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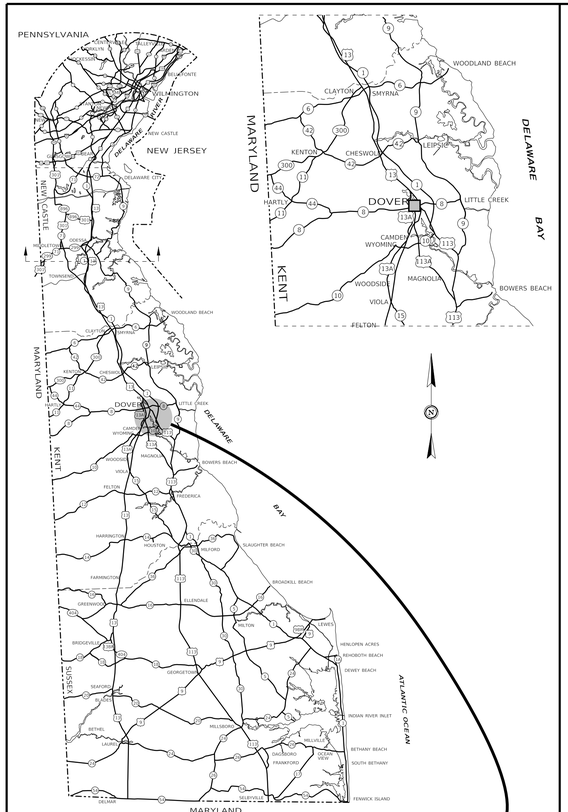



GENERAL LOCATION OF CONTRACT




# THE STATE OF DELAWARE
# DEPARTMENT OF TRANSPORTATION

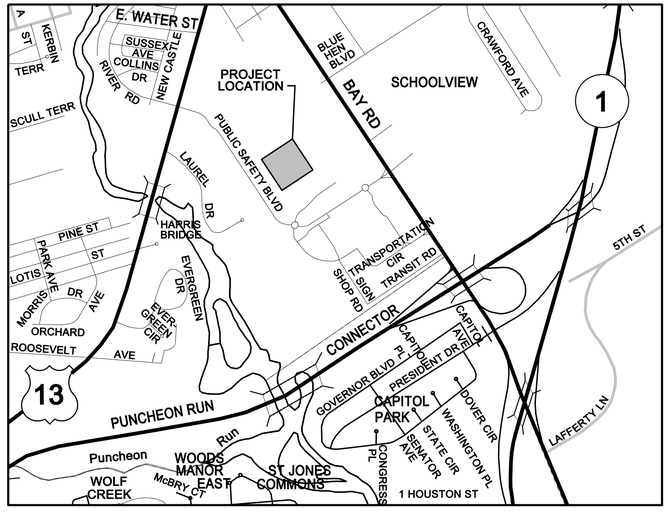
U.S. CUSTOMARY UNITS

CONSTRUCTION PLANS FOR:

# DOVER BUS CANOPY SOLAR PANELS

**CONTRACT NUMBER:** T202153104.03
**FEDERAL FTA PROJECT NUMBER:** 5339-2021(02)

COUNTY: KENT M.R. #: N/A
FROM MILEPOST N/A TO MILEPOST N/A




LOCATION MAP
SCALE: N. T. S.

## DESIGN DESIGNATION

| | | | |
|---|---|---|---|
| FUNCTIONAL CLASS: X | | D.H.V. PROJECTED: | YEAR: |
| TYPE OF CONSTRUCTION: X | | DESIGN SPEED: XX MPH | |
| A.A.D.T. CURRENT: | YEAR: | TRUCKS: | |
| A.A.D.T. PROJECTED: | YEAR: | DIRECTION OF DISTRIBUTION: | |

## APPROVED DESIGN EXCEPTIONS

| DESIGN PARAMETER | REQUIRED | PROVIDED | DATE |
|---|---|---|---|
| . | . | . | . |

## ASSOCIATED CONTRACTS

| CONTRACT NO. | CONTRACT NAME |
|---|---|
| XX-XXX-XX | XXXXX |

**APPROVED FOR ADVERTISEMENT**

CHIEF EXECUTIVE OFFICER,
DELAWARE TRANSIT CORPORATION

3/3/2026
DATE


**PREPARED BY**
THE CONSULTING FIRM OF
**JOHNSON, MIRMIRAN & THOMPSON**
121 CONTINENTAL DR, SUITE 300
NEWARK, DE, 19713
(302) 266 - 9600


PAUL EMMANUEL REUTTER LICENSE No. 24316 DELAWARE PROFESSIONAL ENGINEER
SEAL

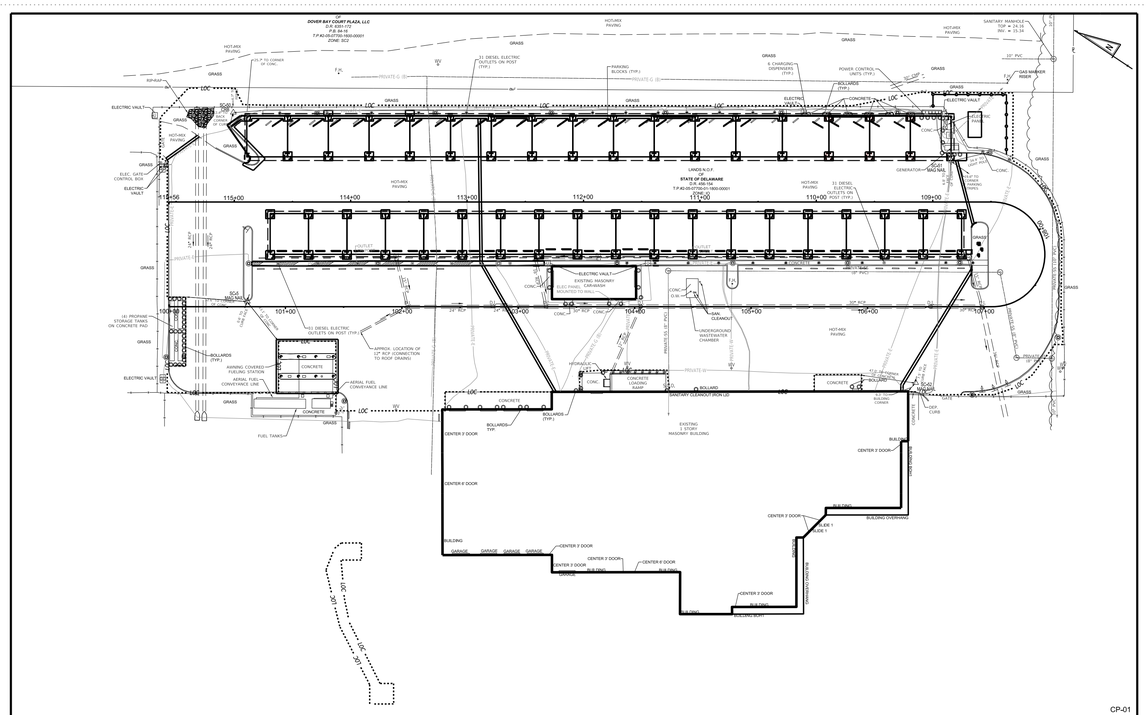
I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE COMPLIES WITH THE APPLICABLE STATE AND LOCAL REGULATIONS AND ORDINANCES.

Paul Reutter
RECOMMENDED

7/8/25
DATE

# INDEX OF SHEETS

| Sheet No. | Drawing No. | Description |
|---|---|---|
| 1 | TC01 | TITLE |
| 2 | IS01 | INDEX OF SHEETS |
| | | **Civil Drawings** |
| 3 | AD01 | ADDENDA AND REVISIONS |
| 4 | LG01 | LEGEND |
| 5 | PN01 | NOTES |
| 6 | HV01 | HORIZONTAL AND VERTICAL CONTROL |
| 7 | EXCP01 | EXISTING CONDITIONS AND DEMOLITION PLAN |
| 8 | CP01 | CONSTRUCTION PLANS |
| 9 | GG01 | GRADES AND GEOMETRICS |
| 10 | DT01 | CONSTRUCTION DETAILS |
| 11 | DT02 | CONSTRUCTION DETAILS |
| 12 | DT03 | CONSTRUCTION DETAILS |
| 13 | CS01 | CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN - NOTES |
| 14 | CS02 | CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN - PHASE 1 |
| 15 | CS03 | CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN - PHASE 2 |
| 16 | CS04 | CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN - PHASE 3 |
| 17 | CS05 | CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN - DETAILS |
| 18 | SS01 | SIGNING, STRIPING AND CONDUIT PLANS |
| | | **Electrical Drawings** |
| 19 | E-001 | ELECTRICAL GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS |
| 20 | ED-101 | ELECTRICAL SITE PLAN - DEMOLITION |
| 21 | E-101 | ELECTRICAL SITE PLAN - NEW |
| 22 | E-102 | CCTV CONDUIT ROUTING PLAN - NEW |
| 23 | E-103 | SITE PLAN - NEW SOLAR ARRAY LAYOUT |
| 24 | E-401 | ELECTRICAL SITE PLAN - NEW |
| 25 | E-501 | ELECTRICAL DETAILS |
| 26 | E-502 | ELECTRICAL DETAILS II |
| 27 | E-503 | ELECTRICAL SINGLE LINE DIAGRAMS & CONDUIT SCHEDULES |
| 28 | E-601 | ELECTRICAL PANEL AND EQUIPMENT SCHEDULES |




IS-01

| ADDENDA / REVISIONS | | NOT TO SCALE | DOVER BUS CANOPY SOLAR PANELS | CONTRACT | BRIDGE NO. N/A | INDEX OF SHEETS | SECTION |
|---|---|---|---|---|---|---|---|
| | | | | T202153104.03 | | | JMT |
| | | | | COUNTY | DESIGNED BY: P. REUTTER | | SHEET NO. |
| | | | | KENT | CHECKED BY: N. BERGERON | | 2 |

## ADDENDUM PREPARED BY

JMT

SEAL

_____ _____

THIS SEAL APPLIES TO THE FOLLOWING SHEETS CHANGED UNDER ADDENDUM #4:
3, 9, 10, 26, 28, 31

DATE

## REVISION PREPARED BY

JMT

SEAL

_____ _____

THIS SEAL APPLIES TO THE FOLLOWING SHEETS CHANGED UNDER ADDENDUM #X:
XX, XX-XX, XX

DATE

AD-01

| ADDENDA / REVISIONS | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | NOT TO SCALE | DOVER BUS CANOPY SOLAR PANELS | CONTRACT | BRIDGE NO. | N/A | ADDENDA AND REVISIONS | SECTION |
| | | | | T202153104.03 | | | | JMT |
| | | | | COUNTY | DESIGNED BY: P. REUTTER | | | SHEET NO. |
| | | | | KENT | CHECKED BY: N. BERGERON | | | 3 |

# EXISTING SYMBOLS

## DRAINAGE

| | |
|---|---|
| | DITCH OR STREAM CENTERLINE |
| | DIRECTIONAL STREAM FLOW ARROW |
| C.B. / D.I. | DRAINAGE INLET |
| J.B. | DRAINAGE JUNCTION BOX |
| Ⓓ | DRAINAGE MANHOLE |
| SIZE/TYPE LABEL | DRAINAGE PIPE AND FLOW ARROW |
| | DRAINAGE PIPE HEADWALL |
| | RIPRAP - AREA FEATURE |
| | RIPRAP - LINEAR FEATURE |

## MANMADE ROADSIDE FEATURES

| | |
|---|---|
| | BOLLARD - STEEL POLE |
| | BOLLARD - WOOD POST |
| (TYPE LABEL) | CURB |
| (TYPE LABEL) | CURB AND GUTTER |
| | FENCE - CHAINLINK OR STRANDED |
| | FENCE - STOCKADE OR SPLIT RAIL |
| F.P. | FLAG POLE |
| | GUARDRAIL - STEEL BEAM |
| | GUARDRAIL - WIRE ROPE |
| LAMP | LAMP AND POST - RESIDENTIAL |
| MB | MAILBOX |
| P.M. | PARKING METER AND POST |
| | PAVEMENT - FLEXIBLE |
| | PAVEMENT - RIGID |
| | PILE - BRIDGE |
| | PILLAR OR MISCELLANEOUS POST |
| | TRAFFIC SIGN AND POST |
| | WALL - BRICK OR BLOCK |
| | WALL - STONE |

## NATURAL ROADSIDE FEATURES

| | |
|---|---|
| | HEDGEROW OR THICKET |
| | MARSH BOUNDARY LINE |
| | TREE - CONIFEROUS |
| | TREE - DECIDUOUS |
| | TREE STUMP |
| | SHRUBBERY |
| WL | DELINEATED WETLAND BOUNDARY LINE |
| | WOODS LINE BOUNDARY |

## RIGHT-OF-WAY SYMBOLS

| | |
|---|---|
| C.M. | PROPERTY MARKER - CONCRETE MON. |
| I.P. | PROPERTY MARKER - IRON PIPE |
| 100+00 | HISTORIC RIGHT-OF-WAY BASELINE |
| | EXISTING RIGHT-OF-WAY |
| | EXISTING PROPERTY LINE |
| EASEMENT TYPE | EXISTING EASEMENT |
| DA | EXISTING DENIAL OF ACCESS |
| R/W-DA | EXISTING R/W & DENIAL OF ACCESS |

## SURVEY CONTROL & MONUMENTATION

| | |
|---|---|
| B.M. | SURVEY BENCHMARK LOCATION |
| | SURVEY NGS POINT LOCATION |
| T.P. | SURVEY TIE POINT LOCATION |
| | SURVEY TRAVERSE POINT |
| | POINT OF CURVATURE OR TANGENCY |
| | POINT OF INTERSECTING TANGENTS |

## UTILITY

| | |
|---|---|
| | SOIL BORING LOCATION |
| | UTILITY TEST HOLE LOCATION |
| TV | CABLE TV DISTRIBUTION BOX |
| Ⓔ | ELECTRIC MANHOLE |
| EM | ELECTRIC METER |
| E | ELECTRIC TRANSFORMER |
| | POLE MOUNTED LUMINAIRE |
| Ⓖ | GAS MANHOLE |
| G.M. | GAS METER |
| G.V. | GAS VALVE |
| G.P. | GAS PUMP - SERVICE STATION |
| | RAILROAD TRACKS |
| Ⓢ | SANITARY SEWER MANHOLE |
| S.V. | SANITARY SEWER VALVE |
| S.C.O. | SANITARY SEWER CLEANOUT OR VENT |
| S.D.F. | SEPTIC DRAIN FIELD |
| B | TELEPHONE BOOTH |
| Ⓣ | TELEPHONE MANHOLE |
| T | TELEPHONE TEST POINT |
| J.W. | TRAFFIC - CONDUIT JUNCTION WELL |
| | TRAFFIC - LIGHT POLE AND BASE |
| | TRAFFIC - PEDESTRIAN POLE & BASE |
| | TRAFFIC - SIGNAL CABINET & BASE |
| | TRAFFIC - SIGNAL POLE AND BASE |
| U | UTILITY BOX |
| | UTILITY POLE GUY WIRE ANCHOR |
| | UTILITY POLE |
| F.H. | WATER - FIRE HYDRANT |
| W.M. | WATER METER |
| WV | WATER VALVE |
| WELL | WELL HEAD |
| ? | MANHOLE - UNDETERMINED OWNER |

## UTILITY COMPANY FACILITIES

| | |
|---|---|
| PRIVATE-COM-FO | EXISTING PRIVATE - FIBER OPTIC |
| PRIVATE-SS | EXISTING PRIVATE - SANITARY SEWER |
| PRIVATE-W | EXISTING PRIVATE - WATER |
| PRIVATE-G | EXISTING PRIVATE - GAS |
| PRIVATE-E | EXISTING PRIVATE - ELECTRIC |

(X) REPRESENTS ASCE DEFINED SUE QUALITY LEVEL

# PROPOSED SYMBOLS

## CONSTRUCTION

| | |
|---|---|
| | *BARRIER, DOUBLE-FACED, PERMANENT* |
| | *BARRIER, SINGLE-FACED, PERMANENT, TL-4 / TL-5* |
| BFS | *BIOFILTRATION SWALE* |
| | *BRICK PATTERNED SURFACE* |
| | *BUTT JOINT* |
| CZ | *CLEAR ZONE* |
| 100+00 | *CONSTRUCTION BASELINE* |
| | *CURB, TYPE 1 & TYPE 3* |
| | *CURB, TYPE 2* |
| | *CURB & GUTTER, TYPE 1* |
| | *CURB & GUTTER, TYPE 2* |
| | *CURB & GUTTER, TYPE 3* |
| | *CURB OPENING - SUMP / ON GRADE* |
| | *CURB OPENING WITH SIDEWALK* |
| | *DRAINAGE INLET* |
| | *DITCH* |
| | *FENCE - METAL / FENCE - WOOD* |
| | *FLARED END / SAFETY END SECTION* |
| | *GUARDRAIL, TYPE 1* |
| | *GUARDRAIL, TYPE 2* |
| | *GUARDRAIL, TYPE 3* |
| | *GUARDRAIL END ANCHORAGE* |
| | *GUARDRAIL END TREATMENT, TYPE 1* |
| | *GUARDRAIL END TREATMENT, TYPE 2* |
| | *GUARDRAIL END TREATMENT, TYPE 3* |
| | *IMPACT ATTENUATOR* |
| | *JUNCTION BOX - DRAINAGE* |
| LO | *LATERAL OFFSET* |
| LOC | *LIMIT OF CONSTRUCTION* |
| MB | *MAILBOX* |
| | *MANHOLE* |
| | *PAVEMENT PATCH* |
| | *PAVEMENT REMOVAL* |
| | *PIPE & DIRECTIONAL FLOW ARROW* |
| | *RIPRAP* |
| | *P.C.C. SIDEWALK - 4"* |
| | *P.C.C. SIDEWALK - 6" (USE 8" DEPTH FOR CHANNELIZATION ISLANDS.)* |
| | *UNDERDRAIN* |
| | *UNDERDRAIN OUTLET* |
| | *BOLLARD* |

## RIGHT-OF-WAY SYMBOLS

| | |
|---|---|
| | *PROPOSED RIGHT-OF-WAY MONUMENT* |
| DA | *PROPOSED DENIAL OF ACCESS* |
| PE | *PROPOSED PERMANENT EASEMENT* |
| R/W | *PROPOSED RIGHT-OF-WAY* |
| R/W-DA | *PROPOSED R/W & DENIAL OF ACCESS* |
| RTE | *RIGHT-TO-ENTER* |
| TCE | *TEMPORARY CONSTRUCTION EASEMENT* |
| 100+00 | *PROPOSED RIGHT-OF-WAY BASELINE* |

## IDENTIFIERS

| | |
|---|---|
| AB C | *ABANDON BY CONTRACTOR* |
| AB O | *ABANDON BY OTHERS* |
| A C | *ADJUST BY CONTRACTOR* |
| A O | *ADJUST BY OTHERS* |
| BMP XXX | *BEST MANAGEMENT PRACTICE* |
| BSP X | *BUS STOP PAD / TYPE* |
| BSSP X | *BUS STOP WITH SHELTER PAD / TYPE* |
| B XXX | *CONCRETE SAFETY BARRIER* |
| C XXX | *CURB OR CURB & GUTTER* |
| CJB XXX | *CONVERT TO JUNCTION BOX* |
| CMH XXX | *CONVERT TO DRAINAGE MANHOLE* |
| C O | *CURB OPENING - SUMP / ON GRADE* |
| CO SW | *CURB OPENING WITH SIDEWALK* |
| DI XXX | *DRAINAGE INLET* |
| DND | *DO NOT DISTURB* |
| ED XXX | *ENERGY DISSIPATOR* |
| F XXX | *FENCE* |
| FES XXX | *FLARED END SECTION* |
| FF C | *FILL WITH FLOWABLE FILL* |
| GR XXX | *GUARDRAIL* |
| JB XXX | *JUNCTION BOX* |
| MH XXX | *MANHOLE* |
| M XXX | *MONUMENT - RIGHT-OF-WAY* |
| PC XX | *PEDESTRIAN CONNECTION / TYPE* |
| PC-N XXX | *PEDESTRIAN CONNECTION / TYPE WITHOUT SIDEWALK SURFACE DETECTABLE WARNING SYSTEM* |
| P XXX | *PIPE* |
| RL C | *RELOCATE BY CONTRACTOR* |
| RL O | *RELOCATE BY OTHERS* |
| RL PO | *RELOCATE BY PROPERTY OWNER* |
| RM C | *REMOVE BY CONTRACTOR* |
| RM TC | *REMOVE BY TRAFFIC CONTRACTOR* |
| RM O | *REMOVE BY OTHERS* |
| SES XXX | *SAFETY END SECTION* |
| UD XXX | *UNDERDRAIN / LENGTH* |
| UDO XXX | *UNDERDRAIN OUTLET PIPE* |

## LANDSCAPING

| | |
|---|---|
| LS XXX | *LANDSCAPE PLANTINGS* |
| | *SHRUBBERY* |
| | *CONIFEROUS TREE* |
| | *DECIDUOUS TREE* |

## TRAFFIC

| | |
|---|---|
| ITMS-CON | *ITMS CONDUIT* |
| SIG-CON | *SIGNAL CONDUIT* |
| | *CONDUIT JUNCTION WELL* |
| | *LUMINAIRE* |
| | *PAVEMENT MARKINGS* |
| | *PAVEMENT STRIPING* |
| | *TRAFFIC SIGN* |

## PAVEMENT SECTION(S)

| | |
|---|---|
| | *HOT-MIX SEAL COAT - SEE DELDOT STANDARD SPECIFICATIONS FOR MATERIALS AND DEPTHS* |
| | *RECONSTRUCTED BITUMINOUS PAVEMENT - SEE PAVEMENT SECTIONS (DT-01) FOR MATERIALS AND DEPTHS* |

## UTILITIES

| | |
|---|---|
| PRIVATE-E | *PROPOSED PRIVATE - ELECTRIC* |
| PRIVATE-SS | *PROPOSED PRIVATE - SANITARY SEWER* |

LG-01

| ADDENDA / REVISIONS | | NOT TO SCALE | DOVER BUS CANOPY SOLAR PANELS | CONTRACT | BRIDGE NO. N/A | LEGEND | SECTION |
|---|---|---|---|---|---|---|---|
| | | | | T202153104.03 | DESIGNED BY: P. REUTTER | | JMT |
| | | | | COUNTY | CHECKED BY: N. BERGERON | | SHEET NO. |
| | | | | KENT | | | 4 |

# GENERAL NOTES

1. THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS", DATED JANUARY 2024 AND THE "STANDARD CONSTRUCTION DETAILS" DATED 2020, INCLUDING ALL REVISIONS UP TO THE DATE OF ADVERTISING. ITEMS SHALL BE MEASURED AND QUANTIFIED AS SUCH, BUT PAID FOR USING ITEM 763511 - MAINTENANCE BUILDING AND ITEM 837524 - INSTALLATION OF SOLAR PANEL AS SHOWN ON THE ITEM BREAKOUT SHEETS.

2. ELECTRONIC PROJECT FILES THAT WILL BE MADE AVAILABLE TO THE AWARDED CONTRACTOR, INCLUDE:

| | |
|---|---|
| ( ) | NONE |
| ( X ) | ASCII DATA FILES WITH COORDINATES AND ELEVATIONS FOR PROPOSED POINTS AS SELECTED BY THE ENGINEER. |
| ( X ) | ALL PLAN SHEETS, IN PDF FORMAT. |
| ( X ) | EXISTING DIGITAL TERRAIN MODEL, IN .DTM FILE FORMAT, COMPATIBLE WITH SOFTWARE CURRENTLY USED BY DELDOT. |
| ( ) | PROPOSED DIGITAL TERRAIN MODEL, IN .DTM FILE FORMAT, COMPATIBLE WITH SOFTWARE CURRENTLY USED BY DELDOT. |
| ( ) | DESIGN FILE, IN .DGN FILE FORMAT, CONTAINING ONLY THE PROPOSED 3D TRIANGLES OF THE PROPOSED DIGITAL TERRAIN MODEL (DTM). |

NOTE: THE DOCUMENT ENTITLED "RELEASE FOR DELIVERY OF DOCUMENTS IN ELECTRONIC FORM TO A CONTRACTOR" MUST BE SIGNED BY ALL PARTIES PRIOR TO THE DELIVERY OF ANY ELECTRONIC PROJECT FILES.

# PROJECT NOTES

## SECTION 100

1. ANY DAMAGE TO ITEMS NOTED TO BE RELOCATED OR RESET OR DO NOT DISTURB BY THE CONTRACTOR , AT THE DISCRETION OF THE ENGINEER, SHALL BE REPAIRED AND/OR REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.

2. THE CONTRACTOR WILL CONTACT THE DELAWARE TMC AT 302-659-4600 PRIOR TO ANY UNMANNED AIRCRAFT VEHICLE (UAV) FLIGHTS. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE THE FOLLOWING INFORMATION: THE REGISTRATION NUMBER OF THE UAV, THE FLIGHT TIME, LOCATION OF THE FLIGHT, THE PILOT'S NAME AND THE PILOT'S CONTACT NUMBER DURING THE FLIGHT.

## SECTION 200

3. ITEMS TO BE REMOVED IN ACCORDANDE WITH DELDOT SPECIFICATIONS FOR REMOVAL OF STRUCTURES AND OBSTRUCTIONS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING. ITEMS SHALL BE PAID UNDER ITEM 763511 - MAINTENANCE BUILDING.
   A. EXISTING CONCRETE MEDIAN
   B. EXISTING LIGHTPOLES AND ELECTRIC OUTLETS ON POSTS

4. ALL EXCAVATION WILL BE INCIDENTAL TO AND PAID UNDER ITEM 763511 - MAINTENANCE BUILDING.

5. ONLY EXISTING FEATURES WITHIN THE LOC IDENTIFIED WITH REMOVE BY CONTRACTOR OR BY OTHER METHODS ARE TO BE REMOVED OR DISTURBED.

6. THE ENGINEER MAY REQUIRE THE CONTRACTOR TO EXCAVATE TEST PITS ALONG PROPOSED DRAINAGE RUNS, AT POINTS OF POSSIBLE UTILITY CONFLICTS, TO DETERMINE IF A CONFLICT EXISTS. ANY CONFLICTS SHALL BE COORDINATED BY THE CONTRACTOR, WITH THE ENGINEER AND THE UTILITY COMPANY INVOLVED. THE ENGINEER SHALL ULTIMATELY DETERMINE THE SOLUTION TO THE UTILITY CONFLICT. TEST HOLES SHALL BE PREFORMED IN ACCORDANCE WITH PIPE, CULVERT, AND STRUCTURAL EXCAVATION AND AND BACKFILL, BUT ONLY TO THE ACTUAL DEPTH EXCAVATED AND PAID UNDER ITEM 763511 - MAINTENANCE BUILDING

## SECTION 600

7. DRAINAGE INLET GRATES ADJACENT TO THE CURB OR EDGE PAVING, WITHIN THE PROJECT LIMITS, WHICH ARE NOT TYPE 1 OR TYPE 4, SHALL BE REPLACED WITH TYPE 1. INLET GRATES WITHIN THE PAVING, NOT ADJACENT TO THE CURB OR EDGE OF PAVING SHALL BE REPLACED WITH TYPE 3. THE ACTUAL LOCATIONS, THE NEED FOR ANY GRATE MODIFICATIONS OR FOR NEW FRAMES SHALL BE DETERMINED BY THE ENGINEER. ALL REPLACED GRATES/FRAMES SHALL BE DELIVERED TO THE NEAREST DISTRICT MAINTENANCE YARD WITH THE COST OF DELIVERY INCIDENTAL TO ITEM 763511 - MAINTENANCE BUILDING. FINAL PAYMENT FOR REPLACED GRATES/FRAMES SHALL NOT BE MADE UNTIL RECEIPT OF DELIVERED MATERIALS IS PRODUCED, SIGNED BY A DELDOT MAINTENANCE YARD SUPERVISOR.

8. STATION AND ELEVATION DATA GIVEN FOR DRAINAGE STRUCTURES ARE TO BE APPLIED TO THE CENTER OF THE GRATE FOR INLETS AND TO THE CENTER OF THE STRUCTURE FOR JUNCTION BOXES AND MANHOLES.

9. THE DEPARTMENT AND THE CONTRACTOR SHALL INSPECT ALL EXISTING PIPES AND DRAINAGE STRUCTURES TO BE USED IN THE FINAL DRAINAGE SYSTEM AND AGREE ON THE CONDITION PRIOR TO THE START OF CONSTRUCTION. EXISTING PIPES AND DRAINAGE STRUCTURES DAMAGED DUE TO CONTRACTOR OPERATIONS SHALL BE REPAIRED OR REPLACED IN-KIND AT THE CONTRACTOR'S EXPENSE. THE DEPARTMENT WILL VIDEO INSPECT NEW PIPE RUNS TO CONFIRM CONDITION PRIOR TO ACCEPTANCE. PIPE CLEANING PRIOR TO VIDEO INSPECTION AND MAINTENANCE OF TRAFFIC DURING THE VIDEO INSPECTION ARE THE RESPONSIBILITY OF THE CONTRACTOR AND INCIDENTAL TO THE PIPE ITEM THAT IS BEING VIDEO INSPECTED.

## SECTION 700

10. IN AREAS WHERE PROPOSED CURB MEETS EXISTING CURB AND THE TWO CURB TYPES ARE NOT SIMILAR, THE PROPOSED CURB SHALL BE TRANSITIONED IN 10 LINEAR FEET, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE TRANSITIONED CURB WORK SHALL BE MEASURED AND PAID FOR UNDER THE PROPOSED CURB ITEM. SAW CUTTING OF THE EXISTING CURB SHALL BE INCIDENTAL TO THE PROPOSED CURB ITEM.

