CHAPTER 9
LISTING OF INSTALLATIONS

9-1. Index of Installations

Description	*Category*
Administration	AA
Airfield and Heliports	AG
Camp, PW	PW
Camp, Troop	NT
Hospital	GH
Maintenance, Vehicle	MT
Marine, Railway Repair	FP
Marine, Terminal POL	PA
Medical Depots	GH
Ordnance, Armament Rebuild Ship, Parks & Collection Point	JA
PECS (Containerized Supplies)	YY
Precast Parts Yard (Concrete, Panelized Wood and Steel)	PY
POL Fuel Drum Cleaning, Filling and Storage	PB
POL Pipeline	PD
POL Tactical Marine Terminal	PF
POL Tank Farm, Bulk Storage	PB
POL Tank Farm, Complex	PC
POL Tank Truck/Car Loading/Unloading	PE
Port, Break-Bulk Cargo	FP
Post Office	AP
Railroad, Regulating Station	FR
Railroad, Terminal	FT
Recreational Center	AR
Storage, Ammunition	DA
Signal Intelligence	CC
Storage, Dry Cargo	DC

9-2. Listing of Installations In Category Number Sequence

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TROPIC CLIMATE

HELIPORT,ARMY,MIN REQTS FOR 25 AIRCRAFT,1 UH-1H AND 24 AG0132
CH-47C OF THE TRANSP.CO.,HELICOPTER MEDIUM,INSTALLATION DWG
SHEET 7 OF 65,INITIAL STD,SUPPORT AREA,
GRADED AND DRAINED,SURFACING HEAVY DUTY MEMBRANE,PERSONNEL
FACIL-ORGANIC TOE EQPT,REAL ESTATE REQT FOR INST-104 ACRES,
REQD FROM LOCAL SOURCE---COARSE AGGR,1743 CY,FINE AGGR,1472
CY,MINERAL FILLER,658 CY,COMBAT BN CONSTR

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
111120AA	RUNWAY W/25 FT SHOULDERS,450 X 60		CH-54 AIRCRAFT	1.0	21	10	45603	409		218	627
111120AB	RUNWAY LENGTH CORRECTION,100 X 60		TEMP AND ALT	.0							
111120AC	RUNWAY OVERRUN,100 X 110 FT		CH-54 AIRCRAFT	2.0	6	4	4184	180		52	232
111120AD	APPROACH-DEPARTURE,1500X250-850 FT		CH-54 AIRCRAFT	4.0				679		435	1114
111120AE	CLEAR AREA,1000 SY			160.0	320	160	167360	9744		3944	13688
111141AA	TAXI-HOVERLANE,450 X 180 FT		CH-54 AIRCRAFT	1.2	38	34	33014	686		214	900
111210AB	TAXIWAY W/25 FT SHOULDERS,2000 X 40		CH-54 AIRCRAFT	5.2	426	161	864848	7864		4117	11981
111320AB	PARKING PAD,4EA 20 X 20 FT		UH-1 AIRCRAFT	.3		1	1967	9		4	13
111320AC	PARKING PAD,2EA 50 X 25 FT		CH-47 AIRCRAFT	12.0	12	36	78660	626		209	835
111370AB	AIRCRAFT WASHING APRON,50 X 25 FT		1/INSTALLATION	1.0	1	3	6498	25		9	34
111371AB	DEFUEL/DECONTN APR,50 X 25 FT		1/INSTALLATION	1.0	1	3	6498	25		9	34
111380AA	AC LOADING APR,2EA 50 X 25 FT		CH-47 AIRCRAFT	2.0	2	6	13110	70		35	105
111610AA	COMPASS SWING BASE,50 X 50 FT		1/INSTALLATION	1.0	1	3	6527	35		17	52
112110AA	HOT REFUELING PAD,2EA 50 X 25 FT		3/INSTALLATION	1.5	2	5	9833	52		26	78
12110AH	SUPPORT ACFT REFUELING 30000 G STOR		5 DAY SUPPLY	2.0	16	40	131052	441	336	928	1705
12110AJ	FUEL STORAGE AUGMENTATION 50000 GAL		5 DAY SUPPLY	1.0	5	5	16865	93	81	186	360
113315AA	AC CONTROL STATION,20 X 20 FT		1/INSTALLATION	1.0	3	2	15	9		1	10
113470AA	WIND DIRECTION INDICATOR		1/INSTALLATION	1.0			304		3	3	6
114111AA	FIRE AND RESCUE STATION,20 X 20 FT		1/INSTALLATION	1.0	3	2	15	9		1	10
142183AB	AMMUNITION STORAGE,2500SF			1.0				4		3	7
85110CK	ROAD PAVEMENT,CLASS C,6IN STBL 1MI		PROVIDE ACCESS	2.2	1472	994	7359	485		140	625
85110DG	HARDSTAND,APR,TXWY,OR RNWY 1000SQYD		AS REQUIRED	.3	30	20	150	12		4	16
85130KH	ROAD,CLASS C,GRADED AND DRAINED 1MI		PROVIDE ACCESS	2.2	26	13	15297	5589		2038	7627
85210AY	HARDSTAND GRADED AND DRAINED 1000SY		AS REQUIRED	.3	2	1	1321	94		33	127
187120AA	DRAINAGE HELIPORT,24 ACRES		1 IN./HR	1.0				67		49	116
					2387	1503	1410480	27207	420	12675	40302

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TROPIC CLIMATE

HELIPORT,ARMY,MIN REQTS FOR 25 AIRCRAFT,1 UH-1H AND 24 CH-47C OF THE TRANSP.CO.,HELICOPTER MEDIUM,INSTALLATION DWG SHEETS 8AND9 OF 65,INITIAL STANDARD SUPPORT AREA,GRADED AND DRAINED,SURFACING M8A1 LANDING MAT, PERSONNEL FACIL-TROOP CAMP INST NO NT1421,REAL ESTATE REQT FOR INST-123 ACRES,REQD FROM LOCAL SOURCE---COARSE AGGR,1584 CY,FINE AGGR,1338 CY,MINERAL FILLER,598 CY,COMBAT BN CONSTR AG0232

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
111120AC	RUNWAY OVERRUN,100 X 110 FT		CH-54 AIRCRAFT	2.0	6	4	4184	180		52	232
111120AD	APPROACH-DEPARTURE,1500X250-850 FT		CH-54 AIRCRAFT	4.0				679		435	1114
111120AE	CLEAR AREA,1000 SY			167.0	334	167	174682	10170		4117	14287
111120BA	RUNWAY W/25 FT SHOULDERS,450 X 60		CH-54 AIRCRAFT	1.0	131	77	73348	431		413	844
111120BC	RUNWAY LENGTH CORRECTION,100 X 60		TEMP AND ALT	.0							
111141AA	TAXI-HOVERLANE,450 X 180 FT		CH-54 AIRCRAFT	1.2	38	34	33014	686		214	900
111210AB	TAXIWAY W/25 FT SHOULDERS,2000 X 40		CH-54 AIRCRAFT	.2	16	6	33263	302		158	460
111210BB	TAXIWAY W/25 FT SHOULDERS,1000 X 40		CH-54 AIRCRAFT	10.2	2234	1265	1306457	8105		7853	15958
111320BB	PARKING PAD,4EA 20 X 20 FT		UH-1 AIRCRAFT	.3	3	2	2580	8		8	16
111320BC	PARKING PAD,10EA 50 X 25 FT		CH-47 AIRCRAFT	2.4	173	125	117766	515		519	1034
111340BD	HANGAR ACCESS,335 X 100 FT			1.0	147	108	104844	331		618	949
111370AB	AIRCRAFT WASHING APRON,50 X 25 FT		1/INSTALLATION	1.0	1	3	6498	25		9	34
111371AB	DEFUEL/DECONTN APR,50 X 25 FT		1/INSTALLATION	1.0	1	3	6498	25		9	34
111380BB	AC LOADING APR,4EA 50 X 25 FT		CH-47 AIRCRAFT	1.0	29	21	19627	73		73	146
111610AA	COMPASS SWING BASE,50 X 50 FT		1/INSTALLATION	1.0	1	3	6527	35		17	52
112110BB	HOT REFUELING PAD,2EA 50 X 25 FT		3/INSTALLATION	1.5	21	15	14721	54		54	108
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT		1.0	1	1	1246	12	75	29	116
12630AA	LDG FACIL FOR TWO FUEL TRUCKS	2-STATION		1.0	12	12	13862	218	471	1530	2219
113315BA	CONTROL TOWER LOW DENSITY TRAFFIC		1/INSTALLATION	1.0	16	21	4632	1	706	141	848
113470AA	WIND DIRECTION INDICATOR		1/INSTALLATION	1.0			304		3	3	6
14110BA	AFOPS BLDG 864SF PNL WD BDG W/ INT		1/INSTALLATION	1.0	27	33	18383	10	1399	1108	2517
114111BA	FIRE AND RSQ STA,FAC NO.73010AC		1/INSTALLATION	1.0	192	283	39238	80	1173	216	1469
114910AR	AIRCRAFT REVETMENT,IMPROVED,UH-1D/H		UH-1 AIRCRAFT	1.0	15	12	3919		77	129	206
114910AT	AIRCRAFT REVETMENT,IMPROVED,CH-47		CH-47 AIRCRAFT	24.0	504	384	132096		2749	4002	6751
121110BB	ORG MNT HANGAR,105 X 112 FT		CH-47 AIRCRAFT	3.0	237	468	773025	740		1327	2067
141120BA	FLAMMABLE STORAGE,12 X 24 FT			1.0	14	13	3322	1		1	2
41180AG	TANK, POL, 3000 BARREL, W/6 IN PIPE	3000 BBL	5 DAY SUPPLY	1.0	2	32	12538	131	450	305	886
142183BA	AMMUNITION STORAGE,24 X 36 FT			1.0	25	27	17138	1		1	2
85110CK	ROAD PAVEMENT,CLASS C,6IN STBL 1MI		PROVIDE ACCESS	2.0	1338	904	6690	441		128	569
85110DG	HARDSTAND,APR,TXWY,OR RNWY 1000SQYD		AS REQUIRED	.6	60	41	300	23		9	32
85130KH	ROAD,CLASS C,GRADED AND DRAINED 1MI		PROVIDE ACCESS	2.0	24	12	13906	5081		1853	6934
85210AY	HARDSTAND GRADED AND DRAINED 1000SY		AS REQUIRED	.6	4	2	2641	187		67	254
187120BA	DRAINAGE HELIPORT,25 ACRES		1 IN./HR	1.0	32	36	22513	93		81	174
87210AD	CONCERTINA,TRIPLE TAPE TYP D 1000LF		SECUR FENCE	11.0	1287	770	21582	447		1786	2233
					6925	4884	2991344	29085	7103	27265	63453

TROPIC CLIMATE

HELIPORT,ARMY,MIN REQTS FOR 25 AIRCRAFT,1 UH-1H AND 24 AG0332
CH-47C OF THE TRANSP.CO.,HELICOPTER MEDIUM,INSTALLATION DWG
SHEETS 10 AND 11 OF 65,TEMPORARY STD,
SUPPORT AREA,GRADED AND DRAINED,SURFACING BITUMINOUS
PAVEMENT,PERSONNEL FACIL-TROOP CAMP INST NO NT1621,REAL
ESTATE REQT FOR INST-123 ACRES,REQD FROM LOCAL SOURCE---
COARSE AGGR,882B CY,FINE AGGR,4118 CY,MINERAL FILLER,1269 CY

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
111120AD	APPROACH-DEPARTURE,1500X250-850 FT		CH-54 AIRCRAFT	4.0				679		435	1114
111120AE	CLEAR AREA,1000 SY			168.0	336	168	175728	10231		4141	14372
111120BF	RUNWAY OVERRUN,100 X 125 FT		CH-54 AIRCRAFT	2.0	8	6	4882	209		58	267
111120CA	RUNWAY W/25 FT SHOULDERS,450 X 75		CH-54 AIRCRAFT	1.0	260	210	13615	574		238	812
111120CB	RUNWAY LENGTH CORRECTION,100 X 75		TEMP AND ALT	.0							
111141AA	TAXI-HOVERLANE,450 X 180 FT		CH-54 AIRCRAFT	1.2	38	34	33014	686		214	900
111210CB	TAXIWAY W/25 FT SHOULDERS,1000 X 40		CH-54 AIRCRAFT	11.0	3443	2761	181357	10033		3924	13957
111320CB	PARKING PAD,4EA 20 X 20 FT		UH-1 AIRCRAFT	.3	4	3	72	21		4	25
111320CC	PARKING PAD,10EA 50 X 25 FT		CH-47 AIRCRAFT	2.4	228	182	3586	606		146	752
111340CD	HANGAR ACCESS,335 X 100 FT			1.0	250	200	3346	405		125	530
111370CB	AIRCRAFT WASHING APRON,50 X 25 FT		1/INSTALLATION	1.0	10	8	139	33		7	40
111371CB	DEFUEL/DECONTN APR,50 X 25 FT		1/INSTALLATION	1.0	10	8	139	33		7	40
111380CB	AC LOADING APR,4EA 50 X 25 FT		CH-47 AIRCRAFT	1.0	38	30	598	102		25	127
111610CA	COMPASS SWING BASE,50 X 50 FT		1/INSTALLATION	1.0	14	11	211	125		36	161
112110CB	HOT REFUELING PAD,2EA 50 X 25 FT		3/INSTALLATION	1.5	30	24	482	107		37	144
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT		1.0	1	1	1246	12	75	29	116
12630AA	LOG FACIL FOR TWO FUEL TRUCKS	2-STATION		1.0	12	12	13862	218	471	1530	2219
113315BA	CONTROL TOWER LOW DENSITY TRAFFIC		1/INSTALLATION	1.0	16	21	4632	1	706	141	848
113470AA	WIND DIRECTION INDICATOR		1/INSTALLATION	1.0			304		3	3	6
14110BA	AFOPS BLDG 864SF PNL WD BDG W/ INT		1/INSTALLATION	1.0	27	33	18383	10	1399	1108	2517
114111BA	FIRE AND RSQ STA,FAC NO.73010AC		1/INSTALLATION	1.0	192	283	39238	80	1173	216	1469
114910AR	AIRCRAFT REVETMENT,IMPROVED,UH-1D/H		UH-1 AIRCRAFT	1.0	15	12	3919		77	129	206
114910AT	AIRCRAFT REVETMENT,IMPROVED,CH-47		CH-47 AIRCRAFT	24.0	504	384	132096		2749	4002	6751
121110CB	ORG MNT HANGAR,105 X 112 FT		CH-47 AIRCRAFT	3.0	363	594	741540	713		922	1635
141120BA	FLAMMABLE STORAGE,12 X 24 FT			1.0	14	13	3322	1		1	2
41180AG	TANK, POL, 3000 BARREL, W76 IN PIPE	3000 BBL	5 DAY SUPPLY	1.0	2	32	12538	131	450	305	886
142183BA	AMMUNITION STORAGE,24 X 36 FT			1.0	25	27	17138	1		1	2
85110BT	ROAD CLASS C, 1@ MULTIPLE SURFACE		PROVIDE ACCESS	2.0	798	600	8372	490		87	577
85110DG	HARDSTAND,APR,TXWY,OR RNWY 1000SQYD		AS REQUIRED	.6	60	41	300	23		9	32
85130KH	ROAD,CLASS C,GRADED AND DRAINED 1MI		PROVIDE ACCESS	2.0	24	12	13906	5081		1853	6934
85210AY	HARDSTAND GRADED AND DRAINED 1000SY		AS REQUIRED	.6	4	2	2641	187		67	254
187120BA	DRAINAGE HELIPORT,25 ACRES		1 IN./HR	1.0	32	36	22513	93		81	174
87210AA	FENCE,CHAIN LK.W/2 OUTRGRS 1 1000LF		PERIM FENCING	11.0	187	561	132814	1994		6380	8374
87210AF	GATE,CHAINLINK SING/LEAF 3 WI 10 HI			5.0	5	10	1395	44		87	131
87210AG	GATE,VEH CHAINL DBL/LEAF 12WI 10 HI			6.0	6	12	2406	61		131	192
87210AJ	FENCE,CORNER POST 10 FT HI CHAINLIN			17.0			1853	247		197	444
					6956	6331	1591587	33231	7103	26676	67010

TROPIC CLIMATE

HELIPORT,ARMY,MIN REQTS FOR 27 AIRCRAFT,10 OH-58,9 AH-1G AND 8 UH-1H OF THE AIR CAVALRY TROOP,INSTALLATION DWG.SHEET 12OF 65,INITIAL STANDARD,SUPPORT AREA,GRADED AND DRAINED,SURFACING M8A1 LANDING MAT,PERSONNEL FACIL-TROOP CAMP INST NO NT1421,REAL ESTATE REQT FOR INST-65 ACRES,REQD FROM LOCAL SOURCE---COARSE AGGR,1268 CY,FINE AGGR,1071 CY, MINERAL FILLER,316 CY,COMBAT BN CONSTR AG1232

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
111120AC	RUNWAY OVERRUN,100 X 110 FT		CH-54 AIRCRAFT	2.0	6	4	4184	180		52	232
111120AD	APPROACH-DEPARTURE,1500X250-850 FT		CH-54 AIRCRAFT	4.0				679		435	1114
111120AE	CLEAR AREA,1000 SY			42.8	86	43	44769	2607		1055	3662
111120BA	RUNWAY W/25 FT SHOULDERS,450 X 60		CH-54 AIRCRAFT	1.0	131	77	73348	431		413	844
111120BC	RUNWAY LENGTH CORRECTION,100 X 60		TEMP AND ALT	.0							
111141AA	TAXI-HOVERLANE,450 X 180 FT		CH-54 AIRCRAFT	4.9	157	137	134809	2799		874	3673
111210AB	TAXIWAY W/25 FT SHOULDERS,2000 X 40		CH-54 AIRCRAFT	.2	16	6	33263	302		158	460
111320BA	PARKING PAD,10EA 12 X 12 FT		OH-58 AIRCRAFT	1.0	10	8	8713	23		23	46
111320BB	PARKING PAD,4EA 20 X 20 FT		AH-1G AIRCRAFT	4.3	39	30	36976	112		118	230
111340BA	HANGAR ACCESS,105 X 100 FT			1.0	47	35	36467	110		206	316
111370AA	AIRCRAFT WASHING APRON,40 X 20 FT		1/INSTALLATION	1.0	1	1	3249	22		6	28
111371AA	DEFUEL/DECONTN APR,40 X 20 FT		1/INSTALLATION	1.0	1	3	6498	22		6	28
111380BA	AC LOADING APR,6EA 20 X 20 FT		UH-1 AIRCRAFT	1.0	14	11	12898	36		36	72
111610AA	COMPASS SWING BASE,50 X 50 FT		1/INSTALLATION	1.0	1	3	6527	35		17	52
112110BA	HOT REFUELING PAD,6EA 20 X 20 FT		6/INSTALLATION	1.0	14	11	12898	36		36	72
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT		1.0	1	1	1246	12	75	29	116
12630AA	LDG FACIL FOR TWO FUEL TRUCKS	2-STATION		1.0	12	12	13862	218	471	1530	2219
113315BA	CONTROL TOWER LOW DENSITY TRAFFIC		1/INSTALLATION	1.0	16	21	4632	1	706	141	848
113470AA	WIND DIRECTION INDICATOR		1/INSTALLATION	1.0			304		3	3	6
14110BB	AFOPS BLDG 2160SF PNL WD BLDG W/ IN		1/INSTALLATION	1.0	170	953	96409	26	2712	769	3507
114111BA	FIRE AND RSQ STA,FAC NO.73010AC		1/INSTALLATION	1.0	192	283	39238	80	1173	216	1469
114910AN	AIRCRAFT REVETMENT,IMPROVED,OH-58		OH-58 AIRCRAFT	10.0	110	80	28000		566	1030	1596
114910AR	AIRCRAFT REVETMENT,IMPROVED,UH-1D/H		UH-1 AIRCRAFT	8.0	120	96	31352		615	1032	1647
114910AV	AIRCRAFT REVETMENT,IMPROVED,AH-1G		AH-1G AIRCRAFT	9.0	108	90	28926		626	1109	1735
121110BB	ORG MNT HANGAR,105 X 112 FT		UH-1 AIRCRAFT	1.0	79	156	257675	247		442	689
141120BA	FLAMMABLE STORAGE,12 X 24 FT			1.0	14	13	3322	1		1	2
41180AF	TANK, POL, 1000 BARREL, W/6 IN PIPE	1000 BBL	5 DAY SUPPLY	1.0	1	14	8663	116	450	218	784
42283AC	MAGAZINE,STEEL ARCH 16X36			1.0	14	31	4453	215	226	218	659
85110CK	ROAD PAVEMENT,CLASS C,6IN STBL 1MI		PROVIDE ACCESS	1.6	1070	723	5352	353		102	455
85110DG	HARDSTAND,APR,TXWY,OR RNWY 1000SQYD		AS REQUIRED	.6	60	41	300	23		9	32
85130KH	ROAD,CLASS C,GRADED AND DRAINED 1MI		PROVIDE ACCESS	1.6	19	10	11125	4065		1482	5547
85210AY	HARDSTAND GRADED AND DRAINED 1000SY		AS REQUIRED	.6	4	2	2641	187		67	254
187120BB	DRAINAGE HELIPORT,11 ACRES		1 IN./HR	1.0	14	17	9880	29		29	58
87210AD	CONCERTINA,TRIPLE TAPE TYP D 1000LF		SECUR FENCE	9.2	1076	644	18050	374		1494	1868
					3603	3556	980029	13341	7623	13356	34320

TROPIC CLIMATE

HELIPORT,ARMY,MIN REQTS FOR 27 AIRCRAFT,10 OH-58,9 AH-1G AND 8 UH-1H OF THE AIR CAVALRY TROOP,INSTALLATION DWG.SHEET 13OF 65,TEMPORARY STD,SUPPORT AREA,GRADED AND DRAINED,SURFACING BITUMINOUS PAVEMENT,PERSONNEL FACIL-TROOP CAMP INST NO NT1621,REAL ESTATE REQT FOR INST-65 ACRES,REQD FROM LOCAL SOURCE---COARSE AGGR,2320 CY,FINE AGGR,1027 CY, MINERAL FILLER,327 CY,COMBAT BN AND SUP CO CONSTR AG1332

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
111120AD	APPROACH-DEPARTURE,1500X250-850 FT		CH-54 AIRCRAFT	4.0				679		435	1114
111120AE	CLEAR AREA,1000 SY			41.5	83	42	43409	2527		1023	3550
111120BF	RUNWAY OVERRUN,100 X 125 FT		CH-54 AIRCRAFT	2.0	8	6	4882	209		58	267
111120CA	RUNWAY W/25 FT SHOULDERS,450 X 75		CH-54 AIRCRAFT	1.0	260	210	13615	574		238	812
111120CB	RUNWAY LENGTH CORRECTION,100 X 75		TEMP AND ALT	.0							
111141AA	TAXI-HOVERLANE,450 X 180 FT		CH-54 AIRCRAFT	5.0	160	140	137560	2857		892	3749
111210CB	TAXIWAY W/25 FT SHOULDERS,1000 X 40		CH-54 AIRCRAFT	.4	125	100	6595	365		143	508
111320CA	PARKING PAD,10EA 12 X 12 FT		OH-58 AIRCRAFT	1.0	11	9	327	177		35	212
111320CB	PARKING PAD,4EA 20 X 20 FT		AH-1G AIRCRAFT	4.3	56	43	1036	306		62	368
111340CA	HANGAR ACCESS,105 X 100 FT			1.0	79	63	1056	149		41	190
111370CA	AIRCRAFT WASHING APRON,40 X 20 FT		1/INSTALLATION	1.0	6	5	86	25		4	29
111371CA	DEFUEL/DECONTN APR,40 X 20 FT		1/INSTALLATION	1.0	6	5	86	25		4	29
111380CA	AC LOADING APR,6EA 20 X 20 FT		UH-1 AIRCRAFT	1.0	18	15	344	106		22	128
111610CA	COMPASS SWING BASE,50 X 50 FT		1/INSTALLATION	1.0	14	11	211	125		36	161
112110CA	HOT REFUELING PAD,6EA 20 X 20 FT		6/INSTALLATION	1.0	18	15	344	117		45	162
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT		1.0	1	1	1246	12	75	29	116
12630AA	LDG FACIL FOR TWO FUEL TRUCKS	2-STATION		1.0	12	12	13862	218	471	1530	2219
113315BA	CONTROL TOWER LOW DENSITY TRAFFIC		1/INSTALLATION	1.0	16	21	4632	1	706	141	848
113470AA	WIND DIRECTION INDICATOR		1/INSTALLATION	1.0			304		3	3	6
14110BB	AFOPS BLDG 2160SF PNL WD BLDG W/ IN		1/INSTALLATION	1.0	170	953	96409	26	2712	769	3507
114111BA	FIRE AND RSQ STA,FAC NO.73010AC		1/INSTALLATION	1.0	192	283	39238	80	1173	216	1469
114910AN	AIRCRAFT REVETMENT,IMPROVED,OH-58		OH-58 AIRCRAFT	10.0	110	80	28000		566	1030	1596
114910AR	AIRCRAFT REVETMENT,IMPROVED,UH-1D/H		UH-1 AIRCRAFT	8.0	120	96	31352		615	1032	1647
114910AV	AIRCRAFT REVETMENT,IMPROVED,AH-1G		AH-1G AIRCRAFT	9.0	108	90	28926		626	1109	1735
121110CB	ORG MNT HANGAR,105 X 112 FT		UH-1 AIRCRAFT	1.0	121	198	247180	238		307	545
141120BA	FLAMMABLE STORAGE,12 X 24 FT			1.0	14	13	3322	1		1	2
41180AF	TANK, POL, 1000 BARREL, W/6 IN PIPE	1000 BBL	5 DAY SUPPLY	1.0	1	14	8663	116	450	218	784
42283AC	MAGAZINE,STEEL ARCH 16X36			1.0	14	31	4453	215	226	218	659
85110BT	ROAD CLASS C, 1@ MULTIPLE SURFACE		PROVIDE ACCESS	1.6	638	480	6698	392		70	462
85110CN	HARDSTAND,APR,TXWY,OR RNWY 1000SQYD		AS REQUIRED	.8	41	30	398	49		23	72
85130KH	ROAD,CLASS C,GRADED AND DRAINED 1MI		PROVIDE ACCESS	1.6	19	10	11125	4065		1482	5547
85210AY	HARDSTAND GRADED AND DRAINED 1000SY		AS REQUIRED	.8	6	2	3522	249		89	338
187120BB	DRAINAGE HELIPORT,11 ACRES		1 IN./HR	1.0	14	17	9880	29		29	58
87210AA	FENCE,CHAIN LK.W/2 OUTRGRS 1' 1000LF		PERIM FENCING	10.0	170	510	120740	1813		5800	7613
87210AF	GATE,CHAINLINK SING/LEAF 3 WI 10 HI			5.0	5	10	1395	44		87	131
87210AG	GATE,VEH CHAINL DBL/LEAF 12WI 10 HI			6.0	6	12	2406	61		131	192
87210AJ	FENCE,CORNER POST 10 FT HI CHAINLIN			16.0			1744	232		186	418
					2622	3527	875046	16082	7623	17538	41243

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TROPIC CLIMATE

HELIPORT,ARMY,MIN REQTS FOR 10 AIRCRAFT,9 CH-54A AND 1 UH-1H OF THE TRANSP.CO,HELICOPTER HEAVY,INSTALLATION DWG.SHEET 14 OF 65,INITIAL STD,SUPPORT AREA,GRADED AND DRAINED,SURFACING HEAVY DUTY MEMBRANE,PERSONNEL FACIL-ORGANIC TOE EQPT,REAL ESTATE REQT FOR INST-66 ACRES,REQD FROM LOCAL SOURCE---COARSE AGGR,1505 CY,FINE AGGR,1272 CY, MINERAL FILLER,569 CY,COMBAT BN CONSTR AG2132

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
111120AA	RUNWAY W/25 FT SHOULDERS,450 X 60		CH-54 AIRCRAFT	1.0	21	10	45603	409		218	627
111120AB	RUNWAY LENGTH CORRECTION,100 X 60		TEMP AND ALT	.0							
111120AC	RUNWAY OVERRUN,100 X 110 FT		CH-54 AIRCRAFT	2.0	6	4	4184	180		52	232
111120AD	APPROACH-DEPARTURE,1500X250-850 FT		CH-54 AIRCRAFT	4.0				679		435	1114
111120AE	CLEAR AREA,1000 SY			120.0	240	120	125520	7308		2958	10266
111141AA	TAXI-HOVERLANE,450 X 180 FT		CH-54 AIRCRAFT	1.0	32	28	27512	571		178	749
111210AB	TAXIWAY W/25 FT SHOULDERS,2000 X 40		CH-54 AIRCRAFT	2.7	221	84	449056	4083		2138	6221
111320AB	PARKING PAD,4EA 20 X 20 FT		UH-1 AIRCRAFT	.3		1	1967	9		4	13
111320AD	PARKING PAD,50 X 50 FT		CH-54 AIRCRAFT	9.0	9	27	58743	313		157	470
111340AA	HANGAR ACCESS,100 X 100 FT			1.0	6	1	14906	96		68	164
111370AD	AIRCRAFT WASHING APRON,50 X 50 FT		1/INSTALLATION	1.0	1	3	6498	35		17	52
111371AD	DEFUEL/DECONTN APR,100 X 100 FT		1/INSTALLATION	1.0	6	1	14906	96		68	164
111380AB	AC LOADING APR,50 X 50 FT		CH-54 AIRCRAFT	4.0	4	12	26108	139		70	209
111610AA	COMPASS SWING BASE,50 X 50 FT		1/INSTALLATION	1.0	1	3	6527	35		17	52
112110AB	HOT REFUELING PAD,50 X 50 FT		2/INSTALLATION	2.0	2	6	13054	70		35	105
12110AH	SUPPORT ACFT REFUELING 30000 G STOR		5 DAY SUPPLY	2.0	16	40	131052	441	336	928	1705
113315AA	AC CONTROL STATION,20 X 20 FT		1/INSTALLATION	1.0	3	2	15	9		1	10
113470AA	WIND DIRECTION INDICATOR		1/INSTALLATION	1.0			304		3	3	6
114111AA	FIRE AND RESCUE STATION,20 X 20 FT		1/INSTALLATION	1.0	3	2	15	9		1	10
85110CK	ROAD PAVEMENT,CLASS C,6IN STBL 1MI		PROVIDE ACCESS	1.9	1271	859	6356	419		121	540
85110DG	HARDSTAND,APR,TXWY,OR RNWY 1000SQYD		AS REQUIRED	.4	40	27	200	16		6	22
85130KH	ROAD,CLASS C,GRADED AND DRAINED 1MI		PROVIDE ACCESS	1.9	23	11	13211	4827		1760	6587
85210AY	HARDSTAND GRADED AND DRAINED 1000SY		AS REQUIRED	.4	3	1	1761	125		45	170
187120AB	DRAINAGE HELIPORT,10 ACRES		1 IN./HR	1.0				30		20	50
					1908	1242	947498	19899	339	9300	29538

TROPIC CLIMATE

HELIPORT,ARMY,MIN REQTS FOR 10 AIRCRAFT,9 CH-54A AND 1 UH-1H AG2242
OF THE TRANSP.CO,HELICOPTER HEAVY,INSTALLATION DWG.SHEET 15
OF 65 INITIAL STANDARD,REAR AREA,GRADED
AND DRAINED,SURFACING M8A1 LANDING MAT,PERSONNEL FACIL-TROOP
CAMP INST NO NT1421,REAL ESTATE REQT FOR INST-93 ACRES,REQD
FROM LOCAL SOURCE---COARSE AGGR,1426 CY,FINE AGGR,1205 CY,
MINERAL FILLER,539 CY,COMBAT BN CONSTR

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
111120AD	APPROACH-DEPARTURE,1500X250-850 FT		CH-54 AIRCRAFT	4.0				679		435	1114
111120AE	CLEAR AREA,1000 SY			115.0	230	115	120290	7004		2835	9839
111120BB	RUNWAY W/25 FT SHOULDERS,450 X 75		CH-54 AIRCRAFT	1.0	164	91	91243	503		505	1008
111120BD	RUNWAY LENGTH CORRECTION,100 X 75		TEMP AND ALT	.0							
111120BF	RUNWAY OVERRUN,100 X 125 FT		CH-54 AIRCRAFT	2.0	8	6	4882	209		58	267
111141AA	TAXI-HOVERLANE,450 X 180 FT		CH-54 AIRCRAFT	1.0	32	28	27512	571		178	749
111210AB	TAXIWAY W/25 FT SHOULDERS,2000 X 40		CH-54 AIRCRAFT	.2	16	6	33263	302		158	460
111210BB	TAXIWAY W/25 FT SHOULDERS,1000 X 40		CH-54 AIRCRAFT	5.5	1205	682	704462	4370		4235	8605
111320BD	PARKING PAD,40 X 40 FT		UH-1 AIRCRAFT	1.0	8	7	8181	26		28	54
111320BE	PARKING PAD,10EA 100 X 100 FT		CH-54 AIRCRAFT	.9	408	222	224910	749		1216	1965
111340BB	HANGAR ACCESS,220 X 100 FT			1.0	98	73	74006	220		412	632
111370AF	AIRCRAFT WASHING APRON,100 X 100 FT		1/INSTALLATION	1.0	6	1	14906	96		68	164
111371AD	DEFUEL/DECONTN APR,100 X 100 FT		1/INSTALLATION	1.0	6	1	14906	96		68	164
111380BC	AC LOADING APR,4EA 100 X 100 FT		CH-54 AIRCRAFT	1.0	181	99	99732	396		592	988
111610AA	COMPASS SWING BASE,50 X 50 FT		1/INSTALLATION	1.0	1	3	6527	35		17	52
112110BD	HOT REFUELING PAD,2EA 100 X 100 FT		2/INSTALLATION	1.0	89	68	72151	299		310	609
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT		1.0	1	1	1246	12	75	29	116
12630AA	LDG FACIL FOR TWO FUEL TRUCKS	2-STATION		1.0	12	12	13862	218	471	1530	2219
113315BA	CONTROL TOWER LOW DENSITY TRAFFIC		1/INSTALLATION	1.0	16	21	4632	1	706	141	848
113470AA	WIND DIRECTION INDICATOR		1/INSTALLATION	1.0			304		3	3	6
14110BA	AFOPS BLDG 864SF PNL WD BDG W/ INT		1/INSTALLATION	1.0	27	33	18383	10	1399	1108	2517
114111BA	FIRE AND RSQ STA,FAC NO.73010AC		1/INSTALLATION	1.0	192	283	39238	80	1173	216	1469
114910AR	AIRCRAFT REVETMENT,IMPROVED,UH-1D/H		UH-1 AIRCRAFT	1.0	15	12	3919		77	129	206
114910AU	AIRCRAFT REVETMENT,IMPROVED,CH-54		CH-54 AIRCRAFT	9.0	378	297	98577		1958	2610	4568
121110BB	ORG MNT HANGAR,105 X 112 FT		CH-54 AIRCRAFT	2.0	158	312	515350	493		885	1378
141120BA	FLAMMABLE STORAGE,12 X 24 FT			1.0	14	13	3322	1		1	2
41180AF	TANK, POL, 1000 BARREL, W/6 IN PIPE	1000 BBL	5 DAY SUPPLY	1.0	1	14	8663	116	450	218	784
85110AT	ROAD CLASS A, 6@ STABILIZED SURFACE		PROVIDE ACCESS	1.8	2140	1445	10701	715		198	913
85110DG	HARDSTAND,APR,TXWY,OR RNWY 1000SQYD		AS REQUIRED	.6	60	41	300	23		9	32
85130AY	ROAD,CLASS A,GRADED AND DRAINED 1MI		PROVIDE ACCESS	1.8	29	14	17086	6525		2623	9148
85210AY	HARDSTAND GRADED AND DRAINED 1000SY		AS REQUIRED	.6	4	2	2641	187		67	254
187120BC	DRAINAGE HELIPORT,15 ACRES		1 IN./HR	1.0	25	27	17759	59		55	114
87210AD	CONCERTINA,TRIPLE TAPE TYP D 1000LF		SECUR FENCE	9.1	1065	637	17854	369		1478	1847
					6589	4566	2270808	24364	6312	22415	53091

TROPIC CLIMATE

HELIPORT,ARMY,MIN REQTS FOR 10 AIRCRAFT,9 CH-54A AND 1 UH-1H AG2342
OF THE TRANSP.CO,HELICOPTER HEAVY,INSTALLATION DWG.SHEET 16
OF 65,TEMPORARY STD,REAR AREA,GRADED AND
DRAINED,SURFACING BITUMINOUS PAVEMENT,PERSONNEL FACIL-TROOP
CAMP INST NO NT1621,REAL ESTATE REQT FOR INST-93 ACRES,REQD
FROM LOCAL SOURCE---COARSE AGGR,7909 CY,FINE AGGR,3638 CY,
MINERAL FILLER,1109 CY,COMBAT BN AND SUP CO CONSTR

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
111120AD	APPROACH-DEPARTURE,1500X250-850 FT		CH-54 AIRCRAFT	4.0				679		435	1114
111120AE	CLEAR AREA,1000 SY			119.0	238	119	124474	7247		2933	10180
111120BF	RUNWAY OVERRUN,100 X 125 FT		CH-54 AIRCRAFT	2.0	8	6	4882	209		58	267
111120CA	RUNWAY W/25 FT SHOULDERS,450 X 75		CH-54 AIRCRAFT	1.0	260	210	13615	574		238	812
111120CB	RUNWAY LENGTH CORRECTION,100 X 75		TEMP AND ALT	.0							
111141AA	TAXI-HOVERLANE,450 X 180 FT		CH-54 AIRCRAFT	1.0	32	28	27512	571		178	749
111210CB	TAXIWAY W/25 FT SHOULDERS,1000 X 40		CH-54 AIRCRAFT	4.2	1315	1054	69245	3831		1498	5329
111320CD	PARKING PAD,40 X 40 FT		UH-1 AIRCRAFT	1.0	13	10	207	36		7	43
111320CE	PARKING PAD,10EA 100 X 100 FT		CH-54 AIRCRAFT	.9	672	536	10499	830		292	1122
111340CB	HANGAR ACCESS,220 X 100 FT			1.0	168	134	2252	291		83	374
111370CD	AIRCRAFT WASHING APRON,100 X 100 FT		1/INSTALLATION	1.0	75	60	1003	149		41	190
111371CD	DEFUEL/DECONTN APR,100 X 100 FT		1/INSTALLATION	1.0	75	60	1003	149		41	190
111380CC	AC LOADING APR,4EA 100 X 100 FT		CH-54 AIRCRAFT	1.0	299	239	4453	400		142	542
111610CA	COMPASS SWING BASE,50 X 50 FT		1/INSTALLATION	1.0	14	11	211	125		36	161
112110CD	HOT REFUELING PAD,2EA 100 X 100 FT		2/INSTALLATION	1.0	150	120	2351	299		145	444
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT		1.0	1	1	1246	12	75	29	116
12630AA	LDG FACIL FOR TWO FUEL TRUCKS	2-STATION		1.0	12	12	13862	218	471	1530	2219
113315BA	CONTROL TOWER LOW DENSITY TRAFFIC		1/INSTALLATION	1.0	16	21	4632	1	706	141	848
113470AA	WIND DIRECTION INDICATOR		1/INSTALLATION	1.0			304		3	3	6
14110BA	AFOPS BLDG 864SF PNL WD BDG W/ INT		1/INSTALLATION	1.0	27	33	18383	10	1399	1108	2517
114111BA	FIRE AND RSQ STA,FAC NO.73010AC		1/INSTALLATION	1.0	192	283	39238	80	1173	216	1469
114910AR	AIRCRAFT REVETMENT,IMPROVED,UH-1D/H		UH-1 AIRCRAFT	1.0	15	12	3919		77	129	206
114910AU	AIRCRAFT REVETMENT,IMPROVED,CH-54		CH-54 AIRCRAFT	1.0	42	33	10953		218	290	508
121110CB	ORG MNT HANGAR,105 X 112 FT		CH-54 AIRCRAFT	2.0	242	396	494360	476		615	1091
141120BA	FLAMMABLE STORAGE,12 X 24 FT			1.0	14	13	3322	1		1	2
41180AF	TANK, POL, 1000 BARREL, W/6 IN PIPE	1000 BBL	5 DAY SUPPLY	1.0	1	14	8663	116	450	218	784
85110AB	ROAD,CLASS A,1IN MULT. SURF.	1MI	PROVIDE ACCESS	1.8	1397	1075	16358	762		133	895
85110CN	HARDSTAND,APR,TXWY,OR RNWY	1000SQYD	AS REQUIRED	.6	31	23	299	37		17	54
85130AY	ROAD,CLASS A,GRADED AND DRAINED	1MI	PROVIDE ACCESS	1.8	29	14	17086	6525		2623	9148
85210AY	HARDSTAND GRADED AND DRAINED	1000SY	AS REQUIRED	.6	4	2	2641	187		67	254
187120BC	DRAINAGE HELIPORT,15 ACRES		1 IN./HR	1.0	25	27	17759	59		55	114
87210AA	FENCE,CHAIN LK.W/2 OUTRGRS	1 1000LF	PERIM FENCING	9.0	153	459	108666	1631		5220	6851
87210AF	GATE,CHAINLINK SING/LEAF 3 WI	10 HI		2.0	2	4	558	17		35	52
87210AG	GATE,VEH CHAINL DBL/LEAF 12WI	10 HI		2.0	2	4	802	20		44	64
87210AJ	FENCE,CORNER POST 10 FT HI CHAINLIN			16.0			1744	232		186	418
					5524	5013	1026502	25774	4572	18787	49133

