

1 2 3 4 5 6 7 8 9 10 11 12 13 14

K

J

I

H

G

F

E

D

C

B

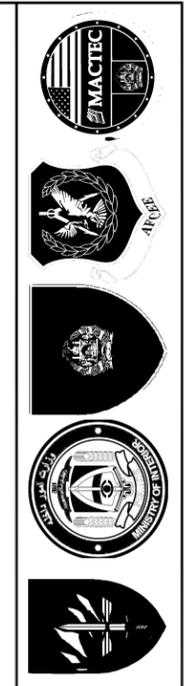
A

1 2 3 4 5 6 7 8 9 10 11 12 13 14



MINISTRY OF INTERIOR – AFGHAN NATIONAL POLICE
 PROVINCIAL FIRE STATION TYPE – B
 SITE-ADAPT CONSTRUCTION DOCUMENTS

MACTEC Logo.png



DESIGNED G. LOVE	AFGHAN NATIONAL SECURITY FORCE COMPREHENSIVE PLAN FOR FACILITIES DEVELOPMENT	SCALE AS SHOWN	PROJECT NO. 6151-08-0328
BY M. BUDSOCK	MINISTRY OF INTERIOR (MoI) AFGHAN NATIONAL POLICE PROVINCIAL FIRE STATION – TYPE-B	COVER SHEET	00-G-000
CHECKED G. LOVE			
DATE D. WHEELER			
30 JUNE 2010			
REV	DATE	BY	DESCRIPTION
0	06/30/10		SITE ADAPT CONSTRUCTION PLANS

FOR CONTRACTOR SOLICITATION ONLY

\\ntm-fnl\proj\BAC\Engineering\000 FY 2011 BPA in Progress\MAP\STANDARD TO DEVELOP Fire Station\MACTEC\00-G-000.dwg 03/14/2011 4:31pm N204818F

SHEET LIST TABLE	
Sheet Number	Sheet Title
00 GENERAL	
00-G-000	COVER SHEET
00-G-001	INDEX SHEET
00-C-001	GENERIC SITE PLAN
00-C-002	GENERIC LAYOUT PLAN - SHEET 1 OF 2
00-C-003	GENERIC LAYOUT PLAN - SHEET 2 OF 2
00-C-004	GENERIC UTILITY PLAN
00-C-005	SIGNAGE & MARKING PLAN
00-C-101	WATER SUPPLY TANK PLAN & ELEVATION
00-C-102	CISTERN TANK PLAN & ELEVATION
00-C-501	CONSTRUCTION DETAILS 1
00-C-502	CONSTRUCTION DETAILS 2
00-C-503	CONSTRUCTION DETAILS 3
00-C-504	CONSTRUCTION DETAILS 4
00-C-505	CONSTRUCTION DETAILS 5
00-C-506	CONSTRUCTION DETAILS 6
00-C-507	CONSTRUCTION DETAILS 7
00-C-508	CONSTRUCTION DETAILS 8
00-C-509	CONSTRUCTION DETAILS 9
00-C-510	CONSTRUCTION DETAILS 10
00-C-511	CONSTRUCTION DETAILS 11
00-C-512	CONSTRUCTION DETAILS 12
00-C-513	CONSTRUCTION DETAILS 13
00-C-514	CONSTRUCTION DETAILS 14
00-C-515	CONSTRUCTION DETAILS 15
00-C-516	CONSTRUCTION DETAILS 16
00-C-517	CIVIL SITE-ADAPT TECHNICAL REQUIREMENTS - 1
00-C-518	CIVIL SITE-ADAPT TECHNICAL REQUIREMENTS - 2
00-C-601	WATER SYSTEM SCHEDULE
00-C-701	ROAD ALIGNMENT TABLES
00-S-001	STRUCTURAL NOTES - 1
00-S-002	STRUCTURAL NOTES - 2
00-S-003	STRUCTURAL NOTES - 3
00-S-004	STRUCTURAL NOTES - 4
00-S-501	STANDARD CONCRETE DETAILS - 1
00-S-502	TYPICAL CONCRETE DETAILS - 2
00-S-503	STANDARD MASONRY DETAILS
00-S-504	TYPICAL TOP OF CMU WALL SUPPORTS & SLAB SECTIONS FOR LATRINES
00-S-505	STANDARD STEEL DETAILS
00-S-506	FUELING STRUCTURAL DETAILS
00-F-001	FUELING GENERAL NOTES, LEGEND & ABBREVIATIONS
00-F-101	FUEL SYSTEM SITE PLAN
00-F-201	FUELING TANK ELEVATIONS
00-F-501	FUELING SYSTEM DETAILS 1
00-F-502	FUELING SYSTEM DETAILS 2
00-F-503	FUELING SYSTEM DETAILS 3
00-F-601	FUELING SYSTEM SCHEDULE
00-F-701	FUELING FLOW DIAGRAM
00-M-001	MECHANICAL GENERAL NOTES, LEGEND & ABBREVIATIONS
00-E-001	LEGENDS AND GENERAL NOTES
00-E-002	ABBREVIATIONS
00-E-101	ELECTRICAL SITE POWER DISTRIBUTION
00-E-102	ELECTRICAL SITE GROUNDING PLAN
00-E-103	FUELING SYSTEM POWER PLAN
00-E-104	FUELING SYSTEM GROUNDING PLAN
00-E-501	ELECTRICAL DETAILS
00-E-502	ELECTRICAL DETAILS

00-E-503	ELECTRICAL DETAILS
00-E-504	ELECTRICAL DETAILS
00-E-601	SINGLE LINE DIAGRAM
00-E-602	ELECTRICAL SCHEDULES
01 FIRE STATION BUILDING	
01-A-001	LIFE SAFETY PLAN
01-A-002	SECOND FLOOR FIRE SAFETY
01-A-101	FIRST FLOOR PLAN
01-A-102	SECOND FLOOR PLAN
01-A-111	FIRST FLOOR REFLECTED CEILING PLAN
01-A-112	SECOND FLOOR REFLECTED CEILING PLAN
01-A-151	ROOF PLAN & DETAILS
01-A-201	ELEVATIONS
01-A-301	BUILDING SECTIONS
01-A-401	ENLARGED KITCHEN FLOOR PLAN & ELEV
01-A-402	ENLARGED TOILET PLANS & ELEVATION
01-A-403	DETAILS
01-A-404	DETAILS
01-A-451	STAIRS SECTION & ENLARGED PLAN
01-A-501	WALL SECTIONS
01-A-502	WALL SECTIONS
01-A-550	DETAILS
01-A-601	ROOM FINISH SCHEDULE
01-A-602	DOOR & WINDOW SCHEDULE
01-A-701	DETAILS
01-A-702	DETAILS
01-S-101	FIRE STATION FOUNDATION PLAN
01-S-102	FIRE STATION ROOF PLAN
01-S-103	FIRE STATION SECOND FLOOR SLAB FRAMING PLAN
01-S-104	FIRE STATION ROOF SLAB FRAMING PLAN
01-S-301	FIRE STATION SECTION A
01-S-302	FIRE STATION SECTION B
01-S-303	FIRE STATION VEHICLE BAY FRAME SECTION
01-S-304	FIRE STATION VEHICLE BAY FRAME SECTION
01-S-501	FIRE STATION STAIR REINFORCEMENT PLANS & SECTIONS
01-S-502	FIRE STATION CONCRETE DETAILS
01-S-503	FIRE STATION TRUSS DETAILS
01-S-504	FIRE STATION COMBINED FOOTING DETAILS 1 OF 3
01-S-505	FIRE STATION COMBINED FOOTING DETAILS 2 OF 3
01-S-506	FIRE STATION COMBINED FOOTING DETAILS 3 OF 3
01-S-601	FIRE STATION 2ND FLOOR CONCRETE BEAM & JOIST REINF SCHEDULE
01-S-602	FIRE STATION ROOF CONCRETE BEAM & JOIST REINF SCHEDULE
01-S-603	FIRE STATION SLAB REINFORCING SCHEDULE
01-S-604	FIRE STATION CONCRETE COLUMN SCHEDULE
01-S-605	FIRE STATION COLUMN SCHEDULE
01-M-101	FIRE STATION FIRST FLOOR MECHANICAL HVAC PLAN
01-M-102	FIRE STATION SECOND FLOOR MECHANICAL HVAC PLAN
01-M-501	FIRE STATION MECHANICAL HVAC DETAILS
01-M-601	FIRE STATION MECHANICAL HVAC SCHEDULES
01-P-101	FIRE STATION FIRST FLOOR WASTE & VENT PLUMBING PLAN
01-P-102	FIRE STATION SECOND FLOOR WASTE & VENT PLUMBING PLAN
01-P-103	FIRE STATION FIRST FLOOR DOMESTIC WATER & COM. AIR PLUMBING PLAN
01-P-104	FIRE STATION SECOND FLOOR DOMESTIC WATER PLUMBING PLAN
01-P-501	FIRE STATION PLUMBING DETAILS
01-P-502	FIRE STATION PLUMBING DETAILS

01-P-503	FIRE STATION PLUMBING DETAILS
01-P-601	FIRE STATION WASTE AND VENT RISER DIAGRAM - TOILET ROOMS
01-P-602	FIRE STATION DOMESTIC WATER RISER DIAGRAM - TOILET ROOMS
01-P-603	FIRE STATION PLUMBING SCHEDULES AND LEGEND
01-E-101	FIRE STATION FIRST FLOOR LIGHTING PLAN
01-E-102	FIRE STATION SECOND FLOOR LIGHTING PLAN
01-E-103	FIRE STATION FIRST FLOOR POWER & SYSTEM PLAN
01-E-104	FIRE STATION FIRST FLOOR POWER PLAN - MECHANICAL
01-E-105	FIRE STATION SECOND FLOOR POWER & SYSTEM PLAN
01-E-106	FIRE STATION SECOND FLOOR POWER PLAN - MECHANICAL
01-E-107	FIRE STATION SECOND FLOOR POWER & MISC PLAN
01-E-501	FIRE STATION RISER DIAGRAMS
01-E-502	FIRE STATION ELECTRICAL DETAILS
01-E-601	FIRE STATION ELECTRICAL SCHEDULES
01-E-602	FIRE STATION ELECTRICAL SCHEDULES
02 WOOD STOVE KITCHEN	
02-A-101	WOOD STOVE KITCHEN FLOOR PLAN
02-A-201	WOOD STOVE KITCHEN ELEVATIONS & SECTIONS
02-A-501	WOOD STOVE KITCHEN DOOR & WINDOW DETAILS
02-A-601	WOOD STOVE KITCHEN DOOR SCHEDULE
02-S-101	WOOD STOVE KITCHEN STRUCTURAL PLANS
02-S-501	WOOD STOVE KITCHEN STRUCTURAL DETAILS
02-E-101	WOOD STOVE KITCHEN ELECTRICAL PLAN
02-E-102	WOOD STOVE KITCHEN LIGHTNING PROTECTION PLAN
03 GUARD HOUSE	
03-A-101	GUARD HOUSE FLOOR PLAN, ROOF PLAN & REFLECTED CEILING
03-A-201	GUARD HOUSE ELEVATIONS & DETAILS
03-A-501	GUARD HOUSE DOOR & WINDOW DETAILS
03-A-502	GUARD HOUSE TOILET ENLARGED PLAN & DETAILS
03-A-601	GUARD HOUSE DOOR & WINDOW SCHEDULE
03-A-602	GUARD HOUSE ROOM FINISH SCHEDULE
03-S-101	GUARD HOUSE FOUNDATION & ROOF FRAMING PLAN
03-S-301	GUARD HOUSE STRUCTURAL DETAILS
03-S-601	GUARD HOUSE STRUCTURAL SCHEDULES
03-M-101	GUARD HOUSE MECHANICAL (HVAC) PLAN
03-P-101	GUARD HOUSE PLUMBING PLANS, SCHEDULES & LEGEND
03-P-501	GUARD HOUSE PLUMBING DETAILS
03-P-502	GUARD HOUSE PLUMBING DETAILS
03-E-101	GUARD HOUSE ELECTRICAL PLANS, SCHEDULES & DETAILS
03-E-102	GUARD HOUSE ROOF LIGHTNING PLAN
04 TRAINING TOWER	
04-A-101	TRAINING TOWER FLOOR PLANS
04-A-201	TRAINING TOWER ELEVATIONS
04-A-301	TRAINING TOWER SECTION
04-A-501	TRAINING TOWER DOOR & WINDOW DETAILS
04-A-601	TRAINING TOWER DOOR & WINDOW SCHEDULE
04-A-602	TRAINING TOWER FINISH SCHEDULE
04-S-101	TRAINING TOWER FOUNDATION PLAN
04-S-102	TRAINING TOWER FRAMING PLANS
04-S-301	TRAINING TOWER SECTION OF FRAME-B
04-S-501	TRAINING TOWER COLUMN DETAILS
04-S-801	TRAINING TOWER CONCRETE BEAM SCHEDULE

04-E-101	TRAINING TOWER ELECTRICAL PLAN
05 GUARD TOWER	
05-A-101	GUARD TOWER FLOOR PLAN & ROOF PLAN
05-A-201	GUARD TOWER ELEVATIONS
05-A-301	GUARD TOWER SECTIONS
05-A-501	GUARD TOWER DOOR & WINDOW DETAILS
05-A-601	GUARD TOWER DOOR & WINDOW SCHEDULE
05-A-602	GUARD TOWER ROOM FINISH SCHEDULE
05-S-101	GUARD TOWER FOUNDATION & ROOF FRAMING PLAN
05-S-601	GUARD TOWER STRUCTURAL SECTIONS & SCHEDULES
05-M-101	GUARD TOWER MECHANICAL (HVAC) PLAN
05-E-101	GUARD TOWER ELECTRICAL PLANS, SCHEDULES & DETAILS
05-E-102	GUARD TOWER LIGHTNING PROTECTION SYSTEM
06 GUARD SHACK	
06-A-101	GUARD SHACK PLAN, ELEVATIONS, BUILDING SECTION & EAVE DETAIL
06-A-501	GUARD SHACK DOOR DETAILS
06-A-601	GUARD SHACK DOOR & WINDOW SCHEDULE
06-A-602	GUARD SHACK ROOM FINISH SCHEDULE
06-S-101	GUARD SHACK FOUND. PLAN ROOF FRAMING PLAN, DTLS & SCHEDULES
06-S-301	GUARD SHACK SECTION OF FRAME-A
06-M-101	GUARD SHACK MECHANICAL (HVAC) PLAN
06-E-101	GUARD SHACK ELECTRICAL PLANS, SCHEDULES & DETAILS
06-E-1 02 GUARD SHACK LIGHTNING PROTECTION SYSTEM	
07 SITE POWER HOUSE	
07-A-101	SITE POWER HOUSE FLOOR PLAN, ROOF PLAN & GENERAL NOTES
07-A-201	SITE POWER HOUSE ELEVATIONS, SECTIONS & DETAILS
07-A-202	SITE POWER HOUSE DOOR ELEVATION & SECTION
07-A-501	SITE POWER HOUSE DOOR & WINDOW DETAILS
07-A-601	SITE POWER HOUSE DOOR & LOUVER SCHEDULE
07-A-602	SITE POWER HOUSE ROOM FINISH SCHEDULE
07-S-101	SITE POWER HOUSE FOUNDATION PLAN
07-S-102	SITE POWER HOUSE ROOF FRAMING & REINFORCEMENT PLAN
07-S-301	SITE POWER HOUSE SECTIONS
07-S-501	SITE POWER HOUSE STRUCTURAL BEAM DETAIL
07-M-101	SITE POWER HOUSE MECHANICAL (HVAC) PLAN
07-E-101	SITE POWER HOUSE ELECTRICAL PLANS, SCHEDULES & DETAILS
07-E-102	SITE POWER HOUSE ELECTRICAL EQUIPMENT DETAILS
07-E-103	SITE POWER HOUSE LIGHTNING PROTECTION SYSTEM
08 WELL HOUSE	
08-A-101	WELL HOUSE ROOF & FLOOR PLAN, ELEVATION & SECTION
08-A-601	WELL HOUSE DOOR & WINDOW SCHEDULE
08-A-602	WELL HOUSE ROOM FINISH SCHEDULE
08-S-101	FOUNDATION, ROOF FRAMING PLAN, DETAILS & SCHEDULES
08-M-101	WELL HOUSE MECHANICAL (HVAC) PLAN
08-E-101	WELL HOUSE ELECTRICAL PLANS, SCHEDULES & DETAILS
08-E-102	WELL HOUSE LIGHTNING PROTECTION SYSTEM



DATE	REV	DESCRIPTION
06/30/10	0	SITE ADAPT CONSTRUCTION PLANS

DESIGNED	BY	DATE
Q. LOVE	Q. LOVE	06/30/10

PROJECT NO.	SCALE
6151-08-0328	AS SHOWN

00-G-001

AFGHAN NATIONAL SECURITY FORCE COMPREHENSIVE PLAN FOR FACILITIES DEVELOPMENT
 MINISTRY OF INTERIOR (MoI) - AFGHAN NATIONAL POLICE
 PROVINCIAL FIRE STATION - TYPE-B
 INDEX SHEET
 DESIGNED: Q. LOVE, CHECKED: C. BUDSOCK, DRAWN: Q. LOVE, DATE: 06/30/10, REV: 0, BY: SUBAPP, DESCRIPTION: SITE ADAPT CONSTRUCTION PLANS, 07/14/2011 4:28pm, M020408F



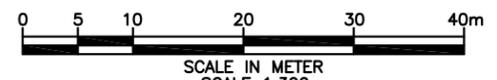
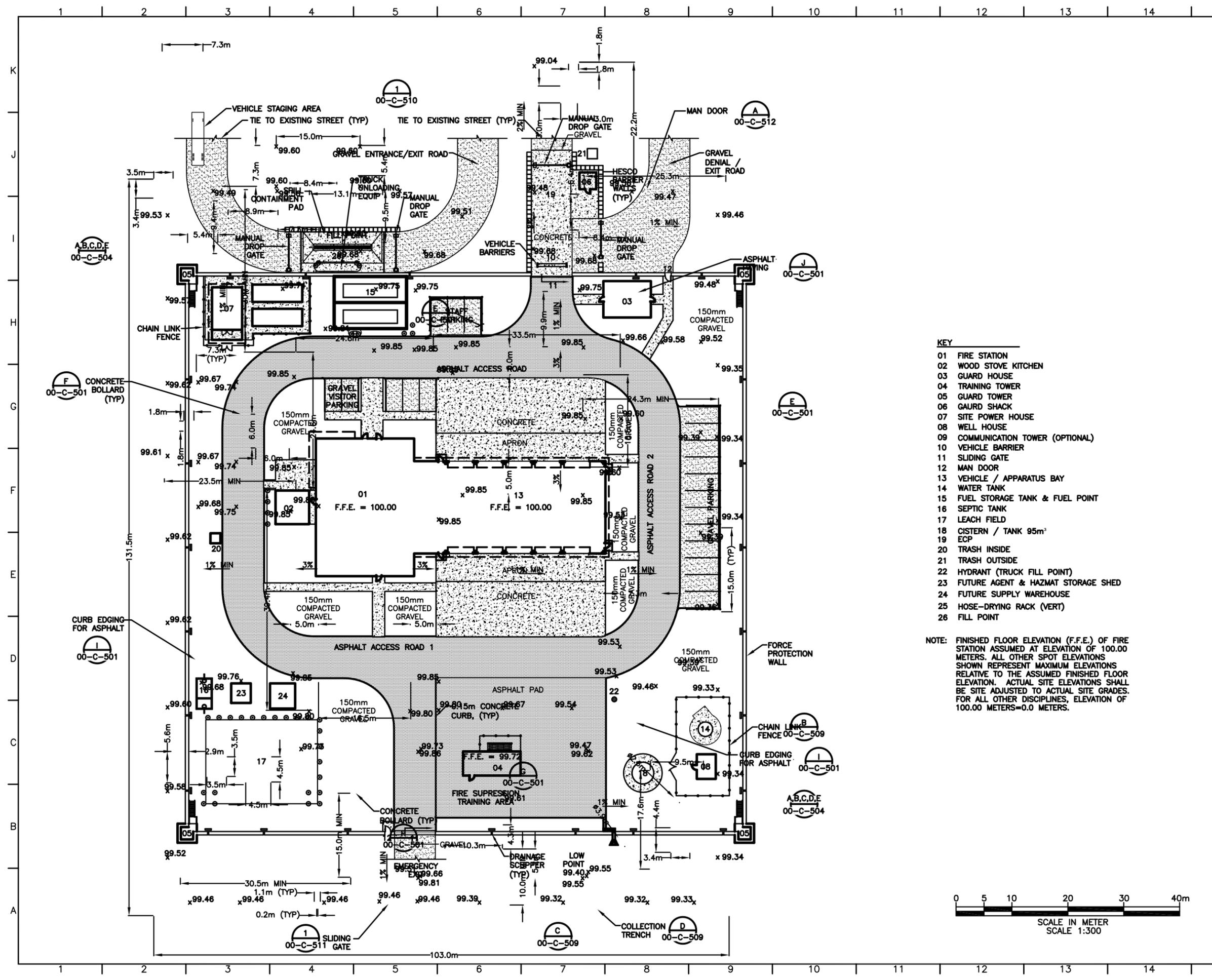
- KEY**
- 01 FIRE STATION
 - 02 WOOD STOVE KITCHEN
 - 03 GUARD HOUSE
 - 04 TRAINING TOWER
 - 05 GUARD TOWER
 - 06 GAURD SHACK
 - 07 SITE POWER HOUSE
 - 08 WELL HOUSE
 - 09 COMMUNICATION TOWER (OPTIONAL)
 - 10 VEHICLE BARRIER
 - 11 SLIDING GATE
 - 12 MAN DOOR
 - 13 VEHICLE / APPARATUS BAY
 - 14 WATER TANK
 - 15 FUEL STORAGE TANK & FUEL POINT
 - 16 SEPTIC TANK
 - 17 LEACH FIELD
 - 18 CISTERN / TANK 95m³
 - 19 ECP
 - 20 TRASH INSIDE
 - 21 TRASH OUTSIDE
 - 22 HYDRANT (TRUCK FILL POINT)
 - 23 FUTURE AGENT & HAZMAT STORAGE SHED
 - 24 FUTURE SUPPLY WAREHOUSE
 - 25 HOSE-DRYING RACK (VERT)
 - 26 FILL POINT

NOTE: FINISHED FLOOR ELEVATION (F.F.E.) OF FIRE STATION ASSUMED AT ELEVATION OF 100.00 METERS. ALL OTHER SPOT ELEVATIONS SHOWN REPRESENT MAXIMUM ELEVATIONS RELATIVE TO THE ASSUMED FINISHED FLOOR ELEVATION. ACTUAL SITE ELEVATIONS SHALL BE SITE ADJUSTED TO ACTUAL SITE GRADES. FOR ALL OTHER DISCIPLINES, ELEVATION OF 100.00 METERS=0.0 METERS.

REV	DATE	BY	DESCRIPTION
0	06/30/10		SITE ADAPT CONSTRUCTION PLANS

DESIGNED	S. AGUDELO	AFGHAN NATIONAL SECURITY FORCE
DRAWN	C. BUDSOCK	COMPREHENSIVE PLAN FOR FACILITIES DEVELOPMENT
CHECKED	J. STODER	MINISTRY OF INTERIOR (MoI) AFGHAN NATIONAL POLICE
DATE	30 JUNE 2010	PROVINCIAL FIRE STATION - TYPE-B

SCALE	AS SHOWN
PROJECT NO.	6151-08-0328
00-C-001	





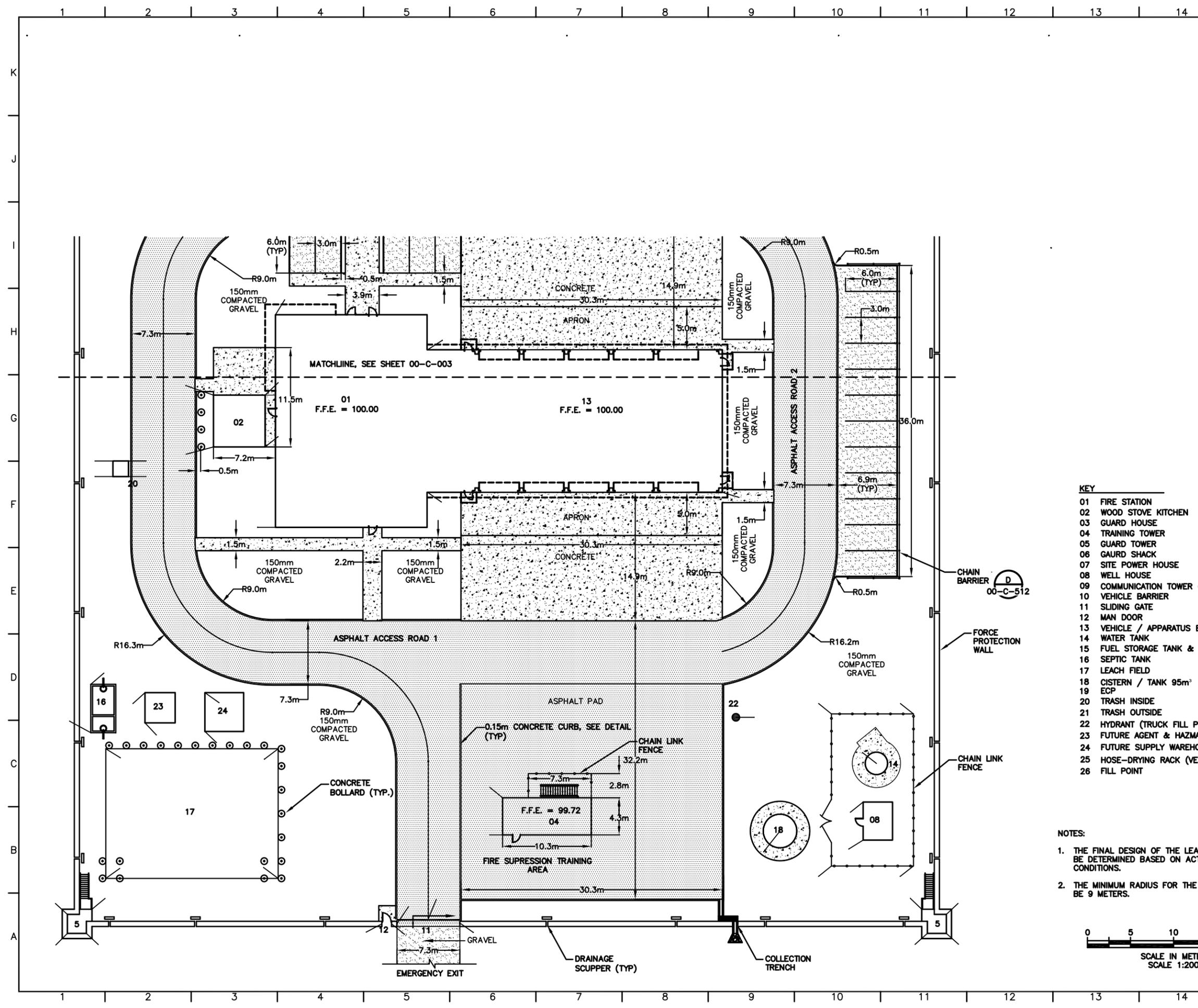
REV	DATE	BY	DESCRIPTION
0	06/30/10		SITE ADAPT CONSTRUCTION PLANS

DESIGNED BY: S. AGUDELO
 DRAWN BY: C. BUDSOCK
 CHECKED BY: J. STODER
 DATE: 30 JUNE 2010

AFGHAN NATIONAL SECURITY FORCE
 COMPREHENSIVE PLAN FOR
 FACILITIES DEVELOPMENT
 MINISTRY OF INTERIOR (MoI) - AFGHAN NATIONAL POLICE
 PROVINCIAL FIRE STATION - TYPE-B
 GENERIC LAYOUT PLAN - SHEET 1 OF 2

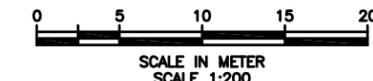
SCALE: AS SHOWN
 PROJECT NO: 6151-08-0328
 SHEET: 00-C-002

\\nam-fsl\sl\BAC\Engineering\000 FY 2011 BPA in Progress\AFN\STANDARD TO DEVELOP Fire Station\MACTEC\00-C-002.dwg 03/14/2011 4:33pm N34826F



- KEY**
- 01 FIRE STATION
 - 02 WOOD STOVE KITCHEN
 - 03 GUARD HOUSE
 - 04 TRAINING TOWER
 - 05 GUARD TOWER
 - 06 GAURD SHACK
 - 07 SITE POWER HOUSE
 - 08 WELL HOUSE
 - 09 COMMUNICATION TOWER (OPTIONAL)
 - 10 VEHICLE BARRIER
 - 11 SLIDING GATE
 - 12 MAN DOOR
 - 13 VEHICLE / APPARATUS BAY
 - 14 WATER TANK
 - 15 FUEL STORAGE TANK & FUEL POINT
 - 16 SEPTIC TANK
 - 17 LEACH FIELD
 - 18 CISTERN / TANK 95m³
 - 19 ECP
 - 20 TRASH INSIDE
 - 21 TRASH OUTSIDE
 - 22 HYDRANT (TRUCK FILL POINT)
 - 23 FUTURE AGENT & HAZMAT STORAGE SHED
 - 24 FUTURE SUPPLY WAREHOUSE
 - 25 HOSE-DRYING RACK (VERT)
 - 26 FILL POINT

- NOTES:**
1. THE FINAL DESIGN OF THE LEACH FIELD TO BE DETERMINED BASED ON ACTUAL SITE CONDITIONS.
 2. THE MINIMUM RADIUS FOR THE ROADS SHALL BE 9 METERS.

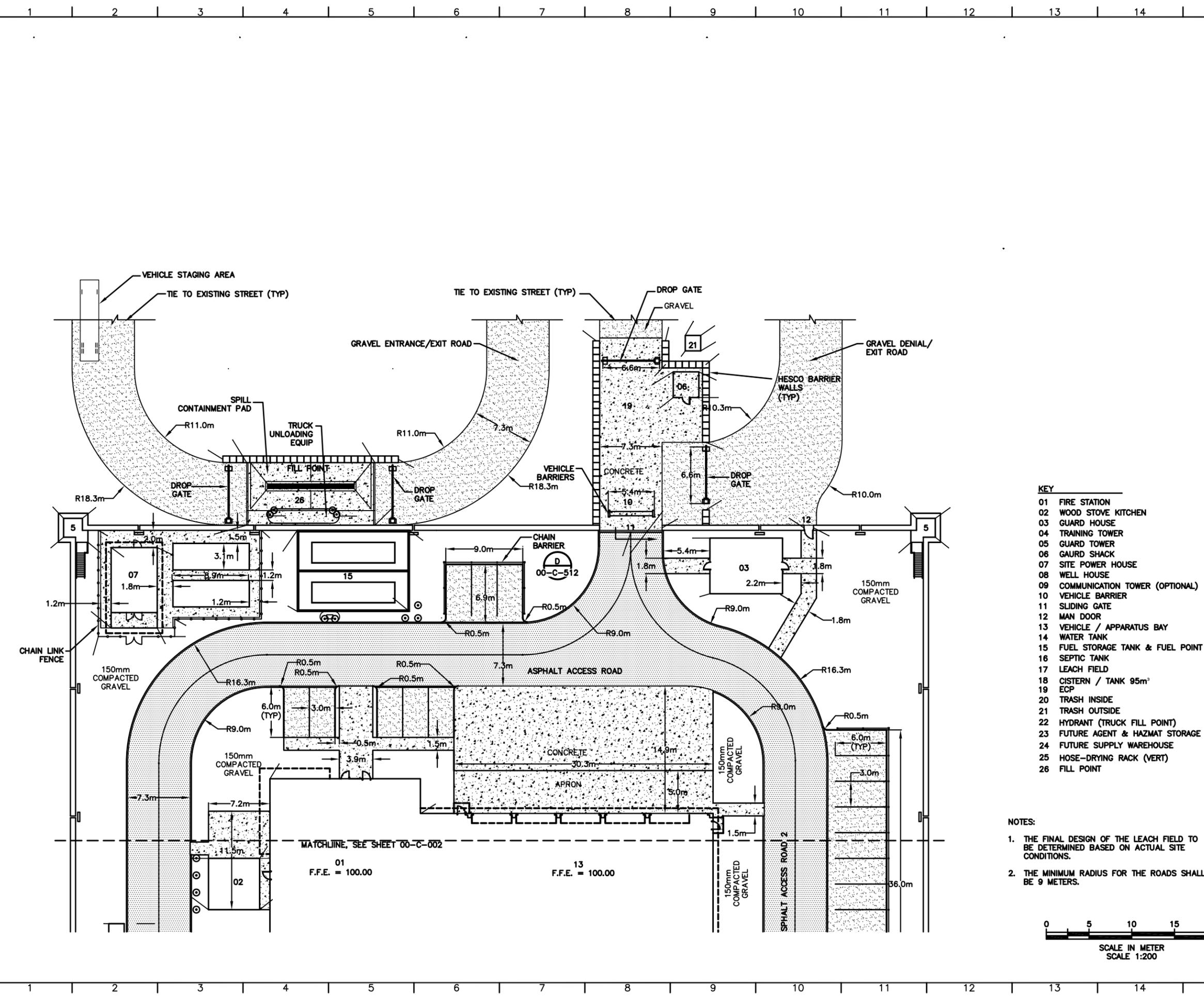




DATE	REV	DESCRIPTION
06/30/10	0	SITE ADAPT CONSTRUCTION PLANS

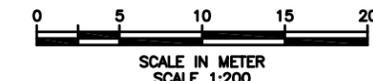
DESIGNED S. AGUDELO	AFGHAN NATIONAL SECURITY FORCE COMPREHENSIVE PLAN FOR FACILITIES DEVELOPMENT
DRAWN C. BUDSOCK	MINISTRY OF INTERIOR (MoI) AFGHAN NATIONAL POLICE PROVINCIAL FIRE STATION - TYPE-B
CHECKED J. STODER	
DATE 30 JUNE 2010	GENERIC LAYOUT PLAN - SHEET 2 OF 2

00-C-003

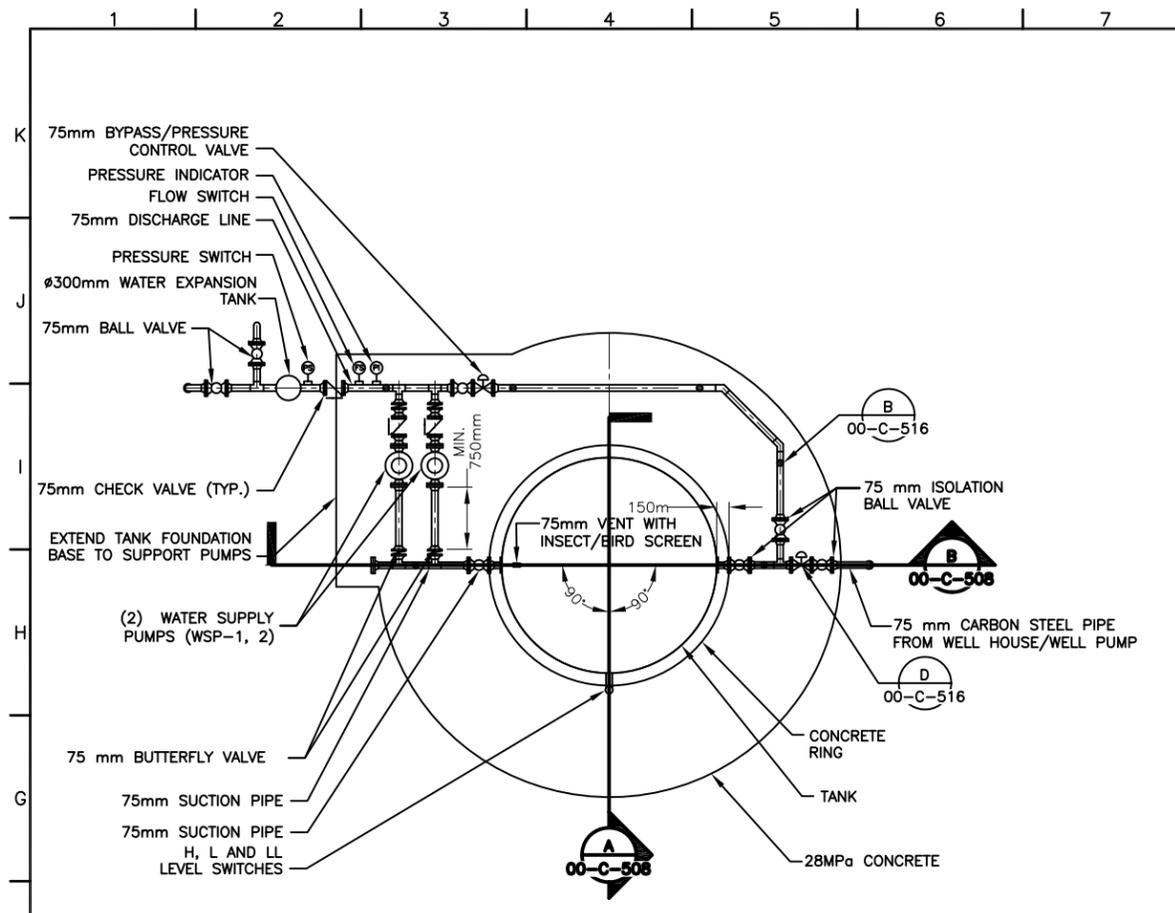


- KEY**
- 01 FIRE STATION
 - 02 WOOD STOVE KITCHEN
 - 03 GUARD HOUSE
 - 04 TRAINING TOWER
 - 05 GUARD TOWER
 - 06 GAURD SHACK
 - 07 SITE POWER HOUSE
 - 08 WELL HOUSE
 - 09 COMMUNICATION TOWER (OPTIONAL)
 - 10 VEHICLE BARRIER
 - 11 SLIDING GATE
 - 12 MAN DOOR
 - 13 VEHICLE / APPARATUS BAY
 - 14 WATER TANK
 - 15 FUEL STORAGE TANK & FUEL POINT
 - 16 SEPTIC TANK
 - 17 LEACH FIELD
 - 18 CISTERN / TANK 95m³
 - 19 ECP
 - 20 TRASH INSIDE
 - 21 TRASH OUTSIDE
 - 22 HYDRANT (TRUCK FILL POINT)
 - 23 FUTURE AGENT & HAZMAT STORAGE SHED
 - 24 FUTURE SUPPLY WAREHOUSE
 - 25 HOSE-DRYING RACK (VERT)
 - 26 FILL POINT

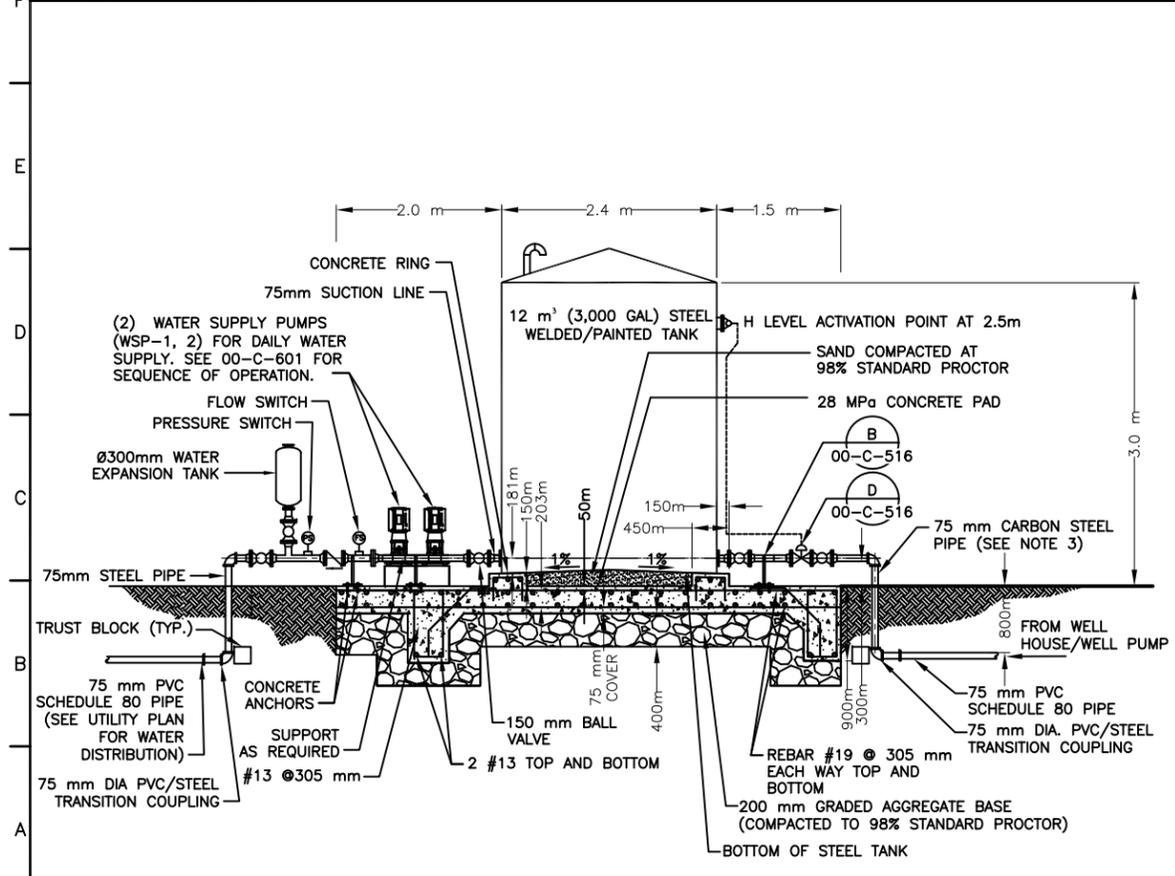
- NOTES:**
1. THE FINAL DESIGN OF THE LEACH FIELD TO BE DETERMINED BASED ON ACTUAL SITE CONDITIONS.
 2. THE MINIMUM RADIUS FOR THE ROADS SHALL BE 9 METERS.



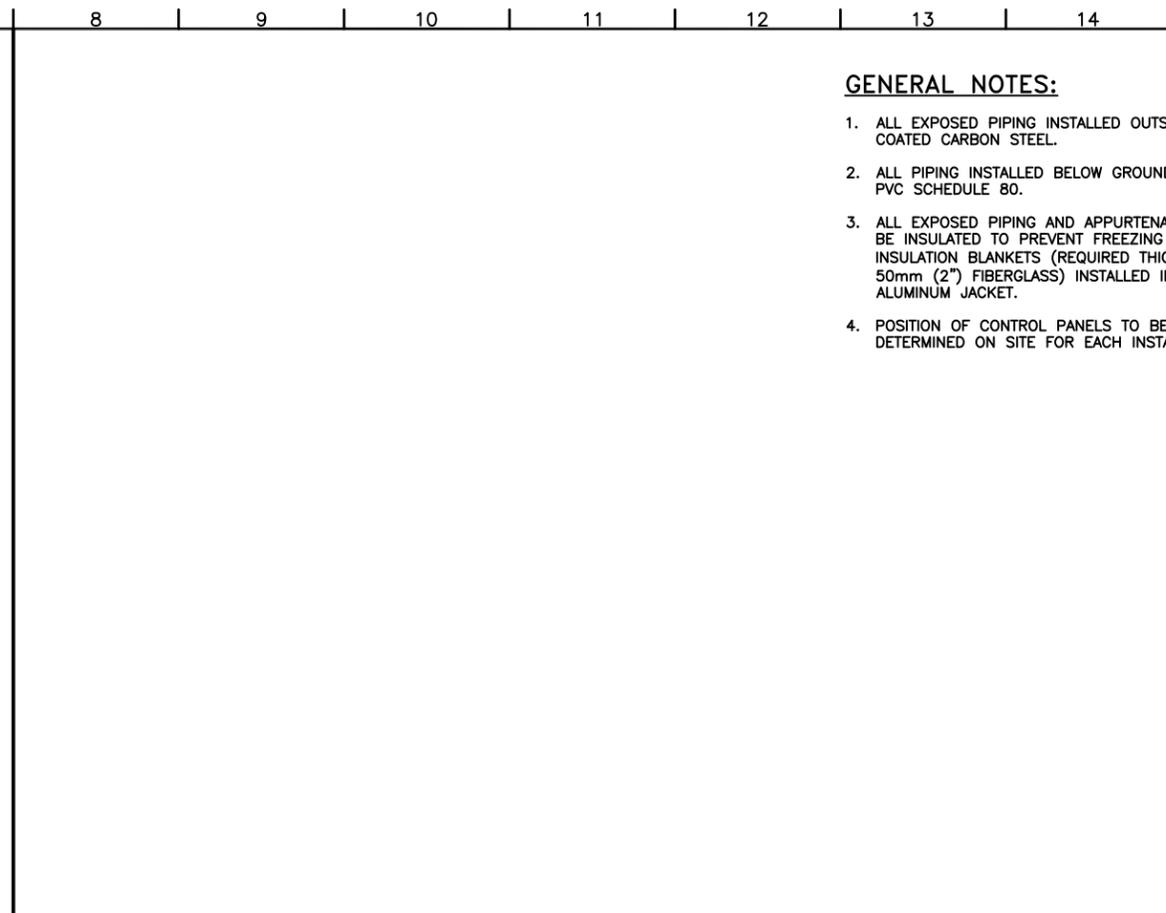
\\user-filing\lsc\Engineering\000 FY 2011 RFPs in Progress\AFIP\STANDARD TO DEVELOP Fire Station\MACTEC\00-C-003.dwg 03/14/2011 4:36pm NS/AN/DF



1 12 m³ (3,000 GAL) WATER SUPPLY TANK PLAN VIEW
00-C-101 SCALE N.T.S.



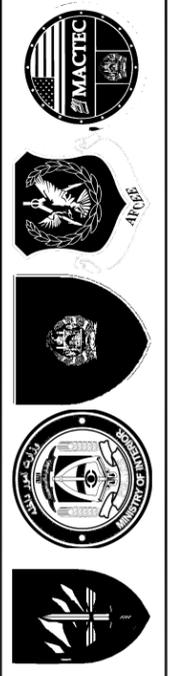
B 12 m³ (3,000 GAL) WATER SUPPLY TANK SECTION VIEW
00-C-101 SCALE N.T.S.



A 12 m³ (3,000 GAL) WATER SUPPLY TANK SECTION VIEW
00-C-101 SCALE N.T.S.

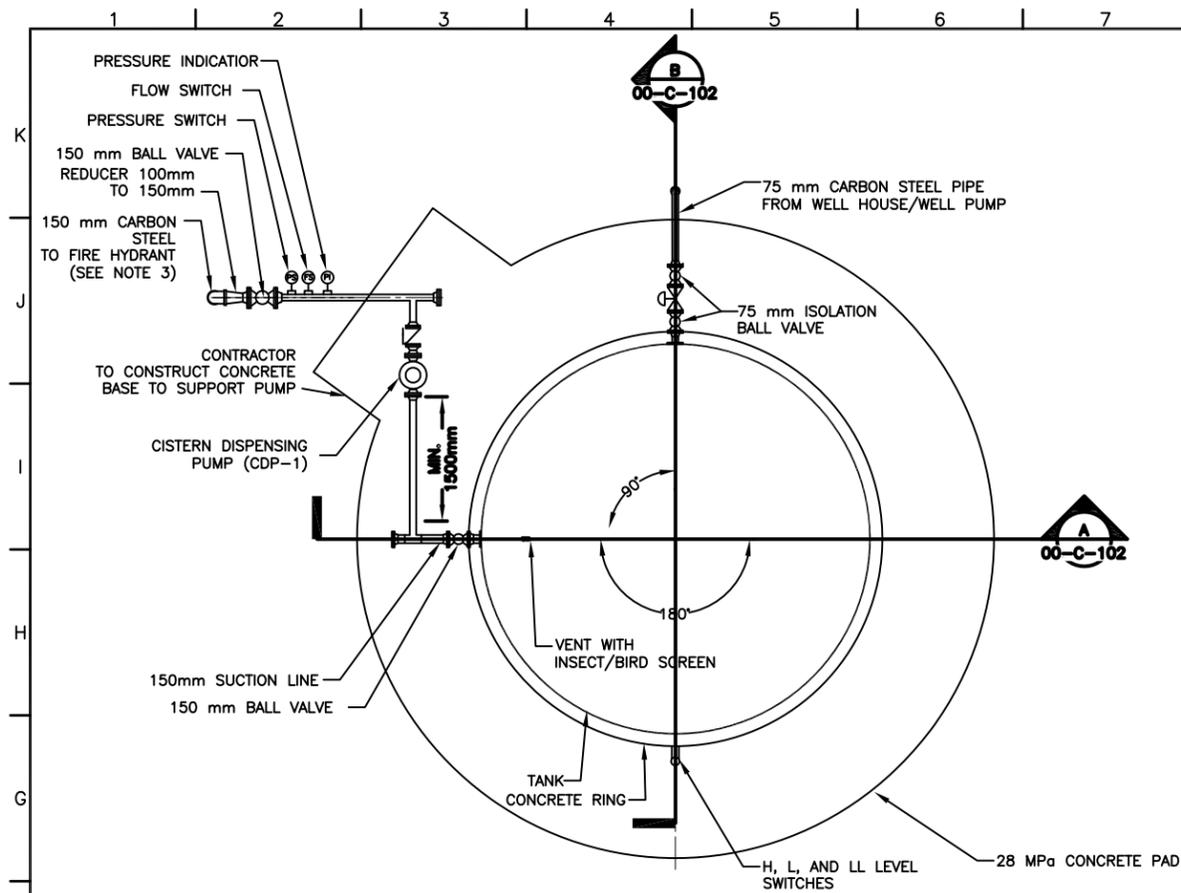
GENERAL NOTES:

1. ALL EXPOSED PIPING INSTALLED OUTSIDE TO BE COATED CARBON STEEL.
2. ALL PIPING INSTALLED BELOW GROUND TO BE PVC SCHEDULE 80.
3. ALL EXPOSED PIPING AND APPURTENANCES WILL BE INSULATED TO PREVENT FREEZING WITH INSULATION BLANKETS (REQUIRED THICKNESS 50mm (2") FIBERGLASS) INSTALLED IN ALUMINUM JACKET.
4. POSITION OF CONTROL PANELS TO BE DETERMINED ON SITE FOR EACH INSTALLATION.

