THE PORT AUTHORITY OF NY & NJ

LAGUARDIA AIRPORT REPLACEMENT OF THE EAST FIELD LIGHTING VAULT

WORK ORDER No. X (TBD) CONTRACT No. LGA-124.223

30% SUBMISSION 07/15/2013

No. Date Revision Approved

FEDERAL AVIATION ADMINISTRATION

ASSISTANT CHIEF ENGINEER/DESIGN

PROGRAM DIRECTOR AVIATION

CHIEF ENGINEER

DATE

Drawing Number G001

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GENERAL NOTES

- 1. VERIFY ALL DIMENSIONS AND CONDITIONS SHOWN ON THE CONTRACT DRAWINGS AT THE SITE BEFORE ORDERING ANY MATERIAL, EQUIPMENT OR PERFORMING ANY WORK.
- 2. ALL AREAS WHICH ARE DAMAGED BY THE CONTRACTOR SHALL BE RESTORED OR REPLACED BY HIM TO THEIR ORIGINAL CONDITION TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE AUTHORITY.
- 3. PROVIDE WRITTEN NOTICE TO THE ENGINEER, 5 DAYS IN ADVANCE, FOR ANY SHUTDOWN/STARTUP REQUIREMENTS. COORDINATE SHUTDOWNS/STARTUPS TO MINIMIZE IMPACTS TO THE CONTINUOUS OPERATION OF THE FACILITY.
- 4. THE CONTRACTOR SHALL GIVE THE ENGINEER 5 DAYS ADVANCE NOTICE OF HIS INTENTION TO START FIELD WORK. FIELD WORK SHALL NOT BE STARTED UNTIL ALL NECESSARY EQUIPMENT AND MATERIALS ARE AT THE CONSTRUCTION SITE.
- 5. PRIOR TO STARTING ANY REMOVAL WORK, MAKE AN INSPECTION WITH THE ENGINEER TO DETERMINE FIELD CONDITIONS.
- 6. ALL MATERIAL AND EQUIPMENT TO BE REMOVED SHALL BE DISPOSED OFF AUTHORITY PROPERTY BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE AUTHORITY.
- 7. WORK AREAS SHALL BE CLEARED OF ALL CONSTRUCTION DEBRIS AT THE COMPLETION OF CONTRACT WORK.
- 8. OBTAIN PORT AUTHORITY CUTTING AND WELDING PERMIT FROM THE ENGINEER. PROVIDE MECHANICAL VENTILATION OF SUFFICIENT CAPACITY IN THE WORK AREA HAVING WELDING, BRAZING AND CUTTING ACTIVITIES IN ACCORDANCE WITH OSHA'S CONSTRUCTION STANDARDS.
- 9. PREVENT WATER PONDING RESULTING FROM CONSTRUCTION OPERATIONS. PROMPTLY REMOVE ANY PONDED WATER TO THE SATISFACTION OF THE ENGINEER, AT NO ADDITIONAL COST TO THE AUTHORITY.
- 10. IMMEDIATELY RESTORE, TO ITS ORIGINAL CONDITION, ALL AREAS OUTSIDE THE LIMITS OF CONSTRUCTION, WHICH ARE DAMAGED BY THE CONTRACTOR'S OPERATIONS, TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE AUTHORITY.
- 11. ALL REGRADED AREAS AND SOIL DISTURBED BY THE CONTRACTOR AS A RESULT OF CONSTRUCTION OPERATIONS SHALL BE TESTED AS PER SPECIFICATION SECTION 02920 "SOIL TESTING".
- 12. PERFORM ALL SEEDING OPERATIONS IN ACCORDANCE WITH SPECIFICATION SECTION 02930 "SEEDING". ADD COMPOST IN ACCORDANCE WITH SPECIFICATION SECTION 02960 "ADDING COMPOST".
- 13. UTILIZE A MOBILE SWEEPER AND WATER TRUCK TO CONTROL DUST AND DEBRIS ALONG THE HAUL ROUTE AND AREA OF WORK AT THE END OF EACH WORK SHIFT.

CONSTRUCTION STAGING

GENERAL:

- 1. THE EXISTING EAST FIELD LIGHTING VAULT SHALL REMAIN OPERATIONAL IN IT'S ENTIRETY UNTIL A POINT IN WHICH THE REPLACEMENT EAST FIELD LIGHTING VAULT IS FULLY OPERATIONAL AND READY TO ACCEPT THE TRANSITION OF AIRFIELD LIGHTING LOADS.
- 2. COORDINATE WITH THE ENGINEER FOR ALL SHUTDOWNS OF EXISTING EQUIPMENT FOR REMOVALS AND INSTALLATIONS A MINIMUM OF 5 DAYS PRIOR TO BEGINNING THE WORK.
- 3. CONTRACTOR SHALL SUBMIT STAGING PLAN TO ENGINEER FOR APPROVAL.
- 4. ALL WORK SHALL BE COORDINATED WITH THE ENGINEERING AND FACILITY OPERATIONS FOR EQUIPMENT DELIVERIES TO THE WORK SITE.

NET COST NOTES

WHEN AND AS DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL PERFORM THE FOLLOWING WORK AND WILL BE COMPENSATED AT THE NET COST THEROF:

- 1. CONSTRUCTION STAGING, SCHEDULE CHANGES TO ACCOMMODATE FACILITY OPERATIONAL REQUIREMENTS.
- 2. REPLACEMENT OF DAMAGED SHEETMETAL NOT SHOWN ON THE CONTRACT DRAWINGS.
- 3. RELOCATION OF UNDERGROUND UTILITIES NOT SHOWN ON THE CONTRACT DRAWINGS.
- 4. REPAIR OF DAMAGED UNDERGROUND UTILITIES NOT SHOWN ON CONTRACT DRAWINGS.
- 5. TRANSPORTATION AND DISPOSAL OF EXCESS/UNSUITABLE EXCAVATED MATERIAL, COLLECTION AND DISPOSAL OF PIT DEBRIS AND DISPOSAL OF SANDBLASTED SHEETING MATERIAL.
- 6. CLEAN BACKFILL MATERIAL WHERE SUBGRADE MAY BE UNSUITABLE OR SATURATED.
- 7. MISCELLANEOUS FENCE AND RAZOR RIBBON REPAIRS NOT SHOWN ON THE CONTRACT DRAWINGS.

THE NET COST SHALL BE COMPUTED IN THE SAME MANNER AS IS COMPENSATION FOR EXTRA WORK, INCLUDING ANY PERCENTAGE ADDITION TO COST, AS SET FORTH IN THE CLAUSE OF THE CONTRACT ENTITLED COMPENSATION FOR "EXTRA WORK". PERFORMANCE OF SUCH NET COST WORK SHALL BE AS DIRECTED BY THE ENGINEER AND SHALL BE SUBJECT TO ALL THE PROVISIONS OF THE CONTRACT RELATING TO THE PERFORMANCE OF EXTRA WORK. COMPENSATION FOR SAID NET COST WORK SHALL NOT BE CHARGED AGAINST THE TOTAL AMOUNT OF COMPENSATION AUTHORIZED FOR EXTRA WORK.

THE PORT AUTHORITY OF NY & NJ

CHIEF ELECTRICAL ENGINEER

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30% SUBMISSION 07/15/2013

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GENERAL										

INDEX OF DRAWINGS, GENERAL NOTES, LCOATION MAP AND CONSTRUCTION STAGING

REPLACEMENT OF THE EAST FIELD

LIGHTING VAULT

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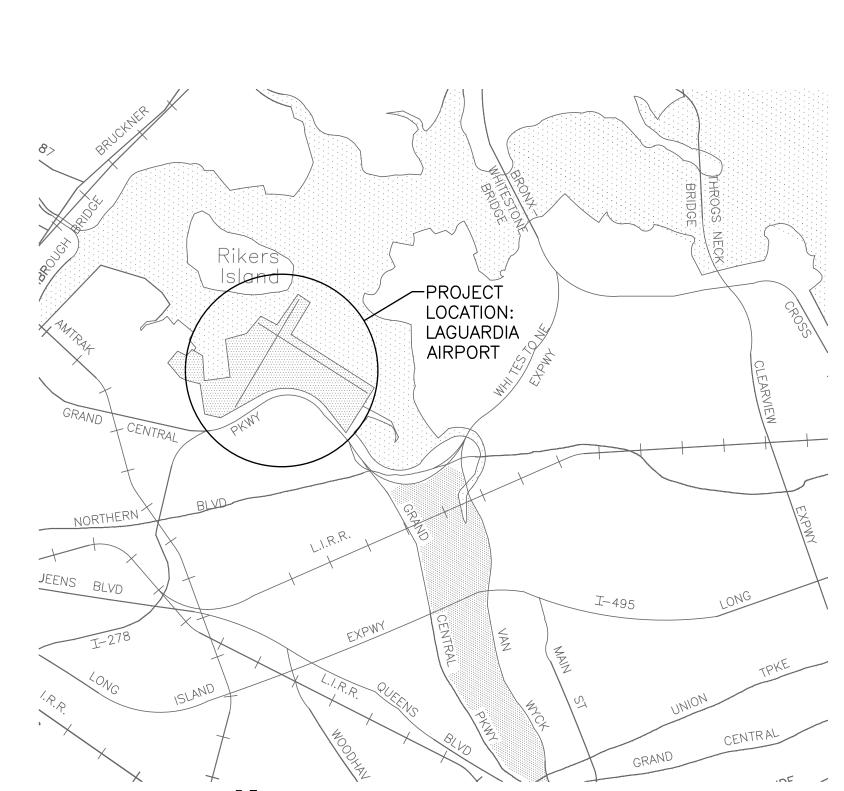
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G. GADOMSKI
Designed by
Drawn by
Checked by

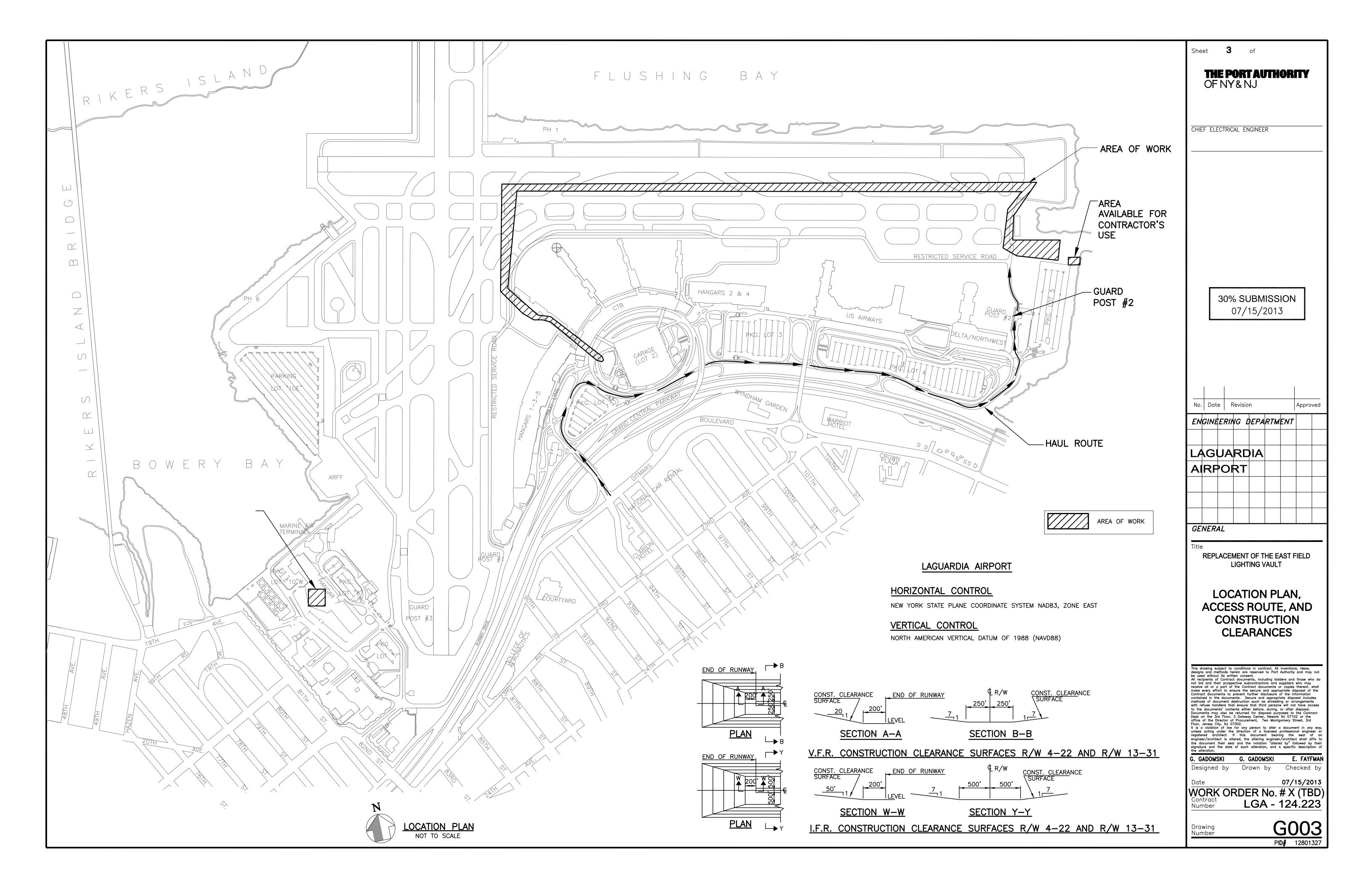
Date 07/15/2013
WORK ORDER No. # X (TBD)
Contract
Number LGA - 124.223

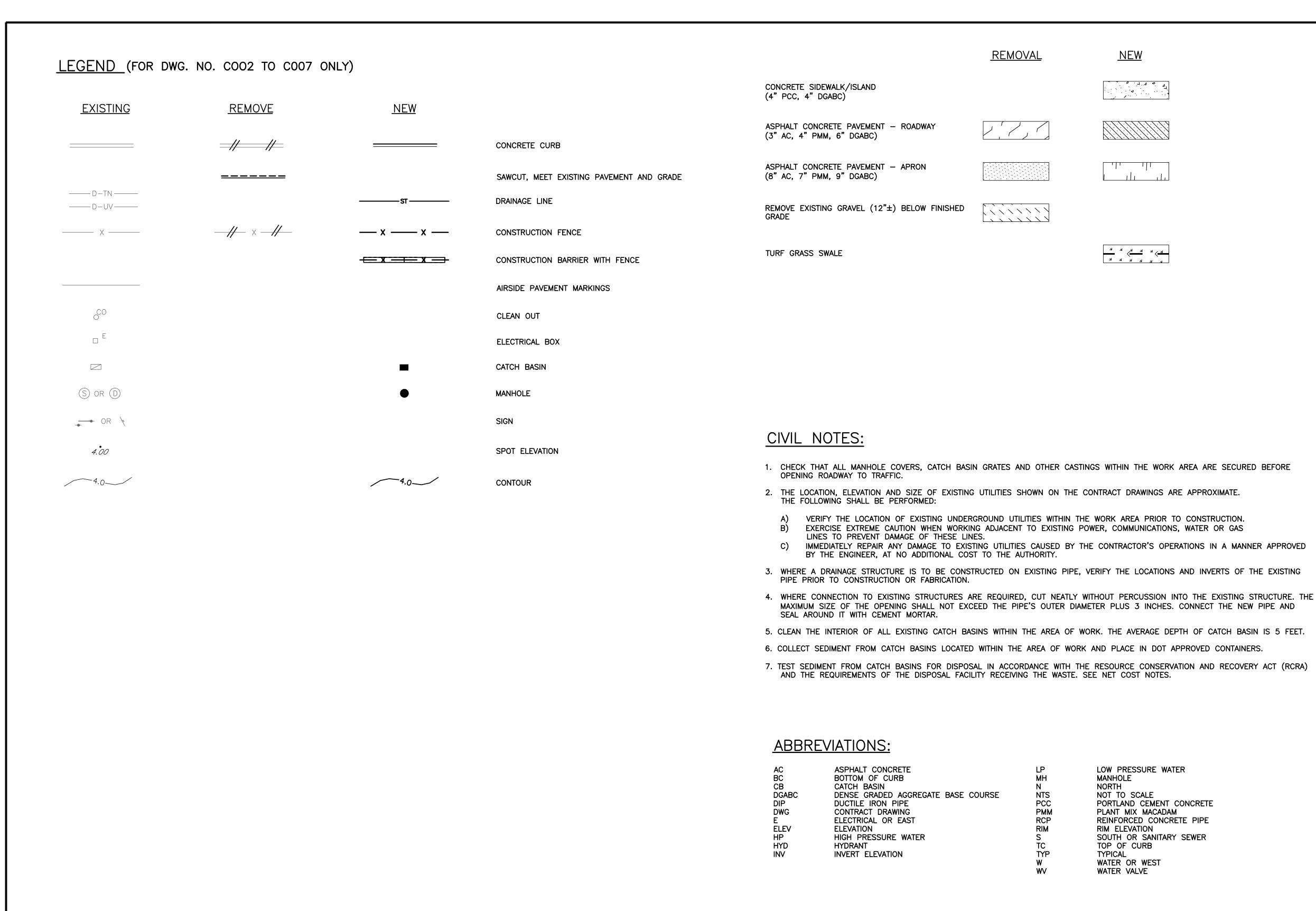
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<u>OCATION MAP</u>

NOT TO SCALE





Sheet of THE PORT AUTHORITY OF NY & NJ CHIEF CIVIL ENGINEER 30% SUBMISSION 07/15/2013 No. | Date | Revision ENGINEERING DEPARTMENT LAGUARDIA AIRPORT CIVIL REPLACEMENT OF THE EAST FIELD LIGHTING VAULT **CIVIL NOTES, LEGEND AND ABBREVIATIONS** This drawing subject to conditions in contract. All inventions, ideas, designs and methods herein are reserved to Port Authority and may not be used without its written consent.

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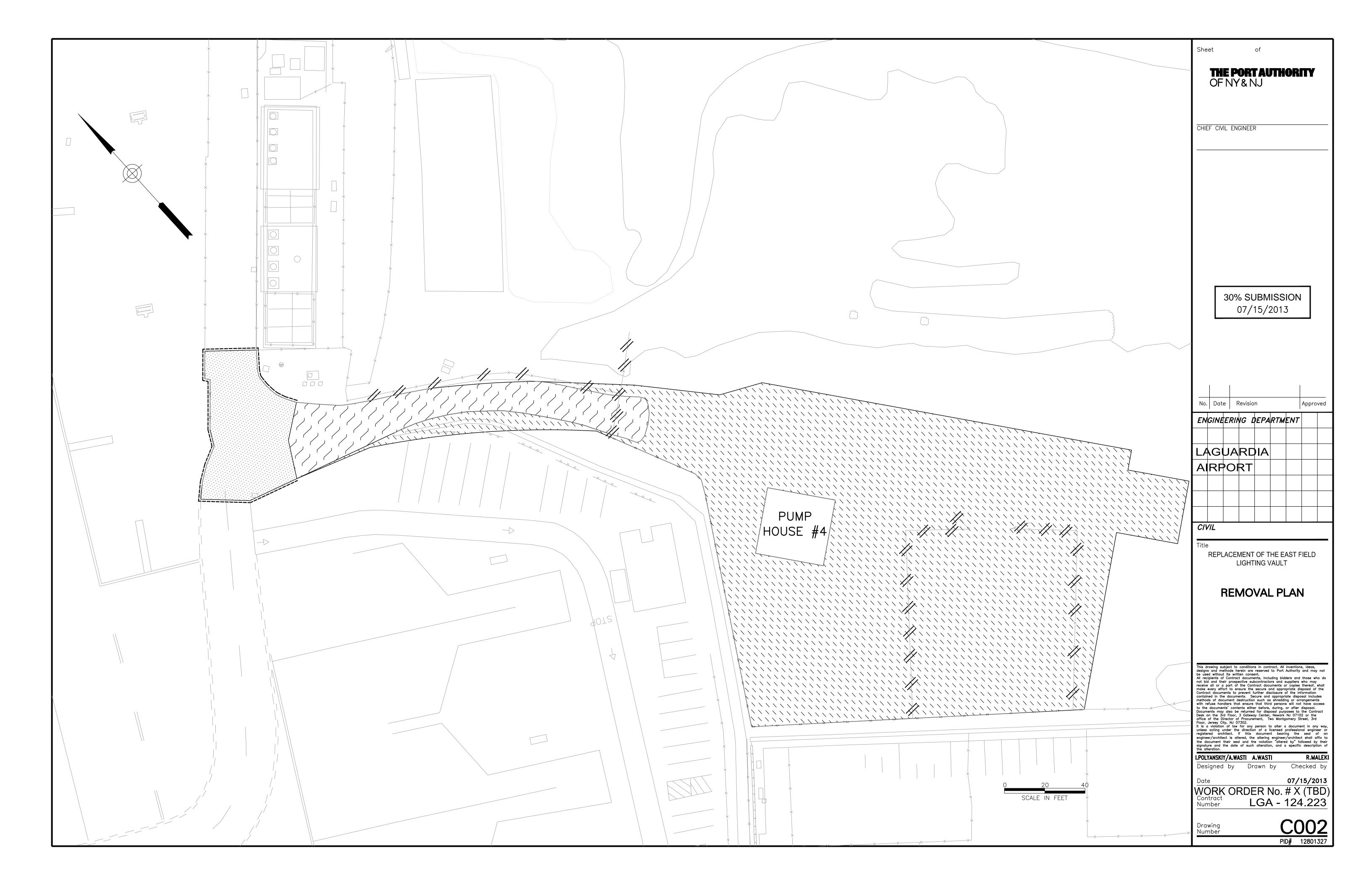
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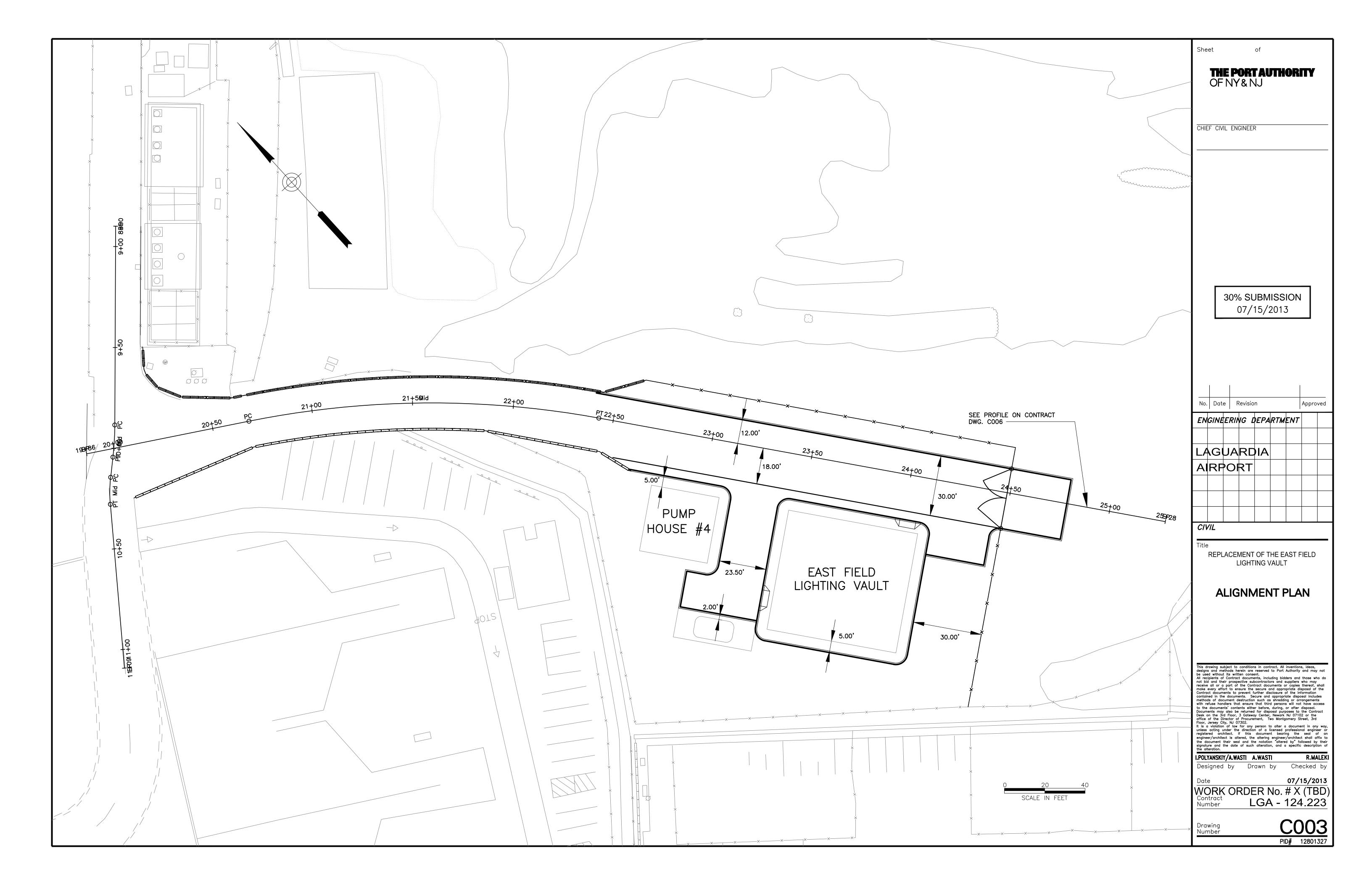
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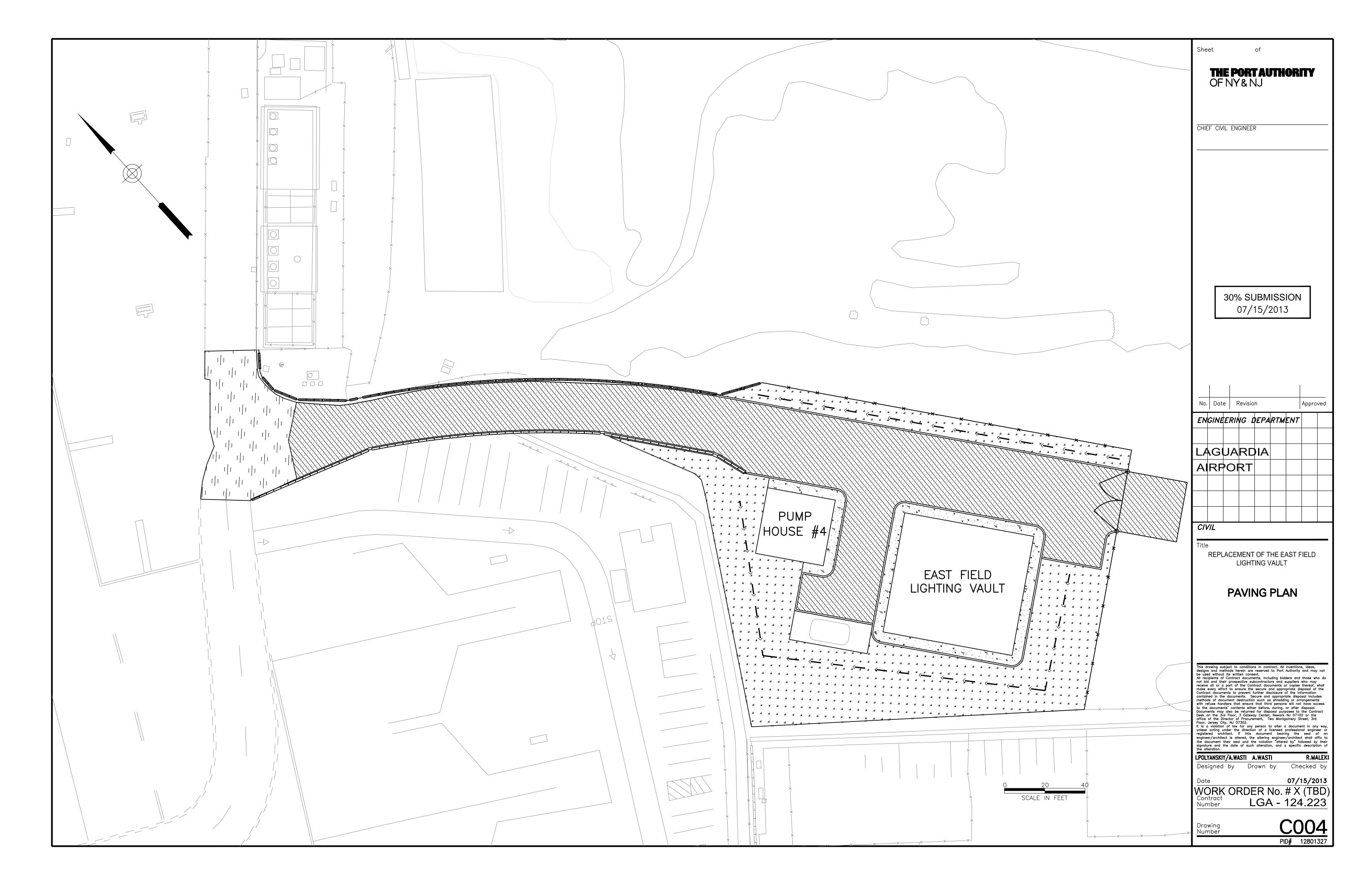
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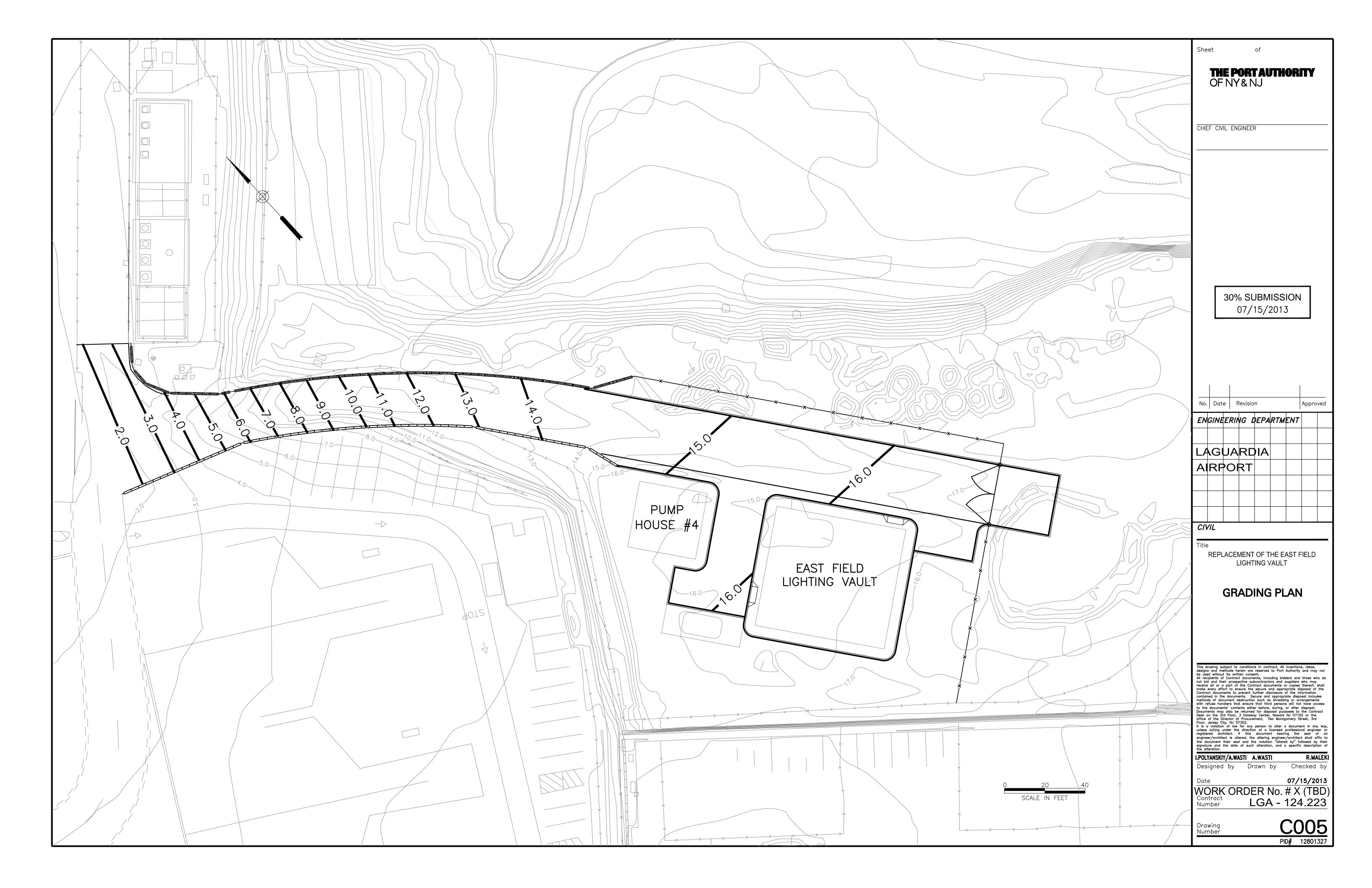
R.MALEKI