TROPIC CLIMATE

HELIPORT,ARMY,MIN REQTS FOR 37 AIRCRAFT,17 UH-1H AND 20 OH-58A OF THE AVIATION CO.,CORPS,INSTALLATION DWG.SHEET 17OF 65,INITIAL STD,SUPPORT AREA,GRADED AND DRAINED,SURFACING HEAVY DUTY MEMBRANE,PERSONNEL FACIL-ORGANIC TOE EQPT,REAL ESTATE REQT FOR INST-49 ACRES,REQD FROM LOCAL SOURCE---COARSE AGGR,1188 CY,FINE AGGR,1004 CY, MINERAL FILLER,449 CY,COMBAT BN CONSTR AG3132

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
111120AA	RUNWAY W/25 FT SHOULDERS,450 X 60		UH-1 AIRCRAFT	1.0	21	10	45603	409		218	627
111120AB	RUNWAY LENGTH CORRECTION,100 X 60		TEMP AND ALT	.0							
111120AC	RUNWAY OVERRUN,100 X 110 FT		UH-1 AIRCRAFT	2.0	6	4	4184	180		52	232
111120AD	APPROACH-DEPARTURE,1500X250-850 FT		UH-1 AIRCRAFT	4.0				679		435	1114
111120AE	CLEAR AREA,1000 SY			38.0	76	38	39748	2314		937	3251
111141AA	TAXI-HOVERLANE,450 X 180 FT		UH-1 AIRCRAFT	4.5	144	126	123804	2571		803	3374
111320AA	PARKING PAD,9EA 12 X 12 FT		OH-58 AIRCRAFT	2.3	2	7	15339	53		23	76
111320AB	PARKING PAD,4EA 20 X 20 FT		UH-1 AIRCRAFT	4.3	4	13	28187	125		56	181
111370AB	AIRCRAFT WASHING APRON,50 X 25 FT		1/INSTALLATION	1.0	1	3	6498	25		9	34
111371AB	DEFUEL/DECONTN APR,50 X 25 FT		1/INSTALLATION	1.0	1	3	6498	25		9	34
111380AA	AC LOADING APR,2EA 50 X 25 FT		UH-1 AIRCRAFT	2.0	2	6	13110	70		35	105
112110AC	HOT REFUELING PAD,2EA 50 X 50 FT		2/INSTALLATION	1.0	6	9	16704	55		35	90
12110AH	SUPPORT ACFT REFUELING 30000 G STOR		5 DAY SUPPLY	2.0	16	40	131052	441	336	928	1705
113315AA	AC CONTROL STATION,20 X 20 FT		1/INSTALLATION	1.0	3	2	15	9		1	10
113470AA	WIND DIRECTION INDICATOR		1/INSTALLATION	1.0			304		3	3	6
114111AA	FIRE AND RESCUE STATION,20 X 20 FT		1/INSTALLATION	1.0	3	2	15	9		1	10
142183AA	AMMUNITION STORAGE,700SF			1.0				1		1	2
85110CK	ROAD PAVEMENT,CLASS C,6IN STBL 1MI		PROVIDE ACCESS	1.5	1004	678	5018	331		96	427
85110DG	HARDSTAND,APR,TXWY,OR RNWY 1000SQYD		AS REQUIRED	.2	20	14	100	8		3	11
85130KH	ROAD,CLASS C,GRADED AND DRAINED 1MI		PROVIDE ACCESS	1.5	18	9	10430	3811		1390	5201
85210AY	HARDSTAND GRADED AND DRAINED 1000SY		AS REQUIRED	.2	1	1	880	62		22	84
187120AC	DRAINAGE HELIPORT,11 ACRES		1 IN./HR	1.0				15		7	22
					1328	965	447489	11193	339	5064	16596

TROPIC CLIMATE

HELIPORT,ARMY,MIN REQTS FOR 37 AIRCRAFT,17 UH-1H AND 20 OH-58A OF THE AVIATION CO.,CORPS,INSTALLATION DWG.SHEET 180F 65,INITIAL ALTERNATE STANDARD,SUPPORT AREA,GRADED AND DRAINED,SURFACING M8A1 LANDING MAT,PERSONNEL FACIL-TROOP CAMP INST NO NT1421,REAL ESTATE REQT FOR INST-84 ACRES,REQD FROM LOCAL SOURCE---COARSE AGGR,1822 CY,FINE AGGR,1539 CY, MINERAL FILLER,688 CY,COMBAT BN CONSTR AG3232

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
111120AC	RUNWAY OVERRUN,100 X 110 FT		CH-54 AIRCRAFT	2.0	6	4	4184	180		52	232
111120AD	APPROACH-DEPARTURE,1500X250-850 FT		CH-54 AIRCRAFT	4.0				679		435	1114
111120AE	CLEAR AREA,1000 SY			45.9	92	46	48011	2795		1131	3926
111120BA	RUNWAY W/25 FT SHOULDERS,450 X 60		CH-54 AIRCRAFT	1.0	131	77	73348	431		413	844
111120BC	RUNWAY LENGTH CORRECTION,100 X 60		TEMP AND ALT	.0							
111141AA	TAXI-HOVERLANE,450 X 180 FT		CH-54 AIRCRAFT	5.0	160	140	137560	2857		892	3749
111210AB	TAXIWAY W/25 FT SHOULDERS,2000 X 40		CH-54 AIRCRAFT	.2	16	6	33263	302		158	460
111320BA	PARKING PAD,10EA 12 X 12 FT		OH-58 AIRCRAFT	2.0	20	16	17426	46		46	92
111320BB	PARKING PAD,4EA 20 X 20 FT		UH-1 AIRCRAFT	4.3	39	30	36976	112		118	230
111340BA	HANGAR ACCESS,105 X 100 FT			1.0	47	35	36467	110		206	316
111370AB	AIRCRAFT WASHING APRON,50 X 25 FT		1/INSTALLATION	1.0	1	3	6498	25		9	34
111371AB	DEFUEL/DECONTN APR,50 X 25 FT		1/INSTALLATION	1.0	1	3	6498	25		9	34
111380BB	AC LOADING APR,4EA 50 X 25 FT		UH-1 AIRCRAFT	1.0	29	21	19627	73		73	146
111610AA	COMPASS SWING BASE,50 X 50 FT		1/INSTALLATION	1.0	1	3	6527	35		17	52
112110BC	HOT REFUELING PAD,2EA 50 X 50 FT		2/INSTALLATION	1.0	24	18	18418	73		73	146
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT		1.0	1	1	1246	12	75	29	116
12630AA	LDG FACIL FOR TWO FUEL TRUCKS	2-STATION		1.0	12	12	13862	218	471	1530	2219
613120BA	NAVIGATION AIDS BUILDING,24 X 24 FT		1/INSTALLATION	1.0	20	22	13194	9	436	415	860
113315BA	CONTROL TOWER LOW DENSITY TRAFFIC		1/INSTALLATION	1.0	16	21	4632	1	706	141	848
113470AA	WIND DIRECTION INDICATOR		1/INSTALLATION	1.0			304		3	3	6
14110BB	AFOPS BLDG 2160SF PNL WD BLDG W/ IN		1/INSTALLATION	1.0	170	953	96409	26	2712	769	3507
114111BA	FIRE AND RSQ STA,FAC NO.73010AC		1/INSTALLATION	1.0	192	283	39238	80	1173	216	1469
114910AN	AIRCRAFT REVETMENT,IMPROVED,OH-58		OH-58 AIRCRAFT	20.0	220	160	56000		1131	2059	3190
114910AR	AIRCRAFT REVETMENT,IMPROVED,UH-1D/H		UH-1 AIRCRAFT	17.0	255	204	66623		1306	2194	3500
121110BB	ORG MNT HANGAR,105 X 112 FT		UH-1 AIRCRAFT	1.0	79	156	257675	247		442	689
141120BA	FLAMMABLE STORAGE,12 X 24 FT			1.0	14	13	3322	1		1	2
41180AF	TANK, POL, 1000 BARREL, W/6 IN PIPE	1000 BBL	5 DAY SUPPLY	1.0	1	14	8663	116	450	218	784
142183BA	AMMUNITION STORAGE,24 X 36 FT			1.0	25	27	17138	1		1	2
85110CK	ROAD PAVEMENT,CLASS C,6IN STBL 1MI		PROVIDE ACCESS	2.3	1539	1040	7694	507		147	654
85110DG	HARDSTAND,APR,TXWY,OR RNWY 1000SQYD		AS REQUIRED	.4	40	27	200	16		6	22
85130KH	ROAD,CLASS C,GRADED AND DRAINED 1MI		PROVIDE ACCESS	2.3	28	14	15992	5843		2131	7974
85210AY	HARDSTAND GRADED AND DRAINED 1000SY		AS REQUIRED	.4	3	1	1761	125		45	170
187120BB	DRAINAGE HELIPORT,11 ACRES		1 IN./HR	1.0	14	17	9880	29		29	58
87210AD	CONCERTINA,TRIPLE TAPE TYP D 1000LF		SECUR FENCE	8.7	1018	609	17069	353		1413	1766
					4214	3976	1075705	15327	8463	15421	39211

TROPIC CLIMATE

HELIPORT,ARMY,MIN REQTS FOR 37 AIRCRAFT,17 UH-1H AND 20 AG3332
OH-58A OF THE AVIATION CO.,CORPS,INSTALLATION DWG.SHEET 190F
65,TEMPORARY STD,SUPPORT AREA,GRADED AND
DRAINED SURFACING BITUMINOUS PAVEMENT PERSONNEL FACIL-TROOP
CAMP INST NO NT1621,REAL ESTATE REQT FOR INST-84 ACRES,REQD
FROM LOCAL SOURCE---COARSE AGGR,2978 CY,FINE AGGR,1306 CY,
MINERAL FILLER,418 CY,COMBAT BN AND SUP CO CONSTR

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	CONSTR EFFORT IN MANHOURS VERT	CONSTR EFFORT IN MANHOURS GENL	CONSTR EFFORT IN MANHOURS TOT
111120AD	APPROACH-DEPARTURE,1500X250-850 FT		CH-54 AIRCRAFT	4.0				679		435	1114
111120AE	CLEAR AREA,1000 SY			49.9	100	50	52195	3039		1230	4269
111120BF	RUNWAY OVERRUN,100 X 125 FT		CH-54 AIRCRAFT	2.0	8	6	4882	209		58	267
111120CA	RUNWAY W/25 FT SHOULDERS,450 X 75		CH-54 AIRCRAFT	1.0	260	210	13615	574		238	812
111120CB	RUNWAY LENGTH CORRECTION,100 X 75		TEMP AND ALT	.0							
111141AA	TAXI-HOVERLANE,450 X 180 FT		CH-54 AIRCRAFT	4.8	154	134	132058	2742		856	3598
111210CB	TAXIWAY W/25 FT SHOULDERS,1000 X 40		CH-54 AIRCRAFT	.3	94	75	4946	274		107	381
111320CA	PARKING PAD,10EA 12 X 12 FT		OH-58 AIRCRAFT	2.0	22	18	654	354		70	424
111320CB	PARKING PAD,4EA 20 X 20 FT		UH-1 AIRCRAFT	4.3	56	43	1036	306		62	368
111340CA	HANGAR ACCESS,105 X 100 FT			1.0	79	63	1056	149		41	190
111370CB	AIRCRAFT WASHING APRON,50 X 25 FT		1/INSTALLATION	1.0	10	8	139	33		7	40
111371CB	DEFUEL/DECONTN APR,50 X 25 FT		1/INSTALLATION	1.0	10	8	139	33		7	40
111380CB	AC LOADING APR,4EA 50 X 25 FT		4/INSTALLATION	1.0	38	30	598	102		25	127
111610CA	COMPASS SWING BASE,50 X 50 FT		1/INSTALLATION	1.0	14	11	211	125		36	161
112110CC	HOT REFUELING PAD,2EA 50 X 50 FT		2/INSTALLATION	1.0	38	32	2297	238		81	319
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT		1.0	1	1	1246	12	75	29	116
12630AA	LDG FACIL FOR TWO FUEL TRUCKS	2-STATION		1.0	12	12	13862	218	471	1530	2219
613120BA	NAVIGATION AIDS BUILDING,24 X 24 FT		1/INSTALLATION	1.0	20	22	13194	9	436	415	860
113315BA	CONTROL TOWER LOW DENSITY TRAFFIC		1/INSTALLATION	1.0	16	21	4632	1	706	141	848
113470AA	WIND DIRECTION INDICATOR		1/INSTALLATION	1.0			304		3	3	6
141108B	AFOPS BLDG 2160SF PNL WD BLDG W/ IN		1/INSTALLATION	1.0	170	953	96409	26	2712	769	3507
114111BA	FIRE AND RSQ STA,FAC NO.73010AC		1/INSTALLATION	1.0	192	283	39238	80	1173	216	1469
114910AN	AIRCRAFT REVETMENT,IMPROVED,OH-58		OH-58 AIRCRAFT	20.0	220	160	56000		1131	2059	3190
114910AR	AIRCRAFT REVETMENT,IMPROVED,UH-1D/H		UH-1 AIRCRAFT	17.0	255	204	66623		1306	2194	3500
121110CB	ORG MNT HANGAR,105 X 112 FT		UH-1 AIRCRAFT	1.0	121	198	247180	238		307	545
141120BA	FLAMMABLE STORAGE,12 X 24 FT			1.0	14	13	3322	1		1	2
41180AF	TANK, POL, 1000 BARREL, W/6 IN PIPE	1000 BBL	5 DAY SUPPLY	1.0	1	14	8663	116	450	218	784
142183BA	AMMUNITION STORAGE,24 X 36 FT			1.0	25	27	17138	1		1	2
85110BT	ROAD CLASS C, 1@ MULTIPLE SURFACE		PROVIDE ACCESS	2.3	918	690	9628	564		100	664
85110CN	HARDSTAND,APR,TXWY,OR RNWY 1000SQYD		AS REQUIRED	.4	20	15	199	24		12	36
85130KH	ROAD,CLASS C,GRADED AND DRAINED 1MI		PROVIDE ACCESS	2.3	28	14	15992	5843		2131	7974
85210AY	HARDSTAND GRADED AND DRAINED 1000SY		AS REQUIRED	.4	3	1	1761	125		45	170
187120BB	DRAINAGE HELIPORT,11 ACRES		1 IN./HR	1.0	14	17	9880	29		29	58
87210AA	FENCE,CHAIN LK.W/2 OUTRGRS 1 1000LF		PERIM FENCING	9.0	153	459	108666	1631		5220	6851
87210AF	GATE,CHAINLINK SING/LEAF 3 WI 10 HI			6.0	6	12	1674	52		104	156
87210AG	GATE,VEH CHAINL DBL/LEAF 12WI 10 HI			7.0	7	14	2807	71		152	223
87210AJ	FENCE,CORNER POST 10 FT HI CHAINLIN			14.0			1526	203		162	365
					3079	3818	933770	18101	8463	19091	45655

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TROPIC CLIMATE

AIRCRAFT PARKING AND MAINTENANCE,COLLOCATED WITH AIRFORCE AG4132
AIRFIELD,MIN FACILS FOR 18 AIRCRAFT,6 OV-1B AND 12 OV-1C OF
THE MIL.INTEL.CO.,INSTALLATION DWG.SHEET 36 OF 65,
INITIAL STD, SUPPORT AREA,GRADED AND DRAINED,
SURFACING HEAVY DUTY MEMBRANE,PERSONNEL FACIL-ORGANIC TOE
EQPT,REAL ESTATE REQT FOR INST-13 ACRES REQD FROM LOCAL
SOURCE---COARSE AGGR,634 CY,FINE AGGR,536 CY,MINERAL FILLER,

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
111120AE	CLEAR AREA,1000 SY			7.2	14	7	7531	438		177	615
111210AA	TAXIWAY W/25 FT SHOULDERS,500 X 30		OV-1 AIRCRAFT	.5	15	10	27302	178		99	277
111210AC	TAXIWAY W/25 FT SHOULDERS,50 X 50		OV-1 AIRCRAFT	2.0	4	6	15186	148		99	247
111310AA	FIXED-WING AC PARK APR W/TAXILANE		OV-1 AIRCRAFT	4.0	56	12	125640	673		348	1021
111370AC	AIRCRAFT WASHING APRON,40 X 50 FT		1/INSTALLATION	1.0	1	3	6498	32		15	47
111371AC	DEFUEL/DECONTN APR,80 X 50 FT		1/INSTALLATION	1.0	3	5	12996	48		28	76
111382AA	SPECIAL PURPOSE APRON W/TAXILANE		OV-1 AIRCRAFT	1.0	16	4	35660	203		104	307
12110AH	SUPPORT ACFT REFUELING 30000 G STOR		5 DAY SUPPLY	2.0	16	40	131052	441	336	928	1705
142183AB	AMMUNITION STORAGE,2500SF			.3				1		1	2
85110CK	ROAD PAVEMENT,CLASS C,6IN STBL 1MI		PROVIDE ACCESS	.8	535	362	2676	176		51	227
85110DG	HARDSTAND,APR,TXWY,OR RNWY 1000SQYD		AS REQUIRED	.4	40	27	200	16		6	22
85130KH	ROAD,CLASS C,GRADED AND DRAINED 1MI		PROVIDE ACCESS	.8	10	5	5562	2032		741	2773
85210AY	HARDSTAND GRADED AND DRAINED 1000SY		AS REQUIRED	.4	3	1	1761	125		45	170
187120AD	DRAINAGE FIXED-WING AC,11 ACRES		1 IN./HR	1.0				9		4	13
					713	482	372064	4520	336	2646	7502

TROPIC CLIMATE

AIRCRAFT PARKING AND MAINTENANCE,COLLOCATED WITH AIRFORCE AG4232
AIRFIELD,MIN FACILS FOR 18 AIRCRAFT,6 OV-1B,AND 12 OV-1C OF
THE MIL.INTEL.CO.,INSTALLATION DWG.SHEET 37 OF 65,
CLIMATE,INITIAL ALTERNATE STANDARD,SUPT AREA,GRADED, DRAINED
SURFACING M8A1 LANDING MAT PERSONNEL FACIL-TROOP CAMP INST
NO NT1421,REAL ESTATE REQT FOR INST-24 ACRES,REQD FROM LOCAL
SOURCE---COARSE AGGR,476 CY,FINE AGGR 402 CY,MINERAL FILLER,

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
111120AE	CLEAR AREA,1000 SY			9.0	18	9	9414	548		222	770
111210BA	TAXIWAY W/25 FT SHOULDERS,1000 X 30		OV-1 AIRCRAFT	.4	66	38	48913	286		271	557
111310BA	FIXED-WING AC PARK APR W/TAXILANE		OV-1 AIRCRAFT	4.1	381	209	210396	1135		1355	2490
111340BC	HANGAR ACCESS,248 X 100 FT			1.0	109	80	76893	291		526	817
111370AE	AIRCRAFT WASHING APRON,60 X 50 FT		1/INSTALLATION	1.0	1	3	6498	41		22	63
111371AC	DEFUEL/DECONTN APR,80 X 50 FT		1/INSTALLATION	1.0	3	5	12996	48		28	76
111382BA	SPECIAL PURPOSE APRON W/TAXILANE		OV-1 AIRCRAFT	1.0	110	60	62723	313		342	655
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT		1.0	1	1	1246	12	75	29	116
12630AA	LDG FACIL FOR TWO FUEL TRUCKS	2-STATION		1.0	12	12	13862	218	471	1530	2219
14110BB	AFOPS BLDG 2160SF PNL WD BLDG W/ IN		1/INSTALLATION	1.0	170	953	96409	26	2712	769	3507
121110BA	ORG MNT HANGAR,76 X 88 FT		OV-1 AIRCRAFT	3.0	138	240	451926	522		922	1444
141120BA	FLAMMABLE STORAGE,12 X 24 FT			1.0	14	13	3322	1		1	2
41180AF	TANK, POL, 1000 BARREL, W/6 IN PIPE	1000 BBL	5 DAY SUPPLY	1.0	1	14	8663	116	450	218	784
142183BA	AMMUNITION STORAGE,24 X 36 FT			1.0	25	27	17138	1		1	2
85110CK	ROAD PAVEMENT,CLASS C,6IN STBL 1MI		PROVIDE ACCESS	.6	401	271	2007	132		38	170
85110DG	HARDSTAND,APR,TXWY,OR RNWY 1000SQYD		AS REQUIRED	.4	40	27	200	16		6	22
85130KH	ROAD,CLASS C,GRADED AND DRAINED 1MI		PROVIDE ACCESS	.6	7	4	4172	1524		556	2080
85210AY	HARDSTAND GRADED AND DRAINED 1000SY		AS REQUIRED	.4	3	1	1761	125		45	170
187120BD	DRAINAGE FIXED-WING AC,14 ACRES		1 IN./HR	1.0	8	13	4391	13		15	28
87210AD	CONCERTINA,TRIPLE TAPE TYP D 1000LF		SECUR FENCE	4.0	468	280	7848	162		650	812
					1976	2260	1040778	5530	3708	7546	16784

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TROPIC CLIMATE

AIRCRAFT PARKING AND MAINTENANCE,COLLOCATED WITH AIRFORCE AG4332
AIRFIELD,MIN FACILS FOR 18 AIRCRAFT,6 OV-1B,AND 12 OV-1C OF
THE MIL.INTEL.CO.,INSTALLATION DWG.SHEET 38 OF 65,
TEMPORARY STD,SUPPORT AREA,GRADED AND DRAINED,
SURFACING BITUMINOUS PAVEMENT,PERSONNEL FACIL-TROOP CAMP
INST NO NT1621,REAL ESTATE REQT FOR INST-24 ACRES,REQD FROM
LOCAL SOURCE---COARSE AGGR,2263 CY,FINE AGGR,1027 CY,MINERAL

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
111120AE	CLEAR AREA,1000 SY		OV-1 AIRCRAFT	9.1	18	9	9519	554		224	778
111210CA	TAXIWAY W/25 FT SHOULDERS,1000 X 30		OV-1 AIRCRAFT	.4	96	77	6200	342		131	473
111310CA	FIXED-WING AC PARK APR W/TAXILANE		OV-1 AIRCRAFT	4.1	623	496	14699	1326		452	1778
111340CC	HANGAR ACCESS,248 X 100 FT			1.0	185	148	2479	291		83	374
111370CC	AIRCRAFT WASHING APRON,60 X 50 FT		1/INSTALLATION	1.0	23	18	302	49		12	61
111371CC	DEFUEL/DECONTN APR,80 X 50 FT		1/INSTALLATION	1.0	30	24	404	65		17	82
111382CA	SPECIAL PURPOSE APRON W/TAXILANE		OV-1 AIRCRAFT	1.0	181	144	4471	377		139	516
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT		1.0	1	1	1246	12	75	29	116
12630AA	LDG FACIL FOR TWO FUEL TRUCKS	2-STATION		1.0	12	12	13862	218	471	1530	2219
14110BB	AFOPS BLDG 2160SF PNL WD BLDG W/ IN		1/INSTALLATION	1.0	170	953	96409	26	2712	769	3507
121110CA	ORG MNT HANGAR,76 X 88 FT		OV-1 AIRCRAFT	3.0	213	315	434034	500		626	1126
141120BA	FLAMMABLE STORAGE,12 X 24 FT			1.0	14	13	3322	1		1	2
41180AF	TANK, POL, 1000 BARREL, W/6 IN PIPE	1000 BBL	5 DAY SUPPLY	1.0	1	14	8663	116	450	218	784
142183BA	AMMUNITION STORAGE,24 X 36 FT			1.0	25	27	17138	1		1	2
85110BT	ROAD CLASS C, 1@ MULTIPLE SURFACE		PROVIDE ACCESS	.6	239	180	2512	147		26	173
85110CN	HARDSTAND,APR,TXWY,OR RNWY 1000SQYD		AS REQUIRED	.4	20	15	199	24		12	36
85130KH	ROAD,CLASS C,GRADED AND DRAINED 1MI		PROVIDE ACCESS	.6	7	4	4172	1524		556	2080
85210AY	HARDSTAND GRADED AND DRAINED 1000SY		AS REQUIRED	.4	3	1	1761	125		45	170
187120BD	DRAINAGE FIXED-WING AC,14 ACRES		1 IN./HR	1.0	8	13	4391	13		15	28
87210AA	FENCE,CHAIN LK.W/2 OUTRGRS 1 1000LF		PERIM FENCING	4.0	68	204	48296	725		2320	3045
87210AF	GATE,CHAINLINK SING/LEAF 3 WI 10 HI			3.0	3	6	837	26		52	78
87210AG	GATE,VEH CHAINL DBL/LEAF 12WI 10 HI			4.0	4	8	1604	41		87	128
87210AJ	FENCE,CORNER POST 10 FT HI CHAINLIN			15.0			1635	218		174	392
					1944	2682	678155	6721	3708	7519	17948

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TROPIC CLIMATE

RUNWAY,ARMY,MIN.FACILITIES FOR C-130 ACRAFT INSTALLATION DWG AG5032
SHEET 39 OF 65,INITIAL ALTERNATE STD.,SUPPORT
AREA,GRADED AND DRAINED,SURFACING M8A1 LANDING MAT,REQD
FROM LOCAL SOURCES---COARSE AGGR,1030 CY,FINE AGGR,870 CY,
MINERAL FILLER,389 CY,COMBAT BN CONSTR

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
111110BA	RUNWAY W/40 FT SHOULDERS,1000 X 96		C-130 AIRCRAFT	3.5	1561	872	918162	4603		4507	9110
111110BB	RUNWAY LENGTH CORRECTION,100 X 96		TEMP AND ALT	.0							
111110BC	RUNWAY OVERRUN,300 X 96 FT		C-130 AIRCRAFT	2.0	16	12	11158	418		122	540
111110BD	RUNWAY TURNAROUND,2EA 200 X 52 FT		C-130 AIRCRAFT	1.0	91	49	49689	299		310	609
111110BE	ON-OFF TAXIWAY,100 X 36 FT		C-130 AIRCRAFT	6.0	114	66	78888	496		426	922
111110BF	APPROACH ZONE,32000X596-2500 FT		C-130 AIRCRAFT	2.0				232			232
111110BG	LANDING AREA GRADED-DRAINED,1000SY			39.0	78	39	47580	3223		961	4184
111110BH	CLEAR ZONE,500X249-596 FT		C-130 AIRCRAFT	2.0	72	58	50212	635		354	989
111350BA	WARM-UP APRON,100 X 96 FT		C-130 AIRCRAFT	2.8	123	67	70459	422		613	1035
85110CK	ROAD PAVEMENT,CLASS C,6IN STBL 1MI		AS REQUIRED	2.2	1472	994	7359	485		140	625
85130KH	ROAD,CLASS C,GRADED AND DRAINED 1MI		AS REQUIRED	2.2	26	13	15297	5589		2038	7627
187120BE	DRAINAGE FIXED-WING AC,9 ACRES		1 IN./HR	1.0	10	16	7773	32		29	61
87210AD	CONCERTINA,TRIPLE TAPE TYP D 1000LF		SECUR FENCE	11.9	1392	833	23348	483		1933	2416
					4955	3019	1279925	16917		11433	28350

TROPIC CLIMATE

RUNWAY,ARMY,MIN.FACILITIES FOR C-130 ACRAFT INSTALLATION DWG AG5042
SHEET 40 OF 65 TEMPORARY STD,REAR AREA,
GRADED AND DRAINED,SURFACING BITUMINOUS PAVEMENT,REQD FROM
LOCAL SOURCES---COARSE AGGR,18766 CY,FINE AGGR,9383 CY,
MINERAL FILLER,2540 CY,COMBAT BN AND SUP CO CONSTR

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
111110BG	LANDING AREA GRADED-DRAINED,1000SY			47.0	94	47	57340	3885		1159	5044
111110CA	RUNWAY W/50 FT SHOULDERS,1000 X 150		C-130 AIRCRAFT	6.0	9348	7722	295476	15660		7856	23516
111110CB	RUNWAY LENGTH CORRECTION,100 X 150		TEMP AND ALT	.0							
111110CC	RUNWAY OVERRUN,500 X 150 FT		C-130 AIRCRAFT	2.0	42	34	28594	966		360	1326
111110CD	RUNWAY TURNAROUND,2EA 200 X 25 FT		C-130 AIRCRAFT	1.0	103	85	1567	258		81	339
111110CE	ON-OFF TAXIWAY,100 X 36 FT		C-130 AIRCRAFT	6.0	234	192	13206	1009		374	1383
111110CF	APPROACH ZONE,32000X670-3500 FT		C-130 AIRCRAFT	2.0				232			232
111110CH	CLEAR ZONE,500X320-670 FT		C-130 AIRCRAFT	2.0	82	66	57536	748		418	1166
111350CA	WARM-UP APRON,100 X 100 FT		C-130 AIRCRAFT	2.8	291	241	7356	694		211	905
85110AB	ROAD,CLASS A,1IN MULT. SURF.	1MI	AS REQUIRED	3.0	2328	1791	27264	1270		222	1492
85130AY	ROAD,CLASS A,GRADED AND DRAINED	1MI	AS REQUIRED	3.0	48	24	28476	10875		4372	15247
187120CA	DRAINAGE FIXED-WING AC,22 ACRES		1 IN./HR	1.0	27	35	15015	49		46	95
87210AA	FENCE,CHAIN LK.W/2 OUTRGRS	1 1000LF	PERIM FENCING	17.0	289	867	205258	3081		9860	12941
87210AF	GATE,CHAINLINK SING/LEAF	3 WI 10 HI		2.0	2	4	558	17		35	52
87210AG	GATE,VEH CHAINL DBL/LEAF	12WI 10 HI		2.0	2	4	802	20		44	64
87210AJ	FENCE,CORNER POST 10 FT HI CHAINLIN			12.0			1308	174		139	313
					12890	11112	739756	38938		25177	64115

TROPIC CLIMATE

SIGNAL INTELEGENCE INSTALLATION,TEMPORARY STANDARD OF CONST CC1012
RUCTION, TROPIC CLIMATE. 400 MAN TROOP CAMP FACILITIES
ARE INCLUDED. WOOD FRAME FACILITIES FOR SUPPORT AND PRE-ENG
METAL FOR OPERATIONS,REQUIRES 39.65 ACRES,1597 CUBIC YARDS
OF COARSE AGGR.,25000GPD WATER AND 7000GPD SEWAGE.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR HORZ	EFFORT IN MANHOURS VERT	EFFORT IN MANHOURS GENL	EFFORT IN MANHOURS TOT
413120AG	SIGINT OPS/CMD BLDG 80X100 DESERT	8000SF	AS REQUIRED	1.0	47090	554118	23822249	690	9570	1656	11916
413120AH	SIGINT OPS/COMP BLDG.80X100 DESERT	8000SF	AS REQUIRED	1.0	47092	554115	23831869	690	9570	1656	11916
413120AJ	SIGINT INST/OPRS BLDG 80X100FT DSRT	8000SF	AS REQUIRED	1.0	47084	554107	23824757	690	9570	1714	11974
413120AK	SIGINT ELE/SUPLY BLDG 80X100FT DSRT	8000SF	AS REQUIRED	1.0	47086	554109	23822550	690	9570	1714	11974
21410GG	2400 SQ.FT. BUILDING GG WOOD		1PER INST	1.0	712	636	54627	534	4247	1389	6170
44110BA	STOREHOUSE WD FR BLDG 20X50X8	20X50X8FT	AS REQUIRED	1.0	22	27	4897	46	668	197	911
55010BC	DISP.TROOP,20X60 W/O WARD,WD W/INT		1 PER INST	1.0	34	48	12751				
161050BN	HQTRS & UNIT SUP BLDG 20X 40X8	20X40X8FT	AS REQUIRED	1.0	19	25	4628	41	625	116	782
172111AW	BRKS 50MAN 20X100 WOOD BLDG	20X100X8FT	72 SF PER MAN	8.0	360	440	74808	522	8712	2158	11392
72210GB	INT,KIT+DNG 5-11HD MAN 60X120FT D/T		1PER INSTAL	1.0	38	88	194536		4346	758	5104
173015ED	GUARD HOUSE WD FRAME BLDG W/INTER	20X60X8FT	AS REQUIRED	1.0	28	36	7290	41	670	162	873
174050AR	GUARD HOUSE WD FRAME BLDG W/INTER	20X60X8FT	1 PER INST	1.0	28	36	7290	41	670	162	873
181110CV	GEN PLANT 1.5 MW IN BLDGS TEMPERATE		AS REQUIRED	1.0	160	335	340318	131	8229	1798	10158
81242BE	ELECT DIST FOR SIGINT INST.	8000SF	AS REQUIRED	1.0	29174	332893	45114371	290	870	870	2030
83111BM	ELECT DIST FOR SIGINT INST.	8000SF	AS REQUIRED	1.0	29174	332893	45114371	290	870	870	2030
83140CC	CONVENT SEW LAG 2 ACRES W/O LINER		AS REQUIRED	2.0	114	236	54866	1183	11359	766	13308
84120AB	WATER SUPLY WELL 200GPM&21MGAL STOR	500 BBL STR	AS REQUIRED	1.0	21	47	24204	702	187	319	1208
84120AC	WATER TANK TOWER 4200 GAL W/ACCESOR	200 GAL	AS REQUIRED	1.0	9	22	7950		152	6	158
84140CC	WATER TANK TOWER 4200 GAL W/ACCESOR	200 GAL	AS REQUIRED	2.0	18	44	15900		305	12	317
84330AC	SUMP FIRE PROTECTION 10000 GAL	10000 GAL	AS REQUIRED	1.0	7	5	145	23	157	168	348
85110AL	ROAD PAVEMENT,CLASS A,CLD MIX BITUM		AS REQUIRED	.6	566	451	7608	285		104	389
85110BH	ROAD PAVEMENT,CLASS B,CLD MIX BITUM		AS REQUIRED	.1	82	65	1094	43		16	59
85110CJ	ROAD PAVEMENT,CLASS C,STAB SURFACE		AS REQUIRED	.6	265	179	1326	107		35	142
85110DB	HARDSTAND,CLD MIX BITUM,STAB BASE		AS REQUIRED	3.0	156	129	2337	152		52	204
85130AH	ROAD,CLASS A,GRADED AND DRAINED		AS REQUIRED	.6	2	4	1322	1790		746	2536
85130EM	ROAD,CLASS B,GRADED AND DRAINED 1MI		AS REQUIRED	.1		1	196	270		112	382
85130JT	ROAD,CLASS C,GRADED AND DRAINED 1MI		AS REQUIRED	.6	2	2	808	1172		463	1635
187190AA	SITE PREPARATION,ONE ACRE		AS REQUIRED	39.7				5066		1842	6908
87210AB	FENCE,BARBED WIRE W/2 OTGR 1000LF		AS REQUIRED	2.0	12	16	3346	1015	1740	1740	4495
87210AM	GATE,VEH SGL/LEAF 12 FT WI 10 FT HI		AS REQUIRED	4.0	8	8	4092	41	58	70	169
87210AP	SECURITY FENCE TYPE X 1000 FEET	1000 FEET	AS REQUIRED	8.0	64	72	13248	534	2946	2970	6450
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
87230AA	SENTRY BOX 4X4		AS REQUIRED	2.0			244	276	1160	580	2016
					2494	312	885191	86370662	17378	86599	25360 129337

TROPIC CLIMATE

SIGNAL INTELEGENCE STATION,TEMPORARY STANDARD OF CONSTRUCTI ON TROPIC CLIMATE. 50 MAN TROOP CAMP FACILITIES ARE INCL UDED. WOOD FRAME FACILITIES FOR SUPPORT AND PRE ENGINEERED METAL FOR OPERATIONS REQUIRES 9.69 ACRES,157 CUBIC YARDS OF COARSE AGGR.2500GPD OF WATER.700GPD SEWAGE. CC1022

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
313120AW	SIGINT INST. OPRS CMD.FRIGID	8000SF	AS REQUIRED	1.0	47090	554118	23822618	690	9570	1656	11916
313120AY	SIGINT INST.OPS.COMP. FRIGID	8000SF	AS REQUIRED	1.0	47092	554115	23832238	690	9570	1656	11916
172111AW	BRKS 50MAN 20X100 WOOD BLDG	20X100X8FT	72SQFT PERMAN	2.0	90	110	18702	131	2178	539	2848
81242BF	ELECT. DIST. FOR SIGINT STATION	8000SF	AS REQUIRED	1.0	46648	231959	73694001	145	435	435	1015
83111BK	ELECT. DIST. FOR SIGINT STATION	8000SF	AS REQUIRED	1.0	46648	231959	73694001	145	435	435	1015
85110BM	ROAD PAVEMENT,CLASS B,STAB SURFACE		AS REQUIRED	.1	69	46	344	27		9	36
85130EM	ROAD,CLASS B,GRADED AND DRAINED 1MI		AS REQUIRED	.1		1	196	270		112	382
187190AA	SITE PREPARATION,ONE ACRE		AS REQUIRED	9.7				1238		450	1688
87210AB	FENCE,BARBED WIRE W/2 OTGR 1000LF		AS REQUIRED	2.0	12	16	3346	1015	1740	1740	4495
87210AM	GATE,VEH SGL/LEAF 12 FT WI 10 FT HI		AS REQUIRED	4.0	8	8	4092	41	58	70	169
87210AP	SECURITY FENCE TYPE X 1000 FEET	1000 FEET	AS REQUIRED	3.0	24	27	4968	200	1105	1114	2419
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
					1876	851572363	95075170	4615	25439	8355	38409

TROPIC CLIMATE

AMMO STORAGE,12000 TON CAP.,TROPICAL CLIMATE,INITIAL STD. DA1062
DWG.DA1062 PROVIDES EARTH BARRICADED STORAGE ON PAVED HARD-
STANDS,HELIPORT,INTERNAL ROADS,LIGHTED SECURITY FENCE,20FTX
100FT OPER.BLDG.,20FTX20FT SUB-OPER.BLDGS.,GUARD TOWERS,
SENTRY BOXES AND PIT LATRINES.REQUIRES 1584.0 ACRES FOR IN-
STALL.PLUS 1142.0ACRES CONTROL AREA.ITEMS PROCURED LOCALLY
-282538CY FILL,28002CY COARSE AGG.,10183CY FINE AGG.,2637CY