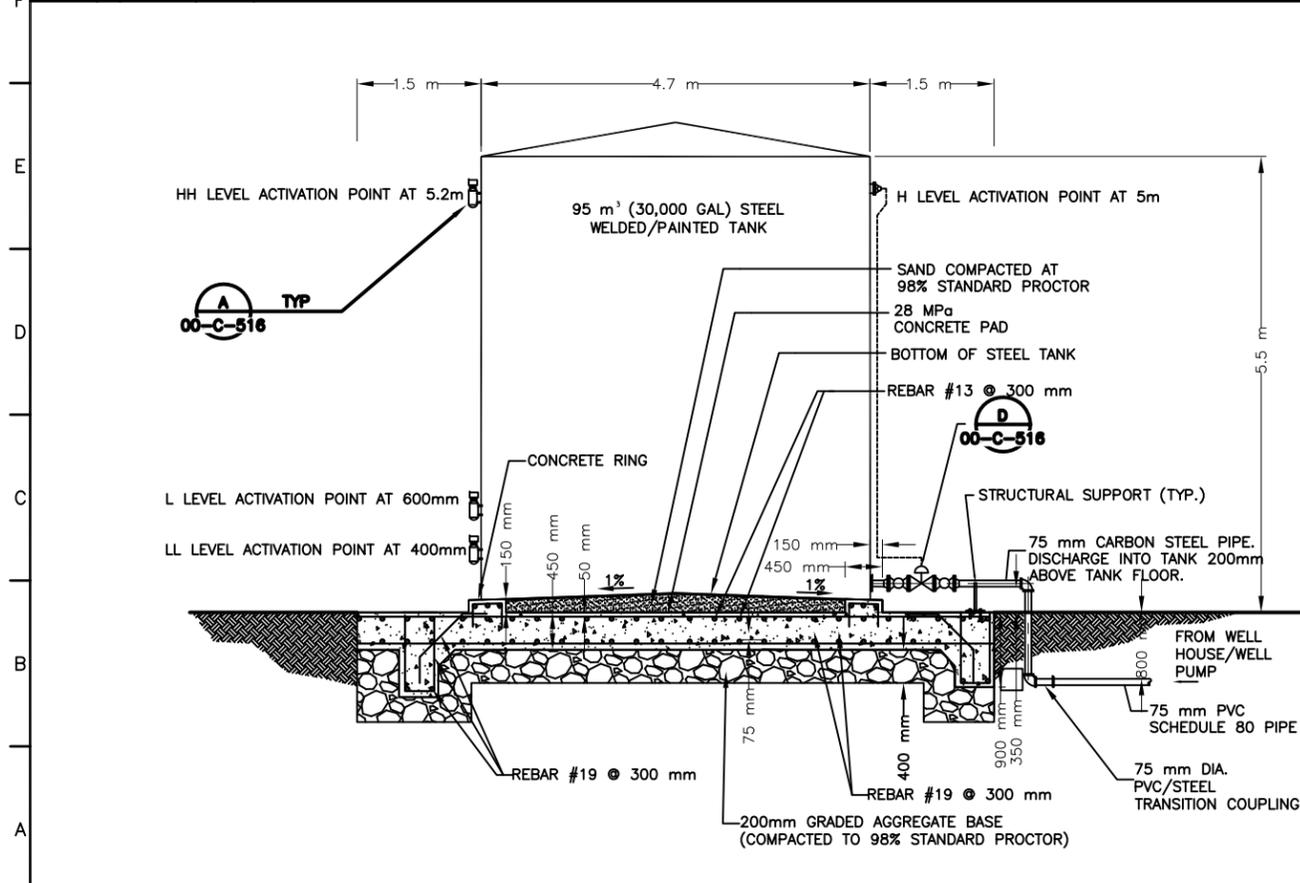


DESIGNED	DRAWN	CHECKED	DATE	REV	DATE	DESCRIPTION
M. ILIC	J. OILE	G. STODER	06/30/10	0		SITE ADAPT CONSTRUCTION PLANS
<p>AFGHAN NATIONAL SECURITY FORCE COMPREHENSIVE PLAN FOR FACILITIES DEVELOPMENT MINISTRY OF INTERIOR (MoI) PROVINCIAL FIRE STATION - TYPE-B WATER SUPPLY TANK PLAN & ELEVATION</p>						
SCALE AS SHOWN						
PROJECT NO. 6151-08-0328						
00-C-101						

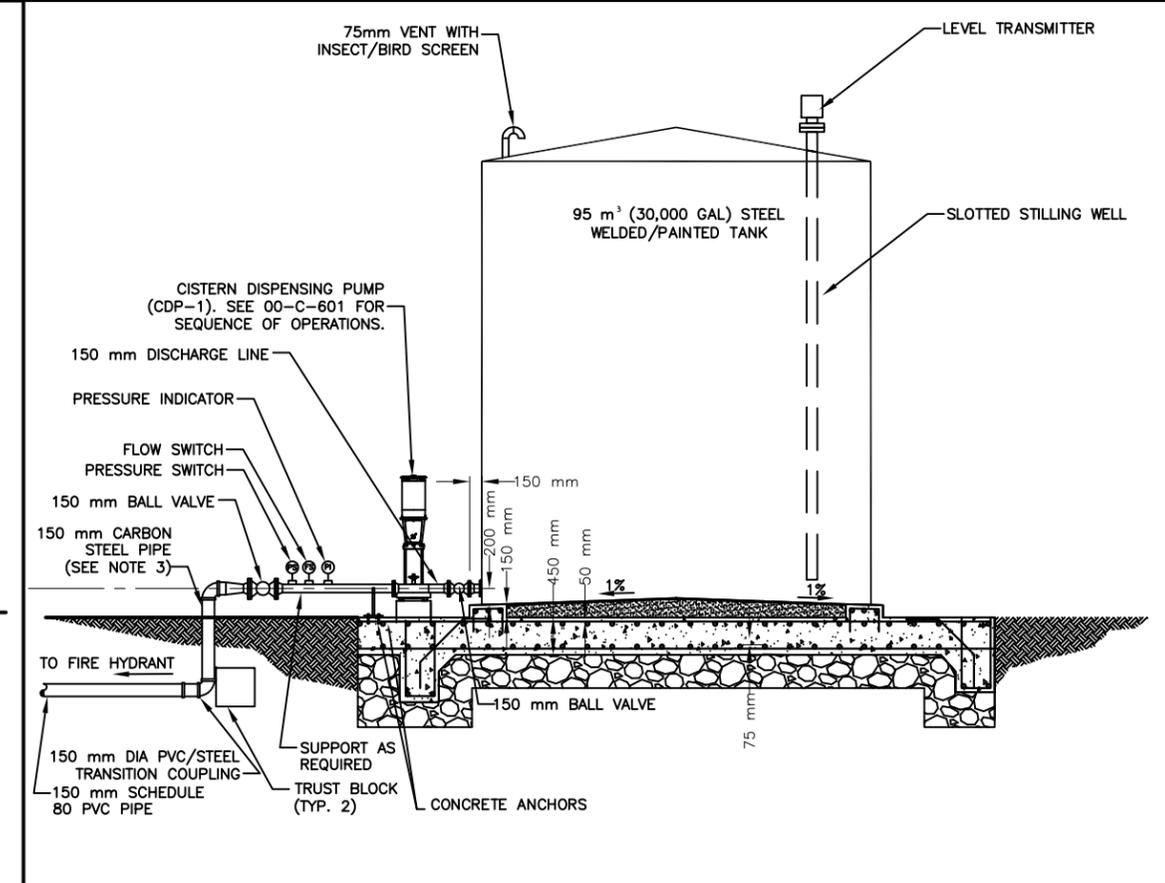
\\user-filing\lsc\Engineering\000 FY 2011 RFPs in Progress\AFN\STANDARD TO DEVELOP Fire Station\MACTEC\00-C-101.dwg 03/14/2011 4:43pm NDU\BLR



1 CISTERN - 95 m³ (25,000 GAL.) TANK PLAN VIEW
 00-C-102 SCALE N.T.S.

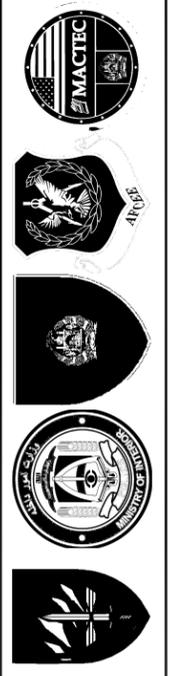


B CISTERN - 95 m³ (25,000 GAL.) TANK SECTION VIEW (TYP)
 00-C-102 SCALE N.T.S.



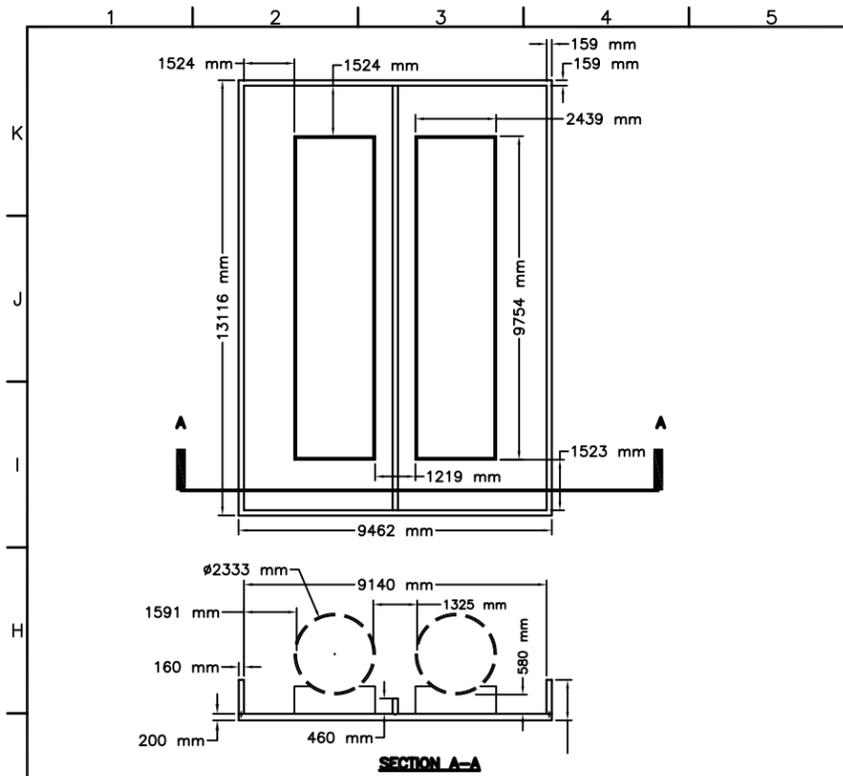
A CISTERN - 95 m³ (25,000 GAL.) TANK SECTION VIEW (TYP)
 00-C-102 SCALE N.T.S.

- NOTES:**
1. ALL EXPOSED PIPING INSTALLED OUTSIDE TO BE COATED CARBON STEEL.
 2. ALL PIPING INSTALLED BELOW GROUND TO BE PVC SCHEDULE 80.
 3. ALL EXPOSED PIPING AND APPURTENANCES WILL BE INSULATED TO PREVENT FREEZING WITH INSULATION BLANKETS (REQUIRED THICKNESS 50mm (2") FIBERGLASS) INSTALLED IN ALUMINUM JACKET.
 4. POSITION OF CONTROL PANELS TO BE DETERMINED ON SITE FOR EACH INSTALLATION.

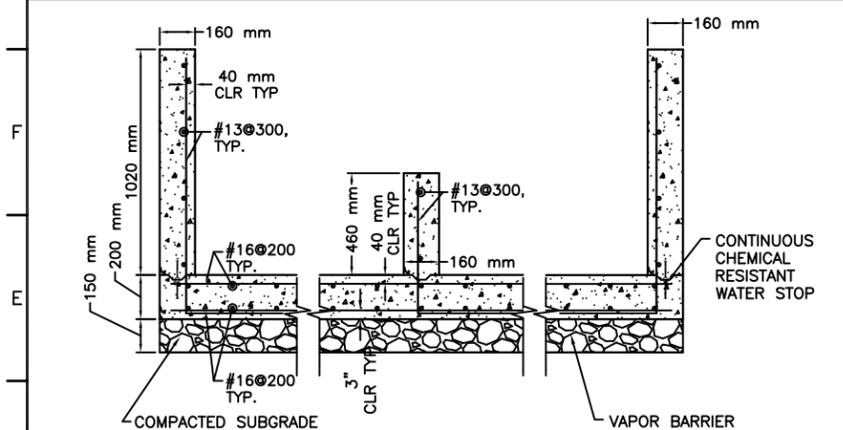


DESIGNED	BY	DATE	REV	DATE	DESCRIPTION
M. ILIC	J. WHEELER	06/30/10	0	06/30/10	SITE ADAPT CONSTRUCTION PLANS
<p>AFGHAN NATIONAL SECURITY FORCE COMPREHENSIVE PLAN FOR FACILITIES DEVELOPMENT MINISTRY OF INTERIOR (MoI) PROVINCIAL FIRE STATION - TYPE-B CISTERN TANK PLAN & ELEVATION</p>					
SCALE AS SHOWN					
PROJECT NO. 6151-08-0328					
00-C-102					

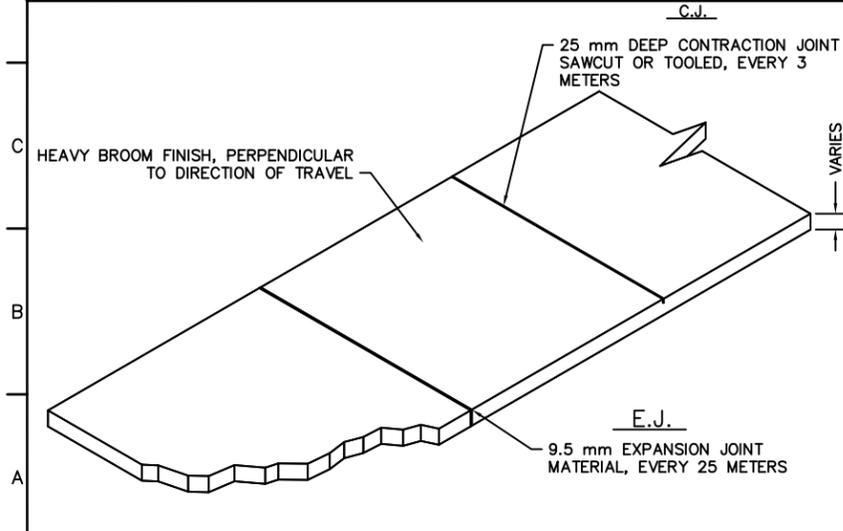
\\net-filing\lsc\Engineering\000 FY 2011 RFPs in Progress\AFN\STANDARD TO DEVELOP Fire Station\MACTEC\00-C-102.dwg 03/14/2011 4:46pm N245816F



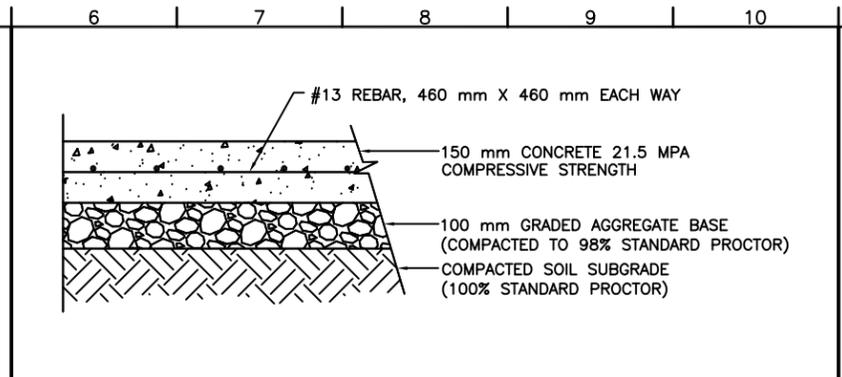
A FUEL STORAGE TANK
00-C-501 SCALE 1:100 | 00-C-004



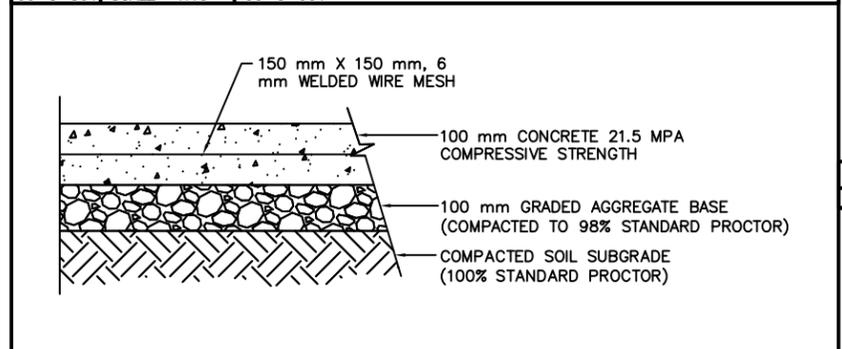
B FUEL STORAGE TANK SECTION A-A
00-C-501 SCALE 1:15 | -



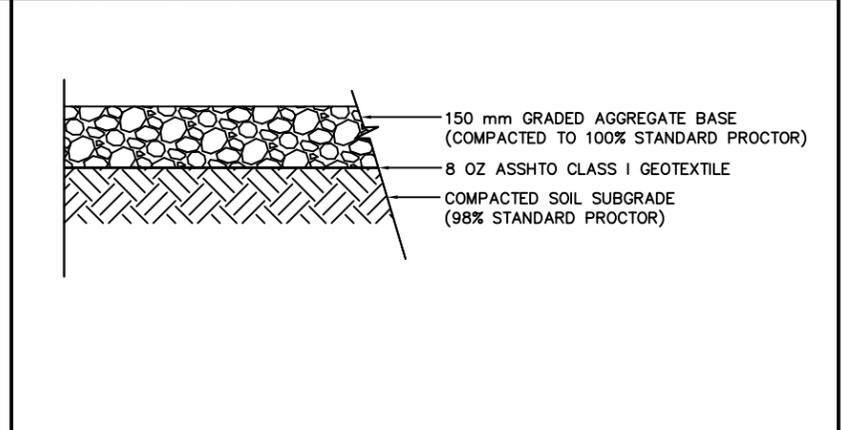
H CONCRETE EXPANSION AND CONTRACTION JOINTS DETAIL
00-C-501 SCALE : N.T.S.



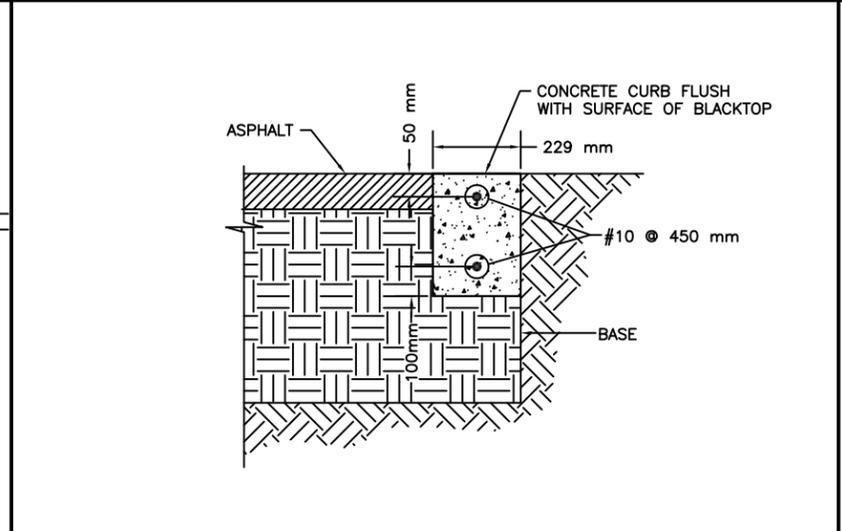
C TYPICAL CONCRETE APRON DETAIL
00-C-501 SCALE 1:15 | 00-C-001



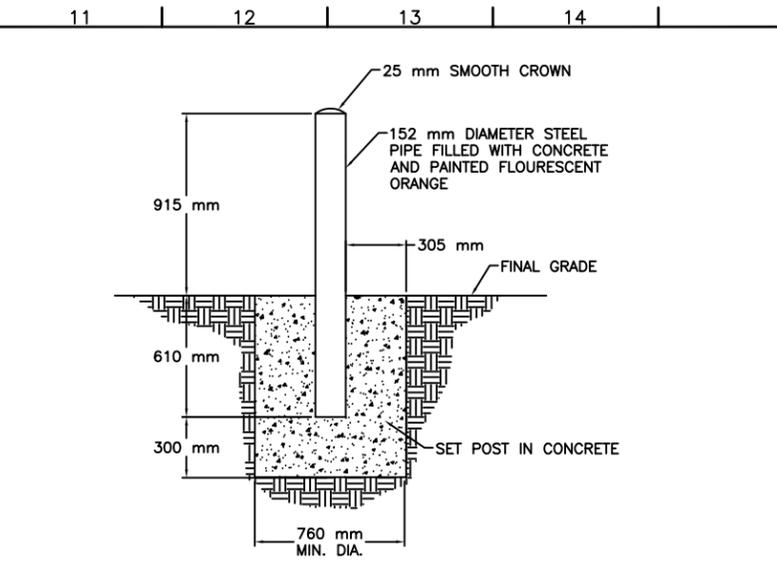
D TYPICAL CONCRETE SIDEWALK AREAS DETAIL
00-C-501 SCALE : N.T.S. | 00-C-001



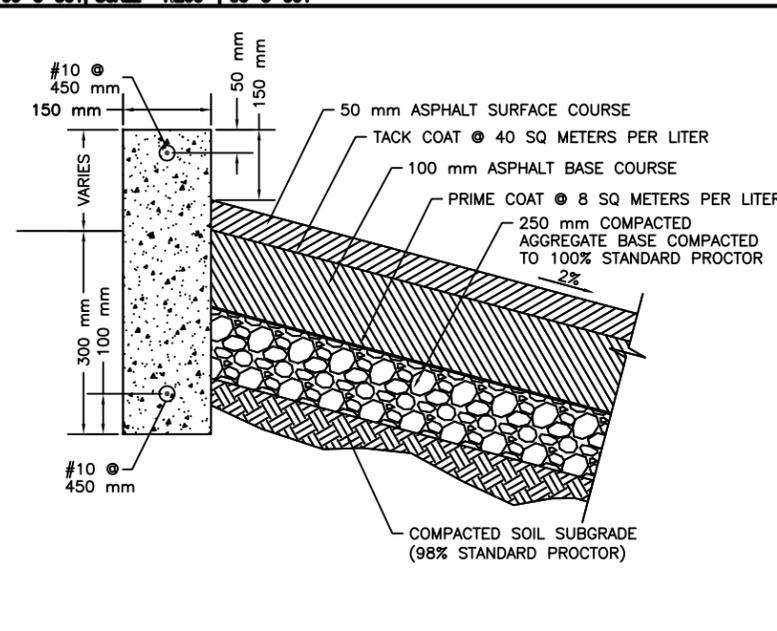
E TYPICAL GRAVEL PARKING DETAIL
00-C-501 SCALE : N.T.S. | 00-C-001



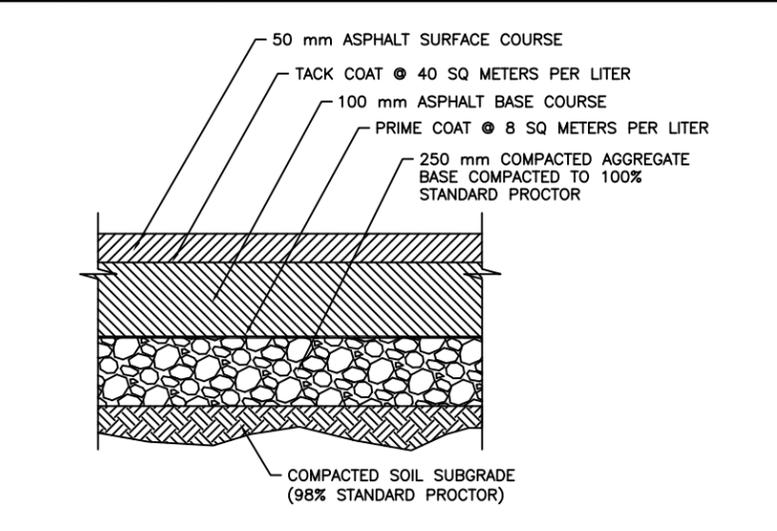
I CURB EDGING ASPHALT DETAIL
00-C-501 SCALE : N.T.S. | 00-C-001



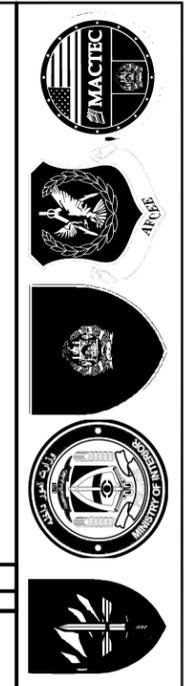
F TYPICAL BOLLARD DETAIL
00-C-501 SCALE 1:200 | 00-C-001



G TYP. FIRE SUPPRESSION CURB AND ASPHALT PAVEMENT DETAIL
00-C-501 SCALE 1:200 | 00-C-001



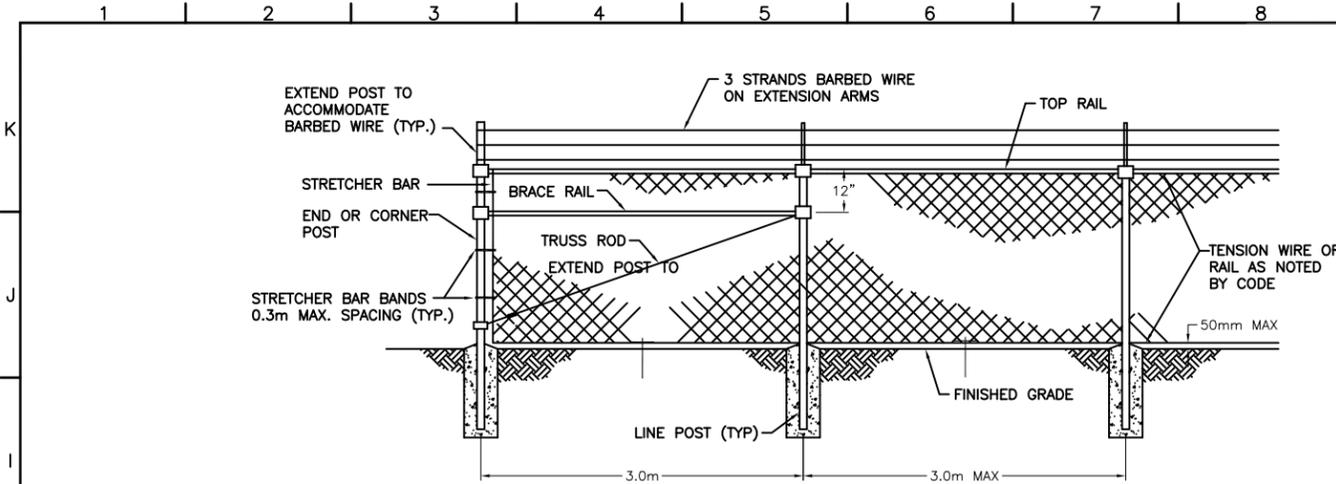
J ASPHALT PAVEMENT DETAIL
00-C-501 SCALE : N.T.S. | 00-C-001



REV	DATE	BY	DESCRIPTION
0	06/30/10	D. WHEELER	SITE ADAPT CONSTRUCTION PLANS

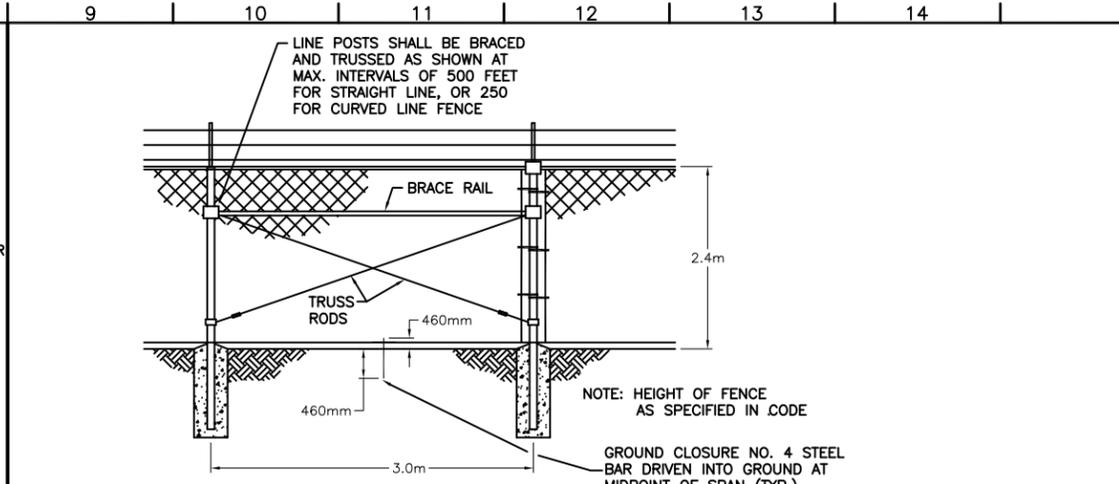
DESIGNED BY S. AQUILLO	AFGHAN NATIONAL SECURITY FORCE
CHECKED BY C. BUDSOCK	COMPREHENSIVE PLAN FOR FACILITIES DEVELOPMENT
DATE 06/30/10	MINISTRY OF INTERIOR (MoI) - AFGHAN NATIONAL POLICE
PROJECT NO. 6151-08-0328	PROVINCIAL FIRE STATION - TYPE-B
SCALE AS SHOWN	CONSTRUCTION DETAILS 1
PROJECT NO. 6151-08-0328	00-C-501

\\nam-filing\lsc\Engineering\000 FY 2011 RPA in Progress\MAP\STANDARD TO DEVELOP Fire Station\MACTEC\00-C-501.dwg 03/14/2011 4:59pm NABUBRF



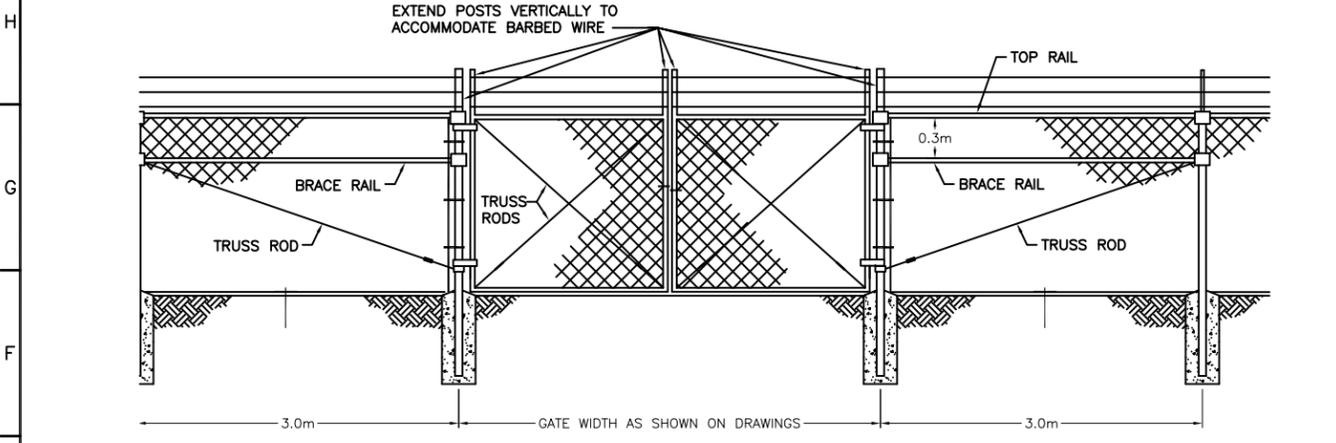
A FENCE ELEVATION AT THE CORNER OR END

00-C-504 SCALE : N.T.S. | 00-C-001



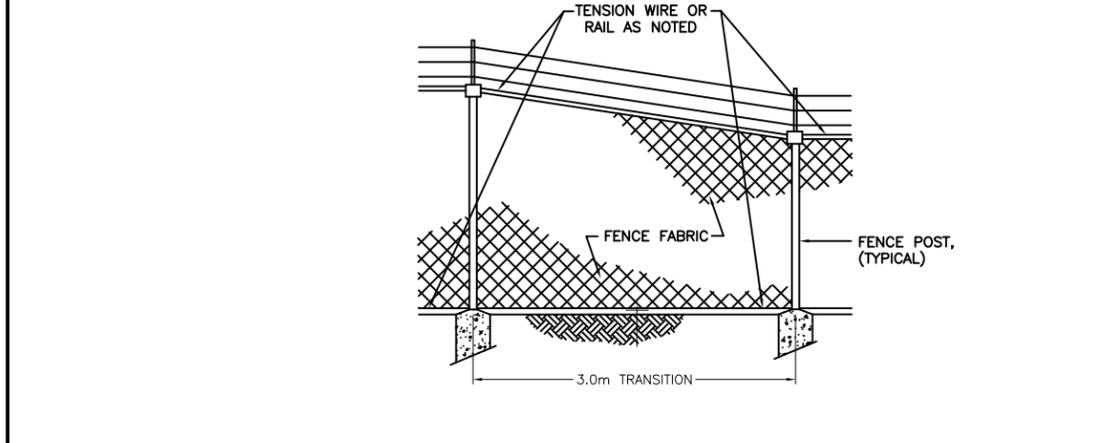
B FENCE ELEVATION AT THE BRACE POST

00-C-504 SCALE : N.T.S. | 00-C-001



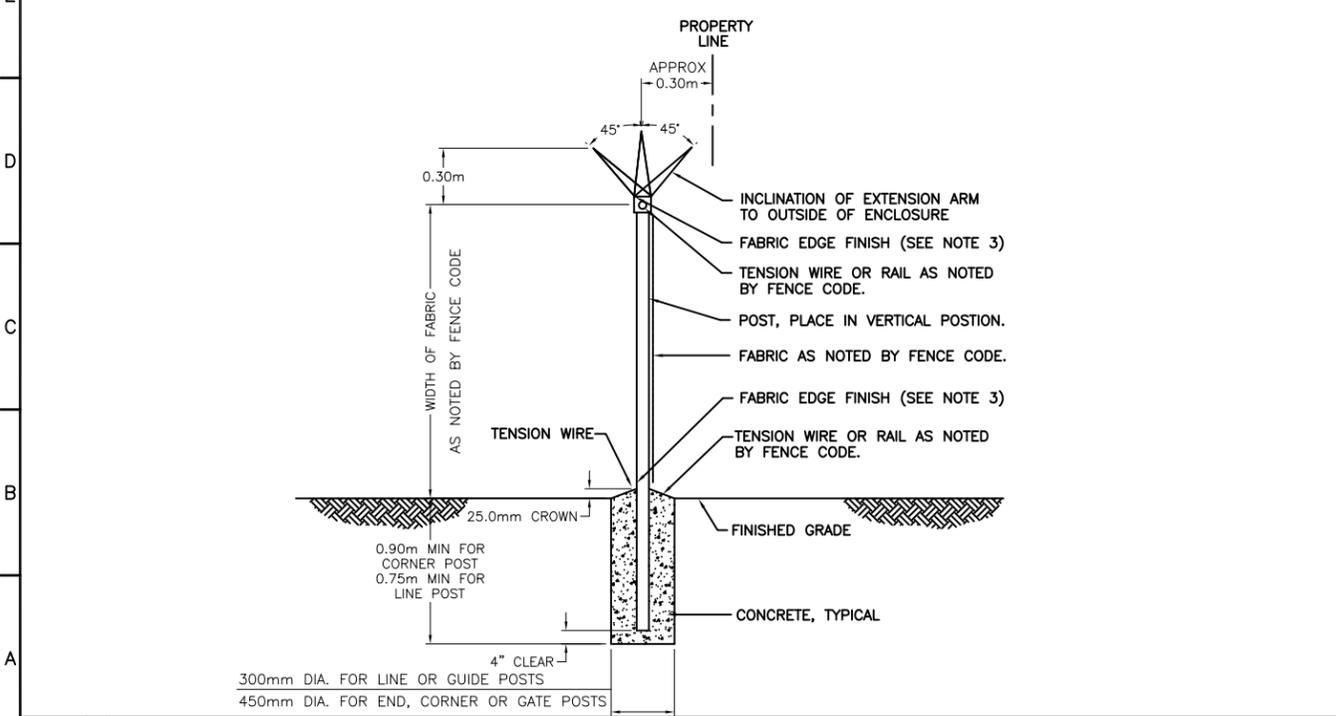
C DOUBLE-LEAF SWINGING GATE ELEVATION FENCE

00-C-504 SCALE : N.T.S. | 00-C-001



D TRANSITION FENCE IN HEIGHT

00-C-504 SCALE : N.T.S. | 00-C-001



E FENCE STATION

00-C-504 SCALE : N.T.S. | 00-C-001

NOTES:

1. LOCATION OF FENCING, LOCATION OF GATES, GATE WIDTH AND ANY SPECIAL FEATURES NECESSARY TO CONSTRUCT FENCING AND GATES SHALL BE AS SHOWN ON DRAWINGS. ALL DIMENSIONS EXCEPT GATE WIDTH SHALL BE TO CENTERS OF POSTS.
2. CHAIN LINK FENCE FEATURES SHALL BE AS NOTED ON THE DRAWINGS AND SHALL BE FENCE DESIGNATION CODE CL-6 P A.
3. UNLESS OTHERWISE NOTED, TOP AND BOTTOM EDGES OF FABRIC SHALL BE BARBED AND TWISTED WHEN BARBED WIRE IS USED AND KNUCKLED WHEN NO BARBED WIRE IS USED.
4. SEE SPECIFICATIONS FOR FABRICATION AND INSTALLATION REQUIREMENTS FOR FENCING.
5. GROUND CLOSURE SHALL BE PROVIDED AT LOCAL GROUND DEPRESSIONS WHERE TENSION WIRE OR RAIL IS MORE THAN 50 MILLIMETERS ABOVE GROUND SURFACE AS INDICATED OR DIRECTED.



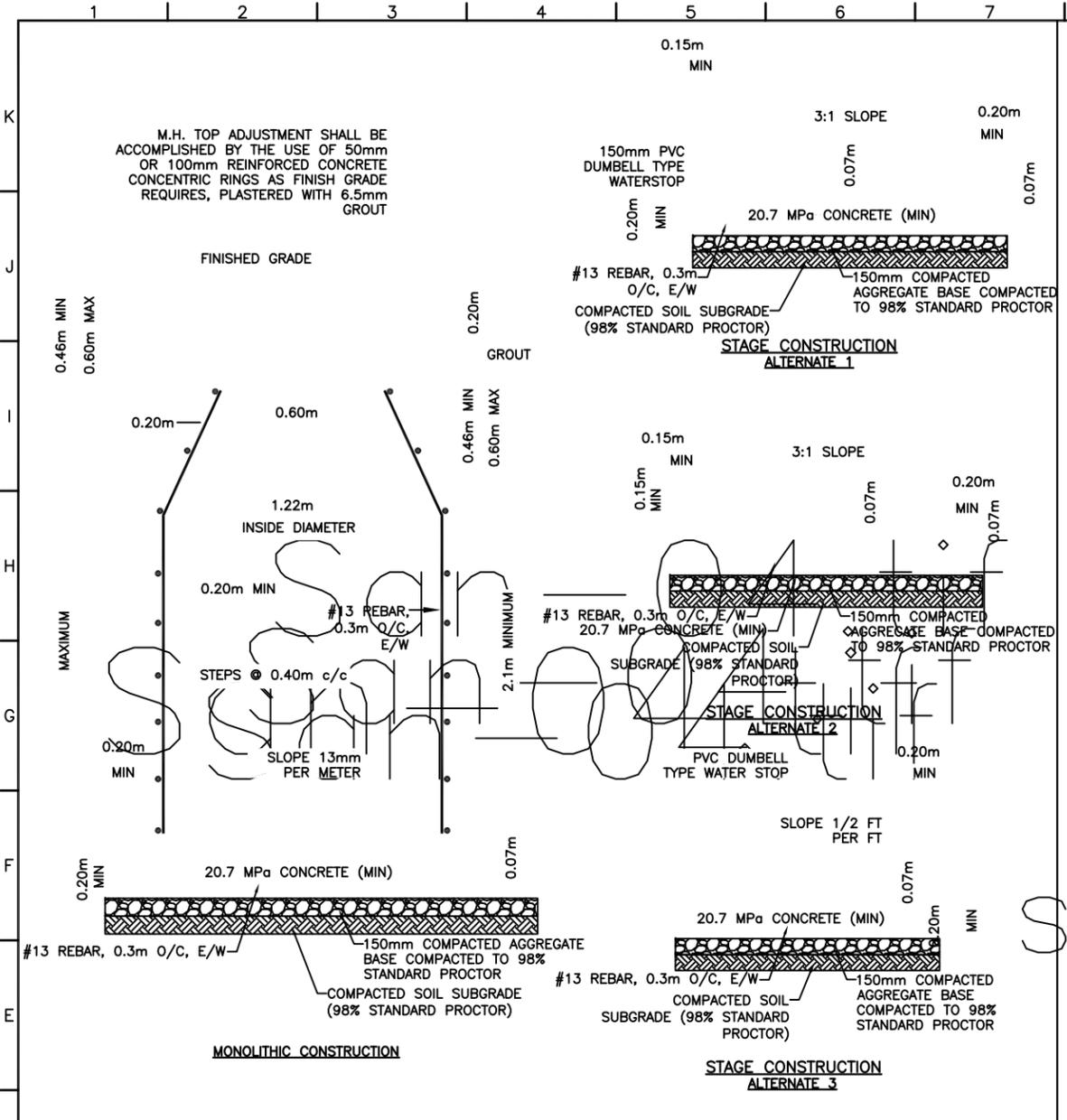
REV	DATE	BY	DESCRIPTION
0	06/30/10		SITE ADAPT CONSTRUCTION PLANS

DESIGNED	S. AGUDELO
DRAWN	C. BUDSOCK
CHECKED	J. STODER
DATE	D. WHEELER
REV	30 JUNE 2010

AFGHAN NATIONAL SECURITY FORCE	COMPREHENSIVE PLAN FOR FACILITIES DEVELOPMENT
MINISTRY OF INTERIOR (MoI)	AFGHAN NATIONAL POLICE
	PROVINCIAL FIRE STATION - TYPE-B
	CONSTRUCTION DETAILS 4

SCALE	AS SHOWN
PROJECT NO.	6151-08-0328
	00-C-504

\\user-filing\lsc\Engineering\000 FY 2011 RFPs in Progress\AFN\STANDARD TO DEVELOP Fire Station\MACTEC\00-C-504.dwg 03/14/2011 4:53pm N24826F

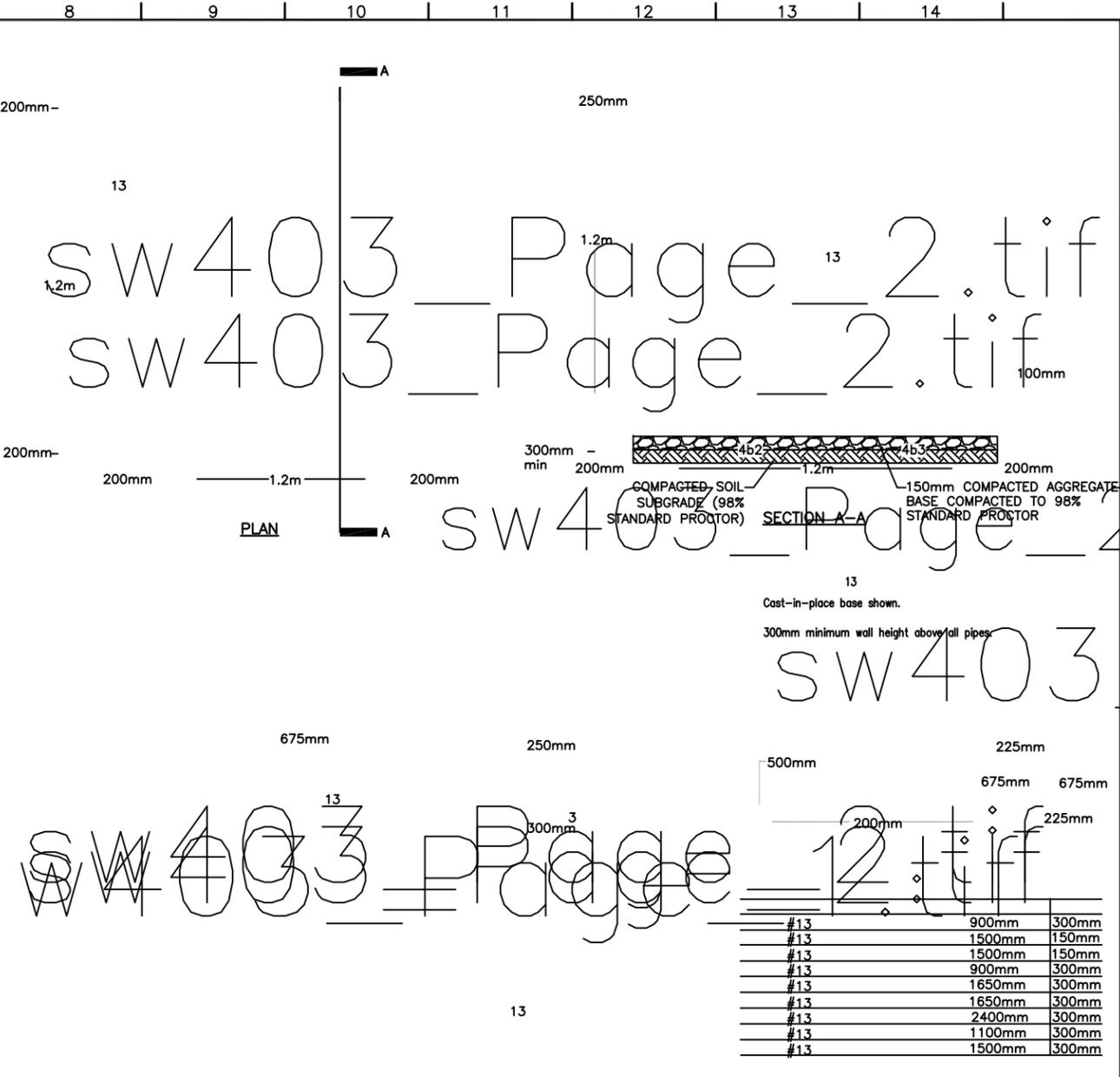


A CAST-IN-PLACE MANHOLE
00-C-505 SCALE : N.T.S. 00-C-004

BEND	SIZE (mm)	A (m)	B (m)	C (m)	D (m)	VOLUME (M ³) APPROX.
11-1/4°	150	0.30	0.6	0.15	0.3	0.03
	200	0.30	0.6	0.18	0.3	0.04
22-1/2°	150	0.30	0.6	0.15	0.3	0.03
	200	0.30	0.6	0.18	0.5	0.05
45°	75	0.15	0.3	0.08	0.2	0.03
	150	0.30	0.6	0.15	0.3	0.05
	200	0.30	0.6	0.18	0.6	0.07
90°	75	0.20	0.6	0.30	0.3	0.05
	150	0.30	0.8	0.30	0.6	0.10
	200	0.60	0.9	0.40	0.9	0.29
TEES AND PLUGS	75	0.20	0.6	0.30	0.3	0.05
	150	0.30	0.8	0.30	0.3	0.07
	200	0.60	1.0	0.40	0.6	0.21

NOTES:
 1. SOIL CONDITIONS SHALL BE VERIFIED BY CONTRACTOR BEFORE THRUST BLOCK DESIGN IS IMPLEMENTED.
 2. DIMENSION OF THRUST BLOCK IS BASED ON 9765 Kg/m² SOIL BEARING PRESSURE. ACTUAL INSIDE DIA. OF D.I.P., CLASS 51, 1.72 MPa (250 P.S.I.) TEST PRESSURE.
 3. CONCRETE SHALL BE CLASS A, 15 MPa (2180 P.S.I.).

B CONCRETE THRUST BLOCKING
00-C-505 SCALE : N.T.S. 00-C-004



C RECTANGULAR CAST-IN-PLACE MANHOLE
00-C-505 SCALE : N.T.S. 00-C-004

SIZE	WALL HEIGHT	WALL THICKNESS
#13	900mm	300mm
#13	1500mm	150mm
#13	1500mm	150mm
#13	900mm	300mm
#13	1650mm	300mm
#13	1650mm	300mm
#13	2400mm	300mm
#13	1100mm	300mm
#13	1500mm	300mm

C RECTANGULAR CAST-IN-PLACE MANHOLE
00-C-505 SCALE : N.T.S. 00-C-004

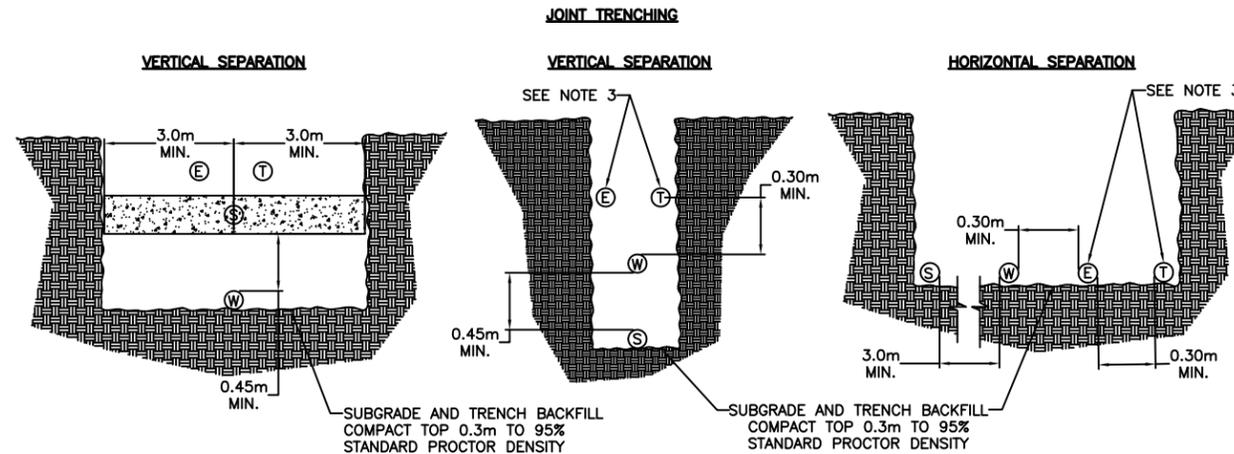
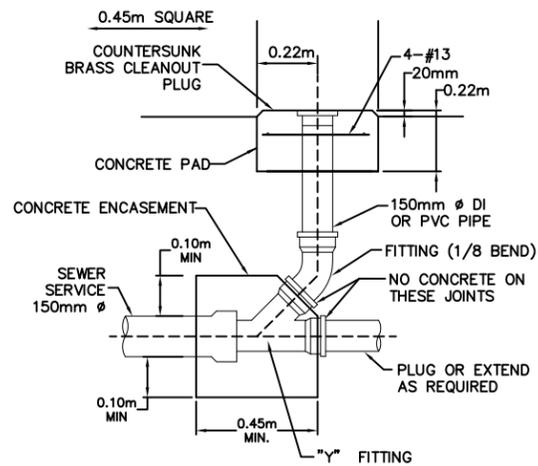
DESIGNED BY: S. AGUDELO
 DRAWN BY: C. BUDSOCK
 CHECKED BY: J. STUDER
 DATE: 06/30/10

AFGHAN NATIONAL SECURITY FORCE
 COMPREHENSIVE PLAN FOR FACILITIES DEVELOPMENT
 MINISTRY OF INTERIOR (MoI)
 PROVINCIAL FIRE STATION - TYPE-B

CONSTRUCTION DETAILS 5

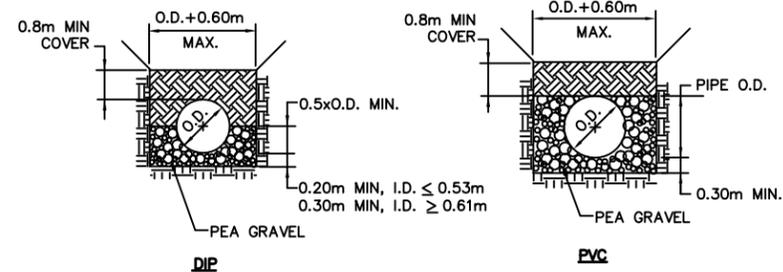
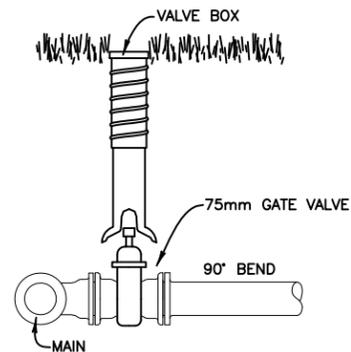
SCALE: AS SHOWN
 PROJECT NO: 6151-08-0328
 00-C-505

REV. DATE BY SUBAPP
 06/30/10
 03/14/2011 4:54pm N24826F

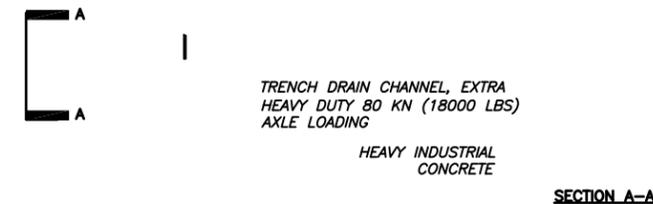


NOTES:

1. THE USE OF A JOINT TRENCH IS ACCEPTABLE ONLY IN THE CASE WHERE THE PARTIES INVOLVED AGREE TO ITS USE AND THEIR INDIVIDUAL PLACEMENTS WITHIN.
2. HORIZONTAL SEPARATION BETWEEN WATER LINE AND SANITARY SEWER LINE SHALL BE 3.0m.
3. HORIZONTAL SEPARATION BETWEEN ELECTRICAL AND TELEPHONE (BARRING ANY STRICTER LOCAL TELEPHONE COMPANY REQUIREMENTS) SHALL BE 0.3m.
4. THIS DETAIL ONLY APPLIES TO THE INSTALLATION OF MULTIPLE UTILITIES IN THE SAME TRENCH
5. REFER TO OTHER DETAILS FOR TRENCH DIMENSIONS.



