ADDENDUM

CLIENT	**CITY OF RICHMOND**
BUILDING	**RICHMOND MUNICIPAL AIRPORT**
PROJECT	**NEW TERMINAL BUILDING**
LWC PROJECT NO.	**25106.00**
ADDENDUM NO.	**02**

DATE:	**2026-04-10**

TO PROSPECTIVE BIDDERS

THIS ADDENDUM IS A MODIFICATION OF THE CONTRACT DOCUMENTS FOR THE ABOVE REFERENCED PROJECT AND IS HEREBY INCORPORATED INTO AND BECOMES A PART OF SAID CONTRACT DOCUMENTS. ACKNOWLEDGE RECEIPT OF THIS ADDENDUM IN THE SPACE PROVIDED ON THE BID FORM. FAILURE TO DO SO MAY SUBJECT THE BIDDER TO DISQUALIFICATION. IT IS TO BE CONSIDERED IN THE PROPOSALS AND COVERS ADDITIONS TO OR CHANGES IN THE CONTRACT DOCUMENTS AS INDICATED BELOW.

ATTACHMENTS

GENERAL ITEMS	PRE-BID MEETING AGENDA AND NOTES GENERAL NOTE CLARIFICATIONS BELOW REGARD GENERAL PROVISION REQUIREMENTS. - ALL SUBSTITUTION REQUESTS MUST BE SUBMITTED TO THE ARCHITECT FOR APPROVAL PRIOR TO RECEIPT OF BIDS. - ANY AIA GENERAL CONDITIONS THAT ARE IN VIOLATION OF OR AGAINST FEDERAL LAWS OR REGULATIONS SHALL BE VOID. - IN THE EVENT OF A DISCREPANCY BETWEEN THE GENERAL CONDITIONS AND THE FAA GENERAL PROVISIONS, THE FAA GENERAL PROVISIONS SHALL SUPERSEDE THE GENERAL CONDITIONS.
SPECIFICATIONS	SECTION – 00001 – INDEX - UPDATED INDEX SECTION - 000400 – BID PROPOSAL FORM - UPDATED FORM TO INCLUDE WATER WELL DRILLING COST BREAKOUT SECTION – 001070 – GENERAL PROVISIONS - NEW REQUIRED FEDERAL PROVISIONS. SECTION – 001073 – SUPPLEMENTARY CONDITIONS - UPDATED ITEM 14 CRIMINAL HISTORY BACKGROUND CHECKS TO ALLOW USE OF AN EQUAL QUALIFIED FIRM ACCEPTABLE TO THE OWNER FOR BACKGROUND CHECKS. SECTION – 00312 – GEOTECHNICAL DATA - NEW SECTION CONTAINING REPORT ON GEOTECH – SOIL BORING DATA. SECTION – 051200 – STRUCTURAL STEEL - INCLUDE THE FOLLOWING MODIFICATIONS TO THIS SPEC SECTION. OMIT PARAGRAPH 1.1, C – ALLOWANCES.

OMIT REFERENCES TO LEED SUBMITTALS AND REQUIREMENTS IN PARAGRAPH 1.3, C.

SECTION – 101400 – SIGNAGE

- NEW SECTION FOR BUILDING SIGNAGE

SECTION - 23 34 00 – HVAC FANS

- REVISED PARAGRAPH 1.9 TO:
  - EQUIPMENT SHALL CARRY AN ALL-INCLUSIVE MANUFACTURER'S PARTS AND LABOR STANDARD WARRANTY FROM DATE OF FINAL ACCEPTANCE OR DATE OF BENEFICIAL USE, AS AGREED TO BETWEEN CONTRACTOR AND ARCHITECT OR CONSTRUCTION MANAGER. THE ALL-INCLUSIVE PARTS AND LABOR WARRANTY FOR ECM'S AND ASSOCIATED CONTROLLERS SHALL BE FOR A PERIOD OF 1 YEAR. ANY MATERIALS, EQUIPMENT, OR CONTROLS FOUND TO BE DEFECTIVE DURING THIS WARRANTY PERIOD SHALL BE MADE GOOD WITHOUT EXPENSE TO THE OWNER, INCLUDING ANY REQUIRED REPLACEMENT OF FLUIDS, GLYCOL, OR REFRIGERANT. THE WARRANTY SHALL INCLUDE A DELAYED START-UP PROVISION SUCH THAT THE WARRANTY DOES NOT BEGIN AT TIME OF DELIVERY. THE LABOR FOR THE WARRANTY SHALL BE PERFORMED BY THE MANUFACTURER'S AUTHORIZED SERVICE AGENT.

SECTION - 23 81 28 – DX MINI SPLIT SYSTEMS – AIR-COOLED

- REVISED PARAGRAPH 1.6 TO:
  - THE SYSTEMS SHALL CARRY A STANDARD WARRANTY FROM DATE OF INSTALLATION. IN ADDITION, THE COMPRESSORS SHALL BE COVERED BY THE MANUFACTURER'S LIMITED STANDARD YEARS FROM DATE OF INSTALLATION. IF, DURING THESE PERIODS, ANY PART SHALL FAIL TO FUNCTION PROPERLY DUE TO DEFECTS IN WORKMANSHIP OR MATERIAL, IT SHALL BE REPLACED OR, AT THE DISCRETION OF THE MANUFACTURER, REPAIRED.

SECTION - 26 36 23A – AUTOMATIC TRANSFER SWITCHES (ASCO SERIES 7000)

- REVISED PARAGRAPH 2.4 TO:
  - PROVIDE ONE YEAR WARRANTY (PARTS AND LABOR). PROVIDE THE CERTIFICATE DIRECTLY TO THE OWNER ACCOMPANIED BY A LETTER OF TRANSMITTAL. PROVIDE A COPY TO THE ENGINEER WITH SHOP DRAWINGS.

SECTION - 26 43 13 – SURGE PROTECTION DEVICES (SPD'S) FOR LOW-VOLTAGE ELECTRICAL POWER CIRCUITS

- REVISED PARAGRAPH 1.9 TO:
  - THE SPD SHALL BE WARRANTED FOR UNCONDITIONAL FAILURE REPLACEMENT FOR A MINIMUM OF ONE YEAR INCLUSIVE OF ALL LABOR TO RESTORE THE DEVICE TO FUNCTIONALITY. SUBMIT WARRANTY WITH SHOP DRAWINGS.

DRAWINGS

T001 TITLE SHEET

- SHEET ID102 SIGNAGE PLAN WAS ADDED TO THE SET

G002 DOOR AND WALL PARTITION TYPES AND DETAILS

- DOOR FRAME MATERIAL FOR DOOR 101C WAS CHANGED TO ALUMIUM
- DOOR FRAME MATERIAL FOR DOOR 103 WAS CHANGED TO ALUMINUM WITH AND UPDATED JAMB DETAIL

AS101 ARCHITECTURAL SITE PLAN

NOTE 6 WAS UPDATED TO REFLECT EXISTING CONDITIONS OF CHAINLINK FENCE

- NOTE 9 WAS UPDATED TO REFLECT NEW ASPHALT SHOWN ON SITE
- NOTES 6 AND 7 WERE UPDATED ON THE SITE PLANS

C100 STORMWATER POLLUTION PREVENTION PLAN
- GENERAL NOTE B WAS UPDATED TO STATE THAT ALL DISTURBED AREAS WILL BE PERMANENTLY SEEDED AT THE END OF CONSTRUCTION
- THE NEW WELL WAS REMOVED, AND LANDSCAPE BED WAS ADDED TO THE DRAWING

C300 SITE GRADING AND DRAINAGE PLAN
- THE NEW WELL WAS REMOVED, AND LANDSCAPE BED WAS ADDED TO THE DRAWING

C400 SITE UTILITY PLAN
- NEW CONNECTION BEING SHOWN FOR WATER AND ELECTRIC LINE TO THE EXISTING WELL.
- THE NEW WELL WAS REMOVED, AND LANDSCAPE BED WAS ADDED TO THE DRAWING

C500 SITE IMPROVEMENT PLAN
- HATCH WAS ADDED TO THE NEW ASPHALT AREA
- NEW NOTE 16 WAS ADDED FOR IN DEPTH LANDSCAPE BEDS
- NEW NOTE 17 WAS ADDED FOR PERMANENT SEEDING AREAS
- NEW CURB CALLOUT
- THE NEW WELL WAS REMOVED, AND LANDSCAPE BED WAS ADDED TO THE DRAWING
- FENCE HEIGHT WAS CHANGED TO 6’
- NOTE 3 WAS CHANGED TO 5’ INSTEAD OF 5’-4”

C510 SITE IMPROVEMENT DETAILS
- THE FENCE DETAIL WAS ALTERED FOR MORE CLARIFICATION AND BARBED WIRE WAS ADDED

S111 HIGH ROOF FRAMING PLAN
- TOP OF STEEL ELEVATION AND STEEL DECK HAVE BEEN DROPPED 5”
- THE SIZE OF THE PERIMETER BEAM THAT SPANS FROM D TO E WITH A CENTILEVER THAT RUNS PLAN SOUTH, AND STUBS OFF THE COLUMNS AT GRIDLINES D AND E, ALONG GRIDLINE 3, HAVE BEEN CHANGED TO A W12X50.

A301 EXTERIOR ELEVATIONS
- HIGH ROOF ELEVATION HAS BEEN DROPPED 5”
- LOCATION OF EXTERIOR SIGNAGE HAS BEEN ADDED. GRAPHICS TBD.

A302 BUILDING SECTIONS
- ROOF OVERHANG DETAILS HAVE BEEN UPDATED TO REFLECT THE TOP OF STEEL CHANGE
- HIGH ROOF ELEVATION HAS BEEN DROPPED 5”

A501 WALL SECTIONS AND ENLARGED DETAILS
- WALL SECTION 3/A501 HAS BEEN UPDATED TO REFLECT THE TOP OF STEEL CHANGE.

A503 WALL SECTIONS AND ENLARGED DETAILS
- TYP. ROOF DETAIL 5/A503 HAS BEEN UPDATED TO REFLECT THE TOP OF STEEL CHANGE.
- ROOF HEIGHT WAS CHANGED FROM 2’-6” TO 2’-1”

ID102 SIGNAGE PLAN
- SHEET HAS BEEN ADDED TO SHOW INTERIOR SIGNAGE WHERE NEEDED.

E201 LIGHTING PLAN

	- LIGHT FIXTURE TYPE L4 WAS ADDED TO THE RECEPTION DESK. E301 POWER PLAN - POWER WAS ADDED FOR THE EXTERIOR SIGNAGE E501 ELECTRICAL SCHEDULES - REVISED BASIS OF DESIGN MANUFACTURE AND MODEL NUMBERS TO BE BAA COMPLIANT - UPDATED ACCEPTABLE MANUFACTURERS TO BE BAA COMPLIANT - ADDED SCHEDULE NOTE 5 - ADDED GENERAL NOTE BELOW LUMINAIRES SCHEDULE ADDRESSING BAA COMPLIANCE OF ALL LIGHT FIXTURES. - LIGHT FIXTURE TYPE L4 WAS ADDED TO THE LUMINAIRES SCHEDULE. E601 SINGLE-LINE DIAGRAM AND PANEL SCHEDULES - PANEL SCHEDULES WERE UPDATED TO REFLECT POWER AND LIGHTING CHANGES
PRODUCT APPROVALS	
	072723 – SPRAY POLYURETHANE FOAM AIR BARRIERS - XCELUS XLS2000 072726- FLUID APPLIED AIR BARRIERS - TREMCO EXOAIR 130 - CARLISLE BARRITECH NP

GENERAL NOTES

- LAST DAY FOR BIDDERS QUESTIONS: APRIL 13, 2026
- DATE OF LAST ADDENDUM: APRIL 13, 2026
- **BIDS DUE: APRIL 16, 2026, 2:00PM**

END OF ADDENDUM

PRE-BID MEETING AGENDA

PROJECT NAME	NEW TERMINAL BUILDING
LWC PROJECT NO.	25106.00

DATE:	2026-03-31
TIME:	10:00 AM
LOCATION:	EXISTING RICHMOND MUNICIPAL AIRPORT TERMINAL BUILDING RICHMOND MUNICIPAL AIRPORT 5169 STATE ROAD 227 RICHMOND, IN 47374

PROJECT DESCRIPTION

Construction of a new airport terminal building, site preparation, foundations structural steel framework, exterior metal panels, curtainwall, electrical, mechanical, utility services, site concrete, pavements and necessary incidentals to complete the work as detailed and specified in the Contract Documents. The contractor shall provide all labor, equipment, and material necessary to complete the work.

BIDDING INFORMATION

BIDS ARE DUE	THURSDAY, APRIL 16, 2026, 2:00 PM
SUBMIT BIDS TO THE FOLLOWING:	RICHMOND BOARD OF AVIATION COMMISSIONERS RICHMOND MUNICIPAL AIRPORT 5169 STATE ROAD 227 RICHMOND, IN 47374

ADDENDA ISSUED

List Addenda Issued:

- Addendum No. 1

BID DOCUMENTS AVAILABILITY

- David Weinberg – dweinberg@lwcinspires.com – 937-344-5436
- LWC Inc. – FTP site: https://ftp2.lwcinspires.com
  Username: RMATBidDocs
  Password: 6nV388sz

CONTRACT TYPE

GENERAL CONSTRUCTION CONTRACT **SINGLE PRIME CONTRACT FOR ALL DIVISIONS OF WORK**

OTHER:

- Contracts to be written on AIA standard form of agreement

BIDDING AND QUESTIONS

DIRECT ALL QUESTIONS TO THE FOLLOWING:

- Architectural Questions: LWC Project Manager: David Weinberg dweinberg@lwcinspires.com – 937-344-5436

- MEP Related Questions: Heapy, Mat Root, MARoot@heapy.com -765-914-4218

CONSTRUCTION SCHEDULE OUTLINE

DOCUMENTS AVAILABLE FOR BIDS:	**MONDAY, MARCH 16, 2026**
FIRST ADVERTISEMENT FOR BIDS:	**WEDNESDAY, MARCH 18, 2026**
SECOND ADVERTISEMENT FOR BIDS:	**WEDNESDAY, MARCH 25, 2026**
PRE-BID MEETING:	**MONDAY, APRIL 6, 2026, 3:00 PM**
LAST DAY FOR BIDDER QUESTIONS:	**THURSDAY, APRIL 9, 2026**
BID DUE DATE:	**THURSDAY, APRIL 16, 2026, 2:00 PM**
POST-BID INTERVIEWS:	**MONDAY, APRIL 20, 2026**
AWARD OF CONTRACT:	**MONDAY, SEPTEMBER 28, 2026 (EARLIEST)**
NOTICE TO PROCEED:	**TBD**
CONSTRUCTION START DATE - MOBILIZATION	**MONDAY, SEPTEMBER 28, 2026 (EARLIEST)**
SUBSTANTIAL COMPLETION	**FRIDAY, JUNE 25, 2027 (EARLIEST)**
PUNCHLIST:	**TBD**
CLOSEOUT DOCUMENTATION	**TBD**

ALTERNATE BID ITEMS

ALTERNATE BIDS ARE AS FOLLOWS:

ALTERNATE BID ITEM NO. 1

- Provide a Deduct Amount for not providing and installing the Rear Concrete Patio Area with exposed concrete.
  a. Base Bid: Provide and install Rear Concrete Patio area as indicated on the drawings.
  b. Alternate Bid Work shall include providing standard concrete slab in lieu of exposed aggregate slab.

ALTERNATE BID ITEM NO. 2

- Provide a Deduct Amount for not providing and installing the Rear Concrete Patio Barrier Wall.
  a. Base Bid: Provide and install Rear Concrete Patio Barrier Wall as indicated on the drawings.
  b. Alternate Bid Work shall include providing a turn down slab at perimeter of Rear Concrete Patio area in lieu of the Barrier Wall.

ALTERNATE BID ITEM NO. 3

- Provide a Deduct Amount for not providing and installing the Mechanical Yard Barrier Wall.
  a. Base Bid: Provide and install Mechanical Yard Barrier Wall as indicated on the drawings.
  b. Alternate Bid Work shall include providing a 5’-0” chainlink fence in lieu of the concrete Barrier Wall.

ALTERNATE BID ITEM NO. 4

- Provide a Deduct Amount for not providing and installing the new Generator as indicated on the Drawings.
  a. Base Bid: Provide and install Generator complete with all gas and electrical connections as indicated on the drawings.
  b. Alternate Bid Work shall include only providing the gas piping rough-ins and electrical stubs and conduit to allow for future connection to a generator.

ITEMS OF SPECIAL ATTENTION

FAA REQUIREMENTS

- Review all specified requirements in the front end.
- Prevailing wage rates and reporting is required.
- Jason Clearwaters with Butler, Fairman, & Seufert (BF&S) will be assisting with FAA requirements

IT BY CITY OF RICHMOND

- IT requirements need to be coordinated with City of Richmond IT department.

AWARD DATE

- Award date (refer to schedule above) for the project is contingent on FAA funding. Include all anticipated escalation costs in your bid to cover an award date of September 28, 2026.

PRE-BID MEETING NOTES AND QUESTIONS

- Bidder questions:
- Asphalt cuts are shown, but is asphalt going back since it is not shown?
- Allowance Schedule – Can a schedule of allowances be supplied? Steel? Etc.?
- Alternate Bids – Will they be included in bid form?
- Jurisdiction for permits and inspections. City of Richmond?
- Is there a project cost estimate? (Kevin responded No)
- What is project completion date? (Kevin responded with June or 9-month timeline)
- An electrician (Jeremy w/Carroll) asked about several items as everyone left the room, he was asked to put it in writing via his company email to be included in Addenda #2.

LWC INCORPORATED

Addendum 002 RFI Log

Commission Number: 25106.00
Project Name: Richmond Municipal Airport - New Terminal Building

Date IN	Date OUT	Due Date	Description/Response	Sheet/Spec Reference	PCO Number	CO Number
3/31/26	4/9/26					
			Will a list of contractors in attendance at the Pre-Bid Site Walk Thru be distributed?			
			Response: Pre-Bid list of attendees will be included in Addendum 2.			
3/31/26	4/9/26					
			Are there any liquidated damages?			
			Response: No, there are no liquidated damages.			
3/31/26	4/9/26					
			Asphalt cuts are shown, but is asphalt going back since it is not shown?			
			Response: Yes, refer to revised Addendum 2 Civil drawings			
3/31/26	4/9/26					
			Allowance Schedule – Can a schedule of allowances be supplied? Steel? Etc.?			
			Response: No, there are no allowances on this project.			
3/31/26	4/9/26					
			Jurisdiction for permits and inspections. City of Richmond?			
			Response: Yes, the City of Richmond is the jurisdiction.			
3/31/26	4/9/26					
			Is there an estimate for the project?			
			Response: No, there is no estimate.			
3/31/26	4/9/26					
			What is project completion date?			
			Response: 270 calendar days after the Notice To Proceed has been issued.			
3/31/26	4/9/26					
			Can you issue a bid form with the alternates listed?			
			Response: Yes, this will be included in Addendum 2.			
3/31/26	4/9/26					
			Are there any allowaces? I do not see a schedule of allowances.			
			Response: No, there are no allowances in this project.			
3/31/26	4/9/26					
			Can you provide a spec for the signage?			
			Response: Yes, a new sheet has been created for this & a new spec section has been included as part of Addendum 2.			
3/31/26	4/9/26					
			There is roughly 300 yards of excess dirt, can this stay on site or does it need to be hauled away?			
			Response: Any excess dirt on the site can remain for use by the owner, in a location as designated by the owner.			
4/1/26	4/9/26					
			Is there a preferred controls contractor for this project?			
			Response: No, there will not be a preferred controls contractor for this project. Due to the simplicity of the controls, no controls contractor should be needed.			
4/6/26	4/9/26					

			Page 564 in spec states “Level 5 gyp board finish at bulkheads and corridor/hallways”. Page A201 general note B – just states level 5 at bulkheads/soffits. ID101 Paint note D – states level 4 everywhere. Just want to make sure I understand what is the expected gyp board finish.			
			Response: All exposed gypsum board walls in this project shall receive a Level 5 finish, with the exception of walls within the following rooms: Storage (#112), Jan/Mech (#108) and Closet (#105) should all receive a Level 4 finish.			
4/6/26	4/9/26					
			Is there a spec for the LED light that are to be in the casework? A601 detail 4,10,11			
			Response: Yes, This has been added in Addendum 2.			
4/6/26	4/9/26					
			Is the microwave, TV, vending machines all OFOI?			
			Response: Yes, these items are to be "Owner Furnished & Owner Installed".			
4/6/26	4/9/26					
			See attached for alternate 03 – is the yellow areas what should be deducted and put 5’ chain-link fence in lieu of this?			
			Response: Yes, that is the cast-in-place concrete mechanical yard wall that would be deducted in lieu of a chain link fence to match existing. See additonal clarification in this Addendum for the chain link fence.			
4/6/26	4/9/26					
			Confirming general contractor/sub-contractor/supplier should expect to hold their pricing until at least September 28th 2026?			
			Response: Yes.			
4/6/26	4/9/26					
			Note 12 on AS101 – we are to just put in topsoil in this area and the owner takes it from there?			
			Response: Yes, this is the case for areas tagged with Note 12. 6" would be a minimum depth.			
4/6/26	4/9/26					
			Can we include an allowance in our bid to repair any damage we cause to the existing asphalt at the end of the project?			
			Response: Carry the cost in GC's base bid. There are no allowances for this project.			
4/6/26	4/9/26					
			See attached “RFI”. Between pages AS101 and C500. What does the green line represent?			
			Response: This line represents the edge of the planting bed. See updated Civil plans in this Addendum.			
4/6/26	4/9/26					
			Is the owner paying for any utility tapping fees?			
			Response: No, these should be included in the bids. See specifications.			
4/6/26	4/9/26					
			Is the owner paying for any aid to construction cost?			
			Response: No, these should be included in the bids. See specifications.			
4/6/26	4/9/26					
			I wasn’t able to find spec section “01 Allowances” – can you please provide that?			
			Response: No, There are no allowances for this project.			
4/6/26	4/9/26					

			Are we able to leave dirt spoils onsite?			
			Response: Yes, location to be determined by owner.			
4/6/26	4/9/26					
			See attached “RFI C500” – confirming this represents note 5			
			Response: Yes, location to be determined by owner.			
4/6/26	4/9/26					
			Please confirm the low voltage scope. It was stated at prebid the owner was hiring all the low voltage, and we just have to put in raceways and backboxes.			
			Response: The low voltage scope is to include all rough-in, including conduit, pull-strings, raceways and backboxes. The owner will issue a separate scope for running the low voltage cable, terminating and installing devices after base bids are awarded.			
4/6/26	4/9/26					
			Page 363 item C1 in spec. Is there any steel allowance we should included in our price?			
			Response: No, there will be no allowances for this project.			
4/6/26	4/9/26					
			If our fabricator is non AISC certified, can the GC carry a cost for a third party to verify welds/fabricating at the fabricators shop?			
			Response: Using a non-AISC certified fabricator is acceptable if the fabricator’s QAQC procedure is submitted to the EOR for review. If the EOR recommends any testing after reviewing the QAQC process, it would be the responsibility of the fabricator. Any field testing by a third party is the responsibility of the owner.			
4/6/26	4/9/26					
			A502 detail 7 and 8 – confirming the vertical symbol/detail between the concrete wall and gyp board is supposed to be “2” light gauge metal stud”. This just has the same symbol as the rigid insulation.			
			Response: Yes, this low section of exterior wall is to have 2" light gauge metal framing above concrete slab level. The gaps between framing members are to receive rigid 2" thick insulation board, but it is also acceptable to substitute 2" of spray foam insulation in these gaps if preferred.			
4/6/26	4/9/26					
			1.Doors #101C and 104A are aluminum but are installed in a hollow metal frame. Our aluminum doors can only be installed with an aluminum frame. Are you wanting these doors to be hollow metal along with the frames or are the door frames going to be aluminum?			
			Response: Yes, the intent is for these doors to be installed in an aluminum frame.			
4/6/26	4/9/26					
			There is a film for the 1" units. Is this marked by the cross-hatch pattern on the frame elevations on page A001?			
			Response: No, the intent of the hatch is to indicate where we have tempered glass, not a film. There is however a one-way film with a custom graphic cut-out logo frosted overlay film on the one interior window for the Manager's Office #103.			
4/6/26	4/9/26					
			Are the interior pieces of glass supposed to be 3/8" or 1/4"? 3/8" glass will work with our systems, but 1/4" is normally what we use.			
			Response: The interior glass is supposed to be 3/8" as indicated.			
4/6/26	4/9/26					

			There are two separate glass types for the 1" units and two glass types for the interior glass, but the glazing specs have one glass type for both the 1" units and one glass type for the interior glass. I am assuming the specs is what I should go off of, but just clarifying if that is the case.			
			Response: The second glass types for both the interior and exterior are the same color and assembly as those indicated in the specs, but are to be tempered glass at these locations which is what the cross hatch is intended to illustrate on the plans.			
4/6/26	4/9/26					
			On the drawing it show # 6 as new 5' tall chain link fence Then on # 7 it has 3' wide gates with lock. On Drawing AS101 it has the fence at # 6 and gates at # 7 Then farther down it just has # 7 for the gates again in a area of 8' x 70' is this supposed to be fence not gates. It is also asking to match existing fence. Do you know what height it is now ? Is this chain link all galvanized material ? Or is it all black material ? Does it have top and bottom rail ? Or does fence have bottom tension wire What size are the line posts ? What size are terminals ? What size are the gate post ? Are the gate frames 1 5/8' or 1 7/8" ? If I need to go out and look at it can I get into this area ?			
			Response: The Civil Drawings have been revised to provide additional clarification on the chain link fence. The fence should be a 6' high (align w/ existing), 2" mesh galvanized chain link, 1 3/4" dia. top rail, 2 1/2" dia. Intermediate posts, 3 1/2" dia. terminal posts, bottom tension wire, 45 degree barb arm on top of each vertical post w/ 3 strands of aluminum barbed wire (align w/ existing).			
4/8/26	4/9/26					
			The specs reference concrete to be installed on underground PVC runs, but no details or is it called out on the drawings. For there conduit / wire running underground from power company transformer to the new 800A switch gear, does this need to be concrete encased?			
			Response: The feed from the transformer to the building does not need to be encased in concrete.			
4/8/26	4/9/26					
			Specifications, pages 19-40 Bid proposal forms, and pages 90-92 Indiana Public Law Certificate, are all the forms required for the Bid Proposal?			
			Response: Yes, all forms are required.			
4/8/26	4/9/26					
			If so, does spec page 36 get replaced with Addendum #1 page 33? Addendum does not specify If so, do spec pages 25-27 get replaced with Addendum #1 pages 11-13? Addendum does not specify Are pages 28-35 in the specifications supposed to be part of the Bid Proposal? Are pages 14-37 of Addendum #1, supposed to be printed and part of the bid proposal?			
			Response: For these questions we need the spec section and paragraphs identified or sent to us to respond to…Reference to page numbers is not accurate, the page numbers will change with future addenda.			
4/8/26	4/9/26					
			Subcontractor list does say to submit with the bid proposal, is this required or can the subcontractor list be submitted upon contract award, only because award is in September and that list could change?			

			Response: SUBMIT THE SUBCONTRACTOR LIST WITH THE BID TO IDENTIFY THOSE SUBCONTRACTORS USED AS A BASIS FOR THE BIDS.			
4/8/26	4/9/26					
			Also I just want to verify that background checks are required through Safe Hiring Solutions LLC and that every sub & contractor has to pay for their own background checks? Page 187 of specs			
			Response: Yes, all forms are required.			
4/8/26	4/9/26					
			I did not see anything in regards to an Owner Contingency, clarifying there is not one?			
			Response: There is no Owner Contingeny for this project.			
4/8/26	4/9/26					
			I did not see anything in regards to Project Allowances, clarifying there is not any?			
			Response: There are no Allowances on this project.			
4/8/26	4/9/26					
			I did not see any costs in relation to Liquidated damages, clarifying there not any?			
			Response: There are no liquidated damages on this project.			
4/8/26	4/9/26					
			What is the expected concrete wall finish on all exposed concrete walls?			
			Response: The exposed finish on the exposed 12" of foundation wall along the building perimeter should be smooth without being parged. This section of wall should be stoned by hand as needed to achieve a smooth even finish. The other exterior concrete site walls will receive vertically oriented polymer formliners on both faces. This will also be expected to be a smooth even finish, so hand stoning of these walls may also be needed depending on how well the forms release.			
4/8/26	4/9/26					
			Page A101 section 2. Detail 12 on A502 and detail 5 on A501. Both are saying the plywood sheathing needs to be painted. Just trying to understand where this plywood starts/stops.			
			Response: This plywood is the continuous exposed surface on top of the "L" shaped soffit that gets the corrugated metal panels on its vertical face. It can be painted with a couple coats of white primer in order to make cleaning easier. See also Wall Section 4 on Sheet A501 and Detail 9 on Sheet A502.			
4/9/26	4/9/26					
			Steel Fabricator had the following question "Is detail 13/S500 correct? Seems to be showing 2 tubes across grid line B"			
			Response: It's correct. One tube supports the glass window. Due to the window's size, we want the steel tube to carry the weight rather than the studs. The other tube in that detail is used to give the stud supplier something to attach to for the mechanical bump out on the lobby side.			
4/9/26	4/9/26					
			What size conduit for the tele/data / AV rough ins ?			
			Response: 1" for tele/data. 1.5" for A/V..			
4/9/26	4/9/26					
			On drawing E501 Motors / Starters / Disconnects & Control schedule references a note #5 for (8) pieces of equipment, who is to supply these?			
			Response: Our drawings do not assign work. That would be the responsibility of the GC.			
4/9/26	4/9/26					

			They are also calling for a 100A disconnect at all of these locations as well. With a Combination starter there is a disconnecting means built in, are both of these to be included?			
			Response: For items noted to have a combination motor starter disconnect, the disconnect portion of the combination unit will suffice as the disconnect, no additional disconnect is needed. Combination motor starter / disconnects are shown for the electric heating units SHP-1 through SHP-4. These only need to be the disconnect shown. Electric heat does not need a motor starter.			
4/9/26	4/9/26					
			Regarding the flooring material where the tile plane patterns are. Is it the intent to have the outline around the planes be a grout joint or metal strips i.e. metal Schluter L that is bendable			
			Response: The intent for the plane profiles in the floor tile is that the curved edges of the tile shapes be created with a diamond blade grinder, edges to be smoothed with grinding wheels, tile file or rubbing stone as required to create an even, chip-free eased edge resulting in a standard width, consistent grout joint.			

SPECIFICATION

For
CITY OF RICHMOND
RICHMOND MUNICIPAL AIRPORT
TERMINAL BUILDING
ADDENDUM 02

SPECIFICATION SECTIONS	
	ISSUED
DIVISION 0 SECTIONS – BIDDING AND CONTRACT REQUIREMENTS	
000001 - Index	**ADD 01**
000100 – Advertisement for Bids	**X**
000210 – Federal Provisions and Wage Rates	**ADD 01**
000211 – A701 Instructions to Bidders	**X**
000212 – Supplementary Instructions to Bidders	**X**
000400 – Bid Proposal Form	**ADD 02**
000400.01 – Proposal Pages	**X**
000401 – Form 96 (Indiana)	**X**
~~000402 – Federal Provisions & Wage Rates~~	**ADD 01**
000500 – Preliminary Project Schedule	**ADD 01**
000801 – Indiana Public Works Law Certificate	**X**
000802 – Indiana E-Verify Affidavit	**X**
001031 – A101-2017 Standard Form of Agreement	**X**
001031A – Exhibit A – A101-2017 Insurance and Bonds	**X**
001031B – Exhibit B – A310-2010 Bid Bond	**X**
001031C – Exhibit C – A312-2010 Payment Bond	**X**
001031D – Exhibit D – A312-2010 Performance Bond	**X**
001071 – A201-2017 General Conditions	**X**
001072 – Modifications to General Conditions	**ADD 01**
001073 – Supplementary Conditions	**X**
002600 – Procurement Substitution Procedures	**ADD 01**
002600.01 – Substitution Request Form	**X**
003132 – Geotechnical Data	**ADD 02**
DIVISION 1 SECTIONS – GENERAL CONDITIONS	
012300 - Alternates	**X**
012500 - Substitutions	**X**
012600 – Contract Modification Procedures	**X**
012900 – Payment Procedures	**X**
013100 – Project Coordination	**X**
013200 – Construction Progress Documentation	**X**
013300 – Shop Drawings, Product Data and Samples	**X**
013310 – Agreement and Waiver for Use of Electronic Information	**X**

014000 – Quality Control Services	**X**
~~014200 - References~~	**ADD 01**
015000 – Temporary Facilities and Controls	**X**
017000 – Project Closeout	**X**
017300 - Execution	**X**
017000 – Closeout Procedures	**X**
017823 – Operation and Maintenance Data	**X**
017839 – Project Record Documents	**X**
017900 – Demonstration and Training	**X**
DIVISION 2 SECTIONS – EXISTING CONDITIONS	
020100 – Maintenance of Existing Conditions	**X**
024113 – Selective Site Demolition	**X**
DIVISION 3 SECTIONS - CONCRETE	
031000 – Concrete Formwork	**X**
032000 – concrete Reinforcement	**X**
033000 – Cast in Place Concrete	**X**
033310 – Architectural Concrete Specialties	**X**
036000 – Epoxy Grout	**X**
036001 - Grouting	**X**
036200 – Non-Shrink Grouting	**X**
DIVISION 4 SECTIONS - MASONRY	
Not Used	
DIVISION 5 SECTIONS - METALS	
051200 – Structural Steel Framing	**X**
053123 – Steel Roof Decking	**X**
055000 – Metal Fabrications	**X**
DIVISION 6 SECTIONS	
061000 – Rough Carpentry	X
061600 - Sheathing	X
064023 – Interior Architectural Woodwork	**X**
DIVISION 7 SECTIONS	
072100 – Thermal Insulation	**X**
072723 – Spray Polyurethane foam Insulation	**ADD 01**
072726 – Fluid Applied Membrane Air Barrier	**X**
074213 – Metal Composite Wall Panels	**ADD 01**
074213.13 – Formed Metal Wall Panels	**X**
075423 – TPO Roofing	**ADD 01**
076200 – Sheet Metal Flashing	**X**

077100 – Roof Specialties	**X**
079200 – Joint Sealants	**ADD 01**
DIVISION 8 SECTIONS	
081113 – Hollow Metal Doors and Frames	**X**
081416 – Flush Wood Doors	**ADD 01**
083113 – Access Doors	**X**
084113 – Aluminum Entrances, Storefronts and Curtainwalls	**ADD 01**
087100 – Door Hardware	**ADD 01**
088000 – Glazing	**ADD 01**
DIVISION 9 SECTIONS	
092216 – Non-Structural Metal Framing	**X**
092900 – Gypsum Board	**X**
093000 – Tiling	**X**
095113 – Acoustical Panel Ceilings	**X**
096513 – Resilient Base and Accessories	**X**
096813 – Tile Carpeting	**ADD 01**
099123 – Interior Painting	**X**
099600 – High Performance Coatings	**X**
DIVISION 10 SECTIONS	
101400 – Interior Signage	**ADD 02**
102113 – Polymer Toilet Compartments	**X**
102800 – Toilet, Bath and Laundry Accessories	**X**
104400 – Fire Protection Specialties	**X**
DIVISION 11 SECTIONS	
Not Used	
DIVISION 12 SECTIONS	
124813 – Entrance Carpet Tiles (Walk-off Carpet)	**X**
124940 – Window Shades	**ADD 01**
DIVISION 14 SECTIONS	
Not Used	
DIVISION 22 - 26 SECTIONS	
Refer to Index in Mechanical, Plumbing and Electrical Specifications	**X**
DIVISION 31 – EARTHWORK	
312000 - Earthwork	**ADD 01**
312500 – Erosion Control	**X**

DIVISION 32 – SITE IMPROVEMENTS	
321216 – Asphalt Paving	**X**
321300 – Site Concrete	**X**
323113 – Chain-link Fences and Gates	**X**
330500 – Common Work Results for Utilities	**X**
332100 – Water Supply Wells	**X**
333000 – Sanitary Sewers	**X**
334000 – Storm Drainage	**X**

END OF INDEX

FORM OF PROPOSAL – ADDENDUM 02

For: **CITY OF RICHMOND**
RICHMOND MUNICIPAL AIRPORT – NEW TERMINAL BUILDING

LWC Incorporated 712 East Main Street Richmond, IN 47374 7650-966-3546	

SUBMITTED BY:

Name: _____

Address: _____

_____

Telephone: _____

Fax: _____

Email: _____

TO: RICHMOND BOARD OF AVIATION COMMISSIONERS
50 North 5th Street, Richmond, IN 47374

Project Location: 5169 State Road 227, Richmond, IN 47374

☐ Indiana State Form 96 **(Revised 2013)**	☐ Financial Statement
☐ Bid Bond	☐ Non-Collusion
☐ Fed. Prov. – Build America, Buy America	☐ Indiana Public Law Certificate

Bonding Co.: _____

Addenda Received: _____

The undersigned, having carefully examined all contract documents, including Instructions to Bidders, General Conditions, Modifications to General Conditions, Special Conditions, Drawings, and Specifications and Addenda entitled:

CITY OF RICHMOND
RICHMOND MUNICIPAL AIRPORT
TERMIINAL BUILDING

Dated **March 16, 2026** prepared by LWC Incorporated (Architects) and having examined the site, hereby proposed to furnish all materials, all services, all labor, and all equipment to complete all work as described in the contract documents for the following:
BASE BID:

TOTAL BASE BID – *SINGLE* PRIME CONTRACT:

$_____

SUM IN WORDS: _____

ALTERNATE BIDS:

1.1 Alternate Bid No 1 – Description: Deduct Amount for not providing and installing the Rear Concrete Patio Area with exposed concrete.

_____ Dollars

($_____)

1.2 Alternate Bid No 2 – Description: Deduct Amount for not providing and installing the Rear Concrete Patio Barrier Wall.

_____ Dollars

($_____)

1.3 Alternate Bid No 3 – Description: Deduct Amount for not providing and installing the Mechanical Yard Barrier Wall.

_____ Dollars

($_____)

1.4 Alternate Bid No 4 – Description: Deduct Amount for not providing and installing the new Generator as indicated on the Drawings.

_____ Dollars

($_____)

WATER WELL DRILLING – COST BREAKOUT INCLUDED IN BASE BID

State the amount included in the Base Bid above for the water well drilling, installation and equipment provided by L. M. Kettler Inc. as specified in Section 332100 – Water Supply Wells.

_____ Dollars

($_____)

SIGNATURE SHEET:

A CORPORATION: _____

STATE IN WHICH INCORPORATED: _____

A PARTNERSHIP: _____

AN INDIVIDUAL: _____

BY: _____
Signature Title

BY: _____
Signature Title

BUSINESS ADDRESS:

_____

_____

_____

DATE: _____

NOTE: A CORPORATION must present a certified copy of a resolution by its Board of Directors authorizing the signing of this proposal by any person other than the President of the

Corporation. AN INDIVIDUAL must be the Owner and state the name of his business, as well as his full legal name.

SUBCONTRACTOR LIST

This list shall be provided with the Form of Proposal. Additional sheets may be added in the same format.

NAME/ADDRESS/PHONE	WORK TO BE PROVIDED

END OF FORM OF PROPOSAL

GENERAL PROVISIONS

Part 1 – General Contract Provisions

Section 10 Definition of Terms

When the following terms are used in these specifications, in the contract, or in any documents or other instruments pertaining to construction where these specifications govern, the intent and meaning shall be defined as follows:

Paragraph Number	Term	Definition
10-01	**AASHTO**	The American Association of State Highway and Transportation Officials.
10-02	**Access Road**	The right-of-way, the roadway and all improvements constructed thereon connecting the airport to a public roadway.
10-03	**Advertisement**	A public announcement, as required by local law, inviting bids for work to be performed and materials to be furnished.
10-04	**Airport**	Airport means an area of land or water which is used or intended to be used for the landing and takeoff of aircraft; an appurtenant area used or intended to be used for airport buildings or other airport facilities or rights of way; airport buildings and facilities located in any of these areas, and a heliport.
10-05	**Airport Improvement Program (AIP)**	A grant-in-aid program, administered by the Federal Aviation Administration (FAA).
10-06	**Air Operations Area (AOA)**	The term air operations area (AOA) shall mean any area of the airport used or intended to be used for the landing, takeoff, or surface maneuvering of aircraft. An air operation area shall include such paved or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiway, or apron.
10-07	**Apron**	Area where aircraft are parked, unloaded or loaded, fueled and/or serviced.
10-08	**ASTM International (ASTM)**	Formerly known as the American Society for Testing and Materials (ASTM).
10-09	**Award**	The Owner's notice to the successful bidder of the acceptance of the submitted bid.
10-10	**Bidder**	Any individual, partnership, firm, or corporation, acting directly or through a duly authorized representative, who submits a proposal for the work contemplated.

Paragraph Number	Term	Definition
10-11	**Building Area**	An area on the airport to be used, considered, or intended to be used for airport buildings or other airport facilities or rights-of-way together with all airport buildings and facilities located thereon.
10-12	**Calendar Day**	Every day shown on the calendar.
10-13	**Certificate of Analysis (COA)**	The COA is the manufacturer's Certificate of Compliance (COC) including all applicable test results required by the specifications.
10-14	**Certificate of Compliance (COC)**	The manufacturer's certification stating that materials or assemblies furnished fully comply with the requirements of the contract. The certificate shall be signed by the manufacturer's authorized representative.
10-15	**Change Order**	A written order to the Contractor covering changes in the plans, specifications, or proposal quantities and establishing the basis of payment and contract time adjustment, if any, for work within the scope of the contract and necessary to complete the project.
10-16	**Contract**	A written agreement between the Owner and the Contractor that establishes the obligations of the parties including but not limited to performance of work, furnishing of labor, equipment and materials and the basis of payment. The awarded contract includes but may not be limited to: Advertisement, Contract form, Proposal, Performance bond, payment bond, General provisions, certifications and representations, Technical Specifications, Plans, Supplemental Provisions, standards incorporated by reference and issued addenda.
10-17	**Contract Item (Pay Item)**	A specific unit of work for which a price is provided in the contract.
10-18	**Contract Time**	The number of calendar days or working days, stated in the proposal, allowed for completion of the contract, including authorized time extensions. If a calendar date of completion is stated in the proposal, in lieu of a number of calendar or working days, the contract shall be completed by that date.
10-19	**Contractor**	The individual, partnership, firm, or corporation primarily liable for the acceptable performance of the work contracted and for the payment of all legal debts pertaining to the work who acts directly or through lawful agents or employees to complete the contract work.
10-20	**Contractors Quality Control (QC) Facilities**	The Contractor's QC facilities in accordance with the Contractor Quality Control Program (CQCP).
10-21	**Contractor Quality Control Program (CQCP)**	Details the methods and procedures that will be taken to assure that all materials and completed construction required by the

Paragraph Number	Term	Definition
		contract conform to contract plans, technical specifications and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors.
10-22	**Control Strip**	A demonstration by the Contractor that the materials, equipment, and construction processes results in a product meeting the requirements of the specification.
10-23	**Construction Safety and Phasing Plan (CSPP)**	The overall plan for safety and phasing of a construction project developed by the airport operator, or developed by the airport operator's consultant and approved by the airport operator. It is included in the invitation for bids and becomes part of the project specifications.
10-24	**Drainage System**	The system of pipes, ditches, and structures by which surface or subsurface waters are collected and conducted from the airport area.
10-25	**Engineer**	The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for engineering, inspection, and/or observation of the contract work and acting directly or through an authorized representative.
10-26	**Equipment**	All machinery, together with the necessary supplies for upkeep and maintenance; and all tools and apparatus necessary for the proper construction and acceptable completion of the work.
10-27	**Extra Work**	An item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, but which is found by the Owner's Engineer or Resident Project Representative (RPR) to be necessary to complete the work within the intended scope of the contract as previously modified.
10-28	**FAA**	The Federal Aviation Administration. When used to designate a person, FAA shall mean the Administrator or their duly authorized representative.
10-29	**Federal Specifications**	The federal specifications and standards, commercial item descriptions, and supplements, amendments, and indices prepared and issued by the General Services Administration.
10-30	**Force Account**	**a.** Contract Force Account - A method of payment that addresses extra work performed by the Contractor on a time and material basis. **b.** Owner Force Account - Work performed for the project by the Owner's employees.
10-31	**Intention of Terms**	Whenever, in these specifications or on the plans, the words "directed," "required," "permitted," "ordered," "designated," "prescribed," or words of like import are used, it shall be understood that the direction, requirement, permission, order, designation, or prescription of the Engineer and/or Resident

Paragraph Number	Term	Definition
		Project Representative (RPR) is intended; and similarly, the words “approved,” “acceptable,” “satisfactory,” or words of like import, shall mean approved by, or acceptable to, or satisfactory to the Engineer and/or RPR, subject in each case to the final determination of the Owner. Any reference to a specific requirement of a numbered paragraph of the contract specifications or a cited standard shall be interpreted to include all general requirements of the entire section, specification item, or cited standard that may be pertinent to such specific reference.
10-32	**Lighting**	A system of fixtures providing or controlling the light sources used on or near the airport or within the airport buildings. The field lighting includes all luminous signals, markers, floodlights, and illuminating devices used on or near the airport or to aid in the operation of aircraft landing at, taking off from, or taxiing on the airport surface.
10-33	**Major and Minor Contract Items**	A major contract item shall be any item that is listed in the proposal, the total cost of which is equal to or greater than 20% of the total amount of the award contract. All other items shall be considered minor contract items.
10-34	**Materials**	Any substance specified for use in the construction of the contract work.
10-35	**Modification of Standards (MOS)**	Any deviation from standard specifications applicable to material and construction methods in accordance with FAA Order 5300.1.
10-36	**Notice to Proceed (NTP)**	A written notice to the Contractor to begin the actual contract work on a previously agreed to date. If applicable, the Notice to Proceed shall state the date on which the contract time begins.
10-37	**Owner**	The term “Owner” shall mean the party of the first part or the contracting agency signatory to the contract. Where the term “Owner” is capitalized in this document, it shall mean airport Sponsor only.
10-38	Passenger Facility Charge (PFC)	Per 14 Code of Federal Regulations (CFR) Part 158 and 49 United States Code (USC) § 40117, a PFC is a charge imposed by a public agency on passengers enplaned at a commercial service airport it controls.
10-39	**Pavement Structure**	The combined surface course, base course(s), and subbase course(s), if any, considered as a single unit.
10-40	**Payment bond**	The approved form of security furnished by the Contractor and their own surety as a guaranty that the Contractor will pay in full all bills and accounts for materials and labor used in the construction of the work.