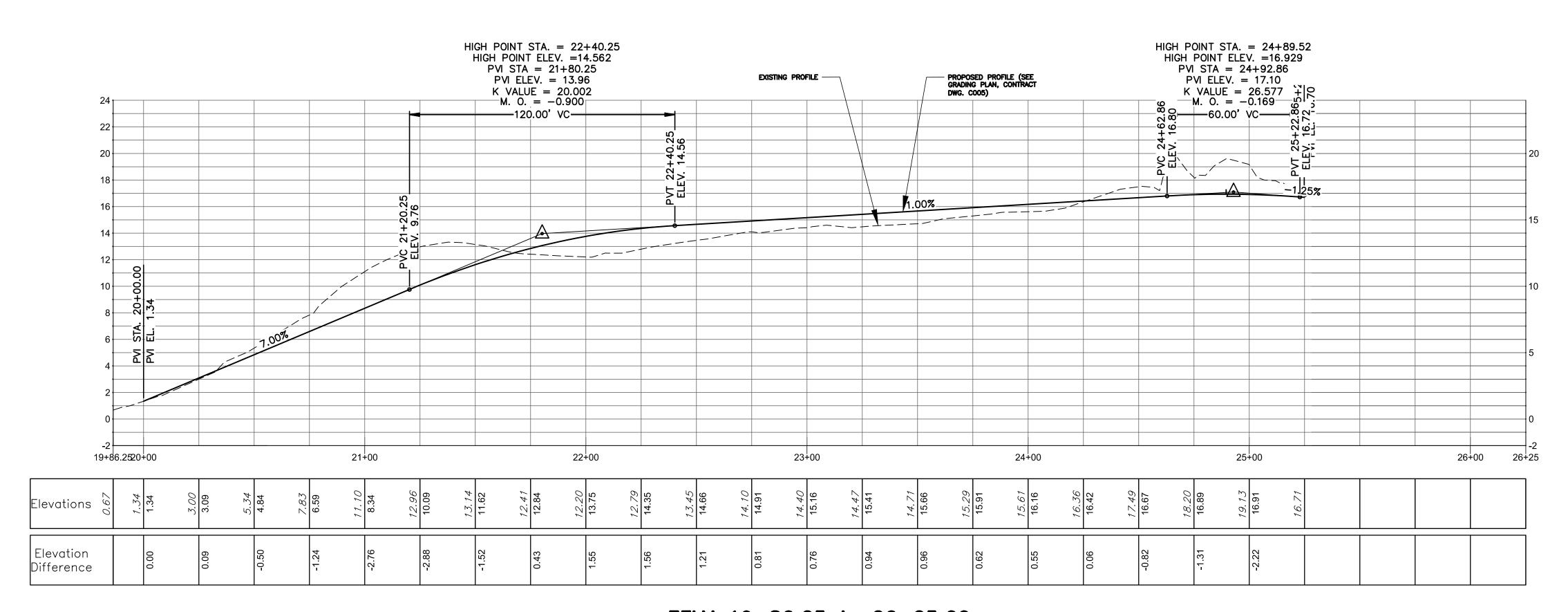
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Sheet of THE PORT AUTHORITY OF NY & NJ CHIEF CIVIL ENGINEER 30% SUBMISSION 07/15/2013 No. Date Revision Approved ENGINEERING DEPARTMENT LAGUARDIA AIRPORT CIVIL Title REPLACEMENT OF THE EAST FIELD LIGHTING VAULT **PROFILE** This drawing subject to conditions in contract. All inventions, ideas, designs and methods herein are reserved to Port Authority and may not be used without its written consent.

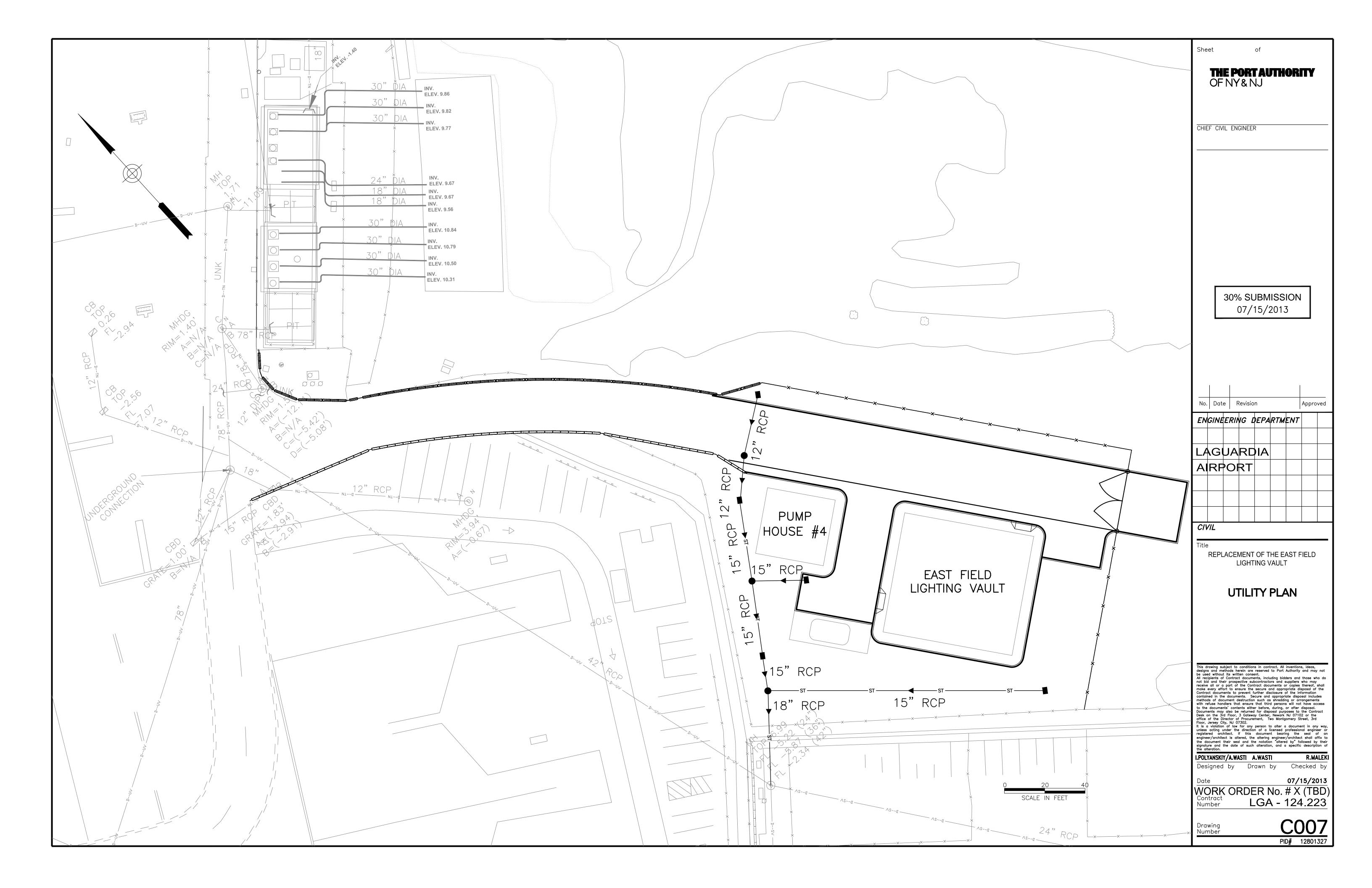
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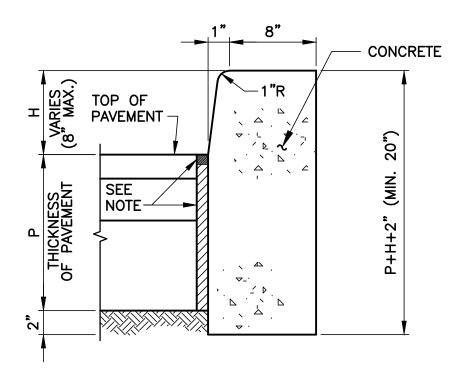
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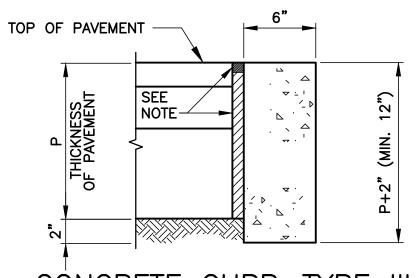




CONCRETE CURB-TYPE I

(NON-MOUNTABLE)

NOTE: PROVIDE ½" x ½" JOINT SEALANT AND ½"
PREMOLDED JOINT FILLER WHEN CONCRETE CURB IS PLACED AGAINST RIGID PAVEMENT

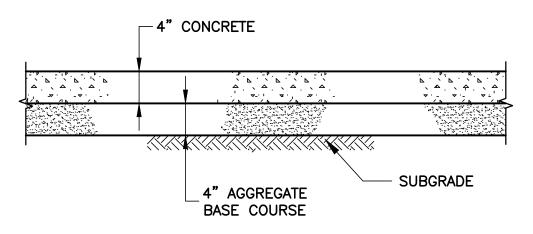


CONCRETE CURB-TYPE III

(HEADER)

NOTE: PROVIDE ½" x ½" JOINT SEALANT AND ½"
PREMOLDED JOINT FILLER WHEN CONCRETE CURB
IS PLACED AGAINST RIGID PAVEMENT

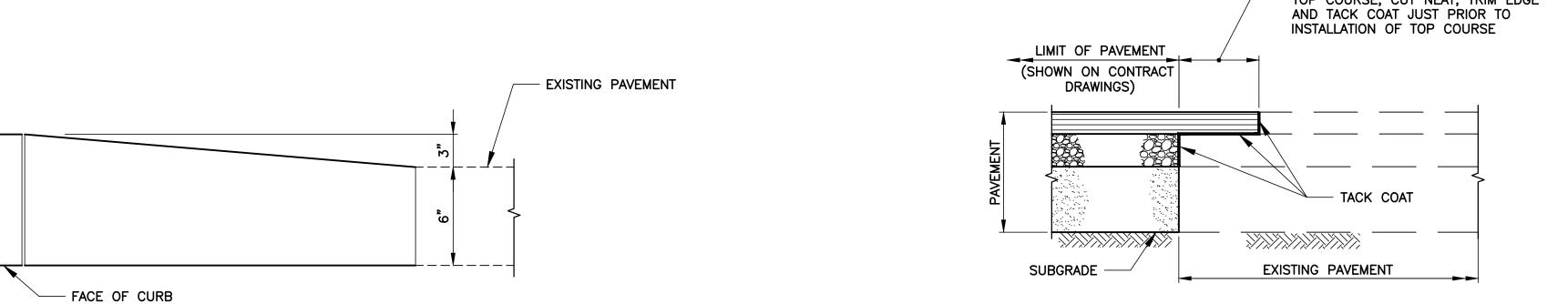
CONCRETE CURB DETAILS

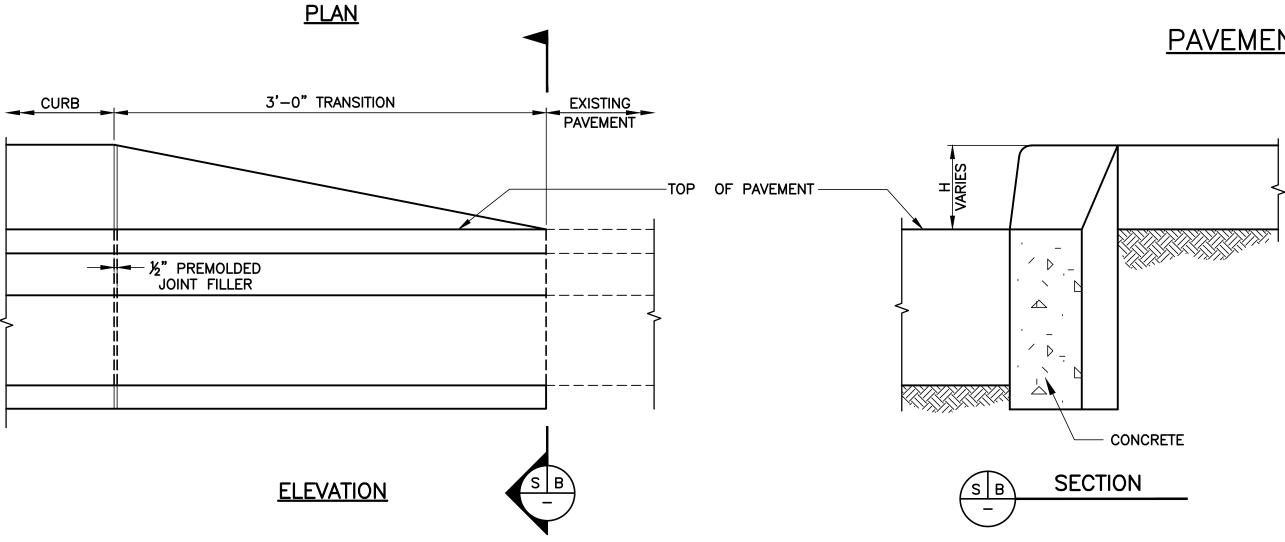


NOTE:

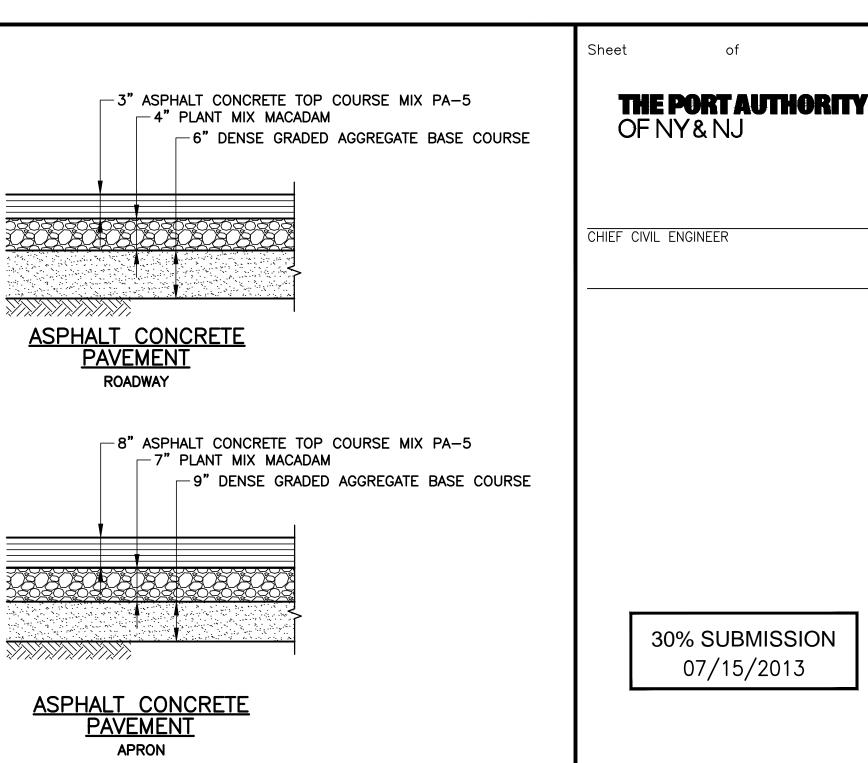
THE LAYOUT OF EXPANSION AND SCORED JOINTS IN THE SIDEWALK AREA SHALL BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL BY THE ENGINEER, UNLESS OTHERWISE SPECIFIED.

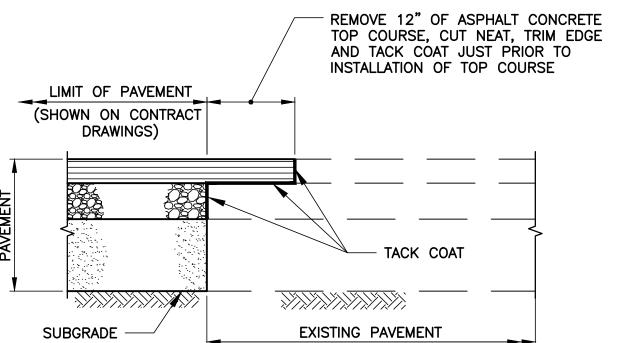
CONCRETE SIDEWALK/ISLAND DETAIL
N.T.S.





CURB TRANSITION (CONCRETE CURB DETAILS)





PAVEMENT MEETING EXISTING PAVEMENT N.T.S.

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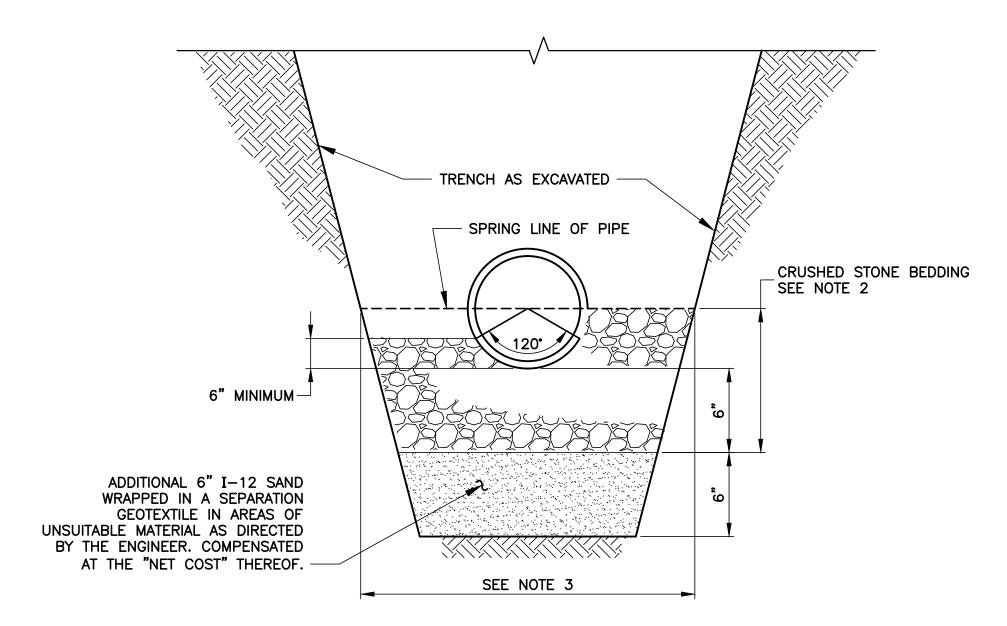
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LGA - 124.223 Number

Drawing Number PID# 12801327

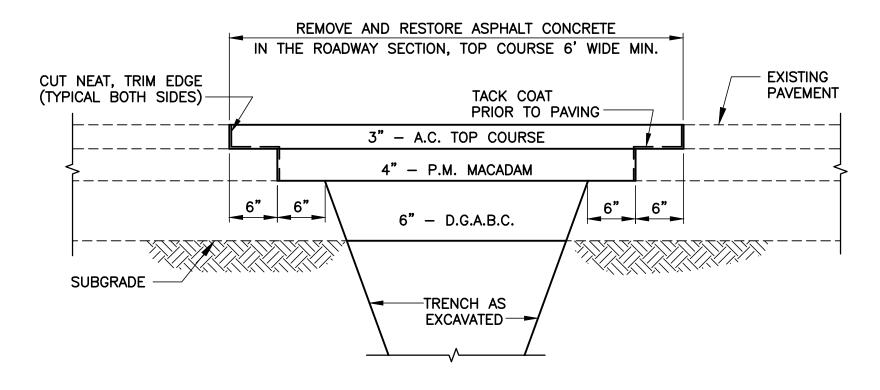


NOTES:

- 1. TRENCH SHALL BE BACKFILLED TO THE SURROUNDING EXISTING GROUND ELEVATION OR PAVEMENT SUBGRADE, WHICHEVER IS LOWER.
- 2. FOR FLEXIBLE PIPE BRING CRUSHED STONE TO SPRING LINE OF PIPE.
- 3. PIPE OUTSIDE DIAMETER + 2'-0" FOR PIPES UP TO AND INCLUDING 18" INSIDE DIAMETER, PIPE OUTSIDE DIAMETER + 3'-0" FOR PIPES OVER 18" INSIDE DIAMETER AND STRUCTURES.
- 4. GEOTEXTILE SHALL HAVE AN APPARENT OPENING SIZE OF LESS THAN 0.6 MILLIMETER AND PERMEABILITY GREATER THAN 10-3 CENTIMETER PER SECOND

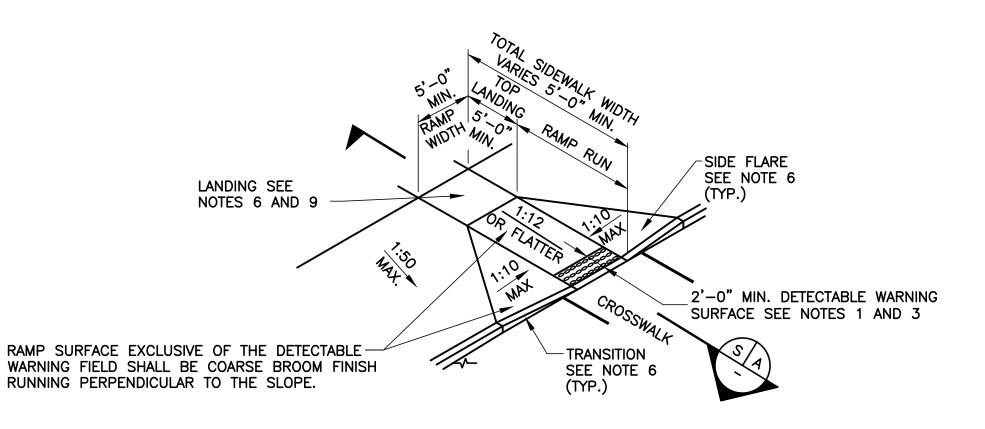
BEDDING DETAIL

(STORM DRAINAGE, WATER SUPPLY AND SANITARY SEWER SYSTEMS)
N.T.S.

