

Appendix B

Site Assessment

PRC @ Tarin Kowt (Relocation of Site)

Uruzgan Province
Tarin Kowt District



No	UTM	MGRS	DD Latitude	DD Longitude	DMS Latitude	DMS Longitude
P1	41S 772976 3608999	41S QS 7297608999	32.584862	65.908087	32° 35' 5.503" N	65° 54' 29.112" E
P2	41S 773217 3608878	41S QS 7321708878	32.583712	65.910616	32° 35' 1.365" N	65° 54' 38.218" E
P3	41S 773293 3609031	41S QS 7329309031	32.585072	65.911469	32° 35' 6.259" N	65° 54' 41.290" E
P4	41S 773051 3609151	41S QS 7305109151	32.586213	65.908929	32° 35' 10.366" N	65° 54' 32.145" E



**US Army Corps
of Engineers®**
Afghanistan Engineer District - South

JAC | 10 AUG 2011 @ 1630



1:2,000

WGS_1984_UTM_Zone_41N
Projection: Transverse_Mercator

Legend

- Coordinate Points
- Site Boundary

N:\2011 NEW DATA STRUCTURE\2011 PROJECTS\MIPI\Uruzgan_Province\W5\B\IE-10-D-0015_0004_PRC_at_Tarin_Kowt_(Relocation_of_Site)_10Aug2011\MXD\PRC_at_Tarin_Kowt.mxd



COMBINED SECURITY TRANSITION FORCES –
CSTC-A



amec E&I, Inc.

SITE ASSESSMENT

August 02, 2011

Provincial Response Company Relocation Terin Kowt, Uruzgan

Terin Kowt District, Uruzgan Province

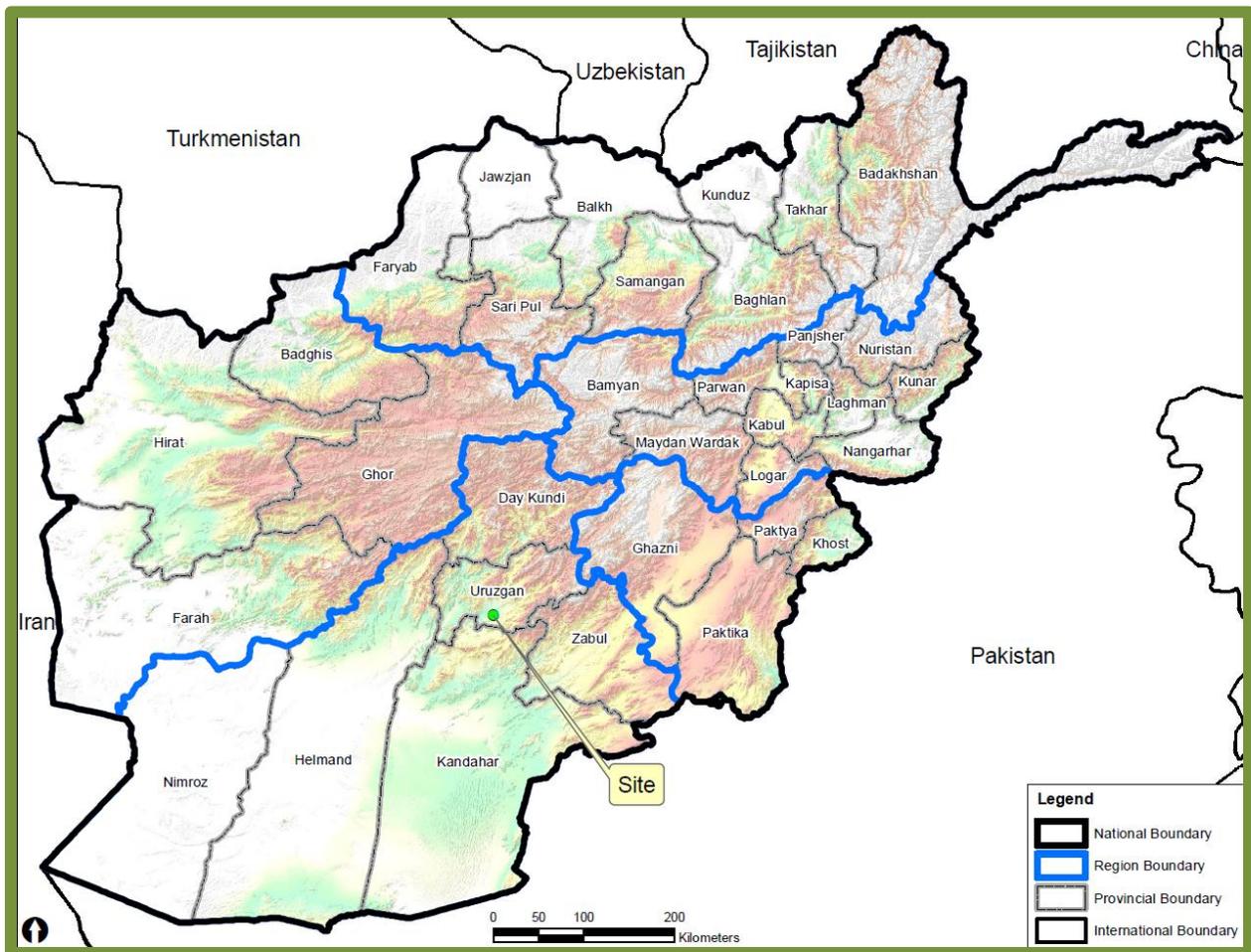
South Region

AFCEE CONTRACT # FA8903-08-D-8775

TASK ORDER 0096

amec Project 6144110096 WBS # 05.OP.00815

CJ-ENG Project Number PRCS050501RC



SITE ASSESSMENT

August 02, 2011

CDR Alex Stites
CJ-Engineering
Camp Eggers
Kabul, Afghanistan

**SITE: Provincial Response Company Relocation Terin Kowt, Uruzgan
Terin Kowt District, Uruzgan Province
South Region**

**AFCEE CONTRACT # FA8903-08-D-8775 TASK ORDER 0096
amec Project 6144110096 WBS # 05.OP.00815
CJ-ENG Project Number PRCS050501RC**

CDR Stites:

amec E&I, Inc. (amec) has prepared this Site Assessment for CSTC-A, CJ-Eng under Task Order 96 of our AFCEE Contract. This site assessment report includes preliminary discussion of issues pertaining to site acquisition and development.

At the request of 2nd Lieutenant Freddie Stephens with CJ-Eng this report is being submitted with the Mol Verification Letter.

Very Respectfully,
amec E&I, Inc

Abdul Aziz Shukuri
Admin Project Coordinator

Alexandra Taylor
amec ANP SA Manager/QC

Pieter J. DePree, P.E.
amec ANP SA Principal
Registered Georgia

SITE ASSESSMENT



amec CHECKLIST for Required Signatures and Stamps for Site Assessment Projects (ANP)

Project Name: PRC Relocation Terin Kowt, Uruzgan

amec Project: 05.0P.00815

Mol Assessment Facilitator: Souhrab Khan

CJ-ENG Project Number: PRCS050501RC

No.	Name & Position	Signatures	Stamps	Site Sketch	Land Ownership Certificate
1	Mohammad Omar Shirzad	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Uruzgan Provincial Governor				
2	Hajji Khudai Rahim	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Deputy Provincial Governor				
3	Name	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Representative of Cadaster Directorate				
4	Hajji Raz Mohammad	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Executive Manager of Properties Main Directorate				
5	Hajji Abdullah	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Mayor				
6	Colonel Fazal Ahmad (Shirzad)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Uruzgan UP Provincial Commander				
7	Hajji Ghulam Shah	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Director of Accountancy				

All Signatures and Stamps completed:

(If not completed leave the check box blank).

Additional Signatures: The Site sketch has also been signed by Abdul Mohammad Director of Legal Affairs Department.

Comments: There is no Cadaster Department available in Uruzgan Province.

License for Construction Project Summary Sheet

Project Name: POLICE PRC Terin Kowt Uruzgan Sites

Province: Uruzgan

District: Terin Kowt

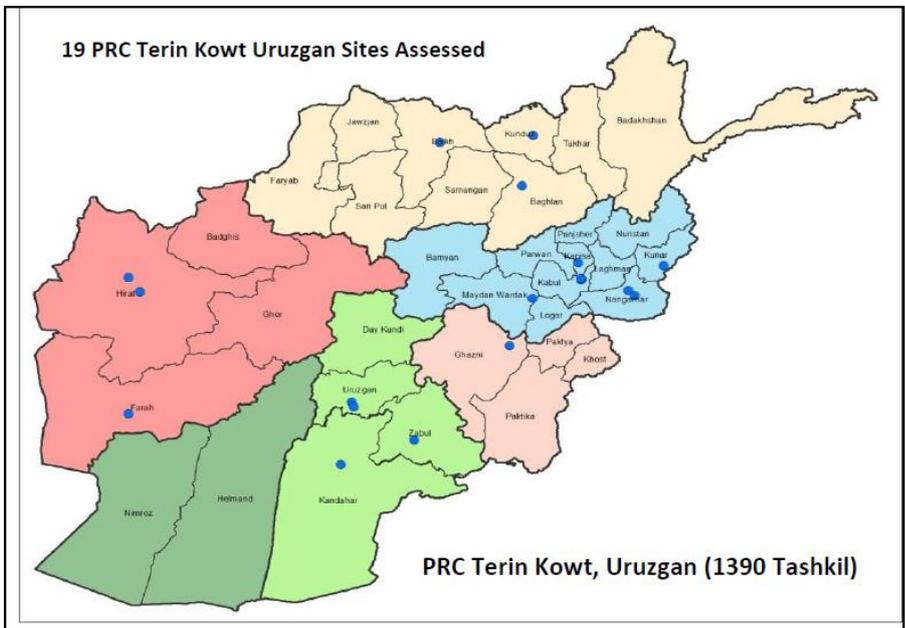
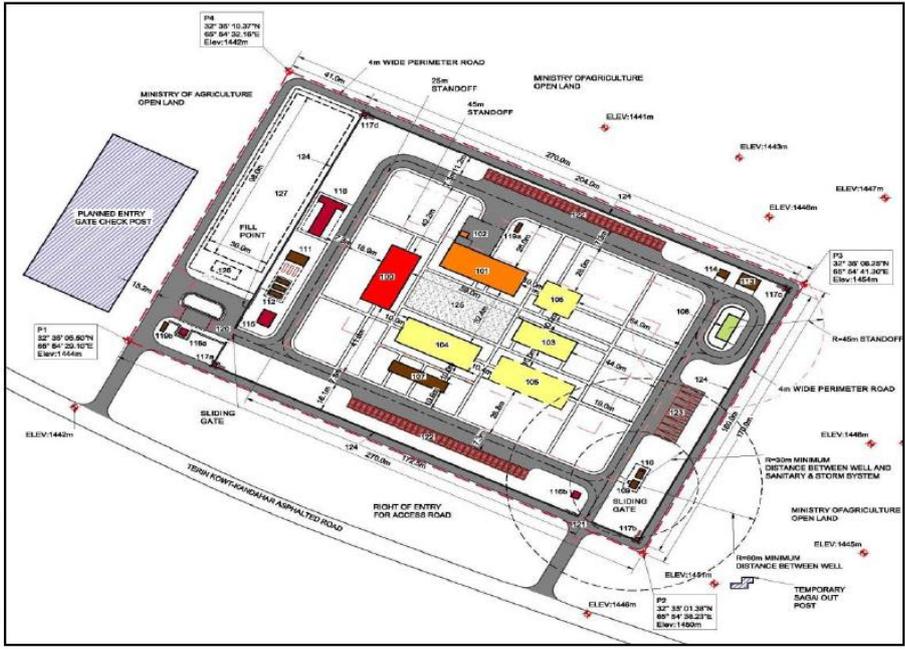
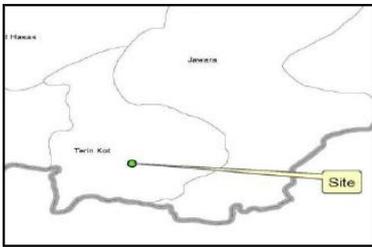
Site Size: 22.96 Jeribs

Project Description:

PROVINCIAL RESPONSE COMPANY RELOCATION TERIN KOWT, URUZGAN		
NEW FACILITIES BUILDINGS	SIZE(GSM)	PEOPLE
100 ADMIN BUILDING (ONE STORY)	808	15p
101 DINING FACILITIES BUILDING	659	132p
102 WOOD STOVE KITCHEN, CANOPY		
103 SENIOR/IGH BARRACKS (ONE STORY)	279	100p
104 OPEN BAY BARRACKS (FUTURE)	279	100p
106 FEMALE BARRACKS (FUTURE)	280	20p
107 TOILET AND SHOWER BUILDING	180	100p
108 SECURE STORAGE BUILDING (ASP)	50	
109 WELL HOUSE		
110 WATER TANK		
111 GENERATOR BUILDING		
112 FUEL STORAGE TANK, CANOPY		
113 WAREHOUSE	65	
114 PETROLEUM, OIL AND LIQUID STORAGE	22	
116 GUARD HOUSE	54	
117-43 GUARD TOWERS	12	
118 DOG KENNEL BUILDING	160	
119 TRASH POINTS		
120 PRIMARY ENTRY CONTROL POINT, CANOPY		
121 SECONDARY ENTRY GATE		
122 CAR PARKING (82 CARS)		
123 TRUCK PARKING (8 TRUCKS)		
124 FORCE PROTECTION WALL	632 m	
125 ASSEMBLY AREA		
126 SEPTIC TANK	80	250p
127 LEACH FIELD	3080	250p
TASHKIL	PER MCI	UNKNOWN
	PER COMMANDER	UNKNOWN
	BILLETED ON-SITE	UNKNOWN
BILLETING DESIGN CAPACITY:		
	ONE SENIOR BARRACKS	100p
	ONE OPEN BAY BARRACKS	500p
	SUBTOTAL	1100p
FUTURE BARRACKS		
	ONE OPEN BAY BARRACKS	100p
	ONE FEMALE BARRACKS	200p
	SUBTOTAL	1200p
	TOTAL	2300p

LAYOUT UTILIZES AED STANDARD BUILDINGS

LEGEND:		
[Red Box]	ADMINISTRATION	[Dashed Box] FUTURE BUILDING
[Yellow Box]	HOUSING	[Dotted Box] HESCO WALL
[Orange Box]	DFAC	[Dashed Line] STONE WALL
[Dark Orange Box]	SECURITY	[Dotted Line] CHAIN LINK FENCE
[Light Orange Box]	SUPPORTING	[Dashed Line] CONSTRUCTION LINE
[Green Box]	ARMORY	[Dotted Line] CHAIN LINK FENCE
		[Dashed Line] SECURITY STANDOFF
		[Dotted Line] PROPOSED ROAD



Planned POLICE PRC Terin Kowt Uruzgan Sites

Site will be used for a:

- Provincial Response Company
- Tashkil (238 People)

There are 3 sites currently planned

Approximate Start Date:

Approximate Completion Date:

SITE ASSESSMENT

PROVINCIAL RESPONSE COMPANY RELOCATION TERIN KOWT, URUZGAN

NEW FACILITIES

BUILDING	SIZE(GSM)	PEOPLE
MAIN BUILDING		
100 ADMIN BUILDING (ONE STORY)	508	18p
101 DINING FACILITIES BUILDING	559	132p
102 WOOD STOVE KITCHEN, CANOPY		
103 SENIOR/HIGH BARRACKS (ONE STORY)	384	18p
104 OPEN BAY BARRACKS	579	100p
105 OPEN BAY BARRACKS (FUTURE)	579	100p
106 FEMALE BARRACKS (FUTURE)	280	20p
107 TOILET AND SHOWER BUILDING	180	100p
108 SECURE STORAGE BUILDING (ASP)	90	
109 WELL HOUSE	20	
110 WATER TANK		
111 GENERATOR BUILDING		
112 FUEL STORAGE TANK, CANOPY		
113 WAREHOUSE	65	
114 PETROLEUM, OIL, AND LUBRICANT STORAGE	22	
115 GUARD HOUSE	54	
116a-b GUARD SHACKS	12	
117a-d GUARD TOWERS	12	
118 DOG KENNEL BUILDING	160	
119a-b TRASH POINTS		
120 PRIMARY ENTRY CONTROL POINT, CANOPY		
121 SECONDARY ENTRY GATE		
122 CAR PARKING (82 CARS)		
123 TRUCK PARKING (8 TRUCKS)		

124 FORCE PROTECTION WALL	632 Im	
125 ASSEMBLY AREA	1100	
126 SEPTIC TANK	80	250p
127 LEACH FIELD	3080	250p

TASHKEIL:

PER MOI	UNKNOWN
PER COMMANDER	UNKNOWN
BILLETED ON-SITE	UNKNOWN

BILLETING DESIGN CAPACITY:

ONE SENIOR BARRACKS	18p
ONE OPEN BAY BARRACKS	100p
SUBTOTAL	118p

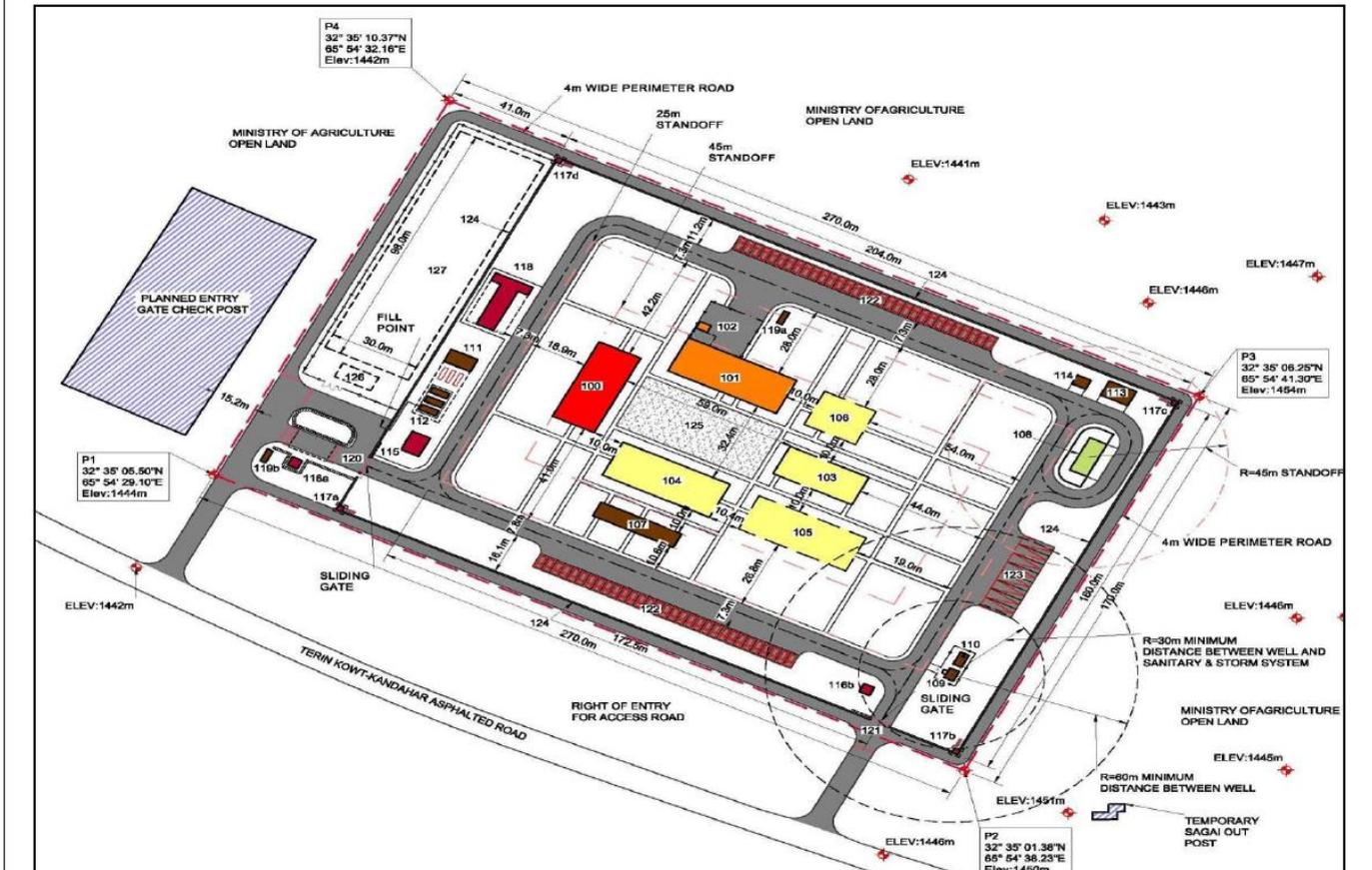
FUTURE BARRACKS

ONE OPEN BAY BARRACKS	100p
ONE FEMALE BARRACKS	20p
SUBTOTAL	120p
TOTAL	238p

LAYOUT UTILIZES AED STANDARD BUILDINGS

LEGEND:

 ADMINISTRATION	 FUTURE BUILDING
 HOUSING	 HESCO WALL
 DFAC	 STONE WALL
 SECURITY	 LICENSE FOR CONSTRUCTION LINE
 SUPPORTING	 CHAIN LINK FENCE
 ARMORY	 SECURITY STANDOFF
	 PROPOSED ROAD

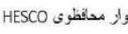


SITE ASSESSMENT

632 lm	دیوار محافظی	124
1100	محل تجمع	125
نفر 250	چاه فاضل آب	126
نفر 250	محل جذب فاضل آب	127
تشکیل:		
نامعلوم	بر اساس راپور وزارت امور داخله	
نامعلوم	بر اساس فرماندان	
نامعلوم	افراد شب باش در ساحه	
طرفیت افراد شب باش:		
نفر 18	یک در بند کاغوش برای افسران بلند رتبه	
نفر 100	یک در بند کاغوش	
نفر 118	مجموعاً	
کاغوش های آینده		
نفر 100	یک در بند کاغوش	
نفر 20	یک در بند کاغوش برای طبقه انات	
نفر 120	مجموعاً	
نفر 238	مجموع کلی	

طرح ساختمان های استندرد

علامت:

	اداری		تعبیر های آینده
	مسکونی		دیوار محافظی HESCO
	طعام خوری		دیوار سنگی
	امنیت		خط جواز برای ساختمان
	حمایوی		نقاط وصل دیوار (FENCE)
	اسلحه خانه		محل دفع امنیتی
			سرک های در نظر گرفته شده

تغیر موقعیت تولی واکنش سریع ولایتی ترینکوت، ارزگان

تسهيلات جديد	ساختمان	اندازه (GSM)	تشکیل
100	ساختمان اصلی	508	18 نفر
101	تعمیر اداری (یک منزله)	559	132 نفر
102	اتاقی طعام خوری		
103	آشپزخانه جوی، سایه بان	384	18 نفر
104	کاغوش افسران بلند رتبه (یک منزله)	579	100 نفر
105	کاغوش ها	579	100 نفر
106	کاغوش ها (در آینده)	280	20 نفر
107	کاغوش ها برای طبقه انات	180	100 نفر
108	تشداب و حمام	90	
109	دیبوی اسلحه	20	
110	چاه خانه		
111	نخیره آب (تاکر آب)		
112	اتاقی جنرالون		
113	نخیره گاه تیل (تاکر نخیره تیل)، سایه بان	65	
114	گندام	22	
115	نخیره گاه تیل و روغنیات	54	
a-b116	اتاقی محافظین	12	
a-d117	پهره دار خانه	12	
118	برج های محافظی	160	
a-b119	سنگ خنده		
120	زبله دانی ها		
121	محل تلاشی، سایه بان		
122	دروازه نخولی دوم		
123	پارکینگ و سلب (62 عراده)		
	پارکینگ لاری ها (8 عراده)		

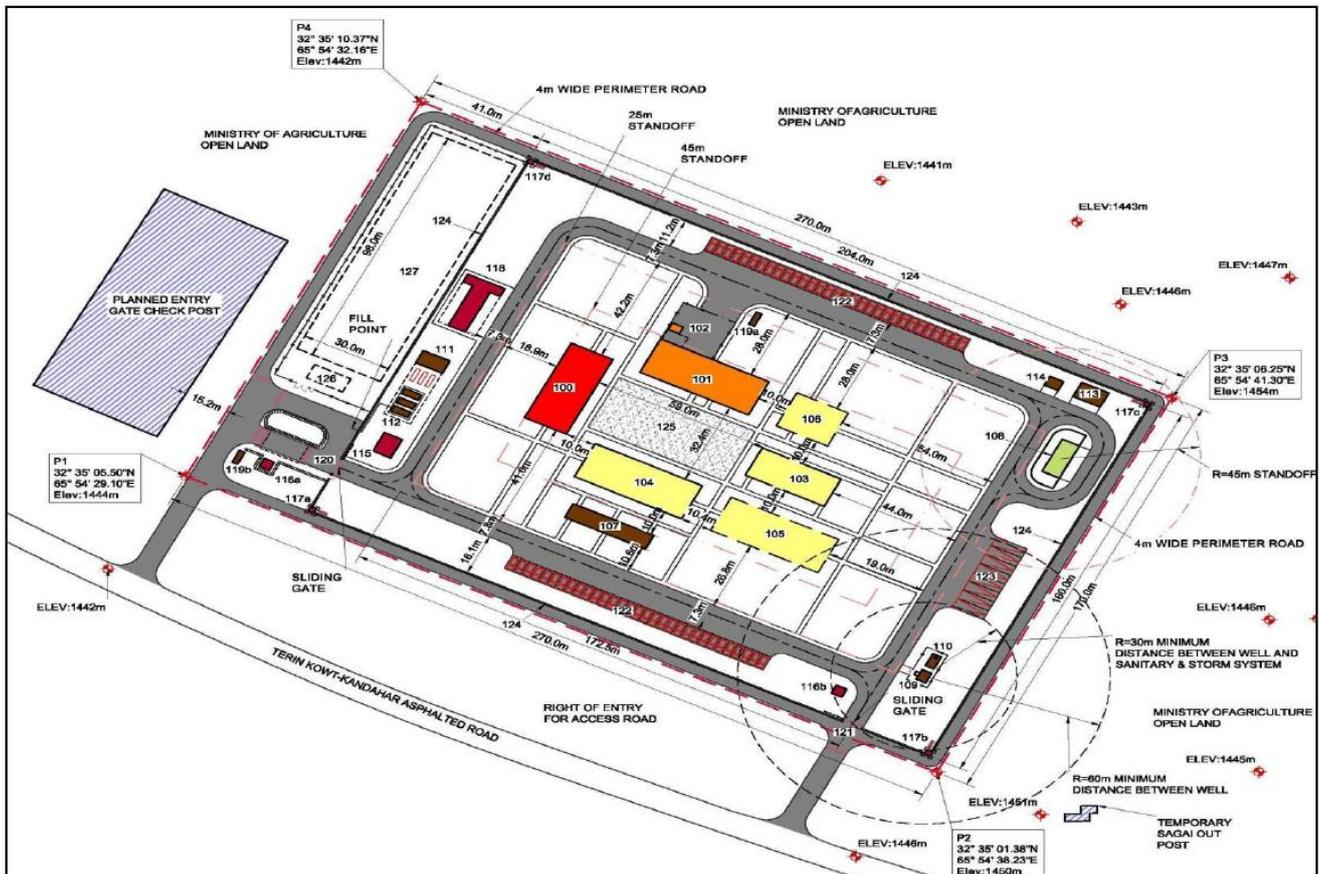


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APPENDIX A Site-Specific Official GoA Documents (Pashtu and English)

- Letter of Introduction and Translation
- Request Letter for Providing Land and Translation
- Administrative Assembly’s Decision and Translation
- Letter from Delegation and Translation
- Letter from Administrative Assembly to Provincial Response Company Commander and Translation
- Notice of Completion of the Site Survey and Translation
- Land Ownership Certificate and Translation
- Site Sketch with Official Signatures and Translation

APPENDIX B Site Photographs

APPENDIX C Master Plan (Under Separate Cover)

Provincial Response Company Relocation Terin Kowt, Uruzgan

Terin Kowt District, Uruzgan Province

South Region

AFCEE CONTRACT # FA8903-08-D-8775

TASK ORDER 0096

MACTEC Project 6144110096 WBS # 05.OP.00815

CJ-ENG Project Number PRCS050501RC

1 INTRODUCTION

amec has completed a Site Assessment an approximately 45,900 square meter (23 Jeribs) parcel of land in Terin Kowt, the Provincial Capital of Uruzgan, Afghanistan, for the Ministry of Interior (Mol) for the Afghan National Police, for a Provincial Response Company. The site is currently open land. The site was assessed on July 05, 2011. A previous assessment report dated April 2, 2011 was submitted for the Provincial Response Company under MACTEC WBS number 05.OP.00456. The previous site is located approximately 8.5 kilometers (km) (by air) north of the relocation site assessed in this report.

This effort was preliminary to a Master Planning effort, and included assessment of the following:

- Land Ownership
- Adjacent Land Use
- General Availability of Utilities on Site
- General Description of Existing Structures and Facilities on Site
- Access Roads
- Proximity of Construction Materials and Labor
- Proximity of Clinics, Fuel and Public Transportation

This site assessment is part of the basis for a master plan for the Ministry of the Interior (Mol) that identifies the required land area and the general location of facilities within the area according to the Statement of Requirement (SoR).

2 PLANNED DEVELOPMENT

The project site (Site) is anticipated to accommodate a Provincial Response Company. A standardized master plan is included in Appendix C (Under Separate Cover).

3 SITE ASSESSMENT

3.1 Site Location

The Site for the Provincial Response Company is approximately 170 by 270 meters (m) and is located on the northern side of the Uruzgan-Kandahar main asphalt road. The Site is located approximately 4.5km southeast of Terin Kowt City the provincial capital of Uruzgan and approximately 630km

southwest of Kabul. The Sagai Police Outpost is located 15m east of the southeast corner of the Site and a Coalition Forces base is located inside the Uruzgan Airport 3km northwest of the Site. The Site elevations, taken by hand-held GPS, range from 1,439 meters to 1,457 meters.

3.2 Site Ownership

The Site is owned by the Ministry of Agriculture per the attached Land Ownership Certificate in Appendix A.

The Land Ownership Certificate has been signed and stamped by the following officials:

- Signed and Stamped – Colonel Fazal Ahmad (Shirzad) – Uruzgan Uniform Police Provincial Commander
- Signed and Stamped – Mohammad Omar Shirzad – Uruzgan Provincial Governor
- Signed and Stamped – Hajji Raz Mohammad – Executive Manager of Properties Main Directorate

The Site Sketch has been signed and stamped by the following officials:

- Signed and Stamped – Hajji Khudai Rahim – Uruzgan Deputy Provincial Governor
- Signed and Stamped – Colonel Fazal Ahmad (Shirzad) – Uruzgan UP PHQ Commander
- Signed and Stamped – Hajji Raz Mohammad – Executive Manager of Properties Main Directorate
- Signed and Stamped – Hajji Ghulam Shah – Director of Accountancy
- Signed and Stamped – Hajji Abdullah – Mayor
- Signed – Abdul Mohammad – Director of Legal Affairs Department

3.3 Existing Site Development

The Site is open, undeveloped, and barren land. There are no existing facilities and structures at the Site. No evidence of past development was noted. Soil excavation was noted along the northern boundary of the Site.

3.4 Surrounding Site Use

North: MoA open land

East: Hills, MoA open land and police outpost

South: Uruzgan-Kandahar main asphalt road

West: Selected land for City Gate

3.5 Site Topography

The Site is gently rolling with an overall relief estimated at about 18 m. The Site generally slopes downward from east to west.

3.6 Site Geology

The published USGS Geologic Map of Afghanistan (2005) indicates the Site is underlain by map symbol:

Q_{34a} - Conglomerate and sandstone (Holocene and late Pleistocene)—Alluvium: shingly and detrital sediments, gravel, sand more abundant than silt and clay.

3.7 Groundwater Resources

Base on the USACE Document "Provincial Water Resources Data Summary of Uruzgan Province, Afghanistan" dated June 2010, Figure 6, the site appears to be near the contact of 1 aquifer:

- A poor, unconsolidated sandstone/conglomerate aquifer with a yield of 25 to 125 liters per minute. The anticipated depth to this aquifer is 25 to 75 m.

There is an existing well 120 m deep located 2km west of the Site in the front of a residential home.

3.8 Site Seismicity

The Published USGS/USAID Seismic Hazard Map indicates Short (0.2 Second) and One Second Seismic Spectral Response Acceleration (S_s and S_1) per IBC 2006 of 0.24 and 0.14 g, respectively, based on a 2 percent probability of exceedance in 50 years. The Site Class should be determined based on a geotechnical exploration.

3.9 Site Drainage

The Site generally drains from east to west.

3.10 Site Expansion Potential

The Site can be expanded to the north and east.

3.11 Mines and Unexploded Ordinance

Based on the statement of Mohammad Jan, Deputy and Logistics Manager of the Uniform Police District Headquarters, there are no UXO hazards. However, no documentation for the mine clearing of the site was discovered.

3.12 Utilities

Public power, water and sanitary sewage are not available at the Site. There is an existing well 120 m deep located 2km west of the Site in front of a residential home. Cell phone coverage is available at the Site from MTN, AWCC and Roshan.

3.13 Site Access

The Site is located 4.5km southeast of Terin Kowt Along the Uruzgan-Kandahar main asphalt road Any type of vehicle can access the Site. Public transportation is available in Terin Kowt City.

3.14 Area Resources

The following information was provided by Mohammad Jan Deputy and Logistics Manager of Uniform Police District Headquarters.

- Construction Machinery, 4.5km, Terin Kowt city
- Skilled and Unskilled Labor, 4.5km, Terin Kowt city
- Stone, 10km, Mountain
- Sand and Gravel, 6km, Darafshan River
- Bricks, 150km, Kandahar
- Crushed Aggregate, 3km, Close to the Airport

- Cement, Steel Bar, Lime and Gypsum, 4.5km, Terin Kowt city
- Fuel Point, 4.5km, Terin Kowt city
- Medical Clinic, 4.5km, Terin Kowt city
- Tele Communication: AWCC, MTN and Roshan Network
- Public Transportation: Available

4 LIMITATIONS

The findings and opinions presented are relative to the dates of our site work and should not be relied on to represent conditions at other dates.

The opinions included herein are based on information obtained during the study and on amec's experience. If additional information becomes available, we request the opportunity to review the information, reassess the potential impacts, and modify the report, if warranted. If this assessment included a review of documents prepared by others, amec has no responsibility for the accuracy of information contained therein.

This document and information is based on a brief site visit, documents provided by CJ-Eng, Mol, or others, and interviews with local persons and officials familiar with or with responsibility over the site. Travel and security considerations limit personnel and equipment able to visit the site.

Location and elevation data are based on published documents and low resolution hand held GPS and should be considered approximate.