Paragraph Number	Term	Definition
10-41	**Performance bond**	The approved form of security furnished by the Contractor and their own surety as a guaranty that the Contractor will complete the work in accordance with the terms of the contract.
10-42	**Plans**	The official drawings or exact reproductions which show the location, character, dimensions and details of the airport and the work to be done and which are to be considered as a part of the contract, supplementary to the specifications. Plans may also be referred to as 'contract drawings.'
10-43	**Project**	The agreed scope of work for accomplishing specific airport development with respect to a particular airport.
10-44	**Proposal**	The written offer of the bidder (when submitted on the approved proposal form) to perform the contemplated work and furnish the necessary materials in accordance with the provisions of the plans and specifications.
10-45	**Proposal guaranty**	The security furnished with a proposal to guarantee that the bidder will enter into a contract if their own proposal is accepted by the Owner.
10-46	**Quality Assurance (QA)**	Owner's responsibility to assure that construction work completed complies with specifications for payment.
10-47	**Quality Control (QC)**	Contractor's responsibility to control material(s) and construction processes to complete construction in accordance with project specifications.
10-48	**Quality Assurance (QA) Inspector**	An authorized representative of the Engineer and/or Resident Project Representative (RPR) assigned to make all necessary inspections, observations, tests, and/or observation of tests of the work performed or being performed, or of the materials furnished or being furnished by the Contractor.
10-49	**Quality Assurance (QA) Laboratory**	The official quality assurance testing laboratories of the Owner or such other laboratories as may be designated by the Engineer or RPR. May also be referred to as Engineer's, Owner's, or QA Laboratory.
10-50	**Resident Project Representative (RPR)**	The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for all necessary inspections, observations, tests, and/or observations of tests of the contract work performed or being performed, or of the materials furnished or being furnished by the Contractor, and acting directly or through an authorized representative.
10-51	**Runway**	The area on the airport prepared for the landing and takeoff of aircraft.

Paragraph Number	Term	Definition
10-52	**Runway Safety Area (RSA)**	A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to aircraft. See the construction safety and phasing plan (CSPP) for limits of the RSA.
10-53	**Safety Plan Compliance Document (SPCD)**	Details how the Contractor will comply with the CSPP.
10-54	**Specifications**	A part of the contract containing the written directions and requirements for completing the contract work. Standards for specifying materials or testing which are cited in the contract specifications by reference shall have the same force and effect as if included in the contract physically.
10-55	**Sponsor**	A Sponsor is defined in 49 USC § 47102(24) as a public agency that submits to the FAA for an AIP grant; or a private Owner of a public-use airport that submits to the FAA an application for an AIP grant for the airport.
10-56	**Structures**	Airport facilities such as bridges; culverts; catch basins, inlets, retaining walls, cribbing; storm and sanitary sewer lines; water lines; underdrains; electrical ducts, manholes, handholes, lighting fixtures and bases; transformers; navigational aids; buildings; vaults; and, other manmade features of the airport that may be encountered in the work and not otherwise classified herein.
10-57	**Subgrade**	The soil that forms the pavement foundation.
10-58	**Superintendent**	The Contractor's executive representative who is present on the work during progress, authorized to receive and fulfill instructions from the RPR, and who shall supervise and direct the construction.
10-59	**Supplemental Agreement**	A written agreement between the Contractor and the Owner that establishes the basis of payment and contract time adjustment, if any, for the work affected by the supplemental agreement. A supplemental agreement is required if: (1) in scope work would increase or decrease the total amount of the awarded contract by more than 25%: (2) in scope work would increase or decrease the total of any major contract item by more than 25%; (3) work that is not within the scope of the originally awarded contract; or (4) adding or deleting of a major contract item.
10-60	**Surety**	The corporation, partnership, or individual, other than the Contractor, executing payment or performance bonds that are furnished to the Owner by the Contractor.
10-61	**Taxilane**	A taxiway designed for low speed movement of aircraft between aircraft parking areas and terminal areas.
10-62	**Taxiway**	The portion of the air operations area of an airport that has been designated by competent airport authority for movement of

Paragraph Number	Term	Definition
		aircraft to and from the airport's runways, aircraft parking areas, and terminal areas.
10-63	**Taxiway/Taxilane Safety Area (TSA)**	A defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an aircraft. See the construction safety and phasing plan (CSPP) for limits of the TSA.
10-64	**Work**	The furnishing of all labor, materials, tools, equipment, and incidentals necessary or convenient to the Contractor's performance of all duties and obligations imposed by the contract, plans, and specifications.
10-65	**Working day**	A working day shall be any day other than a legal holiday, Saturday, or Sunday on which the normal working forces of the Contractor may proceed with regular work for at least six (6) hours toward completion of the contract. When work is suspended for causes beyond the Contractor's control, it will not be counted as a working day. Saturdays, Sundays and holidays on which the Contractor's forces engage in regular work will be considered as working days.
10-66	**Owner Defined terms**	**[** None **]** ********** **The Engineer may add and define additional terms, if necessary.** **On projects that utilize a Construction Manager (CM), a Construction Manager at Risk (CMAR), or a Construction Manager/General Contractor (CMGC), add a definition of their roles on the project. The CM generally acts as an agent of the owner and is not legally or financially responsible for completion of the work; a CMAR and CMGC are legally and financially obligated to complete the work.** **********

END OF SECTION 10

Section 20 Proposal Requirements and Conditions

20-01 Advertisement (Notice to Bidders). See advertisement included in specifications book.

20-02 Qualification of bidders. Each bidder shall submit evidence of competency and evidence of financial responsibility to perform the work to the Owner at the time of bid opening.

Evidence of competency, unless otherwise specified, shall consist of statements covering the bidder's past experience on similar work, and a list of equipment and a list of key personnel that would be available for the work.

Each bidder shall furnish the Owner satisfactory evidence of their financial responsibility. Evidence of financial responsibility, unless otherwise specified, shall consist of a confidential statement or report of the bidder's financial resources and liabilities as of the last calendar year or the bidder's last fiscal year. Such statements or reports shall be certified by a public accountant. At the time of submitting such financial statements or reports, the bidder shall further certify whether their financial responsibility is approximately the same as stated or reported by the public accountant. If the bidder's financial responsibility has changed, the bidder shall qualify the public accountant's statement or report to reflect the bidder's true financial condition at the time such qualified statement or report is submitted to the Owner.

Unless otherwise specified, a bidder may submit evidence that they are prequalified with the State Highway Division and are on the current "bidder's list" of the state in which the proposed work is located. Evidence of State Highway Division prequalification may be submitted as evidence of financial responsibility in lieu of the certified statements or reports specified above.

20-03 Contents of proposal forms. The Owner's proposal forms state the location and description of the proposed construction; the place, date, and time of opening of the proposals; and the estimated quantities of the various items of work to be performed and materials to be furnished for which unit bid prices are asked. The proposal form states the time in which the work must be completed, and the amount of the proposal guaranty that must accompany the proposal. The Owner will accept only those Proposals properly executed on physical forms or electronic forms provided by the Owner. Bidder actions that may cause the Owner to deem a proposal irregular are given in paragraph 20-09 *Irregular proposals*.

Mobilization is limited to 10 percent of the total project cost.

20-04 Issuance of proposal forms. The Owner reserves the right to refuse to issue a proposal form to a prospective bidder if the bidder is in default for any of the following reasons:

a. Failure to comply with any prequalification regulations of the Owner, if such regulations are cited, or otherwise included, in the proposal as a requirement for bidding.

b. Failure to pay, or satisfactorily settle, all bills due for labor and materials on former contracts in force with the Owner at the time the Owner issues the proposal to a prospective bidder.

c. Documented record of Contractor default under previous contracts with the Owner.

d. Documented record of unsatisfactory work on previous contracts with the Owner.

20-05 Interpretation of estimated proposal quantities. An estimate of quantities of work to be done and materials to be furnished under these specifications is given in the proposal. It is the result of careful calculations and is believed to be correct. It is given only as a basis for comparison of proposals and the award of the contract. The Owner does not expressly, or by implication, agree that the actual quantities

involved will correspond exactly therewith; nor shall the bidder plead misunderstanding or deception because of such estimates of quantities, or of the character, location, or other conditions pertaining to the work. Payment to the Contractor will be made only for the actual quantities of work performed or materials furnished in accordance with the plans and specifications. It is understood that the quantities may be increased or decreased as provided in the Section 40, paragraph 40-02, Alteration of Work and Quantities, without in any way invalidating the unit bid prices.

20-06 Examination of plans, specifications, and site. The bidder is expected to carefully examine the site of the proposed work, the proposal, plans, specifications, and contract forms. Bidders shall satisfy themselves to the character, quality, and quantities of work to be performed, materials to be furnished, and to the requirements of the proposed contract. The submission of a proposal shall be prima facie evidence that the bidder has made such examination and is satisfied to the conditions to be encountered in performing the work and the requirements of the proposed contract, plans, and specifications.

Boring logs and other records of subsurface investigations and tests may be available for inspection of bidders. It is understood and agreed that such subsurface information, whether included in the plans, specifications, or otherwise made available to the bidder, was obtained and is intended for the Owner's design and estimating purposes only. Such information has been made available for the convenience of all bidders. It is further understood and agreed that each bidder is solely responsible for all assumptions, deductions, or conclusions which the bidder may make or obtain from their own examination of the boring logs and other records of subsurface investigations and tests that are furnished by the Owner.

20-07 Preparation of proposal. The bidder shall submit their proposal on the forms furnished by the Owner. All blank spaces in the proposal forms, unless explicitly stated otherwise, must be correctly filled in where indicated for each and every item for which a quantity is given. The bidder shall state the price (written in ink or typed) both in words and numerals which they propose for each pay item furnished in the proposal. In case of conflict between words and numerals, the words, unless obviously incorrect, shall govern.

The bidder shall correctly sign the proposal in ink. If the proposal is made by an individual, their name and post office address must be shown. If made by a partnership, the name and post office address of each member of the partnership must be shown. If made by a corporation, the person signing the proposal shall give the name of the state where the corporation was chartered and the name, titles, and business address of the president, secretary, and the treasurer. Anyone signing a proposal as an agent shall file evidence of their authority to do so and that the signature is binding upon the firm or corporation.

20-08 Responsive and responsible bidder. A responsive bid conforms to all significant terms and conditions contained in the Owner's invitation for bid. It is the Owner's responsibility to decide if the exceptions taken by a bidder to the solicitation are material or not and the extent of deviation it is willing to accept.

A responsible bidder has the ability to perform successfully under the terms and conditions of a proposed procurement, as defined in 2 CFR § 200.318(h). This includes such matters as Contractor integrity, compliance with public policy, record of past performance, and financial and technical resources.

20-09 Irregular proposals. Proposals shall be considered irregular for the following reasons:

a. If the proposal is on a form other than that furnished by the Owner, or if the Owner's form is altered, or if any part of the proposal form is detached.

b. If there are unauthorized additions, conditional or alternate pay items, or irregularities of any kind that make the proposal incomplete, indefinite, or otherwise ambiguous.

c. If the proposal does not contain a unit price for each pay item listed in the proposal, except in the case of authorized alternate pay items, for which the bidder is not required to furnish a unit price.

d. If the proposal contains unit prices that are obviously unbalanced.

e. If the proposal is not accompanied by the proposal guaranty specified by the Owner.

f. If the applicable Disadvantaged Business Enterprise information is incomplete.

The Owner reserves the right to reject any irregular proposal and the right to waive technicalities if such waiver is in the best interest of the Owner and conforms to local laws and ordinances pertaining to the letting of construction contracts.

20-10 Bid guarantee. Each separate proposal shall be accompanied by a bid bond, certified check, or other specified acceptable collateral, in the amount specified in the proposal form. Such bond, check, or collateral, shall be made payable to the Owner.

20-11 Delivery of proposal. Each proposal submitted shall be placed in a sealed envelope plainly marked with the project number, location of airport, and name and business address of the bidder on the outside. When sent by mail, preferably registered, the sealed proposal, marked as indicated above, should be enclosed in an additional envelope. No proposal will be considered unless received at the place specified in the advertisement or as modified by Addendum before the time specified for opening all bids. Proposals received after the bid opening time shall be returned to the bidder unopened.

20-12 Withdrawal or revision of proposals. A bidder may withdraw or revise (by withdrawal of one proposal and submission of another) a proposal provided that the bidder's request for withdrawal is received by the Owner in writing, by fax or by email before the time specified for opening bids. Revised proposals must be received at the place specified in the advertisement before the time specified for opening all bids.

20-13 Public opening of proposals. Proposals shall be opened, and read, publicly at the time and place specified in the advertisement. Bidders, their authorized agents, and other interested persons are invited to attend. Proposals that have been withdrawn (by written or telegraphic request) or received after the time specified for opening bids shall be returned to the bidder unopened.

20-14 Disqualification of bidders. A bidder shall be considered disqualified for any of the following reasons:

a. Submitting more than one proposal from the same partnership, firm, or corporation under the same or different name.

b. Evidence of collusion among bidders. Bidders participating in such collusion shall be disqualified as bidders for any future work of the Owner until any such participating bidder has been reinstated by the Owner as a qualified bidder.

c. If the bidder is considered to be in "default" for any reason specified in paragraph 20-04, *Issuance of Proposal Forms,* of this section.

20-15 Discrepancies and Omissions. A Bidder who discovers discrepancies or omissions with the project bid documents shall immediately notify the Owner's Engineer of the matter. A bidder that has doubt as to the true meaning of a project requirement may submit to the Owner's Engineer a written request for interpretation no later than **2** days prior to bid opening.

Any interpretation of the project bid documents by the Owner's Engineer will be by written addendum issued by the Owner. The Owner will not consider any instructions, clarifications or interpretations of the bidding documents in any manner other than written addendum.

END OF SECTION 20

Page Intentionally Blank

Section 30 Award and Execution of Contract

30-01 Consideration of proposals. After the proposals are publicly opened and read, they will be compared on the basis of the summation of the products obtained by multiplying the estimated quantities shown in the proposal by the unit bid prices. If a bidder's proposal contains a discrepancy between unit bid prices written in words and unit bid prices written in numbers, the unit bid price written in words shall govern.

Until the award of a contract is made, the Owner reserves the right to reject a bidder's proposal for any of the following reasons:

a. If the proposal is irregular as specified in Section 20, paragraph 20-09, *Irregular Proposals*.

b. If the bidder is disqualified for any of the reasons specified Section 20, paragraph 20-14, *Disqualification of Bidders*.

In addition, until the award of a contract is made, the Owner reserves the right to reject any or all proposals, waive technicalities, if such waiver is in the best interest of the Owner and is in conformance with applicable state and local laws or regulations pertaining to the letting of construction contracts; advertise for new proposals; or proceed with the work otherwise. All such actions shall promote the Owner's best interests.

30-02 Award of contract. The award of a contract, if it is to be awarded, shall be made within 60-120 calendar days of the date specified for publicly opening proposals, unless otherwise specified herein.

If the Owner elects to proceed with an award of contract, the Owner will make award to the responsible bidder whose bid, conforming with all the material terms and conditions of the bid documents, is the lowest in price.

30-03 Cancellation of award. The Owner reserves the right to cancel the award without liability to the bidder, except return of proposal guaranty, at any time before a contract has been fully executed by all parties and is approved by the Owner in accordance with paragraph 30-07 *Approval of Contract*.

30-04 Return of proposal guaranty. All proposal guaranties, except those of the two lowest bidders, will be returned immediately after the Owner has made a comparison of bids as specified in the paragraph 30-01, *Consideration of Proposals.* Proposal guaranties of the two lowest bidders will be retained by the Owner until such time as an award is made, at which time, the unsuccessful bidder's proposal guaranty will be returned. The successful bidder's proposal guaranty will be returned as soon as the Owner receives the contract bonds as specified in paragraph 30-05, *Requirements of Contract Bonds.*

30-05 Requirements of contract bonds. At the time of the execution of the contract, the successful bidder shall furnish the Owner a surety bond or bonds that have been fully executed by the bidder and the surety guaranteeing the performance of the work and the payment of all legal debts that may be incurred by reason of the Contractor's performance of the work. The surety and the form of the bond or bonds shall be acceptable to the Owner. Unless otherwise specified in this subsection, the surety bond or bonds shall be in a sum equal to the full amount of the contract.

30-06 Execution of contract. The successful bidder shall sign (execute) the necessary agreements for entering into the contract and return the signed contract to the Owner, along with the fully executed surety bond or bonds specified in paragraph 30-05, *Requirements of Contract Bonds,* of this section, within 10 calendar days from the date mailed or otherwise delivered to the successful bidder.

30-07 Approval of contract. Upon receipt of the contract and contract bond or bonds that have been executed by the successful bidder, the Owner shall complete the execution of the contract in accordance with local laws or ordinances, and return the fully executed contract to the Contractor. Delivery of the fully executed contract to the Contractor shall constitute the Owner's approval to be bound by the successful bidder's proposal and the terms of the contract.

30-08 Failure to execute contract. Failure of the successful bidder to execute the contract and furnish an acceptable surety bond or bonds within the period specified in paragraph 30-06, *Execution of Contract,* of this section shall be just cause for cancellation of the award and forfeiture of the proposal guaranty, not as a penalty, but as liquidated damages to the Owner.

END OF SECTION 30

Page Intentionally Blank

Section 40 Scope of Work

40-01 Intent of contract. The intent of the contract is to provide for construction and completion, in every detail, of the work described. It is further intended that the Contractor shall furnish all labor, materials, equipment, tools, transportation, and supplies required to complete the work in accordance with the plans, specifications, and terms of the contract.

40-02 Alteration of work and quantities. The Owner reserves the right to make such changes in quantities and work as may be necessary or desirable to complete, in a satisfactory manner, the original intended work. Unless otherwise specified in the Contract, the Owner's Engineer or RPR shall be and is hereby authorized to make, in writing, such in-scope alterations in the work and variation of quantities as may be necessary to complete the work, provided such action does not represent a significant change in the character of the work.

For purpose of this section, a significant change in character of work means: any change that is outside the current contract scope of work; any change (increase or decrease) in the total contract cost by more than 25%; or any change in the total cost of a major contract item by more than 25%.

Work alterations and quantity variances that do not meet the definition of significant change in character of work shall not invalidate the contract nor release the surety. Contractor agrees to accept payment for such work alterations and quantity variances in accordance with Section 90, paragraph 90-03, *Compensation for Altered Quantities*.

Should the value of altered work or quantity variance meet the criteria for significant change in character of work, such altered work and quantity variance shall be covered by a supplemental agreement. Supplemental agreements shall also require consent of the Contractor's surety and separate performance and payment bonds. If the Owner and the Contractor are unable to agree on a unit adjustment for any contract item that requires a supplemental agreement, the Owner reserves the right to terminate the contract with respect to the item and make other arrangements for its completion.

40-03 Omitted items. The Owner, the Owner's Engineer or the RPR may provide written notice to the Contractor to omit from the work any contract item that does not meet the definition of major contract item. Major contract items may be omitted by a supplemental agreement. Such omission of contract items shall not invalidate any other contract provision or requirement.

Should a contract item be omitted or otherwise ordered to be non-performed, the Contractor shall be paid for all work performed toward completion of such item prior to the date of the order to omit such item. Payment for work performed shall be in accordance with Section 90, paragraph 90-04, *Payment for Omitted Items*.

40-04 Extra work. Should acceptable completion of the contract require the Contractor to perform an item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, Owner may issue a Change Order to cover the necessary extra work. Change orders for extra work shall contain agreed unit prices for performing the change order work in accordance with the requirements specified in the order, and shall contain any adjustment to the contract time that, in the RPR's opinion, is necessary for completion of the extra work.

When determined by the RPR to be in the Owner's best interest, the RPR may order the Contractor to proceed with extra work as provided in Section 90, paragraph 90-05, *Payment for Extra Work*. Extra work that is necessary for acceptable completion of the project, but is not within the general scope of the work

covered by the original contract shall be covered by a supplemental agreement as defined in Section 10, paragraph 10-59, *Supplemental Agreement*.

If extra work is essential to maintaining the project critical path, RPR may order the Contractor to commence the extra work under a Time and Material contract method. Once sufficient detail is available to establish the level of effort necessary for the extra work, the Owner shall initiate a change order or supplemental agreement to cover the extra work.

Any claim for payment of extra work that is not covered by written agreement (change order or supplemental agreement) shall be rejected by the Owner.

40-05 Maintenance of traffic. It is the explicit intention of the contract that the safety of aircraft, as well as the Contractor's equipment and personnel, is the most important consideration. The Contractor shall maintain traffic in the manner detailed in the Construction Safety and Phasing Plan (CSPP).

a. It is understood and agreed that the Contractor shall provide for the free and unobstructed movement of aircraft in the air operations areas (AOAs) of the airport with respect to their own operations and the operations of all subcontractors as specified in Section 80, paragraph 80-04, *Limitation of Operations*. It is further understood and agreed that the Contractor shall provide for the uninterrupted operation of visual and electronic signals (including power supplies thereto) used in the guidance of aircraft while operating to, from, and upon the airport as specified in Section 70, paragraph 70-15, *Contractor's Responsibility for Utility Service and Facilities of Others*.

b. With respect to their own operations and the operations of all subcontractors, the Contractor shall provide marking, lighting, and other acceptable means of identifying personnel, equipment, vehicles, storage areas, and any work area or condition that may be hazardous to the operation of aircraft, fire-rescue equipment, or maintenance vehicles at the airport in accordance with the construction safety and phasing plan (CSPP) and the safety plan compliance document (SPCD).

c. When the contract requires the maintenance of an existing road, street, or highway during the Contractor's performance of work that is otherwise provided for in the contract, plans, and specifications, the Contractor shall keep the road, street, or highway open to all traffic and shall provide maintenance as may be required to accommodate traffic. The Contractor, at their expense, shall be responsible for the repair to equal or better than preconstruction conditions of any damage caused by the Contractor's equipment and personnel. The Contractor shall furnish, erect, and maintain barricades, warning signs, flag person, and other traffic control devices in reasonable conformity with the Manual on Uniform Traffic Control Devices (MUTCD) (http://mutcd.fhwa.dot.gov/), unless otherwise specified. The Contractor shall also construct and maintain in a safe condition any temporary connections necessary for ingress to and egress from abutting property or intersecting roads, streets or highways. Unless otherwise specified herein, the Contractor will not be required to furnish snow removal for such existing road, street, or highway.

40-06 Removal of existing structures. All existing structures encountered within the established lines, grades, or grading sections shall be removed by the Contractor, unless such existing structures are otherwise specified to be relocated, adjusted up or down, salvaged, abandoned in place, reused in the work or to remain in place. The cost of removing such existing structures shall not be measured or paid for directly but shall be included in the various contract items.

Should the Contractor encounter an existing structure (above or below ground) in the work for which the disposition is not indicated on the plans, the Resident Project Representative (RPR) shall be notified prior to disturbing such structure. The disposition of existing structures so encountered shall be immediately determined by the RPR in accordance with the provisions of the contract.

Except as provided in Section 40, paragraph 40-07, *Rights in and Use of Materials Found in the Work*, it is intended that all existing materials or structures that may be encountered (within the lines, grades, or

grading sections established for completion of the work) shall be used in the work as otherwise provided for in the contract and shall remain the property of the Owner when so used in the work.

40-07 Rights in and use of materials found in the work. Should the Contractor encounter any material such as (but not restricted to) sand, stone, gravel, slag, or concrete slabs within the established lines, grades, or grading sections, the use of which is intended by the terms of the contract to be embankment, the Contractor may at their own option either:

a. Use such material in another contract item, providing such use is approved by the RPR and is in conformance with the contract specifications applicable to such use; or,

b. Remove such material from the site, upon written approval of the RPR; or

c. Use such material for the Contractor's own temporary construction on site; or,

d. Use such material as intended by the terms of the contract.

Should the Contractor wish to exercise option a., b., or c., the Contractor shall request the RPR's approval in advance of such use.

Should the RPR approve the Contractor's request to exercise option a., b., or c., the Contractor shall be paid for the excavation or removal of such material at the applicable contract price. The Contractor shall replace, at their expense, such removed or excavated material with an agreed equal volume of material that is acceptable for use in constructing embankment, backfills, or otherwise to the extent that such replacement material is needed to complete the contract work. The Contractor shall not be charged for use of such material used in the work or removed from the site.

Should the RPR approve the Contractor's exercise of option a., the Contractor shall be paid, at the applicable contract price, for furnishing and installing such material in accordance with requirements of the contract item in which the material is used.

It is understood and agreed that the Contractor shall make no claim for delays by reason of their own exercise of option a., b., or c.

The Contractor shall not excavate, remove, or otherwise disturb any material, structure, or part of a structure which is located outside the lines, grades, or grading sections established for the work, except where such excavation or removal is provided for in the contract, plans, or specifications.

40-08 Final cleanup. Upon completion of the work and before acceptance and final payment will be made, the Contractor shall remove from the site all machinery, equipment, surplus and discarded materials, rubbish, temporary structures, and stumps or portions of trees. The Contractor shall cut all brush and woods within the limits indicated and shall leave the site in a neat and presentable condition. Material cleared from the site and deposited on adjacent property will not be considered as having been disposed of satisfactorily, unless the Contractor has obtained the written permission of the property Owner.

END OF SECTION 40

Section 50 Control of Work

50-01 Authority of the Resident Project Representative (RPR). The RPR has final authority regarding the interpretation of project specification requirements. The RPR shall determine acceptability of the quality of materials furnished, method of performance of work performed, and the manner and rate of performance of the work. The RPR does not have the authority to accept work that does not conform to specification requirements.

50-02 Conformity with plans and specifications. All work and all materials furnished shall be in reasonably close conformity with the lines, grades, grading sections, cross-sections, dimensions, material requirements, and testing requirements that are specified (including specified tolerances) in the contract, plans, or specifications.

If the RPR finds the materials furnished, work performed, or the finished product not within reasonably close conformity with the plans and specifications, but that the portion of the work affected will, in their opinion, result in a finished product having a level of safety, economy, durability, and workmanship acceptable to the Owner, the RPR will advise the Owner of their determination that the affected work be accepted and remain in place. The RPR will document the determination and recommend to the Owner a basis of acceptance that will provide for an adjustment in the contract price for the affected portion of the work. Changes in the contract price must be covered by contract change order or supplemental agreement as applicable.

If the RPR finds the materials furnished, work performed, or the finished product are not in reasonably close conformity with the plans and specifications and have resulted in an unacceptable finished product, the affected work or materials shall be removed and replaced or otherwise corrected by and at the expense of the Contractor in accordance with the RPR's written orders.

The term "reasonably close conformity" shall not be construed as waiving the Contractor's responsibility to complete the work in accordance with the contract, plans, and specifications. The term shall not be construed as waiving the RPR's responsibility to insist on strict compliance with the requirements of the contract, plans, and specifications during the Contractor's execution of the work, when, in the RPR's opinion, such compliance is essential to provide an acceptable finished portion of the work.

The term "reasonably close conformity" is also intended to provide the RPR with the authority, after consultation with the Sponsor and FAA, to use sound engineering judgment in their determinations to accept work that is not in strict conformity, but will provide a finished product equal to or better than that required by the requirements of the contract, plans and specifications.

The RPR will not be responsible for the Contractor's means, methods, techniques, sequences, or procedures of construction or the safety precautions incident thereto.

50-03 Coordination of contract, plans, and specifications. The contract, plans, specifications, and all referenced standards cited are essential parts of the contract requirements. If electronic files are provided and used on the project and there is a conflict between the electronic files and hard copy plans, the hard copy plans shall govern. A requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work. In case of discrepancy, calculated dimensions will govern over scaled dimensions; contract technical specifications shall govern over contract general provisions, plans, cited standards for materials or testing, and cited advisory circulars (ACs); contract general provisions shall govern over plans, cited standards for materials or testing, and cited ACs; plans shall govern over cited standards for materials or testing and cited ACs. If

any paragraphs contained in the Special Provisions conflict with General Provisions or Technical Specifications, the Special Provisions shall govern.

From time to time, discrepancies within cited testing standards occur due to the timing of the change, edits, and/or replacement of the standards. If the Contractor discovers any apparent discrepancy within standard test methods, the Contractor shall immediately ask the RPR for an interpretation and decision, and such decision shall be final.

The Contractor shall not take advantage of any apparent error or omission on the plans or specifications. In the event the Contractor discovers any apparent error or discrepancy, Contractor shall immediately notify the Owner or the designated representative in writing requesting their written interpretation and decision.

50-04 List of Special Provisions. See Special Provisions Table of Contents.

50-05 Cooperation of Contractor. The Contractor shall be supplied with **[** five **]** hard copies or an electronic PDF of the plans and specifications. The Contractor shall have available on the construction site at all times one hardcopy each of the plans and specifications. Additional hard copies of plans and specifications may be obtained by the Contractor for the cost of reproduction.

The Contractor shall give constant attention to the work to facilitate the progress thereof, and shall cooperate with the RPR and their inspectors and with other Contractors in every way possible. The Contractor shall have a competent superintendent on the work at all times who is fully authorized as their agent on the work. The superintendent shall be capable of reading and thoroughly understanding the plans and specifications and shall receive and fulfill instructions from the RPR or their authorized representative.

50-06 Cooperation between Contractors. The Owner reserves the right to contract for and perform other or additional work on or near the work covered by this contract.

When separate contracts are let within the limits of any one project, each Contractor shall conduct the work not to interfere with or hinder the progress of completion of the work being performed by other Contractors. Contractors working on the same project shall cooperate with each other as directed.

Each Contractor involved shall assume all liability, financial or otherwise, in connection with their own contract and shall protect and hold harmless the Owner from any and all damages or claims that may arise because of inconvenience, delays, or loss experienced because of the presence and operations of other Contractors working within the limits of the same project.

The Contractor shall arrange their work and shall place and dispose of the materials being used to not interfere with the operations of the other Contractors within the limits of the same project. The Contractor shall join their work with that of the others in an acceptable manner and shall perform it in proper sequence to that of the others.

50-07 Construction layout and stakes. The Engineer/RPR shall establish necessary horizontal and vertical control. The establishment of Survey Control and/or reestablishment of survey control shall be by a State Licensed Land Surveyor. Contractor is responsible for preserving integrity of horizontal and vertical controls established by Engineer/RPR. In case of negligence on the part of the Contractor or their employees, resulting in the destruction of any horizontal and vertical control, the resulting costs will be deducted as a liquidated damage against the Contractor.

Prior to the start of construction, the Contractor will check all control points for horizontal and vertical accuracy and certify in writing to the RPR that the Contractor concurs with survey control established for the project. All lines, grades and measurements from control points necessary for the proper execution and control of the work on this project will be provided to the RPR. The Contractor is responsible to establish all layout required for the construction of the project.

Copies of survey notes will be provided to the RPR for each area of construction and for each placement of material as specified to allow the RPR to make periodic checks for conformance with plan grades, alignments and grade tolerances required by the applicable material specifications. Surveys will be provided to the RPR prior to commencing work items that cover or disturb the survey staking. Survey(s) and notes shall be provided in the following format(s): CAD files and hardcopy.

Laser, GPS, String line, or other automatic control shall be checked with temporary control as necessary. In the case of error, on the part of the Contractor, their surveyor, employees or subcontractors, resulting in established grades, alignment or grade tolerances that do not concur with those specified or shown on the plans, the Contractor is solely responsible for correction, removal, replacement and all associated costs at no additional cost to the Owner.

No direct payment will be made, unless otherwise specified in contract documents, for this labor, materials, or other expenses. The cost shall be included in the price of the bid for the various items of the Contract.

50-08 Authority and duties of Quality Assurance (QA) inspectors. QA inspectors shall be authorized to inspect all work done and all material furnished. Such QA inspection may extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials to be used. QA inspectors are not authorized to revoke, alter, or waive any provision of the contract. QA inspectors are not authorized to issue instructions contrary to the plans and specifications or to act as foreman for the Contractor.

QA Inspectors are authorized to notify the Contractor or their representatives of any failure of the work or materials to conform to the requirements of the contract, plans, or specifications and to reject such nonconforming materials in question until such issues can be referred to the RPR for a decision.

50-09 Inspection of the work. All materials and each part or detail of the work shall be subject to inspection. The RPR shall be allowed access to all parts of the work and shall be furnished with such information and assistance by the Contractor as is required to make a complete and detailed inspection.

If the RPR requests it, the Contractor, at any time before acceptance of the work, shall remove or uncover such portions of the finished work as may be directed. After examination, the Contractor shall restore said portions of the work to the standard required by the specifications. Should the work thus exposed or examined prove acceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be paid for as extra work; but should the work so exposed or examined prove unacceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be at the Contractor's expense.

Provide advance written notice to the RPR of work the Contractor plans to perform each week and each day. Any work done or materials used without written notice and allowing opportunity for inspection by the RPR may be ordered removed and replaced at the Contractor's expense.

Should the contract work include relocation, adjustment, or any other modification to existing facilities, not the property of the (contract) Owner, authorized representatives of the Owners of such facilities shall have the right to inspect such work. Such inspection shall in no sense make any facility owner a party to the contract, and shall in no way interfere with the rights of the parties to this contract.

50-10 Removal of unacceptable and unauthorized work. All work that does not conform to the requirements of the contract, plans, and specifications will be considered unacceptable, unless otherwise determined acceptable by the RPR as provided in paragraph 50-02, *Conformity with Plans and Specifications*.

Unacceptable work, whether the result of poor workmanship, use of defective materials, damage through carelessness, or any other cause found to exist prior to the final acceptance of the work, shall be removed immediately and replaced in an acceptable manner in accordance with the provisions of Section 70, paragraph 70-14, *Contractor's Responsibility for Work*.

No removal work made under provision of this paragraph shall be done without lines and grades having been established by the RPR. Work done contrary to the instructions of the RPR, work done beyond the lines shown on the plans or as established by the RPR, except as herein specified, or any extra work done without authority, will be considered as unauthorized and will not be paid for under the provisions of the contract. Work so done may be ordered removed or replaced at the Contractor's expense.

Upon failure on the part of the Contractor to comply with any order of the RPR made under the provisions of this subsection, the RPR will have authority to cause unacceptable work to be remedied or removed and replaced; and unauthorized work to be removed and recover the resulting costs as a liquidated damage against the Contractor.

50-11 Load restrictions. The Contractor shall comply with all legal load restrictions in the hauling of materials on public roads beyond the limits of the work. A special permit will not relieve the Contractor of liability for damage that may result from the moving of material or equipment.

The operation of equipment of such weight or so loaded as to cause damage to structures or to any other type of construction will not be permitted. Hauling of materials over the base course or surface course under construction shall be limited as directed. No loads will be permitted on a concrete pavement, base, or structure before the expiration of the curing period. The Contractor, at their own expense, shall be responsible for the repair to equal or better than preconstruction conditions of any damage caused by the Contractor's equipment and personnel.

50-12 Maintenance during construction. The Contractor shall maintain the work during construction and until the work is accepted. Maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and forces so that the work is maintained in satisfactory condition at all times.

In the case of a contract for the placing of a course upon a course or subgrade previously constructed, the Contractor shall maintain the previous course or subgrade during all construction operations.

All costs of maintenance work during construction and before the project is accepted shall be included in the unit prices bid on the various contract items, and the Contractor will not be paid an additional amount for such work.

50-13 Failure to maintain the work. Should the Contractor at any time fail to maintain the work as provided in paragraph 50-12, *Maintenance during Construction*, the RPR shall immediately notify the Contractor of such noncompliance. Such notification shall specify a reasonable time within which the Contractor shall be required to remedy such unsatisfactory maintenance condition. The time specified will give due consideration to the exigency that exists.

Should the Contractor fail to respond to the RPR's notification, the Owner may suspend any work necessary for the Owner to correct such unsatisfactory maintenance condition, depending on the exigency that exists. Any maintenance cost incurred by the Owner, shall be recovered as a liquidated damage against the Contractor.

50-14 Partial acceptance. If at any time during the execution of the project the Contractor substantially completes a usable unit or portion of the work, the occupancy of which will benefit the Owner, the Contractor may request the RPR to make final inspection of that unit. If the RPR finds upon inspection that the unit has been satisfactorily completed in compliance with the contract, the RPR may accept it as being complete, and the Contractor may be relieved of further responsibility for that unit. Such partial acceptance and beneficial occupancy by the Owner shall not void or alter any provision of the contract.

50-15 Final acceptance. Upon due notice from the Contractor of presumptive completion of the entire project, the RPR and Owner will make an inspection. If all construction provided for and contemplated by the contract is found to be complete in accordance with the contract, plans, and specifications, such

inspection shall constitute the final inspection. The RPR shall notify the Contractor in writing of final acceptance as of the date of the final inspection.

If, however, the inspection discloses any work, in whole or in part, as being unsatisfactory, the RPR will notify the Contractor and the Contractor shall correct the unsatisfactory work. Upon correction of the work, another inspection will be made which shall constitute the final inspection, provided the work has been satisfactorily completed. In such event, the RPR will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of final inspection.

50-16 Claims for adjustment and disputes. If for any reason the Contractor deems that additional compensation is due for work or materials not clearly provided for in the contract, plans, or specifications or previously authorized as extra work, the Contractor shall notify the RPR in writing of their intention to claim such additional compensation before the Contractor begins the work on which the Contractor bases the claim. If such notification is not given or the RPR is not afforded proper opportunity by the Contractor for keeping strict account of actual cost as required, then the Contractor hereby agrees to waive any claim for such additional compensation. Such notice by the Contractor and the fact that the RPR has kept account of the cost of the work shall not in any way be construed as proving or substantiating the validity of the claim. When the work on which the claim for additional compensation is based has been completed, the Contractor shall, within 10 calendar days, submit a written claim to the RPR who will present it to the Owner for consideration in accordance with local laws or ordinances.

Nothing in this subsection shall be construed as a waiver of the Contractor's right to dispute final payment based on differences in measurements or computations.

50-17 Value Engineering Cost Proposal.

The provisions of this paragraph will apply only to contracts awarded to the lowest bidder pursuant to competitive bidding.

On projects with original contract amounts in excess of $100,000, the Contractor may submit to the RPR, in writing, proposals for modifying the plans, specifications or other requirements of the contract for the sole purpose of reducing the cost of construction. The value engineering cost proposal shall not impair, in any manner, the essential functions or characteristics of the project, including but not limited to service life, economy of operation, ease of maintenance, desired appearance, design and safety standards. This provision shall not apply unless the proposal submitted is specifically identified by the Contractor as being presented for consideration as a value engineering proposal.

Not eligible for value engineering cost proposals are changes in the basic design of a pavement type, runway and taxiway lighting, visual aids, hydraulic capacity of drainage facilities, or changes in grade or alignment that reduce the geometric standards of the project.

As a minimum, the following information shall be submitted by the Contractor with each proposal:

a. A description of both existing contract requirements for performing the work and the proposed changes, with a discussion of the comparative advantages and disadvantages of each.

b. An itemization of the contract requirements that must be changed if the proposal is adopted.

c. A detailed estimate of the cost of performing the work under the existing contract and under the proposed changes.

d. A statement of the time by which a change order adopting the proposal must be issued.

e. A statement of the effect adoption of the proposal will have on the time for completion of the contract.

f. The contract items of work affected by the proposed changes, including any quantity variation attributable to them.

The Contractor may withdraw, in whole or in part, any value engineering cost proposal not accepted by the RPR, within the period specified in the proposal. The provisions of this subsection shall not be construed to require the RPR to consider any value engineering cost proposal that may be submitted.

The Contractor shall continue to perform the work in accordance with the requirements of the contract until a change order incorporating the value engineering cost proposal has been issued. If a change order has not been issued by the date upon which the Contractor's value engineering cost proposal specifies that a decision should be made, or such other date as the Contractor may subsequently have requested in writing, such value engineering cost proposal shall be deemed rejected.

The RPR shall be the sole judge of the acceptability of a value engineering cost proposal and of the estimated net savings from the adoption of all or any part of such proposal. In determining the estimated net savings, the RPR may disregard the contract bid prices if, in the RPR's judgment such prices do not represent a fair measure of the value of the work to be performed or deleted.

The Owner may require the Contractor to share in the Owner's costs of investigating a value engineering cost proposal submitted by the Contractor as a condition of considering such proposal. Where such a condition is imposed, the Contractor shall acknowledge acceptance of it in writing. Such acceptance shall constitute full authority for the Owner to deduct the cost of investigating a value engineering cost proposal from amounts payable to the Contractor under the contract.

If the Contractor's value engineering cost proposal is accepted in whole or in part, such acceptance will be by a contract change order that shall specifically state that it is executed pursuant to this paragraph. Such change order shall incorporate the changes in the plans and specifications which are necessary to permit the value engineering cost proposal or such part of it as has been accepted and shall include any conditions upon which the RPR's approval is based. The change order shall also set forth the estimated net savings attributable to the value engineering cost proposal. The net savings shall be determined as the difference in costs between the original contract costs for the involved work items and the costs occurring as a result of the proposed change. The change order shall also establish the net savings agreed upon and shall provide for adjustment in the contract price that will divide the net savings equally between the Contractor and the Owner.

The Contractor's 50% share of the net savings shall constitute full compensation to the Contractor for the value engineering cost proposal and the performance of the work.

Acceptance of the value engineering cost proposal and performance of the work shall not extend the time of completion of the contract unless specifically provided for in the contract change order.

END OF SECTION 50

Section 60 Control of Materials

60-01 Source of supply and quality requirements. The materials used in the work shall conform to the requirements of the contract, plans, and specifications. Unless otherwise specified, such materials that are manufactured or processed shall be new (as compared to used or reprocessed).

In order to expedite the inspection and testing of materials, the Contractor shall furnish documentation to the RPR as to the origin, composition, and manufacture of all materials to be used in the work. Documentation shall be furnished promptly after execution of the contract but, in all cases, prior to delivery of such materials.

At the RPR's option, materials may be approved at the source of supply before delivery. If it is found after trial that sources of supply for previously approved materials do not produce specified products, the Contractor shall furnish materials from other sources.

The Contractor shall furnish airport lighting equipment that meets the requirements of the specifications; and is listed in AC 150/5345-53, *Airport Lighting Equipment Certification Program* and *Addendum*, that is in effect on the date of advertisement.

60-02 Samples, tests, and cited specifications. All materials used in the work shall be inspected, tested, and approved by the RPR before incorporation in the work unless otherwise designated. Any work in which untested materials are used without approval or written permission of the RPR shall be performed at the Contractor's risk. Materials found to be unacceptable and unauthorized will not be paid for and, if directed by the RPR, shall be removed at the Contractor's expense.

Unless otherwise designated, quality assurance tests will be made by and at the expense of the Owner in accordance with the cited standard methods of ASTM, American Association of State Highway and Transportation Officials (AASHTO), federal specifications, Commercial Item Descriptions, and all other cited methods, which are current on the date of advertisement for bids.

The testing organizations performing on-site quality assurance field tests shall have copies of all referenced standards on the construction site for use by all technicians and other personnel. Unless otherwise designated, samples for quality assurance will be taken by a qualified representative of the RPR. All materials being used are subject to inspection, test, or rejection at any time prior to or during incorporation into the work. Copies of all tests will be furnished to the Contractor's representative at their request after review and approval of the RPR.

A copy of all Contractor QC test data shall be provided to the RPR daily, along with printed reports, in an approved format, on a weekly basis. After completion of the project, and prior to final payment, the Contractor shall submit a final report to the RPR showing all test data reports, plus an analysis of all results showing ranges, averages, and corrective action taken on all failing tests.

The Contractor shall employ a Quality Control (QC) testing organization to perform all Contractor required QC tests in accordance with Item C-100 Contractor Quality Control Program (CQCP).

60-03 Certification of compliance/analysis (COC/COA). The RPR may permit the use, prior to sampling and testing, of certain materials or assemblies when accompanied by manufacturer's COC stating that such materials or assemblies fully comply with the requirements of the contract. The certificate shall be signed by the manufacturer. Each lot of such materials or assemblies delivered to the work must be accompanied by a certificate of compliance in which the lot is clearly identified. The COA is the manufacturer's COC and includes all applicable test results.

Materials or assemblies used on the basis of certificates of compliance may be sampled and tested at any time and if found not to be in conformity with contract requirements will be subject to rejection whether in place or not.

The form and distribution of certificates of compliance shall be as approved by the RPR.

When a material or assembly is specified by "brand name or equal" and the Contractor elects to furnish the specified "or equal," the Contractor shall be required to furnish the manufacturer's certificate of compliance for each lot of such material or assembly delivered to the work. Such certificate of compliance shall clearly identify each lot delivered and shall certify as to:

a. Conformance to the specified performance, testing, quality or dimensional requirements; and,

b. Suitability of the material or assembly for the use intended in the contract work.

The RPR shall be the sole judge as to whether the proposed "or equal" is suitable for use in the work.

The RPR reserves the right to refuse permission for use of materials or assemblies on the basis of certificates of compliance.

60-04 Plant inspection. The RPR or their authorized representative may inspect, at its source, any specified material or assembly to be used in the work. Manufacturing plants may be inspected from time to time for the purpose of determining compliance with specified manufacturing methods or materials to be used in the work and to obtain samples required for acceptance of the material or assembly.

Should the RPR conduct plant inspections, the following conditions shall exist:

a. The RPR shall have the cooperation and assistance of the Contractor and the producer with whom the Contractor has contracted for materials.

b. The RPR shall have full entry at all reasonable times to such parts of the plant that concern the manufacture or production of the materials being furnished.

c. If required by the RPR, the Contractor shall arrange for adequate office or working space that may be reasonably needed for conducting plant inspections. Place office or working space in a convenient location with respect to the plant.

It is understood and agreed that the Owner shall have the right to retest any material that has been tested and approved at the source of supply after it has been delivered to the site. The RPR shall have the right to reject only material which, when retested, does not meet the requirements of the contract, plans, or specifications.

60-05 Engineer/ Resident Project Representative (RPR) field office. An Engineer/RPR field office is not required.

60-06 Storage of materials. Materials shall be stored to assure the preservation of their quality and fitness for the work. Stored materials, even though approved before storage, may again be inspected prior to their use in the work. Stored materials shall be located to facilitate their prompt inspection. The Contractor shall coordinate the storage of all materials with the RPR. Materials to be stored on airport property shall not create an obstruction to air navigation nor shall they interfere with the free and unobstructed movement of aircraft. Unless otherwise shown on the plans and/or CSPP, the storage of materials and the location of the Contractor's plant and parked equipment or vehicles shall be as directed by the RPR. Private property shall not be used for storage purposes without written permission of the Owner or lessee of such property. The Contractor shall make all arrangements and bear all expenses for the storage of materials on private property. Upon request, the Contractor shall furnish the RPR a copy of the property Owner's permission.

All storage sites on private or airport property shall be restored to their original condition by the Contractor at their expense, except as otherwise agreed to (in writing) by the Owner or lessee of the property.

60-07 Unacceptable materials. Any material or assembly that does not conform to the requirements of the contract, plans, or specifications shall be considered unacceptable and shall be rejected. The Contractor shall remove any rejected material or assembly from the site of the work, unless otherwise instructed by the RPR.

Rejected material or assembly, the defects of which have been corrected by the Contractor, shall not be returned to the site of the work until such time as the RPR has approved its use in the work.

60-08 Owner furnished materials. The Contractor shall furnish all materials required to complete the work, except those specified, if any, to be furnished by the Owner. Owner-furnished materials shall be made available to the Contractor at the location specified.

All costs of handling, transportation from the specified location to the site of work, storage, and installing Owner-furnished materials shall be included in the unit price bid for the contract item in which such Owner-furnished material is used.

After any Owner-furnished material has been delivered to the location specified, the Contractor shall be responsible for any demurrage, damage, loss, or other deficiencies that may occur during the Contractor's handling, storage, or use of such Owner-furnished material. The Owner will deduct from any monies due or to become due the Contractor any cost incurred by the Owner in making good such loss due to the Contractor's handling, storage, or use of Owner-furnished materials.

END OF SECTION 60

Section 70 Legal Regulations and Responsibility to Public

70-01 Laws to be observed. The Contractor shall keep fully informed of all federal and state laws, all local laws, ordinances, and regulations and all orders and decrees of bodies or tribunals having any jurisdiction or authority, which in any manner affect those engaged or employed on the work, or which in any way affect the conduct of the work. The Contractor shall at all times observe and comply with all such laws, ordinances, regulations, orders, and decrees; and shall protect and indemnify the Owner and all their officers, agents, or servants against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by the Contractor or the Contractor's employees.