11. ALL PAVED AREAS TO BE RECONSTRUCTED OR WIDENED SHALL BE SAWCUT AT THE POINT WHERE THE NEW PAVEMENT IS TO TIE INTO THE EXISTING PAVEMENT.

# PROJECT NOTES (CONTINUED)

## MISCELLANEOUS

12. THE CONTRACTOR SHALL REMOVE (7) EXISTING LIGHTPOLES AND (31) ELECTRIC OUTLETS ON BOLLARDS. ALONG WESTERN MEDIAN AISLE, CONTRACTOR SHALL REMOVE ENTIRE BOLLARD FOUNDATION AND RECONSTRUCT FULL DEPTH PAVEMENT AS SHOWN ON DT-01. BOLLARD FOUNDATIONS ALONG EASTERN MEDIAN AISLE AND BACK AISLE, CONTRACTOR SHALL REMOVE FOUNDATION 12" BELOW GRADE AND FILL WITH PATCHING CONCRETE (TO BE PAID FOR UNDER ITEM 763511 - MAINTENANCE BUILDING).

13. ANY STAGING AND/OR STOCKPILE AREA(S) OUTSIDE THE PROJECT'S LIMIT OF CONSTRUCTION (LOC) THAT INDIVIDUALLY OR CUMULATIVELY ARE LARGER THAN 10,000 SQUARE FEET, MUST BE APPROVED BY DELDOT'S ARCHAEOLOGIST. CONTACT THE CONSTRUCTION AREA ENGINEER WHO WILL COORDINATE WITH DELDOT'S ARCHAEOLOGIST.

14. ALL FIRE LANES, FIRE HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE STATE FIRE PREVENTION REGULATIONS.

15. ANY AND ALL SUBSURAFCE MATERIAL ENCOUNTERED DURING CONSTRUCTION ACTIVITIES SHALL BE REMOVED IN ACCORDANDE WITH DELDOT SPECIFICATIONS FOR EXCAVATION AND EMBANKMENT OR PIPE, CULVERT, AND STRUCTURAL EXCAVATION. EXCAVATION SHALL BE PAID FOR UNDER ITEM 763511 - MAINTENANCE BUILDING.

16. IN ORDER TO MAINTAIN EFFECTIVE COMMUNICATION WITH THE TRAVELING PUBLIC, ONLY PLACE SIGNS, BANNERS, FLAGS, OR OTHER DISPLAYS WITHIN THE PROJECTS LIMITS THAT MEET THE REQUIREMENTS OF THE LATEST VERSION OF THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. ANY SIGNS OR OTHER MATERIALS WHICH DEVIATE FROM THE MUTCD, MUST BE PREAPPROVED BY THE ENGINEER. THE ONLY SIGNAGE AND MATERIALS WHICH MAY BE DISPLAYED UPON VEHICLES AND EQUIPMENT WITHIN THE PROJECT AREA ARE SIGNS DENOTING THE NAME OF THE CONTRACTOR AND ANY SUBCONTRACTORS AND OTHER SIGNS AND/OR MATERIALS REQUIRED AND APPROVED PURSUANT TO THE MUTCD AND THE ENGINEER. CONTRACTOR SHALL IMMEDIATELY REMOVE ANY SIGNS OR MATERIALS WITHIN THE PROJECT THAT DOES NOT MEET THESE REQUIREMENTS IMMEDIATELY UPON NOTIFICATION BY THE ENGINEER. FAILURE TO REMOVE SIGNS OR OTHER MATERIALS FOLLOWING NOTIFICATION FROM THE ENGINEER WILL RESULT IN LIQUIDATED DAMAGES BEING ASSESSED IN THE MANNER AND AMOUNT SPECIFIED IN THE STANDARD SPECIFICATIONS SECTION 108.9A.

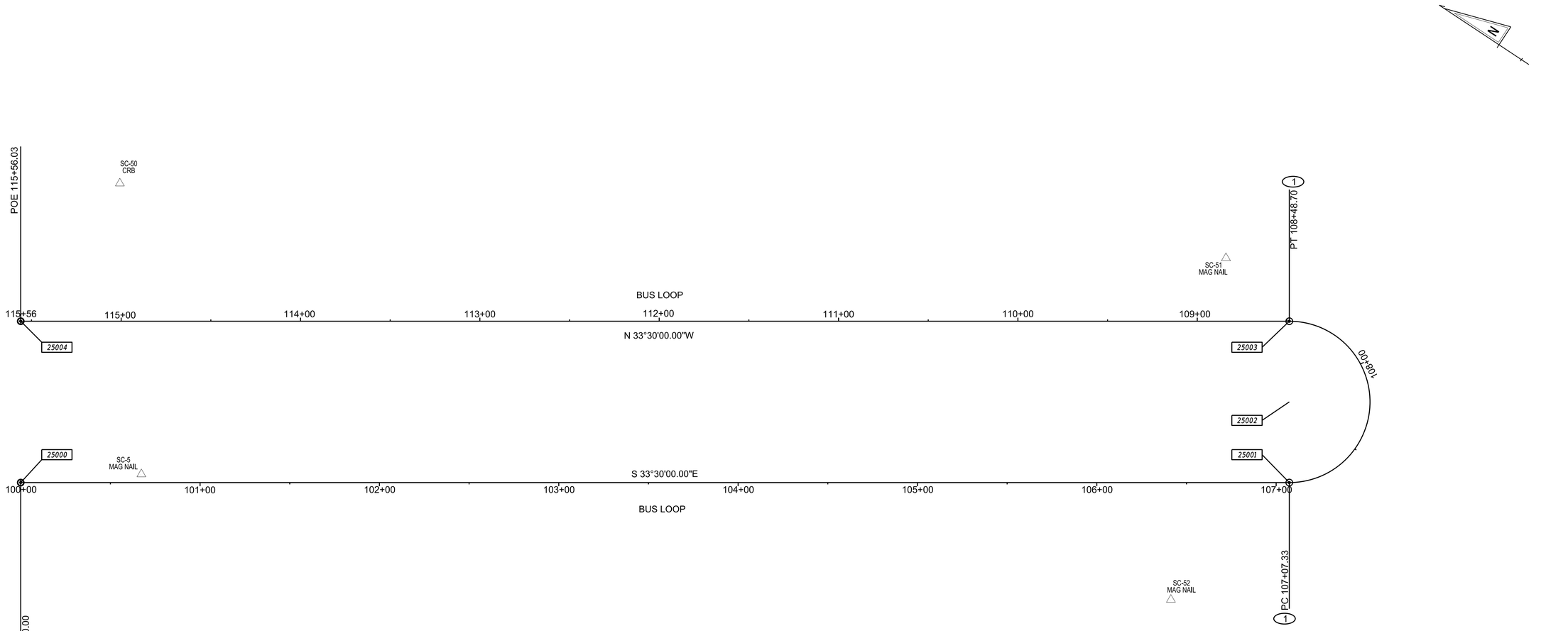
17. PAVING LIMITS BEHIND THE FENCE SHALL BE SEAL COATED PRIOR TO PERMANENT STRIPING IS INSTALLED. SEAL COAT SHALL BE INSTALLED IN ACCORDANCE WITH DELDOT STANDARD SPECIFICATIONS SECTION 504.3.6 AND SHALL BE PAID FOR UNDER ITEM 763511 - MAINTENANCE BUILDING.

## FIRE MARSHALL DATA

| | |
|---|---|
| BUILDING NAME | DOVER MAINTENANCE FACILITY |
| FACILITY ADDRESS | DOVER OPERATIONS FACILITY<br>900 PUBLIC SAFETY BLVD.<br>DOVER, DE 19901 |
| KENT CO.<br>REFERENCE NO. | XXXXXXXX |
| OWNER | DELAWARE DEPARTMENT OF TRANSPORTATION<br>119 LOWER BEECH STREET<br>WILMINGTON, DE 19805 |
| ENGINEER/<br>APPLICANT | JOHNSON, MIRMIRAN, AND THOMPSON<br>121 CONTINENTAL DRIVE<br>NEWARK, DE 19713 |
| BUILDING USE | VEHICLE MAINTENANCE |
| WATER SUPPLIER | CITY OF DOVER |
| BUILDING HEIGHT | N/A |
| BUILDING<br>CONSTRUCTION | N/A |



| ADDENDA / REVISIONS | | NOT TO SCALE | DOVER BUS CANOPY<br>SOLAR PANELS | CONTRACT | BRIDGE NO. | N/A | NOTES | SECTION |
|---|---|---|---|---|---|---|---|---|
| | | | | T202153104.03 | DESIGNED BY: | P. REUTTER | | JMT |
| | | | | COUNTY | | | | SHEET NO. |
| | | | | KENT | CHECKED BY: | N. BERGERON | | 5 |




| CONSTRUCTION ALIGNMENT CONTROL | | | | |
|---|---|---|---|---|
| POINT | STATION | OFFSET | NORTHING | EASTING |
| 25000 | 100+00.00 | 0.00' | 419229.1532 | 629870.6268 |
| 25004 | 115+56.03 | 0.00' | 419278.8276 | 629945.6765 |

| HORIZONTAL / VERTICAL CONTROL DATA | | | |
|---|---|---|---|
| *POINT NO.* | *NORTHING* | *EASTING* | *ELEVATION* |
| SC-5 (MAG NAIL) | 419175.7706 | 629911.2814 | 23.95' |
| SC-50 (CRB) | 419275.3221 | 630039.9415 | 24.84' |
| SC-51 (MAG NAIL) | 418738.0230 | 630345.5744 | 23.37' |
| SC-52 (MAG NAIL) | 418658.4390 | 630169.7602 | 23.51' |

*DATUM REFERENCE:*

*HORIZONTAL - THIS PROJECT IS REFERENCED TO THE DELAWARE STATE PLANE COORDINATE SYSTEM (NAD 83/2011).*

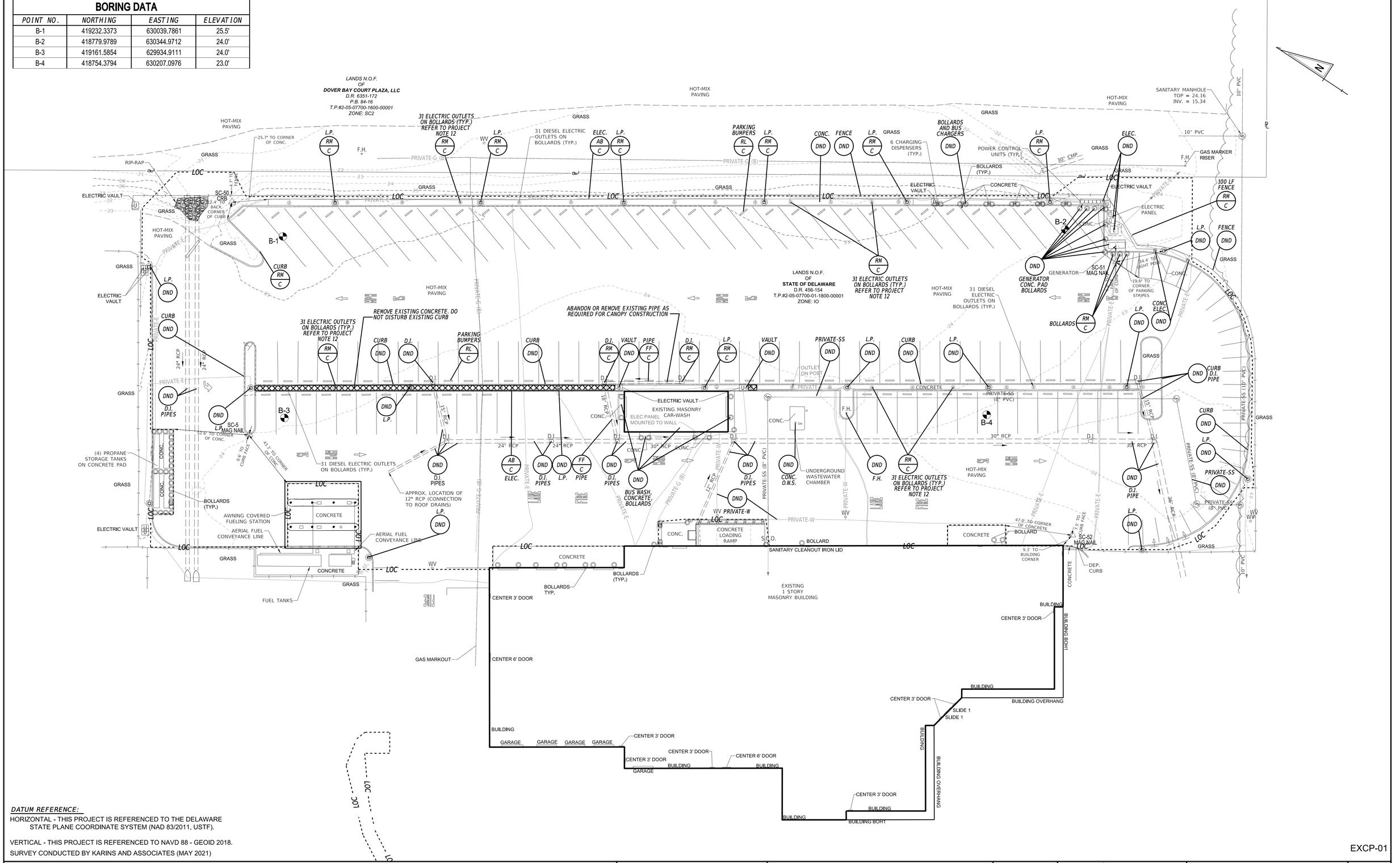
*VERTICAL - THIS PROJECT IS REFERENCED TO NAVD 88.*

| CIRCULAR CURVE NO. 1 | | | |
|---|---|---|---|
| ELEMENT: CIRCULAR | STATION | NORTHING | EASTING |
| PC (25001) | 107+07.33 | 418639.3211 | 630261.0281 |
| CC (25002) | | 418664.1583 | 630298.5530 |
| PT (25003) | 108+48.70 | 418688.9955 | 630336.0779 |
| RADIUS: | 45.00 | | |
| DELTA: | 180°00'00.00" LT | | |
| DEGREE OF CURVATURE(ARC): | 127°19'26.23" | | |
| LENGTH: | 141.37 | | |
| TANGENT: | -1.00 | | |
| CHORD: | 90.00 | | |
| MIDDLE ORDINATE: | -1.00 | | |
| EXTERNAL: | -1.00 | | |
| TANGENT DIRECTION: | S 33°30'00.00" E | | |
| RADIAL DIRECTION: | S 56°30'00.00"W | | |
| CHORD DIRECTION: | N 56°30'00.00" E | | |
| RADIAL DIRECTION: | N 56°30'00.00" E | | |
| TANGENT DIRECTION: | N 33°30'00.00" E | | |

HV-01

| ADDENDA / REVISIONS | | SCALE 0 30 60 90 FEET | DOVER BUS CANOPY SOLAR PANELS | CONTRACT T202153104.03 | BRIDGE NO. N/A | HORIZONTAL AND VERTICAL CONTROLS | SECTION JMT |
|---|---|---|---|---|---|---|---|
| | | | | COUNTY KENT | DESIGNED BY: P. REUTTER | | SHEET NO. 6 |
| | | | | | CHECKED BY: N. BERGERON | | |

| BORING DATA | | | |
|---|---|---|---|
| POINT NO. | NORTHING | EASTING | ELEVATION |
| B-1 | 419232.3373 | 630039.7861 | 25.5' |
| B-2 | 418779.9789 | 630344.9712 | 24.0' |
| B-3 | 419161.5854 | 629934.9111 | 24.0' |
| B-4 | 418754.3794 | 630207.0976 | 23.0' |




*DATUM REFERENCE:*

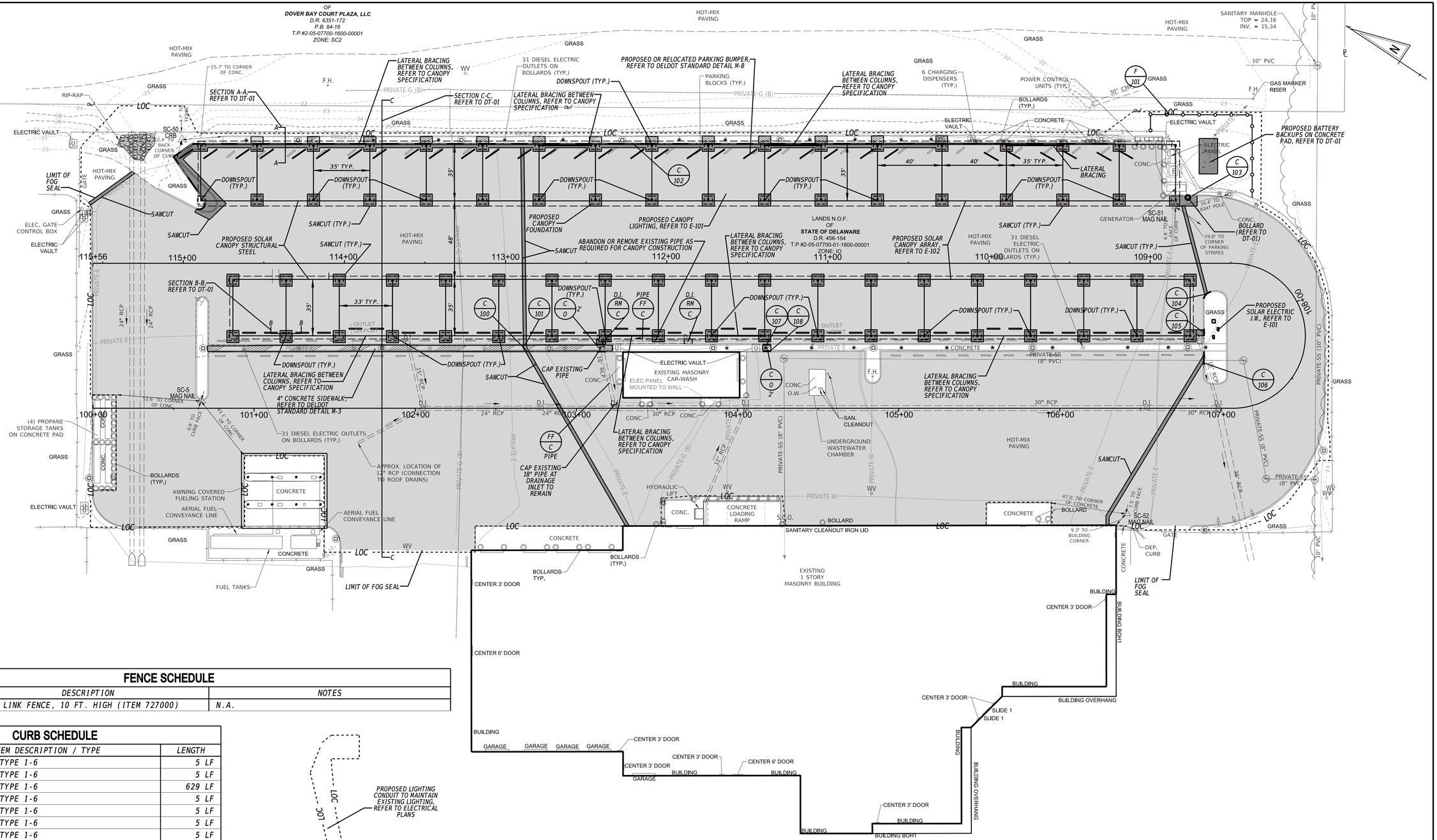
HORIZONTAL - THIS PROJECT IS REFERENCED TO THE DELAWARE STATE PLANE COORDINATE SYSTEM (NAD 83/2011, USTF).

VERTICAL - THIS PROJECT IS REFERENCED TO NAVD 88 - GEOID 2018.

SURVEY CONDUCTED BY KARINS AND ASSOCIATES (MAY 2021)

EXCP-01

| ADDENDA / REVISIONS | | SCALE 0 30 60 90 FEET | DOVER BUS CANOPY SOLAR PANELS | CONTRACT T202153104.03 | BRIDGE NO. N/A | EXISTING CONDITIONS AND DEMOLITION PLAN | SECTION JMT |
|---|---|---|---|---|---|---|---|
| | | | | COUNTY KENT | DESIGNED BY: P. REUTTER | | SHEET NO. 7 |
| | | | | | CHECKED BY: N. BERGERON | | |




## FENCE SCHEDULE

| NO. | QTY. | DESCRIPTION | NOTES |
|---|---|---|---|
| 101 | 125 LF | CHAIN LINK FENCE, 10 FT. HIGH (ITEM 727000) | N.A. |

## CURB SCHEDULE

| NO. | ITEM DESCRIPTION / TYPE | LENGTH |
|---|---|---|
| 100 | P.C.C. CURB, TYPE 1-6 | 5 LF |
| 101 | P.C.C. CURB, TYPE 1-6 | 5 LF |
| 102 | P.C.C. CURB, TYPE 1-6 | 629 LF |
| 103 | P.C.C. CURB, TYPE 1-6 | 5 LF |
| 104 | P.C.C. CURB, TYPE 1-6 | 5 LF |
| 105 | P.C.C. CURB, TYPE 1-6 | 5 LF |
| 106 | P.C.C. CURB, TYPE 1-6 | 5 LF |
| 107 | P.C.C. CURB, TYPE 1-6 | 5 LF |
| 108 | P.C.C. CURB, TYPE 1-6 | 5 LF |

CP-01

ADDENDA / REVISIONS

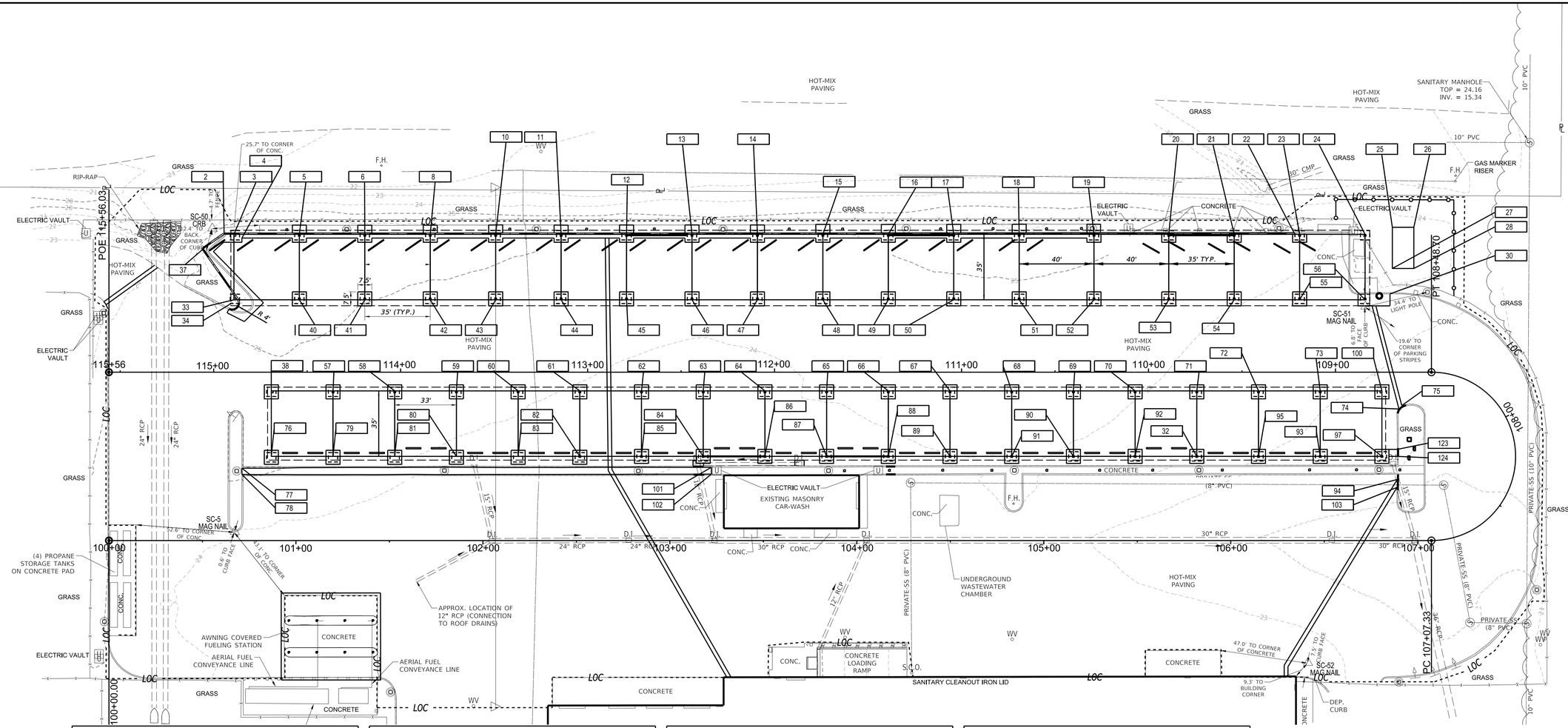
SCALE
0 30 60 90
FEET

# DOVER BUS CANOPY SOLAR PANELS

| | |
|---|---|
| CONTRACT | T202153104.03 |
| COUNTY | KENT |
| BRIDGE NO. | N/A |
| DESIGNED BY: | P. REUTTER |
| CHECKED BY: | N. BERGERON |

CONSTRUCTION PLAN

| | |
|---|---|
| SECTION | JMT |
| SHEET NO. | 8 |




## COORDINATE LIST

| POINT NO. | DESCRIPTION | NORTHING | EASTING |
|---|---|---|---|
| 2 | FACE OF CURB | 419268.1667 | 630041.1532 |
| 3 | COLUMN | 419263.7866 | 630044.0523 |
| 4 | COLUMN | 419259.1387 | 630044.7302 |
| 5 | COLUMN | 419234.6006 | 630063.3701 |
| 6 | COLUMN | 419205.4146 | 630082.6879 |
| 8 | COLUMN | 419176.2286 | 630102.0057 |
| 10 | COLUMN | 419147.0426 | 630121.3235 |
| 11 | COLUMN | 419117.8566 | 630140.6412 |
| 12 | COLUMN | 419088.6706 | 630159.9590 |
| 13 | COLUMN | 419059.4846 | 630179.2768 |
| 14 | COLUMN | 419030.2986 | 630198.5946 |
| 15 | COLUMN | 419001.1126 | 630217.9124 |
| 16 | COLUMN | 418971.9266 | 630237.2302 |
| 17 | COLUMN | 418942.7406 | 630256.5480 |
| 18 | COLUMN | 418913.5546 | 630275.8658 |
| 19 | COLUMN | 418880.1992 | 630297.9433 |
| 20 | COLUMN | 418846.8437 | 630320.0208 |
| 21 | COLUMN | 418817.6577 | 630339.3386 |
| 22 | FACE OF CURB | 418790.5847 | 630357.2359 |
| 23 | COLUMN | 418788.4717 | 630358.6564 |
| 24 | COLUMN | 418759.2857 | 630377.9742 |
| 25 | BATTERY PAD | 418749.1843 | 630389.1240 |
| 26 | BATTERY PAD | 418739.5894 | 630395.4747 |
| 27 | BATTERY PAD | 418737.0490 | 630370.7895 |
| 28 | BATTERY PAD | 418727.4541 | 630377.1403 |

## COORDINATE LIST

| POINT NO. | DESCRIPTION | NORTHING | EASTING |
|---|---|---|---|
| 30 | SAWCUT | 418730.5986 | 630358.7719 |
| 32 | COLUMN | 418768.8026 | 630229.2905 |
| 33 | COLUMN | 419244.4688 | 630014.8663 |
| 34 | FACE OF CURB | 419244.3479 | 630012.9787 |
| 37 | FACE OF CURB | 419273.1086 | 630028.6026 |
| 38 | COLUMN | 419200.8938 | 629985.2677 |
| 40 | COLUMN | 419215.2828 | 630034.1841 |
| 41 | COLUMN | 419186.0968 | 630053.5019 |
| 42 | COLUMN | 419156.9108 | 630072.8197 |
| 43 | COLUMN | 419127.7248 | 630092.1374 |
| 44 | COLUMN | 419098.5388 | 630111.4552 |
| 45 | COLUMN | 419069.3528 | 630130.7730 |
| 46 | COLUMN | 419040.1668 | 630150.0908 |
| 47 | COLUMN | 419010.9808 | 630169.4086 |
| 48 | COLUMN | 418981.7948 | 630188.7264 |
| 49 | COLUMN | 418952.6088 | 630208.0442 |
| 50 | COLUMN | 418923.4228 | 630227.3620 |
| 51 | COLUMN | 418894.2368 | 630246.6798 |
| 52 | COLUMN | 418860.8814 | 630268.7573 |
| 53 | COLUMN | 418827.5259 | 630290.8348 |
| 54 | COLUMN | 418798.3399 | 630310.1526 |
| 55 | COLUMN | 418769.1539 | 630329.4704 |
| 56 | COLUMN | 418739.9601 | 630348.7933 |

