

**FIXTURE/EQUIPMENT SCHEDULE**

ITEM	FIXTURE DESCRIPTION	EQUIPMENT SPECIFICATION	ADA (Y/N)	POTABLE WATER CONNECTIONS		WASTE AND VENT CONNECTIONS	
				COLD	HOT	WASTE	VENT
AIR-1	COMPRESSED AIR CONNECTION OUTLET	COMPRESSED AIR OUTLETS SHALL INCORPORATE A FIELD PIPED 1/4 TURN BALL SHUT OFF VALVE AND BE COMPATIBLE WITH OWNER'S EXISTING QUICK CONNECT COUPLINGS.	N/A	N/A	N/A	N/A	N/A
CO-1	EXTERIOR 4" CLEANOUT AT GRADE	CAST IRON CLEANOUT FERRULE WITH BRONZE PLUG AND ROUND SCORIATED NICKEL BRONZE TOP. 3,000 PSI 24"X24" CONCRETE PAD	N/A	N/A	N/A	4"	N/A
COMP-1	AIR COMPRESSOR	30 HP, 208 VAC, 3 PHASE, 120 GALLON ASME HORIZONTAL TANK, 100 ACFM @ 175 PSIG, 970 RPM.	N/A	N/A	N/A	N/A	N/A
EEW-1	EMERGENCY EYEWASH	COMPLIANT WITH ANSI Z358.1, STAINLESS STEEL EYE/FACEWASH BOWL, 2.5 GPM EYE/FACE WASH NOZZLES, CHROME PLATED BRASS BALL VALVE, EMERGENCY SIGNAGE, AUTOMATIC EYEWASH NOZZLE COVERS.	N/A	1/2"	N/A	1 1/2"	N/A
ESH-1	EMERGENCY SHOWER	COMPLIANT WITH ANSI Z358.1, STAINLESS STEEL EYE/FACEWASH BOWL, 2.5 GPM EYE/FACE WASH NOZZLES, CHROME PLATED BRASS BALL VALVE, EMERGENCY SIGNAGE, AUTOMATIC EYEWASH NOZZLE COVERS. STAINLESS STEEL SHOWER HEAD, 20 GPM FLOW RATE.	N/A	1 1/4"	N/A	1 1/4"	N/A
FD-1	FLOOR DRAIN FINISHED AREAS	CAST IRON BODY WITH ANCHOR FLANGE, WEEPHOLES, 8" DIAMETER NICKEL BRONZE STRAINER, CAPPED OFF TRAP PRIMER CONNECTION, 4" DEEP SEAL PATTERN P-TRAP.	N/A	N/A	N/A	4"	N/A
HB-1	INTERIOR HOSE BIBB	BRONZE CONSTRUCTION, CHROME PLATED FINISH, INTEGRAL VACUUM BREAKER, LOOSE KEY OPERATOR HANDLE.	N/A	3/4"	N/A	N/A	N/A
MV-1	MIXING VALVE	MASTER TEMPERING AND AUTOMATIC BALANCING VALVE WITH PARAFIN-ACTUATION TECHNOLOGY, MOUNTED ON HEAVY-DUTY WELDED STRUTS AND SHIPPED FULLY ASSEMBLED AND FACTORY TESTED. CONSTRUCTED OF SOLID BRASS WITH TRIPLE-DUTY CHECKSTOPS WITH INTEGRAL FILTERS AND BALANCED POPPET DESIGN. TEMPERATURE ADJUSTMENT RANGE OF 40°F TO 160°F AND FEATURE MINIMUM FLOW CONTROL TO ASSE 1017, TEMPERATURE LOCKING MECHANISM, COMPLETE WITH TEMPERATURE AND PRESSURE GAUGES FOR DIAGNOSTICS, FLOW METER WITH VOLUME CONTROL AND IN-LINE CHECKS TO PREVENT CROSS-FLOW, 100 PSI MAXIMUM PRESSURE DIFFERENTIAL, 125 PSIG MAXIMUM STATIC PRESSURE, 200°F MAXIMUM HOT WATER TEMPERATURE, ASSE 1017 LISTED, CSA B125 CERTIFIED.	N/A	1"	1"	N/A	N/A
MV-2	MIXING VALVE	MASTER TEMPERING AND AUTOMATIC BALANCING VALVE WITH PARAFIN-ACTUATION TECHNOLOGY, MOUNTED ON HEAVY-DUTY WELDED STRUTS AND SHIPPED FULLY ASSEMBLED AND FACTORY TESTED. CONSTRUCTED OF SOLID BRASS WITH TRIPLE-DUTY CHECKSTOPS WITH INTEGRAL FILTERS AND BALANCED POPPET DESIGN. TEMPERATURE ADJUSTMENT RANGE OF 40°F TO 160°F AND FEATURE MINIMUM FLOW CONTROL TO ASSE 1017, TEMPERATURE LOCKING MECHANISM, COMPLETE WITH TEMPERATURE AND PRESSURE GAUGES FOR DIAGNOSTICS, FLOW METER WITH VOLUME CONTROL AND IN-LINE CHECKS TO PREVENT CROSS-FLOW, 100 PSI MAXIMUM PRESSURE DIFFERENTIAL, 125 PSIG MAXIMUM STATIC PRESSURE, 200°F MAXIMUM HOT WATER TEMPERATURE, ASSE 1017 LISTED, CSA B125 CERTIFIED.	N/A	1"	1"	N/A	N/A
REEL-1	COMPRESSED AIR HOSE REEL	EPOXY POWDER COAT FINISH, 1/4" BENT STEEL BASE AND SUPPORT POST, LUBRICATED FACTORY BALANCED SPRING MOTOR, CARTRIDGE STYLE SPRING MOTOR, BRASS NPT SWIVEL WITH STAINLESS STEEL STUD, SWIVEL O-RING SEALS WITH TEFLON BACKUP RINGS, MULTI-POSITION LOCKING RATCHET, ADJUSTABLE GUIDE ARM, DETACHABLE ROLLER GUIDE WITH SMOOTH ROLLERS, PROTECTIVE SPRING GUARD, ADJUSTABLE SOLID RUBBER HOSE STOP.	N/A	N/A	N/A	N/A	N/A
TD-1	6" WIDE TRENCH DRAIN	CAST IRON HEAVY DUTY GRATE, 12" WIDE, 2'-0" LONG SECTIONS, COMPLETE WITH FABRICATED STEEL CAST IN PLACE FRAME WITH ANCHOR STRAPS, CONCRETE TRENCH CAST IN PLACE.	N/A	N/A	N/A	4"	3"
WH-1	WALL HYDRANT	ENCASED, ANTI-SIPHON, AUTOMATIC DRAINING WALL HYDRANT FOR FLUSH INSTALLATION. COPPER CASING, ALL BRONZE INTERIOR PARTS WITH ONE-HALF TURN CERAMIC DISC CARTRIDGE AND COMBINATION 3/4" MALE PIPE THREAD INLET, STAINLESS STEEL BOX AND HINGED COVER WITH OPERATING KEY LOCK AND "WATER" STAMPED ON COVER. ALL SOLDER CONNECTIONS ARE LEAD FREE.	N/A	3/4"	N/A	N/A	N/A

**PLUMBING/ELECTRICAL EQUIPMENT COORDINATION SCHEDULE**

EQUIPMENT DESIGNATION	EQUIPMENT DESCRIPTION	EQUIPMENT FURNISHED BY	VOLTAGE/ PHASE	HP	STARTER FURNISHED BY
COMP-1	AIR COMPRESSOR	PC	208/3	30	EC

WATER HAMMER ARRESTOR SIZE	CONNECTING PIPE SIZE	FIXTURE UNITS	PLUMBING & DRAINAGE INSTITUTE CROSS REFERENCE
1/2"	1/2"	1-11	A
3/4"	3/4"	12-32	B
1"	1"	33-60	C
1 1/4"	1 1/4"	61-113	D
1 1/2"	1 1/2"	114-154	E
2"	2"	155-330	F



US ARMY CORPS OF ENGINEERS WILMINGTON

SYMBOL	DESCRIPTION	DATE	BY

DESIGNED BY: MILLER	DATE: 05 AUG 2011
DWN BY: MILLER	SOLICITATION NO.: TBD
KEY: KEY	CONTRACT NO.: TBD
FILE NAME: P-601	CATEGORY CODE: 214
SIZE: D	PLATE DATE: 05 AUG 2011
	PLAT SCALE: AS SHOWN

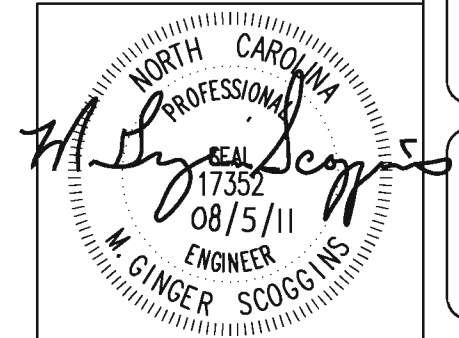
U. S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS WILMINGTON DISTRICT  
 GREENHORNE & O'MARA ENGINEERS  
 1151 SE Cary Parkway, Suite 200  
 Cary, North Carolina 27518  
 Office: 919.851.8481  
 Fax: 919.851.9703

JSOC SOF FACILITY MOTOR POOL ADDITION - SOLSE FORT BRAGG, NORTH CAROLINA  
 PLUMBING SCHEDULES  
 PLATE REFERENCE NUMBER P-601 SHEET 45

**1 PLUMBING SCHEDULES**  
 P-601 P-601 SCALE: N.T.S.



**EDi**  
 Engineered Designs, Inc.  
 1151 SE Cary Parkway, Suite 200  
 Cary, North Carolina 27518  
 Office: 919.851.8481  
 Fax: 919.851.9703  
 GRAPHIC SCALE  
 0 4' 8' 16'