This document is intended for preliminary planning purposes only and should not be considered to replace detailed engineering studies such as site boundary and topographic surveys, geotechnical explorations, hydrologic studies, or other civil engineering effort.

This Site Assessment Survey Report was produced under the direction of the Project Manager and reviewed by the Principal Engineer.

SITE ASSESSMENT

TABLES

TABLE 1: APPROXIMATE COORDINATES OF SITE CORNERS

Site Description	Corner Point & Elevation	Latitude (North)	Longitude (East)	MGRS
Provincial Response Company Relocation Terin Kowt, Uruzgan Province Afghanistan	P1 (1,444 m)	32°35'05.50"	65°54'29.10"	41SQS7297608999
	P2 (1,450 m)	32°35'01.38"	65°54'38.23"	41SQS7321708878
	P3 (1,454 m)	32°35'06.25"	65°54'41.30"	41SQS7329309031
	P4 (1,442 m)	32°35'10.37"	65°54'32.16"	41SQS7305109151

TABLE 2: APPROXIMATE COORDINATES OF ADDITIONAL POINTS AT THE SITE

Site Description	Corner Point & Elevation	Latitude (North)	Longitude (East)	MGRS
Additional Points	P5 (1,449 m)	32° 35' 06.80"	65° 54' 40.00"	NA
	P6 (1,454 m)	32° 35' 07.50"	65° 54' 38.60"	NA
	P7	32° 35' 08.20"	65° 54' 37.50"	NA
	P8 (1,439 m)	32° 35' 09.20"	65° 54' 35.50"	NA
	P9 (1,446 m)	32° 35' 08.60"	65° 54' 31.10"	NA
	P10 (1,449 m)	32° 35' 06.60"	65° 54' 34.10"	NA
	P11 (1,447 m)	32° 35' 03.70"	65° 54' 32.70"	NA
	P12 (1,449 m)	32° 35' 04.60"	65° 54' 33.90"	NA
	P13 (1,453 m)	32° 35' 03.30"	65° 54' 36.10"	NA
	P14 (1,457 m)	32° 35' 05.00"	65° 54' 40.50"	NA
	P15 (1,452 m)	32° 35' 06.80"	65° 54' 38.10"	NA
	P16 (1,454 m)	32° 35' 05.10"	65° 54' 38.70"	NA

SITE ASSESSMENT

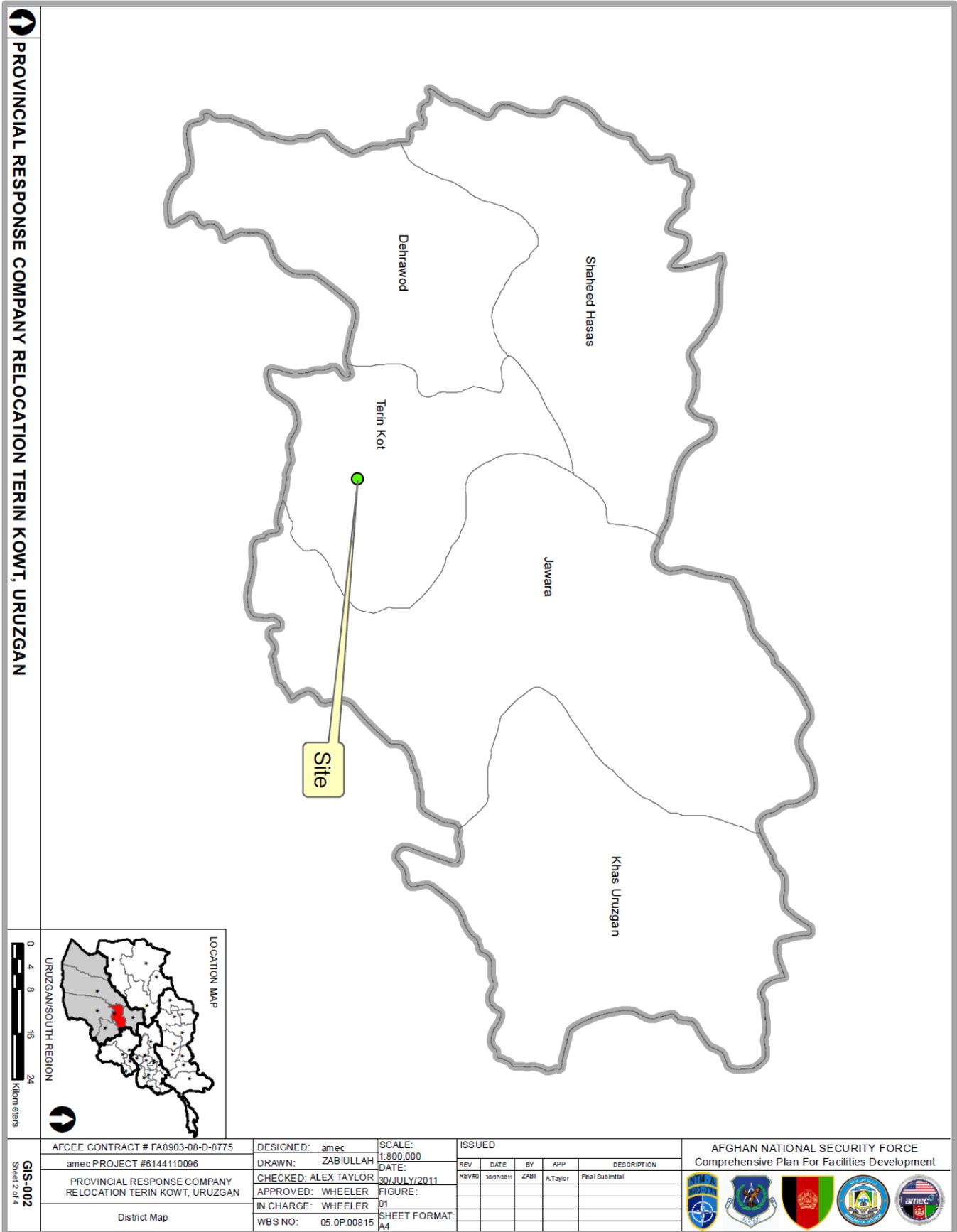
TABLE 3: APPROXIMATE COORDINATES OF ACCESS ROADS

Site Description	Corner Point & Elevation	Latitude (North)	Longitude (East)	MGRS
North Access Road	R1	32° 35' 00.67"	65° 54' 36.70"	NA
	R2	32° 35' 00.79"	65° 54' 36.34"	NA
South Access Road	R3	32° 35' 03.81"	65° 54' 29.42"	NA
	R4	32° 35' 03.98"	65° 54' 29.09"	NA

FIGURES

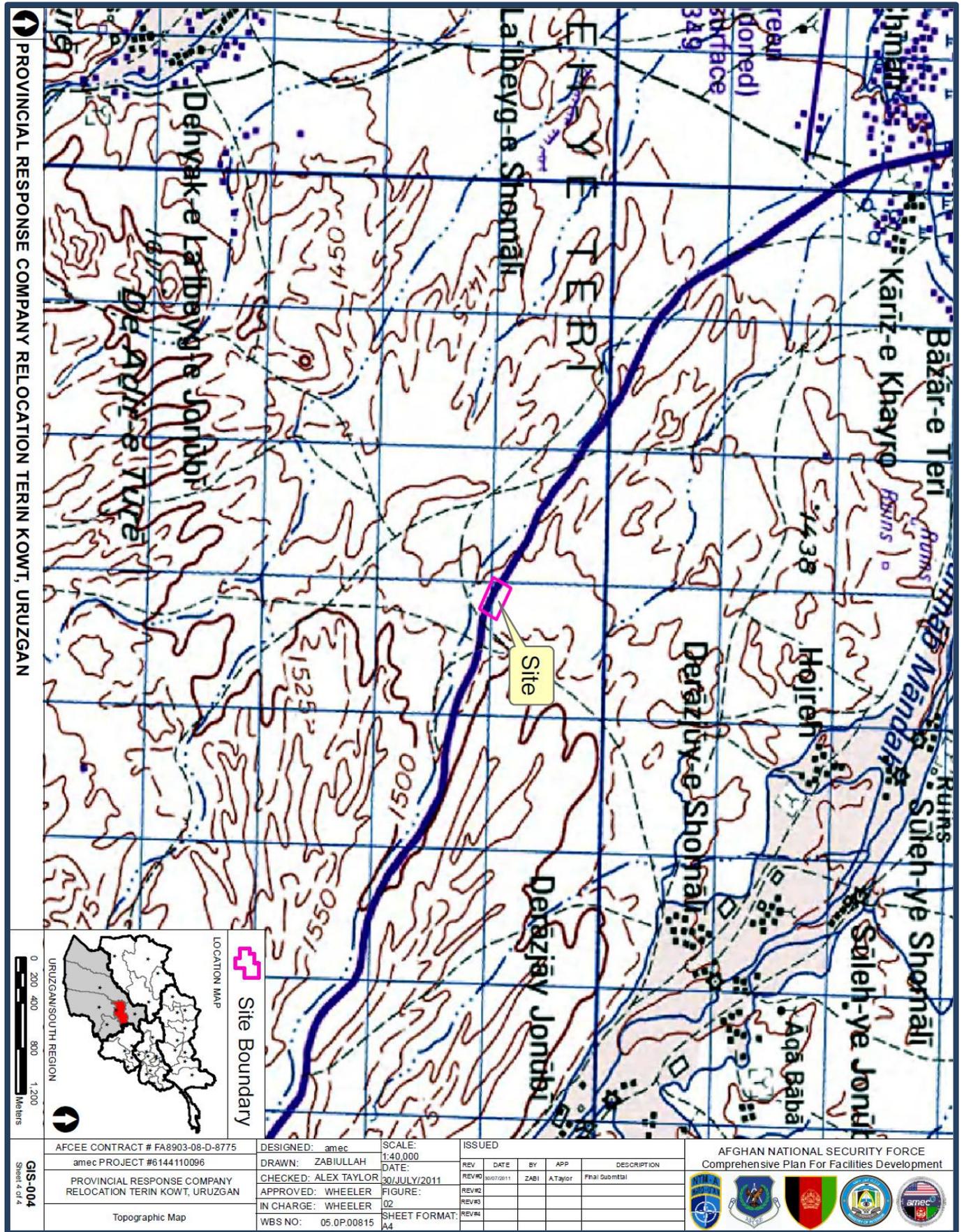
SITE ASSESSMENT

FIGURE 1 - SITE LOCATION MAP



SITE ASSESSMENT

FIGURE 2 - APPROXIMATE LOCATION ON TOPOGRAPHIC MAP



SITE ASSESSMENT

FIGURE 3 - SITE LOCATION ON AERIAL PHOTOGRAPH SHOWING CORNER COORDINATES

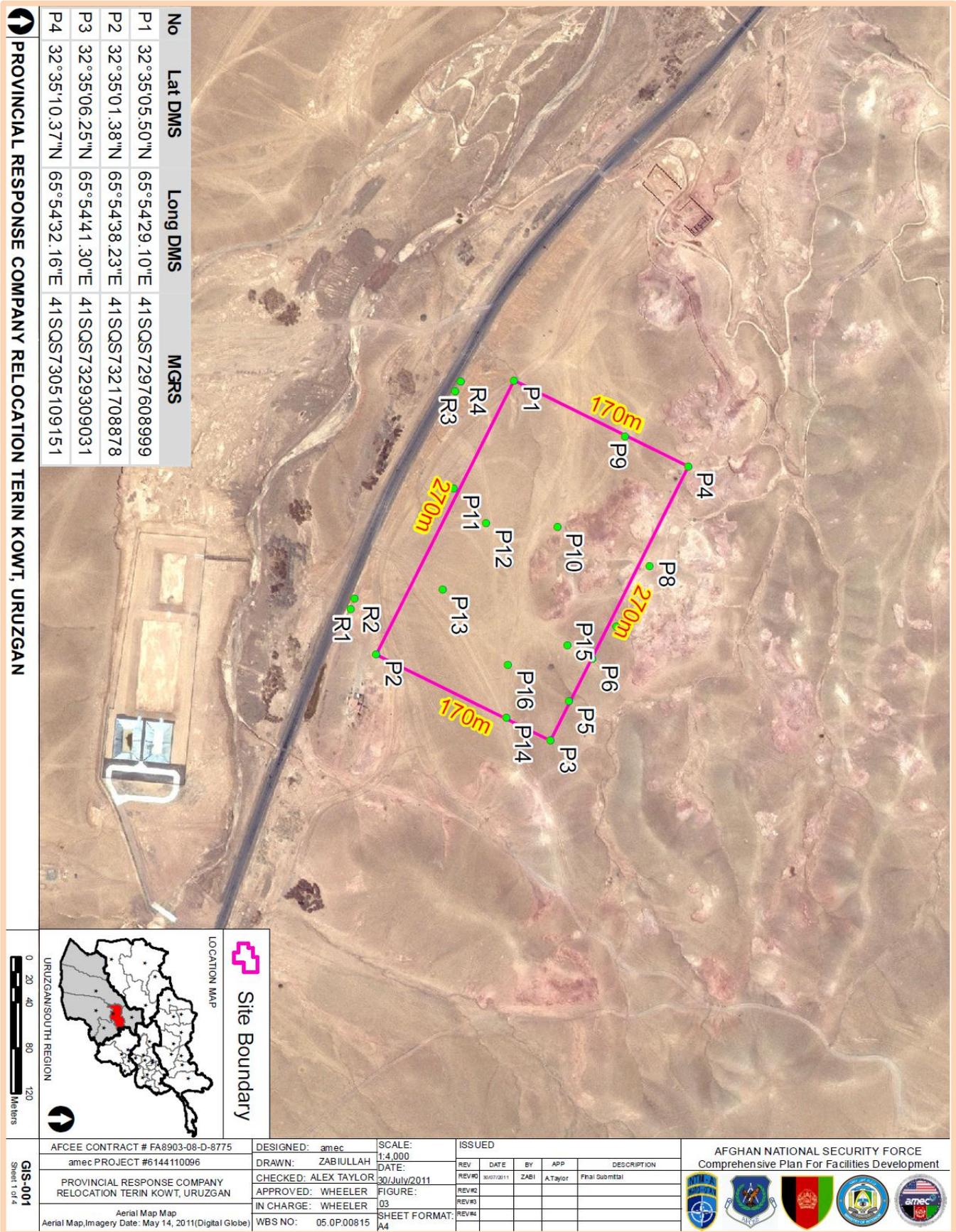
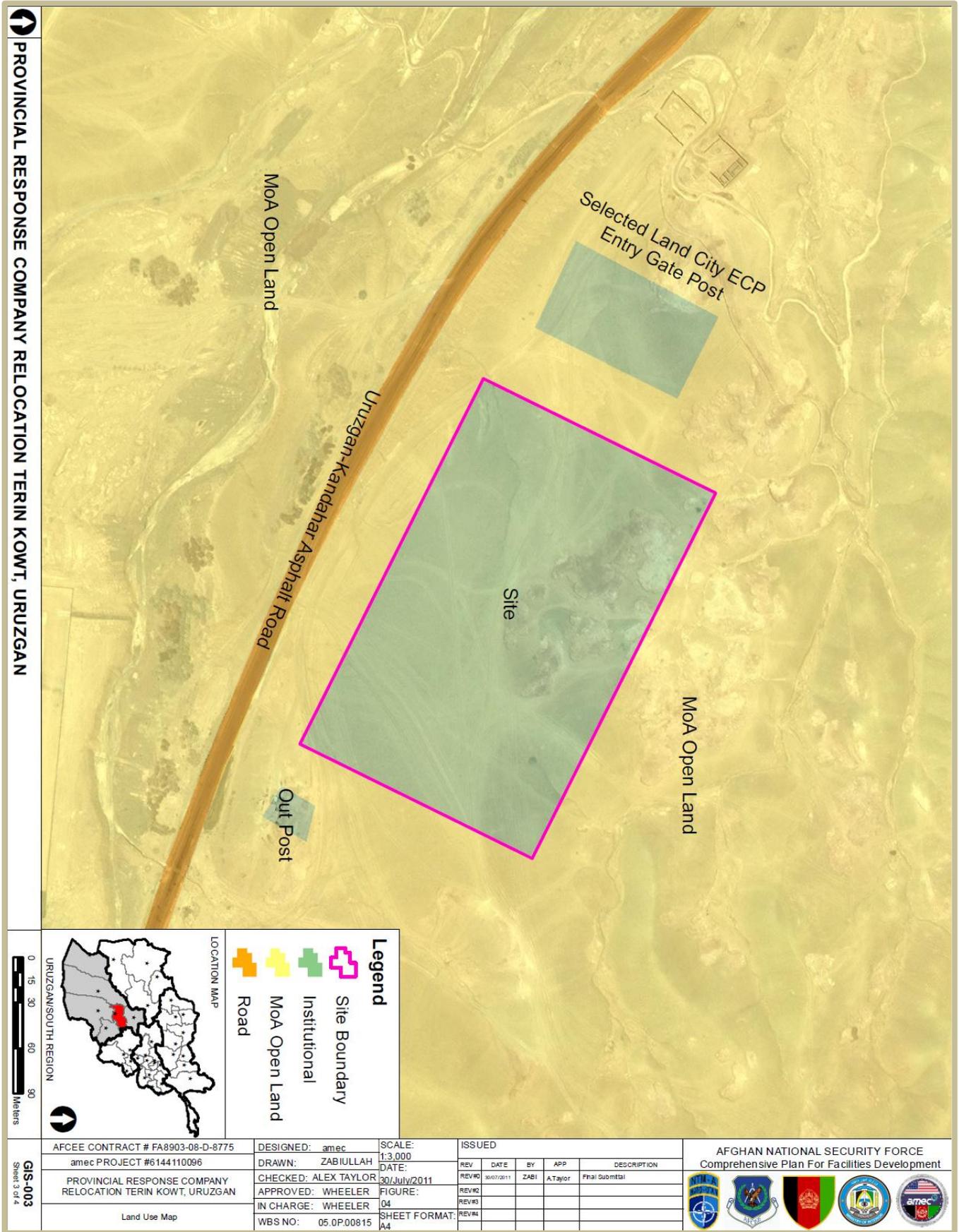
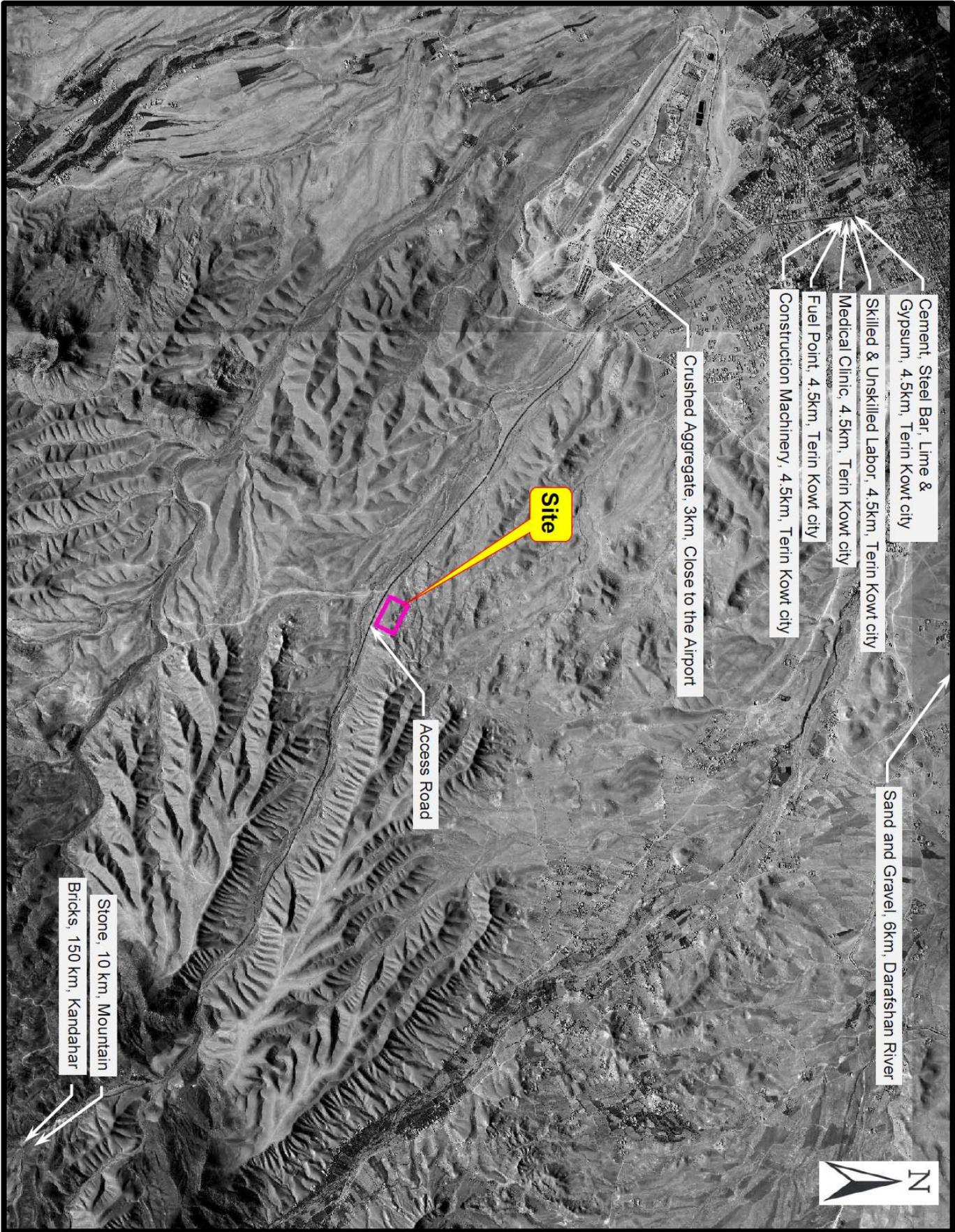


