

ROANOKE-BLACKSBURG REGIONAL AIRPORT

ROANOKE, VIRGINIA

REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4

AIP PROJECT NO. 3-51-0045-071-2024 (DESIGN)

AIP PROJECT NO. 3-51-0045-PENDING (CONSTRUCTION)

RRAC BID NO. 25-011

DELTA PROJECT NO. 23078

FOR THE

ROANOKE REGIONAL AIRPORT COMMISSION

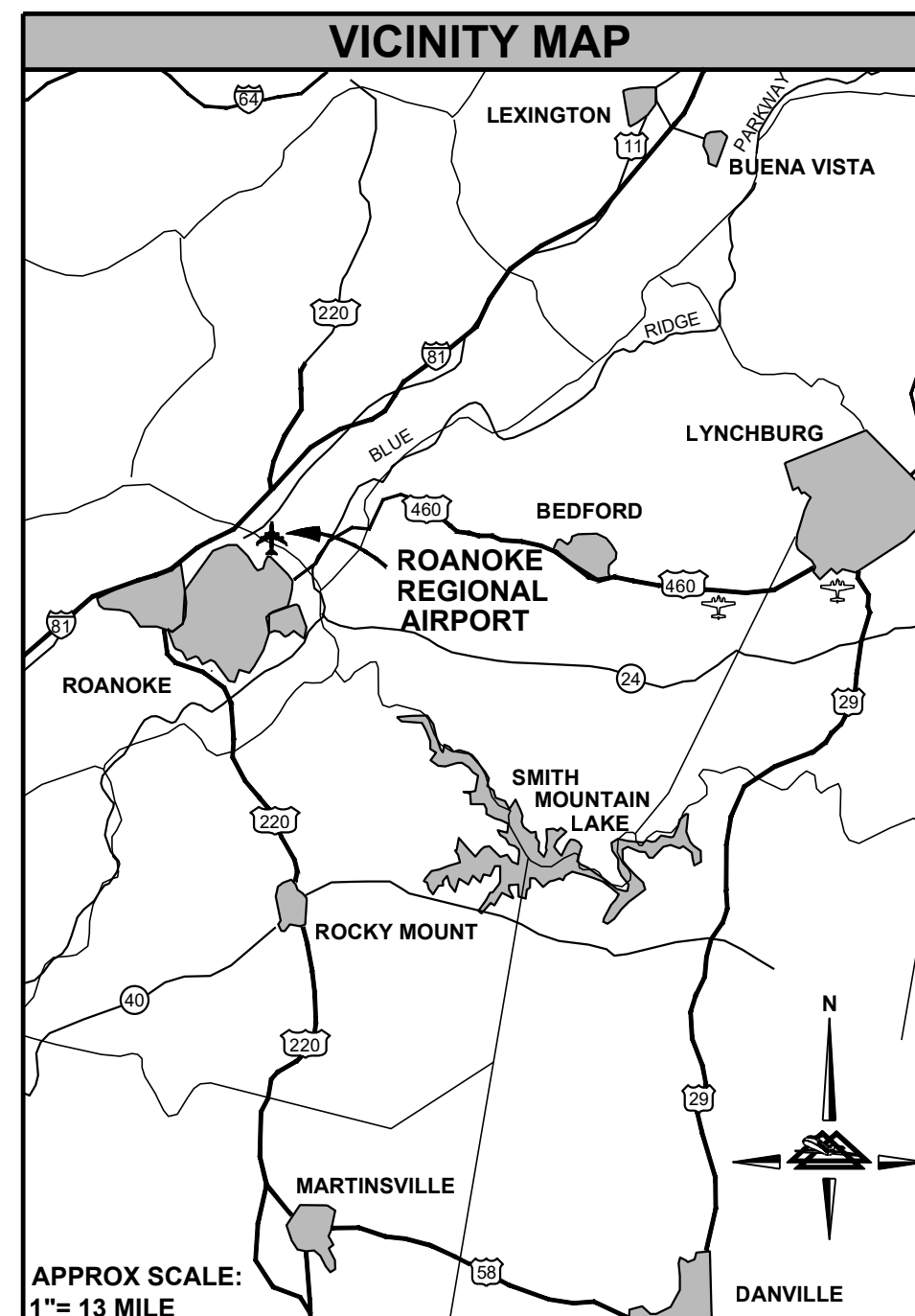
MARCH 2025

ROANOKE-BLACKSBURG REGIONAL AIRPORT
5202 AVIATION DRIVE
ROANOKE, VIRGINIA 24012

PARENT PARCEL NUMBER: 6590101

Construction Procedure Requirements

- Right-of-Way Excavation Permit** - Prior to the commencement of any digging, alteration or construction within the public right-of-way (streets, alleys, public easements), a right-of-way excavation permit shall be applied for and obtained by the contractor from the City of Roanoke.
- Land Disturbance Permit** - An approved erosion and sediment control plan for any borrow/fill sites associated with the project must be submitted prior to the issuance of a land disturbance permit.
- Plans and Permits** - A copy of the plans as approved by the City (signed by the proper City officials) and all permits issued by the City shall be available at the construction site at all times of ongoing construction.
- Location of Utilities** - The contractor shall verify the location of all existing utilities prior to the commencement of any construction.
- Construction Entrance** - The contractor shall install an adequate construction entrance for all construction related egress from the site. Size and composition of construction entrance shall be as shown on the plans.
- Streets to Remain Clean** - It shall be the responsibility of the contractor to insure that the public street adjacent to the construction entrance remains free of mud, dirt, dust, and/or any type of construction materials or litter at all times.
- Barricades/Ditches** - The contractor shall maintain the integrity of all excavated ditches and shall furnish and ensure that all barricades proper and necessary for the safety of the public are in place.
- Sewer and Pavement Replacement** - Construction of sanitary sewers and the replacement of pavement shall be in accordance with approved standards and specifications of the City of Roanoke and the Western Virginia Water Authority.
- Approved Plans/Construction Changes** - Any change or variation from construction design as shown on the officially approved plans shall be approved by the erosion and sediment control agent prior to said changes or variation in construction being made.
- Final Acceptance/City** - The owner or developer shall furnish the City of Roanoke's Planning Building and Development Department with a field surveyed final correct set of as-built plans of the newly constructed storm drain and/or stormwater management facilities prior to final acceptance and issuance of a certificate of occupancy by the City. As-built plans shall be provided in the State Plane Virginia South Coordinate System, NAD 1983, FIPS 4502 Feet, US Survey Feet, Datum NA 83, in the form of 1 paper copy and 1 digital AUTOCAD file.



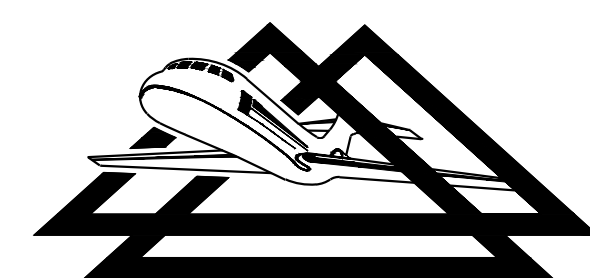
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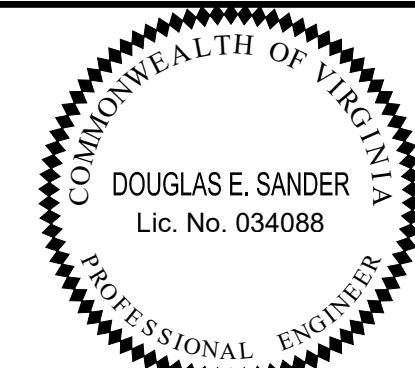
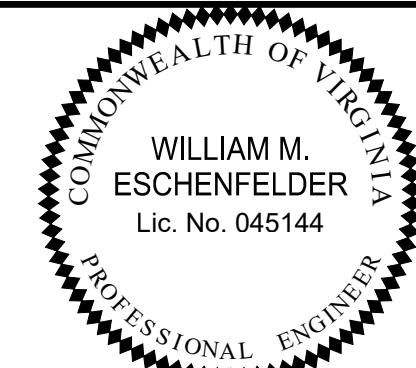
PRELIMINARY - DO NOT
USE FOR CONSTRUCTION
MARCH 2025

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CONSULTANTS, INC.**



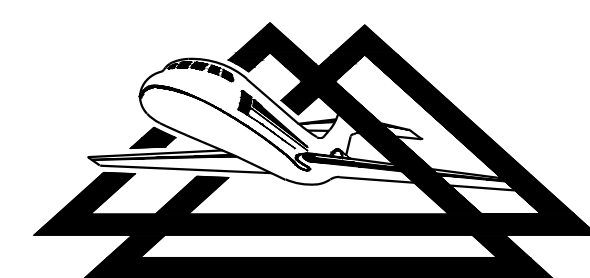
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| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| COVER SHEET | DRAWN BY: PJW | SHEET 1 OF 60 |
| | DESIGNED BY: WME | |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | SCALE: NONE | DATE: MARCH 2025 |

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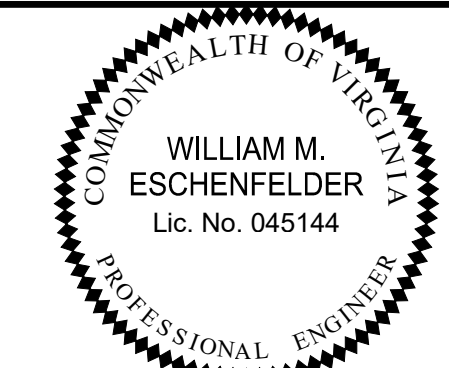
| SUMMARY OF QUANTITIES | | | | | |
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| ITEM NO. | SPEC NO. | DESCRIPTION | UNIT | AS-BID QTY | AS-BUILT QTY |
| 1 | C-100 | CONTRACTOR QUALITY CONTROL PROGRAM | LS | 1 | |
| 2 | C-102 | INLET PROTECTION | EA | 5 | |
| 3 | C-102 | CULVERT INLET PROTECTION | EA | 1 | |
| 4 | C-102 | CURB INLET PROTECTION | EA | 3 | |
| 5 | C-102 | INSTALLATION AND REMOVAL OF SILT SOCK | LF | 2,500 | |
| 6 | C-102 | STONE CONSTRUCTION ENTRANCE | EA | 1 | |
| 7 | C-105 | MOBILIZATION | LS | 1 | |
| 8 | P-101 | BITUMINOUS PAVEMENT REMOVAL | SY | 5,000 | |
| 9 | P-101 | JOINT AND CRACK REPAIR (TYPE A) | LF | 20,000 | |
| 10 | P-101 | JOINT AND CRACK REPAIR (TYPE B) | LF | 5,000 | |
| 11 | P-101 | COLD MILLING (NOMINAL DEPTH) (3") | SY | 20,000 | |
| 12 | P-101 | COLD MILLING (NOMINAL DEPTH) (4") | SY | 450 | |
| 13 | P-101 | COLD MILLING (VARIABLE DEPTH) | SY | 21,000 | |
| 14 | P-101 | REMOVAL OF PIPE | LF | 16 | |
| 15 | P-101 | REMOVAL OF CONCRETE DITCH | SY | 150 | |
| 16 | P-101 | REMOVAL OF CONDUIT AND CABLE | LF | 2,500 | |
| 17 | P-101 | REMOVAL OF AIRFIELD GUIDANCE SIGN FOUNDATION | EA | 6 | |
| 18 | P-101 | MISCELLANEOUS DEMOLITION | LS | 1 | |
| 19 | P-152 | UNCLASSIFIED EXCAVATION | LS | 1 | |
| 20 | P-152 | MUCK EXCAVATION | CY | 500 | |
| 21 | P-209 | CRUSHED AGGREGATE BASE COURSE | CY | 2,750 | |
| 22 | P-209 | SEPARATION GEOTEXTILE | SY | 1,500 | |
| 23 | P-401 | ASPHALT SURFACE COURSE | TN | 12,100 | |
| 24 | P-407 | ASPHALT OVERLAY FABRIC | SY | 3,800 | |
| 25 | M-103 | LIGHTED PORTABLE CLOSED RUNWAY MARKER (CONTRACTOR-FURNISHED) | EA | 2 | |
| 26 | M-103 | CLOSED TAXIWAY MARKER (CONTRACTOR FURNISHED) | EA | 2 | |
| 27 | M-107 | AVIATION BARRICADES (CONTRACTOR FURNISHED) | LF | 1,900 | |
| 28 | P-603 | EMULSIFIED ASPHALT TACK COAT | GL | 6,000 | |
| 29 | P-605 | JOINT SEALING FILLER | LF | 1,800 | |
| 30 | P-619 | PAINT REMOVAL (85-90% LEVEL) | SF | 1,000 | |
| 31 | P-619 | PAINT REMOVAL (95-100% LEVEL) | SF | 4,500 | |
| 32 | P-620 | MARKING (INITIAL YELLOW) | SF | 10,500 | |
| 33 | P-620 | MARKING (PERMANENT YELLOW) | SF | 10,500 | |
| 34 | P-620 | MARKING (INITIAL WHITE) | SF | 200 | |
| 35 | P-620 | MARKING (PERMANENT WHITE) | SF | 200 | |
| 36 | P-620 | MARKING (PERMANENT BLACK) | SF | 14,000 | |
| 37 | P-620 | REFLECTIVE MEDIA | LS | 1 | |
| 38 | P-620 | SURFACE PAINTED HOLDING MARKING | EA | 6 | |
| 39 | D-701 | 48" RCP, CLASS V | LF | 16 | |
| 40 | D-705 | 6" PVC UNDERDRAIN OR EDGE DRAIN PIPE (PERFORATED) | LF | 2,200 | |
| 41 | D-705 | 6" PVC UNDERDRAIN OR EDGE DRAIN PIPE (SOLID) | LF | 400 | |
| 42 | D-751 | ADJUST DRAINAGE STRUCTURE | EA | 10 | |
| 43 | D-751 | INSTALL STORMWATER MANAGEMENT STRUCTURE | EA | 1 | |
| 44 | R-302 | REPLACE DROP INLET TOP | EA | 1 | |
| 45 | D-752 | UNDERDRAIN ENDWALL | EA | 2 | |
| 46 | D-754 | CONCRETE DITCH | SY | 150 | |
| 47 | T-901 | SEEDING | AC | 3 | |
| 48 | T-904 | SODDING | SY | 4,500 | |
| 49 | T-908 | MULCHING | AC | 3 | |
| 50 | L-108 | NO. 8 AWG, 5KV, L-824, TYPE C CABLE, INSTALLED IN TRENCH, DUCT BANK OR CONDUIT | LF | 5,000 | |
| 51 | L-108 | NO. 6 AWG, SOLID, BARE COPPER COUNTERPOISE WIRE, INSTALLED IN TRENCH, INCLUDING CONNECTIONS/TERMINATIONS | LF | 2,400 | |
| 52 | L-110 | NON-ENCASED ELECTRICAL CONDUIT, 1 WAY - 2" PVC CONDUIT | LF | 2,400 | |
| 53 | L-125 | RELOCATED L-858(L) AIRFIELD GUIDANCE SIGN (3-4 CHAR.) ON NEW FOUNDATION | EA | 3 | |
| 54 | L-125 | L-858(L) AIRFIELD GUIDANCE SIGN (3-4 CHAR.) ON NEW FOUNDATION | EA | 1 | |
| 55 | L-125 | L-861T(L) BASE MOUNTED MITL (LED) | EA | 1 | |
| 56 | L-125 | L-861T(L) BASE MOUNTED MITL (LED) BASE ONLY | EA | 6 | |
| 57 | L-125 | RELOCATED L-861T(L) BASE MOUNTED MITL (LED) | EA | 48 | |
| 58 | L-125 | ADJUST L-861T(L) BASE MOUNTED MITL (LED) | EA | 16 | |
| 59 | R-414 | RIPRAP, CLASS A1 | SY | 100 | |
| 60 | R-606 | SOIL STABILIZATION MAT (STANDARD EC-2, TYPE 2) | SY | 700 | |

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| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| SUMMARY OF QUANTITIES | DRAWN BY: PJW | SHEET 2 |
| | DESIGNED BY: WME | OF |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | SCALE: NONE | DATE: MARCH 2025 |
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PROJECT NOTES:

GENERAL:

- THE PROJECT NOTICE-TO-PROCEED WILL NOT BE ISSUED UNTIL ALL PROJECT FUNDING IS IN-PLACE AND THE CONSTRUCTION CONTRACT HAS BEEN APPROVED AND FULLY EXECUTED BY ALL PARTIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING (INCLUDING PAYMENT OF FEES) ALL BONDS, PERMITS, LICENSES, ETC. REQUIRED BY LOCAL, STATE, AND FEDERAL AGENCIES. THE PERMITS REQUIRED SHALL BE IDENTIFIED AND PROCURED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE WHICH PERMITS ARE REQUIRED WITH THE COUNTY PUBLIC WORKS DIVISION, STATE SOIL CONSERVATION SERVICE, STATE HIGHWAY ADMINISTRATION, COUNTY PURCHASING OFFICE, EROSION CONTROL OFFICER, ETC. (NO SEPARATE PAY ITEM).
- ANY LISTED MANUFACTURER'S EQUIPMENT WILL MEAN THAT LISTED ITEM OR AN APPROVED EQUIVALENT.
- BORING LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE. BORING INFORMATION WAS PROVIDED BY:

SCHNABEL ENGINEERING
1901 SOUTH MAIN STREET, SUITE 11/ BLACKSBURG, VA 24060
540 953-1239
- FIELD SURVEY INFORMATION WAS PROVIDED BY:

H&B SURVEYING AND MAPPING
2105 ELECTRIC ROAD SW, SUITE 103, ROANOKE, VA 24018
540 804-2559
- THE OWNER RESERVES THE RIGHT TO CONTRACT AND PERFORM OTHER OR ADDITIONAL WORK ADJACENT TO AND WITHIN THE WORK AREA COVERED BY THIS CONTRACT. WHEN SEPARATE CONTRACTS ARE LET WITHIN THE LIMITS OF ANY ONE PROJECT, EACH CONTRACTOR SHALL CONDUCT THEIR WORK SO AS NOT TO INTERFERE WITH OR HINDER THE PROGRESS OR THE COMPLETION OF THE WORK BEING COMPLETED BY OTHER CONTRACTORS. THE CONTRACTORS WORKING ON THE SAME PROJECT SHALL COOPERATE WITH EACH OTHER AS ORDERED BY THE ENGINEER. ANY ADDITIONAL EFFORT OR WORK REQUIRED FOR SUCH COORDINATION WITH OTHER CONTRACTORS SHALL BE INCIDENTAL TO THE PROJECT AND NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE. REFERENCE IS DIRECTED TO SECTION 50-06 OF THE SPECIFICATIONS. IT IS ANTICIPATED THAT OTHER WORK MAY BE COMPLETED BY AN INDEPENDENT CONTRACTOR(S) DURING THE COURSE OF THIS PROJECT.
- THE APPROXIMATE LOCATION OF THE CONTRACTOR'S STAGING AREA(S) HAVE BEEN SHOWN ON THE PLANS.
- CONTRACTOR EMPLOYEE(S) ARE PROHIBITED FROM RESIDING AT THE PROJECT SITE, ON AIRPORT PROPERTY, IN THE STAGING AREA, OR ANY OTHER TEMPORARY FACILITY.
- THIS PROJECT HAS BEEN ENVIRONMENTALLY APPROVED BY THE FAA UNDER A CAT EX DATED APRIL 02, 2024.
- IN ACCORDANCE WITH SECTION 60-05, A RESIDENT PROJECT REPRESENTATIVE'S FIELD OFFICE AND ASSOCIATED EQUIPMENT SHALL BE INSTALLED AT A LOCATION INDICATED ON THE PLANS AND IS INCIDENTAL TO THE COST OF THE PROJECT. THERE WILL BE NO SEPARATE MEASUREMENT OR PAYMENT. THE OWNER WILL PROVIDE ALL RESIDENT PROJECT REPRESENTATIVE SERVICES.
- THERE ARE PROVISIONS IN THE CONTRACT DOCUMENTS FOR ADJUSTMENT IN CONTRACT TIME DUE TO UNUSUALLY ADVERSE WEATHER CONDITIONS. HOWEVER, THE CONTRACT TIME HAS BEEN ESTABLISHED BASED UPON THE RECEIPT OF NORMAL PRECIPITATION FOR THE PROJECT AREA. REFER TO "CONTRACT TIME EXTENSIONS" OF THE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.
- IN ACCORDANCE WITH SECTION 50-07, THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION LAYOUT AND STAKING AND MUST FURNISH STAKES FOR THE LAYOUT AND CONSTRUCTION OF THE WORK AND PRESERVING ALL STAKES AND BENCHMARKS THROUGH THE DURATION OF THE PROJECT.

SECURITY:

- ALL PERSONNEL WORKING INSIDE THE SECURITY FENCE SHALL HAVE A VALID SECURITY BADGE OR BE UNDER THE DIRECT SUPERVISION (WITHIN APPROXIMATELY 100 FEET) OF A PERSON WITH A BADGE. BACKGROUND EMPLOYMENT HISTORY INFORMATION IS REQUIRED FOR EACH WORKER. REFERENCE IS DIRECTED TO THE SPECIAL PROVISIONS OF THE SPECIFICATIONS.
- THE CONTRACTOR SHALL SUBMIT A SAFETY PLAN COMPLIANCE DOCUMENT (SPCD) IN ACCORDANCE WITH SECTION 80-04.1 "OPERATIONAL SAFETY ON AIRPORT DURING CONSTRUCTION" AND THE SPECIAL PROVISIONS OF THE SPECIFICATIONS.
- ALL UNBADGED DRIVERS SHALL BE ESCORTED AT ALL TIMES WHEN ON THE AOA SIDE OF THE SECURITY GATE. ALL UNBADGED EMPLOYEES SHALL BE UNDER THE DIRECT SUPERVISION AND WITHIN SIGHT OF A BADGED EMPLOYEE.
- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL EMPLOYEES OF THE CONTRACTOR AND SUBCONTRACTORS USE ONLY THE AUTHORIZED ACCESS POINT TO THE PROJECT AND VERIFYING THAT THE ACCESS POINT IS SECURE IMMEDIATELY AFTER USE. GATES THAT FAIL TO SECURE MUST BE IMMEDIATELY REPORTED TO THE ENGINEER OR OWNER.
- THE AIRPORT IS SUBJECT TO FAA TSA SECURITY REQUIREMENTS AND RIGID ADHERENCE IS MANDATORY.
- ANY FINES FOR UNAUTHORIZED PERSONNEL ENTERING THROUGH THE CONTRACTOR'S ACCESS POINT WILL BE DEDUCTED FROM MONIES DUE THE CONTRACTOR, UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL ONLY USE THE HAUL ROUTE(S) INDICATED ON THE PLANS UNLESS OTHERWISE APPROVED BY THE ENGINEER AND OWNER. THE OWNER WILL PROVIDE ACCESS TO THE CONTRACTOR ONLY AFTER THE CONTRACTOR HAS RECEIVED SECURITY TRAINING AND SECURITY CLEARANCE FROM THE OWNER. ALL CONTRACTOR PERSONNEL THAT WILL RECEIVE BADGES SHALL COMPLETE SAFETY AND SECURITY TRAINING AND DRIVER TRAINING PRIOR TO ISSUANCE OF BADGES. TRAINING SESSIONS ARE APPROXIMATELY THREE (3) HOURS IN DURATION AND REQUIRE TWO SEPARATE VISITS.
- THE CONTRACTOR SHALL MAINTAIN SEPARATION BETWEEN THE AIRSIDE AND NON-SECURE SIDE OF THE AIRPORT AT ALL TIMES. THE PERIMETER FENCE SHALL BE MAINTAINED ON A CONTINUOUS BASIS WITH ANY TEMPORARY OPENING BEING CONTINUOUSLY OBSERVED BY THE CONTRACTOR'S DESIGNATED EMPLOYEE. IF ORDERED BY THE ENGINEER OR OWNER, THE CONTRACTOR MAY BE REQUIRED TO PROVIDE GATE GUARDS. GATE GUARDS ARE INCIDENTAL TO THE COST OF THE PROJECT. ALL TEMPORARY OPENINGS AND CONSTRUCTION GATES SHALL BE SECURED AND LOCKED AT THE COMPLETION OF WORK EACH DAY.
- ALL CONTRACTOR VEHICLES OPERATING INSIDE THE SECURITY FENCE SHALL BE CLEARLY LABELED WITH THE CONTRACTOR'S COMPANY NAME VISIBLE FROM 200 FEET. COMPANY VEHICLES SHALL BE NUMBERED FOR EASE OF IDENTIFICATION.

OPERATIONS AND PHASING:

- A 25-FOOT MAXIMUM EQUIPMENT HEIGHT HAS BEEN COORDINATED WITH THE FAA FOR AIRSPACE CLEARANCE. THE CONTRACTOR SHALL SUBMIT AN UPDATED FAA FORM 7460 "NOTICE OF PROPOSED CONSTRUCTION" IF THE CONTRACTOR INTENDS TO USE ANY EQUIPMENT WITH A HEIGHT OVER 25 FEET.
- THE CONTRACTOR SHALL MARK AND LIGHT AREAS UNDER CONSTRUCTION IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. AIRCRAFT AND PUBLIC SAFETY SHALL NOT BE COMPROMISED AND PROPER SEPARATION SHALL BE MAINTAINED AT ALL TIMES. REFERENCE IS DIRECTED TO SECTION 80-04.1 "OPERATIONAL SAFETY ON AIRPORT DURING CONSTRUCTION" AND THE SPECIAL PROVISIONS OF THE SPECIFICATIONS. EQUIPMENT AND VEHICLES SHALL BE MARKED WITH YELLOW FLASHING DOME TYPE LIGHTS OR 3' X 3' ORANGE AND WHITE CHECKER FLAGS. YELLOW FLASHING DOME TYPE LIGHTS ARE REQUIRED FOR NIGHTTIME OPERATIONS.
- ALL CONTRACTOR PERSONNEL SHALL ARRIVE AT THE PROJECT IN COMPANY VEHICLES. ONLY AUTHORIZED VEHICLES WILL BE ALLOWED INSIDE THE SECURITY FENCE. AT THE END OF EACH WORK DAY, THE CONTRACTOR SHALL POSITION ALL EQUIPMENT, TOOLS, MATERIAL, ETC. IN THE APPROVED CONTRACTOR'S STAGING AREA UNLESS OTHERWISE REQUESTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
- THE CONTRACTOR SHALL RELOCATE THE CLOSED MARKERS AND AVIATION BARRICADES DURING THE PROJECT. MULTIPLE RELOCATION OF THE CLOSED MARKERS WILL BE CONSIDERED INCIDENTAL TO THE PROJECT. THE LOCATION OF THE CLOSED MARKERS AND BARRICADES, AS SHOWN ON THE PLANS, REPRESENTS THE MOST TYPICAL LOCATION.
- THE CONTRACTOR SHALL HAVE AN ADEQUATE NUMBER OF TWO-WAY AVIATION BAND RADIOS ON-SITE AT ALL TIMES AND SHALL BE RESPONSIBLE FOR PROVIDING THE RADIOS. REFERENCE IS DIRECTED TO THE SPECIAL PROVISIONS OF THE SPECIFICATIONS.

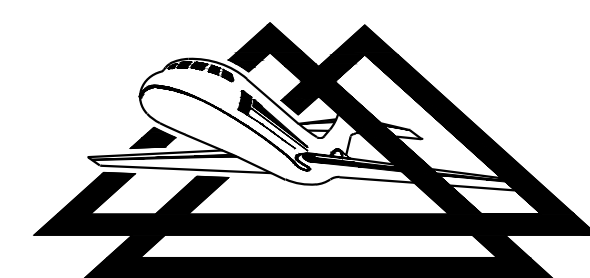
PRIOR TO ENTERING ANY AIR OPERATIONS AREA (AOA) OR SAFETY AREA (AS SHOWN ON PLANS AND IDENTIFIED IN THE SPECIFICATIONS), THE CONTRACTOR SHALL OBTAIN CLEARANCE FROM THE AIR TRAFFIC CONTROL TOWER'S GROUND FREQUENCY (121.9 MHZ). TWO-WAY RADIO COMMUNICATIONS WITH AVIATION BAND RADIOS SHALL BE REQUIRED AT ALL TIMES. NO EQUIPMENT OR PERSONNEL SHALL ENTER AN OPEN RUNWAY OR TAXIWAY SAFETY AREA UNLESS PROPERLY COORDINATED WITH THE CONTROL TOWER. THE USE OF TRAINED FLAGMEN AND TWO-WAY AVIATION BAND RADIOS SHALL BE REQUIRED IN THESE AREAS.
- RUNWAY AND/OR TAXIWAY LIGHTS SHALL BE DE-ENERGIZED OR PROPERLY COVERED ON CLOSED RUNWAY(S) AND ALL CLOSED SECTIONS OF TAXIWAYS IN A MANNER APPROVED BY THE ENGINEER (NO SEPARATE PAY ITEM). REMOVING THE LAMP FROM ITS FIXTURE IS NOT ALLOWED.
- UPON NOTIFICATION FROM THE CONTROL TOWER, THE CONTRACTOR SHALL IMMEDIATELY CLEAR THE RUNWAY AND/OR TAXIWAY SAFETY AREAS OF EQUIPMENT AND PERSONNEL IN THE EVENT OF A DECLARED AIRCRAFT EMERGENCY.

HAUL ROUTE:

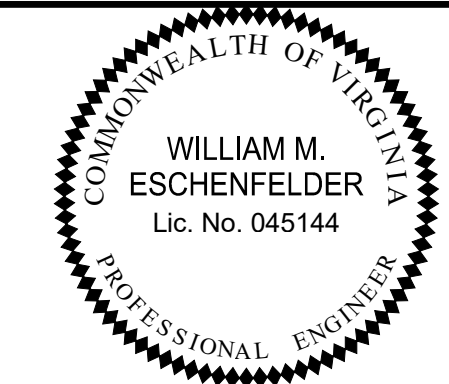
- THE CONTRACTOR SHALL INSTALL TEMPORARY CONSTRUCTION ENTRANCES AT ALL LOCATIONS WHERE HAUL ROUTES CROSS PAVEMENT. SEE THE EROSION AND SEDIMENT CONTROL SHEET FOR DETAILS AND GENERAL PROJECT LAYOUT SHEET FOR ANTICIPATED LOCATIONS. THE CONTRACTOR SHALL MAINTAIN THESE TEMPORARY CONSTRUCTION ENTRANCES SUCH THAT MUD AND DEBRIS ARE NOT TRACKED ONTO OPEN AREAS OF THE AIRCRAFT APRON OR VEHICLE ROADWAYS.
- ALL CONTRACTOR AND SUBCONTRACTOR PERSONNEL AND EQUIPMENT SHALL USE ONLY THE DESIGNATED HAUL ROUTES FOR INGRESS AND EGRESS TO THE CONSTRUCTION AREA AND FOR HAULING MATERIALS TO THE APPROVED WASTE AREA (AS APPLICABLE).
- NO CONTRACTOR TRAFFIC SHALL USE ANY PORTION OF RUNWAY(S), TAXIWAY(S) OR APRON(S) THAT ARE NOT ON THE HAUL ROUTE OR WITHIN THE ACTIVE PROJECT AREA.
- ANY CONSTRUCTION OR MAINTENANCE NECESSARY, INCLUDING ASSOCIATED LABOR AND MATERIALS, TO PRESERVE THE HAUL ROUTE FOR THE CONTRACTOR'S USE WILL BE CONSIDERED INCIDENTAL PROJECT COSTS AND WILL NOT BE A SEPARATE PAY ITEM.
- UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL REPAIR ANY PAVEMENTS DAMAGED BY THE CONTRACTOR'S OPERATIONS. NO SEPARATE PAYMENT WILL BE MADE FOR PAVEMENT REPAIR NECESSARY DUE TO CONTRACTOR'S HAULING OPERATIONS.
- THE CONTRACTOR'S ATTENTION IS ALSO DIRECTED TO THE GENERAL LAYOUT AND PHASING LAYOUT FOR ADDITIONAL INFORMATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO KEEP SIDEWALKS, ROADS, AND OTHER PAVEMENTS CLEAN OF DEBRIS, MUD, AND DUST AT ALL TIMES.
- ANY PLAN FOR THE MAINTENANCE OF TRAFFIC MUST BE PERMITTED VIA THE CITY'S ROW USE PERMIT PROCESS.

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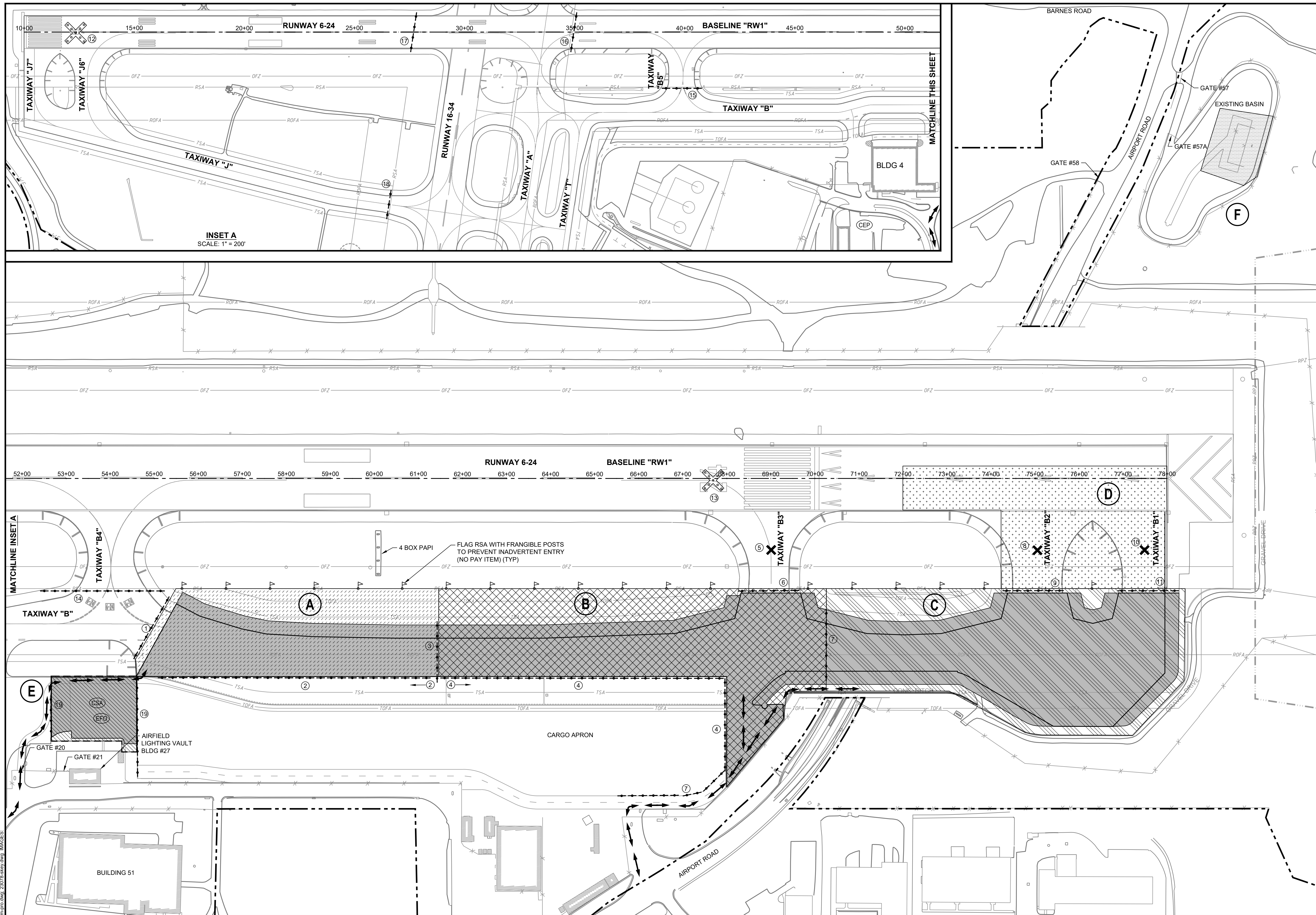
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| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| PROJECT NOTES | | DRAWN BY: PJW | 4 OF 60 |
| | | DESIGNED BY: WME | |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | | SCALE: NONE | DATE: MARCH 2025 |

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DRAWINGS, REFERENCES.dwg, LAYOUT, LT, XREFS, IMAGES



INSET A
 SCALE: 1" = 200'

MATCHLINE INSET A

5

SHEET INDEX

LEGEND

- (X) WORK AREA/PHASE LABEL
- X CLOSED RUNWAY MARKER - MOBILE LIGHTED
- (X) CLOSED TAXIWAY MARKER - LIGHTED
- (X) CLOSED RUNWAY/TAXIWAY MARKER LABEL
- (CEP) CONTRACTOR EMPLOYEE PARKING
- (CSA) CONTRACTOR STAGING AREA
- (EFO) ENGINEER'S FIELD OFFICE
- TEMPORARY FLAG WITH FRANGIBLE POSTS
- AVIATION BARRICADES
- HAUL ROUTE (TWO-WAY TRAFFIC)
- EXISTING FENCE
- EXISTING PART 77 APPROACH SURFACE
- EXISTING AIRPORT PROPERTY LINE
- OFZ EXISTING OBSTACLE FREE ZONE
- ROFA EXISTING RUNWAY OBJECT FREE AREA
- RPZ EXISTING RUNWAY PROTECTION ZONE
- RSA EXISTING RUNWAY SAFETY AREA
- WORK AREA A
- WORK AREA B
- WORK AREA C
- WORK AREA D
- WORK AREA E
- WORK AREA F
- PROPOSED CONSTRUCTION

CLOSED MARKER SCHEDULE

| MARKER # | TYPE | IN PLACE DURING WORK IN PHASE/AREA: | | | | | |
|----------|---------------------|-------------------------------------|---|---|---|---|---|
| | | A | B | C | D | E | F |
| 1 | AVIATION BARRICADES | | X | | | | |
| 2 | AVIATION BARRICADES | X | | | | | |
| 3 | AVIATION BARRICADES | X | X | | | | |
| 4 | AVIATION BARRICADES | | X | | | | |
| 5 | CLOSED TAXIWAY | | X | | | | |
| 6 | AVIATION BARRICADES | | X | | X | | |
| 7 | AVIATION BARRICADES | | X | X | | | |
| 8 | CLOSED TAXIWAY | | X | | | | |
| 9 | AVIATION BARRICADES | | X | X | | | |
| 10 | CLOSED TAXIWAY | | X | | | | |
| 11 | AVIATION BARRICADES | | X | X | | | |
| 12 | CLOSED TAXIWAY | | X | | X | | |
| 13 | AVIATION BARRICADES | | X | | X | | |
| 14 | AVIATION BARRICADES | | X | | X | | |
| 15 | AVIATION BARRICADES | | X | | X | | |
| 16 | AVIATION BARRICADES | | X | | X | | |
| 17 | AVIATION BARRICADES | | X | | X | | |
| 18 | AVIATION BARRICADES | | X | | X | | |
| 19 | AVIATION BARRICADES | X | X | X | X | X | X |

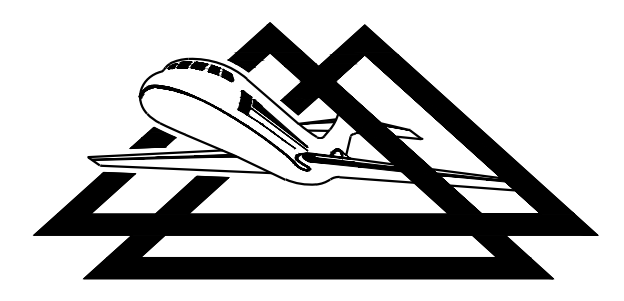
NOTE

1. ALL STATIONS AND OFFSETS ARE GIVEN WITH RESPECT TO BASELINE "RW1" UNLESS OTHERWISE SPECIFIED.

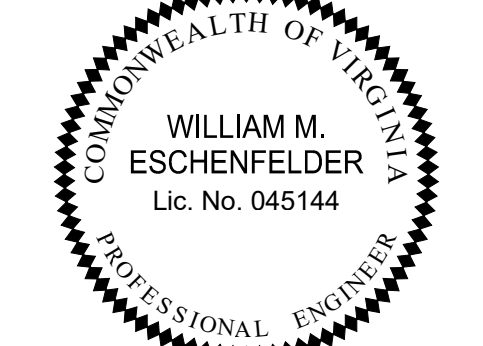
100 0 100 200
SCALE: 1" = 100' FEET

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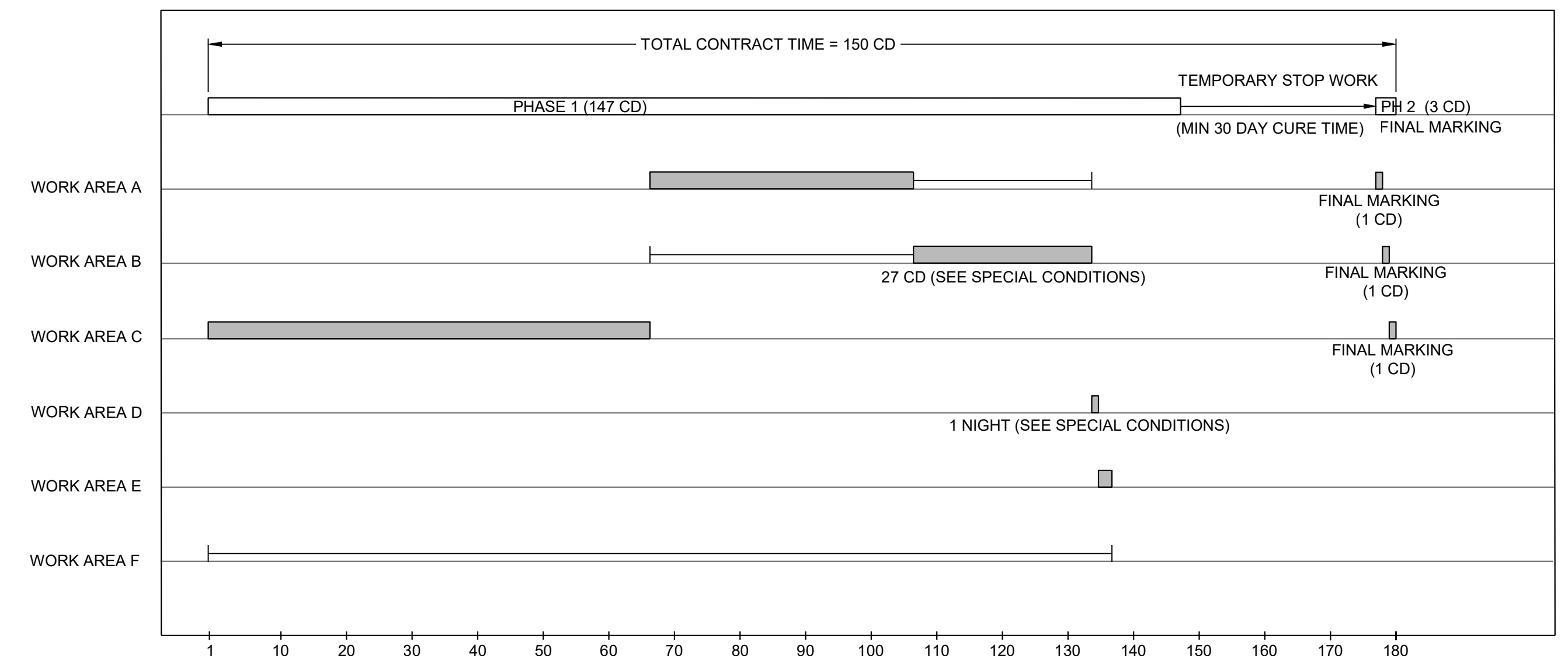
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| | | |
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| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| PHASING LAYOUT | DRAWN BY: PJW | SHEET 5 |
| | DESIGNED BY: WME | OF 60 |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | SCALE: 1" = 100' | DATE: MARCH 2025 |

WORK AREA PHASING SUMMARY

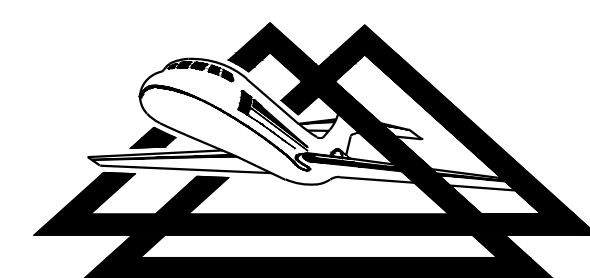
| WORK AREAS | REQUIRED WORK TO BE COMPLETED | AOA CLOSURES | CLOSURE PERIOD | MILESTONE TIME | LIQUIDATED DAMAGES | SPECIAL CONDITIONS |
|---|---|---|---------------------------|----------------|-----------------------------|--|
| PHASE 1: TAXIWAY REHABILITATION AND INITIAL MARKING | - | - | CONTINUOUS UNTIL COMPLETE | 137 CD | \$3000 / CD | DE-ENERGIZE LIGHTS ON AFFECTED TAXIWAY SEGMENTS. COORDINATE WITH OWNER AND ENGINEER. NOTIFY THE OWNER AND ENGINEER AT LEAST 24 HOURS IN ADVANCE OF OPENING TIME TO ALLOW FOR INSPECTIONS AND ANY REMEDIAL CLEANING. |
| WORK AREA A | INSTALL EROSION AND SEDIMENT CONTROL MEASURES, EXCAVATION/EARTHWORK, PAVEMENT SECTION CONSTRUCTION, ELECTRICAL WORK, MILLING AND PAVING, TOPSOIL, SEED AND MULCH. INITIAL MARKING | TAXIWAY B BETWEEN TAXIWAY B4 AND B3. | - | - | - | WORK AREAS A, B, AND C SHALL NOT BE COMPLETED CONCURRENTLY. |
| WORK AREA B | | TAXIWAY B3, TAXIWAY B BETWEEN TAXIWAY B2 AND B4. | | 27 CD | \$3,000 / CD | TAXIWAY SHALL BE OPEN TO AIR CARGO APRON TRAFFIC BETWEEN THE HOURS OF 20:30 - 6:30. TAXIWAY MAY BE CLOSED 24 HOURS A DAY FOR A MAXIMUM OF 10 OF THE 27 CD. WORK AREAS A, B, AND C SHALL NOT BE COMPLETED CONCURRENTLY. |
| WORK AREA C | | TAXIWAY B2 AND B1, TAXIWAY B BETWEEN TAXIWAY B2 AND B1. | | - | - | WORK AREA C MUST BE COMPLETED PRIOR TO WORK AREA B. TAXIWAY "B3" VERTICAL LEAD-IN CENTERLINE MUST BE SCARIFIED BEFORE WORK CAN BEGIN IN THIS AREA. WORK AREAS A, B, AND C SHALL NOT BE COMPLETED CONCURRENTLY. |
| WORK AREA D | | PAINTE REMOVAL AND FINAL MARKING | | RUNWAY 6-24 | 1 CD 1:00 AM AND 5:00 AM | \$6,000 + \$50/MIN |
| WORK AREA E | MILLING AND PAVING INITIAL MARKING | - | - | - | - | CONTRACTOR SHALL STAGE EQUIPMENT IN THIS AREA DURING WORK AREAS A, B, C, AND D. PAVING IN WORK AREA E SHALL BE COMPLETED AFTER THE COMPLETION OF THE PAVING IN ALL OTHER WORK AREAS |
| WORK AREA F | DRAINAGE | - | - | - | - | WORK AREA F MAY BE COMPLETED CONCURRENTLY WITH WORK AREAS A, B, AND/OR C |
| PHASE 2: FINAL MARKINGS | - | - | CONTINUOUS UNTIL COMPLETE | 3 CD | - | CONTRACTOR SHALL BARRICADE SECTIONS OF TAXIWAY "B" TO MINIMIZE BACK TAXI ON RUNWAY. CONTRACTOR SHALL ENSURE MARKINGS ARE DRY PRIOR TO OPENING. |
| WORK AREA A | FINAL MARKINGS | TAXIWAY B BETWEEN TAXIWAY B4 AND B3. | - | - | \$3,000 / CD | FOLLOWING PHASE 1 COMPLETION PLUS REQUIRED CURE TIME. WORK AREA A, B, AND C SHALL NOT BE COMPLETED CONCURRENTLY. |
| WORK AREA B | | TAXIWAY B3, TAXIWAY B BETWEEN TAXIWAY B2 AND B4. | | - | \$3,000 / CD | FOLLOWING PHASE 1 COMPLETION PLUS REQUIRED CURE TIME. WORK AREA A, B, AND C SHALL NOT BE COMPLETED CONCURRENTLY. |
| WORK AREA C | | TAXIWAY B2 AND B1, TAXIWAY B BETWEEN TAXIWAY B2 AND B1. | | - | - | FOLLOWING PHASE 1 COMPLETION PLUS REQUIRED CURE TIME. WORK AREA A, B, AND C SHALL NOT BE COMPLETED CONCURRENTLY. |



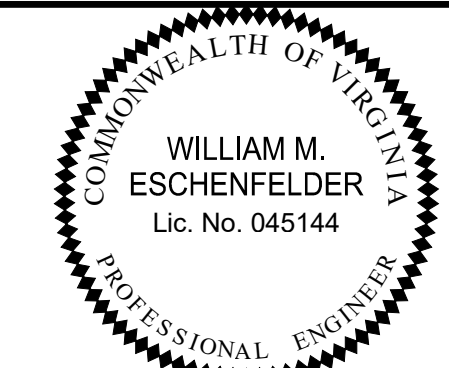
SCHMATIC PHASING SCHEDULE

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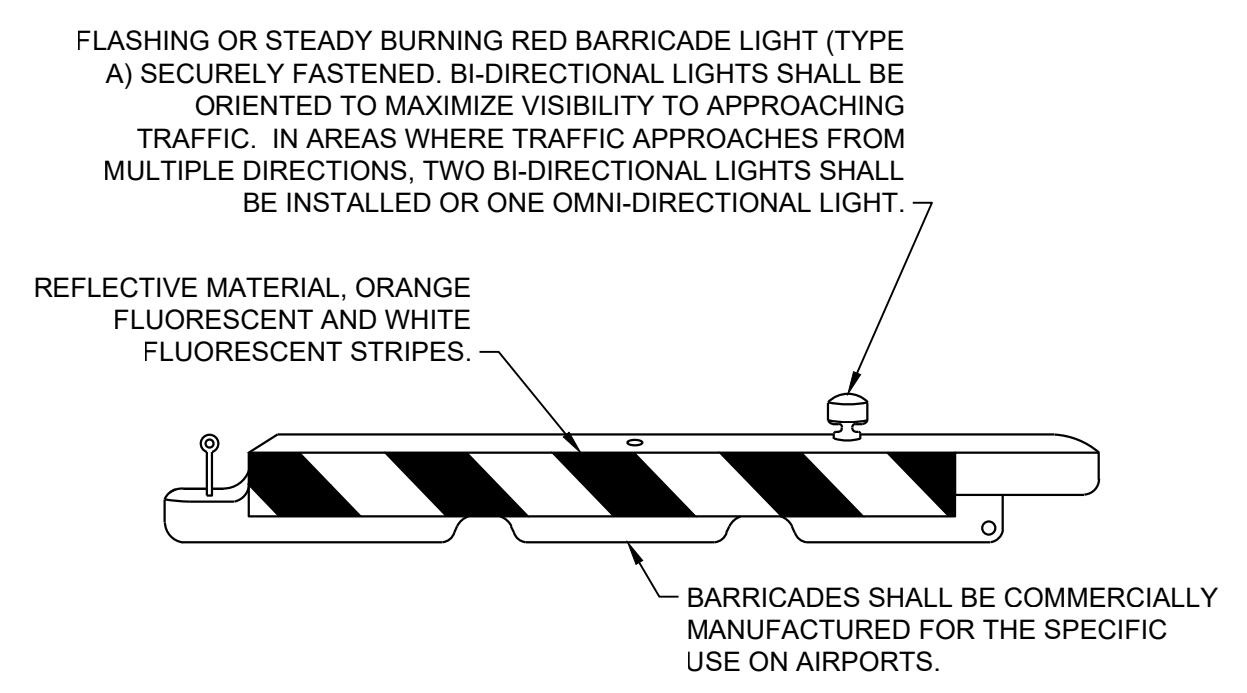
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|--|--|-------------------------------|---------------------|
| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| PHASING NOTES | | DRAWN BY: PJW | SHEET 6 |
| | | DESIGNED BY: WME | OF 60 |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | | SCALE: NONE | DATE: MARCH 2025 |

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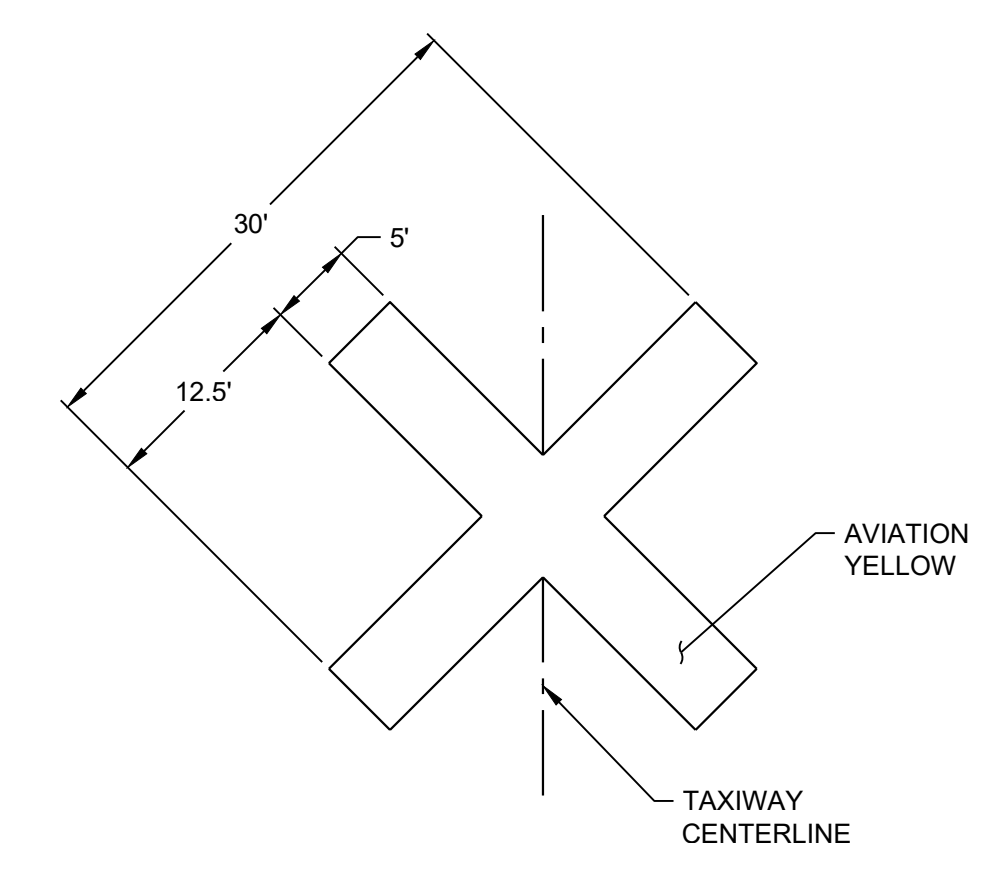
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WATER FILLED AVIATION BARRICADE DETAIL (CONTRACTOR FURNISHED)

NTS
(LOW PROFILE)

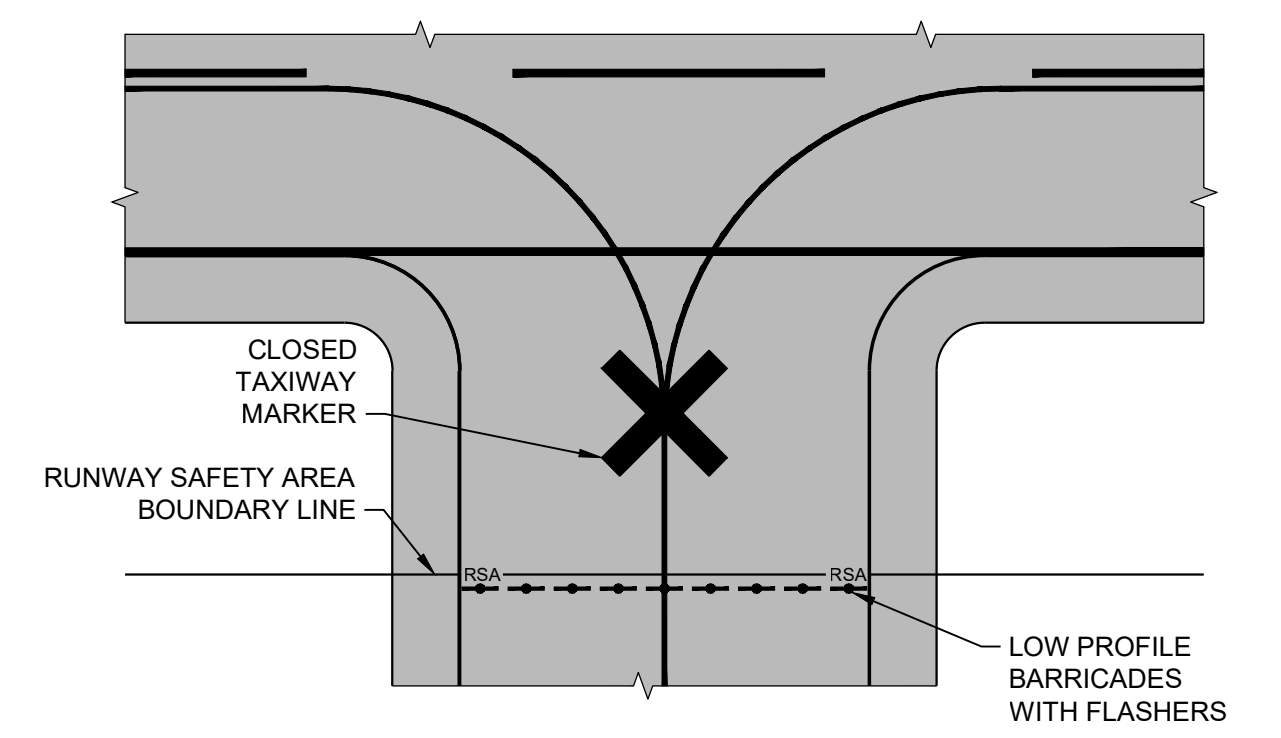
- NOTES:
- BARRICADES SHALL BE SPACED A MAXIMUM OF 4' APART, EXCEPT AT VEHICLE ACCESS/ARFF ACCESS POINTS WHERE A 15' GAP IS ALLOWED.
 - BARRICADES SHALL BE COMMERCIALY MADE IN LENGTHS OF 6' OR 8'.
 - BARRICADES SHALL BE FILLED WITH WATER TO ADEQUATELY WITHSTAND HIGH WINDS AND/OR JET BLAST.
 - THE CONTRACTOR SHALL MAKE FREQUENT INSPECTION OF THE BARRICADES AND MAKE PROMPT REPAIRS AS NECESSARY.
 - LIGHTS AND FLAGS SHALL BE INSPECTED AND OPERATING EVERY NIGHT PRIOR TO LEAVING THE SITE.
 - RELOCATIONS AND MULTIPLE SETUPS AND REMOVALS OF THE AVIATION BARRICADES SHALL BE INCIDENTAL TO THE UNIT COST WHEREIN NO SEPARATE PAYMENT WILL BE MADE.



CLOSED TAXIWAY MARKER DETAIL (CONTRACTOR FURNISHED)

NTS

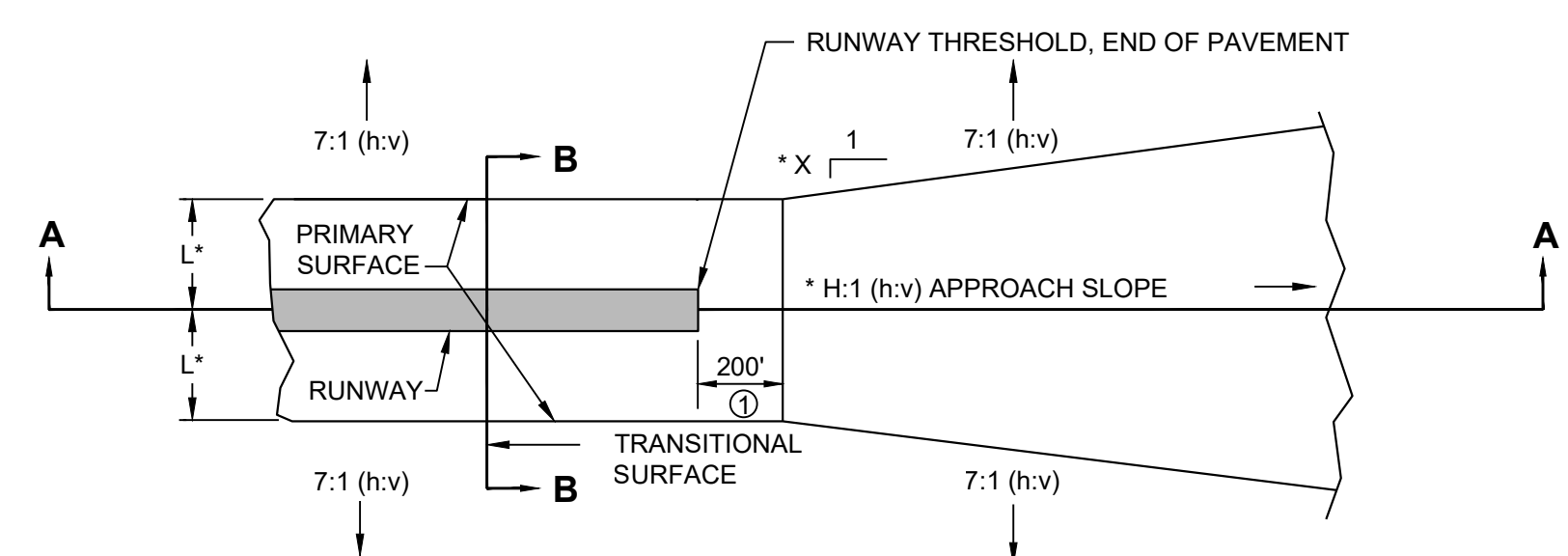
- NOTES:
- CLOSED MARKERS SHALL BE INSTALLED AS THE FIRST ITEM OF WORK.
 - THE CONTRACTOR SHALL MAKE FREQUENT INSPECTION OF THE MARKERS AND MAKE PROMPT REPAIRS AS NECESSARY.
 - THE CONTRACTOR SHALL SCHEDULE THE CLOSING OF THE TAXIWAYS IN ACCORDANCE WITH THE GENERAL AND PHASING NOTES.
 - RELOCATIONS AND MULTIPLE SET UPS AND REMOVALS OF THE CLOSED MARKERS SHALL BE INCIDENTAL TO THE UNIT COST OF EACH MARKER WHEREIN NO SEPARATE PAYMENT WILL BE MADE.



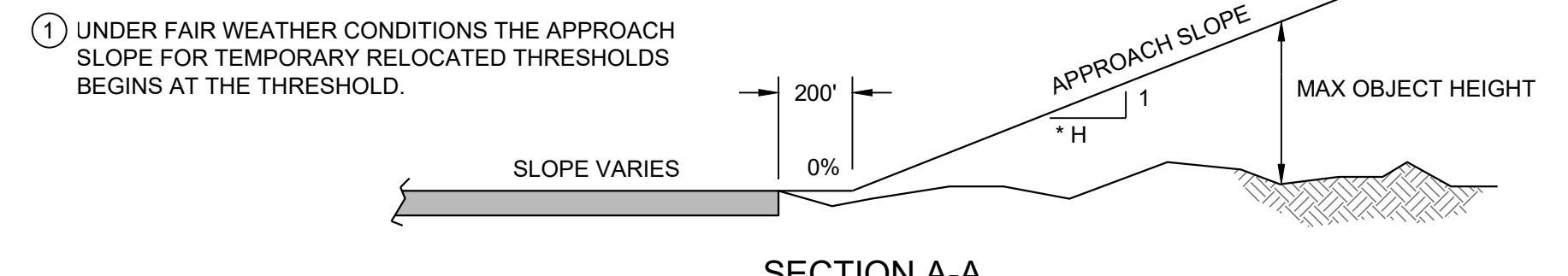
CLOSED TAXIWAY AT RUNWAY DETAIL

NTS

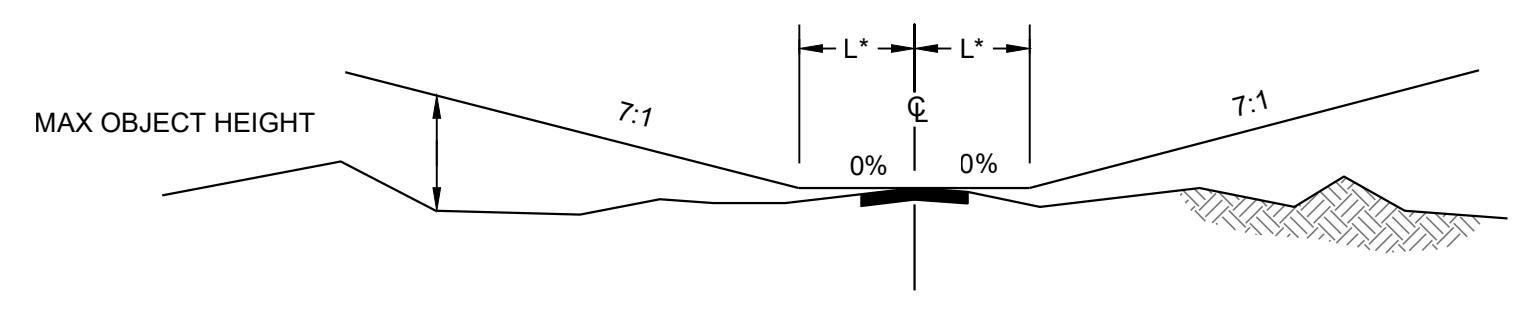
- NOTES:
- LOW PROFILE BARRICADES SHALL BE COMMERCIALY MANUFACTURED FOR SPECIFIC USE ON AIRPORTS.
 - BARRICADES SHALL BE LOCATED OUTSIDE OF ALL SAFETY AREAS.
 - BARRICADES TO BE USED IN CONJUNCTION WITH COVERING, REMOVAL OF LIGHTS, SIGN PANELS AND OTHER AIRFIELD FEATURES RELATED TO THE TEMPORARY CLOSURE OF TAXIWAYS.
 - CLEARANCE FROM THE ATCT IS REQUIRED TO ENTER THE RSA.
 - CLOSED "X" SHALL BE LOCATED MIDWAY BETWEEN RSA AND RUNWAY EDGE.
 - CLOSED "X" SHALL BE SECURED WITH SAND FILLED SOCKS, SAND BAGS, OR OTHER APPROVED MATERIALS. SECURING MATERIALS SHALL NOT EXCEED 3" IN HEIGHT (ABOVE THE GROUND) IN ACCORDANCE WITH RUNWAY SAFETY AREA (RSA) STANDARDS.
 - CONTRACTOR SHALL MAKE FREQUENT INSPECTION OF BARRICADES AND "X"s". AT A MINIMUM, INSPECTIONS SHALL OCCUR AT THE BEGINNING AND END OF EACH WORK PERIOD. CONTRACTOR SHALL IMMEDIATELY REPAIR/REPLACE "X", BARRICADES AND/OR ANY ANCHOR DEVICES THAT HAVE BEEN MOVED OR DAMAGED.



NOTE: FOR HORIZONTAL APPROACH SLOPE (H), DISTANCE (L), AND FLARE RATIO (X), SEE TABLE BELOW.



SECTION A-A



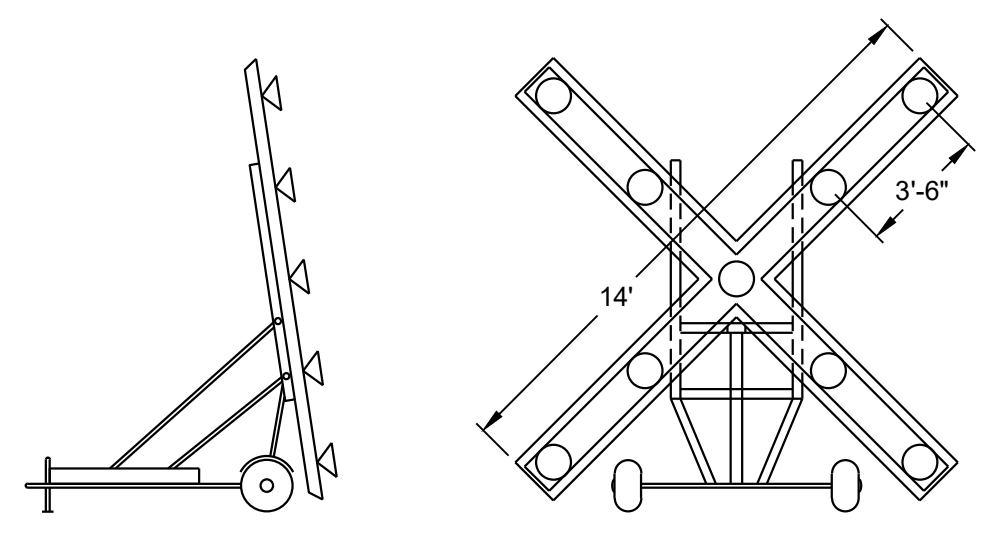
SECTION B-B

FAR PART 77 IMAGINARY SURFACES

NTS

- NOTE:
- ANY EQUIPMENT OR OBJECTS PENETRATING THE PART 77 IMAGINARY SURFACES SHALL BE COORDINATED, IN ADVANCE, WITH THE ENGINEER. OBSTRUCTIONS PENETRATING THE PART 77 SURFACES SHALL BE MARKED AND/OR LIGHTED IN ACCORDANCE WITH FAA GUIDELINES.

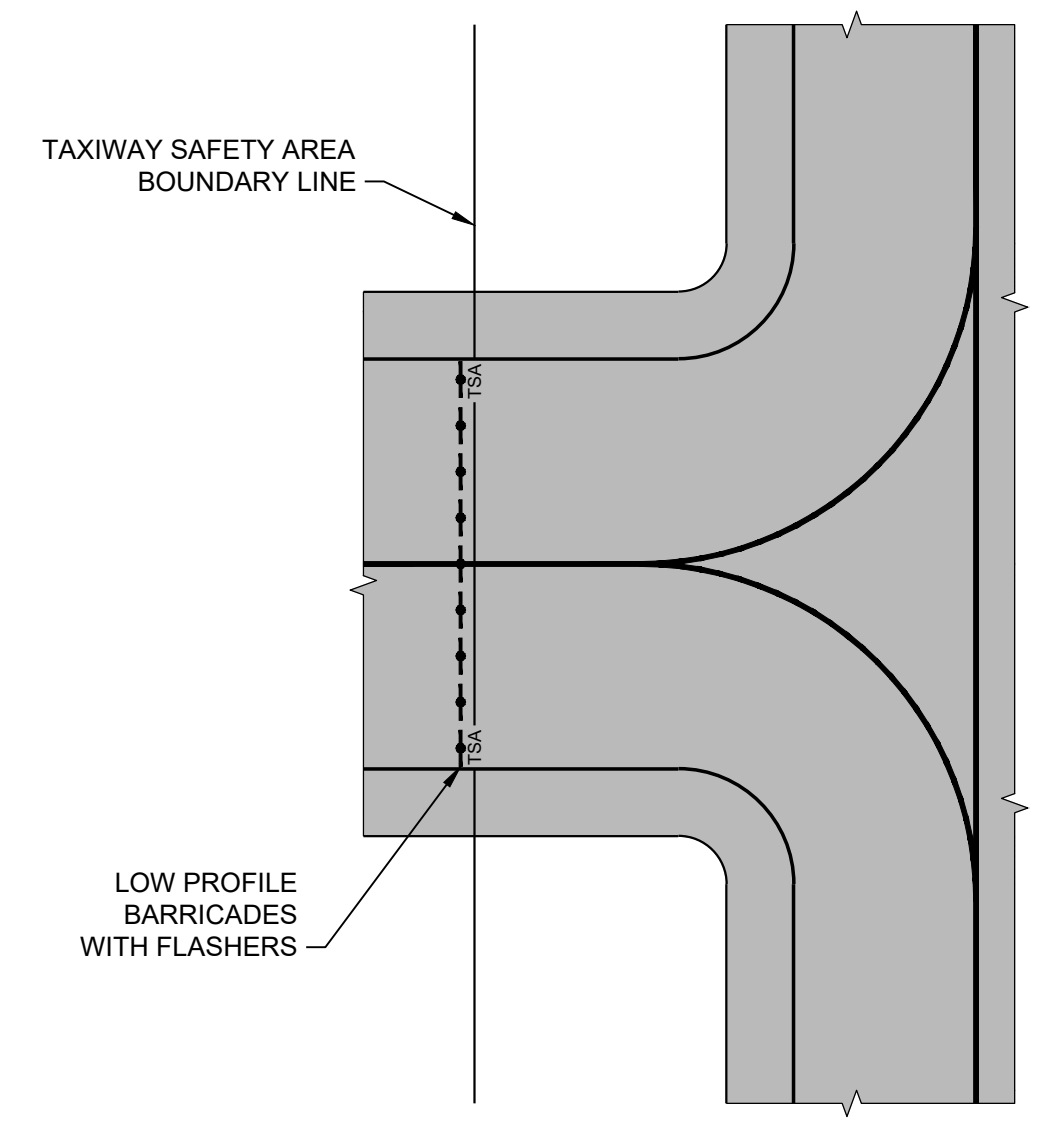
| RUNWAY | APPROACH SLOPE (H) | L | X |
|--------|--------------------|-----|------|
| 6 | 34 | 500 | 0.15 |
| 16 | 20 | 500 | 0.10 |
| 24 | 34 | 500 | 0.15 |
| 34 | 50 | 500 | 0.15 |



PORTABLE LIGHTED CLOSED RUNWAY MARKER DETAIL (CONTRACTOR FURNISHED)

NTS

- NOTES:
- CLOSED MARKERS SHALL BE INSTALLED AS THE FIRST ITEM OF WORK. APPROVAL FROM THE OWNER AND CLEARANCE FROM THE ATCT IS REQUIRED TO ENTER THE RSA. THE OWNER WILL ISSUE A NOTAM FOR THE CLOSURE AND PROVIDE NOTICE WHEN THE MARKER CAN BE INSTALLED.
 - THE CONTRACTOR SHALL PROVIDE TWO LIGHTED CLOSED MARKERS MEETING THE REQUIREMENTS OF ITEM M-103, FAA AC 150/5345-55 (LATEST EDITION), AND IN GENERAL CONFORMANCE WITH THIS DETAIL.
 - THE MARKERS SHALL BE A PORTABLE UNIT THAT CAN BE QUICKLY TOWED TO AND FROM THE RUNWAY BY A STANDARD MEDIUM DUTY PICKUP TRUCK.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR RELOCATING THE MARKERS AS DICTATED BY PROJECT PHASING. THE CONTRACTOR SHALL MAKE FREQUENT INSPECTION OF THE MARKERS AND MAKE PROMPT REPAIRS AS NECESSARY.
 - THE LIGHTED CLOSED MARKER SHALL BE ILLUMINATED AT ALL TIMES THAT IT IS PLACED IN POSITION ON THE RUNWAY.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND USAGE COSTS (FUEL, BULBS, ETC.) FOR THE PROJECT DURATION.



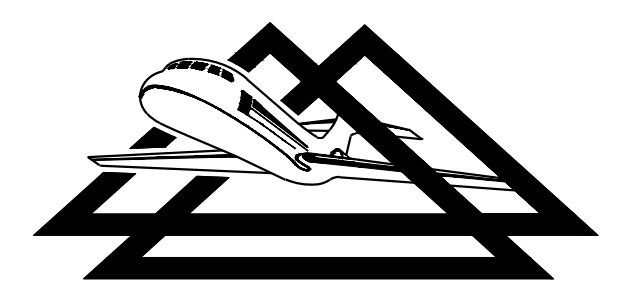
CLOSED TAXIWAY AT TAXIWAY DETAIL

NTS

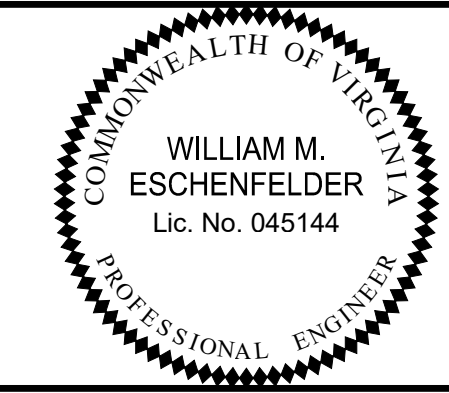
- NOTES:
- LOW PROFILE BARRICADES SHALL BE COMMERCIALY MANUFACTURED FOR SPECIFIC USE ON AIRPORTS.
 - BARRICADES SHALL BE LOCATED OUTSIDE OF ALL SAFETY AREAS.
 - BARRICADES TO BE USED IN CONJUNCTION WITH COVERING, REMOVAL OF LIGHTS, SIGN PANELS AND OTHER AIRFIELD FEATURES RELATED TO THE TEMPORARY CLOSURE OF TAXIWAYS.
 - CONTRACTOR SHALL MAKE FREQUENT INSPECTIONS OF BARRICADES. AT A MINIMUM, THE CONTRACTOR SHALL INSPECT AT THE BEGINNING AND ENDING OF EACH WORK SHIFT. CONTRACTOR SHALL IMMEDIATELY REPAIR/REPLACE BARRICADES THAT HAVE BEEN MOVED OR DAMAGED.

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| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| PHASING DETAILS | | DRAWN BY: PJW | SHEET 7 |
| | | DESIGNED BY: WME | OF 60 |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | | SCALE: NONE | DATE: MARCH 2025 |

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CONSTRUCTION NOTES:

GENERAL:

- THE CONTRACTOR SHALL LOCATE AND PROTECT EXISTING UTILITIES AND FACILITIES (I.E., AIRPORT LIGHTING, NAVAIDS, ETC.) FROM DAMAGE BY EQUIPMENT OR PERSONNEL. THE CONTRACTOR SHALL CONTACT ALL UTILITY AND FACILITY AGENCIES FOR FIELD MARKING PRIOR TO BEGINNING CONSTRUCTION. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. ALL UTILITIES AND FACILITIES ARE NOT NECESSARILY SHOWN. THE CONTRACTOR SHALL ADVISE THE ENGINEER, IN WRITING, OF ANY EXISTING DAMAGED UTILITIES PRIOR TO BEGINNING CONSTRUCTION.

ANY UTILITIES OR FACILITIES DAMAGED DURING THE PROJECT BY THE CONTRACTOR'S MEN OR EQUIPMENT SHALL BE PROMPTLY REPAIRED AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL HAND DIG WHEN WITHIN FIVE (5) FEET OF ANY KNOWN OR SUSPECTED UNDERGROUND UTILITY.
- ALL STATIONS AND OFFSETS ARE APPROXIMATE AND SHALL BE CONFIRMED IN THE FIELD BY THE CONTRACTOR.
- THE CONTRACTOR SHALL FIELD STAKE ALL FIXTURES OR PERMANENT ITEMS PRIOR TO INSTALLATION. ANY DISCREPANCIES IN THE ALIGNMENT LOCATION SHALL BE RESOLVED WITH THE ENGINEER PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL PROTECT EXISTING AIRFIELD LIGHTING FIXTURES TO REMAIN FROM DAMAGE DURING CONSTRUCTION. AN INVENTORY OF EXISTING FIXTURES SHALL BE COMPLETED PRIOR TO THE START OF WORK WITH THE ENGINEER AND/OR OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF REPLACEMENT OF ANY FIXTURES DAMAGED BY THEIR OPERATIONS.
- ALL DISTURBED AREAS, INCLUDING THE CONTRACTORS STAGING AREA, HAUL ROUTES, GRADING LIMITS, ETC. SHALL BE RESTORED TO A SMOOTH LINE AND GRADE WITH POSITIVE DRAINAGE. THE CONTRACTOR SHALL SEED AND MULCH ALL DISTURBED AREAS. THERE WILL BE NO MEASUREMENT FOR PAYMENT OF SEEDING AND MULCHING REQUIRED OUTSIDE THE GRADING LIMITS, APPROVED STOCKPILE LIMITS, OR APPROVED HAUL LIMITS.
- ALL BROKEN CONCRETE, ASPHALT, ETC. SHALL BE DISPOSED OF OFFSITE BY THE CONTRACTOR IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL GUIDELINES.
- THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE FOR THE COMPLETE DURATION OF THE PROJECT. THE DRAINAGE SHALL BE OF EQUAL OR GREATER CAPACITY THAN THE EXISTING DRAINAGE CONVEYANCES. THIS MAY REQUIRE TEMPORARY DITCHES, STRUCTURES OR PIPES, WHICH WILL BE INCIDENTAL TO THE PROJECT.
- THE CONTRACTOR IS ADVISED THAT AIRCRAFT OPERATIONS ARE CONDUCTED ADJACENT TO THE PROJECT. SPECIAL ATTENTION TO DUST CONTROL WILL BE REQUIRED DURING THE DURATION OF THE PROJECT. THE USE OF WATER SHALL BE ANTICIPATED. THE ENGINEER RESERVES THE RIGHT TO HALT WORK OR HAULING IN NON-CONFORMING AREAS, IF DUST CONTROL ACTIONS ARE NOT PROMPTLY TAKEN BY THE CONTRACTOR.
- NO DEBRIS OF ANY NATURE IS ALLOWED IN ACTIVE AIRCRAFT OPERATIONS AREAS. ALL LOOSE MATERIALS (DIRT, STONE, PAVEMENT, FORMING, ETC.) MUST BE KEPT WITHIN THE LIMITS OF CONSTRUCTION. WHEN THE CONSTRUCTION BARRIERS ARE MOVED DURING CONSTRUCTION, THE CLEANUP OF THE AREAS OUTSIDE THE BARRIERS SHALL OCCUR IMMEDIATELY. IN ADDITION, NO LOOSE MATERIALS THAT COULD BLOW INTO AIRCRAFT OPERATIONS AREAS ARE ALLOWED IN THE CONSTRUCTION AREA.
- CONTRACTORS ARE ENCOURAGED TO EXAMINE THE SITE TO VERIFY FIELD CONDITIONS BEFORE SUBMITTING BIDS. NO ADDITIONAL COMPENSATION WILL BE MADE FOR ADVERSE FIELD CONDITIONS SUCH AS EXCAVATION AND/OR TRENCHING THROUGH ROCK.
- THE CONTRACTOR SHALL FURNISH APPROPRIATE ARTIFICIAL LIGHTING NECESSARY FOR NIGHTTIME OPERATIONS. THE LIGHTING SHALL BE ADEQUATE TO SAFELY COMPLETE THE WORK BEING PERFORMED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. IN ADDITION TO EQUIPMENT MOUNTED LIGHTS, THE LIGHTING SHALL BE IN THE FORM OF PORTABLE FLOODLIGHT UNITS. LIGHTING SHALL BE DIRECTED OR SHADED TO PREVENT INTERFERENCE WITH AIRCRAFT, THE AIR TRAFFIC CONTROL TOWER, AND OTHER AIRPORT OPERATIONS. THE CONTRACTOR SHALL REORIENT LIGHTS AS ORDERED BY THE AIR TRAFFIC CONTROL TOWER, ENGINEER, AND/OR OWNER.
- THE CONTRACTOR SHALL HAVE A FULLY OPERATIONAL VACUUM TRUCK AVAILABLE FOR CLEANING AREAS OF POTENTIAL FOOD/DEBRIS. VACUUM TRUCKS SHALL BE IN GOOD WORKING ORDER AND ANY SWEEPING ELEMENTS SHALL BE MADE OF NON-WIRE BRISTLES (WIRED BRISTLES TEND TO BREAK AND BECOME FOOD). SWEEPER VEHICLES SHALL BE AT ANY ACTIVE RUNWAY, APRON, OR TAXIWAY CROSSING DURING WORK HOURS (NO SEPARATE PAY ITEM).
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A "GOOD STAND OF GRASS WITH REGARD TO COLOR AND DENSITY". NO ADDITIONAL COMPENSATION WILL BE MADE FOR OVERSEEDING AREAS THAT YIELD A SPARSE COVER FROM THE INITIAL SEEDING.
- IN ACCORDANCE WITH ITEM T-904 OF THE SPECIFICATIONS, THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING SOD UNTIL IT HAS BECOME ESTABLISHED AND ITS CONTINUED GROWTH ASSURED. THE MAINTENANCE SHALL INCLUDE, BUT IS NOT LIMITED TO, KEEPING THE SOD MOIST TO PROMOTE ESTABLISHMENT. THE CONTRACTOR SHALL COORDINATE THE REQUIRED WATERING SCHEDULE WITH THE OWNER.
- THE CONTRACTOR IS RESPONSIBLE FOR MOWING OF GRASS WITHIN THE PROJECT AREAS UNTIL SUBSTANTIAL COMPLETION AND ALL OBSTACLES TO MOWING ARE REMOVED. GRASS MUST BE MAINTAINED BETWEEN 7 TO 14 INCHES IN HEIGHT (NO SEPARATE PAY ITEM). THE CONTRACTOR SHALL MOW GRASS AT LEAST ONCE DURING THE PROJECT.
- THE OWNER WILL PROVIDE THE PERSONNEL TO COMPLETE THE REQUIRED ACCEPTANCE TESTING. HOWEVER, THE CONTRACTOR WILL BE RESPONSIBLE FOR THEIR OWN QUALITY CONTROL TESTING. ACCEPTANCE TESTING WILL NOT BE PERFORMED AS A QUALITY CHECK FOR THE CONTRACTOR. ANY FAILED ACCEPTANCE TEST SHALL BE BILLED TO THE CONTRACTOR. REFERENCE IS DIRECTED TO ITEM C-100 "CONTRACTOR QUALITY CONTROL REQUIREMENTS" AND SPECIAL PROVISION "TESTING GENERAL" OF THE SPECIFICATIONS.

DEMOLITION:

- ALL ITEMS SHOWN AND LABELED TO BE REMOVED ON THIS PLAN SHALL BE REMOVED UNDER ITEM P-101 "PREPARATION/REMOVAL OF EXISTING PAVEMENTS", UNLESS OTHERWISE NOTED.
- FULL DEPTH PAVEMENT REMOVAL WILL BE PAID FOR BASED UPON THE ACTUAL SQUARE YARDS REMOVED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THERE WILL NOT BE A DIFFERENTIATION BETWEEN CONCRETE AND ASPHALT PAVEMENT REMOVAL.
- PAYMENT FOR THE DEMOLITION OF ELECTRICAL ITEMS WILL BE MADE AT THE CONTRACT UNIT PRICE PER EACH IN ACCORDANCE WITH ITEM P-101 "PREPARATION OF EXISTING PAVEMENTS". THE REMOVAL OF ALL REMAINING ELECTRICAL ITEMS SHOWN TO AND LABELED TO BE REMOVED WILL BE CONSIDERED INCIDENTAL TO THE PROJECT.
- OTHER MINOR ITEMS (I.E. STRUCTURES, CONCRETE PADS, ETC.) THAT MAY BE ENCOUNTERED SHALL BE REMOVED AND CONSIDERED INCIDENTAL TO THE PROJECT.
- THE CONTRACTOR SHALL PROVIDE TEMPORARY DRAINAGE AS REQUIRED DURING DEMOLITION AND CONSTRUCTION OPERATIONS FOR THE DURATION OF THE PROJECT. TEMPORARY DRAINAGE PROVISIONS SHALL HAVE SAME OR HIGHER CAPACITY THAN THAT OF EXISTING DRAINAGE SYSTEM.

- ANY INTERRUPTION TO SERVICE TO ACTIVE LIGHTING CIRCUITS SHALL BE IMMEDIATELY REPAIRED BY THE CONTRACTOR. ANY DAMAGE TO EXISTING AIRPORT CIRCUITS CAUSED BY THE CONTRACTORS EQUIPMENT OR PERSONNEL SHALL BE PROMPTLY REPAIRED AT THE CONTRACTOR'S EXPENSE. ALL ACTIVE LIGHTING SYSTEMS FOR OPEN AIRCRAFT OPERATIONAL AREAS SHALL BE OPERABLE FROM DUSK TO DAWN. THE USE OF TEMPORARY CABLES SHALL BE ANTICIPATED IN ORDER TO ACCOMMODATE CONSTRUCTION PHASING (NO SEPARATE PAY ITEM).
- RESIDUAL MATERIALS FROM THE DEMOLITION WILL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM AIRPORT PROPERTY UNLESS OTHERWISE NOTED. ALL DISPOSALS SHALL BE COMPLETED BY THE CONTRACTOR IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS.
- THE CONTRACTOR SHALL PROTECT, INVENTORY, AND RETAIN ALL ELECTRICAL DEMOLITION ITEMS WHICH THE OWNER CHOOSES TO MAINTAIN POSSESSION OF. THE CONTRACTOR SHALL DELIVER THE IDENTIFIED ITEMS TO A DESIGNATED STORAGE LOCATION ON THE AIRPORT AS ORDERED BY THE OWNER. ALL OTHER ITEMS WILL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM AIRPORT PROPERTY.
- ALL PAVEMENT TO BE REMOVED SHALL BE NEATLY SAWCUT (NO SEPARATE PAY ITEM).
- THE CONTRACTOR SHALL LAYOUT THE LIMITS OF PAVEMENT REMOVAL IN THE FIELD PRIOR TO BEGINNING WORK.
- BACKFILL OF REMOVED STRUCTURES OR PIPE SHALL BE COMPLETED IN ACCORDANCE WITH ITEM P-152 OF THE SPECIFICATIONS. BACKFILL OF SEDIMENT BASINS OR OTHER TEMPORARY EXCAVATIONS SHALL BE COMPLETED IN ACCORDANCE WITH ITEM P-152 (NO SEPARATE PAY ITEM).
- THE LOCATION OF EXISTING DUCTS SHOWN ON PLANS IS APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL MAINTAIN THE EXISTING AIRFIELD LIGHTING SYSTEMS/CIRCUITS FOR OPEN SEGMENTS AT ALL TIMES. THE USE OF TEMPORARY CABLE SHALL BE ANTICIPATED. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY CABLES AS REQUIRED. ALL COSTS TO PROVIDE AND MAINTAIN THE TEMPORARY CABLES WILL BE CONSIDERED INCIDENTAL TO THE PROJECT (NO SEPARATE PAY ITEM).

EXCAVATION, SUBGRADE, AND EMBANKMENT:

- ALL SUITABLE MATERIAL TAKEN FROM EXCAVATION SHALL BE USED IN THE FORMATION OF EMBANKMENT, SUBGRADE, AND FOR BACKFILLING AS ORDERED BY THE ENGINEER.
- WHEN THE VOLUME OF THE EXCAVATION EXCEEDS THAT REQUIRED TO CONSTRUCT THE EMBANKMENT TO THE GRADES INDICATED, THE EXCESS SHALL BE WASTED OFF-SITE. WHEN THE VOLUME OF EXCAVATION IS NOT SUFFICIENT FOR CONSTRUCTING THE FILL TO THE GRADES INDICATED, THE DEFICIENCY SHALL BE SUPPLIED FROM AUTHORIZED OFFSITE BORROW SOURCES.
- SATURATED MATERIAL MAY NOT BE UNSUITABLE FOR USE IN AN EMBANKMENT IF WHEN AERATED OR DRIED IT WOULD BE ACCEPTABLE FOR SUBGRADES OR EMBANKMENTS.
- ALL UNSUITABLE MATERIAL SHALL BE DISPOSED OF OFF-SITE.
- ALL TEST BORING DATA SHOWN ON THE PLANS OR IN REPORTS IS FOR INFORMATION ONLY AND IS NOT A GUARANTEE OF EXISTING CONDITIONS. EACH BIDDER SHALL INVESTIGATE THE SITE SUFFICIENTLY TO SATISFY THEMSELVES IN THIS REGARD PRIOR TO BIDDING.
- THE CONTRACTOR SHALL INFORM AND SATISFY THEMSELVES AS TO THE CHARACTER, QUANTITY, AND DISTRIBUTION OF ALL MATERIAL TO BE EXCAVATED AND/OR PLACED IN EMBANKMENT. NO PAYMENT WILL BE MADE FOR ANY EXCAVATED MATERIAL WHICH IS USED FOR PURPOSES OTHER THAN THOSE DESIGNATED.
- IF THE TYPE OF MATERIAL PRECLUDES TESTING IN ACCORDANCE WITH THE RESPECTIVE SPECIFICATION, THE ENGINEER MAY UTILIZE PROOF ROLLING IN ACCORDANCE WITH ITEM P-152 OF THE SPECIFICATIONS TO IDENTIFY AREAS NEEDING REPAIRS. ANY AREAS THAT RUT OR PUMP SHALL BE REPAIRED. EVEN IF TEST RESULTS HAVE BEEN OBTAINED THAT SHOW DENSITY HAS BEEN ACHIEVED, THE ENGINEER MAY ELECT TO TEST ANY COMPACTED AREA UTILIZING PROOF ROLLING AND ANY AREAS THAT RUT OR PUMP ALSO SHALL BE REPAIRED.
- ALL VEGETATION SUCH AS BRUSH, HEAVY SODS, HEAVY GROWTH OF GRASS, DECAYED VEGETABLE MATTER, RUBBISH, AND ANY OTHER SIMILAR MATERIAL WITHIN THE AREA UPON WHICH EMBANKMENT IS TO BE PLACED SHALL BE STRIPPED OR OTHERWISE REMOVED BEFORE THE EMBANKMENT IS STARTED, AND IN NO CASE WILL SUCH OBJECTIONABLE MATERIAL BE ALLOWED IN OR UNDER THE EMBANKMENT.
- TOPSOIL SHALL BE STRIPPED FROM BOTH CUT AND FILL AREAS, SALVAGED, STOCKPILED, AND THEN REDISTRIBUTED IN ALL UNPAVED AREAS (BOTH CUT AND FILL) UPON COMPLETION OF GRADING. THERE WILL BE NO SEPARATE MEASUREMENT OR PAYMENT FOR HANDLING AND PLACEMENT OF TOPSOIL REGARDLESS OF THE NUMBER OF TIMES THE CONTRACTOR IS REQUIRED TO MOVE THE MATERIAL. THE CONTRACTOR SHOULD NOTE THAT THE FINAL GRADES SHOWN ON THE PLANS ARE FINISHED GRADES, THUS REQUIRING OVER-EXCAVATION (NO PAY ITEM) TO COMPENSATE FOR THE LAYER OF TOPSOIL. REFER TO ITEM P-152-2.6 AND ITEM P-152-2.14 OF THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- TOPSOIL WILL NOT BE MEASURED AS A SEPARATE PAY ITEM. REFERENCE IS DIRECTED TO THE SPECIFICATIONS. OVER EXCAVATION FOR RE-DISTRIBUTION OF TOPSOIL WILL NOT BE MEASURED FOR PAYMENT AND WILL BE CONSIDERED INCIDENTAL TO THE PROJECT. TOPSOIL STRIPPING TO A DEPTH OF UP TO FIVE (5) INCHES IN THE PROPOSED EMBANKMENT AREAS WILL NOT BE MEASURED FOR PAYMENT. ANY STRIPPING BELOW FIVE (5) INCHES IN EMBANKMENT AREAS WILL BE MEASURED AS MUCK EXCAVATION.
- THE CONTRACTOR MAY USE ANY TYPE OF EARTH-MOVING, COMPACTION, AND WATERING EQUIPMENT THEY MAY DESIRE OR HAVE AT THEIR DISPOSAL PROVIDED THE EQUIPMENT IS IN A SATISFACTORY CONDITION AND IS OF SUCH CAPACITY THAT THE CONSTRUCTION SCHEDULE CAN BE MAINTAINED AS PLANNED BY THE CONTRACTOR AND AS APPROVED BY THE ENGINEER IN ACCORDANCE WITH THE TOTAL CALENDAR DAYS OR WORKING DAYS BID FOR THE CONSTRUCTION. THE CONTRACTOR SHALL FURNISH, OPERATE, AND MAINTAIN SUCH EQUIPMENT AS IS NECESSARY TO CONTROL UNIFORM DENSITY, LAYERS, SECTION, AND SMOOTHNESS OF GRADE.
- IMMEDIATELY PRIOR TO DUMPING AND SPREADING THE TOPSOIL IN ANY AREA, THE SURFACE SHALL BE LOOSENEED BY DISC OR SPIKE-TOOTH HARROWS, OR BY OTHER MEANS APPROVED BY THE ENGINEER. TO A MINIMUM DEPTH OF TWO (2) INCHES TO FACILITATE BONDING OF THE TOPSOIL TO THE COVERED SUBGRADE SOIL. THE SURFACE OF THE AREA TO BE TOPSOILED SHALL BE CLEARED AND ALL STONES LARGER THAN 2 INCHES IN ANY DIAMETER AND ALL LITTER OR OTHER MATERIAL WHICH MAY BE DETRIMENTAL TO PROPER BONDING, THE RISE OF CAPILLARY MOISTURE, OR THE PROPER GROWTH OF THE DESIRED PLANTING SHALL BE REMOVED.
- GRADES ON THE AREAS TO BE TOPSOILED SHALL BE SMOOTH-GRADED AND THE SURFACE LEFT AT THE PRESCRIBED GRADE IN AN EVEN AND PROPERLY COMPACTED CONDITION TO PREVENT THE FORMATION OF LOW PLACES OR POCKETS WHERE WATER WILL STAND.
- TOPSOIL SHALL BE STOCKPILED ONLY IN THE AREA(S) SHOWN ON THE PLANS UNLESS OTHERWISE REQUESTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. THE STOCKPILES SHALL BE GRADED TO PROVIDE ADEQUATE DRAINAGE AND PROTECTED BY SILT FENCE OR OTHER SEDIMENT TRAPPING DEVICE AS ORDERED BY THE ENGINEER. THE STOCKPILES SHALL BE REMOVED AND THE AREAS RESTORED TO A SMOOTH LINE AND GRADED, SEEDED, AND MULCHED. SILT FENCE, SEEDING, AND MULCHING ARE PAY ITEMS.
- THE TOPSOIL SHALL BE EVENLY SPREAD IN THE PREPARED AREAS TO A UNIFORM DEPTH OF 4-6 INCHES AFTER COMPACTION, UNLESS OTHERWISE SHOWN ON THE PLANS OR ORDERED BY THE ENGINEER. SPREADING SHALL NOT BE DONE WHEN THE GROUND OR TOPSOIL IS FROZEN, EXCESSIVELY WET, OR OTHERWISE IN A CONDITION DETRIMENTAL TO THE WORK.