70-02 Permits, licenses, and taxes. The Contractor shall procure all permits and licenses, pay all charges, fees, and taxes, and give all notices necessary and incidental to the due and lawful execution of the work.

70-03 Patented devices, materials, and processes. If the Contractor is required or desires to use any design, device, material, or process covered by letters of patent or copyright, the Contractor shall provide for such use by suitable legal agreement with the Patentee or Owner. The Contractor and the surety shall indemnify and hold harmless the Owner, any third party, or political subdivision from any and all claims for infringement by reason of the use of any such patented design, device, material or process, or any trademark or copyright, and shall indemnify the Owner for any costs, expenses, and damages which it may be obliged to pay by reason of an infringement, at any time during the execution or after the completion of the work.

70-04 Restoration of surfaces disturbed by others. The Owner reserves the right to authorize the construction, reconstruction, or maintenance of any public or private utility service, FAA or National Oceanic and Atmospheric Administration (NOAA) facility, or a utility service of another government agency at any time during the progress of the work. To the extent that such construction, reconstruction, or maintenance has been coordinated with the Owner, such authorized work (by others) must be shown on the plans and is indicated as follows:

Except as listed above, the Contractor shall not permit any individual, firm, or corporation to excavate or otherwise disturb such utility services or facilities located within the limits of the work without the written permission of the RPR.

Should the Owner of public or private utility service, FAA, or NOAA facility, or a utility service of another government agency be authorized to construct, reconstruct, or maintain such utility service or facility during the progress of the work, the Contractor shall cooperate with such Owners by arranging and performing the work in this contract to facilitate such construction, reconstruction or maintenance by others whether or not such work by others is listed above. When ordered as extra work by the RPR, the Contractor shall make all necessary repairs to the work which are due to such authorized work by others, unless otherwise provided for in the contract, plans, or specifications. It is understood and agreed that the Contractor shall not be entitled to make any claim for damages due to such authorized work by others or for any delay to the work resulting from such authorized work.

70-05 Federal Participation. The United States Government has agreed to reimburse the Owner for some portion of the contract costs. The contract work is subject to the inspection and approval of duly authorized representatives of the FAA Administrator. No requirement of this contract shall be construed as making the United States a party to the contract nor will any such requirement interfere, in any way, with the rights of either party to the contract.

70-06 Sanitary, health, and safety provisions. The Contractor's worksite and facilities shall comply with applicable federal, state, and local requirements for health, safety and sanitary provisions.

70-07 Public convenience and safety. The Contractor shall control their operations and those of their subcontractors and all suppliers, to assure the least inconvenience to the traveling public. Under all circumstances, safety shall be the most important consideration.

The Contractor shall maintain the free and unobstructed movement of aircraft and vehicular traffic with respect to their own operations and those of their own subcontractors and all suppliers in accordance with Section 40, paragraph 40-05, *Maintenance of Traffic,* and shall limit such operations for the convenience and safety of the traveling public as specified in Section 80, paragraph 80-04, *Limitation of Operations*.

The Contractor shall remove or control debris and rubbish resulting from its work operations at frequent intervals, and upon the order of the RPR. If the RPR determines the existence of Contractor debris in the work site represents a hazard to airport operations and the Contractor is unable to respond in a prompt and reasonable manner, the RPR reserves the right to assign the task of debris removal to a third party and recover the resulting costs as a liquidated damage against the Contractor.

70-08 Construction Safety and Phasing Plan (CSPP). The Contractor shall complete the work in accordance with the approved Construction Safety and Phasing Plan (CSPP) developed in accordance with AC 150/5370-2, Operational Safety on Airports During Construction. The CSPP is included in the project plans.

70-09 Use of explosives. The use of explosives is not permitted on this project.

70-10 Protection and restoration of property and landscape. The Contractor shall be responsible for the preservation of all public and private property, and shall protect carefully from disturbance or damage all land monuments and property markers until the Engineer/RPR has witnessed or otherwise referenced their location and shall not move them until directed.

The Contractor shall be responsible for all damage or injury to property of any character, during the execution of the work, resulting from any act, omission, neglect, or misconduct in manner or method of executing the work, or at any time due to defective work or materials, and said responsibility shall not be released until the project has been completed and accepted.

When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work, or in consequence of the non-execution thereof by the Contractor, the Contractor shall restore, at their expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, or otherwise restoring as may be directed, or the Contractor shall make good such damage or injury in an acceptable manner.

70-11 Responsibility for damage claims. The Contractor shall indemnify and hold harmless the Engineer/RPR and the Owner and their officers, agents, and employees from all suits, actions, or claims, of any character, brought because of any injuries or damage received or sustained by any person, persons, or property on account of the operations of the Contractor; or on account of or in consequence of any neglect in safeguarding the work; or through use of unacceptable materials in constructing the work; or because of any act or omission, neglect, or misconduct of said Contractor; or because of any claims or amounts recovered from any infringements of patent, trademark, or copyright; or from any claims or amounts arising or recovered under the "Workmen's Compensation Act," or any other law, ordinance, order, or decree. Money due the Contractor under and by virtue of their own contract considered necessary by the Owner for such purpose may be retained for the use of the Owner or, in case no money is due, their own surety may be held until such suits, actions, or claims for injuries or damages shall have been settled and suitable evidence to that effect furnished to the Owner, except that money due the

Contractor will not be withheld when the Contractor produces satisfactory evidence that he or she is adequately protected by public liability and property damage insurance.

70-12 Third party beneficiary clause. It is specifically agreed between the parties executing the contract that it is not intended by any of the provisions of any part of the contract to create for the public or any member thereof, a third-party beneficiary or to authorize anyone not a party to the contract to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of the contract.

70-13 Opening sections of the work to traffic. If it is necessary for the Contractor to complete portions of the contract work for the beneficial occupancy of the Owner prior to completion of the entire contract, such "phasing" of the work must be specified below and indicated on the approved Construction Safety and Phasing Plan (CSPP) and the project plans. When so specified, the Contractor shall complete such portions of the work on or before the date specified or as otherwise specified.

Upon completion of any portion of work listed above, such portion shall be accepted by the Owner in accordance with Section 50, paragraph 50-14, *Partial Acceptance*.

No portion of the work may be opened by the Contractor until directed by the Owner in writing. Should it become necessary to open a portion of the work to traffic on a temporary or intermittent basis, such openings shall be made when, in the opinion of the RPR, such portion of the work is in an acceptable condition to support the intended traffic. Temporary or intermittent openings are considered to be inherent in the work and shall not constitute either acceptance of the portion of the work so opened or a waiver of any provision of the contract. Any damage to the portion of the work so opened that is not attributable to traffic which is permitted by the Owner shall be repaired by the Contractor at their expense.

The Contractor shall make their own estimate of the inherent difficulties involved in completing the work under the conditions herein described and shall not claim any added compensation by reason of delay or increased cost due to opening a portion of the contract work.

The Contractor must conform to safety standards contained AC 150/5370-2 and the approved CSPP.

Contractor shall refer to the plans, specifications, and the approved CSPP to identify barricade requirements, temporary and/or permanent markings, airfield lighting, guidance signs and other safety requirements prior to opening up sections of work to traffic.

70-14 Contractor's responsibility for work. Until the RPR's final written acceptance of the entire completed work, excepting only those portions of the work accepted in accordance with Section 50, paragraph 50-14, *Partial Acceptance*, the Contractor shall have the charge and care thereof and shall take every precaution against injury or damage to any part due to the action of the elements or from any other cause, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work occasioned by any of the above causes before final acceptance and shall bear the expense thereof except damage to the work due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God such as earthquake, tidal wave, tornado, hurricane or other cataclysmic phenomenon of nature, or acts of the public enemy or of government authorities.

If the work is suspended for any cause whatever, the Contractor shall be responsible for the work and shall take such precautions necessary to prevent damage to the work. The Contractor shall provide for normal drainage and shall erect necessary temporary structures, signs, or other facilities at their own expense. During such period of suspension of work, the Contractor shall properly and continuously maintain in an acceptable growing condition all living material in newly established planting, seeding, and sodding furnished under the contract, and shall take adequate precautions to protect new tree growth and other important vegetative growth against injury.

70-15 Contractor's responsibility for utility service and facilities of others. As provided in paragraph 70-04, *Restoration of Surfaces Disturbed by Others*, the Contractor shall cooperate with the owner of any

public or private utility service, FAA or NOAA, or a utility service of another government agency that may be authorized by the Owner to construct, reconstruct or maintain such utility services or facilities during the progress of the work. In addition, the Contractor shall control their operations to prevent the unscheduled interruption of such utility services and facilities.

To the extent that such public or private utility services, FAA, or NOAA facilities, or utility services of another governmental agency are known to exist within the limits of the contract work, the approximate locations have been indicated on the plans and/or in the contract documents.

It is understood and agreed that the Owner does not guarantee the accuracy or the completeness of the location information relating to existing utility services, facilities, or structures that may be shown on the plans or encountered in the work. Any inaccuracy or omission in such information shall not relieve the Contractor of the responsibility to protect such existing features from damage or unscheduled interruption of service.

It is further understood and agreed that the Contractor shall, upon execution of the contract, notify the Owners of all utility services or other facilities of their plan of operations. Such notification shall be in writing addressed to "The Person to Contact" as provided in this paragraph and paragraph 70-04, *Restoration of Surfaces Disturbed By Others*. A copy of each notification shall be given to the RPR.

In addition to the general written notification provided, it shall be the responsibility of the Contractor to keep such individual Owners advised of changes in their plan of operations that would affect such Owners.

Prior to beginning the work in the general vicinity of an existing utility service or facility, the Contractor shall again notify each such Owner of their plan of operation. If, in the Contractor's opinion, the Owner's assistance is needed to locate the utility service or facility or the presence of a representative of the Owner is desirable to observe the work, such advice should be included in the notification. Such notification shall be given by the most expeditious means to reach the utility owner's "Person to Contact" no later than two normal business days prior to the Contractor's commencement of operations in such general vicinity. The Contractor shall furnish a written summary of the notification to the RPR.

The Contractor's failure to give the two days' notice shall be cause for the Owner to suspend the Contractor's operations in the general vicinity of a utility service or facility.

Where the outside limits of an underground utility service have been located and staked on the ground, the Contractor shall be required to use hand excavation methods within 3 feet (1 m) of such outside limits at such points as may be required to ensure protection from damage due to the Contractor's operations.

Should the Contractor damage or interrupt the operation of a utility service or facility by accident or otherwise, the Contractor shall immediately notify the proper authority and the RPR and shall take all reasonable measures to prevent further damage or interruption of service. The Contractor, in such events, shall cooperate with the utility service or facility owner and the RPR continuously until such damage has been repaired and service restored to the satisfaction of the utility or facility owner.

The Contractor shall bear all costs of damage and restoration of service to any utility service or facility due to their operations whether due to negligence or accident. The Owner reserves the right to deduct such costs from any monies due or which may become due the Contractor, or their own surety.

70-15.1 FAA facilities and cable runs. The Contractor is hereby advised that the construction limits of the project include existing facilities and buried cable runs that are owned, operated and maintained by the FAA. The Contractor, during the execution of the project work, shall comply with the following:

a. The Contractor shall permit FAA maintenance personnel the right of access to the project work site for purposes of inspecting and maintaining all existing FAA owned facilities.

b. The Contractor shall provide notice to the FAA Air Traffic Organization (ATO)/Technical Operations/System Support Center (SSC) Point-of-Contact through the airport Owner a minimum of seven (7) calendar days prior to commencement of construction activities in order to permit sufficient time to locate and mark existing buried cables and to schedule any required facility outages.

c. If execution of the project work requires a facility outage, the Contractor shall contact the FAA Point-of-Contact a minimum of 72 hours prior to the time of the required outage.

d. Any damage to FAA cables, access roads, or FAA facilities during construction caused by the Contractor's equipment or personnel whether by negligence or accident will require the Contractor to repair or replace the damaged cables, access road, or FAA facilities to FAA requirements. The Contractor shall not bear the cost to repair damage to underground facilities or utilities improperly located by the FAA.

e. If the project work requires the cutting or splicing of FAA owned cables, the FAA Point-of-Contact shall be contacted a minimum of 72 hours prior to the time the cable work commences. The FAA reserves the right to have a FAA representative on site to observe the splicing of the cables as a condition of acceptance. All cable splices are to be accomplished in accordance with FAA specifications and require approval by the FAA Point-of-Contact as a condition of acceptance by the Owner. The Contractor is hereby advised that FAA restricts the location of where splices may be installed. If a cable splice is required in a location that is not permitted by FAA, the Contractor shall furnish and install a sufficient length of new cable that eliminates the need for any splice.

70-16 Furnishing rights-of-way. The Owner will be responsible for furnishing all rights-of-way upon which the work is to be constructed in advance of the Contractor's operations.

70-17 Personal liability of public officials. In carrying out any of the contract provisions or in exercising any power or authority granted by this contract, there shall be no liability upon the Engineer, RPR, their authorized representatives, or any officials of the Owner either personally or as an official of the Owner. It is understood that in such matters they act solely as agents and representatives of the Owner.

70-18 No waiver of legal rights. Upon completion of the work, the Owner will expeditiously make final inspection and notify the Contractor of final acceptance. Such final acceptance, however, shall not preclude or stop the Owner from correcting any measurement, estimate, or certificate made before or after completion of the work, nor shall the Owner be precluded or stopped from recovering from the Contractor or their surety, or both, such overpayment as may be sustained, or by failure on the part of the Contractor to fulfill their obligations under the contract. A waiver on the part of the Owner of any breach of any part of the contract shall not be held to be a waiver of any other or subsequent breach.

The Contractor, without prejudice to the terms of the contract, shall be liable to the Owner for latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards the Owner's rights under any warranty or guaranty.

70-19 Environmental protection. The Contractor shall comply with all federal, state, and local laws and regulations controlling pollution of the environment. The Contractor shall take necessary precautions to prevent pollution of streams, lakes, ponds, and reservoirs with fuels, oils, asphalts, chemicals, or other harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter.

70-20 Archaeological and historical findings. Unless otherwise specified in this subsection, the Contractor is advised that the site of the work is not within any property, district, or site, and does not contain any building, structure, or object listed in the current National Register of Historic Places published by the United States Department of Interior.

Should the Contractor encounter, during their operations, any building, part of a building, structure, or object that is incongruous with its surroundings, the Contractor shall immediately cease operations in that

location and notify the RPR. The RPR will immediately investigate the Contractor's finding and the Owner will direct the Contractor to either resume operations or to suspend operations as directed.

Should the Owner order suspension of the Contractor's operations in order to protect an archaeological or historical finding, or order the Contractor to perform extra work, such shall be covered by an appropriate contract change order or supplemental agreement as provided in Section 40, paragraph 40-04, *Extra Work,* and Section 90, paragraph 90-05, *Payment for Extra Work*. If appropriate, the contract change order or supplemental agreement shall include an extension of contract time in accordance with Section 80, paragraph 80-07, *Determination and Extension of Contract Time*.

70-21 Insurance Requirements.

The Contractor shall indemnify, save harmless, and waive their right to subrogate against the Engineer and the Owner, and their respective officers and employees, (individually and collectively, the "Indemnified Parties"), from and against any and all suits, judgments, actions, claims and liabilities, of any character, brought because of or arising out of any personal or bodily injury or damage received or sustained by any person(s) or property on account of the operations of the Contractor; or on account of, or in consequence of, any neglect in safeguarding the work; or through use of unacceptable materials in constructing the work; or because of any act or omission, neglect or misconduct of said Contractor; or because of any claims or amounts recovered from any infringement(s) of patent, trademark or copyright; or from any claims or amounts arising or recovered under the "Workmen's Compensation Act", or any other law, ordinance, order or decree. Money due to the Contractor under and by virtue of its contract as may be considered necessary by the Owner for such purpose may be retained for the use of the Owner, or, in case no money is due, his or her surety may be held until such suits, judgments, actions, claims or liabilities for injuries or damages as aforesaid, shall have been settled and suitable evidence to that effect furnished to the Owner, except that money due to the Contactor will not be withheld when the Contractor produces satisfactory evidence that it is adequately protected by public liability and/or property damage insurance, as applicable, in accordance with the coverages outlined in the insurance section below. Contractor's insurance coverage shall be primary and the insurance of the Engineer and the Owner, and their respective officers and employees, (individually and collectively, the "Indemnified Parties") shall not contribute in any way for incidents brought because of or arising out of any personal or bodily injury or damage received or sustained by any person(s) or property on account of the operations of the Contractor; or on account of, or in consequence of, any neglect in safeguarding the work; or through use of unacceptable materials in constructing the work; or because of any act or omission, neglect or misconduct of said Contractor; or because of any claims or amounts recovered from any infringement(s) of patent, trademark or copyright; or from any claims or amounts arising or recovered under the "Workmen's Compensation Act", or any other law, ordinance, order or decree.

INSURANCE (LIABILITY). Before commencing the work hereunder, Contractor shall pay for (as part of the cost of the work), and shall keep in full force and effect during the entire term hereof, insurance issued by a company satisfactory to Owner, and qualified to do business in the state the project is located, as follows:

1. Worker's Compensation Insurance. CONTRACTOR shall file with Owner a certification that CONTRACTOR carries Worker's Compensation Insurance in the sum as required by the law of the state the project is in.

2. Bodily Injury and Property Damage. CONTRACTOR shall file with Owner copies of completed Certificates of Insurance, as evidence that CONTRACTOR carries adequate insurance, satisfactory to Owner, to provide protection against all claims for damages to public or private property, and for bodily injury and/or death to persons, arising out of and during the performance of the Contract, and to protect Owner's premises on or near the location on which construction operations are to be performed.
   a. Bodily Injury and Property Damage Other Than Automobile.
      Unless otherwise specifically required by provisions in the proposal, the minimum limits of property damage and bodily injury liability covering each contract shall be:

      $3,000,000 per occurrence

   b. Comprehensive Automobile Liability Insurance.

Includes coverage for any vehicle owned by the entity or used for the benefit of the operation on airport (including, but not limited to, all owned, non-owned, hired, licensed or unlicensed, vehicles or leased vehicles, and providing automatic coverage for newly acquired vehicle, covering Bodily Injury (including death) and Property Damage Liability with a combined single limit of not less than the limits set forth below:

$3,000,000 per occurrence

c. Umbrella or Excess Liability.

In lieu of the total limits of liability being provided under the primary Commercial General Liability and Automobile Liability insurance, the entities or outside parties may provide the liability limit specified by means of a combination of primary and Umbrella/Excess Liability insurance. The Umbrella/Excess Liability coverage must be as broad as or broader than the primary insurance policies.

If Umbrella policies are utilized to meet any limits as prescribed above, all applicable Umbrella policies are required to be endorsed to meet the requirements of coverage as outlined for Worker's Compensation, Automobile Liability, and Commercial General Liability.

d. Owner's Protective Liability.

Where required as an incident to compliance with Federal laws and regulations, bodily injury and property damage protection shall be extended to Owner and Engineer and its agents.

e. Builder's Risk Insurance.

If the project involves a building or structure, the Contractor shall maintain Builder's Risk Insurance at a financial level to cover the cost of the completed project. If the amount of the original contract is increased by change order, the amount of Builder's Risk Insurance coverage must include the increase in the project cost

3. Reports. At the request of Owner or its agent, CONTRACTOR or its insurance carrier shall report claims received, inspections made, and disposition of claims.

The Owner, the Engineer, and the Construction Managers, and their respective officers, directors, employees, representatives and agents shall be named as an "additional insured", using Contractors Endorsement (CG2010 Ed. 11-85 or its equivalent) or a comparable Blanket Additional Insured Endorsement "which includes both premises liability coverage as well as products and completed operations coverage". Contractor shall also provide the proper endorsement(s) and policy corresponding to Contractor naming the Owner, the Engineer, and the Construction Managers, and their respective officers, directors, employee, representatives and agents as an "additional insured."

Coverage provided to the Owner, the Engineer, and the Construction Managers, as additional insureds under the contractors' liability policy, shall apply on a primary and non-contributory basis.

Before commencing any work on the project, Contractor shall furnish to the Owner, the Engineers, and the Construction Managers, and any other persons designated by the Owner, certificates issued by the company or companies issuing such insurance, evidencing that such insurance is in full force and effect and expressly providing that no such insurance may be cancelled or changed without at least thirty (30) days' prior written notice thereof.

In addition, if requested by the Owner, the Engineer, or the Construction Managers, duplicate policies and applicable policy endorsements shall be furnished. At the request of the Owner, the Engineer, or the Construction Managers, the Contractor also shall promptly cause any and all government agencies and political subdivisions having an interest in the project, or any part thereof, to be named as additional insured parties under all of the aforesaid liability and casualty insurance policies, and shall furnish insurance certificates to them. The Contractor shall not commence or permit any subcontractor to commence any work until each has fully complied with the insurance requirements set forth herein.

END OF SECTION 70

Page Intentionally Blank

Section 80 Execution and Progress

80-01 Subletting of contract. The Owner will not recognize any subcontractor on the work. The Contractor shall at all times when work is in progress be represented either in person, by a qualified superintendent, or by other designated, qualified representative who is duly authorized to receive and execute orders of the Resident Project Representative (RPR).

The Contractor shall perform, with his organization, an amount of work equal to at least **[___]** percent of the total contract cost.

Should the Contractor elect to assign their contract, said assignment shall be concurred in by the surety, shall be presented for the consideration and approval of the Owner, and shall be consummated only on the written approval of the Owner.

The Contractor shall provide copies of all subcontracts to the RPR 14 days prior to being utilized on the project. As a minimum, the information shall include the following:

- Subcontractor's legal company name.
- Subcontractor's legal company address, including County name.
- Principal contact person's name, telephone and fax number.
- Complete narrative description, and dollar value of the work to be performed by the subcontractor.
- Copies of required insurance certificates in accordance with the specifications.
- Minority/ non-minority status.

80-02 Notice to proceed (NTP). The Owners notice to proceed will state the date on which contract time commences. The Contractor is expected to commence project operations within **3** days of the NTP date. The Contractor shall notify the RPR at least 24 hours in advance of the time contract operations begins. The Contractor shall not commence any actual operations prior to the date on which the notice to proceed is issued by the Owner.

80-03 Execution and progress. Unless otherwise specified, the Contractor shall submit their coordinated construction schedule showing all work activities for the RPR's review and acceptance at least 10 days prior to the start of work. The Contractor's progress schedule, once accepted by the RPR, will represent the Contractor's baseline plan to accomplish the project in accordance with the terms and conditions of the Contract. The RPR will compare actual Contractor progress against the baseline schedule to determine that status of the Contractor's performance. The Contractor shall provide sufficient materials, equipment, and labor to guarantee the completion of the project in accordance with the plans and specifications within the time set forth in the proposal.

If the Contractor falls significantly behind the submitted schedule, the Contractor shall, upon the RPR's request, submit a revised schedule for completion of the work within the contract time and modify their operations to provide such additional materials, equipment, and labor necessary to meet the revised schedule. Should the execution of the work be discontinued for any reason, the Contractor shall notify the RPR at least 24 hours in advance of resuming operations.

The Contractor shall not commence any actual construction prior to the date on which the NTP is issued by the Owner.

The project schedule shall be prepared as a network diagram in Critical Path Method (CPM), Program Evaluation and Review Technique (PERT), or other format, or as otherwise specified. It shall include information on the sequence of work activities, milestone dates, and activity duration. The schedule shall show all work items identified in the project proposal for each work area and shall include the project start date and end date.

The Contractor shall maintain the work schedule and provide an update and analysis of the progress schedule on a **[** twice **]** monthly basis, or as otherwise specified in the contract. Submission of the work schedule shall not relieve the Contractor of overall responsibility for scheduling, sequencing, and coordinating all work to comply with the requirements of the contract.

80-04 Limitation of operations. The Contractor shall control their operations and the operations of their subcontractors and all suppliers to provide for the free and unobstructed movement of aircraft in the air operations areas (AOA) of the airport.

When the work requires the Contractor to conduct their operations within an AOA of the airport, the work shall be coordinated with airport operations (through the RPR) at least **[** 48 hours **]** prior to commencement of such work. The Contractor shall not close an AOA until so authorized by the RPR and until the necessary temporary marking, signage and associated lighting is in place as provided in Section 70, paragraph 70-08, *Construction Safety and Phasing Plan (CSPP)*.

When the contract work requires the Contractor to work within an AOA of the airport on an intermittent basis (intermittent opening and closing of the AOA), the Contractor shall maintain constant communications as specified; immediately obey all instructions to vacate the AOA; and immediately obey all instructions to resume work in such AOA. Failure to maintain the specified communications or to obey instructions shall be cause for suspension of the Contractor's operations in the AOA until satisfactory conditions are provided. The areas of the AOA identified in the Construction Safety Phasing Plan (CSPP), cannot be closed to operating aircraft to permit the Contractor's operations on a continuous basis and will therefore be closed to aircraft operations intermittently.

The Contractor shall be required to conform to safety standards contained in AC 150/5370-2, Operational Safety on Airports During Construction and the approved CSPP.

80-04.1 Operational safety on airport during construction. All Contractors' operations shall be conducted in accordance with the approved project Construction Safety and Phasing Plan (CSPP) and the Safety Plan Compliance Document (SPCD) and the provisions set forth within the current version of AC 150/5370-2, Operational Safety on Airports During Construction. The CSPP included within the contract documents conveys minimum requirements for operational safety on the airport during construction activities. The Contractor shall prepare and submit a SPCD that details how it proposes to comply with the requirements presented within the CSPP.

The Contractor shall implement all necessary safety plan measures prior to commencement of any work activity. The Contractor shall conduct routine checks to assure compliance with the safety plan measures.

The Contractor is responsible to the Owner for the conduct of all subcontractors it employs on the project. The Contractor shall assure that all subcontractors are made aware of the requirements of the CSPP and SPCD and that they implement and maintain all necessary measures.

No deviation or modifications may be made to the approved CSPP and SPCD unless approved in writing by the Owner. The necessary coordination actions to review Contractor proposed modifications to an approved CSPP or approved SPCD can require a significant amount of time.

80-05 Character of workers, methods, and equipment. The Contractor shall, at all times, employ sufficient labor and equipment for prosecuting the work to full completion in the manner and time required by the contract, plans, and specifications.

All workers shall have sufficient skill and experience to perform properly the work assigned to them. Workers engaged in special work or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform the work satisfactorily.

Any person employed by the Contractor or by any subcontractor who violates any operational regulations or operational safety requirements and, in the opinion of the RPR, does not perform his work in a proper and skillful manner or is intemperate or disorderly shall, at the written request of the RPR, be removed immediately by the Contractor or subcontractor employing such person, and shall not be employed again in any portion of the work without approval of the RPR.

Should the Contractor fail to remove such person or persons, or fail to furnish suitable and sufficient personnel for the proper execution of the work, the RPR may suspend the work by written notice until compliance with such orders.

All equipment that is proposed to be used on the work shall be of sufficient size and in such mechanical condition as to meet requirements of the work and to produce a satisfactory quality of work. Equipment used on any portion of the work shall not cause injury to previously completed work, adjacent property, or existing airport facilities due to its use.

When the methods and equipment to be used by the Contractor in accomplishing the work are not prescribed in the contract, the Contractor is free to use any methods or equipment that will accomplish the work in conformity with the requirements of the contract, plans, and specifications.

When the contract specifies the use of certain methods and equipment, such methods and equipment shall be used unless otherwise authorized by the RPR. If the Contractor desires to use a method or type of equipment other than specified in the contract, the Contractor may request authority from the RPR to do so. The request shall be in writing and shall include a full description of the methods and equipment proposed and of the reasons for desiring to make the change. If approval is given, it will be on the condition that the Contractor will be fully responsible for producing work in conformity with contract requirements. If, after trial use of the substituted methods or equipment, the RPR determines that the work produced does not meet contract requirements, the Contractor shall discontinue the use of the substitute method or equipment and shall complete the remaining work with the specified methods and equipment. The Contractor shall remove any deficient work and replace it with work of specified quality, or take such other corrective action as the RPR may direct. No change will be made in basis of payment for the contract items involved nor in contract time as a result of authorizing a change in methods or equipment under this paragraph.

80-06 Temporary suspension of the work. The Owner shall have the authority to suspend the work wholly, or in part, for such period or periods the Owner may deem necessary, due to unsuitable weather, or other conditions considered unfavorable for the execution of the work, or for such time necessary due to the failure on the part of the Contractor to carry out orders given or perform any or all provisions of the contract.

In the event that the Contractor is ordered by the Owner, in writing, to suspend work for some unforeseen cause not otherwise provided for in the contract and over which the Contractor has no control, the Contractor may be reimbursed for actual money expended on the work during the period of shutdown. No allowance will be made for anticipated profits. The period of shutdown shall be computed from the effective date of the written order to suspend work to the effective date of the written order to resume the work. Claims for such compensation shall be filed with the RPR within the time period stated in the RPR's order to resume work. The Contractor shall submit with their own claim information substantiating the amount shown on the claim. The RPR will forward the Contractor's claim to the Owner for

consideration in accordance with local laws or ordinances. No provision of this article shall be construed as entitling the Contractor to compensation for delays due to inclement weather or for any other delay provided for in the contract, plans, or specifications.

If it becomes necessary to suspend work for an indefinite period, the Contractor shall store all materials in such manner that they will not become an obstruction nor become damaged in any way. The Contractor shall take every precaution to prevent damage or deterioration of the work performed and provide for normal drainage of the work. The Contractor shall erect temporary structures where necessary to provide for traffic on, to, or from the airport.

80-07 Determination and extension of contract time. The number of calendar days, the number of working days, or the completion date shall be stated in the proposal and contract and shall be known as the Contract Time.

If the contract time requires extension for reasons beyond the Contractor's control, it shall be adjusted as follows:

80-07.1 Contract time based on working days. Contract time based on working days shall be calculated weekly by the Resident Project Representative (RPR). The RPR will furnish the Contractor a copy of their weekly statement of the number of working days charged against the contract time during the week and the number of working days currently specified for completion of the contract (the original contract time plus the number of working days, if any, that have been included in approved Change Orders or Supplemental Agreements covering Extra Work).

The weekly statement of contract time charged is based on the following considerations:

(1) Time will be charged for days on which the Contractor could proceed with scheduled work under construction at the time for at least six (6) hours with the normal work force employed on such items. When normal work force is a double-shift, use 12 hours; and when the normal work force is on a triple-shift, use 18 hours. Conditions beyond the Contractor's control such as strikes, lockouts, unusual delays in transportation, temporary suspension of the scheduled work items under construction or temporary suspension of the entire work which have been ordered by the Owner for reasons not the fault of the Contractor, shall not be charged against the contract time.

(2) The RPR will not make charges against the contract time prior to the effective date of the notice to proceed.

(3) The RPR will begin charges against the contract time on the first working day after the effective date of the notice to proceed.

(4) The RPR will not make charges against the contract time after the date of final acceptance as defined in Section 50, paragraph 50-14, *Final Acceptance*.

(5) The Contractor will be allowed one (1) week in which to file a written protest setting forth their own objections to the RPR's weekly statement. If no objection is filed within such specified time, the weekly statement shall be considered as acceptable to the Contractor.

The contract time (stated in the proposal) is based on the originally estimated quantities as described in the Section 20, paragraph 20-05, *Interpretation of Estimated Proposal Quantities*. Should the satisfactory completion of the contract require performance of work in greater quantities than those estimated in the proposal, the contract time shall be increased in the same proportion as the cost of the actually completed quantities bears to the cost of the originally estimated quantities in the proposal. Such increase in contract time shall not consider either the cost of work or the extension of contract time that has been covered by change order or supplemental agreement and shall be made at the time of final payment.

Contract time based on calendar days. Contract Time based on calendar days shall consist of the number of calendar days stated in the contract counting from the effective date of the Notice to Proceed

and including all Saturdays, Sundays, holidays, and non-work days. All calendar days elapsing between the effective dates of the Owner's orders to suspend and resume all work, due to causes not the fault of the Contractor, shall be excluded.

At the time of final payment, the contract time shall be increased in the same proportion as the cost of the actually completed quantities bears to the cost of the originally estimated quantities in the proposal. Such increase in the contract time shall not consider either cost of work or the extension of contract time that has been covered by a change order or supplemental agreement. Charges against the contract time will cease as of the date of final acceptance.

Contract time based on specific completion date. When the contract time is a specified completion date, it shall be the date on which all contract work shall be substantially complete.

If the Contractor finds it impossible for reasons beyond their own control to complete the work within the contract time as specified, or as extended in accordance with the provisions of this paragraph, the Contractor may, at any time prior to the expiration of the contract time as extended, make a written request to the Owner for an extension of time setting forth the reasons which the Contractor believes will justify the granting of their own request. Requests for extension of time, caused by inclement weather, shall be supported with National Weather Bureau data showing the actual amount of inclement weather exceeded what could normally be expected during the contract period. The Contractor's plea that insufficient time was specified is not a valid reason for extension of time. If the supporting documentation justify the work was delayed because of conditions beyond the control and without the fault of the Contractor, the Owner may extend the time for completion by a change order that adjusts the contract time or completion date. The extended time for completion shall then be in full force and effect, the same as though it were the original time for completion.

80-08 Failure to complete on time. For each calendar day or working day, as specified in the contract, that any work remains uncompleted after the contract time (including all extensions and adjustments as provided in paragraph 80-07, *Determination and Extension of Contract Time*) the sum specified in the contract and proposal as liquidated damages (LD) will be deducted from any money due or to become due the Contractor or their own surety. Such deducted sums shall not be deducted as a penalty but shall be considered as liquidation of a reasonable portion of damages including but not limited to additional engineering services that will be incurred by the Owner should the Contractor fail to complete the work in the time provided in their contract.

The maximum construction time allowed for Schedules **SEE SPECIAL PROVISIONS** will be the sum of the time allowed for individual schedules but not more than **SEE SPECIAL PROVISIONS** days. Permitting the Contractor to continue and finish the work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, will in no way operate as a wavier on the part of the Owner of any of its rights under the contract.

80-09 Default and termination of contract. The Contractor shall be considered in default of their contract and such default will be considered as cause for the Owner to terminate the contract for any of the following reasons, if the Contractor:

a. Fails to begin the work under the contract within the time specified in the Notice to Proceed, or

b. Fails to perform the work or fails to provide sufficient workers, equipment and/or materials to assure completion of work in accordance with the terms of the contract, or

c. Performs the work unsuitably or neglects or refuses to remove materials or to perform anew such work as may be rejected as unacceptable and unsuitable, or

d. Discontinues the execution of the work, or

e. Fails to resume work which has been discontinued within a reasonable time after notice to do so, or

f. Becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency, or

g. Allows any final judgment to stand against the Contractor unsatisfied for a period of 10 days, or

h. Makes an assignment for the benefit of creditors, or

i. For any other cause whatsoever, fails to carry on the work in an acceptable manner.

Should the Owner consider the Contractor in default of the contract for any reason above, the Owner shall immediately give written notice to the Contractor and the Contractor's surety as to the reasons for considering the Contractor in default and the Owner's intentions to terminate the contract.

If the Contractor or surety, within a period of 10 days after such notice, does not proceed in accordance therewith, then the Owner will, upon written notification from the RPR of the facts of such delay, neglect, or default and the Contractor's failure to comply with such notice, have full power and authority without violating the contract, to take the execution of the work out of the hands of the Contractor. The Owner may appropriate or use any or all materials and equipment that have been mobilized for use in the work and are acceptable and may enter into an agreement for the completion of said contract according to the terms and provisions thereof, or use such other methods as in the opinion of the RPR will be required for the completion of said contract in an acceptable manner.

All costs and charges incurred by the Owner, together with the cost of completing the work under contract, will be deducted from any monies due or which may become due the Contractor. If such expense exceeds the sum which would have been payable under the contract, then the Contractor and the surety shall be liable and shall pay to the Owner the amount of such excess.

80-10 Termination for national emergencies. The Owner shall terminate the contract or portion thereof by written notice when the Contractor is prevented from proceeding with the construction contract as a direct result of an Executive Order of the President with respect to the execution of war or in the interest of national defense.

When the contract, or any portion thereof, is terminated before completion of all items of work in the contract, payment will be made for the actual number of units or items of work completed at the contract price or as mutually agreed for items of work partially completed or not started. No claims or loss of anticipated profits shall be considered.

Reimbursement for organization of the work, and other overhead expenses, (when not otherwise included in the contract) and moving equipment and materials to and from the job will be considered, the intent being that an equitable settlement will be made with the Contractor.

Acceptable materials, obtained or ordered by the Contractor for the work and that are not incorporated in the work shall, at the option of the Contractor, be purchased from the Contractor at actual cost as shown by receipted bills and actual cost records at such points of delivery as may be designated by the RPR.

Termination of the contract or a portion thereof shall neither relieve the Contractor of their responsibilities for the completed work nor shall it relieve their surety of its obligation for and concerning any just claim arising out of the work performed.

80-11 Work area, storage area and sequence of operations. The Contractor shall obtain approval from the RPR prior to beginning any work in all areas of the airport. No operating runway, taxiway, or air operations area (AOA) shall be crossed, entered, or obstructed while it is operational. The Contractor shall plan and coordinate work in accordance with the approved CSPP and SPCD.

END OF SECTION 80

Section 90 Measurement and Payment

90-01 Measurement of quantities. All work completed under the contract will be measured by the RPR, or their authorized representatives, using United States Customary Units of Measurement**.**

The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice.

Unless otherwise specified, longitudinal measurements for area computations will be made horizontally, and no deductions will be made for individual fixtures (or leave-outs) having an area of 9 square feet (0.8 square meters) or less. Unless otherwise specified, transverse measurements for area computations will be the neat dimensions shown on the plans or ordered in writing by the RPR.

Unless otherwise specified, all contract items which are measured by the linear foot such as electrical ducts, conduits, pipe culverts, underdrains, and similar items shall be measured parallel to the base or foundation upon which such items are placed.

The term “lump sum” when used as an item of payment will mean complete payment for the work described in the contract. When a complete structure or structural unit (in effect, “lump sum” work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories.

When requested by the Contractor and approved by the RPR in writing, material specified to be measured by the cubic yard (cubic meter) may be weighed, and such weights will be converted to cubic yards (cubic meters) for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the RPR and shall be agreed to by the Contractor before such method of measurement of pay quantities is used.

Measurement and Payment Terms

Term	Description
Excavation and Embankment Volume	In computing volumes of excavation, the average end area method will be used unless otherwise specified.
Measurement and Proportion by Weight	The term “ton” will mean the short ton consisting of 2,000 pounds (907 km) avoirdupois. All materials that are measured or proportioned by weights shall be weighed on accurate, independently certified scales by competent, qualified personnel at locations designated by the RPR. If material is shipped by rail, the car weight may be accepted provided that only the actual weight of material is paid for. However, car weights will not be acceptable for material to be passed through mixing plants. Trucks used to haul material being paid for by weight shall be weighed empty daily at such times as the RPR directs, and each truck shall bear a plainly legible identification mark.
Measurement by Volume	Materials to be measured by volume in the hauling vehicle shall be hauled in approved vehicles and measured therein at the point of delivery. Vehicles for this purpose may be of any size or type acceptable for the materials hauled, provided that the body is of such shape that the actual contents may be readily and accurately determined. All vehicles

Term	Description
	shall be loaded to at least their water level capacity, and all loads shall be leveled when the vehicles arrive at the point of delivery.
Asphalt Material	Asphalt materials will be measured by the gallon (liter) or ton (kg). When measured by volume, such volumes will be measured at 60°F (16°C) or will be corrected to the volume at 60°F (16°C) using ASTM D1250 for asphalts. Net certified scale weights or weights based on certified volumes in the case of rail shipments will be used as a basis of measurement, subject to correction when asphalt material has been lost from the car or the distributor, wasted, or otherwise not incorporated in the work. When asphalt materials are shipped by truck or transport, net certified weights by volume, subject to correction for loss or foaming, will be used for computing quantities.
Cement	Cement will be measured by the ton (kg) or hundredweight (km).
Structure	Structures will be measured according to neat lines shown on the plans or as altered to fit field conditions.
Timber	Timber will be measured by the thousand feet board measure (MFBM) actually incorporated in the structure. Measurement will be based on nominal widths and thicknesses and the extreme length of each piece.
Plates and Sheets	The thickness of plates and galvanized sheet used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing will be specified and measured in decimal fraction of inch.
Miscellaneous Items	When standard manufactured items are specified such as fence, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by gauge, unit weight, section dimensions, etc., such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted.
Scales	Scales must be tested for accuracy and serviced before use. Scales for weighing materials which are required to be proportioned or measured and paid for by weight shall be furnished, erected, and maintained by the Contractor, or be certified permanently installed commercial scales. Platform scales shall be installed and maintained with the platform level and rigid bulkheads at each end. Scales shall be accurate within 0.5% of the correct weight throughout the range of use. The Contractor shall have the scales checked under the observation of the RPR before beginning work and at such other times as requested. The intervals shall be uniform in spacing throughout the graduated or marked length of the beam or dial and shall not exceed 0.1% of the nominal rated capacity of the scale, but not less than one pound (454 grams). The use of spring balances will not be permitted. In the event inspection reveals the scales have been “overweighing” (indicating more than correct weight) they will be immediately adjusted. All materials received subsequent to the last previous correct weighting-accuracy test will be reduced by the percentage of error in excess of 0.5%. In the event inspection reveals the scales have been under-weighing (indicating less than correct weight), they shall be immediately adjusted. No additional payment to the Contractor will be allowed for materials previously weighed and recorded. Beams, dials, platforms, and other scale equipment shall be so arranged that the operator and the RPR can safely and conveniently view them.

Term	Description
	Scale installations shall have available ten standard 50-pound (2.3 km) weights for testing the weighing equipment or suitable weights and devices for other approved equipment. All costs in connection with furnishing, installing, certifying, testing, and maintaining scales; for furnishing check weights and scale house; and for all other items specified in this subsection, for the weighing of materials for proportioning or payment, shall be included in the unit contract prices for the various items of the project.
Rental Equipment	Rental of equipment will be measured by time in hours of actual working time and necessary traveling time of the equipment within the limits of the work. Special equipment ordered in connection with extra work will be measured as agreed in the change order or supplemental agreement authorizing such work as provided in paragraph 90-05 *Payment for Extra Work*.
Pay Quantities	When the estimated quantities for a specific portion of the work are designated as the pay quantities in the contract, they shall be the final quantities for which payment for such specific portion of the work will be made, unless the dimensions of said portions of the work shown on the plans are revised by the RPR. If revised dimensions result in an increase or decrease in the quantities of such work, the final quantities for payment will be revised in the amount represented by the authorized changes in the dimensions.

90-02 Scope of payment. The Contractor shall receive and accept compensation provided for in the contract as full payment for furnishing all materials, for performing all work under the contract in a complete and acceptable manner, and for all risk, loss, damage, or expense of whatever character arising out of the nature of the work or the execution thereof, subject to the provisions of Section 70, paragraph 70-18, *No Waiver of Legal Rights*.

When the "basis of payment" subsection of a technical specification requires that the contract price (price bid) include compensation for certain work or material essential to the item, this same work or material will not also be measured for payment under any other contract item which may appear elsewhere in the contract, plans, or specifications.

90-03 Compensation for altered quantities. When the accepted quantities of work vary from the quantities in the proposal, the Contractor shall accept as payment in full, so far as contract items are concerned, payment at the original contract price for the accepted quantities of work actually completed and accepted. No allowance, except as provided for in Section 40, paragraph 40-02, *Alteration of Work and Quantities,* will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor which results directly from such alterations or indirectly from their own unbalanced allocation of overhead and profit among the contract items, or from any other cause.

90-04 Payment for omitted items. As specified in Section 40, paragraph 40-03, *Omitted Items,* the RPR shall have the right to omit from the work (order nonperformance) any contract item, except major contract items, in the best interest of the Owner.

Should the RPR omit or order nonperformance of a contract item or portion of such item from the work, the Contractor shall accept payment in full at the contract prices for any work actually completed and acceptable prior to the RPR's order to omit or non-perform such contract item.

Acceptable materials ordered by the Contractor or delivered on the work prior to the date of the RPR's order will be paid for at the actual cost to the Contractor and shall thereupon become the property of the Owner.

In addition to the reimbursement hereinbefore provided, the Contractor shall be reimbursed for all actual costs incurred for the purpose of performing the omitted contract item prior to the date of the RPR's order. Such additional costs incurred by the Contractor must be directly related to the deleted contract item and shall be supported by certified statements by the Contractor as to the nature the amount of such costs.

90-05 Payment for extra work. Extra work, performed in accordance with Section 40, paragraph 40-04, *Extra Work*, will be paid for at the contract prices or agreed prices specified in the change order or supplemental agreement authorizing the extra work.

90-06 Partial payments. Partial payments will be made to the Contractor at least once each month as the work progresses. Said payments will be based upon estimates, prepared by the RPR, of the value of the work performed and materials complete and in place, in accordance with the contract, plans, and specifications. Such partial payments may also include the delivered actual cost of those materials stockpiled and stored in accordance with paragraph 90-07, *Payment for Materials on Hand*. No partial payment will be made when the amount due to the Contractor since the last estimate amounts to less than five hundred dollars.

a. From the total of the amount determined to be payable on a partial payment, 5 percent of such total amount will be deducted and retained by the Owner for protection of the Owner's interests. Unless otherwise instructed by the Owner, the amount retained by the Owner will be in effect until the final payment is made except as follows:

(1) Contractor may request release of retainage on work that has been partially accepted by the Owner in accordance with Section 50-14. Contractor must provide a certified invoice to the RPR that supports the value of retainage held by the Owner for partially accepted work.

(2) In lieu of retainage, the Contractor may exercise at its option the establishment of an escrow account per paragraph 90-08.

b. The Contractor is required to pay all subcontractors for satisfactory performance of their contracts no later than 30 days after the Contractor has received a partial payment. Contractor must provide the Owner evidence of prompt and full payment of retainage held by the prime Contractor to the subcontractor within 30 days after the subcontractor's work is satisfactorily completed. A subcontractor's work is satisfactorily completed when all the tasks called for in the subcontract have been accomplished and documented as required by the Owner. When the Owner has made an incremental acceptance of a portion of a prime contract, the work of a subcontractor covered by that acceptance is deemed to be satisfactorily completed.

c. When at least 95% of the work has been completed to the satisfaction of the RPR, the RPR shall, at the Owner's discretion and with the consent of the surety, prepare estimates of both the contract value and the cost of the remaining work to be done. The Owner may retain an amount not less than twice the contract value or estimated cost, whichever is greater, of the work remaining to be done. The remainder, less all previous payments and deductions, will then be certified for payment to the Contractor.

It is understood and agreed that the Contractor shall not be entitled to demand or receive partial payment based on quantities of work in excess of those provided in the proposal or covered by approved change orders or supplemental agreements, except when such excess quantities have been determined by the RPR to be a part of the final quantity for the item of work in question.

No partial payment shall bind the Owner to the acceptance of any materials or work in place as to quality or quantity. All partial payments are subject to correction at the time of final payment as provided in paragraph 90-09, *Acceptance and Final Payment*.

