



#### Public Works Project No. 89006007-23-034-C1

I-70 WB Centerville Welcome Center INDOT

#### **ADDENDUM NO. 1**

October 1, 2024

Project Drawings and Manual dated August 2024 for above referenced project are amended as noted in this Addendum.

Receipt of this Addendum shall be acknowledged on the Bid Form.

This Addendum Consists of: (10) General Information Sheets, Revised Notice to Bidders, (2) Revised Pavement Design Sheets, (3) Addendum Sheets, (2) Specification Sheets and (11) Drawing Sheets.

#### **GENERAL INFORMATION**

Pre-Bid Meeting Minutes Dated September 25, 2024 (4 sheets, attached) Pre-Bid Meeting Sign-in Sheet (3 sheets, attached) Current List of Plan Holders (1 sheet, attached) Response to RFIs (2 sheets, attached)

#### **REFER TO SPECIFICATIONS – VOLUME #2**

Items changed or added by this Addendum are to take precedence over the items or descriptions of the work in the project manual and drawings. Items not mentioned in this Addendum are to remain as described in the original plans and specifications.

#### Item No. 1-A1:

#### Section 04 42 16 Exterior Stone Cladding

Add:

Paragraph 2.01-B, Below Information:

- a. Granite: Acceptable Producer/Supplier: Polycor: <u>www.polycor.com/#sle</u>
  - i. Granite Thickness: 3 5/8" as indicated on drawings
  - ii. Granite Type: American Black
    - 1. Quarry Location: Elverson, PA
    - Absorption by Weight: 0.023 maximum percentage; ASTM C97/C97M
    - Density: 192.3 lbs/cu ft (3,080.35 kg/cu m), ASTM C97/C97M
    - 4. Compressive Strength: 43,524 psi (24.5 MPa), minimum; ASTM C170/C170M
    - 5. Flexural Strength: 3,560 psi (24.5 MPa), minimum; ASTM C880/C880M
    - 6. Modulus of Rupture: 3,799 psi (26.19 MPa), minimum; ASTM C99/C99M
    - 7. Finish: Honed

Page 1 of 3

Item No. 2-A1:	Section 07 30 10 Metal Soffit Panels
Add:	Paragraph 2.01-A, Longboard Architectural Products as approved manufacturer.
Item No. 3-A1:	Section 08 63 00 Metal-Framed Skylights
Add:	Paragraph 2.01-B, Velux Commercial Skylights as approved manufacturer. a. Pinnacle Single Pitch Series 600
Item No. 4-A1:	Section 09 54 26 Suspended Wood Ceilings
Add:	Paragraph 2.01-A, CertainTeed Architectural as approved manufacturer.
Item No. 5-A1:	Section 09 84 30 Sound-Absorbing Felt Baffles
Add:	Paragraph 2.01-A, Frasch as approved manufacturer.
REFER TO SPECIFICATIONS	5 – VOLUME #1
Item No. 6-A1: Replace:	Section 01 3216 Construction Progress Schedule Replace Sheets related to Section 01 3216 with attached Sheets Section 01 3216.
REFER TO DRAWINGS	
Item No. 7-A1: Replace:	Drawing Set #1, Sheet M3-1 WELCOME CENTER HVAC FLOOR PLAN Replace Sheet M3-1 with attached Sheet M3-1 Revise ductwork in mechanical room for better access to energy recovery ventilators. Change size and duct layout of HP-101.
Item No. 8-A1: Replace:	Drawing Set #1, Sheet M6-1 MECHANICAL SCHEDULES Replace Sheet M6-1 with attached Sheet M6-1 Revise Geothermal Heat Pump Schedule to identify changes related to R-454B refrigerant.
Item No. 9-A1: Replace:	Drawing Set #1,Sheet P3-1 WELCOME CENTER PLUMBING FLOOR PLAN Replace Sheet P3-1 with attached Sheet P3-1 Add water makeup and hose bib in Mech 106.
Item No. 10-A1: Replace:	Drawing Set #2, Sheet M1-2 TRUCKER RESTROOM HVAC PLANS Replace Sheet M1-2 with attached Sheet M1-2 Revise size and shape of MAU-TR1 to match changes related to R-454B refrigerant.
Item No. 11-A1: Replace:	Drawing Set #2, Sheet M6-1 MECHANICAL SCHEDULES Replace Sheet M6-1 with attached Sheet M6-1 Revise Packaged Geothermal Make Up Air Handler Schedule to identify changes related to R-454B refrigerant.
Item No. 12-A1: Replace:	Drawing Set #4, Sheet L-201 Replace Sheet L-201 with attached Sheet L-201 Added ash receptacle by trucker restroom. Page 2 of 3

Item No. 13-A1: Replace:	Drawing Set #4, Sheet L-602 Replace Sheet L-602 with attached Sheet L-602 Added ash receptacle by entrance to Welcome Center.
Item No. 14-A1: Replace:	Drawing Set #4, Sheet L-708 Replace Sheet L-708 with attached Sheet L-708 Increased size of sculpture base.
Item No. 15-A1: Replace:	Drawing Set #5, Sheet C103 Replace Sheet C103 with attached Sheet C103 Revised Legend Items A and A1 per revised pavement design due to change in INDOT Binder Specifications.
Item No. 16-A1: Replace:	Drawing Set #5, Sheet C104 Replace Sheet C104 with attached Sheet C104 Revised Legend Items A and A1 per revised pavement design due to change in INDOT Binder Specifications.
Item No. 17-A1: Replace:	Drawing Set #5, Sheet C105 Replace Sheet C105 with attached Sheet C105 Revised Legend Items A and A1 per revised pavement design due to change in INDOT Binder Specifications.





#### I-70 WB Centerville Welcome Center PWP # 89006007-23-034-C1

Pre-Bid Meeting Minutes

10:00 AM; Wednesday; September 25, 2024

- 1. Introduction of Attendees See attached sign in Sheet.
- 2. Review of Bidding Requirements:
  - A. All bids are due on October 9, 2024 by 1:31 p.m. Indianapolis Time. There will be a virtual bid opening immediately after that at 2 PM. All bids shall be submitted electronically. Reference Notice to Bidders for requirements. Submit bid form and Alternate & /Unit prices only as one e-mail. Submit any additional and supporting information as a second e-mail.
  - B. Bidder is required to submit quantities and unit prices for all Civil Work related items per Indiana Department of Transportation (INDOT) on a separate sheet attached to bid form.
  - C. Hand delivered and mailed bids will not be accepted.
  - D. Bid form shall be completely filled out. No additions or deletions shall be permitted.
  - E. Alternate and unit prices shall be on a separate sheet attached to bid form.
  - F. Contractor shall verify with State of Indiana their certification requirements. Bidding contractor shall be prequalified before bid. Subcontractors in amount of \$150,000.00 and over shall have prequalification in place before contract is issued. Bids submitted by contractors without proper certification will not be opened.
  - G. Bid amounts shall be written both numerically and in script, if there is any discrepancy in the two numbers the script amount shall govern.
- 3. All questions not clearly answered by the drawings or in the project manuals will be clarified in an addendum.
- 4. Project Start and finish It is anticipated that the selected contractor shall have a contract in approximately 45 days from bid date and the Notice to proceed will follow shortly after that. Ground breaking ceremony is anticipated before November 5, 2024.
- 5. The Contractor shall have full use of the site. The owner will not occupy the site until the project is substantially complete.
- 6. The contract documents indicate what materials can be used on the project. All substitution requests shall be submitted 7 days prior to bid date (Wednesday, October 2, 2024). Approved items will be added by Addendum.
- 7. Commissioning requirements are listed on the drawings. Owner will engage a commissioning agent and compensated out of the Commissioning allowance. Allowance amounts identified in the Bid Documents are for the specific items only and does not include Contractor markups. Therefore, any Contractor markups shall be included in the Base Bid.
- 8. The first addendum will be issued October 1, 2024 and will include pre-bid meeting minutes. The Second addendum will be issued as soon as possible and will include any substitution request items not in previous addendums. Addendums will be issued by e-mail to those plan recipients that received Bid Documents access from our office. Contractors that obtained plans from other sources should check with those sources for the addendum or contact our office to be added to the distribution list.

- 9. The Contractor's Drug and Alcohol Testing Policy must be included in the bid. Stating that policy is on file is not acceptable.
- 10. MBE, WBE and IVOSB Participation goals are indicated on the notice to bidders.
- 11. Contractor shall include all costs required to obtain local building permit. USACE Regional General Permit, IDEM Water Quality Certification, IDEM Isolated Wetland Permit and IDEM SWGP are responsibility of the Owner. SWGP has been received and NOI has been provided to all plan holders. IDEM WQC is anticipated on or before October 31, 2024. Any other permits required to complete the project are the responsibility of the Contractor to obtain. The Contractor shall bear all costs including the permit fees and other bonding requirements.