- SPREADING SHALL BE CARRIED ON SO THAT TURFING OPERATIONS CAN PROCEED WITH A MINIMUM OF SOIL PREPARATION OR TILLING.
- AFTER SPREADING, ANY LARGE, STIFF CLODS OR HARD LUMPS SHALL BE BROKEN WITH A PULVERIZER OR BY OTHER EFFECTIVE MEANS, AND ALL STONES OR ROCKS (2 INCHES OR MORE IN DIAMETER), ROOTS, LITTER, OR ANY FOREIGN MATTER SHALL BE RAKED UP AND DISPOSED OF BY THE CONTRACTOR. AFTER SPREADING IS COMPLETED, THE TOPSOIL SHALL BE SATISFACTORILY COMPACTED BY ROLLING WITH A CULTIPACKER OR BY OTHER MEANS APPROVED BY THE ENGINEER. THE COMPACTED TOPSOIL OR OTHER DIRT FALLING ON PAVEMENTS AS A RESULT OF HAULING OR HANDLING OR TOPSOIL SHALL BE PROMPTLY REMOVED.
- NO SEPARATE PAYMENT OR MEASUREMENT FOR PAYMENT WILL BE MADE FOR STOCKPILING, SPREADING, SHAPING, OR ANY HANDLING OF TOPSOIL. THIS ITEM IS CONSIDERED INCIDENTAL TO ITEM P-152 OF THE SPECIFICATIONS.
- THE TOPOGRAPHY SHOWN ON THE PLANS HAS BEEN USED TO PREPARE ORIGINAL PROJECT CROSS-SECTIONS. FINAL CROSS SECTIONS WILL BE SPOT CHECKED AT THE COMPLETION OF THE WORK TO DETERMINE THE FINAL PAYMENT QUANTITY.
- IF THE CONTRACTOR ELECTS, THEY MAY ENGAGE A REGISTERED SURVEYOR TO SURVEY THE GRADING AREA TO VERIFY THE TOPOGRAPHY. THE CONTRACTOR SHALL FURNISH THE ENGINEER WRITTEN NOTICE OF SUCH SURVEYS. ANY DISCREPANCIES SHALL BE RESOLVED BEFORE GRADING OPERATIONS BEGIN FOR ORIGINAL SECTIONS OR WITHIN TEN (10) DAYS AFTER NOTIFICATION OF FINAL PAYMENT QUANTITY BY THE ENGINEER FOR FINAL SECTIONS.
- SEPARATE MEASUREMENT WILL NOT BE MADE FOR STOCKPILED MATERIALS OR TOPSOIL. OVER EXCAVATION TO ALLOW FOR TOPSOIL IN EXCAVATION AREAS WILL NOT BE MEASURED FOR PAYMENT AND THE COST THEREOF INCLUDED IN THE UNIT PRICE. COST FOR STOCKPILING OF MATERIALS AND/OR HANDLING TOPSOIL MUST BE INCLUDED IN THE CONTRACTOR'S UNIT PRICE FOR EXCAVATION.
- UNDERCUT AND/OR MUCK EXCAVATION ENCOUNTERED DURING THE PROGRESS OF THE WORK WILL BE MEASURED IN ITS ORIGINAL POSITION FOR PAYMENT. THE ENGINEER SHALL BE NOTIFIED PRIOR TO STARTING ANY UNDERCUT OR MUCK EXCAVATION SO THAT NECESSARY SURVEY INFORMATION CAN BE OBTAINED. CROSS-SECTIONS TAKEN BEFORE AND AFTER THE REMOVAL OF THE UNDERCUT OR MUCK EXCAVATION SHALL BE USED TO COMPUTE THE QUANTITY BY AVERAGE END AREA METHOD.
- MUCK AND UNSUITABLE MATERIAL ARE DEFINED IN ITEM P-152-1.2 AND ITEM P-152-1.3 OF THE SPECIFICATIONS, RESPECTIVELY, AND ARE MATERIALS WHICH ARE CONSIDERED UNSUITABLE FOR USE IN EMBANKMENT CONSTRUCTION DUE TO THEIR PHYSICAL PROPERTIES (CONTAINING ORGANICS, DECAYING MATERIALS, ETC.). HIGH IN-PLACE MOISTURE CONTENT WILL NOT BE GROUNDS FOR CLASSIFYING A MATERIAL AS MUCK OR UNSUITABLE. THE CONTRACTOR IS EXPECTED TO AERATE AND DRY THE MATERIAL, AS NECESSARY, TO REACH OPTIMUM MOISTURE CONTENT.
- NO ADDITIONAL PAYMENT WILL BE MADE TO THE CONTRACTOR FOR HANDLING AND DRYING OF SATURATED MATERIAL, WHETHER THEIR ATTEMPTS ARE SUCCESSFUL OR UNSUCCESSFUL. THE CONTRACTOR MAY, AT THEIR OPTION AND THEIR OWN COST, REPLACE, SUPPLEMENT, OR TREAT THE SATURATED MATERIAL TO IMPROVE WORKABILITY. SUPPLEMENTS OR TREATMENTS MAY INCLUDE MIXING WITH A DIFFERENT SOIL MATERIAL OR TREATING WITH LIME OR CEMENT AT THE CONTRACTOR'S OWN COST.
- AS OUTLINED IN SPECIFICATION ITEM P-152-3.1, THE UNIT PRICE FOR MUCK EXCAVATION INCLUDES BACKFILL WITH A SUITABLE MATERIAL. UNSUITABLE/MUCK MATERIAL THAT IS ENCOUNTERED ABOVE FINAL GRADE WILL BE CONSIDERED UNCLASSIFIED EXCAVATION AND SHALL WILL BE MEASURED AS MUCK.
- THE EXCAVATION QUANTITY INCLUDES THE VOLUME OF PAVEMENT REMOVAL IN CUT AREAS ONLY.

GENERAL PAVING:

- IN ACCORDANCE WITH ITEM P-401, THE CONTRACTOR SHALL PROVIDE APPROPRIATE ARTIFICIAL LIGHTING DURING ANY NIGHTTIME PAVING. A LIGHTING PLAN SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER PRIOR TO THE START OF ANY NIGHTTIME PAVING. THE LIGHTING SHALL BE ADEQUATE TO SAFELY COMPLETE THE WORK BEING PERFORMED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. ALL WORK SHALL BE IN ACCORDANCE WITH THE APPROVED CISP AND LIGHTING PLAN. LIGHTING SHALL BE DIRECTED OR SHADED TO PREVENT INTERFERENCE WITH AIRCRAFT, THE AIR TRAFFIC CONTROL TOWER, AND OTHER AIRPORT OPERATIONS. THE CONTRACTOR SHALL REORIENT LIGHTS AS ORDERED BY THE AIR TRAFFIC CONTROL TOWER, ENGINEER, AND/OR OWNER.
- THE CONTRACTOR SHALL ATTEND A PRE-PAVING CONFERENCE CONDUCTED BY THE ENGINEER PRIOR TO START OF PAVING OPERATIONS. THE PAVING FOREMAN SHALL BE PRESENT AT THE CONFERENCE. THE CONTRACTOR SHALL BE PREPARED TO DISCUSS THE PROPOSED LAYDOWN/PAVING PLAN.
- AS OUTLINED IN THE SPECIFICATIONS, THE AGGREGATE BASE COURSE SHALL BE PLACED BY A MECHANICAL SPREADER. AS A MINIMUM, A MECHANICAL SPREADER SHALL BE A "SPREADER BOX" MOUNTED TO THE FRONT OF A DOZER OF SUFFICIENT SIZE AND HORSEPOWER TO PUSH THE SPREADER BOX, LOADED WITH STONE, AND TRUCK BEING USED FOR STONE DELIVERY. STONE BASE SHALL NOT BE PLACED BY END-DUMPING THE MATERIAL AND SPREADING WITH A GRADER.
- THE CONTRACTOR SHALL PROVIDE A LIGHT WEIGHT STRAIGHT EDGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS. THE STRAIGHT EDGE SHALL HAVE A HANDLE WITH A TWO (2) FOOT HEIGHT. THE CONTRACTOR SHALL PROVIDE AN EMPLOYEE TO ASSIST THE RESIDENT PROJECT REPRESENTATIVE IN CONDUCTING THE STRAIGHT EDGE TEST REQUIRED BY THE TECHNICAL SPECIFICATIONS (NO SEPARATE PAY ITEM).
- THE CONTRACTOR SHALL PROVIDE A FINISHED PAVEMENT SURFACE FREE OF PONDING WATER. ALL AREAS OF PONDING WATER SHALL BE REPAIRED AS ORDERED BY THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER.
- FINAL PAVEMENT EDGES SHALL BE STRAIGHT AND NEAT. THIS MAY REQUIRE SAW CUTTING OF FINAL EDGES, PARTICULARLY IN FILLET AREAS. NO ADDITIONAL PAYMENT WILL BE MADE FOR ANY REQUIRED SAW CUTTING.

ASPHALT PAVING:

- TAXIWAY "B" SHALL BE PAVED WITH A MAXIMUM OF THREE (3) COLD JOINTS (4 LANES). ADDITIONAL COLD JOINTS MAY BE USED ON STUB TAXIWAYS, FILLET WIDENING, TRANSITION SECTION AND ALONG THE CARGO APRON. A 25-FOOT PAVEMENT OR SMALLER PAVEMENTS PULLED IN TANDEM WITH A HOT JOINT WILL BE REQUIRED. NO MORE THAN THIRTY (30) MINUTES SHALL ELAPSE BETWEEN 2 PAVEMENTS PULLED IN TANDEM FOR A JOINT TO BE CONSIDERED HOT.
- LONGITUDINAL JOINTS WHICH ARE IRREGULAR, DAMAGED, UNCOMPACTED, OR OTHERWISE DEFECTIVE, OR WHICH HAVE BEEN LEFT EXPOSED FOR MORE THAN 4 HOURS, OR WHOSE SURFACE TEMPERATURE HAS COOLED TO LESS THAN 175 DEGREES SHALL BE CUT BACK BY SAWING A MAXIMUM OF 3 INCHES TO EXPOSE A CLEAN, SOUND VERTICAL SURFACE FOR THE FULL DEPTH OF THE COURSE. REFERENCE IS DIRECTED TO ITEM P-401 OF THE SPECIFICATIONS.
- THE CONTRACTOR SHALL CONTINUALLY MONITOR THE JOINT BETWEEN PAVING LANES TO ENSURE A GOOD JOINT WITH REGARD TO GRADE, SMOOTHNESS, APPEARANCE, AND DENSITY.
- THE PAVING SHALL BE ACCOMPLISHED BY USE OF A PAVEMENT WITH AUTOMATIC GRADE CONTROLS, UNLESS OTHERWISE APPROVED BY THE ENGINEER. REFERENCE IS DIRECTED TO ITEM P-401 OF THE SPECIFICATIONS.
- IN ORDER TO REMOVE ANY SMALL IRREGULARITIES, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE AND USE A 30-FOOT STRING LINE. A SHORT SHOE MAY ONLY BE USED WHEN MATCHING THE EDGE OF AN ADJACENT LIFT.

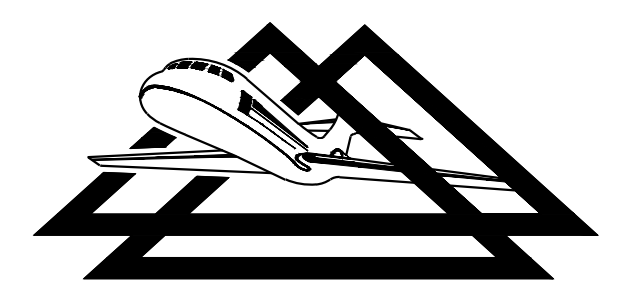
- THE CONTRACTOR SHALL HAVE AT LEAST ONE (1) SPARE PAVER OR EQUAL TYPE, AVAILABLE FOR DELIVERY ON-SITE WITHIN 24 HOURS IF THE FIRST PAVER SHOULD BREAK DOWN (NO SEPARATE PAY ITEM).

SITE CLEANUP

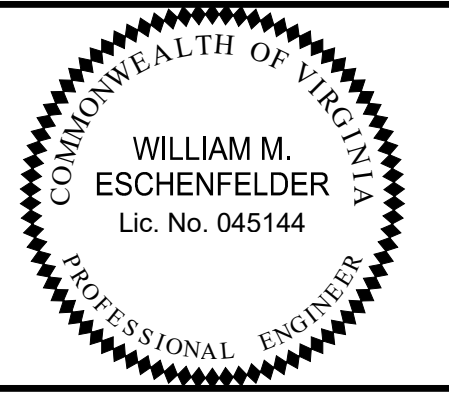
- ALL GRADED AREAS SHALL BE ADDRESSED WITH A MECHANICAL ROCKHOUND AFTER THE PLACEMENT OF TOPSOIL AND PRIOR TO THE APPLICATION OF SEED AND MULCH. AN ENGINEER/OWNER WALKOVER OF ALL AREAS WILL BE CONDUCTED AND ANY REQUIRED CORRECTIONS TO GRADE OR SMOOTHNESS, AND REMOVAL OF ROCKS AND/OR FOREIGN DEBRIS SHALL BE COMPLETED BEFORE SEED AND MULCH ARE APPLIED.
- THE ENGINEER AND/OR OWNER SHALL INSPECT ALL AREAS AFTER SEEDING ANY DEFICIENT AREAS SHALL BE ADDRESSED BY HAND REMOVAL OF OBJECTIONABLE MATERIAL. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO ITEM P-152 OF THE SPECIFICATIONS.
- STAGING AREAS SHALL BE RESTORED TO THEIR PRE-CONSTRUCTION CONDITION. PAVING SHALL BE ANTICIPATED.
- THE CONTRACTOR SHALL CLEAN THE STORM SEWER SYSTEM OF ALL SEDIMENT UPON STABILIZATION OF THE UPSTREAM AREAS (NO SEPARATE PAY ITEM).
- AFTER WORK IS COMPLETED, THE CONTRACTOR SHALL REMOVE ALL TOOLS AND OTHER EQUIPMENT, LEAVING THE ENTIRE SITE FREE, CLEAR, AND IN GOOD CONDITION (NO SEPARATE PAY ITEM).

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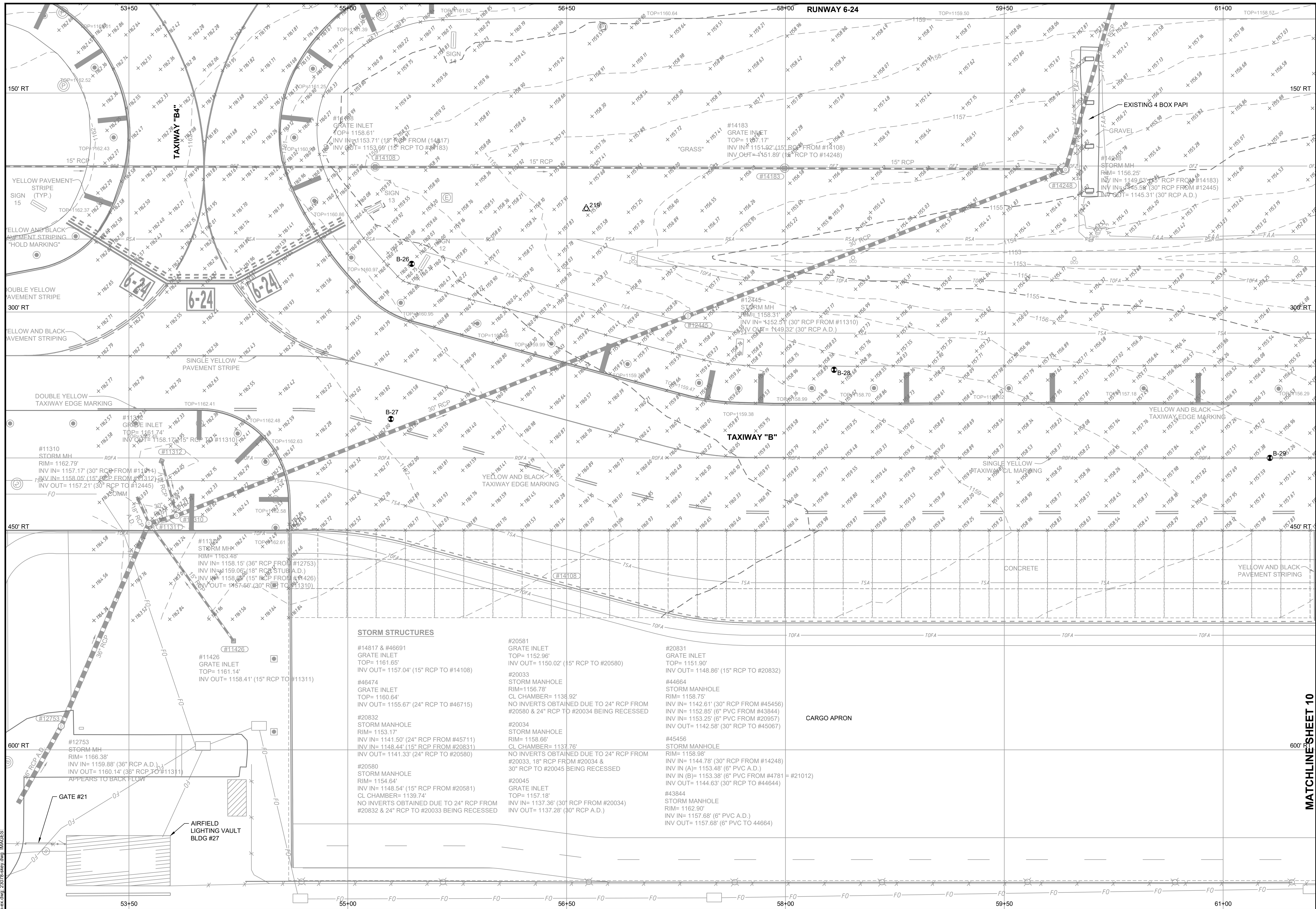
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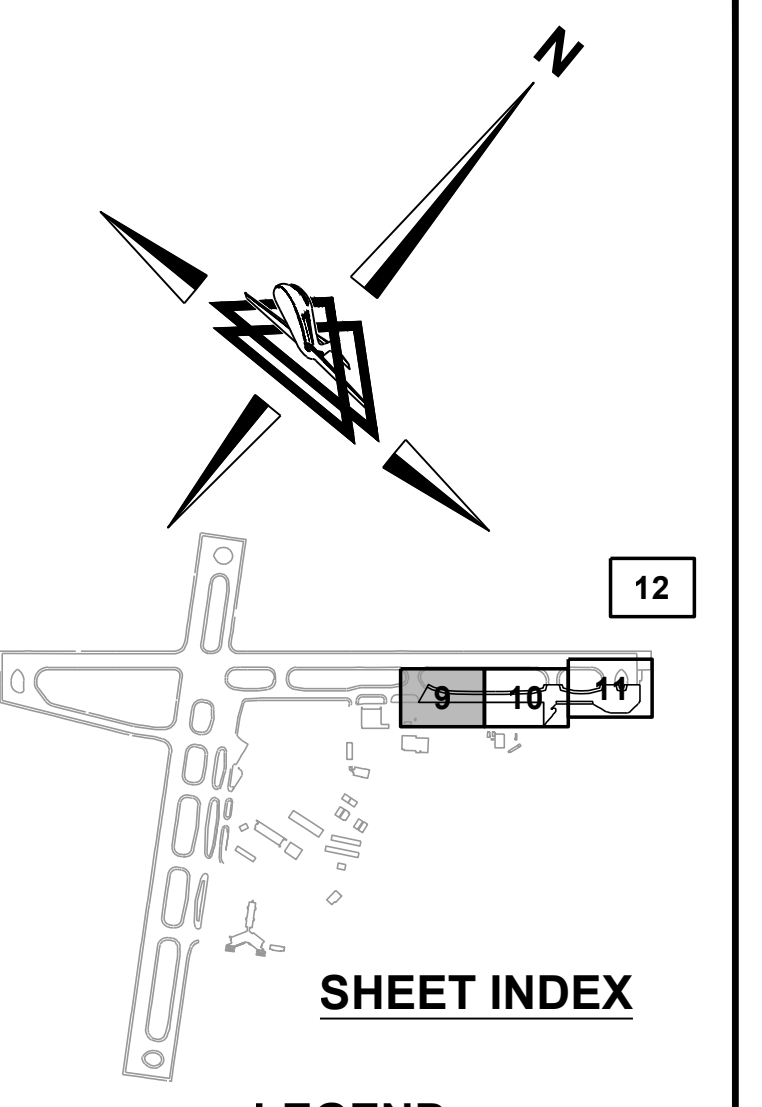
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|---|-------------------------------|---------------------|
| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| | DRAWN BY: PJW | SHEET 8 |
| | DESIGNED BY: WME | OF 60 |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | SCALE: NONE | DATE: MARCH 2025 |

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DRAWINGS: BNTS.dwg LAYOUT: L2
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| STORM STRUCTURES | |
|---|--|
| #14817 & #46691 GRATE INLET TOP= 1161.65' INV OUT= 1157.04' (15" RCP TO #14108) | #20581 GRATE INLET TOP= 1152.96' INV OUT= 1150.02' (15" RCP TO #20580) |
| #46474 GRATE INLET TOP= 1160.64' INV OUT= 1155.67' (24" RCP TO #46715) | #20033 STORM MANHOLE RIM= 1156.78' CL CHAMBER= 1138.92' NO INVERTS OBTAINED DUE TO 24" RCP FROM #20580 & 24" RCP TO #20034 BEING RECESSED |
| #20832 STORM MANHOLE RIM= 1153.17' INV IN= 1141.50' (24" RCP FROM #45711) INV IN= 1148.44' (15" RCP FROM #20831) INV OUT= 1141.33' (24" RCP TO #20580) | #20034 STORM MANHOLE RIM= 1158.66' CL CHAMBER= 1137.76' NO INVERTS OBTAINED DUE TO 24" RCP FROM #20033, 18" RCP FROM #20034 & 30" RCP TO #20045 BEING RECESSED |
| #20580 STORM MANHOLE RIM= 1154.64' INV IN= 1148.54' (15" RCP FROM #20581) CL CHAMBER= 1139.74' NO INVERTS OBTAINED DUE TO 24" RCP FROM #20832 & 24" RCP TO #20033 BEING RECESSED | #20045 GRATE INLET TOP= 1157.18' INV IN= 1137.36' (30" RCP FROM #20034) INV OUT= 1137.28' (30" RCP A.D.) |
| | #20831 GRATE INLET TOP= 1151.90' INV OUT= 1148.86' (15" RCP TO #20832) |
| | #44664 STORM MANHOLE RIM= 1158.75' INV IN= 1142.61' (30" RCP FROM #45456) INV IN= 1152.85' (6" PVC FROM #43844) INV IN= 1153.25' (6" PVC FROM #20957) INV OUT= 1142.58' (30" RCP TO #45067) |
| | #45456 STORM MANHOLE RIM= 1158.98' INV IN= 1144.78' (30" RCP FROM #14248) INV IN (A)= 1153.48' (6" PVC A.D.) INV IN (B)= 1153.38' (6" PVC FROM #4781 = #21012) INV OUT= 1144.63' (30" RCP TO #44644) |
| | #43844 STORM MANHOLE RIM= 1162.90' INV IN= 1157.68' (6" PVC A.D.) INV OUT= 1157.68' (6" PVC TO #44644) |

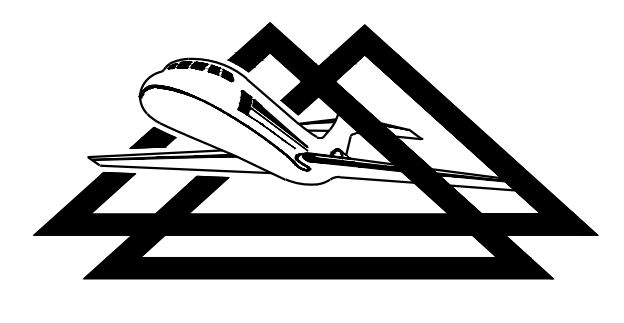


- LEGEND**
- ▲ BM-X BENCHMARK LOCATION
 - B-X BORING LOCATION (APPROX)
 - × 918.33 EXISTING SPOT ELEVATION
 - EXISTING DROP INLET
 - EXISTING FLARED END SECTION
 - EXISTING ENDWALL/HEADWALL/WINGWALL
 - EXISTING STORM MANHOLE
 - EXISTING UNDERDRAIN CLEANOUT
 - EXISTING AIRFIELD GUIDANCE SIGN
 - EXISTING RUNWAY LIGHT
 - EXISTING RUNWAY THRESHOLD LIGHT
 - EXISTING TAXIWAY LIGHT
 - EXISTING WIND CONE
 - EXISTING ROADWAY SIGN
 - EXISTING POLE (LIGHTED)
 - EXISTING POLE (NON-LIGHTED)
 - EXISTING TREE
 - EXISTING STORM DRAIN
 - EXISTING EDGE DRAIN/UNDERDRAIN
 - EXISTING CONCRETE JOINT
 - EXISTING DITCH
 - FAA EXISTING FAA-CONTROLLED CABLE
 - × EXISTING FENCE
 - EXISTING FIBER OPTIC LINE
 - EXISTING GUARDRAIL
 - EXISTING OBSTACLE FREE ZONE
 - EXISTING AIRPORT PROPERTY LINE
 - EXISTING RUNWAY OBJECT FREE AREA
 - EXISTING RUNWAY SAFETY AREA
 - EXISTING TAXIWAY OBJECT FREE AREA
 - EXISTING TAXIWAY SAFETY AREA
 - EXISTING TREE LINE

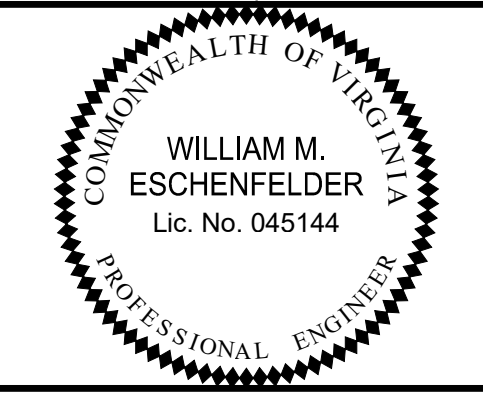


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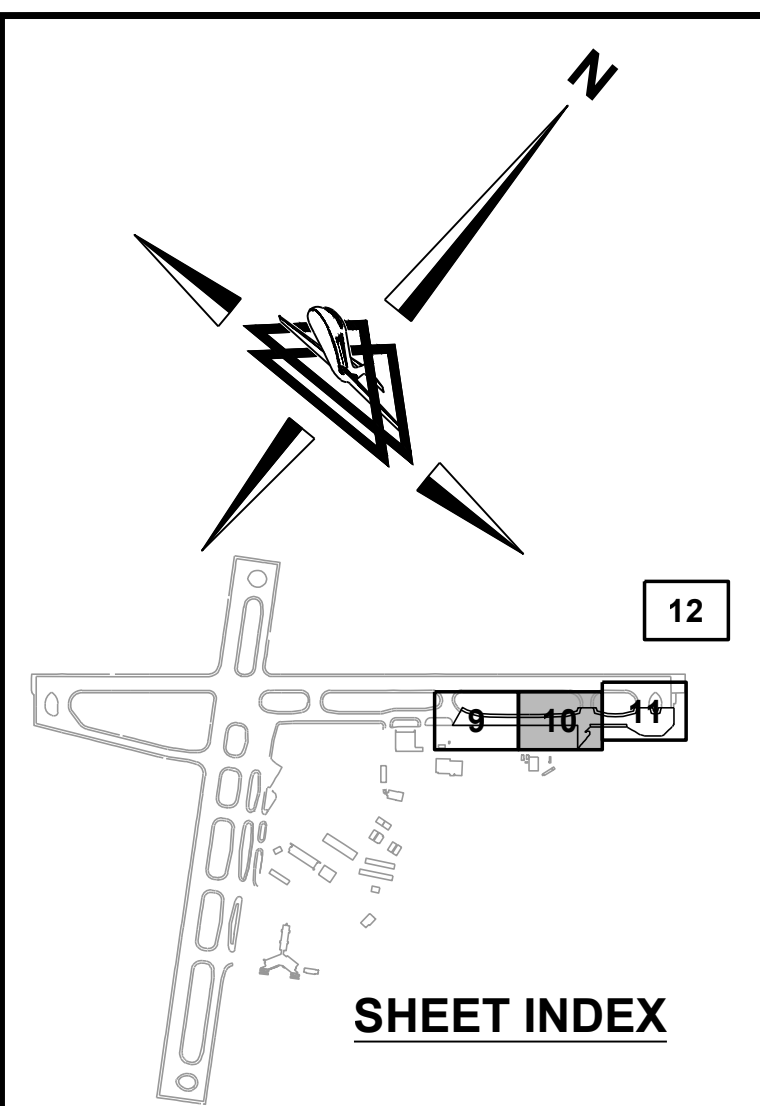
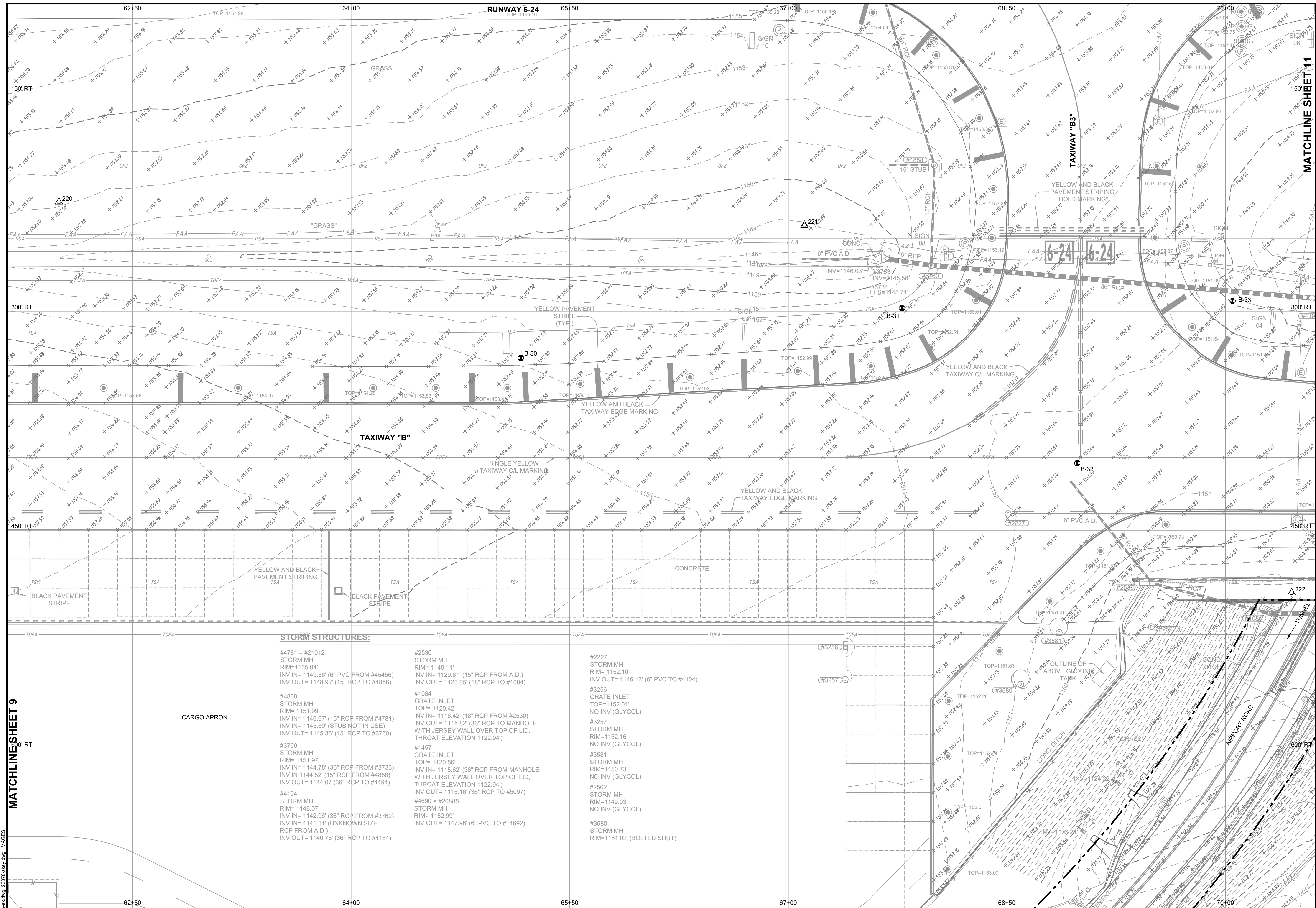


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| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| EXISTING CONDITIONS | | DRAWN BY: PJW | SHEET 9 |
| | | DESIGNED BY: WME | OF 60 |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | | SCALE: 1" = 30' | DATE: MARCH 2025 |

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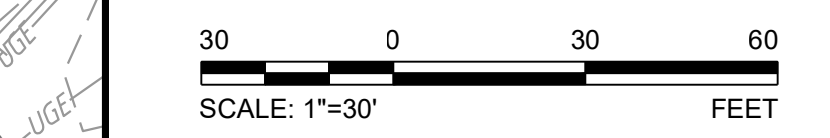
LEGEND

- ▲ BM-X BENCHMARK LOCATION
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- × 918.33 EXISTING SPOT ELEVATION
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- EXISTING STORM MANHOLE
- EXISTING UNDERDRAIN CLEANOUT
- ▭ EXISTING AIRFIELD GUIDANCE SIGN
- EXISTING RUNWAY LIGHT
- EXISTING RUNWAY THRESHOLD LIGHT
- EXISTING TAXIWAY LIGHT
- EXISTING WIND CONE
- EXISTING ROADWAY SIGN
- EXISTING POLE (LIGHTED)
- EXISTING POLE (NON-LIGHTED)
- EXISTING TREE
- ▭ EXISTING STORM DRAIN
- ▭ EXISTING EDGE DRAIN/UNDERDRAIN
- ▭ EXISTING CONCRETE JOINT
- ▭ EXISTING DITCH
- ▭ FAA EXISTING FAA-CONTROLLED CABLE
- × EXISTING FENCE
- ▭ EXISTING FIBER OPTIC LINE
- ▭ EXISTING GUARDRAIL
- ▭ EXISTING OBSTACLE FREE ZONE
- ▭ EXISTING AIRPORT PROPERTY LINE
- ▭ EXISTING RUNWAY OBJECT FREE AREA
- ▭ EXISTING RUNWAY SAFETY AREA
- ▭ EXISTING TAXIWAY OBJECT FREE AREA
- ▭ EXISTING TAXIWAY SAFETY AREA
- ▭ EXISTING TREE LINE

STORM STRUCTURES:

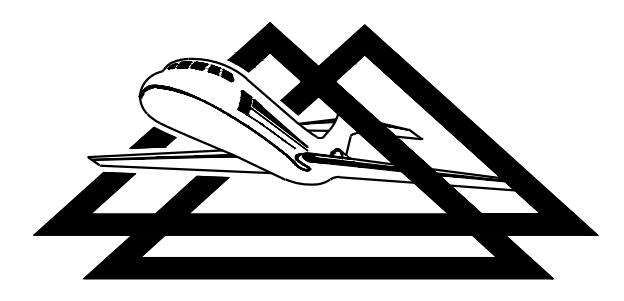
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|--|--|---|
| #4781 = #21012 STORM MH RIM=1155.04' INV IN= 1149.86' (6" PVC FROM #45456) INV OUT= 1148.92' (15" RCP TO #4858) | #2530 STORM MH RIM= 1149.11' INV IN= 1129.61' (15" RCP FROM A.D.) INV OUT= 1123.05' (18" RCP TO #1084) | #2227 STORM MH RIM= 1152.10' INV OUT= 1146.13' (6" PVC TO #4104) |
| #4858 STORM MH RIM= 1151.99' INV IN= 1146.67' (15" RCP FROM #4781) INV IN= 1145.89' (STUB NOT IN USE) INV OUT= 1145.36' (15" RCP TO #3760) | #1084 GRATE INLET TOP= 1120.42' INV IN= 1116.42' (18" RCP FROM #2530) INV OUT= 1115.82' (36" RCP TO MANHOLE WITH JERSEY WALL OVER TOP OF LID, THROAT ELEVATION 1122.94') | #3256 GRATE INLET TOP=1152.01' NO INV (GLYCOL) |
| #3760 STORM MH RIM= 1151.97' INV IN= 1144.78' (36" RCP FROM #3733) INV IN= 1144.52' (15" RCP FROM #4858) INV OUT= 1144.07' (36" RCP TO #4194) | #1457 GRATE INLET TOP= 1120.56' INV IN= 1115.62' (36" RCP FROM MANHOLE WITH JERSEY WALL OVER TOP OF LID, THROAT ELEVATION 1122.94') | #3257 STORM MH RIM=1152.16' NO INV (GLYCOL) |
| #4194 STORM MH RIM= 1148.07' INV IN= 1142.96' (36" RCP FROM #3760) INV IN= 1141.11' (UNKNOWN SIZE RCP FROM A.D.) INV OUT= 1140.75' (36" RCP TO #4164) | #4690 = #20885 STORM MH RIM= 1152.99' INV OUT= 1147.96' (6" PVC TO #14692) | #2562 STORM MH RIM=1149.03' NO INV (GLYCOL) |
| | | #3580 STORM MH RIM=1151.02' (BOLTED SHUT) |

MATCHLINE SHEET 9

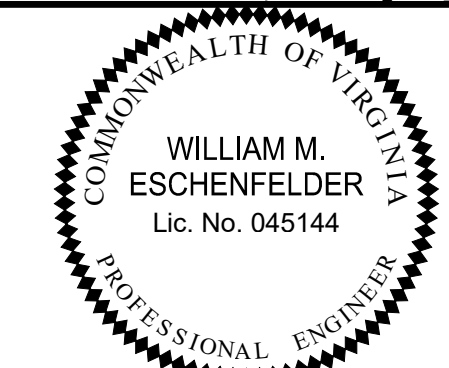


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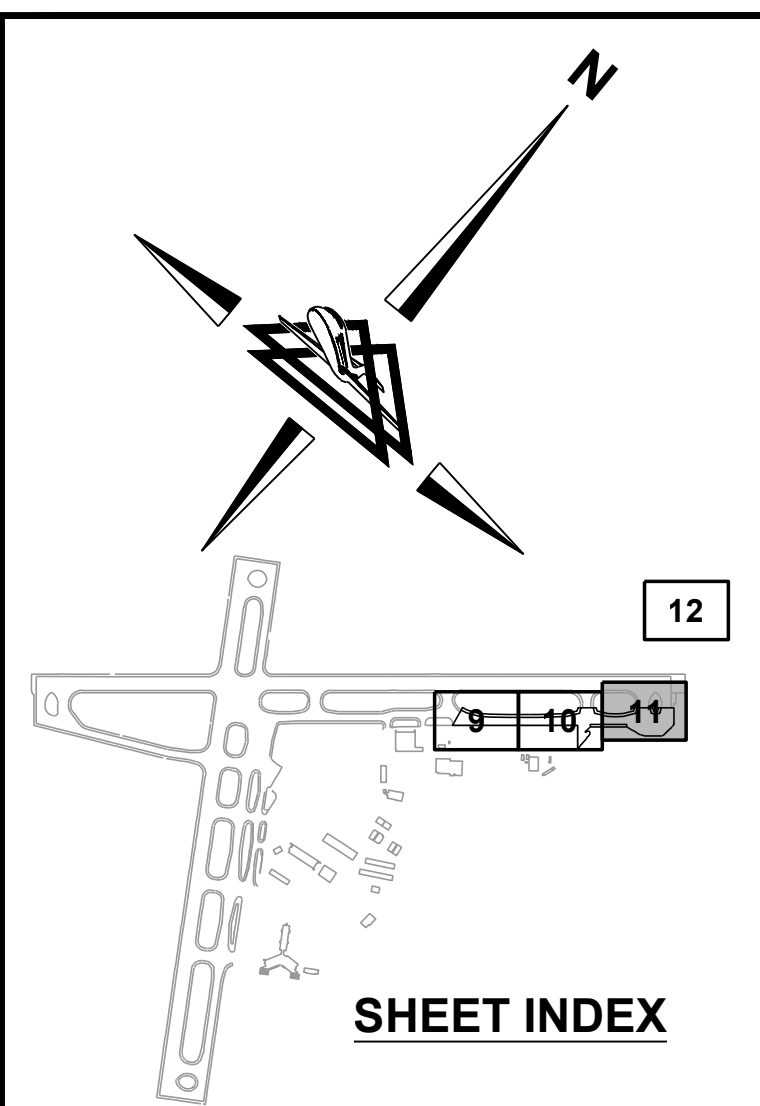
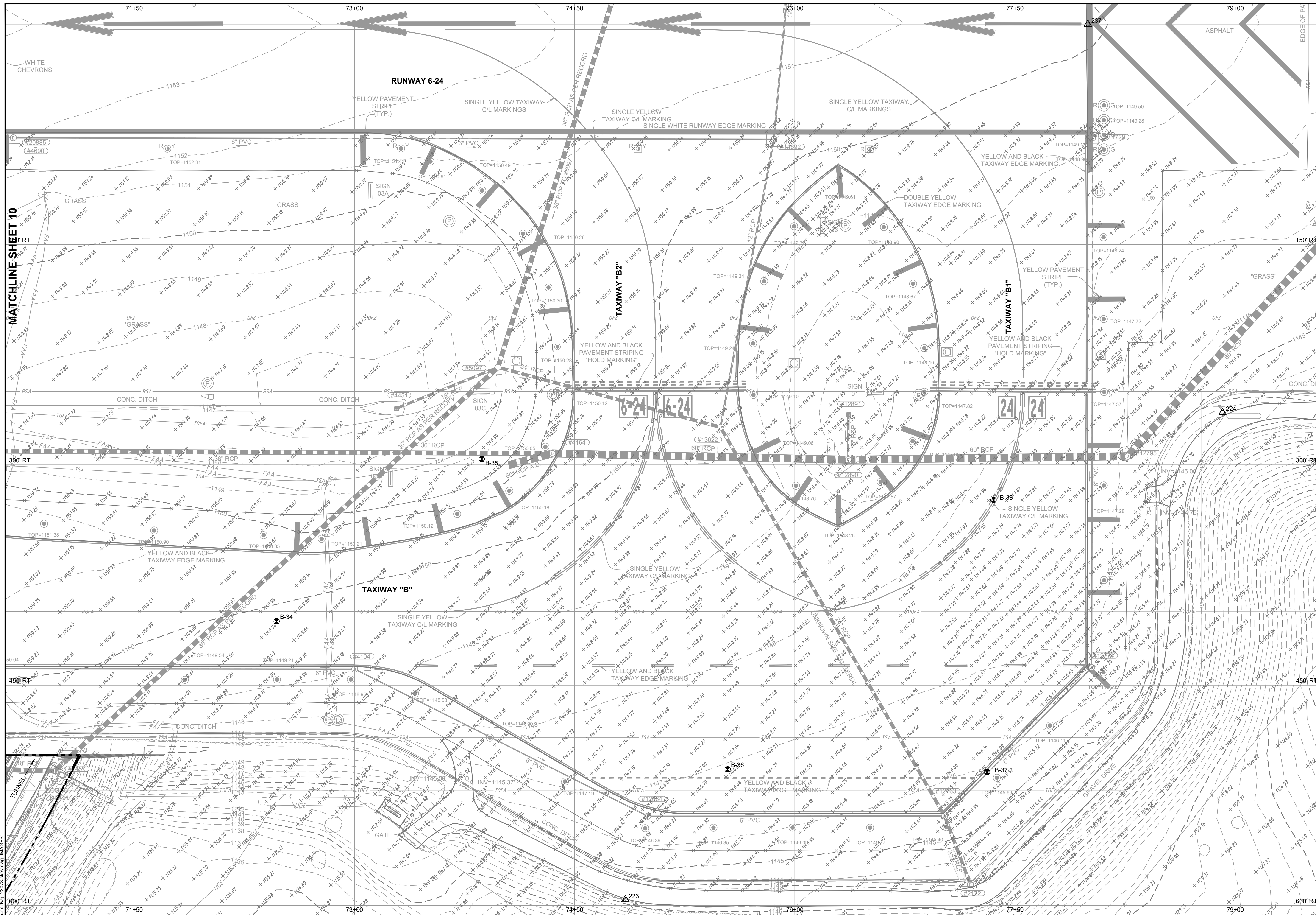


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| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| EXISTING CONDITIONS | | DRAWN BY: PJW | SHEET 10 |
| | | DESIGNED BY: WME | OF 60 |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | | SCALE: 1" = 30' | DATE: MARCH 2025 |

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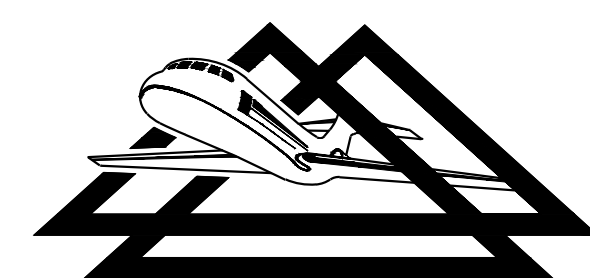


- LEGEND**
- ▲ BM-X BENCHMARK LOCATION
 - B-X BORING LOCATION (APPROX)
 - × 918.33 EXISTING SPOT ELEVATION
 - EXISTING DROP INLET
 - ▭ EXISTING FLARED END SECTION
 - ▭ EXISTING ENDWALL/HEADWALL/WINGWALL
 - EXISTING STORM MANHOLE
 - EXISTING UNDERDRAIN CLEANOUT
 - ▭ EXISTING AIRFIELD GUIDANCE SIGN
 - EXISTING RUNWAY LIGHT
 - EXISTING RUNWAY THRESHOLD LIGHT
 - EXISTING TAXIWAY LIGHT
 - EXISTING WIND CONE
 - ▭ EXISTING ROADWAY SIGN
 - EXISTING POLE (LIGHTED)
 - EXISTING POLE (NON-LIGHTED)
 - EXISTING TREE
 - ▭ EXISTING STORM DRAIN
 - ▭ EXISTING EDGE DRAIN/UNDERDRAIN
 - ▭ EXISTING CONCRETE JOINT
 - ▭ EXISTING DITCH
 - ▭ FAA EXISTING FAA-CONTROLLED CABLE
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 - ▭ EXISTING FIBER OPTIC LINE
 - ▭ EXISTING GUARDRAIL
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 - ▭ EXISTING AIRPORT PROPERTY LINE
 - ▭ EXISTING RUNWAY OBJECT FREE AREA
 - ▭ EXISTING RUNWAY SAFETY AREA
 - ▭ EXISTING TAXIWAY OBJECT FREE AREA
 - ▭ EXISTING TAXIWAY SAFETY AREA
 - ▭ EXISTING TREE LINE

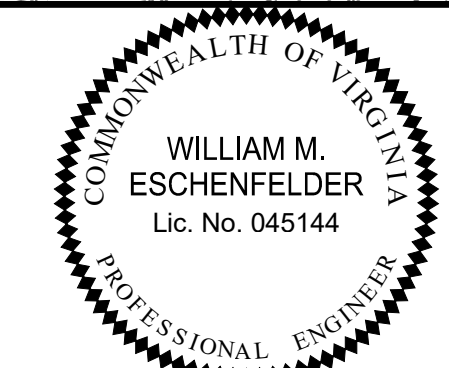


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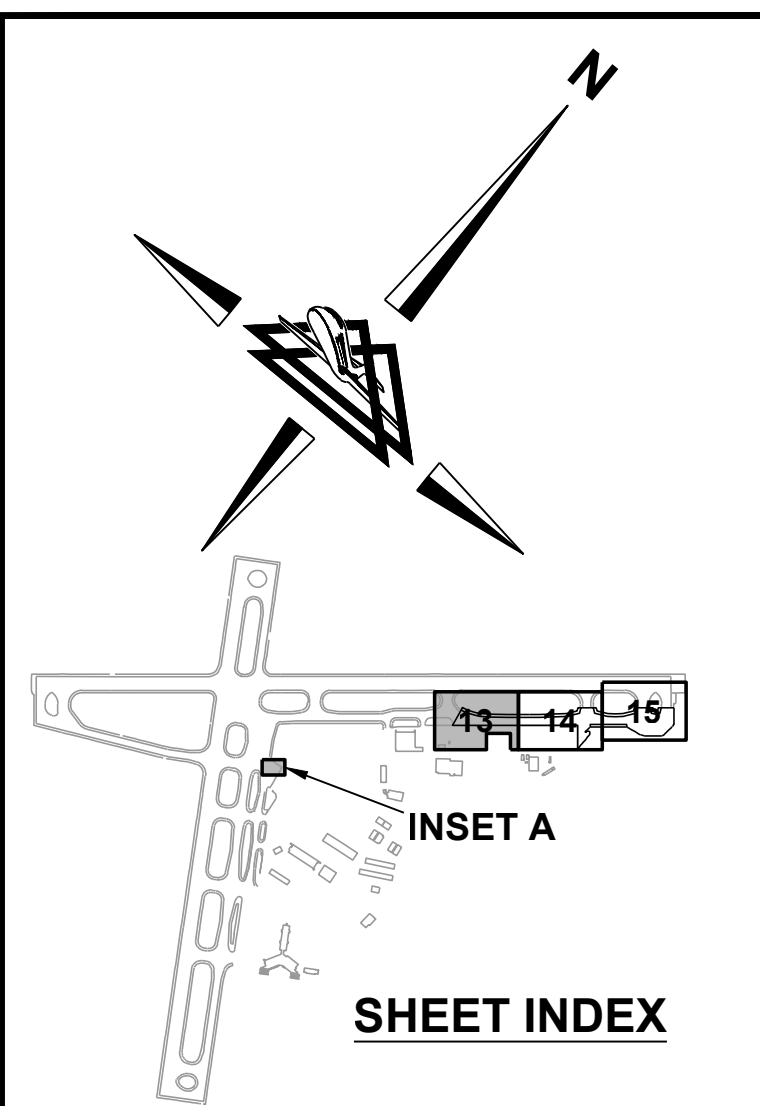
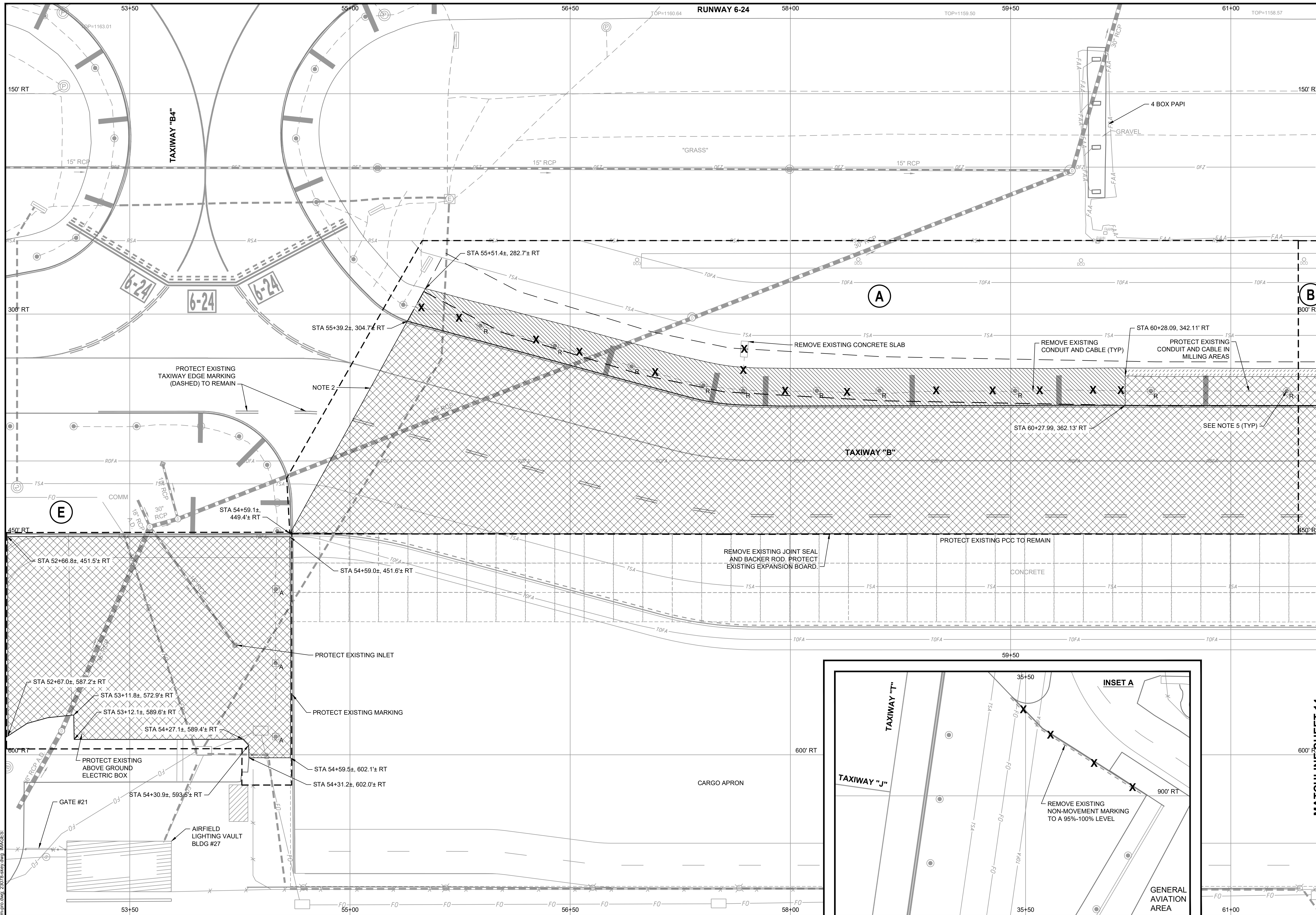


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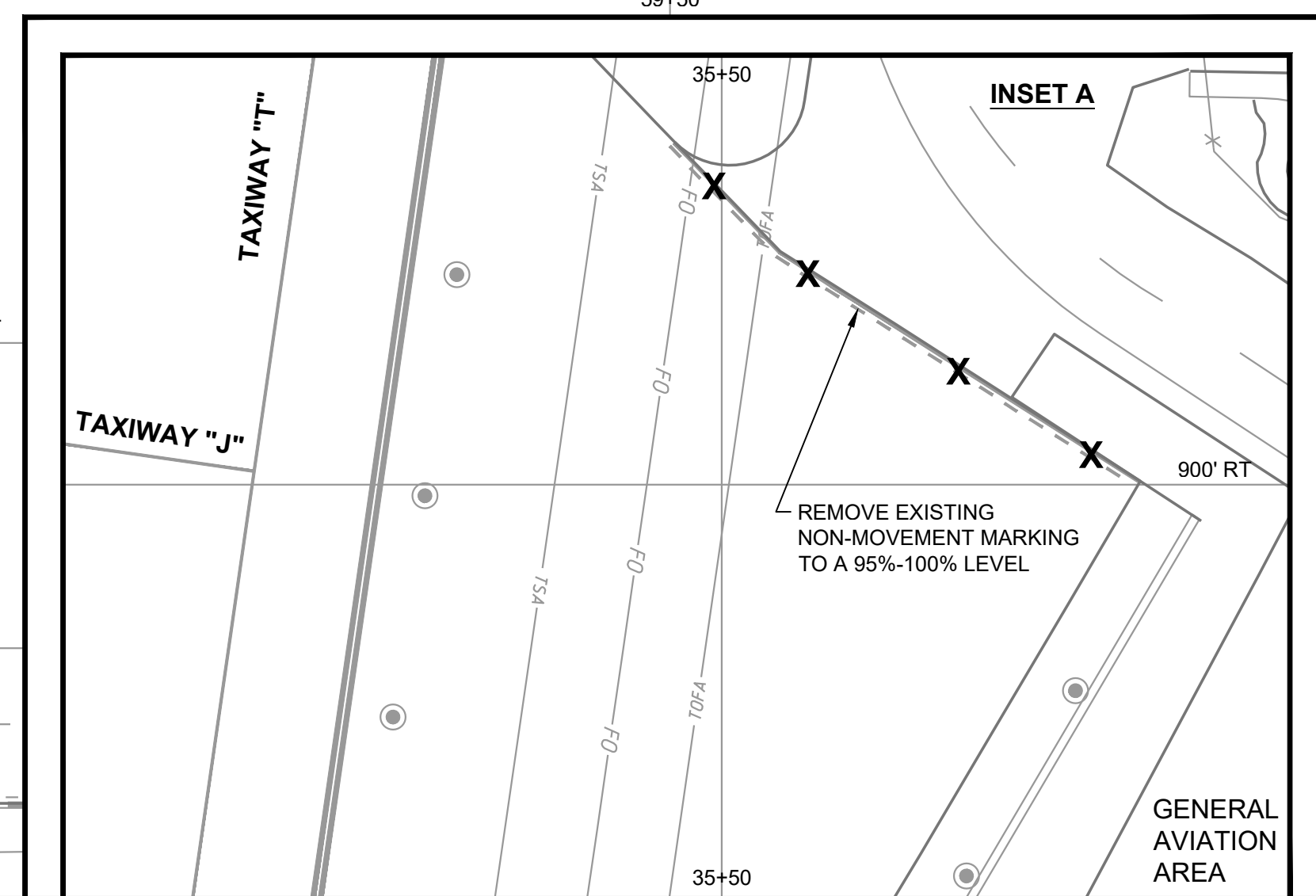
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| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| EXISTING CONDITIONS | | DRAWN BY: PJW | SHEET 11 |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | | DESIGNED BY: WME | OF 60 |
| SCALE: 1" = 30' | DATE: MARCH 2025 | | |

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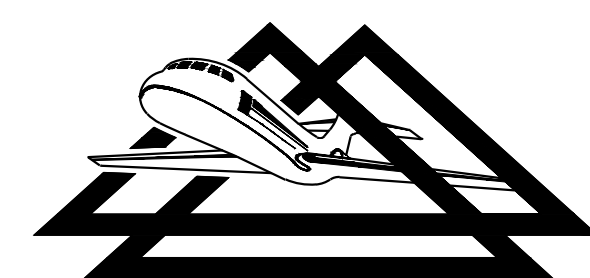
- SHEET INDEX**
- LEGEND**
- (X) WORK AREA LABEL
 - WORK AREA LIMITS
 - EXISTING DROP INLET
 - ▭ EXISTING FLARED END SECTION
 - EXISTING STORM MANHOLE
 - ▭ EXISTING AIRFIELD GUIDANCE SIGN
 - ⊗ EXISTING AIRFIELD GUIDANCE SIGN CONCRETE FOUNDATION TO BE REMOVED
 - EXISTING RUNWAY LIGHT
 - EXISTING RUNWAY THRESHOLD LIGHT
 - EXISTING TAXIWAY LIGHT
 - EXISTING L-861T BASE MOUNTED MITL TO BE ADJUSTED TO GRADE
 - EXISTING L-861T BASE MOUNTED MITL TO BE RELOCATED (SEE NOTE 4)
 - EXISTING STORM DRAIN
 - PROPOSED DEVELOPMENT
 - X EXISTING FENCE
 - EXISTING OBSTACLE FREE ZONE
 - EXISTING AIRPORT PROPERTY LINE
 - EXISTING RUNWAY OBJECT FREE AREA
 - EXISTING RUNWAY SAFETY AREA
 - EXISTING TAXIWAY OBJECT FREE AREA
 - EXISTING TAXIWAY SAFETY AREA
 - ▨ EXISTING SHOULDER TO BE REMOVED (FULL DEPTH)
 - ▨ EXISTING PAVEMENT TO BE MILLED (3" DEPTH)
 - ▨ EXISTING SHOULDER TO BE MILLED (4" DEPTH)
 - ▨ EXISTING PAVEMENT TO BE MILLED (VARIABLE DEPTH)

- NOTES**
- ALL STATIONS AND OFFSETS ARE GIVEN WITH RESPECT TO BASELINE "RW1" UNLESS OTHERWISE SPECIFIED.
 - SAWCUT NEAT VERTICAL FACE.
 - MILLING LIMITS SHOWN INDICATE THE MAXIMUM PAY LIMITS. SHOULD THE CONTRACTOR ELECT TO INCREASE MILLING LIMIT, COST OF ADDITIONAL MILLING AND PAVING SHALL BE AT THEIR OWN EXPENSE.
 - BASE MOUNTED MITL SHALL BE RELOCATED IN NEW CAN. EXISTING BASE CANS SHALL BE REMOVED.
 - EXISTING BASE CANS IN AREAS TO BE MILLED SHALL BE REMOVED IN ACCORDANCE WITH DETAIL "L-867 LIGHT BASE REMOVAL".
 - REMOVE PORTION OF THE EXISTING HOLDING POSITION MARKING LOCATED ON SHOULDER TO A 95% TO 100% LEVEL. PROTECT EXISTING HOLDING POSITION MARKING LOCATED ON TAXIWAY.
- SCALE: 1" = 30' FEET

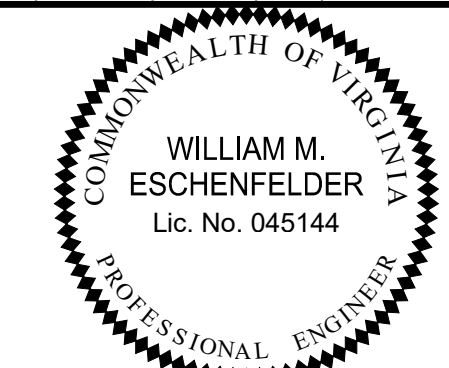


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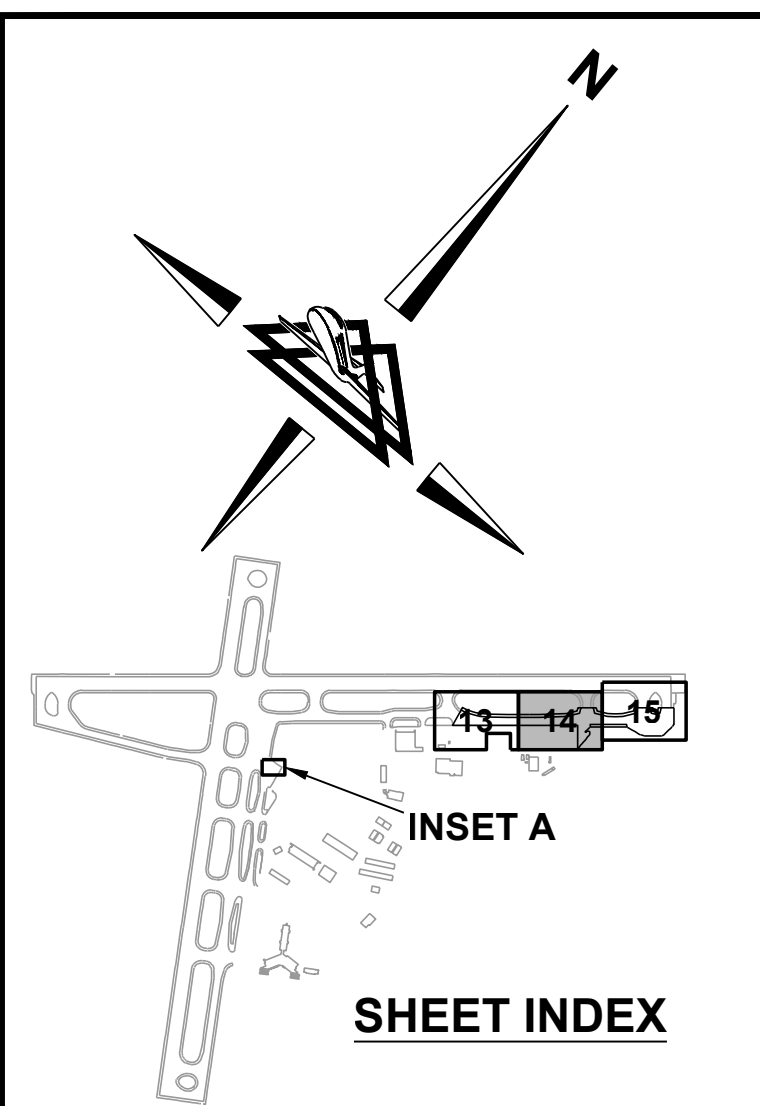
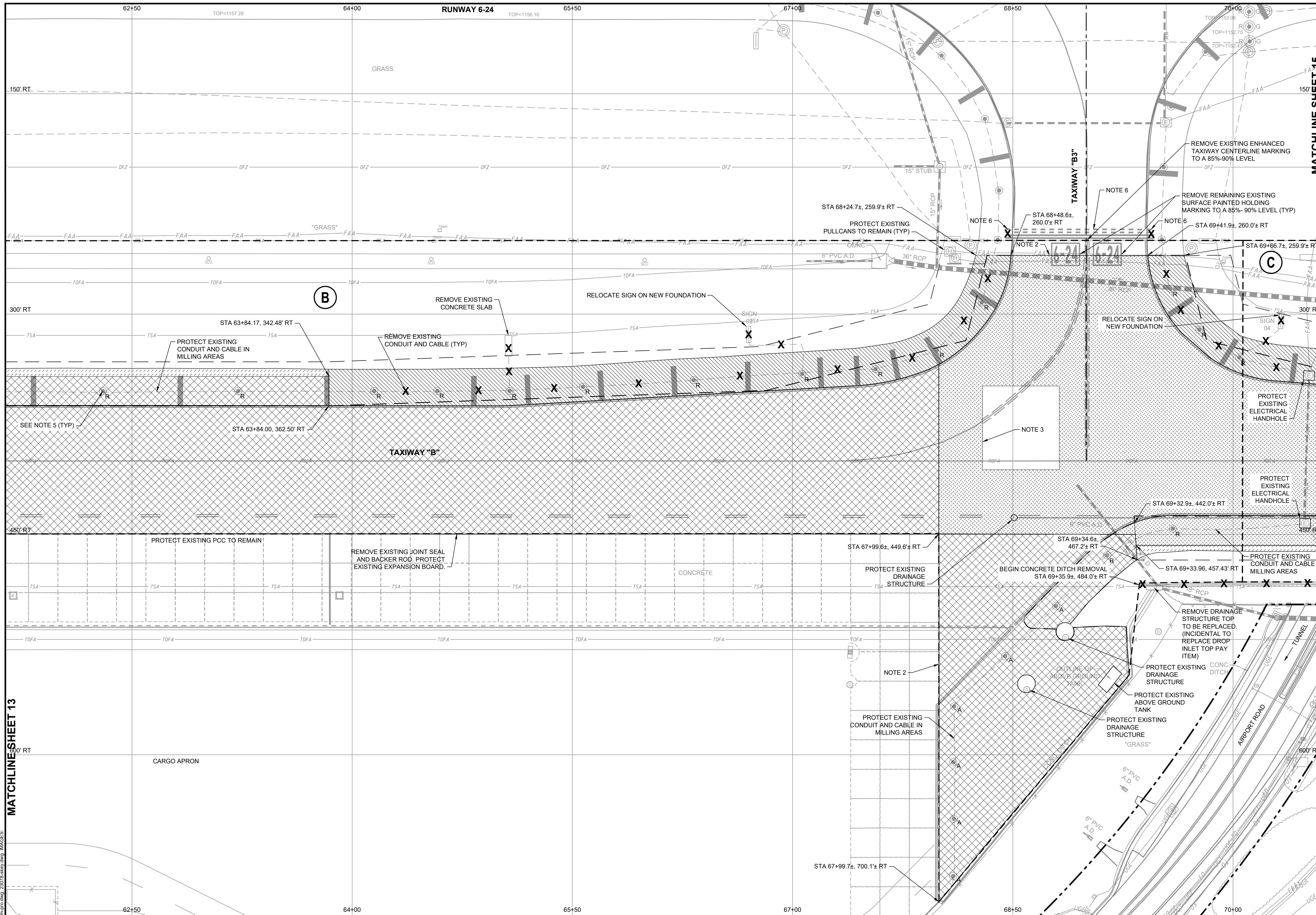
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REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4
DEMOLITION LAYOUT
ROANOKE-BLACKSBURG REGIONAL AIRPORT

AIP NO. 3-51-0045-071-2024
DRAWN BY: PJW
DESIGNED BY: WME
SCALE: 1" = 30'
DATE: MARCH 2025
JOB NO. 23078
SHEET 13 OF 60

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SHEET INDEX

LEGEND

- (X) WORK AREA LABEL
- WORK AREA LIMITS
- EXISTING DROP INLET
- EXISTING FLARED END SECTION
- EXISTING STORM MANHOLE
- EXISTING AIRFIELD GUIDANCE SIGN
- ⊗ EXISTING AIRFIELD GUIDANCE SIGN CONCRETE FOUNDATION TO BE REMOVED
- EXISTING RUNWAY LIGHT
- EXISTING RUNWAY THRESHOLD LIGHT
- EXISTING TAXIWAY LIGHT
- EXISTING L-861T BASE MOUNTED MITL TO BE ADJUSTED TO GRADE
- EXISTING L-861T BASE MOUNTED MITL TO BE RELOCATED (SEE NOTE 4)
- EXISTING STORM DRAIN
- PROPOSED DEVELOPMENT
- X EXISTING FENCE
- EXISTING OBSTACLE FREE ZONE
- EXISTING AIRPORT PROPERTY LINE
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- EXISTING RUNWAY SAFETY AREA
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- EXISTING TAXIWAY SAFETY AREA
- EXISTING SHOULDER TO BE REMOVED (FULL DEPTH)
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- EXISTING SHOULDER TO BE MILLED (4" DEPTH)
- EXISTING PAVEMENT TO BE MILLED (VARIABLE DEPTH)

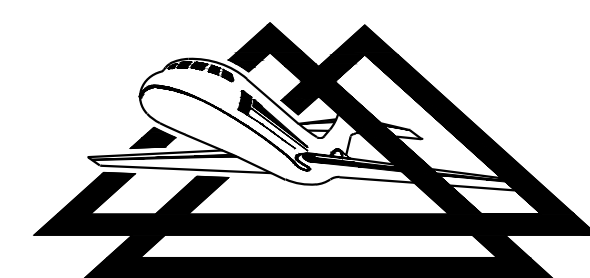
- NOTES**
- ALL STATIONS AND OFFSETS ARE GIVEN WITH RESPECT TO BASELINE "RW1" UNLESS OTHERWISE SPECIFIED.
 - SAWCUT NEAT VERTICAL FACE.
 - MILLING LIMITS SHOWN INDICATE THE MAXIMUM PAY LIMITS. SHOULD THE CONTRACTOR ELECT TO INCREASE MILLING LIMIT, COST OF ADDITIONAL MILLING AND PAVING SHALL BE AT THEIR OWN EXPENSE.
 - BASE MOUNTED MITL SHALL BE RELOCATED IN NEW CAN, EXISTING BASE CANS SHALL BE REMOVED.
 - EXISTING BASE CANS IN AREAS TO BE MILLED SHALL BE REMOVED IN ACCORDANCE WITH DETAIL "L-867 LIGHT BASE REMOVAL".
 - REMOVE PORTION OF THE EXISTING HOLDING POSITION MARKING LOCATED ON SHOULDER TO A 95% TO 100% LEVEL. PROTECT EXISTING HOLDING POSITION MARKING LOCATED ON TAXIWAY.
- 30 0 30 60
SCALE: 1"=30' FEET

MATCHLINE SHEET 13

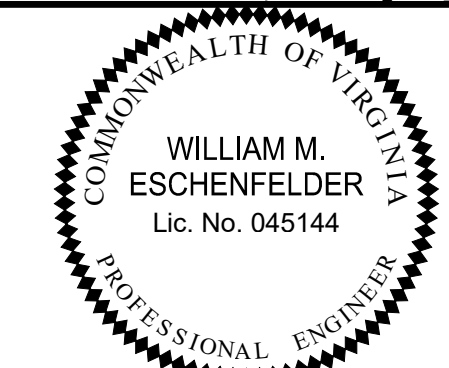
MATCHLINE SHEET 15

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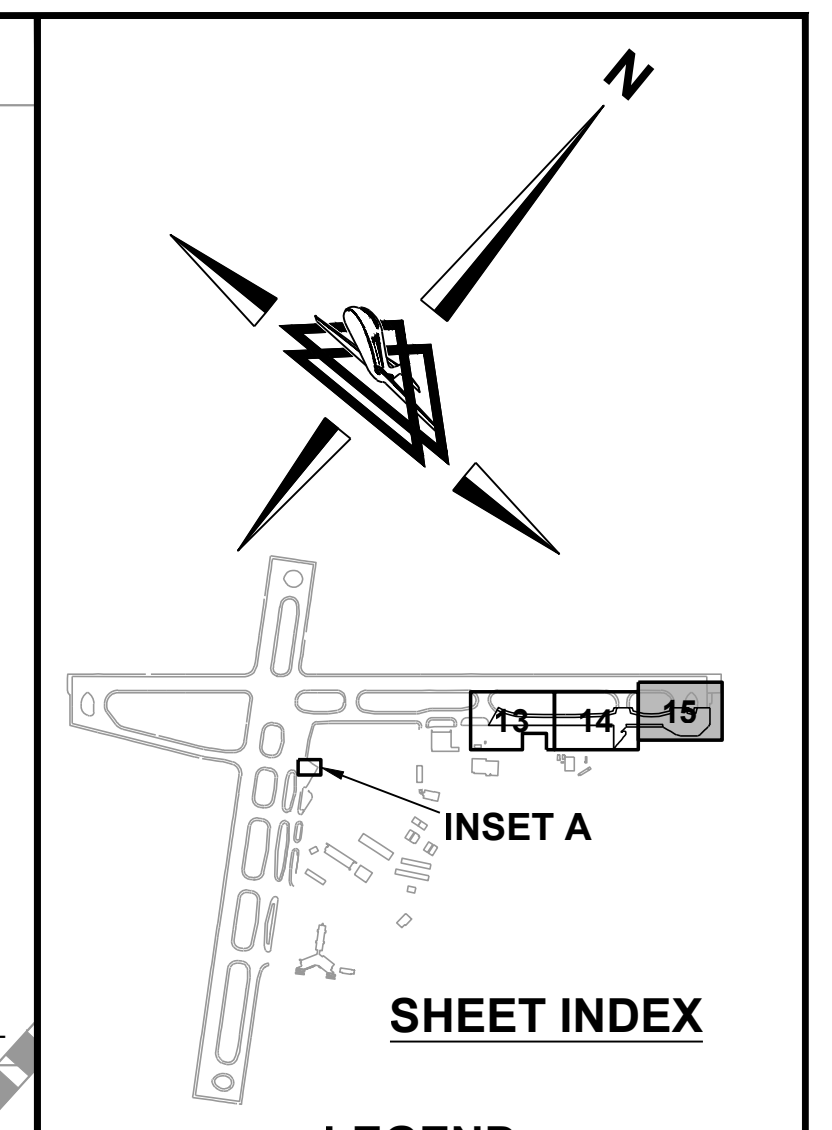
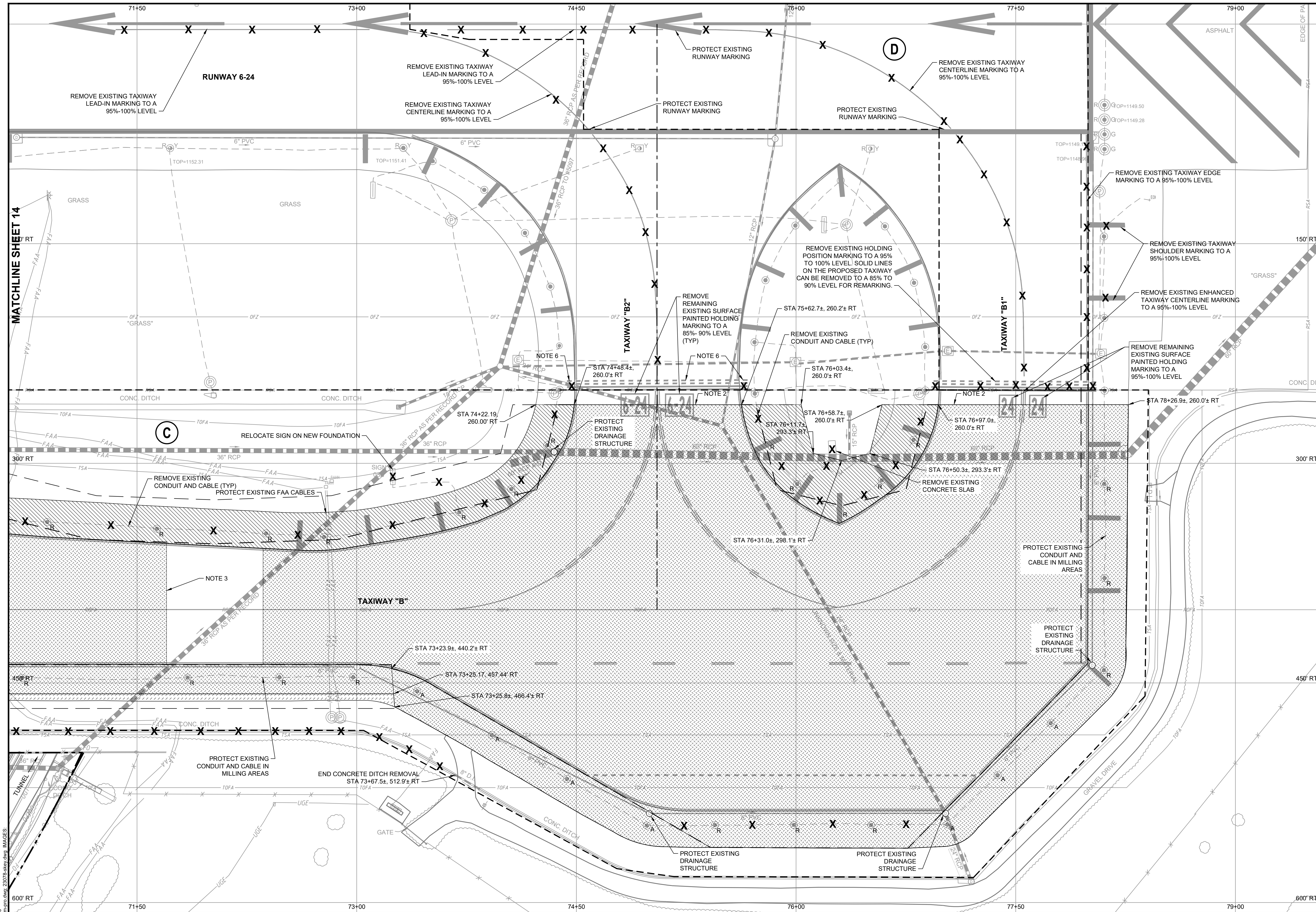


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| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| DEMOLITION LAYOUT | | DRAWN BY: PJW | SHEET 14 |
| | | DESIGNED BY: WME | OF 60 |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | | SCALE: 1" = 30' | DATE: MARCH 2025 |

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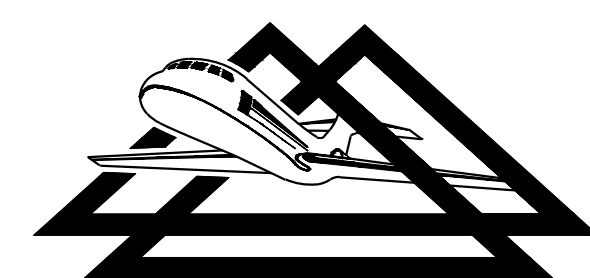


- LEGEND**
- (X) WORK AREA LABEL
 - - - - WORK AREA LIMITS
 - EXISTING DROP INLET
 - EXISTING FLARED END SECTION
 - EXISTING STORM MANHOLE
 - EXISTING AIRFIELD GUIDANCE SIGN
 - ⊗ EXISTING AIRFIELD GUIDANCE SIGN CONCRETE FOUNDATION TO BE REMOVED
 - EXISTING RUNWAY LIGHT
 - EXISTING RUNWAY THRESHOLD LIGHT
 - EXISTING TAXIWAY LIGHT
 - EXISTING L-861T BASE MOUNTED MITL TO BE ADJUSTED TO GRADE
 - EXISTING L-861T BASE MOUNTED MITL TO BE RELOCATED (SEE NOTE 4)
 - EXISTING STORM DRAIN
 - PROPOSED DEVELOPMENT
 - X EXISTING FENCE
 - OFZ EXISTING OBSTACLE FREE ZONE
 - EXISTING AIRPORT PROPERTY LINE
 - ROFA EXISTING RUNWAY OBJECT FREE AREA
 - RSA EXISTING RUNWAY SAFETY AREA
 - TOFA EXISTING TAXIWAY OBJECT FREE AREA
 - TSA EXISTING TAXIWAY SAFETY AREA
 - ▨ EXISTING SHOULDER TO BE REMOVED (FULL DEPTH)
 - ▨ EXISTING PAVEMENT TO BE MILLED (3" DEPTH)
 - ▨ EXISTING SHOULDER TO BE MILLED (4" DEPTH)
 - ▨ EXISTING PAVEMENT TO BE MILLED (VARIABLE DEPTH)

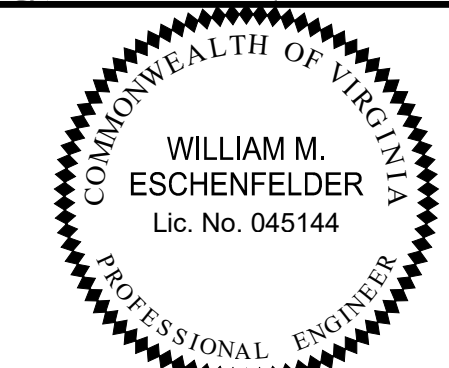
- NOTES**
1. ALL STATIONS AND OFFSETS ARE GIVEN WITH RESPECT TO BASELINE "RW1" UNLESS OTHERWISE SPECIFIED.
 2. SAWCUT NEAT VERTICAL FACE.
 3. MILLING LIMITS SHOWN INDICATE THE MAXIMUM PAY LIMITS. SHOULD THE CONTRACTOR ELECT TO INCREASE MILLING LIMIT, COST OF ADDITIONAL MILLING AND PAVING SHALL BE AT THEIR OWN EXPENSE.
 4. BASE MOUNTED MITL SHALL BE RELOCATED IN NEW CAN, EXISTING BASE CANS SHALL BE REMOVED.
 5. EXISTING BASE CANS IN AREAS TO BE MILLED SHALL BE REMOVED IN ACCORDANCE WITH DETAIL "L-867 LIGHT BASE REMOVAL".
 6. REMOVE PORTION OF THE EXISTING HOLDING POSITION MARKING LOCATED ON SHOULDER TO A 95% TO 100% LEVEL. PROTECT EXISTING HOLDING POSITION MARKING LOCATED ON TAXIWAY.
- 30 0 30 60
SCALE: 1"=30'
FEET

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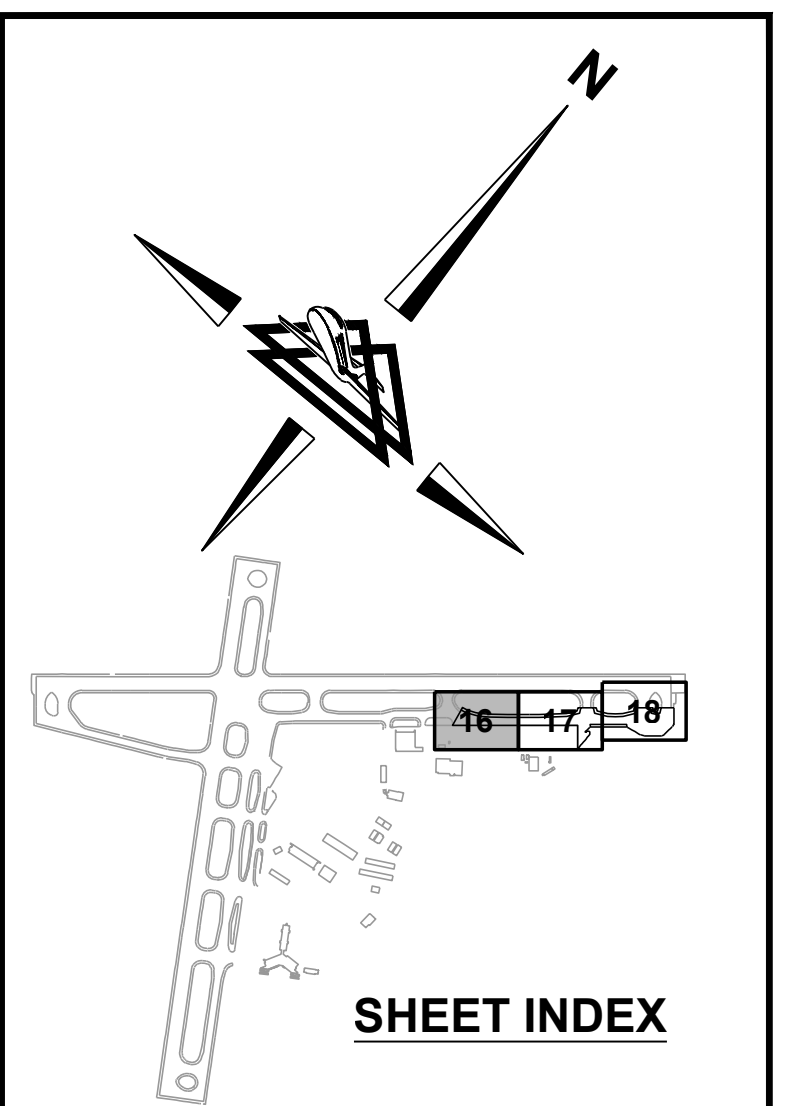
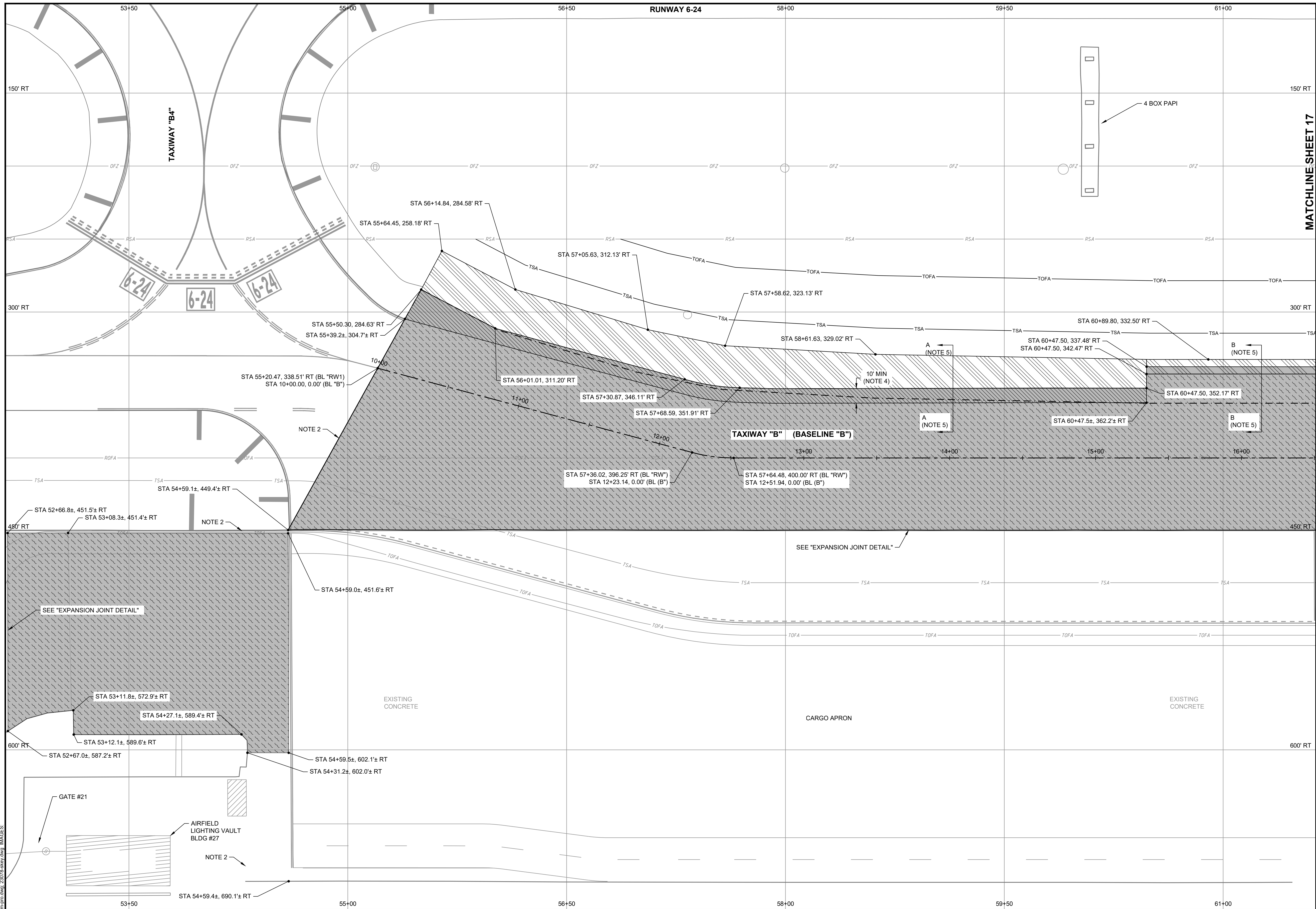
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| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| DEMOLITION LAYOUT | | DRAWN BY: PJW | SHEET 15 |
| | | DESIGNED BY: WME | OF 60 |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | | SCALE: 1" = 30' | DATE: MARCH 2025 |

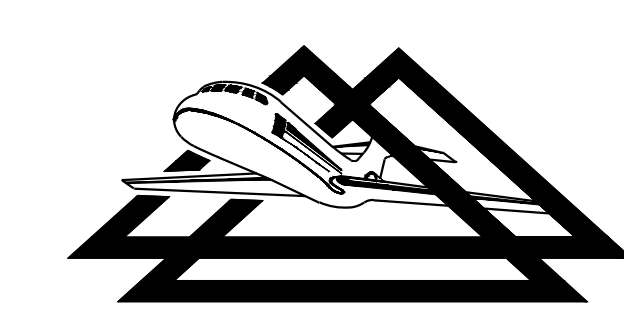


- ### LEGEND
- EXISTING WIND CONE
 - PROPOSED EDGE OF TAXIWAY
 - EXISTING OBSTACLE FREE ZONE
 - EXISTING AIRPORT PROPERTY LINE
 - EXISTING RUNWAY OBJECT FREE AREA
 - EXISTING RUNWAY SAFETY AREA
 - EXISTING TAXIWAY OBJECT FREE AREA
 - EXISTING TAXIWAY SAFETY AREA
 - PROPOSED TAXIWAY OBJECT FREE AREA
 - PROPOSED TAXIWAY SAFETY AREA
 - PROPOSED 3" OVERLAY
 - PROPOSED 4" OVERLAY
 - PROPOSED MINIMUM 3" OVERLAY (VARIABLE DEPTH)
 - PROPOSED FULL DEPTH TAXIWAY PAVEMENT
 - PROPOSED FULL DEPTH SHOULDER PAVEMENT
 - PROPOSED PAVED DITCH

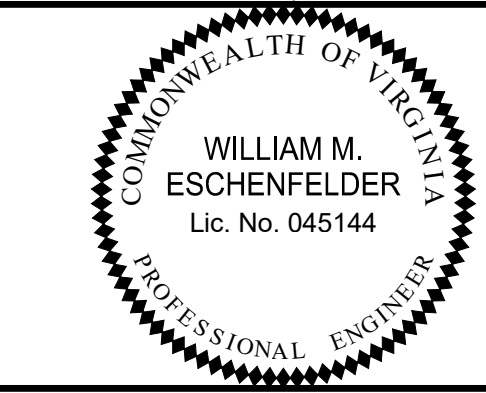
- ### NOTES
1. ALL STATIONS AND OFFSETS ARE GIVEN WITH RESPECT TO BASELINE "RW1" UNLESS OTHERWISE SPECIFIED.
 2. SAWCUT NEAT VERTICAL FACE. MATCH EXISTING PAVEMENT ELEVATION. SEE "PAVEMENT TIE-IN DETAIL".
 3. INSTALL P-407 ASPHALT OVERLAY FABRIC ALONG CENTERLINE OF TAXIWAY AT 45-FOOT WIDTH, STA 25+00 TO STA 32+50.
 4. IF CONTRACTOR ELECTS TO EXPAND FULL DEPTH TAXIWAY PAVEMENT WIDER THAN 10', IT SHALL BE AT THEIR OWN EXPENSE.
 5. REFER TO SHEET 30 - PAVEMENT TIE-IN & TRANSITION DETAILS FOR DETAIL OF SECTION VIEW.
 6. SAW CUT NEAT VERTICAL FACE. MATCH EXISTING PAVEMENT ELEVATION. SEE "OVERLAY TIE-IN DETAIL".
 7. SEE "OVERLAY TRANSITION DETAIL".
 8. REFER TO SHEET 32 - DRAINAGE DETAILS FOR CONCRETE V-DITCH DETAIL.
- SCALE: 1"=30'
FEET

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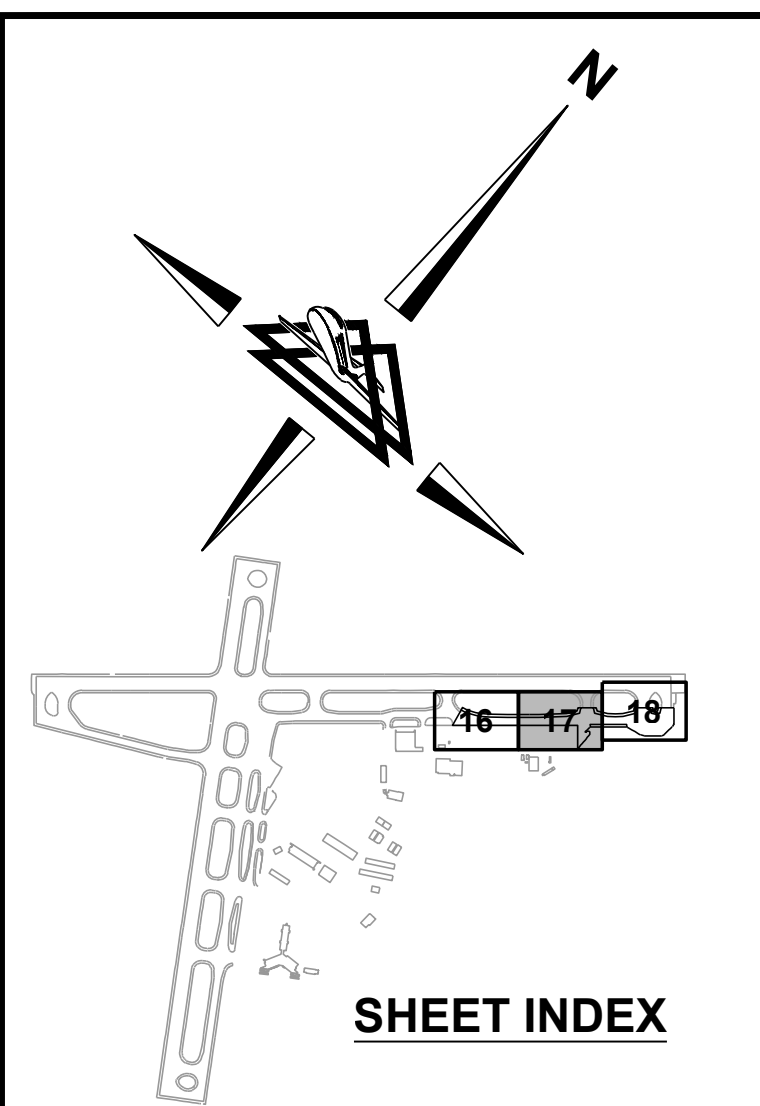
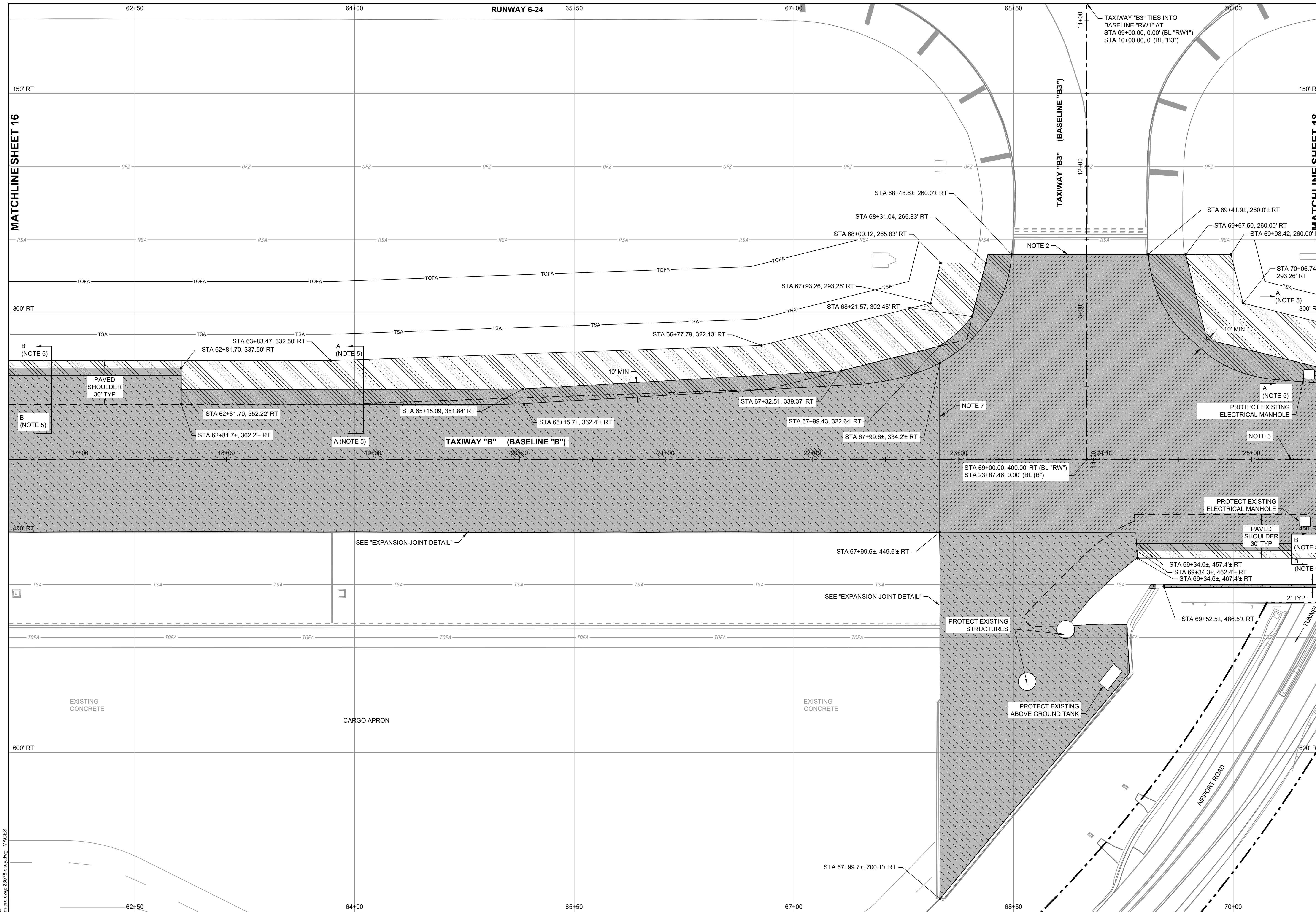


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| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| GEOMETRIC & PAVING LAYOUT | | DRAWN BY: PJW | SHEET 16 |
| | | DESIGNED BY: WME | |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | | SCALE: 1" = 30' | DATE: MARCH 2025 |

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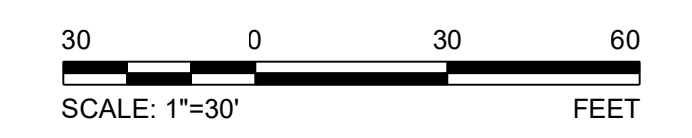
SHEET INDEX

LEGEND

- EXISTING WIND CONE
- PROPOSED EDGE OF TAXIWAY
- EXISTING OBSTACLE FREE ZONE
- EXISTING AIRPORT PROPERTY LINE
- EXISTING RUNWAY OBJECT FREE AREA
- EXISTING RUNWAY SAFETY AREA
- EXISTING TAXIWAY OBJECT FREE AREA
- EXISTING TAXIWAY SAFETY AREA
- PROPOSED TAXIWAY OBJECT FREE AREA
- PROPOSED TAXIWAY SAFETY AREA
- PROPOSED 3' OVERLAY
- PROPOSED 4' OVERLAY
- PROPOSED MINIMUM 3' OVERLAY (VARIABLE DEPTH)
- PROPOSED FULL DEPTH TAXIWAY PAVEMENT
- PROPOSED FULL DEPTH SHOULDER PAVEMENT
- PROPOSED PAVED DITCH

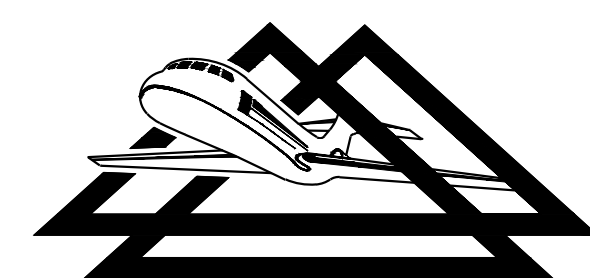
NOTES

1. ALL STATIONS AND OFFSETS ARE GIVEN WITH RESPECT TO BASELINE "RW1" UNLESS OTHERWISE SPECIFIED.
2. SAWCUT NEAT VERTICAL FACE. MATCH EXISTING PAVEMENT ELEVATION. SEE "PAVEMENT TIE-IN DETAIL".
3. INSTALL P-407 ASPHALT OVERLAY FABRIC ALONG CENTERLINE OF TAXIWAY AT 45-FOOT WIDTH. STA 25+00 TO STA 32+50.
4. IF CONTRACTOR ELECTS TO EXPAND FULL DEPTH TAXIWAY PAVEMENT WIDER THAN 10', IT SHALL BE AT THEIR OWN EXPENSE.
5. REFER TO SHEET 30 - PAVEMENT TIE-IN & TRANSITION DETAILS FOR DETAIL OF SECTION VIEW.
6. SAW CUT NEAT VERTICAL FACE. MATCH EXISTING PAVEMENT ELEVATION. SEE "OVERLAY TIE-IN DETAIL".
7. SEE "OVERLAY TRANSITION DETAIL".
8. REFER TO SHEET 32 - DRAINAGE DETAILS FOR CONCRETE V-DITCH DETAIL.