The Contractor shall deliver to the Owner a complete release of all claims for labor and material arising out of this contract before the final payment is made. If any subcontractor or supplier fails to furnish such a release in full, the Contractor may furnish a bond or other collateral satisfactory to the Owner to indemnify the Owner against any potential lien or other such claim. The bond or collateral shall include all costs, expenses, and attorney fees the Owner may be compelled to pay in discharging any such lien or claim.

90-07 Payment for materials on hand. Partial payments may be made to the extent of the delivered cost of materials to be incorporated in the work, provided that such materials meet the requirements of the contract, plans, and specifications and are delivered to acceptable sites on the airport property or at other sites in the vicinity that are acceptable to the Owner. Such delivered costs of stored or stockpiled materials may be included in the next partial payment after the following conditions are met:

a. The material has been stored or stockpiled in a manner acceptable to the RPR at or on an approved site.

b. The Contractor has furnished the RPR with acceptable evidence of the quantity and quality of such stored or stockpiled materials.

c. The Contractor has furnished the RPR with satisfactory evidence that the material and transportation costs have been paid.

d. The Contractor has furnished the Owner legal title (free of liens or encumbrances of any kind) to the material stored or stockpiled.

e. The Contractor has furnished the Owner evidence that the material stored or stockpiled is insured against loss by damage to or disappearance of such materials at any time prior to use in the work.

It is understood and agreed that the transfer of title and the Owner's payment for such stored or stockpiled materials shall in no way relieve the Contractor of their responsibility for furnishing and placing such materials in accordance with the requirements of the contract, plans, and specifications.

In no case will the amount of partial payments for materials on hand exceed the contract price for such materials or the contract price for the contract item in which the material is intended to be used.

No partial payment will be made for stored or stockpiled living or perishable plant materials.

The Contractor shall bear all costs associated with the partial payment of stored or stockpiled materials in accordance with the provisions of this paragraph.

90-08 Payment of withheld funds. At the Contractor's option, if an Owner withholds retainage in accordance with the methods described in paragraph 90-06 *Partial Payments*, the Contractor may request that the Owner deposit the retainage into an escrow account. The Owner's deposit of retainage into an escrow account is subject to the following conditions:

a. The Contractor shall bear all expenses of establishing and maintaining an escrow account and escrow agreement acceptable to the Owner.

b. The Contractor shall deposit to and maintain in such escrow only those securities or bank certificates of deposit as are acceptable to the Owner and having a value not less than the retainage that would otherwise be withheld from partial payment.

c. The Contractor shall enter into an escrow agreement satisfactory to the Owner.

d. The Contractor shall obtain the written consent of the surety to such agreement.

90-09 Acceptance and final payment. When the contract work has been accepted in accordance with the requirements of Section 50, paragraph 50-15, *Final Acceptance*, the RPR will prepare the final estimate of the items of work actually performed. The Contractor shall approve the RPR's final estimate or advise the RPR of the Contractor's objections to the final estimate which are based on disputes in measurements or computations of the final quantities to be paid under the contract as amended by change order or supplemental agreement. The Contractor and the RPR shall resolve all disputes (if any) in the measurement and computation of final quantities to be paid within 30 calendar days of the Contractor's receipt of the RPR's final estimate. If, after such 30-day period, a dispute still exists, the Contractor may approve the RPR's estimate under protest of the quantities in dispute, and such disputed quantities shall be considered by the Owner as a claim in accordance with Section 50, paragraph 50-16, *Claims for Adjustment and Disputes*.

After the Contractor has approved, or approved under protest, the RPR's final estimate, and after the RPR's receipt of the project closeout documentation required in paragraph 90-11, *Contractor Final Project Documentation*, final payment will be processed based on the entire sum, or the undisputed sum in case of approval under protest, determined to be due the Contractor less all previous payments and all amounts to be deducted under the provisions of the contract. All prior partial estimates and payments shall be subject to correction in the final estimate and payment.

If the Contractor has filed a claim for additional compensation under the provisions of Section 50, paragraph 50-16, *Claims for Adjustments and Disputes,* or under the provisions of this paragraph, such claims will be considered by the Owner in accordance with local laws or ordinances. Upon final adjudication of such claims, any additional payment determined to be due the Contractor will be paid pursuant to a supplemental final estimate.

90-10 Construction warranty.

a. In addition to any other warranties in this contract, the Contractor warrants that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, workmanship, or design furnished, or performed by the Contractor or any subcontractor or supplier at any tier.

b. This warranty shall continue for a period of one year from the date of final acceptance of the work, except as noted. If the Owner takes possession of any part of the work before final acceptance, this warranty shall continue for a period of one year from the date the Owner takes possession. However, this will not relieve the Contractor from corrective items required by the final acceptance of the project work. Light Emitting Diode emitting diode (LED) light fixtures with the exception of obstruction lighting, must be warranted by the manufacturer for a minimum of four (4) years after date of installation inclusive of all electronics.

c. The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to Owner real or personal property, when that damage is the result of the Contractor's failure to conform to contract requirements; or any defect of equipment, material, workmanship, or design furnished by the Contractor.

d. The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for one year from the date of repair or replacement.

e. The Owner will notify the Contractor, in writing, within **[** `seven (7)` **]** days after the discovery of any failure, defect, or damage.

f. If the Contractor fails to remedy any failure, defect, or damage within **[** `14` **]** days after receipt of notice, the Owner shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

g. With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall: (1) Obtain all warranties that would be given in normal commercial practice; (2) Require all warranties to be executed, in writing, for the benefit of the Owner, as directed by the Owner, and (3) Enforce all warranties for the benefit of the Owner.

h. This warranty shall not limit the Owner's rights with respect to latent defects, gross mistakes, or fraud.

90-11 Contractor Final Project Documentation. Approval of final payment to the Contractor is contingent upon completion and submittal of the items listed below. The final payment will not be approved until the RPR approves the Contractor's final submittal. The Contractor shall:

a. Provide two (2) copies of all manufacturers warranties specified for materials, equipment, and installations.

b. Provide weekly payroll records (not previously received) from the general Contractor and all subcontractors.

c. Complete final cleanup in accordance with Section 40, paragraph 40-08, *Final Cleanup*.

d. Complete all punch list items identified during the Final Inspection.

e. Provide complete release of all claims for labor and material arising out of the Contract.

f. Provide a certified statement signed by the subcontractors, indicating actual amounts paid to the Disadvantaged Business Enterprise (DBE) subcontractors and/or suppliers associated with the project.

g. When applicable per state requirements, return copies of sales tax completion forms.

h. Manufacturer's certifications for all items incorporated in the work.

i. All required record drawings, as-built drawings or as-constructed drawings.

j. Project Operation and Maintenance (O&M) Manual(s).

k. Security for Construction Warranty.

l. Equipment commissioning documentation submitted, if required.

END OF SECTION 90

SECTION 001073 - SUPPLEMENTARY CONDITIONS – ADDENDUM 02

The following Supplementary Conditions modify, change, delete or add to the General Conditions of the contract for Construction.

1. INDIANA SALES AND USE TAX:

The labor and materials furnished under this contract will be used, when the project is completed by the Owner for its tax exempt purposes. Accordingly, the Indiana Gross Retail and Use Tax (Sales and Use Tax) will not apply to the purchase of materials under this contract by the Owner from the Contractor. The Owner will issue an appropriate exemption certificate to the Contractor to that effect.

2. SPECIAL PROVISIONS REGARDING RETAINAGE, BONDS AND PAYMENT OF CONTRACTORS AND SUB-CONTRACTORS:

Effective May 1, 1972, the laws of the State of Indiana (IC 1971 5-16-5.5) contain certain special provisions regarding retainage, bonds and payment of contractors and sub-contractors. The contracts entered into will be governed by those provisions. With respect to contracts in excess of $200,000 entered into between a contractor and the Owner, these provisions require among other things, that the amounts retained by the Owner from the contractor pursuant to retainage provisions be placed in an escrow account in accordance with a written escrow agreement to be executed by the contractor. Pursuant to these provisions, the successful bidder will be required to comply with all applicable provisions of the statute referred to above with respect to each of his sub-contractors (as the term sub-contractor is defined in the statute referred to above). The form of the escrow agreement shall be in accordance with the agreement bound hereafter.

3. PAYMENTS TO CONTRACTORS:

Monthly payments will be based on 94% of the value of the labor performed and materials incorporated into the building project since the preceding payment period, plus 94% of the value of the materials suitably stored and protected at the site ready for incorporation in the work. Applications for payment, subsequent to the first application, shall be accompanied by Affidavits and Waivers of Lien from the prime contractors and all major suppliers/subcontractors.

Form of application for payment shall be AIA Document G-702, Application and Certificate for Payment, supported by AIA Document G703, Continuation Sheet, executed in same form as the Schedule of Values. Application shall be submitted in quintuplet including all supporting documentation.

All contracts above two hundred thousand dollars ($200,000) must provide for a retainage to be

withheld from progress payments made by the Owner to the Contractor. At the election of the Contractor, the funds comprising the retainage shall be placed in an escrow account with a bank or savings and loan association mutually agreeable to the Contractor and Owner and authorized by a written agreement executed by each. If the Contractor agrees, the funds comprising the retainage may be held by the Owner pending final payment, as defined in the Contract Documents. In such a case, the retainage funds held by the Owner shall not bear interest during the term of the escrow. The retainage to be withheld can be either:

1. Six percent (6%) of the dollar value of all satisfactory work completed up to fifty percent (50%) complete or
2. Three percent (3%) of the dollar value until all work is completed.

Within sixty-one (61) days following the date of substantial completion, the contractor shall be paid all escrow principal and income. However, if any work remains, two hundred percent (200%) of the value of each item value shall be retained.

Bills of sale, vouchers or such other evidence to support the contractor's right to payment for the latter condition may be required for the Owner's protection. No material thus paid for to be removed from the premises without the Owner's permission.

Contractor shall furnish, before the first application, a schedule of values of the various parts of the work aggregating the total sum of the contract. This schedule when approved by the A/E, shall be used as a basis for certificate of payment. In applying for payments, the contractor shall submit a statement based on this application, showing his right to the payment claimed. Application shall be made ten (10) days before payment is due.

Final payment due and payable sixty-one (61) days following final completion and acceptance of work.

Final application for payment shall be accompanied by the following additional documents: AIA Document G706, Contractor's Affidavit of Payment of Debts and Claims; AIA Document G706A, Contractor's Affidavit of Release of Liens; AIA Document G707, Consent of Surety, Unconditional Final Waivers of Lien from all Sub-contractors and Suppliers and Final Conditional Waivers of Lien from the Prime Contractors.

4. INSURANCE REQUIREMENTS:

Add the following to Subparagraph 11.2.1 of AIA Document A201-2017, General Conditions of the Contract for Construction.

OWNER'S LIABILITY INSURANCE:

The Owner shall be responsible for and at his option may maintain such insurance as will protect from his contingent liability to others for damages because of bodily injury, including death, which

may arise from operations under the Contract, and any other liability for damages which the Contractor is required to insure under any provision of the Contract.

CONTRACTOR'S LIABILITY INSURANCE:

A. Each Contractor shall take out and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the work is located, insurance of such types and in such amounts as are necessary to protect the Contractor from claims set forth below which may arise of or result from the Contractor's operations under the Contract and for which the Contractor may be legally liable whether such operations be by the Contractor or by a subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable.

B. No Contractor shall commence work under this contract until he has obtained all insurance required under this Section and such insurance has been approved by the Owner, nor shall any Contractor allow any subcontractor to commence work on his subcontract until the required insurance has been obtained by the subcontractor and approved by the Owner. Each and every Contractor and Subcontractor shall maintain all insurance required under paragraph E of this Section for not less than one year after completion of this contract.

C. Contractor shall submit to the Architect four (4) copies of Certificates of Insurance for this review and the Owner's approval prior to commencement of the Work. The form of certificate preferred is AIA Document G705, Certificate of Insurance. Certificates shall include each and every type of coverage specified.

In the event the Contractor engages Subcontractor for all or a portion of the work required by this agreement, the Contractor will require any and all Subcontractors to also assume all of the duties, obligations and requirements in this Section. The Contractor shall require each Subcontractor to provide Certificates of Insurance evidencing the insurance required by this Section naming the Contractor and Owner (and Building Corporation if bid is assigned by Owner to Building Corporation) as Additional Insureds, except as respects Workers' Compensation Insurance and that insurance carried and maintained by the Subcontractor meets all the requirements of this Section.

D. If requested by the Owner, Contractor shall furnish the Owner with true copies of each policy required of him or his subcontractors. Said policies will not be cancelled or materially altered, except after thirty (30) days advance written notice to the Owner and Architect, mailed to the addresses indicated herein.

E. Liability insurance shall include all major divisions of coverage and be on a comprehensive basis including:

1. Premises' Operations (deleting any X-C or U exclusions).
2. Products and Completed Operations.

3. Contractual, including specific provisions for the Contractor's obligations under Paragraph I.
4. Owned, Non-Owned, and Hired motor vehicles.
5. Broad Form Property Damage including Completed Operations.

Except with respect to bodily injury and property damage included within the products and completed operations hazards, the aggregate limit where applicable shall apply separately to each project under this Contract.

Coverage shall be written on an "Occurrence" form unless otherwise approved by the Owner.

The Architect and the Owner (and Building Corporation if bid is assigned by Owner to Building Corporation) shall be named as additional Insureds under the Comprehensive General Liability Insurance policy or the Commercial General Liability Policy.

F. The insurance required by Paragraph E above shall be written for not less than any limits of liability shown on the "Schedule of Insurance Coverages Required" found herein, or required by law, whichever is greater.

SCHEDULE OF INSURANCE COVERAGES REQUIRED

TYPE OF INSURANCE	LIMITS OF LIABILITY	EACH OCCURRENCE	AGGREGATE
Workers' Compensation	Statutory		
Employer's Liability		$1,000,000/$500,000/$100,000	
Comprehensive General Liability Including:	Bodily Injury	$1,000,000	$2,000,000
(X) Premises / Operations	Property Damage	$1,000,000	$2,000,000
(X) Underground Explosion & Collapse Hazard	BI & PD Combined	$1,000,000	$2,000,000
(X) Products Completed Opr.	Personal Injury		$2,000,000
(X) Contractual Liabilty			
(X) Independent Contractors			
(X) Broad Form Property Damage			

(X) Personal Injury (X) Aggregate by Jobsite			
Comprehensive Automobile Lliability	Bodily Injury (Per Person)	$1,000,000	
(X) Any Auto (X) All Owned Autos (X) Hired Autos (X) Non-Hired Autos	Bodily Injury (Per Accident)	$1,000,000	
	Property Damage	$1,000,000	
	BI & PD	$1,000,000	
Excess Liability			
(X) Umbrella Form () Other than Umbrella Form	BI & PD Combined	$5,000,000	$5,000,000
Other (Specify)			

G. If the Contractor's General Liability Insurance is provided by the Commercial Liability form (Occurrence Form), the Contractor's Automobile Liability Insurance shall include coverage for "Automobile Contractual Liability."

H. Hold Harmless Agreement

1. The Contractor shall indemnify and hold harmless the Owner and the Architect and their agents and employees from and against all claims, damages, losses and expenses including attorney's fee arising out of or resulting from the performance of the work, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (including but not limited to the work) including the loss of use resulting therefrom, and (b) is caused in whole or in part by any negligent act or omission of the Contractor, any subcontractor, any one directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.

2. In any and all claims against the Owner or the Architect or any of their agents or employees by an employee of the Contractor, Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this Hold Harmless Agreement shall not be limited in any way by any limitation on the amount payable by or for the Contractor or any Subcontractor under workmen's compensation acts, disability benefit acts or other employee benefits acts.

3. The obligations of the Contractor under this Hold Harmless Agreement shall not extend to any claim, damage, loss or expense for which the Architect is legally liable arising out of professional services performed by the Architect, his agents, or employees, including (1) the preparation of maps, plans, opinions, reports, surveys, designs or specifications, and (b) periodic observation of the work or engineering services.

PROPERTY INSURANCE

A. The Contractor shall provide insurance coverage for portions of the Work stored off the site after written approval of the Owner at the value established in the approval, and also for portions of the work in transit.

B. Each Contractor shall make such provisions as he deems necessary to replace all items of his work missing by theft prior to acceptance of his work by the Owner.

5. NONDISCRIMINATION PROVISIONS:

a. General:

The Contractor shall perform, observe and comply with all applicable state, municipal and federal laws, rules, regulations and Executive Orders pertaining to nondiscrimination against employees or applicants for employment because of race, color, religion, national origin or ancestry. When required by such laws, rules, regulations and Executive Orders, the Contractor shall include nondiscrimination provisions in all contracts and purchase orders.

b. State of Indiana Requirements:

Pursuant to Indiana Code 22-9-1-10 and the Civil Rights Act of 1964, the parties and any contractors or subcontractors thereof, shall not discriminate against any employee or applicant for employment in the performance of this contract. Parties shall not discriminate with respect to the hire, tenure, terms conditions or privileges of employment or any matter directly or indirectly related to employment, because of race, color, religion, sex, disability, national origin or ancestry. Breach of this provision may be regarded as a material breach of this contract.

6. ARBITRATION:

The Owner omits Arbitration - Article 15.4 paragraphs 15.4.1 thru 15.4.3 which is a part of AIA

Document A201-2017, General Conditions of the Contract for Construction.

7. CHANGES IN THE WORK:

1. Add the following to subparagraph 7.2.2:

In subparagraph 7.2.2 the allowance for overhead and profit combined, included in the total cost to the Owner, shall be based on the following schedule:

a. For the contractor, for the work performed by the contractor's own forces, fifteen percent (15%) of the cost.
b. For the contractor, for work performed by his subcontractor, five percent (5%) of the amount due the subcontractor.
c. For each subcontractor or sub-subcontractor involved, for work performed by his own forces, fifteen percent (15%) of the cost.
d. For each subcontractor, for work performed by his sub-subcontractor, for work performed by his sub-subcontractors, five percent (5%) of the amount due the sub-subcontractors.
e. Cost to which overhead and profit is to be applied shall be determined in accordance with Section 012100 -Allowances.
f. In order to facilitate checking of quotations for extras or credits, all proposals, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of costs including labor, materials and subcontractors. Labor and materials shall be itemized in the manner prescribed above. Where major cost items are subcontracts, they shall be itemized also. In no case will a change involving over $500.00 be approved without such itemization.

8. GUARANTEE:

Contractor shall guarantee in writing for a period of one year from the date of final acceptance of the work against any and all defects in materials and/or workmanship that should manifest themselves within that period. Installations that are defective shall be removed and replaced without expense to the owner and to his satisfaction.

9. PERMITS:

Refer to INSTRUCTIONS TO BIDDERS - #9 TAXES, PERMITS, INSPECTIONS, ETC.

10. SCHEDULE OF WORK:

Progress and Completion:

Add the following subparagraphs to paragraph 8.2.4 and 8.2.5:
"8.2.4 Each prime contractor, subcontractor, and/or material company shall furnish sufficient labor forces, construction plant and equipment, temporary heat, enclosures, etc., required for their work and protection unless specified elsewhere, and shall work such hours, including night shifts and overtime operations as may be necessary to insure the prosecution of the work in accordance with the approved current progress schedule. If, in the opinion of the Architect or General Contractor, the Contractor falls behind the progress schedule, the Contractor shall take such steps as may be necessary to improve his progress and the Architect or General Contractor may require him to increase the number of shifts, and/or overtime operations, days of work, and/or the amount of construction plant, all without additional cost to the Owner. Failure of the Contractor to comply with the requirements of the Architect or General Contractor under this provision shall be grounds for determination by the Architect that the Contractor is not prosecuting the work with such diligence as will insure completion within the time specified. Upon such determination, the Owner shall have the right, without limiting any other right he may have to either not approve reduction of retainage or to terminate the Contractor's right to proceed with the work or any separable part thereof."

"8.2.5 Timely performance is an expressed condition of the contract and any delay in the Contractor's performance may excuse the Owner from his obligation to perform. Failure to abide by the time condition may be treated as a breach of contract.

11. ASBESTOS:

Contractors shall not use any asbestos containing materials for this project. At the end of the project, submit a certification to the A/E and Owner that no asbestos containing materials were used.

12. TOBACCO AND ALCOHOL:

Richmond Community Schools has a strict policy prohibiting the use of tobacco of any kind or alcohol on school property. This policy extends to all construction personnel. Individuals who violate this policy will be asked to leave the jobsite.

13. SEXUAL PREDATOR:

The Contractor shall not permit the employment of anyone who has been convicted of a sex offense requiring the person to register as a sex offender under Indiana Code 35-42-4-11.

14. **CRIMINAL HISTORY BACKGROUND CHECKS: - ADD 02**

Criminal history background checks shall be procured through Safe Hiring Solutions, LLC **or any equal and qualified firm specializing in background checks and acceptable to the Owner. This information shall be furnished to the Owner, prior to a person being permitted to enter upon the**

property for any purpose associated with this Contract. Costs for criminal history background checks shall be borne by any and all prime contractors, sub-contractors, sub-sub-contractors and so on down the line for all tiers of construction personnel who may be or have reason to be on the project site at any time. Contact information: Safe Hiring Solutions, LLC; 10 West Main Street, Danville, Indiana 46122; (317) 745-6946 or (888) 215-8296.

END OF SECTION 001073

SECTION 003132 - GEOTECHNICAL DATA – ADDENDUM 02

1.1 GEOTECHNICAL DATA

A. This Document with its referenced attachments is part of the Procurement and Contracting Requirements for Project. They provide Owner's information for Bidders' convenience and are intended to supplement rather than serve in lieu of Bidders' own investigations. They are made available for Bidders' convenience and information. This Document and its attachments are not part of the Contract Documents.

B. Because subsurface conditions indicated by the soil borings are a sampling in relation to the entire construction area, and for other reasons, the Owner, the Architect, the Architect's consultants, and the firm reporting the subsurface conditions do not warranty the conditions below the depths of the borings or that the strata logged from the borings are necessarily typical of the entire site. Any party using the information described in the soil borings and geotechnical report shall accept full responsibility for its use.

C. Soil-boring data for Project, obtained by the Owner as appended to this Document.

D. A geotechnical investigation report for Project, was obtained by the Owner as appended to this Document.

1. The opinions expressed in this report are those of a geotechnical engineer and represent interpretations of subsoil conditions, tests, and results of analyses conducted by a geotechnical engineer. Owner is not responsible for interpretations or conclusions drawn from the data.
2. Any party using information described in the geotechnical report shall make additional test borings and conduct other exploratory operations that may be required to determine the character of subsurface materials that may be encountered.

E. Related Requirements:

1. Document 002113 "Instructions to Bidders" for the Bidder's responsibilities for examination of Project site and existing conditions.

END OF DOCUMENT 003132

SUBSURFACE INVESTIGATION &
GEOTECHNICAL RECOMMENDATIONS

RICHMOND MUNICIPAL AIRPORT – TERMINAL IMPROVEMENTS
RICHMOND, INDIANA
A&W PROJECT NO.: 25IN0677

PREPARED FOR:
CITY OF RICHMOND, INDIANA
RICHMOND, INDIANA

PREPARED BY:
ALT & WITZIG ENGINEERING, INC.
GEOTECHNICAL DIVISION

DECEMBER 17TH, 2025

Alt & Witzig Engineering, Inc.
4105 West 99th Street • Carmel, Indiana • 46032
Ph (317) 875-7000 • Fax (800) 875-6028

December 17th, 2025

City of Richmond, Indiana
5169 State Road 227 South
Richmond, Indiana 47375
Attention: Mr. Rodney Mayse, Airport Manager

Report of Subsurface Investigation and Geotechnical Recommendations

RE: Richmond Municipal Airport – Terminal Improvements
Richmond, Indiana
A&W Project No.: **25IN0677**

Dear Mr. Mayse:

In compliance with your request, Alt & Witzig Engineering, Inc. has completed a subsurface investigation for the above-referenced site. The Statement of Objectives, Scope of Work, and results of our investigation are presented in the following report. It is our pleasure to transmit a .pdf copy of our findings.

The results of our test borings and laboratory tests completed to date are presented in the appendix of the report. Our recommendations for the project are presented in the "Geotechnical Analysis and Recommendations" section of the report. When final design plans have been developed, they should be submitted to Alt & Witzig Engineering, Inc. for review to determine if changes to our recommendations are necessary. If you have any questions or comments regarding this matter, please contact us at your convenience.

Sincerely,
ALT & WITZIG ENGINEERING, INC.

Joshua W. Tinkle, P.E.

JACOB L. RANKIN
REGISTERED
No. PE11900847
STATE OF
INDIANA
PROFESSIONAL ENGINEER

Jacob L. Rankin, M.Eng., P.E.

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 Purpose

The purpose of this investigation was to determine the various soil profile components, determine the engineering characteristics of the foundation materials, and provide geotechnical recommendations for use by the design engineers and architects in preparing the foundation design of the proposed terminal improvements at the existing Richmond Municipal Airport located in Richmond, Indiana.

1.2 Statement of Objectives

In compliance with your request, we have completed a total of eight (8) soil borings at the above referenced site. This project included:

- A review of geological maps of the area and review of geologic and related literature
- A reconnaissance of the immediate site and subsurface exploration
- Field and laboratory testing
- Engineering analysis and evaluation of the foundation materials

1.3 Scope of Work

This investigation was performed for the City of Richmond, Indiana. The authorization to perform this investigation was in the form of a written proposal (A&W Proposal No. 2511G012) issued by Alt & Witzig Engineering, Inc. on November 11th, 2025, that was accepted by a representative of the client. The scope of this investigation did not specifically or by any implication provide an environmental assessment of the site.

1.4 Incorporations by Reference

Our subsurface investigation was conducted in accordance with guidelines set forth in the scope of services and applicable industry standards.

1.5 Report Reliance

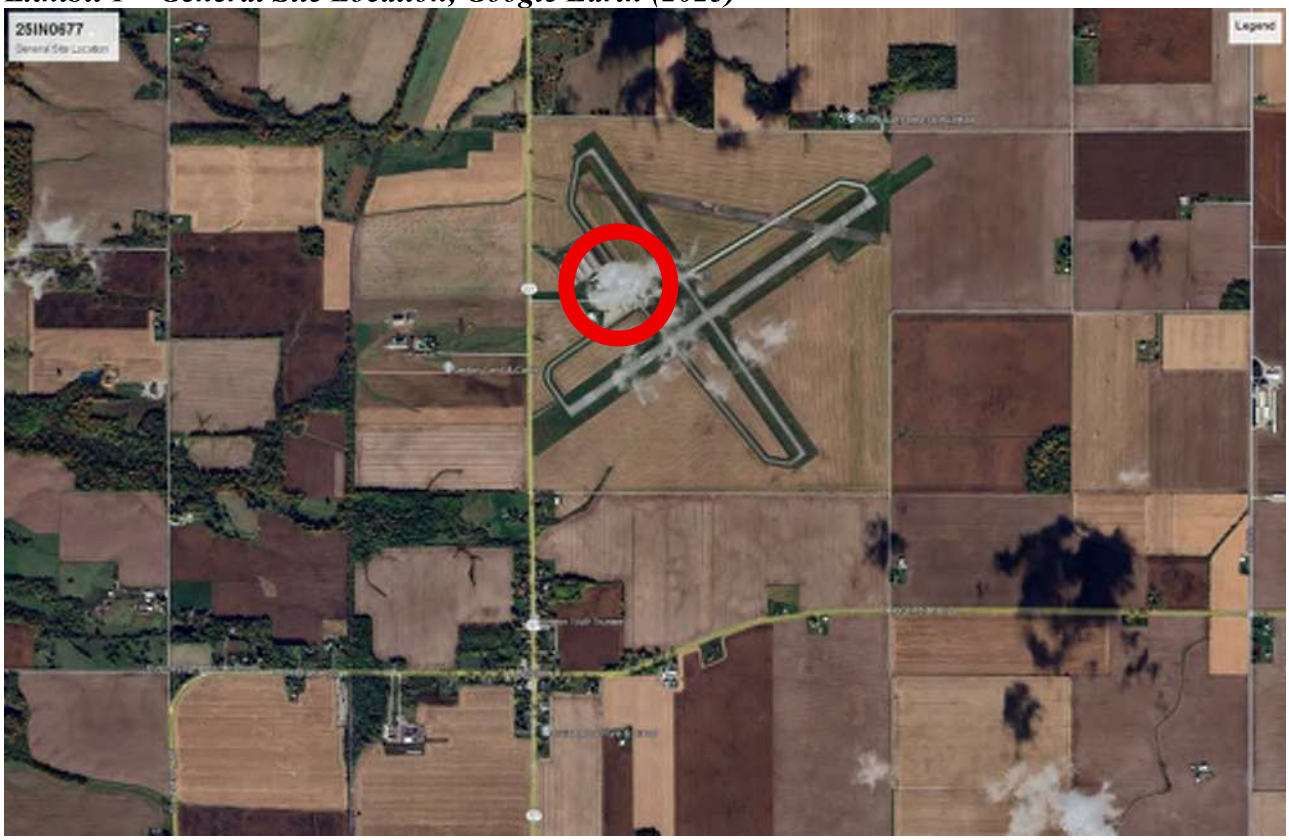
This report is solely for the use of the City of Richmond, Indiana. Any reliance of this report by third parties shall be at such party's sole risk and may not contain sufficient information for purposes of other parties for other uses. This report shall only be presented in full and may not be used to support any other objectives than those set out in the scope of work, except where written approval and consent are provided by the City of Richmond, Indiana and Alt & Witzig Engineering, Inc.

2.0 BACKGROUND INFORMATION

2.1 Site Location

The site of the proposed terminal improvements is located at the existing Richmond Municipal Airport just southeast of Richmond, Indiana in Wayne County. The location of the site is shown on the enclosed *Site Location Map* presented in Appendix A of this report. An aerial photograph of the general site location taken in 2025 provided by Google Earth is presented in *Exhibit 1* below.

Exhibit 1 – General Site Location, Google Earth (2025)



2.2 Site Description

The area of the proposed terminal improvements within the existing Richmond Municipal Airport currently consists of a paved asphalt parking lot with some grass cover towards the south and east. Based on our site reconnaissance and review of available map data, it appears that the surface of the site is relatively flat with an elevation of approximately 1130 feet. The site is surrounded by mostly agricultural properties and some rural residential development with paved roads and underground / overhead utilities.

2.3 Site History

As part of our investigation, historical aerial photographs were reviewed. Based on our review, it appears that the existing parking lot was constructed sometime prior to 1994 with no additional development conducted in the proposed terminal improvement area since that time. Historical aerial photographs of the site from 1994 and 2024 provided by Google Earth are shown in *Exhibits 2 and 3*.

Exhibit 2 – 1994 Aerial Photograph of Site, Google Earth

Exhibit 3 – 2024 Aerial Photograph of Site, Google Earth

2.4 Site Geology

The site is located within the New Castle Till Plains and Drainageways section of the Central Till Plains physiographic region of Indiana. Geological maps published by the Indiana Geological Survey indicate the bedrock at this site consists of Louisville Limestone, Brassfield Limestone, or Salamonie Dolomite of the Silurian age. The elevation of this bedrock is estimated at 1000 feet.

According to the *Custom Soil Resource Report for Wayne County, Indiana* published by the United States Department of Agriculture Soil Conservation Service (USDA SCS), the shallow soils covering this site are classified as loamy Haplaquepts (Hb) and Fincastle silt loam (FcA) type soils as shown in *Exhibit 4*. These soil types are generally characterized as somewhat poorly drained with a depth to seasonal-high water table estimated between 6 to 24 inches below natural ground level. The *Custom Soil Resource Report for Wayne County, Indiana* has been included in Appendix B of this report.

Exhibit 4 – Soil Types, National Resource Conservation Service

3.0 WORK PERFORMED

3.1 Boring Locations

In compliance with your request, we have completed a total of eight (8) soil borings at this site for the proposed terminal improvements. It should be noted that our boring locations were selected based on the site layout provided by the client at the time of the request for proposal. The boring locations and site layout were projected onto aerials provided by the Google Earth website allowing for the correlation of the approximate latitude and longitude coordinates with each boring location as shown in *Exhibit 5*. The boring locations were staked by a representative of Alt & Witzig Engineering, Inc. utilizing a handheld GPS unit prior to our mobilization to the site.

Exhibit 5 – Boring locations overlaid onto aerial photograph by Google Earth

3.2 Soil Sampling

Field investigations to determine the engineering characteristics of the foundation materials included a reconnaissance of the project site and drilling eight (8) soil borings. A standard penetration test with split-spoon sampling was performed during drilling operations. The apparent groundwater level at each boring location was also determined.

3.2.1 Soil Sampling Methodology

The soil borings were performed with a drilling rig equipped with a rotary head. Conventional hollow-stem augers were used to advance the holes. Borings were accessed by a truck mounted drilling rig. During the sampling procedure, standard penetration tests were performed at regular intervals in accordance with ASTM Method D 1586 to obtain the standard penetration value of the soil. The standard penetration value is defined as the number of blows a 140 lb hammer, falling 30 inches, required to advance the split-spoon sampler 12 inches into the soil. The results of the standard penetration tests indicate the relative density and comparative consistency of the soils and thereby provide a basis for estimating the relative strength and compressibility of the soil profile components. Soil samples were field classified and placed in suitable glass jars with Teflon-lined lids for transport to our geotechnical laboratory for further analysis.

3.2.2 Laboratory Analyses for Soil Samples

A supplementary laboratory investigation was conducted to ascertain additional pertinent engineering characteristics of the subsurface materials necessary in analyzing the behavior of the proposed construction. The laboratory-testing program included:

- Moisture content of soils in general accordance with ASTM D 2216
- Visual classification of soils in general accordance with ASTM D 2488
- Split-spoon samples of cohesive soils were tested utilizing a calibrated spring testing machine and a soil penetrometer to aid in determining the strength.

The values of the unconfined compressive strength as determined on the soil samples from the split-spoon sampling must be considered approximate, recognizing the manner in which they were obtained since the split-spoon sampling techniques provide a representative but somewhat disturbed soil sample.

3.3 Groundwater Elevation

The apparent groundwater level at each boring location was measured during and upon completion of the drilling operations. These water level measurements consisted of observing the depth at which water was encountered on the drilling rods during the soil sampling procedure and measuring the depth to the top of any water following removal of the hollow stem augers. It should be noted that the groundwater level measurements recorded on the individual *Boring Logs* in Appendix A of this report are accurate only for the specific dates on which the measurements were performed. It must be understood that the groundwater levels will fluctuate throughout the year, and the *Boring Logs* do not indicate these fluctuations.

3.4 Ground Surface Elevation

Ground surface elevations were not available to us at the time of this report. However, a review of available map data indicates that the surface of the site is relatively flat with an elevation of approximately 1130 feet. All depths and elevations referred to in this report are referenced from the ground surface existing at the time of this report.

4.0 INVESTIGATION RESULTS

The types of foundation materials encountered have been visually classified and are described in detail on the *Boring Logs*. The results of the field penetration tests, strength tests, water level observations, and laboratory moisture contents are presented on the *Boring Logs* in numerical form. Representative samples of the soils encountered in the field were placed in suitable glass jars and are now stored in our laboratory for further analysis if desired. Unless notified to the contrary, all samples will be disposed of after two (2) months.

4.1 Subsurface Conditions

At the ground surface, our borings performed in the undeveloped grass area of the site (B-03 and B-04) encountered topsoil approximately five (5) inches in thickness. All other borings were performed in the existing parking lot and encountered asphalt pavement approximately two (2) to four (4) inches in thickness with a crushed stone or sand and gravel subbase encountered below the asphalt pavement approximately three (3) to six (6) inches in thickness.

Immediately below the surface materials, our borings encountered soft to stiff cohesive silty and sandy clay soils to a depth of approximately fifteen (15) feet below existing ground level. The natural (in-situ) moisture contents of these shallow cohesive soils were generally in the range of fifteen (15) to thirty (30) percent. It should be noted that the shallow cohesive soils within the upper approximately three (3) feet were identified as possible fill and contained trace amounts of organic matter. Below the shallow cohesive soils, our borings typically encountered stiff to hard cohesive sandy clay soil (identified as glacial till) to termination depth of the borings up to twenty (20) feet below existing ground level. The natural (in-situ) moisture contents of these deeper glacial till cohesive soils were generally at or below ten (10) percent. It should be noted that a granular sand and gravel seam was encountered within the glacial till soil layer at boring B-04 where auger refusal was encountered on an apparent boulder at a depth of approximately sixteen (16) feet below existing ground level. For a detailed description of the soil conditions encountered at each boring location, please refer to the *Boring Logs* in Appendix A.

4.2 Groundwater Observations

The water level measurements collected during and upon completion of our drilling operations typically recorded dry conditions to termination depth, except for boring location P-01, which recorded groundwater between depths of approximately two (2) to four (4) feet below existing ground level. The exact location of the water table should be anticipated to fluctuate somewhat depending upon normal seasonal variations in precipitation and surface runoff. It should be noted that the groundwater level measurements recorded on the individual *Boring Logs,* included in Appendix A of this report, are accurate only for the dates on which the measurements were performed.

4.4 Seismic Parameters

Based on the field and laboratory tests performed on the subsurface materials and an assumption that the bedrock surface is between 50 to 100 feet below the existing ground surface, this site should be considered a **Site Class D** in accordance with the current Indiana Building Code.

The location of the site was entered into the website www.seismicmaps.org to determine seismic parameters. Maximum spectral response acceleration values of Ss=0.143 and S_1=0.075 g were generated by the program. Additional parameters are included in the printout in Appendix B.

5.0 GEOTECHNICAL ANALYSES AND RECOMMENDATIONS

5.1 Project Description

Based on information provided by the client in the Request for Proposal (RFP), it is our understanding that the proposed construction at this site will include a new single-story steel structure with paved parking improvements to the west of the building. Maximum column loads of approximately two hundred (200) kips and maximum wall loads of approximately four (4) kips per linear foot are anticipated for the new structure. Additionally, it is expected that the new building will be constructed as a slab-on-grade.

Grading plans were not available at the time of this report. However, a review of available map data indicates that the surface of the site is relatively flat with an elevation of approximately 1130 feet. Therefore, it is assumed that cuts and fills on the order of three (3) feet or less will be required across the site to establish final site grades. If final design loads and grading plans differ from those enumerated above, they should be submitted to Alt & Witzig Engineering, Inc. to determine if changes to our recommendations need to be made.

5.2 Site Preparation & Earthwork

At the ground surface, our borings performed in the undeveloped grass area of the site (B-03 and B-04) encountered topsoil approximately five (5) inches in thickness. However, deeper areas of disturbed soil should be anticipated due to the activities that have taken place at and around the project site. Excessively organic soil on the site will generally undergo high volume changes, which are detrimental to the behavior of shallow foundations, floor slabs, and pavements. Therefore, it is recommended that topsoil and loose materials be stripped from the construction areas and wasted or stockpiled for later use. The topsoil depths shown on the *Boring Logs* are not exact and should only be used for estimation purposes. A representative of Alt & Witzig Engineering, Inc. should be present at the time of stripping to determine the final depth of stripping.

At the ground surface, all other borings were performed in the existing parking lot and encountered asphalt pavement approximately two (2) to four (4) inches in thickness with a crushed stone or sand and gravel subbase encountered below the asphalt pavement approximately three (3) to six (6) inches in thickness. The existing pavement depths shown on the Boring Logs are not exact and should only be used for estimation purposes. A representative of Alt & Witzig Engineering, Inc. should be present at the time of stripping to determine the final depth of removal in this area. Treatment of the existing asphalt and subbase will be dictated by the final site grading plans and field conditions. It is further recommended that the existing asphalt pavement be left in place as long as practical prior to construction.

Prior to placement of any new fill, the exposed subgrade should be proof roll inspected with approved equipment and witnessed by Alt & Witzig Engineering, Inc. This proof roll inspection will determine if any pockets of unstable or unsuitable materials exist beneath the proposed building area. Where pockets of unstable or unsuitable materials are encountered, the materials should be remediated as dictated by field conditions.

A review of field information indicates that the shallow soils across the site are cohesive in nature with trace amounts of organic content to a depth of approximately three (3) feet and isolated locations of soft conditions with elevated moisture contents. Therefore, some areas of failed proof roll should be anticipated, especially if earthmoving is conducted during the wetter portions of the year. Repeated heavy equipment traffic on the site will likely cause large areas of subgrade failure. Therefore, when feasible, heavy equipment traffic across the subgrade should be limited.

After completion of the proof roll and any necessary remediation has been completed, it is recommended that proper control of subgrade compaction and structural fill replacement be maintained by a representative of Alt & Witzig Engineering, Inc. as per the *Recommended Specifications for Compacted Fills and Backfills*, presented in Appendix A of this report. These proper construction practices will help minimize volume changes and differential settlements which are detrimental to behavior of shallow foundations, floor slabs, and pavements.

5.3 Existing Structures / Utility Concerns

As previously noted, the area of the proposed terminal improvements within the existing Richmond Municipal Airport currently consists of a paved asphalt parking lot where existing pavements, sidewalks, and underground utilities are located. Care should be taken to properly abandon any existing foundations and/or utilities located in the area of the proposed new structure. At no time should new foundations be placed on or above previously constructed foundations and/or abandoned utilities. It is recommended that Alt & Witzig Engineering, Inc. evaluate the soil conditions in these areas prior to backfilling.

5.4 Foundation Recommendations

Based on the soil conditions encountered at this site, it is anticipated that shallow foundations in this area will be suitable for support of the estimated structural loads. Net allowable soil bearing capacities of **2,000 psf and 1,600 psf** are recommended for design of spread footings and continuous wall footings, respectively, if founded on firm natural soil or properly compacted fill. It is recommended that the base of the footing excavations be inspected by a representative of Alt & Witzig Engineering, Inc. to ensure suitable bearing materials are present. Where soft or unsuitable soils are encountered during footing excavation, it is recommended that the footings either be extended beneath these materials to bear on stiff natural soils, or these materials be removed and replaced with approved structural fill or lean concrete in accordance with the *Excavation Detail in Unstable Material* in the appendix.

As previously noted, the shallow soils across the site are cohesive in nature with trace amounts of organic matter to a depth of approximately three (3) feet and isolated locations of soft conditions with elevated moisture contents. Therefore, some undercutting may be necessary to reach suitable bearing materials, depending on final site grading.

The above recommended bearing pressures will help reduce differential settlements associated with footings founded on natural soil or compacted fills with varying stiffness across the building pad. Using the above-mentioned bearing pressures and recommendations for limiting settlements, total settlements of less than one (1) inch and differential settlements of one half (½) inch or less can be anticipated. In utilizing the above-mentioned net allowable pressures for dimensioning footings, it is necessary to consider only those loads applied above the finished floor elevation.

In order to alleviate the effects of seasonal variation in moisture content on the behavior of the footings and eliminate the effects of frost action, all exterior foundations and foundations in unheated areas should be founded a minimum of two and one-half (2.5) feet below the final grade.

Depending upon the time of the year and the weather conditions when the excavations are made, seepage from surface runoff may occur into shallow excavations or soften the subgrade soils. Since these foundation materials tend to loosen when exposed to free water, every effort should be made to keep the excavations dry should water be encountered. Sump pumps or other conventional dewatering procedures should be sufficient for this purpose within the shallow cohesive soils encountered. All excavations should be performed in accordance with applicable OSHA regulations. It is also recommended that all concrete for footings be poured the same day as the excavation is made.

5.5 Floor Slab Recommendations

A conventional ground floor for the proposed building can be constructed as a slab-on-grade supported by natural soils and/or well compacted fill materials assuming that any unsuitable soils are removed during the earthmoving phase of the project, as noted in previous sections of the report.

All finished subgrades should be proof roll inspected before placing concrete to verify that the sub-grade is suitable to support the slab. If the subgrade should become disturbed, or excessively wet or dry prior to construction of the floor slabs, the affected materials should be removed and replaced with suitable structural fill or properly treated in place. Final conditioning of the finished subgrade should be performed immediately prior to placing the floor slab base course. Due to the existing possible fill with trace amounts of organics, some undercutting should be expected.

A layer of compacted well drained granular fill should be placed immediately beneath the floor slab. This granular fill will provide a uniform surface for construction of the floor slab and minimize capillary rise of groundwater through the slab.

To reduce the potential of floor slab cracking caused by differential movements between the slab and foundations, the floor slab should be designed structurally independent of footings or walls. Saw-cut control joints should be placed in the slab to help control the location and extent of cracking. Joints or cracks that develop should be sealed with a waterproof, non-extruding compressible compound.

After the building area has been raised to the proper elevation, a layer of free draining granular material should be placed immediately beneath the floor slab. It is recommended that the materials within the subgrade area, above footing elevation, be compacted to a minimum density of 93% of maximum density in accordance with ASTM D-1557 (modified effort).

5.6 Pavement Design Considerations and Subgrade Concerns

The shallow soils across the site generally consisted of soft to medium stiff cohesive soil types. A proof roll inspection is critical to determine the stability of these shallow soil conditions for placement of pavements. These soils should be inspected to determine if undercuts or modifications are necessary. Modifications will be determined at the time of the proof roll inspection. Based upon experience with soils having a similar consistency and limited laboratory tests, a design CBR value of 3.0 is estimated for the pavement design, provided that failed areas of proof roll are properly remediated. However, the actual CBR value will be dependent on the condition of the soils in the field.

Cohesive soils tend to pump and rut easily when they are at or near saturation. If construction begins during the wetter portions of the year, remediation of the subgrade may be necessary to achieve the above referenced CBR value. Options including but not limited to; undercutting and replacement, disking and drying, and chemical-soil modification / stabilization may be considered if remediation is necessary. When chemical-soil modification / stabilization is determined to be necessary, it is recommended that samples of the subgrade be collected by a representative of Alt & Witzig Engineering Inc. to perform laboratory soil analysis and/or mix design testing. The referenced laboratory testing will aid in determining the most suitable chemical type, percentage, and spread rate to be utilized for subgrade treatment.

In areas where fill will be required to raise the site to proposed grade, the performance of the pavements will be greatly affected by the quality of compaction achieved in the subgrade soils. Thus, it is recommended that all pavement areas be compacted to 93% of the material's maximum dry density in accordance with ASTM D-1557 (modified effort).

All paved areas should be designed to prevent water from collecting or ponding immediately beneath the pavement. This can be accomplished by sloping the subgrade soils and providing a well-drained granular layer beneath the pavement which is outletted to drainage ditches, underdrains, or drainage structures that will remove trapped water from the pavement section. It is suggested that underdrains be installed in the pavement areas to minimize potential saturation of the soils identified across the site. At a minimum, underdrains should be considered around all storm structures, at asphalt to concrete interfaces, and under pavements where any slopes will drain onto a pavement surface. For underdrains to be effective, minimum installation depths of 18-inches are suggested. The drains should consist of a 4-inch perforated plastic pipe encased in a clean granular washed No. 8 stone. The No. 8 stone should extend up to the bottom of the pavement stone layer to facilitate drainage.

5.7 Utility Excavations & Groundwater Considerations

The depths of the utility lines to be constructed on this project were not available at the time of this report. Deep utilities should not be placed too close to the proposed structures. Differential settlement becomes a concern when structures are constructed within the cutback slope and backfill of deep utilities.

Depending upon the time of the year and the weather conditions when the excavations are made, seepage from surface runoff may occur into shallow excavations or soften the subgrade soils. Since these foundation materials tend to loosen when exposed to free water, every effort should be made to keep the excavations dry should water be encountered. Sump pumps or other conventional dewatering procedures should be sufficient for this purpose within the shallow cohesive soils encountered. All excavations should be performed in accordance with applicable OSHA regulations.

