CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY

TOLLING DESIGN DETAILS

FOR DESIGN, CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM

MARCH 2025

CENTRAL FLORIDA EXPRESSWAY AUTHORITY
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GENERAL NOTES:

1. UNLESS OTHERWISE NOTED IN THESE PLANS, ADHERE TO ALL REQUIREMENTS DEFINED WITHIN THE LATEST VERSION OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

2. THE LOCATION OF CONDUCTORS, CONDUITS, PULL AND JUNCTION BOXES, SERVICE POINTS, AND CABINETS ARE DIAGRAMMATIC ONLY AND MAY BE ADJUSTED WITH APPROVAL BY CFX TOLL OPERATIONS MANAGEMENT TO ACCOMMODATE LOCAL CONDITIONS AND EXISTING UTILITY LOCATIONS.

3. ALL SYMBOLS FOR ROADWAY LIGHTING AND ITS ARE SHOWN FOR REFERENCE ONLY.

4. AERIAL PHOTOGRAPHY IN THESE PLANS ARE FOR REFERENCE ONLY AND MAY NOT REPRESENT CURRENT SITE CONDITIONS.

5. IT SHOULD BE NOTED THAT NO TEST BORINGS WERE MADE WHERE CONDUIT RUNS ARE TO BE INSTALLED BY JACKING, BORING OR TRENCHING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE JOB SITE CONDITIONS BEFORE SUBMITTING BID PROPOSALS IN ACCORDANCE WITH SECTION 2-4 OF THE FDOT STANDARD SPECIFICATIONS.

6. FULLY RESTORE THE ENTIRE PROJECT LIMITS AND ANY OTHER IMPACTED AREAS TO A CONDITION EQUAL TO OR BETTER THAN EXISTING PRE-CONSTRUCTION CONDITIONS. ALL MISCELLANEOUS WORK AND MATERIALS REQUIRED FOR SITE RESTORATION (I.E. GRADING, SODDING, CLEARING AND GRUBBING, FENCE RESETTING, ETC.) ARE INCIDENTAL TO THE COST OF THE RELATED WORK BEING PERFORMED.

7. ALL CFX MAINLINE TOLL PLAZAS REQUIRE THE USE OF PROXIMITY CARDS TO ACCESS RESTRICTED AREAS. ALL RAMP TOLL PLAZAS REQUIRE KEYS, WHICH MUST BE CHECKED OUT FROM THE ASSOCIATED MAINLINE TOLL PLAZA. PROVIDE AT LEAST ONE REPRESENTATIVE WHO WILL POSSESS A PROXIMITY CARD AND/OR KEYS AND WILL BE RESPONSIBLE FOR ACCESS INTO ALL AREAS OF THE TOLL PLAZA FOR ALL CONTRACTOR'S STAFF DURING THE TIME WORK IS BEING PERFORMED. ALL PERSONNEL REQUIRING ACCESS TO THESE AREAS MUST COMPLY WITH THE BUILDING AND ITS SECURITY POLICIES AND PROCEDURES.

8. IN ORDER TO MINIMIZE IMPACT TO LANDSCAPING MATERIAL, EXERCISE CAUTION THROUGHOUT THE PROJECT LIMITS DURING ALL PHASES OF CONSTRUCTION ACTIVITY. AVOID AND/OR PROTECT ALL TREES AND ROOTS BY HAND DIGGING. REPLACE IN KIND ANY TREES, SHRUBS, VEGETATION OR OTHER LANDSCAPING ELEMENTS DAMAGED AT NO COST TO CFX.

9. HAUL ALL EXCESS EXCAVATION AND WASTE MATERIALS OFF-SITE. ALL WORK AND MATERIALS REQUIRED FOR THE REMOVAL OF THESE MATERIALS IS INCIDENTAL TO THE COST OF THE RELATED WORK BEING PERFORMED.

10. INSTALL ALL CONDUCTORS, CONDUITS, PULL AND JUNCTION BOXES, SERVICE POINTS, CABINETS, AND STRUCTURES WITHIN THE PROJECT LIMITS.

11. IN ORDER TO MINIMIZE GALVANIC CORROSION, DO NOT MIX STAINLESS STEEL AND HOT DIPPED GALVANIZED PARTS. USE MOUNTING HARDWARE AND FITTINGS OF THE SAME MATERIAL AND TYPE ON THE SAME APPLICATION.

12. INSTALL RUBBER OR PLASTIC END CAPS ON ALL UNISTRUTS.

13. DO NOT USE ZIP TIES FOR OUTDOOR APPLICATIONS. SUBMIT CONDUIT/CABLE SECURING METHOD TO THE CEI ENGINEER FOR APPROVAL.

14. INSTALL ALL CABLES ASSOCIATED WITH OUTDOOR EQUIPMENT WITHIN CONDUIT SO THAT NO CABLES ARE EXPOSED.

15. SPLICING OF COMMUNICATION CABLES IS NOT PERMITTED. INSTALL COMMUNICATIONS CABLES AS A CONTINUOUS, UN-SPLICED RUN FROM END TO END.

GENERAL NOTES (CONTINUED):

16. COMPLY WITH THE CITY OF ORLANDO NOISE ORDINANCE CHAPTER 42, OR OTHER LOCAL JURISDICTION NOISE ORDINANCES AS APPLICABLE. THE USE OF VIBRATORY COMPACTION ROLLERS ARE NOT PERMITTED.

17. PAY ALL TOLLS INCURRED FROM USING CFX'S SYSTEM IN TRANSPORTING WORKERS, EQUIPMENT OR MATERIALS TO AND FROM THE SITE OF WORK AT NO ADDITIONAL COST TO CFX. ACCESS THE PROJECT BY EXISTING RAMPS. DO NOT ACCESS THE PROJECT THROUGH THE RIGHT-OF-WAY FENCE UNLESS PREVIOUSLY APPROVED BY CFX.

18. USE OF U-TURNS OF ANY TYPE ARE NOT PERMITTED ON THE CFX SYSTEM.

19. WWD SYSTEMS EXIST ON EXIT RAMPS THROUGHOUT THE CFX CORRIDORS. FOR ANY WORK IMPACTING WWDS EQUIPMENT OR OPERATIONS, COORDINATE WITH THE CFX GSC AND FOLLOW THE LATEST VERSION OF THE CFX WWDS MAINTENANCE PROCEDURE.

20. PRIOR TO FINAL ACCEPTANCE OF THE PROJECT, SUBMIT A COMPLETE SET OF AS-BUILT PLANS WITH ALL CHANGES MARKED IN RED TO THE CEI ENGINEER. THE AS-BUILT PLANS MUST CONTAIN ACCURATELY DIMENSIONED LOCATIONS FOR FIBER OPTIC CABLE, PULL BOXES, POWER SERVICES, CONDUITS, STRUCTURES, CABINETS, GENERATORS, ELECTRICAL LOAD CENTERS, AND FIELD COMPONENTS. THE AS-BUILT PLANS MUST COMPLY WITH THE FDOT DESIGN MANUAL AND INCLUDE A RECORD OF THE COLOR DESIGNATIONS OF ALL HDPE CONDUIT USED, AS WELL AS FIBER SPLICING AND PORT ASSIGNMENTS. THIS SUBMITTAL MUST BE IN BOTH ELECTRONIC AND PAPER FORMAT.

21. NOTIFY CFX TOLL OPERATIONS 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.

22. NOTIFY THE CEI ENGINEER IMMEDIATELY IF ANY CONFLICTS ARE FOUND BETWEEN THE PLANS AND OTHER CONTRACT DOCUMENTS.

23. NOTIFY THE CFX ITS/FON PROJECT MANAGER PRIOR TO ENTERING ANY FIBER OPTIC MANHOLE.

24. COORDINATE ALL ACTIVITIES WITH ALL OTHER CONTRACTORS OPERATING WITHIN THE PROJECT LIMITS.

UTILITIES GENERAL NOTES:

1. COORDINATE WITH THE POWER COMPANY A MINIMUM 48 HOURS FOLLOWING NOTICE TO PROCEED (INCLUDING LIMITED NOTICE TO PROCEED) TO ESTABLISH NEW OR MODIFY EXISTING ELECTRICAL SERVICE POINTS.

2. WHEN ESTABLISHING NEW OR MODIFYING EXISTING ELECTRICAL SERVICE POINTS, COORDINATE IN ADVANCE WITH THE ASSOCIATED POWER COMPANY IN WRITING INCLUDE THE CEI ENGINEER ON ALL CORRESPONDENCE. THE POWER COMPANY MUST PROVIDE APPROVAL TO PROCEED WITH WORK. THE POWER COMPANY, AT ITS DISCRETION, MAY REQUIRE TO BE ON SITE INVOLVING ELECTRICAL WORK BETWEEN THE UTILITY TRANSFORMER AND CFX ELECTRICAL SERVICE POINT. EXERCISE EXTREME CAUTION AT ALL TIMES AS REQUIRED BY OSHA WHEN WORKING AROUND ELECTRICAL COMPONENTS.

3. ADHERE TO ALL APPLICABLE PROVISIONS OF EXISTING UTILITY EASEMENTS.

4. THESE PLANS REFLECT CONDITIONS KNOWN DURING PLAN DEVELOPMENT. THE LOCATION OF EXISTING UTILITIES, AS SHOWN ON THESE PLANS, ARE APPROXIMATE AND BASED ON THE INFORMATION FURNISHED TO THE ENGINEER BY THE UTILITY OWNER(S) AND ARE SHOWN AS NOTICE TO THE CONTRACTOR THAT UNDERGROUND UTILITIES EXIST. IN THE EVENT ACTUAL PHYSICAL CONDITIONS PREVENT THE APPLICATION OR THE PROGRESSION OF ANY WORK SPECIFIED IN THESE PLANS, NOTIFY THE CEI ENGINEER IMMEDIATELY AND PRIOR TO ANY FURTHER WORK ACTIVITY IN THE AFFECTED AREA.

5. EXERCISE ALL APPROPRIATE SAFETY MEASURES WHEN WORKING IN OR AROUND AREAS OF OVERHEAD ELECTRICAL/TRANSMISSION LINES AND/OR UNDERGROUND UTILITIES. HAND DIG AROUND ALL KNOWN AND LOCATED UTILITIES.

UTILITIES GENERAL NOTES (CONTINUED):

6. HAND DIG THE FIRST 4' TO VERIFY POSSIBLE UTILITY CONFLICT AT ALL UTILITY CROSSINGS.

7. PER FLORIDA STATUTE 556, CALL SUNSHINE STATE ONE-CALL OF FLORIDA, INC., AT 1-800-432-4770, NO LESS THAN 2 BUSINESS DAYS BEFORE BEGINNING ANY EXCAVATION OR DEMOLITION. ADDITIONALLY, DO NOT MAKE THIS CALL MORE THAN 5 BUSINESS DAYS BEFORE BEGINNING SUCH CONSTRUCTION. NOT ALL UTILITY AGENCIES/OWNERS ARE MEMBERS OF SUNSHINE STATE ONE-CALL OF FLORIDA, INC.

8. PRIOR TO CONSTRUCTION, ESTABLISH, STAKE, AND PAINT LOCATIONS OF ANY PROPOSED WORK SUCH AS GANTRY, CABINET, GENERATOR AND FUEL TANK, POWER SERVICE ASSEMBLY, AND LANE STRIPING WITH THE USE OF A FLORIDA REGISTERED LAND SURVEYOR. IF THE STAKES AND/OR PAINT MARKINGS LOCATIONS ARE DAMAGED DURING THE CONSTRUCTION PROCESS, RE-ESTABLISH THE LOCATIONS AND MARKINGS USING A FLORIDA REGISTERED LAND SURVEYOR AT NO ADDITIONAL COST TO CFX.

9. PRIOR TO INSTALLATION OF GANTRY FOUNDATIONS, VERIFY LOCATIONS OF ROADWAY LIGHTING AND ITS CONDUITS, ALONG WITH ANY OTHER UNDERGROUND UTILITIES. HAND DIG THE FIRST 4 FEET AT EACH GANTRY INSTALLATION LOCATION AND CLEAR THE SURVEY SITE OF ALL UTILITIES. BACKFILL IN CONFORMANCE WITH SECTION 125 OF THE LATEST FDOT STANDARD SPECIFICATIONS.

10. EXERCISE ALL APPROPRIATE SAFETY MEASURES WHEN WORKING IN OR AROUND EXISTING OVERHEAD STRUCTURES WITH RESPECT TO MAINTAINING THE POWER, GROUNDING, AND COMMUNICATIONS CIRCUITRY. RESTORE ALL FEATURES TO ORIGINAL PRE-WORK CONDITIONS.

11. VERIFY UNDERGROUND UTILITIES VERTICALLY AND HORIZONTALLY FOR ALL CONDUIT, DIRECTIONAL BORES, AND PULL BOX INSTALLATIONS IN ORDER TO AVOID CONFLICTS WITH THE UTILITIES. INCLUDE THE COST FOR THE VVH'S IN THE COST OF THE CONDUIT OR PULL BOX. WHEN BORING UNDER PAVEMENT, VERIFY DEPTH BY POT HOLING PRIOR TO PERFORMING THE DIRECTIONAL BORE.

12. TAKE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES DURING UNDERGROUND CONSTRUCTION ACTIVITIES. DEVELOP A UTILITY CONFLICT PLAN TO AVOID CONFLICTS WITH ALL EXISTING UTILITIES AND MAINTAIN COMMUNICATIONS AT ALL TIMES. INCLUDE IN THE UTILITY CONFLICT PLANS SPECIFIC MEANS, METHODS, AND QUANTITIES FOR ALL CONFLICT LOCATIONS. ALSO INCLUDE WITH THE UTILITY CONFLICT PLAN THE CERTIFICATIONS AND QUALIFICATIONS OF PERSONNEL EXECUTING THE UTILITY CONFLICT PLAN. SUBMIT THE UTILITY CONFLICT PLAN TO THE CEI ENGINEER FOR APPROVAL PRIOR TO ANY CONSTRUCTION ACTIVITIES.

13. IDENTIFY AN INDIVIDUAL FROM THE CONTRACTOR'S STAFF OR SUBCONTRACTOR'S STAFF TO BE RESPONSIBLE FOR THE PROTECTION AND LOCATING OF THE EXISTING FON, LIGHTING, AND OTHER EXISTING TOLL PLAZA UTILITIES DURING THIS CONSTRUCTION PROJECT. SUBMIT THE QUALIFICATIONS OF THIS INDIVIDUAL TO THE CEI ENGINEER FOR APPROVAL.

14. LOCATE AND PROTECT EXISTING CFX OWNED FIBER OPTIC CABLES AND BURIED ELECTRICAL LINES DURING THE INSTALLATION OF NEW CONDUIT AND PULL BOXES.

15. CONSIDER THE CONSTRUCTION CONFLICTS SHOWN IN THE PLANS AS THE MINIMUM NUMBER OF CONFLICTS WHICH MAY BE EXPECTED WITH THE EXISTING UTILITIES.

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UTILITIES GENERAL NOTES (CONTINUED):

16. MAINTAIN THE EXISTING FON WITHIN THE LIMITS OF CONSTRUCTION. AT NO TIME SHALL THERE BE ANY LOSS OF COMMUNICATIONS OR DATA ALONG THE CFX FON. ALL CONSTRUCTION ACTIVITIES WITHIN 10 FEET OF THE FON MUST ONLY BE PERFORMED ON ONE SIDE OF THE ROAD AT A TIME. REFER TO CFX SPECIFICATIONS 603A & 631 FOR OTHER FON PRESERVATION DETAILS.

17. REFER TO THE LATEST EDITION OF THE CFX ITS DESIGN DETAILS FOR ALL OTHER FON UTILITY WORK REQUIREMENTS AND UTILITY CONTACT INFORMATION.

CONDUIT GENERAL NOTES:

1. MATERIALS REQUIREMENTS:
   a. UNDERGROUND HDPE CONDUIT: SMOOTH WALL WITH A RATING OF SDR-11 OR THICKER.
   b. PVC CONDUIT: SCHEDULE 40 OR THICKER.
   c. RGS CONDUIT: HOT DIPPED GALVANIZED.

2. INSTALL A SPARE CONDUIT FOR BOTH COMMUNICATIONS AND POWER CONDUIT RUNS FOR ABOVE GROUND INSTALLATIONS BETWEEN PULL BOX AND AERIAL JUNCTION BOXES.

3. STUB-UP CONDUITS A MINIMUM OF 2" ABOVE THE GRAVEL IN ALL TOLLING PULL BOXES.

4. PAINT ALL ABOVE GROUND CONDUITS TO MATCH THE SURFACE TO WHICH THEY ARE MOUNTED.

5. DO NOT EXCEED 270° OF BENDS IN CONDUIT RUNS BETWEEN PULL AND JUNCTION BOXES, CABINETS, GANTRY FOUNDATIONS, ELECTRICAL SERVICE ASSEMBLIES AND OTHER TOLLING ELEMENTS.

6. MAINTAIN MINIMUM REQUIRED CONDUIT BURY DEPTHS WHERE CONFLICTS OCCUR WITH DRAINAGE OR OTHER UTILITIES.

7. JOIN ALL HDPE CONDUIT CONNECTIONS WITH ELECTROFUSION COUPLERS.

8. PROPERLY SEAL ALL TOLLS POWER, COMMUNICATIONS, AND LOOP CONDUITS AT BOTH ENDS WITH PERMAGUM DUCT SEALANT OR CEI ENGINEER APPROVED EQUIVALENT.

9. PROOF ALL SPARE CONDUITS AFTER ALL CONSTRUCTION ACTIVITIES.

10. DO NOT INSTALL TONE WIRE INSIDE TOLLING EQUIPMENT CABINETS.

11. BACK FILL ALL CONDUIT TRENCHES COMPLETELY TO PROVIDE SAFE CROSSING BY THE END OF EACH WORKING DAY OR WHENEVER THE WORK ZONE BECOMES INACTIVE. DO NOT OPEN ANY AREA THAT CANNOT BE BACK FILLED IN THE SAME DAY/NIGHT OPERATION.

12. FOR TOLL PLAZA ELECTRICAL INTERCONNECT CONDUITS, INSTALL ABOVE GROUND TUBULAR ROUTE MARKERS INDICATING ELECTRICAL CONDUCTORS BURIED BELOW AT EACH PULL AND JUNCTION BOX AND AT ANY TURNS IN THE CONDUIT RUN. REFER TO THE LATEST EDITION OF THE CFX ITS DESIGN DETAILS LOCATED AT CFXWAY.COM FOR ROUTE MARKER DETAILS.

13. ADHERE TO THE LATEST VERSION OF THE CFX ITS DESIGN DETAILS LOCATED AT CFXWAY.COM FOR DIRECTIONAL BORE REQUIREMENTS.

14. ALL SPARE CONDUITS SHALL BE PROVIDED WITH A PULL STRING AND CAPPED ON BOTH ENDS.

PULL BOX GENERAL NOTES:

1. INSTALL A MINIMUM OF 10 LF OF GROUNDING ELECTRODES IN ALL TOLLING PULL BOXES.

2. SPACE PULL BOXES FOR ELECTRICAL CONDUCTORS A MAXIMUM OF 500 FT APART.

PULL BOX GENERAL NOTES (CONTINUED):

3. STAMP ALL COVERS OF EACH OF THE FOLLOWING TYPES OF PULL BOXES WITH THE FOLLOWING TEXT:
   a. LOOP PULL BOXES: "TOLLS LOOPS"
   b. POWER PULL BOXES: "TOLLS POWER"
   c. COMMUNICATIONS PULL BOXES: "TOLLS COMM"
   d. GROUNDING PULL BOXES: "TOLLS GROUND"

4. USE ONLY PULL BOXES ON THE FDOT APPROVED PRODUCTS LIST.

ELECTRICAL GENERAL NOTES:

1. FOR ALL ELECTRICAL WORK, MEET THE REQUIREMENTS OF THE LATEST EDITIONS OF THE NEC, NESC, LOCAL ELECTRICAL UTILITY COMPANIES, AND THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

2. USE RHW-2 FOR AERIAL SERVICE ENTRANCE ELECTRICAL CONDUCTORS. USE XHHW-2 XLPE FOR ALL OTHER ELECTRICAL CONDUCTORS.

3. PULL ELECTRICAL AND GROUNDING CONDUCTORS BY CONNECTING PULLING DEVICES TO THE COPPER WIRE. DO NOT CONNECT PULLING DEVICES TO THE ELECTRICAL OR GROUNDING CONDUCTOR INSULATION. MEET ELECTRICAL AND GROUNDING CONDUCTOR MANUFACTURER PULLING METHODS AND PULLING COMPOUND REQUIREMENTS. ALL BENDS SHALL NOT BE LESS THAN RECOMMENDED BY NEC OR NESC FOR THE CABLE USED.

4. GROUNDING SYSTEMS ARE REQUIRED FOR ALL TOLLING CABINETS, GENERATORS, ELECTRICAL POWER SERVICE ASSEMBLIES, AND STRUCTURES. CONSTRUCT THESE GROUNDING SYSTEMS IN ACCORDANCE WITH THE LATEST EDITIONS OF BOTH THE FDOT STANDARD SPECIFICATIONS SECTION 620 AND THE NEC.

5. ALL ELECTRICAL EQUIPMENT MUST BE WATERPROOF. SEAL ANY OPENINGS WHICH MAY ALLOW WATER TO ENTER, INSIDE AND OUT, WITH SILICONE. PLACE SILICONE SEALANT AROUND THE OUTSIDE EDGE OF ELECTRICAL DISCONNECTS WHERE THE ENCLOSURE COMES INTO CONTACT WITH THE CONCRETE PEDESTAL. SEAL AROUND THE TOP AND SIDES OF THE DISCONNECT AND LEAVE THE BOTTOM EDGE UNSEALED. SILICONE SEAL BOTH THE INSIDE AND OUT OF ANY SMALL HOLES (LESS THAT 1/8 INCH) TO INHIBIT WATER AND PEST INTRUSION.

6. INSTALL LINE SIDE (SERVICE) AND LOAD SIDE (SERVICE ENTRANCE AND FEEDER) ELECTRICAL CONDUCTORS IN SEPARATE PULL/JUNCTION BOXES AND CONDUITS/RACEWAYS.

7. WITH THE EXCEPTION OF THE STRUCTURE RACEWAYS, UPRIGHTS, IN-GROUND PULL BOXES AND ABOVE GROUND JUNCTION BOXES, INSTALL UPS FED (CLEAN) AND NON-UPS FED (DIRTY) POWER ELECTRICAL CONDUCTORS IN SEPARATE PULL/JUNCTION BOXES AND CONDUITS/RACEWAYS.

8. DO NOT, UNDER ANY CIRCUMSTANCE, INSTALL ENERGIZED CABLE IN THE SAME CONDUIT, PULL BOX, OR RACEWAY AS FIBER OPTIC OR ANY OTHER COMMUNICATIONS CABLE.

9. DO NOT CONNECT ANY LIGHTING ELECTRICAL EQUIPMENT TO THE TOLLING ELECTRICAL SYSTEM.

10. IN ACCORDANCE WITH THE NEC, IDENTIFY ALL ABOVE GROUND ELECTRICAL EQUIPMENT WITH LAMACOID TAGS OR AN APPROVED EQUIVALENT ENGRAVED PLASTIC NAMEPLATES.

11. IDENTIFY ALL ELECTRICAL CONDUCTORS WITH A PERMANENT, MACHINE PRINTED, AND WEATHERPROOF CABLE TAGGING SYSTEM THAT IS AFFIXED BY MEANS OF ZIP TIE AND INCLUDES THE MINIMUM INFORMATION: POWER SERVICE DESIGNATION, CIRCUIT NAMES, AND OPERATING VOLTAGES. SUBMIT CABLE TAGGING SYSTEM TO THE CEI ENGINEER FOR REVIEW AND APPROVAL. INSTALL CABLE TAGGING SYSTEM IN EVERY PULL AND JUNCTION BOX.

STANDBY GENERATOR GENERAL NOTES:

NOTE TO EOR: GENERATOR REQUIREMENTS ARE FOR INFORMATIONAL PURPOSES ONLY. REMOVE THESE NOTES FROM THE PLANS, AND INCLUDE THE REQUIREMENTS IN THE GENERATOR TSP.

1. GENERATOR SET
   a. CFX HAS STANDARDIZED ON GENERAC PROPANE GENERATORS.
   b. ELECTRICAL RATING, 120/240 V, 1 PHASE, 3 WIRE. GENERATOR SHALL BE RATED FOR 130% OF CONNECTED LOAD.
   c. PROPANE TYPE 10 FUEL
   d. NFPA 110 COMPLIANT RATED FOR OPTIONAL STANDBY APPLICATION
   e. LEVEL 2 SOUND ATTENUATED ENCLOSURE
   f. 10A UL LISTED BATTERY CHARGER
   g. ENGINE COOLANT HEATER
   h. MAIN LINE CIRCUIT BREAKER
   i. 10A ENGINE RUN RELAY
   j. SUITABLE FOR CONTINUOUSLY OPERATING AT FULL LOAD IN A 50°C (125°F) AMBIENT ENVIRONMENT

2. ALTERNATOR SYSTEM
   a. CLASS H INSULATION
   b. ANTI-CONDENSATION HEATER
   c. TROPICAL COATING.
   d. RATED FOR 80 DEGREE CELSIUS RISE MAX
   e. 4 POLE
   f. SYNCHRONOUS BRUSHLESS

3. ENCLOSURE
   a. SHALL BE PROVIDED WITH THE GENERATOR AND MANUFACTURED BY GENERAC.
   b. RATED LEVEL 2 SOUND ATTENUATED.
   c. CONSTRUCTED OUT OF ALUMINUM.
   d. RATED FOR 200 MPH WIND LOAD RATING.
   e. DOOR OPEN ALARM HORN, WITH DRY CONTACTS TO CONNECT TO REMOTE MONITORING AND ALARM SYSTEM.

4. FUEL TANK
   a. UNDERGROUND PROPANE TANK SHALL BE SIZE TO ACCOMMODATE 72 HOURS RUN TIME BASED ON 100% GENERATOR FULL LOAD RATING.
   b. GENERATOR FUEL TANK AND FUEL SYSTEM SHALL BE DESIGNED SO THAT IT WILL SUSTAIN THE CONTINUOUS PROPANE DRAW OF THE GENERATOR AT FULL LOAD FOR THE ENTIRE RUN TIME SPECIFIED.

5. CONTROL PANEL
   a. NEMA 3R, IP14, GENERATOR MOUNTED CONTROL PANEL ISOLATED FROM GENERATOR SET FOR VIBRATIONS.
   b. SHALL BE PROVIDED WITH PROVISIONS TO CONNECT A REMOTE E-STOP.
   c. GENERATOR SHALL COME WITH MODBUS AND POWER ZONE PRO FOR REMOTE COMMUNICATION VIA MODBUS TCP/IP, INTEGRATING WITH SNMP OR MODBUS RTU.

6. AUTOMATIC TRANSFER SWITCH
   a. GENERAC AUTOMATIC TRANSFER SWITCH, SERIES PSTS, OPEN TRANSITION, 120/240 V, 3 POLE, 3 W, SWITCHED NEUTRAL, NEMA TYPE 3R, ALUMINUM ENCLOSURE
   b. ATS SHALL BE SIZED BASED ON THE MAXIMUM SERVICE ENTRANCE PROTECTIVE DEVICE.
   c. ATS SHALL BE PROVIDED WITH MODBUS AND CONFIGURABLE I/O MODULES TO BE CONNECTED TO THE POWER ZONE PRO CONTROL PANEL PROVIDED WITH THE GENERATOR.

7. PROVIDE GENERATOR EMERGENCY POWER OFF BUTTON PER PLANS.

8. PROVIDE REINFORCED CONCRETE GENERATOR PAD PER PLANS.

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GENERAL NOTES (2 OF 5)

SHEET NO. B-2

POWER CONNECTIONS GENERAL NOTES:

1. POWER SUPPLY LOCATIONS HAVE BEEN COORDINATED WITH DUKE ENERGY AND ORLANDO UTILITIES COMMISSION. CONTACT EACH RESPECTIVE POWER COMPANY CONTACT PERSON UPON NOTICE TO PROCEED TO ENSURE ALL POWER SOURCES CAN BE INSTALLED AS SHOWN IN THE PLANS OR IN THE EVENT A PROPOSED POWER SOURCE IS NOT READILY AVAILABLE.
   a. OUC SERVICE: INSTALL UNDERGROUND CONDUIT TO THE BASE OF OUC POWER POLE AND SET A PULL BOX WITH APPROXIMATELY 30' OF ELECTRICAL SERVICE WIRE COILED INSIDE. INSTALL RIGID CONDUIT UP THE OUC POLE TO A HEIGHT OF 25' WITH A WEATHER HEAD. PULL SERVICE WIRE THROUGH CONDUIT AND COIL EXCESS AROUND WEATHER HEAD. CONTACT OUC CUSTOMER SERVICE AT 407-423-9018 TO REQUEST FINAL CONNECTION.
   b. DUKE ENERGY SERVICE: INSTALL UNDERGROUND CONDUIT TO THE BASE OF PEDESTAL THAT EXISTS, OR INSTALL AND SET A PULL BOX WITH APPROXIMATELY 10' OF ELECTRICAL SERVICE WIRE COILED INSIDE. CONTACT DUKE ENERGY NEW CONSTRUCTION AT 800-700-8744 FOR FINAL CONNECTION BY DUKE ENERGY PERSONNEL.

2. ACCOMPLISH CONNECTIONS TO EXISTING POWER METERS PER STATE AND LOCAL CODES. CORRECTLY IDENTIFY EACH POWER SERVICE METER ENCLOSURE ON THE OUTSIDE FRONT BY A NON-FERROUS METAL PLATE PER APPLICABLE UTILITY COMPANY STANDARDS. RIVET THE PLATE TO THE METER ENCLOSURE. PRE-EXAMINE EACH SITE TO DETERMINE THE FEASIBILITY OF CONNECTING TO THE PROPOSED POWER SOURCE. MAKE CONNECTIONS THROUGH AN EXISTING OR NEW BREAKER PANEL WITH THE APPROPRIATE CIRCUIT BREAKER. SUPPLY ALL MATERIALS, EQUIPMENT AND LABOR FOR A COMPLETE CONNECTION.

TOLLING TTCP GENERAL NOTES:

1. ALL TRAFFIC CONTROL PROCEDURES AND DEVICES SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD, 2009 EDITION), THE FDOT STANDARD PLANS (INDEX 102-600-SERIES), AND THE FOLLOWING NOTES AND DETAILS INCLUDED THIS PLAN.

2. DURING OPERATIONS, NO LANE SHALL BE CLOSED FOR MORE THAN 2 MILES. A LANE SHALL NOT BE CLOSED OVERNIGHT EXCEPT AT AN ACTIVE WORK ZONE. IN THE EVENT OF AN ANTICIPATED EXTENDED STOPPAGE OF WORK EXCEEDING 24 HOURS, ELEVATION OF ADJACENT LANES SHALL NOT EXCEED 1-1/2 INCHES.

3. LANE CLOSURES OR OTHER TRAFFIC CONTROL NECESSARY FOR THE PLACEMENT, RELOCATION, OR REMOVAL OF BARRICADES, BARRIER WALL OR OTHER TRAFFIC CONTROL DEVICES SHALL BE EXECUTED IN ACCORDANCE WITH FDOT STANDARD PLANS INDEX 102-600-SERIES.

4. TEMPORARY PAVEMENT SHALL BE AT A MINIMUM, 2" OF TYPE S ASPHALT ON 6" OF LIMEROCK BASE. TYPE SP ASPHALT MAY BE SUBSTITUTED FOR THE TYPE S ASPHALT FOR NO ADDITIONAL COMPENSATION.

5. MAINTAIN ADEQUATE DRAINAGE AND HISTORICAL DRAINAGE PATTERNS TO PREVENT FLOODING OR DRAINAGE TO FLOW TO ROADWAY OR ROADSIDE AREAS EXISTING, UNDER CONSTRUCTION, OR COMPLETED. PROVIDE ANY TEMPORARY DRAINAGE MEASURES AS REQUIRED TO ADEQUATELY DRAIN THE PROJECT AND TEMPORARY TRAVELED ROADWAYS. ANY ADDITIONAL COSTS ASSOCIATED WITH DRAINAGE (TEMPORARY DRAINAGE STRUCTURES AND THE REMOVAL OF THE SAME INCLUDING THE DESILTING OF THE PERMANENT DRAINAGE STRUCTURES TO REMAIN) SHALL BE CONSIDERED INCIDENTAL TO PAY ITEM NO. 102-1 MAINTENANCE OF TRAFFIC.

6. SUBMIT A DRAINAGE CONTROL PLAN PRIOR TO CONSTRUCTION.

7. ALL DRAINAGE INLETS THAT ARE CONSTRUCTED PRIOR TO FINAL SURROUNDING GRADE BEING ACHIEVED WILL REQUIRETEMPORARY COVERING THAT WILL ALLOW DRAINAGE FLOW AND PROTECT THE INLET DURING TCP PHASES AND SHALL BE CONSIDERED INCIDENTAL TO PAY ITEM NUMBER 102-1.

TOLLING TTCP GENERAL NOTES (CONTINUED):

8. REGULATORY SPEED FOR SR ___ DURING CONSTRUCTION SHALL BE MAINTAINED AT __ MPH UNLESS OTHERWISE NOTED IN THE PLANS.

9. COMPLY WITH NOISE LEVEL RESTRICTIONS STATED IN THE LOCAL NOISE ORDINANCE. METHODS TO MAINTAIN NOISE LEVELS WITHIN ACCEPTABLE LIMITS SHALL INCLUDE BUT NOT BE LIMITED TO TEMPORARY NOISE BARRIERS, ENCLOSURES FOR EQUIPMENT, MUFFLERS, ETC.

10. HEAVY TRAFFIC CONDITIONS, ACCIDENTS, AND ANY UNFORESEEN EMERGENCIES MAY REQUIRE RESTRICTION OR REMOVAL OF ANY LANE CLOSURE. MAKE THE NECESSARY ADJUSTMENTS WITHOUT DELAY AT THE DIRECTION OF THE CFX CONSTRUCTION ENGINEER.

11. A TRAFFIC CONTROL OFFICER IS REQUIRED FOR ALL MAINLINE AND RAMP LANE CLOSURES AND SHALL BE CONSIDERED INCIDENTAL TO PAY ITEM NO. 102-1 MAINTENANCE OF TRAFFIC.

12. REQUEST PERMISSION FOR ANY RAMP OR FULL ROAD CLOSURE AT LEAST 14 DAYS PRIOR TO THE CLOSURE FROM THE CFX CONSTRUCTION ENGINEER OR REPRESENTATIVE. COORDINATE DETOURS WITH ALL ADJACENT CONSTRUCTION PROJECTS INCLUDING PROJECTS AT AJOINING INTERCHANGES.

13. COORDINATE MAINTENANCE OF TRAFFIC ACTIVITIES WITH CFX AT LEAST 72 HOURS PRIOR TO THE ACTIVITY.
    CFXCLOSURES@CFXWAY.COM
    ITSCLOSURES@CFXWAY.COM
    TOLLCLOSURES@CFXWAY.COM
    MAINTENANCECLOSURES@CFXWAY.COM
    CONSTRUCTIONCLOSURES@CFXWAY.COM

14. SINGLE LANE CLOSURES ARE LIMITED TO THE HOURS OF:
    SR ___: ____ PM TO ____ AM
    RAMP: ____ PM TO ____ AM
    SIDE STREET: ____ PM TO ____ AM

15. MULTI-LANE CLOSURES ARE LIMITED TO THE HOURS OF:
    SR ___: ____ PM TO ____ AM, ____DAY THROUGH ____DAY ONLY

16. TRAFFIC PACING PROCEDURES PER STANDARD PLANS INDEX 102-655 ARE LIMITED TO THE HOURS OF:
    ____ AM TO ____ AM, ____DAY THROUGH ____DAY ONLY

17. MAINLINE ROADWAY CLOSURES WITH OFF-SITE DETOURS ARE LIMITED TO THE HOURS OF:
    ____ AM TO ____ AM, ____DAY THROUGH ____DAY ONLY. REFER TO THE DETOUR DETAILS FOR ADDITIONAL INFORMATION.

18. RAMP CLOSURES WITH OFF-SITE DETOURS ARE LIMITED TO THE HOURS OF:
    ____ AM TO ____ AM, ____DAY THROUGH ____DAY ONLY. REFER TO THE DETOUR DETAILS FOR ADDITIONAL INFORMATION.

19. WHEN CONSTRUCTION EQUIPMENT IS BEING TRANSPORTED OR DRIVEN ON OPEN TRAVEL LANES, COMPLY WITH THE FDOT STANDARD PLANS INDEX 102-600-SERIES. MAINTAIN CLEAR ZONE REQUIREMENTS FOR EQUIPMENT, MATERIAL STORAGE, AND WORK ZONE PROTECTION AS SPECIFIED IN STANDARD PLANS INDEX 102-600.

20. ALTERNATE TRAFFIC CONTROL PLANS AND/OR CHANGES MADE TO THE TRAFFIC CONTROL PLAN SHALL BE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF FLORIDA AND BE APPROVED BY CFX AND THE TRAFFIC CONTROL MANAGER PRIOR TO IMPLEMENTATION.

21. A CERTIFIED TRAFFIC CONTROL SUPERVISOR (TCS) SHALL BE ON SITE WHEN CONTRACTOR IS WORKING AND SHALL BE ON CALL FOR EMERGENCIES. PROVIDE THE ENGINEER WITH A 24 HOUR ON-CALL NUMBER.

22. ARROWS (⟶) SHOWN IN THESE PLANS DENOTE NUMBER OF LANES AND DIRECTION OF TRAFFIC ONLY AND DO NOT INDICATE PAVEMENT MARKINGS.

TOLLING TTCP GENERAL NOTES (CONTINUED):

23. ACCELERATION/DECELERATION OF CONSTRUCTION VEHICLES WITHIN AN ACTIVE TRAVEL LANE IS PROHIBITED DURING ALL PHASES OF TRAFFIC CONTROL. MAKE PROVISIONS FOR CONSTRUCTION INGRESS/EGRESS, INCLUDING MATERIALS DELIVERY.

24. TRAFFIC SHALL NOT BE MAINTAINED ON A MILLED/GROOVED SURFACE. DURING MILLING AND RESURFACING OPERATIONS, ALL MILLED LANES SHALL BE RESURFACED AND BROUGHT TO WITHIN 1-1/2" OF THE ADJACENT TRAVEL LANE IN ACCORDANCE WITH STANDARD PLANS INDEX 102-600.

25. MILLING, RESURFACING, AND OVERBUILD OPERATIONS ARE TO BE PHASED SUCH THAT ALL DROP-OFFS COMPLY WITH STANDARD PLANS INDEX 102-600. ANY TRAVEL LANE TREATMENTS OR ADDITIONAL TEMPORARY PAVEMENT NECESSARY TO REMOVE DROP-OFF HAZARDS SHALL BE CONSIDERED INCIDENTAL TO PAY ITEM NO. 102-1.

26. EXISTING GORE STRIPING WHICH IS TO BE REMOVED AND RE-STRIPED AS PART OF THE TRAFFIC CONTROL PLANS SHALL BE MILLED AND RESURFACED PRIOR TO PLACING THE TEMPORARY MARKINGS. WATER BLASTING, AS A MEANS OF MARKING REMOVAL, WILL NOT BE PERMITTED WITHIN THE GORE AREAS.

27. ALL TEMPORARY BARRIER WALL TRANSITIONS SHALL COMPLY WITH STANDARD PLANS INDEX 102-100; IMPACT ATTENUATORS SHALL BE INSTALLED PER STANDARD PLANS INDEX 102-100 AND AS SHOWN IN THE PLANS.

28. MAINTAIN EXISTING ROADWAY LIGHTING LEVELS DURING ALL PHASES OF TRAFFIC CONTROL.

29. MAINTAIN EXISTING WARNING AND REGULATORY SIGNAGE DURING ALL PHASES OF TRAFFIC CONTROL AS APPLICABLE.

30. REMOVE ALL UNUSED TRAFFIC CONTROL DEVICES AND WORK ZONE SIGNS UPON COMPLETION OF THEIR USE. POST-MOUNTED SIGNS MAY BE COVERED OR TURNED TO FACE AWAY FROM TRAFFIC.

31. NOT USED.

32. WITH THE EXCEPTION OF FRICTION COURSE AND FINAL PAVEMENT MARKINGS, PROPOSED WORK IN ANY PHASE MAY BE CONSTRUCTED CONCURRENTLY PROVIDED THE WORK DOES NOT AFFECT THE TRAFFIC PATTERNS SHOWN IN APPLICABLE TTC PHASE.

33. FRICTION COURSE AND FINAL MARKINGS ARE TO BE PLACED DURING PHASE ____ AS NOTED ON THE APPLICABLE TTC PLAN SHEETS.

34. OBTAIN PERMITS FROM THE LOCAL MAINTAINING AGENCY PRIOR TO ANY CONSTRUCTION ACTIVITIES WITHIN THE LOCAL MAINTAINING AGENCY'S ROAD RIGHT-OF-WAY.

35. COORDINATE WITH CFX TOLL OPERATIONS AND THE TOLL PLAZA MANAGER(S) A MINIMUM OF THREE BUSINESS DAYS PRIOR TO PERFORMING ANY WORK WITHIN ½ MILE OF AN EXISTING TOLL PLAZA. THE CONTRACTOR MUST ADVISE THE PLAZA MANAGER OF THE INTENDED TIME AND LOCATION OF THE WORK TO BE PERFORMED.

36. SUBMIT FOR REVIEW AND APPROVAL, A SITE-SPECIFIC TRAFFIC CONTROL PLAN WHICH CONSISTS OF THESE GENERAL NOTES, ANY SITE-SPECIFIC NOTES, AS WELL AS ANY MODIFIED FDOT STANDARD PLANS (102-600 SERIES). ANY MODIFIED FDOT STANDARD PLANS (102-600 SERIES) MUST BE SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA. THE SITE-SPECIFIC TRAFFIC CONTROL PLAN MUST BE APPROVED PRIOR TO COMMENCING ANY MOT OPERATIONS AT THAT SPECIFIC SITE.

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GENERAL NOTES (3 OF 5)

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TOLLING TTCP GENERAL NOTES (CONTINUED):

37. FOR ALL WORK THAT IMPACTS TOLL PLAZA OPERATIONS CONTACT THE PLAZA MANAGER UPON ARRIVAL AT THE SITE TO COORDINATE THE PLANNED LANE CLOSURE(S)/RAMP CLOSURE(S)/DIVERSION(S). THE PLAZA MANAGER, CFX STAFF, AND ITS DESIGNEE ARE AUTHORIZED TO DELAY OR POSTPONE THE LANE CLOSURE(S)/RAMP CLOSURE(S)/DIVERSION(S).

38. CONTACT THE ITS MAINTENANCE CONTRACTOR, ON-CALL TECHNICIAN 30 MINUTES PRIOR TO THE LANE CLOSURE AT 888-482-0808 AND RTMC AT (407) 736-1900 AND PROVIDE THE FOLLOWING:

    1. INDICATE THE MAINLINE PLAZA BEING WORKED ON
    2. INDICATE WHICH LANES ARE BEING CLOSED (OPEN ROAD TOLL)
    3. INDICATE THE ANTICIPATED DURATION OF WORK TO BE PERFORMED

39. CONTACT THE ITS MAINTENANCE CONTRACTOR, ON-CALL TECHNICIAN AND RTMC ONCE THE MOT OPERATION HAS CONCLUDED AND BEEN PICKED UP.

40. PCMS's MUST BE IN PLACE AND OPERATIONAL A MINIMUM OF 1 WEEK IN ADVANCE FOR COMPLETE RAMP CLOSURES/DETOURS. PCMS's MUST BE IN PLACE AND OPERATIONAL DURING ALL ORT DIVERSIONS THROUGH THE CASH LANES.

41. LANE RENTAL FEES WILL BE ASSESSED IF ANY TRAVEL LANE(S) AND/OR RAMP(S) ARE CLOSED TO TRAFFIC OUTSIDE OF THE APPROVED LANE CLOSURE HOURS.

42. FOR CHANNELIZED LANES AT BOTH THE MAINLINE AND RAMP TOLL PLAZAS, ENSURE THE OVERHEAD CANOPY LIGHT FOR THE AFFECTED LANE(S) IS SET TO RED PRIOR TO THE START OF THE LANE CLOSURE, AND RESET TO GREEN AFTER THE CLOSURE HAS BEEN COMPLETED.

43. FOR ALL EXISTING TOLL LOCATIONS THAT REQUIRE CLOSURES, PROVIDE A CFX APPROVED TRUCK/TRAILER MOUNTED ATTENUATOR FOR ALL AERIAL WORK AND ALL CLOSURES EXCEEDING 1 DAY'S OPERATIONS.

TEC COORDINATION GENERAL NOTES:

NOTE TO EOR: COORDINATE WITH CFX AND THE TEC FOR PROJECT-SPECIFIC AND TOLL SITE-SPECIFIC REQUIREMENTS. PROVIDE ALL APPLICABLE REQUIREMENTS FOR EACH SITE SEPARATELY WITHIN THE TEC COORDINATION GENERAL NOTES. DELETE ANY NOTES THAT ARE NOT APPLICABLE TO A SPECIFIC TOLL SITE WITHIN THIS PROJECT. DURING DESIGN, DETERMINE THE DURATIONS FOR TEC WORK AS OUTLINED IN NOTE 5 AND INCLUDE THEM IN THE AFC PLANS.

