire Alarm Pull Station -C40 (Concourse Level)	SS		0 CONS-C40-1240	Install Faregate Control & Emergency Barrier Opening-C40 (Concourse Level)	Has a FF or FS Successor
CONS-A10-1360	Install Notification Appliances -A10 (Platform Level)	SS		3 CONS-A10-1380	Paint Exposed Conduits -A10 (Platform Level)	Has a FF or FS Successor
CONS-A30-1290	Install Notification Appliances -A30 (Platform Level)	SS		4 CONS-A30-1310	Pre-testing by Contractor to be ready for testing in prescene of BART -A30	Has a FF or FS Successor
CONS-A40-1300	Install Notification Appliances -A40 (Concourse Level)	SS		0 CONS-A40-1320	Install Elevator(Escalator) Shutdown& Recall Modular-A40 (Concourse Level)	Has a FF or FS Successor
CONS-A40-1300	Install Notification Appliances -A40 (Concourse Level)	SS		0 CONS-A40-1310	Install Faregate Control & Emergency Barrier Opening-A40 (Concourse Level)	Has a FF or FS Successor
CONS-A40-1380	Install Notification Appliances -A40 (Platform Level)	SS		0 CONS-A40-1390	Paint Exposed Conduits -A40 (Platform Level)	Has a FF or FS Successor
CONS-C40-1200	Install Notification Appliances -C40 (Concourse Level)	SS		0 CONS-C40-1240	Install Faregate Control & Emergency Barrier Opening-C40 (Concourse Level)	Has a FF or FS Successor
CONS-M20-1380	Install Notification Appliances -M20 (Concourse West)	SS		0 CONS-M20-1450	Install Conduits & Boxes -M20 (SAB)	Has a FF or FS Successor
CONS-M20-1180	Install Notification Appliances -M20 (Concourse East)	SS		4 CONS-M20-1240	Install Conduits & Boxes -M20 (Concourse West) - Muni Primary Paid Area	Has a FF or FS Successor
CONS-M20-1180	Install Notification Appliances -M20 (Concourse East)	SS		0 CONS-M20-1190	Install Conduits & Boxes -M20 (Muni Concourse)	Has a FF or FS Successor
CONS-M20-1290	Install Notification Appliances -M20 (Muni Concourse)	SS		0 CONS-M20-1610	Installation of FACU , IRC, Amplifier, Sub FACU and Panels -M20 (Muni Concourse)	Has a FF or FS Successor
CONS-M20-1650	Install Notification Appliances -M20 (North Platform)	SS		0 CONS-M20-1620	Paint Exposed Conduits -M20(South Platform)	Has a FF or FS Successor
CONS-A30-1150	Install Smoke and Heat Detectors -A30 (Concourse Level)	SS		0 CONS-A30-1250	Install Faregate Control & Emergency Barrier Opening-A30 (Concourse Level)	Has a FF or FS Successor

activity ID	Activity Name	Relationship Type	Lag(d)	Successor ID	Successor Activity Name	Comments
CONS-C40-1170	Install Smoke and Heat Detectors -C40 (Concourse Level)	SS		0 CONS-C40-1230	Installation of FACU , IRC, Amplifier, Sub FACU and Panels -C40 (Concourse Level)	Has a FF or FS Successor
CONS-C40-1170	Install Smoke and Heat Detectors -C40 (Concourse Level)	SS		0 CONS-C40-1240	Install Faregate Control & Emergency Barrier Opening-C40 (Concourse Level)	Has a FF or FS Successor
CONS-M20-1210	Install Smoke and Heat Detectors -M20 (Concourse East)	SS		1 CONS-M20-1230	Install Manual Fire Alarm Pull Station -M20 (Concourse East)	Has a FF or FS Successor
CONS-M20-1150	Install Smoke and Heat Detectors -M20 (Concourse Free Area)	SS		0 CONS-M20-1160	Install Manual Fire Alarm Pull Station -M20 (Concourse Free Area)	Has a FF or FS Successor