6.0 STATEMENT OF LIMITATIONS

An inherent limitation of any geotechnical engineering study is that conclusions must be drawn based on data collected at a limited number of discrete locations. The geotechnical parameters provided in this report were developed from the information obtained from the test borings that depict subsurface conditions only at these specific locations and on the date indicated on the boring logs. Soil conditions at other locations may differ from conditions encountered at these boring locations and groundwater levels shall be expected to vary with time. The nature and extent of variations between the borings may not become evident until the course of construction. The recommendations submitted are based on the available soil information and assumed design details enumerated in this report. When final design plans have been developed, they should be submitted to Alt & Witzig Engineering, Inc. for review to determine if changes to our recommendations are necessary.

ALT & WITZIG ENGINEERING, INC.

APPENDIX A

Recommended Specifications for Compacted Fills and Backfills
Undercut Detail for Footings in Unstable Materials
Site Location Plan
Boring Location Plan
Boring Logs
General Notes

RECOMMENDED SPECIFICATIONS FOR COMPACTED FILLS AND BACKFILLS

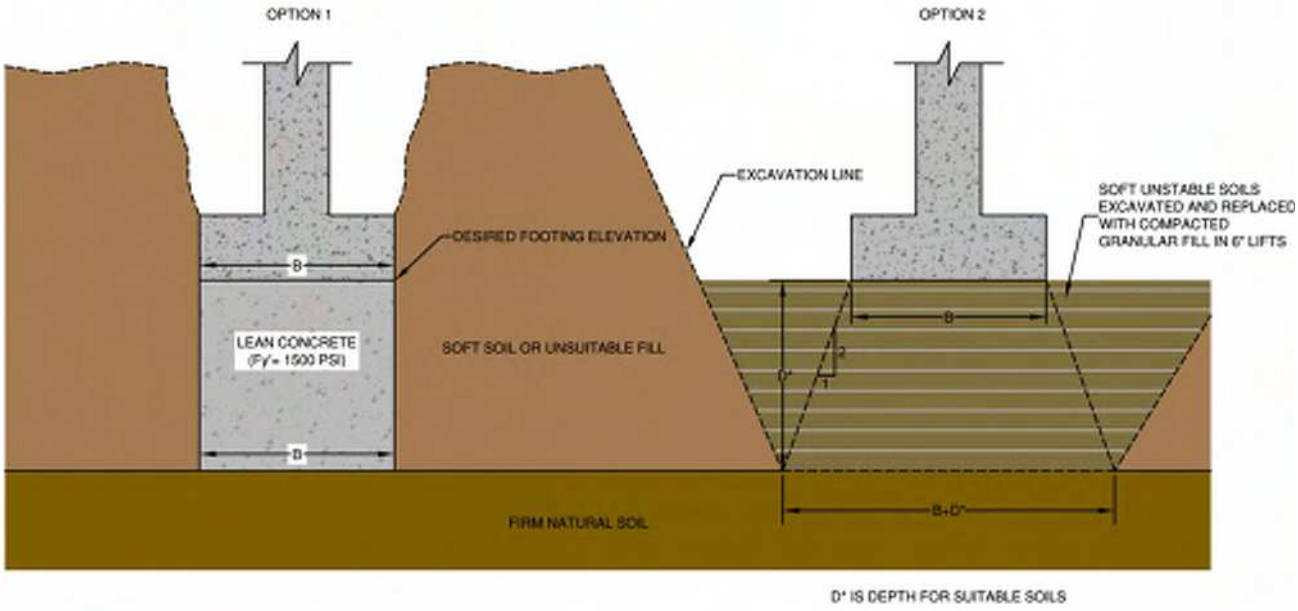
All fill shall be formed from material free of organic materials, construction debris, large rock, and other deleterious material. Prior to placement of fill, a sample of the proposed fill material should be submitted to the soil engineer for laboratory testing. The fill material should be placed in lifts. A representative of Alt & Witzig Engineering, Inc. should be consulted regarding lift thicknesses. The lift thickness will be determined based on compaction equipment to be utilized as well as the field conditions at the time of the filling operations. Dependent upon the moisture content of the proposed fill materials, moisture conditioning in the form of disking/aeration or addition of water may be required to achieve proper compaction. Under no circumstances should a bulldozer or similar tracked vehicles be used as compacting equipment.

All fill shall be compacted to the specified percent of the maximum density obtained in accordance with ASTM D-1557 as indicated in the table below:

Below Footing Level	**95%**
Interior Slabs on Grade	**93%**
Pavements	**93%**
Utility Trenches Backfill	**95%**

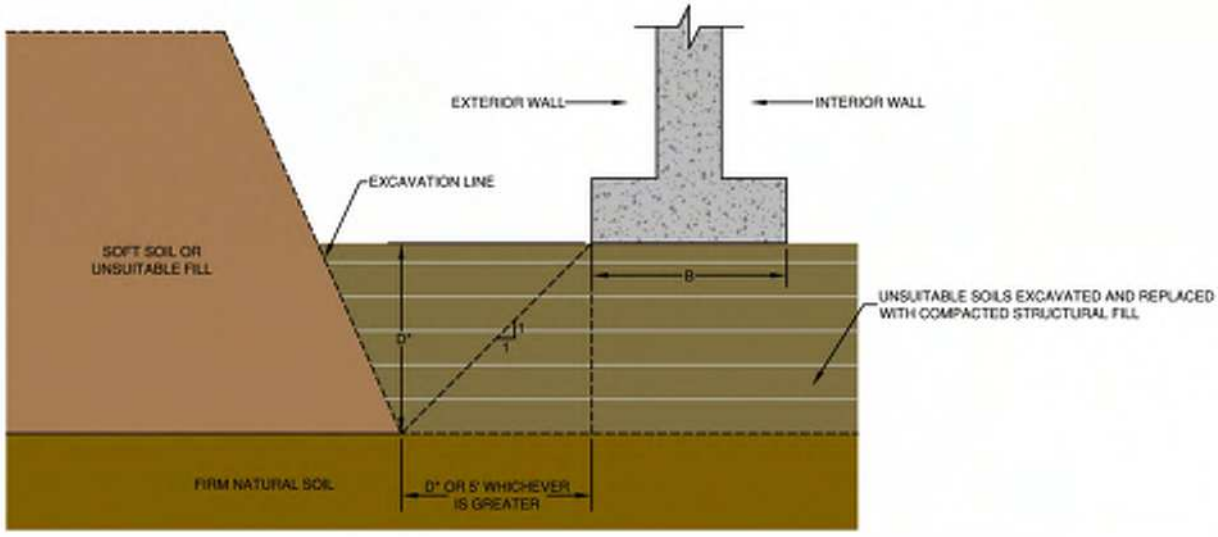
Should the results of the in-place density tests indicate that the specified compaction limits are not obtained; the areas represented by such tests shall be reworked and retested as required until the specified limits are reached.

UNDERCUT EXCAVATION FOR ISOLATED FOOTINGS IN UNSTABLE MATERIALS



D* IS DEPTH FOR SUITABLE SOILS

MASS EXCAVATION FOR FOOTINGS IN UNSTABLE MATERIALS



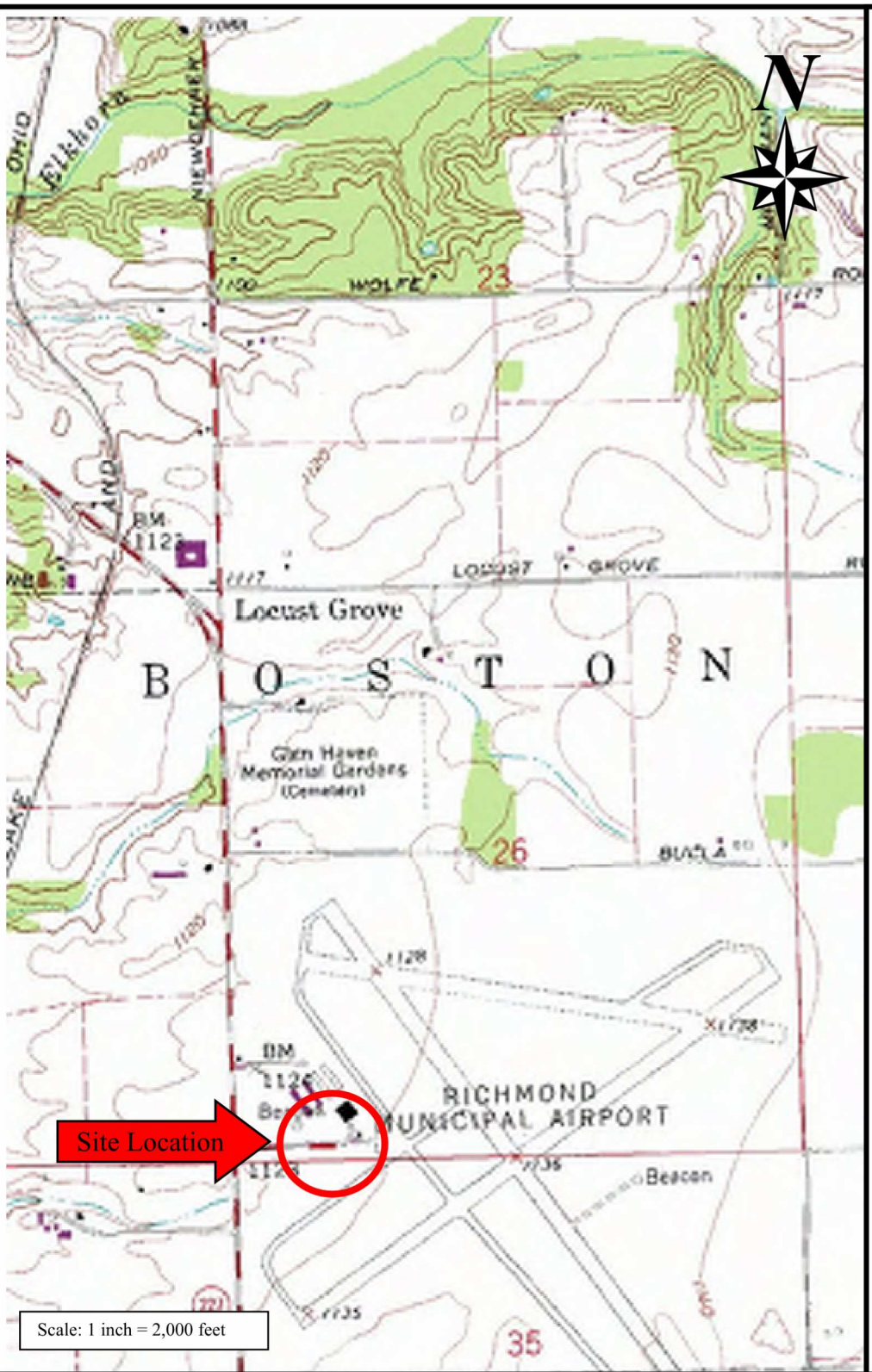
D* IS DEPTH FOR SUITABLE SOILS

Undercut Detail for Footing Excavation in Unstable Material

PROJECT: **Richmond Municipal Airport – Terminal Imp.**
LOCATION: Richmond, Indiana – Wayne County
CLIENT: **City of Richmond, Indiana**
A&W File No.: 25IN0677

Alt & Witzig Engineering Inc.
4105 W. 99th Street ·Carmel, IN 46032
TEL (317)875-7000 · FAX (317) 876-3705
www.altwitzig.com

SITE LOCATION MAP



USGS Topographic Map:
New Paris Quadrangle

Township: T 13 N.
Range: R 1 W.
Section: 26 & 35

PROJECT: **Richmond Municipal Airport – Terminal Improvements**
LOCATION: Richmond, Indiana – Wayne County
CLIENT: **City of Richmond, Indiana**
A&W File No.: 25IN0677

Alt & Witzig Engineering Inc.
4105 W. 99th Street ·Carmel, IN 46032
TEL (317)875-7000 · FAX (800) 875-6028
www.altwitzig.com

Last Modified: 12/16/2025 10:34 AM

BORING LOCATION PLAN

PROJECT: **Richmond Municipal Airport – Terminal Improvements**
LOCATION: Richmond, Indiana – Wayne County
CLIENT: **City of Richmond, Indiana**
A&W File No.: 25IN0677

Alt & Witzig Engineering Inc.
4105 W. 99th Street ·Carmel, IN 46032
TEL (317)875-7000 · FAX (317) 876-3705
www.altwitzig.com

BORING LOG

Alt & Witzig Engineering, Inc.

CLIENT **City of Richmond, Indiana**
PROJECT NAME **Proposed Terminal - Richmond Municipal Airport**
PROJECT LOCATION **Richmond, IN**

BORING # **B-01**
ALT & WITZIG FILE # **25IN0677**

DRILLING and SAMPLING INFORMATION

Date Started **12/11/25**
Date Completed **12/11/25**
Boring Method **HSA**
Driller **C. Peterman**

Hammer Wt. **140** lbs.
Hammer Drop **30** in.
Spoon Sampler OD **2** in.
Rig Type **CME 55 Truck**

STRATA ELEV.	SOIL CLASSIFICATION / SURFACE ELEVATION	Strata Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics / Recovery Graphics	Ground Water	TEST DATA: Standard Penetration Test, N - blows/foot	TEST DATA: Qu-tsf Unconfined Compressive Strength	TEST DATA: PP-tsf Pocket Penetrometer	TEST DATA: Moisture Content % / *Dry Unit Weight (pcf)*	Remarks
	2" Asphalt	0.2										
	3" Crushed Stone	0.4										
	Dark Gray Sandy Silty CLAY w/ Trace Organics *(Possible Fill)*	3.0		1	SS			6		2.0	28.3	
	Brown and Gray Silty CLAY	6.0	5	2	SS			5		1.5	25.4	
				3	SS			14			11.2	
	Brown Sandy Silty CLAY	15.0	10	4	SS			16	3.0		12.1	
	Gray Sandy CLAY *(Glacial Till)*		15	5	SS			10		2.5	10.5	
			20	6	SS		▽	22	4.0		11.4	
	End of Boring at 21 feet	21.0										

Sample Type
SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Groundwater
○ During Drilling *Dry ft.*
▽ At Completion *20.0 ft.*

Boring Method
HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

BORING LOG

Alt & Witzig Engineering, Inc.

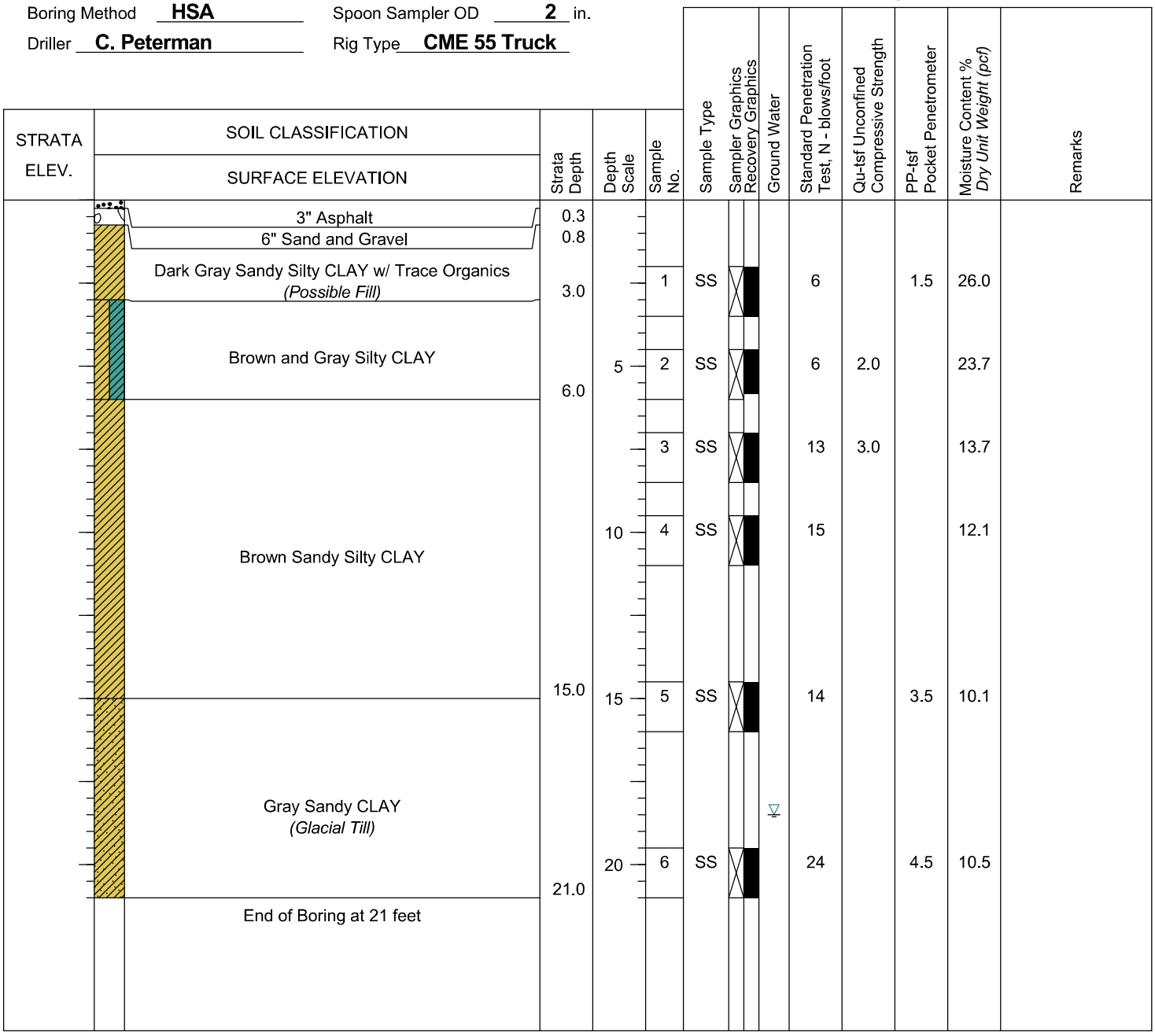
CLIENT **City of Richmond, Indiana**
PROJECT NAME **Proposed Terminal - Richmond Municipal Airport**
PROJECT LOCATION **Richmond, IN**

BORING # **B-02**
ALT & WITZIG FILE # **25IN0677**

DRILLING and SAMPLING INFORMATION

Date Started **12/11/25**
Date Completed **12/11/25**
Boring Method **HSA**
Driller **C. Peterman**

Hammer Wt. **140** lbs.
Hammer Drop **30** in.
Spoon Sampler OD **2** in.
Rig Type **CME 55 Truck**



Sample Type
SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Groundwater
○ During Drilling *Dry ft.*
▽ At Completion *18.5 ft.*

Boring Method
HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

BORING LOG

Alt & Witzig Engineering, Inc.

CLIENT **City of Richmond, Indiana**
PROJECT NAME **Proposed Terminal - Richmond Municipal Airport**
PROJECT LOCATION **Richmond, IN**

BORING # **B-03**
ALT & WITZIG FILE # **25IN0677**

DRILLING and SAMPLING INFORMATION

Date Started **12/10/25**
Date Completed **12/10/25**
Boring Method **HSA**
Driller **C. Peterman**

Hammer Wt. **140** lbs.
Hammer Drop **30** in.
Spoon Sampler OD **2** in.
Rig Type **CME 55 Truck**

STRATA ELEV.	SOIL CLASSIFICATION / SURFACE ELEVATION	Strata Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics / Recovery Graphics	Ground Water	TEST DATA: Standard Penetration Test, N - blows/foot	TEST DATA: Qu-tsf Unconfined Compressive Strength	TEST DATA: PP-tsf Pocket Penetrometer	TEST DATA: Moisture Content % / *Dry Unit Weight (pcf)*	Remarks
	TOPSOIL	0.4										
	Dark Gray Sandy Silty CLAY w/ Trace Organics *(Possible Fill)*	3.0		1	SS			7		1.5	26.3	
	Brown and Gray Silty CLAY	6.0	5	2	SS			6			25.6	
				3	SS			9	2.5		14.2	
	Brown Sandy Silty CLAY		10	4	SS			7	1.5		15.4	
		15.0	15	5	SS			14	3.5		10.1	
	Gray Sandy CLAY *(Glacial Till)*											
		21.0	20	6	SS			17		4.5	10.3	
	End of Boring at 21 feet											

Sample Type
SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Groundwater
○ During Drilling *Dry ft.*
▽ At Completion *Dry ft.*

Boring Method
HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

BORING LOG

Alt & Witzig Engineering, Inc.

CLIENT **City of Richmond, Indiana** BORING # **B-04**

PROJECT NAME **Proposed Terminal - Richmond Municipal Airport** ALT & WITZIG FILE # **25IN0677**

PROJECT LOCATION **Richmond, IN**

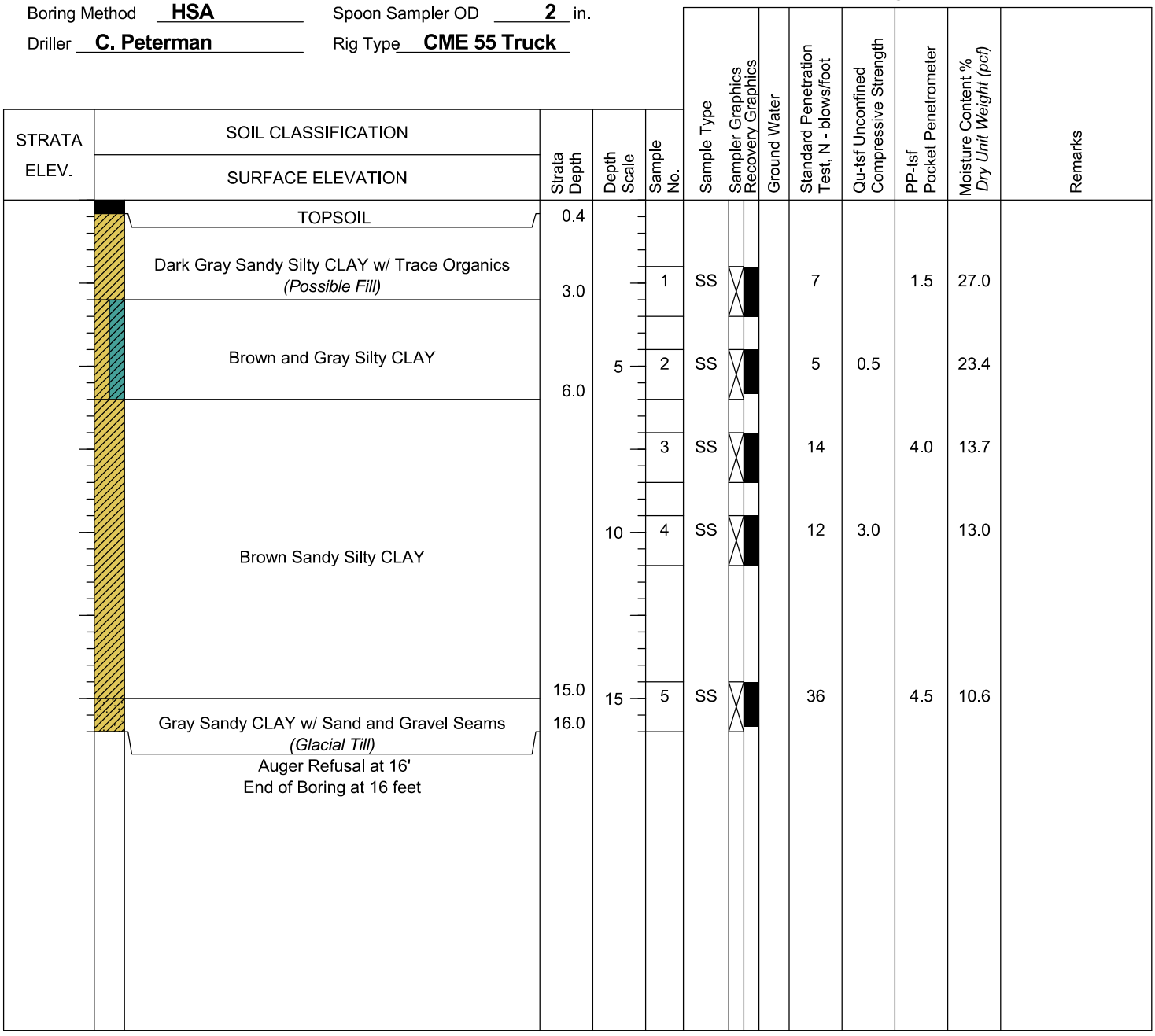
DRILLING and SAMPLING INFORMATION

Date Started **12/10/25** Hammer Wt. **140** lbs.

Date Completed **12/10/25** Hammer Drop **30** in.

Boring Method **HSA** Spoon Sampler OD **2** in.

Driller **C. Peterman** Rig Type **CME 55 Truck**



Sample Type

SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Groundwater

○ During Drilling *Dry ft.*
▽ At Completion *Dry ft.*

Boring Method

HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

BORING LOG

Alt & Witzig Engineering, Inc.

CLIENT **City of Richmond, Indiana**

PROJECT NAME **Proposed Terminal - Richmond Municipal Airport**

PROJECT LOCATION **Richmond, IN**

BORING # **P-01**

ALT & WITZIG FILE # **25IN0677**

DRILLING and SAMPLING INFORMATION

Date Started **12/11/25**

Date Completed **12/11/25**

Boring Method **HSA**

Driller **C. Peterman**

Hammer Wt. **140** lbs.

Hammer Drop **30** in.

Spoon Sampler OD **2** in.

Rig Type **CME 55 Truck**

TEST DATA

STRATA ELEV. / SOIL CLASSIFICATION / SURFACE ELEVATION	Strata Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics / Recovery Graphics	Ground Water	Standard Penetration Test, N - blows/foot	Qu-tsf Unconfined Compressive Strength	PP-tsf Pocket Penetrometer	Moisture Content % / *Dry Unit Weight (pcf)*	Remarks
3" Asphalt	0.3										
3" Crushed Stone	0.5					○					
Dark Gray Sandy Silty CLAY w/ Trace Organics *(Possible Fill)*	3.0		1	SS			7		1.5	27.4	
Brown and Gray Silty CLAY	6.0	5	2	SS		▽	9		2.0	22.9	
			3	SS			7			12.6	
Brown Sandy Silty CLAY	11.0	10	4	SS			10	2.5		14.3	
End of Boring at 11 feet											

Sample Type

SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Groundwater

○ During Drilling *1.5 ft.*
▽ At Completion *4.0 ft.*

Boring Method

HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

BORING LOG

Alt & Witzig Engineering, Inc.

CLIENT **City of Richmond, Indiana**

PROJECT NAME **Proposed Terminal - Richmond Municipal Airport**

PROJECT LOCATION **Richmond, IN**

BORING # **P-02**

ALT & WITZIG FILE # **25IN0677**

DRILLING and SAMPLING INFORMATION

Date Started **12/11/25**

Date Completed **12/11/25**

Boring Method **HSA**

Driller **C. Peterman**

Hammer Wt. **140** lbs.

Hammer Drop **30** in.

Spoon Sampler OD **2** in.

Rig Type **CME 55 Truck**

TEST DATA

STRATA ELEV.	SOIL CLASSIFICATION / SURFACE ELEVATION	Strata Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics / Recovery Graphics	Ground Water	Standard Penetration Test, N - blows/foot	Qu-tsf Unconfined Compressive Strength	PP-tsf Pocket Penetrometer	Moisture Content % / *Dry Unit Weight (pcf)*	Remarks
0	3" Asphalt	0.3										
	6" Crushed Stone	0.8										
	Dark Gray Sandy Silty CLAY w/ Trace Organics *(Possible Fill)*	3.0		1	SS			7	2.0		25.6	
	Brown and Gray Silty CLAY	6.0	5	2	SS			10		2.5	25.2	
	Brown Sandy Silty CLAY			3	SS			12	3.0		12.0	
			10	4	SS			14		4.5	11.2	
	End of Boring at 11 feet	11.0										

Sample Type

SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Groundwater

○ During Drilling *Dry ft.*
▽ At Completion *Dry ft.*

Boring Method

HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

BORING LOG

Alt & Witzig Engineering, Inc.

CLIENT **City of Richmond, Indiana**

PROJECT NAME **Proposed Terminal - Richmond Municipal Airport**

PROJECT LOCATION **Richmond, IN**

BORING # **P-03**

ALT & WITZIG FILE # **25IN0677**

DRILLING and SAMPLING INFORMATION

Date Started **12/11/25**

Date Completed **12/11/25**

Boring Method **HSA**

Driller **C. Peterman**

Hammer Wt. **140** lbs.

Hammer Drop **30** in.

Spoon Sampler OD **2** in.

Rig Type **CME 55 Truck**

STRATA ELEV. / SOIL CLASSIFICATION / SURFACE ELEVATION	Strata Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics / Recovery Graphics	Ground Water	TEST DATA: Standard Penetration Test, N - blows/foot	TEST DATA: Qu-tsf Unconfined Compressive Strength	TEST DATA: PP-tsf Pocket Penetrometer	TEST DATA: Moisture Content % / *Dry Unit Weight (pcf)*	Remarks
4" Asphalt	0.3										
Dark Gray Sandy Silty CLAY w/ Trace Organics *(Possible Fill)*	3.0		1	SS			6	1.0		25.2	
Brown and Gray Silty CLAY	6.0	5	2	SS			8	2.0		24.5	
			3	SS			5		1.5	16.0	
Brown Sandy Silty CLAY	11.0	10	4	SS			7	2.0		13.5	
End of Boring at 11 feet											

Sample Type

SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Groundwater

○ During Drilling *Dry ft.*
▽ At Completion *Dry ft.*

Boring Method

HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

BORING LOG

Alt & Witzig Engineering, Inc.

CLIENT **City of Richmond, Indiana**

PROJECT NAME **Proposed Terminal - Richmond Municipal Airport**

PROJECT LOCATION **Richmond, IN**

BORING # **P-04**

ALT & WITZIG FILE # **25IN0677**

DRILLING and SAMPLING INFORMATION

Date Started **12/11/25**

Date Completed **12/11/25**

Boring Method **HSA**

Driller **C. Peterman**

Hammer Wt. **140** lbs.

Hammer Drop **30** in.

Spoon Sampler OD **2** in.

Rig Type **CME 55 Truck**

TEST DATA

STRATA ELEV. / SOIL CLASSIFICATION / SURFACE ELEVATION	Strata Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics / Recovery Graphics	Ground Water	Standard Penetration Test, N - blows/foot	Qu-tsf Unconfined Compressive Strength	PP-tsf Pocket Penetrometer	Moisture Content % / *Dry Unit Weight (pcf)*	Remarks
0 — 3" Asphalt	0.3										
6" Sand and Gravel	0.8										
Dark Gray Sandy Silty CLAY w/ Trace Organics *(Possible Fill)*	3.0		1	SS			8	2.0		26.9	
Brown and Gray Silty CLAY	6.0	5	2	SS			5		1.0	22.4	
			3	SS			14	3.0		12.6	
Brown Sandy Silty CLAY	11.0	10	4	SS			16			16.5	
End of Boring at 11 feet											

Sample Type

SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Groundwater

○ During Drilling *Dry ft.*
▽ At Completion *Dry ft.*

Boring Method

HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

MATERIAL GRAPHICS LEGEND


ASPHALT: Asphalt


CL: USCS Low Plasticity Clay


CL-ML: USCS Low Plasticity Silty Clay


CL: USCS Low Plasticity Sandy Clay


TOPSOIL


GRAVEL/COBBLES

SOIL PROPERTY SYMBOLS

N: *Standard "N" penetration value. Blows per foot of a 140-lb hammer falling 30" on a 2" O.D. split-spoon.*

Qu: *Unconfined Compressive Strength, tsf* PP: *Pocket Penetrometer, tsf*

LL: *Liquid Limit, %* PL: *Plastic Limit, %* PI: *Plasticity Index, %*

DRILLING AND SAMPLING SYMBOLS

GROUNDWATER SYMBOLS

○ *Apparent water level noted while drilling.*

▽ *Apparent water level noted upon completion.*

▼ *Apparent water level noted upon delayed time.*

SAMPLER SYMBOLS

SS: Split Spoon

RELATIVE DENSITY & CONSISTANCY CLASSIFICATION (NON-COHESIVE SOILS)

TERM	*BLOWS PER FOOT*
Very Loose	0 - 5
Loose	6 - 10
Medium Dense	11 - 30
Dense	31 - 50
Very Dense	>51

RELATIVE DENSITY & CONSISTANCY CLASSIFICATION (COHESIVE SOILS)

TERM	*BLOWS PER FOOT*
Very Soft	0 - 3
Soft	4 - 5
Medium Stiff	6 - 10
Stiff	11 - 15
Very Stiff	16 - 30
Hard	>31

Alt & Witzig Engineering, Inc.
4105 West 99th St.
Carmel, IN 46032
Telephone:
Fax:

GENERAL NOTES

Project: Proposed Terminal - Richmond Municipal Airport

Location: Richmond, IN

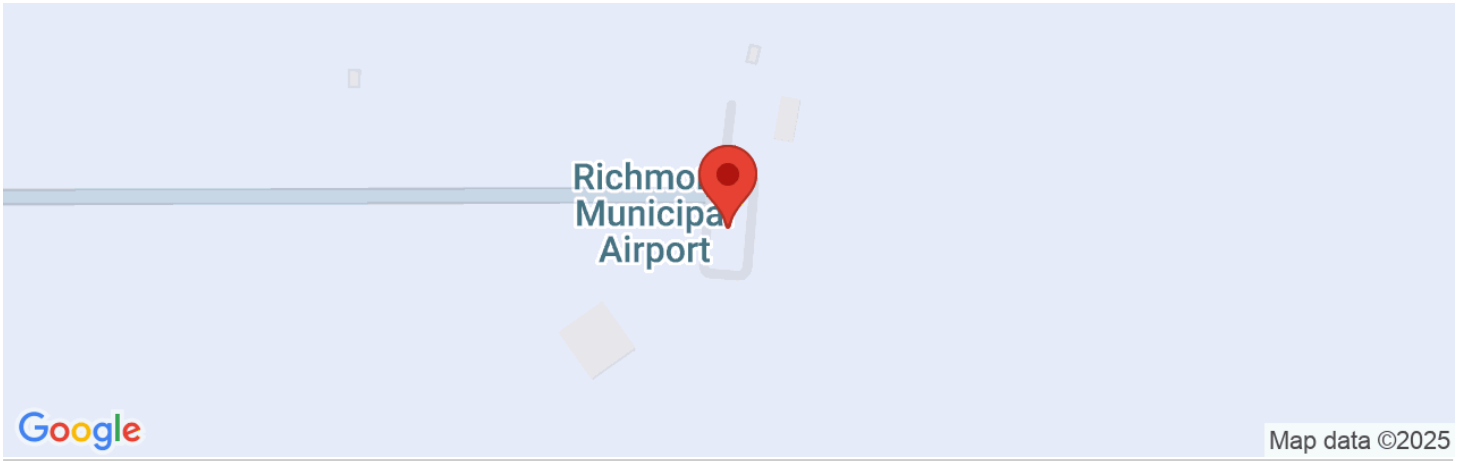
Number: 25IN0677

APPENDIX B

Seismic Design Parameters
Custom Soil Resource Report for Wayne County, Indiana

Announcement
ASCE 7-22 is now available.

Latitude, Longitude: 39.75603518, -84.84823231



Date	12/16/2025, 11:33:24 AM
Design Code Reference Document	IBC-2015
Risk Category	II
Site Class	D

Type	Value	Description
S_S	0.143	MCE_R ground motion. (for 0.2 second period)
S_1	0.075	MCE_R ground motion. (for 1.0s period)
S_{MS}	0.229	Site-modified spectral acceleration value
S_{M1}	0.179	Site-modified spectral acceleration value
S_{DS}	0.152	Numeric seismic design value at 0.2 second SA
S_{D1}	0.12	Numeric seismic design value at 1.0 second SA

Type	Value	Description
SDC	B	Seismic design category
F_a	1.6	Site amplification factor at 0.2 second
F_v	2.4	Site amplification factor at 1.0 second
PGA	0.067	MCE_G peak ground acceleration
F_{PGA}	1.6	Site amplification factor at PGA
PGA_M	0.108	Site modified peak ground acceleration
T_L	12	Long-period transition period in seconds
SsRT	0.143	Probabilistic risk-targeted ground motion. (0.2 second)
SsUH	0.156	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
SsD	1.5	Factored deterministic acceleration value. (0.2 second)
S1RT	0.075	Probabilistic risk-targeted ground motion. (1.0 second)
S1UH	0.085	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
S1D	0.6	Factored deterministic acceleration value. (1.0 second)
PGAd	0.6	Factored deterministic acceleration value. (Peak Ground Acceleration)
PGA_{UH}	0.067	Uniform-hazard (2% probability of exceedance in 50 years) Peak Ground Acceleration
C_{RS}	0.919	Mapped value of the risk coefficient at short periods

Type	Value	Description
C_{R1}	0.876	Mapped value of the risk coefficient at a period of 1 s
C_V		Vertical coefficient

DISCLAIMER

While the information presented on this website is believed to be correct, SEAOC /OSHPD and its sponsors and contributors assume no responsibility or liability for its accuracy. The material presented in this web application should not be used or relied upon for any specific application without competent examination and verification of its accuracy, suitability and applicability by engineers or other licensed professionals. SEAOC / OSHPD do not intend that the use of this information replace the sound judgment of such competent professionals, having experience and knowledge in the field of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the results of the seismic data provided by this website. Users of the information from this website assume all liability arising from such use. Use of the output of this website does not imply approval by the governing building code bodies responsible for building code approval and interpretation for the building site described by latitude/longitude location in the search results of this website.

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Wayne County, Indiana

December 16, 2025

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:1,030 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 15 30 60 90

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Wayne County, Indiana
Survey Area Data: Version 28, Sep 2, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 18, 2023—Aug 4, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
FcA	Fincastle silt loam, New Castle Till Plain, 0 to 2 percent slopes	0.7	14.5%
Hb	Haplaquepts, loamy	3.9	85.5%
Totals for Area of Interest		**4.6**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Wayne County, Indiana

FcA—Fincastle silt loam, New Castle Till Plain, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2yk20
Elevation: 610 to 1,140 feet
Mean annual precipitation: 37 to 46 inches
Mean annual air temperature: 48 to 55 degrees F
Frost-free period: 145 to 180 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Fincastle and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fincastle

Setting

Landform: Interfluves, till plains
Landform position (two-dimensional): Footslope, summit, backslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Silty material and/or loess over loamy till

Typical profile

Ap - 0 to 10 inches: silt loam
E - 10 to 13 inches: silt loam
Bt1 - 13 to 27 inches: silty clay loam
2Bt2 - 27 to 50 inches: clay loam
2BC - 50 to 59 inches: loam
2Cd - 59 to 79 inches: loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: 40 to 60 inches to densic material
Drainage class: Somewhat poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.01 to 0.20 in/hr)
Depth to water table: About 6 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Ecological site: F111XA008IN - Wet Till Ridge
Hydric soil rating: No

Minor Components

Cyclone

Percent of map unit: 10 percent
Landform: Swales, depressions, till plains, flats
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, dip
Down-slope shape: Concave
Across-slope shape: Concave, linear
Ecological site: F111XA006IN - Till Depression
Hydric soil rating: Yes

Williamstown

Percent of map unit: 5 percent
Landform: Till plains, ground moraines
Landform position (two-dimensional): Backslope, summit, shoulder
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex, linear
Across-slope shape: Linear
Ecological site: F111XA009IN - Till Ridge
Hydric soil rating: No

Hb—Haplaquepts, loamy

Map Unit Setting

National map unit symbol: 8c5z
Elevation: 680 to 1,250 feet
Mean annual precipitation: 36 to 42 inches
Mean annual air temperature: 49 to 53 degrees F
Frost-free period: 175 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Haplaquepts and similar soils: 90 percent
Minor components: 3 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Haplaquepts

Setting

Landform position (two-dimensional): Footslope, toeslope
Down-slope shape: Linear
Across-slope shape: Linear

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Negligible
Depth to water table: About 6 to 24 inches

Frequency of flooding: None
Frequency of ponding: None

Minor Components

Ragsdale
Percent of map unit: 3 percent
Landform: Depressions
Ecological site: F111XD015IN - Wet Loess Upland
Hydric soil rating: Yes

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

SECTION 051200 — STRUCTURAL STEEL FRAMING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. All structural steel framing, including connections and accessories, as shown or implied by the Contract Documents.

B. Related Sections:

1. Division 03 Section: Grouting
2. Division 05 Section: Steel Roof Decking
3. Division 05 Section: Composite Metal Decking
4. Division 07 Section: Cementitious Fireproofing
5. Division 07 Section: Thin-Film Intumescent Fireproofing
6. Division 09 Section: Painting

1.2 QUALITY ASSURANCE

A. Qualifications of Suppliers and Personnel:

1. The steel fabricator and erector shall have successfully completed work of this type and scope. The fabrication facility shall be certified as an AISC Category I facility.
   a. If the fabrication facility selected is not an AISC Category I facility, the fabrication facility shall submit, in writing, the facility's quality assurance and quality control procedure to the EOR.
   b. The EOR may request additional testing, at the responsibility of the fabrication facility, upon reviewing the facility's quality assurance and quality control procedures.
2. All welding shall be performed by operators who have been recently qualified as prescribed in "Structural Welding Code" of the American Welding Society (except for welds which do not carry calculated stress).

B. Codes and Standards:

1. In addition to complying with all pertinent codes and regulations, comply with:
2. "Specifications for Design, Fabrication, and Erection of Structural Steel for Buildings" of the American Institute of Steel Construction
3. "Structural Welding Code" of the American Welding Society

4. "Code of Standard Practice for Steel Buildings and Bridges" of the American Institute of Steel Construction.

C. Conflicting Requirements:

1. In the event of conflict between pertinent codes and regulations and the requirements of the referenced standards or this Section of the Project Manual, the provisions of the more stringent shall govern.

D. Fabricators Shop Testing, Inspection and Quality Control:

1. For AISC certified facilities, submit a written program for the proposed fabrication quality control testing and inspection. After review and acceptance of these documents by the Architect/Engineer, perform all shop testing and inspection as specified herein. If the Fabricator's facility is not AISC certified, the Owner's independent testing laboratory will perform all shop testing and inspection work, and the fabricators will be backcharged for this work.
2. Structural Steel Fabrication Shop Quality Control Program: As a minimum, perform at least the following shop tests and inspections and submit daily reports of the results of all tests. State in each report whether the tested specimens conform to all requirements of the Contract Documents, and specifically note any discrepancies. If the inspections indicate defects in the Work, increase the degree of testing to ensure that the full extent of defects in the joint are found and that similar defects are not present in similar joints.

    a. Provide evidence that all welders to be employed in the Work hold current AWS certification for the welding procedures that each will perform. If recertification of welders is required, the retesting is the Contractor's responsibility.
    b. Visually inspect all fabrication operations, including dimensional and fit-up/alignment and control.
    c. Visually inspect all plate edges and rolled shape edges for material defects.
    d. High strength bolted connections:

        1) Check all bolted connections in accordance with the procedures outlined in the RCSC "Specification for Structural Joints Using ASTM A325 or A490 Bolts", latest edition.

    e. Welding visual inspection:

        1) Inspect all welding operations and welds, including edge preparation, fit-up, preheat, and adherence to welding procedures.

            a) Inspect welds prior to shop painting of steel.
            b) Measure the weld profiles for 15 percent of the length of each weld, at random.

    f. Welding magnetic particle testing: Test in accordance with ASTM E109 for a minimum of:

1) 20 percent of all shear plate fillet welds at random, final pass only.
2) 20 percent of all continuity plate and bracing gusset plate fillet welds, at random, final pass only.
3) 100 percent of tension member fillet welds (i.e., hanger connection plates and other similar connections) for root and final passes.
4) 20 percent of length of built-up column member partial penetration and fillet welds at random for root and final passes.
5) 100 percent of length of built-up girder member partial penetration and fillet welds for root and final passes.

g. Welding ultrasonic testing: Test in accordance with ASTM E164 and AWS D1.1 for 100 percent of all full penetration welds, braced and moment frame column splices, and a minimum of 20 percent of all other partial penetration column splices, at random.
h. Schedule all work to allow the testing requirements listed above to be completed.

1.3 SUBMITTALS

A. Shop Drawings:

1. Prior to the bulk of shop drawing preparation, submit to the Architect/Engineer shop drawings of "typical conditions" and connections to assure that the fabricators assumptions are correct as to type of connection and other pertinent details.
2. Before any structural steel is fabricated, submit shop drawings to the Architect/Engineer for review and receive approval of same in accordance with Division 01 of this Project Manual.
3. Show all shop and erection details including cuts, copes, connections, holes, threaded fasteners, and welds.
4. Show all welds, both shop and field by the currently recommended symbols of the American Welding Society.

B. Proof of Qualification:

1. Submit to the Architect/Engineer evidence satisfactory to him that the steel fabricator and steel erector are qualified for the Work in accordance with the requirements of this Section of the Project Manual.

C. Certification:

1. Submit to the Architect/Engineer a certification that the materials supplied are in accordance with the requirements of this Section of the Project Manual.

1.4 PROJECT CONDITIONS

A. Field Verification:

1. Confirm all dimensions necessary to make the framing assembly fit accurately.
2. Do not fabricate materials until field dimensions have been confirmed.

PART 2 - PRODUCTS

2.1 STRUCTURAL STEEL

A. Steel Shapes and Plates:

1. All steel w-shapes shall meet the requirements of ASTM A992 or ASTM A572, Grade 50 except plates, angles and channels shall meet the requirements of ASTM A36.

2. All structural steel exposed to the elements shall be hot dipped galvanized unless noted otherwise on the drawings. All welds and scratches on this steel shall be touched up with a galvanic paint.

B. Hollow Structural Section (HSS):

1. Round, square and rectangular HSS sections shall meet the requirements of ASTM A500, Grade B.

C. Pipes:

1. Steel pipes shall meet the requirements of ASTM A501 or ASTM A53, Grade B, Type E or S.

2.2 CONNECTIONS

A. Materials:

1. High-strength bolts for shop and field connections: ASTM A325, 3/4 inch minimum diameter.
2. Anchor bolts, nuts and washers: ASTM F1554, Class **[36] [55]**, Grade 2A
3. Machine bolts for minor connections: ASTM A307
4. Shear studs: ASTM A108, Grades 1015 through 1020, Headed-stud type, cold finished carbon steel; AWS D1.1, Type B.
5. Welding electrodes: ASTM A233, Series E70XX

B. All shop connections shall be accomplished using high strength bolts or by welding at the Contractor's option.

C. Use high strength bolts for field connections.

D. Bolted connections shall be bearing type connections with threads in the shear plane.

E. Moment connections as detailed in the Contract Documents are designed as welded connections.

F. All connections shall be consistent with the design assumptions associated with Type "2" or Type "3" construction defined by the American Institute of Steel Construction.

G. Minimum thickness of connection material shall be 5/16" unless noted otherwise.

H. All connections both gravity and lateral are to be designed by a connection design engineer employed by the fabricator. The connection design drawings and calculations shall be signed and sealed by a professional engineer in the state where the project is located.

2.3 PRIMER PAINT

A. General:

1. All primer paint for structural steel shall be compatible with the finish coatings described in Division 09 of this Project Manual.
2. Omit paint from structural steel encased in concrete or designated to receive fireproofing, and from all faying surfaces.
3. Omit paint on all non-corrodible finished angles.