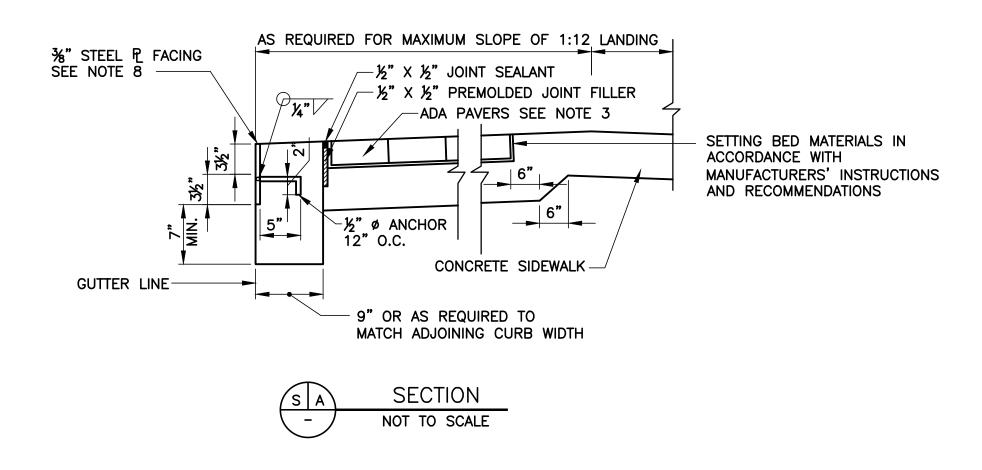


FLEXIBLE PAVEMENT RESTORATION

N.T.S.



<u>PLAN</u>



SIDEWALK CURB RAMP DETAILS

NOTES:

- 1. LOCATION OF DETECTABLE WARNINGS: DETECTABLE WARNINGS SHALL BE LOCATED SO THAT THE EDGE OF THE WARNING FIELD NEAREST TO THE ROADWAY OR STREET SURFACE IS 6" TO 9" FROM THE EDGE OF THE ROADWAY/STREET, OR FROM THE FACE OF THE DROPPED CURB. WHERE A DROPPED CURB CONTINUES ACROSS THE BOTTOM OF THE SIDEWALK CURB RAMP, THE DETECTABLE WARNINGS SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE.
- 2. DOME ALIGNMENT: DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL (SEE 'DOME DETAIL').
- 3. DETECTABLE WARNING SURFACE SHALL BE ONE OF THE FOLLOWING OR APPROVED EQUAL:
 - A. STEP-SAFE AS MANUFACTURED BY TRANSPO INDUSTRIES, NEW ROCHELLE, NY
 - B. ADA PAVERS AS MANUFACTURED BY WHITACRE—GREER BRICK, ALLIANCE, OHIO

- 4. THE COLOR OF THE DETECTABLE WARNING SURFACE SHALL BE DARK GRAY UNLESS OTHERWISE SHOWN ON THE CONTRACT DRAWINGS.
- 5. THE MAXIMUM CROSS SLOPE OF CURB RAMPS SHALL BE 2 PERCENT. CURB RAMP SURFACES SHALL GENERALLY LIE IN CONTINUOUS PLANES WITH A MINIMUM SURFACE WARP.
- 6. WHEN NOT PRACTICAL TO PROVIDE A LANDING THAT IS AT LEAST (5') WIDE (MEASURED FROM THE TOP OF THE RAMP TO THE BACK OF THE SIDEWALK), THE LENGTH OF THE FLARES SHALL BE TWELVE (12) TIMES THE CURB HEIGHT MEASURED ALONG THE CURB LINE (SEE 'PARALLEL CURB RAMPS' DETAIL).
- 7. RAMP TRANSITIONS BETWEEN WALKS, GUTTERS, OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT VERTICAL CHANGES (1/4" MAX).
- 8. REQUIRED WHERE STEEL FACED CURB IS SHOWN ON CONTRACT DRAWINGS. MATERIALS SHALL BE SIMILAR TO STEEL FACED CURB, SEE DETAIL. EXPOSED SURFACE OF STEEL SHALL BE GROUND SMOOTH.
- 9. LANDINGS SHALL HAVE A MINIMUM CLEAR DIMENSION OF A 5' BY 5' SQUARE. THE MAXIMUM CROSS SLOPE AT LANDINGS IS 2% IN ANY DIRECTION.

Sheet THE PORT AUTHORITY OF NY & NJ CHIEF CIVIL ENGINEER 30% SUBMISSION 07/15/2013 No. Date Revision Approved ENGINEERING DEPARTMENT LAGUARDIA | A|RPORT CIVIL Title REPLACEMENT OF THE EAST FIELD LIGHTING VAULT **DETAILS**

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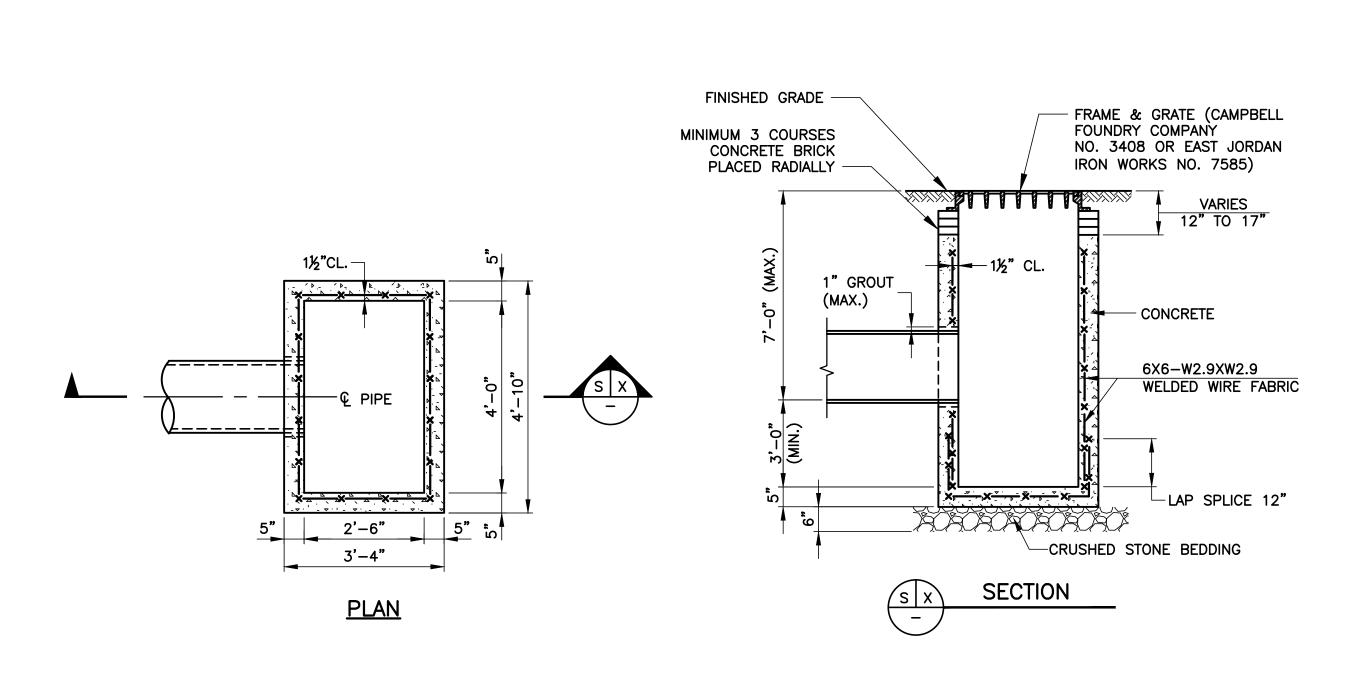
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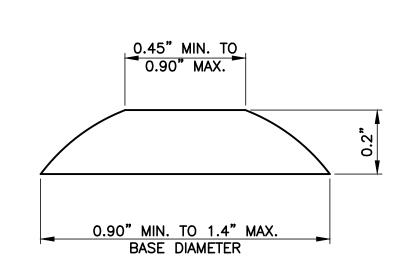
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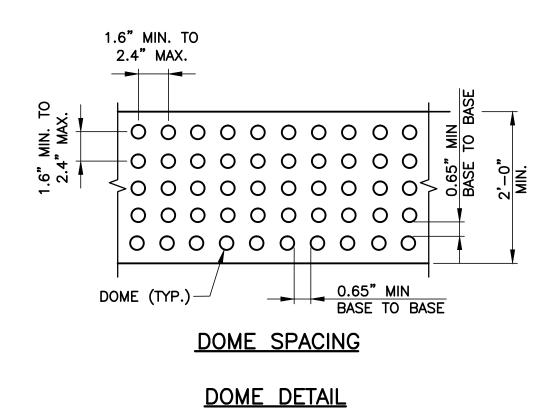
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CATCH BASIN TYPE II PRE-CAST

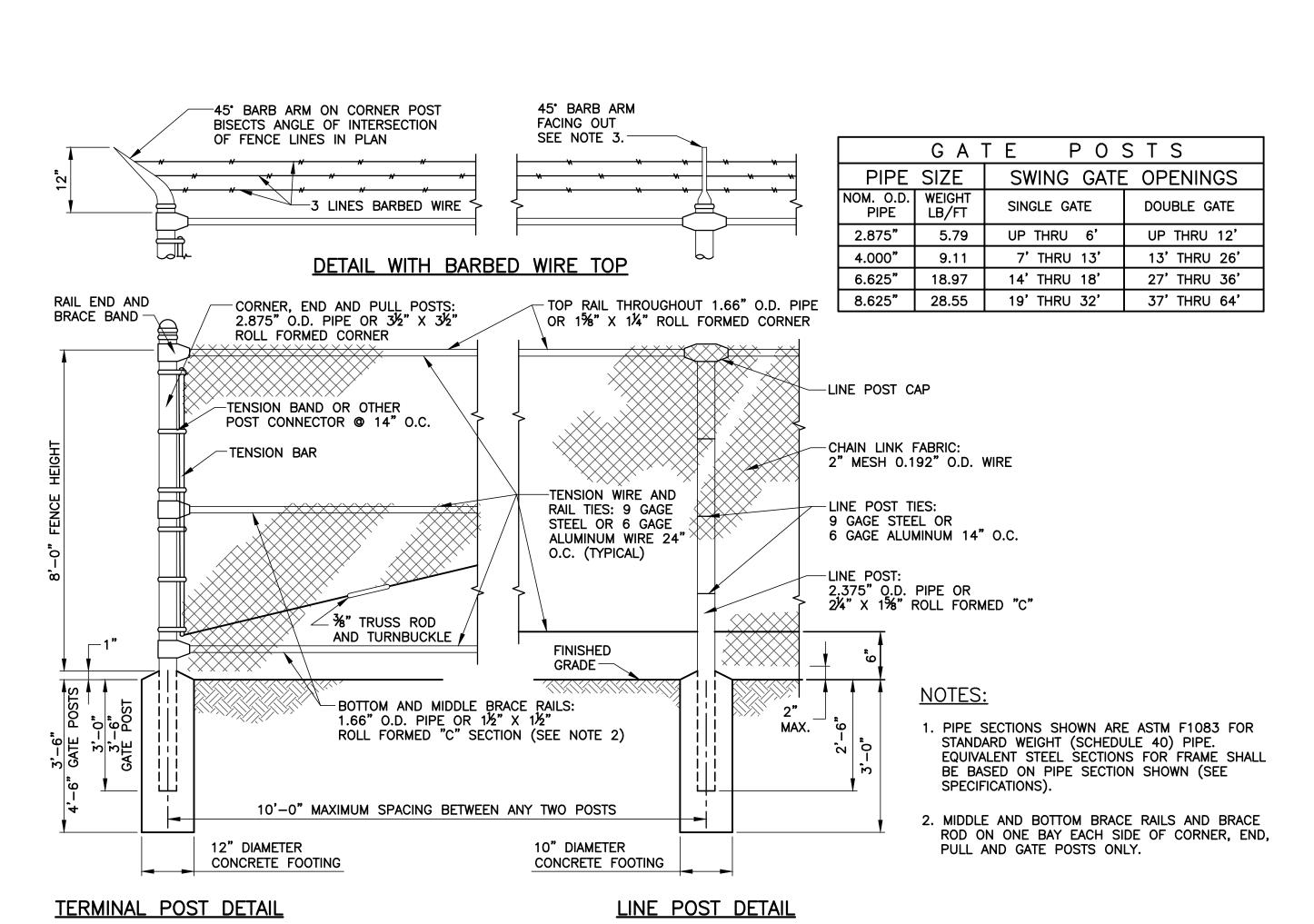


DOME SECTION



SIDEWALK DETECTABLE WARNING SURFACE DETAILS

NOT TO SCALE



EXISTING CHAIN LINK FENCE

NOT TO SCALE

THE PORT AUTHORITY
OF NY& NJ

CHIEF CIVIL ENGINEER

Sheet

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LAGUARDIA
AIRPORT

CIVIL

Title

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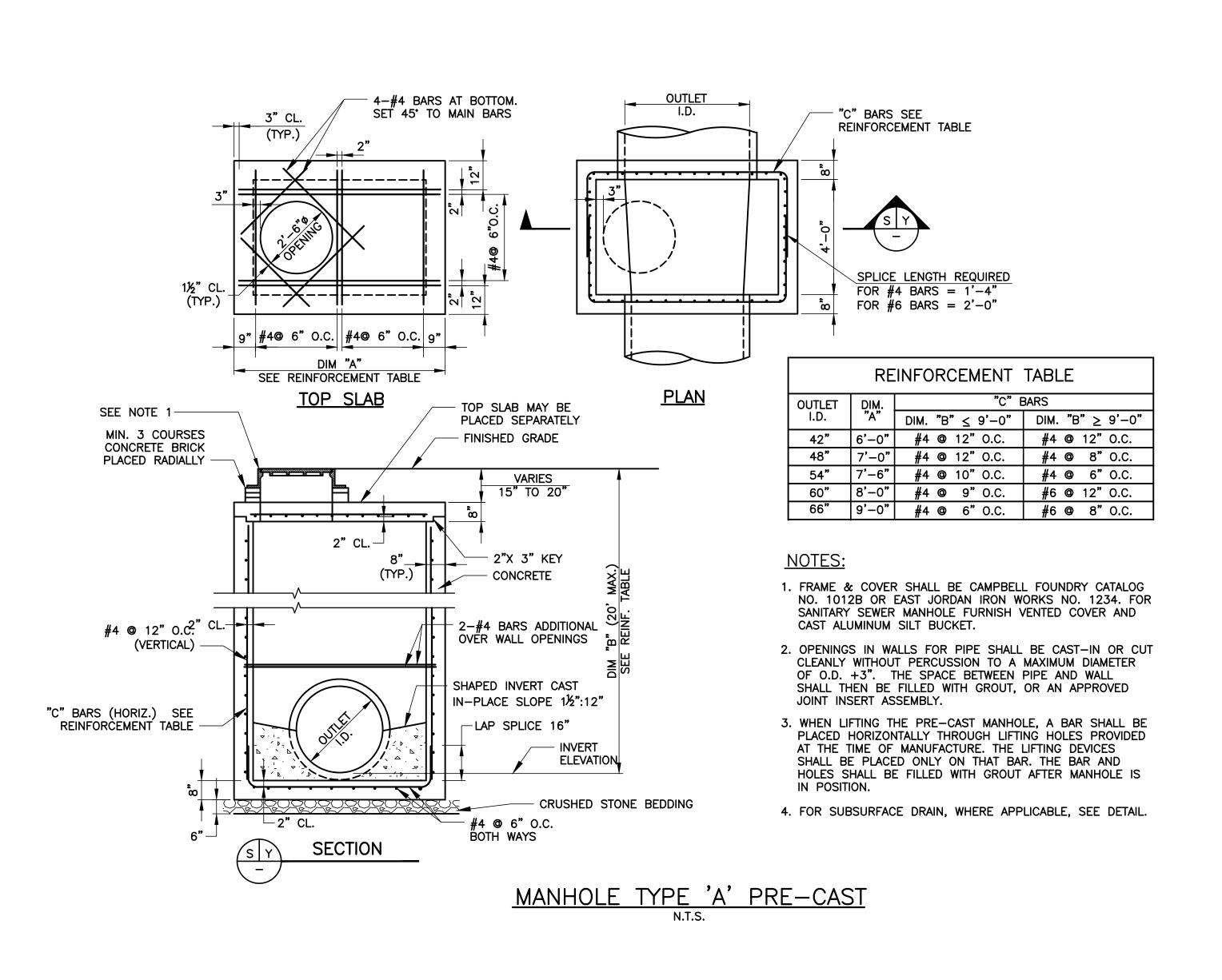
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Drawing Number

PID# 12801327



Sheet of THE PORT AUTHORITY OF NY & NJ CHIEF CIVIL ENGINEER 30% SUBMISSION 07/15/2013 No. Date Revision Approved ENGINEERING DEPARTMENT LAGUARDIA ARPORT CIVIL Title REPLACEMENT OF THE EAST FIELD LIGHTING VAULT **DETAILS** This drawing subject to conditions in contract. All inventions, ideas, designs and methods herein are reserved to Port Authority and may not be used without its written consent.

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I.POLYANSKIY/A.WASTI E. LIU Designed by Drawn by

07/15/2013 WORK ORDER No. # X (TBD)

Drawing Number

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PID# 12801327

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STRUCTURAL NOTES:

GENERAL NOTES:

- ALL STRUCTURAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF NEW YORK CITY BUILDING CODE, LATEST EDITION.
- 2. CHECK AND COORDINATE DIMENSIONS, CLEARANCES, INCLUDING OPENINGS FOR PIPES, DUCTS AND CONDUITS, ETC. WITH THE WORK OF OTHER TRADES.
- 3. FOR LOCATION OF LIGHTING VAULT, REFERENCE LINES, COORDINATES AND ELEVATION DATUM SEE CIVIL CONTRACT DRAWINGS

REINFORCED CONCRETE NOTES:

- 1. STRUCTURAL CONCRETE DESIGN AND CONCRETING PRACTICES SHALL CONFORM WITH ACI 318-05. "AMERICAN CONCRETE INSTITUTE, BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE". DETAILS SHALL BE IN ACCORDANCE WITH ACI-315, LATEST EDITION, "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- 2. CONCRETE FOR WALLS, FOOTINGS, PIERS, AND SLAB ON GRADE SHALL BE CATEGORY IV AS PER TABLE 2 OF THE SPECIFICATION SECTION 0.3301 WITH A MINIMUM COMPRESSIVE STRENGTH OF 4000 psi AT 28 DAYS. CONCRETE FOR HOUSEKEEPING PADS SHALL BE CATEGORY VI AS PER TABLE 2 OF THE SPECIFICATION SECTION 03301 WITH A MINIMUM COMPRESSIVE STRENGTH OF 4000 psi AT 28 DAYS. CONCRETE ON TOP OF ROOF METAL DECK SHALL BE CATEGORY VI LIGHT WEIGHT CONCRETE WITH 115 PCF DENSITY AND A MINIMUM COMPRESSIVE STRENGTH OF 4000 psi AT 28 DAYS.
- 3. ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615 GRADE 60 (Fy=60 KSI). REINFORCING BARS IN THE GARAGE SLAB ON GRADE (10" SLAB ON PLAN, DWG. SO201) SHALL BE EPOXY COATED CONFORMING TO ASTM A775. FABRICATION AND JOBSITE HANDLING OF EPOXY COATED REINFORCING BARS SHALL CONFORM TO ASTM D3963. WELDED WIRE FABRIC SHALL CONFORM TO REQUIREMENTS OF ASTM A185.
- 4. ALL REINFORCEMENT SHALL BE SECURELY HELD IN PLACE WHILE PLACING CONCRETE. II REQUIRED, PROVIDE ADDITIONAL BARS OR STIRRUPS TO FURNISH SUPPORT FOR ALL BARS.
- 5. REINFORCING BARS SHALL BE LAPPED AS SPECIFICALLY DETAILED ON THE DRAWINGS. WHERE NOT SPECIFICALLY INDICATED ON THE DRAWINGS, REINFORCING BARS SHALL BE LAPPED USING THE TENSION SPLICE LENGTHS IN THE SCHEDULE ON THE DRAWING SOXX.
- 6. MINIMUM CONCRETE COVER SHALL BF:
 - CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH
 - CONCRETE EXPOSED TO EARTH OR WEATHER (VERTICAL REINFORCEMENT OF RETAINING WALLS, TOP SLAB ON GRADE BARS, ETC.) #5 AND SMALLER #6 AND LARGER

- 7. PROVIDE CONSTRUCTION JOINTS IN ACCORDANCE WITH ACI 318-05, CHAPTER 6.4 AND TYPICAL CONSTRUCTION JOINTS DETAILS ON SOXX DRAWING. SUBMIT SHOP DRAWINGS SHOWING CONSTRUCTION JOINT LOCATIONS ALONG WITH THE SEQUENCE OF POURS FOR THE ENGINEER'S REVIEW AND APPROVAL. RETAINING WALL CONSTRUCTION JOINTS SHALL BE LOCATED SO AS TO ROVIDE A 60 FOOT MAXIMUM LENGTH OF CONCRETE PLACEMENT
- 8. NO HORIZONTAL CONSTRUCTION JOINTS WILL BE PERMITTED IN WALLS OR SLAB ON GRADE UNLESS SPECIFICALLY SHOWN ON THE DRAWINGS OR APPROVED IN WRITING BY THE ENGINEER. VERTICAL CONSTRUCTION JOINTS IN WALLS SHALL BE USED ONLY WITH PRIOR APPROVAL OF THE ENGINEER. LOCATION OF CONSTRUCTION JOINTS SHALL BE AS APPROVED BY THE ENGINEER.
- CONCRETE PLACEMENT, TEST AND CURING SHALL BE PERFORMED IN ACCORDANCE WITH SPECIFICATION SECTION 03301.
- 10. VERIFY DIMENSIONS AND LOCATIONS OF ALL OPENINGS, PIPE SLEEVES, CONDUITS, ANCHOR BOLTS AND EMBEDMENTS ETC. AS REQUIRED BY OTHER TRADES BEFORE CONCRETE IS PLACED.
- 11. CONCRETE SLAB IN GRADE AND EQUIPMENT PADS SHALL RECEIVE TROWEL FINISH.

STRUCTURAL STEEL NOTES:

- 1. DESIGN OF STRUCTURAL STEEL AND CONNECTIONS SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, "MANUAL OF STEEL CONSTRUCTION, ALLOWABLE STRESS DESIGN (LATEST EDITION).", AS WELL AS SPECIFICATION SECTION 05120.
- 2. FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES," ADOPTED EFFECTIVE 1986.
- 3. UNLESS OTHERWISE NOTED:
 - ALL W-SHAPES SHALL CONFORM TO ASTM SPECIFICATION A992 (Fy=50 ksi, Fu=65 ksi)
 - ALL ANGLES USED IN VERTICAL OR HORIZONTAL BRACING SYSTEMS SHALL CONFORM TO ASTM SPECIFICATION A572 GRADE 50 (Fy=50 ksi, Fu=65 ksi)
 - · ALL RECTANGULAR AND SQUARE HSS SECTIONS SHALL CONFORM TO ASTM SPECIFICATION A500 GRADE B (Fy=46 ksi, Fu=58 ksi)
 - ALL CHANNELS AND ANGLES (OTHER THEN USED IN BRACING SYSTEMS) SHALL CONFORM TO ASTM SPECIFICATION A36 (Fy=36 ksi, Fu=58 ksi)
 - ALL CONNECTION MATERIAL, PLATES, BASE PLATES SHALL CONFORM TO ASTM SPECIFICATION SECTION A36 (Fy=36 ksi, Fu=58 ksi).
- 4. COMPLETE THE DESIGN OF CONNECTIONS BASED ON DETAILS SHOWN ON CONTRACT DRAWINGS. DESIGN AND DETAILING SHALL BE PERFORMED BY A PROFESSIONAL ENGINEER LICENSED IN NEW YORK STATE. THE CALCULATIONS AND SHOP DRAWINGS SHALL ALSO BEAR THE SIGNATURE AND SEAL OF A PROFESSIONAL ENGINEER LICENSED IN NEW YORK STATE. ALL CALCULATIONS AND SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL
- 5 WHEN NOT SPECIFICALLY DETAILED FLSEWHERE ON THE DRAWINGS ALL BEAM TO BEAM AND BEAM TO COLUMN CONNECTIONS SHALL BE TWO SIDED WEB ANGLE CONNECTIONS AS SHOWN IN TYPICAL SHEAR CONNECTION OF BEAM ON DRAWING SOXX.
- 6. ALTERNATE CONNECTIONS WILL BE ACCEPTED ONLY WITH WRITTEN APPROVAL OF THE ENGINEER, WHO WILL BE THE SOLE JUDGE OF ACCEPTABILITY. CONTRACTOR'S BID SHALL ANTICIPATE THE USE OF THOSE SPECIFIC DETAILS SHOWN ON THE DRAWINGS. IN ANY EVENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF SUCH ALTERNATE DETAILS WHICH HE PROPOSES

- 7. WHEN INDICATED AS BOLTED ON THE DRAWINGS, ALL SHOP OR FIELD BOLTED BEAM TO BEAM OR BEAM TO COLUMN CONNECTIONS SHALL BE BEARING TYPE BOLTED CONNECTIONS USING 34" DIAMETER A325 N BOLTS IN STANDARD HOLES UNLESS SPECIFICALLY NOTED OTHERWISE ON SECTIONS OR DETAILS. NO CONNECTION SHALL HAVE LESS THAN TWO (2) BOLTS UNLESS OTHERWISE NOTED ON SECTIONS OR DETAILS.
- 8. ALL BEAMS AND GIRDERS SHALL BE CONNECTED FOR THE REACTION (SHEAR CONNECTION FORCE) DENOTED BY THE SYMBOL "V" ON PLANS. IF NO REACTION IS GIVEN, CONNECTIONS SHALL BE CAPABLE OF DEVELOPING THE UNIFORMLY DISTRIBUTED LOAD CAPACITY OF THE MEMBER USING THE REACTION FROM THE ALLOWABLE LOAD OF BEAM AS TABULATED IN THE MANUAL OF STEEL CONSTRUCTION PART 2.
- 9 WHEN INDICATED AS BOLTED ON THE DRAWINGS ALL SHOP OR FIFLD BOLTED COLLIMN SPLICES. BRACING AND MOMENT CONNECTIONS SHALL BE FRICTION TYPE (SLIP CRITICAL) CLASS A CONNECTIONS USING 34" DIAMETER A325 SLIP CRITICAL BOLTS IN STANDARD HOLES.
- 10. SPLICES SHALL BE ALLOWED ONLY AT LOCATIONS SPECIFICALLY INDICATED ON THE STRUCTURAL DRAWINGS UNLESS APPROVED OTHERWISE BY THE ENGINEER IN WRITING.
- 11. OVERSIZED OR SLOTTED HOLES SHALL NOT BE USED FOR ANY CONNECTIONS UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS OR APPROVED BY THE ENGINEER IN WRITING
- 12. UNLESS NOTED ON DRAWINGS, ALL FILLET WELDS INDICATED SHALL MEET THE MINIMUM WELD SIZE SPECIFIED BY THE AISC MANUAL OF STEEL CONSTRUCTION.
- 13. ALL WELDING SHALL BE PERFORMED BY QUALIFIED WELDERS IN ACCORDANCE WITH A.W.S. D1.1 SPECIFICATIONS, LATEST EDITIONS. ALL WELDING ELECTRODES SHALL CONFORM TO A.W.S. A5.1 GRADE E-70. BARE ELECTRODES AND GRANULAR FLUX SHALL CONFORM TO A.W.S. A5.17, F70 A.W.S. FLUX CLASSIFICATION.
- 14. PROVIDE WELDED STIFFENER PLATES ON BOTH SIDES OF THE WEB OF BEAMS AT POINTS OF
- 15. CUTS, HOLES, COPING, ETC. REQUIRED FOR WORK OF OTHER TRADES SHALL BE SHOWN ON THE SHOP DRAWINGS AND MADE IN SHOP, CUTS OR BURNING OF HOLES IN STRUCTURAL STEEL MEMBERS IN THE FIELD WILL NOT BE PERMITTED.
- 16. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL AND MECHANICAL DRAWINGS AND DRAWINGS RELATED TO OTHER TRADES. CHECK AND COORDINATE DIMENSIONS, CLEARANCES, ETC. WITH WORK OF OTHER TRADES.
- 17 CAMBER WHERE REQUIRED AS INDICATED BY "C" IN FRAMING PLANS FOLLOWED BY THE ORDINATE, IN INCHES. WHERE NO CAMBER IS INDICATED, MEMBERS SHALL BE FABRICATED AND PLACED WITH NATURAL CAMBER UP
- 18. PROVIDE SHELF ANGLES AT COLUMNS, WALLS AND BEAMS AS REQUIRED TO PROVIDE END AND SIDE DECK SUPPORTS. SEE TYPICAL DETAILS ON DWG. SOXX.
- 19. DOUBLE ANGLE MEMBERS SHALL HAVE LONG LEGS BACK-TO-BACK UNLESS OTHERWISE NOTED.
- 20. COORDINATE ALL MISCELLANEOUS STEEL DETAILING REQUIREMENTS SHOWN ON THE DRAWINGS
- 21. STRUCTURAL STEEL FINISH REQUIREMENTS:
 - A. STEEL MEMBERS FOR GIRT SUPPORT SYSTEMS SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A123 OR A153. ALL CONNECTION BOLTS SHALL BE MECHANICALLY GALVANIZED PER ASTM B695.
 - STEEL MEMBERS THAT ARE EXPOSED AND NOT FIREPROOFED SHALL BE PAINTED WITH 3 COAT SYSTEM IN ACCORDANCE WITH SYSTEM S-1S OF SPECIFICATION SECTION #09910. SURFACE PREPARATION SHALL FOLLOW SSPC SP10. SHOP PAINT THE PRIMER AND SECOND COAT, FIELD PAINT THE 3RD COAT. COLOR TO BE DETERMINED BY ENGINEER.