12. Storm water measures must be in place before construction can begin. Wetlands shall be protected as identified on the plans.

- 13. Contractor shall maintain all existing utilities on site for their use during construction and coordinate with utilities representatives as needed. Please review Specifications Volume #5 of 5 for utilities requirements. Contractor shall be responsible for utility costs throughout the duration of the construction.
- 14. Project is 100% State Funded. Contractor is not required to comply with Build America Buy America Act.
- 15. DAPW 12 Form for minority participation must be submitted with pay apps to be processed for payment.
- 15. Owner Team Comments:

a. John Grimes, IDOA, Public Works Division – Contractor shall submit the Pay Application with all necessary documents to JSE for review. JSE will forward to John for final approval.
b. Steve McAvoy, Statewide Facilities Director, INDOT – Contractor need to adhere to INDOT and IDOA requirements as well as coordination with INDOT Greenfield District Construction due to ongoing I-70 Design Build Projects.

16. Design Team Comments.

a. Imtiyaz Dalal, Janssen & Spaans Engineering – Presented Drawing Set #5 and Specifications Volume 1 and 5.

b. Travis Rodgers, Janssen & Spaans Engineering – Presented the testing and storm water measures implementation and maintenance requirements per INDOT and IDEM guidelines. See attached.

- c. Mike Montgomery, KrM Architecture Presented Drawing Set #1 thru 3 and Specifications Volume 2
- d. Keith Sattler, RATIO Presented Drawing Set #4 and Specifications Volume 4
- e. Dave Marshall, Applied Engineering Presented HVAC and Plumbing for Drawing Set #1 thru 3 and Specifications Volume 3
- 17. INDOT Comments.

a. Darryl Wineinger – INDOT Pay Items, Specifications and Testing Requirements – Contractor shall not include any unit prices with the pay items and quantities. This information is requested for determining the need for testing frequency based on material records.

b. James Colonis – Maintenance of Traffic and Damage to INDOT Property – INDOT staff will be available for any maintenance of traffic coordination with I-70 Design Build projects. Contractor shall follow INDOT reimbursement guidelines for any damage to maintenance of traffic items as well as INDOT property.

c. Fielding Tipton – Additional INDOT Items – INDOT will assist towards additional testing need.
d. Daniel Corbin – I-70 Design Build Projects updates and Coordination Requirements – I-70
Design Build project in the vicinity of the Welcome Center project is scheduled to be awarded in

February 2025. Contract documents incorporated the need for maintenance of traffic and other coordination for this project. Welcome Center Contractor shall coordinate with the successful Design Build Contractor.

#### 18. GENERAL REVIEWS OF PROJECT DRAWINGS AND MANUAL

- a. Review of Drawing packages.
  - 1. Drawing Set # 1
    - a. Welcome Center
    - b. Specifications Volumes 1 2 & 3
  - 2. Drawing Set # 2
    - a. Trucker Restroom
    - b. Specifications Volumes 1 2 & 3
  - 3. Drawing Set # 3
    - a. Maintenance Building
    - b. Specifications Volumes 1 2 & 3
  - 4. Drawing Set # 4
    - a. Landscape Architecture
    - b. Specifications Volumes 4
  - 5. Drawing Set # 5
    - a. Civil Site
      - b. Specifications Volumes 1 & 5
- 18. Contractor Questions:
- a. Is there an earthwork table included and/or site is balanced? Earthwork Table is not included. Determining the earthwork quantity based on the final grading plans is Contractor responsibility. Successful Contractor will be provided with the final grading model.
- b. Plan Holders List available? It will be provided with the Addendum #1. E & B Paving and Reith Riley will be added to the list and will be provided with the Bid Documents when email request is received.
- c. Will there be a local road improvement related allowance? There will not be any allowance for local road related improvements due to no access from the local roads and all ingress/egress shall be from I-70.

P:\1394 - Centerville Welcome Center\BID DOCS\2024-09-25 Pre-Bid Meeting\I-70 WB Centerville Pre-Bid-Mtg Minutes.docx

## Comments from the Engineer's inspector

## Centerville Welcome Center; Pre-bid meeting

- 1. The contractor should consider storm water management when preparing their bid.
  - a. Contractor is responsible for maintaining the Storm Water Pollution Prevention Plan, including circulating updates to the site owner, site owner representative (JSE), and especially the IDEM plan reviewer for this area.
  - b. The contractor is responsible for installing and maintaining the BMPs on-site per the SWPPP.
  - c. Per the IDEM rule five general permit, the site must be inspected weekly, and after every rain event of .5 inch or greater by a qualified inspector, this is also the contractor's financial responsibility.
  - d. The contractor needs to respond to each weekly SW report and implement up-steam BMPs.
  - e. While there is an allowance for SW inspection, BMPs and site-maintenance are the financial responsibility of the contractor.
  - f. There **WILL BE** changes, improvements, and additional features added to the SWPPP throughout the life of the contract.
  - g. To achieve the above the contractor should set up an SWM team in the beginning that meet monthly or as needed to maintain the site
- 2. INDOT Standard Specifications 2024 apply to all aspects of the civil site and construction:
  - a. All material testing is to be done per the frequency called out in the 2024 standard specifications.
  - b. While I will be inspecting weekly, the contractor is responsible for providing all testing at the frequency called out for each material.
  - c. Material tickets need to be shared with the on-site materials tester and JSE as soon as the contractor receives them so that we can meet the frequency requirements for testing.
  - d. All methods called out in the standard specifications must be adhered to... such as trench backfill methods, earth work compaction, temporary mulching, etc..
  - e. Testing must be performed by personnel with active INDOT field testing qualifications.
- 3. The contractor needs to have the IC-203 form completed and approved before they break ground. If later-on they decide to take fill or waste material of any kind anywhere else, then they need to submit a new form to JSE and receive approval from the site owner first.





## Sign-In Sheet for Pre-Bid Meeting – I-70 WB Centerville WC; PWP # 89006007-23-034-C1

Wednesday, September 25, 2024;

; Time: 10:00 AM;

Location: Janssen & Spaans Engineering

Name – Print	Representing Agency	Phone Number	Email
IMTZYAZ DALAL	JSE	317-254-9686	IDALAL & JEENGR. COM
Russel Reynolds	JSE	317-254-9686	RREYNOLDS @ JSENGR.com
Frazis Rodgers	ASE	317-964-9544	tradgers & isenar com
John Grimes	ID0A-	317-234-8691	Johgrimes ZIdoa, in, gou
Steve McAroy	INDOF	317 - 489 - 1455	SALCAUOY @ INDOT. IN. GOV
JAMES COLONIS	FIVACI	317-650-304/	Teolonis O inclut in 100
CHIRIS FOLAND	PARSONIS	317-016-1023	CHRISTOPHER, BLAND & ROSANS, CON
Chris Grabosky	Maxwell Construction	614-322-8810	CGRABOSKY@, MAXWELLBUTINS CO
FEELDILY TOPTON	INDOT GREENFIELD	Attended via Teams	
ANISPEN WORTKOETTER	DALDOT GREACH FEELD	Attended via Teams	
SUSAM CASTLE	MGTLEE GRACHFEELD	Attended via Teams	
DANGEL CORBIN	THOUT MAJOR PROJECTS	Attended via Teams	
MIKE Compron	FIETH RILEY	Attended via Teams	

# JANSSEN & SPAANS Engineering, Inc.

ISO 9001:2008 CERTIFIED

1

Name – Print	Representing Agency	Phone Number	Email
DAVE MAZSHALL	APPLIED ENGINEEFING	317 810 +141	DMARSHALL Q APPLED-E-5. COM
TONY EVANS	E& BPaving, UC	765-744-2239	tony evans resparing com
John tatten	HAMILTON	317-504-0713	patten Whamilton.ex.com
H.TPham	FNDOT	317-775-7867	APhan OINDOT, IN. 601/
KEVIN MONTGOMERY	K-M		
			· · · · · · · · · · · · · · · · · · ·

