





DEPARTMENT OF VETERANS AFFAIRS
VA MEDICAL CENTER
MARTINSBURG, WEST VIRGINIA

REPLACEMENT OF CHILLER PLANT TRANSFORMER
100% SUBMISSION
JULY 30, 2013

		ARCHITECT / ENGINEERS:				Stamp/Seal		Drawing Title		Project Title		VA Project Number		Office of Construction and Facilities Management	
		<div><div>2 Wisconsin Circle; Suite 820 Chevy Chase, MD 20815-7003 301.718.0080 www.okksstudios.com</div><div>HENRY ADAMS Consulting Engineers Mechanical Electrical & Plumbing Engineers</div><div>Henry Adams, LLC Consulting Engineers 600 Baltimore Avenue Baltimore, MD 21204 Tel: (410)296-6500 Fax: (410)296-3156</div><div>PROPERTY OF THE UNITED STATES GOVERNMENT FOR OFFICIAL USE ONLY DO NOT REMOVE THIS NOTICE. PROPERLY DESTROY DOCUMENTS WHEN NO LONGER NEEDED</div></div>		COVER SHEET		REPLACEMENT OF CHILLER PLANT TRANSFORMER		613-12-114							
100% SUBMISSION		07/30/2013						Approved: Project Director		Location		Drawing Number		G-001  Department of Veterans Affairs	
95% SUBMISSION		07/01/2013								VAMC, MARTINSBURG, WV					
30% SUBMISSION		04/25/2013								Date		Checked		Drawn	
Revisions:		Date								07/30/2013		TOS		LCW	

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3" = 1'-0"

1" = 1'-0"

3/4" = 1'-0"

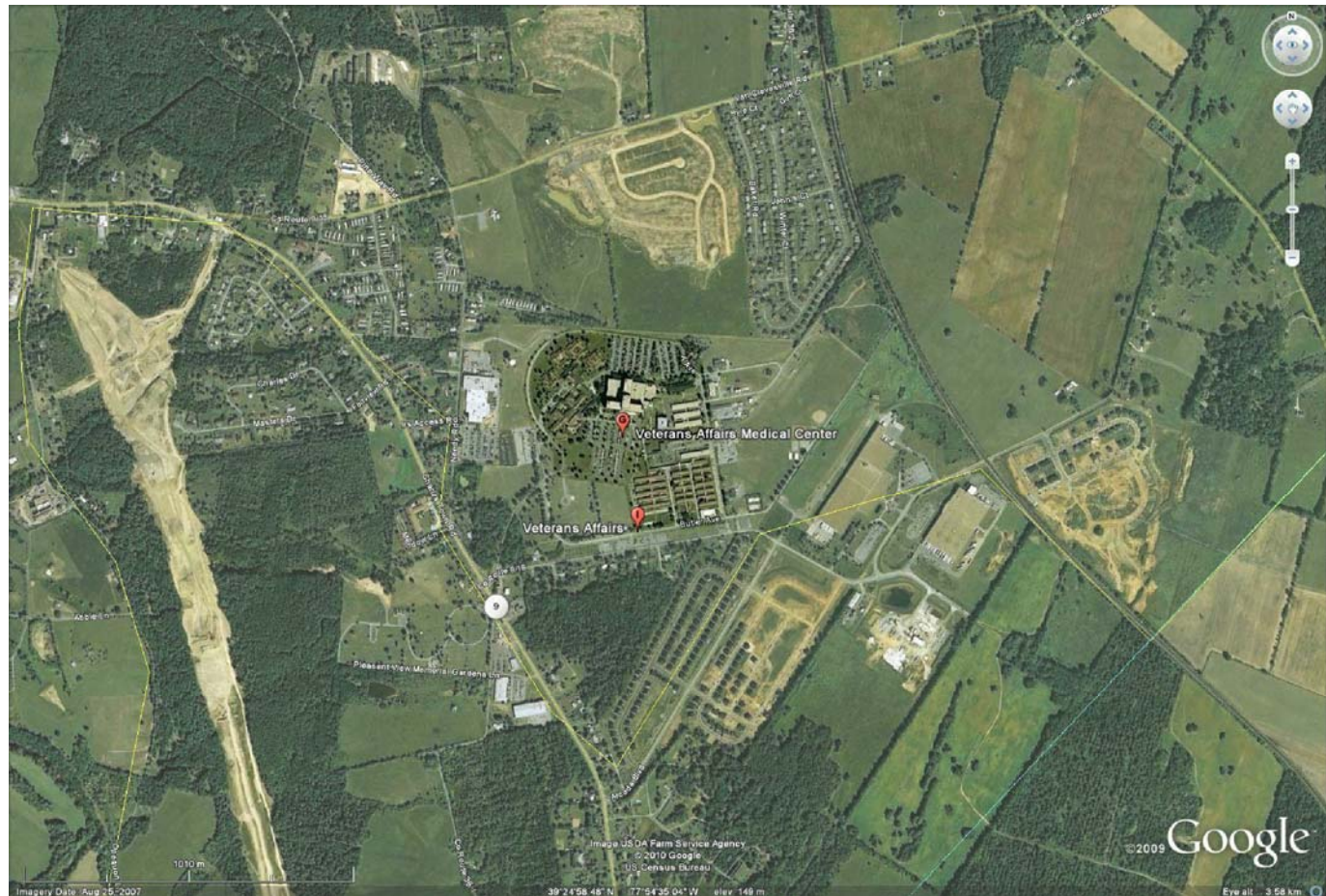
1/2" = 1'-0"

3/8" = 1'-0"

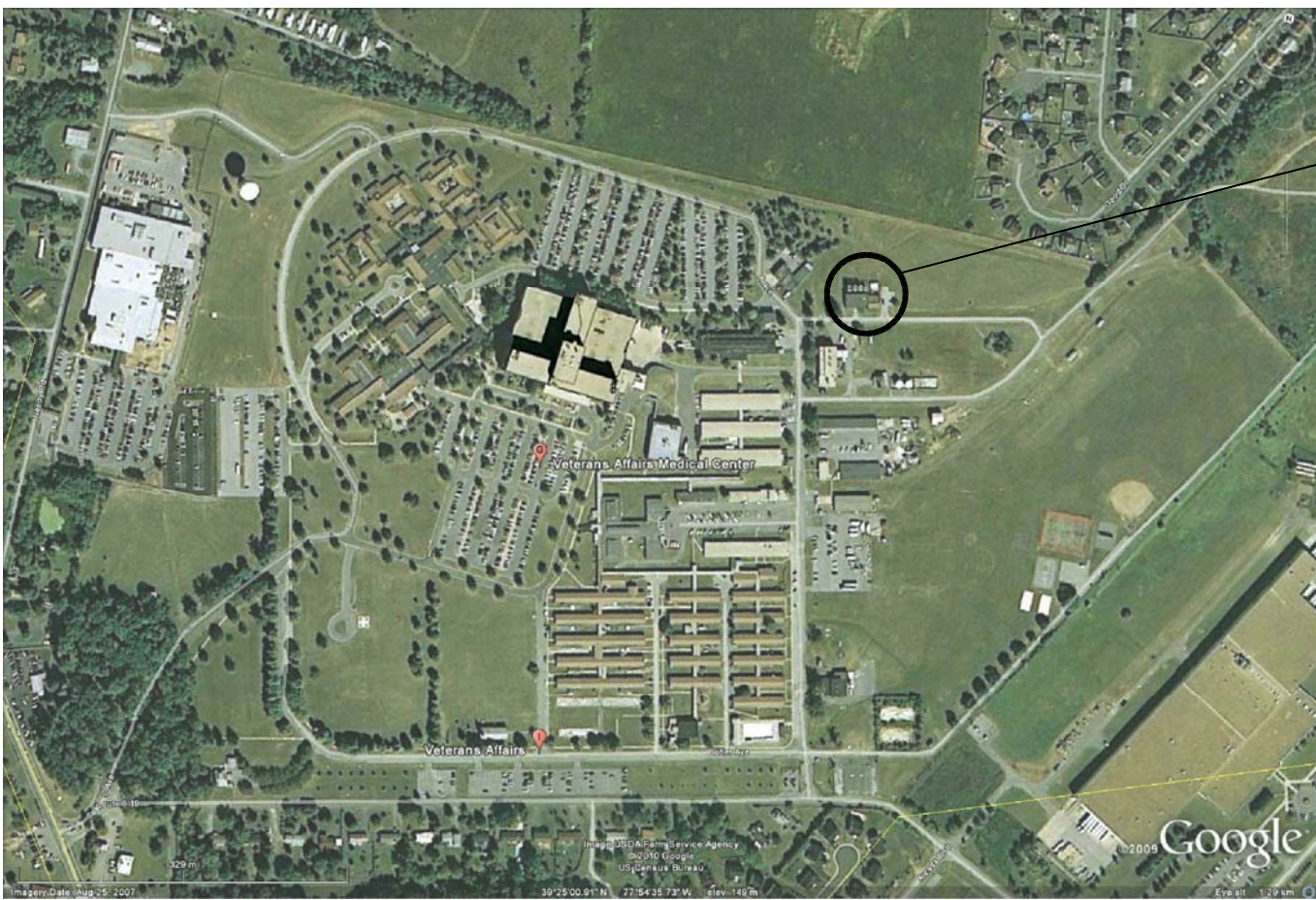
1/4" = 1'-0"

1/8" = 1'-0"

VICINITY MAP



LOCATION MAP



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ES001	ELECTRICAL COVER SHEET
ES002	ELECTRICAL RISER DIAGRAMS
ES101	ELECTRICAL DEMOLITION AND NEW WORK

ABBREVIATIONS

A	ACT ADJ AFF ALUM ANOD APPROX @	ACOUSTICAL CEILING TILE ADJACENT ABOVE FINISH FLOOR ALUMINUM ANODIZED APPROXIMATELY AT
B	BLKG	BLOCKING
C	CAB CCT CG CLG CLOS CMU CMT CONC CONT CORR CSS CPT CT	CABINET CUBICLE CURTAIN TRACK CORNER WALL GUARD CEILING CLOSET CONCRETE MASONRY UNIT CEMENTITIOUS CONCRETE CONTINUOUS CORRIDOR CLINICAL SERVICE SINK CARPET CERAMIC TILE
D	DET DIA DIM DR DRESS DWG DWR	DETAIL DIAMETER DIMENSION DOOR DRESSING DRAWING DRAWER
E	EA EG ELEC ELEV EMER EQUIP ETR EWC EXIST EXT	EACH END WALL GUARD ELECTRIC(AL) ELEVATOR/ ELEVATION EMERGENCY EQUIPMENT EXISTING TO REMAIN ELECTRIC WATER COOLER EXISTING EXTERIOR
F	FA FT FD FE FEC FHS FHC FLR FLUOR FR FVC	FIRE ALARM FEET/ FOOT FLOOR DRAIN FIRE EXTINGUISHER FIRE EXTINGUISHER CABINET FIRE HOSE STATION FIRE HOSE CABINET FLOOR(ING) FLUORESCENT FRAME FIRE VALVE CABINET
G	GALV GB GC GOVT GYP BD	GALVANIZE(D) GRAB BAR / GYPSUM BOARD GENERAL CONTRACTOR GOVERNMENT GYPSUM BOARD
H	HC HDW HGT HM HORIZ	HOLLOW CORE HARDWARE HEIGHT HOLLOW METAL HORIZONTAL
I	IB ID IN INT INTEG INTLK	INTEGRAL BASE INSIDE DIAMETER INCH(ES) INTERIOR INTEGRAL INTERLOCK
L	LAM LAV LB LG LH LHRB LOCK LVR	LAMINATE (D) LAVATORY POUND LENGTH LEFT HAND LEFT HAND REVERSE BEVEL LOOKERS LOUVER
M	MA MAX MED MFR MIN MISC MO MTL	MEDICAL AIR MAXIMUM MEDICAL/MEDICATIONS MANUFACTURER MINIMUM MISCELLANEOUS MASONRY OPENING METAL
N	N NC NEG NIC NO NOM NTS	NORTH/ NITROGEN NURSE CALL NEGATIVE NOT IN CONTRACT NUMBER NOMINAL NOT TO SCALE
O	OA OC OD OH O/OX OPG	OVERALL ON CENTER OUTSIDE DIAMETER OPPOSITE HAND OXYGEN OPENING
P	PL PLAM PLYWD PNL PNT PR PTD PTN	PLATE PLASTIC LAMINATE PLYWOOD PANEL PAINT PAIR PAINTED PARTITION
R	RB REQD RESIL REV RH RHRB RO	RESILIENT BASE REQUIRED RESILIENT REVISED RIGHT HAND RIGHT HAND REVERSE BEVEL ROUGH OPENING
S	S SCW SEAL SECT SHT SIM SPEC SQ SSM S STL SSV STL STN STOR STRUCT SV	SOUTH SOLID CORE WOOD SEALANT SECTION SHEET SIMILAR SPECIFICATION(S) SQUARE SOLID SURFACE MATERIAL STAINLESS STEEL SEAMLESS SHEET VINYL STEEL STAIN STORAGE STRUCTURAL SHEET VINYL
T	TC TEL TEMP THK TOC TOIL TOS TPTN TV TW TYP TZ	TERRA COTTA TELEPHONE TEMPORARY THICK(NESS) TOP OF CURB/ TOP OF CONC. TOILET TOIL TOP OF SLAB/ TOP OF STEEL TOILET PARTITION TELEVISION TOP OF WALL TYPICAL TERRAZZO
V	VAC VB VCT VERT VIF VWC	VACUUM VAPOR BARRIER VINYL COMPOSITION TILE VERTICAL VERIFY IN FIELD VINYL WALL COVERING
W	W W/ WC WD WG WH W/O WP WR WS WSCT WT	WEST WITH WATERCLOSET/ WATER COOLER/ WALL COVERING WOOD WIRE GLASS WALL HUNG WITHOUT WATERPROOF(ING) WATER RESISTANT WEATHERSTRIPPING WAINSCOT WEIGHT