CONS-M20-1260	Install Smoke and Heat Detectors -M20 (Muni Concourse)	SS		0 CONS-M20-1610	Installation of FACU , IRC, Amplifier, Sub FACU and Panels -M20 (Muni Concourse)	Has a FF or FS Successor
CONS-M20-1390	Install Smoke and Heat Detectors -M20 (Muni Platform)	SS		0 CONS-M20-1430	Install Conduits & Boxes -M20 (South Platform)	Has a FF or FS Successor
CONS-M20-1520	Install Smoke and Heat Detectors -M20 (SAB)	SS		4 CONS-M20-1550	Install Manual Fire Alarm Pull Station -M20 (SAB)	Has a FF or FS Successor
CONS-R20-1180	Installation of FACU , IRC, Amplifier and Panels -R20 (Concourse Level)	SS		0 CONS-R20-1190	Paint Exposed Conduits -R20 (Concourse Level)	Has a FF or FS Successor
CONS-A40-1290	Installation of FACU , IRC, Amplifier, Sub FACU and Panels -A40 (Concourse Level)	SS		2 CONS-A40-1400	Pre-testing by Contractor to be ready for testing in prescene of BART -A40	Has a FF or FS Successor
CONS-C40-1230	Installation of FACU , IRC, Amplifier, Sub FACU and Panels -C40 (Concourse Level)	SS		0 CONS-C40-1010	Disconnect Power and Wiring - C40	Has a FF or FS Successor
CONS-R20-1140	Installation of SUB FACU , IRC, Amplifier and Panels -R20 Sub	SS		2 CONS-R20-1150	Paint Exposed Conduits -R20 Sub	Has a FF or FS Successor
CONS-A10-1410	Installing and testing Remote monitoring system tied to BAR OSY -A10	SS		0 CONS-A10-1420	Removal of Old Fire Alarm System -A10	Has a FF or FS Successor
CONS-A10-1410	Installing and testing Remote monitoring system tied to BAR OSY -A10	SS		0 CONS-A10-1460	As-built Drawings -A10	Has a FF or FS Successor
CONS-A10-1410	Installing and testing Remote monitoring system tied to BAR OSY -A10	SS		0 CONS-A10-1470	FireWatch Inspection -A10	Has a FF or FS Successor
CONS-A40-1430	Installing and testing Remote monitoring system tied to BAR OSY -A40	SS		0 CONS-A40-1440	As-built Drawings -A40	Has a FF or FS Successor
CONS-A40-1430	Installing and testing Remote monitoring system tied to BAR OSY -A40	SS		0 CONS-A40-1560	FireWatch Inspection -A40	Has a FF or FS Successor
CONS-M20-1690	Installing and testing Remote monitoring system tied to BAR OSY -M20	SS		0 CONS-M20-1730	Cut over and Fire Watch Inspection -M20	Has a FF or FS Successor
CONS-R20-1280	Installing and testing Remote monitoring system tied to BAR OSY -R20	SS		0 CONS-R20-1390	Cut over and Fire Watch Inspection -R20	Has a FF or FS Successor
PC-M-1010	Mobilization for A30	SS		0 CONS-A30-1000	Scanning -A30 (Concourse Level)	Has a FF or FS Successor
PC-M-1020	Mobilization for A40	SS		0 PROC-1100	Fab. & Deliver Conduits and Boxes -A40 & M20	Has a FF or FS Successor
PC-M-1050	Mobilization for C40	SS		0 CONS-C40-1040	Install Conduits & Boxes -C40 (Concourse Level) Free Area.	Has a FF or FS Successor
PC-M-1040	Mobilization for M20	SS		0 PC-M-1020	Mobilization for A40	Has a FF or FS Successor
PC-M-1030	Mobilization for R20	SS		0 CONS-R20-1000	Install Conduits & Boxes -R20 Sub	Has a FF or FS Successor
PC-M-1030	Mobilization for R20	SS		5 PC-M-1050	Mobilization for C40	Has a FF or FS Successor
CONS-A30-1460	NFPA72 checklist certified by the Contractor -A30	SS		0 CONS-A30-1490	FireWatch Inspection -A30	Has a FF or FS Successor
CONS-R20-1290	NFPA72 checklist certified by the Contractor -R20	SS		0 CONS-R20-1400	As-built Drawings -R20	Has a FF or FS Successor
