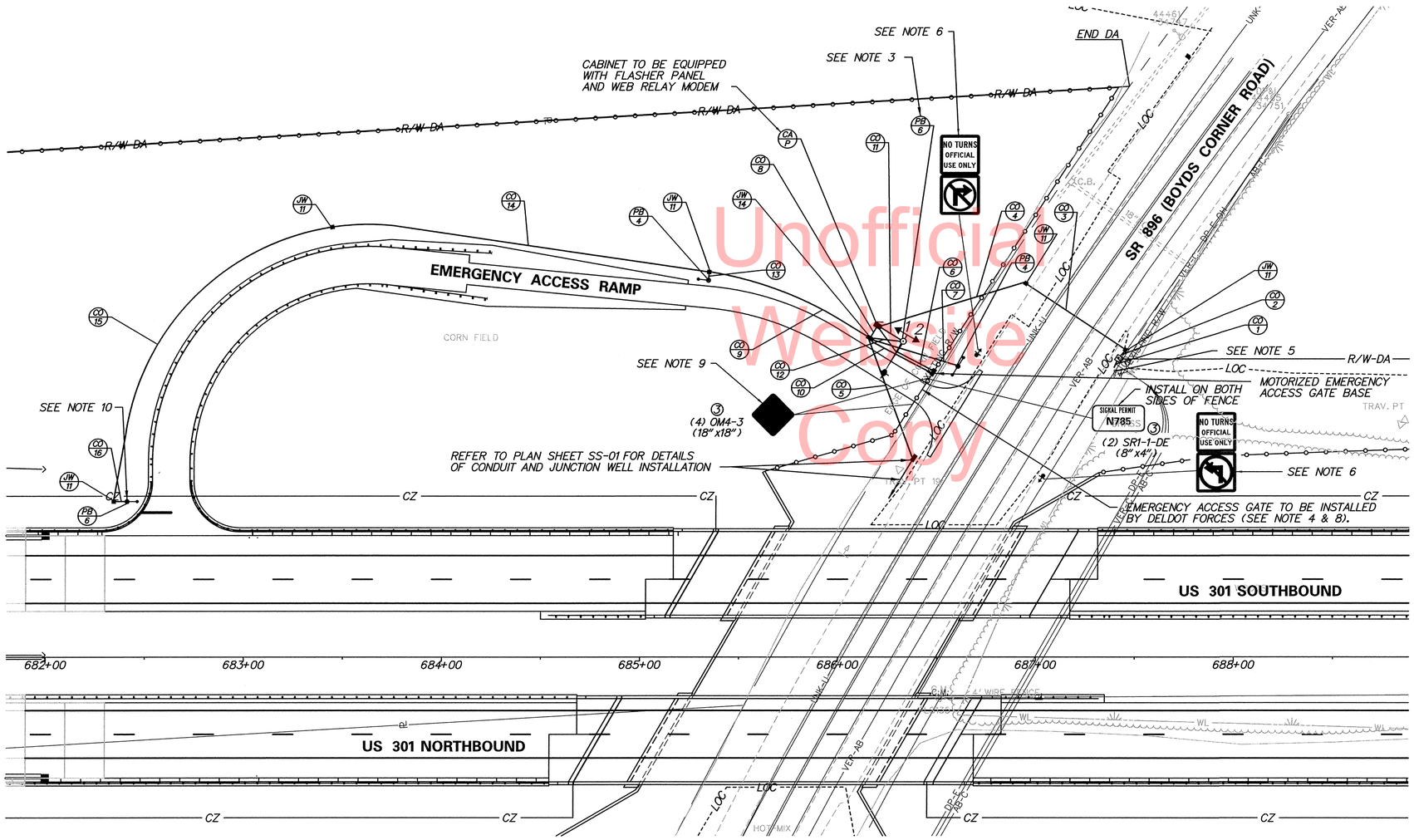
CONDUIT RUN SCHEDULE

CO#	# OF CONDUITS	SIZE	LENGTH	B/T/O	AMOUNT AND TYPE OF CABLE/WIRE (SUPPLY AND INSTALLATION BY DELDOT FORCES)
1*	1	2.0 IN**	4 FT	T	(1) 2/*8 U.F.W./ GROUND
2*	1	2.0 IN**	4 FT	T	(1) 2/*8 U.F.W./ GROUND
3	1	2.5 IN**	59 FT	B	(1) 2/*8 U.F.W./ GROUND
4	1	2.0 IN**	76 FT	T	(1) 2/*8 U.F.W./ GROUND
5	1	4.0 IN***	63 FT	B	COMMUNICATION CABLE
6	1	3.0 IN	35 FT	T	(1) 2/*8 U.F.W./ GROUND
7	1	2.5 IN	43 FT	T	(2) 4/*18, (1)*6 GROUND
8	2	4.0 IN	6 FT	T	(1) 9/*14, (4) 4/*18, (1)*6 GROUND
		4.0 IN	6 FT	T	(2) COMMUNICATION CABLES
9	1	4.0 IN	86 FT	T	(2) 4/*18, (1)*6 GROUND
10	1	3.0 IN	34 FT	T	COMMUNICATION CABLE
11	1	3.0 IN	12 FT	T	(1) 2/*8 U.F.W./ GROUND
12	1	3.0 IN	14 FT	T	(1) 9/*14, (1)*6 GROUND
13	1	2.5 IN	3 FT	T	(1) 4/*18, (1)*6 GROUND
14	1	4.0 IN	191 FT	T	(1) 4/*18, (1)*6 GROUND
15	1	4.0 IN	191 FT	T	(1) 4/*18, (1)*6 GROUND
16	1	3.0 IN	5 FT	T	(1) 4/*18, (1)*6 GROUND

*DENOTES CONDUIT INSTALLED BY DELDOT FORCES B = BORE, T = TRENCH, O = OPEN CUT
**RIGID GALVANIZED STEEL CONDUIT
***HDPE CONDUIT

NOTES:

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND REMOVAL OF ALL UNDERGROUND SIGNAL EQUIPMENT - E.G., JUNCTION WELLS, CABINET AND POLE BASES, AND CONDUIT. DELDOT'S TRAFFIC CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF ALL ELECTRICAL CABLES AND ABOVE GROUND EQUIPMENT - E.G., SIGNAL HEADS, OPTICOM RECEIVERS, SERVICE PEDESTAL, POLES, CABINET AND EMERGENCY GATE.
3. 30' ALUMINUM LIGHT POLE WITH 12' BRACKET ARM AND 250 WATT HIGH PRESSURE SODIUM LUMINAIRE. THE CONTRACTOR SHALL FURNISH AND INSTALL THE LIGHT POLE AND LUMINAIRE. DELDOT FORCES TO COMPLETE ELECTRICAL WIRING.
4. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE RIGHT OF WAY FENCING WITH THE INSTALLATION OF THE EMERGENCY ACCESS GATE BY DELDOT FORCES.
5. THE CONTRACTOR SHALL COORDINATE EXACT SERVICE LOCATION WITH DELMARVA POWER PENDING UTILITY RELOCATION DESIGN. DELMARVA POWER HAS CONFIRMED AVAILABILITY OF SERVICE IN AREA.
6. REFER TO PLAN SHEET SS-01 FOR DETAILS OF SIGN INSTALLATION.
7. ALL CONDUITS SHALL BE SCHEDULE 80, RIGID POLYVINYL CHLORIDE UNLESS OTHERWISE NOTED.
8. THE EMERGENCY GATE SHALL BE INSTALLED WITH RETROREFLECTIVE SHEETING ON BOTH SIDES WITH ALTERNATING RED AND WHITE VERTICAL STRIPES AT 16 INCH INTERVALS.
9. OBJECT MARKERS SHALL BE INSTALLED ON BOTH SIDES OF GATE ON BOTH SIDES OF DRIVEWAY.
10. PROPOSED OPTICOM ON 25 FOOT STEEL POLE WITH BREAKAWAY TRANSFORMER BASE (BY DELDOT FORCES).



SIGNAL PHASING

SIGNAL HEAD DIAGRAM

1,2

LEGEND

- PROPOSED SIGNAL CABINET
- EXISTING SIGNAL CABINET
- PROPOSED SIGNAL POLE BASE
- EXISTING SIGNAL POLE BASE
- PROPOSED PEDESTRIAN POLE BASE
- EXISTING PEDESTRIAN POLE BASE
- PROPOSED WOOD POLE
- EXISTING UTILITY POLE
- PROPOSED JUNCTION WELL
- EXISTING JUNCTION WELL
- PROPOSED SIGNAL HEAD
- EXISTING SIGNAL HEAD
- PROPOSED PEDESTRIAN SIGNAL HEAD
- EXISTING PEDESTRIAN SIGNAL HEAD
- PROPOSED PEDESTRIAN PUSHBUTTON
- EXISTING PEDESTRIAN PUSHBUTTON
- PROPOSED VIDEO DETECTION
- EXISTING VIDEO DETECTION
- PROPOSED MICROWAVE DETECTION
- EXISTING MICROWAVE DETECTION
- OVERHEAD SIGNING
- PROPOSED OPTICOM RECEIVER
- EXISTING OPTICOM RECEIVER
- PROPOSED MAST ARM
- EXISTING MAST ARM
- PROPOSED LUMINAIRE
- EXISTING LUMINAIRE
- PROPOSED LOOP DETECTOR (TYPE 1 OR 2)
- EXISTING LOOP DETECTOR (TYPE 1 OR 2)
- REMOVE BY CONTRACTOR
- REMOVE BY OTHERS
- ABANDON
- PROPOSED POLE BASE IDENTIFIER (TYPE OF POLE BASE)
- EXISTING POLE BASE IDENTIFIER (TYPE OF POLE BASE)
- PROPOSED JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)
- EXISTING JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)
- PROPOSED CONDUIT RUN IDENTIFIER (# OF CONDUIT RUN)
- EXISTING CONDUIT RUN IDENTIFIER (# OF CONDUIT RUN)
- PROPOSED OVERHEAD RUN IDENTIFIER (# OF OVERHEAD RUN)
- EXISTING OVERHEAD RUN IDENTIFIER (# OF OVERHEAD RUN)
- PROPOSED MAST ARM IDENTIFIER (LENGTH OF ARM)
- EXISTING MAST ARM IDENTIFIER (LENGTH OF ARM)
- PROPOSED CABINET IDENTIFIER (TYPE OF CABINET)
- EXISTING CABINET IDENTIFIER (TYPE OF CABINET)
- PROPOSED SPAN WIRE
- EXISTING SPAN WIRE
- RIGHT-OF-WAY OR PROPERTY LINE
- PROPOSED SPAN INSULATOR
- EXISTING SPAN INSULATOR
- SERVICE PEDESTAL

GENERAL SIGNAL NOTES

1. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY, AND/OR THE APPROPRIATE UTILITY PRIOR TO THE BEGINNING OF CONSTRUCTION FOR THE UTILITY MARKOUTS. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY DELDOT TRAFFIC IMMEDIATELY BEFORE CONSTRUCTION.

RECOMMENDED _____ DATE: 5.5.15
RECOMMENDED _____ DATE: _____
RECOMMENDED _____ DATE: _____
APPROVED TRAFFIC ENGINEER _____ DATE: 5/5/15
APPROVED FOR INSTALLATION CHIEF TRAFFIC ENGINEER _____ DATE: 5/6/15

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUM / REVISIONS

SCALE 0 30 60 90 FEET

US 301, SR 896 TO SR 1

CONTRACT	T200911308
COUNTY	NEW CASTLE

PERMIT NO. N785
DESIGNED BY: J.D.C. (WR&A)
CHECKED BY: J.M.M. (WR&A)

SG-01: US 301 SOUTHBOUND EMERGENCY ACCESS GATE

SHEET NO. 831
TOTAL SHTS. 868

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CONDUIT RUN SCHEDULE

CO#	# OF CONDUITS	SIZE	LENGTH	B/T/O	AMOUNT AND TYPE OF CABLE/WIRE (SUPPLY AND INSTALLATION BY DELDOT FORCES)
1*	1	2.0 IN**	4 FT	T	(1) 2/*8 U.F.W./ GROUND
2*	1	2.0 IN**	5 FT	T	(1) 2/*8 U.F.W./ GROUND
3	1	2.5 IN**	61 FT	B	(1) 2/*8 U.F.W./ GROUND
4	1	2.0 IN**	76 FT	T	(1) 2/*8 U.F.W./ GROUND
5	1	4.0 IN	88 FT	T	COMMUNICATION CABLE
6	1	3.0 IN	34 FT	T	(1) 2/*8 U.F.W./ GROUND
7	1	2.5 IN	41 FT	T	(2) 4/*18, (1)*6 GROUND
8	2	4.0 IN	5 FT	T	(1) 9/*14, (4) 4/*18, (1)*6 GROUND
		4.0 IN	5 FT	T	(2) COMMUNICATION CABLES
9	1	4.0 IN	74 FT	T	(2) 4/*18, (1)*6 GROUND
10	1	3.0 IN	33 FT	T	COMMUNICATION CABLE
11	1	3.0 IN	13 FT	T	(1) 2/*8 U.F.W./ GROUND
12	1	3.0 IN	14 FT	T	(1) 9/*14, (1)*6 GROUND
13	1	2.5 IN	3 FT	T	(1) 4/*18, (1)*6 GROUND
14	1	4.0 IN	137 FT	T	(1) 4/*18, (1)*6 GROUND
15	1	4.0 IN	146 FT	T	(1) 4/*18, (1)*6 GROUND
16	1	3.0 IN	5 FT	T	(1) 4/*18, (1)*6 GROUND

*DENOTES CONDUIT INSTALLED BY DELDOT FORCES B = BORE, T = TRENCH, O = OPEN CUT
**RIGID GALVANIZED STEEL
***HDPE CONDUIT

NOTES:

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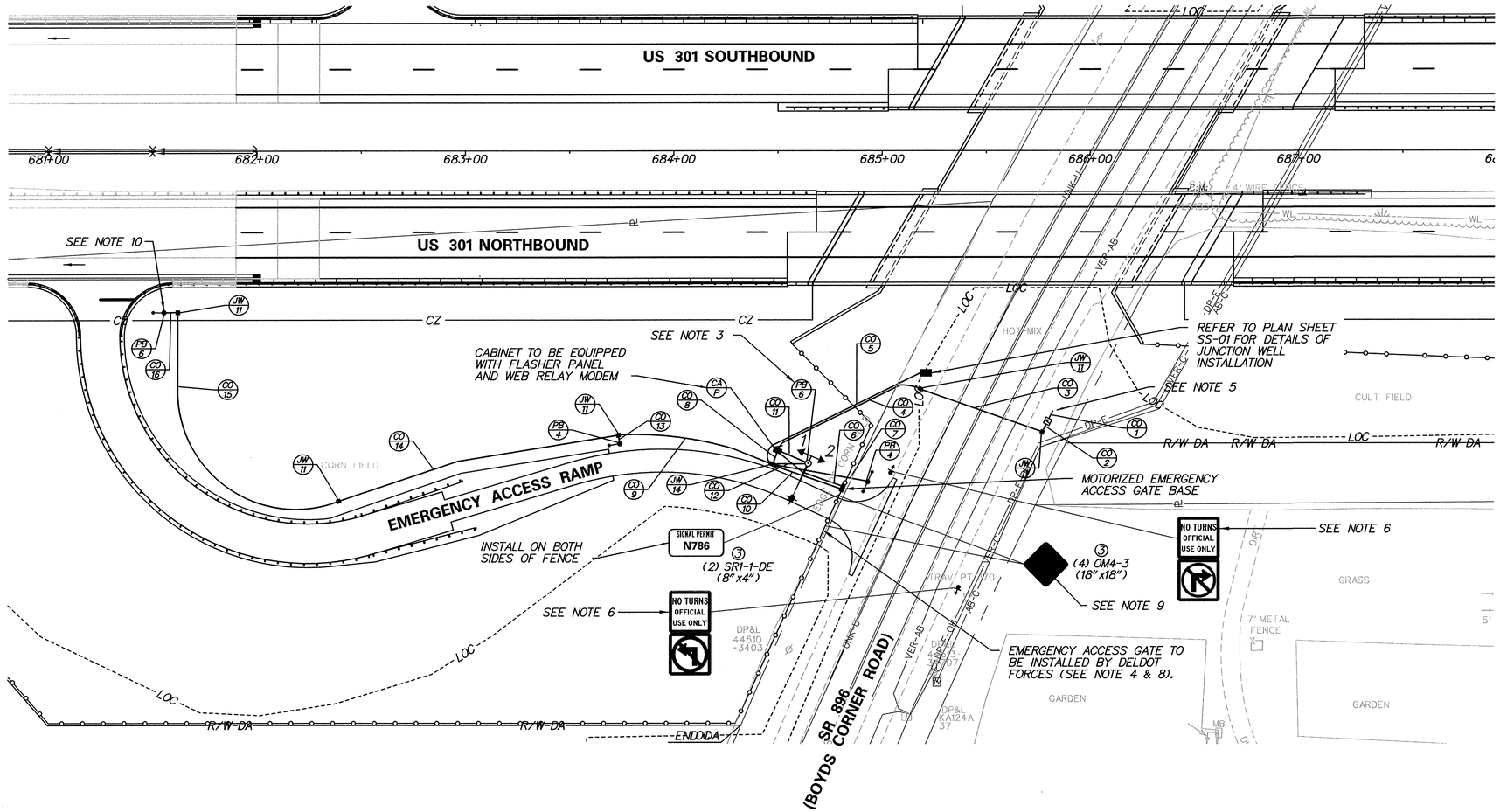

SIGNAL PHASING

SIGNAL HEAD DIAGRAM

1,2

LEGEND

- PROPOSED SIGNAL CABINET
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RECOMMENDED _____ DATE: 5.5.15

RECOMMENDED _____ DATE: _____

RECOMMENDED _____ DATE: _____

APPROVED TRAFFIC ENGINEER _____ DATE: 5/6/15

APPROVED FOR INSTALLATION
CHIEF TRAFFIC ENGINEER _____ DATE: 5/6/15

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUM / REVISIONS

SCALE 0 30 60 90 FEET

US 301, SR 896 TO SR 1

CONTRACT	PERMIT NO.	N786
T200911308	DESIGNED BY: J.D.C. (WR&A)	
COUNTY	CHECKED BY: J.M.M. (WR&A)	
NEW CASTLE		

SG-02: US 301 NORTHBOUND EMERGENCY ACCESS GATE

SHEET NO.
832
TOTAL SHTS.
868

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INDEX OF SHEETS

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IS-01

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

US 301
SR 896 TO SR 1

CONTRACT T200950343
COUNTY NEW CASTLE
BRIDGE NO.
DESIGNED BY: TQD
CHECKED BY: BDP

INDEX SHEET

SHEET NO. 833
TOTAL SHTS. 875

LAST REVISED: 3/12/2008
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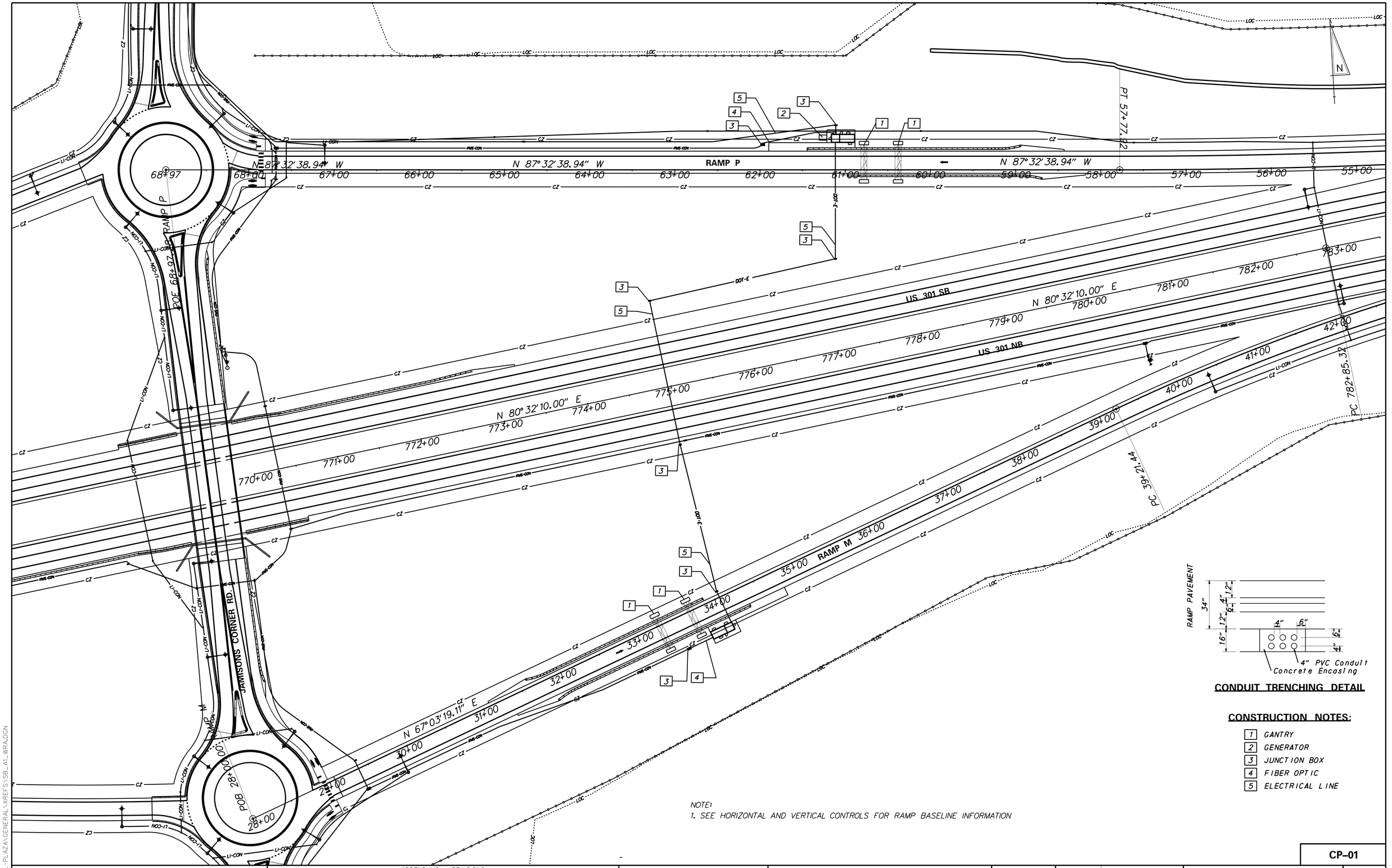

RAMP PAVEMENT

CONDUIT TRENCHING DETAIL

CONSTRUCTION NOTES:

1. GANTRY
2. GENERATOR
3. JUNCTION BOX
4. FIBER OPTIC
5. ELECTRICAL LINE

NOTE:
1. SEE HORIZONTAL AND VERTICAL CONTROLS FOR RAMP BASELINE INFORMATION

LAST REVISED: 3/12/2008
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CP-01

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 50 100 150
FEET

US 301
SR 896 TO SR 1

CONTRACT	BRIDGE NO.	
T200950343	DESIGNED BY: TQD	
COUNTY	CHECKED BY: BDP	
NEW CASTLE		

GENERAL LAYOUT
CONSTRUCTION PLAN

SHEET NO.
834
TOTAL SHTS.
875

N

CZ

ITMS-CON

US 301 NB

CZ

DOT-E

DO NOT STOP

CZ CZ CZ CZ

1 1 5 3 5

67°03'19.11" E

31+00 32+00 33+00 34+00 35+00 36+00

RAMP M CONSTRUCTION AND R/W BASELINE

ITMS-CON

CZ CZ ITMS-CON CZ CZ CZ

3 4 7 6

DO NOT STOP

TOLL

CARS / 2 AXLES $1.00

EACH ADDITIONAL AXLE $X.XX

LOC LOC LOC LOC LOC

CONSTRUCTION NOTES:

1. GANTRY
2. GENERATOR
3. JUNCTION BOX
4. FIBER OPTIC
5. ELECTRICAL LINE
6. P.C.C SIDEWALK (5' WIDE)
7. EQUIPMENT HUT

CP-02

LAST REVISED: 3/12/2008
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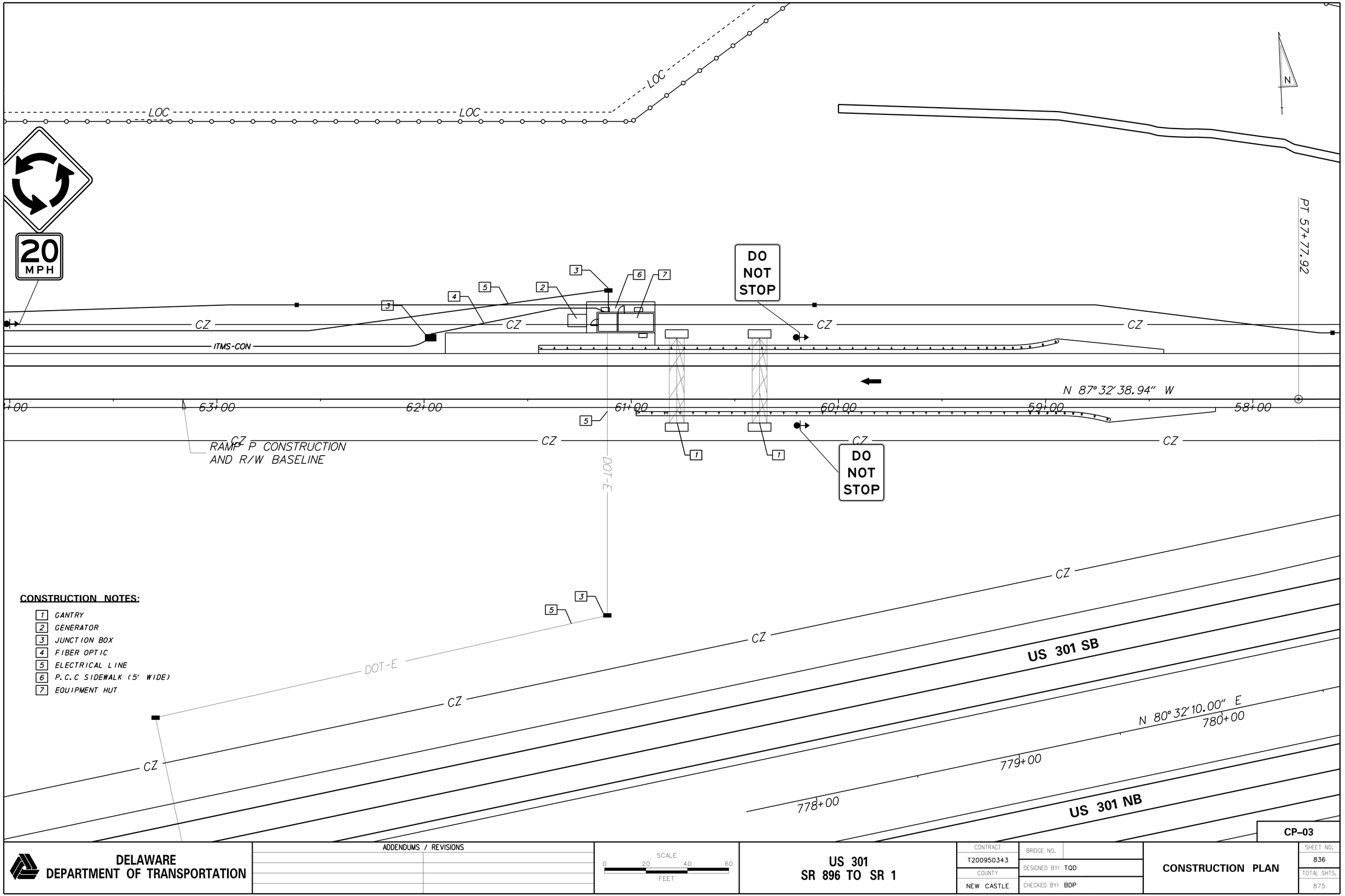
DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 20 40 60
FEET

US 301
SR 896 TO SR 1

CONTRACT	BRIDGE NO.	CONSTRUCTION PLAN	SHEET NO.
T200950343	DESIGNED BY: TQD		835
COUNTY	CHECKED BY: BDP		TOTAL SHTS.
NEW CASTLE			875



CONSTRUCTION NOTES:

1. GANTRY
2. GENERATOR
3. JUNCTION BOX
4. FIBER OPTIC
5. ELECTRICAL LINE
6. P.C.C SIDEWALK (5' WIDE)
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LAST REVISED: 3/12/2008
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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 20 40 60
FEET

US 301
SR 896 TO SR 1

CONTRACT	BRIDGE NO.		SHEET NO.
T200950343	DESIGNED BY: TQD	CONSTRUCTION PLAN	836
COUNTY			TOTAL SHTS.
NEW CASTLE	CHECKED BY: BDP		875

CP-03

GENERAL NOTES

1. ALL WORK SHALL BE COORDINATED WITH DELDOT.
2. COORDINATION OF WORK: THE CONTRACTOR HAS THE RESPONSIBILTY TO COORDINATE THE WORK OF SUBCONTRACTORS TO SUIT PROJECT CONDITIONS. THE CONTRACT SCOPE OF WORK SHALL INCLUDE ALL WORK TO PROVIDE A FINISHED CLEAN AND NEAT APPEARANCE.
3. VERIFY AND COORDINATE THE LOCATION OF EQUIPMENT WITH ELECTRICAL, AND MECHANICAL DRAWINGS.
4. ALL DIMENSIONS SHOWN TO FACE OF CMU OR CENTERLINE OF COLUMN GRID UNLESS OTHERWISE NOTED. DIMENSIONS NOTED "CLEAR" SHALL BE FROM FINISH FACE TO FINISH FACE.
5. ALL DIMENSIONS SHALL BE FIELD VERIFIED PRIOR TO FABRICATION, ERECTION, AND/OR INSTALLATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMEDYING ANY DIMENSIONAL ERRORS IN FABRICATION, ERECTION, AND/OR INSTALLATION WITHOUT ADDITIONAL COST TO THE OWNER AND WITHOUT ADDITIONAL TIME TO PROJECT SCHEDULE.
6. FOR ALL DIMENSIONS NOT SHOWN ON FLOOR PLAN REFER TO ENLARGED PLANS.
7. ALL MASONRY DIMENSIONS, MO, ETC ARE NOMINAL DIMENSIONS UNLESS OTHERWISE NOTED.
8. SEE SPECIFICATIONS FOR ALL INTERIOR AND EXTERIOR SIGNAGE REQUIREMENTS.
9. FE INDICATES FIRE EXTINGUISHER. SURFACE MOUNTED UNITS
10. INTERIOR DOOR DIMENSIONS ARE TO MASONRY OPENINGS UNLESS OTHERWISE NOTED.
11. SEE MECHANICAL / ELECTRICAL DRAWINGS FOR EXACT LOCATION OF CURB AND TYPE OF EQUIPMENT. SEE STRUCTURAL DRAWINGS FOR REINFORCING REQUIREMENTS.
12. ALL PARTITIONS SHALL EXTEND TO THE UNDERSIDE OF THE STRUCTURAL DECK AND/OR TO BOTTOM OF TRUSS AND BE SEALED TIGHTLY WITH NON-COMBUSTIBLE SEALANT.
13. ALL CEILINGS TO RECEIVE SAME PAINT FINISH AS THE ROOM WALLS UNLESS OTHERWISE NOTED.