BUILDING INFORMATION

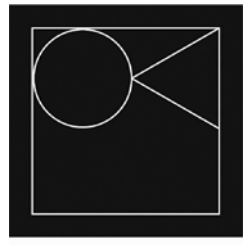
ADDRESS:	VA MEDICAL CENTER 510 BUTLER AVENUE BUILDING 503 MARTINSBURG, WEST VIRGINIA
BUILDING DESCRIPTION:	INDUSTRIAL
SCOPE OF WORK:	REPLACEMENT OF CHILLER PLANT TRANSFORMER
BUILDING CODE REFERENCE:	INTERNATIONAL BUILDING CODE (2012), NEC, OSHA, UFAS, & LIFE SAFETY NFPA 101, LIFE SAFETY CODE (2012)
USE GROUP:	F2 (FACTORY AND INDUSTRIAL)
CONSTRUCTION TYPE:	IIIB
FIRE SUPPRESSION:	FULLY SPRINKLER PROTECTED
BUILDING STORIES:	1
EXISTING FLOOR AREA:	1,720 GSF
HIGH RISE:	NO
RENOVATION AREA:	556 SF INTERIOR

REFERENCE INFORMATION

KEYNOTES	DEMOLITION NOTES
REFERENCE	PARTITION TYPE IDENTIFICATION
ELEVATION MARKER	ELEVATION REFERENCE
DETAIL REFERENCE	SECTION REFERENCE
AREA BEYOND LIMIT OF CONSTRUCTION	REVISION IDENTIFICATION
EXISTING CONST. TO BE REMOVED	DOOR AND WINDOW IDENTIFICATION
EXISTING CONST. TO REMAIN	NEW CONST.
CONCRETE (CAST IN PLACE OR PRECAST)	RIGID INSULATION
BRICK	UNDERBED MATERIAL
CONCRETE MASONRY UNIT	CONTINUOUS WOOD BLOCKING
EARTH	DISCONTINUOUS WOOD BLOCKING
BATT INSULATION	ALUMINUM
STEEL	
FINISHED LUMBER	
PLYWOOD	

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Revisions:	Date

ARCHITECT / ENGINEERS:



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Stamp/Seal

BUILDING AND GENERAL INFORMATION

Approved: Project Director

REPLACEMENT OF CHILLER PLANT TRANSFORMER

Location
VAMC, MARTINSBURG, WV

Date
07/30/2013

Checked
TOS

Drawn
LCW

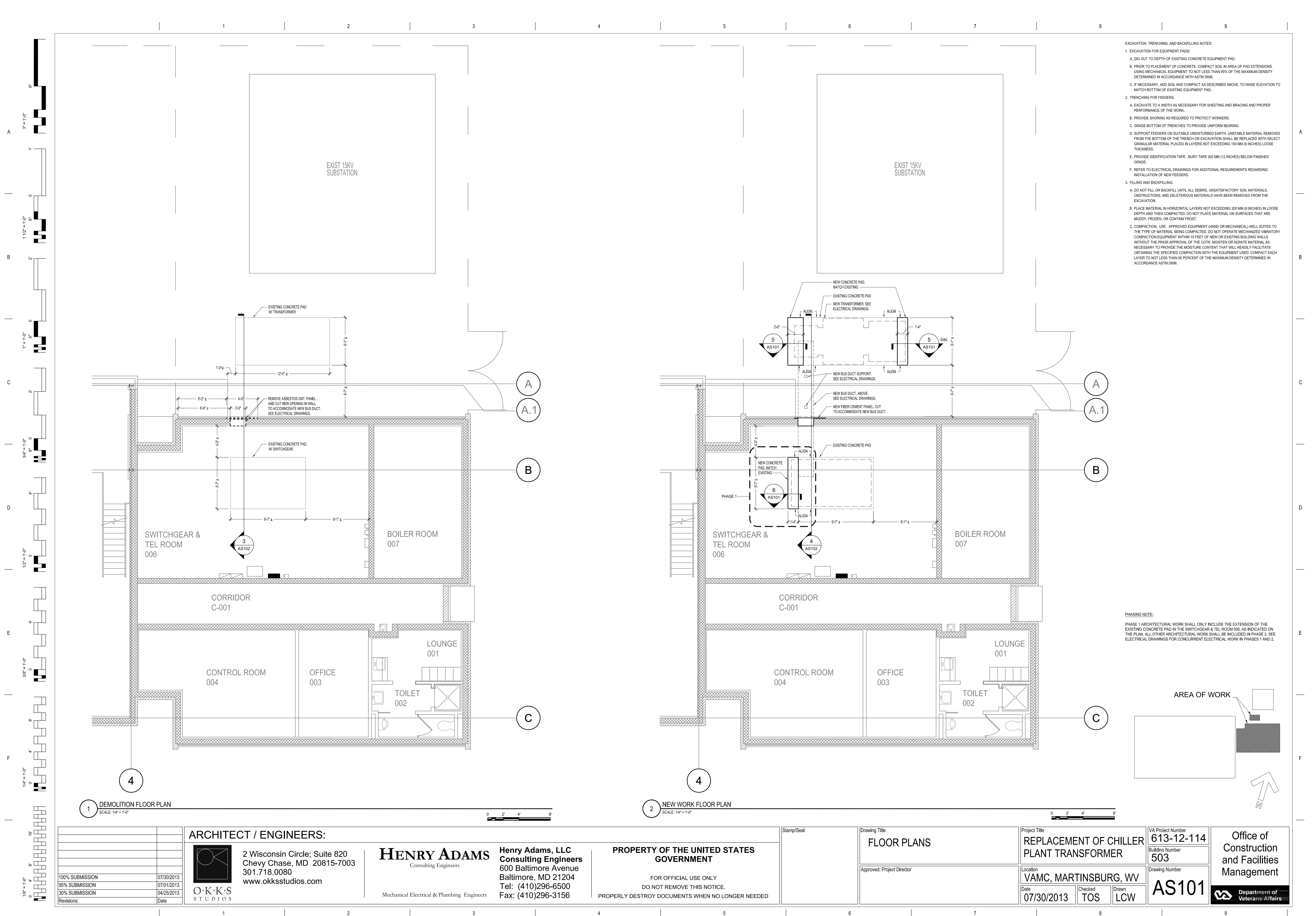
VA Project Number
613-12-114
Building Number
503

Drawing Number

G-002

Office of
Construction
and Facilities
Management

Department of
Veterans Affairs



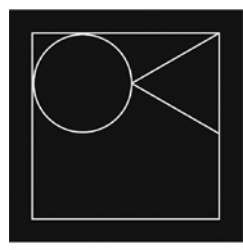
- EXCAVATION, TRENCHING, AND BACKFILLING NOTES:
- EXCAVATION FOR EQUIPMENT PADS:
 - DIG OUT TO DEPTH OF EXISTING CONCRETE EQUIPMENT PAD.
 - PRIOR TO PLACEMENT OF CONCRETE, COMPACT SOIL IN AREA OF PAD EXTENSIONS USING MECHANICAL EQUIPMENT TO NOT LESS THAN 95% OF THE MAXIMUM DENSITY DETERMINED IN ACCORDANCE WITH ASTM D698.
 - IF NECESSARY, ADD SOIL AND COMPACT AS DESCRIBED ABOVE, TO RAISE ELEVATION TO MATCH BOTTOM OF EXISTING EQUIPMENT PAD.
 - TRENCHING FOR FEEDERS:
 - EXCAVATE TO A WIDTH AS NECESSARY FOR SHEETING AND BRACING AND PROPER PERFORMANCE OF THE WORK.
 - PROVIDE SHORING AS REQUIRED TO PROTECT WORKERS.
 - GRADE BOTTOM OF TRENCHES TO PROVIDE UNIFORM BEARING.
 - SUPPORT FEEDERS ON SUITABLE UNDISTURBED EARTH. UNSTABLE MATERIAL REMOVED FROM THE BOTTOM OF THE TRENCH OR EXCAVATION SHALL BE REPLACED WITH SELECT GRANULAR MATERIAL PLACED IN LAYERS NOT EXCEEDING 150 MM (6 INCHES) LOOSE THICKNESS.
 - PROVIDE IDENTIFICATION TAPE. BURY TAPE 300 MM (12 INCHES) BELOW FINISHED GRADE.
 - REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL REQUIREMENTS REGARDING INSTALLATION OF NEW FEEDERS.
 - FILLING AND BACKFILLING:
 - DO NOT FILL OR BACKFILL UNTIL ALL DEBRIS, UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND DELETERIOUS MATERIALS HAVE BEEN REMOVED FROM THE EXCAVATION.
 - PLACE MATERIAL IN HORIZONTAL LAYERS NOT EXCEEDING 200 MM (8 INCHES) IN LOOSE DEPTH AND THEN COMPACTED. DO NOT PLACE MATERIAL ON SURFACES THAT ARE MUDDY, FROZEN, OR CONTAIN FROST.
 - COMPACTION: USE APPROVED EQUIPMENT (HAND OR MECHANICAL) WELL SUITED TO THE TYPE OF MATERIAL BEING COMPACTED. DO NOT OPERATE MECHANIZED VIBRATORY COMPACTION EQUIPMENT WITHIN 10 FEET OF NEW OR EXISTING BUILDING WALLS WITHOUT THE PRIOR APPROVAL OF THE COTR. MOISTEN OR AERATE MATERIAL AS NECESSARY TO PROVIDE THE MOISTURE CONTENT THAT WILL READILY FACILITATE OBTAINING THE SPECIFIED COMPACTION WITH THE EQUIPMENT USED. COMPACT EACH LAYER TO NOT LESS THAN 95 PERCENT OF THE MAXIMUM DENSITY DETERMINED IN ACCORDANCE WITH ASTM D698.

PHASING NOTE:

PHASE 1 ARCHITECTURAL WORK SHALL ONLY INCLUDE THE EXTENSION OF THE EXISTING CONCRETE PAD IN THE SWITCHGEAR & TEL ROOM 006, AS INDICATED ON THE PLAN. ALL OTHER ARCHITECTURAL WORK SHALL BE INCLUDED IN PHASE 2. SEE ELECTRICAL DRAWINGS FOR CONCURRENT ELECTRICAL WORK IN PHASES 1 AND 2.