CONS-R20-1290	NFPA72 checklist certified by the Contractor -R20	SS		0 CONS-R20-1310	Removal of Old Fire Alarm System -R20	Has a FF or FS Successor
MS-1000	NTP	SS	134	SUB-A10-1050	Prepare and Submit Lake Meritt Station Shop drawings -A10	Has a FF or FS Successor
MS-1000	NTP	SS	134	SUB-A10-1000	Prepare and Submit Abatement Plan -A10	Has a FF or FS Successor
MS-1000	NTP	SS	134	SUB-A10-1020	Prepare and Submit CIP -A10	Has a FF or FS Successor
MS-1000	NTP	SS	134	SUB-A10-1030	Prepare and Submit Design & Calcs -A10	Has a FF or FS Successor
MS-1000	NTP	SS	134	SUB-A10-1040	Prepare and Submit Test Procedure & Review -A10	Has a FF or FS Successor
MS-1000	NTP	SS	104	Per-1000	Review&Approve Permits for Lake Merritt & Coliseum	Has a FF or FS Successor
MS-1000	NTP	SS	250	Per-1010	Review&Approve Permits for Montgomery & San Leandro	Has a FF or FS Successor
MS-1000	NTP	SS	450	Per-1020	Review&Approve Permits for Berkeley& Walnut Creek	Has a FF or FS Successor
MS-1000	NTP	SS	0	PC-M-1040	Mobilization for M20	Has a FF or FS Successor
MS-1000	NTP	SS	350	SUB-R20-1050	Prepare and Submit Berkeley Station Shop drawings -R20	Has a FF or FS Successor
MS-1000	NTP	SS	350	SUB-C40-1050	Prepare and Submit Walnut Creek Station Shop drawings -C40	Has a FF or FS Successor
MS-1000	NTP	SS	230	SUB-A40-1050	Prepare and Submit San Leandro Station Shop drawings -A40	Has a FF or FS Successor
MS-1000	NTP	SS	134	SUB-A30-1010	Prepare and Submit Abatement Plan -A30	Has a FF or FS Successor
MS-1000	NTP	SS	34	SUB-1000	Prepare and Submit SSWP -(General).	Has a FF or FS Successor
MS-1000	NTP	SS	152	SUB-1020	Prepare and Submit Safety Plan	Has a FF or FS Successor
MS-1000	NTP	SS	152	SUB-1030	Prepare and Submit QC Plan	Has a FF or FS Successor
MS-1000	NTP	SS	152	SUB-1040	Prepare and Submit Site Specific Emergency Plan	Has a FF or FS Successor
MS-1000	NTP	SS	134	SUB-A30-1000	Prepare and Submit Coliseum Station Shop drawings -A30	Has a FF or FS Successor
MS-1000	NTP	SS	134	SUB-A30-1030	Prepare and Submit CIP -A30	Has a FF or FS Successor
MS-1000	NTP	SS	134	SUB-A30-1040	Prepare and Submit Design & Calcs -A30	Has a FF or FS Successor
MS-1000	NTP	SS	152	SUB-1050	Prepare and Submit Security Plan	Has a FF or FS Successor
MS-1000	NTP	SS	134	SUB-A30-1050	Prepare and Submit Test Procedure & Review -A30	Has a FF or FS Successor
MS-1000	NTP	SS	122	SUB-A30-1020	Prepare and Submit SSWP -A30	Has a FF or FS Successor
MS-1000	NTP	SS	122	SUB-A10-1010	Prepare and Submit SSWP -A10	Has a FF or FS Successor
MS-1000	NTP	SS	230	SUB-A40-1000	Prepare and Submit Abatement Plan -A40	Has a FF or FS Successor
MS-1000	NTP	SS	225	SUB-A40-1010	Prepare and Submit SSWP -A40	Has a FF or FS Successor
MS-1000	NTP	SS	230	SUB-A40-1020	Prepare and Submit CIP -A40	Has a FF or FS Successor
MS-1000	NTP	SS	230	SUB-A40-1030	Prepare and Submit Design & Calcs -A40	Has a FF or FS Successor
MS-1000	NTP	SS	230	SUB-A40-1040	Prepare and Submit Test Procedure & Review -A40	Has a FF or FS Successor
MS-1000	NTP	SS	230	SUB-M20-1050	Prepare and Submit Montgomery Station Shop drawings -M20	Has a FF or FS Successor
MS-1000	NTP	SS	230	SUB-M20-1000	Prepare and Submit Abatement Plan -M20	Has a FF or FS Successor