TRENCH DRAIN ELEVATION



NOTES:

1. INSTALL REMOVABLE SLOTTED GRATE ALONG THE ENTIRE LENGTH OF THE TRENCH DRAIN.
2. TRENCH OPENING SHALL BE FREE OF ANY BLOCKING DEVICE.
3. GRATE SHALL BE SLOTTED, HEAVY INDUSTRIAL.



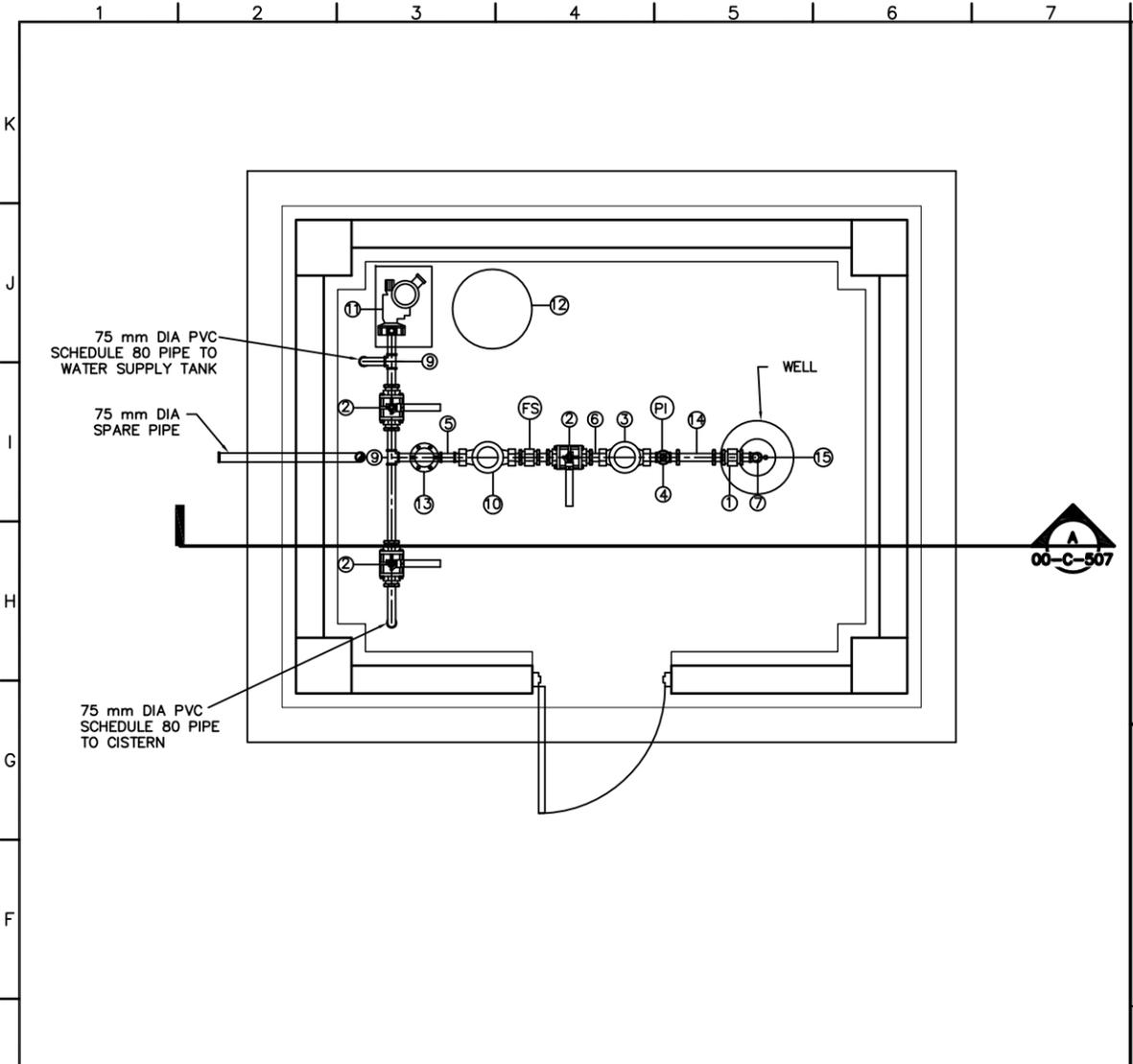
DATE	BY	DESCRIPTION
06/10/10	BY SUBAPP	SITE ADAPT CONSTRUCTION PLANS

DESIGNED	DRAWN	CHECKED	IN CHARGE	DATE
S. AGUDELO	J. JOHNS	J. STODER	D. WHEELER	30 JUNE 2010

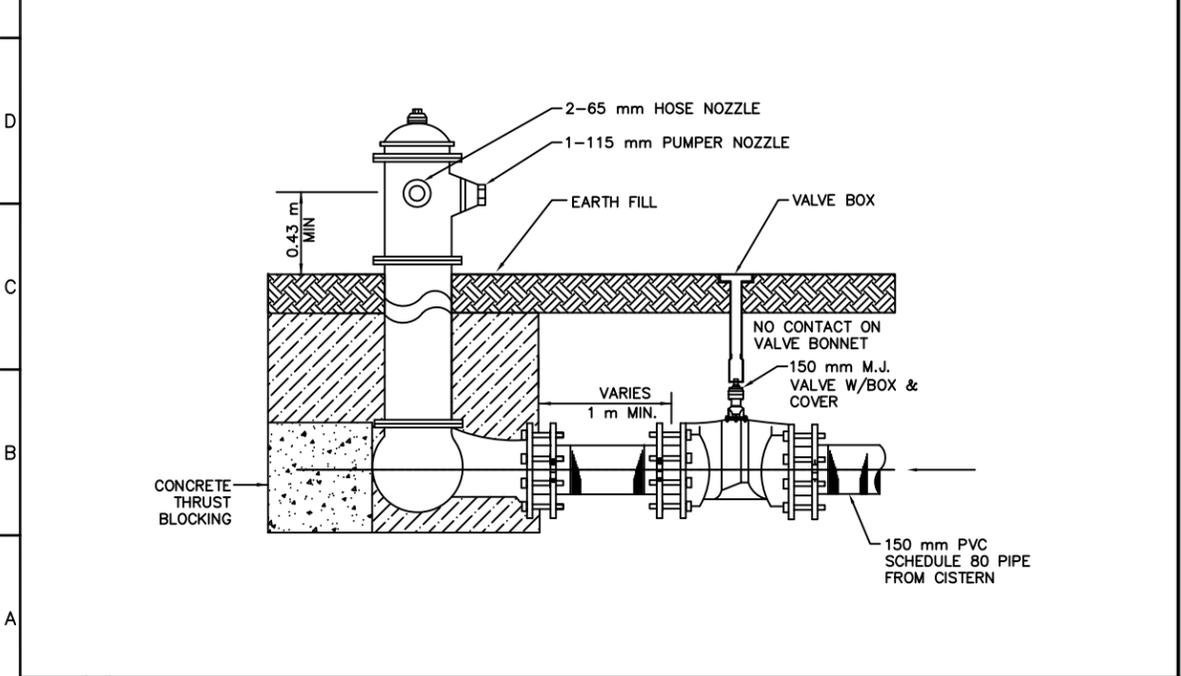
AFGHAN NATIONAL SECURITY FORCE COMPREHENSIVE PLAN FOR FACILITIES DEVELOPMENT	AFGHAN NATIONAL POLICE PROVINCIAL FIRE STATION - TYPE-B	CONSTRUCTION DETAILS 6 OF 16
--	--	------------------------------

SCALE	AS SHOWN
PROJECT NO.	6151-08-0328
00-C-506	

J:\6151-08-0328 Afghanistan\Task 142.20MOD - Kandaks Redesign\Details\575.tif
 03/14/2011 4:58pm
 00-C-506.dwg

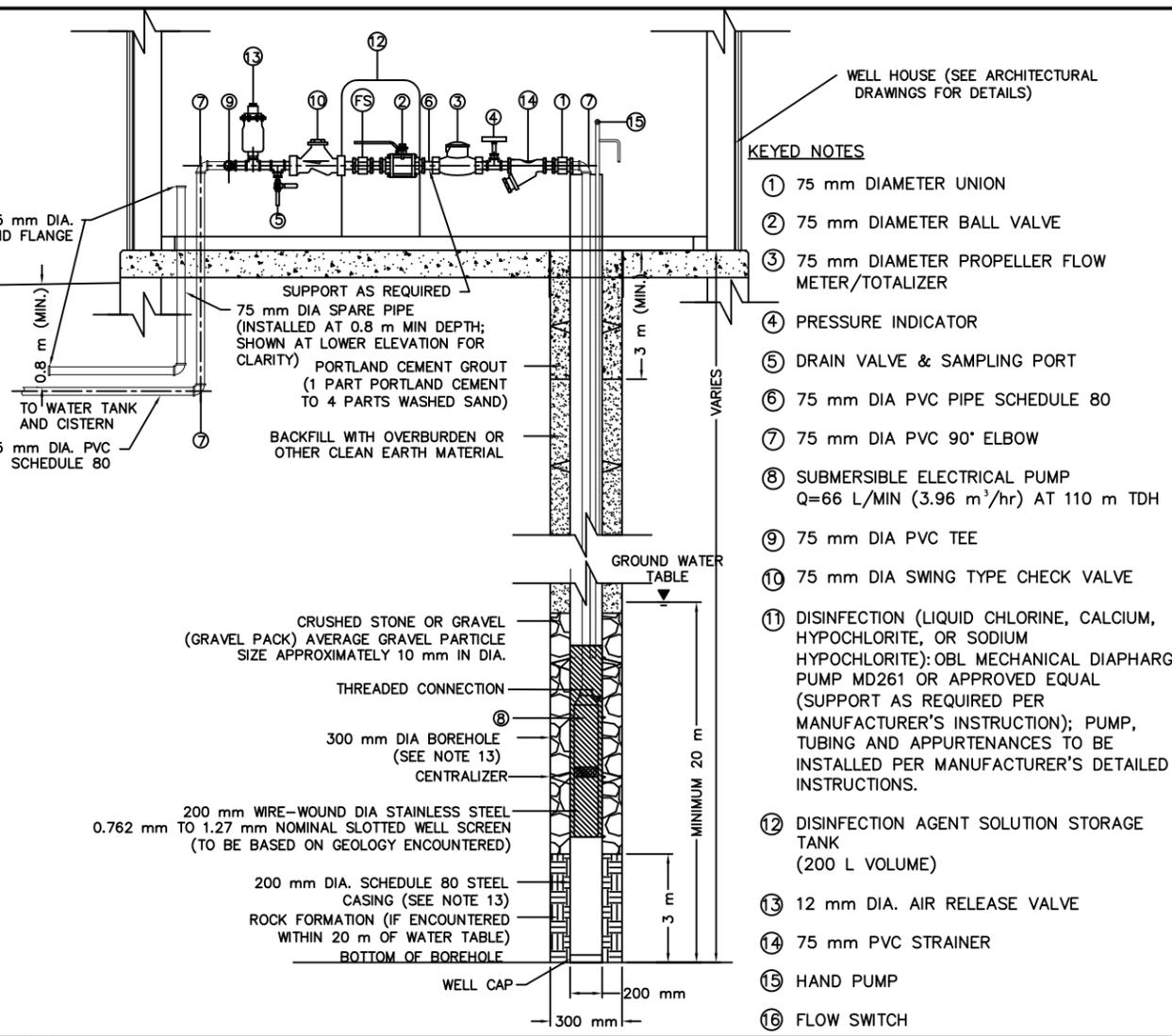


1 WELL-PUMP HOUSE PLAN VIEW
 00-C-507 SCALE N.T.S. 00-C-004



B FIRE HYDRANT
 00-C-507 SCALE N.T.S. 00-C-004

- NOTES**
1. IN AFGHANISTAN, PUBLISHED REPORTED DEPTHS TO THE WATER TABLE ARE TYPICALLY 80 METERS, OR LESS, AND PUBLISHED MAXIMUM WELL DEPTHS ARE APPROXIMATELY 100 METERS OR LESS. THEREFORE, A WATER TABLE DEPTH OF 80 METERS AND A TOTAL DEPTH OF 100 METERS WERE USED FOR DESIGN PURPOSES. WATER TABLES WILL VARY ACCORDING TO THE SPECIFIC SITE GEOLOGY.
 2. CONTRACTOR SHALL PERFORM A GEOHYDROGEOLOGIC STUDY TO CONFIRM AVAILABLE WELL CAPACITY. IF SUFFICIENT CAPACITY DOES NOT EXIST, ADDITIONAL WELLS SHALL BE INSTALLED TO THE DEPTHS AND SPACING AS SPECIFIED IN THE GEOHYDROGEOLOGIC REPORT.
 3. ACCORDING TO PUBLICATIONS, BASIN-FILL SEDIMENTS WATER WELLS YIELD IN AVERAGE APPROXIMATELY 190 L/MIN.
 4. GROUNDWATER YIELD IN AFGHANISTAN WILL VARY BASED ON THE UNDERLYING GEOLOGY AND AQUIFER TYPE.
 5. ACTUAL WELL DESIGN AND INSTALLATION SHALL BE BASED ON SITE CONDITIONS.
 6. AQUIFER TYPES INCLUDE BASIN-FILL SEDIMENTS, CARBONATE ROCK AQUIFERS, AND CONSOLIDATED SEDIMENTARY, IGNEOUS, OR METAMORPHIC BEDROCK.
 7. THE PRINCIPAL AND TYPICALLY THE HIGHEST YIELDING AQUIFERS ARE THE BASIN-FILL SEDIMENTS.
 8. THE WATER-TABLE SURFACE IN THE BASIN-FILL SEDIMENTS GENERALLY MIRRORS TOPOGRAPHY.
 9. MODERATE TO LARGE WELL YIELDS ARE POSSIBLE IN THE BASIN-FILL SEDIMENTS. PRESENTED DESIGN ASSUMED 66 L/MIN WELL YIELD. (PROVIDES FOR FILL OF 95 m³ CISTERN IN 24 HOURS OR 18 m³ WATER SUPPLY TANK IN 4.6 HOURS).
 10. PUBLISHED MINIMUM RECOMMENDED DEPTH OF A DRILLED WELL IS 20 METERS BELOW THE WATER TABLE IN THE BASIN-FILL SEDIMENTS (GUIDELINES FOR SUSTAINABLE USE OF GROUNDWATER IN AFGHANISTAN, 2002).
 11. THE COMPLETED WELL SHALL BE TESTED FOR YIELD AND DRAWDOWN BY PUMPING AT A MINIMUM SUSTAINED RATE OF 66 L/MIN FOR 24 HOUR DURATION. THE WELL MUST MAINTAIN A MINIMUM HEAD UNDER SUSTAINED PUMPING CONDITIONS OF 1/4 THE DEPTH OF THE WELL.
 12. CONTRACTOR TO CONSIDER THE INSTALLATION OF BACK-UP WELL AT EACH LOCATION.
 13. BOREHOLE AND STEEL CASING SIZES SHALL ACCOMMODATE FOR SELECTED PUMP (PER MANUFACTURER'S RECOMMENDATIONS).
 14. PUMP CONTROL PANEL SHALL BE SUPPLIED BY PUMP MANUFACTURER. POSITION OF THE CONTROL PANEL TO BE DETERMINED ON SITE FOR EACH INSTALLATION. SEE DRAWING 00-C-601 FOR SEQUENCE OF OPERATIONS.
 15. WELL CONSTRUCTION DETAILS, GENERAL METHODS AND REQUIREMENTS FOR CONSTRUCTION PER AED DESIGN REQUIREMENTS.
 16. ALL EXPOSED PIPING INSTALLED OUTSIDE SHALL BE CARBON OR STAINLESS STEEL.
 17. ALL PIPING INSTALLED BELOW GROUND SHALL BE PVC SCHEDULE 80.
 18. ALL EXPOSED PIPING AND APPURTENANCES SHALL BE INSULATED WITH INSULATION BLANKETS INSTALLED IN ALUMINUM JACKET, TO PREVENT FREEZING (REQUIRED THICKNESS FOR FREEZING CONDITIONS OF -10°C)
 19. CONTRACTOR SHALL VERIFY WATER WELL QUALITY, DESIGN AND INSTALL ADDITIONAL WATER TREATMENT, AS REQUIRED, TO MEET DRINKING WATER STANDARDS.
 20. CONTRACTOR SHALL INSTALL HAND PUMP SIMILAR TO MODEL 100L, MANUFACTURED BY SOLAR4POWER.



A WELL-PUMP HOUSE SECTION VIEW
 00-C-507 SCALE N.T.S. -

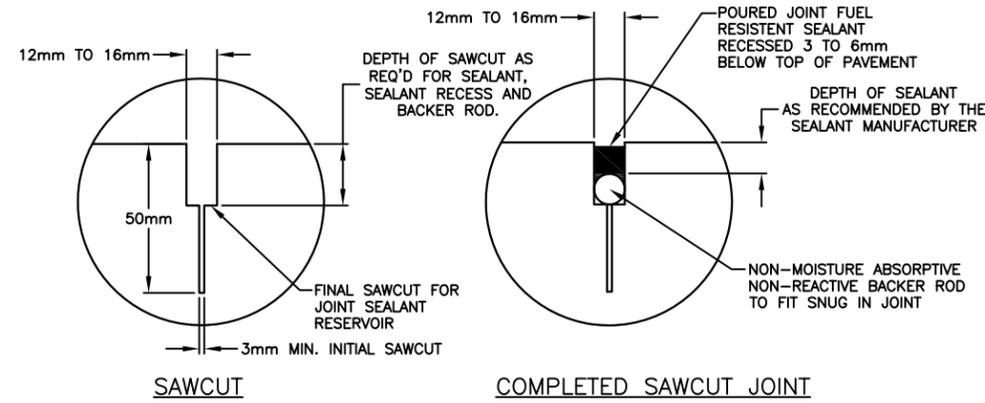
- KEYED NOTES**
- ① 75 mm DIAMETER UNION
 - ② 75 mm DIAMETER BALL VALVE
 - ③ 75 mm DIAMETER PROPELLER FLOW METER/TOTALIZER
 - ④ PRESSURE INDICATOR
 - ⑤ DRAIN VALVE & SAMPLING PORT
 - ⑥ 75 mm DIA PVC PIPE SCHEDULE 80
 - ⑦ 75 mm DIA PVC 90° ELBOW
 - ⑧ SUBMERSIBLE ELECTRICAL PUMP Q=66 L/MIN (3.96 m³/hr) AT 110 m TDH
 - ⑨ 75 mm DIA PVC TEE
 - ⑩ 75 mm DIA SWING TYPE CHECK VALVE
 - ⑪ DISINFECTION (LIQUID CHLORINE, CALCIUM, HYPOCHLORITE, OR SODIUM HYPOCHLORITE): OBL MECHANICAL DIAPHRAGM PUMP MD261 OR APPROVED EQUAL (SUPPORT AS REQUIRED PER MANUFACTURER'S INSTRUCTION); PUMP, TUBING AND APPURTENANCES TO BE INSTALLED PER MANUFACTURER'S DETAILED INSTRUCTIONS.
 - ⑫ DISINFECTION AGENT SOLUTION STORAGE TANK (200 L VOLUME)
 - ⑬ 12 mm DIA. AIR RELEASE VALVE
 - ⑭ 75 mm PVC STRAINER
 - ⑮ HAND PUMP
 - ⑯ FLOW SWITCH

DESIGNED	DRAWN	CHECKED	DATE	REV	DATE	BY	DESCRIPTION
C. JUNG/A. LOCKSTEDT	J. OLE	M. LIC	06/30/10	0	06/30/10		SITE ADAPT CONSTRUCTION PLANS
							30 JUNE 2010
							03/14/2011 4:56pm N24826F

AFGHAN NATIONAL SECURITY FORCE COMPREHENSIVE PLAN FOR FACILITIES DEVELOPMENT	AFGHAN NATIONAL POLICE PROVINCIAL FIRE STATION - TYPE-B
SCALE AS SHOWN	
PROJECT NO. 6151-08-0328	
CONSTRUCTION DETAILS 7	
00-C-507	

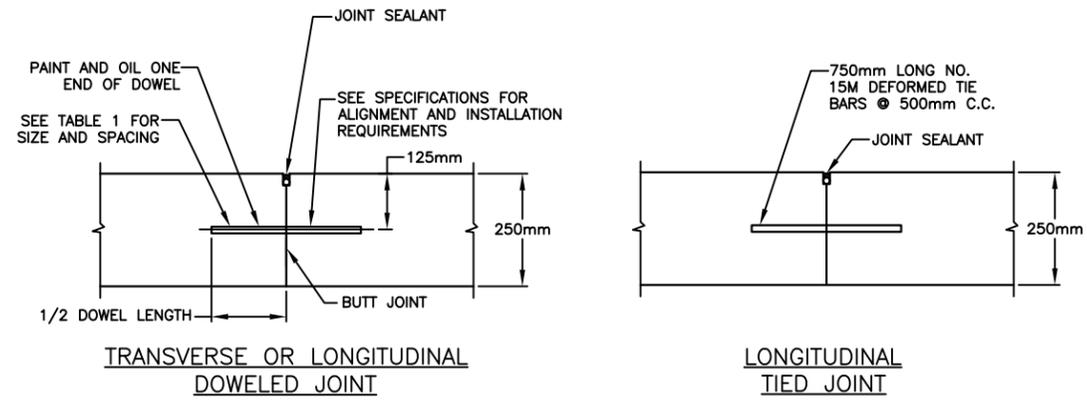
1 2 3 4 5 6 7 8 9 10 11 12 13 14

K
J
I
H
G
F
E
D
C
B
A



A CONTRACTION JOINT SEALANT (SAWED TYPE)

00-C-508 SCALE N.T.S. -

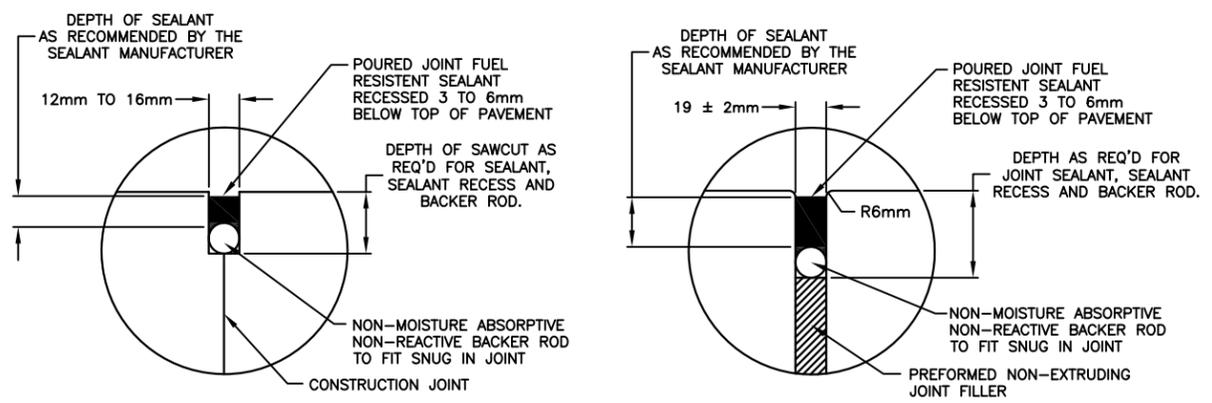


B CONSTRUCTION JOINT DETAILS

00-C-508 SCALE N.T.S. -

TABLE 1

PAVEMENT THICKNESS (mm)	MAXIMUM DOWEL SPACING	MINIMUM DOWEL LENGTH	MINIMUM DOWEL DIAMETER
200 TO 280	300 mm	410 mm	25 mm

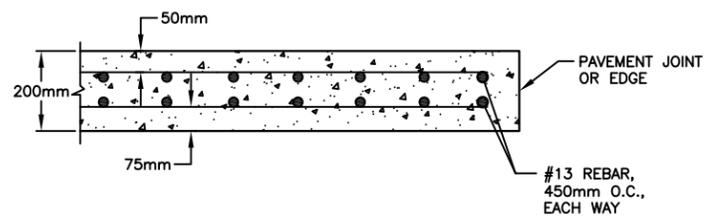


COMPLETED CONSTRUCTION JOINT SEALANT DETAIL

COMPLETED EXPANSION JOINT SEALANT DETAIL

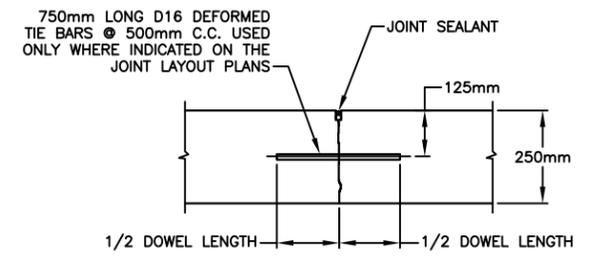
C POURED JOINT SEALANT

00-C-508 SCALE N.T.S. -



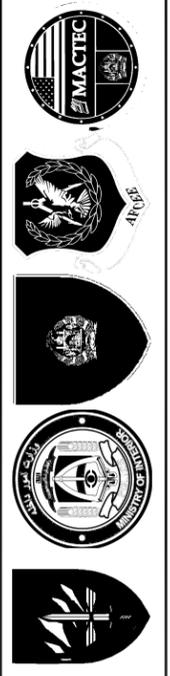
D CONCRETE APRON REINFORCING DETAIL

00-C-508 SCALE N.T.S. -



E DUMMY GROOVE CONTRACTION JOINT

00-C-508 SCALE N.T.S. -

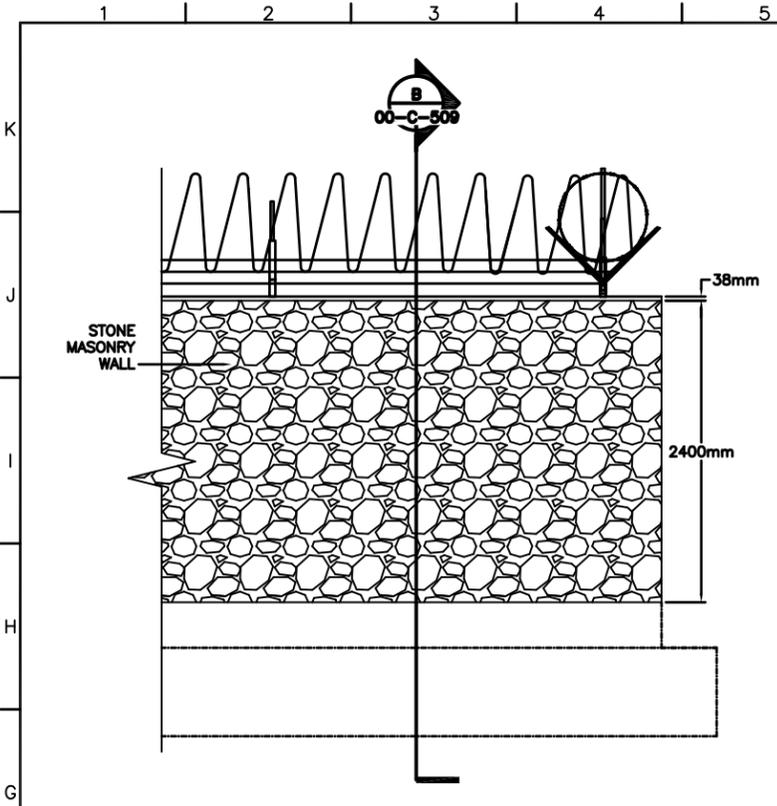


DESIGNED BY	CHECKED BY	DATE	REV	DATE	BY	DESCRIPTION
S. AGUDELO	C. BUDSOCK	06/30/10	0	06/30/10		SITE ADAPT CONSTRUCTION PLANS
J. STUBER	D. WHEELER	30 JUNE 2010		03/14/2011	4:59pm	MS/SH/RF

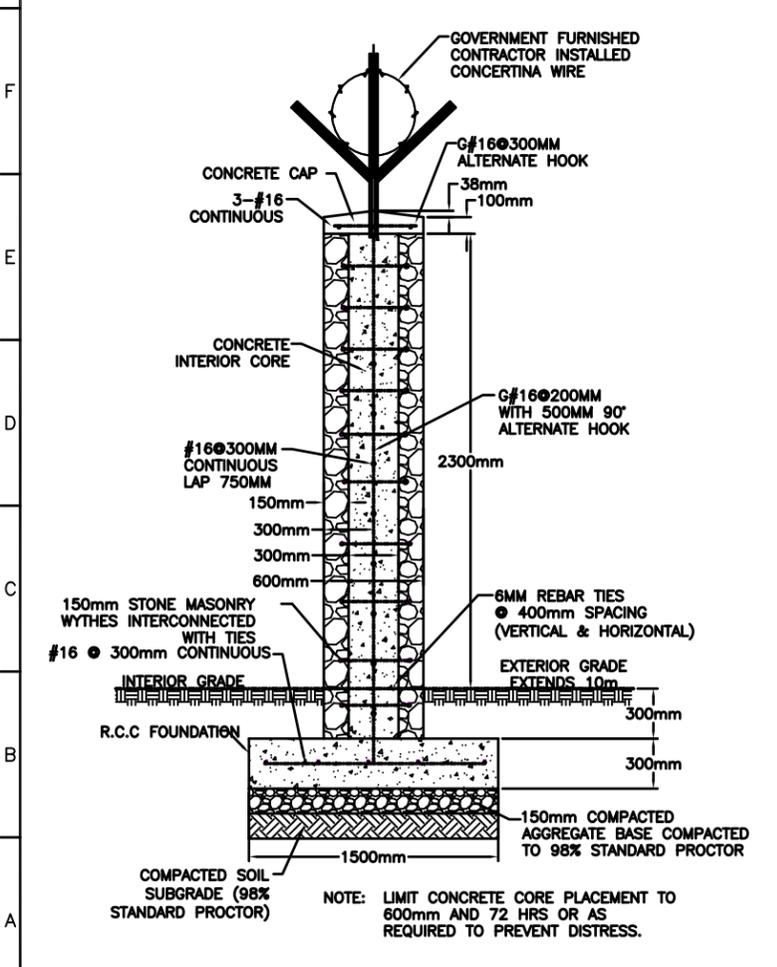
AFGHAN NATIONAL SECURITY FORCE
COMPREHENSIVE PLAN FOR FACILITIES DEVELOPMENT
MINISTRY OF INTERIOR (MoI) AFGHAN NATIONAL POLICE
PROVINCIAL FIRE STATION - TYPE-B
CONSTRUCTION DETAILS 8

SCALE AS SHOWN
PROJECT NO. 6151-08-0328
00-C-508

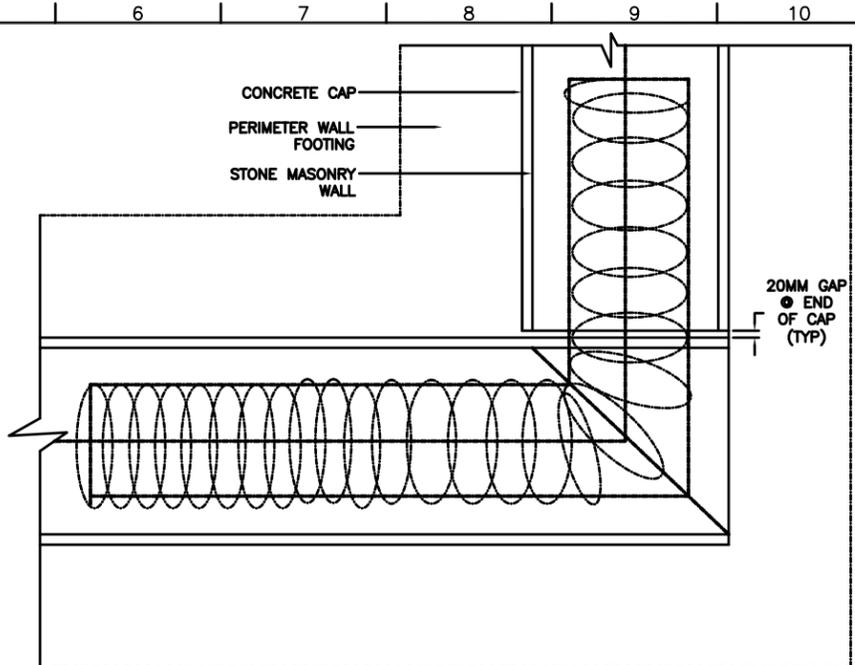
1 2 3 4 5 6 7 8 9 10 11 12 13 14



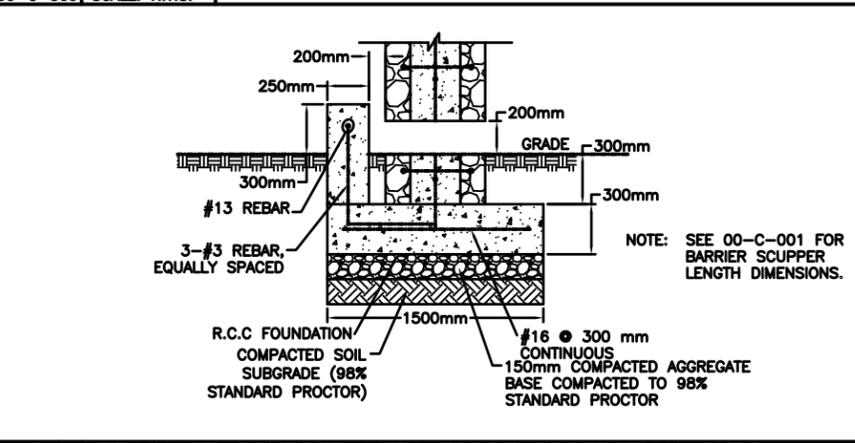
A WALL ELEVATION
00-C-509 SCALE: N.T.S. -



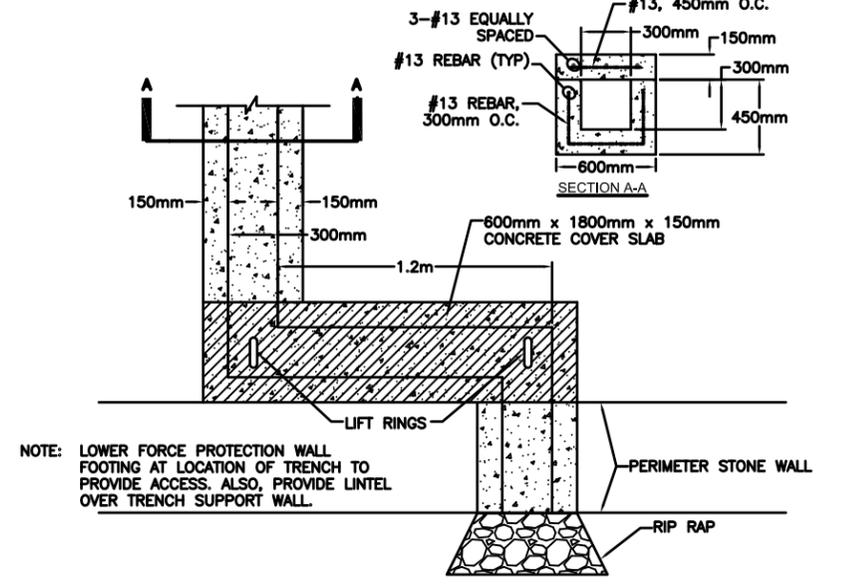
B WALL CROSS-SECTION VIEW
00-C-509 SCALE: N.T.S. 00-C-001



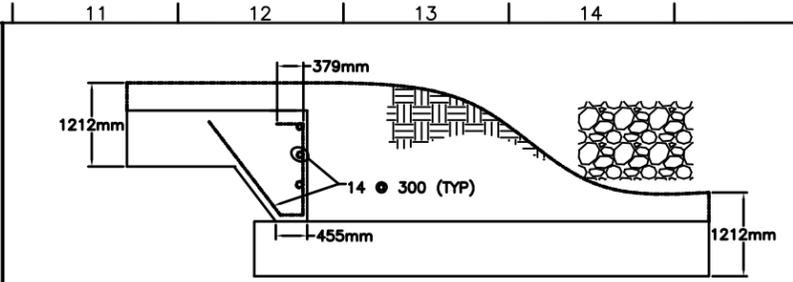
1 PERIMETER STONE WALL CORNER PLAN VIEW
00-C-509 SCALE: N.T.S. -



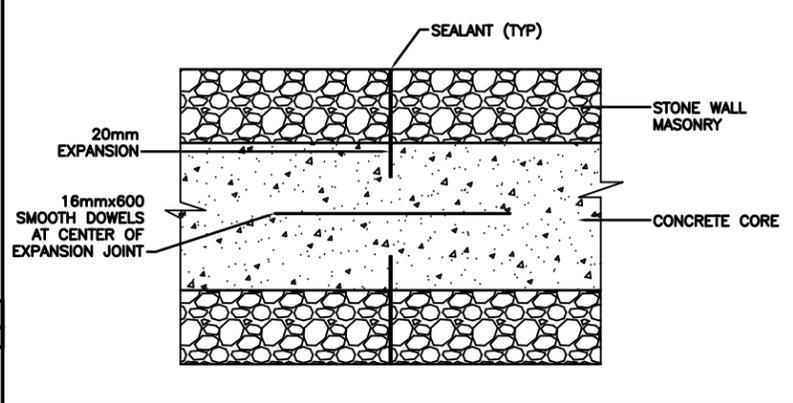
C DRAINAGE SCUPPER WITH FORCE PROTECTION CURB
00-C-509 SCALE: N.T.S. 00-C-001 ; 00-C-004



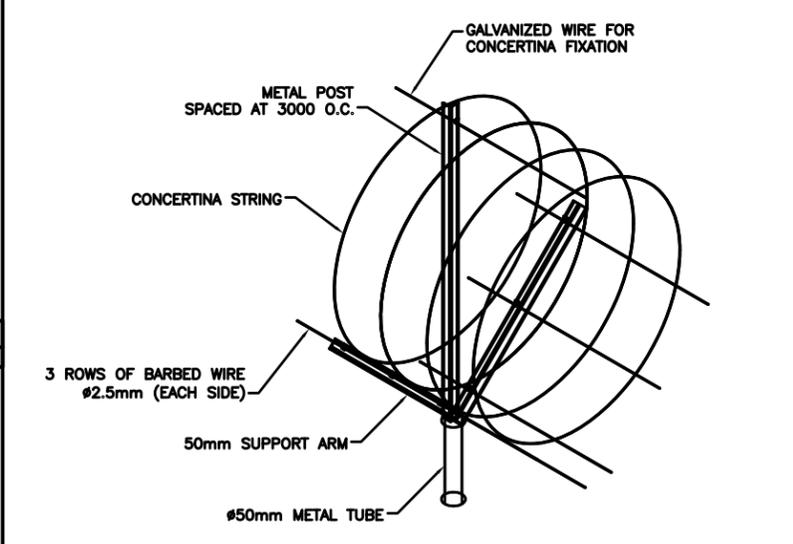
D COLLECTION TRENCH DETAIL
00-C-509 SCALE: N.T.S. 00-C-001 ; 00-C-004



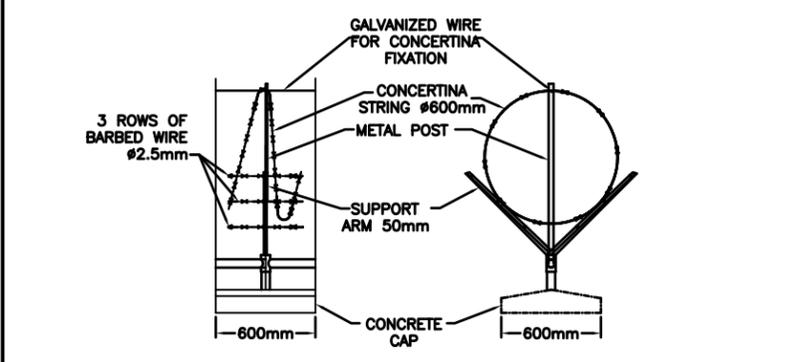
E STEPPED FOOTING DETAIL
00-C-509 SCALE: N.T.S. -



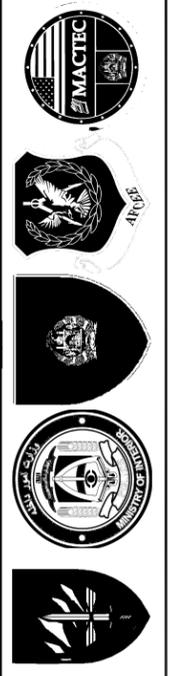
F STONE WALL EXPANSION JOINT DETAIL
00-C-509 SCALE: N.T.S. -



G ISOMETRIC CONCERTINA DETAIL
00-C-509 SCALE: N.T.S. -



H CONCERTINA STRING AND BARBED WIRE DETAIL
00-C-509 SCALE: N.T.S. -



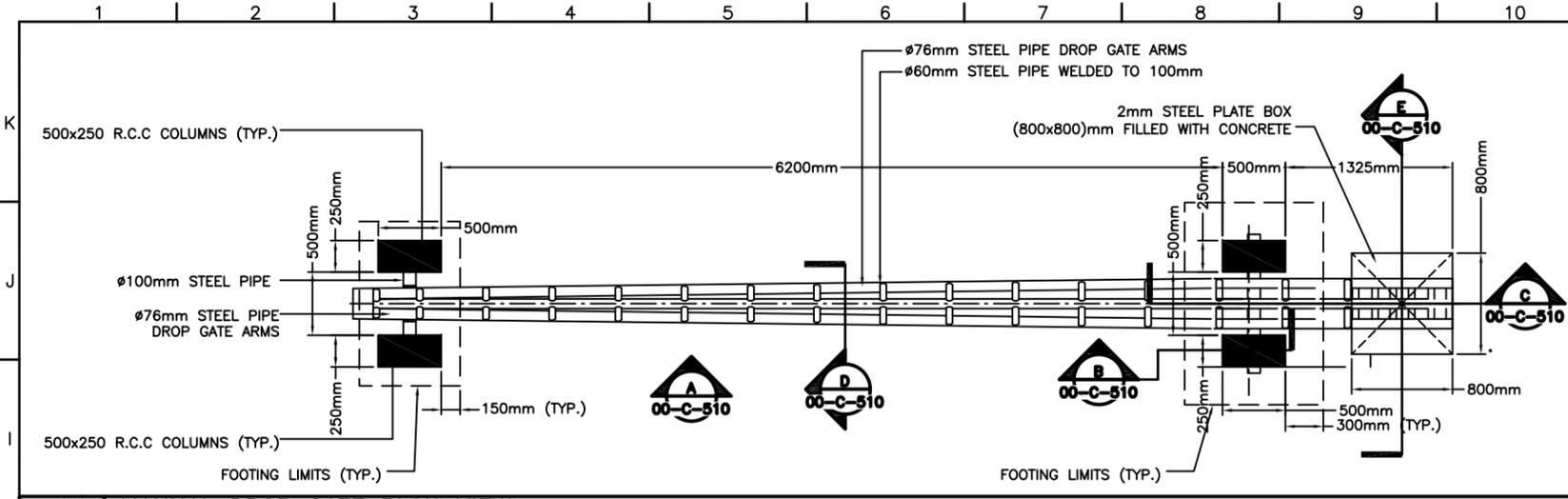
REV	DATE	BY	DESCRIPTION
0	06/30/10	D. WHEELER	SITE ADAPT CONSTRUCTION PLANS
1	30 JUNE 2010	D. WHEELER	CONSTRUCTION DETAILS 9

DESIGNED: S. AGDELO
 CHECKED: C. BUSSOCK
 DRAWN: U. STUBER
 DATE: 03/14/2011 4:57pm N24826F

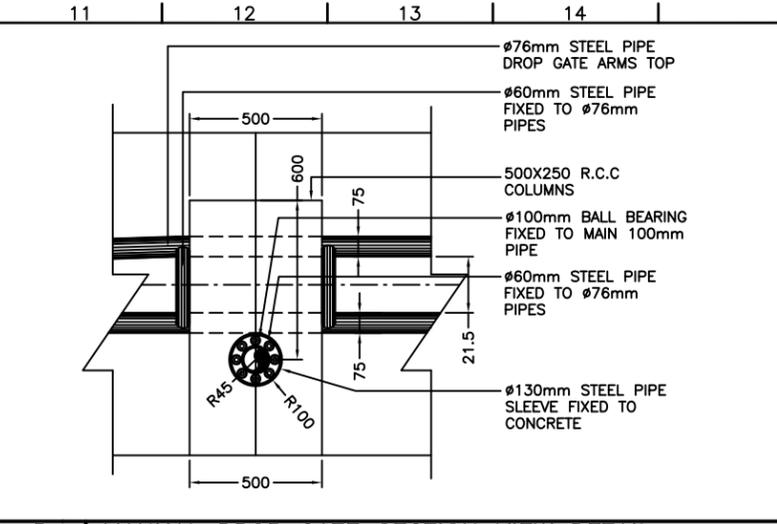
AFGHAN NATIONAL SECURITY FORCE
 COMPREHENSIVE PLAN FOR
 FACILITIES DEVELOPMENT
 MINISTRY OF INTERIOR (MoI) - AFGHAN NATIONAL POLICE
 PROVINCIAL FIRE STATION - TYPE-B

SCALE: AS SHOWN
 PROJECT NO: 6151-08-0328
 00-C-509

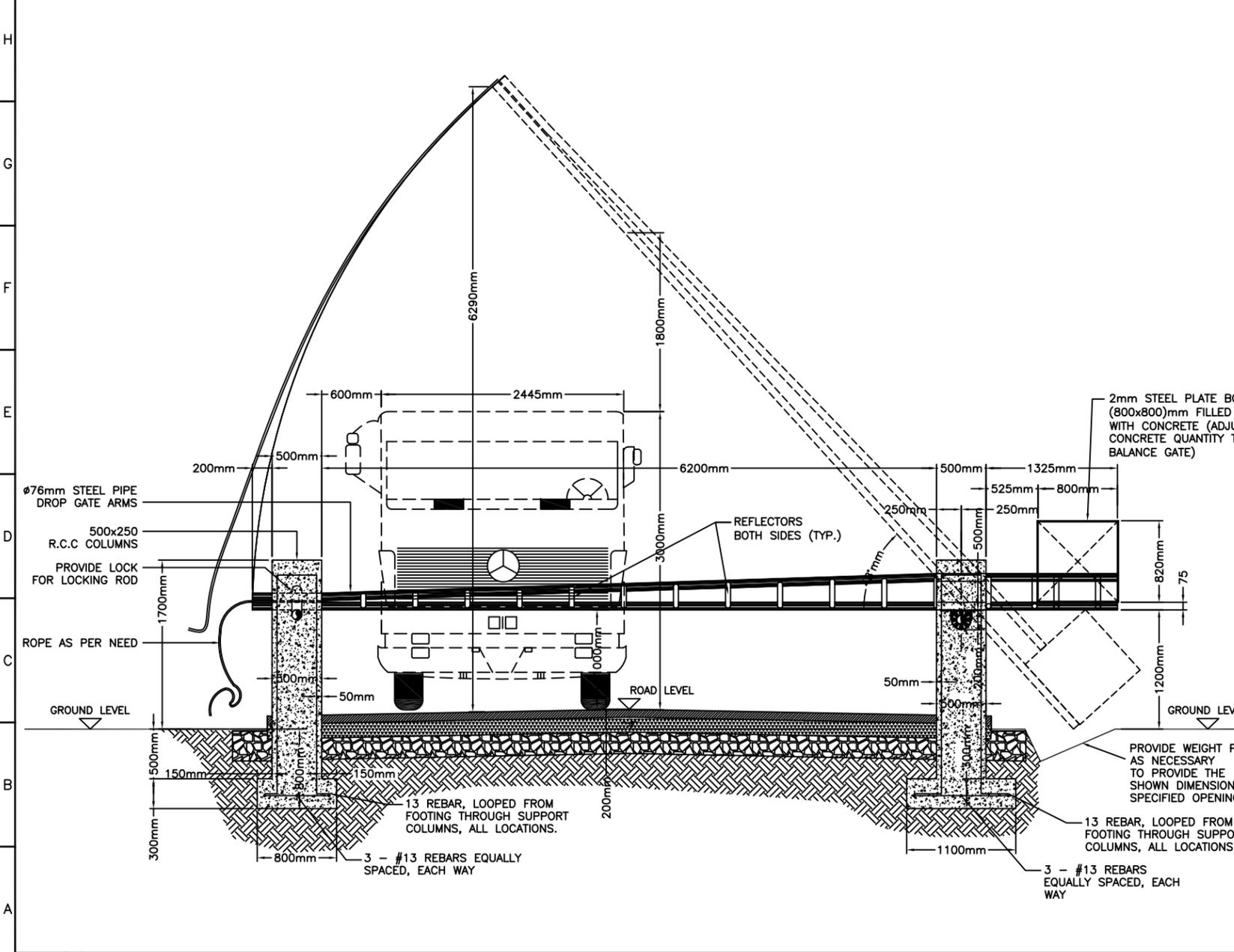
\\net-filing\lsc\Engineering\000 FY 2011 RPA in Progress\AFNIPOL\BOARD TO DEVELOP Fire Station\MACTEC\00-C-509.dwg 03/14/2011 4:57pm N24826F