## COORDINATE LIST

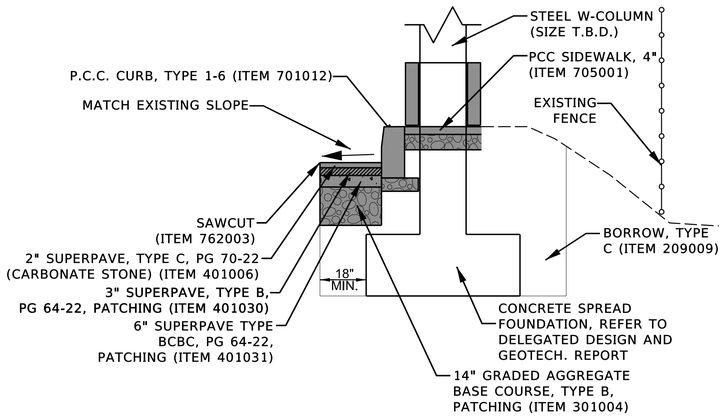
| POINT NO. | DESCRIPTION | NORTHING | EASTING |
|---|---|---|---|
| 57 | COLUMN | 419173.3756 | 630003.4816 |
| 58 | COLUMN | 419145.8574 | 630021.6955 |
| 59 | COLUMN | 419118.3392 | 630039.9094 |
| 60 | COLUMN | 419090.8209 | 630058.1233 |
| 61 | COLUMN | 419063.3027 | 630076.3373 |
| 62 | COLUMN | 419035.7845 | 630094.5512 |
| 63 | COLUMN | 419008.2662 | 630112.7651 |
| 64 | COLUMN | 418980.7480 | 630130.9790 |
| 65 | COLUMN | 418953.2298 | 630149.1930 |
| 66 | COLUMN | 418925.7115 | 630167.4069 |
| 67 | COLUMN | 418898.1933 | 630185.6208 |
| 68 | COLUMN | 418870.6751 | 630203.8347 |
| 69 | COLUMN | 418843.1568 | 630222.0486 |
| 70 | COLUMN | 418815.6386 | 630240.2626 |
| 71 | COLUMN | 418788.1204 | 630258.4765 |
| 72 | COLUMN | 418760.6021 | 630276.6904 |
| 73 | COLUMN | 418733.0839 | 630294.9043 |
| 74 | FACE OF CURB | 418692.6367 | 630310.0783 |
| 75 | FACE OF CURB | 418692.3631 | 630312.4612 |
| 76 | COLUMN | 419181.5761 | 629956.0817 |
| 77 | SIDEWALK | 419191.2510 | 629942.1475 |
| 78 | SIDEWALK | 419189.3132 | 629939.3484 |
| 79 | COLUMN | 419154.0578 | 629974.2956 |
| 80 | COLUMN | 419099.0214 | 630010.7234 |
| 81 | COLUMN | 419126.9805 | 629988.1749 |
| 82 | COLUMN | 419043.9849 | 630047.1513 |
| 83 | COLUMN | 419071.5031 | 630028.9373 |
| 84 | COLUMN | 418988.9484 | 630083.5791 |

## COORDINATE LIST

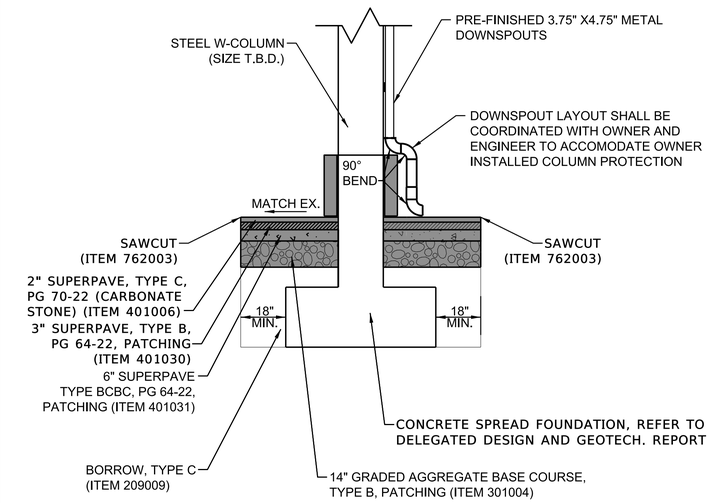
| POINT NO. | DESCRIPTION | NORTHING | EASTING |
|---|---|---|---|
| 85 | COLUMN | 419016.4667 | 630065.3652 |
| 86 | COLUMN | 418961.4302 | 630101.7930 |
| 87 | COLUMN | 418933.9120 | 630120.0069 |
| 88 | COLUMN | 418906.3937 | 630138.2209 |
| 89 | COLUMN | 418878.8755 | 630156.4348 |
| 90 | COLUMN | 418823.8390 | 630192.8626 |
| 91 | COLUMN | 418851.3573 | 630174.6487 |
| 92 | COLUMN | 418796.3208 | 630211.0765 |
| 93 | COLUMN | 418713.7866 | 630265.7244 |
| 94 | FACE OF CURB | 418672.6053 | 630278.1707 |
| 95 | COLUMN | 418741.2953 | 630247.5109 |
| 96 | COLUMN | 418714.5583 | 630261.9145 |
| 97 | COLUMN | 418686.2479 | 630283.9322 |
| 99 | COLUMN | 418735.0560 | 630348.1434 |
| 100 | COLUMN | 418705.5657 | 630313.1182 |
| 101 | SIDEWALK | 418982.0560 | 630081.1253 |
| 102 | SIDEWALK | 418980.0289 | 630078.0698 |
| 103 | FACE OF CURB | 418670.3418 | 630274.6060 |
| 123 | FACE OF CURB | 418681.4384 | 630291.6126 |
| 124 | FACE OF CURB | 418679.3671 | 630288.4865 |

GG-01

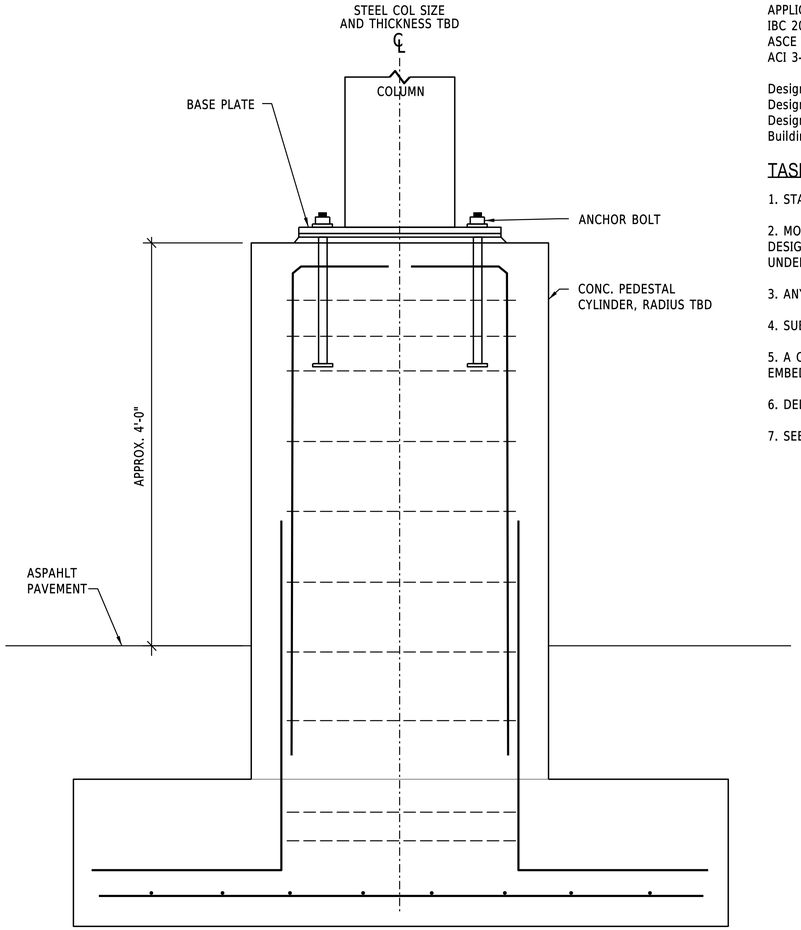
| ADDENDA / REVISIONS | | SCALE 0 30 60 90 FEET | DOVER BUS CANOPY SOLAR PANELS | CONTRACT T202153104.03 | BRIDGE NO. N/A | GRADES AND GEOMETRICS | SECTION JMT |
|---|---|---|---|---|---|---|---|
| | | | | COUNTY KENT | DESIGNED BY: P. REUTTER | | SHEET NO. 9 |
| | | | | | CHECKED BY: N. BERGERON | | |




## CANOPY FOUNDATION AND PAVEMENT PATCH SITE (SECTION A-A)
N.T.S.




## CANOPY FOUNDATION AND PAVEMENT PATCH (SECTION B-B)
N.T.S.




## CANOPY FOUNDATION
N.T.S.

## STRUCTURAL DELEGATED DESIGN NOTES:

APPLICABLE CODES:
IBC 2021
ASCE 7-16
ACI 3-18-19

Design Roof Live Load: Per ASCE 7
Design Wind Speed = 115 mph
Design Snow Load = 25 psf
Building Risk Category II

## TASKS FOR DELEGATED DESIGN OF FOUNDATIONS AND CANOPY:

1. STANDARD DRAWINGS AND DESIGN ANALYSIS SHALL BEAR THE SEAL OF A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF DELAWARE.

2. MODIFICATIONS OF THE FOUNDATIONS, AS SHOWN HERON, REQUIRED TO ACCOMMODATE DETAILS OF THE CANOPY FRAMING MUST BE DESIGNED AND DOCUMENTED BY THE DELEGATED DESIGNER. DESIGN CALCULATIONS AND CONSTRUCTION DOCUMENTS MUST BE PREPARED UNDER THE SUPERVISION OF AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF DELEWARE.

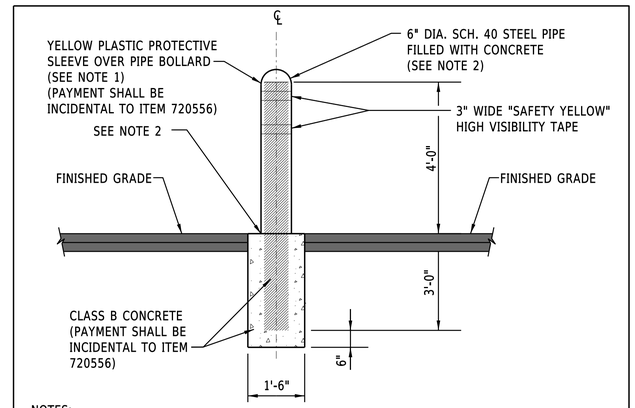
3. ANY MODIFICATIONS TO THE FOUNDATIONS SHOWN ON THESE DRAWINGS ARE SUBJECT TO THE APPROVAL OF THE OWNER.

4. SUBMIT CANOPY DRAWINGS AND FINAL FOUNDATION LOADS PRIOR TO INITIATION OF THE FOUNDATION WORK.

5. A COMPLETE DESIGN ANALYSIS SHOWING ALL CALCULATIONS FOR FRAME, BEAMS, AND A LAYOUT OF THE ANCHOR BOLTS, OR OTHER EMBEDDED ITEMS, SHALL BE SUBMITTED WITH THE DELEGATED DESIGN.

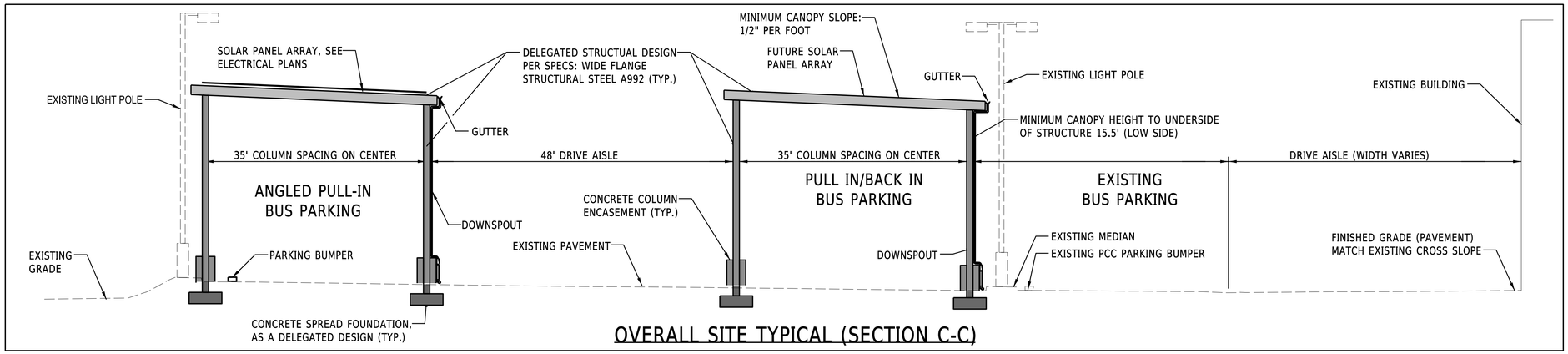
6. DELEGATED DESIGN SHALL INCLUDE DETAILS OF ALL MAIN MEMBERS, TYPICAL CONNECTIONS SHOWING BOLT HOLES AND WELDS.

7. SEE SPECIFICATIONS FOR MORE INFORMATION ON DELEGATED DESIGN.




NOTES:
1. PAINT BOLLARDS SAFETY YELLOW PRIOR TO INSTALLATION OF PLASTIC PROTECTIVE SLEEVE.
2. APPLY COMMERCIAL GRADE WHITE FLEXIBLE JOINT SEALANT AROUND BASE OF BOLLARD.
3. SHALL BE PAID FOR UNDER ITEM 763511 - MAINTENANCE BUILDING.

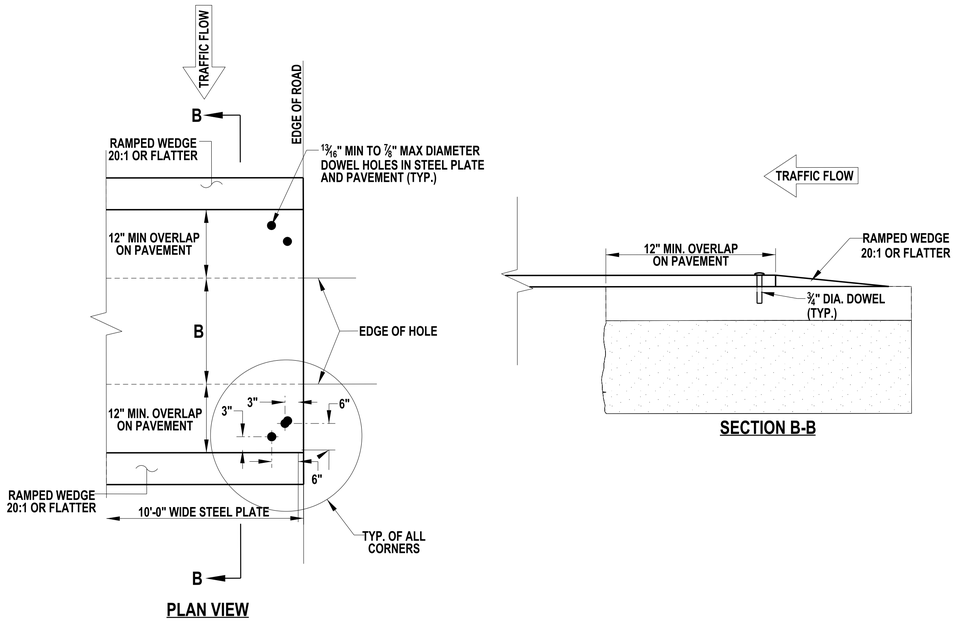
## STEEL BOLLARD
NOT TO SCALE




## OVERALL SITE TYPICAL (SECTION C-C)

DT-01

| ADDENDA / REVISIONS | SCALE | DOVER BUS CANOPY SOLAR PANELS | CONTRACT | BRIDGE NO. N/A | CONSTRUCTION DETAILS | SECTION |
|---|---|---|---|---|---|---|
| | 0 30 60 90 FEET | | T202153104.03 | DESIGNED BY: P. REUTTER | | JMT |
| | | | COUNTY | CHECKED BY: N. BERGERON | | SHEET NO. |
| | | | KENT | | | 10 |




PLAN VIEW




SECTION B-B

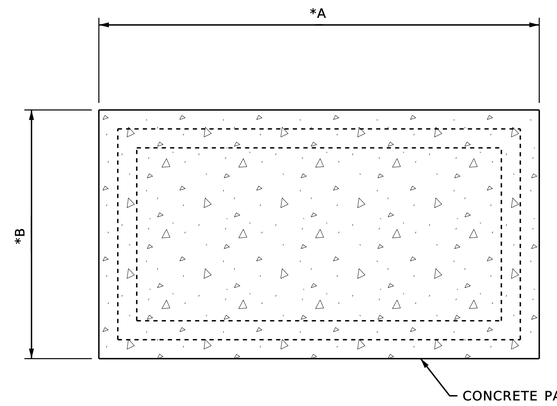
NOTES:

1. USE OF STEEL PLATES MUST BE APPROVED BY THE ENGINEER AND IS NOT PERMITTED BETWEEN NOVEMBER 1ST AND MARCH 31ST.
2. STEEL PLATES AND DOWELS WILL CONFORM TO ASTM A36 STANDARDS.
3. ADEQUATELY SHORE THE TRENCH IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS TO SUPPORT THE BRIDGING AND TRAFFIC LOADS.
4. SECURE BRIDGING AGAINST DISPLACEMENT BY USING ADJUSTABLE CLEATS, SHIMS, OR OTHER DEVICES.
5. USE OF STEEL PLATE BRIDGING IS NOT TO EXCEED FOUR (4) CONSECUTIVE WORKING DAYS IN ANY GIVEN WEEK AND NOT LEFT IN PLACE OVER THE WEEKEND, UNLESS DIRECTED BY THE ENGINEER IN THE FIELD.
6. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF STEEL PLATES, SHORING, ASPHALT CONCRETE RAMPS, AND ENSURING THEY MEET ALL MINIMUM SPECIFICATIONS. DEFORMATIONS OF ANY KIND ARE NOT ACCEPTABLE ON STEEL PLATES. EXAMPLES OF DEFORMATIONS COULD BE, BUT NOT LIMITED TO, ANY OF THE FOLLOWING: FREE FROM ANY CLIPS, CHAINS, ATTACHMENTS, WELDMENTS, SURFACE IRREGULARITIES, ETC.
7. A STRUCTURE DESIGN IS REQUIRED FOR TRENCH WIDTHS GREATER THAN 6'-0". DESIGN WILL BE APPROVED BY DEPARTMENT PRIOR TO USE.
8. INSTALL STEEL PLATE BRIDGING AND SHORING USING THE METHOD BELOW:
   METHOD: FOR SPEEDS 45 MPH OR LESS, ATTACH THE PLATE TO THE ROADWAY BY A MINIMUM OF TWO DOWELS PRE-DRILLED INTO EACH CORNER OF THE PLATE AND DRILLED 2"INTO THE PAVEMENT AS SHOWN IN ON THIS DETAIL. BUTT SUBSEQUENT PLATES TO EACH OTHER. USE COMPACTED BITUMINOUS TEMPORARY ROADWAY MATERIAL (TRM) TO FORM A RAMPED WEDGE WITH A MAXIMUM SLOPE OF 5% AND A MINIMUM TAPER LENGTH OF 20" TO COVER ALL EDGES OF STEEL PLATES.
9. WHEN THE STEEL PLATES ARE REMOVED, BACKFILL THE DOWEL HOLES IN THE PAVEMENT WITH EITHER GRADED FINES OF ASPHALT CONCRETE MIX, CONCRETE SLURRY,OR EQUIVALENT SLURRY TO THE SATISFACTION OF THE ENGINEER.
10. STEEL PLATES MUST HAVE A SURFACE THAT IS MANUFACTURED WITH A MINIMUM NOMINAL COEFFICIENT OF FRICTION OF 0.35 AT THE TIME OF PLACEMENT.
11. STEEL PLATE(S) AND PLATING SHALL NOT BE PAID FOR DIRECTLY AND BOTH ARE INCIDENTAL TO HOTMIX AND CONCRETE PATCHING ITEMS.

| B | C |
|---|---|
| TRENCH WIDTH | MIN. PLATE THICKNESS |
| 1'-0" | 1/2" |
| 2'-0" | 3/4" |
| 3'-0" | 7/8" |
| 4'-0" | 1" |
| 5'-0" | 1 1/8" |
| 6'-0" | 1 1/4" |

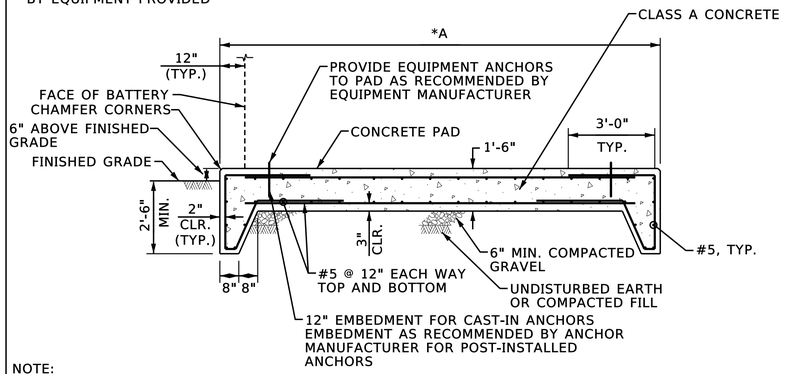
BASED ON HL-93 TRUCK LOAD

## TRENCHING - STEEL PLATE DETAIL




PLAN

* SIZE OF PAD TO BE DETERMINED BY EQUIPMENT PROVIDED



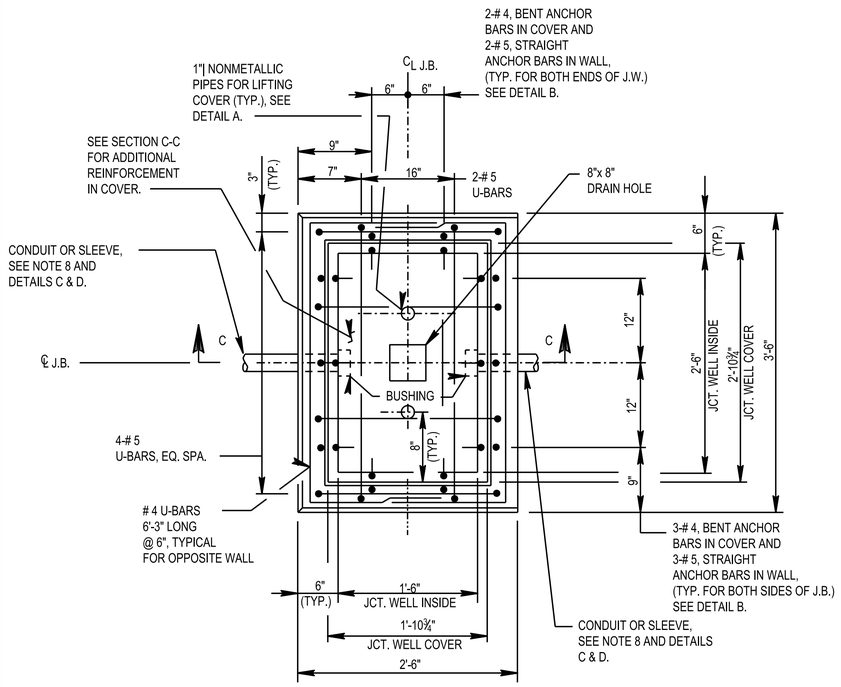

NOTE:
1. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
2. UNLESS NOTED OTHERWISE CONCRETE SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF NO LESS THAN 4000 PSI.
3. CONCRETE IS TO BE CURED FOR A MINIMUM OF 7 DAYS BEFORE IMPOSING LOADS.
4. CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND FABRICATION OF ALL FORM WORK.
5. REBAR IS TO BE GRADE 60 PER ASTM A615.
6. EQUIPMENT PADS TO BE INCIDENTAL TO 500KW BATTERY STORAGE SYSTEM. ITEM INCLUDES ALL MATERIALS, EXCAVATION, AND LABOR REQUIRED TO CONSTRUCT THE EQUIPMENT PAD.

## BATTERY PAD DETAIL

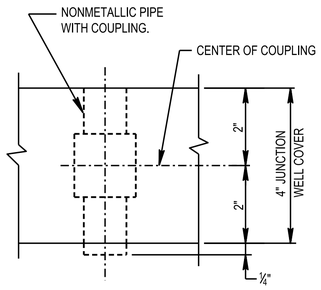
NOT TO SCALE

DT-02

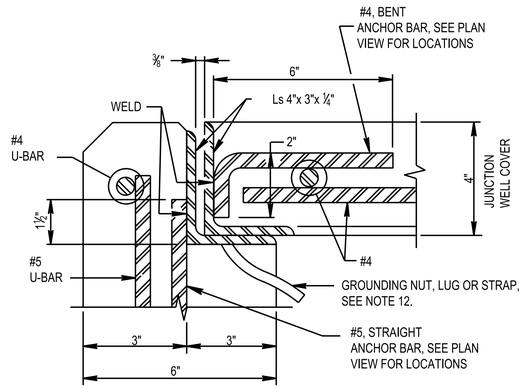
| ADDENDA / REVISIONS | | SCALE | DOVER BUS CANOPY SOLAR PANELS | CONTRACT | BRIDGE NO. N/A | CONSTRUCTION DETAILS | SECTION |
|---|---|---|---|---|---|---|---|
| | | 0 30 60 90 | | T202153104.03 | DESIGNED BY: P. REUTTER | | JMT |
| | | FEET | | COUNTY | CHECKED BY: N. BERGERON | | SHEET NO. |
| | | | | KENT | | | 11 |



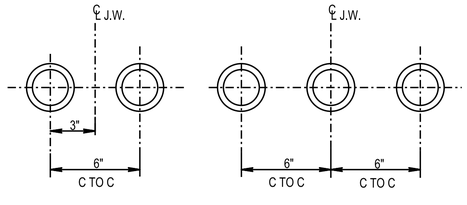

PLAN




DETAIL A



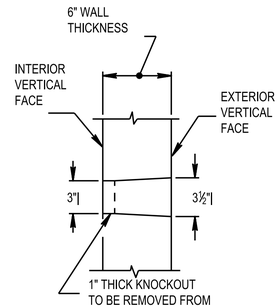

DETAIL B
COVER FRAME AND
SUPPORTING FRAME



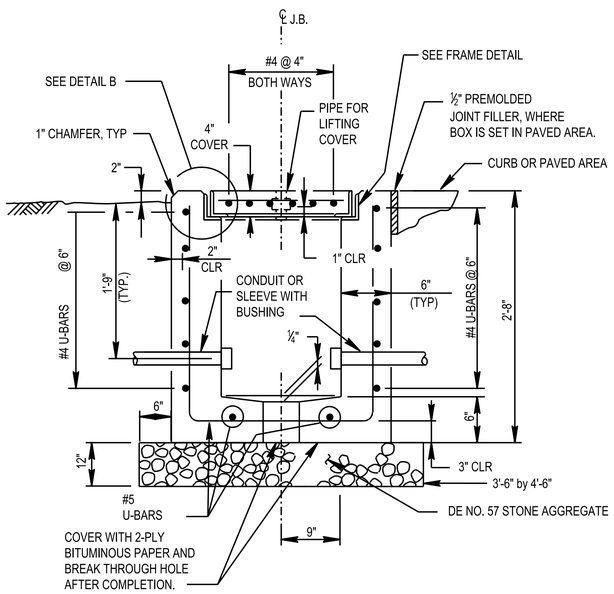

TWO CONDUITS PER VERTICAL FACE

THREE CONDUITS PER VERTICAL FACE

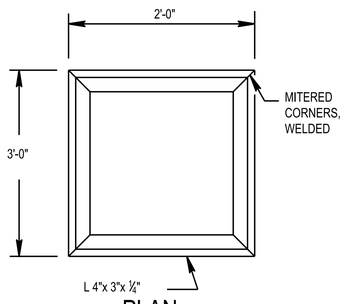
DETAIL C
MULTIPLE CONDUITS IN PLACE
(CAST-IN-PLACE OR PRECAST UNITS)




DETAIL D
TYPICAL KNOCKOUT
(PRECAST UNITS ONLY)




SECTION C-C
JUNCTION WELL




PLAN
FRAME DETAIL
(STEEL OR ALUMINUM)

## NOTES

1. PROVIDE MATERIALS AND CONSTRUCT AS SPECIFIED IN THE SPECIAL PROVISION SPECIFICATION.
2. PROVIDE PRECAST CONCRETE JUNTION WELLS SUPPLIED BY A MANUFACTURER FOLLOWING THE DESIGN DETAIL. FOR DEVIATION OR MODIFICATION OF THE STANDARDS, SUBMIT SHOP DRAWINGS FOR APPROVAL.
3. PROTECTIVE COATING - STEEL FRAME. HOT DIP GALVANIZE IN ACCORDANCE WITH SPECIAL PROVISION CONSTRUCTION METHOD.
4. COST OF DE NO. 57 STONE AGGREGATE IS INCIDENTAL JUNCTION WELL.
5. FOR THE LOCATION, SIZE AND NUMBER OF CONDUITS REQUIRED FOR EACH JUNCTION BOX, SEE THE ELECTRICAL PLANS.
6. THE CONDUIT LOCATIONS SHOWN REPRESENT NORMAL POSITIONS. FOR CAST-IN-PLACE OR PRECAST CONSTRUCTION, WHEN TWO OR THREE CONDUITS ARE INDICATED ON THE SAME VERTICAL FACE, SPACE CONDUITS AT 6" C TO C AND SYMMETRICAL ABOUT THE CENTERLINE OF THE BOX, AS INDICATED IN DETAIL C, WITH FULL WALL THICKNESS BETWEEN OPENINGS.PROVIDE KNOCKOUTS FOR PRECAST UNITS AS INDICATED IN DETAIL D AND LOCATE AS INDICATED IN DETAIL C. GROUT THE CONDUIT OR SLEEVE IN ACCORDANCE WITH SPECIFICATION.
7. PROVIDE POSITIVE DRAINAGE, 1.5"-2" NONMETALLIC CONDUIT, FOR JUNCTION BOXES WHEN FEASIBLE. PROVIDE RODENT PROOF DRAIN.
8. PROVIDE STRUCTURAL STEEL CONFORMING TO ASTM-A36/A36M. PROVIDE ALUMINUM CONFORMING TO ASTM-B221 ALLOY 6061 - T6.
9. PROVIDE AS A MINIMUM: CLASS A CONCRETE FOR CAST-IN-PLACE WELLS AND CLASS A CONCRETE FOR PRECAST WELLS.
10. GROUND EXPOSED METAL PARTS OF JUNCTION WELLS. DO NOT CONNECT GROUND WIRE DIRECTLY TO LID.
11. ALL REINFORCEMENT STEEL BARS SHOWN TO MEET ASTM A 615/A 615M, A 616/A 616M, A 706/A 706M AND A 996/A 996M.
12. ALL DIMENSIONS ARE IN U.S. CUSTOMARY UNITS UNLESS OTHERWISE NOTED.