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	CONSTR EFFORT IN MANHOURS VERT	CONSTR EFFORT IN MANHOURS GENL	CONSTR EFFORT IN MANHOURS TOT
11130AA	HELIPORT,C47 SLINGOUT AREA		AS REQD.	1.0	11	7	6894	1507		703	2210
14930AA	EARTH BARRICADE,AMMO STORAGE,100LF		AS REQD.	146.5			58454	5523		5948	11471
44110BE	STOREHOUSE WD FR BLDG 20X20X8	20X20X8FT	90SF/MAN	3.0	30	33	5829	100	1140	231	1471
161050BP	HQTRS & UNIT SUP BLDG 20X100X8	20X100X8FT	90SF/MAN	1.0	44	60	11736	94	1840	392	2326
72321BB	LATRINE,PIT TYPE,2 SEATS,4X5X8,WOOD	5X4X8FT	AS REQD.	7.0	7	7	658		406	81	487
72321BD	LAT PIT TYPE 160MAN 8 SEATS 10X20	10X20X8	160EM OR 80FF	1.0	8	9	1559	3	290	46	339
81240GC	ELECTRICAL DISTRIBUTION SYSTEM, ONE	1 MILE \ 2	AS REQD.	8.8	158	167	72934	1723	14419	8549	24691
81260AE	TRANSFORMER ASSY 5KVA SGL PHASE CSP		AS REQD.	33.0	33	33	27654		2297		2297
81260AG	SP XFMR ASSY 15KVA 1PH 4160-120/240		AS REQD.	1.0	1	1	731		75		75
81260BB	SP XFMR ASSY 225 KVA 4160-208Y/120		AS REQD.	1.0	3	3	3491		151		151
85110AC	ROAD PAVEMENT,CLASS A,HOT MIX BITUM		AS REQD.	8.5	8033	6401	107253	4166		1479	5645
85110BU	ROAD PAVEMENT,CLASS C,HOT MIX BITUM		AS REQD.	2.7	1409	1110	17688	779		282	1061
85110CP	HARDSTAND,HOT MIX BITUM,STAB BASE		AS REQD.	23.9	1243	1028	18546	1248		416	1664
85110DF	HARDSTAND,STAB SURF,1000SQ YD, 4 IN		AS REQD.	5.7	239	160	1197	198		66	264
85111AD	RDWY PVMT HVY WH BSC 1MI 3IN ASPH		AS REQD.	1.5	1508	1206	20222	857		320	1177
85111AP	RDWY PVMT HVY WH 2FT INCR 3IN ASPH		AS REQD.	18.0	2394	1980	35874	1488		600	2088
85111EB	RDWY HVY WH BSC 4FT SHLDRS 12IN THK		AS REQD.	1.5	5	5	2316	940		272	1212
85111EM	RDWY HVY WH 2FT INCR 12IN THK		AS REQD.	18.0			1980	1331		287	1618
85111KB	HDSTD HVY WH 1000SY 4FT SHLDR 12IN		AS REQD.	45.0	90	90	33075	3719		718	4437
85130AK	ROAD,CLASS A,GRADED AND DRAINED		AS REQD.	8.5	34	34	16881	13496		4708	18204
85130JV	ROAD,CLASS C,GRADED AND DRAINED 1MI		AS REQD.	2.7	5	5	3278	3132		1030	4162
85210AK	HARDSTAND,1000 SQ YDS,NO ROCK		AS REQD.	29.6	89	30	49314	3090		1116	4206
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQD.	8.0	16	16	2656	93	1392	557	2042
87210AU	SECURITY FENCE, TYPE X CONVERTED TO	1000 FEET	AS REQD.	38.1	38	38	57074		11933		11933
87230AA	SENTRY BOX 4X4		AS REQD.	3.0			366	413	1740	870	3023
					15398	12423	557660	43900	35683	28671	108254

TROPIC CLIMATE

AMMO STORAGE,35000 TON CAP.,TROPICAL CLIMATE,INITIAL STD. DA1072
DWG.DA1072 PROVIDES EARTH BARRICADED STORAGE ON PAVED HARD-
STANDS,HELIPORT,INTERNAL RIADS,LIGHTED SECURITY FENCE,20FTX
100FT OPER.BLDGS.,20FTX20FT SUB-OPER.BLDGS.,GUARD TOWERS,
SENTRY BOXES AND PIT LATRINES.REQUIRES 1732.0 ACRES FOR IN-
STALL.PLUS 1414.0 ACRES CONTROL AREA.ITEMS PROCURED LOCALLY
,541167CY FILL,42196CY COARSE AGG.,17895CY FINE AGG.,5094CY

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
11130AA	HELIPORT,C47 SLINGOUT AREA		AS REQD.	1.0	11	7	6894	1507		703	2210
14930AA	EARTH BARRICADE,AMMO STORAGE,100LF		AS REQD.	279.0			111321	10518		11327	21845
44110BE	STOREHOUSE WD FR BLDG 20X20X8	20X20X8FT	90SF/MAN	3.0	30	33	5829	100	1140	231	1471
161050BP	HQTRS & UNIT SUP BLDG 20X100X8	20X100X8FT	90SF/MAN	2.0	88	120	23472	189	3680	783	4652
72321BB	LATRINE,PIT TYPE,2 SEATS,4X5X8,WOOD	5X4X8FT	AS REQD.	12.0	12	12	1128		696	139	835
72321BD	LAT PIT TYPE 160MAN 8 SEATS 10X20	10X20X8	160EM OR 80FF	1.0	8	9	1559	3	290	46	339
81240GC	ELECTRICAL DISTRIBUTION SYSTEM, ONE	1 MILE \ 2	AS REQD.	9.3	167	177	77078	1820	15238	9035	26093
81260AE	TRANSFORMER ASSY 5KVA SGL PHASE CSP		AS REQD.	35.0	35	35	29330		2436		2436
81260AH	SP XFMR ASSY 25KVA 1PH 4160-120/240		AS REQD.	1.0	1	1	668		80		80
81260BA	SP XFMR ASSY 150 KVA 4160-208Y/120		AS REQD.	1.0	2	2	2674		141		141
81260BB	SP XFMR ASSY 225 KVA 4160-208Y/120		AS REQD.	1.0	3	3	3491		151		151
85110AC	ROAD PAVEMENT,CLASS A,HOT MIX BITUM		AS REQD.	8.0	7560	6024	100944	3921		1392	5313
85110BU	ROAD PAVEMENT,CLASS C,HOT MIX BITUM		AS REQD.	3.4	1775	1397	22273	981		355	1336
85110CP	HARDSTAND,HOT MIX BITUM,STAB BASE		AS REQD.	37.1	1929	1595	28790	1937		646	2583
85110DF	HARDSTAND,STAB SURF,1000SQ YD, 4 IN		AS REQD.	5.7	239	160	1197	198		66	264
85111AD	RDWY PVMT HVY WH BSC 1MI 3IN ASPH		AS REQD.	3.0	3015	2412	40443	1714		639	2353
85111AP	RDWY PVMT HVY WH 2FT INCR 3IN ASPH		AS REQD.	18.0	2394	1980	35874	1488		600	2088
85111EB	RDWY HVY WH BSC 4FT SHLDRS 12IN THK		AS REQD.	3.0	9	9	4632	1879		544	2423
85111EM	RDWY HVY WH 2FT INCR 12IN THK		AS REQD.	18.0			1980	1331		287	1618
85111KB	HDSTD HVY WH 1000SY 4FT SHLDR 12IN		AS REQD.	110.3	221	221	81071	9116		1759	10875
85130AK	ROAD,CLASS A,GRADED AND DRAINED		AS REQD.	8.0	32	32	15888	12702		4431	17133
85130JV	ROAD,CLASS C,GRADED AND DRAINED 1MI		AS REQD.	3.4	7	7	4128	3944		1297	5241
85210AK	HARDSTAND,1000 SQ YDS,NO ROCK		AS REQD.	42.8	128	43	71305	4468		1614	6082
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQD.	8.0	16	16	2656	93	1392	557	2042
87210AU	SECURITY FENCE, TYPE X CONVERTED TO	1000 FEET	AS REQD.	40.8	41	41	61118		12779		12779
87230AA	SENTRY BOX 4X4		AS REQD.	3.0			366	413	1740	870	3023
					17723	14336	736109	58322	39763	37321	135406

TROPIC CLIMATE

AMMO STORAGE,70000 TON CAP.,TROPICAL CLIMATE,INITIAL STD. DA1082
DWG.DA1082 PROVIDES EARTH BARRICADED STORAGE ON PAVED HARD-
STANDS,HELIPORT,INTERNAL RDS.,LIGHTED SECURITY FENCE,50000SF
OPER.BLDG.,20FTX20FT SUB-OPER.BLDGS.,GUARD TOWERS,SENTRY
BOXES AND PIT LATRINES.REQUIRES 2117.0 ACRES FOR INSTALL.
PLUS 1761.0 ACRES CONTROL AREA.ITEMS PROCURED LOCALLY,
990998 CY FILL,50088CY COARSE AGG.,23328CY FINE AGG.,7023CY

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
11130AA	HELIPORT,C47 SLINGOUT AREA		AS REQD.	1.0	11	7	6894	1507		703	2210
14930AA	EARTH BARRICADE,AMMO STORAGE,100LF		AS REQD.	514.1			205126	19382		20872	40254
44110BE	STOREHOUSE WD FR BLDG 20X20X8	20X20X8FT	90SF/MAN	3.0	30	33	5829	100	1140	231	1471
161050BW	ADMIN SUP BLDG,WD FR,30FTX70FTX8FT		90SF/MAN	1.0	47	54	8948	73	1341	276	1690
161050BY	ADMIN SUP BLDG,WD FR 30FTX50FTX8FT		90SF/MAN	2.0	70	78	13098	102	2320	406	2828
72321BB	LATRINE,PIT TYPE,2 SEATS,4X5X8,WOOD	5X4X8FT	AS REQD.	14.0	14	14	1316		812	162	974
72321BD	LAT PIT TYPE 160MAN 8 SEATS 10X20	10X20X8	160EM OR 800F	1.0	8	9	1559	3	290	46	339
81240GC	ELECTRICAL DISTRIBUTION SYSTEM, ONE	1 MILE \ 2	AS REQD.	9.4	169	179	77907	1840	15402	9132	26374
81260AE	TRANSFORMER ASSY 5KVA SGL PHASE CSP		AS REQD.	37.0	37	37	31006		2575		2575
81260AH	SP XFMR ASSY 25KVA 1PH 4160-120/240		AS REQD.	1.0	1	1	668		80		80
81260BA	SP XFMR ASSY 150 KVA 4160-208Y/120		AS REQD.	1.0	2	2	2674		141		141
81260BB	SP XFMR ASSY 225 KVA 4160-208Y/120		AS REQD.	1.0	3	3	3491		151		151
85110AC	ROAD PAVEMENT,CLASS A,HOT MIX BITUM		AS REQD.	8.4	7938	6325	105991	4117		1462	5579
85110BU	ROAD PAVEMENT,CLASS C,HOT MIX BITUM		AS REQD.	3.9	2036	1603	25549	1125		407	1532
85110CP	HARDSTAND,HOT MIX BITUM,STAB BASE		AS REQD.	40.6	2111	1746	31506	2119		706	2825
85110DF	HARDSTAND,STAB SURF,1000SQ YD, 4 IN		AS REQD.	5.7	239	160	1197	198		66	264
85111AD	RDWY PVMT HVY WH BSC 1MI 3IN ASPH		AS REQD.	5.2	5226	4181	70101	2971		1108	4079
85111AP	RDWY PVMT HVY WH 2FT INCR 3IN ASPH		AS REQD.	18.0	2394	1980	35874	1488		600	2088
85111EB	RDWY HVY WH BSC 4FT SHLDRS 12IN THK		AS REQD.	5.2	16	16	8029	3257		943	4200
85111EM	RDWY HVY WH 2FT INCR 12IN THK		AS REQD.	18.0			1980	1331		287	1618
85111KB	HDSTD HVY WH 1000SY 4FT SHLDR 12IN		AS REQD.	156.7	313	313	115175	12951		2499	15450
85130AK	ROAD,CLASS A,GRADED AND DRAINED		AS REQD.	8.4	34	34	16682	13337		4653	17990
85130JV	ROAD,CLASS C,GRADED AND DRAINED 1MI		AS REQD.	3.9	8	8	4735	4524		1487	6011
85210AK	HARDSTAND,1000 SQ YDS,NO ROCK		AS REQD.	46.3	139	46	77136	4834		1746	6580
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQD.	8.0	16	16	2656	93	1392	557	2042
87210AU	SECURITY FENCE, TYPE X CONVERTED TO	1000 FEET	AS REQD.	41.5	42	42	62167		12998		12998
87230AA	SENTRY BOX 4X4		AS REQD.	3.0			366	413	1740	870	3023
					20904	16887	917660	75765	40382	49219	165366

TROPIC CLIMATE

AMMO STORAGE,3500 TON CAP.,TROPICAL CLIMATE,INITIAL STD. DA1092
DWG.DA1092 PROVIDES UNBARRICADED STORAGE ON GRAVEL HARDSTAND
,HELIPORT AND INTERNAL GRAVEL ROADS.REQUIRES 1093 ACRES FOR
INSTALLATION PLUS 1331 ACRES CONTROL AREA.ITEMS PROCURED
LOCALLY,960CY COARSE AGG.,807CY FINE AGG.,365CY MINERAL
FILLER.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
11130AA	HELIPORT,C47 SLINGOUT AREA		1/INST.	1.0	11	7	6894	1507		703	2210
85110DF	HARDSTAND,STAB SURF,1000SQ YD, 4 IN		AS REQD.	19.2	806	538	4032	668		223	891
85210AK	HARDSTAND,1000 SQ YDS,NO ROCK		AS REQD.	19.2	58	19	31987	2004		724	2728
					875	564	42913	4179		1650	5829

TROPIC CLIMATE

STORAGE,DRY CARGO, 50000 SF OPEN,ALL CLIMATES,STD 2, DC1169
NEW CONST,TENTAGE. PROVIDES 50000 SF STORAGE SPACE ON
EARTH,GRADED AND DRAINED. ADMINISTRATION IN TENT ERECTED
BY USING SERVICE,PIT TYPE LATRINES. MINIMUM REAL ESTATE
REQUIREMENT FOR INSTALLATION 7.4 ACRES,REQUIRED FROM LOCAL
SOURCE - FINE AGGREGATE,6 CY,COARSE AGGREGATE,7 CY.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
72321BD	LAT PIT TYPE 160MAN 8 SEATS 10X20	10X20X8	160 EM	1.0	8	9	1559	3	290	46	339
72520AA	TENTAGE,MED GEN PURP,32FTX16FT	10-16X32	ADMIN	.1		1	1170			6	6
84330AC	SUMP FIRE PROTECTION 10000 GAL	10000 GAL	EFF RAD 500FT	1.0	7	5	145	23	157	168	348
					15	15	2874	26	447	220	693

TROPIC CLIMATE

STORAGE,DRY CARGO, 50000 SF OPEN,ALL CLIMATES,STD 4, DC1179
NEW CONST,TENTAGE. PROVIDES 50000 SF STORAGE SPACE ON
6 INCHES STABALIZED STONE W/ASPHALT BINDER. ADMIN. IN TENT
ERECTED BY USING SERVICE. PIT TYPE LATRINES.MIN. REAL ESTATE
REQUIREMENT FOR INSTALLATION--7.4 ACRES,REQUIRED FROM LOCAL
SOURCE - FINE AGGREGATE,1005 CY,COARSE AGGREGATE,1285 CY.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
72321BD	LAT PIT TYPE 160MAN 8 SEATS 10X20	10X20X8	160 EM	1.0	8	9	1559	3	290	46	339
72520AA	TENTAGE,MED GEN PURP,32FTX16FT	10-16X32	ADMIN	.1		1	1170			6	6
84330AC	SUMP FIRE PROTECTION 10000 GAL	10000 GAL	EFF RAD 500FT	1.0	7	5	145	23	157	168	348
					15	15	2874	26	447	220	693

TROPIC CLIMATE

STORAGE,DRY CARGO,100000 SF OPEN,ALL CLIMATES,STD 2, DC1189
NEW CONST,TENTAGE. PROVIDES 100000 SF STORAGE SPACE ON
EARTH,GRADED AND DRAINED. ADMINISTRATION IN TENT ERECTED
BY USING SERVICE,PIT TYPE LATRINES. MINIMUM REAL ESTATE
REQUIREMENT FOR INSTALLATION 11.8 ACRES,REQUIRED FROM LOCAL
SOURCE - FINE AGGREGATE,6 CY,COARSE AGGREGATE,7 CY.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
72321BD	LAT PIT TYPE 160MAN 8 SEATS 10X20	10X20X8	160 EM	1.0	8	9	1559	3	290	46	339
72520AA	TENTAGE,MED GEN PURP,32FTX16FT	10-16X32	ADMIN	.1		1	1170			6	6
84330AC	SUMP FIRE PROTECTION 10000 GAL	10000 GAL	EFF RAD 500FT	1.0	7	5	145	23	157	168	348
					15	15	2874	26	447	220	693

TROPIC CLIMATE

STORAGE,DRY CARGO,100000 SF OPEN,ALL CLIMATES,STD 4, DC1199
NEW CONST,TENTAGE. PROVIDES 100000 SF STORAGE SPACE ON 6 IN.
STAB. STONE W/ASPHALT BINDER. ADMINISTRATION IN TENT ERECTED
BY USING SERVICE,PIT TYPE LATRINES. MINIMUM REAL ESTATE
REQUIREMENT FOR INSTALLATION 11.8 ACRES,REQUIRED FROM LOCAL
SOURCE - FINE AGGREGATE, 1919 CY,COARSE AGGREGATE,2377 CY.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
72321BD	LAT PIT TYPE 160MAN 8 SEATS 10X20	10X20X8	160 EM	1.0	8	9	1559	3	290	46	339
72520AA	TENTAGE,MED GEN PURP,32FTX16FT	10-16X32	ADMIN	.1		1	1170			6	6
84330AC	SUMP FIRE PROTECTION 10000 GAL	10000 GAL	EFF RAD 500FT	1.0	7	5	145	23	157	168	348
					15	15	2874	26	447	220	693

TROPIC CLIMATE

STORAGE,DRY CARGO,200000 SF OPEN,ALL CLIMATES,STD 2, DC1209
NEW CONST,TENTAGE. PROVIDES 200000 SF STORAGE SPACE ON
EARTH,GRADED AND DRAINED. ADMINISTRATION IN TENT ERECTED
BY USING SERVICE,PIT TYPE LATRINES. MINIMUM REAL ESTATE
REQUIREMENT FOR INSTALLATION 24.2 ACRES,REQUIRED FROM LOCAL
SOURCE - FINE AGGREGATE,11 CY,COARSE AGGREGATE,12 CY.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
72321BD	LAT PIT TYPE 160MAN 8 SEATS 10X20	10X20X8	160 EM	2.0	16	18	3118	6	580	93	679
72520AA	TENTAGE,MED GEN PURP,32FTX16FT	10-16X32	ADMIN	.1		1	1170			6	6
84330AC	SUMP FIRE PROTECTION 10000 GAL	10000 GAL	EFF RAD 500FT	2.0	14	10	290	46	313	336	695
					30	29	4578	52	893	435	1380

TROPIC CLIMATE

STORAGE,DRY CARGO,200000 SF OPEN,ALL CLIMATES,STD 4, DC1219
NEW CONST,TENTAGE. PROVIDES 200000 SF STORAGE SPACE ON 6 IN.
STAB. STONE W/ASPHALT BINDER. ADMINISTRATION IN TENT ERECTED
BY USING SERVICE,PIT TYPE LATRINES. MINIMUM REAL ESTATE
REQUIREMENT FOR INSTALLATION 24.2 ACRES,REQUIRED FROM LOCAL
SOURCE - FINE AGGREGATE,3800 CY,COARSE AGGREGATE,4690 CY.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
72321BD	LAT PIT TYPE 160MAN 8 SEATS 10X20	10X20X8	160 EM	2.0	16	18	3118	6	580	93	679
72520AA	TENTAGE,MED GEN PURP,32FTX16FT	10-16X32	ADMIN	.1		1	1170			6	6
84330AC	SUMP FIRE PROTECTION 10000 GAL	10000 GAL	EFF RAD 500FT	2.0	14	10	290	46	313	336	695
					30	29	4578	52	893	435	1380

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TROPIC CLIMATE

MARINE RAILWAY REPAIR, TEMPORARY CONSTRUCTION STANDARD, WOOD FRAME BLDGS. PROVIDES 500-TON AND 1800-TON MARINE RAILWAYS WITH REPAIR AND MAINTENANCE SHOPS. REQUIRES 2 ACRES. AGGREGATE REQUIRED 352-CY FINE, 517-CY COARSE. UTILITIES REQUIRED BUT NOT PROVIDED 62.0 KW ELEC CONNECTED LOAD. FP1005

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	CONSTR EFFORT IN MANHOURS VERT	CONSTR EFFORT IN MANHOURS GENL	CONSTR EFFORT IN MANHOURS TOT
121330AE	SHOP MARINE REP 60X180X20,WD FR		MAINT&PRODUCTN	1.0	393	573	358729	262	11818	1034	13114
44110BE	STOREHOUSE WD FR BLDG 20X20X8	20X20X8FT	FOR WINCHES	1.0	10	11	1943	33	380	77	490
144110BF	STOREHOUSE WD FR BLDG 20X30X8	20X30X8FT	FOR WINCHES	1.0	14	16	2671	35	416	104	555
161050BP	HQTRS & UNIT SUP BLDG 20X100X8	20X100X8FT	80 SF/MAN	1.0	44	60	11736	94	1840	392	2326
81240AG	ELEC DISTR W/FLDLTG MARINE RWAY RPR		BLD & DOCK	1.0	5	7	4589	73	1160	508	1741
187190AA	SITE PREPARATION,ONE ACRE		REQUIRED AREA	2.0				255		93	348
					466	667	379668	752	15614	2208	18574

TROPIC CLIMATE

GENERAL CARGO PORT-CONTAINER,BREAKBULK,RO-RO,LIGHTERAGE & PORTS SERVICE VESSEL PIERS LST RAMP ON SHORE SUPPORTING FACILITIES,PIERS&CAUSEWAY FOR 20FT TIDE RANGE-GROUND SLOPE 15-PERCENT,BERTHING,RAMP & ONSHORE SUPPORTING FACILITIES FOR CAPACITY UP TO 14,880 TONS PER DAY, REQUIRES 300 ACRES, 1000 MAN TROOP CAMP(NT3611/NT1531) " 10 BAY MAINT. INST. (MT1081/MT2008),ALL UTILITIES INCLUDED WITH INSTALLATION. FP1105

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
011130AB	HELIPD,CH54,PAD/APPR/DEP.1-1/2IN HM		CH 54	1.0	152	120	3797	23		52	75
111210CB	TAXIWAY W/25 FT SHOULDERS,1000 X 40			.1	31	25	1649	91		36	127
12110AL	SPRT ACFT REFLNG 30000 G W/MANIFOLD	2		4.0	28	64	221056	928	812	2042	3782
12630AA	LDG FACIL FOR TWO FUEL TRUCKS	2-STATION		1.0	12	12	13862	218	471	1530	2219
14970AF	RAMP FOR LANDING CRAFT			1.0				261	73	363	697
15150EL	CONTAINER PIER,TRESTLE,& CAUSEWAY			1.0	13100	18399	23001817	9721	37462	15244	62427
15150EN	BREAKBULK-RO/RO PIER,TRESTLE & CWY.			1.0	16744	24253	34619662	10614	45893	19820	76327
15150EP	LIGHTERAGE PIER,TRESTLE & CAUSEWAY			1.0	6649	6888	5644858	3055	9016	4064	16135
15150ER	SERVICE PIER,TRESTLE,& CAUSEWAY			1.0	6605	6468	5688110	3461	7665	2577	13703
15150ET	PORT-SERVICE PIERS,TRESTLE & CWY.			1.0	10467	21662	17927489	3190	8720	2681	14591
121330AD	SHOP MARINE REP 40X100X12,STL FR			1.0	42	212	42634	389	4829	2401	7619
21410BY	VEH WASH RACK			5.0	105	75	7990	29	428	595	1052
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL		2.0	2	26	18516	232	928	377	1537
44110AL	STOREHOUSE STL FR BLDG 20X50X8	20X50X8FT	AS REQUIRED	1.0	10	56	11736	39	467	239	745
44110AP	WHSE CLOSED STL FR 80X220X12	80X220X12FT	AS REQUIRED	1.0	231	350	151045	431	4209	2703	7343
161050BH	ADMINISTRATION,HEADQUARTERS BLDG,ST	5000SF		2.0	36	94	61686	380	5066	2045	7491
161050CB	ADMIN.SUPPORT BLDG.30X50FT.ST FRAME		90 SF/OCCUP.	2.0	24	46	31480	102	2030	377	2509
72321BD	LAT PIT TYPE 160MAN 8 SEATS 10X20	10X20X8		5.0	40	45	7795	15	1450	232	1697
373010AC	FS 6144SF WD FR BLDG OP-A W/ INTER			1.0	192	283	39238	178	6992	1112	8282
81110AG	GEN PLANT 300 KW 208Y/120 V OUTDOOR	20X 20X8		1.0	24	40	47996		1489	35	1524
181110DF	GEN PLANT 10.5 MW IN VANS TEMPERATE		1000 REEFERS	1.0	539	1205	1971219	387	10085	3770	14242
81240GE	LIGHTING-CONTAINERS-GEN,CARGO PORT			1.0	713	949	2829933	2039	52200	2900	57139
81240GF	AREA ILLUMINATION-GEN,CARGO PORT			1.0	27	30	93469	81	1705		1786
81240GG	AERIAL DISTRIBUTION-GEN,CARGO PORT			1.0	29	23	60429	23	2320		2343
81240GH	FIRE PUMP STATION-GEN,CARGO PORT			1.0	10	19	53428	35	1183		1218
81240GJ	PIERS-FEEDERS&EQPT-GEN,CARGO PORT			1.0	27	57	103840	94	2100		2194
82209AA	STEAM SYSTEM-GEN CARGO PORT ONSHORE			1.0	19	125	47913	853	2936	1705	5494
82209AB	STEAM SYSTEM-BRKBLK/RO-RO PIER			1.0	19	133	64284	1079	2494	1682	5255
82209AC	STEAM SYSTEM CONTAINER PIER			1.0	23	95	50430	705	1654	1102	3461
83210AA	SANITARY SYST-GEN CARGO PORT-SHORE			1.0	3	21	21840		1096	548	1644
84120AD	WATER TANK TOWER 10500 GAL W/ACCESS	10,500 GAL		1.0	8	18	7415		348		348
84210GA	PORTABLE WATER SYST-GEN CARGO SHORE		1000 MAN	1.0	12	245	1548649		4794	4794	9588
84330AF	FIRE WATER SYSTEM-GEN.CARGO ONSHORE			1.0	206	222	570022	2523	4846	2523	9892
84330AG	FIRE WATER SYSTEM-LIGHTERAGE PIER			1.0	7	22	11820	174	286	235	695
84330AH	FIRE WATER SYST.-BRKBLK/RO-RO PIER			1.0	53	185	242806	705	2018	1378	4101
84330AJ	FIRE WATER SYSTEM-SERVICE PIERS			1.0	12	35	22625	232	577	534	1343

TROPIC CLIMATE

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	CONSTR EFFORT IN MANHOURS VERT	CONSTR EFFORT IN MANHOURS GENL	CONSTR EFFORT IN MANHOURS TOT
84330AK	FIRE WATER SYSTEM-CONTAINER PIER			1.0	38	320	144298	583	1726	1254	3563
84520AA	SEAWATER SYST-GEN CARGO PORT-SHORE			1.0	1	4	3484		394	394	788
84520AB	SEAWATER SYS.-BRKBLK/RO-RO PIER			1.0	1	6	6786	61	339	273	673
85110CN	HARDSTAND,APR,TXWY,OR RNWY 1000SQYD			95.4	4865	3625	47509	5810		2767	8577
85110ER	ROAD PAVEMENT,CLASS B,CLD MIX BITUM			25.2	15952	14742	407484	21632		17283	38915
85111AD	RDWY PVMT HVY WH BSC 1MI 3IN ASPH		AS REQUIRED	3.1	3116	2492	41791	1771		661	2432
85111AP	RDWY PVMT HVY WH 2FT INCR 3IN ASPH		AS REQUIRED	36.0	4788	3960	71748	2975		1201	4176
85111ED	RDWY HVY WH BSC 4FT SHLDRS 24IN THK		AS REQUIRED	1.0	4	3	1765	1008		351	1359
85111EE	RDWY HVY WH BSC 4FT SHLDRS 30IN THK		AS REQUIRED	2.1	8	6	3938	2476		907	3383
85111EP	RDWY HVY WH 2FT INCR 24IN THK		AS REQUIRED	12.0			1320	1166		348	1514
85111FB	HDSTD PVMT HVY WH 1000SY 3IN ASPH		AS REQUIRED	11.8	850	708	13924	907		359	1266
85111FD	HDSTD PVMT HVY WH 1000SY 3IN ASPH		AS REQUIRED	406.9	35400	29297	541991	39530		14160	53690
85111KA	HDSTD HVY WH 1000SY 4FT SHLDR 6IN		AS REQUIRED	11.8	24	12	8520	650		120	770
85111KD	HDSTD HVY WH 1000SY 4FT SHLDR 24IN		AS REQUIRED	128.6	257	257	97736	18833		4102	22935
85111KE	HDSTD HVY WH 1000SY 4FT SHLDR 30IN		AS REQUIRED	278.3	557	557	215126	48424		10492	58916
85210AG	HARDSTAND,1000 SQ YDS,NO ROCK			95.4	286	95	158936	8715		2767	11482
87210AF	GATE,CHAINLINK SING/LEAF 3 WI 10 HI			2.0	2	4	558	17		35	52
87210AP	SECURITY FENCE TYPE X 1000 FEET	1000 FEET		9.1	73	82	15070	607	3352	3378	7337
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET		8.5	60	68	11934	592	2736	2761	6089
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1		8.0	16	16	2656	93	1392	557	2042
87230AA	SENTRY BOX 4X4			2.0			244	276	1160	580	2016
					122499	138756	97039356	198413	239741	144446	582600

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TROPIC CLIMATE

AMMUNITION PORT-CONTAINER,BREAKBULK & LIGHTERAGE PIERS,LST RAMP, BARRICADED CONTAINER MARSHALLING YARD. OTHER ONSHORE SUPPORTING FACILITIES, PIERS & CAUSEWAY FOR 20FT TIDE RANGE-GROUND SLOPE 15-PERCENT. BERTHING, RAMP & ONSHORE SUPPORTING FACILITIES FOR CAPACITY UP TO 9,880 TONS PER DAY. REQUIRES 5000 ACRES. UTILITIES INCLUDED WITH INSTALLATION. FP1115

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	CONSTR EFFORT IN MANHOURS VERT	CONSTR EFFORT IN MANHOURS GENL	CONSTR EFFORT IN MANHOURS TOT
011130AB	HELIPD,CH54,PAD/APPR/DEP.1-1/2IN HM		CH 54	1.0	152	120	3797	23		52	75
111210CB	TAXIWAY W/25 FT SHOULDERS,1000 X 40			.4	125	100	6595	365		143	508
14970AF	RAMP FOR LANDING CRAFT			1.0				261	73	363	697
15150EL	CONTAINER PIER,TRESTLE,& CAUSEWAY			1.0	13100	18399	23001817	9721	37462	15244	62427
15150EM	BREAKBULK PIER,TRESTLE,& CAUSEWAY			1.0	12990	16848	20522368	7676	31593	13852	53121
15150EP	LIGHTERAGE PIER,TRESTLE & CAUSEWAY			1.0	6649	6888	5644858	3055	9016	4064	16135
21850AB	BATT CHG FAC STL FR BLD W/INT 20X20			1.0	4	9	6858	32	567	189	788
161050BC	ADMIN BLDG STL FR-INTERIOR 20X30X8	20X30X8FT		1.0	5	11	9128	23	432	128	583
172321BA	ADMIN BLDG STL FR-INTERIOR 20X30X8	20X30X8FT		2.0	10	22	18256	46	864	255	1165
073010AA	FS 6144SF WD FR BLDG OP-A W/ INTER		AS REQUIRED	1.0	192	272	38303	178	6992	1112	8282
181110CV	GEN PLANT 1.5 MW IN BLDGS TEMPERATE		AS REQUIRED	1.0	160	335	340318	131	8229	1798	10158
81240GF	AREA ILLUMINATION-GEN,CARGO PORT			1.0	27	30	93469	81	1705		1786
81240GK	POWER EQPT & ROAD LIGHTG-AMMO PORT			1.0	1794	2106	2393611	8329	66723		75052
81240GL	LIGHTING-CONTAINER AREA-AMMO PORT			1.0	89	95	333681	940	5916		6856
81240GM	FIRE PUMP STATION-AMMUNITION PORT			1.0	6	6	36943	12	522		534
81240GP	FENCE LIGHTING-AMMUNITION PORT			1.0	58	65	293348	725	5278		6003
83120AF	SEPTIC TANK,500 GL, W/ DRAIN FIELD			2.0	2	2	2522		73	870	943
84330AG	FIRE WATER SYSTEM-LIGHTERAGE PIER			1.0	7	22	11820	174	286	235	695
84330AH	FIRE WATER SYST.-BRKBLK/RO-RO PIER			1.0	53	185	242806	705	2018	1378	4101
84330AK	FIRE WATER SYSTEM-CONTAINER PIER			1.0	38	320	144298	583	1726	1254	3563
84330AL	FIRE WATER SYSTEM-AMMO.PORT ONSHORE			1.0	519	661	3930813	3189	6090	3189	12468
85110CK	ROAD PAVEMENT,CLASS C,6IN STBL 1MI			5.5	3680	2486	18398	1212		351	1563
85111AD	RDWY PVMT HVY WH BSC 1MI 3IN ASPH			8.5	8543	6834	114589	4856		1812	6668
85111AP	RDWY PVMT HVY WH 2FT INCR 3IN ASPH			51.0	6783	5610	101643	4215		1701	5916
85111EE	RDWY HVY WH BSC 4FT SHLDRS 30IN THK		AS REQUIRED	8.5	34	26	15938	10020		3673	13693
85111ER	RDWY HVY WH 2FT INCR 30IN THK			51.0			5610	5990		1701	7691
85111FD	HDSTD PVMT HVY WH 1000SY 3IN ASPH		AS REQUIRED	160.1	13929	11527	213253	15554		5571	21125
85111KD	HDSTD HVY WH 1000SY 4FT SHLDR 24IN		AS REQUIRED	23.3	47	47	17708	3412		743	4155
85130JR	ROAD,CLASS C,GRADED AND DRAINED 1MI			5.5	11	11	6677	5311		1667	6978
85240GN	ROAD,CLASS C,GRADED AND DRAINED 1MI		AS REQUIRED	1.0	2	2	1214	966		303	1269
87210AP	SECURITY FENCE TYPE X 1000 FEET	1000 FEET	AS REQUIRED	29.0	232	261	48024	1934	10681	10765	23380
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
87230AA	SENTRY BOX 4X4			1.0			122	138	580	290	1008
					69245	73304	57619449	89880	197174	72842	359896

TROPIC CLIMATE

HOSPITAL, TROPIC CLIMATE, TEMPORARY STANDARD WD. BLDGS. FOR TREATMENT, EXIST STRUCT FOR PATIENT AREA, EXT CONSTRUCTION TYPE ELEVATOR AND CONNECTING CORRIDORS. SEWAGE, WATER, AND GENERATORS FOR TREATMENT BLDGS. REQUIRES 2.5 ACRES 1645.6 CY COARSE AGGREGATE 858.7 CY FINE AGGREGATE 7200 GPD SEWAGE 8400 GPD WATER 164 KW DEMAND LOAD GH2002

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
111610AA	COMPASS SWING BASE,50 X 50 FT		3/INSTALL.	3.0	3	9	19581	104		52	156
155009AA	12-FT WIDE CONNECTING CORRIDOR		AS REQD.	.6	49	98	20374	91	475	431	997
55009EA	EXTERIOR CONSTRUCTION TYPE ELEVATOR		1/INSTALL.	1.0	28	20	91961	88	381		469
655010AB	DISPENSARY-FIRST AID		1/INSTALL.	1.0	1286	2049	131268	371	4238	3094	7703
81110BP	GEN PLANT 200 KW STL BLDG TROP/DES		1/INSTALL.	1.0	52	78	63407	142	4492	1465	6099
81230AF	FLOODLT ASSEMBLY, ONE LT, POLE MTD		1/INSTALL.	1.0			39		10		10
81230AG	FLOODLT ASSEMBLY, TWO LTS, POLE MTD		1/INSTALL.	1.0			39		17		17
81240GA	ELECTRICAL DISTRIBUTION SYSTEM, ONE	1 MILE \ 6	1/INSTALL.	1.0	15	16	8618	152	1370	754	2276
81260BT	CONV XFMR ASSY 150KVA 13.8-208Y/120		1/INSTALL.	1.0	2	3	2456		141		141
85110AY	ROAD PAVEMENT,CLASS B,HOT MIX BITUM		AS REQD.	.1	82	66	1089	44		16	60
85110CP	HARDSTAND,HOT MIX BITUM,STAB BASE		AS REQD.	.3	16	13	233	16		5	21
187190AA	SITE PREPARATION,ONE ACRE		AS REQD.	2.5				319		116	435
					1533	2352	339065	1327	11124	5933	18384

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TROPIC CLIMATE

HOSPITAL, TROPIC CLIMATE, TEMPORARY STANDARD. WD BLDGS. FOR TREATMENT, EXIST STRUCT FOR PATIENT AREA, EXT CONSTRUCTION TYPE ELEVATOR AND CONNECTING CORRIDORS. SEWAGE, WATER, AND GENERATORS FOR TREATMENT BLDGS. REQUIRES 4.0 ACRES 4898.5 CY COARSE AGGREGATE 2556.1 CY FINE AGGREGATE 16800 GPD SEWAGE 20000GPD WATER 502.9 KW DEMAND LOAD GH2012

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
111610AA	COMPASS SWING BASE,50 X 50 FT		3/INSTALL.	3.0	3	9	19581	104		52	156
651020AB	CLINIC OPD/ER ADM.TEMP.-FRID.ZONES		1/INSTALL.	1.0	2951	2464	141164	992	6177	6023	13192
653020BB	RAD.LAB/PHAR.TEMP.-FRIGID ZONES		1/INSTALL.	1.0	2520	2206	116367	1192	7750	6811	15753
155009AA	12-FT WIDE CONNECTING CORRIDOR		AS REQD.	1.3	107	213	44143	198	1029	933	2160
55009EA	EXTERIOR CONSTRUCTION TYPE ELEVATOR		1/INSTALL.	1.0	28	20	91961	88	381		469
81110BP	GEN PLANT 200 KW STL BLDG TROP/DES		1/INSTALL.	1.0	52	78	63407	142	4492	1465	6099
81110BR	GEN PLANT 300 KW STL BLDG TROP/DES		1/INSTALL.	1.0	68	82	72577	154	5142	1511	6807
81230AG	FLOODLT ASSEMBLY, TWO LTS, POLE MTD		3/INSTALL.	3.0			117		52		52
81240GA	ELECTRICAL DISTRIBUTION SYSTEM, ONE	1 MILE \ 6	1/INSTALL.	1.0	15	16	8618	152	1370	754	2276
81260BU	CONV XFMR ASSY 225KVA 13.8-208Y/120		1/INSTALL.	1.0	3	3	3155		151		151
81260BV	CONV XFMR ASSY 300KVA 13.8-208Y/120		1/INSTALL.	1.0	3	4	3746		161		161
85110AY	ROAD PAVEMENT,CLASS B,HOT MIX BITUM		AS REQD.	.2	165	131	2178	88		31	119
85110CP	HARDSTAND,HOT MIX BITUM,STAB BASE		AS REQD.	1.1	57	47	854	57		19	76
187190AA	SITE PREPARATION,ONE ACRE		AS REQD.	4.0				510		186	696
					5972	5273	567868	3677	26705	17785	48167