FIGURE 4 – SURROUNDING LAND USE MAP



SITE ASSESSMENT

FIGURE 5 - CONSTRUCTION RESOURCES



APPENDIX A

Site-Specific Official GoA Documents (Pashtu and English)

Letter of Introduction



وزارت امور داخله دولت اسلامی افغانستان
معینیت امور اداری و تأمیناتی
ریاست تسهیلات
مدیریت عمومی املاک

۶۵۴
- ۱۳۹۰/۳/۲۵

بقومندانی محترم امنیه ولایت ارزگان!

مکتوب نمبر (۵۸) مورخ (۱۳۹۰/۳/۱۴) دفتر مکتبک واصل و دایلا ننگاشته.

دفتر مکتبک در نظر دارد تاتسهیلات مربوط پولیس راسروی نماید بناءً بخاطر سروی تسهیلات

ذیل!

1- پروژه پولیس تولی واکنش ولایتی ولایت ارزگان در مرکز ترینگوت به اندازه (250 در 165)

متری یعنی (20) جریب زمین حد اقل جهت اعمار تسهیلات تولی مذکور (ساحه دوم).

محترم انجنیر سهراب نماینده پروژه بخش پولیس دفتر مکتبک با تیم تخنیکي اعزام

میگردند. موضوع و سیلتاً عرض البته بقومندانی محترم امنیه ولایت ارزگان هدایت خواهد

فرمود که در امور سروی با تیم همکاری لازم نموده تسهیلات لازم کاری را برای شان

فراهم سازند.

ناگفته نماند که ساحه قبلی (اول) بنا به نسبت دوری راه از مرکز ولایت مورد قبول واقع نگردیده

بناءً در نظر است تا ساحه دوم سروی و تثبیت گردد.

مرا تبت تحریری فوق نقلاً ارقام در حصه خویش اجراءات لازم نمائید.

با احترام

معین اداری و تأمینات

وزارت امور داخله

English Translation of Letter of Introduction

**Interior Ministry of Islamic Republic of Afghanistan
Sustaining and Administrative Deputy Ministerial
Facility Department
Properties Main Directorate**

Letter No: 65

Date: 25/3/1390 (15.Jun.2011)

**The Uniform Police Commander
UP Provincial Headquarters
Uruzgan Province
Afghanistan**

LETTER OF INTRODUCTION FOR TECHNICAL TEAM AND MOI REPRESENTATIVE

To The Respected Uniform Police Provincial Headquarters:

The Engineering section of MACTEC Engineering and Consulting, Inc. will conduct an assessment and evaluation of facilities at the different Provinces in Afghanistan for the Afghan National Police (ANP) Projects.

A letter number: 58, dated 14/3/1390 (4.Jun.2011), has been sent out to the Ministry of Interior Offices about the assessment and evaluation of the project at the following province listed below:

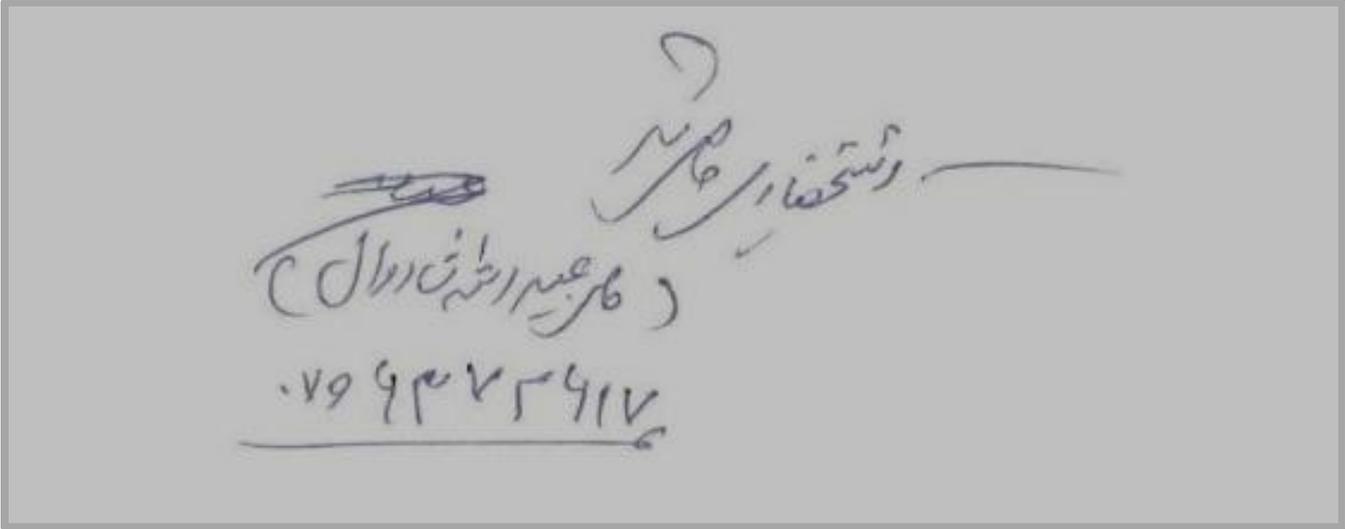
PROJECT	FACILITY TYPE	PROVINCE/ DISTRICT
Police Project	PRC 2 nd site 250 by 165 meters (20 Jeribs)	Terin Kowt, Uruzgan Province

The assessments will be conducted by a Technical Team from MACTEC Engineering and Consulting, Inc. in cooperation with Engineer Souhrab the representative of the Facilities Department, Ministry of Interior. The team will assess police facilities for land availability, assessment and other related work to support projects in rebuilding Afghanistan.

It should be mentioned that the previous Site (1st Site) was not accepted because the Site was located far from the city, so we assessed the 2nd Site.

We are requesting your support to provide information, convoys and security if deemed necessary for our team. Your support will be highly appreciated for the success of this project.

Sincerely,
Sustaining and Administrative Deputy Minister
Ministry of Interior
(Signed)



English Translation of Request Letter for Providing Land

Uruzgan Uniform Police Provincial Headquarters

Construction Office

Request	Response
<p>The Respected Uruzgan Provincial Governor</p> <p>Based on letter number 65, dated 23/3/1390 (13.Jun.2011) and the letter number 85, dated 14/3/1390 (4.Jun.2011), by MACTEC Engineering and Consulting, Inc. it is planned to build facilities for the Provincial Response Company (PRC) on 20 Jeribs of Land (250m x 160m) in Terin Kowt, the provincial capital of Uruzgan.</p> <p>Hence the honorable position is requested to order the distribution of the mentioned land.</p> <p>Sincerely, Colonel Fazal Ahmad Shirzad Uruzgan Uniform Police Provincial Commander (Signed)</p>	<p>Observed</p> <p>The following delegation is appointed on 6/4/1390 (27.Jun.2011):</p> <p>The Respected Director of Agriculture Department The Respected Mayor The Respected Director of Legal Affairs Department The Respected Head of Accountancy Department</p> <p>The issue has been presented to the respected position to conduct further implementations according to the law.</p> <p>(Signed) 14/4/1390 (5.Jul.2011)</p> <p>On behalf of Hajji Rais Sahib and Jananzai the Properties Manager, I Raaz Mohammad the Executive Manager of Properties Main Directorate signed this letter.</p> <p>(Signed) 14/4/1390 (5.Jul.2011)</p> <p>I have been informed (Signed)</p>

I have been informed

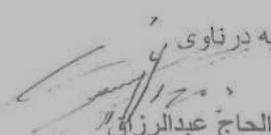
Hajji Obaidullah

Mayor of Terin Kowt

(Signed)

Cell Phone: 0796372617

Administrative Assembly's Decision

<p>جمهوريت اسلامي افغانستان اداره مستقل ارکانهای محلي ولایت ارزگان</p>		<p>د افغانستان اسلامي جمهوريت د سمير و ارکانو خپلواک اداره دارزگان ولايت</p>
<p>تاریخ ۶ / ۴ / ۱۳۹۰</p>	<p>د دفتر ریاست دمجلس مدیریت</p>	<p>شماره ۱۶۵ ۱۵۳</p>
<p>ضمیمه (۱) ورق</p>		
<p>بناغلی دارزگان ولایت دچتک غیرگون دکنک قوماندان صاحب !</p> <p>اداری مجلس ستاسی دکنک دخمکی په خیصه کی داسی تصویب کړیدی .</p> <p>مجلس اداری په نیټه ۶ / ۴ / ۱۳۹۰ تصویب کوی چه دکنک واکنیش سریع لپاره دریگ رشین شمال طرف دیمکه دی لاندی هنیټ لکه رئیس صاحب زراعت و بناوال ، رئیس حقوق و مستوفی صاحب تعیین دی موسوع دی وخیزی او اینده جلسی ته دی گزارش وړاندی کړی .</p> <p>پورته داداری مجلس پریکړه موعیناً وتاسی ته ولیکل او یو کاپی دتصویب مویه ملتیا ددی کنه لیک در وتری هینه ده چه په کتلو دشغه برابر اجراء تر سره شی . په یرناوی</p>		
<p> الحاج عبدالرزاق رئیس دفتر ولایت ارزگان</p>		
<p>X کاپی به ریاست زراعت</p> <p>X کاپی // // بناوالی .</p> <p>X کاپی // // حقوق</p> <p>X کاپی // // مستوفیت .</p>		
<p>Last saved by USEREmail : govemororz@ . va hoo . com</p> <p>Phone No :</p>		
<p>الکترونی تلفونی تریکه</p>		

English Translation of Administrative Assembly's Decision

**Islamic Republic of Afghanistan
Independent Sub-National Local Administration
Uruzgan Province
Administrative Office
Directorate of Provincial Administrative Assembly**

Letter Number: 165/153

Date: 6/4/1390 (27.Jun.2011)

The Respected Uruzgan Provincial Response Company Commander:

The Provincial Assembly has issued an approval regarding your land for the Battalion as follows.

The Administrative Assembly approved on 6/4/1390 (27.Jun.2011) that the area to the north of the Stone Crushing Plant should be assessed for a PRC by a delegation consisting of the Agriculture Director and Mayor, Legal Affairs Department and the Head of the Provincial Accountancy Department.

The issue should be evaluated and reported at the next Provincial Administrative Assembly.

The above decision of the Administrative Assembly is written to you and a copy of the approval is attached with this letter.

We hope you will conduct further implementations regarding the issue according to this letter.

Alhaj Abdul Razaq
Office Manager of Uruzgan Provincial Governor
(Signed)

CC: Agriculture Department

CC: Municipality

CC: Legal Affairs Department

CC: Accountancy Department

English Translation of Letter from Delegation

Page No: 11

Registered in approvals directory as number 33, dated: 6/4/1390 (27.Jun.2011)

The Administrative Assembly approved on 6/4/1390 (27.Jun.2011) that the area to the north of the Stone Crushing Plant should be assessed for a PRC by a delegation consisting of the Agriculture Director and Mayor, Legal Affairs Department and the Head of the Provincial Accountancy Department.

The issue should be evaluated and reported at the next Provincial Administrative Assembly.

Sincerely

Registered in approval directory as number 33, dated: 6/4/1390 (27.Jun.2011)

Administrative and Finance Director

(Signed)

Director of Economics

(Signed)

Mohammad Salim Nomad's Officer

(Signed)

Office Manager

(Signed)

Tribal and Frontiers

(Signed)

Alhaj Aminullah

(Signed)

Women Affairs Department

(Signed)

Central Statistics

(Signed)

(Signed)

Power Officer

(Signed)

Representative of Education

(Signed)

(Signed)

Touristic Department

(Signed)

The Communication Department Director

(Signed)

Information and Culture Department

(Signed)

Immigrants Department

(Signed)

Rural Development Department

(Signed)

Director of Agriculture Department

(Signed)

Prison Officer

(Signed)

Work, Social Affairs, Martyrs and Disabled Department

(Signed)

Election

(Signed)

Head of Accountancy

(Signed)

Teacher's Training Department

(Signed)

Tajwar Kakal Advisor of Education Ministry

(Signed)

Environment Department

(Signed)

Alhaj Dr. Khan Agha Miakhil

(Signed)

Observed

Uruzgan Mayor

(Signed)

6/4/1390 (27.Jun.2011)

Approved

Mohammad Omar Shirzad

Uruzgan Provincial Governor

(Signed)

Uruzgan UP Provincial Commander

(Signed)

Letter from Administrative Assembly to Provincial Response Company Commander

<p>جمهوريت اسلامي افغانستان رياست مستقل ارگانهای محلی ولایت ارزگان</p>		<p>د افغانستان اسلامي جمهوريت دسيمه ايزو ارگانونو حيلواک رياست دارزگان ولايت</p>
<p>No: Date:</p>	<p>رياست دفتر مدیریت مجلس</p>	<p>شماره: ۱۸۱ تاریخ: ۱۹۷</p>
<p>محمد! بلوروی</p>		<p>۱۳۹۰/۴/۱۳</p>
<p>محترم قوماندان صاحب تولى واکنش سریع ولایت ارزگان!</p>		
<p>په سلسله تصویب قبلی شماره (۳۳) ۱۳۹۰/۴/۶ مجلس محترم ادارى یک ورق تصویب شماره</p>		
<p>(۳۴) ۱۳۹۰/۴/۱۳ مجلس محترم ادارى درمورد بیست (۲۰) جریب زمین ضمناً به شما ارسال</p>		
<p>شد تا په ملاحظه ان در زمینه اجراء اصولی نماید . با احترام :</p>		
<p> الحاج عبدالرزاق ریس دفتر ولایت ارزگان</p>		
<p>X کاپی به ریاست شاروالی .</p>		
<p>X کاپی به ریاست زراعت .</p>		
<p>Email: governorurozgan.com Phone: 0753710014</p>	<p>ارتباط الکترونی تلفون نمبر: ۰۷۵۳۷۱۰۰۱۴</p>	

English Translation of Letter from Administrative Assembly to Provincial Response Company Commander

**Islamic Republic of Afghanistan
Independent Sub-National Local Administration
Uruzgan Province
Administrative Office
Directorate of Provincial Administrative Assembly**

Letter Number: 180/167

Date: 13/4/1390 (4.Jul.2011)

The Respected Uruzgan Provincial Response Company Commander:

In follow up of approval number 33, dated 6/4/1390 (27.Jun.2011) by the Provincial Administrative Assembly, a copy of approval letter number 34, dated 13/4/1390 (4.Jul.2011) by the Provincial Administrative Assembly regarding 20 Jeribs of land has been sent to you to conduct further implementations.