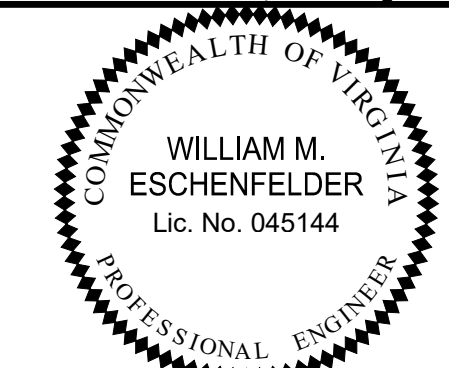


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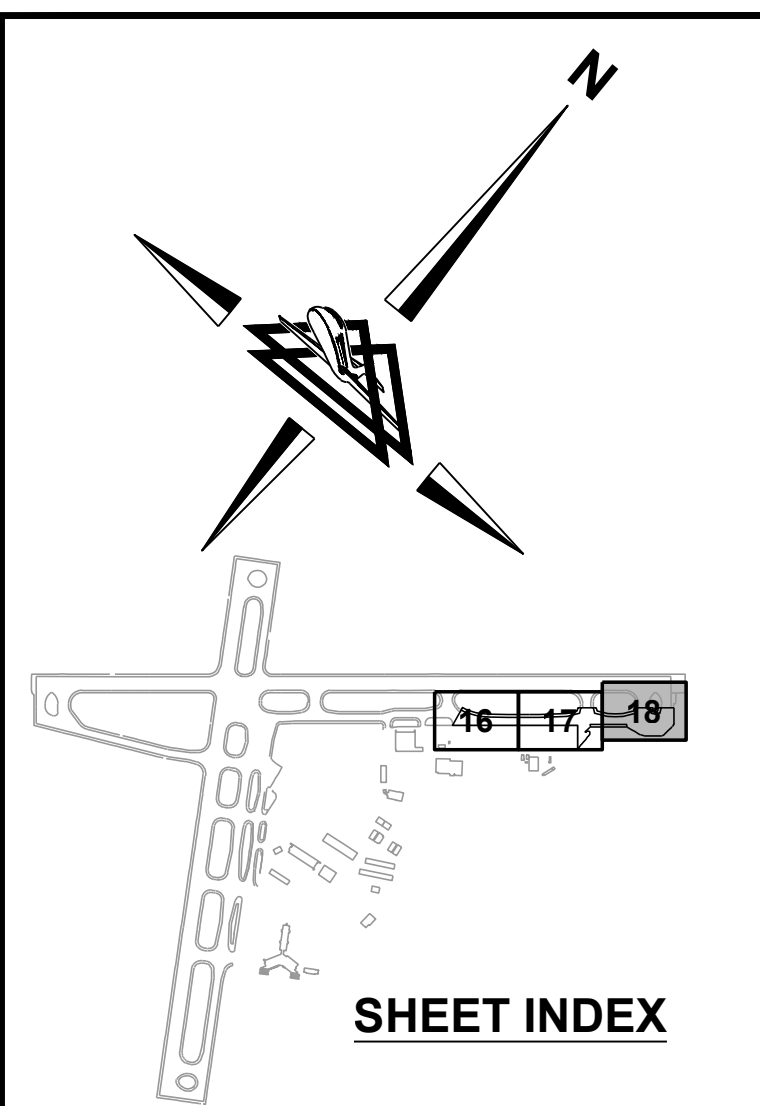
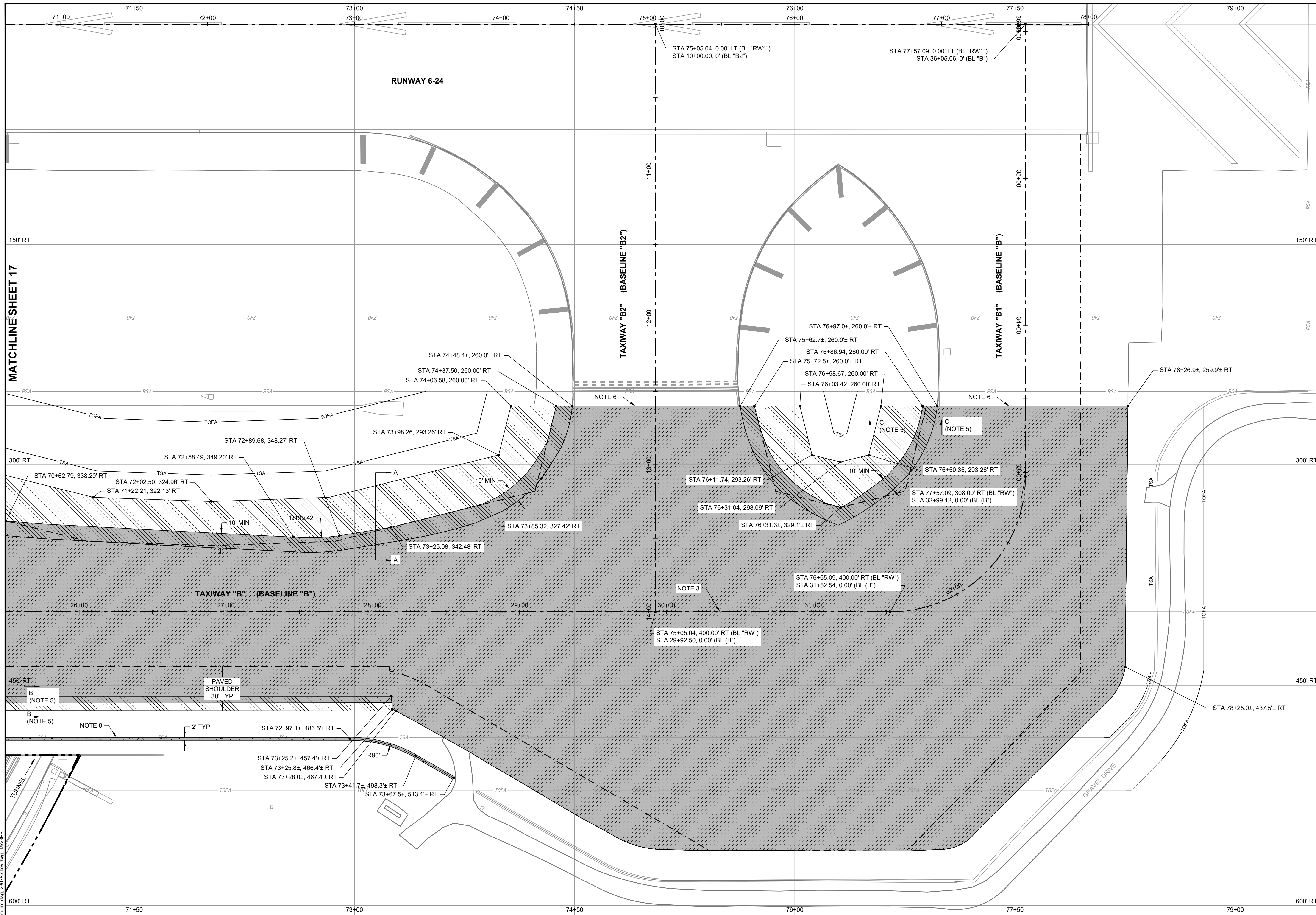


**DELTA AIRPORT
 CONSULTANTS, INC.**



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|--|--|-------------------------------|---------------------|
| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| GEOMETRIC & PAVING LAYOUT | | DRAWN BY: PJW | SHEET 17 |
| | | DESIGNED BY: WME | OF 60 |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | | SCALE: 1" = 30' | DATE: MARCH 2025 |

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LEGEND

- EXISTING WIND CONE
- PROPOSED EDGE OF TAXIWAY
- EXISTING OBSTACLE FREE ZONE
- EXISTING AIRPORT PROPERTY LINE
- EXISTING RUNWAY OBJECT FREE AREA
- EXISTING RUNWAY SAFETY AREA
- EXISTING TAXIWAY OBJECT FREE AREA
- EXISTING TAXIWAY SAFETY AREA
- PROPOSED TAXIWAY OBJECT FREE AREA
- PROPOSED TAXIWAY SAFETY AREA
- PROPOSED 3' OVERLAY
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- PROPOSED MINIMUM 3' OVERLAY (VARIABLE DEPTH)
- PROPOSED FULL DEPTH TAXIWAY PAVEMENT
- PROPOSED FULL DEPTH SHOULDER PAVEMENT
- PROPOSED PAVED DITCH

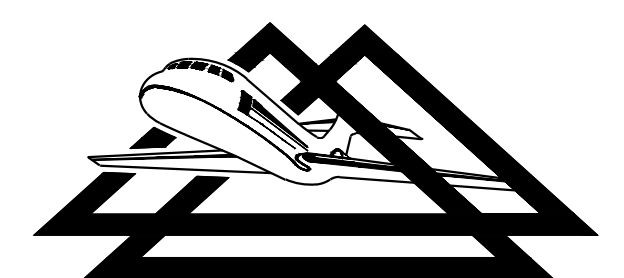
NOTES

1. ALL STATIONS AND OFFSETS ARE GIVEN WITH RESPECT TO BASELINE "RW1" UNLESS OTHERWISE SPECIFIED.
2. SAWCUT NEAT VERTICAL FACE. MATCH EXISTING PAVEMENT ELEVATION. SEE "PAVEMENT TIE-IN DETAIL".
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4. IF CONTRACTOR ELECTS TO EXPAND FULL DEPTH TAXIWAY PAVEMENT WIDER THAN 10', IT SHALL BE AT THEIR OWN EXPENSE.
5. REFER TO SHEET 30 - PAVEMENT TIE-IN & TRANSITION DETAILS FOR DETAIL OF SECTION VIEW.
6. SAW CUT NEAT VERTICAL FACE. MATCH EXISTING PAVEMENT ELEVATION. SEE "OVERLAY TIE-IN DETAIL".
7. SEE "OVERLAY TRANSITION DETAIL".
8. REFER TO SHEET 32 - DRAINAGE DETAILS FOR CONCRETE V-DITCH DETAIL.

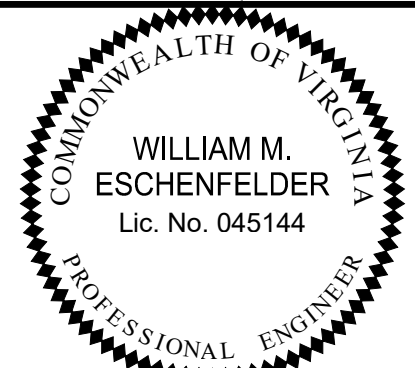


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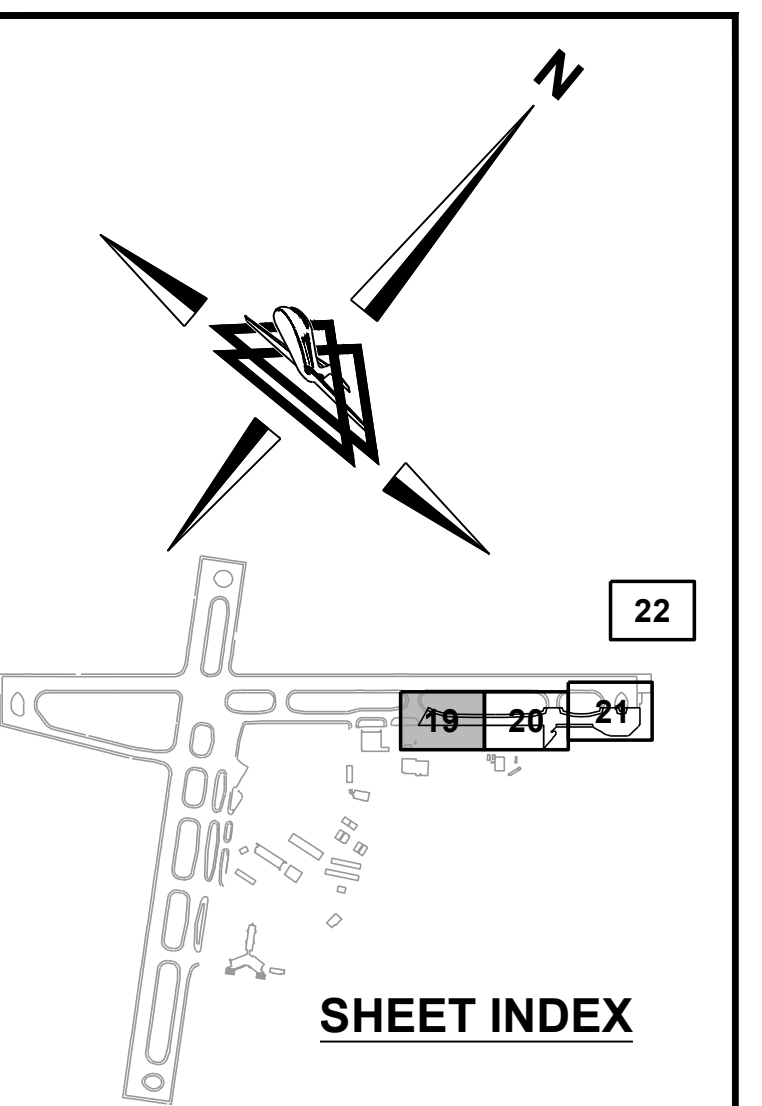
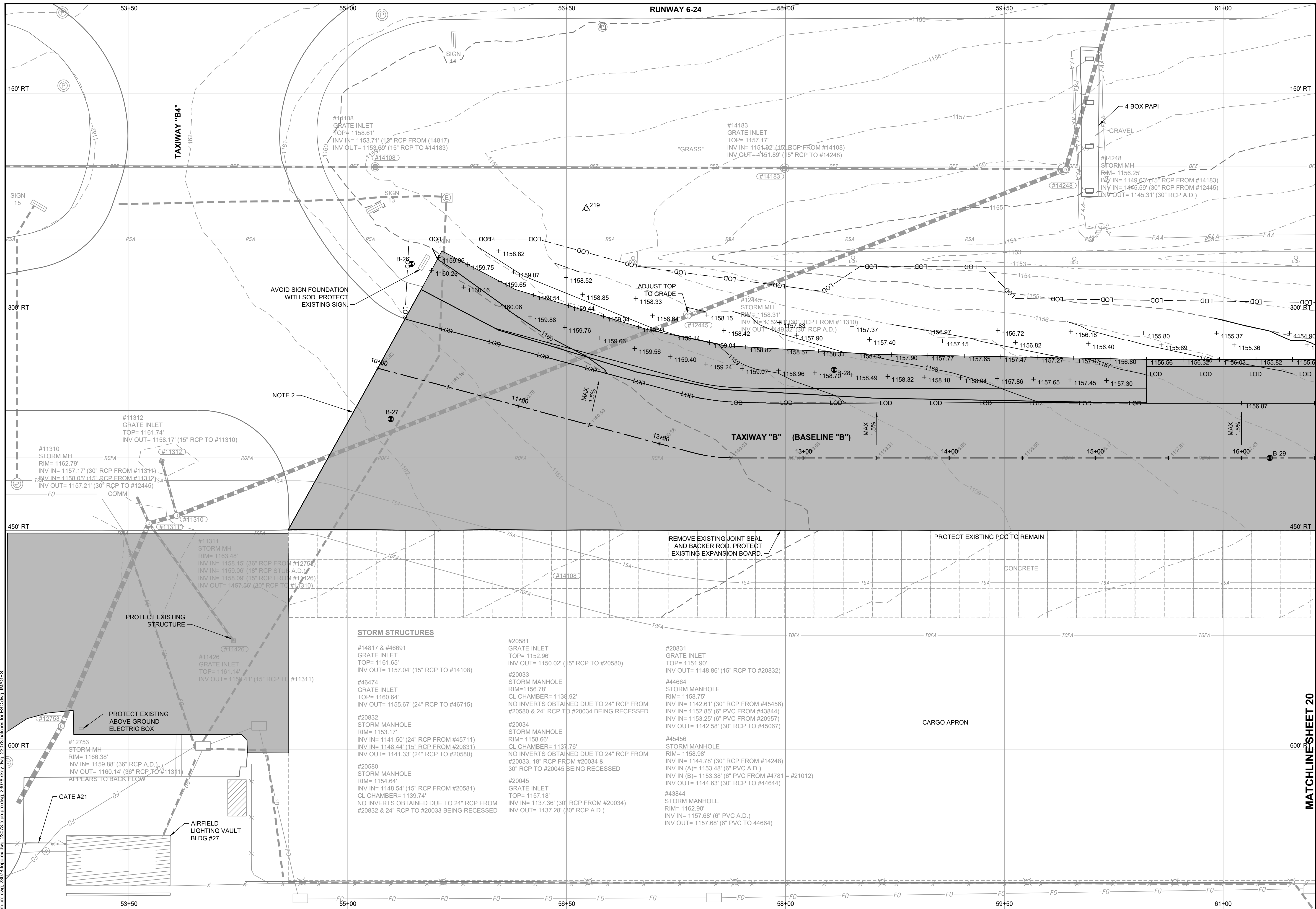


**DELTA AIRPORT
 CONSULTANTS, INC.**



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|--|--|-------------------------------|---------------------|
| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| GEOMETRIC & PAVING LAYOUT | | DRAWN BY: PJW | SHEET 18 |
| | | DESIGNED BY: WME | OF 60 |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | | SCALE: 1" = 30' | DATE: MARCH 2025 |

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- LEGEND**
- SURVEY CONTROL POINT LOCATION
 - BORING LOCATION (APPROX)
 - EXISTING SPOT ELEVATION
 - PROPOSED SPOT ELEVATION
 - EXISTING DROP INLET
 - PROPOSED BASIN STRUCTURE
 - EXISTING FLARED END SECTION
 - EXISTING ENDWALL/HEADWALL/WINGWALL
 - EXISTING STORM MANHOLE
 - EXISTING UNDERDRAIN/CLEANOUT
 - EXISTING AIRFIELD GUIDANCE SIGN
 - EXISTING RUNWAY LIGHT
 - EXISTING RUNWAY THRESHOLD LIGHT
 - EXISTING TAXIWAY LIGHT
 - EXISTING WIND CONE
 - EXISTING ROADWAY SIGN
 - EXISTING POLE (LIGHTED)
 - EXISTING POLE (NON-LIGHTED)
 - EXISTING TREE
 - EXISTING STORM DRAIN
 - EXISTING EDGE DRAIN/UNDERDRAIN
 - EXISTING CONCRETE JOINT
 - EXISTING DITCH
 - EXISTING FAA-CONTROLLED CABLE
 - EXISTING FENCE
 - EXISTING FIBER OPTIC LINE
 - EXISTING GUARDRAIL
 - LIMITS OF DISTURBANCE
 - EXISTING OBSTACLE FREE ZONE
 - EXISTING AIRPORT PROPERTY LINE
 - EXISTING RUNWAY OBJECT FREE AREA
 - EXISTING RUNWAY SAFETY AREA
 - EXISTING TREE LINE
 - PROPOSED PAVEMENT (NOTE 4)
 - PROPOSED CONCRETE DITCH

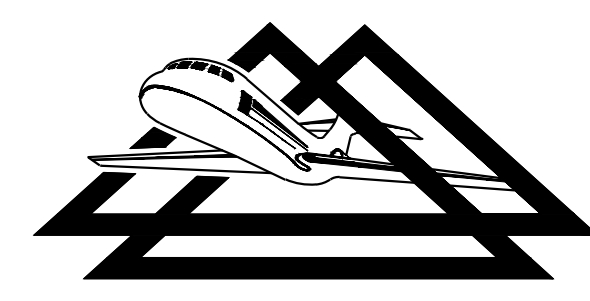
- NOTE**
1. ALL STATIONS AND OFFSETS ARE GIVEN WITH RESPECT TO BASELINE "RW 1" UNLESS OTHERWISE SPECIFIED.
 2. SAWCUT NEAT VERTICAL FACE. MATCH EXISTING PAVEMENT ELEVATION. SEE "PAVEMENT TIE-IN DETAIL".
 3. SAW CUT NEAT VERTICAL FACE. MATCH EXISTING PAVEMENT ELEVATION. SEE "OVERLAY TIE-IN DETAIL".
 4. SEE GEOMETRIC & PAVING LAYOUT SHEET FOR PAVEMENT SECTION LAYOUT.
- SCALE: 1"=30'
FEET

STORM STRUCTURES

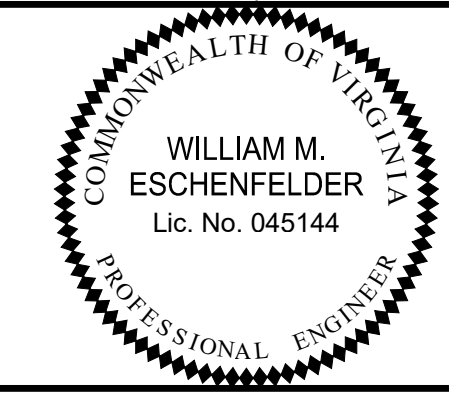
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|---|--|--|
| #14817 & #46691 GRATE INLET TOP= 1161.65' INV OUT= 1157.04' (15' RCP TO #14108) | #20581 GRATE INLET TOP= 1152.96' INV OUT= 1150.02' (15' RCP TO #20580) | #20831 GRATE INLET TOP= 1151.90' INV OUT= 1148.86' (15' RCP TO #20832) |
| #46474 GRATE INLET TOP= 1160.64' INV OUT= 1155.67' (24' RCP TO #46715) | #20033 STORM MANHOLE RIM= 1138.92' CL CHAMBER= 1138.92' NO INVERTS OBTAINED DUE TO 24" RCP FROM #20580 & 24" RCP TO #20034 BEING RECESSED | #44664 STORM MANHOLE RIM= 1158.75' INV IN= 1142.61' (30" RCP FROM #45456) INV IN= 1152.85' (6" PVC FROM #43844) INV IN= 1153.25' (6" PVC FROM #20957) INV OUT= 1142.58' (30" RCP TO #45067) |
| #20832 STORM MANHOLE RIM= 1153.17' INV IN= 1141.50' (24" RCP FROM #45711) INV IN= 1148.44' (15" RCP FROM #20831) INV OUT= 1141.33' (24" RCP TO #20580) | #20034 STORM MANHOLE RIM= 1137.76' CL CHAMBER= 1137.76' NO INVERTS OBTAINED DUE TO 24" RCP FROM #20033, 18" RCP FROM #20034 & 30" RCP TO #20045 BEING RECESSED | #45456 STORM MANHOLE RIM= 1158.98' INV IN= 1144.78' (30" RCP FROM #14248) INV IN (A)= 1153.48' (6" PVC A.D.) INV IN (B)= 1153.38' (6" PVC FROM #4781 = #21012) INV OUT= 1144.63' (30" RCP TO #44644) |
| #20580 STORM MANHOLE RIM= 1154.64' INV IN= 1148.54' (15" RCP FROM #20581) CL CHAMBER= 1139.74' NO INVERTS OBTAINED DUE TO 24" RCP FROM #20832 & 24" RCP TO #20033 BEING RECESSED | #20045 GRATE INLET TOP= 1157.18' INV IN= 1137.36' (30" RCP FROM #20034) INV OUT= 1137.28' (30" RCP A.D.) | #43844 STORM MANHOLE RIM= 1162.90' INV IN= 1157.68' (6" PVC A.D.) INV OUT= 1157.69' (6" PVC TO 44664) |

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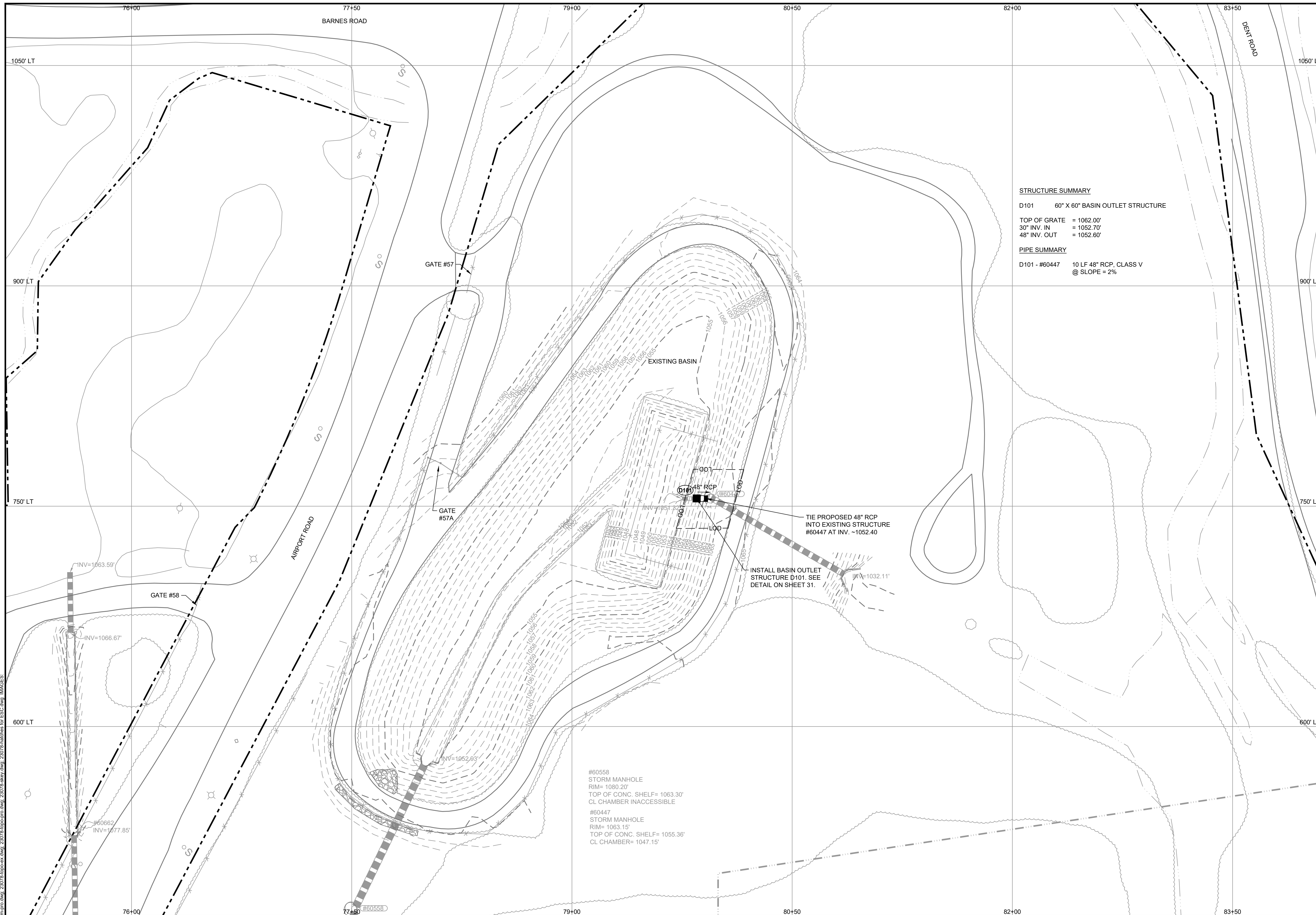
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Midlothian, Virginia 23113
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**DELTA AIRPORT
CONSULTANTS, INC.**

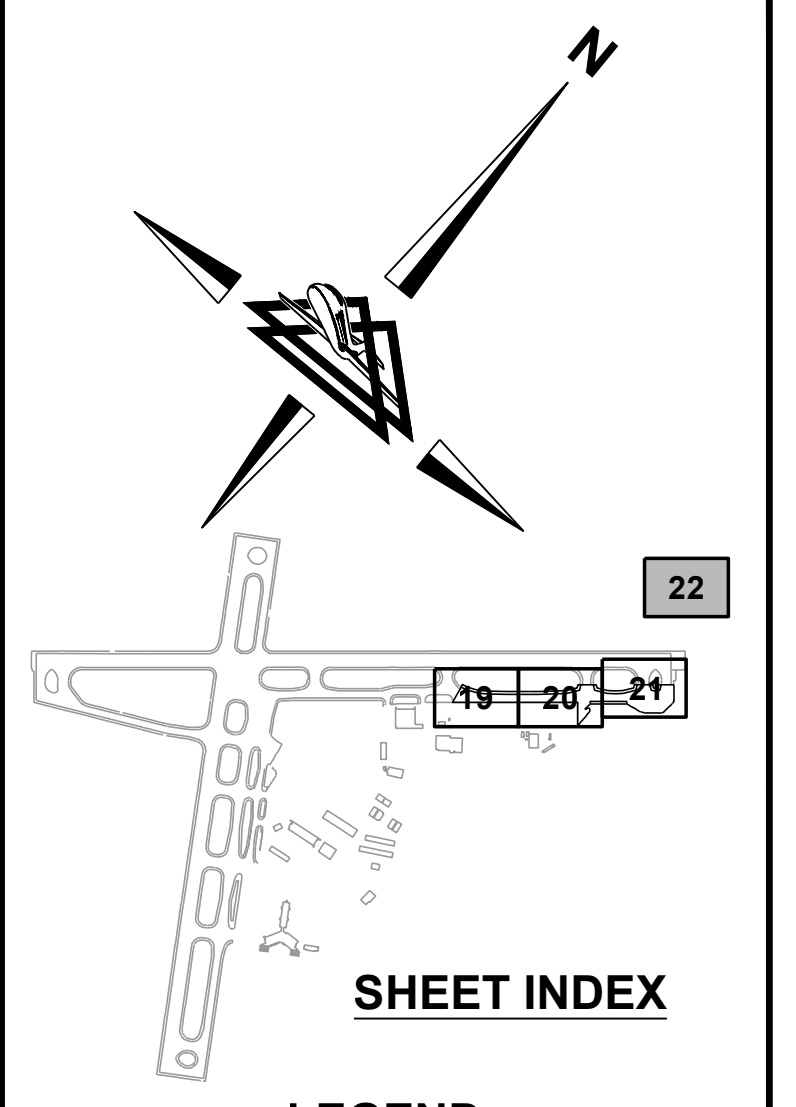


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| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| GRADING & DRAINAGE | | DRAWN BY: PJW | SHEET 19 |
| | | DESIGNED BY: WME | OF 60 |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | | SCALE: 1" = 30' | DATE: MARCH 2025 |



STRUCTURE SUMMARY
 D101 60" X 60" BASIN OUTLET STRUCTURE
 TOP OF GRATE = 1062.00'
 30" INV. IN = 1052.70'
 48" INV. OUT = 1052.60'
PIPE SUMMARY
 D101 - #60447 10 LF 48" RCP, CLASS V @ SLOPE = 2%

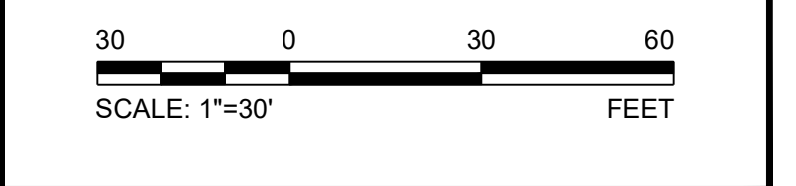
#60558
 STORM MANHOLE
 RIM= 1063.20'
 TOP OF CONC. SHELF= 1063.30'
 CL CHAMBER INACCESSIBLE
 #60447
 STORM MANHOLE
 RIM= 1063.15'
 TOP OF CONC. SHELF= 1055.36'
 CL CHAMBER= 1047.15'



LEGEND

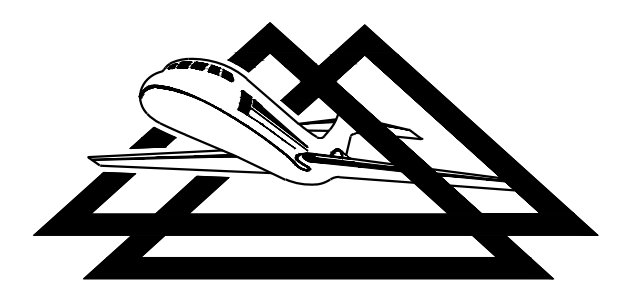
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| | SURVEY CONTROL POINT LOCATION |
| | BORING LOCATION (APPROX) |
| | EXISTING SPOT ELEVATION |
| | PROPOSED SPOT ELEVATION |
| | EXISTING DROP INLET |
| | PROPOSED BASIN STRUCTURE |
| | EXISTING FLARED END SECTION |
| | EXISTING ENDWALL/HEADWALL/WINGWALL |
| | EXISTING STORM MANHOLE |
| | EXISTING UNDERDRAIN CLEANOUT |
| | EXISTING AIRFIELD GUIDANCE SIGN |
| | EXISTING RUNWAY LIGHT |
| | EXISTING RUNWAY THRESHOLD LIGHT |
| | EXISTING TAXIWAY LIGHT |
| | EXISTING WIND CONE |
| | EXISTING ROADWAY SIGN |
| | EXISTING POLE (LIGHTED) |
| | EXISTING POLE (NON-LIGHTED) |
| | EXISTING TREE |
| | EXISTING STORM DRAIN |
| | EXISTING EDGE DRAIN/UNDERDRAIN |
| | EXISTING CONCRETE JOINT |
| | EXISTING DITCH |
| | EXISTING FAA-CONTROLLED CABLE |
| | EXISTING FENCE |
| | EXISTING FIBER OPTIC LINE |
| | EXISTING GUARDRAIL |
| | LIMITS OF DISTURBANCE |
| | EXISTING OBSTACLE FREE ZONE |
| | EXISTING AIRPORT PROPERTY LINE |
| | EXISTING RUNWAY OBJECT FREE AREA |
| | EXISTING RUNWAY SAFETY AREA |
| | EXISTING TREE LINE |
| | PROPOSED PAVEMENT (NOTE 4) |
| | PROPOSED CONCRETE DITCH |

- NOTE**
- ALL STATIONS AND OFFSETS ARE GIVEN WITH RESPECT TO BASELINE "RW1" UNLESS OTHERWISE SPECIFIED.
 - SAWCUT NEAT VERTICAL FACE. MATCH EXISTING PAVEMENT ELEVATION. SEE "PAVEMENT TIE-IN DETAIL".
 - SAW CUT NEAT VERTICAL FACE. MATCH EXISTING PAVEMENT ELEVATION. SEE "OVERLAY TIE-IN DETAIL".
 - SEE GEOMETRIC & PAVING LAYOUT SHEET FOR PAVEMENT SECTION LAYOUT.

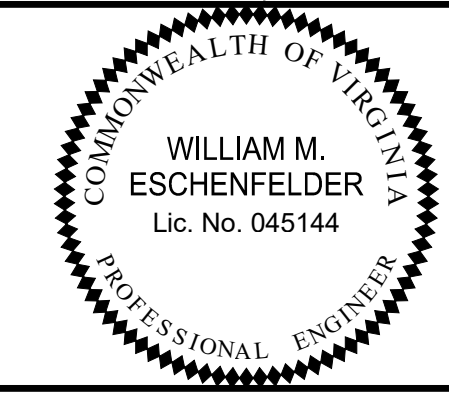


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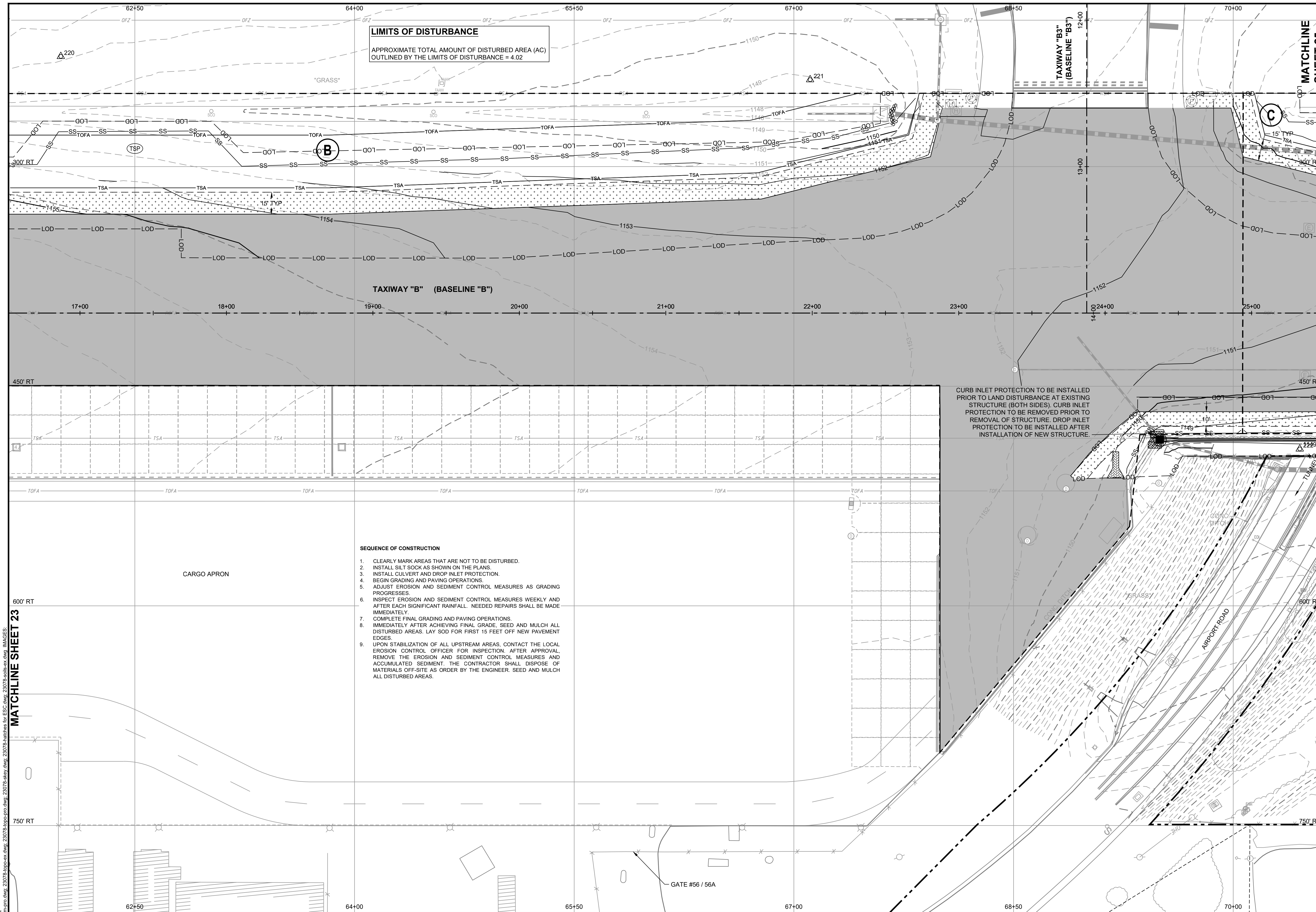


**DELTA AIRPORT
 CONSULTANTS, INC.**



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| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| GRADING & DRAINAGE | | DRAWN BY: PJW | SHEET 22 |
| | | DESIGNED BY: WME | OF 60 |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | | SCALE: 1" = 30' | DATE: MARCH 2025 |

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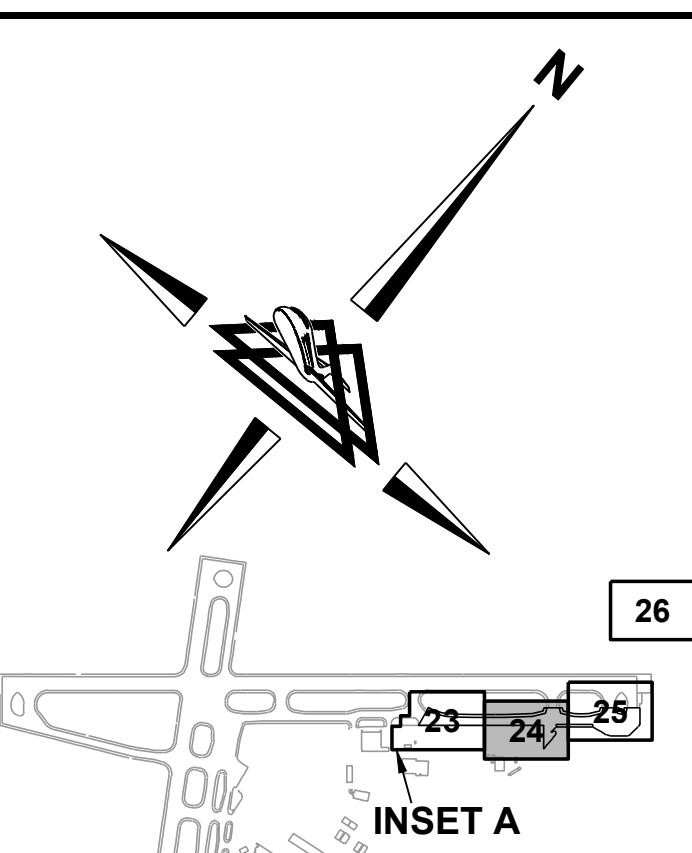


SEQUENCE OF CONSTRUCTION

- CLEARLY MARK AREAS THAT ARE NOT TO BE DISTURBED.
- INSTALL SILT SOCK AS SHOWN ON THE PLANS.
- INSTALL CULVERT AND DROP INLET PROTECTION.
- BEGIN GRADING AND PAVING OPERATIONS.
- ADJUST EROSION AND SEDIMENT CONTROL MEASURES AS GRADING PROGRESSES.
- INSPECT EROSION AND SEDIMENT CONTROL MEASURES WEEKLY AND AFTER EACH SIGNIFICANT RAINFALL. NEEDED REPAIRS SHALL BE MADE IMMEDIATELY.
- COMPLETE FINAL GRADING AND PAVING OPERATIONS.
- IMMEDIATELY AFTER ACHIEVING FINAL GRADE, SEED AND MULCH ALL DISTURBED AREAS. LAY SOD FOR FIRST 15 FEET OFF NEW PAVEMENT EDGES.
- UPON STABILIZATION OF ALL UPSTREAM AREAS, CONTACT THE LOCAL EROSION CONTROL OFFICER FOR INSPECTION. AFTER APPROVAL REMOVE THE EROSION AND SEDIMENT CONTROL MEASURES AND ACCUMULATED SEDIMENT. THE CONTRACTOR SHALL DISPOSE OF MATERIALS OFF-SITE AS ORDER BY THE ENGINEER. SEED AND MULCH ALL DISTURBED AREAS.

LIMITS OF DISTURBANCE

APPROXIMATE TOTAL AMOUNT OF DISTURBED AREA (AC) OUTLINED BY THE LIMITS OF DISTURBANCE = 4.02



SHEET INDEX

LEGEND

- CONSTRUCTION ENTRANCE
- WORK AREA LABEL
- WORK AREA LIMITS
- EXISTING DROP INLET
- EXISTING FLARED END SECTION
- EXISTING END WALL/HEADWALL/WINGWALL
- EXISTING STORM MANHOLE
- EXISTING UNDERDRAIN CLEANOUT
- EXISTING AIRFIELD GUIDANCE SIGN
- EXISTING RUNWAY LIGHT
- EXISTING RUNWAY THRESHOLD LIGHT
- EXISTING TAXIWAY LIGHT
- EXISTING WIND CONE
- EXISTING ROADWAY SIGN
- EXISTING POLE (LIGHTED)
- EXISTING POLE (NON-LIGHTED)
- PERMANENT SEEDING
- PROPOSED INLET PROTECTION
- PROPOSED CURB INLET PROTECTION
- PROPOSED CULVERT INLET PROTECTION
- TEMPORARY TOPSOIL STOCKPILE
- EXISTING STORM DRAIN
- EXISTING EDGE DRAIN/UNDERDRAIN
- EXISTING CONCRETE JOINT
- EXISTING DITCH
- EXISTING FAA-CONTROLLED CABLE
- EXISTING FENCE
- PROPOSED SILT FENCE
- PROPOSED SILT SOCK
- EXISTING FIBER OPTIC LINE
- EXISTING GUARDRAIL
- LOD- LIMITS OF DISTURBANCE
- OFZ- EXISTING OBSTACLE FREE ZONE
- EXISTING AIRPORT PROPERTY LINE
- ROFA- EXISTING RUNWAY OBJECT FREE AREA
- RSA- EXISTING RUNWAY SAFETY AREA
- TOFA- EXISTING TAXIWAY OBJECT FREE AREA
- TOFA- PROPOSED TAXIWAY OBJECT FREE AREA
- TSA- EXISTING TAXIWAY SAFETY AREA
- TSA- PROPOSED TAXIWAY SAFETY AREA
- EXISTING TREE LINE
- PROPOSED PAVEMENT (NOTE 2)
- PROPOSED SOD

NOTES

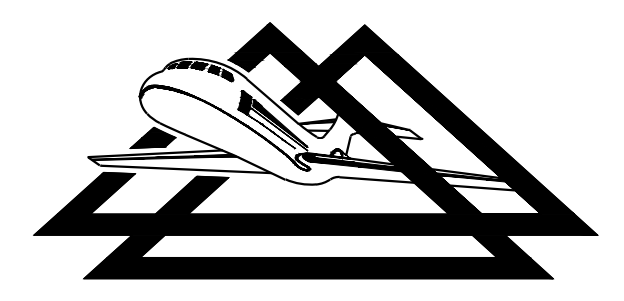
- ALL STATIONS AND OFFSETS ARE GIVEN WITH RESPECT TO BASELINE "RW1" UNLESS OTHERWISE SPECIFIED.
- SEE GEOMETRIC & PAVING LAYOUT SHEET FOR PAVEMENT SECTION LAYOUT.
- ALL SLOPES 4:1 AND STEEPER SHALL HAVE SOIL STABILIZATION MATTING (STANDARD VDOT EC-2, TYPE 2) PLACED ON THE SLOPE AS DIRECTED BY THE ENGINEER.



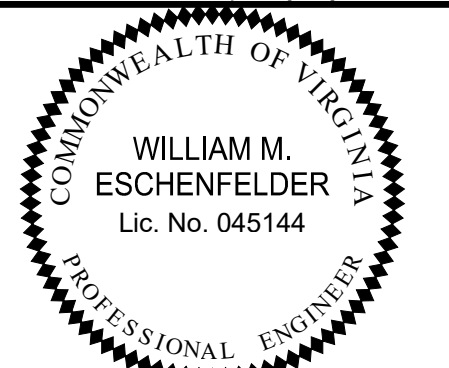
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MATCHLINE SHEET 25

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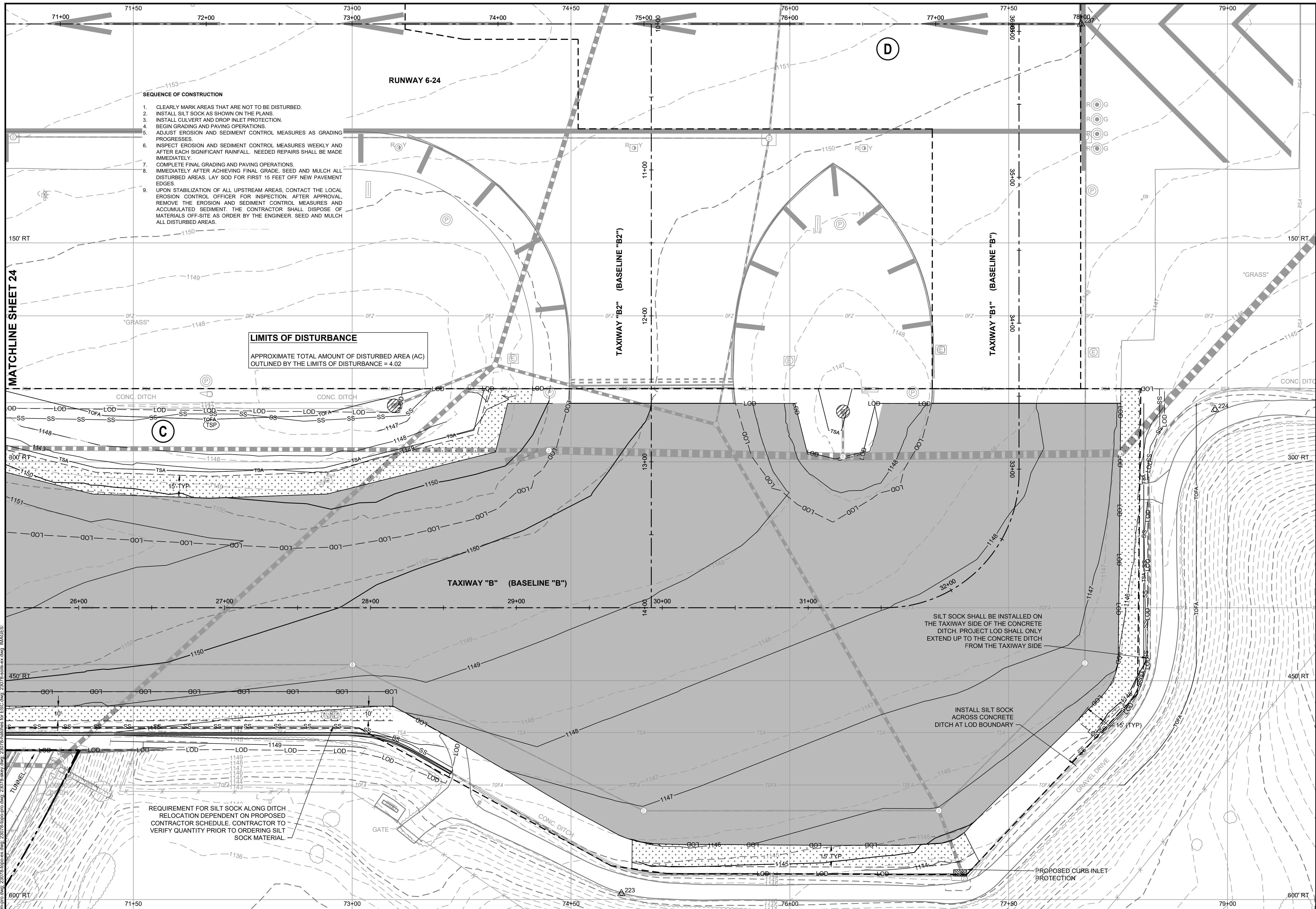


**DELTA AIRPORT
 CONSULTANTS, INC.**



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| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| EROSION & SEDIMENT CONTROL LAYOUT | | DRAWN BY: PJW | SHEET 24 |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | | DESIGNED BY: WME | OF 60 |
| SCALE: 1" = 30' | DATE: MARCH 2025 | | |

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- SEQUENCE OF CONSTRUCTION**
1. CLEARLY MARK AREAS THAT ARE NOT TO BE DISTURBED.
 2. INSTALL SILT SOCK AS SHOWN ON THE PLANS.
 3. INSTALL CULVERT AND DROP INLET PROTECTION.
 4. BEGIN GRADING AND PAVING OPERATIONS.
 5. ADJUST EROSION AND SEDIMENT CONTROL MEASURES AS GRADING PROGRESSES.
 6. INSPECT EROSION AND SEDIMENT CONTROL MEASURES WEEKLY AND AFTER EACH SIGNIFICANT RAINFALL. NEEDED REPAIRS SHALL BE MADE IMMEDIATELY.
 7. COMPLETE FINAL GRADING AND PAVING OPERATIONS.
 8. IMMEDIATELY AFTER ACHIEVING FINAL GRADE, SEED AND MULCH ALL DISTURBED AREAS. LAY SOD FOR FIRST 15 FEET OFF NEW PAVEMENT EDGES.
 9. UPON STABILIZATION OF ALL UPSTREAM AREAS, CONTACT THE LOCAL EROSION CONTROL OFFICER FOR INSPECTION. AFTER APPROVAL, REMOVE THE EROSION AND SEDIMENT CONTROL MEASURES AND ACCUMULATED SEDIMENT. THE CONTRACTOR SHALL DISPOSE OF MATERIALS OFF-SITE AS ORDER BY THE ENGINEER. SEED AND MULCH ALL DISTURBED AREAS.

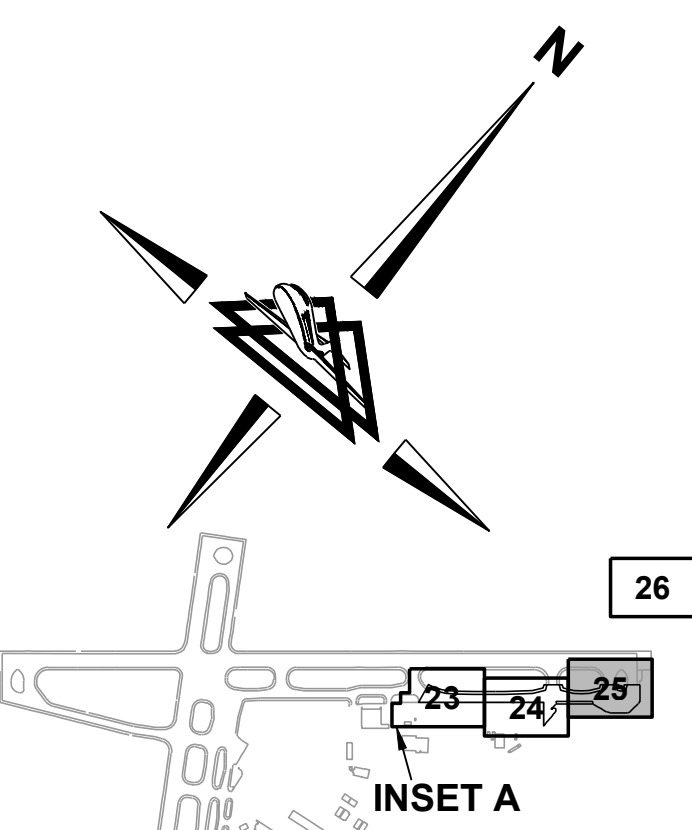
LIMITS OF DISTURBANCE
 APPROXIMATE TOTAL AMOUNT OF DISTURBED AREA (AC)
 OUTLINED BY THE LIMITS OF DISTURBANCE = 4.02

REQUIREMENT FOR SILT SOCK ALONG DITCH
 RELOCATION DEPENDENT ON PROPOSED
 CONTRACTOR SCHEDULE. CONTRACTOR TO
 VERIFY QUANTITY PRIOR TO ORDERING SILT
 SOCK MATERIAL.

SILT SOCK SHALL BE INSTALLED ON
 THE TAXIWAY SIDE OF THE CONCRETE
 DITCH. PROJECT LOD SHALL ONLY
 EXTEND UP TO THE CONCRETE DITCH
 FROM THE TAXIWAY SIDE

INSTALL SILT SOCK
 ACROSS CONCRETE
 DITCH AT LOD BOUNDARY

PROPOSED CURB INLET
 PROTECTION



SHEET INDEX

- LEGEND**
- CONSTRUCTION ENTRANCE
 - WORK AREA LABEL
 - WORK AREA LIMITS
 - EXISTING DROP INLET
 - EXISTING FLARED END SECTION
 - EXISTING ENDWALL/HEADWALL/WINGWALL
 - EXISTING STORM MANHOLE
 - EXISTING UNDERDRAIN CLEANOUT
 - EXISTING AIRFIELD GUIDANCE SIGN
 - EXISTING RUNWAY LIGHT
 - EXISTING RUNWAY THRESHOLD LIGHT
 - EXISTING TAXIWAY LIGHT
 - EXISTING WIND CONE
 - EXISTING ROADWAY SIGN
 - EXISTING POLE (LIGHTED)
 - EXISTING POLE (NON-LIGHTED)
 - PERMANENT SEEDING
 - PROPOSED INLET PROTECTION
 - PROPOSED CURB INLET PROTECTION
 - PROPOSED CULVERT INLET PROTECTION
 - TEMPORARY TOPSOIL STOCKPILE
 - EXISTING STORM DRAIN
 - EXISTING EDGE DRAIN/UNDERDRAIN
 - EXISTING CONCRETE JOINT
 - EXISTING DITCH
 - EXISTING FAA-CONTROLLED CABLE
 - EXISTING FENCE
 - PROPOSED SILT FENCE
 - PROPOSED SILT SOCK
 - EXISTING FIBER OPTIC LINE
 - EXISTING GUARDRAIL
 - LOD - LIMITS OF DISTURBANCE
 - OFZ - EXISTING OBSTACLE FREE ZONE
 - EXISTING AIRPORT PROPERTY LINE
 - EXISTING RUNWAY OBJECT FREE AREA
 - EXISTING RUNWAY SAFETY AREA
 - EXISTING TAXIWAY OBJECT FREE AREA
 - TOFA - PROPOSED TAXIWAY OBJECT FREE AREA
 - EXISTING TAXIWAY SAFETY AREA
 - TSA - PROPOSED TAXIWAY SAFETY AREA
 - EXISTING TREE LINE
 - PROPOSED PAVEMENT (NOTE 2)
 - PROPOSED SOD

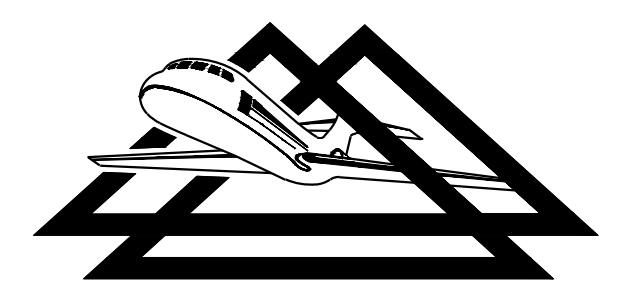
NOTES

1. ALL STATIONS AND OFFSETS ARE GIVEN WITH RESPECT TO BASELINE "RW1" UNLESS OTHERWISE SPECIFIED.
2. SEE GEOMETRIC & PAVING LAYOUT SHEET FOR PAVEMENT SECTION LAYOUT.
3. ALL SLOPES 4:1 AND STEEPER SHALL HAVE SOIL STABILIZATION MATTING (STANDARD VDOT EC-2, TYPE 2) PLACED ON THE SLOPE AS DIRECTED BY THE ENGINEER.

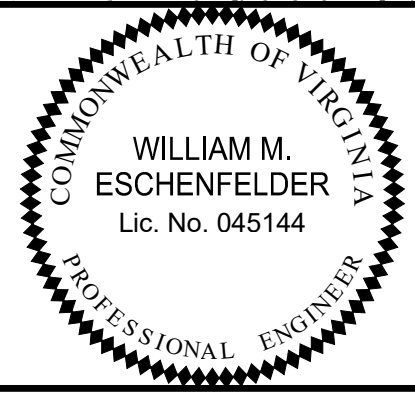


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|--|---------------------|-------------------------------|--------------------|
| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| EROSION & SEDIMENT CONTROL LAYOUT | | DRAWN BY: PJW | SHEET 25 |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | | DESIGNED BY: WME | OF 60 |
| SCALE: 1" = 30' | DATE: MARCH 2025 | | |

C:\Users\pawes\OneDrive\Documents\Delta\23078\EROSION CONTROL LAYOUT.LSS
 DRAWING: 23078-ESC.dwg, LAYOUT: L1
 XREFS: 23078-PLAN.dwg, 23078-COMPO.dwg, 23078-ROAPO.dwg, 23078-BASIS.dwg, 23078-SOILS.dwg, 23078-IMAGES

19 MINIMUM STANDARDS FROM 9VAC25-875-560: EROSION AND SEDIMENT CONTROL CRITERIA, TECHNIQUES, AND METHODS:

- PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR. (SEE NOTE 6B. AND NOTE 10 OF THE EROSION AND SEDIMENT CONTROL NOTES)
- DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE. (SEE NOTE 6B. AND 8A. OF THE EROSION AND SEDIMENT CONTROL NOTES)
- A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT IS UNIFORM, IS MATURE ENOUGH TO SURVIVE, AND WILL INHIBIT EROSION. (SEE NOTE 8C. OF THE EROSION AND SEDIMENT CONTROL NOTES)
- SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS, AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE. (SEE NOTE 6E. OF THE EROSION AND SEDIMENT CONTROL NOTES)
- STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES, AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION. (NOT APPLICABLE TO THIS PROJECT)
- SEDIMENT TRAPS AND SEDIMENT BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN. (NOT APPLICABLE TO THIS PROJECT)
 - THE MINIMUM STORAGE CAPACITY OF A SEDIMENT TRAP SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA AND THE TRAP SHALL ONLY CONTROL DRAINAGE AREAS LESS THAN THREE ACRES. (NOT APPLICABLE)
 - SURFACE RUNOFF FROM DISTURBED AREAS THAT IS COMPRISED OF FLOW FROM DRAINAGE AREAS GREATER THAN OR EQUAL TO THREE ACRES SHALL BE CONTROLLED BY A SEDIMENT BASIN. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT BASIN SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA. THE OUTFALL SYSTEM SHALL, AT A MINIMUM, MAINTAIN THE STRUCTURAL INTEGRITY OF THE BASIN DURING A 25-YEAR STORM OF 24-HOUR DURATION. RUNOFF COEFFICIENTS USED IN RUNOFF CALCULATIONS SHALL CORRESPOND TO A BARE EARTH CONDITION OR THOSE CONDITIONS EXPECTED TO EXIST WHILE THE SEDIMENT BASIN IS UTILIZED. (NOT APPLICABLE)
- CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED. (SEE NOTE 6F. OF THE EROSION AND SEDIMENT CONTROL NOTES)
- CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME, OR SLOPE DRAIN STRUCTURE. (NOT APPLICABLE TO THIS PROJECT)
- WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED. (NOT APPLICABLE TO THIS PROJECT)
- ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT. (SEE NOTE 8K. OF THE EROSION AND SEDIMENT CONTROL NOTES)
- BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTFALL PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL. (NOT APPLICABLE TO THIS PROJECT)
- WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT, AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NON-ERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NON-ERODIBLE COVER MATERIALS. (NOT APPLICABLE TO THIS PROJECT)
- WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX-MONTH PERIOD, A TEMPORARY VEHICULAR STREAM CROSSING CONSTRUCTED OF NON-ERODIBLE MATERIAL SHALL BE PROVIDED. (NOT APPLICABLE TO THIS PROJECT)
- ALL APPLICABLE FEDERAL, STATE, AND LOCAL REQUIREMENTS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET. (NOT APPLICABLE TO THIS PROJECT)
- THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED. (NOT APPLICABLE TO THIS PROJECT)
- UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:
 - NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
 - EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
 - EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
 - MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
 - RESTALLIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THIS CHAPTER.
 - APPLICABLE SAFETY REQUIREMENTS SHALL BE COMPLIED WITH.
(SEE NOTE O. OF THE EROSION AND SEDIMENT CONTROL NOTES)
- WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL DEVELOPMENT LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES. (SEE HAUL ROUTE NOTES ON SHEET 4)
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE VESCP OR VESMP AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION. (SEE NOTE 6B. AND 6I. OF THE EROSION AND SEDIMENT CONTROL NOTES)
- PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION, AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY, AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CRITERIA. STREAM RESTORATION AND RELOCATION PROJECTS THAT INCORPORATE NATURAL CHANNEL DESIGN CONCEPTS ARE NOT MANMADE CHANNELS AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MANMADE CHANNELS:
 - CONCENTRATED STORMWATER RUNOFF LEAVING A DEVELOPMENT SITE SHALL BE DISCHARGED DIRECTLY INTO AN ADEQUATE NATURAL OR MANMADE RECEIVING CHANNEL, PIPE, OR STORM SEWER SYSTEM. FOR THOSE SITES WHERE RUNOFF IS DISCHARGED INTO A PIPE OR PIPE SYSTEM, DOWNSTREAM STABILITY ANALYSES AT THE OUTFALL OF THE PIPE OR PIPE SYSTEM SHALL BE PERFORMED.
 - ADEQUACY OF ALL CHANNELS AND PIPES SHALL BE VERIFIED IN THE FOLLOWING MANNER:
 - THE APPLICANT SHALL DEMONSTRATE THAT THE TOTAL DRAINAGE AREA TO THE POINT OF ANALYSIS WITHIN THE CHANNEL IS 100 TIMES GREATER THAN THE CONTRIBUTING DRAINAGE AREA OF THE PROJECT IN QUESTION; OR
 - (A) NATURAL CHANNELS SHALL BE ANALYZED BY THE USE OF A TWO-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP CHANNEL BANKS NOR CAUSE EROSION OF CHANNEL BED OR BANKS;
 - ALL PREVIOUSLY CONSTRUCTED MANMADE CHANNELS SHALL BE ANALYZED BY THE USE OF A 10-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP THE STORMWATER'S BANKS AND BY THE USE OF A TWO-YEAR STORM TO DEMONSTRATE THAT STORMWATER WILL NOT CAUSE EROSION OF CHANNEL BED OR BANKS; AND
 - PIPES AND STORM SEWER SYSTEMS SHALL BE ANALYZED BY THE USE OF A 10-YEAR STORM TO VERIFY THAT STORMWATER WILL BE CONTAINED WITHIN THE PIPE OR SYSTEM.
 - IF EXISTING NATURAL RECEIVING CHANNELS OR PREVIOUSLY CONSTRUCTED MANMADE CHANNELS OR PIPES ARE NOT ADEQUATE, THE APPLICANT SHALL:
 - IMPROVE THE CHANNELS TO A CONDITION WHERE A 10-YEAR STORM WILL NOT OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT CAUSE EROSION TO THE CHANNEL, THE BED, OR THE BANKS;
 - IMPROVE THE PIPE OR PIPE SYSTEM TO A CONDITION WHERE THE 10-YEAR STORM IS CONTAINED WITHIN THE APPURTENANCES;
 - DEVELOP A SITE DESIGN THAT WILL NOT CAUSE THE PREDEVELOPMENT PEAK RUNOFF RATE FROM A TWO-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A NATURAL CHANNEL OR WILL NOT CAUSE THE PREDEVELOPMENT PEAK RUNOFF RATE FROM A 10-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A MANMADE CHANNEL; OR
 - PROVIDE A COMBINATION OF CHANNEL IMPROVEMENT, STORMWATER DETENTION, OR OTHER MEASURES THAT IS SATISFACTORY TO THE VESCP OR VESMP AUTHORITY TO PREVENT DOWNSTREAM EROSION.
 - THE APPLICANT SHALL PROVIDE EVIDENCE OF PERMISSION TO MAKE THE IMPROVEMENTS.
 - ALL HYDROLOGIC ANALYSES SHALL BE BASED ON THE EXISTING WATERSHED CHARACTERISTICS AND THE ULTIMATE DEVELOPMENT CONDITION OF THE SUBJECT PROJECT.
 - IF THE APPLICANT CHOOSES AN OPTION THAT INCLUDES STORMWATER DETENTION, THE APPLICANT SHALL OBTAIN APPROVAL FROM THE VESCP OR VESMP AUTHORITY FOR A PLAN FOR MAINTENANCE OF THE DETENTION FACILITIES. THE PLAN SHALL SET FORTH THE MAINTENANCE REQUIREMENTS OF THE FACILITY AND THE PERSON RESPONSIBLE FOR PERFORMING THE MAINTENANCE.
 - OUTFALL FROM A DETENTION FACILITY SHALL BE DISCHARGED TO A RECEIVING CHANNEL, AND ENERGY DISSIPATORS SHALL BE PLACED AT THE OUTFALL OF ALL DETENTION FACILITIES AS NECESSARY TO PROVIDE A STABILIZED TRANSITION FROM THE FACILITY TO THE RECEIVING CHANNEL.
 - ALL ON-SITE CHANNELS MUST BE VERIFIED TO BE ADEQUATE.
 - INCREASED VOLUMES OF SHEET FLOWS THAT MAY CAUSE EROSION OR SEDIMENTATION ON ADJACENT PROPERTY SHALL BE DIVERTED TO A STABLE OUTLET, ADEQUATE CHANNEL, PIPE, OR PIPE SYSTEM OR TO A DETENTION FACILITY.
 - IN APPLYING THESE STORMWATER MANAGEMENT CRITERIA, INDIVIDUAL LOTS OR PARCELS IN A RESIDENTIAL, COMMERCIAL, OR INDUSTRIAL DEVELOPMENT SHALL NOT BE CONSIDERED TO BE SEPARATE DEVELOPMENT PROJECTS. INSTEAD, THE DEVELOPMENT, AS A WHOLE, SHALL BE CONSIDERED TO BE A SINGLE DEVELOPMENT PROJECT. HYDROLOGIC PARAMETERS THAT REFLECT THE ULTIMATE DEVELOPMENT CONDITION SHALL BE USED IN ALL ENGINEERING CALCULATIONS.
 - ALL MEASURES USED TO PROTECT PROPERTIES AND WATERWAYS SHALL BE EMPLOYED IN A MANNER THAT MINIMIZES IMPACTS ON THE PHYSICAL, CHEMICAL, AND BIOLOGICAL INTEGRITY OF RIVERS, STREAMS, AND OTHER WATERS OF THE STATE.
 - ANY PLAN APPROVED PRIOR TO JULY 1, 2014, THAT PROVIDES FOR STORMWATER MANAGEMENT THAT ADDRESSES ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MANMADE CHANNELS SHALL SATISFY THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MANMADE CHANNELS IF THE PRACTICES ARE DESIGNED TO (I) DETAIN THE WATER QUALITY VOLUME AND TO RELEASE IT OVER 48 HOURS; (II) DETAIN AND RELEASE OVER A 24-HOUR PERIOD THE EXPECTED RAINFALL RESULTING FROM THE ONE-YEAR, 24-HOUR STORM; AND (III) REDUCE THE ALLOWABLE PEAK FLOW RATE RESULTING FROM THE 1.5-YEAR, TWO-YEAR, AND 10-YEAR 24-HOUR STORMS TO A LEVEL THAT IS LESS THAN OR EQUAL TO THE PEAK FLOW RATE FROM THE SITE ASSUMING THE SITE WAS IN A GOOD FORESTED CONDITION, ACHIEVED THROUGH MULTIPLICATION OF THE FORESTED PEAK FLOW RATE BY A REDUCTION FACTOR THAT IS EQUAL TO THE RUNOFF VOLUME FROM THE SITE WHEN THE SITE WAS IN A GOOD FORESTED CONDITION DIVIDED BY THE RUNOFF VOLUME FROM THE SITE IN THE SITE'S PROPOSED CONDITION, AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MANMADE CHANNELS AS DEFINED IN ANY REGULATIONS PROMULGATED PURSUANT TO § 62.1-44.15.28 OF THE CODE OF VIRGINIA (VESMA) OR § 62.1-44.15.54 OR 62.1-44.15.65 OF THE CODE OF VIRGINIA (ESCL).
 - FOR PLANS APPROVED ON AND AFTER JULY 1, 2014, THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS OF § 62.1-44.15.52 A OF THE CODE OF VIRGINIA (ESCL) AND THIS SUBDIVISION 19 SHALL BE SATISFIED BY COMPLIANCE WITH WATER QUANTITY REQUIREMENTS IN THE VESMA AND ATTENDANT REGULATIONS, UNLESS SUCH LAND-DISTURBING ACTIVITIES (I) ARE IN ACCORDANCE WITH PROVISIONS FOR TIME LIMITS ON APPLICABILITY OF APPROVED DESIGN CRITERIA IN 9VAC25-875-480 OR GRANDFATHERING IN 9VAC25-875-490, IN WHICH CASE THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS OF § 62.1-44.15.52 A OF THE CODE OF VIRGINIA (ESCL) SHALL APPLY; OR (II) ARE EXEMPT PURSUANT TO § 62.1-44.15.34 G 2 OF THE CODE OF VIRGINIA (VESMA).
 - COMPLIANCE WITH THE WATER QUANTITY MINIMUM STANDARDS SET OUT IN 9VAC25-875-600 SHALL BE DEEMED TO SATISFY THE REQUIREMENTS OF THIS SUBDIVISION 19. (SEE NOTE 11. OF THE EROSION AND SEDIMENT CONTROL NOTES)

- EROSION AND SEDIMENT CONTROL NARRATIVE AND NOTES:**
- PROJECT DESCRIPTION**

THE PURPOSE OF THIS PROJECT AT ROANOKE-BLACKSBURG REGIONAL AIRPORT IS TO CORRECT THE GEOMETRY AND REHABILITATE THE PAVEMENT OF TAXIWAY B FROM EAST OF TAXIWAY B4 TAXIWAY OBJECT FREE AREA TO TAXIWAY B1, INCLUDING CONNECTOR TAXIWAYS B1, B2, AND B3 OUTSIDE OF THE RUNWAY SAFETY AREA. RUNOFF FROM ALL DISTURBED AREAS ASSOCIATED WITH THIS PROJECT SHALL BE INTERCEPTED BY SILT SOCK, INLET PROTECTION, OR OTHER SEDIMENT TRAPPING DEVICES.
 - EXISTING SITE CONDITIONS**

THE SITE IS AN AREA OF MODERATE TO STEEPLY SLOPING TERRAIN. THE DISTURBED AREA IS 4.02 ACRES IN SIZE. UNDISTURBED AREAS OF THE SITE ARE EITHER PAVED OR COVERED WITH AVERAGE TO DENSE GRASS.
 - ADJACENT PROPERTY**

THE AIRPORT IS BORDERED BY INTERSTATE 581 TO THE WEST AND US ROUTE 11 TO THE EAST.
 - SOILS**

THE FOLLOWING SOIL TYPES OCCUPY THE MAJORITY OF THE PROJECT AREA:
 - 52 - UDORTHERTS-URBAN LAND COMPLEX
 - 18C - FREDERICK SILT LOAM, 8-15% SLOPES
 - 53 - URBAN LAND

HSG D WAS USED FOR THE SITE FOR WATER QUALITY ANALYSIS (VRRM).
 - CRITICAL EROSION AREAS**

THE POTENTIALLY CRITICAL AREAS FOR EROSION ARE THE EXISTING OUTFALLS FROM THE PROJECT SITE. THE OTHER CRITICAL AREAS ARE THE PROPOSED FILL SLOPES ASSOCIATED WITH THIS PROJECT. WHEREVER GRADING IS NECESSARY, ADEQUATE PRECAUTIONS SHALL BE TAKEN TO MINIMIZE EROSION AND TRAP SEDIMENT ON-SITE.
 - EROSION AND SEDIMENT CONTROL MEASURES**
 - AIR, WATER, SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL LAWS. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK VERSION 1.1. PAYMENT FOR SILT FENCE, PERMANENT SEEDING AND ASSOCIATED MULCHING, AND INLET PROTECTION WILL BE MADE UNDER THEIR RESPECTIVE PAY ITEMS. THE EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE PLANS ARE CONSIDERED MINIMAL STEPS AND ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED, DEPENDING UPON THE FINAL CONSTRUCTION PHASING PROPOSED BY THE CONTRACTOR. NO SEPARATE PAYMENT WILL BE MADE FOR ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES FOUND NECESSARY UNDER THIS PROJECT DUE TO THE CONTRACTOR'S SEQUENCE OF WORK.
 - PERMANENT OR TEMPORARY SOIL STABILIZATION MUST BE APPLIED TO DENUDED AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. SOIL STABILIZATION MUST ALSO BE APPLIED WITHIN SEVEN (7) DAYS TO DENUDED AREAS WHICH MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNWORKED) FOR LONGER THAN THIRTY (30) DAYS. SOIL STOCKPILES MUST BE STABILIZED OR PROTECTED WITH SOIL STABILIZATION AND/OR SEDIMENT TRAPPING MEASURES TO PREVENT SOIL LOSS.
 - PERMANENT SEEDING COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED.
 - PROPERTIES ADJACENT TO THE PROJECT SITE SHALL BE PROTECTED FROM SEDIMENT DEPOSITS.
 - INLET PROTECTION AND OTHER MEASURES INTENDED TO TRAP SEDIMENT ON-SITE MUST BE CONSTRUCTED AS THE FIRST STEP IN GRADING AND MUST BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE. EARTHEN STRUCTURES SUCH AS DAMS, DIKES, AND DIVERSIONS MUST BE SEEDDED AND MULCHED IMMEDIATELY AFTER INSTALLATION.
 - CUT AND FILL SLOPES MUST BE CONSTRUCTED IN A MANNER WHICH WILL MINIMIZE EROSION. **VESCH STANDARD SPECIFICATION 3.29**, SLOPES WHICH ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE (1) YEAR OF CONSTRUCTION MUST BE PROVIDED, BY THE CONTRACTOR, WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.
 - WHENEVER CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED PUBLIC ROADS, PROVISIONS MUST BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT (MUD) BY RUNOFF OR VEHICLE TRACKING ON TO PAVED SURFACES. **VESCH STANDARD SPECIFICATION 3.02**, WHERE SEDIMENT IS TRANSPORTED ONTO A PUBLIC ROAD SURFACE, THE ROAD SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE SWEEPED OR MANUALLY REMOVED AND PLACED IN A DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN ALL OF THE TEMPORARY STONE CONSTRUCTION ENTRANCES SHOWN ON THE PLANS.
 - ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED AND REPAIRED AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION.
 - ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DISPOSED OF WITHIN THIRTY (30) DAYS AFTER THE FINAL SITE STABILIZATION IS ACHIEVED OR AFTER TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER. THE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DISPOSED OF AS ORDERED BY THE ENGINEER.
 - SEDIMENT REMOVAL FROM THE EROSION CONTROL STRUCTURES SHALL BE DISPOSED OF IN AREAS PROTECTED BY EROSION CONTROL DEVICES OR AS ORDERED BY THE ENGINEER.
 - ALL STORM SEWER INLETS WHICH ARE OPERATIONAL DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT LADEN WATER WILL NOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT. **VESCH STANDARD 3.07, STORM DRAIN INLET PROTECTION**.
 - THE CONTRACTOR SHALL OBTAIN ANY LAND DISTURBING AND/OR EROSION AND SEDIMENT CONTROL PERMIT FROM THE CITY OF ROANOKE. **EROSION CONTROL OFFICER AND POST THE REQUIRED EROSION CONTROL BOND**.
 - TOPSOIL STRIPPED FROM THE SITE SHALL BE STOCKPILED, AS ORDERED BY THE ENGINEER. NO MEASUREMENT WILL BE MADE FOR EXCAVATING AND STOCKPILING OF THE TOPSOIL. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
 - TEMPORARY SEEDING SHALL BE IN ACCORDANCE WITH SECTION III OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
 - ALL UTILITIES MUST BE INSTALLED IN ACCORDANCE WITH MINIMUM STANDARD NO.16 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
 - STRUCTURAL PRACTICES**
 - SILT FENCE - PCM-04**

THIS DEVICE WILL BE INSTALLED IN THE LOCATIONS SHOWN ON THIS PLANS, OR AS ORDERED BY THE ENGINEER.
 - SILT SOCK - PCM-05**

THIS DEVICE WILL BE INSTALLED IN THE LOCATIONS SHOWN ON THIS PLANS, OR AS ORDERED BY THE ENGINEER.
 - STORM DRAIN INLET PROTECTION - SCM-04**

ALL STORM DRAIN INLETS DRAINING DISTURBED AREAS SHALL BE PROTECTED DURING CONSTRUCTION.
 - CULVERT INLET PROTECTION - SCM-05**

THIS DEVICE SHALL BE INSTALLED AT THE LOCATIONS SHOWN ON THE PLANS. THE DEVICES SHALL BE USED TO PREVENT SEDIMENT FROM ENTERING, ACCUMULATING IN AND BEING TRANSFERRED BY A CULVERT AND ASSOCIATED DRAINAGE SYSTEM PRIOR TO PERMANENT STABILIZATION OF A DISTURBED PROJECT AREA.
 - VEGETATIVE PRACTICES**
 - TOPSOIL STOCKPILE - MS-2**

TOPSOIL SHALL BE STRIPPED, STOCKPILED AND THEN REDISTRIBUTED OVER THE AREAS TO BE PERMANENTLY SEEDDED UPON REACHING FINAL GRADE. TOPSOIL STOCKPILE LOCATIONS SHALL BE APPROVED BY THE ENGINEER. SURPLUS TOPSOIL SHALL BE LEFT IN A NEAT STABILIZED STOCKPILE.

ENGINEER. SURPLUS TOPSOIL SHALL BE LEFT IN A NEAT STABILIZED STOCKPILE.

- TEMPORARY SEEDING - SSM-09**

THE SEDIMENT BASIN EMBANKMENT, TEMPORARY DIVERSION DIKES, TOPSOIL STOCKPILES, AND ALL AREAS TO BE ROUGH-GRADED DURING THE INITIAL PHASE OF CONSTRUCTION SHALL BE PROTECTED WITH ADEQUATE SEDIMENT BARRIERS AND SEEDED WITH FAST-GERMINATING, TEMPORARY VEGETATION IMMEDIATELY FOLLOWING GRADING. SELECTION OF THE APPROPRIATE SEED MIXTURE WILL DEPEND UPON THE TIME OF YEAR IT IS TO BE APPLIED.
- MANAGEMENT STRATEGIES**
 - CONSTRUCTION SHOULD BE SEQUENCED SO THAT GRADING OPERATIONS CAN BEGIN AND END AS QUICKLY AS POSSIBLE.
 - SEDIMENT TRAPPING MEASURES SHALL BE INSTALLED AS A FIRST STEP IN GRADING AND SHALL BE SEEDDED AND MULCHED IMMEDIATELY FOLLOWING INSTALLATION.
 - TEMPORARY SEEDING OR OTHER STABILIZATION SHALL FOLLOW IMMEDIATELY AFTER GRADING.
 - AREAS WHICH ARE NOT TO BE DISTURBED SHALL BE CLEARLY MARKED BY FLAGS, SIGNS, ETC.
 - THE JOB SUPERINTENDENT SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL PRACTICES.

- PERMANENT STABILIZATION**

ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH PERMANENT SEEDING IMMEDIATELY FOLLOWING FINISH GRADING. REGULAR SEEDING AND MULCHING SHALL BE IN ACCORDANCE WITH SPECIFICATIONS T-901 AND T-908.
- STORM WATER MANAGEMENT**

MODIFICATION OF AN EXISTING STORMWATER MANAGEMENT DEVICE WILL REDUCE THE PEAK RUNOFF OF THE CURRENT SYSTEM AT OUTFALL 1 TO MEET WATER QUANTITY CHANNEL PROTECTION COMPLIANCE AS PER SECTIONS 9VAC25-875-600 B-3A (ENERGY BALANCE), WATER QUANTITY CHANNEL PROTECTION COMPLIANCE WILL BE MET FOR OUTFALL 2 AS PER SUBSECTION B-2A OF 9VAC25-875-600.

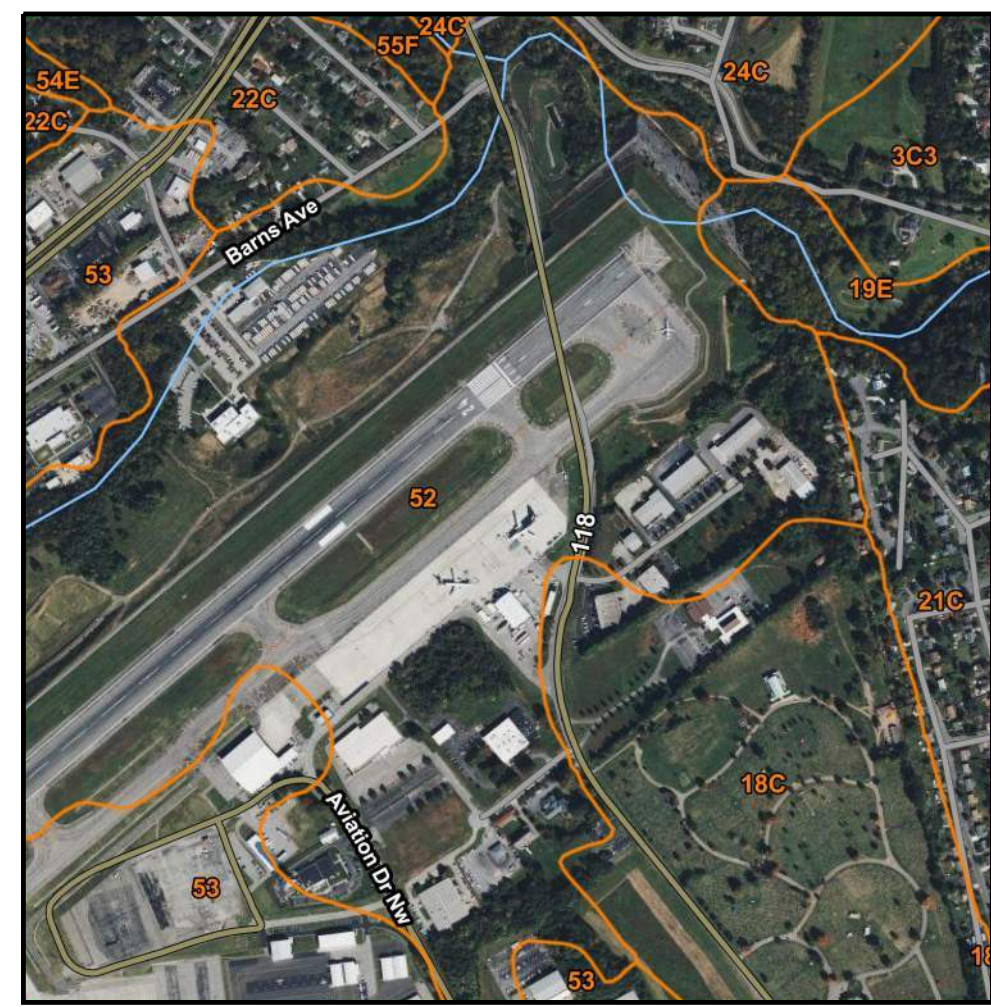
- FLOOD PROTECTION COMPLIANCE**

FLOOD PROTECTION COMPLIANCE WILL BE MET FOR OUTFALLS 1 AND 2 AS PER 9VAC25-875-600 SUBSECTIONS C-1 AND C-2C, RESPECTIVELY. A STORMWATER MANAGEMENT REPORT HAS BEEN DEVELOPED TO SUMMARIZE STORMWATER MANAGEMENT COMPLIANCE IN MORE DETAIL.
- MAINTENANCE**

IN GENERAL, ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED WEEKLY AND AFTER EACH SIGNIFICANT RAINFALL. THE FOLLOWING ITEMS SHALL BE CHECKED IN PARTICULAR.
 - THE INLET PROTECTION DEVICES SHALL BE CHECKED REGULARLY FOR SEDIMENT CLEANOUT.
 - THE SILT SOCK AND SILT FENCE BARRIERS SHALL BE CHECKED REGULARLY FOR UNDERMINING OR DETERIORATION.
 - ALL SEEDDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND OF GRASS IS MAINTAINED. AREAS SHOULD BE REPAIRED AND RESEDED, AS NEEDED.

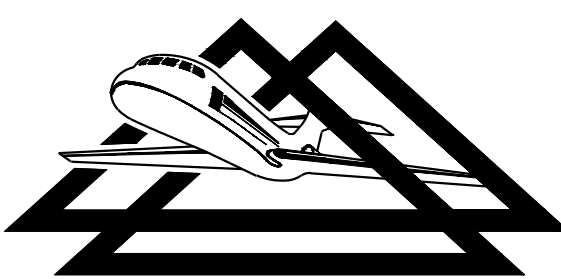
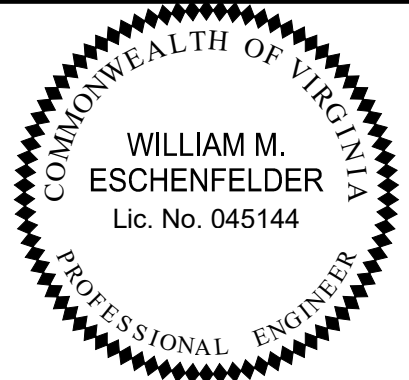
- SEQUENCE OF CONSTRUCTION**
 - CLEARLY MARK AREAS THAT ARE NOT TO BE DISTURBED.
 - INSTALL SILT SOCK AS SHOWN ON THE PLANS.
 - INSTALL CULVERT AND DROP INLET PROTECTION.
 - BEGIN GRADING AND PAVING OPERATIONS.
 - ADJUST EROSION AND SEDIMENT CONTROL MEASURES AS GRADING PROGRESSES.
 - INSPECT EROSION AND SEDIMENT CONTROL MEASURES WEEKLY AND AFTER EACH SIGNIFICANT RAINFALL. NEEDED REPAIRS SHALL BE MADE IMMEDIATELY.
 - COMPLETE FINAL GRADING AND PAVING OPERATIONS.
 - IMMEDIATELY AFTER ACHIEVING FINAL GRADE, SEED AND MULCH ALL DISTURBED AREAS. LAY SOD FOR FIRST 15 FEET OFF NEW PAVEMENT EDGES.
 - UPON STABILIZATION OF ALL UPSTREAM AREAS, CONTACT THE LOCAL EROSION CONTROL OFFICER FOR INSPECTION. AFTER APPROVAL, REMOVE THE EROSION AND SEDIMENT CONTROL MEASURES AND ACCUMULATED SEDIMENT. THE CONTRACTOR SHALL DISPOSE OF MATERIALS OFF-SITE AS ORDER BY THE ENGINEER. SEED AND MULCH ALL DISTURBED AREAS.
- LAND DISTURBANCE PERMIT**

THE CONTRACTOR SHALL BE ACTIVELY REGISTERED WITH THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY AS A RESPONSIBLE LAND DISTURBER (RLD) AND FULLY RESPONSIBLE FOR OBTAINING A LAND DISTURBANCE PERMIT PRIOR TO PROJECT WORK COMMENCING. THE CONTRACTOR (RLD) SHALL SCHEDULE A PRE-CONSTRUCTION CONFERENCE WITH THE CITY OF ROANOKE PROJECT MANAGER AND CITY OF ROANOKE PLAN REVIEWER AS A REQUIREMENT PRIOR TO ISSUANCE OF A LAND DISTURBANCE PERMIT. ANY QUESTIONS REGARDING OBTAINING A LAND DISTURBANCE PERMIT CAN BE DIRECTED TO AARON CYPHER WITH THE CITY OF ROANOKE AT 540-853-6501.