ARCHITECTURAL ABBREVIATIONS

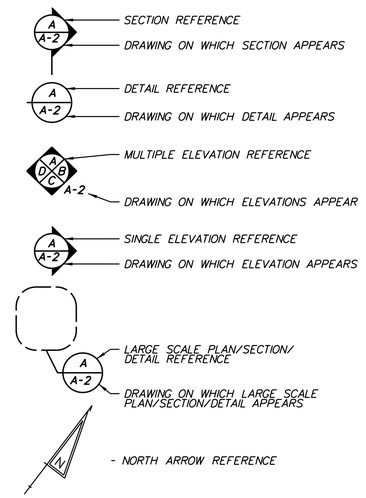
ABV	ABOVE
AC	AIR CONDITIONER
ACST	ACOUSTIC
ADDL	ADDITIONAL
ADJ	ADJACENT
AFF	ABOVE FINISH FLOOR
AGGR	AGGREGATE
AL	ALUMINUM
ALT	ALTERNATE
ARCH	ARCHITECTURAL
ASB	ASBESTOS
ASPH	ASPHALT
ASPHRS	ASPHALT ROOF SHINGLES
ASSN	ASSOCIATION
ASST	ASSISTANT
ASSY	ASSEMBLY
AVE	AVENUE
AVG	AVERAGE
B/O	BOTTOM OF
BALC	BALCONY
BD	BOARD
BETW	BETWEEN
BLDG	BUILDING
BLKG	BLOCKING
BLR	BOILER
BM	BEAM
BP	BASE PLATE
BRDG	BRIDGING
BRG	BEARING
BS	BOTH SIDES
BSMT	BASEMENT
CAB	CABINET
CAP	CAPACITY
CARP	CARPET
CDR	COILING DOOR
CER	CERAMIC
CER TILE	CERAMIC TILE
CI	CAST IRON
CIP	CAST-IRON PIPE
CJ	CONTROL JOINT
CL	CENTERLINE
CLG	CEILING
CLO	CLOSET
CLR	CLEAR
CMIU	CONCRETE MASONRY INSULATED UNIT
CMU	CONCRETE MASONRY UNIT
CNCL	CONCEALED
CO	CLEANOUT
COM	COMPANY
COL	COLUMN
COMP	COMPOSITION
CONC	CONCRETE
CONSTR	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CRV	CURVED
CSK	COUNTERSINK
CTD	COATED
CTR	CENTER
CUH	CABINET UNIT HEATER
D	DEPTH
DBL	DOUBLE
DEG	DEGREE
DEPT	DEPARTMENT
DET	DETAIL
DGL	DIAGONAL
DIA	DIAMETER
DIM	DIMENSION
DIV	DIVISION
DL	DEAD LOAD
DMPF	DAMPPROOFING
DN	DOWN
DPN	DEMOUNTABLE PARTITION
	MANUFACTURER
DR	DOOR
DS	DOWNSPOUT
DW	DISHWASHER
DWG	DRAWING
E	EAST
EA	EACH
EGEN	EMERGENCY GENERATOR
EF	EXHAUST FAN
EIFS	EXTERIOR INSULATION &
	FINISH SYSTEM
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
ENTR	ENTRANCE
EPDM	ETHYLENE PROPYLENE DIENE MONOMER
ETC	ETCETERA
EQ	EQUAL
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPANSION
EXP JT	EXPANSION JOINT
EXT	EXTERIOR

FAB	FABRICATE
FBD	FIBERBOARD
FC	FILE CABINET
FD	FLOOR DRAIN
FDN	FOUNDATION
FDR	FIRE DOOR
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER &
	CABINET
FHY	FIRE HYDRANT
FIN	FINISH
FL	FLASHING
FLEX	FLEXIBLE
FLG	FLANGE
FLR	FLOOR
FLRG	FLOORING
FP	FIREPROOF
FRP	FIBERGLASS-REINFORCED
	PLASTICS
FT	FOOT
FTG	FOOTING
FURN	FURNITURE
GA	GAUGE
GALV	GALVANIZED
GAR	GARAGE
GEN	GENERATOR
GL	GLASS
GLU-LAM	GLUE-LAMINATED
GOVT	GOVERNMENT
GR	GRADE
GRD	GROUND
GVL	GRAVEL
GWB	GYPSUM WALLBOARD
GYP	GYPSUM
H	HIGH
HCP	HANDICAP
HDWE	HARDWARE
HM	HOLLOW METAL
HMD	HOLLOW METAL DOOR
HORIZ	HORIZONTAL
HPT	HIGH POINT
HT	HEIGHT
HTR	HEATER
HVAC	HEATING, VENTILATING, &
	AIR CONDITIONING
ID	INSIDE DIAMETER
IE	THAT IS
IH	INTAKE HOOD
IN	INCH
INSUL	INSULATION
INTR	INTERIOR
JST	JOIST
JT	JOINT
LAB	LABORATORY
LAM	LAMINATE
LAV	LAVATORY
LG	LENGTH
LH	LEFT HAND
LIB	LIBRARY
LIN	LINEAR
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LPT	LOW POINT
LT	LIGHT
LWC	LIGHTWEIGHT CONCRETE
MAINT	MAINTENANCE
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MEMB	MEMBRANE
MEZZ	MEZZANINE
MFR	MANUFACTURER
MGR	MANAGER
MH	MANHOLE
MIL	MILITARY
MIN	MINIMUM
MISC	MISCELLANEOUS
MET	METAL
ML	METAL LATH
MLDG	MOLDING
MLP	METAL LATH AND PLASTER
MO	MASONRY OPENING
MOD	MOTOR OPERATED DAMPER
MTG	MOUNTING
N	NORTH
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO	NUMBER
NRC	NOISE-REDUCTION
	COEFFICIENT
NTS	NOT TO SCALE
OA	OVERALL
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFF	OFFICE
OH	OPPOSITE HAND
OHDR	OVERHEAD DOOR
OPNG	OPENING
OPP	OPPOSITE

OSB	ORIENTED STRAND BOARD
P/L	PROPERTY LINE
PASS	PASSENGER
PERF	PERFORATED
PL	PLATE
PLAS	PLASTER
PLBG	PLUMBING
PLYWD	PLYWOOD
PNL	PANEL
PNT	PAINT
PORC	PORCELAIN
PR	PAIR
PREFAB	PREFABRICATED
PROJ	PROJECT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT
PTD	PAINTED
PTN	PARTITION
PVC	POLYVINYL CHLORIDE
QTF	QUARRY-TILE FLOOR
R	RADIUS
RI	RISER
RD	ROOF DRAIN
REF	REFRIGERATOR
REINF	REINFORCE
REQD	REQUIRED
RET	RETURN
REV	REVISION
REG	REGISTER
RFG	ROOFING
RH	RIGHT HAND
RM	ROOM
RWC	RAIN WATER CONDUCTOR
S	SOUTH
SAPC	SUSPENDED ACOUSTICAL
	PANEL CEILING
SCHED	SCHEDULE
SDG	SIDING
SEC	SECTION
SF	SQUARE FOOT
SGFT	STRUCTURAL GLAZED
	FACING TILE
SH	SHOWER
SHM	SECURITY HOLLOW METAL
SHT	SHEET
SI	INTERNATIONAL SYSTEM OF
	UNITS
SIM	SIMILAR
SKY	SKYLIGHT
SLDR	SLIDING DOOR
SMLS	SEAMLESS
SPA	SPACED
SPEC	SPECIFICATION
SPKLR	SPRINKLER
SPKR	SPEAKER
SQ	SQUARE
SS	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURE/STRUCTURAL
STWY	STAIRWAY
SUPT	SUPERINTENDENT
SUPVR	SUPERVISOR
SURF	SURFACE
SUSP	SUSPENDED/SUSPENSION
SYS	SYSTEM
T	TREAD
T/O	TOP OF
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TAN	TANGENT
TDD	TELECOMMUNICATION DISPLAY
	DEVICE
TEL	TELEPHONE
TEMP	TEMPORARY
TER	TERRAZZO
THRU	THROUGH
TLT	TOILET
TRTD	TREATED
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VAT	VINYL ASBESTOS TILE
VCT	VINYL COMPOSITION TILE
VEND	VENDING MACHINE
VERT	VERTICAL
VIF	VERIFY IN FIELD
VTR	VENT THRU ROOF
W	WEST
WI	WIDE
W/	WITH
W/O	WITHOUT
WBD	WALLBOARD
WC	WATER CLOSET
WD	WOOD
WDR	WOOD DOOR
WH	WATER HEATER
WTRPRF	WATERPROOFING
WWF	WELDED WIRE FABRIC
XFMR	TRANSFORMER

SYMBOLS LEGEND

- 101 / 101 — DOOR NUMBER REFERENCE / ROOM NUMBER REFERENCE
- W2 — WINDOW TYPE REFERENCE
- L-1 — LINTEL TYPE REFERENCE
- LV1 — LOUVER TYPE REFERENCE
- 0.0 — COLUMN REFERENCE
- 5 — TOILET ACCESSORY REFERENCE
- 1 — PARTITON TYPE REFERENCE
- 1 — INDICATES PARTITION HEIGHT TO BE 4" ABOVE CEILING
- INDICATES PARTITION HEIGHT TO EXTEND TO UNDERSIDE OF STRUCTURAL DECK ABOVE
- ELEVATION INDICATION
- 0 — REVISION REFERENCE
- REVISION CLOUD



MATERIALS LEGEND

- BRICK
- CMU
- ACOUSTICAL CMU
- CMIU
- SGFT / GLAZED CMU
- STEEL
- ALUMINUM
- FINISH LUMBER
- DIMENSIONAL LUMBER
- SHIM
- CONCRETE
- GYP BD / GROUT
- BATT INSULATION
- RIGID INSULATION
- COARSE AGGREGATE / BALLAST
- PLYWOOD
- ACOUSTICAL PANEL
- TILE
- OSB
- EARTH

NOTE: SOME OF THESE SYMBOLS AND MATERIALS MAY NOT BE REPRESENTED ON THE DRAWINGS.

CODE CRITERIA

ALL CODE REFERENCES ARE FROM THE INTERNATIONAL BUILDING CODE 2006

DESCRIPTION	CODE REFERENCE	REQUIREMENT	PROVIDED
GENERAL			
USE GROUP SIMILAR TO:	312.1	UTILITY AND MISCELLANEOUS GROUP (U)	UTILITY AND MISCELLANEOUS GROUP (U)
CONSTRUCTION TYPE:	TABLES 601	TYPE 2-B	TYPE 2-B
NO. OF STORIES	TABLE 503	2 STORIES (MAX)	1 STORY
BUILDING AREA	TABLE 503	8,500 SF (MAX)	293 SF
SPECIAL REQUIREMENTS	CHAPTER 4 - N/A		
SPRINKLERED	DELAWARE STATE FIRE PREVENTION REG.	NOT REQUIRED	CLEAN AGENT FIRE SUPRESSION SYSTEM PROVIDED FOR ETC ROOM
FIRE ALARM SYSTEM	907	FIRE ALARM NOT REQUIRED	FIRE ALARM PROVIDED
FIRE RESISTANCE RATING			
BUILDING ELEMENTS			
1. STRUCTURAL FRAME	TABLE 601	0 HOURS	0 HOURS
2. BEARING WALLS	TABLE 601	0 HOURS	0 HOURS
3. NON BEARING WALLS	TABLE 601	0 HOURS	0 HOURS
4. FLOOR CONSTRUCTION	TABLE 601	0 HOURS	0 HOURS
5. ROOF CONSTRUCTION	TABLE 601	0 HOURS	0 HOURS
OTHER ELEMENTS			
1. SHAFT ENCLOSURES	707	N/A	
2. EXIT ENCLOSURES	1020.1	N/A	

A-1

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

US 301
SR 896 TO SR 1

CONTRACT	BRIDGE NO.		SHEET NO.
T200950343	DESIGNED BY:	DRE	837
COUNTY			TOTAL SHTS.
NEW CASTLE	CHECKED BY:	JRS	875

ARCHITECTURAL LEGENDS, SYMBOLS AND ABBREVIATIONS

LAST REVISED: 3/12/2008
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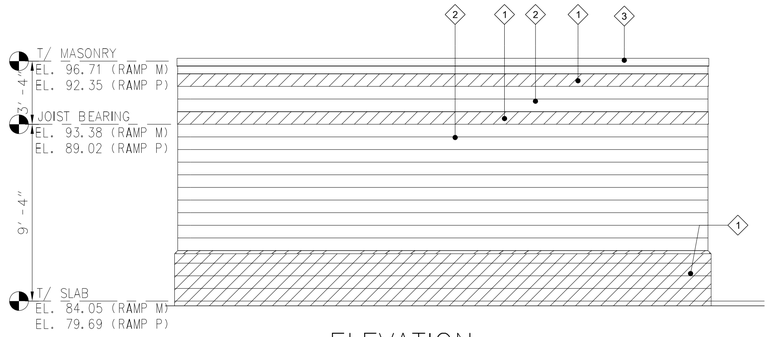
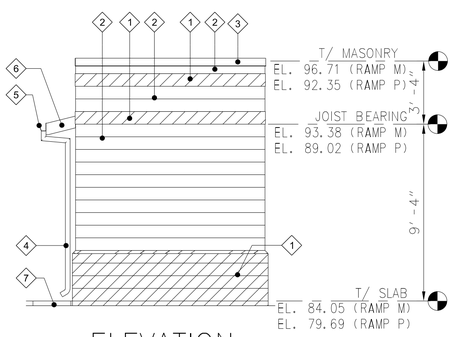


ELEVATION
SCALE: 1/4" = 1'-0" (1 A-2)



ELEVATION
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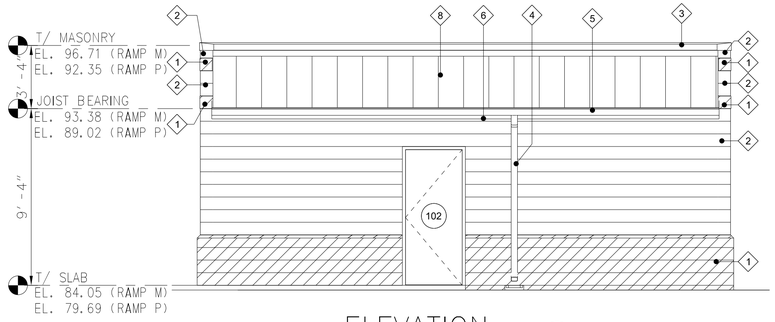
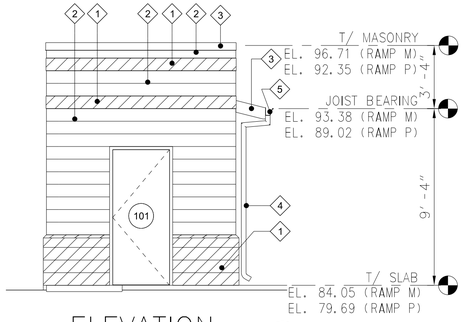


ELEVATION
SCALE: 1/4" = 1'-0" (3 A-2)



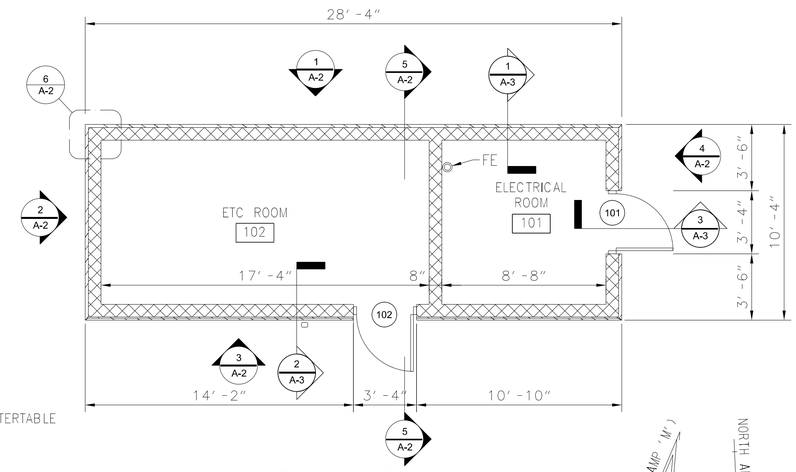
ELEVATION
SCALE: 1/4" = 1'-0" (4 A-2)

KEYNOTES

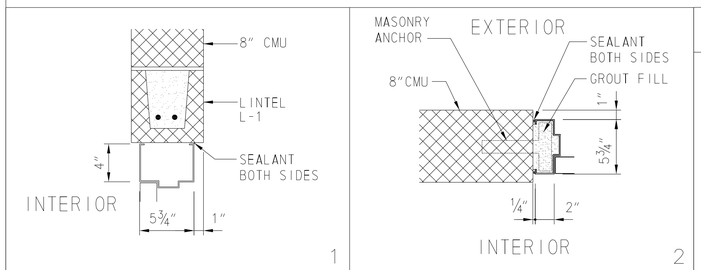
1 SPLIT FACE CMU COLOR #1
2 MATTE FACE CMU COLOR #2
3 METAL COPING
4 METAL DOWNSPOUT
5 METAL GUTTER
6 METAL FASCIA
7 SPLASHBLOCK
8 STANDING SEAM METAL ROOF
9 LIGHT GAUGE METAL TRUSS
10 3/4" PLYWOOD SHEATHING
11 RIGID INSULATION
12 VAPOR BARRIER OVER COURSE AGGREGATE
13 CONCRETE FOOTING. SEE STRUCTURAL DRAWINGS

FLOOR PLAN NOTES

1. MASONRY DIMENSIONS ARE NOMINAL UNLESS NOTED OTHERWISE.
2. DIMENSIONS AT CMU WALLS ARE TO THE FACE OF CMU UNLESS NOTED OTHERWISE.
3. PROVIDE LINTELS FOR OPENINGS IN MASONRY WALLS INCLUDING BUT NOT LIMITED TO OPENINGS FOR DOORS, LOUVERS AND MECHANICAL AND ELECTRICAL PENETRATIONS.
4. THE INSIDE EDGE OF DOOR FRAMES SHALL BE SET 4" CLEAR FROM THE FINISH FACE OF THE ADJACENT PERPENDICULAR PARTITION UNLESS OTHERWISE DIMENSIONED.
5. SEE CIVIL DRAWINGS FOR FINISHED FIRST FLOOR ELEVATION.
6. SEE CIVIL DRAWINGS FOR CONCRETE PADS AND BOLLARD LOCATIONS AT EXTERIOR DOORS



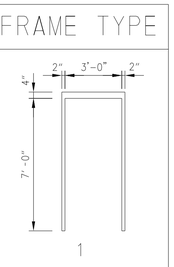
FLOOR PLAN
SCALE: 1/4" = 1'-0"



1

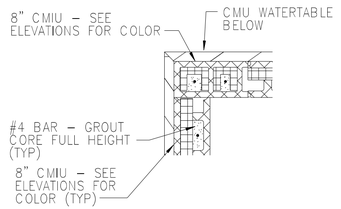
2

DOOR TYPE	FRAME TYPE
A	1

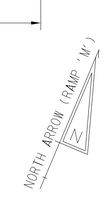


LINTEL SCHEDULE

L-1 8" PRE-CAST CMU LINTEL BEAR 6" ON EITHER JAMB



DETAIL
SCALE: 3/4" = 1'-0" (6 A-2)

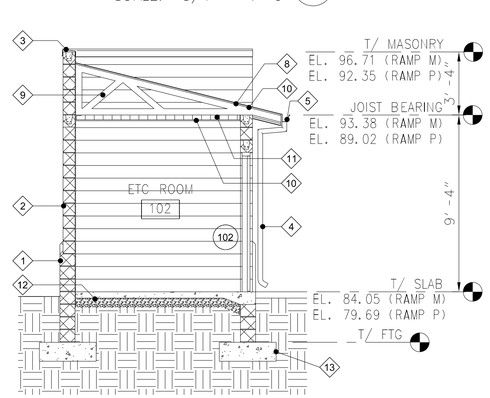


ROOM FINISHES

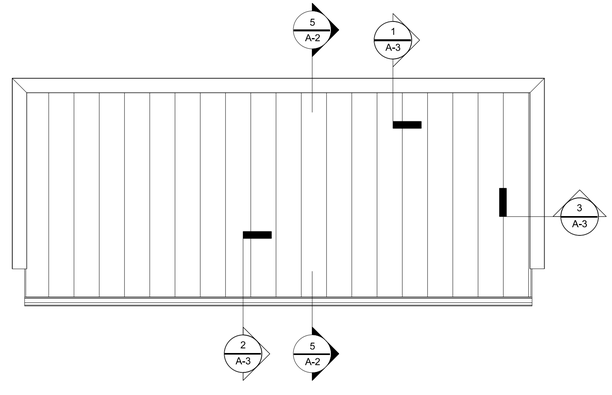
LOCATION ROOM NO.	ROOM NAME	FLOORS MATERIALS: CONCRETE W/ SEALER	FLOORS: CONCRETE W/ EPOXY COATING	FLOORS: NOT USED	FLOORS: NOT USED	FLOORS: NOT USED	BASES MATERIALS: PAINTED	BASES: NOT USED	BASES: NOT USED	BASES: NOT USED	BASES: NOT USED	WALLS MATERIALS: CMU	WALLS: NOT USED	WALLS: NOT USED	WALLS: NOT USED	WALLS: NOT USED	CEILINGS MATERIALS: PAINT	CEILINGS: ½" PLYWOOD	CEILINGS: NOT USED	CEILINGS: NOT USED	CEILINGS: NOT USED	CEILINGS: PAINT	CEILING HEIGHT	REMARKS
		1	2	4	5	6	1	2	3	4	5	1	2	3	4	5	P	1	2	3	4	P		
101	ELECTRICAL ROOM	1					1					1					P	1				P	9'-0"	
102	ETC ROOM		2				1					1					P	1				P	9'-0"	

DOORS AND FRAMES

LOCATION	DOOR NO.	DOOR SIZE W	H	T	MAT	TYPE	GLASS	LOUVER W	LOUVER H	FRAME MAT	FRAME TYPE	FRAME DETAILS HEAD	JAMB(S)	SILL	FIRE RATING LAB	FIRE RATING HOUR	HARDWARE SET NO.	HARDWARE KEYSIDE ROOM NO.	LINTEL	REMARKS
RAMP M	101	3'-0"	7'-0"	1 3/4"	HM	A				HM	1	1	2				1	EXT	L-1	SMOKE SEALS AND CLOSER REQUIRED. CARD READER.
	102	3'-0"	7'-0"	1 3/4"	HM	A				HM	1	1	2				2	EXT	L-1	CARD READER.
RAMP P	101	3'-0"	7'-0"	1 3/4"	HM	A				HM	1	1	2				1	EXT	L-1	SMOKE SEALS AND CLOSER REQUIRED. CARD READER.
	102	3'-0"	7'-0"	1 3/4"	HM	A				HM	1	1	2				2	EXT	L-1	CARD READER.



BUILDING SECTION
SCALE: 1/4" = 1'-0" (5 A-2)



ROOF PLAN
SCALE: 1/4" = 1'-0"

A-2

LAST REVISED: 3/12/2008
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DELAWARE DEPARTMENT OF TRANSPORTATION

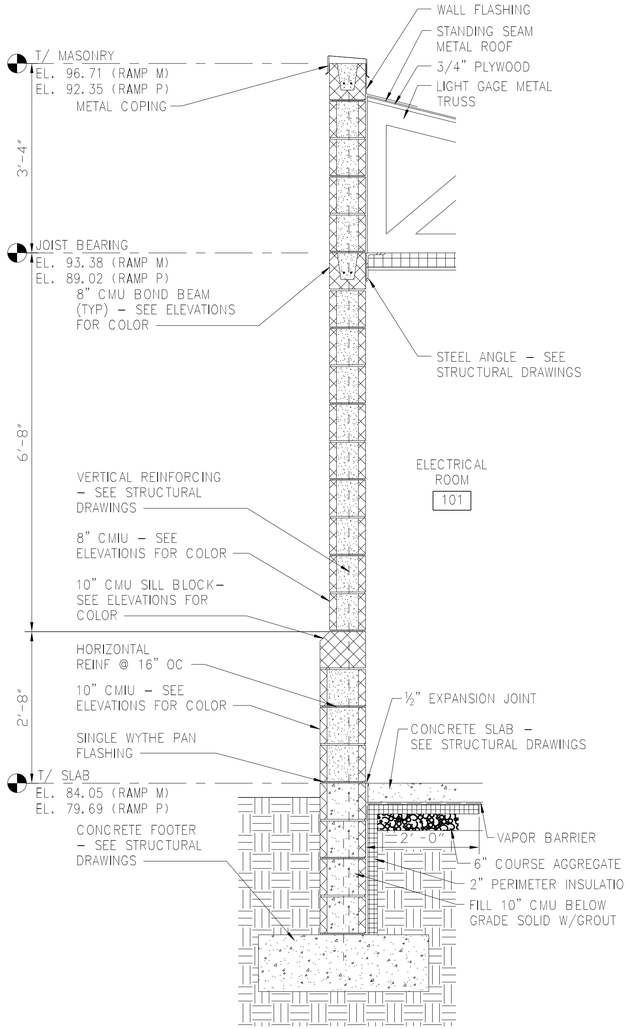
ADDENDUMS / REVISIONS

US 301
SR 896 TO SR 1

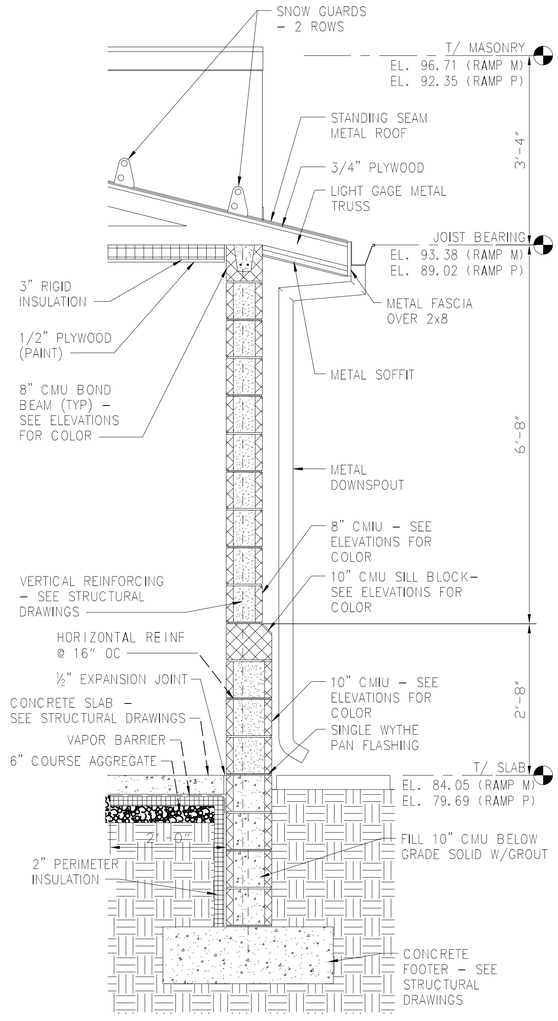
CONTRACT	BRIDGE NO.	
T200950343	DESIGNED BY: BJO	
COUNTY	CHECKED BY: JRS	
NEW CASTLE		

ARCHITECTURAL PLANS, ELEVATIONS, AND DETAILS

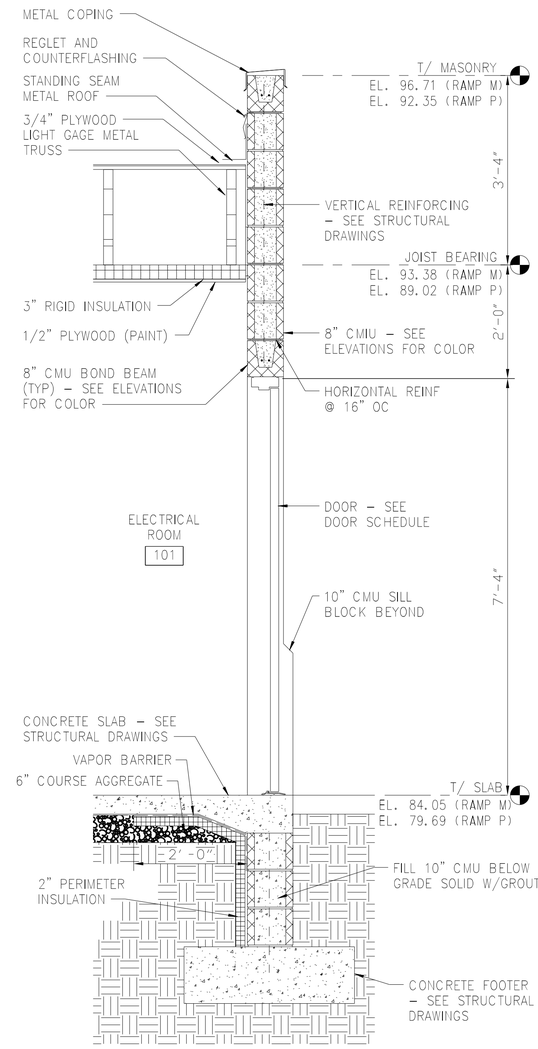
SHEET NO.
838
TOTAL SHTS.
875



WALL SECTION 1
SCALE: 3/4" = 1'-0" A-3



WALL SECTION 2
SCALE: 3/4" = 1'-0" A-3



WALL SECTION 3
SCALE: 3/4" = 1'-0" A-3

NOTE: SEE BUILDING ELEVATIONS ON DRAWING A-2 FOR LOCATION DESIGNATIONS OF SPLIT FACE AND MATTE FACE CMU.

LAST REVISED: 3/12/2008
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A-3

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

US 301
SR 896 TO SR 1

CONTRACT	BRIDGE NO.	
T200950343	DESIGNED BY: BJO	
COUNTY		
NEW CASTLE	CHECKED BY: JRS	

ARCHITECTURAL WALL SECTIONS

SHEET NO.
839
TOTAL SHTS.
875

GENERAL STRUCTURAL NOTES:

GENERAL

1. THE STRUCTURE IS DESIGNED TO ACT AS A STRUCTURAL UNIT UPON COMPLETION. CONTRACTOR SHALL DESIGN AND PROVIDE NECESSARY BRACING, TEMPORARY SUPPORTS, AND SHORING TO RESIST FORCES, INCLUDING UPLIFT, ON THE STRUCTURE DURING CONSTRUCTION.
2. WORK SHALL BE COORDINATED WITH THE VARIOUS TRADES TO AVOID CONFLICT OR INTERFERENCE WITH REINFORCING STEEL OR STRUCTURAL STEEL MEMBERS.
3. THE LOCATION OF ALL AERIAL FACILITIES SHALL BE IDENTIFIED IN THE FIELD BEFORE CONSTRUCTION COMMENCES AND PSE&G PROXIMITY REQUIREMENTS ADHERED TO.

DESIGN CRITERIA

1. APPLICABLE CODES AND SPECIFICATIONS
   IBC 2006 W/ NEW CASTLE COUNTY CODE
   ASCE 7-05, MINIMUM BUILDING LOADS - AS APPLICABLE
   AISC 360-05, MANUAL OF STEEL CONSTRUCTION - LOAD AND RESISTANCE FACTOR DESIGN
   ACI 318-05, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY
2. DESIGN LOADS:

   WIND LOAD:
   - BASIC WIND SPEED (3 SECOND GUST) _ _ _ _ _ _ _ _ _ 90 MPH
   - WIND IMPORTANCE FACTOR _ _ _ _ _ _ _ _ _ _ _ _ _ 1.0
   - WIND EXPOSURE _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ C

FOUNDATIONS

1. THE MAXIMUM ALLOWABLE SOIL BEARING PRESSURE FOR SPREAD FOOTING IS 4,000 PSF.
2. ALL CONCRETE SLABS AND FOOTINGS BEARING ON SOIL SHALL BE UNDERLAIN BY A MINIMUM OF 6 INCHES OF NO. 57 STONE (UNO).

GANTRY NOTES:

1. PROVIDE MATERIALS AND WORKMANSHIP IN THE ACCORDANCE WITH THE DELAWARE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, ANSI/AASHTO/AWS/D1.5-2002 BRIDGE WELDING CODE AND CONTRACT SPECIAL PROVISIONS. USE ANSI/AWS/D1.1-2002 FOR WELDING NOT COVERED IN ANSI/AASHTO/AWS/D1.5-2002.
2. DESIGN SPECIFICATIONS: AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS 2009, 5TH EDITION.
3. ALL DIMENSIONS SHOWN ARE HORIZONTAL, EXCEPT AS NOTED.
4. USE CLASS A CEMENT CONCRETE f'c = 3000 PSI IN PEDESTALS AND FOOTINGS.
5. CHAMFER EXPOSED CONCRETE EDGES 1" X 1" EXCEPT AS NOTED.
6. PROVIDE A MINIMUM OF 2" CONCRETE COVER ON REINFORCEMENT BARS, EXCEPT AS NOTED.
7. PROVIDE GRADE 60 REINFORMENT BARS THAT MEET THE REQUIREMENTS OF ASTM A615/A 615-96A FOR CONCRETE REINFORCEMENT. DO NOT WELD REINFORCEMENT BARS.
8. USE UNCOATED REINFORCEMENT BARS.
9. PROVIDE MINIMUM LAP AND EMBEDMENT LENGTH OF 20 DIAMETERS OR IN ACCORDANCE WITH AASHTO.
10. RAKE-FINISH ALL HORIZONTAL CONSTRUCTION JOINTS EXCEPT AS NOTED.
11. THE DESIGN WIND VELOCITY IS 90 MPH.
12. THE DESIGN ICE LOAD IS 3 PSF.
13. ALL STRUCTURAL DETAILS HAVE BEEN DESIGNED FOR FATIGUE RESISTANCE UNDER THE FOLLOWING FATIGUE LOADS:
    - NATURAL WIND GUST (5.2 • Cd PSF)
    - TRUCK INDUCED GUSTS (18.8 • Cd PSF)
14. PROVIDE STRUCTURAL STEEL CONFORMING TO THE FOLLOWING:
    - ASTM A 53, GRADE B, Fy = 35 KSI FOR PIPE COLUMNS, CHORDS AND STRUTS.
    - AASHTO M 270M, GRADE 36, (ASTM A709M, GRADE 36) FOR SHAPES AND PLATES. ALL STEEL SHALL MEET SUPPLEMENTARY REQUIREMENTS FOR NOTCH TOUGHNESS. (CHARPY TESTING, ZONE "2 NON-FRACTURE CRITICAL).
15. PROVIDE ANCHOR BOLT HOLES ¼" LARGER THAN BOLT DIAMETER FOR BASE PLATE. PROVIDE BOLT HOLES ⅛" LARGER THAN BOLT DIAMETER FOR ANCHOR PLATE.
16. USE TEMPLATES TO ACCURATELY SET BASE PLATE ANCHOR BOLTS TO CORRECT ELEVATION AND ALIGNMENT. SECURELY BRACE ANCHOR BOLTS AGAINST DISPLACEMENT BEFORE PEDESTAL CONCRETE IS PLACE AND DURING CONCRETE CURING.
17. GROUT PADS SHALL NOT BE USED. BASE PLATES AND EXPOSED ANCHOR BOLTS SHALL BE PLACED SO RUN-OFF AND/OR RAIN WATER CANNOT RUN ONTO OR POND AT THIS AREA.
18. PROVIDE DOUBLE NUTS AND WASHERS FOR EACH ANCHOR BOLT.
19. GALVANIZED HIGH STRENGTH BOLTS SHALL CONFORM TO AASHTO M164/ASTM A325.
20. GALVANIZED HEAT TREATED NUTS SHALL CONFORM TO AASHTO M292/ASTM A1494 OR AASHTO M291/ASTM A563 GRADE 2H, DH. GALVANIZED HARDENED STEEL WASHERS SHALL CONFORM TO AASHTO M293/ASTM F436.
21. GALVANIZED ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM F1554 GRADE 55.
22. INSTALL ACCESS HOLES ON POLE OPPOSITE DIRECTION OF TRAFFIC.
23. DIMENSIONS ARE BASED ON A NORMAL TEMPERATURE OF 68° F.
24. VERIFY ALL ELEVATIONS AND DIMENSIONS IN THE FIELD.
25. FOOTINGS WILL BE POURED AGAINST FILL COMPACTED TO 98% RELATIVE MAXIMUM DENSITY OR ON UNDISTURBED MATERIAL.
26. DIVERT ALL SURFACE RUNOFF AWAY FROM EXCAVATIONS. PERFORM ALL EXCAVATIONS IN ACCORDANCE WITH OSHA REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING SUFFICIENT DEWATERING SO THAT EXCAVATIONS ARE DRY ENOUGH FOR INSPECTION AND CONSTRUCTION.
27. COORDINATE, LOCATE AND CONDUCT ALL WORK RELATED TO PUBLIC AND PRIVATE UTILITIES IN ACCORDANCE WITH DELDOT UTILITIES MANUAL.
28. VERIFY AND LOCATE ALL EXISTING UTILITIES PRIOR TO STARTING WORK. CONDUCT OPERATIONS IN A MANNER WHICH ENSURES THAT THE UTILITIES WILL NOT BE DISTURBED OR ENDANGERED, AND ASSUME FULL RESPONSIBILITY FOR ANY DAMAGE TO UTILITIES DURING CONSTRUCTION. THE DEPARTMENT DOES NOT ASSUME RESPONSIBILITY FOR REIMBURSEMENT, PARTICIPATION IN DESIGN AND/OR REVISIONS, OR LIABILITY FOR ACCURACY OF TYPE, SIZE AND LOCATION OF ANY UTILITY.
29. WELDING OF STEEL SHALL BE AS SPECIFICED IN THE CONSTRUCTION SPECIFICATIONS.
30. PIPE, COLUMNS AND CHORDS ARE DENOTED BY DIAMETER AND THICKNESS.
31. DESIGN AND PROVIDE TEMPORARY SUPPORTS AS REQUIRED TO RETAIN EXCAVATED EARTH SURFACES IN ACCORDANCE WITH SPECIFICATIONS.
32. PROVIDE CONNECTIONS AT SUPPORTS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. SHOP DRAWINGS FOR STRUCTURAL STEEL SHALL BE SUBMITTED FOR APPROVAL.
33. VERIFY THE LOCATION OF ALL CONDUIT ROUGH-INS WITH THE EQUIPMENT MANUFACTURER AND COMMISSION'S REPRESENTATIVE, PRIOR TO PLACEMENT OF CONCRETE FOUNDATIONS.
34. PRIOR TO FABRICATION, CONTRACTOR MUST VERIFY CLEARANCE AND ADJUST THE PROPOSED MOUNTING HEIGHT ACCORDINGLY AND AS DIRECTED BY DELDOT.
35. TRUSS CAMBER SHALL BE INCORPORATED DURING FABRICATION. THE CONTRACTOR SHALL ACHIEVE CAMBER BY TILTING THE POLE AND ADJUSTING LEVELING NUTS DURING INSTALLATION.