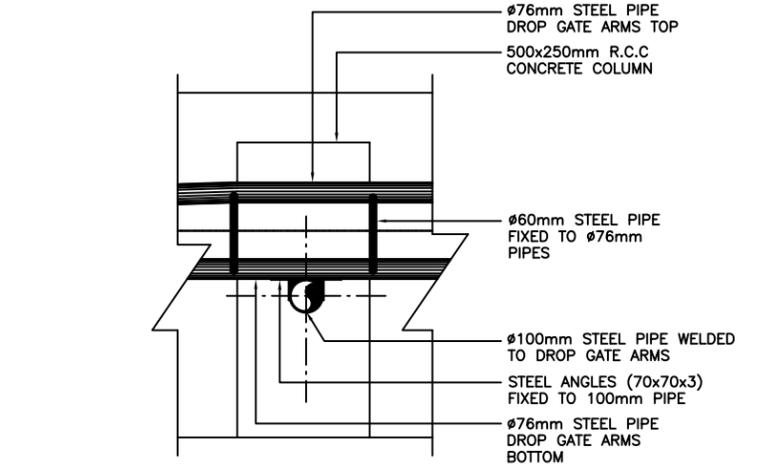
1 MANUAL DROP GATE PLAN VIEW
 00-C-510 SCALE 1:25 0-C-001



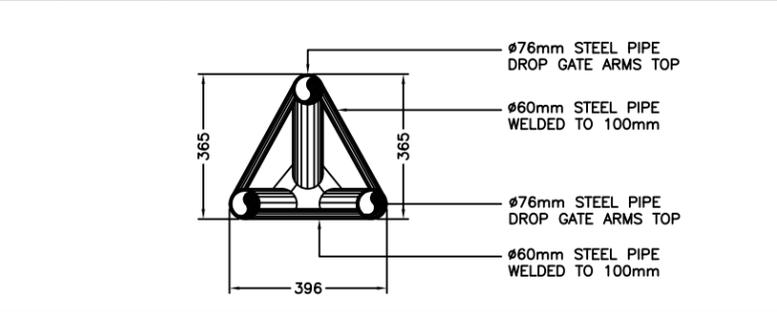
B MANUAL DROP GATE SECTION VIEW DETAIL
 00-C-510 SCALE 1:25 -



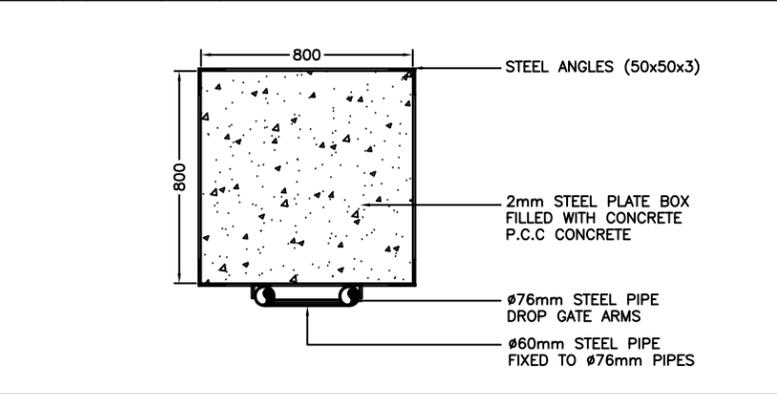
A MANUAL DROP GATE ELEVATION
 00-C-510 SCALE 1:25 -



C MANUAL DROP GATE SECTION VIEW DETAIL
 00-C-510 SCALE 1:25 -



D MANUAL DROP GATE SECTION VIEW DETAIL
 00-C-510 SCALE 1:25 -



E MANUAL DROP GATE SECTION VIEW DETAIL
 00-C-510 SCALE 1:25 -

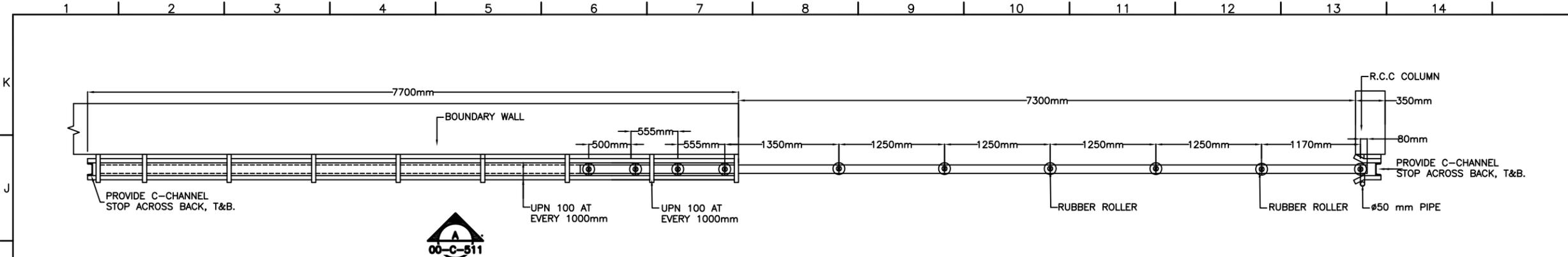


DATE	REV	DESCRIPTION
06/30/10	0	SITE ADAPT CONSTRUCTION PLANS

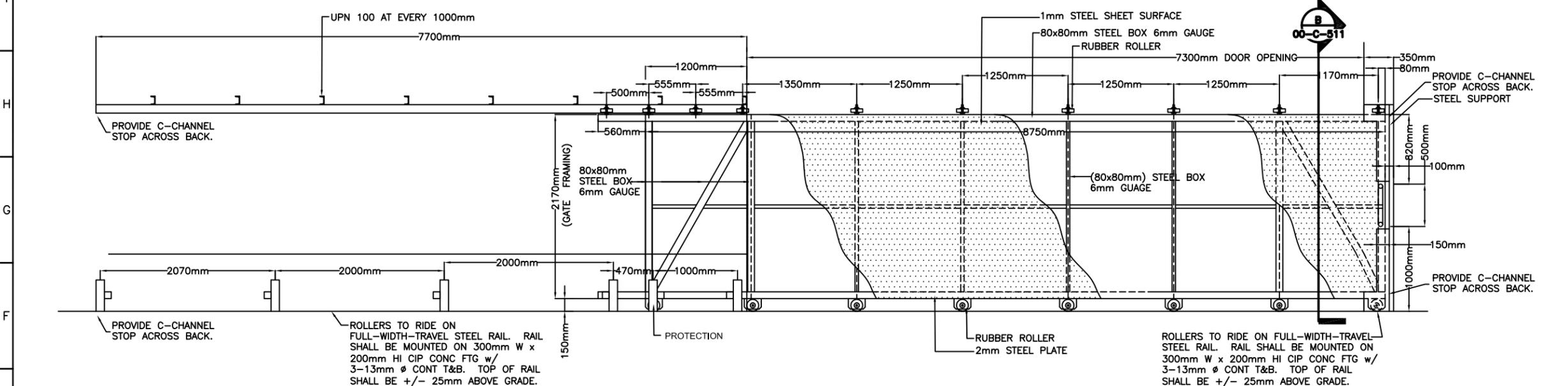
DESIGNED	DRAWN	CHECKED	DATE	REV	DATE	DESCRIPTION
S. AGUDELO	J. OILE	J. STUDER	06/30/10	0	30 JUNE 2010	BY SUBAPP

AFGHAN NATIONAL SECURITY FORCE COMPREHENSIVE PLAN FOR FACILITIES DEVELOPMENT	AFGHAN NATIONAL POLICE PROVINCIAL FIRE STATION - TYPE-B	CONSTRUCTION DETAILS 10
SCALE AS SHOWN		
PROJECT NO. 6151-08-0328		
00-C-510		

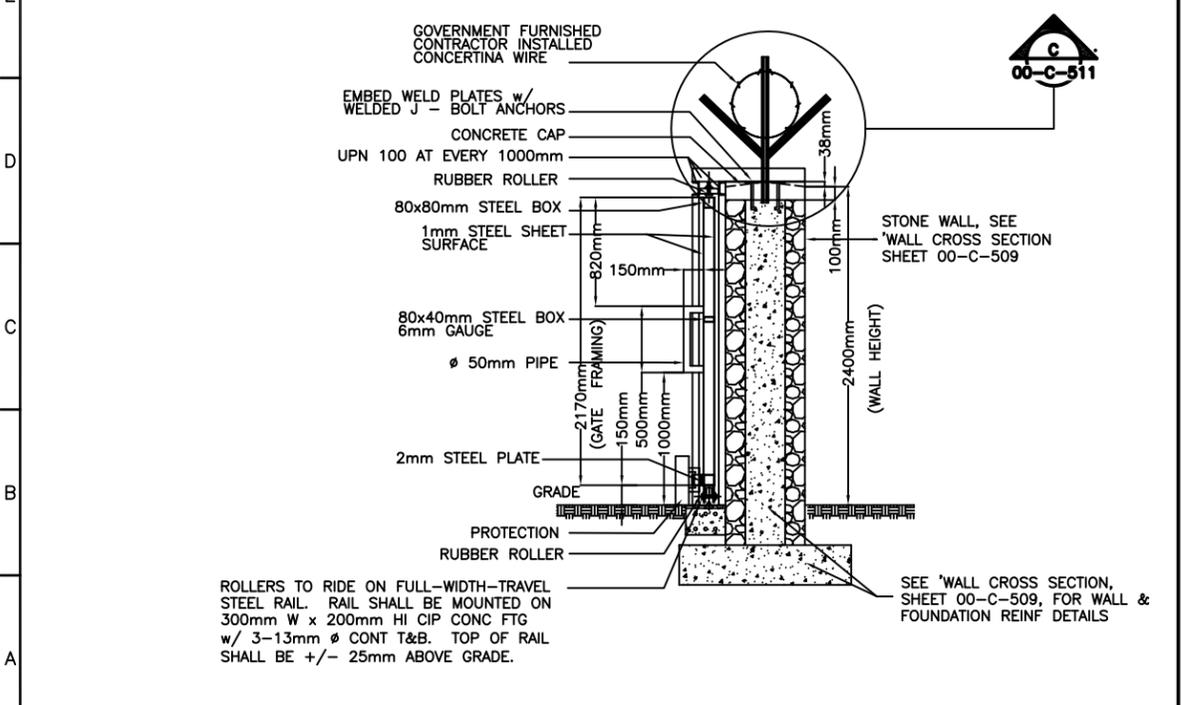
\\user-filing\BAC\Engineering\000 FY 2011 RFPs in Progress\AFN\STANDARD TO DEVELOP Fire Station\MACTEC\00-C-510.dwg 03/14/2011 4:57pm N040408



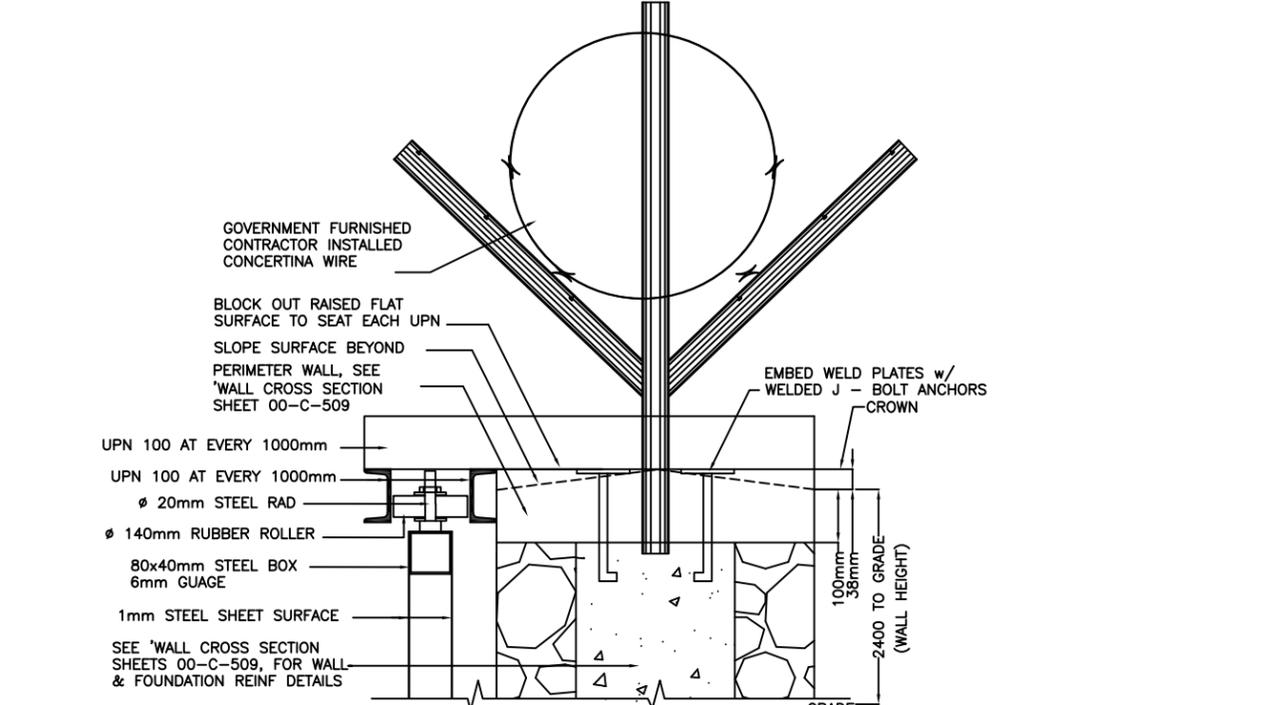
1 SLIDING MAIN GATE PLAN VIEW
 00-C-511 SCALE 1:25 00-C-001



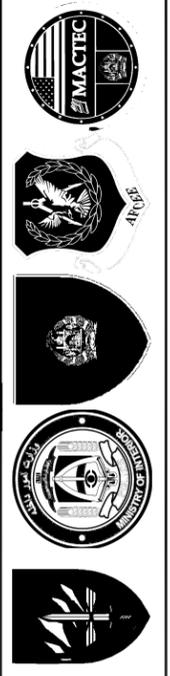
A SLIDING MAIN GATE ELEVATION VIEW
 00-C-511 SCALE 1:25 00-C-001



B SLIDING MAIN GATE SECTION VIEW
 00-C-511 SCALE 1:25 -



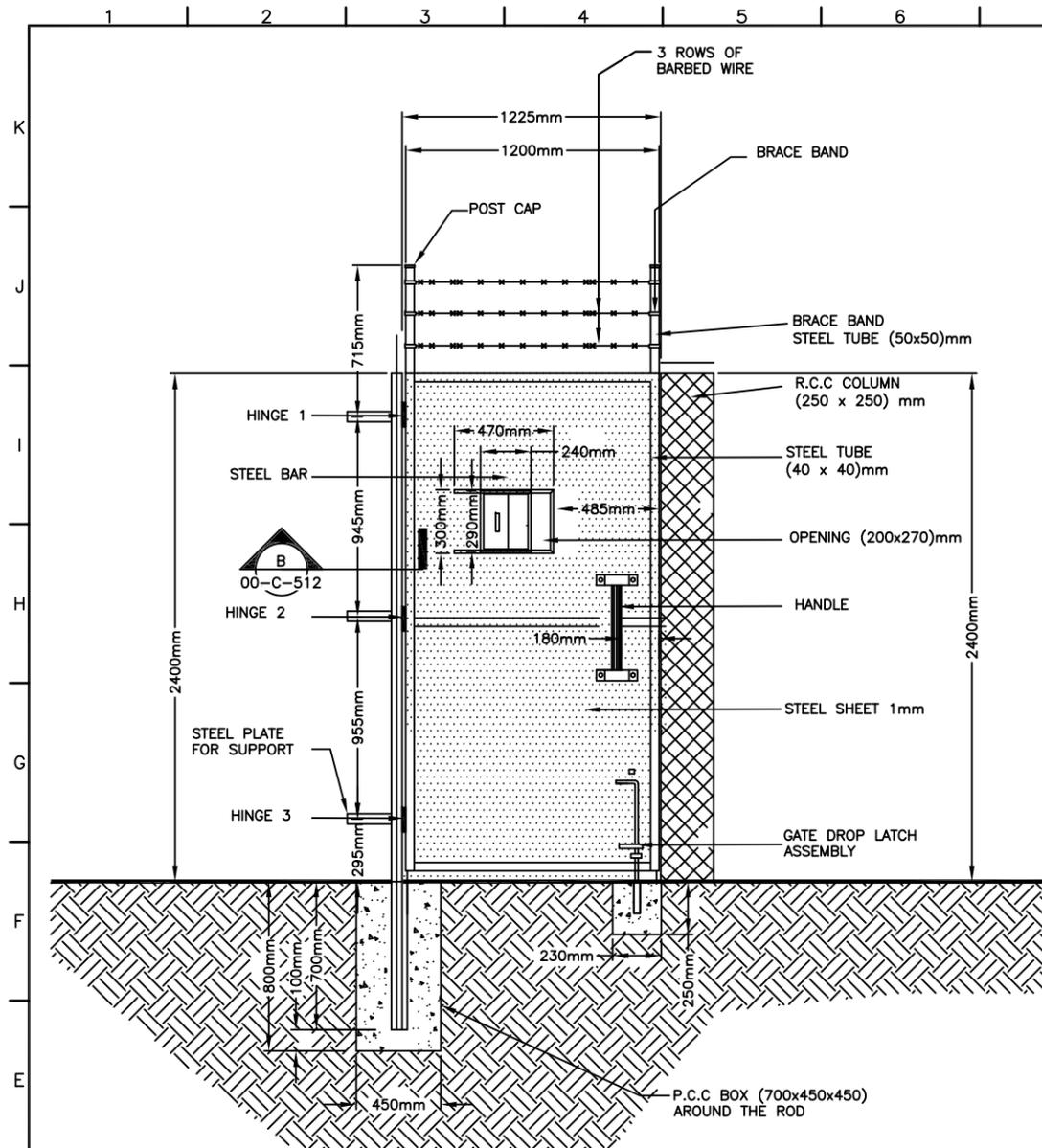
C SLIDING MAIN GATE DETAIL AT TOP OF WALL
 00-C-511 SCALE 1:25 -



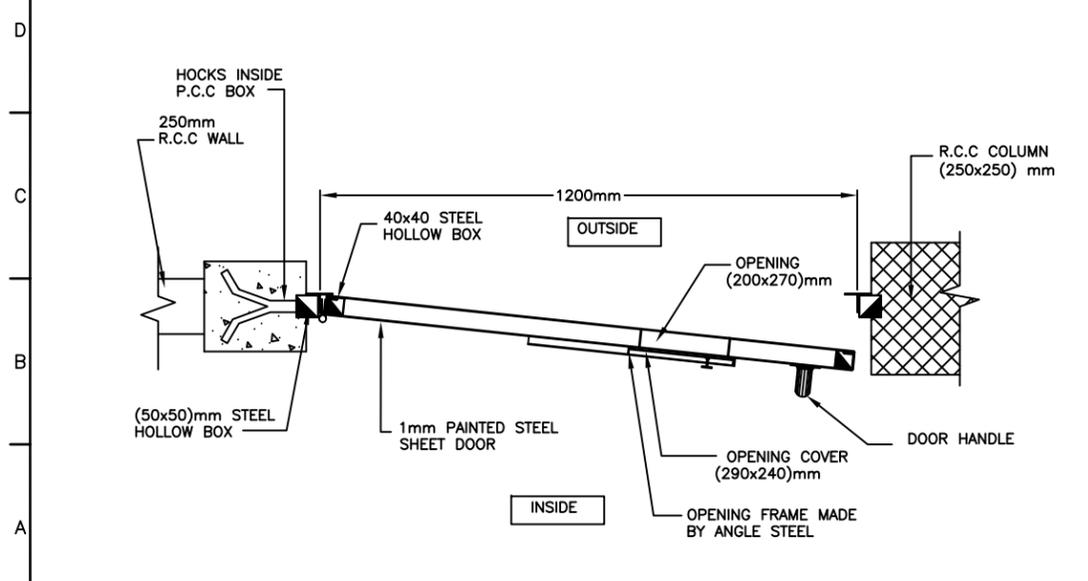
DESIGNED	DRAWN	CHECKED	DATE	REV	DATE	DESCRIPTION
S. AGUDELO	J. JOBLE	J. STODER	06/30/10			SITE ADAPT CONSTRUCTION PLANS
		D. WHEELER				
			30 JUNE 2010			

AFGHAN NATIONAL SECURITY FORCE COMPREHENSIVE PLAN FOR FACILITIES DEVELOPMENT	MINISTRY OF INTERIOR (MoI) AFGHAN NATIONAL POLICE PROVINCIAL FIRE STATION - TYPE-B	CONSTRUCTION DETAILS 11 OF 16
SCALE	AS SHOWN	
PROJECT NO.	6151-08-0328	
00-C-511		

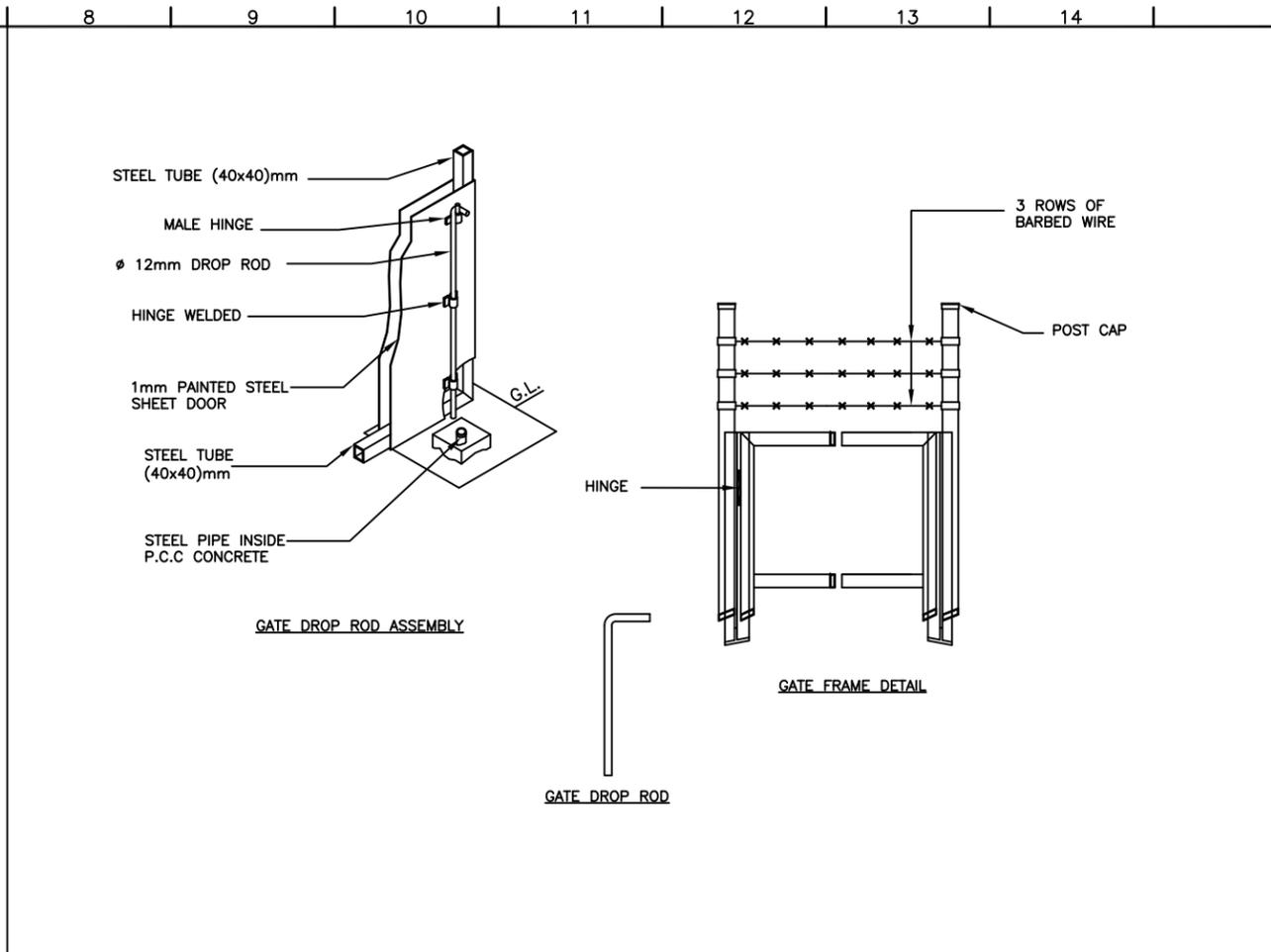
\\net-filing\BAC\Engineering\000 FY 2011 RFPs in Progress\AFAC\STANDARD TO DEVELOP Fire Station\MACTEC\00-C-511.dwg 03/14/2011 5:29pm NDU\BDR



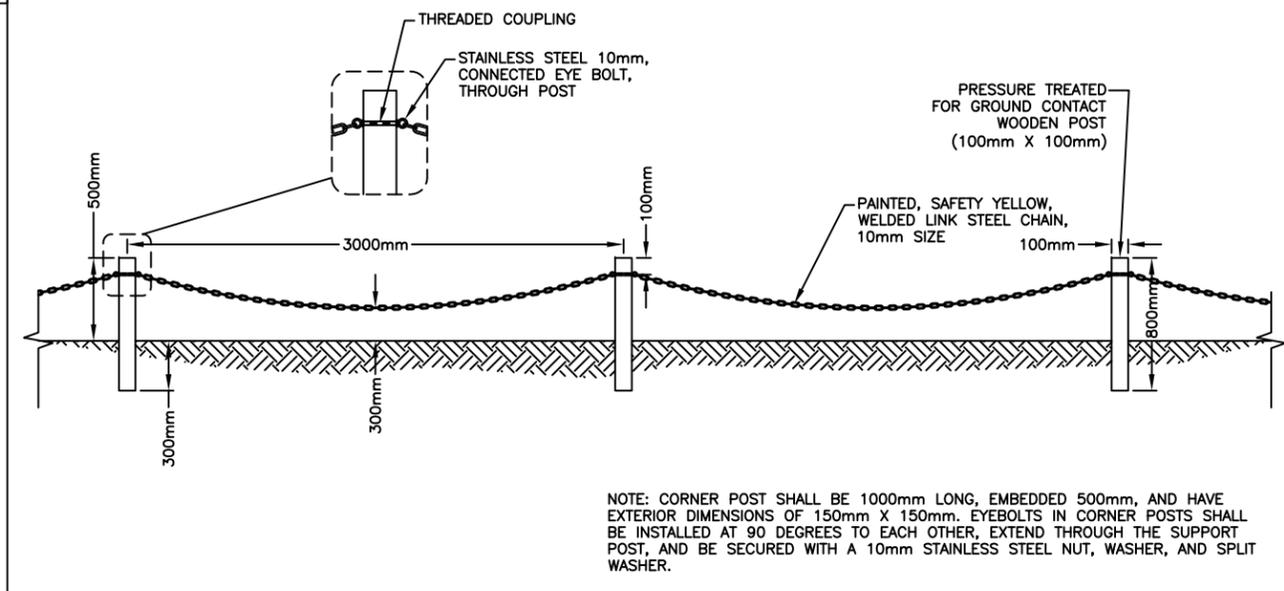
A MAN GATE DOOR
00-C-512 SCALE N.T.S. 00-C-001



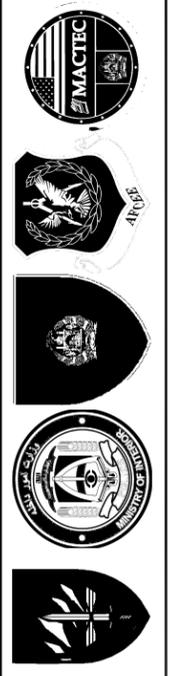
B MAN GATE DOOR SECTION VIEW
00-C-512 SCALE N.T.S. -



C MAN GATE DROP ROD ASSEMBLY
00-C-512 SCALE N.T.S. -



D CHAIN BARRIER AT PARKING BAYS
00-C-512 SCALE N.T.S. 00-C-002, 00-C-003



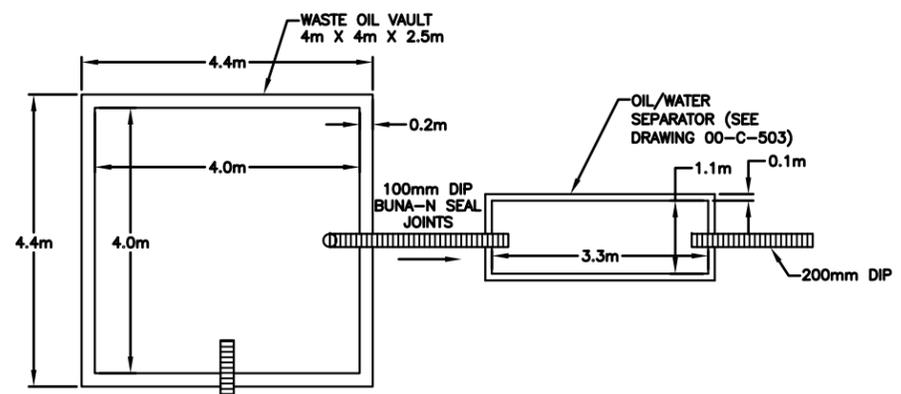
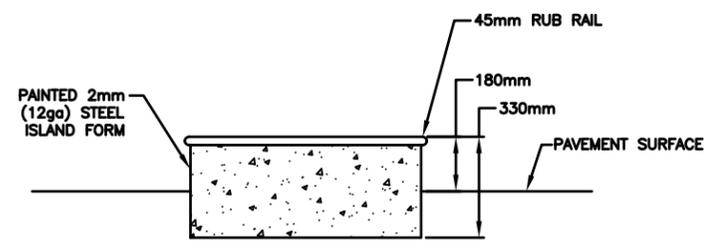
DESIGNED	DATE	REV	DATE	BY	DESCRIPTION
S. AGUDELO	06/30/10	0	06/30/10	NA/BLR	SITE ADAPT CONSTRUCTION PLANS
J. OILE					
J. STODER					
D. WHEELER					
30 JUNE 2010					

AFGHAN NATIONAL SECURITY FORCE	CONSTRUCTION DETAILS 12 OF 16
MINISTRY OF INTERIOR (MoI)	
AFGHAN NATIONAL POLICE	
PROVINCIAL FIRE STATION - TYPE-B	
SCALE AS SHOWN	
PROJECT NO. 6151-08-0328	
00-C-512	

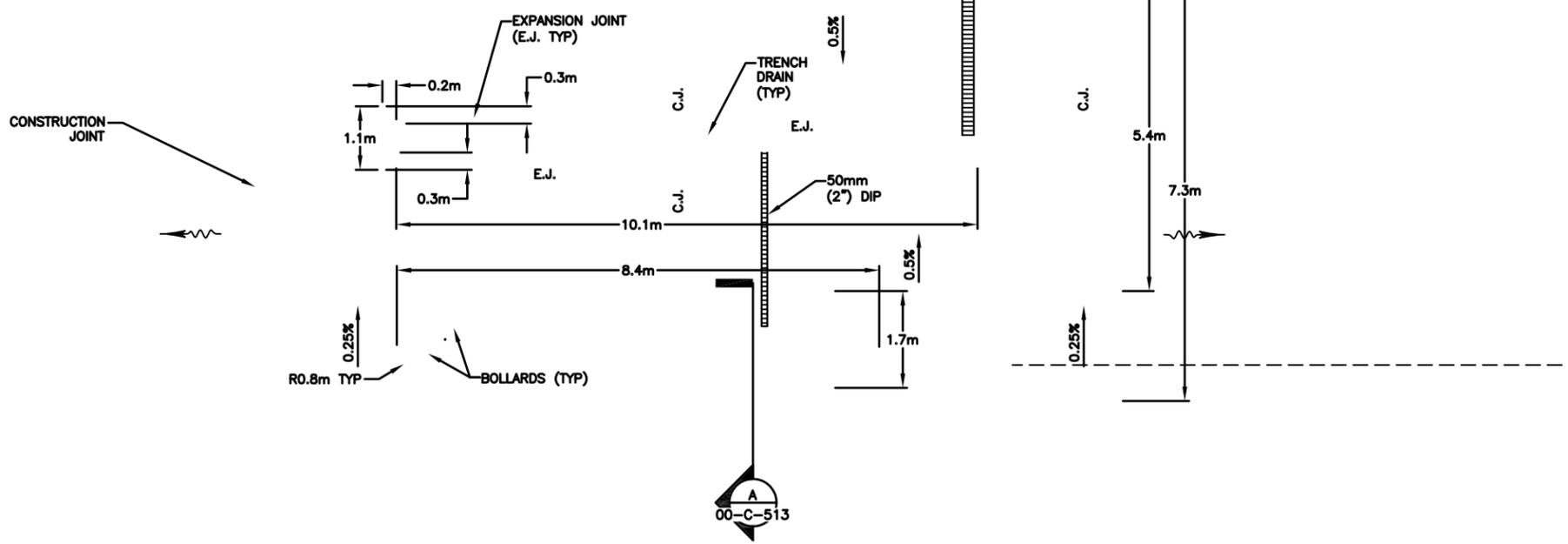
\\nam-filing\lsc\Engineering\000 FY 2011 RFPs in Progress\AFN\STANDARD TO DEVELOP Fire Station\MACTEC\00-C-512.dwg 03/14/2011 5:21pm NA/BLR

1 2 3 4 5 6 7 8 9 10 11 12 13 14

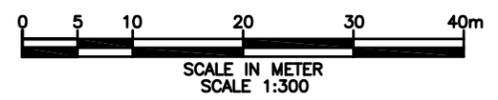
K
J
I
H
G
F
E
D
C
B
A



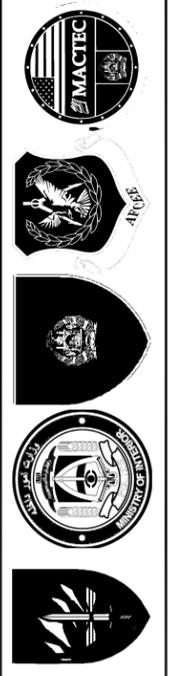
A ISLAND WITH NO PUMP
00-C-513 SCALE: N.T.S. 00-C-514



NOTE:
SEE DRAWING SHEET 00-C-514 FOR FUEL
DISPENSING DETAILS AND EQUIPMENT.



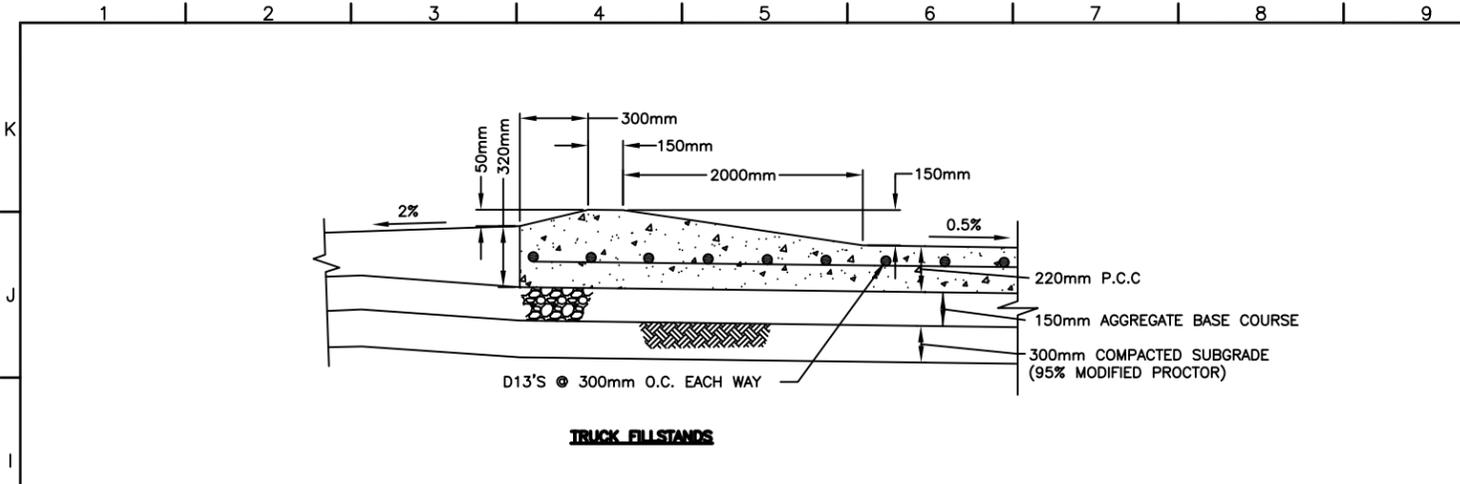
1 FUELING STATION PLAN VIEW
00-C-513 SCALE: 1:300 00-C-514 ; 00-C-504



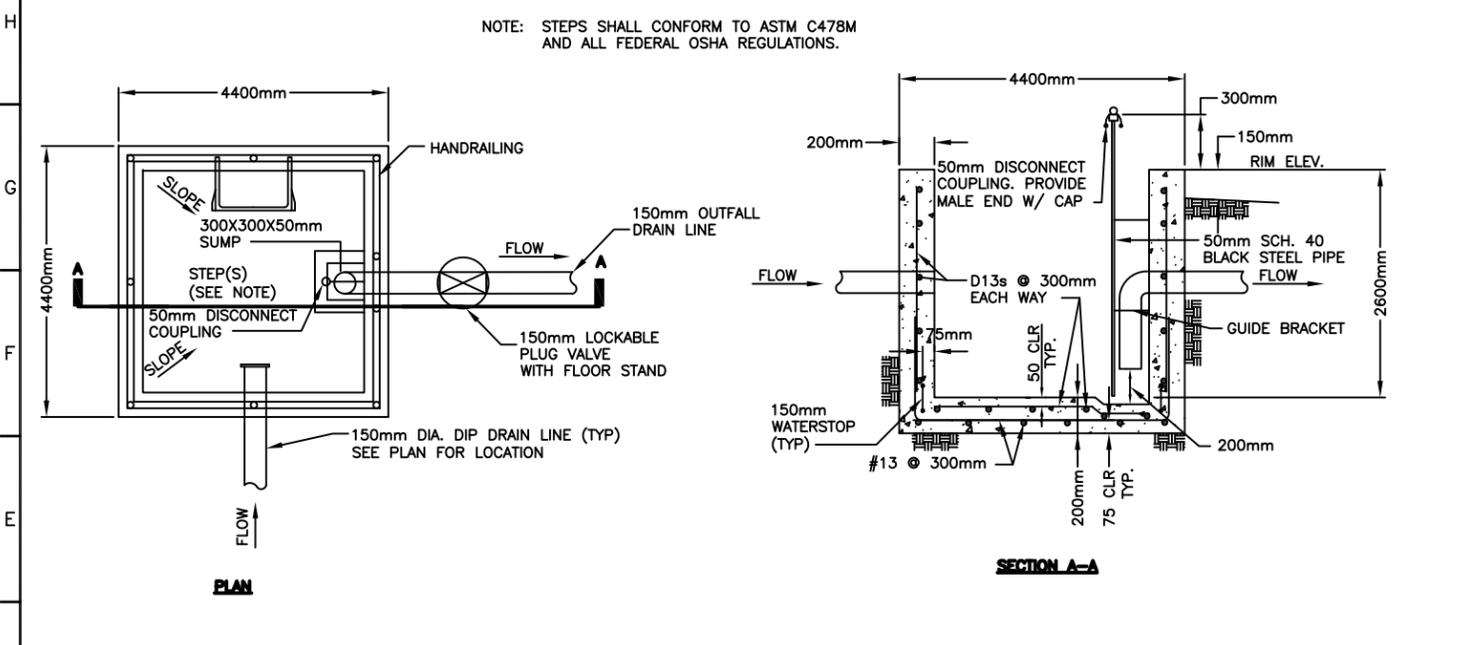
DESIGNED	DATE	REV	DATE	BY	DESCRIPTION
S. AGUDELO	30 JUNE 2010	0	06/30/10		SITE ADAPT CONSTRUCTION PLANS
C. BUDSOCK					
J. STODER					
D. WHEELER					

AFGHAN NATIONAL SECURITY FORCE COMPREHENSIVE PLAN FOR FACILITIES DEVELOPMENT	CONSTRUCTION DETAILS 13
MINISTRY OF INTERIOR (MoI) AFGHAN NATIONAL POLICE PROVINCIAL FIRE STATION - TYPE-B	
SCALE AS SHOWN	
PROJECT NO. 6151-08-0328	
00-C-513	

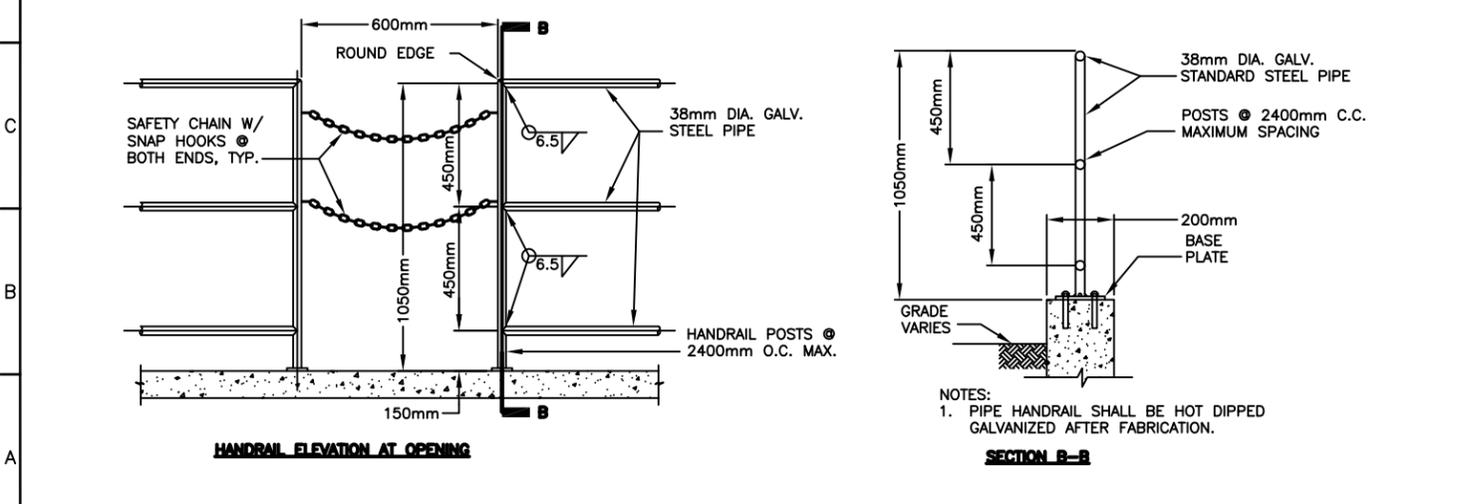
\\net-filing\BAC\Engineering\000 FY 2011 RPA in Progress\MAP\STANDARD TO DEVELOP Fire Station\MACTEC\00\00-C-513.dwg 03/14/2011 5:29pm NDU/BJF



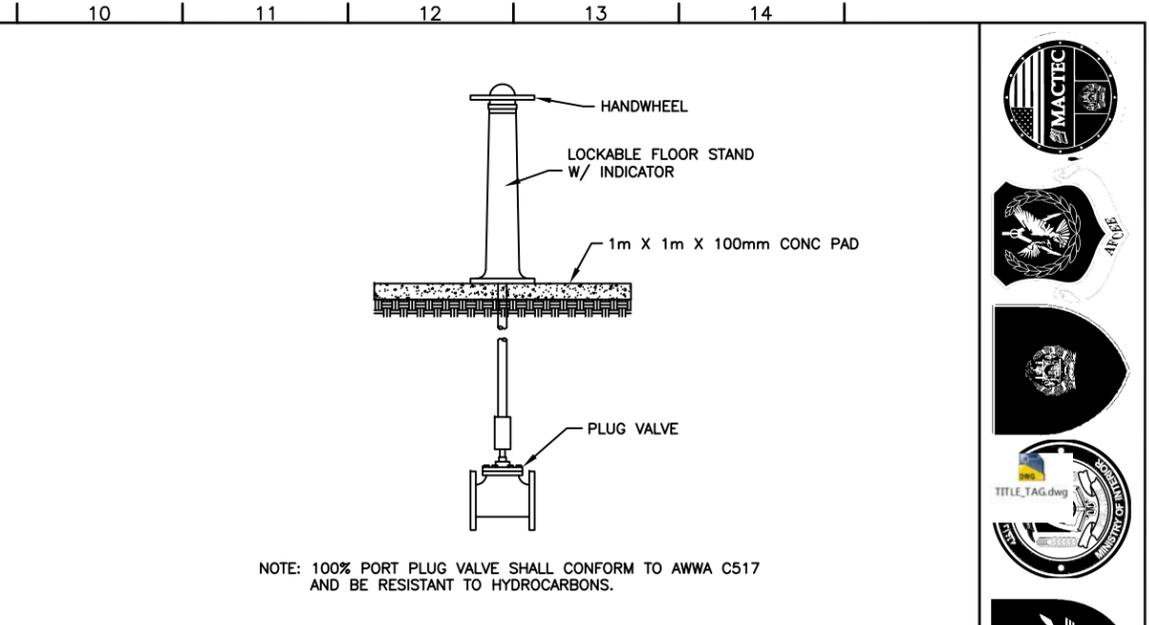
A TYPICAL FUEL CONTAINMENT AREA RAMP SECTION VIEW
 00-C-514 SCALE N.T.S. | 00-C-513 ; 00-C-001



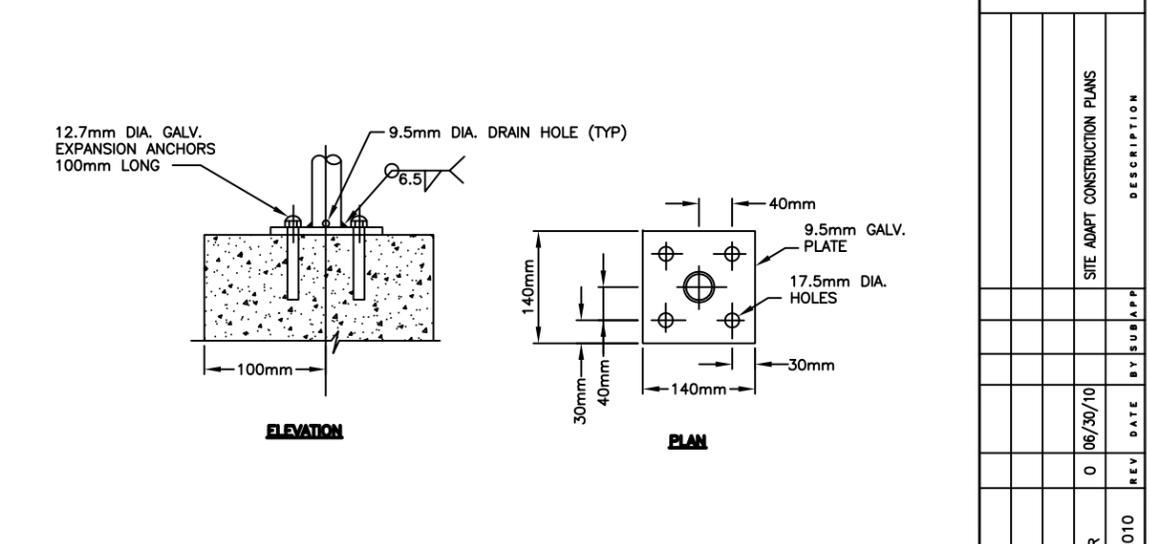
B WASTE OIL VAULT DETAIL
 00-C-514 SCALE N.T.S. | 00-C-513



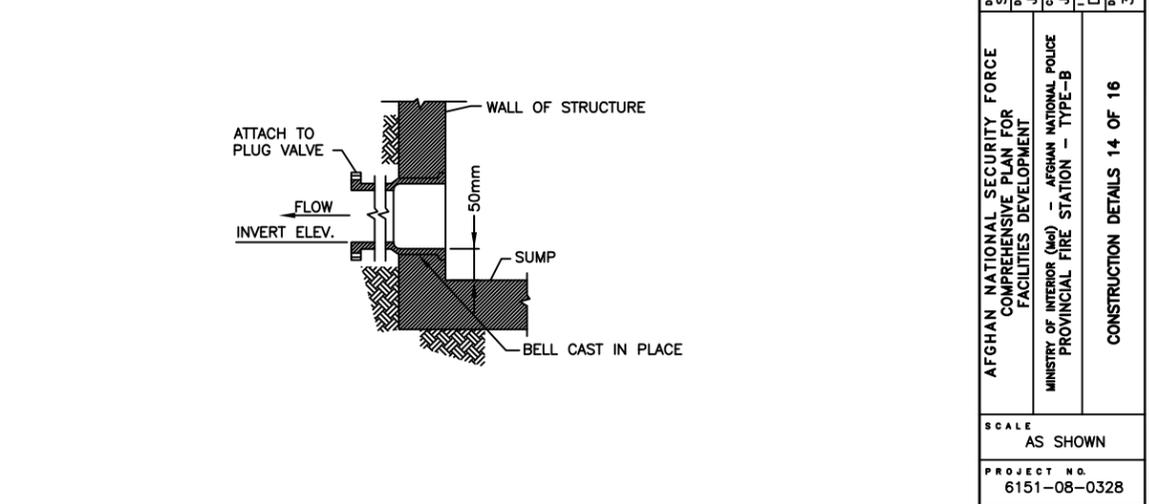
C WASTE OIL VAULT HAND RAIL DETAIL
 00-C-514 SCALE N.T.S. | 00-C-513



D WASTE OIL VAULT FLOOR STAND AND INDICATOR
 00-C-514 SCALE N.T.S. | 00-C-513



E WASTE OIL VAULT BASE PLATE DETAIL
 00-C-514 SCALE N.T.S. | 00-C-513



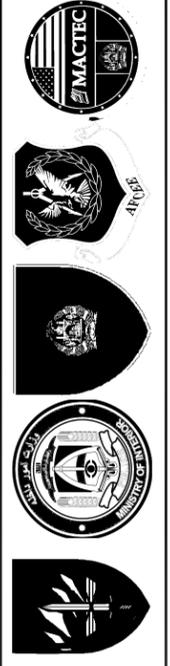
F WASTE OIL VAULT OUTFALL DETAIL
 00-C-514 SCALE N.T.S. | 00-C-513



REV	DATE	BY	DESCRIPTION
0	06/30/10	D. WHEELER	SITE ADAPT CONSTRUCTION PLANS

DESIGNED S. AGUDELO	AFGHAN NATIONAL SECURITY FORCE COMPREHENSIVE PLAN FOR FACILITIES DEVELOPMENT	CONSTRUCTION DETAILS 14 OF 16
DRAWN J. OILE	MINISTRY OF INTERIOR (MoI) AFGHAN NATIONAL POLICE PROVINCIAL FIRE STATION - TYPE-B	
CHECKED J. STODER		
DATE 30 JUNE 2010		
SCALE AS SHOWN		
PROJECT NO. 6151-08-0328		
00-C-514		

\\vsm-falcom\p001\Engineering\000_P\2011\BPA in Progress\VAE\STANDARD TO DEVELOP Fire Station\MACTEC\000\00-C-514.dwg 03/14/2011 6:28pm N245487