JUNCTION WELL-HEAVY DUTY
CAST-IN-PLACE OR PRECAST

DT-03

| ADDENDA / REVISIONS | SCALE 0 30 60 90 FEET | DOVER BUS CANOPY SOLAR PANELS | CONTRACT T202153104.03 | BRIDGE NO. N/A | CONSTRUCTION DETAILS | SECTION JMT |
|---|---|---|---|---|---|---|
| | | | COUNTY KENT | DESIGNED BY: P. REUTTER | | SHEET NO. 12 |
| | | | | CHECKED BY: N. BERGERON | | |

# EROSION AND SEDIMENT CONTROL NOTES

THE DISTURBED AREA FOR THE PROJECT IS 0.6 ACRES.

1. THE DNREC SEDIMENT AND STORMWATER PROGRAM (OR DELEGATED AGENCY) SHALL BE NOTIFIED IN WRITING 5 DAYS PRIOR TO COMMENCING WITH CONSTRUCTION. FAILURE TO DO SO CONSTITUTES A VIOLATION OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLAN

2. REVIEW AND/OR APPROVAL OF THE SEDIMENT AND STORMWATER MANGEMENT PLAN SHALL NOT RELIEVE THE CONTRACTOR FROM HIS OR HER RESPONSIBILITIES FOR COMPLIANCE WITH THE REQUIREMENTS OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS, NOR SHALL IT RELIEVE THE CONTRACTOR FROM ERRORS OR OMISSIONS IN THE APPROVED PLAN.

3. IF THE APPROVED PLAN NEEDS TO BE MODIFIED, ADDITIONAL SEDIMENT AND STORMWATER CONTROL MEASURES MAY BE REQUIRED AS DEEMED NECESSARY BY DNREC OR THE DELEGATED AGENCY.

4. FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED FOR ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE WITHIN 14 CALENDAR DAYS UNLESS MORE RESTRICTIVE FEDERAL REQUIREMENTS APPLY.

5. ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL COMPLY WITH THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.

6. AT ANY TIME A DEWATERING OPERATION IS USED, IT SHALL BE PREVIOUSLY APPROVED BY THE AGENCY CONSTRUCTION SITE REVIEWER FOR A NON-EROSIVE POINT OF DISCHARGE, AND A DEWATERING PERMIT SHOULD BE APPROVED BY THE DNREC WELL PERMITTING BRANCH.

7. APPROVAL OF A SEDIMENT AND STORMWATER MANAGEMENT PLAN DOES NOT GRANT OR IMPLY A RIGHT TO DISCHARGE STORMWATER RUNOFF. THE OWNER/DEVELOPER IS RESPONSIBLE FOR ACQUIRING ANY AND ALL AGREEMENTS, EASEMENTS, ETC., NECESSARY TO COMPLY WITH STATE DRAINAGE AND OTHER APPLICABLE LAWS.

8. THE CONTRACTOR SHALL AT ALL TIMES PROTECT AGAINST SEDIMENT OR DEBRIS LADEN RUNOFF OR WIND FROM LEAVING THE SITE. PERIMETER CONTROLS SHALL BE CHECKED DAILY AND ADJUSTED OR REPAIRED TO FULLY CONTAIN AND CONTROL SEDIMENT FROM LEAVING THE SITE. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED HALF OF THE EFFECTIVE CAPACITY OF THE CONTROL. IN ADDITION, THE CONTRACTOR MAY NEED TO ADJUST OR ALTER MEASURES IN TIMES OF ADVERSE WEATHER CONDITIONS, OR AS DIRECTED BY AGENCY CONSTRUCTION SITE REVIEWER.

9. BEST AVAILABLE TECHNOLOGY (BAT) SHALL BE EMPLOYED TO MANAGE TURBID DISCHARGES IN ACCORDANCE WITH REQUIREMENTS OF 7. DEL C. CH 60, REGULATIONS GOVERNING THE CONTROL OF WATER POLLUTION, SECTION 9.1.02, KNOWN AS SPECIAL CONDITIONS FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES, AND DNREC POLICIES, PROCEDURES, AND GUIDANCE.

# GENERAL CONSTRUCTION PHASING NOTES

1. UPON NTP THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION SCHEDULE PRIOR TO ON-SITE PRE-CONSTRUCTION MEETING THAT MAINTAINS INTENT OF CONSTRUCTION PHASING AS SHOWN.

2. THE CONTRACTOR MUST MAINTAIN SITE SECURITY AT ALL TIMES DURING CONSTRUCTION. SITE FENCING, MOTION DETECTORS, AND SECURITY CAMERAS MUST BE REINSTALLED AT THE CONCLUSION OF EACH DAY. ANY DISRUPTION TO DTC'S OPERATIONS AND/OR SECURITY TO THE SITE MUST BE APPROVED BY THE ENGINEER.

3. THE OWNER IS NOT RESPONSIBLE/LIABLE FOR THE SAFETY/SECURITY OF CONTRACTOR MATERIALS AND EQUIPMENT.

4. THE CONTRACTOR SHALL NOT PARK ANY PERSONAL VEHICLES ON DELAWARE TRANSIT CORPORATION DURING CONSTRUCTION.

5. THE CONTRACTOR MUST MAINTAIN BUS CIRCULATION THROUGHOUT THE SITE AND MAINTAIN ACCESS TO EXISTING BUILDINGS MAINTAINENCE BAYS, BUS FUELING STATION AND BUS WASH AT ALL TIMES. ANY DISRUPTION TO DTC'S OPERATIONS AND/OR SECURITY TO THE SITE MUST BE APPROVED BY THE ENGINEER.

6. THE CONTRACTOR MUST PROVIDE WRITTEN NOTICE TO THE OWNER AND ENGINEER AT LEAST 48 HOURS IN ADVANCE OF AN POWER OUTAGE.

7. ALL TRENCHING ACTIVITIES TO INSTALL CONDUIT AND DRAINAGE MUST BE COORDINATED WITH THE OWNER AND THE ENGINEER TO MINIMZE IMPACTS TO DTC SITE OPERATIONS. STEEL PLATES MAY BE USED FOR SHORT DURATIONS TO MAINTAIN ACCESS.

8. ALLOWABLE WORK HOURS ARE 7 A.M. TO 6 P.M. MONDAY THROUGH SATURDAY. SUNDAY WORK HOURS MUST BE IN ACCORDANCE WITH CITY OF DOVER QUIET HOURS. ANY SUNDAY WORK MUST BE COORDINATED WITH DTC AT LEAST 1 MONTH IN ADVANCE OF ANY CONSTRUCTION ACTIVITIES.

9. AREAS WHERE BUSSES WILL BE PARKED SHALL BE LIT AND COVERED WITH SECURITY CAMERAS AT ALL TIMES DURING CONSTRUCTION. RE-FEEDING EXISTING LIGHT POLES AND TEMPORARY LIGHT FIXTURES WILL BE REQUIRED TO MAINTAIN POWER TO EXISTING LIGHT POLES AND CAMERAS THAT ARE NOT LOCATED WITHIN THE CONSTRUCTION AREA.

10. THE CONTRACTOR MUST SCHEDULE A MEETING WITH ALL PARTIES AT THE CONCLUSION OF EACH PHASE AND PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES RELATED TO THE NEXT PHASE.

11. THE CONTRACTOR MUST SCHEDULE A MEETING WITH ALL PARTIES PRIOR TO ANY POTENTIAL INCLEMENT WEATHER.

12. THE CONTRACTOR MUST MAINTAIN ACCESS TO THE EXISTING BUS WASH DURING THE HOURS OF 2 P.M. TO 11 P.M. CONTRACTOR TO COORDINATE WITH DTC MAINTENANCE STAFF TO DETERMINE CONSTRUCTION LIMITS TO MAINTAIN BUS WASH ACCESS.

# SITE CONSTRUCTION SEQUENCE

1. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS/SPECIFICATIONS FOR LONG LEAD ITEMS FOR REVIEW WITHIN 2 WEEKS OF NOTICE TO PROCEED.

2. OWNER SHALL NOTIFY THE DNREC SEDIMENT AND STORMWATER PROGRAM IN WRITING AT LEAST FIVE (5) DAYS PRIOR TO THE START OF CONSTRUCTION. FAILURE TO DO SO CONSTITUTES A VIOLATION OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLAN.

3. PRIOR TO ANY CLEARING, INSTALLATION OF SEDIMENT CONTROL MEASURES OR GRADING, A PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED AND CONDUCTED WITH THE AGENCY CONSTRUCTION SITE REVIEWER, THE LANDOWNER/DEVELOPER, AND CONTRACTOR, ARE REQUIRED TO ATTEND THE PRE-CONSTRUCTION MEETING; THE DESIGNER IS RECOMMENDED TO ATTEND.

4. THE CONTRACTOR SHALL COORDINATE WITH DTC AND DELDOT.

5. ALL PERIMETER CONTROLS ARE TO BE REVIEWED BY THE AGENCY CONSTRUCTION SITE REVIEWER AND APPROVED PRIOR TO PROCEEDING WITH FURTHER SITE DISTURBANCE OR CONSTRUCTION.

6. INSTALL ALL EROSION AND SEDIMENT CONTROLS AS SHOWN.

PHASE 1

7. INSTALL SILT FENCE. AFTER COORDINATION WITH DTC AND THE ENGINEER TO CONFIRM RELOCATION OF NECESSARY EQUIPMENT AND MATERIAL, CLOSE BUS PARKING ON THE NORTHERN PORTION OF THE EASTERN AISLE AND INSTALL TRAFFIC CONTROL DEVICES AS SHOWN.

8. INSTALL PROPOSED LIGHTING CONDUITS AND RE-FEED EXISTING LIGHT POLES AS SHOWN.

9. REMOVE EXISTING STRIPING, CONSTRUCT PROPOSED CANOPY FOUNDATIONS AND STRUCTURAL STEEL/ROOF DECK, INSTALL PROPOSED LIGHTING AND CCTV EQUIPMENT ON CANOPIES AND MAKE ALL UTILITY CONNECTIONS (INCLUDING UNDERGROUND CONDUITS TO BE COMPLETED/FED IN NEXT PHASE AND ACTIVATE PROPOSED LIGHTING). INSTALL CURB, FULL DEPTH PAVEMENT PATCHING, FOG SEAL PAVEMENT, AND INSTALL PERMANENT STRIPING.

10. REMOVE SILT FENCE ONCE WORK WITHIN PHASE 1 AREAS HAS BEEN COMPLETED AND STABILIZED AND APPROVAL FROM THE DNREC CONSTRUCTION SITE REVIEW HAS BEEN OBTAINED.

PHASE 2

11. AFTER COORDINATION WITH THE ENGINEER TO CONFIRM RELOCATION OF NECESSARY EQUIPMENT AND MATERIAL, REOPEN BUS PARKING CLOSED IN PHASE 1; CLOSE BUS PARKING ON THE SOUTHERN PORTION OF THE EASTERN AISLE AND INSTALL TRAFFIC CONTROL DEVICES AS SHOWN.

12. INSTALL SILT FENCE. REMOVE EXISTING STRIPING, CONSTRUCT PROPOSED CANOPY FOUNDATIONS AND STRUCTURAL STEEL, INSTALL PROPOSED LIGHTING AND CCTV EQUIPMENT ON CANOPIES AND MAKE ALL UTILITY CONNECTIONS (INCLUDING UNDERGROUND CONDUITS AS SHOWN ON PHASE 2 PLAN AND ACTIVATE PROPOSED LIGHTING AND SECURITY CAMERAS), INSTALL CURB, FULL DEPTH PAVEMENT PATCHING, FOG SEAL PAVEMENT, AND INSTALL PERMANENT STRIPING.

13. REMOVE EXISTING FENCE, CONSTRUCT BATTERY FOUNDATION. CONSTRUCT PROPOSED FENCE AROUND BATTERY EQUIPMENT.

14. REMOVE SILT FENCE ONCE WORK WITHIN PHASE 2 AREAS HAS BEEN COMPLETED AND STABILIZED AND APPROVAL FROM THE DNREC CONSTRUCTION SITE REVIEW HAS BEEN OBTAINED.

PHASE 3

15. AFTER COORDINATION WITH THE ENGINEER TO CONFIRM RELOCATION OF NECESSARY EQUIPMENT AND MATERIAL, REOPEN BUS PARKING CLOSED IN PHASE 2; CLOSE THE SOUTHERN PORTION OF THE CENTER AISLE BUS PARKING AND INSTALL TRAFFIC CONTROL DEVICES AS SHOWN.

16. REMOVE EXISTING STRIPING. REMOVE EXISTING INLETS AND PIPE AS NOTED, CAP EXISTING PIPE TO REMAIN AND ABANDON BY FILLING WITH FLOWABLE FILL. CONSTRUCT PROPOSED CANOPY FOUNDATIONS AND STRUCTURAL STEEL/ROOF DECK, INSTALL PROPOSED LIGHTING AND CCTV EQUIPMENT ON CANOPIES AND MAKE ALL UTILITY CONNECTIONS (INCLUDING UNDERGROUND CONDUIT TO BE COMPLETED/FED IN NEXT PHASE AND ACTIVATE PROPOSED LIGHTING AND SECURITY CAMERAS), INSTALL CURB, FULL DEPTH PAVEMENT PATCHING, FOG SEAL PAVEMENT, AND INSTALL PERMANENT STRIPING.

PHASE 4 - PLANS NOT PROVIDED FOR THIS PHASE

17. REOPEN BUS PARKING CLOSED IN PHASE 3.

18. INSTALL SOLAR ARRAY ON ALL ROOF DECKING AND INSTALL BATTERIES. MAKE ALL UTILITY CONNECTIONS (INCLUDING UNDERGROUND CONDUITS).

19. INSTALL REMAINING EQUIPMENT ON CANOPIES AND MAKE ALL UTILITY CONNECTIONS (INCLUDING UNDERGROUND CONDUITS).

20. EROSION AND SEDIMENT CONTROL DEVICES TO BE REMOVED ONLY AFTER WORK IN AN AREA HAS BEEN COMPLETED AND STABILIZED, WITH WRITTEN APPROVAL FROM THE DNREC CONSTRUCTION SITE REVIEWER.

| EROSION & SEDIMENT CONTROL | |
|---|---|
| CFL | COMPOST FILTER LOG |
| CFL | COMPOST FILTER LOG / LENGTH |
| CIP | CULVERT INLET PROTECTION |
| DWBAG | DEWATERING BAG |
| DWB | DEWATERING BASIN |
| ED | EARTH DIKE |
| | INLET SEDIMENT CONTROL |
| | PERIMETER DIKE/SWALE |
| PST | PORTABLE SEDIMENT TANK |
| SBD | SANDBAG DIKE |
| SB | SANDBAG DIVERSION |
| | STONE CHECK DAM |
| SCE | STABILIZED CONSTRUCTION ENTRANCE |
| SF | SILT FENCE / LENGTH |
| SF | SILT FENCE |
| RSF | SILT FENCE - REINFORCED / LENGTH |
| RSF | SILT FENCE - REINFORCED |
| SP | SUMP PIT |
| ST | SEDIMENT TRAP / NUMBER |
| ST | SEDIMENT TRAP |
| ST | SEDIMENT TRAP WITH INLET AS OUTLET |
| ST | SEDIMENT TRAP PIPE OUTLET |
| SM-C | STABILIZATION MATTING, CHANNEL |
| SW | STILLING WELL |
| | TEMPORARY SWALE |
| TSD | TEMPORARY SLOPE DRAIN |
| T XXX | TURBIDITY CURTAIN / LENGTH |
| T | TURBIDITY CURTAIN |
| **CONSTRUCTION PHASING & M.O.T** | |
| | BARRICADE, TYPE 3 |
| | CONCRETE SAFETY BARRIER - PORTABLE |
| CSF XXX | CONSTRUCTION SAFETY FENCE / LENGTH |
| CSF | CONSTRUCTION SAFETY FENCE |
| | CONSTRUCTION WARNING SIGN LOCATION |
| END ROAD WORK | CONSTRUCTION WARNING SIGN |
| | CRASH CUSHION ARRAY |
| | DRUM - TRAFFIC CONTROL |
| | FLAGGER LOCATION |
| | PHASING TRAFFIC FLOW ARROW |
| | TEMPORARY CONSTRUCTION |
| | TEMPORARY PAVEMENT MARKING ARROW |
| | TRUCK WITH MOUNTED ATTENUATOR |
| | WORK AREA - ACTIVE PHASE |

**PREPARED BY**
JMT

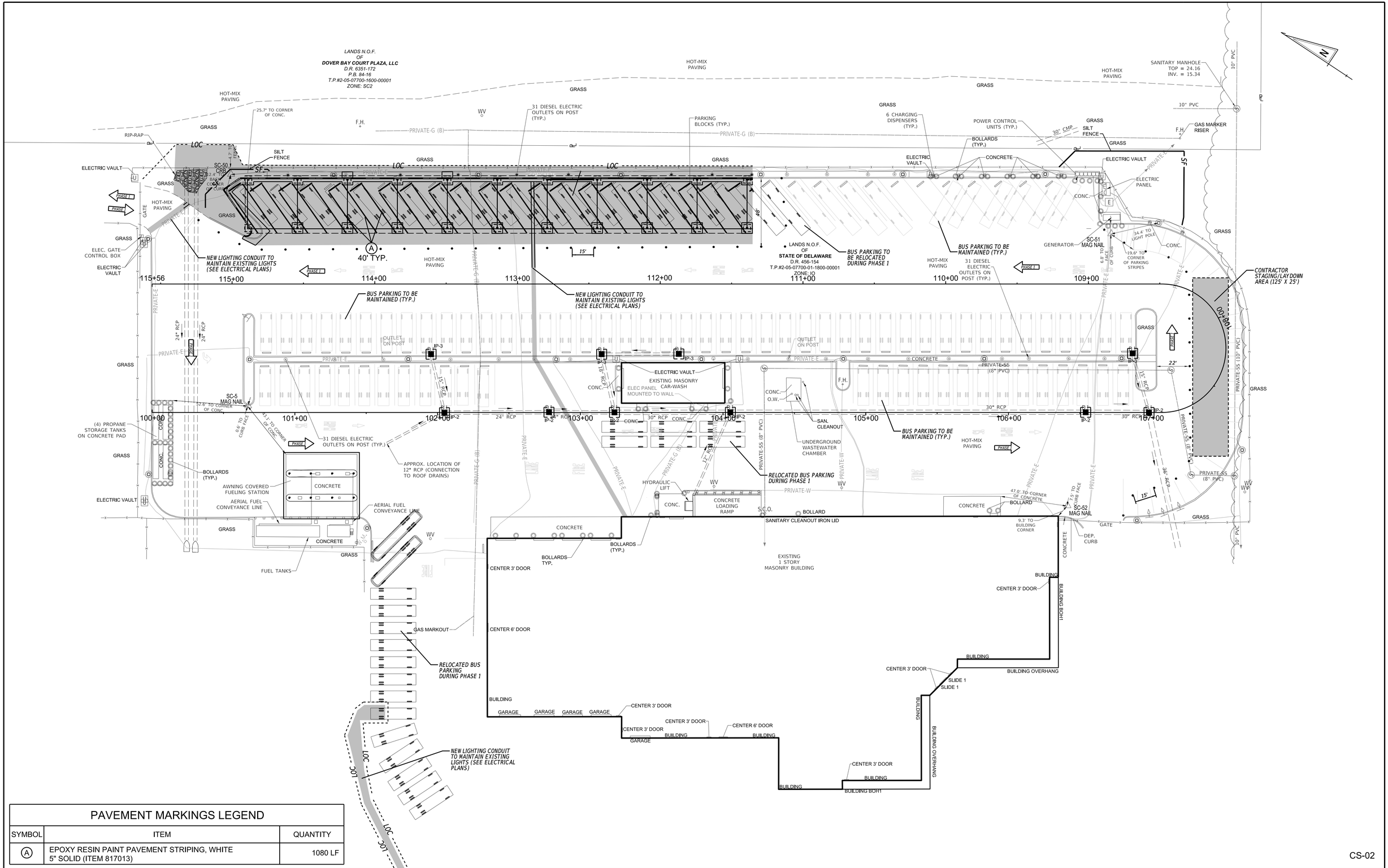
Amy Fitzgerald — 4-21-2025
THIS :ETS DATE
BEARING THE "JMT" SECTION DESIGNATION.

AMY FITZGERALD LICENSE No. 20171 DELAWARE PROFESSIONAL ENGINEER
SEAL

*"I CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THE DESIGN OF THESE PLANS MEETS THE REQUIREMENTS OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS."*

CS-01

| ADDENDA / REVISIONS | | NOT TO SCALE | DOVER BUS CANOPY SOLAR PANELS | CONTRACT | BRIDGE NO. N/A | CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN - PROJECT NOTES | SECTION |
|---|---|---|---|---|---|---|---|
| | | | | T202153104.03 | DESIGNED BY: P. REUTTER | | JMT |
| | | | | COUNTY | | | SHEET NO. |
| | | | | KENT | CHECKED BY: N. BERGERON | | 13 |

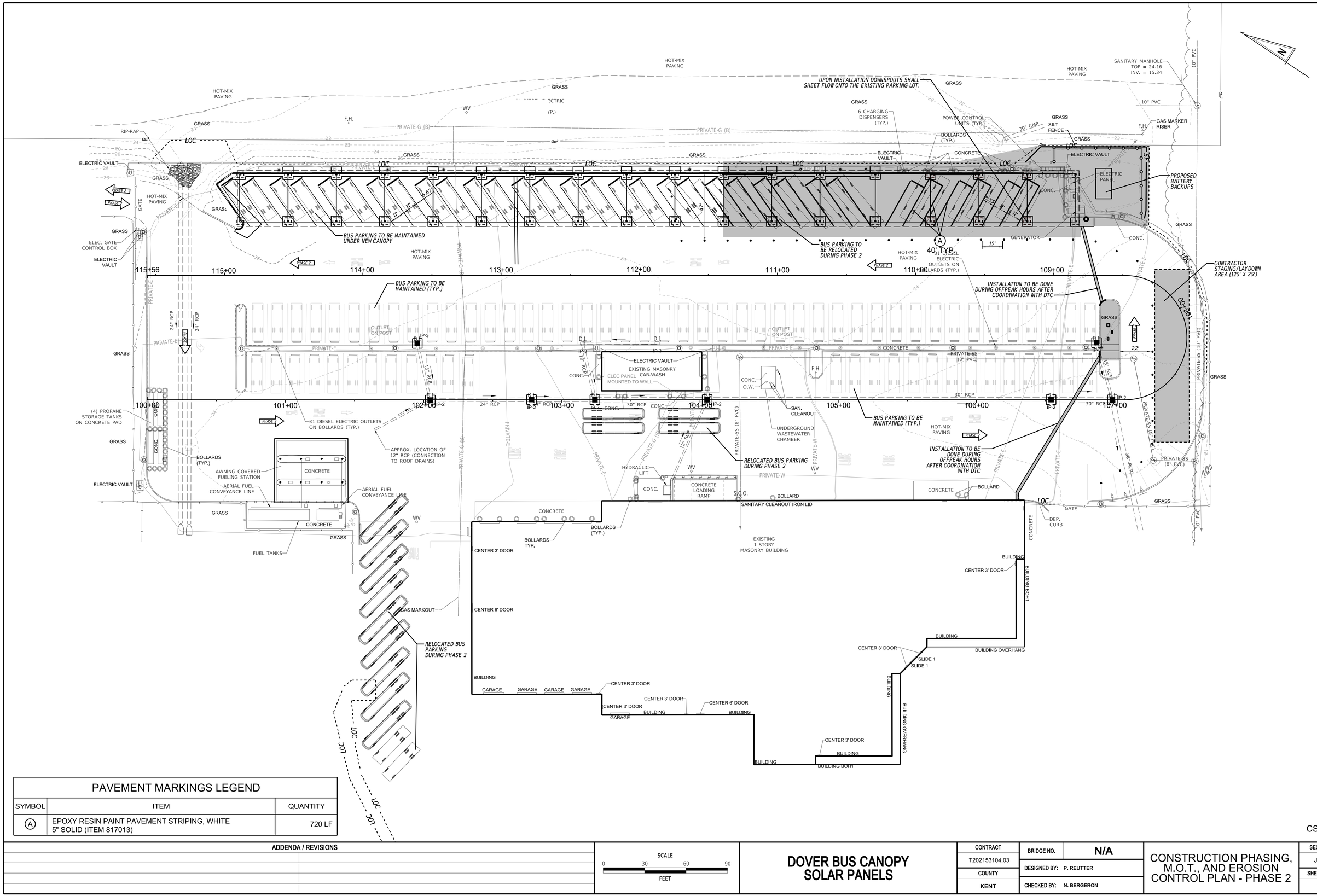



## PAVEMENT MARKINGS LEGEND

| SYMBOL | ITEM | QUANTITY |
|---|---|---|
| Ⓐ | EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 5" SOLID (ITEM 817013) | 1080 LF |

CS-02

| ADDENDA / REVISIONS | | SCALE | DOVER BUS CANOPY SOLAR PANELS | CONTRACT | BRIDGE NO. N/A | CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN - PHASE 1 | SECTION |
|---|---|---|---|---|---|---|---|
| | | 0 30 60 90 FEET | | T202153104.03 | DESIGNED BY: P. REUTTER | | JMT |
| | | | | COUNTY KENT | CHECKED BY: N. BERGERON | | SHEET NO. 14 |

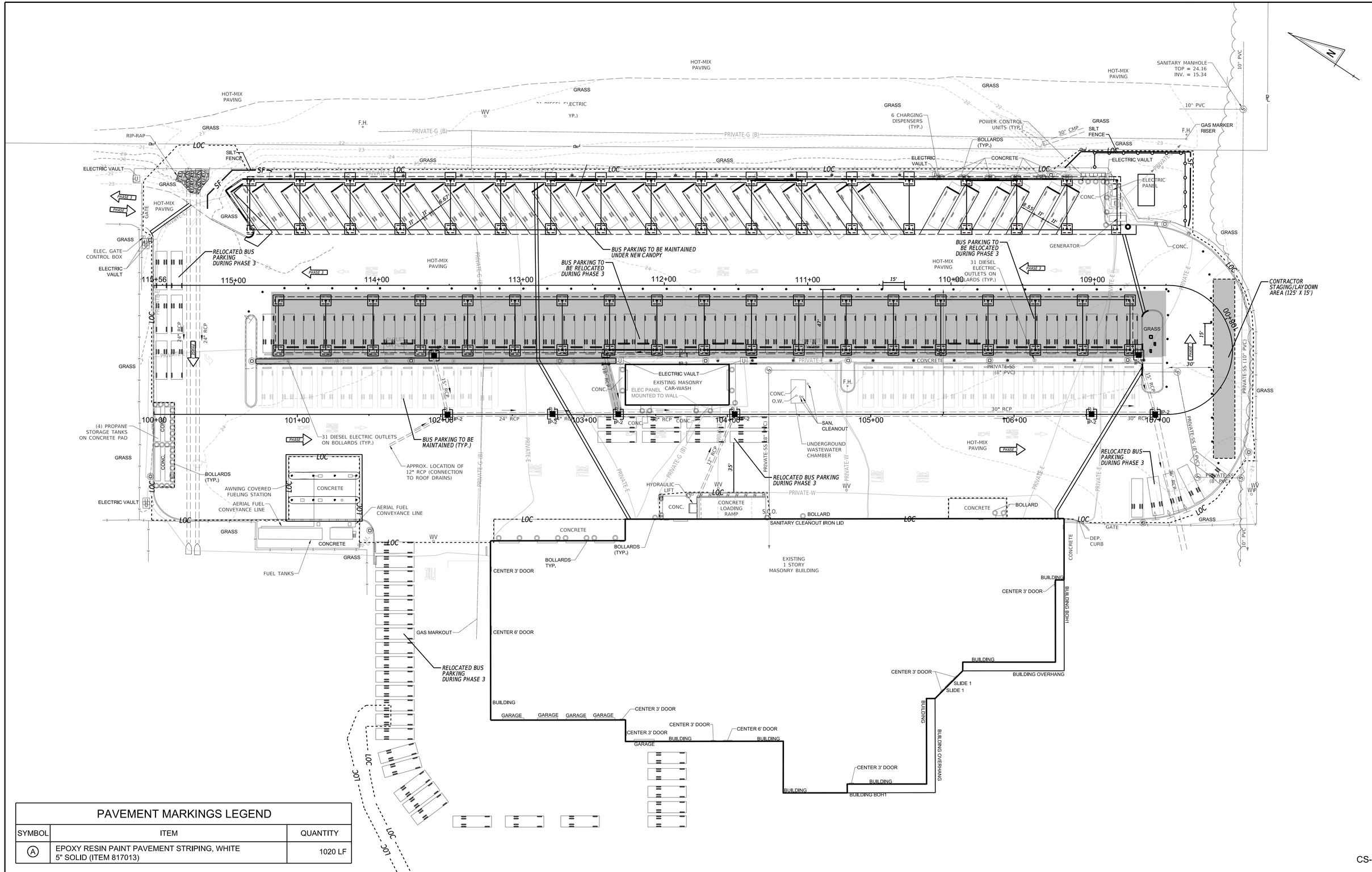



## PAVEMENT MARKINGS LEGEND

| SYMBOL | ITEM | QUANTITY |
|---|---|---|
| Ⓐ | EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 5" SOLID (ITEM 817013) | 720 LF |

CS-03

| ADDENDA / REVISIONS | SCALE | DOVER BUS CANOPY SOLAR PANELS | CONTRACT | BRIDGE NO. N/A | CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN - PHASE 2 | SECTION |
|---|---|---|---|---|---|---|
| | 0 30 60 90 FEET | | T202153104.03 | DESIGNED BY: P. REUTTER | | JMT |
| | | | COUNTY KENT | CHECKED BY: N. BERGERON | | SHEET NO. 15 |




## PAVEMENT MARKINGS LEGEND

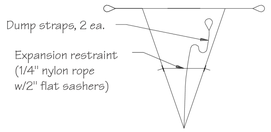
| SYMBOL | ITEM | QUANTITY |
|---|---|---|
| Ⓐ | EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 5" SOLID (ITEM 817013) | 1020 LF |

CS-04

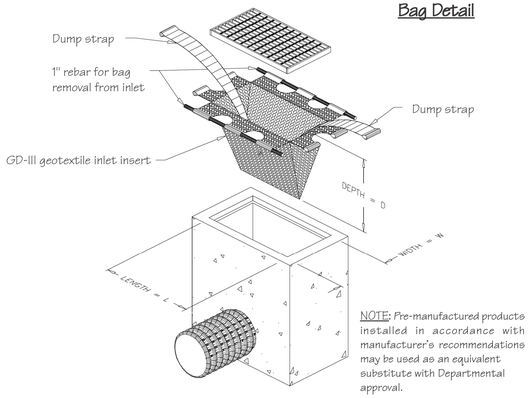
| ADDENDA / REVISIONS | SCALE | DOVER BUS CANOPY SOLAR PANELS | CONTRACT | BRIDGE NO. N/A | CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN - PHASE 3 | SECTION |
|---|---|---|---|---|---|---|
| | 0 30 60 90 FEET | | T202153104.03 | DESIGNED BY: P. REUTTER | | JMT |
| | | | COUNTY KENT | CHECKED BY: N. BERGERON | | SHEET NO. 16 |

Standard Detail & Specifications

# Inlet Protection - Type 2




Bag Detail




NOTE: Pre-manufactured products installed in accordance with manufacturer's recommendations may be used as an equivalent substitute with Departmental approval.