STRUCTURAL ABBREVIATIONS

@	AT
AL. OR ALUM.	ALUMINUM
APPROX.	APPROXIMATE
B/B	BACK TO BACK
BOTT.	BOTTOM
B/	BOTTOM OF
BTWN	BETWEEN
CJ	CONSTRUCTION JOINT
C/C	CENTER TO CENTER
CIR	CIRCULAR
℄	CENTERLINE
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC.	CONCRETE
CONST.	CONSTRUCTION
CONT	CONTINUOUS
DIA.	DIAMETER
EA.	EACH
EF	EACH FACE
EL OR ELEV	ELEVATION
EMBED.	EMBEDMENT
EQ.	EQUAL
EQUIP.	EQUIPMENT
EW	EACH WAY
EXIST	EXISTING
EXP.	EXPANSION
EXT.	EXTERIOR
FD	FLOOR DRAIN
FIN.	FINISHED
FLR.	FLOOR
FT	FEET
FTG.	FOOTING
HORIZ.	HORIZONTAL
HP	HIGH POINT
I.D.	INSIDE DIAMETER
INT.	INTERIOR
JT.	JOINT
KSF	THOUSAND POUNDS PER SQUARE FOOT
LG.	LONG
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LP	LOW POINT
MAX.	MAXIMUM
MIN.	MINIMUM
NO.	NUMBER
N.T.S.	NOT TO SCALE
O/C	ON CENTER
O.D.	OUTSIDE DIAMETER
OPP.	OPPOSITE
PL	PLATE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
R	RISER
RAD.	RADIUS
REINF.	REINFORCEMENT
REQ'D	REQUIRED
SC	SLIP CRITICAL
SCH	SCHEDULE
SF	SQUARE FOOT
SIM	SIMILAR
SPA.	SPACES
SQ.	SQUARE
S.S.	STAINLESS STEEL
ST	STRUCTURAL TUBE
STD.	STANDARD
T	TREAD
T&B	TOP AND BOTTOM
T/	TOP OF
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
W/	WITH
WWF	WELDED WIRE FABRIC

LAST REVISED: 3/12/2008
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ST-01

DELAWARE
DEPARTMENT OF TRANSPORTATION

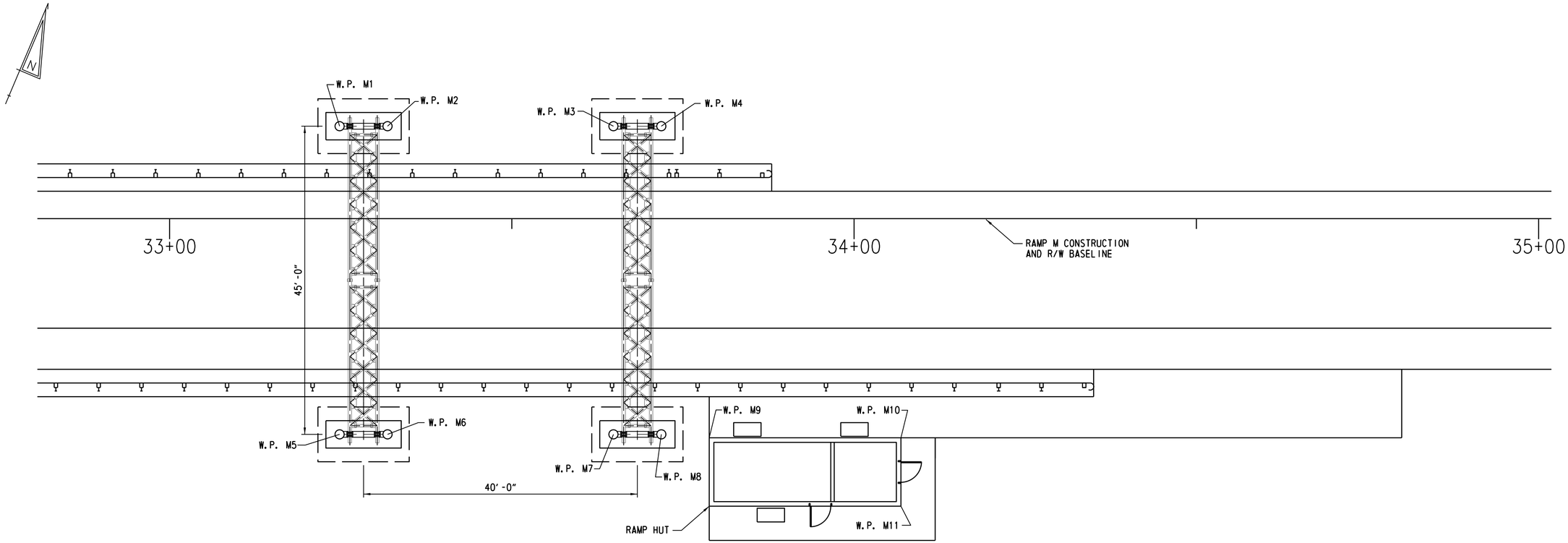
ADDENDUMS / REVISIONS	

US 301
SR 896 TO SR 1

CONTRACT	T200950343
COUNTY	NEW CASTLE
BRIDGE NO.	
DESIGNED BY:	AB
CHECKED BY:	CAM

STRUCTURAL
GENERAL NOTES
& ABBREVIATIONS

SHEET NO.	840
TOTAL SHTS.	875



WORKING POINT COORDINATES

WORKING POINTS	NORTHING	EASTING	STATION	OFFSET
W.P. M1	555035.8987	582473.3726	33+24.84	13.50 LT.
W.P. M2	555038.6276	582479.8188	33+31.84	13.50 LT.
W.P. M3	555051.4928	582510.2077	33+64.84	13.50 LT.
W.P. M4	555054.2217	582516.6539	33+71.84	13.50 LT.
W.P. M5	554994.4592	582490.9158	33+24.84	31.50 RT.
W.P. M6	554997.1881	582497.3620	33+31.84	31.50 RT.
W.P. M7	555010.0532	582527.7509	33+64.84	31.50 RT.
W.P. M8	555012.7822	582534.1971	33+71.84	31.50 RT.
W.P. M9	555015.0506	582540.8382	33+78.84	32.00 RT.
W.P. M10	555025.9662	582566.6229	34+06.84	32.00 RT.
W.P. M11	555016.7574	582570.5213	34+06.84	42.00 RT.

RAMP M - GANTRY PLAN
SCALE: 1/8"=1'-0"

NOTES:
1. FOR GENERAL NOTES, SEE SHEET ST-01.
2. FOR GANTRY ELEVATION, SEE SHEET ST-04.
3. FOR FOUNDATION DETAILS, SEE SHEET ST-05.
4. FOR GANTRY STRUCTURE DETAILS, SEE SHEETS ST-06, ST-07, AND ST-08.
5. FOR EQUIPMENT HUT FOUNDATION AND SLAB, SEE SHEET ST-09.

ST-02

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

US 301
SR 896 TO SR 1

CONTRACT T200950343
COUNTY NEW CASTLE
BRIDGE NO.
DESIGNED BY: AB
CHECKED BY: CAM

STRUCTURAL
GANTRY PLAN
RAMP M

SHEET NO. 841
TOTAL SHTS. 875

LAST REVISED: 3/12/2008
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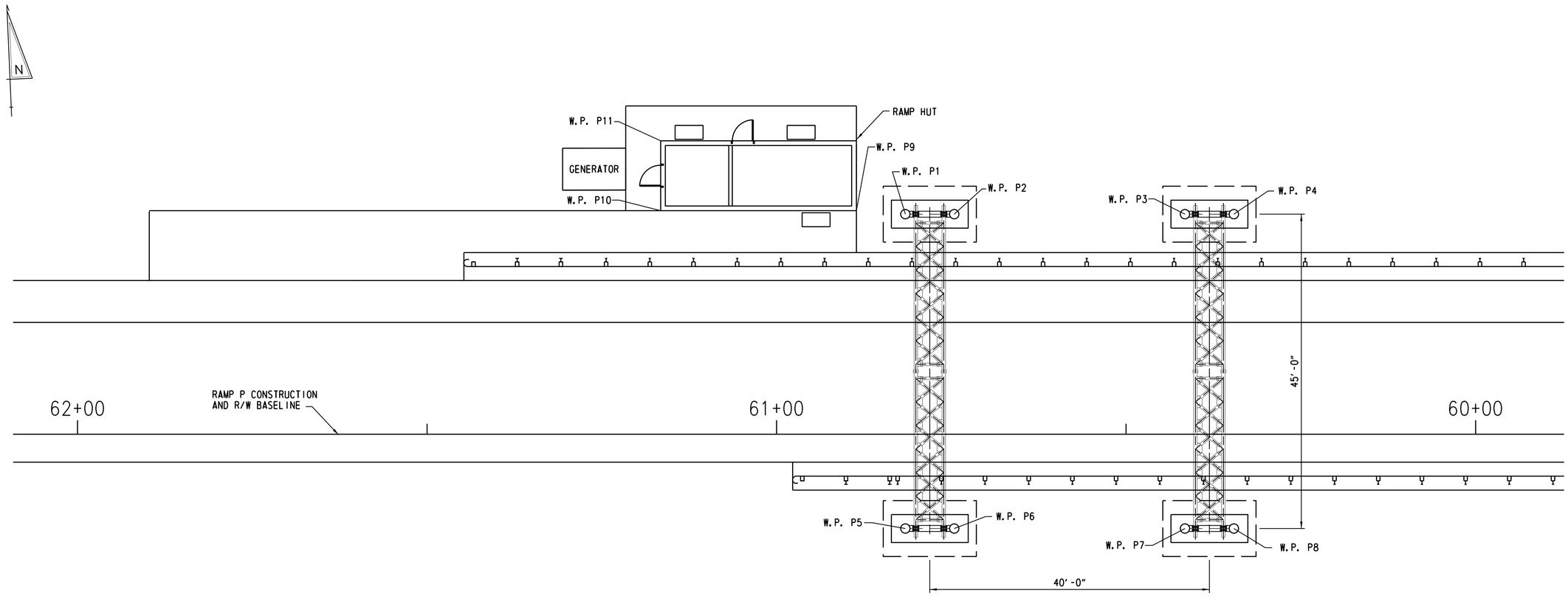

RAMP P - GANTRY PLAN

SCALE: 1/8"=1'-0"

WORKING POINT COORDINATES				
WORKING POINTS	NORTHING	EASTING	STATION	OFFSET
W.P. P1	555580.7906	582742.2783	60+81.58	31.50 RT.
W.P. P2	555580.4906	582749.2719	60+74.58	31.50 RT.
W.P. P3	555579.0768	582782.2416	60+41.58	31.50 RT.
W.P. P4	555578.7768	582789.2351	60+34.58	31.50 RT.
W.P. P5	555535.8319	582740.3501	60+81.58	13.50 LT.
W.P. P6	555535.5320	582747.3436	60+74.58	13.50 LT.
W.P. P7	555534.1181	582780.3133	60+41.58	13.50 LT.
W.P. P8	555533.8182	582787.3069	60+34.58	13.50 LT.
W.P. P9	555581.5901	582735.3062	60+88.58	32.00 RT.
W.P. P10	555582.7899	582707.3319	61+16.58	32.00 RT.
W.P. P11	555592.7807	582707.7604	61+16.58	42.00 RT.

NOTES:
1. FOR GENERAL NOTES, SEE SHEET ST-01.
2. FOR GANTRY ELEVATION, SEE SHEET ST-04.
3. FOR FOUNDATION DETAILS, SEE SHEET ST-05.
4. FOR GANTRY STRUCTURE DETAILS, SEE SHEETS ST-06, ST-07, AND ST-08.
5. FOR EQUIPMENT HUT FOUNDATION AND SLAB, SEE SHEET ST-09.

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

US 301
SR 896 TO SR 1

CONTRACT	BRIDGE NO.
T200950343	
COUNTY	DESIGNED BY: AB
NEW CASTLE	CHECKED BY: CAM

STRUCTURAL
GANTRY PLAN
RAMP P

SHEET NO.
842
TOTAL SHTS.
875

LAST REVISED: 3/12/2008
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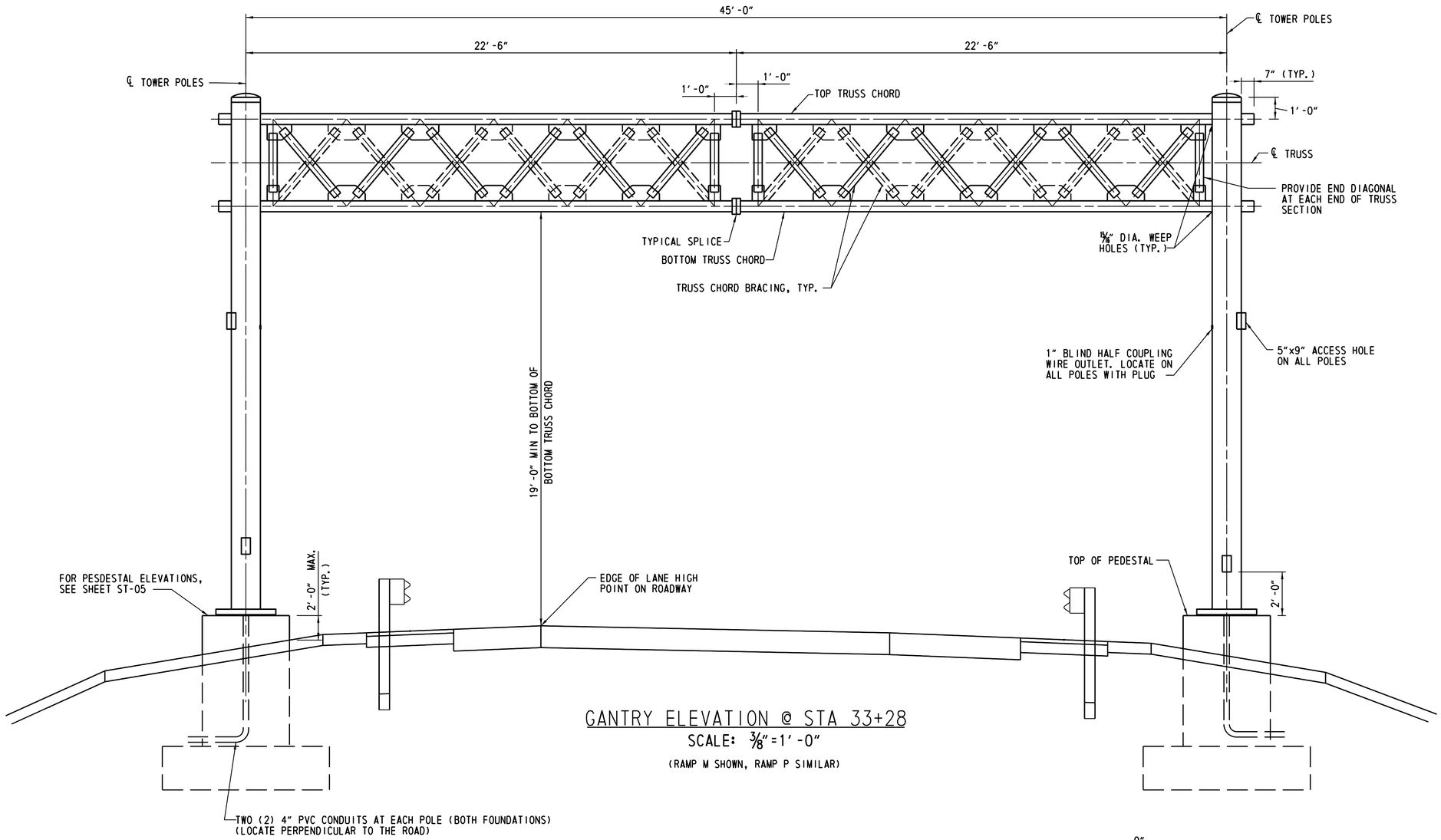
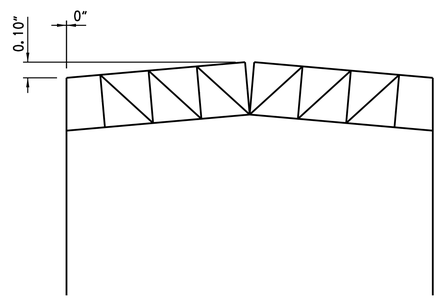


GANTRY ELEVATION @ STA 33+28

SCALE: 3/8″=1′-0″

(RAMP M SHOWN, RAMP P SIMILAR)



GANTRY CAMBER DIAGRAM

SCALE: NTS

NOTES:
1. FOR GENERAL NOTES, SEE SHEET ST-01.
2. FOR STRUCTURE DETAILS, SEE SHEETS ST-06, ST-07, AND ST-08.
3. FOR FOUNDATION DETAILS, SEE SHEET ST-05.

ST-04

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS		US 301 SR 896 TO SR 1	CONTRACT T200950343	BRIDGE NO.	STRUCTURAL GANTRY ELEVATION RAMPS M & P
				COUNTY NEW CASTLE	DESIGNED BY: AB	SHEET NO. 843
					CHECKED BY: CAM	TOTAL SHTS. 875

LAST REVISED: 3/12/2008
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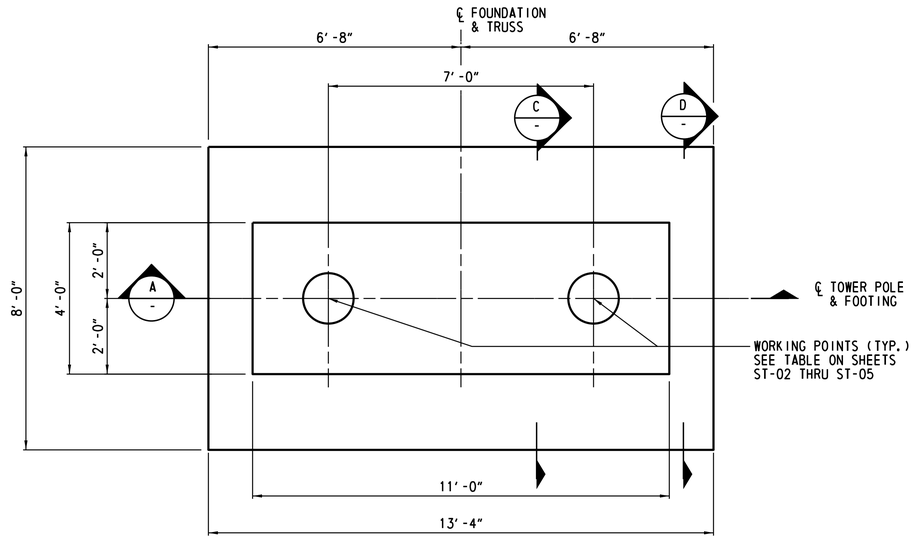
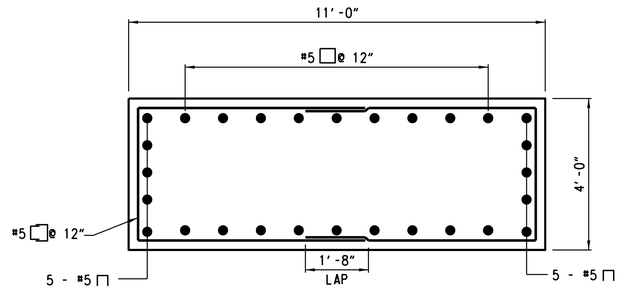


PLAN

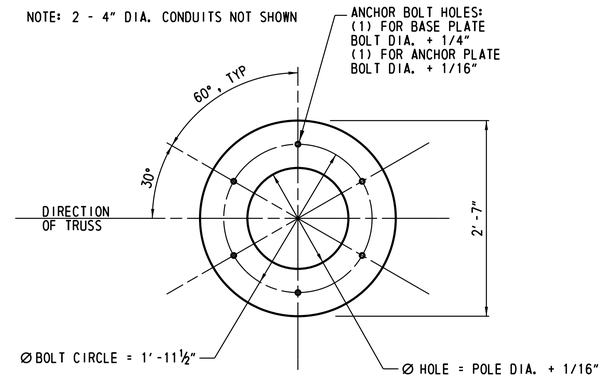
SCALE: 1/2"=1'-0"



SECTION B

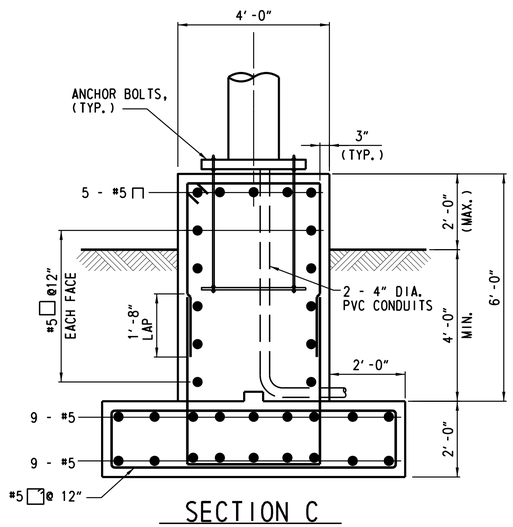
SCALE: 1/2"=1'-0"

NOTE: 2 - 4" DIA. CONDUITS NOT SHOWN



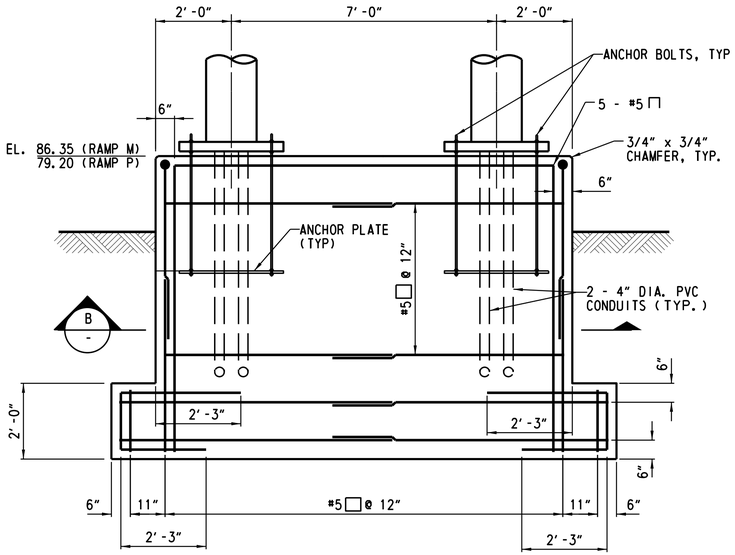
BASE PLATE PLAN VIEW

SCALE: 1"=1'-0"



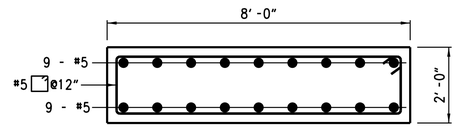
SECTION C

SCALE: 1/2"=1'-0"



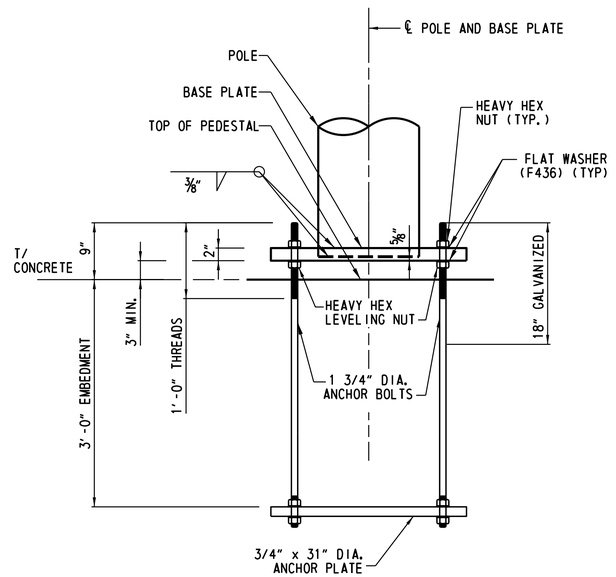
SECTION A

SCALE: 1/2"=1'-0"



SECTION D

SCALE: 1/2"=1'-0"



BASE PLATE & ANCHOR PLATE DETAIL

SCALE: 1"=1'-0"

NOTE: 2 - 4" DIA. CONDUITS NOT SHOWN

LAST REVISED: 3/12/2008
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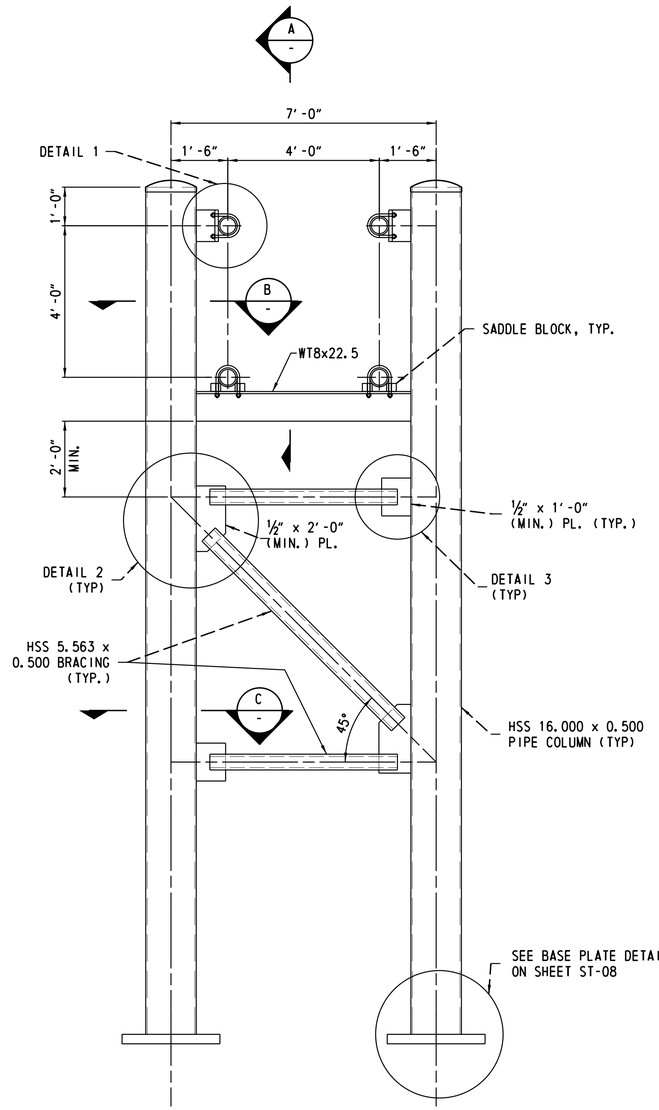
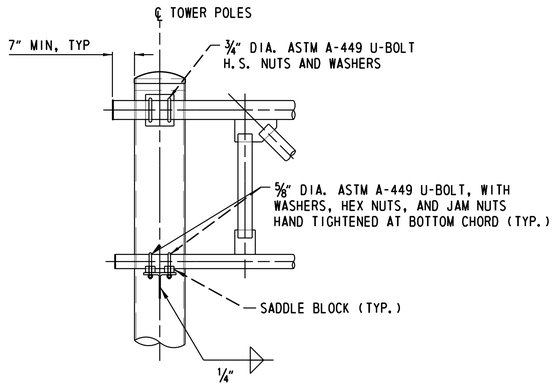
ST-05

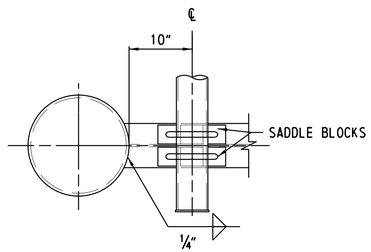
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS		US 301 SR 896 TO SR 1	CONTRACT T200950343	BRIDGE NO.	STRUCTURAL GANTRY FOUNDATION DETAILS	SHEET NO. 844
				COUNTY NEW CASTLE	DESIGNED BY: AB		TOTAL SHTS. 875
					CHECKED BY: CAM		



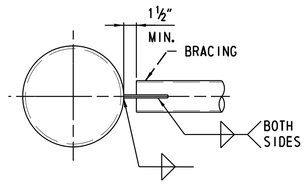
TOWER ELEVATION
SCALE: 1/2"=1'-0"



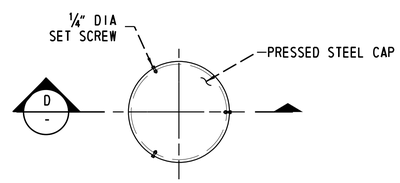
SECTION A
SCALE: ½"=1'-0"



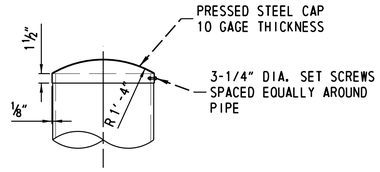
SECTION B
SCALE: 1"=1'-0"



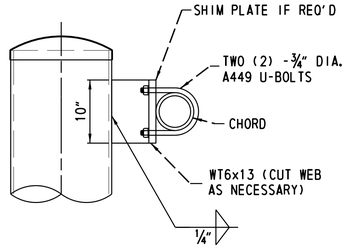
SECTION C
SCALE: 1"=1'-0"



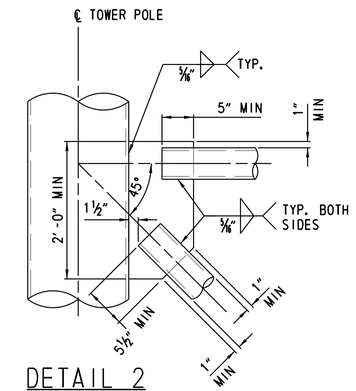
PIPE CAP DETAIL
SCALE: 1"=1'-0"



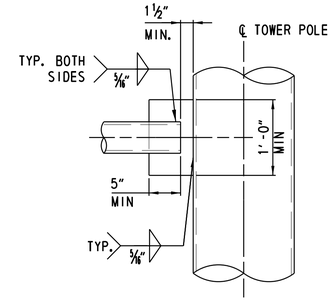
SECTION D
SCALE: 1"=1'-0"



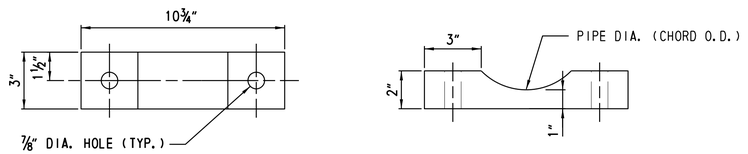
DETAIL 1
SCALE: 1"=1'-0"



DETAIL 2
SCALE: 1"=1'-0"



DETAIL 3
SCALE: 1"=1'-0"



PLAN

ELEVATION

SADDLE BLOCK DETAIL
SCALE: 3"=1'-0"

NOTES:

1. FOR GENERAL NOTES, SEE SHEET ST-01.
2. FOR BASE PLATE, ANCHOR BOLT AND ANCHOR PLATE DETAILS, SEE SHEET ST-05.
3. FOR COPE HOLE DETAILS, SEE SHEET ST-08.
4. TO PREVENT INTERSECTING FILLET WELDS ON OPPOSITE SIDES OF COMMON PLANE, PROVIDE A WELD "HOLDBACK" AT THE EDGE OF THE GUSSET PLATE IN THE BRACING MEMBERS EQUAL TO THE MINIMUM WELD SIZE REQUIRED. ENSURE MINIMUM TOTAL WELD LENGTHS ARE ACHIEVED.