TROPIC CLIMATE

MEDICAL DEPOT,INITIAL STANDARD,ALL CLIMATES,PROVIDES GH4019
APPROX 69600 SF OF STORAGE AREA 85 PERCENT IN TENTS WITH
EARTH FLOORS AND 15 PERCENT IN OPEN HARDSTAND.
ADMINISTRATION,MEDICAL MAINTENANCE,OPTICAL FABRICATING,
ACID-FLAMMABLE STORAGE IN TENTS

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	CONSTR EFFORT IN MANHOURS VERT	CONSTR EFFORT IN MANHOURS GENL	CONSTR EFFORT IN MANHOURS TOT
84330AB	SUMP FIRE PROTECTION 2000 GAL	2000 GAL	AS REQUIRED	7.0	14	14	336	41	223	244	508
85110DH	HARDSTAND,STAB SURF,1000SQ YD, 8 IN		AS REQUIRED	1.0	84	57	420	58		12	70
85210AV	HARDSTAND,1000 SQ YDS,HEAVY ROCK		AS REQUIRED	47.6	333	190	210392	22915		8282	31197
187190AA	SITE PREPARATION,ONE ACRE		AS REQUIRED	21.1				2692		979	3671
87210AD	CONCERTINA,TRIPLE TAPE TYP D 1000LF		AS REQUIRED	4.4	515	308	8633	179		715	894
87210AH	GATE,PER BAR SGL/LEAF 3FT X 7 FT HI		AS REQUIRED	2.0	2	2	716	20	29	12	61
87210AI	GATE,PER BAR SGL/LEAF 3FT X 7 FT HI		AS REQUIRED	5.0	5	5	1790	51	73	29	153
					953	576	222287	25956	325	10273	36554

TROPIC CLIMATE

MEDICAL DEPOT,INITIAL STANDARD,ALL CLIMATES,PROVIDES GH4029
APPROX 88800 SF OF STORAGE AREA 90 PERCENT IN TENTS WITH
EARTH FLOORS AND 10 PERCENT IN OPEN HARDSTAND.
ADMINISTRATION,MEDICAL MAINTENANCE,OPTICAL FABRICATING,
ACID-FLAMMABLE STORAGE IN TENTS
MEDSOM FOR COMMUNICATION ZONE AND COMBAT ZONE

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
84330AB	SUMP FIRE PROTECTION 2000 GAL	2000 GAL	AS REQUIRED	7.0	14	14	336	41	223	244	508
85110DH	HARDSTAND,STAB SURF,1000SQ YD, 8 IN		AS REQUIRED	1.0	84	57	420	58		12	70
85210AV	HARDSTAND,1000 SQ YDS,HEAVY ROCK		AS REQUIRED	57.6	403	230	254592	27729		10022	37751
187190AA	SITE PREPARATION,ONE ACRE		AS REQUIRED	25.0				3190		1160	4350
87210AD	CONCERTINA,TRIPLE TAPE TYP D 1000LF		AS REQUIRED	4.7	550	329	9221	191		763	954
87210AH	GATE,PER BAR SGL/LEAF 3FT X 7 FT HI		AS REQUIRED	2.0	2	2	716	20	29	12	61
87210AI	GATE,PER BAR SGL/LEAF 3FT X 7 FT HI		AS REQUIRED	5.0	5	5	1790	51	73	29	153
					1058	637	267075	31280	325	12242	43847

TROPIC CLIMATE

MEDICAL DEPOT,TROPICAL CLIMATE,TEMPORARY STANDARD,PROVIDES APPROX 69600 SF OF STORAGE AREA,85 PERCENT IN BUILDINGS WITH CONCRETE FLOORS AND 15 PERCENT IN OPEN HARDSTAND. ADMINISTRATION BLDG AND MEDICAL MAINTENANCE,OPTICAL FABRICATING,MOTOR MAINTENANCE,ACID-FLAMMABLE STORAGE AND MEDSOM FOR COMMUNICATION ZONE AND COMBAT ZONE GH4032

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
21410GT	3600 SQ.FT. BUILDING GT WOOD		1PER INST	1.0	1015	881	75577	537	4278	1395	6210
21885CB	GEN PURP MAINT SHOP 24X48 PAN WD;DT	1800SF	AS REQUIRED	1.0	32	38	23338	149	1331	149	1629
44110BC	WHSE CLOSED WD FR BLDG 48X96X14	48X96X14FT	AS REQUIRED	1.0	116	120	14467	102	2198	813	3113
44220AB	WAREHOUSE WOOD FRM CONST 80FTX240FT	19200SF	34.5SF/ST	2.0	1380	1366	218634	1844	10109	673	12626
44220AK	WAREHOUSE WOOD FRM CONST 80FTX240FT	19200SF	34.5SF/ST	1.0	483	534	103025	999	5938	336	7273
44222AB	SHED STORAGE WOOD FRAME 20FTX100FT	2000SF	AS REQUIRED	1.0	55	69	15375	136	938	136	1210
44240AB	ACID FLAMMABLE STORAGE BLDG 20X90	1800SF	AS REQUIRED	1.0	48	57	10362	151	887	151	1189
61025BB	ADMINISTRATION BLDG WOOD FRM 40X110	4400SF	90SF/MAN	1.0	75	133	30158	276	1565	276	2117
072321AA	PORTA-KAMP LATRINE		1/40MEN	5.0	5	5	1240	22	116	109	247
81241AA	ELECTRICAL DISTRIBUTION SYSTEM		AS REQUIRED	1.0	39	239	68886	332	1656	332	2320
83120AB	SEPTIC TANK 1000 GPD,CONCRETE		AS REQUIRED	5.0	55	45	12700	22	986	131	1139
83120DA	SEWAGE		AS REQUIRED	1.0			176	15	23	29	67
84210KA	WATER SYSTEM		AS REQUIRED	1.0	1	3	3799	90	426	90	606
84330AC	SUMP FIRE PROTECTION 10000 GAL	10000 GAL	AS REQUIRED	2.0	14	10	290	46	313	336	695
85110AG	ROAD PAVEMENT,CLASS A,HOT MIX BITUM		1000SY/UNIT	.1	132	110	2043	82		36	118
85110CM	HARDSTAND,SINGLE BITUM,STAB BASE		AS REQUIRED	1.0	45	35	543	48		9	57
85110DH	HARDSTAND,STAB SURF,1000SQ YD, 8 IN		AS REQUIRED	19.8	1663	1129	8316	1148		230	1378
85130FA	ROAD,CLASS B,GRADED AND DRAINED 1MI		AS REQUIRED	.1	1	1	865	302		120	422
85210AV	HARDSTAND,1000 SQ YDS,HEAVY ROCK		AS REQUIRED	31.4	220	126	138788	15116		5464	20580
187190AA	SITE PREPARATION,ONE ACRE		AS REQUIRED	14.1				1799		654	2453
87210AA	FENCE,CHAIN LK.W/2 OUTRGRS 1 1000LF		AS REQUIRED	3.1	53	158	37429	562		1798	2360
87210AF	GATE,CHAINLINK SING/LEAF 3 WI 10 HI		AS REQUIRED	2.0	2	4	558	17		35	52
87210AJ	FENCE,CORNER POST 10 FT HI CHAINLIN		AS REQUIRED	4.0			436	58		46	104
87210AL	GATE,VEH CHAINLINK 10 FT HI 32 F WI		AS REQUIRED	2.0	2	4	802	20		44	64
87230AA	SENTRY BOX 4X4		AS REQUIRED	2.0			244	276	1160	580	2016
					5436	5067	768051	24149	31924	13972	70045

TROPIC CLIMATE

MEDICAL DEPOT,TROPICAL CLIMATE,TEMPORARY STANDARD,PROVIDES GH4042
APPROX 88800 SF OF STORAGE AREA,90 PERCENT IN BUILDINGS WITH
CONCRETE FLOORS AND 10 PERCENT IN OPEN HARDSTAND.
ADMINISTRATION BLDG AND MEDICAL MAINTENANCE,OPTICAL
FABRICATING,MOTOR MAINTENANCE,ACID-FLAMMABLE STORAGE AND
UNIT PICK-UP BUILDINGS PROVIDED.WOOD FRAME CONSTRUCTION
MEDSOM FOR COMBAT ZONE

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
21410GT	3600 SQ.FT. BUILDING GT WOOD		1PER INST	1.0	1015	881	75577	537	4278	1395	6210
21885CB	GEN PURP MAINT SHOP 24X48 PAN WD;DT	1800SF	AS REQUIRED	1.0	32	38	23338	149	1331	149	1629
44110BC	WHSE CLOSED WD FR BLDG 48X96X14	48X96X14FT	AS REQUIRED	1.0	116	120	14467	102	2198	813	3113
44220AB	WAREHOUSE WOOD FRM CONST 80FTX240FT	19200SF	34.5SF/ST	3.0	2070	2049	327951	2767	15164	1009	18940
44220AK	WAREHOUSE WOOD FRM CONST 80FTX240FT	19200SF	34.5SF/ST	1.0	483	534	103025	999	5938	336	7273
44222AB	SHED STORAGE WOOD FRAME 20FTX100FT	2000SF	AS REQUIRED	1.0	55	69	15375	136	938	136	1210
44240AB	ACID FLAMMABLE STORAGE BLDG 20X90	1800SF	AS REQUIRED	1.0	48	57	10362	151	887	151	1189
61025BB	ADMINISTRATION BLDG WOOD FRM 40X110	4400SF	90SF/MAN	1.0	75	133	30158	276	1565	276	2117
072321AA	PORTA-KAMP LATRINE		1/40MEN	5.0	5	5	1240	22	116	109	247
81241AA	ELECTRICAL DISTRIBUTION SYSTEM		AS REQUIRED	1.0	39	239	68886	332	1656	332	2320
83120AB	SEPTIC TANK 1000 GPD,CONCRETE		AS REQUIRED	5.0	55	45	12700	22	986	131	1139
83120DA	SEWAGE		AS REQUIRED	1.0			176	15	23	29	67
84210KA	WATER SYSTEM		AS REQUIRED	1.0	1	3	3799	90	426	90	606
84330AC	SUMP FIRE PROTECTION 10000 GAL	10000 GAL	AS REQUIRED	2.0	14	10	290	46	313	336	695
85110AG	ROAD PAVEMENT,CLASS A,HOT MIX BITUM		1000SY/UNIT	.1	132	110	2043	82		36	118
85110CM	HARDSTAND,SINGLE BITUM,STAB BASE		AS REQUIRED	1.0	45	35	543	48		9	57
85110DH	HARDSTAND,STAB SURF,1000SQ YD, 8 IN		AS REQUIRED	18.0	1512	1026	7560	1044		209	1253
85130FA	ROAD,CLASS B,GRADED AND DRAINED 1MI		AS REQUIRED	.1	1	1	865	302		120	422
85210AV	HARDSTAND,1000 SQ YDS,HEAVY ROCK		AS REQUIRED	41.0	287	164	181220	19737		7134	26871
187190AA	SITE PREPARATION,ONE ACRE		AS REQUIRED	16.3				2080		756	2836
87210AA	FENCE,CHAIN LK.W/2 OUTRGRS 1 1000LF		AS REQUIRED	3.1	53	158	37429	562		1798	2360
87210AF	GATE,CHAINLINK SING/LEAF 3 WI 10 HI		AS REQUIRED	2.0	2	4	558	17		35	52
87210AJ	FENCE,CORNER POST 10 FT HI CHAINLIN		AS REQUIRED	4.0			436	58		46	104
87210AL	GATE,VEH CHAINLINK 10 FT HI 32 F WI		AS REQUIRED	2.0	2	4	802	20		44	64
87230AA	SENTRY BOX 4X4		AS REQUIRED	2.0			244	276	1160	580	2016
					6042	5685	919044	29870	36979	16059	82908

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TROPIC CLIMATE

VEHICLE MAINTENANCE INSTALLATION FOR ALL LEVELS OF SUPPORT THROUGH GENERAL SUPPORT ACTIVITIES.CONSISTS OF TEN BAYS AND SHOP AREA FOR OFF VEHICLE REPAIR.TEMPORARY STANDARD IN THE TROPIC/DESERT CLIMATES,WOOD BUILDINGS. MT2008

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
21410BW	TRACKED VEH TURNING PAD		AS REQUIRED	17.3	346	260	22698		778	1179	1957
21410BY	VEH WASH RACK		3PER INST	3.0	63	45	4794	17	257	357	631
21410GT	3600 SQ.FT. BUILDING GT WOOD		1PER INST	1.0	1015	881	75577	537	4278	1395	6210
21410HN	VEHICLE MAINT FAC.WD.FR.6BAY T/D		1PER INST	1.0	1305	1117	91628	577	4959	1554	7090
21411AA	LUB.RACK,VECHICLE,12X56 RAMP+PLATFO		2PER INST	2.0	14	10	1730		1044	174	1218
72321BD	LAT PIT TYPE 160MAN 8 SEATS 10X20	10X20X8	1PER INST	1.0	8	9	1559	3	290	46	339
81240HA	ELECTRICAL SYSTEM 125 MAN TR CP		AS REQUIRED	1.0	19	21	15370	16	2487	154	2657
84120FA	ELECTRICAL SYSTEM 125 MAN TR CP		AS REQUIRED	1.0	19	21	15370	16	2487	154	2657
84330AC	SUMP FIRE PROTECTION 10000 GAL	10000 GAL	AS REQUIRED	1.0	7	5	145	23	157	168	348
84330AE	FIREFHT EQPT POL W/10MGAL WTR&PUMP		AS REQUIRED	1.0	1	5	16777		49		49
85110DF	HARDSTAND,STAB SURF,1000SQ YD, 4 IN		AS REQUIRED	18.0	756	504	3780	626		209	835
187190AA	SITE PREPARATION,ONE ACRE		AS REQUIRED	4.2				536		195	731
87210AA	FENCE,CHAIN LK.W/2 OUTRGRS 1 1000LF		AS REQUIRED	1.0	17	51	12074	181		580	761
87210AF	GATE,CHAINLINK SING/LEAF 3 WI 10 HI		AS REQUIRED	1.0	1	2	279	9		17	26
87210AL	GATE,VEH CHAINLINK 10 FT HI 32 F WI		AS REQUIRED	1.0	1	2	401	10		22	32
					3572	2933	262182	2551	16786	6204	25541

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TROPIC CLIMATE

VEHICLE MAINTENANCE INSTALLATION FOR ALL LEVELS OF SUPPORT THROUGH GENERAL SUPPORT ACTIVITIES.CONSISTS OF TEN BAYS AND SHOP AREA FOR OFF VEHICLE REPAIR.TEMPORARY STANDARD IN THE TROPIC/DESERT CLIMATES,METAL BUILDINGS. MT2018

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
21410BW	TRACKED VEH TURNING PAD		AS REQUIRED	17.3	346	260	22698		778	1179	1957
21410BY	VEH WASH RACK		3PER INST	3.0	63	45	4794	17	257	357	631
21410GU	3600 SQ.FT. BUILDING GU METAL		1PER INST	1.0	51	46	46815	342	3067	1322	4731
21410HP	VEHICLE MAINT.FAC.ST.FR,6BAY,T/D		1PER INST	1.0	69	61	58873	441	3480	1427	5348
21411AA	LUB.RACK,VECHICLE,12X56 RAMP+PLATFO		2PER INST	2.0	14	10	1730		1044	174	1218
72321BA	LUB.RACK,VECHICLE,12X56 RAMP+PLATFO		1PER INST	1.0	7	5	865		522	87	609
81240HA	ELECTRICAL SYSTEM 125 MAN TR CP		AS REQUIRED	1.0	19	21	15370	16	2487	154	2657
84120FA	ELECTRICAL SYSTEM 125 MAN TR CP		AS REQUIRED	1.0	19	21	15370	16	2487	154	2657
84330AC	SUMP FIRE PROTECTION 10000 GAL	10000 GAL	AS REQUIRED	1.0	7	5	145	23	157	168	348
84330AE	FIREFHT EQPT POL W/10MGAL WTR&PUMP		AS REQUIRED	1.0	1	5	16777		49		49
85110DF	HARDSTAND,STAB SURF,1000SQ YD, 4 IN		AS REQUIRED	18.0	756	504	3780	626		209	835
187190AA	SITE PREPARATION,ONE ACRE		AS REQUIRED	4.2				536		195	731
87210AA	FENCE,CHAIN LK.W/2 OUTRGRS 1 1000LF		AS REQUIRED	1.8	31	92	21733	326		1044	1370
87210AF	GATE,CHAINLINK SING/LEAF 3 WI 10 HI		AS REQUIRED	1.0	1	2	279	9		17	26
87210AL	GATE,VEH CHAINLINK 10 FT HI 32 F WI		AS REQUIRED	1.0	1	2	401	10		22	32
					1385	1079	209630	2362	14328	6509	23199

TROPIC CLIMATE

VEHICLE MAINTENANCE INSTALLATION FOR ALL LEVELS OF SUPPORT THROUGH GENERAL SUPPORT ACTIVITIES.CONSISTS OF TWENTY BAYS AND SHOP AREA FOR OFF VEHICLE REPAIR.TEMPORARY STANDARD IN THE TROPIC/DESERT CLIMATES,WOOD BUILDINGS. MT2028

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
21410BW	TRACKED VEH TURNING PAD		AS REQUIRED	31.4	628	471	41197		1411	2140	3551
21410BY	VEH WASH RACK		6PER INST	6.0	126	90	9588	35	513	713	1261
21410GT	3600 SQ.FT. BUILDING GT WOOD		2PER INST	2.0	2030	1762	151154	1073	8555	2790	12418
21410HN	VEHICLE MAINT FAC.WD.FR.6BAY T/D		2PER INST	2.0	2610	2234	183256	1154	9918	3109	14181
21411AA	LUB.RACK,VECHICLE,12X56 RAMP+PLATFO		4PER INST	4.0	28	20	3460		2088	348	2436
72321BD	LAT PIT TYPE 160MAN 8 SEATS 10X20	10X20X8	1PER INST	1.0	8	9	1559	3	290	46	339
81240HB	ELECTRICAL DISTRIBUTION SYS 250 MAN		AS REQUIRED	1.0	28	42	27991	3	33	3	39
84120FA	ELECTRICAL DISTRIBUTION SYS 250 MAN		AS REQUIRED	1.0	28	42	27991	3	33	3	39
84330AC	SUMP FIRE PROTECTION 10000 GAL	10000 GAL	AS REQUIRED	1.0	7	5	145	23	157	168	348
84330AE	FIREFHT EQPT POL W/10MGAL WTR&PUMP		AS REQUIRED	1.0	1	5	16777		49		49
85110DF	HARDSTAND,STAB SURF,1000SQ YD, 4 IN		AS REQUIRED	36.0	1512	1008	7560	1253		418	1671
187190AA	SITE PREPARATION,ONE ACRE		AS REQUIRED	8.3				1059		385	1444
87210AA	FENCE,CHAIN LK.W/2 OUTRGRS 1 1000LF		AS REQUIRED	2.5	43	128	30185	453		1450	1903
87210AF	GATE,CHAINLINK SING/LEAF 3 WI 10 HI		AS REQUIRED	1.0	1	2	279	9		17	26
87210AL	GATE,VEH CHAINLINK 10 FT HI 32 F WI		AS REQUIRED	1.0	1	2	401	10		22	32
					7051	5820	501543	5078	23047	11612	39737

TROPIC CLIMATE

VEHICLE MAINTENANCE INSTALLATION FOR ALL LEVELS OF SUPPORT THROUGH GENERAL SUPPORT ACTIVITIES.CONSISTS OF TWENTY BAYS AND SHOP AREA FOR OFF VEHICLE REPAIR.TEMPORARY STANDARD IN THE TROPIC/DESERT CLIMATES,METAL BUILDINGS. MT2038

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
21410BW	TRACKED VEH TURNING PAD		AS REQUIRED	31.4	628	471	41197		1411	2140	3551
21410BY	VEH WASH RACK		6PER INST	6.0	126	90	9588	35	513	713	1261
21410GU	3600 SQ.FT. BUILDING GU METAL		2PER INST	2.0	102	92	93630	684	6134	2645	9463
21410HP	VEHICLE MAINT.FAC.ST.FR,6BAY,T/D		2PER INST	2.0	138	122	117746	882	6960	2854	10696
21411AA	LUB.RACK,VECHICLE,12X56 RAMP+PLATFO		4PER INST	4.0	28	20	3460		2088	348	2436
72321BA	LUB.RACK,VECHICLE,12X56 RAMP+PLATFO		1PER INST	1.0	7	5	865		522	87	609
81240HA	ELECTRICAL SYSTEM 125 MAN TR CP		AS REQUIRED	1.0	19	21	15370	16	2487	154	2657
84120FA	ELECTRICAL SYSTEM 125 MAN TR CP		AS REQUIRED	1.0	19	21	15370	16	2487	154	2657
84330AC	SUMP FIRE PROTECTION 10000 GAL	10000 GAL	AS REQUIRED	1.0	7	5	145	23	157	168	348
84330AE	FIREFHT EQPT POL W/10MGAL WTR&PUMP		AS REQUIRED	1.0	1	5	16777		49		49
85110DF	HARDSTAND,STAB SURF,1000SQ YD, 4 IN		AS REQUIRED	36.0	1512	1008	7560	1253		418	1671
187190AA	SITE PREPARATION,ONE ACRE		AS REQUIRED	8.3				1059		385	1444
87210AA	FENCE,CHAIN LK.W/2 OUTRGRS 1 1000LF		AS REQUIRED	2.5	43	128	30185	453		1450	1903
87210AF	GATE,CHAINLINK SING/LEAF 3 WI 10 HI		AS REQUIRED	1.0	1	2	279	9		17	26
87210AL	GATE,VEH CHAINLINK 10 FT HI 32 F WI		AS REQUIRED	1.0	1	2	401	10		22	32
					2632	1992	352573	4440	22808	11555	38803

TROPIC CLIMATE

MARINE TERMINAL,POL,200000 BBL CAPAC W/50M WLDD TNKS,10M&3M BLTD TANKS FOR EXISTG DOCK FOR TNKR DISCHARGE,TEMP,TROP& DST CLIM.T-2 TNKR OR SUPER TANKER DISCHARGING W/ 24HR TURN AROUND TIME.MARINE TERMINAL W/ESTG DOCK MOORING BERTH,12IN INLAND PPELN,BOOSTER PMP STA & OPER BLDG.,TANK FARM FOR BULK STAGE OF 4 PRODUCTS FOR RECEIVING 800000 BBLS/ MO. MAX REQUIRES 60 ACRES. FINE AGGR. 20CY. COARSE AGGR. 22 PA1015

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AD	12IN SWITCH MNFLD F/TNK FARM NO PMP	12-INCH	AS REQUIRED	1.0	26	23	97212	44	348	116	508
12510AG	FLOOD PMP 1355BPH 12 IN MANIFOLD	1355 BPH	AS REQUIRED	1.0	14	21	50497	29	522	145	696
12510AK	TANK PMP POL 2800 BPH W/12IN MANIFD	2800 BPH	AS REQUIRED	4.0	28	56	65016	29	232	87	348
12510AR	TRANS PMP POL 2800 BPH W/12 IN MNFD	2800 BPH	AS REQUIRED	1.0	18	21	78664	65	500	102	667
12510AW	PPLN POL 1000 FT OF 12 INCH GROOVE	1000FT-12IN	AS REQUIRED	1.0	9	32	4440	22	283	102	407
12510BC	PPLN POL 1 MILE OF 12 INCH GROOVE	1MILE-12INCH	AS REQUIRED	4.0	180	708	95916	232	5510	2436	8178
12510BL	PPLN POL 1M FT OF 12 IN API GROVE	1000 FT	AS REQUIRED	4.0	16	16	44460	58	1334	928	2320
12530AG	BOOSTER STATION POL 7000 BPH	7000 BPH	AS REQUIRED	4.0	108	224	216436	232	1624	464	2320
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	2.0	2	2	2736	15	102	58	175
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	4.0	4	4	4984	46	302	116	464
12665AU	PIPE POL 12IN F/SUPER TNKR AT DOCK	12IN 2800BPH	AS REQUIRED	1.0	32	49	221603		957	232	1189
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	3.0	15	30	15606	109	435	196	740
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	3.0	6	96	36132	392	1349	957	2698
41180AL	TANK POL 10000 BARREL W/12 IN PIPE	10000 BBL	AS REQUIRED	4.0	12	164	113536	841	4930	2523	8294
41180AN	TANK POL 50000 BARREL W/12 IN PIPE	50000 BBL	AS REQUIRED	3.0	12	579	182766	1305	19314	8700	29319
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	2.0	14	30	23462	93	1325	493	1911
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	4.0	28	32	5616	278	1288	1299	2865
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
					529	2104	1269004	3929	41167	19282	64378

TROPIC CLIMATE

MARINE TERMINAL,POL,400000 BBL CAPAC.USED FOR PHASE1.WLDD & PA1025
BLTD TNKS FOR EXSTG DOCK FOR TNKR DISCHARGE,TEMP,TROP & DST
CLIM.T-2 TNKR OR SUPER TANKER DISCHARGING W/13
HR TURN AROUND TIME. MARINE TERMINAL W/EXSTG DOCK,MOORING
BERTH,12IN INLAND PPELN,BOOSTER PMP STA & OPER BLDG.,TANK
FARM FOR BULK STGE OF 4 PRODUCTS FOR RECEIVING 1500000 BBLS/
MO. MAX REQUIRES 121 ACRES. FINE AGGR. 40CY. COARSE AGGR. 44

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AD	12IN SWITCH MNFLD F/TNK FARM NO PMP	12-INCH	AS REQUIRED	3.0	78	69	291636	131	1044	348	1523
12510AG	FLOOD PMP 1355BPH 12 IN MANIFOLD	1355 BPH	AS REQUIRED	2.0	28	42	100994	58	1044	290	1392
12510AK	TANK PMP POL 2800 BPH W/12IN MANIFD	2800 BPH	AS REQUIRED	8.0	56	112	130032	58	464	174	696
12510AR	TRANS PMP POL 2800 BPH W/12 IN MNFD	2800 BPH	AS REQUIRED	2.0	36	42	157328	131	1001	203	1335
12510AW	PPLN POL 1000 FT OF 12 INCH GROOVE	1000FT-12IN	AS REQUIRED	2.0	18	64	8880	44	566	203	813
12510BC	PPLN POL 1 MILE OF 12 INCH GROOVE	1MILE-12INCH	AS REQUIRED	8.0	360	1416	191832	464	11020	4872	16356
12510BL	PPLN POL 1M FT OF 12 IN API GROVE	1000 FT	AS REQUIRED	8.0	32	32	88920	116	2668	1856	4640
12530AG	BOOSTER STATION POL 7000 BPH	7000 BPH	AS REQUIRED	8.0	216	448	432872	464	3248	928	4640
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	4.0	4	4	5472	29	203	116	348
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	4.0	4	4	4984	46	302	116	464
12665AU	PIPE POL 12IN F/SUPER TNKR AT DOCK	12IN 2800BPH	AS REQUIRED	1.0	32	49	221603		957	232	1189
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	4.0	20	40	20808	145	580	261	986
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	AS REQUIRED	2.0	2	14	12884	131	522	218	871
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	2.0	2	26	18516	232	928	377	1537
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	6.0	12	192	72264	783	2697	1914	5394
41180AL	TANK POL 10000 BARREL W/12 IN PIPE	10000 BBL	AS REQUIRED	8.0	24	328	227072	1682	9860	5046	16588
41180AN	TANK POL 50000 BARREL W/12 IN PIPE	50000 BBL	AS REQUIRED	6.0	24	1158	365532	2610	38628	17400	58638
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	4.0	28	60	46924	186	2651	986	3823
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	8.0	56	64	11232	557	2575	2598	5730
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	4.0	8	8	1328	46	696	278	1020
					1040	4172	2411113	7913	81654	38416	127983

TROPIC CLIMATE

MARINE TERMINAL,POL,400000 BBL CAPAC.USED FOR PHASE-2.WLDD PA1035
&BLTD TNKS FOR EXISTS DOCK TANKER DISCHARGE,TEMP,TROP & DST
CLIM.T-2 TNKR OR SUPER TANKER DISCHARGING W/13HR
TURN AROUND TIME. MARINE TERMINAL W/EXESTS DOCK MOORING
BERTH,12IN INLAND PPELN,BOOSTER PMP STA & OPER BLDG.,TANK
FARM FOR BULK STGE OF 4 PRODUCTS FOR RECEIVING 1500000
BBLS/MO. MAX REQUIRES 121 ACRES. FINE AGGR. 40CY. COARSE AGG

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AD	12IN SWITCH MNFLD F/TNK FARM NO PMP	12-INCH	AS REQUIRED	3.0	78	69	291636	131	1044	348	1523
12510AG	FLOOD PMP 1355BPH 12 IN MANIFOLD	1355 BPH	AS REQUIRED	2.0	28	42	100994	58	1044	290	1392
12510AK	TANK PMP POL 2800 BPH W/12IN MANIFD	2800 BPH	AS REQUIRED	8.0	56	112	130032	58	464	174	696
12510AR	TRANS PMP POL 2800 BPH W/12 IN MNFD	2800 BPH	AS REQUIRED	2.0	36	42	157328	131	1001	203	1335
12510AW	PPLN POL 1000 FT OF 12 INCH GROOVE	1000FT-12IN	AS REQUIRED	2.0	18	64	8880	44	566	203	813
12510BC	PPLN POL 1 MILE OF 12 INCH GROOVE	1MILE-12INCH	AS REQUIRED	16.0	720	2832	383664	928	22040	9744	32712
12510BL	PPLN POL 1M FT OF 12 IN API GROVE	1000 FT	AS REQUIRED	8.0	32	32	88920	116	2668	1856	4640
12530AG	BOOSTER STATION POL 7000 BPH	7000 BPH	AS REQUIRED	16.0	432	896	865744	928	6496	1856	9280
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	4.0	4	4	5472	29	203	116	348
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	16.0	16	16	19936	186	1206	464	1856
12665AU	PIPE POL 12IN F/SUPER TNKR AT DOCK	12IN 2800BPH	AS REQUIRED	2.0	64	98	443206		1914	464	2378
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	4.0	20	40	20808	145	580	261	986
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	AS REQUIRED	2.0	2	14	12884	131	522	218	871
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	2.0	2	26	18516	232	928	377	1537
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	6.0	12	192	72264	783	2697	1914	5394
41180AL	TANK POL 10000 BARREL W/12 IN PIPE	10000 BBL	AS REQUIRED	8.0	24	328	227072	1682	9860	5046	16588
41180AN	TANK POL 50000 BARREL W/12 IN PIPE	50000 BBL	AS REQUIRED	6.0	24	1158	365532	2610	38628	17400	58638
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	4.0	28	60	46924	186	2651	986	3823
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	8.0	56	64	11232	557	2575	2598	5730
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	4.0	8	8	1328	46	696	278	1020
					1660	6097	3272372	8981	97783	44796	151560

TROPIC CLIMATE

MARINE TERMINAL,POL,200000 BBL CAPAC W/10 THOUS.& 3 THOUS. PA1045
BOLTED STL FOR EXISTG DOCK FOR TANKER DISCHARGE,TEMP,TROP&
DST CLIM.T-2 TANKER OR SUPER TANKER DISCHARGING W/24HR
TURN AROUND TIME.MARINE TERMINAL W/EXSTS DOCK MOORING BERTH,
12IN INLAND PPELN,BOOSTER PMP STA & OPER BLDG.,TANK FARM
FOR BULK STGE OF 4 PRODUCTS FOR RECEIVING 80000 BBLS/MO. MAX
REQUIRES 60 ACRES. FINE AGGR. 20CY. COARSE AGGR. 22CY. FIRFT

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AD	12IN SWITCH MNFLD F/TNK FARM NO PMP	12-INCH	AS REQUIRED	1.0	26	23	97212	44	348	116	508
12510AG	FLOOD PMP 1355BPH 12 IN MANIFOLD	1355 BPH	AS REQUIRED	2.0	28	42	100994	58	1044	290	1392
12510AK	TANK PMP POL 2800 BPH W/12IN MANIFD	2800 BPH	AS REQUIRED	4.0	28	56	65016	29	232	87	348
12510AR	TRANS PMP POL 2800 BPH W/12 IN MNFD	2800 BPH	AS REQUIRED	1.0	18	21	78664	65	500	102	667
12510AW	PPLN POL 1000 FT OF 12 INCH GROOVE	1000FT-12IN	AS REQUIRED	1.0	9	32	4440	22	283	102	407
12510BC	PPLN POL 1 MILE OF 12 INCH GROOVE	1MILE-12INCH	AS REQUIRED	4.0	180	708	95916	232	5510	2436	8178
12510BK	PPLN POL 1M FT OF 8 IN API GROOVE	1000 FT	AS REQUIRED	.2	3	3	700	3	58	41	102
12510BL	PPLN POL 1M FT OF 12 IN API GROVE	1000 FT	AS REQUIRED	6.0	24	24	66690	87	2001	1392	3480
12530AG	BOOSTER STATION POL 7000 BPH	7000 BPH	AS REQUIRED	4.0	108	224	216436	232	1624	464	2320
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	2.0	2	2	2736	15	102	58	175
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	4.0	4	4	4984	46	302	116	464
12665AU	PIPE POL 12IN F/SUPER TNKR AT DOCK	12IN 2800BPH	AS REQUIRED	1.0	32	49	221603		957	232	1189
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	3.0	15	30	15606	109	435	196	740
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	4.0	8	128	48176	522	1798	1276	3596
41180AL	TANK POL 10000 BARREL W/12 IN PIPE	10000 BBL	AS REQUIRED	19.0	57	779	539296	3995	23418	11984	39397
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	2.0	14	30	23462	93	1325	493	1911
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	5.0	35	40	7020	348	1610	1624	3582
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
					596	2212	1598873	6039	42359	21337	69735

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TROPIC CLIMATE

MARINE TERMINAL,POL,400000 BBL CAPAC W/10 THOUSAND. & 3 THOU PA1055
BOLTED STEEL FOR EXISTING DOCK FOR TANKER DISCHARGE,TEMPER-
ATE,TROPICAL AND DESERT CLIMATE.T-2 TANKER OR SUPER TANKER
DISCHARGING. MARINE TERMINAL W/EXISTING DOCK MOORING BERTH
12IN INLAND PPELN,BOOSTER PMP STA & OPER BLDG., TANK FARM
FOR BULK STGE CF 4 PRODUCTS FOR RECEIVING 1500000 BBLS/MO.
MAX REQUIRES 121 ACRES. FINE AGGR. 40CY. COARSE AGGR. 44CY.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AD	12IN SWITCH MNFLD F/TNK FARM NO PMP	12-INCH	AS REQUIRED	3.0	78	69	291636	131	1044	348	1523
12510AG	FLOOD PMP 1355BPH 12 IN MANIFOLD	1355 BPH	AS REQUIRED	4.0	56	84	201988	116	2088	580	2784
12510AK	TANK PMP POL 2800 BPH W/12IN MANIFD	2800 BPH	AS REQUIRED	8.0	56	112	130032	58	464	174	696
12510AR	TRANS PMP POL 2800 BPH W/12 IN MNFD	2800 BPH	AS REQUIRED	2.0	36	42	157328	131	1001	203	1335
12510AW	PPLN POL 1000 FT OF 12 INCH GROOVE	1000FT-12IN	AS REQUIRED	2.0	18	64	8880	44	566	203	813
12510BC	PPLN POL 1 MILE OF 12 INCH GROOVE	1MILE-12INCH	AS REQUIRED	2.0	90	354	47958	116	2755	1218	4089
12510BK	PPLN POL 1M FT OF 8 IN API GROOVE	1000 FT	AS REQUIRED	8.0	104	128	28000	116	2320	1624	4060
12510BL	PPLN POL 1M FT OF 12 IN API GROVE	1000 FT	AS REQUIRED	.4	2	2	4446	6	133	93	232
12530AG	BOOSTER STATION POL 7000 BPH	7000 BPH	AS REQUIRED	16.0	432	896	865744	928	6496	1856	9280
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	4.0	4	4	5472	29	203	116	348
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	8.0	8	8	9968	93	603	232	928
12665AU	PIPE POL 12IN F/SUPER TNKR AT DOCK	12IN 2800BPH	AS REQUIRED	2.0	64	98	443206		1914	464	2378
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	4.0	20	40	20808	145	580	261	986
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	AS REQUIRED	2.0	2	14	12884	131	522	218	871
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	2.0	2	26	18516	232	928	377	1537
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	8.0	16	256	96352	1044	3596	2552	7192
41180AL	TANK POL 10000 BARREL W/12 IN PIPE	10000 BBL	AS REQUIRED	38.0	114	1558	1078592	7990	46835	23969	78794
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	4.0	28	60	46924	186	2651	986	3823
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	10.0	70	80	14040	696	3219	3248	7163
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	4.0	8	8	1328	46	696	278	1020
					1208	3903	3484102	12238	78614	39000	129852

TROPIC CLIMATE

MARINE TERMINAL,POL,1000000 BBL CAPAC.USED FOR PHASE 1. WLDD PA1065
& BLTD TNKS FOR EXISTG DOCK FOR TANKER DISCHARGE,TEMP,TROP &
DST CLIM. T-2 TANKER OR SUPER TANKER DISCHARGING W/13 HR
TURN AROUND TIME. MARINE TERMINAL W/EXSTG DOCK MOORING BERTH
12IN INLAND PPELN, BOOSTER PMP STA & OPER. BLDG.,TANK FARM
FOR BULK STGE CF 4 PRODUCTS FOR RECEIVING 3000000 BBLS/MO.
MAX REQUIRES 307 ACRES. FINE AGGR. 80CY. COARSE AGGR. 88 CY.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AD	12IN SWITCH MNFLD F/TNK FARM NO PMP	12-INCH	AS REQUIRED	5.0	130	115	486060	218	1740	580	2538
12510AG	FLOOD PMP 1355BPH 12 IN MANIFOLD	1355 BPH	AS REQUIRED	8.0	112	168	403976	232	4176	1160	5568
12510AK	TANK PMP POL 2800 BPH W/12IN MANIFD	2800 BPH	AS REQUIRED	16.0	112	224	260064	116	928	348	1392
12510AR	TRANS PMP POL 2800 BPH W/12 IN MNFD	2800 BPH	AS REQUIRED	4.0	72	84	314656	261	2001	406	2668
12510AW	PPLN POL 1000 FT OF 12 INCH GROOVE	1000FT-12IN	AS REQUIRED	4.0	36	128	17760	87	1131	406	1624
12510BC	PPLN POL 1 MILE OF 12 INCH GROOVE	1MILE-12INCH	AS REQUIRED	16.0	720	2832	383664	928	22040	9744	32712
12510BL	PPLN POL 1M FT OF 12 IN API GROVE	1000 FT	AS REQUIRED	24.0	96	96	266760	348	8004	5568	13920
12530AG	BOOSTER STATION POL 7000 BPH	7000 BPH	AS REQUIRED	16.0	432	896	865744	928	6496	1856	9280
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	8.0	8	8	10944	58	406	232	696
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	16.0	16	16	19936	186	1206	464	1856
12665AU	PIPE POL 12IN F/SUPER TNKR AT DOCK	12IN 2800BPH	AS REQUIRED	1.0	32	49	221603		957	232	1189
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	10.0	50	100	52020	363	1450	653	2466
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	AS REQUIRED	2.0	2	14	12884	131	522	218	871
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	4.0	4	52	37032	464	1856	754	3074
41180AL	TANK POL 10000 BARREL W/12 IN PIPE	10000 BBL	AS REQUIRED	20.0	60	820	567680	4205	24650	12615	41470
41180AN	TANK POL 50000 BARREL W/12 IN PIPE	50000 BBL	AS REQUIRED	16.0	64	3088	974752	6960	103008	46400	156368
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	8.0	56	120	93848	371	5301	1972	7644
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	15.0	105	120	21060	1044	4829	4872	10745
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	8.0	16	16	2656	93	1392	557	2042
					2123	8946	5013099	16993	192093	89037	298123