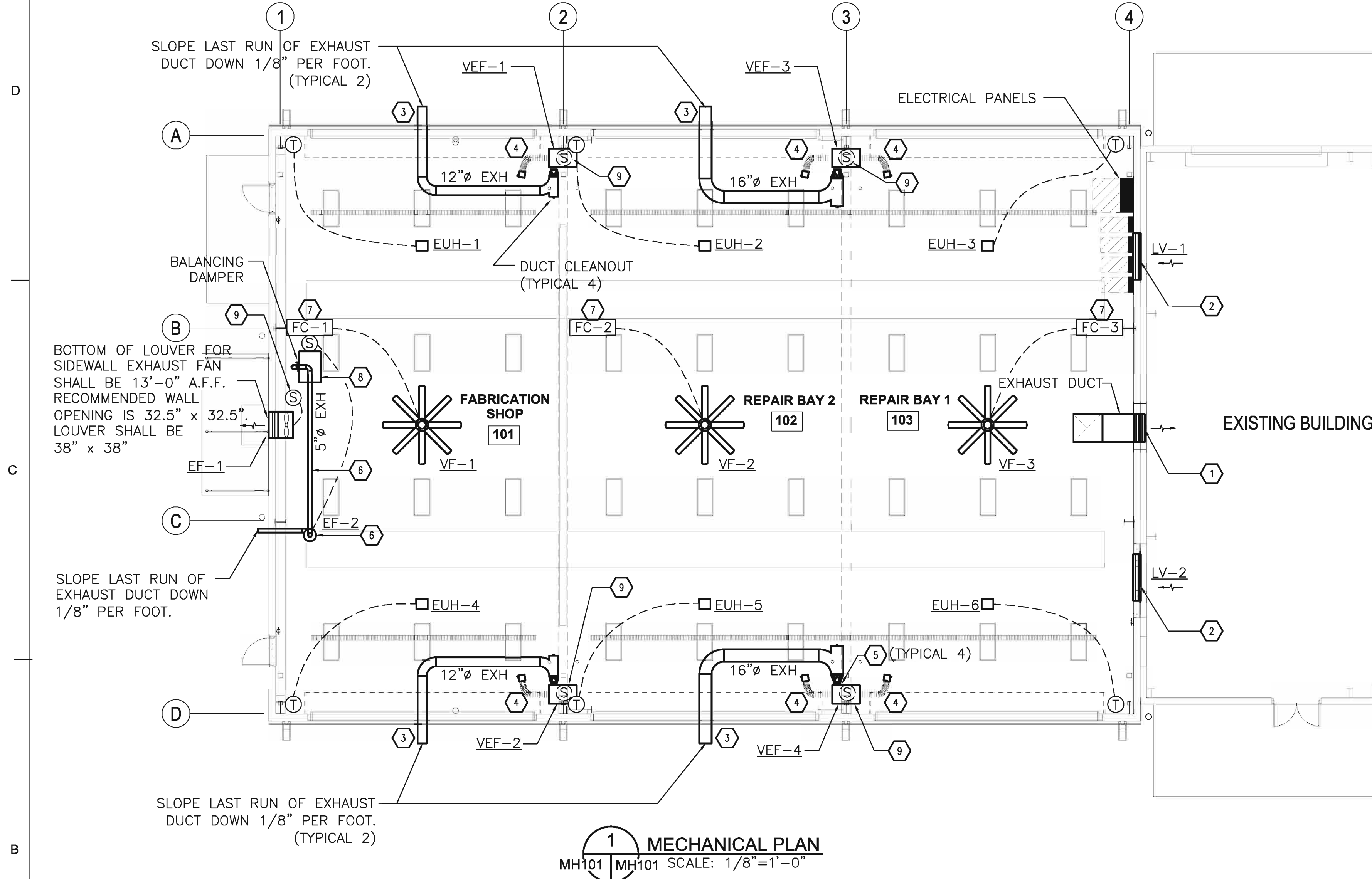


**GENERAL PROJECT NOTES:**

1. CONTRACTOR MUST PROVIDE ALL NECESSARY TRANSITIONS & FITTINGS TO MAKE EXHAUST CONNECTION TO VEHICLE EXHAUST SYSTEM.
2. ELECTRIC UNIT HEATERS SHALL BE INSTALLED IN A DOWN BLAST ORIENTATION.

**NOTES KEYED TO PLAN**

1. EXISTING SIDEWALL EXHAUST FAN SHALL REMAIN IN PLACE. ROUTE NEW EXHAUST DUCT FROM EXISTING FAN. TURN MITERED ELBOW OVER & ROUTE DUCT UP IN THE VERTICAL POSITION. TURN ANOTHER MITERED ELBOW TOWARDS EXTERIOR OF THE BUILDING & ROUTE TO NEW EXHAUST LOUVER. SIZE IS APPROX. 36"x36"
2. 48" WIDE x 60" LONG INTAKE LOUVER INSTALLED WITHIN EXTERIOR WALL OF NEW BUILDING. BOTTOM OF LOUVER SHALL BE 22'-0" A.F.F. INTAKE LOUVER SHALL BE A MINIMUM OF 10'-0" FROM NEW EXHAUST LOUVER THAT WILL SERVE EXISTING SIDEWALL FAN.
3. EXHAUST DUCT FOR VEHICLE EXHAUST SYSTEM. EXTEND EXHAUST DUCT 24" PAST EXTERIOR WALL. PROVIDE GALVANIZED HARDWARE CLOTH AT THE END OF THE DUCT.
4. VEHICLE EXHAUST HOSE SHALL BE LOWERED & RAISED BY PULLEY SYSTEM.
5. CONTRACTOR SHALL INSTALL FLEXIBLE CANVAS CONNECTOR AT EXHAUST FAN DUCT OPENING FOR EACH VEHICLE EXHAUST SYSTEM.
6. UTILITY EXHAUST FAN & DUCT FOR WELDING BENCH. EXHAUST DUCT SHALL CONNECT TO THE BOTTOM OF THE EXHAUST WELDING BENCH. CONTRACTOR SHALL PROVIDE FLEXIBLE CANVAS CONNECTOR AT EXHAUST CONNECTION OF THE WELDING BENCH. THE BOTTOM OF THE EXHAUST DUCT SHALL BE INSTALLED 18'-0" A.F.F. & EXTEND 24" PAST EXTERIOR WALL.
7. INSTALL FAN WALL CONTROLLER (FC-1, FC-2, FC-3) ON COLUMNS & CMU WALL APPROX. 4'-6" A.F.F.
8. PROVIDE WELDING/GRINDING BENCH LOCATION. WELDING/GRINDING BENCH IS 40.25" WIDE x 28" DEEP x 51" TALL WITH FOUR (4) HEAVY DUTY SUPPORT LEGS. WELDING/GRINDING BENCH SHALL BE PROVIDED BY GOVERNMENT. MOUNT STARTER MANUAL PILOT SWITCH ON SIDE OF BENCH & RUN CIRCUIT TO COMBINATION STARTER/DISCONNECT CONTACTS.
9. HAND/OFF SWITCH ON COMBINATION STARTER/DISCONNECT BY ELECTRICAL CONTRACTOR.



**1 MECHANICAL PLAN**  
MH101 | MH101 SCALE: 1/8"=1'-0"

**MECHANICAL ABBREVIATIONS**

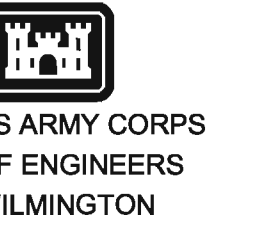
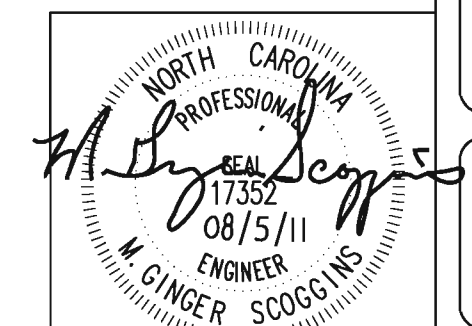
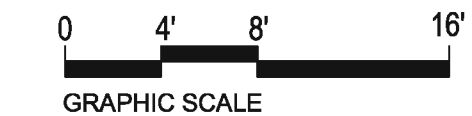
EF-1	EXHAUST FAN DESIGNATION AND NUMBER
EUH-1	ELECTRIC UNIT HEATER DESIGNATION AND NUMBER
LV-1	LOUVER DESIGNATION AND NUMBER
VEF-1	VEHICLE EXHAUST FAN DESIGNATION AND NUMBER
EXH	EXHAUST
FC-1	FAN CONTROLLER DESIGNATION AND NUMBER
AFF	ABOVE FINISHED FLOOR

**MECHANICAL HVAC LEGEND**

	FLEXIBLE HOSE FOR VEHICLE EXHAUST
	NEW DUCT
	KEYED NOTE NUMBER
	AIRFLOW DIRECTION TO AND FROM LOUVER
	LINE VOLTAGE THERMOSTAT
	CONTROL WIRING
	LETTER CALL OUT FOR WELDING/GRINDING BENCH DETAIL
	STARTER HAND/OFF OR REMOTE MANUAL PILOT SWITCH
	MANUAL BALANCING DAMPER

**2 MECHANICAL ABBREVIATIONS & MECHANICAL HVAC LEGEND**  
MH101 | MH101 N.T.S.

**EDi**  
Engineered Designs, Inc.  
1151 SE Cary Parkway, Suite 200  
Cary, North Carolina 27518  
Office: 919.851.8481  
Fax: 919.851.9703