ST-06

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

US 301
SR 896 TO SR 1

CONTRACT	BRIDGE NO.	
T200950343	DESIGNED BY: AB	
COUNTY	CHECKED BY: CAM	
NEW CASTLE		

STRUCTURAL
GANTRY TOWER ELEVATION & SECTIONS

SHEET NO.	
845	
TOTAL SHTS.	
875	

LAST REVISED: 3/12/2008
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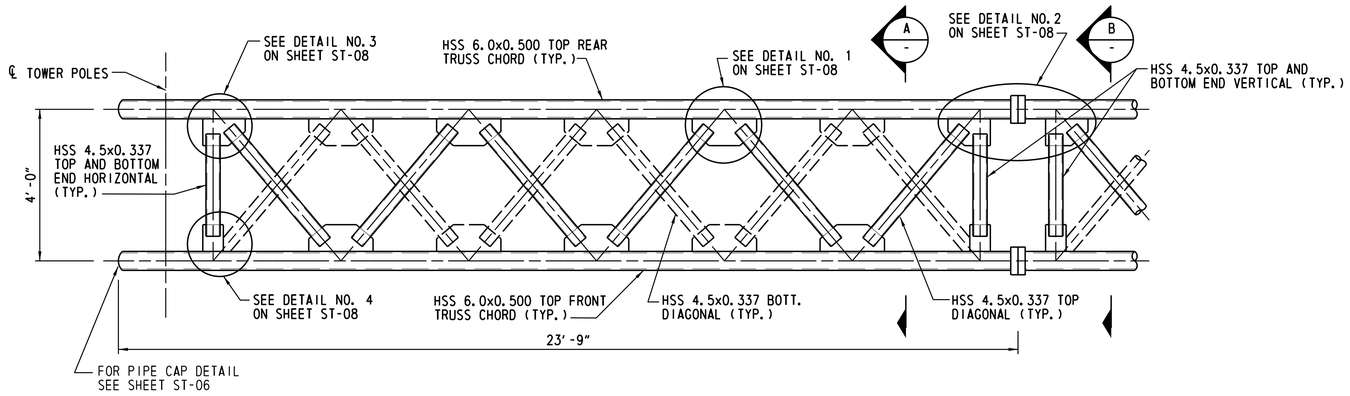
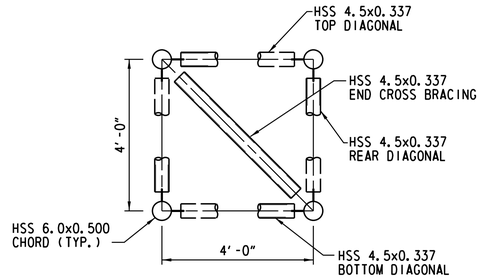
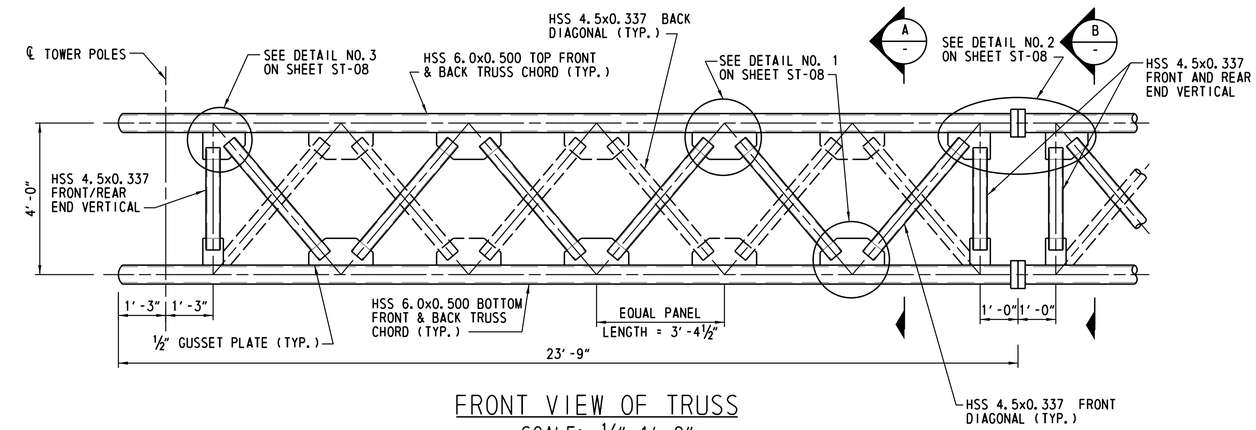


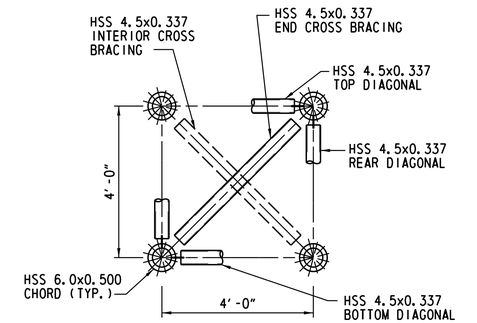
TOP VIEW OF TRUSS
SCALE: ½"=1'-0"



SECTION A
SCALE: ½"=1'-0"



FRONT VIEW OF TRUSS
SCALE: ½"=1'-0"



SECTION B
SCALE: ½"=1'-0"

NOTES:

1. FOR GENERAL NOTES, SEE SHEET ST-01.
2. TEMPORARY END FRAME TO BE USED TO PROVIDE ADDITIONAL SUPPORT TO ENDS OF TRUSS CHORDS DURING FABRICATION AND GALVANIZING PROCESSES. REMOVE AND REPAIR GALVANIZING AT POINTS OF CONTACT PRIOR TO TRUSS ASSEMBLY AND ERECTION. TEMPORARY FRAME IS NOT PART OF THE STRUCTURE AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.
3. TRUSSES SHALL BE FABRICATED WITH CAMBER AT THE CENTER OF THE SPAN EQUAL TO THE VALUE GIVEN BY THE CAMBER DIAGRAM ON THE CONTRACT DRAWING. ALL TRUSSES SHALL BE ASSEMBLED IN THE SHOP IN A NO LOAD CONDITION TO ENSURE FIT AT SPLICES AND TO CHECK CAMBER.

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

US 301
SR 896 TO SR 1

CONTRACT T200950343
COUNTY NEW CASTLE
BRIDGE NO.
DESIGNED BY: AB
CHECKED BY: CAM

STRUCTURAL GANTRY TRUSS DETAILS I

SHEET NO. 846
TOTAL SHTS. 875

LAST REVISED: 3/12/2008
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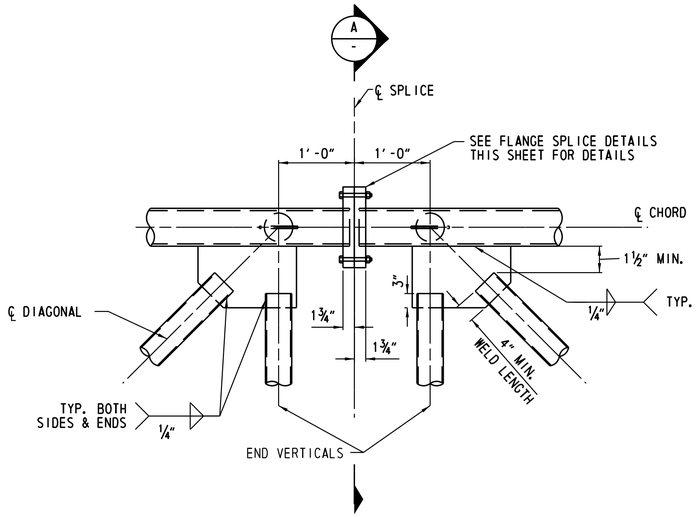
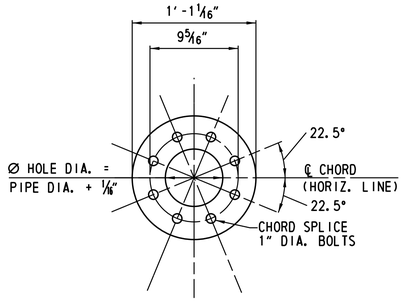
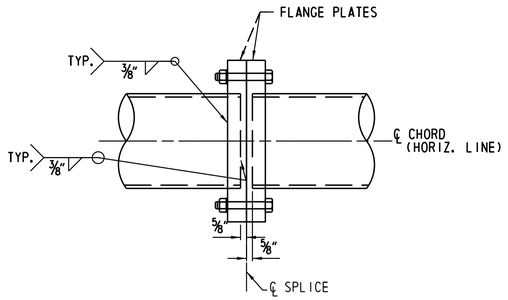


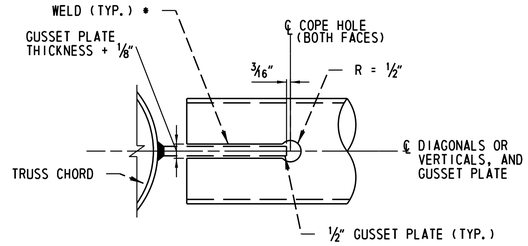
DETAIL 2
SCALE: 1"=1'-0"



SECTION A
SCALE: 1 ½"=1'-0"

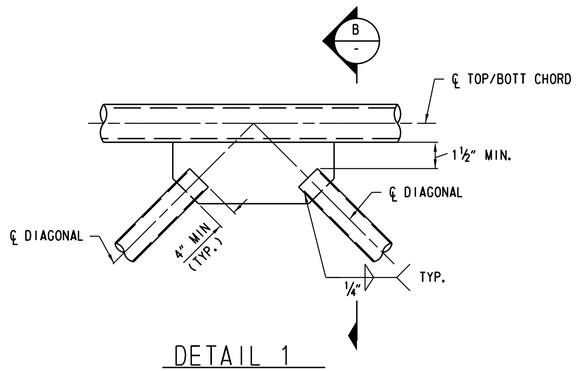


FLANGE SPLICE DETAIL
SCALE: NTS



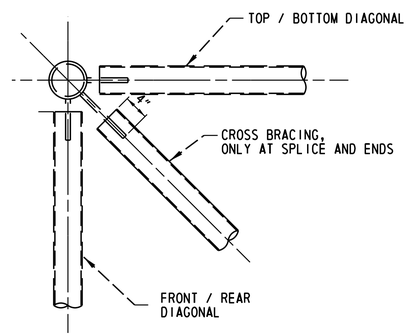
COPE HOLE DETAIL (TYP.)
SCALE: NTS

• - PROVIDE A WELD "HOLDBACK" AT THE EDGE OF THE GUSSET PLATE IN THE BRACING MEMBER EQUAL TO THE MINIMUM WELD SIZE REQUIRED.

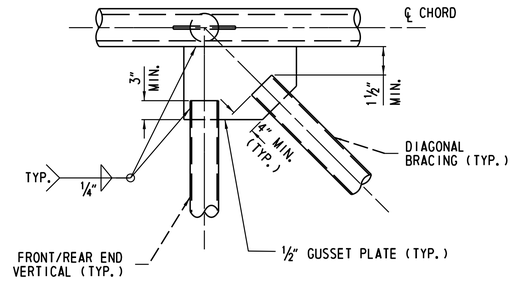


DETAIL 1
SCALE: 1"=1'-0"

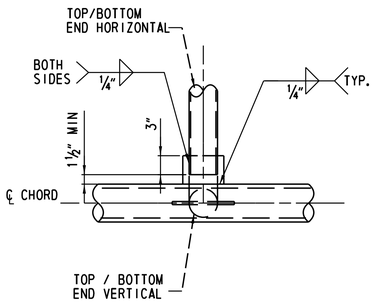
CROSS BRACING ONLY AT SPLICE & ENDS



SECTION B
SCALE: 1"=1'-0"



DETAIL 3
SCALE: 1"=1'-0"



DETAIL 4
SCALE: 1"=1'-0"

NOTES:

1. FOR GENERAL NOTES, SEE SHEET ST-01.
2. CHORD SPLICE BOLTS SHALL BE ASTM A325 HIGH STRENGTH STEEL BOLTS, HOLES IN SPLICE PLATE SHALL BE 1/16" LARGER THAN BOLT DIAMETER.
3. ASTM A325 SPLICE BOLTS SHALL BE HEAVY HEXAGON TYPE AND SHALL BE FURNISHED WITH HEAVY HEXAGON NUTS AND WASHER.
4. THE THREADED PORTION OF THE SPLICE BOLTS SHALL BE EXCLUDED FROM THE SHEAR PLANE OF THE SPLICE.
5. TO PREVENT INTERSECTING FILLET WELDS ON OPPOSITE SIDES OF COMMON PLANE, PROVIDE A WELD "HOLDBACK" AT THE EDGE OF THE GUSSET PLATE IN THE BRACING MEMBERS EQUAL TO THE MINIMUM WELD SIZE REQUIRED. ENSURE MINIMUM TOTAL WELD LENGTHS ARE ACHIEVED.

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

US 301
SR 896 TO SR 1

CONTRACT	BRIDGE NO.		SHEET NO.
T200950343	DESIGNED BY: AB	STRUCTURAL GANTRY TRUSS DETAILS II	847
COUNTY			TOTAL SHTS.
NEW CASTLE	CHECKED BY: CAM		875

LAST REVISED: 3/12/2008
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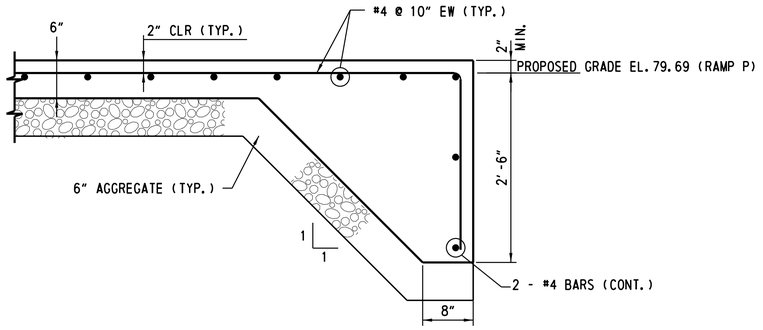
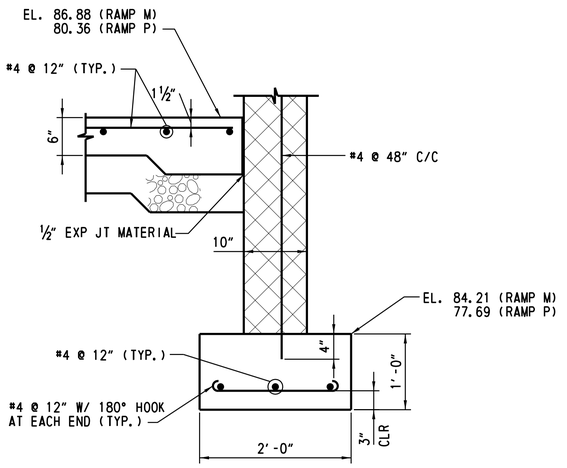


NOTES:

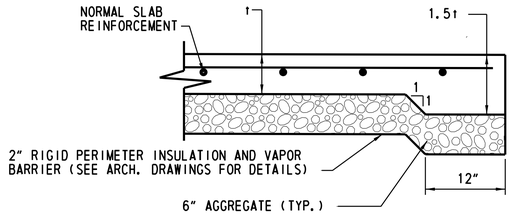
1. THE DIMENSIONS OF THE GENERATOR PAD ARE 10'-6"x5'-6".
2. THE DESIGN OF THE GENERATOR PAD IS FOR A 6500 LB. UNIT THAT MEASURES 8'-6"x3'-6". ACTUAL SIZE AND WEIGHT OF GENERATOR SHALL BE COORDINATED WITH THE ELECTRICAL DISCIPLINE.
3. THE GENERATOR PAD SHALL EXTEND AN ADDITIONAL 1 FT. ON EACH SIDE OF THE APPROVED UNIT.
4. PROVIDE BONDOUT TO ACCOMMODATE CONDUITS FROM BELOW. COORDINATE SIZE AND LOCATION WITH GENERATOR VENDOR SUBMITTALS.

GENERATOR PAD DETAIL
SCALE: 1"=1'-0"

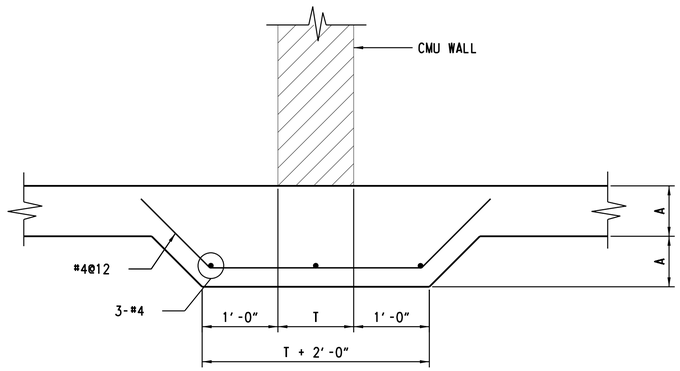


NOTE: FOR EQUIPMENT HUT DETAILS, SEE ARCHITECTURAL DRAWINGS

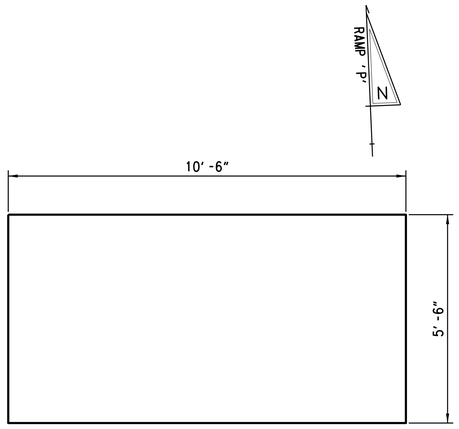
RAMP HUT DETAIL
SCALE: 1"=1'-0"



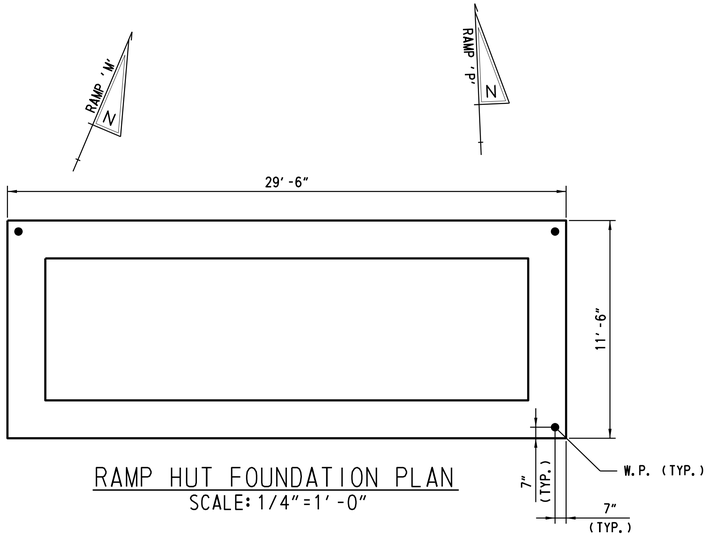
THICKENED SLAB EDGE
SCALE: NTS



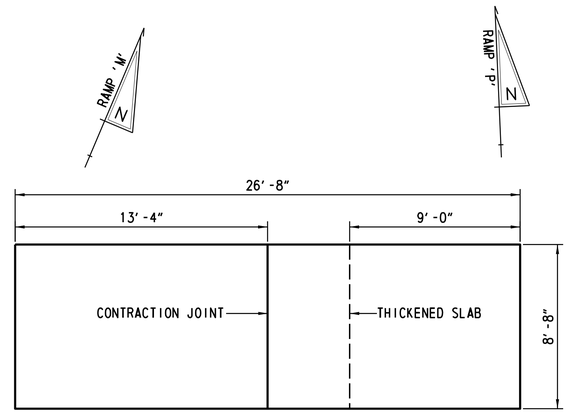
THICKENED SLAB AT MASONRY WALLS
SCALE: NTS



GENERATOR PAD PLAN
SCALE: 1/2"=1'-0"



RAMP HUT FOUNDATION PLAN
SCALE: 1/4"=1'-0"



RAMP HUT SLAB PLAN
SCALE: 1/4"=1'-0"

NOTES:

1. FOR GENERAL STRUCTURAL NOTES, REFER TO SHEET ST-01.
2. FOR DETAILS OF EQUIPMENT HUT, REFER TO SHEET A-2.

NOTES:

1. ALTERNATE BARS SHALL BE STOPPED 2" ON BOTH SIDES OF CONTRACTION JOINT.
2. PLACE 1" DEEP SAW CUT CONTRACTION JOINT.

ST-09

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

US 301
SR 896 TO SR 1

CONTRACT	BRIDGE NO.
T200950343	DESIGNED BY: CAB
COUNTY	CHECKED BY: CAM
NEW CASTLE	

STRUCTURAL
MISC. STRUCTURES
SECTIONS AND DETAILS

SHEET NO.
848
TOTAL SHTS.
875

ABBREVIATIONS

(NOT ALL ABBREVIATIONS MAY APPEAR ON THESE CONTRACT DOCUMENTS)

ABV	ABOVE
AC	AIR COMPRESSOR
ACCU	AIR COOLED CONDENSING UNIT
ACU	AIR CONDITIONING UNIT
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AFR	ABOVE FINISHED ROOF
AHU	AIR HANDLING UNIT
AP	ACCESS PANEL
APD	AIR PRESSURE DROP
APPROX.	APPROXIMATE
AS	AIR SEPERATOR
ATC	AUTOMATIC TEMPERATURE CONTROL
AUTO	AUTOMATIC
AVG	AVERAGE
AVS	AIR VOLUME MEASUREMENT STATION
AWT	AVERAGE WATER TEMPERATURE
BCU	BUILDING CONTROL UNIT
BDD	BACK DRAFT DAMPER
BFP	BACK FLOW PREVENTOR
BG	BLAST GATE
BLDG	BUILDING
BOL	BOTTOM OF LOUVER
BOD	BOTTOM OF DUCT/BASIS OF DESIGN
BOI	BOTTOM OF INSULATION
BOT	BOTTOM
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
CA	COMPRESSED AIR
CAP	CAPACITY
CAV	CONSTANT AIR VOLUME
CBV	CIRCUIT BALANCING VALVE
CC	COOLING COIL
CD	CEILING DIFFUSER\CONDENSATE DRAIN
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CHP	CONCRETE HOUSEKEEPING PAD
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
CI	CAST IRON
CLG	CEILING
CMU	CONCRETE MASONARY UNIT
CO	CLEAN OUT
COL	COLUMN
COMP	COMPRESSOR
CONC	CONCRETE
COND	CONDENSATE
CONN	CONNECTION
CONTD	CONTINUED
CONV	CONVECTOR
COP	COEFFICIENT OF PERFROMANCE
CT	COOLING TOWER
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
CV	CONSTANT AIR VOLUME BOX
CVS	CONTROL VALVE STATION
CW	COLD WATER
D	DAMPER
DDC	DIRECT DIGITAL CONTROL
DEPT	DEPARTMENT
DIA	DIAMETER
DIAG	DIAGRAM
DIFF	DIFFERENTIAL
DISC	DISCONNECT
DIV	DIVISION
DIW	DOWN IN WALL
DL	DOOR LOUVER
DN	DOWN
DWG	DRAWING
DX	DIRECT EXPANSION
DPI	DIFFERENTIAL PRESSURE INDICATOR
DPT	DIFFERENTIAL PRESSURE TRANSMITTER
(E),EXIST	EXISTING
EA	EACH OR EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EAV	EXHAUST AIR VALVE
ECC	ECCENTRIC
EDB	ENTERING DRY BULB
EDH	ELECTRIC DUCT HEATER
EER	ENERGEY EFFICIENCY RATING
EF	EXHAUST FAN
EG	EXHAUST GRILLE
EL	ELEVATION
ELEC	ELECTRIC
EQ	EQUAL
EQUIP	EQUIPMENT
ER	EXHAUST REGISTER
ES	END SWITCH
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EUH	ELECTRIC UNIT HEATER
EWT	ENTERING WATER TEMPERATURE
EXP	EXPANSION
°F	DEGREES FAHRENHEIT
FA	FROM ABOVE
FB	FROM BELOW
FC	FLEXIBLE CONNECTION
FCU	FAN COIL UNIT
FCV	FLOW CONTROL VALVE
FD	FIRE DAMPER/FLOOR DRAIN
FIN	FINISHED
FL	FLANGE
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
FLR	FLOOR
FM	FLOW METER
FO	FAIL OPEN
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FP	FIRE PROTECTION
FPB	FAN POWERED BOX
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FS	FLOW SWITCH
FT	FEET, FLASH TANK
FTR	FIN TUBE RADIATION
FV	FACE VELOCITY
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GRD	GROUND
GRS/LB	GRAINS PER POUND
GUH	GAS FIRED UNIT HEATER
H	HUMIDIFIER
HC	HEATING COIL
HD	HEAD (PRESSURE IN FEET)
HOA	HAND OFF AUTO SWITCH
HORIZ.	HORIZONTAL
HP	HORSEPOWER
HRU	HEAT RECOVERY UNIT
HWHC	HOT WATER HEATING COIL
HWS	HOT WATER SUPPLY
HWR	HOT WATER RETURN
HVAC	HEATING VENTILATION AND AIR CONDITIONING
HVU	HEATING AND VENTILATION UNIT
HX	HEAT EXCHANGER
HZ	HERTZ
H20	WATER
ID	INSIDE DIMENSION
IN	INCHES
INFO	INFORMATION
IN WG	INCHES IN WATER COLUMN
INV	INVERT
IPLV	INTEGRATED PART LOAD VALUE
KE	KITCHEN EXHAUST
KEH	KITCHEN EXHAUST HOOD
KW	KILOWATT
L	LENGTH
LAT	LEAVING AIR TEMPERATURE
LBG	LINEAR BAR GRILLE
LBS	POUNDS
LBS/HR	POUNDS PER HOUR
LD	LINEAR DIFFUSER
LDB	LEAVING DRY BULB TEMPERATURE
LIN	LINEAR
LRA	LOCKED ROTOR AMPS
LVR	LOUVER
LWB	LEAVING WET BULB TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
M	MOTOR
MAU	MAKE UP AIR UNIT
MAX	MAXIMUM
MB	MIXING BOX
MBH	THOUSANDS OF BTU PER HOUR
MC	MECHANICAL CONTRACTOR
MD	MOTORIZED DAMPER
MED	MEDIUM
MER	MECHANICAL EQUIPMENT ROOM
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MOD	MODULATING
N/A	NOT APPLICABLE
NG	NATURAL GAS
NC	NORMALLY CLOSED
NEG	NEGATIVE
NIC	NOT IN CONTRACT
No	NUMBER
NO	NORMALLY OPEN
NOM	NOMINAL
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OAI	OUTSIDE AIR INTAKE
OAT	OUTSIDE AIR TEMPERATURE
OC	ON CENTER
OCC	OCCUPIED•
OD	OUTSIDE DIMENSION
ODP	OPEN DRIP PROOF
PC	PLUMBING CONTRACTOR
PD	PRESSURE DROP
PERF	PERFORATED
PNEU	PNEUMATIC
POS	POSITIVE
PRV	PRESSURE REDUCING VALVE
PS	PRESSURE SWITCH
PSA	PRIMARY SUPPLY AIR
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH VALVE
PT	PRESSURE TRANSMITTER
PVC	POLYVINYL CHOLORIDE
RA	RETURN AIR
RD	ROOF DRAIN
RF	RETURN FAN
RG	RETURN GRILLE
RH	RELATIVE HUMIDITY
RHC	REHEAT COIL
RL	REFRIGERANT LIQUID
RLA	RATED LOAD AMPS
RM	ROOM
RPM	REVOLUTIONS PER MINUTE
RR	RETURN REGISTER
RS	REFRIGERANT SUCTION
RTU	ROOFTOP AIR HANDLING UNIT
RV	RELIEF VALVE
SA	SUPPLY AIR
SAV	SUPPLY AIR VALVE
SCH	SCHEDULE
SD	SMOKE DAMPER
SF	SUPPLY FAN
SG	SUPPLY GRILLE
SHT	SHEET
SP	STATIC PRESSURE
SPEC	SPECIFICATION
SQ	SQUARE
SR	SUPPLY REGISTER
SRV	SAFETY RELIEF VALVE
SS	STAINLESS STEEL
ST	SOUND TRAP
SW	SWITCH
SUCT	SUCTION
SUP	SUPPLY
SYS	SYSTEM
T	THERMOSTAT
TAD	TRANSFER AIT DUCT
TEMP	TEMPERATURE
TF	TRANSFER FAN
TG	TRANSFER GRILLE
TK	TANK
TP	TOTAL PRESSURE
TRAN	TRANSITION
TS	TEMPERATURE SWITCH
TYP	TYPICAL
UH	UNIT HEATER
VAC	VACUUM
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
VEL	VELOCITY
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VTR	VENT THRU ROOF
W	WIDTH
WB	WET BULB
WG	WATER GAUGE
WH	WATER HEATER
WPD	WATER PRESSURE DROP
WT	WEIGHT
X	VARIABLE
2 POS	TWO POSITION

PIPING ELEMENTS/VALVES

(NOT ALL ELEMENTS MAY APPEAR ON THESE CONTRACT DOCUMENTS)

- VALVE, SEE SPEC'S
- GLOBE VALVE
- PLUG VALVE, GAS COCK
- BUTTERFLY VALVE
- BALL VALVE
- CHECK VALVE
- GATE VALVE, ANGLE
- GLOBE VALVE, ANGLE
- THREE WAY CONTROL VALVE
- TWO WAY CONTROL VALVE
- SOLENOID VALVE
- PRESSURE REDUCING VALVE (PRV)
- SV — COMBINATION STRAINER AND SHUT OFF VALVE WITH PETES PLUGS
- FV — COMBINATION FLOW CONTROL VALVE AND SHUT OFF VALVE WITH PETES PLUGS
- CIRCUIT BALANCING VALVE
- TPV — TEMPERATURE/PRESSURE RELIEF VALVE
- FLEXIBLE CONNECTION
- PIPE GUIDE
- RELIEF/SAFETY VALVE
- AUTOMATIC FILL VALVE
- MV — MANUAL AIR VENT
- AV — AUTOMATIC AIR VENT (EXTEND DISCHARGE TO DRAIN)
- FLOW METER-ORIFICE
- DIRECTION OF FLOW
- DIRECTION OF SLOPE
- STRAINER
- STRAINER WITH BLOW OFF VALVE
- BFP — BACK-FLOW PREVENTOR
- PIPE RISING UP
- PIPE DROPPING DOWN
- TEE OUTLET DOWN
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER
- UNION - SCREWED OR FLANGED
- BLIND FLANGE
- A — PIPE ANCHOR
- EJ — EXPANSION JOINT
- AQUASTAT
- ELECTRICALLY TRACED PIPING
- H / W — EXPANSION LOOP (WxH)
- PT — PRESSURE / TEMPERATURE TEST STATION
- THERMOMETER

DUCTWORK

(NOT ALL COMPONENTS MAY APPEAR ON THESE CONTRACT DOCUMENTS)

DOUBLE LINE		SINGLE LINE
	FLEXIBLE DUCTWORK	
20X12	NEW DUCTWORK - DUCT SIZE INDICATED INCLUDES ALLOWANCE FOR ACOUSTIC LINING WHERE APPLICABLE	20X12
	RADIUS ELBOW	
	VANED ELBOW	
	BRANCH DUCT TAKE-OFF	
D R	RISE OR DROP DIRECTION OF AIR FLOW	D R
SIZE CFM	DIFFUSER — TYPE, NECK, CFM	
SIZE CFM	CEILING RETURN/EXHAUST REGISTER (R) OR GRILLE (G) — TYPE, NECK, CFM	
SIZE CFM	SUPPLY AIR GRILLE (G) OR SUPPLY AIR REGISTER (R) — TYPE, NECK, CFM	
SIZE CFM	RETURN AND/OR EXHAUST AIR GRILLE (G) OR REGISTER (R) — TYPE, NECK, CFM	
VD	VOLUME DAMPER W / LOCKING QUADRANT	
SD	SMOKE DAMPER W / AD	
FD	FIRE DAMPER W / AD	
FSD	FIRE & SMOKE DAMPER W / AD	
M	MOTORIZED DAMPER (OPPOSED BLADE)	
	CENTRIFUGAL FAN	
	DOME FAN	
8	AXIAL FAN	
	AIR VOLUME MEASUREMENT STATION	
T	THERMOSTAT	
H	HUMIDISTAT	
S	SMOKE DETECTOR	
U	UNDERCUT	
DL 12X12	DOOR LOUVER	
	CEILING MOUNTED GRILLE OR REGISTER	
	DIFFUSER, 4-WAY BLOW	
	DIFFUSER, 3-WAY BLOW	
	DIFFUSER, 2-WAY BLOW	
	DIFFUSER, 1-WAY BLOW	
	LINEAR DIFFUSER	
CO	GAS CONCENTRATION MONITOR	
CO2	CARBON DIOXIDE MONITOR	

REFERENCE SYMBOLS

(NOT ALL SYMBOLS MAY APPEAR ON THESE CONTRACT DOCUMENTS)

- (X)X — QUANTITY; NON POWERED EQUIPMENT (SEE SCHEDULE); EQUIPMENT IDENTITY ABBREVIATION
- X — OPTIONAL CELL
- X — FLOW RATE
- X / X-X — EQUIPMENT POWERED WITH LINE VOLTAGE; EQUIPMENT IDENTITY ABREVIATION; EQUIPMENT NUMBER; SYSTEM NUMBER (IF APPLICABLE)
- X / X — INDICATES DETAIL LETTER (APPLIES ONLY WHERE INDICATED ON DRAWINGS); INDICATES DRAWING ON WHICH DETAIL APPEARS
- X / X — INDICATES SECTION NUMBER; INDICATES ON WHICH DRAWING SECTION APPEARS
- X — INDICATES REVISION & NUMBER
- ELEVATION REFERENCE
- CONNECT NEW TO EXISTING
- TERMINATION POINT OF DEMOLITION
- CONNECT TO MANUFACTURER'S PREPIPED CONNECTION
- PREPURCHASED EQUIPMENT
- X — SHEET NOTE NUMBER (SN)

LINE DESIGNATIONS

(NOT ALL LINETYPES MAY APPEAR ON THESE CONTRACT DOCUMENTS)

- CD — CONDENSATE DRAIN
- D — DRAIN
- EA — EXHAUST AIR
- HWS — HOT WATER SUPPLY
- HWR — HOT WATER RETURN
- NG — NATURAL GAS
- RA — RETURN AIR
- RL — REFRIGERANT LIQUID
- RS — REFRIGERANT SUCTION
- SA — SUPPLY AIR
- P — P — P — VENDOR PROVIDED EQUIIP
- LOW VOLTAGE WIRING

M–01

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

US 301
SR 896 TO SR 1

CONTRACT	T200911308
COUNTY	NEW CASTLE
BRIDGE NO.	
DESIGNED BY: CLG	
CHECKED BY: DWF	

MECHANICAL SYMBOLS, ABBREVIATIONS & GENERAL NOTES

SHEET NO.	849
TOTAL SHTS.	875

LAST REVISED: 3/12/2008
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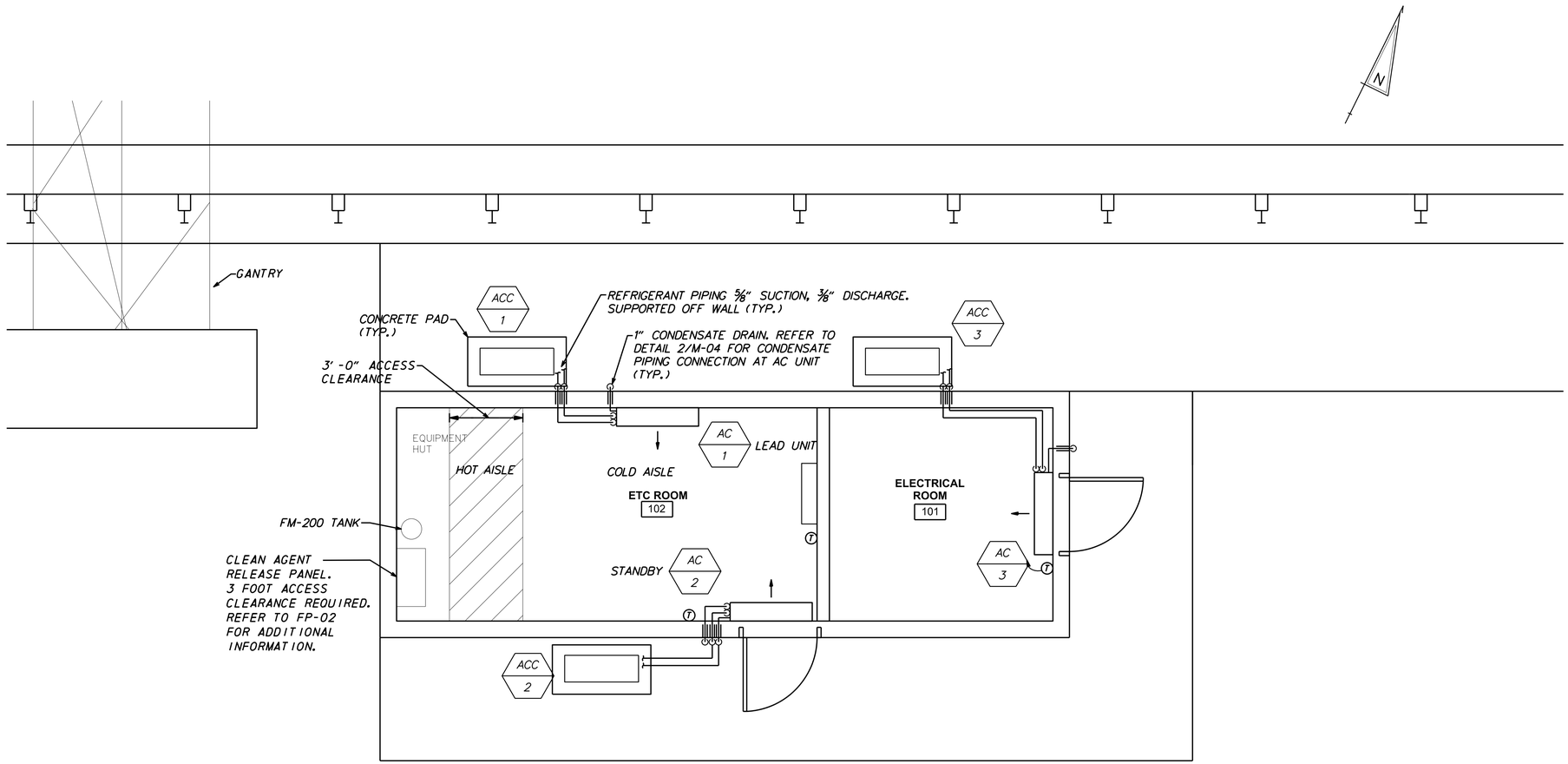

NOTE: ETC EQUIPMENT TO BE SUPPLIED BY OTHERS.
WALL MOUNT OR OTHER SOLUTIONS MAY BE UTILIZED.
ANY CHANGES MUST BE APPROVED BY THE ETC CONTRACTOR.