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Revisions:	Date

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Drawing Title
FLOOR PLANS

Approved: Project Director

Project Title
**REPLACEMENT OF CHILLER
PLANT TRANSFORMER**

Location
VAMC, MARTINSBURG, WV

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07/30/2013

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VA Project Number
613-12-114

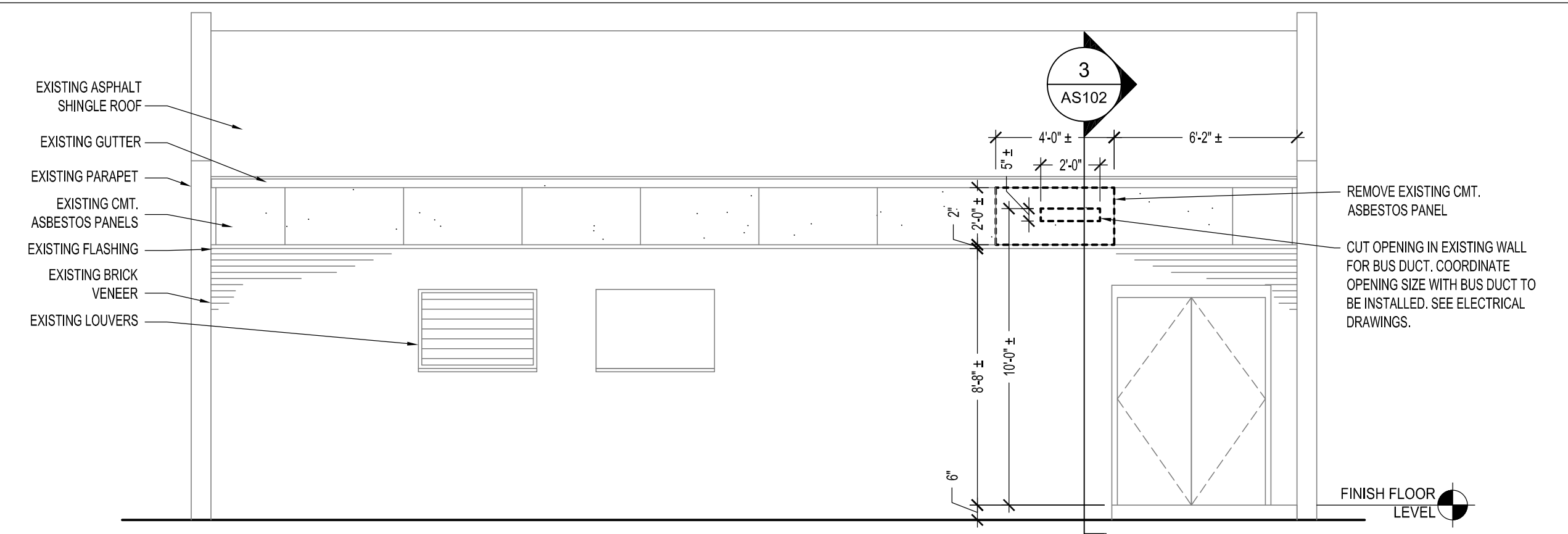
Building Number
503

Drawing Number
AS101

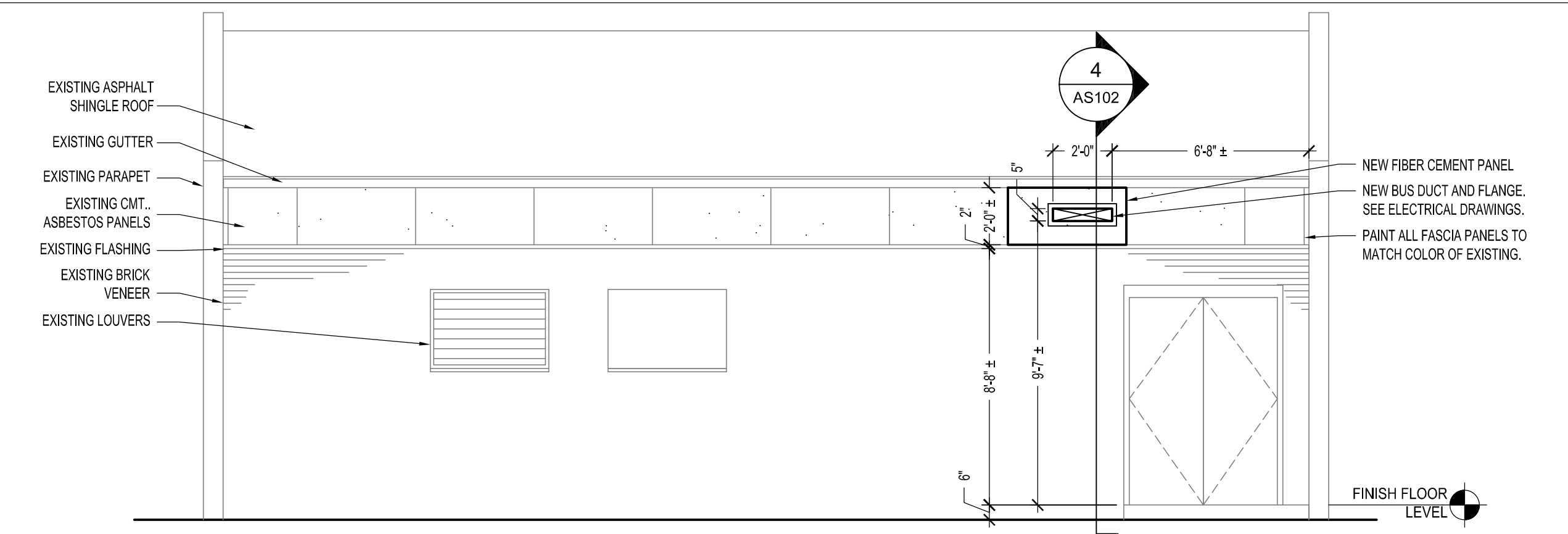
Office of
Construction
and Facilities
Management



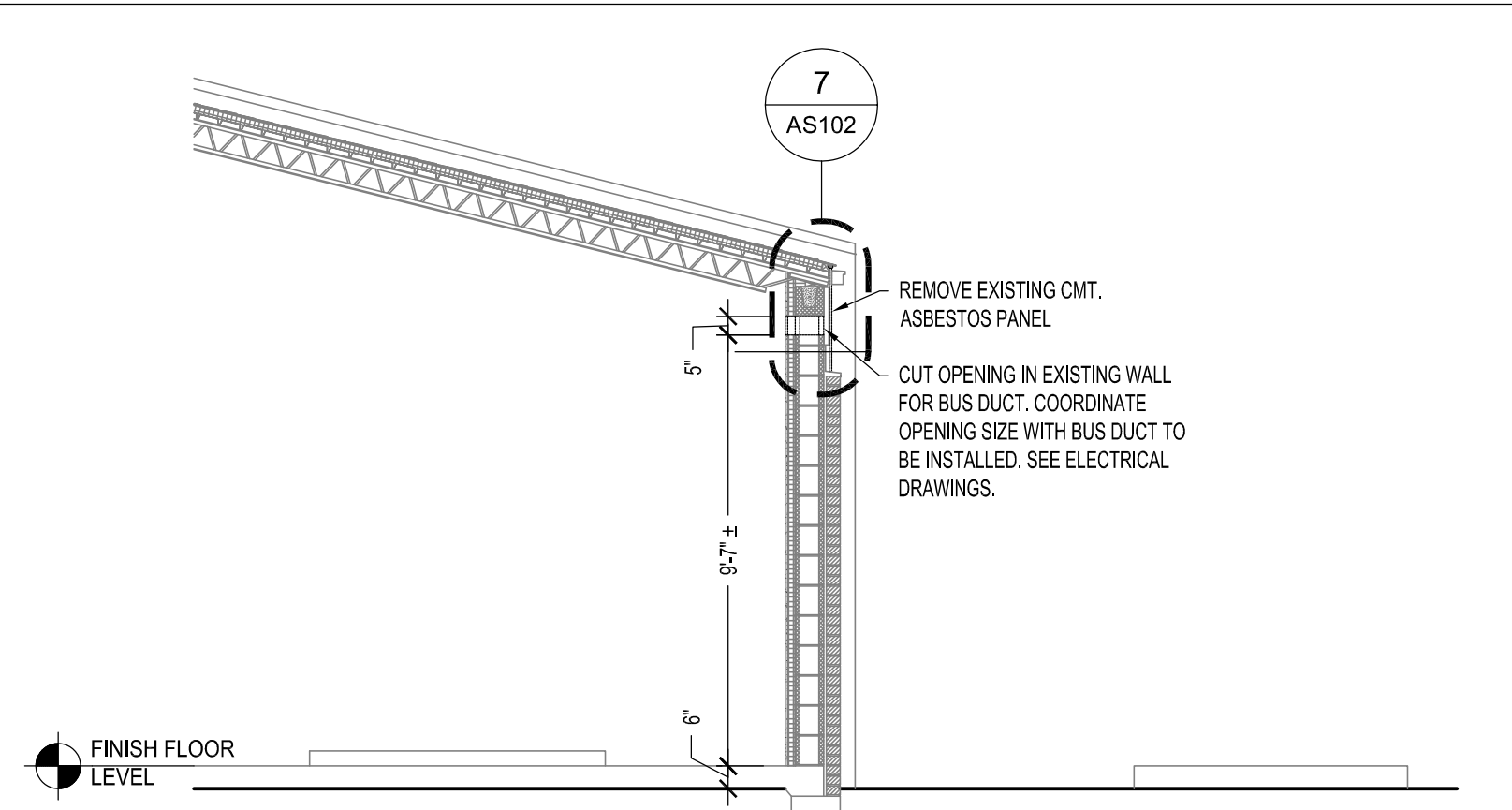
3" = 1'-0"
1 1/2" = 1'-0"
1" = 1'-0"
3/4" = 1'-0"
1/2" = 1'-0"
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1/4" = 1'-0"
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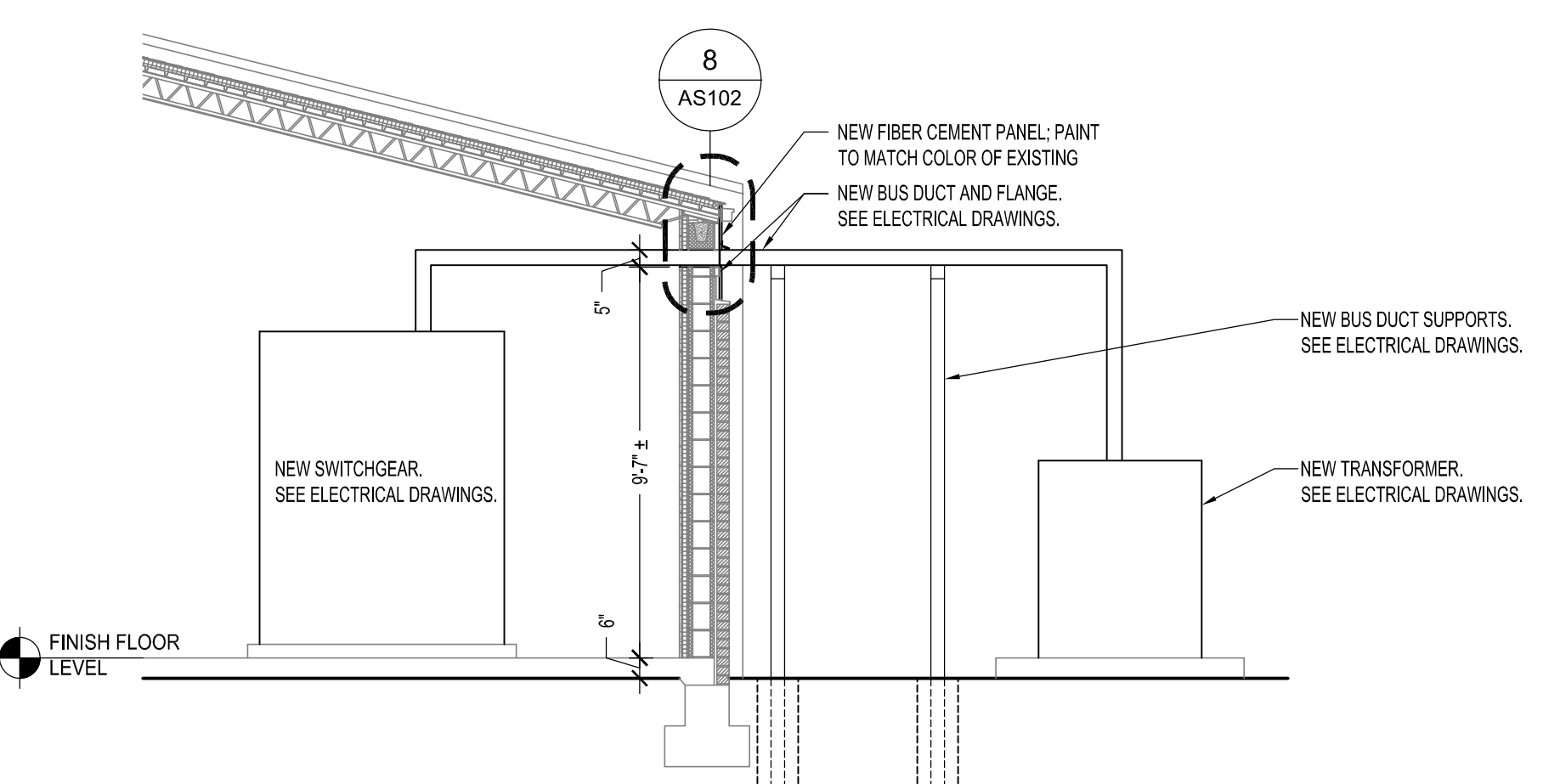
1 NORTH EXTERIOR ELEVATION - PHASE 2 DEMOLITION
SCALE: 1/4" = 1'-0"