TROPIC CLIMATE

MARINE TERMINAL,POL,1000000 BBL CAPAC USED FOR PHASE2. WLDD PA1075
& BLTD TNKS FOR EXISTG DOCK FOR TANKER DISCHARGE,TEMP,TROP &
DST CLIM. T-2 TANKER OR SUPER TANKER DISCHARGING W/13 HR
TURN AROUND TIME. MARINE TERMINAL W/EXSTS DOCK MOORING BERTH
12IN INLAND PPELN, BOOSTER PMP STA & OPER BLDG., TANK FARM
FOR BULK STGE OF 4 PRODUCTS FOR RECEIVING 3000000 BBLS/MO.
MAX REQUIRES 307 ACRES. FINE AGGR. 80CY. COARSE AGGR. 88 CY.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AD	12IN SWITCH MNFLD F/TNK FARM NO PMP	12-INCH	AS REQUIRED	5.0	130	115	486060	218	1740	580	2538
12510AG	FLOOD PMP 1355BPH 12 IN MANIFOLD	1355 BPH	AS REQUIRED	8.0	112	168	403976	232	4176	1160	5568
12510AK	TANK PMP POL 2800 BPH W/12IN MANIFD	2800 BPH	AS REQUIRED	16.0	112	224	260064	116	928	348	1392
12510AR	TRANS PMP POL 2800 BPH W/12 IN MNFD	2800 BPH	AS REQUIRED	4.0	72	84	314656	261	2001	406	2668
12510AW	PPLN POL 1000 FT OF 12 INCH GROOVE	1000FT-12IN	AS REQUIRED	4.0	36	128	17760	87	1131	406	1624
12510BC	PPLN POL 1 MILE OF 12 INCH GROOVE	1MILE-12INCH	AS REQUIRED	32.0	1440	5664	767328	1856	44080	19488	65424
12510BL	PPLN POL 1M FT OF 12 IN API GROVE	1000 FT	AS REQUIRED	24.0	96	96	266760	348	8004	5568	13920
12530AG	BOOSTER STATION POL 7000 BPH	7000 BPH	AS REQUIRED	32.0	864	1792	1731488	1856	12992	3712	18560
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	8.0	8	8	10944	58	406	232	696
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	32.0	32	32	39872	371	2413	928	3712
12665AU	PIPE POL 12IN F/SUPER TNKR AT DOCK	12IN 2800BPH	AS REQUIRED	2.0	64	98	443206		1914	464	2378
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	10.0	50	100	52020	363	1450	653	2466
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	AS REQUIRED	2.0	2	14	12884	131	522	218	871
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	4.0	4	52	37032	464	1856	754	3074
41180AL	TANK POL 10000 BARREL W/12 IN PIPE	10000 BBL	AS REQUIRED	20.0	60	820	567680	4205	24650	12615	41470
41180AN	TANK POL 50000 BARREL W/12 IN PIPE	50000 BBL	AS REQUIRED	16.0	64	3088	974752	6960	103008	46400	156368
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	8.0	56	120	93848	371	5301	1972	7644
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	15.0	105	120	21060	1044	4829	4872	10745
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	8.0	16	16	2656	93	1392	557	2042
					3323	12739	6504046	19034	222793	101333	343160

TROPIC CLIMATE

MARINE TERMINAL,POL,1000000 BBL CAPAC WITH 10M BOLTED STEEL PA1085
TNKS FOR EXISTS DOCK FOR TANKER DISCHARGE,TEMP,TROP& DST
DST CLIM. T-2 TANKER OR SUPER TANKER DISCHARGING W/13 HR
TURN AROUND TIME. MARINE TERMINAL W/EXSTG DOCK MOORING BERTH
12IN INLAND PPELN,BOOSTER PMP STA & OPER.BLDG.,TANK FARM FOR
BULK STGE OF 4 PRODUCTS FOR RECEIVING 3000000 BBLS/MO-MAX
REQUIRES 307 ACRES. FINE AGGR. 70CY. COARSE AGGR. 77CY. FIRE

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AD	12IN SWITCH MNFLD F/TNK FARM NO PMP	12-INCH	AS REQUIRED	5.0	130	115	486060	218	1740	580	2538
12510AG	FLOOD PMP 1355BPH 12 IN MANIFOLD	1355 BPH	AS REQUIRED	8.0	112	168	403976	232	4176	1160	5568
12510AK	TANK PMP POL 2800 BPH W/12IN MANIFD	2800 BPH	AS REQUIRED	2.0	14	28	32508	15	116	44	175
12510AR	TRANS PMP POL 2800 BPH W/12 IN MNFD	2800 BPH	AS REQUIRED	4.0	72	84	314656	261	2001	406	2668
12510AW	PPLN POL 1000 FT OF 12 INCH GROOVE	1000FT-12IN	AS REQUIRED	8.0	72	256	35520	174	2262	812	3248
12510BC	PPLN POL 1 MILE OF 12 INCH GROOVE	1MILE-12INCH	AS REQUIRED	24.0	1080	4248	575496	1392	33060	14616	49068
12510BK	PPLN POL 1M FT OF 8 IN API GROOVE	1000 FT	AS REQUIRED	1.2	16	19	4200	17	348	244	609
12510BL	PPLN POL 1M FT OF 12 IN API GROVE	1000 FT	AS REQUIRED	28.0	112	112	311220	406	9338	6496	16240
12530AG	BOOSTER STATION POL 7000 BPH	7000 BPH	AS REQUIRED	32.0	864	1792	1731488	1856	12992	3712	18560
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	8.0	8	8	10944	58	406	232	696
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	32.0	32	32	39872	371	2413	928	3712
12665AU	PIPE POL 12IN F/SUPER TNKR AT DOCK	12IN 2800BPH	AS REQUIRED	2.0	64	98	443206		1914	464	2378
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	10.0	50	100	52020	363	1450	653	2466
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	AS REQUIRED	2.0	2	14	12884	131	522	218	871
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	4.0	4	52	37032	464	1856	754	3074
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	16.0	32	512	192704	2088	7192	5104	14384
41180AL	TANK POL 10000 BARREL W/12 IN PIPE	10000 BBL	AS REQUIRED	96.0	288	3936	2724864	20184	118320	60552	199056
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	7.0	49	105	82117	325	4639	1726	6690
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	20.0	140	160	28080	1392	6438	6496	14326
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	8.0	16	16	2656	93	1392	557	2042
					3157	11855	7521503	30040	212575	105754	348369

TROPIC CLIMATE

MARINE TERM,POL,200000 BBL CAPAC W/50M WLDD TANKS,10M & 3M BLTD STL TANKS W/JETTY FOR TANKER FOR TANKER DISCHARGE. TEMP TROP & DST CLIM. T-2 TANKER DISCHARGING W/24 HR TURN AROUND TIME.MARINE TERM W/JETTY MOORING BERTH,12IN INLD PPLN, BOOSTER PMP STA & OPER BLDG. TANK FARM FOR BLK STGE OF 4 PROD FOR RECEIVG 800000 BBLS/MO.MAX.REQUIRES 60 ACRES FINE AGGR. 20CY,COARSE AGGR. 22CY. FIREFTG EQUIP. HAND EXTG PA1095

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AD	12IN SWITCH MNFLD F/TNK FARM NO PMP	12-INCH	AS REQUIRED	1.0	26	23	97212	44	348	116	508
12510AG	FLOOD PMP 1355BPH 12 IN MANIFOLD	1355 BPH	AS REQUIRED	1.0	14	21	50497	29	522	145	696
12510AK	TANK PMP POL 2800 BPH W/12IN MANIFD	2800 BPH	AS REQUIRED	4.0	28	56	65016	29	232	87	348
12510AR	TRANS PMP POL 2800 BPH W/12 IN MNFD	2800 BPH	AS REQUIRED	1.0	18	21	78664	65	500	102	667
12510AW	PPLN POL 1000 FT OF 12 INCH GROOVE	1000FT-12IN	AS REQUIRED	1.0	9	32	4440	22	283	102	407
12510BC	PPLN POL 1 MILE OF 12 INCH GROOVE	1MILE-12INCH	AS REQUIRED	4.0	180	708	95916	232	5510	2436	8178
12510BL	PPLN POL 1M FT OF 12 IN API GROVE	1000 FT	AS REQUIRED	4.0	16	16	44460	58	1334	928	2320
12530AG	BOOSTER STATION POL 7000 BPH	7000 BPH	AS REQUIRED	4.0	108	224	216436	232	1624	464	2320
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	2.0	2	2	2736	15	102	58	175
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	4.0	4	4	4984	46	302	116	464
12665AU	PIPE POL 12IN F/SUPER TNKR AT DOCK	12IN 2800BPH	AS REQUIRED	1.0	32	49	221603		957	232	1189
16440AA	JETTY POL 14FT X 1M FT WALK&PIPEWAY	1000&40X70FT	AS REQUIRED	1.0	695	718	278329	6235	10150	276	16661
16440AB	HOSE DERRICK PARTS FOR POL WHARFS.		AS REQUIRED	1.0	2	1	2709		131	131	262
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	5.0	25	50	26010	181	725	326	1232
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	3.0	6	96	36132	392	1349	957	2698
41180AL	TANK POL 10000 BARREL W/12 IN PIPE	10000 BBL	AS REQUIRED	4.0	12	164	113536	841	4930	2523	8294
41180AN	TANK POL 50000 BARREL W/12 IN PIPE	50000 BBL	AS REQUIRED	3.0	12	579	182766	1305	19314	8700	29319
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	2.0	14	30	23462	93	1325	493	1911
84290AA	TANKER WATERING SERVICE FACILITIES,	1000 BBL	AS REQUIRED	1.0	8	28	18849		1160	189	1349
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	4.0	28	32	5616	278	1288	1299	2865
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
					1244	2871	1579295	10236	52898	20008	83142

TROPIC CLIMATE

MARINE TERM,POL,400000 BBL CAPAC W/50M WLDD TANKS,10M & 3M PA1105
BLTD STL TANKS W/JETTY FOR TANKER FOR TANKER DISCHARGE. TEMP
TROP & DST CLIM. T-2 TANKER DISCHARGING W/13 HR TURN AROUND
TIME. MARINE TERM W/JETTY MOORING BERTH,12IN INLD PPLN,
BOOSTER PMP STA & OPER BLDG. TANK FARM FOR BLK STGE OF 4
PROD FOR RECEIVG 1500000 BBLS/MO.MAX. REQUIRES 121 ACRES
FINE AGGR. 40CY,COARSE AGGR. 44CY. FIREFTG EQUIP. HAND EXTG

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AD	12IN SWITCH MNFLD F/TNK FARM NO PMP	12-INCH	AS REQUIRED	3.0	78	69	291636	131	1044	348	1523
12510AG	FLOOD PMP 1355BPH 12 IN MANIFOLD	1355 BPH	AS REQUIRED	2.0	28	42	100994	58	1044	290	1392
12510AK	TANK PMP POL 2800 BPH W/12IN MANIFD	2800 BPH	AS REQUIRED	8.0	56	112	130032	58	464	174	696
12510AR	TRANS PMP POL 2800 BPH W/12 IN MNFD	2800 BPH	AS REQUIRED	2.0	36	42	157328	131	1001	203	1335
12510AW	PPLN POL 1000 FT OF 12 INCH GROOVE	1000FT-12IN	AS REQUIRED	8.0	72	256	35520	174	2262	812	3248
12510BC	PPLN POL 1 MILE OF 12 INCH GROOVE	1MILE-12INCH	AS REQUIRED	12.0	540	2124	287748	696	16530	7308	24534
12510BL	PPLN POL 1M FT OF 12 IN API GROVE	1000 FT	AS REQUIRED	2.0	8	8	22230	29	667	464	1160
12530AG	BOOSTER STATION POL 7000 BPH	7000 BPH	AS REQUIRED	8.0	216	448	432872	464	3248	928	4640
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	4.0	4	4	5472	29	203	116	348
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	12.0	12	12	14952	139	905	348	1392
12665AU	PIPE,POL 12IN F/SUPER TNKR AT DOCK	12IN 2800BPH	AS REQUIRED	1.0	32	49	221603		957	232	1189
16440AA	JETTY POL 14FT X 1M FT WALK&PIPEWAY	1000&40X70FT	AS REQUIRED	1.0	695	718	278329	6235	10150	276	16661
16440AB	HOSE DERRICK PARTS FOR POL WHARFS.		AS REQUIRED	1.0	2	1	2709		131	131	262
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	4.0	20	40	20808	145	580	261	986
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	AS REQUIRED	2.0	2	14	12884	131	522	218	871
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	2.0	2	26	18516	232	928	377	1537
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	6.0	12	192	72264	783	2697	1914	5394
41180AL	TANK POL 10000 BARREL W/12 IN PIPE	10000 BBL	AS REQUIRED	8.0	24	328	227072	1682	9860	5046	16588
41180AN	TANK POL 50000 BARREL W/12 IN PIPE	50000 BBL	AS REQUIRED	6.0	24	1158	365532	2610	38628	17400	58638
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	4.0	28	60	46924	186	2651	986	3823
84290AA	TANKER WATERING SERVICE FACILITIES,	1000 BBL	AS REQUIRED	1.0	8	28	18849		1160	189	1349
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	8.0	56	64	11232	557	2575	2598	5730
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	4.0	8	8	1328	46	696	278	1020
					1963	5803	2776834	14516	98903	40897	154316

TROPIC CLIMATE

MARINE TERM,POL,400000 BBL CAPAC W/50M WLDD TANKS,10M & 3M PA1115
BLTD STL TANKS W/JETTY FOR TANKER FOR TANKER DISCHARGE. TEMP
TROP & DST CLIM. T-2 TANKER DISCHARGING W/13 HR TURN AROUND
TIME.MARINE TERM W/JETTY MOORING BERTH,12IN INLD PPLN,
BOOSTER PMP STA & OPER BLDG. TANK FARM FOR BLK STGE OF 4
PROD FOR RECEIVG 1500000 BBLS/MO.MAX. REQUIRES 121 ACRES
FINE AGGR. 40CY,COARSE AGGR. 44CY. FIREFTG EQUIP. HAND EXTG

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AD	12IN SWITCH MNFLD F/TNK FARM NO PMP	12-INCH	AS REQUIRED	3.0	78	69	291636	131	1044	348	1523
12510AG	FLOOD PMP 1355BPH 12 IN MANIFOLD	1355 BPH	AS REQUIRED	2.0	28	42	100994	58	1044	290	1392
12510AK	TANK PMP POL 2800 BPH W/12IN MANIFD	2800 BPH	AS REQUIRED	8.0	56	112	130032	58	464	174	696
12510AR	TRANS PMP POL 2800 BPH W/12 IN MNFD	2800 BPH	AS REQUIRED	2.0	36	42	157328	131	1001	203	1335
12510AW	PPLN POL 1000 FT OF 12 INCH GROOVE	1000FT-12IN	AS REQUIRED	8.0	72	256	35520	174	2262	812	3248
12510BC	PPLN POL 1 MILE OF 12 INCH GROOVE	1MILE-12INCH	AS REQUIRED	20.0	900	3540	479580	1160	27550	12180	40890
12510BL	PPLN POL 1M FT OF 12 IN API GROVE	1000 FT	AS REQUIRED	2.0	8	8	22230	29	667	464	1160
12530AG	BOOSTER STATION POL 7000 BPH	7000 BPH	AS REQUIRED	16.0	432	896	865744	928	6496	1856	9280
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	4.0	4	4	5472	29	203	116	348
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	20.0	20	20	24920	232	1508	580	2320
12665AU	PIPE POL 12IN F/SUPER TNKR AT DOCK	12IN 2800BPH	AS REQUIRED	2.0	64	98	443206		1914	464	2378
16440AA	JETTY POL 14FT X 1M FT WALK&PIPEWAY	1000&40X70FT	AS REQUIRED	1.0	695	718	278329	6235	10150	276	16661
16440AB	HOSE DERRICK PARTS FOR POL WHARFS.		AS REQUIRED	1.0	2	1	2709		131	131	262
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	4.0	20	40	20808	145	580	261	986
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	AS REQUIRED	2.0	2	14	12884	131	522	218	871
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	2.0	2	26	18516	232	928	377	1537
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	6.0	12	192	72264	783	2697	1914	5394
41180AL	TANK POL 10000 BARREL W/12 IN PIPE	10000 BBL	AS REQUIRED	8.0	24	328	227072	1682	9860	5046	16588
41180AN	TANK POL 50000 BARREL W/12 IN PIPE	50000 BBL	AS REQUIRED	6.0	24	1158	365532	2610	38628	17400	58638
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	4.0	28	60	46924	186	2651	986	3823
84290AA	TANKER WATERING SERVICE FACILITIES,	1000 BBL	AS REQUIRED	1.0	8	28	18849		1160	189	1349
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	8.0	56	64	11232	557	2575	2598	5730
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	4.0	8	8	1328	46	696	278	1020
					2579	7724	3633109	15537	114731	47161	177429

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TROPIC CLIMATE

MARINE TERM,POL,1000000 BBL CAPAC W/50M WLDD TANKS,10M & 3M PA1125
BLTD STL TANKS W/JETTY FOR TANKER FOR TANKER DISCHARGE. TEMP
TROP & DST CLIM. T-2 TANKER DISCHARGING W/13 HR TURN AROUND
TIME.MARINE TERM W/JETTY MOORING BERTH,12IN INLD PPLN,
BOOSTER PMP STA & OPER BLDG.TANK FARM FOR BLK STGE OF 4 PROD
FOR RECEIVG 3000000 BBLS/MO.MAX. REQUIRES 307 ACRES
FINE AGGR. 80CY,COARSE AGGR. 88CY. FIREFTG EQUIP. HAND EXTG

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AD	12IN SWITCH MNFLD F/TNK FARM NO PMP	12-INCH	AS REQUIRED	5.0	130	115	486060	218	1740	580	2538
12510AG	FLOOD PMP 1355BPH 12 IN MANIFOLD	1355 BPH	AS REQUIRED	8.0	112	168	403976	232	4176	1160	5568
12510AK	TANK PMP POL 2800 BPH W/12IN MANIFD	2800 BPH	AS REQUIRED	16.0	112	224	260064	116	928	348	1392
12510AR	TRANS PMP POL 2800 BPH W/12 IN MNFD	2800 BPH	AS REQUIRED	4.0	72	84	314656	261	2001	406	2668
12510AW	PPLN POL 1000 FT OF 12 INCH GROOVE	1000FT-12IN	AS REQUIRED	4.0	36	128	17760	87	1131	406	1624
12510BC	PPLN POL 1 MILE OF 12 INCH GROOVE	1MILE-12INCH	AS REQUIRED	16.0	720	2832	383664	928	22040	9744	32712
12510BL	PPLN POL 1M FT OF 12 IN API GROVE	1000 FT	AS REQUIRED	24.0	96	96	266760	348	8004	5568	13920
12530AG	BOOSTER STATION POL 7000 BPH	7000 BPH	AS REQUIRED	16.0	432	896	865744	928	6496	1856	9280
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	8.0	8	8	10944	58	406	232	696
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	16.0	16	16	19936	186	1206	464	1856
12665AU	PIPE POL 12IN F/SUPER TNKR AT DOCK	12IN 2800BPH	AS REQUIRED	1.0	32	49	221603		957	232	1189
16440AA	JETTY POL 14FT X 1M FT WALK&PIPEWAY	1000&40X70FT	AS REQUIRED	1.0	695	718	278329	6235	10150	276	16661
16440AB	HOSE DERRICK PARTS FOR POL WHARFS.		AS REQUIRED	1.0	2	1	2709		131	131	262
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	10.0	50	100	52020	363	1450	653	2466
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	AS REQUIRED	2.0	2	14	12884	131	522	218	871
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	4.0	4	52	37032	464	1856	754	3074
41180AL	TANK POL 10000 BARREL W/12 IN PIPE	10000 BBL	AS REQUIRED	20.0	60	820	567680	4205	24650	12615	41470
41180AN	TANK POL 50000 BARREL W/12 IN PIPE	50000 BBL	AS REQUIRED	1.6	6	309	97475	696	10301	4640	15637
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	8.0	56	120	93848	371	5301	1972	7644
84290AA	TANKER WATERING SERVICE FACILITIES,	1000 BBL	AS REQUIRED	1.0	8	28	18849		1160	189	1349
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	15.0	105	120	21060	1044	4829	4872	10745
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	8.0	16	16	2656	93	1392	557	2042
					2770	6914	4435709	16964	110827	47873	175664

TROPIC CLIMATE

MARINE TERM,POL,1000000 BBL CAPAC W/50M WLDD TANKS, 10M & 3M PA1135
BLTD STL TANKS W/JETTY FOR TANKER FOR TANKER DISCHARGE. TEMP
TROP & DST CLIM. T-2 TANKER DISCHARGING W/13 HR TURN AROUND
AROUND TIME.MARINE TERM W/JETTY MOORING BERTH,12IN INLD
PPLN,BOOSTER PMP STA & OPER BLDG. TANK FARM FOR BLK STGE OF
4 PROD FOR RECEIVG 3000000 BBLS/MO.MAX. REQUIRES 307 ACRES
FINE AGGR. 80CY,COARSE AGGR. 88CY. FIREFTG EQUIP. HAND EXTG

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AD	12IN SWITCH MNFLD F/TNK FARM NO PMP	12-INCH	AS REQUIRED	5.0	130	115	486060	218	1740	580	2538
12510AG	FLOOD PMP 1355BPH 12 IN MANIFOLD	1355 BPH	AS REQUIRED	8.0	112	168	403976	232	4176	1160	5568
12510AK	TANK PMP POL 2800 BPH W/12IN MANIFD	2800 BPH	AS REQUIRED	16.0	112	224	260064	116	928	348	1392
12510AR	TRANS PMP POL 2800 BPH W/12 IN MNFD	2800 BPH	AS REQUIRED	4.0	72	84	314656	261	2001	406	2668
12510AW	PPLN POL 1000 FT OF 12 INCH GROOVE	1000FT-12IN	AS REQUIRED	4.0	36	128	17760	87	1131	406	1624
12510BC	PPLN POL 1 MILE OF 12 INCH GROOVE	1MILE-12INCH	AS REQUIRED	32.0	1440	5664	767328	1856	44080	19488	65424
12510BL	PPLN POL 1M FT OF 12 IN API GROVE	1000 FT	AS REQUIRED	24.0	96	96	266760	348	8004	5568	13920
12530AG	BOOSTER STATION POL 7000 BPH	7000 BPH	AS REQUIRED	32.0	864	1792	1731488	1856	12992	3712	18560
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	8.0	8	8	10944	58	406	232	696
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	32.0	32	32	39872	371	2413	928	3712
12665AU	PIPE POL 12IN F/SUPER TNKR AT DOCK	12IN 2800BPH	AS REQUIRED	2.0	64	98	443206		1914	464	2378
16440AA	JETTY POL 14FT X 1M FT WALK&PIPEWAY	1000&40X70FT	AS REQUIRED	1.0	695	718	278329	6235	10150	276	16661
16440AB	HOSE DERRICK PARTS FOR POL WHARFS.		AS REQUIRED	1.0	2	1	2709		131	131	262
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	10.0	50	100	52020	363	1450	653	2466
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	AS REQUIRED	2.0	2	14	12884	131	522	218	871
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	4.0	4	52	37032	464	1856	754	3074
41180AL	TANK POL 10000 BARREL W/12 IN PIPE	10000 BBL	AS REQUIRED	20.0	60	820	567680	4205	24650	12615	41470
41180AN	TANK POL 50000 BARREL W/12 IN PIPE	50000 BBL	AS REQUIRED	16.0	64	3088	974752	6960	103008	46400	156368
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	8.0	56	120	93848	371	5301	1972	7644
84290AA	TANKER WATERING SERVICE FACILITIES,	1000 BBL	AS REQUIRED	1.0	8	28	18849		1160	189	1349
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	15.0	105	120	21060	1044	4829	4872	10745
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	8.0	16	16	2656	93	1392	557	2042
					4028	13486	6803933	25269	234234	101929	361432

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TROPIC CLIMATE

MARINE TERMINAL,POL,200000 BARREL CAPAC W/50M WLDD TNKS,10M AND 3M BLTD TANKS W/12 SUBM PPLN. TEMP,TROP & DST CLIMATE. PA1145
T-2 TANKER DISCHARGING W/24HR TURN AROUND TIME. MARINE TERM W/5-LEG MOORING BERTH.12IN SUBMARINE PPLN,12IN INLAND PPLN BOOSTER PMP STA & OPER BLDG.TANK FARM COMPLEX FOR STGE OF 4 PROD. FOR RECEIVG 800000 BBLS/MO.MAX. REQUIRES 60 ACRES FINE AGGR. 20CY. COARSE AGGR. 22CY. FIREFTG EQUIP. HAND EXT.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AD	12IN SWITCH MNFLD F/TNK FARM NO PMP	12-INCH	AS REQUIRED	1.0	26	23	97212	44	348	116	508
12510AG	FLOOD PMP 1355BPH 12 IN MANIFOLD	1355 BPH	AS REQUIRED	1.0	14	21	50497	29	522	145	696
12510AK	TANK PMP POL 2800 BPH W/12IN MANIFD	2800 BPH	AS REQUIRED	4.0	28	56	65016	29	232	87	348
12510AR	TRANS PMP POL 2800 BPH W/12 IN MNFD	2800 BPH	AS REQUIRED	1.0	18	21	78664	65	500	102	667
12510AW	PPLN POL 1000 FT OF 12 INCH GROOVE	1000FT-12IN	AS REQUIRED	1.0	9	32	4440	22	283	102	407
12510BC	PPLN POL 1 MILE OF 12 INCH GROOVE	1MILE-12INCH	AS REQUIRED	4.0	180	708	95916	232	5510	2436	8178
12510BL	PPLN POL 1M FT OF 12 IN API GROVE	1000 FT	AS REQUIRED	4.0	16	16	44460	58	1334	928	2320
12530AG	BOOSTER STATION POL 7000 BPH	7000 BPH	AS REQUIRED	4.0	108	224	216436	232	1624	464	2320
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	2.0	2	2	2736	15	102	58	175
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	4.0	4	4	4984	46	302	116	464
12590AT	PPLN SUBMAR 12IN POL 60FT DEP 1 MI	5300FT-12IN	AS REQUIRED	1.0	275	322	96144	2610	3234	1189	7033
16390AD	TNKR MOORING POL 5LEGS-60 FT DEPTH	5LEG 60FT DP	AS REQUIRED	1.0	98	254	169468	870	972	580	2422
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	3.0	15	30	15606	109	435	196	740
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	3.0	6	96	36132	392	1349	957	2698
41180AL	TANK POL 10000 BARREL W/12 IN PIPE	10000 BBL	AS REQUIRED	4.0	12	164	113536	841	4930	2523	8294
41180AN	TANK POL 50000 BARREL W/12 IN PIPE	50000 BBL	AS REQUIRED	3.0	12	579	182766	1305	19314	8700	29319
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	2.0	14	30	23462	93	1325	493	1911
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	4.0	28	32	5616	278	1288	1299	2865
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	1.0	2	2	332	12	174	70	256
					868	2629	1312681	7398	44242	20750	72390

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TROPIC CLIMATE

MARINE TERMINAL,POL,400000 BARREL CAPAC W/50M WLDD TNKS,10M AND 3M BLTD TANKS W/12 SUBM PPLN. TEMP,TROP & DST CLIMATE. T-2 OR SUPER TNK DISCHG W/13HR TURN AROUND TIME. MARINE TERM W/7-LEG MOORING BERTH. 12IN SUBMARINE PPLN, 12IN INLAND PPLN,BOOSTER PMP STA & OPER BLDG. TANK FARM COMPLEX FOR STGE OF 4 PROD. FOR RECEIVG 1500000 BBLS/MO.MAX.REQUIRES 121 ACRE FINE AGGR. 40CY. COARSE AGGR. 44CY. FIREFTG EQUIP. HAND EXT. PA1155

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AD	12IN SWITCH MNFLD F/TNK FARM NO PMP	12-INCH	AS REQUIRED	3.0	78	69	291636	131	1044	348	1523
12510AG	FLOOD PMP 1355BPH 12 IN MANIFOLD	1355 BPH	AS REQUIRED	2.0	28	42	100994	58	1044	290	1392
12510AK	TANK PMP POL 2800 BPH W/12IN MANIFD	2800 BPH	AS REQUIRED	8.0	56	112	130032	58	464	174	696
12510AR	TRANS PMP POL 2800 BPH W/12 IN MNFD	2800 BPH	AS REQUIRED	2.0	36	42	157328	131	1001	203	1335
12510AW	PPLN POL 1000 FT OF 12 INCH GROOVE	1000FT-12IN	AS REQUIRED	2.0	18	64	8880	44	566	203	813
12510BC	PPLN POL 1 MILE OF 12 INCH GROOVE	1MILE-12INCH	AS REQUIRED	4.0	180	708	95916	232	5510	2436	8178
12510BL	PPLN POL 1M FT OF 12 IN API GROVE	1000 FT	AS REQUIRED	8.0	32	32	88920	116	2668	1856	4640
12530AG	BOOSTER STATION POL 7000 BPH	7000 BPH	AS REQUIRED	8.0	216	448	432872	464	3248	928	4640
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	4.0	4	4	5472	29	203	116	348
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	8.0	8	8	9968	93	603	232	928
12590AT	PPLN SUBMAR 12IN POL 60FT DEP 1 MI	5300FT-12IN	AS REQUIRED	1.0	275	322	96144	2610	3234	1189	7033
16390AG	TNKR MOORING POL 7LEGS-60 FT DEPTH	7LEG 60FT DP	AS REQUIRED	1.0	136	351	235507	1218	1305	812	3335
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	4.0	20	40	20808	145	580	261	986
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	AS REQUIRED	2.0	2	14	12884	131	522	218	871
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	2.0	2	26	18516	232	928	377	1537
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	6.0	12	192	72264	783	2697	1914	5394
41180AL	TANK POL 10000 BARREL W/12 IN PIPE	10000 BBL	AS REQUIRED	8.0	24	328	227072	1682	9860	5046	16588
41180AN	TANK POL 50000 BARREL W/12 IN PIPE	50000 BBL	AS REQUIRED	6.0	24	1158	365532	2610	38628	17400	58638
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	4.0	28	60	46924	186	2651	986	3823
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	8.0	56	64	11232	557	2575	2598	5730
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	4.0	8	8	1328	46	696	278	1020
					1243	4092	2430229	11556	80027	37865	129448

TROPIC CLIMATE

MARINE TERMINAL,POL,40000 BARREL CAPAC W/50M WLDD TNKS,10M AND 3M BLTD TANKS W/12 SUBM PPLN. TEMP,TROP & DST CLIMATE. T-2 OR SUPER TNK DISCHG W/13HR TURN AROUND TIME. MARINE TERM W/7-LEG MOORING BERTH. 12IN SUBMARINE PPLN,12IN INLAND PPLN,BOOSTER PMP STA & OPER BLDG. TANK FARM COMPLEX FOR STGE OF 4 PROD. FOR RECIEVING 1500000 BBLS/MO.MAX. REQUIRES 121 ACRES. FINE AGGR. 40CY. COARSE AGGR. 44CY. FIREFTG EQUIP. PA1165

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AD	12IN SWITCH MNFLD F/TNK FARM NO PMP	12-INCH	AS REQUIRED	3.0	78	69	291636	131	1044	348	1523
12510AG	FLOOD PMP 1355BPH 12 IN MANIFOLD	1355 BPH	AS REQUIRED	2.0	28	42	100994	58	1044	290	1392
12510AK	TANK PMP POL 2800 BPH W/12IN MANIFD	2800 BPH	AS REQUIRED	8.0	56	112	130032	58	464	174	696
12510AR	TRANS PMP POL 2800 BPH W/12 IN MNFD	2800 BPH	AS REQUIRED	2.0	36	42	157328	131	1001	203	1335
12510AW	PPLN POL 1000 FT OF 12 INCH GROOVE	1000FT-12IN	AS REQUIRED	2.0	18	64	8880	44	566	203	813
12510BC	PPLN POL 1 MILE OF 12 INCH GROOVE	1MILE-12INCH	AS REQUIRED	12.0	540	2124	287748	696	16530	7308	24534
12510BL	PPLN POL 1M FT OF 12 IN API GROVE	1000 FT	AS REQUIRED	8.0	32	32	88920	116	2668	1856	4640
12530AG	BOOSTER STATION POL 7000 BPH	7000 BPH	AS REQUIRED	12.0	324	672	649308	696	4872	1392	6960
12530AH	LOADING PMP FOR 2TNK/TRK/5CAR INSTL	700X1400 BPH	AS REQUIRED	3.0	24	75	55329	44	370	109	523
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	4.0	4	4	5472	29	203	116	348
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	12.0	12	12	14952	139	905	348	1392
12590AT	PPLN SUBMAR 12IN POL 60FT DEP 1 MI	5300FT-12IN	AS REQUIRED	2.0	550	644	192288	5220	6467	2378	14065
16390AG	TNKR MOORING POL 7LEGS-60 FT DEPTH	7LEG 60FT DP	AS REQUIRED	1.0	136	351	235507	1218	1305	812	3335
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	4.0	20	40	20808	145	580	261	986
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	AS REQUIRED	2.0	2	14	12884	131	522	218	871
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	2.0	2	26	18516	232	928	377	1537
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	6.0	12	192	72264	783	2697	1914	5394
41180AL	TANK POL 10000 BARREL W/12 IN PIPE	10000 BBL	AS REQUIRED	8.0	24	328	227072	1682	9860	5046	16588
41180AN	TANK POL 50000 BARREL W/12 IN PIPE	50000 BBL	AS REQUIRED	6.0	24	1158	365532	2610	38628	17400	58638
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	4.0	28	60	46924	186	2651	986	3823
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	8.0	56	64	11232	557	2575	2598	5730
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	4.0	8	8	1328	46	696	278	1020
					2014	6133	2994954	14952	96576	44615	156143

TROPIC CLIMATE

MARINE TERMINAL,POL,1000000 BARREL CAPAC W/50M WLDD TNKS, PA1175
10M & 3M BLTD TANKS W/12 SUBM PPLN. TEMP,TROP & DST CLIMATE.
T-2 OR SUPER TANKER DISCHARGING W/13 HR TURN AROUND TIME.
MARINE TERM W/7-LEG MOORING BERTH.12IN SUBMARINE PPLN,12IN
INLAND PPLN,BOOSTER PMP STA & OPER BLDG.TANK FARM COMPLEX
FOR STGE OF 4 PROD. FOR RECEIVG 3000000 BBLS/MO.MAX. REQUIRE
307 ACRES. FINE AGGR. 80CY. COARSE AGGR. 88CY. FIREFTG EQUIP

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AD	12IN SWITCH MNFLD F/TNK FARM NO PMP	12-INCH	AS REQUIRED	5.0	130	115	486060	218	1740	580	2538
12510AG	FLOOD PMP 1355BPH 12 IN MANIFOLD	1355 BPH	AS REQUIRED	8.0	112	168	403976	232	4176	1160	5568
12510AK	TANK PMP POL 2800 BPH W/12IN MANIFD	2800 BPH	AS REQUIRED	16.0	112	224	260064	116	928	348	1392
12510AR	TRANS PMP POL 2800 BPH W/12 IN MNFD	2800 BPH	AS REQUIRED	4.0	72	84	314656	261	2001	406	2668
12510AW	PPLN POL 1000 FT OF 12 INCH GROOVE	1000FT-12IN	AS REQUIRED	4.0	36	128	17760	87	1131	406	1624
12510BC	PPLN POL 1 MILE OF 12 INCH GROOVE	1MILE-12INCH	AS REQUIRED	16.0	720	2832	383664	928	22040	9744	32712
12510BL	PPLN POL 1M FT OF 12 IN API GROVE	1000 FT	AS REQUIRED	24.0	96	96	266760	348	8006	5568	13920
12530AG	BOOSTER STATION POL 7000 BPH	7000 BPH	AS REQUIRED	16.0	432	896	865744	928	6496	1856	9280
12530AH	LOADING PMP FOR 2TNK/TRK/5CAR INSTL	700X1400 BPH	AS REQUIRED	5.0	40	125	92215	73	616	181	870
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	12.0	12	12	14952	139	905	348	1392
12590AT	PPLN SUBMAR 12IN POL 60FT DEP 1 MI	5300FT-12IN	AS REQUIRED	1.0	275	322	96144	2610	3234	1189	7033
16390AG	TNKR MOORING POL 7LEGS-60 FT DEPTH	7LEG 60FT DP	AS REQUIRED	1.0	136	351	235507	1218	1305	812	3335
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	10.0	50	100	52020	363	1450	653	2466
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	AS REQUIRED	2.0	2	14	12884	131	522	218	871
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	4.0	4	52	37032	464	1856	754	3074
41180AL	TANK POL 10000 BARREL W/12 IN PIPE	10000 BBL	AS REQUIRED	20.0	60	820	567680	4205	24650	12615	41470
41180AN	TANK POL 50000 BARREL W/12 IN PIPE	50000 BBL	AS REQUIRED	16.0	64	3088	974752	6960	103008	46400	156368
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	8.0	56	120	93848	371	5301	1972	7644
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	15.0	105	120	21060	1044	4829	4872	10745
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	8.0	16	16	2656	93	1392	557	2042
					2530	9683	5199434	20789	195584	90639	307012

TROPIC CLIMATE

MARINE TERMINAL,POL,1000000 BARREL CAPAC W/50M WLDD TNKS,10M PA1185
AND 3M BLTD TANKS W/12 SUBM PPLN. TEMP,TROP & DST CLIMATE.
T-2 OR SUPER TNKR DISCH W/13HR TURN AROUND TIME.MARINE TERM
W/7-LEG MOORING BERTH.12IN SUBMARINE PPLN,12IN INLAND PPLN,
BOOSTER PMP STA & OPER BLDG. TANK FARM COMPLEX FOR STGE OF
4 PROD. FOR RECEIVING 3000000 BBLS/MO.MAX. REQUIRES ACRE
S. FINE AGGR. 80CY. COARSE AGGR. 88CY. FIREFTG EQUIP. HAND

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AD	12IN SWITCH MNFLD F/TNK FARM NO PMP	12-INCH	AS REQUIRED	5.0	130	115	486060	218	1740	580	2538
12510AG	FLOOD PMP 1355BPH 12 IN MANIFOLD	1355 BPH	AS REQUIRED	8.0	112	168	403976	232	4176	1160	5568
12510AK	TANK PMP POL 2800 BPH W/12IN MANIFD	2800 BPH	AS REQUIRED	16.0	112	224	260064	116	928	348	1392
12510AR	TRANS PMP POL 2800 BPH W/12 IN MNFD	2800 BPH	AS REQUIRED	4.0	72	84	314656	261	2001	406	2668
12510AW	PPLN POL 1000 FT OF 12 INCH GROOVE	1000FT-12IN	AS REQUIRED	4.0	36	128	17760	87	1131	406	1624
12510BC	PPLN POL 1 MILE OF 12 INCH GROOVE	1MILE-12INCH	AS REQUIRED	32.0	1440	5664	767328	1856	44080	19488	65424
12510BL	PPLN POL 1M FT OF 12 IN API GROVE	1000 FT	AS REQUIRED	24.0	96	96	266760	348	8004	5568	13920
12530AG	BOOSTER STATION POL 7000 BPH	7000 BPH	AS REQUIRED	32.0	864	1792	1731488	1856	12992	3712	18560
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	8.0	8	8	10944	58	406	232	696
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	12.0	12	12	14952	139	905	348	1392
12590AT	PPLN SUBMAR 12IN POL 60FT DEP 1 MI	5300FT-12IN	AS REQUIRED	2.0	550	644	192288	5220	6467	2378	14065
16390AG	TNKR MOORING POL 7LEGS-60 FT DEPTH	7LEG 60FT DP	AS REQUIRED	1.0	136	351	235507	1218	1305	812	3335
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	10.0	50	100	52020	363	1450	653	2466
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	AS REQUIRED	2.0	2	14	12884	131	522	218	871
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	4.0	4	52	37032	464	1856	754	3074
41180AL	TANK POL 10000 BARREL W/12 IN PIPE	10000 BBL	AS REQUIRED	20.0	60	820	567680	4205	24650	12615	41470
41180AN	TANK POL 50000 BARREL W/12 IN PIPE	50000 BBL	AS REQUIRED	16.0	64	3088	974752	6960	103008	46400	156368
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	8.0	56	120	93848	371	5301	1972	7644
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	15.0	105	120	21060	1044	4829	4872	10745
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	8.0	16	16	2656	93	1392	557	2042
					3925	13616	6463715	25240	227143	103479	355862

