SUBSET 06 - BUILDING SYSTEMS
INDEX OF DRAWINGS

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DESIGNED BY:
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Anthony A Moretti
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REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 5/2/2016

DESIGNER/DRAFTER: G.T.G
CHECKED BY: T.R.L

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: 06-UTILITIES..SSCOVER..0301..0170..SS-00.dgn

SIGNATURE/ BLOCK:

PROJECT TITLE:
NOROTON HEIGHTS RAILROAD STATION PLATFORM REPLACEMENT

TOWN: DARIEN

DRAWING TITLE:
BUILDING SYSTEMS INDEX OF DRAWINGS

PROJECT NO. 301-0170
DRAWING NO. SS-00
SHEET NO. 06.01

SCOPE OF WORK

1. EXISTING PLATFORM LIGHTING POLES SHALL BE REMOVED, STORED AND RE-INSTALLED AS SHOWN ON DRAWINGS. CONTRACTOR SHALL TAKE GREAT CARE FOR REMOVING EXISTING PLATFORM LIGHTING POLES AND STORE THEM IN A DRY LOCATION. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO LIGHTING POLES DURING REMOVAL AND STORAGE PERIOD.
2. REMOVE AND STORE EXISTING LUMINAIRES AND REINSTALL LUMINAIRES WITH LED RETROFIT, AS SHOWN ON DRAWINGS.
3. REMOVE EXISTING CONDUITS AND CABLE RUNS IN THE CONDUITS AS PER STAGING PLANS, AS SHOWN ON DRAWINGS.
4. METRO NORTH RAILROAD (MNR) WILL DISCONNECT AND RECONNECT PA (PUBLIC ANNOUNCEMENT) SYSTEM AND VMS (VARIABLE MESSAGE SIGNS). THE CONTRACTOR SHALL COORDINATE THE DISCONNECTION AND RECONNECTION OF PA SYSTEM AND VMS WITH MNR. THE CONTRACTOR SHALL PLAN AND EXECUTE THE DISCONNECTION AND RECONNECTION ARRANGEMENT TO ENSURE FUNCTIONING OF VMS AND PA SYSTEM IN NON-STAGED AREA OF PLATFORMS. REFER TO STAGING PLANS S-10 THROUGH S-15 FOR STAGING DETAILS.
5. INSTALL NEW CONDUITS AND CABLE WIRES FOR LIGHTING, POWER, PA SYSTEM AND VMS SYSTEMS AS SHOWN ON DRAWINGS.
6. CONTRACTOR SHALL LEGALLY DISPOSE OF ALL CONDUITS, CABLES, WIRES, AND RELATED ACCESSORIES.
7. INSTALL NEW PA SPEAKERS ON REINSTALLED LIGHT POLES.

GENERAL NOTES

1. PROVIDE ALL LABOR, MATERIAL EQUIPMENT, INCIDENTALS, METHODS AND SERVICES REQUIRED TO INSTALL ALL WORK INDICATED COMPLETELY AND IN FULL OPERATION.
2. ALL ELECTRICAL WORK SHALL CONFORM TO THE LATEST ADOPTED BY THE STATE OF CONNECTICUT, NATIONAL ELECTRICAL CODE, AS WELL AS OTHER APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND/OR ORDINANCES.
3. ALL COMPONENTS OF THE ELECTRICAL SYSTEM SHALL BE PROPERLY GROUNDED, AS PER NEC ARTICLE 250. GROUND ALL NON-CURRENT CARRYING METAL PARTS OF EQUIPMENT.
4. CONTRACTOR SHALL FURNISH AND INSTALL ALL ELECTRICAL EQUIPMENT REQUIRED TO PROVIDE A COMPLETE SYSTEM IN WORKING ORDER.
5. CONTINUITY OF EXISTING ELECTRICAL SYSTEMS AND CIRCUITS TO REMAIN INTACT DURING AND AFTER CONSTRUCTION. ANY INTERRUPTION OF SERVICE OF ANY KIND SHALL BE COORDINATED WITH THE OWNER AND OTHER TRADES.
6. ALL REMOVAL AND INSTALLATION WORK SHALL BE DONE ACCORDING TO COMMON SCHEDULE PROPOSED BY CONTRACTOR AND APPROVED BY OWNER-IN ORDER TO MINIMIZE TIME OF INTERRUPTIONS.
7. PROVIDE A PRINTED AND LAMINATED DIRECTORY FOR EACH PANELBOARD AS REQUIRED.
8. COORDINATE ALL DEVICE LOCATIONS WITH OWNER PRIOR TO SETTING EQUIPMENT.
9. PLANS AND EXISTING CONDITIONS TO BE VERIFIED IN THE FIELD, BY CONTRACTOR.
10. ALL LIGHTING FIXTURES INCLUDING POLES, SHALL BE REMOVED, STORED, AND REINSTALLED AT SAME LOCATION ON THE PLATFORM, HOWEVER, IF THE NEW POLES AND FIXTURES ARE TO BE USED, THE OLD ONES SHALL BE REPLACED IN-KIND WITH MOUNTING HEIGHTS SAME AS EXISTING FIXTURES. MOUNTING HEIGHT SHALL BE FROM THE BOTTOM OF THE FIXTURE TO THE FINISHED FLOOR.
11. PROVIDE TEMPORARY CONSTRUCTION LIGHTING INCLUDING IN THE TEMPORARY SHELTER WITH APPROVED PORTABLE GENERATOR.
12. MINIMUM CONDUIT SIZE SHALL BE 3/4" PVC COATED RIGID METAL CONDUIT (RMC) UNLESS OTHERWISE NOTED.
13. POWER AND LIGHTING WIRE OR CABLE SHALL BE #10 AWG COPPER MINIMUM, UNLESS OTHERWISE NOTED.
14. SPLICING OF WIRES OR CABLES IN CONDUITS IS NOT PERMITTED. PROVIDE CODE SIZED JUNCTION BOX, WHERE REQUIRED, TO SPLICE CABLES.
15. IT IS THE CONTRACTOR'S RESPONSIBILITY TO TAKE ALL NECESSARY PRECAUTION TO PREVENT ANY DAMAGE TO THE EXISTING SYSTEMS DURING CONSTRUCTION. ANY SUCH DAMAGES THAT MAY OCCUR DURING CONSTRUCTION SHALL BE REPAIRED/FIXED TO ITS ORIGINAL CONDITION TO OWNER'S SATISFACTION WITHOUT ADDITIONAL COST TO OWNER.
16. LABEL ALL PLATFORM LIGHTING POLES AND RECEPTACLES WITH APPROPRIATE BRANCH CIRCUIT NUMBERS.
17. LABEL ALL POWER PANELS TOP RIGHT CORNER WITH THE LOCATION OF PANEL POWER SOURCE.
18. CONTRACTOR SHALL INSTALL EXPANSION FITTINGS ON ALL TYPES OF CONDUITS AT EVERY 150 FOOT DISTANCE OR PLATFORM CONTROL JOINTS.
19. CONTRACTOR SHALL COORDINATE WITH EVERSOURCE ENERGY UTILITY AS REQUIRED FOR THE PROJECT.

DEMOLITION NOTES

1. PRIOR TO DEMOLITION, CONTRACTOR SHALL REVIEW WITH OWNER ALL MATERIALS TO BE REMOVED. SHOULD THE OWNER OPT TO KEEP ANY MATERIALS THE CONTRACTOR SHALL REMOVE AND DELIVER THE PARTS TO THE SITE DIRECTED BY THE OWNER WITHIN 50 MILES OF RADIUS, OTHERWISE ALL DEMOLISHED OR REMOVED MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE AND BE DISPOSED OF IN A LEGAL MANNER.
2. IDENTIFY THE APPLICABLE CONDUITS, WIRES, JUNCTION BOXES, AND ASSOCIATED CIRCUIT BREAKERS IN THE POWER PANEL FOR EACH PHASE PRIOR TO ALL DEMOLITION WORK.
3. PRIOR TO DEMOLITION, CONTRACTOR SHALL COORDINATE HIS SCOPE OF WORK WITH ALL OTHER TRADES TO ACHIEVE A SMOOTH FLOW OF WORK. HE SHALL ALSO COORDINATE WITH THE OWNER OF THE FACILITY SUCH THAT ALL NECESSARY ELECTRICAL INTERRUPTIONS SHALL BE REDUCED TO THE MINIMUM OR CONTRACTOR SHALL SCHEDULE ALL HIS WORK DURING WEEKENDS, ENSURING HIS WORK IS DONE BEFORE START OF THE WORK WEEK.
4. DEMOLITION SHALL INCLUDE REMOVAL OF ALL PARTS AND PIECES IN THEIR ENTIRETY BACK TO POINTS INDICATED OR IF NOT INDICATED, BACK TO THEIR POINT OF SOURCE. WHERE CONDITIONS PROHIBIT TOTAL REMOVAL OF THE WORK, THE REMAINING PORTION e.g. CONDUIT SHALL BE CUT FLUSH WITH THE SURROUNDING SURFACE AND BE CAPPED, PLUGGED OR SEALED AND THE SURROUNDING SURFACE SHALL BE REFINISHED IN AN APPROVED MANNER.
5. REMOVE EXISTING EQUIPMENT ONE AT A TIME, ENSURING NOTES 1 AND 2 ARE FOLLOWED.
6. PROVIDE ADEQUATE PROTECTION WHERE REQUIRED FOR THE SAFETY OF PERSONNEL AND FOR THE PRESENT BUILDING AND ITS CONTENTS, AND AGAINST FIRE.
7. CONTRACTOR SHALL RING OUT AND INDENTIFY ALL CIRCUITS REMAINING IN CONTRACT AREA AFTER DEMOLITION. REMOVE ALL CIRCUITS BACK TO SOURCE, UNLESS OTHERWISE NOTED, UPDATE DIRECTORY AND MARK PANEL OR SWITCHBOARD CIRCUITS NO LONGER IN USE "SPARE".
8. COORDINATE WITH ALL TRADES THE EXTENT OF DEMOLITION WORK REQUIRED, WHETHER OR NOT SPECIFICALLY INDICATED, WHICH INTERFERE WITH OR ARE USELESS TO THE PROPOSED CONSTRUCTION. DISPOSE OF ALL REMOVED MATERIAL AT THE CONTRACTOR'S EXPENSE.
9. THE CONTRACTOR SHALL EXTEND WIRING AS REQUIRED TO MAINTAIN NORMAL OPERATING CONDITION TO AREAS AFFECTED BY DEMOLITION, WHETHER OR NOT THE AREAS TO BE RETAINED ARE INDICATED ON THE CONTRACT DRAWINGS OR DESCRIBED IN THE SPECIFICATIONS.
10. RELOCATE/RECONNECT/REWIRE OR REMOVE/REPLACE EXISTING LIGHTING SYSTEM AS REQUIRED TO CLEAR FOR NEW WORK.
11. ALL EXISTING EQUIPMENT IDENTIFIED TO REMAIN SHALL BE CONNECTED TO EXISTING CIRCUITS, UNLESS OTHERWISE NOTED.
12. ALL WORK AREAS SHALL BE LEFT IN A SAFE CONDITION, AFTER WIRING ASSOCIATED WITH THE EQUIPMENT HAS BEEN DISCONNECTED.
13. ANY REPAIRS AND/OR PATCHING WORK NECESSITATED BY THE REMOVAL WORK SHALL BE INCLUDED.
14. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY AND IDENTIFY ALL SERVICES AND CONNECTIONS THAT NEED TO BE DISCONNECTED OR MAINTAINED. DISCONNECTIONS SHALL BE DONE AS PER REQUIREMENTS AND REGULATIONS OF THE OWNER.

PAY ITEM NOTES

1. REINSTALLATION OF EXISTING LIGHT POLES ONTO PROPOSED PLATFORM SECTIONS SHALL BE PAID UNDER ITEM "REINSTALL LIGHT POLE".
2. REMOVAL OF EXISTING HID LUMINAIRE FROM EXISTING LIGHT HOUSING ON EXISTING LIGHT POLES AND EXISTING CANOPIES SHALL BE PAID FOR UNDER ITEM "REMOVE EXISTING LUMINAIRE".
3. THE REMOVAL OF ALL LIGHT POLES LOCATED ON THE PLATFORM SHALL BE PAID FOR UNDER ITEM "REMOVE POLE".
4. THE INSTALLATION OF LED RETROFIT INTO EXISTING LIGHT HOUSING SHALL BE PAID FOR UNDER ITEM "LED LUMINAIRE".
5. ALL PROPOSED CONDUIT SHALL BE PAID FOR UNDER ITEMS "3/4", 1" AND 4" PVC COATED CONDUIT".
6. REMOVAL OF ALL EXISTING CONDUIT SHALL BE PAID FOR UNDER ITEM "REMOVE CONDUIT".
7. THE REMOVAL OF ALL EXISTING CABLE FOR POWER AND COMMUNICATION SHALL BE PAID FOR UNDER ITEM "REMOVE CABLE".
8. ALL TEMPORARY LIGHTING REQUIRED TO MAINTAIN MINIMUM REQUIRED FOOT CANDLES ON PLATFORM AND EGRESS LOCATIONS SHALL BE PAID FOR UNDER ITEM "TEMPORARY LIGHTING".
9. ALL OTHER WORK SHOWN ON THESE CONTRACT PLANS SHALL BE PAID FOR UNDER ITEM "RAIL FACILITY UPGRADE (SITE NO. 1)".

ABBREVIATIONS

A	AMPERES
AC	ALTERNATING CURRENT
AFF	ABOVE FINISHED FLOOR
AIC	AMPERE INTERRUPTING CAPACITY
AWG	AMERICAN WIRE GUAGE
BLDG	BUILDING
BKR	BREAKER
C	CONDUIT
CAB	CABINET
CB	CIRCUIT BREAKER
CKT(S)	CIRCUIT(S)
CDOT	CONNECTICUT DEPARTMENT OF TRANSPORTATION
CP	CONTROL PANEL
CTRL	CONTROL
DS	DISCONNECT SWITCH
DWG	DRAWING
EB	EASTBOUND
EL	EMERGENCY LIGHTING
EBP	EASTBOUND PANEL
ELEC	ELECTRIC, ELECTRICAL
ELP	EMERGENCY LIGHT PANEL
EMT	ELECTRICAL METAL TUBING
EXIST	EXISTING
FL	FLOOR
FMC	FLEXIBLE METAL CONDUIT
GALV	GALVANIZED
GEC	GROUND ELECTRODE CONDUCTOR
GND,G	GROUND
HZ	HERTZ
KVA	KILOVOLTAMPERE
KW	KILOWATT
LTG	LIGHTING
MCB	MAIN CIRCUIT BREAKER
MNR	METRO NORTH RAILROAD
N	NEUTRAL
NTS	NOT TO SCALE
P	POLE
PB	PULL BOX
PF	POWER FACTOR
PH	PHASE
PNL	PANEL
PNLBD	PANELBOARD
RECEP	RECEPTACLE(S)
RGS	RIGID GALVANIZED STEEL CONDUIT
RM	ROOM
RMC	RIGID METAL CONDUIT
SW	SWITCH
TBD	TO BE DETERMINED
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTED POWER SUPPLY
V	VOLT
VA	VOLT - AMPERE
W	WATT, WIRE
WB	WESTBOUND
WBP	WESTBOUND PANEL
WP	WEATHERPROOF
XFMR	TRANSFORMER

SYMBOLS

1	PLATFORM LUMINAIRE WITH POLE NUMBER
	SPEAKER WITH SINGLE HEAD
	SPEAKER WITH DOUBLE HEAD
	UNDERGROUND CONDUIT, UNDER PLATFORM CONDUIT
	EMERGENCY LIGHTING CIRCUIT (EL)
WP	DUPLEX RECEPTACLE WITH WEATHERPROOF COVER
1 GFI	DUPLEX RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTION WITH RECEPTACLE NUMBER
(#)	CIRCUIT NUMBER OF CONTROLLING PANEL
	PLATFORM BENCH
	PANEL UNDER PLATFORM

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Plotted Date: 4/22/2016

DESIGNER/DRAFTER: S.G.
CHECKED BY: M.G. / K.M.
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STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: Subset 06 - Building Systems

SIGNATURE/ BLOCK:

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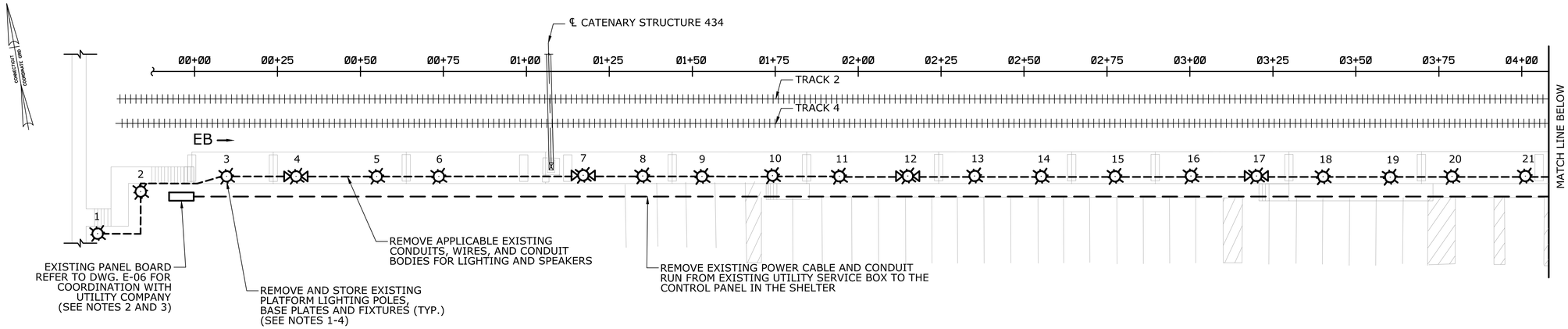
1000 CRAWFORD PLACE, SUITE 300
MOUNT LAUREL, NJ 08054

PROJECT TITLE:
NOROTON HEIGHTS
RAILROAD STATION
PLATFORM REPLACEMENT

TOWN: DARIEN

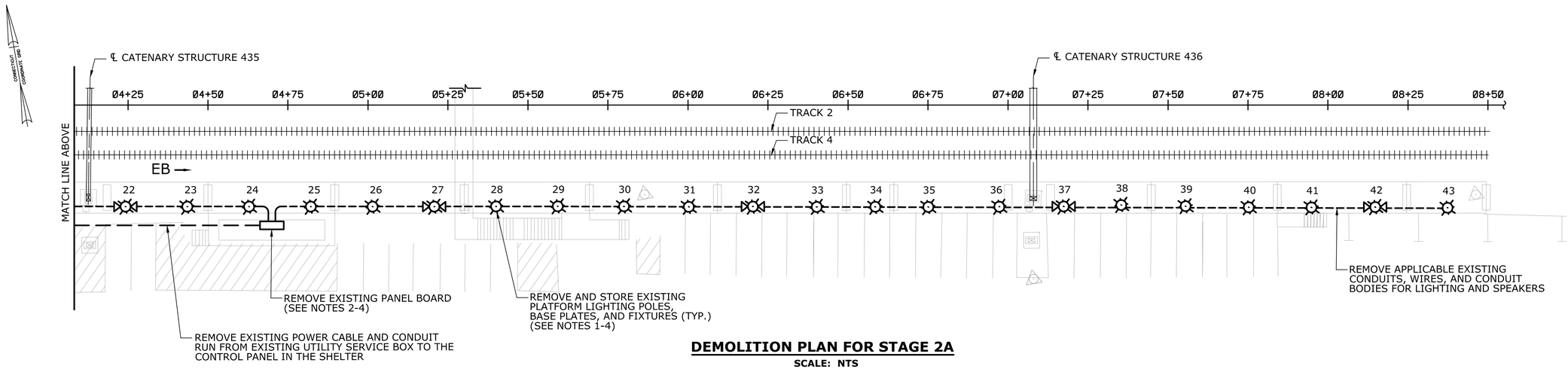
DRAWING TITLE:
GENERAL NOTES, ABBREVIATIONS & SYMBOLS

PROJECT NO. 301-0170
DRAWING NO. E-01
SHEET NO. 06.02



DEMOLITION PLAN FOR STAGE 1A

SCALE: NTS



DEMOLITION PLAN FOR STAGE 2A

SCALE: NTS

NOTES

1. NOTE THE EXISTING LOCATIONS OF LIGHT POLES RELEVANT TO EXISTING DOUBLE TEE SECTIONS EB1-EB23 ON EB PLATFORM. THE REMOVED POLES ARE TO BE REINSTALLED AS PER CONSTRUCTION STAGING SEQUENCE AT SAME LOCATIONS ON EB PLATFORM.
2. PRIOR TO DEMOLITION, TURN OFF THE BREAKERS CONTROLLING LIGHTS IN EACH STAGE. THE LIGHTS IN OTHER AREAS TO REMAIN.
3. IN COORDINATION WITH OTHER TRADES AND PRIOR TO DEMOLITION WORK OF STAGING PLANS S-10 TO S-15, UNBOLT THE CONDUIT RUNS UNDER EB PLATFORM DOUBLE TEE SECTIONS AND PLACE THE CONDUITS ON THE GROUND IN THE PROTECTED LAYDOWN AREA. ENSURE THAT THE CONDUIT RUNS ARE ELECTRICALLY CONTINUOUS AND GROUNDED AT BOTH ENDS.
4. THE CONTRACTOR SHALL MAINTAIN A MINIMUM 10 FOOT CANDLES AT ALL TIMES, PLAN AND EXECUTE DEMOLITION OF THE EXISTING LIGHTING SO THAT NON-STAGED AREAS OF THE PLATFORM REMAIN LIGHTED FOR CONVENIENCE OF COMMUTERS. REFER TO STAGING PLANS S-10 THROUGH S-15 FOR STAGING DETAILS.
5. REMOVE ANY EXISTING SMALL PIECES OF 4/0 COPPER GROUNDING WIRE AND #4 COPPER WIRE CONNECTIONS TO METALLIC APPURTENANCES ON THE PLATFORM. CLEAN THE SURFACES FOR THE NEW CONNECTIONS.
6. THE CONTRACTOR SHALL PLAN & EXECUTE THE DISCONNECTION & RECONNECTION ARRANGEMENT TO ENSURE FUNCTIONING OF VMS & PA SYSTEM IN NON-STAGED AREA OF PLATFORMS. COORDINATE WITH MNR FOR DISCONNECT & RECONNECT OF PA.
7. REFER TO RELEVANT STRUCTURES CONSTRUCTION STAGING DRAWINGS (S-10 TO S-15).

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DESIGNER/DRAFTER: S.G.

CHECKED BY: M.G. / K.M.

SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: Subset 06 - Building Systems

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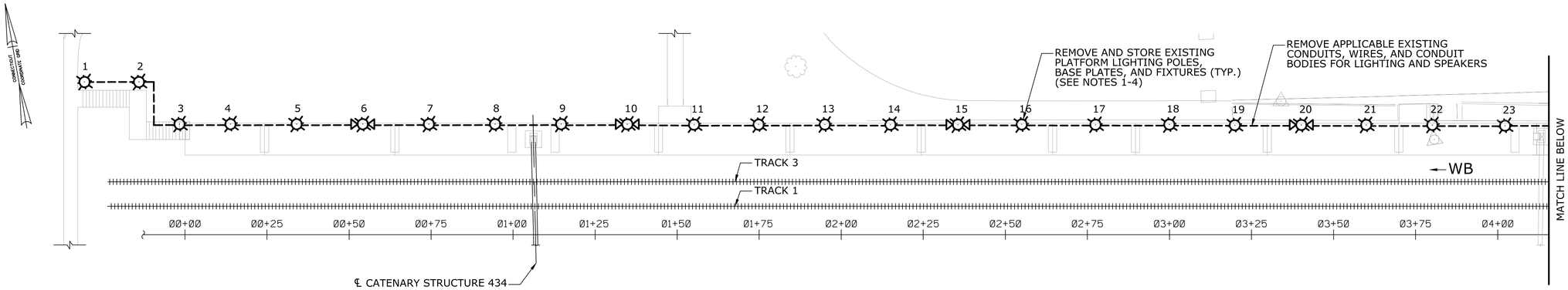
PROJECT TITLE:
NOROTON HEIGHTS
RAILROAD STATION
PLATFORM REPLACEMENT

TOWN: DARIEN

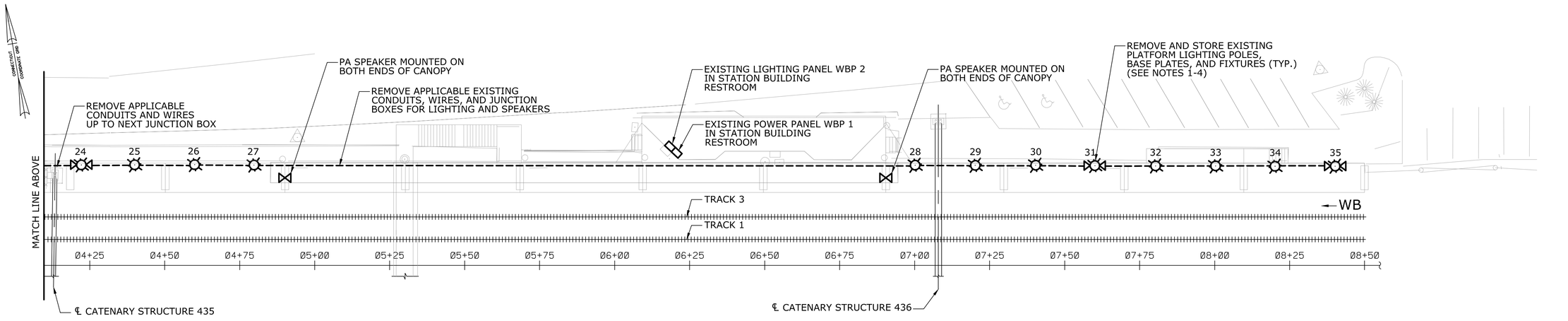
DRAWING TITLE:
DEMOLITION PLAN
SHEET 1 OF 2

PROJECT NO. 301-0170
DRAWING NO. E-02
SHEET NO. 06.03



DEMOLITION PLAN FOR STAGE 3A

SCALE: NTS



DEMOLITION PLAN FOR STAGE 4A

SCALE: NTS

NOTES

1. NOTE THE EXISTING LOCATIONS OF LIGHT POLES RELEVANT TO EXISTING DOUBLE TEE SECTIONS WB1-WB22 ON WB PLATFORM. THE REMOVED POLES ARE TO BE REINSTALLED AS PER CONSTRUCTION STAGING SEQUENCE AT THE SAME LOCATIONS ON WB PLATFORM.
2. PRIOR TO DEMOLITION, TURN OFF THE BREAKERS CONTROLLING LIGHTS IN EACH STAGE. THE LIGHTS IN OTHER AREAS TO REMAIN.
3. IN COORDINATION WITH OTHER TRADES AND PRIOR TO DEMOLITION WORK OF STAGING PLANS S-10 TO S-15, UNBOLT THE CONDUIT RUNS UNDER EB PLATFORM DOUBLE TEE SECTIONS AND PLACE THE CONDUITS ON THE GROUND IN THE PROTECTED LAYDOWN AREA.ENSURE THAT THE CONDUIT RUNS ARE ELECTRICALLY CONTINUOUS AND GROUNDED AT BOTH ENDS.
4. THE CONTRACTOR SHALL PLAN AND EXECUTE DEMOLITION OF EXISTING LIGHTING SO THAT NON-STAGED AREAS OF THE PLATFORM SHALL REMAIN LIGHTED FOR CONVENIENCE OF COMMUTERS. REFER TO STAGING PLANS S-10 TO S-15 FOR STAGING DETAILS. CONTRACTOR SHALL MAINTAIN AT ALL TIMES A MINIMUM 10 FOOT CANDLES.
5. REMOVE ANY EXISTING SMALL PIECES OF 4/0 COPPER GROUNDING WIRE AND #4 COPPER WIRE CONNECTIONS TO METALLIC APPURTENANCES ON THE PLATFORM. CLEAN THE SURFACES FOR THE NEW CONNECTIONS.
6. THE CONTRACTOR SHALL PLAN & EXECUTE THE DISCONNECTION & RECONNECTION ARRANGEMENT TO ENSURE FUNCTIONING OF VMS & PA SYSTEM IN NON-STAGED AREA OF PLATFORMS. COORDINATE WITH MNR FOR DISCONNECT & RECONNECT OF PA.
7. REFER TO RELEVANT STRUCTURES CONSTRUCTION STAGING DRAWINGS (S-10 TO S-15).
8. BOTH POWER (HEATING LOADS) AND LIGHTING PANELS ARE LOCATED INSIDE THE STATION BUILDING RESTROOM (SEE DWG. NO. E-05, E-10, E-17 & E-18). THE RESTROOM SHALL REMAIN OPERABLE DURING CONSTRUCTION WITH MINIMUM OUTAGES. COORDINATE THE CONSTRUCTION WITH THE FACILITY MANAGER.
9. CONTRACTOR TO FIELD VERIFY CIRCUIT NUMBERS WITHIN THE LIGHTING PANEL AND THE CORRESPONDING CONDUIT RUNS FOR DEMOLITION.

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PROJECT TITLE:
NOROTON HEIGHTS
RAILROAD STATION
PLATFORM REPLACEMENT

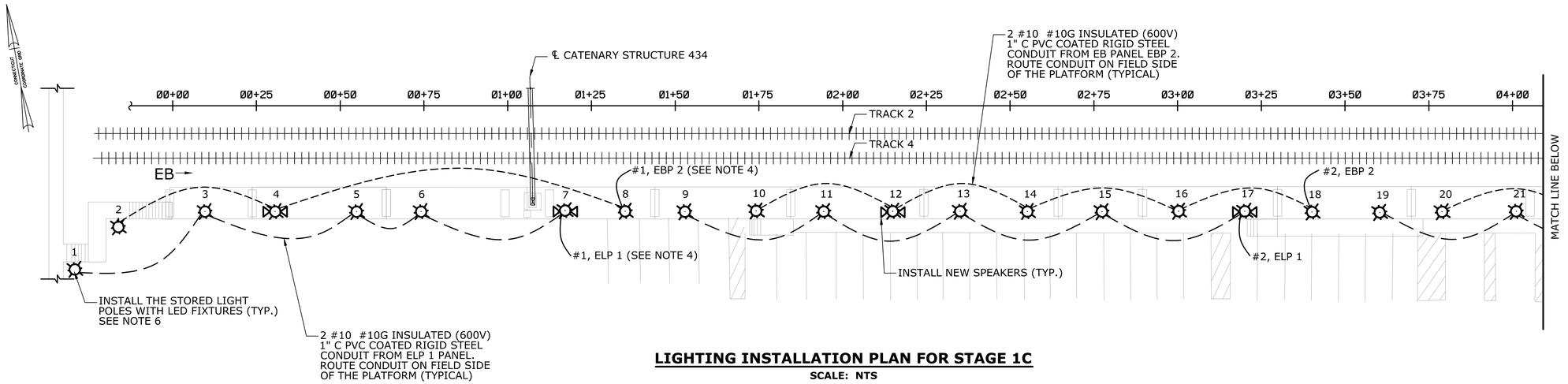
TOWN: DARIEN

DRAWING TITLE:
DEMOLITION PLAN
SHEET 2 OF 2

PROJECT NO. 301-0170

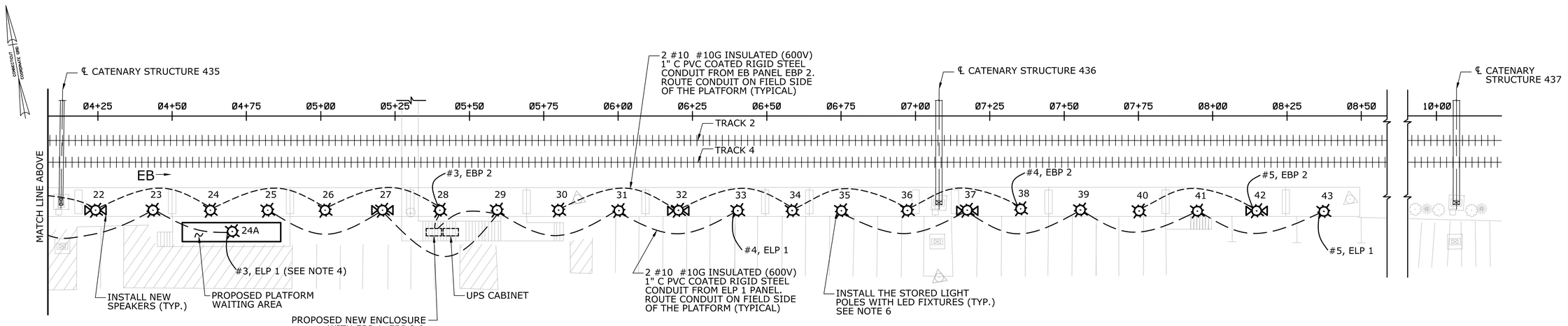
DRAWING NO. E-03

SHEET NO. 06.04



LIGHTING INSTALLATION PLAN FOR STAGE 1C

SCALE: NTS



LIGHTING INSTALLATION PLAN FOR STAGE 2C

SCALE: NTS

NOTES

1. AFTER INSTALLATION OF PROPOSED PLATFORM SECTIONS AS PER THE STAGING SEQUENCE PLANS AND BEFORE INSTALLING THE STORED LIGHT POLES, INSTALL 4/0 COPPER WELD-COPPER CONDUCTOR TYPE "E" MESSENGER WIRE IN 1" C PVC COATED RMC, AS PER DRAWINGS E-19 AND E-20.
2. REFER TO RELEVANT STRUCTURES CONSTRUCTION STAGING DRAWINGS (S-10 TO S-15).
3. NEW CONDUITS TO RUN FROM NEW CONTROL PANEL AND EB UPS CABINET.
4. (# ELP 1) INDICATES CONTROLLING CIRCUIT BREAKER NUMBER IN EASTBOUND ELP 1 PANEL POWER FED FROM UPS, (# EBP 2) INDICATES CONTROLLING CIRCUIT BREAKER NUMBER IN PROPOSED EASTBOUND PANEL FOR LIGHTING. SEE DRAWINGS E-07, E-15, AND E-16.
5. CONTRACTOR SHALL INSTALL EXPANSION FITTINGS ON ALL TYPES OF CONDUITS AT EVERY 150 FEET DISTANCE OR PLATFORM CONTROL JOINTS.
6. ALL POLE MOUNTED LIGHTING LUMINAIRES ON THE EB PLATFORM ARE TYPE "A", SEE DRAWING E-08.
7. LUMINAIRE "24A" IN SHELTER IS TYPE "C". SEE DRAWING E-08.

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SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

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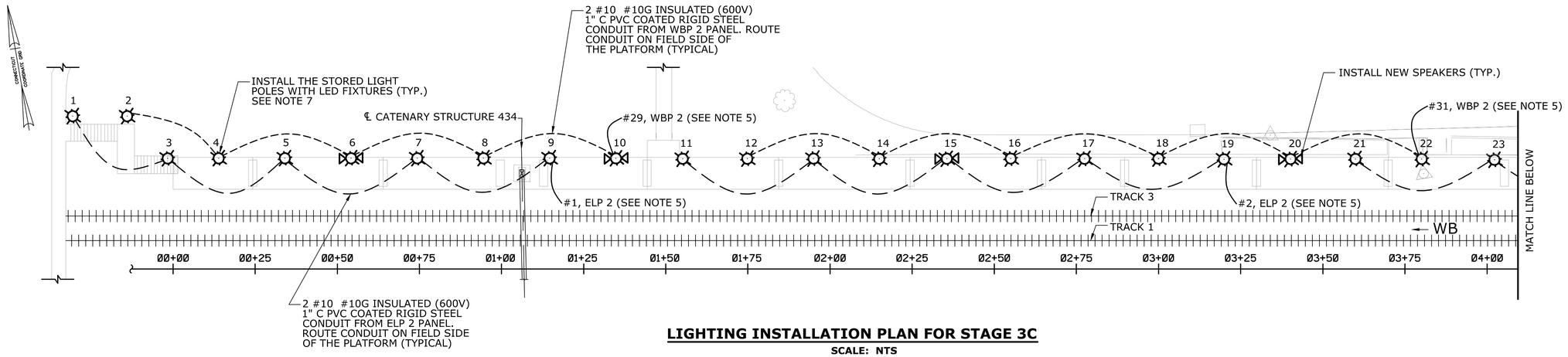
MOUNT LAUREL, NJ 08054

PROJECT TITLE:
NOROTON HEIGHTS
RAILROAD STATION
PLATFORM REPLACEMENT

TOWN: DARIEN

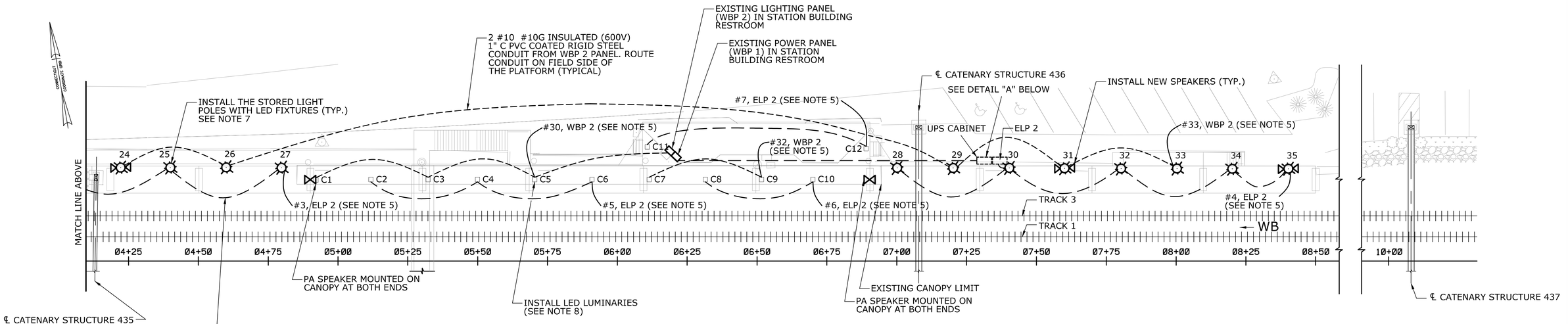
DRAWING TITLE:
PLATFORM LED LIGHTING
PLAN SHEET 1 OF 2

PROJECT NO. 301-0170
DRAWING NO. E-04
SHEET NO. 06.05



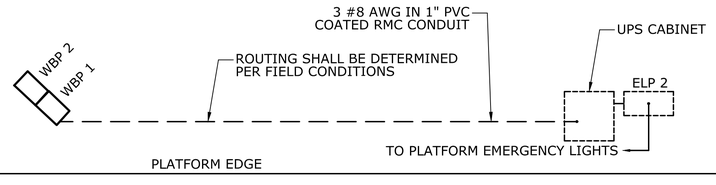
LIGHTING INSTALLATION PLAN FOR STAGE 3C

SCALE: NTS



LIGHTING INSTALLATION PLAN FOR STAGE 4C

SCALE: NTS



DETAIL "A" ROUTING OF CABLE FROM WBP 1 TO UPS CABINET

SCALE: NTS

NOTES

1. BOTH POWER (HEATING LOADS) AND LIGHTING PANELS ARE LOCATED INSIDE THE STATION BUILDING RESTROOM (SEE DWG. NO. E-17 & E-18). THE RESTROOM SHALL REMAIN OPERABLE DURING CONSTRUCTION WITH MINIMUM OUTAGES. COORDINATE CONSTRUCTION WITH THE FACILITY MANAGER.
2. AFTER INSTALLATION OF PROPOSED PLATFORM SECTIONS AS PER THE STAGING SEQUENCE PLANS AND BEFORE INSTALLING THE STORED LIGHT POLES, INSTALL 4/0 COPPER WELD-COPPER CONDUCTOR TYPE "E" MESSENGER WIRE IN 1" C PVC COATED RMC, AS PER DRAWINGS E-19 AND E-20.
3. NEW CONDUITS FOR LIGHTING SHALL BE RUN FROM EXISTING WBP 2 PANEL AND WB UPS PANEL.
4. REFER TO RELEVANT STRUCTURES CONSTRUCTION STAGING DRAWINGS (S-10 TO S-15).
5. "# ELP 2" INDICATES CONTROLLING CIRCUIT BREAKER NUMBER IN WESTBOUND ELP 2 PANEL, FED FROM UPS, "# WBP 2" INDICATES CIRCUIT BREAKER NUMBER IN EXISTING WESTBOUND PANEL FOR LIGHTING. SEE DRAWINGS E-07, E-16, E-17 AND E-18.
6. CONTRACTOR SHALL INSTALL EXPANSION FITTINGS ON ALL TYPES OF CONDUITS AT EVERY 150 FEET DISTANCE OR PLATFORM CONTROL JOINTS.
7. ALL POLE MOUNTED LUMINAIRES ON THE WB PLATFORM ARE TYPE "A". SEE DRAWING E-08.
8. ALL LUMINAIRES UNDER THE CANOPY (C1-C12) ARE TYPE "B". SEE DRAWING E-08.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 4/22/2016

DESIGNER/DRAFTER: S.G.
CHECKED BY: M.G. / K.M.
SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: Subset 06 - Building Systems

SIGNATURE/ BLOCK:

STATE OF CONNECTICUT · JEFFREY G. GRUSKA · NO. 23238 · LICENSED PROFESSIONAL ENGINEER

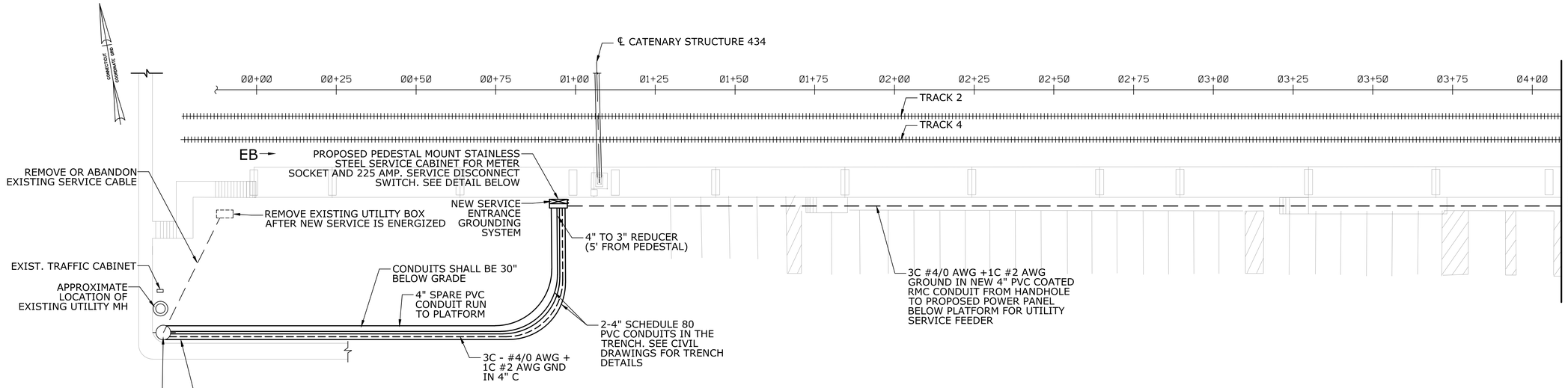
GARG CONSULTING SERVICES, INC.
1000 CRAWFORD PLACE, SUITE 300
MOUNT LAUREL, NJ 08054

PROJECT TITLE:
NOROTON HEIGHTS
RAILROAD STATION
PLATFORM REPLACEMENT

TOWN: DARIEN

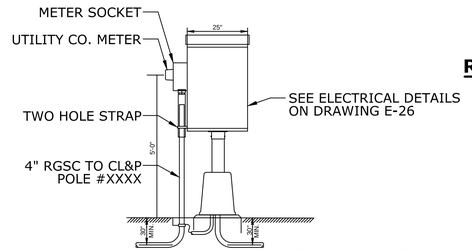
DRAWING TITLE: PLATFORM LED LIGHTING PLAN SHEET 2 OF 2

PROJECT NO. 301-0170
DRAWING NO. E-05
SHEET NO. 06.06



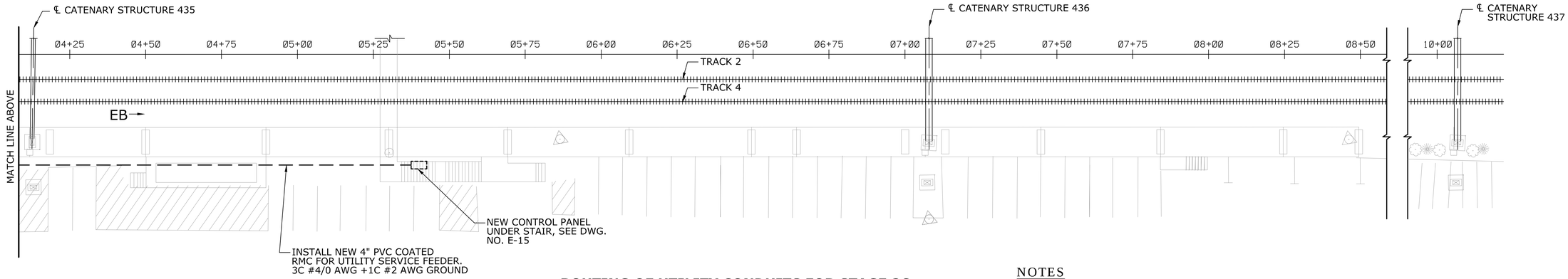
ROUTING OF UTILITY CONDUITS FOR STAGE 1C

SCALE: NTS



PEDESTAL MOUNT STAINLESS STEEL CABINET

SCALE: NTS



ROUTING OF UTILITY CONDUITS FOR STAGE 2C

SCALE: NTS

NOTES

1. AFTER INSTALLATION OF PROPOSED PLATFORM SECTIONS PER THE STAGING SEQUENCE PLANS AND BEFORE INSTALLING THE STORED LIGHT POLES, UTILITY POWER CONDUIT, AND CONTROL PANEL, INSTALL 4/0 GROUNDING MESSENGER WIRE PER DRAWINGS E-19 AND E-20.
2. REFER TO RELEVANT STRUCTURES CONSTRUCTION STAGING DRAWINGS (S-10 TO S-15).
3. THE CONTRACTOR SHALL COORDINATE WITH EVERSOURCE ENERGY FOR ROUTING THEIR FEEDER CABLE FROM THE UTILITY POLE INTO THE METER SERVICE CABINET.
4. THE CONTRACTOR TO ENSURE THAT THE METER SERVICE CABINET IS NOT MOUNTED BELOW THE PLATFORM. THE METER IS TO BE MOUNTED AT 5' ABOVE GRADE, WITH 2' CLEARANCE ON EACH SIDE AND MINIMUM 5' CLEARNACE FROM THE PLATFORM. SEE DWG. E-26 FOR DETAILS.
5. THE CONTRACTOR SHALL COORDINATE WITH MAIN BREAKER IN PANEL EBP 1. SEE DRAWING NO. E-17.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 4/22/2016

DESIGNER/DRAFTER: S.G.
CHECKED BY: M.G. / K.M.
SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: Subset 06 - Building Systems

SIGNATURE/ BLOCK:

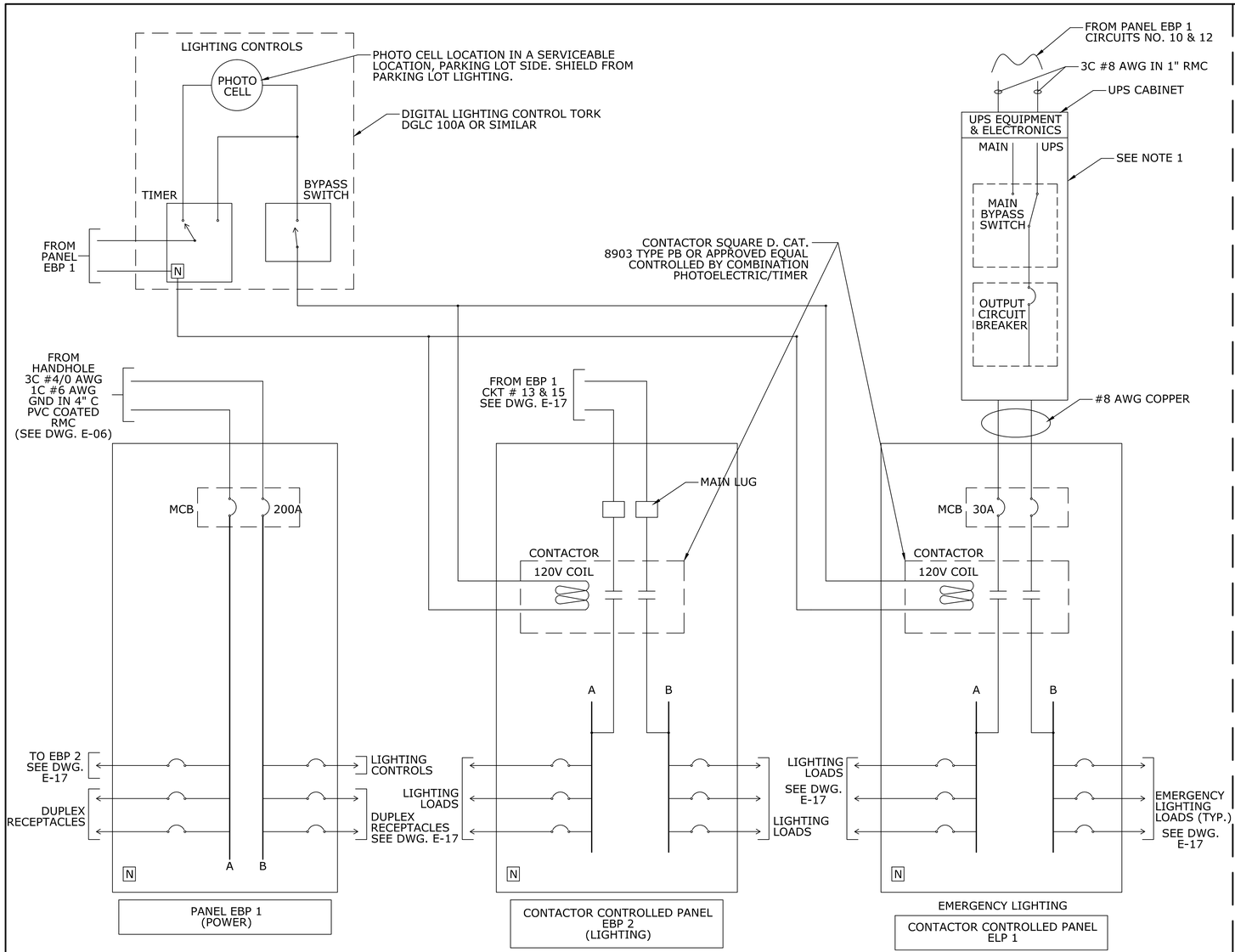
GARG CONSULTING SERVICES, INC.
1500 CRANFORD PLACE, SUITE 100
MOUNT LAUREL, NJ 08054