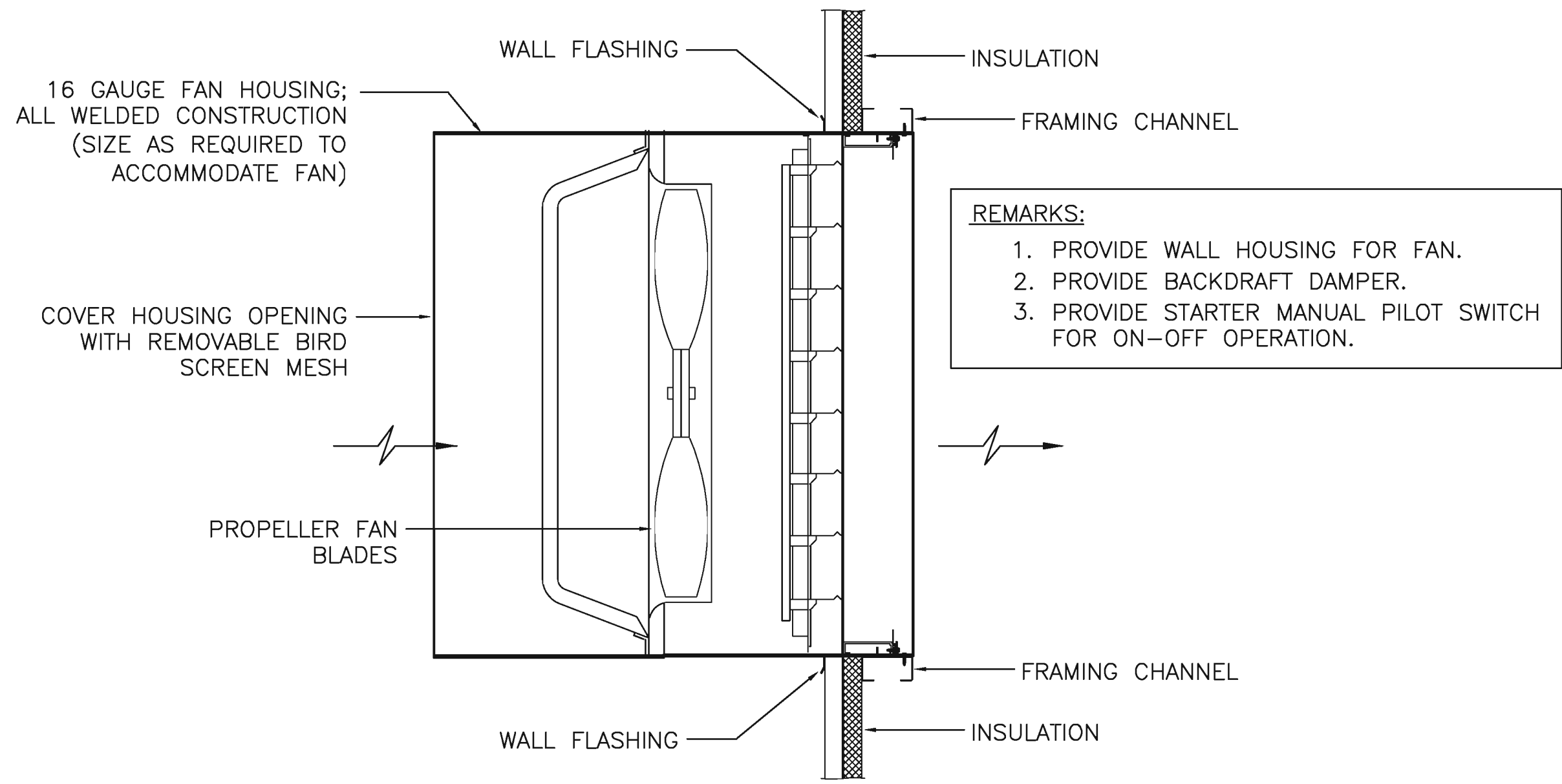


DATE	BY	DESCRIPTION	SYMBOL

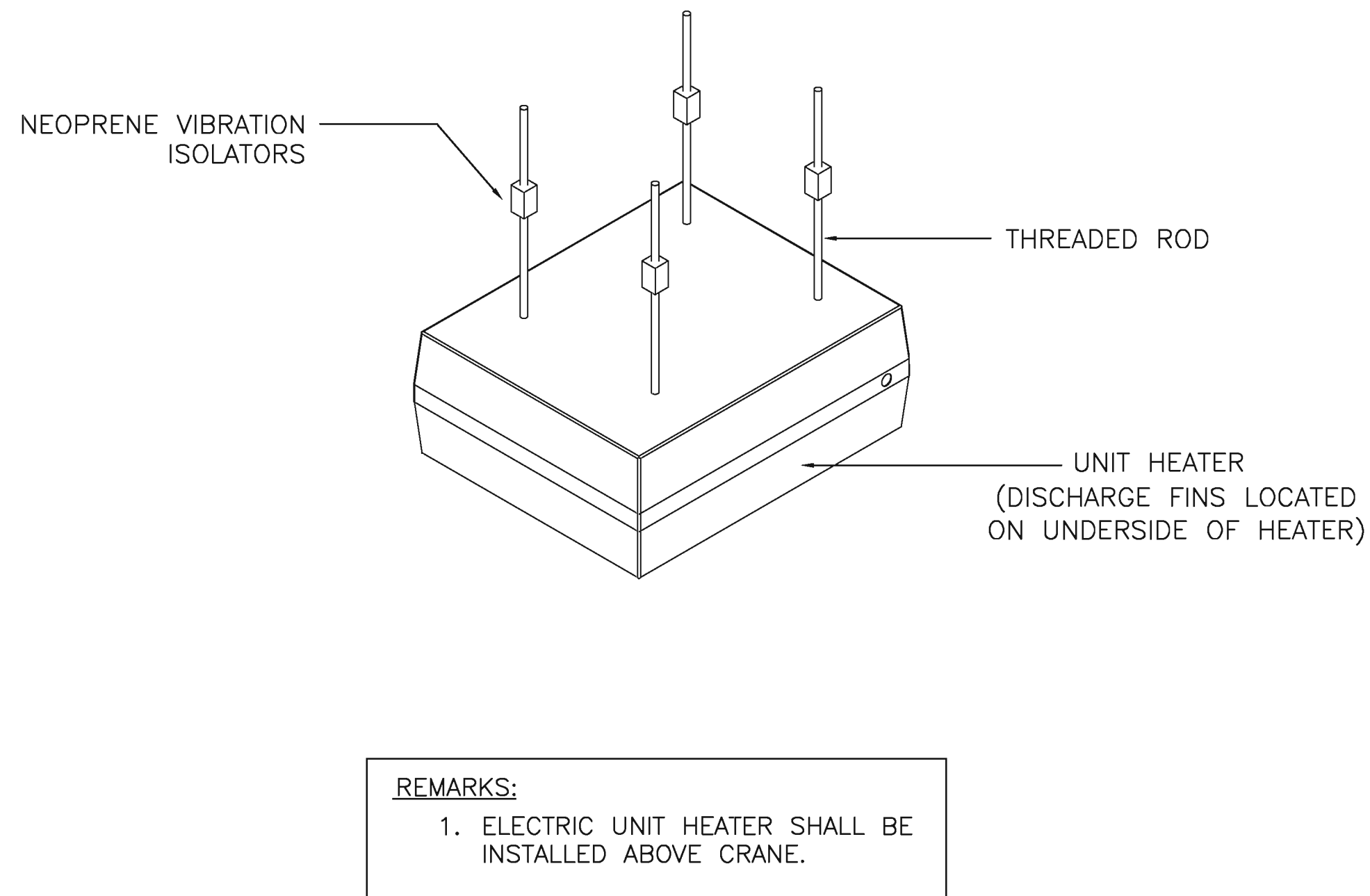
DESIGNED BY: BROWN	DATE: 05 AUG 2011
DWN BY: TAPP	SOLICITATION NO.: TBD
KEY NAME: R. M. H. 101	CONTRACT NO.: TBD
SIZE: D	CATEGORY CODE: 1214-020
	PLAT DATE: 05 AUG 2011
	AS SHOWN

U. S. ARMY ENGINEER DISTRICT  
CORPS OF ENGINEERS  
WILMINGTON DISTRICT  
GREENHORNE & O'MARA  
ENGINEERS  
1151 SE CARY PARKWAY, SUITE 200  
CARY, NORTH CAROLINA 27518  
OFFICE: 919.851.8481  
FAX: 919.851.9703

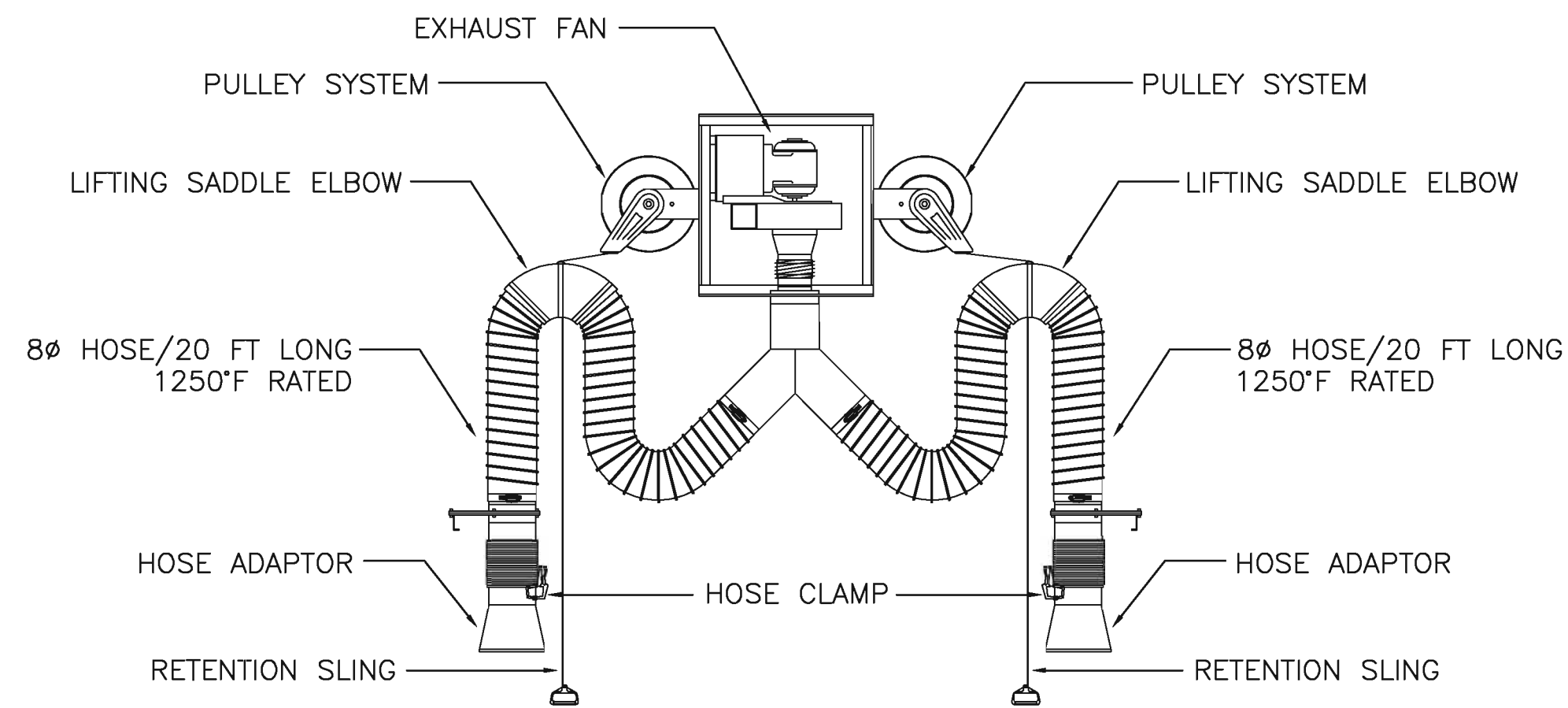
JSOC SOF FACILITY MOTOR POOL ADDITION - SOLSE  
FORT BRAGG, NORTH CAROLINA  
MECHANICAL ABBREVIATIONS & LEGEND  
& MECHANICAL PLAN  
PLATE REFERENCE NUMBER  
**MH101**  
SHEET 46