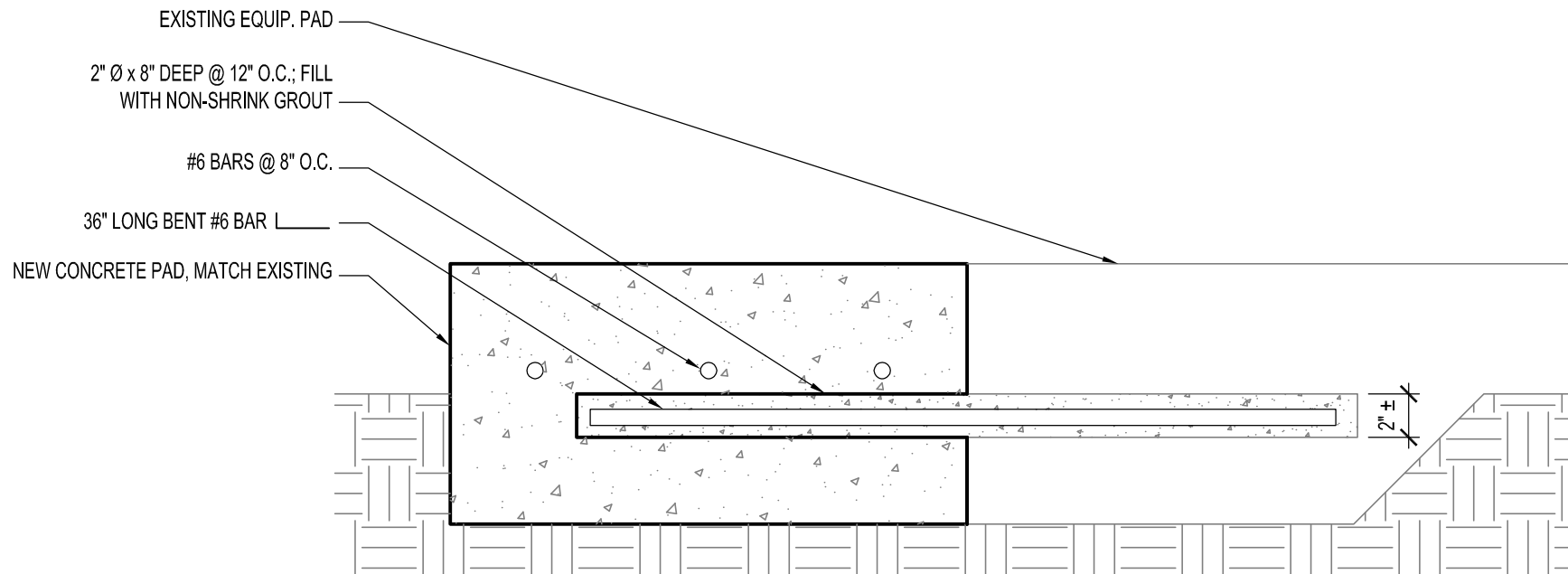
2 NORTH EXTERIOR ELEVATION - PHASE 2 NEW WORK
SCALE: 1/4" = 1'-0"



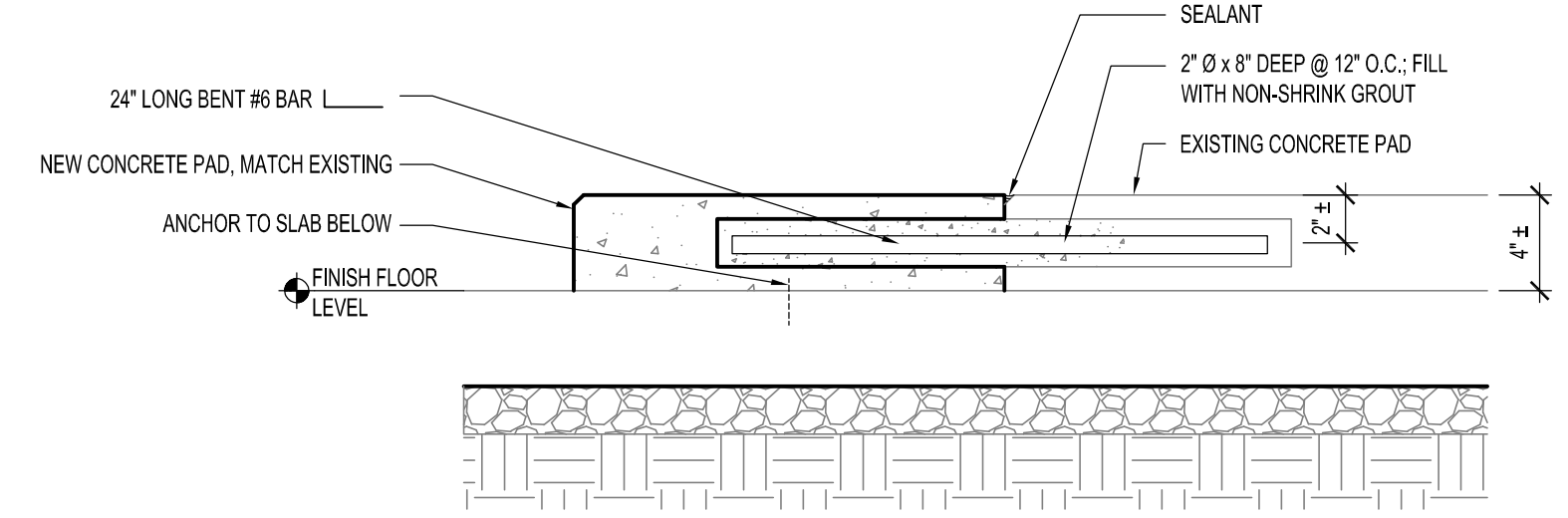
3 SECTION THRU EXISTING EXTERIOR WALL - PHASE 2 DEMOLITION
SCALE: 1/4" = 1'-0"



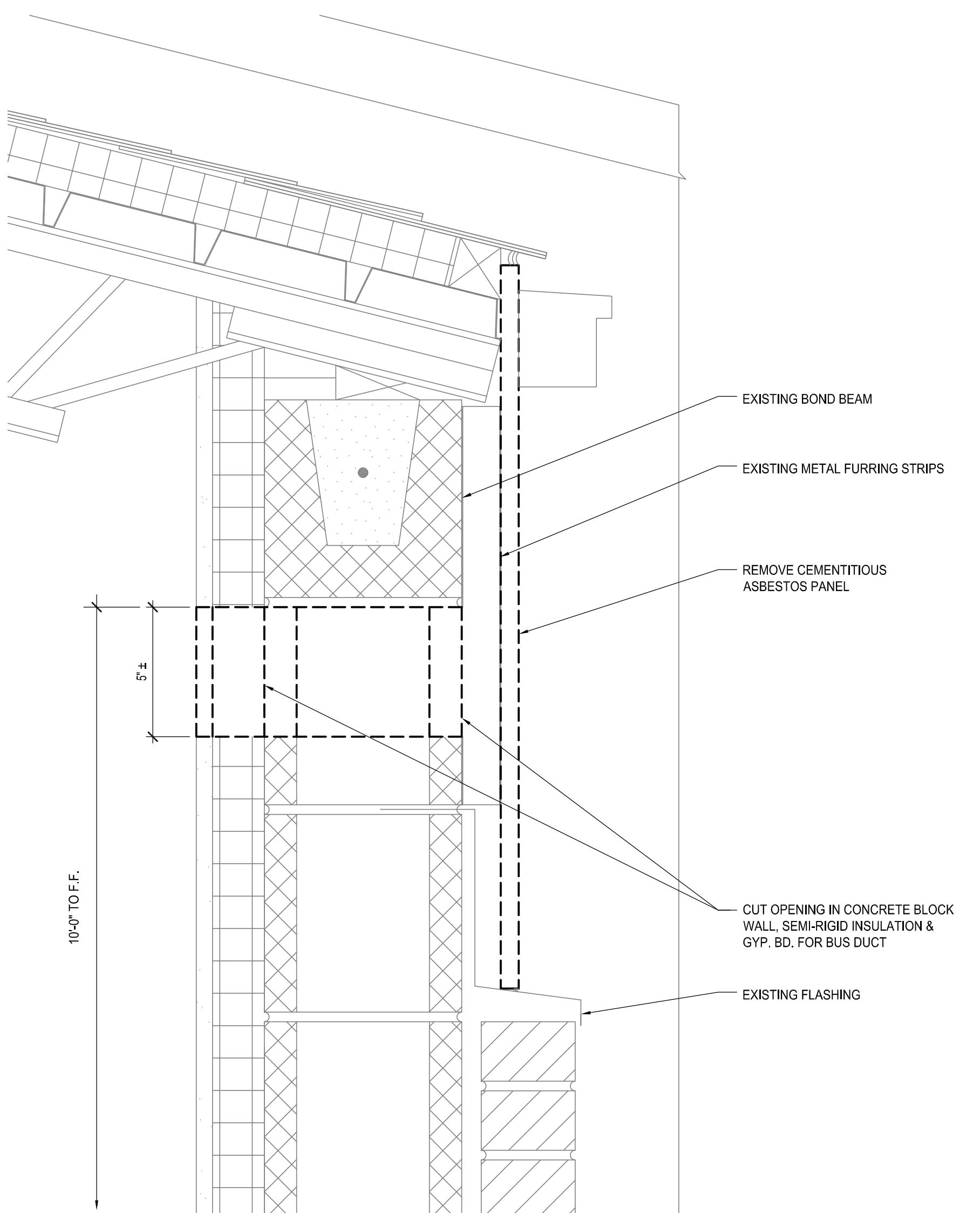
4 SECTION THRU EXISTING EXTERIOR WALL - PHASE 2 NEW WORK
SCALE: 1/4" = 1'-0"



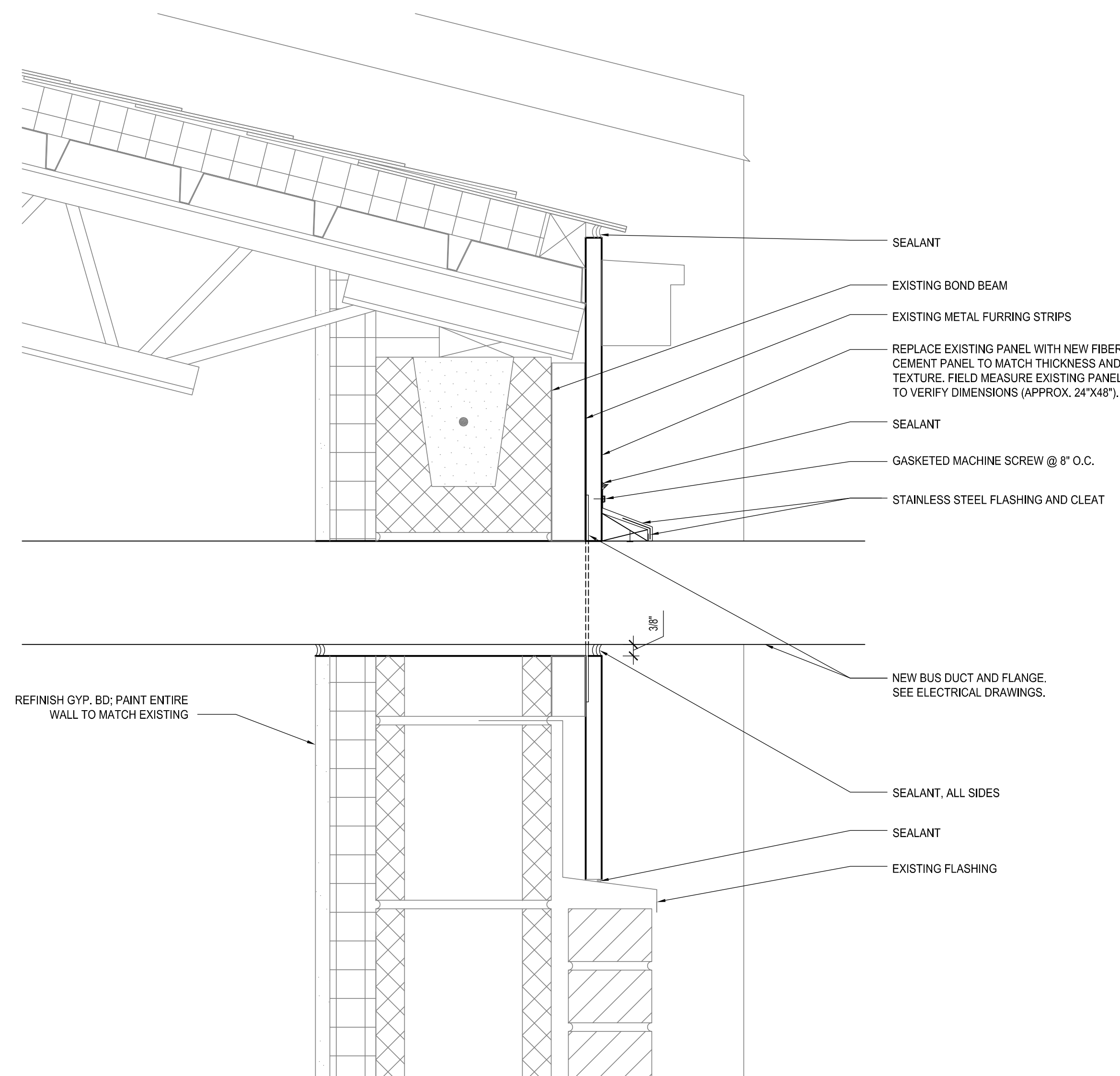
5 SECTION THRU EXTERIOR EQUIPMENT PAD EXTENSION - PHASE 2
SCALE: 1-1/2" = 1'-0"