# JANSSEN & SPAANS Engineering, Inc.

# ISO 9001:2008 CERTIFIED

Name – Print	Representing Agency	Phone Number	Email
DAVID NOBBE	Milestone contractors	317-408-8345	david . NOBBE & MilesTolel P. com
Wes Readinger	Hannig Construction	812-235-6218	Wreadinger Channia Construction. con
Scott Hester	Milestone Contractors	765-914-4512	scott, hesteremilestonelp. com
Seth Perfer	Hannis Construction	812-236-4396	sporter anaunto construction, con
Keith Sattler	RATIO	805-224-2673	Kjattke & ratio design . com
DAREYC WINEINGOR	INDUT - TSD	317-410-8026	dwineinger @ indot. m. gov
GAREY HOCHSTEDIER	GEISER & PETERS	317 6359-9521	barry eqpsteel.com
JESSE VACENCOURT	LYNCH, HARMSON & BRUMBER	317-550-2993	JUARENCOUNT @ LHB-ENG. CM
Matt Mchillough	F.A. Wilhelm	317-809-6885	Mattmccullough@fawilhelm.con
-			

I-70 \	<b>NB Centerville Wel</b>	come Center Plan Holder	List (PWP # PWP# 89006007	7-23-034-C1)	
Electroni	ic Bid: 10/9/2024; Pre-Bid Meet	ting: 10:00 AM; Wednesday, 9/25/24			_
					-
Number	Name	Organization	Contact Info	Plans Delivered	
1	Kendall Bales	Maxwell Construction	kbales@maxwellbuilds.com	9/16/2024	
2	Lisa Trusler	Hannig Construction Inc.	ltrusler@hannigconstruction.com	9/17/2024	
3	Brad Yoder	R. Yoder Construction	brad@ryoderconstruction.com	9/19/2024	
4	Cyndi Thornton	The Builders Exchange, Inc.	CThornton@bxohio.com	9/19/2024	
5	Kristal Amad	Dodge Construction Network	Kristal.Amad@construction.com	9/19/2024	
6	David Slusser	Earth Images, Inc.	DavidS@earthimagesinc.com	9/20/2024	
7	Anne Castellarin	Korellis	acastellarin@korellis.com	9/20/2024	Not Bidding
8	Molly Burns	F.A.WILHELM	MollyBurns@fawilhelm.com	9/23/2024	
9	Amy Hughes	Milestone	AHughes@milestonelp.com	9/23/2024	
10	Joe Schmidt	KNEW Solutions	knewsolutionsllc@gmail.com	9/23/2024	
11	Barry Hochstedler	Geiger & Peters	hochstedler@gpsteel.com	9/24/2024	
12	Ronny Gauldin	Blackmore & Buckner Roofing	RGauldin@tectaamerica.com	9/25/2024	
13	Tony Evans	E&B Paving	tony.evans@ebpaving.com	9/25/2024	
14	Eric Jordan	Reith Riley	ejordan@rieth-riley.com	9/26/2024	
15	James Baah	Constructconnect	James.Baah@Constructconnect.com	9/26/2024	7
16	Brad Whitaker	RLTurner	bwhitaker@rlturner.com	9/26/2024	7

### Dalal, Imtiyaz

From:	Tony Evans <tony.evans@ebpaving.com></tony.evans@ebpaving.com>
Sent:	Monday, September 30, 2024 3:43 PM
То:	Dalal, Imtiyaz
Cc:	Jared Hill
Subject:	Re: Public Works Project No. 89006007-23-034-C1 (I-70 WB Centerville Welcome Center Wayne)

You don't often get email from tony.evans@ebpaving.com. Learn why this is important

Imtiyaz,

We have some questions on the existing Concrete Lot repairs related to the "Existing Pavement Treatment Notes" on sheet C800. Our questions relate to notes 1 thru 4

- 1. It is difficult to give a firm bid without giving us quantities, would you consider giving us quantities of full depth patching?
- 2. No questions on note 2
- 3. It is difficult to give a firm bid without giving us quantities, would you consider giving us quantities for re-sealing joints?
- 4. It is difficult to give a firm bid without giving us quantities, would you consider giving us quantities for pop-out repair and joint repair?

Part of our concern is that it will be two years before this work is completed and how much damage will occur with two more winter seasons? This work will be difficult to bid without some assurances of quantities or unit price assurances

Please feel free to call if you have any questions or would like to discuss

Thanks,	RESPONSES TO ABOVE QUESTIONS: We recommend all bidders visit the site that may eliminate some of the RFI items.
Tony	<ul> <li>1.All patching locations have been identified in the plan sheets. Any additional locations at the time of construction will be compensated via Proposal Request. Please include Unit Price for Partial and Full Depth Patching in your bid for future use.</li> <li>2. OK.</li> <li>3. Consider all existing joints to remain to be resealed. Please include Unit Price</li> </ul>
Tony N. Evans	for joint seal in your bid for future use. 4. Consider 1000 LFT for Bid purpose. Any additional quantities will be
Vice President	compensated via Proposal Request. Please include Unit Price for Joint Repair in your bid for future use.
286 West 300 North	
Anderson, Indiana 46012	
MOBILE: 765-744-2239	
tony.evans@ebpaving.cor	m

## I70 WB Centerville Welcome Center 10/1/2024

#	Sheet	Spec	Question	Answer
1	WC/A1-1 & WC/A6-5		Section 2 on WC/A6-5 indicates 8" polished CMU, but the wall hatching on sheet WC/A1-1 indicates 8" standard CMU. Which is correct?	That area where 2/A6-5 is cut through should be standard CMU, WC/A1-1 is correct.
2		01 3216	This spec section appears to be from another project. Can a revised specification for this project be provided?	See attached revised spec
3			Is there an AutoCad file available that can be used to calculate cut/fill quantities for the earthwork?	Response to be provided asap.
4	WC/A4-2		Note 27 in detail 7 calls for full depth granite. We cannot locate the following information: supplier, color & finish. Can this be provided?	Granite to be: American Black, Honed Finish. Manufacturer/Supplier: Polycor. Depth 3 5/8"
5	L-508		Can application rates or weights be provided for the native seeding?	Response to be provided in future Addendum asap.
7				
8				
9				
10				





## STATE OF INDIANA ERIC J. HOLCOMB, Governor

DEPARTMENT OF ADMINISTRATION Public Works Division 402 West Washington Street, Room W462 Indiana Government Center – South Indianapolis, Indiana 46204-2746 PHONE: (317) 232-3001

## **NOTICE TO BIDDERS**

BY STATE OF INDIANA DEPARTMENT OF ADMINISTRATION, PUBLIC WORKS DIVISION FOR A PUBLIC WORKS CONSTRUCTION PROJECT ESTIMATED AT ONE HUNDRED FIFTY THOUSAND DOLLARS OR ABOVE

SECURED ELECTRONIC BIDS FOR:

Public Works Project No. 89006007-23-034-C1 I-70 WB Centerville Welcome Center Wayne County

will be received from Contractors, holding a current Certificate of Qualification, at Department of Administration, Public Works Division Email Bid Box-<u>publicworksbids@idoa.in.gov</u> (note, do not cc: any other party)

Subject line MUST contain "Bid- 89006007-23-034-C1; - (I-70 Centerville Welcome Center) - (Your firm)"

Bid File (PDF) MUST be named-"(Bidding Firm name) Bid-89006007-23-034-C1; - (I-70 Centerville Welcome Center)" and not exceed 9Mb

1:01 Until <u>4:34 P.M</u> (Indianapolis Time), <u>Wednesday, October <del>9,</del> 2024</u>, after which all bids will be publicly opened and read online in a Microsoft Teams Live Event- <u>https://on.in.gov/h8bfp</u>

Minority Contractors are encouraged to submit bids on this project as a prime contractor or through a prime contractor.

PDF Copies of the detailed Instructions to Bidders and Drawings and/or Specifications dated August, 2024 may be obtained from the office of: Janssen & Spaans Engineering, Inc.; 9120 Harrison Park Ct., Indianapolis, IN 46216; Phone: 317-254-9686, Ext. 277; Email: idala@jsengr.com.

Bids shall be taken from Prime Contractors pre-qualified by the Public Works Certification Board in the following classification(s): <u>1542.00A – Institutional Buildings > \$10,000,000 and 1611.01 or 1771.01</u> <u>Concrete Construction.</u>

The Specified construction period is <u>730</u> calendar days. The State of Indiana reserves the right to reject any and all bids.