1 PROPELLER EXHAUST FAN DETAIL  
 M-501 M-501 N.T.S.

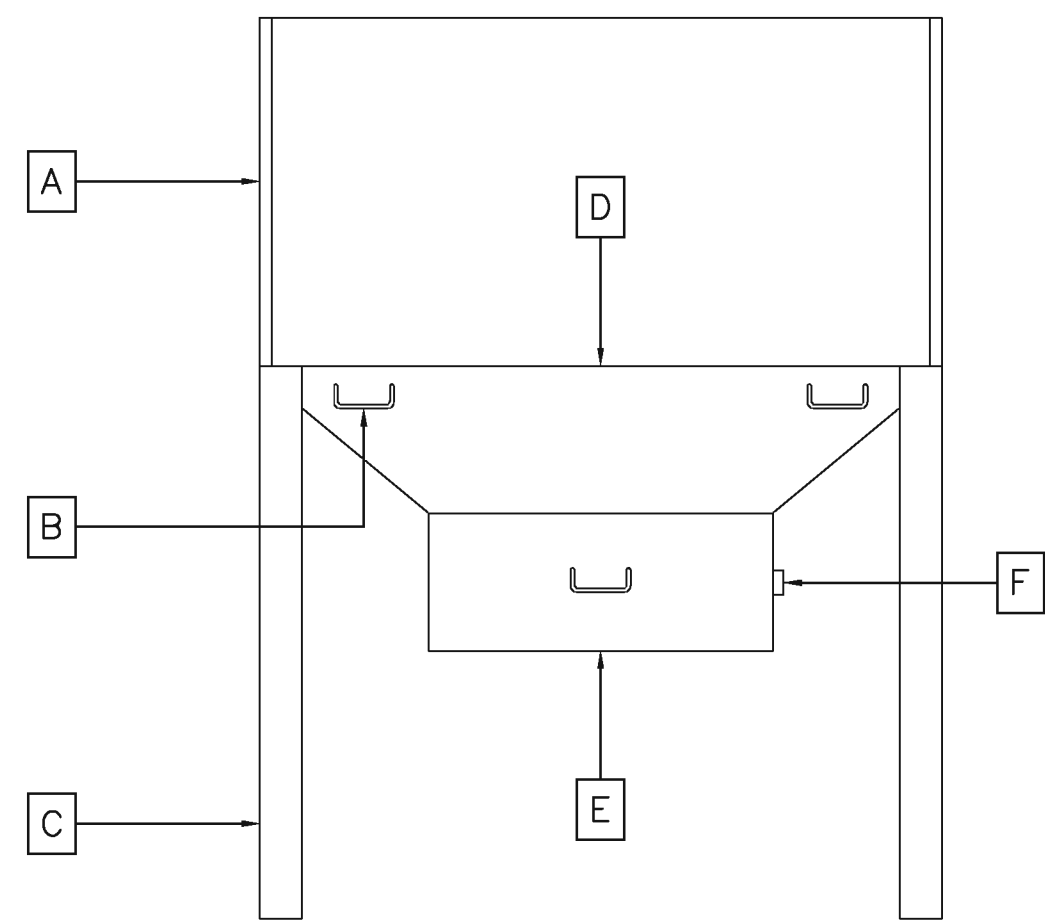


2 ELECTRIC UNIT HEATER DETAIL  
 M-501 M-501 N.T.S.



REMARKS:  
 1. REFER TO REMARKS ON AUTOMOTIVE VENTILATION SCHEDULE SHEET.  
 2. THE COMPONENTS OF THE SINGLE HOSE SYSTEM SHALL BE THE SAME AS THIS ONE BUT WITH ONE HOSE & PULLEY SYSTEM.

3 VEHICLE EXHAUST SYSTEM  
 M-501 M-501 N.T.S.



REMARKS:  
 1. WELDING/GRINDING BENCH PROVIDED BY GOVERNMENT  
 2. REFER TO NOTES KEYED TO PLAN NUMBER 8 ON SHEET MH101 FOR DIMENSIONAL DATA.

4 WELDING/GRINDING BENCH  
 M-501 M-501 N.T.S.

LEGEND

A SPARK SHIELD - HELPS CONTAIN SPARKS & FOCUS WORK TABLE SUCTION

B LIFTING HANDLES - HEAVY DUTY HANDLES TO ALLOW FOR EASY TRANSPORT

C HEAVY DUTY LEG SYSTEM - SUPPORTS THE ENTIRE CABINET & WORKPIECE

D CHROME VENTED WORK TABLE - SUPPORTS WORKPIECES DURING WELDING, CUTTING, & GRINDING OPERATION.

E SLAG DRAWER - SERVES AS A SINGLE LOCATION FOR CLEANING & SCREEN MAINTENANCE.

F QUICK SERVICE LATCH - ALLOWS FOR QUICK & EASY SLAG DRAWER SCREEN & FILTER ACCESS.

SYMBOL	DESCRIPTION	DATE	BY

DESIGNED BY: BROWN	DATE: 05 AUG 2011
DWN BY: TAPP	SOLICITATION NO.: TBD
SUBMITTED BY: KEY	CONTRACT NO.: TBD
KEY NAME: BROWN	CATEGORY CODE: Z14-002
KEY NUMBER: D	PILOT SCALE: AS SHOWN
KEY SIZE: D	PILOT DATE: 05 AUG 2011

U. S. ARMY ENGINEER DISTRICT  
 CORPS OF ENGINEERS  
 WILMINGTON DISTRICT

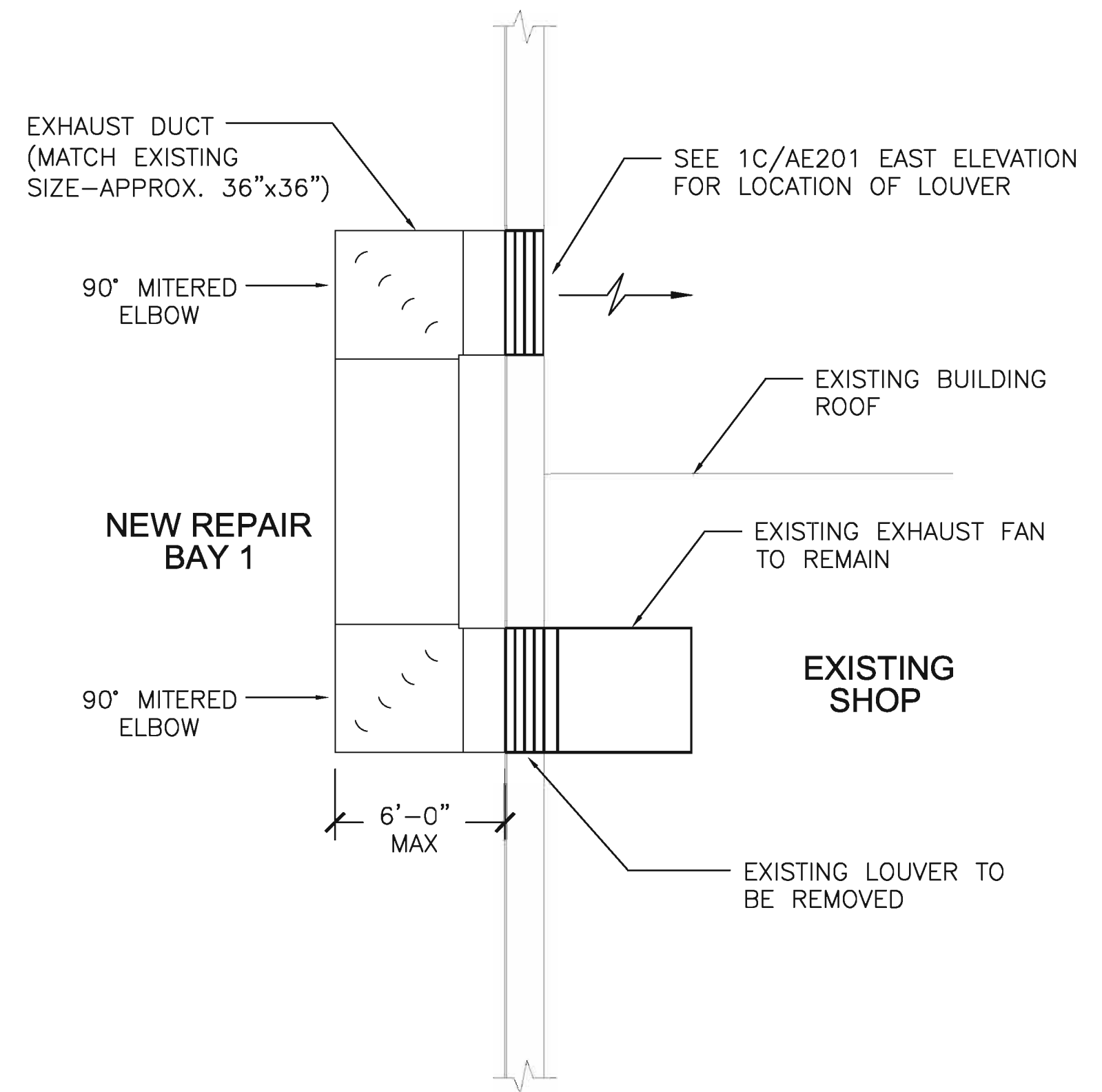
CREENHORNE & O'MARA  
 ENGINEERS  
 1151 SE Cary Parkway, Suite 200  
 Cary, North Carolina 27518  
 Office: 919.851.8481  
 Fax: 919.851.9703