2.4 OTHER MATERIALS

A. All other materials not specifically described but required for a complete and proper installation of structural steel, shall be new, free from rust, first quality of their respective kinds, and subject to the acceptance of the Architect/Engineer.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

A. Inspection:

1. Prior to installation of the Work of this Section, carefully inspect the installed Work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
2. Verify that existing conditions will permit the structural steel to be fabricated and erected in strict accordance with the original design, the shop drawings, and the referenced standards.

B. Discrepancies:

1. Do not proceed with fabrication or installation in areas of discrepancy until all such discrepancies have been fully resolved.

3.2 FABRICATION

A. General:

1. Fabricate all structural steel in strict accordance with the shop drawings and the referenced standards.

B. Shop Cleaning and Priming:

1. Shop cleaning shall meet recommendations of the final finish manufacturer.
2. Shop paint all structural steel one coat where priming is required.
3. Thoroughly clean all steel that is not to be painted.

C. Milling:

1. Mill the bearing surfaces of all columns/compression members.

D. Leveling Nuts:

1. All column base plates shall be supported on leveling nuts unless noted otherwise. The area between the base plate and concrete shall be grouted in accordance with Division 03 Section: Grouting.

3.3 WELDING

A. General:

1. For details of joints, comply with requirements for AWS joints accepted with qualification tests.
2. Use ASTM A233, E-70 series electrodes.
3. Follow applicable sections of AWS specifications.

B. Types of Welds:

1. Unless otherwise noted:

a. Make all fillet welds 3/16" minimum.
b. Make all butt welds full penetration welds, using back-up or chip and back-weld.

3.4 ERECTION

A. General:

1. Erect all structural steel in strict accordance with the drawings, the shop drawings, and all pertinent regulations and standards.

B. Bolted Connections:

1. Accomplish high-strength bolted connections in accordance with the American Institute of Steel Construction's publication, "Specifications for Structural Joints Using ASTM A325 or A490 Bolts."
2. All bolts in bolted connections shall be tightened to the “snug tight condition” unless noted otherwise on the drawings.

C. Touch-Up:

1. After erection is complete:

a. Touch-up all shop priming coats damaged during transportation and erection.
b. Prime all field welds on members that have been welded and paint all field bolts using the priming paint specified for shop priming.

D. Bracing:

1. Furnish, design, and install all temporary erection bracing.
2. Leave such bracing in place until the structure is stabilized by walls, slabs, decks and permanent bracing.

3.5 INSPECTION AND QUALITY ASSURANCE

A. The Testing Laboratory will conduct a program of testing and inspection for both shop fabrication and field erection. During shop fabrication, the program will consist of monitoring the structural steel Contractor's quality control and testing program. If the fabrication facility does not qualify as a certified AISC Category I facility, the Testing Laboratory will perform all shop testing and inspection work. During field erection, the program will consist of all field testing and inspection as specified.

B. Shop Quality Control by Testing Laboratory: Provide periodic monitoring of the Contractor's quality control testing and inspection program. Include the following as a minimum degree of monitoring:

1. Verify all welder qualification and monitor welding procedures and welding processes.
2. Monitor all fabrication operations.
3. Verify and monitor all shop testing and inspection, including review of the Contractor's testing and inspection records.
4. Perform inspection as necessary on those portions of the structural steel not in evidence of complying with the Contract Documents.

C. Field Quality Control by Testing Laboratory: At the responsibility of the Owner, perform the following quality control tests and inspections. Interpret test results, submit daily reports and monthly summary reports.

1. Examine the Manufacturer's test certificates for all materials provided. Verify that the lot numbers of the tested material coincide with the lot numbers of the material used on-site.
2. Visually inspect all anchor-bolt nut installation and tightening.
3. High strength bolted connections:

    a. Observe the job site calibration of each size bolted fastener assembly and installation technique in the calibrated tension measuring device. Verify that the proper bolt pretension listed in Table 4 of the RCSC "Specification" is achieved and that installation equipment is of sufficient capacity.
    b. Routinely monitor field bolting procedures during bolt installation. Verify that all bolts in all connections are brought to a "snug tight" condition with all plies of the connection in firm contact. Verify that bolts in connections identified as either slip-critical or direct tension connections are being additionally tightened by the proper technique(s) determined in the tension testing device described above.
    c. Check that all bolted connections are being installed in accordance with the procedures outlined in the RCSC "Specification."

4. Welded connections:

    a. Obtain qualifications of all welders and verify all welding procedures, including the Contractor's compliance with preheat, weather-protection, electrodes, and welding surface preparation requirements.
    b. Visually inspect all field welding operations and welds.

5. Magnetic particle testing: Test in accordance with ASTM E109 for a minimum of:

    a. 20 percent of the length of all field fillet welds, at random, final pass only.
    b. 25 percent of the length of all field partial penetration welds except column splices, at random, root and final passes.

6. Ultrasonic testing: Test in accordance with ASTM E164 and AWS D1.1 for a minimum of:

    a. 100 percent of all field full penetration welds.
    b. 100 percent of the length of 25 percent of all field partial penetration column splices, at random.

7. Schedule all work to allow the testing requirements listed above to be completed.
8. Testing and inspection do not relieve the Contractor of the responsibility for providing materials and fabrication procedures in compliance with the specified requirements.

D. The following procedure shall be followed for inspection and testing of all joints of the seismic force resisting systems:

1. The testing agency responsible for quality assurance shall submit the following documents to the A/E and the owner:

    a. Qualifications of the management and quality assurance personnel designated for the project.
    b. Qualification records for the inspectors and non destructive testing technicians designated for the project.
    c. Daily or weekly inspection reports including the nonconformance reports.

2. Inspection points and frequencies of quality assurance task and documentation for the seismic load resisting system shall be as explained below:

    a. Observe (O): Observe these on a random, daily basis.
    b. Perform (P): Perform these functions prior to final acceptance of the item.
    c. Document (D): The inspector shall prepare reports indicating that the work meets the requirements of the contract documents. The report shall indicate the deficiencies and whether the noncompliance has been satisfactorily repaired or not. Inspect after repair and provide a report.

3. Visual welding inspection shall be the primary method to confirm the procedure materials and the workmanship are as specified and approved. Minimum inspection tasks shall be as follows:

    a. Observe and perform material identification, joint preparation, dimensions, cleanliness tack weld quality and location, backing type, configuration of the access holes, dimensions and cleanliness of the fillet welds and the field welding process.
    b. Document visual inspection of the weld for crack, weld/base metal fusion, crater cross-section, weld profile, weld size, undercut, porosity placement of the reinforcement fillets, backing bars/weld tabs removed and finished (if required) and the repair activities.
    c. Perform and document all repair or corrective work activities.

4. Nondestructive testing of the welds shall be performed by ultrasonic or magnetic particle testing (MT) as follows:

    a. MT inspection for cracks at welding of doubler plates, continuity plates or stiffeners in the k-area base metal within 3” of weld. Document the findings until accepted.
    b. Ultrasonic testing shall be performed for all complete joint penetration (CJP) groove weld in materials 5/16” or thicker. Perform MT inspection on 25 percent of all beam-to-column CJP groove welds. Document the findings until accepted.
    c. Ultrasonic testing for Lamellar Tearing for base metal thicker than 1-1/2”. Document the findings until accepted.
    d. MT inspection of beam cope and access hole for beams with 1-1/2” or thicker flange. Document the findings until accepted.

e. MT inspection of reduced beam section repair and web tab removal sites. Document the findings until accepted.

5. Observation of bolting operations shall be the primary method to confirm the materials procedure and workmanship.

   a. Verify materials and procedure prior to installation and document the findings until accepted.
   b. Document data of all rejected connections until accepted.

END OF SECTION 051200

SECTION 101400 – INTERIOR SIGNAGE – ADD 02

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Interior panel signs – Room identification, directional and informational signs.

1.3 DEFINITIONS

A. ADA-ABA Accessibility Guidelines: U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines."

1.4 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: Show fabrication and installation details for signs.

1. Show sign mounting heights, locations of supplementary supports to be provided by others, and accessories.

C. Samples for Initial Selection: Manufacturer's color charts consisting of actual units or sections of units showing the full range of colors available for the following:

1. Acrylic sheet.
2. Polycarbonate sheet.
3. Vinyl graphic material

D. Samples for Verification: For each of the following products and for the full range of color, texture, and sign material indicated, of sizes indicated:

1. Acrylic Sheet: 8 by 10 inches for each color required.
2. Polycarbonate Sheet: 8 by 10 inches for each color required.
3. Vinyl graphic material: 8 by 10 inches for each color.

E. Warranty: Special warranty specified in this Section.

1.5 QUALITY ASSURANCE

A. Fabricator Qualifications: Shop that employs skilled workers who custom-fabricate products similar to those required for this Project and whose products have a record of successful in-service performance.

B. Regulatory Requirements: Comply with applicable provisions in ADA-ABA Accessibility Guidelines.

C. Comply with US Manual on Uniform Traffic Control Devices for signs within public rights-of-way.

1.6 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of signs that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:

a. Deterioration of metal and polymer finishes beyond normal weathering.
b. Deterioration of embedded graphic image colors and sign lamination.

2. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 FABRICATORS

A. ASI Signs – Matt Berlage - 513.248.4100 – Cincinnati Ohio

B. Essential Architectural Signs – Cindy Hulen - 317.253.6000 – Indianapolis Indiana

C. Hightech Signs – Rob Steiner - 513.874.5223 – Fairfield Ohio

D. Select Signs – 937-262-7095 – Dayton Ohio

E. Sign Solutions Inc. – 317-881-1818 – Greenwood indiana

2.2 MATERIALS

A. Acrylic Sheet: ASTM D 4802, Category A-1 (cell-cast sheet), Type UVA (UV absorbing).

B. Polycarbonate Sheet: Of thickness indicated, manufactured by extrusion process, coated on both surfaces with abrasion-resistant coating:

1. Impact Resistance: 16 ft-lbf/in. per ASTM D 256, Method A.
2. Tensile Strength: 9000 lbf/sq. in. per ASTM D 638.
3. Flexural Modulus of Elasticity: 340,000 lbf/sq. in. per ASTM D 790.
4. Heat Deflection: 265 deg F at 264 lbf/sq. in. per ASTM D 648.
5. Abrasion Resistance: 1.5 percent maximum haze increase for 100 revolutions of a Taber abraser with a load of 500 g per ASTM D 1044.

C. Aluminum Castings: ASTM B 26/B 26M, of alloy and temper recommended by sign manufacturer for casting process used and for use and finish indicated.

D. Aluminum Sheet and Plate: ASTM B 209 (ASTM B 209M), alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with at least the strength and durability properties of Alloy 5005-H32.

E. Aluminum Extrusions: ASTM B 221 (ASTM B 221M), alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with at least the strength and durability properties of Alloy 6063-T5.

2.3 PANEL SIGNS

A. Interior Panel Signs: Provide smooth sign panel surfaces constructed to remain flat under installed conditions within a tolerance of plus or minus 1/16 inch measured diagonally from corner to corner, complying with the following requirements:

1. Non-glare Acrylic Face Sheet: 0.125 inch thick, with subsurface graphics / color applied to back of face sheet.
2. Opaque Acrylic Backer Plate: .0625 inch thick.
3. Edge Condition: Square cut.
4. Mounting: Unframed

    a. Wall mounted
    b. Manufacturer's standard anchors for substrates encountered.

5. Custom Paint Colors: Match Architect’s sample.
6. Tactile Characters: Characters and Grade 2 Braille raised 1/32 inch above surface with contrasting colors.

B. Colored Coatings for Acrylic Sheet: For copy and background colors, provide colored coatings, including inks, dyes, and paints, that are recommended by acrylic manufacturers for optimum adherence to acrylic surface and are UV and water resistant for five years for application intended.

1. Custom Paint Colors: Match Architect’s sample.

C. Panel Sign Schedule: Refer to Drawings for signage locations and descriptions.

PART 3 - EXECUTION

3.1 CLEANING AND PROTECTION

A. After installation, clean soiled sign surfaces according to manufacturer's written instructions. Protect signs from damage until acceptance by Owner.

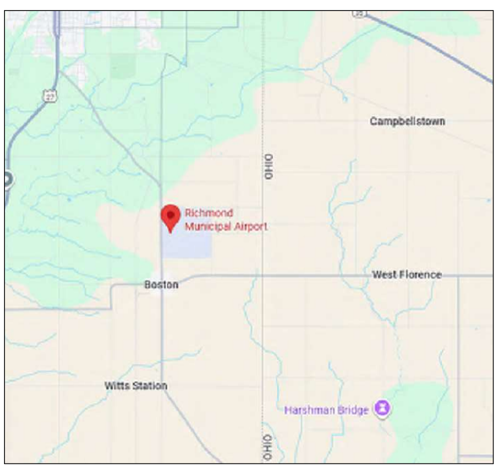
END OF SECTION 101400

RICHMOND MUNICIPAL AIRPORT
TERMINAL BUILDING

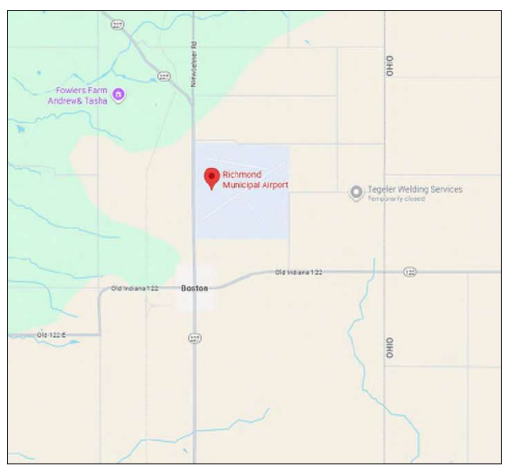
5169 IN-227
RICHMOND, IN 47374
03/16/2026

COMMISSION # 25106.00
AIP # 3-18-0071-031-2026
AIP # 3-18-0071-032-2026

CONSTRUCTION DOCUMENTS



VICINITY MAP
SCALE: N.T.S.



LOCATION PLAN
SCALE: N.T.S.

DRAWING INDEX

SHEET NO.	SHEET NAME
1-TITLE SHEET	
T001	TITLE SHEET
2-GENERAL	
G001	GENERAL INFORMATION, CODE REVIEW & LIFE SAFETY PLAN
G002	DOOR AND WALL PARTITION TYPES AND DETAILS
G003	CONSTRUCTION SAFETY PHASING PLAN
G004	CONSTRUCTION SAFETY PHASING PLAN NOTES
3-CIVIL	
AS101	ARCHITECTURAL SITE PLAN
C001	PROJECT INFORMATION SHEET
C002	EXISTING CONDITIONS
C100	STORMWATER POLLUTION PREVENTION PLAN
C110	STORMWATER POLLUTION PREVENTION DETAILS
C200	SITE DEMOLITION PLAN
C300	SITE GRADING AND DRAINAGE PLAN
C400	SITE UTILITY PLAN
C410	SITE UTILITY DETAILS
C500	SITE IMPROVEMENT PLAN
C510	SITE IMPROVEMENT DETAILS
4-STRUCTURAL	
S001	GENERAL NOTES
S002	GENERAL NOTES
S003	TYPICAL DETAILS
S004	TYPICAL DETAILS
S005	TYPICAL DETAILS
S010	AXONOMETRICS
S100	FOUNDATION PLAN
S110	LOW ROOF FRAMING PLAN
S111	HIGH ROOF FRAMING PLAN
S200	MOMENT FRAME ELEVATIONS
S300	FOUNDATION DETAILS
S500	FRAMING DETAILS

DRAWING INDEX

SHEET NO.	SHEET NAME
6-ARCHITECTURAL	
A001	ALUMINUM FRAME ELEVATIONS
A101	FLOOR PLAN AND CLERESTORY PLAN
A201	REFLECTED CEILING PLAN
A301	EXTERIOR ELEVATIONS
A302	BUILDING SECTIONS
A501	WALL SECTIONS AND ENLARGED DETAILS
A502	WALL SECTIONS AND ENLARGED DETAILS
A503	WALL SECTIONS AND ENLARGED DETAILS
A601	CASEWORK DETAILS
A602	INTERIOR ELEVATIONS
A701	RESTROOM ENLARGED PLANS & DETAILS
A901	ROOF PLAN
7-INTERIOR DESIGN	
~~ID101~~	~~FLOOR AND WALL FINISH PLAN~~
ID102	SIGNAGE PLAN
11-PLUMBING	
P001	LEGEND, NOTES, SHEET LIST
P002	PLUMBING SCHEDULES & DETAILS
P101	FOUNDATION & FIRST FLOOR
P102	MECHANICAL YARD
12-MECHANICAL	
M001	LEGEND, NOTES SHEET LIST
M002	MECHANICAL SCHEDULES
M003	MECHANICAL & DETAILS
M101	FIRST FLOOR
13-ELECTRICAL	
E001	ELECTRICAL SYMBOLS, ABBREVIATIONS, AND LEGENDS
E100	ELECTRICAL SITE PLAN
E201	LIGHTING PLAN
E301	POWER PLAN
E401	SYSTEMS PLAN
E501	ELECTRICAL SCHEDULES
E502	ELEVATION DETAIL
E601	SINGLE-LINE DIAGRAM

2

GENERAL CONTRACTOR:

STRUCTURAL:

JPS CONSULTING ENGINEERS
SITE • CIVIL • STRUCTURAL
MBE

PME:

HEAPY

CONSULTANT:

CONSULTANT:

CONSULTANT:

No.	Revisions / Submissions	Date
	SD PROGRESS SET	2025.10.30
	DD PROGRESS SET	2025.12.19
	90% PROGRESS SET	2026.02.23
	CONSTRUCTION DOCUMENTS	2026.03.16
2	ADDENDUM 2	2026.04.07

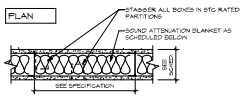
LWC INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

STATE OF INDIANA REGISTERED ARCHITECT
KEVIN R. [illegible]
[illegible]

Comm. No.	Date
25106.00	2026.03.16
Drawn: KAA	Drawing No.
Checked: DW	T001

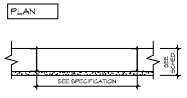
© 2026 LWC INCORPORATED

4/9/2026 4:49:05 PM
Autodesk Docs://Richmond Municipal Airport Terminal/25106.00 Richmond Municipal Airport Terminal R23 CENTRAL.rvt



WALL TYPE P NON-RATED LIGHT GAUGE METAL PARTITION					
TYPE	STUD SIZE	PARTITION THICKNESS	SOUND ATTN. BLANKET	STC RATING	
P1	3-5/8"	4-7/8"	NONE	N/A	
P2	3-5/8"	4-7/8"	3-1/2"	44	
P3	4"	5-1/4"	NONE	N/A	
P4	4"	5-1/4"	3-1/2"	49	
P5	6"	7-1/4"	NONE	N/A	
P6	6"	7-1/4"	3-1/2"	49	

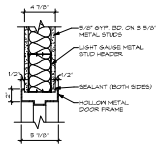
7 WALL TYPE P
SCALE: 1 1/2" = 1'-0"



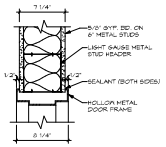
WALL TYPE Q NON-RATED LIGHT GAUGE METAL PARTITION (SINGLE FINISH SIDE)				
TYPE	STUD SIZE	PARTITION THICKNESS	SOUND ATTN. BLANKET	STC RATING
Q2	3-5/8"	4-1/4"	NONE	N/A

8 WALL TYPE Q
SCALE: 1 1/2" = 1'-0"

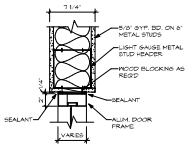
DOOR SCHEDULE																		
NOTES: 1.																		
DOOR NO.	EXISTING / NEW	INTERIOR / EXTERIOR	SINGLE / PAIR	DOOR SIZE			DOOR			FRAME				HARDWARE SET #	FIRE RATING	REMARKS
				WIDTH	HEIGHT	THICKNESS	TYPE	MATERIAL	GLAZING	TYPE	MATERIAL	DETAILS JAMB	DETAILS HEAD			
101A		EXT.	PAIR	3'-0"	8'-0"	1 3/4"	D2	ALUM.	FULL	F1	ALUM.		H5			
101B		EXT.	PAIR	3'-0"	8'-0"	1 3/4"	D2	ALUM.	FULL	F1	ALUM.		H5			
101C		INT.	PAIR	3'-0"	8'-0"	1 3/4"	D2	ALUM.	FULL	F1	ALUM.	J5	H5			
102		EXT.	SINGLE	3'-0"	8'-0"	1 3/4"	D2	ALUM.	FULL	F1	ALUM.	J5	H5			
103		INT.	SINGLE	3'-0"	8'-0"	1 3/4"	D2	ALUM.	FULL	F1	ALUM.	J5	H5			
104A		INT.	SINGLE	3'-0"	7'-0"	1 3/4"	D2	ALUM.	FULL	F1	ALUM.	J1	H1			
104B		EXT.	SINGLE	3'-0"	8'-0"	1 3/4"	D2	ALUM.	FULL	F1	ALUM.		H5			
105		INT.	SINGLE	3'-0"	7'-0"	1 3/4"	D1	WOOD	-	F1	HM	J1	H1			
106		INT.	SINGLE	3'-0"	7'-0"	1 3/4"	D1	WOOD	-	F1	HM	J1	H1			
107		INT.	SINGLE	3'-0"	7'-0"	1 3/4"	D1	WOOD	-	F1	HM	J1	H1			
108		INT.	SINGLE	3'-0"	7'-0"	1 3/4"	D1	WOOD	-	F1	HM	J1	H1			
109		INT.	SINGLE	3'-0"	7'-0"	1 3/4"	D1	WOOD	-	F1	HM	J1	H1			
110		INT.	SINGLE	3'-0"	7'-0"	1 3/4"	D1	WOOD	-	F1	HM	J1	H1			
111		EXT.	SINGLE	3'-0"	8'-0"	1 3/4"	D2	ALUM.	FULL	F1	ALUM.		H5			
112		INT.	SINGLE	3'-0"	7'-0"	1 3/4"	D1	WOOD	-	F1	HM	J1	H1			



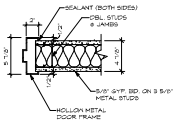
H1



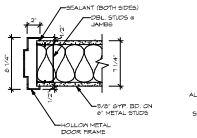
H2



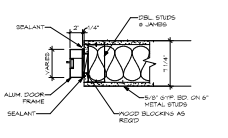
H3



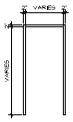
J1



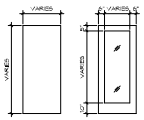
J2



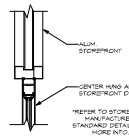
J3



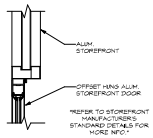
F1



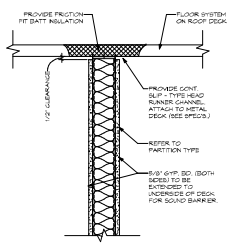
P1 P2



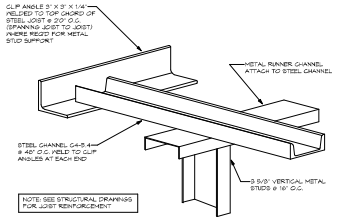
H5



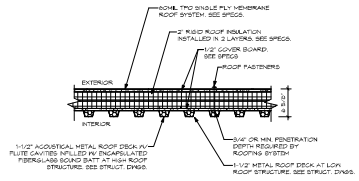
H6



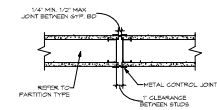
6 NON-RATED GYPSUM PARTITION HEAD AT DECK
SCALE: 1 1/2" = 1'-0"



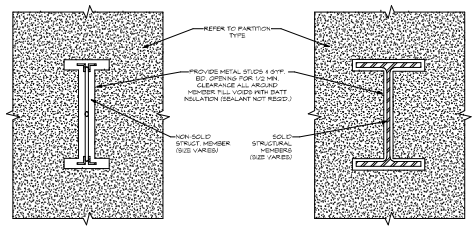
5 WALL - GYP. BD. - TYP. SUSPENDED METAL STUDS SUPPORT
SCALE: 1 1/2" = 1'-0"



4 TYP. ROOF ASSEMBLY
SCALE: 1" = 1'-0"

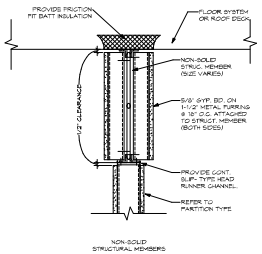


3 TYPICAL CONTROL JOINT - NON-RATED
SCALE: 1 1/2" = 1'-0"

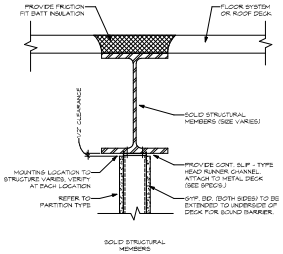


NON-RATED METAL STUD PARTITIONS WHERE STRUCTURAL MEMBERS PASS THRU PARTITION

2 NON-RATED GYPSUM PARTITION AT STRUCTURAL MEMBERS
SCALE: 1 1/2" = 1'-0"



1 NON-RATED GYPSUM PARTITON HEAD AT STRUCTURE
SCALE: 1 1/2" = 1'-0"



No.	Revisions / Submissions	Date
	SD PROGRESS SET	2025.10.30
	DD PROGRESS SET	2025.12.19
	90% PROGRESS SET	2026.02.23
	CONSTRUCTION DOCUMENTS	2026.03.16
2	ADDENDUM 2	2026.04.07

LWC INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

RICHMOND MUNICIPAL AIRPORT

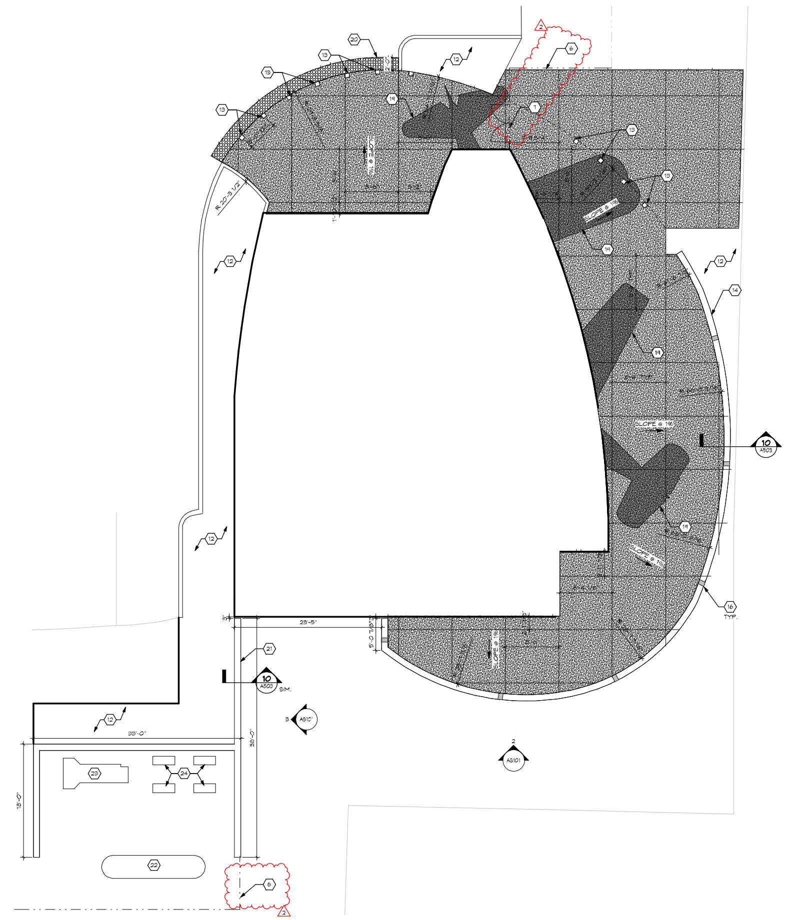
TERMINAL BUILDING

5169 IN-227
RICHMOND, IN 47374

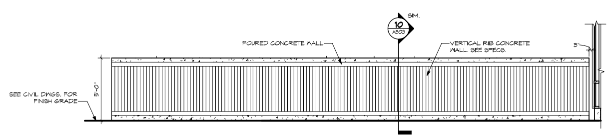
DOOR AND WALL PARTITION TYPES AND DETAILS

Comm. No.	Date
25106.00	2026.03.16
Drawn	Drawing No.
KAA	G002
Checked	
DW	

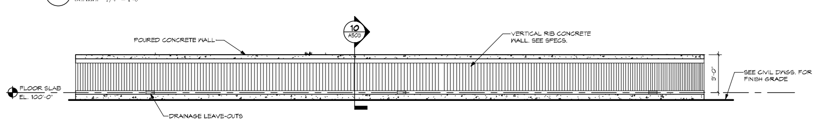
© 2026 LWC INCORPORATED



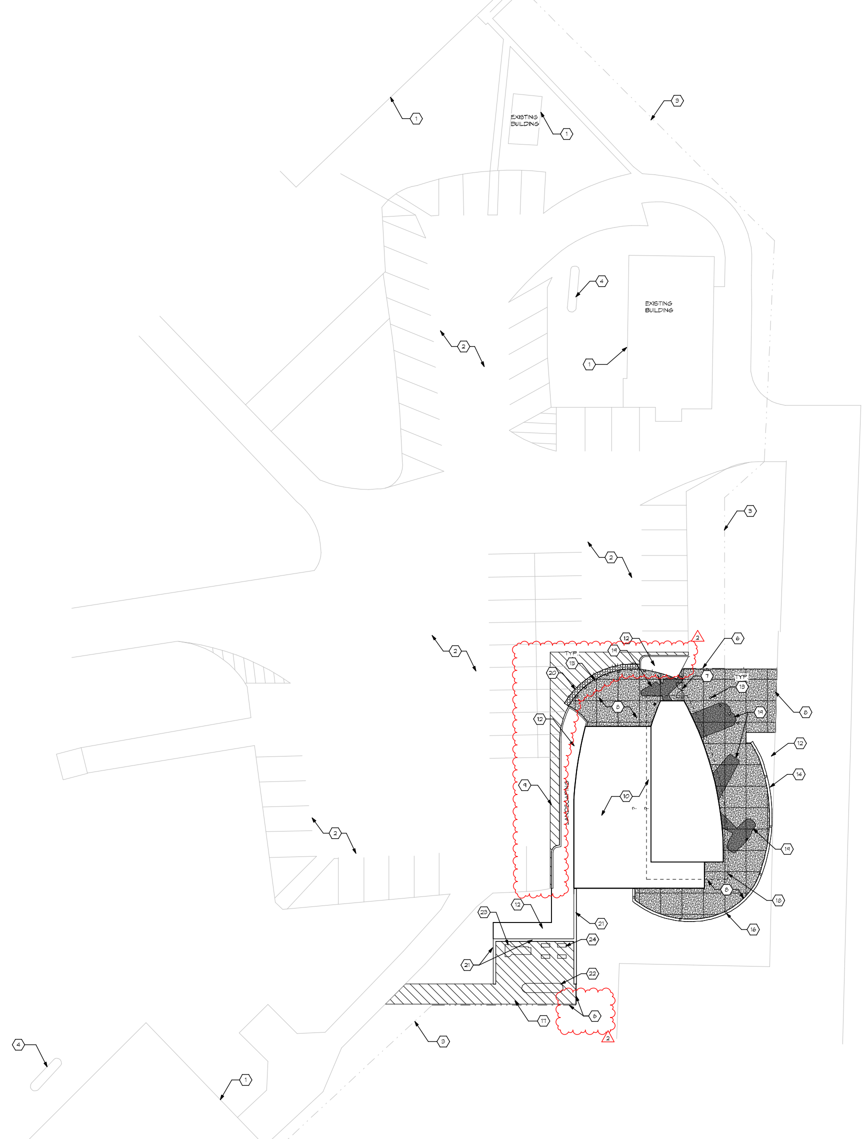
4 ENLARGED ARCHITECTURAL SITE PLAN
SCALE: 1/8" = 1'-0"



3 EXTERIOR WALL ELEVATION - BASE BID (SEE DEDUCT ALTERNATES)
SCALE: 1/4" = 1'-0"



2 EXTERIOR WALL ELEVATION - BASE BID (SEE DEDUCT ALTERNATES)
SCALE: 1/4" = 1'-0"



1 ARCHITECTURAL SITE PLAN
SCALE: 1" = 20'-0"

SHEET NOTES:

1. EXISTING BUILDING
2. EXISTING PARKING
3. EXISTING FENCE
4. EXISTING PROPANE TANK
5. ~~EXISTING GATE~~
6. NEW 6'-0" HIGH CHAINLINK FENCE W/ 3 STRANDS OF BARBED WIRE TO MATCH EXISTING. SEE CIVIL DWGS. FOR DETAILS.
7. NEW 3'-0" WIDE GATES WITH LOCKS. SEE SPECS.
8. BROOM FINISH CONCRETE PATIO W/ SAW-CUT CONTROL JOINTS AS INDICATED - BASE BID. SEE CIVIL/STRUCTURAL DWGS. (SEE DEDUCT ALTERNATES)
9. NEW ASPHALT. SEE CIVIL DWGS.
10. ~~NEW BUILDING~~
11. NOT USED.
12. LANDSCAPE PLANTING BED & MULCH BY OWNER
13. BOLLARDS AT 5'-0" O.C. EDGE TO ALIGN WITH EDGE OF CONCRETE WALL
14. 3'-0" POURED CONCRETE WALL. SEE DETAILS.
15. NOT USED.
16. 4" X 8" DRAINAGE LEAVE-OUT THROUGH WALL AT 20'-0" O.C.
17. NEW ASPHALT ACCESS DRIVE & EQUIPMENT YARD. SEE CIVIL DWGS.
18. LINE OF ROOF ABOVE
19. DARKENED PLANE GRAPHICS TO BE FINISHED W/ EXPOSED AGGREGATE - BASE BID. SEE DEDUCT ALTERNATES.
20. 2'-0" WIDE RAISED DOME ADA TACTILE TRANSITION STRIP IN DARK GRAY
21. 5'-0" POURED CONCRETE WALL. SEE DETAILS.
22. NEW PROPANE TANK BY OWNER.
23. NEW PROPANE GENERATOR - BASE BID. SEE DEDUCT ALTERNATES.
24. NEW CONDENSERS. SEE PME DWGS. FOR EXACT LOCATION.

GENERAL NOTES:

A. REFER TO CIVIL AND PME PLANS FOR ADDITIONAL DETAILS.
B. COORDINATE WITH ARCHITECT THE FINAL LOCATION AND QUANTITY OF ALL BOLLARDS PRIOR TO INSTALL.
C. COORDINATE ALL SIDEWALK SAWCUT LAYOUT AND SPACING WITH ARCHITECT PRIOR TO INSTALL.
D. IF A CONFLICT IS FOUND BETWEEN THESE DRAWINGS, ASSOCIATED DETAILS & THE DRAWINGS OF OTHER DISCIPLINES, THE CONTRACTOR SHALL PROVIDE THE OUTCOME INTENDED BY EITHER OPTION, REGARDLESS OF THE COST DIFFERENCE.

No.	Revisions / Submissions	Date
	SD PROGRESS SET	2025.10.30
	DD PROGRESS SET	2025.12.19
	90% PROGRESS SET	2026.02.23
	CONSTRUCTION DOCUMENTS	2026.03.16
2	ADDENDUM 2	2026.04.07

LWC INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

RICHMOND MUNICIPAL AIRPORT

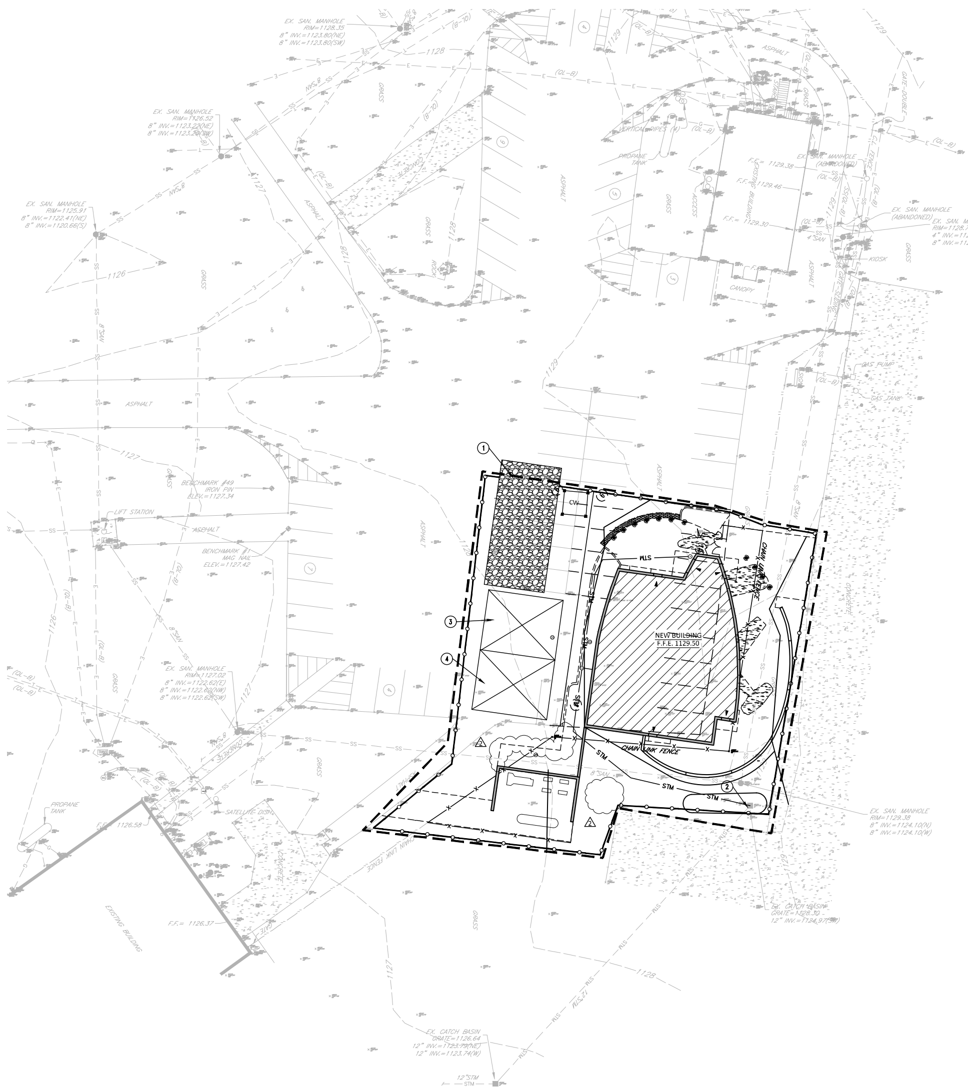
TERMINAL BUILDING

5169 IN-227
RICHMOND, IN 47374

ARCHITECTURAL SITE PLAN

Comm. No. 25106.00	Date 2026.03.16
Drawn KAA	Drawing No. AS101
Checked DW	

© 2026 LWC INCORPORATED



GENERAL NOTES

A. TEMPORARILY SEED ALL DISTURBED AREA.
B. AT THE END OF CONSTRUCTION PERMANENTLY SEED ALL DISTURBED AREAS.
C. REFER TO STORMWATER POLLUTION PREVENTION NOTES AND DETAIL SHEETS.
D. ALL PROPOSED EROSION AND SEDIMENT CONTROL SHALL BE IN CONFORMANCE WITH CHAPTER 600 OF THE CITY OF INDIANAPOLIS STORMWATER SPECIFICATIONS MANUAL, LATEST EDITION. DISCREPANCIES BETWEEN THE PLANS AND THE MANUAL SHALL NOT ALLEVIATE THE CONTRACTOR FROM ADHERING TO THE REQUIREMENTS AS SET FORTH IN THE MANUAL.
E. ADDITIONAL EROSION CONTROL AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED BY THE INSPECTOR.
F. PUBLIC AND PRIVATE ROADWAYS SHALL BE KEPT CLEARED OF ACCUMULATED SEDIMENT. BULK CLEARING OF ACCUMULATED SEDIMENT SHALL NOT INCLUDE FLUSHING THE AREA WITH WATER. PROJECTS SUBJECT TO IDEM'S CSGP SHALL REMOVE SEDIMENT FROM PUBLIC RIGHT-OF-WAY NOT EXCLUSIVE OF CONSTRUCTION TRAFFIC AT THE END OF EACH DAY PER THE CSGP REQUIREMENTS.
G. SEEDING OR EROSION CONTROL STABILIZATION SHALL BE INITIATED BY THE END OF THE SEVENTH (7th) DAY THAT AN AREAS WAS LEFT IDEM. STABILIZATION MUST BE COMPLETED WITHIN FOURTEEN (14) DAYS AFTER INITIATION.
H. DEWATERING BAG PERFORMANCE STANDARDS. DIRECT TO AN APPROPRIATE SEDIMENT CONTROL MEASURE. CONTAMINATED DISCHARGE WATER BY REQUIRE AN ALTERNATIVE METHOD OF DISPOSAL. DISCHARGES MAY REQUIRE AN INDIVIDUAL WASTEWATER PERMIT OR A GENERAL DEWATERING PERMIT

○ PLAN NOTES

1. CONSTRUCTION ENTRANCE.
2. BASKET INLET PROTECTION.
3. CONSTRUCTION STAGING AND STORAGE AREA.
4. TOPSOIL STOCKPILE AREA.

PLAN SYMBOLS

Symbol	Description
CW	CONCRETE WASHOUT AREA
—o—o—	SILT FENCE
— — —	PROPOSED STORM SEWERS
— — — (heavy)	CONSTRUCTION/GRADING LIMITS
——	PROPOSED CONTOURS
- - -	PROPOSED IMPROVEMENTS

0 20 40 FEET
SCALE: 1"=20'

No.	Revisions / Submissions	Date
2	ADDENDUM 02	2026.04.07
	CONSTRUCTION DOCUMENTS	2026.03.16

LWC INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

RICHMOND MUNICIPAL AIRPORT

TERMINAL BUILDING

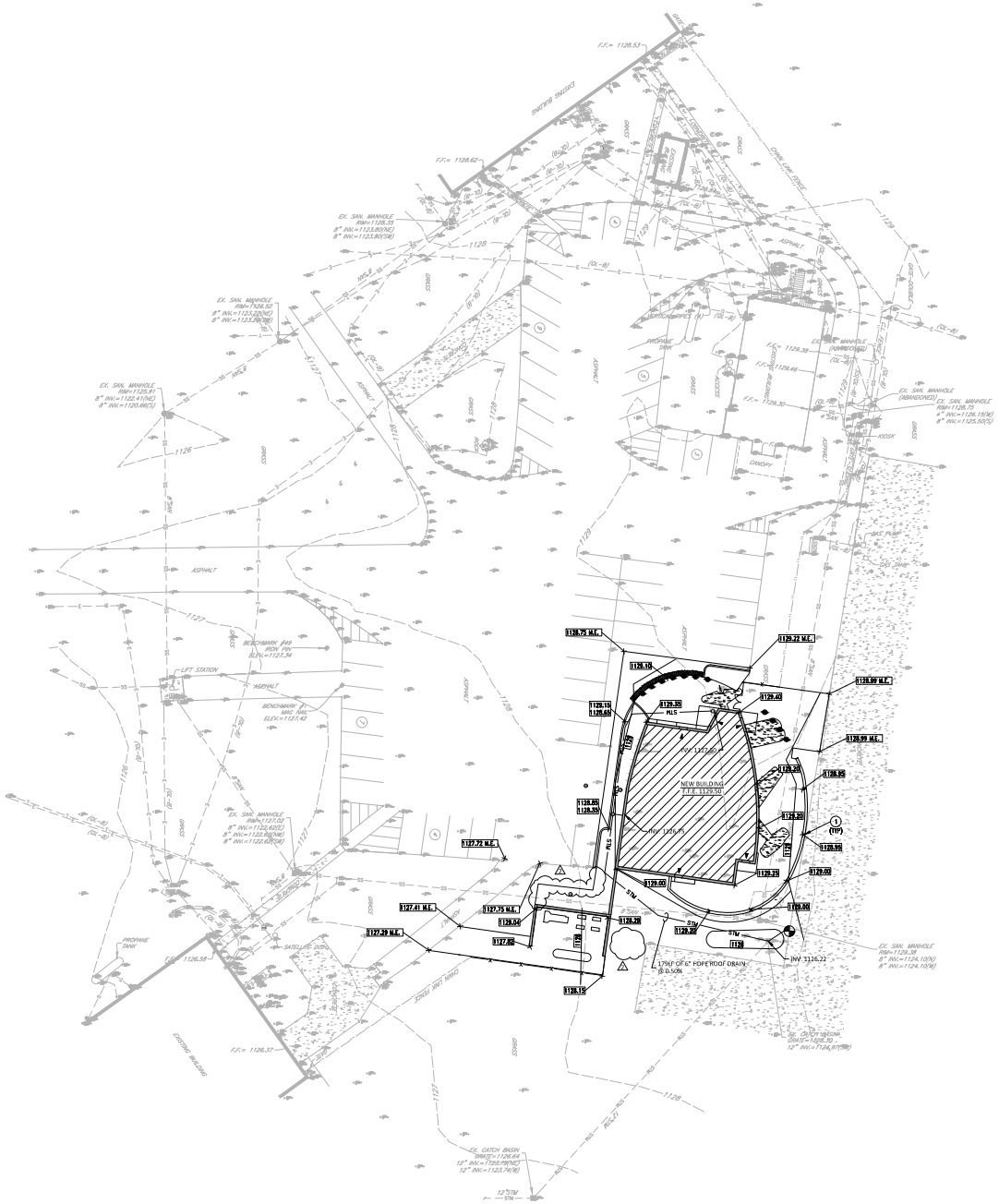
5169 IN-277
RICHMOND, IN 47374

STORMWATER POLLUTION PREVENTION PLAN

Comm. No. 25106.00	Date 2026.03.16
Drawn NRS	Drawing No. C100
Checked ADS	

© 2025 LWC INCORPORATED

12/17/2025 10:38:16 AM



GENERAL NOTES

A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING, AND VERIFYING, THAT ALL PERMITS AND APPROVALS ARE OBTAINED FROM THE RESPECTIVE CITY, COUNTY, STATE AND FEDERAL AGENCIES PRIOR TO STARTING CONSTRUCTION.

B. CONTRACTOR SHALL VERIFY LOCATION AND INVERT ELEVATIONS OF EXISTING SEWERS PRIOR TO START OF CONSTRUCTION.

C. CONTRACTOR SHALL MAINTAIN A COMPLETE AND OPERABLE UTILITY SYSTEM AT ALL TIMES.

D. CONTRACTOR SHALL INCLUDE COSTS FOR CUTTING AND PATCHING AS REQUIRED IN THEIR BID PROPOSAL TO COMPLETELY INSTALL THE WORK INDICATED.

E. CONTRACTOR SHALL INCLUDE ALL TAP FEES, PERMIT FEES AND APPLICATION FEES IN THEIR BID PROPOSAL AS NECESSARY TO COMPLETELY INSTALL THE WORK INDICATED.

F. INFORMATION SHOWN WAS OBTAINED FROM AN OWNER FURNISHED SITE SURVEY OF EXISTING CONDITIONS AND IS UNCONFIRMED. CONTRACTOR IS REQUIRED TO FIELD VERIFY THIS INFORMATION AND NOTIFY ARCHITECT OF ANY DISCREPANCIES SO MODIFICATION CAN BE MADE.