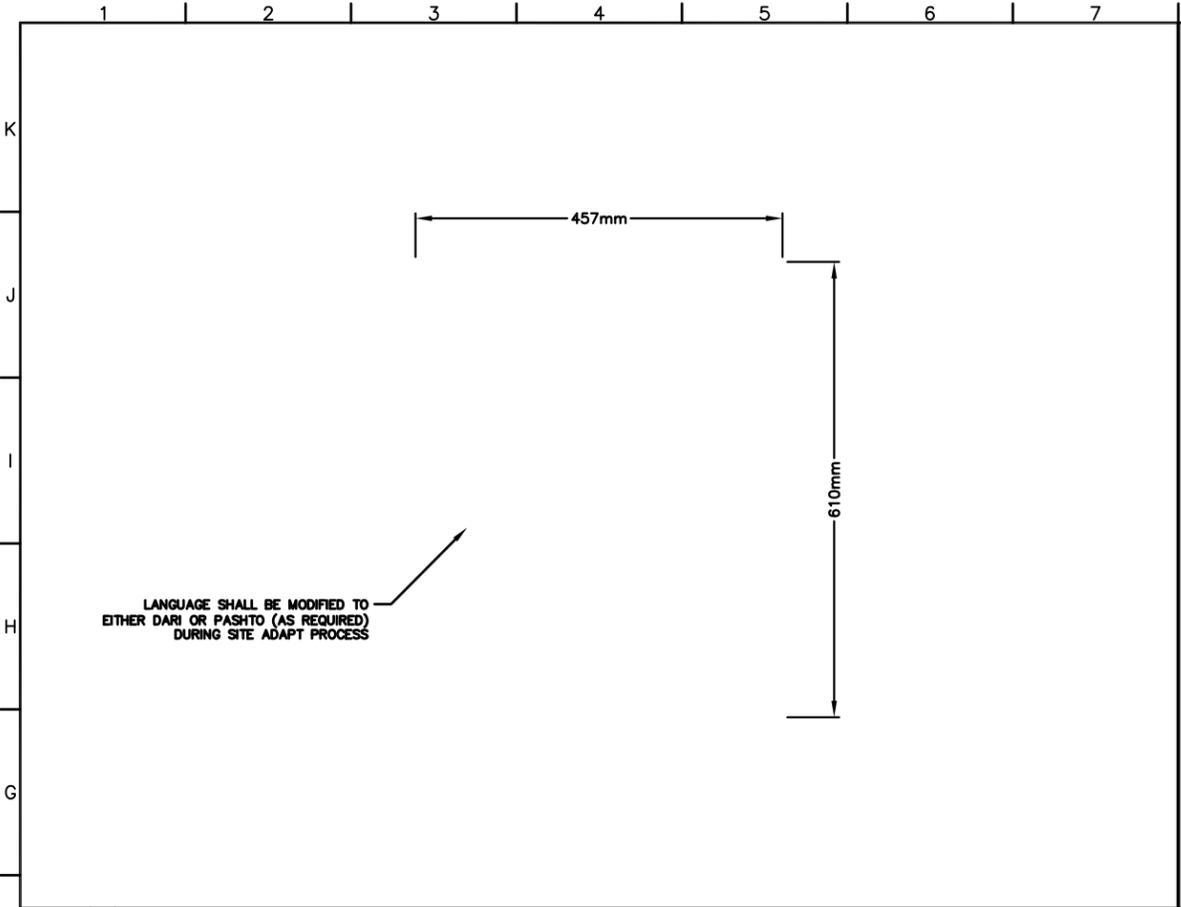
DATE	REV	DESCRIPTION
06/30/10	0	SITE ADAPT CONSTRUCTION PLANS

DESIGNED	DATE	REV	DESCRIPTION
S. AGUDELO	30 JUNE 2010		
DRAWN			
C. BUDDOCK			
CHECKED			
J. STODER			
DATE			
D. WHEELER			

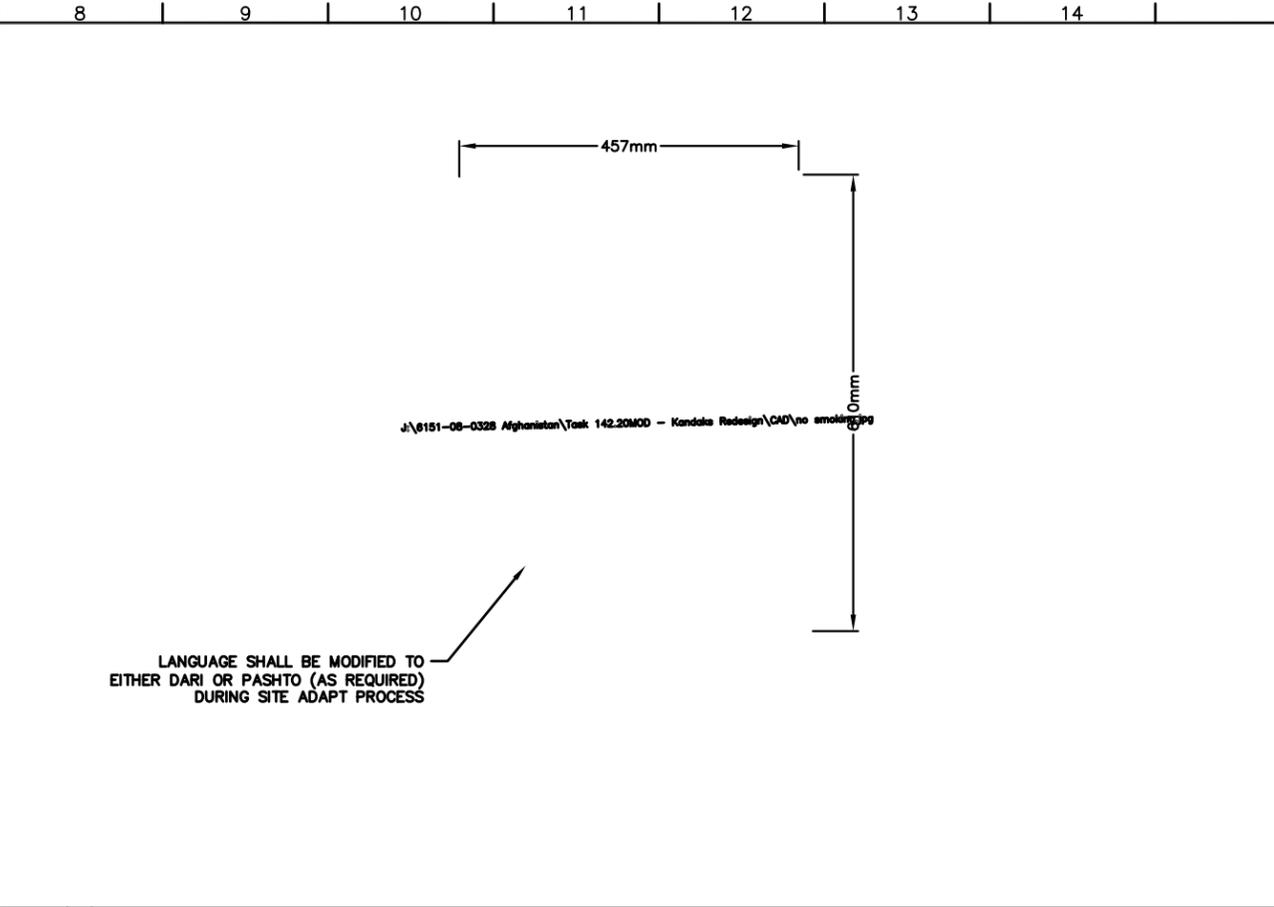
AFGHAN NATIONAL SECURITY FORCE COMPREHENSIVE PLAN FOR FACILITIES DEVELOPMENT
MINISTRY OF INTERIOR (MoI) AFGHAN NATIONAL POLICE PROVINCIAL FIRE STATION - TYPE-B
CONSTRUCTION DETAILS 15

SCALE	AS SHOWN
PROJECT NO.	6151-08-0328
00-C-515	

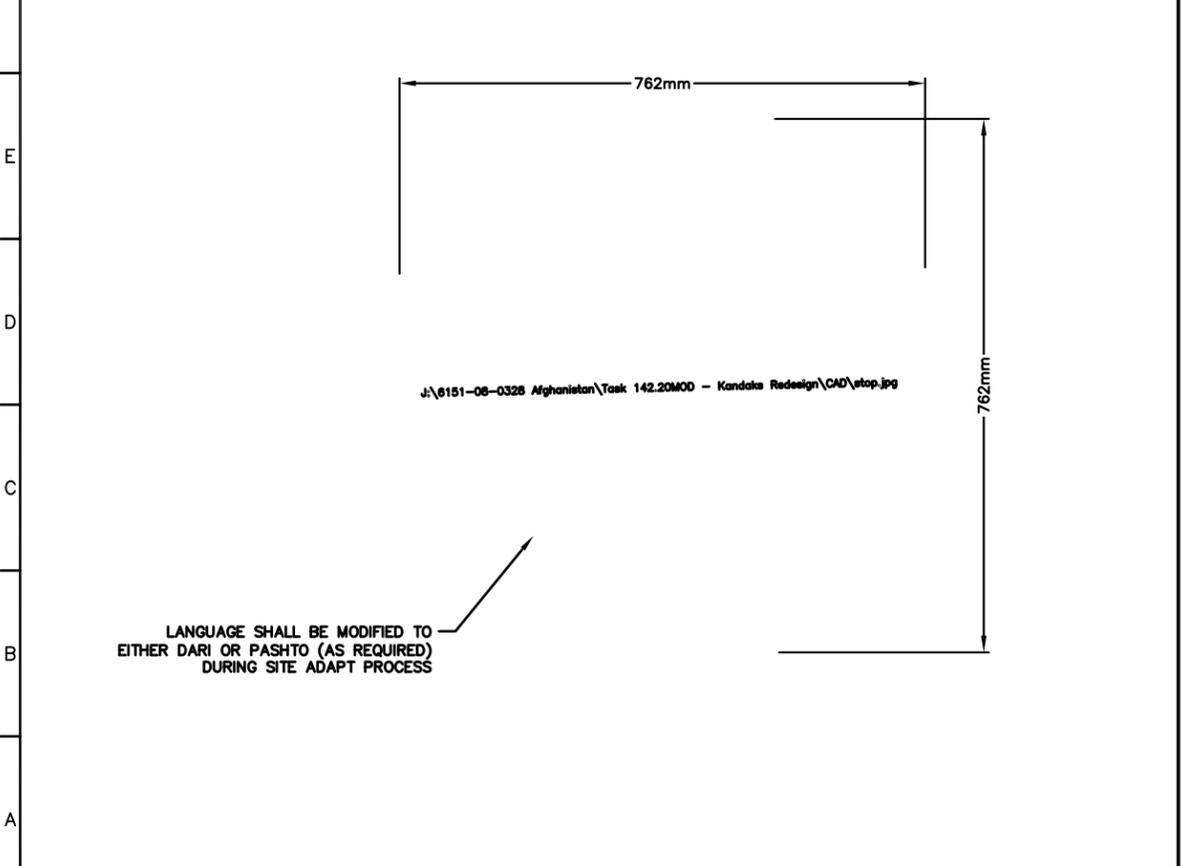
\\nrc-filing\BAC\Engineering\000 FY 2011 RPA in Progress\AF\STANDARD TO DEVELOP Fire Station\MACTEC\CAD\08-03-05.dwg 03/14/2011 6:27pm NDU/BLF



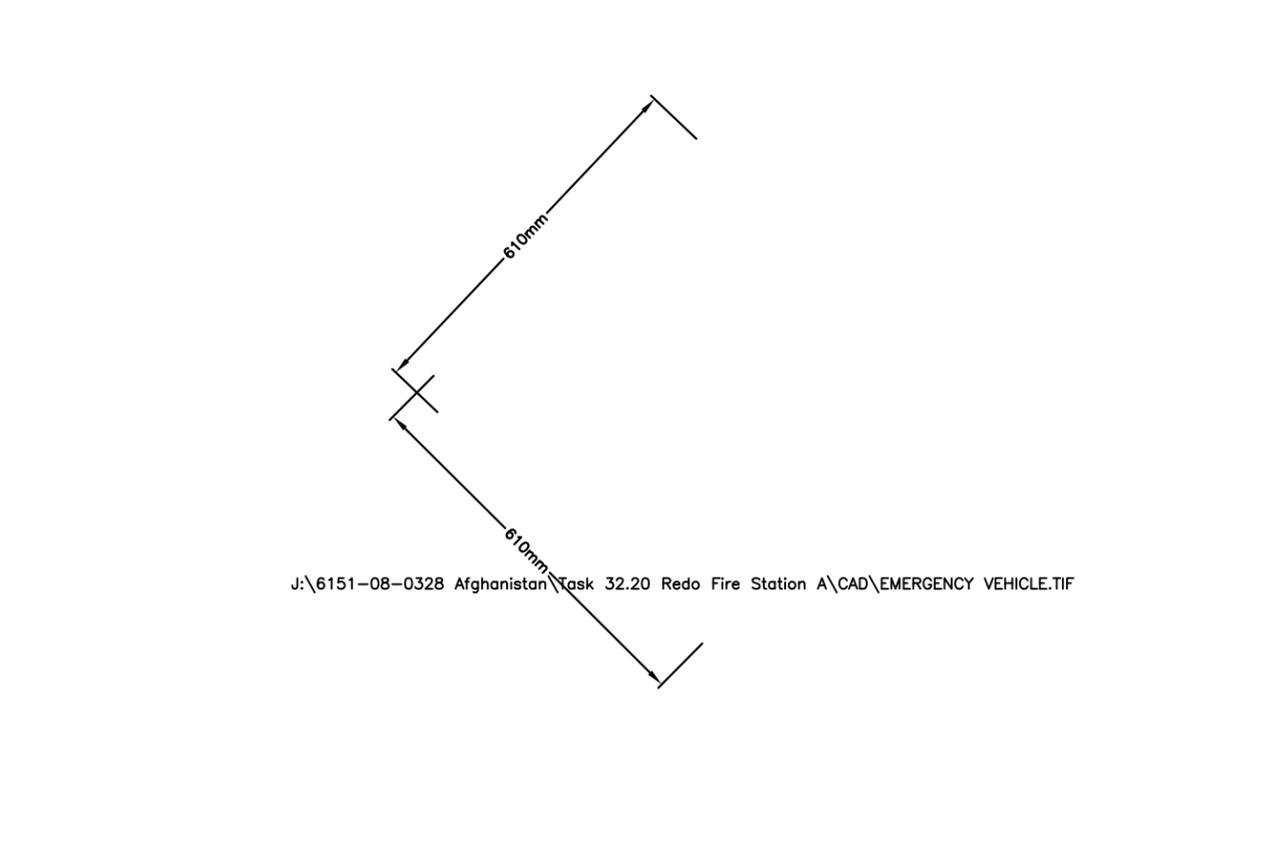
A | SPEED LIMIT SIGN
00-C-515 | SCALE N.T.S. | 00-C-005



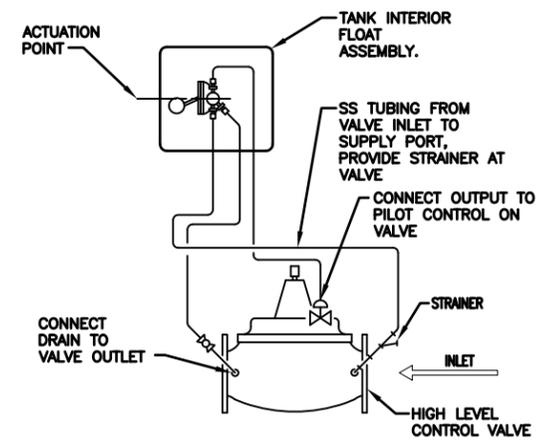
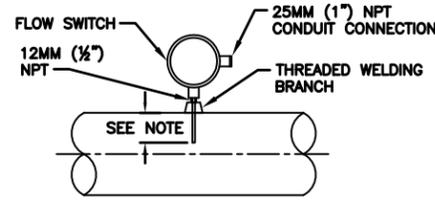
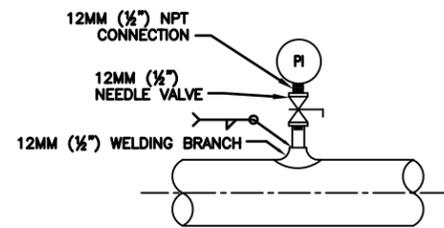
B | EMERGENCY VEHICLE SIGN
00-C-515 | SCALE N.T.S. | 00-C-005



C | STOP SIGN
00-C-515 | SCALE N.T.S. | 00-C-005



D | EMERGENCY VEHICLE SIGN
00-C-515 | SCALE N.T.S. | 00-C-005



F PRESSURE INDICATOR DETAIL

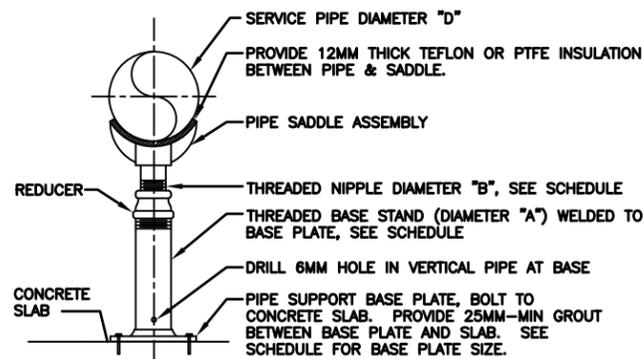
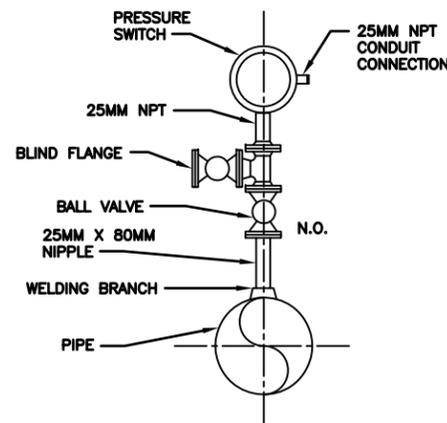
E FLOW SWITCH DETAIL

D HIGH LEVEL CONTROL VALVE DETAIL

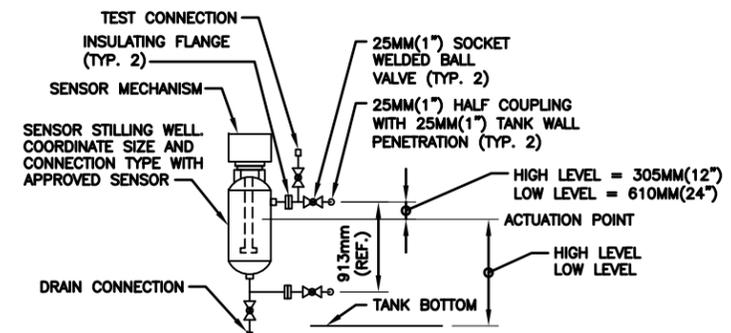
00-C-518 SCALE N.T.S.

00-C-518 SCALE N.T.S.

00-C-518 SCALE N.T.S.



PIPE SUPPORT SCHEDULE				
SERVICE PIPE NOMINAL DIA. "D"	"A"	"B"	BASE PLATE SIZE	
62MM - 88MM	62MM	38MM	9 x 200 x 200MM	
100MM - 300MM	75MM	62MM	9 x 300 x 300MM	
350MM - 400MM	100MM	75MM	12 x 300 x 300MM	
450MM - 900MM	150MM	100MM	12 x 450 x 450MM	



C PRESSURE SWITCH DETAIL

B PIPE SUPPORT DETAIL

A LEVEL SWITCH DETAIL

00-C-518 SCALE N.T.S.

00-C-518 SCALE N.T.S.

00-C-518 SCALE N.T.S.



DATE	REV	DESCRIPTION
06/30/10	0	SITE ADAPT CONSTRUCTION PLANS

DESIGNED	DRAWN	CHECKED	DATE
S. AGUDELO	C. BUDSOCK	J. STODER	30 JUNE 2010

AFGHAN NATIONAL SECURITY FORCE	AFGHAN NATIONAL POLICE
COMPREHENSIVE PLAN FOR FACILITIES DEVELOPMENT	PROVINCIAL FIRE STATION - TYPE-B

SCALE	PROJECT NO.	00-C-516
AS SHOWN	6151-08-0328	

SEQUENCE OF OPERATION

WELL PUMP SYSTEM

THE WELL PUMP SYSTEM IS SET UP PROVIDE AUTOMATED WATER SUPPLY TO THE WATER SUPPLY AND CISTERN TANKS. A WELL PUMP CONTROL PANEL IS LOCATED IN THE WELL HOUSE, PROVIDING OPERATOR INTERFACE WITH THE WELL SYSTEM.

TO INITIATE THE AUTOMATED WELL WATER SUPPLY OPERATION, AN OPERATOR FIRST ENSURES ALL NECESSARY MANUAL VALVES ARE OPENED FOR AN OPEN FLOW TO THE SELECTED TANK(S) (Water Supply Tank and/or Cistern Tank).

WELL PUMP – NORMAL OPERATION:

- A. UNDER NORMAL OPERATION, THE WELL PUMP CONTROL HAND/OFF/AUTO (HOA) SWITCH IS PLACED IN THE "AUTO" POSITION.
- B. WHEN (Water Supply Tank and/or Cistern) TANK IS REDUCED TO THE LOW-LOW LEVEL DURING THE DISPENSING PROCESS, THE RESPECTIVE TANK LOW-LOW (LL) LEVEL SWITCH SHALL ENERGIZE THE TANK LL LEVEL LIGHT AT THE WELL PUMP CONTROL PANEL. VISIBLE LL LEVEL STATUS LIGHT WILL BE CLEARED WHEN THE WATER LEVEL IS INCREASED ABOVE THE LL LEVEL.
- C. WHEN (Water Supply Tank and/or Cistern) TANK IS REDUCED TO THE LOW LEVEL DURING THE DISPENSING PROCESS, THE RESPECTIVE TANK LOW (L) LEVEL SWITCH SHALL ENERGIZE THE TANK L LEVEL LIGHT AT THE WELL PUMP CONTROL PANEL AND ENERGIZE THE WELL PUMP TO START THE TANK FILLING PROCESS. VISIBLE L LEVEL STATUS LIGHT WILL BE CLEARED WHEN THE WATER LEVEL IS INCREASED ABOVE THE L LEVEL. SEE CISTERN TANK AND WATER SUPPLY TANK MONITORING / LEVEL CONTROL OPERATION BELOW.
- D. ONCE THE PUMP IS INITIATED, THE FLOW SWITCH SHALL PROVE FLOW WITHIN THE FIRST 5 SECONDS (ADJUSTABLE); THE GREEN PUMP RUN STATUS LIGHT SHALL ILLUMINATE INDICATING PUMP ON; AND THE GREEN FLOW STATUS LIGHT SHALL ILLUMINATE INDICATING FLOW. DURING THE FIRST 5 SECONDS (ADJUSTABLE), THE FLOW SWITCH SHALL STOP THE PUMP WHEN NO FLOW IS DETECTED FOR 3 CONTINUOUS SECONDS (ADJUSTABLE), THE PUMP ALARM STATUS LIGHT SHALL ILLUMINATE; AN AUDIBLE ALARM SHALL INITIATE; THE GREEN PUMP RUN STATUS LIGHT SHALL NOT ILLUMINATE INDICATING PUMP OFF; AND THE GREEN FLOW STATUS LIGHT SHALL NOT ILLUMINATE INDICATING NO FLOW. VISIBLE/AUDIBLE ALARMS MAY BE CLEARED WITH THE ACKNOWLEDGE SWITCH.
- E. AFTER 6 SECONDS (ADJUSTABLE) OF NORMAL OPERATION, THE FLOW SWITCH SHALL STOP THE WELL PUMP WHEN NO FLOW IS DETECTED FOR 3 CONTINUOUS SECONDS (ADJUSTABLE); THE GREEN PUMP RUN STATUS LIGHT SHALL NOT ILLUMINATE INDICATING WELL PUMP OFF; AND THE GREEN FLOW STATUS LIGHT SHALL NOT ILLUMINATE INDICATING NO FLOW.
- F. WHEN (Water Supply Tank and/or Cistern) TANK LEVEL RISES TO THE HIGH-HIGH LEVEL DURING THE FILLING PROCESS, THE RESPECTIVE TANK HH LEVEL LIGHT SHALL BE ENERGIZED AT THE WELL PUMP CONTROL PANEL AND THE WELL PUMP SHALL BE DE-ENERGIZED. VISIBLE HH ALARM STATUS LIGHT WILL BE CLEARED WHEN WATER LEVEL IS REDUCED BELOW THE HH LEVEL. SEE WATER SUPPLY TANK AND CISTERN TANK MONITORING / LEVEL CONTROL OPERATION BELOW.
- G. THE PUMP STOP SWITCH WILL CAUSE THE PUMP TO BE DE-ENERGIZED AND THE GREEN PUMP RUN STATUS LIGHT SHALL NOT ILLUMINATE INDICATING PUMP OFF.
- H. THE EMERGENCY STOP SWITCH SHALL DE-ENERGIZE THE PUMP, THE EMERGENCY STOP STATUS LIGHT SHALL ILLUMINATE AND AN AUDIBLE ALARM SHALL INITIATE. VISIBLE/AUDIBLE ALARMS MAY BE CLEARED WITH THE ACKNOWLEDGE SWITCH.

WATER SUPPLY DISPENSING SYSTEM

THE POTABLE WATER DISPENSING SYSTEM IS SET UP TO TRANSFER WATER FROM THE WATER SUPPLY TANK TO THE FIRE STATION AND GUARD HOUSE BUILDINGS. A STORAGE TANK CONTROL PANEL IS LOCATED AT THE WATER TANK STORAGE AREA, PROVIDING OPERATOR INTERFACE WITH THE WATER SYSTEM.

TO INITIATE THE WATER DISPENSING OPERATION, THE OPERATOR FIRST ENSURES ALL NECESSARY MANUAL VALVES ARE OPENED FOR AN OPEN FLOW PATH TO THE BUILDINGS.

WATER SUPPLY PUMP – NORMAL OPERATION:

- A. UNDER NORMAL OPERATION, PUMP CONTROL HOA SWITCH(S) FOR THE SELECTED PUMP(S) IS PLACED IN THE "AUTO" POSITION TO ENABLE THE ASSOCIATED DISPENSING PUMP(S). FOR THOSE DISPENSING PUMP(S) NOT CHOSEN FOR OPERATION, HOA SWITCHES MAY BE LEFT IN THE "OFF" POSITION. WHEN MULTIPLE PUMP HOA'S ARE PLACED IN THE "AUTO" POSITION, A ROTATING LEAD PUMP FUNCTION SHALL BE IMPLEMENTED.
- B. PUMP START SHALL BE INITIATED BASED ON INPUT FROM THE PRESSURE SWITCH WHEN PRESSURE DROPS BELOW THE FIXED SETPOINT (BYPASS PRESSURE CONTROL VALVE SETPOINT + 1.4 kPa, ADJUSTABLE), CAUSING THE DISPENSING PUMP TO BE ENERGIZED.
- C. ONCE THE PUMP IS INITIATED, THE FLOW SWITCH SHALL PROVE FLOW WITHIN THE FIRST 5 SECONDS (ADJUSTABLE); THE GREEN PUMP RUN STATUS LIGHT SHALL ILLUMINATE INDICATING PUMP ON; AND THE GREEN FLOW STATUS LIGHT SHALL ILLUMINATE INDICATING FLOW. DURING THE FIRST 5 SECONDS (ADJUSTABLE), THE FLOW SWITCH SHALL STOP THE PUMP WHEN NO FLOW IS DETECTED FOR 3 CONTINUOUS SECONDS (ADJUSTABLE), THE PUMP ALARM STATUS LIGHT SHALL ILLUMINATE; AN AUDIBLE ALARM SHALL INITIATE; THE GREEN PUMP RUN STATUS LIGHT SHALL NOT ILLUMINATE INDICATING PUMP OFF; AND THE GREEN FLOW STATUS LIGHT SHALL NOT ILLUMINATE INDICATING NO FLOW. VISIBLE/AUDIBLE ALARMS MAY BE CLEARED WITH THE ACKNOWLEDGE SWITCH.
- D. WHILE THE PUMP IS RUNNING AND WATER IS FLOWING UNDER VARYING FLOW DEMAND, THE HYDRAULIC BYPASS PRESSURE CONTROL VALVE SHALL MODULATE TO MAINTAIN CONSTANT SYSTEM PRESSURE AT THE FIXED SETPOINT (ADJUSTABLE).
- E. AFTER 6 SECONDS (ADJUSTABLE) OF NORMAL OPERATION, THE FLOW SWITCH SHALL STOP THE PUMP WHEN NO FLOW IS DETECTED FOR 3 CONTINUOUS SECONDS (ADJUSTABLE); THE GREEN PUMP RUN STATUS LIGHT SHALL NOT ILLUMINATE INDICATING PUMP OFF; AND THE GREEN FLOW STATUS LIGHT SHALL NOT ILLUMINATE INDICATING NO FLOW.
- F. THE EMERGENCY STOP SWITCH SHALL DE-ENERGIZE THE PUMP, THE EMERGENCY STOP STATUS LIGHT SHALL ILLUMINATE AND AN AUDIBLE ALARM SHALL INITIATE. VISIBLE/AUDIBLE ALARMS MAY BE CLEARED WITH THE ACKNOWLEDGE SWITCH.

CISTERN TANK DISPENSING SYSTEM

THE CISTERN WATER DISPENSING SYSTEM IS SET UP TO TRANSFER WATER FROM STORAGE TO THE ADJACENT FIRE HYDRANT. A STORAGE TANK CONTROL PANEL IS LOCATED AT THE CISTERN TANK STORAGE AREA, PROVIDING OPERATOR INTERFACE WITH THE WATER SYSTEM.

TO INITIATE THE WATER DISPENSING OPERATION, THE OPERATOR FIRST ENSURES ALL NECESSARY MANUAL VALVES ARE OPENED FOR AN OPEN FLOW PATH TO THE FIRE HYDRANT.

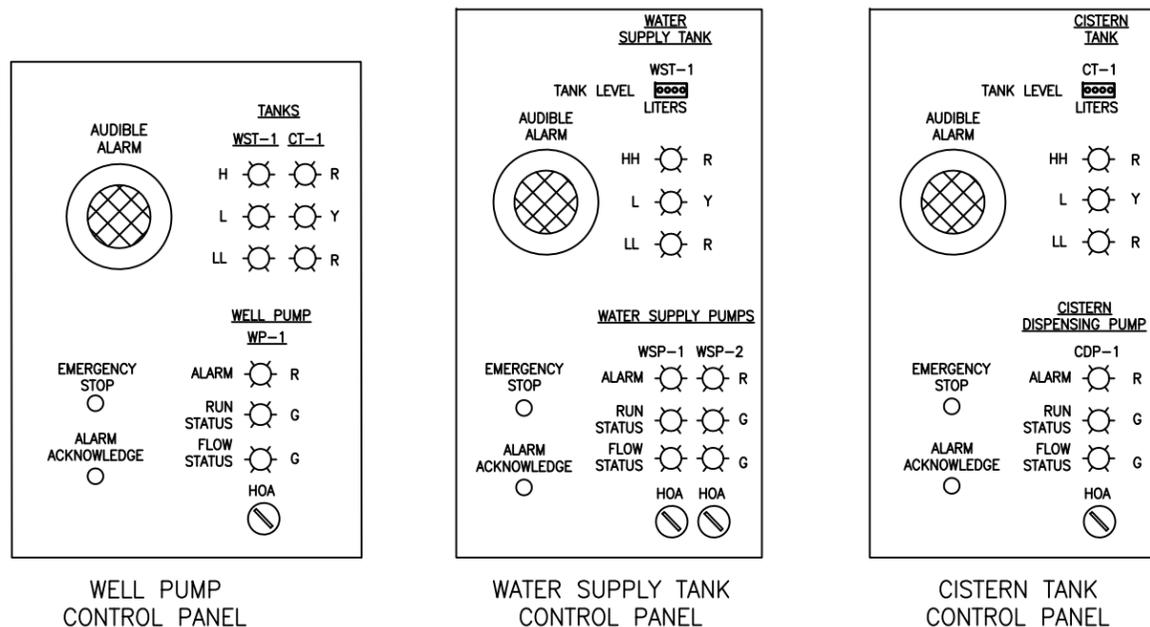
CISTERN WATER DISPENSING PUMP – NORMAL OPERATION:

- A. UNDER NORMAL OPERATION, PUMP CONTROL HOA SWITCH FOR THE SELECTED PUMP IS PLACED IN THE "AUTO" POSITION TO ENABLE THE ASSOCIATED DISPENSING PUMP.
- B. PUMP START SHALL BE INITIATED BASED ON INPUT FROM THE PRESSURE SWITCH WHEN PRESSURE DROPS BELOW THE FIXED SETPOINT (BYPASS PRESSURE CONTROL VALVE SETPOINT + 1.4 kPa, ADJUSTABLE), CAUSING THE DISPENSING PUMP TO BE ENERGIZED.
- C. ONCE THE PUMP IS INITIATED, THE FLOW SWITCH SHALL PROVE FLOW WITHIN THE FIRST 5 SECONDS (ADJUSTABLE); THE GREEN PUMP RUN STATUS LIGHT SHALL ILLUMINATE INDICATING PUMP ON; AND THE GREEN FLOW STATUS LIGHT SHALL ILLUMINATE INDICATING FLOW. DURING THE FIRST 5 SECONDS (ADJUSTABLE), THE FLOW SWITCH SHALL STOP THE PUMP WHEN NO FLOW IS DETECTED FOR 3 CONTINUOUS SECONDS (ADJUSTABLE), THE PUMP ALARM STATUS LIGHT SHALL ILLUMINATE; AN AUDIBLE ALARM SHALL INITIATE; THE GREEN PUMP RUN STATUS LIGHT SHALL NOT ILLUMINATE INDICATING PUMP OFF; AND THE GREEN FLOW STATUS LIGHT SHALL NOT ILLUMINATE INDICATING NO FLOW. VISIBLE/AUDIBLE ALARMS MAY BE CLEARED WITH THE ACKNOWLEDGE SWITCH.
- D. AFTER 6 SECONDS (ADJUSTABLE) OF NORMAL OPERATION, THE FLOW SWITCH SHALL STOP THE PUMP WHEN NO FLOW IS DETECTED FOR 3 CONTINUOUS SECONDS (ADJUSTABLE); THE GREEN PUMP RUN STATUS LIGHT SHALL NOT ILLUMINATE INDICATING PUMP OFF; AND THE GREEN FLOW STATUS LIGHT SHALL NOT ILLUMINATE INDICATING NO FLOW.
- E. THE EMERGENCY STOP SWITCH SHALL DE-ENERGIZE THE PUMP, THE EMERGENCY STOP STATUS LIGHT SHALL ILLUMINATE AND AN AUDIBLE ALARM SHALL INITIATE. VISIBLE/AUDIBLE ALARMS MAY BE CLEARED WITH THE ACKNOWLEDGE SWITCH.

WATER SUPPLY TANK AND CISTERN TANK MONITORING / LEVEL CONTROL:

WATER SUPPLY TANK AND CISTERN TANK MONITORING / LEVEL CONTROL SYSTEMS WILL OPERATE INDEPENDENTLY. EACH STORAGE SYSTEM WILL INCLUDE A TANK LEVEL MONITOR, HIGH-HIGH (HH), LOW (L), LOW-LOW (LL) LEVEL SWITCHES AND A HYDRAULIC OPERATED HIGH LEVEL CONTROL VALVE. TANK MONITORING / LEVEL CONTROL SEQUENCE AS FOLLOWS:

- A. WHEN TANK LEVEL RISES TO THE HIGH-HIGH LEVEL DURING THE FILLING PROCESS, AN AUDIBLE ALARM SHALL SOUND, THE TANK HH LEVEL LIGHT SHALL BE ENERGIZED AT THE TANK MONITORING PANEL, WELL PUMP CONTROL PANEL AND THE REMOTE WELL PUMP SHALL BE DE-ENERGIZED. AUDIBLE ALARMS MAY BE CLEARED WITH THE ACKNOWLEDGE SWITCH. VISIBLE HH ALARM STATUS LIGHT WILL BE CLEARED WHEN WATER LEVEL IS REDUCED BELOW THE HH LEVEL. SEE WELL PUMP OPERATION ABOVE.
- B. WHEN TANK LEVEL RISES TO THE HIGH (H) LEVEL DURING THE FILLING PROCESS, THE HYDRAULIC FLOAT OPERATED HIGH LEVEL CONTROL VALVE SHALL CLOSE TO STOP FLOW FROM FURTHER FILLING THE TANK.
- C. WHEN TANK IS REDUCED TO THE LOW LEVEL DURING THE DISPENSING PROCESS, THE TANK LOW (L) LEVEL LIGHT SHALL BE ENERGIZED AT THE TANK MONITORING PANEL, WELL PUMP CONTROL PANEL AND THE WELL PUMP SHALL BE ENERGIZED TO START THE TANK FILLING PROCESS. VISIBLE L LEVEL STATUS LIGHT WILL BE CLEARED WHEN THE WATER LEVEL IS INCREASED ABOVE THE L LEVEL.
- G. WHEN TANK IS REDUCED TO LOW-LOW LEVEL DURING THE DISPENSING PROCESS, AN AUDIBLE ALARM SHALL SOUND, THE TANK LOW-LOW (LL) LEVEL LIGHT SHALL BE ENERGIZED AT THE TANK MONITORING PANEL, WELL PUMP CONTROL PANEL AND ASSOCIATED WATER DISPENSING PUMP(S) SHALL BE DE-ENERGIZED. VISIBLE LL LEVEL STATUS LIGHT WILL BE CLEARED AND THE DISPENSING PUMP(S) ENABLED WHEN WATER LEVEL IS INCREASED ABOVE THE LL LEVEL. AUDIBLE ALARMS MAY BE CLEARED WITH THE ACKNOWLEDGE SWITCH.



REMOTE SYSTEM PUMP SCHEDULE							
PUMP	V/φ/Hz	POWER, hp (kW)	PUMP TYPE	FLOW	TDH	BASIS OF DESIGN	COMMENTS
WP-1	220/1/50	3 hp (2.2 kw)	Submersible Pump	66.24 L/m (17.5 gpm)	110 meters of H ₂ O	Grundfos SP 5A-25 Product No.: 05002125	
WSP-1,2	380/3/50	5.5 hp (4.1 kw)	Vertical In-line Centrifugal Pump	189.25 L/m (50 gpm)	55 meters of H ₂ O	Grundfos CR 15-5 A-F-A-E HQQE Product No.: 96501701	
CDP-1	380/3/50	30 hp (22.4 kw)	Vertical In-line Centrifugal Pump	2152 L/m (569 gpm)	38.6 meters of H ₂ O	Grundfos CR 150-2-1 A-F-A-E HQQE Product No.: 95922376	
DP-1	230/1/50	0.5 hp (0.37 kw)	Mechanical Diaphragm Metering Pump	3300 mgpd	5.10 meters of H ₂ O	Series MD521PPFZ Mechanical Diaphragm Metering Pump	If Required



DESIGNED	J. MARIANETTI	DATE	30 JUNE 2010
DRAWN	D. HOYLE	REV	06/30/10
CHECKED	M. JILIC	BY	D. WHEELER
APPROVED		DESCRIPTION	SITE ADAPT CONSTRUCTION PLANS

AFGHAN NATIONAL SECURITY FORCE COMPREHENSIVE PLAN FOR FACILITIES DEVELOPMENT	AFGHAN NATIONAL POLICE PROVINCIAL FIRE STATION - TYPE-B	WATER SYSTEM SCHEDULE
SCALE: AS SHOWN		
PROJECT NO.: 6151-08-0328		
00-C-601		

\\nam-falcom\BAC\Engineering\000_P\2011\BPA in Progress\WSP\STANDARD TO DEVELOP Fire Station\MACTEC\000-C-601.dwg 07/14/2011 6:31pm NAB/BRF

ALIGNMENT: ROAD 1			
TANGENT DATA			
DESCRIPTION	PT STATION	NORTHING	EASTING
START:	0+00.00	1099.34	1065.36
END:	0+01.62	1097.72	1065.36
TANGENT DATA			
PARAMETER	VALUE	PARAMETER	VALUE
LENGTH:	1.62	COURSE:	S 00° 00' 00.00" W
CURVE POINT DATA			
DESCRIPTION	STATION	NORTHING	EASTING
PC:	0+01.62	1097.72	1065.36
RP:		1097.72	1052.71
PT:	0+21.49	1085.07	1052.71
CIRCULAR CURVE DATA			
PARAMETER	VALUE	PARAMETER	VALUE
DELTA:	90° 00' 00.00"	TYPE:	RIGHT
RADIUS:	12.65		
LENGTH:	19.87	TANGENT:	12.65
MID-ORD:	3.71	EXTERNAL:	5.24
CHORD:	17.89	COURSE:	S 45° 00' 00.00" W
TANGENT DATA			
DESCRIPTION	PT STATION	NORTHING	EASTING
START:	0+21.49	1085.07	1052.71
END:	0+51.41	1085.07	1022.79
TANGENT DATA			
PARAMETER	VALUE	PARAMETER	VALUE
LENGTH:	29.92	COURSE:	N 90° 00' 00.00" W
CURVE POINT DATA			
DESCRIPTION	STATION	NORTHING	EASTING
PC:	0+51.41	1085.07	1022.79
RP:		1072.42	1022.79
PT:	0+69.78	1072.42	1010.14
CIRCULAR CURVE DATA			
PARAMETER	VALUE	PARAMETER	VALUE
DELTA:	90° 00' 00.00"	TYPE:	LEFT
RADIUS:	12.65		
LENGTH:	19.87	TANGENT:	12.65
MID-ORD:	3.71	EXTERNAL:	5.24
CHORD:	17.89	COURSE:	S 45° 00' 00.00" W
TANGENT DATA			
DESCRIPTION	PT STATION	NORTHING	EASTING
START:	0+71.28	1072.42	1010.14
END:	0+99.53	1044.18	1010.14
TANGENT DATA			
PARAMETER	VALUE	PARAMETER	VALUE
LENGTH:	28.25	COURSE:	S 00° 00' 00.00" W

CURVE POINT DATA			
DESCRIPTION	STATION	NORTHING	EASTING
PC:	0+99.53	1044.18	1010.14
RP:		1044.18	1022.79
PT:	1+19.40	1031.53	1022.79
CIRCULAR CURVE DATA			
PARAMETER	VALUE	PARAMETER	VALUE
DELTA:	90° 00' 00.00"	TYPE:	
RADIUS:	12.65		
LENGTH:	19.87	TANGENT:	12.65
MID-ORD:	3.71	EXTERNAL:	5.24
CHORD:	17.89	COURSE:	S 45° 00' 00.00" E
TANGENT DATA			
DESCRIPTION	PT STATION	NORTHING	EASTING
START:	1+19.40	1031.53	1022.79
END:	1+24.84	1031.53	1028.23
TANGENT DATA			
PARAMETER	VALUE	PARAMETER	VALUE
LENGTH:	5.44	COURSE:	N 90° 00' 00.00" E
CURVE POINT DATA			
DESCRIPTION	STATION	NORTHING	EASTING
PC:	1+24.84	1031.53	1028.23
RP:		1018.88	1028.23
PT:	1+44.71	1018.88	1040.88
CIRCULAR CURVE DATA			
PARAMETER	VALUE	PARAMETER	VALUE
DELTA:	90° 00' 00.00"	TYPE:	RIGHT
RADIUS:	12.65		
LENGTH:	19.87	TANGENT:	12.65
MID-ORD:	3.71	EXTERNAL:	5.24
CHORD:	17.89	COURSE:	S 45° 00' 00.00" E
TANGENT DATA			
DESCRIPTION	PT STATION	NORTHING	EASTING
START:	1+44.71	1018.88	1040.88
END:	1+62.90	1000.68	1040.88
TANGENT DATA			
PARAMETER	VALUE	PARAMETER	VALUE
LENGTH:	18.19	COURSE:	S 00° 00' 00.00" W

ALIGNMENT: ROAD 2			
CURVE POINT DATA			
DESCRIPTION	STATION	NORTHING	EASTING
PC:	0+00.00	1096.99	1065.36
RP:		1096.99	1078.01
PCC:	0+16.83	1084.71	1075
CIRCULAR CURVE DATA			
PARAMETER	VALUE	PARAMETER	VALUE
DELTA:	76° 12' 25.39"	TYPE:	LEFT
RADIUS:	12.65		
LENGTH:	16.83	TANGENT:	9.92
MID-ORD:	2.7	EXTERNAL:	3.43
CHORD:	15.61	COURSE:	S 38° 06' 12.69" E
CURVE POINT DATA			
DESCRIPTION	STATION	NORTHING	EASTING
PCC:	0+16.83	1084.71	1075
RP:		1072.42	1071.98
PT:	0+33.33	1072.74	1084.63
CIRCULAR CURVE DATA			
PARAMETER	VALUE	PARAMETER	VALUE
DELTA:	74° 45' 42.10"	TYPE:	RIGHT
RADIUS:	12.65		
LENGTH:	16.51	TANGENT:	9.66
MID-ORD:	2.6	EXTERNAL:	3.27
CHORD:	15.36	COURSE:	S 38° 49' 34.34" E
TANGENT DATA			
DESCRIPTION	PT STATION	NORTHING	EASTING
Start:	0+33.33	1072.74	1084.63
End:	0+61.85	1044.22	1084.56
TANGENT DATA			
PARAMETER	VALUE	PARAMETER	VALUE
LENGTH:	28.52	COURSE:	S 00° 07' 52.65" W
CURVE POINT DATA			
DESCRIPTION	STATION	NORTHING	EASTING
PC:	0+61.85	1044.22	1084.56
RP:		1043.85	1071.97
PT:	0+78.97	1031.62	1074.98
CIRCULAR CURVE DATA			
PARAMETER	VALUE	PARAMETER	VALUE
DELTA:	77° 50' 27.10"	TYPE:	RIGHT
RADIUS:	12.6		
LENGTH:	17.12	TANGENT:	10.17
MID-ORD:	2.8	EXTERNAL:	3.59
CHORD:	15.83	COURSE:	S 37° 14' 05.42" W



DESIGNED S. AGUDELO	CHECKED C. BUDSOCK	DATE 06/30/10	REV 0	BY D. WHEELER	DESCRIPTION SITE ADAPT CONSTRUCTION PLANS
AFGHAN NATIONAL SECURITY FORCE COMPREHENSIVE PLAN FOR FACILITIES DEVELOPMENT			REV 0	DATE 30 JUNE 2010	DESCRIPTION ROAD ALIGNMENT TABLES
MINISTRY OF INTERIOR (MoI) AFGHAN NATIONAL POLICE PROVINCIAL FIRE STATION - TYPE-B			REV 0	DATE 30 JUNE 2010	DESCRIPTION ROAD ALIGNMENT TABLES
SCALE AS SHOWN					
PROJECT NO. 6151-08-0328					
00-C-701					

\\user-filing\lsc\Engineering\000 FY 2011 RPA in Progress\AFN\STARTBOARD TO DEVELOP Fire Station\MACTEC\000-08-0328.dwg 03/14/2011 6:33pm N243618F

K
J
I
H
G
F
E
D
C
B
A

STRUCTURAL ABBREVIATIONS:

ACI	AMERICAN CONCRETE INSTITUTE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALT	ALTERNATE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWS	AMERICAN WELDING SOCIETY
ARCH	ARCHITECTURAL
B	BOTTOM
BLDG	BUILDING
BOTT	BOTTOM
CL	CENTER LINE
CFMF	COLD FORM METAL FRAME
CFS	COLD FORMED STEEL
CIP	CAST IN PLACE
CIPL	CAST-IN-PLACE LINTEL
CJ	CONTROL JOINT
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COEFF	COEFFICIENT
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
COORD	COORDINATE
CSJ	CONSTRUCTION JOINT
CTJ	CONTROL JOINT
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DWL	DRAWING
DWL	DOWEL
EA	EACH
ELEC	ELECTRICAL
ELEV	ELEVATION
EMBED	EMBEDMENT
EQUIV	EQUIVALENT
ETC	ET CETERA
EW	EACH WAY
EXT	EXTERIOR
FTG	FOOTING
GA	GAUGE
HORIZ	HORIZONTAL
HRS	HOURS
IBC	INTERNATIONAL BUILDING CODE
INT	INTERIOR
Kg	KILOGRAM
KIP	KIPS (1 KIP = 1,000 POUNDS)
kN	KILONEWTON
kPa	KILOPASCAL
L _f	ANGLE (# INDICATES SIZE)
LLV	LONG LEG VERTICAL
M	METER
MAX	MAXIMUM
MBM	METAL BUILDING MANUFACTURER
MBMA	METAL BUILDING MANUFACTURERS ASSOCIATION
MECH	MECHANICAL
MFG	MANUFACTURER
MID	MIDDLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MM	MILLIMETER
Mpa	MEGAPASCAL
MTL	METAL
MMFRS	MAIN WIND FORCE RESISTING SYSTEM
N	NEWTON
N	NORTH
N/A	NOT APPLICABLE
#	NUMBER SYMBOL FOR REBAR SIZE
NTS	NOT TO SCALE
O.C.	ON CENTER
OPNG	OPENING
PL	PLATE
PCC	PRECAST CONCRETE
PRE-ENG	PRE-ENGINEERED
REIN	REINFORCED
REQ'D	REQUIRED
SIM	SIMILAR
SOG	SLAB ON GRADE
SPECS	SPECIFICATIONS
STD	STANDARD
STRUCT	STRUCTURAL
T	TOP
T/	TOP OF
T/ELEV	TOP ELEVATION
T&B	TOP AND BOTTOM
THK	THICK
TM	TRADE MARK
TYP	TYPICAL
UFC	UNIFIED FACILITIES CRITERIA UNLESS OTHERWISE NOTED
VERT	VERTICAL
W	WIDTH
W/	WITH
WP	WORK POINT