SOILS MAP

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SOURCE: HTTP://WEBSOILSURVEY.SC.EGOV.USDA.GOV



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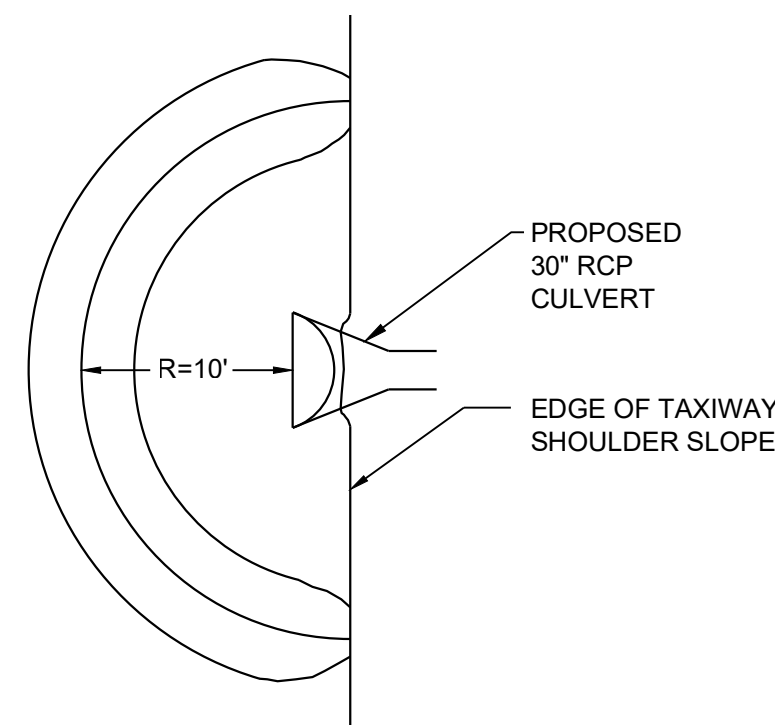
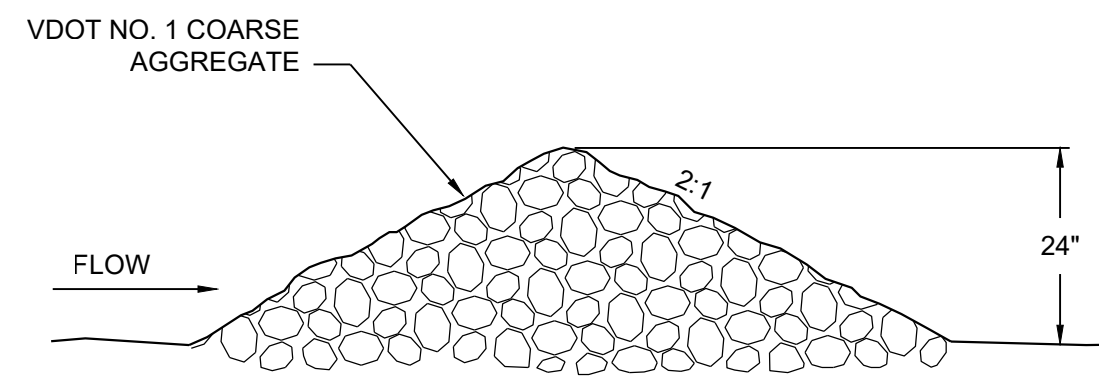
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| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| EROSION & SEDIMENT CONTROL NOTES | | DRAWN BY: PJW | SHEET 27 OF 60 |
| | | DESIGNED BY: WME | |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | | SCALE: NONE | DATE: MARCH 2025 |

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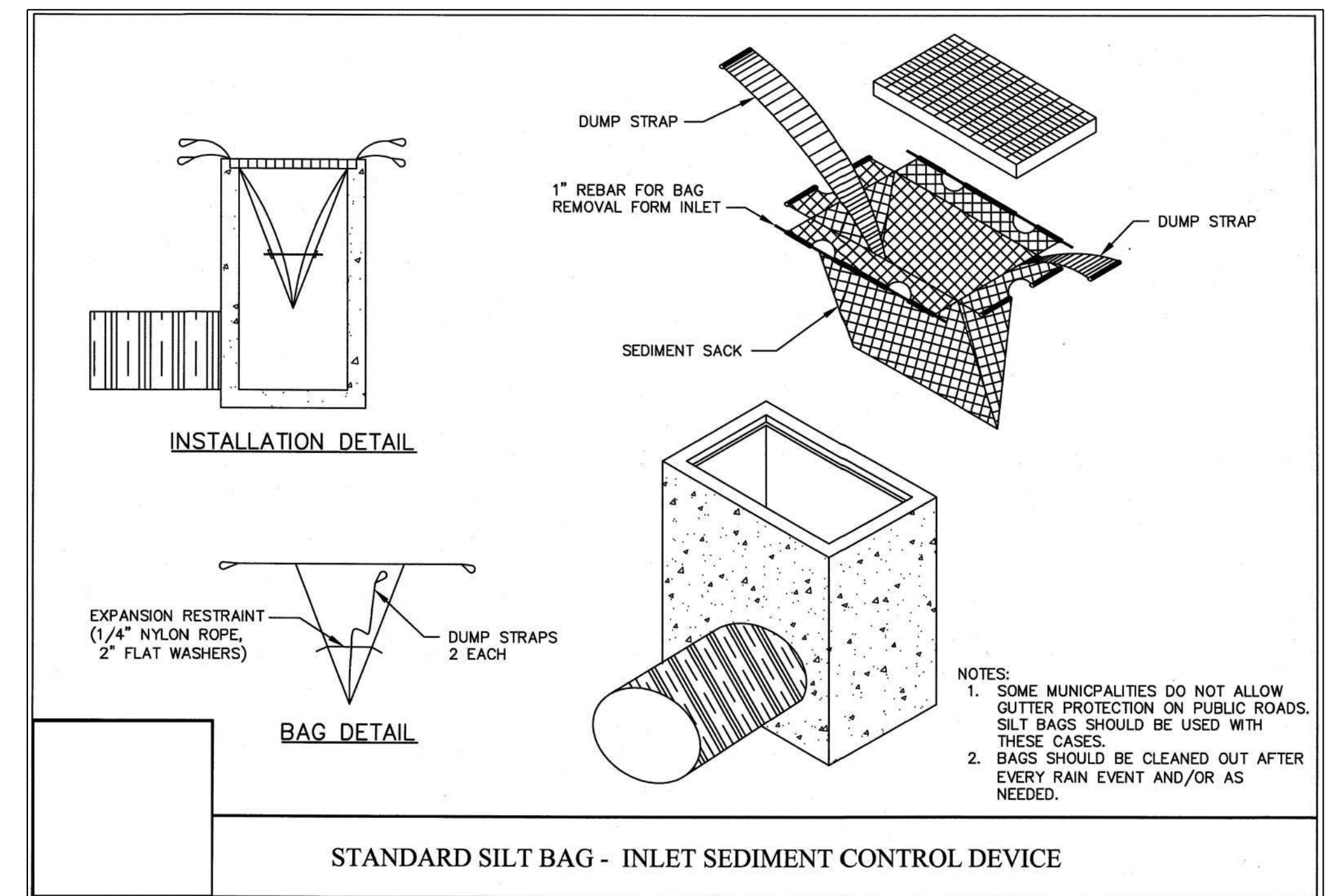
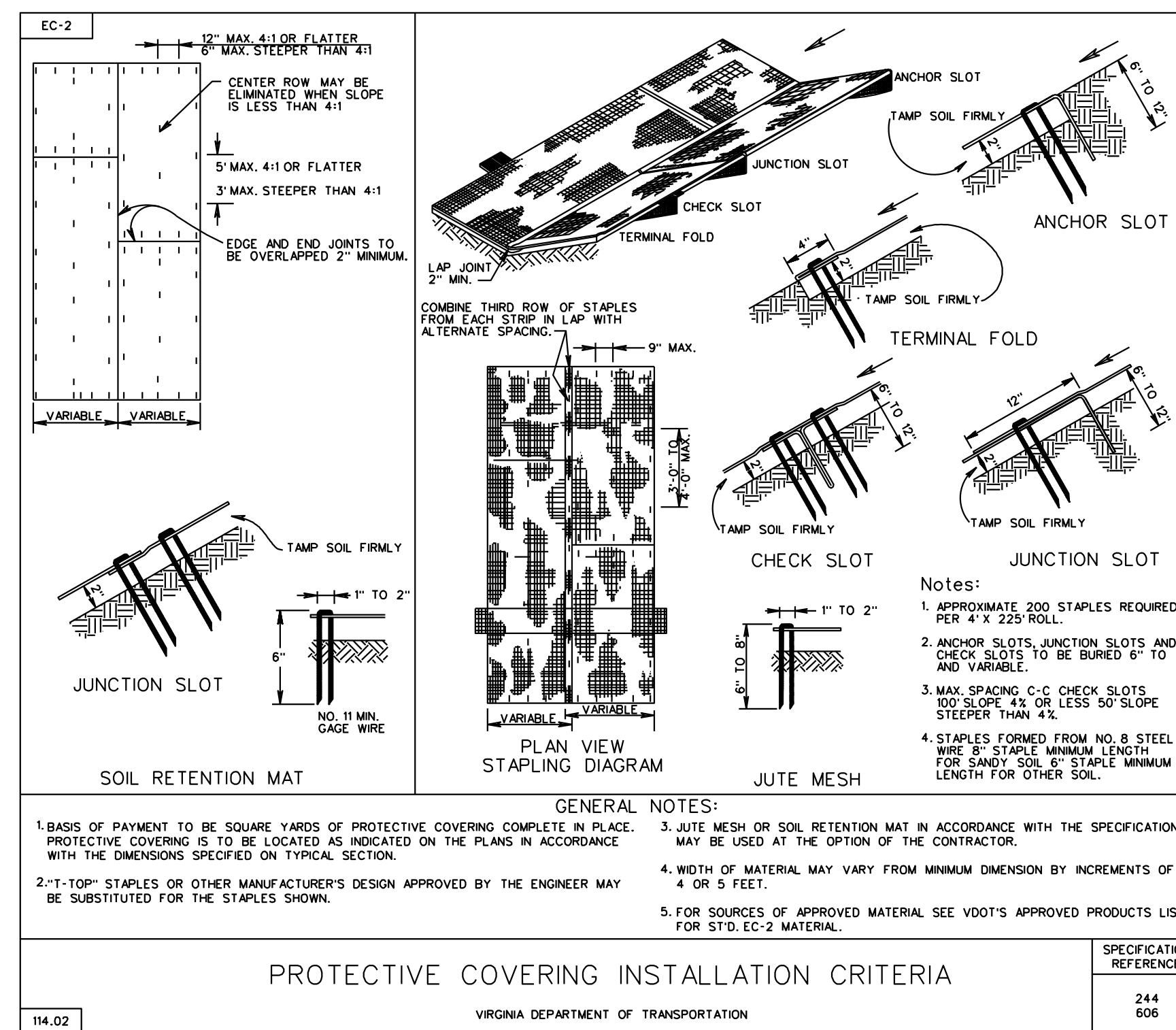
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CULVERT INLET PROTECTION DETAIL

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CIP 3.08



**TABLE 3.31-B
ACCEPTABLE TEMPORARY SEEDING PLANT MATERIALS
"QUICK REFERENCE FOR ALL REGIONS"**

| PLANTING DATES | SPECIES | RATE (LBS./ACRE) |
|-----------------|---|------------------|
| SEPT 1 - FEB 15 | 50/50 MIX OF ANNUAL RYEGRASS (LOLIUM MULTI-FLORUM) & CEREAL (WINTER) RYE SECALE CEREALE | 50-100 |
| FEB 16 - APR 30 | ANNUAL RYEGRASS (LOLIUM MULTI-FLORUM) | 60 - 100 |
| MAY 1 - AUG 31 | GERMAN MILLET (SETARIA ITALICA) | 50 |

SOURCE: VA DSWC

**TABLE 3.32-C
SITE SPECIFIC SEEDING MIXTURES FOR
APPALACHIAN/MOUNTAIN AREA**

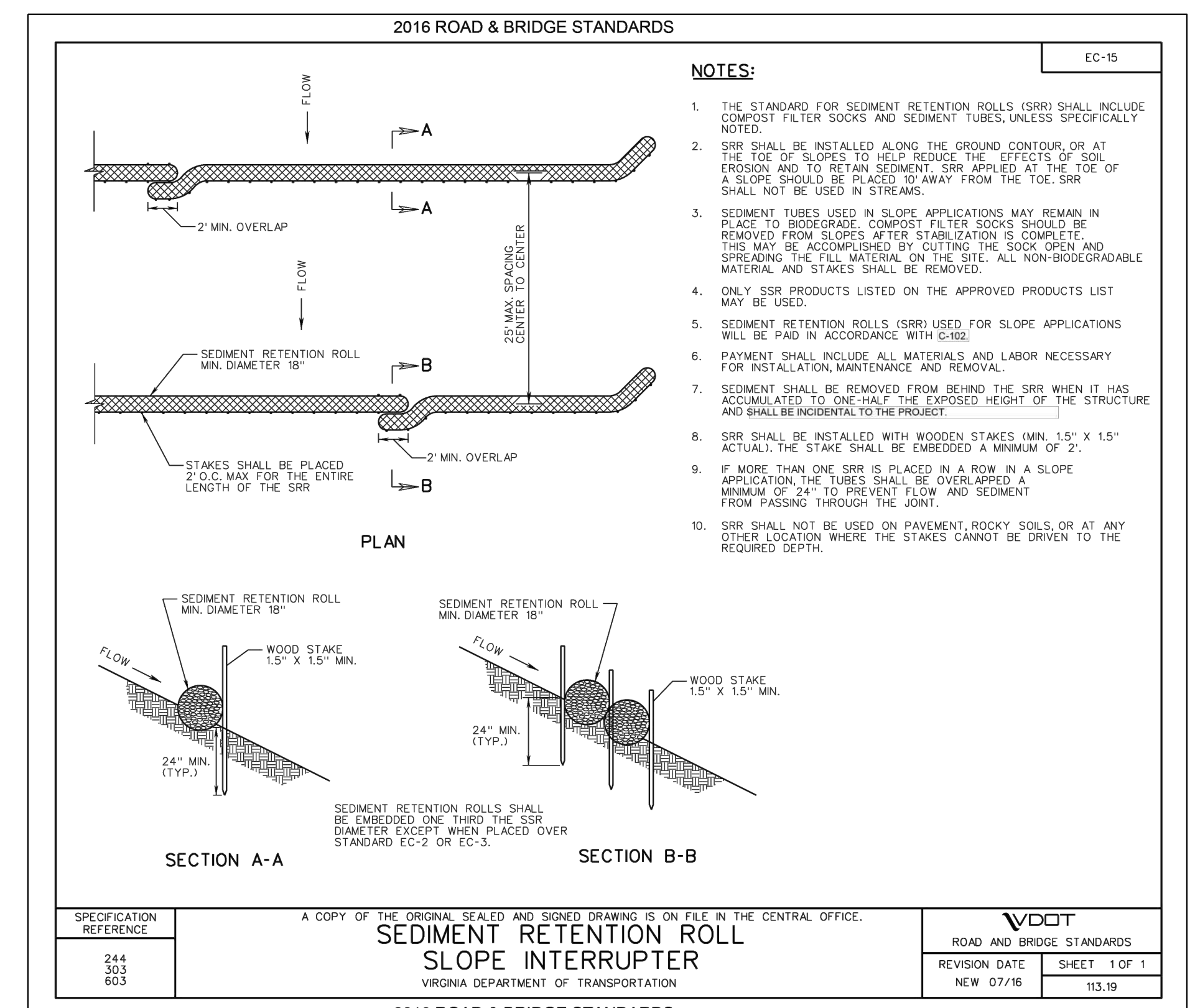
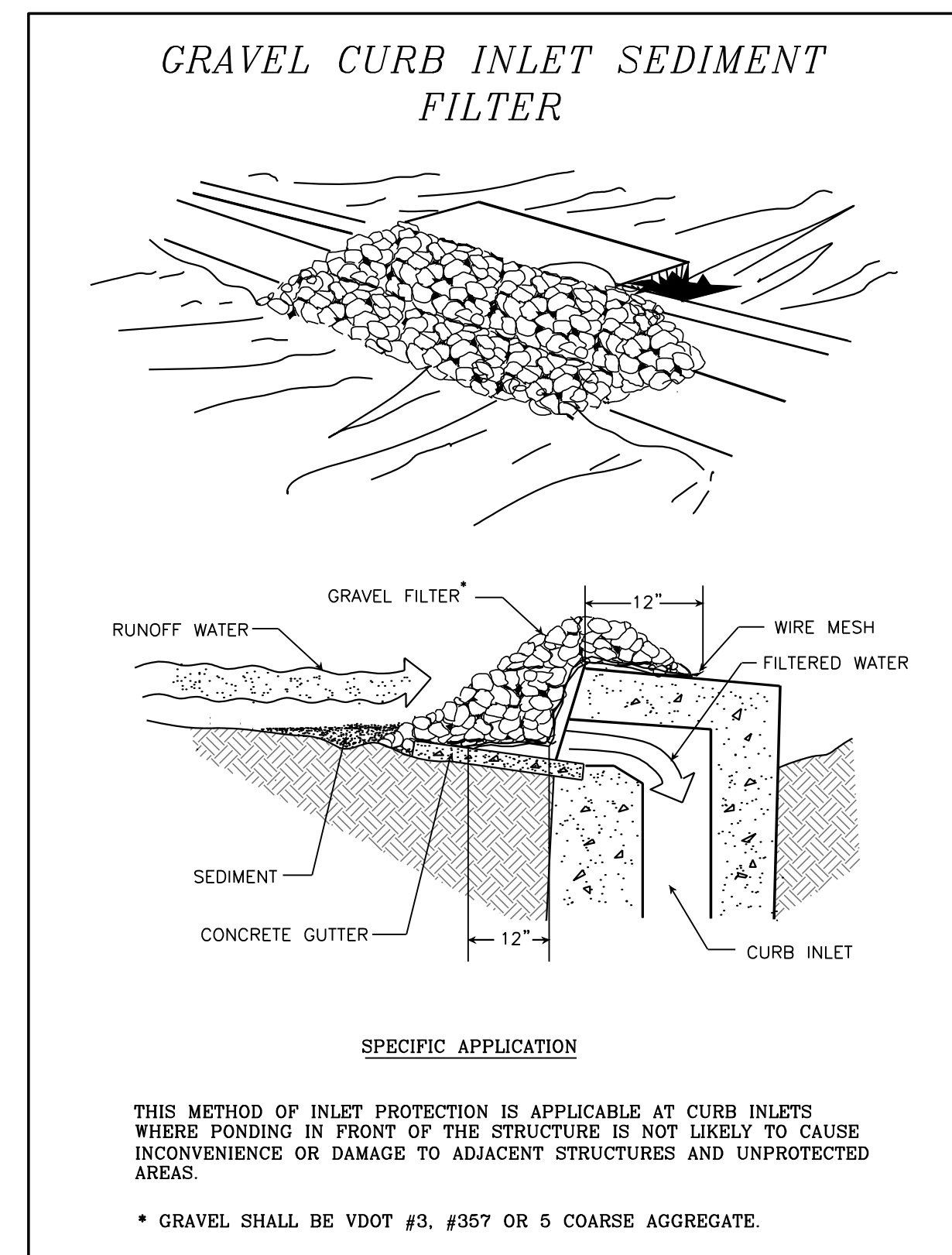
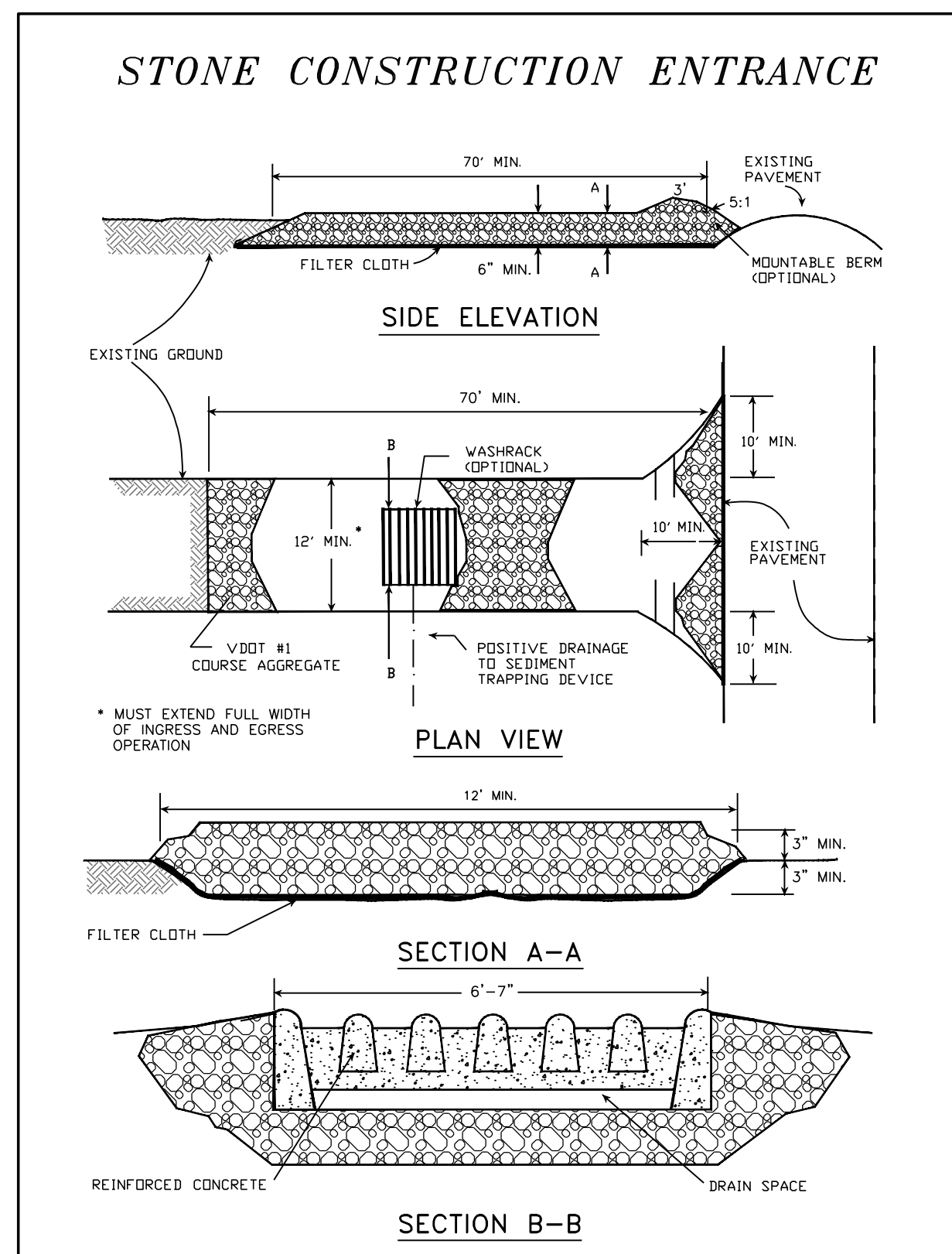
| | TOTAL LBS. PER ACRE |
|--|---------------------|
| MINIMUM CARE LAWN | |
| - COMMERCIAL OR RESIDENTIAL | 200 - 250 LBS. |
| - KENTUCKY 31 OR TURF-TYPE TALL FESCUE | 90 - 100% |
| - IMPROVED PERENNIAL RYEGRASS * | 0 - 10% |
| - KENTUCKY BLUEGRASS | 0 - 10% |
| HIGH-MAINTENANCE LAWN | 125 LBS. |
| - MINIMUM OF THREE (3) UP TO FIVE (5) VARIETIES OF BLUEGRASS FROM APPROVED LIST FOR USE IN VIRGINIA. | |
| GENERAL SLOPE (3:1 OR LESS) | |
| - KENTUCKY 31 FESCUE | 128 LBS. |
| - RED TOP GRASS | 2 LBS. |
| - SEASONAL NURSE CROP ** | 20 LBS. |
| | 150 LBS. |
| LOW-MAINTENANCE SLOPE (STEEPER THAN 3:1) | |
| - KENTUCKY 31 FESCUE | 108 LBS. |
| - RED TOP GRASS | 2 LBS. |
| - SEASONAL NURSE CROP ** | 20 LBS. |
| - CROWN VETCH *** | 20 LBS. |
| | 150 LBS. |

* PERENNIAL RYEGRASS WILL GERMINATE FASTER AND AT LOWER SOIL TEMPERATURES THAN FESCUE. THEREBY PROVIDING COVER AND EROSION RESISTANCE FOR SEEDBED.

** USE SEASONAL NURSE CROP IN ACCORDANCE WITH SEEDING DATES AS STATED BELOW:

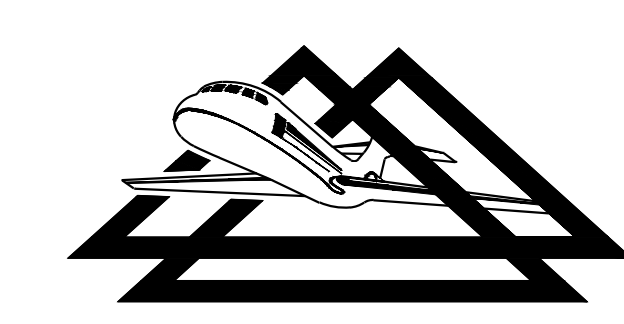
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|--|----------------|
| MARCH, APRIL THROUGH MAY 15TH | ANNUAL RYE |
| MAY 16TH THROUGH AUGUST 15TH | FOXTAIL MILLET |
| AUGUST 16TH THROUGH SEPTEMBER, OCTOBER | ANNUAL RYE |
| NOVEMBER THROUGH FEBRUARY | WINTER RYE |

*** IF FLATPEA IS USED, INCREASE TO 30 LBS./ACRE. ALL LEGUME SEED MUST BE PROPERLY INOCULATED. WEEPING LOVEGRASS MAY ALSO BE INCLUDED IN ANY SLOPE OR LOW-MAINTENANCE MIXTURE DURING WARMER SEEDING PERIODS; ADD 10-20 LBS./ACRE IN MIXES.

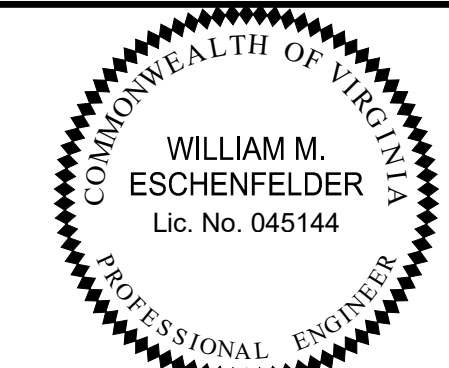


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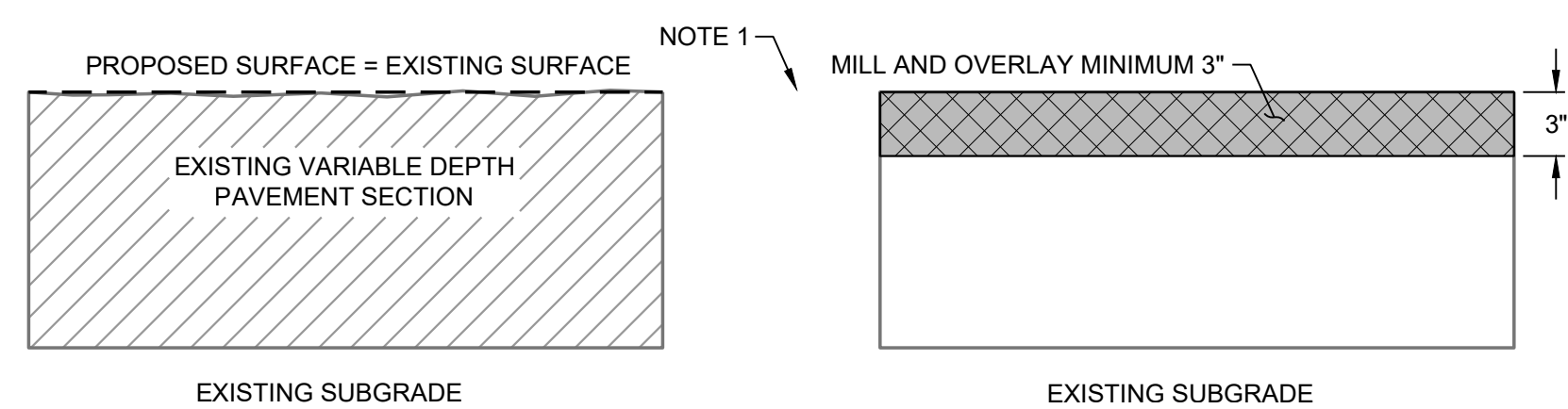


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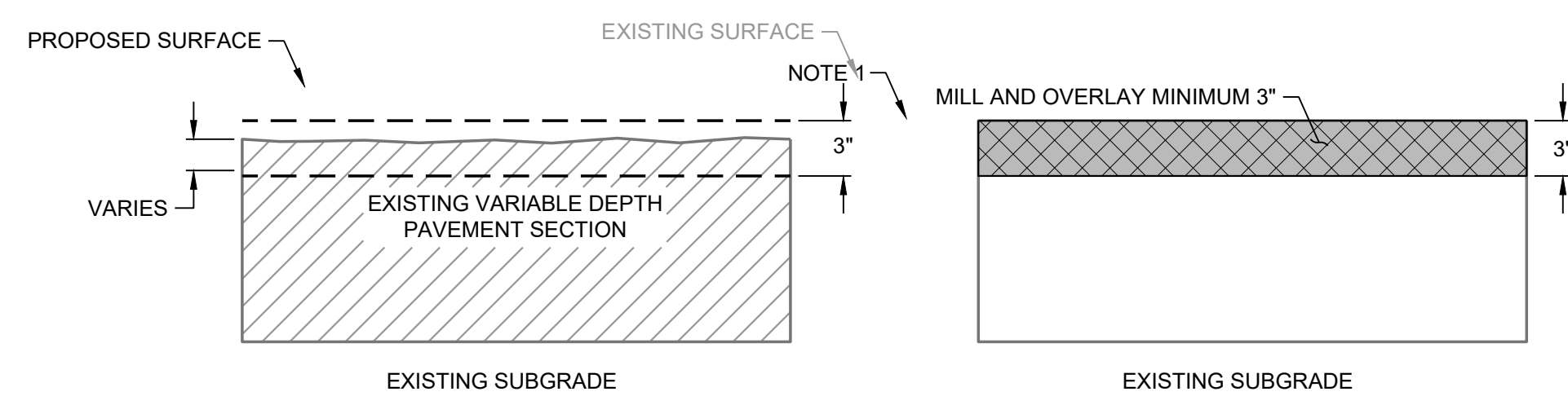
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| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| EROSION & SEDIMENT CONTROL DETAILS | DRAWN BY: PJW | SHEET 28 |
| | DESIGNED BY: WME | OF 60 |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | SCALE: NONE | DATE: MARCH 2025 |

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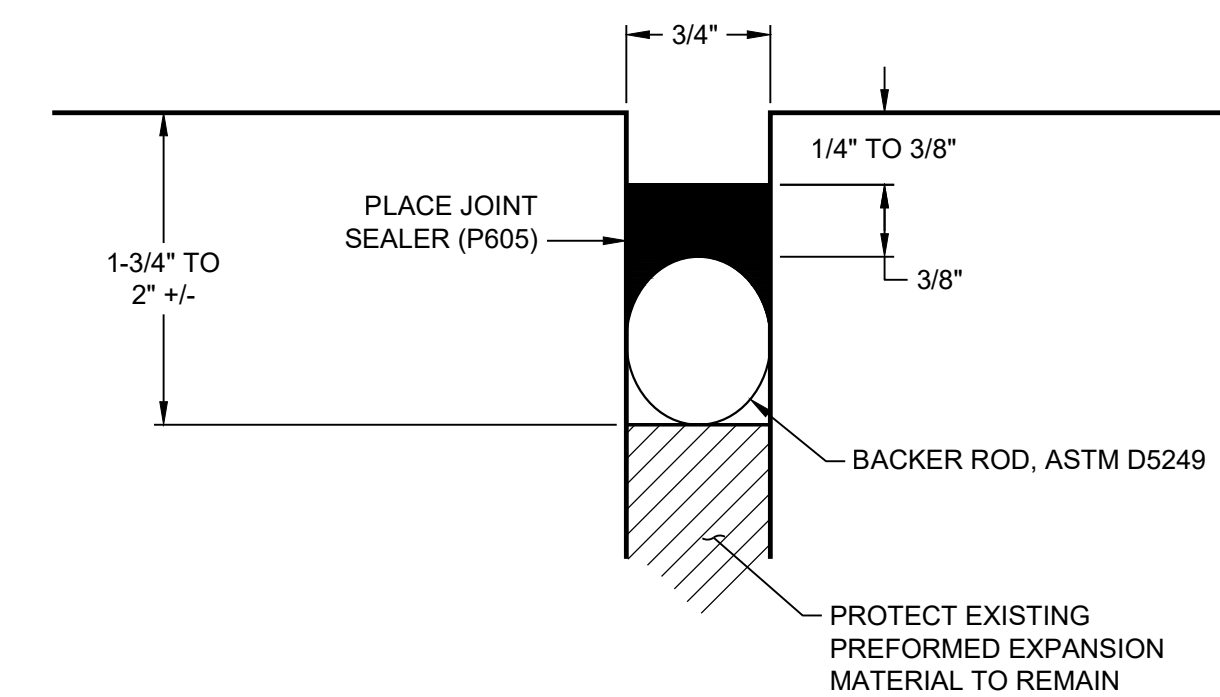
**MILL AND OVERLAY PAVEMENT SECTION
(3" NOMINAL)**

- NOTES:
1. IF SCABBING IS ENCOUNTERED, AN ADDITIONAL 1" OF MILLING MAY BE NECESSARY. ADDITIONAL MILLING SHALL BE INCIDENTAL TO THE MILLING PAY ITEM. ADDITIONAL ASPHALT SHALL BE PAID IN ACCORDANCE WITH THE P-401 SPECIFICATION.



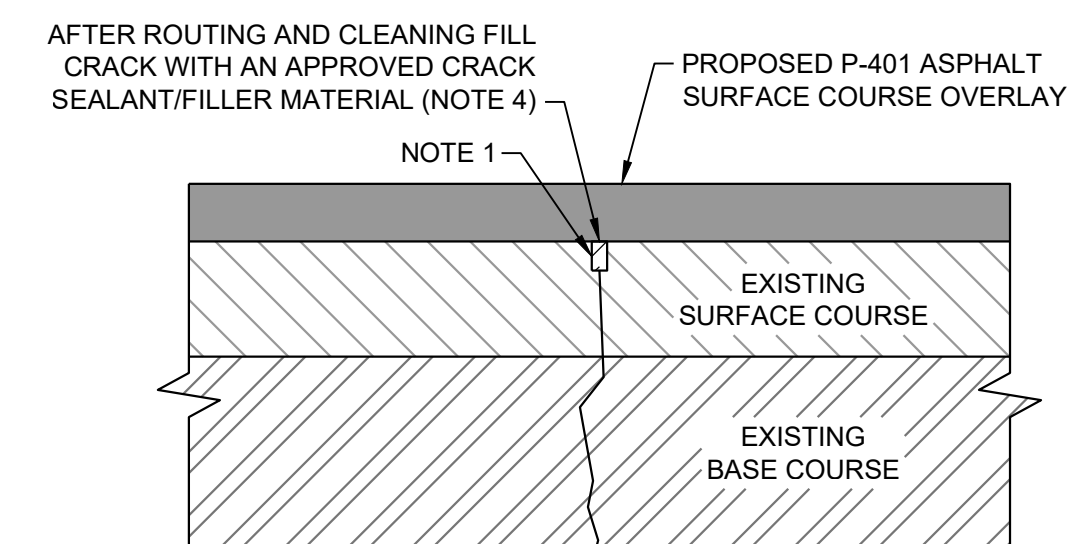
**MILL AND OVERLAY PAVEMENT SECTION
(VARIABLE DEPTH)**

- NOTES:
1. IF SCABBING IS ENCOUNTERED, AN ADDITIONAL 1" OF MILLING MAY BE NECESSARY. ADDITIONAL MILLING SHALL BE INCIDENTAL TO THE MILLING PAY ITEM. ADDITIONAL ASPHALT SHALL BE PAID IN ACCORDANCE WITH THE P-401 SPECIFICATION.
 2. THE CONTRACTOR SHALL SUBMIT A MILLING PLAN TO BE APPROVED BY THE ENGINEER PRIOR TO THE START OF MILLING OPERATIONS.



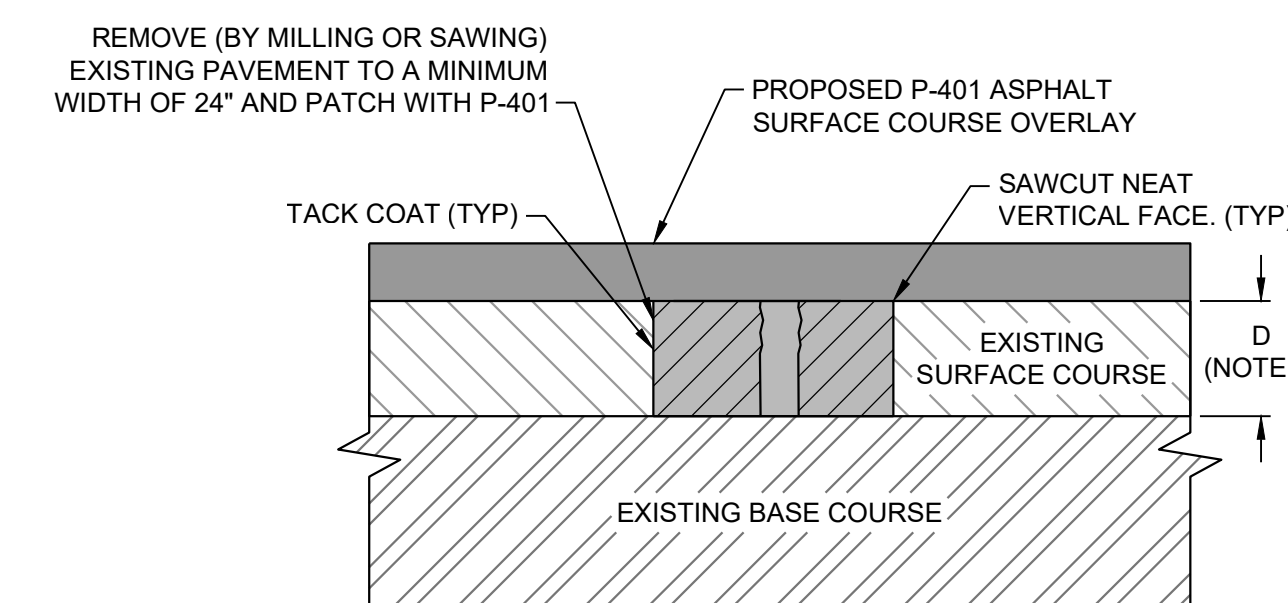
ISOLATION JOINT SEALANT DETAIL
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- NOTES:
1. REFER TO "JOINT SEAL AND EXPANSION MATERIAL NOTES" FOR ADDITIONAL INFORMATION.
 2. JOINT DEPTH TO BE DETERMINED FOLLOWING MANUFACTURER'S RECOMMENDATIONS (ASPECT RATIO).
 3. IF PAVEMENT IS TO BE GROOVED OR DIAMOND GRINDED AFTER PLACEMENT OF SEALANT, INCREASE ALL DEPTHS BY DEPTH OF GROOVE OR GRIND.



**CRACK REPAIR DETAIL (TYPE A)
(> 1/4" WIDTH, ≤ 1-1/2" WIDTH)**

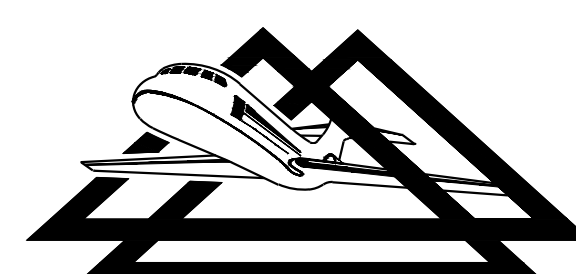
- NOTES:
1. CRACKS SHALL BE ROUTED FULL DEPTH, 2" MINIMUM. MINIMUM ROUTED WIDTH 3/4".
 2. CRACK PREPARATION, ROUTING (IF REQUIRED), CRACK SEALANT/FILLER, ETC. INCLUDED WITH CRACK REPAIR (P-101).
 3. REMOVE ANY VEGETATION, DIRT, DAMPNESS, AND LOOSE MATERIAL FROM CRACKS. APPLY HERBICIDE BEFORE FILLING.
 4. CRACK FILLER SHALL COMPLY WITH ASTM D6690, TYPE III AND SHALL BE CRAFCO ROADSAVER 222, W.R. MEADOWS SEALTIGHT 3405, P&T PRODUCTS DURA-FILL 3405, OR EQUIVALENT APPROVED BY THE ENGINEER. AS AN ALTERNATIVE, A FLOWABLE NON-SHRINK, NON-METALLIC, GROUT SHALL BE USED. GROUT SHALL PROVIDE A MINIMUM OF 90 PERCENT FILLED VOIDS.



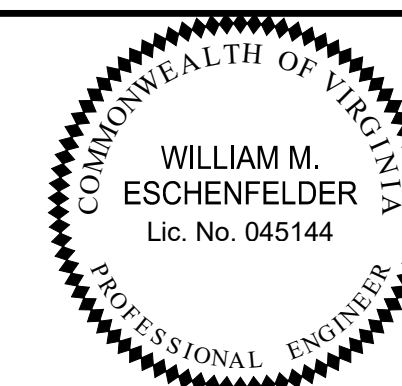
**CRACK REPAIR DETAIL (TYPE B)
(> 1-1/2" WIDTH)**

- NOTES:
1. COMPACT ASPHALT CONCRETE PATCH WITH MECHANICAL COMPACTOR (LOWER LIFTS) OR ROLLER (TOP LIFT).
 2. PAVEMENT REMOVAL (MILLING) AND BITUMINOUS PATCH INCLUDED IN UNIT PRICE PER LINEAR FOOT FOR "JOINT AND CRACK REPAIR (TYPE B)".
 3. DEPTH SHALL BE 6" OR THE FULL DEPTH OF THE COURSE, WHICHEVER IS LESS.
 4. IF CRACK EXTENDS INTO BASE COURSE, NON-SHRINK GROUT SHALL BE USED TO FILL THE VOID.

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| PAVEMENT DETAILS | | DRAWN BY: PJW | SHEET 29 |
| | | DESIGNED BY: WME | OF 60 |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | | SCALE: NONE | DATE: MARCH 2025 |

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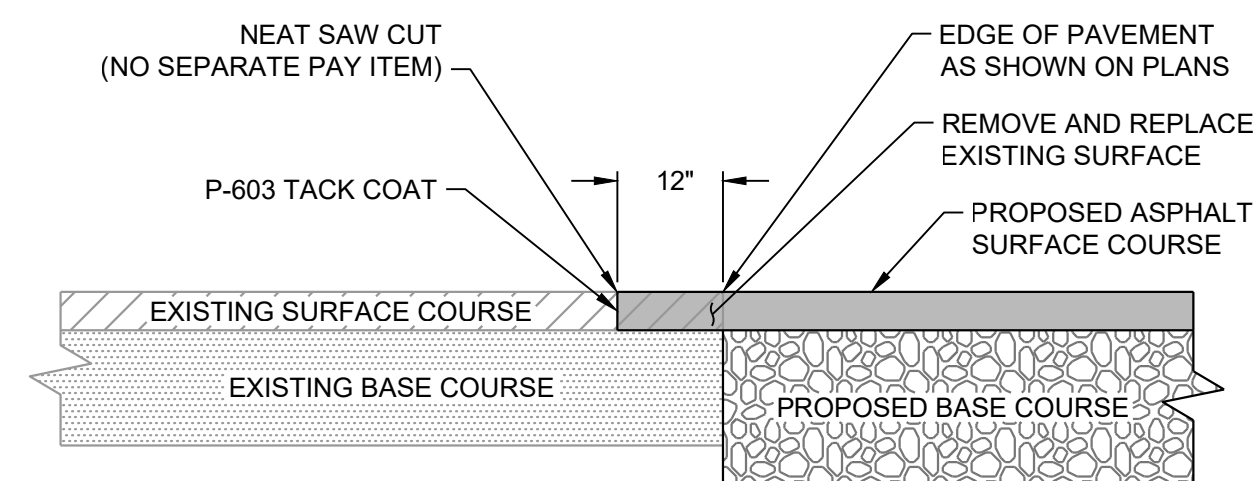
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| SURFACE TYPE | RESIDUAL RATE, GAL/SY | EMULSION APPLICATION BAR RATE, GAL/SY |
|------------------|-----------------------|---------------------------------------|
| NEW ASPHALT | 0.02 - 0.05 | 0.03 - 0.07 |
| EXISTING ASPHALT | 0.04 - 0.07 | 0.06 - 0.11 |
| MILLED SURFACE | 0.04 - 0.08 | 0.06 - 0.12 |

TACK COAT APPLICATION RATES

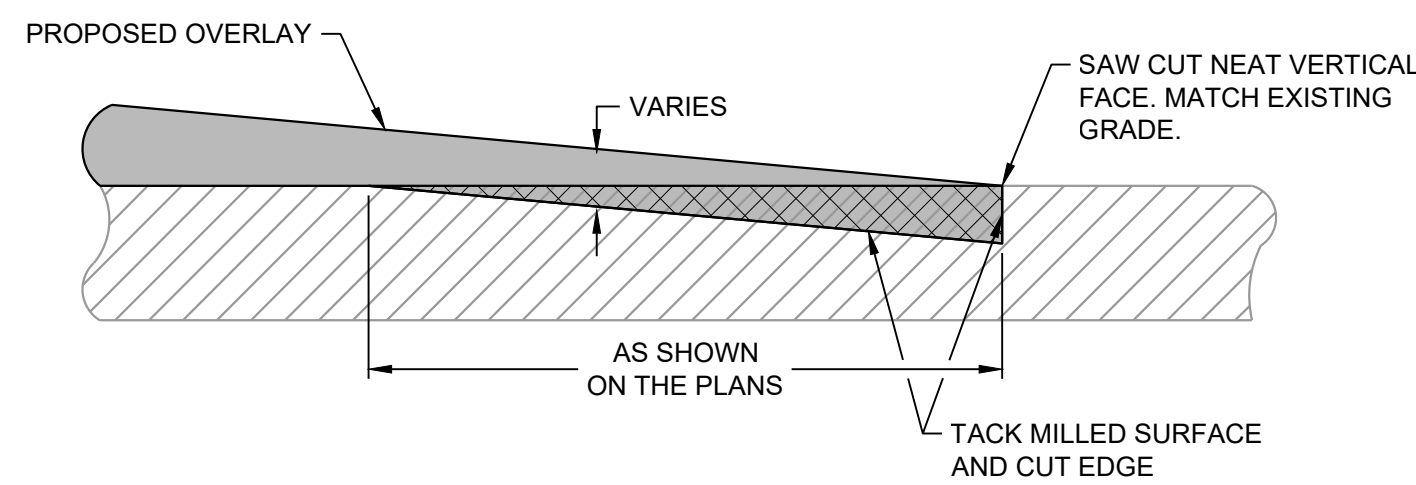
NOTE:

- REFERENCE IS DIRECTED TO ITEM P-603 OF THE SPECIFICATIONS FOR ADDITIONAL DETAILS.



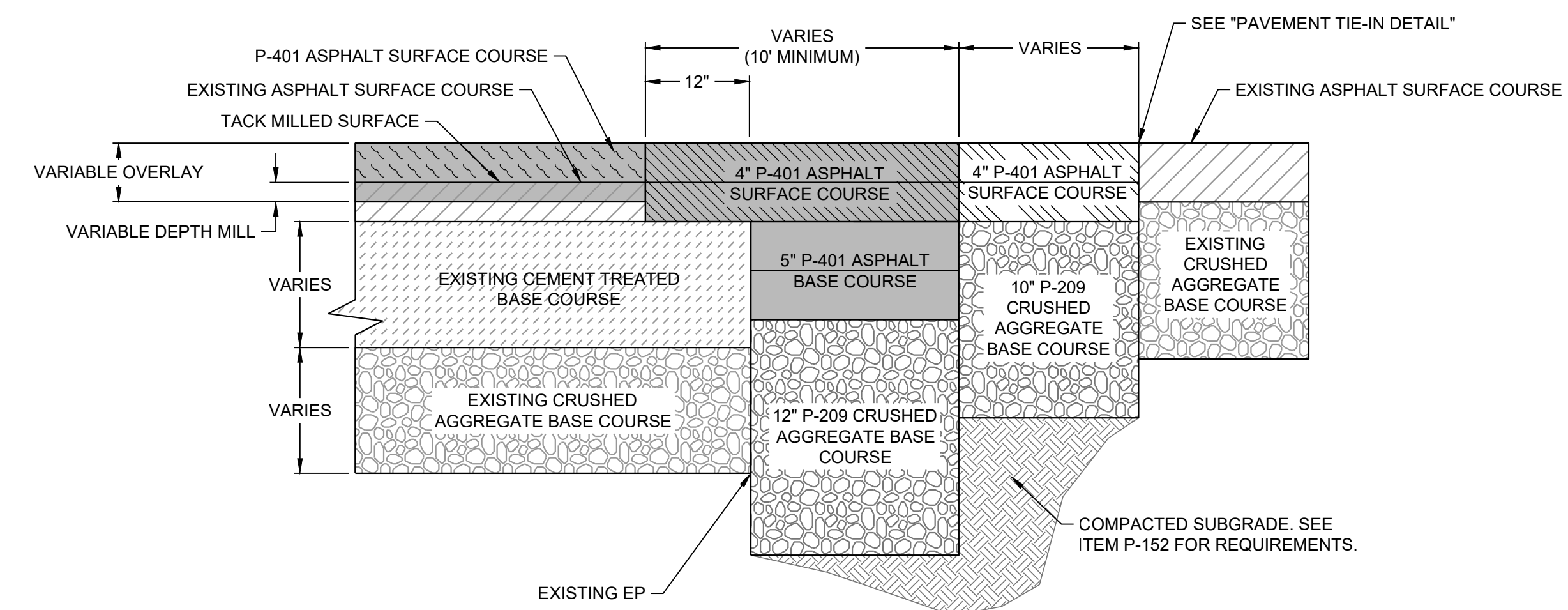
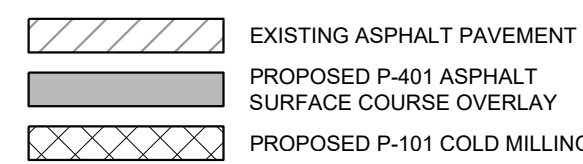
PAVEMENT TIE-IN DETAIL

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OVERLAY TIE-IN DETAIL

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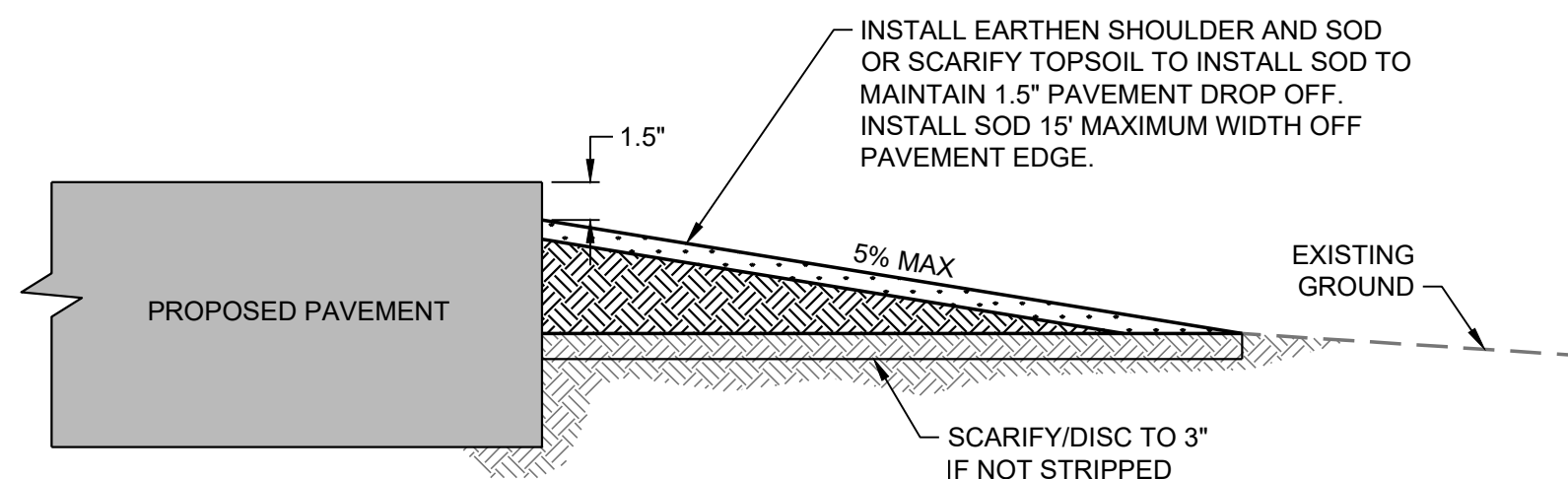


SECTION C-C (PAVED ISLAND TIE-IN)

NTS

NOTES:

- PLACE TACK COAT BETWEEN LIFTS OF P-401 ASPHALT SURFACE COURSE. SEE "TACK COAT APPLICATION RATES" TABLE AND ITEM P-603 OF THE SPECIFICATIONS.
- IF ORDERED BY THE ENGINEER, THE CONTRACTOR SHALL UNDERCUT THE SUBGRADE TO REMOVE SOFT OR YIELDING MATERIAL.

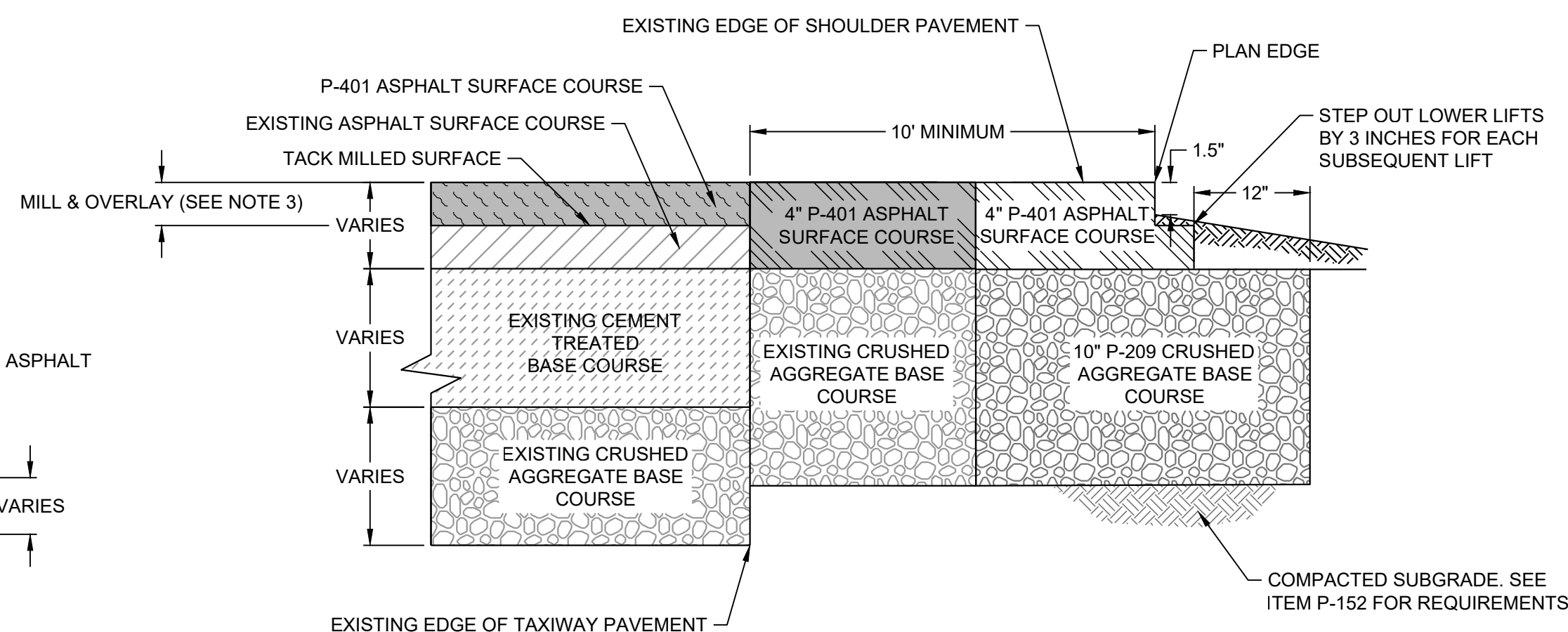


EDGE OF PAVEMENT TIE-IN DETAIL

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NOTES:

- SODDING SHALL BE IN ACCORDANCE WITH ITEM T-904 OF THE SPECIFICATIONS.
- PAYMENT FOR SODDING SHALL BE IN ACCORDANCE WITH ITEM T-904 OF THE SPECIFICATIONS.
- SOD TO BE INSTALLED ALONG LOCATIONS OF EDGE DRAIN INSTALLATION AND ON ANY DISTURBED AREAS ADJACENT TO PAVEMENT.

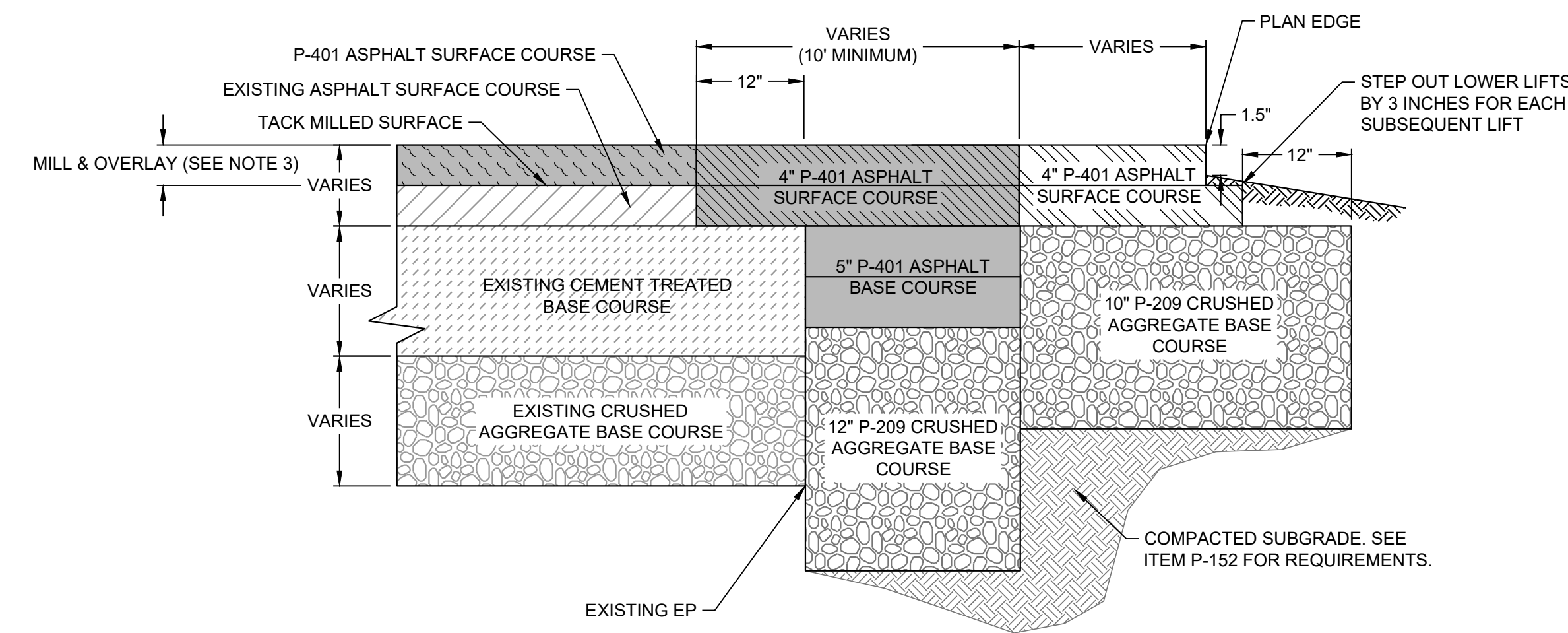


SECTION B-B TIE IN

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NOTES:

- PLACE TACK COAT BETWEEN LIFTS OF P-401 ASPHALT SURFACE COURSE. SEE "TACK COAT APPLICATION RATES" TABLE AND ITEM P-603 OF THE SPECIFICATIONS.
- IF ORDERED BY THE ENGINEER, THE CONTRACTOR SHALL UNDERCUT THE SUBGRADE TO REMOVE SOFT OR YIELDING MATERIAL.
- 3" MILL AND OVERLAY IS SHOWN. REFER TO GEOMETRIC AND GRADING AND DRAINAGE LAYOUT FOR MILLING AND OVERLAY DEPTHS.

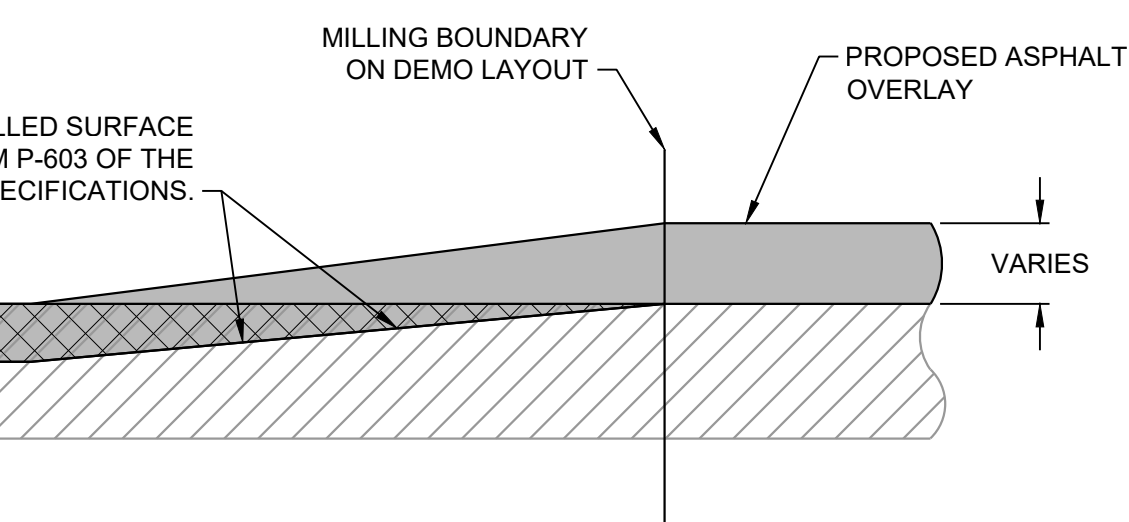


SECTION A-A TIE IN

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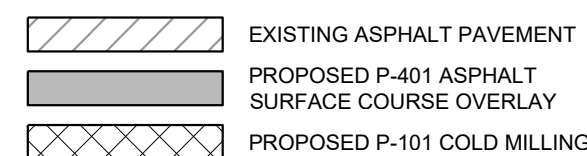
NOTES:

- PLACE TACK COAT BETWEEN LIFTS OF P-401 ASPHALT SURFACE COURSE. SEE "TACK COAT APPLICATION RATES" TABLE AND ITEM P-603 OF THE SPECIFICATIONS.
- IF ORDERED BY THE ENGINEER, THE CONTRACTOR SHALL UNDERCUT THE SUBGRADE TO REMOVE SOFT OR YIELDING MATERIAL.
- 3" MILL AND OVERLAY IS SHOWN. REFER TO GEOMETRIC AND GRADING AND DRAINAGE LAYOUT FOR MILLING AND OVERLAY DEPTHS.



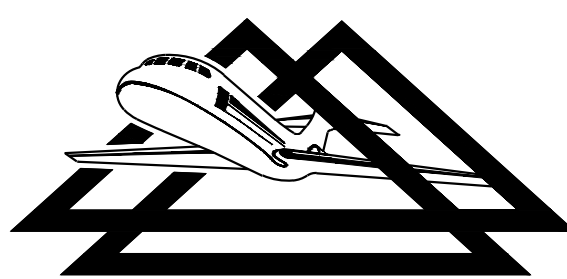
OVERLAY TRANSITION DETAIL

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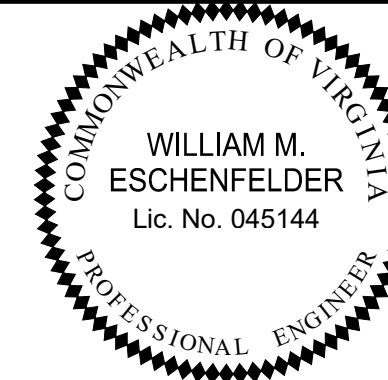


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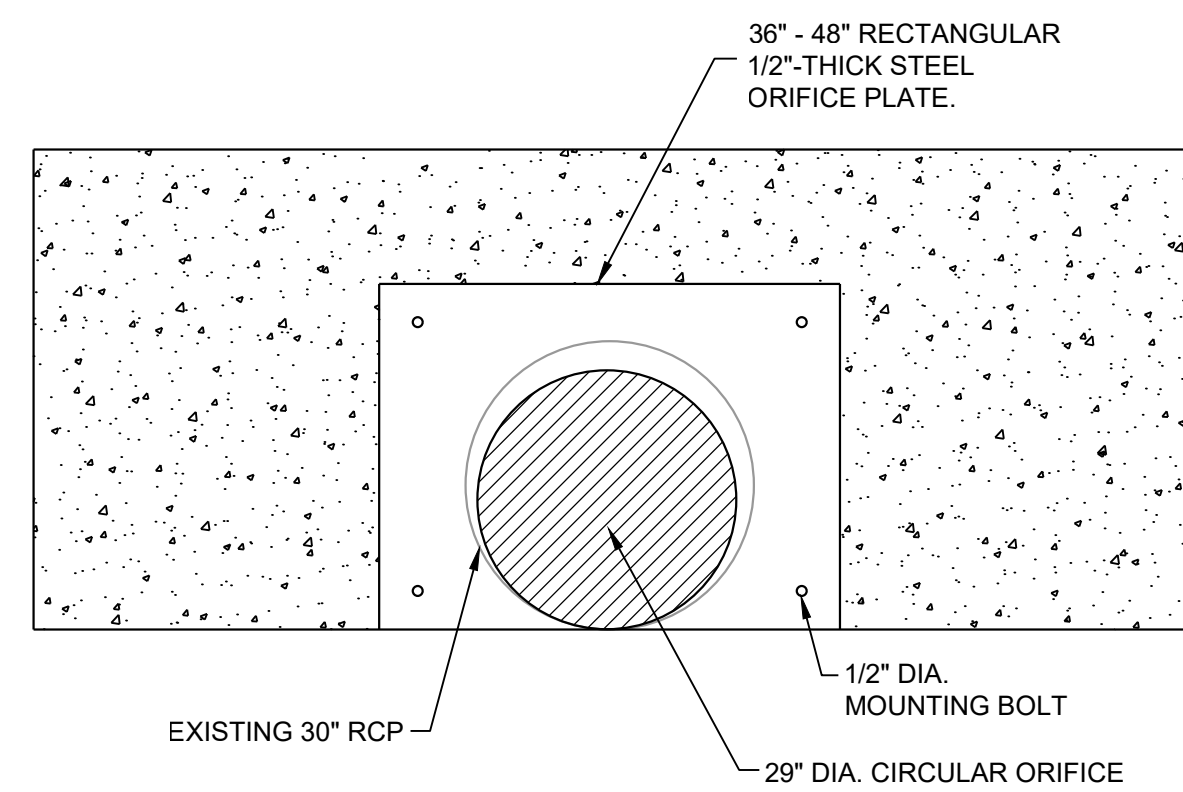
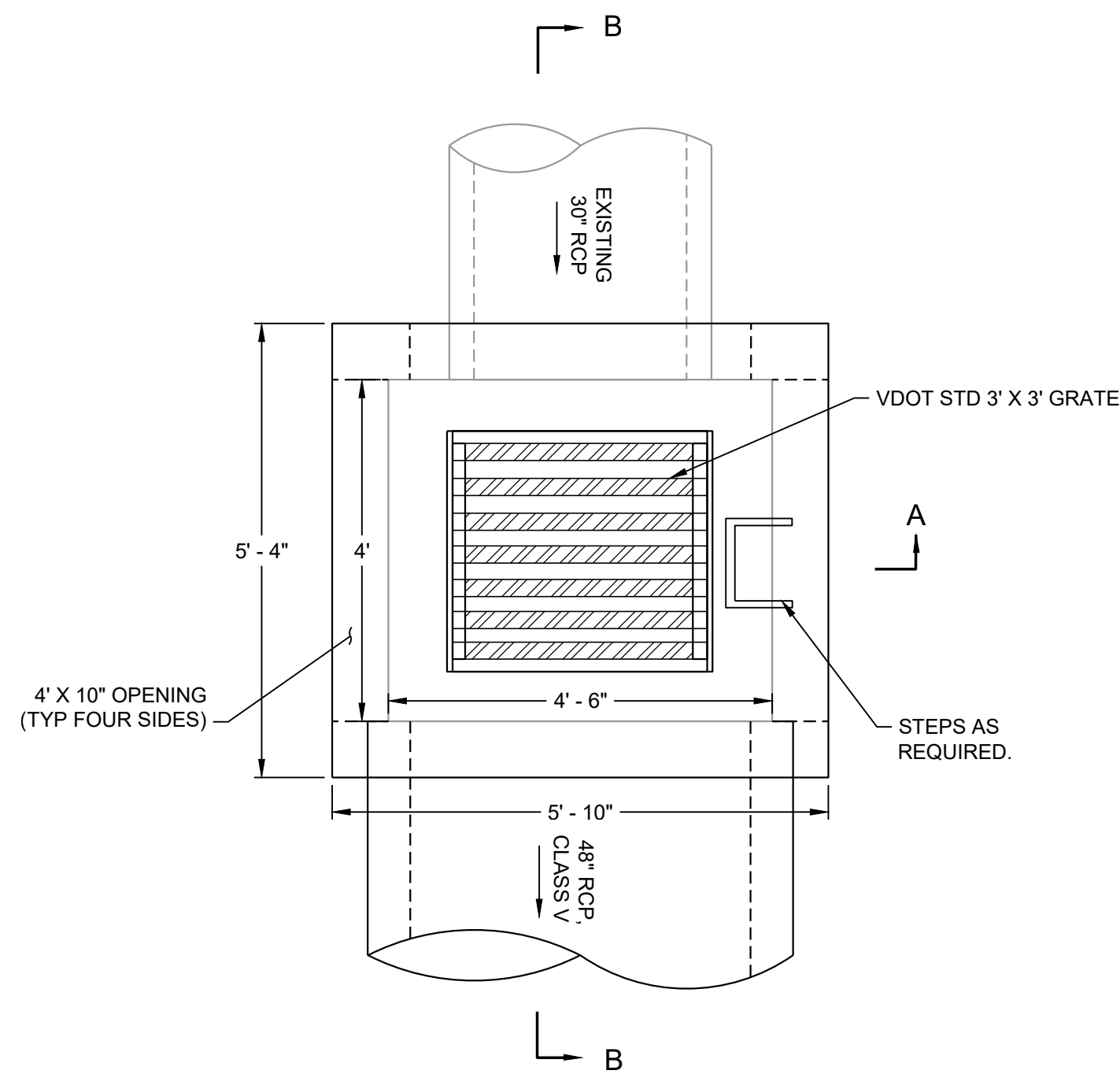
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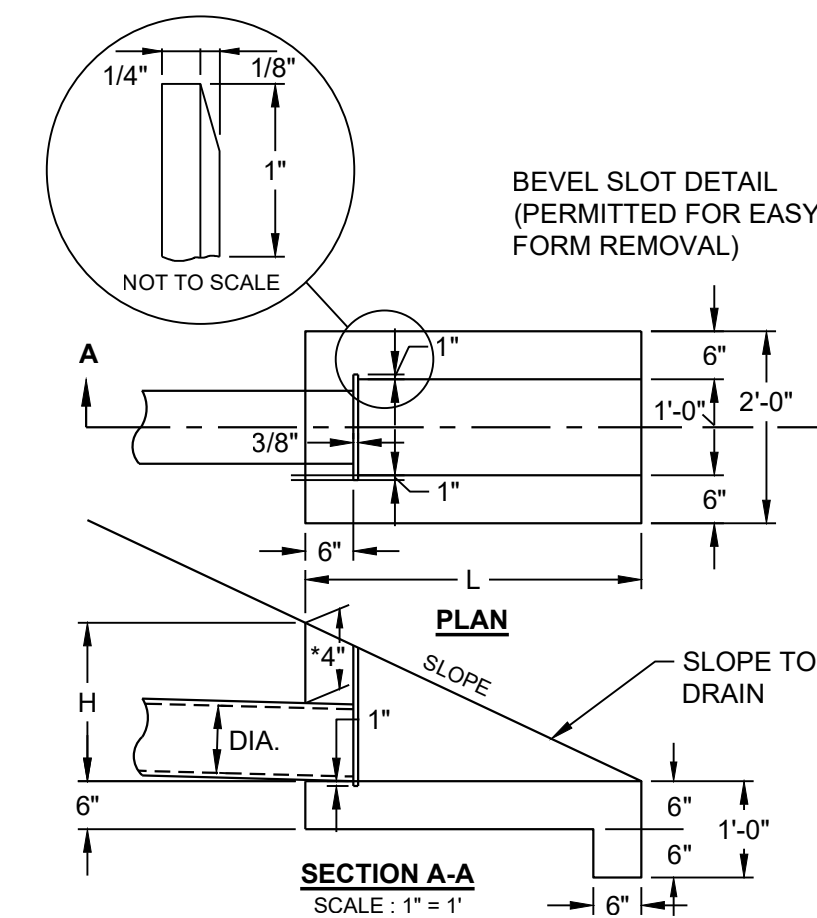
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| | | DESIGNED BY: WME | OF 60 |
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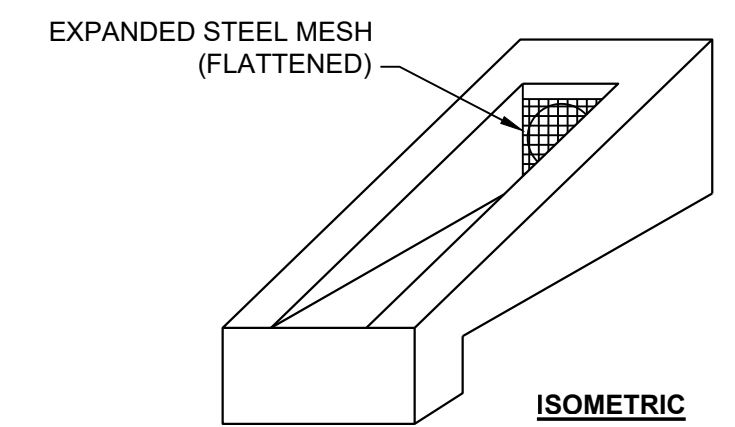


ORIFICE PLATE DETAIL
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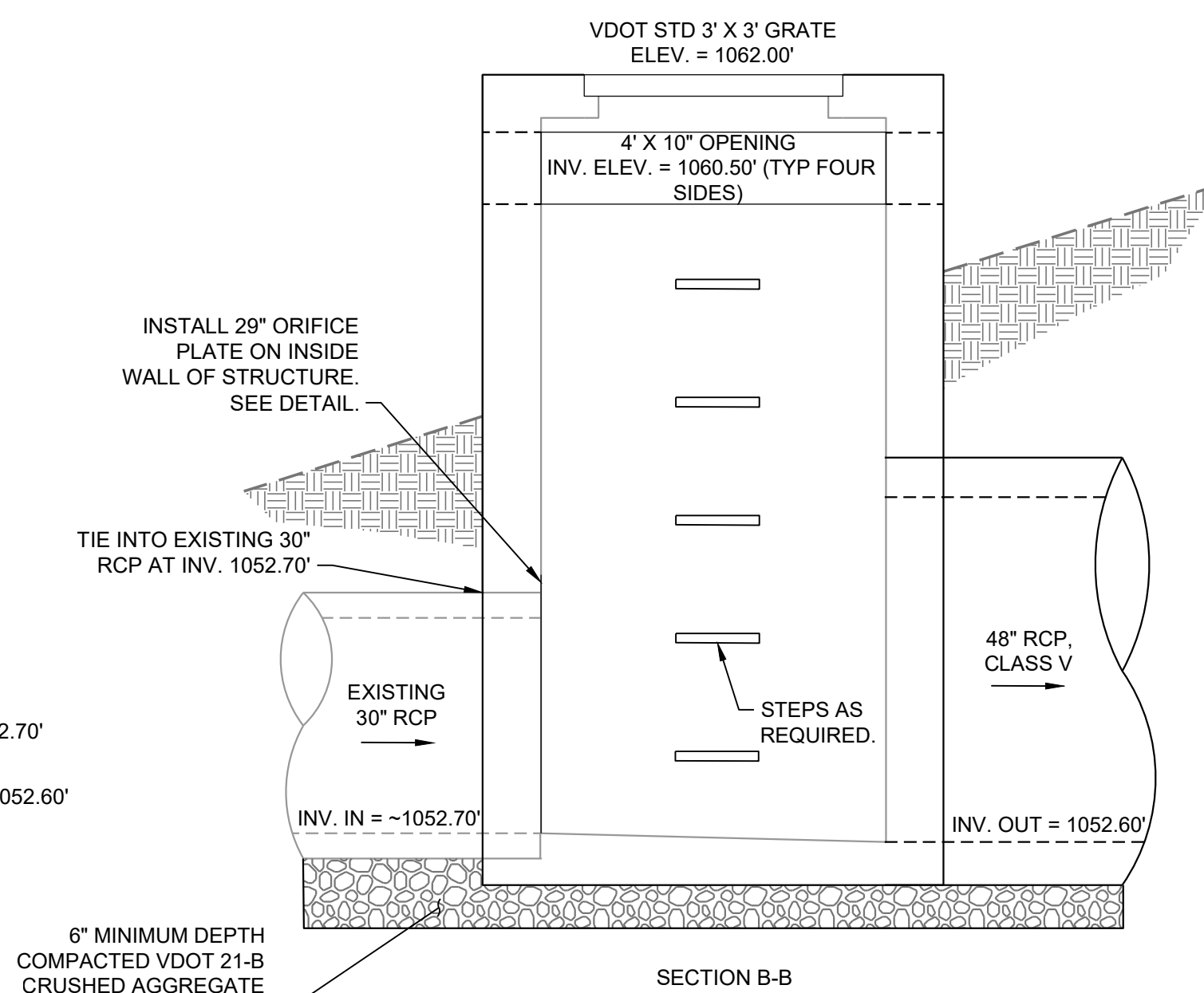
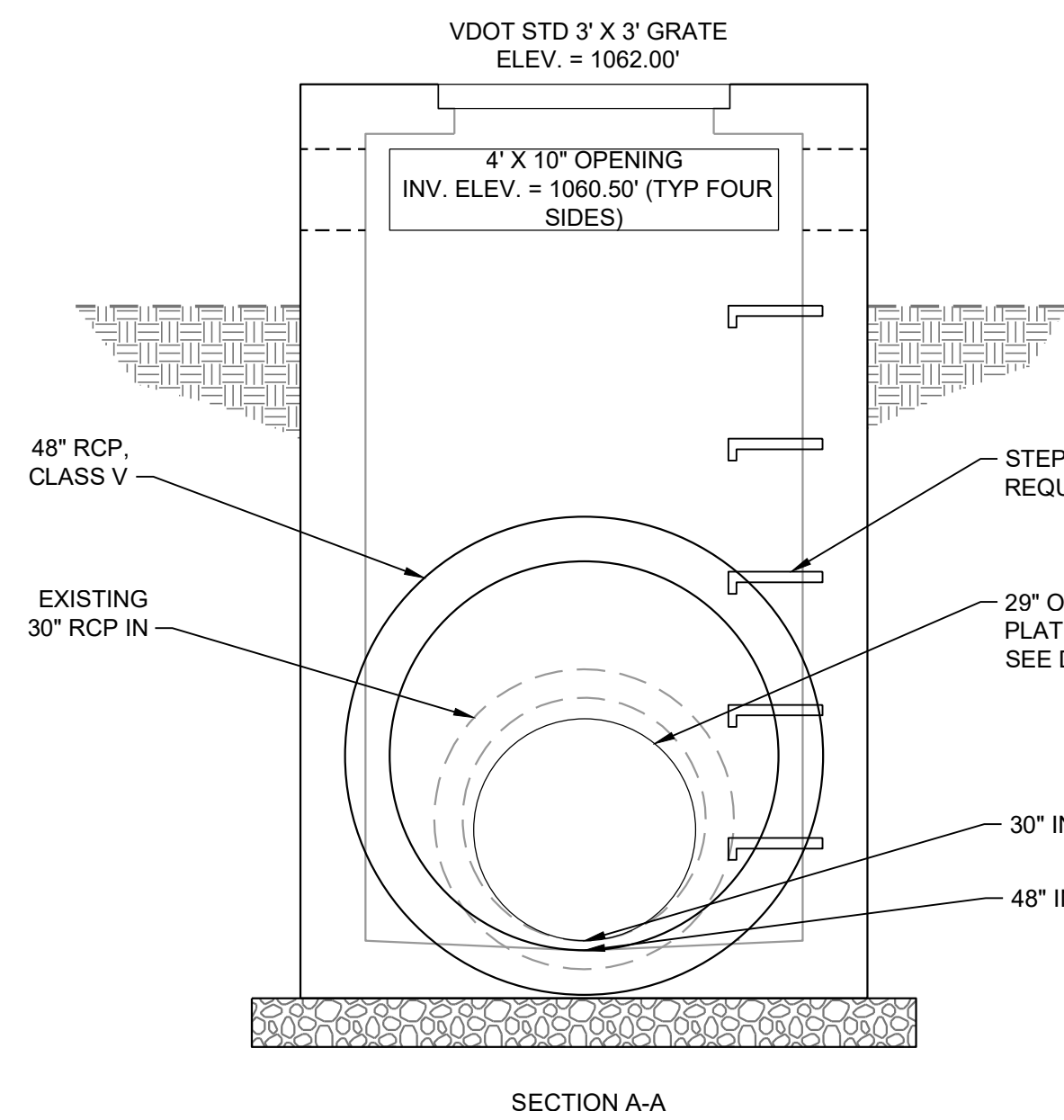


- NOTES:
1. TYPICAL ENDWALL TO BE PLACED AT THE ENDS OF ALL UNDERDRAIN OUTLETS. ENDWALL TO BE INSTALLED PERPENDICULAR TO ROADWAY AND FLUSH WITH THE SLOPE.
 2. OUTLET PIPES SHALL BE RIGID NONPREFORATED, SMOOTH BOREPIPE, MEETING THE REQUIREMENTS OF AASHTO M-252.
 3. EXPANDED STEEL MESH (FLATTENED) SHALL HAVE OPENINGS OF APPROX. 1/2"x1" AND WEIGH APPROX. 0.82 PER SQ. FT. MESH SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A-123. THE MESH SHALL EXTEND A MINIMUM OF 1" ABOVE THE O.D. OF THE PIPE, AND IS A BARRIER FOR RODENTS, ETC. THE SLOT FOR THE STEEL MESH IS TO BE CONSTRUCTED SO THAT THE MESH CAN BE REMOVED FOR CLEANOUT PURPOSES.

| PIPE DIA. | SLOPE | DIMENSIONS | | 3,000 PSI CONCRETE CU. YD. |
|-----------|-------|------------|-----------|----------------------------|
| | | L | H | |
| 4" | 2:1 | 2'-5 1/2" | 1'-2 3/4" | 0.17 |
| 4" | 4:1 | 4'-5" | 1'-1 1/4" | 0.28 |
| 6" | 2:1 | 2'-10 1/2" | 1'-5 1/4" | 0.21 |
| 6" | 4:1 | 5'-3" | 1'-3 3/4" | 0.35 |

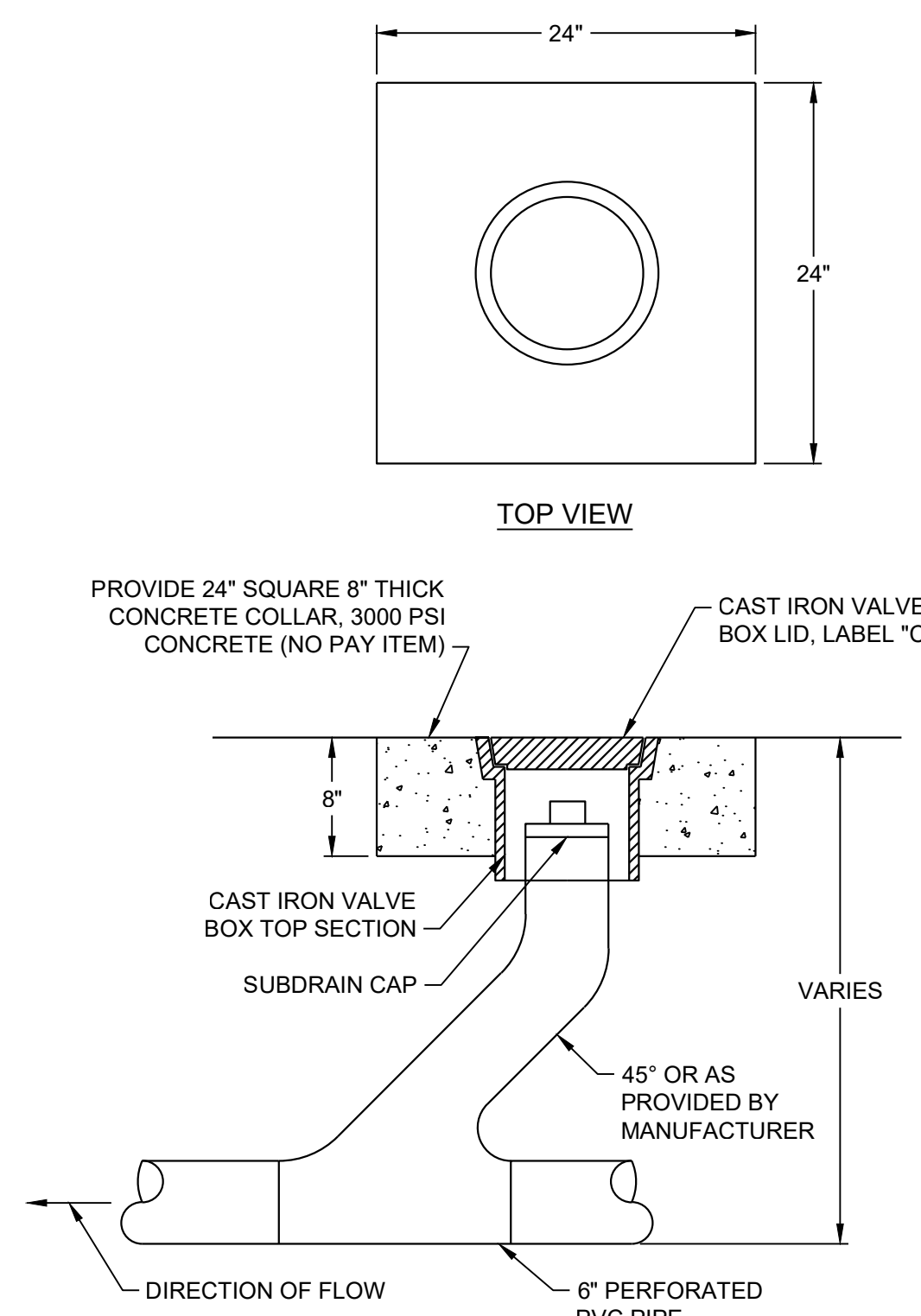


ENDWALL FOR UNDERDRAIN
NTS



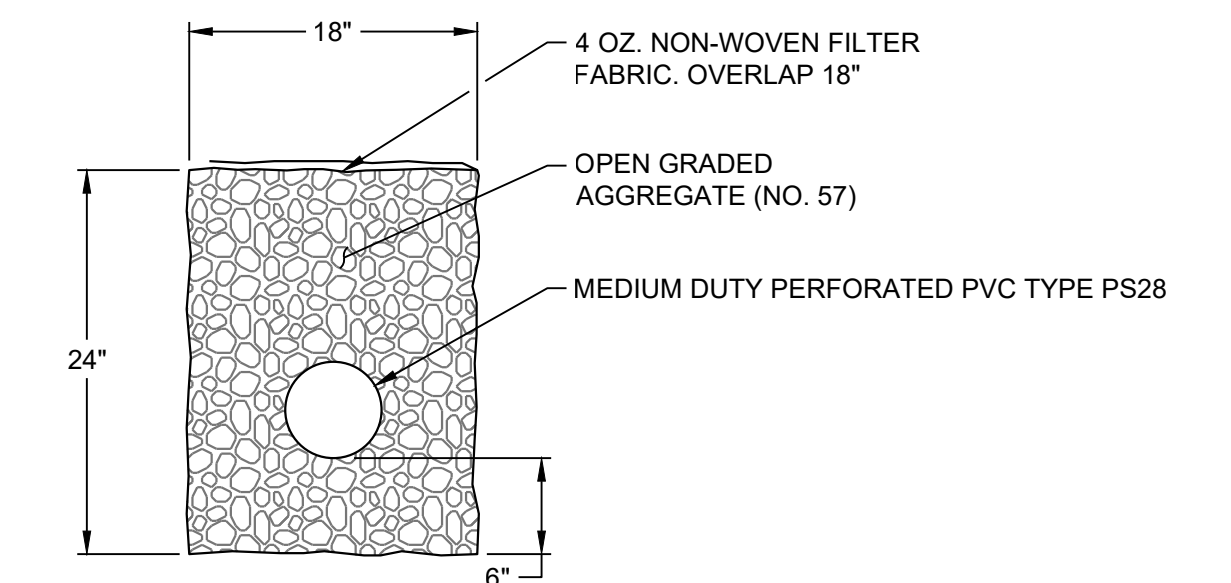
STORMWATER MANAGEMENT STRUCTURE (D101)
NTS

- NOTES:
1. CONSTRUCTION AND STEEL REINFORCING SHALL BE IN CONFORMANCE WITH ASTM C478 REQUIREMENTS.
 2. CONCRETE SHALL BE 3000 PSI MINIMUM.
 3. THE CONTRACTOR SHALL SUBMIT SHOP DRAWING DESIGNS (INCLUDING STRUCTURAL CALCULATIONS AND ASSUMPTIONS) SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE COMMONWEALTH OF VIRGINIA FOR THE PROPOSED STRUCTURE.
SEALED SHOP DRAWING OF STRUCTURE SHALL INCLUDE OR SHOW, AS A MINIMUM:
 - STEEL REINFORCEMENT SIZES AND SPACING
 - CONCRETE WALL, BASE AND SLAB THICKNESS
 - ROUGH PIPE OPENINGS AND THEIR INVERTS
 - FINISHED FLOW LINE INVERTS
 - STEP LOCATION WITH RESPECT TO LID OR GRATE
 - CERTIFICATION THAT STRUCTURE MEETS ASTM C478 REQUIREMENTS
 - DESIGN LOADING: H20 LOADING
 4. THE CONTRACTOR SHALL INSTALL STANDARD STEPS IN ALL MANHOLES AND DROP INLETS.
 5. THE CONTRACTOR SHALL INSTALL INLET SHAPING AS REQUIRED TO PROVIDE POSITIVE DRAINAGE WITHIN THE STRUCTURE.
 6. NO SEPARATE MEASUREMENT WILL BE MADE FOR THE ABOVE REFERENCED ITEMS.



UNDERDRAIN CLEANOUT DETAIL
NTS

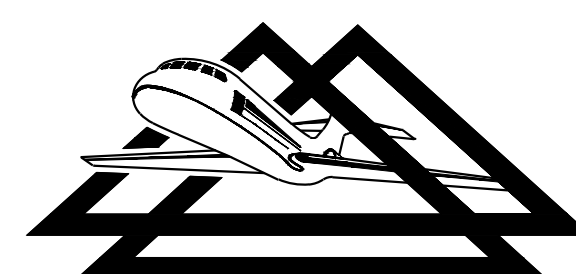
- NOTES:
1. CLEANOUTS TO BE ON 100' CC MAX SPACING, BENDS, OR AS SHOWN ON THE PLANS.
 2. THE COST OF THE CLEANOUTS IS TO BE INCLUDED IN THE LINEAR FOOT PRICE FOR THE UNDERDRAIN.



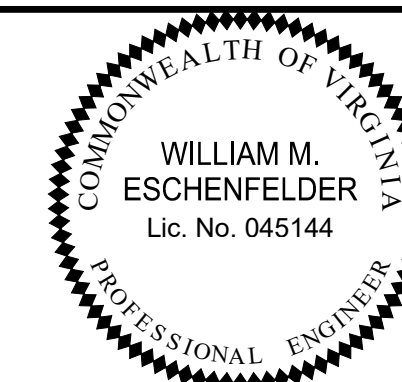
UNDERDRAIN DETAIL
NTS

- NOTES:
1. UNDERDRAIN TO BE INSTALLED AT LOCATIONS AS ORDERED BY THE ENGINEER.
 2. PIPE ENDS SHALL BE COVERED WITH 3/4" x 3/4" MESH, 17 GAUGE, GALVANIZED HARDWARE CLOTH, SECURELY FASTENED.
 3. PIPE SHALL CONFORM TO THE REQUIREMENTS OF ASTM F758, TYPE PS-28.
 4. PERFORATIONS SHALL BE IN ACCORDANCE WITH ASTM F758, "STANDARD SPECIFICATION FOR SMOOTHWALL POLY (VINYL CHLORIDE) (PVC) PLASTIC UNDERDRAIN SYSTEMS FOR HIGHWAY, AIRPORT, AND SIMILAR DRAINAGE."