G. CONTRACTOR SHALL COORDINATE EXACT UTILITY LOCATIONS WITH THE OWNER AND LOCAL UTILITY COMPANIES PRIOR TO COMMENCING ANY WORK. UTILIZE THE INDIANA UNDERGROUND UTILITY LOCATION SERVICE AT 811 OR 800-382-5544 PRIOR TO ANY EXCAVATION ON THE SITE.

○ PLAN NOTES

1. DRAINAGE PIPE THROUGH WALL AT 20' O.C.

No.	Revisions / Submissions	Date
2	ADDENDUM 02	2026.04.07
	CONSTRUCTION DOCUMENTS	2026.03.16

LWC INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

RICHMOND MUNICIPAL AIRPORT

TERMINAL BUILDING

5169 IN-227
RICHMOND, IN 47374

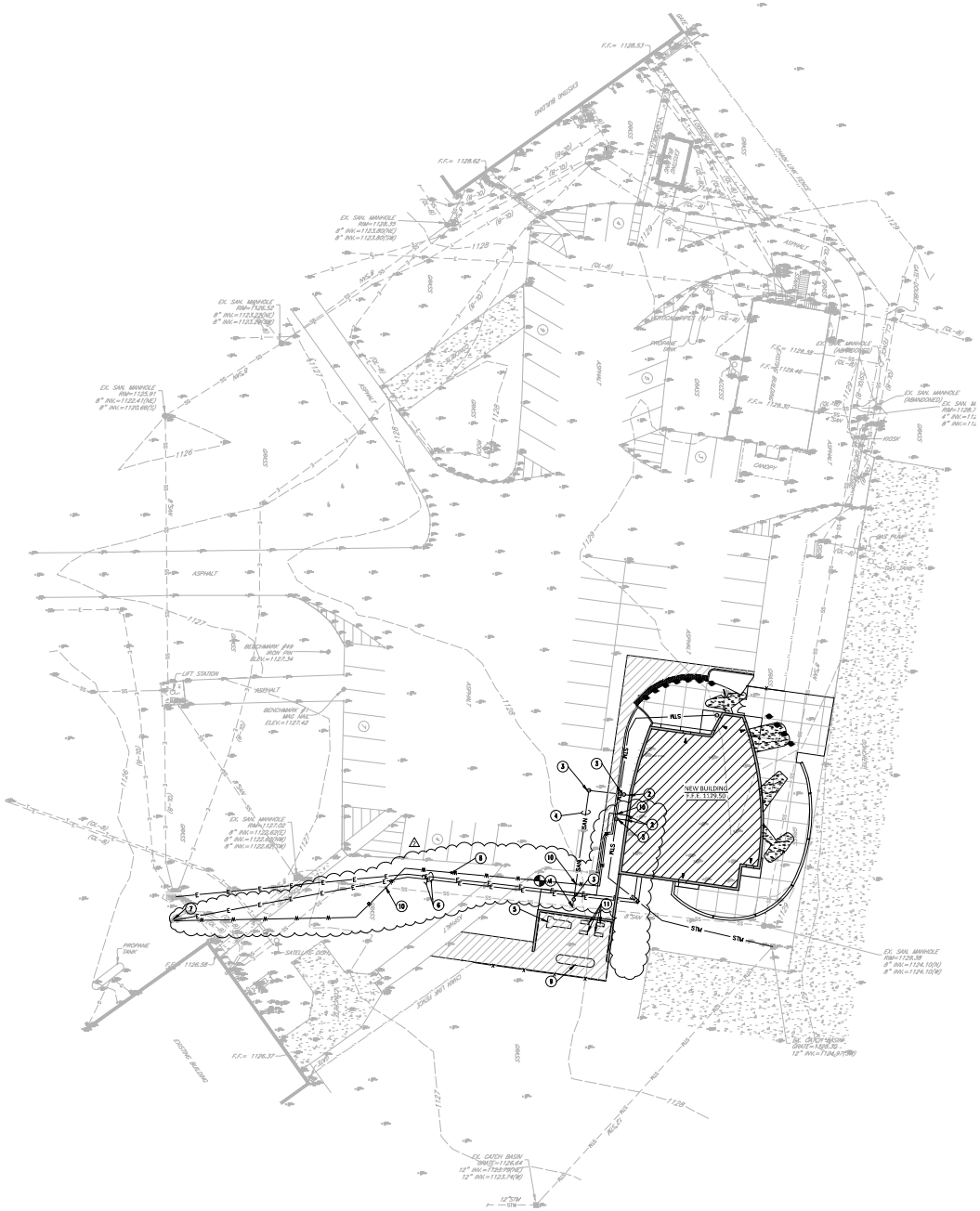
SITE GRADING AND DRAINAGE PLAN

Comm. No.	25106.00
Date	2026.03.16
Drawn	NRS
Drawing No.	C300
Checked	ADS

© 2025 LWC INCORPORATED

0 20 40 FEET
SCALE: 1"=20'

JPS Consulting Engineers - K:\Civil Projects\2025\25JPS053 Richmond Municipal Airport - Terminal Building\Drawings\C300.dwg April 3, 2026 - 10:27 AM NSwenson
Autodesk Docs://Richmond Municipal Airport Terminal/25106.00 Richmond Municipal Airport Termina_STRUCT_R23 CENTRAL.rvt



GENERAL NOTES

A. REFER TO UTILITY DETAILS FOR NOTE REFERENCES.
B. ALL CASTINGS SHALL HAVE THE WORDS 'NO DUMPING DRAINS TO STREAM' CAST IN RAISED OR RECESSED LETTERS AT A MINIMUM OF 1" HEIGHT. A SYMBOL OF A FISH SHALL ALSO BE CAST WITH THE LETTERS.
C. CASTINGS TO BE NEENAH TYPE OR APPROVED EQUAL.
D. CONTRACTOR TO VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES PRIOR TO THE START OF CONSTRUCTION.

○ PLAN NOTES

1. CONTRACTOR TO FIELD VERIFY EXISTING STORM SEWER LOCATION, ELEVATION AND SIZE.
2. COORDINATE SIZE, LOCATION AND ELEVATION OF PIPING WITH PLUMBING PLANS.
3. NEW EXTERIOR CLEANOUT.
4. 84LF OF 4" PVC SANITARY PIPE @ 1.04%.
5. NEW PROPANE GENERATOR BY OWNER. SEE ALTERNATES.
6. NEW ELECTRICAL LINE.
7. REFER TO WELL DRILLERS PLANS FOR EXISTING WELL CONNECTION AND DETAILS.
8. NEW WATER LINE.
9. NEW PROPANE TANK BY OWNER. SEE ALTERNATES.
10. WATER AND SEWER CROSSING, MINIMUM 18" CLEARANCE.
11. NEW CONDENSERS. REFER TO PME DRAWINGS.

0 20 40 FEET
SCALE: 1"=20'

No.	Revisions / Submissions	Date
2	ADDENDUM 02	2026.04.07
	CONSTRUCTION DOCUMENTS	2026.03.16

LWC INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

RICHMOND MUNICIPAL AIRPORT

TERMINAL BUILDING

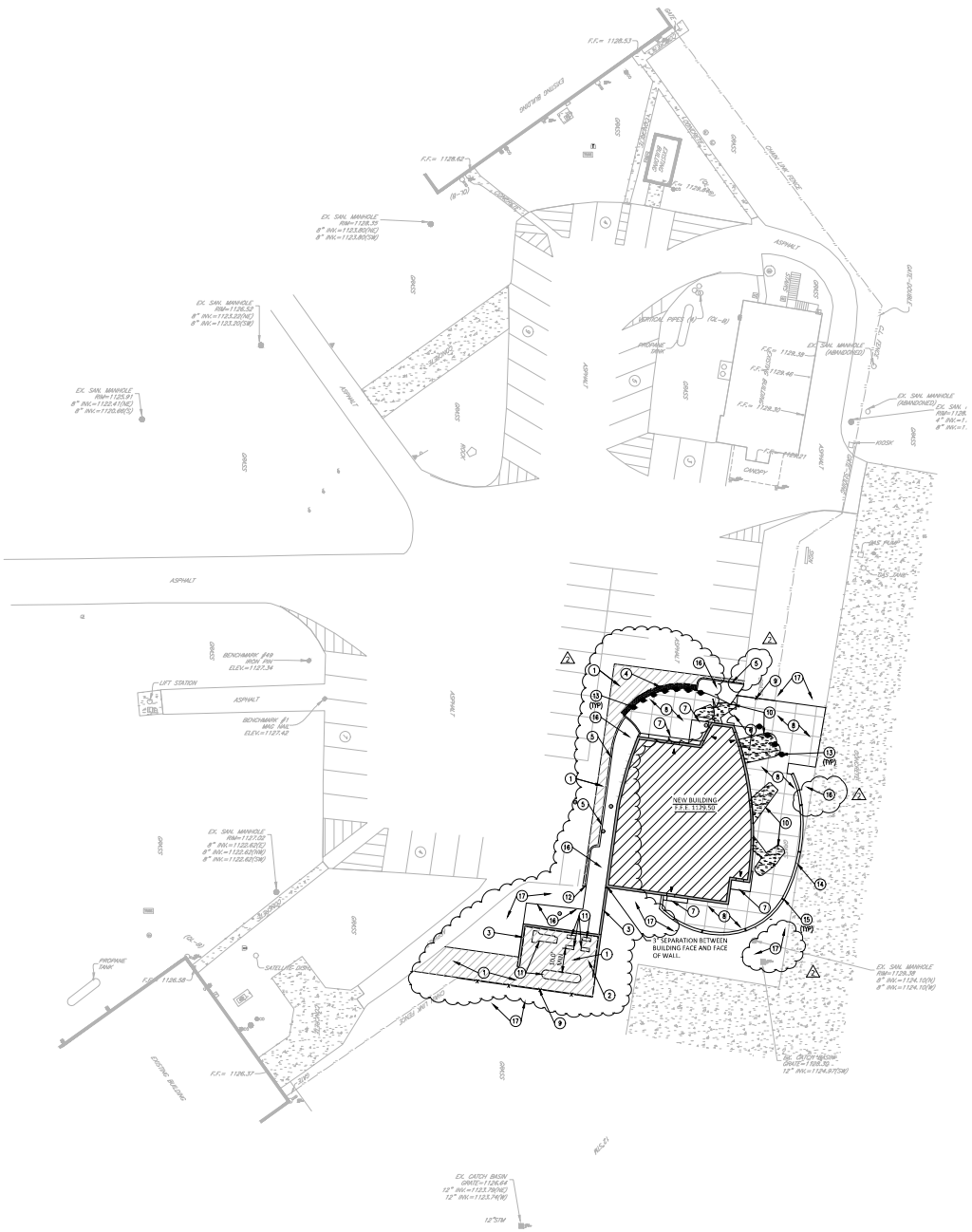
5169 IN-277
RICHMOND, IN 47374

SITE UTILITY PLAN

Comm. No. 25106.00	Date 2026.03.16
Drawn NRS	Drawing No. C400
Checked ADS	

© 2025 LWC INCORPORATED

12/17/2025 10:59:16 AM
Autodesk Docs://Richmond Municipal Airport Terminal/25106.00 Richmond Municipal Airport Termina_STRUCT_R23_CENTRAL.rvt
JPS Consulting Engineers - J:\KJ\24 Projects\2025\25JPS03 Richmond Municipal Airport - Terminal Building\Drawings\C400.dwg April 9, 2026 - 10:38 AM KSwanson



GENERAL NOTES

A. REFER TO IMPROVEMENT DETAILS FOR NOTE REFERENCES.

PLAN NOTES

1. ASPHALT PAVEMENT.
2. NEW MECHANICAL YARD. REFER TO PME DRAWINGS.
3. 5'-0" POURED CONCRETE WALL. REFER TO ARCH DRAWINGS.
4. 2'-0" WIDE RAISED DOME ADA TACTILE TRANSITION STRIP IN DARK GRAY.
5. STRAIGHT CONCRETE CURB.
6. FENCE GATES.
7. CONCRETE STOOP.
8. 6" CONCRETE PAVEMENT.
9. NEW 6' FENCE TO MATCH EXISTING FENCE.
10. DARKENED PLANE: GRAPHICS HAVE BEEN OMITTED WITH EXPOSED AGGREGATE.
11. EQUIPMENT SUPPORT PAD.
12. CONCRETE CURB TAPER.
13. BOLLARDS AT 5' O.C. EDGED TO ALIGN WITH EDGE OF CONCRETE WALL.
14. POURED CONCRETE WALL. REFER TO ARCH DRAWINGS.
15. 4" x 8" DRAINAGE LEAVE OUT THROUGH WALL AT 20' O.C.
16. LANDSCAPING BED. PLANTINGS BY OWNER. LANDSCAPING BEDS TO BE BACKFILLED TO A DEPTH OF 6" WITH A MIXTURE OF ¾ TOPSOIL AND ¼ COMPOST.
17. PERMANENT SEEDING IN DISTURBED AREAS AT THE END OF CONSTRUCTION.

0 20 40 FEET
SCALE: 1"=20'

No.	Revisions / Submissions	Date
2	ADDENDUM 02	2026.04.07
1	CONSTRUCTION DOCUMENTS	2026.03.16

LWC INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

RICHMOND MUNICIPAL AIRPORT

TERMINAL BUILDING

5169 IN-277
RICHMOND, IN 47374

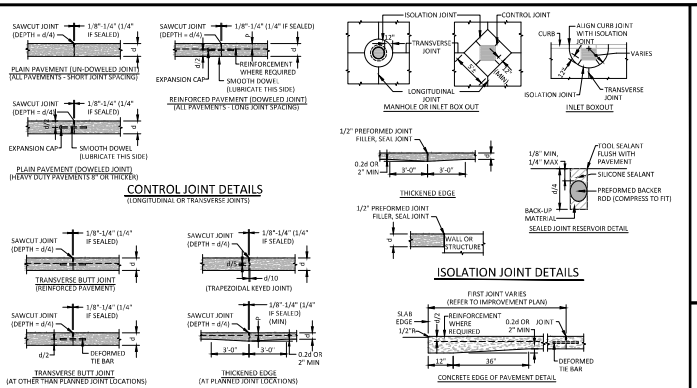
SITE IMPROVEMENT PLAN

Comm. No.	Date
25106.00	2026.03.16
Drawn: NRS	Drawing No. C500
Checked: ADS	

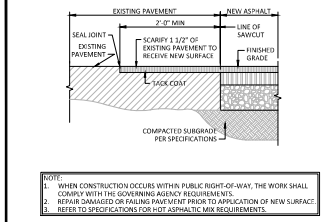
REGISTERED LANDSCAPE ARCHITECT No. LA10901259 STATE OF INDIANA

© 2025 LWC INCORPORATED

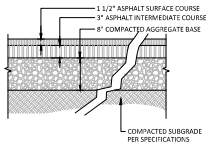
12/17/2025 10:59:16 AM
Autodesk Docs://Richmond Municipal Airport Terminal/25106.00 Richmond Municipal Airport Termina_STRUCT_R23_CENTRAL.rvt
JPS Consulting Engineers - J:\CIVIL\2014 Projects\2025\25JPS033 Richmond Municipal Airport - Terminal Building\Drawings\C500.dwg, April 3, 2026 - 10:23 AM, HStevenson



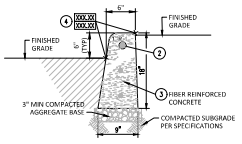
7 CONCRETE PAVEMENT DETAIL
NO SCALE



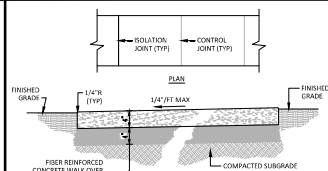
4 NEW ASPHALT PAVEMENT TO EXISTING ASPHALT PAVEMENT DETAIL
NO SCALE



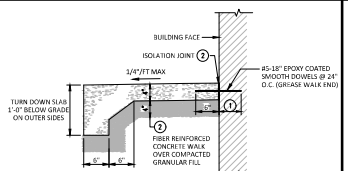
3 ASPHALT PAVEMENT DETAIL
NO SCALE



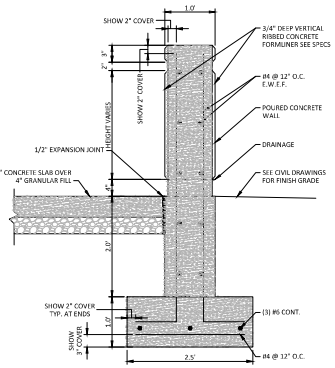
12 STRAIGHT CONCRETE CURB DETAIL
NO SCALE



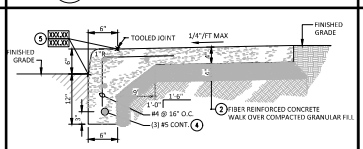
10 CONCRETE WALK DETAIL
NO SCALE



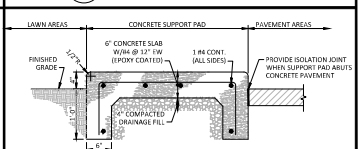
6 CONCRETE STOOP DETAIL
NO SCALE



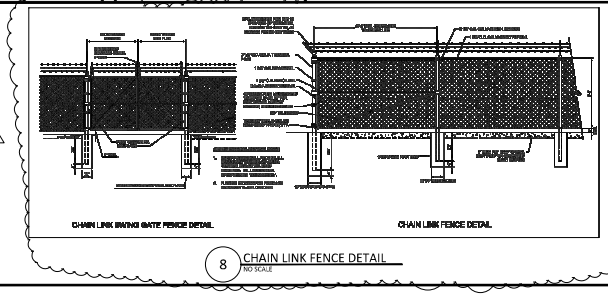
2 CONCRETE WALL DETAIL
NO SCALE



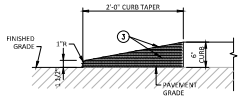
11 CONCRETE CURB AND WALK DETAIL
NO SCALE



5 EQUIPMENT SUPPORT PAD DETAIL
NO SCALE



8 CHAIN LINK FENCE DETAIL
NO SCALE



1 CURB TAPER DETAIL
NO SCALE

No.	Revisions / Submissions	Date
2	ADDENDUM 02	2026.04.07
1	CONSTRUCTION DOCUMENTS	2026.03.16

LWC INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

RICHMOND MUNICIPAL AIRPORT

TERMINAL BUILDING

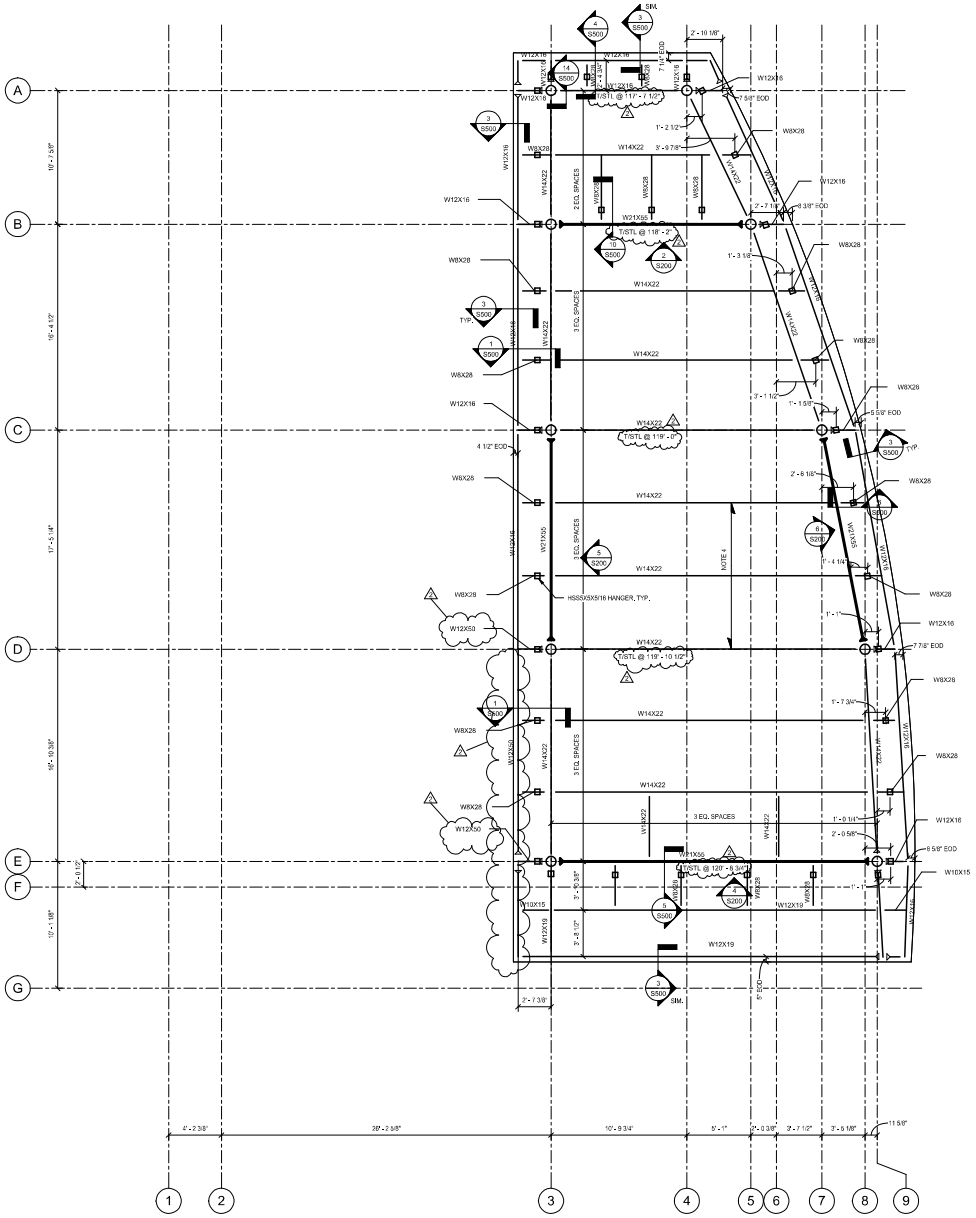
5169 IN-277
RICHMOND, IN 47374

SITE IMPROVEMENT DETAILS

Contract No. 25106.00
Date 2026.03.16
Drawn NRS
Checked ADS
Drawing No. C510

© 2025 LWC INCORPORATED

12/17/2025 10:59:16 AM
Autodesk Docs://Richmond Municipal Airport Terminal/25108.00 Richmond Municipal Airport Terminal_STRUCT_ R23 CENTRAL.rvt
JPS Consulting Engineers - J:\C2014 Projects\2025\25JPS033 Richmond Municipal Airport - Terminal Building\Drawings\C500.dwg April 9, 2026 - 10:23 AM HStevenson



1 HIGH ROOF FRAMING PLAN
S111 1/8" = 1'-0"

PLAN NOTES:

1. REFER TO SHEETS S001-S005 FOR GENERAL NOTES AND TYPICAL DETAILS.
2. THE GC SHALL COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH THE VARIOUS TRADES.
3. THE TOP OF STEEL SHALL BE AT ELEVATION PER PLAN (SLOPES).
4. ROOF DECK SHALL BE VULCRAFT 1.5IN-36 20 GAGE WITH ENCAPSULATED FIBERGLASS INSULATION OR AN APPROVED EQUAL.
5. ASSUME A BEAM END REACTION OF 20k FOR CONNECTION DESIGN. THIS REACTION IS A FACTORED LRFD VALUE.

No.	Revisions / Submissions	Date
1	CONSTRUCTION DOCUMENTS	2026.03.16
2	ADDENDUM 02	2026.04.07

LWC INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

RICHMOND MUNICIPAL AIRPORT

TERMINAL BUILDING

5169 IN-227
RICHMOND, IN 47374

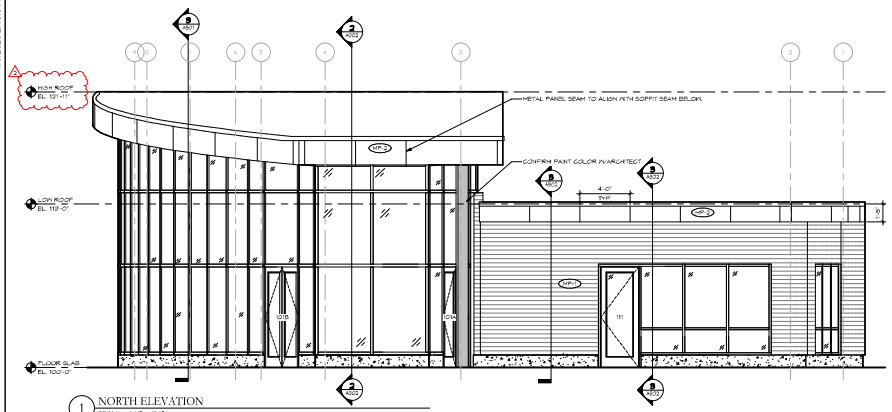
HIGH ROOF FRAMING PLAN

Comm. No.	25106.00
Date	2026.03.16
Drawn	JCB
Drawing No.	S111
Checked	CES

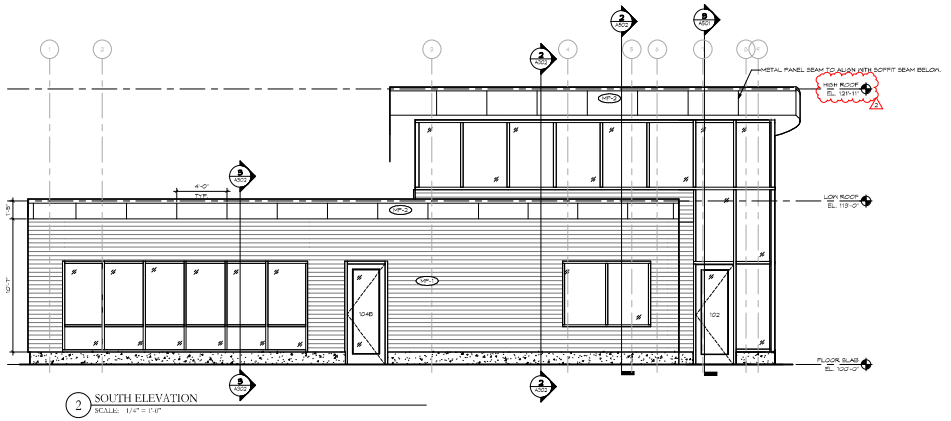
© 2026 LWC INCORPORATED

4/9/2026 6:08:55 PM
Autodesk Docs://Richmond Municipal Airport Terminal/25106.00 Richmond Municipal Airport Terminal_STRUCT_R23 CENTRAL.rvt

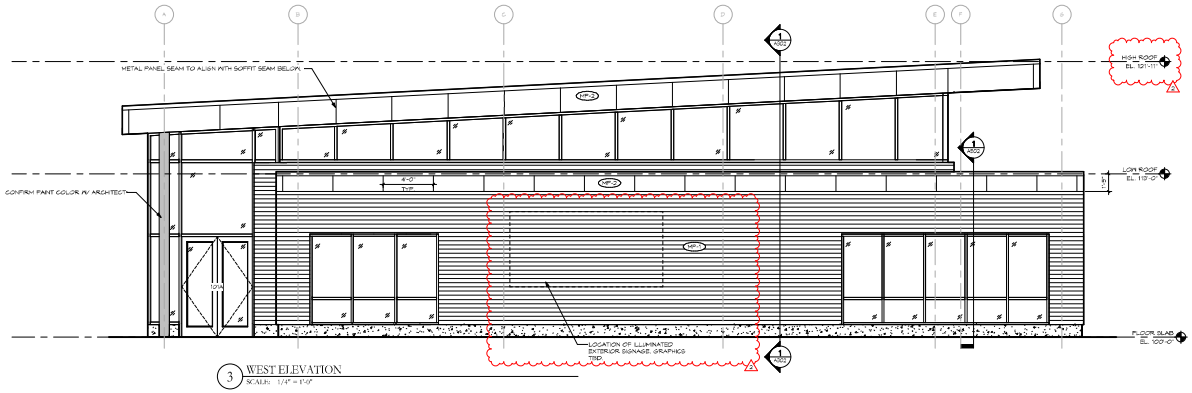
4/8/2026 2:49:04 PM
Autodesk Docs://Richmond Municipal Airport Terminal/25106.00 Richmond Municipal Airport Terminal R23 CENTRAL.rvt



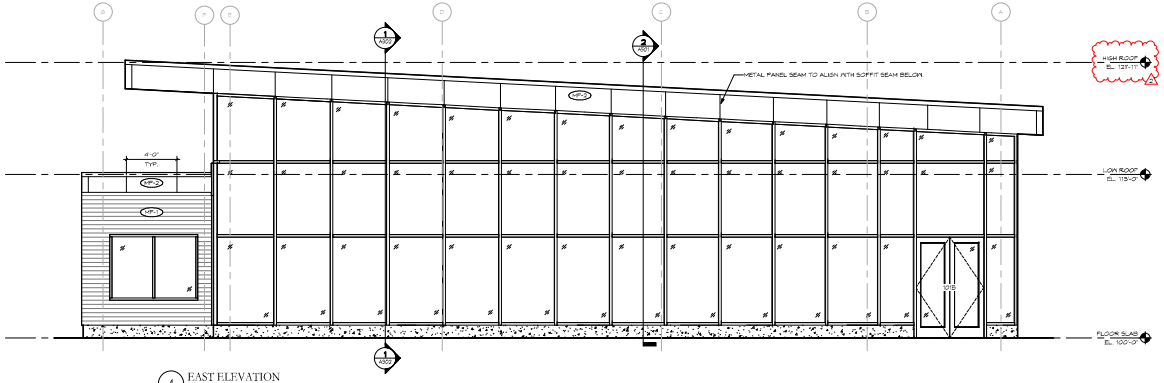
1 NORTH ELEVATION
SCALE: 1/4" = 1'-0"



2 SOUTH ELEVATION
SCALE: 1/4" = 1'-0"



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



4 EAST ELEVATION
SCALE: 1/4" = 1'-0"

GENERAL NOTES:

A. SEE FINISH MATERIAL SCHEDULE FOR METAL PANEL TYPES.

No.	Revisions / Submissions	Date
	SD PROGRESS SET	2025.10.30
	DD PROGRESS SET	2025.12.19
	90% PROGRESS SET	2026.02.23
	CONSTRUCTION DOCUMENTS	2026.03.16
2	ADDENDUM 2	2026.04.07

LWC INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

RICHMOND MUNICIPAL AIRPORT

TERMINAL BUILDING

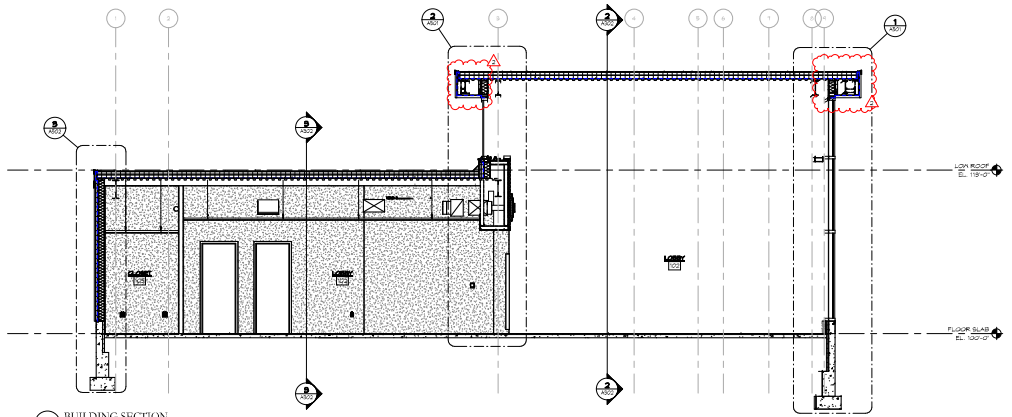
5169 IN-227
RICHMOND, IN 47374

EXTERIOR ELEVATIONS

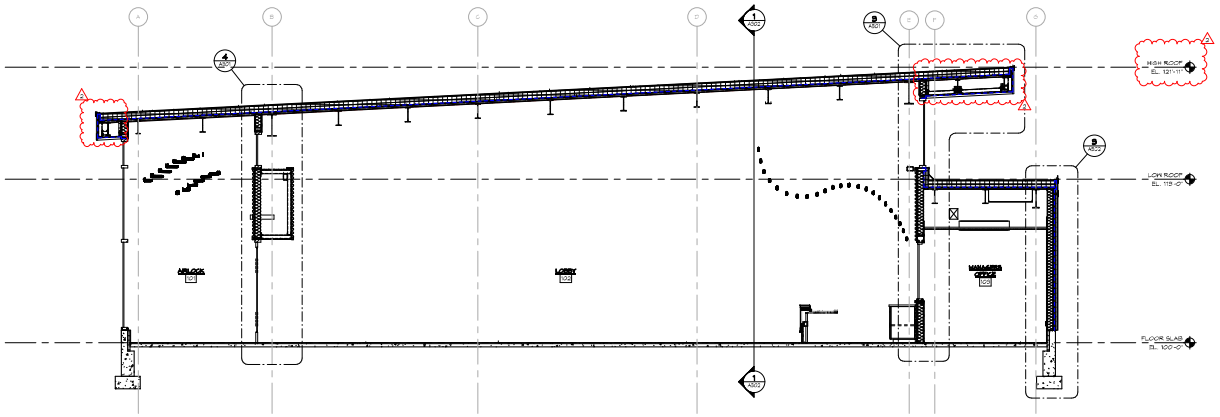
Comm. No.	25106.00
Date	2026.03.16
Drawn	KAA
Checked	DW
Drawing No.	A301

© 2026 LWC INCORPORATED

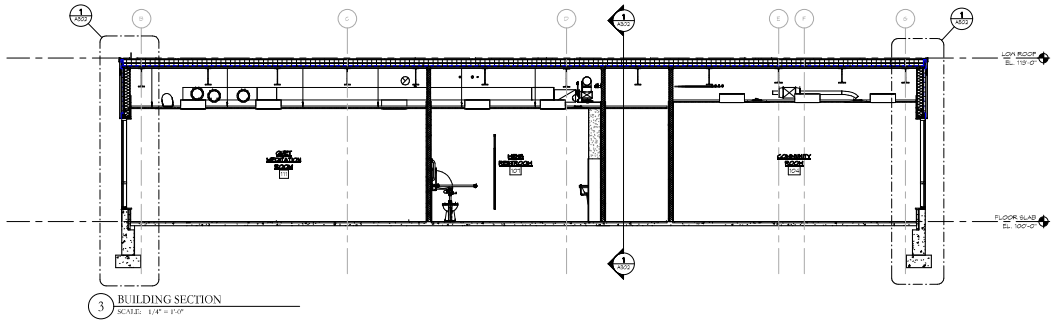
4/9/2026 1:08:30 PM
Autodesk Docs://Richmond Municipal Airport Terminal/25106.00 Richmond Municipal Airport Terminal R23 CENTRAL.rvt



1 BUILDING SECTION
SCALE: 1/4" = 1'-0"



2 BUILDING SECTION
SCALE: 1/4" = 1'-0"



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

No.	Revisions / Submissions	Date
	SD PROGRESS SET	2025.10.30
	DD PROGRESS SET	2025.12.19
	90% PROGRESS SET	2026.02.23
	CONSTRUCTION DOCUMENTS	2026.03.16
2	ADDENDUM 2	2026.04.07

LWC INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

RICHMOND MUNICIPAL AIRPORT

TERMINAL BUILDING

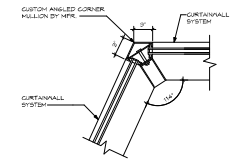
5169 IN-227
RICHMOND, IN 47374

BUILDING SECTIONS

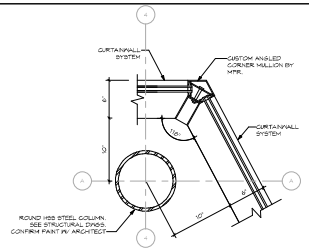
Comm. No.	25106.00
Date	2026.03.16
Drawn	KAA
Drawing No.	A302
Checked	DW

© 2026 LWC INCORPORATED

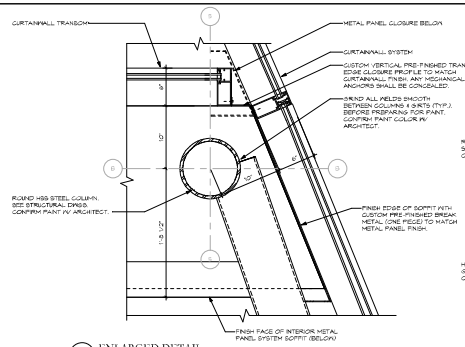
4/9/2026 1:04:25 PM
Autodesk Docs://Richmond Municipal Airport Terminal/25106.00 Richmond Municipal Airport Terminal R23 CENTRAL.rvt



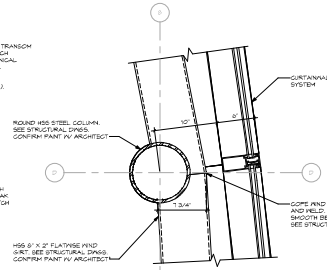
15 ENLARGED DETAIL
SCALE: 1 1/2" = 1'-0"



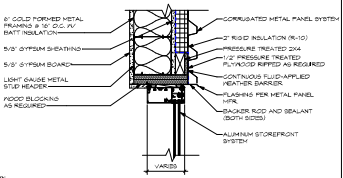
14 ENLARGED DETAIL
SCALE: 1 1/2" = 1'-0"



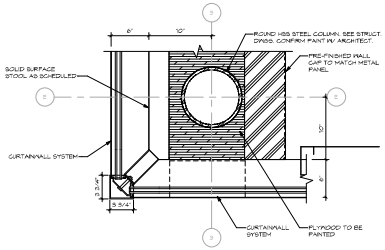
13 ENLARGED DETAIL
SCALE: 1 1/2" = 1'-0"



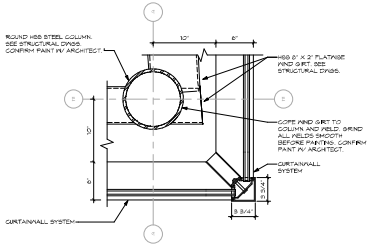
12 ENLARGED DETAIL
SCALE: 1 1/2" = 1'-0"



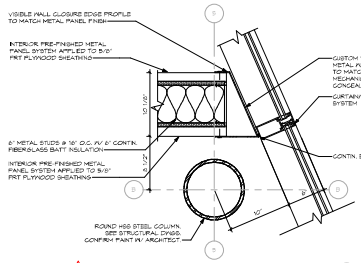
11 TYPICAL WINDOW HEAD DETAIL
SCALE: 1 1/2" = 1'-0"



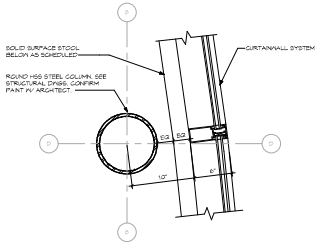
5 ENLARGED DETAIL
SCALE: 1 1/2" = 1'-0"



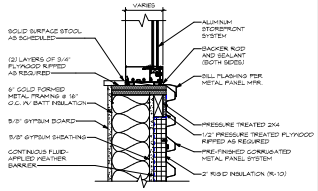
6 ENLARGED DETAIL
SCALE: 1 1/2" = 1'-0"



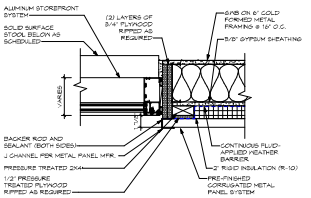
7 ENLARGED DETAIL
SCALE: 1 1/2" = 1'-0"



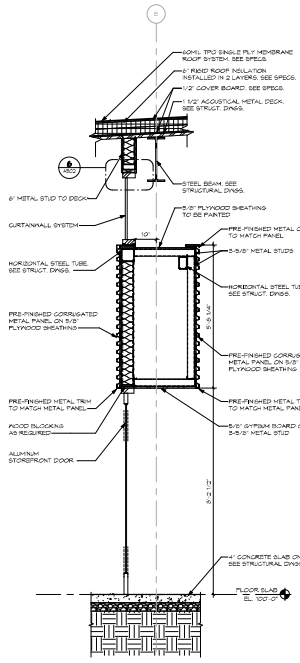
8 ENLARGED DETAIL
SCALE: 1 1/2" = 1'-0"



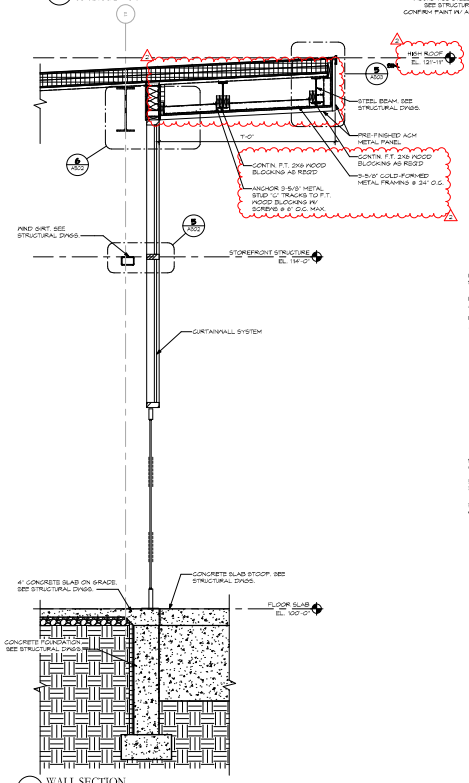
10 TYPICAL WINDOW SILL DETAIL
SCALE: 1 1/2" = 1'-0"



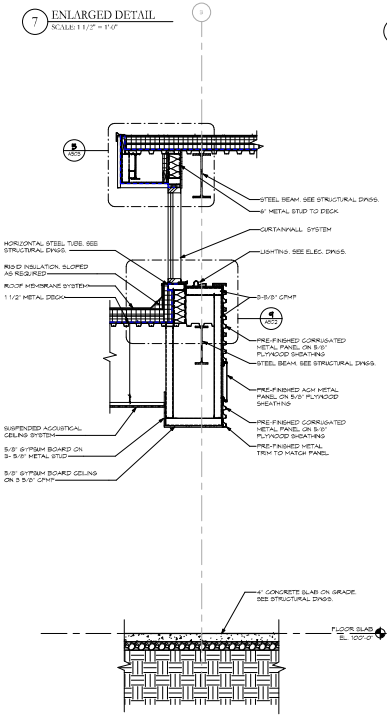
9 TYPICAL WINDOW JAMB DETAIL
SCALE: 1 1/2" = 1'-0"



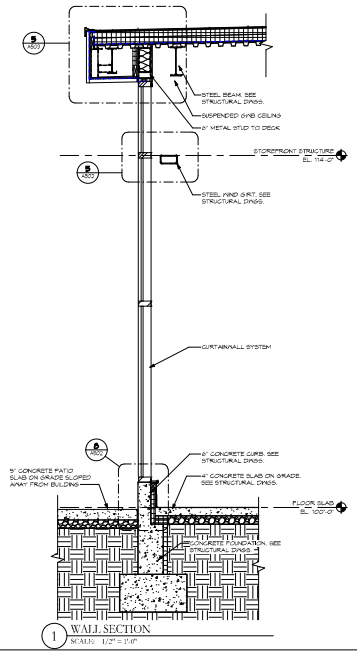
4 WALL SECTION
SCALE: 1/2" = 1'-0"



3 WALL SECTION
SCALE: 1/2" = 1'-0"



2 WALL SECTION
SCALE: 1/2" = 1'-0"



1 WALL SECTION
SCALE: 1/2" = 1'-0"

No.	Revisions / Submissions	Date
	SD PROGRESS SET	2025.10.30
	DD PROGRESS SET	2025.12.19
	90% PROGRESS SET	2026.02.23
	CONSTRUCTION DOCUMENTS	2026.03.16
2	ADDENDUM 2	2026.04.07

LWC INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

RICHMOND MUNICIPAL AIRPORT

TERMINAL BUILDING

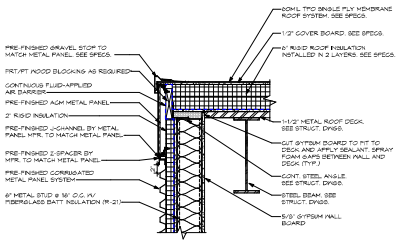
5169 IN-227
RICHMOND, IN 47374

WALL SECTIONS AND ENLARGED DETAILS

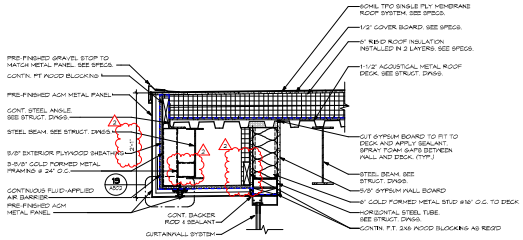
Contract No.	25106.00
Date	2026.03.16
Drawn	KAA
Checked	DW
Drawing No.	A501

© 2026 LWC INCORPORATED

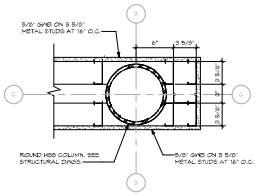
4/9/2026 1:09:25 PM
Autodesk Docs://Richmond Municipal Airport Terminal/25106.00 Richmond Municipal Airport Terminal R23 CENTRAL.rvt



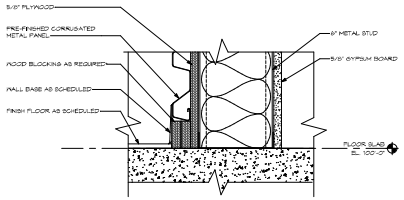
6 TYP. ROOF DETAIL
SCALE: 1" = 1'-0"



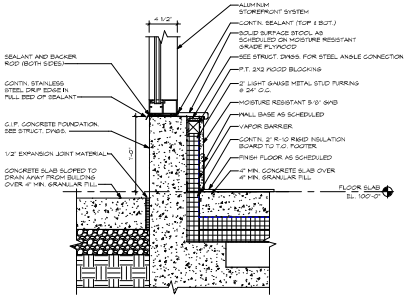
5 TYP. ROOF DETAIL
SCALE: 1" = 1'-0"



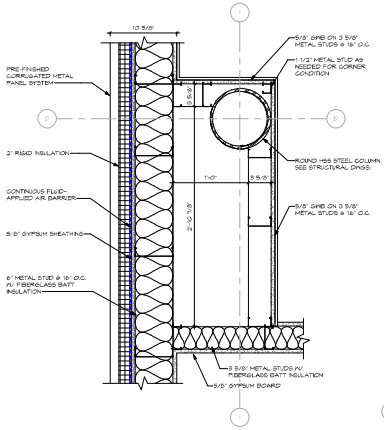
4 ENLARGED DETAIL
SCALE: 1 1/2" = 1'-0"



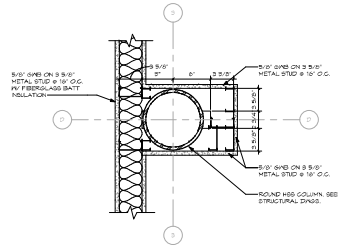
12 ENLARGED DETAIL
SCALE: 3" = 1'-0"



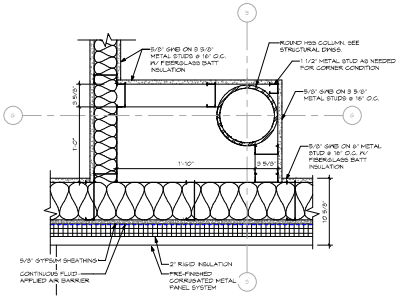
7 ENLARGED DETAIL
SCALE: 1 1/2" = 1'-0"