 C. STRUCTURAL STEEL THAT ARE IN CONTACT WITH GALVANIZED STEEL SHALL BE PAINTED
 - WITH ZINC-PRIMER COAT OF SYSTEM S-1S PER SPECIFICATION SECTION #09910. SURFACE PREPARATION SHALL FOLLOW SSPC SP-10.
 - D. GALVANIZED FINISH THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED IN ACCORDANCE WITH ASTM A780, USING ZINC-RICH PAINT CONTAINING A MINIMUM OF 92% ZINC IN THE DRY FILM

FOR FIREPROOFING REQUIREMENT, SEE ARCHITECTURAL DRAWINGS.

CONTROLLED INSPECTIONS:

CONTROLLED INSPECTIONS SHALL BE CONDUCTED BY THE PORT AUTHORITY OF NEW YORK AND NEW JERSEY FOR THE FOLLOWING CONSTRUCTION AND OPERATIONS:

- A. STEEL CONSTRUCTION:
- 1. WELDING OF STRUCTURAL STEEL.
- 2 INSTALLATION AND TENSIONING OF HIGH-STRENGTH BOLTS
- 1. MATERIAL CONFORMANCE TO ACL AND ASTM STANDARDS FOR STRENGTH CEMENT, AGGREGATES, MIXING WATER, STEEL REINFORCEMENT AND ADMIXTURES.
- 2. PLACING AND CURING OF ALL CONCRETE.
- C. MASONRY CONSTRUCTION:
 - 1. FABRICATION OF PREFABRICATED UNITS.
 - 2. PLACEMENT AND BEDDING OF UNITS, SIZES AND WALL THICKNESS OF MEMBERS, SIZE AND POSITION OF REINFORCEMENT AND PROVISIONS FOR CURING AND PROTECTION OF MASONRY.

METAL DECK NOTES:

- 1. METAL DECK SHALL BE OF THE FOLLOWING TYPE OR APPROVED EQUAL:
 - 1.5" VL20 GALVANIZED COMPOSITE METAL DECK AS MANUFACTURED BY VULCRAFT.
- 2. ALL METAL DECK SHALL BE FABRICATED AND INSTALLED FOR A MINIMUM THREE-SPAN CONDITION. ONE SPAN CONDITIONS ARE PROHIBITED UNLESS SPECIFICALLY CALLED FOR ON THE DRAWINGS. TEMPORARY SHORING SHALL NOT BE USED ON METAL DECK UNLESS APPROVED BY THE ENGINEER

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- 3. METAL DECK UNITS SHALL BE FASTENED TO STEEL FRAMING AS FOLLOWS:

 A AT ENDS OF DECK UNITS AS WELL AS TO ALL INTERMEDIATE SUPPORTS (GIRDERS AND FILLER BEAMS THAT ARE PERPENDICULAR TO THE DECK DIRECTION)
 - B TO ALL FDGE BEAMS (BEAMS AT THE PERIMETER OF THE BUILDING, AT THE FDGE OF LARGE OPENINGS SUCH AS STAIR AND ELEVATOR OPENINGS AND MECHANICAL SHAFTS, AT EDGE OF DEPRESSED AREAS)
 - C TO ALL BEAMS LOCATED ON COLUMN LINES REGARDLESS OF THE BEAM ORIENTATION IN RESPECT TO DECK DIRECTION (INCLUDING BEAMS ON COLUMN LINES THAT ARE PARALLEL TO DECK DIRECTION)
- 4. ALL METAL ROOF DECK UNITS SHALL BE FASTENED TO THE STEEL FRAMEWORK BY WELDS NOT LESS THAN %" DIAMETER SPACED AT 8" ON CENTER MAXIMUM. SIDE LAPS OF ADJACENT UNITS SHALL BE FASTENED BETWEEN SUPPORTS BY SIDE SEAM WELDING OR SIDELAP SCREWS SPACED PER MANUFACTURERS ENGINEERED CALCULATIONS WITH MAXIMUM SPACING OF 18" FOR WELDS AND 12" ON CENTER FOR SCREWS. SEAM WELDS SHALL BE A MINIMUM OF 1-1/2 INCH BY 1/2 INCH.
- 5. OPENINGS WILL NOT BE PERMITTED IN THE ROOF DECK UNLESS SPECIFICALLY CALLED FOR AND DETAILED ON THE SHOP DRAWINGS APPROVED BY THE ENGINEER.
- 6. THE HANGING OF ANY LOADS FROM A ROOF METAL DECK IS STRICTLY PROHIBITED
- 7. METAL DECK HANGER TABS SHALL NOT BE USED FOR HANGING ANY LOADS (INCLUDING LIGHTWEIGH
- 8. COORDINATE DECK OPENING SIZES AND LOCATIONS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS PROVIDE HEADER MEMBERS OR REINFORCEMENT AS REQUIRED UNLESS OTHERWISE NOTED ON PLANS OR SECTIONS AND DETAILS.
- 9. ALL COMPOSITE METAL DECK SHALL INCLUDE POUR STOP AND END CLOSURE.

STEEL FRAMING NOTES:

1. SYMBOLS:



INDICATES DIRECTION OF 31/2" (TOTAL DEPTH) LIGHT WEIGHT CONCRETE ON TOP OF 1.5" VL20 COMPOSITE METAL DECK.

INDICATES VERTICAL BRACING.



INDICATES MOMENT CONNECTION. PROVIDE CONNECTION FOR FULL MOMENT CAPACITY OF BEAM UNLESS MOMENT IS INDICATED ON PLAN.

2. NOTATION

INDICATES GRAVITY SHEAR CONNECTION FORCE IN KIPS, IF NO REACTION IS SHOWN, REFER TO STRUCTURAL STEEL NOTES ON SOXX. MINIMUM SHEAR REACTION SHALL BE 6 KIPS.

INDICATES CAMBER AT CENTER OF BEAM SPAN. THE SPECIFIED CAMBER INCLUDES ALL MILL TOLERANCES.

INDICATES MOMENT CONNECTION FORCE IN KIP-FEET.

INDICATES AXIAL CONNECTION FORCE [TENSION (+) OR COMPRESSION (-)] IN

LEGEND: (STRUCTURAL DRAWINGS ONLY)



CONC

CONCRETE

PLAN SECTION FLEVATION OR DETAIL IDENTIFICATION

DRAWING NUMBER ON WHICH SECTION IS SHOWN, OR DASH (-) IF SHOWN ON SAME DRAWING

BOLD LINE = MATERIAL FURNISHED AND INSTALLED IN THIS CONTRACT



COURSE EARTH

AGGREGATE BASE

COMPACTED FILL MATER



ABBREVIATIONS:

ADD L	-	ADDITIONAL	DIAG.	_	DIAGONAL
ARCH'L	_	ARCHITECTURAL	DIAM., Ø	-	DIAMETER
B, BOTT.	-	воттом	DO	-	DITTO
BLDG.	-	BUILDING	DWG., DWGS	-	DRAWING(S)
ВМ	-	BEAM	EA.	-	EACH
C.C.	-	CENTER TO CENTER	EL., ELEV.	-	ELEVATION
Q.	-	CENTER LINE	ELECT.	-	ELECTRICAL
COL.	_	COLUMN			

THE PORT AUTHORITY

CHIEF STRUCTURAL ENGINEER

30% SUBMISSION 07/15/2013

Revision No. Date Approved ENGINEERING DEPARTMENT LAGUARDIA AIRPORT STRUCTURAL

REPLACEMENT OF THE EAST FIELD LIGHTING VAULT

STRUCTURAL NOTES. **LEGEND AND ABBREVIATIONS**

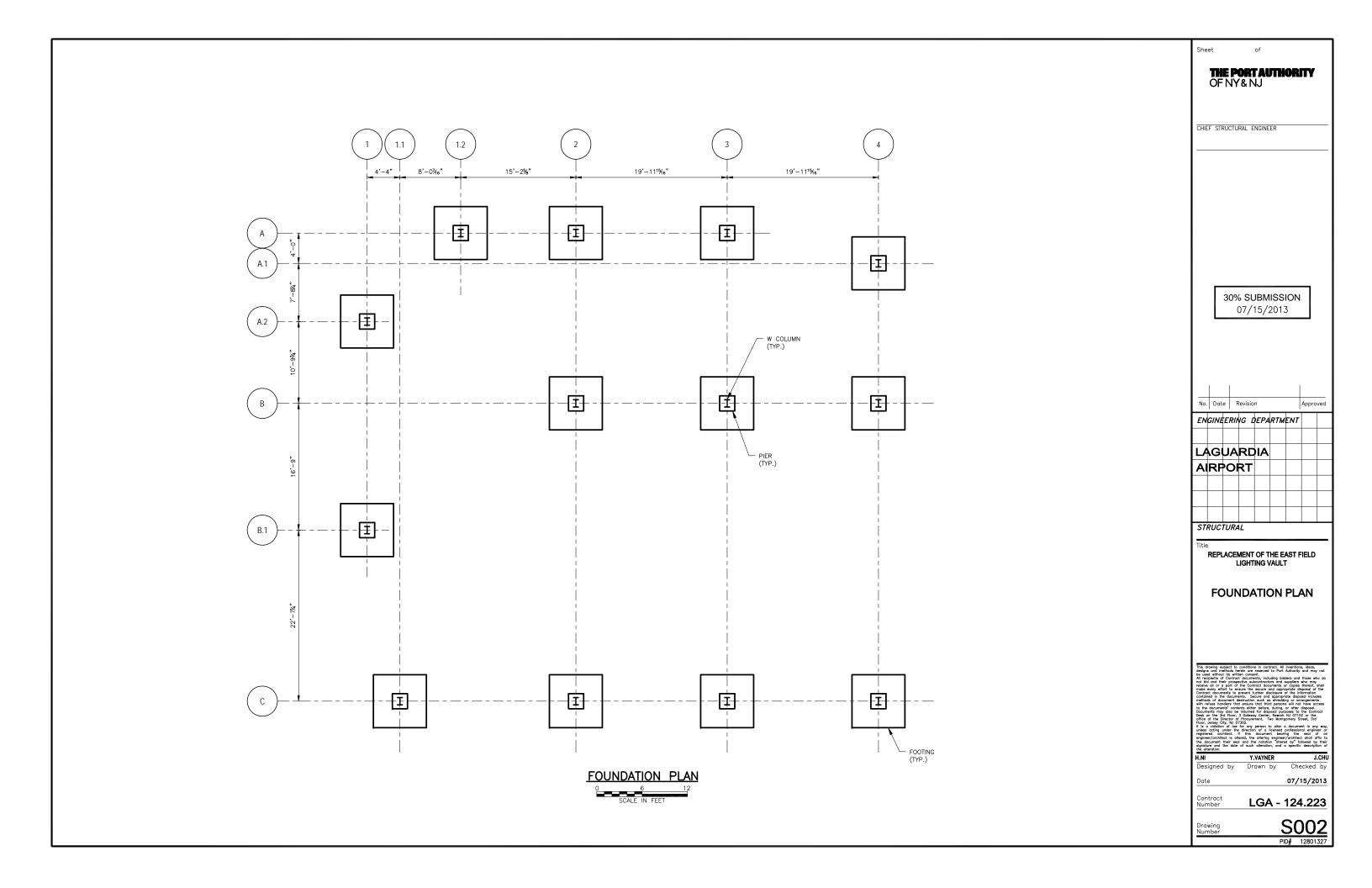
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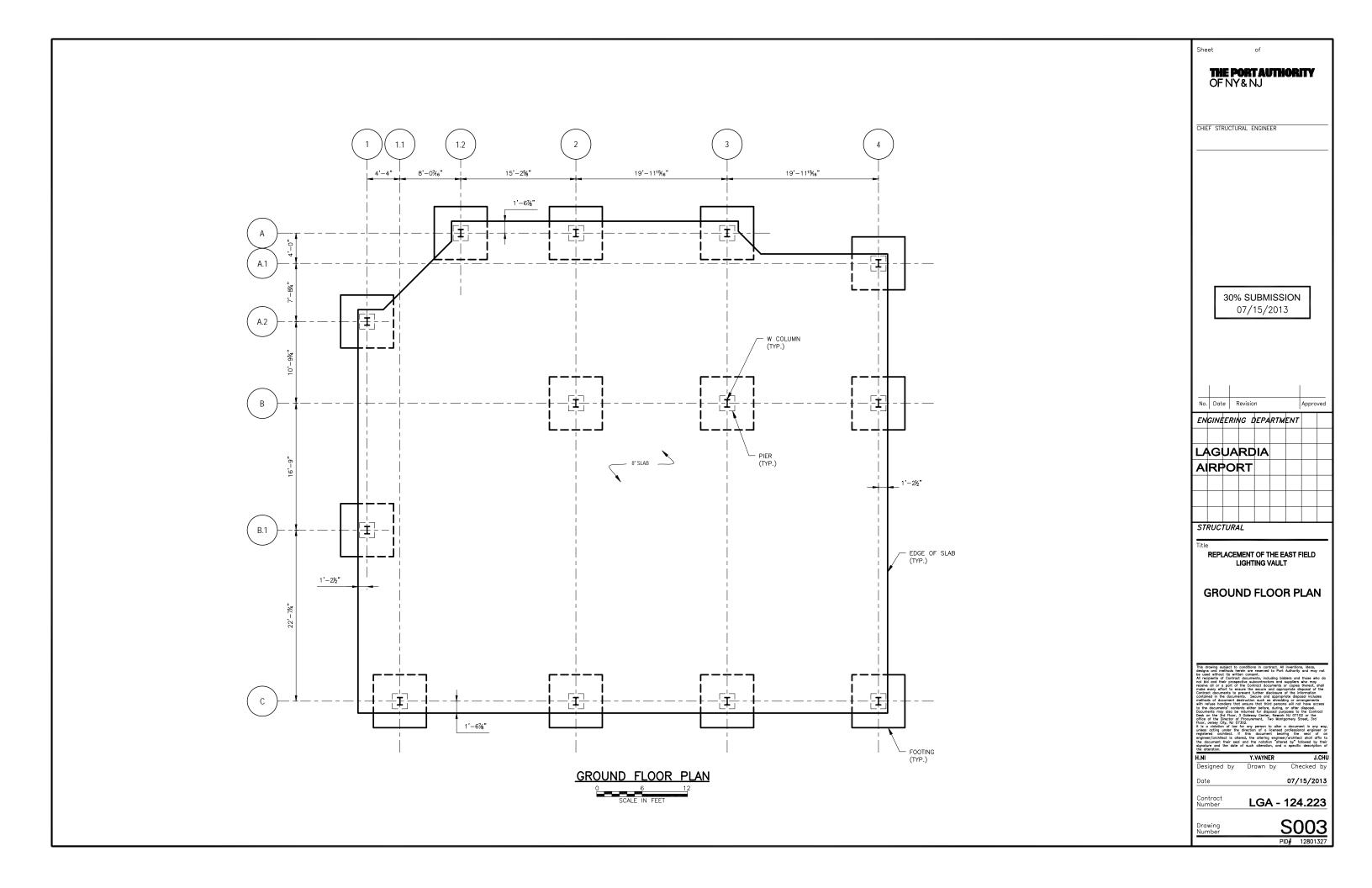
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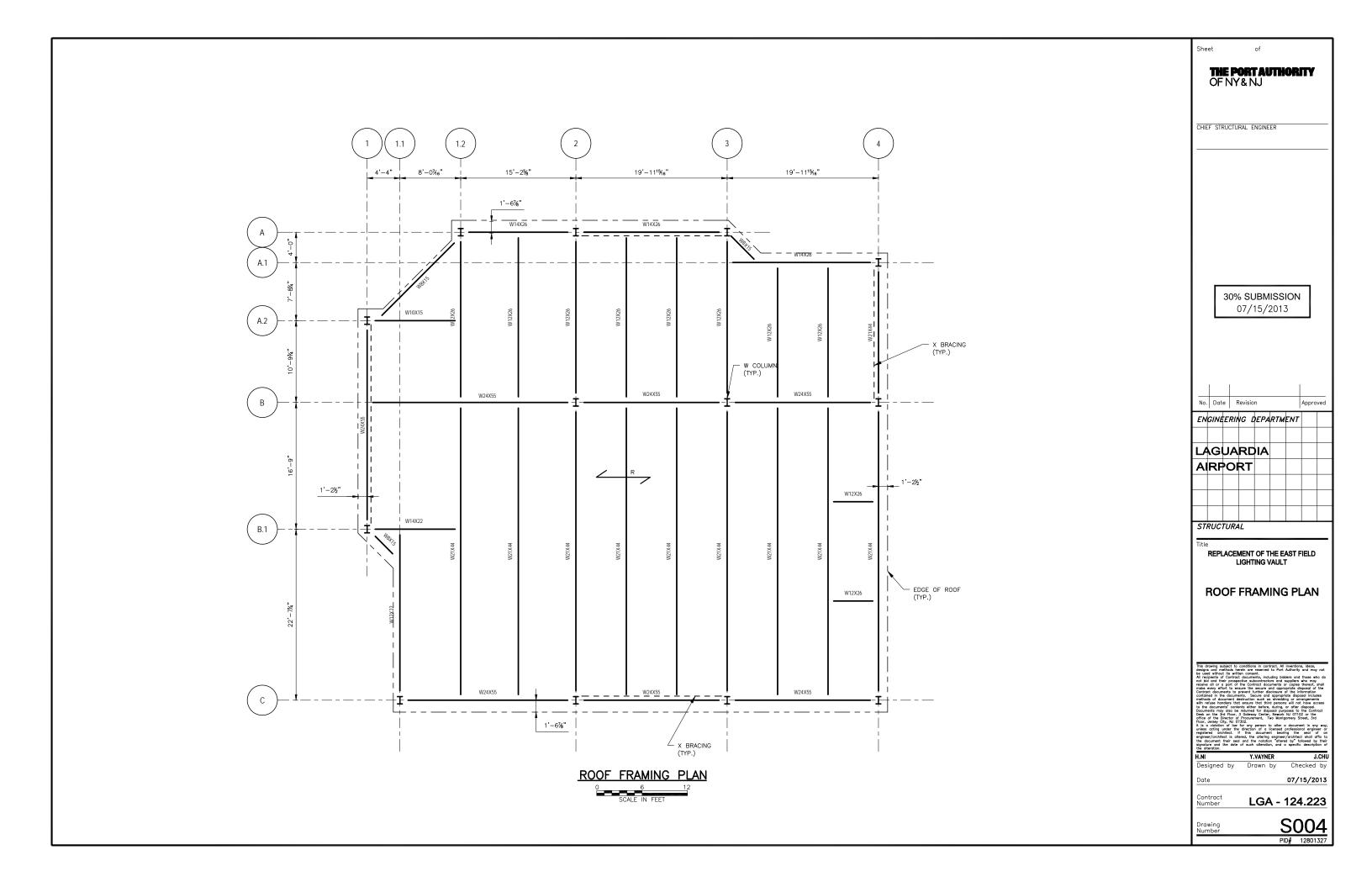
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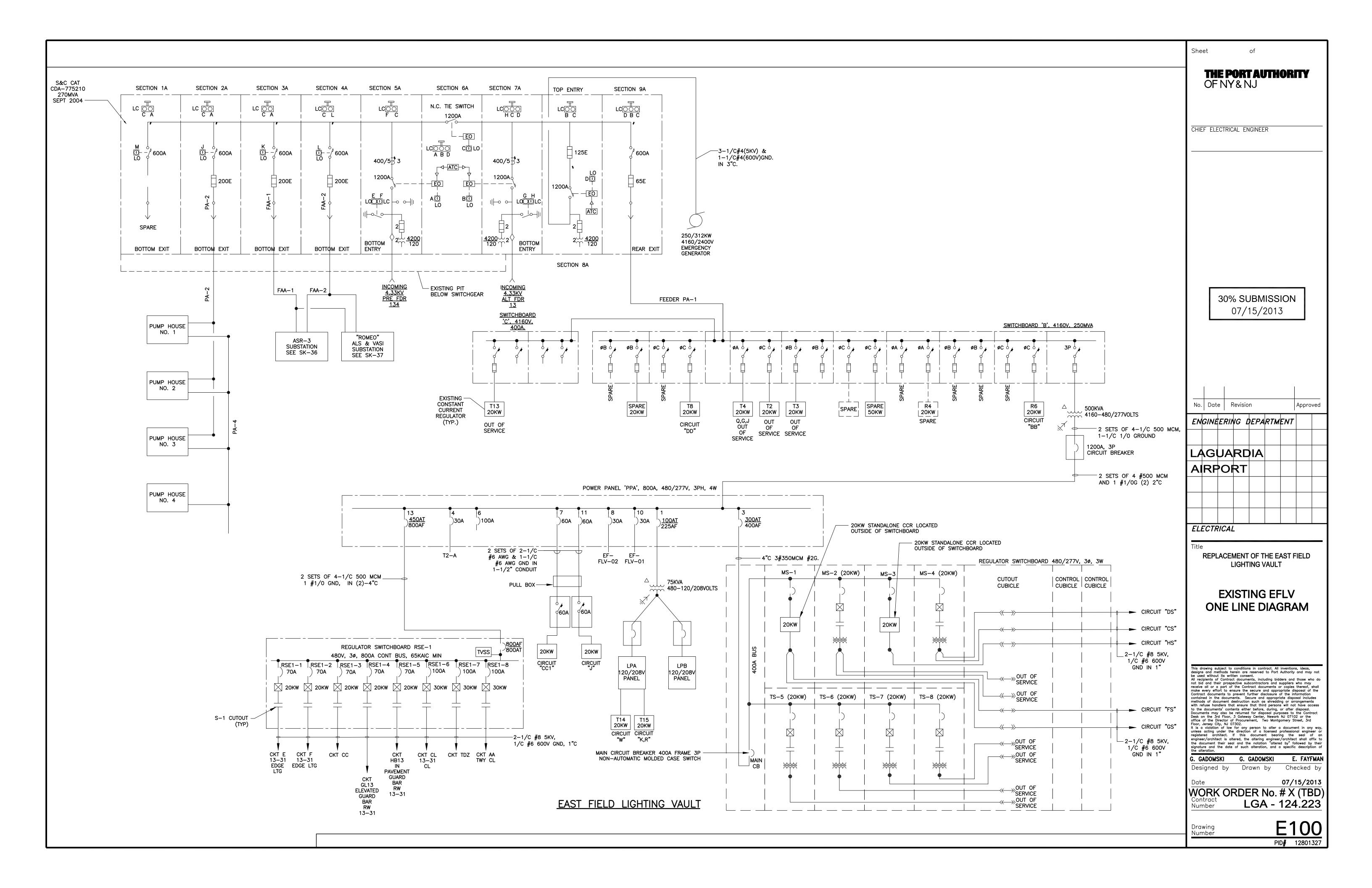
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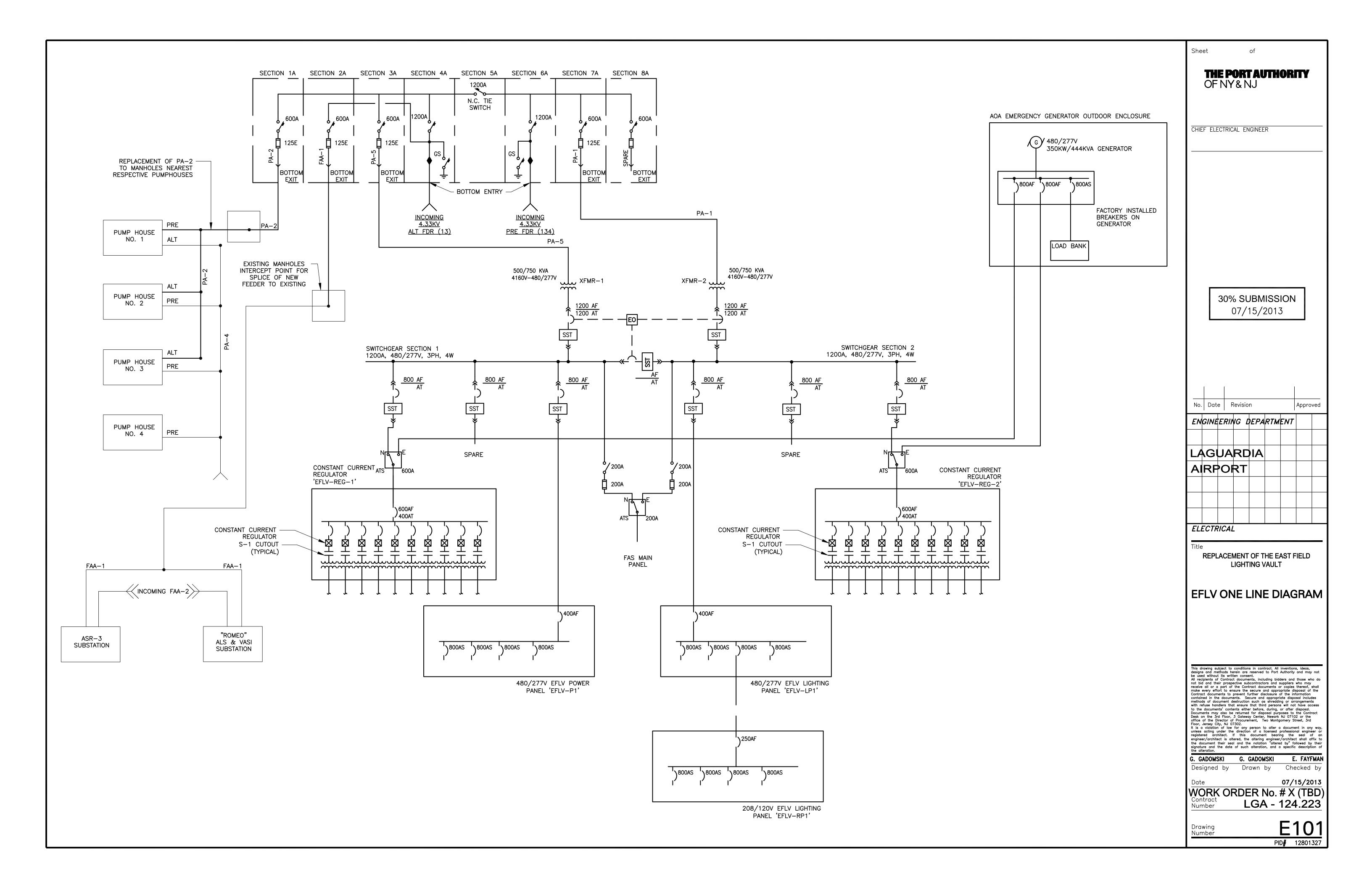
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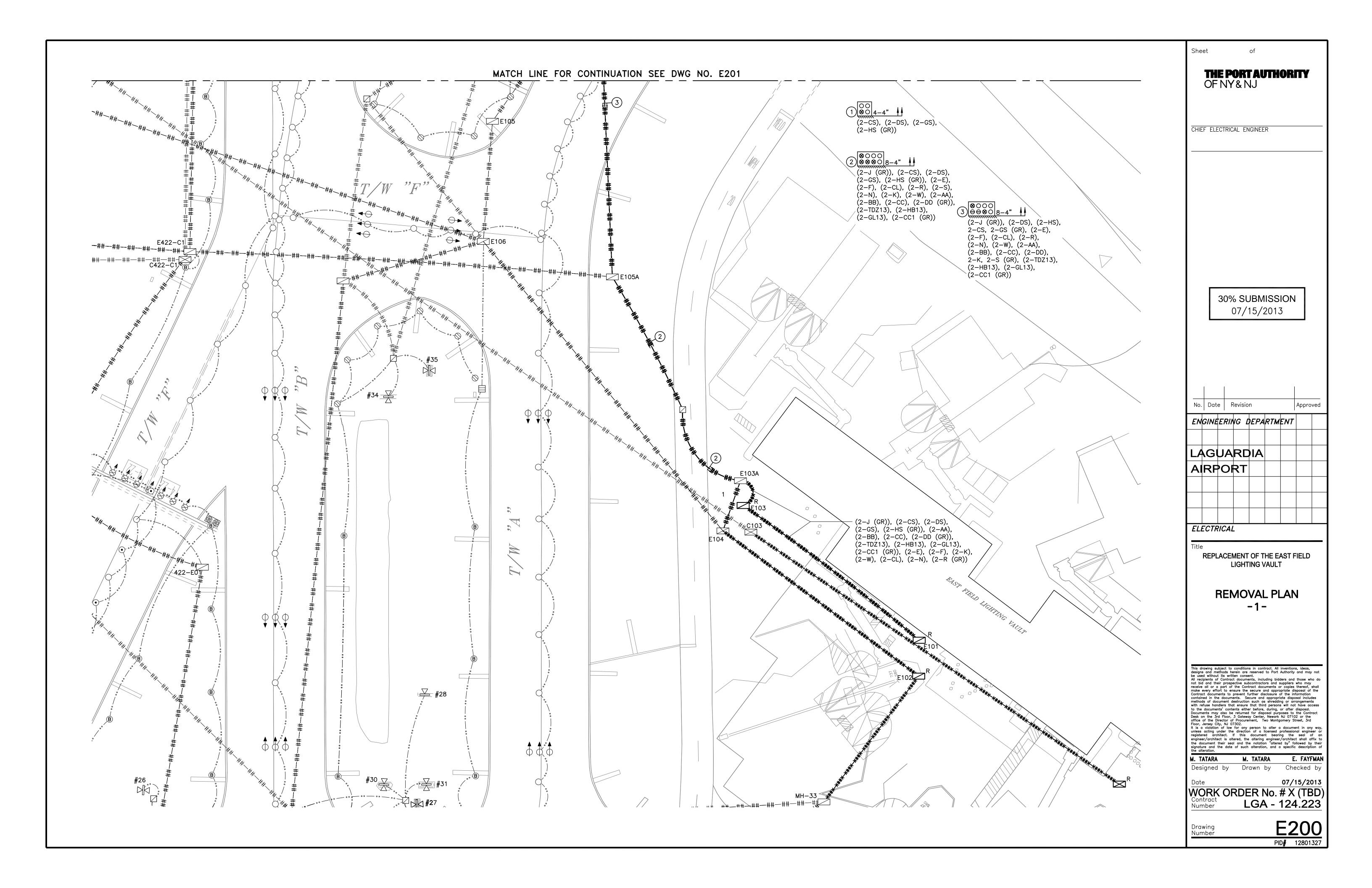