STRUCTURAL NOTES

- 1.0 THIS PROJECT HAS BEEN DESIGNED FOR THE WEIGHTS AND MATERIALS INDICATED ON THE SHEETS AND FOR THE LIVE LOADS INDICATED IN THE DESIGN CRITERIA. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ALLOWABLE CONSTRUCTION LOADS AND TO PROVIDE PROPER DESIGN AND CONSTRUCTION OF FALSEWORK, FORMWORK, STAGING, BRACING, SHEETING AND SHORING, ETC.
- 1.1 COORDINATE THESE SHEETS WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND CIVIL SHEETS. ALL DIMENSIONS SHOWN ON THE SHEETS ARE MILLIMETERS UNLESS NOTED OTHERWISE.
- 1.2 THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL FLOOR AND ROOF OPENING SIZES AND LOCATIONS, EQUIPMENT PAD SIZES AND LOCATIONS, ANCHOR BOLT LAYOUTS, ETC WITH EQUIPMENT SELECTED. THE CONTRACTOR SHALL MAKE ANY REQUIRED MODIFICATIONS AT NO ADDITIONAL COST.
- 1.3 THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING SHEETS FOR SLEEVES, CURBS, INSERTS OR OPENINGS, ETC. NOT HEREIN INDICATED.
- 1.4 SLAB OPENINGS SMALLER THAN 250mm (10") DIA TO BE CORE DRILLED IN FIELD UON. SEE MECHANICAL, ELECTRICAL AND PLUMBING SHEETS FOR LOCATIONS OF THESE OPENINGS.
- 1.5 WORK NOT INCLUDED ON THE SHEETS BUT IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES ELSEWHERE ON THE SHEETS SHALL BE REPEATED.
- 1.6 IN CASE OF CONFLICT BETWEEN THE NOTES, DETAILS AND SPECIFICATIONS THE MOST RIGID REQUIREMENTS SHALL GOVERN.
- 1.7 SEE ARCHITECTURAL SHEETS FOR LOCATIONS OF MASONRY AND DRYWALL NON-LOAD BEARING PARTITIONS. PROVIDE COMPRESSIBLE FIRESAFING AT TOP OF WALL AS REQUIRED BY ARCHITECTURAL SHEETS.
- 1.8 COORDINATE FINISHED FLOOR DATUM ELEVATION 0.0m WITH THE CIVIL SHEETS.
- 2.0 **FOUNDATION NOTES**
- 2.1 THE GEOTECHNICAL ANALYSIS FOR THIS PROJECT IS THE RESPONSIBILITY OF THE CONTRACTOR AWARDED THE WORK. DESIGN VALUES USED IN THE STRUCTURAL ANALYSIS OF THE BUILDINGS HEREIN INDICATED HAVE BEEN ASSUMED AND SHALL BE CONFIRMED AND VERIFIED AS PART OF THE GEOTECHNICAL INVESTIGATION. VALUES WHICH DO NOT MEET THE REQUIREMENTS INDICATED ON SHEET 00-S-002 SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE CONTRACTING OFFICER FOR CONSIDERATION AND DETERMINATION ON THE NEXT APPROPRIATE COURSE OF ACTION.
- 2.2 SEE THE SPECIFICATION FOR ADDITIONAL REQUIREMENTS TO THOSE OUTLINED IN THE GEOTECHNICAL INVESTIGATION FOR EXCAVATION AND PREPARATION OF THE FOUNDATION AND THE SLAB ON GRADE SUBGRADE INCLUDING COMPACTION PROCEDURES.
- 2.3 EXCAVATIONS FOR FOOTINGS SHALL HAVE THE SIDES AND BOTTOMS TEMPORARILY LINED WITH 0.25mm POLYETHYLENE IF PLACEMENT OF CONCRETE DOES NOT OCCUR WITHIN 24 HRS OF THE EXCAVATION OF THE FOOTING.
- 2.4 FOUNDATION CONDITIONS NOTED DURING CONSTRUCTION WHICH DIFFER FROM THOSE DESCRIBED IN THE GEOTECHNICAL REPORT SHALL BE REPORTED TO THE GENERAL CONTRACTOR BEFORE FURTHER CONSTRUCTION IS ATTEMPTED. SEE PROJECT SPECIFICATIONS.
- 2.5 NO FOOTINGS OR SLABS SHALL BE POURED INTO OR AGAINST SUBGRADE CONTAINING FREE WATER, FROST, ICE OR LOOSE MATERIAL. FROST DEPTH ASSUMED TO BE 800MM
- 2.6 ALL SLAB-ON-GRADE, TRENCH BOTTOMS AND OTHER ON-GRADE INTERIOR HORIZONTAL SURFACES SHALL BE PLACED OVER A 0.25mm VAPOR RETARDER OVER A 100mm (4") #57 STONE WATER BARRIER PLACED ON SUBGRADE PROPERLY PREPARED IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS. (UON)
- 2.7 SEE PLUMBING, ELECTRICAL & CIVIL SHEETS FOR REQUIRED UNDERSLAB UTILITIES.
- 2.8 SEE ARCHITECTURAL SHEETS FOR ALL WATERPROOFING DETAILS AND MATERIALS.
- 2.9 IF UNDERMINING OF FOOTINGS OCCURS, FILL VOIDS WITH 15MPa (2 KSI) CONCRETE. DO NOT ATTEMPT TO REPLACE AND RECOMPACT SOIL. THE FOUNDATION SHALL BE SUPPORTED ON A MINIMUM 95% COMPACTED SOIL. COMPACTED SOIL SHALL MEET THE REQUIREMENTS OF THE GEOTECHNICAL REPORT.
- 3.0 **CONCRETE**
- 3.1 CONCRETE SHALL HAVE THE UNIT WEIGHT AND THE MINIMUM COMPRESSIVE STRENGTHS (f_c) AT 28 DAYS AS SHOWN IN THE CONCRETE MATERIALS SCHEDULE ON SHEET 00-S-003. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION. ENTRAIN AIR TO PRODUCE TOTAL AIR CONTENT ACCORDING TO THE SPECIFICATIONS FOR CONCRETE EXPOSED TO FREEZING TEMPERATURES (EXTERIOR FOOTINGS, SLAB TURNDOWNS, EXTERIOR SLABS AND SLAB-ON-GRADE, EXTERIOR RETAINING WALLS, AND EXTERIOR GRADE BEAMS.)
- 3.2 GROUT FOR BASE PLATES SHALL BE NON-SHRINKABLE GROUT AND SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH AT 28 DAYS OF 35MPa (5 KSI), UNLESS NOTED OTHERWISE.
- 3.3 NO CALCIUM CHLORIDE SHALL BE USED IN ANY CONCRETE.
- 3.4 MIXING, TRANSPORTING AND PLACING OF CONCRETE SHALL CONFORM TO ACI 301M-05

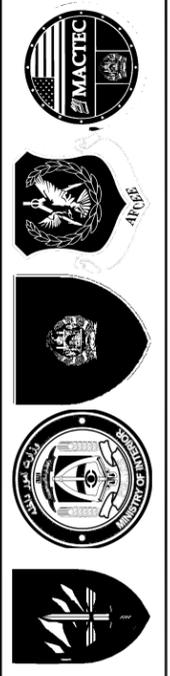
- 3.5 ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN CONCRETE INSTITUTE (ACI) 318M MANUAL (metric), "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", AND REQUIREMENTS OUTLINED IN THE CONTRACT SPECIFICATIONS. WHEN THERE IS A CONFLICT BETWEEN ACI AND THE SPECIFICATIONS, THE MORE STRINGENT SHALL GOVERN.
- 3.6 CHAMFER ALL EXPOSED EXTERNAL CORNERS OF CONCRETE WITH 20mm x45 DEGREE CHAMFER UON.
- 3.7 CONCRETE REINFORCEMENT BARS SHALL CONFORM TO ASTM A615M-96a, GRADE 420 MPa. REINFORCING BARS SHALL NOT BE TACK WELDED, WELDED, HEATED OR CUT, UNLESS INDICATED ON THE CONTRACT DOCUMENTS. ALL LAP SPLICES SHALL BE CLASS "B" UON.
- 3.8 HORIZONTAL FOOTING AND HORIZONTAL WALL REINFORCEMENT SHALL BE CONTINUOUS AND SHALL HAVE 90 DEGREE BENDS AND EXTENSIONS, OR CORNER BARS OF EQUIVALENT SIZE LAPPED WITH A CLASS B TENSION SPLICE AT CORNERS AND INTERSECTIONS. TOP BAR CRITERIA SHALL APPLY IF 300mm (12") OR MORE OF FRESH CONCRETE IS PLACED BELOW BAR.
- 3.9 SLABS-ON-GRADE SHALL HAVE CONSTRUCTION JOINTS OR CRACK CONTROL JOINTS AS SHOWN ON THE SHEETS. CONSTRUCTION JOINTS CAN BE USED AT CONTROL JOINT LOCATIONS AT CONTRACTORS OPTION. SEE SLAB PLANS & JOINT DETAILS FOR ADDITIONAL INFORMATION. FOR AREAS NOT SHOWN ON SHEETS, THE MAXIMUM SPACING OF CONSTRUCTION/ CRACK CONTROL JOINTS SHALL BE 4000mm (13 FT).
- 3.10 SEE SPECIFICATIONS FOR ALL WATERPROOFING/DAMP-PROOFING REQUIREMENTS.
- 3.11 ALL CONCRETE REINFORCEMENT SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED, AND SPACED IN FORMS AND SECURED IN PLACE IN ACCORDANCE WITH THE PROCEDURES AND REQUIREMENTS OUTLINED IN THE LATEST EDITION OF THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", ACI 318M, AND THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315M, LATEST EDITION.
- 3.12 SHOP DRAWINGS SHOWING REINFORCING DETAILS, INCLUDING STEEL SIZES, SPACING AND PLACEMENT, SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION.
- 3.13 ALL DOWELS SHALL MATCH SIZE AND NUMBER OF MAIN REINFORCING, UNLESS NOTED OTHERWISE ON SHEETS.
- 3.14 ADDITIONAL BARS SHALL BE PROVIDED AROUND ALL FLOOR AND WALL OPENINGS AS SHOWN ON THE SHEETS.
- 3.15 SEE ARCHITECTURAL SHEETS FOR TYPE AND LOCATION OF ALL FLOOR FINISHES.
- 3.16 THE CONTRACTOR SHALL COORDINATE ADDITIONAL WALL/SLAB OPENINGS NOT SHOWN ON STRUCTURAL SHEETS. SEE MECHANICAL, ELECTRICAL, PLUMBING AND CIVIL SHEETS.
- 3.17 UNLESS NOTED OTHERWISE, ALL CURBS SHALL BE REINFORCED WITH AT LEAST (1)-#13 CONTINUOUS AND #13 AT 300mm (12") O.C. DOWELS TO STRUCTURE BELOW.
- 3.18 THE SUB-CONTRACTOR SHALL VERIFY ALL OPENINGS, PAD SIZES, AND ANCHOR BOLTS WITH EQUIPMENT SELECTED.
- 3.19 FOR ALL WALLS & PIERS, PROVIDE DOWELS INTO FOOTING AT EACH VERT REINF BAR. UON DOWEL SIZE SHALL BE SAME AS VERT REINF.
- 3.20 ALL DEFORMED BAR ANCHORS SHALL BE TRS NELSON DIVISION OR EQUAL 13mm (0.5") DIA (UON) CONFORMING TO ASTM A-496M WITH A MINIMUM TENSILE STRENGTH OF 420 MPa (100 KSI). ANCHOR DIMENSIONS SHALL BE IN ACCORDANCE WITH ASTM D-19. INSTALL ANCHORS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS BY AUTOMATIC END WELDING AS INDICATED ON THE DRAWINGS. NO UNAUTHORIZED OR FIELD WELDING SHALL BE MADE WITHOUT AUTHORIZATION FROM THE MANUFACTURER.
- 3.21 ALL REINFORCING INDICATED TO BE WELDED SHALL BE IN ACCORDANCE WITH ASTM A706M. "LOW ALLOY STEEL DEFORMED BARS FOR CONCRETE REINFORCEMENT". ANY INSTALLATIONS USING MANUFACTURER'S EQUIPMENT SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.
- 3.22 PROVIDE CONCRETE POUR STOPS OR FORMS AS REQUIRED FOR INSTALLATION OF ALL CONCRETE WORK.
- 3.23 PROVIDE ADDITIONAL (2)-#13 x 600mm (24") REINFORCING BARS IN SLAB-ON-GRADE AT ALL RE-ENTRANT CORNERS. PLACE BARS AT MID-DEPTH OF SLAB WITH A CLEARANCE OF 50mm FROM CORNER UON.
- 4.0 **CONCRETE MASONRY**
- 4.1 MASONRY CONSTRUCTION AND MATERIALS SHALL CONFORM TO ALL REQUIREMENTS OF THESE CONTRACT DOCUMENTS AND THE PROJECT SPECIFICATIONS.
- 4.2 THE SPECIFIED ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE MASONRY (f_m) ON THE NET AREA IS A MINIMUM OF 10.4 MPa.
- 4.3 PROVIDE TWO #16 BARS CONTINUOUS IN ALL CMU AND CAST-IN-PLACE BOND BEAMS UON ON THE SHEETS. INTERMEDIATE BOND BEAMS SHALL BE CONTINUOUS AND SPACED AT A MAXIMUM OF 1200mm (48") OC VERTICALLY. ALL BOND BEAMS SHALL BE A MINIMUM OF 200mm IN DEPTH WITH REINFORCING BEING CONTINUOUS AND HAVING STANDARD ACI HOOKS AT EACH END. PROVIDE STANDARD BAR SPLICES AS SPECIFIED.

- 4.4 FOR MINIMUM WALL REINFORCING, SEE TYPICAL CMU WALL REINFORCING DETAILS ON SHEET 00-S-004.
- 4.5 CMU CELLS THAT REQUIRE VERTICAL REINFORCING BARS AS INDICATED ON THE CONTRACT DRAWINGS AND/OR SPECS SHALL HAVE REINF BAR PLACED IN CENTERS OF CMU CELLS AND CONTINUOUSLY GROUTED UON. PROVIDE 1-N10 BAR CENTERED IN CMU JOINT AS JOINT REINFORCEMENT AT 600mm VERTICAL SPACING, UON
- 4.6 PROVIDE CONTROL JOINTS AS INDICATED ON THE ARCHITECTURAL SHEETS.
- 4.7 GROUT FOR MASONRY SHALL BE NORMAL WEIGHT AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 25 MPa AT 28 DAYS. GROUT SHALL CONFORM TO ASTM C476M. GROUT LIFTS SHALL NOT EXCEED 1400mm.
- 4.8 USE MORTAR TYPE S CONFORMING TO ASTM C270M, SEE SPECIFICATIONS.
- 4.9 CONCRETE MASONRY UNITS SHALL BE NORMAL WEIGHT AND CONFORM TO ASTM C90M.
- 4.10 ALL CMU CELLS, OPEN CAVITIES, AND AIR SPACES SHALL BE GROUTED. TO STOP FRAGMENTS FROM MORTAR BLAST
- 4.11 BOND BEAM REINFORCING SHALL BE DISCONTINUOUS AT CONTROL JOINTS (UON). MAXIMUM CONTROL JOINT SPACING SHALL BE AS INDICATED ON THE ARCHITECTURAL SHEETS.
- 4.12 THE CONTRACTOR SHALL COORDINATE LOCATION OF ALL OPENINGS SEE ARCH, MECH, ELEC, AND PLUMBING SHEETS. FOR SIZE AND LOCATION OF OPENINGS.
- 4.13 MASONRY WALLS SHALL NOT BE BACK FILLED PRIOR TO THE MORTAR AND GROUT ATTAINING THEIR RESPECTIVE MAXIMUM DESIGN STRENGTHS PER SPECIFICATIONS.
- 5.0 **STEEL DECK**
- 5.1 STEEL DECK SHALL BE ASTM A611M, GRADES C & D OR A653M STRUCTURAL QUALITY HAVING A MINIMUM YIELD STRENGTH OF 345 MPa AS PER THE STEEL DECK INSTITUTE (SDI) DESIGN MANUAL.
- 5.2 STEEL DECK SHALL BE ERECTED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND ERECTION LAYOUTS AND CONNECTED TO SUPPORTING MEMBERS AS INDICATED.
- 5.3 **COMPOSITE FLOOR DECK**
- 5.3.1 STEEL FLOOR DECK SHALL BE 51mm (2") RIB HEIGHT, 18 GA HOT-DIP GALVANIZED (SDI TYPE 2VL-18) UON.
- 5.3.2 FLOOR DECK SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:

MOMENT OF INERTIA, I _p	18 GAUGE
	760mm ⁴ /mm
	(556 W ⁴ /FT) WIDTH
SECTION MODULUS (TOP OF DECK), S _n	27.5mm ³ /mm
	(511 W ³ /FT) WIDTH
SECTION MODULUS (BOT OF DECK) S _p	27.8mm ³ /mm
	(517 W ³ /FT) WIDTH
- 5.3.3 FLOOR DECK SHALL BE FASTENED TO THE SUPPORTS AS INDICATED IN THE BOTTOM OF THE FLUTES USING A SDI 36/7 PATTERN. DECK SIDELAPS SHALL BE ATTACHED USING #10 SELF-TAPPING TEK SCREWS WITH A MINIMUM 3-SIDE LAP CONNECTIONS PER SPAN.
- 5.3.4 SUSPENDED CEILING, LIGHT FIXTURES, DUCTS, CONDUITS, PIPING OR OTHER UTILITIES SHALL NOT BE SUPPORTED BY THE STEEL FLOOR DECK.
- 5.3.5 IN ADDITION TO MEETING THE MINIMUM REQUIREMENTS ABOVE, THE DECK MANUFACTURER SHALL DESIGN THE FLOOR DECK AND ATTACHMENTS TO STEEL FOR A MAXIMUM DEFLECTION DUE TO WET CONCRETE & 1 KPa CONSTANT LOAD OF L/240. FLOOR DECK SHALL NOT REQUIRE SHORING DURING CONCRETE PLACEMENT.
- 5.4 **STEEL ROOF DECK**
- 5.4.1 STEEL ROOF DECK SHALL BE 38MM (1-1/2") WIDE RIB DECK WITH A MINIMUM THICKNESS OF 0.734MM (22 GAUGE). THE WIDTH OF THE DECK PANELS SHALL BE 914MM.
- 5.4.2 STEEL ROOF DECK SHALL HAVE THE MINIMUM PROPERTIES:

MOMENT OF INERTIA, I _p	125.64mm ⁴ /mm
SECTION MODULUS, S _p	4.25mm ³ /mm
- 5.4.3 ROOF DECK SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A653.
- 5.4.4 U.N.O. ON PLAN, METAL DECK SHALL BE FASTENED TO STEEL WITH #12 TEK FASTENERS (MANUF. APPROVED) AT 305MM (12") O.C.
- 5.4.5 SIDE LAPS SHALL BE FASTENED WITH #10 TEK AT 2'-6" MAX ON CENTER BETWEEN SUPPORTS.
- 5.4.6 DECKING SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

- 6.0 **STRUCTURAL STEEL**
- 6.1 STRUCTURAL STEEL ROLLED SHAPES AND PLATES SHALL CONFORM TO THE MATERIAL INFORMATION SCHEDULE DIMENSIONS AND PROPERTIES SHALL BE IN ACCORDANCE TO ASTM A36M.
- 6.2 ANCHOR BOLTS SHALL CONFORM TO ASTM A36M HEAVY HEX UNLESS NOTED OTHERWISE.
- 6.3 CONNECTION BOLTS FOR STRUCTURAL STEEL MEMBERS SHALL BE 20 DIA ASTM A325M-N, UON; NUTS SHALL CONFORM TO ASTM A563M; WASHERS SHALL CONFORM TO ASTM F436M. CONNECTION BOLTS SHALL HAVE A HARDENED WASHER PLACED UNDER THE ELEMENT TO BE TIGHTENED.
- 6.4 DETAILING OF STRUCTURAL STEEL CONNECTIONS MUST BE CONSISTENT WITH RECOGNIZED, PUBLISHED METHODS SUCH AS IN THE AISC "STEEL CONSTRUCTION MANUAL", THIRTEENTH EDITION; "ENGINEERING FOR STEEL CONSTRUCTION", OR "VOLUME II CONNECTIONS MANUAL OF STEEL CONSTRUCTION".
- 6.4.1 THE CODE OF STANDARD PRACTICE OF AISC THIRTEENTH EDITION IS AMENDED SUCH THAT THE FABRICATOR/DETAILER IS RESPONSIBLE FOR THE DESIGN AND DETAILING OF ALL CONNECTIONS.
- 6.5 STANDARD FRAMING CONNECTIONS SHALL BE DETAILED BY THE FABRICATOR IN ACCORDANCE WITH THE AISC "STEEL CONSTRUCTION MANUAL", THIRTEENTH EDITION. CONNECTIONS SHALL BE DESIGNED TO DEVELOP A MINIMUM END REACTION OF 54kN (12 KIPS).
- 6.5.1 UNLESS NOTED OTHERWISE AS THUS: (#kN), CONNECTIONS SHALL BE DESIGNED AND DETAILED FOR THE END REACTION DETERMINED FROM PART 2 - "ALLOWABLE UNIFORM LOAD TABLES" FROM THE AISC STEEL CONSTRUCTION MANUAL 13TH EDITION OR A MINIMUM OF 54kN (12 KIPS) WHICH EVER IS GREATER.
- 6.6 ALL MEMBERS AND CONNECTIONS ON THE CONTRACT DRAWINGS AND CONNECTIONS NOT SHOWN SHALL BE DESIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER, DETAILED AND SUBMITTED FOR APPROVAL AND SHOWN ON THE SHOP DRAWINGS.
- 6.7 ALTERNATIVE CONNECTION DETAILS MAY BE SUBMITTED ON SHOP DRAWINGS BY THE CONTRACTOR ONLY IF ACCOMPANIED BY COMPLETE STRUCTURAL CALCULATIONS PREPARED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER AND SUBMITTED FOR REVIEW.
- 6.8 CALCULATIONS FOR DETAILS MUST SHOW A RATIONAL ANALYSIS OF A COMPLETE LOAD PATH, INCLUDING LOCAL EFFECTS ON WEBS, FLANGES, ETC OF THE CONNECTED MEMBERS AND THE DEVICES (PLATES, SEATS, BRACKETS, BOLTS, WEBS, ETC) AFFECTING ALL CONNECTIONS. FAILURE TO SUBMIT SUCH CALCULATIONS FOR REVIEW CONCURRENT WITH SHOP DRAWING ERECTION PLANS AND DETAILS WILL BE CAUSE FOR REJECTION OF THAT SUBMITTAL.
- 6.8.1 ALL SHEAR TAB CONNECTIONS SUBMITTED AS AN ALTERNATE FOR APPROVAL SHALL BE DESIGNED USING A FLEXIBLE SUPPORT CONDITION.
- 6.8.2 BEAM AND GIRDER CONNECTIONS SHALL BE DESIGNED SUCH THAT ALL ADDITIONAL STRESSES DUE TO CONNECTION ECCENTRICITY SHALL BE DEVELOPED BY THE CONNECTION AND NOT INDUCE ANY ADDITIONAL STRESSES INTO SUPPORTING MEMBERS.
- 6.9 STRUCTURAL STEEL DETAILING, FABRICATION AND ERECTION SHALL CONFORM TO THE AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS - ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN" AND THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" - LATEST EDITIONS.
- 6.10 WELDING SHALL CONFORM TO THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE AWS D1.1. ELECTRODES SHALL BE CLASS E70XX. ALL WELDING SHALL BE DONE BY QUALIFIED, CERTIFIED WELDERS PER THE ABOVE STANDARD UNDER ONLY SHOP CONDITIONS.
- 6.11 TESTING OF WELDS AND BOLTS SHALL BE AS OUTLINED IN THE SPECIFICATIONS.
- 6.12 ALL FILLET WELDS SHALL BE A MINIMUM OF 5mm UNLESS NOTED OTHERWISE.
- 6.13 THERE SHALL BE NO FIELD CUTTING OF STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES WITHOUT PRIOR APPROVAL OF THE CONTRACTING OFFICER.
- 6.14 FOR FLOOR AND ROOF OPENINGS, THE FABRICATOR SHALL VERIFY OPENING LOCATIONS WITH EQUIPMENT SELECTED AND MAKE ANY NECESSARY MODIFICATIONS AT NO ADDITIONAL COST. THE CONTRACTOR SHALL COORDINATE MECHANICAL UNITS AND OPENINGS & ARCHITECTURAL ITEMS REQUIRED FOR COMPLETE INSTALLATION OF WORK. IT IS THE RESPONSIBILITY OF FABRICATOR TO RECEIVE ALL NECESSARY INFORMATION PRIOR TO FABRICATION OF THE STEEL.
- 6.15 ALL STRUCTURAL STEEL SHALL BE PRIMED AS PER THE SPECIFICATIONS.
- 6.16 ALL PLATES NOT INDICATED SHALL BE 13mm (3/16") MIN THICKNESS. ALL ANGLES NOT INDICATED SHALL BE 80x80x7MM MIN. ALL WELDS NOT INDICATED SHALL BE 6mm (1/4") MIN ALL AROUND UON.
- 6.17 SEE MECHANICAL, ELECTRICAL, AND PLUMBING SHEETS FOR ADDITIONAL OPENINGS NOT SHOWN. ALL OPENINGS SHALL BE FRAMED 4 SIDES WITH C200x17'S UON.
- 6.18 FIELD WELDING IS STRICTLY PROHIBITED.
- 6.19 IF A SPECIFIED STRUCTURAL STEEL MEMBER IS NOT AVAILABLE, A RECOMMENDED EQUIVALENT SHAPE SHALL BE SUBMITTED TO THE CONTRACTING OFFICER AND SUBMITTED TO ENGINEERING FOR REVIEW PRIOR TO CONSTRUCTION.



DESIGNED BY A. KHOTIPAL	SITE ADAPT CONSTRUCTION PLANS	REV	DATE	BY	APP
DRAWN BY M. LORENZ		0	06/30/10		
CHECKED BY M. GARVER					
DATE D. WHEELER					
30 JUNE 2010					

AFGHAN NATIONAL SECURITY FORCE COMPREHENSIVE PLAN FOR FACILITIES DEVELOPMENT	MINISTRY OF INTERIOR (MoI) AFGHAN NATIONAL POLICE PROVINCIAL FIRE STATION - TYPE-B	SCALE	AS SHOWN
PROJECT NO. 6151-08-0328		00-S-001	

\\Vn-rm-fk\pcc\Engineering\000 FY 2011 0818 In Progress\AFN\STANDARD TO DEVELOP Pre-Station\MACTEC\000-08-08-001.dwg 06/17/2011 7:03pm N048048

MINIMUM LAP SPLICES OF REINFORCING BARS IN TENSION (PER ACI 318M-05)			
f _c = 28 MPa CONCRETE			
BAR SIZE	---TOP BARS---	---OTHER BARS---	4db
	#10	610	
#12	810	620	50
#16	1020	790	60
#19	1470	1120	80
#22	1960	1500	90
#25	2590	1980	100
#29	3280	2510	110
#32	4140	3200	130
#36	5080	3910	140

NOTES:

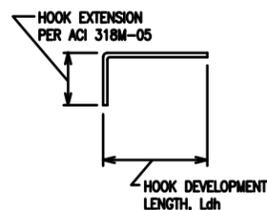
- LAP SPLICES ABOVE ARE IN MILLIMETERS UON.
- YIELD STRENGTH OF REINFORCEMENT, f_y, IS 420MPa (LAP SPLICE LENGTH IS IN MILLIMETERS).
- CONCRETE IS NORMAL WEIGHT (2400Kg/m³).
- TOP BAR INDICATES HORIZONTAL REINFORCEMENT WHICH IS PLACED ABOVE 300mm OR MORE OF FRESH CONCRETE.
- SEE COLUMN SCHEDULE FOR COLUMN AND SHEAR WALL VERTICAL LAP SPLICE.
- STRAIGHT DEVELOPMENT LENGTH OF AN UNLAPPED BAR IS EQUAL TO VALUE FROM TABLE DIVIDED BY 1.3.
- LAP SPLICE DIMENSIONS BASED ON CRS1 CATEGORY 5 AND ACI 318M-05 CLASS B.

CONCRETE MATERIALS SCHEDULE	
STRUCTURAL ELEMENT	f _c CONCRETE COMPRESSIVE STRENGTH @ 28 DAYS (MPa)
SLAB-ON-GRADE/TURN-DOWN SLABS	28
ROOF AND FLOOR SLABS	28
ALL FOOTINGS (UON)	28
MISC. CURBS, WALLS AND PADS UON	28
CAST-IN-PLACE LINTEL	28
CONCRETE FRAMING - BEAMS AND COLUMNS	28

NOTES:

- ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE (2400 Kg/m³ UON)
- ALL CONCRETE SHALL HAVE A MAX WATER-CEMENT RATIO OF 0.45.

STANDARD HOOKS IN TENSION PER (ACI 318M-05)	
HOOK DEVELOPMENT LENGTH L _{dh} (mm)	
BAR SIZE	f _c 28 MPa
#10	180
#12	250
#16	300
#19	400
#22	430
#25	480
#29	560
#32	620
#36	690

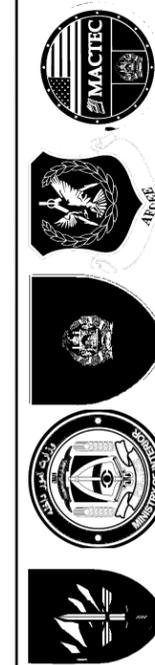


NOTES:

- CONCRETE IS NORMAL WEIGHT CONCRETE.
- BAR YIELD STRENGTH, f_y = 420 MPa
- SIDE COVER REQUIREMENTS OF ACI SECT. 12.5.3 ARE ASSUMED TO NOT BE MET.
- TIE OR STIRRUP REQUIREMENTS OF ACI SECT. 12.5.3 ARE ASSUMED TO NOT BE MET.
- REDUCTION FOR EXCESS REINFORCEMENT IS NOT TAKEN.
- HOOK DEVELOPMENT LENGTH IS VALID FOR 180° HOOKS ALSO.

STEEL MATERIALS SCHEDULE		
STRUCTURAL ELEMENT	FY YIELD STRENGTH (MPa)	REMARKS
WIDE FLANGE; ROLLED SHAPES; ANGLES; CHANNELS	250	ASTM A36M ASTM A6M
CONNECTIONS, PLATES, & ALL OTHERS	250	ASTM A36M ASTM A6M
ANCHOR BOLTS	250	ASTM A36M or A307M ASTM A6M
PIPES	245	ASTM A53-95 GRADE B ASTM A6M
TUBING	290	ASTM A500-93 GRADE C ASTM A6M
HIGH STRENGTH BOLTS	F _e =310	ASTM A325M-N
WELDING ELECTRODES	240	AWS D1.1-90 E70xx

CONCRETE COVER SCHEDULE	
MINIMUM CONCRETE COVER PROTECTION FOR REINFORCEMENT BARS SHALL BE AS FOLLOWS: (SEE ACI 318M-05, SECTION 7.7 FOR CONDITIONS NOT NOTED). DIMENSIONS FOR BAR PLACEMENT GIVEN IN SECTIONS AND DETAILS SHALL SUPERSEDE MINIMUM COVER REQUIREMENTS GIVEN HERE. DIMENSIONS ARE IN mm.	
FOOTINGS (EARTH FORMED)	75
COLUMNS / PIERS (TO TIES)	40
GRADE BEAMS OR SLAB TURNED DOWN EDGES:	
TOP	40
BOTTOM (EARTH FORMED)	75
SIDES (EARTH FORMED)	75
SIDES (BOARD FORMED)	40
	#16 BAR & SMALLER
	#19 THRU #36 BAR
ELEVATED BEAMS & SLABS:	
BEAM TIES & STIRRUPS (NOT EXPOSED TO WEATHER)	40
BEAM TIES & STIRRUPS (EXPOSED TO WEATHER)	50
FLOOR SLABS (NOT EXPOSED TO WEATHER)	20
FLOOR SLABS (EXPOSED TO WEATHER)	
#19 & LARGER	50
#16 & SMALLER	40
ROOF SLAB BARS	40
SLABS-ON-GRADE (NO EXPOSURE TO WEATHER) FROM TOP	
SLABS-ON-GRADE (EXPOSURE TO WEATHER) FROM TOP	40
UTILITY TUNNEL WALLS, RETAINING WALLS AND SHEAR WALLS, (NO SURFACES SHALL BE EARTH FORMED)	
EARTH SIDE AND FRONT SIDE (EXPOSED TO WEATHER):	
#16 BAR AND SMALLER	40
#19 THRU #36 BAR	50
PROVIDE STANDARD BAR CHAIRS AND SPACERS AS REQUIRED TO MAINTAIN CONCRETE PROTECTION SPECIFIED.	



DESIGNED BY	CHECKED BY	DATE	REV	DATE	DESCRIPTION
A. KHOTIPAL	M. LORENZ	06/30/10	0	06/30/10	SITE ADAPT CONSTRUCTION PLANS
BY	D. WHEELER	30 JUNE 2010			STRUCTURAL NOTES - 3

SCALE AS SHOWN
PROJECT NO. 6151-08-0328
00-S-003

CMU LINTEL SCHEDULE						
OPENING TYPE OR SIZE, BEAM LOCATION OR TYPE	MAX SPAN (mm)	BEAM DEPTH (mm)	MAIN REINFORCING			SHEAR REIN STIRRUPS
			TOP	BOTTOM	OTHER	
EXT WALL OPENING, 1-STORY BLDG	1800	400	(2)-#12	(2)-#12		----
EXT WALL OPENING, 1-STORY BLDG	900	200	(2)-#12	(2)-#12		----
INT WALL OPENING, NON-BEARING	2400	400	(2)-#12	(2)-#12		----
INT WALL OPENING, NON-BEARING	1800	200	(2)-#12	(2)-#12		----
INT WALL OPENING, NON-BEARING	900	200	(2)-#12	(2)-#12		----
INT WALL OPENING, SHEAR WALL	900	200	(2)-#12	(2)-#12		----
INT WALL OPENING, SHEAR WALL	1800	200	(2)-#12	(2)-#12		----
INT WALL OPENING, SHEAR WALL	2400	400	(2)-#16	(2)-#16		#12 @ 300

- STRUCTURAL SHEETS DO NOT INDICATE ALL OPENINGS IN MASONRY WALLS. VERIFY NUMBER, SIZE AND LOCATION OF ALL OPENINGS IN MASONRY WALLS FROM ARCHITECTURAL SHEETS AND APPROVED PLUMBING, MECHANICAL, AND ELECTRICAL SHOP DRAWINGS.
- PROVIDE 200mm BEARING EA END FOR 200mm DEEP CMU LINTEL BB PROVIDE 400mm BEARING EA END FOR 400mm DEEP CMU LINTEL BB.
- FOR HEAD DETAILS REFER TO ARCHITECTURAL SHEETS.
- REINFORCING SHALL BE ASTM A615M, GRADE 420. CONCRETE FOR CAST-IN-PLACE BEAMS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 28 MPa AT 28 DAYS.
- CONTRACTOR SHALL SUBMIT FOR APPROVAL SHOP DRAWINGS AND SCHEDULES SHOWING SIZE, DETAILS, LOCATIONS, ETC FOR ALL CAST-IN-PLACE BEAMS IN CMU WALLS.

MAXIMUM CMU WALL UNSUPPORTED HEIGHT OR LENGTH			
	WALL THICKNESS (mm)	EXTERIOR WALL NON-LOAD BEARING (mm)	INTERIOR NON-LOAD BEARING WALL (mm)
MAX HEIGHT OR LENGTH BETWEEN SUPPORTS	200	4800	7200

NOTE: CMU WALL MAXIMUM LATERAL SUPPORT SPACING GIVEN IN SECTIONS AND DETAILS SHALL SUPERSEDE THE ABOVE SCHEDULE REQUIREMENTS.

MASONRY REINFORCING MINIMUM LAP SPLICES	
BAR SIZE	BASIC LAP SPLICE Ld FOR CMU REINFORCING
#10	450
#12	600
#16	750
#20	900
#22	1050
#25	1200

CMU WALL NOTES:

GENERAL:

- ENGINEERED MASONRY IS DESIGNED IN ACCORDANCE WITH "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" (ACI 530-99/ASCE 5-99/TMS 402-99).
- UNITS: ASTM C90, TYPE (I) (NORMAL WEIGHT, MOISTURE CONTROLLED) (OR EQUIVALENT DIN, ACI OR EN STANDARDS)
MORTAR: ASTM C270 TYPE S (OR EQUIVALENT DIN, ACI OR EN STANDARDS)
- FULLY GROUT ALL CELLS OF CONCRETE MASONRY UNIT.
- USE FULL CONTACT LAP SPLICES FOR REINFORCING STEEL IN CMU WALLS AS FOLLOWS:
#10 BARS: MINIMUM 600mm
#12 BARS: MINIMUM 400mm

VERTICAL REINFORCEMENT:

- PROVIDE AN ADDITIONAL VERTICAL REINFORCEMENT AT EACH SIDE OF INTERSECTION OF EXTERIOR WALLS, AND AT EACH SIDE OF ALL MASONRY OPENINGS GREATER THAN 250mm IN WIDTH. IN OPENINGS WIDER THAN 600mm, PROVIDE ADDITIONAL VERTICAL REINFORCEMENT IN TWO ADJACENT CELLS ON EACH SIDE OF THE OPENING. ADDED VERTICAL REINFORCEMENT SHALL BE CONTINUOUS FOR THE FULL HEIGHT OF WALL UNLESS NOTED OTHERWISE.

HORIZONTAL REINFORCEMENT:

- PROVIDE BOND BEAMS AT 1200mm MAXIMUM VERTICAL SPACING.
- PROVIDE BOND BEAM BELOW ALL MASONRY OPENINGS AND EXTEND A MINIMUM OF 400mm BEYOND EACH SIDE OF OPENING.
- PROVIDE 1-N 10 BAR CENTERED IN CMU JOINT AT 600MM VERTICAL SPACING.

TYPICAL CMU WALL REINFORCING SCHEDULE						
WALL TYPE OR LOCATION	WALL THICKNESS (mm)	CONT VERT REINF (CENTERED IN CMU, UON)	CONT CAST IN PLACE BOND BEAM			REMARKS
			DEPTH (mm)	REINF (BOT UON)	MAX BOND BEAM VERT SPACING(mm)	
ALL PERIMETER/EXTERIOR WALLS (UON)	200	1-#16 @ 800	200	2-#16	1200	----
NON-LOAD BEARING INTERIOR WALLS WITH TOP AND BOTT SUPPORTS	200	1-#12 @ 1200	200	2-#16	1200	----

NOTES:

- REINFORCING SIZES AND SPACING GIVEN IN SECTIONS AND DETAILS SHALL SUPERSEDE THE ABOVE SCHEDULE REQUIREMENTS.
- PROVIDE CONTINUOUS CAST IN PLACE CONCRETE BOND BEAM AT ALL WALL LATERAL SUPPORT LOCATIONS.
- REINFORCING INDICATED SHALL BE CONTINUOUS FOR FULL EXTENT OF SPLICE FOLLOWING THE REQUIREMENTS OF THE LAP SPLICE TABLE SHOWN ON THIS SHEET.
- WALLS HAVE BEEN DESIGNATED AS VERTICALLY SPANNING UON AND THEREFORE MUST BE TEMPORARILY SUPPORTED DURING CONSTRUCTION UNTIL THE SUPPORTING DIAPHRAGMS (FLOOR AND ROOF SYSTEMS) HAVE BEEN COMPLETELY INSTALLED. SHORING IS THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL CMU WALLS SHALL BE FULLY GROUTED IN LIFTS NOT EXCEEDING THOSE BY CODE (UON)



DESIGNED BY	CHECKED BY	DATE	REV	DATE	DESCRIPTION
A. KHOTIPAL	M. LORENZ	06/30/10	0	06/30/10	SITE ADAPT CONSTRUCTION PLANS
DRAYN	M. GARVER				
	D. WHEELER				
		30 JUNE 2010			

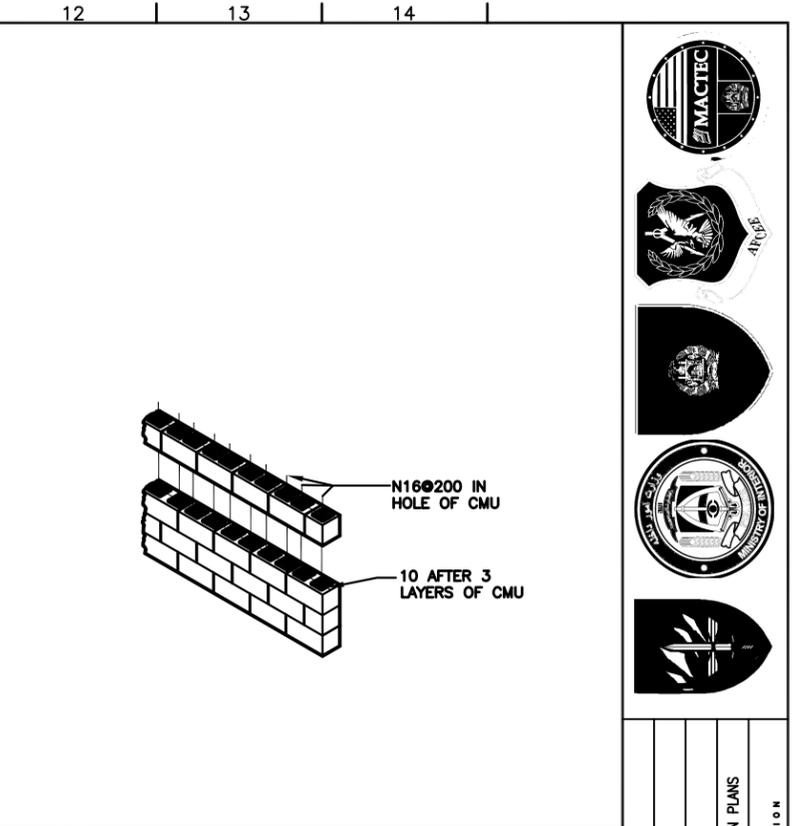
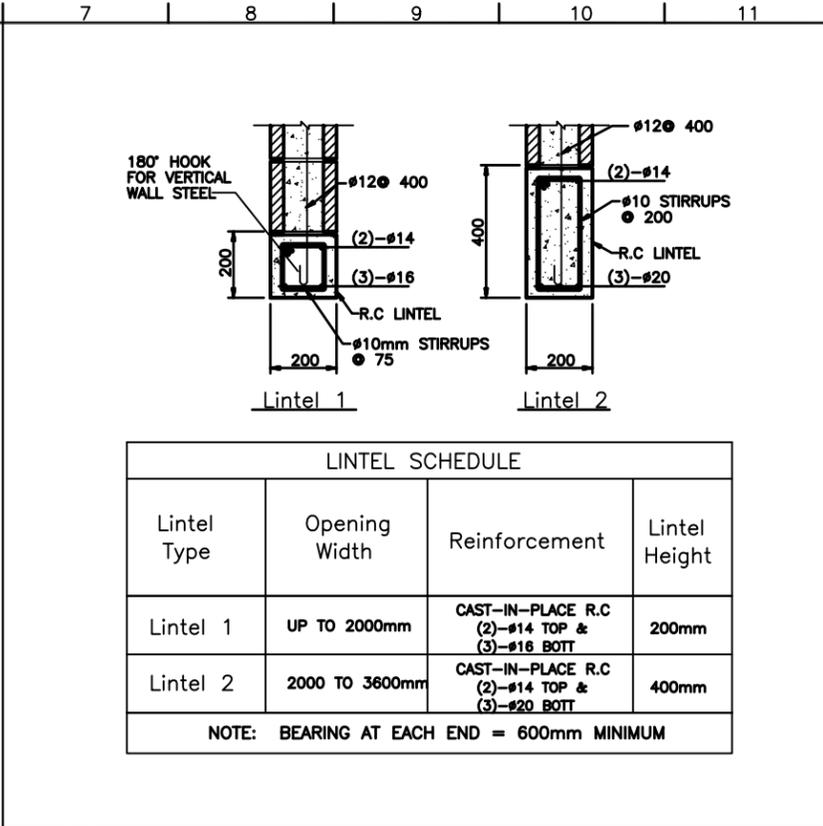
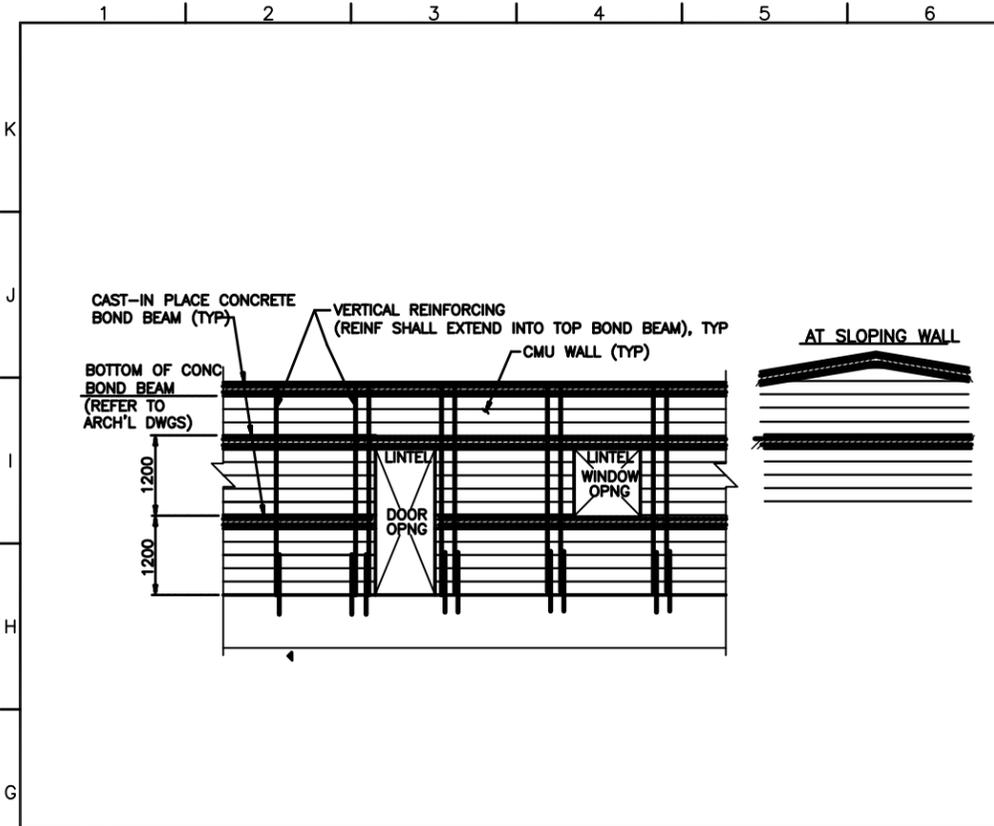
AFGHAN NATIONAL SECURITY FORCE
COMPREHENSIVE PLAN FOR
FACILITIES DEVELOPMENT
MINISTRY OF INTERIOR (MoI) -
PROVINCIAL FIRE STATION - TYPE-B
STRUCTURAL NOTES - 4

SCALE AS SHOWN
PROJECT NO. 6151-08-0328

00-S-004

1 GENERAL STRUCTURAL NOTES

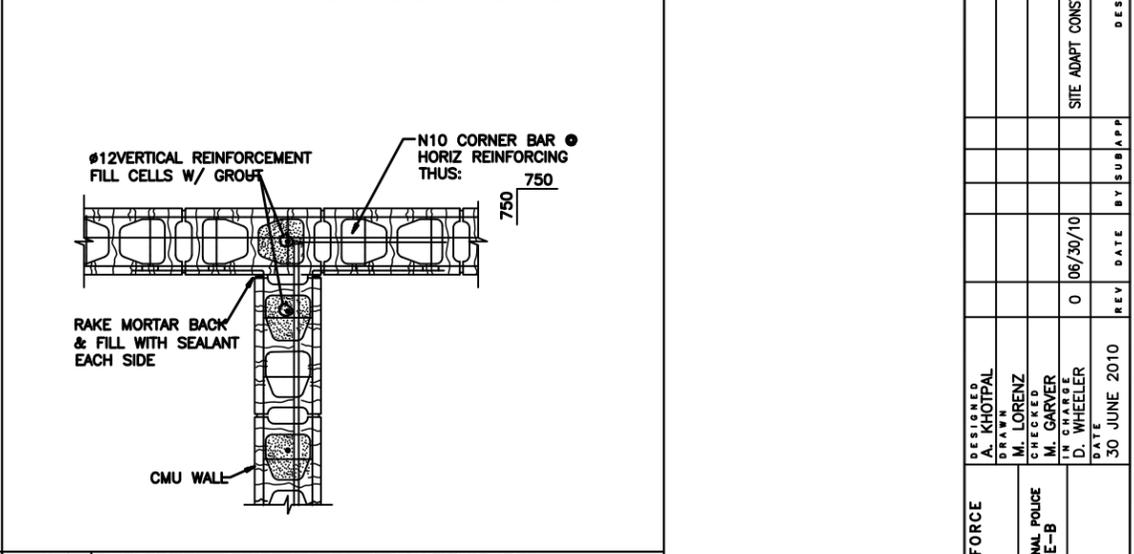
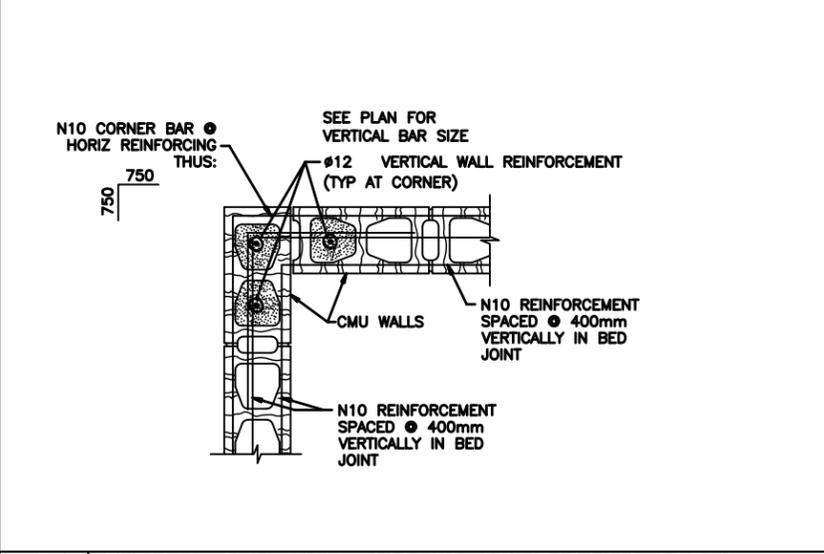
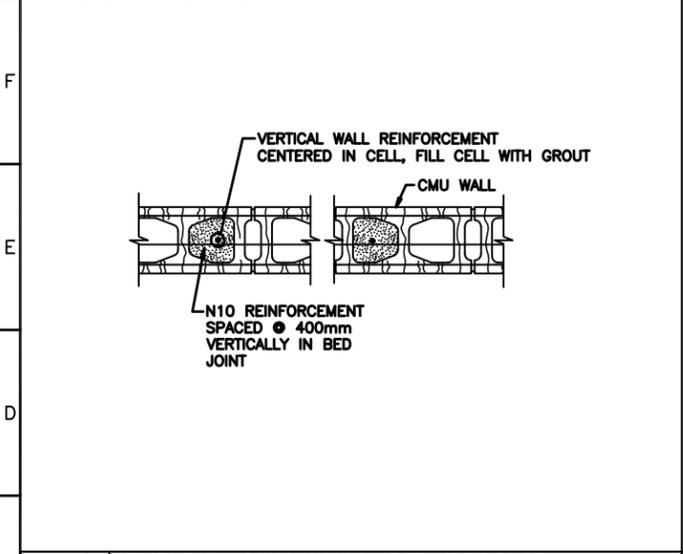
00-S-004 SCALE NONE