Sincerely,
Alhaj Abdul Razaq
Office Manager of Uruzgan Provincial Governor
(Signed)

CC: Municipality
CC: Agriculture Department

Attachment: One page

English Translation of Letter from Delegation to Administrative Assembly

Registered in approvals directory as approval number 33, dated: 13/4/1390 (04.Jul.2011).

The Administrative Assembly has approved on 13/4/1390 (04.Jul.2011) that the Municipality Department and Agriculture Department should provide 20 Jeribs of land to the north of Kandahar road for the construction of a PRC according to the law.

Sincerely,

Representative of Agriculture Department

(Signed)

(Signed)

(Signed)

Election

(Signed)

Rural Development Department

(Signed)

Acting Director of Public Health Department

(Signed)

Work, Social Affairs, Martyrs and Disables Department

(Signed)

13/4/1390 (04.Jul.2011)

Government Cases Department Officer

(Signed)

Administration Reform Department

(Signed)

General Manager of Criminal Main Directorate

(Signed)

(Signed)

Public work Department

(Signed)

Nomad's Officer

(Signed)

Sport Section Officer

(Signed)

Director of Financial and Administrative Department

(Signed)

Accountancy Department

(Signed)

Mayor

(Signed)

Transport Department

(Signed)

Representative Anti-Narcotics Department

(Signed)

Women's Affair Department

(Signed)

First Deputy of National Directorate of Security (NDS)

(Signed)

13/4/1390(04.Jul.2011)

Observed

13/4/1390 (04.Jul.2011)

Hajji Khudai Rahim

Uruzgan Provincial Deputy Governor

(Signed)

Notice of Completion of the Site Assessment

۳۱۶
 ۳۹۹
 ولایت
 قوماندان
 سردار
 اورنگ
 مورخ ۱۹/۱۲/۱۳۹۱
 به مقام قوم ریاست تسهیلات وزارت امور داخله
 بجهت مکتوب بر عکس مورخ ۲۵/۱۲/۱۳۹۱ و مکتوب بر عکس مورخ ۱۳/۱۲/۱۳۹۱
 دفتر مکتوب واصل و ذیل آنجا که است
 دفتر مکتوب در تکرار در تسهیلات مربوط بولس را تروی نماید
 بناً قوم اینجین سپهراپ خان نمائنده پروژه بخش بولس دفتر مکتوب با این محتوی
 اعراضی خویش برقرره بولس کولک وارش ولایتی و ولایت اورنگان مرکز معلوم
 را تروی نموده و دوباره بعد از قسم فطف به مقام قوم معرفی گردیدم
 سر و بند عهد الحصار برتر کسان اینستمال فطف خود را نمود

با احترام
 سید محمد فضل احمد نیرزاد
 مکتوب ولایت اورنگان
 قوماندان

SITE ASSESSMENT

English Translation of Notice of Completion of the Site Assessment

Uruzgan Province
Uniform Police Provincial Headquarters
Personnel Directorate

Letter No: 316/399

Date: 19/4/1390 (10.Jul.2011)

NOTICE OF COMPLETED SITE ASSESSMENT

The Respected Facility Department of Interior Ministry:

This letter is in response to the letter number: 65, dated: 25/3/1390 (15.June.2011) and letter number 58 dated 14/3/1390 (4.Jun.2011) provided by MACTEC Engineering and Consulting, Inc. our notice of assessment completion below states that:

The Technical Team of MACTEC Engineering and Consulting, Inc. and Engineer Suhrab Khan, representative of the Mol has reported the completion of the Site assessment, evaluation of the Site of the District Project and completed the site sketch for the project listed below:

PROJECT	FACILITY TYPE	PROVINCE/ DISTRICT
Police Project	PRC	Terin Kowt District, Uruzgan Province

The Site sketch is attached along with this letter for future reference for the Ministry of Interior through its representative.

The Technical Team and the support group returned to their respective office and duty stations after the completion of the assessment work.

Sincerely,

Colonel Fazal Ahmad Shirzad
Uruzgan UP PHQ Commander
(Signed)

Land Ownership Certificate

مل
ملکیت

د ملکیت تصدیق پانه

افغانستان

ناحیه *د تهرنیوت ښار غیرتون پور*

د دی ملکیت د تصدیق پانه چی په *۰۹-۰۷-۲۰۱۱* تاریخ اجرا شوی ده، لاسلیک کوونکی دا تصدیق کوی چی:

۱. دا ځمکه او د دی ځمکی د څښتننوب حقوقی اسناد دا روښانوی چی:

ا. دا ځمکه شخصی نه ده.

ب. دا ځمکه د افغانستان اسلامی حکومت د *.....* وزارت په ولکه کی ده.

۲. د دی ځمکی څښتننوب کی څه شخړه نشته.

۳. د دی تصدیق پانی لاسلیک کوونکی د افغانستان د اسلامی حکومت د *.....* وزارت له خوا پوره واک لری چه د دی ځمکی څښتننوب چه د افغانستان اسلامی حکومت ده تصدیق کوی.

د ملکیت څیرنه، د ملکیت نقشه او اطفاقی اسناد.

نوم *.....* *شیرزاد احمد* *.....*



شاهدان دا تصدیق کوی چی د دی تصدیق پانی لاسلیک کوونکی د افغانستان اسلامی حکومت له خوا په پوره توگه واک لری.

لومړی واک لرونکی: *.....* دوهم واک لرونکی: *.....*



محمد شیرزاد ولی نوری

سایب الله محمد میراوردی

English Translation of Land Ownership Certificate

OWNERSHIP CERTIFICATE

Afghanistan

District of PRC Terin Kowt

Upon execution of this Ownership Certificate, dated 09.Jul.2011, the undersigned hereby acknowledges and certifies:

(1) That the land (together with any and all appurtenances), described below is:

(a) Not owned by a private individual

(b) Owned by the Ministry of Agriculture, Government of Afghanistan

(2) That the ownership of the said land is not in dispute

(3) That the undersigned has authority to sign this certificate on behalf of the

Government of Afghanistan, Ministry of Interior, and is duly authorized and has authority to confirm and verify Government land ownership.

Property Description, together with attached Exhibit "A" (map, additional documentation):

Colonel Fazal Ahmad (Shirzad)

Uruzgan Uniform Police Provincial Commander

(Signed and Stamped)

Sworn to and subscribed before the listed witnesses, who certify that the person who has signed this Ownership Certificate is authorized to act and sign on behalf of the named Government agency, on this 9th day of July, 2011.

Witnesses:

Mohammad Omar Shirzad
Uruzgan Provincial Governor
(Signed and Stamped)

Hajji Raz Mohammad
Executive Manager of Properties Main Directorate
(Signed and Stamped)

The Respected Uruzgan Provincial Governor:

Based on a request of the Uruzgan Uniform Police Provincial Headquarters and the appointed delegation by the Provincial Governor Headquarters, we the delegation jointly visited the land for the Provincial Response Company (PRC) which is located to the north of the Stone Crushing Plant and is owned by the government and the people therefore we assessed another site located beside and north of Kandahar Main Road which is arid and non-agricultural land and owned by the Government. It is worth mentioning that the Cadaster Directorate is not available in Uruzgan Province.

Hajji Raz Mohammad
Executive Manager of Properties Main Directorate
(Signed and Stamped)

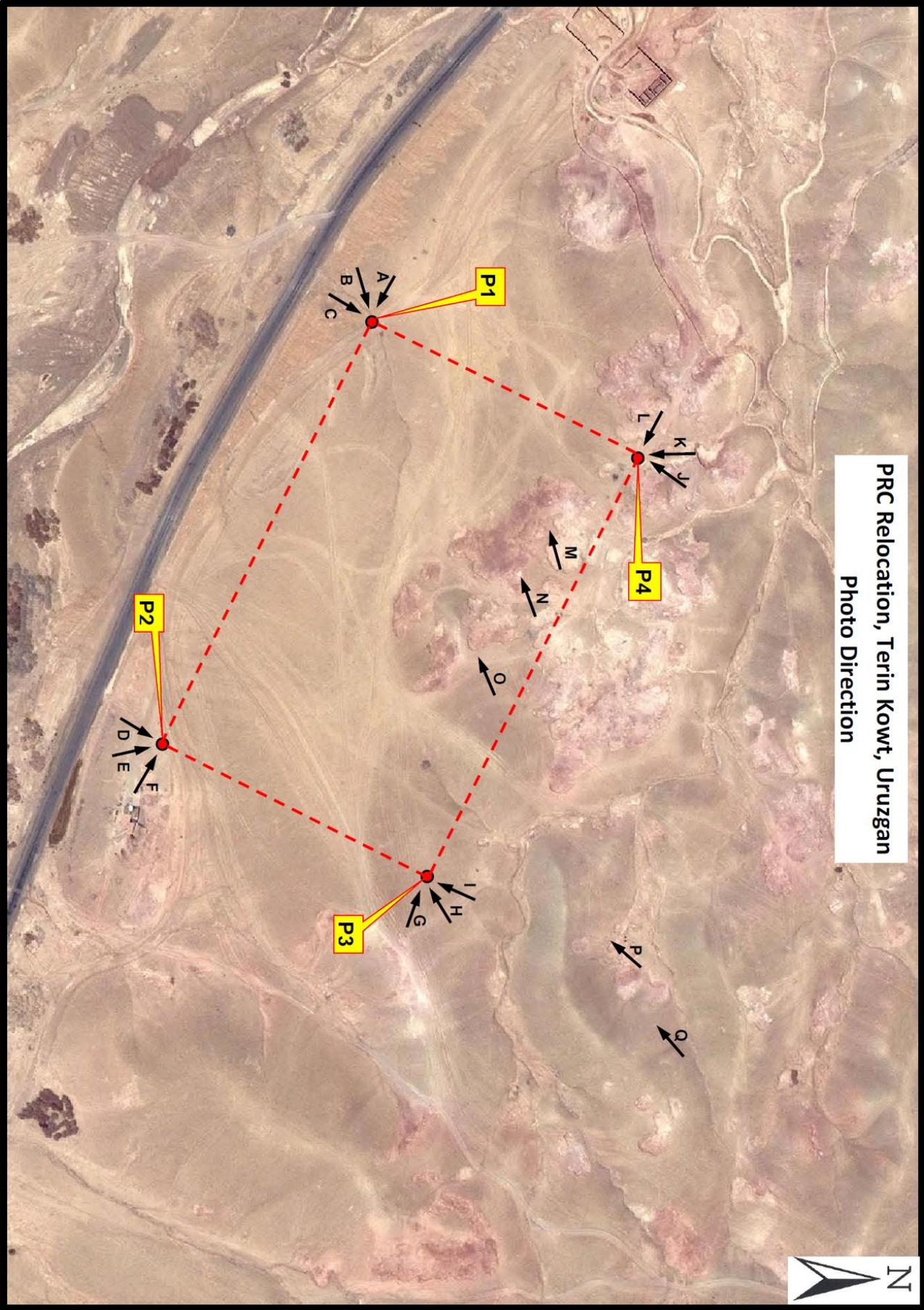
Abdul Mohammad
Director of Legal Affairs Department
(Signed)

Hajji Ghulam Shah
Director of Accountancy
(Signed and Stamped)

Hajji Abdullah
Mayor
(Signed and Stamped)

**APPENDIX B
SITE PHOTOGRAPHS**

PHOTOGRAPH DIRECTION



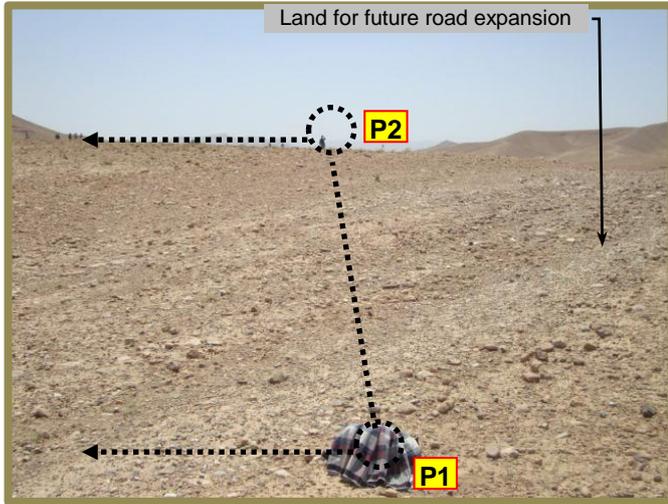
PRC Relocation, Terin Kowt, Uruzgan
Photo Direction