1. PROVIDE AND MAINTAIN ONGOING COORDINATION, ADVANCE NOTICE, AND SCHEDULING WITH CFX AND THE TEC THROUGHOUT THE ENTIRE DURATION OF CONSTRUCTION REGARDING ALL CONTRACTOR ACTIVITIES IMPACTING BOTH EXISTING AND NEW TOLLING EQUIPMENT. THIS COORDINATION INCLUDES ADVANCE NOTICE, SCHEDULING, AND TIME ALLOCATION REQUIRED FOR TEC WORK.

2. TEC WORK INCLUDES AT A MINIMUM:
    a. EXISTING TOLLING EQUIPMENT REMOVAL AND SALVAGE.
    b. EXISTING TOLLING EQUIPMENT RELOCATION.
    c. FURNISHING, INSTALLATION, CONFIGURATION, AND TUNING OF TOLLING EQUIPMENT.
    d. TOLLING EQUIPMENT SYSTEMS TESTING AND COMMISSIONING.

3. TEC TOLLING EQUIPMENT INCLUDES AT A MINIMUM:
    a. ABOVEGROUND TOLL COLLECTION EQUIPMENT MOUNTED TO GANTRIES OR OTHER STRUCTURES.
    b. IN-PAVEMENT TOLLING LOOPS.
    c. TOLLING EQUIPMENT LOCATED WITHIN TOLLING EQUIPMENT CABINETS, TOLL BUILDINGS, TUNNELS, AND/OR CATWALKS.
    d. ALL ASSOCIATED CABLING AND OTHER APPURTANANCES REQUIRED FOR A COMPLETE AND FUNCTIONAL TOLLING SYSTEM AS REQUIRED BY CFX AND THE TEC.

TEC COORDINATION GENERAL NOTES (CONTINUED):

4. COORDINATE WITH CFX AND THE TEC TO DETERMINE TOLL SITE CONSTRUCTION ACTIVITIES REQUIRED TO BE COMPLETE FOR THE TEC TO PERFORM THEIR WORK AND PROVIDE CFX AND THE TEC 30 DAYS ADVANCE NOTICE OF COMPLETION OF THESE ACTIVITIES. TOLL SITE CONSTRUCTION ACTIVITIES REQUIRED TO BE COMPLETE INCLUDE AT A MINIMUM THE INSTALLATION, CONSTRUCTION, AND/OR MODIFICATION OF ALL THE FOLLOWING TOLL SITE COMPONENTS:
    a. TOLL GANTRY
    b. TOLLING CONCRETE PAVEMENT ZONE
    c. TOLL ZONE APPROACH AND DEPARTURE ROADWAY SEGMENTS REQUIRED FOR TEC EQUIPMENT TESTING, INCLUDING ALL SHOULDERS AND TRAVEL LANES WITH NO DROP-OFFS GREATER THAN 1.5 INCHES
    d. TOLL SITE CONDUITS AND RACEWAYS (INCLUDING PULL BOXES AND JUNCTION BOXES)
    e. TOLLING EQUIPMENT CABINET FOUNDATION
    f. TOLLING EQUIPMENT CABINET
    g. TRANSPONDER READER NEMA CABINET
    h. TOLL BUILDING
    i. POWER
    j. GENERATOR INSTALLATION AND TESTING
    k. LIGHTNING PROTECTION SYSTEM
    l. FON COMMUNICATIONS INSTALLATION AND TESTING
    m. OTHER TOLL SITE COMPONENTS AS REQUIRED BY CFX AND THE TEC

5. UPON COMPLETION OF THE REQUIRED TOLL SITE COMPONENTS, ALLOCATE THE FOLLOWING CONSECUTIVE WORKING DAYS IN THE CONTRACT SCHEDULE FOR THE FOLLOWING WORK TO BE PERFORMED BY THE TEC:
    a. EXISTING TOLLING EQUIPMENT REMOVAL AND SALVAGE: ___ DAYS
    b. EXISTING TOLLING EQUIPMENT RELOCATION: ___ DAYS
    c. FURNISHING, INSTALLATION, CONFIGURATION, AND TUNING OF TOLLING EQUIPMENT: ___ DAYS
    d. TOLLING EQUIPMENT SYSTEMS TESTING AND COMMISSIONING: ___ DAYS

6. UPON COMPLETION OF TEC TESTING AND COMMSSIONING OF EACH TOLL ZONE, A FORMAL HANDOVER WILL OCCUR IN WHICH CFX, THE CONTRACTOR AND THE TEC AGREE THAT THE TOLL SITE IS COMPLETE AND MEETS THE CONTRACT REQUIREMENTS. ANY DEFFICIENCIES IDENTIFIED DURING THE HANDOVER MUST BE IMMEDIATELY ADDRESSED BY THE APPROPRIATE PARTY. A FORMAL HANDOVER AGREEMENT WILL BE EXECUTED ONCE ALL DEFFICIENCIES HAVE BEEN ADDRESSED AND ALL TOLL ZONE COMPONENTS MEET CONTRACT REQUIREMENTS. UPON EXECUTION, THE TEC WILL ASSUME RESPONSIBILITY FOR MAINTENANCE OF THE TOLL ZONE. CONTRACTOR MUST NOT MAKE ANY MODIFICATIONS TO THE TOLL ZONE INFRASTRUCTURE FOLLOWING THE FORMAL HANDOVER TO THE TEC WITHOUT ADVANCE NOTIFICATION AND COORDINATION WITH CFX AND THE TEC.

TOLL SITE CONSTRUCTION PHASING GENERAL NOTES:

NOTE TO EOR : COORDINATE WITH CFX AND THE TEC FOR PROJECT-SPECIFIC AND TOLL SITE-SPECIFIC REQUIREMENTS. PROVIDE ALL APPLICABLE REQUIREMENTS FOR EACH SITE SEPARATELY WITHIN THE TOLL SITE CONSTRUCTION PHASING GENERAL NOTES. DELETE ANY NOTES THAT ARE NOT APPLICABLE TO A SPECIFIC TOLL SITE WITHIN THIS PROJECT.

1. MAINTAIN ALL EXISTING TOLL OPERATIONS WITH NO INTERRUPTION TO TOLL COLLECTION THROUGHOUT THE DURATION OF CONSTRUCTION.

2. DO NOT DEMO AN EXISTING TOLL SITE UNTIL AFTER COMPLETION AND ACTIVATION OF THE NEW TOLL COLLECTION SYSTEM.

3. EXISTING POWER AND FON CONNECTIONS AND INTERCONNECT TO TOLL SITES MUST REMAIN INTACT AND OPERATIONAL UNTIL THE NEW TOLLING SYSTEM IS INSTALLED, TESTED, COMMISSIONED, ACTIVATED BY CFX, AND COLLECTING TOLL TRANSACTIONS.

TOLL SITE CONSTRUCTION PHASING GENERAL NOTES: (CONTINUED):

4. THE FOLLOWING WORK MUST BE COMPLETE PRIOR TO TEC TOLL EQUIPMENT INSTALLATION (AS APPLICABLE):
    a. EXISTING UTILITY RELOCATION(S) WITHIN THE TOLL SITE.
    b. REMOVAL OF ALL METAL PIPING, CONDUCTORS, OR OTHER METAL OBJECTS WITHIN THE TOLL SITE.
    c. ALL TRAVEL LANES AND SHOULDERS OF THE TOLL ZONE CONCRETE PAVEMENT, INCLUDING FINAL ALIGNMENT AND STRIPING (FOR NEW TOLL SITES ONLY).
    d. TOLL GANTRY.
    e. TOLL ZONE APPROACH AND DEPARTURE ROADWAY SEGMENTS REQUIRED FOR TEC TOLLING EQUIPMENT TESTING.
    f. TOLL SITE CONDUITS AND RACEWAYS (INCLUDING PULL BOXES AND JUNCTION BOXES).
    g. TOLLING EQUIPMENT CABINET AND FOUNDATION.
    h. TRANSPONDER READER NEMA CABINET(S).
    i. TOLL BUILDING.
    j. TOLL SITE POWER.
    k. TOLL SITE GENERATOR INSTALLATION AND TESTING.
    l. TOLL SITE LIGHTNING PROTECTION SYSTEM.
    m. TOLL SITE FON COMMUNICATIONS CONNECTIONS INSTALLED, TESTED, AND REVIEWED FOR ACCEPTANCE PRIOR TO CONNECTING TO NETWORK EQUIPMENT.

5. TOLL ZONE ROADWAY APPROACH AND DEPARTURE SEGMENT LENGTHS REQUIRED FOR TEC EQUIPMENT TESTING AND COMMISSIONING ARE DEFINED AS FOLLOWS:
    a. MAINLINES: 2000' OF APPROACH, 1500' OF DEPARTURE.
    b. RAMPS: 1500' OF APPROACH, 1000' OF DEPARTURE.
    c. FOR AET RAMP CONVERSIONS AND SITES THAT DO NOT MEET THE ABOVE DISTANCES, THE EOR WILL COORDINATE WITH CFX AND THE TEC TO DEVELOP DETAILS AND TECHNICAL SPECIAL PROVISIONS WHICH, AT A MINIMUM, WILL INCLUDE RAMP MOT NIGHT CLOSURES TO ALLOW FOR THE TEC TO HAVE FULL ACCESS TO THE SITE FOR CONFIGURATION AND COMMISSIONING TESTING OF THE TOLL EQUIPMENT. THE NIGHT CLOSURES WILL INCLUDE A TRAFFIC DETOUR, ALLOWING THE TEC TO HAVE FULL VEHICULAR ACCESS TO THE RAMP FOR TESTING.

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ABBREVIATIONS:

AC = ALTERNATING CURRENT
A/C = AIR CONDITIONER
AFF = ABOVE FINISHED FLOOR
AMP = AMPERAGE
AWG = AMERICAN WIRE GAUGE
AVI = AUTOMATIC VEHICLE IDENTIFICATION
BKR = BREAKER
BTU = BRITISH THERMAL UNIT
C = CONDUIT
CEI = CONSTRUCTION ENGINEERING AND INSPECTION
CFX = CENTRAL FLORIDA EXPRESSWAY AUTHORITY
CKT = CIRCUIT
COMM = COMMUNICATIONS
CR = COUNTY ROAD
CU = COPPER
D = DEPTH
DC = DIRECT CURRENT
DVAS = DIGITAL VIDEO AUDITING SYSTEM
DWG = DRAWING
E6 = ENCOMPASS 6 MULTIPROTOCOL READER
EB = EASTBOUND
EMR = ELECTROMETALLIC TUBING
EOR = ENGINEER OF RECORD
EPO = EMERGENCY POWER SHUTOFF
FDOT = FLORIDA DEPARTMENT OF TRANSPORTATION
FOC = FIBER OPTIC CABLE
FON = FIBER OPTIC NETWORK
FPP = FIBER PATCH PANEL
FT = FOOT; FEET
GFCI = GROUND FAULT CIRCUIT INTERRUPTER
GFRP = GLASS FIBER REINFORCED POLYMER
HDPE = HIGH DENSITY POLYETHYLENE
H = HEIGHT
HSS = HOLLOW STRUCTURAL SECTION
ITS = INTELLIGENT TRANSPORTATION SYSTEMS
JB = JUNCTION BOX
KVA = KILOVOLT-AMPERES
KW = KILOWATT
LBS = POUNDS
LED = LIGHT-EMITTING DIODE
LF = LINEAR FEET
LP = LIGHTNING PROTECTION
LTFM = LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT
MAX = MAXIMUM
MCB = MAIN CIRCUIT BREAKER
MIN = MINIMUM
MLO = MAIN LUG ONLY
MOT = MAINTENANCE OF TRAFFIC
MUTCD = MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
NEC = NATIONAL ELECTRIC CODE
NESC = NATIONAL ELECTRIC SAFETY CODE
NB = NORTHBOUND
NTS = NOT TO SCALE
OCPD = OVERCURRENT PROTECION DEVICE
ORT = OPEN ROAD TOLLING
PCMS = PORTABLE CHANGEABLE MESSAGE SIGNS
PWR = POWER
POS = POSITION
PSI = POUNDS PER SQUARE INCH
PVC = POLYVINYL CHLORIDE
RD = ROAD
RGS = RIGID GALVANIZED STEEL
RPM = REMOTE POWER MANAGER
RU = RACK UNIT
SB = SOUTHBOUND
SCH = SCHEDULE
SER = SERVICE ENTRANCE RATED
SHW = SEASONAL HIGH WATER
SPD = SURGE PROTECTION DEVICE
SR = STATE ROAD
TTCP = TEMPORARY TRAFFIC CONTROL PLAN
TDM = TIME DIVISION MULTIPLEXING
TYP = TYPICAL
UON = UNLESS OTHERWISE NOTED
UPS = UNITERRUPTIBLE POWER SUPPLY
V = VOLTAGE
VCARS = VEHICLE CAPTURE AND RECOGNITION SYSTEM
VVH = VERIFY VERTICALLY AND HORIZONTALLY
W = WATTS or WIDTH
WB = WESTBOUND
WP = WEATHER-PROOF
WWDS = WRONG WAY DRIVING SYSTEM
WWF = WELDED WIER FABRIC
XFMR = TRANSFORMER
QTY = QUANTITY

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NOTE TO EOR:

1. ALL OTHER PROJECT SPECIFIC CONTACTS SHALL BE COMPLETED BY THE DESIGNER.

UTILITY CONTACTS

UTILITY LOCATES PROVIDED BY NO-CUTS: 1-800-432-4770

CFX (FIBER)	WILLIAM COLLINS	407-690-5000
CFX FACILITIES MAINTENANCE	LBS	407-730-8923
CFX ROADWAY MAINTENANCE (SR429,SR414,SR451)	LBS	407-730-8923
CFX ROADWAY MAINTENANCE (SR408,SR417,SR528)	JCS	407-249-9122

PLANNING FOR DISRUPTION OF COMMUMICATIONS OR POWER TO A TOLL PLAZA:
COORDINATE ANY PLANNED OUTAGE A MINIMUM OF 30 DAYS PRIOR TO ANY PROPOSED OUTAGE. CFX RESERVES THE RIGHT TO APPROVE, REJECT, OR SCHEDULE ANY DISRUPTION. CONTACT THE FOLLOWING TO COORDINATE OUTAGES:

CFXConstOutageNotice@CFXway.com 407-690-5000

OUTAGE CAUSING DISRUPTION OF COMMUNICATIONS OR POWER TO A TOLL PLAZA:
IN THE EVENT OF AN OUTAGE AT ANY TOLL PLAZA(S) OR SYSTEM WIDE, EITHER PLANNED OR UNPLANNED, IMMEDIATELY NOTIFY THE FOLLOWING USING BOTH METHODS OF COMMUNICATION (EMAILS AND CALLS):

CFXConstOutageNotice@CFXway.com 407-690-5000
ORLMMC@Transcore.com 321-281-4127 (TRANSCORE MMC) AND 754-241-4419 (BACKUP)

OTHER CONTACTS

CITY OF APOPKA PUBLIC SERVICES-DESIGN ENGINEERING	407-703-1731
CITY OF OCOEE PUBLIC WORKS	407-905-3170
CITY OF ORLANDO TRANSPORTATION ENGINEERING	407-246-2281
CITY OF WINTER GARDEN PUBLIC SERVICES	407-656-2256
ORANGE COUNTY TRAFFIC ENGINEERING	407-836-7890

LEGEND

- UNDERGROUND CONDUITS
- DIRECTIONAL BORE CONDUITS
- STRUCTURE MOUNT RACEWAY
- LOOP CONDUITS WITH STUB-OUT
- CONCRETE PEDESTAL WITH METER (AND DISCONNECT, WHERE REQUIRED)
- ITS FIBER OPTIC MANHOLE
- CONCRETE
- STONE OR CRUSHED ROCK
- TOLLS POWER PULL BOX
- TOLLS COMMUNICATIONS PULL BOX
- TOLLS LOOP PULL BOX
- STRUCTURE GROUNDING PULL BOX
- LIGHT POLE
- DO NOT STOP SIGN
- UTILITY TRANSFORMER
- TOLLING EQUIPMENT CABINET
- REVERSE RED SIGNAL HEAD
- GENERATOR
- GENERATOR UNDERGROUND FUEL TANK

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LEGEND AND UTILITY CONTACTS

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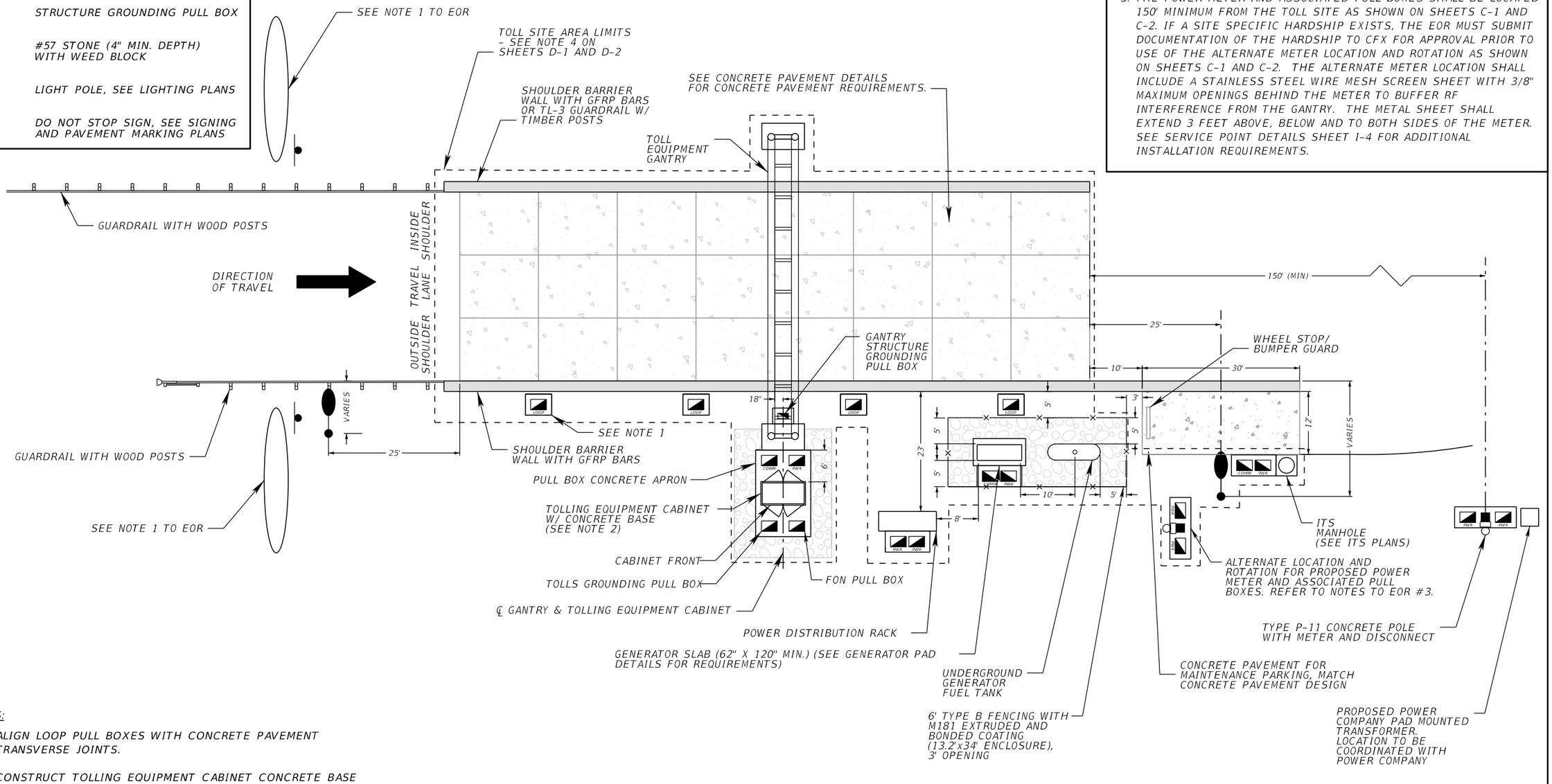
LEGEND

- CONCRETE PAVEMENT
- POWER PULL BOX
- COMMUNICATIONS PULL BOX
- LOOP PULL BOX
- STRUCTURE GROUNDING PULL BOX
- #57 STONE (4" MIN. DEPTH) WITH WEED BLOCK
- LIGHT POLE, SEE LIGHTING PLANS
- DO NOT STOP SIGN, SEE SIGNING AND PAVEMENT MARKING PLANS

NOTES TO EOR:

1. INSTALL REMOVABLE PIPE BOLLARDS ONLY IN SCENARIOS WHERE VEHICULAR TRAFFIC COULD DRIVE THROUGH THESE AREAS FOR TOLL AVOIDANCE.
2. FOR EASE OF TOLLING EQUIPMENT MAINTENANCE, WHERE POSSIBLE, THE SHOULDER NEAREST TO THE TOLLING EQUIPMENT CABINET IS DESIRED TO BE MINIMUM 12' WIDTH. FOR SITES THAT ARE UNABLE TO ACHEIVE THE 12' SHOULDER WIDTH, NOTIFY CFX TOLLS.
3. THE POWER METER AND ASSOCIATED PULL BOXES SHALL BE LOCATED 150' MINIMUM FROM THE TOLL SITE AS SHOWN ON SHEETS C-1 AND C-2. IF A SITE SPECIFIC HARDSHIP EXISTS, THE EOR MUST SUBMIT DOCUMENTATION OF THE HARDSHIP TO CFX FOR APPROVAL PRIOR TO USE OF THE ALTERNATE METER LOCATION AND ROTATION AS SHOWN ON SHEETS C-1 AND C-2. THE ALTERNATE METER LOCATION SHALL INCLUDE A STAINLESS STEEL WIRE MESH SCREEN SHEET WITH 3/8" MAXIMUM OPENINGS BEHIND THE METER TO BUFFER RF INTERFERENCE FROM THE GANTRY. THE METAL SHEET SHALL EXTEND 3 FEET ABOVE, BELOW AND TO BOTH SIDES OF THE METER. SEE SERVICE POINT DETAILS SHEET I-4 FOR ADDITIONAL INSTALLATION REQUIREMENTS.



NOTES:

1. ALIGN LOOP PULL BOXES WITH CONCRETE PAVEMENT TRANSVERSE JOINTS.
2. CONSTRUCT TOLLING EQUIPMENT CABINET CONCRETE BASE WITH AN ELEVATION GREATER THAN THAT OF ANY CONNECTED PULL BOX.

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RAMP SITE PLAN

SHEET NO. C-1

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NOTES TO EOR:

1. INSTALL REMOVABLE PIPE BOLLARDS ONLY IN SCENARIOS WHERE VEHICULAR TRAFFIC COULD DRIVE THROUGH THESE AREAS FOR TOLL AVOIDANCE.

2. FOR EASE OF TOLLING EQUIPMENT MAINTENANCE, WHERE POSSIBLE, THE SHOULDER NEAREST TO THE TOLLING EQUIPMENT CABINET IS DESIRED TO BE MINIMUM 12' WIDTH. FOR SITES THAT ARE UNABLE TO ACHEIVE THE 12' SHOULDER WIDTH, NOTIFY CFX TOLLS.

3. THE POWER METER AND ASSOCIATED PULL BOXES SHALL BE LOCATED 150' MINIMUM FROM THE TOLL SITE AS SHOWN ON SHEETS C-1 AND C-2. IF A SITE SPECIFIC HARDSHIP EXISTS, THE EOR MUST SUBMIT DOCUMENTATION OF THE HARDSHIP TO CFX FOR APPROVAL PRIOR TO USE OF THE ALTERNATE METER LOCATION AND ROTATION AS SHOWN ON SHEETS C-1 AND C-2. THE ALTERNATE METER LOCATION SHALL INCLUDE A STAINLESS STEEL WIRE MESH SCREEN SHEET WITH 3/8" MAXIMUM OPENINGS BEHIND THE METER TO BUFFER RF INTERFERENCE FROM THE GANTRY. THE METAL SHEET SHALL EXTEND 3 FEET ABOVE, BELOW AND TO BOTH SIDES OF THE METER. SEE SERVICE POINT DETAILS SHEET I-4 FOR ADDITIONAL INSTALLATION REQUIREMENTS.

CONCRETE PAVEMENT

POWER PULL BOX

COMMUNICATIONS PULL BOX

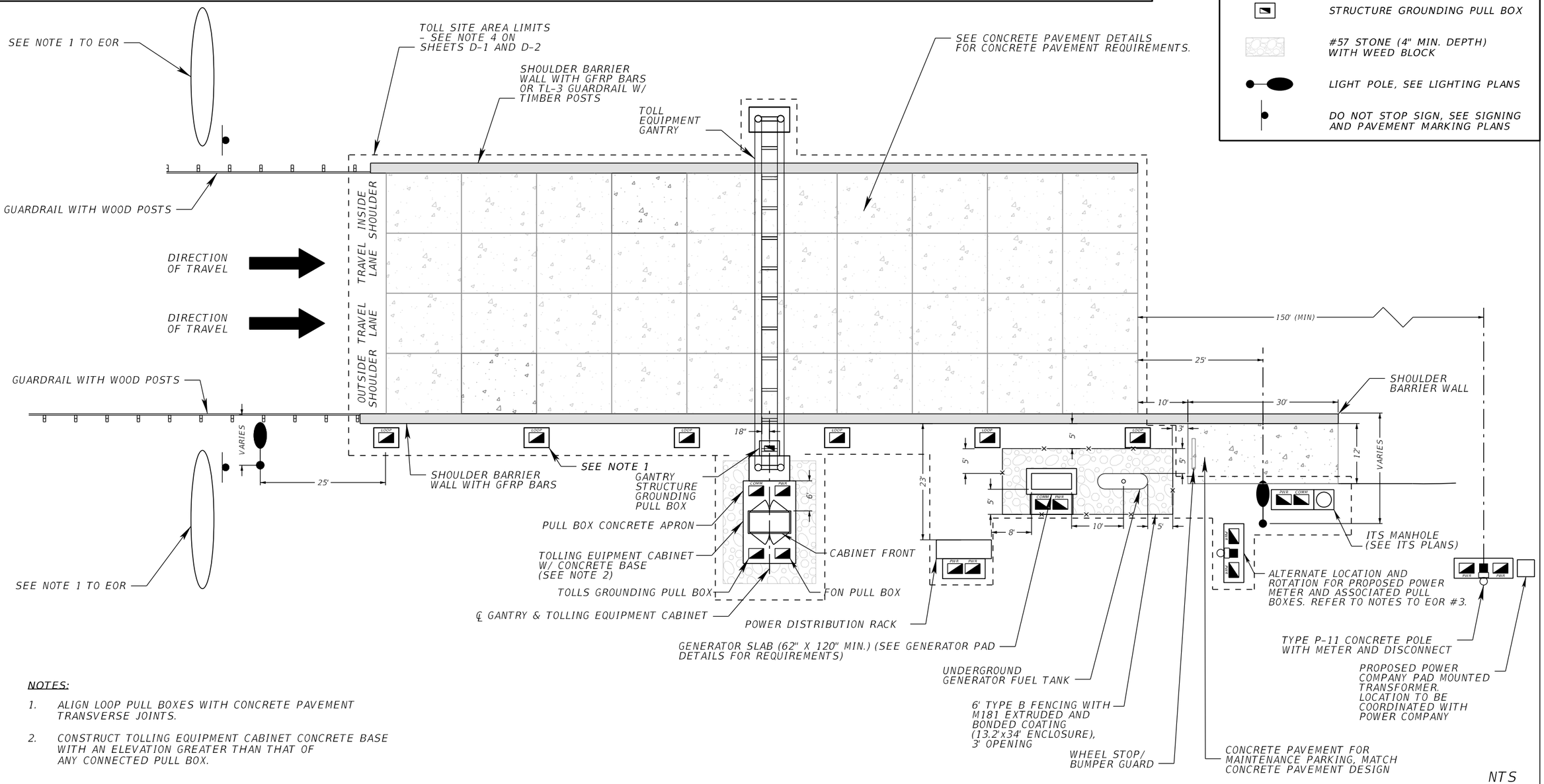
LOOP PULL BOX

STRUCTURE GROUNDING PULL BOX

#57 STONE (4" MIN. DEPTH) WITH WEED BLOCK

LIGHT POLE, SEE LIGHTING PLANS

DO NOT STOP SIGN, SEE SIGNING AND PAVEMENT MARKING PLANS



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NOTES:

1. ALIGN LOOP PULL BOXES WITH CONCRETE PAVEMENT TRANSVERSE JOINTS.

2. CONSTRUCT TOLLING EQUIPMENT CABINET CONCRETE BASE WITH AN ELEVATION GREATER THAN THAT OF ANY CONNECTED PULL BOX.

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MAINLINE SITE PLAN

SHEET NO. C-2

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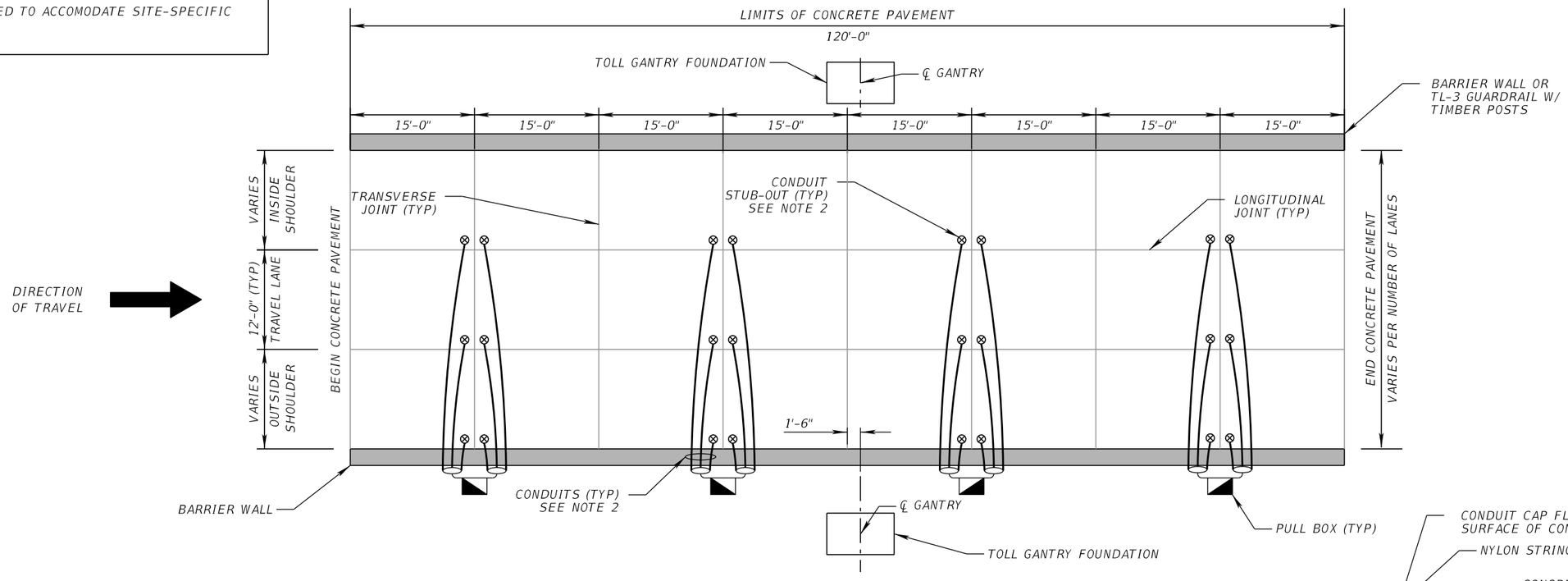
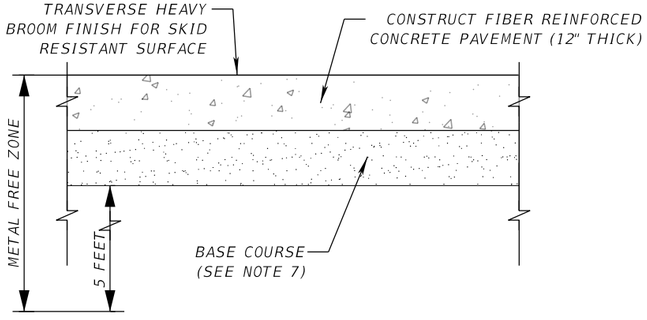
NOTE TO EOR:
INCREASE QUANTITY OF TRAVEL LANES AND ASSOCIATED LOOP CONDUITS AS NEEDED TO ACCOMODATE SITE-SPECIFIC ROADWAY DESIGN.

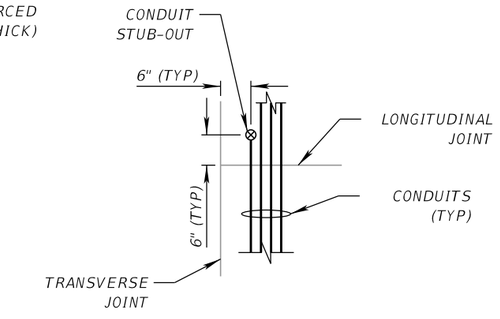


PLAN VIEW

TYPICAL CONDUIT STUB-UP DETAIL



TYPICAL CONCRETE PAVEMENT SLAB



TYPICAL CONDUIT DETAIL

NTS

NOTES:

1. CONDUCT A MEETING WITH THE CEI ENGINEER, CONTRACTOR, AND CFX TOLLING LIASON PRIOR TO PLACING FORMS TO COORDINATE CONDUIT, PULL BOXES, AND JOINT PLACEMENT.
2. PLAN VIEW IS DIAGRAMMATIC IN NATURE. SEE TYPICAL CONDUIT DETAIL THIS SHEET FOR LOCATIONS AND OFFSET DIMENSIONS OF LOOP CONDUITS AND STUB-OUTS. PROVIDE COMMERCIAL GRADE ALL-PURPOSE NYLON STRING EXTENDING 1" ABOVE CONCRETE AT ALL CONDUIT STUB-OUT LOCATIONS.
3. FOR CONCRETE PAVEMENT FINISHED ELEVATIONS, SEE ROADWAY PLANS.
4. A METAL FREE ZONE SHALL BE CREATED AROUND AND BELOW THE TOLL SITE AREA. THIS ZONE SHALL EXTEND A MINIMUM OF 5 FEET OUTSIDE THE EDGE OF AND BELOW THE TOLL SITE AREA AND A MINIMUM 5 FEET BELOW THE BOTTOM OF THE TOLLING PAVEMENT SECTION (INCLUDING BASE MATERIAL). THE TOLL SITE AREA WHICH ENCOMPASSES ALL TOLLING EQUIPMENT AND IMPROVEMENTS SHALL INCLUDE, BUT NOT BE LIMITED TO, THE TOLL PAVEMENT AREA, TOLL GANTRY STRUCTURE, CABINETS, ALL PULL BOXES, GENERATOR , FUEL TANK AND METER. SEE SHEETS C-1 AND C-2. THE GANTRY FOUNDATIONS, DRILLED SHAFTS AND CABINENT APRON CAN USE STANDARD REINFORCEMENT.
5. PIPES CARRYING OR INTENDED TO CARRY FLUIDS SHALL BE LOCATED A MINIMUM OF 10 FEET FROM THE TOLL SITE AND MINIMUM OF 5 FEET FROM LOOP CONDUITS.
6. HIGH VOLTAGE OR CURRENT TRANSMISSION CABLING SHALL BE A MINIMUM OF 100 FEET FROM THE CLOSEST POINT OF THE TOLL GANTRY.
7. FIBER REINFORCED POLYMER (FRP) REQUIREMENTS:

   A. DOWEL BARS - 1.5 INCH DIAMETER, 18 INCH LONG AND SPACED AT 10 INCHES CENTER TO CENTER
   B. TIE BARS - 0.75 INCH DIAMETER, 24 INCH LONG AND SPACED AT 12 INCHES CENTER TO CENTER
   C. CHAIRS SUPPORTING DOWEL BARS SHALL BE NON-METALLIC

8. USE 1.25" SCH 40 PVC CONDUITS UNDER THE CONCRETE PAVEMENT.
9. USE 12" THICK CRUSHED CONCRETE BASE COURSE OVER SELECT FILL WITH MINIMUM BASE CLEARANCE OVER SHW OF 3'. IF BASE CLEARANCE OF 3' CANNOT BE MET, INCLUDE AN UNDERDRAIN SYSTEM PER FDOT STANDARD PLANS INDEX 446-001. PROVIDE A MINIMUM OF 1' BASE CLEARANCE OVER SHW.

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RAMP CONCRETE PAVEMENT DETAILS

SHEET NO. D-1

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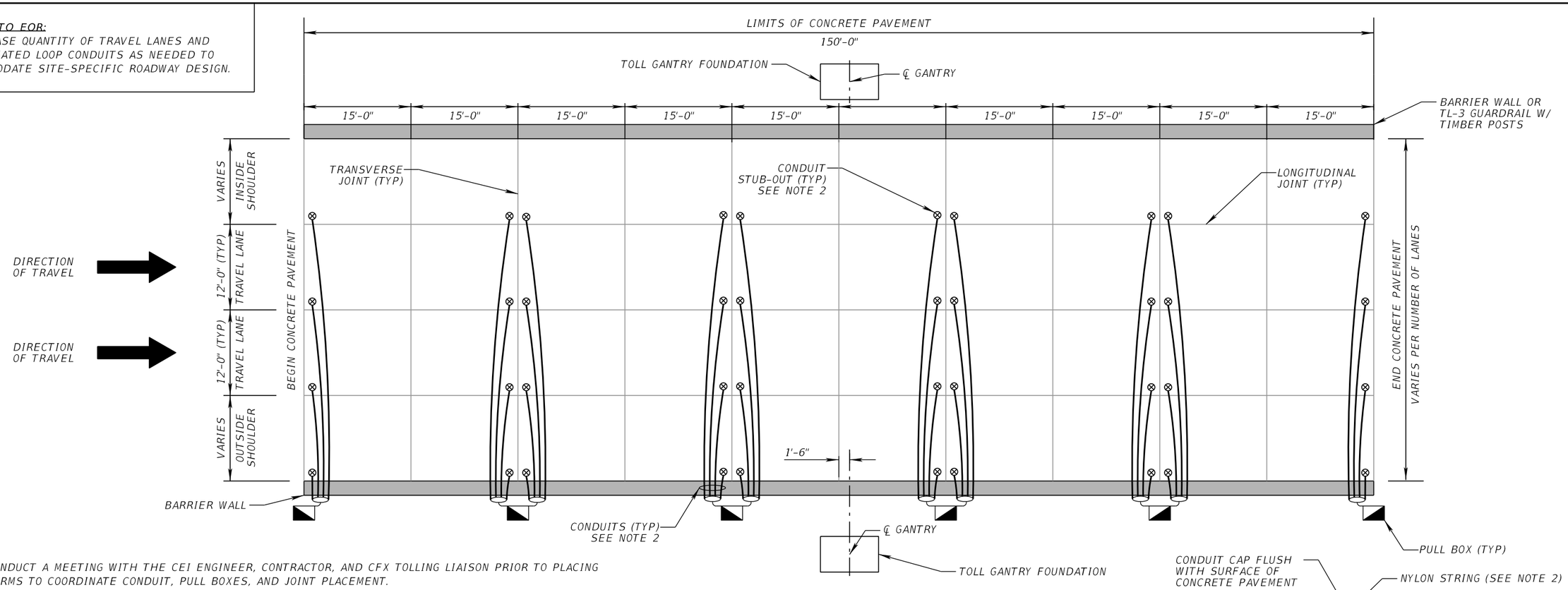
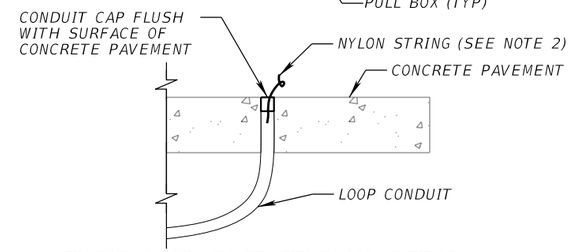
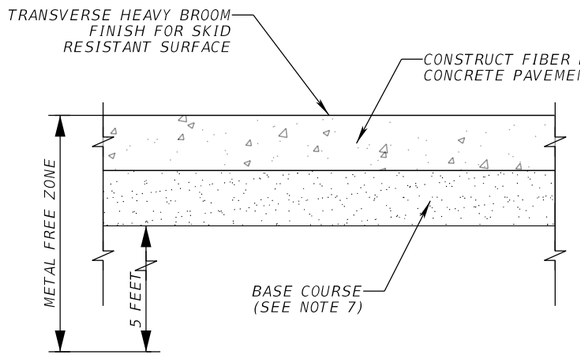
NOTE TO EOR:
INCREASE QUANTITY OF TRAVEL LANES AND ASSOCIATED LOOP CONDUITS AS NEEDED TO ACCOMODATE SITE-SPECIFIC ROADWAY DESIGN.



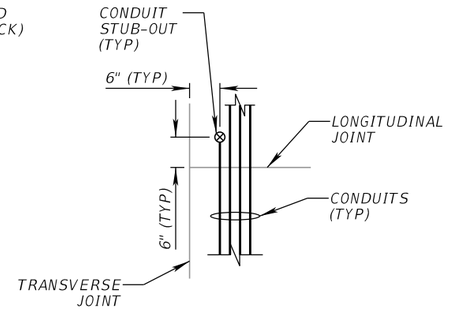
PLAN VIEW



TYPICAL CONDUIT STUB-UP DETAIL



TYPICAL CONCRETE PAVEMENT SLAB



TYPICAL CONDUIT DETAIL

NTS

NOTES:

1. CONDUCT A MEETING WITH THE CEI ENGINEER, CONTRACTOR, AND CFX TOLLING LIAISON PRIOR TO PLACING FORMS TO COORDINATE CONDUIT, PULL BOXES, AND JOINT PLACEMENT.

2. PLAN VIEW IS DIAGRAMMATIC IN NATURE. SEE TYPICAL CONDUIT DETAIL THIS SHEET FOR LOCATIONS AND OFFSET DIMENSIONS OF LOOP CONDUITS AND STUB-OUTS. PROVIDE COMMERCIAL GRADE ALL-PURPOSE NYLON STRING EXTENDING 1" ABOVE CONCRETE AT ALL CONDUIT STUB-OUT LOCATIONS.

3. FOR CONCRETE PAVEMENT FINISHED ELEVATIONS, SEE ROADWAY PLANS.

4. A METAL FREE ZONE SHALL BE CREATED AROUND AND BELOW THE TOLL PAVEMENT AREA. THIS ZONE SHALL EXTEND A MINIMUM OF 5 FEET OUTSIDE THE EDGE AND BELOW THE TOLL SITE AREA AND A MINIMUM 5 FEET BELOW THE BOTTOM OF THE TOLLING PAVEMENT SECTION (INCLUDING BASE MATERIAL). THE TOLL SITE AREA WHICH ENCOMPASSES ALL TOLLING EQUIPMENT AND IMPROVEMENTS SHALL INCLUDE, BUT NOT BE LIMITED TO, THE TOLL PAVEMENT AREA, TOLL GANTRY STRUCTURE, CABINETS, ALL PULL BOXES, GENERATOR , FUEL TANK AND METER. SEE SHEETS C-1 AND C-2. THE GANTRY FOUNDATIONS, DRILLED SHAFTS AND CABINENT APRON CAN USE STANDARD REINFORCEMENT.

5. PIPES CARRYING OR INDENDED TO CARRY FLUIDS SHALL BE LOCATED A MINIMUM OF 10 FEET FROM THE TOLL SITE AND MINIMUM OF 5 FEET FROM LOOP CONDUITS.

6. HIGH VOLTAGE OR CURRENT TRANSMISSION CABLING SHALL BE A MINIMUM OF 100 FEET FROM THE CLOSEST POINT OF THE TOLL GANTRY.

7. FIBER REINFORCED POLYMER (FRP) REQUIREMENTS:

   A. DOWEL BARS - 1.5 INCH DIAMETER, 18 INCH LONG AND SPACED AT 10 INCHES CENTER TO CENTER
   B. TIE BARS - 0.75 INCH DIAMETER, 24 INCH LONG AND SPACED AT 12 INCHES CENTER TO CENTER
   C. CHAIRS SUPPORTING DOWEL BARS SHALL BE NON-METALLIC

8. USE 1.25" SCH 40 PVC CONDUITS UNDER THE CONCRETE PAVEMENT.

9. USE 12" THICK CRUSHED CONCRETE BASE COURSE OVER SELECT FILL WITH MINIMUM BASE CLEARANCE OVER SHW OF 3'. IF BASE CLEARANCE OF 3' CANNOT BE MET, INCLUDE AN UNDER DRAIN SYSTEM PER FDOT STANDARD PLANS INDEX 446-001. PROVIDE A MINIMUM OF 1' BASE CLEARANCE OVER SHW.