MS-1000	NTP	SS	225	SUB-M20-1010	Prepare and Submit SSWP -M20	Has a FF or FS Successor
MS-1000	NTP	SS	230	SUB-M20-1020	Prepare and Submit CIP -M20	Has a FF or FS Successor
MS-1000	NTP	SS	230	SUB-M20-1030	Prepare and Submit Design & Calcs -M20	Has a FF or FS Successor
MS-1000	NTP	SS	230	SUB-M20-1040	Prepare and Submit Test Procedure & Review -M20	Has a FF or FS Successor

activity ID	Activity Name	Relationship Type	Lag(d)	Successor ID	Successor Activity Name	Comments
MS-1000	NTP	SS		350 SUB-R20-1000	Prepare and Submit Abatement Plan -R20	Has a FF or FS Successor
MS-1000	NTP	SS		350 SUB-R20-1010	Prepare and Submit SSWP -R20	Has a FF or FS Successor
MS-1000	NTP	SS		350 SUB-R20-1020	Prepare and Submit CIP -R20	Has a FF or FS Successor
MS-1000	NTP	SS		350 SUB-R20-1030	Prepare and Submit Design & Calcs -R20	Has a FF or FS Successor
MS-1000	NTP	SS		350 SUB-R20-1040	Prepare and Submit Test Procedure & Review -R20	Has a FF or FS Successor
MS-1000	NTP	SS		350 SUB-C40-1000	Prepare and Submit Abatement Plan -C40	Has a FF or FS Successor
MS-1000	NTP	SS		350 SUB-C40-1010	Prepare and Submit SSWP -C40	Has a FF or FS Successor
MS-1000	NTP	SS		350 SUB-C40-1020	Prepare and Submit CIP -C40	Has a FF or FS Successor
MS-1000	NTP	SS		350 SUB-C40-1030	Prepare and Submit Design & Calcs -C40	Has a FF or FS Successor
MS-1000	NTP	SS		350 SUB-C40-1040	Prepare and Submit Test Procedure & Review -C40	Has a FF or FS Successor
MS-1000	NTP	SS		152 SUB-1060	Prepare and Submit Baseline Schedule	Has a FF or FS Successor
MS-1000	NTP	SS		152 SUB-1070	Prepare and Submit Schedule of Variance	Has a FF or FS Successor
MS-1000	NTP	SS		152 SUB-1080	Prepare and Submit Management Plan	Has a FF or FS Successor
MS-1000	NTP	SS		35 SUB-MAT-1000	Prepare and Submit Smoke Detectors & Heat Detectors .	Has a FF or FS Successor
MS-1000	NTP	SS		120 SUB-MAT-1040	Prepare and Submit Batteries.	Has a FF or FS Successor
MS-1000	NTP	SS		134 SUB-A30-1060	Prepare and Submit Coring Plan and Scanning-A30	Has a FF or FS Successor
MS-1000	NTP	SS		134 SUB-A10-1060	Prepare and Submit Coring Plan and Scanning-A10	Has a FF or FS Successor
MS-1000	NTP	SS		60 SUB-MAT-1060	Prepare and Submit Conduits and Boxes .	Has a FF or FS Successor
MS-1000	NTP	SS		240 SCAN-1000	Scanning -A40	Has a FF or FS Successor
MS-1000	NTP	SS		240 SCAN-1010	Scanning -M20	Has a FF or FS Successor
MS-1000	NTP	SS		350 SCAN-1020	Scanning -R20	Has a FF or FS Successor
MS-1000	NTP	SS		350 SCAN-1030	Scanning -C40	Has a FF or FS Successor
CONS-A40-1390	Paint Exposed Conduits -A40 (Platform Level)	SS		5 CONS-A40-1400	Pre-testing by Contractor to be ready for testing in prescene of BART -A40	Has a FF or FS Successor
CONS-C40-1260	Paint Exposed Conduits -C40 (Concourse Level)	SS		0 CONS-C40-1270	Paint Exposed Conduits -C40 (Platform Level)	Has a FF or FS Successor
SUB-MAT-1060	Prepare and Submit Conduits and Boxes .	SS		0 SUB-MAT-1070	Prepare and Submit Fire Alarm Cables .	Has a FF or FS Successor
SUB-MAT-1010	Prepare and Submit FACU , IRC, Amplifier and Sub FACU	SS		0 SUB-MAT-1020	Prepare and Submit Notification Appliances .	Has a FF or FS Successor