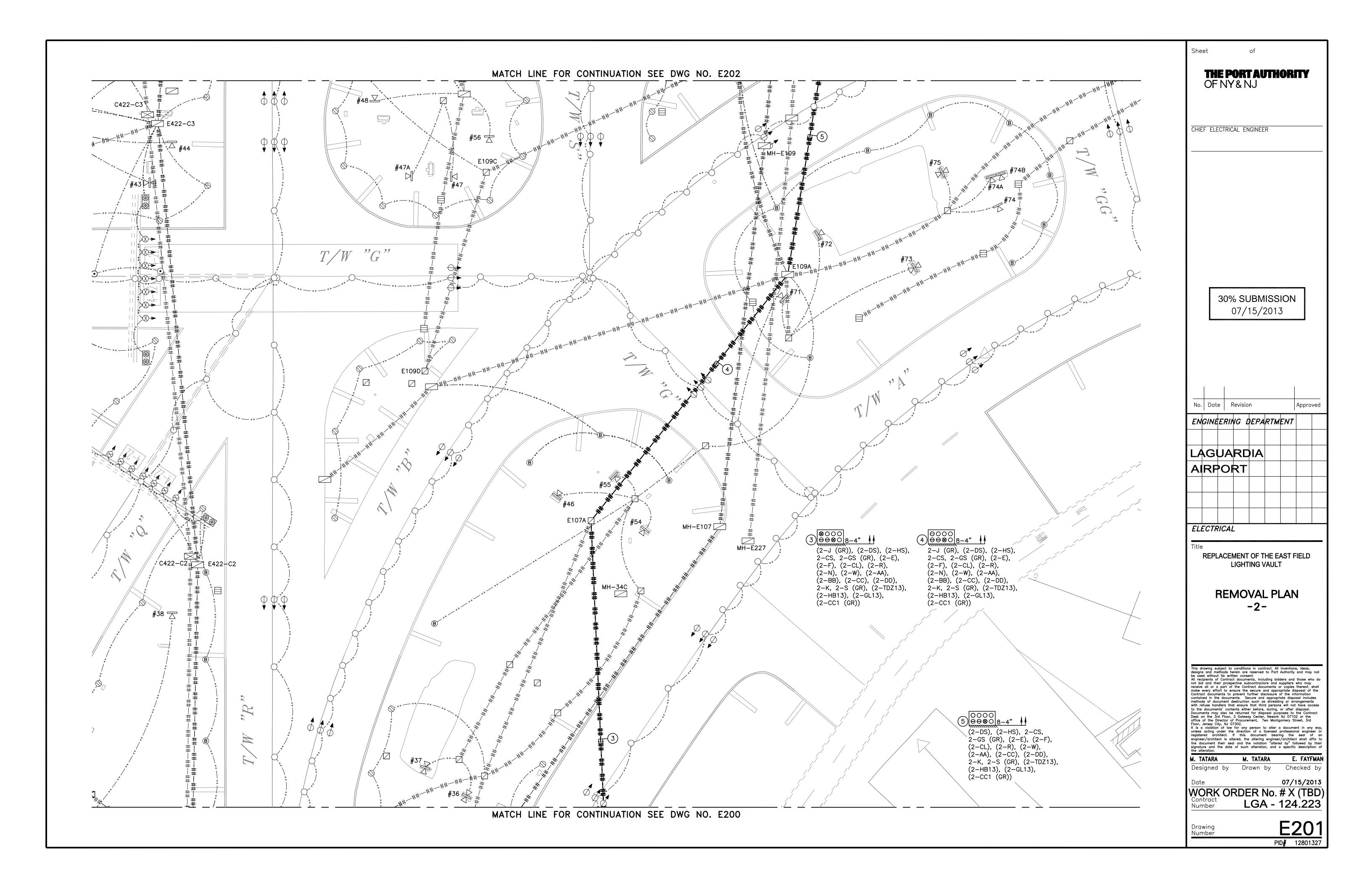


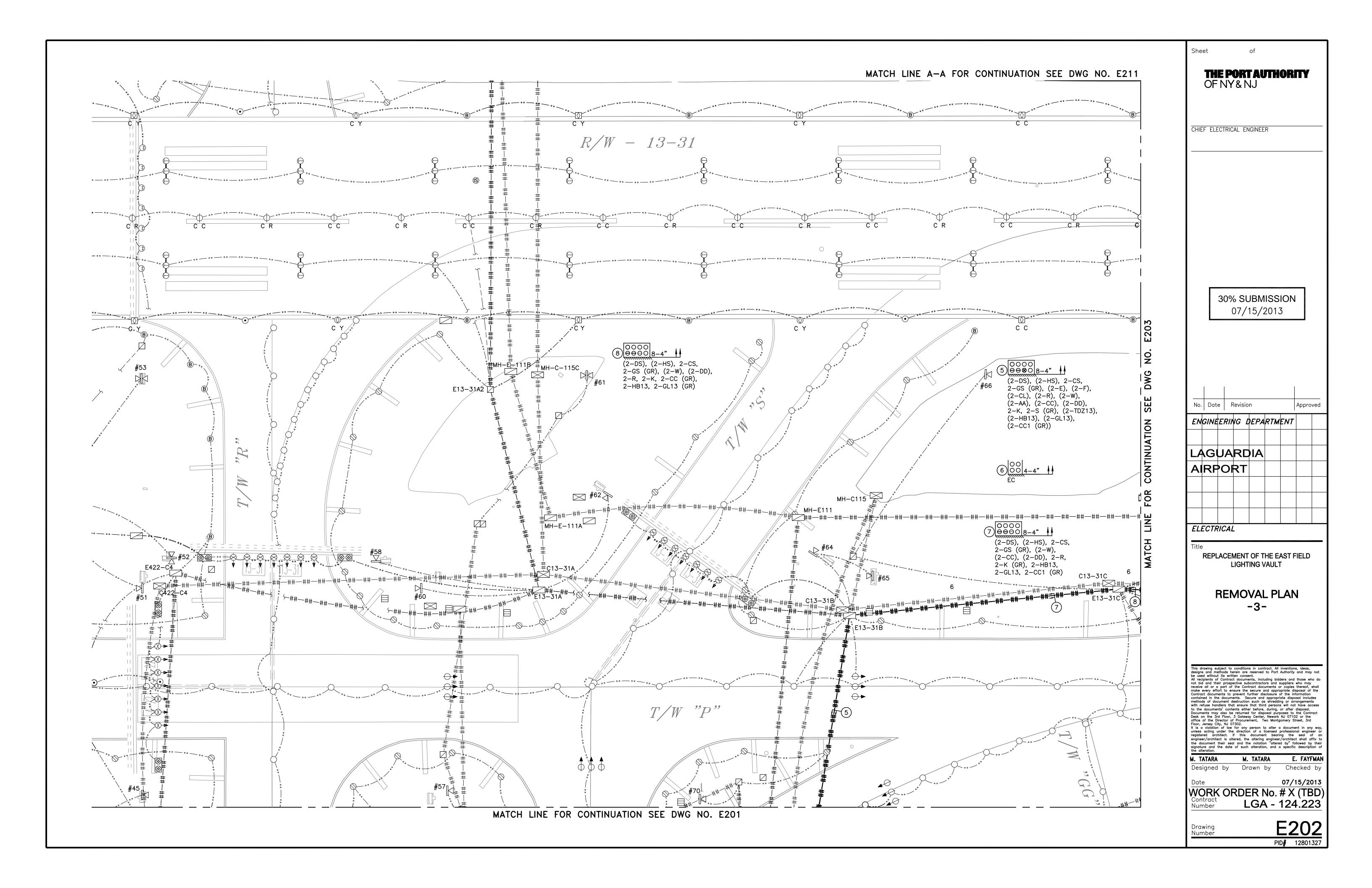


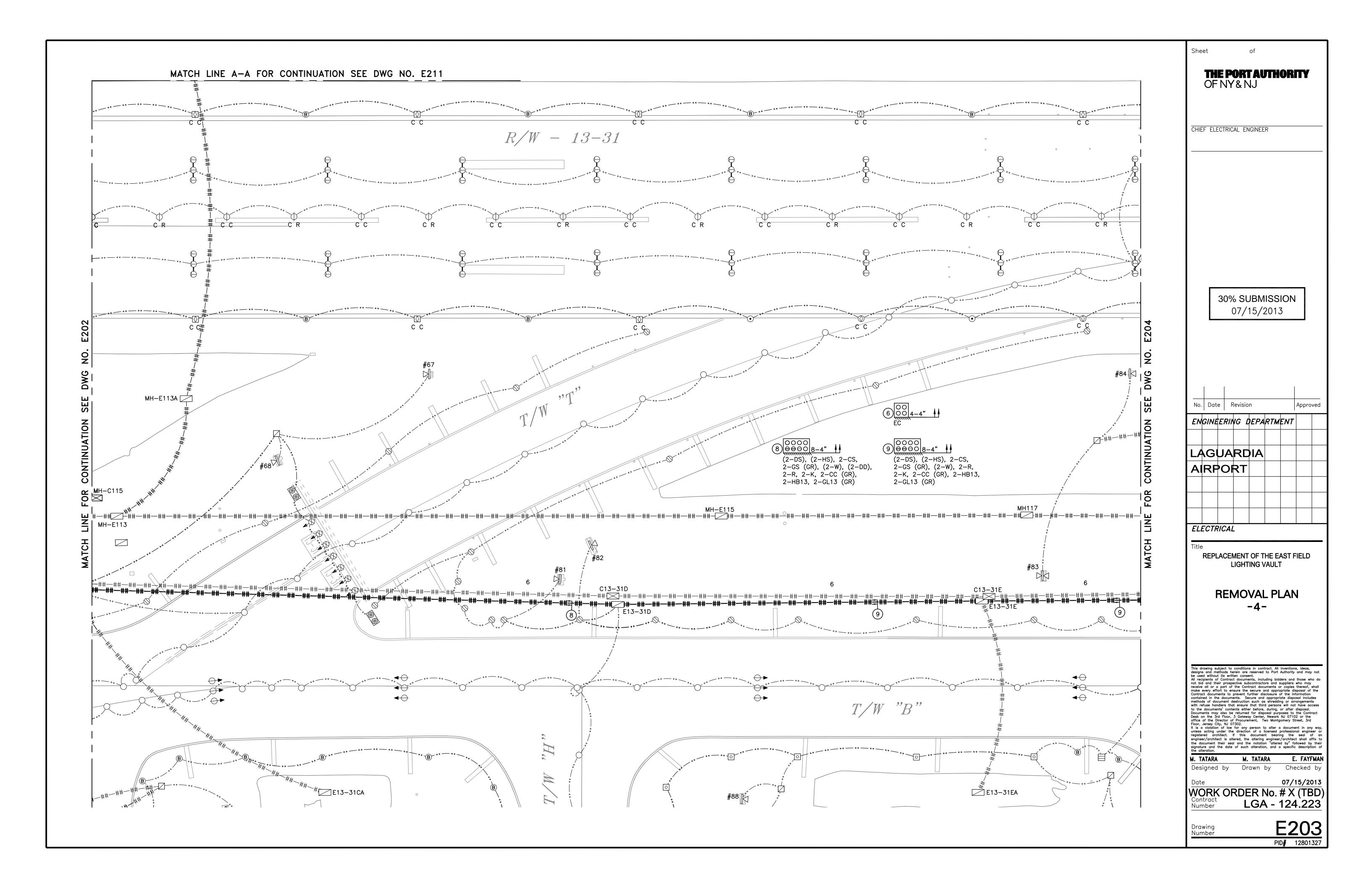


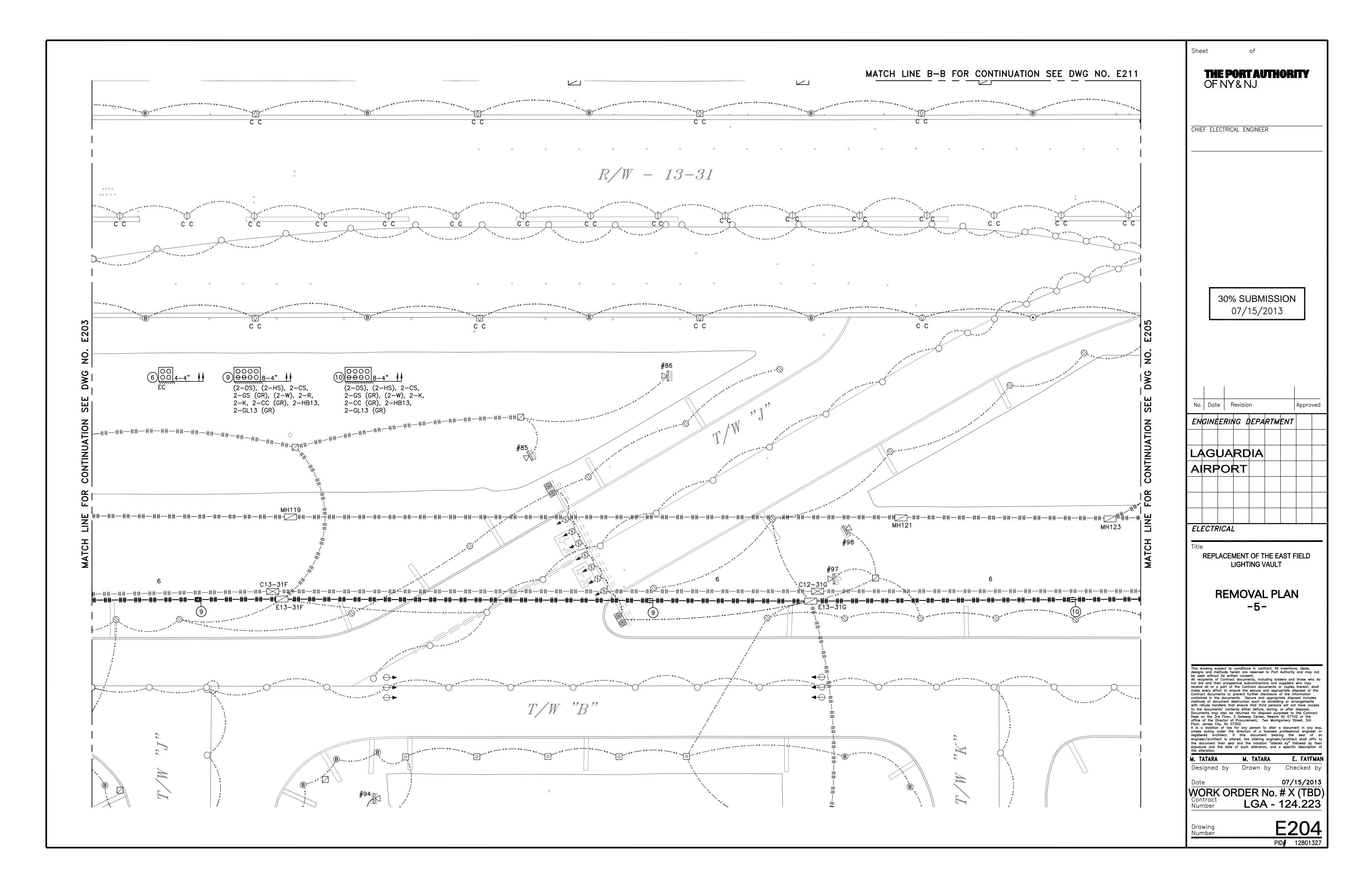


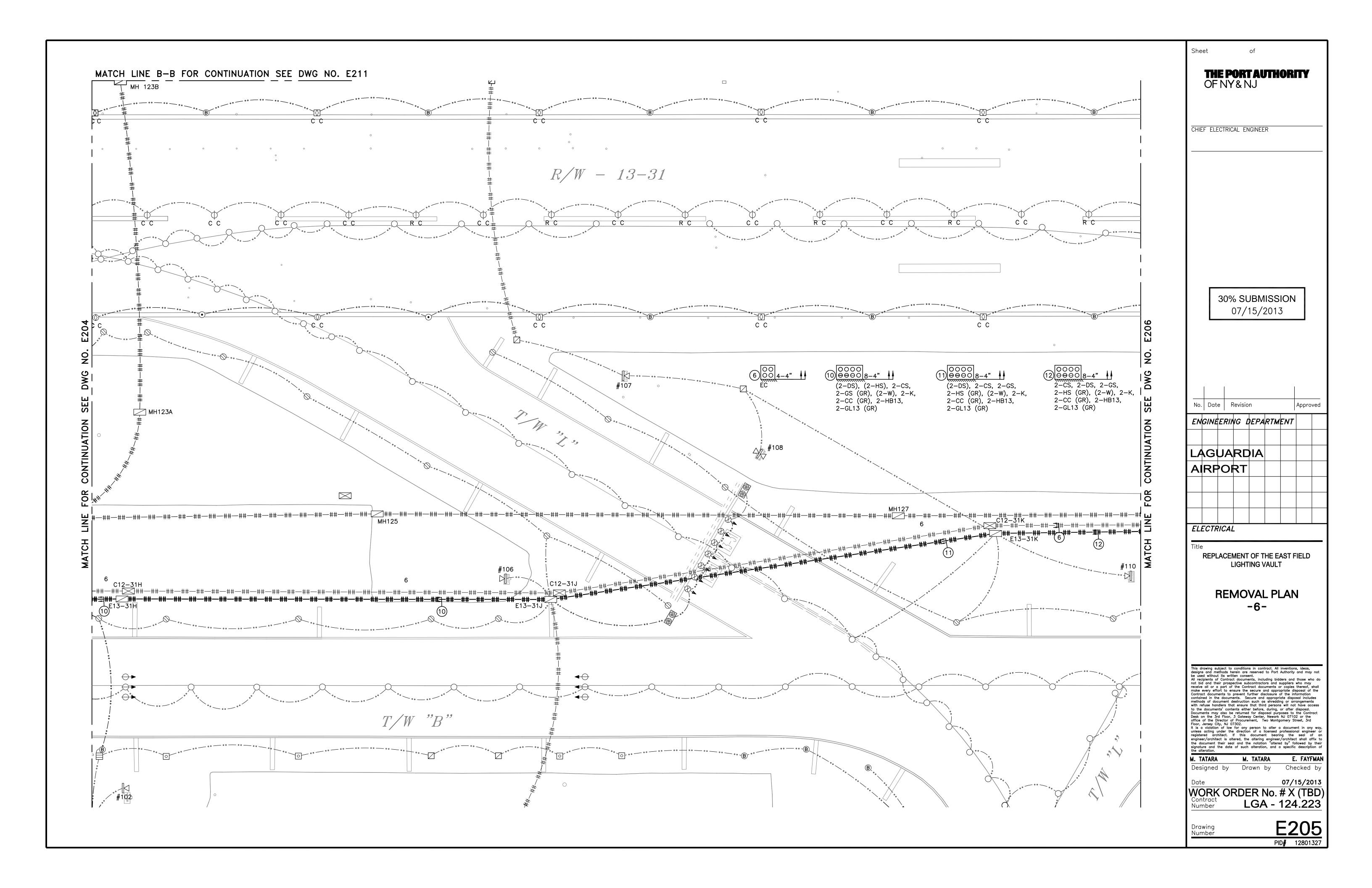


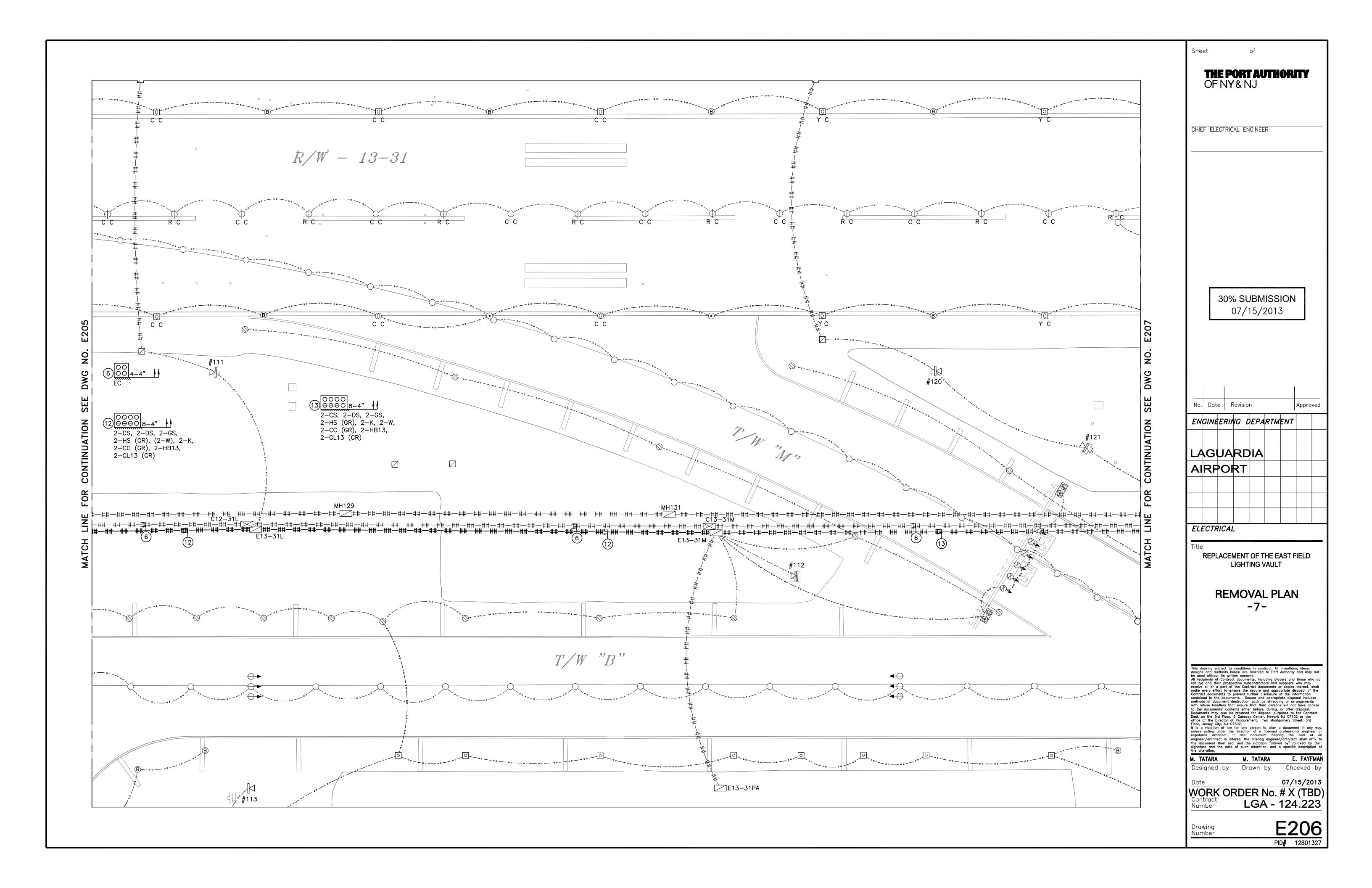


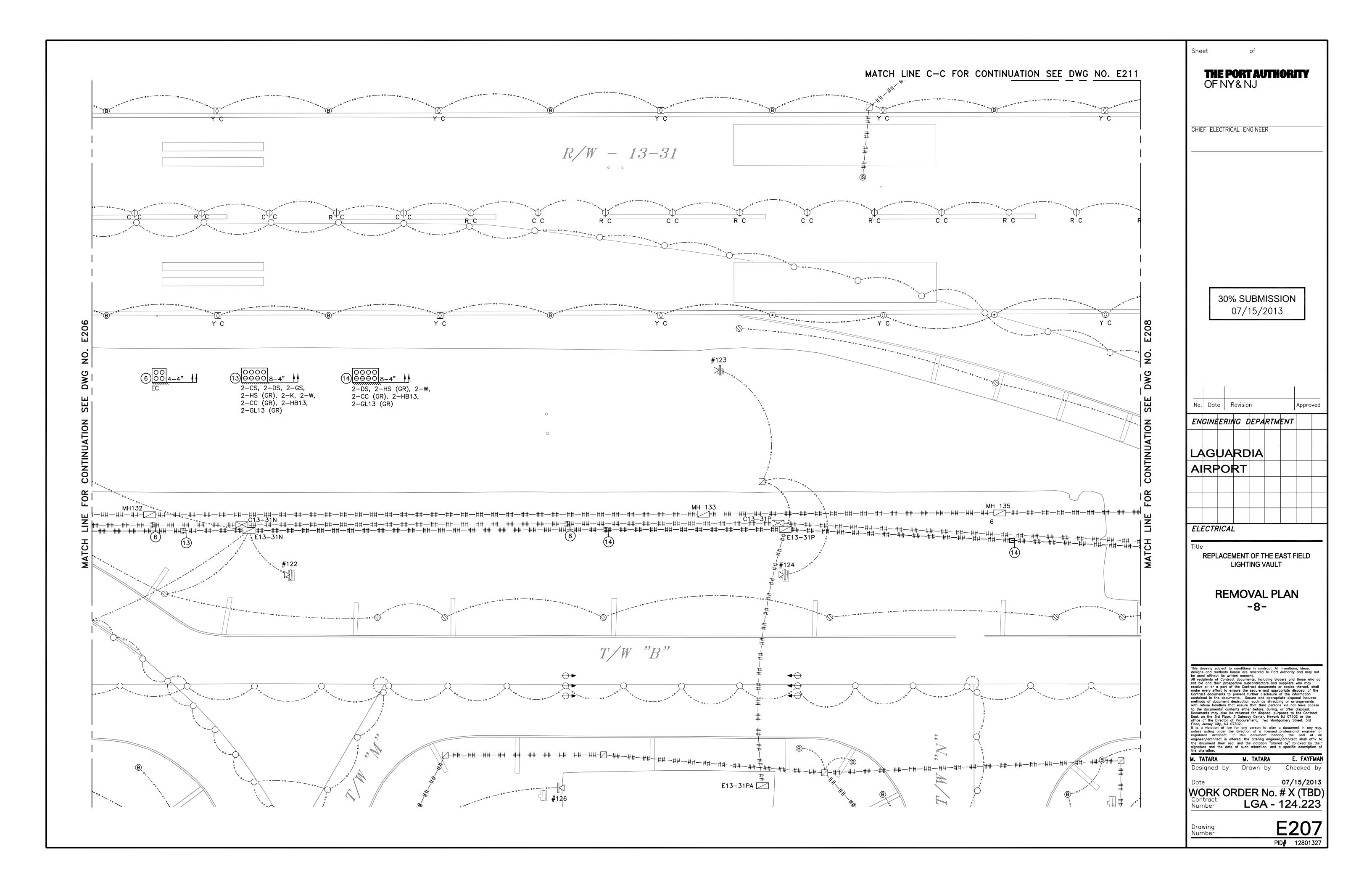


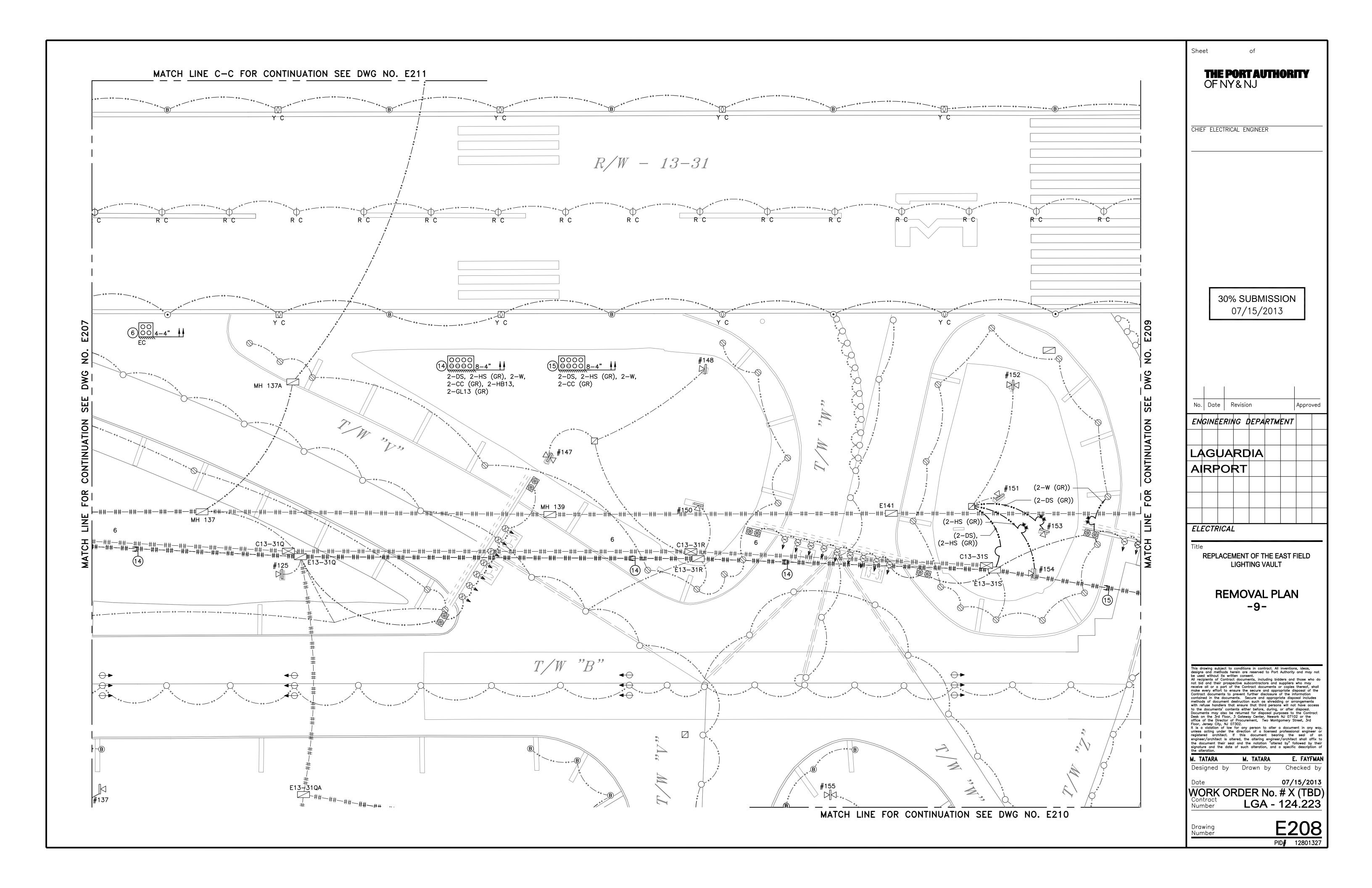


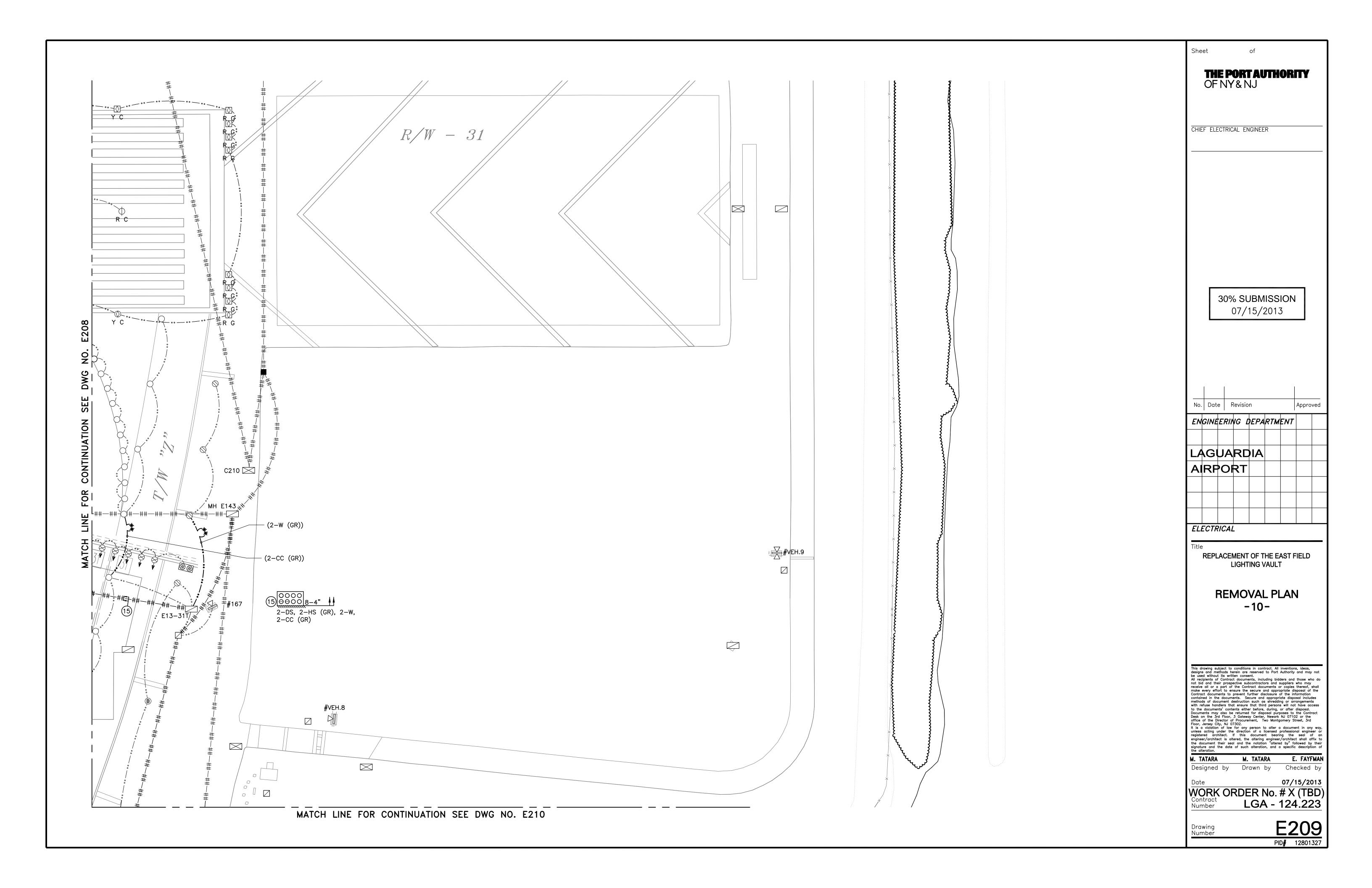


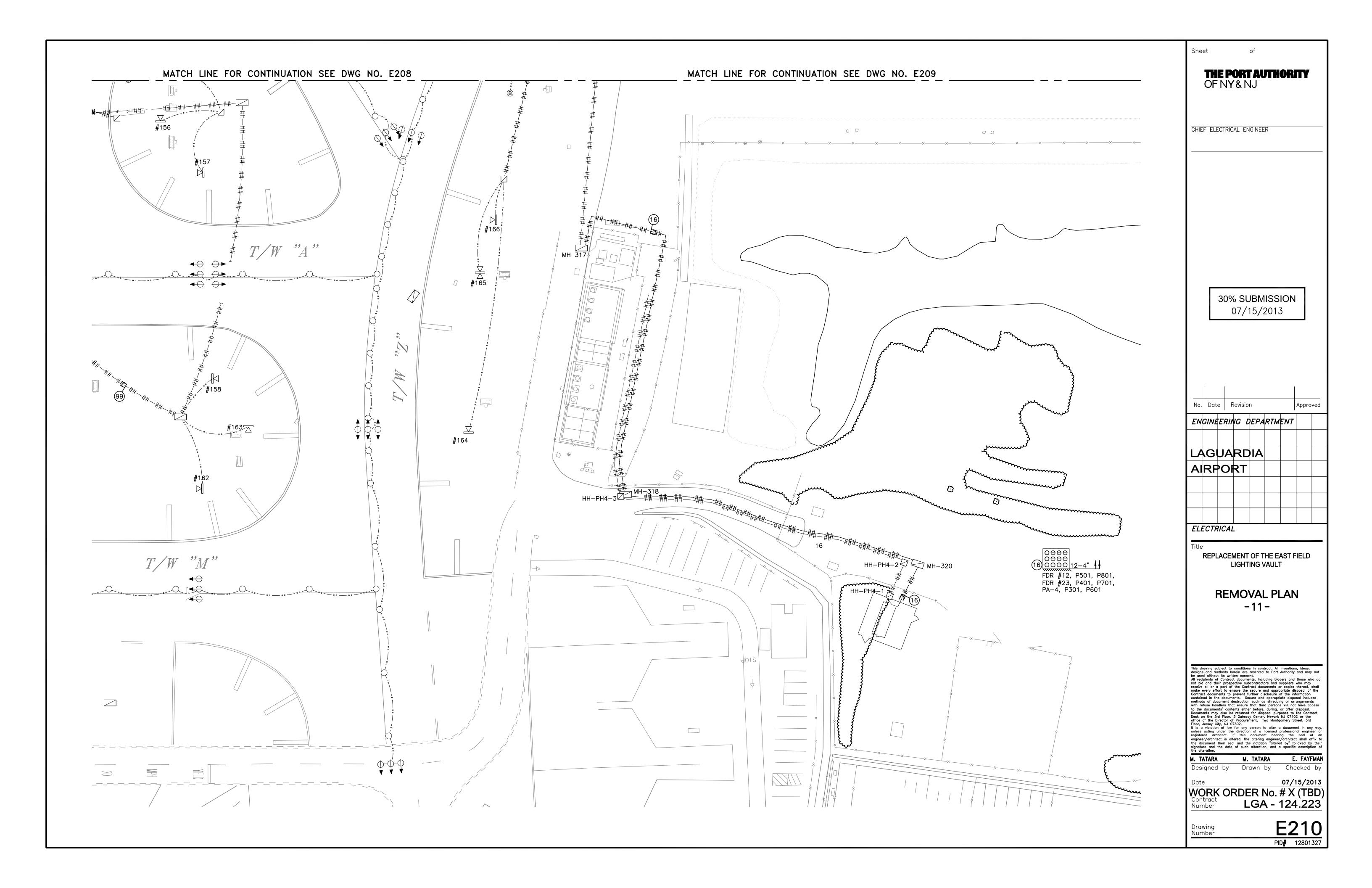


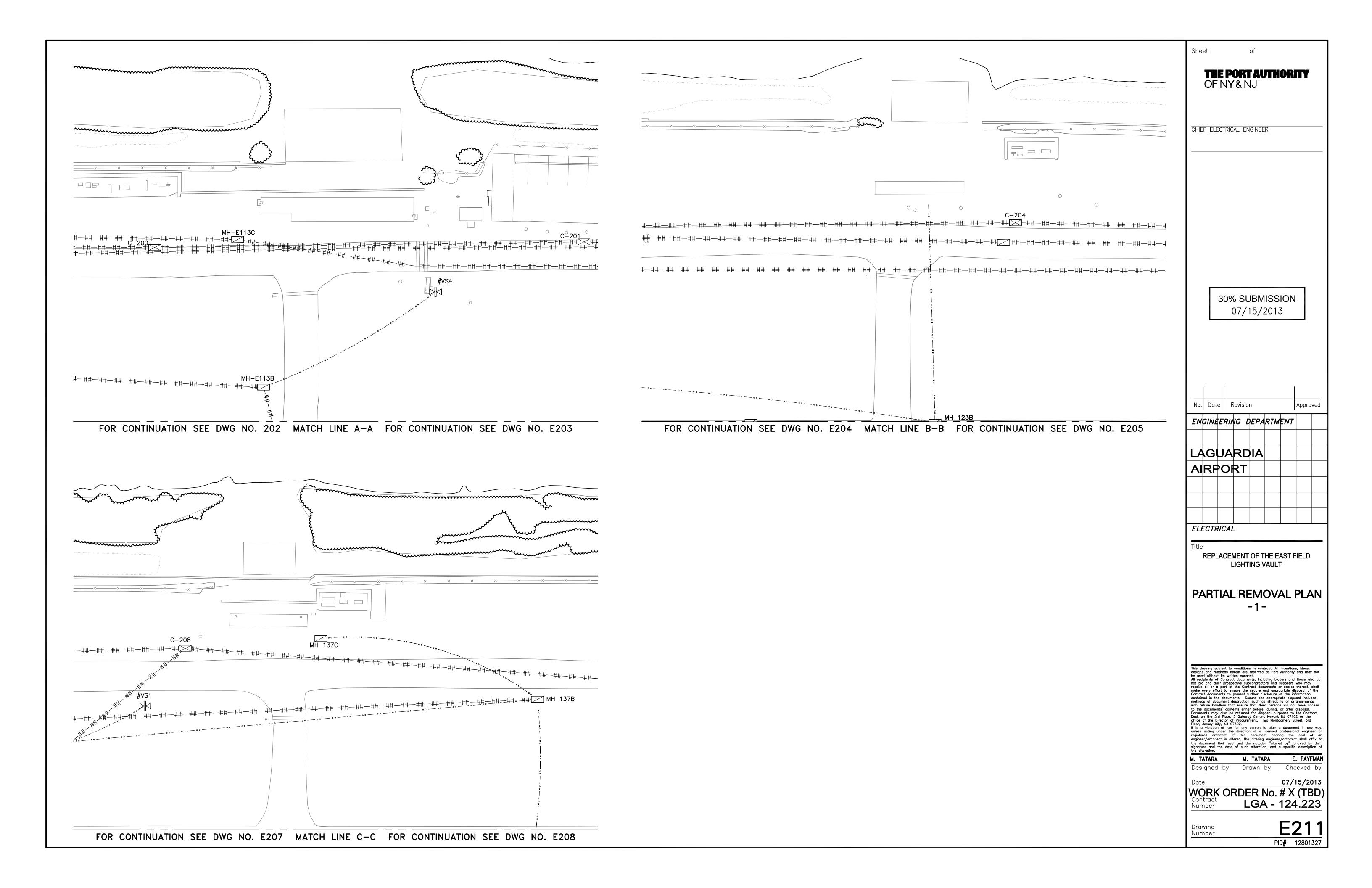


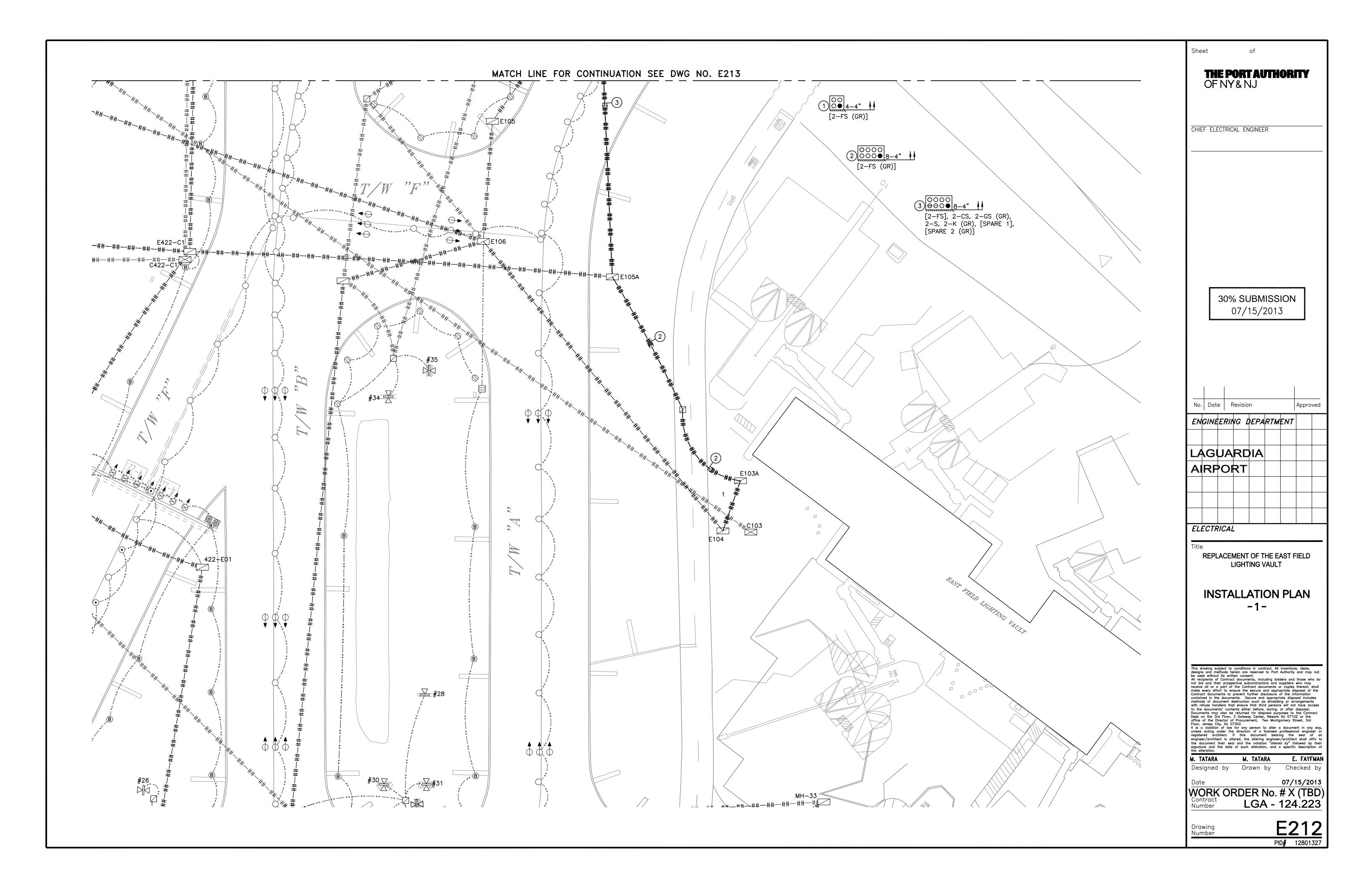


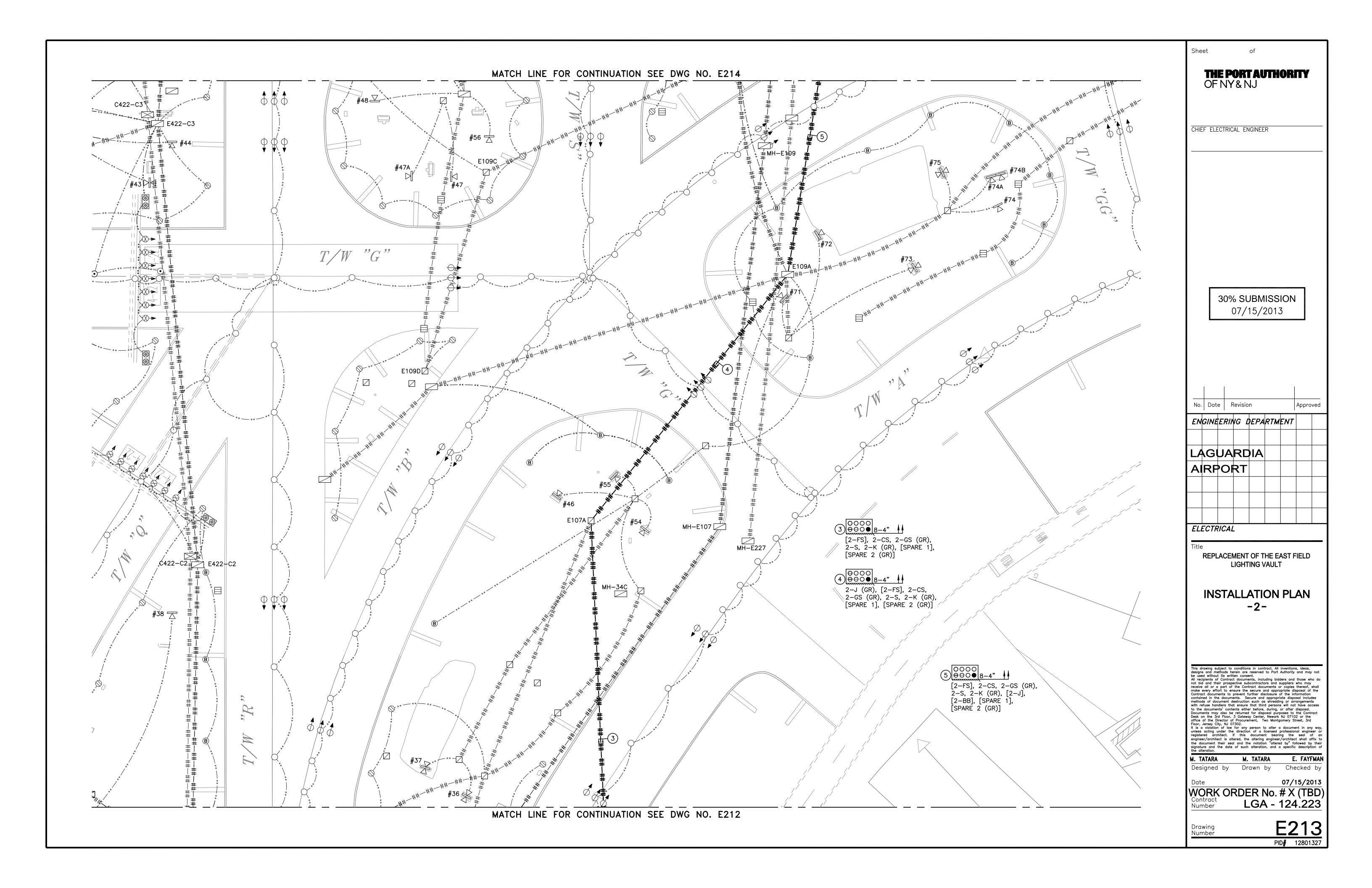


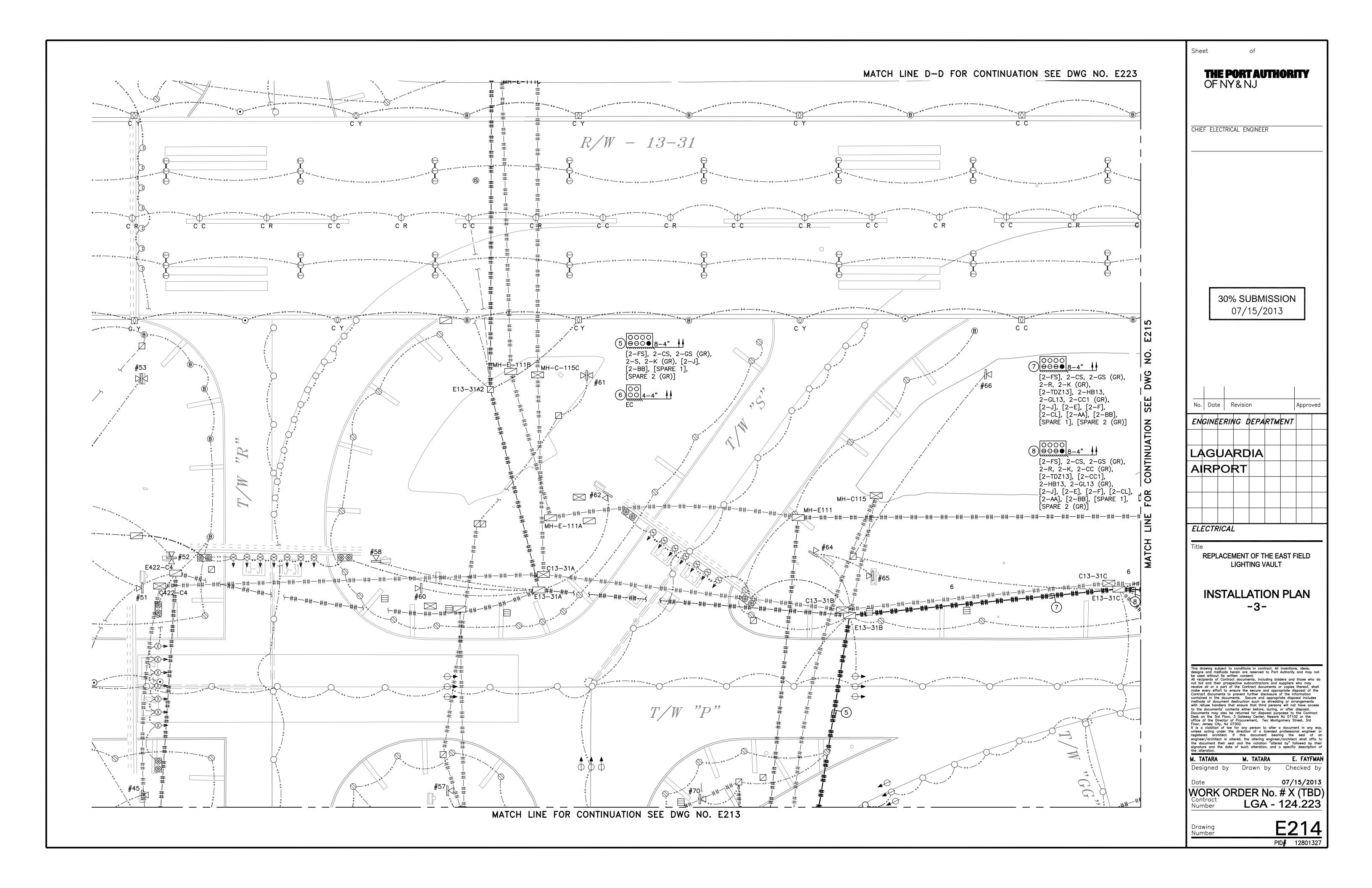


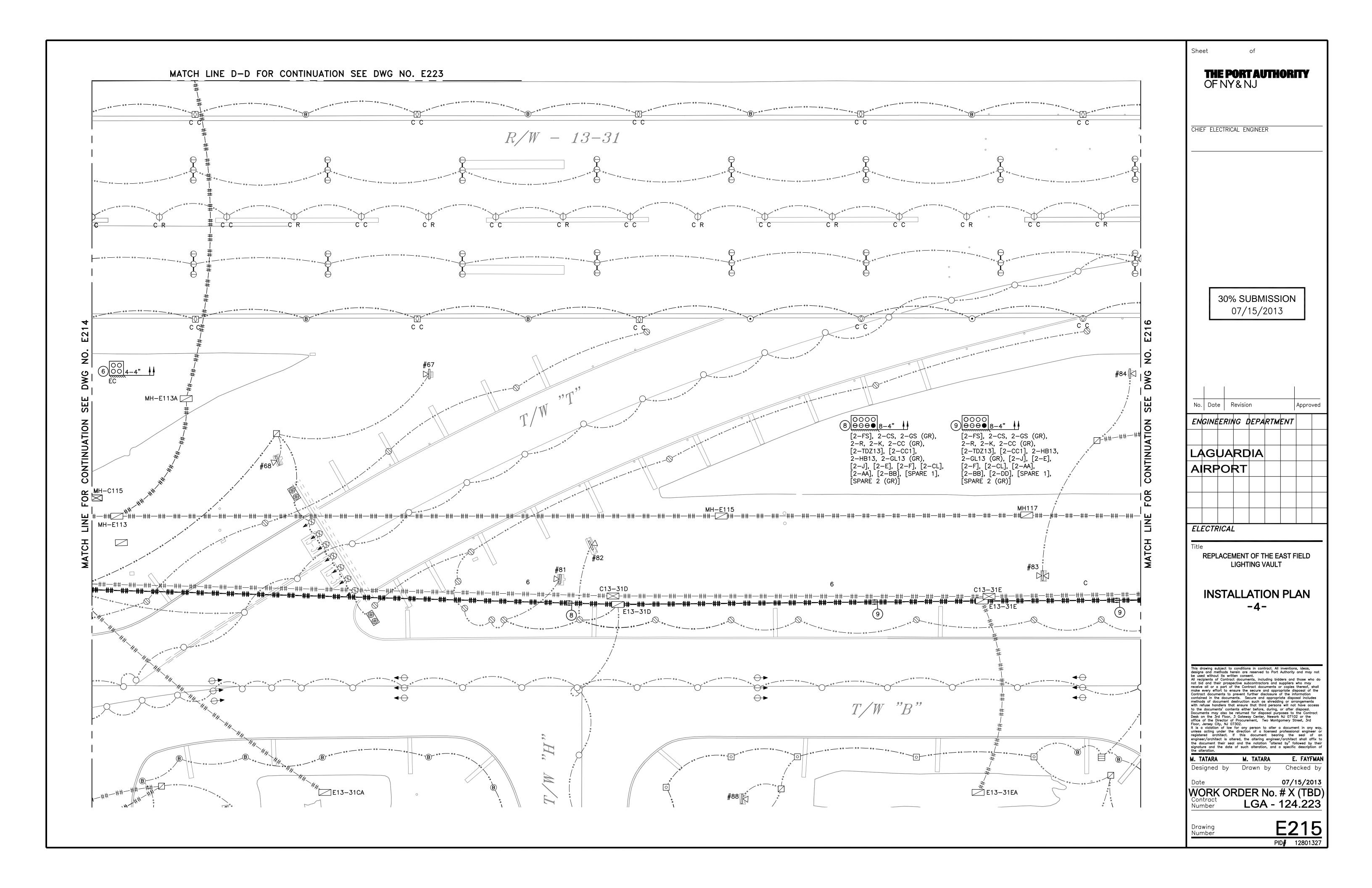


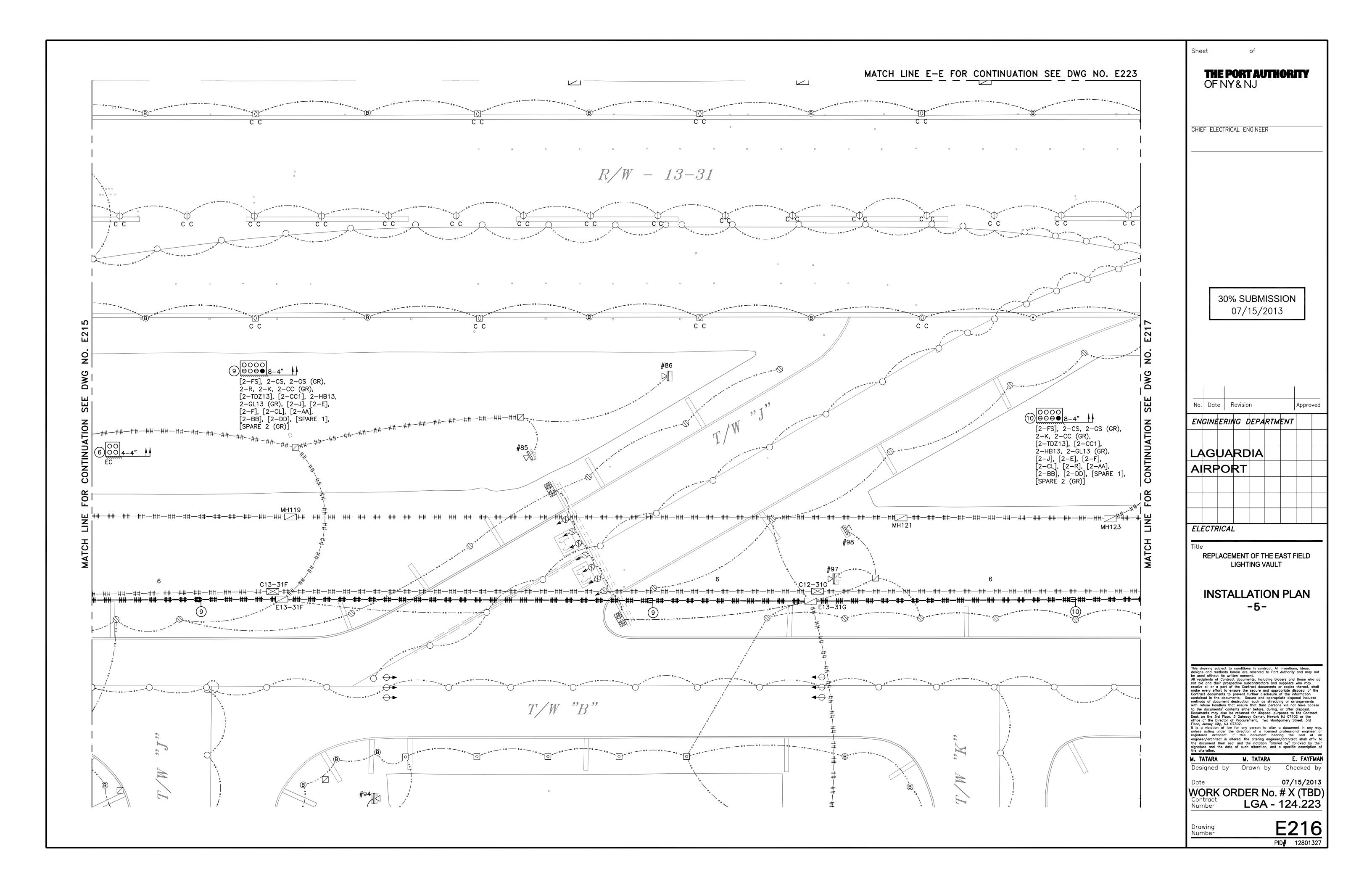


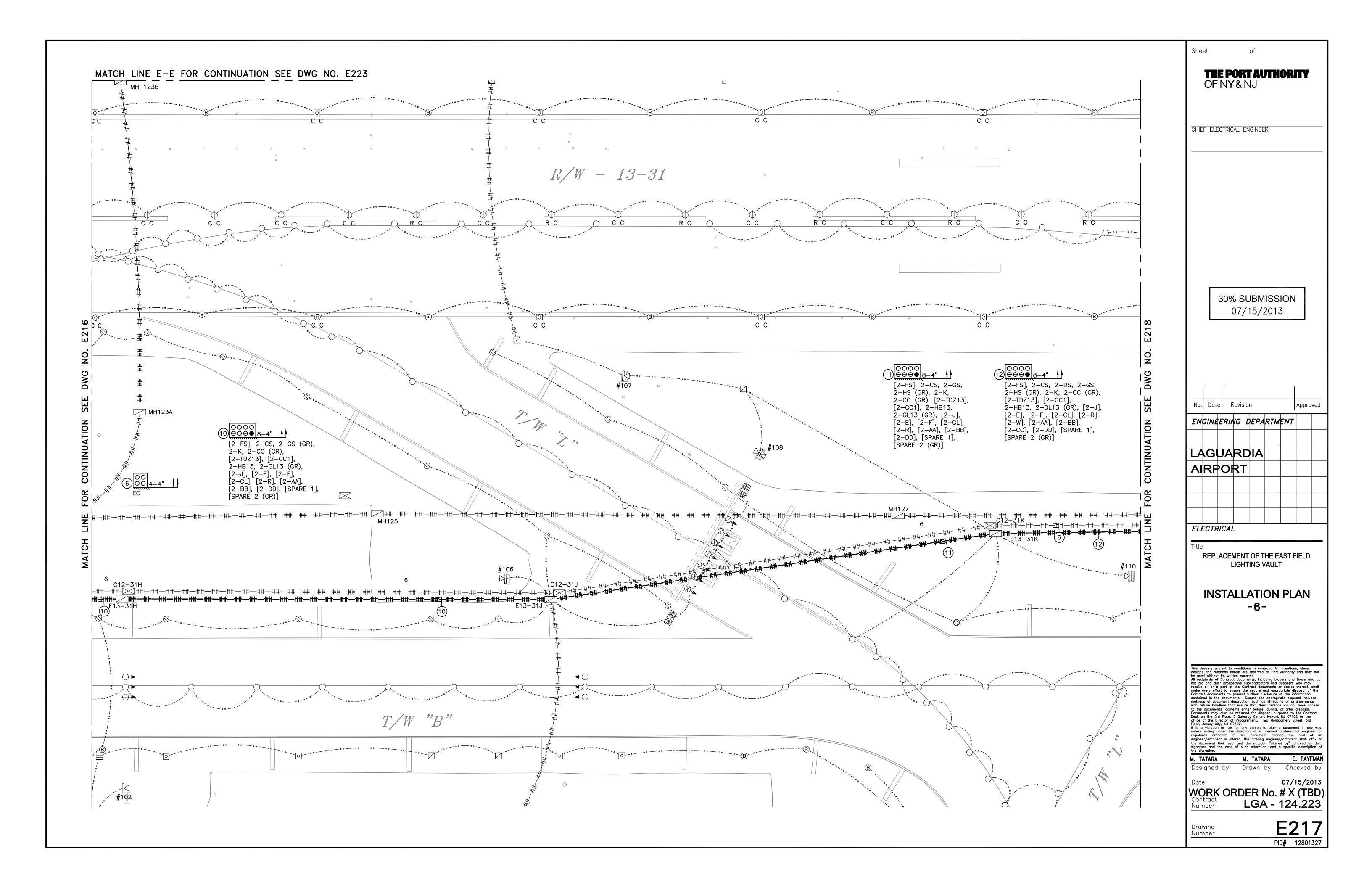


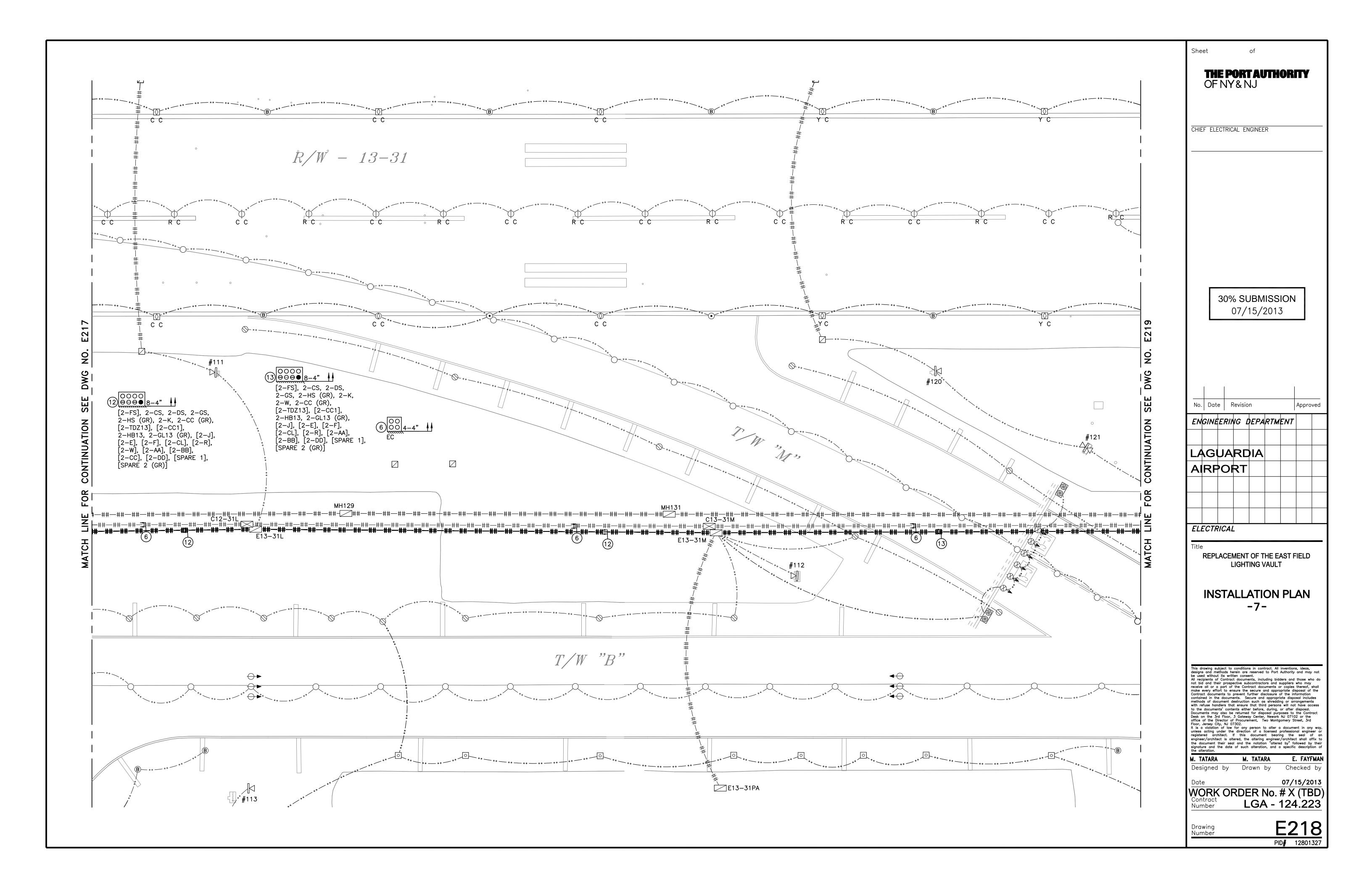


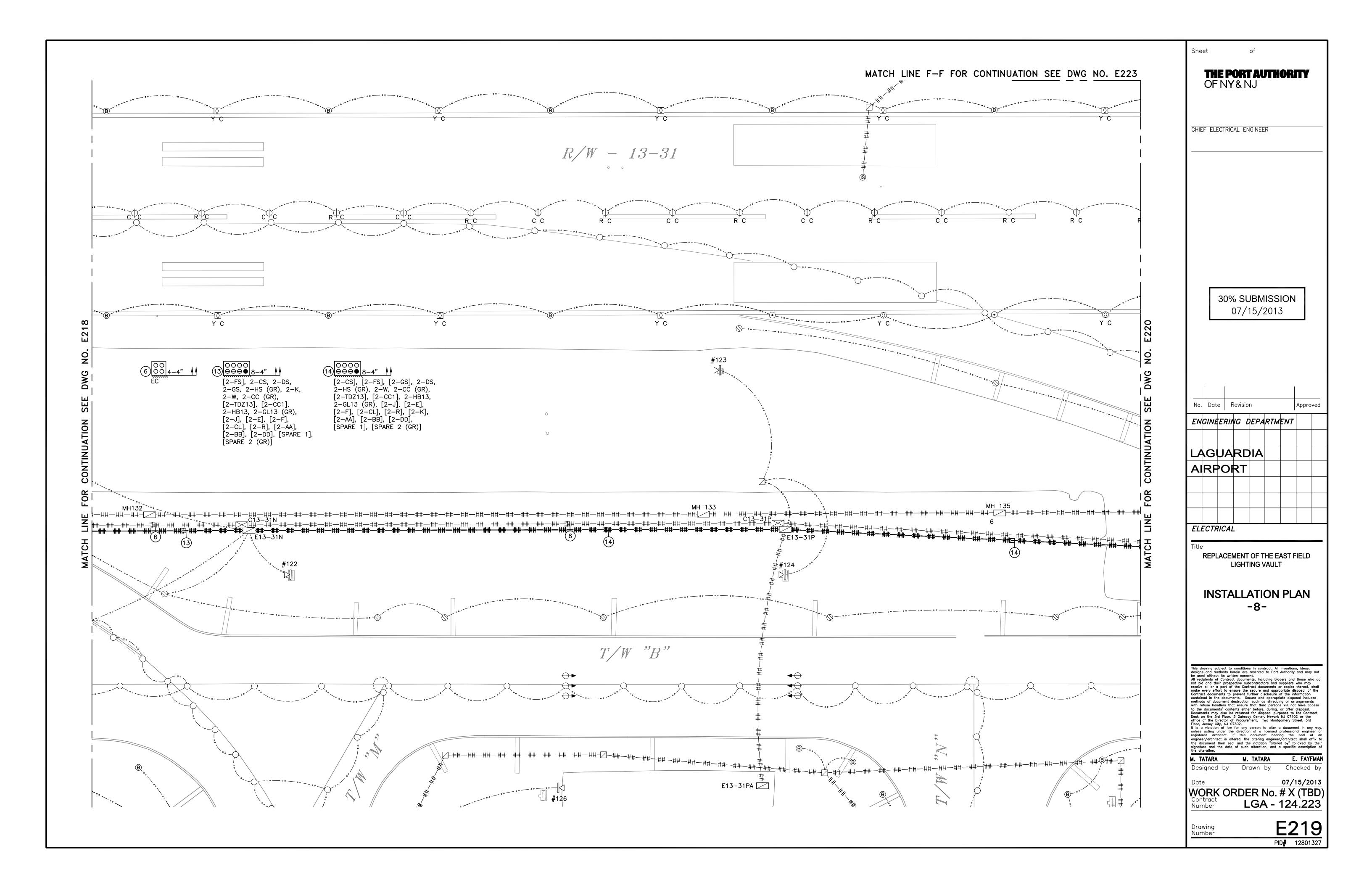


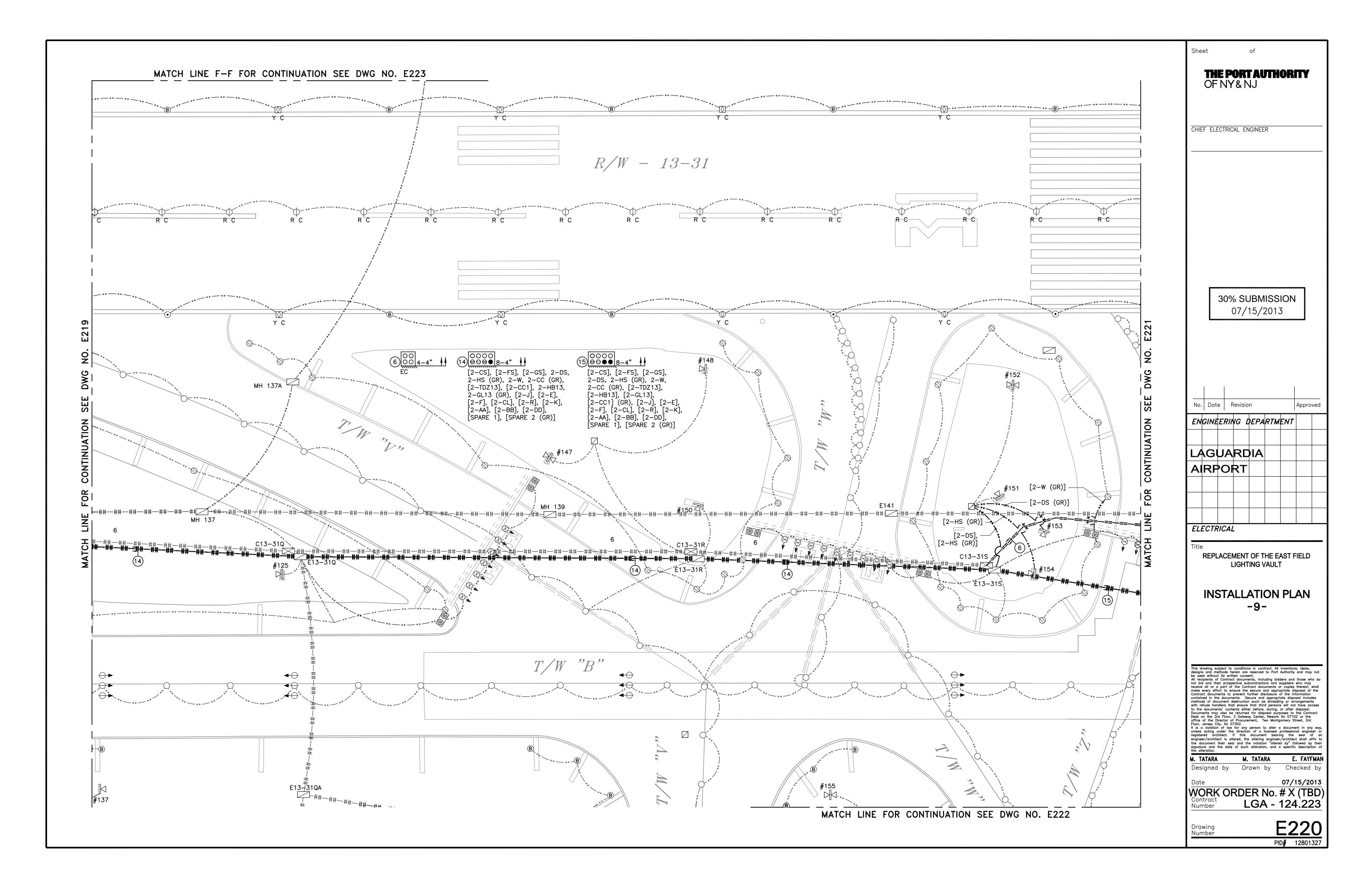


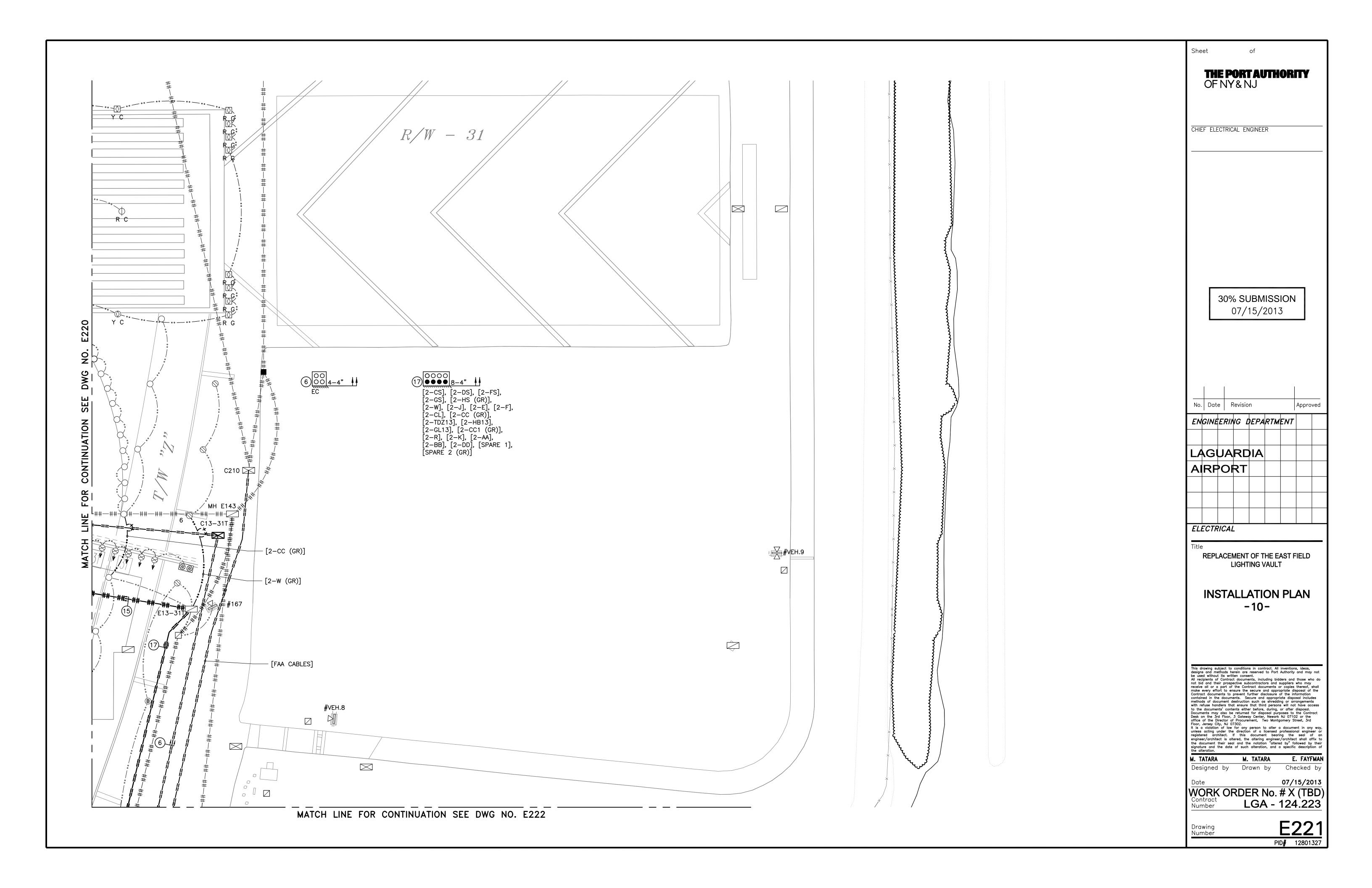


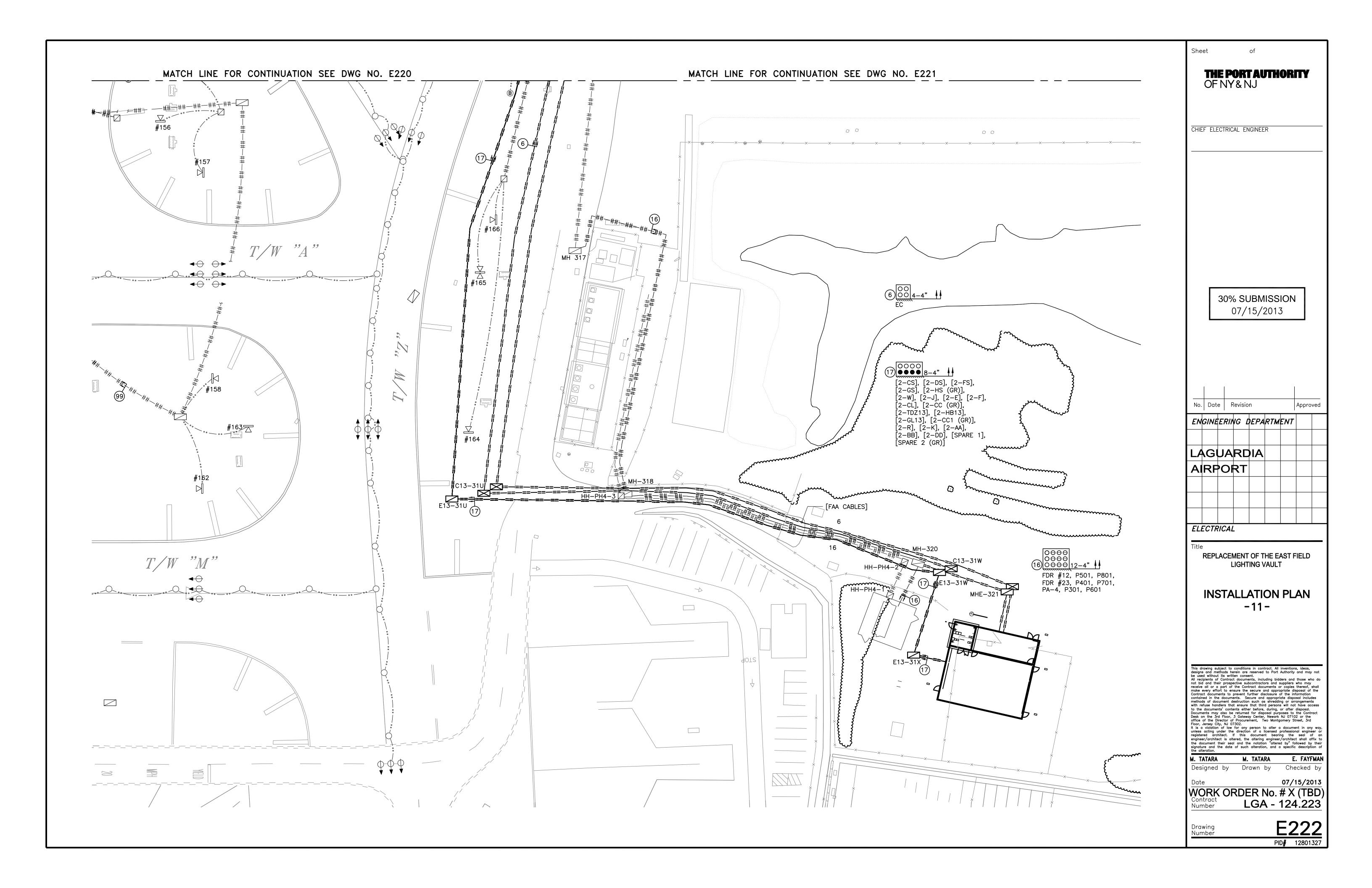