6 SECTION THRU INTERIOR EQUIPMENT PAD EXTENSION - PHASE 1
SCALE: 1-1/2" = 1'-0"

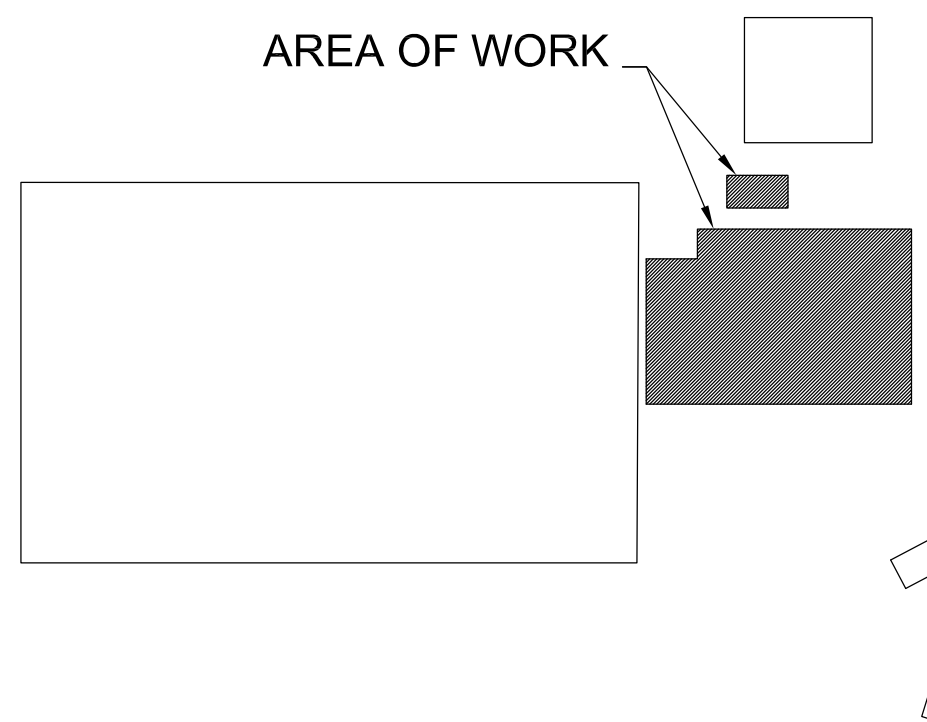


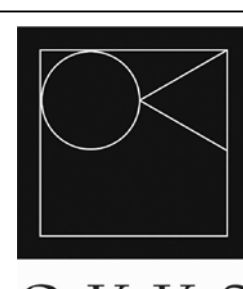

7 NORTH EXTERIOR WALL - PHASE 2 DEMOLITION
SCALE: 3" = 1'-0"



8 NORTH EXTERIOR WALL - PHASE 2 NEW WORK
SCALE: 3" = 1'-0"

PHASING NOTE:
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100% SUBMISSION 07/30/2013 95% SUBMISSION 07/01/2013 30% SUBMISSION 04/25/2013 Revisions: Date								Approved: Project Director	Location VAMC, MARTINSBURG, WV Date 07/30/2013 Checked TOS Drawn LCW			

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3" = 1'-0"

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1" = 1'-0"

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1" = 1'-0"

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3/4" = 1'-0"

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1/2" = 1'-0"

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3/8" = 1'-0"

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1/4" = 1'-0"

6"

16"

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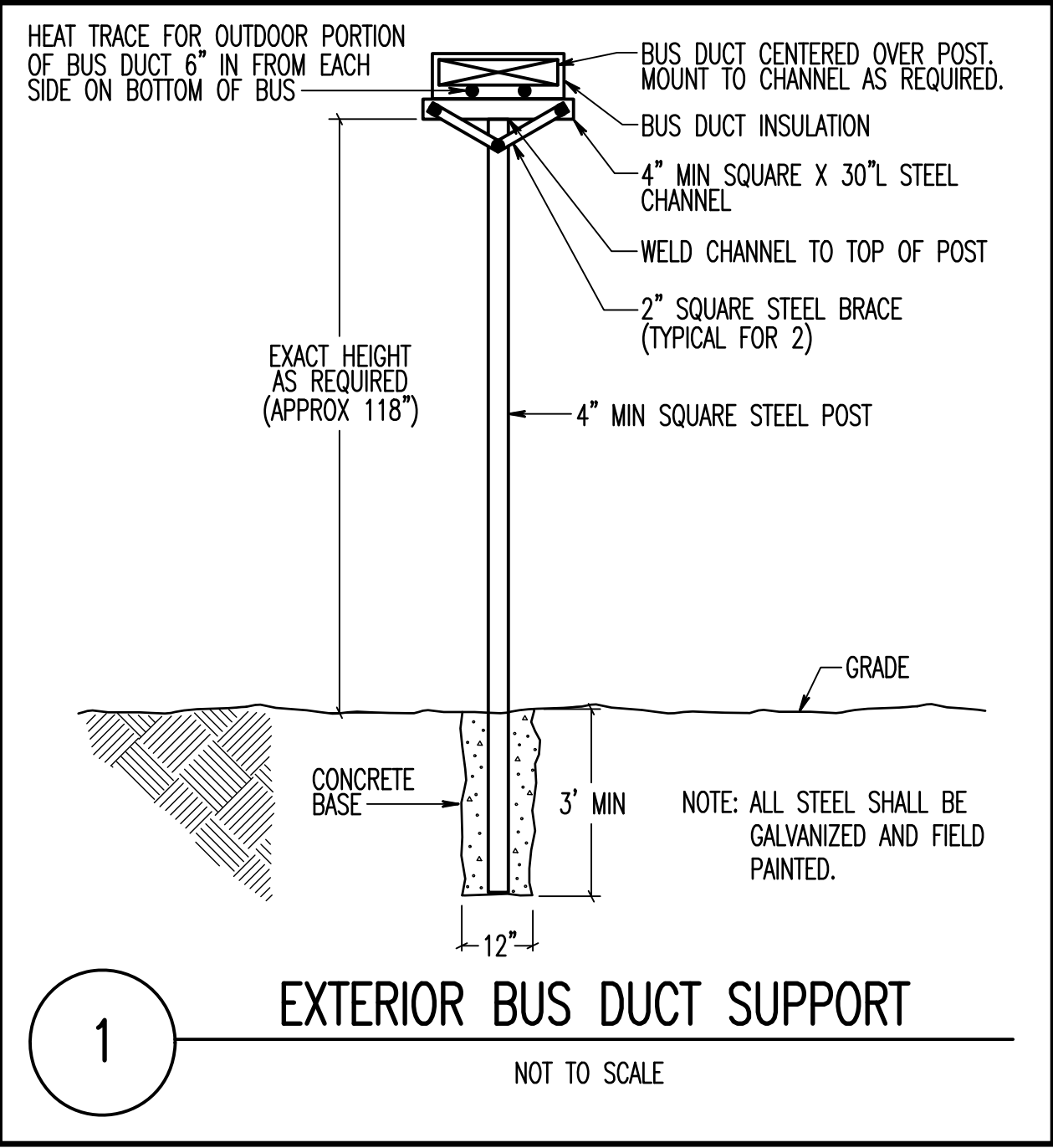
1/8" = 1'-0"

6"

GENERAL ELECTRICAL NOTES	
G.1	PROVIDE LABOR, MATERIALS, TOOLS, EQUIPMENT, COORDINATION, DELEGATED DESIGN AND INCIDENTALS NECESSARY TO PROVIDE A COMPLETE AND OPERABLE SYSTEM.
G.2	PERFORM WORK AS REQUIRED BY APPLICABLE CODES, REGULATIONS AND LAWS OF LOCAL, STATE AND FEDERAL GOVERNMENTS AND OTHER AUTHORITIES WITH LAWFUL JURISDICTION.
G.3	MATERIAL AND EQUIPMENT SHALL BE LISTED AND LABELED BY NATIONALLY RECOGNIZED TESTING LABORATORIES FOR INTENDED SERVICE.
G.4	GIVE NOTICES, FILE PLANS, OBTAIN PERMITS AND LICENSES, PAY FEES AND BACK CHARGES, AND OBTAIN NECESSARY APPROVALS FROM AUTHORITIES THAT HAVE JURISDICTION.
G.5	MAINTAIN RECORD DRAWINGS ON SITE. RECORD SET SHALL BE COMPLETE, CURRENT, AND AVAILABLE UPON REQUEST.
G.6	SUBMIT FOR APPROVAL, SHOP DRAWINGS FOR EQUIPMENT AND MATERIALS USED ON PROJECT. OBTAIN APPROVAL BY ENGINEER PRIOR TO PURCHASE OF EQUIPMENT AND MATERIALS.
G.7	REPAIR OR REPLACE DAMAGE TO FACILITIES AND EQUIPMENT AT NO ADDITIONAL EXPENSE TO OWNER.
G.8	PATCH AND REPAIR DISTURBED AREAS TO MATCH ADJACENT SURFACES AND FINISHES.
G.9	PROVIDE TEMPORARY POWER AND LIGHTING FOR OTHER TRADES AS REQUIRED TO COMPLETE PROJECT IN ACCORDANCE WITH APPLICABLE CODES AND STANDARDS.
G.10	DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS. PROVIDE COMPONENTS INDICATED ON RISER DIAGRAMS WHETHER OR NOT INDICATED ON PLANS, AND VICE VERSA.
G.11	LOCATIONS SHOWN ON PLANS ARE APPROXIMATE AND REQUIRE COORDINATION WITH OTHER TRADES. ROUTING OF CONDUIT IS DIAGRAMMATIC IN NATURE AND NOT INTENDED TO SHOW REQUIRED OFFSETS AND DETAILS. OBTAIN DRAWINGS AND SPECIFICATIONS FROM OTHER TRADES AND COORDINATE WITH OTHER TRADES.
G.12	COORDINATE ELECTRICAL INSTALLATION WITH FIELD CONDITIONS. LOCATIONS SHOWN ARE DIAGRAMMATIC AND MAY REQUIRE ADJUSTMENT IN FIELD.
G.13	PERMANENTLY LABEL NEW ELECTRICAL EQUIPMENT, INCLUDING BUT NOT LIMITED TO, DEVICE DESIGNATION AND SUPPLY CIRCUIT DESIGNATION.
G.14	PROVIDE EACH CIRCUIT WITH A DEDICATED NEUTRAL UNLESS NOTED OTHERWISE.
G.15	PROVIDE FIREPROOFING FOR ELECTRICAL PENETRATIONS WHERE APPLICABLE.
G.16	INSTALL ELECTRICAL WORK IN A NEAT AND WORKMANLIKE MANNER, RECTILINEAR TO BUILDING STRUCTURE. INSTALL RACEWAYS TIGHT TO STRUCTURAL CEILING AND AS HIGH AS POSSIBLE WITHIN CEILING SPACES TO MAINTAIN MAXIMUM AMOUNT OF CLEAR SPACE BELOW RACEWAY. -WHERE SUSPENDED CEILINGS ARE NOT PROVIDED -IN VERTICAL SHAFTS, ELECTRICAL CLOSETS, ETC., MECHANICAL AND ELECTRICAL EQUIPMENT SPACES WHERE CONCEALMENT IS NOT PRACTICAL. -AT SURFACE-MOUNT PANELBOARDS IN OTHERWISE FINISHED SPACES LIMITED TO VERTICAL RUNS ABOVE AND BELOW PANEL -WHERE REQUIRED FOR EQUIPMENT CONNECTIONS -WHERE SPECIFICALLY INDICATED ON DRAWINGS
G.17	INSTALL RACEWAYS CONCEALED IN WALLS, UNDER FLOORS, ABOVE CEILINGS, ETC., EXCEPT AS FOLLOWS: -WHERE SUSPENDED CEILINGS ARE NOT PROVIDED -IN VERTICAL SHAFTS, ELECTRICAL CLOSETS, ETC., MECHANICAL AND ELECTRICAL EQUIPMENT SPACES WHERE CONCEALMENT IS NOT PRACTICAL. -AT SURFACE-MOUNT PANELBOARDS IN OTHERWISE FINISHED SPACES LIMITED TO VERTICAL RUNS ABOVE AND BELOW PANEL -WHERE REQUIRED FOR EQUIPMENT CONNECTIONS -WHERE SPECIFICALLY INDICATED ON DRAWINGS
G.18	WHERE SUBMITTED EQUIPMENT REQUIRES REVISION TO OVERCURRENT PROTECTION, CONDUIT, AND WIRING, COORDINATE AND MAKE CHANGE TO PROVIDE A COMPLETE INSTALLATION IN ACCORDANCE WITH APPLICABLE CODES.
G.19	PRIOR TO SUBMITTING BID, VISIT SITE AND BECOME THOROUGHLY FAMILIAR WITH EXISTING CONDITIONS AND PROPOSED CONSTRUCTION.