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MAINLINE CONCRETE PAVEMENT DETAILS

SHEET NO. D-2

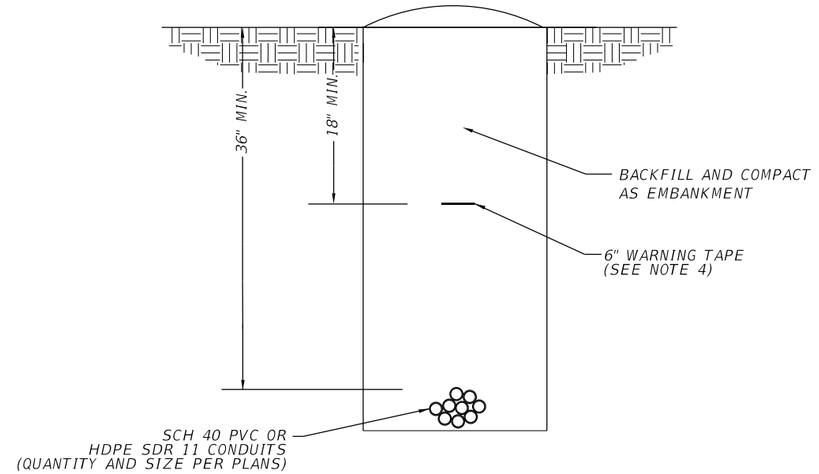
NOTES:

1. MAINTAIN A MINIMUM OF 2'-0" FROM EXISTING LANDSCAPE FEATURES.

2. TRENCH CONDUITS WITH SUFFICIENT TRENCH WIDTH TO ACCOMMODATE MECHANICAL COMPACTION EQUIPMENT CONFORMING TO THE LATEST FDOT STANDARD SPECIFICATIONS.

3. ROUTE CONDUIT TO AVOID OBSTRUCTIONS USING SWEEPING BENDS AROUND OR UNDER OBSTRUCTIONS.

4. WARNING TAPE REQUIREMENTS:
   - 3" TEXT HEIGHT
   - FOR COMMUNICATIONS CONDUIT, USE TEXT "CFX COMMUNICATIONS CABLE BURIED BELOW"
   - FOR POWER CONDUIT, USE TEXT "CFX ELECTRIC CABLE BURIED BELOW"



STANDARD CROSS SECTION OF OPEN TRENCH CONDUIT

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DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION					E-1

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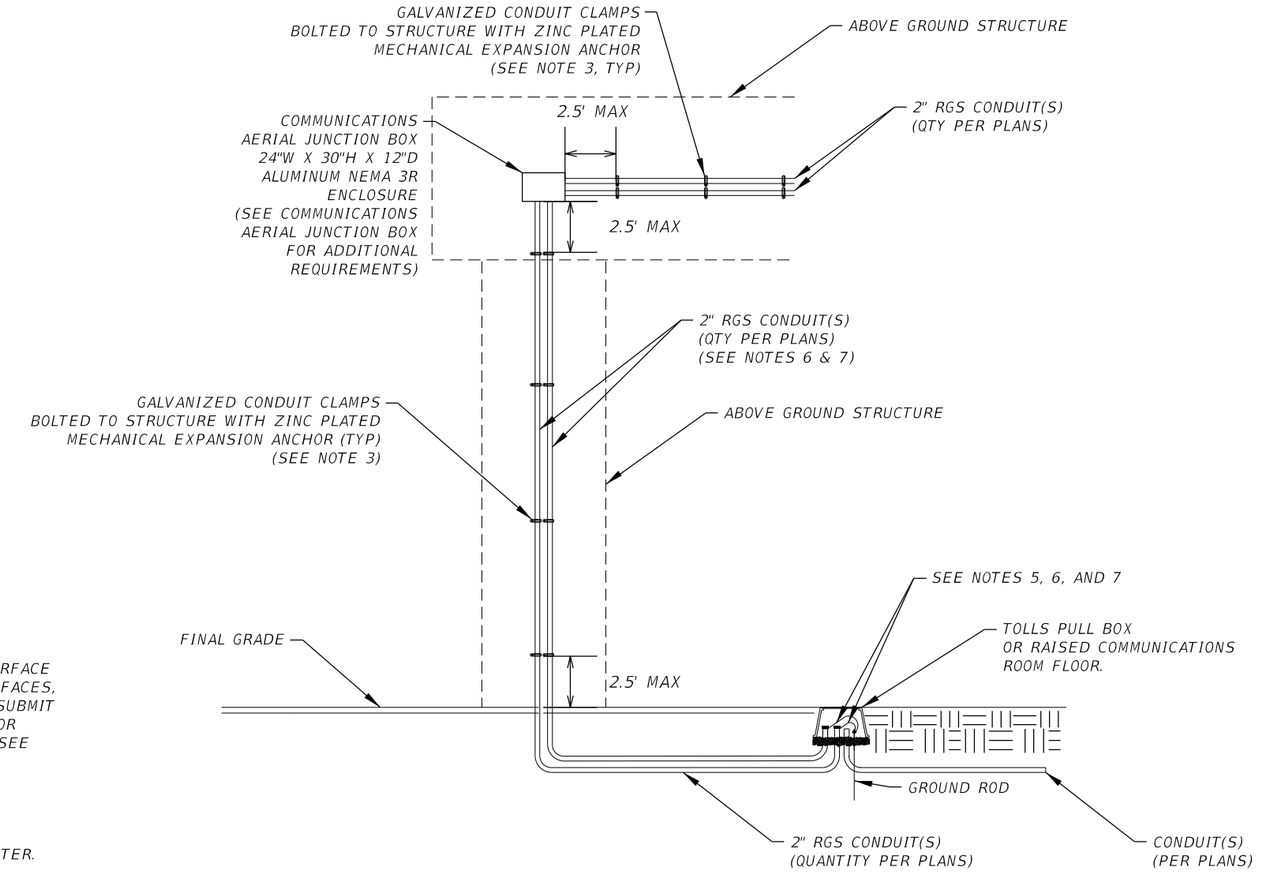

ABOVE GROUND CONDUIT

NOTES:

1. WHEN NEW CONDUIT IS INSTALLED ON A PAINTED SURFACE SUCH AS MSE WALLS, BARRIER WALLS, BUILDING SURFACES, ETC., PAINT THE CONDUIT TO MATCH THE SURFACE. SUBMIT PAINT COLORS AND PAINTING PROCEDURES TO CFX FOR APPROVAL PRIOR TO THE START OF PAINTING WORK. SEE CFX DESIGN CRITERIA PACKAGE FOR PAINTING REQUIREMENTS.
2. DO NOT EXCEED 270° IN CONDUIT BENDS.
3. SPACE CONDUIT STRAPS AT A MAXIMUM OF 5' ON CENTER.
4. LIQUIDTIGHT FLEXIBLE METAL CONDUIT IS PERMITTED FOR USE AT TRANSITIONS BETWEEN RGS CONDUITS AND EQUIPMENT/CONNECTED ELEMENTS.
5. PROVIDE GROUNDING BUSHINGS AT THE ENDS OF ALL INSTALLED METAL CONDUITS.
6. BOND THE ENDS OF RGS CONDUIT GROUNDING BUSHINGS TO THE GROUND ROD WITHIN THE PULL BOX OR MAIN GROUND BUSBAR WITHIN THE BUILDING WITH A #6 AWG GREEN INSULATED STRANDED COPPER BONDING JUMPER.
7. INSTALL A SINGLE DEDICATED #6 AWG GREEN INSULATED STRANDED COPPER GROUNDING CONDUCTOR WITHIN ONE RGS CONDUIT AND BOND TO ALL GROUNDING ELEMENTS. BOND THE EQUIPMENT GROUNDING CONDUCTOR TO THE GROUND LUG IN THE AERIAL JUNCTION BOX AND GROUND ROD IN THE PULL BOX OR GROUND BUSBAR IN THE BUILDING.

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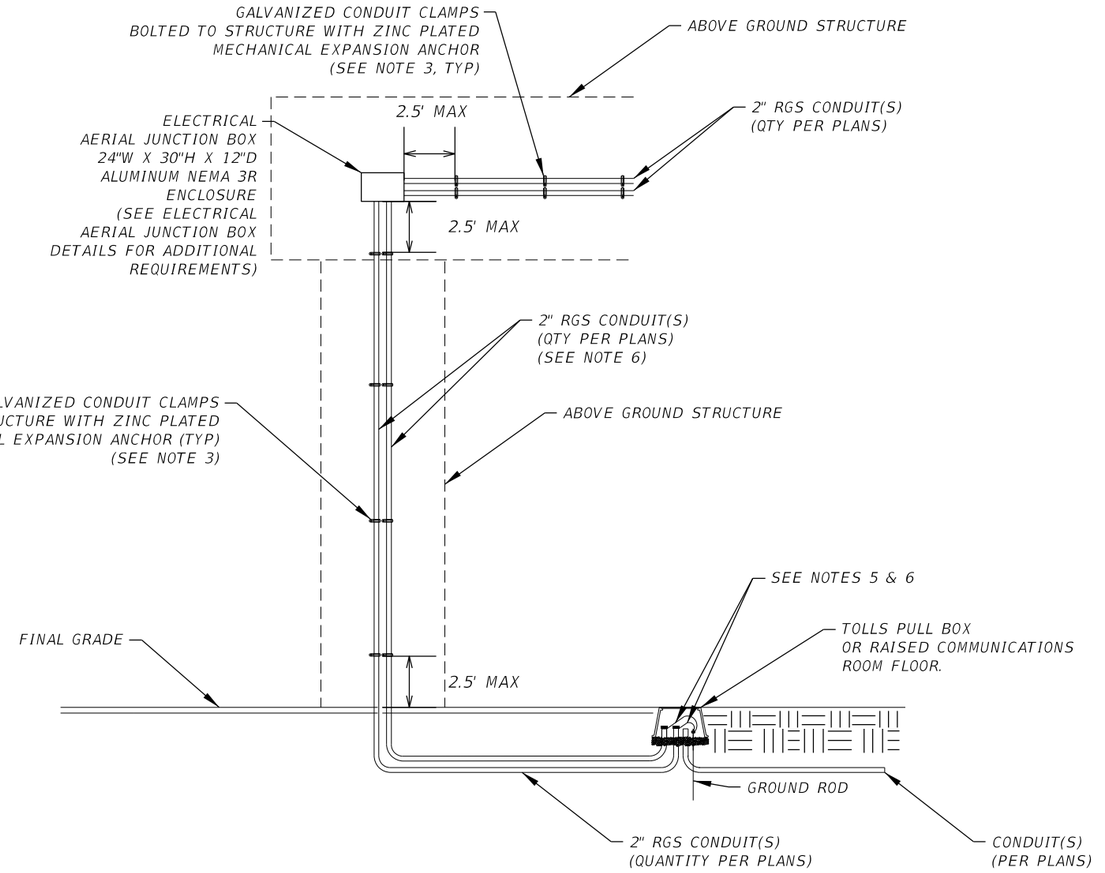
ABOVE GROUND COMMUNICATIONS CONDUIT DETAIL

SHEET NO. E-2



ABOVE GROUND CONDUIT

NOTES:

1. WHEN NEW CONDUIT IS INSTALLED ON A PAINTED SURFACE SUCH AS MSE WALLS, BARRIER WALLS, BUILDING SURFACES, ETC., PAINT THE CONDUIT TO MATCH THE SURFACE. SUBMIT PAINT COLORS AND PAINTING PROCEDURES TO CFX FOR APPROVAL PRIOR TO THE START OF PAINTING WORK. SEE CFX DESIGN CRITERIA PACKAGE FOR PAINTING REQUIREMENTS.
2. DO NOT EXCEED 270° IN CONDUIT BENDS.
3. SPACE CONDUIT STRAPS AT A MAXIMUM OF 5' ON CENTER.
4. LIQUIDTIGHT FLEXIBLE METAL CONDUIT IS PERMITTED FOR USE AT TRANSITIONS BETWEEN RGS CONDUITS AND EQUIPMENT/CONNECTED ELEMENTS.
5. PROVIDE GROUNDING BUSHINGS AT THE ENDS OF ALL INSTALLED METAL CONDUITS.
6. BOND THE ENDS OF RGS CONDUIT GROUNDING BUSHINGS TO THE GROUND ROD WITHIN THE PULL BOX OR MAIN GROUND BUSBAR WITHIN THE BUILDING WITH A #6 AWG GREEN INSULATED STRANDED COPPER BONDING JUMPER.

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DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION					E-3

VERSION: MARCH 2025

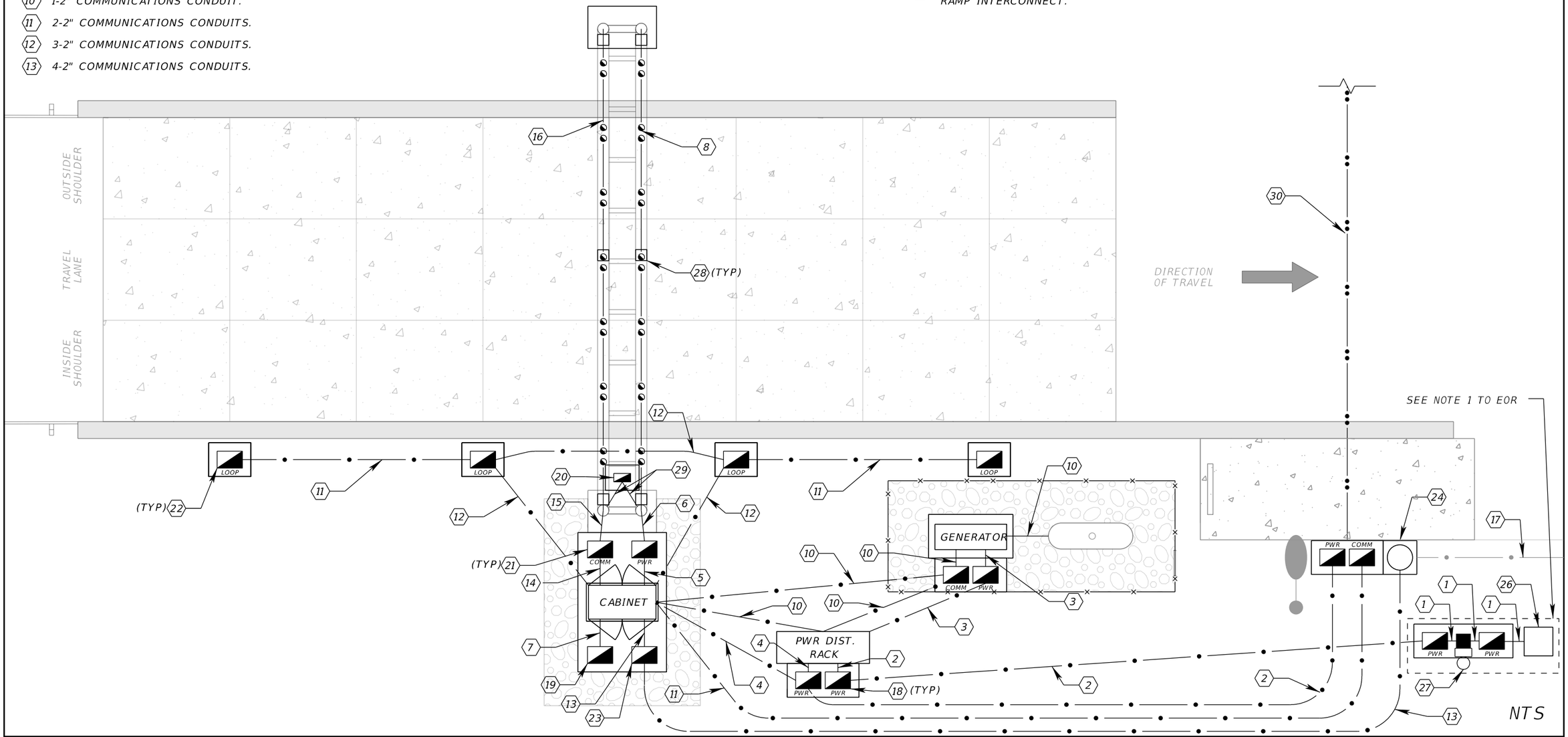
REFERENCE NOTES:

1. 1-2" POWER CONDUIT.
2. 2-2" POWER CONDUITS.
3. 3-2" POWER CONDUITS.
4. 4-2" POWER CONDUITS.
5. 8-2" POWER CONDUITS.
6. 1-6" POWER CONDUIT.
7. 1-2" GROUNDING CONDUIT.
8. 1-6"X6" POWER RACEWAY.
9. NOT USED
10. 1-2" COMMUNICATIONS CONDUIT.
11. 2-2" COMMUNICATIONS CONDUITS.
12. 3-2" COMMUNICATIONS CONDUITS.
13. 4-2" COMMUNICATIONS CONDUITS.
14. 8-2" COMMUNICATIONS CONDUITS.
15. 1-6" COMMUNICATIONS CONDUIT.
16. 1-6"X6" COMMUNICATIONS RACEWAY.
17. ITS FOC CONDUITS BY ITS CONTRACTOR.
18. POWER PULL BOX.
19. TOLLS GROUNDING PULL BOX.
20. GANTRY STRUCTURE GROUNDING PULL BOX.
21. COMMUNICATIONS PULL BOX.
22. LOOP PULL BOX.
23. FON PULL BOX.
24. ITS MANHOLE. COORDINATE WITH ITS.
25. SPARE PULL BOXES FOR FUTURE USE.
26. PROPOSED POWER COMPANY PAD-MOUNTED TRANSFORMER. COORDINATE LOCATION WITH UTILITY COMPANY.
27. TYPE P-II CONCRETE POLE(S) WITH METER AND DISCONNECT(S).
28. RACEWAY JUNCTION BOX.
29. 3/4" GROUNDING CONDUITS CAST WITHIN GANTRY STRUCTURE FOUNDATION. STUB-UP CONDUITS INSIDE OF GANTRY STRUCTURE POLE. SEE STRUCTURE GROUNDING DETAIL.
30. 2-2" POWER AND 2-2" COMMUNICATIONS CONDUITS FOR RAMP INTERCONNECT.

NOTES TO EOR:

1. LOCATE EQUIPMENT SUCH THAT METER IS 150' (MIN) FROM END OF TOLLING ZONE CONCRETE PAVEMENT. REFER TO NOTE 3 SHEET C-1 FOR ADDITIONAL GUIDANCE.

2. MINIMIZE CONDUIT CROSSINGS WHERE POSSIBLE.



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RAMP CONDUIT PLAN

SHEET NO. E-4

VERSION: MARCH 2025

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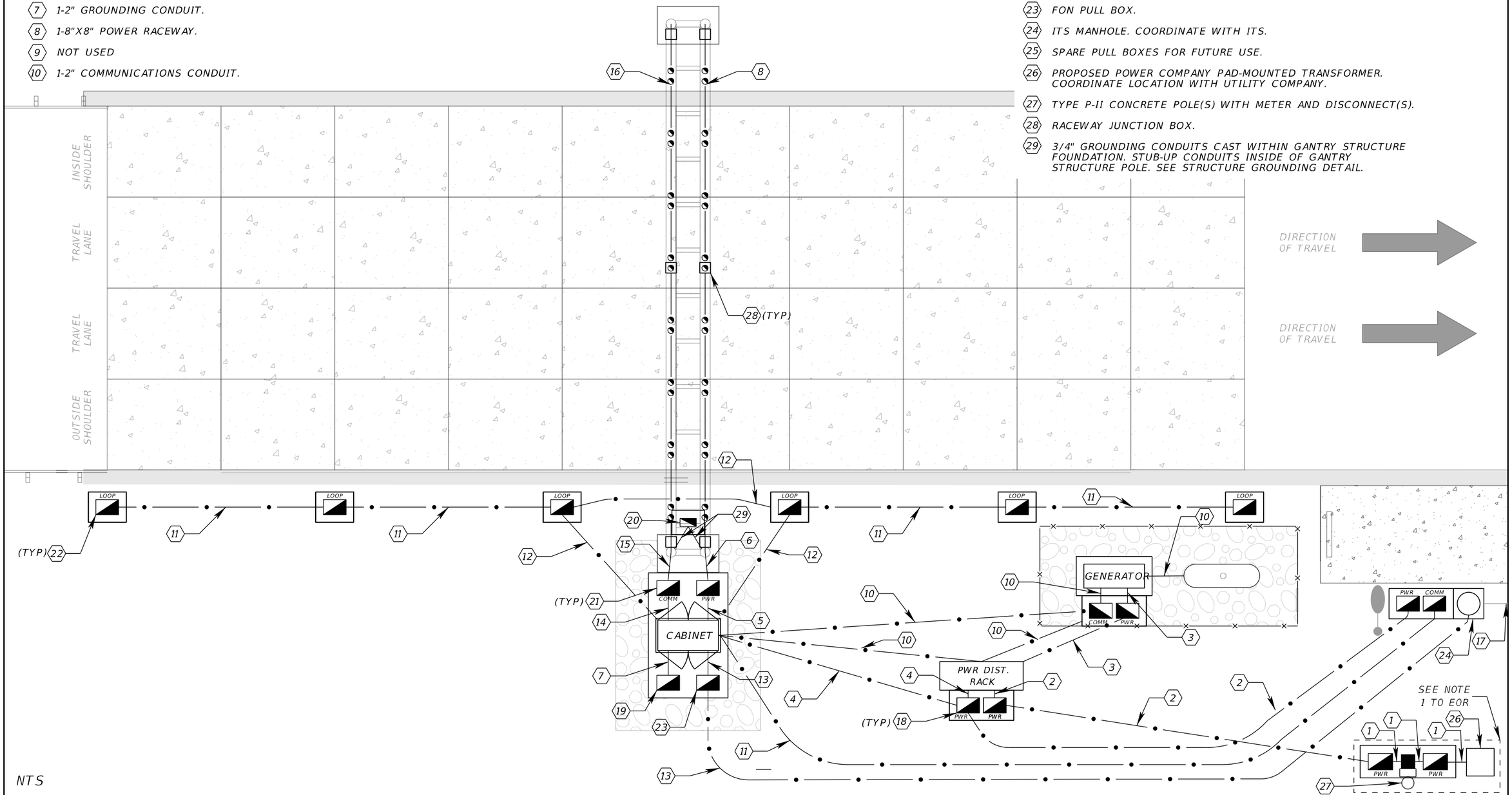
REFERENCE NOTES:

1. 1-2" POWER CONDUIT.
2. 2-2" POWER CONDUITS.
3. 3-2" POWER CONDUITS.
4. 4-2" POWER CONDUITS.
5. 8-2" POWER CONDUITS.
6. 1-6" POWER CONDUIT.
7. 1-2" GROUNDING CONDUIT.
8. 1-8"X8" POWER RACEWAY.
9. NOT USED
10. 1-2" COMMUNICATIONS CONDUIT.
11. 2-2" COMMUNICATIONS CONDUITS.
12. 3-2" COMMUNICATIONS CONDUITS.
13. 4-2" COMMUNICATIONS CONDUITS.
14. 8-2" COMMUNICATIONS CONDUITS.
15. 1-6" COMMUNICATIONS CONDUIT.
16. 2-8"X8" COMMUNICATIONS RACEWAYS.
17. ITS FOC CONDUITS BY ITS CONTRACTOR.
18. POWER PULL BOX.
19. TOLLS GROUNDING PULL BOX.
20. GANTRY STRUCTURE GROUNDING PULL BOX.
21. COMMUNICATIONS PULL BOX.
22. LOOP PULL BOX.
23. FON PULL BOX.
24. ITS MANHOLE. COORDINATE WITH ITS.
25. SPARE PULL BOXES FOR FUTURE USE.
26. PROPOSED POWER COMPANY PAD-MOUNTED TRANSFORMER. COORDINATE LOCATION WITH UTILITY COMPANY.
27. TYPE P-II CONCRETE POLE(S) WITH METER AND DISCONNECT(S).
28. RACEWAY JUNCTION BOX.
29. 3/4" GROUNDING CONDUITS CAST WITHIN GANTRY STRUCTURE FOUNDATION. STUB-UP CONDUITS INSIDE OF GANTRY STRUCTURE POLE. SEE STRUCTURE GROUNDING DETAIL.

NOTES TO EOR:

1. LOCATE EQUIPMENT SUCH THAT METER IS 150' (MIN) FROM END OF TOLLING ZONE CONCRETE PAVEMENT. REFER TO NOTE 3 SHEET C-1 FOR ADDITIONAL GUIDANCE

2. MINIMIZE CONDUIT CROSSINGS WHERE POSSIBLE.



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MAINLINE CONDUIT PLAN

SHEET NO. E-5

VERSION: MARCH 2025

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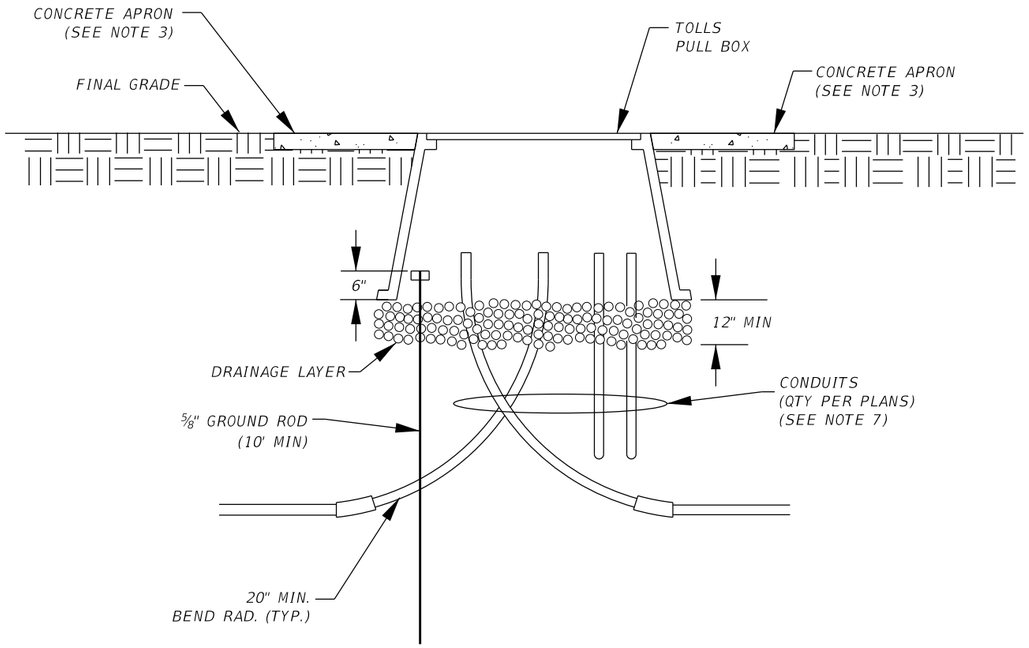

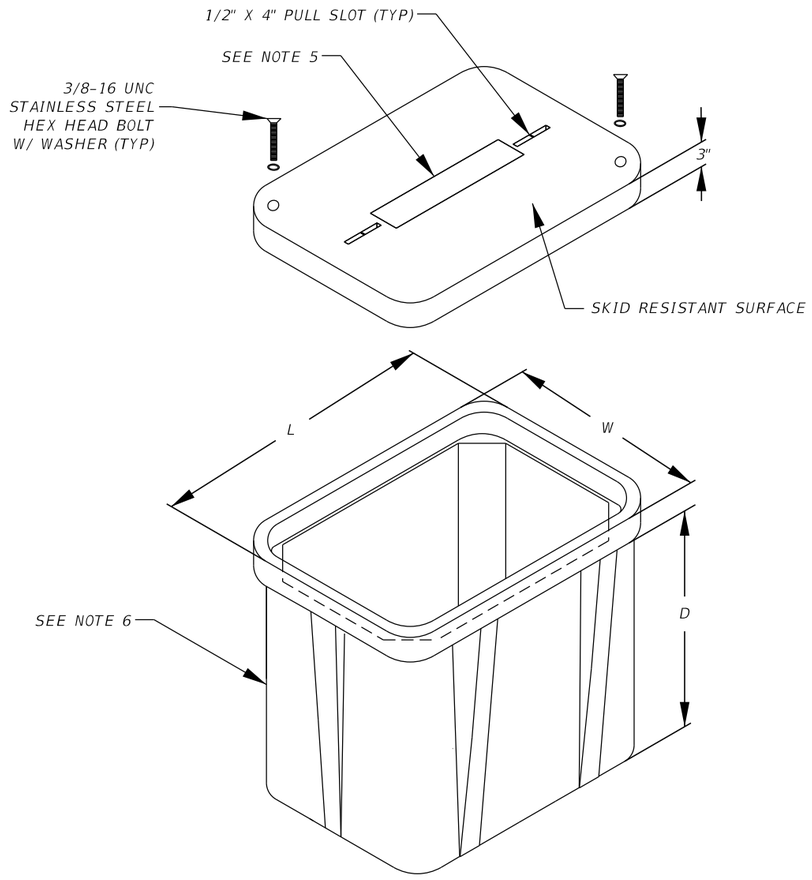

NOTES:

1. TAKE SPECIAL CARE AT ALL TIMES TO NOT DAMAGE ANY EXISTING CONDUIT, CABLING, OR FON. REPLACE ANY DAMAGE IN KIND AT THE CONTRACTOR'S EXPENSE.
2. INSTALLATION OF PULL BOX, ASSOCIATED EQUIPMENT AND MATERIALS IS INCIDENTAL TO THE PULL BOX PAY ITEM.
3. SEE CONCRETE APRON DETAILS FOR ADDITIONAL REQUIREMENTS.
4. SLOPE CONCRETE APRONS AWAY FROM THE CENTER OF PULL BOXES WITH A SLOPE 1/4" TO 1".
5. SEE GENERAL NOTES FOR PULL BOX COVER TEXT REQUIREMENTS.
6. GANTRY STRUCTURE GROUNDING PULL BOX DIMENSIONS: 12"W X 24"L X 24"D. ALL OTHER TOLLING PULL BOXES DIMENSIONS: 24"W X 36"L X 36"D.
7. EXTEND CONDUITS ENTERING PULL BOXES 2" (MIN) TO 4" (MAX) ABOVE THE TOP OF THE DRAINAGE LAYER.

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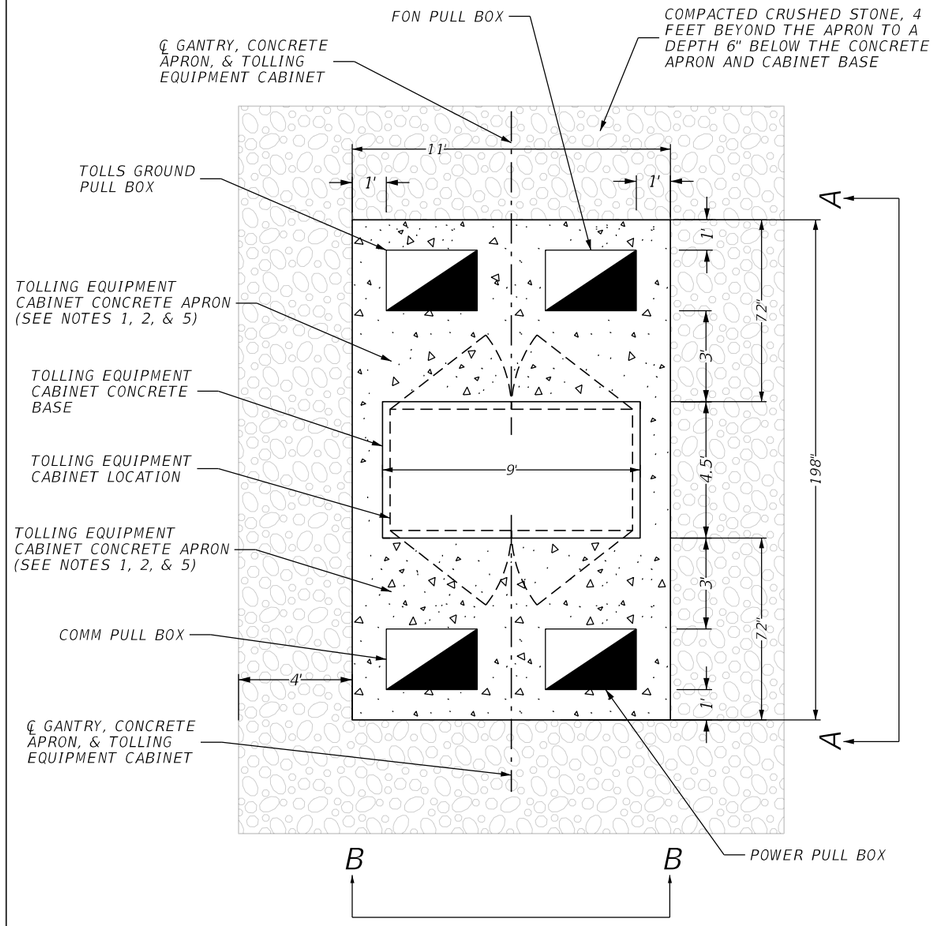
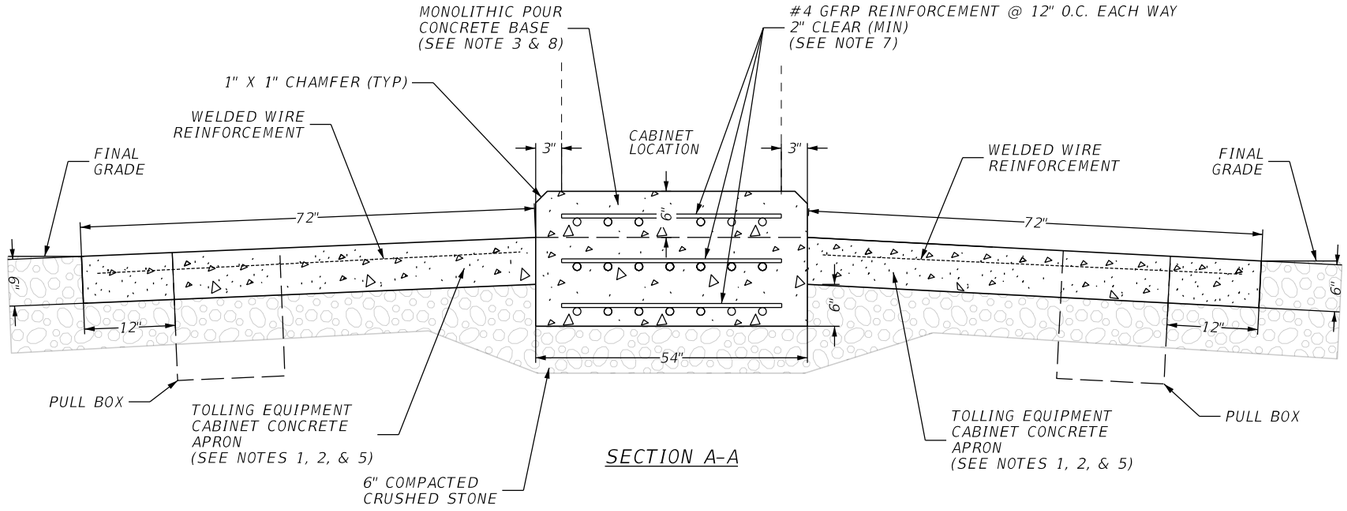
TOLLS PULL BOX DETAILS

SHEET NO.

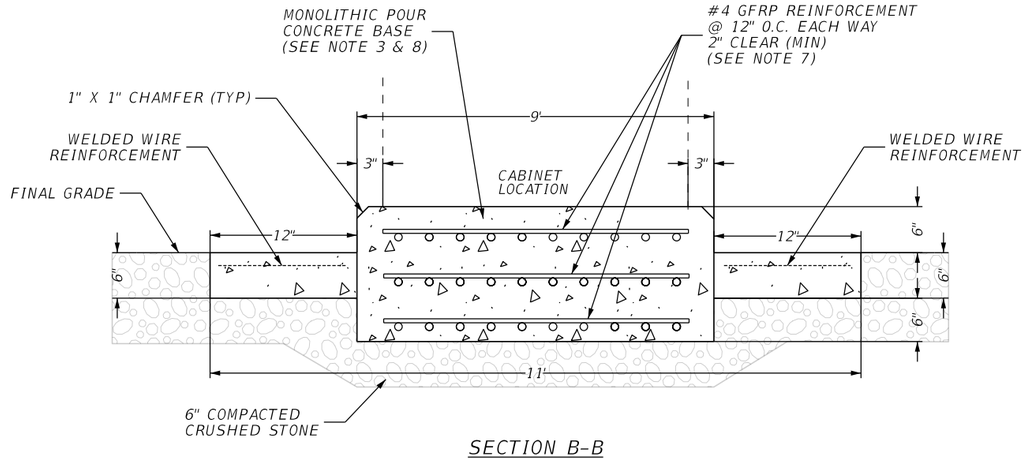
F-1



TOLLING EQUIPMENT CABINET PULL BOX CONCRETE APRON DETAIL



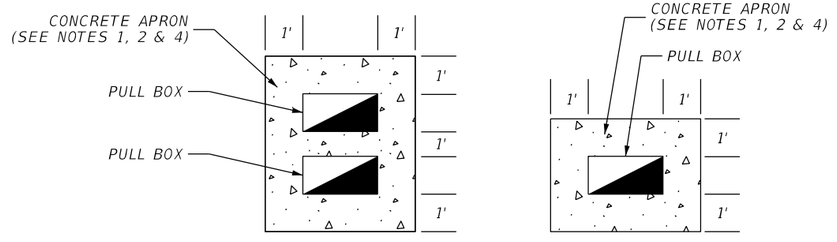
SECTION A-A



SECTION B-B

NOTES:

1. CONSTRUCT ALL PULL BOX CONCRETE APRONS WITH NON-STRUCTURAL 2500 PSI CONCRETE.
2. CONSTRUCT 6" THICK CONCRETE APRONS FOR ALL PULL BOXES.
3. CONSTRUCT 18" THICK CONCRETE BASE FOR THE TOLLING EQUIPMENT CABINET WITH NON-STRUCTURAL 4000 PSI CONCRETE.
4. SLOPE CONCRETE APRONS AWAY FROM THE CENTER OF PULL BOXES WITH A SLOPE OF 1/4" TO 1".
5. SLOPE TOLLING EQUIPMENT CABINET CONCRETE APRON AWAY FROM THE TOLLING EQUIPMENT CABINET CONCRETE BASE WITH A 4% SLOPE.
6. CAST IN PLACE THE CONDUIT SWEEPS FOR THE TOLLING EQUIPMENT CABINET BASE. CONDUITS NOT SHOWN IN THIS DETAIL FOR GRAPHICAL CLARITY. SEE TOLLING EQUIPMENT CABINET CONDUIT LAYOUT DETAILS FOR ADDITIONAL REQUIREMENTS.
7. MAINTAIN 3" SEPARATION BETWEEN ENDS OF GFRP REINFORCEMENT AND EDGES OF CONCRETE FORMWORK.
8. SCHEDULE A COORDINATION MEETING WITH THE CEI ENGINEER AND TOLLING LIASON PRIOR TO CONSTRUCTING THE TOLLING EQUIPMENT CABINET CONCRETE BASE. SEE TOLLING EQUIPMENT CABINET CONDUIT LAYOUT FOR ADDITIONAL REQUIREMENTS.
9. SOIL BENEATH THE EQUIPMENT CABINET CONCRETE APRON AND BASE SHALL HAVE 1.5 KSF BEARING STRENGTH.



TOLLS PULL BOX CONCRETE APRON DETAILS

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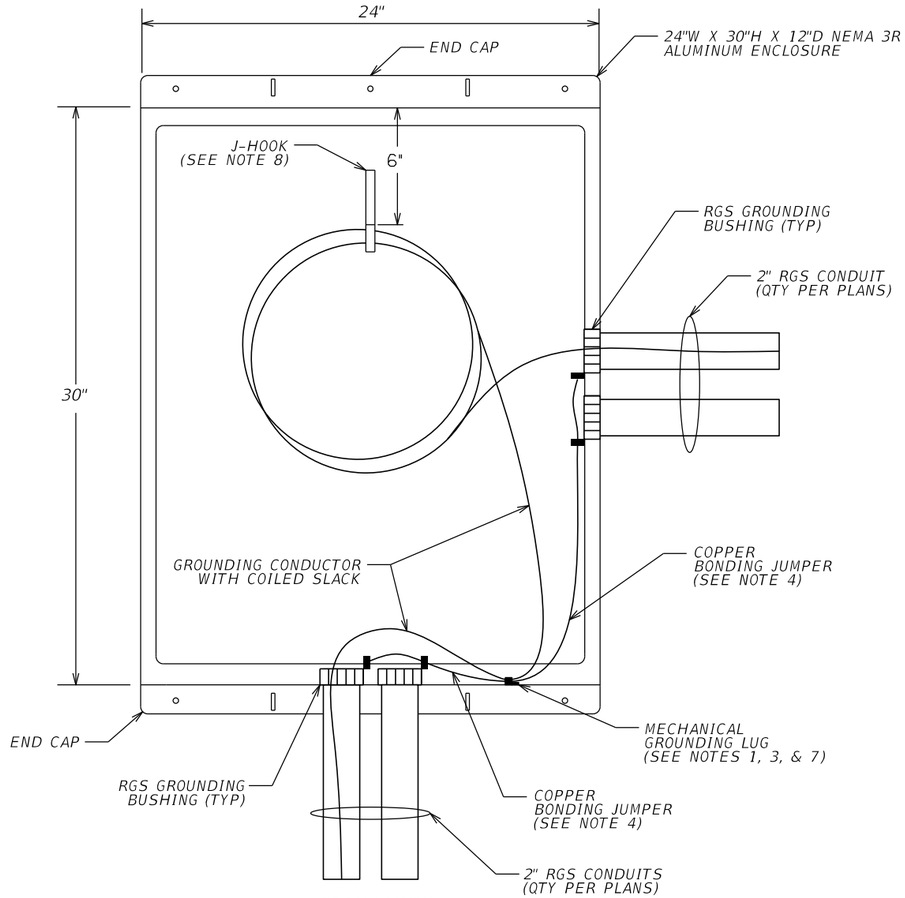
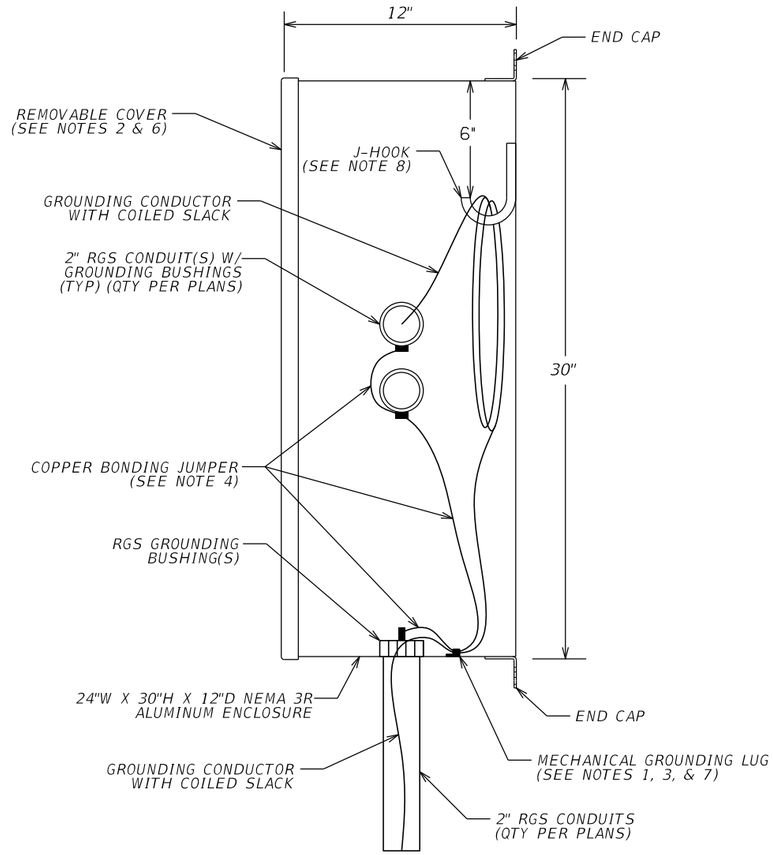
REVISIONS						FOR INFORMATIONAL PURPOSES ONLY	CENTRAL FLORIDA EXPRESSWAY AUTHORITY	CENTRAL FLORIDA EXPRESSWAY AUTHORITY	CONCRETE APRON DETAILS	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION					F-2

VERSION: MARCH 2025



FRONT VIEW
(SEE NOTE 5)



SIDE VIEW

NOTES:

1. ALUMINUM SOLDERLESS MECHANICAL LUG, RATED FOR COPPER WIRE, ATTACHED TO JUNCTION BOX WITH BURNDY LAY-IN ZINC PLATED ATTACHMENT HARDWARE.
2. ATTACH REMOVABLE COVER TO ENCLOSURE WITH GALVANIZED STEEL SCREWS.
3. INSTALL 2-HOLE MOUNT, 2-CONDUCTOR LUG. BOND CIRCUIT GROUNDING CONDUCTOR TO THE LUG, REMOVING INSULATION ONLY AT THE GROUND LUG. GROUNDING CONDUCTOR MUST REMAIN CONTINUOUS (UN-CUT) THROUGH THE LUG.
4. BOND ALL CONDUITS AND JUNCTION BOX TOGETHER WITH A CONTINUOUS, BARE COPPER BONDING JUMPER, GROUNDING CONDUIT BUSHINGS, AND A SINGLE MECHANICAL GROUNDING LUG. SIZE COPPER BONDING JUMPER PER NEC.
5. JUNCTION BOX COVER NOT SHOWN THIS VIEW FOR GRAPHICAL CLARITY.
6. INSTALL LAMACOID TAG OR AN APPROVED EQUIVALENT ENGRAVED PLASTIC NAMEPLATE ON THE JUNCTION BOX COVER WITH THE FOLLOWING TEXT:
   TOLLS POWER.
7. APPLY ANTI-OXIDANT COMPOUND TO THE MATING SURFACE OF THE GROUND LUG AND JUNCTION BOX AND WIPE CLEAN EXCESS COMPOUND.
8. 2" J-HOOK FOR COILED CABLE SLACK, 1/2" ○ ROLLED ALUMINUM, WELDED TO THE REAR INSIDE WALL OF THE JUNCTION BOX.

