B.5 Design and Construction Schedule

Figure B.5-1 presents a preliminary, feasibility-level design and construction schedule for the NODOS/Sites Reservoir Project. The schedule is based on constructing Alternative D, which involves the largest facility sizes for dams, reservoirs, and pumping-generating plants. The schedule for Alternatives A, B, and C likely would have a similar duration, because these alternatives still include many of the same critical-path features in common with Alternative D that govern the schedule duration.

The *Basis of Estimate Report for Sites Project Authority Project Alternative D* (AECOM 2016b) contains the full schedule, which includes approximately 200 linked construction activities. The schedule presents a reasonable approach to construct the project, which accounts for the logical sequencing of the work, procurement of equipment, and reasonable durations to complete construction activities. Durations reflect the estimated labor and equipment spreads needed to complete activities, including earthwork, balancing the movement of excavated soil and rock to placement sites, supplying and placing all materials, erecting structures, and installing major equipment. Labor and equipment costs are reflected in the cost estimate.

The schedule presents construction activities with an assumed construction start date in late March 2022. Predecessor activities like design, permitting, packaging the work, and bidding the construction packages are not included because of the uncertainty in scheduling these activities between now and 2022. With hydroelectric generation as part of the project, the Federal Energy Regulatory Commission permitting process may also affect the actual start date.

As construction progresses, the critical path (or critical remaining work) moves between facilities. Completing the Sacramento River (Delevan Intake) and Sites Pumping/Generating Plants in early 2030 are the final critical activities to achieve project construction completion and begin pumping operations.

Filling the reservoir is not reflected in the schedule, due to the uncertainty in hydrological conditions at that time and the operating criteria that would be contained in the regulatory permits required for the project. It may be possible to begin filling the reservoir using natural runoff from Stone Corral and Funks Creeks, beginning with the 2028 and 2029 wet season. At this point, the dams are completed. Adequate storage would be available to accommodate a major storm event (including the PMF), and release facilities would be available at Sites Dam, if needed.

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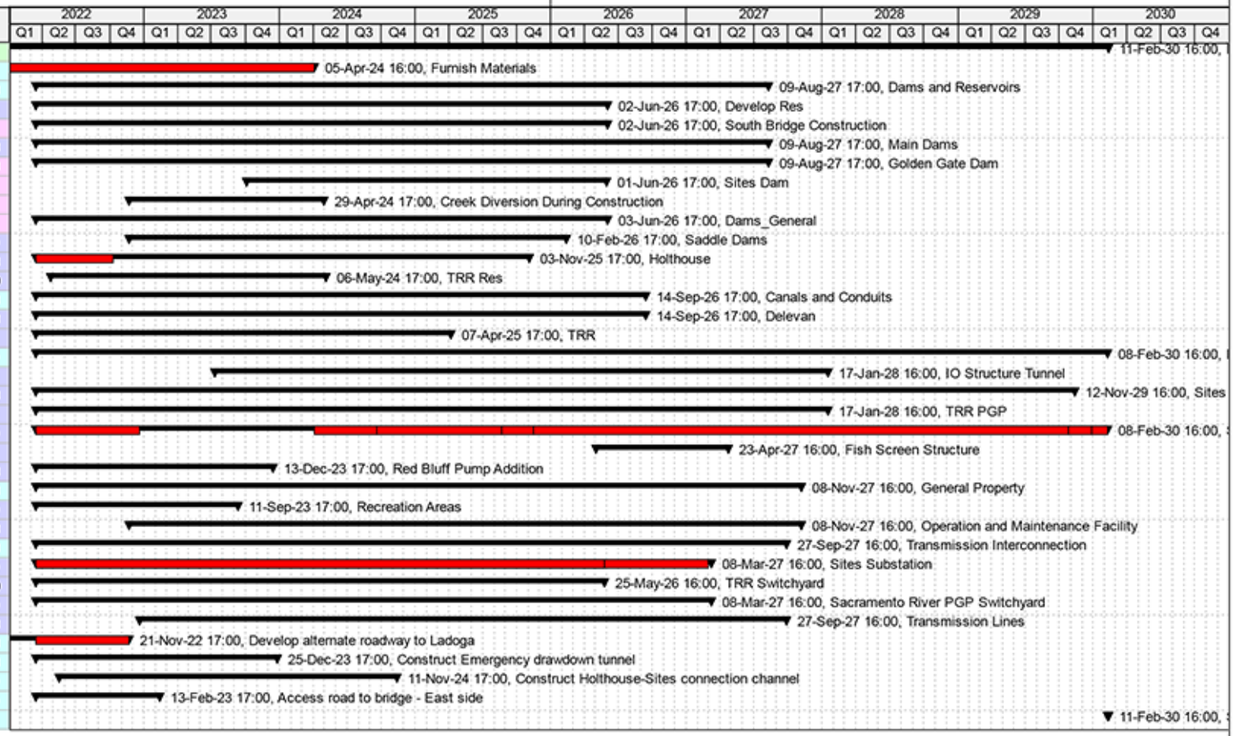
NODOS_Sites Reservoir_Ver2 | Classic WBS Layout | 02-Dec-16 08:58