MECHANICAL RAMP HUT PLAN RAMP 'M'

SCALE: 3/8" = 1'-0"

LAST REVISED: 3/12/2008
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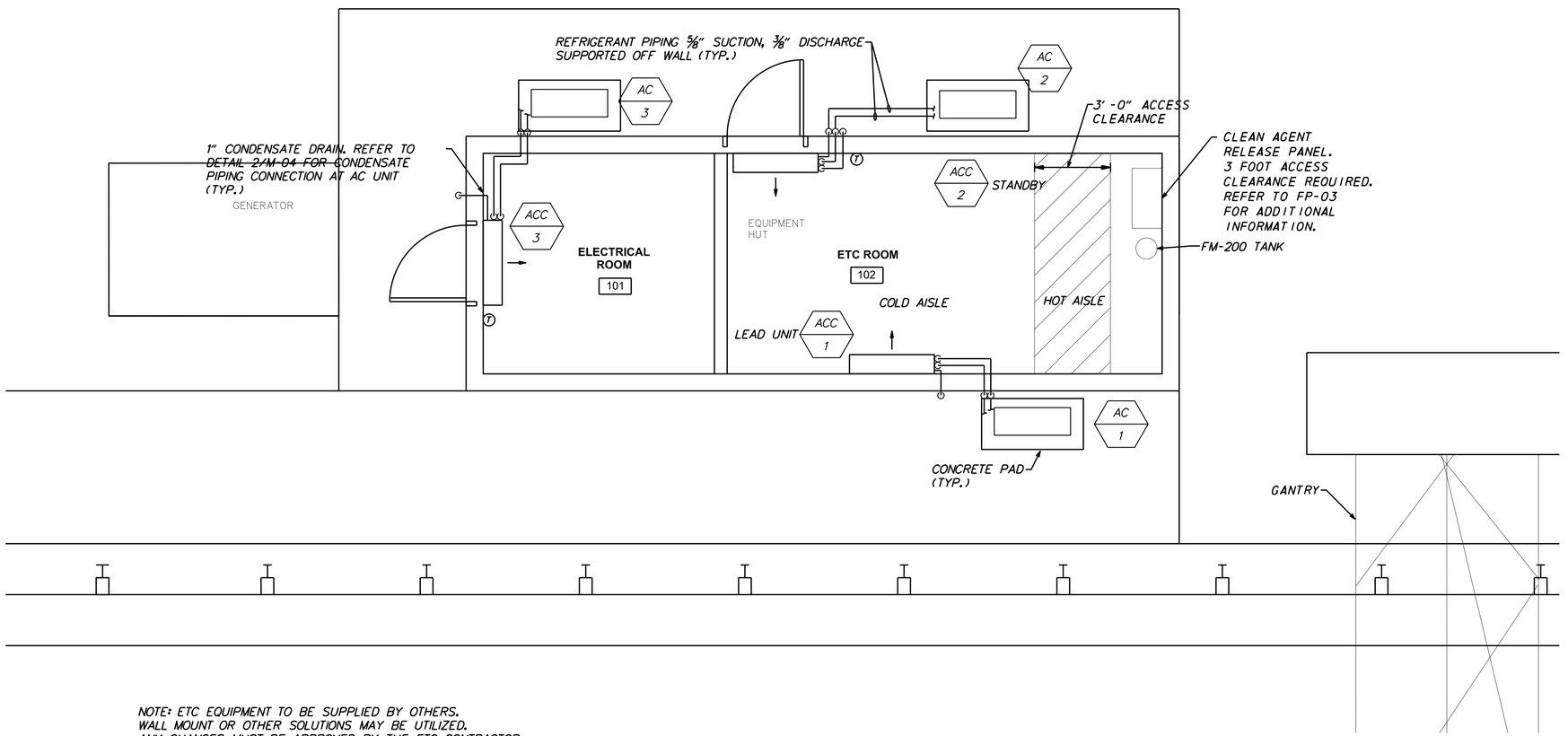
M-02

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS		US 301 SR 896 TO SR 1	CONTRACT T200911308	BRIDGE NO.	MECHANICAL RAMP 'M' PLAN	SHEET NO. 850
				COUNTY NEW CASTLE	DESIGNED BY: ASC		TOTAL SHTS. 875
					CHECKED BY: CLG		



NOTE: ETC EQUIPMENT TO BE SUPPLIED BY OTHERS.
WALL MOUNT OR OTHER SOLUTIONS MAY BE UTILIZED.
ANY CHANGES MUST BE APPROVED BY THE ETC CONTRACTOR.

MECHANICAL RAMP HUT PLAN RAMP 'P'

SCALE: 1/2" = 1'-0"

LAST REVISED: 3/12/2008
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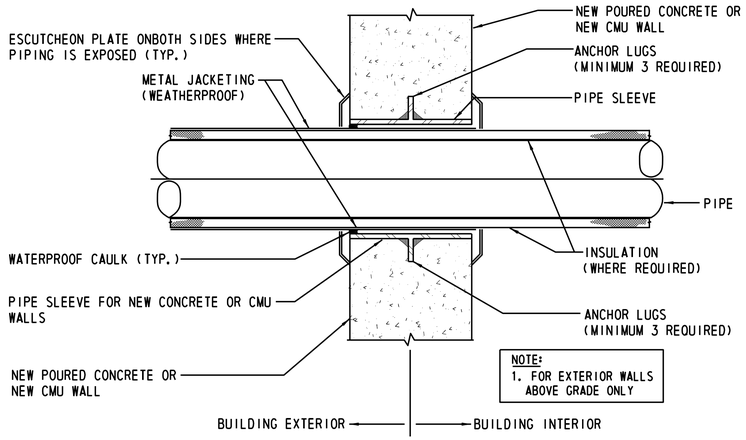
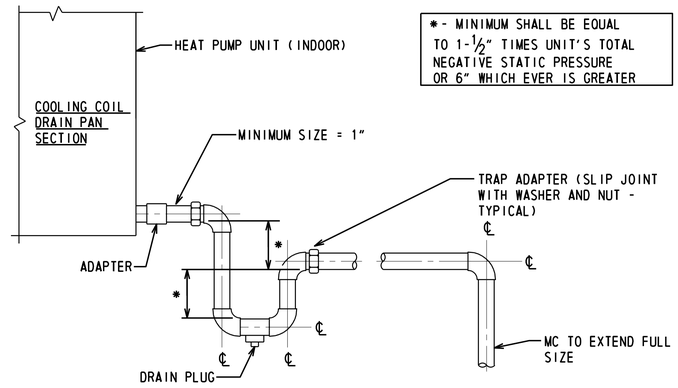
M-03

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS		US 301 SR 896 TO SR 1	CONTRACT T200911308	BRIDGE NO.	MECHANICAL RAMP HUT PLAN RAMP 'P'	SHEET NO. 851
				COUNTY NEW CASTLE	DESIGNED BY: ASC		TOTAL SHTS. 875
					CHECKED BY: CLG		



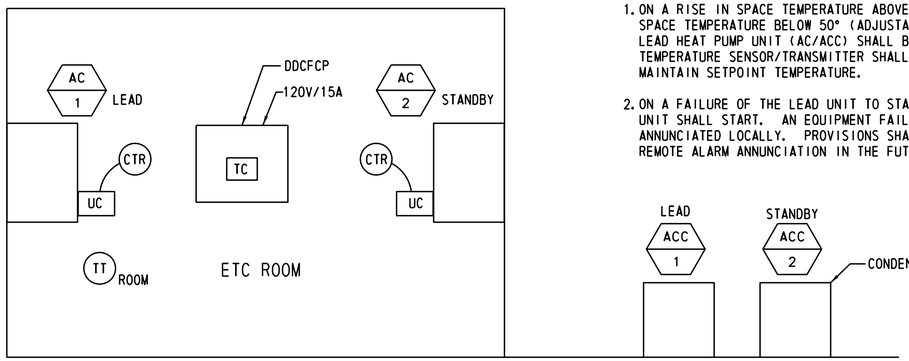
1 PIPE SLEEVE - EXTERIOR WALL ABOVE GRADE

SCALE: NONE



2 DETAIL - CONDENSATE DRAIN

SCALE: NONE



ETC ROOM TEMPERATURE CONTROL SEQUENCE

1. ON A RISE IN SPACE TEMPERATURE ABOVE 80° OR ON A DROP SPACE TEMPERATURE BELOW 50° (ADJUSTABLE), THE SELECTED LEAD HEAT PUMP UNIT (AC/ACC) SHALL BE ENERGIZED. SPACE TEMPERATURE SENSOR/TRANSMITTER SHALL CYCLE UNIT TO MAINTAIN SETPOINT TEMPERATURE.
2. ON A FAILURE OF THE LEAD UNIT TO START, THE STANDBY UNIT SHALL START. AN EQUIPMENT FAILURE ALARM SHALL BE ANNUNCIATED LOCALLY. PROVISIONS SHALL BE MADE FOR REMOTE ALARM ANNUNCIATION IN THE FUTURE.

3 ETC ROOM/TEMPERATURE CONTROL DIAGRAM

SCALE: NONE

SYMBOL LIST

TT	TEMPERATURE SENSOR AND TRANSMITTER
UC	UNIT CONTROLLER (BY OEM)
CTR	CURRENT TRANSFORMER RELAY
TC	TEMPERATURE CONTROLLER PROVIDED BY ATC CONTRACTOR PARAGON: PART NUMBER PC 12931
DDCFCP	DDC FIELD CONTROL PANEL ENCLOSURE BY ATC CONTRACTOR. 110V WITH 24VDC TRANSFORMER, PARAGON: A1008CHOR W/ A10P8 BACKPLATE

GENERAL CONTROL NOTES:

1. ALL CONTROL COMPONENTS SHALL BE FIELD MOUNTED AND WIRED, EXCEPT FOR UNIT CONTROLLERS UC.
2. TEMPERATURE SENSORS (TT) SHALL BE CAPABLE OF PROVIDING A TEMPERATURE SIGNAL TO REMOTE BUILDING MANAGEMENT SYSTEM IN THE FUTURE.
3. DDCFCP SHALL INCLUDE FLUSHMOUNT LOCAL DISPLAYS INDICATING: SETPOINT, TEMPERATURE DISPLAY; LOCAL "SYSTEM START", "HAND, OFF, AUTO" AND MANUAL ON" SWITCHES WITH OPTIONAL REMOTE CONNECTIONS.
4. LEAD UNIT SHALL BE SELECTABLE FROM DDCFCP.

SPLIT SYSTEM HEAT PUMP UNIT SCHEDULE

UNIT TAG	INDOOR UNIT DATA						OUTDOOR UNIT DATA			ELECTRICAL DATA					MANUFACTURER/MODEL	REMARKS
	NOMINAL COOLING (MBH)	NOMINAL HEATING (MBH)	MAX AIRFLOW (CFM)	OA (CFM)	DIMENSIONS H/W/D (IN.)	WEIGHT (LBS.)	FAN RPM (CLG/HTG)	DIMENSIONS H/W/D (IN.)	WEIGHT (LBS.)	MAX AMPS HEATING	MAX AMPS COOLING	VOLTS	PHASE	HERTZ		
AC-1/ACC-1	30	32	695	-	12-5/8 / 39-1/4 / 9	31	850/850	32-3/4 / 35-3/8 / 13	137	18.5	17	208	1	60	FUJITSU / 30 RLX	SEE NOTES
AC-2/ACC-2	30	32	695	-	12-5/8 / 39-1/4 / 9	31	850/850	32-3/4 / 35-3/8 / 13	137	18.5	17	208	1	60	FUJITSU / 30 RLX	SEE NOTES
AC-3/ACC-3	30	32	695	-	12-5/8 / 39-1/4 / 9	31	850/850	32-3/4 / 35-3/8 / 13	137	18.5	17	208	1	60	FUJITSU / 30 RLX	SEE NOTES

NOTES:
1. FURNISH HEAT PUMP WITH SINGLE POINT POWER CONNECTION, DISCONNECT SWITCH, LOW AMBIENT CONTROL DOWN TO 0°F, AND MOUNTING HARDWARE.

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

US 301
SR 896 TO SR 1

CONTRACT T200911308
COUNTY NEW CASTLE
BRIDGE NO.
DESIGNED BY: CLG
CHECKED BY: DWF

MECHANICAL DETAILS & SCHEDULES

SHEET NO. 852
TOTAL SHTS. 875

LAST REVISED: 3/12/2008
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VALVE SYMBOLS

FM-200 RELEASE VALVE

PIPING ELEMENT SYMBOLS

FM-200 — FM-200 PIPING

FM-200 RELEASE NOZZLE

DEVICE SYMBOLS

A — ALARM HORN AND STROBE

R — RELEASE HORN AND STROBE

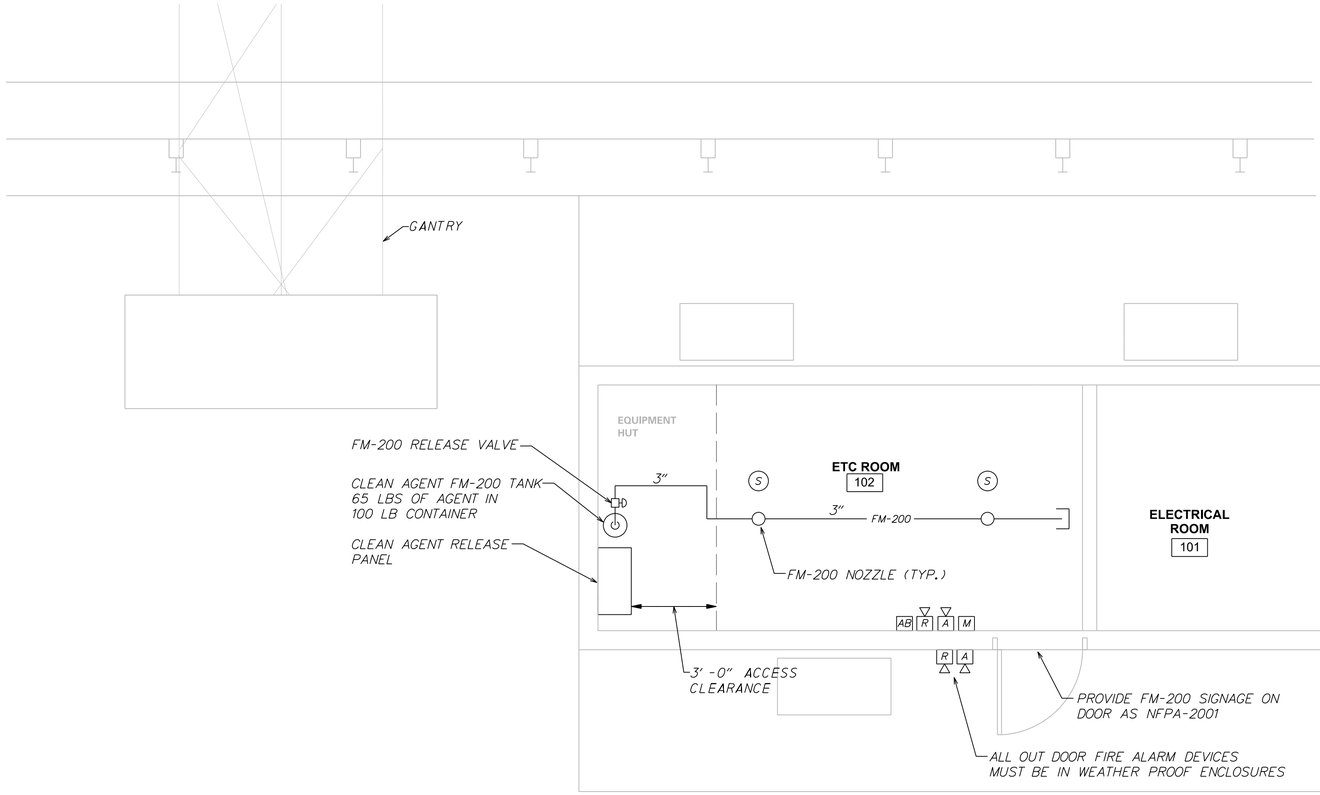
AB — MANUAL ABORT SWITCH

M — MANUAL PULL STATION

S — SMOKE DETECTOR (PHOTO ELECTRIC)

GENERAL NOTES

1. SEE ARCHITECTURAL DRAWING FOR GENERAL NOTES.
2. LEGENDS, SYMBOLS, NOTES AND ABBREVIATIONS SHOWN ON THIS DRAWING PERTAIN TO FIRE PROTECTION DRAWINGS ONLY.
3. COORDINATE WITH OTHER CONTRACTORS FOR CUTTING AND PATCHING OF ALL OPENINGS, EQUIPMENT PADS, PIPE SLEEVES, ETC.
4. PROVIDE OPENINGS THROUGH CONSTRUCTION AND SLEEVES AS REQUIRED.
5. PROVIDE ALL NECESSARY TEMPORARY OR PERMANENT CAPS OR PLUGS FOR PIPING. DO NOT LEAVE PIPING OPEN ENDED.
6. ENTIRE INSTALLATION SHALL MEET THE REQUIREMENTS OF THE FOLLOWING:
   A. NFPA 2001 - ALL APPLICABLE CHAPTERS
   B. OWNER'S INSURANCE COMPANY
   C. LOCAL AND STATE REGULATIONS
7. MAKE ALL NECESSARY SUBMISSIONS AND OBTAIN ALL NECESSARY PERMITS AND APPROVALS, INCLUDING ENGINEER'S APPROVAL PRIOR TO STARTING FABRICATION AND CONSTRUCTION.
8. REFER TO ARCHITECTURAL DRAWINGS FOR ROOM LAYOUTS, ROOM DIMENSIONS, CEILING HEIGHTS, BUILDING CONSTRUCTION, AND OTHER ARCHITECTURAL AND STRUCTRAL DETAILS IMPACTING DESIGN.
9. REFER TO FIRE PROTECTION SPECIFICATIONS FOR REQUIREMENTS ON MATERIALS, METHODS OF INSTALLATION, PRODUCTS AND GENERAL PROVISIONS.
10. IN ORDER TO FINALIZE THE PLAN REVIEW RELEASE FOR FIRE PROTECTION AND DEMONSTRATE COMPLIANCE WITH IFC 901.2 & IBC 907.1.1, THE CONTRACTOR SHALL PROVIDE TO THE ENGINEER THE FOLLOWING:
    A. SHOP DRAWINGS, DETAILS, SPECIFICATIONS, FIRE SUPRESSION CALCULATIONS, WATER SUPPLY DATA, AND EQUIPMENT DATA SHEETS, FOR THE AUTOMATIC FIRE SPRINKLER SYSTEM TO BE INSTALLED.
    B. SHOP DRAWINGS, DETAILS, SPECIFICATIONS, EQUIPMENT DATA SHEETS, ETC. ON ALL COMPONENTS AND DEVICES TO BE INSTALLED AS PART OF THE AUTOMATIC FIRE ALARM SYSTEM
    C. THE SHOP DRAWING SUBMISSION MUST BE SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF DELEWARE.
11. FM-200 PROTECTED SPACE IS TO BE SEALED AND LEAK TESTED AS PER NFPA-2001 AND ALL LOCAL AND STATE REQUIREMENTS.



FIRE PROTECTION RAMP HUT PLAN RAMP 'M'

SCALE: 3/8" = 1'-0"

FP-01

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

US 301
SR 896 TO SR 1

CONTRACT T200911308

COUNTY NEW CASTLE

BRIDGE NO.

DESIGNED BY: MLW

CHECKED BY: DWF

FIRE PROTECTION RAMP 'M' PLAN

SHEET NO. 853

TOTAL SHTS. 875

LAST REVISED: 3/12/2008
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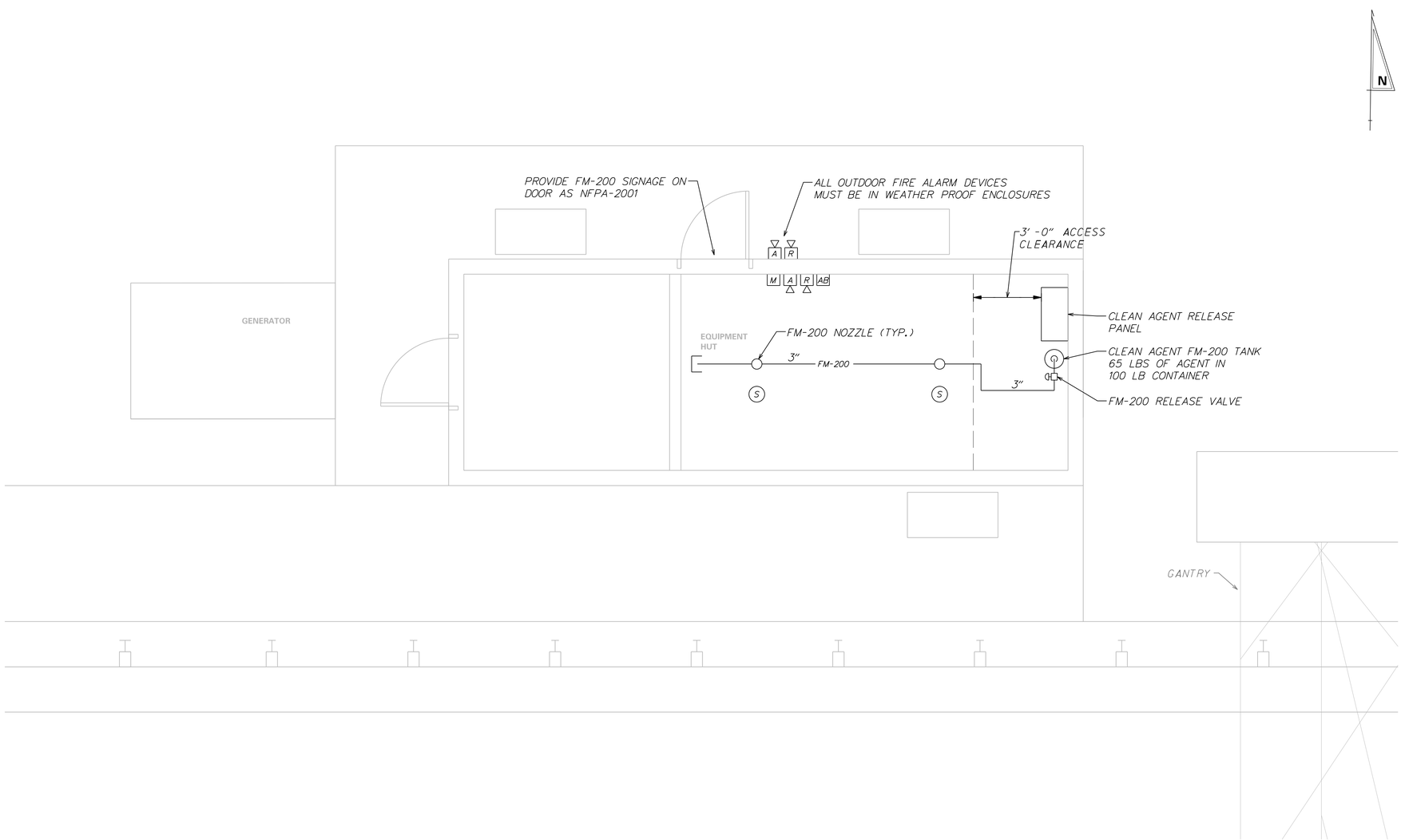

FIRE PROTECTION RAMP HUT PLAN RAMP 'P'

SCALE: 1/2" = 1'-0"

FP-02

LAST REVISED: 3/12/2008
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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS		US 301 SR 896 TO SR 1	CONTRACT T200911308	BRIDGE NO.	FIRE PROTECTION RAMP HUT PLAN RAMP 'P'	SHEET NO. 854
				COUNTY NEW CASTLE	DESIGNED BY: MLW		TOTAL SHTS. 875
					CHECKED BY: DWF		

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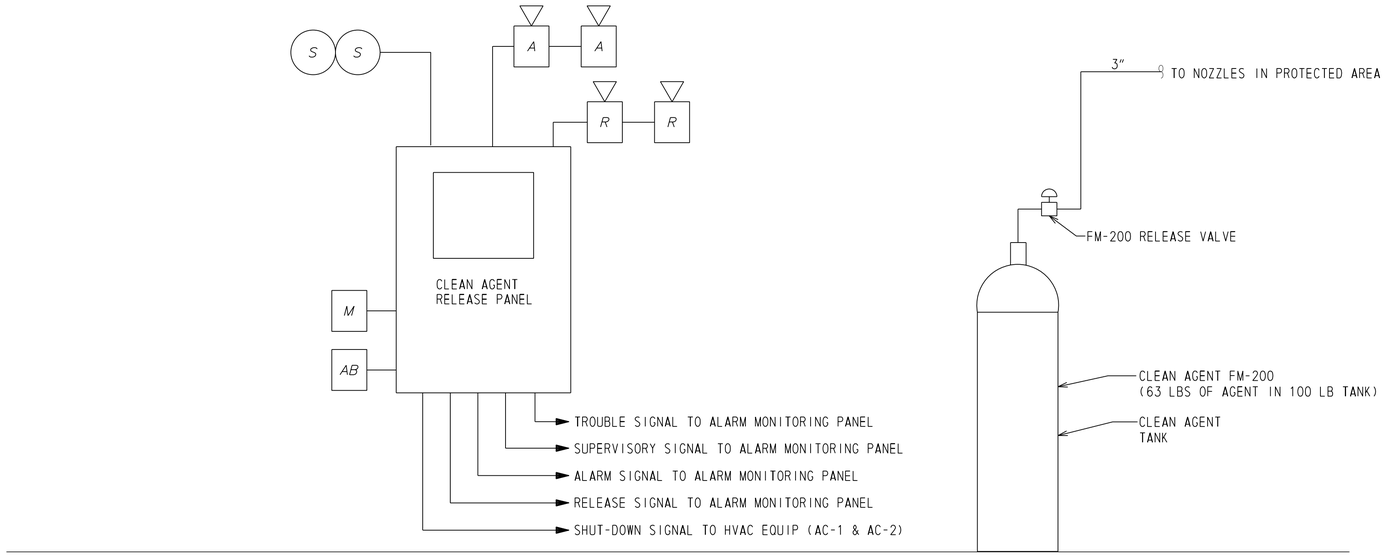


CLEAN AGENT FIRE SUPPRESSION SYSTEM SCHEMATIC

SCALE: NONE

SEQUENCE OF OPERATIONS

UPON THE PULLING OF A MANUAL PULL STATION THE CLEAN AGENT RELEASE PANEL SHALL:

1. SEND ALARM SIGNAL TO MAIN BUILDING FIRE ALARM PANEL

2. SEND SIGNAL TO SHUT-DOWN HVAC EQUIPMENT

3. RING ALARM HORN AND STROBES

4. ARM THE TANK VALVE AND INITIATE 30 SECOND WAITING PERIOD

5. AT THE END OF 30 SECOND WAITING PERIOD RING RELEASE HORN AND STROBE

6. SEND SIGNAL TO TANK VALVE TO RELEASE AGENT

UPON THE TRIPPING OF ONE SMOKE DETECTOR THE CLEAN AGENT RELEASE PANEL SHALL:

1. SEND ALARM SIGNAL TO MAIN BUILDING FIRE ALARM PANEL

2. RING ALARM HORN AND STROBES.

UPON THE TRIPPING OF A SECOND SMOKE DETECTOR THE CLEAN AGENT RELEASE PANEL SHALL:

1. ARM THE TANK VALVE AND INITATE 30 SECOND WAITING PERIOD.

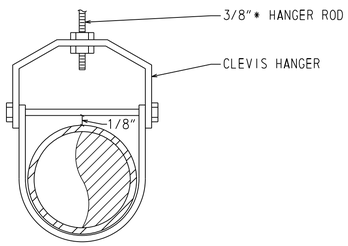
2. SEND SIGNAL TO SHUT DOWN HVAC EQUIPMENT AND DE-ENERGIZE ANY DOOR OPENERS/HOLDERS.

3. AT THE END OF THE 30 SECOND WAITING PERIOD RING RELEASE HORN AND STROBES

4. SEND SIGNAL TO TANK VALVE TO RELEASE AGENT

UPON RECIEVING SIGNAL FROM MANUAL ABORT SWITCH THE CLEAN AGENT RELEASE PANEL SHALL:

1. DISARM TANK VALVE



CLEVIS HANGER DETAIL

SCALE: NONE

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FP-02

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

US 301
SR 896 TO SR 1

CONTRACT	BRIDGE NO.	
T200911308	DESIGNED BY: MLW	
COUNTY	CHECKED BY: DWF	
NEW CASTLE		

FIRE PROTECTION DETAILS

SHEET NO.
855
TOTAL SHTS.
875

LIGHTING: (NOTE: SEE LIGHTING FIXUTRE SCHEDULE FOR FIXTURE TYPES)

- LP-1 — CIRCUIT
- 2x2 FLUORESCENT FIXTURE
- A — FIXTURE TYPE
- a — CONTROL DEVICE

- 2x4 FLUORESCENT FIXTURE
- 4' FLUORESCENT FIXTURE
- 8' FLUORESCENT FIXTURE
- LIGHT FIXTURE FOR EMERGENCY ILLUMINATION
- CEILING MOUNTED DOWN LIGHT
- WALL MOUNT FIXTURE
- TRACK LIGHTING
- POLE STANDARD LIGHT FIXTURE (ONE LUMINAIRE INDICATED)
- LIGHTING BOLLARD
- EXIT SIGN FIXTURE (SINGLE FACE UNIVERSAL MOUNT INDICATED)
- EXIT SIGN FIXTURE W/DIRECTIONAL ARROWS (DOUBLE FACE UNIVERSAL MOUNT INDICATED)
- S — SWITCH, SINGLE POLE
- S_3 — SWITCH, 3-WAY
- S_4 — SWITCH, 4-WAY
- S_D — SWITCH, DIMMER
- S_P — SWITCH WITH PILOT LIGHT
- TC — TIME CLOCK
- DIRECTIONAL MOTION DETECTOR LIGHT CONTROL
- MULTI-DIRECTIONAL MOTION DETECTOR LIGHT CONTROL
- OS — WALL OCCUPANCY SENSOR
- VS — WALL VACANCY SENSOR
- S — SPECIAL PURPOSE LIGHT SWITCH: DESCRIPTION OF SWITCH WILL BE AS NOTED ON DRAWINGS
- PHOTOELECTRIC CONTROL
- LIGHTING CONTACTOR: LC1 — REPRESENTS LIGHTING CONTACTOR IDENTIFICATION
- LIGHTING CONTACTOR REMOTE CONTROL: LC1 — REPRESENTS LIGHTING CONTACTOR TO BE CONTROLLED

EMERGENCY LIGHTING:

- EMERGENCY BATTERY PACK FIXTURE WITH TWO HEADS
- TD — TD-TIME DELAY RESET
- REMOTE HEADS FOR EMERGENCY BATTERY PACK UNIT

FIRE ALARM SYSTEM:

- FACP — FIRE ALARM CONTROL PANEL
- FAAP — FIRE ALARM ANNUNCIATOR PANEL
- F — FIRE ALARM MANUAL PULL STATION
- SMOKE DETECTOR (PHOTOELECTRIC U.O.N.)
- HEAT DETECTOR (FIXED TEMP U.O.N.)
- R — RATE OF RISE
- (D) — DUCT SMOKE DETECTOR
- FS — SPRINKLER SYSTEM WATER FLOW SWITCH
- TS — SPRINKLER SYSTEM TAMPER SWITCH
- C — CEILING MOUNTED FIRE ALARM STROBE
- (75) — CANDELL RATING (15 U.O.N.)
- F — FIRE ALARM SPEAKER/STROBE
- F — FIRE ALARM SPEAKER
- F — FIRE ALARM HORN/STROBE
- MM — MONITOR MODULE
- CM — CONTROL MODULE
- RTI — REMOTE-TEST-INDICATOR
- DH — MAGNETIC DOOR HOLDER
- CO — CARBON MONOXIDE DETECTOR
- SD — SMOKE DAMPER
- DACT — DIGITAL ALARM COMMUNICATOR TRANSMITTER

SYMBOLS AND ABBREVIATIONS ARE FOR REFERENCE ONLY AND DO NOT INDICATE THEIR INCORPORATION INTO THE PROJECT.