PROJECT TITLE:
NOROTON HEIGHTS
RAILROAD STATION
PLATFORM REPLACEMENT

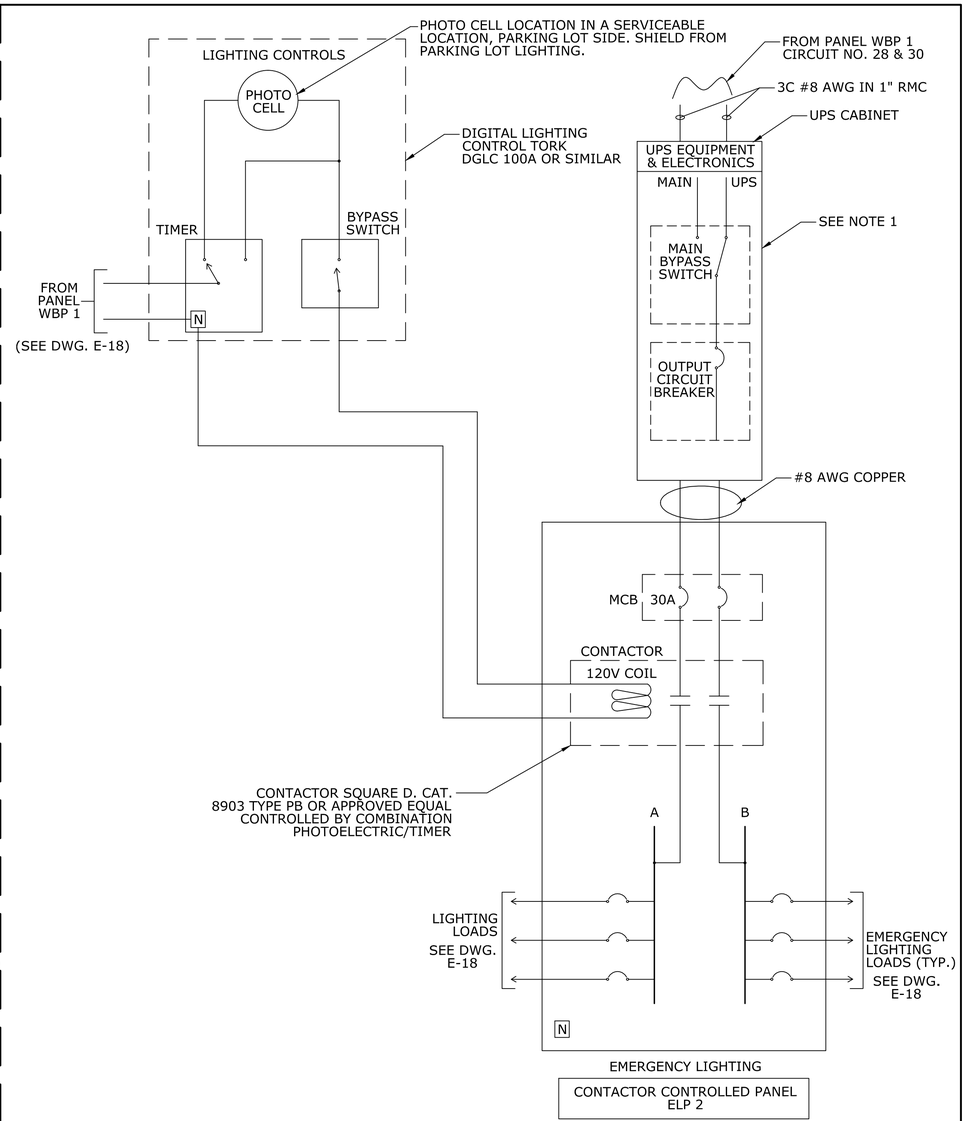
TOWN: DARIEN

DRAWING TITLE: ROUTING OF UTILITY POWER CONDUIT

PROJECT NO. 301-0170
DRAWING NO. E-06
SHEET NO. 06.07



LIGHTING CONTROL SCHEMATIC
(EASTBOUND)
SCALE: NTS



LIGHTING CONTROL SCHEMATIC
(WESTBOUND)
SCALE: NTS

NOTES

1. 5.0 KW 240/120V 1PH WITH INTEGRAL 90 MINUTE BATTERY BANK. CRUCIAL POWER H.E.U. MODEL NO. HU5 OD5800TI OR APPROVED EQUAL.

NOTES

1. 5.0 KW 208/120V 1PH WITH INTEGRAL 90 MINUTE BATTERY BANK. CRUCIAL POWER H.E.U. MODEL NO. HU5 OB5800TI OR APPROVED EQUAL.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: Subset 06 - Building Systems

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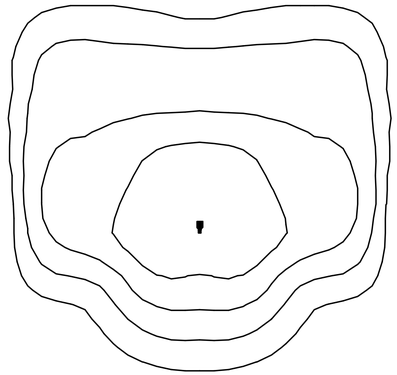
GARG CONSULTING SERVICES, INC.
1500 CRANFORD PLACE, SUITE 100
MOUNT LAUREL, NJ 08054

PROJECT TITLE:
NOROTON HEIGHTS
RAILROAD STATION
PLATFORM REPLACEMENT

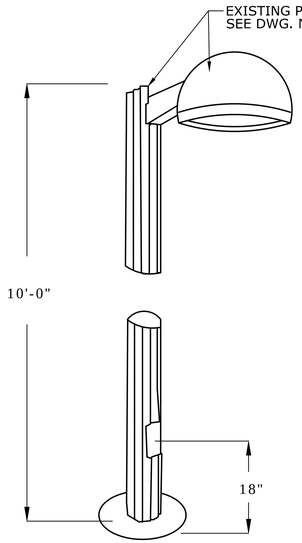
TOWN: DARIEN

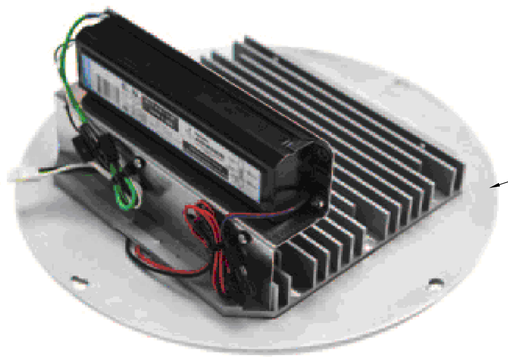
DRAWING TITLE:
LIGHTING CONTROL
SCHEMATICS RISER DIAGRAMS

PROJECT NO. 301-0170
DRAWING NO. E-07
SHEET NO. 06.08



TYPE IV DISTRIBUTION OF LED RETROFIT





50LA LED RETROFIT FOR EXISTING FORM-10 FIXTURE

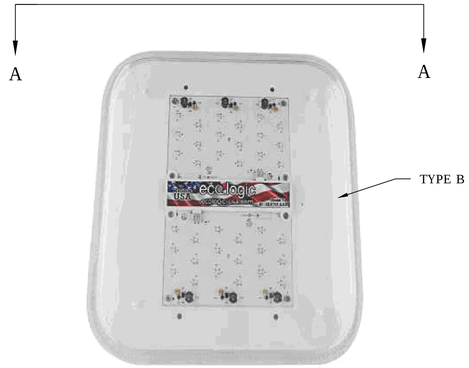
SCALE: NTS

STANDARD RC-52-CNP-LED

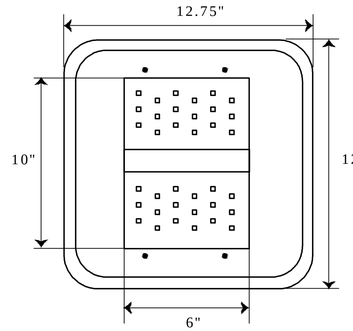
MEANWELL DRIVER

SECTION "A"

SCALE: NTS



SCOTTSDALE LOW-PROFILE ADAPTER KIT

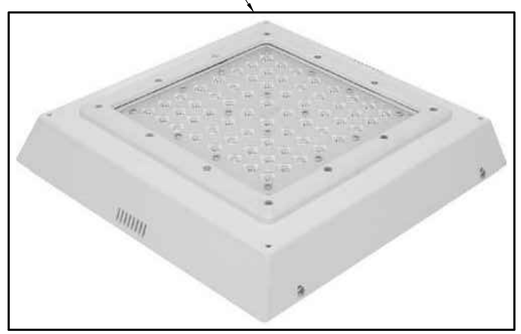


SCOTTSDALE RC-52-CNP-LED RETROFIT LOW-PROFILE ADAPTER KIT

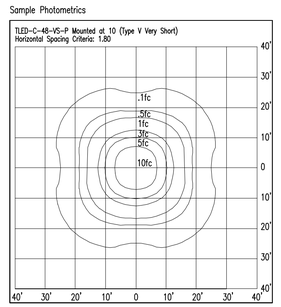
SCALE: NTS

ITEM	QUANT	LIST OF MATERIAL
TYPE A	90	50 LA LED RETROFIT CONSTANT WATTAGE RKL-PHILIPS GARDCO OR APPROVED EQUAL SUITABLE FOR EXISTING PHILIPS GARDCO LIGHTING FORM 10 ROUND, SEMI SPHERICAL (MA) CUT-OFF LUMINAIRE, 17" DIAMETER, TYPE IV DIST., 120V MH. MODEL NUMBER MA-17-1-FM-70MH-120-BRA-F-MF
TYPE B	12	RC-52-CNP-LED RETROFIT CONSTANT WATTAGE-60W SCOTTSDALE LOW-PROFILE ADAPTER KIT OR APPROVED EQUAL FOR EXISTING LITHONIA LIGHTING 100W MH PRISMATIC GLASS REFLECTOR 120V, DARK BRONZE WITH ENHANCED CORROSSION RESISTANCE MODEL NUMBER KACM-100M-FP-120-LPISF
TYPE C	2	TRAPEZOID-TLED-TC-48-VS-P-SURFACE 55W TOTAL SYSTEM WATTS AND 102 LUMENS PER WATT LED LITE LOGIC LUMINAIRE OR APPROVED EQUAL

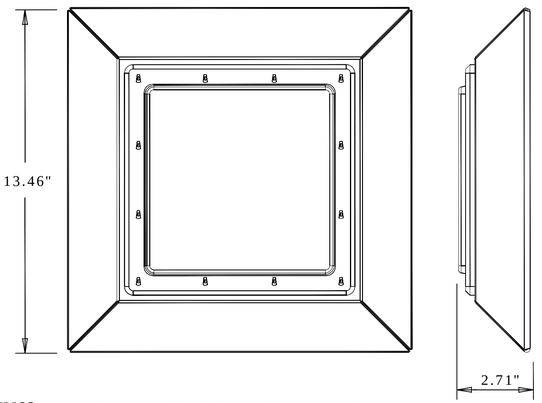
TYPE C



TRAPEZOID TLED-TC-48-VS-P SURFACE



TRAPEZOID TLED-TC-48-VS-P SURFACE PHOTOMETRICS



TRAPEZOID TLED-TC-48-VS-P SURFACE

TRAPEZOID TLED-TC-48-VS-P SURFACE 55W LED FIXTURE

SCALE: NTS

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 4/22/2016

DESIGNER/DRAFTER: S.G.

CHECKED BY: M.G. / K.M.

SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: Subset 06 - Building Systems

SIGNATURE/ BLOCK:

GARG CONSULTING SERVICES, INC.
1500 CRANFORD PLACE, SUITE 100
MOUNT LAUREL, NJ 08054

PROJECT TITLE:
NOROTON HEIGHTS
RAILROAD STATION
PLATFORM REPLACEMENT

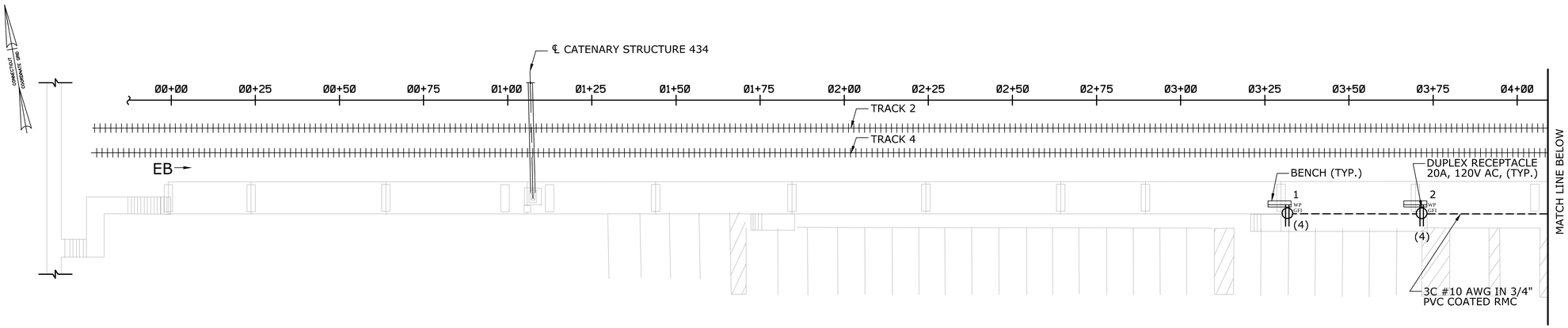
TOWN: DARIEN

DRAWING TITLE:
LED LIGHTING
SCHEDULE & DETAILS

PROJECT NO. 301-0170

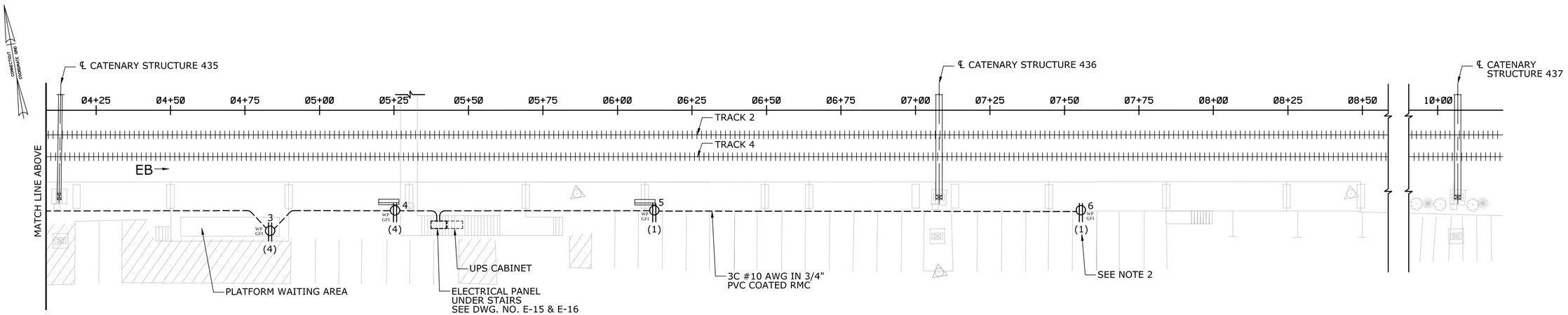
DRAWING NO. E-08

SHEET NO. 06.09



POWER INSTALLATION PLAN FOR STAGE 1C

SCALE: NTS



POWER INSTALLATION PLAN FOR STAGE 2C

SCALE: NTS

NOTES

1. INSTALL RECEPTACLES IN A WEATHERPROOF BOX BEHIND EACH BENCH ON THE PLATFORM AS PER DETAILS ON DRAWING E-24.
2. (#) INDICATES CONTROLLING CIRCUIT BREAKER NUMBER IN EASTBOUND PANEL EBP 1.
3. LOCATION OF BENCHES AND RECYCLING CENTERS SHOWN ARE APPROXIMATE, SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS.
4. CONTRACTOR SHALL INSTALL EXPANSION FITTINGS ON ALL TYPES OF CONDUITS AT EVERY 150' DISTANCE OR PLATFORM CONTROL JOINTS.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: Subset 06 - Building Systems

SIGNATURE/ BLOCK:

GARG CONSULTING SERVICES, INC.
100 GRANTHAM PLACE, SUITE 100
MONTCLAIR, NJ 07043

PROJECT TITLE:
NOROTON HEIGHTS
RAILROAD STATION
PLATFORM REPLACEMENT

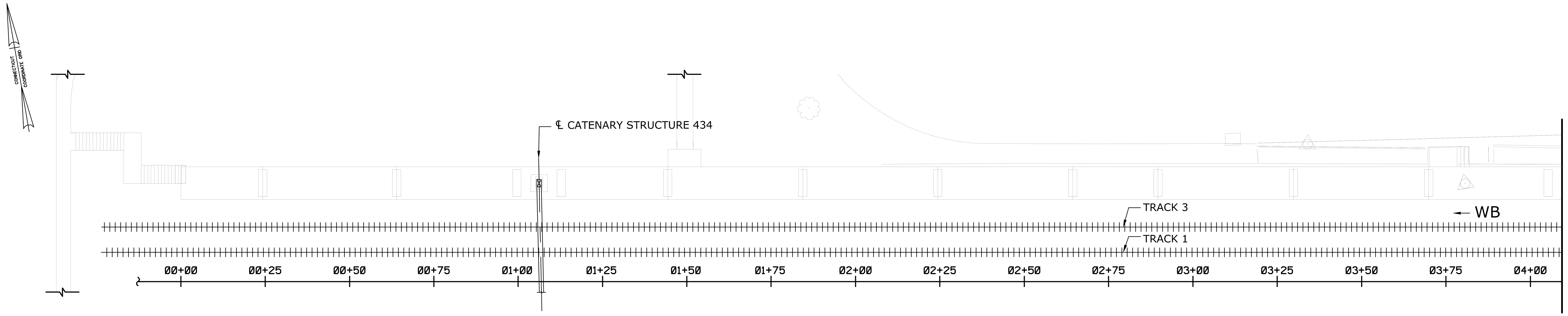
TOWN: DARIEN

DRAWING TITLE: POWER INSTALLATION PLAN
SHEET 1 OF 2

PROJECT NO. 301-0170

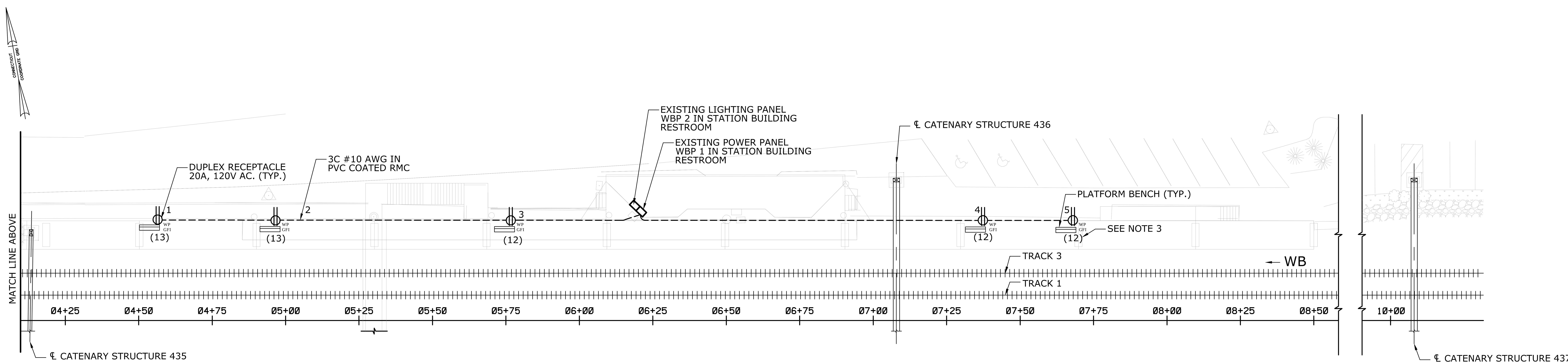
DRAWING NO. E-09

SHEET NO. 06.10



POWER INSTALLATION PLAN FOR STAGE 3C

SCALE: NTS



POWER INSTALLATION PLAN FOR STAGE 4C

SCALE: NTS

NOTES

1. BOTH POWER (HEATING LOADS) AND LIGHTING PANELS ARE LOCATED INSIDE THE STATION BUILDING RESTROOM (SEE DWG. NO. E-17 & E-18). THE RESTROOM SHALL REMAIN OPERABLE DURING CONSTRUCTION WITH MINIMUM OUTAGES. COORDINATE CONSTRUCTION WITH THE FACILITY MANAGER.
2. INSTALL RECEPTACLES IN A WEATHERPROOF BOX BEHIND EACH BENCH ON THE PLATFORM AS PER DETAILS ON DRAWING E-24.
3. (#) INDICATES CONTROLLING CIRCUIT BREAKER NUMBER IN WESTBOUND PANEL WBP 2.
4. LOCATION OF BENCHES AND RECYCLING CENTERS SHOWN ARE APPROXIMATE, SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS.
5. CONTRACTOR SHALL INSTALL EXPANSION FITTINGS ON ALL TYPES OF CONDUITS AT EVERY 150 FOOT DISTANCE OR PLATFORM CONTROL JOINTS.

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STATE OF CONNECTICUT

DEPARTMENT OF TRANSPORTATION

Filename: Subset 06 - Building Systems

SIGNATURE/ BLOCK:

GARG CONSULTING SERVICES, INC.

PROJECT TITLE: NOROTON HEIGHTS RAILROAD STATION PLATFORM REPLACEMENT

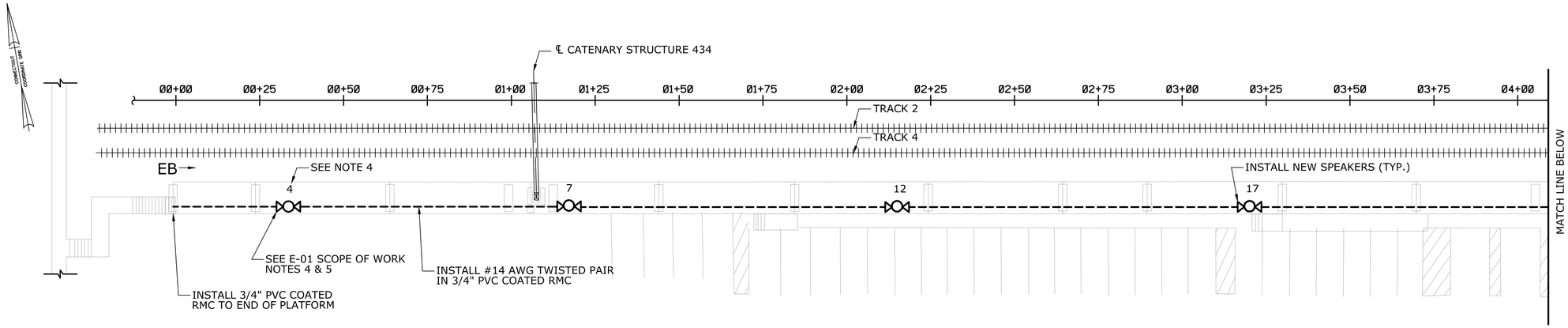
TOWN: DARIEN

DRAWING TITLE: POWER INSTALLATION PLAN SHEET 2 OF 2

PROJECT NO. 301-0170

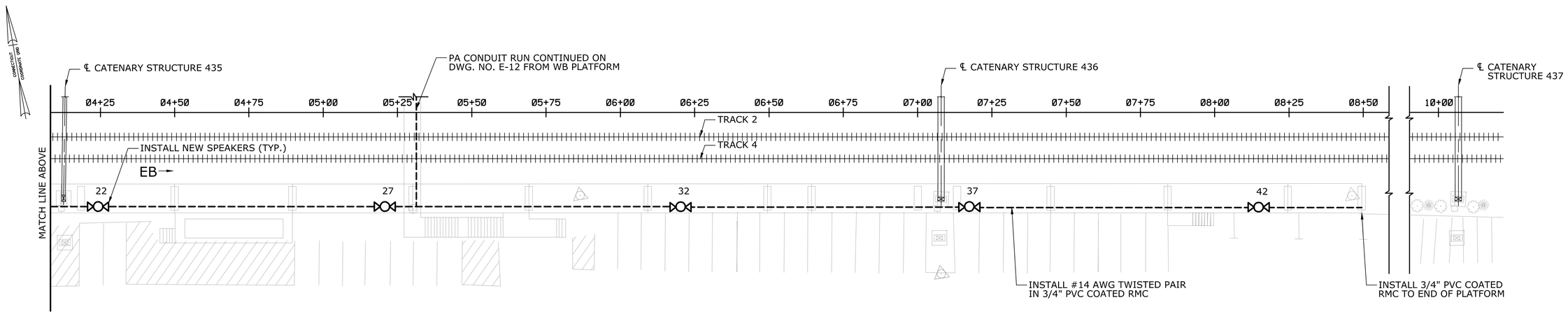
DRAWING NO. E-10

SHEET NO. 06.11



PA COMMUNICATION PLAN FOR STAGE 1C

SCALE: NTS



PA COMMUNICATION PLAN FOR STAGE 2C

SCALE: NTS

SCHEDULE FOR NEW PA SPEAKER
NEW PA SYSTEM SPEAKERS SHALL BE ATLAS SOUND MODEL APT-34AT TWIN HORN WITH MODEL BX2A VANDAL RESISTANT COVER PLATE OR APPROVED EQUAL.