1 TYPICAL DIAGRAMMATIC CMU WALL ELEVATION
00-S-503 SCALE: 1:10

2 LINTEL REINFORCEMENT SCHEDULE AND SECTIONS
00-S-503 SCALE: 1:10

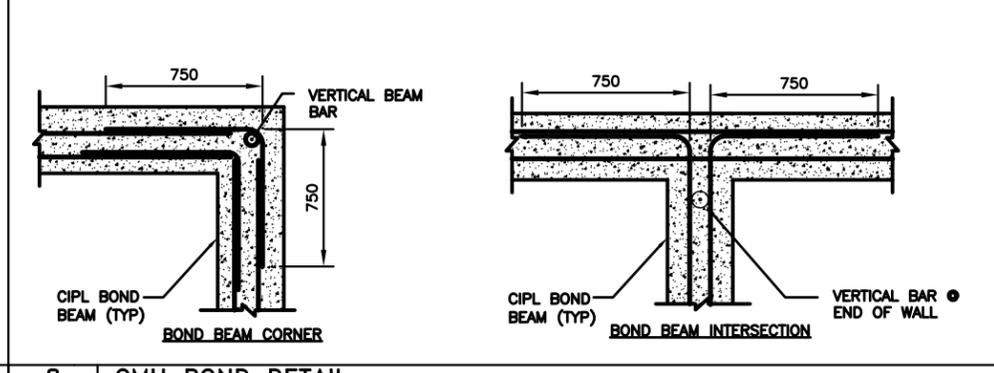
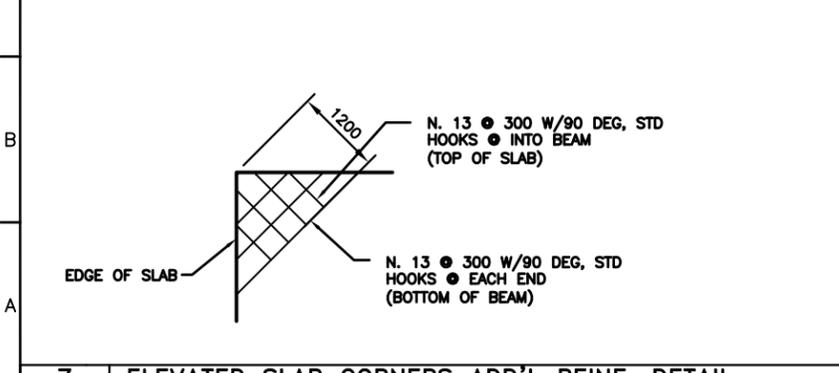
3 WALL ISOMETRIC
00-S-503 SCALE: NTS



4 TYPICAL CMU WALL REINFORCING
00-S-503 SCALE: 1:10

5 TYPICAL CMU WALL CORNER REINFORCING DETAIL
00-S-503 SCALE: 1:10

6 TYPICAL CMU WALL INTERSECTION
00-S-503 SCALE: NTS



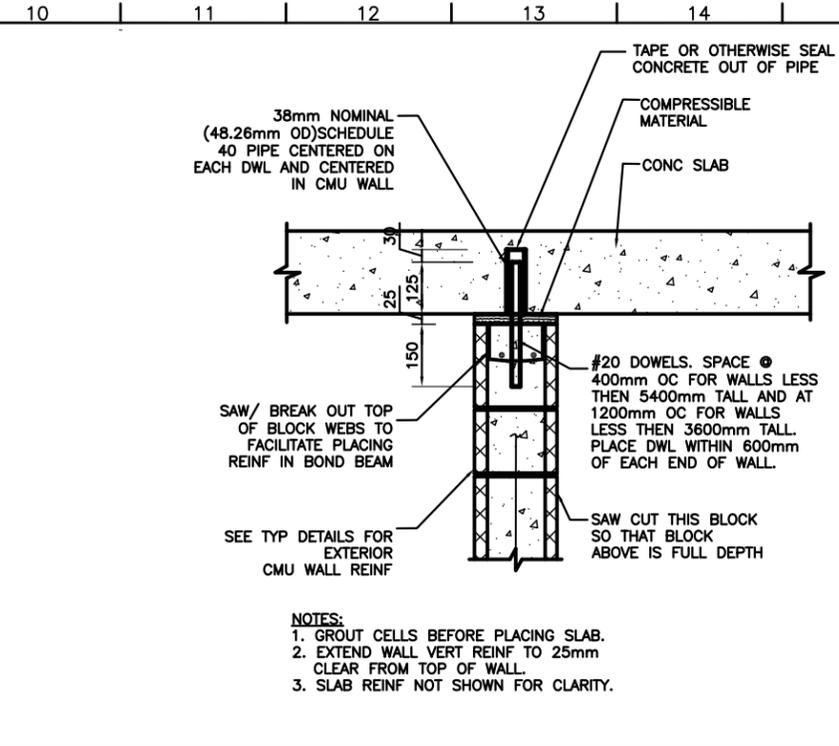
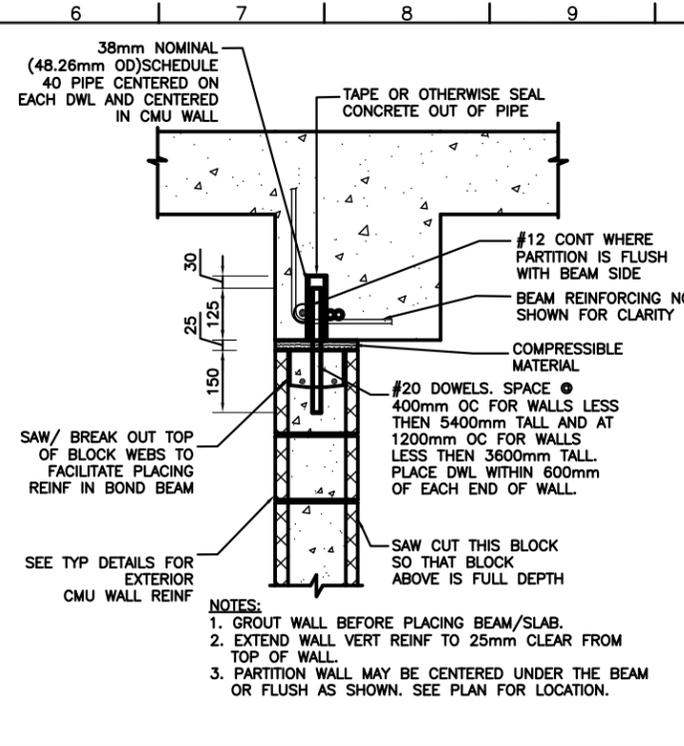
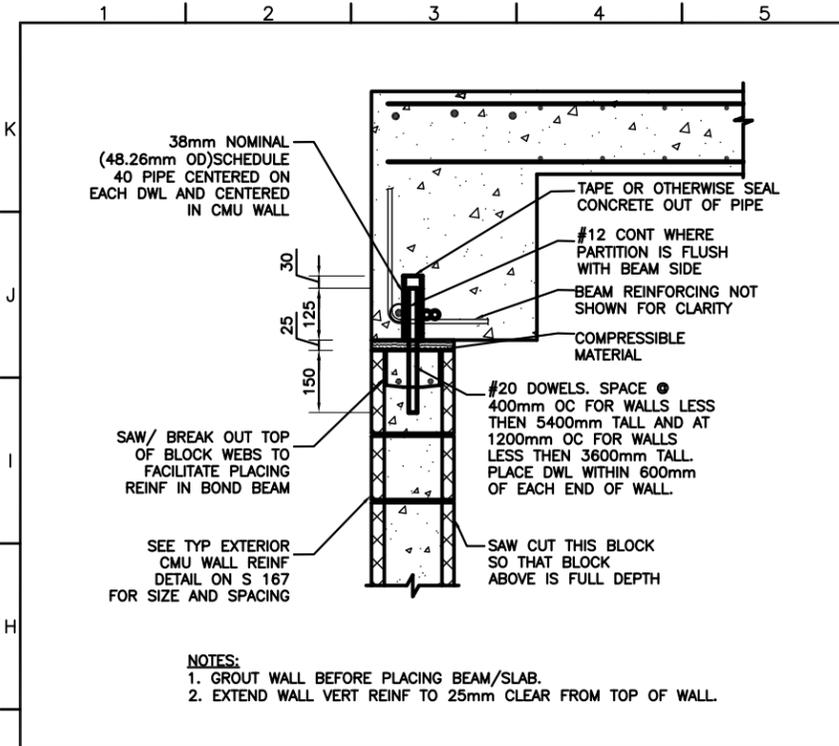
7 ELEVATED SLAB CORNERS ADD'L REINF. DETAIL
00-S-503 SCALE: NTS

8 CMU BOND DETAIL
00-S-503 SCALE: NTS

UNLESS OTHERWISE NOTED, LINEAR DIMENSIONS SHOWN ARE IN MILLIMETERS (MM)

DESIGNED A. KHOTIPAL	AFGHAN NATIONAL SECURITY FORCE COMPREHENSIVE PLAN FOR FACILITIES DEVELOPMENT	MINISTRY OF INTERIOR (MoI) AFGHAN NATIONAL POLICE PROVINCIAL FIRE STATION - TYPE-B	DATE 30 JUNE 2010	REV	DATE	BY	SUB APP	DESCRIPTION
CHECKED M. LORENZ								
DATE 06/30/10								
BY D. WHEELER								
PROJECT NO. 6151-08-0328								
00-S-503								

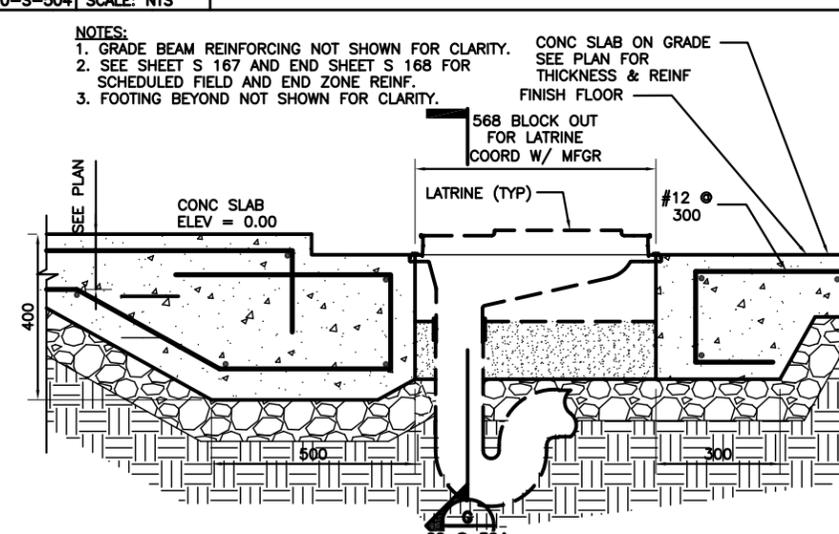
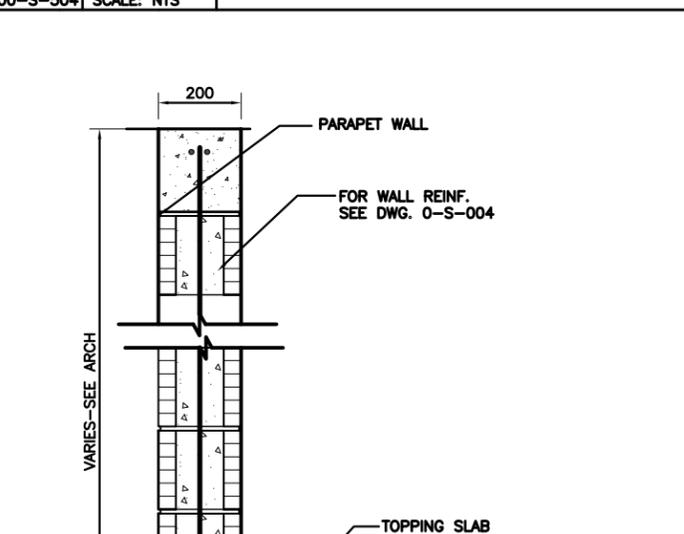
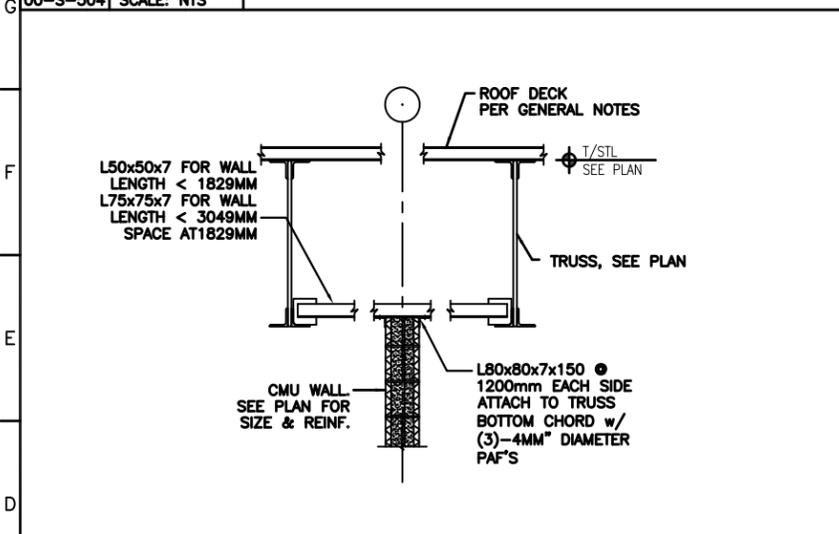
\\user-fs1\p\p\Engineering\000 FY 2011 RFPs in Progress\AFN\STANDARD TO DEVELOP Fire Station\MACTEC\00-S-503.dwg 03/14/2011 6:54pm N24816F



A SECTION AT SPANDREL BEAM
00-S-504 SCALE: NTS

B SECTION AT INTERIOR BEAM
00-S-504 SCALE: NTS

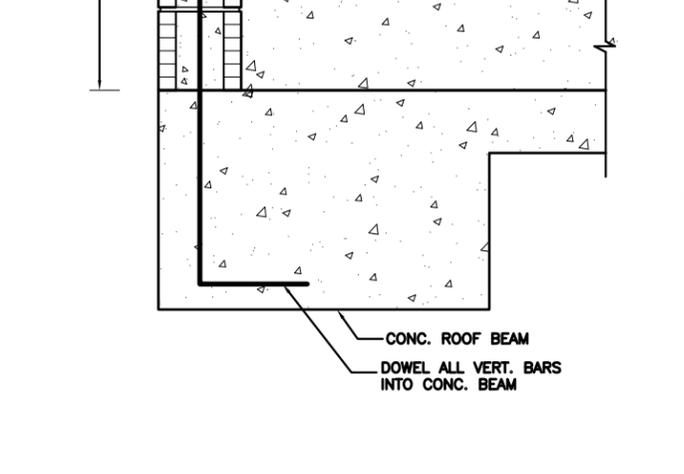
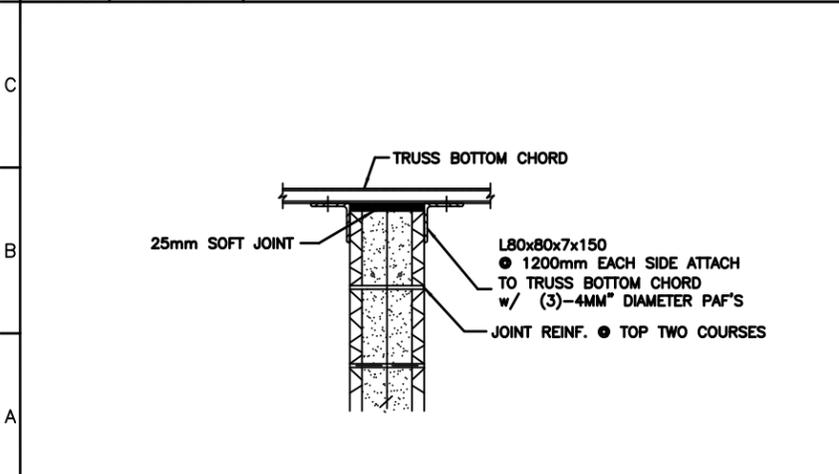
C SECTION AT SLAB
00-S-504 SCALE: NTS



D SECTION PERP. TO STEEL FRAMING
00-S-504 SCALE: NTS

H SECTION
00-S-504 SCALE: NTS

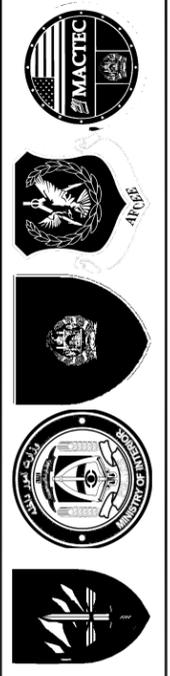
F SECTION
00-S-504 SCALE: NTS



E SECTION
00-S-504 SCALE: NTS

G SECTION PERPENDICULAR TO STEEL FRAMING
00-S-504 SCALE: NTS

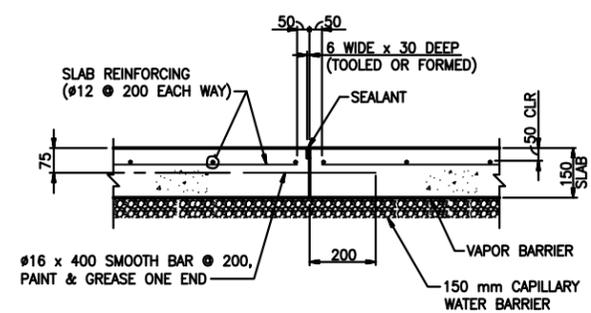
G SECTION PERPENDICULAR TO STEEL FRAMING
00-S-504 SCALE: NTS



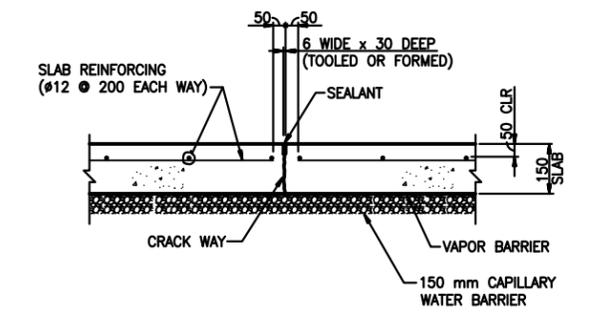
DESIGNED	DRAWN	CHECKED	DATE	REV	DATE	BY	DESCRIPTION
A. KHOTIPAL	M. LORENZ	M. GARVER	06/30/10	0	06/30/10	D. WHEELER	SITE ADAPT CONSTRUCTION PLANS
AFGHAN NATIONAL SECURITY FORCE COMPREHENSIVE PLAN FOR FACILITIES DEVELOPMENT							30 JUNE 2010
MINISTRY OF INTERIOR (MoI) AFGHAN NATIONAL POLICE PROVINCIAL FIRE STATION - TYPE-B							03/14/2011 6:54pm
TYPICAL TOP OF CMU WALL SUPPORTS & SLAB SECTIONS FOR LATRINES							00-S-504
SCALE AS SHOWN							
PROJECT NO. 6151-08-0328							

\\net-filing\sa\Engineering\000 FY 2011 RFPs in Progress\AFN\STANDARD TO DEVELOP THE STATION\MACTEC\00-S-504.dwg 03/14/2011 6:54pm N24826F

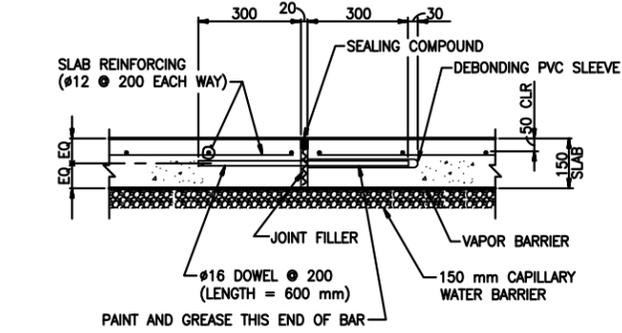
- SLAB ON GRADE NOTES:**
1. THE SLAB ON GRADE MINIMUM THICKNESS IS 150 mm UNLESS NOTED OTHERWISE.
 2. CONTROL JOINT FOR THE SLAB ON GRADE SHALL BE AS SHOWN ON FOUNDATION PLAN.
 3. EXPANSION JOINT FOR THE SLAB ON GRADE SHALL BE AS SHOWN ON FOUNDATION PLAN.
 4. CONCRETE SLAB ON GRADE SHALL BE PLACED IN A CHECKER BOARD PATTERN. ADJACENT SLABS SHALL BE POURED NO LESS THAN THREE (3) DAYS APART.



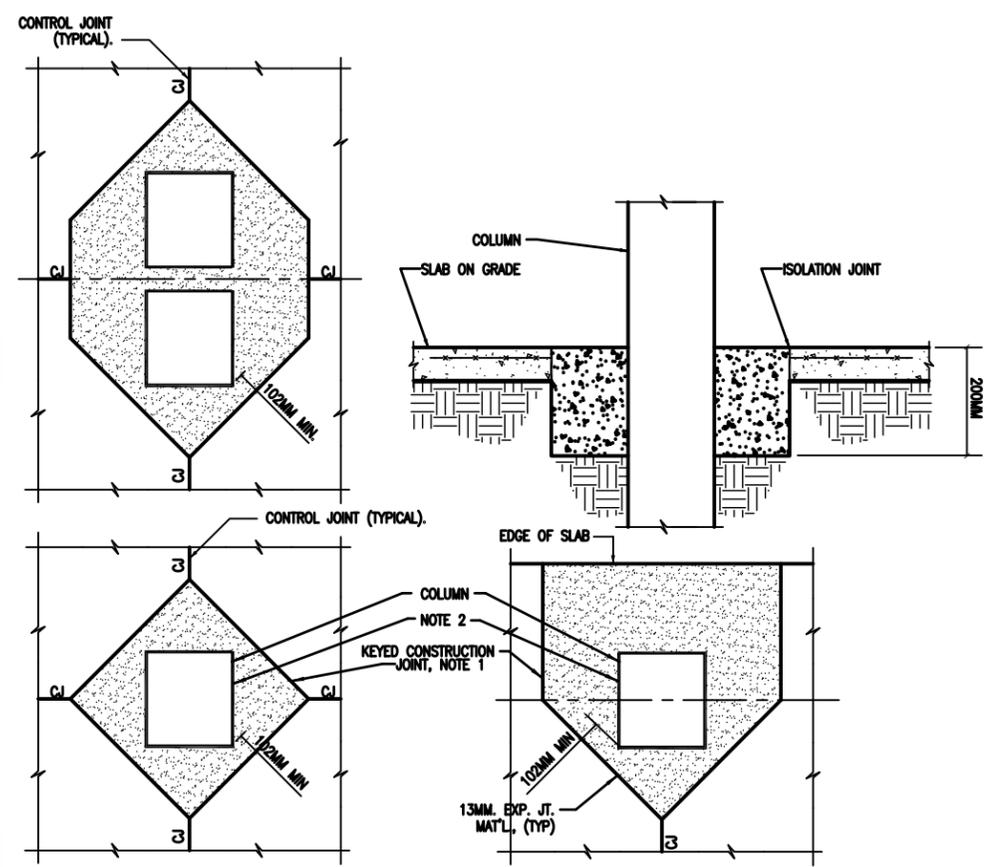
1 SOG CONSTRUCTION JOINT
00-S-505 SCALE: 1:10



2 SOG CONTROL JOINT DETAIL
00-S-505 SCALE: 1:10

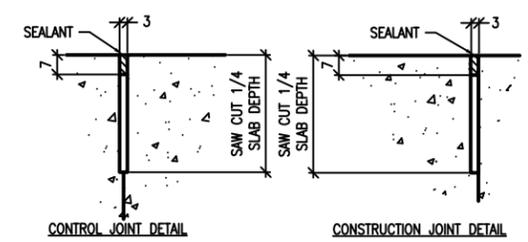


3 SOG EXPANSION JOINT DETAIL
00-S-505 SCALE: 1:10



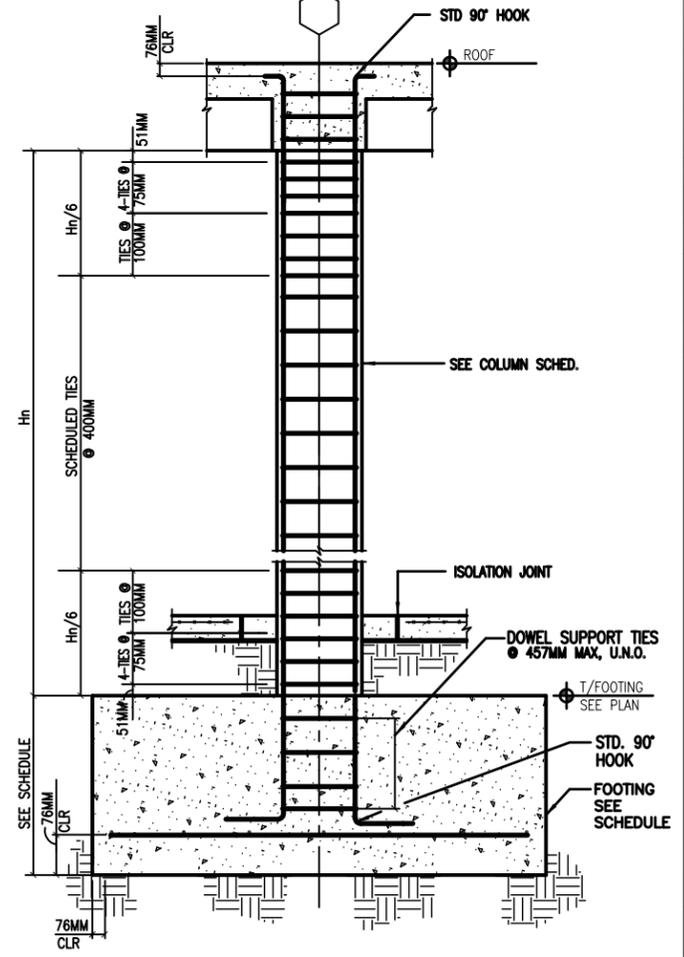
- NOTES:**
1. SEE TYPICAL SLAB ON GRADE CONSTRUCTION JOINT FOR ADD'L INFO.
 2. AT INTERIOR SLABS PROVIDE 30# ROOFING FELT TYP. AT EXTERIOR SLABS, PROVIDE 13MM EXPANSION JOINT MATERIAL.

4 TYPICAL SOG COLUMN ISOLATION JOINT DETAIL
00-S-505 SCALE: NTS

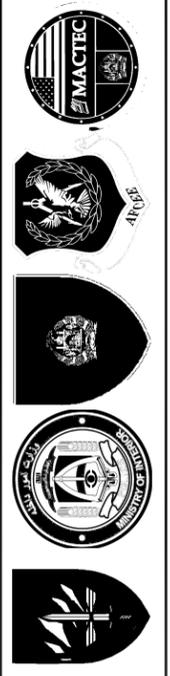


5 TYPICAL CONCRETE SLAB JOINT FINISH DETAIL
00-S-505 SCALE: NTS

- NOTES:**
1. U.N.O. T&B BAR LAP SPLICES SHALL BE PLACED IN THE MIDDLE THIRD OF THE BEAM SPAN, BUT NOT CLOSER THAN (2x BEAM DEPTH) FROM THE FACE OF SUPPORT UNLESS NOTED OTHERWISE ON STRUCTURAL DRAWINGS. PROVIDE CONTINUOUS BARS AND ELIMINATE THE LAP SPLICES WHERE PRACTICAL.
 2. WHERE THERE ARE NO SHORT BOTTOM BARS, STAGGER BOTTOM BARS LAP SPLICES IN THE MIDDLE THIRD OF THE BEAM SPAN, WHERE REQ'D.
 3. PROVIDE THE SCHEDULE STIRRUPS @ 100mm (MAX) AT THE BEAM TOP OR BOTTOM BAR LAP SPLICE ZONES. SMALLER DIAMETER STIRRUPS 10mm MIN. @100mm (MAX) CAN BE USED IF THE TOTAL STIRRUP AREA IS > THE CORRESPONDING SCHEDULE STIRRUP AREA.



7 SINGLE STORY COLUMN DETAIL
00-S-505 SCALE: NTS



DESIGNED BY	CHECKED BY	DATE	REV	DATE	DESCRIPTION
A. KHOTIPAL	M. LORENZ	06/30/10	0	06/30/10	SITE ADAPT CONSTRUCTION PLANS
DRAYN	M. GARVER				
	D. WHEELER				
30 JUNE 2010					REV DATE BY SUBAPP

AFGHAN NATIONAL SECURITY FORCE COMPREHENSIVE PLAN FOR FACILITIES DEVELOPMENT	AFGHAN NATIONAL POLICE PROVINCIAL FIRE STATION - TYPE-B	STANDARD STEEL DETAILS
--	--	------------------------

SCALE: AS SHOWN
PROJECT NO: 6151-08-0328
00-S-505



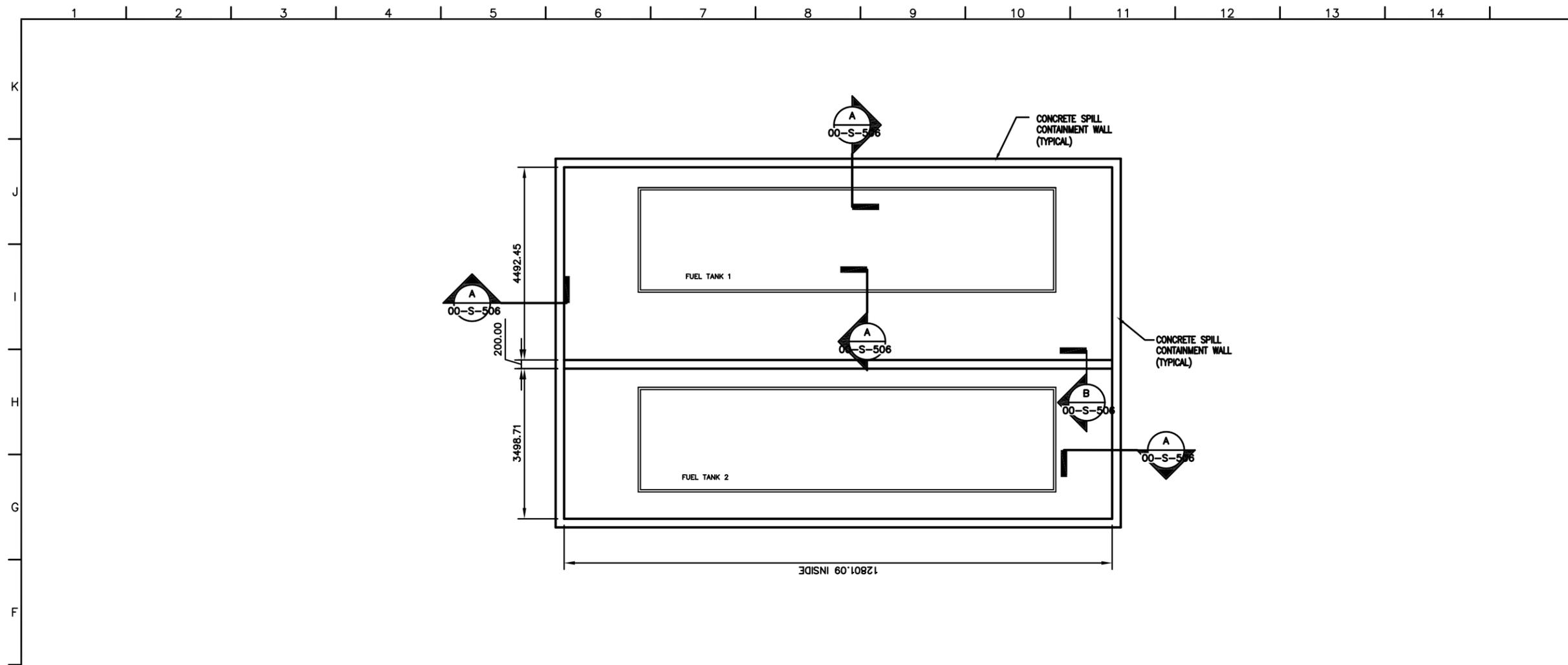
NO.	DATE	BY	DESCRIPTION
0	06/30/10		SITE ADAPT CONSTRUCTION PLANS

REV	DATE	BY	DESCRIPTION
0	30 JUNE 2010		

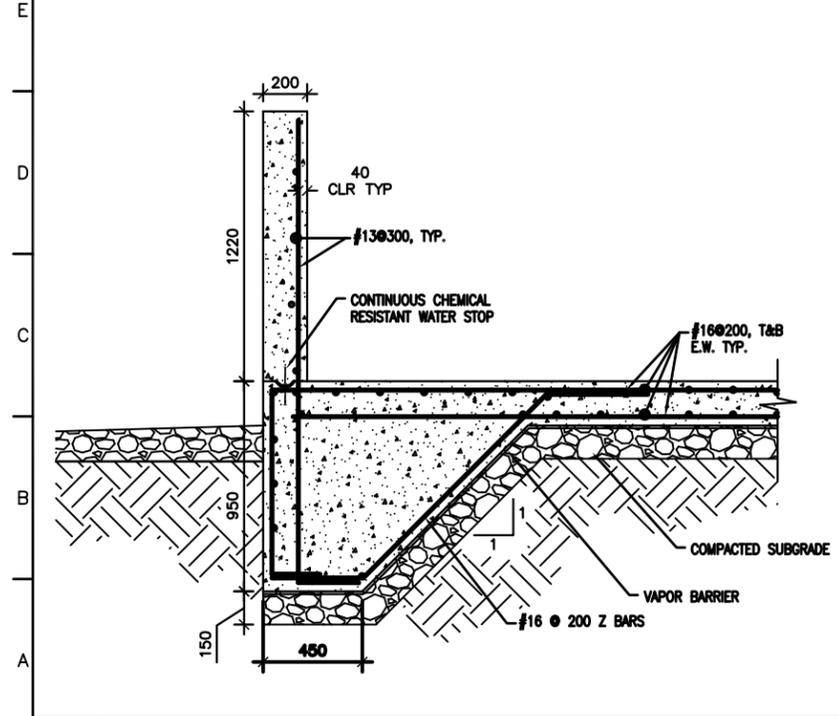
AFGHAN NATIONAL SECURITY FORCE
 COMPREHENSIVE PLAN FOR
 FACILITIES DEVELOPMENT
 MINISTRY OF INTERIOR (MoI) - AFGHAN NATIONAL POLICE
 PROVINCIAL FIRE STATION - TYPE-B
 FUELING STRUCTURAL DETAILS

SCALE: AS SHOWN
 PROJECT NO.: 6151-08-0328
 00-S-506

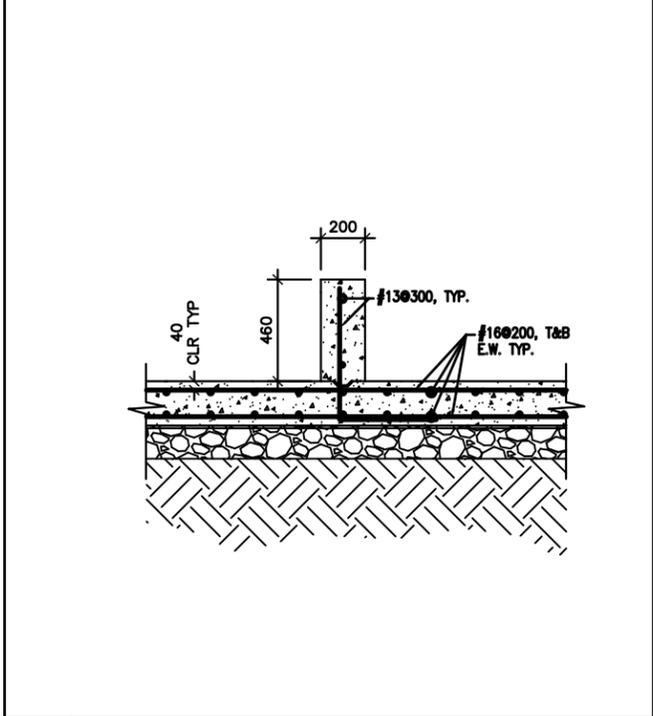
R:\Engineering\000 FY 2011 RFP in Program\AF\STANDARD TO DEVELOP Fire Station\MACTEC\00-S-506.dwg 03/14/2011 6:53pm HZHENJIF



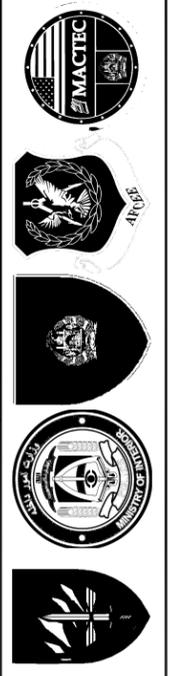
1 SPILL CONTAINMENT TANK PLAN
 00-S-506 SCALE: 1:50



A SECTION
 00-S-506 SCALE: 1:15



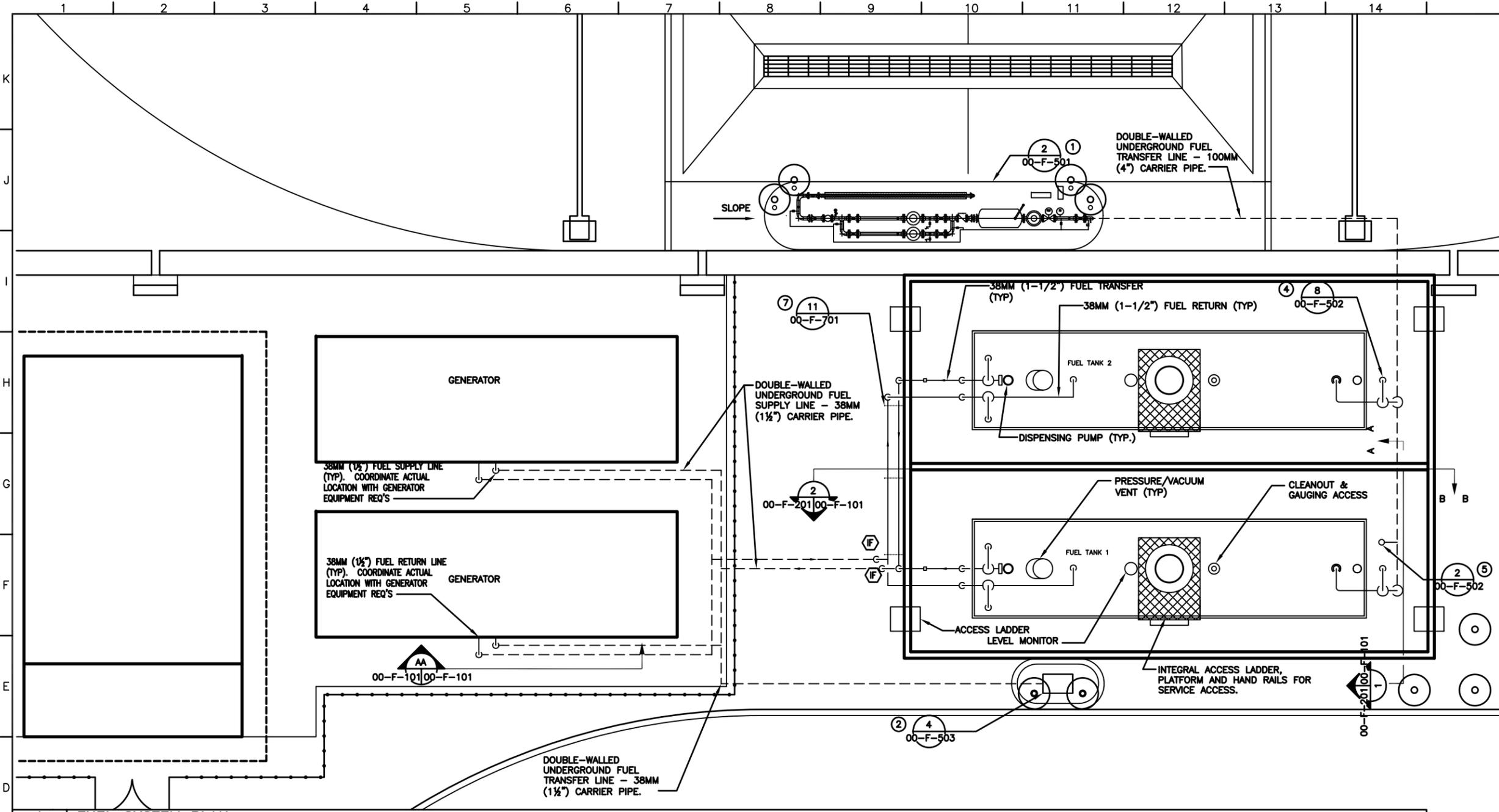
B SECTION
 00-S-506 SCALE: 1:15



DATE	REV	DESCRIPTION
06/30/10	0	SITE ADAPT CONSTRUCTION PLANS
30 JUNE 2010		BY SUBAPP

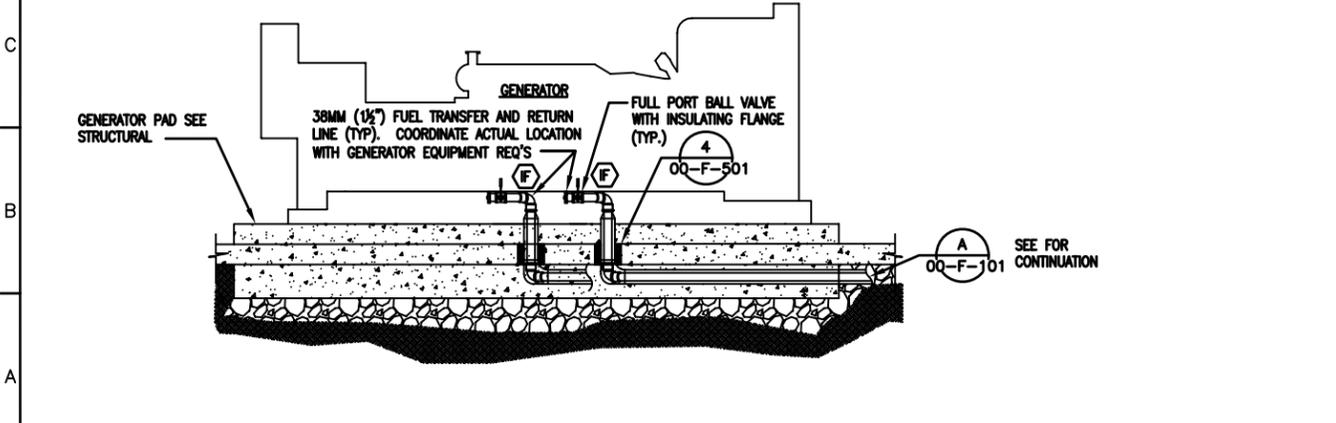
DESIGNED M. PEISHER	AFGHAN NATIONAL SECURITY FORCE
DRAWN C. JUNG	COMPREHENSIVE PLAN FOR FACILITIES DEVELOPMENT
CHECKED J. MARIANETTI	MINISTRY OF INTERIOR (MoI) AFGHAN NATIONAL POLICE
DATE D. WHEELER	PROVINCIAL FIRE STATION - TYPE-B
30 JUNE 2010	FUEL SYSTEM SITE PLAN

SCALE AS SHOWN
PROJECT NO. 6151-08-0328
00-F-101



A FUEL SYSTEM PLAN

00-F-101 SCALE 1:50



AA GENERATOR ELEVATION VIEW

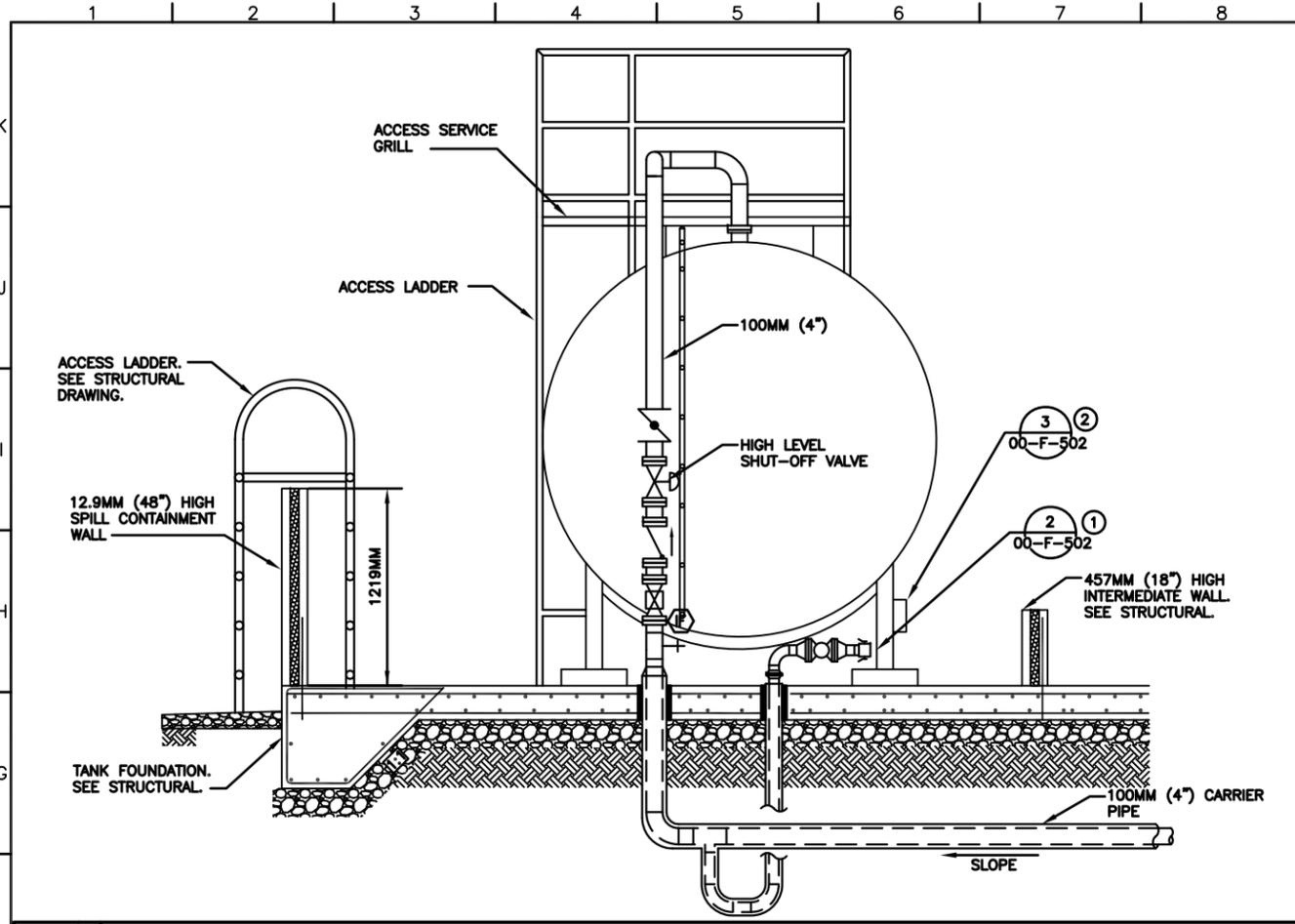
00-F-101 SCALE 1:500

GENERAL NOTES

1. PROVIDE MINIMUM 0.5m CLEARANCE BETWEEN FUEL LINES AND UTILITY LINES AT ALL UNDERGROUND CROSSINGS.
2. PROVIDE MINIMUM 0.5% SLOPE TO ALL LOW POINT DRAINS.
3. COORDINATE FUEL LINE ELEVATION WITH SITE-ADAPTED CIVIL UTILITIES. SEE CIVIL FOR UTILITY INFORMATION.
4. CONTRACTOR TO PROVIDE ADDITIONAL HIGH POINT VENTS AND LOW POINT DRAINS AS NEEDED TO PROVIDE POSITIVE SYSTEM DRAINAGE.