#	Activity ID	Activity Name	Original	Start	Finish
1		NODOS_Sites Reservoir_Ver2	3369	15-Mar-17 08:(	11-Feb-30 16:00
2		Furnish Materials	1095	27-Jan-20 08:(	05-Apr-24 16:00
3		Dams and Reservoirs	1410	15-Mar-22 08:(	09-Aug-27 17:00
4		Develop Res	1101	15-Mar-22 08:(	02-Jun-26 17:00
5		South Bridge Construction	1101	15-Mar-22 08:(	02-Jun-26 17:00
6		Main Dams	1410	15-Mar-22 08:(	09-Aug-27 17:00
7		Golden Gate Dam	1410	15-Mar-22 08:(	09-Aug-27 17:00
8		Sites Dam	695	03-Oct-23 08:00	01-Jun-26 17:00
9		Creek Diversion During Construction	375	22-Nov-22 08:(	29-Apr-24 17:00
10		Dams_General	1102	15-Mar-22 08:(	03-Jun-26 17:00
11		Saddle Dams	841	22-Nov-22 08:(	10-Feb-26 17:00
12		Holthouse	950	15-Mar-22 08:(	03-Nov-25 17:00
13		TRR Res	530	26-Apr-22 08:00	06-May-24 17:00
14		Canals and Conduits	1175	15-Mar-22 08:(	14-Sep-26 17:00
15		Delevan	1175	15-Mar-22 08:(	14-Sep-26 17:00
16		TRR	800	15-Mar-22 08:(	07-Apr-25 17:00
17		Pumping and Generating Plants	2064	15-Mar-22 08:(	08-Feb-30 16:00
18		IO Structure Tunnel	1180	11-Jul-23 08:00	17-Jan-28 16:00
19		Sites PGP	2000	15-Mar-22 08:(	12-Nov-29 16:00
20		TRR PGP	1525	15-Mar-22 08:(	17-Jan-28 16:00
21		Sac River PGP	2064	15-Mar-22 08:(	08-Feb-30 16:00
22		Fish Screen Structure	255	01-May-26 16:(	23-Apr-27 16:00
23		Red Bluff Pump Addition	457	15-Mar-22 08:(	13-Dec-23 17:00
24		General Property	1475	15-Mar-22 08:(	08-Nov-27 16:00
25		Recreation Areas	390	15-Mar-22 08:(	11-Sep-23 17:00
26		Operation and Maintenance Facility	1295	22-Nov-22 08:(	08-Nov-27 16:00
27		Transmission Interconnection	1445	15-Mar-22 08:(	27-Sep-27 16:00
28		Sites Substation	1300	15-Mar-22 08:(	08-Mar-27 16:00
29		TRR Switchyard	1095	15-Mar-22 08:(	25-May-26 16:00
30		Sacramento River PGP Switchyard	1300	15-Mar-22 08:(	08-Mar-27 16:00
31		Transmission Lines	1245	20-Dec-22 08:(	27-Sep-27 16:00
32		Develop alternate roadway to Ladoga	1484	15-Mar-17 08:(	21-Nov-22 17:00
33		Construct Emergency drawdown tunnel	465	15-Mar-22 08:(	25-Dec-23 17:00
34		Construct Holthouse-Sites connection channel	650	17-May-22 08:(	11-Nov-24 17:00
35		Access road to bridge - East side	240	15-Mar-22 08:(	13-Feb-23 17:00
36		Start Filling Sites Reservoir	1	08-Feb-30 16:(	11-Feb-30 16:00



Remaining Level of Effort | Remaining Work | Summary
Actual Level of Effort | Critical Remaining Work | Float Bar
Actual Work | Milestone | Neg Float Bar

Page 1 of 1

TASK filter: All Activities

Figure B.5-1. Design and Construction Schedule

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