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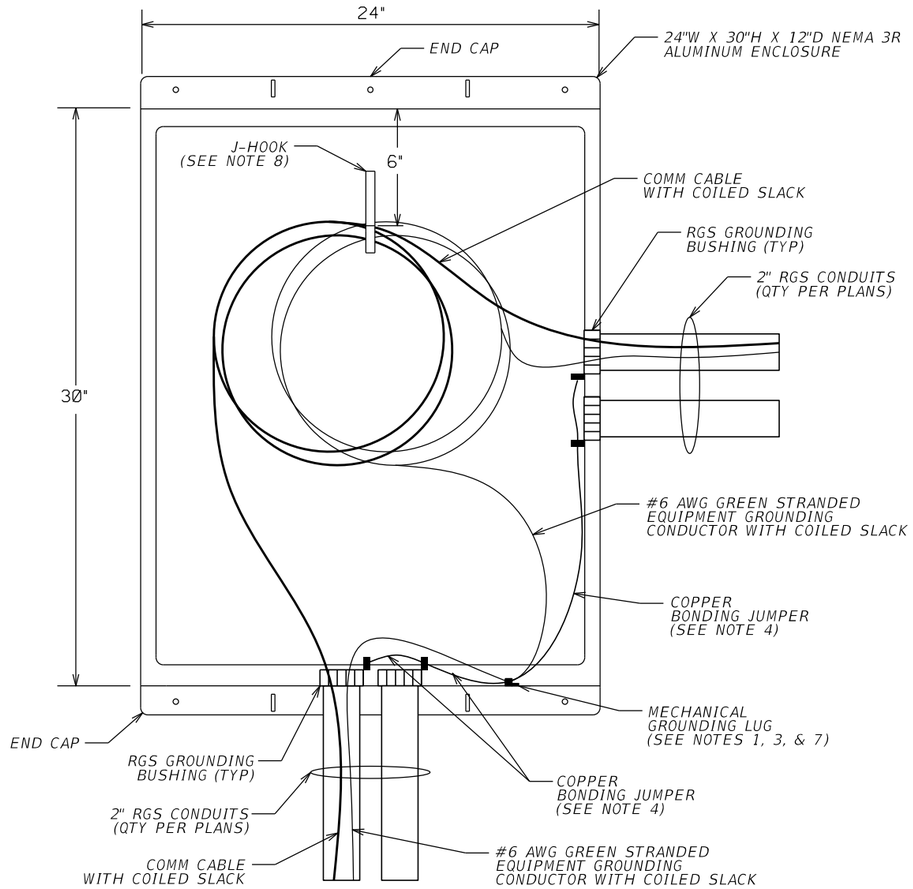
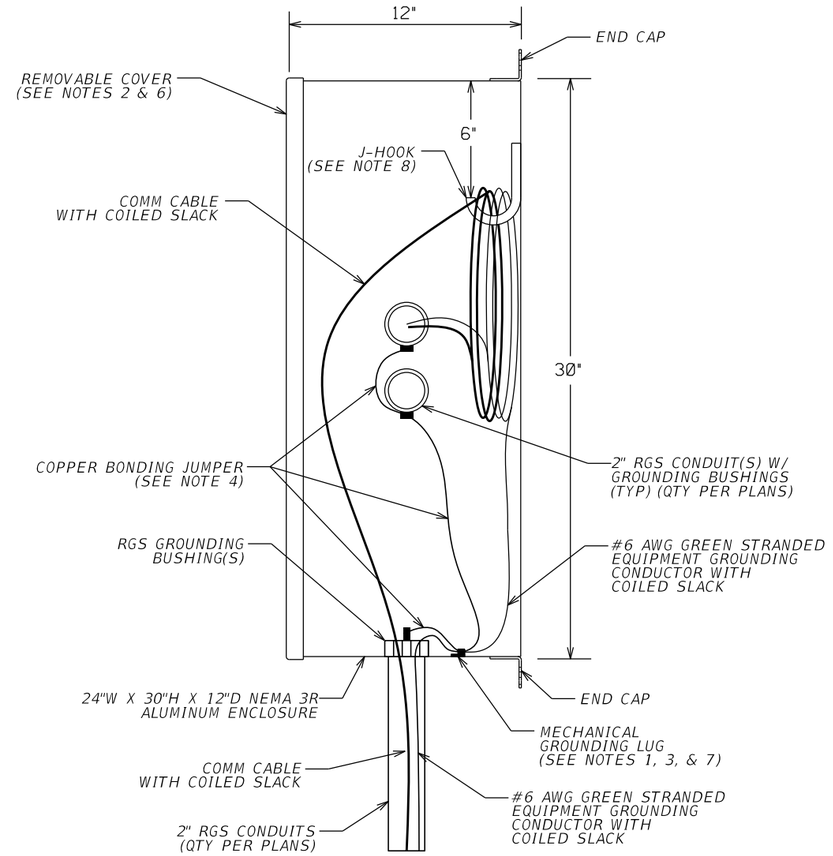
REVISIONS						FOR INFORMATIONAL PURPOSES ONLY	CENTRAL FLORIDA EXPRESSWAY AUTHORITY	CENTRAL FLORIDA EXPRESSWAY AUTHORITY	ELECTRICAL AERIAL JUNCTION BOX DETAILS	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION					F-3

VERSION: MARCH 2025



FRONT VIEW
(SEE NOTE 5)



SIDE VIEW

NOTES:

1. ALUMINUM SOLDERLESS MECHANICAL LUG, RATED FOR COPPER WIRE, ATTACHED TO JUNCTION BOX WITH BURNDY LAY-IN ZINC PLATED ATTACHMENT HARDWARE.
2. ATTACH REMOVABLE COVER TO ENCLOSURE WITH GALVANIZED STEEL SCREWS.
3. USE 2-HOLE MOUNT, 2-CONDUCTOR LUG. BOND EQUIPMENT GROUNDING CONDUCTOR TO THE LUG, REMOVING INSULATION ONLY AT THE GROUND LUG.
4. BOND ALL CONDUITS AND JUNCTION BOX TOGETHER WITH A CONTINUOUS, BARE COPPER BONDING JUMPER, GROUNDING CONDUIT BUSHINGS, AND A SINGLE MECHANICAL GROUNDING LUG. SIZE COPPER BONDING JUMPER PER NEC.
5. JUNCTION BOX COVER NOT SHOWN THIS VIEW FOR GRAPHICAL CLARITY.
6. INSTALL LAMACOID TAG OR AN APPROVED EQUIVALENT ENGRAVED PLASTIC NAMEPLATE ON THE JUNCTION BOX COVER WITH THE FOLLOWING TEXT:
   TOLLS COMM.
7. APPLY ANTI-OXIDANT COMPOUND TO THE MATING SURFACE OF THE GROUND LUG AND JUNCTION BOX AND WIPE CLEAN EXCESS COMPOUND.
8. 2" J-HOOK FOR COILED CABLE SLACK, 1/2" ∅ ROLLED ALUMINUM, WELDED TO THE REAR INSIDE WALL OF THE JUNCTION BOX.

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COMMUNICATIONS AERIAL JUNCTION BOX DETAILS

SHEET NO.

F-4

VERSION: MARCH 2025

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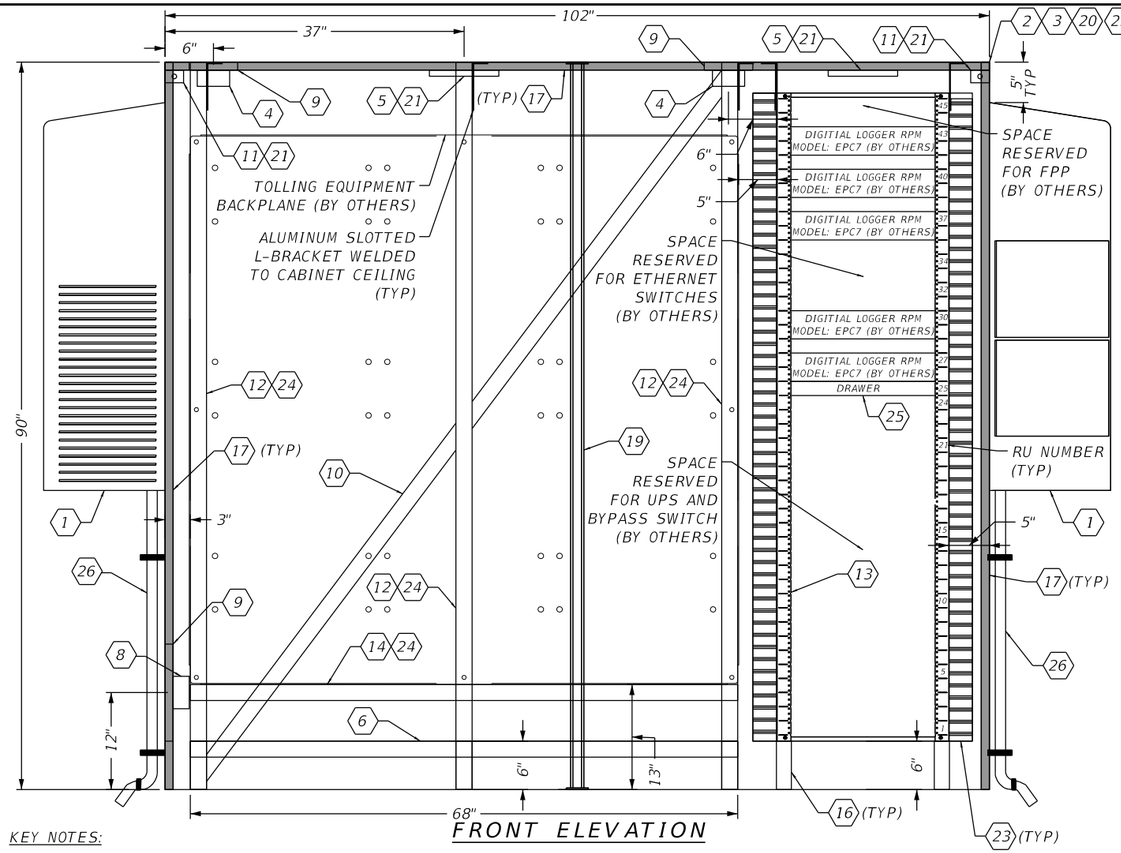
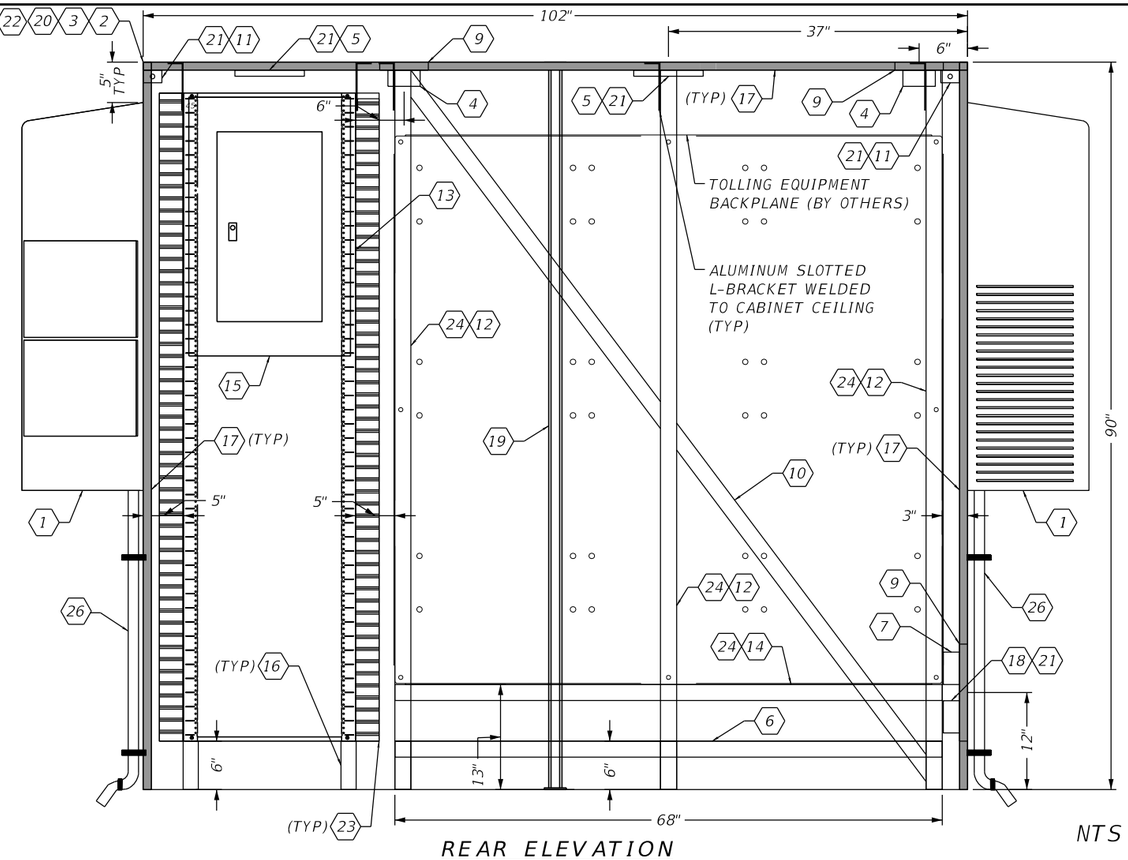


FRONT ELEVATION



REAR ELEVATION

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KEY NOTES:

1. THERMAL EDGE WITHOUT HEATER, 240 V, NEMA 4X 304 STAINLESS STEEL, OUTDOOR AIR CONDITIONER WITH LEAD-LAG SYSTEM, OR CFX APPROVED EQUIVALENT. CABINET MANUFACTURER SHALL INSTALL THE AIR CONDITIONER TO MAINTAIN UL RATED NEMA 4X ASSEMBLY. PROVIDE CHORD AND PLUG CONNECTION TO THE RECEPTACLE. PROVIDE DRAIN PIPE EXTENDED FROM THE A/C TO PROPOSED GRADE. THE LEAD-LAG SHALL BE CONFIGURED BY THE CONTRACTOR TO WORK IN THE COOLING PHASE FOR INTERNAL TEMPERATURE NOT TO EXCEED 75 DEGREES. BOTH AC UNITS SHALL COME WITH ONE PLR WIRED TO BOTH UNITS USING THE MODIFIED DEFAULT PROGRAM. BOTH UNITS SHALL HAVE MODBUS RTU WIRE FOR REMOTE MONITORING. CONTRACTOR SHALL REQUEST THAT THE LOCAL MANUFACTURER'S REPRESENTATIVE BE ON SITE FOR AC START UP AND CHANGES TO THE DEFAULT PROGRAM. REFER TO SHEETS I-11 AND I-12 FOR ADDITIONAL INFORMATION RELATED TO BTU AC UNIT SIZING BASED ON THE SPECIFIC TOLL LANE CONFIGURATION.
2. 90"H X 102"W X 48"D TOLLING EQUIPMENT CABINET. NEMA 3R RATED, 0.125" 5052 ALUMINUM CONSTRUCTION WITH NATURAL MILL FINISH. INCLUDES DOUBLE DOOR ACCESS ON BOTH THE FRONT AND THE REAR OF THE CABINET WITH 3-POINT MAIN DOOR LATCHING, 3/4" DIAMETER GALVANIZED STEEL HANDLE, GALVANIZED STEEL PROVISIONS FOR PAD LOCKING, DOOR WIND STAY BRACKETS AT THE BOTTOM ONLY OF ALL DOORS, CLOSED CELL NEOPRENE GASKETS FOR WEATHER TIGHT SEAL, REMOVABLE CENTER DOOR POST, NO DOOR LOUVERS, OPEN BOTTOM, INCLUDES PROVISIONS FOR PAD MOUNTING, WITH R-4 RATED INSULATION INSTALLED ON ALL INTERIOR WALLS AND DOORS. DOORS AND LOCKING MECHANISMS MUST BE COMPATIBLE WITH CFX CYBERLOCK MODEL CL2-TC1. CABINET WIND LOAD RATING: 170 MPH.
3. ALUMINUM SUN SHIELDS ON ALL SIDES, TOP, AND DOORS OF CABINET WITH 1" STAND OFF FROM CABINET (TYP), COORDINATE WITH AIR CONDITIONER PENETRATIONS. TOP SUN SHIELDS SHALL EXTEND 12" BEYOND THE FRONT AND REAR DOORS OF THE CABINET.
4. 240 V, 20 A, NEMA L6-20R TWIST-LOCK RECEPTACLE, 1-GANG BOX, MOUNTED TO PANEL.
5. 120 VAC, 10 W, LED LIGHT. MOUNT TO FRONT AND REAR OF CABINET, CENTERED ABOVE BOTH THE BACKPLANES AND EQUIPMENT RACK, MOUNTING BRACKET ANGLED 45° TOWARDS INSIDE OF CABINET.
6. REMOVABLE ALUMINUM PLATFORM WITH SKID RESISTANT SURFACE. STAND DIMENSIONS: 6"H X 68"W X 24"D. MUST SUPPORT 600 LB (MIN).
7. 120 V, 20 A, NEMA 5-20R RECEPTACLE, 2-GANG, MOUNTED TO SIDE PANEL.
8. 120 V, 20 A, NEMA 5-20R GFCI RECEPTACLE, 2-GANG, MOUNTED TO SIDE PANEL.
9. ALUMINUM PANELS WELDED TO THE SIDE AND TOP OF THE CABINET. TOP PANEL DIMENSIONS: 6" X 6". SIDE PANEL DIMENSIONS: 12" X 12".
10. DIAGONAL CABINET STRUCTURAL SUPPORT BEAM WELDED TO BACKPLANE VERTICAL SUPPORT STRUCTURES.
11. INTEGRAL DOOR LIGHT SWITCH, WITH EACH SWITCH CONTROLLING THE NEAREST LIGHT ONLY.
12. VERTICAL BACKPLANE SUPPORT STRUCTURE(S). SLOTTED ALUMINUM STRUT CHANNEL, BOLTED TO SLOTTED L-BRACKET WELDED TO THE CABINET CEILING. PROVIDE 2-HOLE SQUARE MOUNT POST BASE STRUT MOUNTS FOR ATTACHING TO CONCRETE PAD.
13. 45 RU, 35" DEEP, 4-POST OPEN FRAME RACK. BOLT EQUIPMENT RACK TO THE SLOTTED L-BRACKET WELDED TO THE TOP OF THE CABINET.
14. HORIZONTAL BACKPLANE SUPPORT BRACKET. SLOTTED ALUMINUM STRUT CHANNEL, BOLTED TO BACKPLANE VERTICAL SUPPORT STRUCTURES.
15. RACK MOUNTED 30 CIRCUIT MCB PANELBOARD, 10 KAIC, SQUARE D MODEL NQ30L1C, NEMA 1 ENCLOSURE (OR CFX APPROVED EQUIVALENT).
16. EQIUPMENT RACK SUPPORT BRACKET. MUST SUPPORT 980 LBS (MIN) OF EQUIPMENT MOUNTED IN THE EQUIPMENT RACK.
17. 1" X 2" ALUMINUM CABINET STRUCTURAL SUPPORT BEAM(S) WELDED TO THE TOP AND SIDES OF THE CABINET.
18. 4" X 4" X 2" JUNCTION BOX FOR CABINET LIGHTS AND DOOR SWITCH CIRCUITS. LEAVE WIRES UNTERMINATED IN JUNCTION BOX.
19. REMOVABLE CENTER POST.
20. DOORS NOT SHOWN. EQUIP DOORS WITH CANE BOLT DROP ROD STOP, DOOR STIFFENERS, AND PRINT POUCH.
21. INSTALL CABINET LIGHTING CIRCUITS IN SPLIT LOOM TUBING, NEATLY DRESSED TO THE SIDES OF THE CABINET.
22. SEE CABINET MOUNTING DETAIL ON SHEET G-2.
23. PANDUIT 2" X 3" TYPE G WIRING DUCT WITH COVER.
24. BACKPLANE VERTICAL SUPPORT STRUCTURE(S) MUST SUPPORT 850 LBS (MIN) FOR EACH BACKPLANE.
25. RACK MOUNT, 12" DEEP, 1 RU PULL OUT DRAWER WITH LID.
26. MINIMUM 1/2" DIAMETER AC DRAIN PIPE. PIPE SHALL BE PVC OR CPVC. SECURE PIPE TO SUN SHIELD AND CONCRETE PAD.

GENERAL NOTES:

A. CABINET DOORS, CONDUITS, AND SUNSHIELDS NOT SHOWN THIS VIEW FOR GRAPHICAL CLARITY.
B. PROVIDE FOUR #2 KEYS WITH EACH CABINET.
C. PROVIDE FOUR CL2-TC1 CYBERLOCKS WITH EACH CABINET, TO BE CONFIGURED BY CFX AND INSTALLED BY THE TEC.
D. PROVIDE CANE BOLT DROP RODS ATTACHED TO THE INSIDE OF EACH DOOR WITH DOUBLE GUIDE BRACKETS (ONE AT THE TOP AND ONE AT THE BOTTOM LIP OF THE DOOR) TO ALLOW THE DROP ROD TO BE EXTENDED TO AND SECURED IN THE SURROUNDING CONCRETE SLAB A DEPTH OF 3".

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TOLLING EQUIPMENT CABINET DETAILS (1)

SHEET NO. G-1

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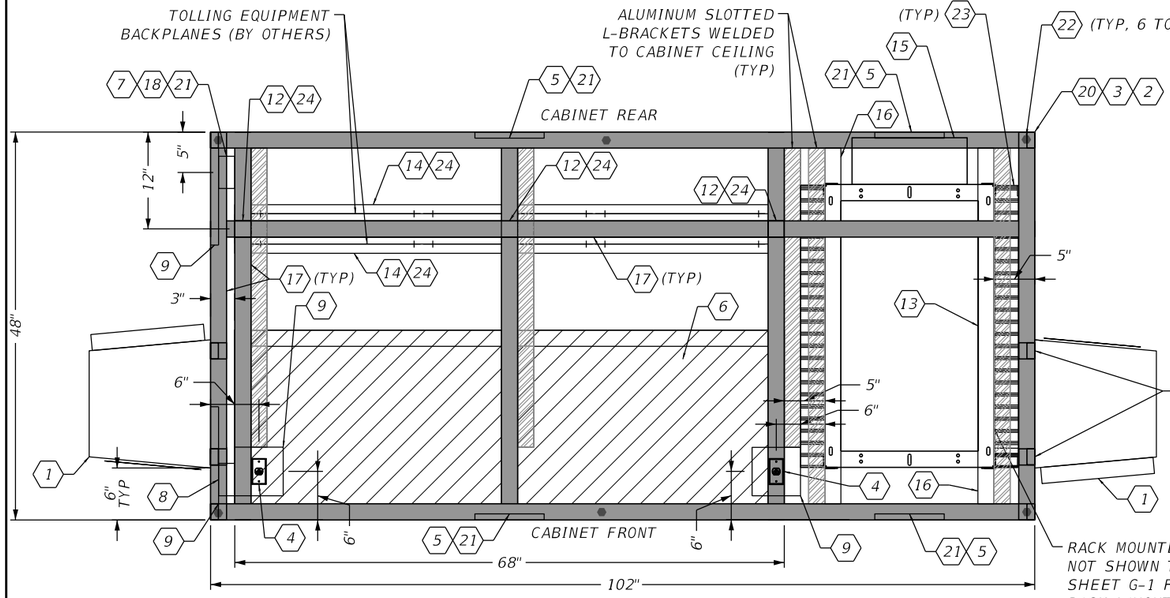
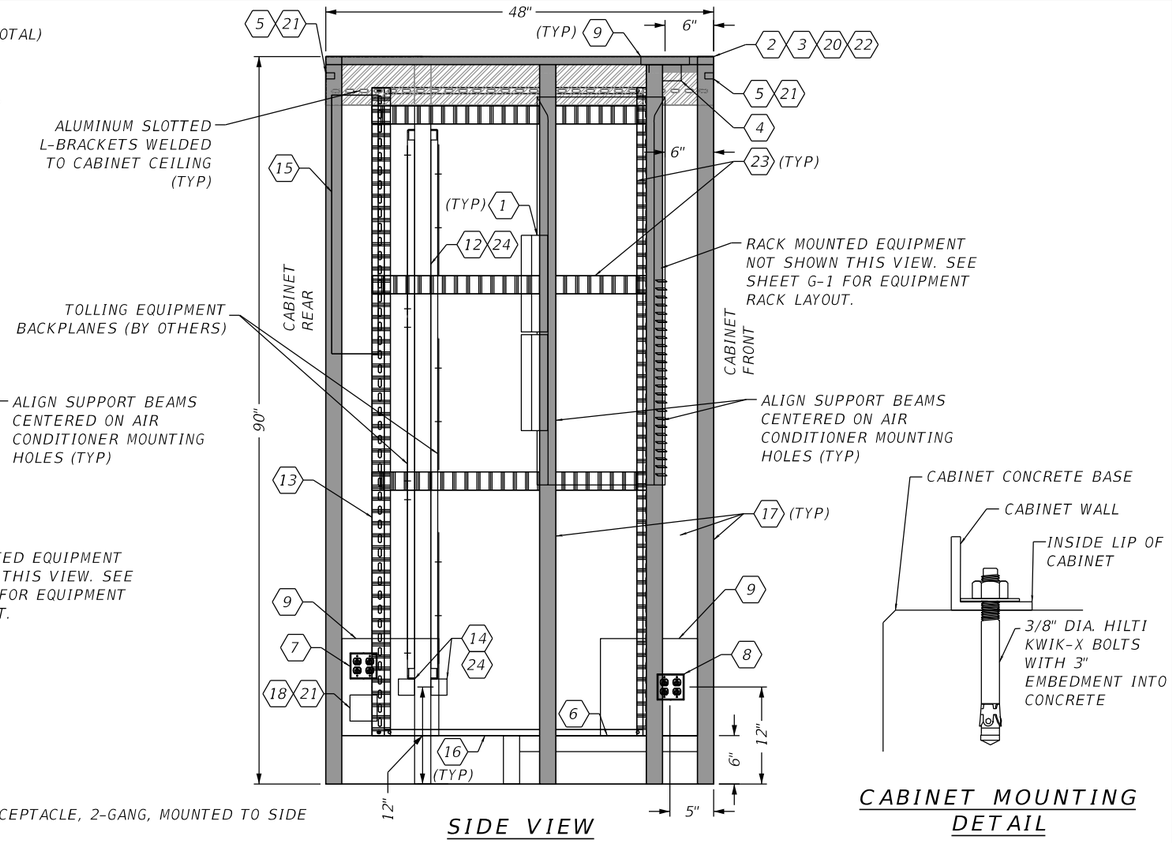


TOP VIEW



SIDE VIEW

CABINET MOUNTING DETAIL

KEY NOTES:

1. THERMAL EDGE WITHOUT HEATER, 240 V, NEMA 4X 304 STAINLESS STEEL, OUTDOOR AIR CONDITIONER WITH LEAD-LAG SYSTEM, OR CFX APPROVED EQUIVALENT. CABINET MANUFACTURER SHALL INSTALL THE AIR CONDITIONER TO MAINTAIN UL RATED NEMA 4X ASSEMBLY. PROVIDE CHORD AND PLUG CONNECTION TO THE RECEPTACLE. PROVIDE DRAIN PIPE EXTENDED FROM THE A/C TO PROPOSED GRADE. THE LEAD-LAG SHALL BE CONFIGURED BY THE CONTRACTOR TO WORK IN THE COOLING PHASE FOR INTERNAL TEMPERATURE NOT TO EXCEED 75 DEGREES. BOTH AC UNITS SHALL COME WITH ONE PLR WIRED TO BOTH UNITS USING THE MODIFIED DEFAULT PROGRAM. BOTH UNITS SHALL HAVE MODBUS RTU WIRE FOR REMOTE MONITORING. CONTRACTOR SHALL REQUEST THAT THE LOCAL MANUFACTURER'S REPRESENTATIVE BE ON SITE FOR AC START UP AND CHANGES TO THE DEFAULT PROGRAM. REFER TO SHEETS I-11 AND I-12 FOR ADDITIONAL INFORMATION RELATED TO BTU AC UNIT SIZING BASED ON THE SPECIFIC TOLL LANE CONFIGURATION.
2. 90"H X 102"W X 48"D TOLLING EQUIPMENT CABINET. NEMA 3R RATED, 0.125" 5052 ALUMINUM CONSTRUCTION WITH NATURAL MILL FINISH. INCLUDES DOUBLE DOOR ACCESS ON BOTH THE FRONT AND THE REAR OF THE CABINET WITH 3-POINT MAIN DOOR LATCHING, 3/4" DIAMETER GALVANIZED STEEL HANDLE, GALVANIZED STEEL PROVISIONS FOR PAD LOCKING, DOOR WIND STAY BRACKETS AT THE BOTTOM ONLY OF ALL DOORS, CLOSED CELL NEOPRENE GASKETS FOR WEATHER TIGHT SEAL, REMOVABLE CENTER DOOR POST, NO DOOR LOUVERS, OPEN BOTTOM, INCLUDES PROVISIONS FOR PAD MOUNTING, WITH R-4 RATED INSULATION INSTALLED ON ALL INTERIOR WALLS AND DOORS. DOORS AND LOCKING MECHANISMS MUST BE COMPATIBLE WITH CFX CYBERLOCK MODEL CL2-TC1. CABINET WIND LOAD RATING: 170 MPH.
3. ALUMINUM SUN SHIELDS ON ALL SIDES, TOP, AND DOORS OF CABINET WITH 1" STAND OFF FROM CABINET (TYP), COORDINATE WITH AIR CONDITIONER PENETRATIONS. TOP SUN SHIELDS SHALL EXTEND 12" BEYOND THE FRONT AND REAR DOORS OF THE CABINET.
4. 240 V, 20 A, NEMA L6-20R TWIST-LOCK RECEPTACLE, 1-GANG BOX, MOUNTED TO PANEL.
5. 120 VAC, 10 W, LED LIGHT. MOUNT TO FRONT AND REAR OF CABINET, CENTERED ABOVE BOTH THE BACKPLANES AND EQUIPMENT RACK, MOUNTING BRACKET ANGLED 45° TOWARDS INSIDE OF CABINET.
6. REMOVABLE ALUMINUM PLATFORM WITH SKID RESISTANT SURFACE. STAND DIMENSIONS: 6"H X 68"W X 24"D. MUST SUPPORT 600 LB (MIN).
7. 120 V, 20 A, NEMA 5-20R RECEPTACLE, 2-GANG, MOUNTED TO SIDE PANEL.
8. 120 V, 20 A, NEMA 5-20R GFCI RECEPTACLE, 2-GANG, MOUNTED TO SIDE PANEL.
9. ALUMINUM PANELS WELDED TO THE SIDE AND TOP OF THE CABINET. TOP PANEL DIMENSIONS: 6" X 6". SIDE PANEL DIMENSIONS: 12" X 12".
10. DIAGONAL CABINET STRUCTURAL SUPPORT BEAM WELDED TO BACKPLANE VERTICAL SUPPORT STRUCTURES.
11. INTEGRAL DOOR LIGHT SWITCH, WITH EACH SWITCH CONTROLLING THE NEAREST LIGHT ONLY.
12. VERTICAL BACKPLANE SUPPORT STRUCTURE(S). SLOTTED ALUMINUM STRUT CHANNEL, BOLTED TO SLOTTED L-BRACKET WELDED TO THE CABINET CEILING. PROVIDE 2-HOLE SQUARE MOUNT POST BASE STRUT MOUNTS FOR ATTACHING TO CONCRETE PAD.
13. 45 RU, 35" DEEP, 4-POST OPEN FRAME RACK. BOLT EQUIPMENT RACK TO THE SLOTTED L-BRACKET WELDED TO THE TOP OF THE CABINET.
14. HORIZONTAL BACKPLANE SUPPORT BRACKET. SLOTTED ALUMINUM STRUT CHANNEL, BOLTED TO BACKPLANE VERTICAL SUPPORT STRUCTURES.
15. RACK MOUNTED 30 CIRCUIT MCB PANELBOARD, 10 KAIC, SQUARE D MODEL NQ30L1C, NEMA 1 ENCLOSURE (OR CFX APPROVED EQUIVALENT).
16. EQUIPMENT RACK SUPPORT BRACKET. MUST SUPPORT 980 LBS (MIN) OF EQUIPMENT MOUNTED IN THE EQUIPMENT RACK.
17. 1" X 2" ALUMINUM CABINET STRUCTURAL SUPPORT BEAM(S) WELDED TO THE TOP AND SIDES OF THE CABINET.
18. 4" X 4" X 2" JUNCTION BOX FOR CABINET LIGHTS AND DOOR SWITCH CIRCUITS. LEAVE WIRES UNTERMINATED IN JUNTCION BOX.
19. REMOVABLE CENTER POST
20. DOORS NOT SHOWN. EQUIP DOORS WITH CANE BOLT DROP ROD STOP, DOOR STIFFENERS, AND PRINT POUCH.
21. INSTALL CABINET LIGHTING CIRCUITS IN SPLIT LOOM TUBING, NEATLY DRESSED TO THE SIDES OF THE CABINET.
22. SEE CABINET MOUNTING DETAIL ON THIS SHEET.
23. PANDUIT 2" X 3" TYPE G WIRING DUCT WITH COVER.
24. BACKPLANE VERTICAL SUPPORT STRUCTURE(S) MUST SUPPORT 850 LBS (MIN) FOR EACH BACKPLANE.
25. RACK MOUNT, 12" DEEP, 1 RU PULL OUT DRAWER WITH LID.

GENERAL NOTES:

A. CABINET DOORS, CONDUITS, AND SUNSHIELDS NOT SHOWN THIS VIEW FOR GRAPHICAL CLARITY.
B. PROVIDE FOUR #2 KEYS WITH EACH CABINET.
C. PROVIDE FOUR CL2-TC1 CYBERLOCKS WITH EACH CABINET, TO BE CONFIGURED BY CFX AND INSTALLED BY THE TEC.
D. PROVIDE CANE BOLT DROP RODS ATTACHED TO THE INSIDE OF EACH DOOR WITH DOUBLE GUIDE BRACKETS (ONE AT THE TOP AND ONE AT THE BOTTOM LIP OF THE DOOR) TO ALLOW THE DROP ROD TO BE EXTENDED TO AND SECURED IN THE SURROUNDING CONCRETE SLAB A DEPTH OF 3".

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TOLLING EQUIPMENT CABINET DETAILS (2)

SHEET NO. G-2

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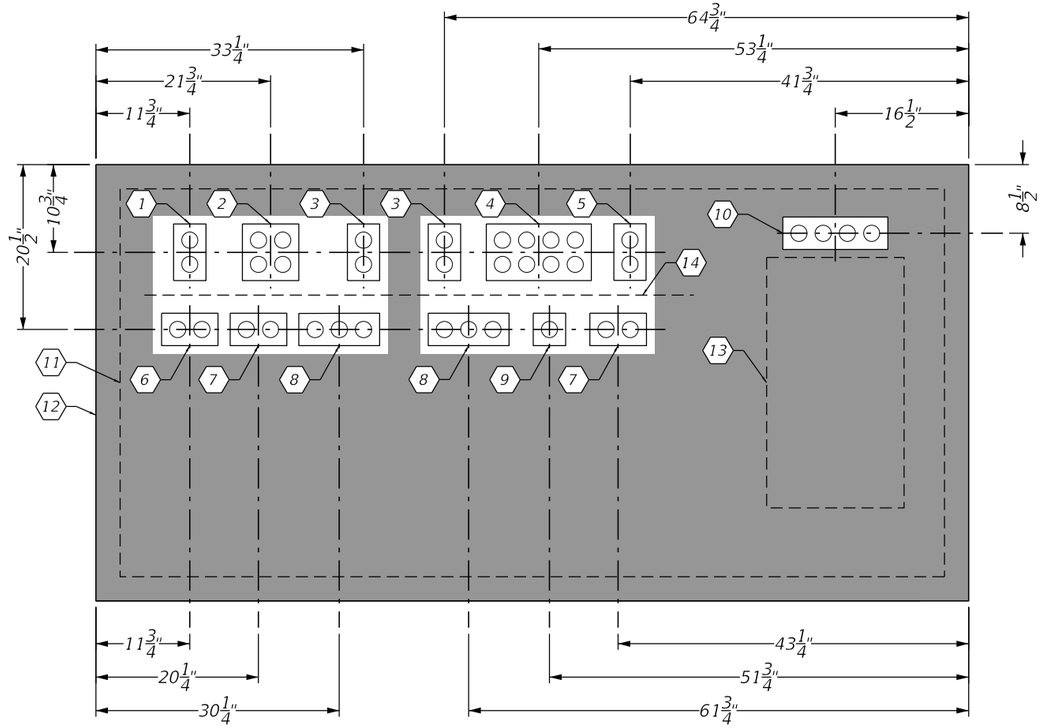
LEGEND

CONDUIT INSTALLATION ZONES WITH CONDUIT STUB-UPS (CONDUIT QUANTITY VARIES)

SEE NOTE C.

℄ CONDUIT INSTALLATION ZONES

CABINET REAR



CABINET FRONT

CONCRETE BASE & CONDUIT LAYOUT
PLAN VIEW

NOTES:

A. SCHEDULE A COORDINATION MEETING WITH THE CEI ENGINEER AND TOLLING LIAISON PRIOR TO CONSTRUCTING THE TOLLING EQUIPMENT CABINET CONCRETE BASE.

B. INSTALL CONDUITS WITHIN THE DEDICATED AREAS AS SHOWN IN THE PLAN VIEW. ADJUST REINFORCING STEEL TO ACCOMODATE CONDUITS. COORDINATE WITH THE CEI PRIOR TO POURING CONCRETE BASE FOR APPROVAL OF CONDUIT LOCATIONS.

C. DO NOT INSTALL CONDUITS WITHIN THE SHADED AREAS OF THE PLAN VIEW.

D. DIMENSIONS SHOWN ARE TO THE CENTERLINES OF THE CONDUIT INSTALLATION ZONES.

KEY NOTES:

1. 4" X 7" AREA FOR 2-2" COMM CONDUITS TO SPARE PULL BOXES.
2. 7" X 7" AREA FOR 4-2" COMM CONDUITS TO GANTRY COMM PULL BOX.
3. 4" X 7" AREA FOR 2-2" COMM CONDUITS TO GANTRY COMM PULL BOX.
4. 13" X 7" AREA FOR 8-2" PWR CONDUITS TO GANTRY PWR PULL BOX.
5. 4" X 7" AREA FOR 2-2" COMM CONDUITS TO GENERATOR AND ATS.
6. 7" X 4" AREA FOR 2-2" PWR CONDUITS TO SPARE PULL BOXES.
7. 7" X 4" AREA FOR 2-2" PWR CONDUITS TO POWER DISTRIBUTION RACK.
8. 10" X 4" AREA FOR 3-2" COMM CONDUITS TO LOOP PULL BOX.
9. 4" X 4" AREA FOR 1-2" PWR CONDUIT TO TOLLS GROUNDING PULL BOX.
10. 13" X 4" AREA FOR 4-2" COMM CONDUITS TO FON PULL BOX.
11. PERIMETER OF TOLLING EQUIPMENT CABINET CENTERED ON CONCRETE BASE.
12. CONCRETE BASE.
13. 4-POST EQUIPMENT RACK APPROXIMATE LOCATION.
14. ℄ EQUIPMENT BACKPLANE SUPPORT STRUCTURE APPROXIMATE LOCATION.

NTS

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TOLLING EQUIPMENT CABINET CONDUIT LAYOUT

SHEET NO. G-3

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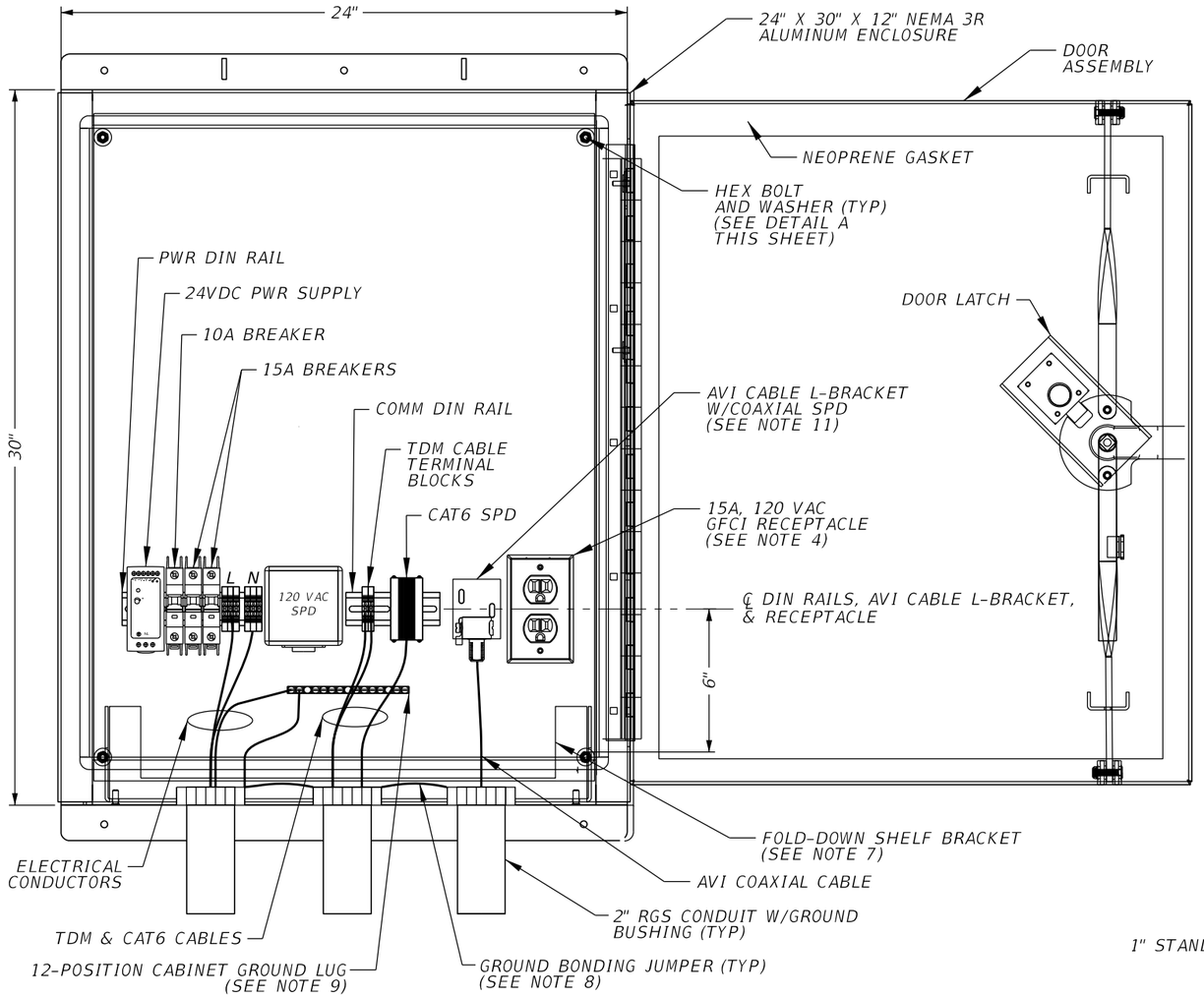
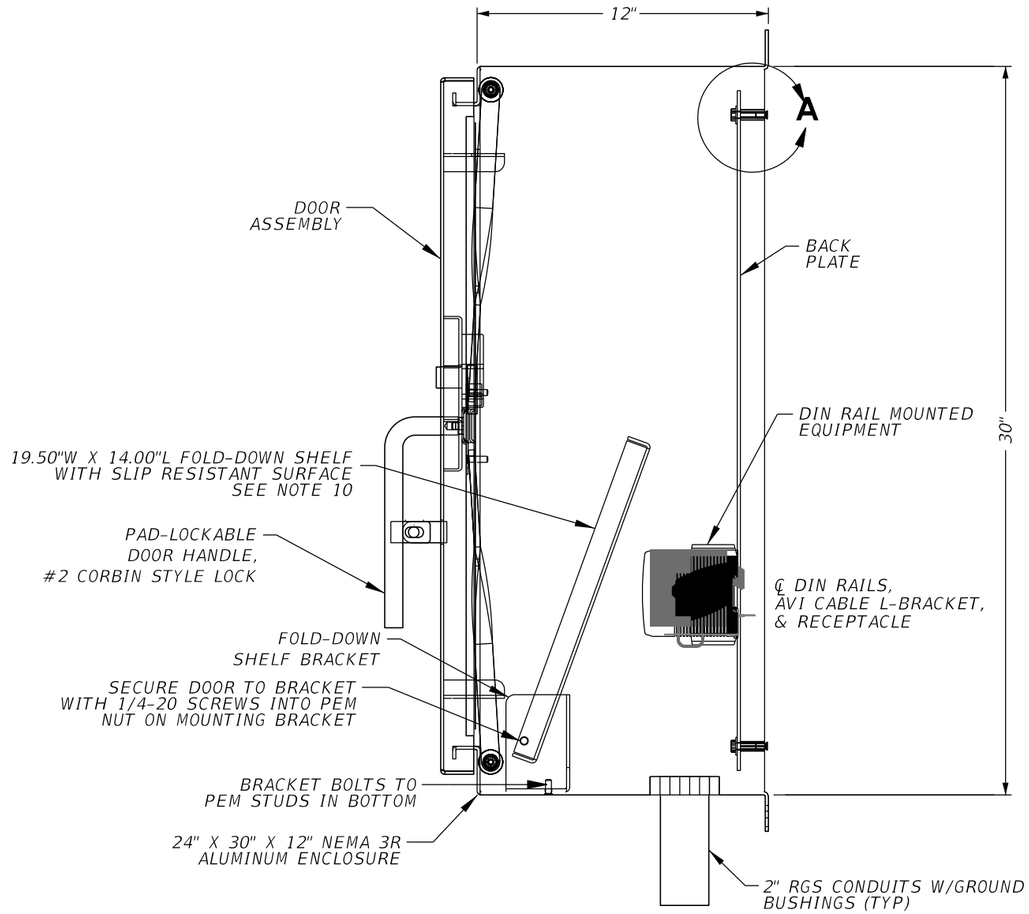
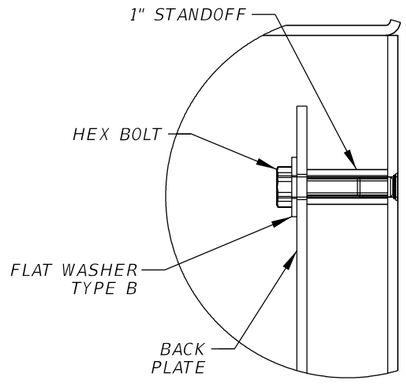


POLE / WALL MOUNTED CABINET (TRANSPONDER READER MODULE)



SIDE VIEW



DETAIL A

NTS

NOTES:

1. SUBMIT A CABINET WIRING AND LAYOUT DIAGRAM TO THE CEI ENGINEER FOR APPROVAL PRIOR TO PROCUREMENT.
2. SPDs MUST BE ON THE FDOT APPROVED PRODUCTS LIST.
3. DO NOT BOND NEUTRAL TO GROUND IN THE CABINET.
4. PROVIDE GFCI RECEPTACLE FACEPLATE WITH PERMANENT LABEL WITH TEXT "DO NOT CONNECT TOLLING EQUIPMENT."
5. WELD STIKER FLUSH WITH INSIDE OF BOX.
6. WELD HASPS TO BODY AND DOOR.
7. FOLD DOWN SHELF NOT IN SHOWN THIS VIEW FOR GRAPHICAL CLARITY.
8. BOND ALL CONDUITS AND JUNCTION BOX TOGETHER WITH A CONTINUOUS, BARE COPPER BONDING JUMPER, GROUNDING CONDUIT BUSHINGS, AND CABINET GROUND BAR. SIZE COPPER BONDING JUMPER PER NEC.
9. ALUMINUM SOLDERLESS MECHANICAL GROUND LUG, RATED FOR COPPER WIRE, ATTACH TO ENCLOSURE WITH ZINC PLATED ATTACHMENT HARDWARE. MODEL #: PK12GTA 2 POS
10. FOLD-DOWN SHELF RESTING ANGLE OF 20 DEGREES.
11. COAXIAL SPD REQUIREMENTS: UL LISTED, 4 GHz, BIDIRECTIONAL, INSERTION LOSS <0.2 dB, 50 OHM, PEAK SURGE CURRENT 20 kA.