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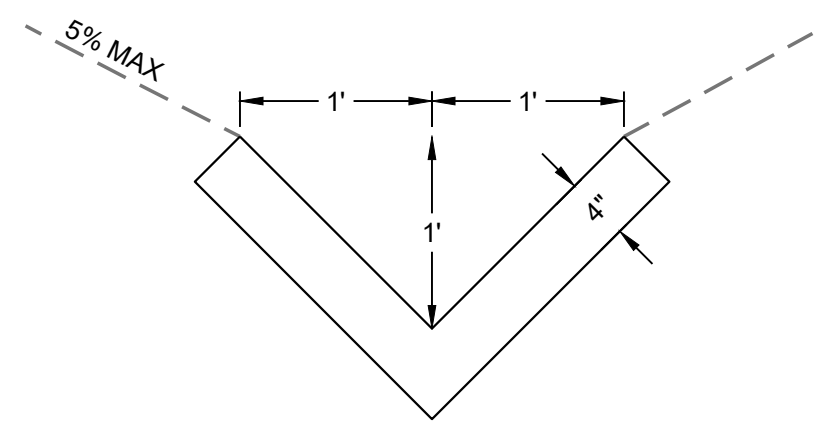


REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4
DRAINAGE DETAILS
ROANOKE-BLACKSBURG REGIONAL AIRPORT

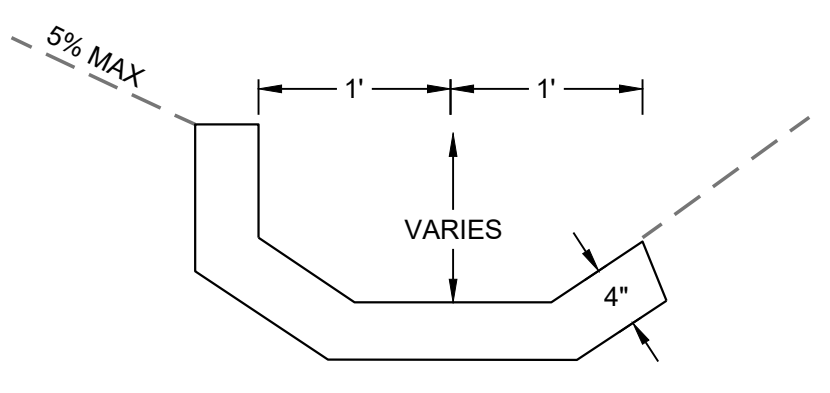
AIP NO.
3-51-0045-071-2024
DRAWN BY: PJW
DESIGNED BY: WME
SCALE: NONE
DATE: MARCH 2025

JOB NO.
23078
SHEET
OF
31
OF
60

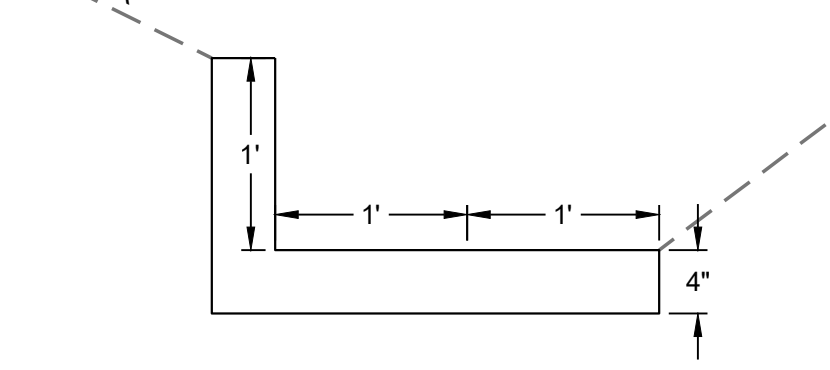
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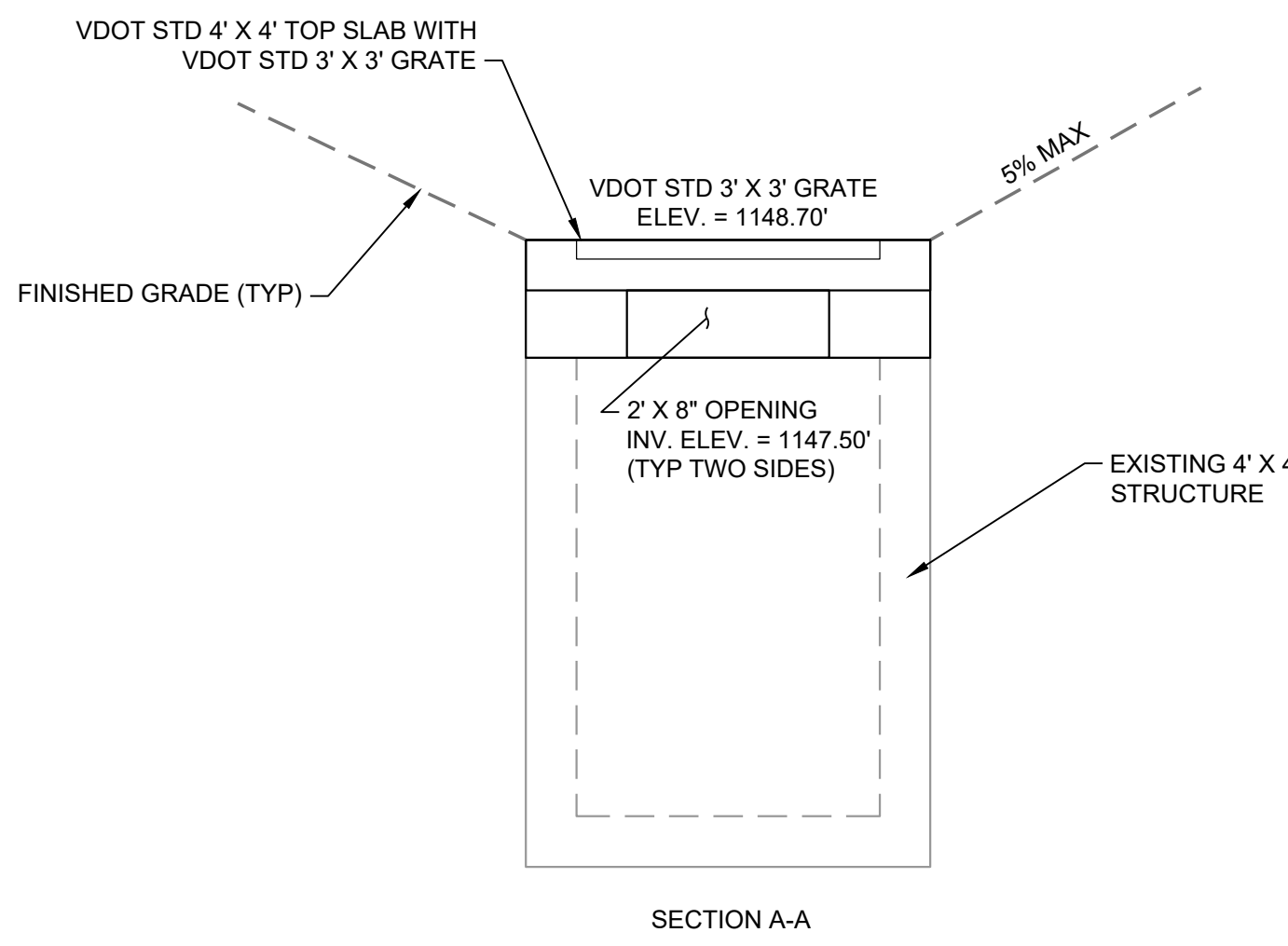
SECTION AA
STANDARD V-DITCH SECTION



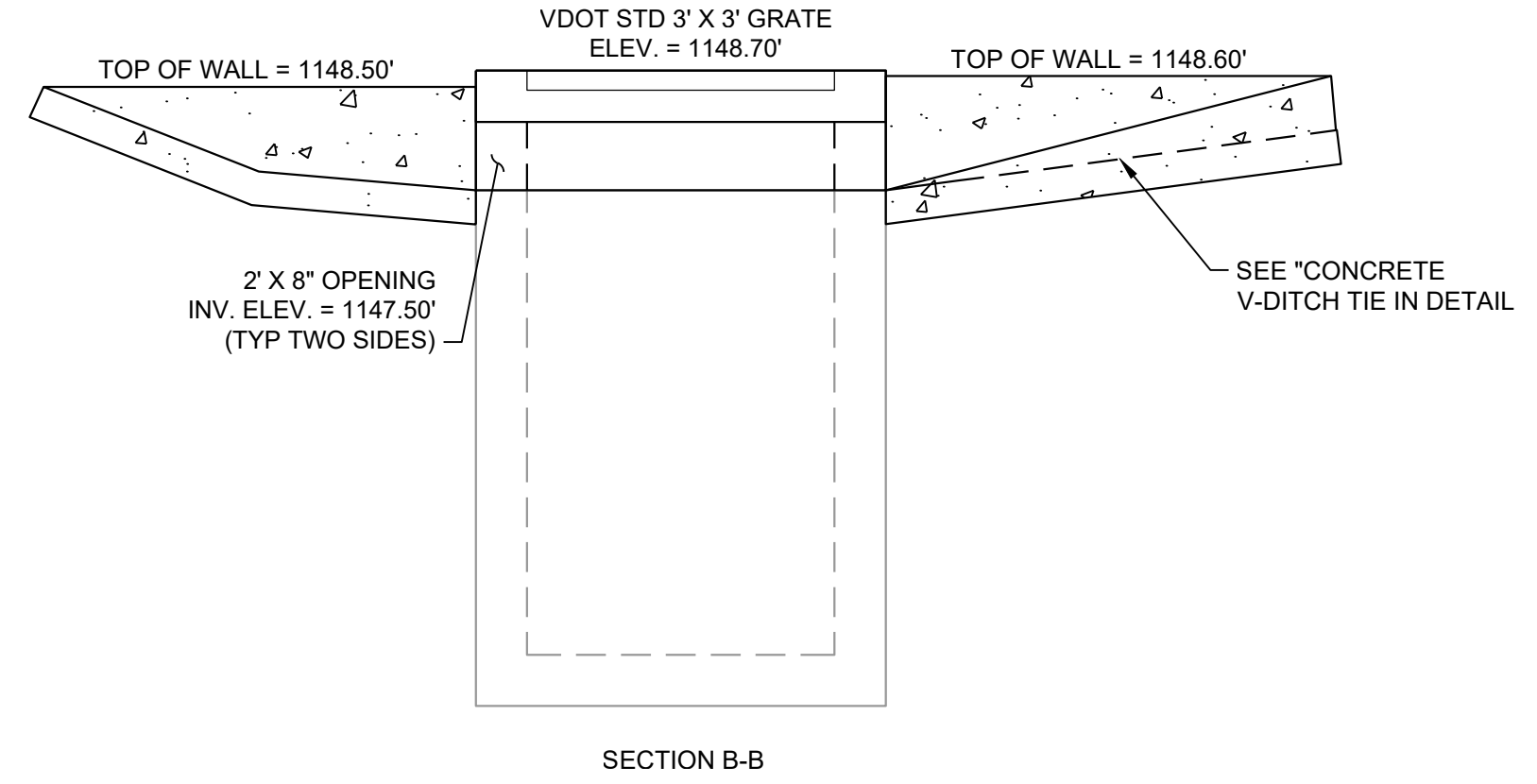
SECTION BB
V-DITCH TRANSITION SECTION



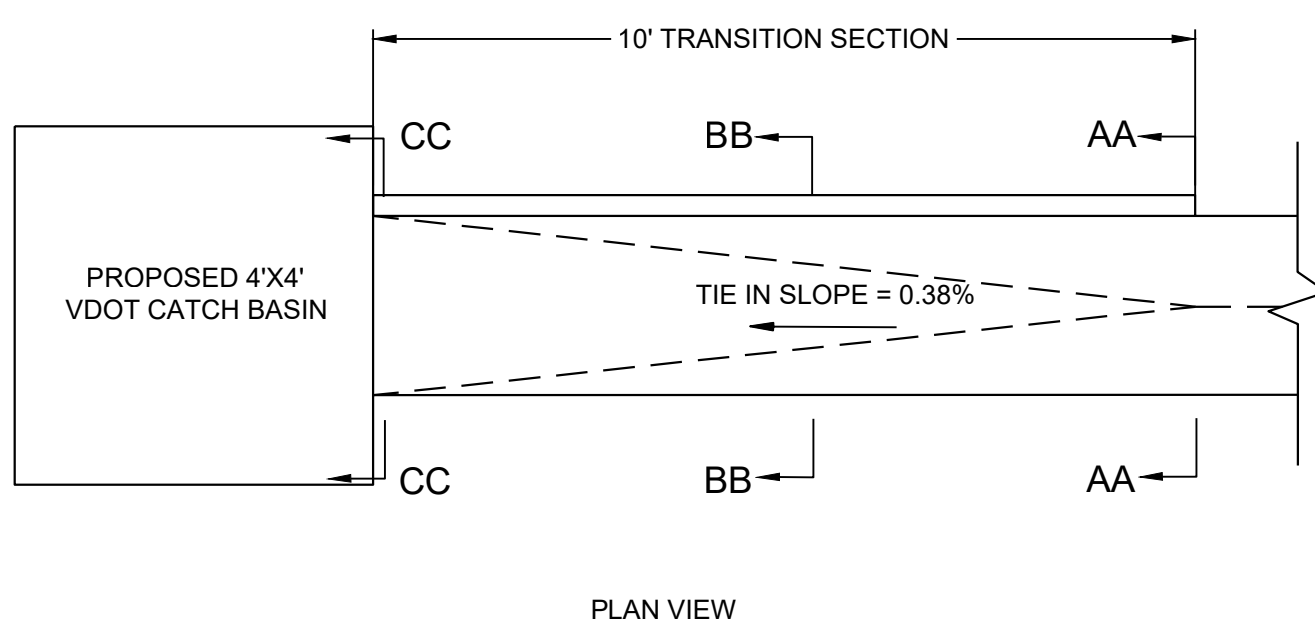
SECTION CC
V-DITCH TIE IN SECTION



SECTION A-A



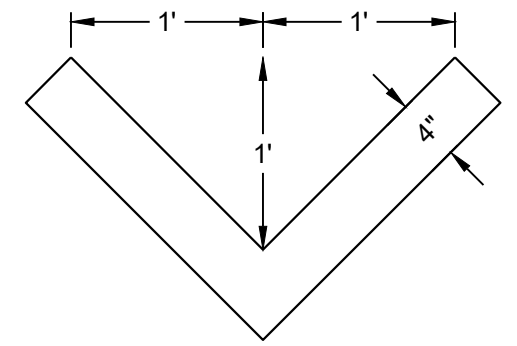
SECTION B-B



PLAN VIEW

CONCRETE V-DITCH TIE IN DETAIL

NTS

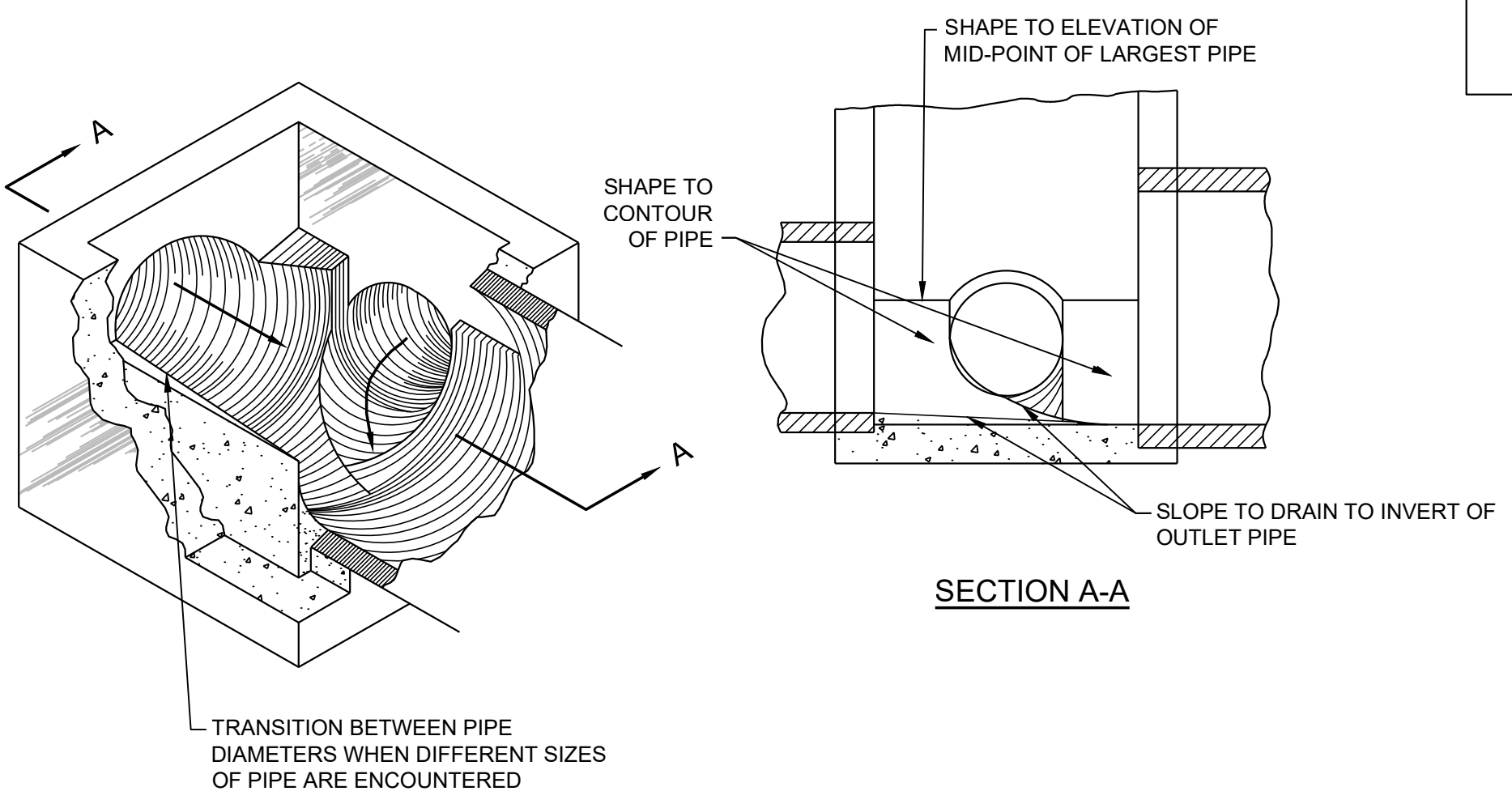


CONCRETE V-DITCH DETAIL

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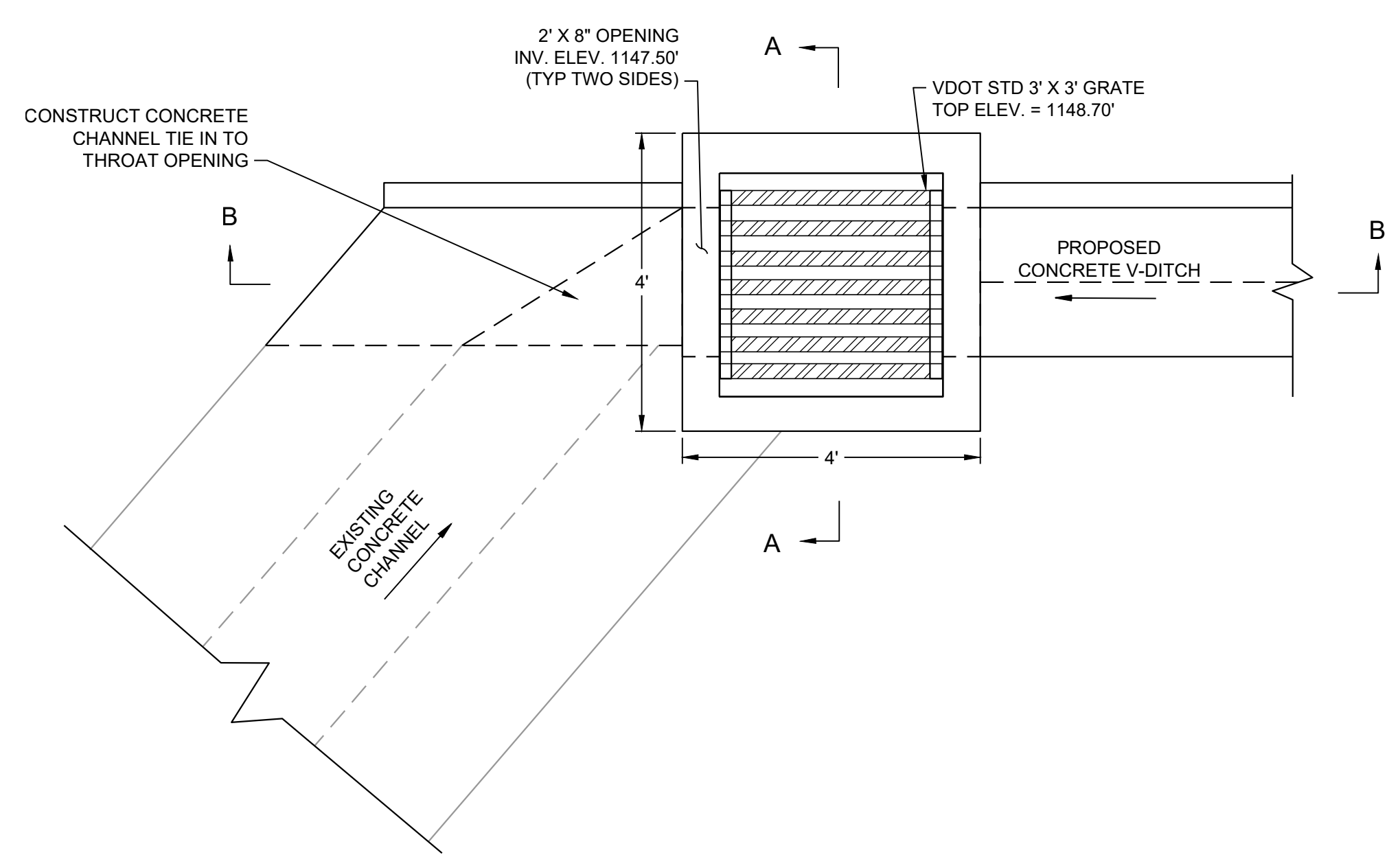
NOTES:

1. CONCRETE V-DITCH SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION D-754 OF THE SPECIFICATIONS.
2. CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION P-610 OF THE SPECIFICATIONS.



METHOD OF SHAPING INLET INVERTS DETAIL

NTS



**48" X 48" VDOT OPEN THROAT CATCH BASIN (D102)
ON EXISTING STRUCTURE**

NTS

NOTES:

1. CONSTRUCTION SHALL BE IN CONFORMANCE WITH ASTM C478 REQUIREMENTS.
2. CONCRETE SHALL BE 3000 PSI MINIMUM.
3. THE CONTRACTOR SHALL SUBMIT SHOP DRAWING DESIGNS (INCLUDING STRUCTURAL CALCULATIONS AND ASSUMPTIONS) SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE COMMONWEALTH OF VIRGINIA FOR THE PROPOSED STRUCTURE.

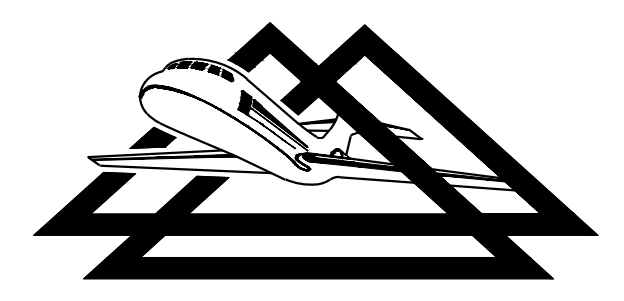
SEALED SHOP DRAWING OF STRUCTURE SHALL INCLUDE OR SHOW, AS A MINIMUM:

- STEEL REINFORCEMENT SIZES AND SPACING
- CONCRETE WALL, BASE AND SLAB THICKNESS
- FINISHED FLOW LINE INVERTS
- CERTIFICATION THAT STRUCTURE MEETS ASTM C478 REQUIREMENTS
- DESIGN LOADING: H20 LOADING

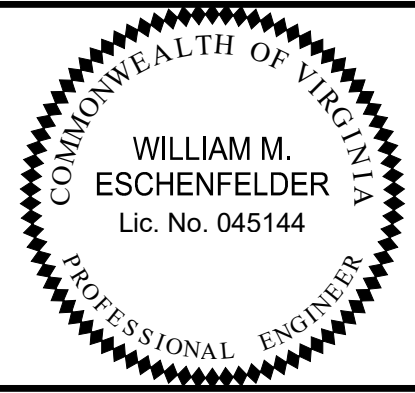
4. NO SEPARATE MEASUREMENT WILL BE MADE FOR THE ABOVE REFERENCED ITEMS.

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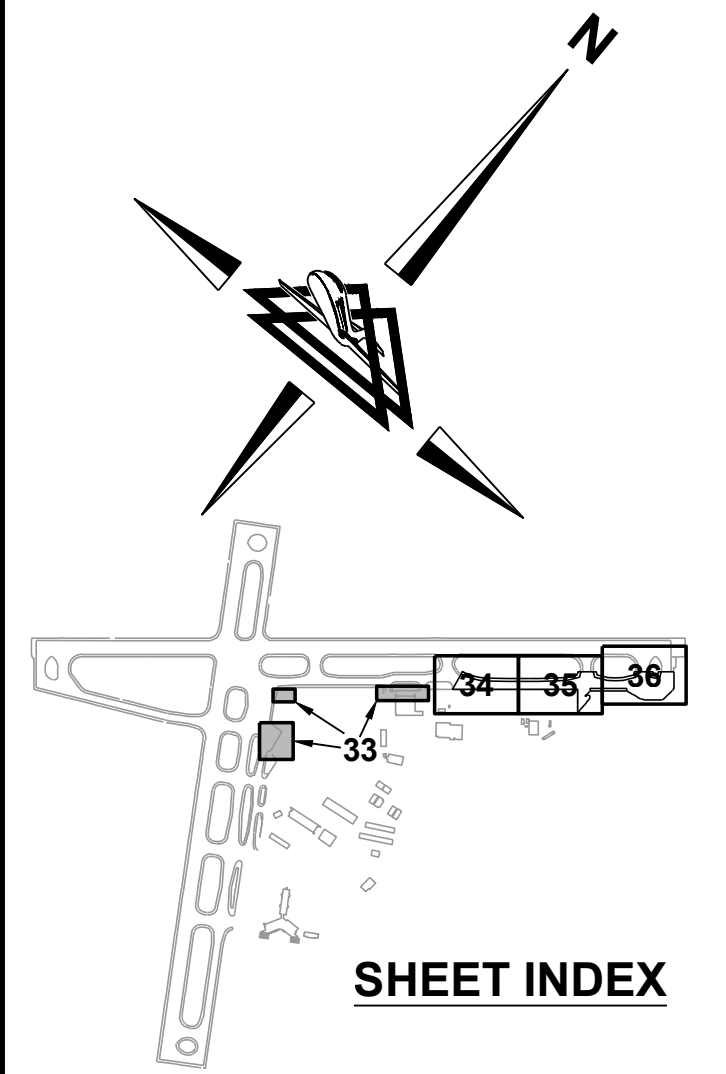
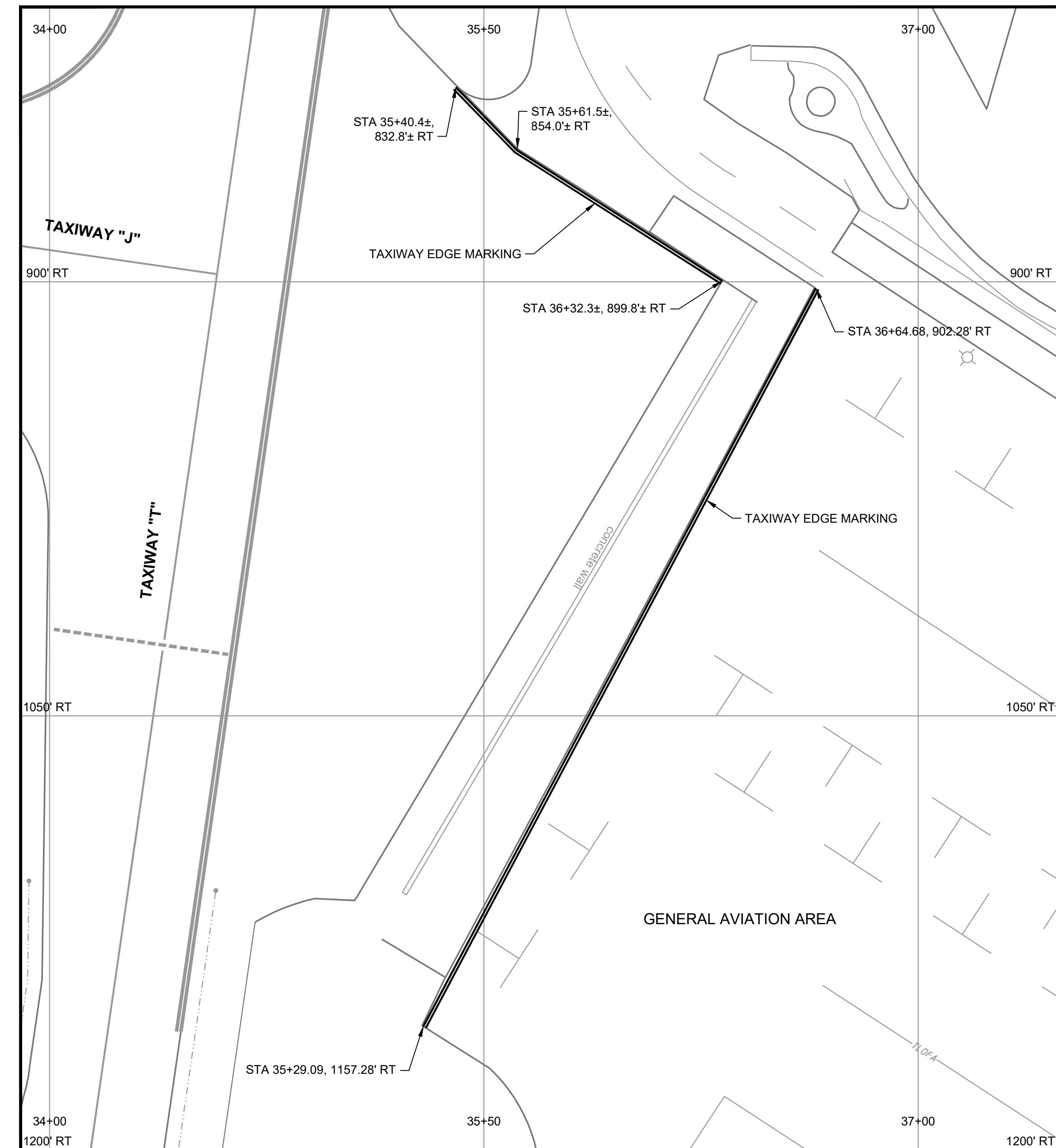
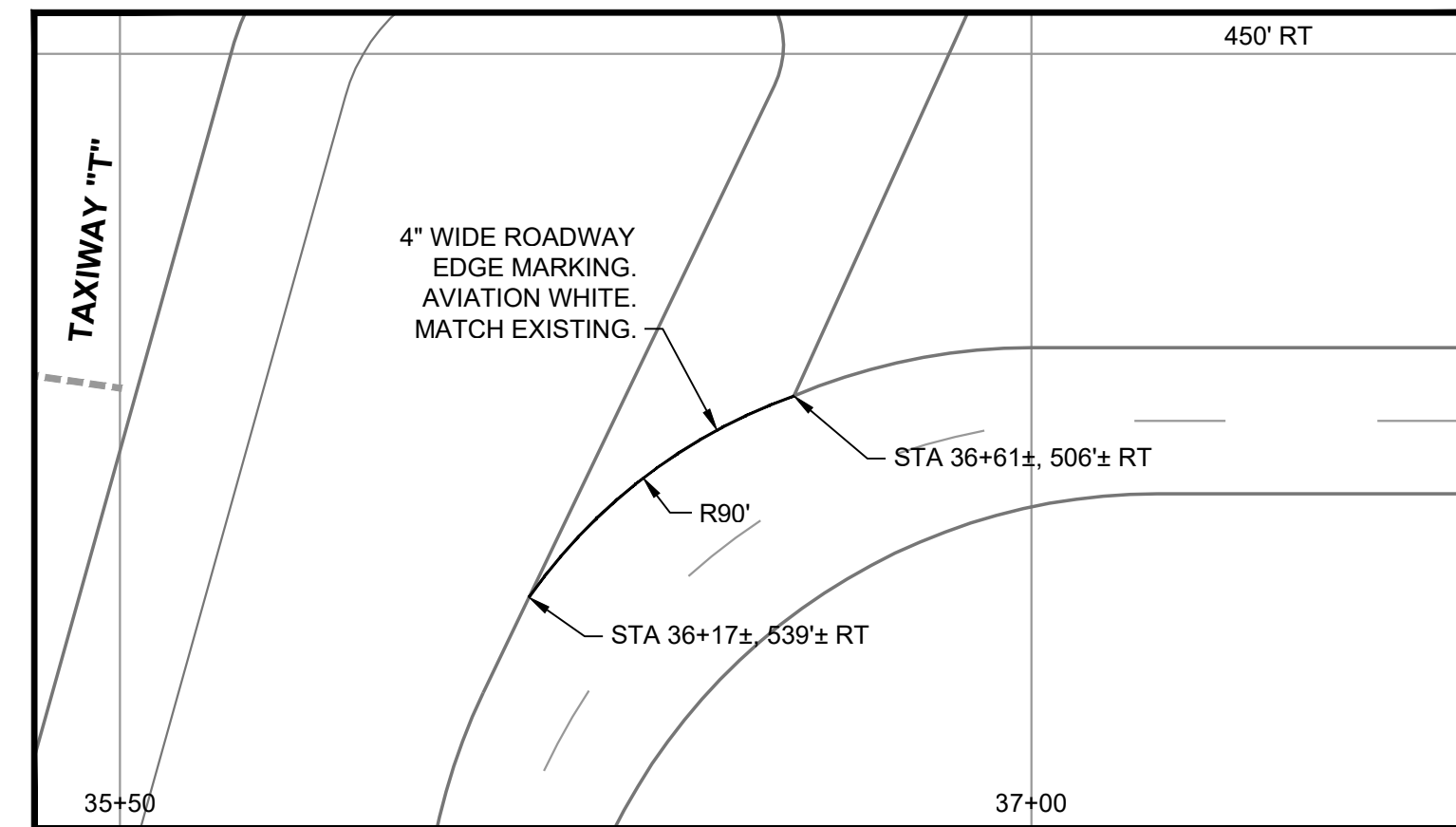
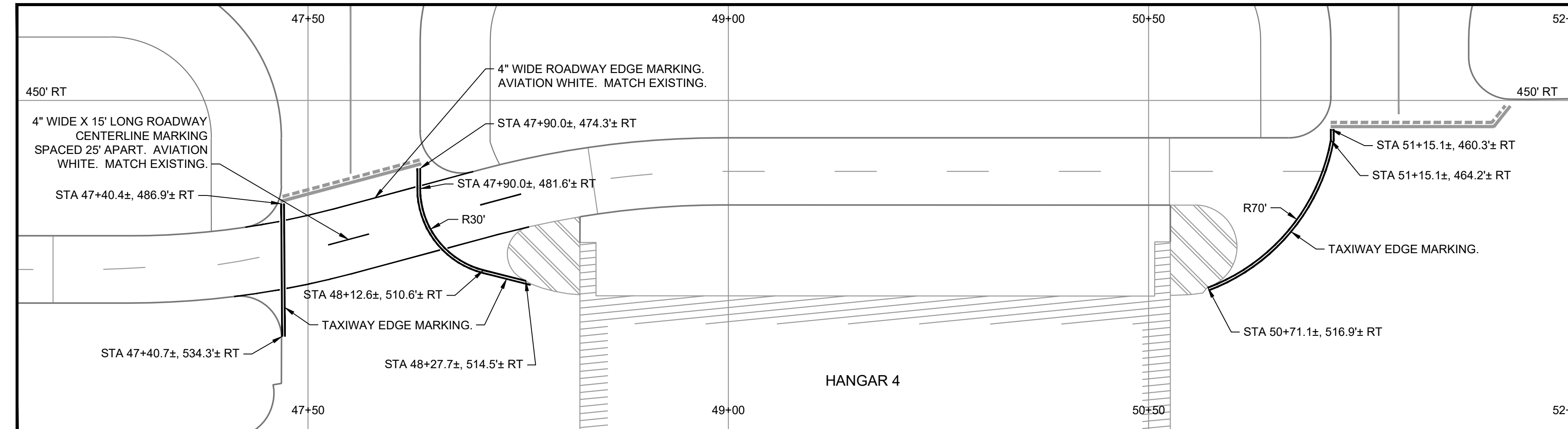
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| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| DRAINAGE DETAILS | | DRAWN BY: PJW | SHEET 32 |
| | | DESIGNED BY: WME | OF 60 |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | | SCALE: NONE | DATE: MARCH 2025 |

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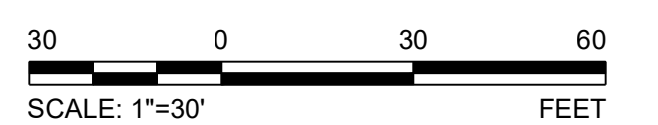
SHEET INDEX

LEGEND

- EXISTING MARKING
- PROPOSED MARKING

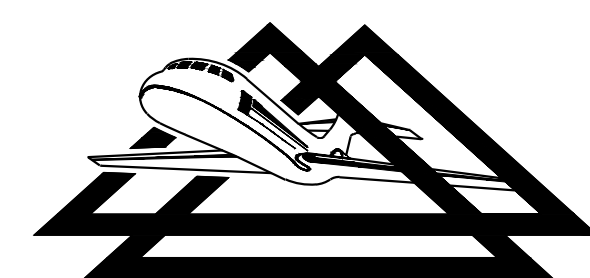
NOTES

1. ALL STATIONS AND OFFSETS ARE GIVEN WITH RESPECT TO BASELINE "RW1" UNLESS OTHERWISE SPECIFIED.
2. EDGE OF PROPOSED FULL STRENGTH PAVEMENT NOT SHOWN FOR CLARITY.

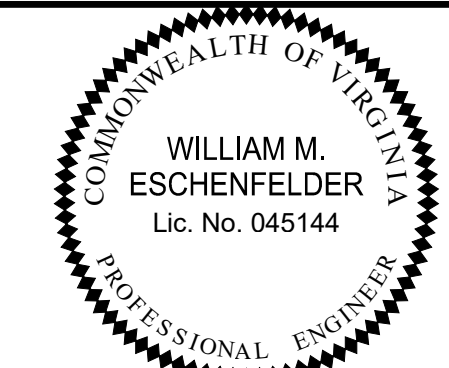


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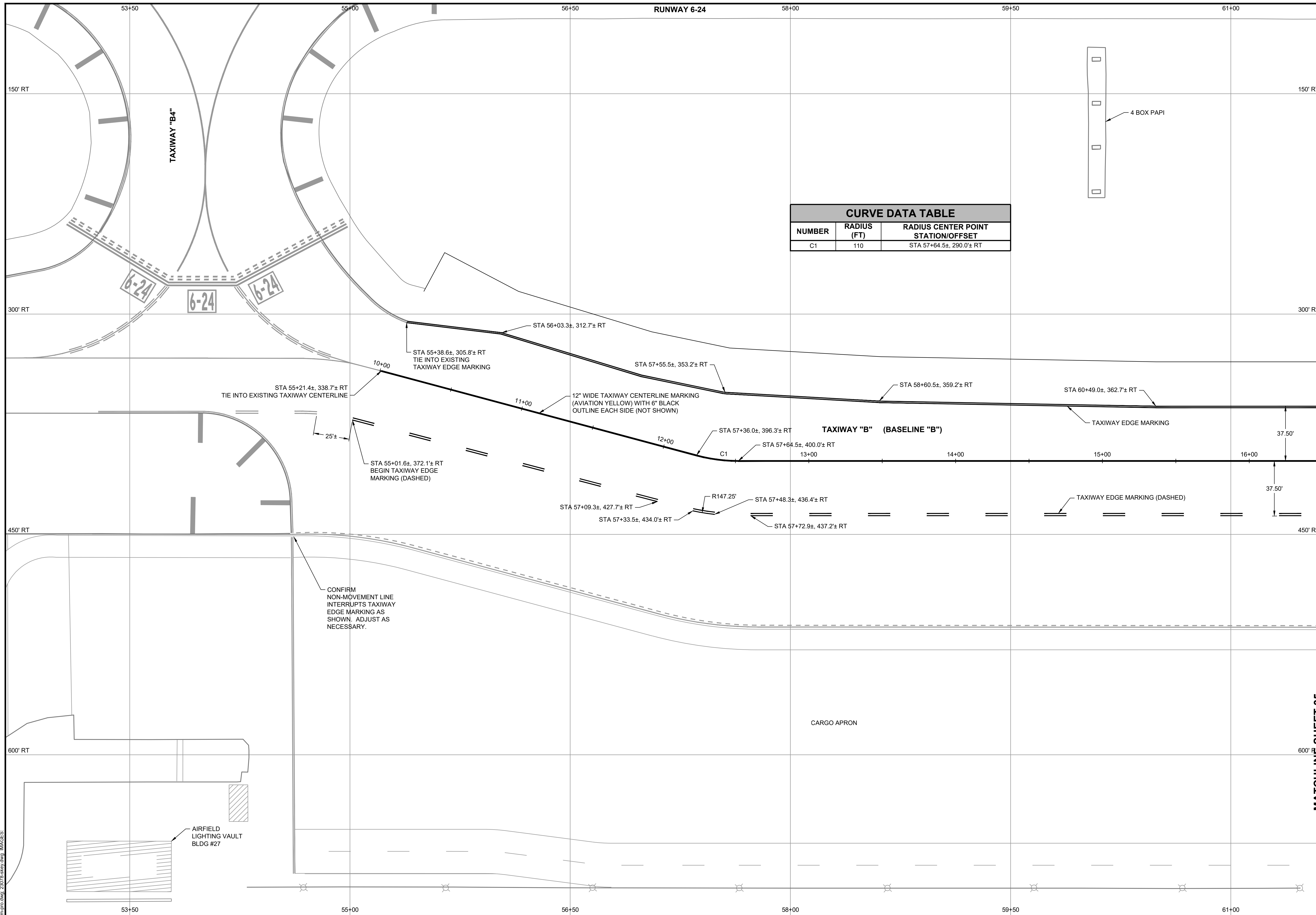


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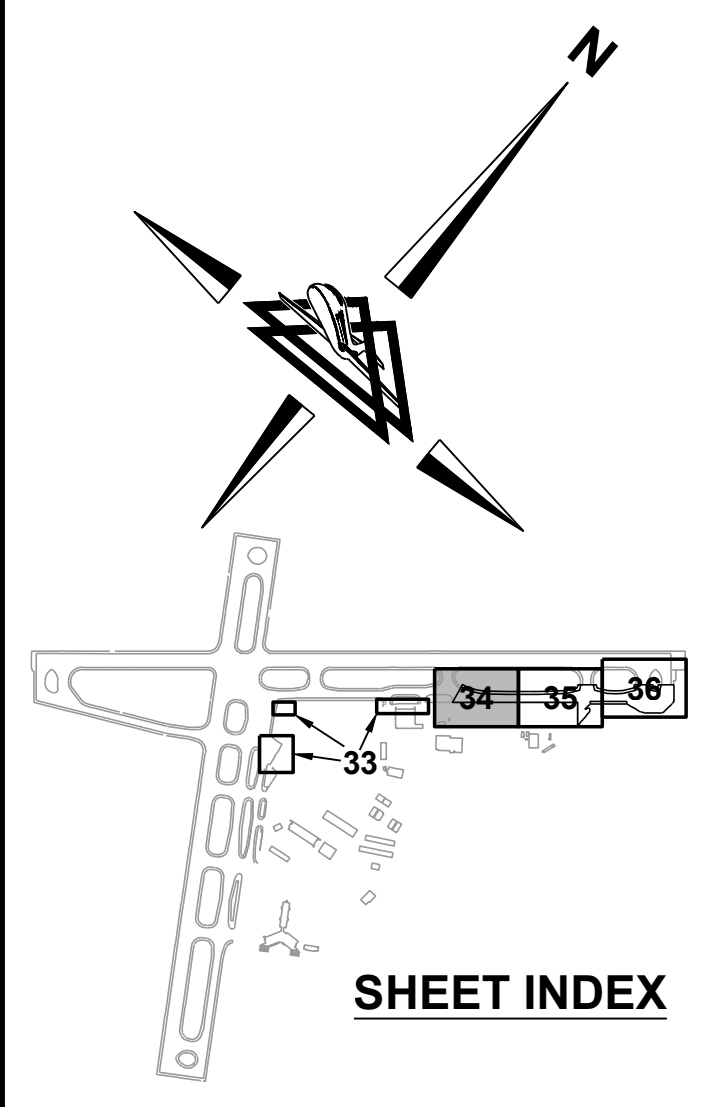


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| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| MARKING LAYOUT | | DRAWN BY: PJW | SHEET 33 |
| | | DESIGNED BY: WME | OF 60 |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | | SCALE: 1" = 30' | DATE: MARCH 2025 |

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| CURVE DATA TABLE | | |
|------------------|-------------|------------------------------------|
| NUMBER | RADIUS (FT) | RADIUS CENTER POINT STATION/OFFSET |
| C1 | 110 | STA 57+64.5±, 290.0± RT |



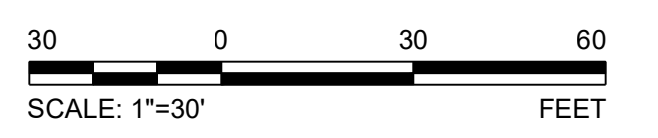
SHEET INDEX

LEGEND

- EXISTING MARKING
- PROPOSED MARKING

NOTES

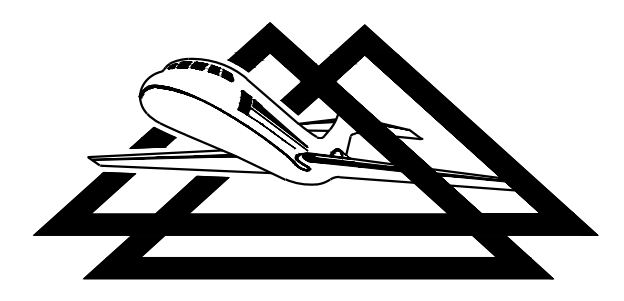
1. ALL STATIONS AND OFFSETS ARE GIVEN WITH RESPECT TO BASELINE "RW1" UNLESS OTHERWISE SPECIFIED.
2. EDGE OF PROPOSED FULL STRENGTH PAVEMENT NOT SHOWN FOR CLARITY.



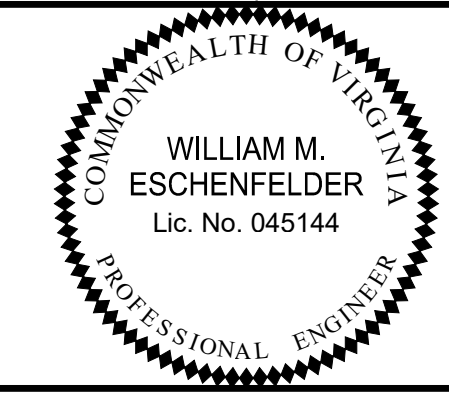
MATCHLINE SHEET 35

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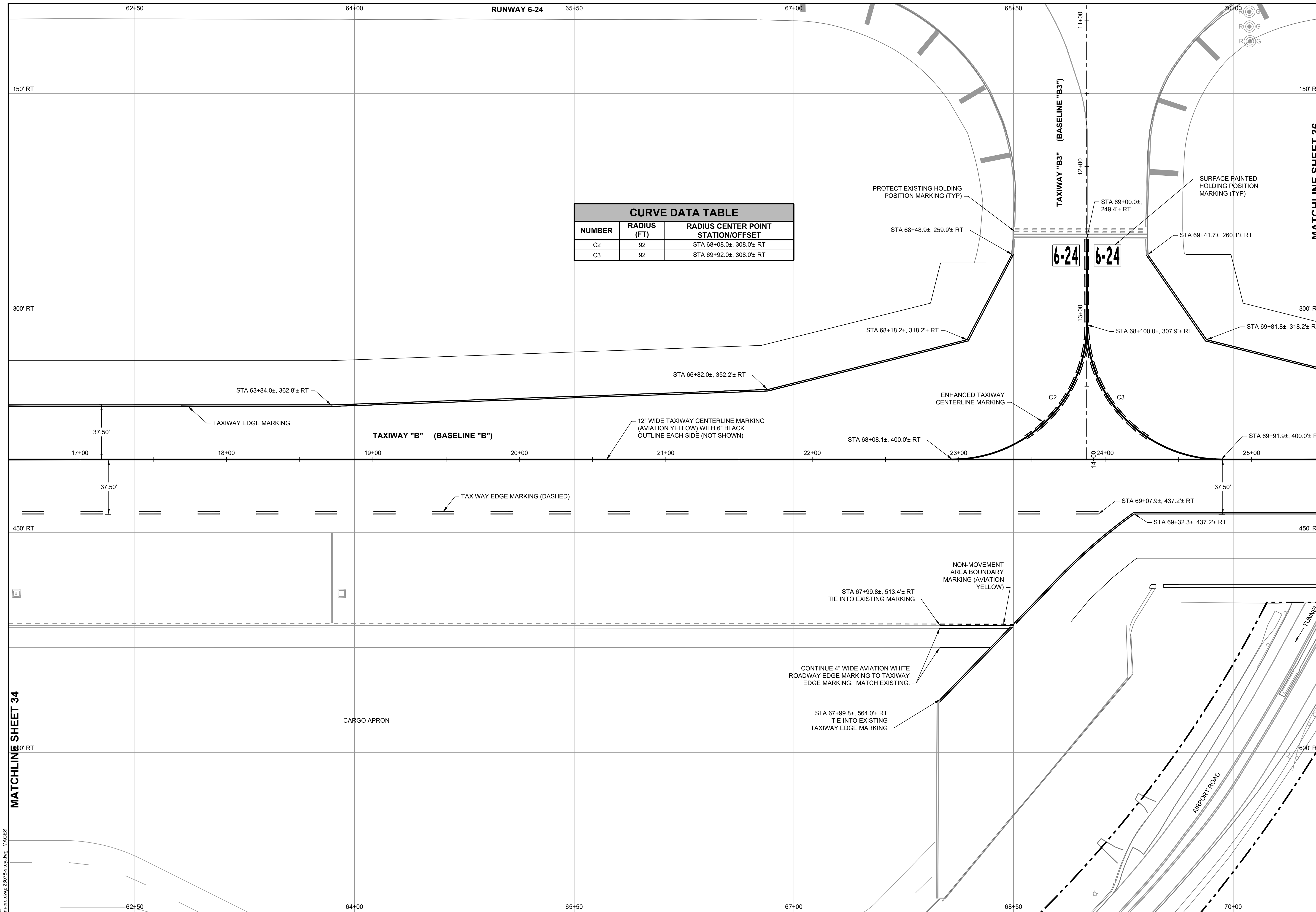


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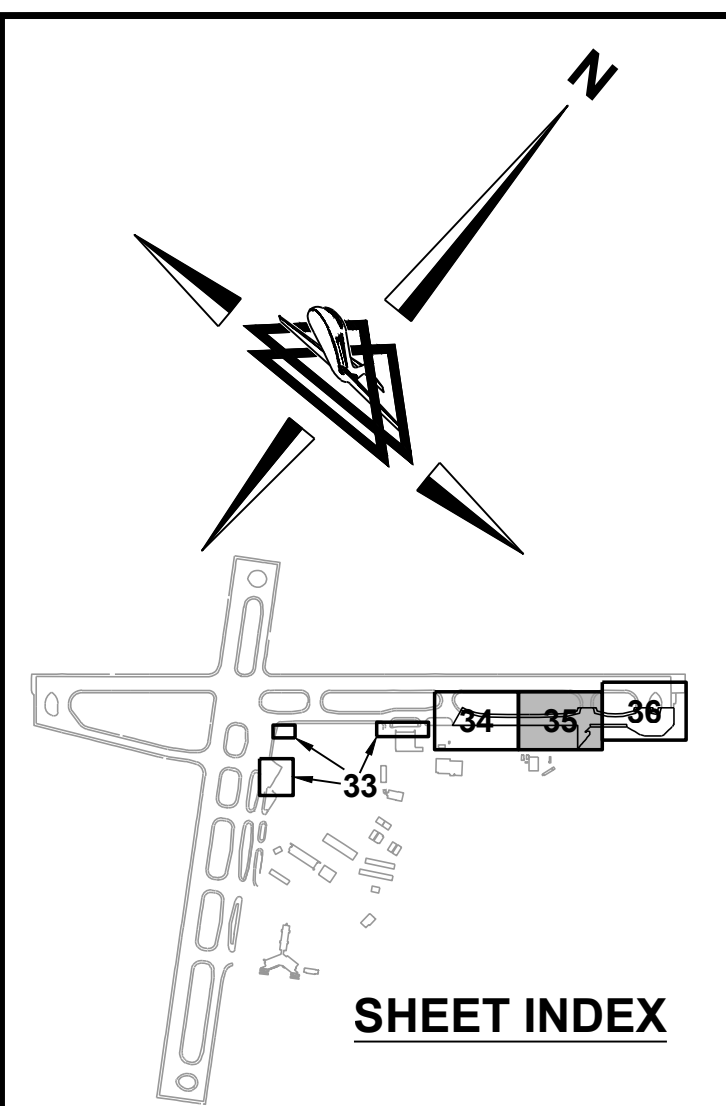


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| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| MARKING LAYOUT | | DRAWN BY: PJW | SHEET 34 |
| | | DESIGNED BY: WME | OF 60 |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | | SCALE: 1" = 30' | DATE: MARCH 2025 |

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| CURVE DATA TABLE | | |
|------------------|-------------|------------------------------------|
| NUMBER | RADIUS (FT) | RADIUS CENTER POINT STATION/OFFSET |
| C2 | 92 | STA 68+08.0±, 308.0± RT |
| C3 | 92 | STA 69+92.0±, 308.0± RT |



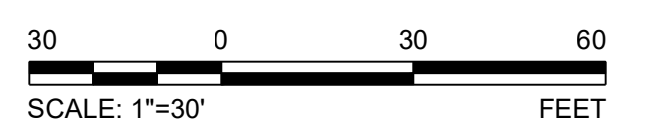
SHEET INDEX

LEGEND

- EXISTING MARKING
- PROPOSED MARKING

NOTES

1. ALL STATIONS AND OFFSETS ARE GIVEN WITH RESPECT TO BASELINE "RW1" UNLESS OTHERWISE SPECIFIED.
2. EDGE OF PROPOSED FULL STRENGTH PAVEMENT NOT SHOWN FOR CLARITY.

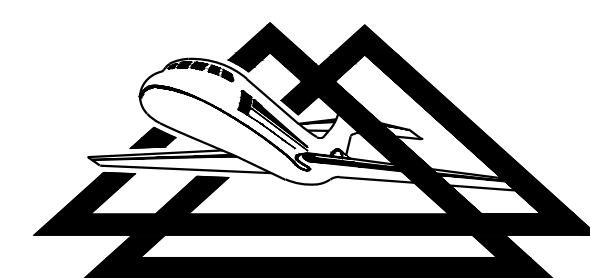


MATCHLINE SHEET 34

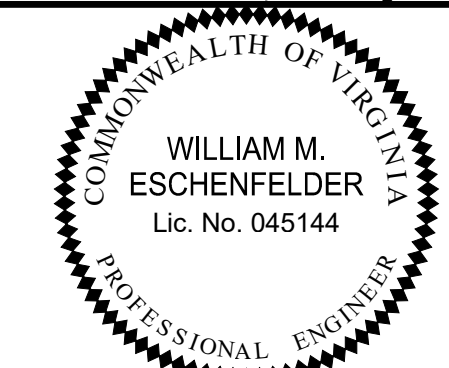
MATCHLINE SHEET 36

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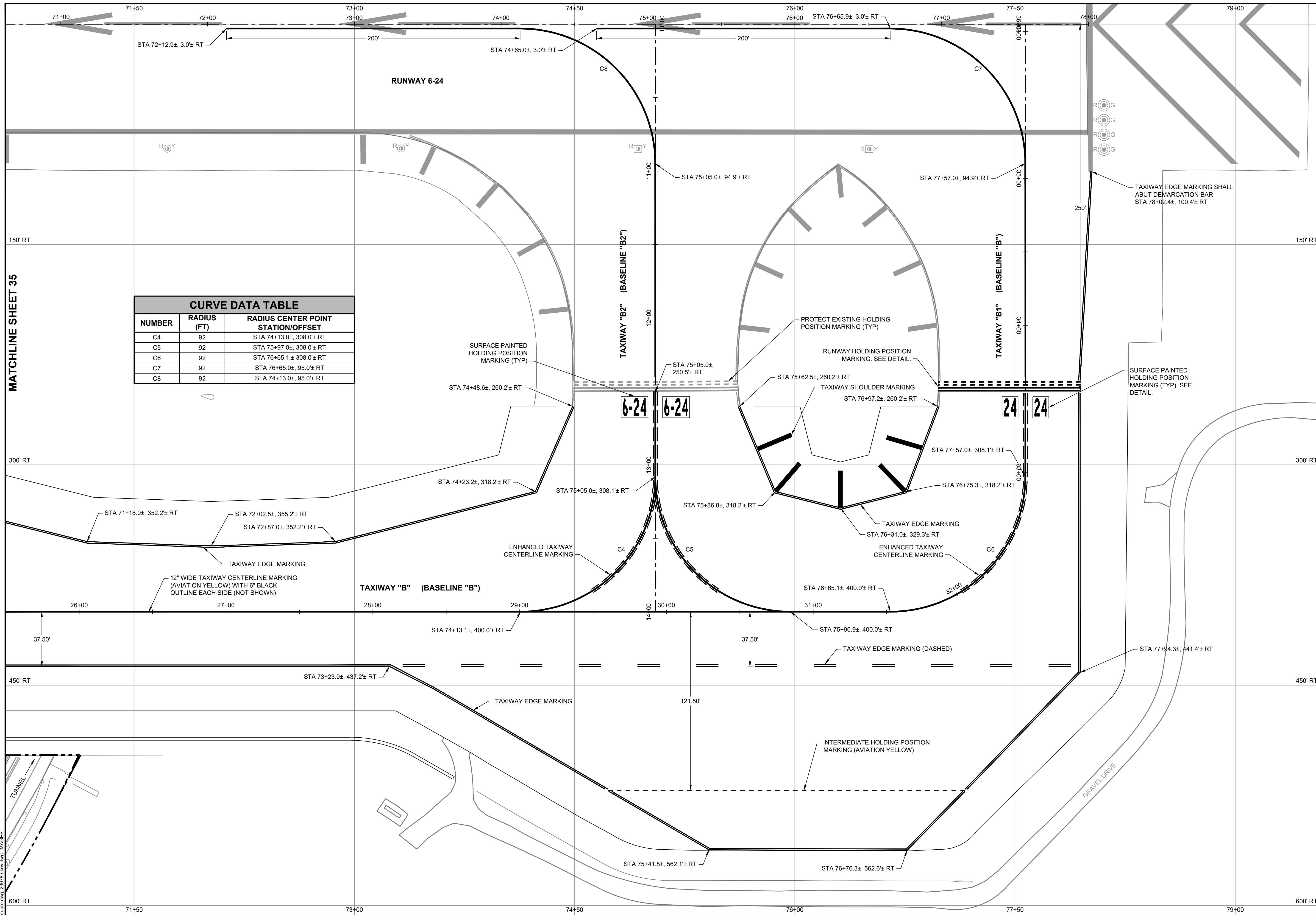


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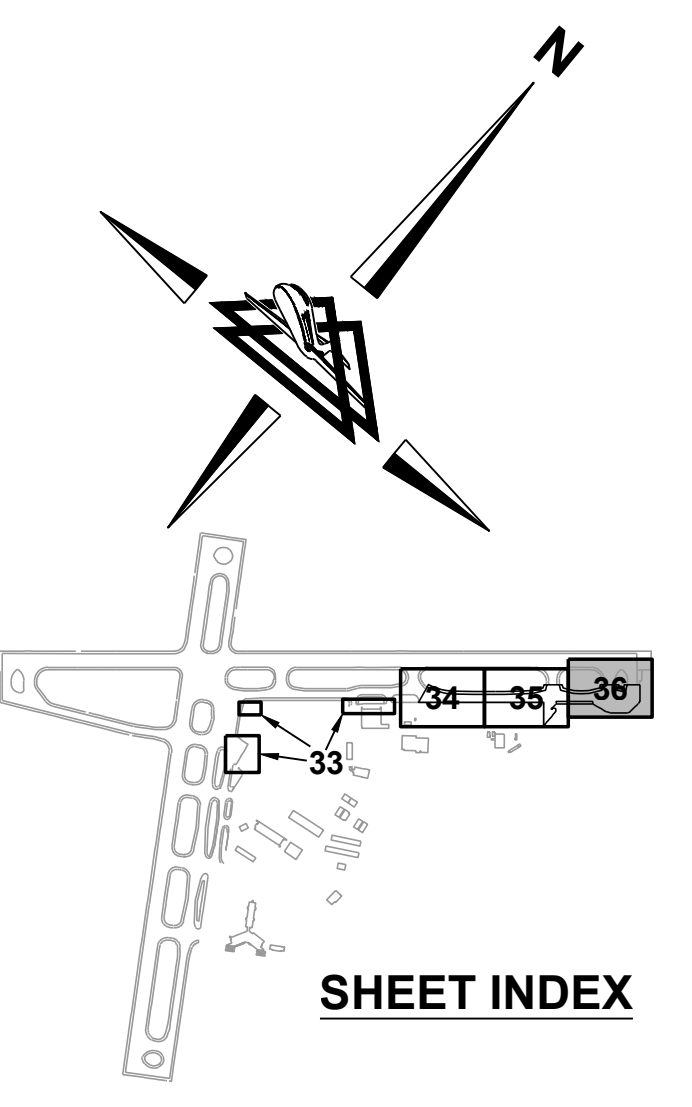


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| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| MARKING LAYOUT | | DRAWN BY: PJW | SHEET 35 |
| | | DESIGNED BY: WME | OF 60 |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | | SCALE: 1" = 30' | DATE: MARCH 2025 |

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| CURVE DATA TABLE | | |
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| NUMBER | RADIUS (FT) | RADIUS CENTER POINT STATION/OFFSET |
| C4 | 92 | STA 74+13.0±, 308.0± RT |
| C5 | 92 | STA 75+97.0±, 308.0± RT |
| C6 | 92 | STA 76+65.1±, 308.0± RT |
| C7 | 92 | STA 76+65.0±, 95.0± RT |
| C8 | 92 | STA 74+13.0±, 95.0± RT |

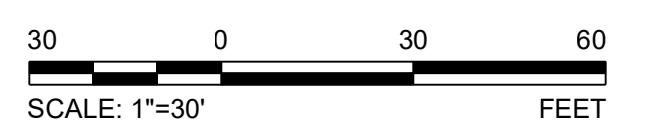


LEGEND

- EXISTING MARKING
- PROPOSED MARKING

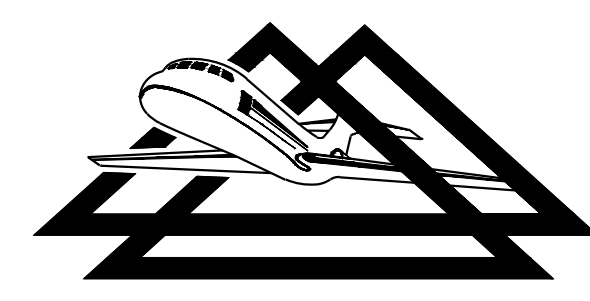
NOTES

1. ALL STATIONS AND OFFSETS ARE GIVEN WITH RESPECT TO BASELINE "RW1" UNLESS OTHERWISE SPECIFIED.
2. EDGE OF PROPOSED FULL STRENGTH PAVEMENT NOT SHOWN FOR CLARITY.

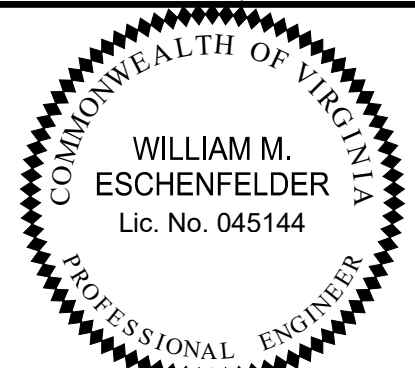


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| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
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| | | DESIGNED BY: WME | OF 60 |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | | SCALE: 1" = 30' | DATE: MARCH 2025 |

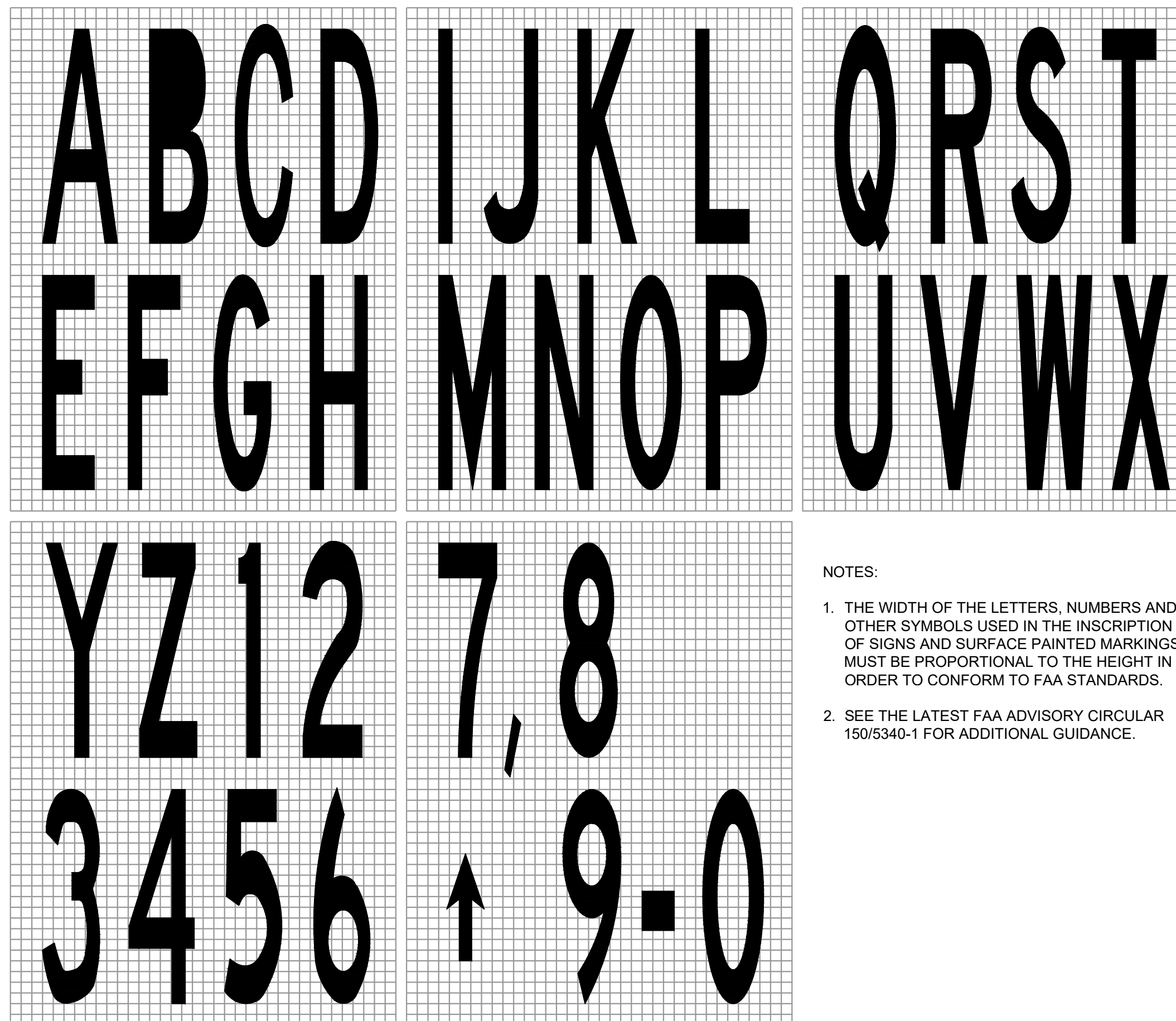
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MARKING NOTES:

GENERAL:

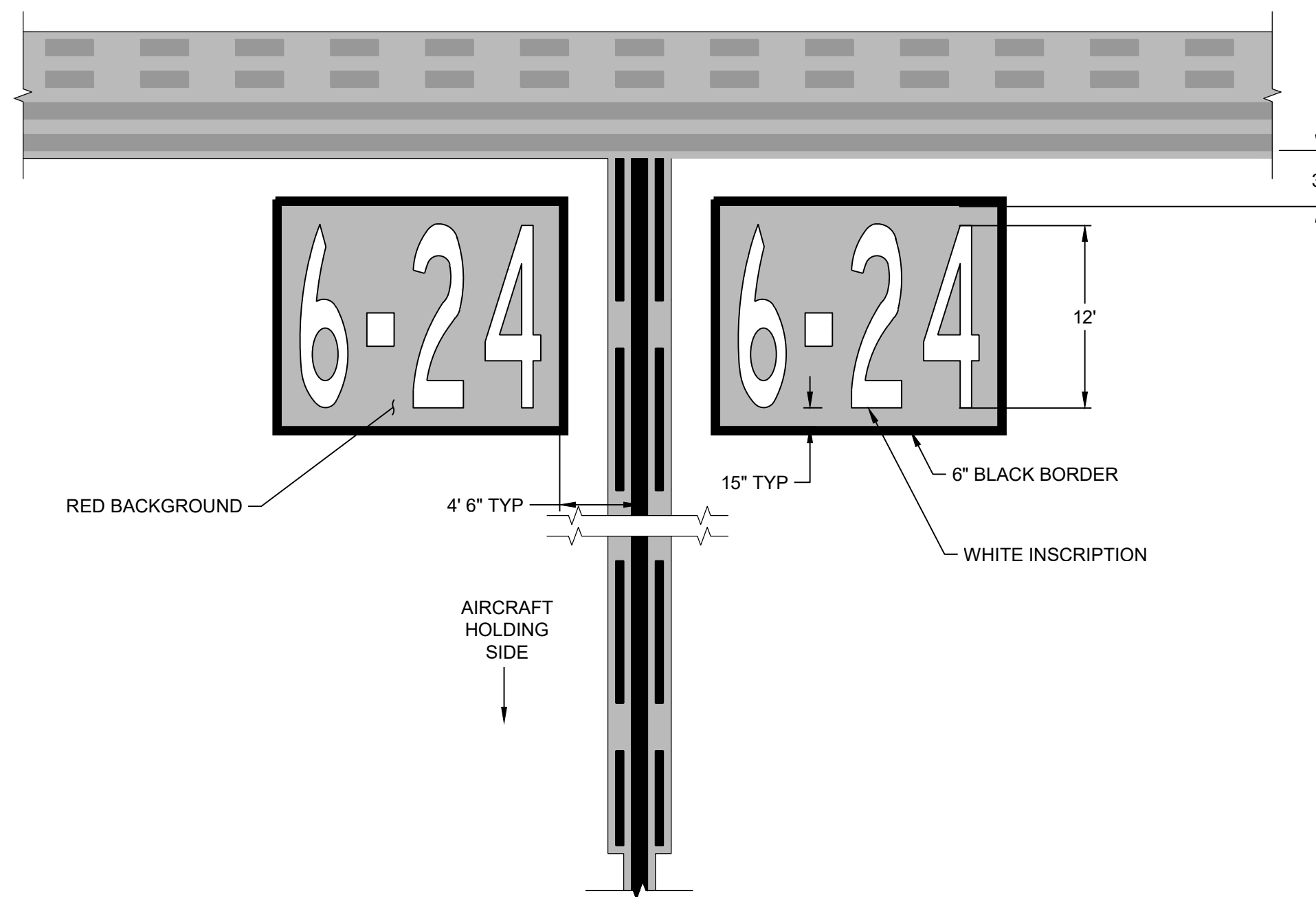
1. THE CONTRACTOR SHALL SUBMIT DOCUMENTATION THAT THE PERSONNEL RESPONSIBLE FOR MARKING LAYOUT AND APPLICATION HAS A MINIMUM OF FIVE (5) YEARS OF SIMILAR EXPERIENCE WORKING ON AIRPORTS. THE CONTRACTOR SHALL PROVIDE REFERENCES TO SUBSTANTIATE THE REQUIRED EXPERIENCE.
2. ALL MARKINGS SHALL BE IN ACCORDANCE WITH FAA ADVISORY CIRCULAR (AC) 150/5340-1M, "STANDARDS FOR AIRPORT MARKINGS".
3. ANY MARKINGS APPLIED ON NEW BITUMINOUS PAVEMENT PRIOR TO THE THIRTY (30) DAY CURE TIME SHALL BE APPLIED AT 33 PERCENT OF THE SPECIFIED COVERAGE AND PAID FOR AS INITIAL MARKING. REFERENCE IS DIRECTED TO ITEM P-620 OF THE SPECIFICATIONS.
4. INITIAL MARKINGS SHALL BE APPLIED ON NEW PAVEMENT PRIOR TO OPENING OF PAVEMENT FOR TRAFFIC.
5. INITIAL MARKINGS SHALL INCLUDE ALL MARKINGS SHOWN ON THE PLANS OR AS COORDINATED WITH THE ENGINEER. INITIAL MARKINGS ARE NOT REQUIRED FOR BLACK OUTLINES OR BORDERS.
6. AFTER PROPER PAVEMENT CURE FOR BITUMINOUS PAVEMENT, ALL MARKINGS ON THE "MARKING LAYOUT" SHALL BE MARKED AT THE FULL RATE AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT FOR PERMANENT MARKING. REFERENCE IS DIRECTED TO ITEM P-620 OF THE SPECIFICATIONS.
7. REFLECTIVE MEDIA SHALL BE PROVIDED AS OUTLINED IN ITEM P-620. BLACK MARKINGS SHALL NOT BE REFLECTORIZED. MARKINGS WITHOUT BEADS MUST BE DRY PRIOR TO APPLYING MARKING WITH BEADS.
8. WHERE RUNWAY AND TAXIWAY MARKINGS INTERSECT, RUNWAY MARKINGS SHALL TAKE PRECEDENCE.
9. RUNWAY HOLDING POSITION MARKINGS SHALL BE ALIGNED WITH THE HOLDING POSITION SIGNS, EXCEPT WHERE OTHERWISE NOTED IN THE PLANS.
10. THE PAVEMENT SHALL BE THOROUGHLY CLEANED PRIOR TO THE APPLICATION OF THE MARKINGS. THE CLEANING SHALL BE ACCOMPLISHED WITH HIGH PRESSURE WATER; THE USE OF CHEMICALS WILL NOT BE PERMITTED.
11. ALL STATIONS AND OFFSETS ARE APPROXIMATE AND SHALL BE CONFIRMED IN THE FIELD BY THE CONTRACTOR.
12. ALL MARKINGS SHALL BE LAID OUT ON THE PAVEMENT BY THE CONTRACTOR FOR ACCEPTANCE BY THE ENGINEER PRIOR TO PLACEMENT.
13. PRIOR TO THE START OF WORK, A CONTROL STRIP SHALL BE APPLIED IN ACCORDANCE WITH ITEM P-620-3.7. ALL STRIPING EQUIPMENT SHALL BE CALIBRATED PRIOR TO THE TEST LINE APPLICATION.

14. FINAL MARKINGS SHALL BE WITHIN THE TOLERANCES OUTLINED IN ITEM P-620-3.5.
 15. EXCESS GLASS BEADS SHALL BE REMOVED BY VACUUM TRUCK, FOD BOSS, OR SIMILAR EQUIPMENT; BLOWING OF BEADS IS NOT ACCEPTABLE.
 16. REFER TO "PHASING NOTES" FOR SEQUENCE OF MARKING AND MARKING REMOVAL.
- MARKING REMOVAL NOTES:**
17. PAINT REMOVAL SHALL BE ACCOMPLISHED WITH EQUIPMENT AND IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT. APPROVED METHODS INCLUDE HIGH PRESSURE WATERBLASTING OR SCARIFICATION (GRINDING); THE USE OF CHEMICALS IS NOT PERMITTED. BLACKING OUT OF MARKINGS IS NOT PERMITTED. SCARIFICATION (GRINDING) SHALL BE LIMITED TO UNGROOVED PAVEMENTS OR TO REMOVING PAINT ABOVE THE SURFACE.
 18. ANY DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE AND IN A MANNER APPROVED BY THE ENGINEER.
 19. THE CONTRACTOR SHALL PROVIDE CERTIFICATION THAT THE CONTRACTOR'S EQUIPMENT HAS BEEN USED IN THE PERFORMANCE OF A SIMILAR CONTRACT.
 20. PRIOR TO THE START OF WORK, PAVEMENT MARKINGS SHALL BE REMOVED FROM A DESIGNATED TEST SECTION. THE METHOD AND EQUIPMENT USED FOR THE TEST SECTION SHALL BE THE SAME AS THAT INTENDED FOR THE REMAINDER OF THE WORK. THE TEST SECTION SHALL BE INSPECTED AND APPROVED BY THE ENGINEER PRIOR TO BEGINNING ANY FURTHER PAINT REMOVAL. REFERENCE IS DIRECTED TO ITEM P-619 OF THE SPECIFICATIONS.
 21. THE DEGREE OF PAINT REMOVAL SHALL BE REQUIRED AS SHOWN ON THE PLANS AND DEFINED BELOW:
 - a. AT LEAST 95-100 PERCENT OF MARKINGS SHALL BE REMOVED.
 - b. THE REMOVAL LEVEL IS DEFINED SUCH THAT THE PAVEMENT IS CLEARLY EXPOSED TO THE DEGREE SPECIFIED. THE DEGREE WILL BE VERIFIED BY THE GRID METHOD AS OUTLINED IN ITEM P-619.
 22. USED OR WASTE WATER FROM PAINT REMOVAL OPERATIONS SHALL BE COLLECTED BY THE CONTRACTOR AND DISPOSED OF OFF-SITE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL GUIDELINES.
 23. ACCUMULATIONS OF WATER, DUST, OR OTHER RESIDUE RESULTING FROM THE PAINT REMOVAL SHALL BE REMOVED AS THE WORK PROGRESSES. PRIOR TO ANY PAINTING OPERATIONS, THE SURFACE SHALL BE FREE OF ANY DIRT, REMOVAL RESIDUE, OR OTHER CONTAMINANTS THAT WOULD PREVENT THE BOND OF THE NEW COATING TO THE PAVEMENT. QUALITY CONTROL MEASURES SHALL INCLUDE A SIMPLE "PULL TEST" WITH ADHESIVE MATERIAL; EVIDENCE OF EXCESSIVE DEBRIS ON THE ADHESIVE INDICATES THAT ADDITIONAL CLEANING SHALL BE REQUIRED.



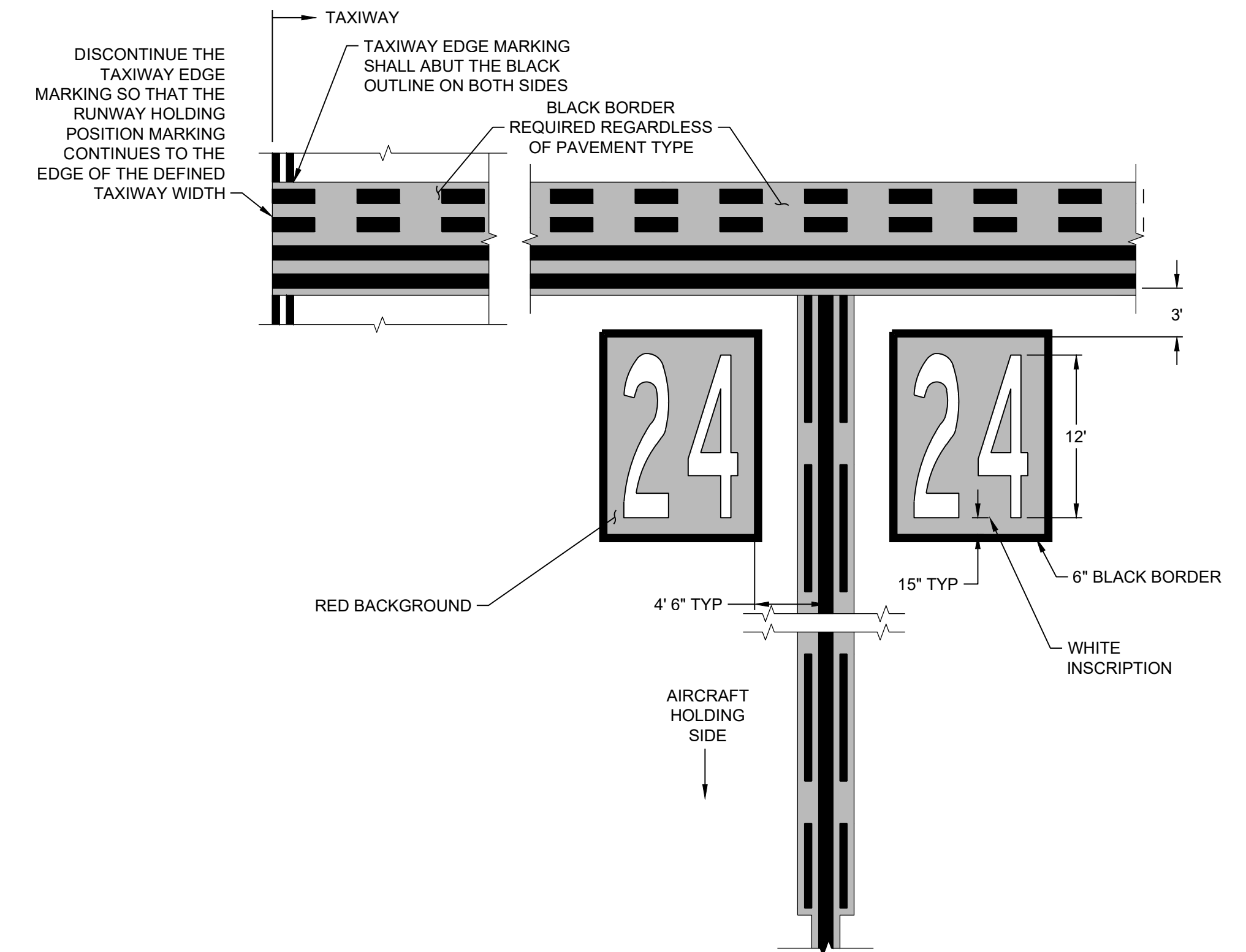
SURFACE PAINTED MARKINGS DETAIL
NTS

- NOTES:**
1. THE WIDTH OF THE LETTERS, NUMBERS AND OTHER SYMBOLS USED IN THE INSCRIPTION OF SIGNS AND SURFACE PAINTED MARKINGS MUST BE PROPORTIONAL TO THE HEIGHT IN ORDER TO CONFORM TO FAA STANDARDS.
 2. SEE THE LATEST FAA ADVISORY CIRCULAR 150/5340-1 FOR ADDITIONAL GUIDANCE.



SURFACE PAINTED HOLDING POSITION SIGNS

- NOTES:**
1. THIS DETAIL APPLIES ONLY TO SITUATIONS WHERE THE TAXIWAY CENTERLINE AND RUNWAY HOLDING POSITION MARKING ARE PERPENDICULAR.
 2. SEE "SURFACE PAINTED MARKINGS DETAIL" FOR INSCRIPTION PROPORTIONAL SIZING.
 3. THE SURFACE PAINTED HOLDING POSITION SIGN SHALL BE AT LEAST 2 FEET FROM THE TAXIWAY EDGE MARKING OR TAXIWAY EDGE IF NOT MARKED.
 4. STENCIL BRACES MUST BE FILLED IN. ALL INDIVIDUAL CHARACTERS MUST BE PAINTED CONTIGUOUS.



SURFACE PAINTED HOLDING POSITION SIGNS

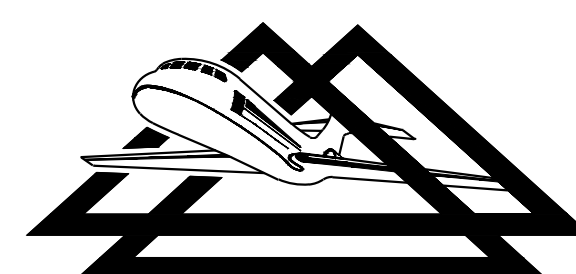
- NOTES:**
1. THIS DETAIL APPLIES ONLY TO SITUATIONS WHERE THE TAXIWAY CENTERLINE AND RUNWAY HOLDING POSITION MARKING ARE PERPENDICULAR.
 2. SEE "SURFACE PAINTED MARKINGS DETAIL" FOR INSCRIPTION PROPORTIONAL SIZING.
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 4. STENCIL BRACES MUST BE FILLED IN. ALL INDIVIDUAL CHARACTERS MUST BE PAINTED CONTIGUOUS.

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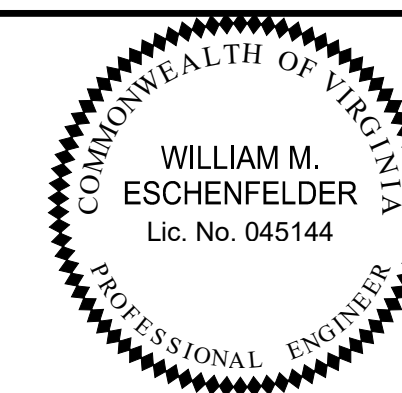
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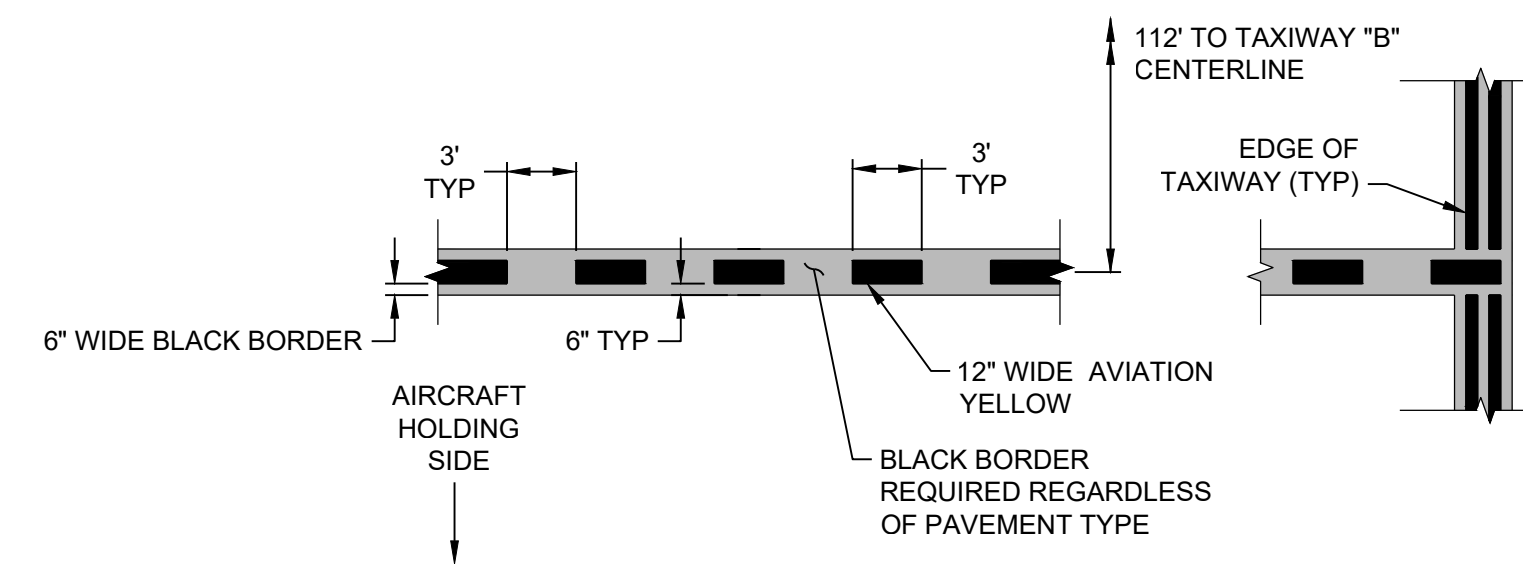
2700 Polo Parkway
Midlothian, Virginia 23113
phone: (804) 275-8301
www.deltaairport.com



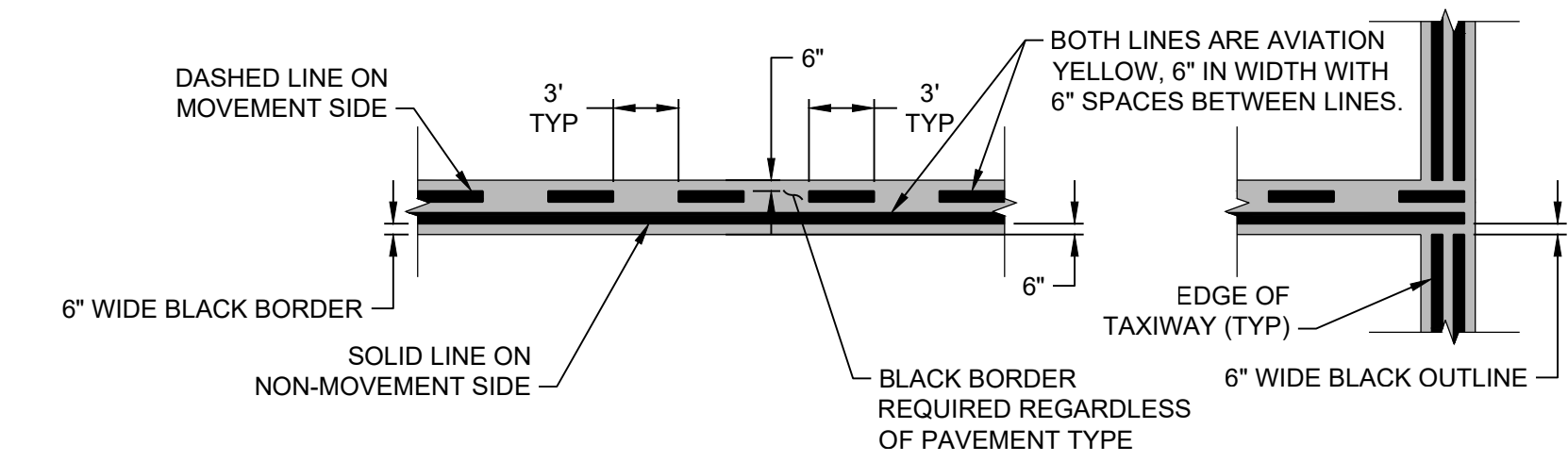
**DELTA AIRPORT
CONSULTANTS, INC.**



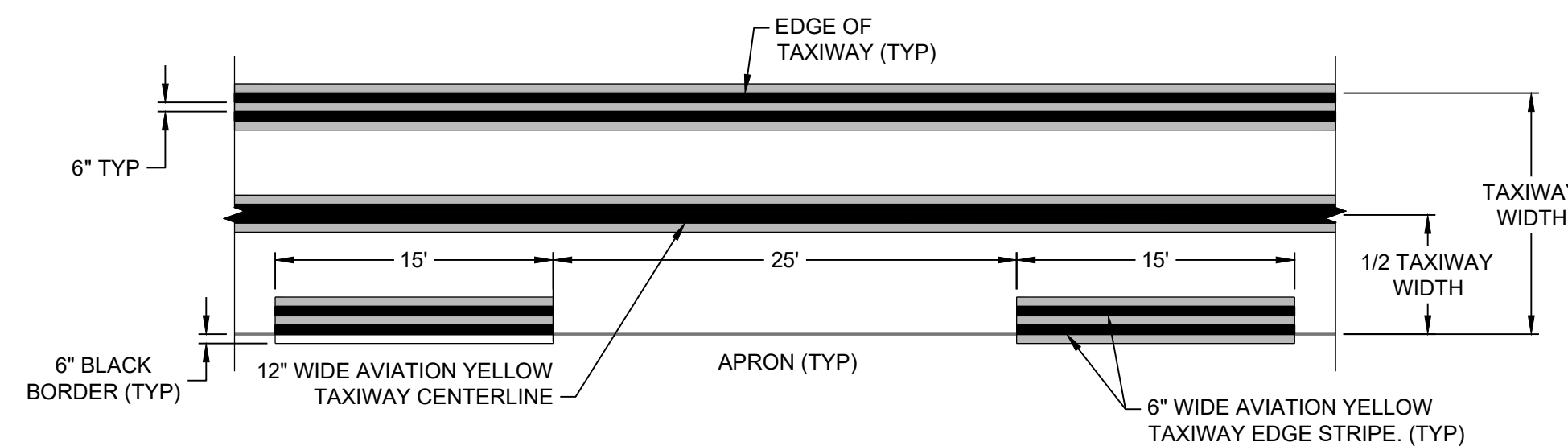
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|--|-------------------------------|-----------------------------------|
| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| MARKING NOTES & DETAILS | DRAWN BY: PJW | SHEET 37 OF 60 |
| | DESIGNED BY: WME | |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | SCALE: NONE | DATE: MARCH 2025 |



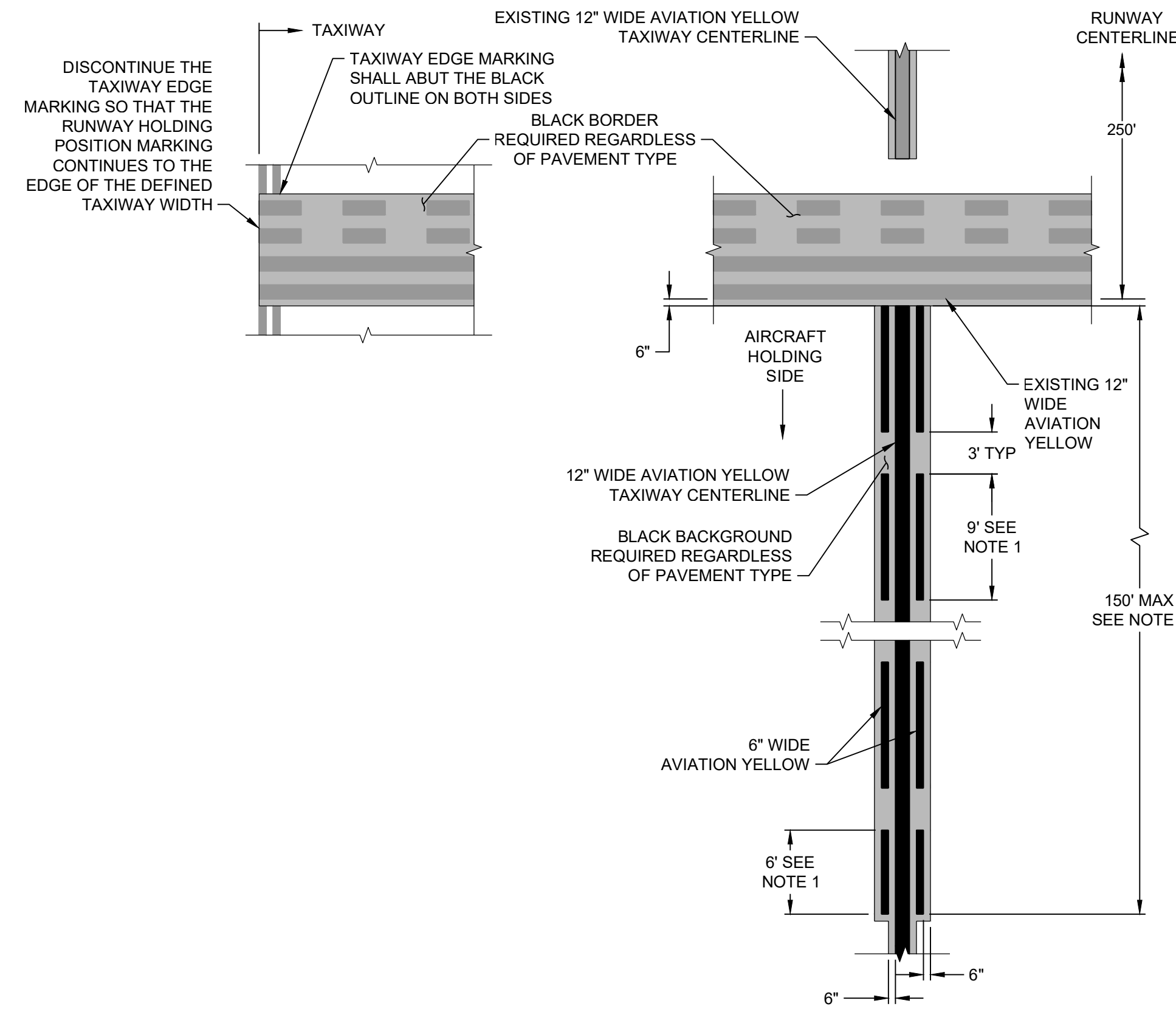
INTERMEDIATE HOLDING POSITION MARKING WITH 12" TAXIWAY CENTERLINE
NTS



6" NON-MOVEMENT AREA BOUNDARY MARKING
NTS



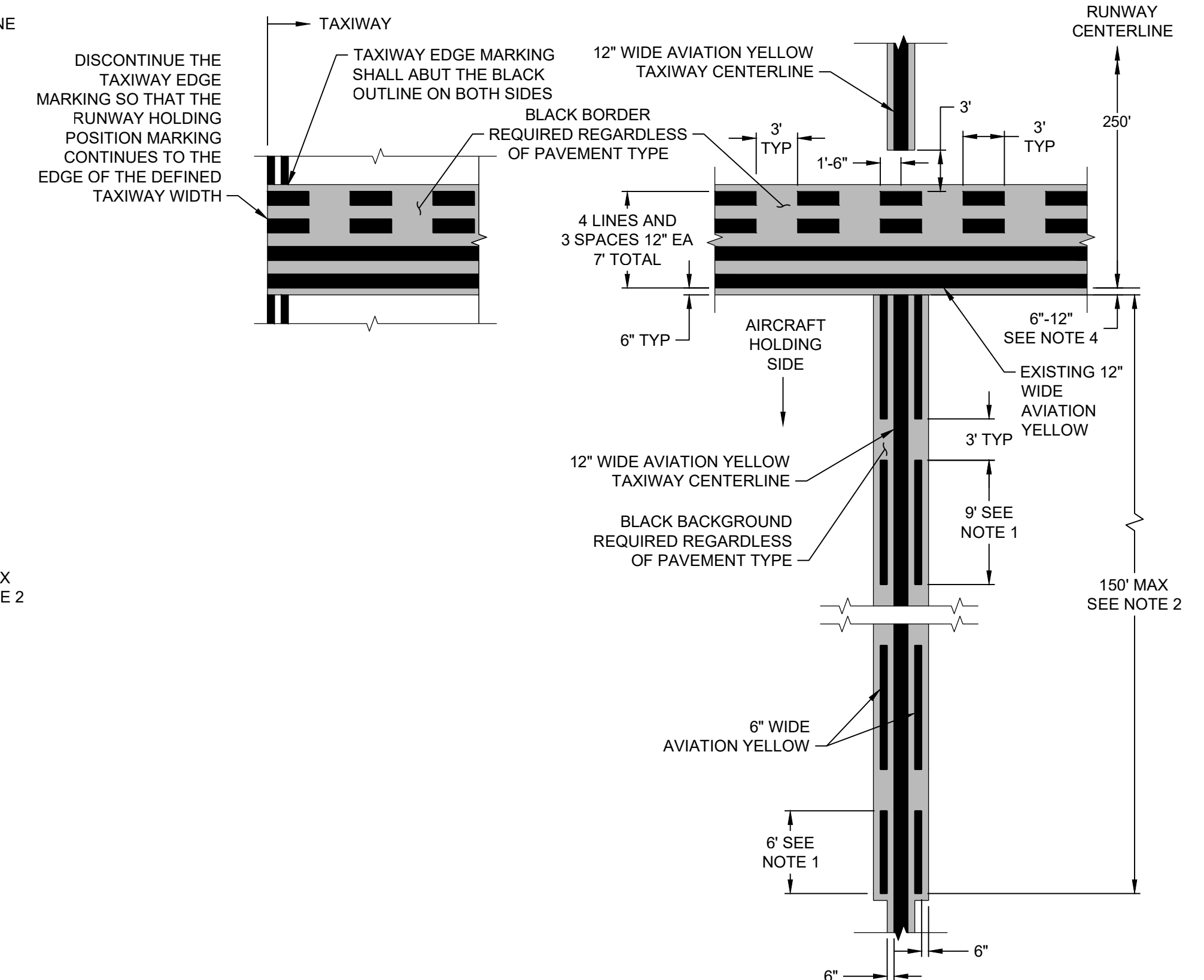
TAXIWAY EDGE MARKING (DASHED) WITH 12" TAXIWAY CENTERLINE
NTS



EXISTING RUNWAY HOLDING POSITION MARKING WITH PROPOSED ENHANCED 12" TAXIWAY CENTERLINE
NTS

NOTES:

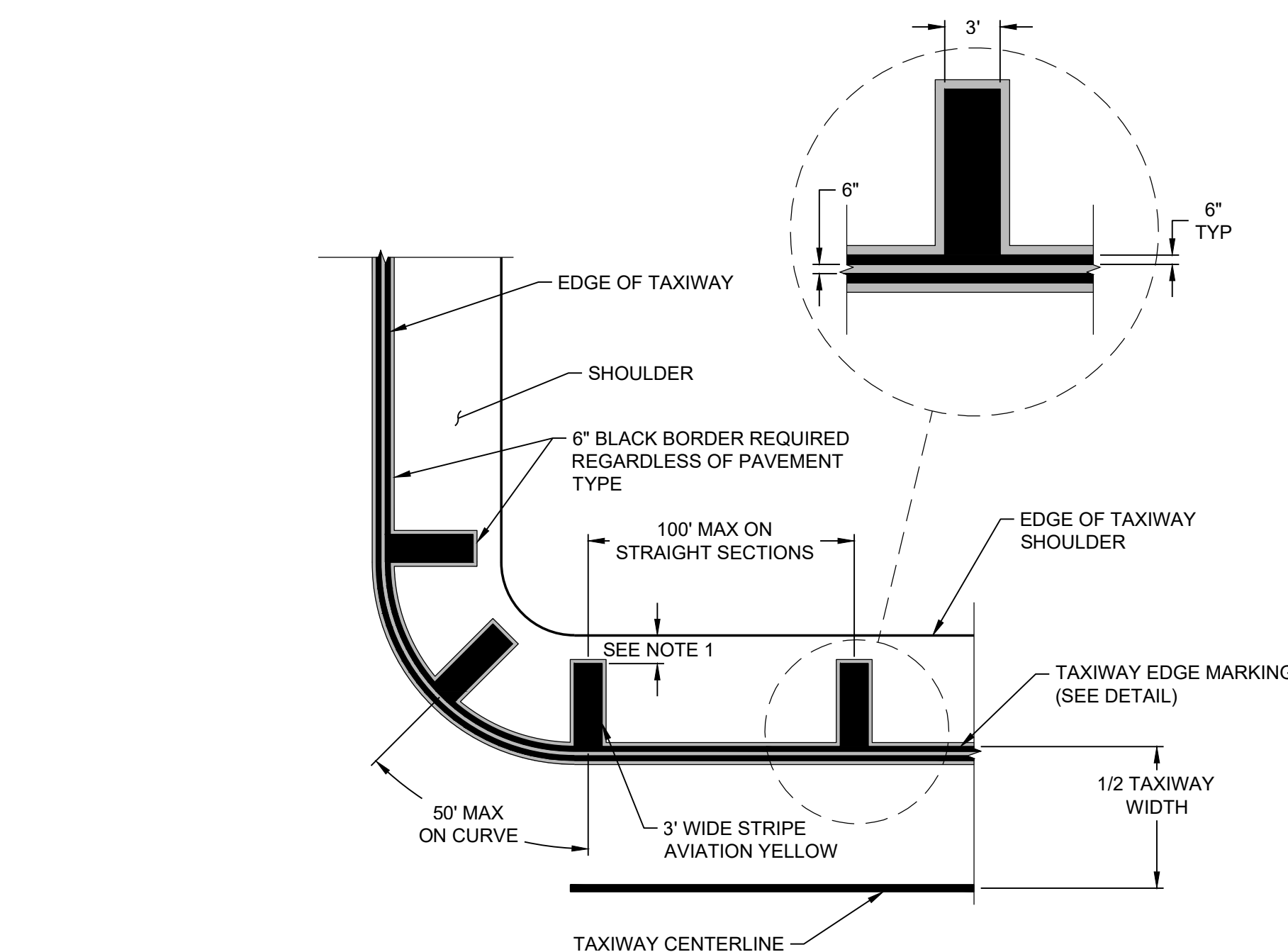
- 9 FEET AND 6 FEET DIMENSION IS ALONG TAXIWAY CENTERLINE. IN SKEWED CONDITIONS, DIMENSION ON CENTER WILL BE THAT SHOWN. DIMENSION OF 6 INCHES WIDE DASHED ENHANCEMENT LINE WILL BE LONGER OR SHORTER THAN 9 FEET DEPENDING ON SIDE OF SKEW. DASHED LINE SHALL END AT SAME LOCATION RELATIVE TO THE CENTERLINE.
- IF THE TAXIWAY CENTERLINE TO BE ENHANCED CONTINUES THROUGH A TAXIWAY/TAXIWAY INTERSECTION THAT IS LOCATED WITHIN 150 FEET OF A RUNWAY HOLDING POSITION MARKING, THE TAXIWAY CENTERLINE ENHANCEMENT MUST BE TERMINATED 5 FEET PRIOR TO THE POINT WHERE THE OTHER TAXIWAY CENTERLINE CROSSES THE ENHANCED TAXIWAY CENTERLINE.
- IF A LIGHT FIXTURE OR SIGN IS LOCATED ON THE TAXIWAY SHOULDER AND ALIGNED WITH THE EXTENDED HOLDING POSITION MARKING, THE EXTENDED HOLDING POSITION MARKING SHOULD BE EXTENDED NO CLOSER THAN 5 FEET TO THE EDGE OF THE LIGHT OR SIGN.