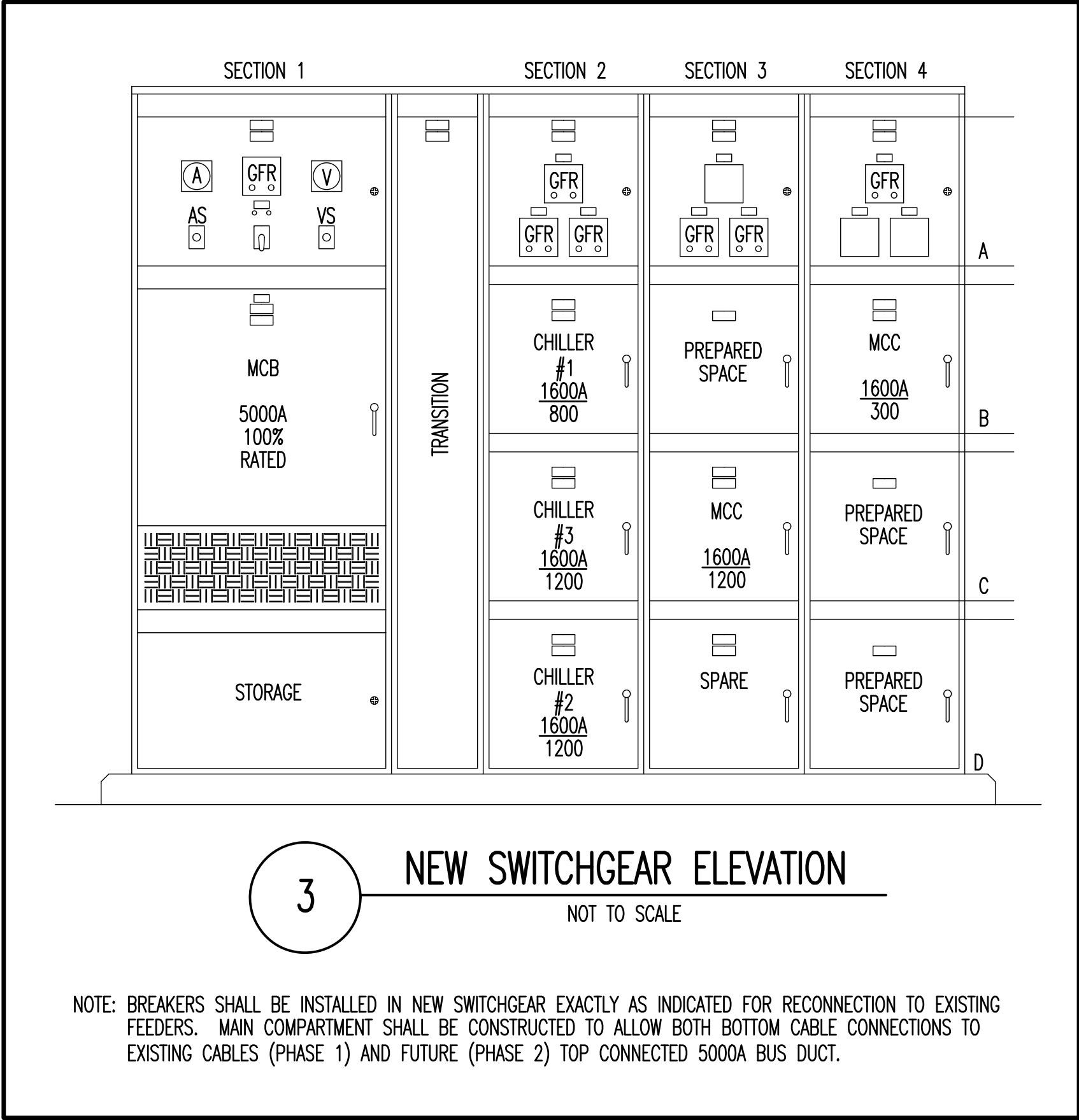
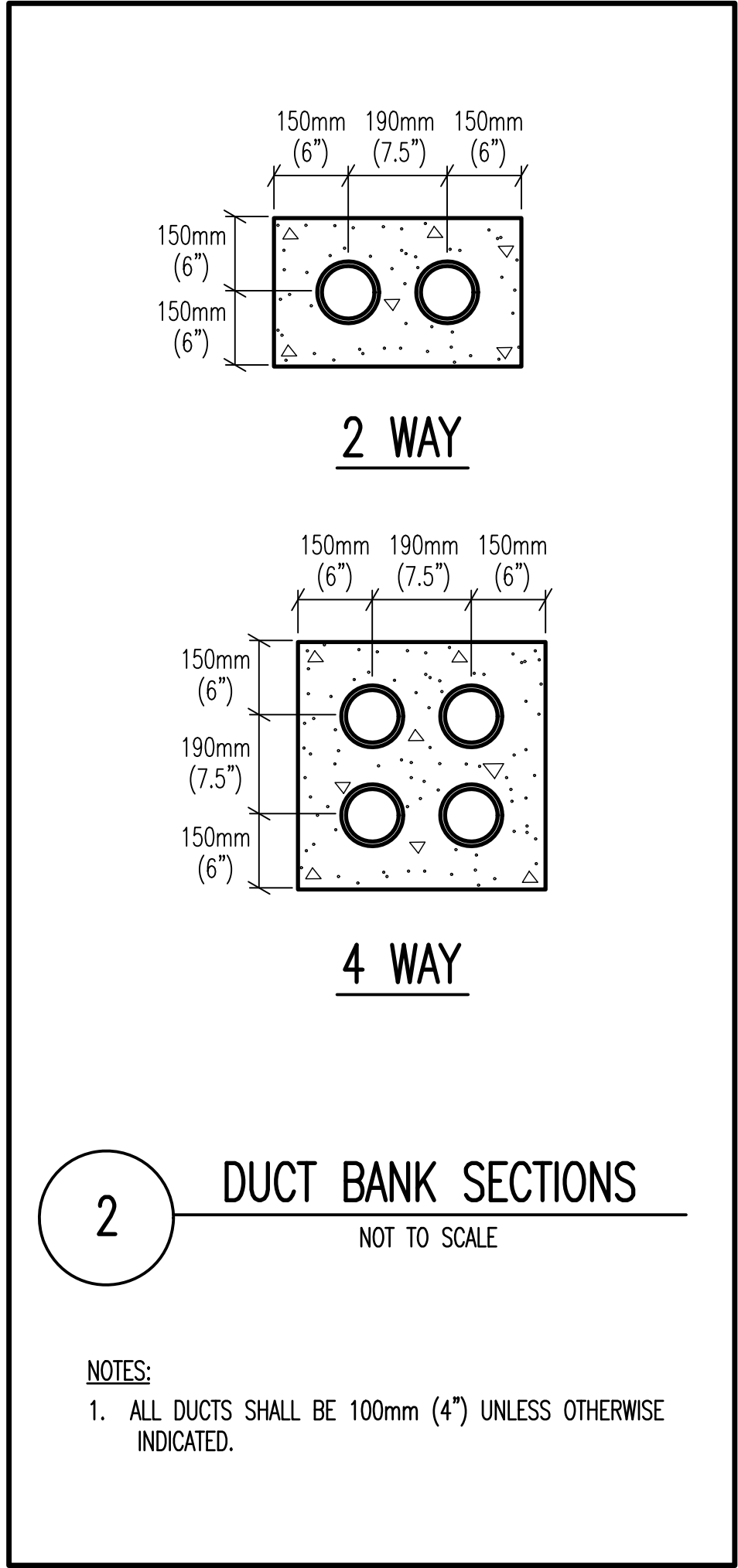
GENERAL ELECTRICAL DEMOLITION/RENOVATION NOTES	
GD.1	THE FACILITY WILL REMAIN OCCUPIED DURING RENOVATIONS.
GD.2	MINIMIZE OUTAGES. COORDINATE OUTAGES WITH OWNER. PERFORM WORK REQUIRING SUSTAINED EQUIPMENT OUTAGE CONTINUOUSLY AROUND THE CLOCK UNTIL WORK IS COMPLETE, UNLESS NOTED OTHERWISE.
GD.3	PRIOR TO DEMOLITION, FIELD VERIFY CONDUITS, CONDUCTORS, AND CABLES THAT PASS THROUGH AND SERVE AREAS OUTSIDE THE SCOPE OF WORK. MAINTAIN CONTINUITY OF SYSTEMS. PROTECT OR RELOCATE SYSTEMS TO PREVENT DAMAGE. RESTORE SYSTEMS TO NORMAL OPERATION. COORDINATE SYSTEM OUTAGES WITH OWNER.
GD.4	IDENTIFY NONFUNCTIONING EQUIPMENT AND DEVICES TO REMAIN AFTER DEMOLITION. NOTIFY OWNER IN WRITING PRIOR TO DEMOLITION. UPON COMPLETION OF WORK, ENSURE THAT EXISTING EQUIPMENT AND DEVICES OPERATE PROPERLY.
GD.5	IN AREAS REQUIRING THE PERFORMANCE OF WORK OF OTHER TRADES, CAREFULLY DISCONNECT, MAKE SAFE, REMOVE AND STORE ELECTRICAL ITEMS IN PATH OF WORK. REINSTALL AND RECONNECT SAME AFTER COMPLETION OF OTHER TRADE'S WORK. COORDINATE REMOVAL OF EQUIPMENT WITH OTHER TRADES PRIOR TO DEMOLITION.
GD.6	AFTER DEMOLITION VERIFY AND SUPPORT REMAINING CABLES, WIRES, AND CONDUIT IN ACCORDANCE WITH THE APPLICABLE VERSION OF THE NEC. DISCONNECT, MAKE SAFE AND REMOVE ABANDONED AND TEMPORARY WIRE WITHIN SPACE.
GD.7	PROTECT REMAINING ELECTRICAL SYSTEMS AND COMPONENTS FROM DAMAGE. REMOVE PROTECTIVE MATERIALS UPON COMPLETION OF WORK.
GD.8	IN AREAS NOTED TO REMOVE ELECTRICAL WORK, REMOVE CONDUITS AND ASSOCIATED SUPPORTS BACK TO POINT OF CONCEALMENT AND REMOVE WIRING BACK TO REMAINING ACTIVE DEVICES OR SOURCE AS NOTED.
GD.9	PROVIDE OWNER WITH INVENTORY OF MAJOR ELECTRICAL ITEMS TO BE REMOVED. OWNER WILL SELECT ITEMS TO BE SALVAGED. TURN SALVAGED ITEMS OVER TO OWNER. ITEMS REJECTED BY THE OWNER SHALL BECOME THE PROPERTY OF THE CONTRACTOR. REMOVE DEMOLISHED ITEMS FROM SITE.
GD.10	REPAIR DISTURBED AREAS TO MATCH EXISTING CONDITIONS.
GD.11	PROVIDE BLANK COVER PLATES FOR DEVICES REMOVED WHEN A REPLACEMENT DEVICE IS NOT INDICATED.
GD.12	MAINTAIN CONTINUITY OF CIRCUITS AND FEEDERS REMAINING AFTER DEMOLITION IN PANELS INDICATED TO BE DEMOLISHED OR REPLACED. EXTEND EXISTING CIRCUITS AND FEEDERS REMAINING AFTER DEMOLITION TO NEW PANELS. CIRCUIT BREAKER, CONDUIT, AND WIRE SHALL MATCH EXISTING TYPES AND SIZES.

ELECTRICAL CONVENTIONS	
REFERENCE	
	DETAIL DESIGNATION NUMBER DENOTES DETAIL IDENTIFICATION DRAWING NUMBER WHERE DETAIL IS LOCATED
	SPECIAL NOTE (APPLIES WHERE INDICATED ON THE DRAWING)
	DRAWING NOTE (APPLIES TO ENTIRE DRAWING)
	GENERAL NOTE - APPLIES TO ENTIRE DRAWING SET
PRESENTATION	
	ELECTRICAL EQUIPMENT DESIGNATED BY SOLID HEAVY LINEWEIGHT INDICATES NEW WORK TO BE PROVIDED.
	ELECTRICAL EQUIPMENT DESIGNATED BY SOLID LIGHT LINEWEIGHT INDICATES EXISTING EQUIPMENT TO REMAIN, UNLESS OTHERWISE INDICATED.
	ELECTRICAL EQUIPMENT DESIGNATED BY DASHED HEAVY LINEWEIGHT REPRESENTS EXISTING EQUIPMENT TO BE REMOVED AND DISPOSED, UNLESS INDICATED TO BE REMOUNTED, RELOCATED, OR TURNED OVER TO OWNER.



