

Construction Schedule for

Funks/TRR Pipeline

05

Subpackage

Phase	Code	Start Date	End Date	Working Days	Days/Week
05 Funks/TRR Pipeline	Funks/TRR Pipeline-05				
05.01 Funks TRR Connection Manifold	Funks/TRR Pipeline-0501	10/1/2026	5/1/2027	152	5
05.02 Funks Pipeline	Funks/TRR Pipeline-0502	5/7/2026	10/1/2026	105	5
05.03 Terminal Regulating Reservoir Pipeline	Funks/TRR Pipeline-0503	5/7/2026	8/3/2027	324	5

01

02

03

Offroad Equipment (Fossil Fuel) Inventory for

Funks/TRR Pipeline

05

Code	Equipment Name	General Equipment Category	#/day	Hours/day/ equipment	Fuel Type	Engine Horsepower (if known)	Fuel (gal/day) (if known)
Funks/TRR Pipeline-0501	Hyd. Excavator, 2.5 C.Y.	Excavators	0.33	8	Diesel		
Funks/TRR Pipeline-0501	Crawler Crane, 75 Ton	Cranes	0.03	8	Diesel		
Funks/TRR Pipeline-0501	Concrete Pump (Small)	Pumps	0.04	8	Diesel		
Funks/TRR Pipeline-0501	Sheepsfoot Roller, 240 H.P.	Rollers	0.13	8	Diesel		
Funks/TRR Pipeline-0501	F.E. Loader, W.M., 5.5 C.Y.	Tractors/Loaders/Backhoes	0.29	8	Diesel		
Funks/TRR Pipeline-0501	Truck Tractor, 220 H.P.	Off-Highway Tractors	0.10	8	Diesel		
Funks/TRR Pipeline-0501	Truck Tractor, 6x4, 380 H.P.	Off-Highway Tractors	0.64	8	Diesel		
Funks/TRR Pipeline-0501	Gas Engine Vibrator	Other Construction Equipment	0.07	8	Gasoline		
Funks/TRR Pipeline-0501	Welder, Gas Engine, 300 amp	Welders	0.03	8	Gasoline		
Funks/TRR Pipeline-0502	Hyd. Excavator, 2.5 C.Y.	Excavators	4.04	8	Diesel		
Funks/TRR Pipeline-0502	Hyd. Crane, 55 Ton	Cranes	4.20	8	Diesel		
Funks/TRR Pipeline-0502	Concrete Pump (Small)	Pumps	0.63	8	Diesel		
Funks/TRR Pipeline-0502	Sheepsfoot Roller, 240 H.P.	Rollers	1.50	8	Diesel		
Funks/TRR Pipeline-0502	F.E. Loader, W.M., 5.5 C.Y.	Tractors/Loaders/Backhoes	3.51	8	Diesel		
Funks/TRR Pipeline-0502	Truck Tractor, 220 H.P.	Off-Highway Tractors	1.12	8	Diesel		
Funks/TRR Pipeline-0502	Truck Tractor, 6x4, 380 H.P.	Off-Highway Tractors	10.07	8	Diesel		
Funks/TRR Pipeline-0502	Gas Engine Vibrator	Other Construction Equipment	1.26	8	Gasoline		
Funks/TRR Pipeline-0503	Asphalt Paver, 130 H.P.	Pavers	0.01	8	Diesel		
Funks/TRR Pipeline-0503	Horz. Boring Csg. Mch.	Bore/Drill Rigs	0.63	8	Diesel		
Funks/TRR Pipeline-0503	Hyd. Excavator, 1.5 C.Y.	Excavators	0.07	8	Diesel		
Funks/TRR Pipeline-0503	Hyd. Excavator, 2.5 C.Y.	Excavators	6.49	8	Diesel		
Funks/TRR Pipeline-0503	Backhoe Loader, 48 H.P.	Tractors/Loaders/Backhoes	0.00	8	Diesel		
Funks/TRR Pipeline-0503	Hydraulic Crane, 25 ton	Cranes	0.63	8	Diesel		
Funks/TRR Pipeline-0503	Hyd. Crane, 55 Ton	Cranes	5.78	8	Diesel		
Funks/TRR Pipeline-0503	S.P. Crane, 4x4, 12 Ton	Cranes	0.16	8	Diesel		
Funks/TRR Pipeline-0503	Grader, 30,000 Lbs.	Graders	0.34	8	Diesel		
Funks/TRR Pipeline-0503	Concrete Pump (Small)	Pumps	0.87	8	Diesel		
Funks/TRR Pipeline-0503	Grout Pump, 50 C.F./hr.	Pumps	1.18	8	Diesel		
Funks/TRR Pipeline-0503	Roller, Vibratory, 25 Ton	Rollers	0.18	8	Diesel		
Funks/TRR Pipeline-0503	Tandem Roller, 10 Ton	Rollers	0.01	8	Diesel		
Funks/TRR Pipeline-0503	Roller, Pneum. Whl., 12 Ton	Rollers	0.01	8	Diesel		
Funks/TRR Pipeline-0503	Sheepsfoot Roller, 240 H.P.	Rollers	2.74	8	Diesel		
Funks/TRR Pipeline-0503	S.P. Scraper, 14 C.Y.	Scrapers	0.10	8	Diesel		
Funks/TRR Pipeline-0503	Dozer, 200 H.P.	Rubber Tired Dozers	0.01	8	Diesel		
Funks/TRR Pipeline-0503	Dozer, 300 H.P.	Rubber Tired Dozers	0.11	8	Diesel		
Funks/TRR Pipeline-0503	F.E. Loader, Crl, 1.5 C.Y.	Tractors/Loaders/Backhoes	0.09	8	Diesel		
Funks/TRR Pipeline-0503	F.E. Loader, W.M., 5.5 C.Y.	Tractors/Loaders/Backhoes	6.02	8	Diesel		
Funks/TRR Pipeline-0503	Truck Tractor, 220 H.P.	Off-Highway Tractors	2.05	8	Diesel		
Funks/TRR Pipeline-0503	Truck Tractor, 6x4, 380 H.P.	Off-Highway Tractors	12.26	8	Diesel		
Funks/TRR Pipeline-0503	Truck Tractor, 6x4, 450 H.P.	Off-Highway Tractors	0.09	8	Diesel		
Funks/TRR Pipeline-0503	Gas Engine Vibrator	Other Construction Equipment	1.75	8	Gasoline		
Funks/TRR Pipeline-0503	Welder, Gas Engine, 300 amp	Welders	0.63	8	Gasoline		