ENHANCED RUNWAY HOLDING POSITION MARKING WITH 12" TAXIWAY CENTERLINE
NTS

NOTES:

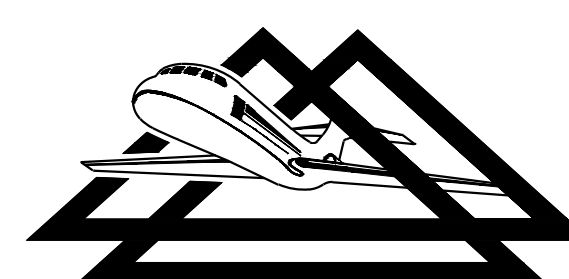
- 9 FEET AND 6 FEET DIMENSION IS ALONG TAXIWAY CENTERLINE. IN SKEWED CONDITIONS, DIMENSION ON CENTER WILL BE THAT SHOWN. DIMENSION OF 6 INCHES WIDE DASHED ENHANCEMENT LINE WILL BE LONGER OR SHORTER THAN 9 FEET DEPENDING ON SIDE OF SKEW. DASHED LINE SHALL END AT SAME LOCATION RELATIVE TO THE CENTERLINE.
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- MATCH EXISTING FIELD CONDITIONS ELSEWHERE ON AIRPORT (6" SHOWN).



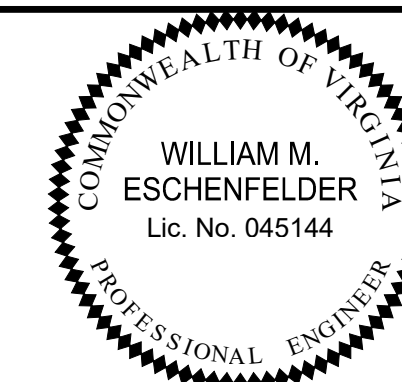
TAXIWAY SHOULDER MARKING DETAIL
NTS

NOTE:

- TRANSVERSE STRIPES SHALL BE 5' FROM EXISTING TAXIWAY SHOULDER EDGE BUT NO LONGER THAN 25' IN LENGTH.



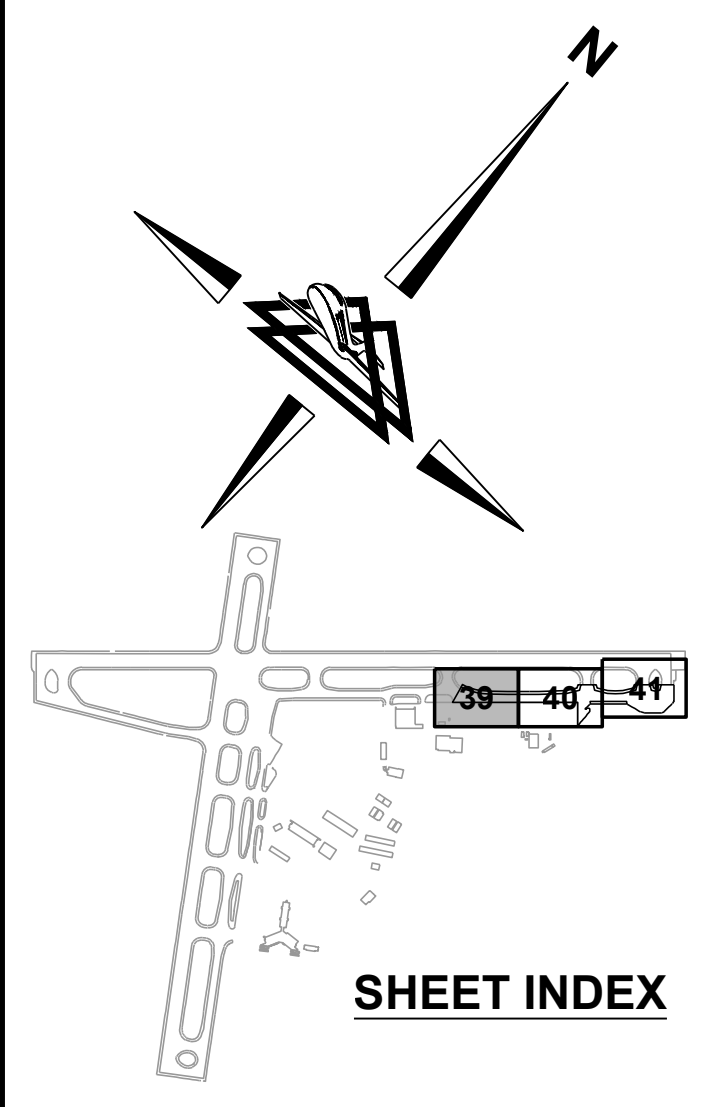
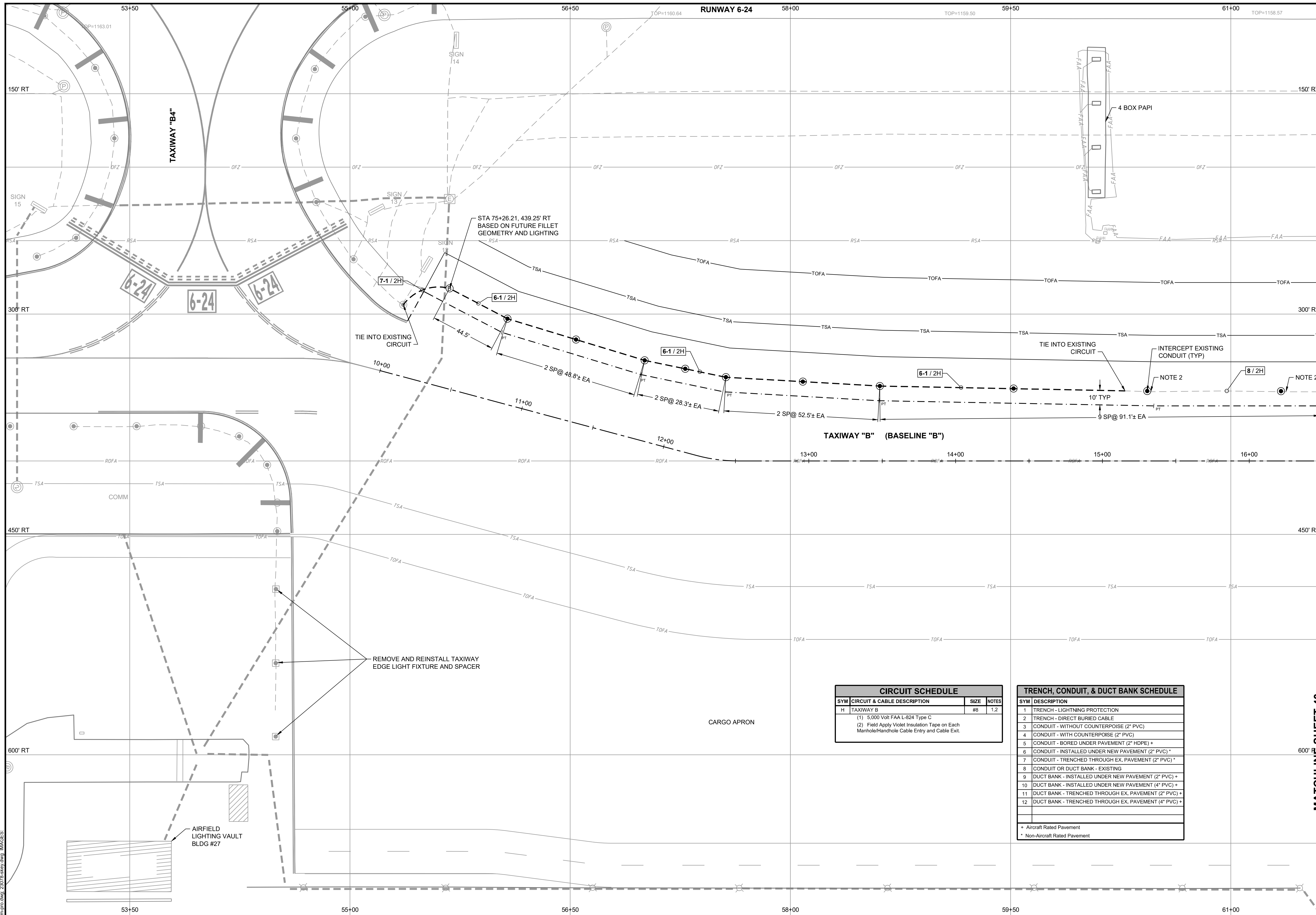
DELTA AIRPORT CONSULTANTS, INC.



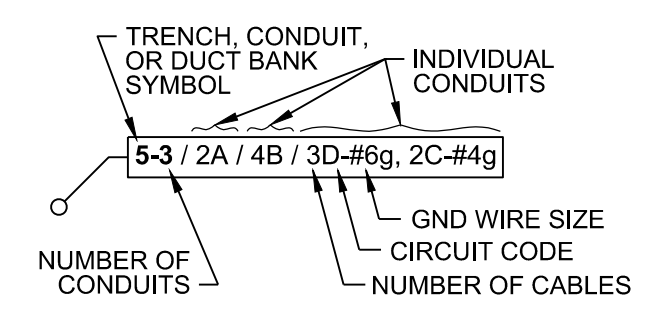
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| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| MARKING DETAILS | | DRAWN BY: PJW | SHEET 38 OF |
| | | DESIGNED BY: WME | |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | | SCALE: NONE | DATE: MARCH 2025 |

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TRENCH, CONDUIT & DUCT BANK LABEL LEGEND



SIGN/LIGHT COLOR LEGEND

- B - BLACK
- C - CLEAR
- G - GREEN
- O - OBSCURED
- R - RED
- W - WHITE
- Y - YELLOW
- CHARACTER OR LENS COLOR
- BACKGROUND OR LENS COLOR

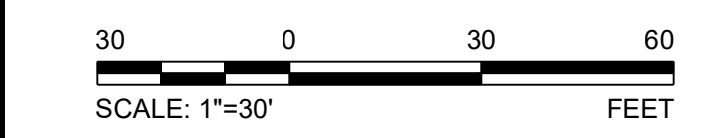
ELECTRICAL SYMBOL LEGEND

| EXISTING | REMOVE | NEW | RELOCATE | ADJUST |
|----------|--------|-----|----------|--------|
| ○ | ✗ | ● | ⊙ | ⊕ |

| SYMBOL | DESCRIPTION |
|--------|---|
| ▬ | L-858 AIRFIELD GUIDANCE SIGN |
| ▬ | EXISTING AIRFIELD GUIDANCE SIGN ON NEW FOUNDATION |
| ○ | L-861T (L) BASE MOUNTED LED MITL |
| ⊕ | L-867 ELECTRICAL PULLCAN |
| ⊕ | L-867 ELECTRICAL PULLCAN PLAZA (# INDICATES NUMBER OF CANS) |
| ⊕ | ELECTRICAL HANDHOLE |
| ⊕ | ELECTRICAL MANHOLE |
| ⊕ | L-867 LIGHT BASE |
| CM | TRENCH DUCT/CABLE MARKER |
| - - - | PROPOSED EDGE OF TAXIWAY |
| - - - | CONDUIT & CABLE |
| - - - | EXISTING ELECTRICAL DUCT |
| - - - | DUCT BANK - BORED UNDER PAVEMENT |
| FAA | EXISTING FAA-CONTROLLED CABLE |
| OFZ | EXISTING OBSTACLE FREE ZONE |
| ROFA | EXISTING RUNWAY OBJECT FREE AREA |
| RSA | EXISTING RUNWAY SAFETY AREA |
| TOFA | EXISTING TAXIWAY OBJECT FREE AREA |
| TOFA | PROPOSED TAXIWAY OBJECT FREE AREA |
| TSA | EXISTING TAXIWAY SAFETY AREA |
| TSA | PROPOSED TAXIWAY SAFETY AREA |

NOTES

- ALL STATIONS AND OFFSETS ARE GIVEN WITH RESPECT TO BASELINE "RW1" UNLESS OTHERWISE SPECIFIED.
- PATCH EXISTING CONDUIT WHERE EXISTING LIGHT BASE CAN WAS REMOVED.



| CIRCUIT SCHEDULE | | | |
|------------------|---|------|-------|
| SYM | CIRCUIT & CABLE DESCRIPTION | SIZE | NOTES |
| H | TAXIWAY B | #8 | 1,2 |
| | (1) 5,000 Volt FAA L-824 Type C | | |
| | (2) Field Apply Violet Insulation Tape on Each Manhole/Handhole Cable Entry and Cable Exit. | | |

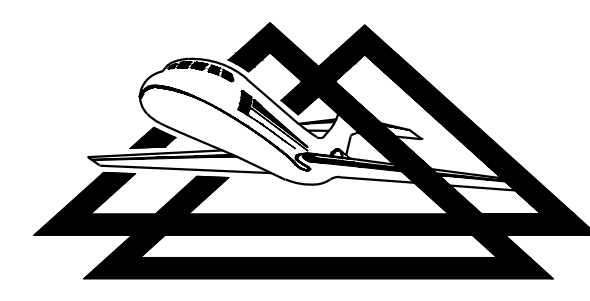
| TRENCH, CONDUIT, & DUCT BANK SCHEDULE | |
|---------------------------------------|--|
| SYM | DESCRIPTION |
| 1 | TRENCH - LIGHTNING PROTECTION |
| 2 | TRENCH - DIRECT BURIED CABLE |
| 3 | CONDUIT - WITHOUT COUNTERPOISE (2" PVC) |
| 4 | CONDUIT - WITH COUNTERPOISE (2" PVC) |
| 5 | CONDUIT - BORED UNDER PAVEMENT (2" HDPE) + |
| 6 | CONDUIT - INSTALLED UNDER NEW PAVEMENT (2" PVC) * |
| 7 | CONDUIT - TRENCHED THROUGH EX. PAVEMENT (2" PVC) * |
| 8 | CONDUIT OR DUCT BANK - EXISTING |
| 9 | DUCT BANK - INSTALLED UNDER NEW PAVEMENT (2" PVC) + |
| 10 | DUCT BANK - INSTALLED UNDER NEW PAVEMENT (4" PVC) + |
| 11 | DUCT BANK - TRENCHED THROUGH EX. PAVEMENT (2" PVC) + |
| 12 | DUCT BANK - TRENCHED THROUGH EX. PAVEMENT (4" PVC) + |

+ Aircraft Rated Pavement
* Non-Aircraft Rated Pavement

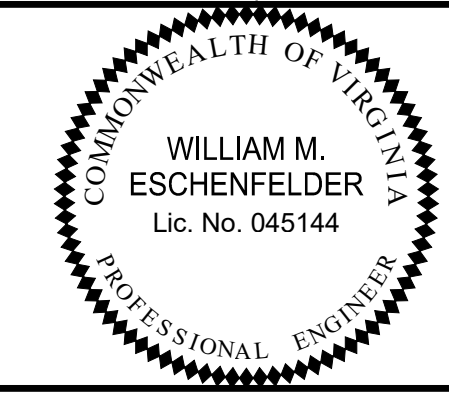
MATCHLINE SHEET 40

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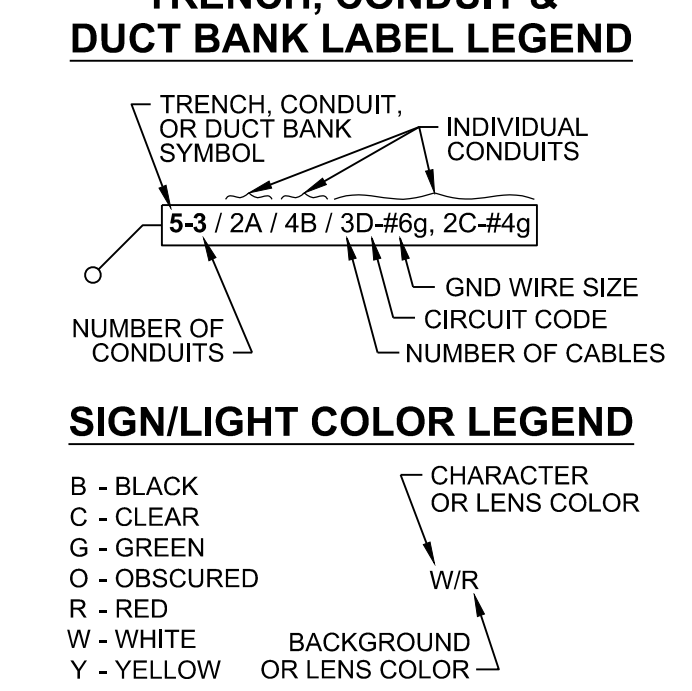
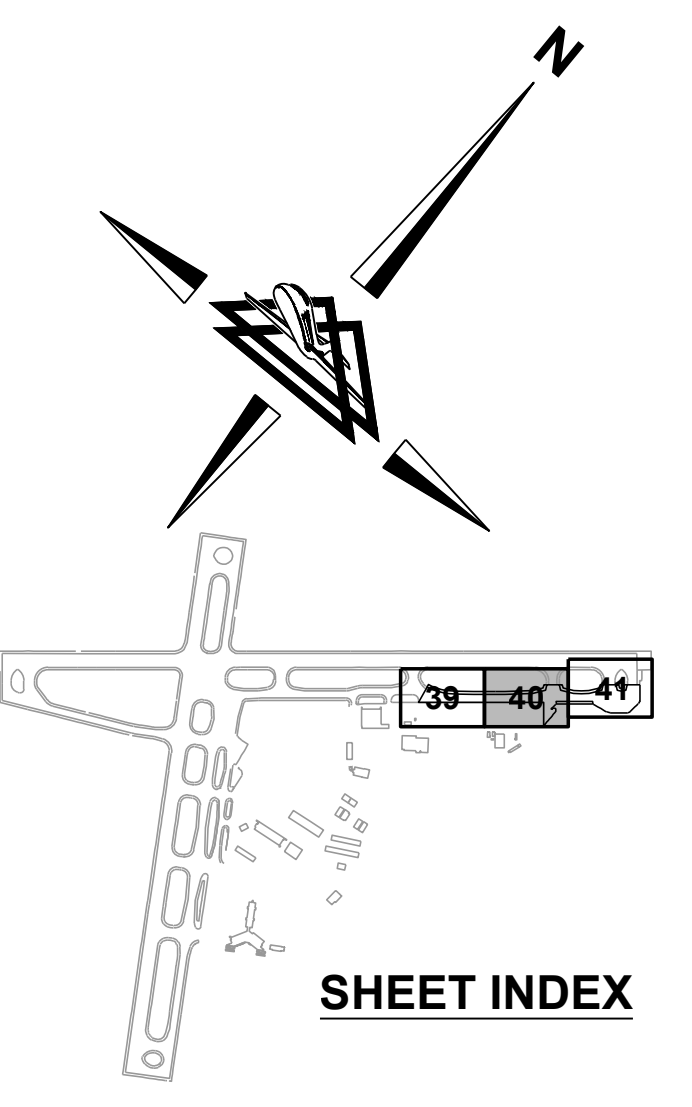
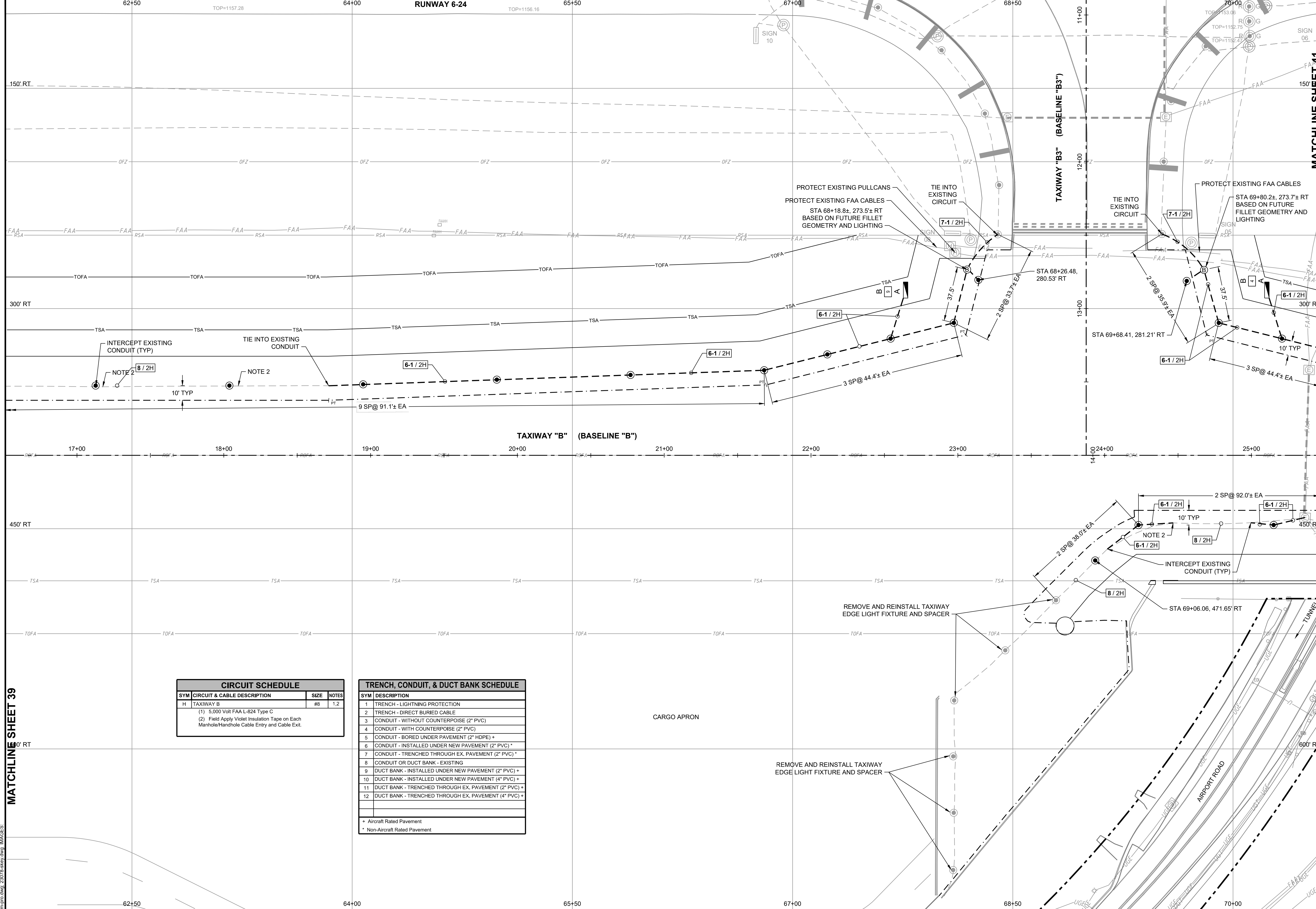


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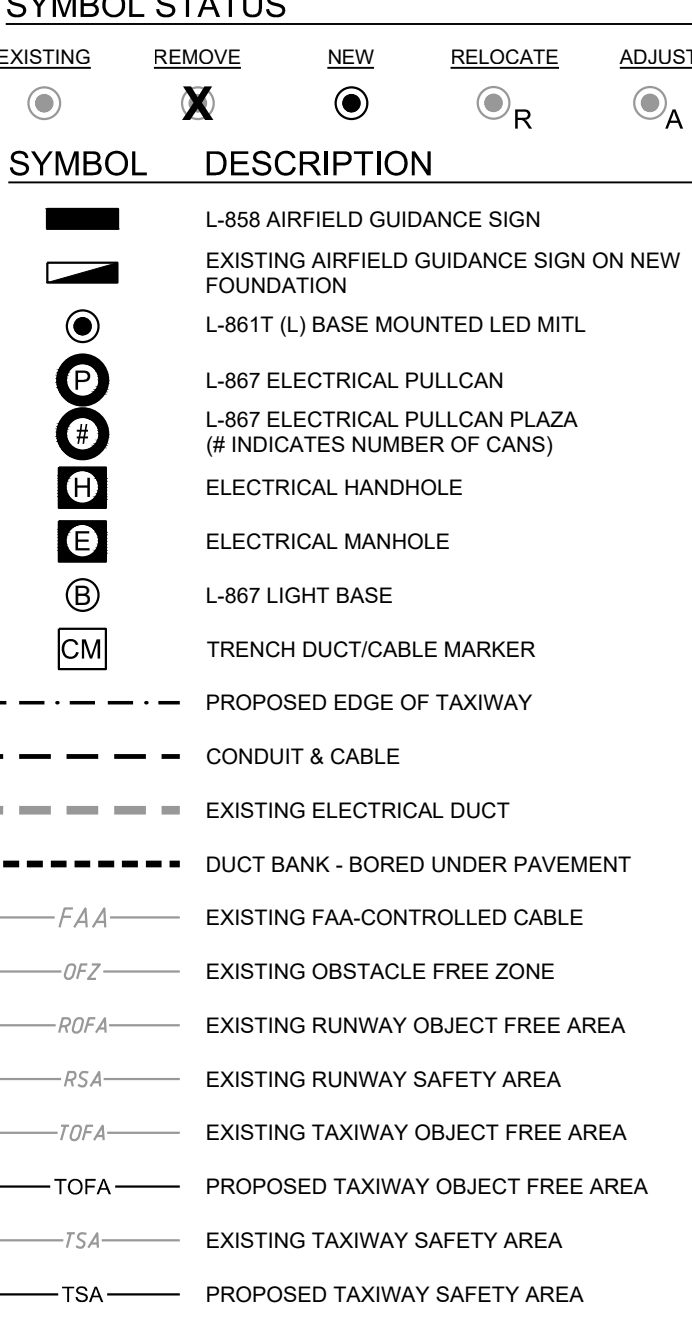


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| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| ELECTRICAL LAYOUT | | DRAWN BY: PJW | SHEET 39 |
| | | DESIGNED BY: WME | OF 60 |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | | SCALE: 1" = 30' | DATE: MARCH 2025 |

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ELECTRICAL SYMBOL LEGEND



- NOTES: 1. ALL STATIONS AND OFFSETS ARE GIVEN WITH RESPECT TO BASELINE "RW1" UNLESS OTHERWISE SPECIFIED. 2. PATCH EXISTING CONDUIT WHERE EXISTING LIGHT BASE CAN WAS REMOVED.

MATCHLINE SHEET 39

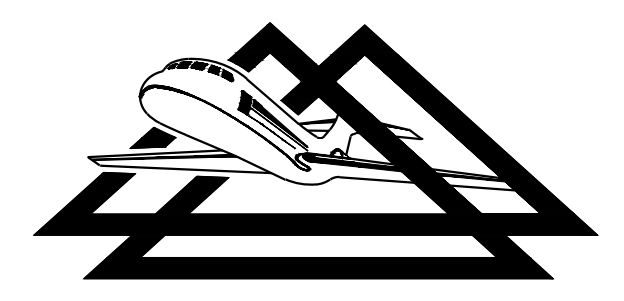
MATCHLINE SHEET 41

CIRCUIT SCHEDULE table with columns SYM, CIRCUIT & CABLE DESCRIPTION, SIZE, NOTES.

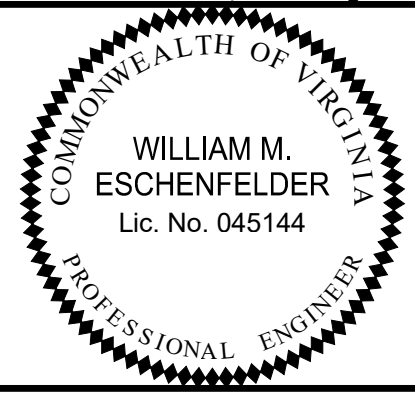
TRENCH, CONDUIT, & DUCT BANK SCHEDULE table with columns SYM, DESCRIPTION.

NO. REVISIONS BY APP. DATE table with 4 columns and 10 rows.

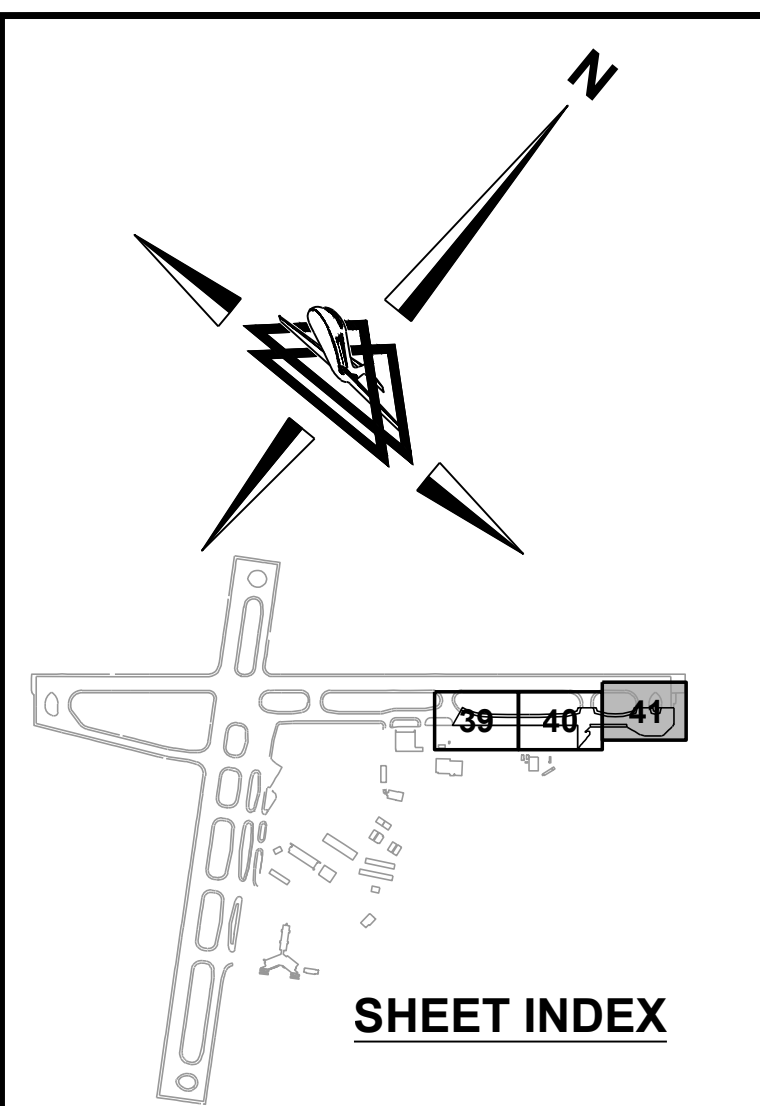
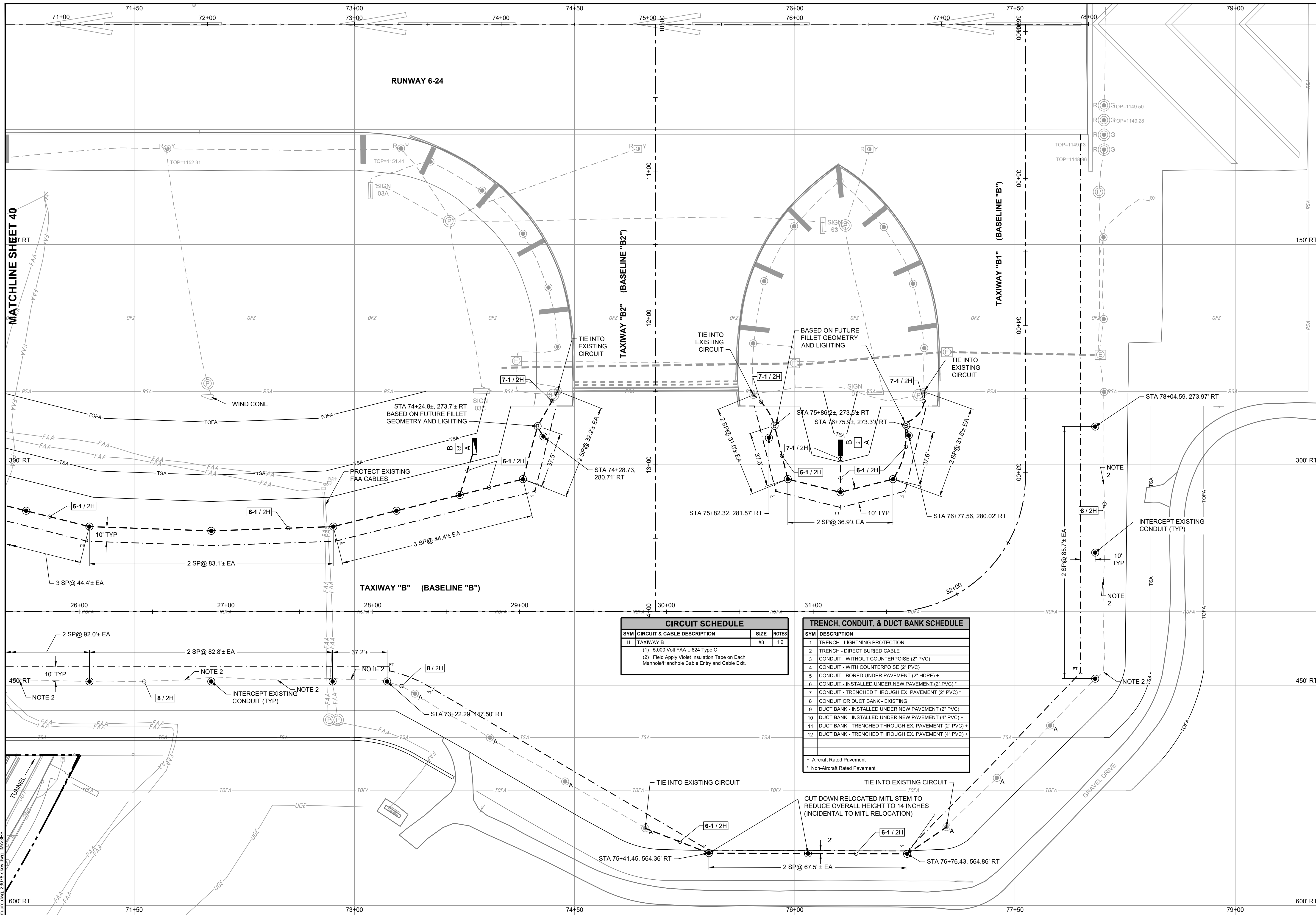
2700 Polo Parkway Midlothian, Virginia 23113 phone: (804) 275-8301 www.deltaairport.com



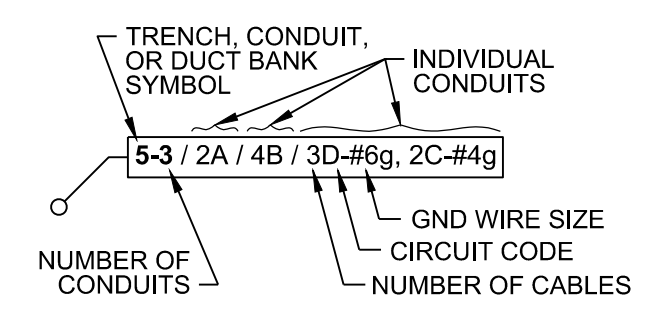
DELTA AIRPORT CONSULTANTS, INC. logo and name.



REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 ELECTRICAL LAYOUT ROANOKE-BLACKSBURG REGIONAL AIRPORT AIP NO. 3-51-0045-071-2024 JOB NO. 23078 DRAWN BY: PJW SHEET 40 OF 60 DESIGNED BY: WME SCALE: 1" = 30' DATE: MARCH 2025



TRENCH, CONDUIT & DUCT BANK LABEL LEGEND



SIGN/LIGHT COLOR LEGEND

- B - BLACK
 - C - CLEAR
 - G - GREEN
 - O - OBTURED
 - R - RED
 - W - WHITE
 - Y - YELLOW
- CHARACTER OR LENS COLOR
- WIR
- BACKGROUND OR LENS COLOR

ELECTRICAL SYMBOL LEGEND

SYMBOL STATUS

- EXISTING
- REMOVE
- NEW
- RELOCATE
- ADJUST

| SYMBOL | DESCRIPTION |
|----------|---|
| [Symbol] | L-858 AIRFIELD GUIDANCE SIGN |
| [Symbol] | EXISTING AIRFIELD GUIDANCE SIGN ON NEW FOUNDATION |
| [Symbol] | L-861(L) BASE MOUNTED LED MITL |
| [Symbol] | L-867 ELECTRICAL PULLCAN |
| [Symbol] | L-867 ELECTRICAL PULLCAN PLAZA (# INDICATES NUMBER OF CANS) |
| [Symbol] | ELECTRICAL HANDHOLE |
| [Symbol] | ELECTRICAL MANHOLE |
| [Symbol] | L-867 LIGHT BASE |
| [Symbol] | TRENCH DUCT/CABLE MARKER |
| [Symbol] | PROPOSED EDGE OF TAXIWAY |
| [Symbol] | CONDUIT & CABLE |
| [Symbol] | EXISTING ELECTRICAL DUCT |
| [Symbol] | DUCT BANK - BORED UNDER PAVEMENT |
| [Symbol] | EXISTING FAA-CONTROLLED CABLE |
| [Symbol] | EXISTING OBSTACLE FREE ZONE |
| [Symbol] | EXISTING RUNWAY OBJECT FREE AREA |
| [Symbol] | EXISTING RUNWAY SAFETY AREA |
| [Symbol] | EXISTING TAXIWAY OBJECT FREE AREA |
| [Symbol] | PROPOSED TAXIWAY OBJECT FREE AREA |
| [Symbol] | EXISTING TAXIWAY SAFETY AREA |
| [Symbol] | PROPOSED TAXIWAY SAFETY AREA |

CIRCUIT SCHEDULE

| SYM | CIRCUIT & CABLE DESCRIPTION | SIZE | NOTES |
|-----|---|------|-------|
| H | TAXIWAY B | #8 | 1.2 |
| | (1) 5,000 Volt FAA L-824 Type C | | |
| | (2) Field Apply Violet Insulation Tape on Each Manhole/Handhole Cable Entry and Cable Exit. | | |

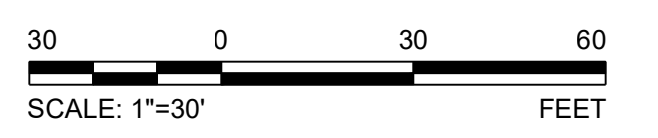
TRENCH, CONDUIT, & DUCT BANK SCHEDULE

| SYM | DESCRIPTION |
|-----|--|
| 1 | TRENCH - LIGHTNING PROTECTION |
| 2 | TRENCH - DIRECT BURIED CABLE |
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| 12 | DUCT BANK - TRENCHED THROUGH EX. PAVEMENT (4" PVC) + |

+ Aircraft Rated Pavement
* Non-Aircraft Rated Pavement

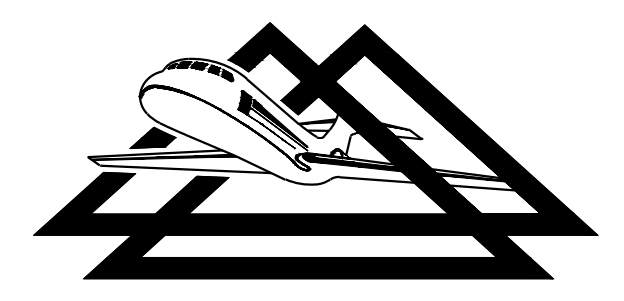
NOTES

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- PATCH EXISTING CONDUIT WHERE EXISTING LIGHT BASE CAN WAS REMOVED.

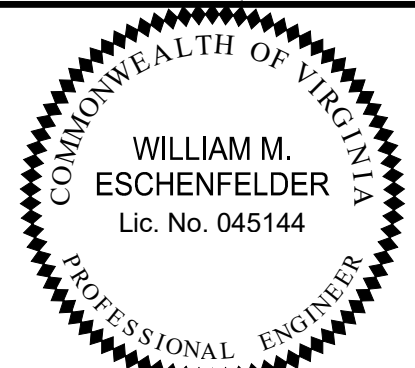


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REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4

ELECTRICAL LAYOUT

ROANOKE-BLACKSBURG REGIONAL AIRPORT

AIP NO. 3-51-0045-071-2024
JOB NO. 23078

DRAWN BY: PJW
DESIGNED BY: WME
SHEET 41 OF 60

SCALE: 1" = 30'
DATE: MARCH 2025

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ELECTRICAL NOTES:

GENERAL:

1. THE CONTRACTOR SHALL MAINTAIN ELECTRICAL SERVICE TO ALL AIRFIELD EQUIPMENT WITHIN THE SCOPE OF THE PROJECT. ANY REQUIREMENTS FOR TEMPORARY ELECTRICAL POWER, SUCH AS TEMPORARY CABLES, GENERATORS, ETC. ANTICIPATED IN ORDER TO ACCOMMODATE CONSTRUCTION PHASING, SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND IS INCIDENTAL TO THE COST OF THE PROJECT.
2. THE CONTRACTOR SHALL HAVE A TONE GENERATOR TYPE CABLE TRACER ON SITE AT ALL TIMES. NO SEPARATE PAY ITEM
3. ALL ELECTRICAL WORK SHALL BE COMPLETED IN ACCORDANCE WITH LOCAL CODE AND CURRENT NEC HANDBOOK.
4. THE LOCATIONS OF ALL P.T.'S SHOWN ON THE PLANS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR WITH THE ENGINEER TO RESOLVE ANY DISCREPANCIES.
5. THE CONTRACTOR SHALL LOCATE EXISTING DUCTS WHICH WILL BE UTILIZED FOR THIS PROJECT. APPROXIMATE "AS-BUILT PLAN" LOCATIONS ARE SHOWN.
6. THE EXISTING FIXTURE I.D. NUMBERS SHALL BE ASSIGNED BY THE ENGINEER / OWNER UNLESS OTHERWISE NOTED.
7. RUNWAY AND/OR TAXIWAY LIGHTS SHALL BE DE-ENERGIZED OR PROPERLY COVERED ON ALL CLOSED SEGMENTS OF RUNWAY(S) AND TAXIWAY(S) IN A MANNER APPROVED BY THE ENGINEER. (NO SEPARATE PAY ITEM). REMOVING THE LAMP FROM ITS FIXTURE IS NOT ALLOWED.
8. THE CONTRACTOR SHALL CONFIRM FIXTURE TAG LABELS WITH ENGINEER PRIOR TO ORDERING AND INSTALLATION.
9. ALL EXISTING ELECTRICAL EQUIPMENT REMOVED AND NOT SHOWN TO BE REUSED SHALL REMAIN THE PROPERTY OF THE OWNER AND STORED AT THE AIRPORT AT A LOCATION AS ORDERED BY THE ENGINEER AND/OR OWNER UNLESS OTHERWISE NOTED.

MATERIALS:

10. ALL CABLES SHALL BE TAGGED AT EACH CONNECTION AND AT EACH ENTRANCE TO DUCTS, HANDHOLES, AND SPICE CANS. CABLE MARKERS SHALL BE ALMETEK "MINI-TAGS" KIT WITH BLACK STAMPED YELLOW POLYETHYLENE LETTERS OR APPROVED EQUIVALENT. ATTACH MARKERS WITH CABLE TIES. NO SEPARATE PAY ITEM
11. ALL UNDERGROUND CONDUITS SHALL BE PVC, SCHEDULE 40, UNLESS OTHERWISE NOTED. ALL UNDERGROUND CONDUIT BENDS SHALL BE UL APPROVED LONG RADIUS.
12. WHERE PROPOSED CONDUIT IS TO BE CONNECTED TO EXISTING CONDUIT, THE CONTRACTOR SHALL MAKE THE CONNECTION USING MANUFACTURED COUPLINGS. NO SEPARATE PAY ITEM.
13. EACH L-830 ISOLATION TRANSFORMER, L-823 CONNECTOR KIT, AND 5KV, TYPE "C" CABLE INSTALLED ON THIS PROJECT AS A COMPLETE OR PARTIAL CIRCUIT SHALL BE TESTED AS AN OPERABLE CIRCUIT SYSTEM AND SHALL MEET THE REQUIREMENTS OF SECTION L-108-3.10 OF THE SPECIFICATIONS. THE INSULATION RESISTANCE OF THE L-830 ISOLATION TRANSFORMERS SHALL BE TESTED IN ACCORDANCE WITH FAA AC 150/5345-47C. THE CONTRACTOR SHALL PROVIDE A LETTER INDICATING THAT THE L-830 TRANSFORMERS COMPLY WITH THE REQUIREMENTS OF THE ADVISORY CIRCULAR.

PRIOR TO CONSTRUCTION:

14. THE LOCATION OF ALL UTILITIES SHOWN ARE APPROXIMATE ONLY AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR BEFORE BEGINNING CONSTRUCTION. NOT ALL UTILITIES ARE NECESSARILY SHOWN.
15. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL INVENTORY ALL LIGHTS, FIXTURES, SIGNS, ETC. WITHIN THE PROJECT LIMITS. THE CONTRACTOR SHALL ADVISE THE ENGINEER, IN WRITING, OF ANY DAMAGED LIGHT FIXTURES, SIGNS, OR UTILITIES PRIOR TO CONSTRUCTION.
16. THE CONTRACTOR SHALL MEGGER THE EXISTING LIGHTING SYSTEMS PRIOR TO COMMENCING WORK ON THE EXISTING LIGHTING SYSTEMS. THIS WORK SHALL BE PERFORMED IN THE PRESENCE OF THE RESIDENT PROJECT REPRESENTATIVE AND LOGGED IN THE DAILY REPORT (NO SEPARATE PAY ITEM).
17. AT THE BEGINNING OF THE PROJECT, THE CONTRACTOR SHALL FURNISH THE ENGINEER WITH TWO (2) COPIES OF ALL MANUFACTURERS' INSTALLATION INSTRUCTIONS FOR ALL EQUIPMENT ASSOCIATED WITH THE PROJECT (NO SEPARATE PAY ITEM).

CONSTRUCTION:

18. THE CONTRACTOR SHALL COORDINATE (AT LEAST 48 HOURS IN ADVANCE) INTERRUPTION OF ELECTRICAL SERVICE TO ACTIVE LIGHTING CIRCUITS WITH THE ENGINEER / OWNER. ANY DAMAGE TO EXISTING AIRPORT CIRCUITS CAUSED BY THE CONTRACTOR'S EQUIPMENT OR PERSONNEL SHALL BE PROMPTLY REPAIRED TO THE ENGINEER'S SATISFACTION, BY THE CONTRACTOR, AT THE CONTRACTOR'S EXPENSE. ALL LIGHTING SYSTEMS FOR OPEN AIRCRAFT OPERATIONAL AREAS SHALL REMAIN READY FOR OPERATION DURING IFR WEATHER CONDITIONS AND FROM DUSK TO DAWN.
19. THE CONTRACTOR SHALL MANUALLY LOCK-OUT EACH CIRCUIT IN THE VAULT WHEN WORK IS BEING PERFORMED ON THAT CIRCUIT. THE CONTRACTOR SHALL GIVE 48 HOURS NOTICE PRIOR TO ANY CIRCUIT LOCK-OUT. THE CIRCUIT SHALL BE TAGGED AND THE CONTRACTOR'S NAME SHALL BE CLEARLY IDENTIFIED ON EACH TAG. THE CONTRACTOR SHALL HAVE A LOCK-OUT KIT ON SITE AT ALL TIMES. THE OWNER'S REPRESENTATIVE SHALL BE NOTIFIED (AT LEAST 48 HOURS IN ADVANCE) EACH TIME A CIRCUIT IS SECURED AND EACH TIME THE CIRCUIT IS RETURNED TO REMOTE CONTROL. THE CONTRACTOR MUST BE CERTIFIED AND TRAINED BY THE OWNER PRIOR TO PERFORMING WORK OR LOCK-OUTS IN THE ELECTRICAL VAULT.
20. THE CONTRACTOR SHALL FIELD STAKE ALL LIGHTS AND AIRFIELD SIGNS PRIOR TO INSTALLATION. ANY DISCREPANCIES IN ALIGNMENT OR LOCATION SHOULD BE RESOLVED PRIOR TO INSTALLATION. THE LOCATION OF ALL HOLD LINES SHALL BE CONFIRMED PRIOR TO INSTALLATION OF THE SIGNS. ANY SIGNS OR OTHER ELECTRICAL EQUIPMENT WHICH ARE STAKED IN DRAINAGE SWALES OR DITCHES SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO INSTALLATION OF THE SIGNS OR EQUIPMENT.
21. ALL SIGNS SHALL BE INSTALLED PERPENDICULAR TO THE RUNWAY OR TAXIWAY CENTERLINE UNLESS OTHERWISE NOTED. SIGN STATIONS AND OFFSETS ARE REFERENCED TO THE CENTER OF THE SIDE CLOSEST TO THE EDGE OF PAVEMENT.

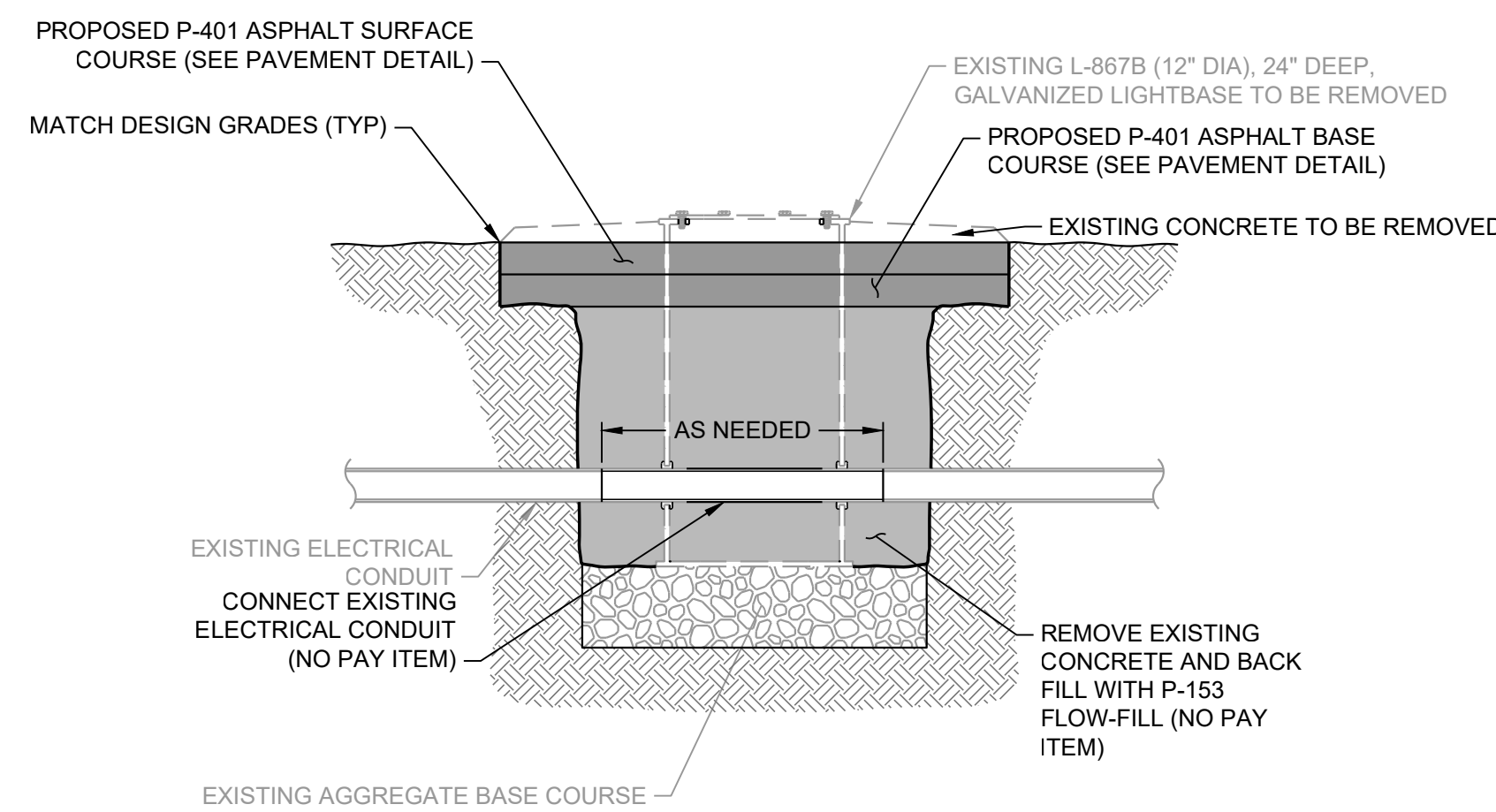
22. THE RUNWAY AND TAXIWAY LIGHTING CIRCUIT DESIGN LOADS ARE BASED UPON THE INSTALLATION OF THE "LOW VA" LOAD AIRFIELD SIGNS. THE SIGN LOADS SHALL NOT EXCEED THE FOLLOWING LOADS:

| NO. OF MODULES | MEASURED LOAD (VA) |
|----------------|--------------------|
| 1 | 140 |
| 2 | 225 |
| 3 | 310 |
| 4 | 410 |

23. THE CONTRACTOR SHALL FIELD STAKE THE LOCATION OF PROPOSED SIGNS FOR THE ENGINEERS REVIEW PRIOR TO INSTALLATION. NEW SIGNS SHALL NOT BLOCK EXISTING SIGNS IN AREAS TO REMAIN OPEN TO TRAFFIC. THE CONTRACTOR SHALL COORDINATE THEIR WORK SUCH THAT AN EXISTING SIGN IS REMOVED AND A NEW SIGN INSTALLED AND OPERATIONAL BEFORE THE AREA IS REOPENED TO TRAFFIC.
24. THE CONTRACTOR SHALL BE REQUIRED TO CONNECT TO EXISTING CONDUIT, MANHOLES, HANDHOLES, JUNCTION BOXES, PULLCANS, SIGNS, AND LIGHT FIXTURES, ETC. DURING CONSTRUCTION. ALL WORK NECESSARY TO COMPLETE THE CONNECTION SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
25. ALL WORK ASSOCIATED WITH CONNECTING A NEW PULLCAN, FIXTURE, SIGN, ETC. TO AN EXISTING CONDUIT WILL BE CONSIDERED INCIDENTAL TO THE PULLCAN, FIXTURE, ETC. PAY ITEM.
26. THE CONTRACTOR SHALL BE REQUIRED TO CONNECT PROPOSED CIRCUITS TO THE EXISTING CIRCUITS AS ORDERED BY THE ENGINEER. ALL WORK REQUIRED TO MAKE THE CONNECTIONS TO EXISTING CIRCUITS SHALL BE INCIDENTAL TO THE PROJECT (I.E., PUNCHING INTO EXISTING MANHOLES FOR CONDUITS).
27. EXISTING CIRCUITS SHALL BE REPLACED FROM HANDHOLE TO HANDHOLE OR PULLCAN OR NEAREST LIGHT FIXTURE.
28. THE CONTRACTOR SHALL CLEAN/SWAB OUT EXISTING DUCTS BEING USED ON THIS PROJECT. THE USE OF SEWER TAPE TO CLEAR OBSTRUCTIONS WITHIN CONCRETE ENCASED DUCTS SHOULD BE ANTICIPATED. (NO SEPARATE PAY ITEM)
29. ALL GROUND RODS AND OTHER UNDERGROUND GROUNDING CONNECTIONS SHALL BE EXOTHERMICALLY WELDED. EXOTHERMIC CONNECTIONS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S GUIDELINES. THE PROPOSED COUNTERPOISE SYSTEM SHALL BE CONNECTED WITH THE EXISTING SYSTEM AT ALL CROSSING POINTS.
30. FOR SITUATIONS IN WHICH ENCOUNTERING ROCK DOES NOT PERMIT DRIVING A GROUND ROD THE FULL DISTANCE REQUIRED, A GROUNDING PLATE MAY BE SUBSTITUTED AS APPROVED BY THE ENGINEER.

COMPLETION OF CONSTRUCTION:

31. AT PROJECT COMPLETION, THE CONTRACTOR SHALL PROVIDE A TWO (2) HOUR MINIMUM TRAINING SESSION FOR AIRPORT MAINTENANCE PERSONNEL. THE SESSION SHALL COVER ALL INSTALLED EQUIPMENT (NO SEPARATE PAY ITEM).
32. AT PROJECT COMPLETION, THE CONTRACTOR SHALL PROVIDE COMPLETE MAINTENANCE MANUALS BOUND IN THREE-RING NOTEBOOKS (NO SEPARATE PAY ITEM). THE MANUALS SHALL CONTAIN THE FOLLOWING AS A MINIMUM:
 - AS-BUILT WIRING SCHEMATICS
 - EQUIPMENT SHOP DRAWING SUBMITTALS
 - MANUFACTURER'S EQUIPMENT INSTALLATION INSTRUCTIONS
 - MANUFACTURER'S MAINTENANCE INSTRUCTIONS
 - WARRANTIES
 - SPARE PARTS LIST
 - AS-BUILT WIRING SCHEMATICS



L-867 LIGHT BASE REMOVAL DETAIL
NTS

NOTES:

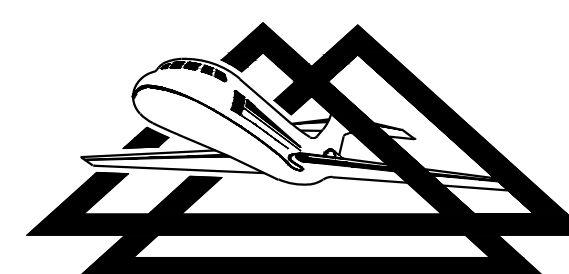
1. CONDUIT SHALL BE IN ACCORDANCE WITH L-110 AND SHALL BE INCIDENTAL TO THE RELOCATED L-861T(L) BASE MOUNTED MITL (LED) PAY ITEM.
2. FLOW-FILL SHALL BE INCIDENTAL TO THE RELOCATED L-861T(L) BASE MOUNTED MITL (LED) PAY ITEM.
3. ASPHALT SURFACE AND BASE COURSE WILL BE PAID FOR UNDER RESPECTIVE P-401 PAY ITEMS.

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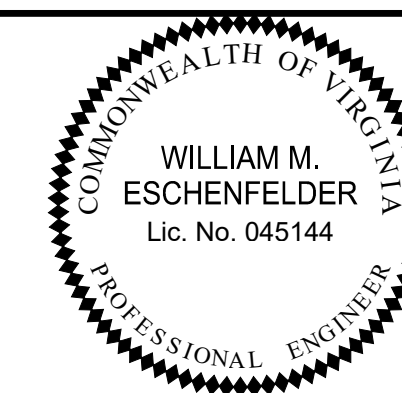
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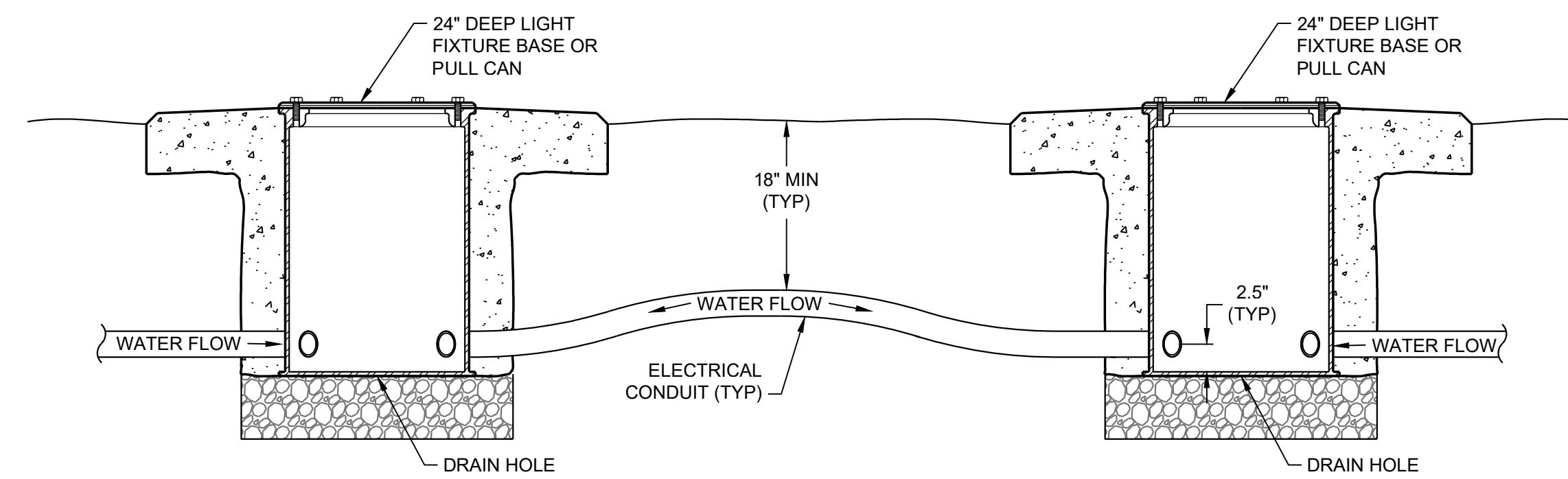
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| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| ELECTRICAL NOTES & DETAILS | | DRAWN BY: PJW | SHEET 42 |
| | | DESIGNED BY: WME | OF 60 |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | | SCALE: NONE | DATE: MARCH 2025 |



PULL CANS AND LIGHT FIXTURE BASES WITH DRAIN HOLES WITHOUT DRAINAGE SUMP

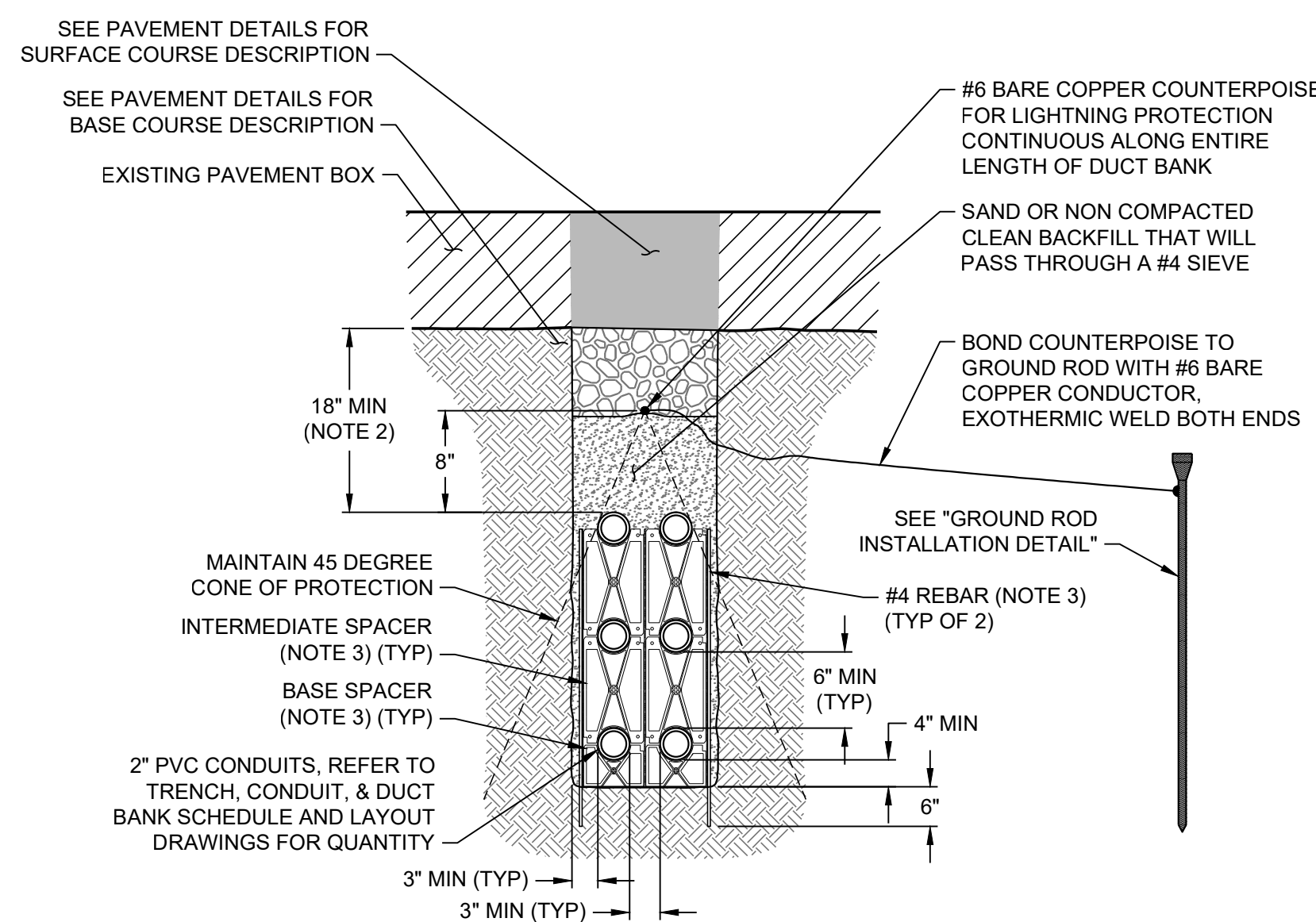
CONDUIT SLOPING
NTS

NOTES:

- PULL CAN AND LIGHT BASE CONDUIT ENTRY SHALL BE PROVIDED TO ALLOW POSITIVE DRAINAGE TOWARD PULL CAN / LIGHT FIXTURE BASE.
- MAINTAIN CONSTANT SLOPE FROM CENTER OF CONDUIT RUN TO EACH PULL CAN / LIGHT FIXTURE BASE WITHOUT SAGS OR HUMPS.

TRENCH, CONDUIT, & DUCT BANK NOTES:

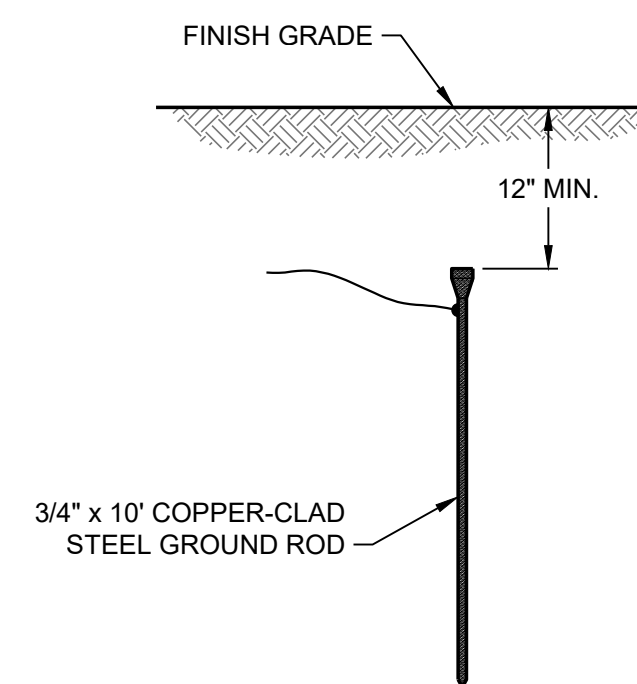
- THE #6 BARE COPPER COUNTERPOISE AND ASSOCIATED GROUND RODS AND EXOTHERMIC WELD CONNECTIONS SHOWN IN THE TRENCH, CONDUIT, AND DUCT BANK DETAILS WILL BE PAID FOR UNDER THE #6 BARE COPPER COUNTERPOISE LINE ITEM. ALL OTHER ITEMS SHOWN IN THE TRENCH, CONDUIT, AND DUCT BANK DETAILS ARE INCIDENTAL TO THE COST OF THE RESPECTIVE TRENCH, CONDUIT, OR DUCT BANK.
- CONDUITS SHALL BE INSTALLED WITH CONDUIT SPACERS AT 5' ON CENTER.
- ROUTE SKV CABLES IN LOWER LEVEL CONDUITS WHERE POSSIBLE. DO NOT ROUTE DIFFERENT VOLTAGE CLASSIFICATION CABLES IN THE SAME CONDUIT.
- GROUND RODS SHALL ALSO BE USED TO TERMINATE COUNTERPOISE AT BOTH ENDS OF TRENCH, CONDUIT RUN, OR DUCT BANK (NO SEPARATE PAY ITEM).



TRENCH 7 - CONDUIT - TRENCHED THROUGH EXISTING PAVEMENT (2" PVC)
Non-Aircraft Rated Pavement
NTS

NOTES:

- THE ILLUSTRATION SHOWN ABOVE IS FOR CONFIGURATION PURPOSES ONLY. SEE TRENCH, CONDUIT, & DUCT BANK SCHEDULE AND LAYOUT DRAWINGS FOR CONDUIT QUANTITY. SEE ELECTRICAL NOTES SHEET FOR TRENCH, CONDUIT, & DUCT BANK NOTES.
- DEPTH OF CONDUIT SHALL ALLOW FOR POSITIVE DRAINAGE OF CONDUIT SYSTEM. SEE "CONDUIT SLOPING" DETAIL FOR ADDITIONAL INFORMATION.
- CONTRACTOR SHALL INSTALL CONDUIT SPACERS AT 5'-0" INTERVALS.



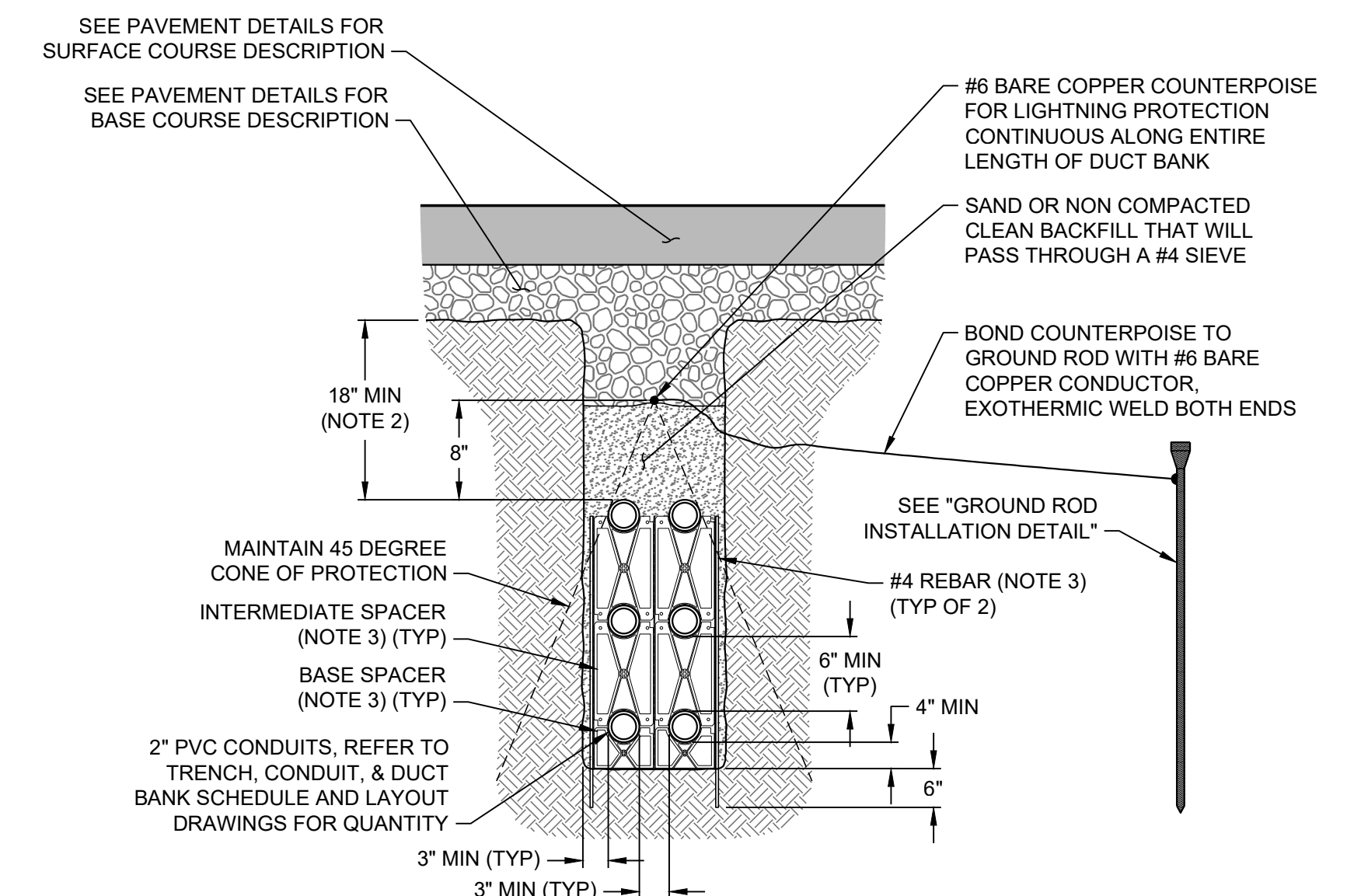
GROUND ROD INSTALLATION DETAIL
NTS

NOTES:

- THE IMPEDANCE TO GROUND OF EACH GROUND ROD SHALL NOT EXCEED 25 OHMS. SHOULD THE IMPEDANCE EXCEED 25 OHMS THE CONTRACTOR SHALL INSTALL A SECOND GROUND ROD AT LEAST 10 FEET AWAY IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC).
- INTERCONNECT GROUND RODS WITH #6 BARE COUNTERPOISE WITH EXOTHERMIC CONNECTION. RETEST AFTER THE SECOND GROUND ROD IS INSTALLED AND NOTIFY ENGINEER IF IMPEDANCE EXCEEDS 25 OHMS.
- GROUND ELECTRODES SHALL BE INSTALLED IN ACCORDANCE WITH NEC 250.53. WHERE ROCK PREVENTS VERTICALLY DRIVEN RODS, OBLIQUELY DRIVEN (UP TO 45 DEGREES FROM VERTICAL) OR TRENCHED HORIZONTAL GROUND RODS SHALL BE INSTALLED IN ACCORDANCE WITH NEC 250.53(G).
- WHERE INSTALLING TRENCHED HORIZONTAL GROUND RODS, INSTALL 30" DEEP OR BELOW FROST LINE WHICHEVER IS DEEPER. ALSO PLACE GROUND ENHANCEMENT MATERIAL (GEM) IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS WITH A MINIMUM 1" TOP AND BOTTOM COVER. GEM MUST BE PERMANENT AND MAINTENANCE-FREE AND MAINTAIN ITS EARTH RESISTANCE WITH TIME. GEM MUST SETUP FIRMLY AND NOT DISSOLVE OR DECOMPOSE, OR OTHERWISE POLLUTE THE SOIL OR THE LOCAL WATER TABLE. THE GEM MUST ALSO BE SUITABLE FOR INSTALLATION IN A SLURRY FORM. GEM SHALL NOT DEPEND ON THE CONTINUOUS PRESENCE OF WATER TO MAINTAIN ITS CONDUCTIVITY.
- FOR SITUATIONS IN WHICH ENCOUNTERING ROCK DOES NOT PERMIT DRIVING A GROUND ROD THE FULL DISTANCE REQUIRED, A GROUNDING PLATE MAY BE SUBSTITUTED AS APPROVED BY THE ENGINEER.

GROUND RODS SHALL BE INSTALLED AT THE FOLLOWING LOCATIONS:

- 500' INTERVALS OR FRACTIONS THEREOF ALONG ENTIRE LENGTH OF TRENCHES AND DUCT BANKS
- END OF TRENCHES AND DUCT BANKS
- PAVEMENT EDGE OF DIRECTIONALLY BORED CONDUITS
- CHANGE IN TRENCH AND DUCT BANK DIRECTION
- AT TRENCH AND DUCT BANK INTERSECTIONS
- LIGHT FIXTURES AND PULLCANS / PULLCAN PLAZAS
- AS NOTED ON THE PLANS

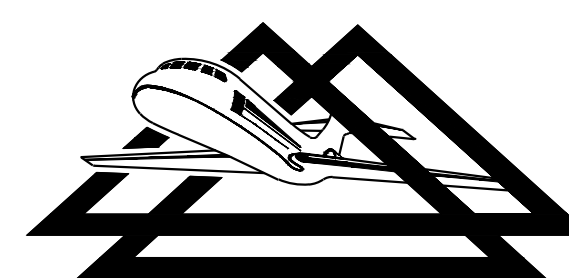


TRENCH 6 - CONDUIT - INSTALLED UNDER NEW PAVEMENT (2" PVC)
Non-Aircraft Rated Pavement
NTS

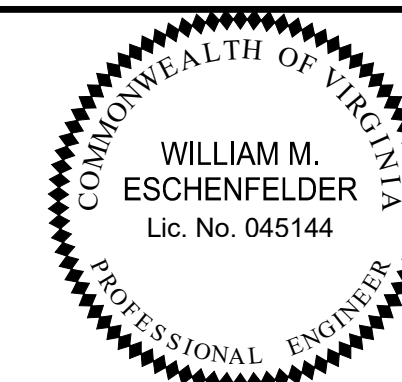
NOTE:

- THE ILLUSTRATION SHOWN ABOVE IS FOR CONFIGURATION PURPOSES ONLY. SEE TRENCH, CONDUIT, & DUCT BANK SCHEDULE AND LAYOUT DRAWINGS FOR CONDUIT QUANTITY. SEE ELECTRICAL NOTES SHEET FOR TRENCH, CONDUIT, & DUCT BANK NOTES.
- DEPTH OF CONDUIT SHALL ALLOW FOR POSITIVE DRAINAGE OF CONDUIT SYSTEM. SEE "CONDUIT SLOPING" DETAIL FOR ADDITIONAL INFORMATION.
- CONTRACTOR SHALL INSTALL CONDUIT SPACERS AT 5'-0" INTERVALS.

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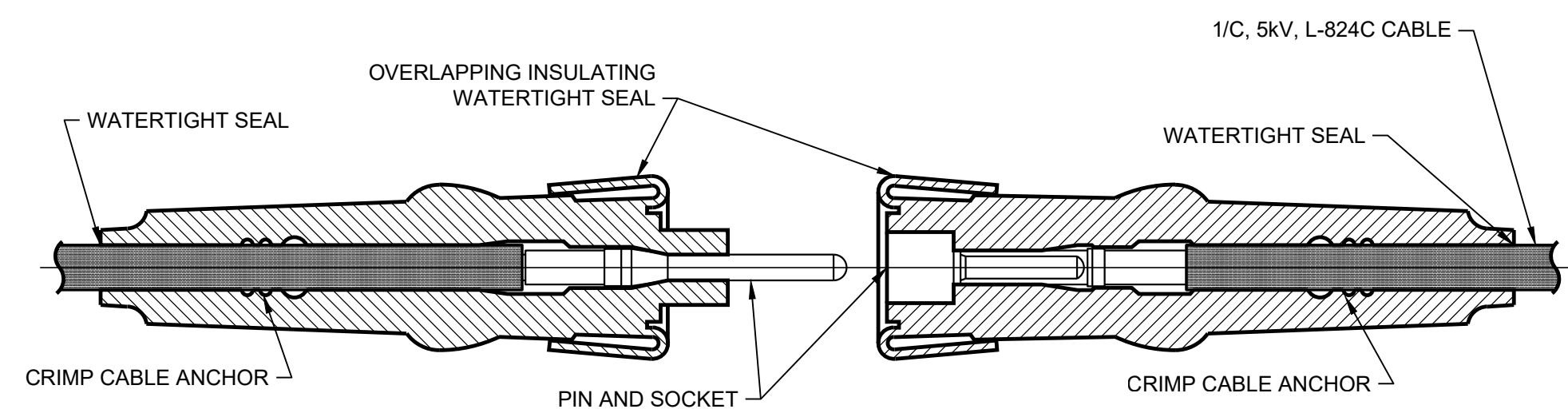


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| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| TRENCH DETAILS | DRAWN BY: PJW | SHEET 43 |
| | DESIGNED BY: WME | OF 60 |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | SCALE: NONE | DATE: MARCH 2025 |

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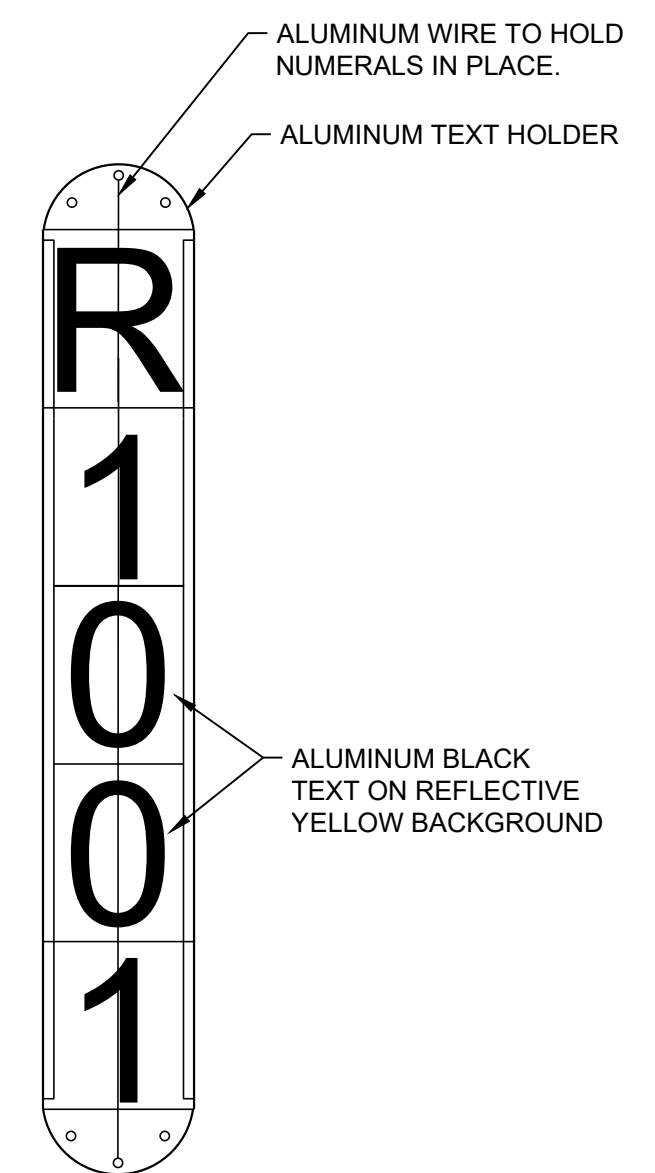
PLUG (FAA L-823 STYLE 3) ASSEMBLY RECEPTACLE (FAA L-823 STYLE 10) ASSEMBLY

L-823 SUPER KIT FIELD ATTACHED PLUG-IN SPLICE CONNECTOR

NTS

NOTES:

1. FOLLOW ALL CONNECTOR KIT MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS FOR ENTIRE ASSEMBLY
2. ASSEMBLY SHALL NOT REQUIRE TAPING OR COLD/HEAT SHRINK SEALING TO MAINTAIN WATERPROOF LISTING
3. CABLE SHALL ONLY BE PREPARED WITH MANUFACTURER RECOMMENDED PENCILING TOOL.
4. CABLE CONNECTOR SHALL ONLY BE INSTALLED WITH MANUFACTURER RECOMMENDED CRIMPING TOOL.
5. EXISTING PRIMARY CONNECTOR KITS ARE AMERACE 54 SUPER D4-D4 AND NEW KITS MUST BE COMPATIBLE.
6. MEGGER READINGS WILL BE RECORDED FOR ALL CIRCUITS BEFORE AND AFTER WORK IS PERFORMED. MEGGER READINGS TAKEN AFTER THE PROJECT IS COMPLETE ARE TO BE CONSISTENT WITH THOSE TAKEN BEFORE.

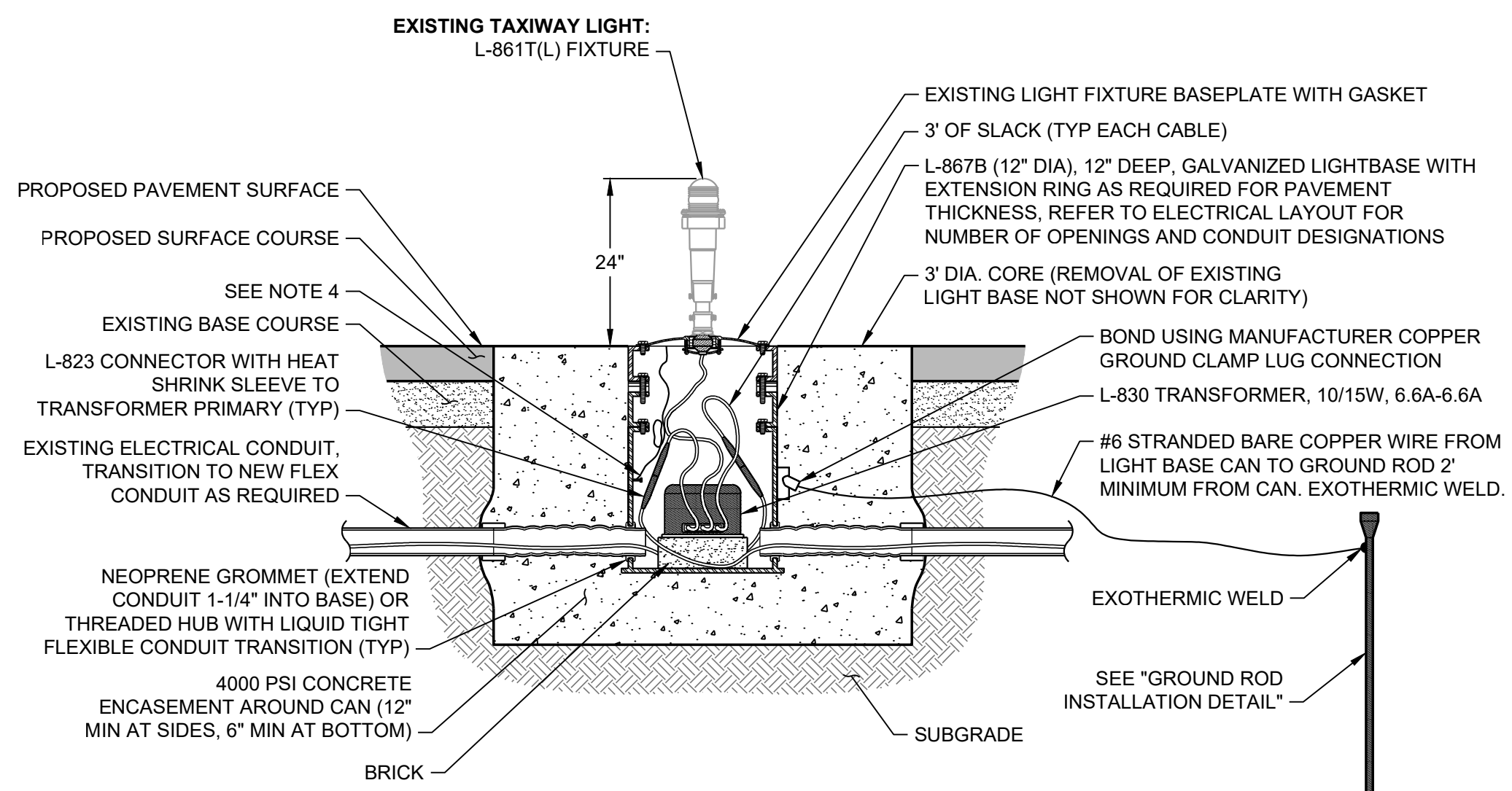


LIGHT FIXTURE IDENTIFICATION TAG DETAIL

NTS

NOTES:

1. THE CONTRACTOR SHALL FURNISH AND INSTALL NEW NUMBER TAGS ON ALL LIGHTS. THE TAGS SHALL BE REFLECTIVE AND SHALL BE "E-Z TAG" AS MANUFACTURED BY ALMATEK, OR APPROVED EQUAL. EACH TAG SHALL BE A VERTICAL CONFIGURATION, CONSISTING OF A HOLDER AND NUMERALS.
2. THE ALPHANUMERIC TAG SHALL CONSIST LETTERS AND NUMBERS CORRESPONDING TO THE CIRCUITS. THE NUMBER SEQUENCE SHALL BE AS DEFINED ON THE PLANS.
3. LIGHT FIXTURE TAGS SHALL BE UNIQUE AND NON-REPEATING WITH OTHER FIXTURES.

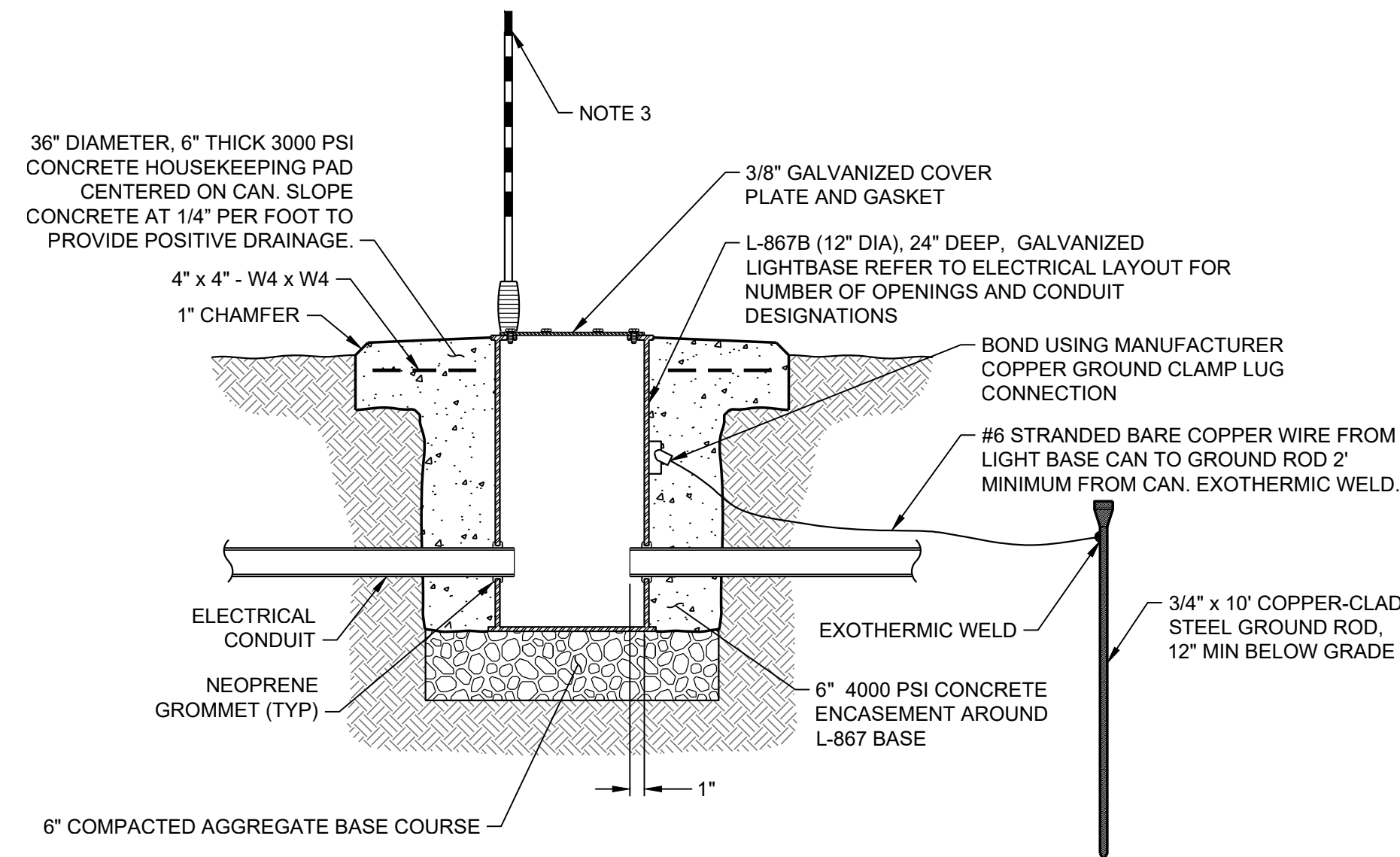


LED TAXIWAY EDGE LIGHT IN EXISTING PAVED SHOULDER DETAIL

NTS

NOTES:

1. USE HIGH EARLY STRENGTH CONCRETE. PROVIDE SUBMITTAL FOR APPROVAL.
2. THE #6 STRANDED BARE COPPER GROUND AND THE GROUND ROD IS INCIDENTAL TO THE COST OF THE RUNWAY/TAXIWAY EDGE LIGHT.
3. ALL DIRECT BURIED BARE WIRE CONNECTIONS SHALL BE EXOTHERMIC WELDS ONLY. LUG CONNECTIONS SHALL BE USED FOR CONCRETE ENCASED APPLICATIONS.
4. MECHANICALLY BOND FIXTURE BASE USING MANUFACTURER-PROVIDED LUGS WITH #6 COPPER GROUND (600V RATING) WITH GREEN XHHW INSULATION (BRAIDED GROUND STRAP OF EQUAL RATING ACCEPTABLE) WITH LENGTH SUFFICIENT TO EASILY REMOVE LIGHT BASE FOR MAINTENANCE.
5. ALL IN-PAVEMENT LIGHTS ARE TO BE INSTALLED WITH SNOW PLOW RINGS (NOT SHOWN FOR CLARITY).
6. ALL EXISTING AIRFIELD GUIDANCE SIGNS AND ASSOCIATED ISOLATION TRANSFORMERS IN THE FIELD AND STORED AS SPARES WERE MANUFACTURED BY ADB. NEW EQUIPMENT MUST BE COMPATIBLE.
7. REMOVAL OF EXISTING CONDUIT SHALL BE INCIDENTAL TO THE RELOCATED L-861(L) BASE MOUNTED MITL (LED) PAY ITEM.