ELECTRICAL ABBREVIATIONS			
A	AMPERE	MCB	MAIN CIRCUIT BREAKER
ACH	ABOVE CABINET HEIGHT	MCC	MOTOR CONTROL CENTER
ACU	AIR CONDITIONING UNIT	MCP	MOTOR CIRCUIT PROTECTOR
AFF	ABOVE FINISHED FLOOR	MHP	MAIN DISTRIBUTION PANEL
AFG	ABOVE FINISHED GRADE	MH	MANHOLE
AHU	AIR HANDLING UNIT	M/L	MAIN LUGS
AIC	AMPERE INTERRUPTING CAPACITY	MOA	MULTI OUTLET ASSEMBLY
ASYM	ASYMMETRICAL	MSP	MOTOR STARTER PANEL
ATS	AUTOMATIC TRANSFER SWITCH	MTO	MOUNTED
		MV	MEDIUM VOLTAGE
C	CONDUIT	NC	NORMALLY CLOSED
CB	CIRCUIT BREAKER	NC/EC	NURSE CALL EQUIP. CABINET
CCTV	CLOSED CIRCUIT TELEVISION	NF	NON-FUSED
CKT	CIRCUIT	NO	NORMALLY OPEN
CT	CURRENT TRANSFORMER	NTS	NOT TO SCALE
CX	CONNECT TO EXISTING	OC	OVERCURRENT PROTECTION
DP	DISTRIBUTION PANEL	OH	OVERHEAD
DT	DOUBLE THROW		
DWC	DRINKING WATER COOLER	P	POLE(1P., 2P., 3P.)
DWG	DRAWING	PB	PUSH BUTTON
E	EMERGENCY	PH	PHASE
EBH	ELECTRIC BASEBOARD HEATER	PL	PILOT LIGHT
EQUIP	EQUIPMENT	PP	POWER PANEL
ETR	EXISTING TO REMAIN	PT	POTENTIAL TRANSFORMER
EW	ELECTRIC WATER HEATER	PVC	POLYVINYL CHLORIDE
EX	EXISTING		
F	FUSED OR FUSIBLE	R	RACEWAY
FA	FIRE ALARM	RCS	REMOTE CONTROL SWITCH
FAP	FIRE ALARM CONTROL PANEL	RP	RECEPTACLE PANEL
FCU	FAN COIL UNIT	RX	REMOVE EXISTING
FDR	FEEDER	SN	SOLID NEUTRAL
GFI	GROUND FAULT INTERRUPTER	SS	SAFETY SWITCH
GW	GROUND WIRE	ST	SINGLE-THROW SWITCH
HOA	HAND-OFF-AUTOMATIC	SW	SWITCH
HP	HORSE POWER	SWBD	SWITCHBOARD
HPU	HEAT PUMP UNIT	SYM	SYMMETRICAL
HV	HIGH VOLTAGE		
HZ	HERTZ	TS	TIE SWITCH
ICEC	INTERCOM EQUIPMENT CABINET	TB	TELEPHONE TERMINAL BOARD
IG	ISOLATED GROUND	TP	TYPICAL
JB	JUNCTION BOX	UG	UNDERGROUND
KMIL	THOUSAND CIRCULAR MILS	UH	UNIT HEATER
KV	KILO-VOLTS	UON	UNLESS OTHERWISE NOTED
KVA	KILO-VOLT-AMPERE	V	VOLTS
KW	KILOWATTS	W	WIRE
LAD	LOCATE AS DIRECTED	WP	WEATHER PROOF
LC	LOAD CENTER	XFMR	TRANSFORMER
LP	LIGHTING PANEL		
LV	LOW VOLTAGE		

ELECTRICAL SYMBOLS - DIAGRAM	
	DELTA CONNECTION
	MOTOR, SINGLE-PHASE
	MOTOR, THREE-PHASE
	TRANSFORMER
	WYE CONNECTION
	EARTH GROUND
	SWITCH, SINGLE BREAK
	NORMALLY CLOSED RELAY CONTACT
	NORMALLY OPEN RELAY CONTACT
	FUSE WITH RATING
	MOLDED CASE CIRCUIT BREAKER
	LOW-VOLTAGE DRAWOUT AIR CIRCUIT BREAKER
	MEDIUM-VOLTAGE DRAWOUT AIR CIRCUIT BREAKER
	SWITCH AND FUSE UNIT
	FUSED DRAWOUT POTENTIAL TRANSFORMER
	RELAY
	50 = INSTANTANEOUS OVERCURRENT OR RATE-OF-RISE
	51 = AC-TIME OVERCURRENT
	67 = AC-DIRECTIONAL OVERCURRENT
	86 LOCKING OUT
	DISCONNECT SWITCH, FUSED
	DISCONNECT SWITCH, UNFUSED
	FUSIBLE LINK
	STARTER, COMBINATION WITH DISCONNECT SWITCH
	STARTER OR MOTOR CONTROLLER
	TIME CLOCK
	GENERATOR, POWER
	BATTERY
	CAPACITOR
	POTHEAD
	STRESS CONE
	LIGHTNING ARRESTER
	METER
	AMMETER
	VOLTMETER
	WATTMETER
	WATT-HOUR METER



100% SUBMISSION	07/30/2013
95% SUBMISSION	07/01/2013
30% SUBMISSION	04/25/2013
Revisions:	Date

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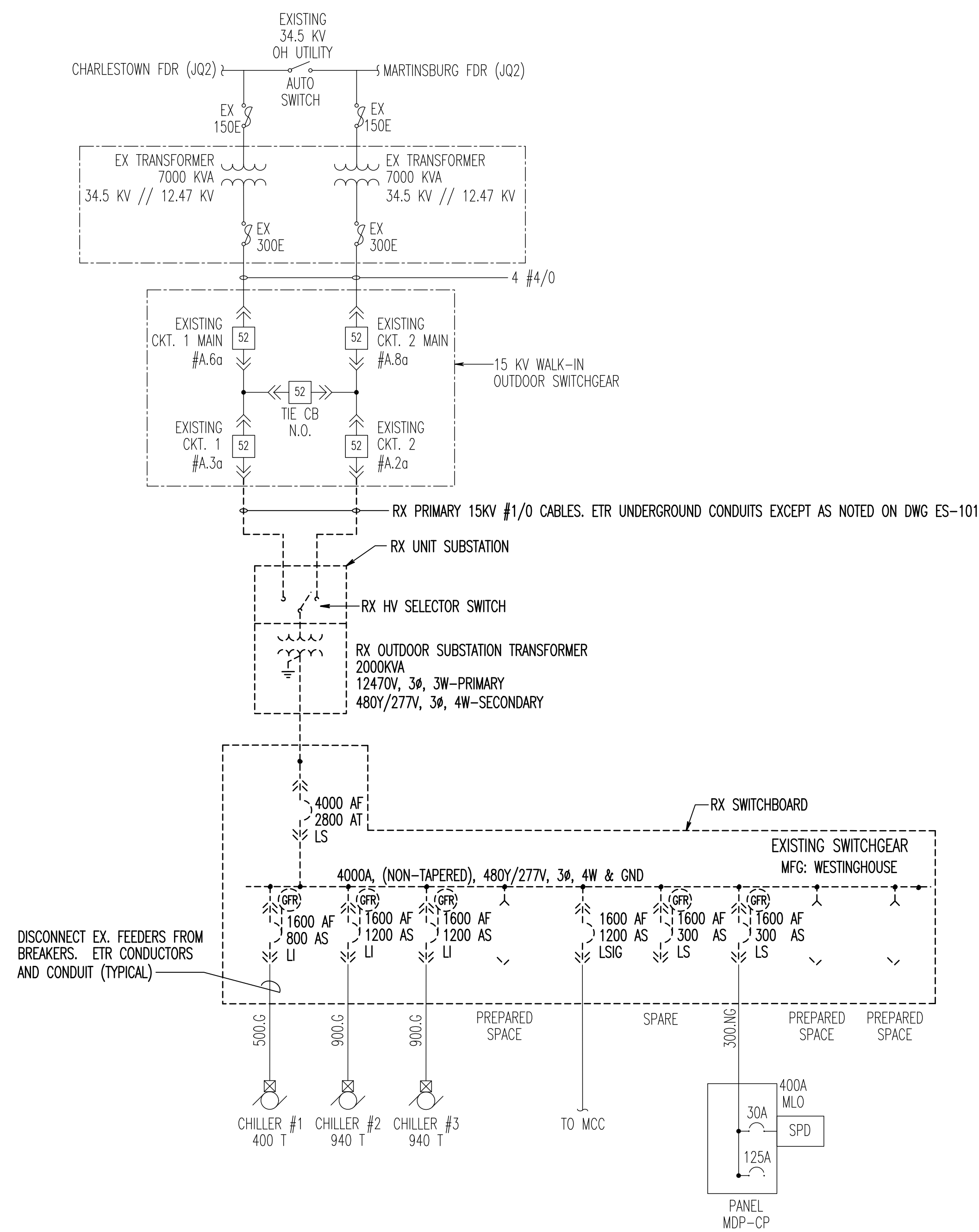
Drawing Title
ELECTRICAL COVER SHEET
Approved: Project Director

Project Title
REPLACEMENT OF CHILLER PLANT TRANSFORMER
Location
VAMC, MARTINSBURG, WV
Date
07/30/2013

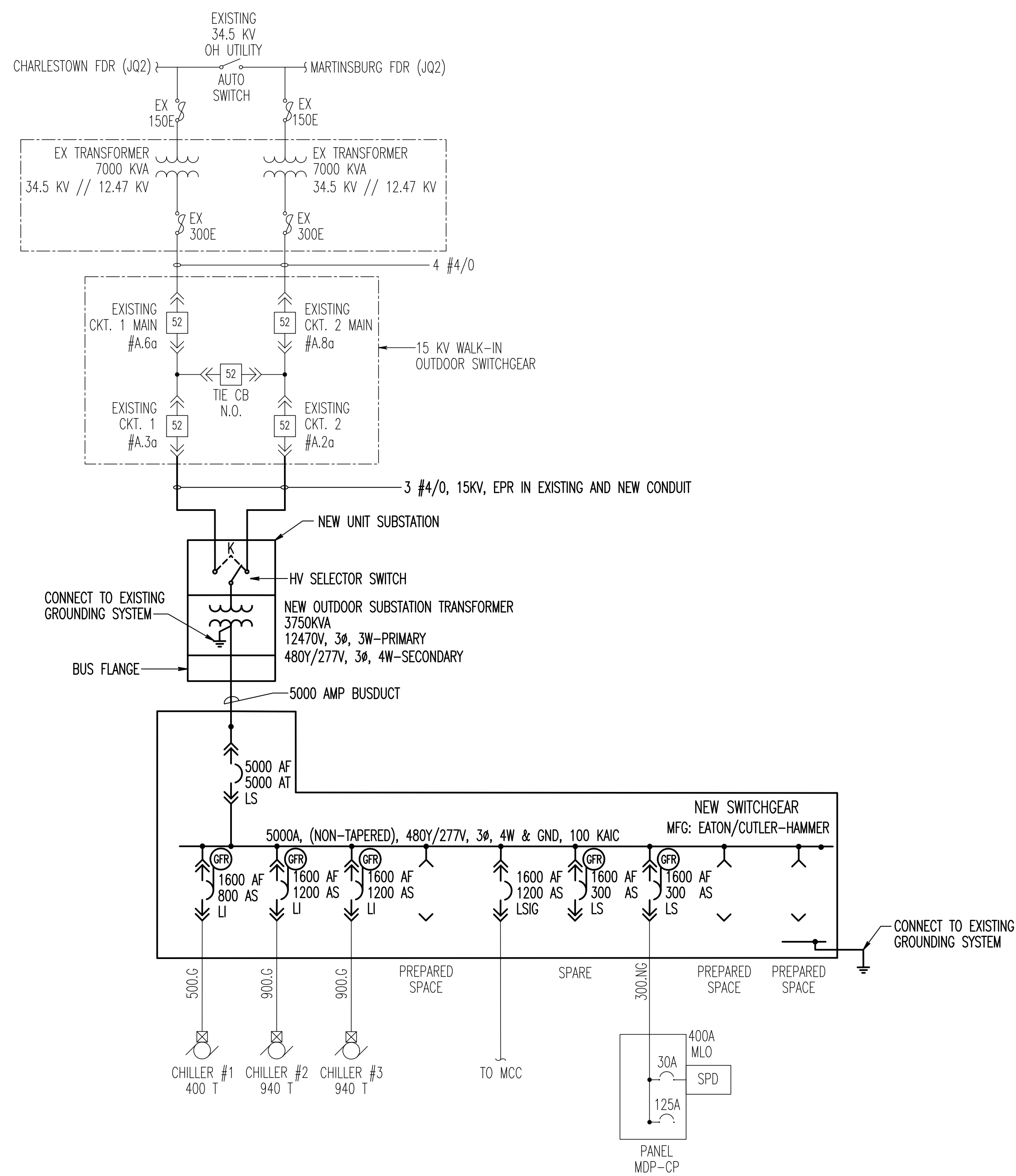
VA Project Number
613-12-114
Building Number
503
Drawing Number
ES001

Office of Construction and Facilities Management
Department of Veterans Affairs

GENERAL NOTES: (APPLICABLE TO ELECTRICAL DRAWINGS ONLY)
G1. REFER TO DRAWING ES101 FOR PROJECT PHASING REQUIREMENTS.