SITE ASSESSMENT

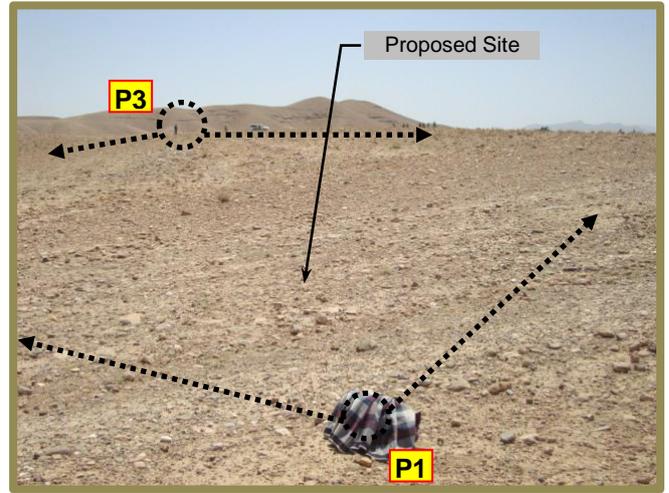
SITE PHOTOGRAPH LOCATIONS AND DIRECTION

Site Corner Point #1

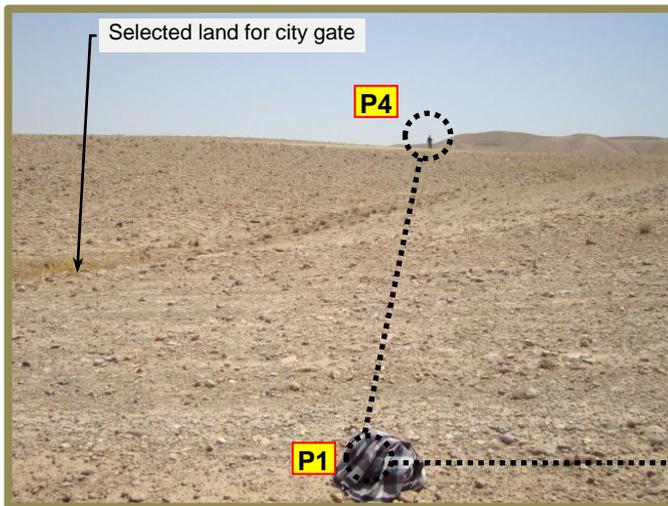
A- to Southeast



B- to Northeast

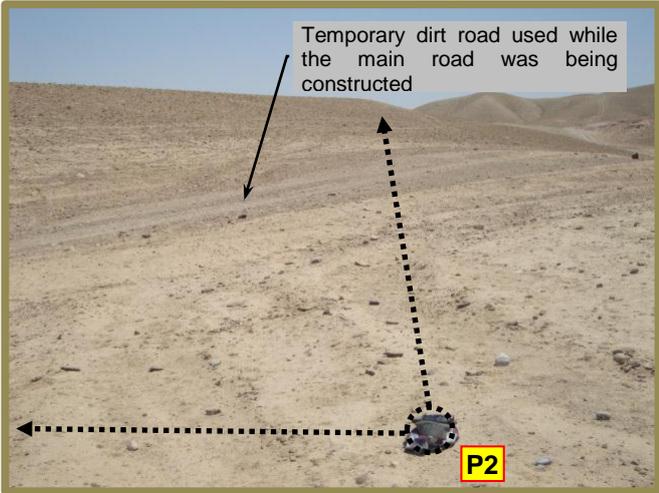


C- to Northeast

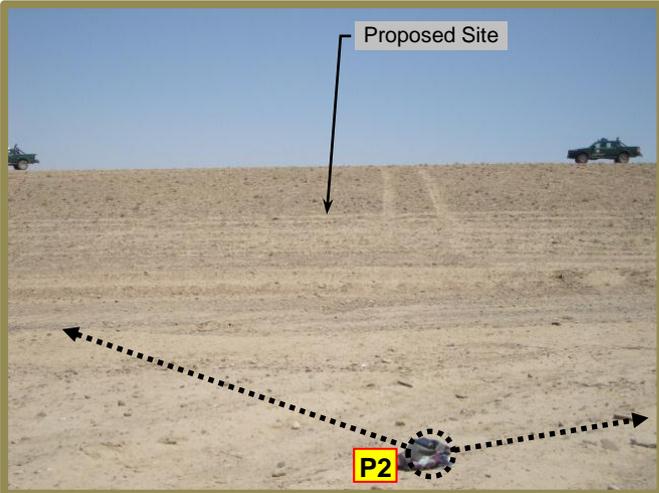


Site Corner Point # 2

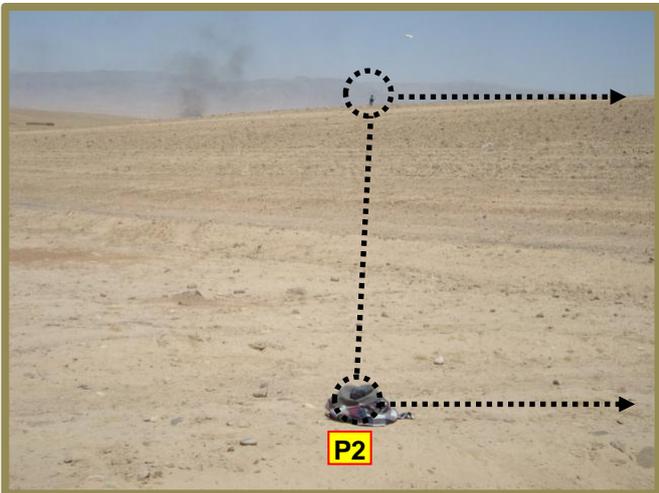
D – to Northeast



E - to North

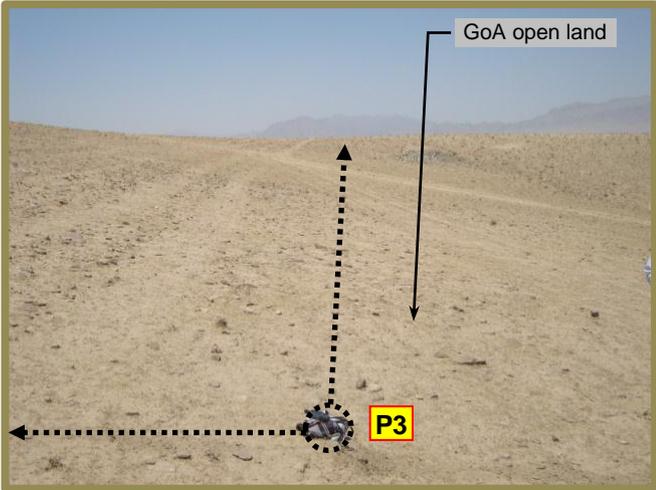


F-to Northwest

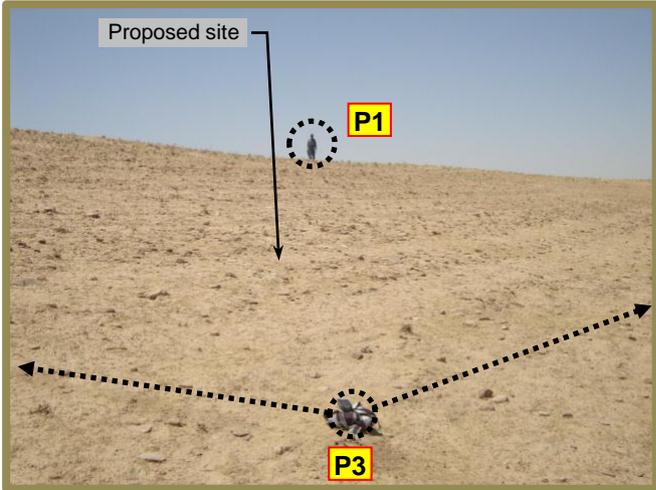


Site Corner Point # 3

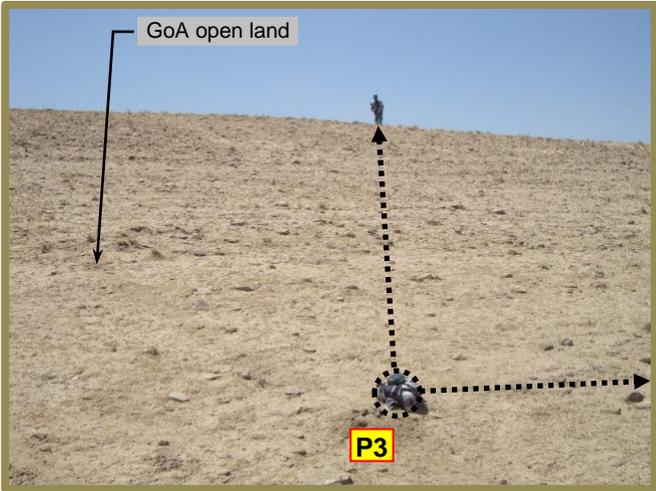
G - to Northwest



H - to Southwest



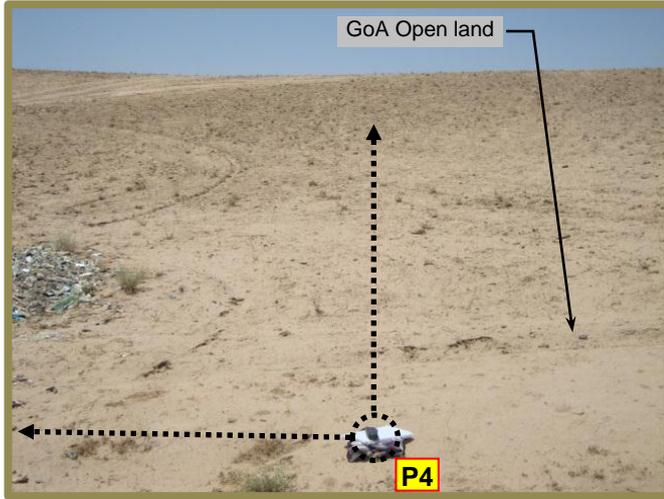
I - to Southwest



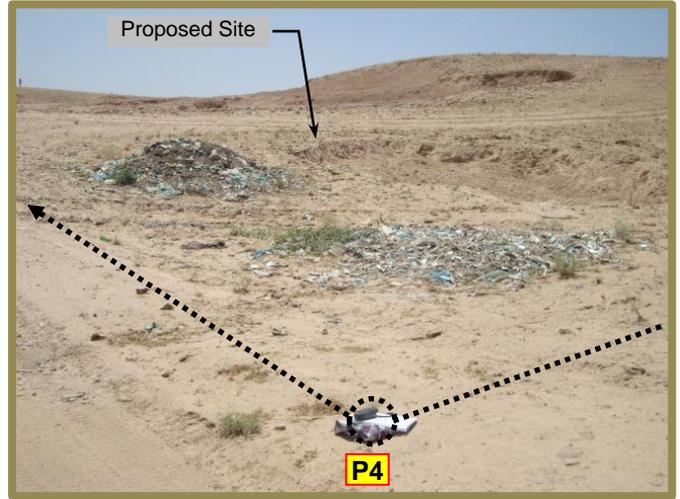
SITE ASSESSMENT

Site Corner Point # 4

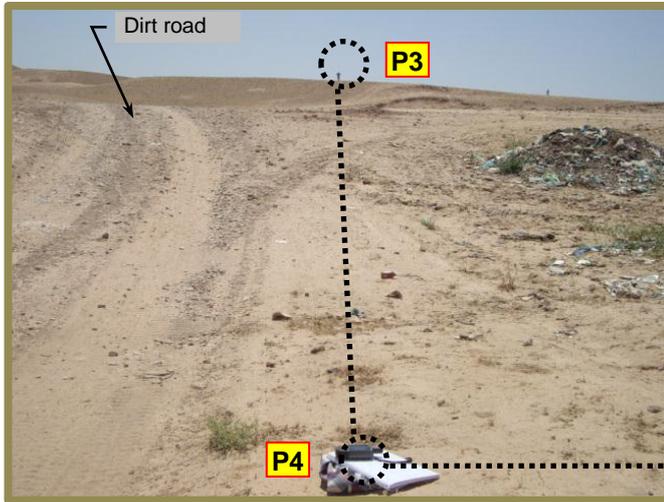
J - to Southwest



K - to South



L - to Southeast



**ADDITIONAL
SITE PHOTOGRAPHS**

SITE ASSESSMENT

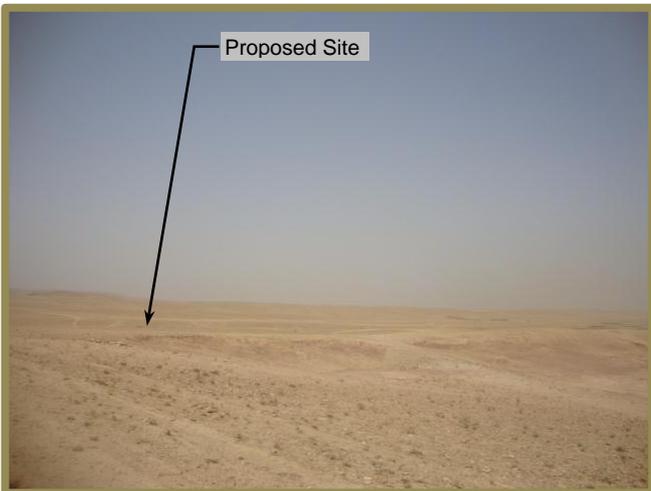
M- to West



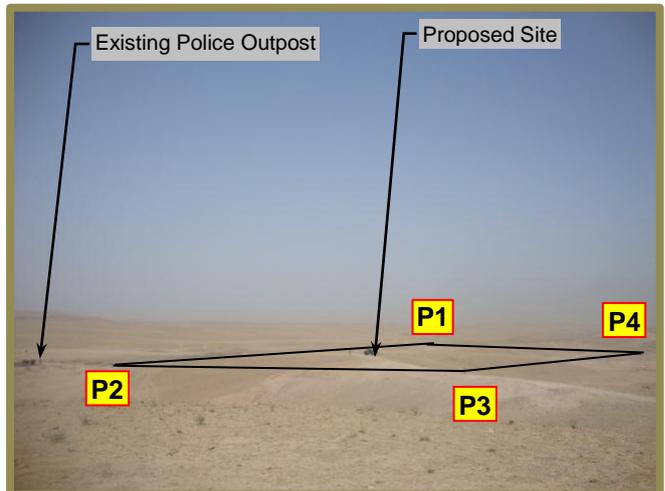
N- to West



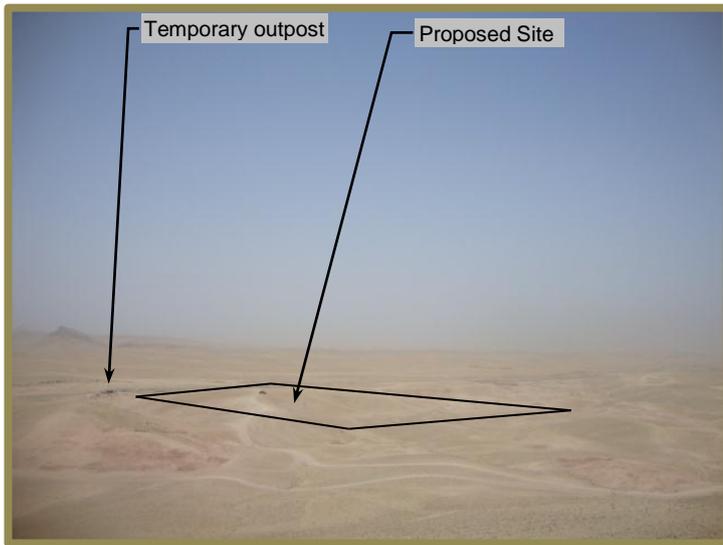
O- to Southwest



P- to Southwest



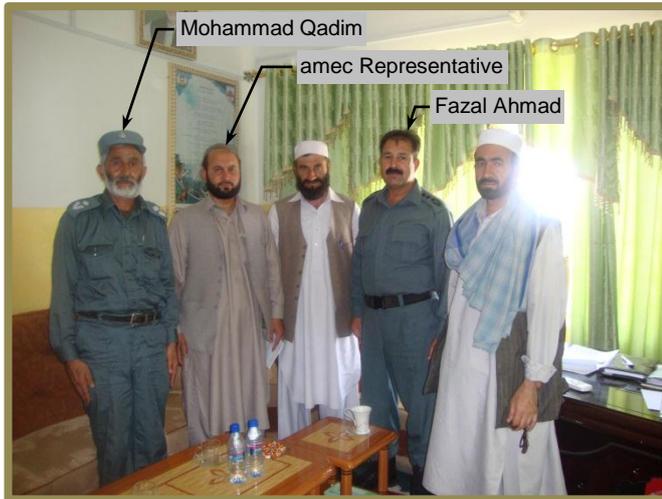
Q-to Southwest



SITE ASSESSMENT

Meeting Photos

Meeting with Fazal Ahmad Shirzad UP PHQ Commander and Mohammad Qadim Chief of Facility Directorate



Meeting with Mohammad Umar Shirzad Provincial Governor and Mahammad Qadim chief of Facility Directorate



Meeting with Haji Sardar Mohmmad Agriculture Department Director



Meeting with Haji Ubaidullah Shah Mayor, Abdul Mohammad Chief of Human Rights Department and Mohammad Qadim Chief of Facility Directorate.



Meeting with Haji Ghulam Shah Accountancy Director and
Mohammad Qadir Chief of Facility Directorate



DEPARTMENT OF THE ARMY
US ARMY GEOSPATIAL CENTER
7701 TELEGRAPH ROAD
ALEXANDRIA, VA 22315-3864

CEAGC-WSH

20 January 2012

MEMORANDUM FOR: Kenneth Mathis, Transatlantic Division (TAD)**SUBJECT: Hydrogeologic assessment of the PRC Tarin Kowt, Oruzgan Province, Afghanistan.**

(U/FOUO) The purpose of this memorandum is to provide information related to the hydrogeologic setting of PRC Tarin Kowt. This memorandum is provided in response to a request assigned by Thomas Webster, Army Geospatial Center on 3 January 2011. The coordinates provided for three evaluation sites are listed below:

<i>Location</i>	<i>MGRS Coordinate</i>	<i>Elevation (ft)</i>
Point 1	41S QS 7297608999	4725
Point 2	41S QS 7321708878	4715
Point 3	41S QS 7329309031	4727
Point 4	41S QS 7305109151	4697

(U) Summary

- The given coordinates fall within an area of POOR groundwater supply potential. The site is located in thin, loosely consolidated sandstone beds within alternating sequences of calcareous shale, clay, and weakly cemented conglomerate with some limestone. Yields of fresh water are expected to range from 25 to 125 Lpm. Depth to aquifer will vary between 25 and 75 m.

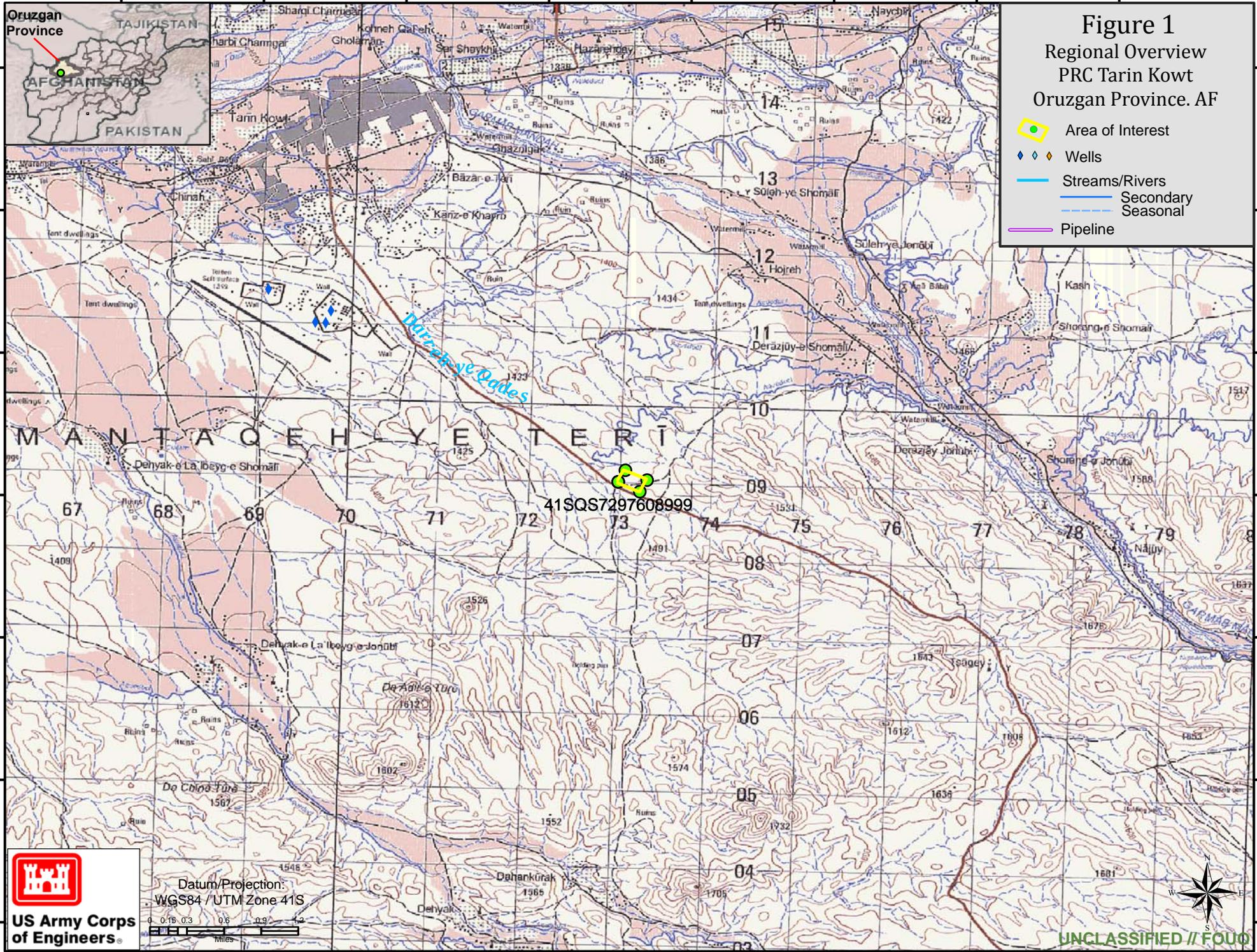
(U) List of Figures & Tables**Figure 1:** Regional setting of the area of interest (AOI).**Figure 2:** Regional water features within the AOI.**Figure 3:** Groundwater potential for the AOI.**Table 1:** Well siting guidelines.**Appendix A:** Climate data for Tarin Kowt, AF.**(U) Terminology & Abbreviations***Common Abbreviations*

bgs	below ground surface
°C	degrees Celsius
gal/min, gpm	gallons per minute
km, km ²	kilometer, square kilometers
mi, mi ²	miles, square miles
L/min, Lpm	liters per minute
L/s, lps	liters per second (1L/s = 60 L/min)
m, m ² , m ³	meter, square meters, cubic meters
m ³ /d	cubic meters per day
m ³ /s	cubic meters per second
mg/L	milligram per liter
mm	millimeter