KEY NOTES:

- ① TRUCK OFFLOADING ISLAND
- ② FUEL DISPENSOR
- ③ TANK STORAGE AND DISPENSING EQUIPMENT
- ④ HIGH POINT VENT (TYP. 6)
- ⑤ LOW POINT DRAIN
- ⑥ ADJUSTABLE PIPE SADDLE SUPPORT
- ⑦ PIPE SUPPORT (TYP. 3)

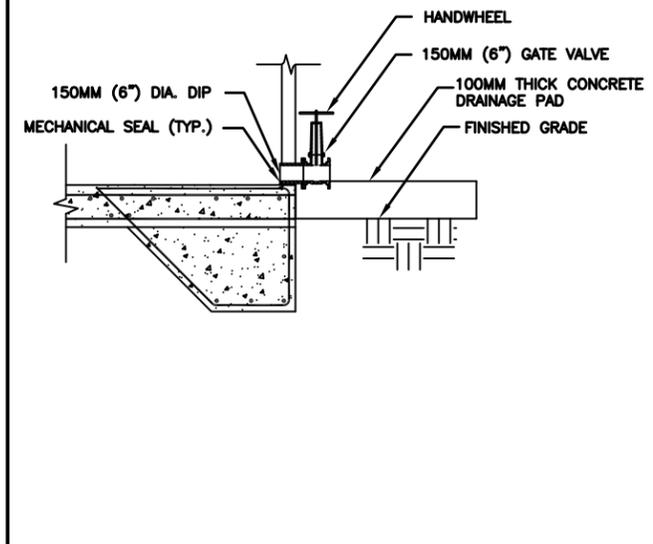


1 FUEL TANK FUEL STORAGE SECTION A-A

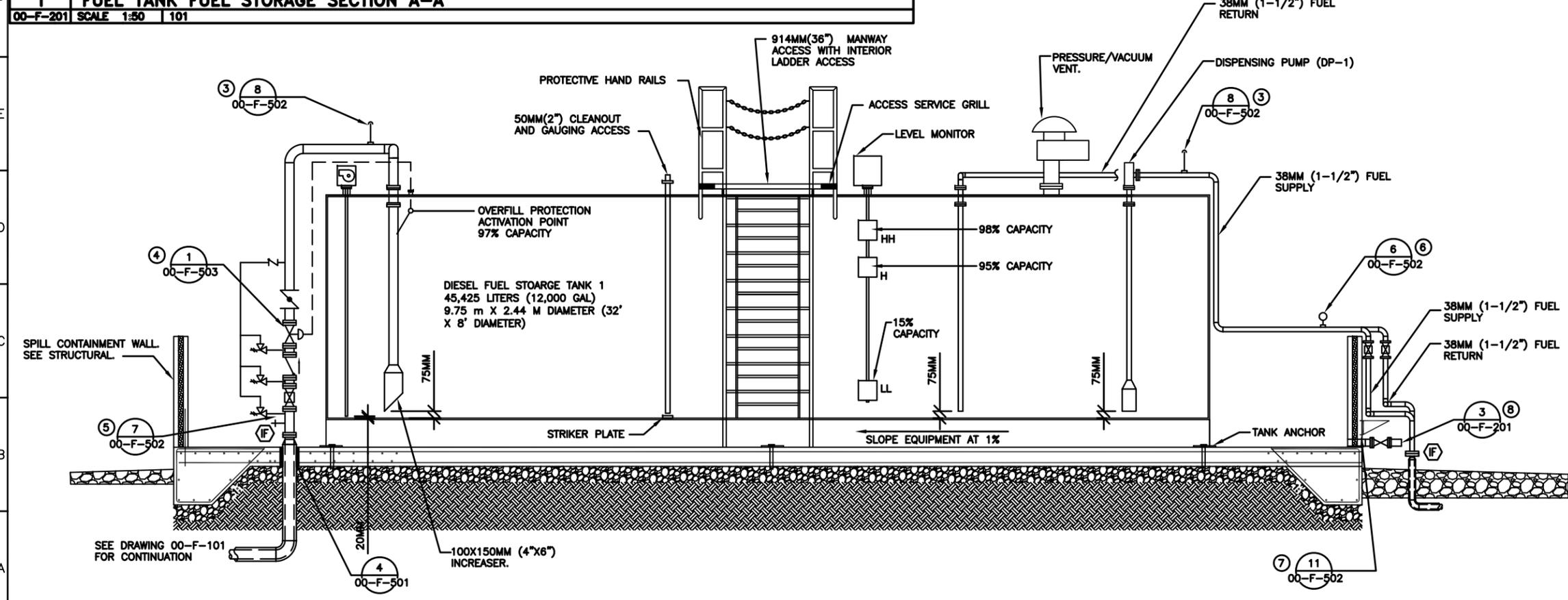
00-F-201 SCALE 1:50 101

3 CLOSED GATE VALVE

00-F-201 SCALE N.T.S. 101

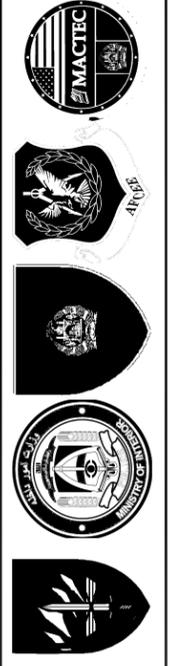


- KEY NOTES:**
- ① LOW POINT DRAIN
 - ② TANK GROUNDING LUG. SEE ELECTRICAL FOR WIRING DETAILS.
 - ③ HIGH POINT VENT
 - ④ HIGH LEVEL SHUT-OFF VALVE
 - ⑤ FUEL SAMPLE POINT
 - ⑥ FLOW SWITCH
 - ⑦ PIPE SUPPORT
 - ⑧ 50mm NORMALLY CLOSED GATE VALVE (DRAIN)



2 FUEL TANK FUEL STORAGE SECTION B-B

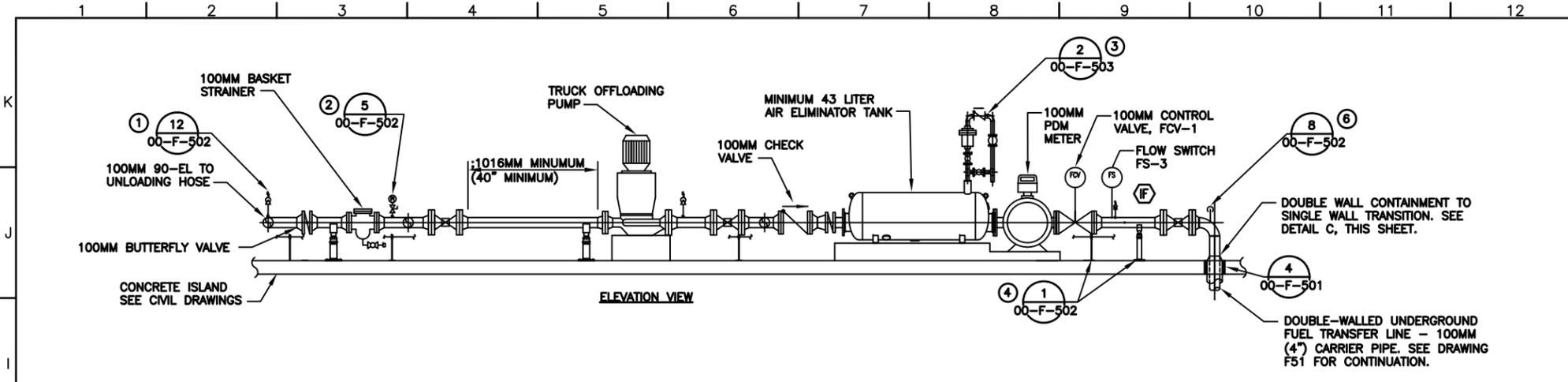
00-F-201 SCALE 1:25 101



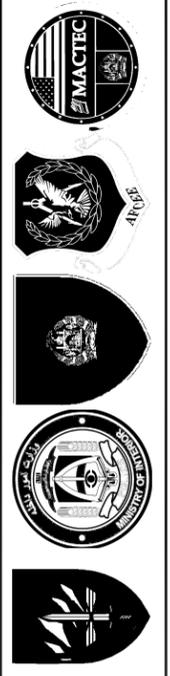
DESIGNED	DATE	REV	DATE	BY	DESCRIPTION
M. PEISHER					
C. JUNG					
J. MARINETTI					
D. WHEELER					
	06/30/10	0			SITE ADAPT CONSTRUCTION PLANS
	30 JUNE 2010				FUELING TANK ELEVATIONS

AFGHAN NATIONAL SECURITY FORCE
 COMPREHENSIVE PLAN FOR FACILITIES DEVELOPMENT
 MINISTRY OF INTERIOR (MoI) AFGHAN NATIONAL POLICE
 PROVINCIAL FIRE STATION - TYPE-B
 SCALE AS SHOWN
 PROJECT NO. 6151-08-0328
 00-F-201

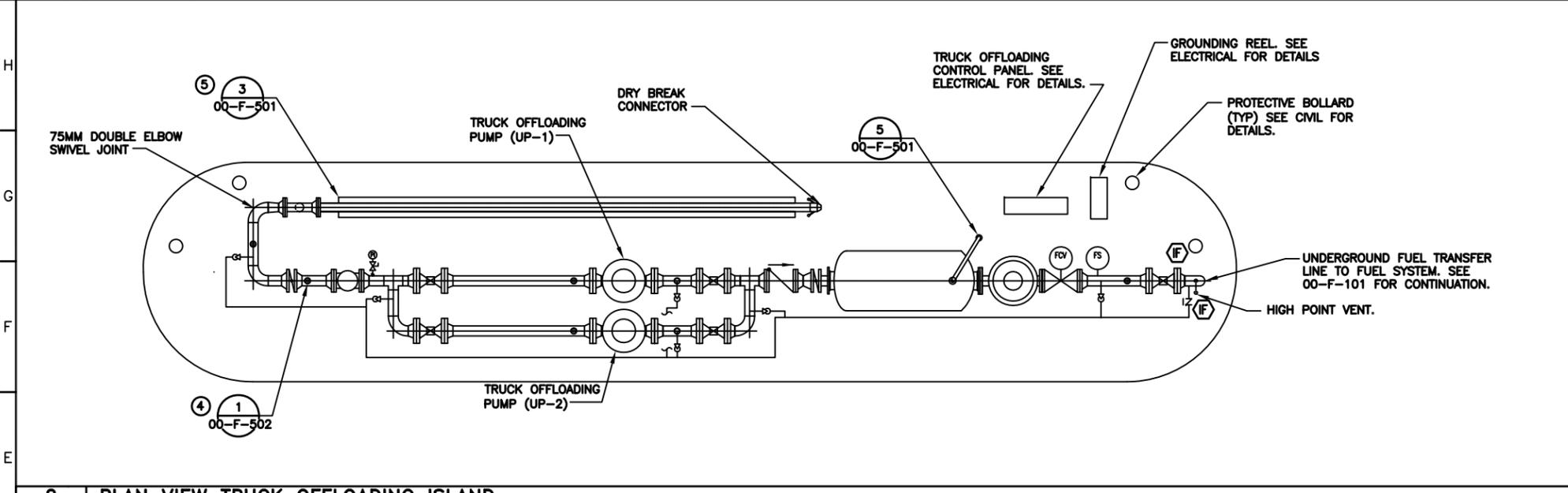
\\net-rt\proj\BAC\Engineering\00-F-201-018 In Progress\WAP\STANDARD TO DEVELOP Fire Station\MACTEC\00-F-201.dwg 03/14/2011 7:08pm M045618F



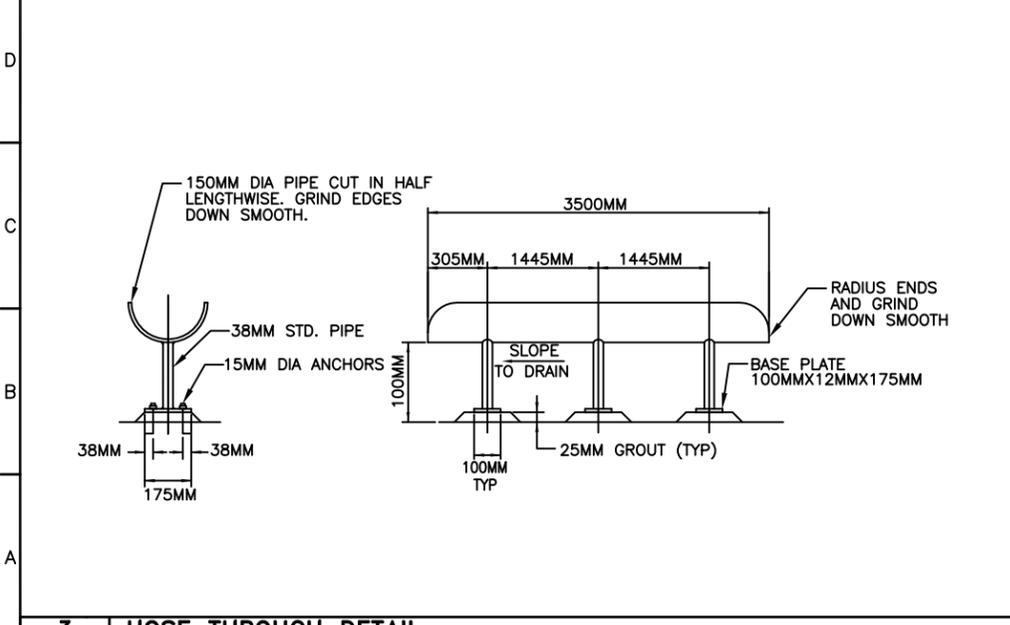
- KEY NOTES:**
- 1 THERMAL RELIEF VALVE (TRV)
 - 2 PRESSURE INDICATOR
 - 3 50MM NPT AUTOMATIC AIR ELIMINATOR VENT (AE-1). ROUTE TO NEAREST DRAIN.
 - 4 PIPE SUPPORT, ANCHOR TO CONCRETE.
 - 5 OFFLOADING 75MM HOSE WITH CARRIER THROUGH.
 - 6 HIGH POINT VENT



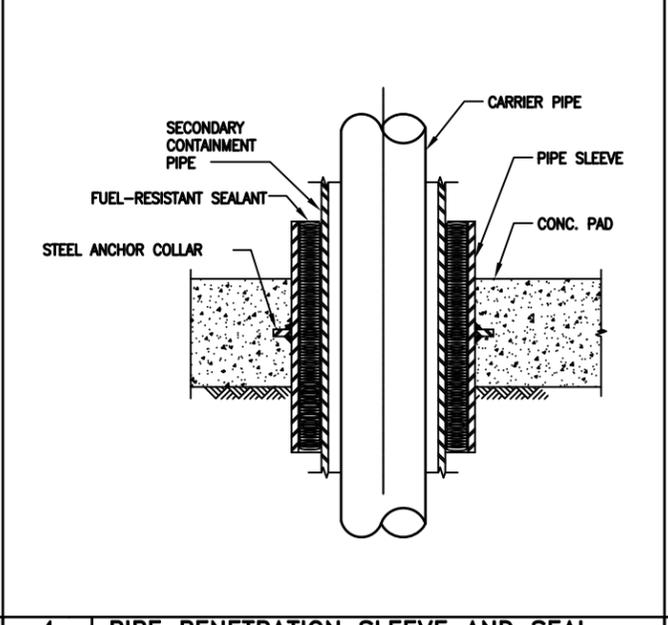
1 ELEVATION VIEW TRUCK OFFLOADING ISLAND
00-F-501 SCALE 1:20



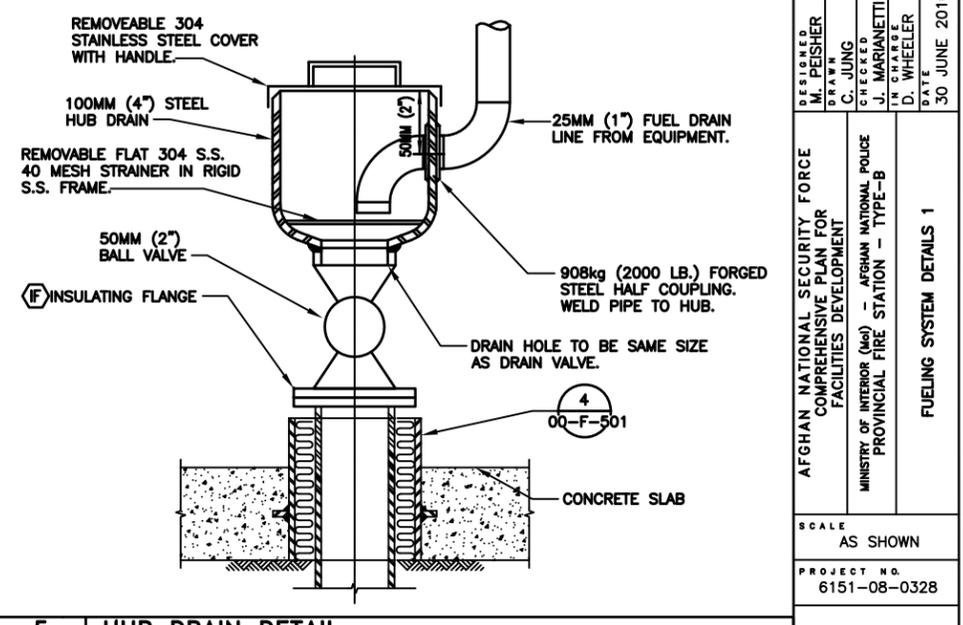
2 PLAN VIEW TRUCK OFFLOADING ISLAND
00-F-501 SCALE 1:20



3 HOSE THROUGH DETAIL
00-F-501 SCALE N.T.S.



4 PIPE PENETRATION SLEEVE AND SEAL
00-F-501 SCALE N.T.S.



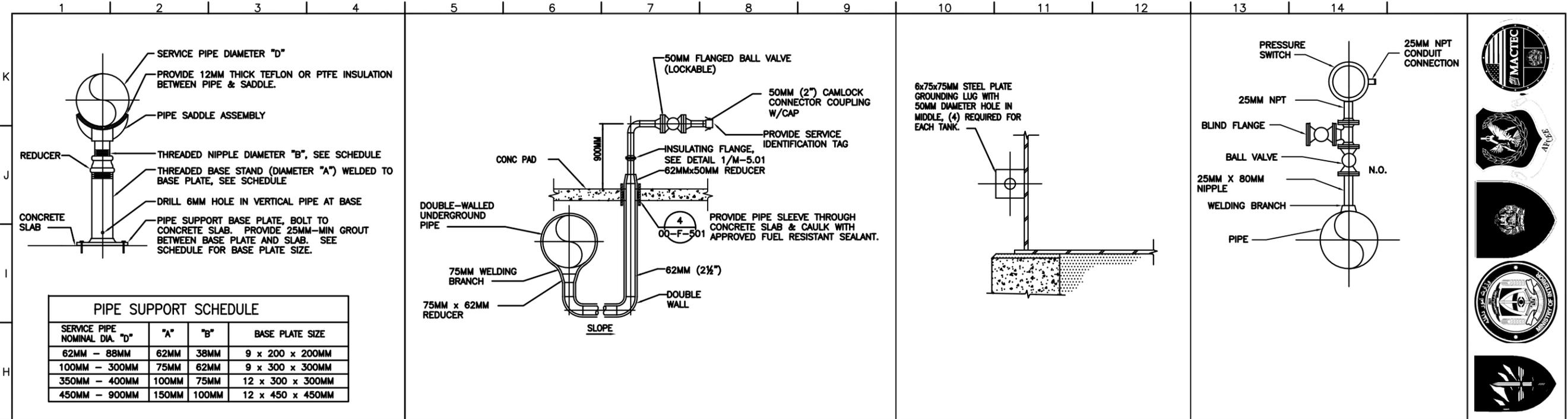
5 HUB DRAIN DETAIL
00-F-501 SCALE N.T.S.

REV	DATE	BY	DESCRIPTION
0	06/30/10		SITE ADAPT CONSTRUCTION PLANS

DESIGNED	M. PEISHER
DRAWN	C. JUNG
CHECKED	J. MARIANETTI
DATE	D. WHEELER
30 JUNE 2010	

AFGHAN NATIONAL SECURITY FORCE	COMPREHENSIVE PLAN FOR FACILITIES DEVELOPMENT	AFGHAN NATIONAL POLICE	PROVINCIAL FIRE STATION - TYPE-B	FUELING SYSTEM DETAILS 1
MINISTRY OF INTERIOR (MoI)				
SCALE	AS SHOWN	PROJECT NO.	6151-08-0328	00-F-501

\\net-filing\BAC\Engineering\000 FY 2011 BPA in Progress\AF\STANDARD TO DEVELOP Fire Station\MACTEC\000-F-501.dwg 03/14/2011 7:07pm NBS/BLR

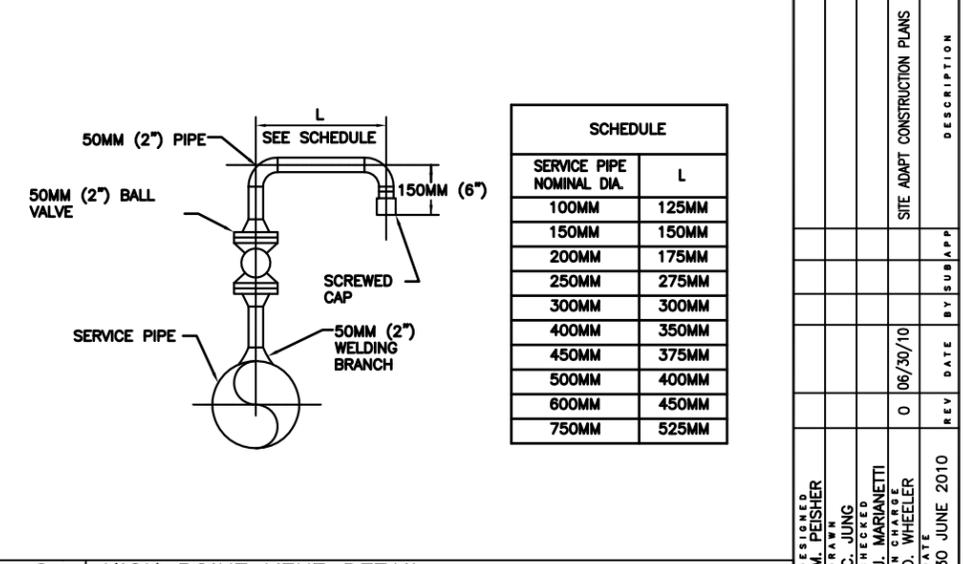
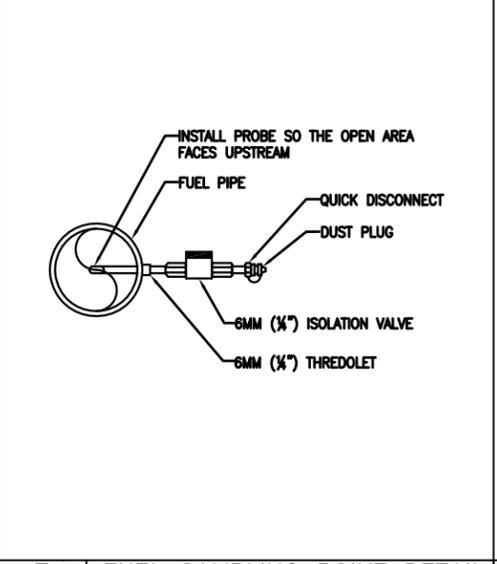
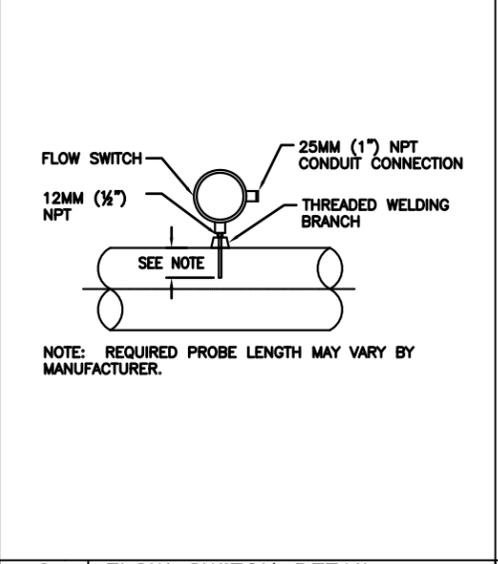
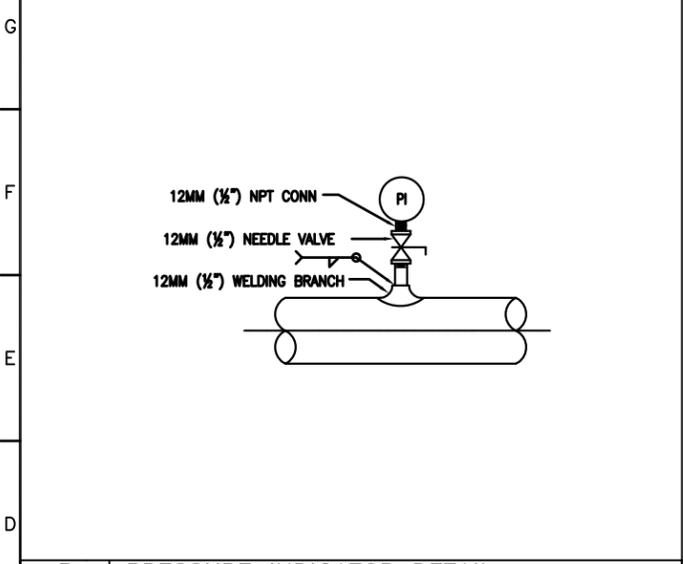


PIPE SUPPORT SCHEDULE

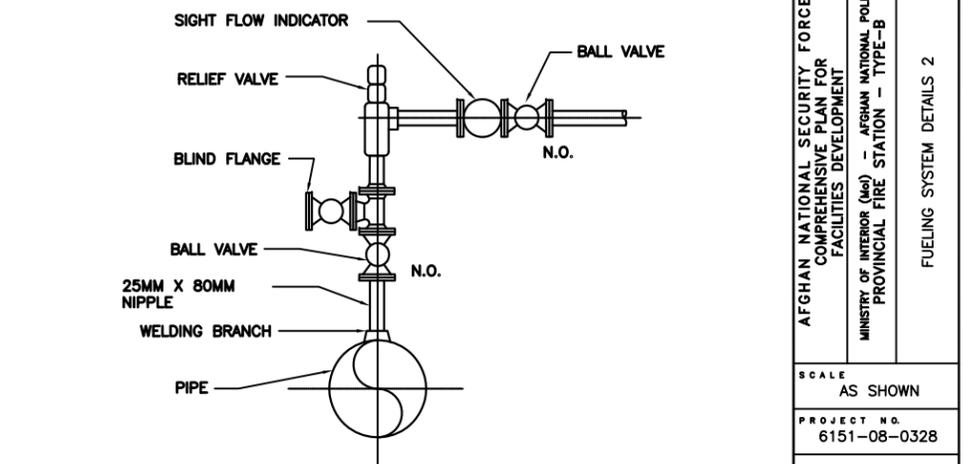
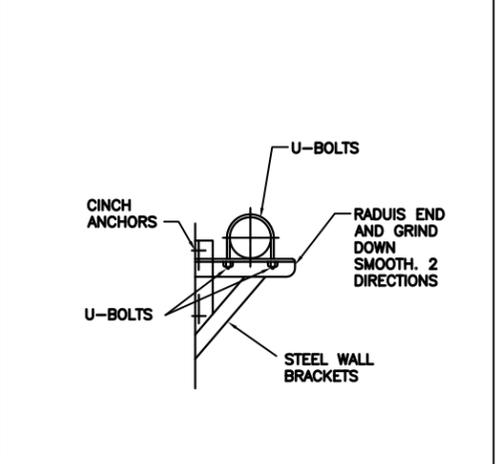
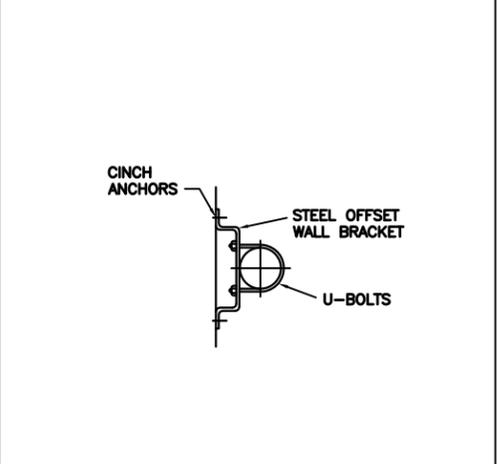
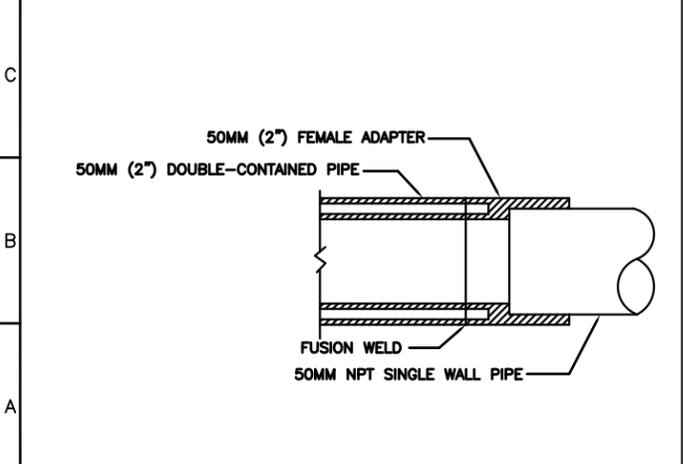
SERVICE PIPE NOMINAL DIA. "D"	"A"	"B"	BASE PLATE SIZE
62MM - 88MM	62MM	38MM	9 x 200 x 200MM
100MM - 300MM	75MM	62MM	9 x 300 x 300MM
350MM - 400MM	100MM	75MM	12 x 300 x 300MM
450MM - 900MM	150MM	100MM	12 x 450 x 450MM



1 ADJUSTABLE PIPE SADDLE DETAIL 00-F-502 SCALE N.T.S. 2 LOW POINT DRAIN DETAIL 00-F-502 SCALE N.T.S. 3 TANK GROUNDING LUG DETAIL 00-F-502 SCALE N.T.S. 4 PRESSURE SWITCH DETAIL 00-F-502 SCALE N.T.S.



5 PRESSURE INDICATOR DETAIL 00-F-502 SCALE N.T.S. 6 FLOW SWITCH DETAIL 00-F-502 SCALE N.T.S. 7 FUEL SAMPLING POINT DETAIL 00-F-502 SCALE N.T.S. 8 HIGH POINT VENT DETAIL 00-F-502 SCALE N.T.S.



9 DOUBLE TO SINGLE WALL PIPE TRANSITION 00-F-502 SCALE N.T.S. 10 PIPE SUPPORT A 00-F-502 SCALE N.T.S. 11 PIPE SUPPORT B 00-F-502 SCALE N.T.S. 12 THERMAL RELIEF VALVE PIPING DETAIL 00-F-502 SCALE N.T.S.

DATE	REV	DESCRIPTION
06/30/10	0	SITE ADAPT CONSTRUCTION PLANS

DESIGNED BY: M. PEISHER
 DRAWN BY: C. JUNG
 CHECKED BY: J. MARIANETTI
 IN CHARGE: D. WHEELER

AFGHAN NATIONAL SECURITY FORCE
 COMPREHENSIVE PLAN FOR FACILITIES DEVELOPMENT
 MINISTRY OF INTERIOR (MoI)
 PROVINCIAL FIRE STATION - TYPE-B

SCALE: AS SHOWN
 PROJECT NO: 6151-08-0328

00-F-502

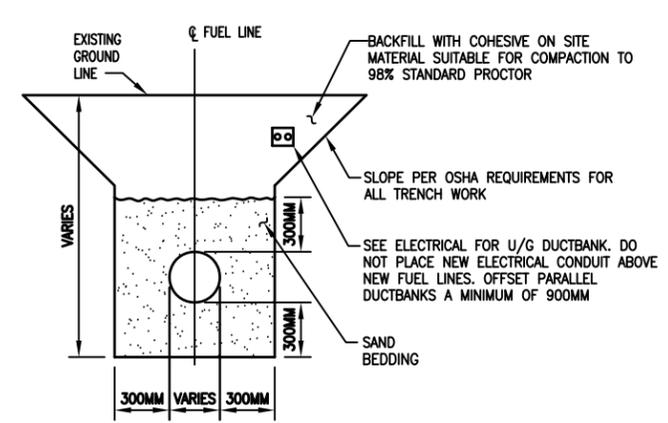
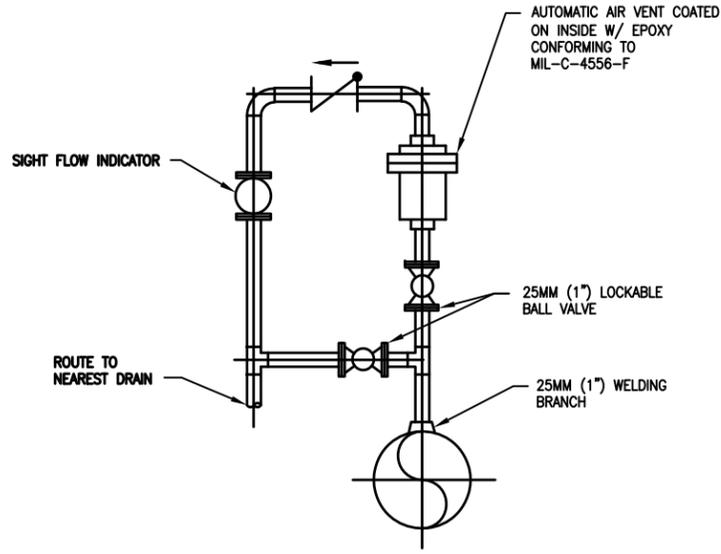
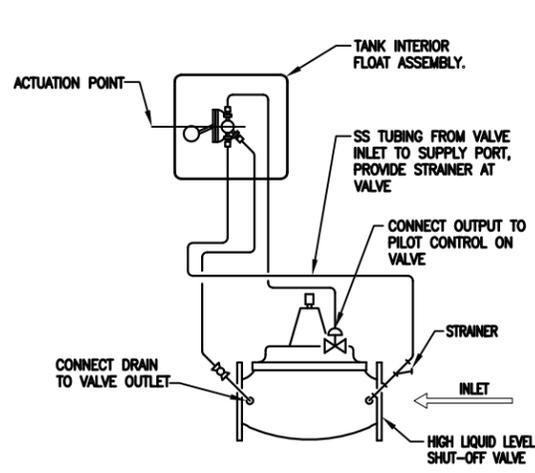
\\ntm-filing\lsc\Engineering\000 FY 2011 RFPs in Progress\AFN\STANDARD TO DEVELOP Fire Station\MACTEC\00-F-502.dwg 03/14/2011 7:07pm N245048F

1 2 3 4

5 6 7 8 9 10

11 12 13 14

K
J
I
H



1 HIGH LEVEL SHUT-OFF VALVE

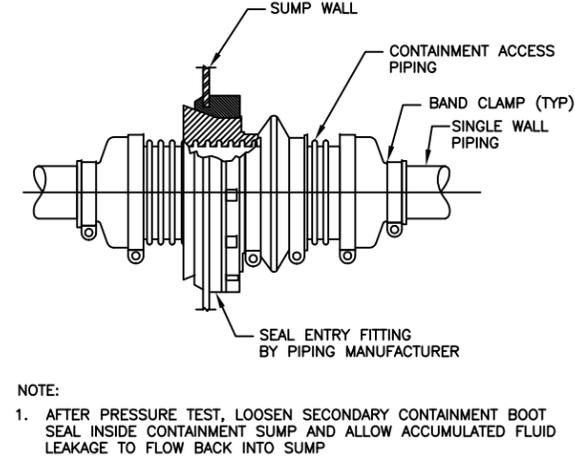
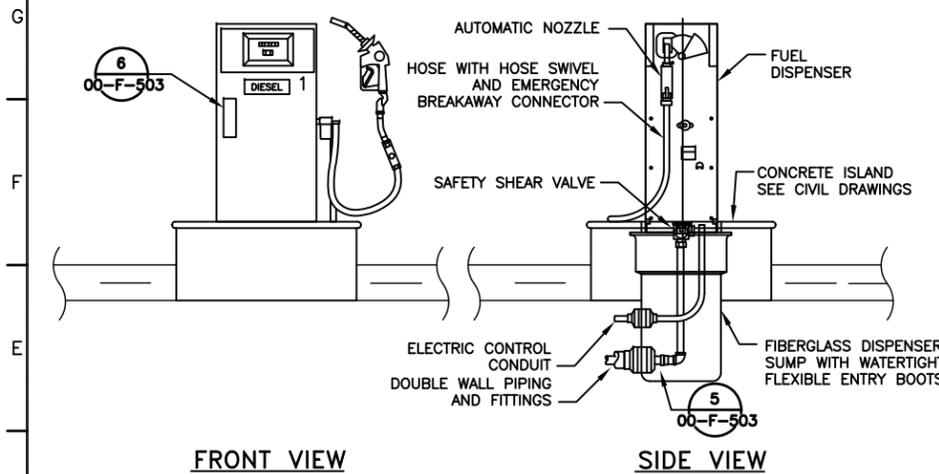
2 AUTOMATIC AIR VENT DETAIL

3 SINGLE FUEL LINE SECTION

00-F-503 SCALE N.T.S.

00-F-503 SCALE N.T.S.

00-F-503 SCALE N.T.S.

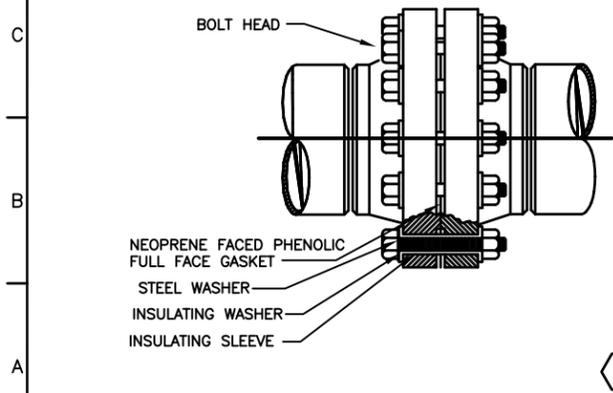


4 FUEL DISPENSER ELEVATION DETAIL

5 PIT PENETRATION DETAIL

00-F-503 SCALE N.T.S.

00-F-503 SCALE N.T.S.



7 INSULATING FLANGE ASSEMBLY

00-F-503 SCALE N.T.S.



PLACE ONE ON EACH SIDE OF EACH DISPENSER (PLACE IN A CONSPICUOUS AREA)

6 STATIC ELECTRICITY WARNING LABEL

00-F-503 SCALE N.T.S.

DESIGNED	DRAWN	CHECKED	DATE	REV	DATE	BY	DESCRIPTION
M. PEISHER	C. JUNG	J. MARINETTI	06/30/10	0	06/30/10		SITE ADAPT CONSTRUCTION PLANS
		D. WHEELER	30 JUNE 2010				FUELING SYSTEM DETAILS 3

AFGHAN NATIONAL SECURITY FORCE
COMPREHENSIVE PLAN FOR
FACILITIES DEVELOPMENT
MINISTRY OF INTERIOR (MoI)
PROVINCIAL FIRE STATION - TYPE-B
FUELING SYSTEM DETAILS 3

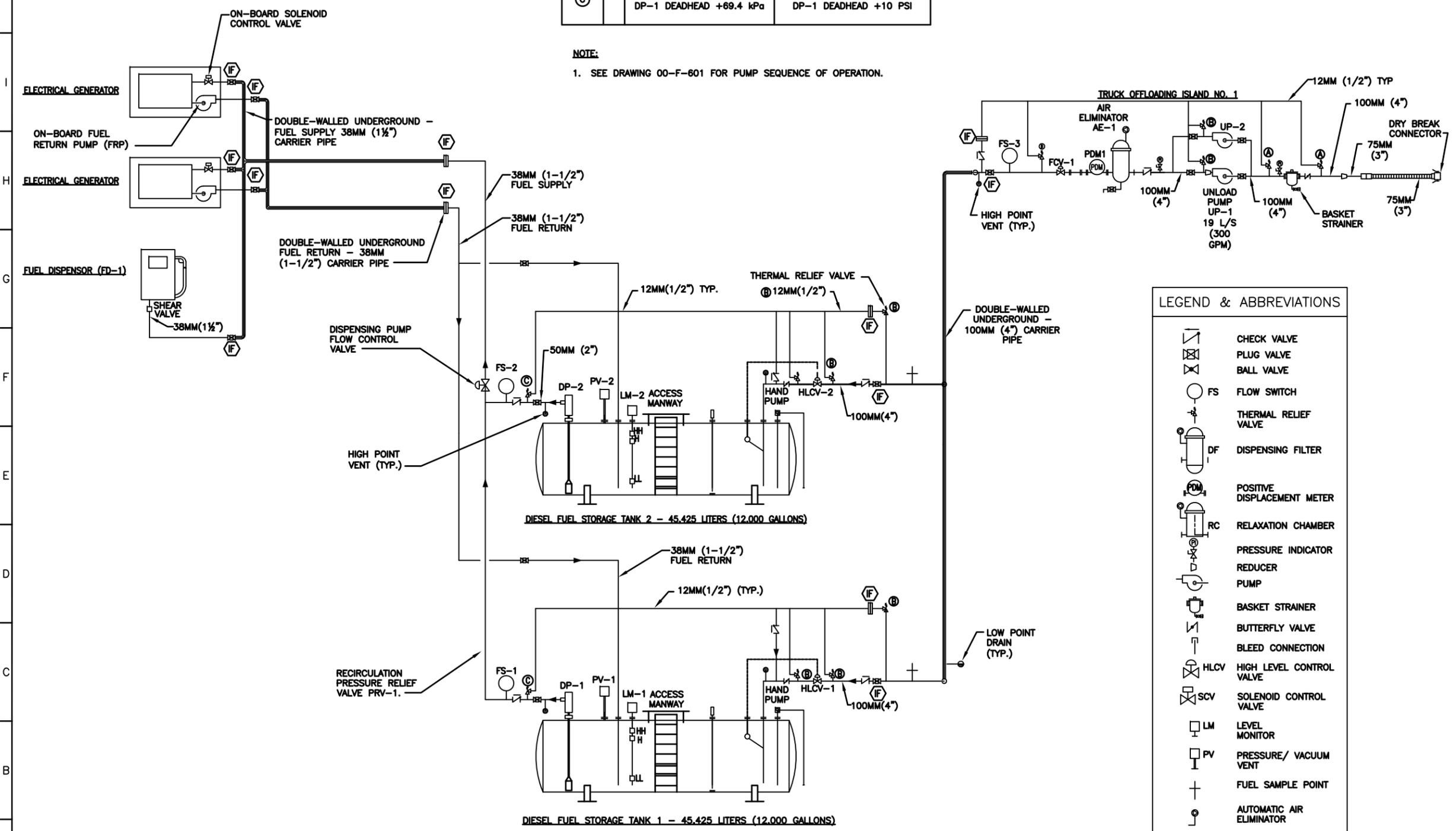
SCALE AS SHOWN
PROJECT NO. 6151-08-0328

00-F-503



THERMAL RELIEF SETTINGS		
TRV#	FACTORY PRESET	
	kPa	PSI
(A)	172.4	25
(B)	UP-1 DEADHEAD 69.4 kPa	UP-1 DEADHEAD +10 PSI
(C)	DP-1 DEADHEAD +69.4 kPa	DP-1 DEADHEAD +10 PSI

NOTE:
1. SEE DRAWING 00-F-601 FOR PUMP SEQUENCE OF OPERATION.



LEGEND & ABBREVIATIONS

- CHECK VALVE
- PLUG VALVE
- BALL VALVE
- FS FLOW SWITCH
- THERMAL RELIEF VALVE
- DF DISPENSING FILTER
- PDM POSITIVE DISPLACEMENT METER
- RC RELAXATION CHAMBER
- PRESSURE INDICATOR
- REDUCER
- PUMP
- BASKET STRAINER
- BUTTERFLY VALVE
- BLEED CONNECTION
- HLCV HIGH LEVEL CONTROL VALVE
- SCV SOLENOID CONTROL VALVE
- LM LEVEL MONITOR
- PV PRESSURE/ VACUUM VENT
- FUEL SAMPLE POINT
- AUTOMATIC AIR ELIMINATOR
- HIGH POINT VENT
- LOW POINT DRAIN

DESIGNED	SCALE	PROJECT NO.	00-F-701
M. PEISHER	AS SHOWN	6151-08-0328	
DRAWN			
C. JUNG			
CHECKED			
J. MARIANETTI			
DATE			
D. WHEELER			
REV			
0			
DATE			
30 JUNE 2010			
REV			
BY			
DATE			
03/14/2011			
BY			
DATE			
06/30/10			
DESCRIPTION			
SITE ADAPT CONSTRUCTION PLANS			

K
J
I
H
G
F
E
D
C
B
A

1 2 3 4 5 6 7 8 9 10 11 12 13 14

1 2 3 4 5 6 7 8 9 10 11 12 13 14

LEGENDS

POWER

- DELTA CONNECTION
- MOTOR
- TRANSFORMER
- WYE CONNECTION
- GROUND CONNECTION
- JUNCTION BOX, CEILING/WALL MOUNTED
- PULL BOX
- RELAY CONTACT, NORMALLY OPEN
- RELAY CONTACT, NORMALLY CLOSED
- FUSE
- CIRCUIT BREAKER
100AF FRAME SIZE
70AT TRIP AMPS
- SWITCH AND FUSE UNIT
- UNFUSED SAFETY SWITCH, RATING AS NOTED
POLES
AMPERES
- FUSED SAFETY SWITCH, RATING AS NOTED
POLES
FUSE AMPERE RATING
SWITCH AMPERE RATING
- MAGNETIC MOTOR STARTER, RATING AS NOTED
NEMA SIZE
- COMBINATION TYPE MAGNETIC MOTOR STARTER, RATING AS NOTED
- GENERATOR, POWER
- BATTERY
- LIGHTNING ARRESTER
- METER
- AMMETER
- VOLTMETER
- WATTMETER
- WATT-HOUR METER
- RELAY
- AIR TERMINAL
- HAND HOLE
- MAN HOLE
- UNDER GROUND CONDUIT

GROUNDING

- GROUNDING CONDUCTOR
- GROUND ROD

LIGHTING

- MOTOR
- TRANSFORMER
- WYE CONNECTION
- EARTH GROUND
- AIR TERMINAL
- JUNCTION BOX
- CABLE TRAY/WIREWAY, AS INDICATED ON THE DRAWINGS
- BRANCH CIRCUIT HOMERUN, TICK MARKS INDICATE NUMBER OF #12 AWG CONDUCTORS GROUNDING CONDUCTOR NEUTRAL CONDUCTOR HOT CONDUCTOR NO TICK MARKS INDICATES 2#12, 1#12G
- DIRECT BURIAL CABLE
- POWER DUCT
- RACEWAY IN CEILING OR WALL
- RACEWAY UNDERFLOOR, UNDERGROUND
- ONE CROSSMARK PER WIRE (3 WIRES UNLESS SHOWN), GROUND NOT SHOWN
- FLEXIBLE RACEWAY
- HOME RUN (ONE ARROW PER CIRCUIT)
- CONDUIT (UP, DOWN)
- EXPOSED RACEWAY
- 380/220V, 50HZ, 4W DISTRIBUTION PANELBOARD (FLUSH, SURFACE MOUNTED) WOOD BACKBOARD
- PUSH BUTTON
- FLOOR OUTLET, DATA COMMUNICATION OUTLET, DATA COMMUNICATION RECEPTACLE, CLOCK HANGER
- DUPLEX RECEPTACLE (WP=WEATHERPROOF) (G=GROUND FAULT INTERRUPTING) (C=ISOLATED GROUND)
- ABOVE-COUNTER DUPLEX RECEPTACLE
- QUADRUPLEX
- SINGLE RECEPTACLE
- SINGLE RECEPTACLE WITH SWITCH
- SPECIAL RECEPTACLE
- VOICE/DATA OUTLET
- STARTER
- SWITCH
- F: FUSED
- L: LOCK
- M: MOTOR RATED SWITCH
- MP: MOTOR SNAP WITH PILOT LIGHT
- WP: WEATHER PROOF
- K: KEY OPERATED
- LM: LOW VOLTAGE MASTER
- MC: MOMENTARY CONTACT
- P: WITH PILOT LIGHT
- RC: REMOTE CONTROL
- X: EXPLOSION PROOF

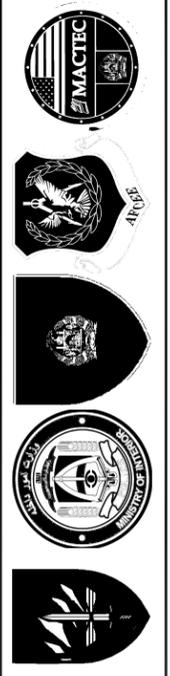
- SPST TOGGLE SWITCH
- BLANK: SINGLE POLE
- 3: THREE WAY
- D: DIMMER
- LV: LOW VOLTAGE
- LM: LOW VOLTAGE MASTER
- T: TIMER OPERATED
- X: EXPLOSION PROOF
- MO: OCCUPANCY SENSOR
- STRIP/INDUSTRIAL FLUORESCENT FIXTURE, TYPE INDICATED
- STRIP/INDUSTRIAL FLUORESCENT FIXTURE W/EMERGENCY BATTERY, TYPE INDICATED.
- 2'X4' FLUORESCENT LIGHTING FIXTURE, TYPE INDICATED
- 2'X4' FLUORESCENT LIGHTING FIXTURE W/EMERGENCY BATTERY, TYPE INDICATED
- WALL MOUNTED LIGHTING FIXTURE
- RECESSED-MOUNTED
- CEILING-MOUNTED OR SUSPENDED
- RECESSED GRID-MOUNTED FLUORESCENT
- SURFACE-MOUNTED FLUORESCENT
- OCCUPANCY SENSOR
- EXIST (WALL, CEILING)
- EMERGENCY LIGHTING BATTERY UNIT WITH 2 LAMP HEADS
- REMOTE EMERGENCY LIGHTING 1 OR 2 LAMP HEADS
- POLE MOUNTED SITE LIGHT, ONE LUMINARIES
- POLE MOUNTED SITE LIGHT, TWO LUMINARIES
- 2'X2' FLUORESCENT LIGHTING FIXTURE, TYPE INDICATED
- 2'X2' FLUORESCENT LIGHTING FIXTURE W/EMERGENCY BATTERY, TYPE INDICATED
- TRACK LIGHT
- BOLLARD
- PHOTOCELL
- LIGHTING CONTACTOR

FIRE ALARM EQUIPMENT

- FIRE ALARM PULL STATION
- FIRE ALARM HORN/STROBE/SPEAKER
- FIRE ALARM STROBE ONLY
- FIRE ALARM SMOKE DETECTOR
- FIRE ALARM DUCT MOUNTED SMOKE DETECTOR
- FIRE ALARM CONTROL PANEL

GENERAL NOTES:

1. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE LATEST APPROVED NEC EDITION, AND LOCAL CODES AND REGULATIONS.
2. A GREEN EQUIPMENT GROUNDING CONDUCTOR INSULATED OR BARE WIRE SHALL BE INCLUDED IN EACH CABLE OR CONDUIT AND ATTACHED TO THE FRAME OF ENCLOSURE OF EVERY ELECTRICALLY ENERGIZED DEVICE. CONDUIT SHALL NOT BE USED AS GROUNDING CONDUCTOR. THE CONDUIT GROUND IS CONSIDERED AS BACK UP GROUNDING.
3. MINIMUM TRADE CONDUIT SIZE SHALL BE 21MM. CONDUITS CONTAINING MORE THAN THREE CURRENT CARRYING CONDUCTORS SHALL BE ADJUSTED ACCORDING TO NEC CODE BOOK (TABLE 310.15(B)(2)(a)).
4. ALL EXTERIOR CONDUIT SHALL BE RIGID GALVANIZED STEEL AND ALL UNDERGROUND CONDUITS SHALL BE PVC UNLESS OTHERWISE NOTED.
5. ROUTE POWER AND LIGHTING BRANCH CIRCUIT CONDUCTORS TO THEIR RESPECTIVE CIRCUITS IN LOAD CENTER.
6. COORDINATE LIGHTING FIXTURES LOCATIONS WITH OTHER EQUIPMENT PRIOR TO INSTALLATION.
7. ALL CONDUIT RUNS SHALL BE MADE EITHER PARALLEL OR PERPENDICULAR TO STRUCTURES.
8. FIELD VERIFY ALL DIMENSIONS PRIOR TO COMMENCING WORK.
9. ALL CONDUITS AND CABLES SHALL HAVE A NON-CORRODING TAG. ALL WIRES SHALL HAVE A NON-CORRODING TAG. ALL TERMINAL BLOCKS SHALL HAVE A NON-CORRODING IDENTIFICATION OF WIRE NUMBERS FROM SCHEMATICS.
10. ALL MATERIAL FURNISHED BY THE CONTRACTOR SHALL BE NEW AND UL LISTED. MATERIALS SHALL BE SUBJECT TO TEST, INSPECTION AND APPROVAL BY THE OWNER OR THE ENGINEERS.
11. WIRES AND CABLES SHALL HAVE BE PULLED INTO THEIR CONDUITS BY APPLICATION OF SUITABLE LUBRICANTS THAT WILL HAVE NO INJURIOUS EFFECT ON THE COVERING TO THE CONDUCTOR. OIL OR GREASE SHALL NOT BE USED. WIRES AND CABLES SHALL BE INSTALLED WITHOUT JOINTS OR SPLICES INSOFAR AS PRACTICAL. SUFFICIENT WIRE SHALL BE LEFT AT ALL OUTLETS FOR CONNECTING FIXTURES AND WIRING DEVICES. WHEN FITTINGS ARE REQUIRED WITH PLUGS FOR POSSIBLE FUTURE EXTENSIONS, SUFFICIENT LOOP IN WIRE SHALL BE LEFT FOR THIS PURPOSE.
12. ALL CIRCUITS SHALL BE CORRECTLY IDENTIFIED AND A DIRECTORY SHALL BE MADE FOR THE LOAD CENTER.
13. THE CONTRACTOR SHALL INSTALL AND TEST THE COMPLETE LIGHTING AND RECEPTACLE SYSTEMS MAKING ALL CONNECTIONS TO THE LIGHTING FIXTURES, RECEPTACLES, APPARATUS AS SHOWN ON THE ENGINEERS' DRAWINGS.
14. THE COMPLETE POWER SYSTEM SHALL BE INSTALLED AND TESTED, MAKING ALL CONNECTIONS TO THE EQUIPMENT AND APPARATUS AS SHOWN ON THE ENGINEERS' DRAWINGS.
15. SEISMIC REQUIREMENTS ARE SITE SPECIFIC. CONTRACTOR SHALL DETERMINE WHETHER THE SITE IS IN A SEISMIC ZONE.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SEISMIC REQUIREMENTS AS SPECIFIED IN SECTION 26 05 48.00 10 SEISMIC PROTECTION FOR ELECTRICAL EQUIPMENT AND THE UNIFIED FACILITIES CRITERIA (UFC) 3-310-04 SEISMIC DESIGN FOR BUILDINGS.



DESIGNED S. WILLIAMS	AFGHAN NATIONAL SECURITY FORCE	SCALE AS SHOWN
DRAWN S. WILLIAMS	COMPREHENSIVE PLAN FOR FACILITIES DEVELOPMENT	PROJECT NO. 6151-08-0328
CHECKED B. CRANFORD	MINISTRY OF INTERIOR (MoI) AFGHAN NATIONAL POLICE	00-E-001
DATE D. WHEELER	PROVINCIAL FIRE STATION - TYPE-B	
REV 30 JUNE 2010	LEGENDS AND GENERAL NOTES	
BY SUB APP		
DATE 06/30/10		
DESCRIPTION SITE ADAPT CONSTRUCTION PLANS		