GENERAL POWER:

- SINGLE RECEPTACLE (NEMA 5-20R)
- GF — RECEPTACLE WIRED TO GROUND FAULT CIRCUIT BREAKER
- IG — ISOLATED GROUND
- S — SWITCHED
- TR — TAMPER RESISTANT
- WP — WEATHER RESISTANT RECEPTACLE W/IN-USE COVER (WET LOCATION)
- WR — WEATHER RESISTANT RECEPTACLE W/NON-IN-USE COVER (DAMP LOCATION)
- DUPLEX RECEPTACLE (NEMA 5-20R)
- DOUBLE DUPLEX RECEPTACLE
- GROUND FAULT CIRCUIT INTERRUPTER (DUPLEX NEMA 5-20R)
- SPECIAL PURPOSE RECEPTACLE (NEMA CONFIGURATION AS NOTED)
- RECEPTACLE FLOOR MOUNTED
- SPECIAL PURPOSE RECEPTACLE FLOOR MOUNTED (NEMA CONFIGURATION AS NOTED)
- MULTIOUTLET ASSEMBLY: LENGTH, TYPE AND QUANTITY OF RECEPTACLES AS NOTED
- P — POWER POLE
- P — WALL BOX FOR MODULAR FURNITURE WHIP
- J — JUNCTION BOX
- NON FUSED SAFETY SWITCH
- (3R) — ENCLOSURE NEMA RATING
- 30A — SWITCH RATING
- F — FUSED SAFETY SWITCH
- 30AS — SWITCH RATING
- 20AF — FUSE RATING
- MAGNETIC MOTOR STARTER
- (12) — ENCLOSURE NEMA RATING
- 2 — NEMA SIZE
- COMBINATION MAGNETIC MOTOR STARTER
- 3 — NEMA SIZE
- CB — ENCLOSED CIRCUIT BREAKER
- CONTACTOR
- S_T — TIME SWITCH
- S_M — MANUAL MOTOR SWITCH (WITHOUT OVERLOADS)
- S_{MT} — MANUAL MOTOR STARTER (WITH THERMAL OVERLOADS)
- S_{MP} — MANUAL MOTOR SWITCH WITH PILOT LIGHT
- hs — CONTROL STATION, TYPE AS NOTED
- MUSHROOM SWITCH
- MOTOR (HORSEPOWER INDICATED ON PLANS)
- T — TRANSFORMER
- GENERATOR
- MOD — MOTOR OPERATED DAMPER
- (T) — THERMOSTAT
- UPS — UNINTERRUPTIBLE POWER SUPPLY
- SPD — SURGE PROTECTIVE DEVICE
- UNIT HEATER

COMMUNICATIONS:

- (S) — CEILING SPEAKER
- WALL MOUNTED SPEAKER
- WALL MOUNTED DOUBLE SPEAKER
- POLE MOUNTED SPEAKER
- POLE MOUNTED DOUBLE SPEAKER
- VOICE DATA OUTLET
- 6 — DATA OUTLET INDICATES NUMBER OF PORTS
- FLOOR MOUNTED OUTLET
- CATV — CABLE TELEVISION OUTLET
- TELEPHONE OUTLET
- P — PAY PHONE
- W — WALL MOUNTED
- C — WALL BOX FOR SYSTEMS FURNITURE VOICE/DATA WHIP
- TTC — TELEPHONE TERMINAL CABINET

ACCESS CONTROL/INTRUSION ALARM:

- AICP — ACCESS/INTRUSION ALARM CONTROL PANEL
- D — DOOR CONTACT
- KP — ACCESS KEYPAD
- ACR — ACCESS CARD READER
- MD — MOTION DETECTOR
- CCTV — CLOSED CIRCUIT TELEVISION CAMERA

GROUNDING:

- GROUND ROD
- EXOTHERMIC WELD CONNECTION
- MECHANICAL CONNECTION (BOLTED OR COMPRESSION)
- BARE COPPER CONDUCTOR EXPOSED
- G — BARE COPPER CONDUCTOR BURIED OR EMBEDDED IN CONCRETE
- GND — GROUND BUS

ONE LINE DIAGRAM:

- 52 — MEDIUM VOLTAGE DRAWOUT CIRCUIT BREAKER
- AF — AMP FRAME
- AT — AMP TRIP
- EO — ELECTRICALLY OPERATED — LOW VOLTAGE DRAWOUT CIRCUIT BREAKER
- CIRCUIT BREAKER
- ST — ST - SHUNT TRIP; GF - GROUND FAULT; EO - ELECTRICALLY OPERATED
- DISCONNECT, ISOLATION OR SAFETY SWITCH
- FUSED CUTOUT
- FUSED LOAD BREAK SWITCH
- MEDIUM VOLTAGE MOTOR STARTER
- 1 — MAGNETIC MOTOR STARTER. NUMERAL INDICATES NEMA SIZE. FVNR UNLESS OTHERWISE NOTED. FVR - FULL VOLTAGE REVERSING; RVAT - REDUCING VOLTAGE AUTO TRANSFORMER; 2S - 2 SPEED; RVSS - REDUCED VOLTAGE SOLID STATE
- CAPACITOR
- VFD — VARIABLE FREQUENCY DRIVE
- POWER TRANSFORMER
- CONNECTION
- SHIELDED ISOLATION TRANSFORMER
- 480/120 — RATIO
- 2 — NUMBER REQUIRED — POTENTIAL TRANSFORMER
- 600/5 — RATIO
- 2 — NUMBER REQUIRED — CURRENT TRANSFORMER
- GROUND FAULT CURRENT TRANSFORMER
- 5 — MOTOR, NUMBER INDICATES HORSE POWER
- GENERATOR
- ATS — ATS - AUTOMATIC TRANSFER SWITCH; MTS - MANUAL TRANSFER SWITCH
- A — METER: A - AMMETER; V - VOLTMETER; W - WATTMETER; WH - WATT HOURMETER; KWH - KILOWATT HOUR; KVAR - KILOVAR METER; VAR - VAR METER; HZ - FREQUENCY METER; PF - POWER FACTOR METER
- DPM — DIGITAL POWER METER
- AS — METER TRANSFER SWITCH: AS - AMMETER SWITCH; VS - VOLTMETER SWITCH
- SPD — SURGE PROTECTIVE DEVICE
- LIGHTNING ARRESTOR
- k — KEY INTERLOCK
- FUSE
- e / f — ELECTRONIC POWER FUSE
- DRAWOUT DEVICE
- GROUND

MISCELLANEOUS:

- EQUIPMENT IDENTIFICATION
- A / E5 — SECTION IDENTIFICATION; SECTION NOMENCLATURE; SHEET NUMBER ON WHICH SECTION IS SHOWN
- A / E5 — SITE WORK
- BLDG PLANS
- 2 / E5 — DETAIL IDENTIFICATION; DETAIL NOMENCLATURE; SHEET NUMBER ON WHICH DETAIL IS SHOWN
- C — COMMUNICATION
- E — ELECTRIC
- T — TELEPHONE
- OHE — OVERHEAD ELECTRIC
- OHT — OVERHEAD TELEPHONE
- UTILITY POLE
- HANDHOLE
- HH-x — MANHOLE
- MH-x — MANHOLE

CONDUIT FEEDERS & BRANCH CIRCUITS:

- CONDUIT
- CONDUIT - EMBEDDED IN FLOOR OR EARTH
- CONDUIT TURNED UP
- CONDUIT TURNED DOWN
- CONDUIT CAPPED
- CIRCUIT HOME RUN
- 10 — FEEDER IDENTIFICATION (SEE FEEDER LEGEND ON DRAWING)
- (3)#8 AWG, (1)#10 GRD-1"C. — CONDUIT FEEDER IDENTIFICATION
- TYPICAL FEEDER WITH NO SIZE IDENTIFICATION SEE GENERAL NOTE 9

ABBREVIATIONS:

A OR AMP	AMPERE	MC	METAL CLAD
AC	ALTERNATING CURRENT	MCB	MAIN CIRCUIT BREAKER
AFF	ABOVE FINISHED FLOOR	MCC	MOTOR CONTROL CENTER
AFG	ABOVE FINISHED GRADE	MFR	MANUFACTURE
AHJ	AUTHORITY HAVING JURISDICTION	MI	MINERAL INSULATED
AIC	AMPERE INTERRUPTING CAPACITY	MLO	MAIN LUG ONLY
AL	ALUMINUM	MOA	MULTI-OUTLET ASSEMBLY
ATS	AUTOMATIC TRANSFER SWITCH	MOD	MOTOR OPERATED DAMPER
AUTO	AUTOMATIC	MS	MOTOR STARTER
AWG	AMERICAN WIRE GAUGE	MT	MANUAL TRANSFER SWITCH
BFG	BELOW FINISHED GRADE	MTD	MOUNTED
BLDG	BUILDING	MV	MEDIUM VOLTAGE
BOS	BOTTOM OF STEEL	N/A	NOT APPLICABLE
C	CONDUIT	NC	NORMALLY CLOSED
CB	CIRCUIT BREAKER	NEC	NATIONAL ELECTRICAL CODE
CCTV	CLOSED CIRCUIT TELEVISION	NEUT	NEUTRAL
CP	CONTROL PANEL	NIC	NOT IN CONTRACT
CPT	CONTROL POWER TRANSFORMER	NO	NORMALLY OPEN
CT	CURRENT TRANSFORMER	No.	NUMBER
CU	COPPER	NTS	NOT TO SCALE
DISC	DISCONNECT	PF	POWER FACTOR
DIV	DIVISION	PH	PHASE
DN	DOWN	PM	POWER MONITOR
DS	DISCONNECT SWITCH	PNL	PANEL
EC	ELECTRICAL CONTRACTOR	PT	POTENTIAL TRANSFORMER
EGC	ELECTRICAL GROUNDING CONDUCTOR	PVC	POLYVINYL CHLORIDE
EMT	ELECTRICAL METALLIC TUBING	RECP	RECEPTACLES
EF	EXHAUST FAN	RGS	RIGID GALVANIZED STEEL(CONDUIT)
ECH	ELECTRIC CABINET HEATER	RTD	RESISTANCE TEMPERATURE DETECTOR
EGC	EQUIPMENT GROUNDING CONDUCTOR	RVAT	REDUCED VOLTAGE AUTOTRANSFORMER
EUH	ELECTRIC UNIT HEATER	RVSS	REDUCED VOLTAGE SOLID STATE
EWC	ELECTRIC WATER COOLER	SC	SURGE CAPACITOR
FAAP	FIRE ALARM ANNUNCIATOR PANEL	SN	SOLID NEUTRAL
FACP	FIRE ALARM CONTROL PANEL	SPD	SURGE PROTECTIVE DEVICE
FBO	FURNISHED BY OTHERS	STP	SHIELDED TWISTED PAIR
FC	FAILS CLOSED	STT	SHIELDED TWISTED TRIPLET
F/T	FEED THROUGH	SW	SWITCH
FU	FUSE	SWBD	SWITCHBOARD
FRE	FIBERGLASS REINFORCED EPOXY	TC	TRAY-CABLE
FWE	FURNISHED WITH EQUIPMENT	TOS	TOP OF STEEL
GF	GROUND FAULT	TTB	TELEPHONE TERMINAL BOARD
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	TTC	TELEPHONE TERMINAL CABINET
GRD	GROUND	TYP	TYPICAL
HID	HIGH INTENSITY DISCHARGE	UL	UNDERWRITERS LABORATORIES
HP	HORSEPOWER	UH	UNIT HEATER
HPS	HIGH PRESSURE SODIUM	UON	UNLESS OTHERWISE NOTED
HVAC	HEAT-VENT-AIR CONDITIONING	UPS	UNINTERRUPTIBLE POWER SUPPLY
IG	ISOLATED GROUND	V	VOLT
IND	INDUSTRIAL	VA	VOLT AMPERE
JIC	JOINT INDUSTRIAL COUNCIL	VAR	VOLT AMPERE REACTIVE
KV	KILOVOLT	W	WIRE
KVA	KILOVOLT AMPERE	WP	WEATHERPROOF
KVAR	KILOVARS	WR	WEATHER RESISTANT
KW	KILOWATT	XFMR	TRANSFORMER
LA	LIGHTNING ARRESTOR	1-PH	SINGLE PHASE
LC	LIGHTING CONTACTOR	3-PH	THREE PHASE
LTG	LIGHTING		

WIRING METHODS:

A. INTERIOR
1. EXPOSED AREAS NOT SUBJECT TO PHYSICAL ABUSE-EMT.
2. EXPOSED AREAS SUBJECT TO ABUSE-RIGID STEEL CONDUIT.
3. CONCEALED IN STUD WALL OR ABOVE SUSPENDED CEILING-EMT OR TYPE MC CABLE.
4. CONCEALED IN MASONRY WALLS - EMT OR RIGID STEEL CONDUIT.

C. EXTERIOR
1. RIGID STEEL CONDUIT

D. BELOW GRADE
1. CONCRETE ENCASED-SCHEDULE 40 PVC
2. DIRECT BURIED-SCHEDULE 40 PVC

E. PENETRATIONS
1. UP THROUGH GRADE-PVC COATED RIGID STEEL
2. THROUGH FOUNDATION WALLS-PVC COATED RIGID STEEL

GENERAL NOTES:

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NFPA-70) AS ADOPTED AND AMENDED BY THE AUTHORITY HAVING JURISDICTION (AHJ).

2. ARCHITECTURAL FEATURES SHOWN ON THESE DRAWINGS ARE FOR REFERENCE ONLY. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR BUILDING DIMENSIONS, SECTIONS, ELEVATIONS, PARTITION RATINGS AND CONSTRUCTION DETAILS OF BUILDING ELEMENTS.

3. EQUIPMENT LOCATIONS ARE SHOWN FOR REFERENCE ONLY. REFER TO ARCHITECTURAL, HVAC, PLUMBING, FIRE PROTECTION AND EQUIPMENT PLANS FOR EQUIPMENT LOCATIONS.

4. THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK AND DO NOT SHOW EVERY SUPPORT, OFFSET, FITTING OR COMPONENT. PROVIDE ALL MATERIALS FOR A COMPLETE ELECTRICAL INSTALLATION AND FIELD VERIFY ALL DIMENSIONS.

5. COORDINATE ALL WORK WITH OTHER TRADES TO AVOID INTERFERENCES.

6. ALL MOTOR SAFETY SWITCHES, LOCAL DISCONNECTS, MOTOR STARTERS AND DRIVES SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR (DIVISION 26) UNLESS OTHERWISE NOTED ON THE DRAWINGS AS FURNISHED WITH EQUIPMENT (FWE).

7. ALL PENETRATIONS THROUGH FLOORS, WALLS AND RATED PARTITIONS SHALL BE SEALED WITH UL LISTED FIRE SEALANT MATERIALS TO MAINTAIN THE RATING OF THE SEPARATION.

8. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE PROVIDED WITH EVERY FEEDER AND BRANCH CIRCUIT.

9. ALL WIRING SHALL BE COPPER. WHERE CONDUCTOR SIZES ARE NOT INDICATED ON THE DRAWINGS, MINIMUM WIRING SHALL BE 2 NO. 12 AWG & NO. 12 EGC FOR SINGLE PHASE CIRCUITS LESS THAN 100 FEET AND 3 NO. 12 & NO. 12 EGC FOR THREE PHASE CIRCUITS. WIRE SIZE FOR 20 AMP-120 VOLT BRANCH CIRCUITS WITH CIRCUIT LENGTH GREATER THAN 100 FEET SHALL BE 2 NO. 10 AWG & NO. 10 EGC IN ¾"C. BRANCH CIRCUITS WITH CIRCUIT LENGTH GREATER THAN 200 FEET SHALL BE 2 NO. 8 AWG & NO. 8 EGC IN 1" C. BRANCH CIRCUITS WITH CIRCUIT LENGTH GREATER THAN 300 FEET UP TO 450 FEET SHALL BE 2 NO. 6 AWG & NO. 6 EGC IN 1" C. SHORT TAPS OFF THE MAIN RUN TO INDIVIDUAL OUTLETS SHALL BE PERMITTED TO BE NO. 12 AWG.

LAST REVISED: 3/12/2008
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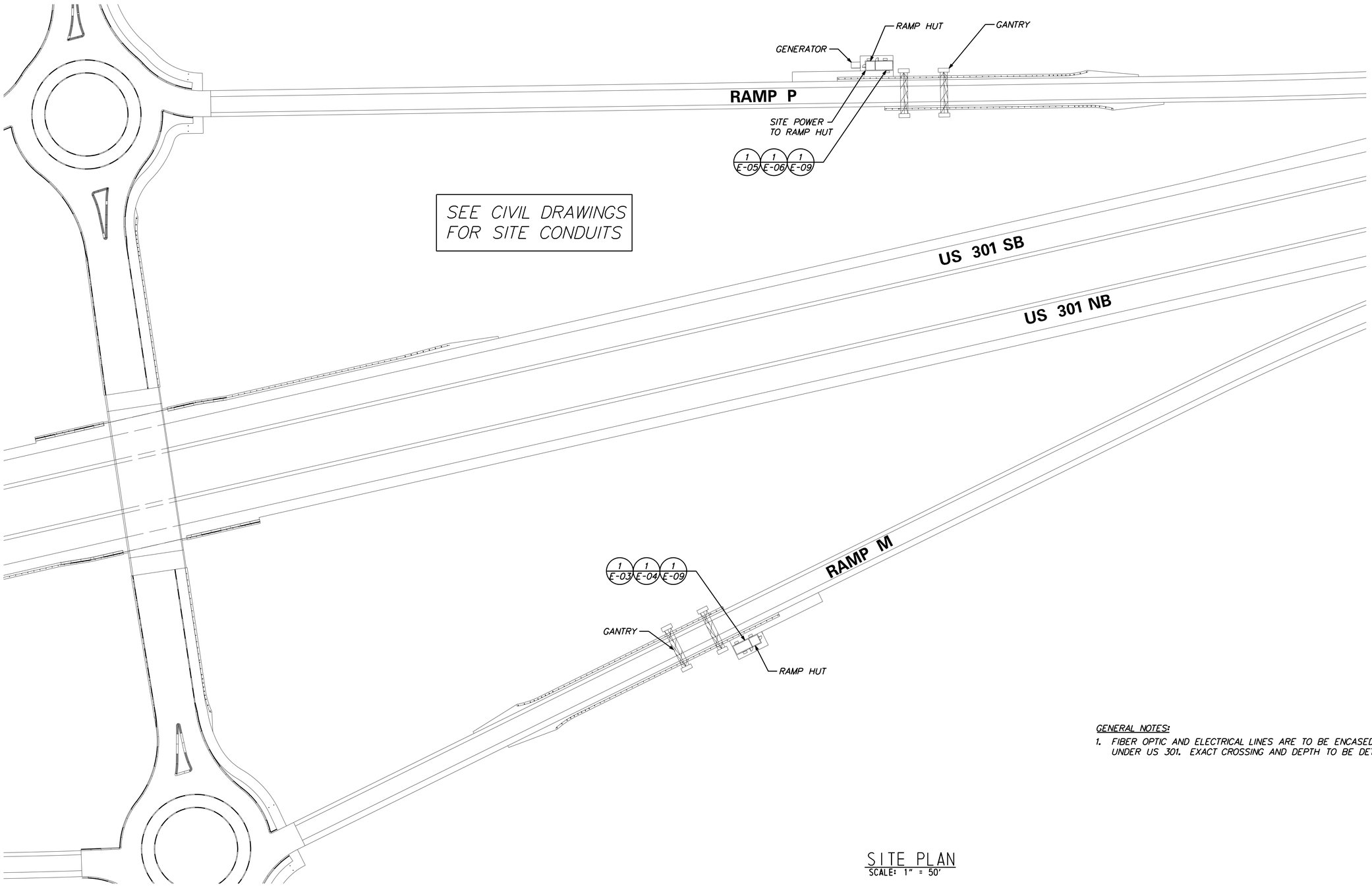
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS		US 301 SR 896 TO SR 1	CONTRACT T200911308	BRIDGE NO.
				COUNTY NEW CASTLE	DESIGNED BY: JLG
					CHECKED BY: RAK

7/30/15 | E-01

ELECTRICAL LEGEND, SYMBOLS & ABBREVIATIONS

SHEET NO. 856 | TOTAL SHTS. 875



SITE PLAN
SCALE: 1" = 50'

GENERAL NOTES:

1. FIBER OPTIC AND ELECTRICAL LINES ARE TO BE ENCASED IN CONCRETE UNDER US 301. EXACT CROSSING AND DEPTH TO BE DETERMINED.

LAST REVISED: 3/12/2008
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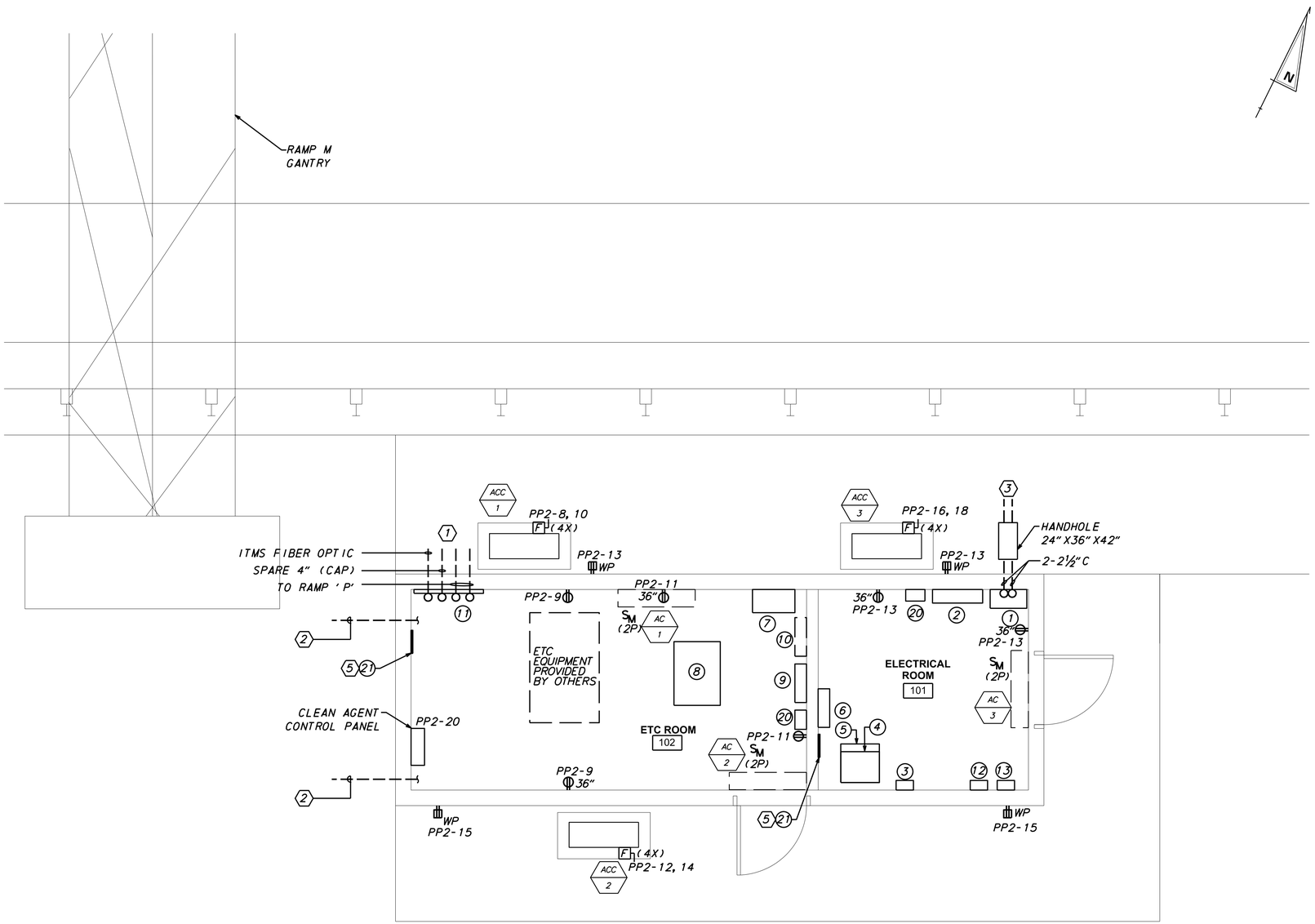
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 50 100 150 FEET	US 301 SR 896 TO SR 1	CONTRACT T200911308	BRIDGE NO.	ELECTRICAL KEY PLAN	SHEET NO. 857
				COUNTY NEW CASTLE	DESIGNED BY: JLG		TOTAL SHTS. 875
					CHECKED BY: RAK		

7/30/15 | E-02

RAMP M

DESIGNATION	DESCRIPTION
(1)	BUILDING DISCONNECT (100A)
(2)	PANEL 'DP-2'
(3)	15KVA TRANSFORMER SECONDARY CIRCUIT BREAKER
(4)	15KVA TRANSFORMER (MOUNTED ABOVE)
(5)	30KVA TRANSFORMER (FLOOR)
(6)	PANEL 'PP-2'
(7)	UPS MAINTENANCE BYPASS SWITCH
(8)	UPS
(9)	PANEL 'UPP-3'
(10)	PANEL 'UPP-4' (FUTURE)
(11)	3'-0" TELE/DATA BACKBOARD
(12)	PRIMARY DISCONNECT 15KVA TRANSFORMER
(13)	PRIMARY DISCONNECT 30KVA TRANSFORMER
(14)	NOT USED
(15)	NOT USED
(16)	NOT USED
(17)	NOT USED
(18)	NOT USED
(19)	NOT USED
(20)	SURGE PROTECTIVE DEVICE (SPD)
(21)	GROUND BUS



1 / E-03 ELECTRICAL RAMP HUT POWER PLAN RAMP 'M'

SCALE: 3/8" = 1'-0"

KEY NOTES:

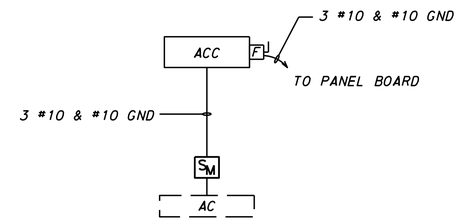
(1) CONDUITS FOR ITMS FIBER OPTIC BACKBONE CONNECTION AND CONDUITS TO ELECTRICAL HUT 'P'. PROVIDE GROUNDING TYPE BUSHINGS. SEE CIVIL DRAWINGS FOR CONDUIT SIZE.

(2) SEE DRAWINGS ETC-3 & ETC-4 FOR ETC CONDUIT QUANTITY AND SIZES.

(3) TWO CONDUITS FROM RAMP 'P' HUT PANEL DP-1. SEE CIVIL DRAWINGS FOR CONTINUATION.

(4) NOT USED.

(5) COPPER GROUND BUS, STORM COPPER OR EQUAL. 4"X12"XO.25".



2 / E-03 DUCTLESS SPLIT SYSTEM WIRING

LAST REVISED: 3/12/2008
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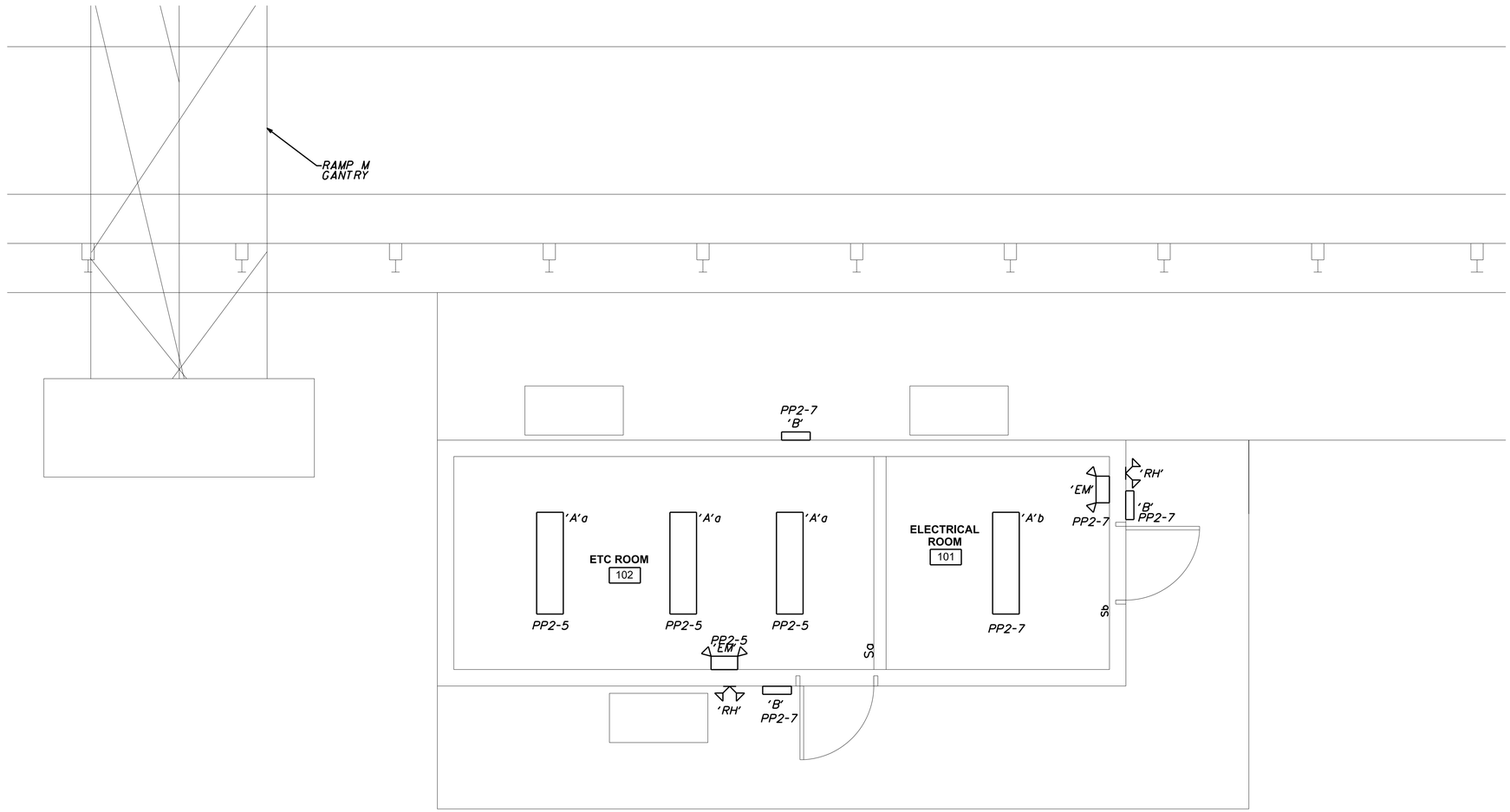
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS		US 301 SR 896 TO SR 1	CONTRACT T200911308	BRIDGE NO.	7/30/15	E-03
				COUNTY NEW CASTLE	DESIGNED BY: JLG	ELECTRICAL RAMP HUT POWER PLAN RAMP 'M'	SHEET NO. 858
					CHECKED BY: RAK		TOTAL SHTS. 875



NOTES:
1. SEE DWG. E-10 FOR LUMINAIRE SCHEDULE.