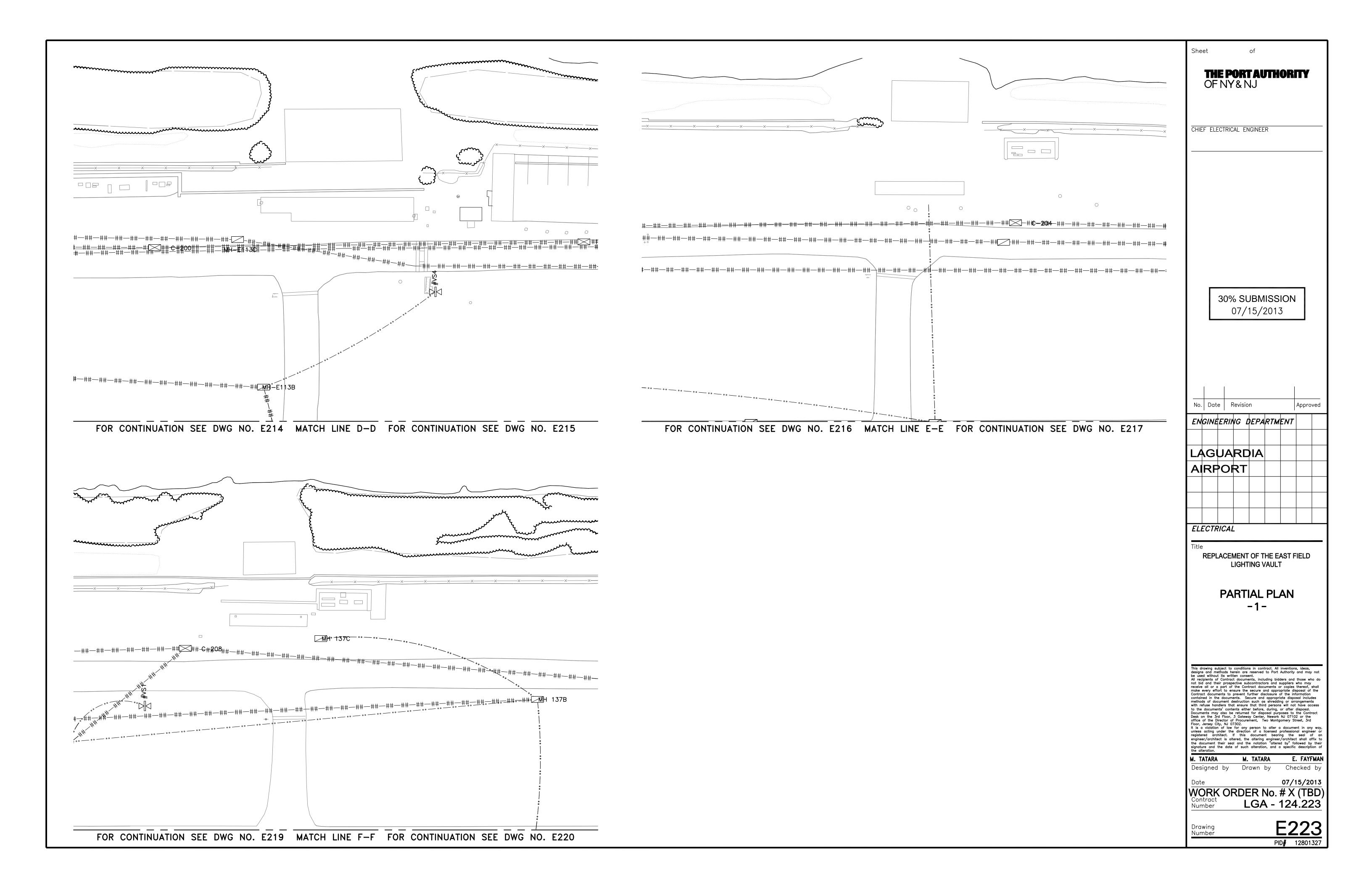


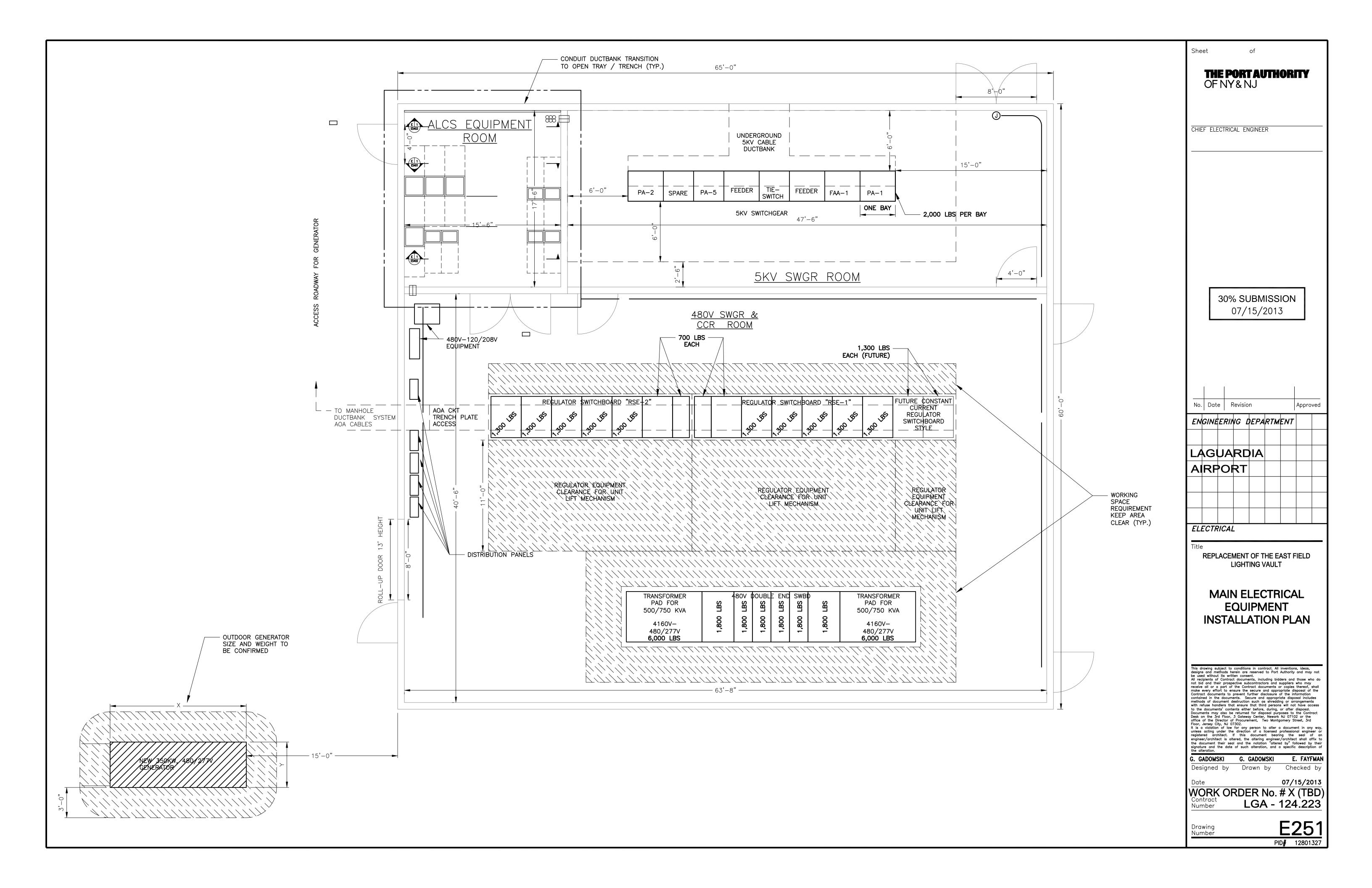


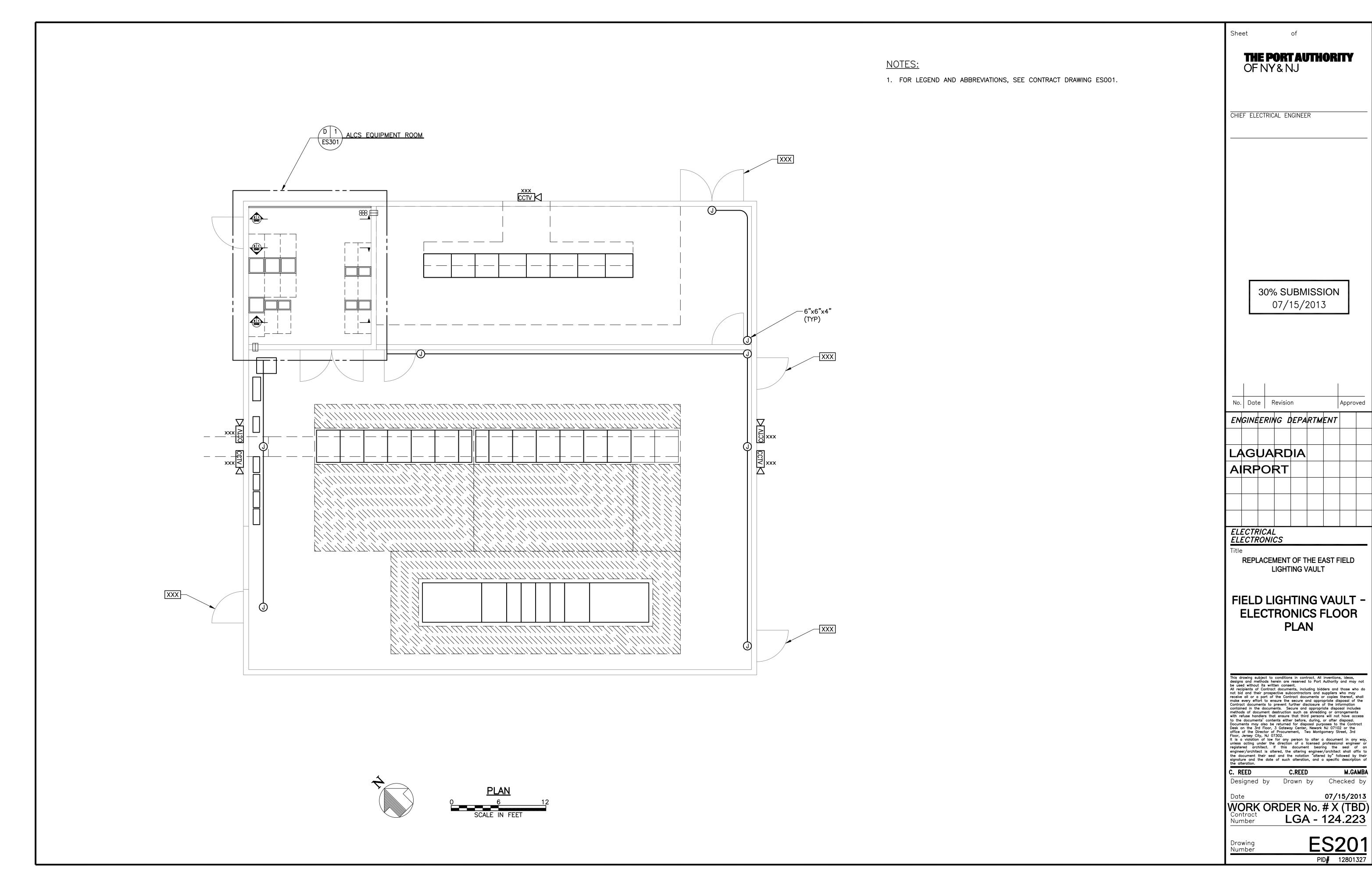






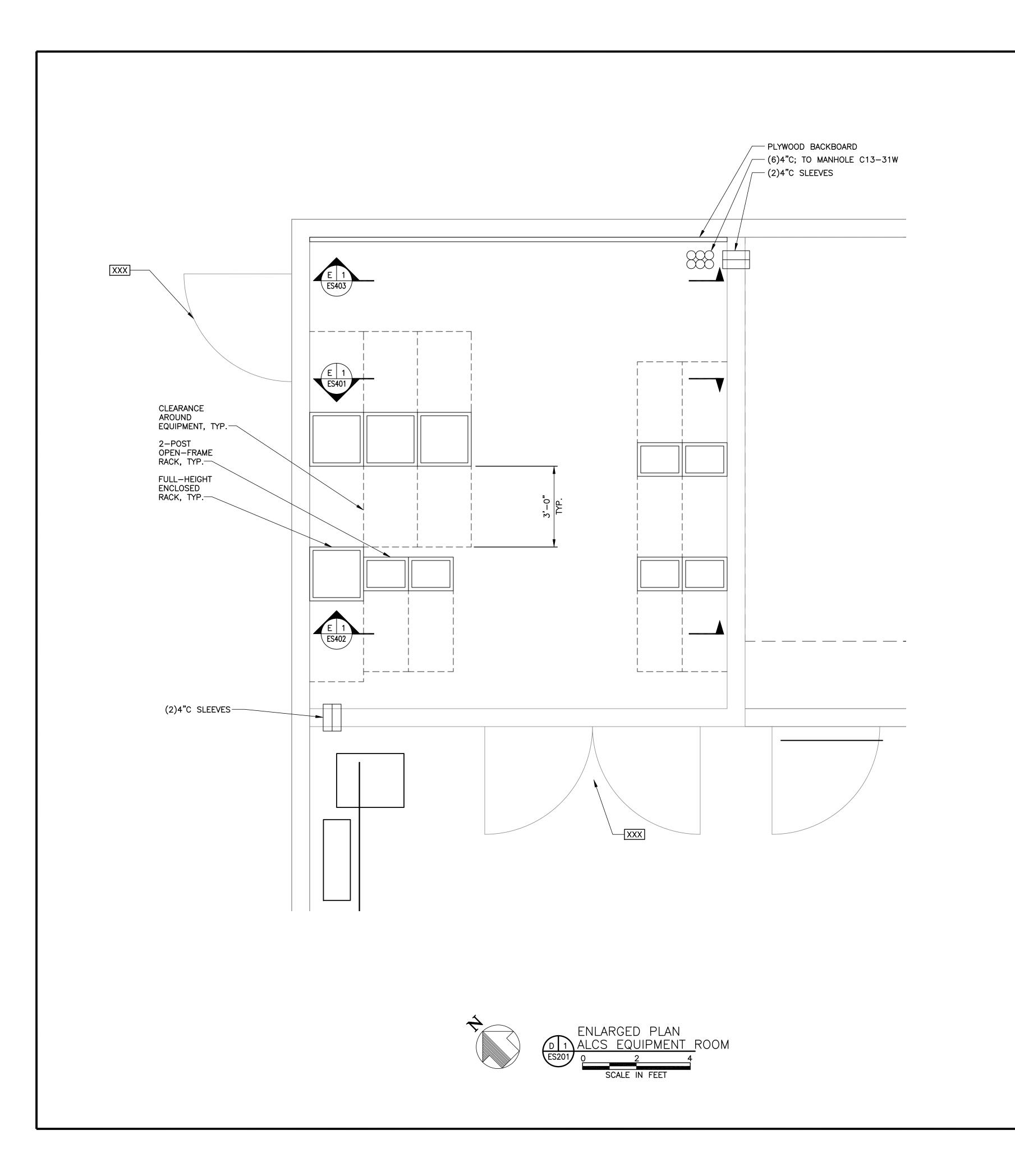






Approved

M.GAMBA



NOTES:

1. FOR LEGEND AND ABBREVIATIONS, SEE CONTRACT DRAWING ESOO1.

THE PORT AUTHORITY OF NY & NJ CHIEF ELECTRICAL ENGINEER 30% SUBMISSION 07/15/2013 No. Date Revision Approved ENGINEERING DEPARTMENT LAGUARDIA AIRPORT ELECTRICAL ELECTRONICS REPLACEMENT OF THE EAST FIELD LIGHTING VAULT

Sheet

FIELD LIGHTING VAULT -ALCS EQUIPMENT ROOM

This drawing subject to conditions in contract. All inventions, ideas, designs and methods herein are reserved to Port Authority and may not be used without its written consent.

All recipients of Contract documents, including bidders and those who do not bid and their prospective subcontractors and suppliers who may receive all or a part of the Contract documents or copies thereof, shall make every effort to