MECHANICAL DETAILS

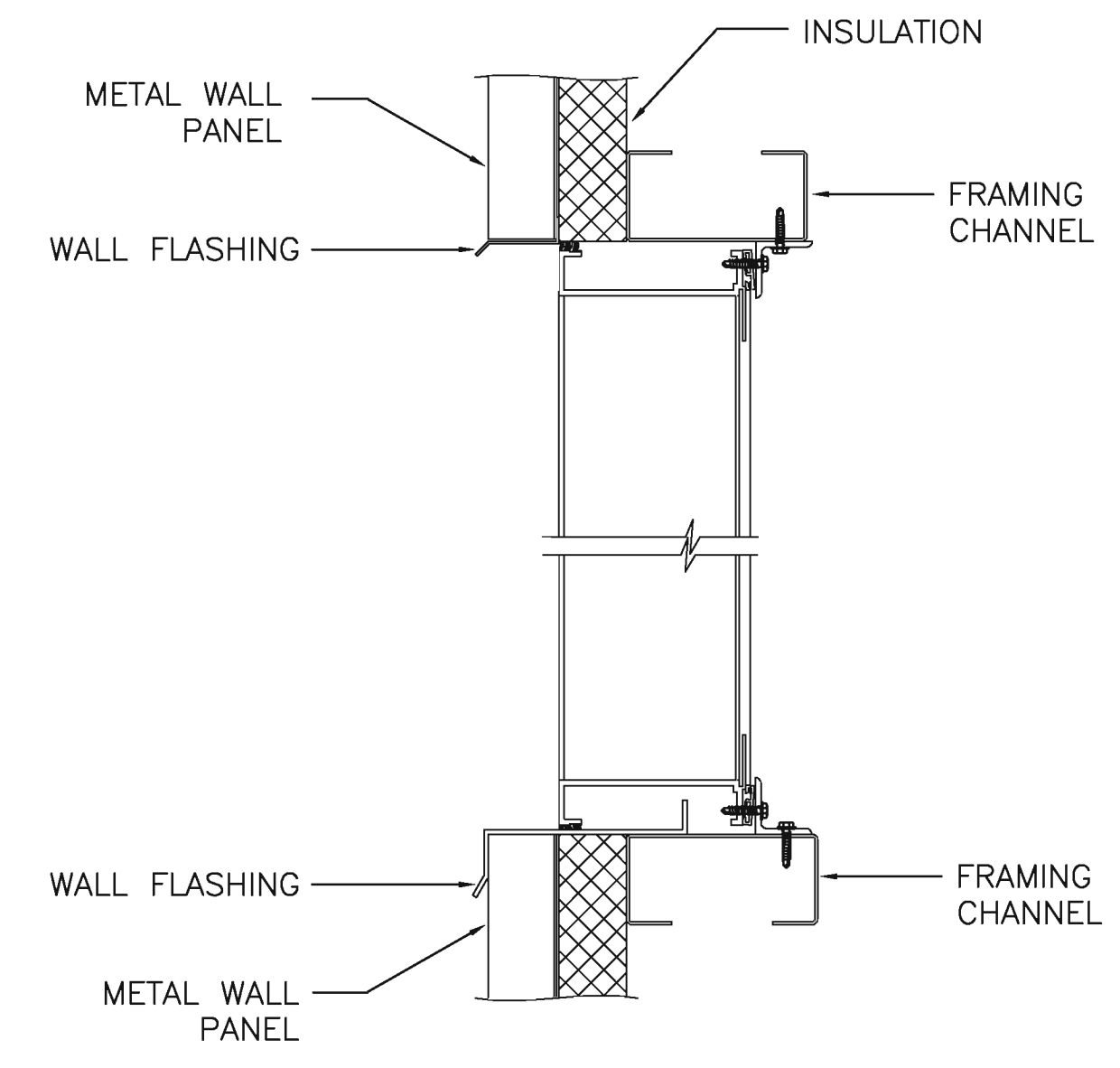
PLATE REFERENCE NUMBER  
**M-501**  
 SHEET 47

**EDi**  
 Engineered Designs, Inc.  
 1151 SE Cary Parkway, Suite 200  
 Cary, North Carolina 27518  
 Office: 919.851.8481  
 Fax: 919.851.9703

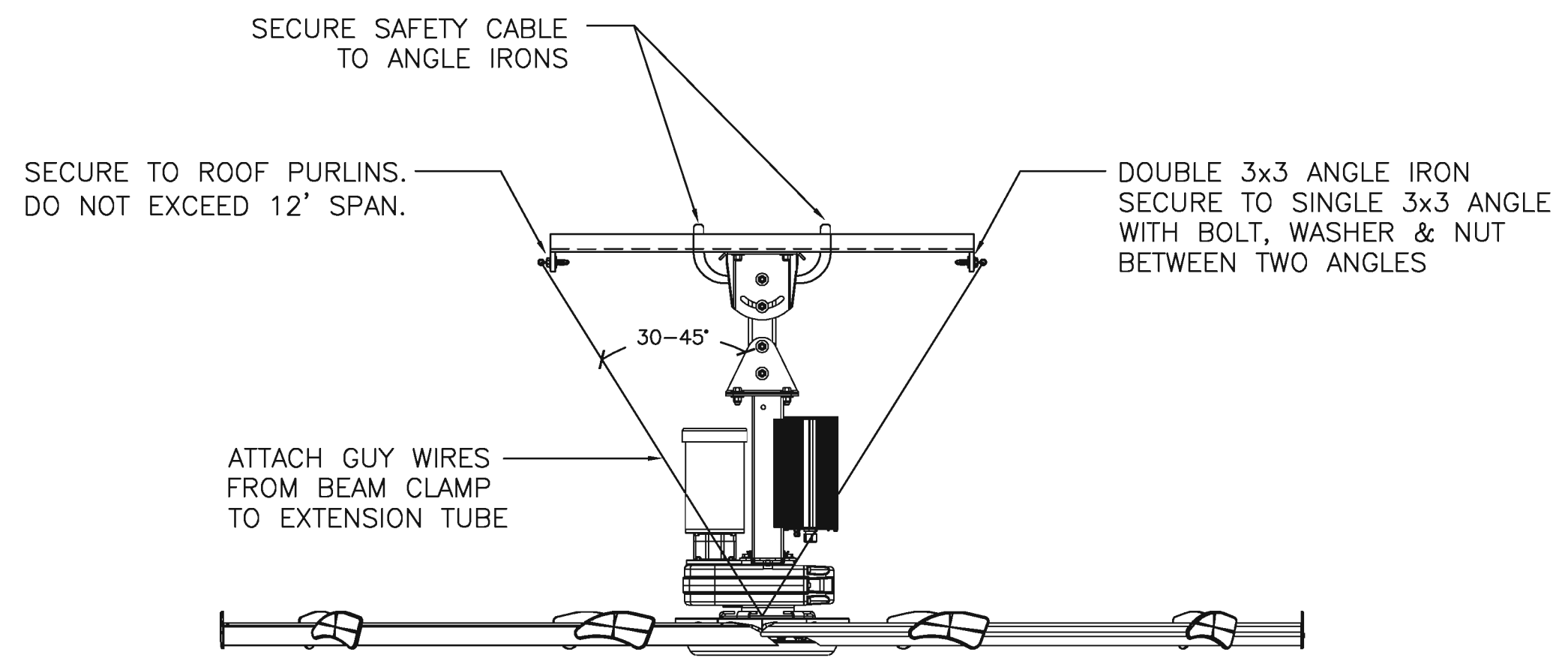
PROFESSIONAL ENGINEER  
 M. GINGER SCOGGINS  
 17352  
 08/5/11



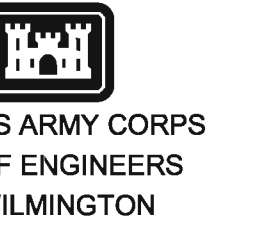
**1** NEW EXHAUST DUCT FOR EXISTING FAN DETAIL  
M-502 M-502 N.T.S.



**2** METAL BUILDING LOUVER DETAIL  
M-502 M-502 N.T.S.



**3** CEILING FAN MOUNTING DETAIL  
M-502 M-502 N.T.S.



SYMBOL	DESCRIPTION	DATE	BY

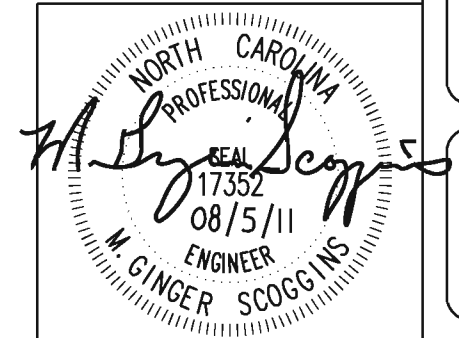
DESIGNED BY: BROWN	DATE: 05 AUG 2011
DWN BY: TAPP	SOLICITATION NO.: TBD
SUBMITTED BY: KEY	CONTRACT NO.: TBD
FILE NAME: E:\M502	CATEGORY CODE: 1214-0020
SIZE: D	PLAT DATE: 05 AUG 2011
	PLAT SCALE: AS SHOWN

U. S. ARMY ENGINEER DISTRICT  
CORPS OF ENGINEERS  
WILMINGTON DISTRICT

GREENHORNE & O'MARA  
ENGINEERS  
1151 SE CARY PARKWAY, SUITE 200  
CARY, NORTH CAROLINA 27518  
PHONE: 919.851.8481  
FAX: 919.851.9703

PLATE REFERENCE NUMBER  
**M-502**  
SHEET 48

**EDi**  
Engineered Designs, Inc.  
1151 SE Cary Parkway, Suite 200  
Cary, North Carolina 27518  
Office: 919.851.8481  
Fax: 919.851.9703



**AUTOMOTIVE VENTILATION SCHEDULE**

MARK	SERVICE	TYPE	SYSTEM		HOSE			RET./SLING	PLATFORM		FAN INFORMATION				REMARKS		
			SINGLE	DUAL	DIAMETER	LENGTH	ADAPTOR		TEMP.	WALL	CEILING	H.P.	DRIVE	VOLTAGE/PHASE		CFM	E.S.P
VEF-1	FABRICATION SHOP	VEHICLE EXHAUST FAN	YES	N/A	8 IN.	20 FT.	YES	1250°F	YES	N/A	YES	3.0	BELT	208/3	1,400	6"	SEE BELOW
VEF-2	FABRICATION SHOP	VEHICLE EXHAUST FAN	YES	N/A	8 IN.	20 FT.	YES	1250°F	YES	N/A	YES	3.0	BELT	208/3	1,400	6"	SEE BELOW
VEF-3	REPAIR BAY 2 & 1	VEHICLE EXHAUST FAN	N/A	YES	8 IN.	20 FT.	YES	1250°F	YES	N/A	YES	5.0	BELT	208/3	2,800	6"	SEE BELOW
VEF-4	REPAIR BAY 2 & 1	VEHICLE EXHAUST FAN	N/A	YES	8 IN.	20 FT.	YES	1250°F	YES	N/A	YES	5.0	BELT	208/3	2,800	6"	SEE BELOW

**REMARKS:**

- CONTRACTOR SHALL PROVIDE ALL NECESSARY ACCESSORIES REQUIRED FOR A COMPLETE & OPERABLE SYSTEM.
- CONTRACTOR SHALL REQUEST A BILL OF MATERIALS FROM THE MANUFACTURER TO ENSURE ALL PARTS & ACCESSORIES ARE INCLUDED.
- THE EXHAUST FAN FOR THE AUTOMOTIVE VENTILATION SYSTEM IS A COMPONENT OF THE SYSTEM. THESE ARE MARKED AS "VEF" FOR VEHICLE EXHAUST FAN.
- FAN TO BE RATED FOR 500°F.
- CONTROL BY COLUMN MOUNTED STARTER MANUAL PILOT SWITCH.
- AMCA CLASS "C" SPARK RESISTANT CONSTRUCTION.
- PROVIDE BLAST GATE ON HOSE CONNECTION.

**EXHAUST FAN SCHEDULE**

MARK	SERVICE	TYPE	DRIVE	CFM	E.S.P	ELECTRICAL INFORMATION		WEIGHT (LBS)	REMARKS
						VOLT/Ø	H.P.		
EF-1	FAB. SHOP/REPAIR BAYS	SIDEWALL PROPELLER	DIRECT	8,685	0.25	208/3	1.0	140	1,2
EF-2	WELDING/GRINDNG BENCH	CENTRIFUGAL	DIRECT	600	5.5	208/3	1.5	243	3,4,5,6

**REMARKS:**

- PROVIDE WALL HOUSING FOR FAN.
- PROVIDE BACKDRAFT DAMPER.
- PROVIDE REMOTE STARTER MANUAL PILOT SWITCH MOUNTED ON SIDE OF BENCH.
- FAN TO BE RATED FOR 250°F CONTINUOUS OPERATION.
- PROVIDE CAST ALUMINUM RADIAL WHEEL & HOUSING.
- PROVIDE TEFC MOTOR.