Note:

1. Number of equipment/day = Total Equipment Hours / 8 hours per day / Total number of days of the Sub-package.
2. Number of equipment in this table represents averages throughout each sub-package. It does not represent a typical day or peak day conditions.

Jacobs Calculations for #/days

Package	Equipment	total hours (Engineering Data)	hours per day	total equipment days @listed hours per day	total number of working days/phase	Number of equipment/day @ listed hours per day
	Hyd. Excavator, 2.5 C.Y.	397.63	8	50	152	0.3
	Crawler Crane, 75 Ton	36.50	8	5	152	0.0
	Concrete Pump (Small)	43.11	8	5	152	0.0
	Sheepsfoot Roller, 240 H.P.	161.80	8	20	152	0.1
	F.E. Loader, W.M., 5.5 C.Y.	350.50	8	44	152	0.3
	Truck Tractor, 220 H.P.	121.35	8	15	152	0.1
	Truck Tractor, 6x4, 380 H.P.	773.34	8	97	152	0.6
	Gas Engine Vibrator	86.22	8	11	152	0.1
	Welder, Gas Engine, 300 amp	36.50	8	5	152	0.0
	Hyd. Excavator, 2.5 C.Y.	3,390.76	8	424	105	4.0
	Hyd. Crane, 55 Ton	3,530.00	8	441	105	4.2
	Concrete Pump (Small)	528.28	8	66	105	0.6
	Sheepsfoot Roller, 240 H.P.	1,258.70	8	157	105	1.5
	F.E. Loader, W.M., 5.5 C.Y.	2,950.91	8	369	105	3.5
	Truck Tractor, 220 H.P.	944.03	8	118	105	1.1
	Truck Tractor, 6x4, 380 H.P.	8,457.10	8	1057	105	10.1
	Gas Engine Vibrator	1,056.56	8	132	105	1.3
	Asphalt Paver, 130 H.P.	23.91	8	3	324	0.0
	Horz. Boring Csg. Mch.	1,622.40	8	203	324	0.6
	Hyd. Excavator, 1.5 C.Y.	168.57	8	21	324	0.1
	Hyd. Excavator, 2.5 C.Y.	16,811.27	8	2101	324	6.5
	Backhoe Loader, 48 H.P.	4.00	8	1	324	0.0
	Hydraulic Crane, 25 ton	1,622.40	8	203	324	0.6
	Hyd. Crane, 55 Ton	14,981.33	8	1873	324	5.8
	S.P. Crane, 4x4, 12 Ton	424.99	8	53	324	0.2
	Grader, 30,000 Lbs.	879.79	8	110	324	0.3
	Concrete Pump (Small)	2,266.61	8	283	324	0.9
	Grout Pump, 50 C.F./hr.	3,048.24	8	381	324	1.2
	Roller, Vibratory, 25 Ton	460.39	8	58	324	0.2
	Tandem Roller, 10 Ton	35.87	8	4	324	0.0
	Roller, Pneum. Whl., 12 Ton	23.91	8	3	324	0.0
	Sheepsfoot Roller, 240 H.P.	7,100.63	8	888	324	2.7
	S.P. Scraper, 14 C.Y.	260.57	8	33	324	0.1
	Dozer, 200 H.P.	13.33	8	2	324	0.0
	Dozer, 300 H.P.	285.88	8	36	324	0.1
	F.E. Loader, Crl, 1.5 C.Y.	220.74	8	28	324	0.1
	F.E. Loader, W.M., 5.5 C.Y.	15,600.23	8	1950	324	6.0
	Truck Tractor, 220 H.P.	5,325.47	8	666	324	2.1
	Truck Tractor, 6x4, 380 H.P.	31,782.23	8	3973	324	12.3
	Truck Tractor, 6x4, 450 H.P.	220.74	8	28	324	0.1
	Gas Engine Vibrator	4,533.22	8	567	324	1.7
	Welder, Gas Engine, 300 amp	1,622.40	8	203	324	0.6

