

Construction Schedule for

TRR_West: Funks/TRR Pipeline

05

Subpackage

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

01

02

03

Offroad Equipment (Fossil Fuel) Inventory for

TRR_West: 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)
TRR_West: Funks/TRR Pipeline-0501	Hyd. Excavator, 2.5 C.Y.	Excavators	0.33	8	Diesel		
TRR_West: Funks/TRR Pipeline-0501	Crawler Crane, 75 Ton	Cranes	0.03	8	Diesel		
TRR_West: Funks/TRR Pipeline-0501	Concrete Pump (Small)	Pumps	0.04	8	Diesel		
TRR_West: Funks/TRR Pipeline-0501	Sheepsfoot Roller, 240 H.P.	Rollers	0.13	8	Diesel		
TRR_West: Funks/TRR Pipeline-0501	F.E. Loader, W.M., 5.5 C.Y.	Tractors/Loaders/Backhoes	0.29	8	Diesel		
TRR_West: Funks/TRR Pipeline-0501	Truck Tractor, 220 H.P.	Off-Highway Tractors	0.10	8	Diesel		
TRR_West: Funks/TRR Pipeline-0501	Truck Tractor, 6x4, 380 H.P.	Off-Highway Tractors	0.64	8	Diesel		
TRR_West: Funks/TRR Pipeline-0501	Gas Engine Vibrator	Other Construction Equipment	0.07	8	Gasoline		
TRR_West: Funks/TRR Pipeline-0501	Welder, Gas Engine, 300 amp	Welders	0.03	8	Gasoline		
TRR_West: Funks/TRR Pipeline-0502	Hyd. Excavator, 2.5 C.Y.	Excavators	3.20	8	Diesel		
TRR_West: Funks/TRR Pipeline-0502	Crawler Crane, 75 Ton	Cranes	4.44	8	Diesel		
TRR_West: Funks/TRR Pipeline-0502	Concrete Pump (Small)	Pumps	0.43	8	Diesel		
TRR_West: Funks/TRR Pipeline-0502	Sheepsfoot Roller, 240 H.P.	Rollers	0.90	8	Diesel		
TRR_West: Funks/TRR Pipeline-0502	F.E. Loader, W.M., 5.5 C.Y.	Tractors/Loaders/Backhoes	2.54	8	Diesel		
TRR_West: Funks/TRR Pipeline-0502	Truck Tractor, 220 H.P.	Off-Highway Tractors	0.68	8	Diesel		
TRR_West: Funks/TRR Pipeline-0502	Truck Tractor, 6x4, 380 H.P.	Off-Highway Tractors	12.37	8	Diesel		
TRR_West: Funks/TRR Pipeline-0502	Gas Engine Vibrator	Other Construction Equipment	0.86	8	Gasoline		
TRR_West: Funks/TRR Pipeline-0502	Welder, Gas Engine, 300 amp	Welders	4.44	8	Gasoline		
TRR_West: Funks/TRR Pipeline-0503	Horz. Boring Csg. Mch.	Bore/Drill Rigs	0.33	8	Diesel		
TRR_West: Funks/TRR Pipeline-0503	Hyd. Excavator, 1.5 C.Y.	Excavators	0.07	8	Diesel		
TRR_West: Funks/TRR Pipeline-0503	Hyd. Excavator, 2.5 C.Y.	Excavators	2.91	8	Diesel		
TRR_West: Funks/TRR Pipeline-0503	Backhoe Loader, 48 H.P.	Tractors/Loaders/Backhoes	0.00	8	Diesel		
TRR_West: Funks/TRR Pipeline-0503	Crawler Crane, 75 Ton	Cranes	3.22	8	Diesel		
TRR_West: Funks/TRR Pipeline-0503	Hydraulic Crane, 25 ton	Cranes	0.33	8	Diesel		
TRR_West: Funks/TRR Pipeline-0503	S.P. Crane, 4x4, 12 Ton	Cranes	0.16	8	Diesel		
TRR_West: Funks/TRR Pipeline-0503	Grader, 30,000 Lbs.	Graders	0.20	8	Diesel		
TRR_West: Funks/TRR Pipeline-0503	Concrete Pump (Small)	Pumps	0.32	8	Diesel		
TRR_West: Funks/TRR Pipeline-0503	Grout Pump, 50 C.F./hr.	Pumps	0.61	8	Diesel		
TRR_West: Funks/TRR Pipeline-0503	Roller, Vibratory, 25 Ton	Rollers	0.10	8	Diesel		
TRR_West: Funks/TRR Pipeline-0503	Sheepsfoot Roller, 240 H.P.	Rollers	1.04	8	Diesel		
TRR_West: Funks/TRR Pipeline-0503	S.P. Scraper, 14 C.Y.	Scrapers	0.06	8	Diesel		
TRR_West: Funks/TRR Pipeline-0503	Dozer, 300 H.P.	Rubber Tired Dozers	0.06	8	Diesel		
TRR_West: Funks/TRR Pipeline-0503	F.E. Loader, Crl, 1.5 C.Y.	Tractors/Loaders/Backhoes	0.05	8	Diesel		
TRR_West: Funks/TRR Pipeline-0503	F.E. Loader, W.M., 5.5 C.Y.	Tractors/Loaders/Backhoes	2.56	8	Diesel		
TRR_West: Funks/TRR Pipeline-0503	Truck Tractor, 220 H.P.	Off-Highway Tractors	0.78	8	Diesel		
TRR_West: Funks/TRR Pipeline-0503	Truck Tractor, 6x4, 380 H.P.	Off-Highway Tractors	7.86	9	Diesel		
TRR_West: Funks/TRR Pipeline-0503	Truck Tractor, 6x4, 450 H.P.	Off-Highway Tractors	0.04	10	Diesel		
TRR_West: Funks/TRR Pipeline-0503	Gas Engine Vibrator	Other Construction Equipment	0.47	11	Gasoline		
TRR_West: Funks/TRR Pipeline-0503	Welder, Gas Engine, 300 amp	Welders	2.37	12	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.	2,686.50	8	336	105	3.2
		Crawler Crane, 75 Ton	3,731.33	8	466	105	4.4
		Concrete Pump (Small)	361.41	8	45	105	0.4
		Sheepsfoot Roller, 240 H.P.	757.31	8	95	105	0.9
		F.E. Loader, W.M., 5.5 C.Y.	2,133.00	8	267	105	2.5
		Truck Tractor, 220 H.P.	567.99	8	71	105	0.7
		Truck Tractor, 6x4, 380 H.P.	10,392.19	8	1299	105	12.4
		Gas Engine Vibrator	722.82	8	90	105	0.9
		Welder, Gas Engine, 300 amp	3,731.33	8	466	105	4.4
		Horz. Boring Csg. Mch.	847.33	8	106	324	0.3
		Hyd. Excavator, 1.5 C.Y.	168.57	8	21	324	0.1
		Hyd. Excavator, 2.5 C.Y.	7,548.58	8	944	324	2.9
		Backhoe Loader, 48 H.P.	4.00	8	1	324	0.0
		Crawler Crane, 75 Ton	8,355.33	8	1044	324	3.2
		Hydraulic Crane, 25 ton	847.33	8	106	324	0.3
		S.P. Crane, 4x4, 12 Ton	424.99	8	53	324	0.2
		Grader, 30,000 Lbs.	506.43	8	63	324	0.2
		Concrete Pump (Small)	829.09	8	104	324	0.3
		Grout Pump, 50 C.F./hr.	1,592.16	8	199	324	0.6
		Roller, Vibratory, 25 Ton	265.01	8	33	324	0.1
		Sheepsfoot Roller, 240 H.P.	2,687.73	8	336	324	1.0
		S.P. Scraper, 14 C.Y.	154.51	8	19	324	0.1
		Dozer, 300 H.P.	165.69	8	21	324	0.1
		F.E. Loader, Crl, 1.5 C.Y.	127.06	8	16	324	0.0
		F.E. Loader, W.M., 5.5 C.Y.	6,633.24	8	829	324	2.6
		Truck Tractor, 220 H.P.	2,015.80	8	252	324	0.8
		Truck Tractor, 6x4, 38	22916.08	9	2546	324	7.9
		Truck Tractor, 6x4, 45	127.06	10	13	324	0.0
		Gas Engine Vibrator	1658.18	11	151	324	0.5
		Welder, Gas Engine, 3	9202.67	12	767	324	2.4