**VERTICAL CEILING FAN SCHEDULE**

MARK	SERVICE	TYPE	DIAMETER	AIR FLOW	ELECTRICAL REQUIRMENTS				WEIGHT (LBS)	REMARKS
					AMPS	PHASE	VOLT	HP		
VF-1	FABRICATION SHOP	CEILING MOUNTED	120"	73,215	3.4	3	208	1.0	300	SEE BELOW
VF-2	REPAIR BAY 2	CEILING MOUNTED	120"	73,215	3.4	3	208	1.0	300	SEE BELOW
VF-3	REPAIR BAY 1	CEILING MOUNTED	120"	73,215	3.4	3	208	1.0	300	SEE BELOW

**REMARKS:**

- FANS SHALL BE CONTROLLED BY WALL CONTROLLER KEY PAD. (FC-1, FC-2, FC-3)
- COLOR SHALL BE COORDINATED WITH OWNER PRIOR TO PURCHASE.

**INTAKE LOUVER SCHEDULE**

MARK	SERVICE	TYPE	CFM	E.S.P	DIMENSIONAL DATA		FREE AREA REQUIRED	FRAME STYLE/SIZE	REMARKS
					WIDTH	LENGTH			
LV-1	FABRICATION SHOP	INTAKE LOUVER	7,875	0.2	48"	60"	9.84	DRAINABLE STATIONARY	SEE BELOW
	REPAIR BAY 1								SEE BELOW
	REPAIR BAY 2								SEE BELOW
LV-2	FABRICATION SHOP	INTAKE LOUVER	7,875	0.2	48"	60"	9.84	DRAINABLE STATIONARY	SEE BELOW
	REPAIR BAY 1								SEE BELOW
	REPAIR BAY 2								SEE BELOW

**REMARKS:**

- INSTALL COUNTERWEIGHT DAMPER WITH LOUVER TO RESIST OPENING AT 0.02 IN. W.G.

**ELECTRIC UNIT HEATER SCHEDULE**

MARK	SERVICE	INSTALLATION	POWER INFORMATION		ELECTRICAL INFORMATION		REMARKS
			KW	BtuH	VOLT/Ø	AMPS	
EUH-1	FABRICATION SHOP	CEILING MOUNTED	5.0	17.0	208/1	24.0	SEE BELOW
EUH-2	REPAIR BAY 2	CEILING MOUNTED	5.0	17.0	208/1	24.0	SEE BELOW
EUH-3	REPAIR BAY 1	CEILING MOUNTED	5.0	17.0	208/1	24.0	SEE BELOW
EUH-4	FABRICATION SHOP	CEILING MOUNTED	5.0	17.0	208/1	24.0	SEE BELOW
EUH-5	REPAIR BAY 2	CEILING MOUNTED	5.0	17.0	208/1	24.0	SEE BELOW
EUH-6	REPAIR BAY 1	CEILING MOUNTED	5.0	17.0	208/1	24.0	SEE BELOW

**REMARKS:**

- PROVIDE 120V LINE VOLTAGE THERMOSTAT.
- CONTRACTOR SHALL PROVIDE MOUNTING BRACKETS SO THAT UNIT HEATER IS INSTALLED IN A DOWNBLAST ORIENTATION.

**MECHANICAL/ELECTRICAL COORDINATION SCHEDULE**

EQUIPMENT DESIGNATION	EQUIPMENT DESCRIPTION	EQUIPMENT FURN. BY	VOLTS/PHASE	KW	HP	MCA	DISCONNECT FURN. BY	STARTERS FURN. BY	CONTROLS	REMARKS
VEF1-VEF2	VEHICLE EXHAUST FAN SYST.	M.C.	208/3	N/A	3.0	N/A	CONTRACTOR	CONTRACTOR	STARTER HAND/OFF SWITCH	1
VEF3-VEF4	VEHICLE EXHAUST FAN SYST.	M.C.	208/3	N/A	5.0	N/A	CONTRACTOR	CONTRACTOR	STARTER HAND/OFF SWITCH	1
EF-1	PROPELLER EXHAUST	M.C.	208/3	N/A	1.0	N/A	CONTRACTOR	CONTRACTOR	STARTER HAND/OFF SWITCH	-
EF-2	EXH. FAN WELDING HOOD	M.C.	208/3	N/A	1.5	N/A	CONTRACTOR	CONTRACTOR	REMOTE STARTER MANUAL PILOT SWITCH	-
EUH1-EUH6	ELECTRIC UNIT HEATER	M.C.	208/1	5.0	N/A	30.0 AMPS	N/A	N/A	208V LINE VOLTAGE T-STAT	-
VF1-VF3	VERTICAL CEILING FAN	M.C.	208/3	N/A	1.0	10.0 AMPS	CONTRACTOR	w/EQUIP.	KEY PAD CONTROLLER	-

**REMARKS:**

- THE EXHAUST FAN FOR THE AUTOMOTIVE VENTILATION SYSTEM IS A COMPONENT OF THE SYSTEM. THESE ARE MARKED AS "VEF" FOR VEHICLE EXHAUST FAN.

**ABBREVIATIONS:**

M.C. = MECHANICAL CONTRACTOR

**OUTSIDE AIR COMPLIANCE SCHEDULE**

SYSTEM	AREA SERVED	OUTSIDE AIR CALCULATION	REQUIRED O.A. CFM	TOTAL DESIGNED O.A. CFM
EF-1	FAB. SHOP/REPAIR BAYS	5,790 sf. * 1.5 cfm/s.f	8,685	8,685
TOTAL			8,685	8,685

**REMARKS:**

REQUIRED AIRFLOWS ARE BASED ON ASHRAE 62.1.-2007

1  
M-601 N.T.S.

**EDi**  
Engineered Designs, Inc.  
1151 SE Cary Parkway, Suite 200  
Cary, North Carolina 27518  
Office: 919.851.8481  
Fax: 919.851.9703



SYMBOL	DESCRIPTION	DATE	BY

DESIGNED BY: BROWN  
DWN BY: TAPP  
SUBMITTED BY: KEY  
FILE NAME: 17352  
FILE NUMBER: 17352  
SIZE: 17352  
DATE: 08/05/11  
SCALE: AS SHOWN

DATE: 05 AUG 2011  
SOLICITATION NO.: TBD  
CONTRACT NO.: TBD  
CATEGORY CODE: Z14-C02  
PILOT DATE: 05 AUG 2011

U.S. ARMY ENGINEER DISTRICT  
CORPS OF ENGINEERS  
WILMINGTON DISTRICT

GREENHORNE & O'MARA  
17352  
1151 SE CARY PARKWAY, SUITE 200  
CARY, NORTH CAROLINA 27518  
OFFICE: 919.851.8481  
FAX: 919.851.9703