Jacobs Equipment Types

Equipment	General Type	Fuel Type
Asphalt Paver, 130 H.P.	Pavers	Diesel
Horz. Boring Csg. Mch.	Bore/Drill Rigs	Diesel
Hyd. Excavator, 1.5 C.Y.	Excavators	Diesel
Hyd. Excavator, 2.5 C.Y.	Excavators	Diesel
Backhoe Loader, 48 H.P.	Tractors/Loaders/Backhoes	Diesel
Crawler Crane, 75 Ton	Cranes	Diesel
Hydraulic Crane, 25 ton	Cranes	Diesel
Hyd. Crane, 55 Ton	Cranes	Diesel
S.P. Crane, 4x4, 12 Ton	Cranes	Diesel
Grader, 30,000 Lbs.	Graders	Diesel
Concrete Pump (Small)	Pumps	Diesel
Grout Pump, 50 C.F./hr.	Pumps	Diesel
Roller, Vibratory, 25 Ton	Rollers	Diesel
Tandem Roller, 10 Ton	Rollers	Diesel
Roller, Pneum. Whl., 12 Ton	Rollers	Diesel
Sheepsfoot Roller, 240 H.P.	Rollers	Diesel
S.P. Scraper, 14 C.Y.	Scrapers	Diesel
Dozer, 200 H.P.	Rubber Tired Dozers	Diesel
Dozer, 300 H.P.	Rubber Tired Dozers	Diesel
F.E. Loader, Crl, 1.5 C.Y.	Tractors/Loaders/Backhoes	Diesel
F.E. Loader, W.M., 5.5 C.Y.	Tractors/Loaders/Backhoes	Diesel
Dump Truck, 12 C.Y., 400 H.P.	Off-Highway Trucks	Diesel
Water Tank Trailer, 5000 Gal.	Off-Highway Trucks	Diesel
Dump Trailer, 20 C.Y.	Off-Highway Trucks	Diesel
Truck Tractor, 220 H.P.	Off-Highway Tractors	Diesel
Truck Tractor, 6x4, 380 H.P.	Off-Highway Tractors	Diesel
Truck Tractor, 6x4, 450 H.P.	Off-Highway Tractors	Diesel
Gas Engine Vibrator	Other Construction Equipment	Gasoline
Welder, Electric, 300 amp	Welders	Electric
Welder, Gas Engine, 300 amp	Welders	Gasoline