Project Goal of 7% MBE, 5% WBE and 3% IVOSB. Link: https://www.in.gov/idoa/mwbe/2494.htm

Project Manager:

John Grimes, Project Manager, DAPW (317) 234-8691 johgrimes@idoa.in.gov John Grimes

Director of Public Works: Robert Grossman, Director

> Pre-Bid Information: A Mandatory Pre-Bid Meeting shall be held in Conference Room 1 of Janssen & Spaans Engineering, Inc.; 9120 Harrison Park Ct., Indianapolis, IN 46216 on September 25, 2024, at 10:00 AM (EST)

### ADDENDUM #1



## **INDIANA DEPARTMENT OF TRANSPORTATION**

December 20, 2023

Driving Indiana's Economic Growth

100 North Senate Avenue Room N758 - Engineering Indianapolis, Indiana 46204

PHONE: (317) 232-5347

Eric Holcomb, Governor Michael Smith, Commissioner

MEMORANDUM

- TO: Abel Powers, INDOT Project Manager
- THRU: Kumar Dave, P.E. Kpd 12/20/2023 Manager, Office of Pavement Engineering
- FROM: Nicholas Cosenza, P.E. Pavement Engineer, Office of Pavement Engineering



SUBJECT:Final Abbreviated Pavement Analysis and DesignCONTRACT:R-45256Wayne CountyRE:Des 2000500 - I 70 Centerville Welcome Center RenovationCATEGORY:Rest Area Modernization ProjectCOST:\$22,775,742.00LETTING:Spring 2023PURPOSE:Pavement Replacement

This memorandum addresses the pavement design for the pavement widening and reconstruction at the Centerville Welcome Center Renovation.

#### Pavement Scope

The pavement of the welcome center was originally constructed in the 2010s. The entire rest area was constructed with 14" of jointed concrete on 9" of subbase for PCCP. During preliminary site visits, the existing pavement was observed to be in good condition with some areas of full depth replacement required primarily around the existing car parking area adjacent to drainage structures. With the proposed site reconfiguration, additional new pavement and widening of the existing pavement will be required.

#### **Recommendations**

All designs are consistent with the Indiana Design Manual, Part 6 "Pavement Design". Design alternatives have been analyzed using "AASHTOWare Pavement ME".

#### The Design Data is as follows:

Design Data	Rest Area
Growth Factor (%)	0.5
Design AADTT (V.P.D) (One Way)	2,000
Design Traffic Speed (MPH)	30
Design ESALs (Millions)	10 ≤ ESAL < 30

#### 1. New Truck Ramps – Jointed Pain Concrete Pavement:

- 14" QC/QA-PCCP\* with 15 ft D-1 Contraction Joint Spacing and 1.5" Diameter Dowel Bars
- 300 lb/yd<sup>2</sup> QC/QA-HMA, 4, 58E, Intermediate, OG 19.0mm, on
- 6" of Compacted Aggregate No. 53, on
- Geotextile for Pavement, Type 2B, on
- Subgrade Treatment, Type IBC (14" of Chemical Soil Modification with Cement)

#### 2. Widening or Repair of Existing Pavement – Jointed Pain Concrete Pavement:

- 14" QC/QA-PCCP\* with Match Existing/Extend Existing D-1 Contraction Joint Spacing and 1.5" Diameter Dowel Bars
- Subbase for PCCP (9" of Aggregate), on
- Geotextile for Pavement, Type 2B, on
- Subgrade Treatment, Type IC (12" of #53 Aggregate)

#### 3. New Car Parking Area – Jointed Pain Concrete Pavement:

- 10" QC/QA-PCCP\* with 15 ft D-1 Contraction Joint Spacing and 1.5" Diameter Dowel Bars
- 300 lb/yd<sup>2</sup> QC/QA-HMA, 4, 58E, Intermediate, OG 19.0mm, on
- 6" of Compacted Aggregate No. 53, on
- Geotextile for Pavement, Type 2B, on
- Subgrade Treatment, Type IBC (14" of Chemical Soil Modification with Cement)

\* If the PCCP pay item has a quantity less than 7200 yd<sup>2</sup> (one lot), the pay item should be "PCCP, \_\_\_\_\_ in." [Use 502 pay items].

#### Notes:

- Subgrade treatment should extend 2 feet beyond the curb.
- In instances where construction operations prohibit the use of Subgrade Treatment Type IBC, Subgrade Treatment Type IC may be used in its place. The pavement section has been designed to account for either subgrade treatment.
- Underdrains should be designed and constructed at the edge of the pavement following chapter 605 of the Indiana Design Manual.

#### Service Life

The full depth PCCP Pavement as designed has a functional design life of 30-year design and a structural design life of 50+ years.





Cc: Thomas Duncan - FHWA District Pavement Engineer Pavement Area Engineer INDOT Coordinator Project Designer File

### SECTION 01 3216 CONSTRUCTION PROGRESS SCHEDULE

#### PART 1 GENERAL

### 1.01 SECTION INCLUDES

- A. Preliminary schedule.
- B. Construction progress schedule.

#### 1.02 RELATED SECTIONS

A. Section 01 1000 - Summary: Work sequence.

### 1.03 SUBMITTALS

- A. Within 10 days after date of Agreement, submit preliminary schedule.
- B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.
- C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
- D. Within 10 days after joint review, submit complete schedule.
- E. Submit updated schedule with each Application for Payment.
- F. Submit in PDF format.

#### 1.04 QUALITY ASSURANCE

A. Scheduler: Contractor's personnel or specialist Consultant specializing in CPM scheduling with one years minimum experience in scheduling construction work of a complexity comparable to this Project, and having use of computer facilities capable of delivering a detailed graphic printout within 48 hours of request.

#### 1.05 SCHEDULE FORMAT

- A. Listings: In chronological order according to the start date for each activity. Identify each activity with the applicable specification section number.
- B. Diagram Sheet Size: Maximum 22 x 17 inches (560 x 432 mm).
- C. Sheet Size: Multiples of 8-1/2 x 11 inches (216 x 280 mm).

### PART 2 PRODUCTS - NOT USED

### PART 3 EXECUTION

### 3.01 PRELIMINARY SCHEDULE

A. Prepare preliminary schedule in the form of a horizontal bar chart.

### 3.02 CONTENT

- A. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.
- B. Identify each item by specification section number.
- C. Identify work of separate stages and other logically grouped activities.
- D. Provide sub-schedules for each stage of Work identified in Section 01 1000 Summary.
- E. Provide sub-schedules to define critical portions of the entire schedule.
- F. Show accumulated percentage of completion of each item, and total percentage of Work completed, as of the first day of each month.
- G. Provide legend for symbols and abbreviations used.

### 3.03 NETWORK ANALYSIS

A. Prepare bar chart, gantt chart type schedule diagrams using the Critical Path Method.

- B. Illustrate order and interdependence of activities and sequence of work; how start of a given activity depends on completion of preceding activities, and how completion of the activity may restrain start of subsequent activities.
- C. Tabulate each activity of detailed diagrams, using calendar dates, and identify for each activity:
  - 1. Preceding and following event numbers.
  - 2. Activity description.
  - 3. Estimated duration of activity, in maximum 15 day intervals.
  - 4. Earliest start date.
  - 5. Earliest finish date.
  - 6. Actual start date.
  - 7. Actual finish date.
  - 8. Latest start date.
  - 9. Latest finish date.
  - 10. Total and free float; float time shall accrue to Owner and to Owner's benefit.
  - 11. Percentage of activity completed.
  - 12. Responsibility.
- D. Required Reports: List activities in sorts or groups:
  - 1. By preceding work item or event number from lowest to highest.
  - 2. By amount of float, then in order of early start.

#### 3.04 REVIEW AND EVALUATION OF SCHEDULE

- A. Participate in joint review and evaluation of schedule with Architect at each submittal.
- B. Evaluate project status to determine work behind schedule and work ahead of schedule.
- C. After review, revise as necessary as result of review, and resubmit within 10 days.

#### 3.05 UPDATING SCHEDULE

- A. Maintain schedules to record actual start and finish dates of completed activities.
- B. Indicate progress of each activity to date of revision, with projected completion date of each activity.
- C. Annotate diagrams to graphically depict current status of Work.
- D. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.
- E. Indicate changes required to maintain Date of Substantial Completion.
- F. Submit reports required to support recommended changes.

### 3.06 DISTRIBUTION OF SCHEDULE

- A. Distribute copies of updated schedules to Contractor's project site file, to subcontractors, suppliers, Architect, Owner, and other concerned parties.
- B. Instruct recipients to promptly report, in writing, problems anticipated by projections indicated in schedules.