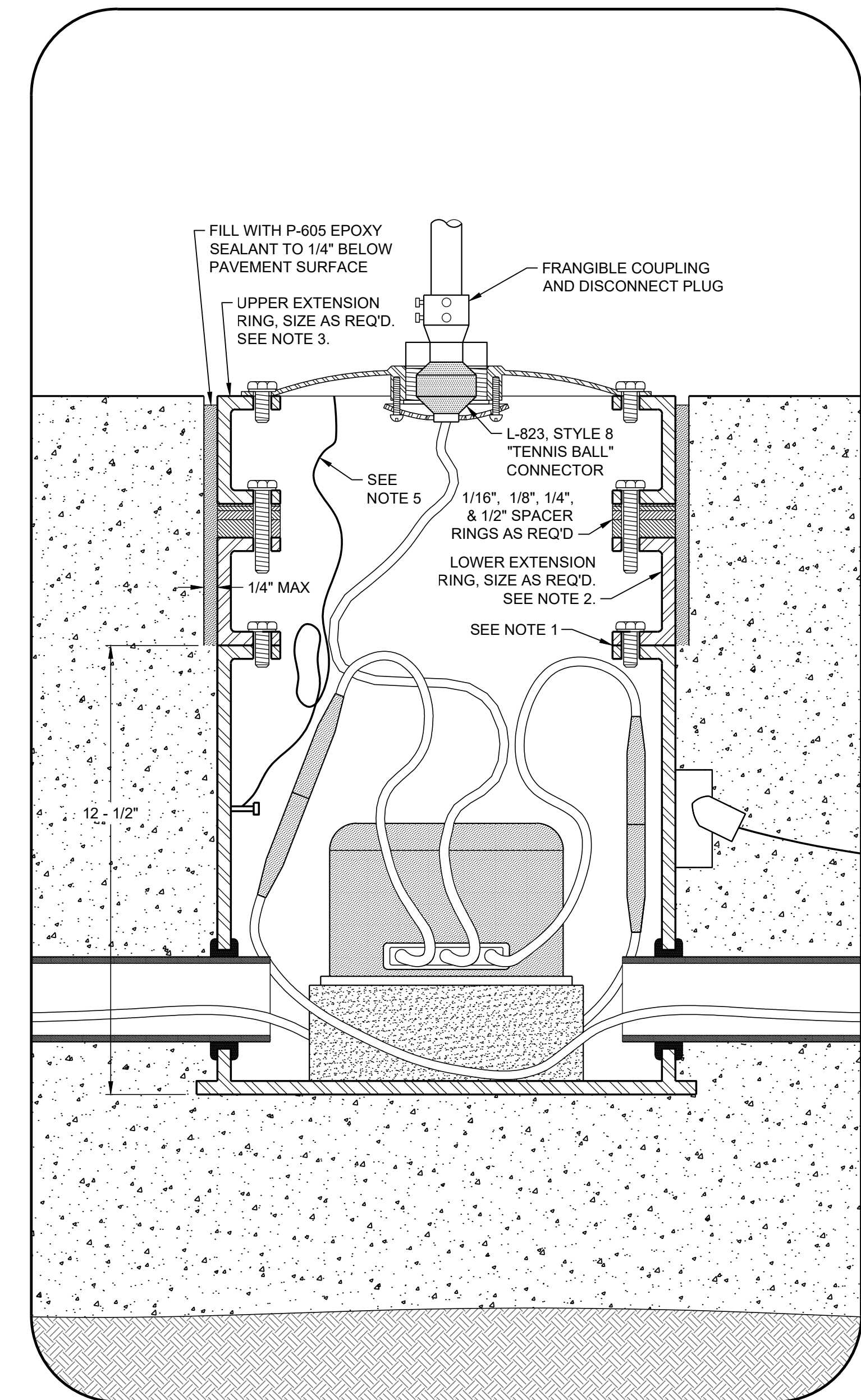


L-867 LIGHT BASE DETAIL

NTS

NOTES:

1. THE #6 STRANDED BARE COPPER GROUND AND THE GROUND ROD IS INCIDENTAL TO THE COST OF THE TAXIWAY EDGE LIGHT.
2. ALL DIRECT BURIED BARE WIRE CONNECTIONS SHALL BE EXOTHERMIC WELDS ONLY. LUG CONNECTIONS SHALL BE USED FOR CONCRETE ENCASED APPLICATIONS.
3. PROVIDE AND INSTALL ONE (1) 30\"/>



ASSEMBLY DETAIL FOR LIGHT BASE IN PAVED SHOULDER

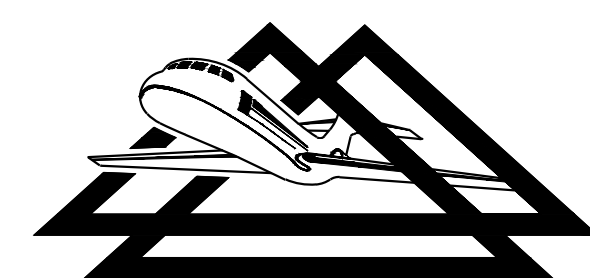
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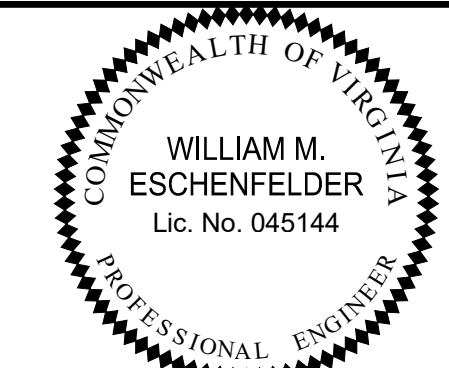
1. THE TOP SURFACE OF THE BASE CAN SHALL BE 1/2\"/>
- 2. LOWER EXTENSION RING SHALL BE SIZED SO THAT THE TOP SURFACE OF THE EXTENSION RING IS 1/2\"/>
- 3. UPPER EXTENSION RING SHALL BE SIZED SO THAT THE TOP SURFACE OF THE EXTENSION RING IS FLUSH WITH THE PAVEMENT SURFACE OF THE PROPOSED SURFACE COURSE.
- 4. P-605 SEALANT SHALL BE TYPE 3 COMPATIBLE WITH ASPHALT.
- 5. BOND FIXTURE BASE WITH #6 COPPER GROUND (600V RATING) WITH GREEN XHHW INSULATION (BRAIDED GROUND STRAP OF EQUAL RATING ACCEPTABLE) WITH LENGTH SUFFICIENT TO EASILY REMOVE LIGHT BASE FOR MAINTENANCE.
- 6. ALL EXISTING AIRFIELD GUIDANCE SIGNS AND ASSOCIATED ISOLATION TRANSFORMERS IN THE FIELD AND STORED AS SPARES WERE MANUFACTURED BY ADB. NEW EQUIPMENT MUST BE COMPATIBLE.

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| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| LIGHTS AND LIGHT BASES | DRAWN BY: PJW | SHEET 44 |
| | DESIGNED BY: WME | OF 60 |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | SCALE: NONE | DATE: MARCH 2025 |

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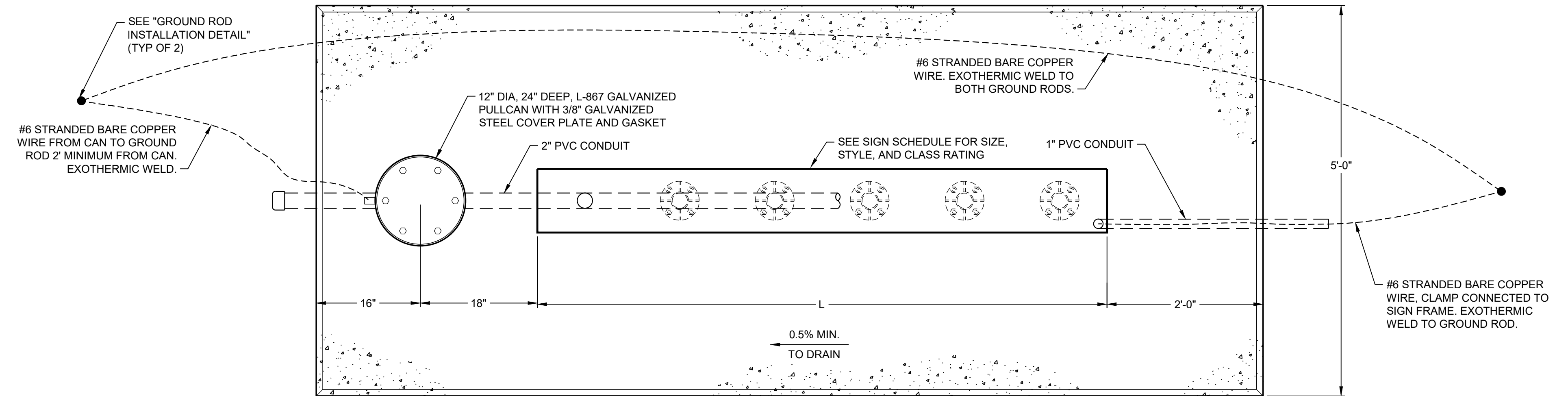
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01**

LIGHT/SIGN FIXTURE IDENTIFICATION TAG DETAIL

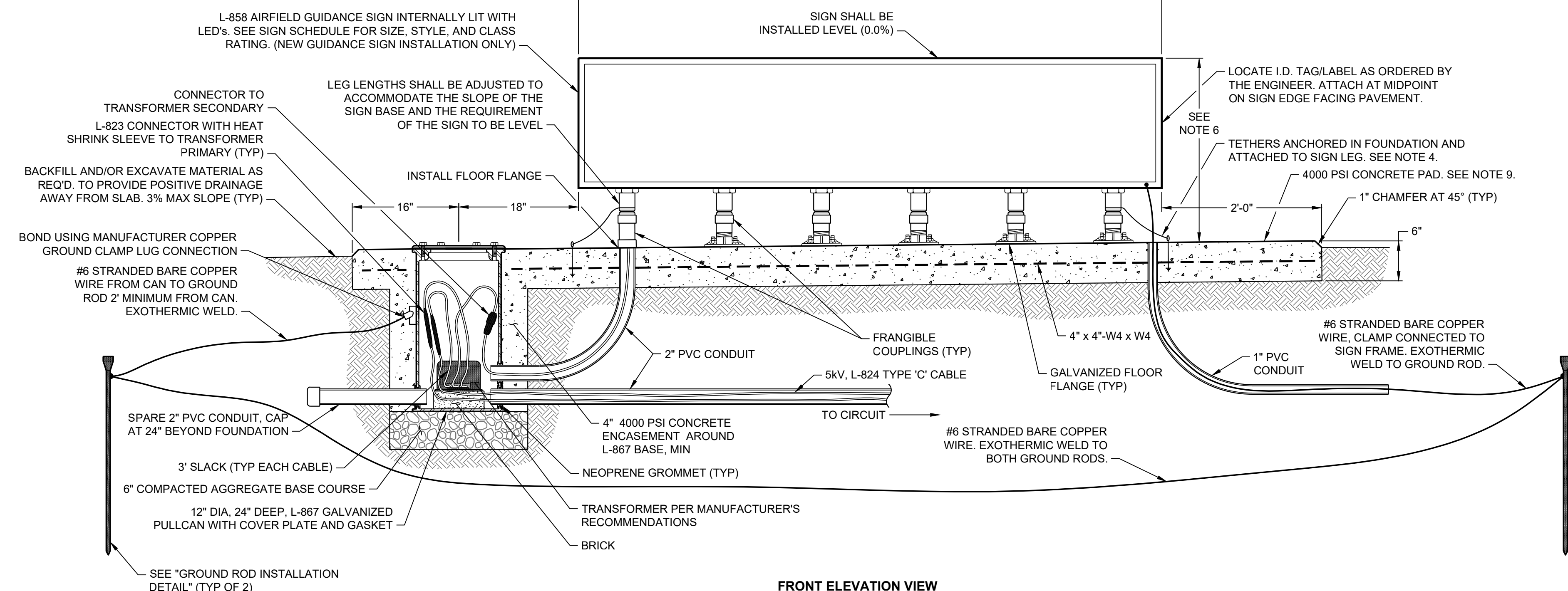
NTS

NOTES:

1. 1" MIN CHARACTER HEIGHT VISIBLE FROM EDGE OF PAVEMENT.
2. CHARACTERS ENGRAVED IN BLACK ON 1/8" THICK WHITE PLASTIC LAMINATE.
3. FOR LIGHT FIXTURE TAGS ONLY, DRILL 1/4" HOLE TO ATTACH TO LIGHT FIXTURE STEM WITH CONDUIT HANGER OR CLIP.
4. FOR SIGN FIXTURE TAGS, ATTACH TO GUIDANCE SIGN SIDE PANEL WITH INDUSTRIAL STRENGTH EXTERIOR RATED ADHESIVE, 3M OR EQUIVALENT.
5. FIXTURE IDENTIFICATION TAGS SHALL BE PROVIDED FOR ALL RUNWAY / TAXIWAY LIGHTS AND SIGNS. (NO SEPARATE PAY ITEM)



PULLCAN TO BE LOCATED ON OPPOSITE SIDE OF SIGN FROM PAVEMENT EDGE



| SIGN SCHEDULE | | | | | | | | | | | | | |
|---------------|----------------------|--------|-----------------------|------------|----------|------------|--------------------------|------------|------|-------|-------|----------|---------------------------------|
| SIGN # | PANEL "A" | | PANEL "B" | | LOCATION | | EQUIPMENT SPECIFICATIONS | | | | | COMMENTS | |
| | INSCRIPTION | TYPE | INSCRIPTION | TYPE | STATION | OFFSET | # CHAR | # MODULES* | SIZE | STYLE | CLASS | | MODE |
| 2 | B B2 → Y/B B/Y 3" | L-858L | ← B1 B 27" B/Y Y/B | L-858L / Y | 76+31.04 | 294.01' RT | 4 | 2 | 3 | 3 | 1 | 2 | NEW SIGN ON NEW FOUNDATION |
| 3B | B BLANK Y/B | L-858L | ← B2 B 27" B/Y Y/B | L-858L / Y | 73+82.01 | 281.89' RT | 4 | 2 | 3 | 3 | 1 | 2 | EXISTING SIGN ON NEW FOUNDATION |
| 4 | B B3 → Y/B B/Y 3" | L-858L | BLANK B Y/B | L-858L / Y | 70+23.04 | 281.90' RT | 4 | 2 | 3 | 3 | 1 | 2 | EXISTING SIGN ON NEW FOUNDATION |
| 9 | B BLANK Y/B | L-858L | ← B3 B 27" B/Y Y/B | L-858L / Y | 67+76.96 | 281.90' RT | 4 | 2 | 3 | 3 | 1 | 2 | EXISTING SIGN ON NEW FOUNDATION |

* ESTIMATE - COORDINATE WITH SIGN MANUFACTURER ON EXACT NUMBER OF MODULES

REFERENCE INFORMATION FROM AIC 150/5345-44K "SPECIFICATIONS FOR RUNWAY AND TAXIWAY SIGNS (8 OCT 15)"

| | |
|---|---|
| TYPE L-858Y = DIRECTION, DESTINATION, AND BOUNDARY SIGN (B/Y) | CLASS 1 = OPERATING TEMPERATURE FROM -4F (-20C) TO +131F (55C) |
| TYPE L-858R = MANDATORY INSTRUCTION SIGN (W/R) | CLASS 2 = OPERATING TEMPERATURE FROM -40F (-40C) TO +131F (55C) |
| TYPE L-858L = TAXIWAY LOCATION SIGN (Y/B) | MODE 1 = WIND LOADING TO 100 MPH |
| TYPE L-858B = RUNWAY DISTANCE REMAINING SIGN (W/B) | MODE 2 = WIND LOADING TO 200 MPH |
| TYPE L-858C = TAXIWAY ENDING MARKER SIGN (Y/B) | MODE 3 = WIND LOADING TO 300 MPH |
| TYPE L-858H = ONE-HALF DISTANCE REMAINING SIGN (W/B) | |

SIZE 1 = 18" HIGH PANEL WITH 12" CHARACTER
 SIZE 2 = 24" HIGH PANEL WITH 15" CHARACTER
 SIZE 3 = 30" HIGH PANEL WITH 18" CHARACTER
 SIZE 4 = 48" HIGH PANEL WITH 40" CHARACTER
 SIZE 5 = 30" HIGH PANEL WITH 25" CHARACTER

STYLE 1 = 120 VAC
 STYLE 2 = 3 STEPS 4.8-6.6 AMPS
 STYLE 3 = 5 STEPS 2.8 - 6.6 AMPS OR 8.5 - 20.0 AMPS
 STYLE 4 = UNLIGHTED
 STYLE 5 = 1 STEP 5.5 AMPS

LOCATION GUIDE

SIGN COLOR LEGEND

W - WHITE CHARACTER COLOR
 R - RED CHARACTER COLOR
 B - BLACK CHARACTER COLOR
 Y - YELLOW CHARACTER COLOR
 W/R - WIRE BACKGROUND COLOR

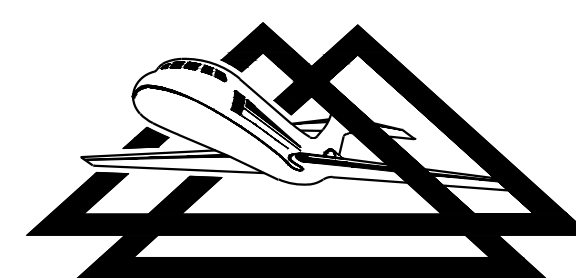
LED AIRFIELD GUIDANCE SIGN DETAIL

NTS

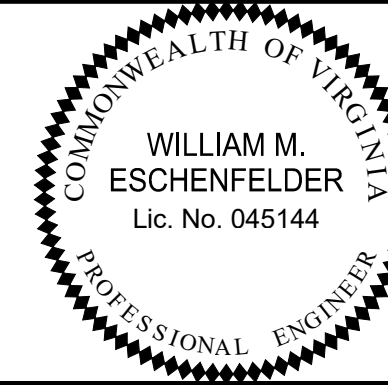
NOTES:

1. THIS DETAIL APPLIES TO BOTH NEWLY INSTALLED AIRFIELD GUIDANCE SIGNS AND EXISTING GUIDANCE SIGNS INSTALLED ON NEW FOUNDATION.
2. PROVIDE A L-823 DISCONNECT PLUG & RECEPTACLE IN THE FRANGIBLE COUPLING OF THE POWER LEG AS REQUIRED.
3. ALL CONDUIT UNDER THE CONCRETE PAD IS INCIDENTAL TO THE COST OF THE AIRFIELD GUIDANCE SIGN.
4. ORIENT THE INTERNAL POWER LUGS OF THE AIRFIELD GUIDANCE SIGN SO THAT THEY WILL BE CLOSEST TO THE LEG THROUGH WHICH THE POWER ENTERS THE SIGN HOUSING (NEW GUIDANCE SIGN INSTALLATION ONLY)
5. SINGLE MODULE SIGN REQUIRES ONE TETHER. MULTIPLE MODULE SIGN IN CONTINUOUS FRAME MUST USE TETHER AT BOTH ENDS. (NEW GUIDANCE SIGN INSTALLATION ONLY.)
6. ALL DIRECT BURIED BARE WIRE CONNECTIONS SHALL BE EXOTHERMIC WELDS ONLY. LUG CONNECTIONS SHALL BE USED FOR CONCRETE ENCASED APPLICATIONS.
7. 30" MAX. (SIZE 1), 36" MAX. (SIZE 2), OR 42" MAX. (SIZE 3). THESE DIMENSIONS APPLY TO THE SIDE CLOSEST TO THE PAVEMENT. OPPOSITE SIDE WILL BE GREATER TO ACCOMMODATE SLOPE OF SLAB. (NEW GUIDANCE SIGN INSTALLATION ONLY)
8. CONTRACTOR TO COORDINATE DEPTH OF PAD WITH MANUFACTURER'S RECOMMENDED ANCHOR BOLTS.
9. PROVIDE EXTERNAL POWER DISCONNECT (ON/OFF) SWITCH TO ISOLATE THE SIGN FROM THE CIRCUIT FOR MAINTENANCE. (NEW GUIDANCE SIGN INSTALLATION ONLY)
10. THE CONCRETE SHALL RECEIVE A BROOM FINISH.
11. ALL EXISTING AIRFIELD GUIDANCE SIGNS AND ASSOCIATED ISOLATION TRANSFORMERS IN THE FIELD AND STORED AS SPARES WERE MANUFACTURED BY ADB. NEW EQUIPMENT MUST BE COMPATIBLE.

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REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4
SIGN DETAILS & SCHEDULE
 ROANOKE-BLACKSBURG REGIONAL AIRPORT

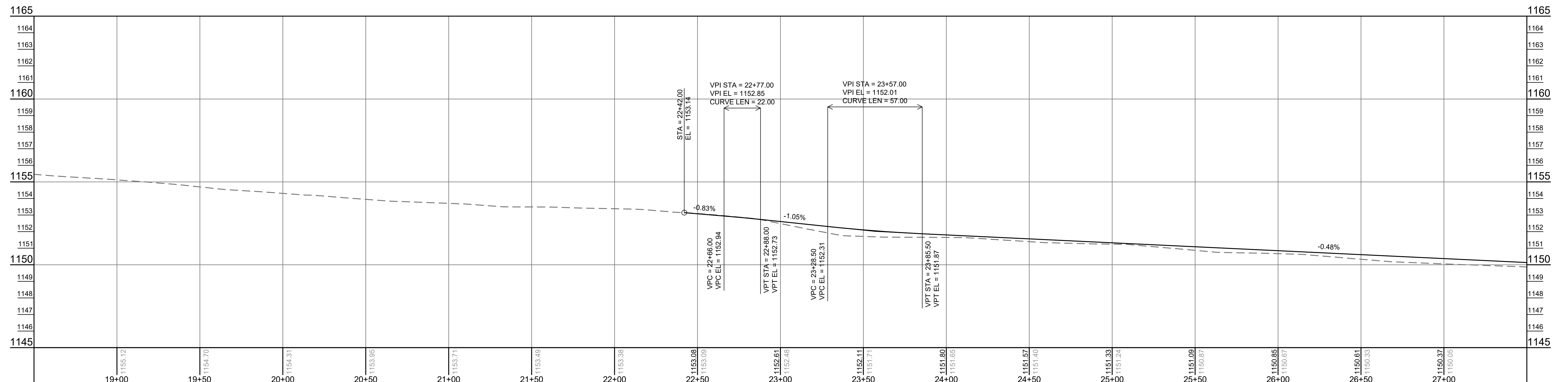
AIP NO. 3-51-0045-071-2024
 DRAWN BY: PJW
 DESIGNED BY: WME
 SCALE: NONE
 DATE: MARCH 2025
 JOB NO. 23078
 SHEET 45 OF 60

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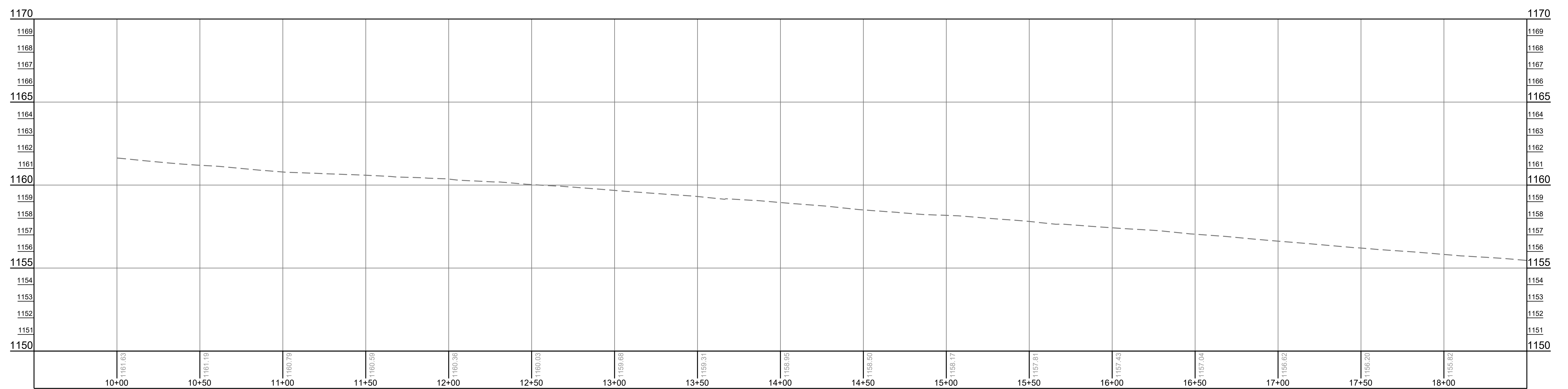
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LEGEND

--- EXISTING GRADE
 — PROPOSED GRADE



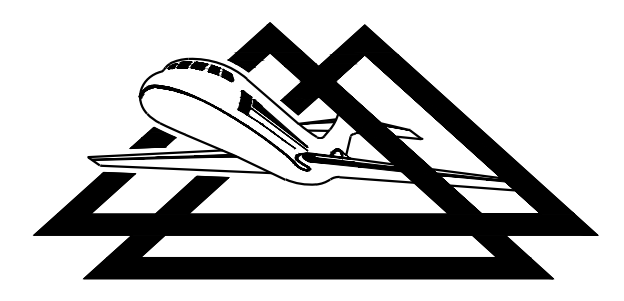
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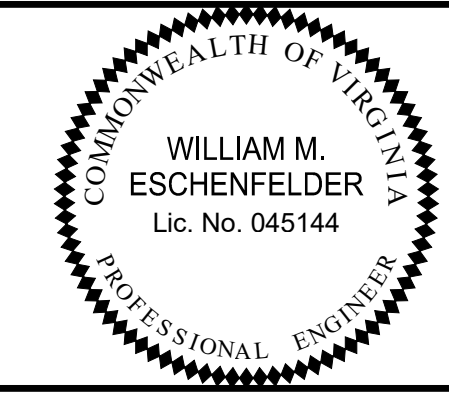
BASELINE "B"

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| CENTERLINE PROFILES | REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| | ROANOKE-BLACKSBURG REGIONAL AIRPORT | DRAWN BY: PJW | SHEET 46 |
| | SCALE: HORIZ: 1" = 30' VERT: 1" = 3' | DESIGNED BY: WME | DATE: MARCH 2025 |

OF
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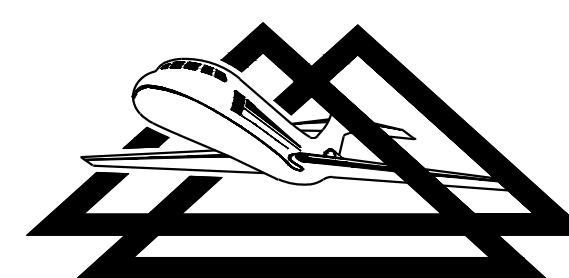
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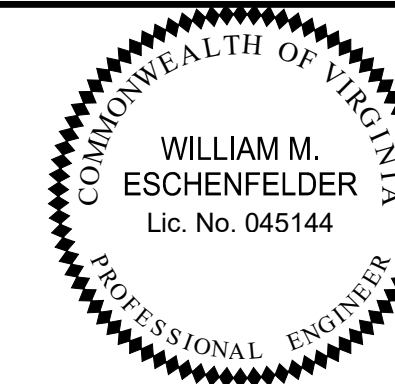
BASELINE "B"

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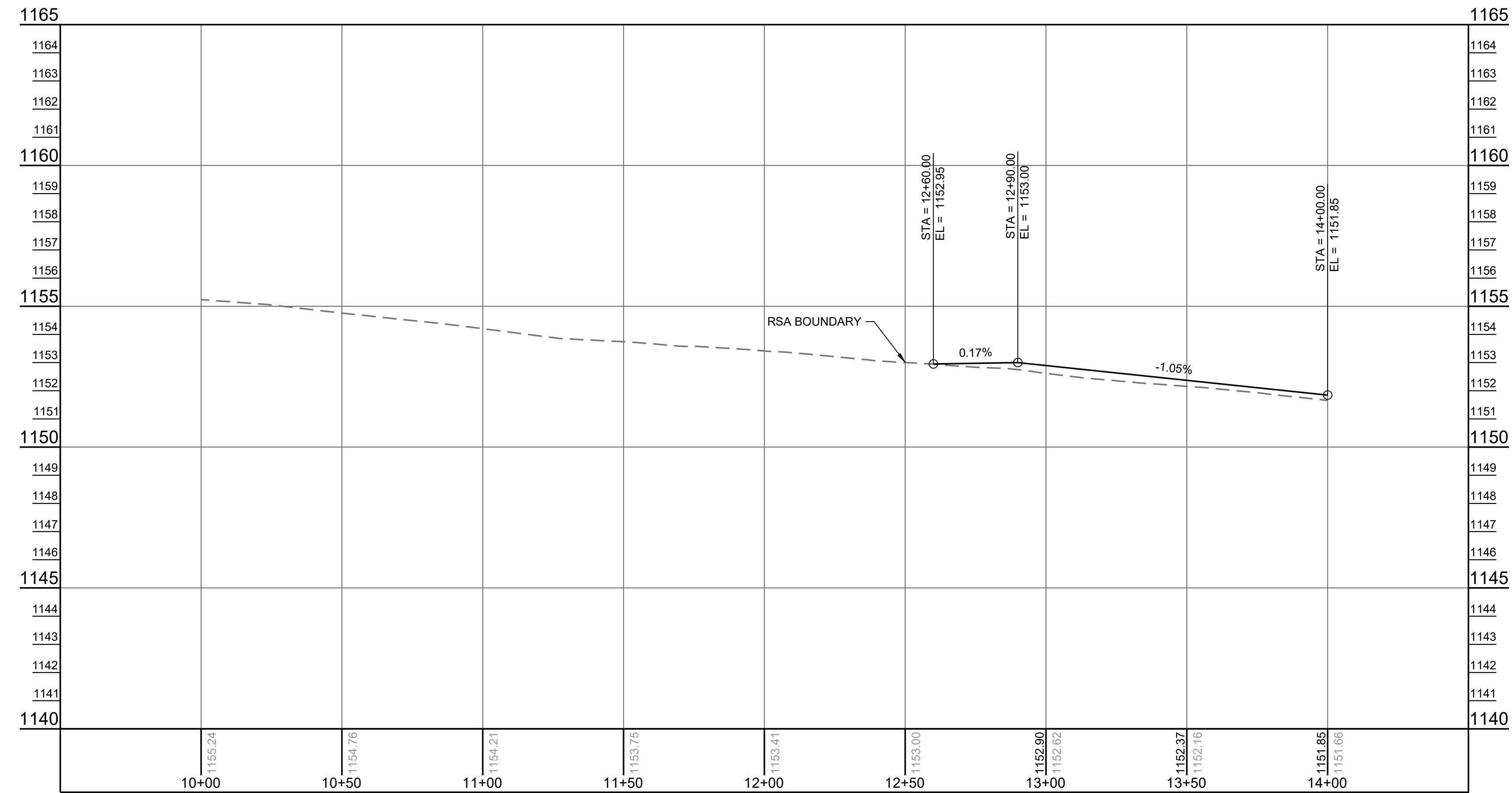


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| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| | CENTERLINE PROFILES | |
| | DESIGNED BY: WME | DRAWN BY: PJW |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | SCALE: HORIZ: 1" = 30' VERT: 1" = 3' | DATE: MARCH 2025 |

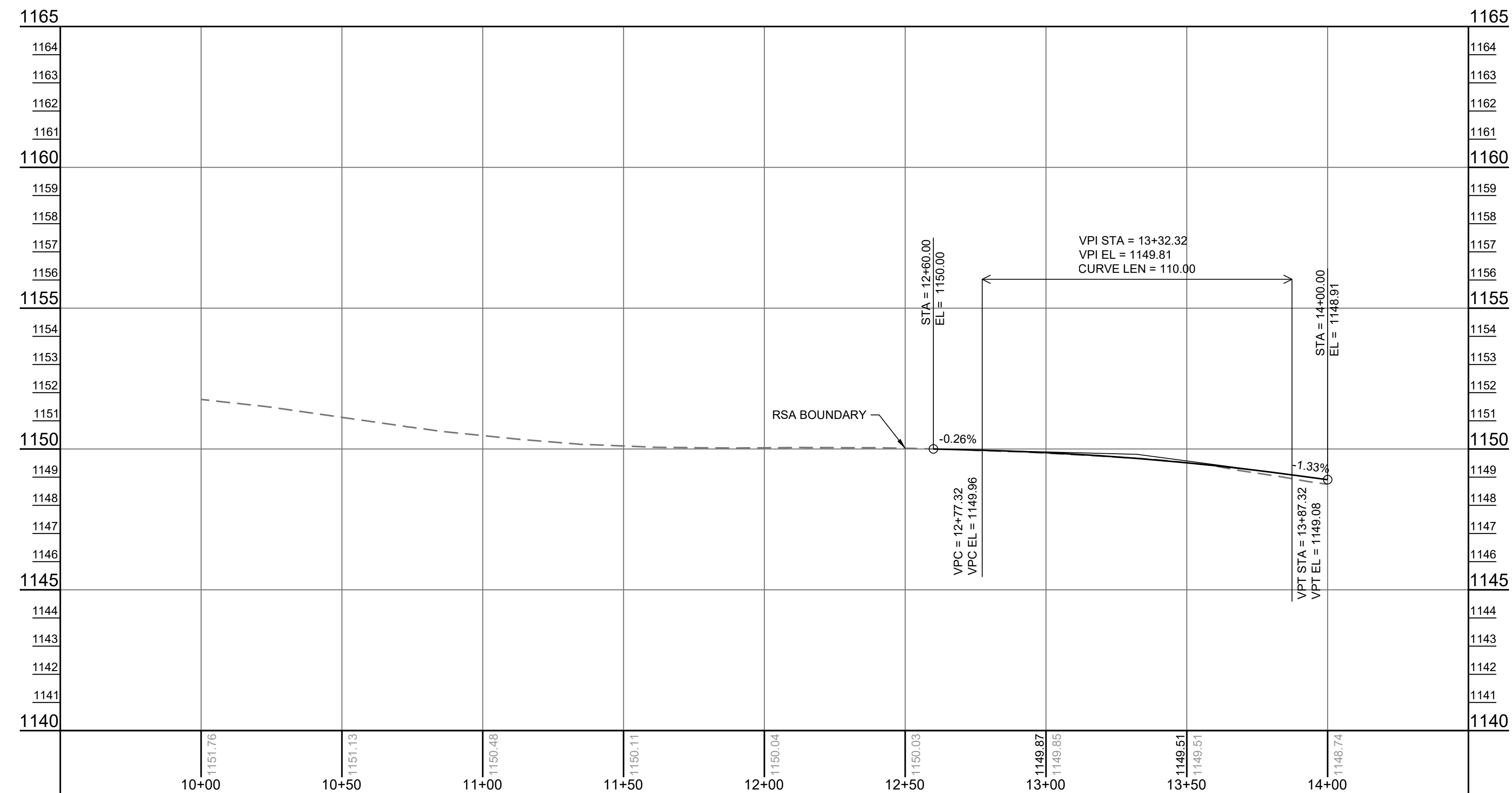
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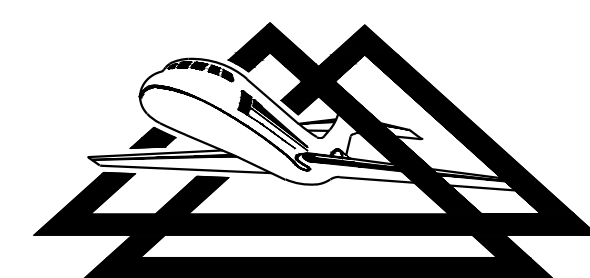


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 ————— PROPOSED GRADE

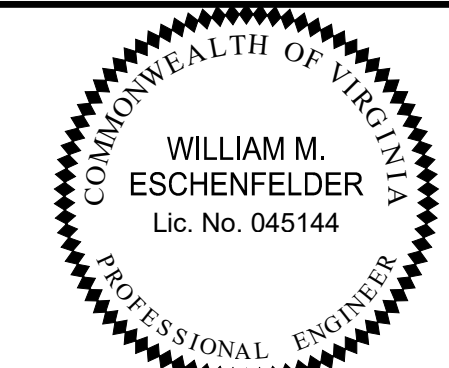


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| CENTERLINE PROFILES | REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| | DESIGNED BY: WME | DRAWN BY: PJW | SHEET 48 |
| | SCALE: HORIZ: 1" = 30' VERT: 1" = 3' | DATE: MARCH 2025 | OF 60 |

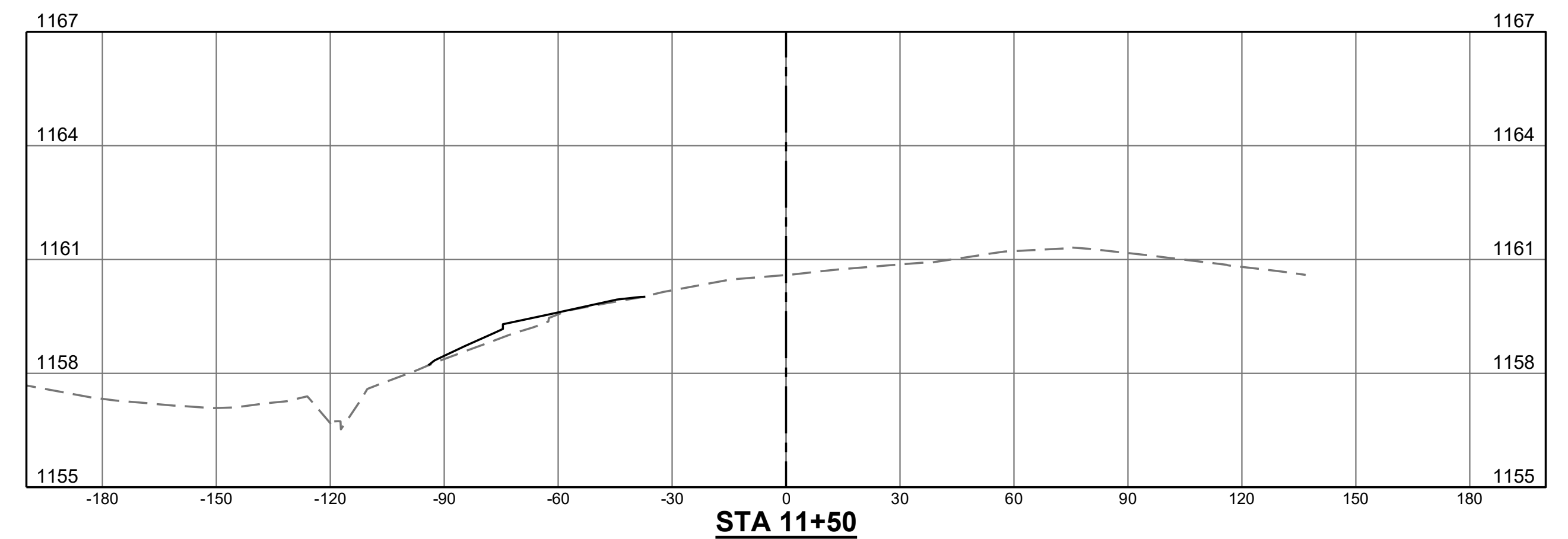
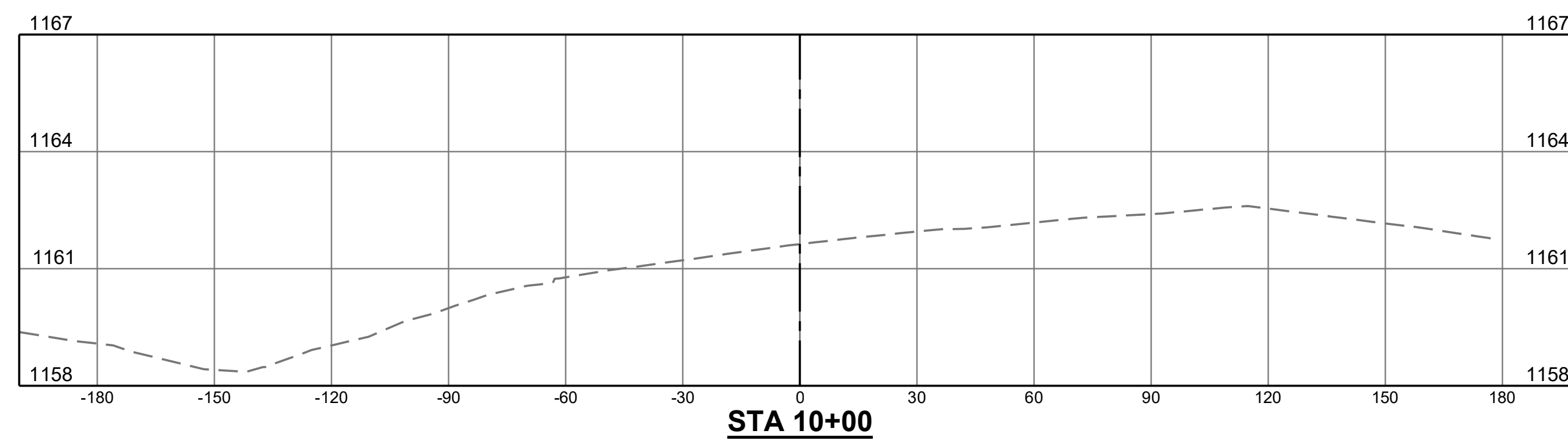
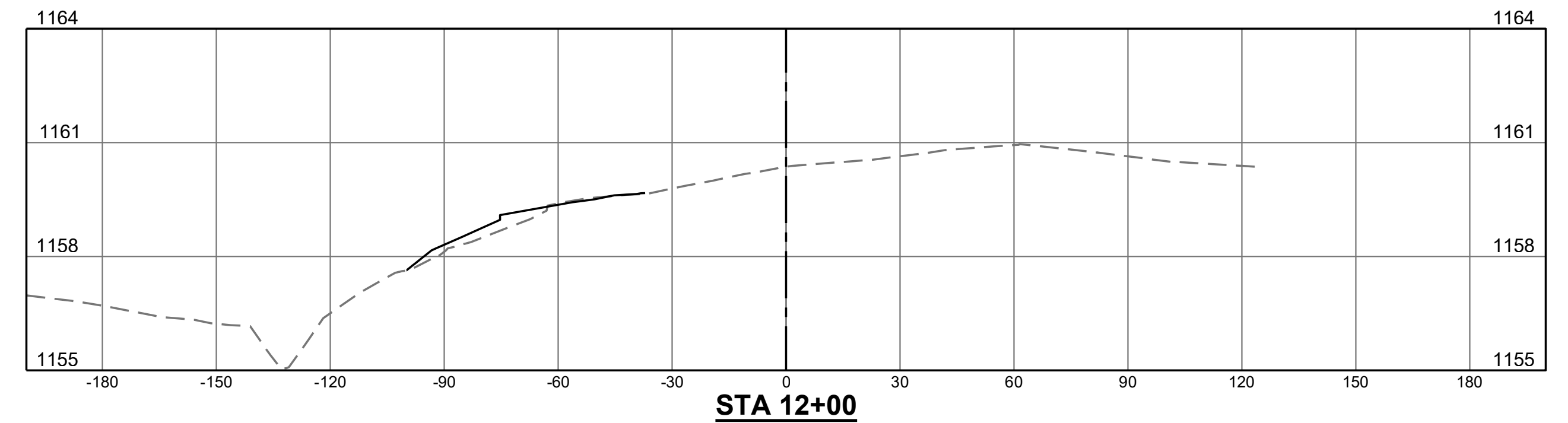
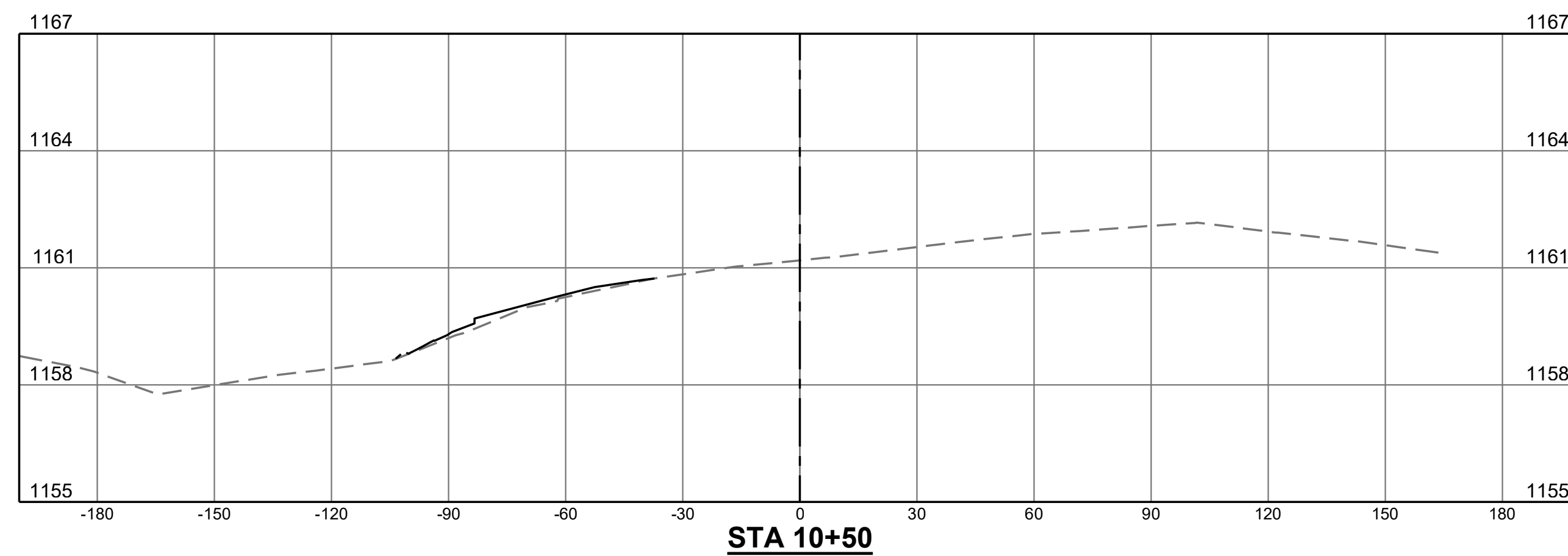
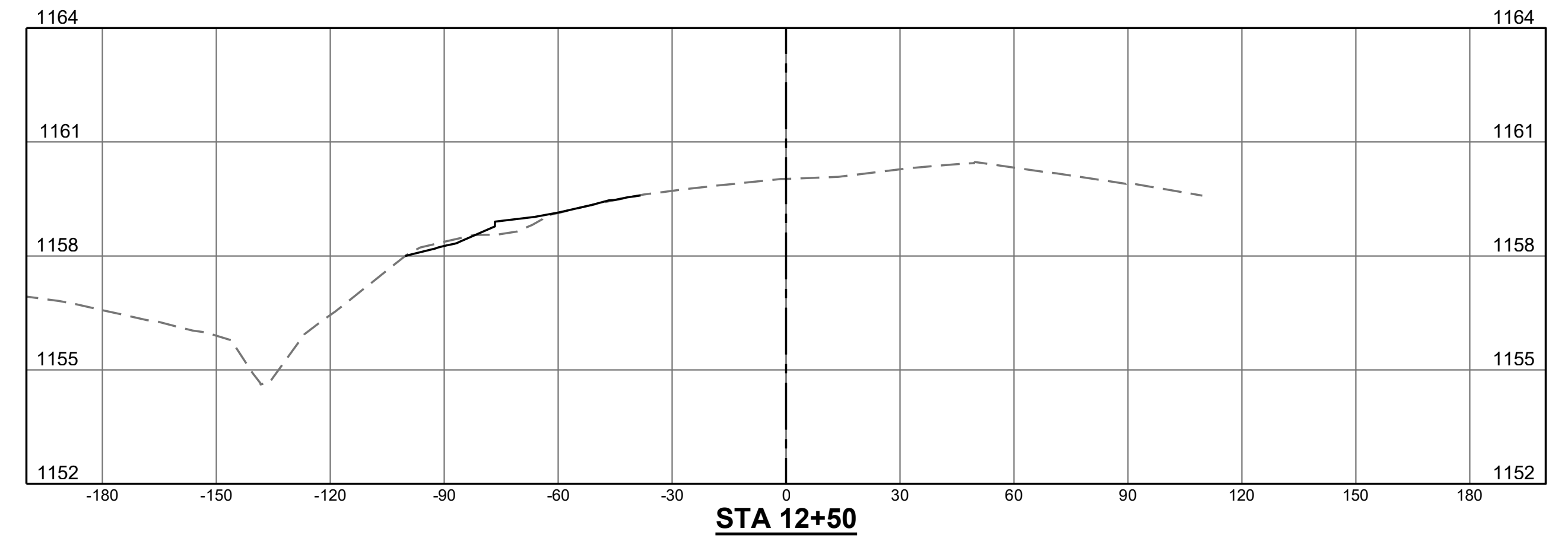
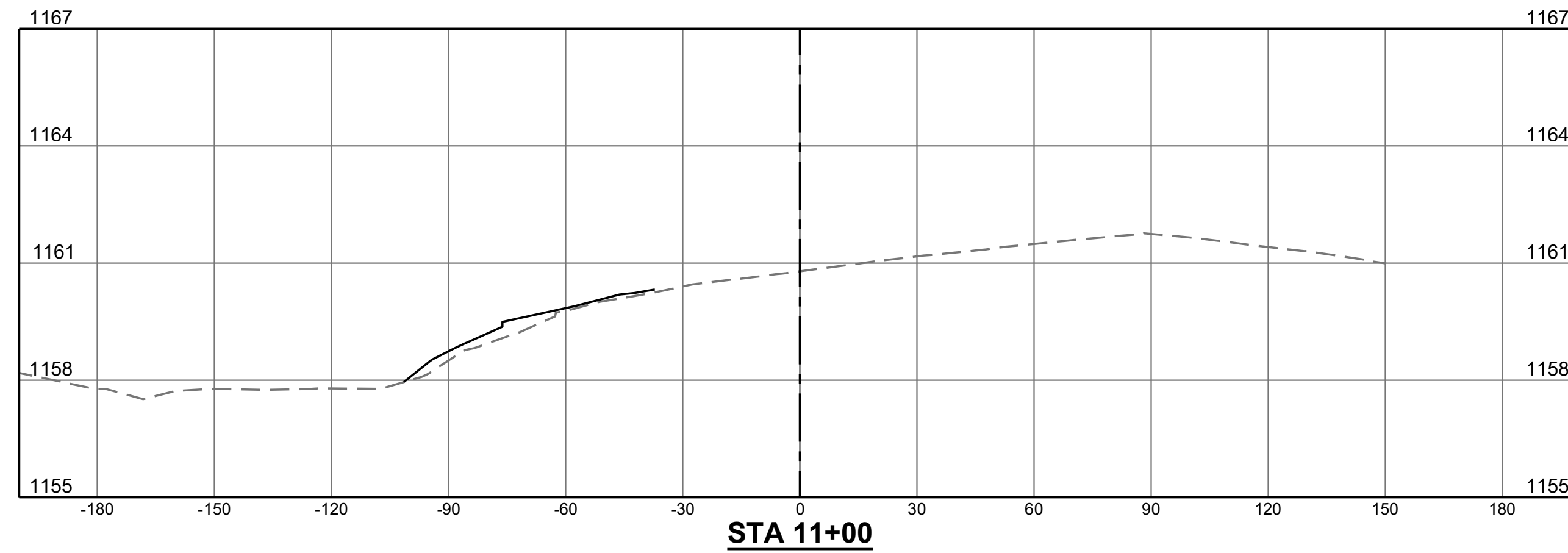
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 — PROPOSED GRADE

NOTE:

- CROSS SECTIONS ARE BASED ON BASELINE "B" (TAXIWAY B CENTERLINE)

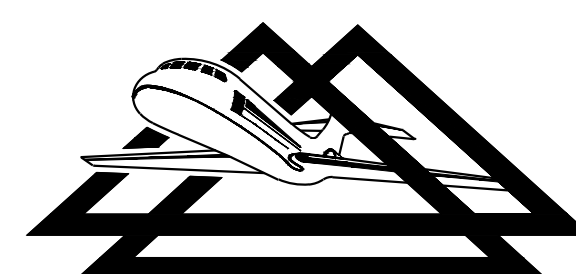


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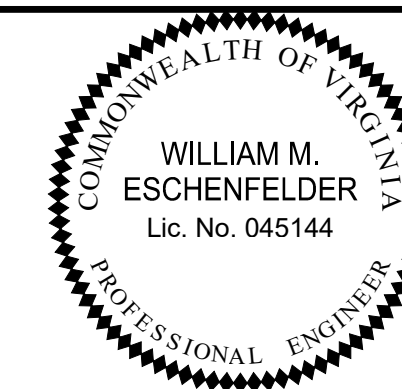
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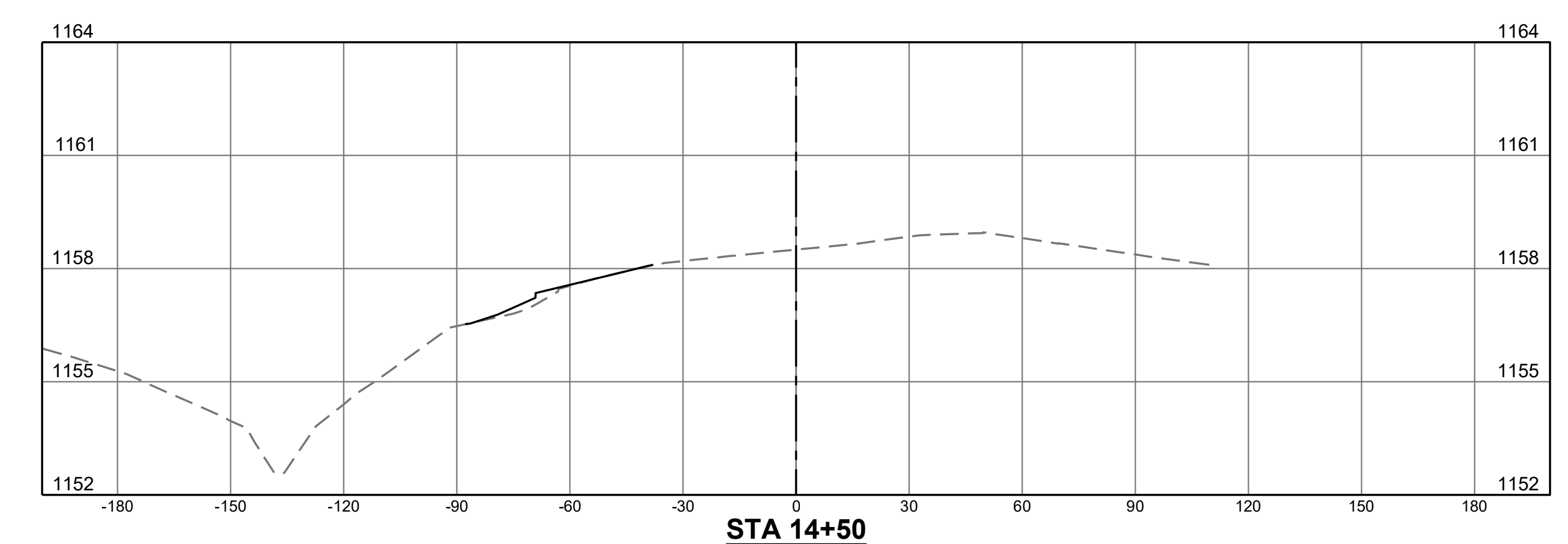
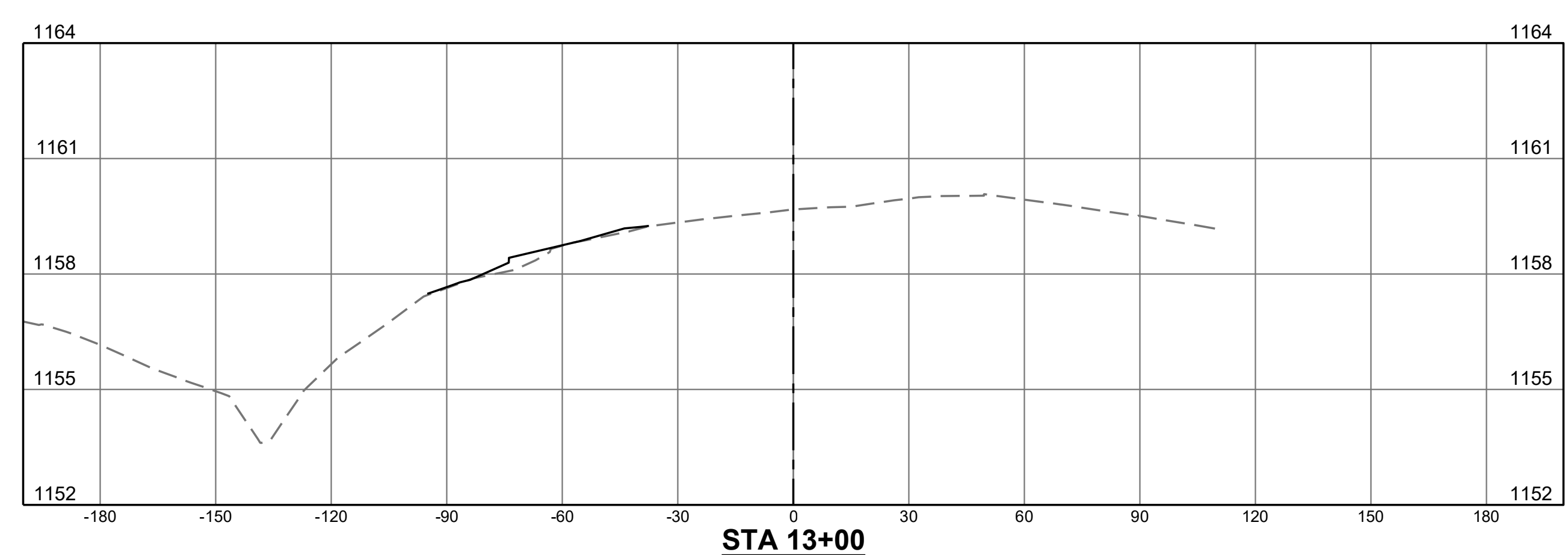
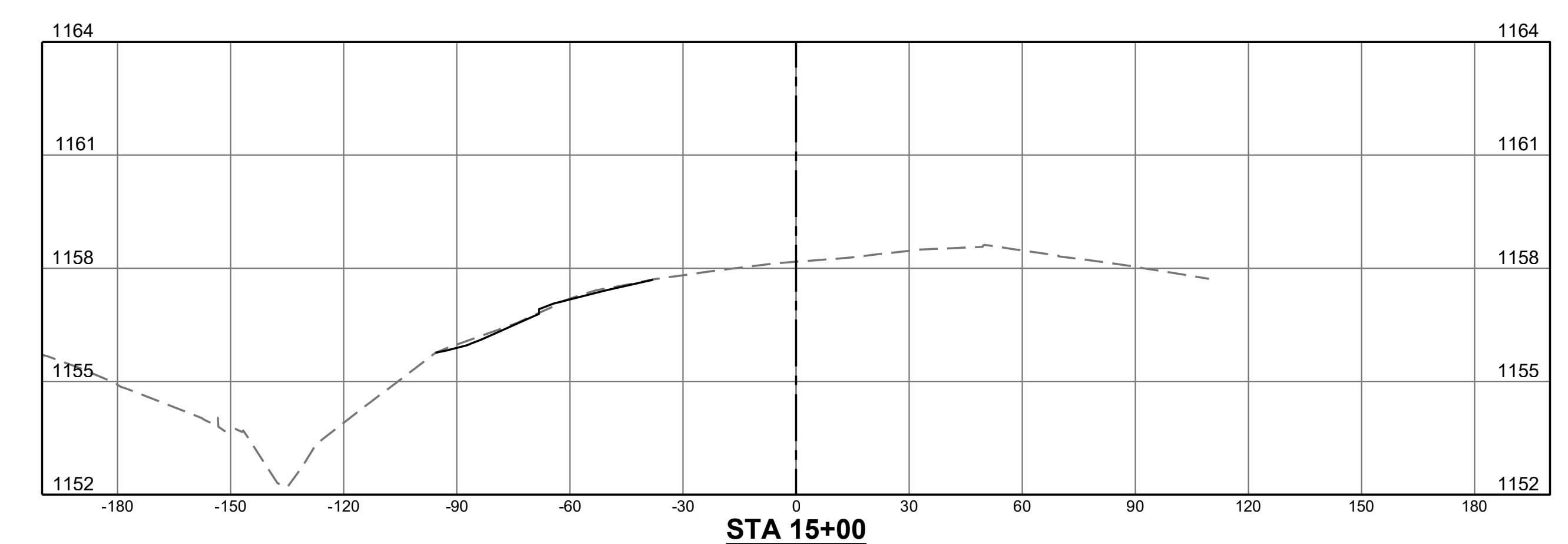
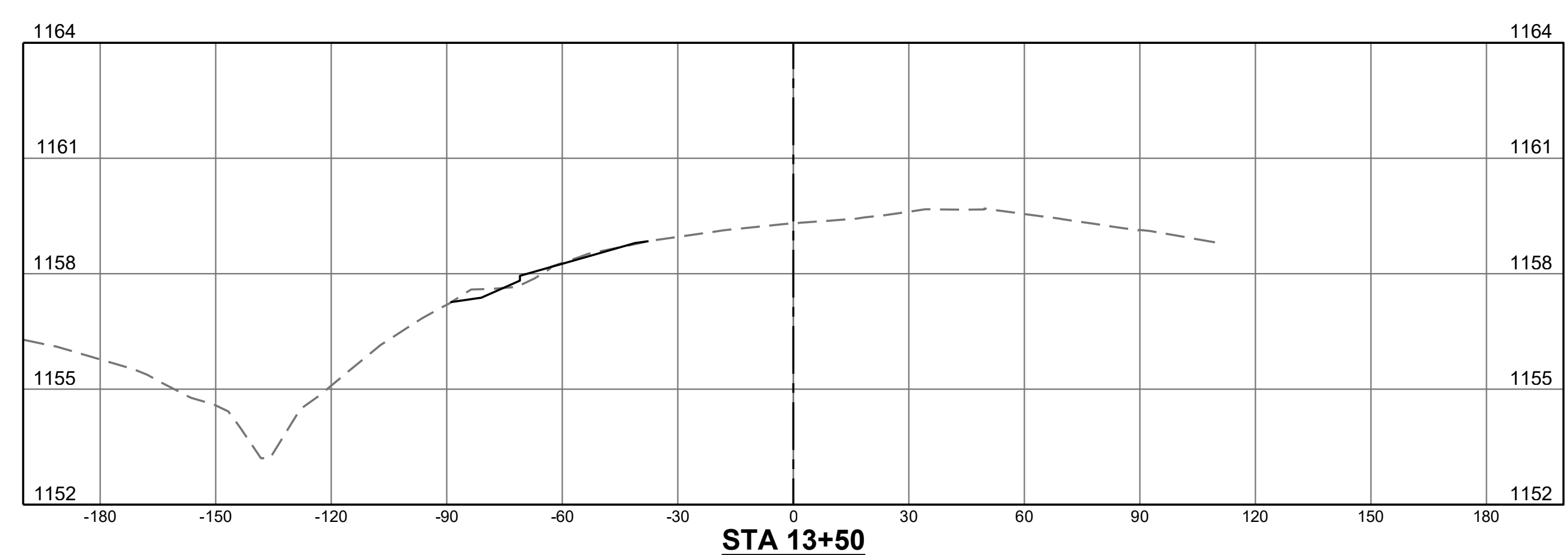
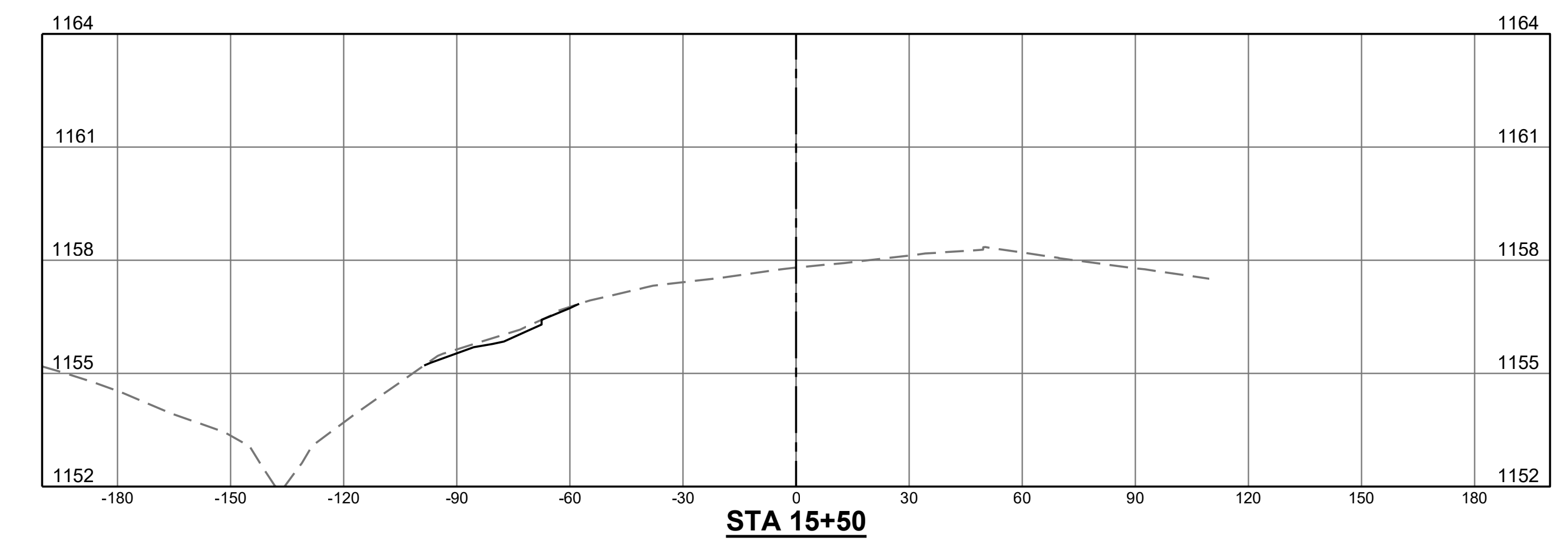
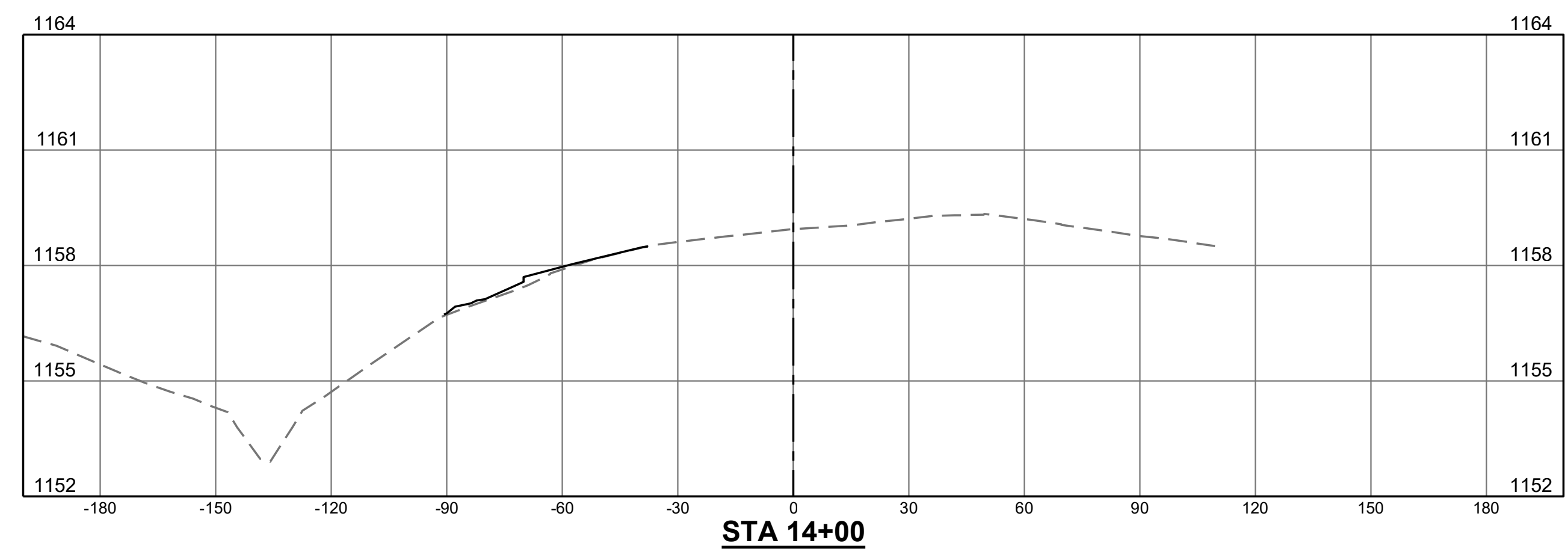
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| CROSS SECTIONS | REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| | ROANOKE-BLACKSBURG REGIONAL AIRPORT | DRAWN BY: PJW | SHEET 49 |
| | | DESIGNED BY: WME | OF 60 |
| | SCALE: HORIZ: 1" = 30' VERT: 1" = 3' | DATE: MARCH 2025 | |

LEGEND

- - - - - EXISTING GRADE
- PROPOSED GRADE

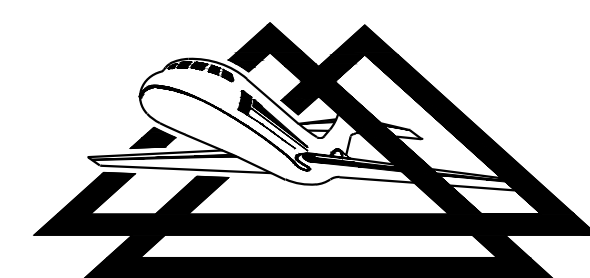
NOTE:

1. CROSS SECTIONS ARE BASED ON BASELINE "B" (TAXIWAY B CENTERLINE)

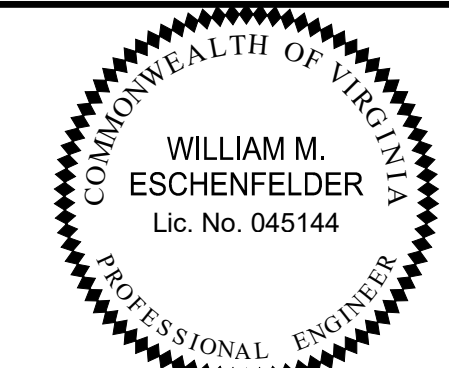


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| CROSS SECTIONS | REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| | ROANOKE-BLACKSBURG REGIONAL AIRPORT | DRAWN BY: PJW | SHEET 50 |
| | | DESIGNED BY: WME | OF 60 |
| | SCALE: HORIZ: 1" = 30' VERT: 1" = 3' | DATE: MARCH 2025 | |

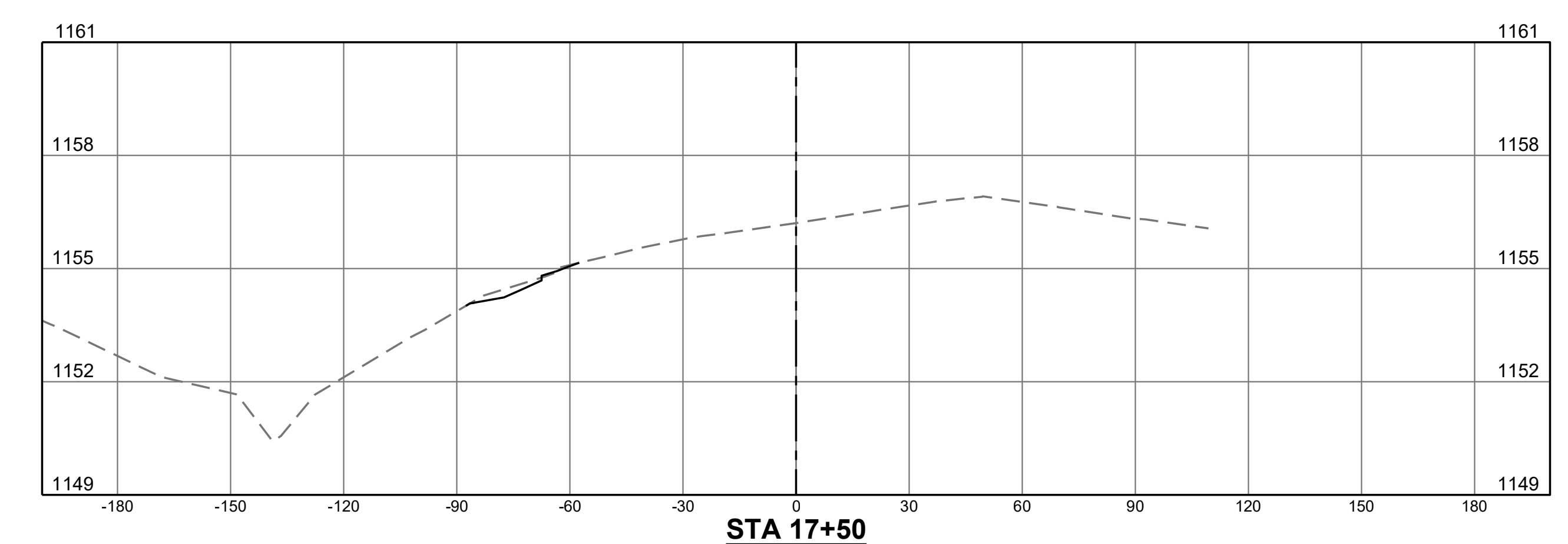
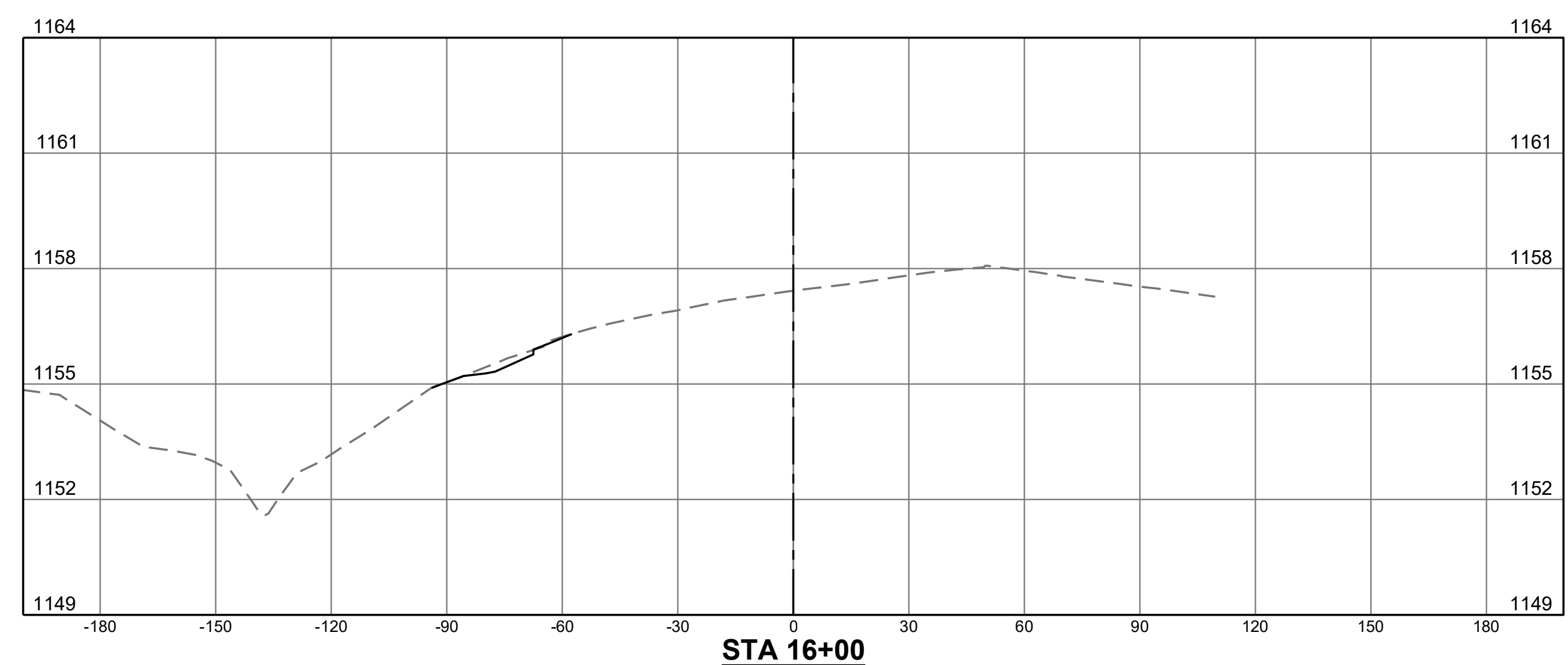
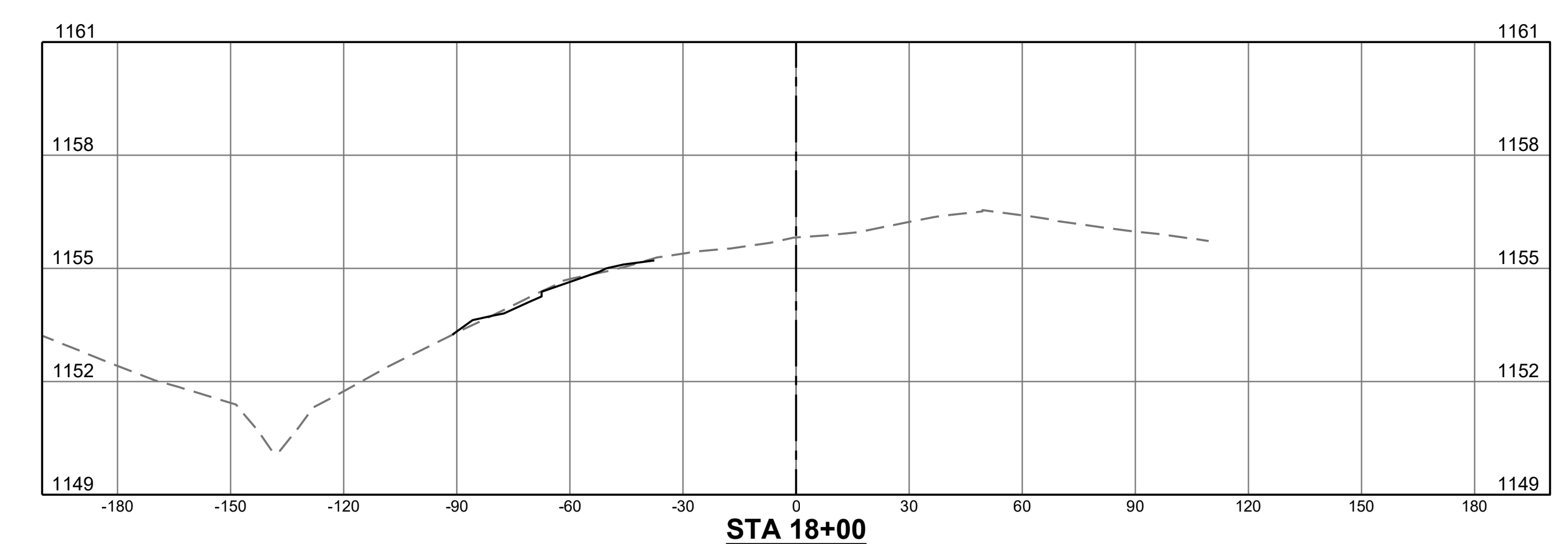
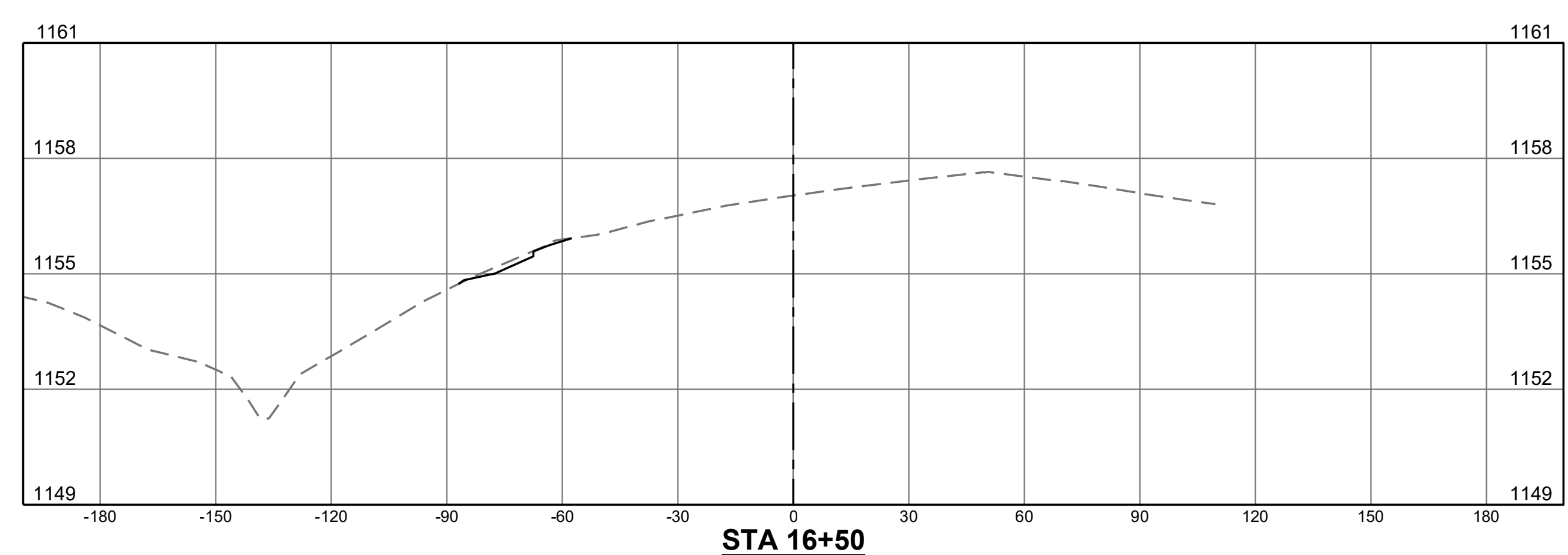
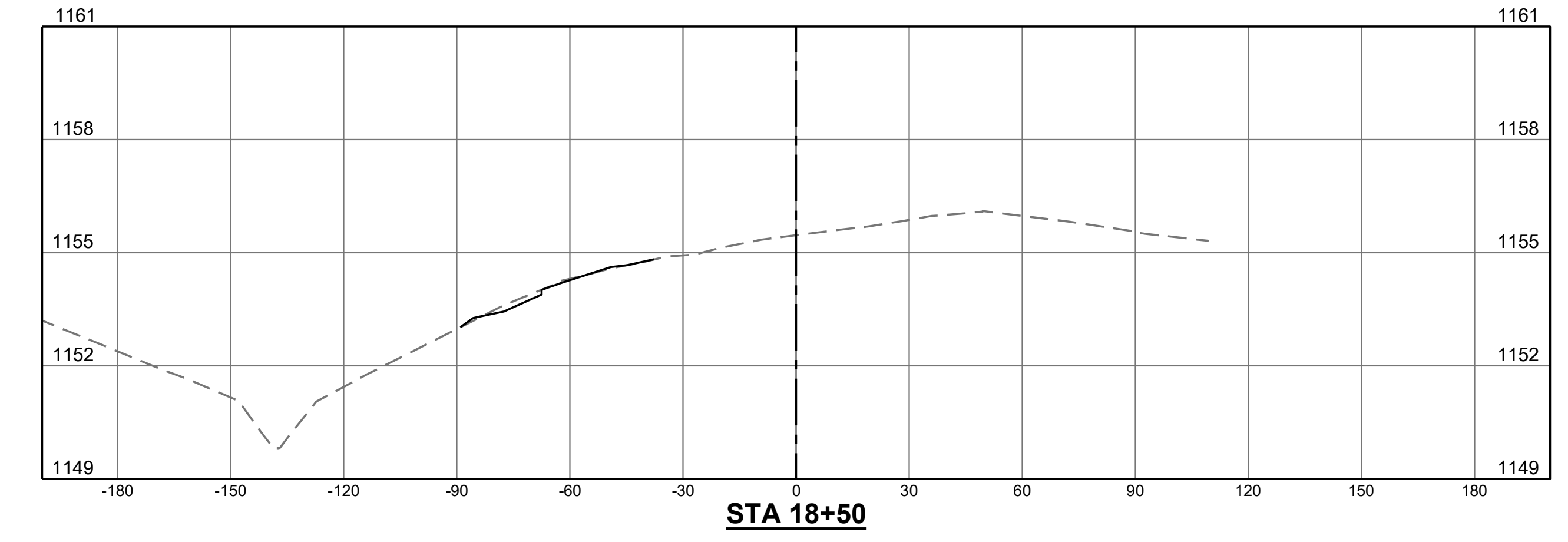
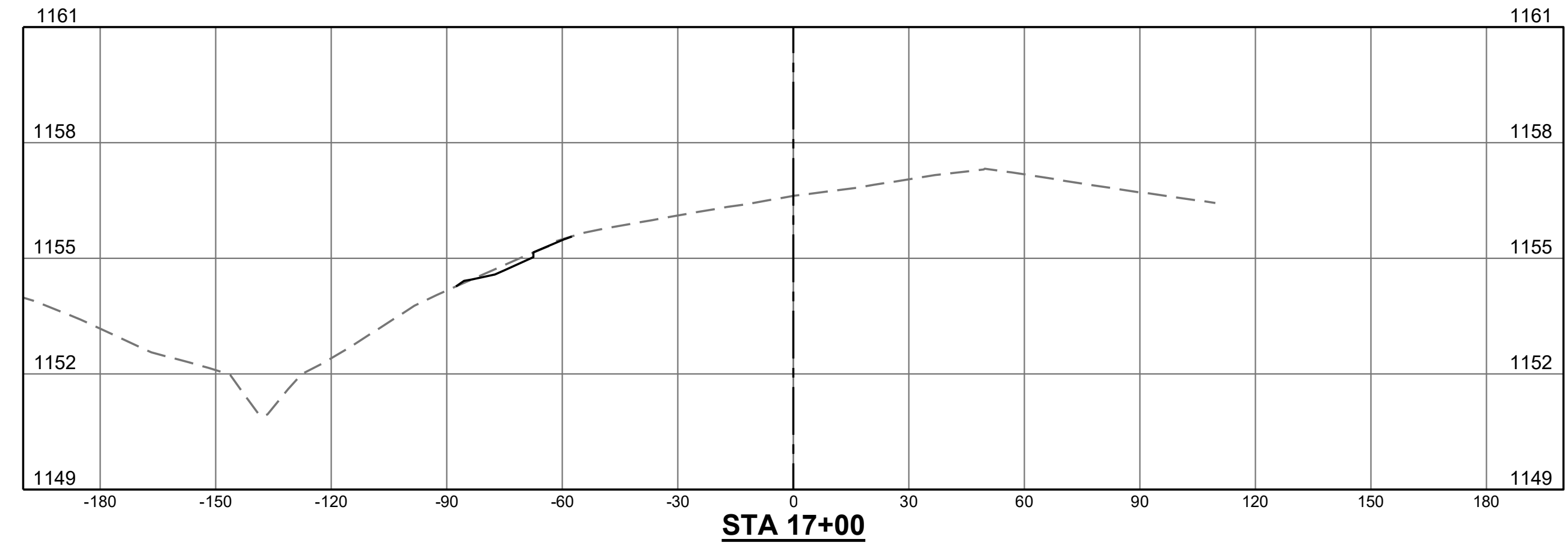
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LEGEND

- - - - - EXISTING GRADE
- PROPOSED GRADE

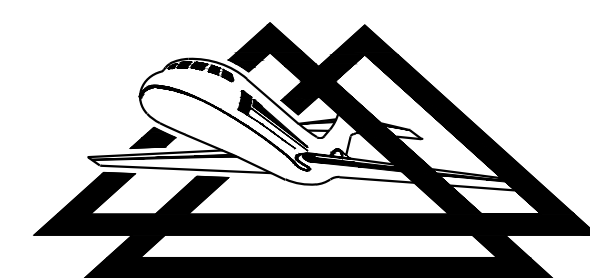
NOTE:

1. CROSS SECTIONS ARE BASED ON BASELINE "B" (TAXIWAY B CENTERLINE)

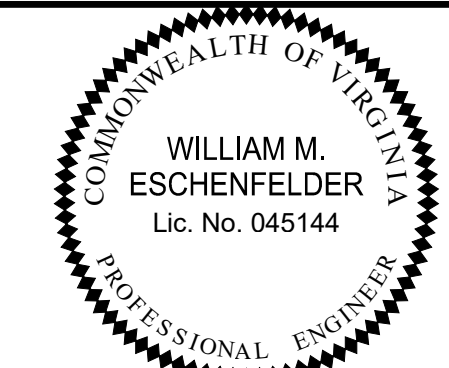


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| CROSS SECTIONS | REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| | ROANOKE-BLACKSBURG REGIONAL AIRPORT | DRAWN BY: PJW | SHEET 51 |
| | | DESIGNED BY: WME | OF 60 |
| | SCALE: HORIZ: 1" = 30' VERT: 1" = 3' | DATE: MARCH 2025 | |

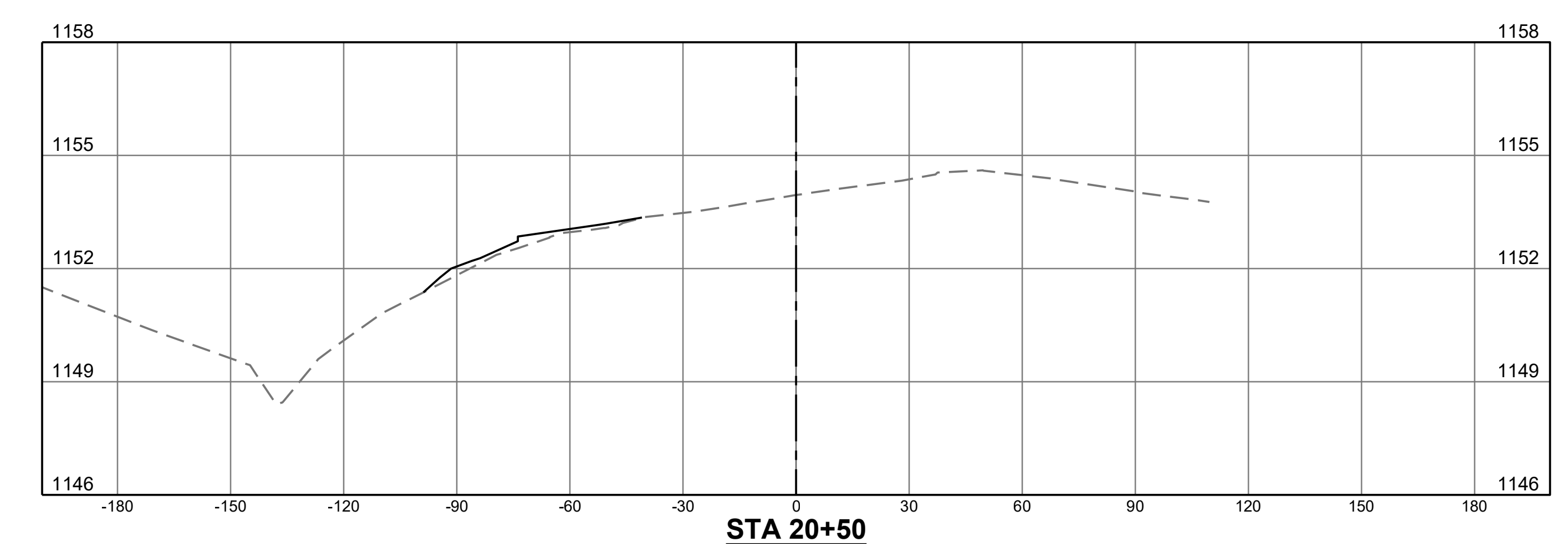
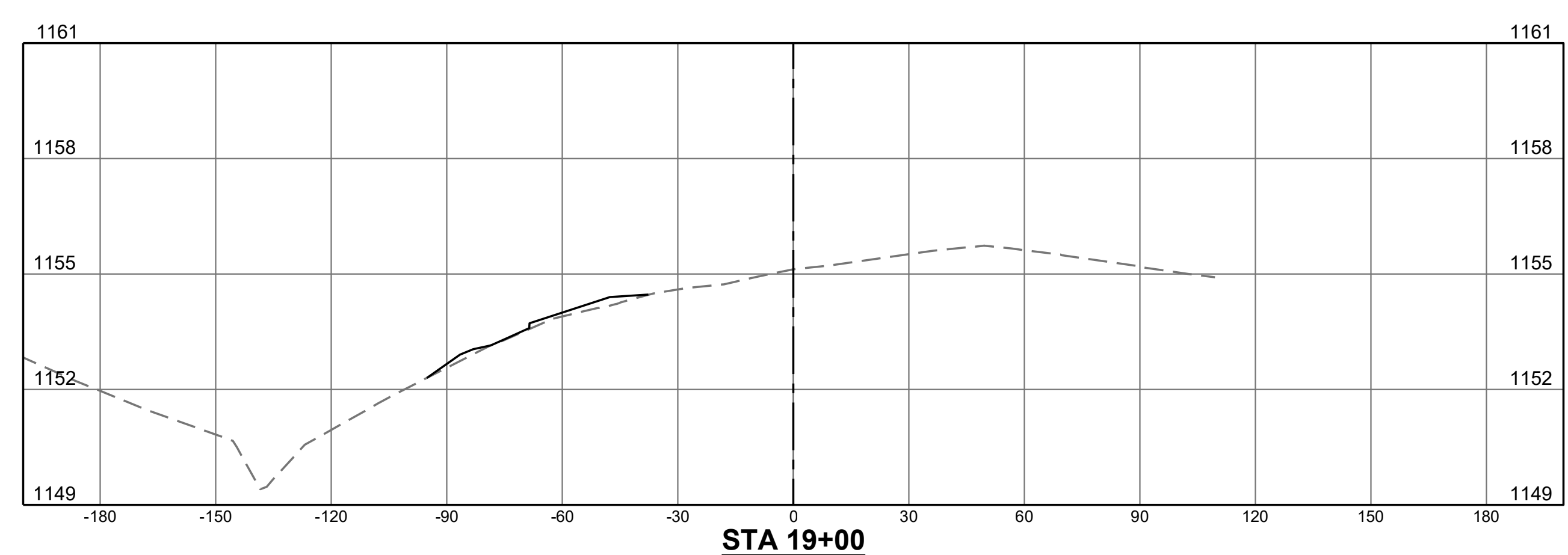
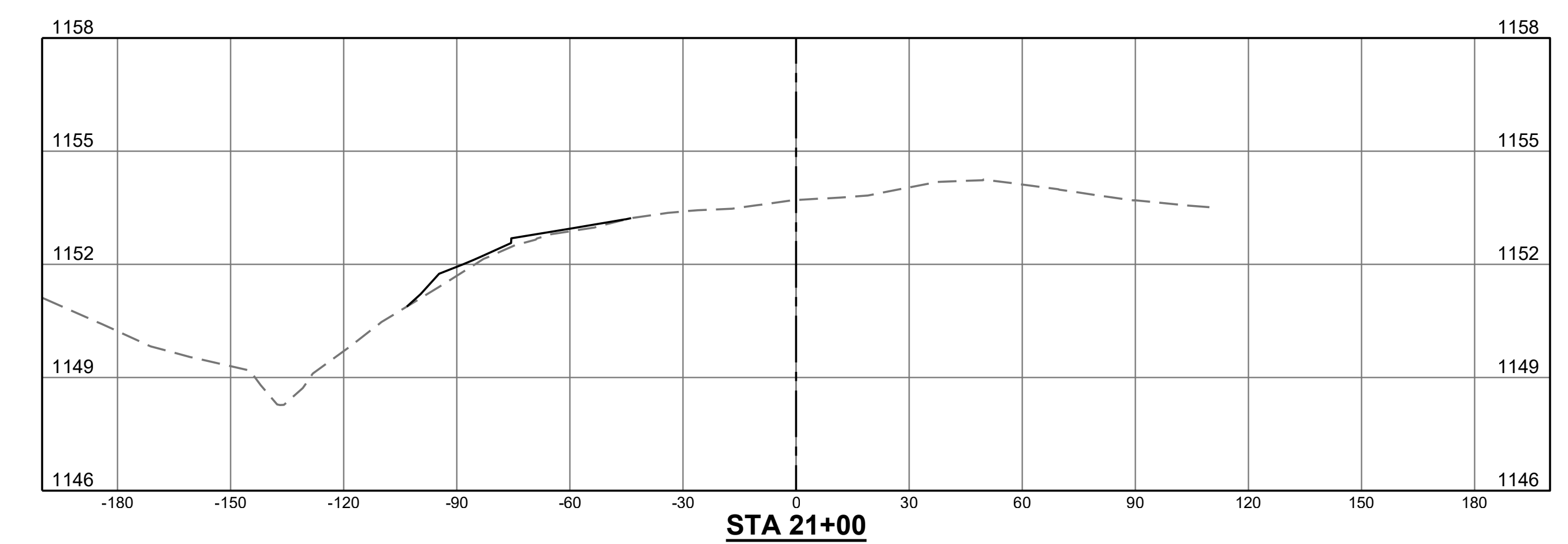
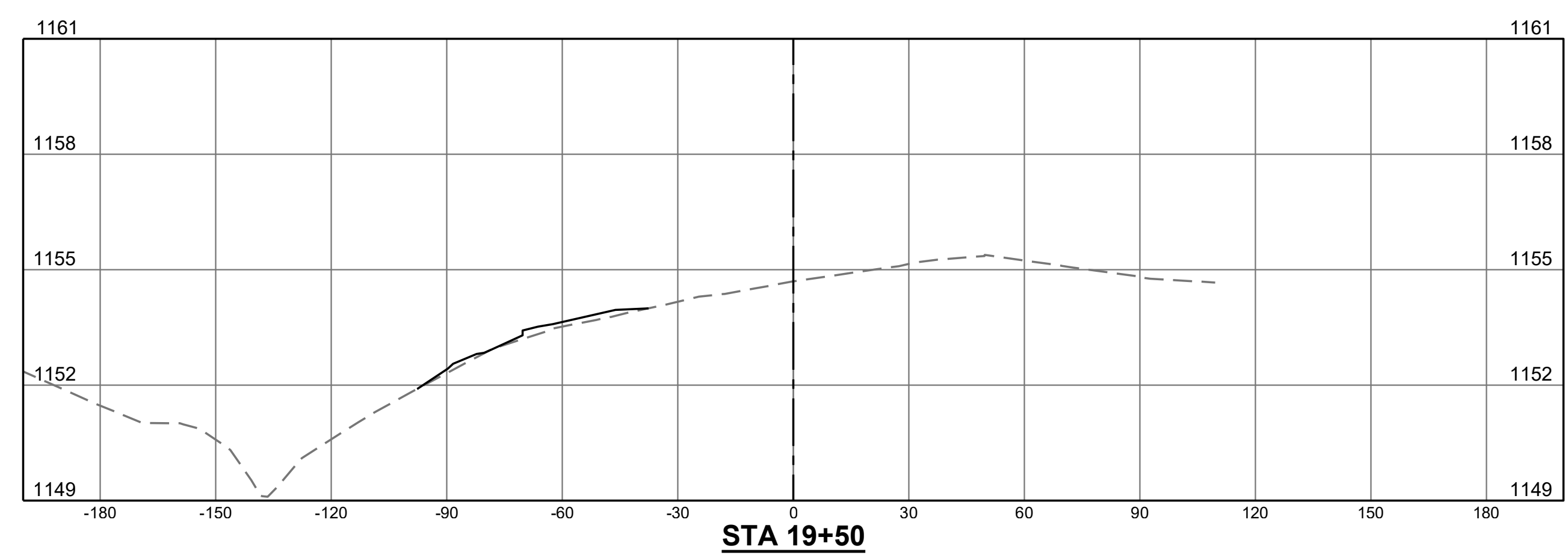
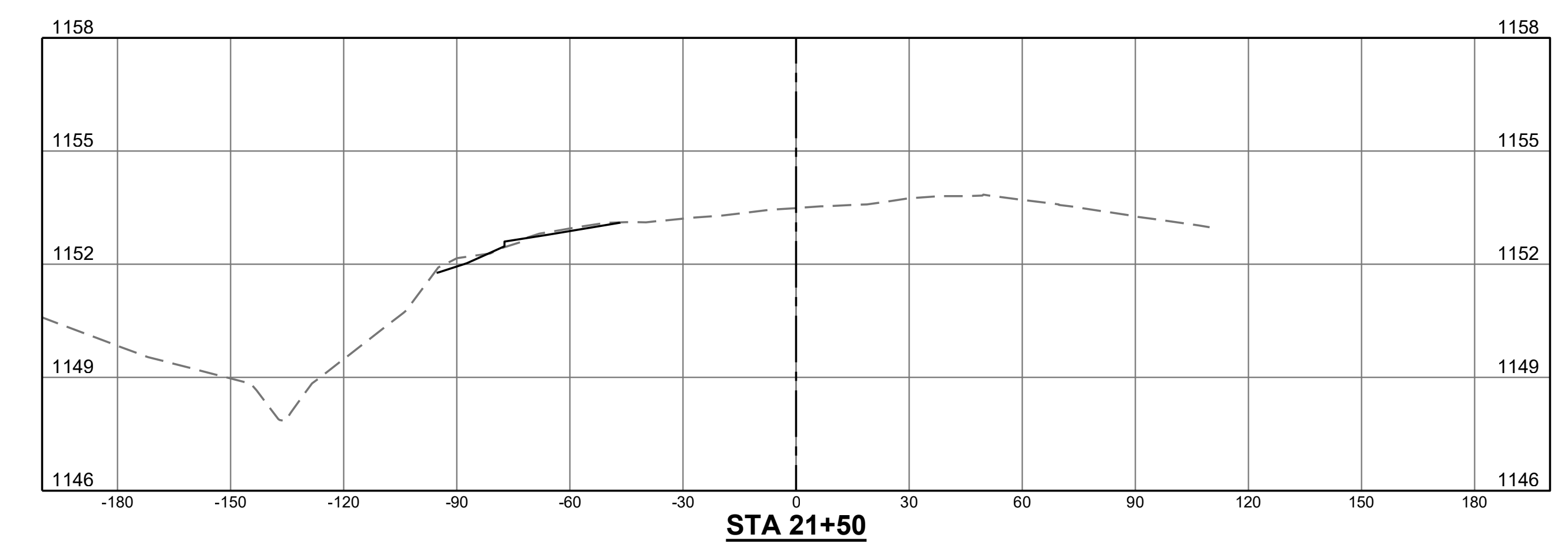
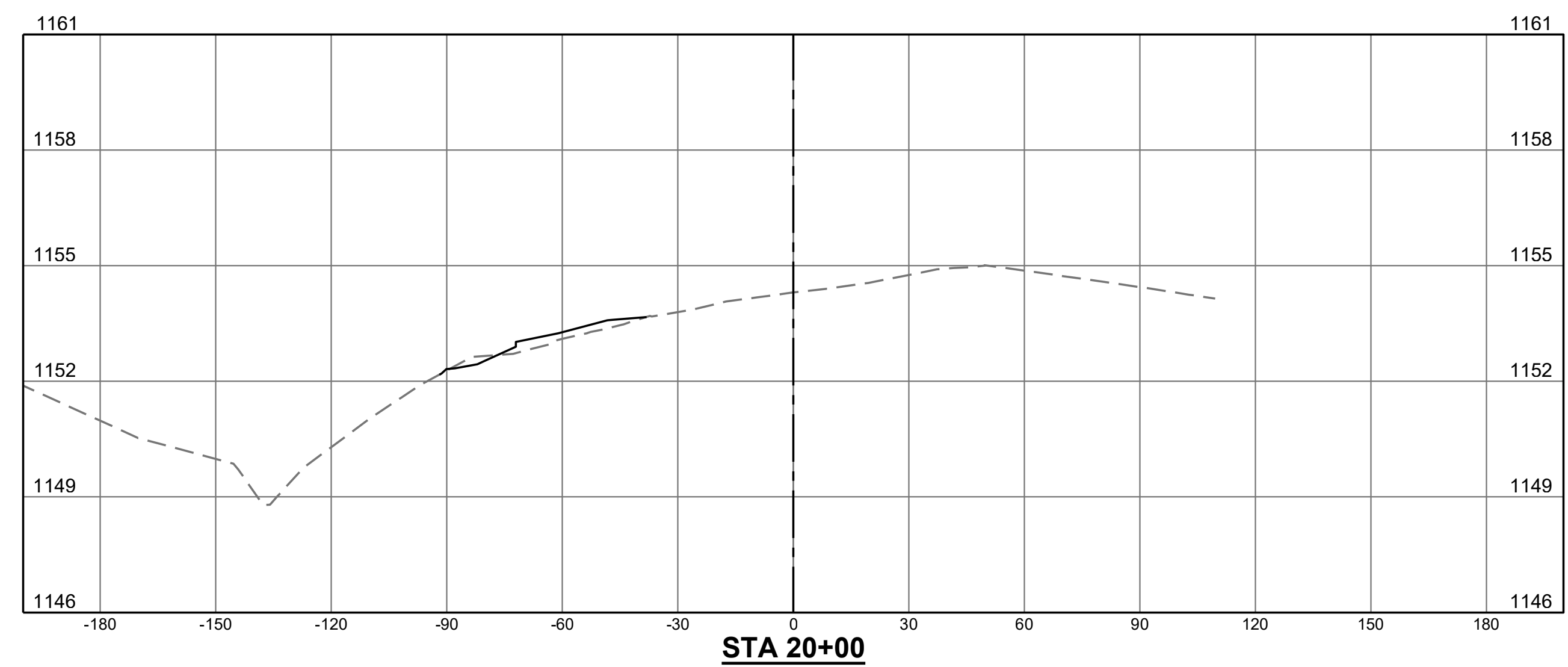
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- PROPOSED GRADE