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TRANSPONDER READER NEMA CABINET DETAIL

SHEET NO. G-4

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LONGITUDINAL EQUIPMENT SUPPORT FRAME MEMBER (TYP)

℄ TRAVEL WAY

EQUIPMENT SUPPORT FRAME, SEE SHEET H-2 (TYP)

3" ∅ HDG STEEL PIPE (TYP)

6" x 6" POWER RACEWAY (SEE SHEET H-1B)

TRUSS CHORD SPLICE (TYP)

7'

5'

12'

TRAVEL DIRECTION

HAND HOLES (SEE NOTE 1)

℄ STRUCTURE

6" DIA. DEBURRED VENT HOLE, TYPICAL AT CONNECTION FROM GANTRY UPRIGHT TO LOWER HORIZONTAL TRUSS TO ALLOW PASSAGE OF CABLES. TOTAL OF 4 PER GANTRY

HAND HOLES (SEE NOTE 1)

3" ∅ HDG

6" X 6" COMM RACEWAY

EQUIPMENT SUPPORT FRAME, SEE SHEET H-2 (TYP)

6" DIA. DEBURRED VENT HOLE, TYPICAL AT CONNECTION FROM GANTRY UPRIGHT TO LOWER HORIZONTAL TRUSS TO ALLOW PASSAGE OF CABLES. (TOTAL OF 4 PER GANTRY)

JUNCTION BOX (TYP) (SEE SHEET H-3)

FACTORY INSTALLED COMPRESSION GROUND LUGS WELDED TO SURFACE OF STRUCTURE ON EACH SIDE OF TRUSS CHORD SPLICES (TYP), SEE STRUCTURE GROUNDING DETAIL.

PLAN

NOTES:

1. SEE FDOT STANDARD PLANS INDEX NO. 649-010 FOR HAND HOLE DETAILS.
2. COAT AND PAINT STRUCTURAL MEMBERS PER FDOT SPECIFICATIONS SECTION 975. COORDINATE WITH CFX FOR SITE-SPECIFIC PAINT COLOR.

HAND HOLES (SEE NOTE 1)

℄ TRUSS CHORD SPLICE (TYP)

JUNCTION BOX (TYP) (SEE SHEET H-3)

6" X 6" RACEWAYS (SEE SHEET H-1B)

EQUIPMENT SUPPORT FRAME, SEE SHEET H-2 (TYP)

6" DIA. DEBURRED VENT HOLE

FACTORY INSTALLED COMPRESSION GROUND LUGS WELDED TO INSIDE OF STRUCTURE, SEE STRUCTURE GROUNDING DETAIL (TYP)

18'-6" MIN

¾" ∅ CONDUIT, SEE ELECTRICAL DRAWINGS (TYP)

6" ∅ CONDUIT, SEE ELECTRICAL DRAWINGS (TYP)

NOTES TO EOR:

1. CENTER OUTSIDE LONGITUDINAL EQUIPMENT SUPPORT FRAME MEMBERS OVER THE BARRIER WALLS AND/OR GUARDRAIL.
2. DO NOT INSTALL LEADING EDGE (UPSTREAM) LONGITUDINAL EQUIPMENT SUPPORT FRAME MEMBERS WITHIN 2.5' OF THE CENTER OF THE LANE LINES.
3. DO NOT INSTALL TRAILING EDGE (DOWNSTREAM) LONGITUDINAL EQUIPMENT SUPPORT FRAME MEMBERS WITHIN 3.5' OF THE CENTER OF THE LANES.
4. COORDINATE WITH CFX TEC TO ENSURE EQUIPMENT SUPPORT FRAME DOES NOT CONFLICT WITH TOLLING EQUIPMENT INSTALLATION LOCATIONS.

HAND HOLES (SEE NOTE 1)

CONCRETE SHOULDER BARRIER WALL OR GUARDRAIL, SEE ROADWAY PLANS

1'-6" (TYP)

℄ TRAVEL WAY

INSIDE LANE

OUTSIDE LANE

ELEVATION

(LOOKING IN DIRECTION OF TRAVEL)

TOP OF FOUNDATION (TYP)

CONCRETE SHOULDER BARRIER WALL, SEE ROADWAY PLANS

HAND HOLES (SEE NOTE 1)

℄ STRUCTURE

12'

5'

7'

JUNCTION BOX (TYP) (SEE SHEET H-3)

6"X6" COMM RACEWAY

3" ∅ STEEL EQUIPMENT SUPPORT FRAME, SEE SHEET H-2 (TYP)

6" X 6" POWER RACEWAY

FACTORY INSTALLED COMPRESSION GROUND LUGS WELDED TO INSIDE OF STRUCTURE, SEE STRUCTURE GROUNDING DETAIL (TYP)

TRAVEL DIRECTION

HAND HOLES (SEE NOTE 1) (TYP)

TOP OF FOUNDATION

SIDE ELEVATION

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RAMP TOLL GANTRY PLAN & ELEVATION

SHEET NO. H-1A

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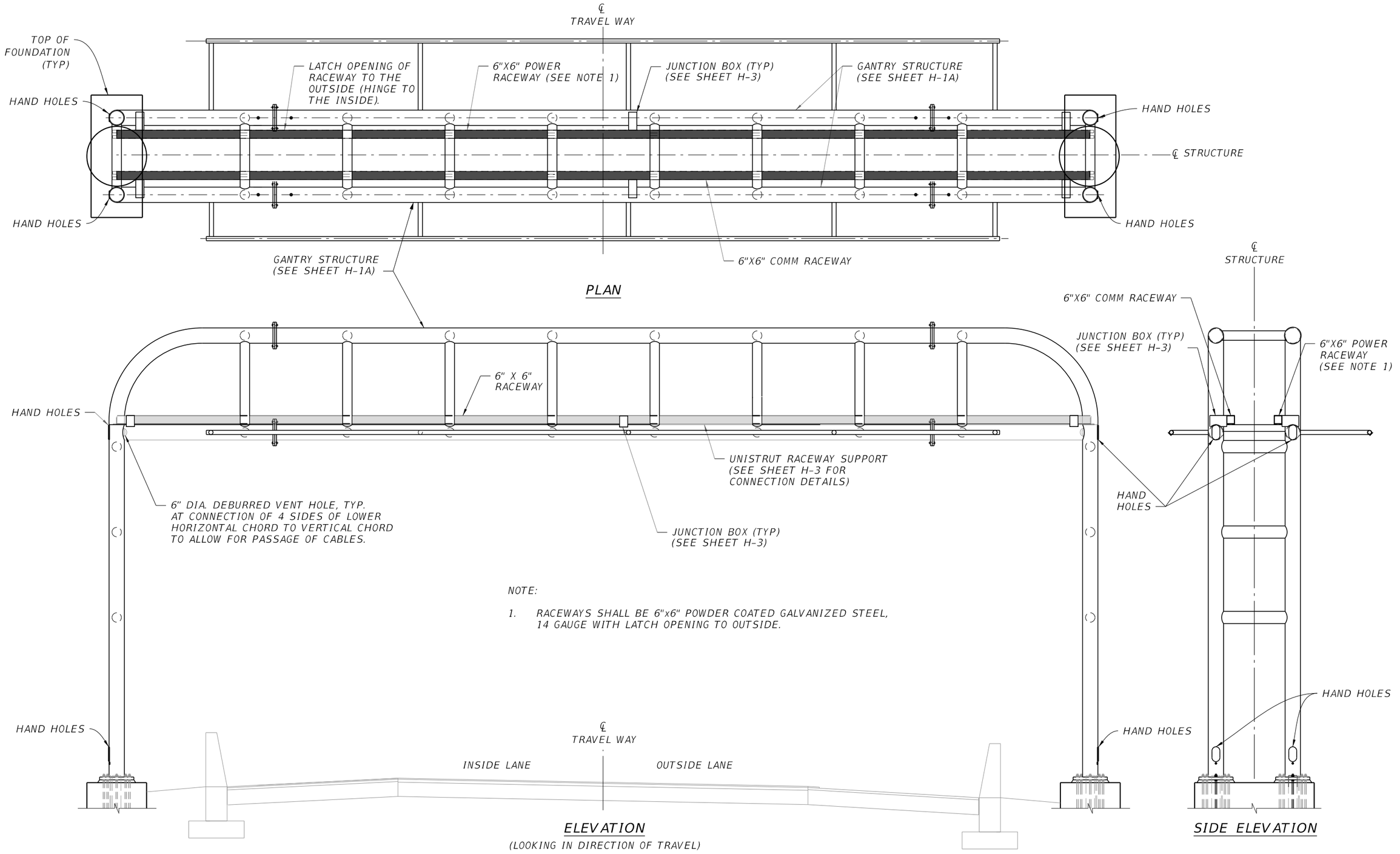

NOTE:

1. RACEWAYS SHALL BE 6"x6" POWDER COATED GALVANIZED STEEL, 14 GAUGE WITH LATCH OPENING TO OUTSIDE.

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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RAMP TOLL GANTRY RACEWAY PLAN & ELEVATION

SHEET NO. H-1B

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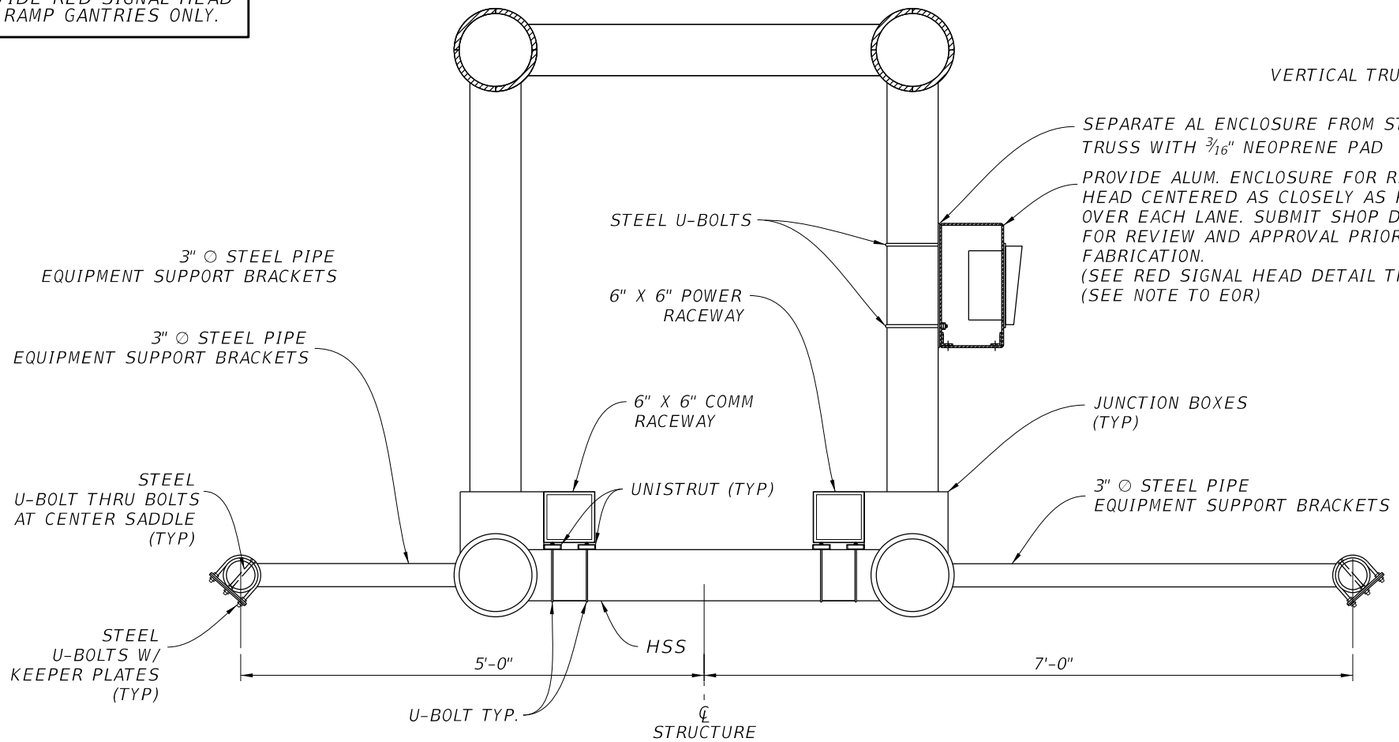
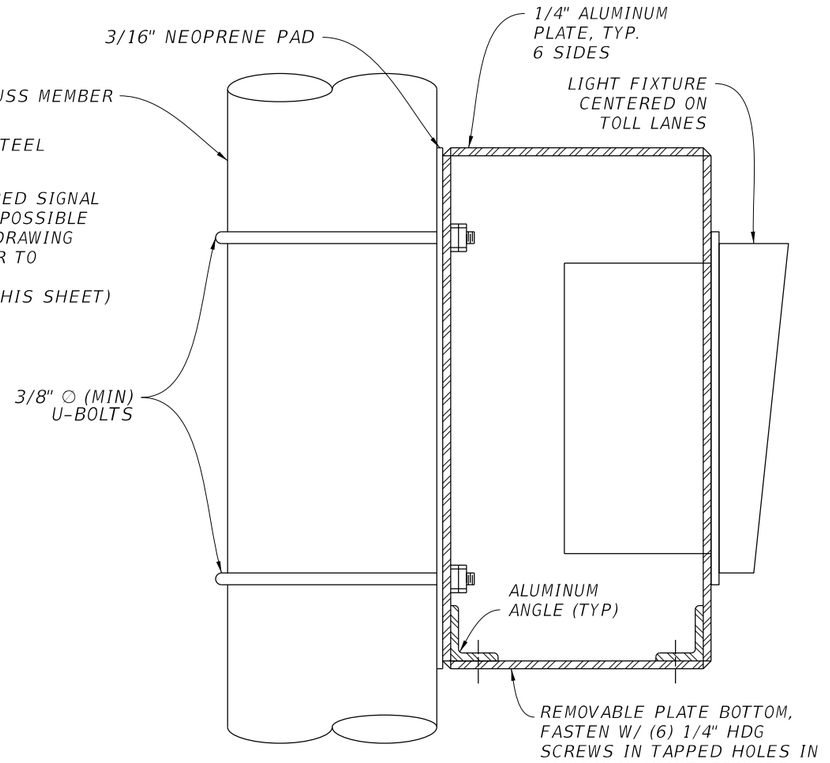
NOTE TO EOR:
PROVIDE RED SIGNAL HEAD FOR RAMP GANTRIES ONLY.



TRUSS SECTION

(SEE SHEET H-3 FOR RACEWAY AND JUNCTION BOX DETAILS)



RED SIGNAL HEAD DETAIL

DEVICE	LONGITUDINAL AREA (SQ. IN.)	TRANSVERSAL AREA (SQ. IN.)	WEIGHT (LBS)
VCARS-2	735	235	55
ANTENNA	630	74	31
DVAS	68	68	20

TOLLING EQUIPMENT STRUCTURAL LOADS TABLE

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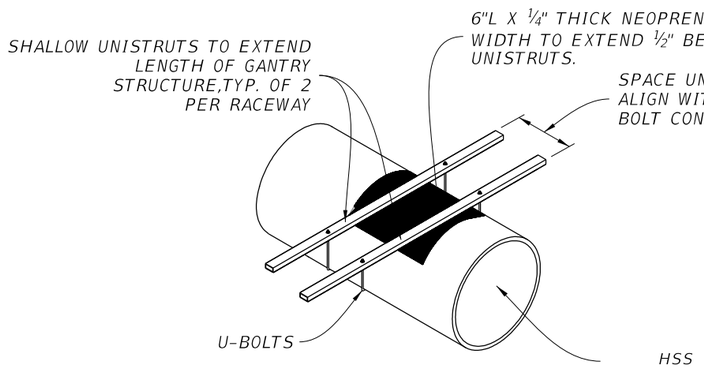
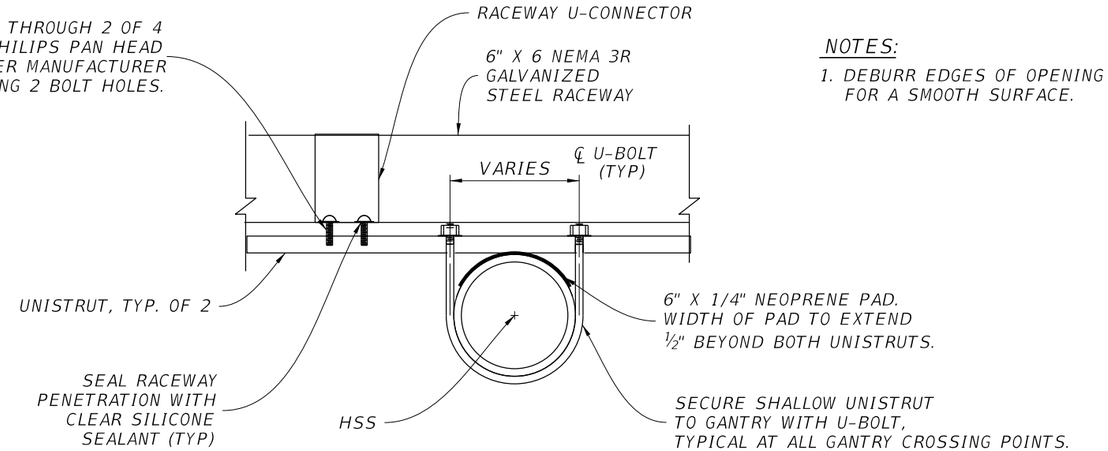
REVISIONS						FOR INFORMATIONAL PURPOSES ONLY	CENTRAL FLORIDA EXPRESSWAY AUTHORITY	CENTRAL FLORIDA EXPRESSWAY AUTHORITY	RAMP TOLL GANTRY TRUSS SECTION & DETAILS	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION					H-2



TYPICAL SHALLOW UNISTRUT MOUNTING DETAIL ISOMETRIC VIEW

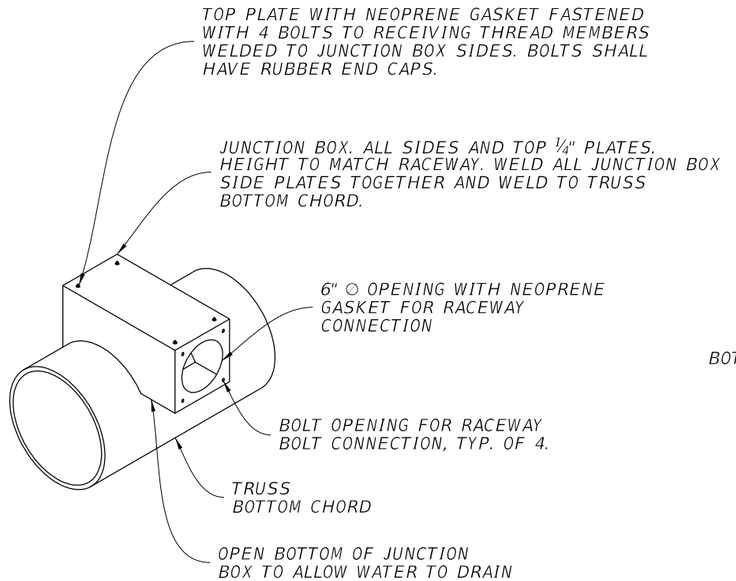
(NEMA 3R RACEWAY NOT SHOWN IN THIS VIEW)



NOTES:

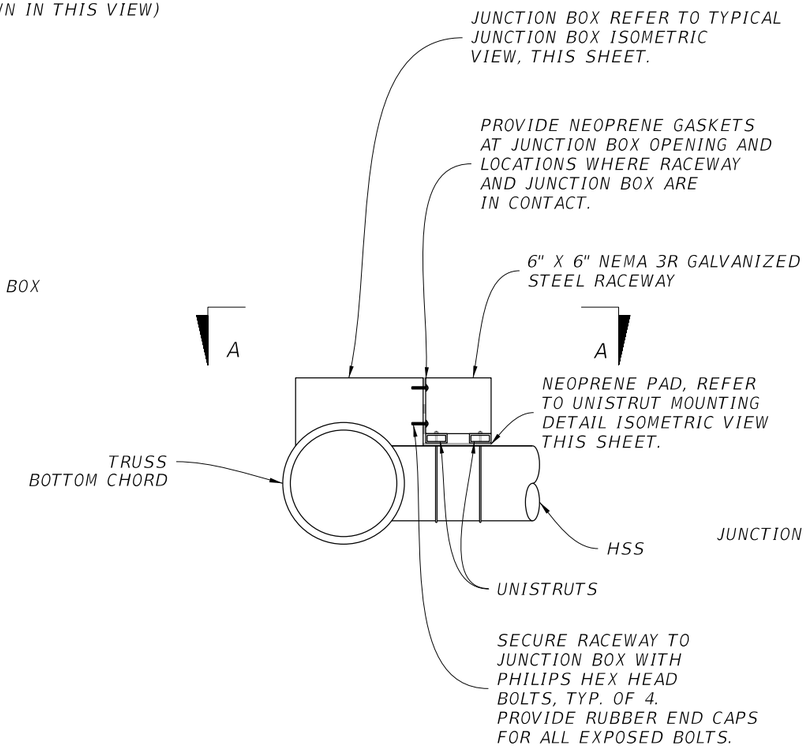
1. DEBURR EDGES OF OPENING FOR A SMOOTH SURFACE.

TYPICAL RACEWAY MOUNTING DETAIL

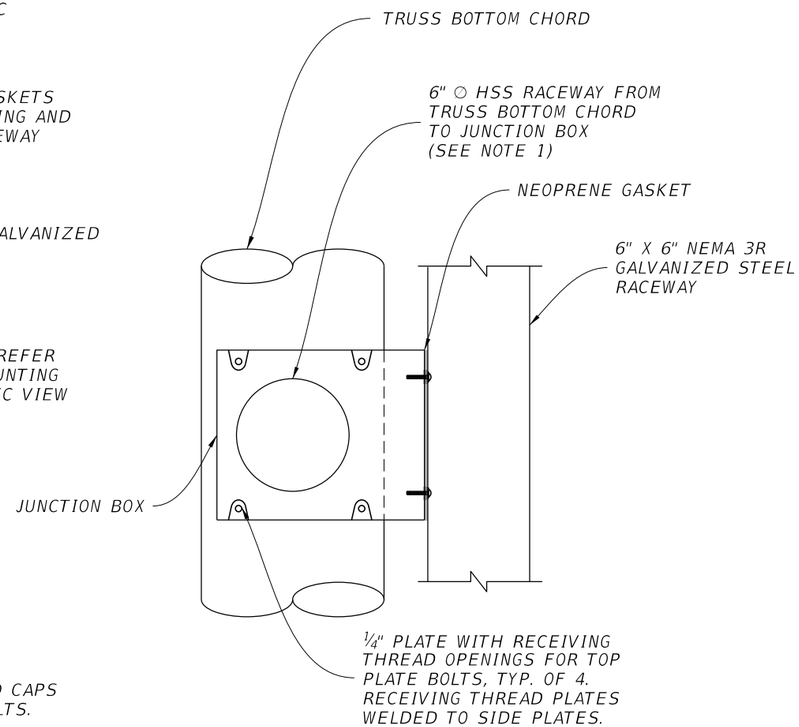


TYPICAL JUNCTION BOX ISOMETRIC VIEW

(NEMA 3R RACEWAY NOT SHOWN IN THIS VIEW)



TYPICAL JUNCTION BOX & RACEWAY DETAIL



SECTION A-A

REVISIONS								
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	FOR INFORMATIONAL PURPOSES ONLY	CENTRAL FLORIDA EXPRESSWAY AUTHORITY	CENTRAL FLORIDA EXPRESSWAY AUTHORITY

RAMP TOLL GANTRY MISCELLANEOUS DETAILS

SHEET NO. H-3

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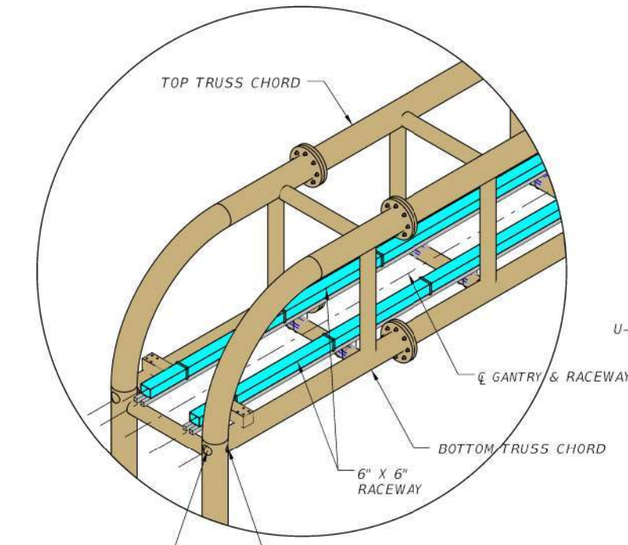
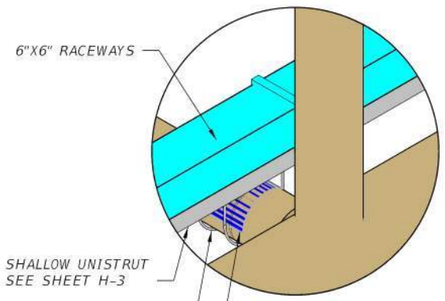
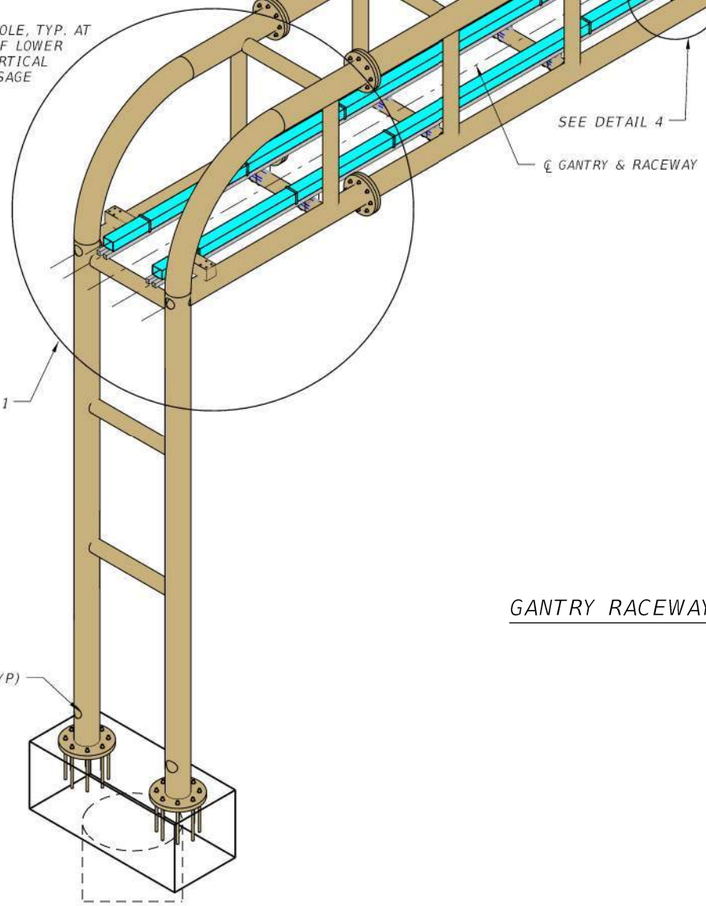
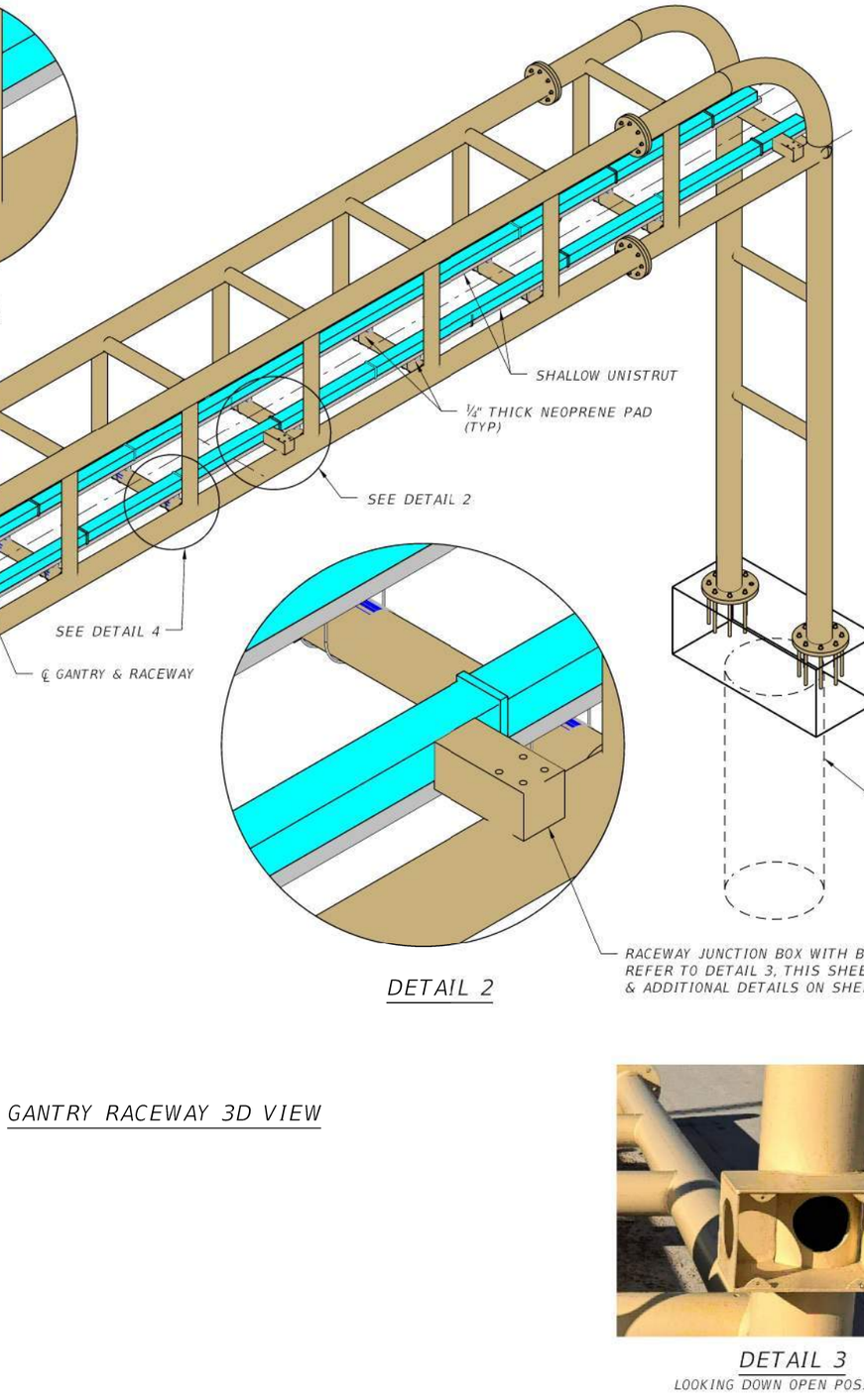


DETAIL 1



DETAIL 4





GANTRY RACEWAY 3D VIEW

DETAIL 2

NOTES:

1. THREE INCH (3") STEEL EQUIPMENT SUPPORT FRAME NOT SHOWN.
2. RACEWAYS SHALL BE MOUNTED TO ALLOW ACCESS THROUGH THE TOP OF FEED-THROUGH WIREWAYS. RACEWAYS SHALL OPEN TO THE OUTSIDE OF THE GANTRY.

DETAIL 3

LOOKING DOWN OPEN POSITION

NTS

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H-1C

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RAMP TOLL GANTRY RACEWAY 3D VIEW

SHEET NO. H-4

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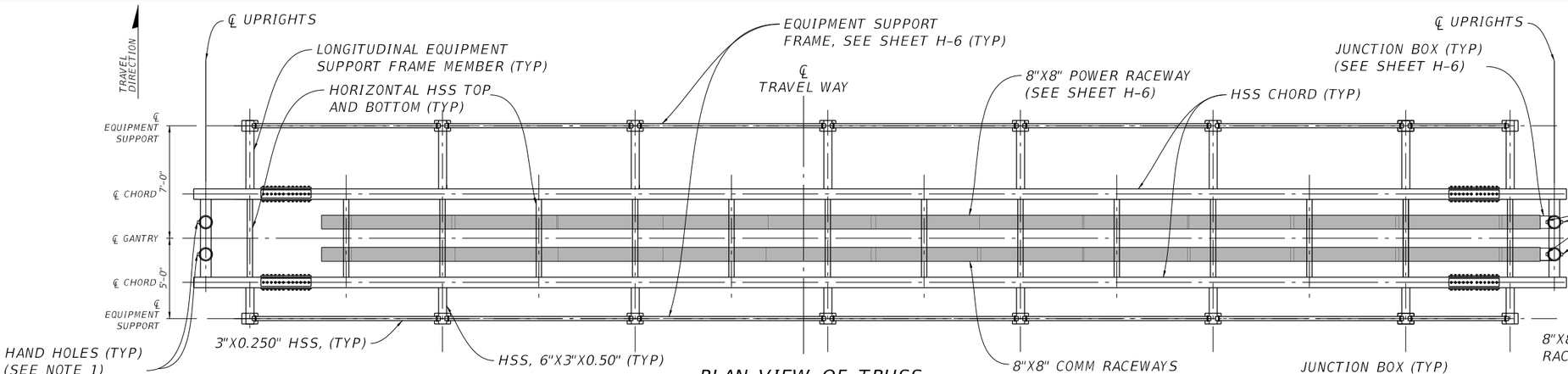
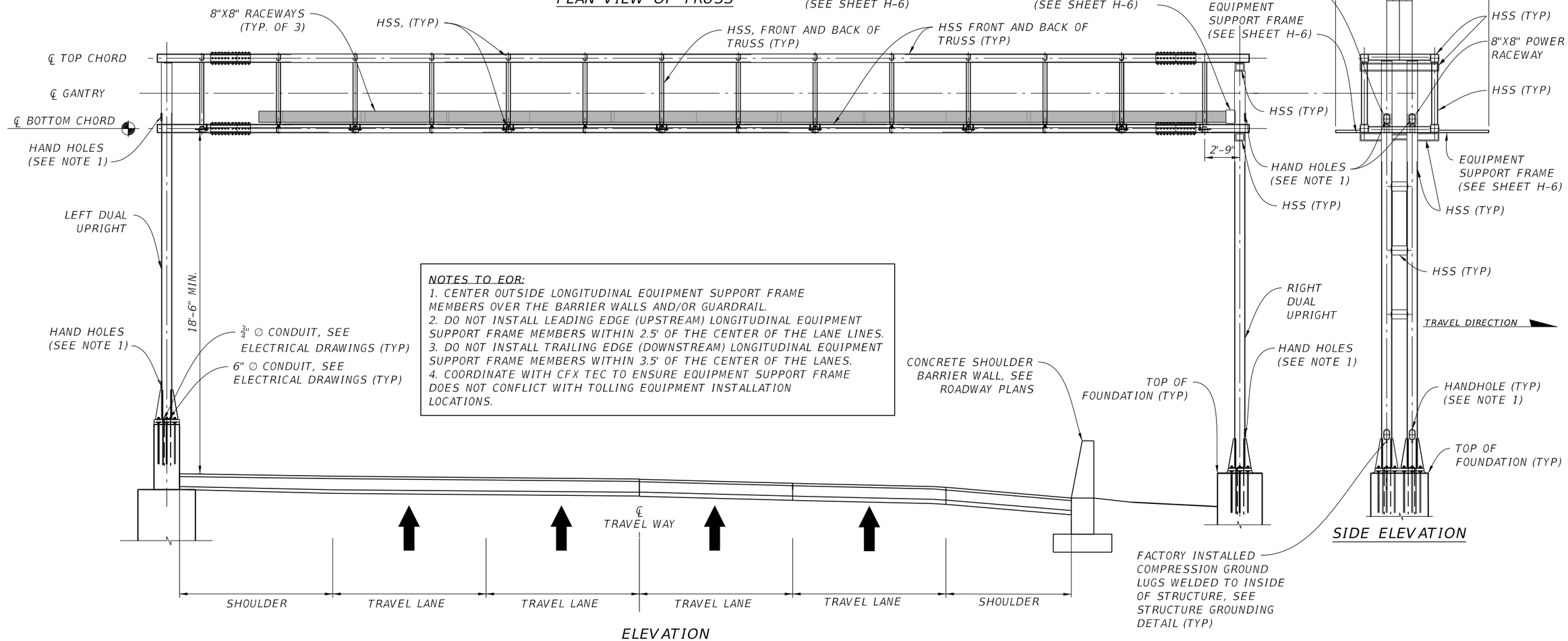


PLAN VIEW OF TRUSS

NOTES:

1. SEE FDOT STANDARD PLANS INDEX NO. 649-010 FOR HAND HOLE DETAILS.
2. COAT AND PAINT STRUCTURAL MEMBERS PER FDOT SPECIFICATIONS SECTION 975. COORDINATE WITH CFX FOR SITE-SPECIFIC PAINT COLOR.

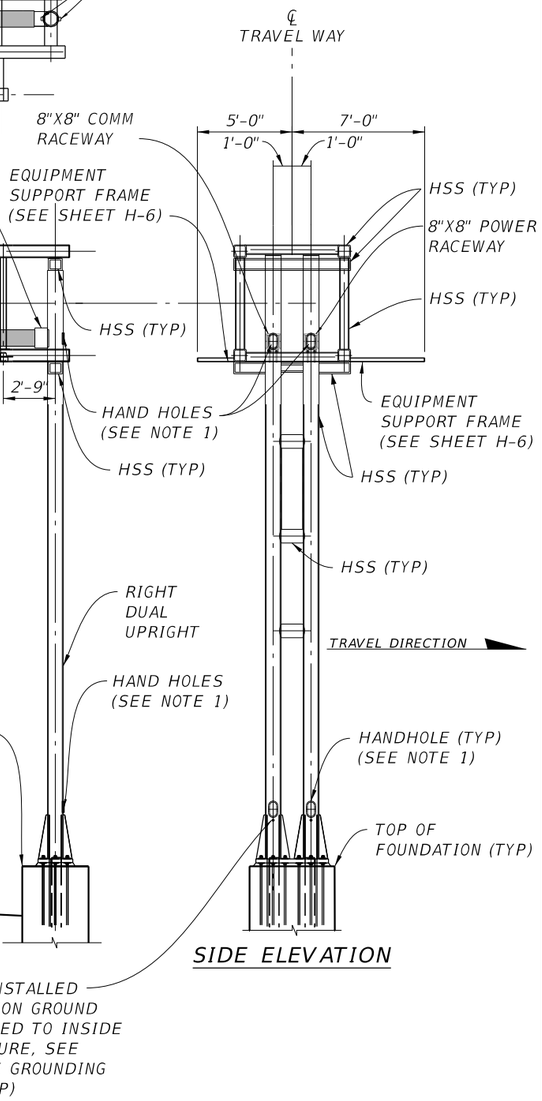


NOTES TO EOR:

1. CENTER OUTSIDE LONGITUDINAL EQUIPMENT SUPPORT FRAME MEMBERS OVER THE BARRIER WALLS AND/OR GUARDRAIL.
2. DO NOT INSTALL LEADING EDGE (UPSTREAM) LONGITUDINAL EQUIPMENT SUPPORT FRAME MEMBERS WITHIN 2.5' OF THE CENTER OF THE LANE LINES.
3. DO NOT INSTALL TRAILING EDGE (DOWNSTREAM) LONGITUDINAL EQUIPMENT SUPPORT FRAME MEMBERS WITHIN 3.5' OF THE CENTER OF THE LANES.
4. COORDINATE WITH CFX TEC TO ENSURE EQUIPMENT SUPPORT FRAME DOES NOT CONFLICT WITH TOLLING EQUIPMENT INSTALLATION LOCATIONS.

ELEVATION

(LOOKING IN DIRECTION OF TRAVEL)



SIDE ELEVATION

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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MAINLINE TOLL GANTRY PLAN & ELEVATION

SHEET NO. H-5A

VERSION: MARCH 2025

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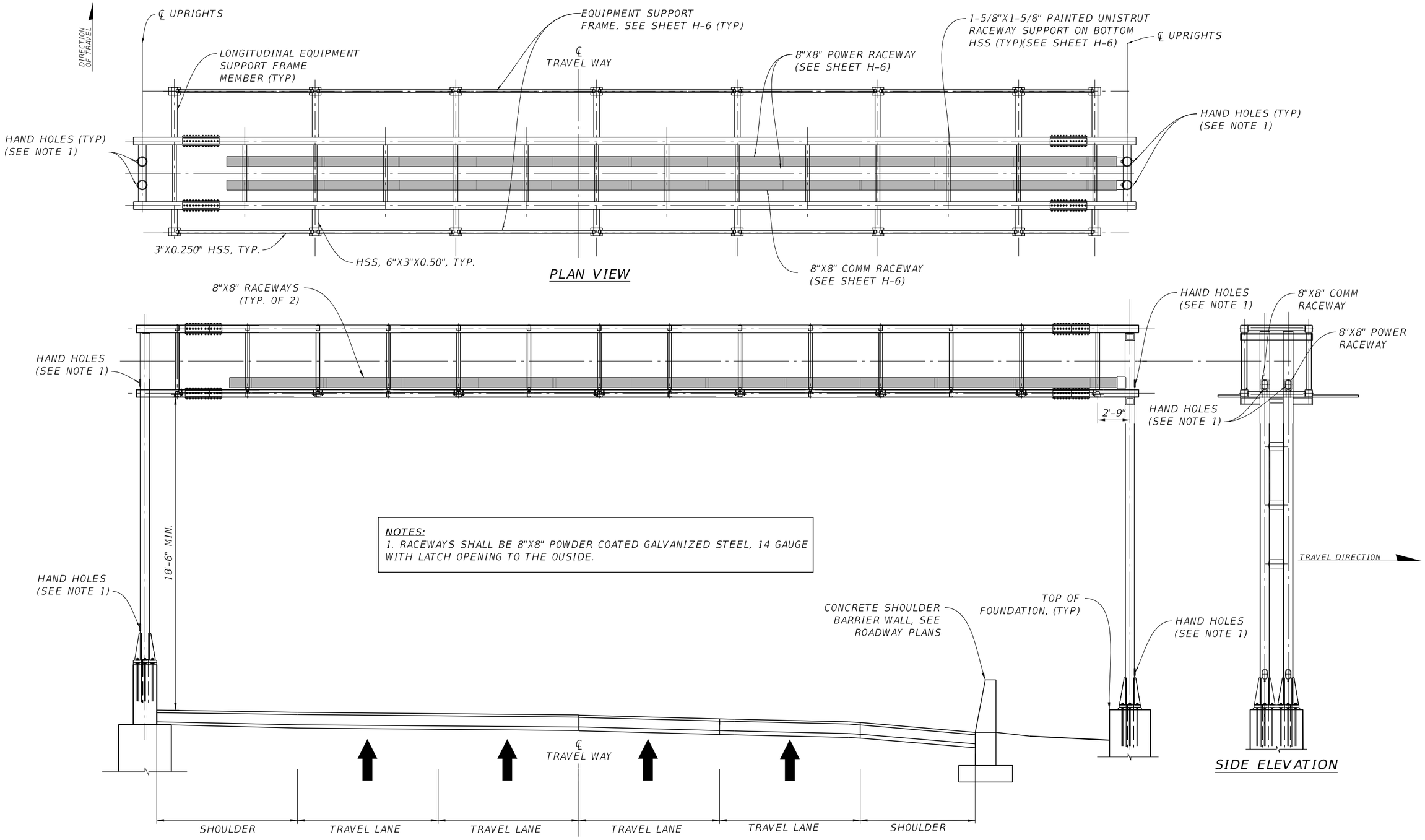

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CENTRAL FLORIDA EXPRESSWAY AUTHORITY

MAINLINE TOLL GANTRY RACEWAY PLAN & ELEVATION

SHEET NO.