TROPIC CLIMATE

150000 BBL TNK FARM BULK STGE WITH 8IN PIPE & ACCESSORIES PB1019
TEMPERATE,TROPIC,FRIGID & DESERT. USES 2-50M BBL AND 4-10M
&3-3M BLTD STEEL TANKS W/ 8IN PIPE, FITTINGS,PMPS MANIFOLDS,
OPERATIONS BLDG. WATER STGE TANK & SECURITY FENCING.
REQUIRES 26 ACRES. 10CY FINE AGGR. 11CY. COARSE AGGR. HAND
EXT. ONLY INCLUDED W/INSTALLATION AS FIREFIGHTING EQUIP.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	CONSTR EFFORT IN MANHOURS VERT	CONSTR EFFORT IN MANHOURS GENL	CONSTR EFFORT IN MANHOURS TOT
12510AC	8IN-SWITCH MNFLD F/TNK FARM W/O PMP	8-INCH	AS REQUIRED	1.0	16	16	19680	15	261	87	363
12510AF	FLOOD PMP 1355BPH 8IN MANIFOLD	1355 BPH	AS REQUIRED	2.0	22	40	41254	58	812	232	1102
12510AJ	TANK PMP POL 1400 BPH W/8 IN MANIFD	1400 BPH	AS REQUIRED	4.0	16	36	31748	29	203	58	290
12510AP	TRANS PMP POL 1400 BPH W/8 IN MNFD	1400 BPH	AS REQUIRED	1.0	12	16	16109	51	355	73	479
12510AV	PPLN POL 1000 FT OF 8 INCH GROOVE	1000FT-4IN	AS REQUIRED	1.0	6	15	9258	15	160	87	262
12510BK	PPLN POL 1M FT OF 8 IN API GROOVE	1000 FT	AS REQUIRED	3.0	39	48	10500	44	870	609	1523
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	2.0	2	2	2736	15	102	58	175
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	1.0	5	10	5202	36	145	65	246
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	3.0	6	96	36132	392	1349	957	2698
41180AK	TANK POL 10000 BARREL W/8 IN PIPE	10000 BBL	AS REQUIRED	4.0	12	160	80460	812	4930	2494	8236
41180AM	TANK POL 50000 BARREL W/8 IN PIPE	50000 BBL	AS REQUIRED	2.0	8	386	105694	870	12847	5800	19517
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	3.4	24	27	4774	237	1094	1104	2435
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
					180	884	385200	2759	24603	12199	39561

TROPIC CLIMATE

200000 BBL TNK FARM BULK STGE WITH 8IN PIPE & ACCESSORIES PB1029
TEMPERATE,TROPIC,FRIGID & DESERT. USES 3-50M BBL & 4-10M &3-
3M BLTD STEEL TANKS W/8IN PIPE,FITTINGS,PMPS,MANIFOLDS,
OPERATIONS BLDG. WATER STGE TANK & SECURITY FENCING. REQUIRE
11 ACRES. 10CY FINE AGGR. 11CY COARSE AGGR. HAND EXT. ONLY
INCLUDED W/INSTALLATION AS FIREFIGHTING EQUIP.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AC	8IN-SWITCH MNFLD F/TNK FARM W/O PMP	8-INCH	AS REQUIRED	1.0	16	16	19680	15	261	87	363
12510AF	FLOOD PMP 1355BPH 8IN MANIFOLD	1355 BPH	AS REQUIRED	2.0	22	40	41254	58	812	232	1102
12510AP	TRANS PMP POL 1400 BPH W/8 IN MNFD	1400 BPH	AS REQUIRED	1.0	12	16	16109	51	355	73	479
12510AV	PPLN POL 1000 FT OF 8 INCH GROOVE	1000FT-4IN	AS REQUIRED	1.0	6	15	9258	15	160	87	262
12510BK	PPLN POL 1M FT OF 8 IN API GROOVE	1000 FT	AS REQUIRED	4.0	52	64	14000	58	1160	812	2030
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	2.0	2	2	2736	15	102	58	175
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	1.0	5	10	5202	36	145	65	246
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	3.0	6	96	36132	392	1349	957	2698
41180AK	TANK POL 10000 BARREL W/8 IN PIPE	10000 BBL	AS REQUIRED	4.0	12	160	80460	812	4930	2494	8236
41180AM	TANK POL 50000 BARREL W/8 IN PIPE	50000 BBL	AS REQUIRED	3.0	12	579	158541	1305	19271	8700	29276
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	3.6	25	29	5054	251	1159	1169	2579
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
					182	1059	410079	3193	31179	15309	49681

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TROPIC CLIMATE

200000 BBL TNK FARM BULK STGE WITH 12IN PIPE & ACCESSORIES PB1039

TEMPERATE,TROPIC,FRIGID & DESERT. USES 3-50M BBL & 4-10M &
3-3M BBL STEEL TANKS W/12IN PIPE,FITTINGS,PMPS,MANIFOLDS,
OPERATIONS BLDG.WATER STORAGE TANK & SECURITY FENCING.
REQUIRES 11 ACRES. 10CY FINE AGGR. 11CY COARSE AGGR. HAND
EXT. ONLY INCLUDED W/INSTALLATION AS FIREFIGHTING EQUIP.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AD	12IN SWITCH MNFLD F/TNK FARM NO PMP	12-INCH	AS REQUIRED	1.0	26	23	97212	66	368	116	508
12510AG	FLOOD PMP 1355BPH 12 IN MANIFOLD	1355 BPH	AS REQUIRED	2.0	28	42	100994	58	1044	290	1392
12510AK	TANK PMP POL 2800 BPH W/12IN MANIFD	2800 BPH	AS REQUIRED	4.0	28	56	65016	29	232	87	348
12510AR	TRANS PMP POL 2800 BPH W/12 IN MNFD	2800 BPH	AS REQUIRED	1.0	18	21	78664	65	500	102	667
12510AW	PPLN POL 1000 FT OF 12 INCH GROOVE	1000FT-12IN	AS REQUIRED	1.0	9	32	4440	22	283	102	407
12510BL	PPLN POL 1M FT OF 12 IN API GROVE	1000 FT	AS REQUIRED	4.0	16	16	44460	58	1334	928	2320
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	2.0	2	2	2736	15	102	58	175
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	1.0	5	10	5202	36	145	65	246
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	3.0	6	96	36132	392	1349	957	2698
41180AL	TANK POL 10000 BARREL W/12 IN PIPE	10000 BBL	AS REQUIRED	4.0	12	164	113536	841	4930	2523	8296
41180AN	TANK POL 50000 BARREL W/12 IN PIPE	50000 BBL	AS REQUIRED	3.0	12	579	182766	1305	19314	8700	29319
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	3.6	25	29	5054	251	1159	1169	2579
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
					199	1102	757865	3301	32215	15672	51188

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TROPIC CLIMATE

250000 BBL TNK FARM BULK STGE WITH 8IN PIPE & ACCESSORIES PB1049
TEMPERATE,TROPIC,FRIGID & DESERT. USES 4-50M BBL & 5-10000
BBL BLTD STEEL TANKS W / 8IN PIPE, FITTINGS, PMPS MANIFOLDS
OPERATIONS BLDG.WATER STGE TANK & SECURITY FENCING. REQUIRES
28 ACRES. 10CY FINE AGGR. 11CY COARSE AGGR. HAND EXT. ONLY
INCLUDED W/INSTALLATION AS FIREFIGHTING EQUIP.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AC	8IN-SWITCH MNFLD F/TNK FARM W/O PMP	8-INCH	AS REQUIRED	1.0	16	16	19680	15	261	87	363
12510AF	FLOOD PMP 1355BPH 8IN MANIFOLD	1355 BPH	AS REQUIRED	2.0	22	40	41254	58	812	232	1102
12510AJ	TANK PMP POL 1400 BPH W/8 IN MANIFD	1400 BPH	AS REQUIRED	4.0	16	36	31748	29	203	58	290
12510AP	TRANS PMP POL 1400 BPH W/8 IN MNFD	1400 BPH	AS REQUIRED	1.0	12	16	16109	51	355	73	479
12510AV	PPLN POL 1000 FT OF 8 INCH GROOVE	1000FT-4IN	AS REQUIRED	1.0	6	15	9258	15	160	87	262
12510BK	PPLN POL 1M FT OF 8 IN API GROOVE	1000 FT	AS REQUIRED	6.0	78	96	21000	87	1740	1218	3045
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	2.0	2	2	2736	15	102	58	175
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	1.0	5	10	5202	36	145	65	246
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
41180AK	TANK POL 10000 BARREL W/8 IN PIPE	10000 BBL	AS REQUIRED	5.0	15	200	100575	1015	6163	3118	10296
41180AM	TANK POL 50000 BARREL W/8 IN PIPE	50000 BBL	AS REQUIRED	4.0	16	772	211388	1740	25694	11600	39034
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	4.0	28	32	5616	278	1288	1299	2865
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
					228	1267	486219	3524	38398	18470	60392

TROPIC CLIMATE

250000 BBL TNK FARM BULK STGE WITH 12IN PIPE & ACCESSORIES PB1059
TEMPERATE,TROPIC,FRIGID & DESERT. USES 4-50M BBL & 5-10000
BBL BLTD STEEL TANKS W/ IN PIPE, FITTINGS, PMPS MANIFOLDS,
OPERATIONS BLDG. WATER STGE TANK & SECURITY FENCING.REQUIRE
28 ACRES. 10CY FINE AGGR. 11CY COARSE AGGR. HAND EXT. ONLY
INCLUDED W/INSTALLATION AS FIREFIGHTING EQUIP.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AD	12IN SWITCH MNFLD F/TNK FARM NO PMP	12-INCH	AS REQUIRED	1.0	26	23	97212	44	348	116	508
12510AG	FLOOD PMP 1355BPH 12 IN MANIFOLD	1355 BPH	AS REQUIRED	2.0	28	42	100994	58	1044	290	1392
12510AK	TANK PMP POL 2800 BPH W/12IN MANIFD	2800 BPH	AS REQUIRED	4.0	28	56	65016	29	232	87	348
12510AR	TRANS PMP POL 2800 BPH W/12 IN MNFD	2800 BPH	AS REQUIRED	1.0	18	21	78664	65	500	102	667
12510AW	PPLN POL 1000 FT OF 12 INCH GROOVE	1000FT-12IN	AS REQUIRED	1.0	9	32	4440	22	283	102	407
12510BL	PPLN POL 1M FT OF 12 IN API GROVE	1000 FT	AS REQUIRED	6.0	24	24	66690	87	2001	1392	3480
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	2.0	2	2	2736	15	102	58	175
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	1.0	5	10	5202	36	145	65	246
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
41180AL	TANK POL 10000 BARREL W/12 IN PIPE	10000 BBL	AS REQUIRED	5.0	15	205	141920	1051	6163	3154	10368
41180AN	TANK POL 50000 BARREL W/12 IN PIPE	50000 BBL	AS REQUIRED	4.0	16	772	243688	1740	25752	11600	39092
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	4.0	28	32	5616	278	1288	1299	2865
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
					211	1251	833831	3610	39333	18840	61783

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TROPIC CLIMATE

50000 BBL TNK FARM BULK STGE WITH 6IN PIPE & ACCESSORIES PB1069
TEMPERATE,TROPIC,FRIGID & DESERT. USES 4-10M BBL & 4-3M BBL
BOLTED STEEL TANKS W/ 6IN PIPE, FITTINGS, PMPS MANIFOLDS,
OPERATIONS BLDG. WATER STGE TANK & SECURITY FENCING.
REQUIRES 14 ACRES. 10CY FINE AGGR. 11CY COARSE AGGR. HAND EX
T. ONLY INCLUDED W/INSTALLATION AS FIREFIGHTING EQUIP.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AB	6IN-SWITCH MNFLD F/TNK FARM W/O PMP	6-INCH	AS REQUIRED	1.0	9	9	15541	15	218	73	306
12510AE	FLOOD PMP 785 BPH 6IN MANIFOLD	785 BPH	AS REQUIRED	2.0	20	38	43920	29	624	160	813
12510AH	TANK PMP POL 700 BPH W/6 IN MANIFD	700 BPH	AS REQUIRED	2.0	8	16	15484	15	102	29	146
12510AN	TRANS PMP POL 700 BPH W/6 IN MNFD	700 BPH	AS REQUIRED	1.0	11	15	18715	44	334	73	451
12510AU	PPLN POL 1000 FT OF 6 INCH GROOVE	1000FT-4IN	AS REQUIRED	1.0	6	11	5196	15	109	65	189
12510BJ	PPLN POL 1M FT OF 6 IN API GROOVE	1000 FT	AS REQUIRED	1.6	18	21	11621	12	267	162	441
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	2.0	2	2	2736	15	102	58	175
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	1.0	5	10	5202	36	145	65	246
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
41180AG	TANK, POL, 3000 BARREL, W/6 IN PIPE	3000 BBL	AS REQUIRED	4.0	8	128	50152	522	1798	1218	3538
41180AJ	TANK POL 10000 BARREL W/6 IN PIPE	10000 BBL	AS REQUIRED	4.0	8	160	82984	812	4930	2436	8178
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	3.4	24	27	4774	237	1094	1104	2435
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
					131	469	277978	1937	11198	6018	19153

TROPIC CLIMATE

50000 BBL TNK FARM BULK STGE WITH 8IN PIPE & ACCESSORIES PB1079
TEMPERATE,TROPIC,FRIGID & DESERT. USES 4-10M BBL & 4-3M
BBL BOLTED STEEL TANKS W/ 8IN PIPE, FITTINGS,PMPS MANIFOLDS,
OPERATIONS BLDG. WATER STGE TANK & SECURITY FENCING.
REQUIRES 14 ACRES. 10CY FINE AGGR. 11CY COARSE AGGR. HAND EX
T. ONLY INCLUDED W/INSTALLATION AS FIREFIGHTING EQUIP.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	CONSTR EFFORT IN MANHOURS VERT	CONSTR EFFORT IN MANHOURS GENL	CONSTR EFFORT IN MANHOURS TOT
12510AC	8IN-SWITCH MNFLD F/TNK FARM W/O PMP	8-INCH	AS REQUIRED	1.0	16	16	19680	15	261	87	363
12510AF	FLOOD PMP 1355BPH 8IN MANIFOLD	1355 BPH	AS REQUIRED	2.0	22	40	41254	58	812	232	1102
12510AJ	TANK PMP POL 1400 BPH W/8 IN MANIFD	1400 BPH	AS REQUIRED	2.0	8	18	15874	15	102	29	146
12510AP	TRANS PMP POL 1400 BPH W/8 IN MNFD	1400 BPH	AS REQUIRED	1.0	12	16	16109	51	355	73	479
12510AV	PPLN POL 1000 FT OF 8 INCH GROOVE	1000FT-4IN	AS REQUIRED	1.0	6	15	9258	15	160	87	262
12510BK	PPLN POL 1M FT OF 8 IN API GROOVE	1000 FT	AS REQUIRED	1.6	21	26	5600	23	464	325	812
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	2.0	2	2	2736	15	102	58	175
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	1.0	5	10	5202	36	145	65	246
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	4.0	8	128	48176	522	1798	1276	3596
41180AK	TANK POL 10000 BARREL W/8 IN PIPE	10000 BBL	AS REQUIRED	4.0	12	160	80460	812	4930	2494	8236
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	3.4	24	27	4774	237	1094	1104	2435
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
					148	490	270776	1984	11698	6405	20087

TROPIC CLIMATE

100000 BBL TNK FARM BULK STGE WITH 6IN PIPE & ACCESSORIES PB1089
TEMPERATE,TROPIC,FRIGID & DESERT. USES 9-10M BBL & 4-3M BBL
BOLTED STEEL TANKS W/6 IN PIPE, FITTINGS, PMPS MANIFOLDS,
OPERATIONS BLDG. WATER STGE TANK & SECURITY FENCING.REQUIRES
23 ACRES. 10CY FINE AGGR. 11CY COARSE AGGR. HAND EXT. ONLY
INCLUDED W/INSTALLATION AS FIREFIGHTING EQUIP.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	CONSTR EFFORT IN MANHOURS VERT	CONSTR EFFORT IN MANHOURS GENL	CONSTR EFFORT IN MANHOURS TOT
12510AB	6IN-SWITCH MNFLD F/TNK FARM W/O PMP	6-INCH	AS REQUIRED	1.0	9	9	15541	15	218	73	306
12510AE	FLOOD PMP 785 BPH 6IN MANIFOLD	785 BPH	AS REQUIRED	2.0	20	38	43920	29	624	160	813
12510AH	TANK PMP POL 700 BPH W/6 IN MANIFD	700 BPH	AS REQUIRED	5.0	20	40	38710	36	254	73	363
12510AN	TRANS PMP POL 700 BPH W/6 IN MNFD	700 BPH	AS REQUIRED	1.0	11	15	18715	44	334	73	451
12510AU	PPLN POL 1000 FT OF 6 INCH GROOVE	1000FT-4IN	AS REQUIRED	2.0	12	22	10392	29	218	131	378
12510BJ	PPLN POL 1M FT OF 6 IN API GROOVE	1000 FT	AS REQUIRED	3.0	33	39	21789	22	500	305	827
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	2.0	2	2	2736	15	102	58	175
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	1.0	5	10	5202	36	145	65	246
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
41180AG	TANK, POL, 3000 BARREL, W/6 IN PIPE	3000 BBL	AS REQUIRED	4.0	8	128	50152	522	1798	1218	3538
41180AJ	TANK POL 10000 BARREL W/6 IN PIPE	10000 BBL	AS REQUIRED	9.0	18	360	186714	1827	11093	5481	18401
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	4.2	29	34	5897	292	1352	1364	3008
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
					179	729	421421	3052	18113	9576	30741

TROPIC CLIMATE

100000 BBL TNK FARM BULK STGE WITH 8IN PIPE & ACCESSORIES PB1099
TEMPERATE,TROPIC,FRIGID & DESERT. USES 9-10M & 4-3M
BBL BOLTED STEEL TANKS W/8 IN PIPE, FITTINGS,PMPS MANIFOLDS,
OPERATIONS BLDG. WATER STGE TANK & SECURITY FENCING.
REQUIRES 23 ACRES. 10CY FINE AGGR. 10CY COARSE AGGR. HAND EX
T. ONLY INCLUDED W/INSTALLATION AS FIREFIGHTING EQUIP.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	CONSTR EFFORT IN MANHOURS VERT	CONSTR EFFORT IN MANHOURS GENL	CONSTR EFFORT IN MANHOURS TOT
12510AC	8IN-SWITCH MNFLD F/TNK FARM W/O PMP	8-INCH	AS REQUIRED	1.0	16	16	19680	15	261	87	363
12510AF	FLOOD PMP 1355BPH 8IN MANIFOLD	1355 BPH	AS REQUIRED	2.0	22	40	41254	58	812	232	1102
12510AJ	TANK PMP POL 1400 BPH W/8 IN MANIFD	1400 BPH	AS REQUIRED	5.0	20	45	39685	36	254	73	363
12510AP	TRANS PMP POL 1400 BPH W/8 IN MNFD	1400 BPH	AS REQUIRED	1.0	12	16	16109	51	355	73	479
12510AV	PPLN POL 1000 FT OF 8 INCH GROOVE	1000FT-4IN	AS REQUIRED	2.0	12	30	18516	29	319	174	522
12510BK	PPLN POL 1M FT OF 8 IN API GROOVE	1000 FT	AS REQUIRED	3.0	39	48	10500	44	870	609	1523
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	2.0	2	2	2736	15	102	58	175
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	1.0	5	10	5202	36	145	65	246
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	4.0	8	128	48176	522	1798	1276	3596
41180AK	TANK POL 10000 BARREL W/8 IN PIPE	10000 BBL	AS REQUIRED	9.0	27	360	181035	1827	11093	5612	18532
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	4.2	29	34	5897	292	1352	1364	3008
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
					204	761	410443	3110	18836	10198	32144

TROPIC CLIMATE

150000 BBL TNK FARM BULK STGE WITH 8IN PIPE & ACCESSORIES PB1109
TEMPERATE,TROPIC,FRIGID & DESERT. USES 14-10M & 4-3M
BBL BOLTED STEEL TANKS W/8IN PIPE,FITTINGS,PMPS MANIFOLDS
OPERATIONS BLDG-WATER STGE TANK & SECURITY FENCING.
REQUIRES 31 ACRES. 10CY FINE AGGR. 11CY COARSE AGGR. HAND EX
T. ONLY INCLUDED W/INSTALLATION AS FIREFIGHTING EQUIP.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AC	8IN-SWITCH MNFLD F/TNK FARM W/O PMP	8-INCH	AS REQUIRED	1.0	16	16	19680	15	261	87	363
12510AF	FLOOD PMP 1355BPH 8IN MANIFOLD	1355 BPH	AS REQUIRED	2.0	22	40	41254	58	812	232	1102
12510AJ	TANK PMP POL 1400 BPH W/8 IN MANIFD	1400 BPH	AS REQUIRED	4.0	16	36	31748	29	203	58	290
12510AP	TRANS PMP POL 1400 BPH W/8 IN MNFD	1400 BPH	AS REQUIRED	1.0	12	16	16109	51	355	73	479
12510AV	PPLN POL 1000 FT OF 8 INCH GROOVE	1000FT-4IN	AS REQUIRED	3.0	18	45	27774	44	479	261	784
12510BK	PPLN POL 1M FT OF 8 IN API GROOVE	1000 FT	AS REQUIRED	4.0	52	64	14000	58	1160	812	2030
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	2.0	2	2	2736	15	102	58	175
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	1.0	5	10	5202	36	145	65	246
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	4.0	8	128	48176	522	1798	1276	3596
41180AK	TANK POL 10000 BARREL W/8 IN PIPE	10000 BBL	AS REQUIRED	14.0	42	560	281610	2842	17255	8729	28826
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	4.5	32	36	6318	313	1449	1462	3224
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
					237	985	516260	4168	25494	13688	43350

TROPIC CLIMATE

200000 BBL TNK FARM BULK STGE WITH 8IN PIPE & ACCESSORIES PB1119
TEMPERATE,TROPIC,FRIGID & DESERT. USES 19-10M & 4-3M BBL
BOLTED STEEL TANKS W/8 IN PIPE,FITTINGS,PMPS MANIFOLDS,
OPERATIONS BLDG. WATER STGE TANK & SECURITY FENCING.REQUIRES
31 ACRES. 10CY FINE AGGR. 11CY COARSE AGGR. HAND EXT. ONLY
INCLUDED W/INSTALLATION AS FIREFIGHTING EQUIP.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AC	8IN-SWITCH MNFLD F/TNK FARM W/O PMP	8-INCH	AS REQUIRED	1.0	16	16	19680	15	261	87	363
12510AF	FLOOD PMP 1355BPH 8IN MANIFOLD	1355 BPH	AS REQUIRED	2.0	22	40	41254	58	812	232	1102
12510AJ	TANK PMP POL 1400 BPH W/8 IN MANIFD	1400 BPH	AS REQUIRED	4.0	16	36	31748	29	203	58	290
12510AP	TRANS PMP POL 1400 BPH W/8 IN MNFD	1400 BPH	AS REQUIRED	1.0	12	16	16109	51	355	73	479
12510AV	PPLN POL 1000 FT OF 8 INCH GROOVE	1000FT-4IN	AS REQUIRED	1.0	6	15	9258	15	160	87	262
12510BK	PPLN POL 1M FT OF 8 IN API GROOVE	1000 FT	AS REQUIRED	6.0	78	96	21000	87	1740	1218	3045
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	2.0	2	2	2736	15	102	58	175
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	1.0	5	10	5202	36	145	65	246
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	4.0	8	128	48176	522	1798	1276	3596
41180AK	TANK POL 10000 BARREL W/8 IN PIPE	10000 BBL	AS REQUIRED	19.0	57	760	382185	3857	23418	11847	39122
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	5.0	35	40	7020	348	1610	1624	3582
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
					269	1191	606021	5218	32079	17200	54497

TROPIC CLIMATE

200000 BBL TNK FARM BULK STGE WITH 12IN PIPE & ACCESSORIES PB1129
TEMPERATE,TROPIC,FRIGID & DESERT. USES 19-10M & 4-3M BBL
BOLTED STEEL TANKS W/12IN PIPE,FITTINGS,PMPS MANIFOLDS,
OPERATIONS BLDG. WATER STGE TANK & SECURITY FENCING.
REQUIRES 31 ACRES. 10CY FINE AGGR. 11CY COARSE AGGR. HAND EX
T. ONLY INCLUDED W/INSTALLATION AS FIREFIGHTING EQUIP.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AD	12IN SWITCH MNFLD F/TNK FARM NO PMP	12-INCH	AS REQUIRED	1.0	26	23	97212	44	348	116	508
12510AG	FLOOD PMP 1355BPH 12 IN MANIFOLD	1355 BPH	AS REQUIRED	2.0	28	42	100994	58	1044	290	1392
12510AK	TANK PMP POL 2800 BPH W/12IN MANIFD	2800 BPH	AS REQUIRED	4.0	28	56	65016	29	232	87	348
12510AR	TRANS PMP POL 2800 BPH W/12 IN MNFD	2800 BPH	AS REQUIRED	1.0	18	21	78664	65	500	102	667
12510BK	PPLN POL 1M FT OF 8 IN API GROOVE	1000 FT	AS REQUIRED	.2	3	3	700	3	58	41	102
12510BL	PPLN POL 1M FT OF 12 IN API GROVE	1000 FT	AS REQUIRED	6.0	24	24	66690	87	2001	1392	3480
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	2.0	2	2	2736	15	102	58	175
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	1.0	5	10	5202	36	145	65	246
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	4.0	8	128	48176	522	1798	1276	3596
41180AL	TANK POL 10000 BARREL W/12 IN PIPE	10000 BBL	AS REQUIRED	19.0	57	779	539296	3995	23418	11984	39397
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	5.0	35	40	7020	348	1610	1624	3582
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
					246	1160	1033359	5387	32731	17610	55728

TROPIC CLIMATE

250000 BBL TNK FARM BULK STGE WITH 8IN PIPE & ACCESSORIES PB1139
TEMPERATE,TROPIC,FRIGID & DESERT. USES 24-10M & 4-3M
BEL BOLTED STEEL TANKS W/ 8IN PIPE,FITTINGS,PMPS
MANIFOLDS,OPERATIONS BLDG. WATER STGE TANK & SECURITY
FENCING. REQUIRES ACRES. 10CY FINE AGGR. 11CY COARSE AGGR.
HAND EXT. ONLY INCLUDED W/INSTALLATION AS FIREFIGHTING EQUI
P.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	CONSTR EFFORT IN MANHOURS VERT	CONSTR EFFORT IN MANHOURS GENL	CONSTR EFFORT IN MANHOURS TOT
12510AC	8IN-SWITCH MNFLD F/TNK FARM W/O PMP	8-INCH	AS REQUIRED	1.0	16	16	19680	15	261	87	363
12510AF	FLOOD PMP 1355BPH 8IN MANIFOLD	1355 BPH	AS REQUIRED	2.0	22	40	41254	58	812	232	1102
12510AJ	TANK PMP POL 1400 BPH W/8 IN MANIFD	1400 BPH	AS REQUIRED	5.0	20	45	39685	36	254	73	363
12510AP	TRANS PMP POL 1400 BPH W/8 IN MNFD	1400 BPH	AS REQUIRED	1.0	12	16	16109	51	355	73	479
12510AV	PPLN POL 1000 FT OF 8 INCH GROOVE	1000FT-4IN	AS REQUIRED	2.0	12	30	18516	29	319	174	522
12510BK	PPLN POL 1M FT OF 8 IN API GROOVE	1000 FT	AS REQUIRED	7.0	91	112	24500	102	2030	1421	3553
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	2.0	2	2	2736	15	102	58	175
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	1.0	5	10	5202	36	145	65	246
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	4.0	8	128	48176	522	1798	1276	3596
41180AK	TANK POL 10000 BARREL W/8 IN PIPE	10000 BBL	AS REQUIRED	24.0	72	960	482760	4872	29580	14964	49416
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	5.0	35	40	7020	348	1610	1624	3582
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
					307	1431	727291	6269	38741	20622	65632

TROPIC CLIMATE

250000 BBL TNK FARM BULK STGE WITH 12 IN PIPE & ACCESSORIES PB1149
TEMPERATE,TROPIC,FRIGID & DESERT. USES 24-10M & 4-3M BBL
BOLTED STEEL TANKS W/12IN PIPE,FITTINGS,PMPS MANIFOLDS,
OPERATIONS BLDG.WATER STGE TANK & SECURITY FENCING. REQUIRES
30 ACRES. 10CY FINE AGGR. 11CY COARSE AGGR. HAND EXT. ONLY
INCLUDED W/INSTALLATION AS FIREFIGHTING EQUIP.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AD	12IN SWITCH MNFLD F/TNK FARM NO PMP	12-INCH	AS REQUIRED	1.0	26	23	97212	44	348	116	508
12510AG	FLOOD PMP 1355BPH 12 IN MANIFOLD	1355 BPH	AS REQUIRED	2.0	28	42	100994	58	1044	290	1392
12510AK	TANK PMP POL 2800 BPH W/12IN MANIFD	2800 BPH	AS REQUIRED	5.0	35	70	81270	36	290	109	435
12510AR	TRANS PMP POL 2800 BPH W/12 IN MNFD	2800 BPH	AS REQUIRED	1.0	18	21	78664	65	500	102	667
12510AW	PPLN POL 1000 FT OF 12 INCH GROOVE	1000FT-12IN	AS REQUIRED	2.0	18	64	8880	44	566	203	813
12510BL	PPLN POL 1M FT OF 12 IN API GROVE	1000 FT	AS REQUIRED	7.0	28	28	77805	102	2335	1624	4061
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	2.0	2	2	2736	15	102	58	175
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	1.0	5	10	5202	36	145	65	246
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	4.0	8	128	48176	522	1798	1276	3596
41180AL	TANK POL 10000 BARREL W/12 IN PIPE	10000 BBL	AS REQUIRED	24.0	72	984	681216	5046	29580	15138	49764
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	5.0	35	40	7020	348	1610	1624	3582
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
					287	1444	1210828	6501	39793	21180	67474

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TROPIC CLIMATE

POL SYSTEM TANK FARM,MODULAR INSTALLATION 6INCH LINE PB1159

50000 BBL

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12502AA	PMP,CENTR,1050GPM,850FTHD W/8IN MAN		AS REQUIRED	12.0	108	312	328176	1114	2645	835	4594
12503AA	SWITCHING MAN 8/10IN W/3-WAY VALVES		AS REQUIRED	5.0	40	155	315675	464	1102	348	1914
12504AA	METER,TURBINE,6IN,1050GPM W/10IN PI		AS REQUIRED	1.0	8	14	2551	93	220	70	383
12506AA	PPL BBL CLEANER ASSY.6IN		AS REQUIRED	1.0	4	4	6995	26	155	65	246
12510BN	PPLN POL 1 MILE- 6 IN API GROVE	1 MILE	AS REQUIRED	2.0	118	126	89200	116	1508	841	2465
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	1.0	1	1	1368	7	51	29	87
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	1.0	5	10	5202	36	145	65	246
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	AS REQUIRED	1.0	1	7	6442	65	261	109	435
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	4.0	8	128	48176	522	1798	1276	3596
41180AK	TANK POL 10000 BARREL W/8 IN PIPE	10000 BBL	AS REQUIRED	4.0	12	160	80460	812	4930	2494	8236
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	4.0	28	32	5616	278	1288	1299	2865
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
					345	981	911514	3718	15578	8006	27302

TROPIC CLIMATE

POL SYSTEM TANK FARM,MODULAR INSTALLATION 8INCH LINE PB1169
100000 BBL

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	CONSTR EFFORT IN MANHOURS VERT	CONSTR EFFORT IN MANHOURS GENL	CONSTR EFFORT IN MANHOURS TOT
12502AA	PMP,CENTR,1050GPM,850FTHD W/8IN MAN		AS REQUIRED	17.0	153	442	464916	1578	3747	1183	6508
12503AA	SWITCHING MAN 8/10IN W/3-WAY VALVES		AS REQUIRED	5.0	40	155	315675	464	1102	348	1914
12504AA	METER,TURBINE,6IN,1050GPM W/10IN PI		AS REQUIRED	1.0	8	14	2551	93	220	70	383
12506AB	PPL BBL CLEANER ASSY.8IN		AS REQUIRED	1.0	5	4	6737	26	155	65	246
12510BP	PPLN POL 1 MILE- 8 IN API GROVE	1 MILE	AS REQUIRED	2.0	142	162	38414	232	2146	1015	3393
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	1.0	1	1	1368	7	51	29	87
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	1.0	5	10	5202	36	145	65	246
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	AS REQUIRED	1.0	1	7	6442	65	261	109	435
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	4.0	8	128	48176	522	1798	1276	3596
41180AK	TANK POL 10000 BARREL W/8 IN PIPE	10000 BBL	AS REQUIRED	9.0	27	360	181035	1827	11093	5612	18532
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	4.0	28	32	5616	278	1288	1299	2865
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
					430	1347	1097785	5313	23481	11646	40440

TROPIC CLIMATE

POL SYSTEM TANK FARM,MODULAR INSTALLATION 8INCH LINE PB1179
150000 BBL

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12502AA	PMP,CENTR,1050GPM,850FTHD W/8IN MAN		AS REQUIRED	13.0	117	338	355524	1206	2865	905	4976
12503AA	SWITCHING MAN 8/10IN W/3-WAY VALVES		AS REQUIRED	5.0	40	155	315675	464	1102	348	1914
12504AA	METER,TURBINE,6IN,1050GPM W/10IN PI		AS REQUIRED	1.0	8	14	2551	93	220	70	383
12506AB	PPL BBL CLEANER ASSY.8IN		AS REQUIRED	1.0	5	4	6737	26	155	65	246
12510BP	PPLN POL 1 MILE- 8 IN API GROVE	1 MILE	AS REQUIRED	2.0	142	162	38414	232	2146	1015	3393
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	1.0	1	1	1368	7	51	29	87
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	1.0	5	10	5202	36	145	65	246
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	3.0	6	96	36132	392	1349	957	2698
41180AK	TANK POL 10000 BARREL W/8 IN PIPE	10000 BBL	AS REQUIRED	4.0	12	160	80460	812	4930	2494	8236
41180AM	TANK POL 50000 BARREL W/8 IN PIPE	50000 BBL	AS REQUIRED	2.0	8	386	105694	870	12847	5800	19517
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	1.0	7	8	1404	70	322	325	717
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
					363	1366	970814	4393	27607	12648	44648

TROPIC CLIMATE

POL SYSTEM TANK FARM,MODULAR INSTALLATION 10INCH LINE PB1189
200000 BBL

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12502AA	PMP,CENTR,1050GPM,850FTHD W/8IN MAN		AS REQUIRED	14.0	126	364	382872	1299	3086	974	5359
12503AA	SWITCHING MAN 8/10IN W/3-WAY VALVES		AS REQUIRED	5.0	40	155	315675	464	1102	348	1914
12504AA	METER,TURBINE,8IN,1050GPM W/10IN PI		AS REQUIRED	1.0	8	14	2551	93	220	70	383
12506AC	PIPELN BBL CLEANER TRAP 10IN IN-OUT		AS REQUIRED	1.0	7	13	8851	26	155	65	246
12510CD	PIPELN,1MILE,10IN GRVD STL API PIPE		AS REQUIRED	2.0	196	350	60464	290	2625	1233	4148
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	1.0	1	1	1368	7	51	29	87
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	1.0	5	10	5202	36	145	65	246
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	AS REQUIRED	1.0	1	7	6442	65	261	109	435
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	3.0	6	96	36132	392	1349	957	2698
41180AK	TANK POL 10000 BARREL W/8 IN PIPE	10000 BBL	AS REQUIRED	4.0	12	160	80460	812	4930	2494	8236
41180AM	TANK POL 50000 BARREL W/8 IN PIPE	50000 BBL	AS REQUIRED	3.0	12	579	158541	1305	19271	8700	29276
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	4.0	28	32	5616	278	1288	1299	2865
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
					454	1813	1085827	5252	35958	16918	58128

TROPIC CLIMATE

POL SYSTEM TANK FARM,MODULAR INSTALLATION 10INCH LINE PB1199
250000 BBL

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	CONSTR EFFORT IN MANHOURS VERT	CONSTR EFFORT IN MANHOURS GENL	CONSTR EFFORT IN MANHOURS TOT
12502AA	PMP,CENTR,1050GPM,850FTHD W/8IN MAN		AS REQUIRED	18.0	162	468	492264	1670	3967	1253	6890
12504AA	METER,TURBINE,6IN,1050GPM W/10IN PI		AS REQUIRED	1.0	8	14	2551	93	220	70	383
12506AC	PIPELN BBL CLEANER TRAP 10IN IN-OUT		AS REQUIRED	1.0	7	13	8851	26	155	65	246
12510CD	PIPELN,1MILE,10IN GRVD STL API PIPE		AS REQUIRED	2.0	196	350	60464	290	2625	1233	4148
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	1.0	1	1	1368	7	51	29	87
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	1.0	5	10	5202	36	145	65	246
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	AS REQUIRED	1.0	1	7	6442	65	261	109	435
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	4.0	8	128	48176	522	1798	1276	3596
41180AK	TANK POL 10000 BARREL W/8 IN PIPE	10000 BBL	AS REQUIRED	5.0	15	200	100575	1015	6163	3118	10296
41180AM	TANK POL 50000 BARREL W/8 IN PIPE	50000 BBL	AS REQUIRED	4.0	16	772	211388	1740	25694	11600	39034
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	4.0	28	32	5616	278	1288	1299	2865
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
					459	2027	964550	5927	43842	20692	70461

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TROPIC CLIMATE

POL SYSTEM TANK FARM,MODULAR INSTALLATION 8INCH LINE PB1219
43000 BBL

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12502AA	PMP,CENTR,1050GPM,850FTHD W/8IN MAN		AS REQUIRED	12.0	108	312	328176	1114	2645	835	4594
12503AA	SWITCHING MAN 8/10IN W/3-WAY VALVES		AS REQUIRED	5.0	40	155	315675	464	1102	348	1914
12504AA	METER,TURBINE,6IN,1050GPM W/10IN PI		AS REQUIRED	1.0	8	14	2551	93	220	70	383
12506AB	PPL BBL CLEANER ASSY.8IN		AS REQUIRED	1.0	5	4	6737	26	155	65	246
12510BP	PPLN POL 1 MILE- 8 IN API GROVE	1 MILE	AS REQUIRED	2.0	142	162	38414	232	2146	1015	3393
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	1.0	1	1	1368	7	51	29	87
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	1.0	5	10	5202	36	145	65	246
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	AS REQUIRED	1.0	1	7	6442	65	261	109	435
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	5.0	10	160	60220	653	2248	1595	4496
41180AK	TANK POL 10000 BARREL W/8 IN PIPE	10000 BBL	AS REQUIRED	3.0	9	120	60345	609	3698	1871	6178
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	4.0	28	32	5616	278	1288	1299	2865
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
					369	1009	852399	3762	15434	7876	27072