SUB-MAT-1000	Prepare and Submit Smoke Detectors & Heat Detectors .	SS		60 SUB-MAT-1010	Prepare and Submit FACU , IRC, Amplifier and Sub FACU	Has a FF or FS Successor
SUB-MAT-1000	Prepare and Submit Smoke Detectors & Heat Detectors .	SS		60 SUB-MAT-1030	Prepare and Submit Misc. Materials .	Has a FF or FS Successor
CONS-M20-1660	Pre-testing by Contractor to be ready for testing in prescene of BART -M20	SS		0 CONS-M20-1670	Pre-testing by Contractor in presence of BART -M20	Has a FF or FS Successor
CONS-A10-1450	Removal of FA Devices -A10	SS		0 CONS-A10-1440	Decommissioning of existing FA system-A10	Has a FF or FS Successor
CONS-A10-1420	Removal of Old Fire Alarm System -A10	SS		0 CONS-A10-1450	Removal of FA Devices -A10	Has a FF or FS Successor
CONS-A10-1420	Removal of Old Fire Alarm System -A10	SS		0 CONS-A10-1640	Punclist -A10	Has a FF or FS Successor
CONS-A30-1360	Removal of Old Fire Alarm System -A30	SS		0 CONS-A30-1370	Removal of FA Devices -A30	Has a FF or FS Successor
CONS-A40-1450	Removal of Old Fire Alarm System -A40	SS		0 CONS-A40-1460	Removal of FA Devices -A40	Has a FF or FS Successor
CONS-C40-1330	Removal of Old Fire Alarm System -C40	SS		0 CONS-C40-1340	Removal of FA Devices -C40	Has a FF or FS Successor
CONS-C40-1330	Removal of Old Fire Alarm System -C40	SS		0 CONS-C40-1470	Punchlist -C40	Has a FF or FS Successor
CONS-M20-1700	Removal of Old Fire Alarm System -M20	SS		0 CONS-M20-1710	Removal of FA Devices -M20	Has a FF or FS Successor
CONS-M20-1700	Removal of Old Fire Alarm System -M20	SS		5 CONS-R20-1000	Install Conduits & Boxes -R20 Sub	Has a FF or FS Successor
CONS-R20-1310	Removal of Old Fire Alarm System -R20	SS		0 CONS-R20-1480	Punchlist -R20	Has a FF or FS Successor
CONS-A30-1380	Remove excessive wire and conduits-A30	SS		0 CONS-A30-1450	Demobilization for A30	Has a FF or FS Successor
CONS-M20-1740	Remove excessive wire and conduits-M20	SS		5 CONS-M20-2520	Demobilization for - M20	Has a FF or FS Successor
REV-C40-1000	Review and Approve Abatement Plan -C40	SS		0 REV-C40-1010	Review and Approve SSWP -C40	Has a FF or FS Successor
REV-C40-1020	Review and Approve CIP -C40	SS		0 REV-C40-1030	Review and Approve Design & Calcs -C40	Has a FF or FS Successor
CONS-A10-1000	Scanning -A10 (Lake Merritt)	SS		0 MS-1070	Start Milestone for - A10	Has a FF or FS Successor
CONS-A30-1000	Scanning -A30 (Concourse Level)	SS		0 CONS-A30-1010	Core Drilling -A30 (Concourse Level)	Has a FF or FS Successor
CONS-A30-1000	Scanning -A30 (Concourse Level)	SS		0 MS-1060	Start Milestone for - A30	Has a FF or FS Successor
MS-1070	Start Milestone for - A10	SS		0 SUM-1010	Summery for - A10	Has a FF or FS Successor
MS-1060	Start Milestone for - A30	SS		0 SUM-1000	Summery for - A30	Has a FF or FS Successor
MS-1080	Start Milestone for - A40	SS		0 SUM-1020	Summery for - A40	Has a FF or FS Successor
MS-1110	Start Milestone for - C40	SS		0 SUM-1050	Summery for - C40	Has a FF or FS Successor
MS-1090	Start Milestone for - M20	SS		0 SUM-1030	Summery for - M20	Has a FF or FS Successor
MS-1100	Start Milestone for - R20	SS		0 SUM-1040	Summery for - R20	Has a FF or FS Successor
CONS-C40-2520	Training Manuals -C40	SS		0 CONS-C40-2510	O&M Manuals -C40	Has a FF or FS Successor