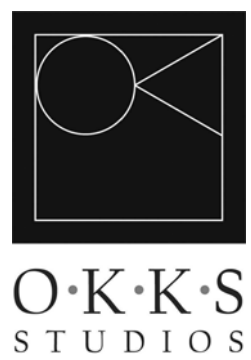
1 SINGLE LINE DIAGRAM - DEMOLITION
ES-4.1 SCALE: NTS



1 SINGLE LINE DIAGRAM - NEW WORK
ES-4.1 SCALE: NTS

100% SUBMISSION	07/30/2013
95% SUBMISSION	07/01/2013
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Drawing Title
ELECTRICAL RISER DIAGRAMS

Approved: Project Director

Project Title
**REPLACEMENT OF CHILLER
PLANT TRANSFORMER**

Location
VAMC, MARTINSBURG, WV

Date
07/30/2013

Checked
KMG

Drawn
MLS

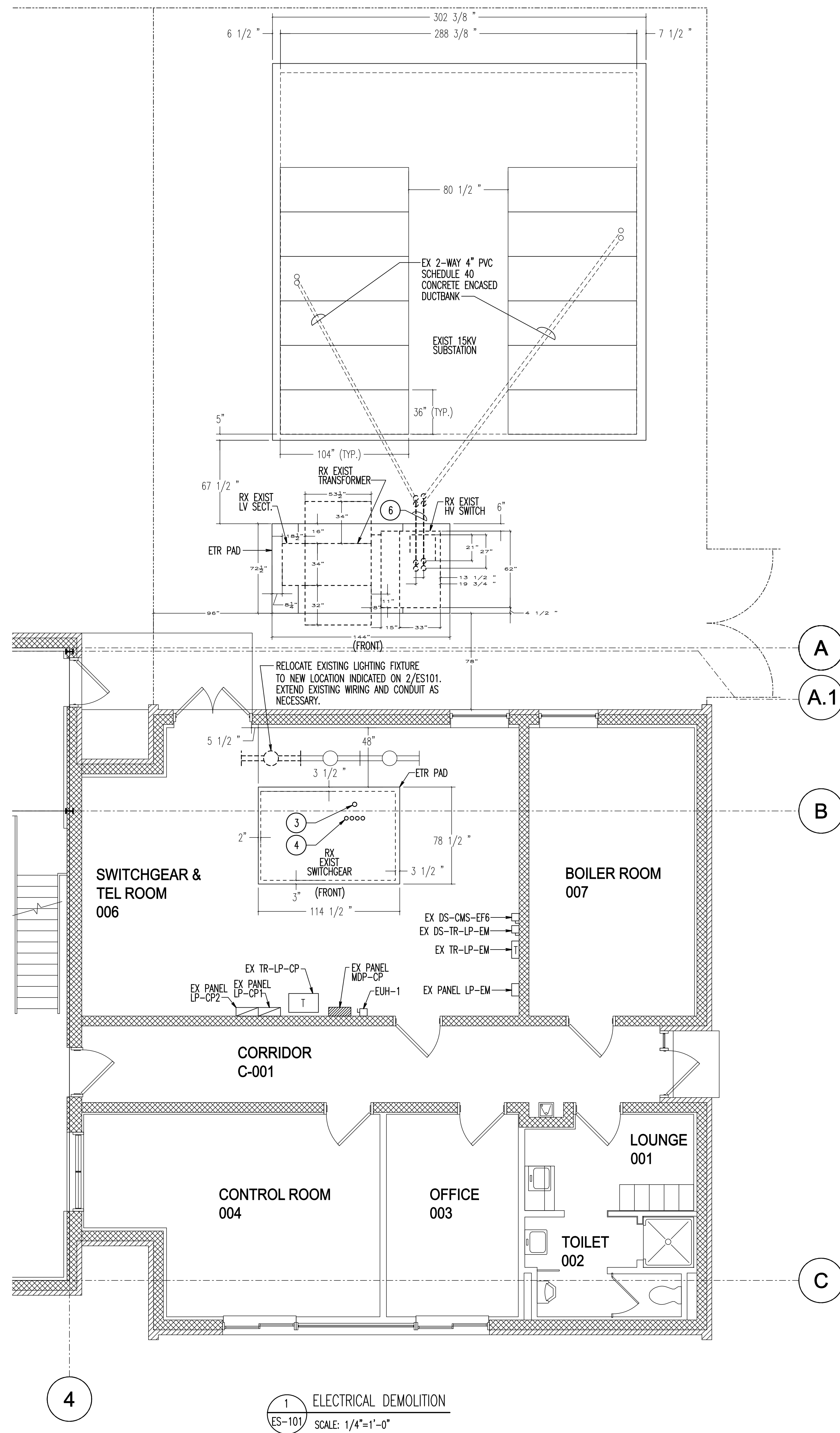
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613-12-114

Building Number
503

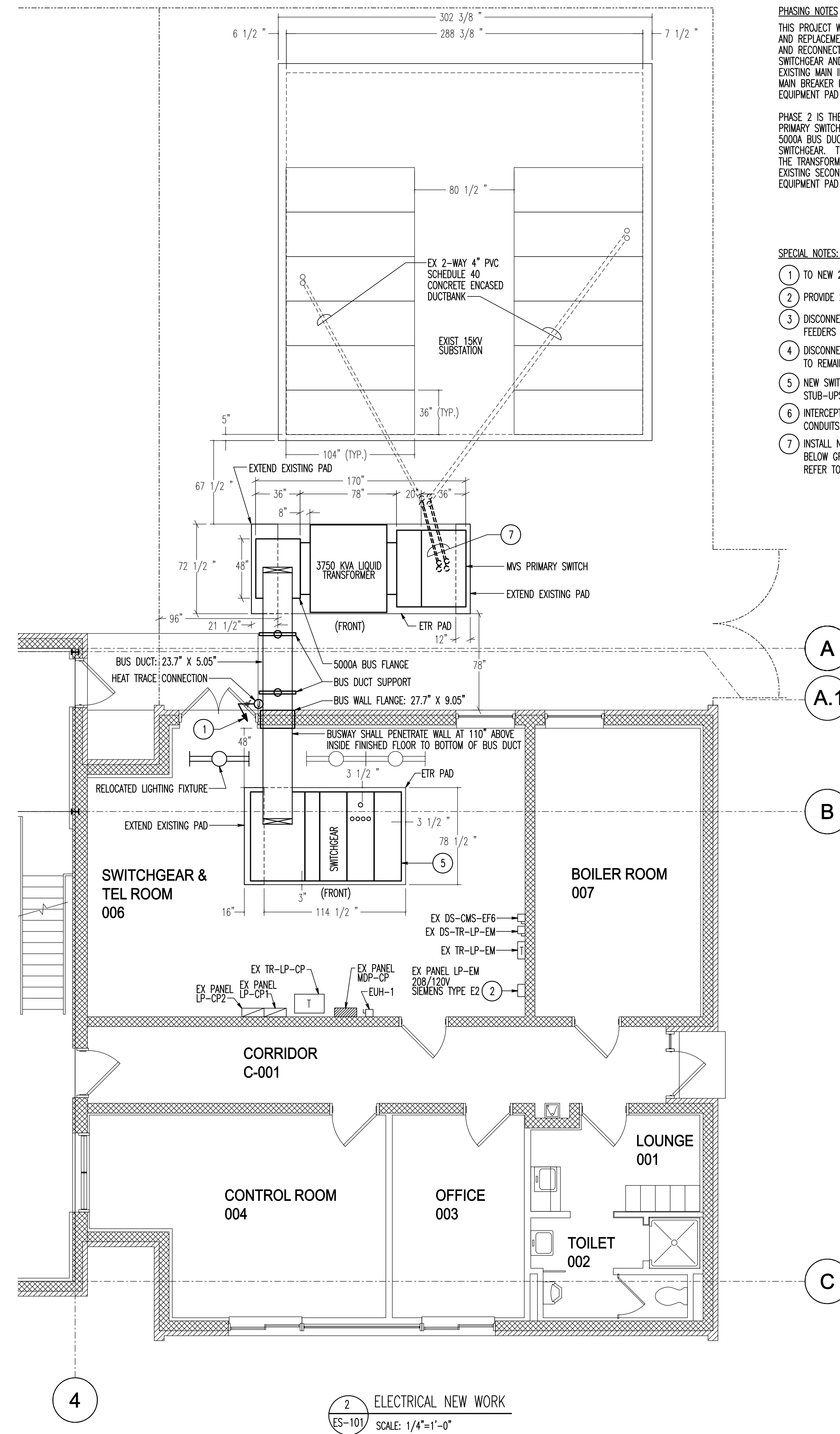
Drawing Number
ES002

Office of
Construction
and Facilities
Management

Department of
Veterans Affairs



1 ELECTRICAL DEMOLITION
ES-101
SCALE: 1/4"=1'-0"



2 ELECTRICAL NEW WORK
ES-101
SCALE: 1/4"=1'-0"

PHASING NOTES

THIS PROJECT WILL BE PHASED IN TWO PARTS. PHASE 1 IS THE REMOVAL AND REPLACEMENT OF THE INDOOR SWITCHGEAR. PROVIDE DISCONNECTION AND RECONNECTION OF THE EXISTING OUTGOING FEEDERS FROM THE SWITCHGEAR AND DISCONNECTION AND TEMPORARILY RECONNECTION OF THE EXISTING MAIN INCOMING FEEDERS FROM THE TRANSFORMER TO THE NEW MAIN BREAKER IN THE NEW SWITCHGEAR. EXTEND EXISTING INDOOR EQUIPMENT PAD AS INDICATED.

PHASE 2 IS THE REPLACEMENT OF THE OUTDOOR TRANSFORMER, ASSOCIATED PRIMARY SWITCH, PRIMARY CABLES AS INDICATED, AND INSTALLATION OF THE 5000A BUS DUCT FROM THE NEW TRANSFORMER TO THE NEW INDOOR SWITCHGEAR. THE EXISTING UNDERGROUND SECONDARY FEEDER CABLES FROM THE TRANSFORMER TO THE INDOOR SWITCHGEAR SHALL BE REMOVED. ABANDON EXISTING SECONDARY UNDERGROUND CONDUITS. EXTEND EXISTING OUTDOOR EQUIPMENT PAD AS INDICATED.

- SPECIAL NOTES: (APPLICABLE TO THIS SHEET ONLY)**
- 1 TO NEW 2P-20A CB IN EXISTING PANEL LP-EM.
 - 2 PROVIDE 2P-20A CB IN EXISTING SPACE IN THIS PANEL FOR HEAT TRACE.
 - 3 DISCONNECT EXISTING 3-1/2" CONDUIT AND FEEDERS. CONDUIT AND FEEDERS TO REMAIN FOR RECONNECTION TO NEW SWITCHGEAR.
 - 4 DISCONNECT EXISTING 3" CONDUIT AND FEEDERS. CONDUIT AND FEEDERS TO REMAIN FOR RECONNECTION TO NEW SWITCHGEAR (TYPICAL FOR 4).
 - 5 NEW SWITCHGEAR SHALL BE PLACED DIRECTLY OVER FEEDER CONDUIT STUB-UPS. PHASE 1.
 - 6 INTERCEPT EXISTING PRIMARY 4" PVC SCHEDULE 40 CONCRETE ENCASED CONDUITS AND REMOVE BACK TO SWITCHGEAR PAD AS INDICATED.
 - 7 INSTALL NEW 4-WAY 4" PVC SCHEDULE 40 CONCRETE ENCASED CONDUITS BELOW GRADE TO NEW LOCATION INDICATED. PHASE 2. REFER TO DETAIL DRAWING ES001.