H-5B

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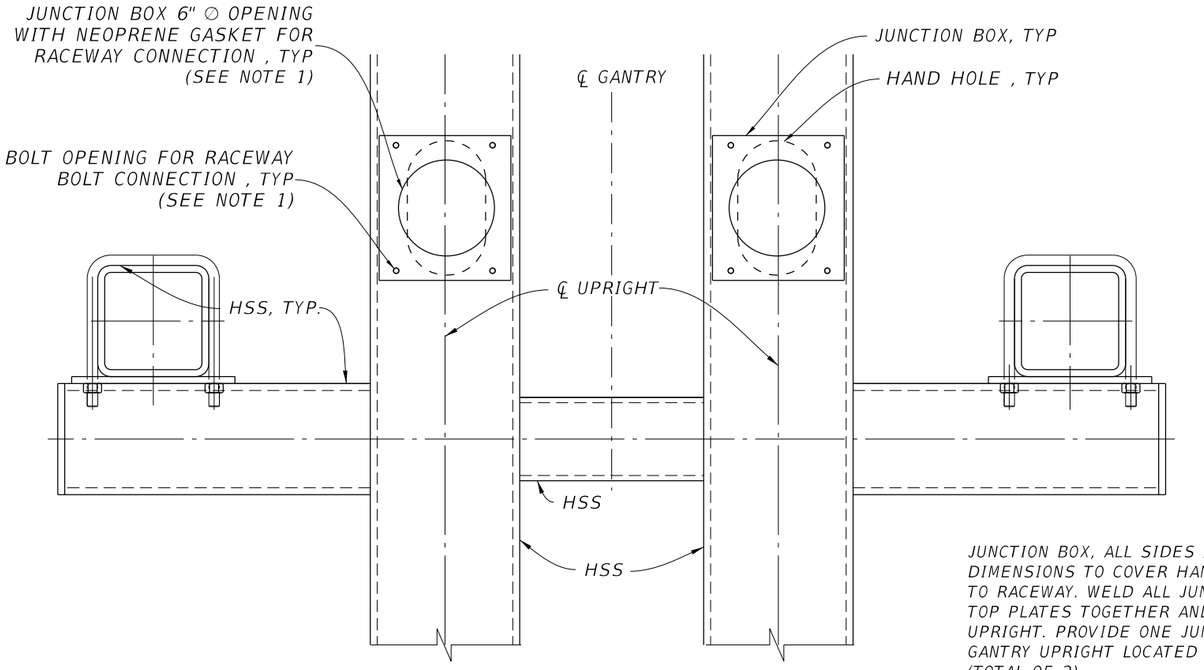
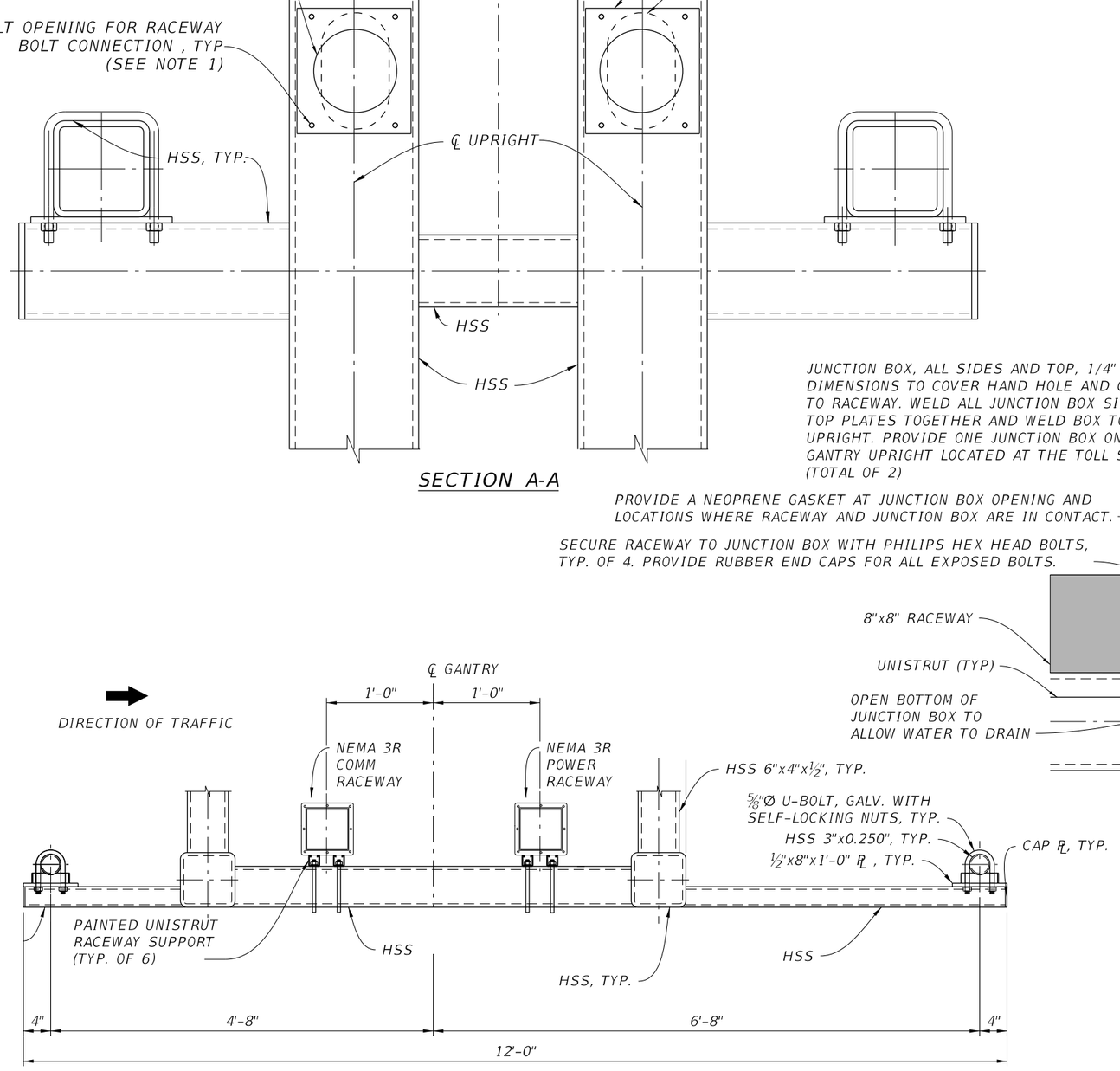


SECTION A-A

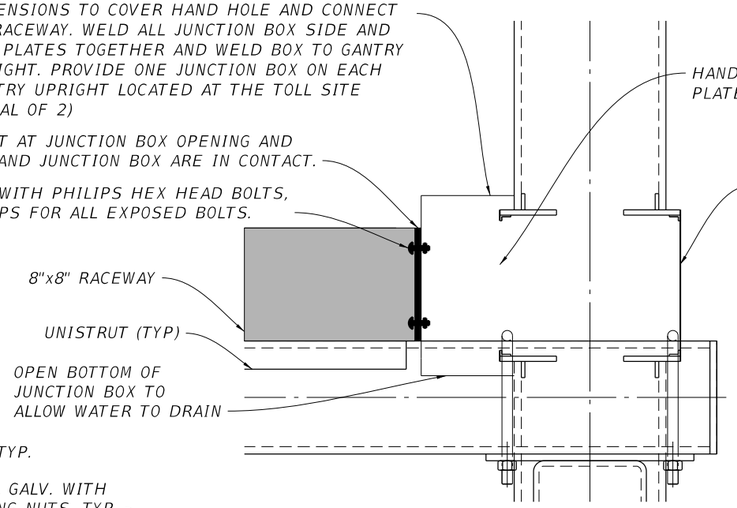


LOWER CHORD TYPICAL SECTION THRU TRUSS

JUNCTION BOX, ALL SIDES AND TOP, 1/4" PLATES. DIMENSIONS TO COVER HAND HOLE AND CONNECT TO RACEWAY. WELD ALL JUNCTION BOX SIDE AND TOP PLATES TOGETHER AND WELD BOX TO GANTRY UPRIGHT. PROVIDE ONE JUNCTION BOX ON EACH GANTRY UPRIGHT LOCATED AT THE TOLL SITE (TOTAL OF 2)

PROVIDE A NEOPRENE GASKET AT JUNCTION BOX OPENING AND LOCATIONS WHERE RACEWAY AND JUNCTION BOX ARE IN CONTACT.

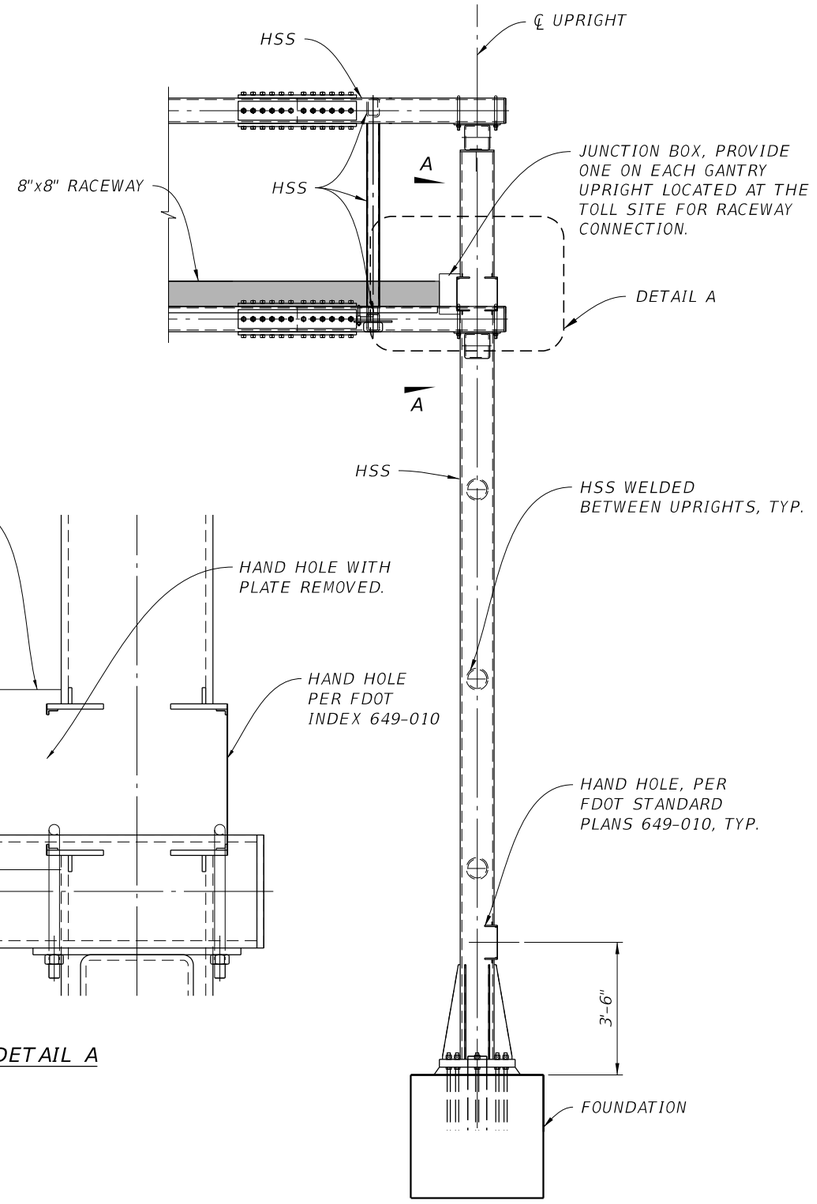
SECURE RACEWAY TO JUNCTION BOX WITH PHILIPS HEX HEAD BOLTS, TYP. OF 4. PROVIDE RUBBER END CAPS FOR ALL EXPOSED BOLTS.



DETAIL A

NOTES:

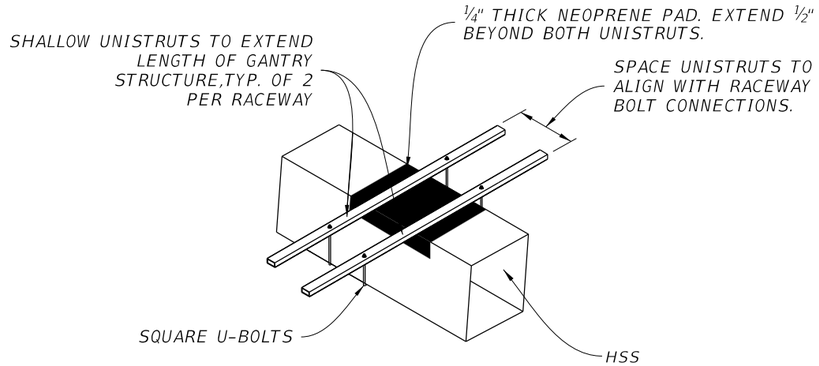
1. DEBURR EDGES OF OPENING FOR A SMOOTH SURFACE.



UPRIGHT ELEVATION DETAIL

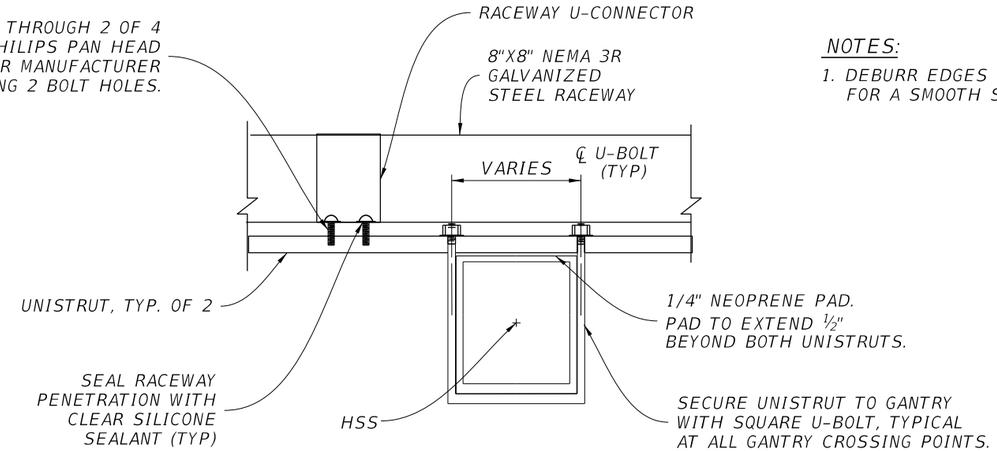
REVISIONS						FOR INFORMATIONAL PURPOSES ONLY	CENTRAL FLORIDA EXPRESSWAY AUTHORITY	CENTRAL FLORIDA EXPRESSWAY AUTHORITY	MAINLINE TOLL GANTRY TRUSS SECTION & DETAILS	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION					H-6

VERSION: MARCH 2025



TYPICAL UNISTRUT MOUNTING DETAIL
ISOMETRIC VIEW

(NEMA 3R RACEWAY NOT SHOWN IN THIS VIEW)



TYPICAL RACEWAY MOUNTING DETAIL

NOTES:

1. DEBURR EDGES OF OPENING FOR A SMOOTH SURFACE.

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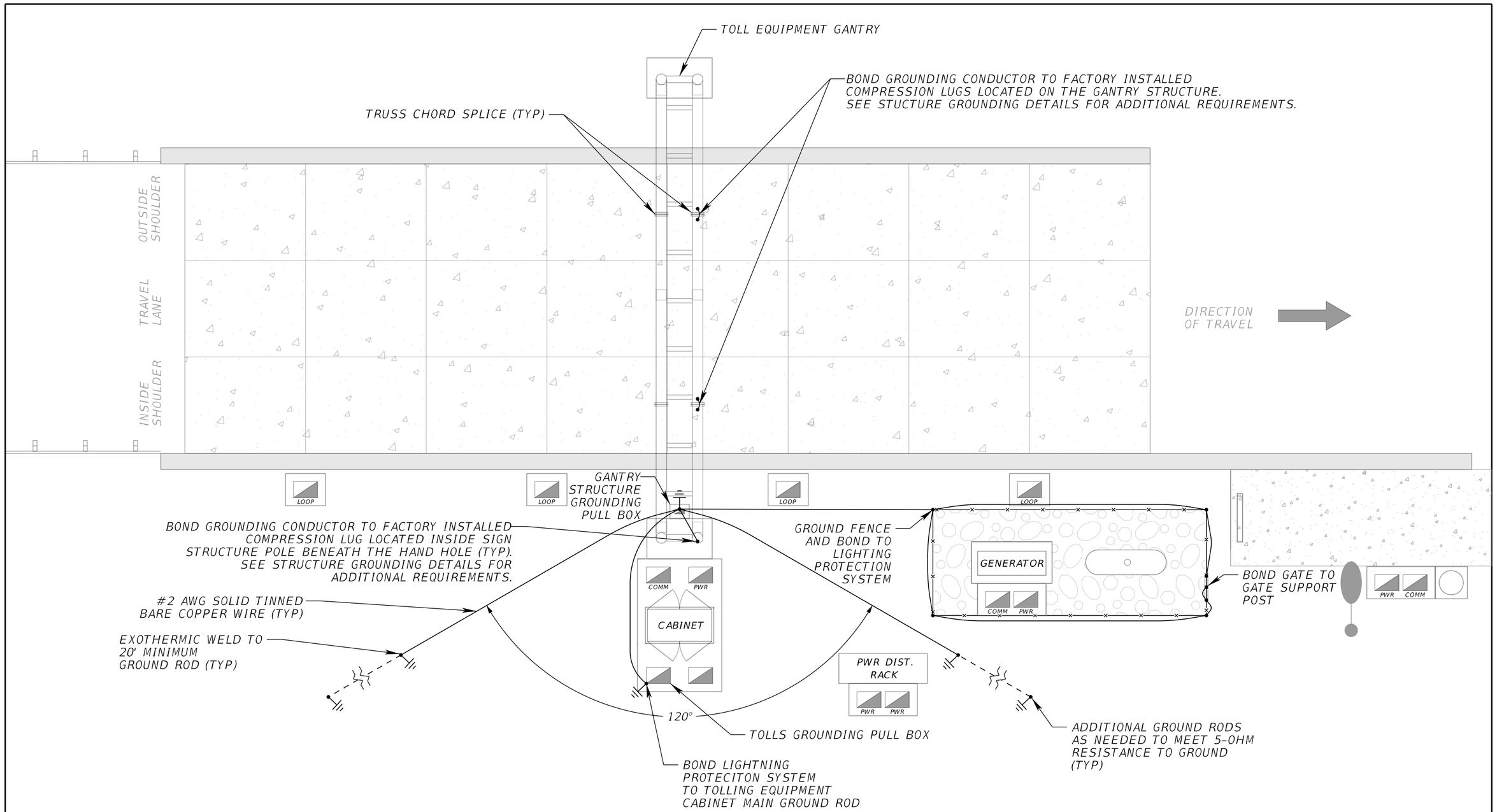
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION					H-7



NOTES:

1. MAINTAIN 40' SPACING BETWEEN ALL GROUND RODS WITHIN GROUND ARRAYS.

2. REFER TO PULL BOX DETAIL FOR ADDITIONAL PULL BOX GROUND ROD REQUIREMENTS.

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RAMP LIGHTNING PROTECTION PLAN

SHEET NO. I-1

VERSION: MARCH 2025

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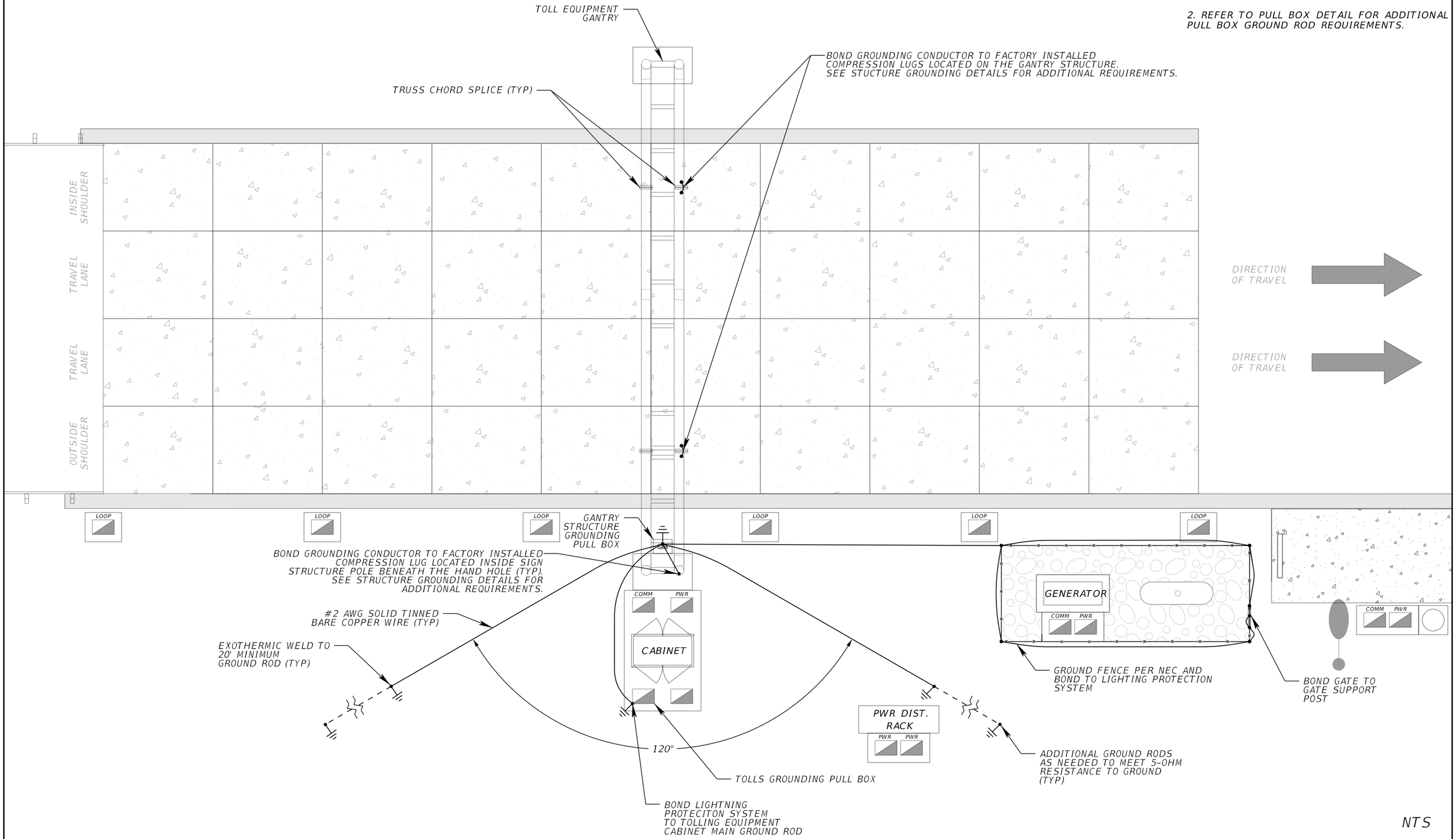
NOTES:

1. MAINTAIN 40' SPACING BETWEEN ALL GROUND RODS WITHIN GROUND ARRAYS.

2. REFER TO PULL BOX DETAIL FOR ADDITIONAL PULL BOX GROUND ROD REQUIREMENTS.



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VERSION: MARCH 2025

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DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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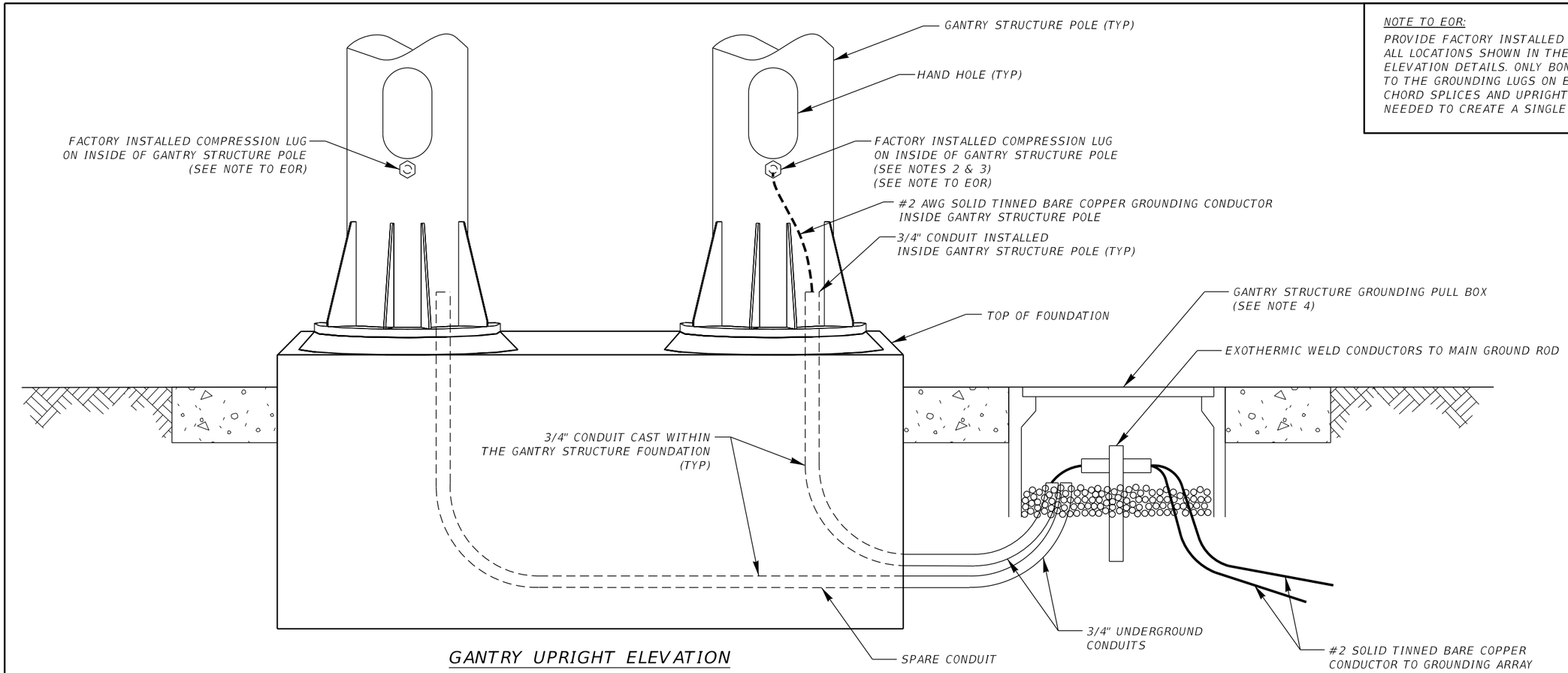
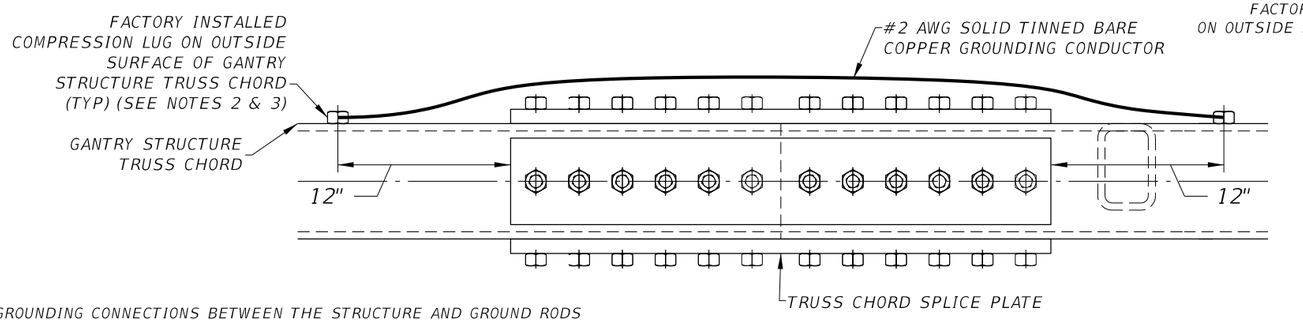
MAINLINE LIGHTNING PROTECTION PLAN

SHEET NO. I-2

NOTE TO EOR:
PROVIDE FACTORY INSTALLED COMPRESSION LUGS AT ALL LOCATIONS SHOWN IN THE TOLL GANTRY PLAN AND ELEVATION DETAILS. ONLY BOND GROUNDING CONDUCTORS TO THE GROUNDING LUGS ON EACH SIDE OF THE TRUSS CHORD SPLICES AND UPRIGHT POLE AT LOCATIONS AS NEEDED TO CREATE A SINGLE PATH TO GROUND.

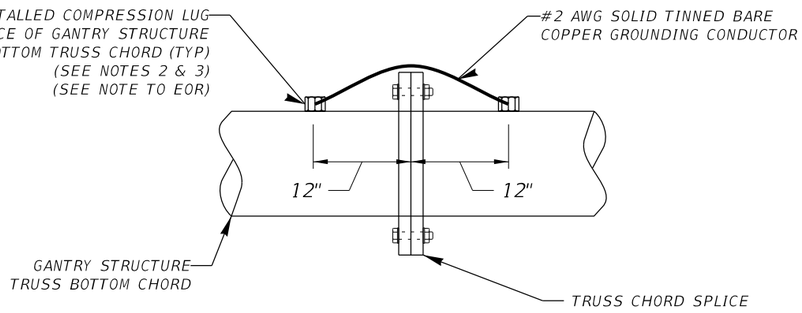


GANTRY UPRIGHT ELEVATION



TYPICAL MAINLINE GANTRY TRUSS CHORD SPLICE ELEVATION

NOT TO SCALE



TYPICAL RAMP GANTRY TRUSS CHORD SPLICE ELEVATION

NOTES:

1. MAKE ALL GROUNDING CONNECTIONS BETWEEN THE STRUCTURE AND GROUND RODS USING #2 AWG SOLID CONDUCTOR TINNED BARE COPPER WIRE.
2. REMOVE GALVANIZATION, PAINT, AND/OR OTHER PROTECTIVE COATING TO EXPOSE BARE STEEL ON THE GROUNDING LUG ONLY WHERE BONDING GROUNDING CONDUCTORS. AFTER BONDING IS COMPLETE, COAT EXPOSED BARE STEEL IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONSSECTION 562 AND PAINT GROUND LUGS AND CONNECTIONS TO MATCH EXISTING STRUCTURE COLOR AND TYPE.
3. BOND #2 AWG GROUNDING CONDUCTOR TO FACTORY INSTALLED COMPRESSION LUG.
4. DETAIL IS DIAGRAMMATIC IN NATURE. SEE SITE PLAN FOR STRUCTURE GROUNDING PULL BOX INSTALLATION LOCATION.

NTS

REVISIONS						FOR INFORMATIONAL PURPOSES ONLY	CENTRAL FLORIDA EXPRESSWAY AUTHORITY	CENTRAL FLORIDA EXPRESSWAY AUTHORITY	STRUCTURE GROUNDING DETAILS	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION					I-3

VERSION: MARCH 2025

KEY NOTES:

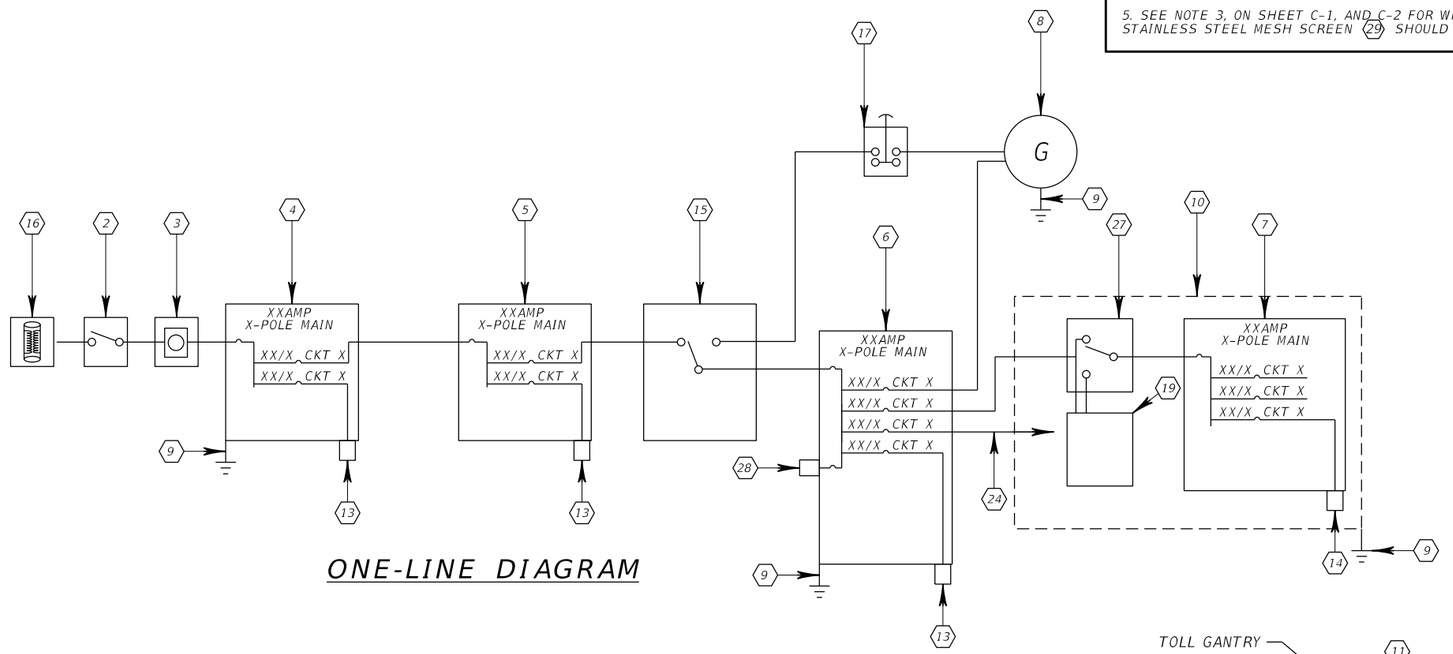
1. PULL BOX.
2. XX AMP, XXX/XXXV, NEMA 3R, NON-FUSED DISCONNECT (IF REQUIRED BY SERVICE PROVIDER). COORDINATE LOCATION OF DISCONNECT RELATIVE TO THE METER WITH POWER COMPANY BEFORE INSTALLATION.
3. METER SOCKET BY CONTRACTOR, METER BY POWER COMPANY.
4. XX AMP, X-POLE, XXX/XXXV MAIN CIRCUIT BREAKER PANEL "MCB". SERVICE ENTRANCE RATED XXXV, XXA, XPH, X-WIRE, SURFACE MOUNTED NEMA 3R ENCLOSURE.
5. XX AMP, X-POLE, XXX/XXXV SAFETY CIRCUIT BREAKER PANEL "SCB-X". RATED XXXV, XXA, XPH, X-WIRE, SURFACE MOUNTED NEMA 3R ENCLOSURE.
6. XX AMP, X-POLE, XXX/XXXV DISTRIBUTION CIRCUIT BREAKER PANEL "LDP-X". RATED XXXV, XXA, XPH, X-WIRE, SURFACE MOUNTED NEMA 3R ENCLOSURE. SEE PANEL SCHEDULES. PROVIDE WITH BREAKER INTERLOCK KIT FOR PORTABLE GENERATOR CIRCUIT.
7. XX AMP, X-POLE, XXX/XXXV UPS POWER CIRCUIT BREAKER PANEL "UPS-X". RATED XXXV, XXA, XPH, X-WIRE; RACK MOUNTED NEMA 1 ENCLOSURE (FURNISHED BY CONTRACTOR, WIRED BY TEC). SEE PANEL SCHEDULES.
8. GENERAC XX KW, 120/240V, 1-PH STAND-BY GENERATOR SET.
9. GROUND ROD ASSEMBLY.
10. TOLLING EQUIPMENT CABINET.
11. RACEWAY.
12. CONDUIT(S).
13. PRIMARY TYPE 1 SERVICE ENTRANCE SURGE PROTECTION DEVICE.
14. SECONDARY TYPE 2 SURGE PROTECTION DEVICE.
15. GENERAC AUTOMATIC TRANSFER SWITCH WITH SWITCHED NEUTRAL.
16. UTILITY TRANSFORMER, XXX/XXX VOLTS, X-PH, IMPEDENCE XXX.
17. EMERGENCY POWER OFF PUSH BUTTON. SEE EMERGENCY POWER OFF PUSH BUTTON DETAILS FOR REQUIREMENTS.
18. BOND GROUNDING BONDING JUMPER TO H-FRAME ASSEMBLY UNISTRUT(S) WITH MECHANICAL GROUND LUG(S), AND BOND TO GROUND BUS BAR IN CIRCUIT BREAKER PANEL.
19. EATON UPS (BY TEC). USE UPS WITH LEAD-ACID BATTERIES, MODEL NO.9PXM FOR THE MAINLINE AND MODEL NO. 9PX6K-L WITH LITHIUM-ION BATTERIES FOR THE RAMP TOLLING GANTRY INSTALLATIONS.
20. MOUNT U-CHANNEL USING 1/2" STAINLESS STEEL BOLT THROUGH POST OR LEAD ANCHOR AND BOLT.
21. U-CHANNEL MUST NOT EXTEND BEYOND THE OUTER SIDES OF THE H-FRAME ASSEMBLY CONCRETE POSTS.
22. TYPE P-II CONCRETE SERVICE POLE.
23. CONSTRUCT 6" THICK CONCRETE PAD, LENGTH AS REQUIRED TO MATCH THE FULL LENGTH OF THE H-FRAME ASSEMBLY. EXTEND CONCRETE PAD MINIMUM 30" FROM THE FRONT OF THE ELECTRICAL EQUIPMENT FOR WORKING SPACE.
24. CIRCUITS FEEDING THE TOLLING EQUIPMENT CABINET A/C, LIGHTS, RECEPTACLES, AND GANTRY LIGHTS.
25. SEE GENERATOR CONCRETE PAD DETAILS FOR REQUIREMENTS.
26. SEE TOLLING EQUIPMENT CABINET CONCRETE APRON DETAILS FOR REQUIREMENTS.
27. EATON POWER BYPASS MODULE (BY TEC).
28. PORTABLE GENERATOR TWIST LOCK RECEPTACLE. RATED XXXA, 120/240V, NEMA 3R, UL LISTED.
29. STAINLESS STEEL WIRE MESH SCREEN SHEET WITH 3/8" MAXIMUM SQUARE OPENINGS BEHIND THE METER TO BUFFER RADIO FREQUENCY (RF) INTERFERENCE FROM THE GANTRY. MCNICHOLS WIRE MESH SQUARE INDUSTRIAL CLOTH 2381, STAINLESS STEEL, WOVEN, OR CFX APPROVED EQUIVALENT. THE WIRE MESH SCREEN SHEET SHALL EXTEND 3 FEET MINIMUM ABOVE, BELOW AND TO BOTH SIDES OF THE METER. THE WIRE MESH SCREEN SHEET SHALL HAVE U-CHANNEL AROUND ALL EXPOSED PERIMETER SECURED TO FLAT BARS, AND BE FRAMED AND SECURED TO THE CONCRETE POLE OR VERTICAL UNISTRUT SO AS TO MEET ALL WINDLOAD AND DEAD LOAD REQUIREMENTS. CONTRACTOR TO PROVIDE PROPER GROUNDING FOR WIRE MESH SCREEN SHEET.

NOTES:

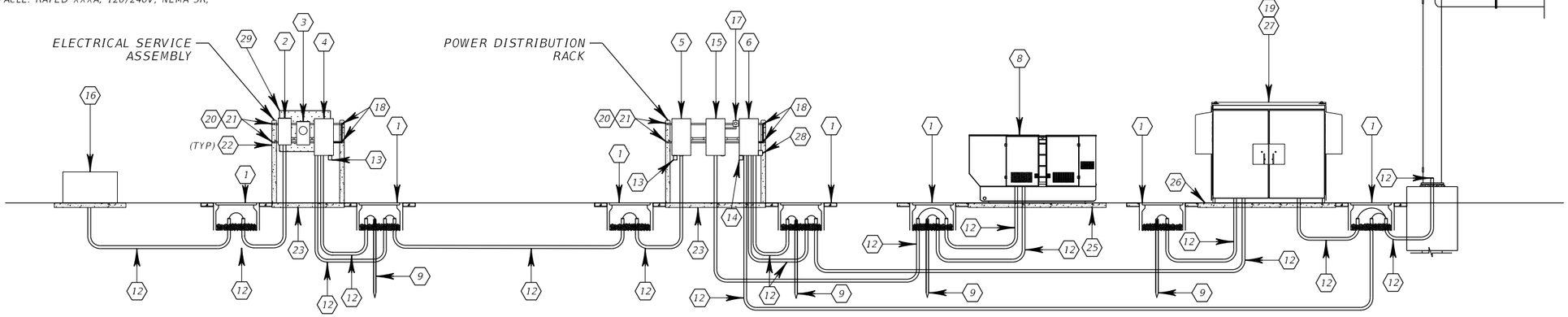
1. GROUND THESE SITES AS SHOWN WITHIN THE GROUNDING DETAILS.
2. CONDUCTOR SIZE AND QUANTITY VARIES. SEE PLAN SHEETS.
3. PULL BOX LOCATION AND QUANTITY VARIES. SEE PLAN SHEETS. PULL BOXES NOT SHOWN IN ONE-LINE DIAGRAM FOR GRAPHICAL CLARITY.
4. SEAL THE SIDES AND TOP OF ALL EQUIPMENT MOUNTED TO THE H-FRAME ASSEMBLY WITH SILICONE. SEAL HOLES SMALLER THAN 1/8" WITH SILICONE SEALANT INSIDE AND OUT. DO NOT PLACE SILICONE AROUND THE BOTTOM OF THE EQUIPMENT.
5. COMMUNICATIONS CONDUITS NOT SHOWN IN THIS DETAIL FOR GRAPHICAL CLARITY ONLY. SEE CONDUIT PLAN FOR MORE INFORMATION.

NOTES TO EOR:

1. THIS DETAIL IS FOR CADD LOOK AND FEEL REFERENCE ONLY. ALL VOLTAGES, CONDUITS, TRANSFORMERS, BREAKERS AND SPD's SHALL BE SIZED BY THE EOR.
2. MAXIMUM VOLTAGE THROUGHOUT THE POWER ASSEMBLY IS NOT TO EXCEED 480V.
3. INCLUDE STEP-UP AND STEP-DOWN TRANSFORMERS IF REQUIRED. PROVIDE TRANSFORMER SECONDARY OCPD PER NEC.
4. SEE CONDUIT PLAN FOR CONDUIT SIZES AND QUANTITIES.
5. SEE NOTE 3, ON SHEET C-1, AND C-2 FOR WHEN STAINLESS STEEL MESH SCREEN (29) SHOULD BE USED.