ensure the secure and appropriate disposal of the Contract documents to prevent further disclosure of the information contained in the documents. Secure and appropriate disposal includes methods of document destruction such as shredding or arrangements with refuse handlers that ensure that third persons will not have access to the documents' contents either before, during, or after disposal. Documents may also be returned for disposal purposes to the Contract Desk on the 3rd Floor, 3 Gateway Center, Newark NJ 07102 or the office of the Director of Procurement, Two Montgomery Street, 3rd Floor, Jersey City, NJ 07302.

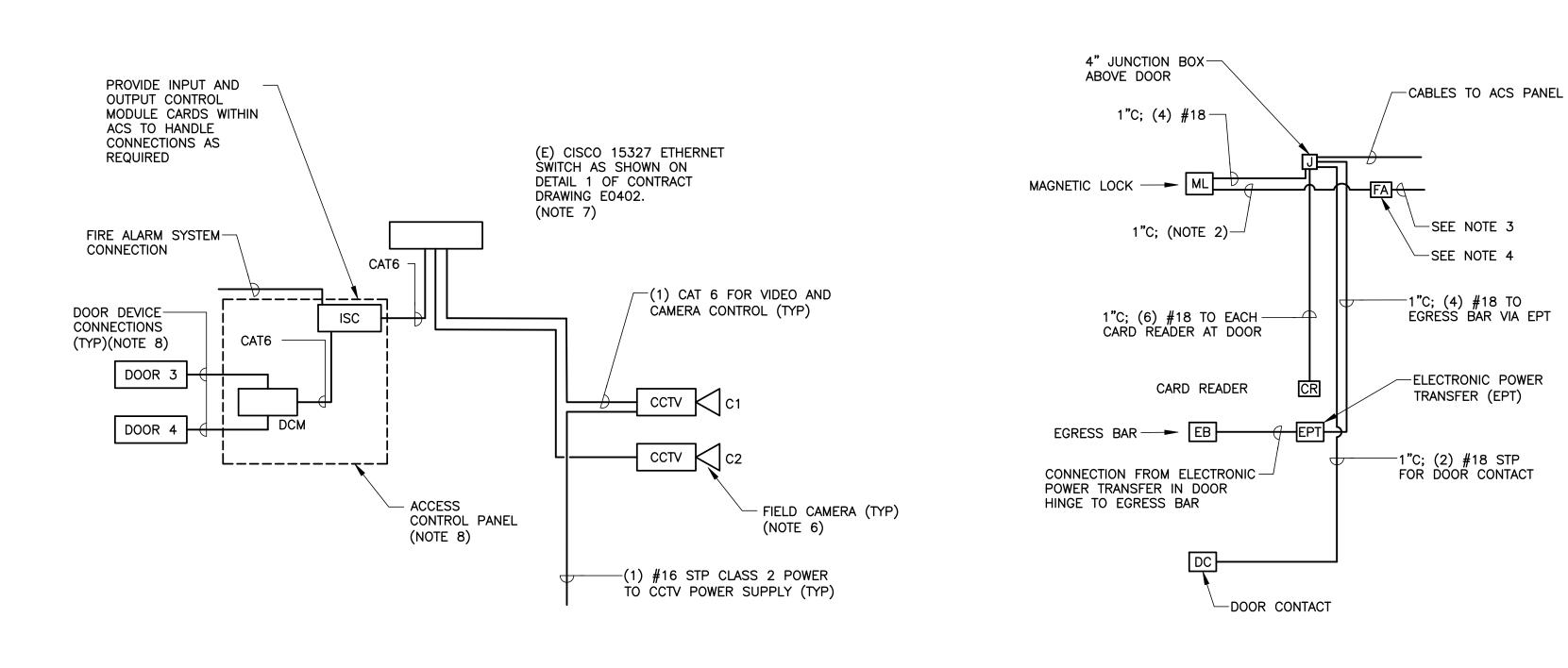
It is a violation of law for any person to alter a document in any way, unless acting under the direction of a licensed professional engineer or registered architect. If this document bearing the seal of an engineer/architect is altered, the altering engineer/architect shall affix to the