Figure 1
Regional Overview
PRC Tarin Kowt
Oruzgan Province. AF

- Area of Interest
- Wells
- Streams/Rivers
- Secondary Seasonal
- Pipeline



Datum/Projection:
WGS84 / UTM Zone 41S

0 0.15 0.3 0.6 0.9 1.2
Miles



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TDS	total dissolved solids
	<i>Water Quality Terms</i>
Fresh water:	maximum TDS < 1,500 mg/L maximum chlorides < 600 mg/L maximum sulfates < 300 mg/L
Brackish water:	maximum 30,000 mg/L > TDS > 1,500 mg/L
Saline water:	TDS > 30,000 mg/L

The Area of Interest

(U/FOUO) Tarin Kowt (pop. 16,700 in 2003) is the administrative seat of Oruzgan Province, and a local trading center with cottage industries and small businesses engaged in the manufacture of household goods; there are small food enterprises (mainly rice cleaning). From May to November, many livestock-herding nomadic camps appear in the summer pastures of the area's mountains; tents and yurts serve as their dwellings; there are livestock pens next to the camps. The city of Tarin Kowt and certain large towns have telephone service. Kerosene is used for lighting. Public water supplies are drawn from rivers, canals, springs, wells and karezes (underground galleries for collecting ground water and delivering it to the surface which may be up to several kilometers long). Some water sources contain salty or brackish water and are unfit for drinking. Sanitation is unsatisfactory in most of the populated places.

(U/FOUO) The area of interest (AOI) is within an area of POOR groundwater supply potential. The site is located in thin, loosely consolidated sandstone beds within alternating sequences of calcareous shale, clay, and weakly cemented conglomerate with some limestone. Yields of fresh water are expected to range from 25 to 125 Lpm. Depth to aquifer will vary between 25 and 75 m.

(U/FOUO) Roads are poorly developed. Unpaved roads are 3-5 meters wide, and their beds are reinforced with coarse or fine gravel or sand. Dirt and field country roads are 3-8 meters wide, and in places they coincide with caravan routes. There are many pack-animal trails in the area; in broad river valleys and intermontane basins they are often accessible to tracked vehicles. In the mountains, and especially on passes on roads and trails, there are many long ascents and descents and tight turns. Passes are at elevations of 1200-2300 meters and are open to traffic year-round.

(U/FOUO) Vegetation is high steppe, consisting of drought-resistant grasses (needle grass, sheep's fescue, etc.), low shrubs (mainly sagebrush), low (1-3 meters tall) bushes (locoweed, Calligonum), and sparse wood and consisting of juniper and wild pistachio trees 4-10 meters high. Plowlands are planted with grain crops (wheat, barley, rice) and industrial crops (including ambary hemp and cotton). Vineyards and orchards occur near towns.

(U) Groundwater Resources

(U/FOUO) The area consists primarily of interbedded limestone, sandstone, and shale which form rugged, highly dissected mountains giving way to broad alluvial plain in the southwest. Metamorphic and igneous rock as well as younger interbedded sandstone and shale form more gently sloping plateaus and basins. The alluvial plain to the southwest consists of thick silt and clay deposits with thin layers of gravel and conglomerate. Dissection is very heavy in the mountainous areas, moderate on sloping foothills, plateaus, and basins, and slight on the plains. Vehicular movement may be hindered in the more heavily dissected areas.

(U/FOUO) The areas of **Good** groundwater potential are located in unconsolidated alluvial deposits. Yields of fresh water are expected to range from 200 to 400 Lpm. Depth to aquifer will generally not exceed 25 m. TDS varies from 320 mg/L in the upper reaches of the plain to 490 mg/L to the



32°37'N

32°36'N

32°35'N

32°37'N

32°36'N

32°35'N

Kareze Khayro

Figure 2

Local Water Features PRT Tarin Kowt Oruzgan Province. AF

- Area of Interest
- Wells
- Streams/Rivers
 - Secondary
 - Seasonal
- Pipeline
- Canal
- Aqueduct segment
- Water Retention Feature
- Stream Gauge
- Tank/Tower
- Settlements

41SQS729760899



Datum/Projection:
WGS84 / UTM Zone 41S

0 0.08 0.16 0.24 0.32
Miles



south. Depth to water is approximately 15 m in the lower portion of the plain and 25 to 30 in the upper reaches.

(U/FOUO) The areas of **Moderate** groundwater potential are located in interbedded limestone, sandstone, and shale. The sandstone beds are only locally permeable. Discontinuous joints and solution cavities will cause yields and depths to water to vary over short distances. Yields of fresh water are expected to generally range from 200 to 400 Lpm. Exceptionally larger yields, up to 6600 Lpm, may be obtained from springs in valley and gorges at the contacts with underlying formations. However, these may be widely spaced, making well sitting difficult. Conversely, exposed limestone at upper elevations may be practically waterless. The depth to aquifer will vary between 50 and 500 m.

(U/FOUO) The areas of **Poor** groundwater potential are located in thin, loosely consolidated sandstone beds within alternating sequences of calcareous shale, clay, and weakly cemented conglomerate with some limestone. Yields of fresh water are expected to range from 25 to 125 Lpm. Depth to aquifer will vary between 25 and 75 m.

(U/FOUO) Static water levels for 4 wells (approximately 2.5 mi away) are between 30 and 35m (see Table 1 below). There are 6 additional wells within that radius for which no other data was available.

Table 1: Well data, Tarin Kowt, Oruzgan, AF.

Name	MGRS	Well Type	Permanence	Static Water Level (ft)	Well Depth (ft)	Water Quality
	41SQS6907111394	sample	Intermittent			Brackish
Tarin Kowt Well 3	41SQS6970910980	Drilled	Perennial	88	196	Unknown
Tarin Kowt Well 2	41SQS6976411139	Drilled	Perennial	97	171	Unknown
Tarin Kowt Well 1	41SQS6959610987	Drilled	Perennial	118	210	Unknown

(U) Surface Water Resources

(U/FOUO) In this region, perennial streams originate in the upper elevations of mountains ridges where Moderate to Large quantities of water are available from snowmelt during the spring and summer months. The Helmand River (Darya-i-Helmand, Rode Helmand, Rud Helmand, at 41SQS2840013100), and the Teri Rod (Teri Rud) (41SQS5140010000) provide the largest quantities of fresh water throughout the year. The Helmand River is marked by a sinuous braided channel, prone to frequent shifting; the arms and channels are separated by low alluvial islands that submerge at high water. The river's main channel has a prevailing width of 300-400 meters above the dam (maximum 500 meters), and 100-200 meters below it (maximum 400 meters), a depth of 2-2.5 meters (maximum of 6 meters), and a current of 1-1.9 m/s. The bottom is primarily gravel and sand and gravel. Banks are low and flat, and in places have small cliffs (2-4 meters high, highest 13 meters). The bottomlands are dry and dissected by irrigation canals and ditches. Near Alaquadari-Kajaki, there is a hydropower station on the river, consisting of a riprap dam 274 meters long and 97 meters high, the Zakhirayi-Abi-Band-e Kajaki Reservoir, with a surface area of 30 km, and a generating station with a capacity of 33 MW. The Teri Rud River has a prevailing width of 40-50 meters (maximum 150 meters) and a depth of up to 2 meters. The highest water levels on the Helmand and Teri Rod Rivers (1-3 meters above low water), which are due to rapid melting of



Figure 3
Groundwater Supply Potential
PRC Tarin Kowt
Oruzgan Province. AF

- Area of Interest
- Wells
- Streams/Rivers
 - Secondary
 - Seasonal
- Pipeline
- Canal
- Aqueduct segment
- Water Retention Feature
- Stream Gauge
- Tank/Tower
- Settlements

Groundwater Supply Potential

	Poor
freshwater yield = 50-200 lpm depth to aquifer = 25-150 m	
	Moderate
freshwater yield = 200 - 400 lpm depth to aquifer = 5 - 50m	
	Good
freshwater yield = 200-400 lpm depth to aquifer = 15-30 m	



Datum/Projection:
WGS84 / UTM Zone 41S
0 0.15 0.3 0.6 0.9 1.2
Miles



mountain snow, occur from March to June; at this time both rivers turn to churning white water. Low water lasts from July to October. Brief storm surges occur from November to February. The level of the Helmand River below the Kajaki Reservoir depends on releases from the reservoir. The other rivers in the area are intermittent. They have water from November through June, and at this time reach a width of 5-10 meters (some reach widths of 50-100 meters) at a depth of 0.5-1.5 meters.

(U/FOUO) Perennial canals, located throughout the region, provide Small to Moderate quantities of fresh water for irrigation. Remaining streams in this area are intermittent and flow in response to precipitation which generally occurs from December through May. Water is fresh but may be brackish in pools of standing water located in intermittent streambeds.

(U/FOUO) Biological contamination can be expected near populated areas.

(U) Soils & Geology

The terrain is mountainous, heavily dissected, and nearly or totally inaccessible off-road to motorized vehicles. Mountain ranges and massifs have prevailing elevations of 1500-2000 meters; the high point (an unnamed peak in the Sowr Ghar Range) is at 2778 meters. Mountain crests are rolling, with mostly rounded peaks; mountainsides have slopes of 15-30°, and in places are precipitous; in certain sections they are dissected by networks of narrow, deep gullies. Rocky placers are widespread along the slopes, and there are stacks 3-21 meters high. Large intermontaine valleys and basins, which separate ranges and mountain massifs, have gently rolling or hilly bottoms dissected by irrigation canals and small intermittent rivers and creeks, which are the main obstacles in the area to mechanized vehicles off-road. Soils on slopes and mountain crests are predominantly rubble and loam or rubble and sandy loam (see map) 1-5 meters thick. They are underlain by rock, which in places crops out (mainly in precipices). There are areas with rocky soil. Intermontaine basins contain primarily loam and sandy loam; during rains they become very soggy, substantially degrading the terrain's passability. In the Helmand River valley, soils are sand and gravel, whose passability improves when wet. The water table in the valleys and basins lies 2 to 20 meters below the surface, and on slopes and mountain crests, at a depth of several dozen to several hundred meters. It sometimes reaches the surface as springs. The area is seismically active; earthquakes as strong as 5-7 points on the Modified Mercalli Scale have been recorded.

(U) Climatic Conditions

(U/FOUO) The climate of the area is subtropical moderately continental. Winter in the valleys and basins (December to February) is mild. Normal temperatures are 3-6°C in the daytime, 0°C to -4°C at night. In the mountains, above 2000 meters, winter (early November to early April) is considerably colder. Precipitation in the valleys and basins occurs as rain and snow, which melts rapidly, and in the mountains above 2000 meters only as snow. Snow cover is persistent above 2500 meters lasting three or four months. Spring in the valleys and depressions (March and April) is warm and generally clear. In the mountains above 2000 meters, spring (early April to early June) is cool, with unstable weather. Light frosts occur until the end of the season. Precipitation occurs as brief heavy downpours, sometimes with thunderstorms, and in the high mountains snow is possible early in the season. Summer in the valleys and basins (May through September) is hot and dry, with clear sunny weather. Normal temperatures are 25-35°C (record high 42°C) in the daytime and 18-24°C at night. In the mountains above 2000 meters, summer (early June to early September) is relatively cool, with light frosts possible at night. Precipitation occurs mainly early in the season, mostly in brief downpours. Fall in the valleys and basins (October to November) and in the

TARIN KOWT AFGHANISTAN

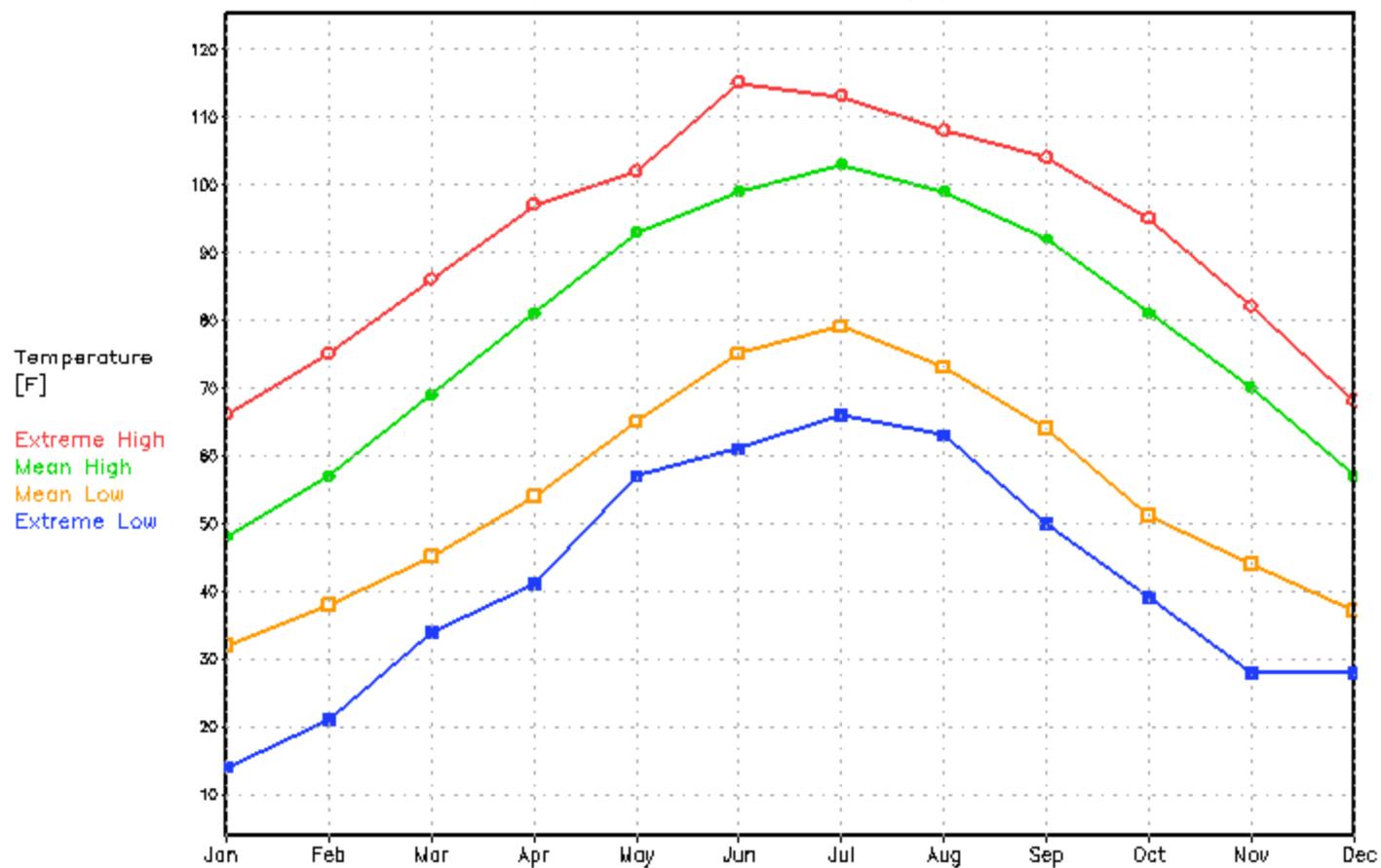
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Data Derived from 14WS Operational Climatic Data Summary (OCD5)