JSOC SOF FACILITY MOTOR POOL ADDITION - SOLSE  
FORT BRAGG, NORTH CAROLINA

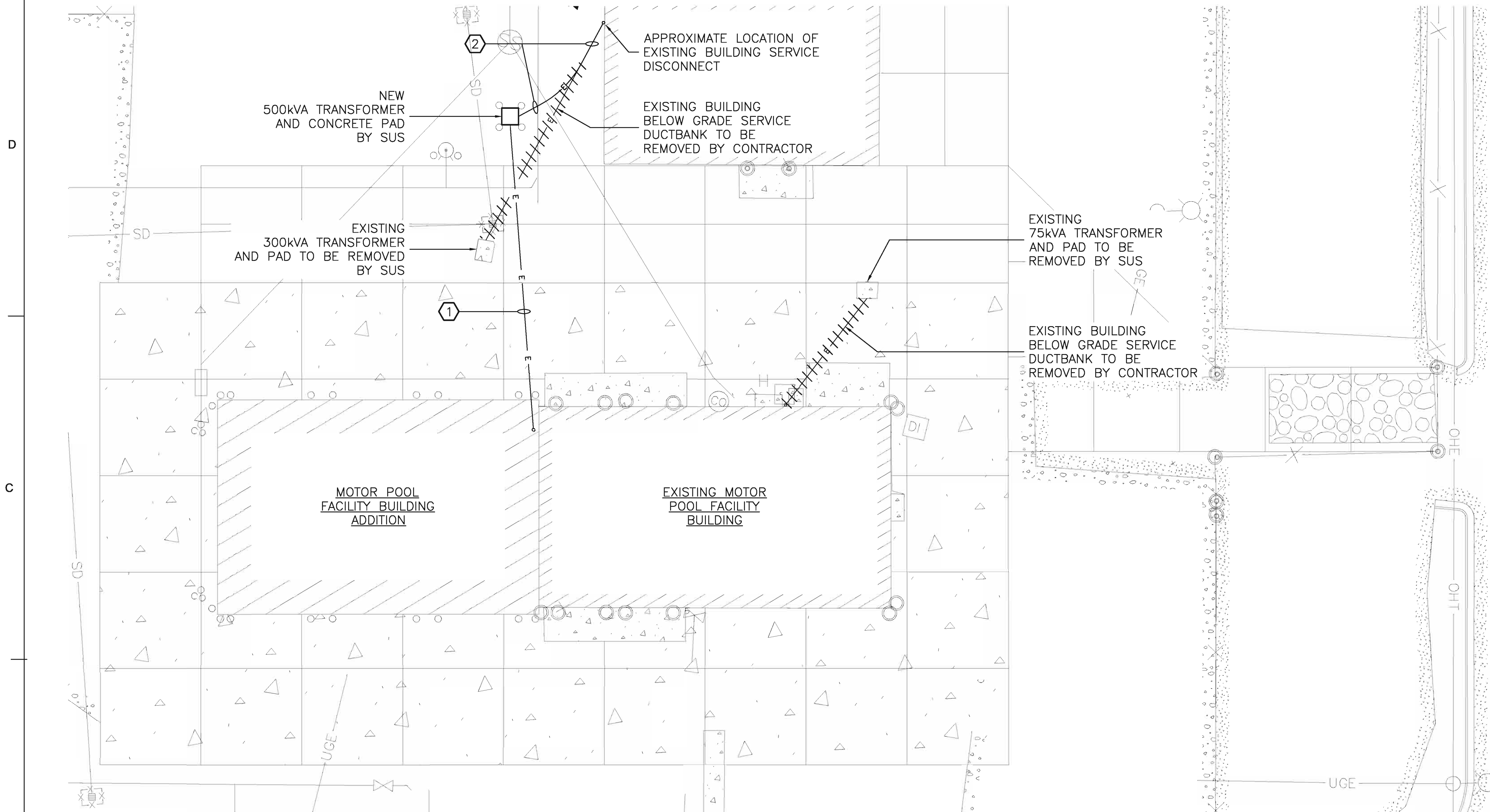
MECHANICAL SCHEDULES

PLATE REFERENCE NUMBER  
**M-601**  
SHEET 49

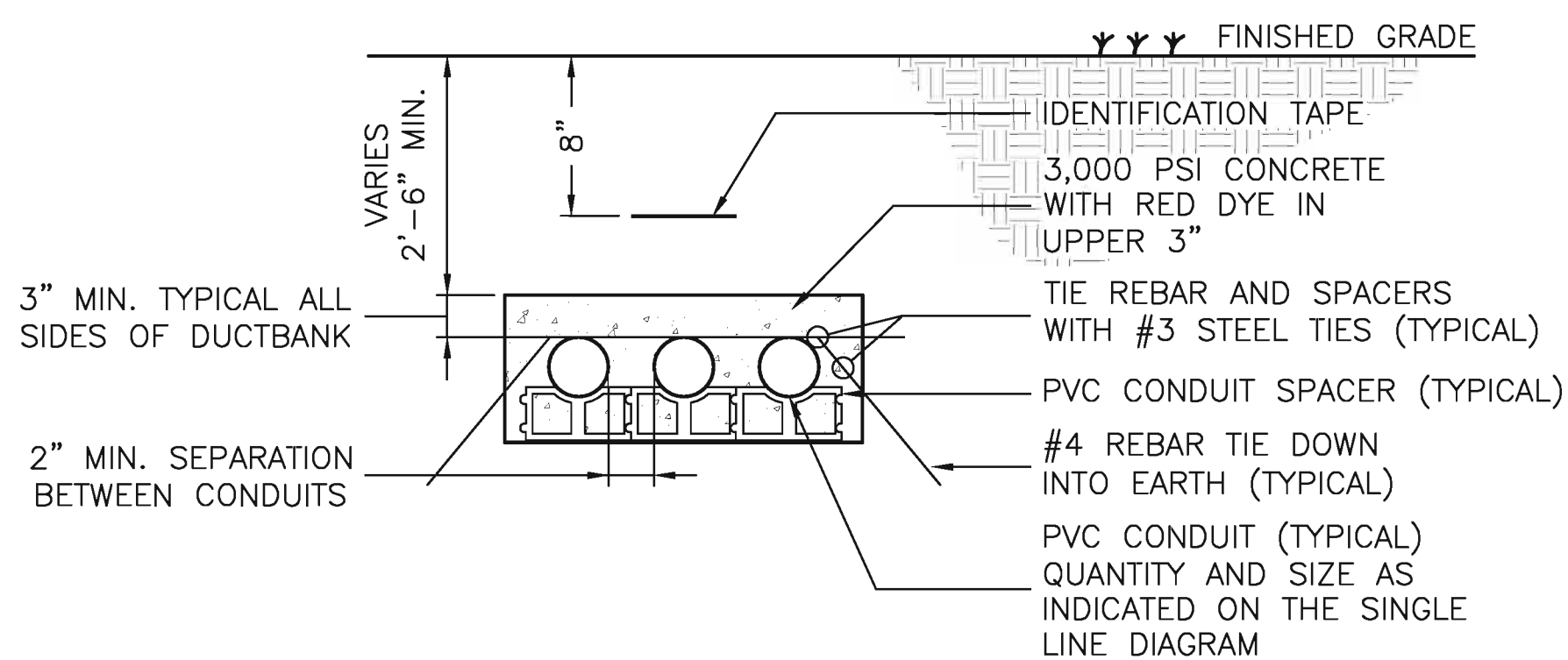






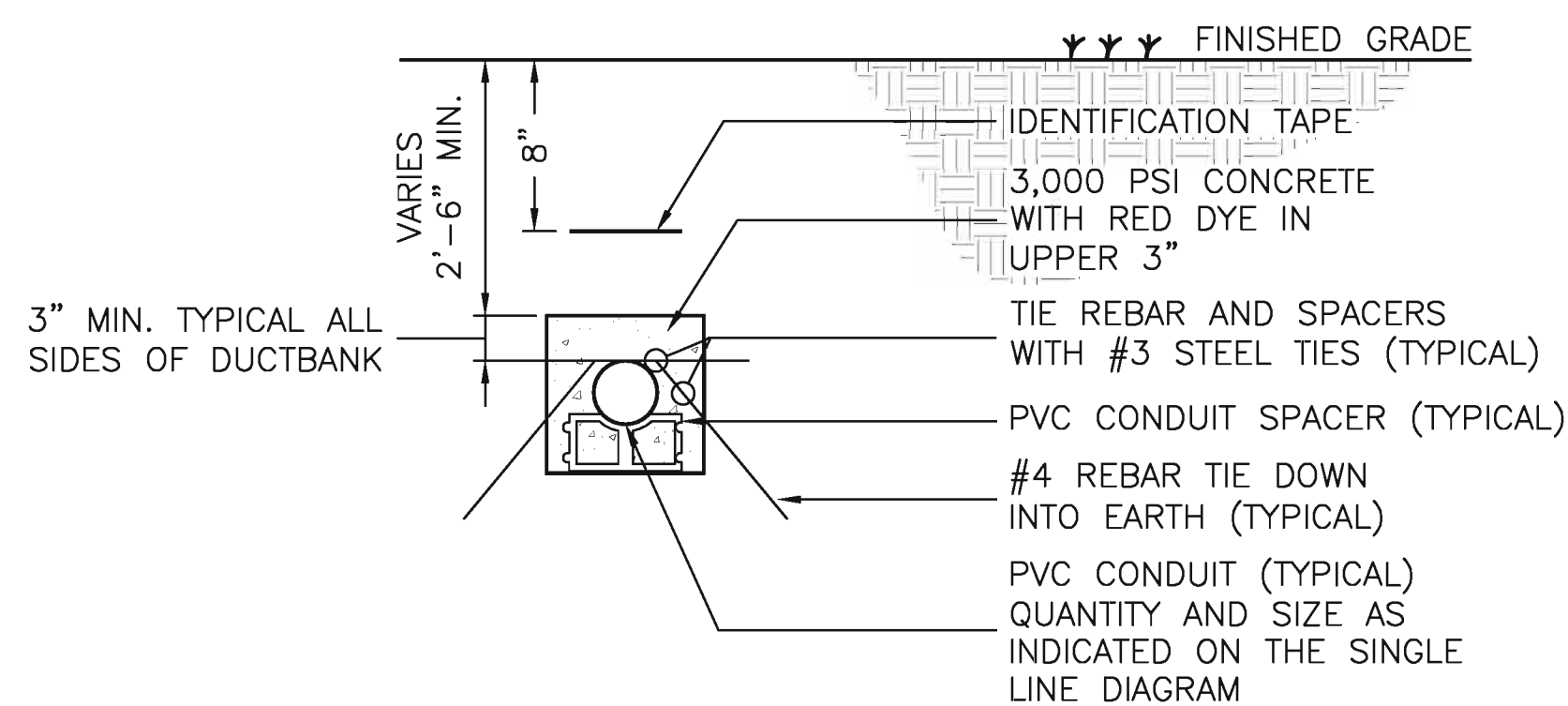


**1 ELECTRICAL SITE PLAN**  
ES001 | ES001 1" = 20'



**2 ELECTRICAL SERVICE DUCTBANK DETAIL**  
ES001 | ES001 NOT TO SCALE

NOTE: DUCTBANK DEPTH SHOWN IS A MINIMUM. DEPTH WILL VARY BASED ON LOCATION AND COORDINATION WITH UNDERGROUND SITE UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH DUCTBANK INSTALLATION.



**3 ELECTRICAL SERVICE DUCTBANK DETAIL**  
ES001 | ES001 NOT TO SCALE

NOTE: DUCTBANK DEPTH SHOWN IS A MINIMUM. DEPTH WILL VARY BASED ON LOCATION AND COORDINATION WITH UNDERGROUND SITE UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH DUCTBANK INSTALLATION.

**UTILITY WORK DELINEATION**

ALL PRIMARY LINE/EQUIP (15KV) WORK INCLUDING UTILITY PRIMARY FEEDERS, UTILITY TRANSFORMERS AND PADS SHALL BE PROVIDED BY SANDHILLS UTILITY SERVICES (SUS). THE CONTRACTOR SHALL COORDINATE ALL WORK WITH SUS.

**COLUMN FOOTING NOTE**

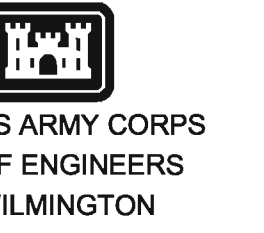
DUCTBANKS SHALL BE ROUTED AROUND COLUMN FOOTINGS. COORDINATE WITH ALL TRADES.

**DUCTBANK INSTALLATION NOTE**

ALL UNDERGROUND ELECTRICAL DUCTS SHALL BE SCHEDULE 40 PVC CONDUIT (NEMA TC-6 & 8) AND OF SIZES INDICATED ON DRAWINGS. ALL CONDUIT BENDS SHALL BE FACTORY BENDS. IDENTIFICATION TAPE SHALL BE RED IN COLOR, 4MIL THICK AND 3 INCHES WIDE. CONDUIT SPACERS SHALL BE OF THE INTERLOCKING TYPE AND MADE OF HIGH IMPACT POLYSTYRENE. CONCRETE SHALL BE 3000PSI MINIMUM. CONDUIT SPACES AND REBAR TIE DOWNS SHALL BE PLACED EVERY FIVE FEET ALONG LENGTH OF DUCTBANK. SLOPE ALL DUCTBANKS AWAY FROM BUILDING NOT LESS THAN 4 INCHES PER 100 FEET. TIE DOWN REBAR SHALL BE INSERTED A MINIMUM OF 1 FOOT INTO BOTTOM AND WALLS OF TRENCH TO PREVENT FLOATING OF DUCTBANK DURING CONCRETE POURING. NO STANDING WATER SHALL BE IN TRENCH PRIOR TO POURING CONCRETE. ALL DUCTS SHALL BE DRIED AND CLEANED BY PULLING A SWAB AND MANDREL, 1/2 INCH SMALLER THAN CONDUIT I.D., THROUGH EACH DUCT IMMEDIATELY PRIOR TO INSTALLATION OF CONDUCTORS. PROVIDE PULL CORDS IN ALL SPARE CONDUITS. ALL DUCTBANKS SHALL BE INSPECTED BY THE GOVERNMENT PRIOR TO CONCRETE POUR.