1 / E-04 ELECTRICAL RAMP HUT LIGHTING PLAN RAMP 'M'
SCALE: 3/8" = 1'-0"

LAST REVISED: 3/12/2008
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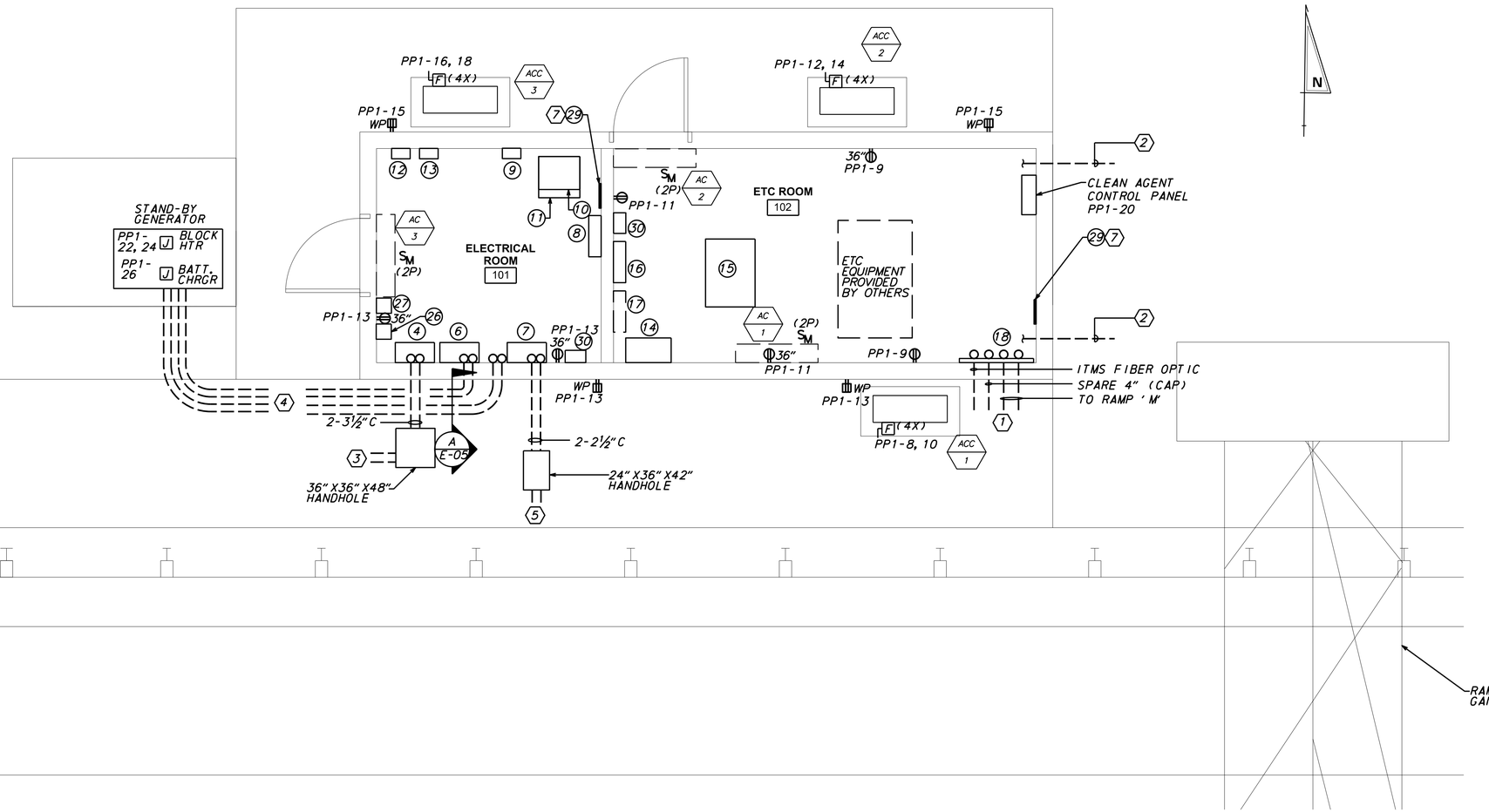
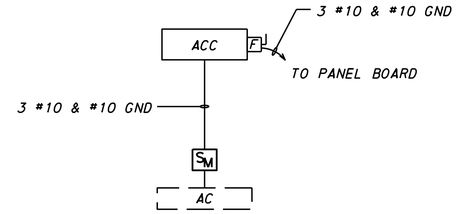
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS		US 301 SR 896 TO SR 1	CONTRACT T200911308	BRIDGE NO.	ELECTRICAL RAMP HUT LIGHTING PLAN RAMP 'M'	7/30/15 / E–04
				COUNTY NEW CASTLE	DESIGNED BY: JLG		SHEET NO. 859
					CHECKED BY: RAK		TOTAL SHTS. 875



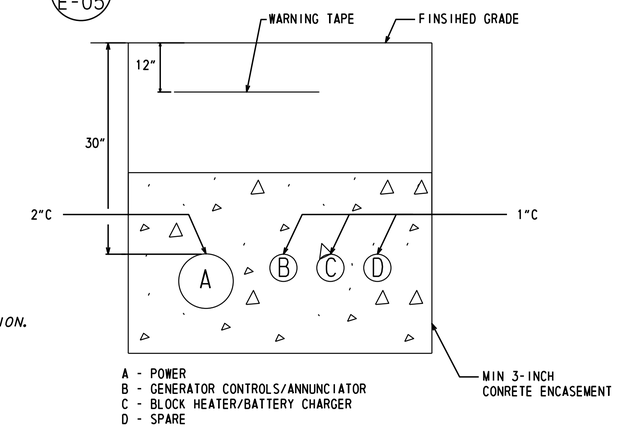
1 / E-05 ELECTRICAL RAMP HUT POWER PLAN RAMP 'P'

SCALE: 3/8" = 1'-0"

DESIGNATION	DESCRIPTION
1	NOT USED
2	NOT USED
3	NOT USED
4	BUILDING DISCONNECT (200A)
5	NOT USED
6	AUTOMATIC TRANSFER SWITCH
7	PANEL 'DP-1'
8	PANEL 'PP-1'
9	15KVA TRANSFORMER SECONDARY CIRCUIT BREAKER
10	15KVA TRANSFORMER (MOUNTED ABOVE)
11	30KVA TRANSFORMER (FLOOR)
12	PRIMARY DISCONNECT 15KVA TRANSFORMER
13	PRIMARY DISCONNECT 30KVA TRANSFORMER
14	UPS MAINTENANCE BYPASS SWITCH
15	UPS
16	PANEL 'UPP-1'
17	PANEL 'UPP-2' (FUTURE)
18	3'-0" TELE/DATA BACKBOARD
19	NOT USED
20	NOT USED
21	NOT USED
22	NOT USED
23	NOT USED
24	NOT USED
25	NOT USED
26	GENERATOR ANNUNCIATOR
27	GENERATOR ESTOP
28	NOT USED
29	GROUND BUS
30	SURGE PROTECTIVE DEVICE (SPD)



2 / E-05 DUCTLESS SPLIT SYSTEM WIRING



A - POWER
B - GENERATOR CONTROLS/ANNUNCIATOR
C - BLOCK HEATER/BATTERY CHARGER
D - SPARE

SECTION 'A'

KEY NOTES:

1. CONDUITS FOR ITMS FIBER OPTIC BACKBONE CONNECTION AND CONDUITS TO HUT AT RAMP 'M'. PROVIDE GROUNDING TYPE BUSHINGS. SEE CIVIL DRAWINGS FOR CONDUIT SIZE.
2. SEE DRAWINGS ETC-6 & ETC-7 FOR ETC CONDUIT QUANTITY AND SIZES.
3. CONDUIT FOR BUILDING POWER FROM SITE DISTRIBUTION.
4. CONDUIT TO GENERATOR.
5. POWER CONDUIT TO RAMP 'M' (DP-2). SEE CIVIL DRAWINGS FOR CONTINUATION.
6. NOT USED
7. COPPER GROUND BUS. STORM COPPER OR EQUAL. 4"X12"XO.25"

LAST REVISED: 3/12/2008
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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

US 301
SR 896 TO SR 1

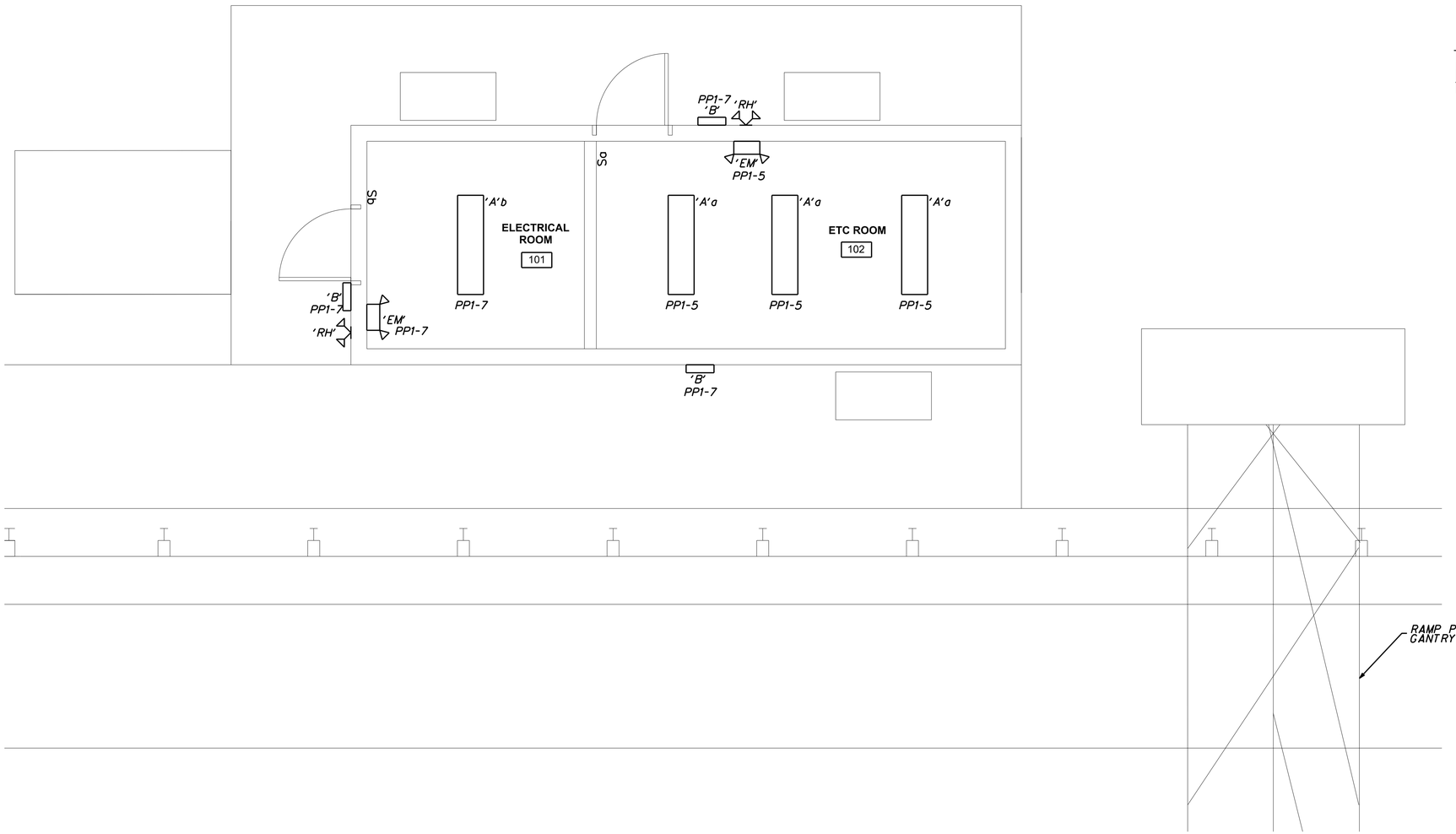
CONTRACT	BRIDGE NO.
T200911308	
COUNTY	DESIGNED BY: JLG
NEW CASTLE	CHECKED BY: RAK

ELECTRICAL RAMP HUT POWER PLAN RAMP 'P'

7/30/15 | E-05

SHEET NO.	TOTAL SHTS.
860	875

NOTES:
1. SEE DWG. E-10 FOR LUMINAIRE SCHEDULE.



1 / E-06 ELECTRICAL RAMP HUT LIGHTING PLAN RAMP 'P'
SCALE: 3/8" = 1'-0"

LAST REVISED: 3/12/2008
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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS		US 301 SR 896 TO SR 1	CONTRACT T200911308	BRIDGE NO.	ELECTRICAL RAMP HUT LIGHTING PLAN RAMP 'P'	7/30/15 E-06
				COUNTY NEW CASTLE	DESIGNED BY: JLG		SHEET NO. 861
					CHECKED BY: RAK		TOTAL SHTS. 875

PANEL DESIGNATION: DP-1

TYPE: -
NUMBER OF POLES: 42
MAIN BUS RATING: 225A
MAIN RATING: 200A MCB

LOCATION: ELECTRICAL ROOM - RAMP 'P'
VOLTAGE: 480/277V, 3Ø, 4W
PANEL MOUNTING: SURFACE
PANEL ENCLOSURE (NEMA): 1
PANEL MIN. A.I.C. RATING: 65 KA

CIR. No.	CIR. BKR.	DESCRIPTION	LOAD - KVA AØ	LOAD - KVA BØ	LOAD - KVA CØ	LOAD - KVA AØ	LOAD - KVA BØ	LOAD - KVA CØ	DESCRIPTION	CIR. BKR.	CIR. No.
1			4.0			7.2					2
3	30	15 KVA XMFR (UPS)		4.0			8.8		DP-2 (RAMP 'M')	100	4
5					4.0			7.7			6
7			3.5			-					8
9	50	30 KVA XMFR (PP-1)		6.8			-		SURGE PROTECTIVE DEVICE (SPD)	40	10
11					5.7			-			12
13			-								14
15	30	SPARE		-							16
17					-						18
19											20
21											22
23											24
25											26
27											28
29											30
31											32
33											34
35											36
37											38
39											40
41											42
		TOTAL	7.5	10.8	9.7	7.2	8.8	7.7	TOTAL		

PANEL CONNECTED LOAD
AØ 14.7
BØ 19.6
CØ 17.4
51.7 TOTAL

___ SOLID NEUTRAL BUS
___ EQUIPMENT GROUND BUS

PANEL DESIGNATION: UPP-1

TYPE: -
NUMBER OF POLES: 42
MAIN BUS RATING: 225A
MAIN RATING: 60A MCB

LOCATION: ETC ROOM - RAMP 'P'
VOLTAGE: 120/208V, 3Ø, 4W
PANEL MOUNTING: SURFACE
PANEL ENCLOSURE (NEMA): 1
PANEL MIN. A.I.C. RATING: 10 KA

CIR. No.	CIR. BKR.	DESCRIPTION	LOAD - KVA AØ	LOAD - KVA BØ	LOAD - KVA CØ	LOAD - KVA AØ	LOAD - KVA BØ	LOAD - KVA CØ	DESCRIPTION	CIR. BKR.	CIR. No.
1											2
3			-			-					4
5											6
7											8
9											10
11											12
13											14
15											16
17											18
19											20
21											22
23											24
25											26
27											28
29											30
31											32
33											34
35											36
37											38
39									SURGE PROTECTIVE DEVICE (SPD)	40	40
41											42
		TOTAL							TOTAL		

PANEL CONNECTED LOAD
AØ ____
BØ ____
CØ ____
____ TOTAL

___ SOLID NEUTRAL BUS
___ EQUIPMENT GROUND BUS
___ FEED THRU LUGS

PANEL DESIGNATION: PP-1

TYPE: -
NUMBER OF POLES: 42
MAIN BUS RATING: 225A
MAIN RATING: 100A MCB

LOCATION: ELECTRICAL ROOM - RAMP 'P'
VOLTAGE: 120/208V, 3Ø, 4W
PANEL MOUNTING: SURFACE
PANEL ENCLOSURE (NEMA): 1
PANEL MIN. A.I.C. RATING: 10 KA

CIR. No.	CIR. BKR.	DESCRIPTION	LOAD - KVA AØ	LOAD - KVA BØ	LOAD - KVA CØ	LOAD - KVA AØ	LOAD - KVA BØ	LOAD - KVA CØ	DESCRIPTION	CIR. BKR.	CIR. No.	
1	20	SPARE	-			-					2	
3	20	SPARE		-			-		SPARE	15	4	
5	20	ETC ROOM LIGHTING			0.3			-			6	
7	20	ELECT RM/EXTERIOR LTG	0.2			2.0			ACC-1	30	8	
9	20	RECEPT - ETC ROOM		0.4			2.0				10	
11	20	RECEPT - ETC ROOM			0.4			-	ACC-2 (STAND BY)	30	12	
13	20	RECEPT - ELEC RM/OUTDOOR	0.8			-					14	
15	20	RECEPT - OUTDOOR		0.4			2.0		ACC-3	30	16	
17	15	SPARE			-			2.0			18	
19	20	SPARE				0.2			CLEAN AGENT PANEL	20	20	(1)
21	20	SPARE					2.0		GENERATOR BLOCK HEATER	30	22	
23	20	SPARE						2.0			24	
25	20	SPARE				0.3			GENERATOR BATT. CHARGER	20	26	
27	20	SPARE									28	
29	20	SPARE									30	
31	20	SPARE									32	
33	20	SPARE									34	
35	20	SPARE									36	
37	20	SPARE									38	
39	20	SPARE		-							40	
41	20	LEC			1.0						42	
		TOTAL	1.0	0.8	1.7	2.5	6.0	4.0	TOTAL			

PANEL CONNECTED LOAD
AØ 3.5
BØ 6.8
CØ 5.7
16.0 TOTAL

___ SOLID NEUTRAL BUS
___ EQUIPMENT GROUND BUS

(1) PROVIDE LOCKDOG ON CIRCUIT BREAKER HANDLE.

PANEL DESIGNATION KEY	
DP-1	UPP-1
PP-1	

LAST REVISED: 3/12/2008
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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

US 301
SR 896 TO SR 1

CONTRACT: T200911308
COUNTY: NEW CASTLE
BRIDGE NO.:
DESIGNED BY: JLG
CHECKED BY: RAK

7/30/15

E-07

ELECTRICAL
PANEL SCHEDULES

SHEET NO.: 862
TOTAL SHTS.: 875

PANEL DESIGNATION: DP-2

TYPE: -
NUMBER OF POLES: 42
MAIN BUS RATING: 225A
MAIN RATING: 100A M.L.O.

LOCATION: ELECTRICAL ROOM - RAMP 'M'
VOLTAGE: 480/277V, 3Ø, 4W
PANEL MOUNTING: SURFACE
PANEL ENCLOSURE (NEMA): 1
PANEL MIN. A.I.C. RATING: 65 KA

CIR. No.	CIR. BKR.	DESCRIPTION	LOAD - KVA AØ	LOAD - KVA BØ	LOAD - KVA CØ	LOAD - KVA AØ	LOAD - KVA BØ	LOAD - KVA CØ	DESCRIPTION	CIR. BKR.	CIR. No.
1			4.0			3.2					2
3	30	15 KVA XFMR (UPS)		4.0			4.8		30 KVA XFMR (PP-2)	50	4
5					4.0			3.7			6
7			-			-					8
9	40	SURGE PROTECTIVE DEVICE (SPD)		-			-		SPARE	30	10
11					-			-			12
13											14
15											16
17											18
19											20
21											22
23											24
25											26
27											28
29											30
31											32
33											34
35											36
37											38
39											40
41											42
		TOTAL	4.0	4.0	4.0	3.2	4.8	3.7	TOTAL		

PANEL CONNECTED LOAD
AØ 7.2
BØ 8.8
CØ 7.7
23.7 TOTAL

___ SOLID NEUTRAL BUS
___ EQUIPMENT GROUND BUS

PANEL DESIGNATION: UPP-3

TYPE: -
NUMBER OF POLES: 42
MAIN BUS RATING: 225A
MAIN RATING: 60A MCB

LOCATION: ETC ROOM - RAMP 'M'
VOLTAGE: 120/208V, 3Ø, 4W
PANEL MOUNTING: SURFACE
PANEL ENCLOSURE (NEMA): 1
PANEL MIN. A.I.C. RATING: 10 KA

CIR. No.	CIR. BKR.	DESCRIPTION	LOAD - KVA AØ	LOAD - KVA BØ	LOAD - KVA CØ	LOAD - KVA AØ	LOAD - KVA BØ	LOAD - KVA CØ	DESCRIPTION	CIR. BKR.	CIR. No.
1											2
3			-			-					4
5											6
7											8
9											10
11											12
13											14
15											16
17											18
19											20
21											22
23											24
25											26
27											28
29											30
31											32
33											34
35											36
37											38
39									SURGE PROTECTIVE DEVICE (SPD)	40	40
41											42
		TOTAL							TOTAL		

PANEL CONNECTED LOAD
AØ ____
BØ ____
CØ ____
____ TOTAL

___ SOLID NEUTRAL BUS
___ EQUIPMENT GROUND BUS
___ FEED THRU LUGS

PANEL DESIGNATION: PP-2

TYPE: -
NUMBER OF POLES: 42
MAIN BUS RATING: 225A
MAIN RATING: 100A MCB

LOCATION: ELECTRICAL ROOM - RAMP 'M'
VOLTAGE: 120/208V, 3Ø, 4W
PANEL MOUNTING: SURFACE
PANEL ENCLOSURE (NEMA): 1
PANEL MIN. A.I.C. RATING: 10 KA

CIR. No.	CIR. BKR.	DESCRIPTION	LOAD - KVA AØ	LOAD - KVA BØ	LOAD - KVA CØ	LOAD - KVA AØ	LOAD - KVA BØ	LOAD - KVA CØ	DESCRIPTION	CIR. BKR.	CIR. No.	
1	20	SPARE	-			-					2	
3	20	SPARE		-			-		SPARE	15	4	
5	20	ETC ROOM LIGHTING			0.3			-			6	
7	20	ELEC RM/EXTERIOR LTG	0.2			2.0			ACC-1	30	8	
9	20	RECEPT - ETC ROOM		0.4			2.0				10	
11	20	RECEPT - ETC ROOM			0.4			-	ACC-2 (STAND BY)	30	12	
13	20	RECEPT - ELEC RM/OUTDOOR	0.8			-					14	
15	20	RECEPT - OUTDOOR		0.4			2.0		ACC-3	30	16	
17	15	SPARE			-			2.0			18	
19	20	SPARE				0.2			CLEAN AGENT PANEL	20	20	(1)
21	20	SPARE									22	
23	20	SPARE									24	
25	20	SPARE									26	
27	20	SPARE									28	
29	20	SPARE									30	
31	20	SPARE									32	
33	20	SPARE									34	
35	20	SPARE									36	
37	20	SPARE									38	
39	20	SPARE		-							40	
41	20	LEC			1.0						42	
		TOTAL	1.0	0.8	1.7	2.2	4.0	2.0	TOTAL			

PANEL CONNECTED LOAD
AØ 3.2
BØ 4.8
CØ 3.7
11.7 TOTAL

___ SOLID NEUTRAL BUS
___ EQUIPMENT GROUND BUS

(1) PROVIDE LOCKDOG ON CIRCUIT BREAKER HANDLE.

PANEL DESIGNATION KEY	
DP-2	UPP-3
PP-2	

LAST REVISED: 3/12/2008
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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

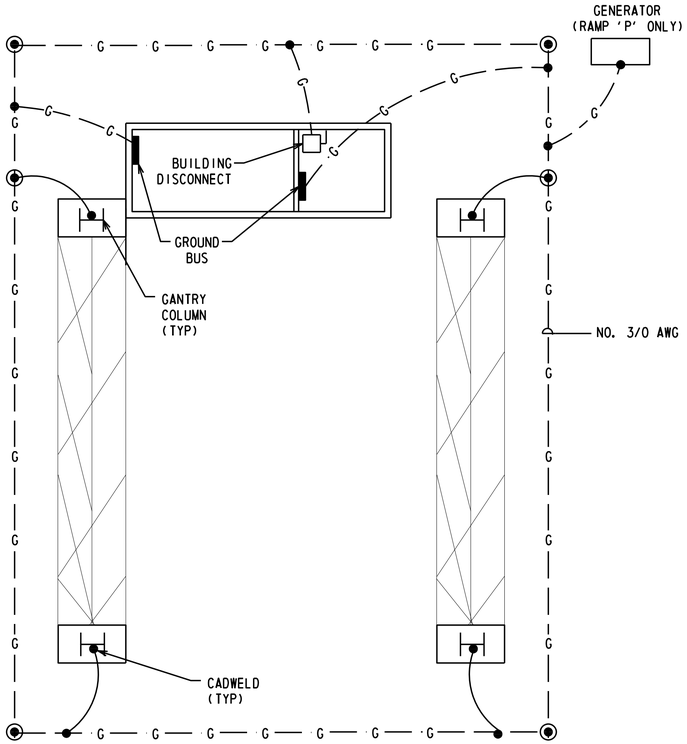
US 301
SR 896 TO SR 1

CONTRACT: T200911308
COUNTY: NEW CASTLE
BRIDGE NO.:
DESIGNED BY: JLG
CHECKED BY: RAK

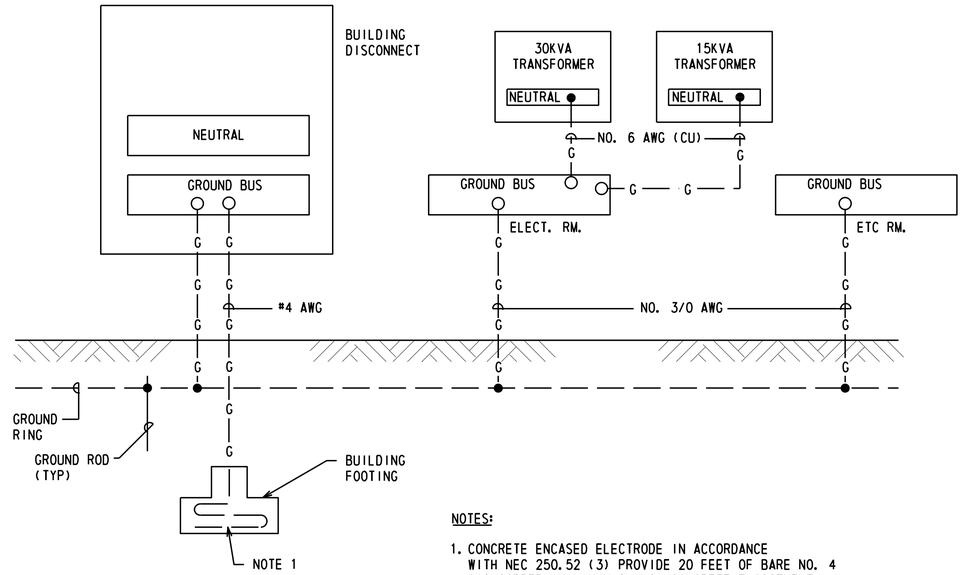
7/30/15

ELECTRICAL
PANEL SCHEDULES

SHEET NO. E-08
TOTAL SHTS. 875



1 E-09 GROUNDING PLAN
SCALE: N.T.S.



NOTES:

1. CONCRETE ENCASED ELECTRODE IN ACCORDANCE WITH NEC 250.52 (3) PROVIDE 20 FEET OF BARE NO. 4 AWG COPPER, MINIMUM 2-INCH CONCRETE ENCASEMENT AT BOTTOM OF FOOTING.

2 E-09 GROUNDING DETAIL
SCALE: N.T.S.

LAST REVISED: 3/12/2008
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						7/30/15	E-09
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS		US 301 SR 896 TO SR 1	CONTRACT T200911308	BRIDGE NO.	ELECTRICAL DETAILS	SHEET NO. 864
				COUNTY NEW CASTLE	DESIGNED BY: JLG		TOTAL SHTS. 875
					CHECKED BY: RAK		

LUMINAIRE SCHEDULE

FIXTURE TYPE	MANUFACTURER AND CATALOG NO.	VOLT	SYSTEM				LAMP	MOUNTING				INPUT WATTS	NOTES	DESCRIPTION	REMARKS
			INCAND.	FLUOR.	HID	NO.	WATTS	SURF.	RECESS	WALL	OTHER				
'A'	LITHONIA 'AFST' SERIES	120/277		●		3	32W T8	●				87	(1)	HEAVY DUTY INDUSTRIAL, SOLID REFLECTOR	ELECTRONIC BALLAST, INSTANT START < 10% THD, WITH BALLAST DISCONNECT
'B'	LITHONIA 'TWF1' SERIES	120		●		2	26W DTT					49	(1)	EXTERIOR ARHCITECTURAL WALL PACK, POLYCARBONATE LENS, DIE-CAST METAL BEZEL, DARK BRONZE FINISH UL LISTED FOR WET LOCATIONS	BOTTOM OF FIXTURE MOUNTED AT 7'-0" AFG PROVIDE WITH INTEGRAL PHOTO ELECTRIC CELL
'EM'	LITHONIA 'ELM' SERIES	120/277	●			2	9W KRYPTON			●		8	(1)	THERMOPLASTIC EMERGENCY UNIT, DUAL HEADS, HIGH CAPACITY 54W OUTPUT	-
'RH'	LITHONIA 'ELA' SERIES	120/277	●			2	9W KYRPTON			●		-	(1)	THERMOPLASTIC EMERGENCY REMOTE TWIN HEAD, 6 VOLT KRYPTON LAMPS.	-

NOTES:

(1) ALL LAMPS TO BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED.

LAST REVISED: 3/12/2008
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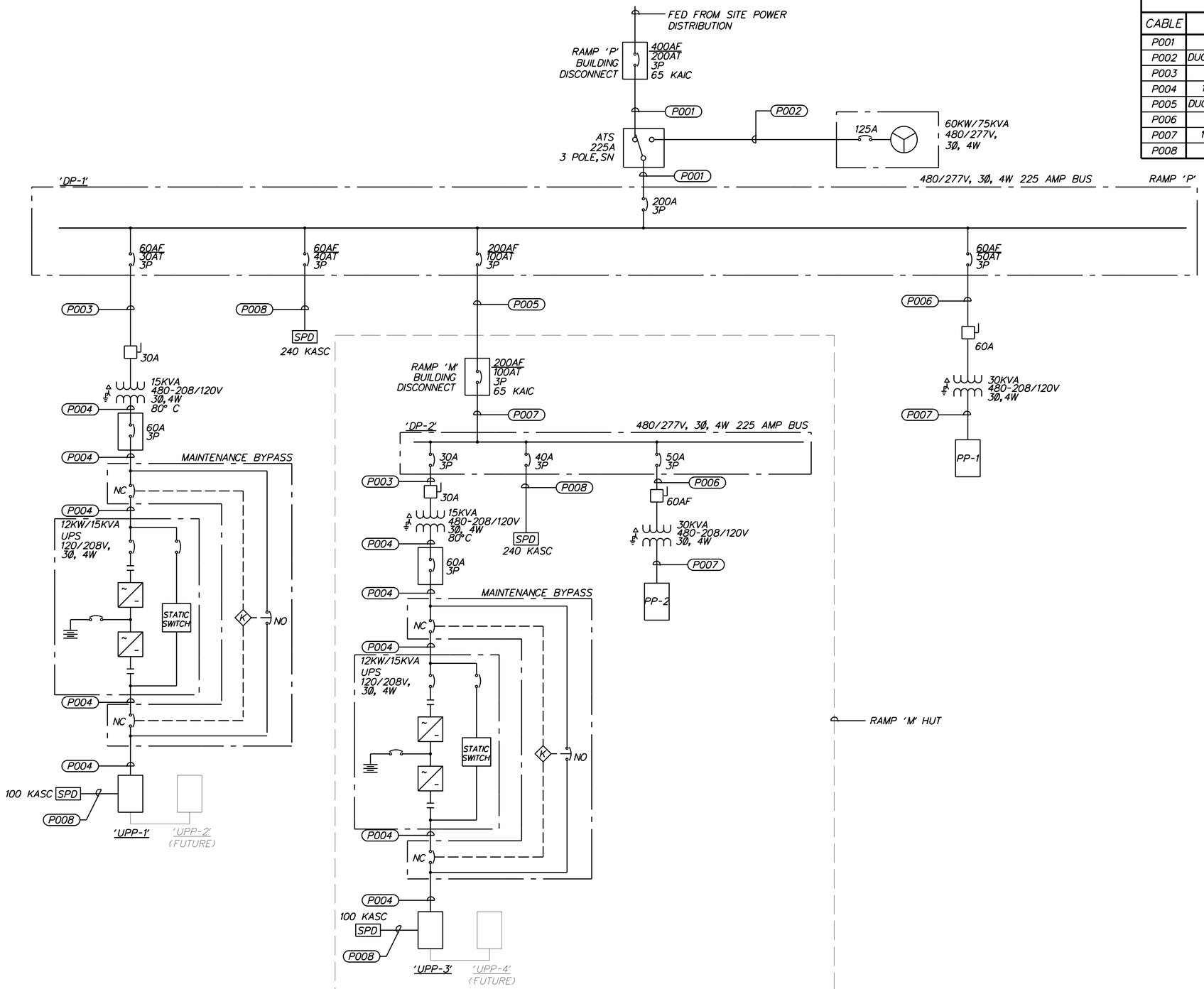
						7/30/15	E-10
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS		US 301 SR 896 TO SR 1	CONTRACT T200911308	BRIDGE NO.	ELECTRICAL LUMINAIRE SCHEDULE	SHEET NO. 865
				COUNTY NEW CASTLE	DESIGNED BY: JLG		TOTAL SHTS. 875
					CHECKED BY: RAK		

FEEDER SCHEDULE		
CABLE	SIZE	WIRE
P001	2"	4-1/C NO. 3/0 AWG & NO. 4 GND
P002	DUCT BANK	4-1/C NO. 1/0 AWG & NO. 4 GND
P003	¾"	3-1/C NO. 10 AWG & NO. 10 GND
P004	1-1/2"	4-1/C NO. 4 AWG & NO. 8 GND
P005	DUCT BANK	4-1/C NO. 4/0 AWG & NO. 3 GND
P006	1"	3-1/C NO. 6 AWG & NO. 10 GND
P007	1-1/2"	4-1/C NO. 1 AWG & NO. 6 GND
P008	1"	4-1/C NO. 6 AWG & NO. 6 GND



1 / E-11 MAIN ONE LINE DIAGRAM
SCALE: N.T.S.

LAST REVISED: 3/12/2008
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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

US 301
SR 896 TO SR 1

CONTRACT T200911308
COUNTY NEW CASTLE
BRIDGE NO.
DESIGNED BY: JLG
CHECKED BY: RAK

7/30/15 | E-11

ELECTRICAL
MAIN ONE LINE DIAGRAM

SHEET NO. 866
TOTAL SHTS. 875

LEGEND:

GROUND CONNECTION

CONDUIT - EXPOSED

CONDUIT - EMBEDDED

CONDUIT - TURNED DOWN

CONDUIT - TURNED UP

POWER OR CONTROL PULLBOX

GENERAL NOTES:

1. DRAWINGS ARE DIAGRAMMATIC IN NATURE, CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO INSTALLATION. CONTRACTORS SHALL COORDINATE ALL WORK WITH OTHER DIVISION TRADES. LOCATE FIXTURES, DEVICES, ETC. IN ORDER TO AVOID INTERFERENCE'S.
2. ARCHITECTURAL FEATURES SHOWN ON THESE DRAWINGS ARE FOR BACKGROUND INFORMATION ONLY. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR ACTUAL BUILDING CONSTRUCTION OF WALLS AND CURBS. REFER TO MECHANICAL DRAWINGS FOR ACTUAL LOCATION OF EQUIPMENT.
3. CONTRACTORS SHALL IN A WORKMANLIKE MANNER, PROVIDE A COMPLETE OPERABLE SYSTEM. OUTLINE DESCRIPTION AND DIAGRAMMATIC REPRESENTATION OF SYSTEM OPERATION AND EQUIPMENT DOES NOT LIMIT CONTRACTOR LIABILITY FOR INSTALLATION OF A COMPLETE AND OPERABLE SYSTEM.
4. ALL WORK SHALL BE PERFORMED AS REQUIRED BY APPLICABLE SECTIONS OF THE NATIONAL ELECTRICAL CODE, LATEST EDITION, AND ALL GOVERNING LOCAL CODES, LAWS/OR REGULATIONS.
5. ALL CONDUIT PENETRATIONS UP THROUGH GRADE AND THROUGH FOUNDATIONS SHALL BE PVC-COATED GALVANIZED RIGID STEEL CONDUIT (PCRMC). ALL OTHER EXPOSED OUTDOOR CONDUITS SHALL BE GALVANIZED STEEL CONDUIT. MINIMUM SIZED DIAMETER SHALL BE 1" UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL UTILIZE THE CONDUIT MANUFACTURER'S RECOMMENDED SUPPORTS FOR ALL CONDUIT ROUTINGS.