TROPIC CLIMATE

POL SYSTEM TANK FARM,MODULAR INSTALLATION 8INCH LINE PB1219
43000 BBL

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12502AA	PMP,CENTR,1050GPM,850FTHD W/8IN MAN		AS REQUIRED	12.0	108	312	328176	1114	2645	835	4594
12503AA	SWITCHING MAN 8/10IN W/3-WAY VALVES		AS REQUIRED	5.0	40	155	315675	464	1102	348	1914
12504AA	METER,TURBINE,6IN,1050GPM W/10IN PI		AS REQUIRED	1.0	8	14	2551	93	220	70	383
12506AB	PPL BBL CLEANER ASSY.8IN		AS REQUIRED	1.0	5	4	6737	26	155	65	246
12510BP	PPLN POL 1 MILE- 8 IN API GROVE	1 MILE	AS REQUIRED	2.0	142	162	38414	232	2146	1015	3393
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	1.0	1	1	1368	7	51	29	87
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	1.0	5	10	5202	36	145	65	246
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	AS REQUIRED	1.0	1	7	6442	65	261	109	435
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	5.0	10	160	60220	653	2248	1595	4496
41180AK	TANK POL 10000 BARREL W/8 IN PIPE	10000 BBL	AS REQUIRED	3.0	9	120	60345	609	3698	1871	6178
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	4.0	28	32	5616	278	1288	1299	2865
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
					369	1009	852399	3762	15434	7876	27072

TROPIC CLIMATE

POL SYSTEM TANK FARM,MODULAR INSTALLATION 8INCH LINE PB1229
65000 BBL

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12502AA	PMP,CENTR,1050GPM,850FTHD W/8IN MAN		AS REQUIRED	12.0	108	312	328176	1114	2645	835	4594
12503AA	SWITCHING MAN 8/10IN W/3-WAY VALVES		AS REQUIRED	5.0	40	155	315675	464	1102	348	1914
12504AA	METER,TURBINE,6IN,1050GPM W/10IN PI		AS REQUIRED	1.0	8	14	2551	93	220	70	383
12506AB	PPL BBL CLEANER ASSY.8IN		AS REQUIRED	1.0	5	4	6737	26	155	65	246
12510BP	PPLN POL 1 MILE- 8 IN API GROVE	1 MILE	AS REQUIRED	2.0	142	162	38414	232	2146	1015	3393
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	1.0	1	1	1368	7	51	29	87
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	1.0	5	10	5202	36	145	65	246
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	AS REQUIRED	1.0	1	7	6442	65	261	109	435
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	5.0	10	160	60220	653	2248	1595	4496
41180AK	TANK POL 10000 BARREL W/8 IN PIPE	10000 BBL	AS REQUIRED	5.0	15	200	100575	1015	6163	3118	10296
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AK	FENCE,CORNER POST 10 FT HI BARB WIR		AS REQUIRED	4.0	4	4	508	52	81	81	214
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
					351	1061	887521	3942	16692	7905	28539

TROPIC CLIMATE

POL SYSTEM TANK FARM MODULAR INSTALLATION 10INCH LINE, 85000 BBL. PB1239

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12502AA	PMP,CENTR,1050GPM,850FTHD W/8IN MAN		AS REQUIRED	16.0	144	416	437568	1485	3526	1114	6125
12503AA	SWITCHING MAN 8/10IN W/3-WAY VALVES		AS REQUIRED	5.0	40	155	315675	464	1102	348	1914
12504AA	METER,TURBINE,6IN,1050GPM W/10IN PI		AS REQUIRED	1.0	8	14	2551	93	220	70	383
12506AC	PIPELN BBL CLEANER TRAP 10IN IN-OUT		AS REQUIRED	1.0	7	13	8851	26	155	65	246
12510CD	PIPELN,1MILE,10IN GRVD STL API PIPE		AS REQUIRED	2.0	196	350	60464	290	2625	1233	4148
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	1.0	1	1	1368	7	51	29	87
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	1.0	5	10	5202	36	145	65	246
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	AS REQUIRED	1.0	1	7	6442	65	261	109	435
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	2.0	2	26	18516	232	928	377	1537
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	5.0	10	160	60220	653	2248	1595	4496
41180AK	TANK POL 10000 BARREL W/8 IN PIPE	10000 BBL	AS REQUIRED	7.0	21	280	140805	1421	8628	4365	16414
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	4.0	28	32	5616	278	1288	1299	2865
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	1.0	2	2	332	12	174	70	256
					472	1481	1075341	5108	22014	10986	38108

TROPIC CLIMATE

POL SYSTEM TANK FARM MODULAR INSTALLATION 10INCH LINE, 110000 BBL. PB1249

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12502AA	PMP,CENTR,1050GPM,850FTHD W/8IN MAN		AS REQUIRED	17.0	153	442	464916	1578	3747	1183	6508
12503AA	SWITCHING MAN 8/10IN W/3-WAY VALVES		AS REQUIRED	5.0	40	155	315675	464	1102	348	1914
12504AA	METER,TURBINE,6IN,1050GPM W/10IN PI		AS REQUIRED	1.0	8	14	2551	93	220	70	383
12506AC	PIPELN BBL CLEANER TRAP 10IN IN-OUT		AS REQUIRED	1.0	7	13	8851	26	155	65	246
12510CD	PIPELN,1MILE,10IN GRVD STL API PIPE		AS REQUIRED	2.0	196	350	60464	290	2625	1233	4148
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	1.0	1	1	1368	7	51	29	87
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	1.0	5	10	5202	36	145	65	246
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	AS REQUIRED	1.0	1	7	6442	65	261	109	435
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	4.0	8	128	48176	522	1798	1276	3596
41180AK	TANK POL 10000 BARREL W/8 IN PIPE	10000 BBL	AS REQUIRED	10.0	30	400	201150	2030	12325	6235	20590
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	4.0	28	32	5616	278	1288	1299	2865
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
					489	1584	1142064	5574	25192	12487	43253

TROPIC CLIMATE

400000 BBL CAPACITY TANK FARM COMPLEX BULK STGE OF 4 PROD. PC1019
TEMPERATE,TROPIC,DESERT & FRIGID CLIM. W/6IN-INLAND PPLN,
BOOSTER PMP STA.& OPER BLDG. CONSISTS OF 2-200000 BBL TANK
FARMS MADE UP OF 6 50BBL WLDD,8-10M & 6-3M BARREL BLTD STL
TANKS,WATER SUPPLY TANK & SECURITY FENCING. REQUIRES 110ACRE
300CY FINE AGGR. 33CY COARSE AGGR. HAND EXT. ONLY INCLUDED
W/INSTALLATION AS FIREFIGHTING EQUIP.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	CONSTR EFFORT IN MANHOURS VERT	CONSTR EFFORT IN MANHOURS GENL	CONSTR EFFORT IN MANHOURS TOT
12510AB	6IN-SWITCH MNFLD F/TNK FARM W/O PMP	6-INCH	AS REQUIRED	1.0	9	9	15541	15	218	73	306
12510AC	8IN-SWITCH MNFLD F/TNK FARM W/O PMP	8-INCH	AS REQUIRED	2.0	32	32	39360	29	522	174	725
12510AF	FLOOD PMP 1355BPH 8IN MANIFOLD	1355 BPH	AS REQUIRED	4.0	44	80	82508	116	1624	464	2204
12510AJ	TANK PMP POL 1400 BPH W/8 IN MANIFD	1400 BPH	AS REQUIRED	8.0	32	72	63496	58	406	116	580
12510AP	TRANS PMP POL 1400 BPH W/8 IN MNFD	1400 BPH	AS REQUIRED	2.0	24	32	32218	102	711	145	958
12510AV	PPLN POL 1000 FT OF 8 INCH GROOVE	1000FT-4IN	AS REQUIRED	2.0	12	30	18516	29	319	174	522
12510BA	PPLN POL 1 MILE OF 6 INCH GROOVE	1MILE-6INCH	AS REQUIRED	4.0	120	200	128832	174	1856	1276	3306
12510BK	PPLN POL 1M FT OF 8 IN API GROOVE	1000 FT	AS REQUIRED	8.0	104	128	28000	116	2320	1624	4060
12530AE	BOOSTER STATION POL 1400 BPH	1400 BPH	AS REQUIRED	4.0	52	112	108604	232	551	203	986
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	8.0	8	8	10944	58	406	232	696
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	4.0	20	40	20808	145	580	261	986
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	2.0	2	26	18516	232	928	377	1537
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	6.0	12	192	72264	783	2697	1914	5394
41180AK	TANK POL 10000 BARREL W/8 IN PIPE	10000 BBL	AS REQUIRED	8.0	24	320	160920	1624	9860	4988	16472
41180AM	TANK POL 50000 BARREL W/8 IN PIPE	50000 BBL	AS REQUIRED	6.0	24	1158	317082	2610	38541	17400	58551
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	3.0	21	45	35193	139	1988	740	2867
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	7.1	50	57	9968	494	2285	2306	5085
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	4.0	8	8	1328	46	696	278	1020
					598	2549	1164098	7002	66508	32745	106255

TROPIC CLIMATE

400000 BBL CAPACITY TANK FARM COMPLEX BULK STGE OF 4 PROD. PC1029
TEMPERATE,TROPIC,DESERT & FRIGID. W/8IN-INLAND PPLN,BOOSTER
PMP STAT.& OPER BLDG. CONSISTS OF 2-200000 BBL TANK FARMS
MADE UP OF 6 50M WELDED, 8-10M & 6 3M BARREL BLTD STL TANKS,
WATER SUPPLY TANK & SECURITY FENCING. REQUIRES 110 ACRES
30CY FINE AGGR. 33CY COARSE AGGR. HAND EXT. INCLUDED W/INSTA
LLATION AS FIREFIGHTING EQUIP.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AC	8IN-SWITCH MNFLD F/TNK FARM W/O PMP	8-INCH	AS REQUIRED	3.0	48	48	59040	44	783	261	1088
12510AF	FLOOD PMP 1355BPH 8IN MANIFOLD	1355 BPH	AS REQUIRED	4.0	44	80	82508	116	1624	464	2204
12510AJ	TANK PMP POL 1400 BPH W/8 IN MANIFD	1400 BPH	AS REQUIRED	8.0	32	72	63496	58	406	116	580
12510AP	TRANS PMP POL 1400 BPH W/8 IN MNFD	1400 BPH	AS REQUIRED	2.0	24	32	32218	102	711	145	958
12510AV	PPLN POL 1000 FT OF 8 INCH GROOVE	1000FT-4IN	AS REQUIRED	2.0	12	30	18516	29	319	174	522
12510BB	PPLN POL 1 MILE OF 8 INCH GROOVE	1 MILE-8INCH	AS REQUIRED	8.0	288	696	302376	464	5220	3712	9396
12510BK	PPLN POL 1M FT OF 8 IN API GROOVE	1000 FT	AS REQUIRED	8.0	104	128	28000	116	2320	1624	4060
12530AF	BOOSTER STATION POL 2800 BPH	2800 BPH	AS REQUIRED	8.0	112	232	216560	464	1102	406	1972
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	12.0	12	12	16416	87	609	348	1044
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	4.0	20	40	20808	145	580	261	986
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	2.0	2	26	18516	232	928	377	1537
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	6.0	12	192	72264	783	2697	1914	5394
41180AK	TANK POL 10000 BARREL W/8 IN PIPE	10000 BBL	AS REQUIRED	8.0	24	320	160920	1624	9860	4988	16472
41180AM	TANK POL 50000 BARREL W/8 IN PIPE	50000 BBL	AS REQUIRED	6.0	24	1158	317082	2610	38541	17400	58551
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	3.0	21	45	35193	139	1988	740	2867
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	7.1	50	57	9968	494	2285	2306	5085
					829	3168	1453881	7507	69973	35236	112716

TROPIC CLIMATE

400000 BBL CAPACITY TANK FARM COMPLEX BULK STGE OF 4 PROD. PC1039
TEMPERATE,TROPIC,DESERT & FRIGID. W/12IN-INLAND PPLN,
BOOSTER PMP STA.& OPER BLDG.CONSISTS OF 2-2000000 BBL TANK
FARMS MADE UP OF 6-50M WELDED,8-10M & 6-3M BARREL BLTD STL
TANKS,WATER SUPPLY TANK & SECURITY FENCING REQUIRES 110ACRES
30CY FINE AGGR. 33CY COARSE AGGR. HAND EXT. ONLY INCLUDED
W/INSTALLATION AS.FIREFIGHTING EQUIP.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AD	12IN SWITCH MNFLD F/TNK FARM NO PMP	12-INCH	AS REQUIRED	3.0	78	69	291636	131	1044	348	1523
12510AG	FLOOD PMP 1355BPH 12 IN MANIFOLD	1355 BPH	AS REQUIRED	4.0	56	84	201988	116	2088	580	2784
12510AK	TANK PMP POL 2800 BPH W/12IN MANIFD	2800 BPH	AS REQUIRED	8.0	56	112	130032	58	464	174	696
12510AR	TRANS PMP POL 2800 BPH W/12 IN MNFD	2800 BPH	AS REQUIRED	2.0	36	42	157328	131	1001	203	1335
12510AW	PPLN POL 1000 FT OF 12 INCH GROOVE	1000FT-12IN	AS REQUIRED	2.0	18	64	8880	44	566	203	813
12510BC	PPLN POL 1 MILE OF 12 INCH GROOVE	1MILE-12INCH	AS REQUIRED	8.0	360	1416	191832	464	11020	4872	16356
12510BL	PPLN POL 1M FT OF 12 IN API GROVE	1000 FT	AS REQUIRED	8.0	32	32	88920	116	2668	1856	4640
12530AG	BOOSTER STATION POL 7000 BPH	7000 BPH	AS REQUIRED	8.0	216	448	432872	464	3248	928	4640
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	4.0	4	4	5472	29	203	116	348
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	8.0	8	8	9968	93	603	232	928
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	4.0	20	40	20808	145	580	261	986
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	2.0	2	26	18516	232	928	377	1537
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	6.0	12	192	72264	783	2697	1914	5394
41180AL	TANK POL 10000 BARREL W/12 IN PIPE	10000 BBL	AS REQUIRED	8.0	24	328	227072	1682	9860	5046	16588
41180AN	TANK POL 50000 BARREL W/12 IN PIPE	50000 BBL	AS REQUIRED	6.0	24	1158	365532	2610	38628	17400	58638
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	3.0	21	45	35193	139	1988	740	2867
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	8.0	56	64	11232	557	2575	2598	5730
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	4.0	8	8	1328	46	696	278	1020
					1031	4140	2270873	7840	80857	38126	126823

TROPIC CLIMATE

600000 BBL CAPACITY TANK FARM COMPLEX BULK STGE OF 4 PROD. PC1049
TEMPERATE,TROPIC,DESERT & FRIGID. W/8IN-INLAND PPLN,BOOSTER
PMP STA.& OPER BLDG. CONSISTS OF 3-200000 BBL TANK FARMS
MADE UP OF 9-50M WELDED,12-10M & 9-3M BARREL BLTD STL
TANKS,WATER SUPPLY TANK & SECURITY FENCING. REQUIRES 188
ACRES. 50CY FINE AGGR. 55CY COARSE AGGR. HAND EXT. ONLY INCL
UDED W/INSTALLATION AS FIREFIGHTING EQUIP.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AC	8IN-SWITCH MNFLD F/TNK FARM W/O PMP	8-INCH	AS REQUIRED	4.0	64	64	78720	58	1044	348	1450
12510AF	FLOOD PMP 1355BPH 8IN MANIFOLD	1355 BPH	AS REQUIRED	6.0	66	120	123762	174	2436	696	3306
12510AJ	TANK PMP POL 1400 BPH W/8 IN MANIFD	1400 BPH	AS REQUIRED	12.0	48	108	95244	87	609	174	870
12510AP	TRANS PMP POL 1400 BPH W/8 IN MNFD	1400 BPH	AS REQUIRED	3.0	36	48	48327	152	1066	218	1436
12510AV	PPLN POL 1000 FT OF 8 INCH GROOVE	1000FT-4IN	AS REQUIRED	3.0	18	45	27774	44	479	261	784
12510BB	PPLN POL 1 MILE OF 8 INCH GROOVE	1 MILE-8INCH	AS REQUIRED	18.0	648	1566	680346	1044	11745	8352	21141
12510BK	PPLN POL 1M FT OF 8 IN API GROOVE	1000 FT	AS REQUIRED	12.0	156	192	42000	174	3480	2436	6090
12530AF	BOOSTER STATION POL 2800 BPH	2800 BPH	AS REQUIRED	12.0	168	348	324840	696	1653	609	2958
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	6.0	6	6	8208	44	305	174	523
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	6.0	6	6	7476	70	452	174	696
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	6.0	30	60	31212	218	870	392	1480
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	3.0	3	39	27774	348	1392	566	2306
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	9.0	18	288	108396	1175	4046	2871	8092
41180AK	TANK POL 10000 BARREL W/8 IN PIPE	10000 BBL	AS REQUIRED	12.0	36	480	241380	2436	14790	7482	24708
41180AM	TANK POL 50000 BARREL W/8 IN PIPE	50000 BBL	AS REQUIRED	9.0	36	1737	475623	3915	57812	26100	87827
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	5.0	35	75	58655	232	3313	1233	4778
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	10.7	75	86	15023	745	3444	3475	7664
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	6.0	12	12	1992	70	1044	418	1532
					1461	5280	2396752	11682	109980	55979	177641

TROPIC CLIMATE

600000 BBL CAPACITY TANK FARM COMPLEX BULK STGE OF 4 PROD. PC1059
TEMPERATE,TROPIC,DESERT & FRIGID. W/12IN-INLAND PPLN,
BOOSTER PMP STA.& OPER BLDG. CONSISTS OF 3-200000 BBL TANK
FARMS MADE UP OF 9-50M WELDED,12-10M & 9-3M BARREL BLTD STL
TANKS,WATER SUPPLY TANK & SECURITY FENCING. REQUIRES 188
ACRES. 50CY FINE AGGR. 55CY COARSE AGGR. HAND EXT. ONLY INCL
UDED W/INSTALLATION AS FIREFIGHTING EQUIP.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AD	12IN SWITCH MNFLD F/TNK FARM NO PMP	12-INCH	AS REQUIRED	4.0	104	92	388848	174	1392	464	2030
12510AG	FLOOD PMP 1355BPH 12 IN MANIFOLD	1355 BPH	AS REQUIRED	6.0	84	126	302982	174	3132	870	4176
12510AK	TANK PMP POL 2800 BPH W/12IN MANIFD	2800 BPH	AS REQUIRED	12.0	84	168	195048	87	696	261	1044
12510AR	TRANS PMP POL 2800 BPH W/12 IN MNFD	2800 BPH	AS REQUIRED	3.0	54	63	235992	196	1501	305	2002
12510AW	PPLN POL 1000 FT OF 12 INCH GROOVE	1000FT-12IN	AS REQUIRED	3.0	27	96	13320	65	848	305	1218
12510BC	PPLN POL 1 MILE OF 12 INCH GROOVE	1MILE-12INCH	AS REQUIRED	18.0	810	3186	431622	1044	24795	10962	36801
12510BL	PPLN POL 1M FT OF 12 IN API GROVE	1000 FT	AS REQUIRED	12.0	48	48	133380	174	4002	2784	6960
12530AG	BOOSTER STATION POL 7000 BPH	7000 BPH	AS REQUIRED	12.0	324	672	649308	696	4872	1392	6960
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	6.0	6	6	8208	44	305	174	523
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	12.0	12	12	14952	139	905	348	1392
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	6.0	30	60	31212	218	870	392	1480
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	3.0	3	39	27774	348	1392	566	2306
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	9.0	18	288	108396	1175	4046	2871	8092
41180AL	TANK POL 10000 BARREL W/12 IN PIPE	10000 BBL	AS REQUIRED	12.0	36	492	340608	2523	14790	7569	24882
41180AN	TANK POL 50000 BARREL W/12 IN PIPE	50000 BBL	AS REQUIRED	9.0	36	1737	548298	3915	57942	26100	87957
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	5.0	35	75	58655	232	3313	1233	4778
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	10.7	75	86	15023	745	3444	3475	7664
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	6.0	12	12	1992	70	1044	418	1532
					1798	7258	3505618	12019	129289	60489	201797

TROPIC CLIMATE

800000 BBL CAPACITY TANK FARM COMPLEX BULK STGE OF 4 PROD. PC1069
TEMPERATE,TROPIC,DESERT & FRIGID. W/8 IN-INLAND PPLN,
BOOSTER PMP STA. & OPER BLDG. CONSISTS OF 4-200000 BBL TANK
FARMS MADE UP OF 12-50M WELDED\16-10M & 12-3M BARREL BLTD
TANKS,WATER SUPPLY TANK & SECURITY FENCING. REQUIRES 267
ACRES. 70CY FINE AGGR. 77CY AGGR. HAND EXT. ONLY INCLUDED
W/INSTALLATION AS FIREFIGHTING EQUIP.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AC	8IN-SWITCH MNFLD F/TNK FARM W/O PMP	8-INCH	AS REQUIRED	5.0	80	80	98400	73	1305	435	1813
12510AF	FLOOD PMP 1355BPH 8IN MANIFOLD	1355 BPH	AS REQUIRED	8.0	88	160	165016	232	3248	928	4408
12510AJ	TANK PMP POL 1400 BPH W/8 IN MANIFD	1400 BPH	AS REQUIRED	16.0	64	144	126992	116	812	232	1160
12510AP	TRANS PMP POL 1400 BPH W/8 IN MNFD	1400 BPH	AS REQUIRED	4.0	48	64	64436	203	1421	290	1914
12510AV	PPLN POL 1000 FT OF 8 INCH GROOVE	1000FT-4IN	AS REQUIRED	4.0	24	60	37032	58	638	348	1044
12510BB	PPLN POL 1 MILE OF 8 INCH GROOVE	1 MILE-8INCH	AS REQUIRED	24.0	864	2088	907128	1392	15660	11136	28188
12510BK	PPLN POL 1M FT OF 8 IN API GROOVE	1000 FT	AS REQUIRED	16.0	208	256	56000	232	4640	3248	8120
12530AF	BOOSTER STATION POL 2800 BPH	2800 BPH	AS REQUIRED	24.0	336	696	649680	1392	3306	1218	5916
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	8.0	8	8	10944	58	406	232	696
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	12.0	12	12	14952	139	905	348	1392
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	10.0	50	100	52020	363	1450	653	2466
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	4.0	4	52	37032	464	1856	754	3074
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	12.0	24	384	144528	1566	5394	3828	10788
41180AK	TANK POL 10000 BARREL W/8 IN PIPE	10000 BBL	AS REQUIRED	16.0	48	640	321840	3248	19720	9976	32944
41180AM	TANK POL 50000 BARREL W/8 IN PIPE	50000 BBL	AS REQUIRED	12.0	48	2316	634164	5220	77082	34800	117102
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	7.0	49	105	82117	325	4639	1726	6690
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	14.2	99	114	19937	988	4571	4612	10171
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	8.0	16	16	2656	93	1392	557	2042
					2070	7295	3424874	16162	148445	75321	239928

TROPIC CLIMATE

800000 BBL CAPACITY TANK FARM COMPLEX BULK STGE OF 4 PROD. PC1079
TEMPERATE,TROPIC,DESERT & FRIGID. W/12IN-INLAND PPLN,
BOOSTER PMP STA.& OPER BLDG. CONSISTS OF 4-200000 BBL TANK
FARMS MADE UP OF 12-50M WELDED,16-10M & 12-3M BARREL BLTD
STL TANKS, WATER SUPPLY TANK & SECURITY FENCING. REQUIRES
267 ACRES. 70CY FINE AGGR. 77CY COARSE AGGR. HAND EXT. ONLY
INCLUDED W/INSTALLATION AS FIREFIGHTING EQUIP.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AD	12IN SWITCH MNFLD F/TNK FARM NO PMP	12-INCH	AS REQUIRED	5.0	130	115	486060	218	1740	580	2538
12510AG	FLOOD PMP 1355BPH 12 IN MANIFOLD	1355 BPH	AS REQUIRED	8.0	112	168	403976	232	4176	1160	5568
12510AK	TANK PMP POL 2800 BPH W/12IN MANIFD	2800 BPH	AS REQUIRED	16.0	112	224	260064	116	928	348	1392
12510AR	TRANS PMP POL 2800 BPH W/12 IN MNFD	2800 BPH	AS REQUIRED	4.0	72	84	314656	261	2001	406	2668
12510AW	PPLN POL 1000 FT OF 12 INCH GROOVE	1000FT-12IN	AS REQUIRED	4.0	36	128	17760	87	1131	406	1624
12510BC	PPLN POL 1 MILE OF 12 INCH GROOVE	1MILE-12INCH	AS REQUIRED	24.0	1080	4248	575496	1392	33060	14616	49068
12510BL	PPLN POL 1M FT OF 12 IN API GROVE	1000 FT	AS REQUIRED	16.0	64	64	177840	232	5336	3712	9280
12530AG	BOOSTER STATION POL 7000 BPH	7000 BPH	AS REQUIRED	24.0	648	1344	1298616	1392	9744	2784	13920
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	8.0	8	8	10944	58	406	232	696
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	24.0	24	24	29904	278	1810	696	2784
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	10.0	50	100	52020	363	1450	653	2466
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	4.0	4	52	37032	464	1856	754	3074
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	12.0	24	384	144528	1566	5394	3828	10788
41180AL	TANK POL 10000 BARREL W/12 IN PIPE	10000 BBL	AS REQUIRED	16.0	48	656	454144	3364	19720	10092	33176
41180AN	TANK POL 50000 BARREL W/12 IN PIPE	50000 BBL	AS REQUIRED	12.0	48	2316	731064	5220	77256	34800	117276
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	7.0	49	105	82117	325	4639	1726	6690
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	14.2	99	114	19937	988	4571	4612	10171
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	8.0	16	16	2656	93	1392	557	2042
					2624	10150	5098814	16649	176610	81962	275221

TROPIC CLIMATE

1000000 BBL CAPACITY TANK FARM COMPLEX BULK STGE OF 4 PROD. PC1089
TEMPERATE,TROPIC,DESERT & FRIGID. W/8 IN-INLAND PPLN,
BOOSTER PMP STA.& OPER BLDG. CONSISTS OF 4-250000 BBL TANK
FARMS MADE UP OF 16-50M WELDED, AND TWENTY 10 THOUSAND BLTD
STL TANKS,WATER SUPPLY TANK & SECURITY FENCING.REQUIRES 263
ACRES. 70CY FINE AGGR. 77CY COARSE AGGR. HAND EXT. ONLY INCL
UDED W/INSTALLATION AS FIREFIGHTING EQUIP.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AC	8IN-SWITCH MNFLD F/TNK FARM W/O PMP	8-INCH	AS REQUIRED	5.0	80	80	98400	73	1305	435	1813
12510AF	FLOOD PMP 1355BPH 8IN MANIFOLD	1355 BPH	AS REQUIRED	8.0	88	160	165016	232	3248	928	4408
12510AJ	TANK PMP POL 1400 BPH W/8 IN MANIFD	1400 BPH	AS REQUIRED	16.0	64	144	126992	116	812	232	1160
12510AP	TRANS PMP POL 1400 BPH W/8 IN MNFD	1400 BPH	AS REQUIRED	4.0	48	64	64436	203	1421	290	1914
12510AV	PPLN POL 1000 FT OF 8 INCH GROOVE	1000FT-4IN	AS REQUIRED	4.0	24	60	37032	58	638	348	1044
12510BB	PPLN POL 1 MILE OF 8 INCH GROOVE	1 MILE-8INCH	AS REQUIRED	24.0	864	2088	907128	1392	15660	11136	28188
12510BK	PPLN POL 1M FT OF 8 IN API GROOVE	1000 FT	AS REQUIRED	24.0	312	384	84000	348	6960	4872	12180
12530AF	BOOSTER STATION POL 2800 BPH	2800 BPH	AS REQUIRED	24.0	336	696	649680	1392	3306	1218	5916
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	8.0	8	8	10944	58	406	232	696
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	12.0	12	12	14952	139	905	348	1392
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	10.0	50	100	52020	363	1450	653	2466
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	4.0	4	52	37032	464	1856	754	3074
41180AK	TANK POL 10000 BARREL W/8 IN PIPE	10000 BBL	AS REQUIRED	20.0	60	800	402300	4060	24650	12470	41180
41180AM	TANK POL 50000 BARREL W/8 IN PIPE	50000 BBL	AS REQUIRED	16.0	64	3088	845552	6960	102776	46400	156136
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	7.0	49	105	82117	325	4639	1726	6690
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	15.0	105	120	21060	1044	4829	4872	10745
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	8.0	16	16	2656	93	1392	557	2042
					2184	7977	3601317	17320	176253	87471	281044

TROPIC CLIMATE

1000000 BBL CAPACITY TANK FARM COMPLEX BULK STGE OF 4 PROD. PC1099
TEMPERATE,TROPIC,DESERT & FRIGID. W/12IN-INLAND PPLN,
BOOSTER PMP STA.& OPER BLDG.CONSISTS OF 4-250000 BBL TANK
FARMS MADE UP OF 12-50M WELDED AND TWENTY 10 THOUSAND BLTD
STL TANKS,WATER SUPPLY TANK & SECURITY FENCING. REQUIRES 263
ACRES. 70CY FINE AGGR. 77CY COARSE AGGR. HAND EXT. ONLY INCL
UDED W/INSTALLATION AS FIREFIGHTING EQUIP.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AD	12IN SWITCH MNFLD F/TNK FARM NO PMP	12-INCH	AS REQUIRED	5.0	130	115	486060	218	1740	580	2538
12510AG	FLOOD PMP 1355BPH 12 IN MANIFOLD	1355 BPH	AS REQUIRED	8.0	112	168	403976	232	4176	1160	5568
12510AK	TANK PMP POL 2800 BPH W/12IN MANIFD	2800 BPH	AS REQUIRED	16.0	112	224	260064	116	928	348	1392
12510AR	TRANS PMP POL 2800 BPH W/12 IN MNFD	2800 BPH	AS REQUIRED	4.0	72	84	314656	261	2001	406	2668
12510AW	PPLN POL 1000 FT OF 12 INCH GROOVE	1000FT-12IN	AS REQUIRED	4.0	36	128	17760	87	1131	406	1624
12510BC	PPLN POL 1 MILE OF 12 INCH GROOVE	1MILE-12INCH	AS REQUIRED	24.0	1080	4248	575496	1392	33060	14616	49068
12510BL	PPLN POL 1M FT OF 12 IN API GROVE	1000 FT	AS REQUIRED	24.0	96	96	266760	348	8004	5568	13920
12530AG	BOOSTER STATION POL 7000 BPH	7000 BPH	AS REQUIRED	24.0	648	1344	1298616	1392	9744	2784	13920
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	8.0	8	8	10944	58	406	232	696
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	24.0	24	24	29904	278	1810	696	2784
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	10.0	50	100	52020	363	1450	653	2466
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	4.0	4	52	37032	464	1856	754	3074
41180AL	TANK POL 10000 BARREL W/12 IN PIPE	10000 BBL	AS REQUIRED	20.0	60	820	567680	4205	24650	12615	41470
41180AN	TANK POL 50000 BARREL W/12 IN PIPE	50000 BBL	AS REQUIRED	16.0	64	3088	974752	6960	103008	46400	156368
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	7.0	49	105	82117	325	4639	1726	6690
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	15.0	105	120	21060	1044	4829	4872	10745
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	8.0	16	16	2656	93	1392	557	2042
					2666	10740	5401553	17836	204824	94373	317033

TROPIC CLIMATE

4000 BBL CAPACITY TANK FARM COMPLEX BULK STGE OF 4 PROD. PC1109
TEMPERATE,TROPIC,DESERT & FRIGID. W/6 IN-INLAND PPLN,BOOSTER
PMP STA.& OPER BLDG.CONSISTS %F 2-200000 BBL TANK FARMS MADE
UP OF 38-10 THOUSAND AND EIGHT 3 THOUSAND BL D S 1 TANKS,
WATER SUPPLY TANK & SECURITY FENCING. REQUIRES 110 ACRES
20CY FINE AGGR. 22CY COARSE AGGR. HAND EXT. ONLY INCLUDED
W/INSTALLATION AS FIREFIGHTING EQUIP.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AB	6IN-SWITCH MNFLD F/TNK FARM W/O PMP	6-INCH	AS REQUIRED	1.0	9	9	15541	15	218	73	306
12510AC	8IN-SWITCH MNFLD F/TNK FARM W/O PMP	8-INCH	AS REQUIRED	2.0	32	32	39360	29	522	174	725
12510AF	FLOOD PMP 1355BPH 8IN MANIFOLD	1355 BPH	AS REQUIRED	4.0	44	80	82508	116	1624	464	2204
12510AJ	TANK PMP POL 1400 BPH W/8 IN MANIFD	1400 BPH	AS REQUIRED	8.0	32	72	63496	58	406	116	580
12510AP	TRANS PMP POL 1400 BPH W/8 IN MNFD	1400 BPH	AS REQUIRED	2.0	24	32	32218	102	711	145	958
12510AV	PPLN POL 1000 FT OF 8 INCH GROOVE	1000FT-4IN	AS REQUIRED	2.0	12	30	18516	29	319	174	522
12510BA	PPLN POL 1 MILE OF 6 INCH GROOVE	1MILE-6INCH	AS REQUIRED	4.0	120	200	128832	174	1856	1276	3306
12510BK	PPLN POL 1M FT OF 8 IN API GROOVE	1000 FT	AS REQUIRED	12.0	156	192	42000	174	3480	2436	6090
12530AE	BOOSTER STATION POL 1400 BPH	1400 BPH	AS REQUIRED	4.0	52	112	108604	232	551	203	986
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	8.0	8	8	10944	58	406	232	696
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	4.0	20	40	20808	145	580	261	986
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	2.0	2	26	18516	232	928	377	1537
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	8.0	16	256	96352	1044	3596	2552	7192
41180AK	TANK POL 10000 BARREL W/8 IN PIPE	10000 BBL	AS REQUIRED	38.0	114	1520	764370	7714	46835	23693	78242
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	3.0	21	45	35193	139	1988	740	2867
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	10.0	70	80	14040	696	3219	3248	7163
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	4.0	8	8	1328	46	696	278	1020
					740	2742	1492626	11003	67935	36442	115380

TROPIC CLIMATE

POL PIPELINE,41M 8MILES,WITH 355 BPH PUMP. PD1019
STATION FOR TEMP,TROP,DST & FRIGID CLIMATE. TRANSFER OF POL
PRODUCTS AT RATE OF 7000 BBL/DAY. REQUIRES 97 ACRES. 2 CY F
INE AGGR. 2 CY COARSE AGGR. ONLY HAND EXT. INCLUDED WITH INS
TALLATION AS FIREFIGHTING EQUIP.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510BD	PPLN POL 5 MILE OF 4 INCH GROOVE	5 MILES-4 IN	AS REQUIRED	1.0	61	110	61704	73	1595	1044	2712
12510BM	PPLN POL 1 MILE- 4 IN API GROVE	1 MILE	AS REQUIRED	3.0	102	69	96474	131	1827	1218	3176
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	1.0	1	1	1368	7	51	29	87
12530AM	PUMP STATION POL FOR 4 IN PIPELINE	385 BPH	AS REQUIRED	1.0	5	86	80584	51	145	51	247
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	1.0	5	10	5202	36	145	65	246
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	.3	2	2	421	21	97	97	215
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	1.0	2	2	332	12	174	70	256
					178	280	246085	331	4034	2574	6939

TROPIC CLIMATE

POL PIPELINE,61M 17MILES,WITH 785 BPH PUMP. PD1029
STATION FOR TEMP,TROP,DST & FRIGID CLIMATE. TRANSFER OF POL
PRODUCTS AT RATE OF 15000 BBL/DAY. REQUIRES 206 ACRES. 2 CY
FINE AGGR. 2 CY COARSE AGGR. ONLY HAND EXT. INCLUDED WITH IN
STALLATION AS FIREFIGHTING EQUIP.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510BE	PPLN POL 5 MILE OF 6 INCH GROOVE	5 MILES-6 IN	AS REQUIRED	3.0	441	717	476826	218	6308	4785	11311
12510BN	PPLN POL 1 MILE- 6 IN API GROVE	1 MILE	AS REQUIRED	2.0	118	126	89200	116	1508	841	2465
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	1.0	1	1	1246	12	75	29	116
12530AN	PUMP STATION POL FOR 6 IN PIPELINE	789 BPH	AS REQUIRED	1.0	9	171	155992	51	312	131	494
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	AS REQUIRED	1.0	1	7	6442	65	261	109	435
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	.4	3	3	562	28	129	130	287
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	1.0	2	2	332	12	174	70	256
					575	1027	730600	502	8767	6095	15364

TROPIC CLIMATE

POL PIPELINE 81M 17MILES,WITH 1355 BPH PUMP. PD1039
STATION FOR TEMP,TROP,DST & FRIGID CLIMATE. TRANSFER OF POL
PRODUCTS AT RATE OF 27000 BBL/DAY. REQUIRES 206 ACRES. 2 CY
FINE AGGR. 2 CY COARSE AGGR. ONLY HAND EXT. INCLUDED WITH IN
STALLATION AS FIREFIGHTING EQUIP.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	CONSTR EFFORT IN MANHOURS VERT	CONSTR EFFORT IN MANHOURS GENL	CONSTR EFFORT IN MANHOURS TOT
12510BF	PPLN POL 5 MILE OF 8 INCH GROOVE	5 MILES-8 IN	AS REQUIRED	3.0	546	1296	595626	218	6743	4611	11572
12510BP	PPLN POL 1 MILE- 8 IN API GROVE	1 MILE	AS REQUIRED	2.0	142	162	38414	232	2146	1015	3393
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	1.0	1	1	1246	12	75	29	116
12530AP	PUMP STATION POL FOR 8 IN PIPELINE	1355 BPH	AS REQUIRED	1.0	32	63	62452	58	348	160	566
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	AS REQUIRED	1.0	1	7	6442	65	261	109	435
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	.4	3	3	562	28	129	130	287
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	1.0	2	2	332	12	174	70	256
					727	1534	705074	625	9876	6124	16625

TROPIC CLIMATE

POL SHORE BOOSTER STATION,6INCH LINE,1800 BPH PUMP. PD1049

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12471AA	TANKS, COLLAPSIBLE W/EQUIPMENT, POL	5-10000GAL	AS REQUIRED	1.0	7	22	49987	15	80	22	117
12502AA	PMP,CENTR,1050GPM,850FTHD W/8IN MAN		AS REQUIRED	2.0	18	52	54696	186	441	139	766
12503AA	SWITCHING MAN 8/10IN W/3-WAY VALVES		AS REQUIRED	1.0	8	31	63135	93	220	70	383
12504AA	METER,TURBINE,6IN,1050GPM W/10IN PI		AS REQUIRED	1.0	8	14	2551	93	220	70	383
12505AA	FILTER COALESCER,W/10IN PIPE		AS REQUIRED	1.0	9	32	75000	93	220	70	383
12506AA	PPL BBL CLEANER ASSY.6IN		AS REQUIRED	1.0	4	4	6995	26	155	65	246
12510BJ	PPLN POL 1M FT OF 6 IN API GROOVE	1000 FT	AS REQUIRED	2.0	22	26	14526	15	334	203	552
12510BK	PPLN POL 1M FT OF 8 IN API GROOVE	1000 FT	AS REQUIRED	3.0	39	48	10500	44	870	609	1523
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	1.0	1	1	1246	12	75	29	116
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	1.0	5	10	5202	36	145	65	246
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	4.0	28	32	5616	278	1288	1299	2865
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	1.0	2	2	332	12	174	70	256
					158	289	301517	949	4885	2958	8792