ONE-LINE DIAGRAM



RISER DIAGRAM

NTS

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SERVICE POINT DETAILS

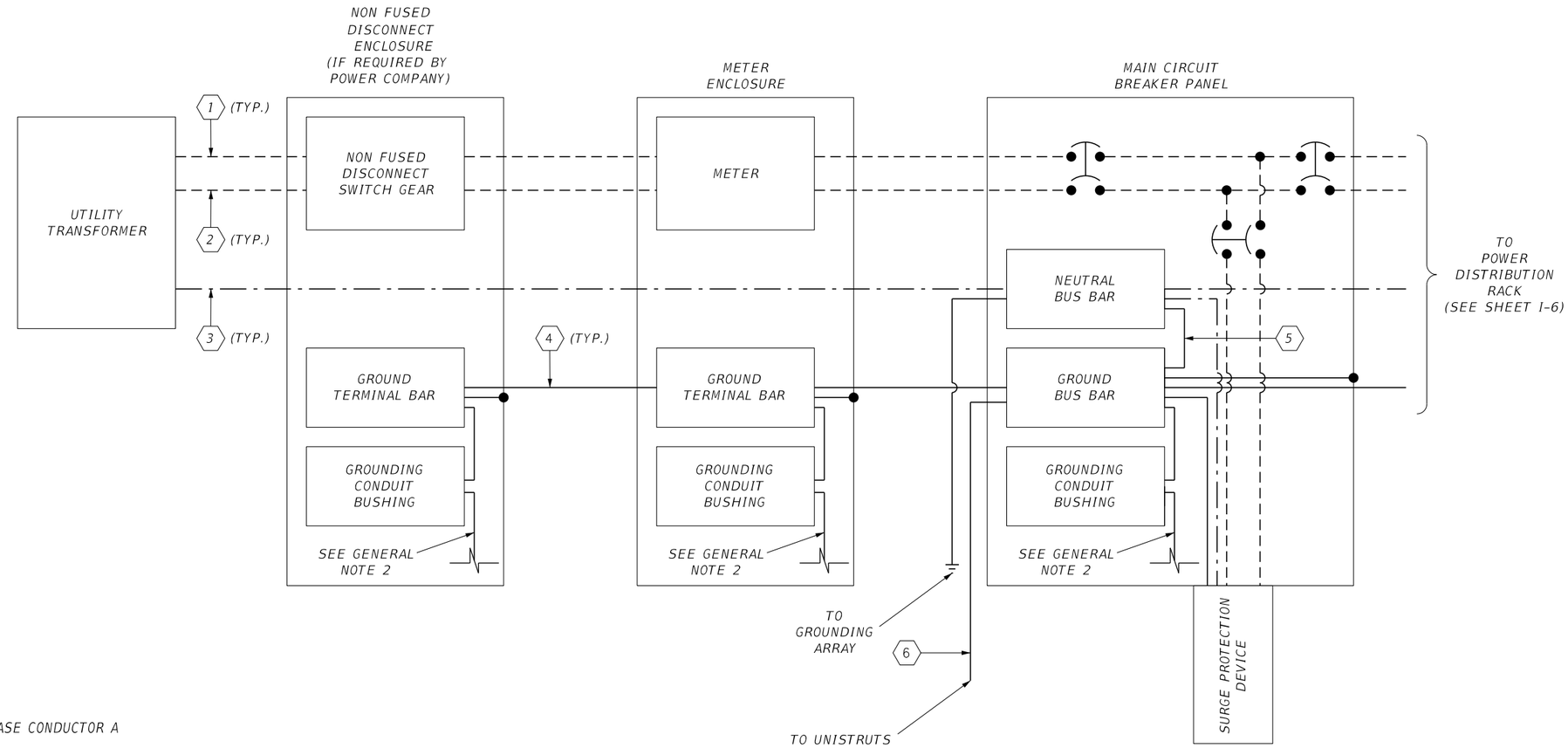
SHEET NO. I-4

LEGEND

- PHASE (UNGROUNDED) CONDUCTOR
- NEUTRAL (GROUNDED) CONDUCTOR
- GROUNDING CONDUCTOR

NOTES TO EOR:

1. CHANGE WIRING AND BREAKERS AS NEEDED TO MEET PROJECT REQUIREMENTS.
2. THIS IS FOR 120/240 AND 240/480 VAC APPLICATIONS.
3. UPDATE SHEET NUMBER REFERENCES ON THIS SHEET.
4. INCLUDE STEP-UP AND STEP-DOWN TRANSFORMERS IF REQUIRED. PROVIDE TRANSFORMER SECONDARY OCPD PER NEC.



KEYED NOTES

1. BLACK INSULATED PHASE CONDUCTOR A
2. RED INSULATED PHASE CONDUCTOR B WHEN PROVIDED/REQUIRED
3. WHITE INSULATED NEUTRAL CONDUCTOR
4. GREEN INSULATED GROUNDING CONDUCTOR
5. GREEN INSULATED SYSTEM BONDING JUMPER
6. BARE GROUNDING BONDING JUMPER

GENERAL NOTES

1. SIZE ALL CONDUCTORS AS REQUIRED BY THE N.E.C. THE MINIMUM SIZE CONDUCTOR TO BE USED IS #6 AWG.
2. BOND ALL METALLIC CONDUIT GROUNDING BUSHINGS IN SERIES WITH A SINGLE COPPER BONDING JUMPER.

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ELECTRICAL SERVICE ASSEMBLY WIRING DIAGRAM

SHEET NO. I-5

VERSION: MARCH 2025

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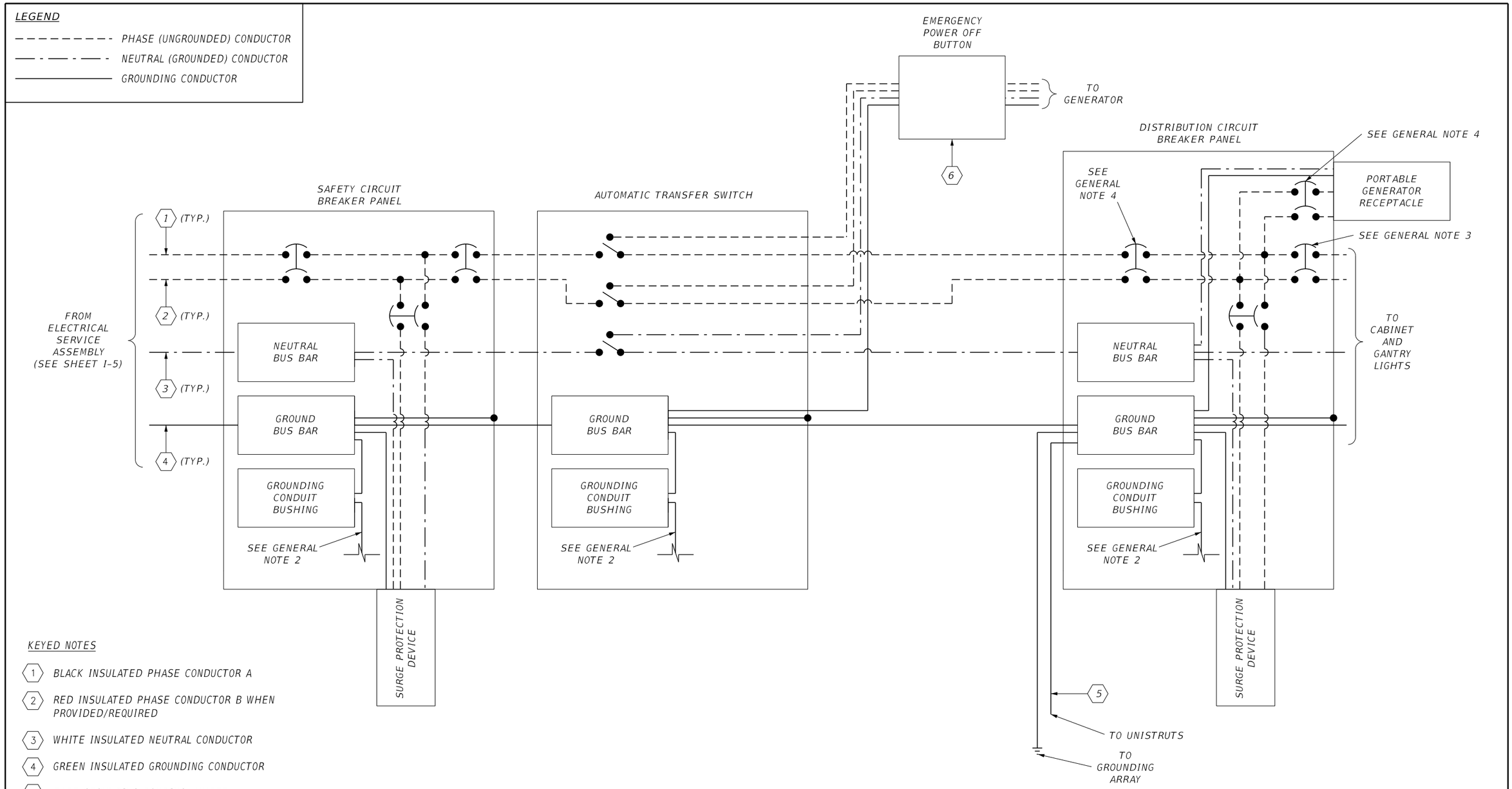

KEYED NOTES

1. BLACK INSULATED PHASE CONDUCTOR A
2. RED INSULATED PHASE CONDUCTOR B WHEN PROVIDED/REQUIRED
3. WHITE INSULATED NEUTRAL CONDUCTOR
4. GREEN INSULATED GROUNDING CONDUCTOR
5. BARE GROUNDING BONDING JUMPER
6. SEE SHEET I-11 FOR DETAILS

GENERAL NOTES

1. SIZE ALL CONDUCTORS AS REQUIRED BY THE N.E.C. THE MINIMUM SIZE CONDUCTOR TO BE USED IS #6 AWG.
2. BOND ALL METALLIC CONDUIT GROUNDING BUSHINGS IN SERIES WITH A SINGLE COPPER BONDING JUMPER.
3. BRANCH BREAKER QUANTITY AND TYPE VARIES. SEE PANEL SCHEDULES.
4. PROVIDE BREAKER INTERLOCK KIT FOR PORTABLE GENERATOR CIRCUIT.

NOTES TO EOR:

1. CHANGE WIRING AND BREAKERS AS NEEDED TO MEET PROJECT REQUIREMENTS.
2. THIS IS FOR 120/240 AND 240/480 VAC APPLICATIONS.
3. UPDATE SHEET NUMBER REFERENCES ON THIS SHEET.
4. INCLUDE STEP-UP AND STEP-DOWN TRANSFORMERS IF REQUIRED. PROVIDE TRANSFORMER SECONDARY OCPD PER NEC.

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POWER DISTRIBUTION RACK WIRING DIAGRAM

SHEET NO. I-6

VERSION: MARCH 2025

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VOLTAGE: 120/240V
PHASE: 1
WIRES: 3

MAIN TYPE: BREAKER
MAIN CB: XXXA
AIC: XX,XXXA

PANEL "LDP-X" SCHEDULE

CKT NO.	KVA	BKR/POLE	LOAD	CKT NO.	KVA	BKR/POLE	LOAD
1	X.X	XX/X	A/C RECEPTACLE 1	2	X.X	XX/X	ENGINE JACKET HEATER
3				4	X.X	XX/X	GENERATOR RECEPTACLE 1
5	X.X	XX/X	A/C RECEPTACLE 2	6	X.X	XX/X	GENERATOR RECEPTACLE 2
7				8	X.X	XX/X	BATTERY CHARGER
9	X.X	XX/X	CABINET UPS	10	X.X	XX/X	CABINET RECEPTACLES
11				12	X.X	XX/X	CABINET LIGHTS
13	-	20/2	SPARE	14	X.X	XX/X	GANTRY RED SIGNAL HEAD
15				16	-	20/1	SPARE
17	-	20/2	SPARE	18	-	20/1	SPARE
19				20	-	20/1	SPARE
21	-	20/2	SPARE	22	-	20/1	SPARE
23				24	-	20/1	SPARE
25	-	-	SPACE	26	-	-	SPACE
27	-	-	SPACE	28	-	-	SPACE
29	-	-	SPACE	30	-	-	SPACE

TOTAL CONNECTED LOAD: X.X KVA
TOTAL DEMAND LOAD: XX.X KVA

VOLTAGE: 120/240V
PHASE: 1
WIRES: 3

MAIN TYPE: BREAKER
MAIN CB: XXXA
AIC: XX,XXXA

PANEL "UPS-X" SCHEDULE

CKT NO.	VA	BKR/POLE	LOAD	CKT NO.	VA	BKR/POLE	LOAD
1	X.X	20/1	RPM 1	2	X.X	20/1	RPM 2
3	X.X	20/1	RPM 3	4	X.X	20/1	RPM 4
5	X.X	20/1	RPM 5	6	-	20/1	SPARE
7	-	20/1	SPARE	8	-	20/1	SPARE
9	-	20/1	SPARE	10	-	20/1	SPARE
11	-	20/1	SPARE	12	-	20/1	SPARE
13	-	20/1	SPARE	14	-	20/1	SPARE
15	-	20/1	SPARE	16	-	20/1	SPARE
17	-	-	SPACE	18	-	-	SPACE
19	-	-	SPACE	20	-	-	SPACE
21	-	-	SPACE	22	-	-	SPACE
23	-	-	SPACE	24	-	-	SPACE
25	-	-	SPACE	26	-	-	SPACE
27	-	-	SPACE	28	-	-	SPACE
29	-	-	SPACE	30	-	-	SPACE

TOTAL CONNECTED LOAD: X.X KVA
TOTAL DEMAND LOAD: XX.X KVA

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PANEL SCHEDULES

SHEET NO.
I-7

NOTES:

1. PLACE ARC FLASH WARNING LABEL ON THE EXTERIOR COVER OF EQUIPMENT AT THE LIGHTING LOAD CENTER LOCATIONS AS SPECIFIED HEREIN.

2. PROVIDE A 4"(H) X 6"(W) SELF-ADHESIVE VINYL LABEL COMPLYING WITH THE ARC FLASH HAZARD LABELING STANDARD DEPICTED ON THIS SHEET.

3. ADJUST ALL PROTECTIVE DEVICE SETTINGS BASED ON THE RESULTS OF THE SELECTIVE COORDINATION AND ARC FLASH HAZARD STUDY PERFORMED FOR THIS PROJECT.

4. PRIOR TO FABRICATION, COORDINATE THE ARC FLASH HAZARD STUDY RESULTS AND DEVICE SETTINGS WITH MANUFACTURERS AND SUPPLIERS OF ELECTRICAL EQUIPMENT TO INCORPORATE THE RECOMMENDATIONS AND NECESSARY MODIFICATIONS.

5. SPECIFIC MODELS OF OVER CURRENT PROTECTION DEVICES WERE USED IN THE ARC FLASH HAZARD STUDY; IF ALTERNATIVE DEVICES ARE USED, THE ARC FLASH HAZARD DATA DEPICTED HEREIN ARE NOT VALID. SUBMIT OVERCURRENT PROTECTION DEVICE SHOP DRAWINGS FOR REVIEW AND APPROVAL BY THE ENGINEER PRIOR TO INSTALLATION; IF THE APPROVED DEVICES VARY FROM THE DEVICES USED IN THE ORIGINAL ARC FLASH HAZARD STUDY, COORDINATE WITH THE ENGINEER TO OBTAIN REVISED ARC FLASH HAZARD DATA FOR EQUIPMENT LABELS AND REVISED OVER CURRENT PROTECTION DEVICE COORDINATION SETTINGS.

ARC FLASH AND SHOCK HAZARD DATA

EQUIPMENT	MIN. ARC RATING AT 18" (cal/cm^2)	ARC FLASH BOUNDARY (in)	SHOCK RISK WHEN COVER REMOVED (OPERATING VOLTAGE)	LIMITED APPROACH (in)	RESTRICTED APPROACH (in)	DATE OF ANALYSIS (MONTH YEAR)
SERVICE N.F. DISCONNECT	X.X	XX	XXX VAC	XX	XX	XX/XX
PANEL MCB-X	X.X	XX	XXX VAC	XX	XX	XX/XX
PANEL LDP-X	X.X	XX	XXX VAC	XX	XX	XX/XX
ATS	X.X	XX	XXX VAC	XX	XX	XX/XX
PANEL UPS-X	X.X	XX	XXX VAC	XX	XX	XX/XX

⚠ WARNING

ARC FLASH AND SHOCK RISK
APPROPRIATE PPE REQUIRED

FLASH PROTECTION		SHOCK PROTECTION	
MIN. ARC RATING (cal/cm°2):	SEE TABLE	SHOCK RISK WHEN COVER REMOVED:	SEE TABLE
ARC FLASH BOUNDARY (in):	SEE TABLE	LIMITED APPROACH (in):	SEE TABLE
		RESTRICTED APPROACH (in):	SEE TABLE
DATE OF ANALYSIS:	SEE TABLE	REFERENCE NFPA 70E FOR APPROPRIATE PPE FOR BOTH ARCH FLASH AND SHOCK RISKS.	

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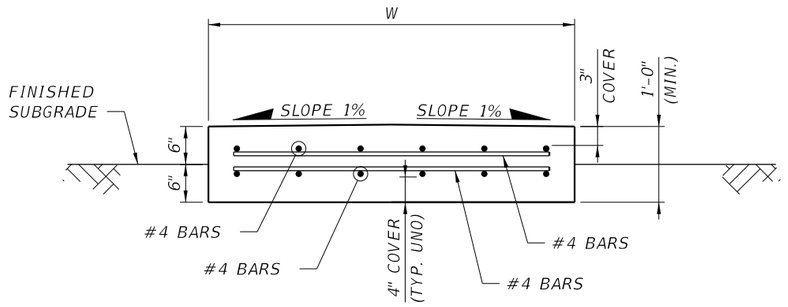
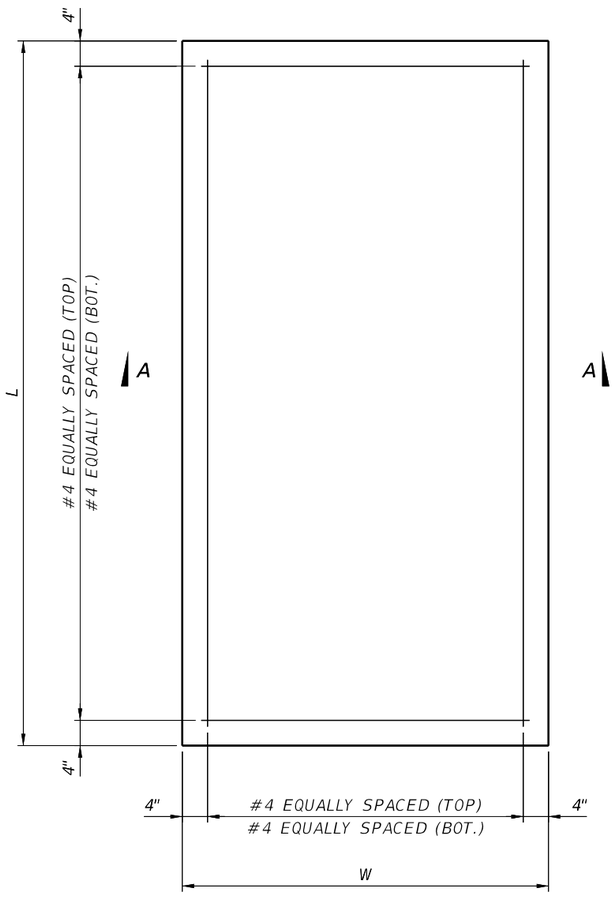
ARC FLASH AND SHOCK RISK LABELING DETAILS

SHEET NO. I-8



SECTION A-A



PLAN

NOTES:

1. CONCRETE CLASS II: f'c = 3.4 KSI REINFORCEMENT STEEL: CARBON STEEL BARS PER FDOT SPECIFICATION 931.
2. CAST OUTSIDE EDGES OF THE SLAB AGAINST THE FORMWORK.
3. COORDINATE CONDUIT STUB-UP LOCATIONS EMBEDDED IN THE GENERATOR PAD WITH THE GENERATOR AND TRANSFORMER SHOP DRAWINGS PRIOR TO CONSTRUCTING THE GENERATOR PAD.
4. MAINTAIN A MINIMUM 12" EDGE DISTANCE BETWEEN THE GENERATOR SET AND THE GENERATOR PAD.
5. PROVIDE GENERATOR TIE-DOWN HOOKS ANCHORED TO THE CONCRETE PAD PER GENERATOR MANUFACTURER REQUIREMENTS.

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EMERGENCY GENERATOR CONCRETE PAD DETAILS

SHEET NO. I-9

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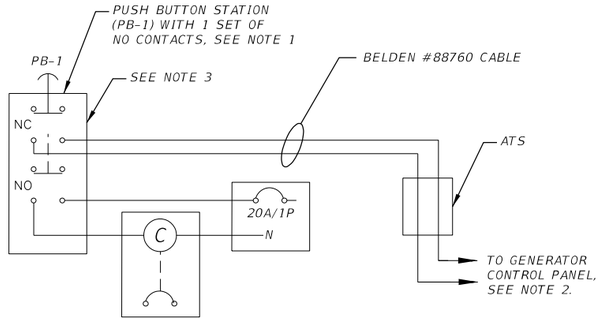


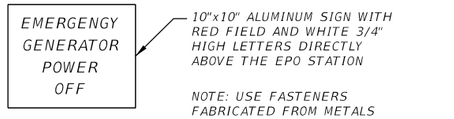
NOTES:

1. INSTALL SWITCH PUSH BUTTON PB-1 IN A SINGLE GANG BOX. REFER TO EPO DETAIL ON THIS SHEET FOR ADDITIONAL INFORMATION.

2. CONNECT TO EPO TERMINALS IN GENERATOR CONTROL PANEL. REFER TO MANUFACTURER'S INSTALLATION MANUAL FOR ADDITIONAL INFORMATION.

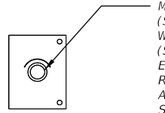
3. WHEN THE MUSHROOM PUSH BUTTON IS DEPRESSED, TO THE "OFF" POSITION, THE BACKUP GENERATOR WILL SHUT DOWN IF IT IS RUNNING. ENSURE THE BACKUP GENERATOR WILL NOT START UNTIL THE EPO SWITCH IS RETURNED TO THE "ON" POSITION, TURN-TO-RELEASE, AND THE SHUTDOWN ALARMS ARE CLEARED FROM THE OPERATOR CONTROL PANEL.

EPO/SHUNT TRIP WIRING DIAGRAM
N.T.S.



10"x10" ALUMINUM SIGN WITH RED FIELD AND WHITE 3/4" HIGH LETTERS DIRECTLY ABOVE THE EPO STATION

NOTE: USE FASTENERS FABRICATED FROM METALS THAT ARE NOT CORROSIVE TO THE SIGN MATERIAL AND MOUNTING SURFACE.



MUSHROOM PUSH BUTTON, RED, (SQUARE-D CAT. #9001SKR16H13), WITH ONE N.O. SET OF CONTACTS (SQUARE-D CAT. #KA1), GUARDED ENCLOSURE UL TYPE 4, NEMA 3R RATED, SQUARE-D CAT. KYG1 OR APPROVED EQUAL, (COLOR GRAY) SURFACE MOUNTED 66" AFG. PROVIDE NAMEPLATE "EMERGENCY GENERATOR POWER OFF" ABOVE PUSHBUTTON

EPO DETAIL
N.T.S.

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EMERGENCY GENERATOR POWER SHUTOFF DETAIL

SHEET NO.

I-10

						LANE CONFIGURATION (TOLL LANES + SHOULDERS)						
						1	1+0	1+1	1+2	2+0	2+1	2+2
EQUIPMENT NO.	EQUIPMENT DESCRIPTION	EQUIPMENT LOCATION	CONNECTED ELECTRICAL PANEL	OPERATING VOLTAGE	MAX POWER (WATTAGE OR VOLTAMPS)	EQUIPMENT QUANTITY						
1	VCARS-2 (INCLUDING HEATERS, FANS, AND CAMERAS)	GANTRY	UPS-FED	120	170 (W)	2	2	4	6	4	6	8
2	DVAS	GANTRY	UPS-FED	120	34.4 (W)	1	1	1	1	2	2	2
3	TIP OUT EQUIPMENT (SINGLE BAY MAX POWER)	CABINET	UPS-FED	120	244.7 (W)	2	2	2	3	3	3	4
4	E6 READER	CABINET	UPS-FED	120	40 (W)	1	3	4	5	5	6	7
5	CISCO X460-G2-24t-10GE4 ETHERNET SWITCH (TOLLS)	CABINET	UPS-FED	120	125 (W)	1	1	1	1	1	1	1
6	EXTREME X460-G2-24t-10GE4 ETHERNET SWITCH (ITS)	CABINET	UPS-FED	120	125 (W)	1	1	1	1	1	1	1
7	RPM (DIGI-LOGGER ETHERNET POWER CONTOLLER 7)	CABINET	UPS-FED	120	5.3 (W)	5	5	5	5	5	5	5
8	UPS (RUN MODE)	CABINET	DISTRIBUTION	120	50 (VA)	1	1	1	1	1	1	1
9	RED SIGNAL HEAD (RAMP GANTRIES ONLY)	GANTRY	DISTRIBUTION	120	10 (VA)	1	1	1	1	2	2	2
10	CABINET LIGHTS	CABINET	DISTRIBUTION	120	10 (VA)	4	4	4	4	4	4	4
11	THERMAL EDGE 10,000 BTU AIR CONDITIONER (STARTUP INRUSH)	CABINET	DISTRIBUTION	240	1,886 (VA)	2	2	2	2	2	2	2
12	UPS (CHARGE MODE)	CABINET	DISTRIBUTION	240	240 (VA)	1	1	1	1	1	1	1

CAB EQUIP UPS-FED POWER (VA)	824.7	904.7	944.7	1210.6	1210.6	1250.6	1535.3
GANTRY EQUIP UPS-FED POWER (VA)	374.4	314.4	714.4	1054.4	748.8	1088.8	1428.8
TOTAL UPS-FED POWER (VA) (INCLUDES 94% UPS EFFICIENCY)	1275.6	1360.7	1659.1	2409.6	2084.5	2488.7	3153.3
TOTAL DIST PANEL POWER (VA)	5387.6	5472.7	5771.1	6521.6	6206.5	6610.7	7275.3

NOTES:

1. ALL ELECTRICAL LOADS OF THE EQUIPMENT NUMBER 1 THROUGH 7 ARE MEASURED IN WATTS (W).
2. ELECTRICAL LOADS OF THE EQUIPMENT NUMBER 8 THROUGH 12 ARE MEASURED IN VOLTAMPS (VA).
3. SHOULDERS COUNTED IN THE LANE CONFIGURATION ARE 6 FEET OR LARGER.

VERSION: MARCH 2025

REVISIONS						FOR INFORMATIONAL PURPOSES ONLY	CENTRAL FLORIDA EXPRESSWAY AUTHORITY	CENTRAL FLORIDA EXPRESSWAY AUTHORITY	RAMP TOLLING EQUIPMENT ELECTRICAL LOADS	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION					I-11

						LANE CONFIGURATION (TOLL LANES + SHOULDERS)						
						2+2	3+0	3+1	3+2	4+0	4+1	4+2
EQUIPMENT NO.	EQUIPMENT DESCRIPTION	EQUIPMENT LOCATION	CONNECTED ELECTRICAL PANEL	OPERATING VOLTAGE	MAX POWER (WATTAGE OR VOLTAMPS)	EQUIPMENT QUANTITY						
1	VCARS-2 (INCLUDING HEATERS, FANS, AND CAMERAS)	GANTRY	UPS-FED	120	170 (W)	8	6	8	10	8	10	12
2	DVAS	GANTRY	UPS-FED	120	34.4 (W)	2	3	3	3	4	4	4
3	TIP OUT EQUIPMENT (SINGLE BAY MAX POWER)	CABINET	UPS-FED	120	244.7 (W)	4	4	4	5	4	5	6
4	E6 READER	CABINET	UPS-FED	120	40 (W)	7	7	8	9	9	10	11
5	CISCO X460-G2-24t-10GE4 ETHERNET SWITCH (TOLLS)	CABINET	UPS-FED	120	125 (W)	1	1	1	1	1	1	2
6	EXTREME X460-G2-24t-10GE4 ETHERNET SWITCH (ITS)	CABINET	UPS-FED	120	125 (W)	1	1	1	1	1	1	2
7	RPM (DIGI-LOGGER ETHERNET POWER CONTOLLER 7)	CABINET	UPS-FED	120	5.3 (W)	5	5	5	5	5	5	6
8	UPS (RUN MODE)	CABINET	DISTRIBUTION	120	50 (VA)	1	1	1	1	1	1	2
9	RED SIGNAL HEAD (RAMP GANTRIES ONLY)	GANTRY	DISTRIBUTION	120	10 (VA)	0	0	0	0	0	0	0
10	CABINET LIGHTS	CABINET	DISTRIBUTION	120	10 (VA)	4	4	4	4	4	4	5
11	THERMAL EDGE 12,000 BTU AIR CONDITIONER (STARTUP INRUSH)	CABINET	DISTRIBUTION	240	1,886 (VA)	2	2	2	2	2	2	2
12	UPS (CHARGE MODE)	CABINET	DISTRIBUTION	240	2,400 (VA)	1	1	1	1	1	1	1

CAB EQUIP UPS-FED POWER (VA)	1535.3	1535.3	1575.3	1860.0	1615.3	1900.0	2440.0
GANTRY EQUIP UPS-FED POWER (VA)	1428.8	1123.2	1463.2	1803.2	1497.6	1837.6	2177.6
TOTAL UPS-FED POWER (VA) (INCLUDES 94% UPS EFFICIENCY)	3153.3	2828.2	3232.4	3897.0	3311.6	3976.2	4912.3
TOTAL DIST PANEL POWER (VA)	9415.3	9090.2	9494.4	10159.0	9573.6	10238.2	11234.3

NOTES:

1. ALL ELECTRICAL LOADS OF THE EQUIPMENT NUMBER 1 THROUGH 7 ARE MEASURED IN WATTS (W).
2. ELECTRICAL LOADS OF THE EQUIPMENT NUMBER 8 THROUGH 12 ARE MEASURED IN VOLTAMPS (VA).
3. FOR A TOLLING LANE CONFIGURATION WITH MORE THAN 4 TRAVELING LANES AND 2 SHOULDERS, THE RECOMMENDATION TO USE 15,000 BTU AC UNITS IS BASED ON THE COOLING LOAD REQUIRED FOR THE EQUIPMENT.
4. SHOULDERS COUNTED IN THE LANE CONFIGURATION ARE 6 FEET OR LARGER.

VERSION: MARCH 2025

REVISIONS						FOR INFORMATIONAL PURPOSES ONLY	CENTRAL FLORIDA EXPRESSWAY AUTHORITY	CENTRAL FLORIDA EXPRESSWAY AUTHORITY	MAINLINE TOLLING EQUIPMENT ELECTRICAL LOADS	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION					I-12

EXHIBIT A

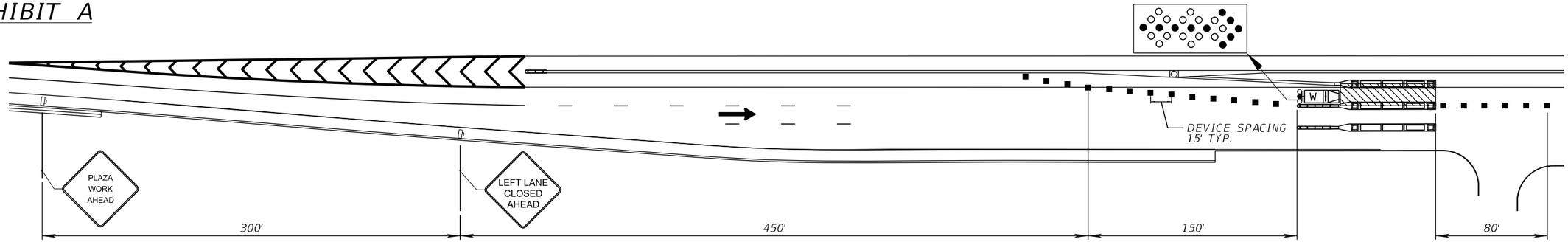
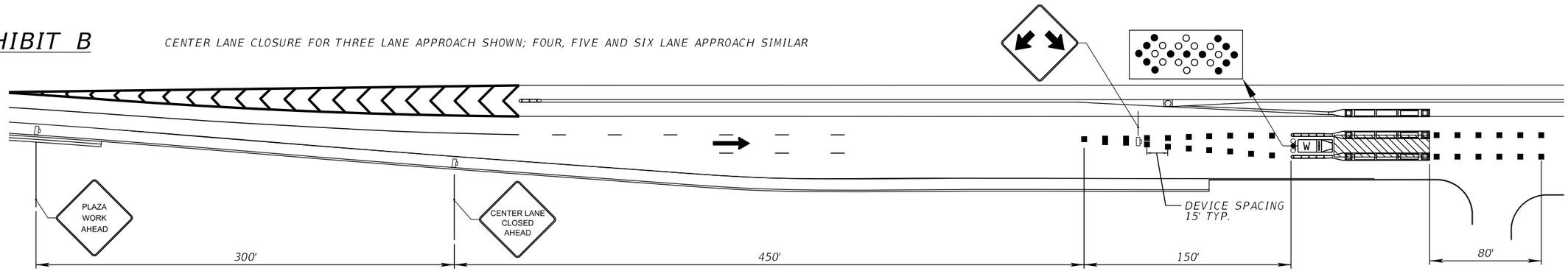


EXHIBIT B

CENTER LANE CLOSURE FOR THREE LANE APPROACH SHOWN; FOUR, FIVE AND SIX LANE APPROACH SIMILAR



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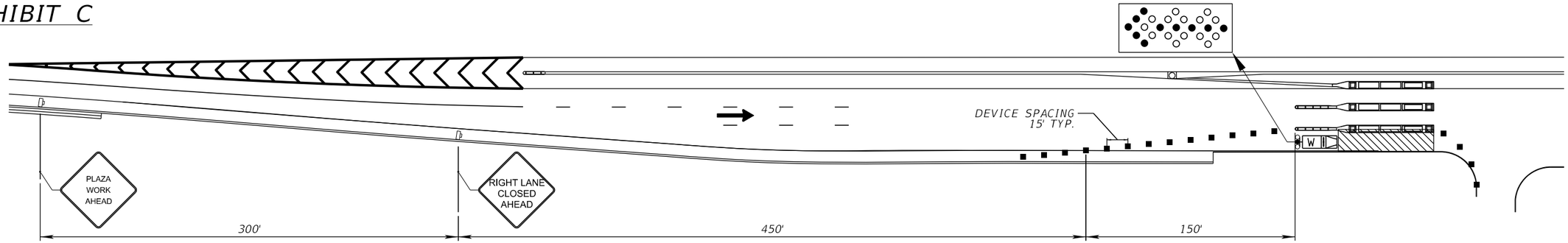

SYMBOLS

- LANE IDENTIFICATION + DIRECTION OF TRAFFIC
- CHANNELIZING DEVICE
- WORK ZONE SIGN
- WORK AREA
- W — WORK VEHICLE WITH WARNING LIGHTS AND ARROW BOARD

NOTES:

1. LANE WIDTH THROUGH THE TOLLING AREA SHALL BE MAINTAINED AT 15' MINIMUM.
2. THIS PLAN IS TO BE USED AT CFX MAINLINE TOLL PLAZAS ONLY AND FOR LANE CLOSURES THAT ARE LESS THAN THREE HOURS IN DURATION.
3. DETAILS SHOWN ON THIS SHEET DO NOT APPLY TO PINE HILLS ML (EB), CONWAY ML (WB) AND UNIVERSITY ML (SB). SITE SPECIFIC TCP'S ARE REQUIRED AT THESE LOCATIONS.
4. ENSURE THAT THE MERGING TAPER ONLY DIRECTS VEHICULAR TRAFFIC INTO EITHER THE RIGHT OR LEFT LANE.

VERSION: MARCH 2025

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FOR INFORMATIONAL PURPOSES ONLY

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

STANDARD MAINLINE TOLL PLAZA MOT PLAN SHORT-TERM DURATION

SHEET NO.

TCP-1

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EXHIBIT A

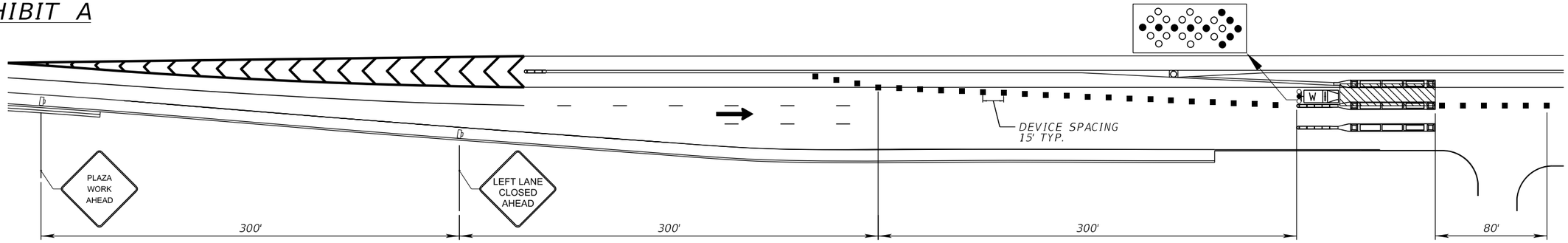
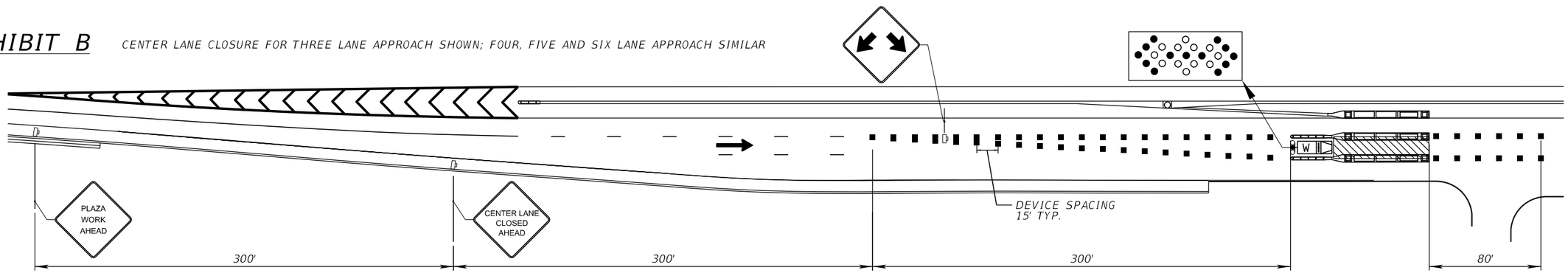


EXHIBIT B

CENTER LANE CLOSURE FOR THREE LANE APPROACH SHOWN; FOUR, FIVE AND SIX LANE APPROACH SIMILAR



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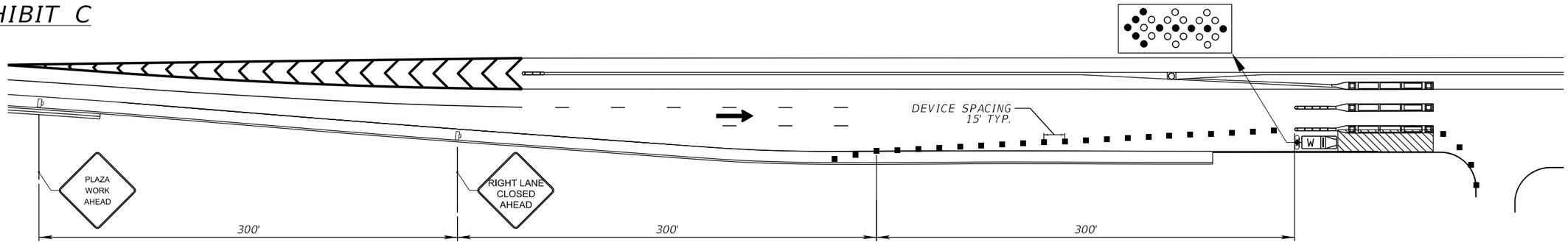


SYMBOLS

- LANE IDENTIFICATION + DIRECTION OF TRAFFIC
- CHANNELIZING DEVICE
- WORK ZONE SIGN
- WORK AREA
- W — WORK VEHICLE WITH WARNING LIGHTS AND ARROW BOARD

NOTES:

1. LANE WIDTH THROUGH THE TOLLING AREA SHALL BE MAINTAINED AT 15' MINIMUM.
2. THIS PLAN IS TO BE USED AT CFX MAINLINE TOLL PLAZAS ONLY AND FOR LANE CLOSURES THAT ARE LESS THAN ONE DAY'S OPERATION.
3. DETAILS SHOWN ON THIS SHEET DO NOT APPLY TO PINE HILLS ML (EB), CONWAY ML (WB) AND UNIVERSITY ML (SB). SITE SPECIFIC TCP'S ARE REQUIRED AT THESE LOCATIONS.
4. ENSURE THAT THE MERGING TAPER ONLY DIRECTS VEHICULAR TRAFFIC INTO EITHER THE RIGHT OR LEFT LANE.

REVISIONS						FOR INFORMATIONAL PURPOSES ONLY	CENTRAL FLORIDA EXPRESSWAY AUTHORITY	CENTRAL FLORIDA EXPRESSWAY AUTHORITY	STANDARD MAINLINE TOLL PLAZA MOT PLAN INTERMEDIATE DURATION	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION					TCP-2

VERSION: MARCH 2025

EXHIBIT A

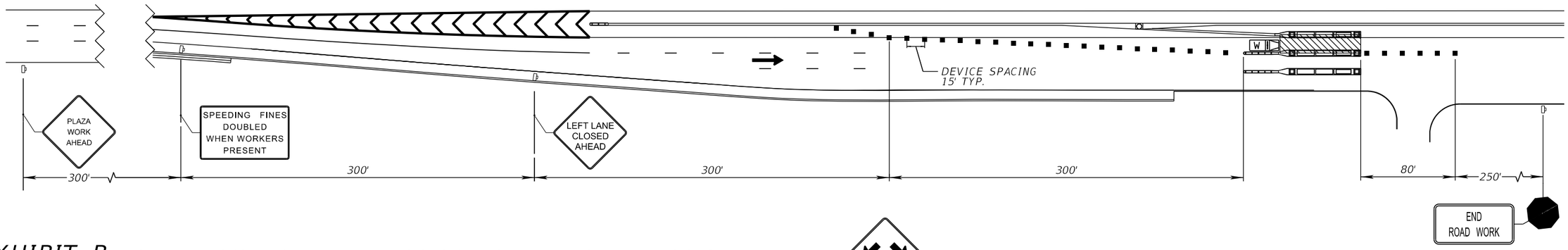
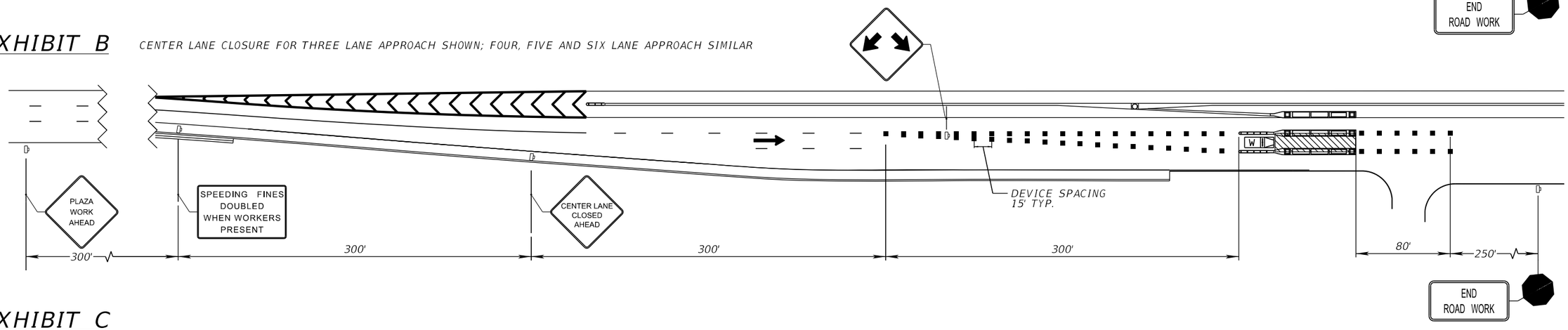


EXHIBIT B

CENTER LANE CLOSURE FOR THREE LANE APPROACH SHOWN; FOUR, FIVE AND SIX LANE APPROACH SIMILAR



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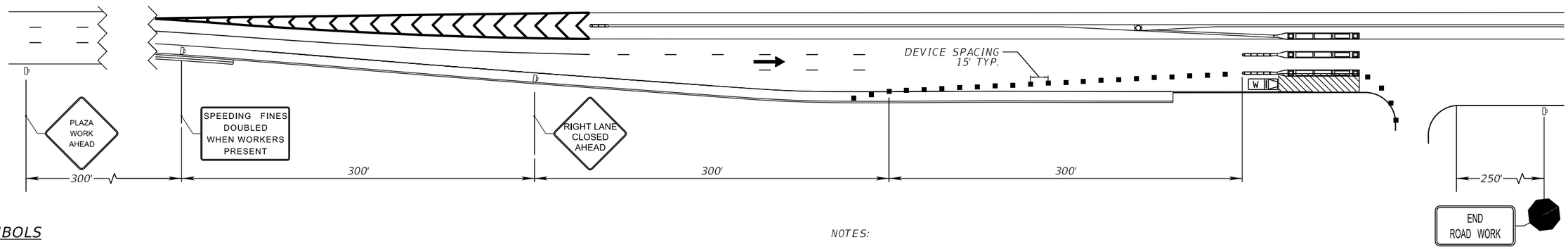

SYMBOLS

- LANE IDENTIFICATION + DIRECTION OF TRAFFIC
- CHANNELIZING DEVICE (BARRELS)
- WORK ZONE SIGN
- WORK AREA
- ATTENUATOR TRUCK

NOTES:

1. LANE WIDTH THROUGH THE TOLLING AREA SHALL BE MAINTAINED AT 15' MINIMUM.
2. THIS PLAN IS TO BE USED AT CFX MAINLINE TOLL PLAZAS ONLY AND FOR LANE CLOSURES THAT ARE GREATER THAN ONE DAY'S (24 HOURS) OPERATION.
3. DETAILS SHOWN ON THIS SHEET DO NOT APPLY TO PINE HILLS ML (EB), CONWAY ML (WB) AND UNIVERSITY ML (SB). SITE SPECIFIC TCP'S ARE REQUIRED AT THESE LOCATIONS.
4. ENSURE THAT THE MERGING TAPER ONLY DIRECTS VEHICULAR TRAFFIC INTO EITHER THE RIGHT OR LEFT LANE.