Perspective

| Source: | Symbol: | Detail No. |
|---|---|---|
| Adapted from ACF Products, Inc. | IP-2 | DE-ESC-3.1.5.2 Sheet 1 of 2 Effective July 2023 |

Standard Detail & Specifications

# Inlet Protection - Type 2

## Notes:

1. This practice shall only be used in situations in which Inlet Protection - Type 1 cannot be used due to site constraints. These include, but are not limited to partially completed parking areas, streets, roads, etc.
2. It may be necessary to transition from Type 1 to Type 2 Inlet Protection as construction proceeds.
3. For areas where there is a concern for oil run-off or spills, insert shall meet one of the above specifications with an oil-absorbant pillow or shall be made completely from an oil-absorbant material with a woven pillow.

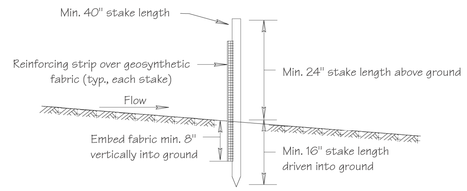
## Materials:

The geotextile inlet insert shall meet or exceed the specifications of Type GD-III geotextile in accordance with Appendix A-3 of the Delaware Erosion & Sediment Control Handbook.

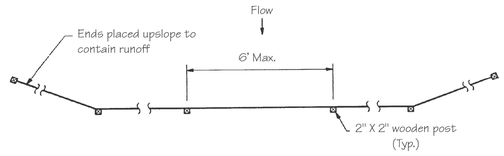
| Source: | Symbol: | Detail No. |
|---|---|---|
| Adapted from ACF Products, Inc. | IP-2 | DE-ESC-3.1.5.2 Sheet 2 of 2 Effective July 2023 |

Standard Detail & Specifications

# Silt Fence




Section




Plan

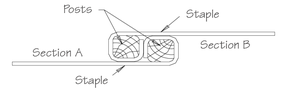
DATA
Max. controlled slope

| Source: | Symbol: | Detail No. |
|---|---|---|
| Adapted from MD Stds. & Specs. for ESC | SF | DE-ESC-3.1.2.1 Sheet 1 of 2 Effective July 2023 |

Standard Detail & Specifications

# Silt Fence

Construction Detail




Method for joining continuous sections

Top

## Construction Notes:

1. Geosynthetic fabric to be fastened securely to fence posts with wire ties or staples.
2. When two sections of filter cloth adjoin each other they shall be overlapped by six inches and folded.
3. Maintenance shall be performed as needed and material removed when "bulges" develop in the silt fence.

## Materials:

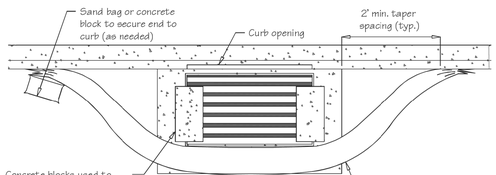
1. Stakes: Steel (either T or U) or 2" x 2" hardwood
2. Geosynthetic Fabric: Type GD-I
3. Reinforcing strip: Wooden lath or plastic strip

| Source: | Symbol: | Detail No. |
|---|---|---|
| Adapted from MD Stds. & Specs. for ESC | SF | DE-ESC-3.1.2.1 Sheet 2 of 2 Effective July 2023 |

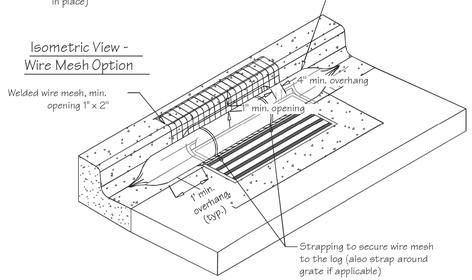
Standard Detail & Specifications

# Inlet Protection - Type 3

Plan View - Concrete Block Option




Isometric View -
Wire Mesh Option




| Source: | Symbol: | Detail No. |
|---|---|---|
| Adapted from Filtrexx™ International | IP-3 | DE-ESC-3.1.5.3 Sheet 1 of 3 Effective July 2023 |

Standard Detail & Specifications

# Inlet Protection - Type 3

## Notes:

1. This practice shall only be used in situations in which Inlet Protection – Type 1 cannot be used due to site constraints. These include, but are not limited to partially complete parking areas, streets, roads, etc., having a throat or curb opening. It should be used in conjunction with Type 2 Inlet Protection when a grate is also present.
2. The filter log sock fabric shall be high durability netting material to resist puncture and wear in the traffic areas. If compost media is used to fill the sock it must meet the Standards and Specifications for Compost Material in the Appendix, except that the maximum pass through for a 3/8" screen shall be 20% to allow for higher flow through. Additives, such as soluble phosphorus and petroleum hydrocarbons, can be mixed with the compost media to aid in pollutant removal, if desired. Reference the Compost Filter Log design guidelines for additional requirements on the high durability netting material, compost media, and sock filling and installation procedures. Reference the design alternatives below for additional log media options.
3. The maximum contributing drainage area shall be 3 acres, or as recommended by the manufacturer. 8" diameter socks shall be used for standard roadway applications. If in a highly disturbed area, the Engineer or Site Reviewer may opt for larger socks, either 12" or 18" depending on the need. (If used as a replacement for Type 1 Inlet Protection with special approval, minimum 12" diameter socks shall be used.) The top of the log may need to be flattened so that it is always below the top of curb elevation with a minimum 1" opening in order to prevent localized flooding.
4. Concrete blocks shall be used to aid in the log shape and prevent it from entering into the throat. They should be placed between the log and the throat opening, and used to secure the ends of the log against the curb if needed. The end of the log shall extend a minimum of 2 feet past the end of the throat opening. If a grate is also present in addition to the throat opening, the concrete blocks can either be laid perpendicular to the curb (recommended) so that the log lies on the outside of the grate, or parallel to the curb so that the log lies on top of the grate (note, Type 2 Inlet Protection is also used in conjunction with Type 3 if a grate is present). Sand bags can be used as an alternate to the concrete blocks at the end of the log to secure the log against the curb.

| Source: | Symbol: | Detail No. |
|---|---|---|
| Adapted from Filtrexx™ International | IP-3 | DE-ESC-3.1.5.3 Sheet 2 of 3 Effective July 2023 |

Standard Detail & Specifications

# Inlet Protection - Type 3

5. If concrete blocks are not desired due to high traffic volumes, a welded wire screen in an "S" shape can be fitted over the length of the opening and secured to the log with straps, such as zip-ties. This will prevent the sock from falling into the opening. In this case, the log only needs to extend past the curb opening a minimum of 1 foot.
6. In all cases, the log shall provide a physical barrier to the catchbasin to allow for ponding and sedimentation along the upstream side of the log. The logs shall be placed on flat surfaces and maintain constant contact with the paved surface. Any daylight will allow for untreated discharge and is not permitted.
7. All structures must be inspected frequently (24 hours after a storm event and weekly) for proper function. Accumulated sediment shall be removed to avoid future failure, and must not exceed half of the effective height of the log. Reference manufacturer's recommendations for additional maintenance.

**Alternatives:**

1. In lieu of the compost filter log, crushed DE #3 stone with a fractured face on all sides that is double wrapped in 1" chicken wire made from 10 gauge wire may be used. The wire should be secured using hog rings or wire ties on 6" centers along the length of the joint, and on 1" center on the ends of the rock sock. All installation and maintenance criteria are the same as the compost log above.
2. In lieu of the compost filter media, 100% shredded rubber (typically from tires) can be used.
3. For applications that have a grate and a throat inlet, some Type 2 Inlet Protection manufacturers have developed a catchbasin sack insert that also have a tubular attachment which rests above the grate and against the throat. As long as the sack meets the requirements of Type 2 Inlet Protection, and the provided throat protection extends a minimum of 1' past the limits of the curb opening, without any daylight along the edges, these combination Type 2 and Type 3 devices may be used upon approval of the Department or Delegated Agency.

| Source: | Symbol: | Detail No. |
|---|---|---|
| Adapted from Filtrexx™ International | IP-3 | DE-ESC-3.1.5.3 Sheet 3 of 3 Effective July 2023 |

CS-05

| ADDENDA / REVISIONS | | SCALE 0 30 60 90 FEET | DOVER BUS CANOPY SOLAR PANELS | CONTRACT T202153104.03 | BRIDGE NO. N/A | CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN DETAILS | SECTION JMT |
|---|---|---|---|---|---|---|---|
| | | | | COUNTY KENT | DESIGNED BY: P. REUTTER | | SHEET NO. 17 |
| | | | | | CHECKED BY: N. BERGERON | | |

EXISTING STRIPING SHALL BE REMOVED IN ACCORDANCE WITH DELDOT STANDARD SPECS.

R01-01
30X30

31 DIESEL ELECTRIC OUTLETS ON BOLLARDS (TYP.)

6 CHARGING DISPENSERS (TYP.)

POWER CONTROL UNITS (TYP.)

SANITARY MANHOLE
TOP = 24.16
INV. = 15.34

GAS MARKER RISER

ELECTRIC VAULT

ELECTRIC PANEL

GENERATOR

(4) PROPANE STORAGE TANKS ON CONCRETE PAD

BOLLARDS (TYP.)

AWNING COVERED FUELING STATION

AERIAL FUEL CONVEYANCE LINE

APPROX. LOCATION OF 12" RCP (CONNECTION TO ROOF DRAINS)

ELECTRIC VAULT
EXISTING MASONRY CAR-WASH

UNDERGROUND WASTEWATER CHAMBER

SANITARY CLEANOUT IRON LID

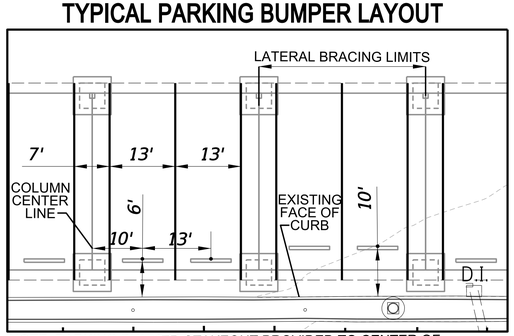
CONCRETE LOADING RAMP

EXISTING
1 STORY
MASONRY BUILDING

GAS MARKOUT

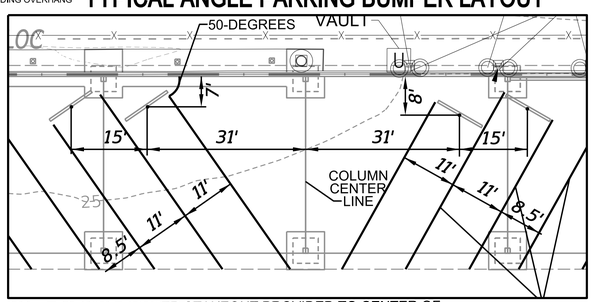
DEP. CURB

## TYPICAL PARKING BUMPER LAYOUT




NOTE: PARKING BUMPER STAKEOUT PROVIDED TO CENTER OF PROPOSED PARKING BUMPER.

## TYPICAL ANGLE PARKING BUMPER LAYOUT




NOTE: PARKING BUMPER STAKEOUT PROVIDED TO CENTER OF PROPOSED PARKING BUMPER.

## PAVEMENT MARKINGS LEGEND

| SYMBOL | ITEM | QUANTITY |
|---|---|---|
| (A) | EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 5" SOLID (ITEM 817013) | 5291 LF |
| (F) | ALKYD THERMOPLASTIC PAVEMENT STRIPING, WHITE SYMBOL / LEGEND (ITEM 817002) | 750 SF |

SS-01

ADDENDA / REVISIONS

SCALE
0 30 60 90
FEET

# DOVER BUS CANOPY SOLAR PANELS

| | | |
|---|---|---|
| CONTRACT | BRIDGE NO. | N/A |
| T202153104.03 | DESIGNED BY: P. REUTTER | |
| COUNTY | CHECKED BY: N. BERGERON | |
| KENT | | |

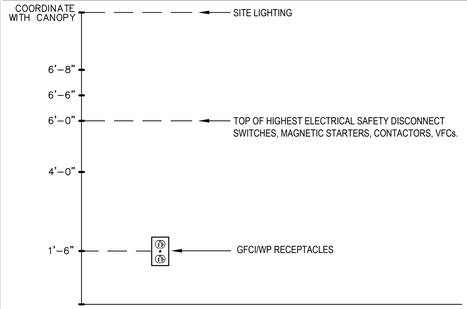
SIGNING AND STRIPING PLAN

| SECTION |
|---|
| JMT |
| SHEET NO. |
| 18 |

## SYMBOL LEGEND

| SYMBOL | DESCRIPTION |
|---|---|
| H | HAND HOLE |
| AF P OR AF/NF/P/3R | NON–FUSED DISCONNECT SWITCH, SIZE AS INDICATED WHERE:<br>"AF" – INDICATES AMPERE SWITCH SIZE<br>"NF" – DENOTES NON–FUSED<br>"P" – DENOTES POLE<br>"3R" – DENOTES NEMA TYPE ENCLOSURE |
| | TRANSFORMER |
| | CIRCUIT BREAKER |
| | INVERTER |
| | DELTA CONFIGURATION |
| | START (WYE) CONFIGURATION |
| ø | ELECTRICAL PHASE |
| CCTV | SECURITY CAMERA |
| M | UTILITY METER |
| | CURRENT TRANSFORMER |

## MOUNTING LEGEND




MOUNTING NOTES:

1. THE ABOVE MOUNTING HEIGHTS SHALL BE ADHERED TO UNLESS SPECIFICALLY NOTED OR DETAILED OTHERWISE ON THE DRAWINGS OR SPECIFICATIONS.

## GENERAL ABBREVIATIONS

| | |
|---|---|
| A | AMPERES |
| ADA | AMERICANS WITH DISABILITIES ACT |
| AFF | ABOVE FINISH FLOOR |
| AFG | ABOVE FINISH GRADE |
| AHJ | AUTHORITY HAVING JURISDICTION |
| AIC | AMPERE INTERRUPTING CAPACITY |
| AL | ALUMINUM |
| ANSI | AMERICAN NATIONAL STANDARDS INSTITUTE |
| ARCH | ARCHITECT |
| AWG | AMERICAN WIRE GAUGE |
| BESS | BATTERY ENERGY STORAGE SYSTEM |
| BFG | BELOW FINISH GRADE |
| BLDG | BUILDING |
| C | CONDUIT |
| CB | CIRCUIT BREAKER |
| CKT | CIRCUIT |
| CU | COPPER |
| DWG | DRAWING |
| EC | ELECTRICAL CONTRACTOR |
| ECC | ENERGY CONTROL CENTER |
| ECB | ENCLOSED CIRCUIT BREAKER |
| EM | EMERGENCY |
| EMT | ELECTRICAL METALLIC TUBING |
| ETR | EXISTING TO REMAIN |
| EX | EXISTING |
| FLA | FULL LOAD AMPERES |
| FMC | FLEXIBLE METAL CONDUIT |
| FT | FEET |
| G,GND | GROUND OR GROUNDING |
| HOA | HAND, OFF, AUTOMATIC SWITCH |
| IEEE | INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS |
| INV | INVERTER |
| KCMIL | THOUSAND CIRCULAR MILS |
| KVA | KILOVOLT AMPERES |
| KW | KILOWATTS |
| MCB | MAIN CIRCUIT BREAKER |
| MISC | MISCELLANEOUS |
| MLO | MAIN LUGS ONLY |
| NC | NORMALLY CLOSED |
| NEC | NATIONAL ELECTRIC CODE |
| NEMA | NATIONAL ELECTRICAL MANUFACTURES ASSOCIATION |
| NFPA | NATIONAL FIRE PROTECTION ASSOCIATION |
| NO | NORMALLY OPEN OR NUMBER |
| NTS | NOT TO SCALE |
| P | POLE |
| PNL | PANEL |
| PV | PHOTOVOLTAIC |
| PVC | POLYVINYL CHLORIDE |
| PWR | POWER |
| QTY | QUANTITY |
| RMC | RIGID METAL CONDUIT |
| RX | REMOVE EXISTING |
| SW | SWITCH |
| UL | UNDERWRITERS LABORATORIES |
| V | VOLT |
| WP | WEATHERPROOF |
| XFMR | TRANSFORMER |

## ELECTRICAL CONVENTIONS

WIRING

LP2A–1,3,5 — HOMERUN TO PANEL "LP2A", CIRCUITS #1,3,5 (VIA 20A–1P C/B'S). PROVIDE INSULATED GROUND CONDUCTOR IN ACCORDANCE WITH SPECIFICATIONS. NUMBER OF CIRCUITS INDICATED BY QUANTITY OF ARROW HEADS.

HASH MARKS INDICATE QUANTITY OF #12 AWG COPPER CONDUCTORS IN CONDUIT. WHEN NO HASH MARKS ARE INDICATED, CONDUIT SHALL CONTAIN (2) #12 WIRES AND (1) #12 GROUND WIRE. ASSUME 3/4" DIAMETER CONDUIT UNLESS NOTED OTHERWISE. EXAMPLE SHOWN AT LEFT INDICATES 2 HOT, 2 NEUTRAL (LONG LINES), AND 1 GROUND WIRES.

CONCEALED CONDUIT AND/OR WIRING.

BELOW GRADE CONDUIT AND/OR WIRING.

EXPOSED CONDUIT AND/OR WIRING.

CIRCUITRY TURNING DOWN

CIRCUITRY TURNING UP

ANNOTATION

# / SHT — DETAIL REFERENCE
"#" DENOTES DETAIL NUMBER
"SHT" DENOTES SHEET NUMBER

X / # — ELEVATION OR SECTION IDENTIFIER
"X" DENOTES ELEVATION OR SECTION NUMBER
"#" DENOTES SHEET NUMBER

1 — SHEET KEYNOTE NUMBER

###X — FEEDER TAG (REFER TO FEEDER SCHEDULE)

1 — REVISION NUMBER

LIGHTING

A — LUMINAIRE TYPE – SEE LUMINAIRE SCHEDULE

## GENERAL DEMOLITION NOTES

1. PRIOR TO SUBMITTING BID, VISIT SITE AND IDENTIFY EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT THE DEMOLITION WORK. ANY DISCREPANCIES BETWEEN DRAWINGS AND ACTUAL SITE CONDITIONS SHALL BE REPORTED TO THE OWNER DURING THE BID PROCESS. NO COMPENSATION WORK CAUSED BY UNFAMILIARITY WITH SITE CONDITIONS THAT ARE VISIBLE OR READILY CONSTRUED WILL BE GRANTED FOR ADDITIONAL WORK BY EXPERIENCED OBSERVERS. THIS CONTRACTOR SHALL PARTICIPATE IN SURVEY OF THE EXISTING ELECTRICAL SYSTEMS. HE SHALL DISCONNECT AND CAP ALL SERVICE LINES TO BE DISCONNECTED FOR THOSE SERVICES WHICH NORMALLY ARE INCLUDED IN HIS FIELD OF WORK. PARTICULAR CARE SHALL BE TAKEN TO AVOID CREATING HAZARD OR CAUSING DISRUPTION OF SERVICES IN ADJOINING AREAS.
2. REFER TO MECHANICAL AND PLUMBING CONTRACT DRAWINGS AND SPECIFICATIONS FOR EXACT QUANTITIES AND LOCATIONS OF ALL MECHANICAL AND PLUMBING EQUIPMENT BEING ABANDONED OR REMOVED, WHICH WILL REQUIRE DE–ENERGIZATION, REMOVAL, AND BLANK OFF BY THE ELECTRICAL CONTRACTOR.
3. MAINTAIN AND RESTORE, IF INTERRUPTED BY REMOVALS OR IN PATH OF NEW CONSTRUCTION, ALL CIRCUITS, CONDUITS AND FEEDERS PASSING THROUGH AND SERVING UNDISTURBED AREAS (SHOWN OR NOT SHOWN).
4. DISCONNECT AND MAKE SAFE ANY EQUIPMENT TO BE REMOVED BY OTHERS (I.E. MOTORS, PUMPS, FANS, UNIT VENTILATORS, UNIT HEATERS, ETC.). COORDINATE REMOVAL OF EQUIPMENT WITH OTHER TRADES PRIOR TO DEMOLITION.
5. IN ANY AREA REQUIRING THE PERFORMANCE OF ANY TRADE'S WORK, THIS CONTRACTOR SHALL CAREFULLY REMOVE AND STORE ANY OR ALL ELECTRICAL ITEMS IN PATH OF WORK, REINSTALLING AND RECONNECTING SAME AS REQUIRED, IN ACCORDANCE WITH THE PLANS AND/OR AS DIRECTED AFTER COMPLETION OF OTHER TRADE'S WORK IN THAT AREA.
6. DISCONNECT, MAKE SAFE, AND REMOVE ALL TEMPORARY AND ABANDONED WIRE WITHIN THE SPACE.
7. DISCONNECT AND REMOVE PANELS, FEEDERS AND BRANCH CIRCUITS BACK TO POINT OF SOURCE. PRIOR TO THE START OF DEMOLITION, CONTRACTOR SHALL FIELD VERIFY ALL BRANCH CIRCUITS AND MAINTAIN THOSE CIRCUITS THAT EXTEND OUTSIDE OF THE SCOPE OF WORK.
8. UPON REMOVAL, CONTRACTOR SHALL INVENTORY MAJOR ELECTRICAL ITEMS THAT ARE REMOVED AND PROVIDE A LIST TO THE OWNER FOR THEIR SELECTION OF ITEMS TO BE RETAINED. ALL ITEMS REJECTED BY THE OWNER SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE.
9. ALL WIRING, CABLES AND CONDUCTORS ASSOCIATED WITH REMOVAL OF FEEDERS AND BRANCH CIRCUITS SHALL BE LOOPED, TIED AND RETURNED TO THE OWNER.
10. THE EXISTING ELECTRICAL EQUIPMENT AND DEVICES WITHIN DEMOLITION AREA SHALL BE DEMOLISHED ALONG WITH ALL FEEDERS AND CONDUITS BACK TO SOURCE UNLESS OTHERWISE NOTED. CONTRACTOR SHALL DISCONNECT, MAKE SAFE, AND REMOVE ALL LIGHT FIXTURES, CORD DROP RECEPTACLES, AND OTHER ASSOCIATED ELECTRICAL EQUIPMENT AND ALL ASSOCIATED CIRCUITRY WITHIN THIS AREA, EXCEPT AS SHOWN OTHERWISE. UPON REMOVAL, INVENTORY MAJOR ELECTRICAL ITEMS THAT ARE REMOVED AND PROVIDE A LIST TO THE OWNER FOR THEIR SELECTION OF ITEMS TO BE RETAINED. ALL ITEMS REJECTED BY THE OWNER SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE.