### END OF SECTION



WITH TILE PATTERN OR BLOCK COURSING. CENTER GRILLE OVER FIXTURE. INSTALL WITH BLADES UP. 14x14 SA DOWN TO APPROX. 3' 0" A.F.F. TRANSITION ROUTED TO AVOID FOOTERS/FOUNDATION. POUR CONCRETE UP TO DUCT AND SEAL. EXTERNALLY 48" RETURN SLOT GRILLE TYPE "LDRD" IN WOODEN CEILING - REFER TO ARCHITECTURAL CEILING PLAN FOR EXACT LOCATION. GRILLE TO HAVE TOP DUCT DUCT TO 24x24 TYPE "EGB" GRILLE AT APPROX. 9'6" IN

INSTALL WITH BLADES UP. INSTALL WITH TAMPER CEILING (APPROX 10' 0") TO MATCH TILE OR BLOCK

PROVIDE CABLE ACTUATED DAMPERS IN BRANCH DUCTS TO GRILLES WITH CABLE ACCESSIBLE BEHIND

MAIN TEMPERATURE CONTROLS PANEL COORDINATE WITH ALL TRADES TO LEAVE ACCESS IN FRONT AND

RECOVERY VENTILATORS. TURN DOWN TO APPROX. 6'6" ABOVE FINISHED FLOOR NEAR INLETS TO HP-10' TRANSITION AS REQUIRED TO MATCH OUTLET SIZE O HEAT PUMP AND PROVIDE FLEXIBLE CONNECTION TO

. MAINTAIN MINIMUM 3' 0" CLEAR BETWEEN EQUIPMENT . 24" DEEP INSULATED PLENUM TO MATCH LOUVER. 3. MAINTAIN SERVICE CLEARANCE FOR ACCESS DOORS

THOMA No. PE10302029 STATE OF 1PP NDIANA .. SONAL L'mil 7/15/2024 Certified by: NSSEN & SPAANS ENGINE jsengr.com 9120 Harrison Park Court - Indianapolis, IN 46216 Architecture+ 1515 N. Pennsylvania St Indianapolis, Indiana RATIO LANDSCAPE ARCHITECTURE 30 W Monroe Street, Suite 500 Chicago, IL 60603 T: 312.465.2359 www.ratiodesign.com Applied Engineering Ser D D 006007-23-E CENTER ANA E IC WORKS PROJECT NO CENTERVILLE WELCC CENTERVILLE, II JDIAN 9/30/24 Addendum 1

roject Number: 89006007-23-034-C equisition Number account Number: esigner: Drawing Date 8/30/2024

DAM Drawing Scale: DAPW Approval: Client Approval: Reference Number:

1394

Building Reference: Drawing Name: WELCOME CENTER - HVAC **FLOOR PLAN** 

WC/M3-1

Drawing Number:

{	GEOTHER	MAL HEAT	PUMP SCHEE	DULE																												
	NOTES: 1. FRONT RETURN, 2. INSTALL ON 4" HO 3. PROVIDE WITH IN	TOP SUPPLY. CON DUSEKEEPING PAD, ITEGRAL REFRIGER	NECT DUCTWORK WITH F ROUTE CONDENSATE DF ANT DETECTION SYSTEM	LEXIBLE CONNECT RAIN TO FLOOR DR. 1. ON DETECTION (	TION. AIN. MAIN OF REFR	NTAIN MAN IGERANT I	IUFACTURI NITIATE IN	ER'S RECO TERNAL SE	DMMENDEI EQUENCE	D SERVIO TO SEND	CE CLEAR/ D ALARM T	ANCES A	ROUND UN ROLS FRON	IT. PROVII IT END, SH	DE VIBRAT HUT DOWN	ION ISOL	ATORS P ESSOR A	ER MANUF ND RUN BI	FACTURE LOWER.	ER'S RECOM ALL OTHER	MENDATIO SAFETIES	ONS. S INCLUDI	NG FREEZ	ZE STAT T	O REMAIN O	PERAT	IONAL.					
<u>۲</u>						GE	EOTHERMA	AL COOLIN	G COIL 25%	% PROPY	LENE GL	<u>rcol</u>			GEOTH	ERMAL H	EATING C	OIL 25% P	ROPYLE	NE GLYCOL			FA	AN	COMF	PRESSO	DR		ELEC	TRICAL DA	ТА	_
·····	UNIT TAG	LOCATION	AREA SERVED	TYPE	CFM	MBH TOTAL	MBH SENSIBLE	EDB/EW B	LDB/LWB	EWT (F)	LWT (F)	GPM	WATER PRESSUF E DROP (FT)	MIN. MBH OUTPUT	EAT	LAT	EWT (F)	LWT (F)	GPM	WATER PRESSURE DROP (FT)	CFM	ESP	MOTOR HP	RPM	MOTOR HP	NO.	RLA/LRA	MCA	MOCP	/OLT/PH P(	EM CON DWER TY	Т /1
{	HP-101	MECH 106	LOBBY 101	VERT GEO HP	7000	347.2	236	86/70	54/53	62	74	90	15	397	37	88	43	35	90	14	7000		2) 2HP	1760				67	90	460/3	YES DI	D
<u>}</u>	HP-100	MECH 106	VESTIBULE 100	VERT GEO HP	1360	53.5	37	80/67	55/54	62	71	12	18.5	43.5	70	88	43	38	12	4.7	1360	0.5	1) 3/4	1760		1	6.4/41.0	16.2	20	460/3	YES DI	Ć
5	HP-102	MECH 106	OFFICE 102	VERT GEO HP	200	9.3	7.4	80/67	58/57	62	71	2.3	8	7.4	65	87	43	38	2	3	200	0.4	1/4	1760	1	1	2.6 / 13.5	5.5	15	277/1	YES DI	Ĺ
<u>ک</u>	HP-103	MECH 106	OFFICE 103, FAM RR	VERT GEO HP	450	17.5	13.8	80/67	58/57	62	74	3.5	17	12.9	65	87	43	38	2	3	450	0.5	1/3	1760	1	1	2.6 / 13.5	10.5	15	277/1	YES DI	Ĺ
S	HP-107	CENTER CHASE	VEND 107/109	VERT GEO HP	1000	48.2	35.9	80/67	57/56	62	76	8	18	36.1	70	90	43	38	9	15	1000	0.5	3/4	1760	1	1	5.1 / 28	15.9	20	460/3	YES DI	ſ
ا عم	HP-108	CENTER CHASE	MENS 108	VERT GEO HP	1000	48.2	35.9	80/67	57/56	62	76	8	18	36.1	70	90	43	38	9	15	1000	0.5	3/4	1760	1	1	5.1 / 28	15.9	20	460/3	YES DI	Ĺ
1	HP-110	CENTER CHASE	WOMENS 110	VERT GEO HP	1000	48.2	35.9	80/67	57/56	62	76	8	18	36.1	70	90	43	38	9	15	1000	0.5	3/4	1760	1	1	5.1 / 28	15.9	20	460/3	YES D	[
<u>ک</u>	HP-111	CENTER CHASE	STORAGE 111	VERT GEO HP	1120	48.2	35.9	80/67	57/56	62	76	8	18	36.1	70	90	43	38	9	15	1120	0.5	3/4	1760	1	1	5.1 / 28	15.9	20	460/3	YES DI	Ĺ
ζ	HP-113	STORAGE	MOTHERS RM 113	VERT GEO HP	300	9.3	13.8	80/67	58/57	62	71	2.3	8	7.4	65	87	43	38	3	3	300	0.4	1/4	1760	1	1	2.6 / 13.5	5.5	15	277/1	YES DI	Ĺ

## NOTES: 1. SUSPEND UNIT FROM STRUCTURE WITH VIBRATION ISOLATION PER MANUFACTURER'S RECOMMENDATIONS. INSTALL WITH ADEQUATE CLEARANCE AND ACCESS FOR FILTER CHANGES, SERVICE AND MAINTENANCE. PROVIDE UNIT WITH CONTROLLER TO MONITOR DISCHARGE CONDITIONS AND CYCLE OA/FRESH AIR FAN IN FROSTING CONDITIONS. OA / FRESH AIR AHU TAG UNIT ENTERING (OA) LEA\ NO. CONFIG. CFM DB WB CFM ERV-1"H"273295782700ERV-2"H"273295782700

## ELECTRIC REHEAT COIL SCHEDULE

NOTES:	JOTES:																	
1. DUCT MOUNT	1. DUCT MOUNTED COIL. TRANSITION DUCTWORK AS REQURED. PROVIDE AIR SWITCH AND CONTROL CABINET SAFETY SWITCH AND DISCONNECT. CONTROL SIGNAL FROM ASSOCIATED HEAT PUMP.																	
2. INSTALL WITH SERVICE CLEARANCE AT CONTROL PANEL FOR SERVICE AND MAINTENANCE.																		
			AIR	SIDE				AIR SIDE		ELECTRICAL DATA				IMENSIONA	L	BASIS OF D		
					SENSIBLE						DISC.							
	SYSTEM				LOAD		CONTROL	MAX. AIR			SWITCH	EM.	DUCT	DUCT	FACE			
UNIT TAG	SERVED	AIR FLOW	EDB	LDB	(MBH)	KW	TYPE	VELOCITY	VOLTS	PH	BY	POWER	WIDTH	HEIGHT	AREA	MANUFACTURER	MODEL NO.	NOTES
ERH-100	HP-100	1400 CFM	40.0 °F	50.0 °F	17	5 kW	2 STAGE	850 FPS	480 V	3	MFGR	YES	16"	16"	1.8 ft <sup>2</sup>	INDEECO	16x16	1,2
ERH-101	HP-101	7000 CFM	40.0 °F	80.0 °F	135	88 kW	2 STAGE	850 FPS	480 V	3	MFGR	YES	64"	20"	8.9 ft <sup>2</sup>	INDEECO	64x20	1,2

2. PROVIDE COMMUNICATIONS TO BUILDING BAS (DISTECH CONTROLS) WITH UNIT STATUS, ALARM STATUS, ENTERING AND LEAVING TEMPERATURES.