Vehicle Inventory for

Funks/TRR Pipeline

05

Code	Vehicle	Primary Trip Purpose/Location (within construction footprint vs. offsite)	# of Vehicles	One-Way Trips/Day	Miles per Trip	Fuel Type	Fuel (gal/day) (if known)
Funks/TRR Pipeline-0501	Water Tank Trailer, 5000 Gal.	Onsite	1	8.0	1	Diesel	
Funks/TRR Pipeline-0501	Dump Trailer, 20 C.Y.	Onsite	1	50.9	1	Diesel	
Funks/TRR Pipeline-0502	Water Tank Trailer, 5000 Gal.	Onsite	1	89.9	1	Diesel	
Funks/TRR Pipeline-0502	Dump Trailer, 20 C.Y.	Onsite	1	805.4	1	Diesel	
Funks/TRR Pipeline-0503	Dump Truck, 12 C.Y., 400 H.P.	Onsite	1	0.8	1	Diesel	
Funks/TRR Pipeline-0503	Water Tank Trailer, 5000 Gal.	Onsite	1	171.2	1	Diesel	
Funks/TRR Pipeline-0503	Dump Trailer, 20 C.Y.	Onsite	2	980.9	2	Diesel	
Funks/TRR Pipeline-0501	Dump Truck - 20 cy	Offsite/Haul	1	5.0	25	Diesel	
Funks/TRR Pipeline-0501	Pipe Hauling Trucks	Offsite/Haul	1	0.2	120	Diesel	
Funks/TRR Pipeline-0502	Dump Truck - 20 cy	Offsite/Haul	1	78.5	25	Diesel	
Funks/TRR Pipeline-0502	Pipe Hauling Trucks	Offsite/Haul	1	5.8	120	Diesel	
Funks/TRR Pipeline-0503	Dump Truck - 20 cy	Offsite/Haul	1	95.6	25	Diesel	
Funks/TRR Pipeline-0503	Pipe Hauling Trucks	Offsite/Haul	1	8.3	120	Diesel	

Note:

1. Onsite water truck and dump truck numbers and miles per trip were set to 1.
2. The one-way trips/day were estimated by dividing the total number of trips by the number of days of the sub-package.
3. Number of trips per day in this table represents averages throughout each sub-package. It does not represent a typical day or peak day conditions.

Equipment	total hours (Engineering Data)	total number of working days/phase	Average hours/day	Miles/day (assume 10)
Water Tank Trailer, 5000 Gal.	121.35	152	0.8	8.0
Dump Trailer, 20 C.Y.	773.34	152	5.1	50.9
Water Tank Trailer, 5000 Gal.	944.03	105	9.0	89.9
Dump Trailer, 20 C.Y.	8,457.10	105	80.5	805.4
Dump Truck, 12 C.Y., 400 H.P.	26.67	324	0.1	0.8
Water Tank Trailer, 5000 Gal.	5,546.21	324	17.1	171.2
Dump Trailer, 20 C.Y.	31,782.23	324	98.1	980.9
Total amount	Assumption	One-way trips total	Number of days	
7540	Assume 20 cy per load	754	152	
146	Assume avg 35' per load p	24	152	
82456	Assume 20 cy per load	8,246	105	
10590	Assume avg 35' per laod	605	105	
309874	Assume 20 cy per load	30,987	324	
47268	Assume avg 35' per laod	2,701	324	

Employees Required to Construct Funks/TRR Pipeline 05

Code	Vehicle Type	# of Employees/Day	One-Way Trips/Day	Miles per Trip
Funks/TRR Pipeline-0501	Employee	6	12	60.0
Funks/TRR Pipeline-0502	Employee	77	154	60.0
Funks/TRR Pipeline-0503	Employee	131	262	60.0

Note:

1. Worker trips assumed that the trips would be from Sacramento (68 miles), Willows (19 miles), Williams (9 miles), and Red Bluff (60 miles). One-way distance of 60
2. Number of trips per day in this table represents averages throughout each sub-package. It does not represent a typical day or peak day conditions.

Jacobs Calculations

	Total labor hours (Engineering Data)	Hours per employee/day	Total days of construction	#employees/d ay	one-way Trips/day
	6240	8	152	6	12
	64355	8	105	77	154
	338605	8	324	131	262

miles was used.

Earthmoving/Paving Assumptions for Funks/TRR Pipeline 05

Code	<i>Daily</i>				
	Stripping or Grading (acres/day)	Borrow/Excavate (cy/day)	Dredge (cy/day)	Paving (sf/day)	Stripping or Grading (total acres)
Funks/TRR Pipeline-0501	0.0	939.2	0.0	0.0	0.0
Funks/TRR Pipeline-0502	0.0	10420.0	0.0	0.0	0.0
Funks/TRR Pipeline-0503	0.134	17116.5	0.0	526.8	21.7

Note:

1. Daily amounts were estimated using 50% of construction days.

Total

Borrow/Excavate (total cy)	Dredge (total cy)	Paving (total sf)
71380.0	0.0	0.0
547052.0	0.0	0.0
2772874.0	0.0	85344

Jacobs Calculations

Total # days/subpackage	Total # days/earthmoving -paving
152	76
105	52.5
324	162