## GENERAL NOTES

1. THE SCOPE OF WORK CONSISTS OF FURNISHING AND INSTALLING OF A COMPLETE ELECTRICAL SYSTEM AS INDICATED ON THE DRAWINGS AND SPECIFIED HEREIN. THE CONTRACTOR SHALL PROVIDE SUPERVISION, LABOR, MATERIALS, EQUIPMENT, MACHINERY, ADDITIONAL DESIGN AND ALL INCIDENTALS NECESSARY TO COMPLETE THE ELECTRICAL SYSTEM. THE CONTRACTOR SHALL PROVIDE AND INSTALL THE NUMBER OF ITEMS OF EQUIPMENT AS INDICATED ON THE DRAWINGS AND/OR AS REQUIRED FOR A COMPLETE SYSTEM. COORDINATE WORK TO BE PERFORMED OR INSTALLED BY OTHERS AFFECTING ELECTRICAL WORK AND PROVIDE AND INSTALL ALL NECESSARY ANCHORS, SLEEVES, HANGERS, ACCESSORIES, ETC. FOR ATTACHING OR CONNECTING ELECTRICAL WORK TO RELATED WORK OF OTHER TRADES. ALL WORK SHALL BE PERFORMED BY A QUALIFIED ELECTRICAL CONTRACTOR LICENSED IN THE STATE OF DELAWARE THAT HAS PREVIOUSLY PERFORMED WORK OF THIS SIZE AND TYPE.
2. REFER TO THE SPECIFICATIONS THAT ARE PART OF THIS CONTRACT AND ARE COMPLEMENTARY TO THESE GENERAL NOTES. IN CASE OF A CONFLICT BETWEEN THE SPECIFICATIONS AND DRAWINGS, THE MOST STRINGENT REQUIREMENTS SHALL APPLY AS DETERMINED BY THE ARCHITECT/ENGINEER/OWNER.
3. PERFORM WORK AS REQUIRED BY CODES, REGULATIONS AND LAWS OF LOCAL, STATE AND FEDERAL GOVERNMENTS AND OTHER AUTHORITIES WITH LAWFUL JURISDICTION. INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:
   a. THE 2020 VERSION OF N.E.C., AND LOCAL N.E.C. AMENDMENTS.
   b. ALL LOCAL CODES.
   c. NFPA 72 AND THE LATEST VERSION OF THE LOCALLY RECOGNIZED BUILDING CODE.
   d. THE AMERICANS WITH DISABILITIES ACT (ADA).
   e. THE 2021 IECC CODE.
   d. NATIONAL ELECTRICAL SAFETY CODE.
4. WHEREVER THE WORD "PROVIDE" IS USED, IT SHALL MEAN TO "FURNISH AND INSTALL COMPLETE AND READY FOR USE." CONTRACTOR SHALL PROVIDE ALL TESTING AND INSTRUCTION REQUIRED FOR OPERATION AND MAINTENANCE OF EQUIPMENT AND SYSTEM BY OWNER UNLESS OTHERWISE NOTED.
5. MATERIAL AND EQUIPMENT SHALL BE UL, NEMA, ANSI, IEEE, ADA & CBM APPROVED FOR INTENDED SERVICE. MATERIAL AND INSTALLATION SHALL MEET REQUIREMENTS OF NATIONAL AND STATE ELECTRICAL CODE.
6. ELECTRICAL DRAWINGS WHICH CONSTITUTE A PART OF THIS CONTRACT ARE DIAGRAMMATIC ONLY AND INDICATE THE GENERAL ARRANGEMENT OF CIRCUITS AND OUTLETS, LOCATIONS OF SWITCHES, PANELBOARDS CONDUIT AND OTHER WORK. ALL ITEMS NOT SPECIFICALLY MENTIONED HEREIN, WHICH ARE NECESSARY TO MAKE A COMPLETE WORKING INSTALLATION, SHALL BE INCLUDED AT NO EXTRA COST.
7. CONTRACTOR SHALL EXAMINE THE ARCHITECTURAL, STRUCTURAL, MECHANICAL AND PLUMBING DRAWINGS TO FAMILIARIZE HIMSELF WITH ALL ASPECTS OF THOSE DESIGNS AFFECTING HIS WORK. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH ALL OTHER TRADES.
8. PRIOR TO SUBMITTING BID, THE CONTRACTOR SHALL VISIT THE SITE AND BE THOROUGHLY FAMILIAR WITH THE EXISTING CONDITIONS AND PROPOSED CONSTRUCTION. CONTRACTOR SHALL INCLUDE IN THEIR BID ALL MATERIAL, LABOR AND ALL INCIDENTALS FOR A COMPLETE INSTALLATION WHETHER SPECIFICALLY CALLED FOR OR NOT. ALL ERROR, DISCREPANCIES AND MISSED ITEMS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER DURING THE BIDDING PROCESS BY THE CONTRACTOR. THESE ITEMS SHALL BE INCLUDED IN THE BID PRICE. NO EXTRA COST WILL BE ALLOWED FOR ANY DISCREPANCY WHICH COULD HAVE BEEN NOTICED AT THE SITE VISIT BY THE CONTRACTOR.
9. GIVE NOTICES, FILE PLANS, OBTAIN PERMITS AND LICENSES, PAY FEES AND BACK CHARGES, AND OBTAIN NECESSARY APPROVALS FROM AUTHORITIES THAT HAVE JURISDICTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE REQUIRED NOTICES, PERMITS, LICENSES, FEES, BACK CHARGES AND APPROVALS REQUIRED FOR THIS PROJECT.
10. THE CONTRACTOR SHALL MAINTAIN AT THE SITE FOR THE OWNER ONE COPY OF ALL DRAWINGS, SPECIFICATIONS, ADDENDA, APPROVED SHOP OR SETTING DRAWINGS, CHANGE ORDERS AND OTHER MODIFICATIONS IN GOOD ORDER AND MARKED TO RECORD ALL CHANGES AS THEY OCCUR DURING CONSTRUCTION. THESE SHALL BE AVAILABLE TO THE ARCHITECT/ENGINEER, THE OWNER, THE PROJECT INSPECTOR, THE OWNER'S OTHER INSPECTORS AND TO THE OWNER'S TESTING PERSONNEL. THE DRAWINGS SHALL BE NEATLY AND CLEARLY MARKED IN COLOR DURING CONSTRUCTION TO RECORD ALL VARIATIONS MADE DURING CONSTRUCTION. THE REPRESENTATION OF SUCH VARIATIONS SHALL INCLUDE SUCH SUPPLEMENTARY NOTES, SYMBOLS, LEGENDS, AND DETAILS AS MAY BE NECESSARY TO CLEARLY SHOW THE AS–BUILT CONSTRUCTION. UPON COMPLETION OF THE WORK THE CONTRACTOR SHALL DELIVER TO THE ARCHITECT/ENGINEER, ONE COMPLETE SET OF "AS–BUILT DRAWINGS"
11. ALL WORKMANSHIP, MATERIALS AND EQUIPMENT SHALL BE GUARANTEED FOR A PERIOD OF TWO YEARS AFTER ACCEPTANCE OF AREA BY OWNER. REPAIR OR REPLACE DEFECTIVE MATERIALS OR INSTALLATION AT NO COST TO OWNER DURING THE GUARANTEE PERIOD. CORRECT DAMAGE CAUSED IN MAKING NECESSARY REPAIRS AND REPLACEMENTS UNDER GUARANTEE AT NO COST TO OWNER.
12. SUBMIT GUARANTEE TO CONTRACT OFFICER BEFORE FINAL PAYMENT.
13. STATEMENT OF GUARANTEE REQUIREMENTS SHALL NOT BE INTERPRETED TO LIMIT OWNER'S RIGHTS UNDER LAW AND THIS CONTRACT.
14. ADDRESS QUESTIONS REGARDING DRAWINGS TO ENGINEER IN WRITING BEFORE AWARD OF CONTRACT. OTHERWISE, ENGINEER INTERPRETATION OF MEANING AND INTENT OF DRAWINGS SHALL BE FINAL.
15. THE CONSTRUCTION ADMINISTRATION PHASE SERVICES ARE INTENDED TO BENEFIT THE CLIENT ONLY. SERVICES RENDERED BY ENGINEER DO NOT RELIEVE CONTRACTOR FROM OBLIGATIONS UNDER THE CONSTRUCTION DOCUMENTS. ENGINEER DOES NOT HAVE AUTHORITY TO SUPERVISE, DIRECT OR CONTROL CONTRACTOR, AND IS NOT RESPONSIBLE FOR MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES OF CONSTRUCTION OR FOR SAFETY PROGRAMS OR PRECAUTIONS DURING CONSTRUCTION. NOR IS ENGINEER RESPONSIBLE FOR CONTRACTORS FAILURE TO PERFORM THE WORK IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS OR APPLICABLE LAWS OR CODES.
16. SUBMIT SHOP DRAWINGS AND PRODUCT DATA WITHIN 21 DAYS AFTER AWARD OF CONTRACT. CHECK, STAMP AND MARK WITH PROJECT NAMES SUBMITTALS BEFORE TRANSMITTING TO ARCHITECT. INDICATE DEVIATIONS FROM CONTRACT DOCUMENTS. SHOP DRAWINGS SHALL BE PROVIDED FOR ALL EQUIPMENT SHOWN ON THE DRAWINGS. SUBMITTALS SHALL BE APPROVED BY THE ENGINEER BEFORE PURCHASE OF MATERIALS.
17. DEVIATION FROM CONTRACT DOCUMENTS, OR PROPOSED SUBSTITUTION OF MATERIALS OR EQUIPMENT FOR THOSE SPECIFIED, SHALL BE REQUESTED IN SEPARATE LETTER, WHETHER DEVIATIONS ARE DUE TO FIELD CONDITIONS, STANDARD SHOP PRACTICE, OR OTHER CAUSE.
18. SCHEDULE AT LEAST TEN WORKING DAYS, EXCLUSIVE OF TRANSMITTAL TIME FOR SUBMITTAL REVIEW.
19. ALL WORK SHALL BE EXECUTED IN WORKMANLIKE MANNER AND SHALL PRESENT NEAT, RECTILINEAR AND MECHANICAL APPEARANCE WHEN COMPLETED. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH THE BEST ENGINEERING PRACTICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL EQUIPMENT IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS. THIS SHALL INCLUDE PROVIDING CLEARANCES AS DEFINED IN THE INSTALLATION INSTRUCTIONS AND IN ACCORDANCE WITH NEC REQUIREMENTS. PROVIDE ALL AUXILIARY ITEMS REQUIRED TO PERFORM FUNCTION INTENDED.
20. ALL WORK SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER OR HIS AUTHORIZED REPRESENTATIVE AND SHALL BE PERFORMED IN ACCORDANCE WITH ALL BUILDING RULES AND REGULATIONS AS PROVIDED BY THE BUILDING OWNER.
21. CONTRACTOR SHALL REVIEW ALL TRADES' CONTRACT DOCUMENTS TO DETERMINE SPECIFIC MOUNTING LOCATIONS FOR ELECTRICAL EQUIPMENT.
22. THE CONTRACTOR SHALL NOT INSTALL MORE THAN 3 CURRENT CARRYING CONDUCTORS IN A RACEWAY UNLESS DONE SO STRICTLY TO COMPLY WITH THE NATIONAL ELECTRIC CODE REQUIREMENTS FOR APPLYING ADJUSTMENT FACTORS FOR MORE THAN THREE CURRENT–CARRYING CONDUCTORS IN A RACEWAY.
23. ALL CONDUCTORS SHALL BE COPPER, MINIMUM SIZE CONDUCTOR SHALL BE NO. 12 AWG WITH 600 VOLT TYPE "THWN" INSULATION, RATED MINIMUM 75° C. AND ROUTED IN CONDUIT. CONDUCTORS NO. 8 AWG AND LARGER SHALL BE STRANDED. THE USE OF ALUMINUM CONDUCTORS SHALL NOT BE ACCEPTABLE.
24. ALL 120 VOLT CIRCUIT HOME RUNS WHICH ARE OVER 75 LINEAR FEET SHALL BE #10 CONDUCTORS MINIMUM. CONTRACTOR SHALL INCREASE WIRE SIZE AS REQUIRED TO MAINTAIN A MAXIMUM VOLTAGE DROP OF 3%.
25. COLOR CODING AND LABELING OF UTILITIES SHALL BE ACCOMPLISHED PER THE REQUIREMENTS OF UTILITY COMPANY.
26. BRANCH CIRCUIT CONDUCTORS #12 AND #10 SHALL HAVE SOLID COLOR COMPOUND, SOLID COLOR COATING. NEUTRALS AND EQUIPMENT GROUNDS SHALL HAVE SOLID COMPOUND OR SOLID COLOR COATING (WHITE, GRAY AND GREEN), EXCEPT THAT NEUTRALS WITH COLORED STRIPE SHALL BE USED WHERE REQUIRED BY NEC. CONDUCTORS #8 AND LARGER WITH STRIPES, BANDS OR HASH MARKS SHALL HAVE BACKGROUND COLOR OTHER THAN WHITE, GREEN, AND GRAY.
27. ALL CIRCUITS MUST HAVE SEPARATE INSULATED GROUND WIRE. THE CONDUIT CANNOT BE USED IN PLACE OF THE GROUND WIRE.
28. CONDUCTORS SHALL BE CONTINUOUS FROM TERMINATION TO TERMINATION. PROVIDE JUNCTION BOXES AS SHOWN ON DRAWINGS OR AS REQUIRED.
29. CONTROL/POWER WIRING AND CONDUIT REQUIRED BUT NOT SHOWN FOR, AND NOT LIMITED TO, INVERTERS, BATTERY STORAGE, AND EQUIPMENT MANUFACTURER CONTROL PANELS SHALL BE SUPPLIED AND INSTALLED TO PROVIDE A COMPLETE AND USABLE FACILITY AS SPECIFIED. COORDINATE WITH MECHANICAL DIVISION AND PROVIDE AS REQUIRED.
30. ALL WIRING SHALL BE INSTALLED IN CONDUIT. MINIMUM CONDUIT SIZE SHALL BE 3/4–INCH.
31. ELECTRICAL METALLIC TUBING (EMT) CONDUIT SHALL NOT EXCEED 2 INCHES DIAMETER FOR POWER FEEDER OR BRANCH CIRCUITS AND SHALL NOT EXCEED 4 INCHES DIAMETER FOR CONTROL CIRCUITS AND COMMUNICATIONS SYSTEMS.
32. EXPOSED OUTDOOR CONDUITS SHALL BE GALVANIZED RIGID METAL CONDUIT (GRC). 3/4–INCH DIAMETER MINIMUM.
33. EXPANSION FITTINGS SHALL BE INSTALLED IN CONDUITS CROSSING EXPANSION JOINTS.
34. CONDUITS IN FINISHED AREAS SHALL BE CONCEALED AND THOSE IN UNFINISHED AREAS SHALL BE SURFACE MOUNTED.
35. PROVIDE POLYETHYLENE CORDS FOR PULLING WIRE.
36. PROVIDE PULLING WIRES FOR COMMUNICATION AND OTHER EMPTY CONDUIT SYSTEMS REQUIRED, WITHOUT SPLICES AND WITH AMPLE EXPOSED LENGTHS AT EACH END.
37. TOP ENTRIES OF CONDUITS INTO ELECTRICAL ENCLOSURES LOCATED IN AREAS SUBJECT TO WATER OR CONDENSATION SHALL NOT BE PERMITTED.
38. ALL CIRCUITRY RUNS INDICATED ARE DIAGRAMMATIC. THE CONTRACTOR SHALL DETERMINE IN THE FIELD THE MOST SUITABLE ROUTES. THE CONTRACTOR SHALL PROVIDE "AS–BUILT" DOCUMENTATION OF ALL CIRCUITRY RUNS.
39. CONTRACTOR SHALL PROVIDE ALL WEATHERPROOF FOR ELECTRICAL PENETRATIONS.
40. FURNISH AND INSTALL NAMEPLATES ON ALL ELECTRICAL EQUIPMENT.
41. ALL GROUNDING SHALL BE PERFORMED IN ACCORDANCE WITH THE NATIONAL AND STATE ELECTRICAL CODES.
42. COORDINATE ALL ELECTRICAL ITEMS WITH EXISTING FIELD CONDITIONS. LOCATIONS SHOWN ARE APPROXIMATE AND MAY REQUIRE MINOR ADJUSTMENT IN THE FIELD TO SATISFY THE DESIGN INTENT.
43. DAMAGE TO EXISTING FACILITIES AND EQUIPMENT SHALL BE REPAIRED OR REPLACED IMMEDIATELY BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
44. THE LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE AND REQUIRE COORDINATION WITH ALL OTHER TRADES AND VERIFICATION OF EXISTING CONDITIONS. ROUTING OF CONDUIT IS DIAGRAMMATIC IN NATURE AND NOT INTENDED TO SHOW ALL REQUIRED OFFSETS AND DETAILS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL EXISTING ASSOCIATED EQUIPMENT AND CONDITIONS. COORDINATE THE LOCATION OF ALL EQUIPMENT WITH THE ENGINEER AND THE OWNER. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL OTHER TRADES' DRAWINGS AND SPECIFICATIONS AND COORDINATING WITH OTHER TRADE DURING BIDDING AND CONSTRUCTION.
45. REPAIR AND PATCH ANY DISTURBED AREA TO MATCH EXISTING CONDITIONS.
46. ALL ELECTRICAL WORK INDICATED TO REMAIN SHALL BE SUITABLY PROTECTED TO PREVENT ANY DAMAGE.
47. ALL ELECTRICAL CURRENT CARRYING PARTS SHALL BE COPPER FOR ALL EQUIPMENT.
48. SWITCHBOARDS AND PANELBOARDS SHALL BE FULLY RATED. SERIES RATING IS NOT ACCEPTABLE. CIRCUIT BREAKERS SHALL BE THE BOLT–ON TYPE WITH FULL COPPER BUSSING, 100% NEUTRAL AND ISOLATED GROUND BUSS REMOVABLE COVER AND NAMEPLATE. U.O.N
49. PROVIDE TEMPORARY POWER AND LIGHTING FOR ALL TRADES AND REQUIRED TO COMPLETE THE PROJECT. ALL TEMPORARY AND INTERIM EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS INCLUDING. BUT NOT LIMITED TO, NFPA 70. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THIS REQUIREMENT WITH ALL OTHER TRADES AND INCLUDING ALL ASSOCIATED COST IN BID PRICE.
50. ENGAGE A QUALIFIED ELECTRICAL TESTING COMPANY TO LOCATE ALL UNDERGROUND UTILITIES IN PROPOSED CONSTRUCTION AREAS FOR ALL TRADES BEFORE DIGGING. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THIS ORGANIZATION AND INCLUDING ALL ASSOCIATED COSTS IN THE BID PRICE.
51. PROVIDE CONCRETE FOUNDATION HOUSEKEEPING PAD FOR ALL FLOOR MOUNTED EQUIPMENT.
52. THIS DOCUMENT INCLUDES INFORMATION AND DEPICTIONS OF CITY OF DOVER POWER ELECTRIC UTILITIES LOCATED WITHIN THE PROJECT AREA, LOCATIONS, DIMENSIONS, DEPTHS, AND OTHER DETAILS OF ANY SUCH UTILITIES MAY NOT BE AS–BUILT, AND THE INFORMATION SHALL NOT BE RELIED UPON WITHOUT FIELD VERIFICATION, EXCAVATORS MUST EMPLOY SAFE DIGGING BEST PRACTICES WHEN APPROACHING CITY OF DOVER POWER ELECTRIC UTILITIES AND COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, INCLUDING, BUT NOT LIMITED TO, THE "MISS UTILITY LAW". NO REPRESENTATION, GUARANTEES, OR WARRANTIES, EXPRESS OR IMPLIED, ARE MADE BY CITY OF DOVER POWER AS TO THE QUALITY, COMPLETENESS, OR ACCURACY OF THE CITY OF DOVER POWER UTILITY INFORMATION, AND IN ACCEPTING THIS DOCUMENT, THE RECIPIENT EXPRESSLY ACKNOWLEDGES AND AGREES THAT IT IS NOT RELYING ON THE ACCURACY OF THE SAME.
53. CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY COMPANY COORDINATION REQUIRED FOR CONNECTING THE NEW SOLAR PANEL SYSTEM TO THE UTILITY SERVICE, INCLUDING BUT NOT LIMITED TO, REPLACING THE EXISTING METER WITH BI–DIRECTIONAL METER AND PROGRAMMING THE ENERGY MANAGEMENT CENTER TO NOT ALLOW MORE ENERGY THAN ALLOWED BY THE UTILITY TO FLOW BACK TO THE UTILITY. THIS VALUE IS CALCULATED BY TAKING 110% OF THE CONSUMPTION HISTORY AS DICTATED BY THE UTILITY.
54. CONTRACTOR SHALL SUBMIT CONDUIT LAYOUT PLAN FOR SOLAR PANEL SYSTEM INCLUDING CANOPY MOUNTED CONDUITS AND UNDERGROUND CONDUIT FOR APPROVAL PRIOR TO INSTALLING ANY CONDUIT.
55. CONTRACTOR SHALL SUBMIT PV RACKING SYSTEM GROUNDING LAYOUT FOR APPROVAL PRIOR TO INSTALLATION.

ADDENDUMS / REVISIONS

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**DOVER BUS CANOPY SOLAR PANELS**

| | |
|---|---|
| CONTRACT | T202153104.02 |
| COUNTY | KENT |
| BRIDGE NO. | N/A |
| DESIGNED BY: | JRM |
| CHECKED BY: | JL |

# ELECTRICAL GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS

E-001
SECTION
JMT
SHEET NO.
19

JMT Q:\2018\1802769_026_Dover_Bus_Canopy_Sol\CADD\Elec\E-001.dwg

## GENERAL SHEET NOTES:

1. INFORMATION SHOWN ON THIS DRAWING PERTAINING TO EXISTING CONDITIONS HAVE BEEN OBTAINED FROM AVAILABLE BUILDING DRAWINGS OR GENERAL FIELD OBSERVATIONS AND MAY NOT INDICATE ACTUAL EXISTING CONDITIONS IN DETAIL OR DIMENSION. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE ACTUAL EXISTING CONDITIONS PRIOR TO FABRICATION OR PERFORMANCE OF ANY WORK. SHOULD CONDITIONS BE DISCOVERED THAT PREVENT EXECUTION OF THE WORK AS INDICATED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING AND AWAIT DIRECTION BEFORE PROCEEDING WITH THE WORK.

2. UNLESS OTHERWISE NOTED, ELECTRICAL ITEMS SHOWN HEAVY DASHED (— — —) SHALL BE REMOVED, AND ELECTRICAL ITEMS SHOWN LIGHT SOLID (————) SHALL BE EXISTING TO REMAIN.

## SHEET KEYNOTES:

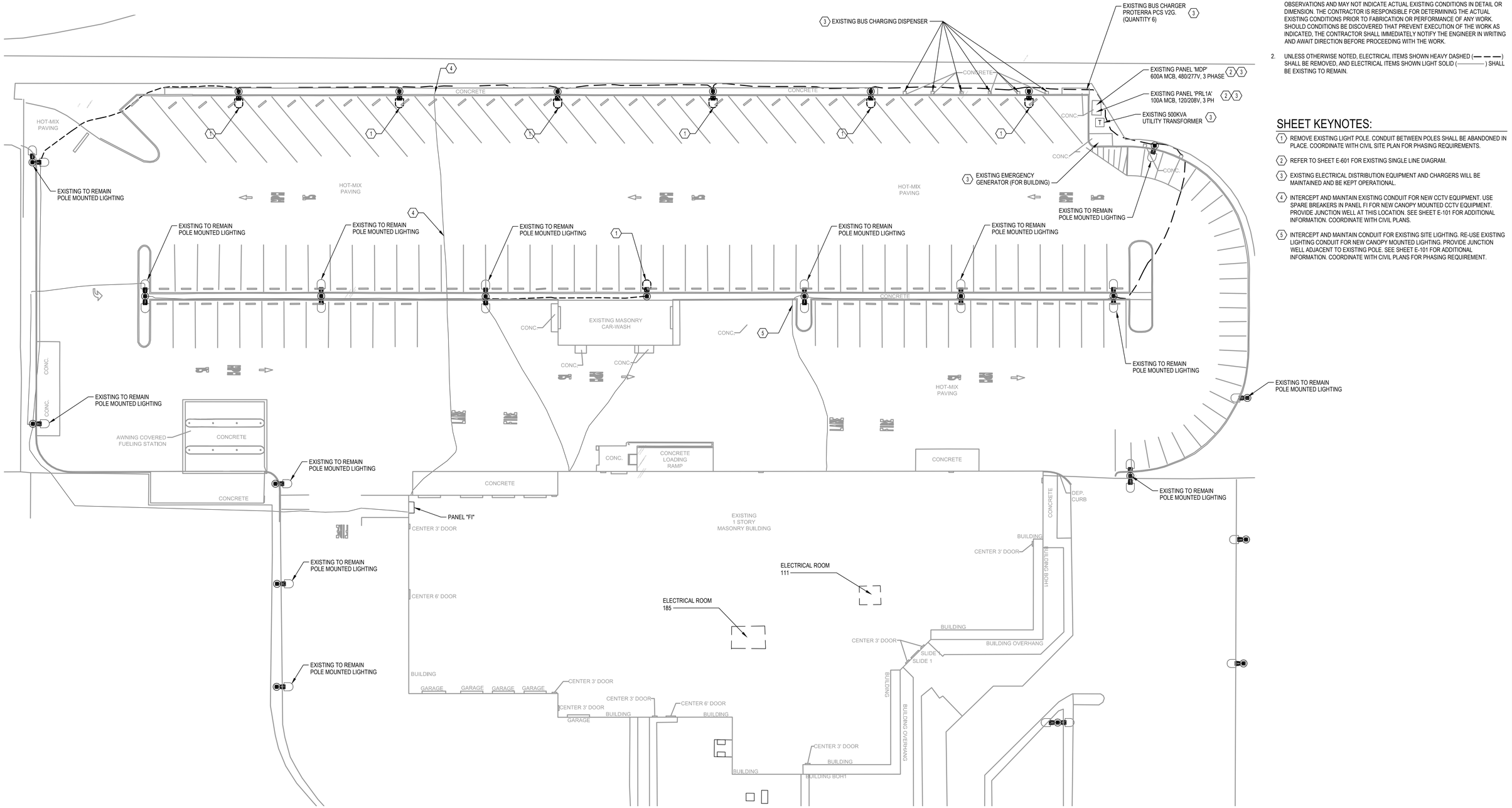
(1) REMOVE EXISTING LIGHT POLE. CONDUIT BETWEEN POLES SHALL BE ABANDONED IN PLACE. COORDINATE WITH CIVIL SITE PLAN FOR PHASING REQUIREMENTS.

(2) REFER TO SHEET E-601 FOR EXISTING SINGLE LINE DIAGRAM.

(3) EXISTING ELECTRICAL DISTRIBUTION EQUIPMENT AND CHARGERS WILL BE MAINTAINED AND BE KEPT OPERATIONAL.

(4) INTERCEPT AND MAINTAIN EXISTING CONDUIT FOR NEW CCTV EQUIPMENT. USE SPARE BREAKERS IN PANEL FI FOR NEW CANOPY MOUNTED CCTV EQUIPMENT. PROVIDE JUNCTION WELL AT THIS LOCATION. SEE SHEET E-101 FOR ADDITIONAL INFORMATION. COORDINATE WITH CIVIL PLANS.

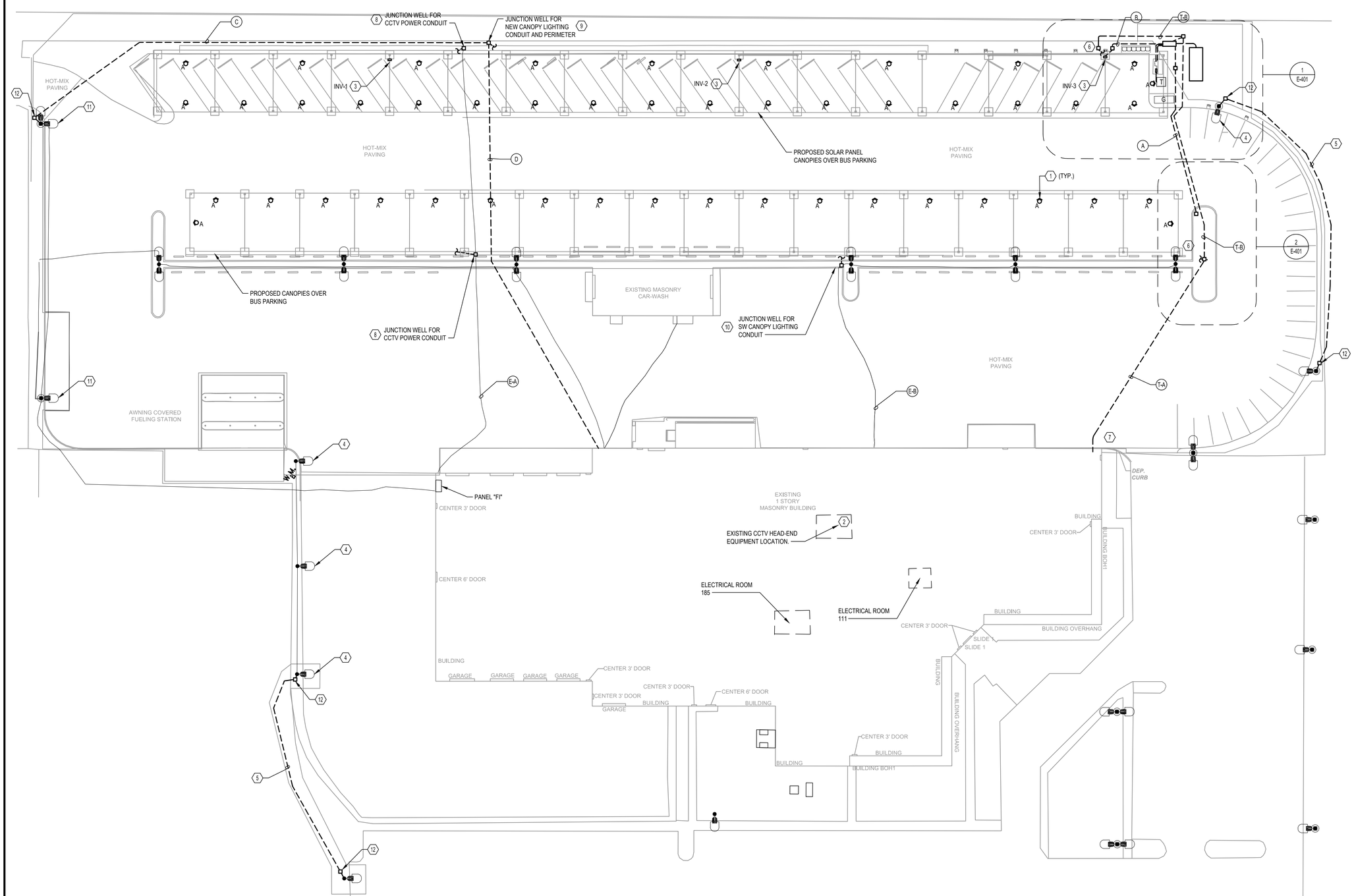
(5) INTERCEPT AND MAINTAIN CONDUIT FOR EXISTING SITE LIGHTING. RE-USE EXISTING LIGHTING CONDUIT FOR NEW CANOPY MOUNTED LIGHTING. PROVIDE JUNCTION WELL ADJACENT TO EXISTING POLE. SEE SHEET E-101 FOR ADDITIONAL INFORMATION. COORDINATE WITH CIVIL PLANS FOR PHASING REQUIREMENT.




1 ED-101 ELECTRICAL SITE PLAN - DEMOLITION
SCALE: 1" = 30'

Q:\2018\1802769_026_Dover_Bus_Canopy_Sol\CADD\Elec\ED-101 - ELECTRICAL SITE PLAN - DEMOLITION.dwg

| ADDENDUMS / REVISIONS | | 15' 0 15' 30' SCALE: 1"= 30'-0" | DOVER BUS CANOPY SOLAR PANELS | CONTRACT T202153104.02 | BRIDGE NO. N/A | ELECTRICAL SITE PLAN - DEMOLITION | ED-101 |
|---|---|---|---|---|---|---|---|
| | | | | COUNTY KENT | DESIGNED BY: JRM | | SECTION JMT |
| | | | | | CHECKED BY: JL | | SHEET NO. 20 |




## GENERAL SHEET NOTES:

1. INFORMATION SHOWN ON THIS DRAWING PERTAINING TO EXISTING CONDITIONS HAS BEEN OBTAINED FROM AVAILABLE BUILDING DRAWINGS OR GENERAL FIELD OBSERVATIONS AND MAY NOT INDICATE ACTUAL EXISTING CONDITIONS IN DETAIL OR DIMENSION. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE ACTUAL EXISTING CONDITIONS PRIOR TO FABRICATION OR PERFORMANCE OF ANY WORK. SHOULD CONDITIONS BE DISCOVERED THAT PREVENT EXECUTION OF THE WORK AS INDICATED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING AND AWAIT DIRECTION BEFORE PROCEEDING WITH THE WORK.
2. UNLESS OTHERWISE NOTED, ELECTRICAL ITEMS SHOWN HEAVY SOLID ( ——— ) SHALL BE NEW, AND ELECTRICAL ITEMS SHOWN LIGHT SOLID ( ——— ) SHALL BE EXISTING TO REMAIN.
3. ALL WIRING SHALL BE INSTALLED IN CONDUIT, INCLUSIVE OF LOW VOLTAGE/CONTROL WIRING. BURIED CONDUIT SHALL BE PVC SCHEDULE 40. CONDUIT SHALL BE ENCASED IN CONCRETE UNDER DRIVE AISLES AND PARKING AREAS, AND DIRECT BURIED IN ALL OTHER AREAS.
4. COORDINATE EXACT LOCATIONS OF DIRECT BURIES DUCTBANKS WITH DTC.
5. REFER TO SHEET E-601 FOR ELECTRICAL PANEL SCHEDULES, SINGLE LINE, AND FIXTURE SCHEDULES.
6. COMMUNICATIONS DUCTBANK SHALL HAVE AT LEAST 12 INCHES OF SEPARATION FROM POWER DUCTBANK.
7. CONTRACTOR SHALL SUPPORT CONDUITS AS REQUIRED BY NEC.
8. REFER TO SHEET DT-02 FOR TRAFFIC RATED JUNCTION WELL DETAILS WITHIN PARKING LOT LIMITS. COORDINATE WITH CIVIL PLANS.