ABBREVIATIONS:

A	AMPERE
A.C.	ALTERNATING CURRENT
A/C	AIR CONDITIONING
ADJ.	ADJACENT
AE	AUTOMATIC ENTRY
A.F.F.	ABOVE FINISHED FLOOR
A.F.G	ABOVE FINISHED GRADE
A.I.C.	AMPERE INTERRUPTING CAPACITY
A.T.S.	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AVI	AUTOMATIC VEHICLE IDENTIFICATION
AWG	AMERICAN WIRE GAUGE
BCC	BOOTH CONTROL CENTER
BLDG.	BUILDING
C	CONDUIT
CB	CIRCUIT BREAKER
C.P.	CONTROL PANEL
CNTL	CONTROL CABLE/CONDUIT
CONTR	CONTRACTOR
COTB.	CANOPY OVERRIDE TERMINATION BOX
CNTOR	CONTACTOR
D.C.	DIRECT CURRENT
DE	DEDICATED ENTRY
DIA.	DIAMETER
D.S.	DISCONNECT SWITCH
E.C.	ELECTRICAL CONTRACTOR
EM.	EMERGENCY
EMB.	EMBEDDED
E.P.	EXPLOSION PROOF
ETC	ELECTRONIC TOLL COLLECTOR
EXH.	EXHAUST
F.A.	FIRE ALARM
FT.	FOOT, FEET
FU.	FUSE
G.C.	GENERAL CONTRACTOR
G.F.I.	GROUND FAULT INTERRUPTER
GRD.	GROUND
H.I.D.	HIGH INTENSITY DISCHARGE
HP	HORSEPOWER
H.P.S.	HIGH PRESSURE SODIUM
HVAC	HEAT-VENT-AIR CONDITIONING
HTR.	HEATER
I.G.	ISOLATED GROUND
I.M.C.	INTERMEDIATE METAL CONDUIT
IN.	INCH
JB	JB
KW.	KILOWATT
LTG.	LIGHTING
MIN.	MINIMUM
M.H.	MOUNTING HEIGHT
M.L.O.	MAIN LUG ONLY
MTD.	MOUNTED
MCB	MAIN CIRCUIT BREAKER
M.C.S.	MOLDED CASE SWITCH
NB	NORTH BOUND
N.C.	NORMALLY CLOSED
NF	NONFUSIBLE
N.I.C.	NOT IN CONTRACT
N.O.	NORMALLY OPEN
No.	NUMBER
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
OH	OVERHEAD
PNL.	PANEL
PWR	POWER CABLE/CONDUIT
PVC	POLYVINYL CHLORIDE
PCRMC	PVC-COATED RIGID METAL CONDUIT
R.G.S.	RIGID GALVANIZED STEEL
SB	SOUTHBOUND
SCI	SIGN CONTROLLER INTERFACE
SW	SWITCH
T.B.	TOLL BOOTH
T.S.	TRAFFIC SIGNAL
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
TYP.	TYPICAL
U.L.	UNDERWRITERS LABORATORIES
U.N.O.	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTED POWER SUPPLY
V	VOLT
VES	VEHICLE ENFORCEMENT SYSTEM
W.P.	WEATHERPROOF
X	EXIT
PED. ACC.	PEDESTRIAN ACCESSWAY

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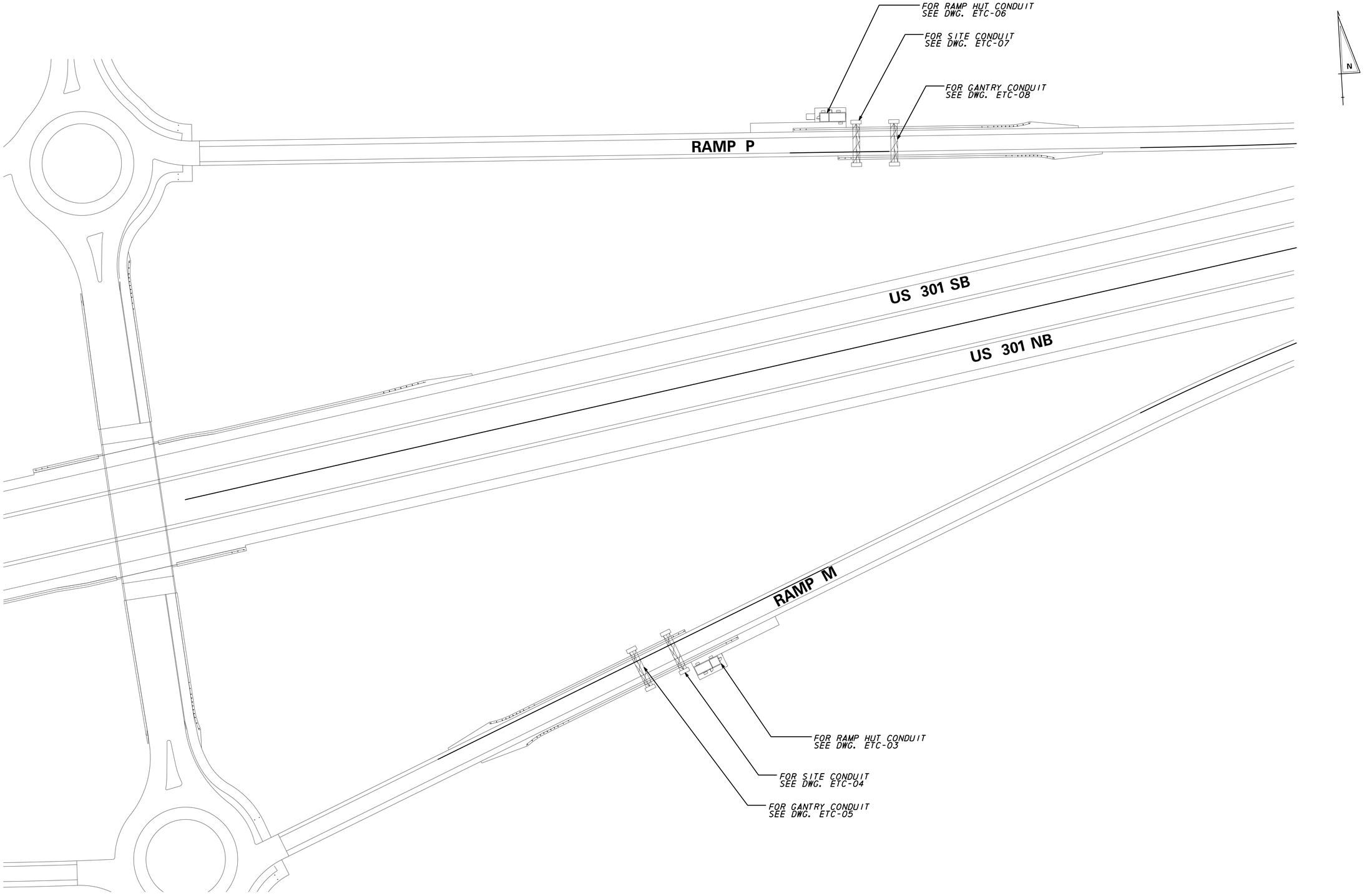
				7/30/15	ETC–01	
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS		US 301 SR 896 TO SR 1	CONTRACT T200911308	BRIDGE NO.	ETC LEGEND, SYMBOLS & ABBREVIATIONS
				COUNTY NEW CASTLE	DESIGNED BY: JTB	SHEET NO. 867
					CHECKED BY: RAK	TOTAL SHTS. 875



SITE PLAN - RAMPS M & P

SCALE: 1" = 50'

LAST REVISED: 3/12/2008
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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

SCALE
0 50 100 150
FEET

US 301
SR 896 TO SR 1

CONTRACT	T200911308
COUNTY	NEW CASTLE
BRIDGE NO.	
DESIGNED BY: JTB	
CHECKED BY: RAK	

7/30/15

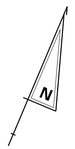
ETC
OVERALL
SITE PLAN

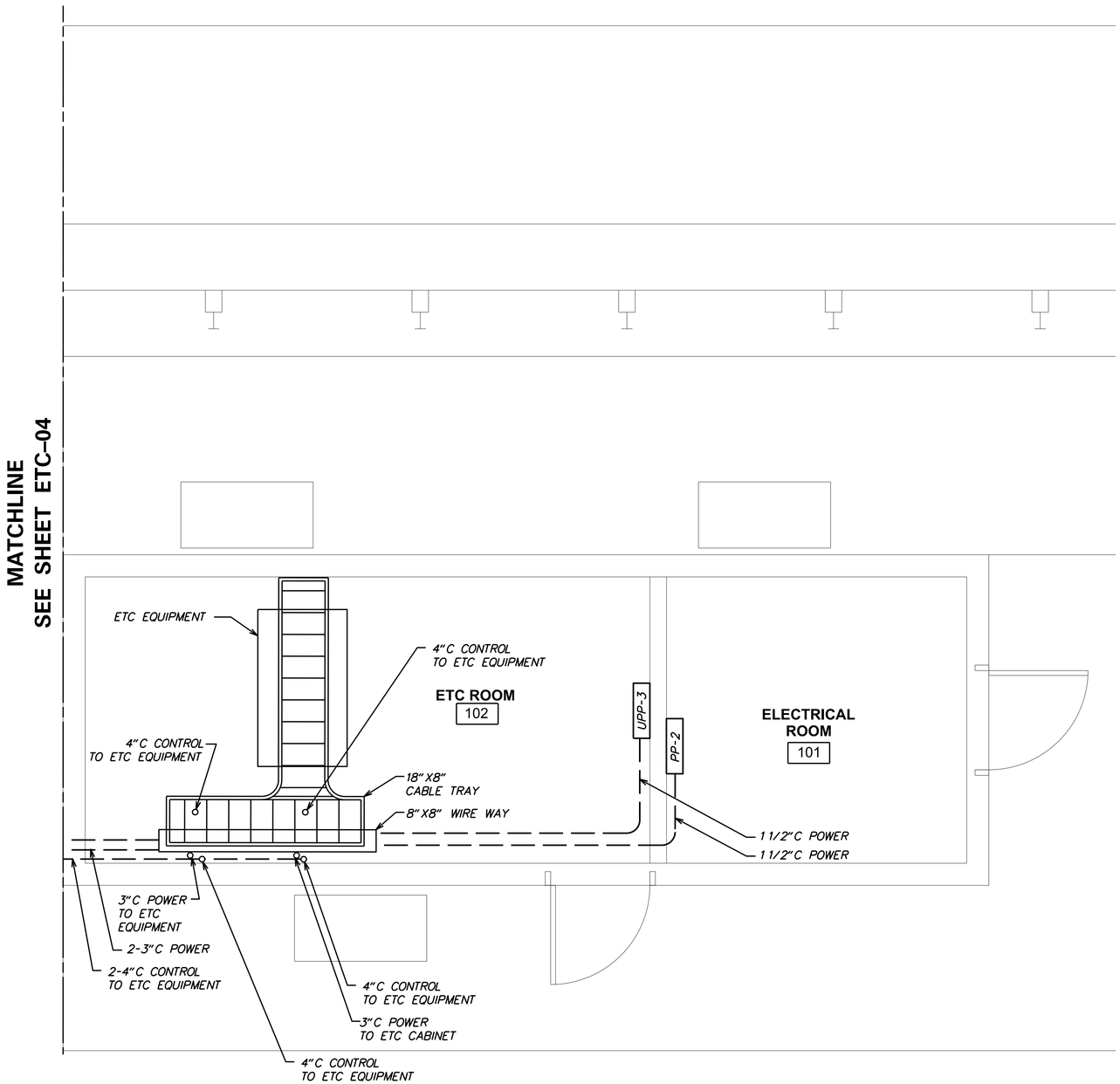
ETC-02

SHEET NO.	TOTAL SHTS.
868	875

NOTES:

1. CONTRACTOR SHALL COORDINATE WITH ETC CONTRACTOR FOR EXACT EQUIPMENT LOCATIONS AND ADJUST FINAL CONDUIT ROUTING AS NECESSARY.
2. ALL ETC EQUIPMENT TO BE HOUSED WITHIN THE "ETC ROOM".





ETC RAMP HUT CONDUIT PLAN AET RAMP 'M'

SCALE: 1/2" = 1'-0"

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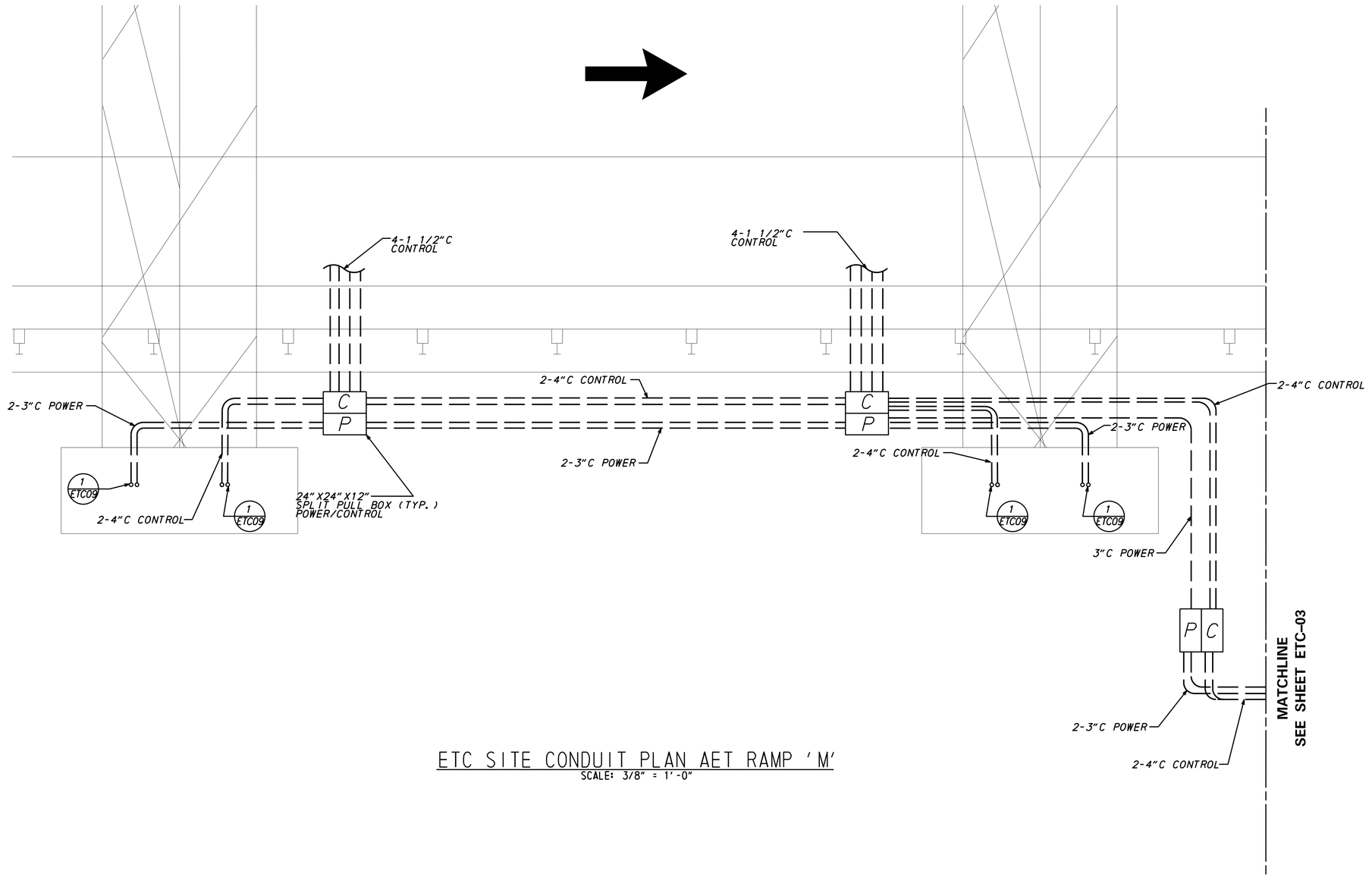
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS		US 301 SR 896 TO SR 1	CONTRACT T200911308	BRIDGE NO.	ETC RAMP HUT CONDUIT PLAN AET RAMP 'M'	7/30/15 ETC-03
				COUNTY NEW CASTLE	DESIGNED BY: JTB		SHEET NO. 869
					CHECKED BY: RAK		TOTAL SHTS. 875



ETC SITE CONDUIT PLAN AET RAMP 'M'

SCALE: 3/8" = 1'-0"

NOTES:

1. *CONTRACTOR SHALL COORDINATE WITH ETC CONTRACTOR FOR EXACT EQUIPMENT LOCATIONS AND ADJUST FINAL CONDUIT ROUTING AS NECESSARY.*
2. *SEE DWG. ETC-09 FOR GANTRY COLUMN CONDUIT DETAILS.*

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

US 301
SR 896 TO SR 1

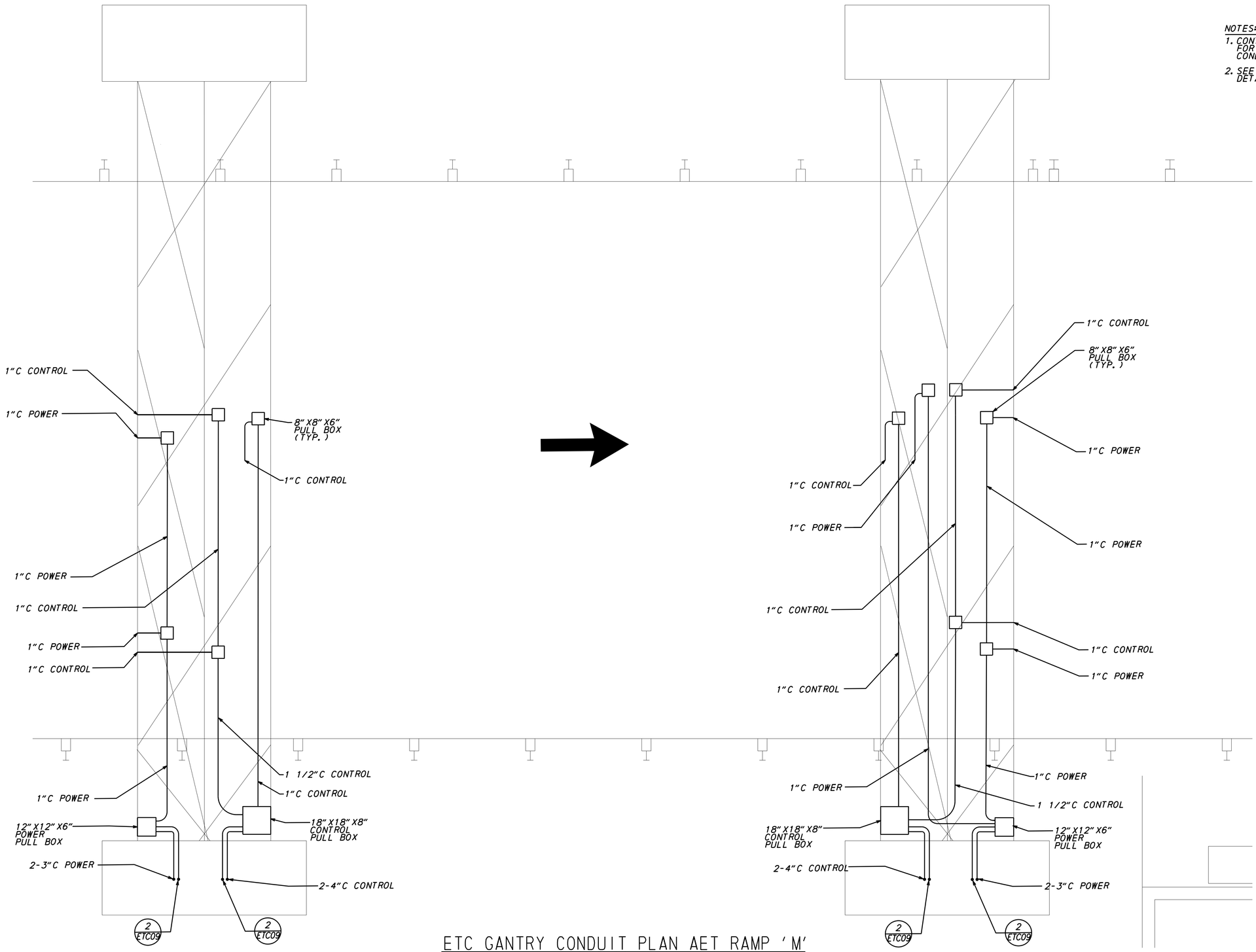
CONTRACT	T200911308
COUNTY	NEW CASTLE
BRIDGE NO.	
DESIGNED BY:	JTB
CHECKED BY:	RAK

ETC SITE CONDUIT PLAN AET RAMP 'M'

7/30/15	ETC-04
SHEET NO.	870
TOTAL SHTS.	875

NOTES:

1. CONTRACTOR SHALL COORDINATE WITH ETC CONTRACTOR FOR EXACT EQUIPMENT LOCATIONS AND ADJUST FINAL CONDUIT ROUTING AS NECESSARY.
2. SEE DWG. ETC-09 FOR GANTRY COLUMN CONDUIT DETAILS.



ETC GANTRY CONDUIT PLAN AET RAMP 'M'

SCALE: 3/8" = 1'-0"

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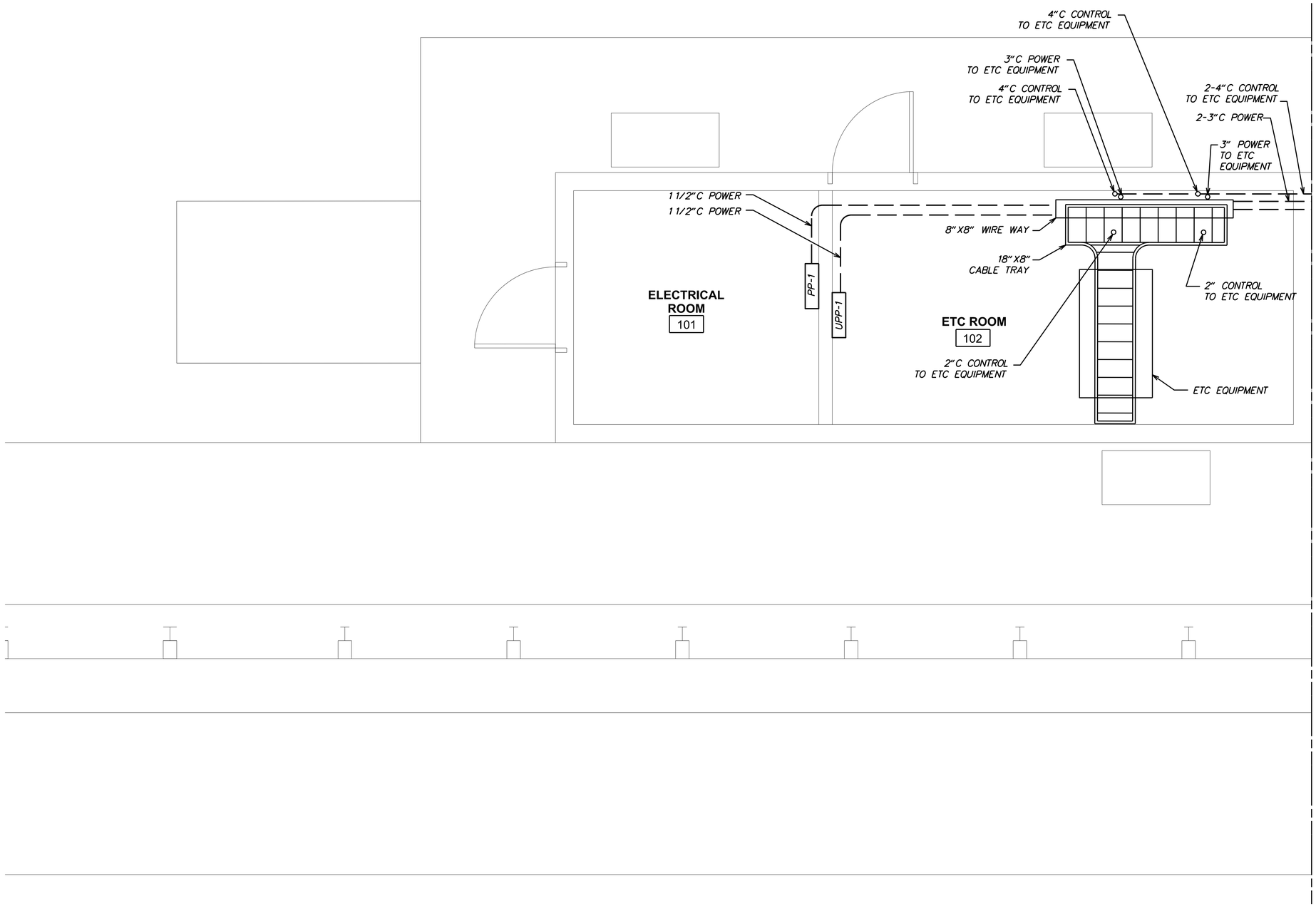
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS		US 301 SR 896 TO SR 1	CONTRACT T200911308	BRIDGE NO.	ETC GANTRY CONDUIT PLAN AET RAMP 'M'	7/30/15 ETC-05
				COUNTY NEW CASTLE	DESIGNED BY: JTB		SHEET NO. 871
					CHECKED BY: RAK		TOTAL SHTS. 875



ETC SITE AND HUT CONDUIT PLAN AET RAMP 'P'

SCALE: 1/2" = 1'-0"

NOTES:

1. CONTRACTOR SHALL COORDINATE WITH ETC CONTRACTOR FOR EXACT EQUIPMENT LOCATIONS AND ADJUST FINAL CONDUIT ROUTING AS NECESSARY.
2. ALL ETC EQUIPMENT TO BE HOUSED WITHIN "ETC ROOM".

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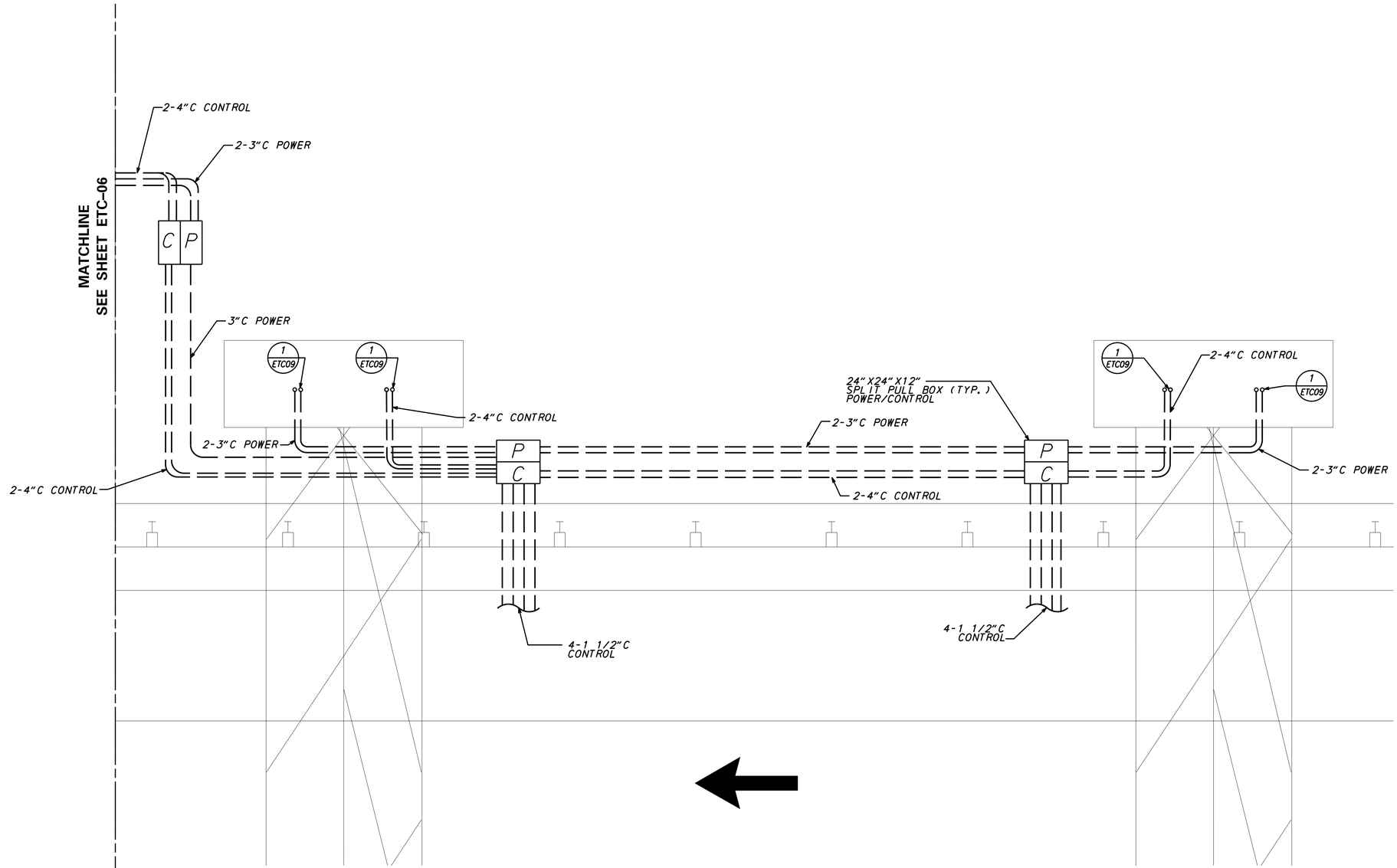
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS		US 301 SR 896 TO SR 1	CONTRACT T200911308	BRIDGE NO.	ETC RAMP HUT CONDUIT PLAN AET RAMP 'P'	SHEET NO. 872
				COUNTY NEW CASTLE	DESIGNED BY: JTB		TOTAL SHTS. 875
					CHECKED BY: RAK		

7/30/15 | ETC-06



ETC SITE AND HUT CONDUIT PLAN AET RAMP 'P'

SCALE: 3/8" = 1'-0"

NOTES:

1. CONTRACTOR SHALL COORDINATE WITH ETC CONTRACTOR FOR EXACT EQUIPMENT LOCATIONS AND ADJUST FINAL CONDUIT ROUTING AS NECESSARY.
2. SEE DWG. ETC-09 FOR GANTRY COLUMN CONDUIT DETAILS.

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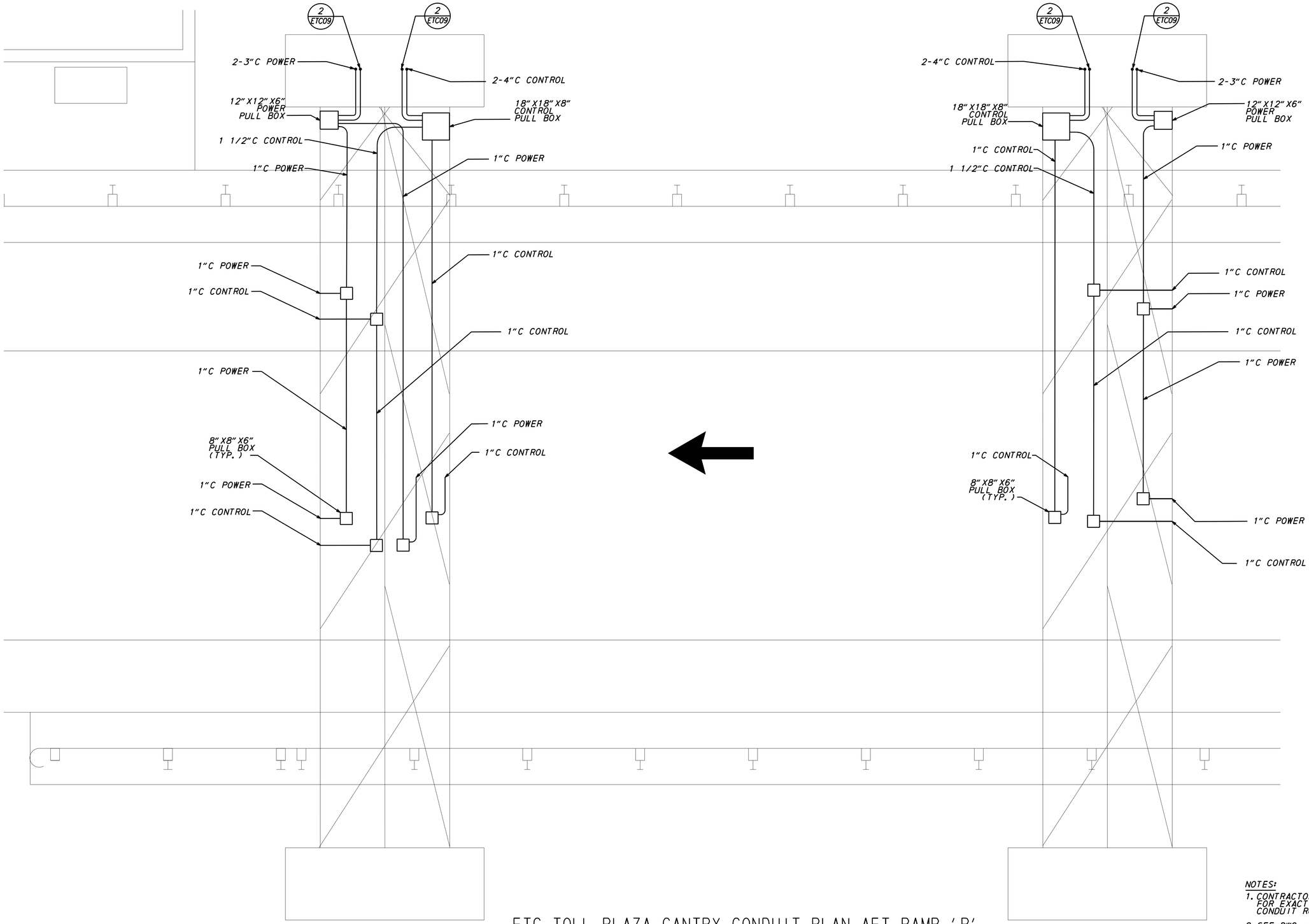
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS		US 301 SR 896 TO SR 1	CONTRACT T200911308	BRIDGE NO.	ETC SITE CONDUIT PLAN AET RAMP 'P'	SHEET NO. 873
				COUNTY NEW CASTLE	DESIGNED BY: JTB		TOTAL SHTS. 875
					CHECKED BY: RAK	7/30/15	ETC-07



ETC TOLL PLAZA GANTRY CONDUIT PLAN AET RAMP 'P'

SCALE: 3/8" = 1'-0"

NOTES:

1. CONTRACTOR SHALL COORDINATE WITH ETC CONTRACTOR FOR EXACT EQUIPMENT LOCATIONS AND ADJUST FINAL CONDUIT ROUTING AS NECESSARY.
2. SEE DWG. ETC-09 FOR GANTRY COLUMN CONDUIT DETAILS.

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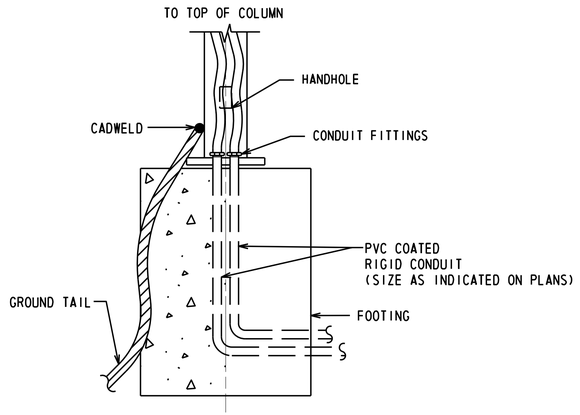
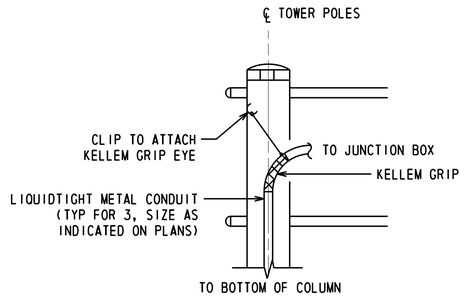
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS		US 301 SR 896 TO SR 1	CONTRACT T200911308	BRIDGE NO.	ETC GANTRY CONDUIT PLAN AET RAMP 'P'	7/30/15 ETC-08
				COUNTY NEW CASTLE	DESIGNED BY: JTB		SHEET NO. 874
					CHECKED BY: RAK		TOTAL SHTS. 875



1 ETC09 TYPICAL GANTRY COLUMN BOTTOM ELEVATION

N.T.S.



2 ETC09 TYPICAL GANTRY COLUMN TOP ELEVATION

N.T.S.

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						7/30/15	ETC–09
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS		US 301 SR 896 TO SR 1	CONTRACT T200911308	BRIDGE NO.	ETC DETAILS	SHEET NO. 875
				COUNTY NEW CASTLE	DESIGNED BY: JTB		TOTAL SHTS. 875
					CHECKED BY: RAK		