CHAR	JE CON		AND C	YCLE OF	VFRESH A	IR FAN IN FRU		UNDITIO	NS.																										
	SUMME	ER DATA										WINTE	R DATA							FAN	DATA							ELECT	RICAL DATA					BASIS OF [	JESIG
			RA / E	EXHAUS	Т				OA / FR	ESH AIR				RA / E	XHAUS	Т		F	FRESH AI	R		EXHAUST													
VING (	FA)	ENT	ERING	(RA)	LEAVING	RECOVERED	ENT	ERING (	(OA)	LEA	AVING (F	A)	ENT	ERING (	RA)	LEAVING	RECOVERED							VOLTS/	FAN FLA	MCA	MOCP	DISC. SW.	STARTER	STARTER		CONTRO	(LBS)	MANUFACTURE	NAC
DB	WB	CFM	DB	WB	(EXH) CFM	MBH	CFM	DB	WB	CFM	DB	WB	CFM	DB	WB	(EXH) CFM	MBH	CFM	ESP	HP	CFM	ESP	HP	PH	SA / EA	WCA	MOCP	BY	BY	TYPE	EMFOWER	L TYPE	()	R	
84.5	73.5	2215	78	63.8	2253	52.9	2732	-8	-10	2700	42	41	2215	68	60	2253	193.9	2732	.75	3	2253	.75	2	480/3	6.7 / 6.7	16.6	20	EC	MFGR	VFD	YES	DDC	750	RENEWAIRE	Н
84.5	73.5	2215	78	63.8	2253	52.9	2732	-8	-10	2700	42	41	2215	68	60	2253	193.9	2732	0.75	3	2253	0.75	2	480/3	6.7 / 6.7	16.6	20	EC	MFGR	VFD	YES	DDC	750	RENEWAIRE	H

## UNIT HEATER SCHEDULE

NOTES:																
1. PROVIDE WI	ITH INTEGRAL TA	MPER PROOF THERM	OSTAT AND DIS	CONNECT. PR	OVIDE HARDW	ARE FOR RECE	ESSED MOUNTI	NG.								
2. PROVIDE UN	NIT MOUNTED THE	ERMOSTAT. PROVIDE	HARDWARE FO	OR MOUNTING F	FROM WALL OF	R STRUCTURE.										
						HEATING	ELEMENT	MOTOR DATA		MOTOR DATA		ELE	CTRICAL DATA		BASIS OF D	DESIGN
UNIT TAG	LOCATION	TYPE	MBH	EAT	CFM	KW	STEPS	NO. OF SPEEDS	RPM	VOLTS	PHASES	DISC. SW. BY	EM. POWER	CONTROL TYPE	MANUFACTURE	MODEL NO.
ECUH-114	CORRIDOR 114	WALL ELECTRIC	5.1	60.0 °F	150 CFM	1.5 kW	1	1	1600	120 V	1	MFGR	YES	INTEGRAL	MARLEY	AWH3150F
EUH-106	MECH. 106	HORIZONTAL PROPELLER	34.1	60.0 °F	650 CFM	10 kW	1	1	1600	480 V	3	MFGR	YES	INTEGRAL	MARLEY	MUH-07-2
EUH-111E	STORAGE 111	HORIZONTAL PROPELLER	19.1	60.0 °F	650 CFM	5.6 kW	1	1	1600	208 V	1	MFGR	YES	INTEGRAL	MARLEY	MUH-07-2
EUH-111W	STORAGE 111	HORIZONTAL PROPELLER	19.1	60.0 °F	650 CFM	5.6 kW	1	1	1600	208 V	1	MFGR	YES	INTEGRAL	MARLEY	MUH-07-2
EUH-112	VENDING STORAGE 112	HORIZONTAL PROPELLER	19.1	60.0 °F	650 CFM	5.6 kW	1	1	1600	208 V	1	MFGR	YES	INTEGRAL	MARLEY	MUH-07-2

PUMP S	CHEDULE																						
NOTES: 1. TRANSITION	PIPING TO SUSPEND	PUMP AT 24" ABOVE FLOC	DR. SUPPORT PIF	PING FROM	HOUSEKEEF	VING PAD V	VITH 1" NE	OPRENE VIBI	RATION PADS.														
2. TWO PUMPS	TO RUN IN PARALLEL	, 1 PUMP TO REMAIN AS E	BACKUP. ROTATE	E LEAD PUN	/IP ON MONTI	HLY BASIS	•			1								1					
				DES	IGN CRITERI	Ą							МОТО	R DATA					ELECTI	RICAL		BASIS OF	DESIGN
						MIN. FLUID	MAX. FLUID	MIN. IMPELLER	MIN.									STARTER	STARTER	EM.	CONTROL		
UNIT TAG	LOCATION	TYPE	FLOW	TDH	FLUID	TEMP.	TEMP.	DIA.	EFFICIENCY	BHP	HP	RPM	VOLTS	PH	FLA	MCA	MOCP	BY	TYPE	POWER	TYPE	MANUFACTURER	MODEL
GTP-1	MECH. 106	INLINE	120 GPM	120 FT	30% GLYCOL	35.0 °F	140.0 °F	6	63	5.45	10	3550	460 V	3	0 A	0 A	0 A	EC	VFD	YES	DDC	BELL & GOSSETT	E80 2x2
GTP-2	MECH. 106	INLINE	120 GPM	120 FT	30% GLYCOL	35.0 °F	140.0 °F	6	63	5.45	10	3550	460 V	3	0 A	0 A	0 A	EC	VFD	YES	DDC	BELL & GOSSETT	E80 2x2
GTP-3	MECH. 106	INLINE	120 GPM	120 FT	30% GLYCOL	35.0 °F	140.0 °F	6	63	5.63	10	3600	460 V	3	0 A	0 A	0 A	EC	VFD	YES	DDC	BELL & GOSSETT	E80 2x2

## **HVAC DESIGN CONDITIONS**

OUTE	DOOR DES	GIGN CONE	DITIONS		SPACE			SPACES		
SUM	MER	WI	NTER							
						R	H	NIGHT S	ETBACK	
DRY BULB	WET BULB	DRY BULB	RELATIVE HUMIDITY	COOLING	HEATING	MIN	MAX	COOLING	HEATING	COOLI
95	78	-10	0.02	75	68	-	60	24 HR OP	ERATION	80

NOTES:		
1 ALUMINUM CONSTRUCTION WHITE FINISH		
2. CENTER IN GRID WHERE POSSIBLE		
NOMINAL ROUND NECK     BRANCH DUCT SIZE TO     MAXIMUM     MAX. NC     THROW (FT)     MAX. NECK     MAX. VELOCITY     MAX. TOTAL     MANUFACTUR		
TYPE TAG NOMINAL SIZE SIZE DIFFUSER MINIMUM CFM CFM LEVEL 150-100-50 VELOCITY PRESSURE PRESSURE ER MODEL NO	). TYPE DE	JESCRIF
SDB         12"x12"         6         6         80 CFM         125 CFM         15         4-5-11         650 FPM         0.026 in-wg         0.089 in-wg         PRICE         SPD	CEILING	PLAQ
SDD         24"x24"         8         140 CFM         260 CFM         15         4-6-12         750 FPM         0.035 in-wg         0.118 in-wg         PRICE         SPD	CEILING	PLAQ
SDE         24"x24"         10         10         220 CFM         380 CFM         15         5-7-13         700 FPM         0.031 in-wg         0.103 in-wg         PRICE         SPD	CEILING	PLAQ