## SHEET KEYNOTES:

1. PROVIDE LIGHTING FIXTURE MOUNTED TO THE UNDERSIDE OF THE CANOPY. EXISTING LIGHTING CONTROLS FROM BUILDING SHALL BE RE-USED. (TYPICAL)
2. COORDINATE FINAL LOCATION AND TERMINATION REQUIREMENTS OF CCTV HEAD-END EQUIPMENT WITH OWNER.
3. PROVIDE SOLAR ARRAY INVERTER MOUNTED TO CANOPY COLUMN. COORDINATE FINAL LOCATION WITH SOLAR PANEL LAYOUT.
4. LIGHTING FIXTURE POWER SHALL BE DISCONNECTED FROM EXISTING SOURCE AND RE-ROUTED TO ALTERNATE EXISTING LIGHTING CIRCUIT. MATCH ALTERNATING CIRCUIT NUMBER SCHEME USED ON NEW CIRCUIT FOR LIGHTING (1,3,5 ETC.). SEE CIVIL PLANS FOR PHASING REQUIREMENTS.
5. PROVIDE NEW 1" CONDUIT FOR CONNECTING EXISTING-TO-REMAIN LIGHTING FIXTURES TO ALTERNATE EXISTING POWER SOURCE. MATCH CONDUIT TYPE, AND WIRING SIZE AND TYPE FOR CIRCUIT CONNECTION.
6. REFER TO DETAIL 1 ON SHEET E-502 FOR MORE INFORMATION ON VERTICAL CONDUIT ROUTING TRANSITIONS.
7. REFER TO DETAIL 2 ON SHEET E-502 FOR MORE INFORMATION ON VERTICAL CONDUIT ROUTING TRANSITION INTO BUILDING. COORDINATE TERMINATION LOCATION OF CCTV CONDUIT WITH OWNER.
8. PROVIDE JUNCTION WELL FOR INTERCEPTING EXISTING POWER CONDUIT FOR NEW CCTV EQUIPMENT. USE A SPARE BREAKER FOR EACH CANOPY FROM PANEL "FI" TO NEW CANOPY MOUNTED CCTV EQUIPMENT. JUNCTION WELL IN DRIVE ISLES, OR SUBJECT TO TRAFFIC SHALL BE RATED FOR THOSE CONDITIONS AND SIZED PER NEC REQUIREMENTS. SEE SHEET DT-03 FOR ADDITIONAL DETAILS OF DRIVE AISLE RATED JUNCTION WELL.
9. PROVIDE JUNCTION WELL TYPE 1 FOR NEW CANOPY LIGHTING CIRCUIT, AND TO FEED EXISTING PERIMETER LIGHTING CIRCUIT. USE SPARE BREAKER FROM PANEL H2 IN ELECTRICAL ROOM 185 FOR THE TWO NEW CIRCUITS. SEE CIVIL PLANS FOR PHASING REQUIREMENTS.
10. PROVIDE JUNCTION WELL FOR INTERCEPTING EXISTING POWER FOR SITE LIGHTING. USE SPARE BREAKERS FROM PANEL H3A IN ELECTRICAL ROOM 111 FOR NEW CANOPY LIGHTING CIRCUIT. JUNCTION WELLS IN DRIVE AISLES, OR SUBJECT TO TRAFFIC SHALL BE RATED FOR THOSE CONDITIONS AND SIZED PER NEC REQUIREMENTS. SEE CIVIL PLANS FOR PHASING REQUIREMENTS. SEE SHEET DT-03 FOR ADDITIONAL DETAILS OF DRIVE AISLE RATED JUNCTION WELL.
11. LIGHTING FIXTURE POWER SHALL BE DISCONNECTED FROM EXISTING SOURCE AND RE-ROUTED TO NEW LIGHTING CIRCUIT FROM PANEL H2 IN ELECTRICAL ROOM 185. SEE CIVIL PLANS FOR PHASING REQUIREMENTS.
12. PROVIDE QUAZITE HANDHOLE ADJACENT TO POLE FOR INTERCEPTING CONDUIT, AND EXTENDING CONDUIT TO EXISTING POLE MOUNTED FIXTURE. COORDINATE FINAL LOCATION WITH EXISTING LIGHTING. SEE DETAIL 2 ON SHEET E-501 FOR ADDITIONAL DETAIL.

## LEGEND

DRAWING SYMBOL FOR CONDUIT/WIRING DESCRIPTION.

(AA) UNDERGROUND CONDUITS

NOTES:

- SEE CONDUIT/WIRING SCHEDULE ON DRAWING E-503.

1 E-101 ELECTRICAL SITE PLAN - NEW WORK
SCALE: 1" = 30'-0"

15' 0 15' 30'
SCALE: 1"= 30'-0"

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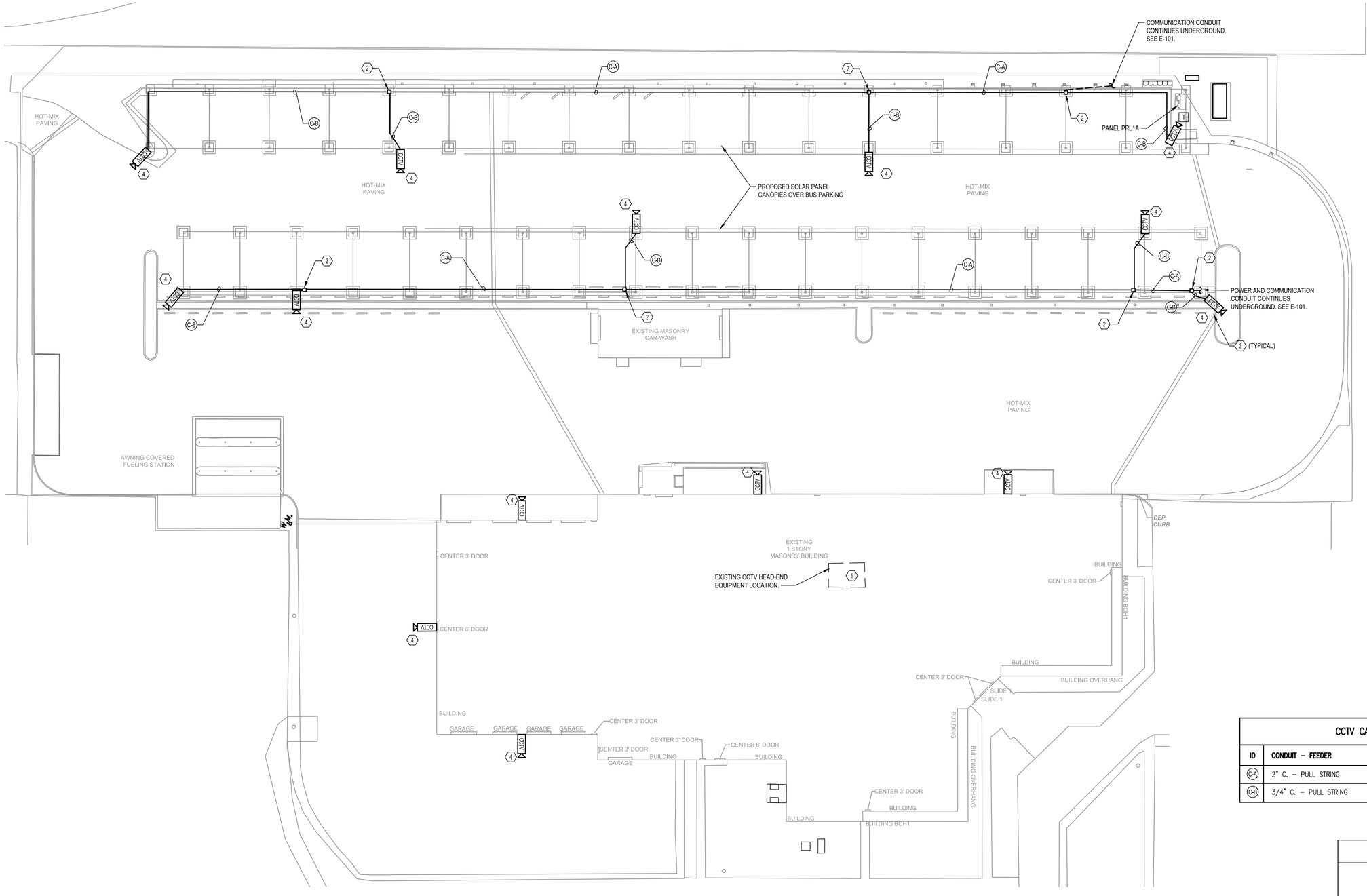
| ADDENDUMS / REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| | | | DOVER BUS CANOPY SOLAR PANELS | CONTRACT T202153104.02 | BRIDGE NO. N/A | ELECTRICAL SITE PLAN - NEW |
| | | | | COUNTY KENT | DESIGNED BY: JRM | |
| | | | | | CHECKED BY: JL | |

E-101 | SECTION JMT | SHEET NO. 21




1 E-103 COMMUNICATIONS SITE PLAN - NEW WORK
SCALE: 1" = 30'-0"

## GENERAL SHEET NOTES:

1. INFORMATION SHOWN ON THIS DRAWING PERTAINING TO EXISTING CONDITIONS HAS BEEN OBTAINED FROM AVAILABLE BUILDING DRAWINGS OR GENERAL FIELD OBSERVATIONS AND MAY NOT INDICATE ACTUAL EXISTING CONDITIONS IN DETAIL OR DIMENSION. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE ACTUAL EXISTING CONDITIONS PRIOR TO FABRICATION OR PERFORMANCE OF ANY WORK. SHOULD CONDITIONS BE DISCOVERED THAT PREVENT EXECUTION OF THE WORK AS INDICATED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING AND AWAIT DIRECTION BEFORE PROCEEDING WITH THE WORK.
2. UNLESS OTHERWISE NOTED, ELECTRICAL ITEMS SHOWN HEAVY SOLID (————) SHALL BE NEW, AND ELECTRICAL ITEMS SHOWN LIGHT SOLID (————) SHALL BE EXISTING TO REMAIN.
3. ALL WIRING SHALL BE INSTALLED IN CONDUIT, INCLUSIVE OF LOW VOLTAGE/CONTROL WIRING. BURIED CONDUIT SHALL BE PVC SCHEDULE 40. CONDUIT SHALL BE ENCASED IN CONCRETE UNDER DRIVE AISLES AND PARKING AREAS, AND DIRECT BURIED IN ALL OTHER AREAS.
4. COORDINATE EXACT LOCATIONS OF DIRECT BURIED DUCTBANKS WITH DTC.
5. REFER TO SHEET E-502 FOR ELECTRICAL PANEL SCHEDULES, SINGLE LINE, AND FIXTURE SCHEDULES.
6. COMMUNICATIONS DUCTBANK SHALL HAVE AT LEAST 12 INCHES OF SEPARATION FROM POWER DUCTBANK.
7. CONTRACTOR SHALL SUPPORT CONDUITS ON CANOPY AS REQUIRED BY NEC.
8. COORDINATE FINAL CAMERA LOCATION, QUANTITY, AND REQUIREMENTS WITH DTC.
9. COORDINATE WITH DTC ALL PHASING AND COVERAGE REQUIREMENTS TO MAINTAIN EXISTING CCTV COVERAGE DURING CONSTRUCTION.
10. SEE SHEET E-101 FOR UNDERGROUND CONDUIT INFORMATION. SEE SHEET E-501 AND E-502 FOR DETAILS.
11. CONTRACTOR SHALL FURNISH AND INSTALL ALL CONDUITS, BACKBOXES AND REQUIRED ACCESSORIES AS NECESSARY TO SUPPORT THE COMPLETE INSTALLATION OF ALL FIXED VIDEO SURVEILLANCE CAMERAS. ALL WIRING AND CAMERA INSTALLATION SHALL BE DONE BY THE DTC INTEGRATOR. WORK DONE ON THE INTERIOR OF THE BUILDING SHALL BE DONE BY THE DTC INTEGRATOR. THE CONTRACTOR SHALL COORDINATE WITH THE DTC INTEGRATOR TO DETERMINE ALL CONDUIT REQUIREMENTS PRIOR TO COMMENCEMENT OF ANY WORK.

## SHEET KEYNOTES:

1. COORDINATE FINAL LOCATION AND TERMINATION REQUIREMENTS OF CCTV HEAD-END EQUIPMENT WITH OWNER.
2. PROVIDE STAINLESS STEEL NEMA 4X JUNCTION BOX FOR CCTV CONDUIT ROUTING. SIZE JUNCTION BOX PER NEC REQUIREMENTS.
3. ALL CCTV CAMERA MORE THAN 295 FEET FROM NETWORK SWITCH SHALL BE FIBER PER DTC STANDARDS. PROVIDE POWER FOR MEDIA CONVERTERS AT CAMERA LOCATIONS FROM PANEL PRL1A.
4. CCTV EQUIPMENT SHALL BE INSTALLED BY OTHERS.

### CCTV CANOPY CONDUIT ROUTING SCHEDULE

| ID | CONDUIT – FEEDER | DESCRIPTION |
|---|---|---|
| C-A | 2" C. – PULL STRING | MAIN CCTV CONDUIT |
| C-B | 3/4" C. – PULL STRING | INDIVIDUAL CCTV CONDUIT |

### LEGEND

DRAWING SYMBOL FOR CONDUIT/WIRING DESCRIPTION. (AA)
CANOPY CONDUITS

| ADDENDUMS / REVISIONS | |
|---|---|
| | |
| | |
| | |
| | |

15' 0 15' 30'
SCALE: 1"= 30'-0"

**DOVER BUS CANOPY SOLAR PANELS**

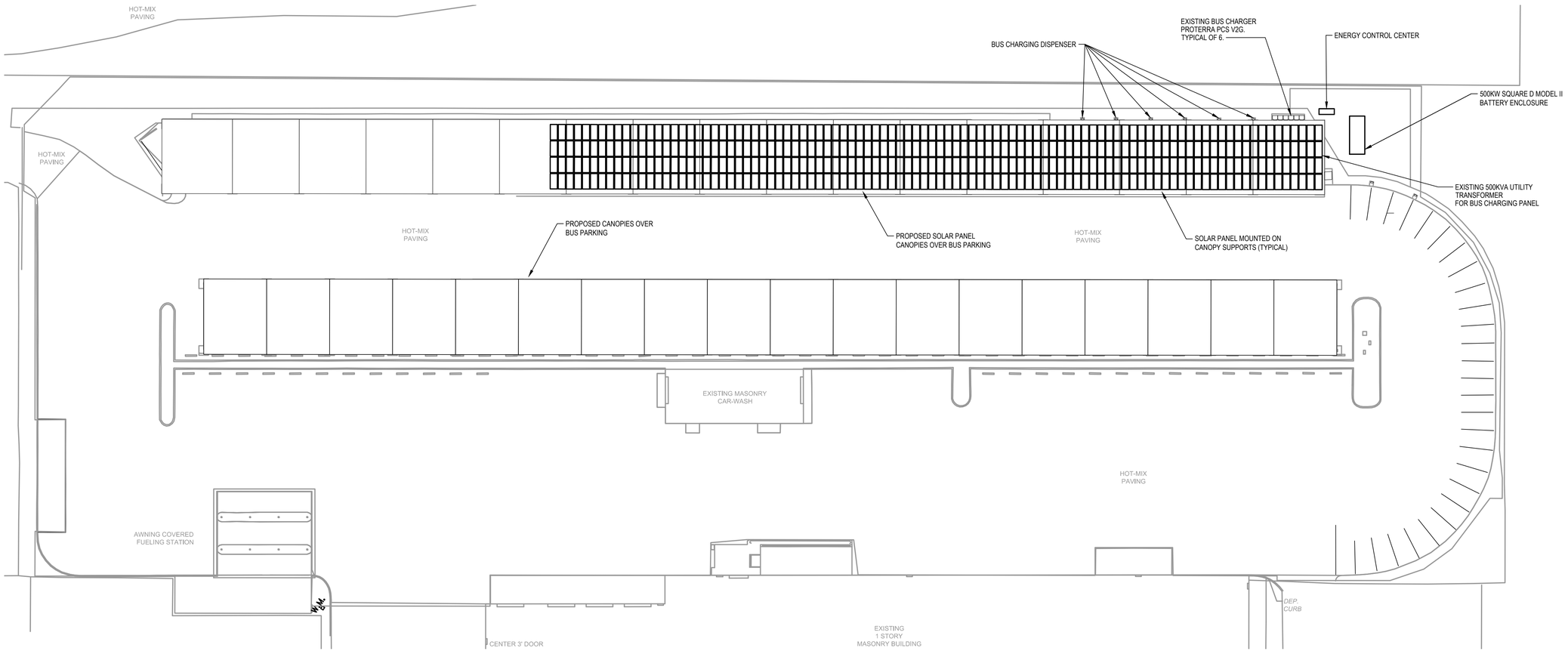
| CONTRACT | BRIDGE NO. | N/A |
|---|---|---|
| T202153104.02 | DESIGNED BY: | JRM |
| COUNTY | CHECKED BY: | JL |
| KENT | | |

**CCTV CONDUIT ROUTING PLAN - NEW**

| E-102 |
|---|
| SECTION |
| JMT |
| SHEET NO. |
| 22 |

## GENERAL SHEET NOTES:

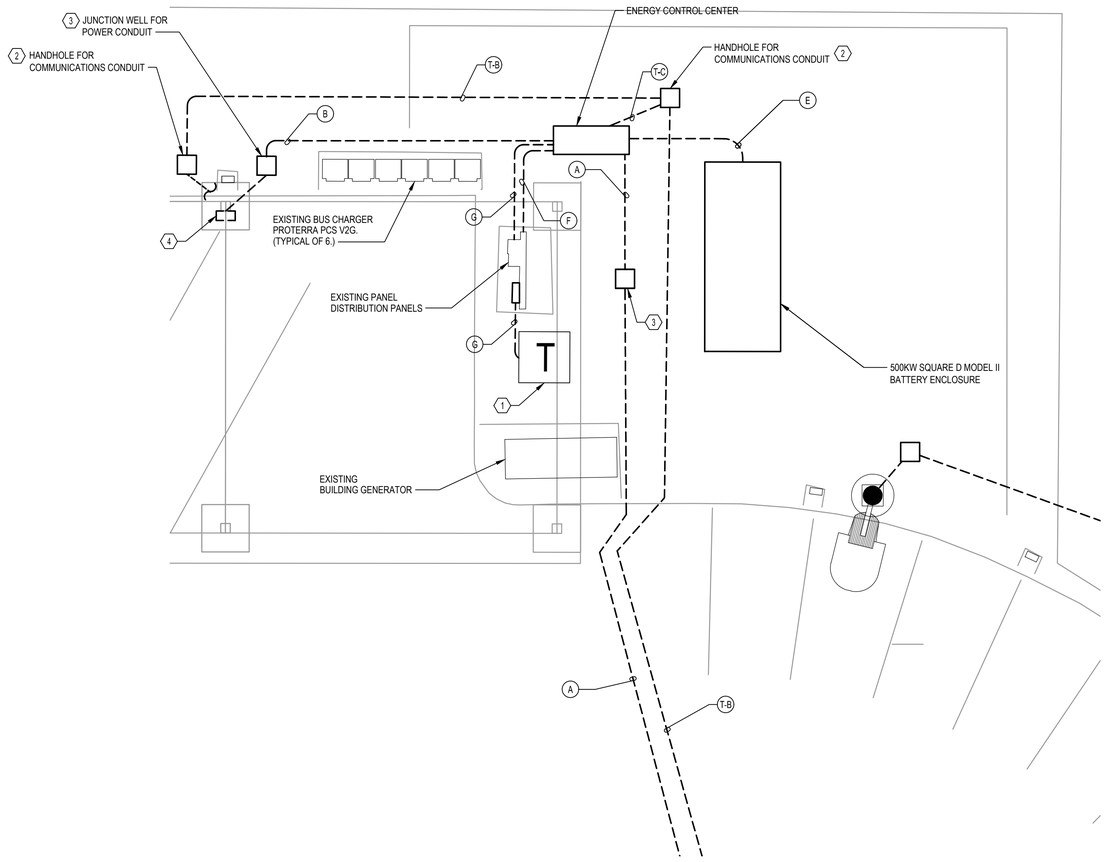
1. INFORMATION SHOWN ON THIS DRAWING PERTAINING TO EXISTING CONDITIONS HAS BEEN OBTAINED FROM AVAILABLE BUILDING DRAWINGS OR GENERAL FIELD OBSERVATIONS AND MAY NOT INDICATE ACTUAL EXISTING CONDITIONS IN DETAIL OR DIMENSION. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE ACTUAL EXISTING CONDITIONS PRIOR TO FABRICATION OR PERFORMANCE OF ANY WORK. SHOULD CONDITIONS BE DISCOVERED THAT PREVENT EXECUTION OF THE WORK AS INDICATED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING AND AWAIT DIRECTION BEFORE PROCEEDING WITH THE WORK.
2. UNLESS OTHERWISE NOTED, ELECTRICAL ITEMS SHOWN HEAVY SOLID (———) SHALL BE NEW, AND ELECTRICAL ITEMS SHOWN LIGHT SOLID (———) SHALL BE EXISTING TO REMAIN.
3. ALL WIRING SHALL BE INSTALLED IN CONDUIT, INCLUSIVE OF LOW VOLTAGE/CONTROL WIRING. BURIED CONDUIT SHALL BE PVC SCHEDULE 40 OR SCHEDULE 80, ENCASED IN CONCRETE.
4. BASIS OF DESIGN SOLAR PANEL IS QCELLS Q PEAK DUO XL WITH MINIMUM WATTAGE OF 590W. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. SOLAR PANEL ARRAY SHALL BE CAPABLE OF PRODUCING A MINIMUM OF 226KW.
6. DURING NORMAL OPERATION THE SOLAR PANELS SHOULD CHARGE THE BATTERY SYSTEM DURING THE DAY. AT NIGHT THE BATTERIES SHOULD BE USED TO POWER THE VEHICLE CHARGERS, WITH UTILITY HELP ON ANY ADDITIONAL REQUIRED ENERGY. UTILITY CONTRIBUTION SHALL ONLY BE ALLOWED TO BE USED DURING BATTERY DISCHARGE, AND NOT BATTERY CHARGING SCENARIOS. COORDINATE ECC OPERATION WITH MANUFACTURER.
7. THE CONTRACTOR SHALL PROVIDE ALL WIRING, INCLUDING BETWEEN THE SOLAR PANELS AND INVERTER, REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM. ALL WIRING SHALL BE PROVIDED IN CONDUIT.
8. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT CONNECTIONS AND EQUIPMENT GROUNDING OF THE SOLAR ARRAY, INVERTERS, AND STRUCTURAL FRAMES REQUIRED FOR A COMPLETE AND FUNCTIONAL SYSTEM IN ADHERENCE TO NEC ARTICLE 690.43.



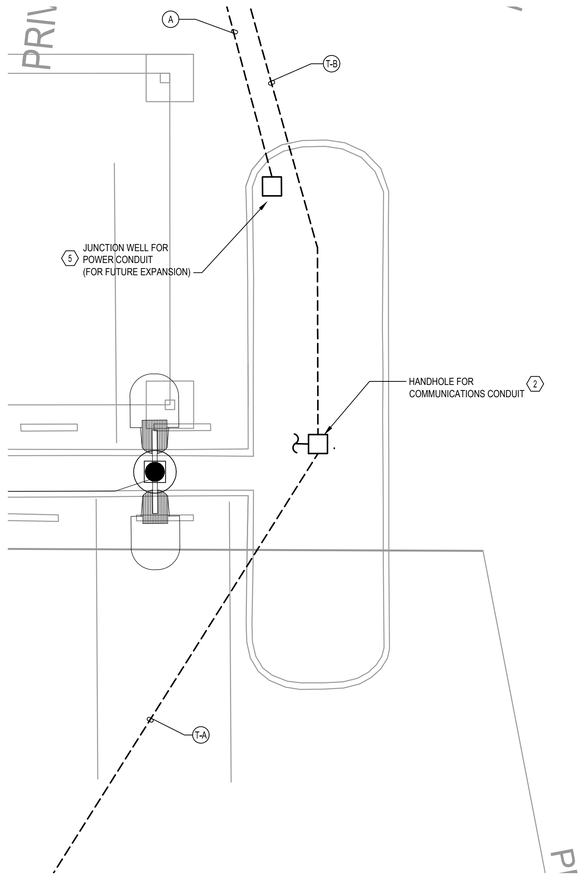

1 / E-102 ELECTRICAL SITE PLAN - SOLAR ARRAY LAYOUT
SCALE: 1" = 30'

\\jmt.corp.local\jmtdfs\2018\1802769_026_Dover_Bus_Canopy_Sol\CADD\Elec\E-103 - SITE PLAN - SOLAR ARRAY LAYOUT - 590.dwg

| ADDENDUMS / REVISIONS | | 15' 0 15' 30' SCALE: 1"= 30'-0" | DOVER BUS CANOPY SOLAR PANELS | CONTRACT T202153104.02 | BRIDGE NO. N/A | SITE PLAN - NEW SOLAR ARRAY LAYOUT | E-103 |
|---|---|---|---|---|---|---|---|
| | | | | COUNTY KENT | DESIGNED BY: JRM | | SECTION JMT |
| | | | | | CHECKED BY: JL | | SHEET NO. 23 |




1 E-401 ELECTRICAL SITE PLAN - NEW WORK - ECC & DISTRIBUTION
SCALE: 1/8" = 1'-0"




2 E-401 ELECTRICAL SITE PLAN - NEW WORK - PROPOSED ISLAND
SCALE: 1/8" = 1'-0"

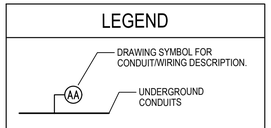
## GENERAL SHEET NOTES:

1. INFORMATION SHOWN ON THIS DRAWING PERTAINING TO EXISTING CONDITIONS HAS BEEN OBTAINED FROM AVAILABLE BUILDING DRAWINGS OR GENERAL FIELD OBSERVATIONS AND MAY NOT INDICATE ACTUAL EXISTING CONDITIONS IN DETAIL OR DIMENSION. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE ACTUAL EXISTING CONDITIONS PRIOR TO FABRICATION OR PERFORMANCE OF ANY WORK. SHOULD CONDITIONS BE DISCOVERED THAT PREVENT EXECUTION OF THE WORK AS INDICATED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING AND AWAIT DIRECTION BEFORE PROCEEDING WITH THE WORK.
2. UNLESS OTHERWISE NOTED, ELECTRICAL ITEMS SHOWN HEAVY SOLID ( ——— ) SHALL BE NEW, AND ELECTRICAL ITEMS SHOWN LIGHT SOLID ( ——— ) SHALL BE EXISTING TO REMAIN.
3. ALL WIRING SHALL BE INSTALLED IN CONDUIT, INCLUSIVE OF LOW VOLTAGE/CONTROL WIRING. BURIED CONDUIT SHALL BE PVC SCHEDULE 40. CONDUIT SHALL BE ENCASED IN CONCRETE UNDER DRIVE ISLES AND PARKING AREAS, AND DIRECT BURIED IN ALL OTHER AREAS.
4. COORDINATE EXACT LOCATIONS OF DIRECT BURIES DUCTBANKS WITH DTC.
5. REFER TO SHEET E-601 FOR ELECTRICAL PANEL SCHEDULES, SINGLE LINE, AND FIXTURE SCHEDULES.
6. COMMUNICATIONS DUCTBANK SHALL HAVE AT LEAST 12 INCHES OF SEPARATION FROM POWER DUCTBANK.
7. CONTRACTOR SHALL SUPPORT CONDUITS AS REQUIRED BY NEC.

## SHEET KEYNOTES:

1. INTERCEPT EXISTING SERVICE ON CUSTOMER SIDE OF UTILITY METER AND EXTEND TO GO THROUGH ENERGY CONTROL CENTER. REFER TO SINGLE LINE DIAGRAM FOR ADDITIONAL DETAIL. COORDINATE WITH UTILITY SERVICE PROVIDER.
2. PROVIDE JUNCTION WELL, TYPE 1 FOR COMMUNICATIONS. REFER TO DETAIL 2 ON SHEET E-501 FOR ADDITIONAL DETAILS. REFER TO E-102 FOR CONTINUATION OF CCTV CONDUIT TO CANOPY.
3. PROVIDE JUNCTION WELL, TYPE 1 FOR ELECTRICAL POWER. REFER TO DETAIL 1 ON SHEET E-501 FOR ADDITIONAL DETAILS.
4. REFER TO DETAIL 1 ON SHEET E-502 FOR MORE INFORMATION ON VERTICAL CONDUIT ROUTING TRANSITIONS.
5. PROVIDE JUNCTION WELL, TYPE 1 FOR FUTURE SOLAR CANOPY EXPANSION. REFER TO DETAIL 1 ON SHEET E-501 FOR ADDITIONAL DETAILS.