NOTES

1. CONTRACTOR TO PERFORM THE WORK PER NOTE 4 & 5 OF SCOPE OF WORK (SOW) ON DRAWING E-01.
2. REFER TO RELEVANT STRUCTURES CONSTRUCTION STAGING DRAWINGS (S-10 TO S-15).
3. INSTALL NEW SPEAKERS ON EXISTING RE-INSTALLED POLES.
4. NUMBERS ABOVE POLES INDICATE POLE NUMBERS.
5. INSTALL TWO #14 TWISTED PAIR JACKETED CABLES IN THE COMMUNICATION CONDUIT.
6. EXTEND COMMUNICATION CONDUIT AND #14 TWISTED PAIR JACKETED CABLE AT EACH SPEAKER LOCATION.
7. WIRE SPEAKERS IN PARALLEL WITH ALTERNATE SPEAKERS CONNECTED TO ALTERNATE #14 AWG TWISTED PAIR JACKETED CABLES.
8. THE CONTRACTOR SHALL SUBMIT SHOP/WORKING DRAWINGS OF THE PROPOSED ARRANGEMENT FOR THE SCOPE OF WORK.
9. CONTRACTOR SHALL INSTALL EXPANSION FITTINGS ON ALL TYPES OF CONDUITS AT EVERY 150' DISTANCE OR PLATFORM CONTROL JOINTS.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 4/22/2016

DESIGNER/DRAFTER: S.G.
CHECKED BY: M.G. / K.M.
SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
Filename: Subset 06 - Building Systems

SIGNATURE/ BLOCK:

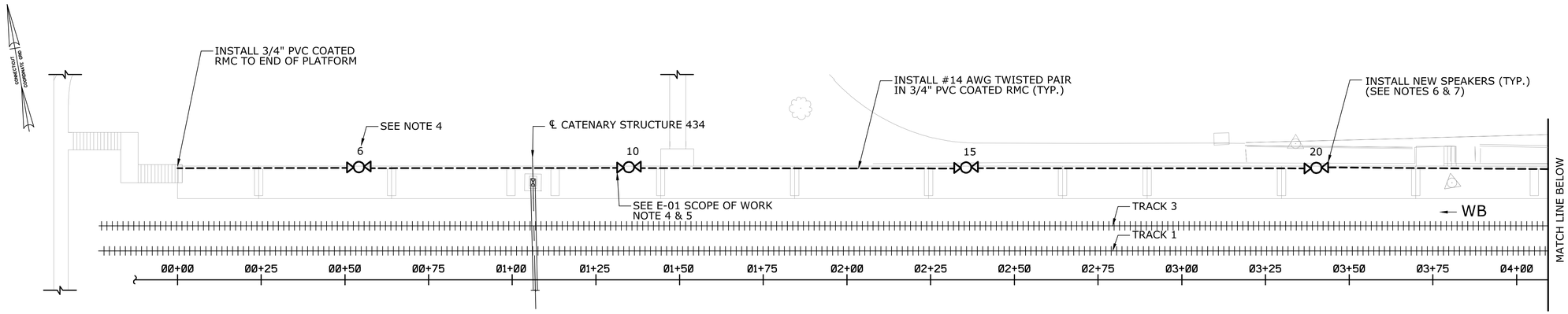
GARG CONSULTING SERVICES, INC.
1000 CRANFORD PLACE, SUITE 200
MOUNT LAUREL, NJ 08054

PROJECT TITLE:
NOROTON HEIGHTS
RAILROAD STATION
PLATFORM REPLACEMENT

TOWN: DARIEN

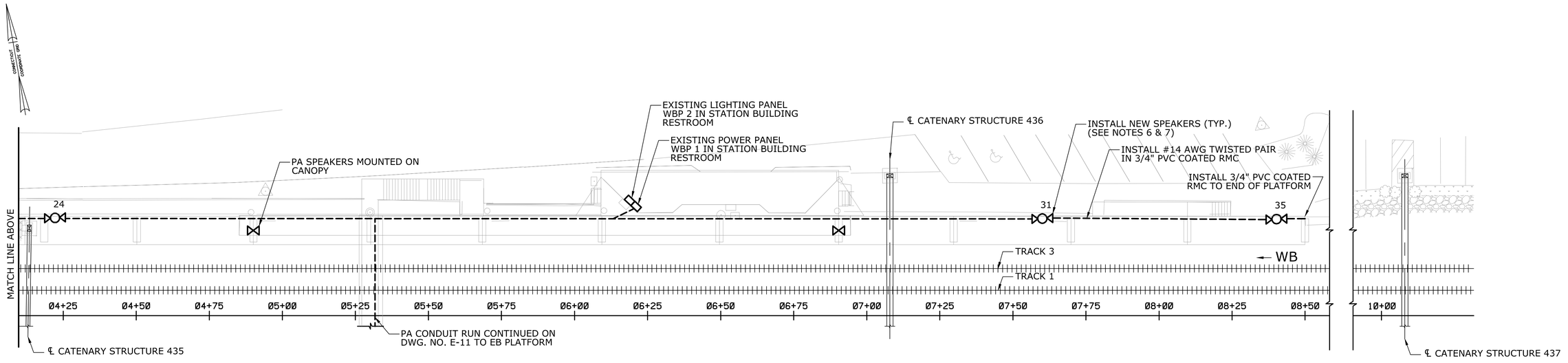
DRAWING TITLE:
PA COMMUNICATION PLAN
SHEET 1 OF 2

PROJECT NO. 301-0170
DRAWING NO. E-11
SHEET NO. 06.12



PA COMMUNICATION PLAN FOR STAGE 3C

SCALE: NTS



PA COMMUNICATION PLAN FOR STAGE 4C

SCALE: NTS

SCHEDULE FOR NEW PA SPEAKER
NEW PA SYSTEM SPEAKERS SHALL BE ATLAS SOUND MODEL APT-34AT TWIN HORN WITH MODEL BX2A VANDAL RESISTANT COVER PLATE OR APPROVED EQUAL.

NOTES

1. CONTRACTOR TO PERFORM THE WORK PER NOTE 4 & 5 OF SCOPE OF WORK (SOW) ON DRAWING E-01.
2. REFER TO RELEVANT STRUCTURES CONSTRUCTION STAGING DRAWINGS (S-10 TO S-15).
3. INSTALL NEW SPEAKERS ON EXISTING RE-INSTALLED POLES.
4. NUMBERS ABOVE POLES INDICATE POLE NUMBERS.
5. INSTALL TWO #14 TWISTED PAIR JACKETED CABLES IN THE COMMUNICATION CONDUIT.
6. EXTEND COMMUNICATION CONDUIT AND #14 TWISTED PAIR JACKETED CABLE AT EACH SPEAKER LOCATION.
7. WIRE SPEAKERS IN PARALLEL WITH ALTERNATE SPEAKERS CONNECTED TO ALTERNATE #14 AWG TWISTED PAIR JACKETED CABLES.
8. THE CONTRACTOR SHALL SUBMIT SHOP/WORKING DRAWINGS OF THE PROPOSED ARRANGEMENT FOR THE SCOPE OF WORK.
9. CONTRACTOR SHALL INSTALL EXPANSION FITTINGS ON ALL TYPES OF CONDUITS AT EVERY 150' DISTANCE OR PLATFORM CONTROL JOINTS.

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STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: Subset 06 - Building Systems

SIGNATURE/ BLOCK:

STATE OF CONNECTICUT — REGISTERED PROFESSIONAL ENGINEER — NO. 23258

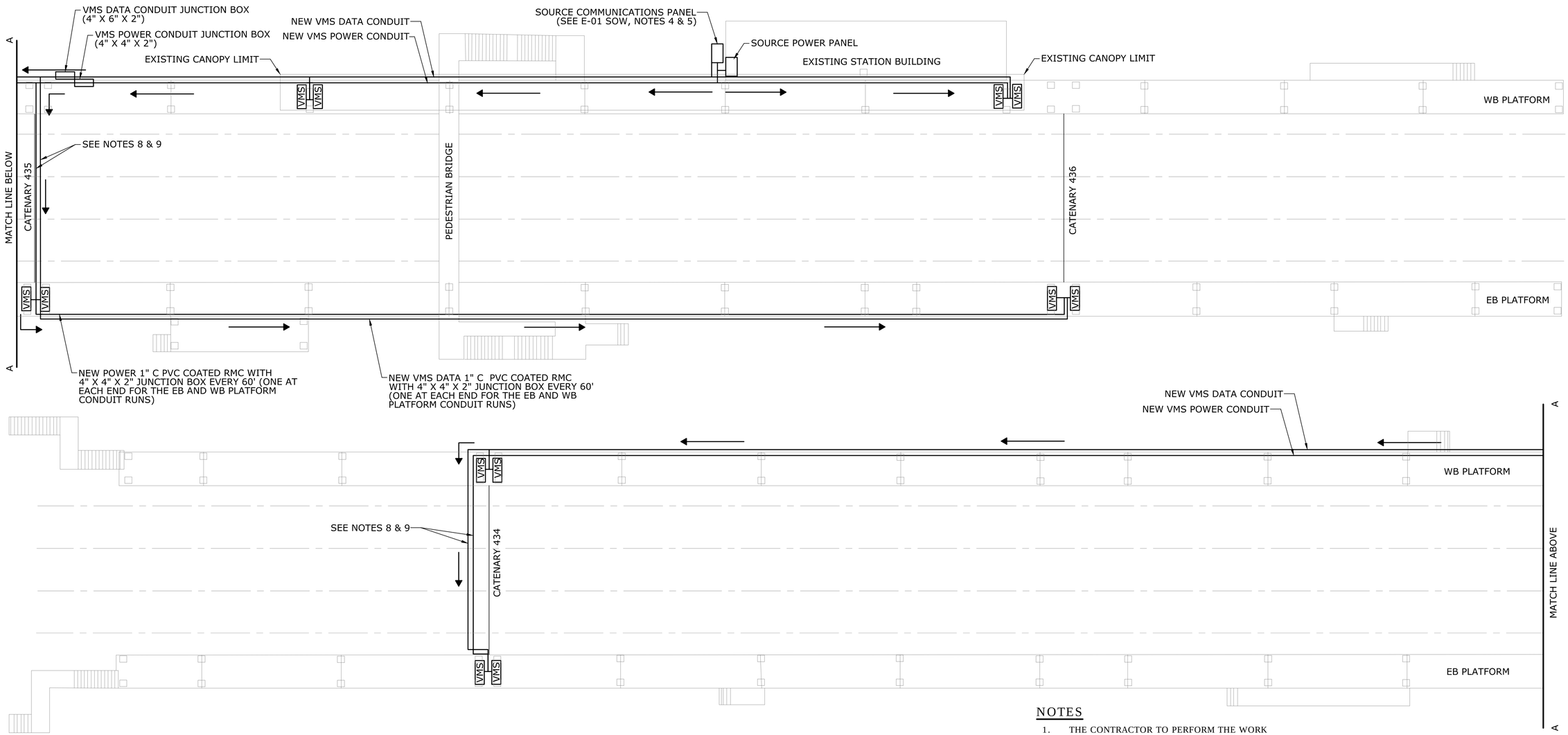
GARG CONSULTING SERVICES, INC.
1000 CRAWFORD PLACE, SUITE 300
MOUNT LAUREL, NJ 08054

PROJECT TITLE:
NOROTON HEIGHTS
RAILROAD STATION
PLATFORM REPLACEMENT

TOWN: DARIEN

DRAWING TITLE:
PA COMMUNICATION PLAN
SHEET 2 OF 2

PROJECT NO. 301-0170
DRAWING NO. E-12
SHEET NO. 06.13



VMS POWER AND COMMUNICATION CONDUIT RUNS

SCALE: NTS

NOTES

1. THE CONTRACTOR TO PERFORM THE WORK PER NOTE 4 & 5 OF SCOPE OF WORK ON DWG. E-01.
2. THE CONTRACTOR SHALL PLAN AND EXECUTE THE DEMOLITION/REMOVAL OF THE EXISTING VMS SIGNS SUCH THAT NON-STAGE AREAS OF THE PLATFORM HAVE VMS SIGNS WORKING FOR THE COMMUTERS CONVENIENCE. REFER TO STAGING PLANS S-10 TO S-15 FOR STAGING DETAILS.
3. SEE DWG. NO. E-14 FOR DETAILS OF THE CONDUIT RUN CROSSING TRACKS TO EB PLATFORM.
4. THE CONTRACTOR SHALL SUBMIT WORKING DRAWINGS OF THE PROPOSED CONDUIT RUNS AND VMS MOUNTING LOCATIONS AND DETAILS.
5. CONDUITS IN THE CANOPY AREA SHALL RUN ON THE UNDERSIDE OF THE CANOPY.
6. CONDUITS IN THE PLATFORM AREAS SHALL RUN ON THE FIELD SIDE.
7. CONTRACTOR SHALL INSTALL EXPANSION FITTINGS ON ALL TYPES OF CONDUITS AT EVERY 150 FEET DISTANCE OR PLATFORM CONTROL JOINTS.
8. BOTH VMS DATA AND VMS POWER EXISTING CONDUITS RUN OVER THE CATENARY STRUCTURES TO REMAIN.
9. CONNECT THE EXISTING CONDUIT RUN OVER CATENARY STRUCTURES WITH NEW CONDUIT RUN THROUGH 4" X 4" X 2" JUNCTION BOXES. SEE DWG. E-14.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 4/22/2016

DESIGNER/DRAFTER: S.G.
CHECKED BY: M.G. / K.M.
SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: Subset 06 - Building Systems

SIGNATURE/ BLOCK:

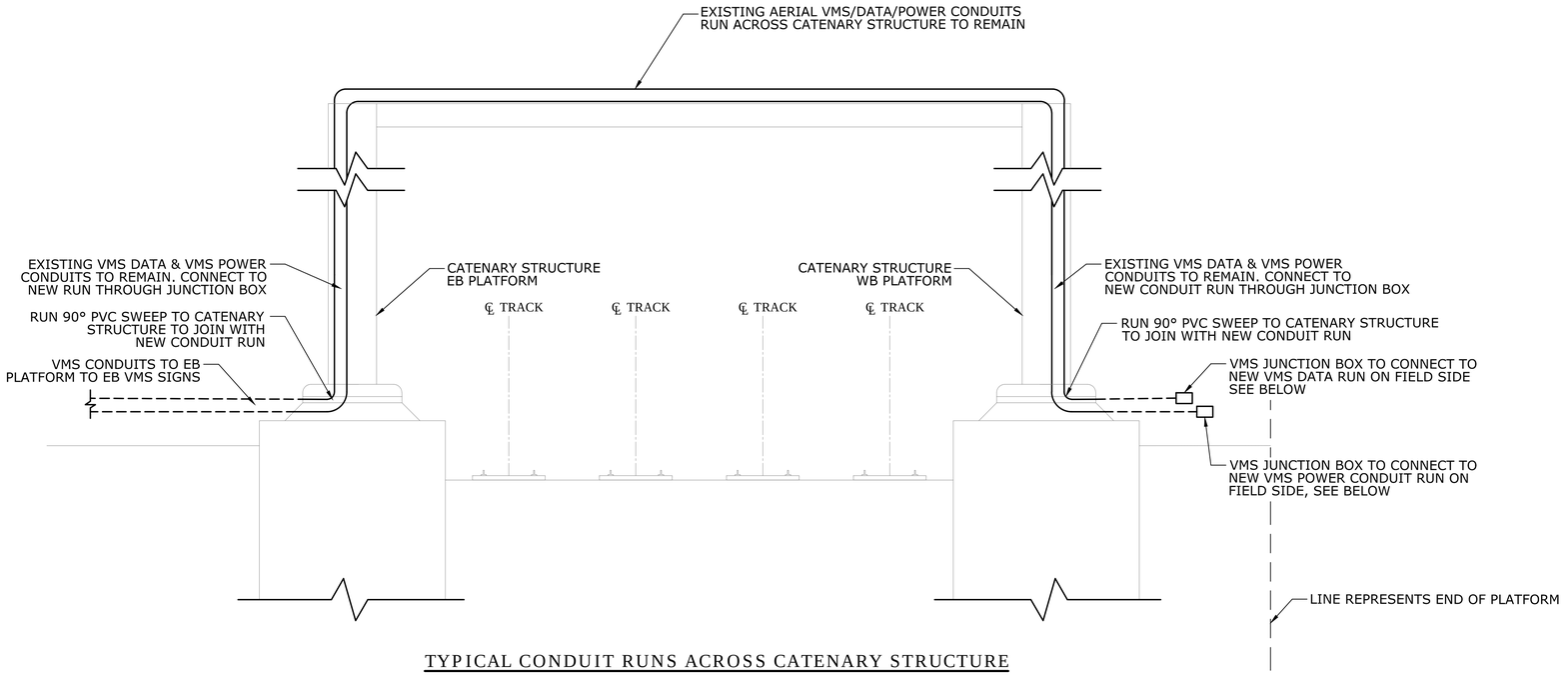
GARG CONSULTING SERVICES, INC.
1500 CRANFORD PLACE, SUITE 100
MOUNT LAUREL, NJ 08054

PROJECT TITLE:
NOROTON HEIGHTS
RAILROAD STATION
PLATFORM REPLACEMENT

TOWN: DARIEN

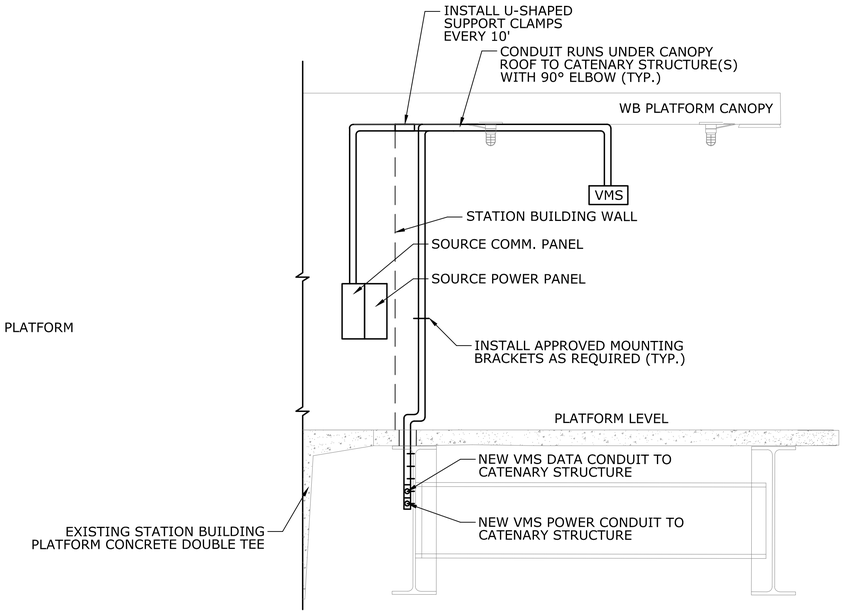
DRAWING TITLE:
VMS POWER & COMMUNICATION
PLAN SHEET 1 OF 2

PROJECT NO. 301-0170
DRAWING NO. E-13
SHEET NO. 06.14



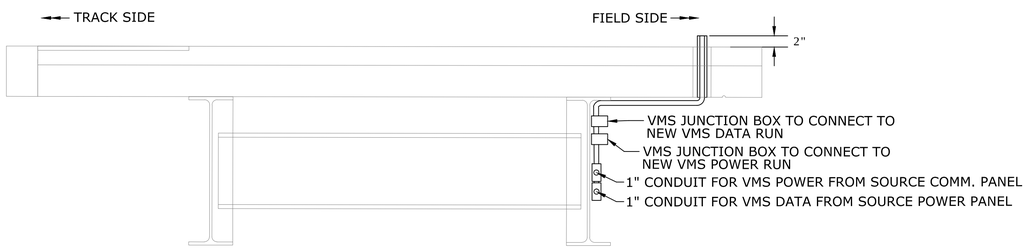
TYPICAL CONDUIT RUNS ACROSS CATENARY STRUCTURE

SCALE: NTS



TYPICAL CONDUIT RUNS ON CANOPY FOR VMS/DATA/POWER CONDUITS

SCALE: NTS



NOTES

1. REFER TO DWG. NO. E-13 FOR LOCATION OF VMS SIGNS ON CATENARY STRUCTURE 434, 435 AND 436 ON EB AND WB PLATFORMS.
2. THE ROUTING OF THE CONDUITS IS DETAILED ON DWG. NO. E-13.
3. THE CONTRACTOR SHALL EXECUTE THE DEMOLITION/REMOVAL OF THE EXISTING VMS SIGNS SUCH THAT NON-STAGE AREAS OF THE PLATFORM HAVE VMS SIGNS WORKING FOR THE COMMUTERS CONVENIENCE. REFER TO STAGING PLANS S-10 TO S-15 FOR STAGING DETAILS.
4. BOTH VMS DATA AND VMS POWER EXISTING CONDUIT RUNS OVER THE CATENARY STRUCTURE TO REMAIN.
5. CONNECT THE EXISTING CONDUIT RUN OVER CATENARY STRUCTURES WITH NEW CONDUIT RUN THROUGH 4" X 4" X 2" JUNCTION BOXES.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 4/22/2016

DESIGNER/DRAFTER: S.G.

CHECKED BY: M.G. / K.M.

SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: Subset 06 - Building Systems

SIGNATURE/ BLOCK:

GARG CONSULTING SERVICES, INC.
1500 GRANTHAM PLACE, SUITE 100
MOUNT LAUREL, NJ 08054

PROJECT TITLE:
NOROTON HEIGHTS
RAILROAD STATION
PLATFORM REPLACEMENT

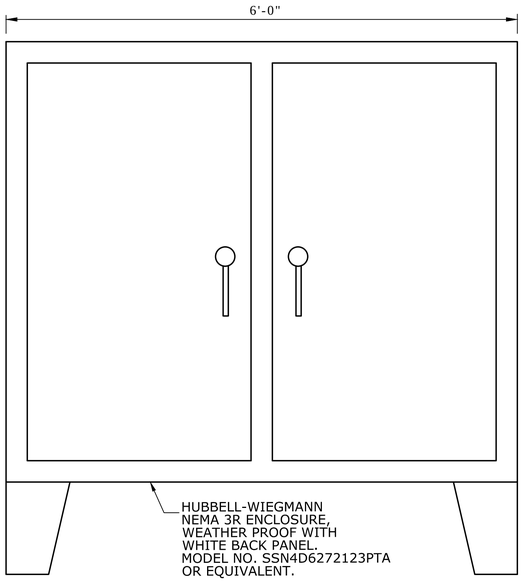
TOWN: DARIEN

DRAWING TITLE: VMS POWER & COMMUNICATION PLAN SHEET 2 OF 2

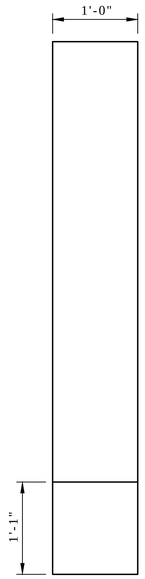
PROJECT NO. 301-0170

DRAWING NO. E-14

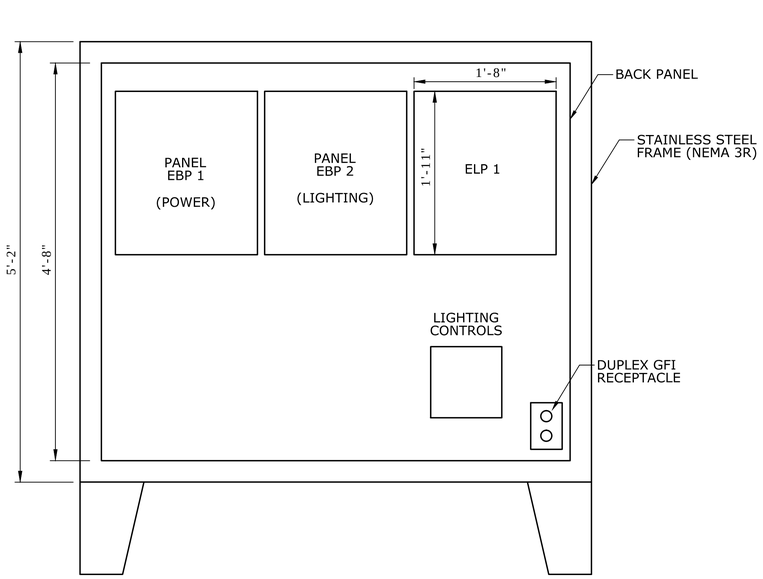
SHEET NO. 06.15



FRONT VIEW
SCALE: 3/32=1

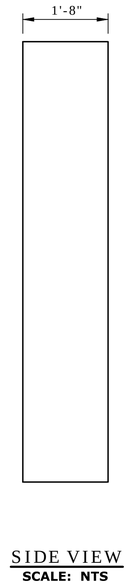


SIDE VIEW
SCALE: 3/32=1

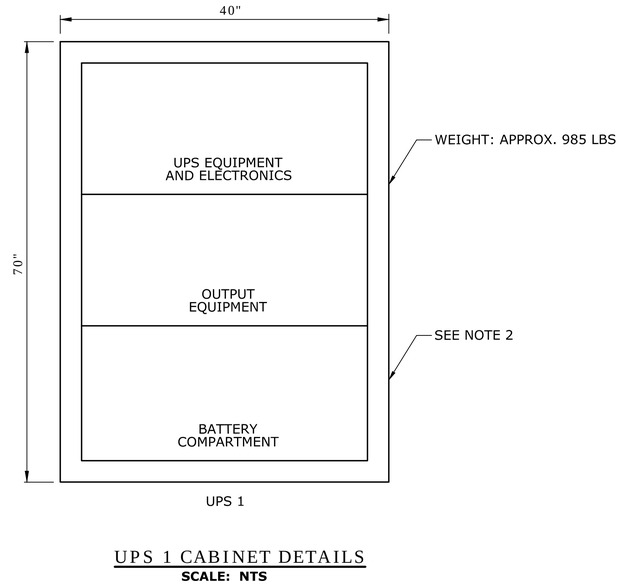


INTERIOR VIEW
SCALE: 3/32=1

EASTBOUND PLATFORM PANELS ENCLOSURE DETAIL
SCALE: AS NOTED

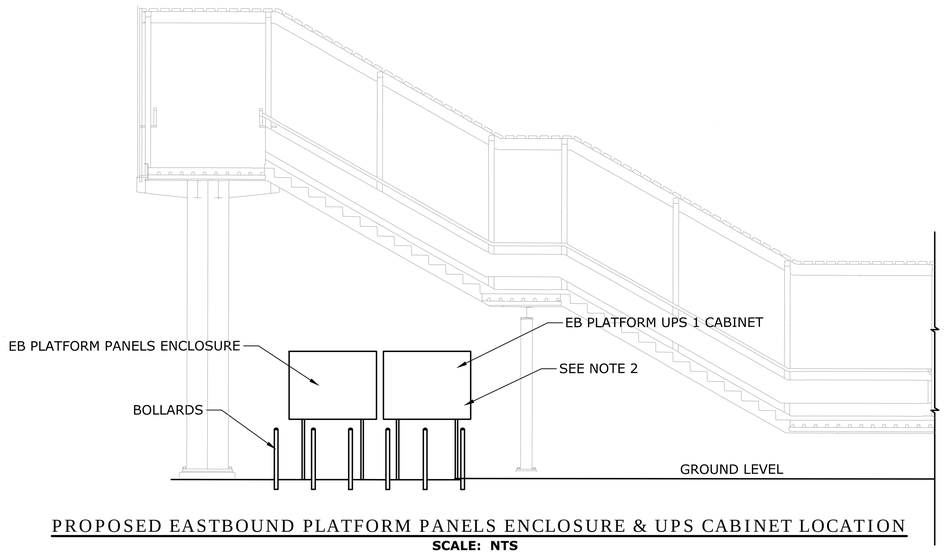


SIDE VIEW
SCALE: NTS

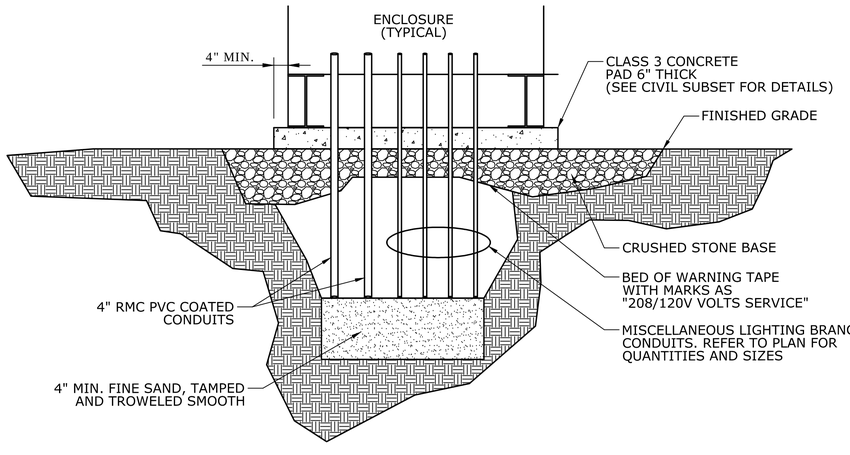


UPS 1 CABINET DETAILS
SCALE: NTS

EASTBOUND PLATFORM UPS CABINET DETAIL
SCALE: NTS



PROPOSED EASTBOUND PLATFORM PANELS ENCLOSURE & UPS CABINET LOCATION
SCALE: NTS



ENCLOSURE MOUNTING DETAIL
SCALE: NTS

NOTE:

1. PROVIDE DIMENSIONED SHOP DRAWINGS OF ENCLOSURE WITH EQUIPMENT BEFORE ORDERING.
2. 5.0 KW 240/120V 1PH WITH INTEGRAL 90 MINUTE BATTERY BANK. CRUCIAL POWER H.E.U. MODEL NO. HU5 OD5800TI OR APPROVED EQUAL.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 4/22/2016

DESIGNER/DRAFTER: S.G.
CHECKED BY: M.G. / K.M.
SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: Subset 06 - Building Systems

SIGNATURE/ BLOCK:

STATE OF CONNECTICUT EUGENE Y. GRUSZYNSKI NO. 23268 LICENSED PROFESSIONAL ENGINEER

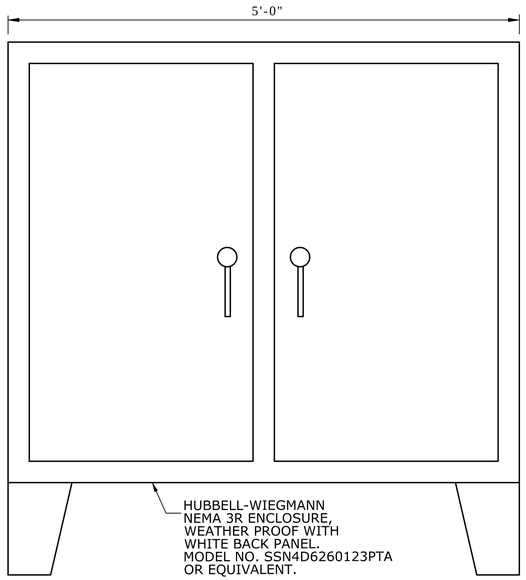
GARG CONSULTING SERVICES, INC.
1500 CRANFORD PLACE, SUITE 100
MOUNT LAUREL, NJ 08054

PROJECT TITLE:
NOROTON HEIGHTS
RAILROAD STATION
PLATFORM REPLACEMENT

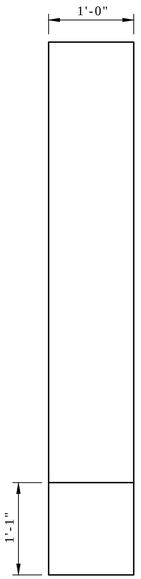
TOWN: DARIEN

DRAWING TITLE: PANEL ARRANGEMENT SCHEMATICS (EB) SHT. 1 OF 2

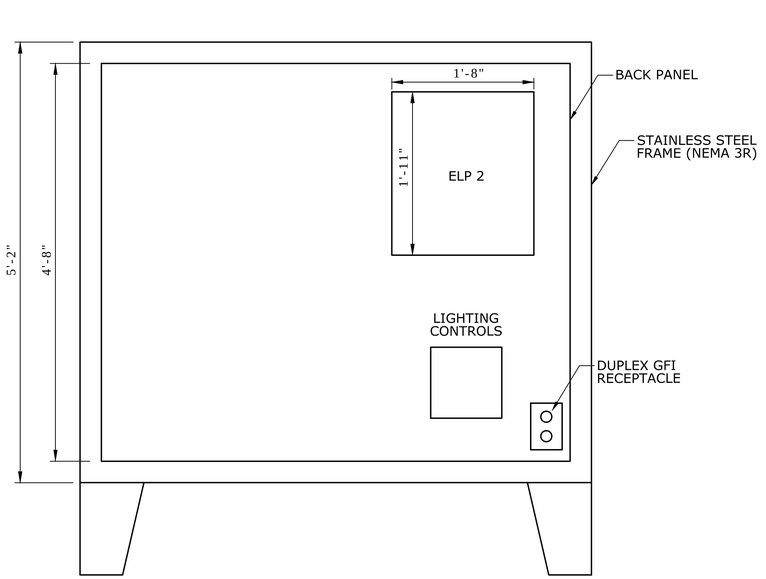
PROJECT NO. 301-0170
DRAWING NO. E-15
SHEET NO. 06.16



FRONT VIEW
SCALE: NTS

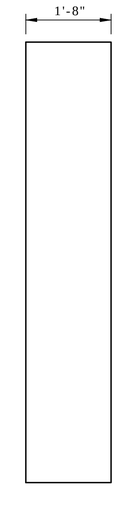


SIDE VIEW
SCALE: 3/32=1

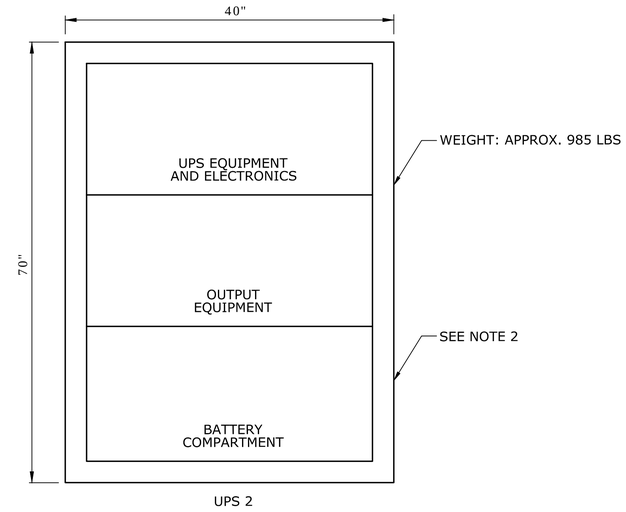


INTERIOR VIEW
SCALE: NTS

WESTBOUND PLATFORM PANELS ENCLOSURE DETAIL
SCALE: AS NOTED

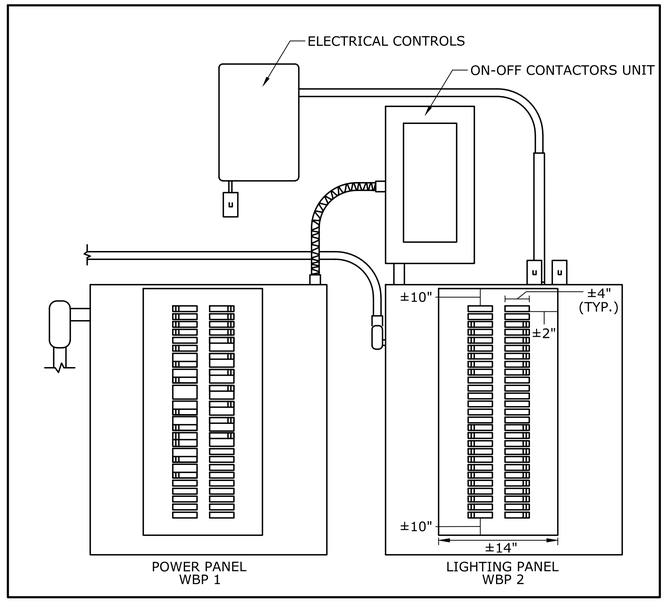


SIDE VIEW
SCALE: NTS

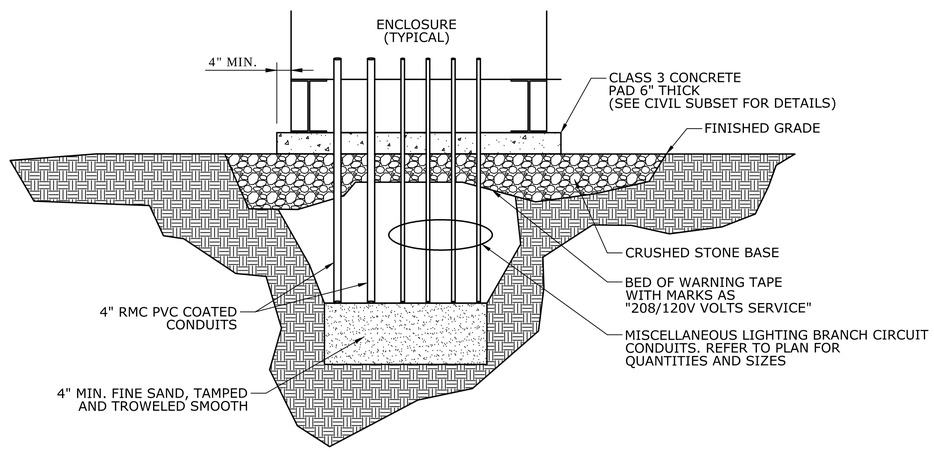


UPS CABINET DETAILS
SCALE: NTS

WESTBOUND PLATFORM UPS CABINET DETAIL
SCALE: NTS



EXISTING POWER & LIGHTING PANELS-WB PLATFORM
SCALE: NTS



ENCLOSURE MOUNTING DETAIL
SCALE: NTS

NOTE:

1. PROVIDE DIMENSIONED SHOP DRAWINGS OF ENCLOSURE WITH EQUIPMENT BEFORE ORDERING.
2. 5.0 KW 208/120V 1PH WITH INTEGRAL 90 MINUTE BATTERY BANK. CRUCIAL POWER H.E.U. MODEL NO. HU5 OB5800TI OR APPROVED EQUAL.
3. PANEL WBP 1 AND PANEL WBP 2 ARE LOCATED IN THE STATION BUILDING RESTROOM. SEE DRAWING NO. E-03.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 4/22/2016

DESIGNER/DRAFTER: S.G.
CHECKED BY: M.G. / K.M.
SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: Subset 06 - Building Systems

SIGNATURE/ BLOCK:

GARG CONSULTING SERVICES, INC.
1500 CRANFORD PLACE, SUITE 103
MOUNT LAUREL, NJ 08054

PROJECT TITLE:
NOROTON HEIGHTS
RAILROAD STATION
PLATFORM REPLACEMENT

TOWN: DARIEN

DRAWING TITLE:
PANEL ARRANGEMENT
SCHEMATICS (WB) SHT. 2 OF 2

PROJECT NO. 301-0170
DRAWING NO. E-16
SHEET NO. 06.17

PANEL: PROPOSED ELP 1				MAIN CB: 30A				NOTES:
PROJECT: NOROTON HEIGHTS STATION				V & PH: 240/120V, 1PH, 3W				PHASE A, KVA = 0.62 PHASE B, KVA = 0.87 TOTAL KVA = 1.49 (CONTACTOR CONTROLLED PANEL)
PROJECT #: 301-0170				A.I.C. 22,000 A				
LOCATION: UNDER EB PLATFORM STAIR				FEEDER: FROM UPS (DWG. E-07) #4 AWG COPPER				
MOUNTING: CONCRETE SURFACE								
BREAKER				PHASE LOAD - KVA				BREAKER
#	A	P	DESCRIPTION	LOAD KVA	A	B	C	LOAD KVA	DESCRIPTION	A	P	#
1	15	1	LED LIGHT CIRCUITS	0.31	0.62		N/A	0.31	LED LIGHT CIRCUITS	15	1	2
3	15	1	LED LIGHT CIRCUITS	0.25		0.56		0.31	LED LIGHT CIRCUITS	15	1	4
5			SPARE						SPARE			6
7	15	1	LED LIGHT CIRCUITS	0.31		0.31			SPARE			8
9			SPARE						SPARE			10
11			SPARE						SPARE			12
13												14
15												16
17												18
19												20
TOTAL LOAD PER PHASE:					0.62	0.87						
TOTAL LOAD ON PANEL:					1.49							

PANEL: PROPOSED EBP 1				MAIN CB: 200A				NOTES:
PROJECT: NOROTON HEIGHTS STATION				V & PH: 240/120V, 1PH, 3W				PHASE A, KVA = 4.51 PHASE B, KVA = 4.65 TOTAL KVA = 9.16
PROJECT #: 301-0170				A.I.C. 22,000 A				
LOCATION: UNDER EB PLATFORM STAIR				FEEDER: 3C #4/0 AWG + 1C #2 AWG GND.				
MOUNTING: CONCRETE SURFACE				FED FROM UTILITY CABINET METER				
BREAKER				PHASE LOAD - KVA				BREAKER
#	A	P	DESCRIPTION	LOAD KVA	A	B	C	LOAD KVA	DESCRIPTION	A	P	#
1	15	1	RECEPTACLES #5 & 6	0.45	0.45		N/A		SPARE			2
3	15	1	SPARE			0.90		0.90	RECEPTACLES #1, 2, 3 & 4	15	1	4
5	15	1	SPARE		0.30			0.30	LIGHTING CONTACTOR	15	1	6
7			SPARE						SPARE			8
9			SPARE	3.125	3.125				PANEL ELP 1 (UPS)	40	2	10
11			SPARE			3.125		3.125				12
13	60	2	PANEL EBP 2	0.63	0.63							14
15						0.62		0.62				16
17												18
19												20
TOTAL LOAD PER PHASE:					4.51	4.65						
TOTAL LOAD ON PANEL:					9.16							

PANEL: PROPOSED EBP 2				MAIN CB: MAINS LUG				NOTES:
PROJECT: NOROTON HEIGHTS STATION				V & PH: 240/120V, 1PH, 3W				PHASE A, KVA = 0.63 PHASE B, KVA = 0.62 TOTAL KVA = 1.25 (CONTACTOR CONTROLLED PANEL)
PROJECT #: 301-0170				A.I.C. 22,000 A				
LOCATION: UNDER EB PLATFORM STAIR				FEEDER: #4 AWG COPPER				
MOUNTING: CONCRETE SURFACE				FED FROM EBP 1 CIRCUITS 13 AND 15				
BREAKER				PHASE LOAD - KVA				BREAKER
#	A	P	DESCRIPTION	LOAD KVA	A	B	C	LOAD KVA	DESCRIPTION	A	P	#
1	15	1	LED LIGHT CIRCUITS	0.19	0.50		N/A	0.31	LED LIGHT CIRCUITS	15	1	2
3	15	1	LED LIGHT CIRCUITS	0.31		0.62		0.31	LED LIGHT CIRCUITS	15	1	4
5	15	1	LED LIGHT CIRCUITS	0.13	0.13				SPARE			6
7			SPARE						SPARE			8
9			SPARE						SPARE			10
11			SPARE						SPARE			12
13												14
15												16
17												18
19												20
TOTAL LOAD PER PHASE:					0.63	0.62						
TOTAL LOAD ON PANEL:					1.25							

ELECTRICAL PANEL SCHEDULES

SCALE: NTS

NOTES

1. SEE DRAWING NO. E-04 FOR REFERENCING CIRCUITS OF PANELS ELP 1 AND EBP 2 WITH LED LIGHT POLE POSITIONS.
2. SEE DRAWING E-09 FOR REFERENCING RECEPTACLE CIRCUITS IN EBP 1 WITH RECEPTACLE POSITIONS. SEE DRAWING E-07 FOR LIGHTING CONTACTOR FEED.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 4/22/2016

DESIGNER/DRAFTER: S.G.

CHECKED BY: M.G. / K.M.

SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: Subset 06 - Building Systems

SIGNATURE/ BLOCK:

JOSEPH Y. CHIOVARO — STATE OF CONNECTICUT — NO. 23258 — LICENSED PROFESSIONAL ENGINEER

GARG CONSULTING SERVICES, INC.
1000 CRAWFORD PLACE, SUITE 300
MOUNT LAUREL, NJ 08054

PROJECT TITLE:
NOROTON HEIGHTS
RAILROAD STATION
PLATFORM REPLACEMENT

TOWN: DARIEN

DRAWING TITLE:
ELECTRICAL SCHEDULES
SHEET 1 OF 2

PROJECT NO. 301-0170
DRAWING NO. E-17
SHEET NO. 06.18

PANEL: PROPOSED ELP 2				MAIN CB: 30A				NOTES:			
PROJECT: NOROTON HEIGHTS STATION				V & PH: 208/120V, 1PH, 3W				PHASE A, KVA = 1.00 PHASE B, KVA = 0.71 TOTAL KVA = 1.71 (CONTACTOR CONTROLLED PANEL)			
PROJECT #: 301-0170				A.I.C. 22,000 A							
LOCATION: UNDER EB PLATFORM STAIR				FEEDER: #4 AWG COPPER							
MOUNTING: CONCRETE SURFACE				FED FROM UPS (SEE DRAWING E-07)							
BREAKER				PHASE LOAD - KVA				BREAKER			
#	A	P	DESCRIPTION	LOAD KVA	A	B	C	LOAD KVA	DESCRIPTION	A	P	#
1	15	1	LED LIGHT CIRCUITS	0.31	0.62		N/A	0.31	LED LIGHT CIRCUITS	15	1	2
3	15	1	LED LIGHT CIRCUITS	0.25		0.56		0.31	LED LIGHT CIRCUITS	15	1	4
5	15	1	LED LIGHT CIRCUITS	0.23	0.38			0.15	LED LIGHT CIRCUITS	15	1	6
7	15	1	LED LIGHT CIRCUITS	0.15		0.15			SPARE			8
9			SPARE						SPARE			10
11			SPARE						SPARE			12
13												14
15												16
17												18
19												20
TOTAL LOAD PER PHASE:					1.00	0.71						
TOTAL LOAD ON PANEL:					1.71							

NOTES FOR EXISTING WBP 1

1. THE DESCRIPTION OF CIRCUIT BREAKERS ARE AS SHOWN ON THE LOAD DESCRIPTION WRITTEN ON PANEL CARDS.
2. THE CONTRACTOR TO CHOOSE THE AVAILABLE SPARE BREAKERS FOR THE HEATING LOADS WITH REGARD TO THE INSTALLATION OF NEW DOOR IN STATION BUILDING. LOAD BALANCING ON PHASES TO BE DONE WHILE USING SPARE BREAKERS.
3. NEW CIRCUITS ARE INDICATED IN BOLD LETTERING.

NOTES FOR EXISTING WBP 2

1. 1 TO 14 CIRCUIT BREAKERS ARE NON-LIGHTING.
2. 15 TO 38 CIRCUIT BREAKERS ARE FOR LIGHTING LOADS.
3. * INDICATES EXISTING PLATFORM LIGHTING. THESE CIRCUITS SHALL BE DISCONNECTED, LEFT AS SPARES AND WIRES SHALL BE REMOVED.
4. THE DESCRIPTION OF CIRCUIT BREAKERS 1 TO 14 IS AS PER THE LOAD DESCRIPTION WRITTEN ON EXISTING PANEL CARDS, WITH THE EXCEPTION OF CIRCUIT BREAKER NUMBER 12 & 13. EXISTING SPARE CIRCUIT BREAKER NUMBERS 12 & 13 SHALL BE USED FOR PROPOSED WESTBOUND PLATFORM DUPLEX OUTLETS.
5. NEW CIRCUITS ARE INDICATED IN BOLD LETTERING.

PANEL: WBP 1				MAIN CB: 225A					NOTES:			
PROJECT: NOROTON HEIGHTS STATION				V & PH: 208V/120V, 3PH, 4W					*CONTRACTOR TO VERIFY EXISTING FEEDER			
PROJECT #: 301-0170				A.I.C. -								
LOCATION: PASSENGER AREA				*FEEDER:3C #4/0 AWG + 1C #2 AWG GND. FED								
MOUNTING: SURFACE				FROM SERVICE FEEDER UTILITY METER CABINET								
BREAKER				PHASE LOAD - KVA					BREAKER			
#	A	P	DESCRIPTION	LOAD KVA	A	B	C	LOAD KVA	DESCRIPTION	A	P	#
1	-	-	EXHAUST FAN						SPARE			2
3	-	-	EXHAUST FAN						HEATER TAPES UNDER PLATFORM			4
5	-	-	HOT WATER HEATER						SPARE			6
7	-	-	PA POWER						SPARE			8
9			SPARE						SPARE			10
11			SPARE						WAITING ROOM HEATER	20	1	12
13			HEATER WAITING ROOM						COFFEE/WAITING RM. HEAT			14
15			HEATER WAITING ROOM						WAITING ROOM HEATER			16
17			HEATER WAITING ROOM						WAITING ROOM HEATER			18
19			TICKET OFFICE HEATER						TOILET HEATER			20
21			STORE ROOM HEATER						TOILET HEATER			22
23			STALL ROOM HEATER						HEAT + FAN OVER DOOR			24
25			HEAT + FAN OVER DOOR						LIGHTING CONTACTOR	15	1	26
27			SPARE						UPS	40	2	28
29			SPARE									30
31			SPARE						SPARE	15	1	32
33			SPARE						SPARE			34
35			SPARE						SPARE			36
37			SPARE						SPARE			38
39			SPARE						SPARE			40
41			SPARE						SPARE			42
TOTAL LOAD PER PHASE:												
TOTAL LOAD ON PANEL:												

PANEL: WBP 2				MAIN CB: 225A					NOTES:			
PROJECT: NOROTON HEIGHTS STATION				V & PH: 208V/120V, 3PH, 4W					*CONTRACTOR TO VERIFY EXISTING FEEDER (EXISTING CONTACTOR CONTROLLED PANEL)			
PROJECT #: 301-0170				A.I.C. -								
LOCATION: UNDER PLATFORM STAIR				*FEEDER: 3C #4/0 AWG + 1C #2 AWG GND.								
MOUNTING: CONCRETE SURFACE				FROM SERVICE FEEDER UTILITY METER CABINET								
BREAKER				PHASE LOAD - KVA					BREAKER			
#	A	P	DESCRIPTION	LOAD KVA	A	B	C	LOAD KVA	DESCRIPTION	A	P	#
1	-	-	PLATFORM PLUGS						PLATFORM PLUGS			2
3	-	-	ELECT. EYE						CLOCK 4 + 8			4
5	-	-	STATION BLDG RECEPTACLE						BACK ROW LGTS. WINDOW			6
7	-	-	STATION BLDG RECEPTACLE						CLOCK			8
9			OFFICE LIGHTS + TOILET AREA						OUTSIDE CLOCKS & SIGNS			10
11			SPARE						DUPLEX OUTLETS (3)	20	1	12
13	**20**	**1**	**DUPLEX OUTLETS (2)**						AC TICKET OFFICE			14
* 15			PLATFORM LIGHTING						PLATFORM LIGHTING			16 *
17			CANOPY LIGHTS						PLATFORM LIGHTING			18 *
* 19			PLATFORM LIGHTING						CANOPY LIGHTS			20
* 21			PLATFORM LIGHTING						PLATFORM LIGHTING			22 *
* 23			PLATFORM LIGHTING						PLATFORM LIGHTING			24 *
* 25			PLATFORM LIGHTING						PLATFORM LIGHTING			26 *
27			SPARE						PLATFORM LIGHTING			28 *
29	**15**	**1**	**NEW LED LIGHTING**	0.38	0.61			0.23	NEW LED LIGHTING	15	1	30
31	**15**	**1**	**NEW LED LIGHTING**	0.38		0.53		0.15	NEW LED LIGHTING	15	1	32
33	**15**	**1**	**NEW LED LIGHTING**	0.31			0.31		SPARE			34
35			SPARE						SPARE			36
37			SPARE						SPARE			38
39			SPARE						SPARE			40
41			SPARE						SPARE			42
TOTAL LOAD PER PHASE:												
TOTAL LOAD ON PANEL:												

ELECTRICAL PANEL SCHEDULES

SCALE: NTS

GENERAL NOTES

1. SEE DRAWING E-05 FOR REFERENCING CIRCUITS OF PANEL ELP 2 AND NEW CIRCUITS ON WBP 2 PANEL WITH LED LIGHT POLE/CANOPY POSITIONS.
2. SEE DRAWING E-10 FOR NEW RECEPTACLE CIRCUITS ON WBP 2 FOR RECEPTACLE POSITIONS ON WB PLATFORM. SEE DRAWING E-07 FOR LIGHTING CONTACTOR FOR ELP 2.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 4/22/2016

DESIGNER/DRAFTER: S.G.