TROPIC CLIMATE

POL SHORE BOOSTER STATION,8INCH LINE,3600 BPA PUMP. PD1059

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12471AA	TANKS, COLLAPSIBLE W/EQUIPMENT, POL	5-10000GAL	AS REQUIRED	1.0	7	22	49987	15	80	22	117
12502AA	PMP,CENTR,1050GPM,850FTHD W/8IN MAN		AS REQUIRED	3.0	27	78	82044	278	661	209	1148
12503AA	SWITCHING MAN 8/10IN W/3-WAY VALVES		AS REQUIRED	2.0	16	62	126270	186	441	139	766
12504AA	METER,TURBINE,6IN,1050GPM W/10IN PI		AS REQUIRED	1.0	8	14	2551	93	220	70	383
12505AA	FILTER COALESCER,W/10IN PIPE		AS REQUIRED	1.0	9	32	75000	93	220	70	383
12506AB	PPL BBL CLEANER ASSY.8IN		AS REQUIRED	1.0	5	4	6737	26	155	65	246
12510BK	PPLN POL 1M FT OF 8 IN API GROOVE	1000 FT	AS REQUIRED	2.0	26	32	7000	29	580	406	1015
12510CC	PIPELN,1000FT,10IN GRVD STL API PI		AS REQUIRED	3.0	54	93	17256	44	935	653	1632
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	1.0	1	1	1246	12	75	29	116
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	AS REQUIRED	1.0	1	7	6442	65	261	109	435
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	4.0	28	32	5616	278	1288	1299	2865
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	1.0	2	2	332	12	174	70	256
					191	394	392212	1177	5753	3388	10318

TROPIC CLIMATE

POL SHORE BOOSTER STATION,8INCH LINE,5400 BPH PUMP. PD1069

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	CONSTR EFFORT IN MANHOURS VERT	CONSTR EFFORT IN MANHOURS GENL	CONSTR EFFORT IN MANHOURS TOT
12471AA	TANKS, COLLAPSIBLE W/EQUIPMENT, POL	5-10000GAL	AS REQUIRED	1.0	7	22	49987	15	80	22	117
12502AA	PMP,CENTR,1050GPM,850FTHD W/8IN MAN		AS REQUIRED	4.0	36	104	109392	371	882	278	1531
12503AA	SWITCHING MAN 8/10IN W/3-WAY VALVES		AS REQUIRED	2.0	16	62	126270	186	441	139	766
12504AA	METER,TURBINE,6IN,1050GPM W/10IN PI		AS REQUIRED	1.0	8	14	2551	93	220	70	383
12505AA	FILTER COALESCER,W/10IN PIPE		AS REQUIRED	1.0	9	32	75000	93	220	70	383
12506AB	PPL BBL CLEANER ASSY.8IN		AS REQUIRED	1.0	5	4	6737	26	155	65	246
12510BK	PPLN POL 1M FT OF 8 IN API GROOVE	1000 FT	AS REQUIRED	2.0	26	32	7000	29	580	406	1015
12510CC	PIPELN,1000FT,10IN GRVD STL API PI		AS REQUIRED	3.0	54	93	17256	44	935	653	1632
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	1.0	1	1	1246	12	75	29	116
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	AS REQUIRED	1.0	1	7	6442	65	261	109	435
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	4.0	28	32	5616	278	1288	1299	2865
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	1.0	2	2	332	12	174	70	256
					200	420	419560	1270	5974	3457	10701

TROPIC CLIMATE

POL SHORE BOOSTER STATION,10INCH LINE 7200 BPH PUMP. PD1079

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12471AA	TANKS, COLLAPSIBLE W/EQUIPMENT, POL	5-10000GAL	AS REQUIRED	1.0	7	22	49987	15	80	22	117
12502AA	PMP,CENTR,1050GPM,850FTHD W/8IN MAN		AS REQUIRED	7.0	63	182	191436	650	1543	487	2680
12503AA	SWITCHING MAN 8/10IN W/3-WAY VALVES		AS REQUIRED	4.0	32	124	252540	371	882	278	1531
12504AA	METER,TURBINE,6IN,1050GPM W/10IN PI		AS REQUIRED	1.0	8	14	2551	93	220	70	383
12505AA	FILTER COALESCER,W/10IN PIPE		AS REQUIRED	1.0	9	32	75000	93	220	70	383
12506AC	PIPELN BBL CLEANER TRAP 10IN IN-OUT		AS REQUIRED	1.0	7	13	8851	26	155	65	246
12510BL	PPLN POL 1M FT OF 12 IN API GROVE	1000 FT	AS REQUIRED	3.0	12	12	33345	44	1001	696	1741
12510CC	PIPELN,1000FT,10IN GRVD STL API PI		AS REQUIRED	2.0	36	62	11504	29	624	435	1088
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	1.0	1	1	1246	12	75	29	116
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	4.0	28	32	5616	278	1288	1299	2865
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	1.0	2	2	332	12	174	70	256
					213	524	653397	1785	7389	3957	13131

TROPIC CLIMATE

POL SHORE BOOSTER STATION,10INCH LINE 9000 BPH PUMP. PD1089

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12471AA	TANKS, COLLAPSIBLE W/EQUIPMENT, POL	5-10000GAL	AS REQUIRED	1.0	7	22	49987	15	80	22	117
12502AA	PMP,CENTR,1050GPM,850FTHD W/8IN MAN		AS REQUIRED	8.0	72	208	218784	742	1763	557	3062
12503AA	SWITCHING MAN 8/10IN W/3-WAY VALVES		AS REQUIRED	4.0	32	124	252540	371	882	278	1531
12504AA	METER,TURBINE,6IN,1050GPM W/10IN PI		AS REQUIRED	1.0	8	14	2551	93	220	70	383
12505AA	FILTER COALESCER,W/10IN PIPE		AS REQUIRED	1.0	9	32	75000	93	220	70	383
12506AC	PIPELN BBL CLEANER TRAP 10IN IN-OUT		AS REQUIRED	1.0	7	13	8851	26	155	65	246
12510BL	PPLN POL 1M FT OF 12 IN API GROVE	1000 FT	AS REQUIRED	3.0	12	12	33345	44	1001	696	1741
12510CC	PIPELN,1000FT,10IN GRVD STL API PI		AS REQUIRED	2.0	36	62	11504	29	624	435	1088
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	1.0	1	1	1246	12	75	29	116
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	4.0	28	32	5616	278	1288	1299	2865
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	1.0	2	2	332	12	174	70	256
					222	550	680745	1877	7609	4027	13513

TROPIC CLIMATE

POL PIPELINE PUMPING STATION,6INCH LINE 1800 BPH PUMP. PD1149

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12471AA	TANKS, COLLAPSIBLE W/EQUIPMENT, POL	5-10000GAL	AS REQUIRED	1.0	7	22	49987	15	80	22	117
12502AA	PMP,CENTR,1050GPM,850FTHD W/8IN MAN		AS REQUIRED	2.0	18	52	54696	186	441	139	766
12503AA	SWITCHING MAN 8/10IN W/3-WAY VALVES		AS REQUIRED	1.0	8	31	63135	93	220	70	383
12504AA	METER,TURBINE,6IN,1050GPM W/10IN PI		AS REQUIRED	1.0	8	14	2551	93	220	70	383
12506AA	PPL BBL CLEANER ASSY.6IN		AS REQUIRED	1.0	4	4	6995	26	155	65	246
12510BJ	PPLN POL 1M FT OF 6 IN API GROOVE	1000 FT	AS REQUIRED	1.0	11	13	7263	7	167	102	276
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	1.0	1	1	1368	7	51	29	87
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	1.0	5	10	5202	36	145	65	246
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	4.0	28	32	5616	278	1288	1299	2865
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	1.0	2	2	332	12	174	70	256
					99	196	208876	799	3604	2178	6581

TROPIC CLIMATE

POL PIPELINE PUMPING STATION,8INCH LINE 3600 BPH PUMP. PD1159

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12471AA	TANKS, COLLAPSIBLE W/EQUIPMENT, POL	5-10000GAL	AS REQUIRED	1.0	7	22	49987	15	80	22	117
12502AA	PMP,CENTR,1050GPM,850FTHD W/8IN MAN		AS REQUIRED	3.0	27	78	82044	278	661	209	1148
12503AA	SWITCHING MAN 8/10IN W/3-WAY VALVES		AS REQUIRED	2.0	16	62	126270	186	441	139	766
12504AA	METER,TURBINE,6IN,1050GPM W/10IN PI		AS REQUIRED	1.0	8	14	2551	93	220	70	383
12506AB	PPL BBL CLEANER ASSY,8IN		AS REQUIRED	1.0	5	4	6737	26	155	65	246
12510BK	PPLN POL 1M FT OF 8 IN API GROOVE	1000 FT	AS REQUIRED	1.0	13	16	3500	15	290	203	508
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	1.0	1	1	1368	7	51	29	87
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	AS REQUIRED	1.0	1	7	6442	65	261	109	435
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	4.0	28	32	5616	278	1288	1299	2865
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	1.0	2	2	332	12	174	70	256
					115	253	296578	1021	4284	2462	7767

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TROPIC CLIMATE

POL PIPELINE PUMPING STATION,6INCH LINE 1800 BPH PUMP. PD1149

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12471AA	TANKS, COLLAPSIBLE W/EQUIPMENT, POL	5-10000GAL	AS REQUIRED	1.0	7	22	49987	15	80	22	117
12502AA	PMP,CENTR,1050GPM,850FTHD W/8IN MAN		AS REQUIRED	2.0	18	52	54696	186	441	139	766
12503AA	SWITCHING MAN 8/10IN W/3-WAY VALVES		AS REQUIRED	1.0	8	31	63135	93	220	70	383
12504AA	METER,TURBINE,6IN,1050GPM W/10IN PI		AS REQUIRED	1.0	8	14	2551	93	220	70	383
12506AA	PPL BBL CLEANER ASSY.6IN		AS REQUIRED	1.0	4	4	6995	26	155	65	246
12510BJ	PPLN POL 1M FT OF 6 IN API GROOVE	1000 FT	AS REQUIRED	1.0	11	13	7263	7	167	102	276
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	1.0	1	1	1368	7	51	29	87
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	1.0	5	10	5202	36	145	65	246
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	4.0	28	32	5616	278	1288	1299	2865
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	1.0	2	2	332	12	174	70	256
					99	196	208876	799	3604	2178	6581

TROPIC CLIMATE

POL PIPELINE PUMPING STATION,8INCH LINE 3600 BPH PUMP. PD1159

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12471AA	TANKS, COLLAPSIBLE W/EQUIPMENT, POL	5-10000GAL	AS REQUIRED	1.0	7	22	49987	15	80	22	117
12502AA	PMP,CENTR,1050GPM,850FTHD W/8IN MAN		AS REQUIRED	3.0	27	78	82044	278	661	209	1148
12503AA	SWITCHING MAN 8/10IN W/3-WAY VALVES		AS REQUIRED	2.0	16	62	126270	186	441	139	766
12504AA	METER,TURBINE,6IN,1050GPM W/10IN PI		AS REQUIRED	1.0	8	14	2551	93	220	70	383
12506AB	PPL BBL CLEANER ASSY.8IN		AS REQUIRED	1.0	5	4	6737	26	155	65	246
12510BK	PPLN POL 1M FT OF 8 IN API GROOVE	1000 FT	AS REQUIRED	1.0	13	16	3500	15	290	203	508
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	1.0	1	1	1368	7	51	29	87
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	AS REQUIRED	1.0	1	7	6442	65	261	109	435
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	4.0	28	32	5616	278	1288	1299	2865
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	1.0	2	2	332	12	174	70	256
					115	253	296578	1021	4284	2462	7767

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TROPIC CLIMATE

POL PIPELINE PUMPING STATION,8INCH LINE 5400 BPH PUMP. PD1169

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12471AA	TANKS, COLLAPSIBLE W/EQUIPMENT, POL	5-10000GAL	AS REQUIRED	1.0	7	22	49987	15	80	22	117
12502AA	PMP,CENTR,1050GPM,850FTHD W/8IN MAN		AS REQUIRED	4.0	36	104	109392	371	882	278	1531
12503AA	SWITCHING MAN 8/10IN W/3-WAY VALVES		AS REQUIRED	2.0	16	62	126270	186	441	139	766
12504AA	METER,TURBINE,6IN,1050GPM W/10IN PI		AS REQUIRED	1.0	8	14	2551	93	220	70	383
12506AB	PPL BBL CLEANER ASSY.8IN		AS REQUIRED	1.0	5	4	6737	26	155	65	246
12510BK	PPLN POL 1M FT OF 8 IN API GROOVE	1000 FT	AS REQUIRED	1.0	13	16	3500	15	290	203	508
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	1.0	1	1	1368	7	51	29	87
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	AS REQUIRED	1.0	1	7	6442	65	261	109	435
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	4.0	28	32	5616	278	1288	1299	2865
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	1.0	2	2	332	12	174	70	256
					124	279	323926	1114	4505	2531	8150

TROPIC CLIMATE

POL PIPELINE PUMPING STATION,10INCH LINE 7200 BPH PUMP. PD1179

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12471AA	TANKS, COLLAPSIBLE W/EQUIPMENT, POL	5-10000GAL	AS REQUIRED	1.0	7	22	49987	15	80	22	117
12502AA	PMP,CENTR,1050GPM,850FTHD W/8IN MAN		AS REQUIRED	7.0	63	182	191436	650	1543	487	2680
12503AA	SWITCHING MAN 8/10IN W/3-WAY VALVES		AS REQUIRED	4.0	32	124	252540	371	882	278	1531
12504AA	METER,TURBINE,6IN,1050GPM W/10IN PI		AS REQUIRED	1.0	8	14	2551	93	220	70	383
12506AC	PIPELN BBL CLEANER TRAP 10IN IN-OUT		AS REQUIRED	1.0	7	13	8851	26	155	65	246
12510CC	PIPELN,1000FT,10IN GRVD STL API PI		AS REQUIRED	1.0	18	31	5752	15	312	218	545
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	1.0	1	1	1368	7	51	29	87
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	AS REQUIRED	1.0	1	7	6442	65	261	109	435
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	4.0	28	32	5616	278	1288	1299	2865
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	1.0	2	2	332	12	174	70	256
					174	443	536606	1578	5629	2894	10101

TROPIC CLIMATE

POL PIPELINE PUMPING STATION,10INCH LINE 9000 BPH PUMP. PD1189

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12471AA	TANKS, COLLAPSIBLE W/EQUIPMENT, POL	5-10000GAL	AS REQUIRED	1.0	7	22	49987	15	80	22	117
12502AA	PMP,CENTR,1050GPM,850FTHD W/8IN MAN		AS REQUIRED	8.0	72	208	218784	742	1763	557	3062
12503AA	SWITCHING MAN 8/10IN W/3-WAY VALVES		AS REQUIRED	4.0	32	124	252540	371	882	278	1531
12504AA	METER,TURBINE,6IN,1050GPM W/10IN PI		AS REQUIRED	1.0	8	14	2551	93	220	70	383
12506AC	PIPELN BBL CLEANER TRAP 10IN IN-OUT		AS REQUIRED	1.0	7	13	8851	26	155	65	246
12510CC	PIPELN,1000FT,10IN GRVD STL API PI		AS REQUIRED	1.0	18	31	5752	15	312	218	545
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	1.0	1	1	1368	7	51	29	87
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	AS REQUIRED	1.0	1	7	6442	65	261	109	435
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	4.0	28	32	5616	278	1288	1299	2865
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	1.0	2	2	332	12	174	70	256
					183	469	563954	1670	5849	2964	10483

TROPIC CLIMATE

POL PIPELINE PUMP STATION.ONE 6 INCH DIESEL DRIVEN PUMP,19 MILES OF 6 INCH PIPE AND TUBING,785 BPH CAPABILITY. PD1259

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510BA	PPLN POL 1 MILE OF 6 INCH GROOVE	1MILE-6INCH	AS REQUIRED	2.0	60	100	64416	87	928	638	1653
12510BE	PPLN POL 5 MILE OF 6 INCH GROOVE	5 MILES-6 IN	AS REQUIRED	3.0	441	717	476826	218	6308	4785	11311
12510BN	PPLN POL 1 MILE- 6 IN API GROVE	1 MILE	AS REQUIRED	2.0	118	126	89200	116	1508	841	2465
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	2 UNIT	1.0	1	1	1368	7	51	29	87
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	4 UNIT	1.0	1	1	1246	12	75	29	116
12530AR	PUMP STA POL 6IN LINE 1 PUMP 600GPM	600 GPM	785 BPH	1.0	9	48	41366	264	1276	464	2004
41180AA	TANK, POL, 100 BARREL, W/4 IN PIPE	100 BBL	100 BBL	2.0	6	32	11256	73	218	87	378
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	500 BBL	1.0	1	7	6442	65	261	109	435
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	20FTX40FT	1.0	7	15	11731	46	663	247	956
72321BC	LAT PIT TYPE FEMALE 2 SEATS 10X10	10X10X8FT	2 SEAT FEMALE	1.0	5	6	1028		162	23	185
81240AB	ELEC DISTR POL PUMP STA 6 IN LINE	2	AS REQUIRED	1.0	3	6	14092	102	348	220	670
84330AD	FIREFIGHT SYS EQP FOAM,POL 3000GAL		AS REQUIRED	1.0	1	5	17434		46		46
85110CJ	ROAD PAVEMENT,CLASS C,STAB SURFACE		ONE LANE	.4	177	119	884	71		23	94
85130KB	ROAD,CLASS C,GRADED AND DRAINED 1MI		ONE LANE	.4	1	2	538	1494		944	2438
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	TYPE Y	2.0	14	16	2808	139	644	650	1433
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	MAN/VEH	6.0	12	12	1992	70	1044	418	1532
					857	1213	742627	2764	13532	9507	25803

TROPIC CLIMATE

POL PIPELINE PUMP STATION.TWO 6 INCH DIESEL DRIVEN PUMPS,19 MILES OF 6 INCH PIPE AND TUBING,1570 BPA CAPABILITY. PD1269

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510BA	PPLN POL 1 MILE OF 6 INCH GROOVE	1MILE-6INCH	AS REQUIRED	2.0	60	100	64416	87	928	638	1653
12510BE	PPLN POL 5 MILE OF 6 INCH GROOVE	5 MILES-6 IN	AS REQUIRED	3.0	441	717	476826	218	6308	4785	11311
12510BN	PPLN POL 1 MILE- 6 IN API GROVE	1 MILE	AS REQUIRED	2.0	118	126	89200	116	1508	841	2465
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	2 UNIT	1.0	1	1	1368	7	51	29	87
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	4 UNIT	1.0	1	1	1246	12	75	29	116
12530AT	PUMP STA POL 6IN TWO PUMPS 1200 GPM	1200 GPM	785 BPH	1.0	14	92	76277	296	1511	557	2364
41180AA	TANK, POL, 100 BARREL, W/4 IN PIPE	100 BBL	100 BBL	2.0	6	32	11256	73	218	87	378
41180AC	TANK, POL, 500 BARREL, W/4 IN PIPE	500 BBL	500 BBL	1.0	1	7	6442	65	261	109	435
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	20FTX40FT	1.0	7	15	11731	46	663	247	956
72321BC	LAT PIT TYPE FEMALE 2 SEATS 10X10	10X10X8FT	2 SEAT FEMALE	1.0	5	6	1028		162	23	185
81240AB	ELEC DISTR POL PUMP STA 6 IN LINE	2	AS REQUIRED	1.0	3	6	14092	102	348	220	670
84330AD	FIREFIGHT SYS EQP FOAM,POL 3000GAL		AS REQUIRED	1.0	1	5	17434		46		46
85110CJ	ROAD PAVEMENT,CLASS C,STAB SURFACE		ONE LANE	.4	177	119	884	71		23	94
85130KB	ROAD,CLASS C,GRADED AND DRAINED 1MI		ONE LANE	.4	1	2	538	1494		944	2438
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	TYPE Y	2.0	14	16	2808	139	644	650	1433
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	MAN/VEH	6.0	12	12	1992	70	1044	418	1532
					862	1257	777538	2796	13767	9600	26163

TROPIC CLIMATE

POL TANK TRUCK LOADING STATION.2 STATIONS,4-UNITS. PE1019
TEMP,TROP,DST & FRIGID CLIM. LOAD 5000 GALLON TRUCKS AT RATE
OF TWENTY TRUCKS/DAY/PRODUCT. TANKS,PPLNS,MANIFOLDS,PUMPS,
OPERATIONS BLDG TO HANDLE 4 PRODUCTS OR LESS. REQUIRES 40 AC
RES. 185 CY FINE AGGR. 290 CY COARSE AGGR. ONLY HAND EXT. IN
CLUDGD W/INSTALLATION AS FIREFIGHTING EQUIP.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AE	FLOOD PMP 785 BPH 6IN MANIFOLD	785 BPH	AS REQUIRED	1.0	10	19	21960	15	312	80	407
12510AL	DIST MNFLD F/DRUM & CAN LOADG INSTL	785BPH,6-IN	AS REQUIRED	1.0	1	1	1792	7	65	15	87
12510AT	PPLN POL 1000 FT OF 4 INCH GROOVE	1000FT-4IN	AS REQUIRED	1.0	3	5	2498	15	107	52	174
12510BA	PPLN POL 1 MILE OF 6 INCH GROOVE	1MILE-6INCH	AS REQUIRED	8.0	240	400	257664	348	3712	2552	6612
12510BJ	PPLN POL 1M FT OF 6 IN API GROOVE	1000 FT	AS REQUIRED	2.0	22	26	14526	15	334	203	552
12530AH	LOADING PMP FOR 2TNK/TRK/5CAR INSTL	700X1400 BPH	AS REQUIRED	4.0	32	100	73772	58	493	145	696
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	3.0	3	3	4104	22	152	87	261
12630AA	LDG FACIL FOR TWO FUEL TRUCKS	2-STATION	AS REQUIRED	1.0	12	12	13862	218	471	1530	2219
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	3.0	15	30	15606	109	435	196	740
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
41180AG	TANK, POL, 3000 BARREL, W/6 IN PIPE	3000 BBL	AS REQUIRED	8.0	16	256	100304	1044	3596	2436	7076
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	2.7	19	22	3791	188	869	877	1934
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
					385	906	531532	2224	12021	8748	22993

TROPIC CLIMATE

POL TANK CAR LOADING STATION,5 STATIONS. PE1029
TEMP,TROP,DST & FRIGID CLIM. LOAD FIFTEEN 10 THOUSAND GALLON
RAILWAY TANK CARS PER DAY. PROVIDES TANKS,PPLNS,MANIFOLDS,
PUMPS,OPERATIONS BLDG TO HANDLE 4 PRODUCTS OR LESS. REQUIRES
41 ACRES. 185CY FINE AGGR. 290CY COARSE AGGR. ONLY HAND EXT
. INCLUDED W/INSTALLATION AS FIREFIGHTING EQUIP.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	CONSTR EFFORT IN MANHOURS VERT	CONSTR EFFORT IN MANHOURS GENL	CONSTR EFFORT IN MANHOURS TOT
12510AE	FLOOD PMP 785 BPH 6IN MANIFOLD	785 BPH	AS REQUIRED	1.0	10	19	21960	15	312	80	407
12510AL	DIST MNFLD F/DRUM & CAN LOADG INSTL	785BPH,6-IN	AS REQUIRED	1.0	1	1	1792	7	65	15	87
12510AT	PPLN POL 1000 FT OF 4 INCH GROOVE	1000FT-4IN	AS REQUIRED	1.0	3	5	2498	15	107	52	174
12510BA	PPLN POL 1 MILE OF 6 INCH GROOVE	1MILE-6INCH	AS REQUIRED	8.0	240	400	257664	348	3712	2552	6612
12510BJ	PPLN POL 1M FT OF 6 IN API GROOVE	1000 FT	AS REQUIRED	2.0	22	26	14526	15	334	203	552
12530AH	LOADING PMP FOR 2TNK/TRK/5CAR INSTL	700X1400 BPH	AS REQUIRED	4.0	32	100	73772	58	493	145	696
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	3.0	3	3	4104	22	152	87	261
12640AA	TANK CAR LOADING, POL, FOR LOADING	5-TANK CARS	AS REQUIRED	1.0	35	61	53557	754	2320	5075	8149
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	3.0	15	30	15606	109	435	196	740
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
41180AG	TANK, POL, 3000 BARREL, W/6 IN PIPE	3000 BBL	AS REQUIRED	8.0	16	256	100304	1044	3596	2436	7076
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	2.7	19	22	3791	188	869	877	1934
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
					408	955	571227	2760	13870	12293	28923

TROPIC CLIMATE

POL TANK CAR LOADING STATION 10 STATIONS. PE1039
TEMP,TROP,DST & FRIGID CLIM. LOAD THIRTY 10 THOUSAND GALLON
RAILWAY TANK CARS PER DAY. PROVIDES TANKS,PPLNS,MANIFOLDS,
PUMPS,OPERATIONS BLDG TO HANDLE 4 PRODUCTS OR LESS. REQUIRES
42 ACRES. 185CY FINE AGGR. 290CY COARSE AGGR. ONLY HAND EXT
. INCLUDED W/INSTALLATION AS FIREFIGHTING EQUIP.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	CONSTR EFFORT IN MANHOURS VERT	CONSTR EFFORT IN MANHOURS GENL	CONSTR EFFORT IN MANHOURS TOT
12510AF	FLOOD PMP 1355BPH 8IN MANIFOLD	1355 BPH	AS REQUIRED	1.0	11	20	20627	29	406	116	551
12510AM	DIST MNFLD F/10STA-TNK CAR LDG INST	10STATION	AS REQUIRED	1.0	2	2	2464	7	65	15	87
12510AT	PPLN POL 1000 FT OF 4 INCH GROOVE	1000FT-4IN	AS REQUIRED	1.0	3	5	2498	15	107	52	174
12510BB	PPLN POL 1 MILE OF 8 INCH GROOVE	1 MILE-8INCH	AS REQUIRED	8.0	288	696	302376	464	5220	3712	9396
12510BJ	PPLN POL 1M FT OF 6 IN API GROOVE	1000 FT	AS REQUIRED	2.0	22	26	14526	15	334	203	552
12510BK	PPLN POL 1M FT OF 8 IN API GROOVE	1000 FT	AS REQUIRED	.5	7	8	1750	7	145	102	254
12530AJ	LOADING PMP FOR 10TNK/CAR INSTL	2000-2500BPH	AS REQUIRED	4.0	56	164	111960	87	638	261	986
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	3.0	3	3	4104	22	152	87	261
12640AB	TANK CAR LOADING, POL, FOR LOADING	10-TANK CARS	AS REQUIRED	1.0	74	75	71174	986	3016	6612	10614
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	3.0	15	30	15606	109	435	196	740
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
41180AH	TANK, POL, 3000 BARREL, W/8 IN PIPE	3000 BBL	AS REQUIRED	8.0	16	256	96352	1044	3596	2552	7192
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	2.7	19	22	3791	188	869	877	1934
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
					528	1339	668881	3158	16458	15360	34976

TROPIC CLIMATE

POL TANK CAR LOADING STATION,5 STATIONS. PE1029
TEMP,TROP,DST & FRIGID CLIM. LOAD FIFTEEN 10 THOUSAND GALLON
RAILWAY TANK CARS PER DAY. PROVIDES TANKS,PPLNS,MANIFOLDS,
PUMPS,OPERATIONS BLDG TO HANDLE 4 PRODUCTS OR LESS. REQUIRES
41 ACRES. 185CY FINE AGGR. 290CY COARSE AGGR. ONLY HAND EXT
. INCLUDED W/INSTALLATION AS FIREFIGHTING EQUIP.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510AE	FLOOD PMP 785 BPH 6IN MANIFOLD	785 BPH	AS REQUIRED	1.0	10	19	21960	15	312	80	407
12510AL	DIST MNFLD F/DRUM & CAN LOADG INSTL	785BPH,6-IN	AS REQUIRED	1.0	1	1	1792	7	65	15	87
12510AT	PPLN POL 1000 FT OF 4 INCH GROOVE	1000FT-4IN	AS REQUIRED	1.0	3	5	2498	15	107	52	174
12510BA	PPLN POL 1 MILE OF 6 INCH GROOVE	1MILE-6INCH	AS REQUIRED	8.0	240	400	257664	348	3712	2552	6612
12510BJ	PPLN POL 1M FT OF 6 IN API GROOVE	1000 FT	AS REQUIRED	2.0	22	26	14526	15	334	203	552
12530AH	LOADING PMP FOR 2TNK/TRK/5CAR INSTL	700X1400 BPH	AS REQUIRED	4.0	32	100	73772	58	493	145	696
12530AK	PUMP STATION FUEL SUPPLY, POL, FOR	2-UNIT	AS REQUIRED	3.0	3	3	4104	22	152	87	261
12640AA	TANK CAR LOADING, POL, FOR LOADING	5-TANK CARS	AS REQUIRED	1.0	35	61	53557	754	2320	5075	8149
41180AB	TANK, POL, 250 BARREL, W/4 IN PIPE	250 BBL	AS REQUIRED	3.0	15	30	15606	109	435	196	740
41180AE	TANK POL 1000 BARREL W/4 IN PIPE	1000 BBL	AS REQUIRED	1.0	1	13	9258	116	464	189	769
41180AG	TANK, POL, 3000 BARREL, W/6 IN PIPE	3000 BBL	AS REQUIRED	8.0	16	256	100304	1044	3596	2436	7076
161050BF	HQTRS & UNIT SUPPLY&GO STL FR	20X40X8FT	AS REQUIRED	1.0	7	15	11731	46	663	247	956
87210AR	SECURITY FENCE TYPE Y 1000 FEET	1000 FEET	AS REQUIRED	2.7	19	22	3791	188	869	877	1934
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	AS REQUIRED	2.0	4	4	664	23	348	139	510
					408	955	571227	2760	13870	12293	28923

TROPIC CLIMATE

POL TANK CAR LOADING STATION. 2 STATIONS,4-UNIT. PE1059
TEMP,TROP,DST & FRIGID CLIM. PROVIDES TANK TRUCK LOADING FOR
2 STATION AT TANK FARM. THE EXISTING FUEL STORAGE TANKS OF
TANK FARM ARE CONNECTED TO THE LOADING STAND. LOADS 5000 GAL
. TRUCKS AT RATE OF 20 TRUCKS/DAY/PRODUCT. LINES FOR 4 PROD.
REAL EST. REQUIREMENT 4 ACRES. 6CY FINE AGGR. 12CY COARSE
AGGR. ONLY HAND EXT. INCLUDED W/INSTALLATION AS FIREFIGHTING

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12510BJ	PPLN POL 1M FT OF 6 IN API GROOVE	1000 FT	AS REQUIRED	2.0	22	26	14526	15	334	203	552
12530AH	LOADING PMP FOR 2TNK/TRK/5CAR INSTL	700X1400 BPH	AS REQUIRED	4.0	32	100	73772	58	493	145	696
12530AL	PUMP STATION FUEL SUPPLY, POL, FOR	4-UNIT	AS REQUIRED	2.0	2	2	2492	23	151	58	232
12630AA	LDG FACIL FOR TWO FUEL TRUCKS	2-STATION	AS REQUIRED	1.0	12	12	13862	218	471	1530	2219
					68	140	104652	314	1449	1936	3699

TROPIC CLIMATE

TEMPERATE CLIMATE,/TACTICAL/POL/50M BBL STOC COEC W/6IN SUBM PF1015
PPLN &6 BUOYANT HOSELINE FOR TKR DISCHARGE/TEM/TROP & DST
CLIM. DISCHARGE AND TRANSFER CAPACITY OF 600 GPM AND STOR.
OF 3 PROD OR LESS/MOGAS. JP-4 & DIESEL FUEL).
REQUIRES 160 ACRES.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR. EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
12665AN	MARINE TERM 50M BBL STOR CAP	50000 BBL	AS REQUIRED	1.0	6	250	575092	3335	5365	2262	10962
85190AA	ROAD BEACH 2 LN PORT MAT SURF 1 MI		ACCESS ROAD	.4	197	120	49913		522	1108	1630
87190AB	CLEARING AND GRUBBING ONE ACRE		SITE PREP.	160.0				7888		8352	16240
87210AY	TRIPLE STANDARD CONCERTINA FENCE		SECURITY FENCE	20.0	20	60	76840		3074	15370	18444
					223	430	701845	11223	8961	27092	47276

TROPIC CLIMATE

FABRICATION PLANT,PANELIZED WOOD BUILDING SUB-FACILITY ASSE- PY2892
MBLY AND STORAGE AREA.12.9 ACRES REQUIRED FOR REAL ESTATE.
REQUIRED FROM LOCAL SOURCE,FINE AGGREGATE 2026 CY,COARSE
AGGREGATE 2614 CY.POWER REQUIREMENT MUST BE DETERMINED AND
APPROPRIATE AFCS FACILITY SELECTED.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	CONSTR EFFORT IN MANHOURS VERT	CONSTR EFFORT IN MANHOURS GENL	CONSTR EFFORT IN MANHOURS TOT
22892AA	SAW HORSE,FOR PAN.WD.BLDG.FAB.WORK.		2 PER INST	2.0			58			6	6
22892AB	FABRICATION JIG WOOD FLOOR PANELS		2 PER INST	2.0	2	2	326		46		46
22892AC	FABRICATION JIG 6-8FT WALL PANELS		4 PER INST	4.0		4	576		81		81
22892AD	FABRICATION JIG 12FT WALL PANELS		2 PER INST	2.0	2	2	320		46		46
22892AE	FABRICATION JIG 24FT TRUSSES.		2 PER INST	2.0	2	4	748		104		104
22892AF	FABRICATION JIG 30FT TRUSSES.		2 PER INST	2.0	4	6	1082		116		116
22892AG	FABRICATION JIG 36FT TRUSSES.		2 PER INST	2.0	4	6	998		110		110
22892AH	FABRICATION JIG ROOF PANELS		2 PER INST	2.0	2	2	396		58		58
22892AJ	FABRICATION JIG BOX BEAMS		2 PER INST	2.0	2	2	652		35		35
72321BD	LAT PIT TYPE 160MAN 8 SEATS 10X20	10X20X8	PER.REQMT.	1.0	8	9	1559	3	290	46	339
84330AC	SUMP FIRE PROTECTION 10000 GAL	10000 GAL	EFF RAD 500FT	1.0	7	5	145	23	157	168	348
187190AA	SITE PREPARATION,ONE ACRE		BUILDINGS	2.5				319		116	435
87210AP	SECURITY FENCE TYPE X 1000 FEET	1000 FEET	PERIMETER	2.0	16	18	3312	133	737	742	1612
87210AT	VEH-MAN GATE FOR SECURITY FENCE	1	2PER INST	2.0	4	4	664	23	348	139	510
87230AA	SENTRY BOX 4X4		2 PER INST	2.0			244	276	1160	580	2016
93112AA	BLDG,PANELIZED WD 12X24X8FT C/F D/T		6PER INST	6.0	66	36	9846	122	1514	896	2532
93112LA	BLDG,PANELIZED WD 144X140X12FT D/T		1PER INST	1.0	739	2828	256776	550	8791	4862	14203
					858	2928	277702	1449	13593	7555	22597

TROPIC CLIMATE

PRE-PACKAGED CULVERT SECTIONS IN ASSORTED SIZES AND SANDBAGS YY1009
FOR ROAD CONSTRUCTION AND REPAIR.

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
99999AA	PRE-PKGD DRAINAGE-FLD FORTS CULVERT		AS REQUIRED	1.0	5	13	4546				
99999AB	PRE-PACKAGED DRAINAGE SUPPLIES CULV		AS REQUIRED	1.0	5	12	4391				
99999AC	PRE-PACKAGED DRAINAGE SUPPLIES CULV		AS REQUIRED	1.0	4	14	3663				
99999AD	PRE-PACKAGED DRAINAGE SUPPLIES CULV		AS REQUIRED	1.0	4	16	3175				
99999AE	PRE-PACKAGED SANDBAGS MULTI-PURPOSE		AS REQUIRED	1.0	5	18	5963				
					23	73	21738				

TROPIC CLIMATE

CONTAINERIZED SUPPLIES FOR CONSTRUCTION OF FIELD FORTIFICATIONS. YY1019

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
99999AA	PRE-PKGD DRAINAGE-FLD FORTS CULVERT		AS REQUIRED	1.0	5	13	4546				
99999AE	PRE-PACKAGED SANDBAGS MULTI-PURPOSE		AS REQUIRED	1.0	5	18	5963				
99999AF	FIELD FORTS- BARBED-TAPE CONCERTINA		AS REQUIRED	1.0	2	16	12390				
99999AG	FLD FORTS-BARBED WIRE-POSTS-STL SEC		AS REQUIRED	1.0	8	15	5266				
99999AH	LUMBER 2 X 12 FLD FORTS & GEN CONST		AS REQUIRED	1.0	16	49	6324				
99999AJ	STRUCTURAL TIMBER 8IN X 10IN		AS REQUIRED	1.0	16	49	7824				
					52	160	42313				

TROPIC CLIMATE

PRE-PACKAGED CONSTRUCTION SUPPLIES (LUMBER, HARDWARE, ELECTRICAL AND PLUMBING FIXTURES, ETC) FOR GENERAL CONSTRUCTION AND RENOVATION. YY1029

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	MATERIALS VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
99999AH	LUMBER 2 X 12 FLD FORTS & GEN CONST		AS REQUIRED	1.0	16	49	6324				
99999AJ	STRUCTURAL TIMBER 8IN X 10IN		AS REQUIRED	1.0	16	49	7824				
99999AK	PLYWOOD-LUMBER & CORR SHEET METAL		AS REQUIRED	1.0	21	59	12639				
99999AL	ASSORTED SIZES OF STRUCTURAL LUMBER		AS REQUIRED	1.0	16	49	5349				
99999AM	ASSORTED CONST SUPPLIES & HARDWARE		AS REQUIRED	1.0	11	20	12414				
99999AN	ASSORTED ELEC SUPPLIES & FIXTURES		AS REQUIRED	1.0	9	38	52212				
99999AP	ASSORTED PLUMBING SUPPLIES/FIXTURES		AS REQUIRED	1.0	2	12	3755				
					91	276	100517				

TROPIC CLIMATE

PRE-PACKAGED MULTI-PURPOSE RIGGING KIT W/ASSORTED SIZES OF FIBER ROPE - WIRE ROPE - CHAIN AND RELATED ACCESSORIES. YY1039

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
99999AR	PRE-PACK MULTI-PURPOSE RIGGING KIT		AS REQUIRED	1.0	7	14	13090				
					7	14	13090				

TROPIC CLIMATE

PRE-PACKAGED MARKING & CAMOUFLAGE KIT W/MARKING & CAMOUFLAGE PAINT AND CAMOUFLAGE NETS-WOOLAND RADAR SCATTERING. YY1049

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
99999AT	MARKING PAINT & CAMOUF PAINT & NETS		AS REQUIRED	1.0	5	19	21159				
					5	19	21159				

TROPIC CLIMATE

PRE-PACKAGED MARKING & CAMOUFLAGE KIT W/MARKING & CAMOUFLAGE PAINT AND CAMOUFLAGE NETS-DESERT RADAR SCATTERING. YY1059

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST	VOL-MT	COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
99999AV	MARKING PAINT & CAMOUF PAINT & NETS		AS REQUIRED	1.0	4	15	8160				
					4	15	8160				

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TROPIC CLIMATE

PRE-PACKAGED HAND TOOL KIT FOR USE BY INDIGENOUS LABOR. YY1069

FAC NUMBER	FACILITY DESCRIPTION	SIZE OR UNIT	BASIS	QUANTITY REQUIRED	MATERIALS WT-ST VOL-MT	MATERIALS COST	CONSTR EFFORT IN MANHOURS HORZ	VERT	GENL	TOT
99999AU	PRE-PACK INDIGENOUS LABOR TOOL KIT		AS REQUIRED	1.0		373				
						373				

END REPORT DDEXER2