## LEGEND




NOTES:

- SEE CONDUIT/WIRING SCHEDULE ON DRAWING E-503.

| ADDENDUMS / REVISIONS | |
|---|---|
| | |
| | |
| | |
| | |

4' 0 4' 8'
SCALE: ⅛"= 1'-0"

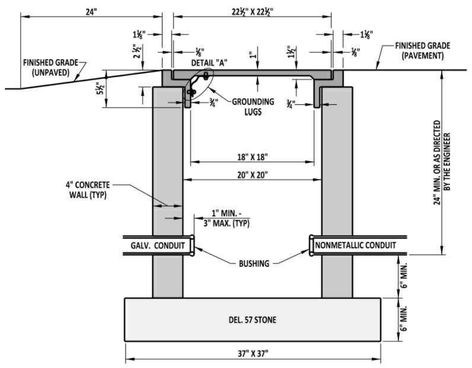
**DOVER BUS CANOPY SOLAR PANELS**

| CONTRACT | BRIDGE NO. | N/A |
|---|---|---|
| T202153104.02 | DESIGNED BY: | JRM |
| COUNTY | CHECKED BY: | JL |
| KENT | | |

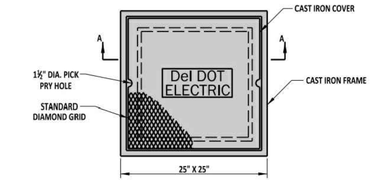
**ELECTRICAL SITE PLAN - NEW**

| E-401 |
|---|
| SECTION |
| JMT |
| SHEET NO. |
| 24 |

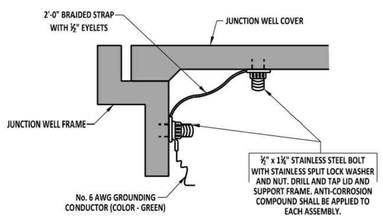
O:\2018\1802769_026_Dover_Bus_Canopy_Sol\CADD\Elec\E-401 - ELECTRICAL SITE - PART PLANS - NEW.dwg




**SECTION A-A**




**PLAN VIEW**

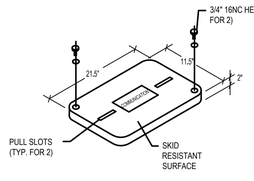



**DETAIL "A"**

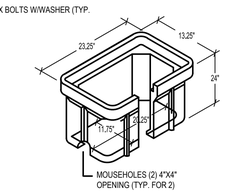
1 / E-501 — **CONDUIT JUNCTION WELL, TYPE 1**
SCALE: NTS

## GENERAL HANDHOLE NOTES:

1. PROVIDE QUAZITE/COMPOSOLITE #PG STYLE WITH MOUSEHOLES.
2. COORDINATE DEPTH OF HANDHOLES WITH EXISTING CONDITIONS IN THE FIELD. CONTRACTOR SHALL PROVIDE EXTENSION BOXES AS REQUIRED.
3. COVER LABEL SHALL STATE "ELECTRIC" OR "COMMS" DEPENDING ON ITS USE.
4. DETAIL IS FOR OPEN BOTTOM HANDHOLE.
5. MODIFY SIZE AS REQUIRED.

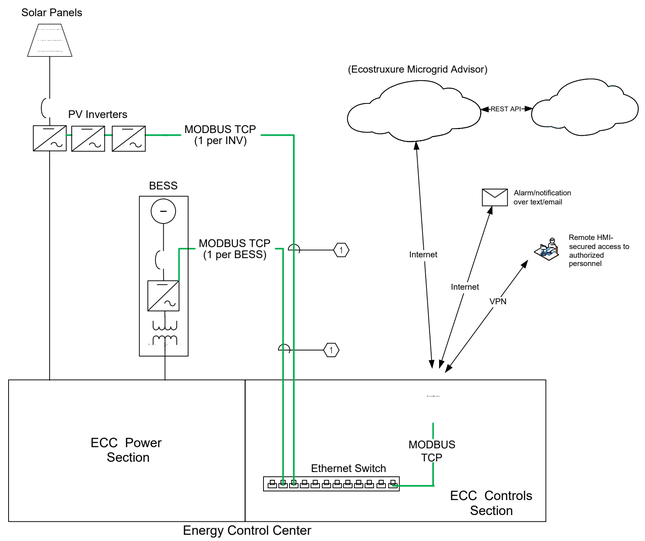



COVER




BASE

2 / E-501 — **TYPICAL COMMUNICATIONS HANDHOLE DETAIL**
SCALE: NTS



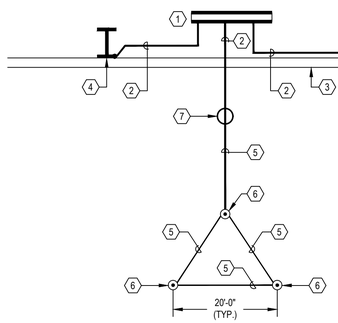

## DETAIL KEYNOTES:

1. SPARE CONDUIT FOR MODBUS CONNECTION. REFER TO SITE PLAN E-102 FOR ROUTING AND CONDUIT DETAILS.

3 / E-501 — **ENERGY CONTROL CENTER CONTROL ARCHITECTURE**
SCALE: NTS

## GENERAL DETAIL KEYNOTES:

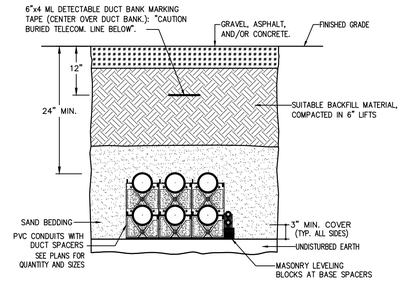
1. MAIN ENERGY CONTROL CENTER GROUND BUS.
2. #4/0 BARE CU. GROUND CONDUCTOR IN 1-1/4" CONDUIT.
3. OTHER EQUIPMENT EXTERIOR WALL.
4. STRUCTURAL STEEL EXOTHERMIC CONNECTION.
5. #4/0 BARE CU. GROUND CONDUCTOR
6. 3/4" X 10'-0" LONG COPPER WELD GROUND ROD DRIVEN WITH TOP 1'-0" BELOW GRADE.
7. GROUNDING TEST WELL.



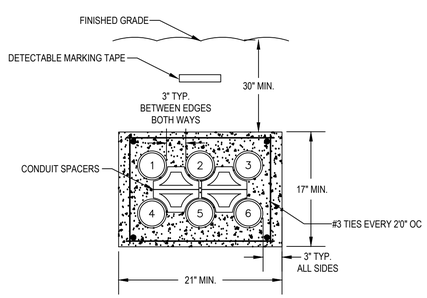

## GENERAL DETAIL NOTES:

1. PROVIDE COPPER GROUND RODS QUANTITY REQUIRED TO MEET A LESS THAN 5 OHM RESISTANCE TO EARTH.

4 / E-501 — **TYPICAL GROUNDING DETAIL**
SCALE: NONE




5 / E-501 — **TYPICAL BURIED CONDUIT SECTION**
SCALE: NTS




6 / E-501 — **TYPICAL CONCRETE-ENCASED DUCT BANK SECTION**
SCALE: NONE

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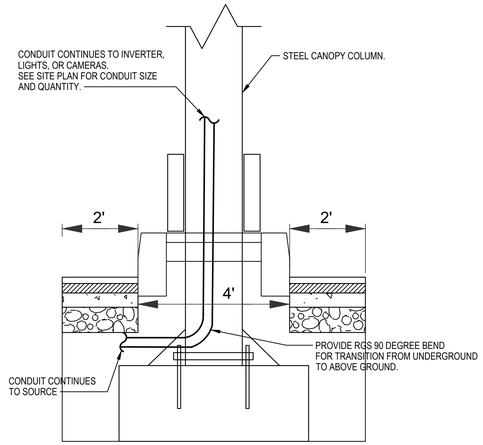
| ADDENDUMS / REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| | | | **DOVER BUS CANOPY SOLAR PANELS** | CONTRACT T202153104.02 | BRIDGE NO. N/A | **ELECTRICAL DETAILS** |
| | | | | COUNTY KENT | DESIGNED BY: JRM | |
| | | | | | CHECKED BY: JL | |

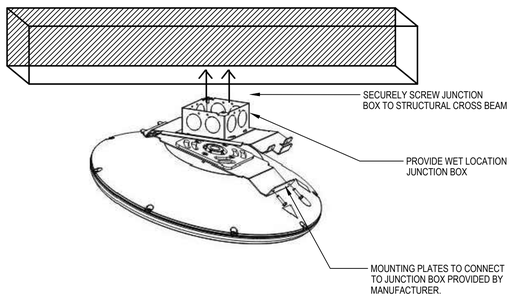
| E-501 |
|---|
| SECTION |
| JMT |
| SHEET NO. |
| 25 |



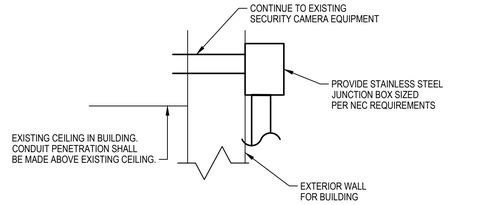

## GENERAL DETAIL NOTES:

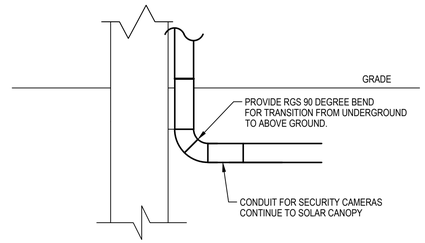
1. CONDUIT SHALL BE MOUNTED ON POLE UP TO CONNECTIONS TO OTHER EQUIPMENT.
2. CONDUIT SHALL BE PVC SCHEDULE 40, AND TURN UP TO BE RGS.

1 / E-502 CONDUIT ROUTING - CANOPY COLUMN & OVERHEAD
SCALE: NTS




3 / E-502 LIGHTING FIXTURE MOUNTING DETAIL
SCALE: NTS



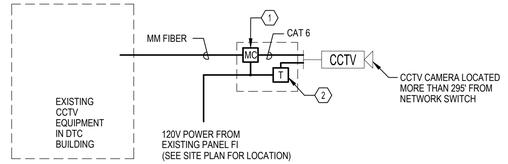

## GENERAL DETAIL NOTES:

1. REPAIR ALL DISTURBED WALLS.
2. CONDUIT SHALL BE PVC SCHEDULE 40, AND TURN UP TO BE RGS.

2 / E-502 CONDUIT ROUTING - WALL PENETRATION OF BUILDING
SCALE: NTS

## GENERAL DETAIL NOTES:

1. THE CAMERA ACCESORY EQUIPMENT ENCLOSURE SHALL BE PROVIDED ADJACENT TO THE CAMERA. THE ENCLOSURE SHALL HAVE THE FOLLOWING FEATURES
   - 1.1. UL LISTED, SIZE PER NEC
   - 1.2. NEMA 4X RATED
   - 1.3. STAINLESS STELL TYPE 316L CONSTRUCTION
2. A DEDICATED CAMERA ACCESORY EQUIPMENT ENCLOSURE SHALL BE PROVIDED FOR EACH CAMERA. COORDINATE DIMENSIONS OF THE ENCLOSURE WITH THE DIMENSIONS OF THE EQUIPMENT THAT IS INSTALLED INSIDE IT.
3. COORDINATE WITH DTC FOR EXACT QUANTITY AND LOCATION AND LOCATION OF CCTV CAMERAS.
4. CONDUIT FOR CCTV, AND 120V POWER SHALL BE PROVIDED BY CONTRACTOR. ALL WIRING, AND FINAL CONNECTIONS SHALL BE MADE BY DTC.




## SHEET KEYNOTES:

1. PROVIDE MM FIBER TO COPPER MEDIA CONVERTER FOR CCTV CAMERAS MORE THAN 295' FROM NETWORK SWITCH. (BY DTC)
2. PROVIDE 100VA, 120VAC-12VDC CONTROL TRANSFORMER FOR POWER TO CATV CAMERA. (BY DTC)

4 / E-502 CCTV CONNECTION DIAGRAM
SCALE: NTS

| ADDENDUMS / REVISIONS | |
|---|---|
| | |
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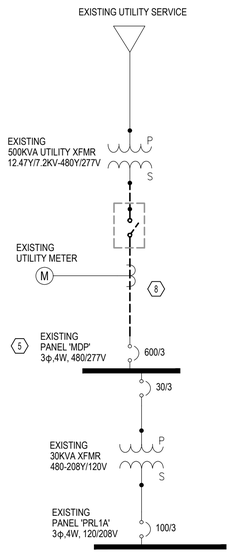
| | |

**DOVER BUS CANOPY SOLAR PANELS**

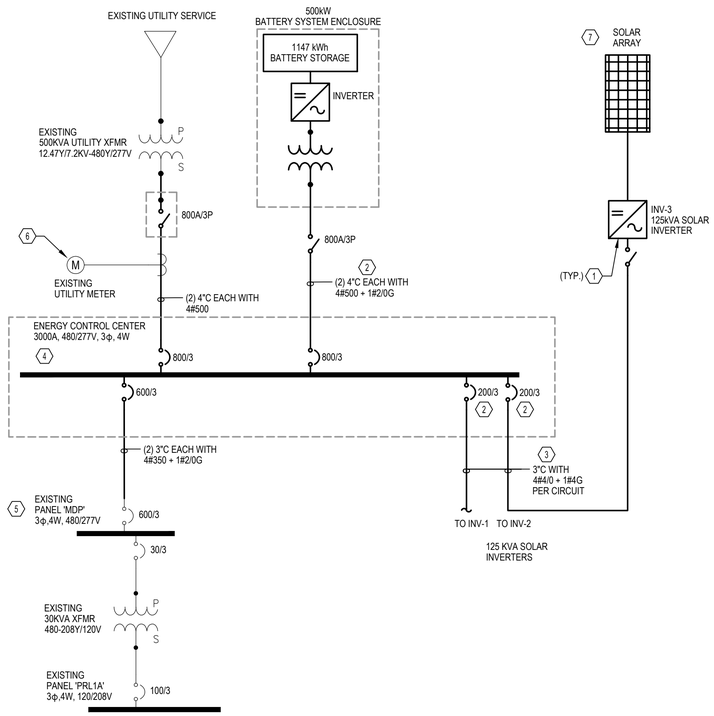
| | | | |
|---|---|---|---|
| CONTRACT | T202153104.02 | BRIDGE NO. | N/A |
| COUNTY | KENT | DESIGNED BY: | JRM |
| | | CHECKED BY: | JL |

**ELECTRICAL DETAILS II**

| | |
|---|---|
| | E-502 |
| SECTION | |
| JMT | |
| SHEET NO. | 26 |




1 E-601 SCALE: NTS **SINGLE LINE DIAGRAM - DEMOLITION**




2 E-602 SCALE: NTS **SINGLE LINE DIAGRAM - NEW WORK**

## GENERAL SHEET NOTES:

1. ALL WIRING SHALL BE INSTALLED IN CONDUIT, INCLUSIVE OF LOW VOLTAGE/CONTROL WIRING. BURIED CONDUIT SHALL BE PVC SCHEDULE 40 OR SCHEDULE 80, ENCASED IN CONCRETE.
2. QUANTITY AND SIZE OF INVERTERS, CIRCUIT BREAKERS, RACEWAYS, AND CONDUCTORS SHALL BE DETERMINED BASED ON THE SOLAR ARRAY SUBMITTED.
3. SIZE OF ELECTRICAL EQUIPMENT RACEWAYS, CONDUCTORS, AND ALL ASSOCIATED ACCESSORIES SHALL BE MODIFIED FROM THOSE SHOWN AS REQUIRED FOR THE SUBMITTED SOLAR ARRAY SYSTEM. CONTRACTOR SHALL PROVIDE ALL NECESSARY MATERIAL FOR A FULLY FUNCTIONAL SYSTEM.

## SHEET KEYNOTES:

1. SOLAR INVERTERS SHALL BE MOUNTED UNDER THE CANOPY ON THE CANOPY SUPPORTS AS CLOSE TO THE ARRAY AS ALLOWED. CONTRACTOR SHALL PROVIDE ALL ADDITIONAL EQUIPMENT REQUIRED FOR ANY DEVIATIONS OF DESIGN AT NO ADDITIONAL COST TO THE OWNER. (TYPICAL ALL).
2. QUANTITY AND SIZES OF CIRCUIT BREAKERS ARE BASED ON BASIS OF DESIGN SOLAR ARRAY AND INVERTERS AND FUTURE EXPANSION. CONTRACTOR SHALL PROVIDE QUANTITY AND SIZE OF CIRCUIT BREAKERS FOR ANY DEVIATIONS.
3. QUANTITY AND SIZES OF CONDUIT AND CONDUCTORS ARE BASED ON BASIS OF DESIGN SYSTEM. CONTRACTOR TO PROVIDE QUANTITY AND SIZE OF CONDUCTORS AND CONDUIT AS REQUIRED FOR ANY DEVIATIONS.
4. ENERGY CONTROL CENTER SHALL BE SERVICE ENTRANCE RATED. CONTRACTOR SHALL HAVE MANUFACTURER PROVIDE ALL PROGRAMMING REQUIRED FOR A FULLY OPERATIONAL AND UTILITY COMPANY APPROVED SYSTEM.
5. NEUTRAL TO GROUND BOND SHALL BE REMOVED IN EXISTING PANEL.
6. COORDINATE WITH UTILITY COMPANY FOR REPLACEMENT OF EXISTING METER.
7. STRINGS AND SOLAR PANELS PER STRING SHALL BE COORDINATED WITH THE SELECTED INVERTER BY CONTRACTOR TO ENSURE A FUNCTIONING SYSTEM.
8. EXISTING SERVICE CONNECTION SHALL BE REMOVED AND REPLACED WITH NEW FEED TO NEW ECC. REPLACE ANY DISCONNECTS AND EQUIPMENT AS REQUIRED FOR A COMPLETE AND FUNCTIONAL SYSTEM.

**ELECTRICAL CONDUIT AND WIRING SCHEDULE**

| ID | CONDUIT – FEEDER | DESCRIPTION |
|---|---|---|
| A | (4) 3" C. – PULL STRING | SPARE (FOR FUTURE SOLAR CANOPY EXPANSION) |
| | (2) 2" C. – PULL STRING | SPARE |
| B | (2) 3" C. – 4#4/0 + 1#4G | TO NE CANOPY 125KVA INVERTERS |
| | (1) 3" C. – PULL STRING | SPARE (FOR FUTURE SOLAR CANOPY EXPANSION) |
| | (1) 2" C. – PULL STRING | SPARE |
| C | (1) 1" C. – 2#10 + 1#10G | EX. LIGHTING – FROM SPARE IN PANEL H2 |
| | (1) 1" C. – PULL STRING | SPARE |
| D | (1) 1" C. – 2#10 + 1#10G | LIGHTING – NE CANOPY FROM SPARE IN PANEL H2 |
| | (1) 1" C. – 2#10 + 1#10G | EX. LIGHTING – FROM SPARE IN PANEL H2 |
| | (1) 1" C. – PULL STRING | SPARE |
| E | (2) 4" C. – 4#500 + 1#1/0G | TO BATTERY SYSTEM |
| F | (2) 3" C. – EACH WITH 4#350 + 1#1G | TO EXISTING PANEL MDP |
| G | (2) 4" C. – EACH WITH 4#500 | SERVICE TO ENERGY CONTROL CENTER |
| H | (1) 1" C. – 2#10 + 1#10G | EX. LIGHTING – FROM SPARE IN PANEL H2 |
| E-A | EX. CONDUIT – 2#10 + 1#10G | CCTV – SW CANOPY FROM SPARE IN PANEL FI |
| | EX. CONDUIT – 2#10 + 1#10G | CCTV – NE CANOPY FROM SPARE IN PANEL FI |
| E-B | EX. CONDUIT – 2#10 + 1#10G | LIGHTING – SW CANOPY FROM SPARE IN PANEL H3A |

**COMMUNICATIONS CONDUIT AND WIRING SCHEDULE**

| ID | CONDUIT – FEEDER | DESCRIPTION |
|---|---|---|
| T-A | (2) 2" C. – PULL STRING | SPARE FOR COMMUNICATION WIRING |
| | (1) 3" C. – PULL STRING | SPARE FOR SW CANOPY CCTV FROM BUILDING |
| | (1) 3" C. – PULL STRING | SPARE FOR NE CANOPY CCTV FROM BUILDING |
| T-B | (2) 2" C. – PULL STRING | SPARE FOR COMMUNICATION WIRING |
| | (1) 3" C. – PULL STRING | SPARE FOR NE CANOPY CCTV FROM BUILDING |
| T-C | (1) 2" C. – PULL STRING | SPARE FOR COMMUNICATION WIRING |



| ADDENDUMS / REVISIONS | |
|---|---|
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**DOVER BUS CANOPY SOLAR PANELS**

| | | | |
|---|---|---|---|
| CONTRACT | T202153104.02 | BRIDGE NO. | N/A |
| COUNTY | KENT | DESIGNED BY: | JRM |
| | | CHECKED BY: | JL |

ELECTRICAL SINGLE LINE DIAGRAMS & CONDUIT SCHEDULE

| | |
|---|---|
| | E-503 |
| SECTION | JMT |
| SHEET NO. | 27 |

## GENERAL SHEET NOTES:

1. ALL WIRING SHALL BE INSTALLED IN CONDUIT, INCLUSIVE OF LOW VOLTAGE/CONTROL WIRING. BURIED CONDUIT SHALL BE PVC SCHEDULE 40 OR SCHEDULE 80, ENCASED IN CONCRETE.
2. QUANTITY AND SIZE OF INVERTERS, CIRCUIT BREAKERS, RACEWAYS, AND CONDUCTORS SHALL BE DETERMINED BASED ON THE SOLAR ARRAY SUBMITTED.
3. SIZE OF ELECTRICAL EQUIPMENT RACEWAYS, CONDUCTORS, AND ALL ASSOCIATED ACCESSORIES SHALL BE MODIFIED FROM THOSE SHOWN AS REQUIRED FOR THE SUBMITTED SOLAR ARRAY SYSTEM. CONTRACTOR SHALL PROVIDE ALL NECESSARY MATERIAL FOR A FULLY FUNCTIONAL SYSTEM.

## SHEET KEYNOTES:

(1) QUANTITY AND SIZES OF CIRCUIT BREAKERS ARE BASED ON BASIS OF DESIGN SOLAR ARRAY AND INVERTERS. CONTRACTOR SHALL PROVIDE QUANTITY AND SIZE OF CIRCUIT BREAKERS FOR ANY DEVIATIONS.

## ENERGY CONTROL CENTER - ECC

**277/480** VOLT, **3** PHASE, **4** WIRE & GROUND

MAIN BUS AMPS: **2500** MAIN DEVICE AMPS: **-** AIC: **65K**

| Circuit Number | Load Description | Connected KVA Load | Overcurrent Device Frame | Trip | Pole | Remarks |
|---|---|---|---|---|---|---|
| 1 | INCOMING UTILITY SERVICE | 0.00 | 1000 | 800 | 3 | |
| 2 | BATTERY STORAGY SYSTEM | 0.00 | 1000 | 800 | 3 | 500KW BATTERY |
| 3 | SPARE (FOR FUTURE EXPANSION) | 0.00 | 1000 | 800 | 3 | (FOR FUTURE BESS) |
| (1) 4 | INV-1 - SOLAR ARRAY INVERTER | 0.00 | 250 | 200 | 3 | 125KVA INVERTER |
| (1) 5 | INV-2 - SOLAR ARRAY INVERTER | 0.00 | 250 | 200 | 3 | 125KVA INVERTER |
| 6 | SPARE (FOR FUTURE EXPANSION) | 0.00 | 250 | 200 | 3 | (FOR FUTURE INVERTER) |
| 7 | SPARE (FOR FUTURE EXPANSION) | 0.00 | 250 | 200 | 3 | (FOR FUTURE INVERTER) |
| 8 | SPARE (FOR FUTURE EXPANSION) | 0.00 | 250 | 200 | 3 | (FOR FUTURE INVERTER) |
| 9 | SPARE (FOR FUTURE EXPANSION) | 0.00 | 250 | 200 | 3 | (FOR FUTURE INVERTER) |
| 10 | SPARE (FOR FUTURE EXPANSION) | 0.00 | 250 | 200 | 3 | (FOR FUTURE INVERTER) |
| 11 | SPACE | 0.00 | - | - | 3 | |
| 12 | EXISTING PANEL 'MDP' | 403.00 | 800 | 600 | 3 | |
| 13 | SPACE | 0.00 | - | - | 3 | |
| 14 | SPACE | 0.00 | - | - | 3 | |
| | **SERVICE CALCULATION (NEC 220.87)** | | | | | |

| | |
|---|---|
| TOTAL CONNECTED LOAD | **403.00** kVA |
| TOTAL DEMAND LOAD | **403.00** kVA |

MFG:

OPTIONS:
SURGE PROTECTION DEVICE(SPD)
SQUARE D POWER METER
SERVICE ENTRANCE RATED

## LIGHTING FIXTURE SCHEDULE

| TYPE | SYMBOL | DESCRIPTION | MANUFACTURER OR APPROVED EQUAL | CATALOG NO. | LAMP TYPE | LAMP COLOR | FIXTURE VOLTAGE | FIXTURE WATTS | MOUNTING | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| A | A | LED CANOPY LUMINAIRE, LANE | LITHONIA | VCPG-LED-V4-P1-40K-80CRI-LANE -MVOLT-SRM-DWHXD | LED | 4000 °K | 277V | 27W | SURFACE MOUNTED ON CANOPY FRAME, DIRECTED TOWARDS LANES | SEE NOTE 1, 2, 3, 4, 5 & 6 |

FIXTURE SCHEDULE NOTES:

1. COORDINATE ALL FIXTURE QUANTITIES AND PLACEMENT REQUIREMENTS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ORDERING AND COORDINATING ALL FIXTURE OPTIONS AND ACCESSORIES TO ENSURE A COMPLETE QUALITY INSTALLATION.
3. FOR ALL LIGHT FIXTURES, FINISH SHOULD BE COORDINATED WITH ARCHITECT.
4. FOR ALL LIGHT FIXTURES, COORDINATE WITH CANOPY MANUFACTURER FOR EXACT LOCATIONS AND MOUNTING HEIGHT.
5. LIGHTING SUBSTITUTIONS SHALL BE APPROVED BY THE OWNER / ARCHITECT PRIOR TO ORDERING AND INSTALLING.
6. LIGHTING SHALL BE MOUNTED PER MANUFACTURER RECOMMENDATIONS TO BE APPROAPRIATELY ORIENTED TO ILLUMINATE DRIVE ISLES.

## BASIS OF DESIGN - EQUIPMENT SCHEDULE

| EQUIPMENT TYPE | DESCRIPTION | MANUFACTURER OR APPROVED EQUAL | PRODUCT NO. | RATED WATTS | RATED ENERGY | VOLTAGE RATING AC | VOLTAGE RATING DC |
|---|---|---|---|---|---|---|---|
| **INVERTER (1-2)** | SUNNY HIGHPOWER PEAK 3 - 125 INVERTER | SMA AMERICA | SHP 125-US-20 | 125 KW | - | 480/277V | 1500 VDC (MAXIMUM) |
| **ECC** | 3000A ENERGY CONTROL CENTER | SCHNEIDER ELECTRIC | ECC 3000 N3R | - | - | 480/277V | - |
| **SOLAR PANEL** | PV MODULE | QCELL | Q.PEAK DUO XL-G11S/BFG | 590 W | - | - | 53.60 VDC (OC) |
| **BESS** | BATTERY ENERGY STORAGE SYSTEM | SCHNEIDER ELECTRIC | BESS SERIES II | 500 KW | 1147 kWh | 480/277V | 48-58.4 VDC |

EQUIPMENT SCHEDULE NOTES:

1. ADDITIONAL INFORMATION FOR BASIS OF DESIGN EQUIPMENT CAN BE FOUND IN THE SPECIFICATIONS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ORDERING AND COORDINATING ALL EQUIPMENT AND ACCESSORIES TO ENSURE A COMPLETE QUALITY INSTALLATION.
3. FOR ALL EQUIPMENT, COORDINATE WITH MANUFACTURER FOR INDIVIDUAL INSTALLATION REQUIREMENTS.
4. SUBSTITUTIONS SHALL BE APPROVED BY THE OWNER / ARCHITECT PRIOR TO ORDERING AND INSTALLING, AND WILL REQUIRE THE CONTRACTOR TO SUBMIT PLANS WITH ALL DEVIATIONS ACCOUNTED FOR, INCLUDING BUT NOT LIMITED TO CONDUIT, WIRE, AND BREAKER SIZES.

\\vnt.corp.local\vntdfs\2018\1802769_026_Dover_Bus_Canopy_Sol\CADD\Elec\E-601 - ELECTRICAL SINGLE LINE DIAGRAM AND SCHEDULES.dwg

| ADDENDUMS / REVISIONS | |
|---|---|
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**DOVER BUS CANOPY SOLAR PANELS**

| | |
|---|---|
| CONTRACT | T202153104.02 |
| COUNTY | KENT |
| BRIDGE NO. | N/A |
| DESIGNED BY: | JRM |
| CHECKED BY: | JL |

ELECTRICAL PANEL AND EQUIPMENT SCHEDULES

| | |
|---|---|
| | E-601 |
| SECTION | JMT |
| SHEET NO. | 28 |