CHECKED BY: M.G. / K.M.

SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: Subset 06 - Building Systems

SIGNATURE/ BLOCK:

GARG CONSULTING SERVICES, INC.
1500 CRANFORD PLACE, SUITE 106
MOUNT LAUREL, NJ 08054

PROJECT TITLE:
NOROTON HEIGHTS
RAILROAD STATION
PLATFORM REPLACEMENT

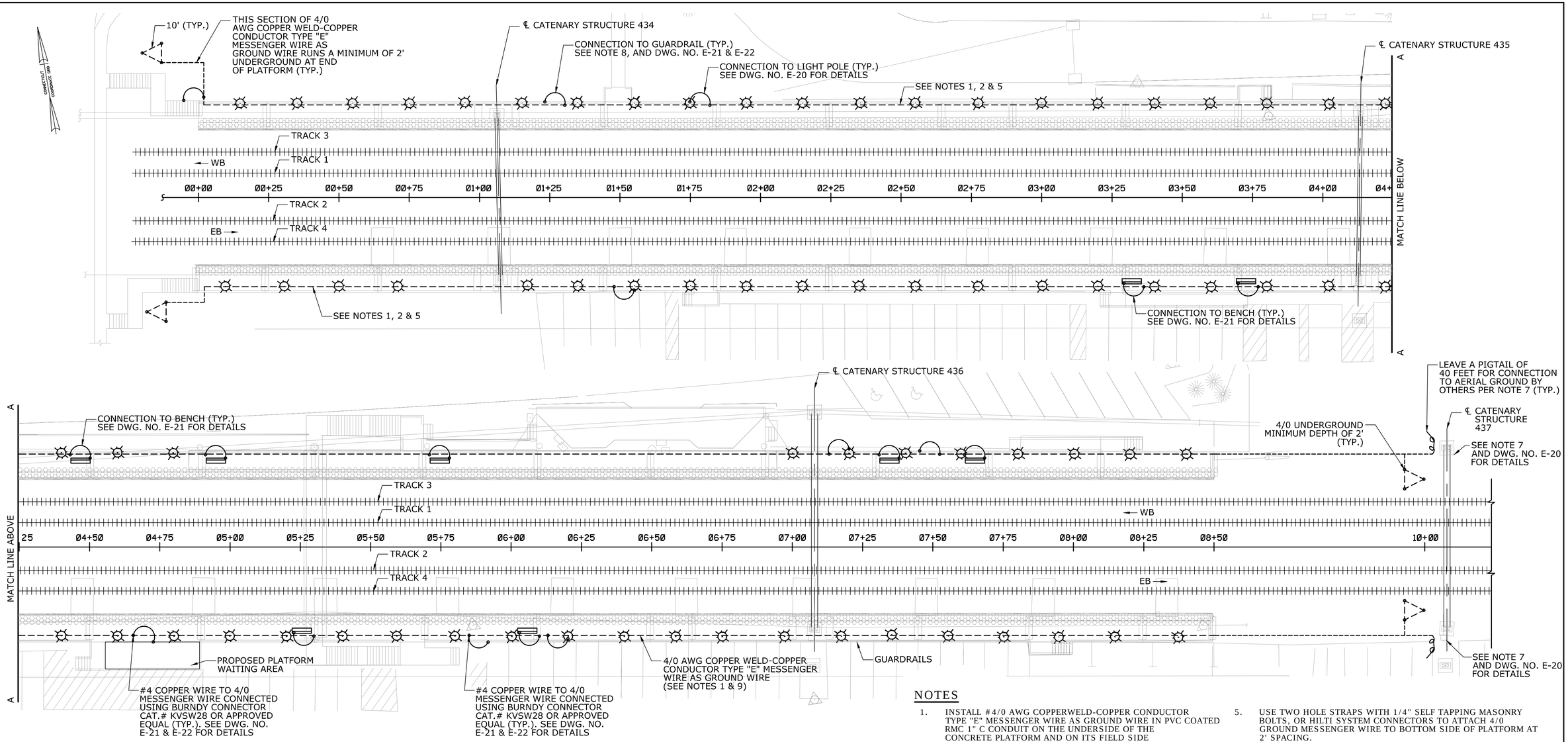
TOWN: DARIEN

DRAWING TITLE:
ELECTRICAL SCHEDULES
SHEET 2 OF 2

PROJECT NO. 301-0170

DRAWING NO. E-18

SHEET NO. 06.19



GROUNDING PLAN

SCALE: NTS

NOTES

1. INSTALL #4/0 AWG COPPERWELD-COPPER CONDUCTOR TYPE "E" MESSENGER WIRE AS GROUND WIRE IN PVC COATED RMC 1" C CONDUIT ON THE UNDERSIDE OF THE CONCRETE PLATFORM AND ON ITS FIELD SIDE (SEE DWG. NO. E-20). THIS GROUND WIRE IS TO BE CAD-WELDED TO THE GROUND RODS AT BOTH ENDS OF THE PLATFORM AND CAD-WELDED TO THE CAT. STRUCTURE #437.
2. THE 4/0 MESSENGER GROUNDING WIRE TO BE INSTALLED AFTER INSTALLATION OF PROPOSED PLATFORM SECTIONS AS PER THE STAGING PLANS (S-10 TO S-15) AND BEFORE INSTALLING THE STORED LIGHT POLES.
3. #4 WIRE WITH ONE HOLE CONNECTOR LUGS AND 1/4" SELF TAPPING BOLTS TO BE CONNECTED TO ALL METALLIC PERMANENTLY MOUNTED FIXTURES ON PASSENGER PLATFORM SUCH AS BENCHES, RAILINGS, LIGHT STANCHIONS, AND STRUCTURAL STEEL ACCESSIBLE TO THE PASSENGERS. (OPTION, ACCESS LIGHT POST THROUGH BOTTOM OF PLATFORM THROUGH FIXTURE HAND HOLE). REFER DWGS. E-20, E-21, E-22, E-24 AND E-25 FOR DETAILS.
4. BOND ACROSS ALL EXPANSION JOINTS ON ANY STRUCTURAL STEEL WITH 4/0 COPPER STRAND AND SERVICE POST CONNECTORS. BOND ADJACENT SECTIONS OF THE GUARD RAIL USING #4 COPPER WIRE.
5. USE TWO HOLE STRAPS WITH 1/4" SELF TAPPING MASONRY BOLTS, OR HILTI SYSTEM CONNECTORS TO ATTACH 4/0 GROUND MESSENGER WIRE TO BOTTOM SIDE OF PLATFORM AT 2' SPACING.
6. CONNECT #4 WIRE TO 4/0 MESSENGER WIRE WITH SUITABLE PARALLEL CLAMP OR SPLIT BOLT.
7. RUN 4/0 WIRE INSIDE OF STRUCTURE COLUMN SECURING TO ANGLE EVERY TEN FEET WITH PARALLEL GROOVE CLAMPS AND CONNECTION TO AERIAL GROUND WITH PARALLEL CLAMPS OR SPLIT BOLTS BY OTHERS.
8. EACH SECTION OF THE GUARD RAIL SHALL BE CONNECTED TO 4/0 GROUND WIRE USING #4 COPPER WIRE MESSENGER.
9. GROUNDING & BONDING SYSTEM CONDUCTORS FOR THE PLATFORMS SHALL BE CONCEALED IN PVC COATED RMC 1" C. GROUNDING & BONDING SYSTEM SHALL BE INSPECTED BY MNR.
10. CONNECT ALL METAL BENCHES TO GROUND WIRE USING #4 AWG BARE COPPER WIRE, SEE DWG. NO. E-21 & E-22 FOR DETAILS.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 4/22/2016

DESIGNER/DRAFTER: S.G.
CHECKED BY: M.G. / K.M.
SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: Subset 06 - Building Systems

SIGNATURE/ BLOCK:

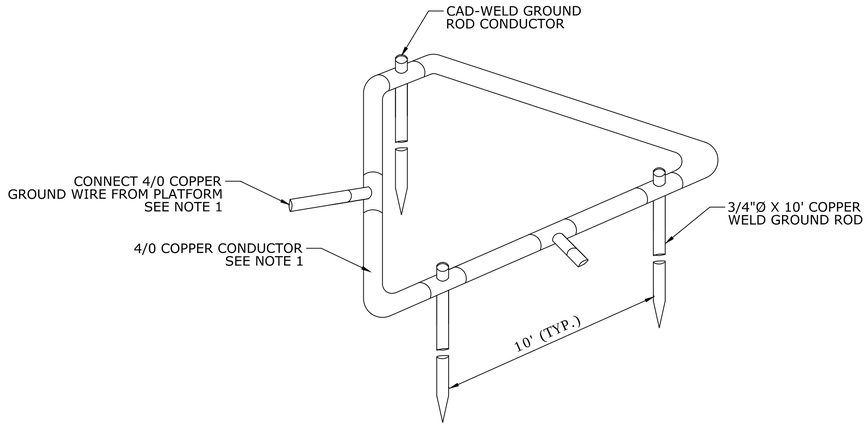
GARG CONSULTING SERVICES, INC.
1500 CRANFORD PLACE, SUITE 104
MOUNT LAUREL, NJ 08054

PROJECT TITLE:
NOROTON HEIGHTS
RAILROAD STATION
PLATFORM REPLACEMENT

TOWN: DARIEN

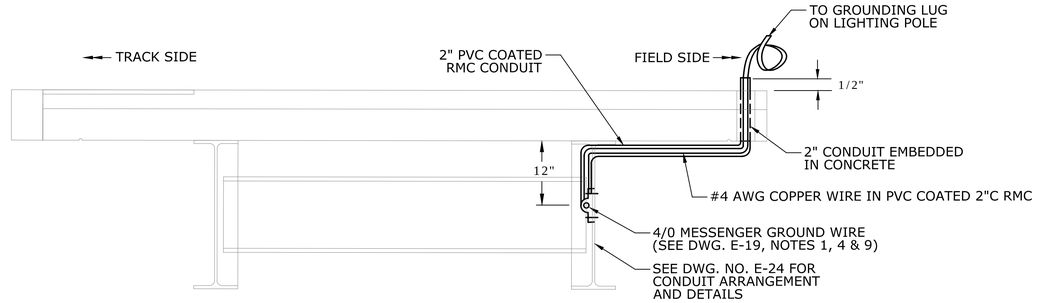
DRAWING TITLE: GROUNDING PLAN

PROJECT NO. 301-0170
DRAWING NO. E-19
SHEET NO. 06.20



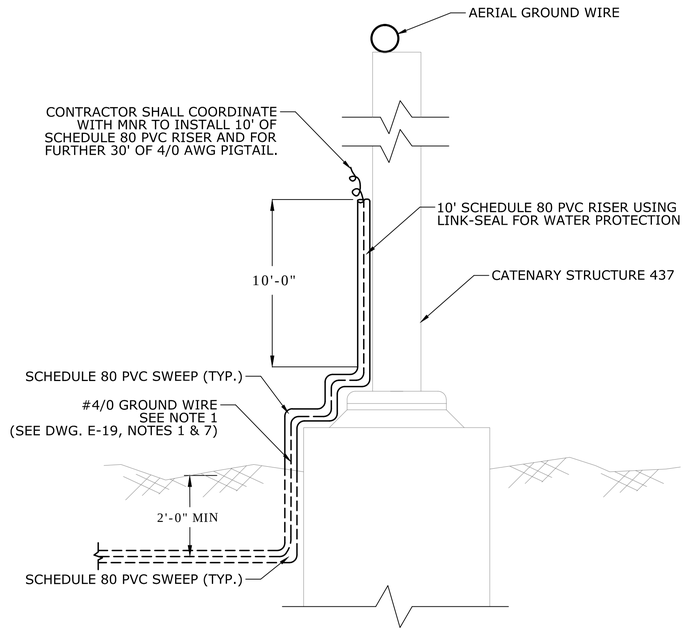
GROUND ROD CONFIGURATION DETAIL

SCALE: NTS



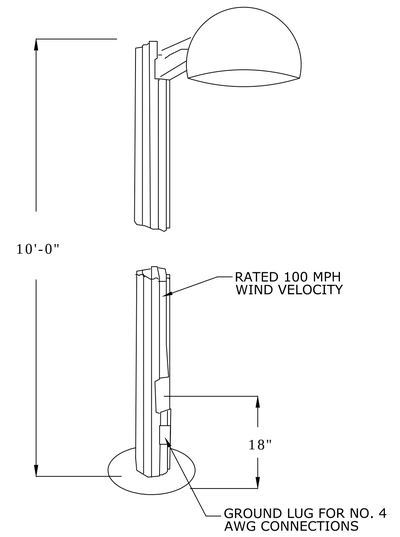
PROPOSED PLATFORM SECTION - FOR GROUND WIRE

SCALE: NTS



TYPICAL CONNECTION TO CATENARY STRUCTURE AERIAL GROUND

SCALE: NTS



NOTE

1. GROUNDING & BONDING SYSTEM CONDUCTORS FOR THE PLATFORMS SHALL BE CONCEALED IN PVC COATED RMC 1" C. GROUNDING & BONDING SYSTEM SHALL BE INSPECTED BY MNR.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 4/22/2016

DESIGNER/DRAFTER: S.G.

CHECKED BY: M.G. / K.M.

SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: Subset 06 - Building Systems

SIGNATURE/ BLOCK:

GARG CONSULTING SERVICES, INC.
1000 CRAWFORD PLACE, SUITE 300
MOUNT LAUREL, NJ 08054

PROJECT TITLE:
NOROTON HEIGHTS
RAILROAD STATION
PLATFORM REPLACEMENT

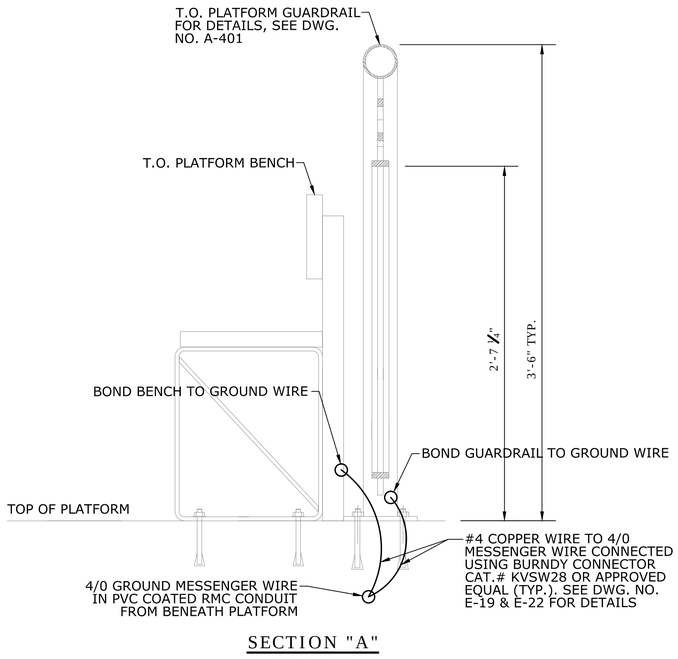
TOWN: DARIEN

DRAWING TITLE: GROUNDING & BONDING DETAILS
SHEET 1 OF 2

PROJECT NO. 301-0170

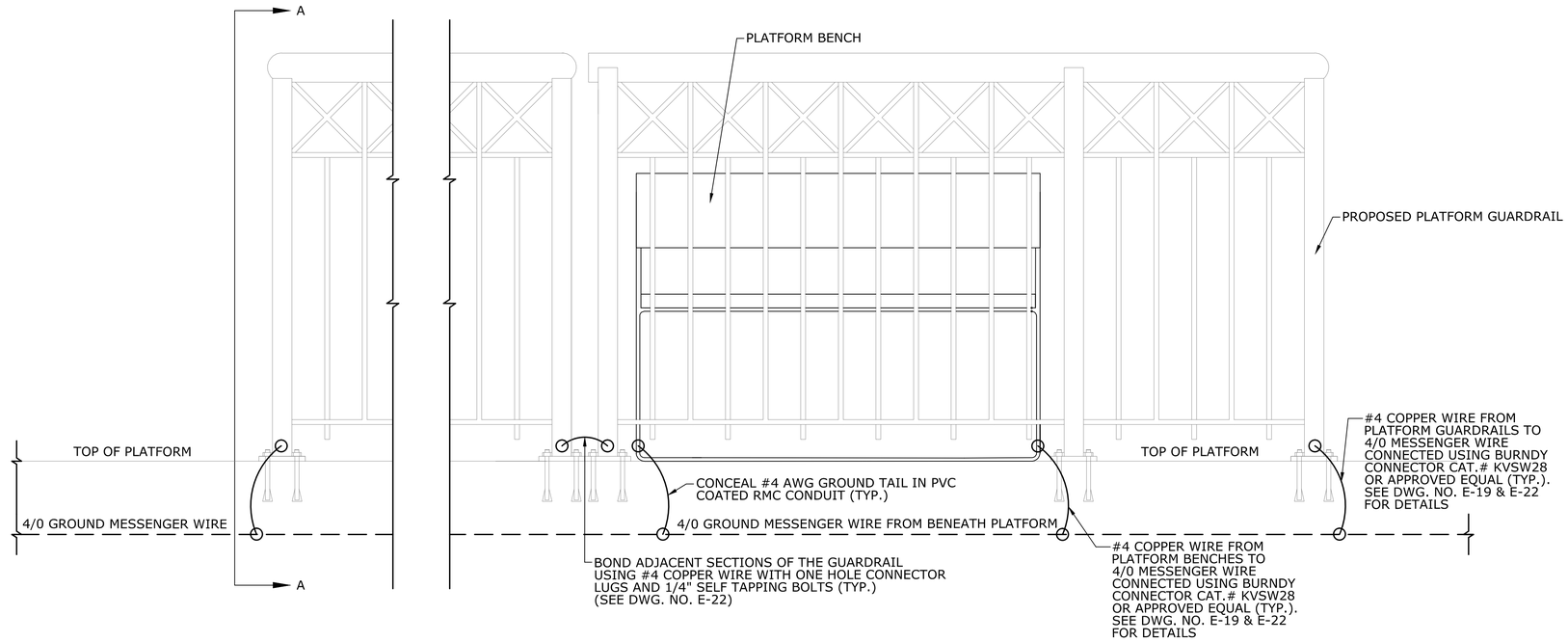
DRAWING NO. E-20

SHEET NO. 06.21



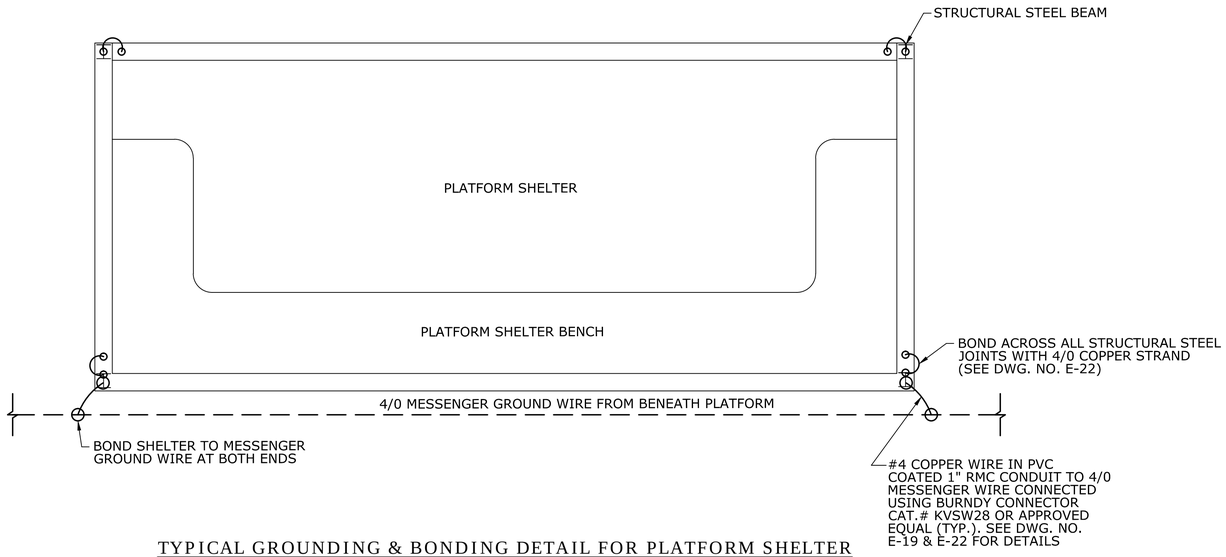
SECTION "A"

SCALE: NTS



TYPICAL GROUNDING & BONDING FOR PLATFORM BENCHES & GUARDRAIL

SCALE: NTS



TYPICAL GROUNDING & BONDING DETAIL FOR PLATFORM SHELTER

SCALE: NTS

NOTES

1. INSTALL #4/0 MESSENGER GROUND WIRE IN PVC COATED 1" RMC CONDUIT ON THE UNDERSIDE OF THE CONCRETE PLATFORM ON ITS FIELD SIDE (SEE DWG. NO. E-20). THIS GROUND WIRE IS TO BE CAD-WELDED TO THE GROUND RODS AT BOTH ENDS OF THE PLATFORM AND CAD-WELDED TO THE CATENARY STRUCTURE #437 (SEE DWG. NO. E-19).
2. #4 WIRE WITH ONE HOLE CONNECTOR LUGS AND 1/4" SELF TAPPING BOLTS TO BE CONNECTED TO ALL METALLIC PERMANENTLY MOUNTED FIXTURES ON PASSENGER PLATFORM SUCH AS BENCHES, RAILINGS, LIGHT STANCHIONS, AND STRUCTURAL STEEL ACCESSIBLE TO THE PASSENGERS. (OPTION, ACCESS LIGHT POST THROUGH BOTTOM OF PLATFORM THROUGH FIXTURE HAND HOLE).
3. BOND ACROSS ALL EXPANSION JOINTS ON ANY STRUCTURAL STEEL WITH 4/0 COPPER STRAND AND SERVICE POST CONNECTORS. BOND ADJACENT SECTIONS OF THE GUARDRAIL USING #4 COPPER WIRE.
4. USE TWO HOLE STRAPS WITH 1/4" SELF TAPPING MASONRY BOLTS, OR HILTI SYSTEM CONNECTORS TO ATTACH 4/0 GROUND MESSENGER WIRE TO BOTTOM SIDE OF PLATFORM AT 2' SPACING.
5. CONNECT #4 WIRE TO 4/0 WIRE WITH SUITABLE PARALLEL CLAMP OR SPLIT BOLT.
6. EACH SECTION OF THE GUARD RAIL SHALL BE CONNECTED TO 4/0 GROUND WIRE USING #4 COPPER WIRE.
7. THE 4/0 MESSENGER GROUNDING WIRE TO BE INSTALLED AFTER INSTALLATION OF PROPOSED PLATFORM SECTIONS AS PER THE STAGING PLANS (S-10 TO S-15) AND BEFORE INSTALLING THE STORED LIGHT POLES & BENCHES.
8. GROUNDING & BONDING SYSTEM CONDUCTORS FOR THE PLATFORMS SHALL BE CONCEALED IN PVC COATED RMC 1" C. GROUNDING & BONDING SYSTEM SHALL BE INSPECTED BY MNR.
9. FOR DETAILS OF COMPLETE GROUNDING PLAN, REFER TO DRAWING NO. E-19.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 4/22/2016

DESIGNER/DRAFTER: S.G.

CHECKED BY: M.G. / K.M.

SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: Subset 06 - Building Systems

SIGNATURE/ BLOCK:

STATE OF CONNECTICUT — DONNA Y. GHIONE — NO. 23238 — LICENSED PROFESSIONAL ENGINEER

GARG CONSULTING SERVICES, INC.
1000 CRAWFORD PLACE, SUITE 300
MOUNT LAUREL, NJ 08054

PROJECT TITLE:

NOROTON HEIGHTS
RAILROAD STATION
PLATFORM REPLACEMENT

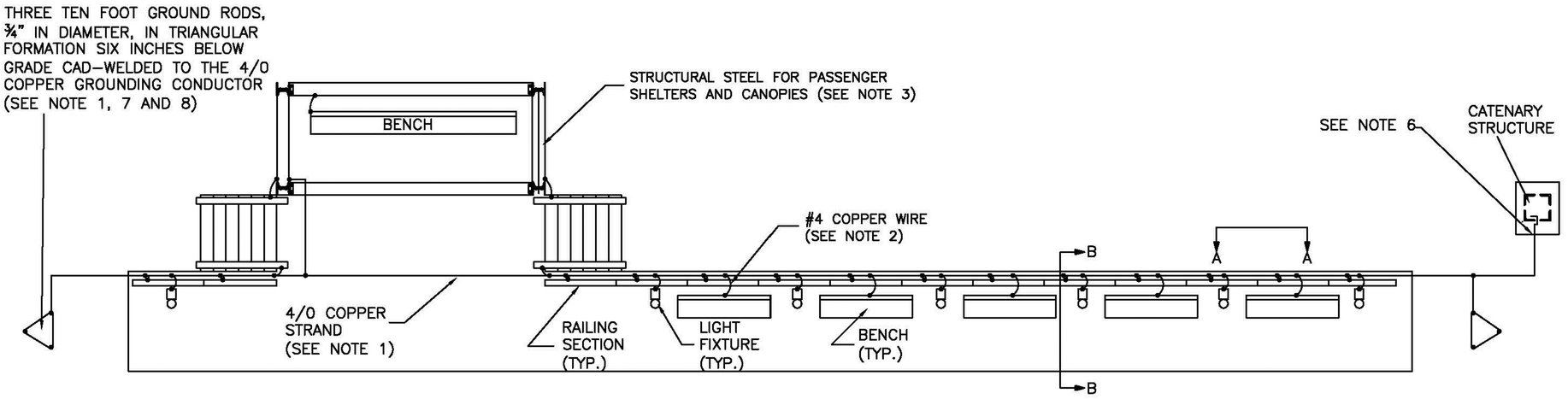
TOWN: DARIEN

DRAWING TITLE: GROUNDING & BONDING DETAILS SHEET 2 OF 2

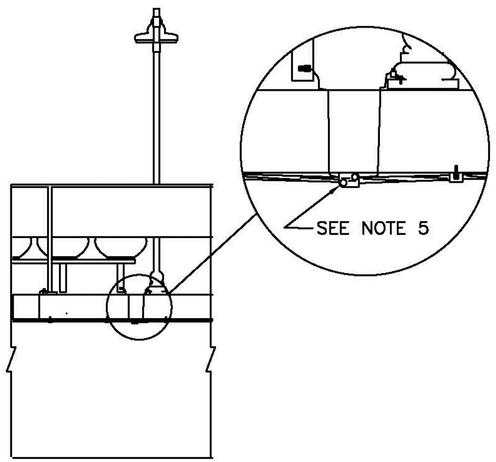
PROJECT NO. 301-0170

DRAWING NO. E-21

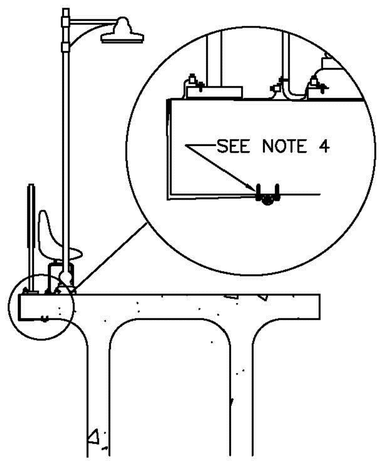
SHEET NO. 06.22



PLAN VIEW



SECTION AA



SECTION BB

NOTES:

1. 4/0 COPPER WIRE TO BE CONNECTED TO UNDERSIDE OF CONCRETE PLATFORM A MINIMUM OF 12" FROM THE EDGE. THIS CONDUCTOR IS TO BE CAD–WELDED TO THE GROUND RODS AT BOTH ENDS OF THE PLATFORM AND CAD–WELDED TO A CATENARY STRUCTURE AT ONE END.
2. #4 WIRE WITH ONE HOLE CONNECTOR LUGS AND 1/4" SELF TAPPING BOLTS TO BE CONNECTED TO ALL METALLIC PERMANENTLY MOUNTED FIXTURES ON PASSENGER PLATFORM SUCH AS BENCHES, RAILINGS, LIGHT STANCHIONS, AND STRUCTURAL STEEL ACCESSIBLE TO THE PASSENGERS. (OPTION, ACCESS LIGHT POST THROUGH BOTTOM OF PLATFORM THROUGH FIXTURE HAND HOLE.)
3. BOND ACROSS ALL EXPANSION JOINTS ON ANY STRUCTURAL STEEL WITH 4/0 COPPER STRAND AND SERVICE POST CONNECTORS.
4. USE TWO HOLE STRAPS WITH 1/4" SELF TAPPING MASONRY BOLTS, OR HILTI SYSTEM CONNECTORS TO ATTACH 4/0 COPPER CONDUCTOR TO BOTTOM SIDE OF CONCRETE PLATFORM, AT 2' SPACING.
5. CONNECT #4 CONDUCTOR TO 4/0 CONDUCTOR WITH SUITABLE PARALLEL CLAMP OR SPLIT BOLT.
6. RUN 4/0 CONDUCTOR INSIDE OF STRUCTURE COLUMN SECURING TO ANGLE EVERY TEN FEET WITH PARALLEL GROOVE CLAMPS AND CONNECT TO AERIAL GROUND WITH PARALLEL CLAMPS OR SPLIT BOLTS.
7. IN THE CASE OF ISLAND PLATFORMS RUN 4/0 CONDUCTOR DOWN CENTER OF PLATFORM AND ACCESS LIGHT POST THROUGH HAND HOLE ON UNDER SIDE OF PLATFORM.
8. RESISTANCE SHALL BE NO GREATER THAN 5 OHMS.

#	DATE	DESCRIPTION
1	11/6/2013	UPDATED NOTES

DIRECTOR–POWER SYSTEMS — ASST CHIEF ENGINEER — ASST CHIEF ENGINEER — SUPERVISOR–POWER DESIGN (M. Chen)

Metro-North Railroad
Power Department

STATION BONDING AND GROUNDING
NEW HAVEN LINE
TYPICAL

DATE 05/12/04
SCALE NONE
SHEET 1 OF 1
DRAWING # STD–NHSG–1
POWER/STD/GROUNDING

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 4/22/2016

DESIGNER/DRAFTER: S.G.
CHECKED BY: M.G. / K.M.
SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
Filename: Subset 06 - Building Systems

SIGNATURE/ BLOCK:

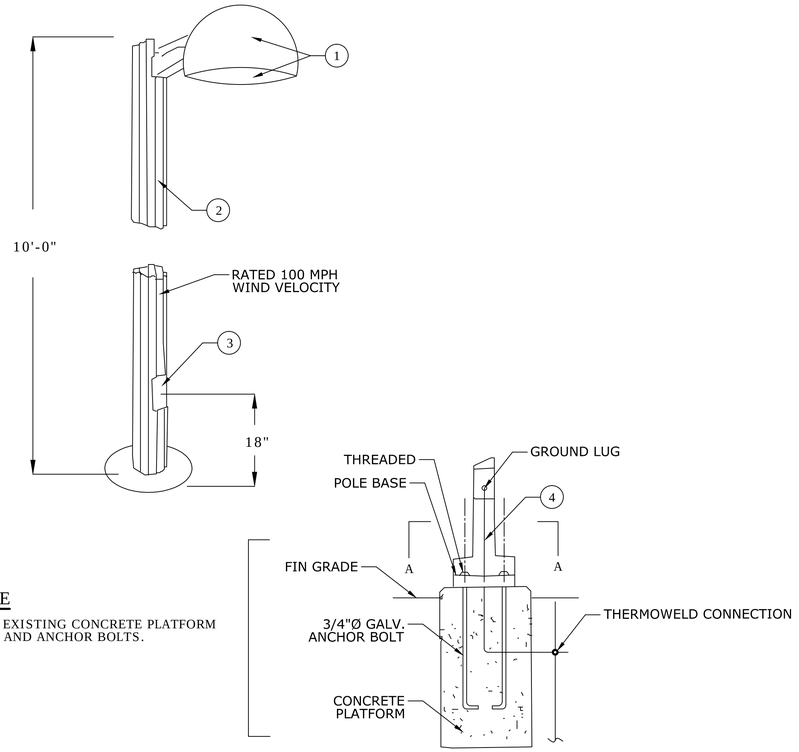
GARG CONSULTING SERVICES, INC.
1000 CRANFORD PLACE, SUITE 300
MOUNT LAUREL, NJ 08054

PROJECT TITLE:
NOROTON HEIGHTS
RAILROAD STATION
PLATFORM REPLACEMENT

TOWN: DARIEN

DRAWING TITLE:
TYP. STATION BONDING & GROUNDING
NEW HAVEN LINE (MNR STANDARD)

PROJECT NO. 301-0170
DRAWING NO. E-22
SHEET NO. 06.23



NOTE

1. EXISTING CONCRETE PLATFORM AND ANCHOR BOLTS.

EXISTING POLE ARRANGEMENT

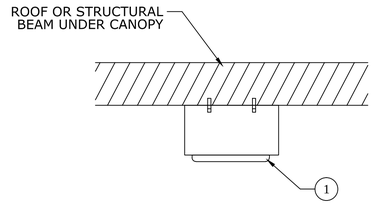
SCALE: NTS

ITEM	QUANT	LIST OF MATERIAL
1	1	PHILIPS GARDCO LIGHTING FORM 10 ROUND, SEMI-SPHERICAL (MA) CUTOFF LUMINAIRE, 17" DIA., TYPE IV DIST., 277 120V, 70W, MH MODEL NO.MA17-1-FM-70MH-120-BRA-F-MF OR APPROVED EQUAL
2	1	10' PHILIPS GARDCO LIGHTING 4-1/2" STRAIGHT ROUND ALUMINUM (TENONBASE) POLE MODEL NO. RA4.5-STB-10-D1-BRA OR APPROVED EQUAL
3	1	2"X4" ALUMINUM COVER PLATE WITH ATTACHED SCREWS
4	1	GROUND CABLE LIGHTING CIRCUIT

DETAIL 1

TYPICAL INSTALLATION STANTION PLATFORM LIGHT

SCALE: NTS

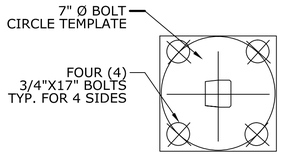


ITEM	QUANT	LIST OF MATERIAL
1	1	LITHONIA LIGHTING, 100W, MH, PRISMATIC GLASS REFLECTOR 120V, DARK BRONZE WITH ENHANCED CORROSION RESISTANCE MODEL NO. KACM-100M-FP-120-LP1SF OR APPROVED EQUAL

DETAIL 2

TYPICAL INSTALLATION CANOPY SURFACE LIGHT FIXTURE

SCALE: NTS



SECTION A-A

SCALE: NTS

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 4/22/2016

DESIGNER/DRAFTER: S.G.

CHECKED BY: M.G. / K.M.

SCALE AS NOTED

STATE OF CONNECTICUT

DEPARTMENT OF TRANSPORTATION

Filename: Subset 06 - Building Systems

SIGNATURE/ BLOCK:

GARG CONSULTING SERVICES, INC.
1000 CRAWFORD PLACE, SUITE 300
MOUNT LAUREL, NJ 08054

PROJECT TITLE:

NOROTON HEIGHTS
RAILROAD STATION
PLATFORM REPLACEMENT

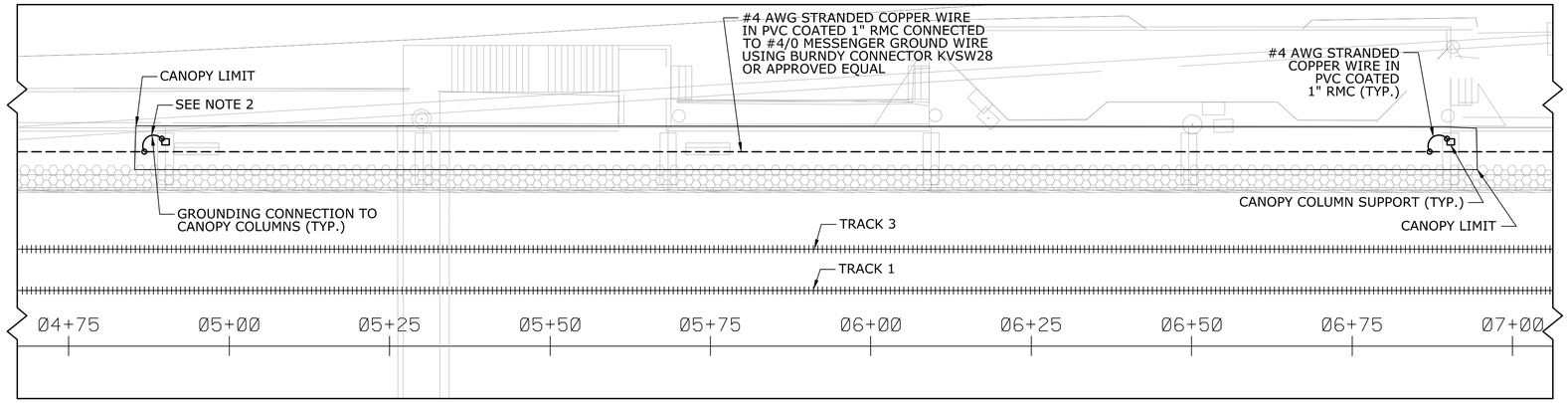
TOWN: DARIEN

DRAWING TITLE: EXISTING ELECTRICAL POLE & FIXTURE DETAILS

PROJECT NO. 301-0170

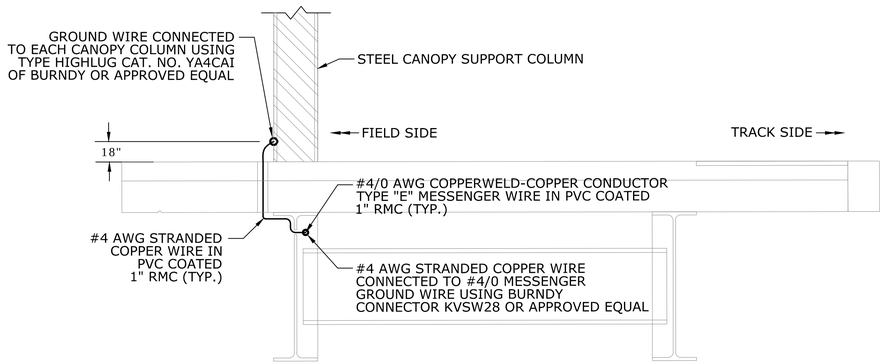
DRAWING NO. E-23

SHEET NO. 06.24



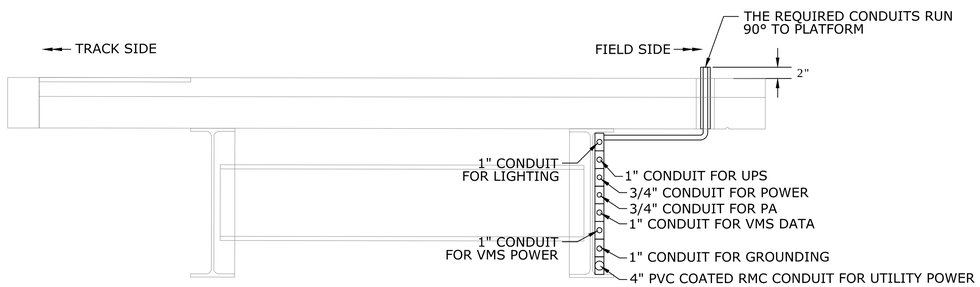
GROUNDING OF CANOPY COLUMNS

SCALE: NTS



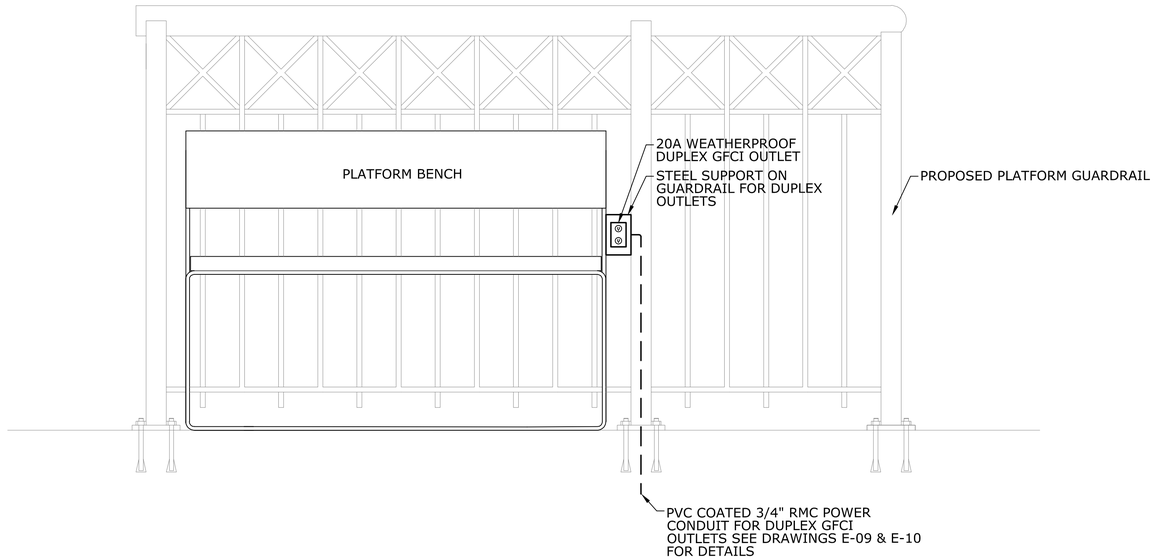
TYPICAL GROUNDING OF CANOPY COLUMNS

SCALE: NTS



PROPOSED PLATFORM SECTION - SHOWING POWER, LIGHTING & COMMUNICATION CONDUITS ARRANGEMENT

SCALE: NTS



TYPICAL DUPLEX OUTLET MOUNTING NEAR PLATFORM BENCHES

SCALE: NTS

NOTE

1. GROUNDING & BONDING SYSTEM CONDUCTORS FOR THE PLATFORM SHALL BE CONCEALED IN PVC COATED RMC CONDUIT. GROUNDING & BONDING SYSTEM SHALL BE INSPECTED BY MNR.
2. SIMILAR BONDING ARRANGEMENT TO BE FOLLOWED FOR INTERMEDIATE COLUMNS.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: Subset 06 - Building Systems

SIGNATURE/ BLOCK:

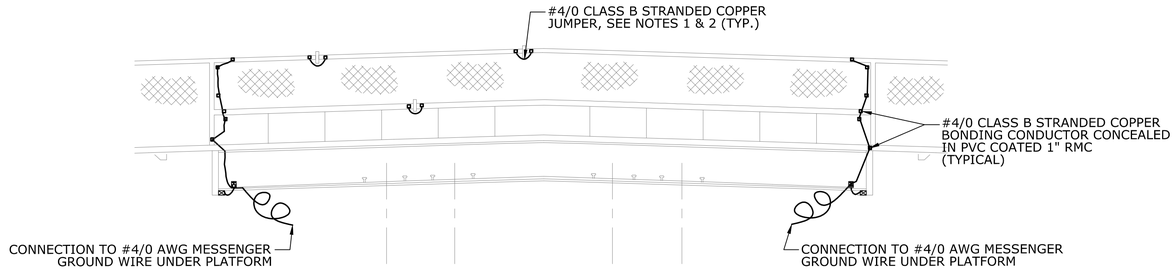
GARG CONSULTING SERVICES, INC.
1000 CRAWFORD PLACE, SUITE 300
MOUNT LAUREL, NJ 08054

PROJECT TITLE:
NOROTON HEIGHTS
RAILROAD STATION
PLATFORM REPLACEMENT

TOWN: DARIEN

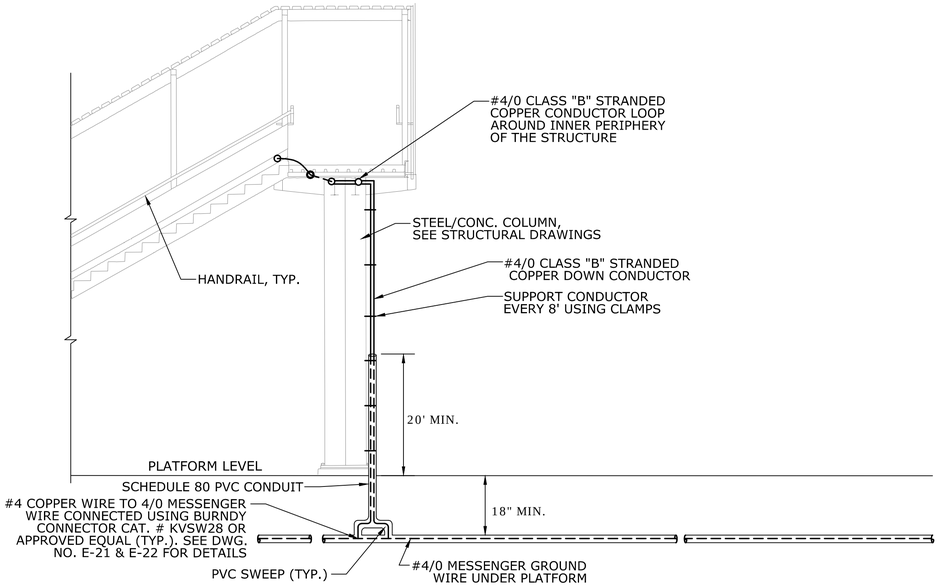
DRAWING TITLE: TYPICAL DETAILS

PROJECT NO. 301-0170
DRAWING NO. E-24
SHEET NO. 06.25



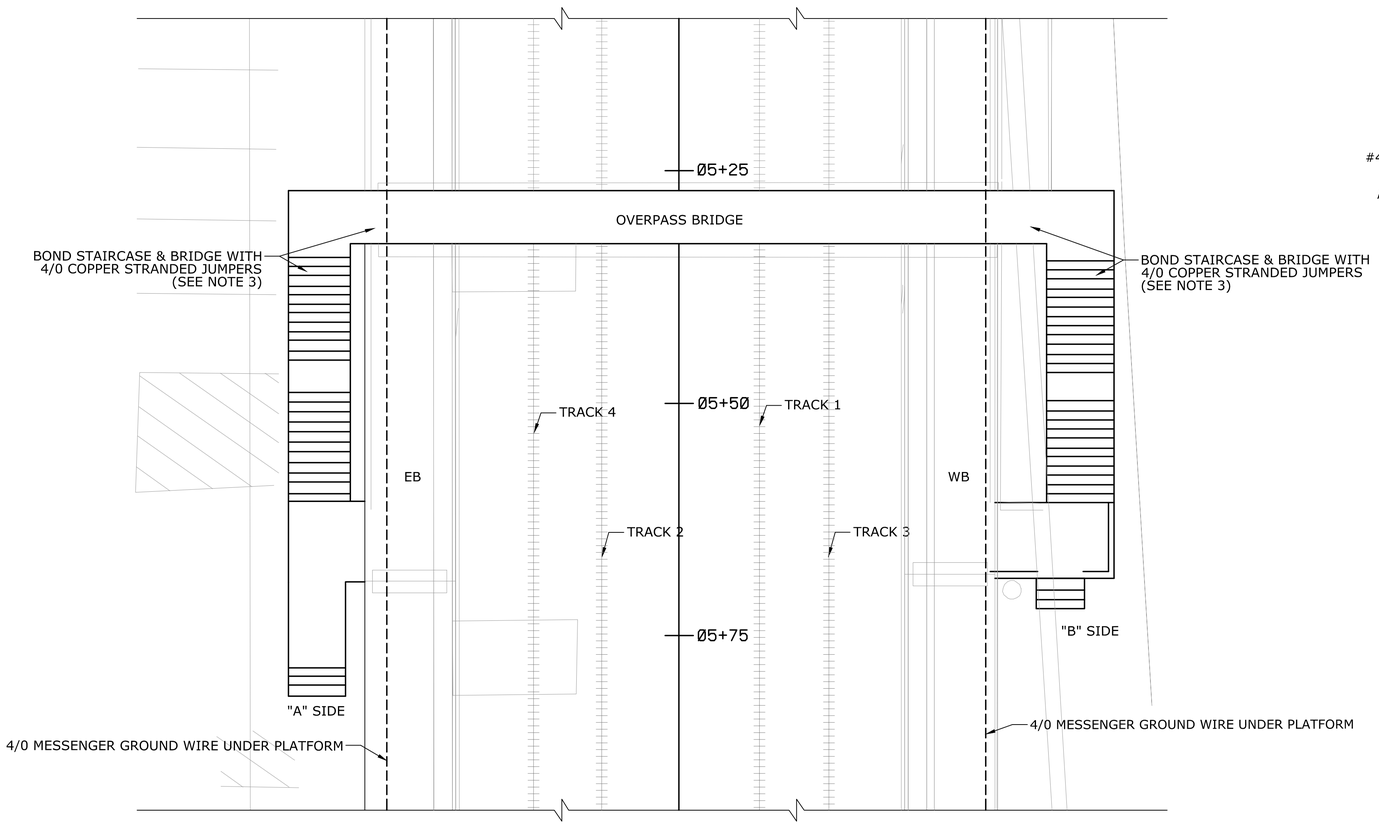
OVERPASS BRIDGE - ELEVATION VIEW

SCALE: NTS



OVERPASS BRIDGE - SIDE VIEW OF "A" & "B" FOR GROUNDING & BONDING DETAILS

SCALE: NTS



OVERPASS BRIDGE - PLAN VIEW

SCALE: NTS

NOTE

1. BOND THE DIFFERENT METTALIC SECTIONS OF THE PEDESTRIAN OVERPASS WITH #4/0 CLASS "B" STRANDED COPPER JUMPERS AT TWO PLACES USING MECHANICAL CONNECTIONS.
2. BOND ACROSS ALL EXPANSION JOINTS ON STRUCTURAL STEEL WITH #4/0 CLASS "B" STRANDED COPPER JUMPERS.
3. BOND THE STAIRCASE AND BRIDGE WITH 4/0 COPPER STRANDED JUMPERS. THERE SHALL BE AT LEAST TWO SUCH CONNECTIONS. STAIRCASE STEEL SHALL BE MADE ELECTRICALLY CONTINUOUS.
4. GROUNDING AND BONDING SYSTEM CONDUCTORS FOR THE PLATFORM SHALL BE CONCEALED IN PVC COATED RMC 1" C. GROUNDING AND BONDING SYSTEM SHALL BE INSPECTED BY MNR.
5. RUN 4/0 COPPER INSIDE OF STRUCTURE COLUMN SECURING TO ANGLE EVERY 8 FEET WITH PARALLEL GROOVE CLAMPS AND CONNECT WITH PARALLEL CLAMPS OR SPLIT BOLTS BY OTHERS.
6. CONNECTIONS OF #4/0 CLASS "B" STRANDED COPPER JUMPERS TO TRACK AND/OR CATENARY STRUCTURE.
7. CONTRACTOR SHALL INSTALL NEW GROUNDING & BONDING OF THE OVERPASS BRIDGE AS SHOWN IN THIS DRAWING. AFTER INSTALLATION OF THE NEW GROUNDING, THE REMNANTS OF OLD GROUNDING OF THIS BRIDGE SHALL BE REMOVED AND RETURNED TO CTDOT.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED.