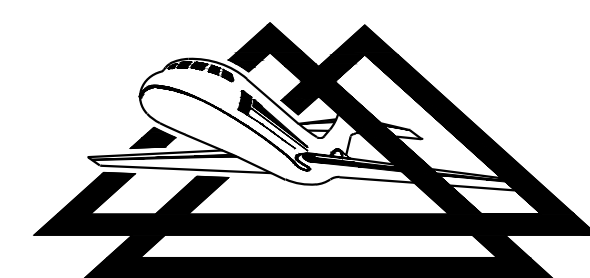
NOTE:

1. CROSS SECTIONS ARE BASED ON BASELINE "B" (TAXIWAY B CENTERLINE)

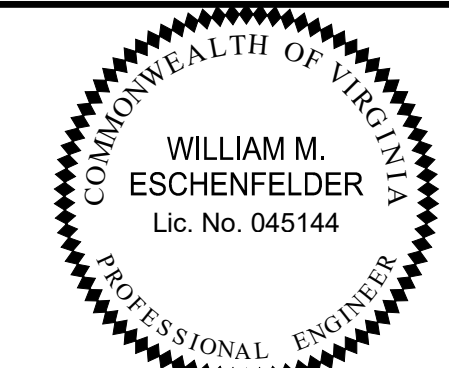


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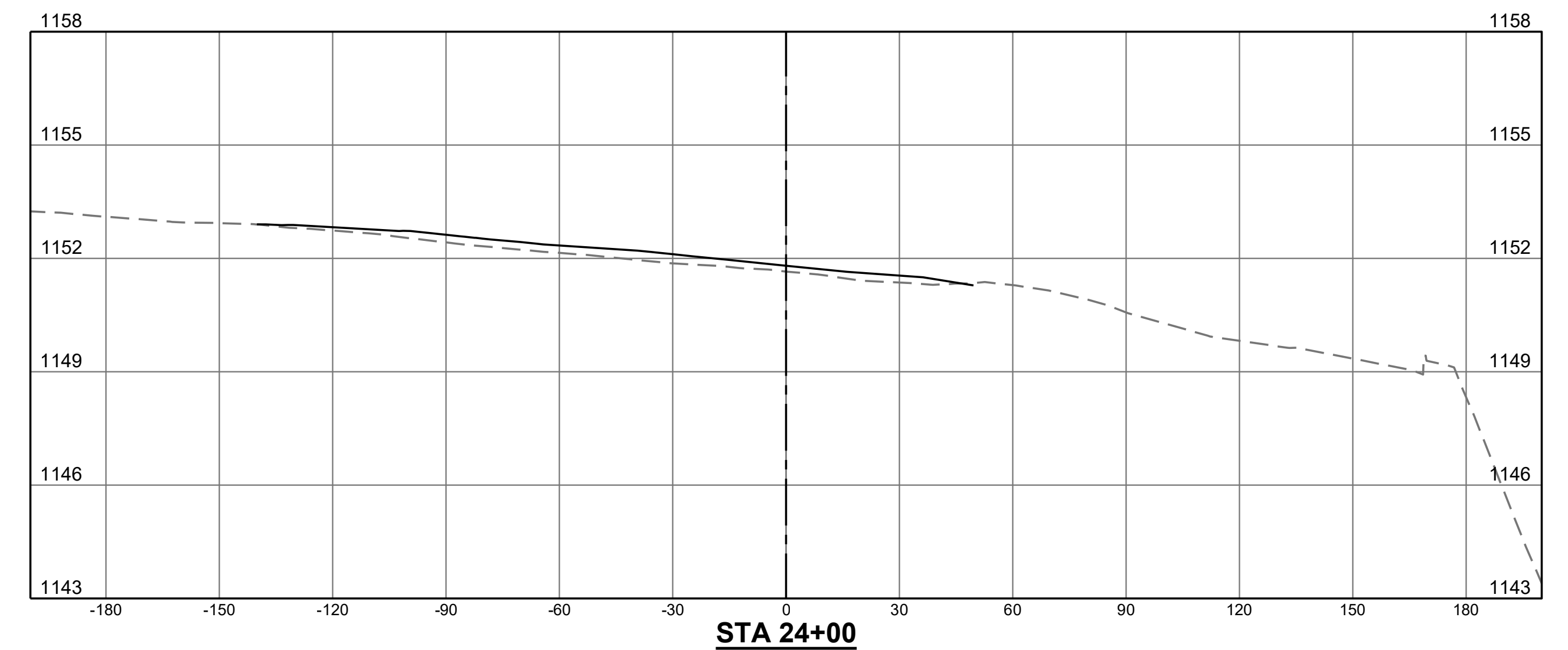
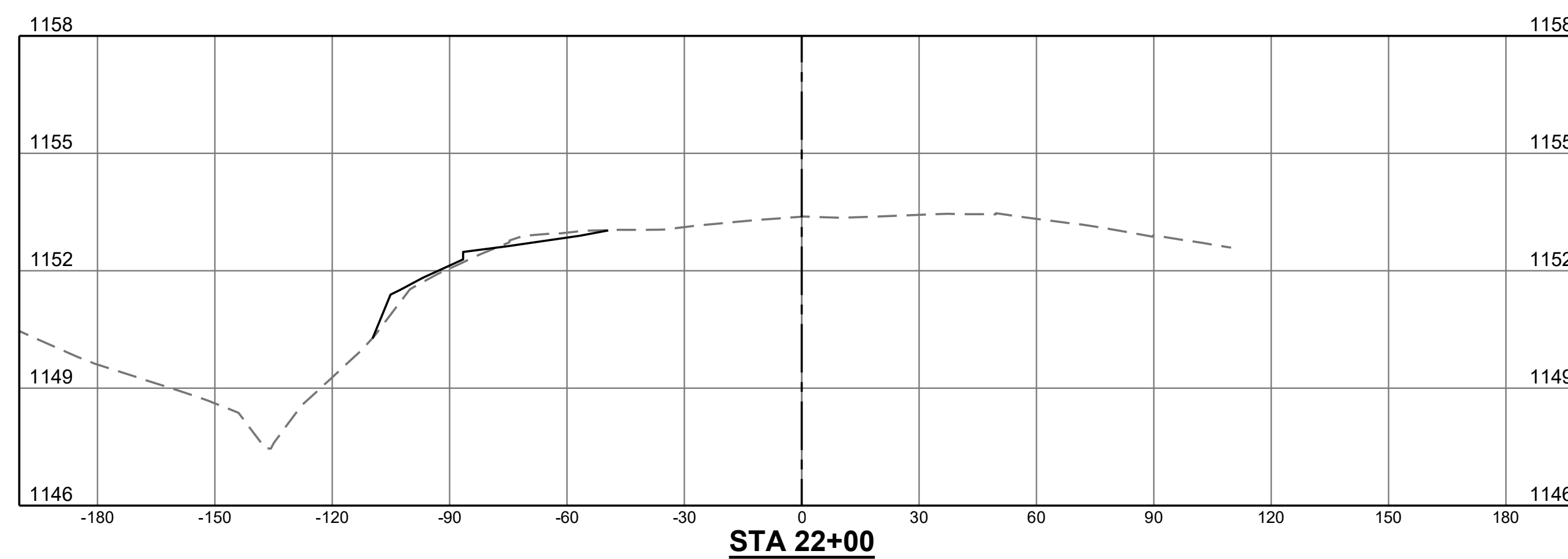
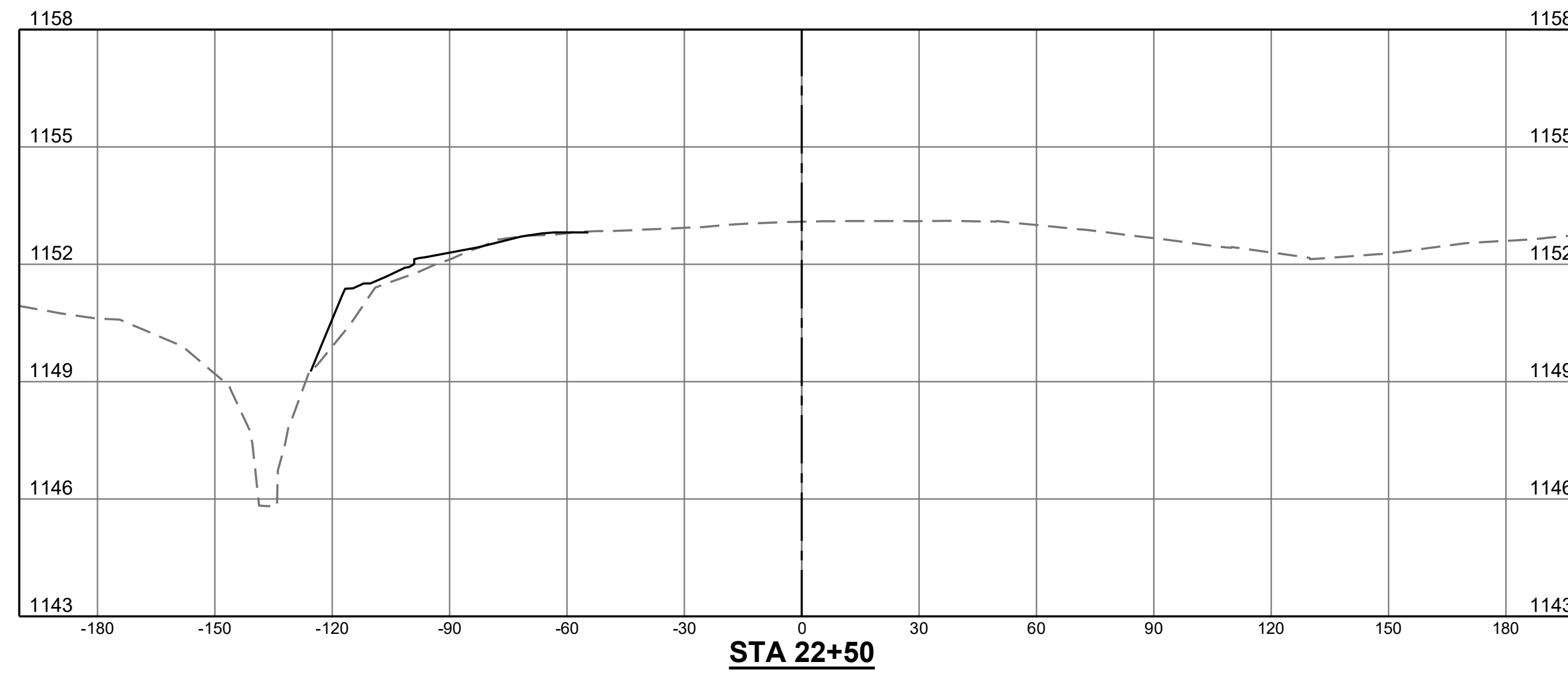
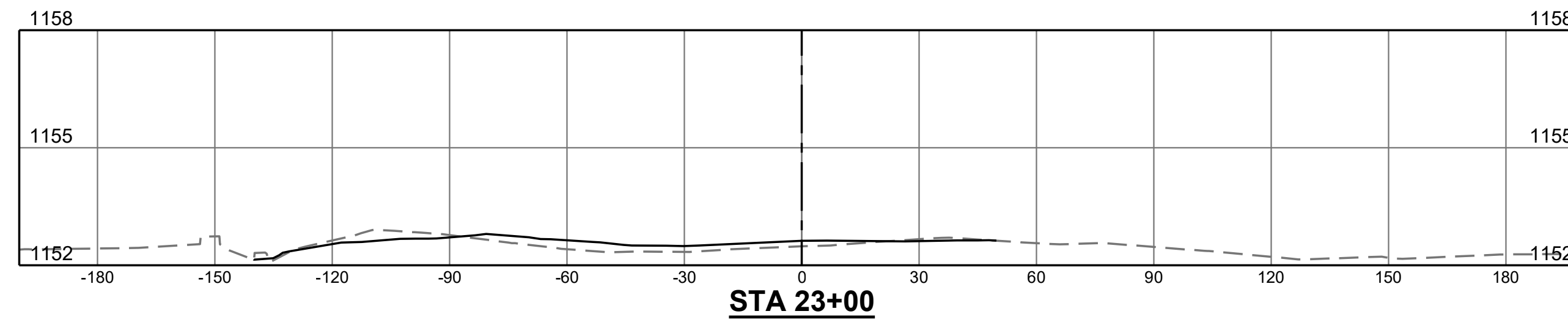
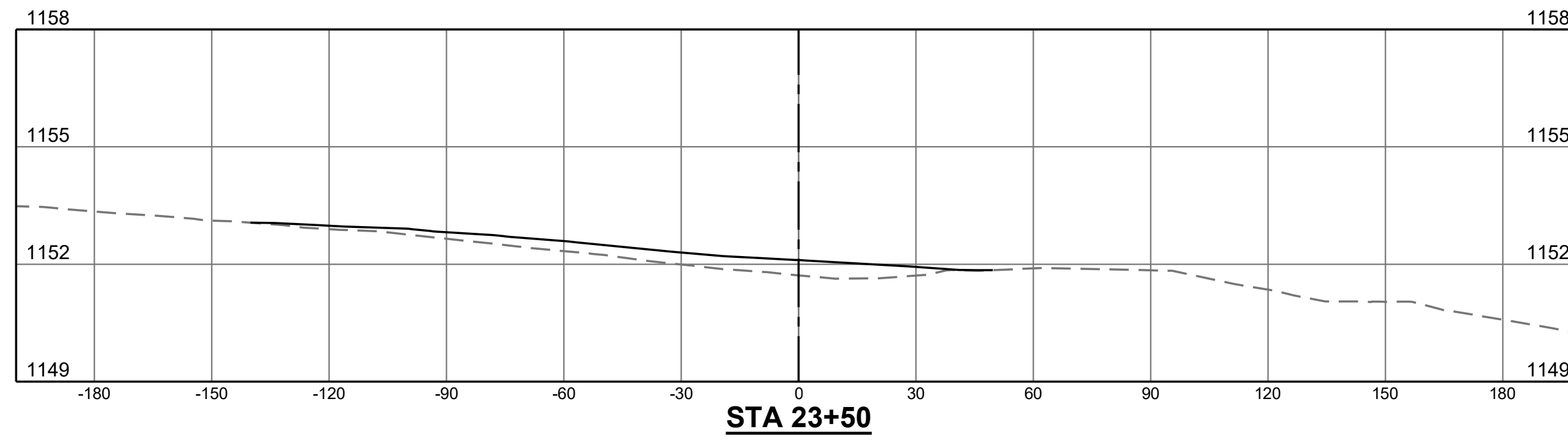


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| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| CROSS SECTIONS | DRAWN BY: PJW | SHEET 52 |
| | DESIGNED BY: WME | OF 60 |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | SCALE: HORIZ: 1" = 30' VERT: 1" = 3' | DATE: MARCH 2025 |

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LEGEND

- EXISTING GRADE
- PROPOSED GRADE

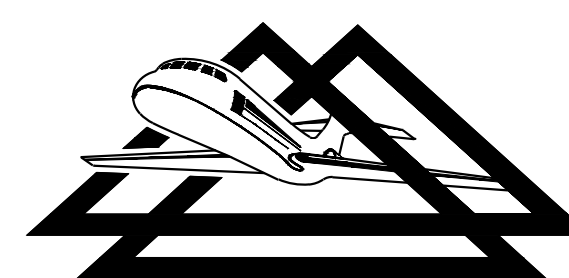
NOTE:

1. CROSS SECTIONS ARE BASED ON BASELINE "B" (TAXIWAY B CENTERLINE)

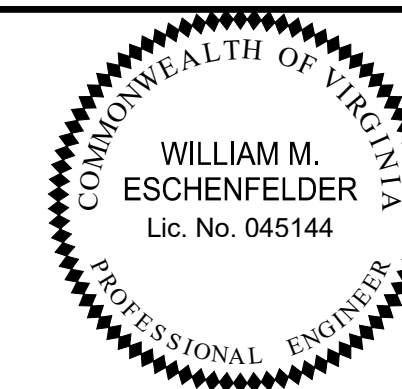
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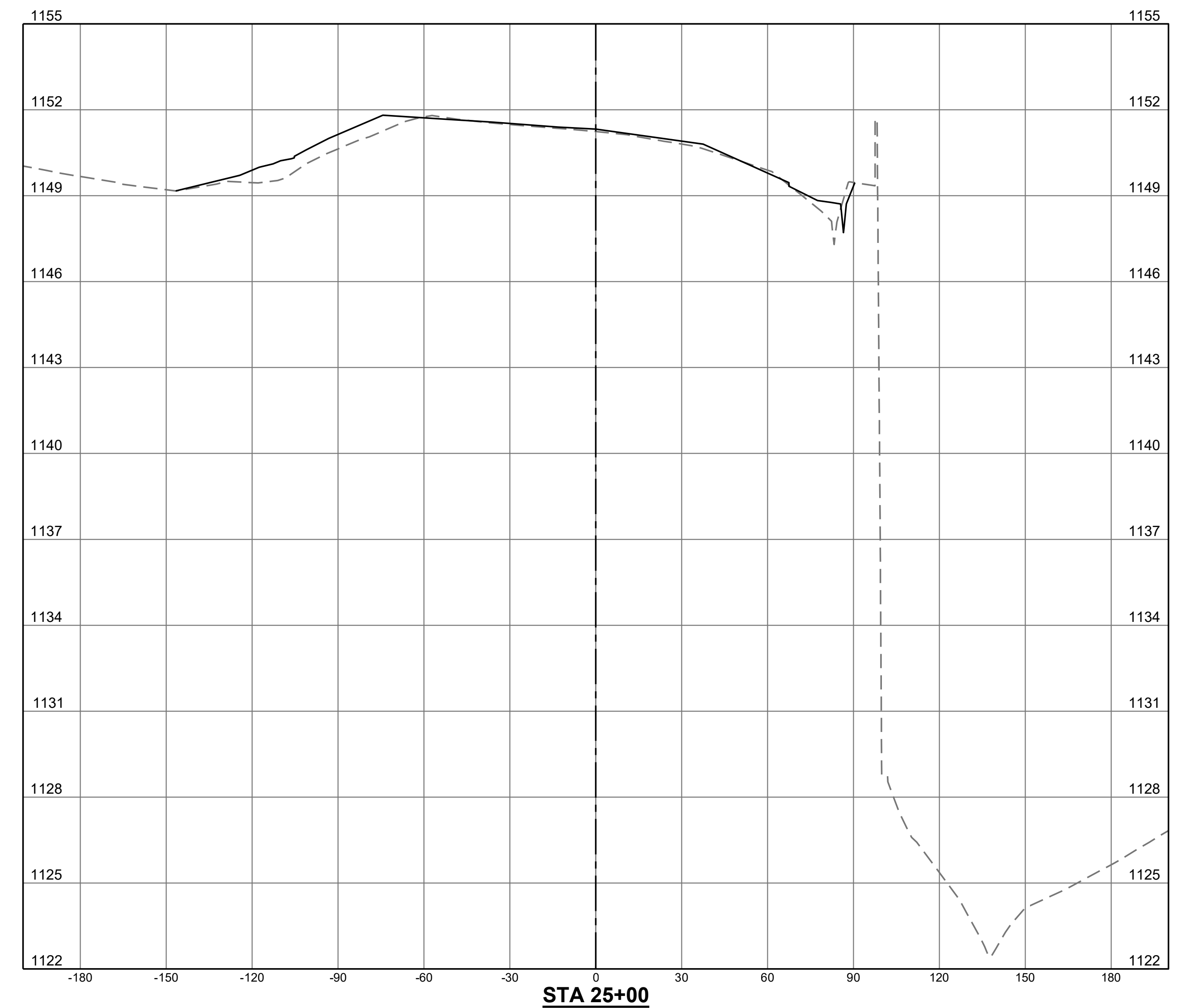
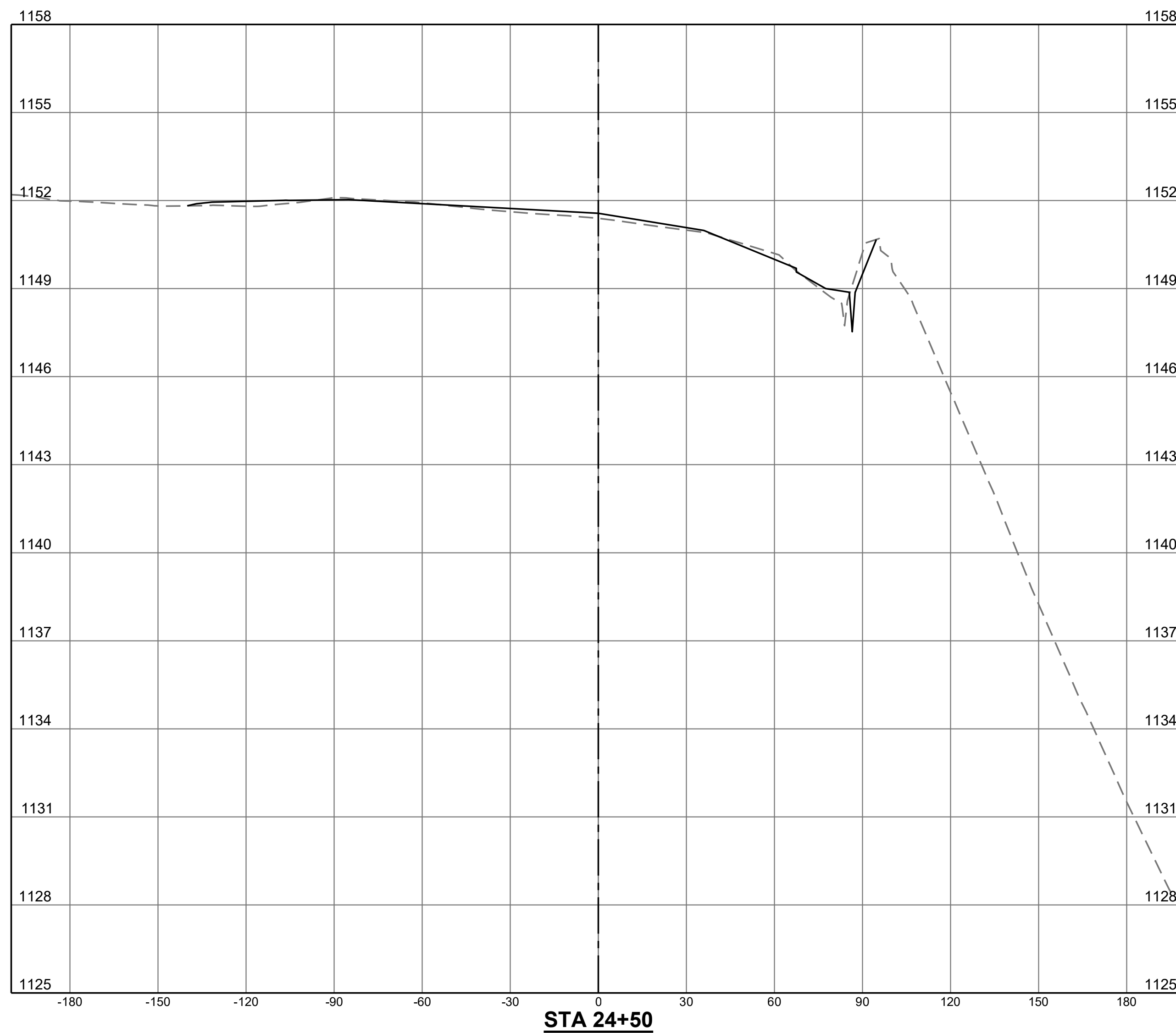
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| CROSS SECTIONS | REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| | ROANOKE-BLACKSBURG REGIONAL AIRPORT | DRAWN BY: PJW | SHEET 53 |
| | | DESIGNED BY: WME | OF 60 |
| | SCALE: HORIZ: 1" = 30' VERT: 1" = 3' | DATE: MARCH 2025 | |

LEGEND

- - - - - EXISTING GRADE
- PROPOSED GRADE

NOTE:

1. CROSS SECTIONS ARE BASED ON BASELINE "B" (TAXIWAY B CENTERLINE)

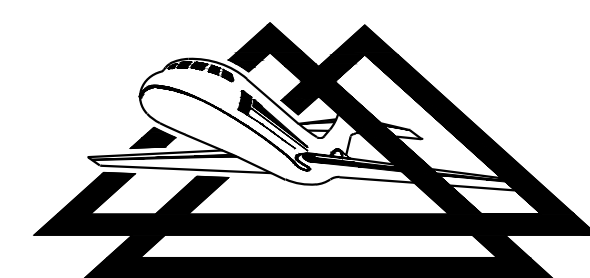


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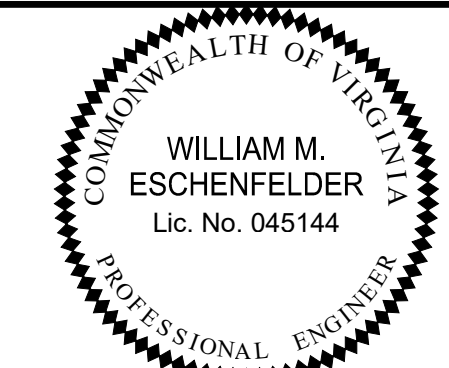
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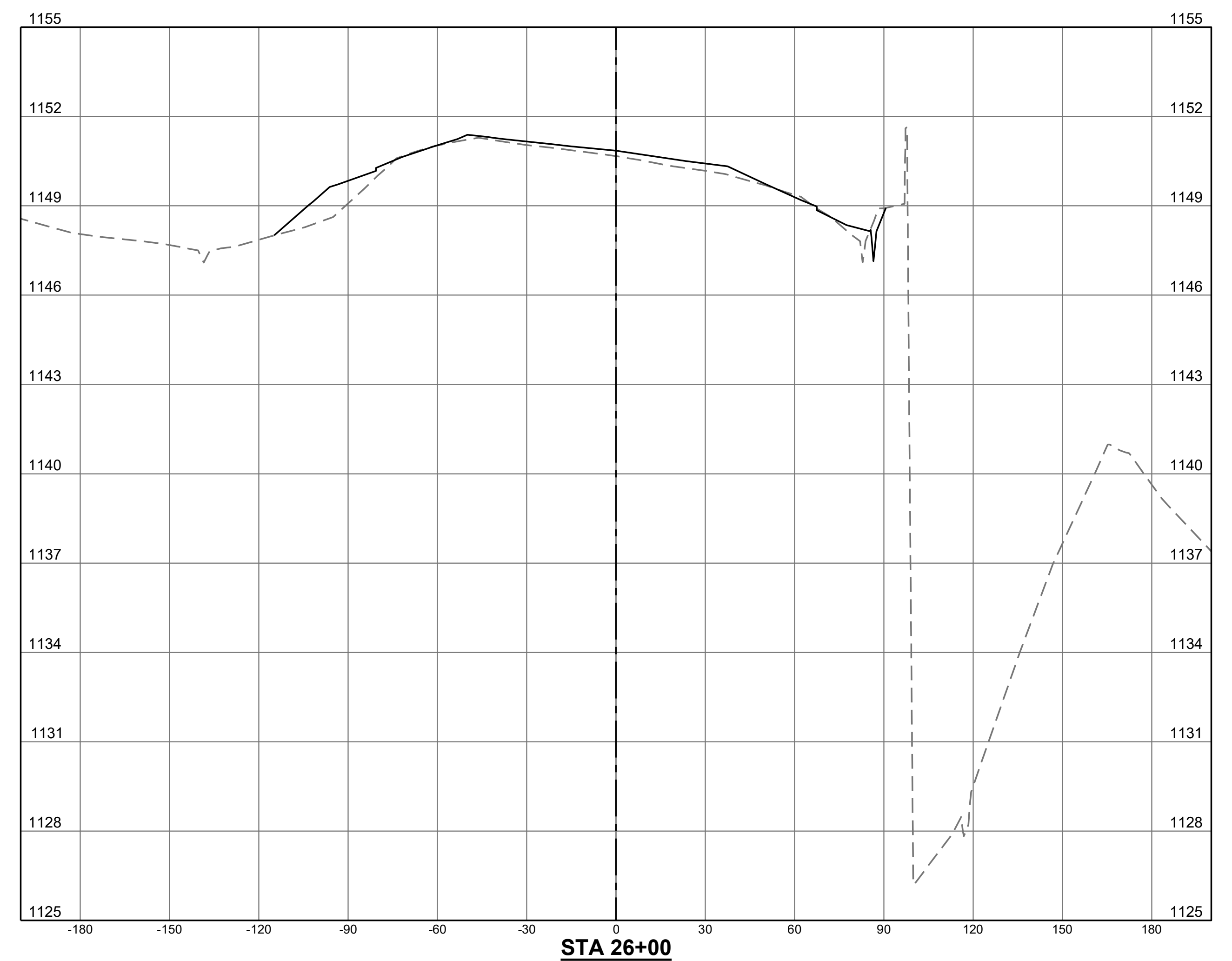
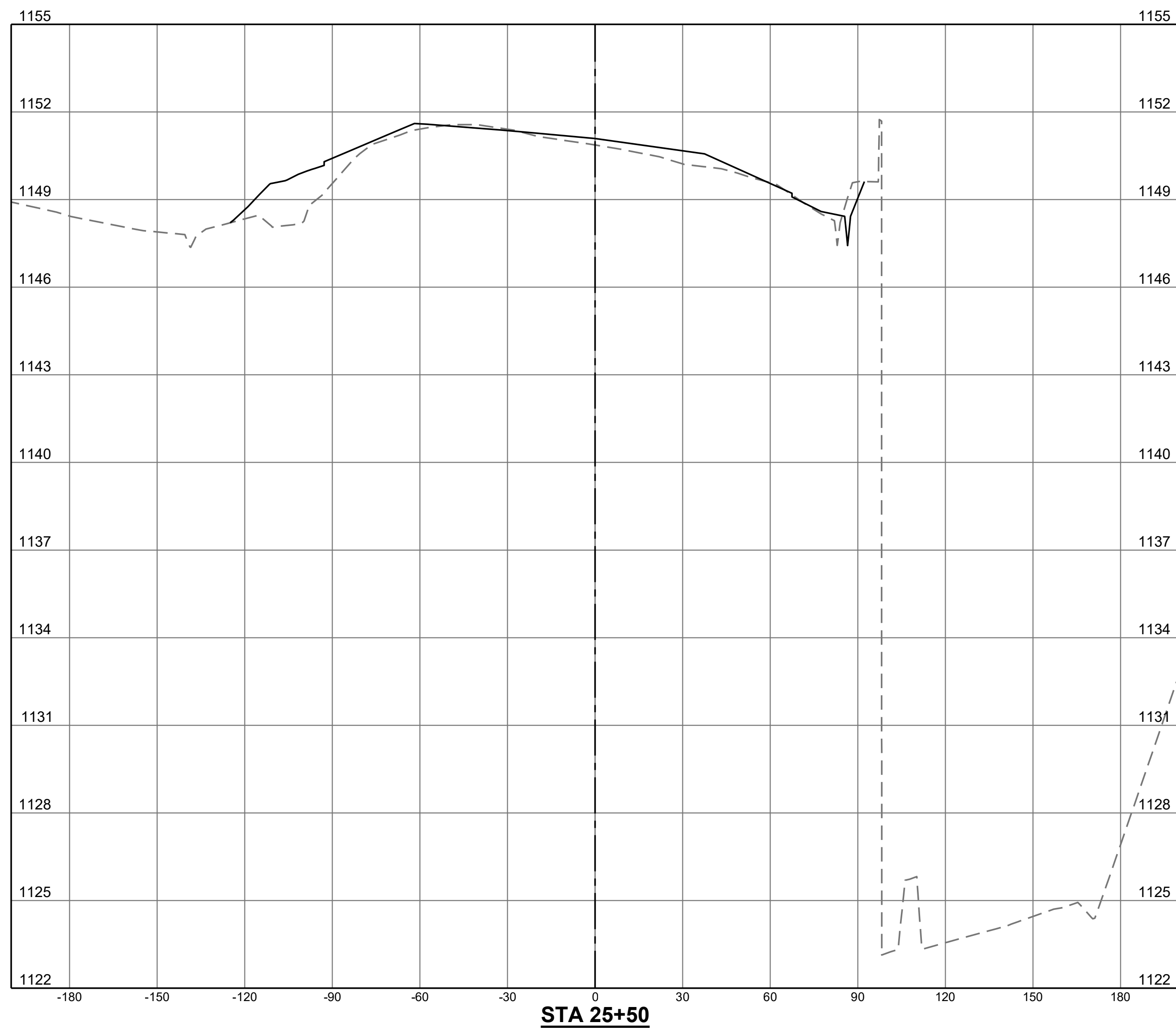
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| CROSS SECTIONS | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| | DRAWN BY: PJW | SHEET 54 |
| | DESIGNED BY: WME | OF 60 |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | SCALE: HORIZ: 1" = 30' VERT: 1" = 3' | DATE: MARCH 2025 |

LEGEND

--- EXISTING GRADE
 — PROPOSED GRADE

NOTE:

- CROSS SECTIONS ARE BASED ON BASELINE "B" (TAXIWAY B CENTERLINE)

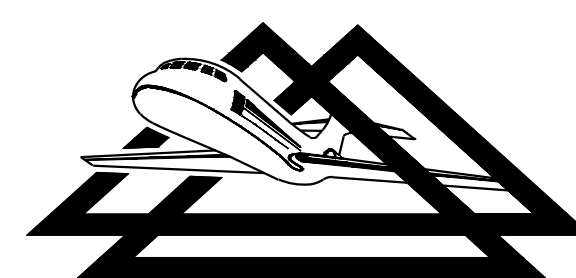


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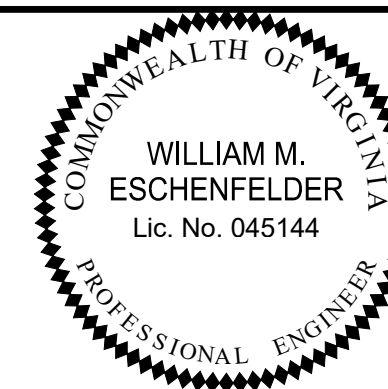
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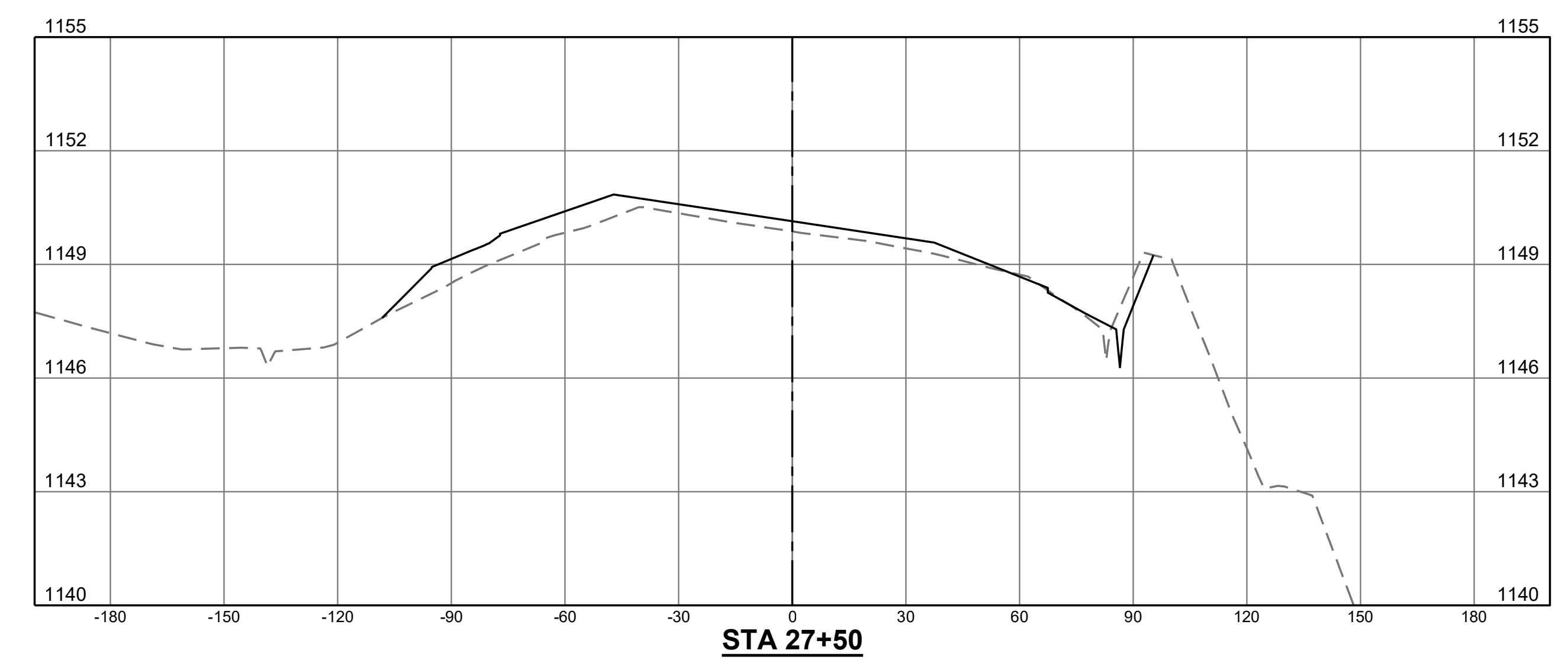
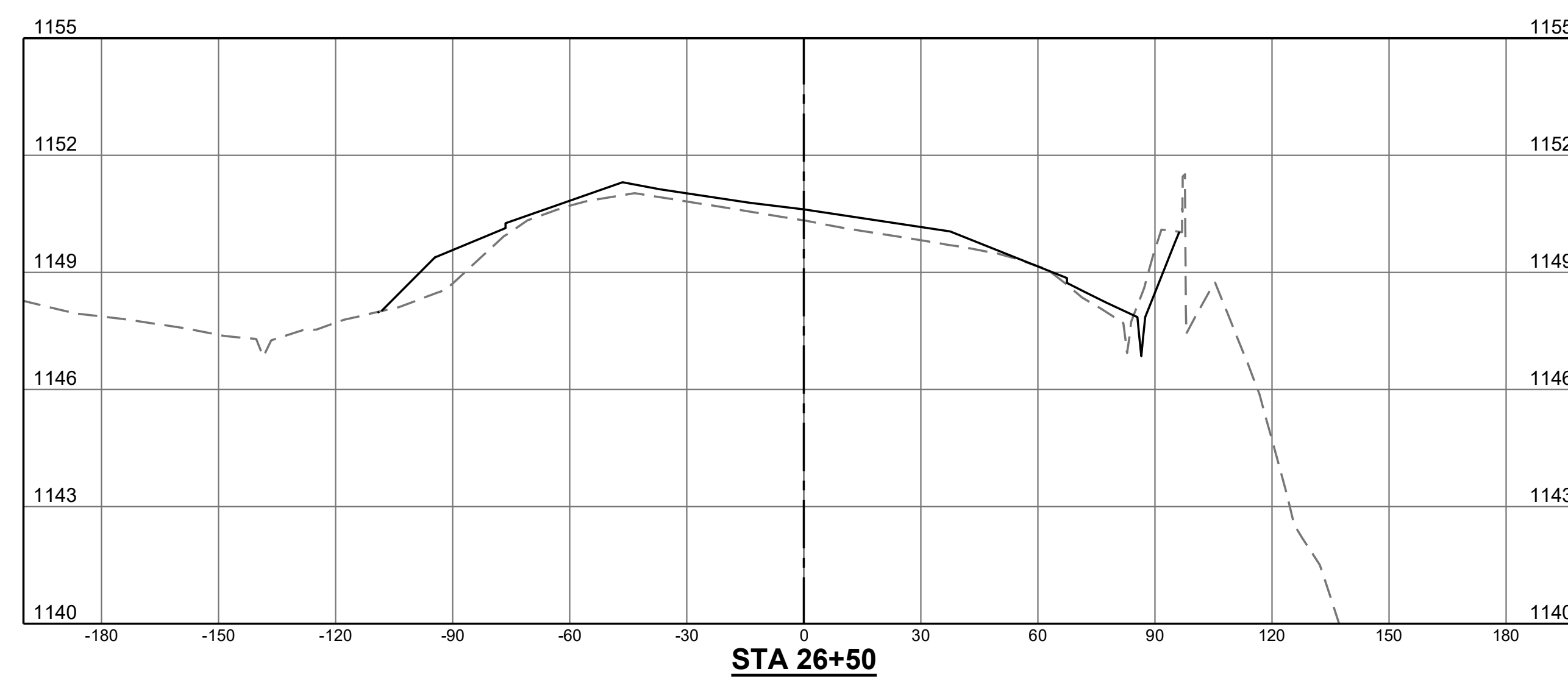
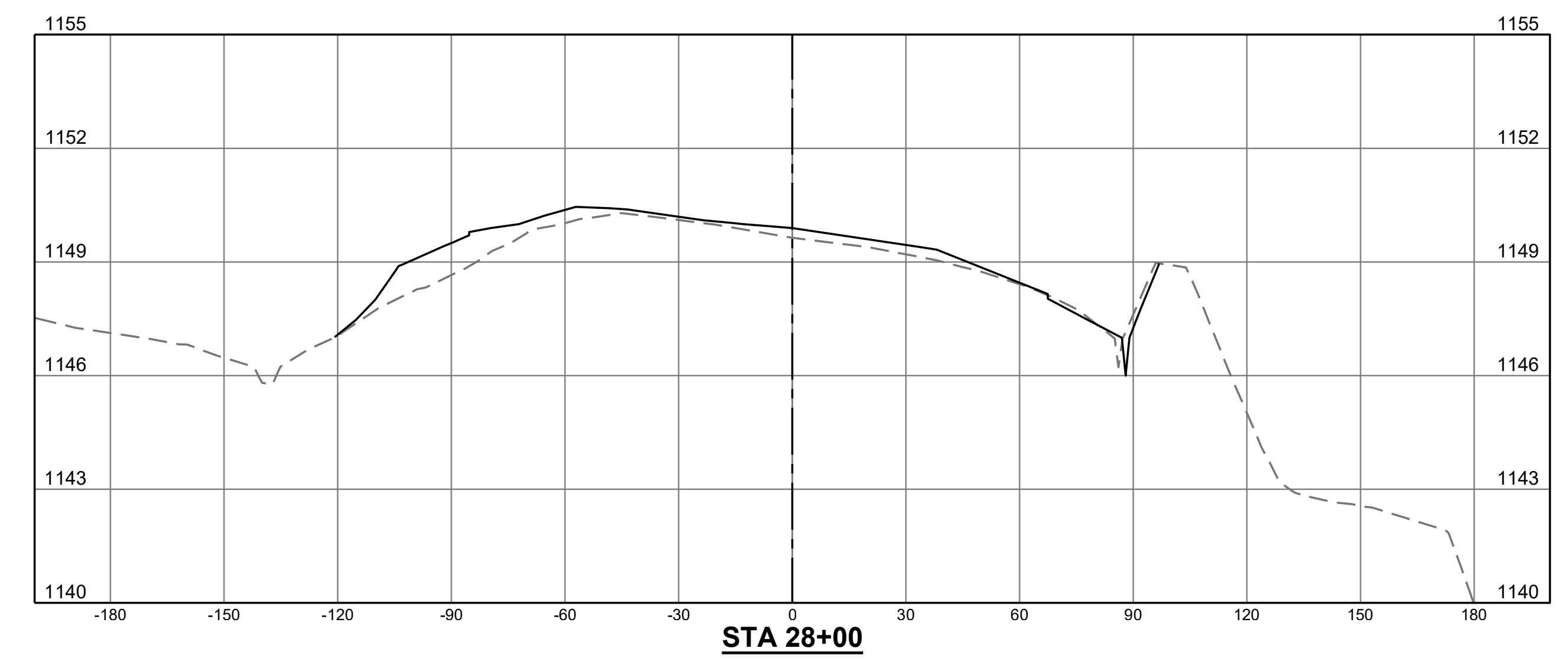
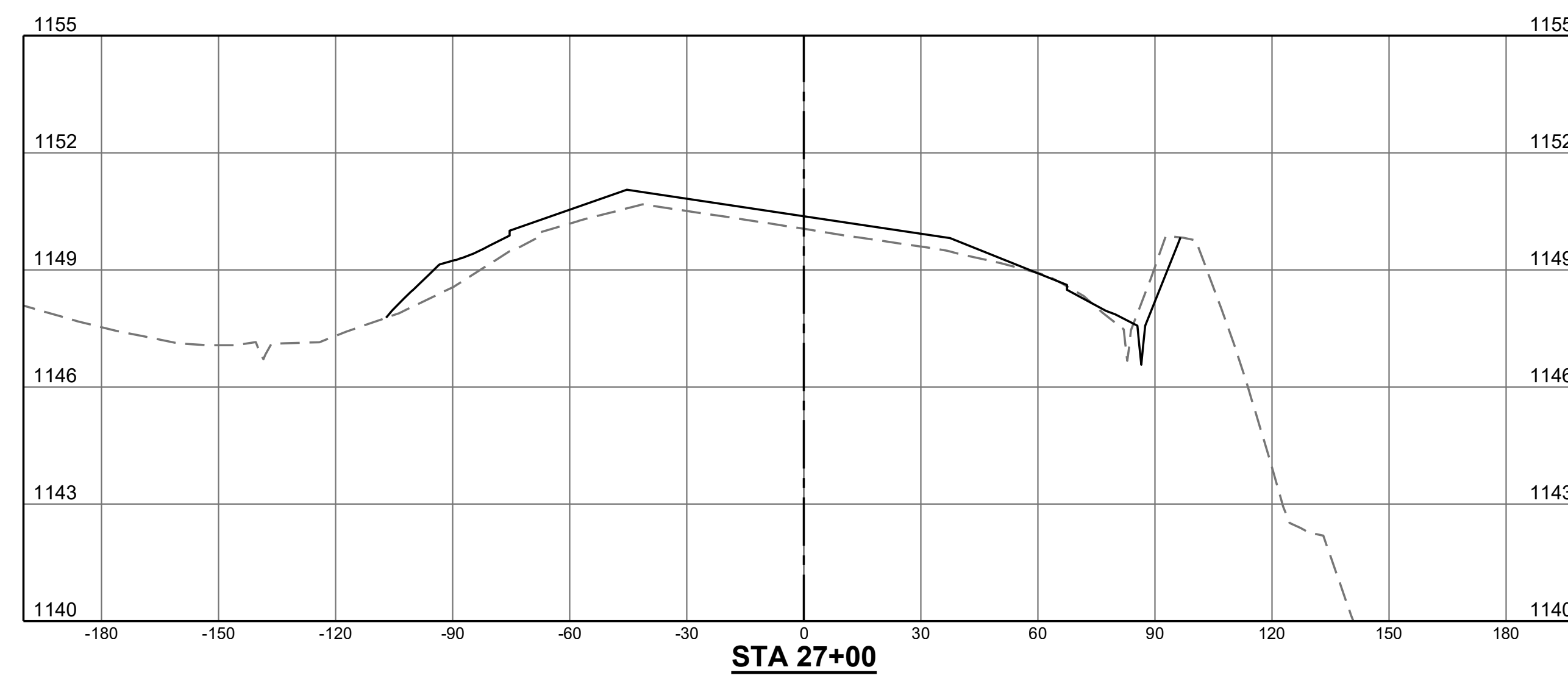
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| CROSS SECTIONS | REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| | ROANOKE-BLACKSBURG REGIONAL AIRPORT | DRAWN BY: PJW | SHEET 55 |
| | | DESIGNED BY: WME | OF 60 |
| | SCALE: HORIZ: 1" = 30' VERT: 1" = 3' | DATE: MARCH 2025 | |

LEGEND

- - - - - EXISTING GRADE
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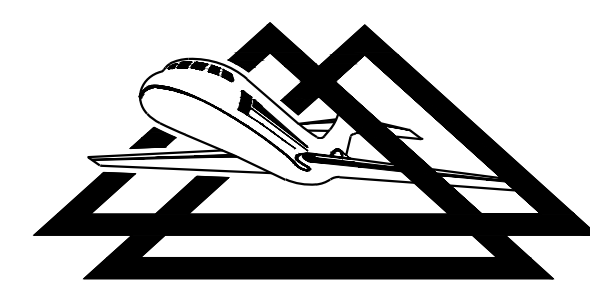
NOTE:

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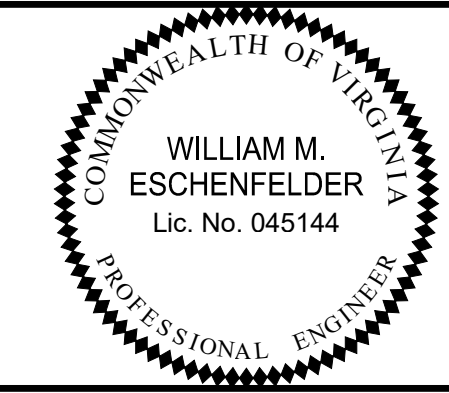


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| CROSS SECTIONS | REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| | ROANOKE-BLACKSBURG REGIONAL AIRPORT | DRAWN BY: PJW | SHEET 56 |
| | | DESIGNED BY: WME | OF 60 |
| | SCALE: HORIZ: 1" = 30' VERT: 1" = 3' | DATE: MARCH 2025 | |

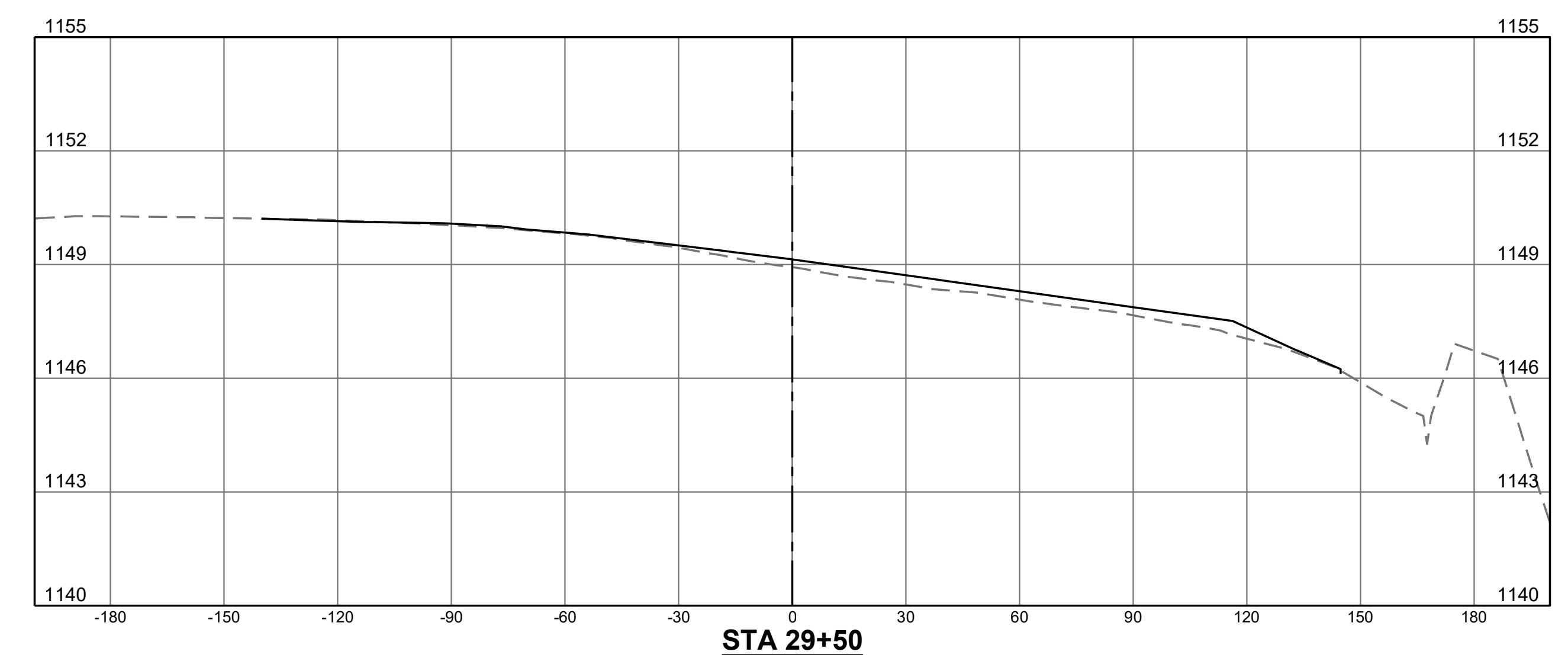
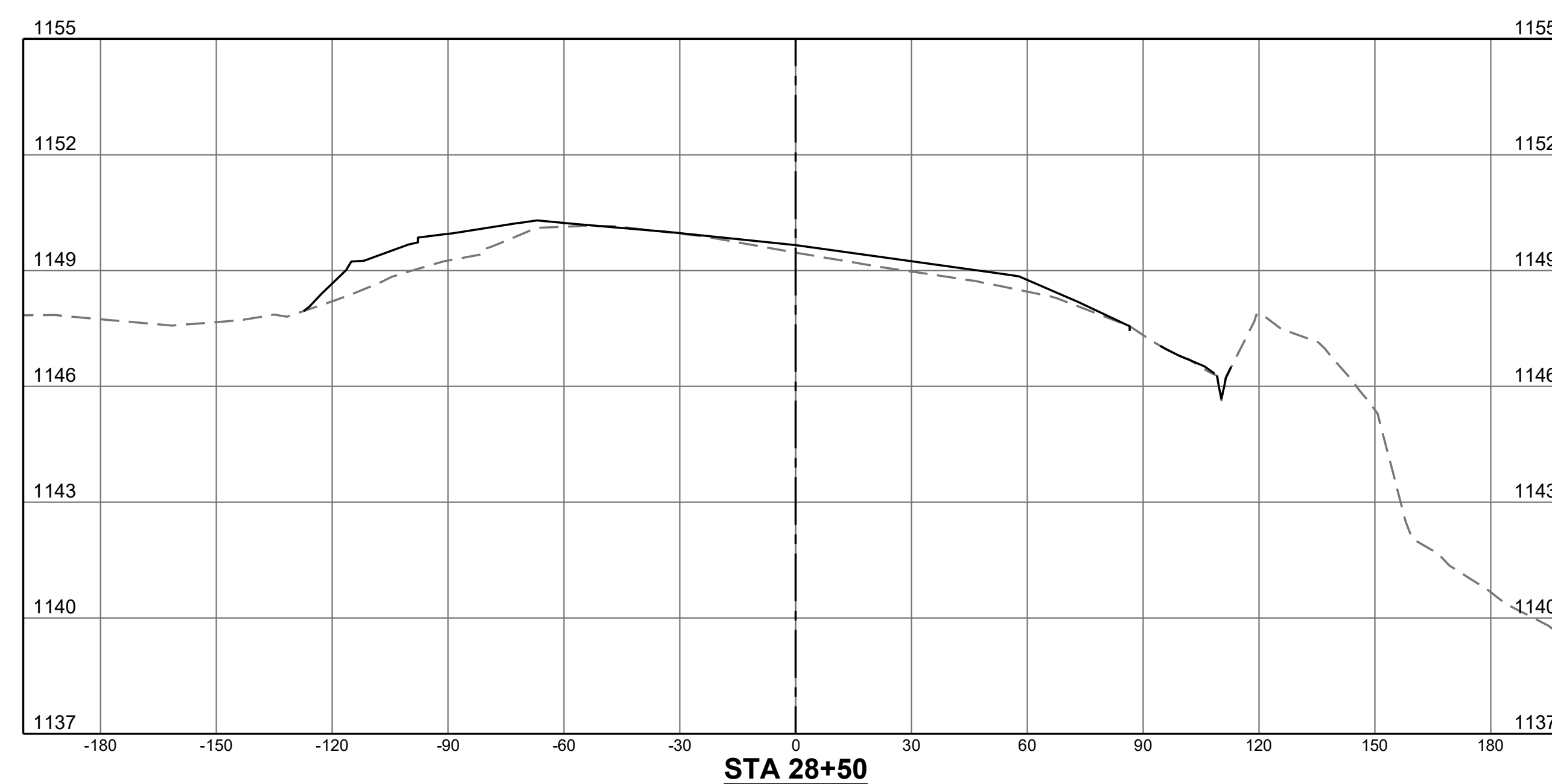
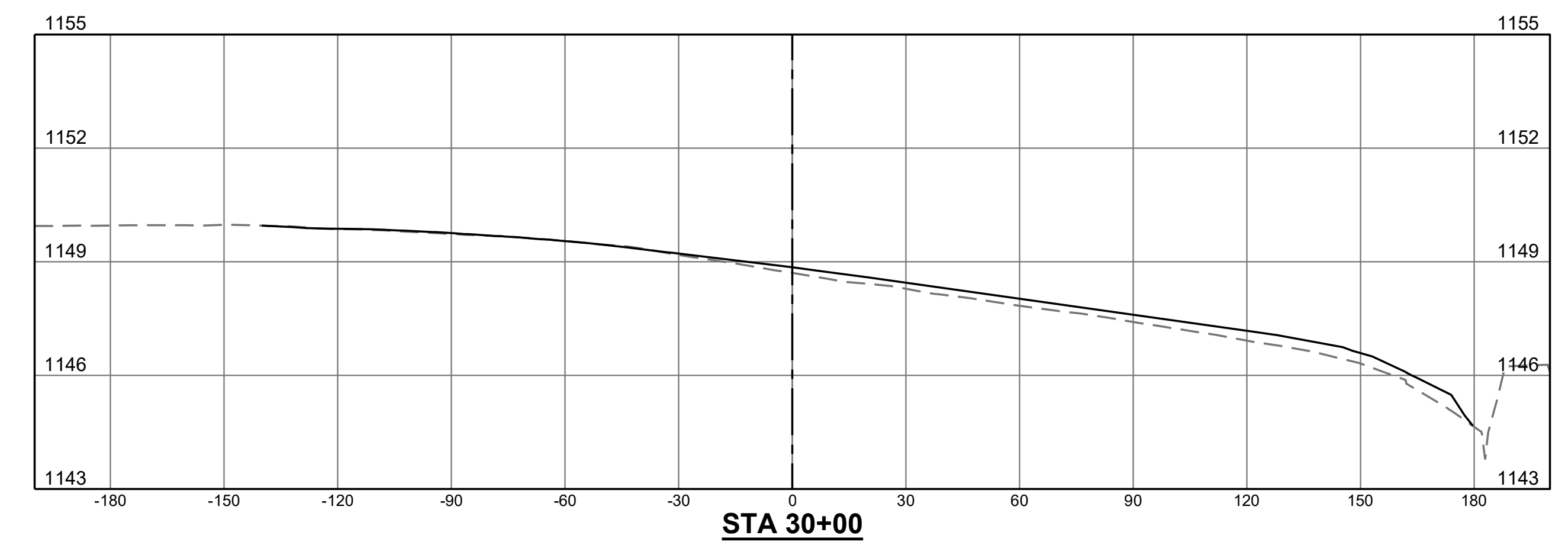
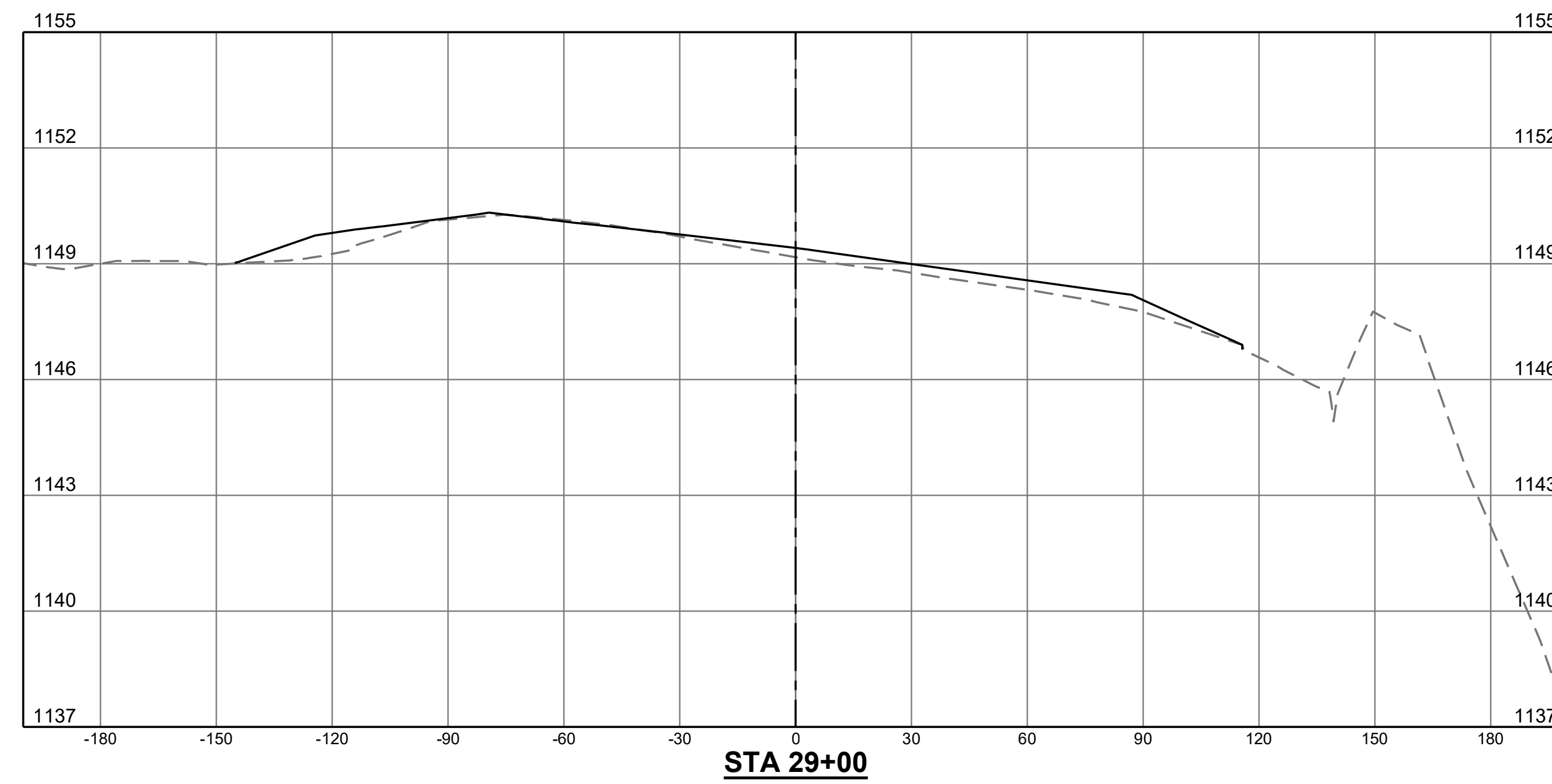
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- - - - - EXISTING GRADE
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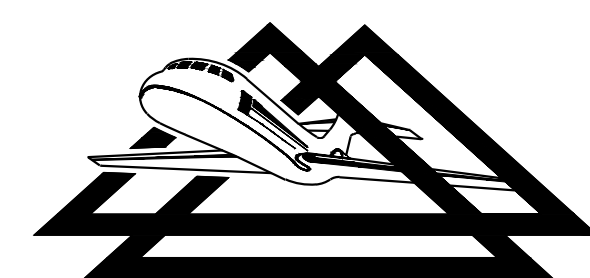
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1. CROSS SECTIONS ARE BASED ON BASELINE "B" (TAXIWAY B CENTERLINE)

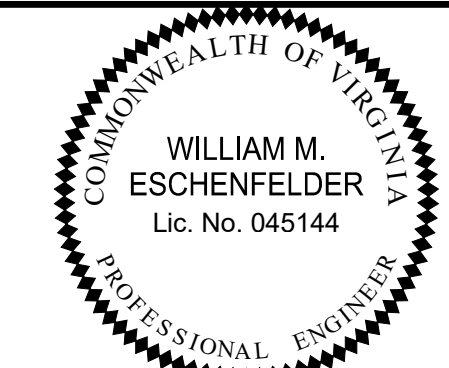


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| CROSS SECTIONS | REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| | ROANOKE-BLACKSBURG REGIONAL AIRPORT | DRAWN BY: PJW | SHEET 57 |
| | | DESIGNED BY: WME | OF 60 |
| | SCALE: HORIZ: 1" = 30' VERT: 1" = 3' | DATE: MARCH 2025 | |

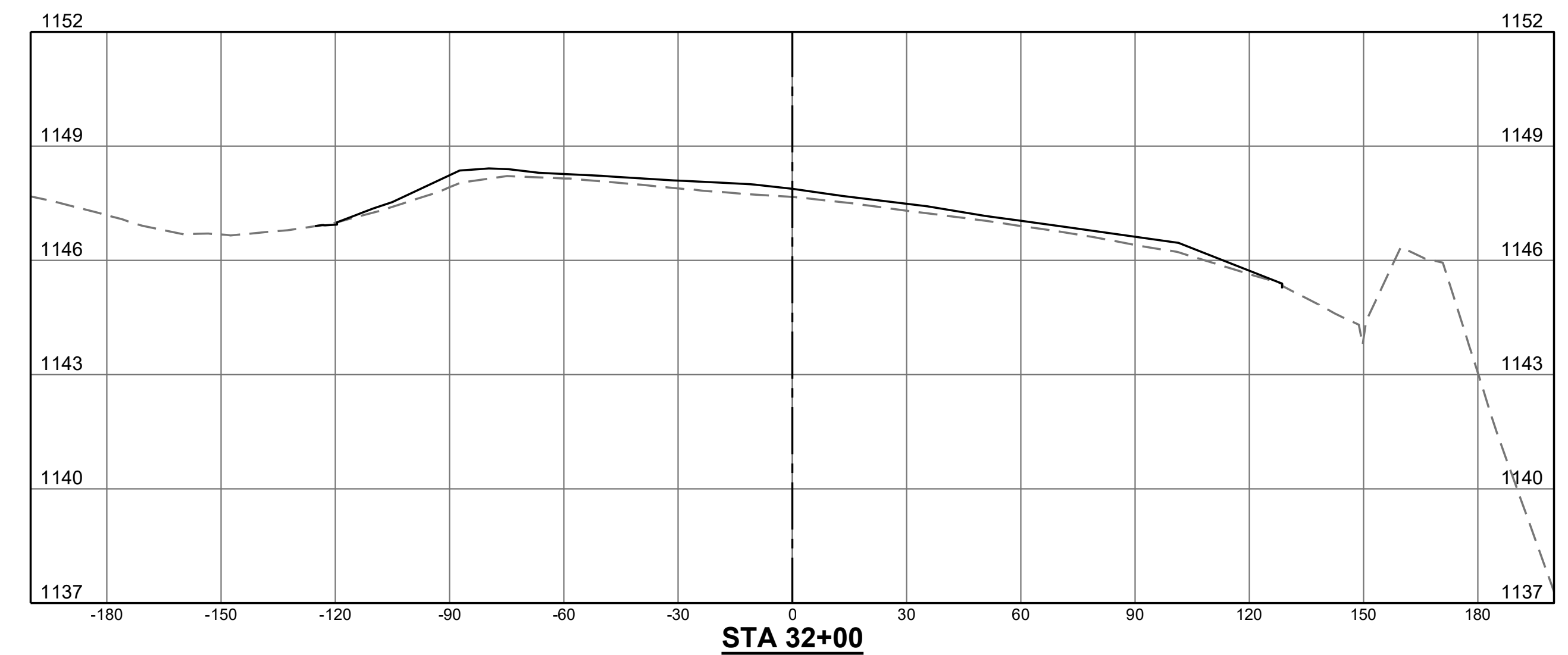
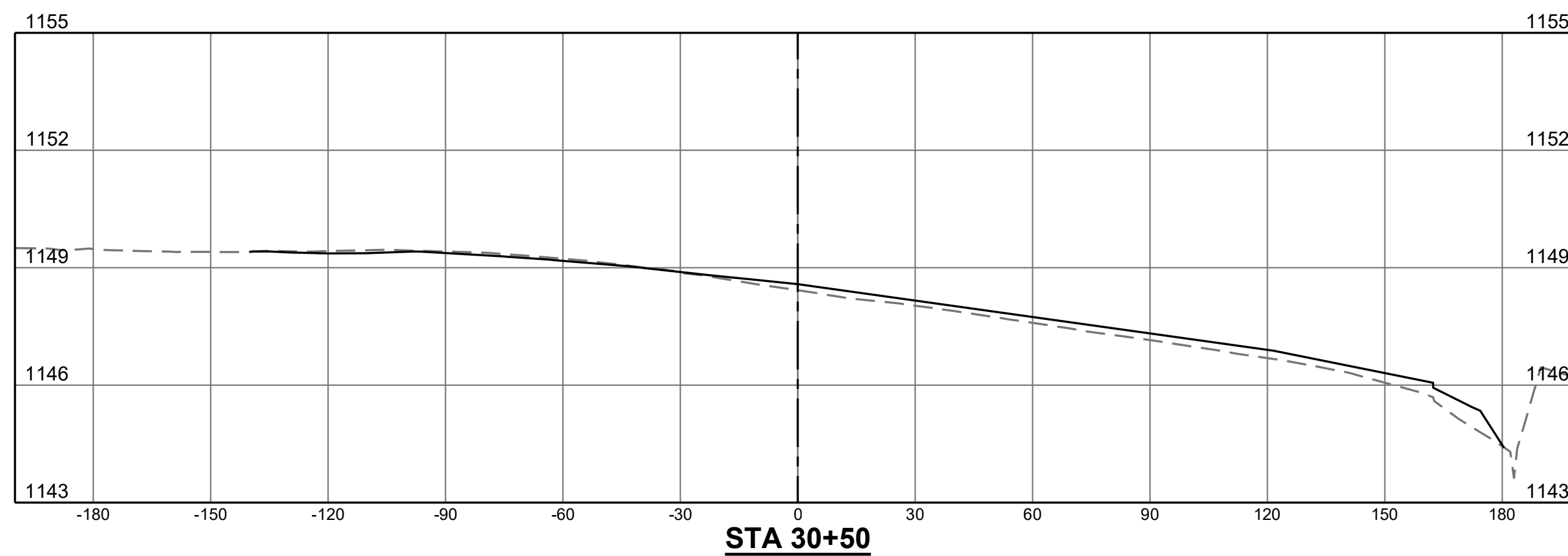
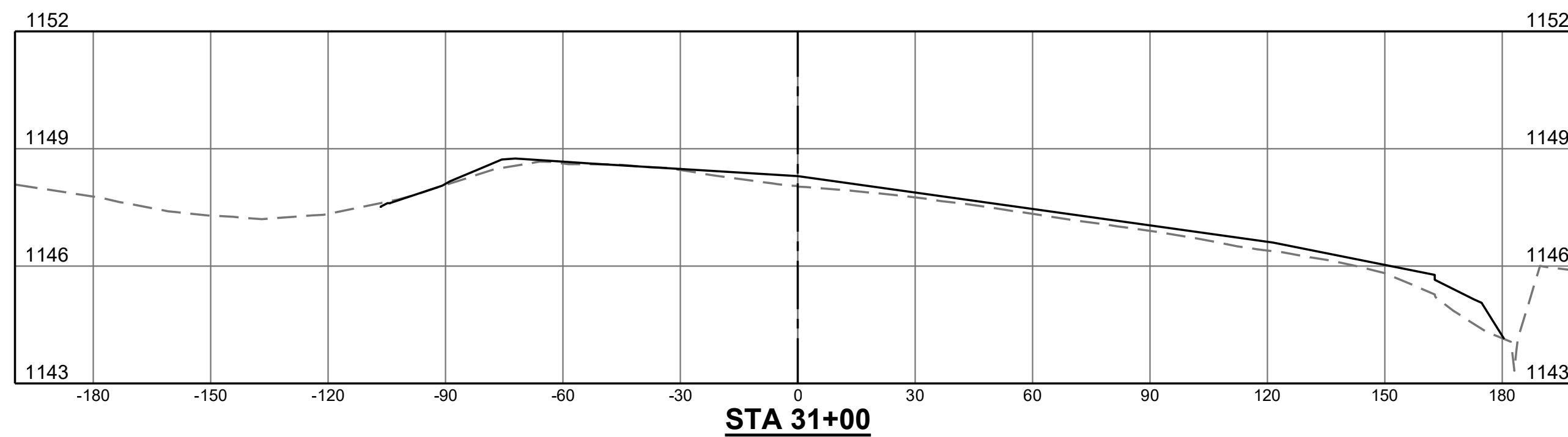
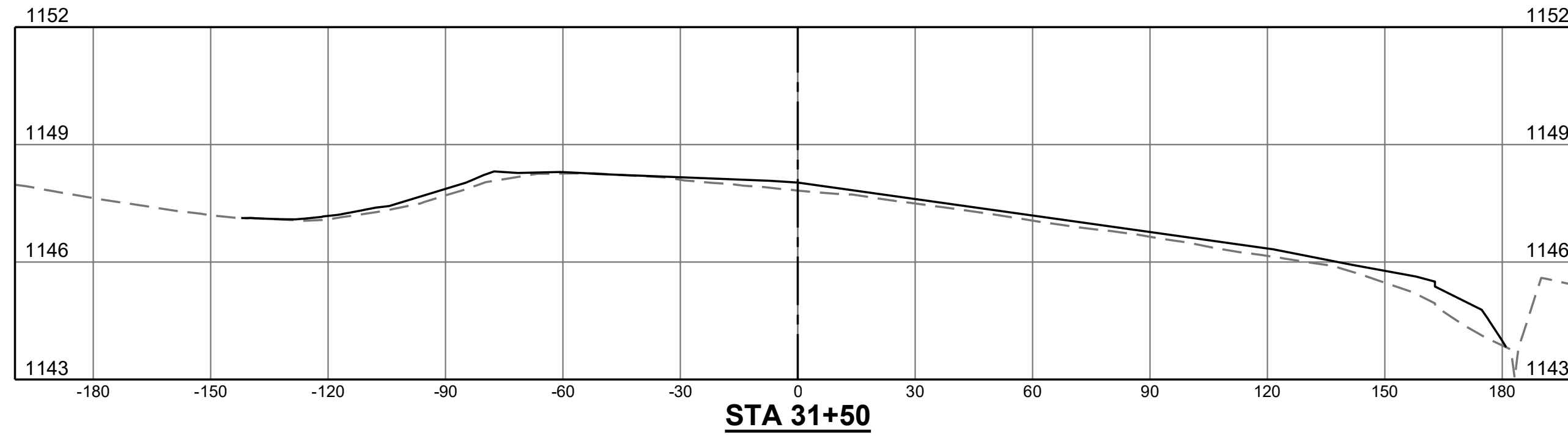
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- - - - - EXISTING GRADE
- PROPOSED GRADE

NOTE:

1. CROSS SECTIONS ARE BASED ON BASELINE "B" (TAXIWAY B CENTERLINE)

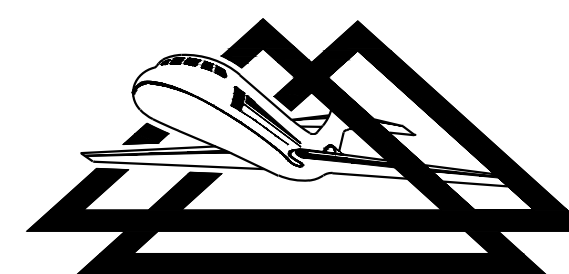


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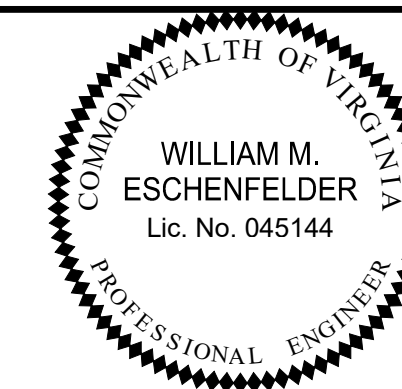
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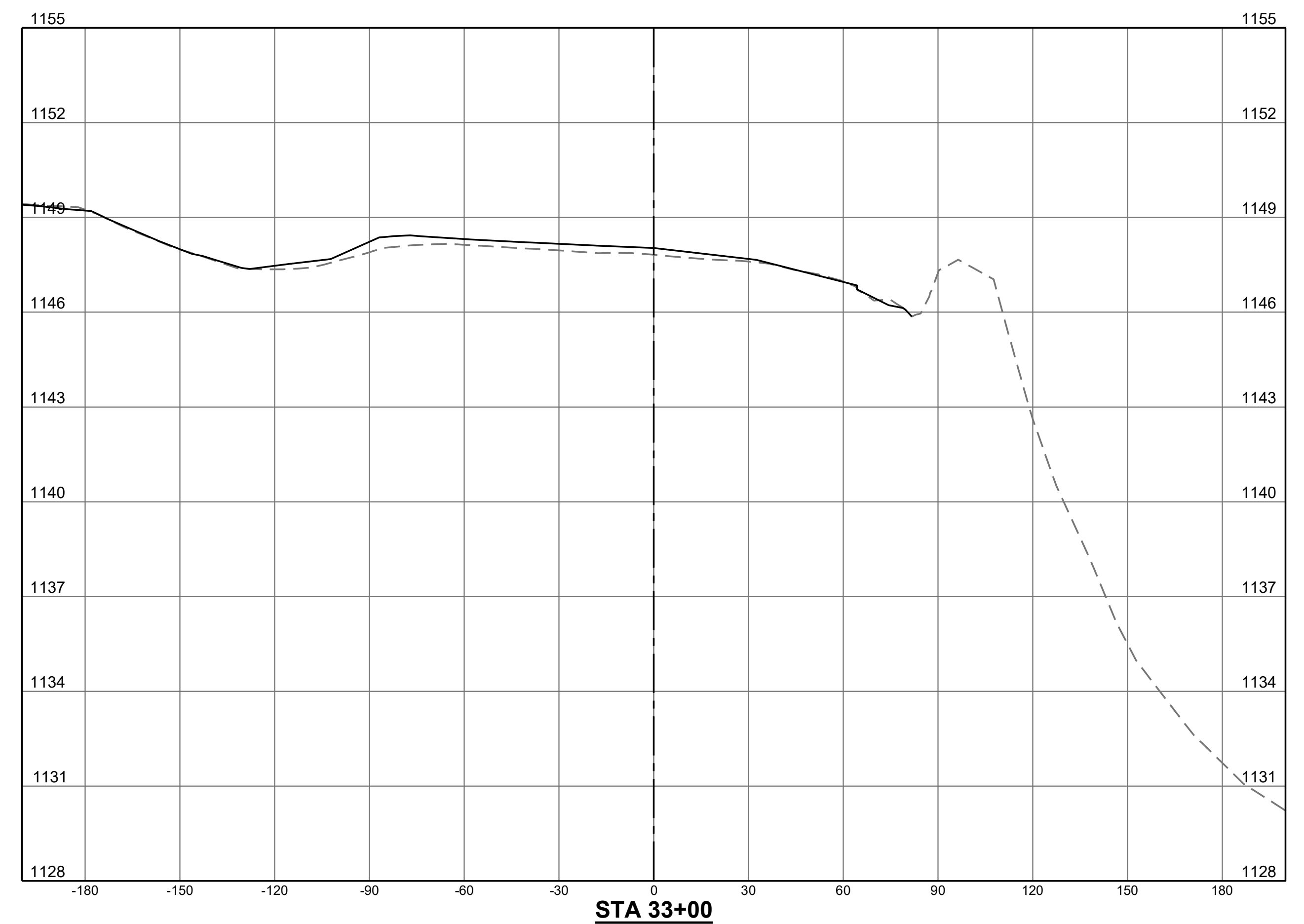
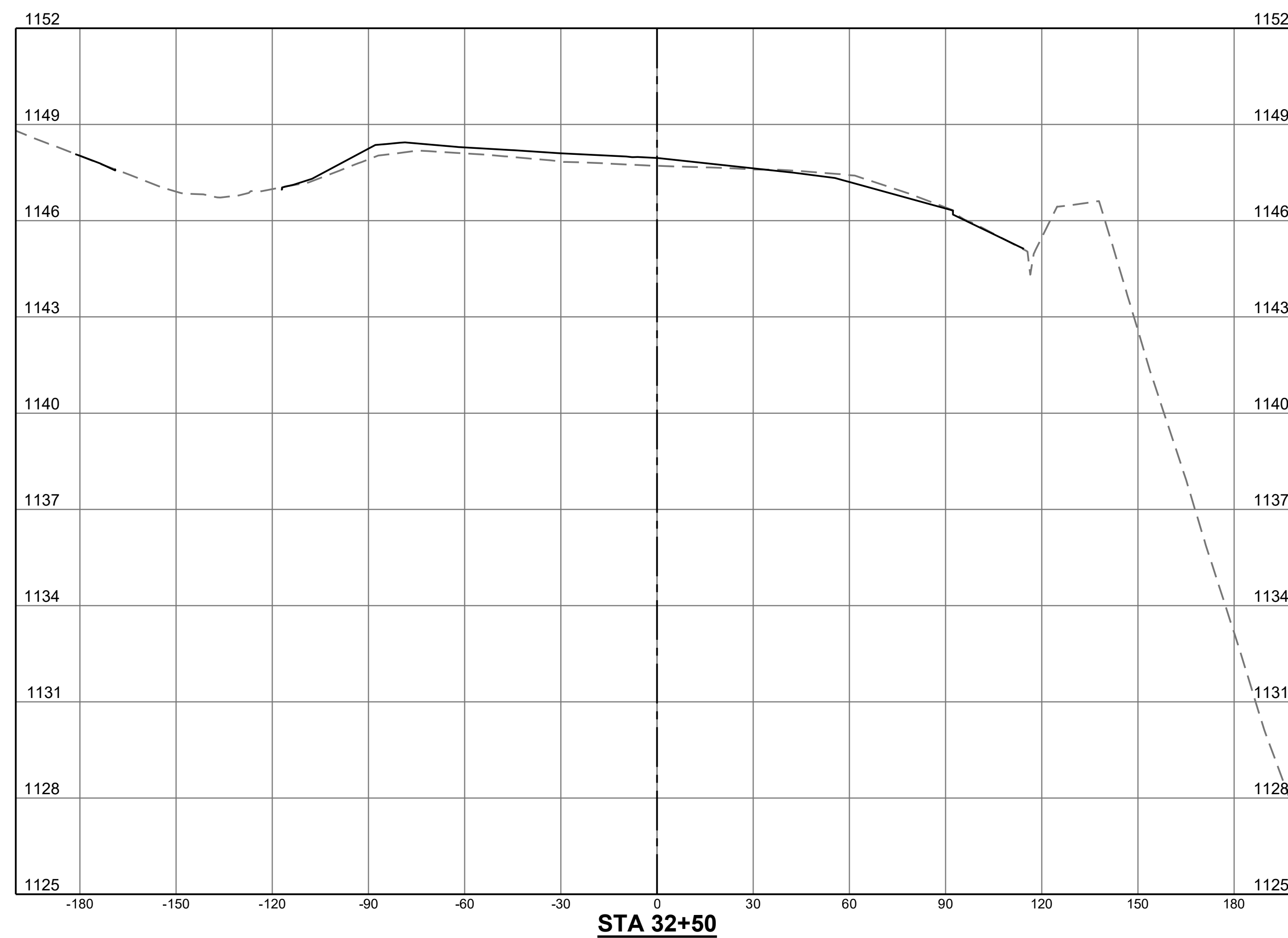
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| CROSS SECTIONS | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| | DRAWN BY: PJW | SHEET 58 |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | DESIGNED BY: WME | OF 60 |
| | SCALE: HORIZ: 1" = 30' VERT: 1" = 3' | DATE: MARCH 2025 |

LEGEND

--- EXISTING GRADE
 — PROPOSED GRADE

NOTE:

- CROSS SECTIONS ARE BASED ON BASELINE "B" (TAXIWAY B CENTERLINE)

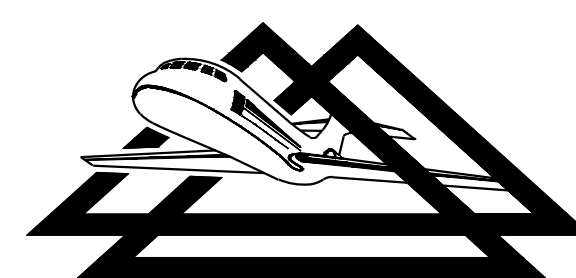


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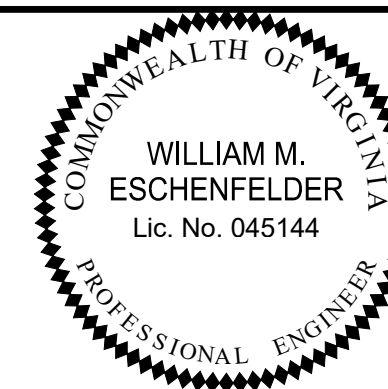
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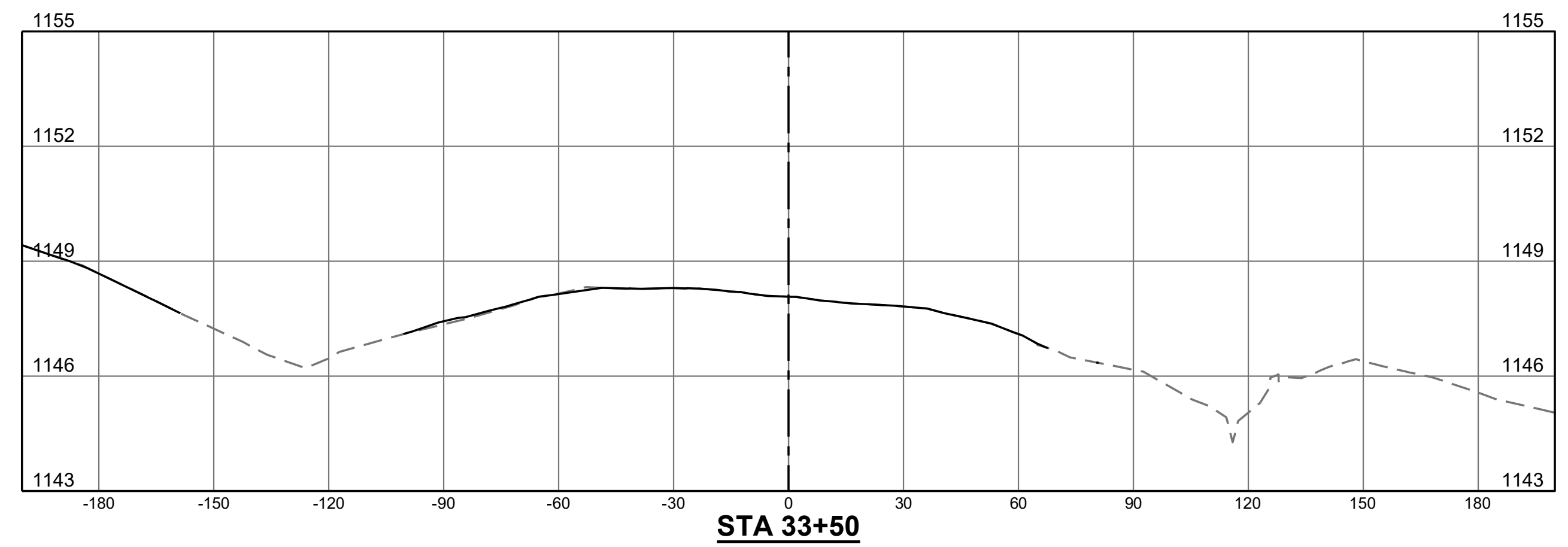
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| CROSS SECTIONS | REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| | ROANOKE-BLACKSBURG REGIONAL AIRPORT | DRAWN BY: PJW | SHEET 59 |
| | | DESIGNED BY: WME | OF 60 |
| | SCALE: HORIZ: 1" = 30' VERT: 1" = 3' | DATE: MARCH 2025 | |

LEGEND

--- EXISTING GRADE
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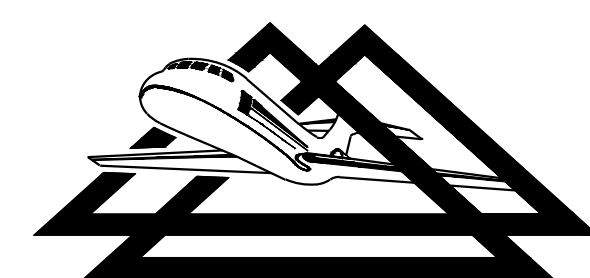
NOTE:

- CROSS SECTIONS ARE BASED ON BASELINE "B" (TAXIWAY B CENTERLINE)

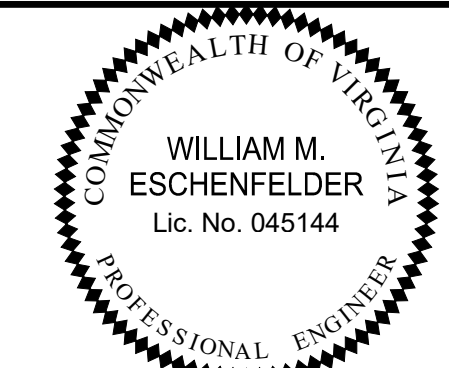


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| REHABILITATE TAXIWAY B FROM TAXIWAY B1 TO B4 | AIP NO. 3-51-0045-071-2024 | JOB NO. 23078 |
| CROSS SECTIONS | DRAWN BY: PJW | SHEET 60 |
| | DESIGNED BY: WME | OF 60 |
| ROANOKE-BLACKSBURG REGIONAL AIRPORT | SCALE: HORIZ: 1" = 30' VERT: 1" = 3' | DATE: MARCH 2025 |

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