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, Cri, 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

TRR_West: Funks/TRR Pipeline

05

Code	Vehicle	Primary Trip Purpose/Location (within construction footprint vs. offsite)	# of Vehicles
TRR_West: Funks/TRR Pipeline-0501	Dump Truck - 20 cy	Offsite/Haul	1
TRR_West: Funks/TRR Pipeline-0502	Pipe Hauling Trucks	Offsite/Haul	1
TRR_West: Funks/TRR Pipeline-0502	Dump Truck - 20 cy	Offsite/Haul	1
TRR_West: Funks/TRR Pipeline-0502	Pipe Hauling Trucks	Offsite/Haul	1
TRR_West: Funks/TRR Pipeline-0503	Dump Truck - 20 cy	Offsite/Haul	1
TRR_West: Funks/TRR Pipeline-0503	Pipe Hauling Trucks	Offsite/Haul	1

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.

One-Way Trips/Day	Miles per Trip	Fuel Type	Fuel (gal/day) (if known)
5.0	25	Diesel	
0.2	120	Diesel	
96.5	25	Diesel	
6.1	120	Diesel	
66.9	25	Diesel	
5.0	120	Diesel	

Equipment	total hours (Engineering Data)	total number of working days/phase	Average hours/day	Miles/day (assume 10)
Total amount	Assumption	One-way trips total	Number of days	
7540	Assume 20 cy per load	754	152	
146	Assume avg 35' per load pl	24	105	
101323	Assume 20 cy per load	10,132	105	
11194	Assume avg 35' per laod	640	105	
216670	Assume 20 cy per load	21,667	324	
28268	Assume avg 35' per laod	1,615	324	

Employees Required to Construct TRR_West: Funks/TRR Pipeline 05

Code	Vehicle Type	# of Employees/Day	One-Way Trips/Day	Miles per Trip
TRR_West: Funks/TRR Pipeline-0501	Employee	6	12	60.0
TRR_West: Funks/TRR Pipeline-0502	Employee	100	200	60.0
TRR_West: Funks/TRR Pipeline-0503	Employee	88	176	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.
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
	83833	8	105	100	200
	227026	8	324	88	176

e of 60 miles was used.

Earthmoving/Paving Assumptions for

TRR_West: Funks/TR 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)
TRR_West: Funks/TRR Pipeline-0501	0.0	837.1	0.0	0.0	0.0
TRR_West: Funks/TRR Pipeline-0502	0.0	8278.6	0.0	0.0	0.0
TRR_West: Funks/TRR Pipeline-0503	0.077	7815.8	0.0	0.0	12.5

Note:

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

Total

Borrow/Excavate (total cy)	Dredge (total cy)	Paving (total sf)
63620.0	0.0	0.0
434626.0	0.0	0.0
1266165.0	0.0	0.0

Jacobs Calculations

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