VERSION: MARCH 2025

REVISIONS						FOR INFORMATIONAL PURPOSES ONLY	CENTRAL FLORIDA EXPRESSWAY AUTHORITY	CENTRAL FLORIDA EXPRESSWAY AUTHORITY	STANDARD MAINLINE TOLL PLAZA MOT PLAN LONG-TERM DURATION	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION					TCP-3

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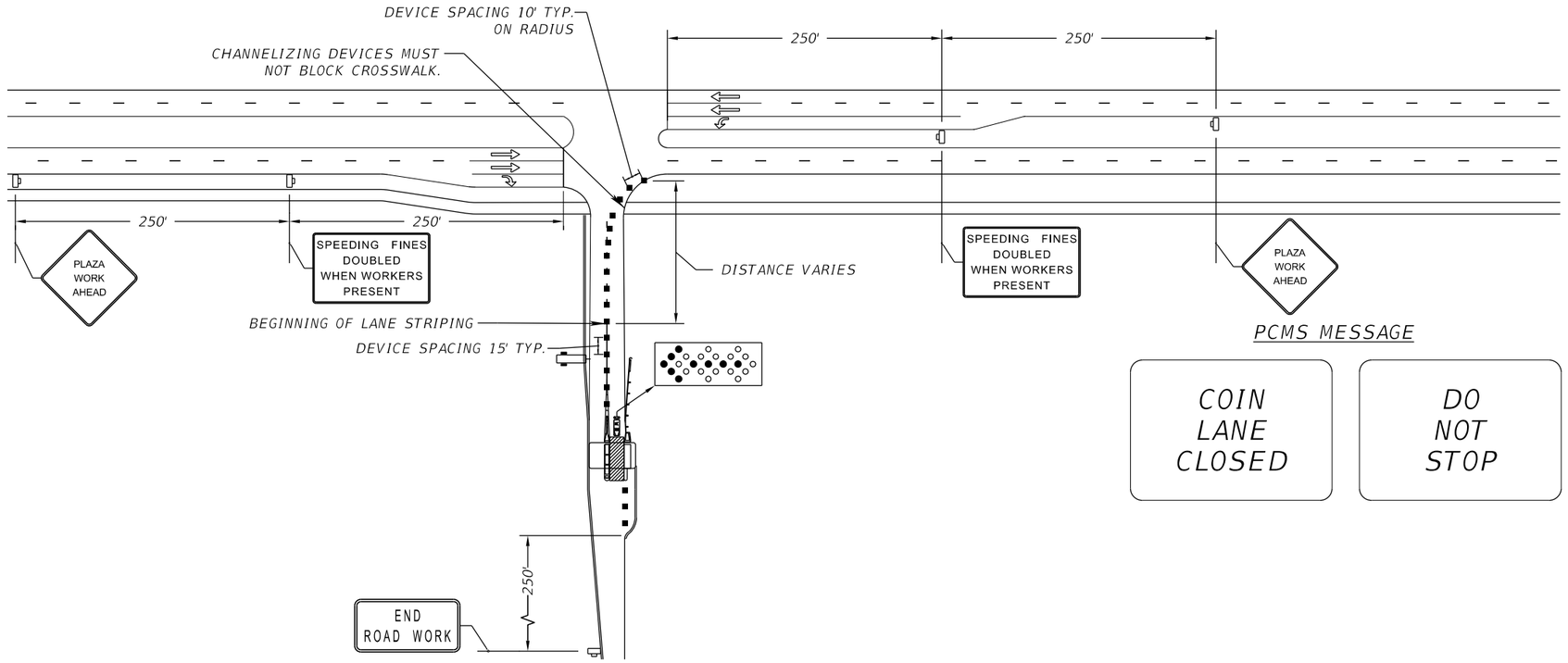
ACM LANE CLOSURE

LANE CONFIGURATION VARIES

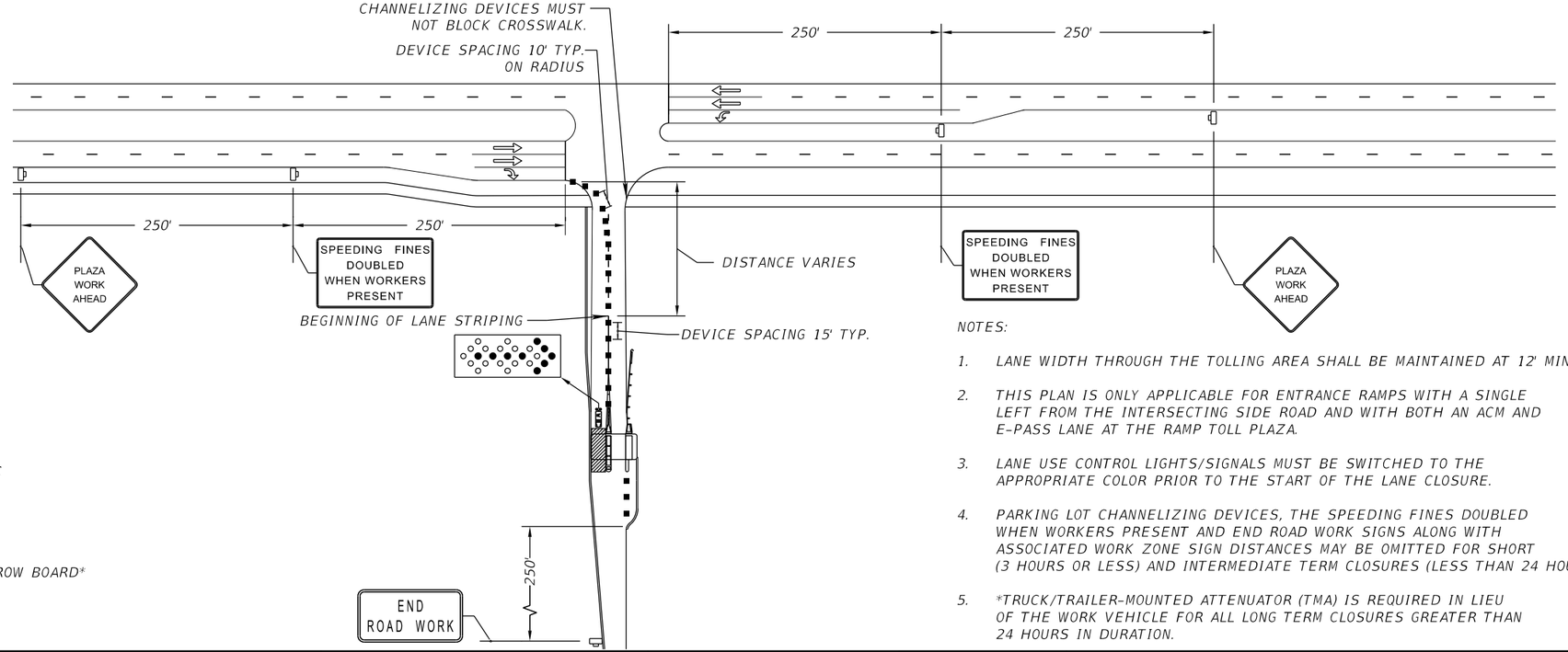


PCMS MESSAGE

COIN LANE CLOSED	DO NOT STOP

AET LANE CLOSURE

LANE CONFIGURATION VARIES



SYMBOLS

- LANE IDENTIFICATION + DIRECTION OF TRAFFIC
- CHANNELIZING DEVICE
- WORK ZONE SIGN
- WORK AREA
- WORK VEHICLE WITH WARNING LIGHTS AND ARROW BOARD*
- PORTABLE CHANGEABLE MESSAGE SIGN WITH PLASTIC DRUMS IN EACH CORNER

NOTES:

1. LANE WIDTH THROUGH THE TOLLING AREA SHALL BE MAINTAINED AT 12' MINIMUM.
2. THIS PLAN IS ONLY APPLICABLE FOR ENTRANCE RAMPS WITH A SINGLE LEFT FROM THE INTERSECTING SIDE ROAD AND WITH BOTH AN ACM AND E-PASS LANE AT THE RAMP TOLL PLAZA.
3. LANE USE CONTROL LIGHTS/SIGNALS MUST BE SWITCHED TO THE APPROPRIATE COLOR PRIOR TO THE START OF THE LANE CLOSURE.
4. PARKING LOT CHANNELIZING DEVICES, THE SPEEDING FINES DOUBLED WHEN WORKERS PRESENT AND END ROAD WORK SIGNS ALONG WITH ASSOCIATED WORK ZONE SIGN DISTANCES MAY BE OMITTED FOR SHORT (3 HOURS OR LESS) AND INTERMEDIATE TERM CLOSURES (LESS THAN 24 HOURS).
5. *TRUCK/TRAILER-MOUNTED ATTENUATOR (TMA) IS REQUIRED IN LIEU OF THE WORK VEHICLE FOR ALL LONG TERM CLOSURES GREATER THAN 24 HOURS IN DURATION.

VERSION: MARCH 2025

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FOR INFORMATIONAL PURPOSES ONLY

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ON RAMP TOLL PLAZA SINGLE LEFT SINGLE LANE CLOSURE

SHEET NO. TCP-4

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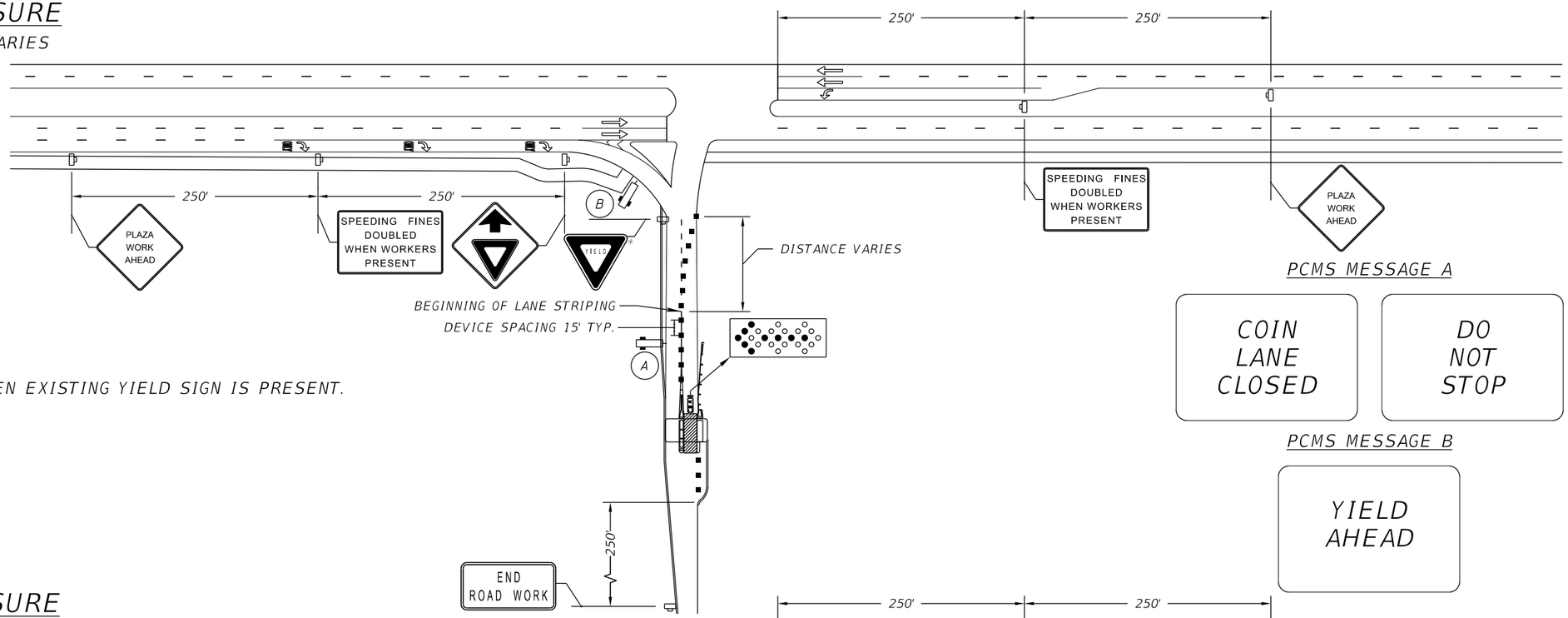
ACM LANE CLOSURE

LANE CONFIGURATION VARIES



* MAY BE OMITTED WHEN EXISTING YIELD SIGN IS PRESENT.

PCMS MESSAGE A

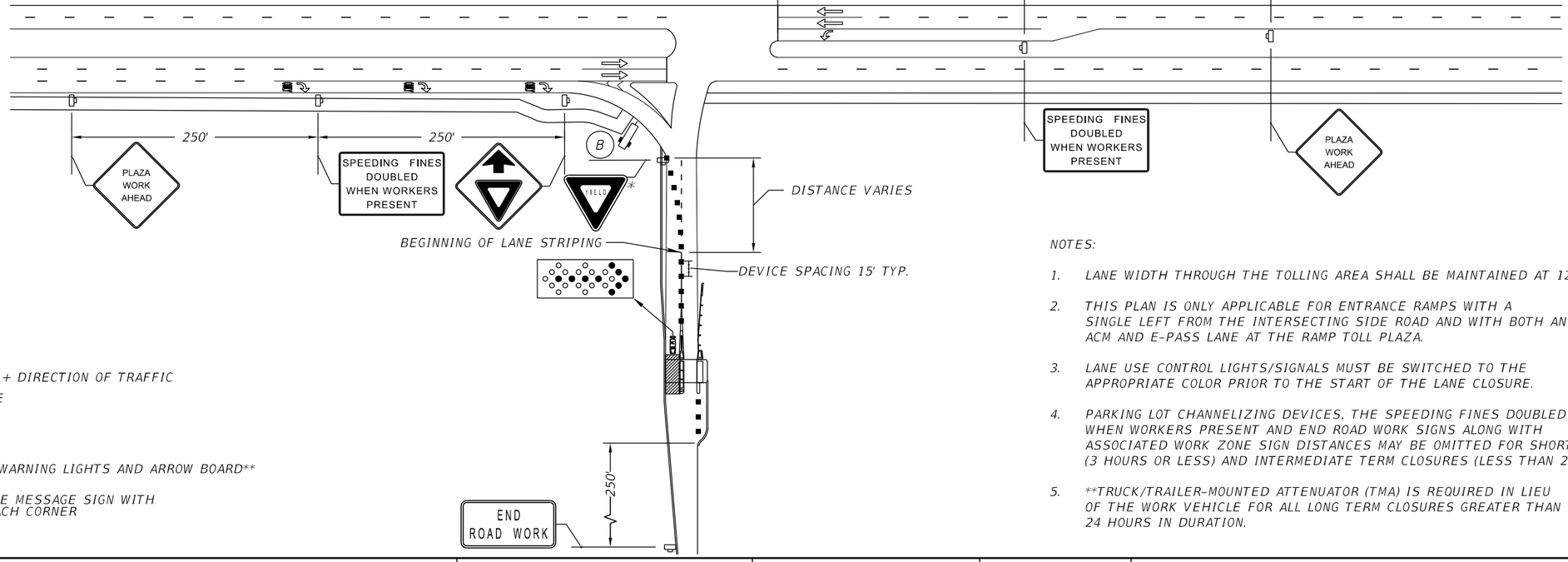
COIN LANE CLOSED	DO NOT STOP

PCMS MESSAGE B

YIELD AHEAD

AET LANE CLOSURE

LANE CONFIGURATION VARIES



SYMBOLS

- LANE IDENTIFICATION + DIRECTION OF TRAFFIC
- CHANNELIZING DEVICE
- WORK ZONE SIGN
- WORK AREA
- WORK VEHICLE WITH WARNING LIGHTS AND ARROW BOARD**
- PORTABLE CHANGEABLE MESSAGE SIGN WITH PLASTIC DRUMS IN EACH CORNER

NOTES:

1. LANE WIDTH THROUGH THE TOLLING AREA SHALL BE MAINTAINED AT 12' MINIMUM.
2. THIS PLAN IS ONLY APPLICABLE FOR ENTRANCE RAMPS WITH A SINGLE LEFT FROM THE INTERSECTING SIDE ROAD AND WITH BOTH AN ACM AND E-PASS LANE AT THE RAMP TOLL PLAZA.
3. LANE USE CONTROL LIGHTS/SIGNALS MUST BE SWITCHED TO THE APPROPRIATE COLOR PRIOR TO THE START OF THE LANE CLOSURE.
4. PARKING LOT CHANNELIZING DEVICES, THE SPEEDING FINES DOUBLED WHEN WORKERS PRESENT AND END ROAD WORK SIGNS ALONG WITH ASSOCIATED WORK ZONE SIGN DISTANCES MAY BE OMITTED FOR SHORT (3 HOURS OR LESS) AND INTERMEDIATE TERM CLOSURES (LESS THAN 24 HOURS).
5. **TRUCK/TRAILER-MOUNTED ATTENUATOR (TMA) IS REQUIRED IN LIEU OF THE WORK VEHICLE FOR ALL LONG TERM CLOSURES GREATER THAN 24 HOURS IN DURATION.

VERSION: MARCH 2025

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FOR INFORMATIONAL PURPOSES ONLY

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ON RAMP TOLL PLAZA SINGLE LEFT WITH YIELD SINGLE LANE CLOSURE

SHEET NO.

TCP-5

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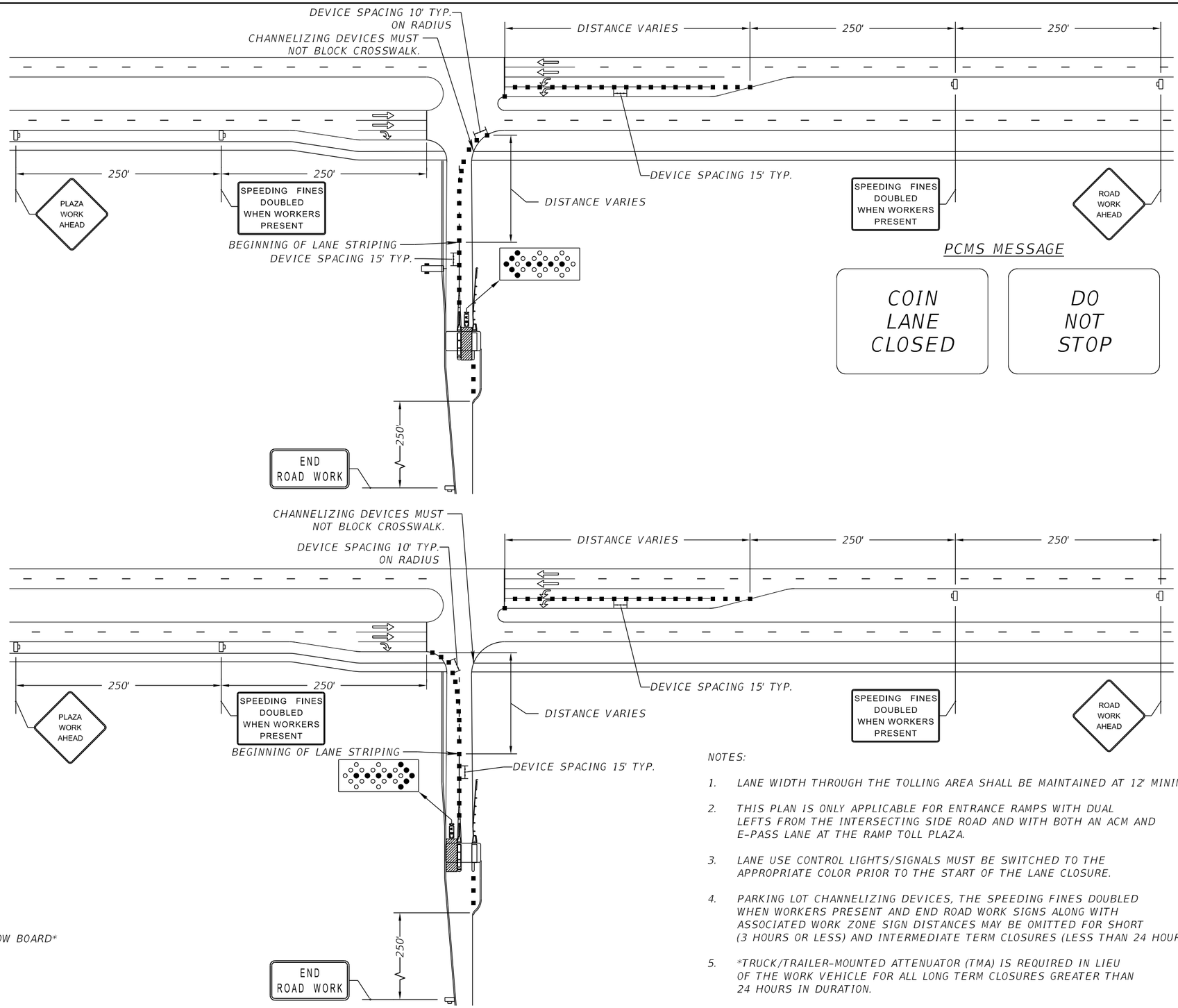
ACM LANE CLOSURE

LANE CONFIGURATION VARIES



PCMS MESSAGE

COIN LANE CLOSED	DO NOT STOP

AET LANE CLOSURE

LANE CONFIGURATION VARIES

SYMBOLS

- LANE IDENTIFICATION + DIRECTION OF TRAFFIC
- CHANNELIZING DEVICE
- WORK ZONE SIGN
- WORK AREA
- W — WORK VEHICLE WITH WARNING LIGHTS AND ARROW BOARD*
- PORTABLE CHANGEABLE MESSAGE SIGN WITH PLASTIC DRUMS IN EACH CORNER

NOTES:

1. LANE WIDTH THROUGH THE TOLLING AREA SHALL BE MAINTAINED AT 12' MINIMUM.
2. THIS PLAN IS ONLY APPLICABLE FOR ENTRANCE RAMPS WITH DUAL LEFTS FROM THE INTERSECTING SIDE ROAD AND WITH BOTH AN ACM AND E-PASS LANE AT THE RAMP TOLL PLAZA.
3. LANE USE CONTROL LIGHTS/SIGNALS MUST BE SWITCHED TO THE APPROPRIATE COLOR PRIOR TO THE START OF THE LANE CLOSURE.
4. PARKING LOT CHANNELIZING DEVICES, THE SPEEDING FINES DOUBLED WHEN WORKERS PRESENT AND END ROAD WORK SIGNS ALONG WITH ASSOCIATED WORK ZONE SIGN DISTANCES MAY BE OMITTED FOR SHORT (3 HOURS OR LESS) AND INTERMEDIATE TERM CLOSURES (LESS THAN 24 HOURS).
5. *TRUCK/TRAILER-MOUNTED ATTENUATOR (TMA) IS REQUIRED IN LIEU OF THE WORK VEHICLE FOR ALL LONG TERM CLOSURES GREATER THAN 24 HOURS IN DURATION.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FOR INFORMATIONAL PURPOSES ONLY

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ON RAMP TOLL PLAZA DUAL LEFT SINGLE LANE CLOSURE

SHEET NO. TCP-6

VERSION: MARCH 2025

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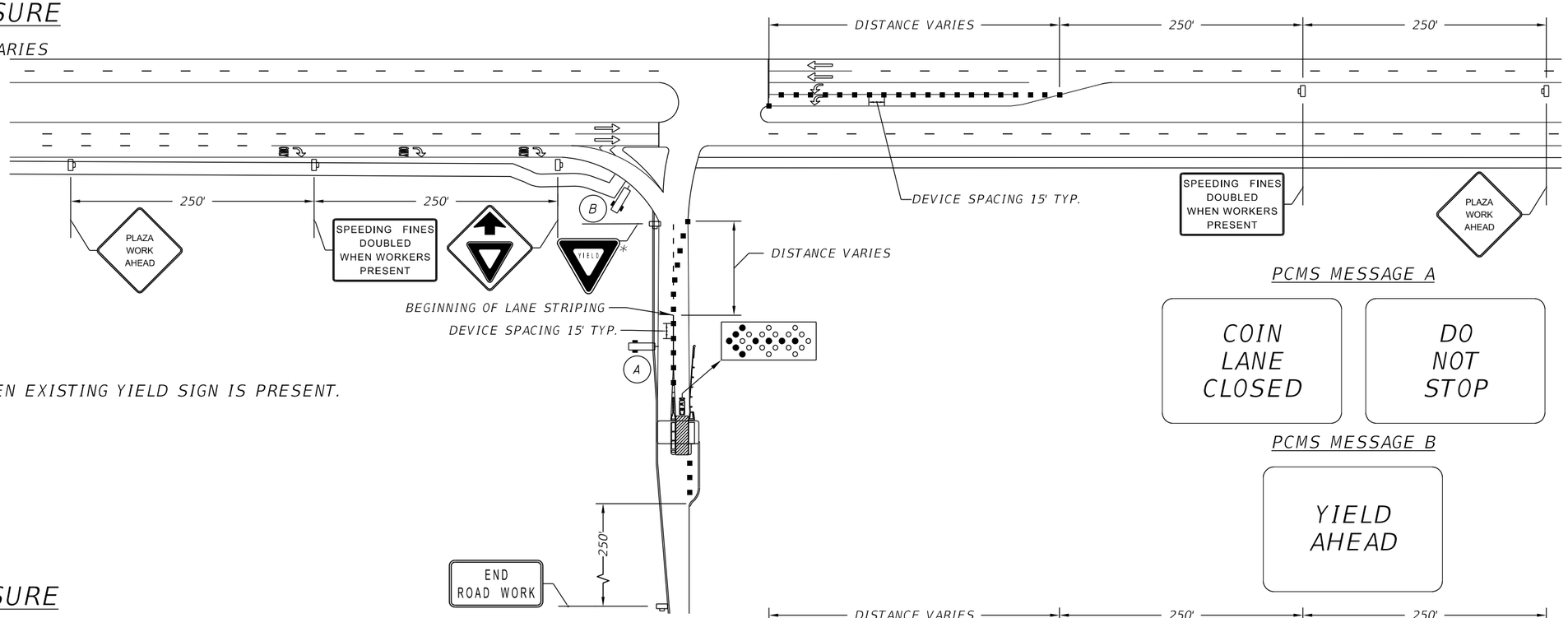
ACM LANE CLOSURE

LANE CONFIGURATION VARIES



* MAY BE OMITTED WHEN EXISTING YIELD SIGN IS PRESENT.

PCMS MESSAGE A

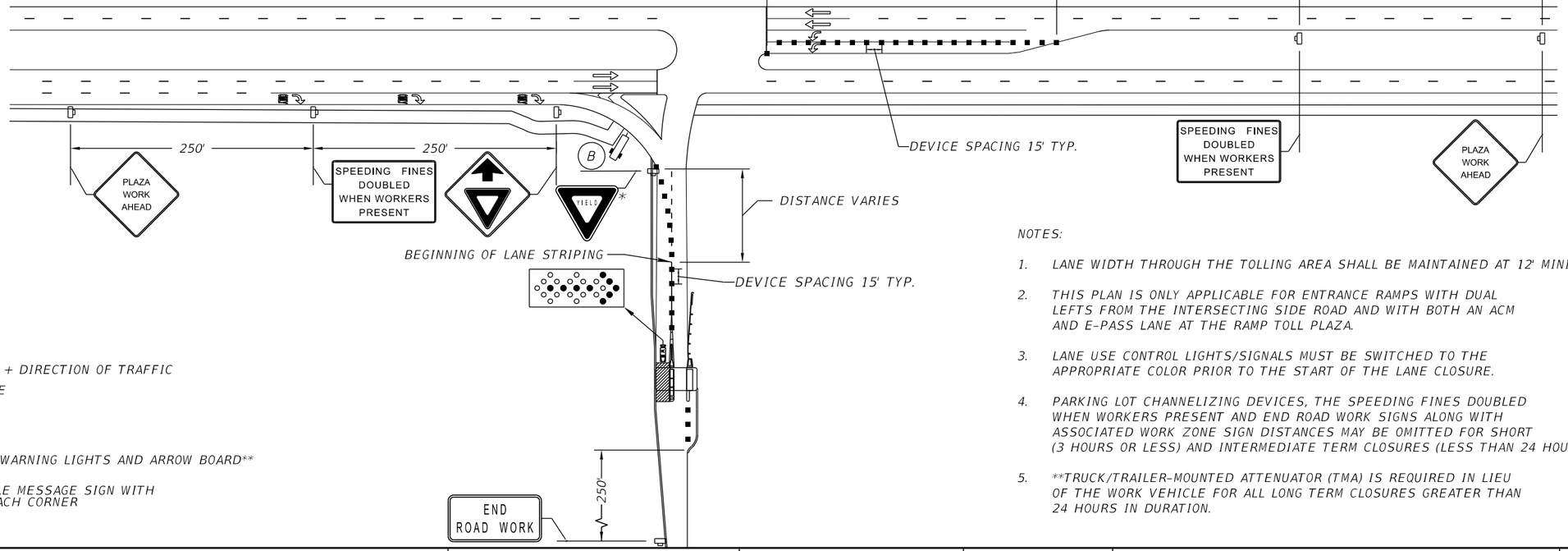
COIN LANE CLOSED	DO NOT STOP

PCMS MESSAGE B

YIELD AHEAD

AET LANE CLOSURE

LANE CONFIGURATION VARIES



SYMBOLS

- LANE IDENTIFICATION + DIRECTION OF TRAFFIC
- CHANNELIZING DEVICE
- WORK ZONE SIGN
- WORK AREA
- W — WORK VEHICLE WITH WARNING LIGHTS AND ARROW BOARD**
- PORTABLE CHANGEABLE MESSAGE SIGN WITH PLASTIC DRUMS IN EACH CORNER

NOTES:

1. LANE WIDTH THROUGH THE TOLLING AREA SHALL BE MAINTAINED AT 12' MINIMUM.
2. THIS PLAN IS ONLY APPLICABLE FOR ENTRANCE RAMPS WITH DUAL LEFTS FROM THE INTERSECTING SIDE ROAD AND WITH BOTH AN ACM AND E-PASS LANE AT THE RAMP TOLL PLAZA.
3. LANE USE CONTROL LIGHTS/SIGNALS MUST BE SWITCHED TO THE APPROPRIATE COLOR PRIOR TO THE START OF THE LANE CLOSURE.
4. PARKING LOT CHANNELIZING DEVICES, THE SPEEDING FINES DOUBLED WHEN WORKERS PRESENT AND END ROAD WORK SIGNS ALONG WITH ASSOCIATED WORK ZONE SIGN DISTANCES MAY BE OMITTED FOR SHORT (3 HOURS OR LESS) AND INTERMEDIATE TERM CLOSURES (LESS THAN 24 HOURS).
5. **TRUCK/TRAILER-MOUNTED ATTENUATOR (TMA) IS REQUIRED IN LIEU OF THE WORK VEHICLE FOR ALL LONG TERM CLOSURES GREATER THAN 24 HOURS IN DURATION.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FOR INFORMATIONAL PURPOSES ONLY

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

ON RAMP TOLL PLAZA DUAL LEFT WITH YIELD SINGLE LANE CLOSURE

SHEET NO.

TCP-7

VERSION: MARCH 2025

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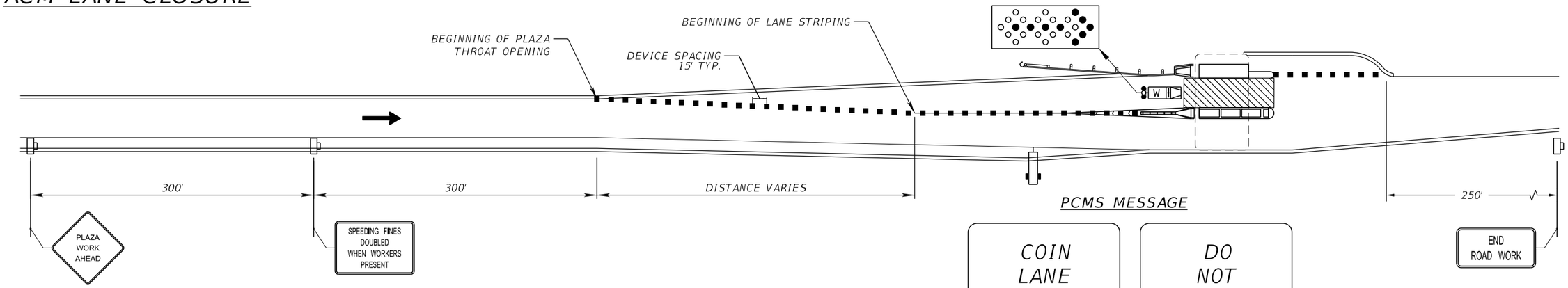
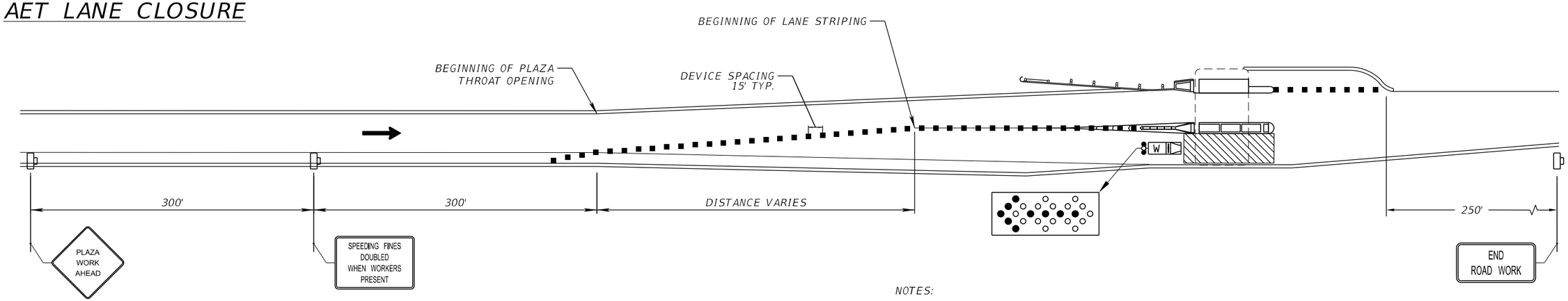
ACM LANE CLOSURE



PCMS MESSAGE

COIN LANE CLOSED	DO NOT STOP

AET LANE CLOSURE



SYMBOLS

- LANE IDENTIFICATION + DIRECTION OF TRAFFIC
- CHANNELIZING DEVICE
- WORK ZONE SIGN
- WORK AREA
- W — WORK VEHICLE WITH WARNING LIGHTS AND ARROW BOARD*
- PORTABLE CHANGEABLE MESSAGE SIGN WITH PLASTIC DRUMS IN EACH CORNER

NOTES:

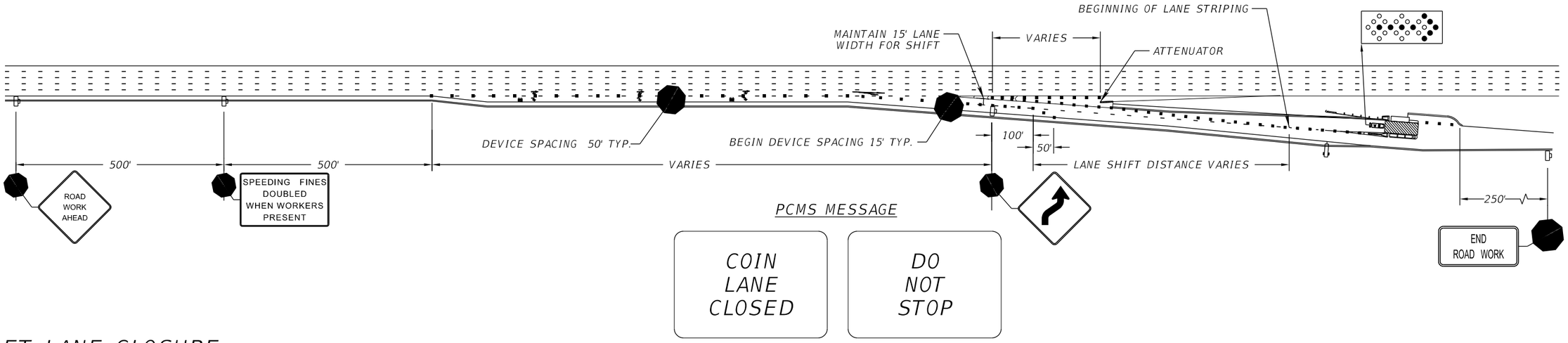
1. LANE WIDTH THROUGH THE TOLLING AREA SHALL BE MAINTAINED AT 12' MINIMUM.
2. THIS PLAN IS ONLY APPLICABLE FOR SINGLE LANE OFF-RAMPS AND WITH BOTH AN ACM AND E-PASS LANE AT THE RAMP TOLL PLAZA .
3. LANE USE CONTROL LIGHTS/SIGNALS MUST BE SWITCHED TO THE APPROPRIATE COLOR PRIOR TO THE START OF THE LANE CLOSURE.
4. FOR LOCATIONS WITH WRONG WAY DRIVING (WWD) DETECTION SYSTEMS, COORDINATE ACTIVITIES WITH THE DISTRICT 5 RTMC AND PLACE THE SYSTEM IN MAINTENANCE MODE FOR THE DURATION OF THE WORK.
5. PARKING LOT CHANNELIZING DEVICES, THE SPEEDING FINES DOUBLED WHEN WORKERS PRESENT AND END ROAD WORK SIGNS ALONG WITH ASSOCIATED WORK ZONE SIGN DISTANCES MAY BE OMITTED FOR SHORT (3 HOURS OR LESS) AND INTERMEDIATE TERM CLOSURES (LESS THAN 24 HOURS).
6. *TRUCK/TRAILER-MOUNTED ATTENUATOR (TMA) IS REQUIRED IN LIEU OF THE WORK VEHICLE FOR ALL LONG TERM CLOSURES GREATER THAN 24 HOURS IN DURATION.

VERSION: MARCH 2025

REVISIONS						FOR INFORMATIONAL PURPOSES ONLY	CENTRAL FLORIDA EXPRESSWAY AUTHORITY	CENTRAL FLORIDA EXPRESSWAY AUTHORITY	OFF RAMP TOLL PLAZA SINGLE LANE EXIT SINGLE LANE CLOSURE	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION					TCP-8

ACM LANE CLOSURE

LANE CONFIGURATION VARIES

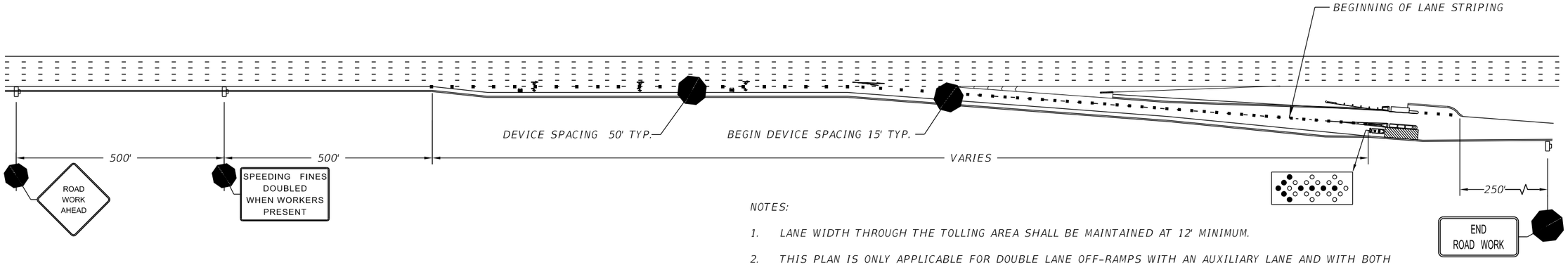


PCMS MESSAGE

COIN LANE CLOSED	DO NOT STOP

AET LANE CLOSURE

LANE CONFIGURATION VARIES



SYMBOLS

- LANE IDENTIFICATION + DIRECTION OF TRAFFIC
- CHANNELIZING DEVICE
- WORK ZONE SIGN
- WORK AREA
- WORK VEHICLE WITH WARNING LIGHTS AND ARROW BOARD*
- PORTABLE CHANGEABLE MESSAGE SIGN WITH PLASTIC DRUMS IN EACH CORNER

NOTES:

1. LANE WIDTH THROUGH THE TOLLING AREA SHALL BE MAINTAINED AT 12' MINIMUM.
2. THIS PLAN IS ONLY APPLICABLE FOR DOUBLE LANE OFF-RAMPS WITH AN AUXILIARY LANE AND WITH BOTH AN ACM AND E-PASS LANE AT THE RAMP TOLL PLAZA.
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6. *REFER TO FDOT STANDARD PLANS INDEX 102-600 FOR LENGTH BASED ON POSTED SPEED.
7. **TRUCK/TRAILER-MOUNTED ATTENUATOR (TMA) IS REQUIRED IN LIEU OF THE WORK VEHICLE FOR ALL LONG TERM CLOSURES GREATER THAN 24 HOURS IN DURATION.

VERSION: MARCH 2025

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FOR INFORMATIONAL PURPOSES ONLY

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

OFF RAMP TOLL PLAZA AUXILIARY LANE EXIT SINGLE LANE CLOSURE (1)

SHEET NO.

TCP-9

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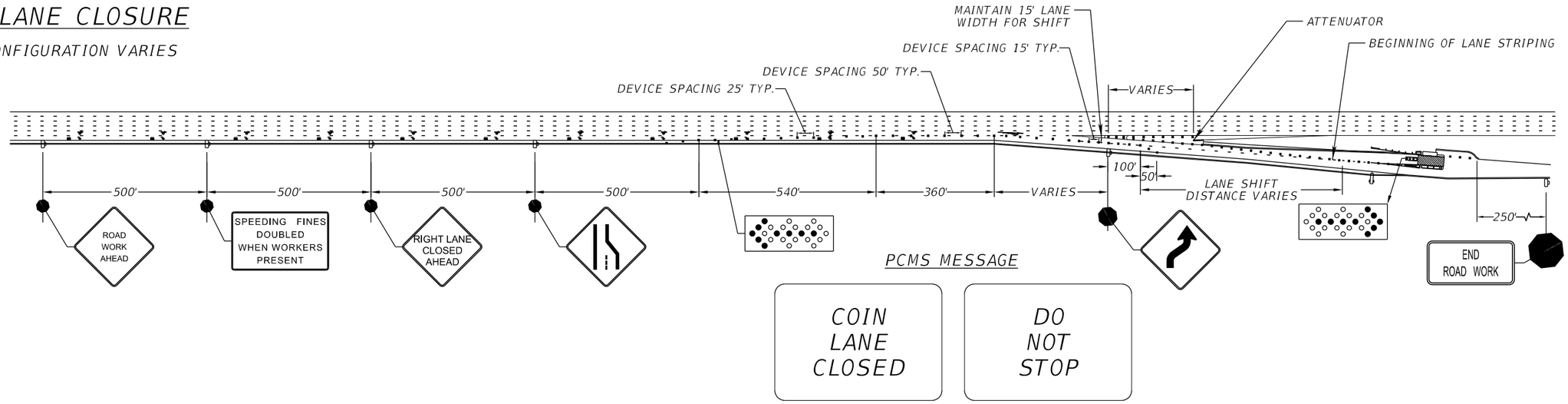
ACM LANE CLOSURE

LANE CONFIGURATION VARIES

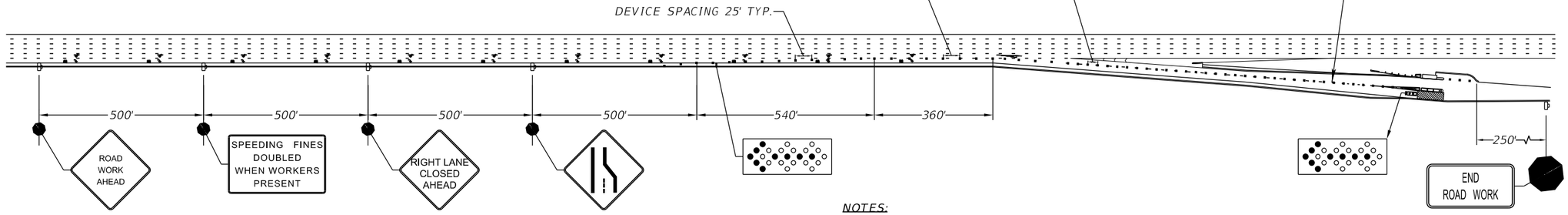


PCMS MESSAGE

COIN LANE CLOSED	DO NOT STOP

AET LANE CLOSURE

LANE CONFIGURATION VARIES



SYMBOLS

- LANE IDENTIFICATION + DIRECTION OF TRAFFIC
- CHANNELIZING DEVICE
- WORK ZONE SIGN
- ARROW BOARD
- WORK AREA
- WORK VEHICLE WITH WARNING LIGHTS AND ARROW BOARD*
- PORTABLE CHANGEABLE MESSAGE SIGN WITH PLASTIC DRUMS IN EACH CORNER

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VERSION: MARCH 2025

REVISIONS						FOR INFORMATIONAL PURPOSES ONLY	CENTRAL FLORIDA EXPRESSWAY AUTHORITY	CENTRAL FLORIDA EXPRESSWAY AUTHORITY	OFF RAMP TOLL PLAZA AUXILIARY LANE EXIT SINGLE LANE CLOSURE (2)	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION					TCP-10