Plotted Date: 4/22/2016

DESIGNER/DRAFTER: S.G.

CHECKED BY: M.G. / K.M.

SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: Subset 06 - Building Systems

SIGNATURE/ BLOCK:

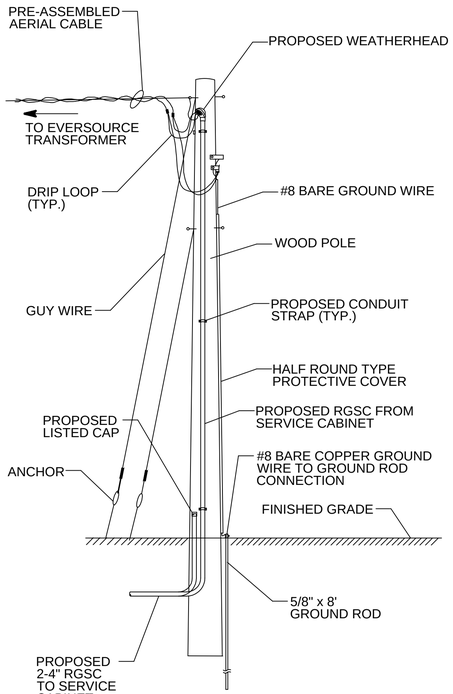
GARG CONSULTING SERVICES, INC.
1000 CRAWFORD PLACE, SUITE 300
MOUNT LAUREL, NJ 08054

PROJECT TITLE:
NOROTON HEIGHTS
RAILROAD STATION
PLATFORM REPLACEMENT

TOWN: DARIEN

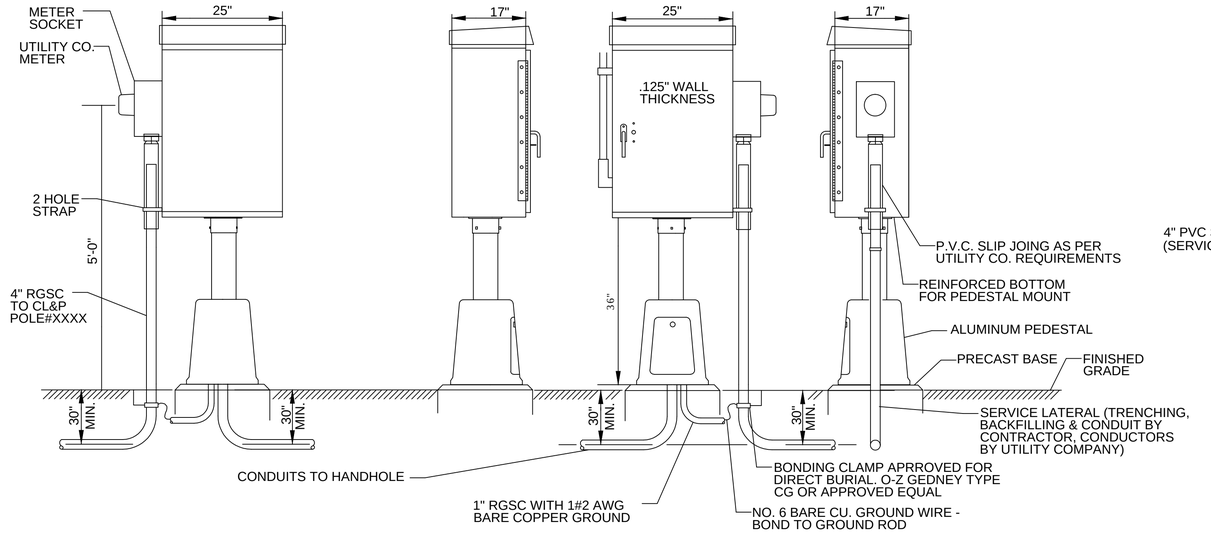
DRAWING TITLE:
OVERPASS BRIDGE
GROUNDING & BONDING

PROJECT NO. 301-0170
DRAWING NO. E-25
SHEET NO. 06.26



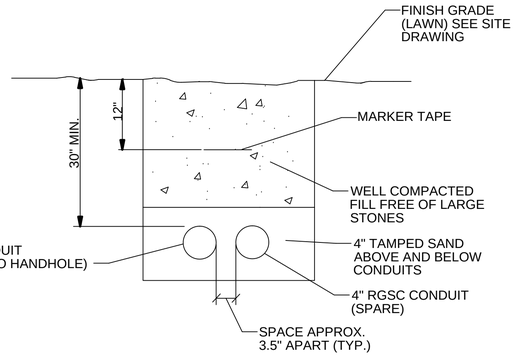
EVERSOURCE POLE # 3557

NOT TO SCALE



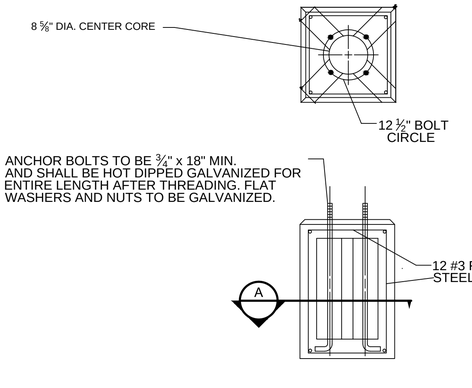
SERVICE ENTRANCE AND CABINET TYPE II

NOT TO SCALE



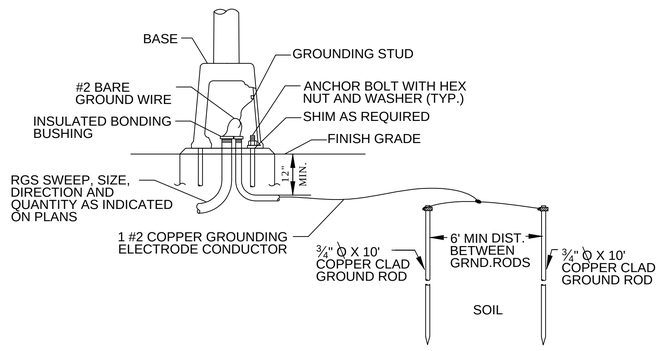
2 WAY DUCT BANK INSTALLATION DETAIL

NOT TO SCALE

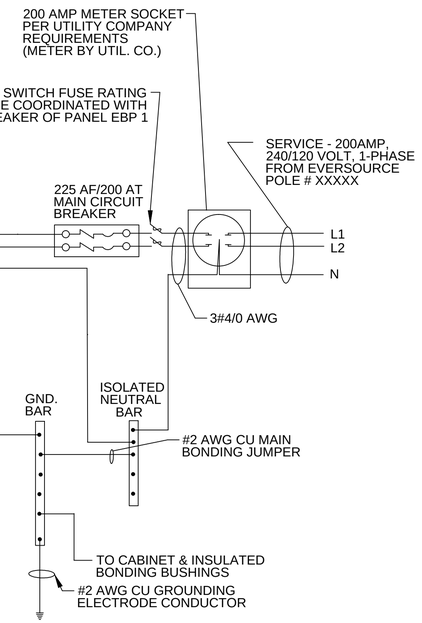


PRECAST PEDESTAL BASE TYPE I

NOT TO SCALE



36" ALUMINUM PEDESTAL



SERVICE ENTRANCE WIRING DIAGRAM

NOT TO SCALE

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 4/22/2016

DESIGNER/DRAFTER: S.G.

CHECKED BY: M.G. / K.M.

SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: Subset 06 - Building Systems

SIGNATURE/ BLOCK:

GARG CONSULTING SERVICES, INC.
1000 CRAWFORD PLACE, SUITE 300
MOUNT LAUREL, NJ 08054

PROJECT TITLE:
NOROTON HEIGHTS
RAILROAD STATION
PLATFORM REPLACEMENT

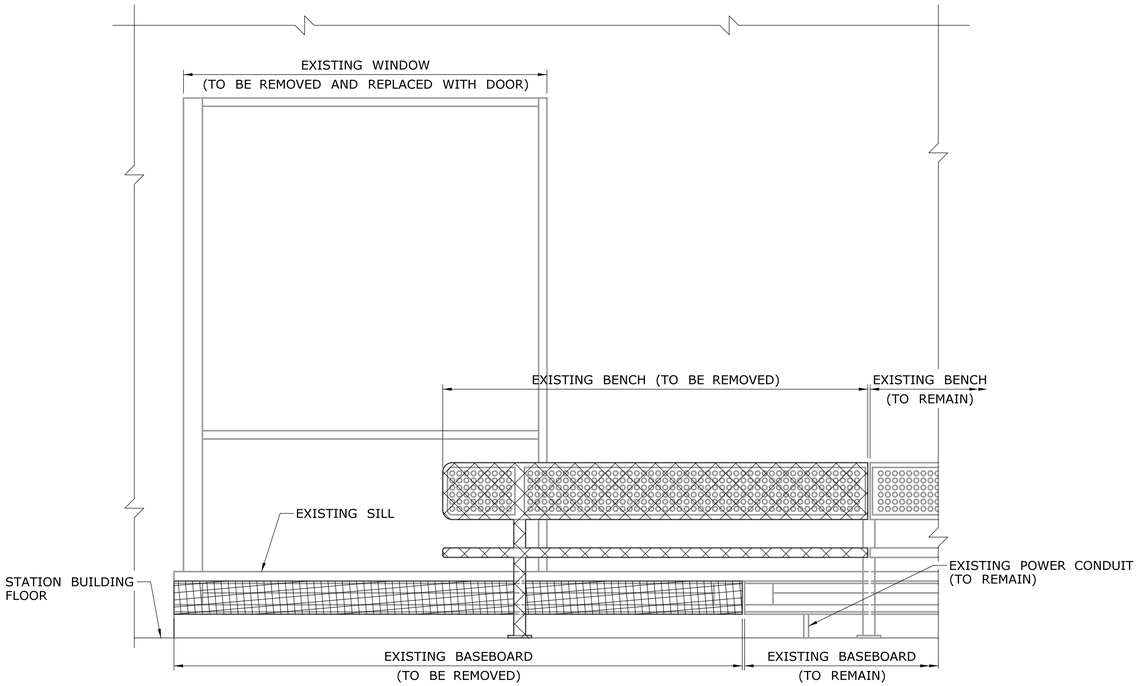
TOWN: DARIEN

DRAWING TITLE:
UTILITY POWER SERVICE
ELECTRICAL DETAILS

PROJECT NO. 301-0170

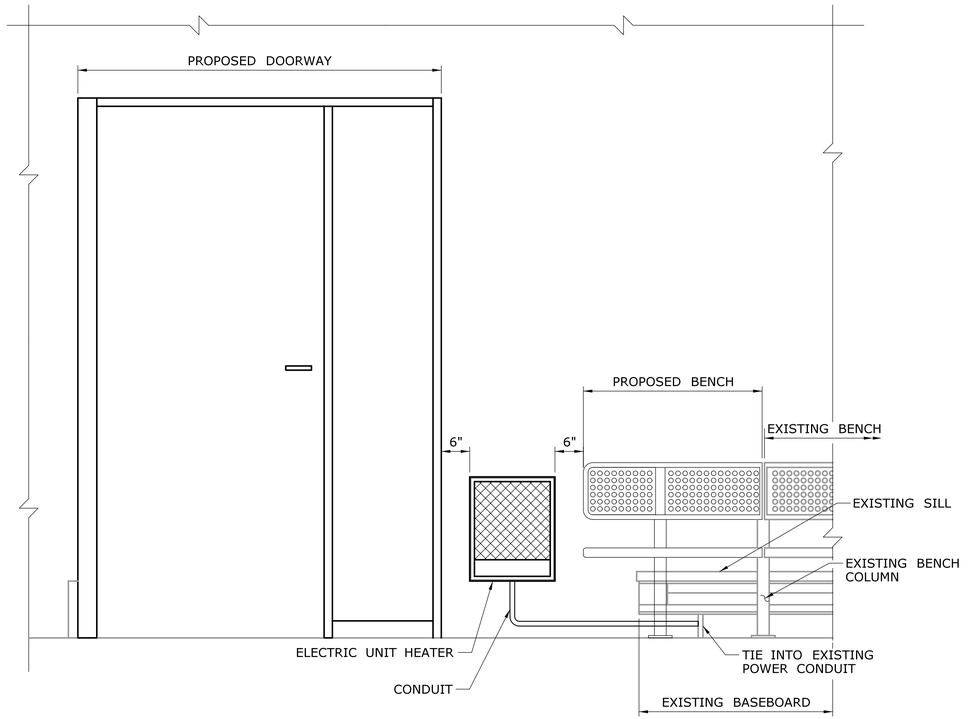
DRAWING NO. E-26

SHEET NO. 06.27



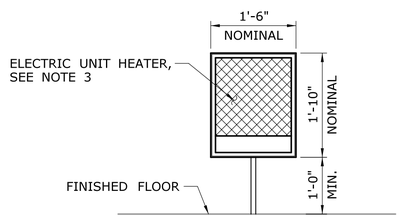
EXISTING BASEBOARD/BENCH REMOVAL

SCALE: 3/4" = 1'-0"



UNIT HEATER DETAIL

SCALE: 3/4" = 1'-0"



ELECTRIC UNIT HEATER

SCALE: 3/4" = 1'-0"

NOTES:

1. FOR FURTHER DETAILS OF BENCH REMOVAL AND WINDOW REMOVAL, SEE ARCHITECTURAL DRAWINGS.
2. FOR FURTHER DETAILS OF BENCH AND DOORWAY, SEE ARCHITECTURAL DRAWINGS.
3. SURFACE MOUNTED PROPOSED ELECTRIC UNIT HEATER CAPACITY 3000 WATTS 208V 1 PHASE BASIS OF DESIGN TRANE UHWA 03 OR EQUIVALENT.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 6/10/2016

DESIGNER/DRAFTER: C.D./G.T.G
CHECKED BY: T.R.L
SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: FA_MSH_0301-0170_M_01_HVAC.dgn

SIGNATURE/ BLOCK:

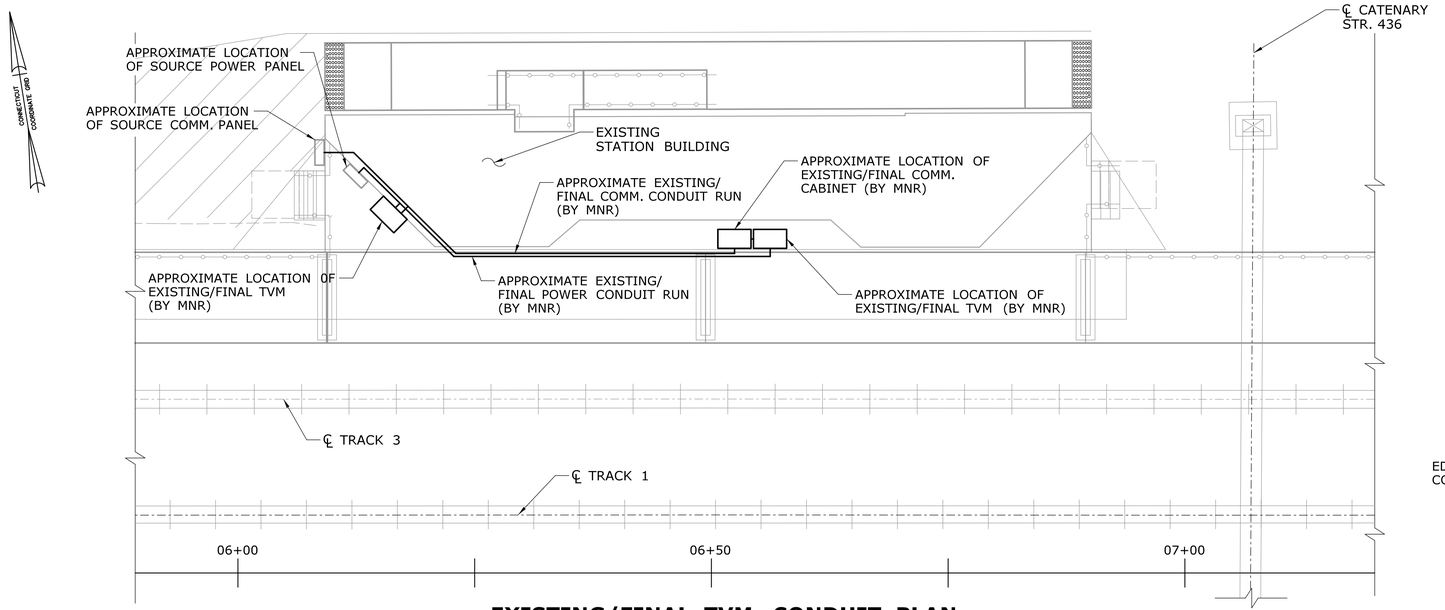
PARSONS BRINCKERHOFF
500 WINDING BROOK DR.
GLASTONBURY, CT 06033

PROJECT TITLE:
NOROTON HEIGHTS RAILROAD STATION PLATFORM REPLACEMENT

TOWN: **DARIEN**

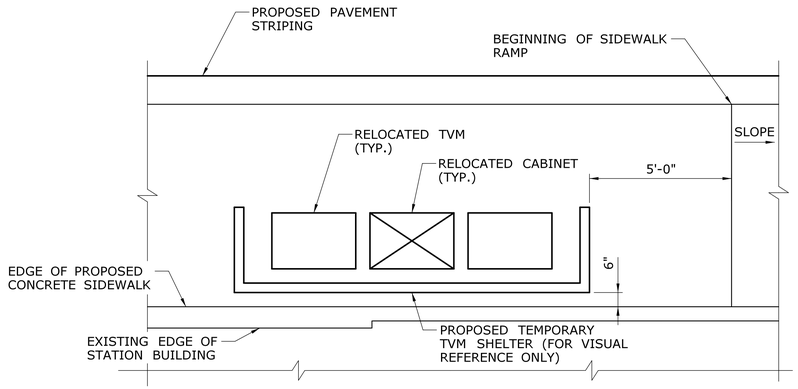
DRAWING TITLE: **MODIFIED HVAC DETAILS**

PROJECT NO. **301-0170**
DRAWING NO. **M-01**
SHEET NO. 06.28



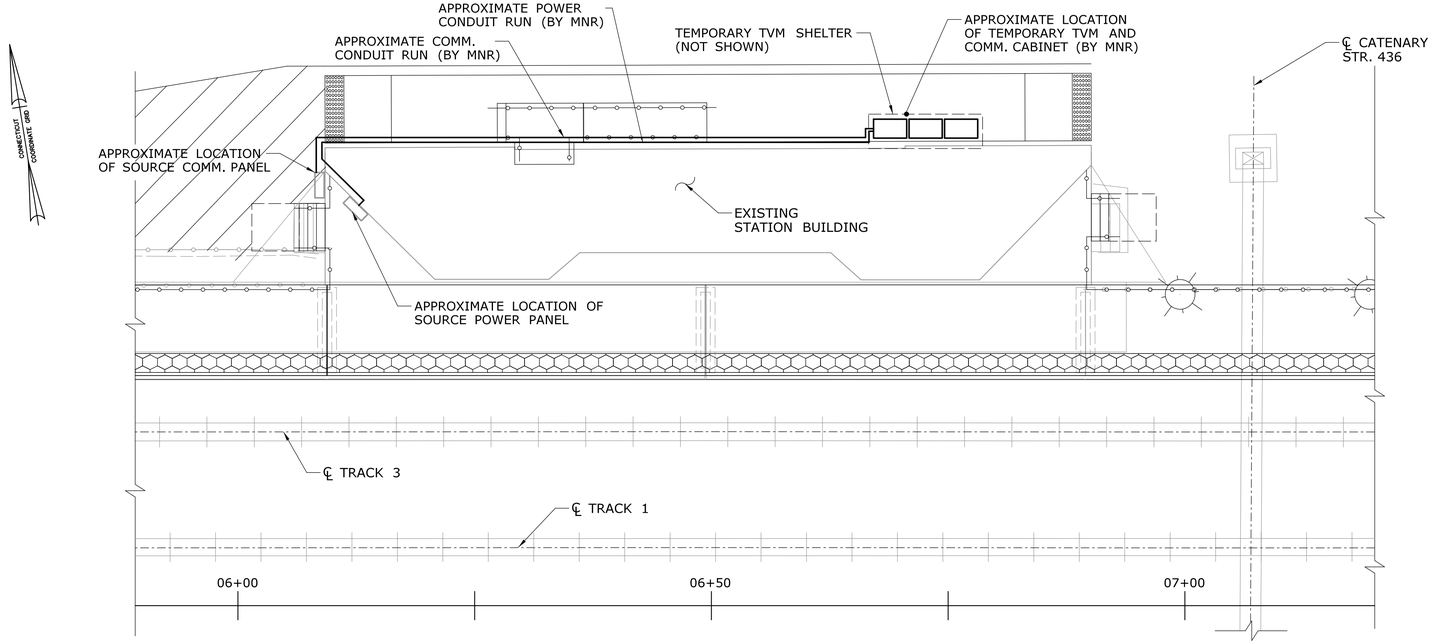
EXISTING/FINAL TVM CONDUIT PLAN

SCALE: $\frac{1}{8}$" = 1'-0"



TEMPORARY TVM SHELTER LOCATION PLAN

NOT TO SCALE



TEMPORARY TVM CONDUIT PLAN

SCALE: $\frac{1}{8}$" = 1'-0"

NOTES:

1. CONTRACTOR SHALL COORDINATE WITH MNR FOR DISCONNECTION OF POWER AND COMMUNICATION CONDUIT, INSTALLATION OF TEMPORARY POWER AND COMMUNICATION CONDUIT, RELOCATION OF TVMS/COMMUNICATION CABINET TO TEMPORARY LOCATION AND RELOCATION OF TVMS/COMMUNICATION CABINET TO FINAL LOCATION ON PLATFORM.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR PLACEMENT OF TVM SHELTER WITH BLOCKOUT FOR POWER/COMMUNICATION CONDUIT AND FIELD DRILL REQUIRED ANCHOR RODS.
3. MNR SHALL BE RESPONSIBLE FOR DISCONNECTION/RECONNECTION OF ALL COMMUNICATION AND POWER LINES TO THE TVMS AND SOURCE PANELS DURING RELOCATION TO TEMPORARY AND FINAL TVM LOCATIONS. MNR SHALL ALSO BE RESPONSIBLE FOR RUNNING OF ALL CONDUITS AND PULLING ALL LINES FOR COMMUNICATION AND POWER TO TEMPORARY AND FINAL LOCATIONS OF TVMS. MNR SHALL ALSO BE RESPONSIBLE FOR THE RELOCATION OF THE TVMS AND COMMUNICATION CABINET TO TEMPORARY LOCATION AND FINAL LOCATION.
4. THE DETAILS SHOWN ON THIS PLAN ARE SCHEMATIC ONLY TO DEPICT APPROXIMATE LOCATION OF EXISTING, TEMPORARY AND FINAL CONDUIT RUNS FOR TVMS AND ASSOCIATED COMMUNICATION CABINETS AND PANELS. MNR SHALL LOCATE ALL CONDUIT RUNS FOR TEMPORARY/FINAL POWER AND COMMUNICATION.
5. FOR FURTHER DETAILS OF TVM SHELTER, SEE ARCHITECTURAL SUBSET.

REV.	DATE	REVISION DESCRIPTION	SHEET NO.

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Plotted Date: 6/10/2016

DESIGNER/DRAFTER: **G.T.G**

CHECKED BY: **T.R.L**

SCALE AS NOTED

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

Filename: FA_MSH_0301-0170_M_02_TVM.dgn

SIGNATURE/ BLOCK:

PARSONS BRINCKERHOFF
500 WINDING BROOK DR.
GLASTONBURY, CT 06033

PROJECT TITLE:

NOROTON HEIGHTS RAILROAD STATION PLATFORM REPLACEMENT

TOWN: **DARIEN**

DRAWING TITLE: **TVM RELOCATION SCHEMATIC**

PROJECT NO. **301-0170**

DRAWING NO. **M-02**

SHEET NO. 06.29