**NOTES KEYED TO PLAN**

- 1 INSTALL THE FOLLOWING CONDUIT/WIRE FROM THE UTILITY TRANSFORMER TO THE BUILDING DISTRIBUTION EQUIPMENT AS SHOWN. REFER TO DUCTBANK SECTION DETAIL, 2/ES001, FOR ADDITIONAL REQUIREMENTS:
  - A. 4-#400KCMIL, 3 INCH CONDUIT
  - B. 4-#400KCMIL, 3 INCH CONDUIT
  - C. 4-#400KCMIL, 3 INCH CONDUIT
- 2 CONTRACTOR SHALL INTERCEPT EXISTING SERVICE FEEDER TO ADJACENT BUILDING AND RE-ROUTE / EXTEND / RECONNECT AS REQUIRED TO ACCOMMODATE THE NEW TRANSFORMER LOCATION. COORDINATE ALL DOWNTIME REQUIRED TO RECONNECT THE EXISTING SERVICE WITH THE CONTRACTING OFFICER. REFER TO DUCTBANK SECTION DETAIL, 3/ES001, FOR ADDITIONAL REQUIREMENTS.



DATE	BY	DESCRIPTION

DESIGNED BY: WYNNIE	DATE: 05 AUG 2011
DWN BY: WYNNIE	SOLICITATION NO.: TBD
SUBMITTED BY: VELEZ	CONTRACT NO.: TBD
FILE NO.: ES001	CATEGORY CODE: 1214-0020
SCALE: AS SHOWN	PLAT DATE: 05 AUG 2011

JSOC SOF FACILITY MOTOR POOL ADDITION - SOLSE  
FORT BRAGG, NORTH CAROLINA  
ELECTRICAL SITE PLAN



**EDi**  
Engineered Designs, Inc.  
1151 SE Cary Parkway, Suite 200  
Cary, North Carolina 27518  
Office: 919.851.8481  
Fax: 919.851.9703

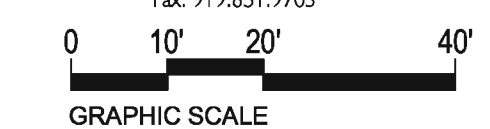
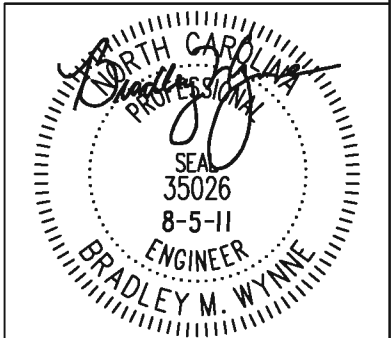
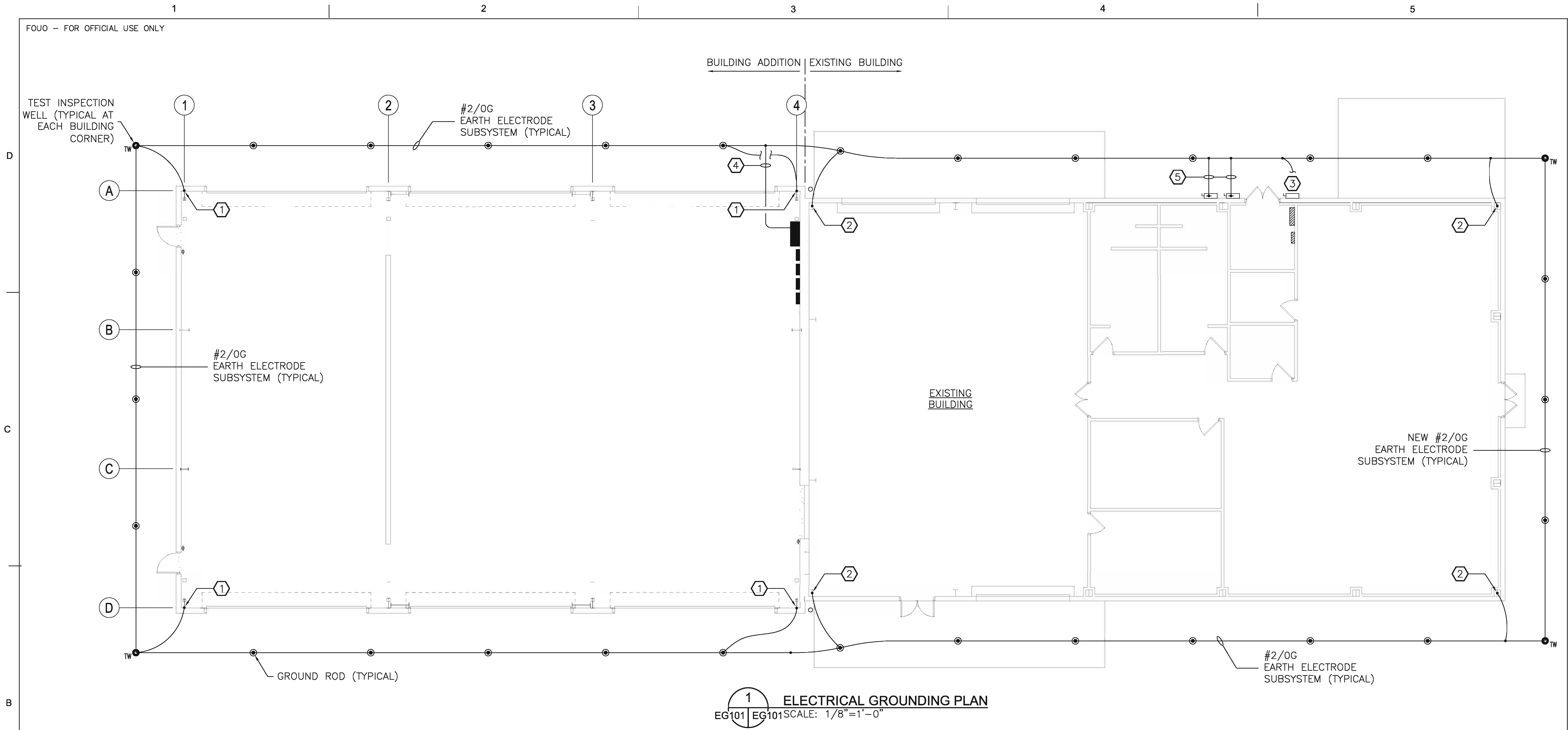


PLATE REFERENCE NUMBER  
**ES001**  
SHEET 53



**1 ELECTRICAL GROUNDING PLAN**  
EG101 | EG101 SCALE: 1/8"=1'-0"

**NEW GROUNDING SYSTEM NOTE**

ALL GROUND RODS, TEST INSPECTION WELLS, AND GROUND RINGS / EARTH ELECTRODE SUBSYSTEMS INDICATED ON THIS DRAWING ARE NEW AND SHALL BE PROVIDED AS A PART OF THIS CONTRACT UNLESS OTHERWISE NOTED.

**GROUND CONNECTION NOTE**

UNLESS OTHERWISE NOTED, ALL GROUND CONNECTIONS TO GROUND RODS, BUILDING STEEL, EARTH ELECTRODE SUBSYSTEM, ETC. SHALL BE OF THE EXOTHERMIC WELD TYPE.

**EXISTING GROUNDING SYSTEM NOTE**

THE EXISTING GROUNDING SYSTEM IN PLACE FOR THE EXISTING MOTOR POOL BUILDING SHALL BE TIED INTO THE NEW GROUNDING SYSTEM AS REQUIRED / SHOWN. CONTRACTOR SHALL PROVIDE NEW GROUND CONNECTION, #2G IN 1" PVC CONDUIT, TO EXISTING METALLIC COLD WATER PIPING IN THE EXISTING MOTOR POOL BUILDING AND TIE BACK TO PANEL 'SDP' GROUND BUS. WHERE EXISTING GROUND CONNECTIONS NOT INDICATED TO BE REMOVED ARE FOUND NOT ELECTRICALLY CONTINUOUS WITH THE NEW GROUNDING SYSTEM, THE CONTRACTOR SHALL PROVIDE NEW CONNECTION(S) TO THE NEW GROUNDING SYSTEM AS REQUIRED.

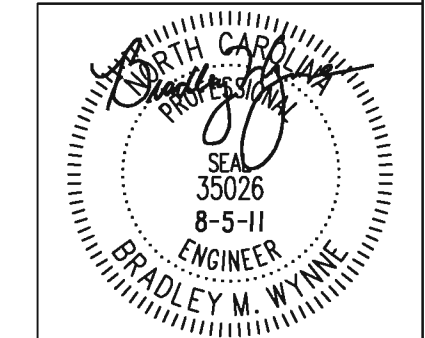
**GROUNDING DETAILS NOTE**

REFER TO GROUNDING DETAILS ON DRAWING E-501 FOR ADDITIONAL GROUNDING REQUIREMENTS.

- NOTES KEYED TO PLAN**
- ① 1-#2/0 AWG, BOND BUILDING ADDITION STRUCTURE TO EARTH ELECTRODE SUBSYSTEM.
  - ② 1-#2/0 AWG, BOND EXISTING BUILDING STRUCTURE TO EARTH ELECTRODE SUBSYSTEM.
  - ③ CONTRACTOR SHALL LOCATE EXISTING GROUNDING ELECTRODE FOR EXISTING SERVICE ENTRANCE EQUIPMENT AND TIE INTO NEW EARTH ELECTRODE SUBSYSTEM AS REQUIRED.
  - ④ 1-#3/0 AWG, BOND ELECTRICAL EQUIPMENT GROUND BUS BARS TO EARTH ELECTRODE SUBSYSTEM AS REQUIRED.
  - ⑤ 1-#1/0 AWG, BOND ELECTRICAL EQUIPMENT GROUND BUS BARS TO EARTH ELECTRODE SUBSYSTEM AS REQUIRED.



**EDi**  
Engineered Designs, Inc.  
1151 SE Cary Parkway, Suite 200  
Cary, North Carolina 27518  
Office: 919.851.8481  
Fax: 919.851.9703



DATE	BY	DESCRIPTION

DESIGNED BY: WYNNE	DATE: 05 AUG 2011
DWN BY: WYNNE	SOLICITATION NO.: TBD
SUBMITTED BY: VELEZ	CONTRACT NO.: TBD
FILE NAME: EG101	CATEGORY CODE: 214-020
SIZE: D	PLAT DATE: 05 AUG 2011
	AS SHOWN

U. S. ARMY ENGINEER DISTRICT  
CORPS OF ENGINEERS  
WILMINGTON DISTRICT

GREENHORNE & O'MARA  
ENGINEERS  
1000 WILMINGTON BOULEVARD  
WILMINGTON, NC 28401  
TEL: 910.342.1000  
FAX: 910.342.1001

JSOC SOF FACILITY MOTOR POOL ADDITION - SOLSE  
FORT BRAGG, NORTH CAROLINA

ELECTRICAL GROUNDING PLAN

PLATE REFERENCE NUMBER  
**EG101**  
SHEET 54