document their seal and the notation "altered by" followed by their signature and the date of such alteration, and a specific description of the alteration.

C. REED		C.REED	M.GAME
Designed	by	Drawn by	Checked by

07/15/2013 WORK ORDER No. # X (TBD) LGA - 124.223

PID# 12801327

ES301 Drawing Number



NOTES:

1. FOR LEGEND AND ABBREVIATIONS, SEE CONTRACT DRAWING ES001.

Sheet THE PORT AUTHORITY OF NY & NJ CHIEF ELECTRICAL ENGINEER 30% SUBMISSION 07/15/2013 No. Date Revision Approved ENGINEERING DEPARTMENT LAGUARDIA AIRPORT ELECTRICAL **ELECTRONICS** REPLACEMENT OF THE EAST FIELD LIGHTING VAULT FIBER OPTIC **BLOCK DIAGRAM**

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C.REED C. REED Checked by Designed by Drawn by

07/15/2013 WORK ORDER No. # X (TBD) LGA - 124.223

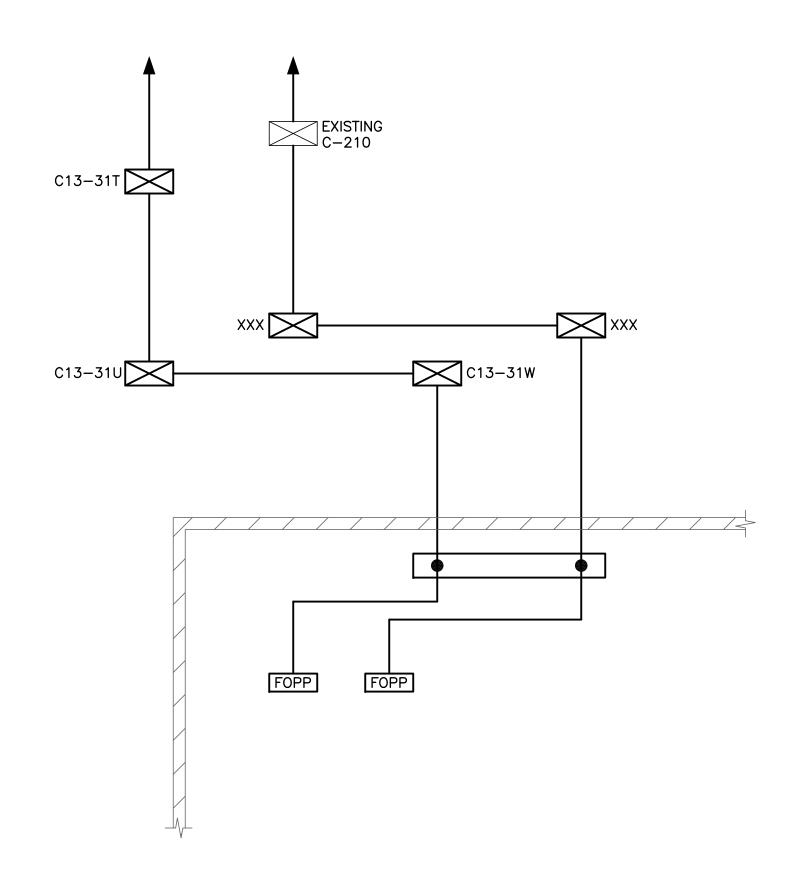
Drawing Number

PID# 12801327

M.GAMBA

ACS/CCTV BLOCK DIAGRAM

DOOR DEVICE CONNECTION DIAGRAM



FIBER OPTIC BLOCK DIAGRAM