## EXPANSION TANK AND AIR CONTROL SYSTEM SCHEDULE

NOTES:

				WATER	PRV FILL	MAX OPE	R. PRESS.	MINI	MIN.	Å	AIR SEP/	ARATOF	R	BA	SIS OF DESIGN
TAG NO.	LOCATIO N	SYSTEM SERVED	SYSTEM VOLUME	TEMP RANGE MIN/MAX	PRESSURE AT TANK PSIG	RELIEF VALVE PSIG	AT TANK PSIG	VOLUME GAL.	ACCEPT VOLUME GAL.	SIZE	GPM	MAX P.D.	WGT. (LBS)	MFGR	MODEL #
ET-1/AS-1	MECH S-119	HEATING HOT WATER	4200	60-80	35	45	42	340	42	4	150	6'	350	B&G	ET-1: 2) B&G B80 AS-1: B&G ROLAIRTROL SIZI

PACE TEMP -ILITY SPACES 30 68

## **ROOF HOOD SCHEDULE**

NOTES 1. PROVIDE GALVANIZED BIRD SCREEN 2. PROVIDE 14" HINGED INSULATED ROOF CURB WITH SAFETY BARS

TAG NO.	EQUIPMENT SERVED	TYPE	SERVICE	CFM	THROAT AREA SQ FT	AIR VELOCITY FPM	STATIC PRESSURE "W.C.	HOOD SIZE LxWxH OR DIA x H	ROOF OPENING	FINISH	MANUFACTUREF MODEL
RH-1	ERV-1	GRAVITY RELIEF HOOD	EXHAUST	2040	5	410	0.05	48" DIA	26.5x26.5	ANODIZED ALUM.	GREENHECK GR 30
RH-2	ERV-2	GRAVITY RELIEF HOOD	EXHAUST	960	5	200	0.05	48" DIA	26.5x26.5	ANODIZED ALUM.	GREENHECK GR 30

G. ENTGHS AND ARR	ANGEMENT.						
MIN. CFM	NAX. CFM	MAX. NC MAX LEVEL VE	X. CORE V LOCITY P	MAX. /ELOCITY RESSURE	MAX. TOTAL PRESSURE	MANUFACTUR ER	MODEL N
0 CFM	0 CFM	0 0	FPM 0	.000 in-wg	0.000 in-wg	PRICE	620
200 CFM	700 CFM	30 47	70 FPM 0	.070 in-wg	0.090 in-wg	PRICE	LBP
100 CFM 2	200 CFM	30 30	00 FPM 0	.070 in-wg	0.090 in-wg	PRICE	LBPH
	MIN. CFM         N           0 CFM         200 CFM           100 CFM         100 CFM	MIN. CFM         MAX. CFM           0 CFM         0 CFM           200 CFM         700 CFM           100 CFM         200 CFM	MIN. CFM         MAX. CFM         LEVEL         VE           0 CFM         0 CFM         0         0           200 CFM         700 CFM         30         47           100 CFM         200 CFM         30         30	MIN. CFM         MAX. CFM         LEVEL         VELOCITY         P           0 CFM         0 CFM         0         0 FPM         0           200 CFM         700 CFM         30         470 FPM         0           100 CFM         200 CFM         30         300 FPM         0	MIN. CFM         MAX. CFM         LEVEL         VELOCITY         PRESSURE           0 CFM         0 CFM         0         0 FPM         0.000 in-wg           200 CFM         700 CFM         30         470 FPM         0.070 in-wg           100 CFM         200 CFM         30         300 FPM         0.070 in-wg	MIN. CFM         MAX. CFM         LEVEL         VELOCITY         PRESSURE         PRESSURE           0 CFM         0 CFM         0         0 FPM         0.000 in-wg         0.000 in-wg           200 CFM         700 CFM         30         470 FPM         0.070 in-wg         0.090 in-wg           100 CFM         200 CFM         30         300 FPM         0.070 in-wg         0.090 in-wg	MIN. CFM         MAX. CFM         LEVEL         VELOCITY         PRESSURE         PRESSURE         ER           0 CFM         0 CFM         0         0 FPM         0.000 in-wg         0.000 in-wg         PRICE           200 CFM         700 CFM         30         470 FPM         0.070 in-wg         0.090 in-wg         PRICE           100 CFM         200 CFM         30         300 FPM         0.070 in-wg         0.090 in-wg         PRICE

NOTES:											
1. PROVIDE WI	TH CONCEALED	PLASTER FRAM	1E.								
2. WHITE FINIS	H. 3. PROVIDE \	NITH FLUSH MO	UNT LAYIN FRAM	ME FOR INSTALL	ATION IN WOOI	D CEILING. COLO	OR BY ARCHITE	CT.			
UNIT TYPE	NOMINAL	NUMBER OF		INLET DUCT			MAX. NC		MAX. TOTAL	MANUFACTUR	
TAG	LENGTH	SLOTS	SLOT WIDTH	SIZE	MIN. CFM	MAX. CFM	LEVEL	MAX. THROW	PRESSURE	ER	MODEI
LDRD	4' - 0"	3	1"	48	0 CFM	480 CFM	25	37'	0.080 in-wg	PRICE	SD
LDSC	4' - 0"	3	1"	10	200 CFM	300 CFM	25	31'	0.080 in-wg	PRICE	SD
LDSE	5' - 0"	3	1"	10	160 CFM	320 CFM	25	21'	0.120 in-wg	PRICE	SD







(TA)





(TB)





PACK	AGED GEOT	HERMAL	<b>_ M</b>	AKI	E UP A	IR H	AND	<b>LER</b>			
NOTES: 1. DOWNFL 2. ELECTRI 3. PROVIDE 4. DISCONN 5. FULLY PI 6. SINGLE F	DW ARRANGEMENT C HEAT BELOW 40F WITH INTEGRAL REF IECT SWITCH / CONT ROGRAMMABLE ELEC POINT ELETRICAL CC	WITH 24" TALL F 136.5 MBH, 40KV FRIGERANT DET INUOUS POWE CTRONIC CONT NNECTION - PF	FULL P W, -10 F FECTIC R CON ROLLE ROVIDE	ERIME EAT, 9 ON SYS VENIE ER FOF E TRAN	ETER INSUL 5 LAT STEM. ON E NCE OUTLI R CONSTAN ISFORMER	ATE CU DETECT ET. PRO IT VOLU AS REC	RB. UN ION OF VIDE IN ME SIN QUIRED	IT TO BE REFRIGE TAKE HC GLE ZON FOR CON	MOUNT RANT II OOD WIT E OPER NTROLS	ED ON C NITIATE H BIRDS ATION. , LIGHTS	GRADE
TAG NO.	AREA SERVED	TYPE	CFM	OA CFM	MBH TOT / SENS	GPM	EWT	EAT DB / WB	LADB (COIL)	LAWB (COIL)	REFF TYF

E IN PUBLIC AREA - PROVIDE SCREENS OR GUARDS ON ALL OPEN OR OPERABLE SECTIONS WITH TAMPER PROOF HARDWARE. RNAL SEQUENCE TO SEND ALARM TO CONTROLS FRONT END, SHUT DOWN COMPRESSOR AND RUN BLOWER. ALL OTHER SAFETIES INCLUDING FREEZE STAT TO REMAIN OPERATIONAL.