Asheville, NC 28801-5002



TARIN KOWT AFGHANISTAN

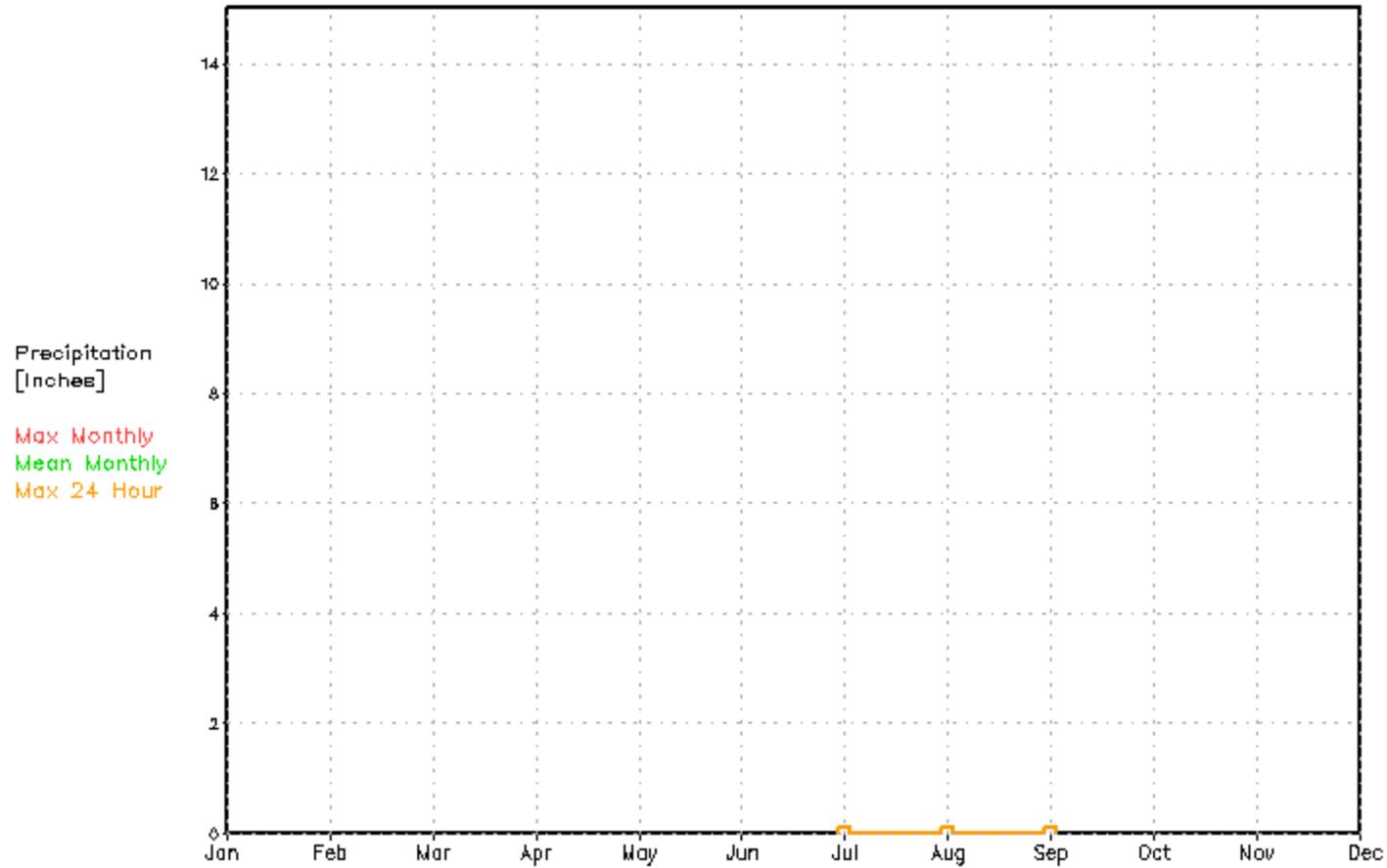
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Asheville, NC 28801-5002



TARIN KOWT AFGHANISTAN

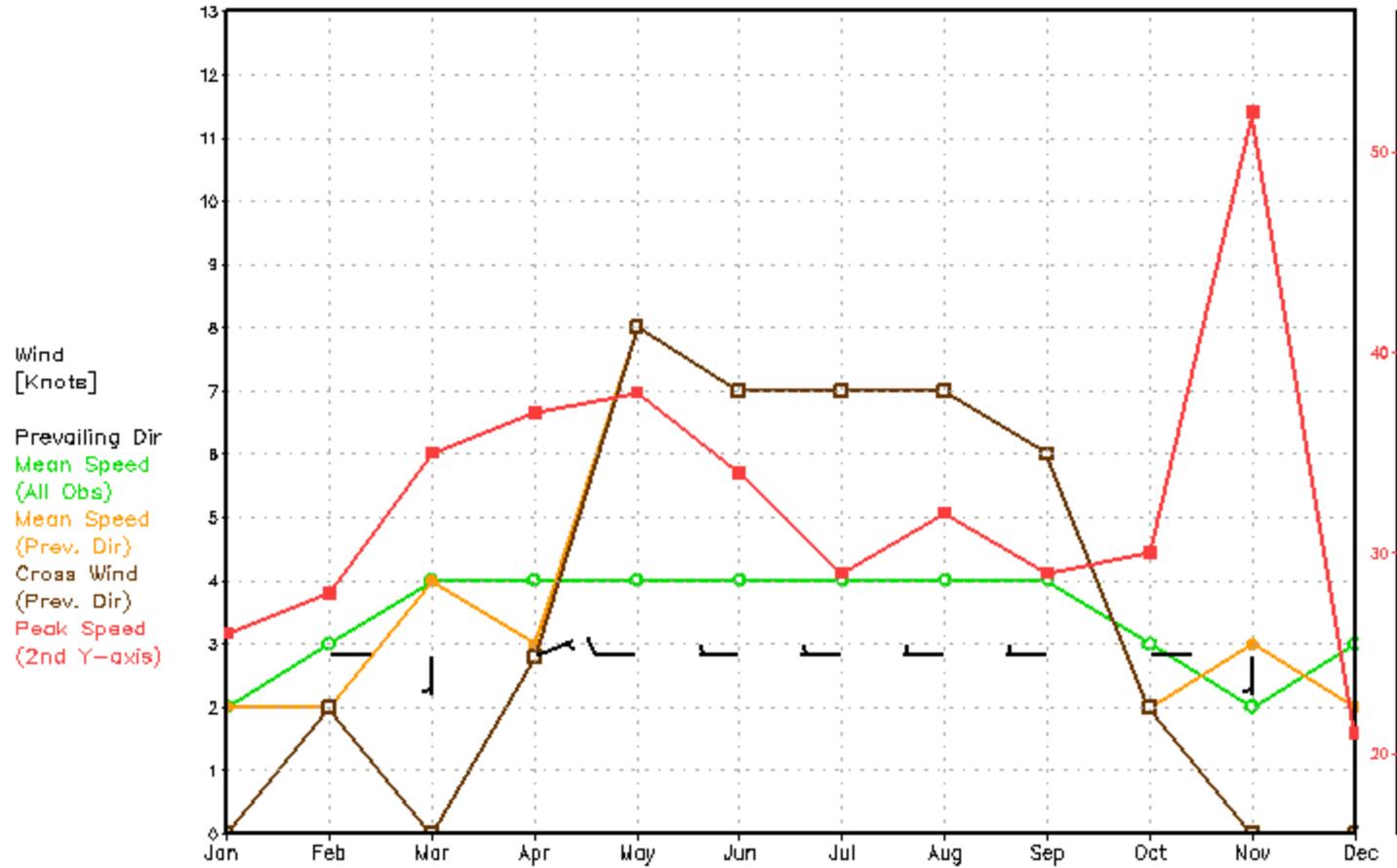
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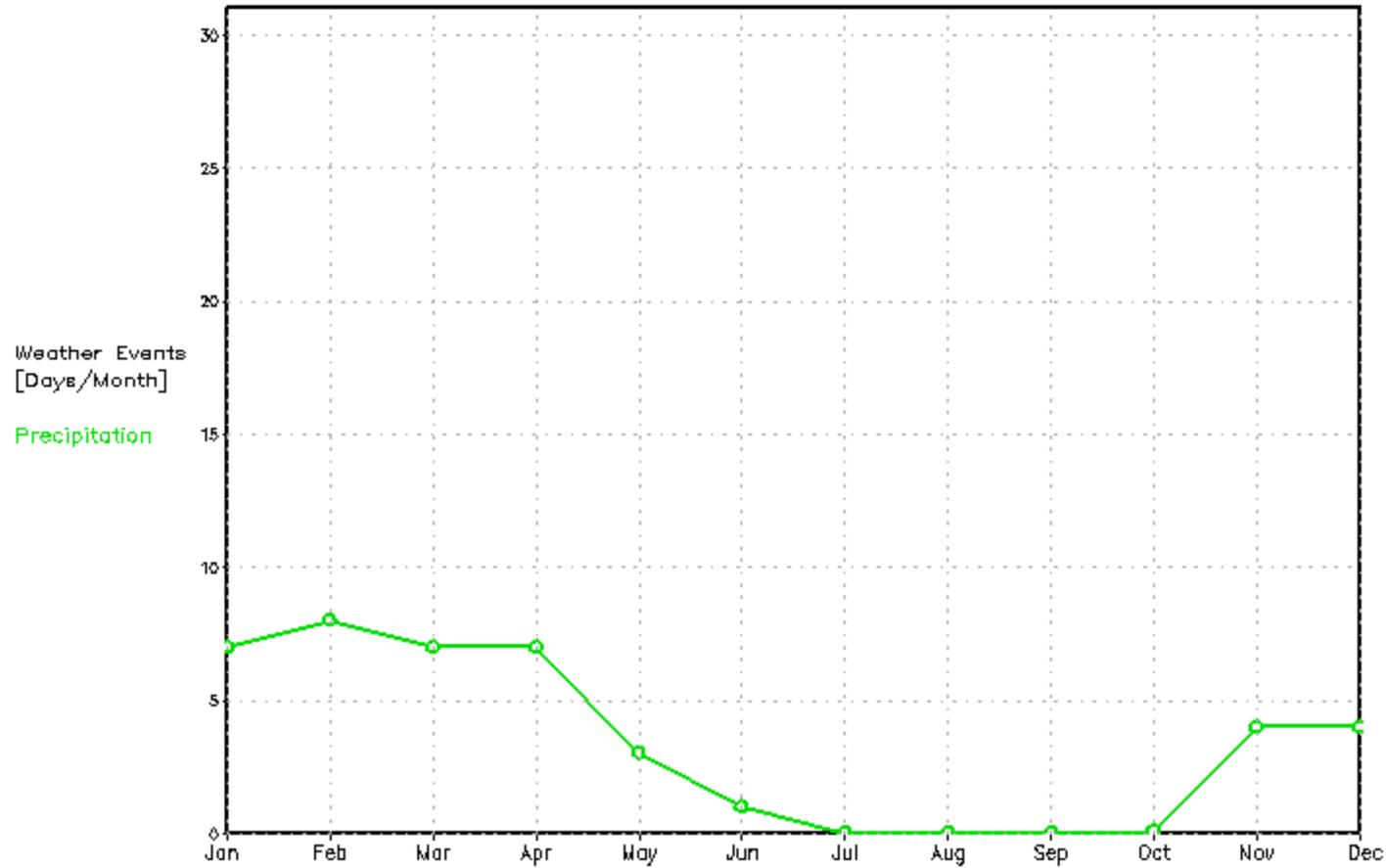
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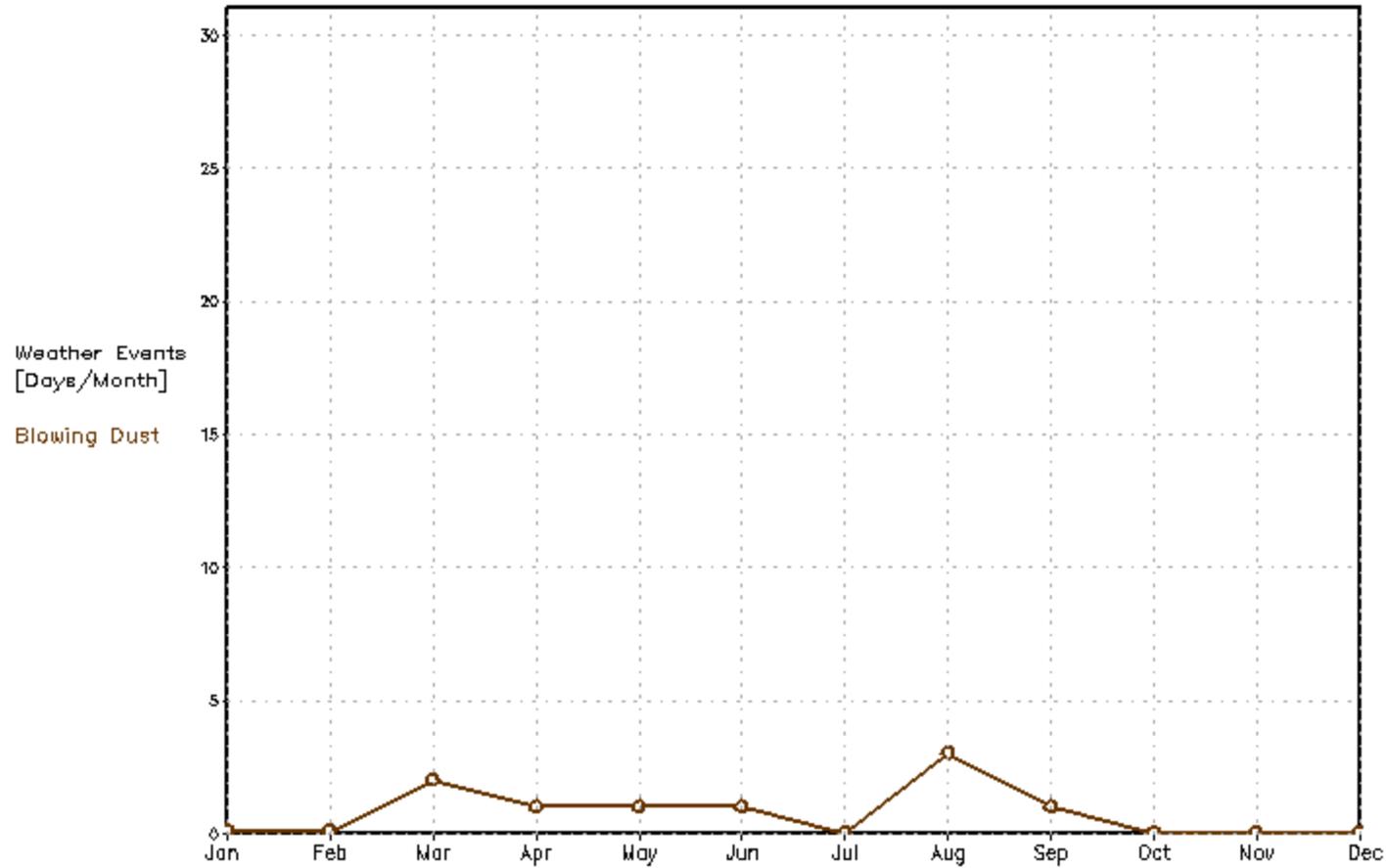
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151 Patton Ave, Rm 120

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Asheville, NC 28801-5002



mountains above 2000 meters (early September to early November) begins warm and dry, but then turns damp and cool. Light frosts begin in late October or early November (early October in the high mountains). Precipitation occurs mainly as rain, but snow is possible in the high mountains.

(U/FOUO) Winds are primarily northerly and northwesterly during the year. The area is characterized by mountain-valley winds; they blow up the mountainsides in the daytime and back at night.

General DoD/Army Well Siting Considerations:

(U/FOUO) *Recommended Minimum Distances from Potential Sources of Contamination or Interference.* The following table summarizes well location considerations (from US Army Corps of Engineers Afghanistan Engineering District manual “AED Design Requirements – Well Pumps and Well Design”, dated November 2009). Wells should always be sited upgradient from potential contamination sources.

Table 2. Recommended Minimum Distances from Potential Sources of Contamination or Interference.

Distance (ft)	Potential Source of Contamination or Interference
325	Garbage dumps, refuse piles, vehicle repair or fuel sales/distribution point, industrial operations or storage points.
250	Functioning wells.
165	Field toilets, animal pens, fertilizer or other hazardous materials.
150	Lagoons, cesspools, or leaching pits.
100	Septic tanks and/or disposal fields, surface water, seepage pits.
100	Natural or man-made drains, ditches, structures or other storage points.
50	Building sewers; dry or abandoned wells.

(U/FOUO) *Interference with Adjacent Wells.* Wells that are pumping from the same aquifer can influence each other, causing yields to decrease in wells located in the same zone of influence. The nearer they are to each other, the more influence they could potentially exert in the form of decreased yields. It should be determined whether there are any other functioning wells in the vicinity of the proposed well site and if so, their sustained pumping rates and potential for interference should be determined.

(U/FOUO) *Flooding.* Wells should be installed in areas that are not subject to seasonal flooding and protected from surface water infiltration. Additional flooding assessments may be requested of the Hydrologic Assessment Team (HAT).

(U) Contact Information

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(U) The Hydrologic Assessment Team requests that you send all well logs and other information regarding the results of your well drilling mission so that the most current data may be incorporated into our Water Resources Database.

(U) If there are any questions or comments, please contact me at (703) 428-3619 or email kade.b.hutchinson@usace.army.mil . For further requests, contact Mr. Tom Webster at (703) 428-6891, DSN 364-6891, or e-mail: thomas.c.webster@usace.army.mil . Our fax number is (703) 428-6991 and our mailing address is as follows:

Director
U. S. Army Geospatial Center
Bldg 2592, ATTN: CEAGC-WSH
7701 Telegraph Road
Alexandria, VA 22315-3864

Very respectfully,
Kade BP Hutchinson
Hydrologist, Hydrologic Assessment Team

(U) REFERENCES

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<https://notus2.afccc.af.mil/SCIS/data/ocds/693149.txt>

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