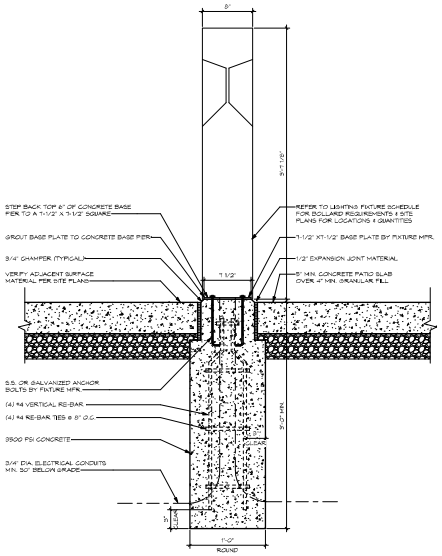
8 ENLARGED DETAIL
SCALE: 1 1/2" = 1'-0"



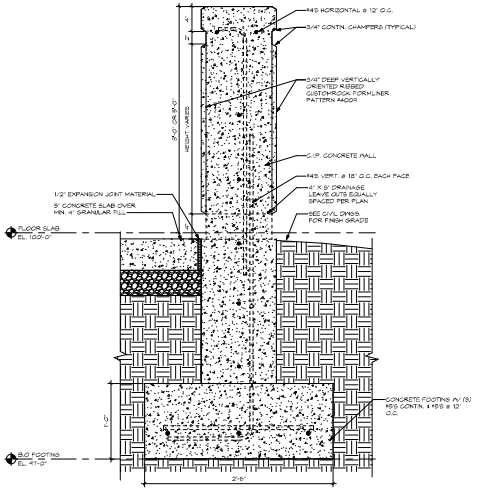
3 ENLARGED DETAIL
SCALE: 1 1/2" = 1'-0"



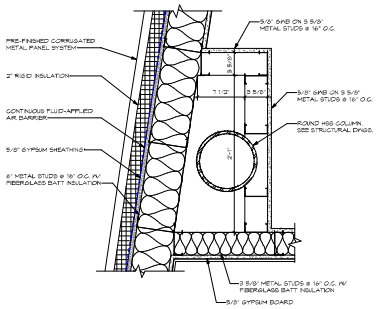
2 ENLARGED DETAIL
SCALE: 1 1/2" = 1'-0"



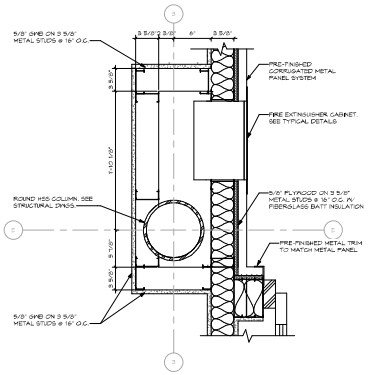
11 TYP. BOLLARD DETAIL
SCALE: 1 1/2" = 1'-0"



10 EXTERIOR WALL SECTION
SCALE: 1 1/2" = 1'-0"



9 ENLARGED DETAIL
SCALE: 1 1/2" = 1'-0"



1 ENLARGED DETAIL
SCALE: 1 1/2" = 1'-0"

No.	Revisions / Submissions	Date
	SD PROGRESS SET	2025.10.30
	DD PROGRESS SET	2025.12.19
	80% PROGRESS SET	2026.02.23
	CONSTRUCTION DOCUMENTS	2026.03.16
1	ADDENDUM 1	2026.03.27
2	ADDENDUM 2	2026.04.07

LWC INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

RICHMOND MUNICIPAL AIRPORT

TERMINAL BUILDING

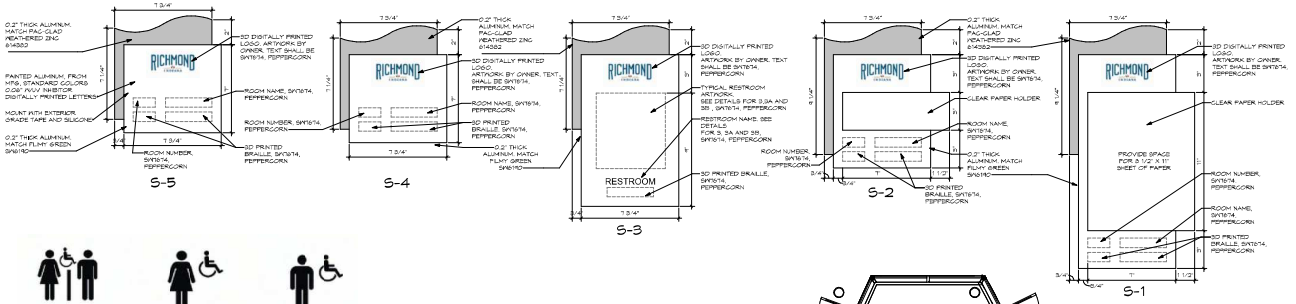
5169 IN-227
RICHMOND, IN 47374

WALL SECTIONS AND ENLARGED DETAILS

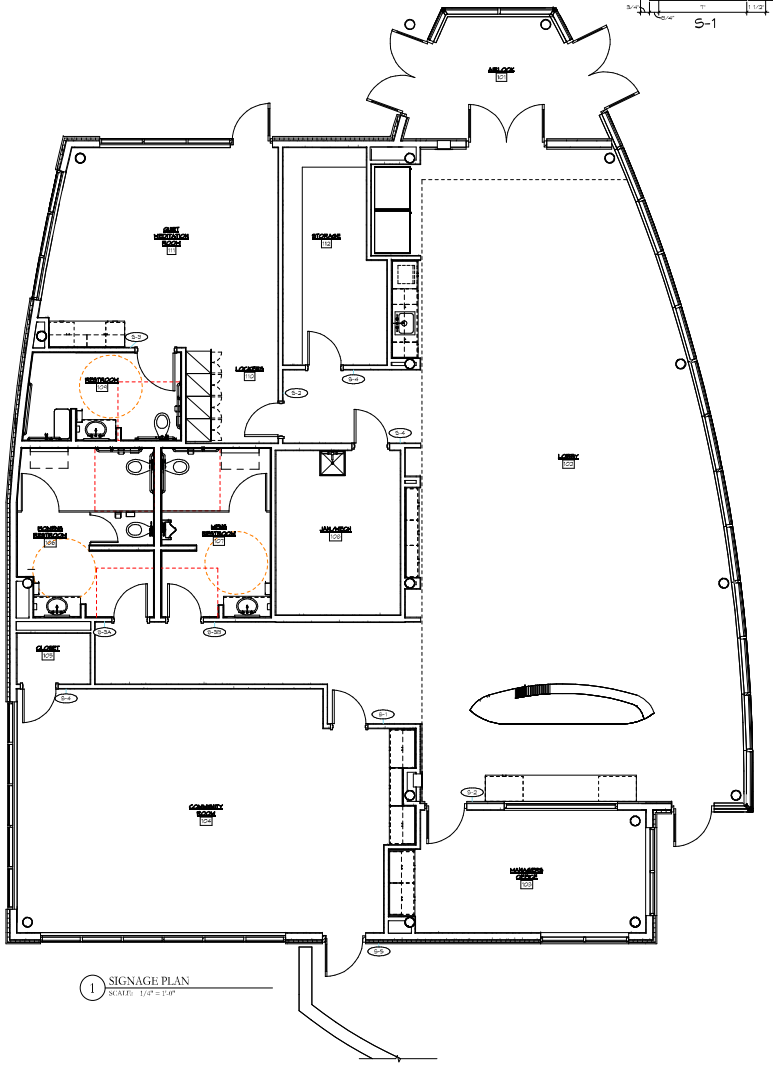
Comm. No.	Date
25106.00	2026.03.16
Drawn	Drawing No.
KAA	A503
Checked	
DW	

© 2026 LWC INCORPORATED

4/7/2026 2:59:43 PM



SIGNAGE SCHEDULE			
SIGN TYPE	AREA	QTY.	DESCRIPTION
S-1	ROOMS 104	1	CLEAR PAPER HOLDER INSERT
S-2	ROOMS 103,110	2	ROOM IDENTIFICATION WITH CLEAR PAPER HOLDER INSERT
S-3	RESTROOM (UNISEX)	1	RESTROOM IDENTIFICATION
S-3a	RESTROOM (WOMEN)	1	RESTROOM IDENTIFICATION
S-3b	RESTROOM (MEN)	1	RESTROOM IDENTIFICATION
S-4	ROOMS 112, 108, 105	3	ROOM IDENTIFICATION
S-5	ROOMS 104	1	EXTERIOR ROOM IDENTIFICATION



1 SIGNAGE PLAN
SCALE: 1/4" = 1'-0"

SHEET NOTES:

GENERAL NOTES:

No.	Revisions / Submissions	Date
2	ADDENDUM 2	2026.04.07

LWC INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

RICHMOND MUNICIPAL AIRPORT

TERMINAL BUILDING

5169 IN-227
RICHMOND, IN 47374

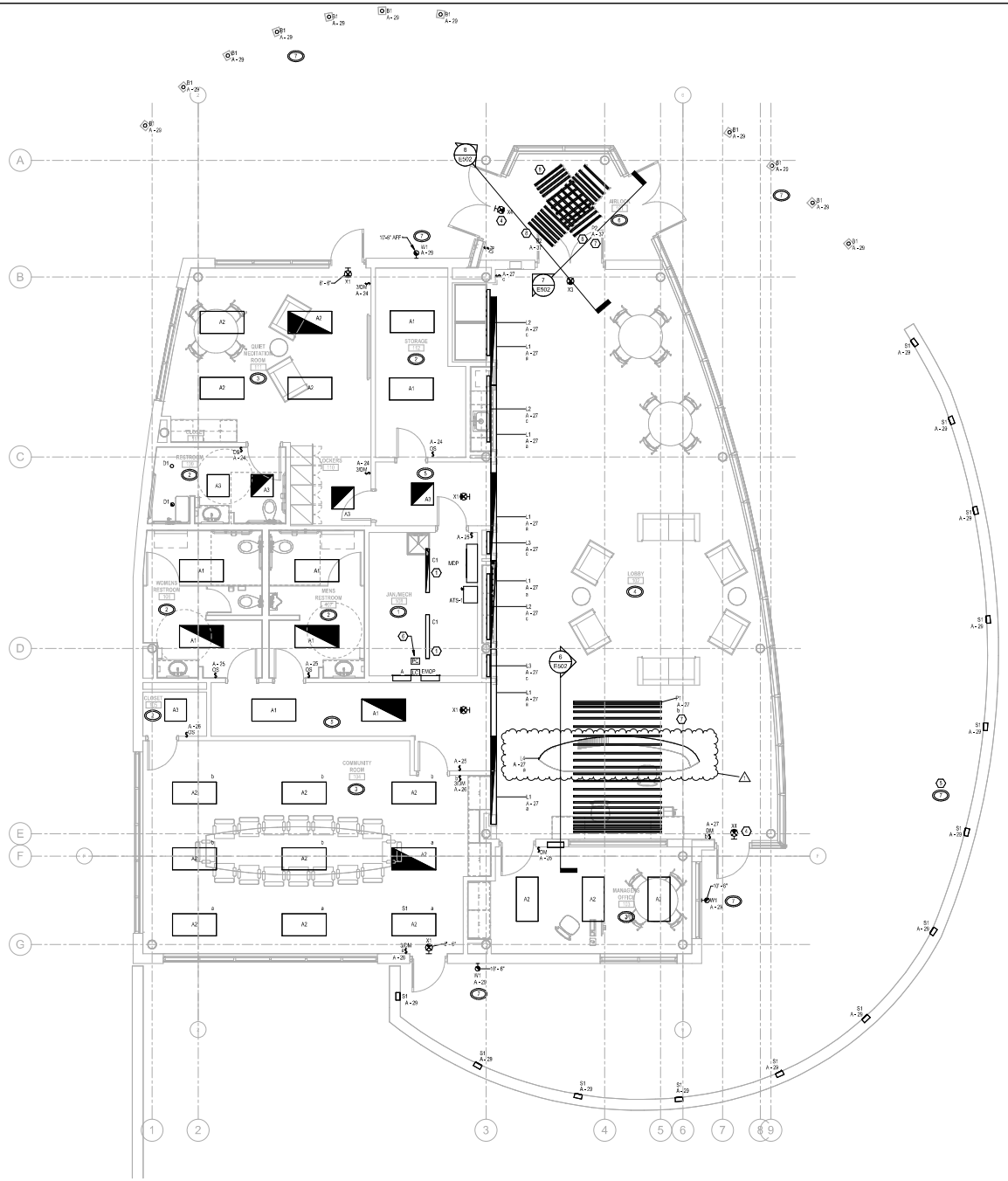
SIGNAGE PLAN

Comm. No.	25106.00
Date	2026.03.16
Drawn	RM
Checked	DW
Drawing No.	ID102

© 2026 LWC INCORPORATED

Autodesk Docs://Richmond Municipal Airport Terminal/25106.00 Richmond Municipal Airport Terminal R23 CENTRAL.rvt

4/7/2026 9:50:08 AM



1 **LIGHTING FIRST FLOOR PLAN**
SCALE: 1/4" = 1'-0"

SHEET NOTES:

1. MOUNT 10'-0" CLEAR AFF.
2. MOUNT 15'-0" CLEAR AFF.
3. MOUNT 17'-6" CLEAR AFF.
4. MOUNT EXIT SIGN TO DOOR HEAD MULLION. ROUTE WIRING THROUGH DOOR FRAME.
5. EVENLY SPACE "S1" TYPE LIGHT FIXTURES ALONG WALL AT 2'-0" ABOVE GRADE. VERIFY MOUNTING HEIGHT WITH ARCHITECT PRIOR TO ROUGH-IN. REFER TO SECTIONS ON ELECTRICAL AND ARCHITECTURAL DRAWINGS. ALL SUSPENDED FIXTURES IN GROUPING TO BE CIRCUITED TO THE SAME CIRCUIT AND CONTROL DEVICE.
6. PROVIDE THIS FIXTURE WITH A BATTERY INVERTER FOR 90 MINUTES OF EGRESS LIGHTING.

No.	Revisions / Submissions	Date
	CONSTRUCTION DOCUMENTS	2026.03.16
1	ADDENDUM 2	2026.04.07

LWC INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

RICHMOND MUNICIPAL AIRPORT

TERMINAL BUILDING

5169 IN-277
RICHMOND, IN 47374

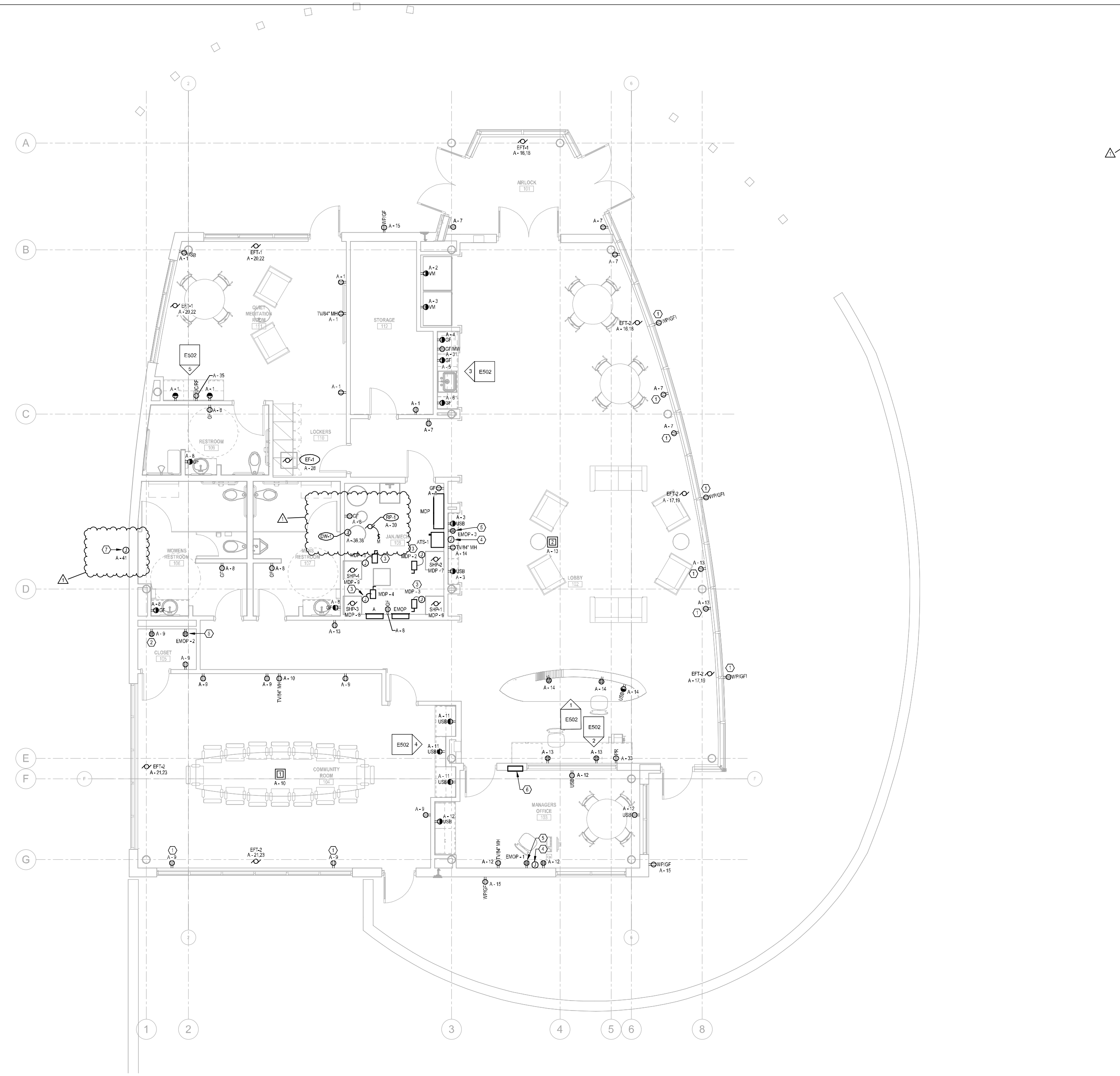
LIGHTING PLAN

HEAPY
PROJECT NO. 2025-07191

Comm. No.	25106.00
Date	2026.03.16
Drawn	DLH
Checked	MAR
Drawing No.	E201

© 2026 LWC INCORPORATED

Autodesk Docs://Richmond Municipal Airport Terminal/2025-07191-MEP-Central.rvt



1 POWER PLAN
SCALE: 1/4" = 1'-0"

SHEET NOTES:

1. MOUNT RECEPTACLE IN CURB AT 6" AFF.
2. QUADRAPLEX RECEPTACLE FOR DATA RACK. COORDINATE LOCATION OF DATA RACK.
3. CONNECTION FOR ELECTRIC HEAT KIT PROVIDED WITH INDOOR UNIT.
4. DOUBLE GANG BOX WITH BLANK DEVICE PLATE WITH 1" CONDUIT WITH PULL STRING TO ABOVE ROOF FOR OWNER PROVIDED ANTENNAE.
5. RECEPTACLE ON EMERGENCY POWER FOR OWNER PROVIDED COMMUNICATION EQUIPMENT. COORDINATE EXACT LOCATION WITH OWNER AND LOCATE AS DIRECTED.
6. GENERATOR ANNUNCIATOR PANEL. COORDINATE FINAL LOCATION WITH OWNER AND LOCATE AS DIRECTED.
7. 120V, 20 AMP BRANCH CIRCUIT TO LIGHTED SIGNAGE. COORDINATE EXACT LOCATION PRIOR TO ROUGH-IN. MOUNT BOX ABOVE ACCESSIBLE CEILING HEIGHT.

No.	Revisions / Submissions	Date
	CONSTRUCTION DOCUMENTS	2026.03.16
1	ADDENDUM 2	2026.04.07

LWC INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

RICHMOND MUNICIPAL AIRPORT

TERMINAL BUILDING

5169 IN-277
RICHMOND, IN 47374

POWER PLAN

Comm. No. 25106.00	Date 2026.03.16
Drawn CAG/DLH	Drawing No. E301
Checked MAR	

© 2025 LWC INCORPORATED

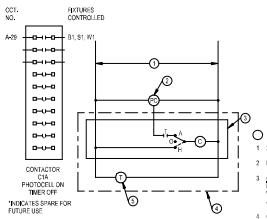
HEAPY
PROJECT NO. 2025-07191

4/7/2026 9:50:11 AM

LIGHTING CONTROL SEQUENCE OF OPERATIONS

NOTES:
1. OCCUPANCY SENSOR TO BE INTERGRAL WITH LIGHT SWITCH
2. CEILING MOUNTED OCCUPANCY SENSOR
3. CEILING MOUNTED HI-BAY TYPE OCCUPANCY SENSOR.
4. DAYLIGHT CONTROL FOR SWITCHLEG "a" AND "c". ON/OFF SWITCH CONTROL FOR "b" SWITCH LEG.
5. COORDINATE ON/OFF TIMES WITH OWNER.

	OCCUPANCY SENSOR				TIME CLOCK					WALL SWITCH					DAYLIGHT SENSOR						
CONTROL NUMBER	VACANCY MODE (MANUAL ON)	OCCUPANCY MODE (AUTO ON)	SENSOR TIME OUT PERIOD (IN MINUTES)	HIGH / LOW OPERATION: OCCUPIED: 100% VACANT: 30%	SCHEDULED ON AT	SCHEDULED OFF AT	OCCUPIED TIME START	UNOCCUPIED TIME START	AFTER HOURS OVERRIDE SWITCH (2 HOURS)	ON / OFF ONLY	DIMMER SWITCH	KEY SWITCH	SCENE SWITCH	GRAPHICAL WALL STATION	PHOTOCELL - ON / OFF ONLY	INDOOR - ON / OFF	INDOOR - DIMMING	LIGHT LEVEL MAINTAINED AT (IN FOOTCANDLES @ 2'-6" A.F.F.)	EXTERIOR PHOTOCELL - ON / OFF	SEE NOTE	DETAIL NUMBER
1										•											N/A
2		•	30							•										1	N/A
3		•	30								•									2	N/A
4		•	30							•	•						20			3, 4	N/A
5		•	30																	2	N/A
6		•	30								•						20			3	N/A
7					DUSK	DAWN													•	5	1/ES01



DETAIL NOTES

1. 20A 120V. CONTROL CCT.
2. PHOTOCELL INTERMATIC "K4133M (120/277V) OR EQUAL.
3. CONTACTOR C1A - MECHANICALLY HELD 10 POLE LIGHTING CONTACTOR, SQUARE D, LXG-10BMB OR EQUAL WITH ONE H2A SWITCH AND 120V COIL. WIRE IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.
4. CONTACTOR C1A, TIMECLOCK AND H2A, SWITCH TO BE MOUNTED IN ONE NEMA 1 LOCKABLE ENCLOSURE WITH HINGED COVER.
5. TIMECLOCK: TORK D2S400BP (120V) OR EQUAL. ASTRONOMIC 7 DAY 2 CIRCUIT WITH 24 HOUR POWER BACKUP.

GENERAL NOTES

A. PROVIDE SLACK IN LIGHTING CIRCUIT CONDUCTORS SO CIRCUIT CAN BE MOVED TO FURTHEST CONNECTION ENCLOSURE.

① EXTERIOR LIGHTING CONTROL - SINGLE ZONE

LUMINAIRES

NOTES:
1. FIXTURE PROVIDED WITH BATTERY INVERTER FOR 90 INUTES OF EGRESS LIGHTING.
2. VERIFY FINISH/COLOR SELECTION WITH ARCHITECT.
3. REFER TO DETAIL 11 ON A503 FOR CONCRETE BASE DETAIL.
4. PROVIDE CORD AND ARI CRAFT CABLE IN LENGTH AS REQUIRED FOR MOUNTING HEIGHTS INDICATED ON DRAWINGS.
5. MANUFACTURER NEEDS TO PROVIDE LIGHTING CALCULATIONS WITH SHOP DRAWINGS TO CONFIRM THEY MEET PERFORMANCE REQUIREMENTS.

		LAMPS										TRIM COLOR				MOUNTING	SIZE				
MARK	TYPE L.E.D.	VA / LINEAR FOOT	DELIVERED LUMENS	COLOR	LOAD (VA)	FIXTURE VOLTAGE	MANUFACTURER	CATALOG NO.	DESCRIPTION	OTHER ACCEPTABLE MANUFACTURERS	DIFFUSING MEDIA	WHITE	BLACK	ALUMINUM	BRONZE	STANDARD	SEE NOTE	S-SURFACE R=RECESSED SM=STEM MTD W/M=WALL MTD C=CHAIN MTD UC=UNDER CAB CS=CBL SURFACE	DIAMETER	WIDTH	LENGTH	DEPTH	SEE NOTE
A1	X		4500	4000K	29	120	METALUX	SERIES "CGTX"	2'X2' FLAT PANEL, 0-10V DIMMING TO 1%	ILP-INC, LITHONIA, DAY-BRITE	FROSTED ACRYLIC	•				•		R		24"	48"	2.25"	1
A2	X		6100	4000K	42	120	METALUX	SERIES "CGTX"	2'X4' FLAT PANEL, 0-10V DIMMING TO 1%	ILP-INC, LITHONIA, DAY-BRITE	FROSTED ACRYLIC	•				•		R		24"	48"	2.25"	1
A3	X		4500	4000K	32	120	METALUX	SERIES "CGTX"	2'X2' FLAT PANEL, 0-10V DIMMING TO 1%	ILP-INC, LITHONIA, DAY-BRITE	FROSTED ACRYLIC	•				•		R		24"	24"	2.25"	1
B1	X		362	4000K	16	120	FORMS + SURFACES	SERIES "LBKNHLED"	8"X3"X43" LIGHTED BOLLARD, EXTRUDED ALUMINUM HOUSING, 18" DEEP CONCRETE BASE	APPROVED EQUAL						•		CONCRETE BASE	9"				42"	2, 3
C1	X		5000	4000K	32	120	METALUX	SERIES "ZL1N"	4' LED, CURVED LENS	ILP-INC, LITHONIA, DAY-BRITE	FROSTED ACRYLIC	•				•		C		4"	48"	5.5"	
D1	X		1000	4000K	10	120	PORTFOLIO	SERIES "LD6C"	6" DIAMETER DOWNLIGHT, SELF FLANGED ALUMINUM REFLECTOR, MEDIUM DISTRIBUTION, DAMP LOCATION RATED	ALPHABET, LITHONIA, LIGHTOLIER	OPEN	•				•		R	6"			8.75"	1
L1	X	14	11,492	4000K	112	120	SPI	SERIES "EIV12015"	6" LONG, SURFACE MOUNTED LINEAR FIXTURE WITH FORWARD THROW ASYMMETRIC DISTRIBUTION, LAMP BODY SHALL BE ADJUSTABLE AND LOCK INTO POSITION, 0-10V DIMMING TO 1%	ELLIPTIPAR, AXIS LIGHTING, FINELITE, DAYOLITE	FROSTED ACRYLIC			•		•		S		6.102"	96"	2.5"	5
L2	X	6	500/LFT	4000K	36	120	ALCON LIGHTING	SERIES "12100-15-8	1.5" WIDE, 8'-0" LONG, RECESSED LINEAR FIXTURE, EXTRUDED ALUMINUM HOUSING, SNAP IN LENS	LITE CONTROL, LUMINI, ACOLYTE, QTL	FROSTED ACRYLIC					•		R		3.781"	72"	3.813"	
L3	X	6	500/LFT	4000K	12	120	ALCON LIGHTING	SERIES "12100-15-8	1.5" WIDE, 2'-0" LONG, RECESSED LINEAR FIXTURE, EXTRUDED ALUMINUM HOUSING, SNAP IN LENS	LITE CONTROL, LUMINI, ACOLYTE, QTL	FROSTED ACRYLIC					•		R		3.781"	24"	3.813"	2
L4	X	4	256/FT	3000K	4	120	LUMINII	SERIES "K8L-W"	SEALED, BENDABLE (3D BENDING) TAPE LIGHT	APPROVED EQUAL	FROSTED SILICONE	•				•		R		0.5"	1,197"	0.5"	
P1	X		2,671	4000K	32	120	SPI LIGHTING	SERIES "SIP12133"	8' LONG, 2" DIAMETER MATTE WHITE ACRYLIC TUBE, 360 DEGREE DISTRIBUTION, 0-10V DIMMING TO 1%	BROWNLEE, LUMOS, VISA	MATTE WHITE ACRYLIC				•	•		ACC		1.5"	96"	1.5"	4
P2	X		1002	4000K	12	120	SPI LIGHTING	SERIES "SIP12133"	3' LONG, 2" DIAMETER MATTE WHITE ACRYLIC TUBE, 360 DEGREE DISTRIBUTION.	BROWNLEE, LUMOS, VISA	MATTE WHITE ACRYLIC				•	•		ACC		1.5"	36"	1.5"	2, 4
S1	X		233	4000K	11	120	VISTA	SERIES "1503"	STEP LIGHT WITH ALUMINUM LOUVER, FORWARD THROW DISTRIBUTION.	PERFORMANC LIGHTING, LUMUX, BEGA	LOUVER					•		R		3.25"	8.25"	4.313"	2
W1	X		2500	4000K	25	120	KIM	SERIES "CY1-25"	WALL MOUNTED WALL PACK FIXTURE, TRIANGLE WEDGE SHAPED HOUSING, DOWNLIGHT ONLY, FORWARD THROW DISTRIBUTION (TYPE IV), UNIVERSAL VOLTAGE, FUEL CUTOFF.	PERFORMANC LIGHTING, GARDCO, BEGA	CLEAR ACRYLIC					•		WM		12"	17.12 5"	6"	1, 2
X1	X		RED		3	120	EVENLITE	SERIES "SOVI"	WALL MOUNTED ARCHITECTURAL EDGELIT EXIT SIGN, CLEAR ACRYLIC PANE, RED LETTERS, SELF-DIAGNOSTICS	ISOLITE, UTOPIA	CLEAR ACRYLIC, RED LETTERS					•		WM		0"	0"	0"	1, 2
X3	X				3	120	EVENLITE	SERIES "SOVI"	CEILING MOUNTED ARCHITECTURAL EDGELIT EXIT SIGN, CLEAR ACRYLIC PANE, RED LETTERS, SELF-DIAGNOSTICS	ISOLITE, UTOPIA	CLEAR ACRYLIC, RED LETTERS				•	•		C		9"	13"	2.375"	
X4	X		RED		3	120	EVENLITE	SERIES "SOVI"	WALL/CEILING MOUNTED ARCHITECTURAL EDGELIT EXIT SIGN, CLEAR ACRYLIC PANE, RED LETTERS, SELF-DIAGNOSTICS	ISOLITE, UTOPIA	CLEAR ACRYLIC, RED LETTERS				•	•		WM		0"	0"	0"	1, 2

GENERAL NOTE:
ALL FIXTURES NEED TO BE BAA COMPLIANT. FIXTURES LISTED THAT MAY NOT BE BAA COMPLIANT ARE FOR REFERENCE AND A BAA COMPLIANT FIXTURE SHALL BE PROVIDED.

FLOOR BOX (FB) SCHEDULE

GENERAL NOTES:
A. REFER TO DRAWINGS FOR BOX DEPTH IREQUIRED.
B. PROVIDE CARPET FLANGE WHERE REQUIRED.
C. COVER FINISH TO BE BRUSHED BRASS PLATED, UNLESS NOTED OTHERWISE.
D. PROVIDE 20A-125V DUPLEX RECEPTACLE FOR EACH POWER GANG, UNLESS NOTED OTHERWISE.
E. REFER TO DIVISION 27 FACEPLATE DETAILS.
F. REFER TO DRAWINGS FOR LOW VOLTAGE CONDUITS QUANTITY, SIZE, AND ROUTING.

NOTES:
1.
2.
3.
4.

	TYPE					QTY. OF GANGS					LOW VOLTAGE CONDUITS			
	BASIS OF DESIGN													
FLOOR BOX (FB) #	MANUFACTURER	MODEL	RECESSED CONCRETE	RECESSED WOOD	RAISED FLOOR	FIRE RATED	TYPE NOTE	POWER	VOICE/DATA	A/V	BLANK	DEVICE NOTE	VOICE/DATA	A/V	SPECIAL	CONDUIT NOTE
1	HUBBELL	SYSTEM ONE	•	-	-	-		2	1	1			-	-	-	
2	HUBBELL	SYSTEM ONE	•	-	-	-		2	-	-	-		-	-	-	

MOTORS, STARTERS, DISCONNECTS & CONTROLS

NOTES:
1. INDOOR UNIT IS POWERED FROM OUTDOOR UNIT. PROVIDE ALL INTERCONNECTION WIRING AND CONDUITS.
2. DIRECT CONNECTION TO ELECTRIC HEAT FIN TUBE.
3. THIS WORK OMITTED IF EXISTING WELL CAN BE UTILIZED.
5. COMBINATION MOTOR STARTER DISCONNECT WITH HAND/OFF/AUTO.

	MOTOR CHARACTERISTICS										STARTER TYPE						STARTER LOCATION				DISCONNECT MEANS TYPE								DISCONNECT MEANS LOCATION							CONTROL				
MARK	HORSEPOWER (HP)	LOAD (kVA)	120-1 PH	208-1 PH	208-3 PH	240-1 PH	240-3 PH	277-1 PH	480-3 PH	NEMA SIZE	MANUAL	MAGNETIC	BUILT-IN MOTOR OL	X-SPEED	VFD	SEE NOTE	NEAR MOTOR	MOTOR CONT CENTER	EQUIP CONT PANEL	ROOM NUMBER	SEE NOTE	FURNISHED BY	DISC SWITCH	MANUAL STARTER	RECEPTACLE	FEEDER SW OR BREAKER	NEMA TYPE	DISC SIZE	SEE NOTE	NEAR MOTOR	MOTOR CONT CENTER	EQUIP CONT PANEL	PANELBOARD	SEE NOTE	FURNISHED BY	INTERLOCK WITH MOTOR NO. BY E.C.	MANUAL A.F. STARTER	INTEGRAL WITH EQUIPMENT	FURNISHED BY	SEE NOTE	SEE NOTE
SF-1	.25	0.7	•								•					•							•							•						•					
EFT-1		1.73				•					•												•							•						•					2
FT-2		2.88				•					•												•							•						•					2
HPCU-1		6.12				•					•					•							•				3R		•						•					1, 5
HPCU-2		6.12				•					•					•							•				3R		•						•					1, 5
HPCU-3		8.16				•					•					•							•				3R		•						•					1, 5
HPCU-4		8.16				•					•					•							•				3R		•						•					1, 5
SHP-1		0.24				•					•					•							•				1		•						•					1, 5
SHP-2		0.24				•					•					•							•				1		•						•					1, 5
SHP-3		0.24				•					•					•							•				1		•						•					1, 5
SHP-4		0.24				•					•					•							•				1		•						•					1, 5
WH-1	3	4.08				•				1	•									•			•				50		•			•			•					3

HEAPY
PROJECT NO. 2023-27191

No.	Revisions / Submissions	Date
	CONSTRUCTION DOCUMENTS	2026.03.16
1	ADDENDUM 2	2026.04.07

LWC
INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

RICHMOND MUNICIPAL AIRPORT

TERMINAL BUILDING

5169 IN-277
RICHMOND, IN 47374

ELECTRICAL SCHEDULES

Comm. No. 25106.00
Date 2026.03.16
Drawn CAG
Checked MAR
Drawing No. E501

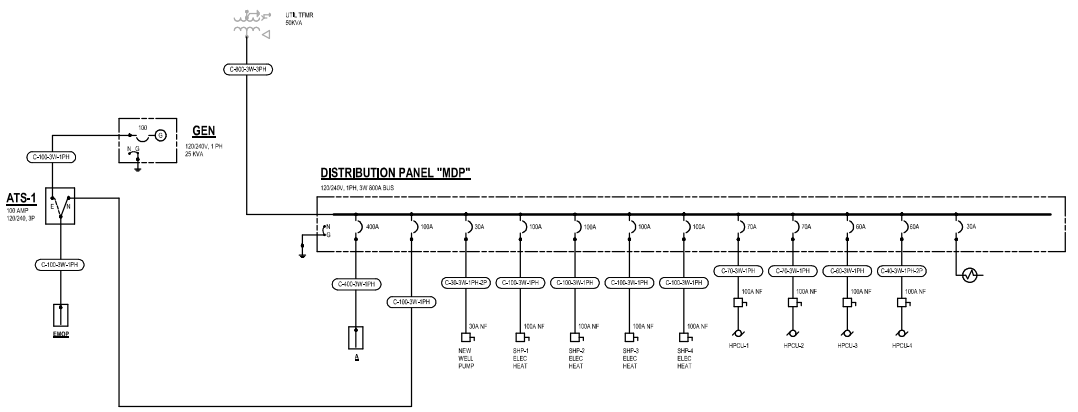
© 2026 LWC INCORPORATED

Autodesk Docs://Richmond Municipal Airport Terminal/2025-07191-MEP-Central.rvt

4/8/2026 9:51:17 AM

FEEDER WIRE SIZES

FEEDER TAG	# OF SETS	# OF CONDUCTORS	CONDUCTOR SIZE	GROUND SIZE	CONDUIT SIZE
C 30 3W 1PH 2P	1	3	10	10	0.75"
C 40 3W 1PH 2P	1	3	8	10	0.75"
C 60 3W 1PH	1	3	4	10	1.25"
C 70 3W 1PH	1	3	4	8	1.25"
C 100 3W 1PH	1	2	2	8	1.5"
C 100 3W 1PH	1	3	2	8	1.5"
C 400 3W 1PH	1	3	500	3	3.5"
C 600 3W 3PH	2	3	600	1/0	3.5"



1 ELECTRICAL SINGLE-LINE

DISTRIBUTION PANEL: MDP

Location: JANUMECH 105 **Mounting:** SURFACE **A.I.C. Rating:** 22,000
Supply From: UTILITY TRANSFORMER **Enclosure:** TYPE 1 **Mains Type:** MCB
Voltage: 240/120V-1PH-3W **Mains Rating:** 800 A
Feeder Size: **Spec. Ref. #:**

CKT	CIRCUIT DESCRIPTION	APPROX CONNECTED LOAD	FRAME SIZE	POLES	TRIP SETTING	BREAKER TYPE	NUMBER OF CONDUCTORS	WIRE SIZE	GROUND SIZE	CONDUIT SIZE	SEE NOTE
1	A	50,41 kVA	400 A	2	400 A						1
2	ELEC HEAT...	17,50 kVA	100 A	2	100 A						1
3	ELEC HEAT...	17,50 kVA	100 A	2	100 A						1
4	ELEC HEAT...	17,50 kVA	100 A	2	100 A						1
5	ELEC HEAT...	17,50 kVA	100 A	2	100 A						1
6	HPCU-1	9,38 kVA	100 A	2	70 A						1
7	HPCU-2	9,38 kVA	100 A	2	70 A						1
8	HPCU-3	8,40 kVA	60 A	2	60 A						1
9	HPCU-4	8,40 kVA	60 A	2	60 A						1
10	WELL PUMP	4,88 kVA	30 A	2	20 A						1
11	EMOP	1,08 kVA	30 A	2	20 A						1
12											
13											
14											
15											
16											
17											
18											
19											
20											

Load Classification	Connected..	Demand Factor	Estimated..	Panel Totals	
Lighting	3,415 VA	125,00%	4,269 VA		
Motor	59,920 VA	103,81%	62,200 VA	Total Conn. Load:	161,09 kVA
Receptacle	97,752 VA	55,11%	53,876 VA	Total Est. Demand:	120,34 kVA
				Total Conn.:	671 A
				Total Est. Demand:	501 A

NOTES: 1. REFER TO SINGLE LINE FOR FEEDER SIZES.

TOTAL CONNECTED		ESTIMATED DEMAND
161,09 kVA		120,34 kVA (501 A)

Panel: EMOP

Construction Phase: NEW
Location: **Mounting:** SURFACE **A.I.C. Rating:** 22,000
Supply From: MDP **Enclosure:** Type 1 **Mains Type:** MLO
Voltage: 240/120V-1PH-3W **Mains Rating:** 100 A

CKT	Circuit Description	SCB Type	Trip	Poles	A		B		Poles	Trip	SCB Type	Circuit Description	CKT
1	RECEPTACLE		20 A	1	0,36	0,36			1	20 A	--	RECEPTACLE	2
3	RECEPTACLE		20 A	1			0,36	0	1	20 A	--	SPARE	4
5	SPARE	--	20 A	1	0	0			1	20 A	--	SPARE	6
7	SPARE	--	20 A	1			0	0	1	20 A	--	SPARE	8
9	SPARE	--	20 A	1	0	0			1	20 A	--	SPARE	10
11	SPARE	--	20 A	1			0	0	1	20 A	--	SPARE	12
13	SPACE	--	--	1	--	--			1	--	--	SPACE	14
15	SPACE	--	--	1			--	--	1	--	--	SPACE	16
17	SPACE	--	--	1	--	--			1	--	--	SPACE	18
19	SPACE	--	--	1			--	--	1	--	--	SPACE	20
21	SPACE	--	--	1	--	--			1	--	--	SPACE	22
23	SPACE	--	--	1			--	--	1	--	--	SPACE	24
25	SPACE	--	--	1	--	--			1	--	--	SPACE	26
27	SPACE	--	--	1			--	--	1	--	--	SPACE	28
29	SPACE	--	--	1	--	--			1	--	--	SPACE	30
			Total Load:		0,72 kVA		0,36 kVA						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Receptacle	1.080 VA	100,00%	1.080 VA		
				Total Conn. Load:	1,08 kVA
				Total Est. Demand:	1,08 kVA
				Total Conn.:	5 A
				Total Est. Demand:	5 A

Special Circuit Breaker (SCB) Types: GF=GFCI Breaker, ST=Shunt Trip Breaker, AF=AFCI Breaker, GP=GFPE Breaker
Notes:

TOTAL CONNECTED		ESTIMATED DEMAND
1,08 kVA		1,08 kVA (5 A)

Panel: A

Construction Phase: NEW
Location: **Mounting:** SURFACE **A.I.C. Rating:** 22,000
Supply From: MDP **Enclosure:** Type 1 **Mains Type:** MLO
Voltage: 240/120V-1PH-3W **Mains Rating:** 400 A

CKT	Circuit Description	SCB Type	Trip	Poles	A		B		Poles	Trip	SCB Type	Circuit Description	CKT
1	RECEPTACLE		20 A	1	1,58	0,5			1	20 A		VENDING MACHINE	2
3	VENDING MACHINE		20 A	1			0,86	0,18	1	20 A		RECEPTACLE	4
5	RECEPTACLE		20 A	1	0,18	0,18			1	20 A		RECEPTACLE	6
7	RECEPTACLE		20 A	1			1,08	1,62	1	20 A		RECEPTACLE	8
9	RECEPTACLE		20 A	1	1,62	0,898			1	20 A		RECEPTACLE	10
11	RECEPTACLE		20 A	1			0,54	1,4	1	20 A		RECEPTACLE	12
13	RECEPTACLE		20 A	1	1,356	1,4			1	20 A		RECEPTACLE	14
15	RECEPTACLE		20 A	1			0,72	2,304	2	20 A	GF	EFT-1 & 2 RM 101-102	16
17	EFT-2 RM 102	GF	20 A	2	2,88	2,304			--	--	--	--	18
19	--	--	--	--			2,88	1,728	2	20 A	GF	EFT-1 ROOM 112	20
21	EFT-2 RM 104	GF	20 A	2	2,88	1,728			--	--	--	--	22
23	--	--	--	--			2,88	0,373	1	20 A		LIGHTING	24
25	LIGHTING		20 A	1	0,237	0,531			1	20 A		LIGHTING	26
27	LIGHTING		20 A	1			1,544	0,698	1	20 A		EF-1	28
29	LIGHTING		20 A	1	0,294	1			1	20 A		BLOCK HEATER	30
31	MICROWAVE		20 A	1			1,8	1	1	20 A		BATTERY CHARGER	32
33	PRINTER		20 A	1	1,5	0,18			1	20 A		GENERATOR REC.	34
35	UC REFRIGERATOR		20 A	1			1,5	3	2	40 A		WATER HEATER	36
37	OVEN/RNG		40 A	2	0,336	3			--	--	--	--	38
39	RECIRC PUMP		20 A	1			0,04	0	1	20 A	--	SPARE	40
41	SPARE	--	20 A	1	0,18	0			1	20 A	--	SPARE	42
43	SPARE	--	20 A	1			0	0	1	20 A	--	SPARE	44
45	SPARE	--	20 A	1	0	0			1	20 A	--	SPARE	46
47	SPARE	--	20 A	1			0	0	1	20 A	--	SPARE	48
49	SPARE	--	20 A	1	0	0			1	20 A	--	SPARE	50
51	SPARE	--	20 A	1			0	0	1	20 A	--	SPARE	52
53	SPARE	--	20 A	1	0	0			1	20 A	--	SPARE	54
55	SPARE	--	20 A	1			0	0	1	20 A	--	SPARE	56
57	SPARE	--	20 A	1	0	0			1	20 A	--	SPARE	58
59	SPARE	--	20 A	1			0	0	1	20 A	--	SPARE	60
			Total Load:		24,56 kVA		25,84 kVA						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	3.415 VA	125,00%	4.269 VA		
Motor	20.320 VA	103,54%	21.040 VA	Total Conn. Load:	50,41 kVA
Receptacle	26.672 VA	68,75%	18.336 VA	Total Est. Demand:	43,64 kVA
				Total Conn.:	210 A
				Total Est. Demand:	182 A

Special Circuit Breaker (SCB) Types: GF=GFCI Breaker, ST=Shunt Trip Breaker, AF=AFCI Breaker, GP=GFPE Breaker
Notes:

TOTAL CONNECTED		ESTIMATED DEMAND
50,41 kVA		43,64 kVA (182 A)

GENERAL NOTES:

GENERATOR, PROPANE TANK, AND AUTOMATIC TRANSFER SWITCH (ATS) TO BE PROVIDED BY OWNER AS PART OF A DEDUCT ALTERNATE. REFER TO FRONT END DOCUMENTS FOR DESCRIPTION OF ALTERNATE.
IF DEDUCT ALTERNATE IS ACCEPTED, PROVIDE CONDUIT WITH PULL STRING FROM GENERATOR PAD LOCATION TO ATS LOCATION. TURN CONDUIT UP ABOVE GRADE/FLOOR AND CAP FOR FUTURE USE.

No.	Revisions / Submissions	Date
	CONSTRUCTION DOCUMENTS	2026.03.16
1	ADDENDUM 2	2026.04.07

LWC INCORPORATED
434 East First Street Dayton, OH 45402 937.223.6500
712 East Main Street Richmond, IN 47374 765.966.3546

RICHMOND MUNICIPAL AIRPORT

TERMINAL BUILDING

5169 IN-277
RICHMOND, IN 47374

SINGLE-LINE DIAGRAM AND PANEL SCHEDULES

HEAPY PROJECT NO. 2025-07191

Comm. No.	Date
25106.00	2026.03.16
Drawn: DLH	Drawing No.: E601
Checked: MAR	

© 2026 LWC INCORPORATED

Autodesk Docs://Richmond Municipal Airport Terminal/2025-07191-MEP-Central.rvt