					GEOTHER	MAL COOL	ING COIL				ELEC PR	EHEAT		GEO (PR	RIMARY) H	EAT	H.G. REH	EAT				FAN					COMPF	RESSOR/CO	DNDENSER			FILTE	RS		ELECTRICAL	DATA		
G NO.	AREA SERVED	TYPE	CFM OA CFM	MBH TOT / SENS GF	M EWT	EAT DB L / WB (C	ADB LAWE COIL) (COIL	REFRIG. TYPE	MAX MIN FAC FAC	I. MBH	EAT / LAT	KW	FLA ME	BH GPM	1 EWT	EAT / LAT	MBH E	AT / FAI		NO. OF	TOTAL SP	EXT FAN SP RPN	MOTOR HP	MOTOR RPM VC	DLT/PH MIN.	NO OF C DMP 1		NO OF NDENSE	FAN HP EACH	FAN DES RPM AMBI	BIGN ENT NO.	. TYPE	SIZE	MCA	MOP PO	EM CONTR WER TYPE	OL MFG. MODE	L # WGT LBS.
R1	TRUCKER RR	PACKAGED RTU	1000 1000	72.1/39.1 1	5 62	95/78	56 56	R-454B	500 5.3	48.6	-10 / 35	15	42 54	l.8 15	43	35/84	18.6 5	6/75 FC	DIREC	T 1	1.7	1 176	1	1760	460/3	1 SC	CROLL	1	1/3	1110 9	5 2	DISPOSABL	_E 20x20x2	36	40 Y	ES DDC	AAON RQA-	005 2000

NOTES:

1. PROVIDE MOUNTING HAR 2. SCHEDULE NOTES

UNIT TAG LOCATION UH-TR1 Chase TR 10

RESTROOM

## ELECTRIC UNIT HEATER SCHEDULE TRUCKER RESTROOM

RDWARE AND UNIT	MOUNTED	THERMOSTAT

			HEATING ELEMENT			MOTOR DATA			ELECTRIC	CAL DATA	BASIS OF D	ESIGN	
N	TYPE	MBH	KW	HP	FLA	MOCP	VOLTS	PHASES	DISC. SW. BY	EM. POWER	MANUFACTURER	MODEL NO.	WEIG
01	HORIZO NTAL PROPEL LER	17	5 kW	1/6	6 A	15 A	480 V	3	EC	YES	MARLEY	MUH-0541	30

EXI	HAUST F	AN SC	HEDU		JCKE	R RES	STROC	M												
NOTES	3:																			
1. SUP	PORT FROM STR	RUCTURE WIT	TH VIBRATI	ON ISOLATOF	RS AS REC	OMMENDED	BY MANUF	ACTURE	R. PROVIDE	E WITH IN	NTEGRAL	BACKDRAF	T DAMPER							
2. SC⊢	EDULE NOTES																			
		FAN						MOTOR DATA MOTOR DISCONNECT								BASIS OF I	BASIS OF DESIGN			
			1	1744						10101					Bleeel				2,010 01 1	
	AREA													EM.			CONTROL			
TAG	SERVED	FAN TYPE	CFM	TOTAL S.P.	RPM	DRIVE	SONES	HP	VOLTS	PH	FLA	MCA	MOCP	POWER	PROVIDED BY	LOCATION	TYPE	WEIGHT	MANUFACTURER	MODEL NO.
EF-TF	TR	INLINE	1200 CFM	0.600 in-wg	1450	DIRECT	4.5	0.5	120 V	1	7 A	9 A	15 A	YES	MFGR	ON FAN	INTEGRAL	75 lb	GREENHECK	CSP-A1410
	DECTROOM			J J																





ODE	DESCRIPTION	DETAIL
12-03-01	WAYFINDING SIGN	A5/L-702
12-03-02	TRAIL MARKER SIGN	A3/L-702
ITE FURN	ISHINGS	
12-93-06	DOG WASTE STATION W/ BAG DISPENSER AND VENTED RECEPTACLE, REFER TO MFR. FOR INSTALLATION RECOMENDATIONS	
12-93-07	LITTER RECEPTACLE: FORMS+SURFACES, MODEL SLTNO-230S' TONYO 60-GALLON CAPACITY, W/RAIN HAT, COLOR BLACK TEXTURE FINISH, 'NOTCH' PERFORATION PATTERN, SURFACE MOUNTED PER MFR. RECOMENDATIONS.	
12-93-10	LITTER RECEPTACLE ON CONCRETE PAD. REFER TO NOTE 12-93-07 FOR ADDITIONAL	E1/L-701
(12-93-12)	ASH RECEPTACLE: MMCITE CRYSTAL COLOR RAL 7016. SURFACE MOUNT PER MFR	

## **GENERAL NOTES | SITE FEATURES PLANS**:

- UTILITIES. EACH SHEET.

1. DO NOT SCALE DRAWINGS FOR FIELD LAYOUT.

2. COORDINATE ALL WORK WITH OTHER DESIGN DISCIPLINES.

3. EXISTING AND PROPOSED UTILITIES THAT ARE SHOWN ARE FOR REFERENCE ONLY. REFER TO THE SITE SURVEY FOR EXISTING UTILITIES AND VERIFY ALL IN THE FIELD. REFER TO THE SITE ELECTRICAL PLAN FOR PROPOSED SITE LIGHTING AND POWER DISTRIBUTION EQUIPMENT. REFER TO CIVIL DRAWINGS FOR ALL OTHER PROPOSED

4. REFERENCE NOTES SCHEDULE MAY APPEAR ON MULTIPLE SHEETS. NOT ALL REFERENCE NOTES APPEAR ON

5. REFER TO A2/L-701 FOR CONCRETE PAVING JOINT DETAILS.









## **GENERAL NOTES | SITE FEATURES PLANS:**

- 1. DO NOT SCALE DRAWINGS FOR FIELD LAYOUT.
- 2. COORDINATE ALL WORK WITH OTHER DESIGN DISCIPLINES.
- 3. EXISTING AND PROPOSED UTILITIES THAT ARE SHOWN ARE FOR REFERENCE ONLY. REFER TO THE SITE SURVEY FOR EXISTING UTILITIES AND VERIFY ALL IN THE FIELD. REFER TO THE SITE ELECTRICAL PLAN FOR PROPOSED SITE LIGHTING AND POWER DISTRIBUTION EQUIPMENT. REFER TO CIVIL DRAWINGS FOR ALL OTHER PROPOSED UTILITIES.
- 4. REFERENCE NOTES SCHEDULE MAY APPEAR ON MULTIPLE SHEETS. NOT ALL REFERENCE NOTES APPEAR ON EACH SHEET.
- 5. REFER TO A2/L-701 FOR CONCRETE PAVING JOINT DETAILS.
- 5.1. 'IJ' DENOTES ISOLATION JOINT.
- 5.2. 'CJ-A' DENOTES CONTRACTION JOINT 'A'.
- 6. ALL CONCRETE PAVING JOINTS SHALL BE CONTRACTION JOINT 'A' UNLESS INDICATED OTHERWISE.
- 7. ALL ISOLATION AND CONCRETE JOINTS FOR CONCRETE CURBS SHALL ALIGN WITH RESPECTIVE ISOLATION AND CONTRACTION JOINT SPACING OF ADJACENT CONCRETE PAVEMENTS AND SIDEWALKS. SEE CURB DETAILS FOR ADDITIONAL INFORMATION, IF APPLICABLE.
- 8. REFER TO CIVIL DRAWINGS FOR ALL PAVING NOT HATCHED ON THESE DRAWINGS UNLESS OTHERWISE INDICATED IN THE LANDSCAPE DRAWINGS.
- 9. THE LANDSCAPE ARCHITECT'S ELECTRONIC DESIGN DATA FILE(S) MAY BE MADE AVAILABLE TO THE SUCCESSFUL BIDDER(S) FOR LAYOUT PURPOSES UPON REQUEST AND RECEIPT OF A SIGNED "WAIVER OF CLAIMS FOR USE OF ELECTRONIC DATA" FORM.

## REFERENCE NOTES SCHEDULE DETAIL SYMBOL DESCRIPTION **BRICK MASONRY** (04-21-02) SEAT WALL 'B', BRICK VENEER, LIMESTONE CAP C1/L-704 **10 SPECIALTIES** (10-75-01) FLAGPOLE, ALUMINUM TAPERED IN-GROUND A1/L-702 **12 FURNISHINGS** (12-01A) INTERPERTIVE SIGN: TRAIL MAP + INDIANA WOODS E5/L-702 A5/L-702 (12-03-01) WAYFINDING SIGN SITE FURNISHINGS DOG WASTE STATION W/ BAG DISPENSER NO TRASH SURFACE MOUNT PER MRF. (12-93-06A) RECOMMENDATIONS \_\_\_\_ LITTER RECEPTACLE: FORMS+SURFACES, MODEL SLTNO-230S' TONYO 60-GALLON CAPACITY, W/RAIN HAT, COLOR BLACK TEXTURE FINISH, 'NOTCH' PERFORATION PATTERN, (12-93-07) SURFACE MOUNTED PER MFR. RECOMENDATIONS. (12-93-08) SPECIALITY BOLLARD E1/L-702 12-93-09BENCH: LANDSCAPE FORMS NEOLIVIANO 69", BACKED, THERMALLY MODIFIED ASH SLATS,<br/>SURFACE MOUNT PER MFR. RECOMENDATIONS(12-93-12)ASH RECEPTACLE: MMCITE CRYSTAL COLOR RAL 7016. SURFACE MOUNT PER MFR 26 ELECTRICAL (26-56-02) LIGHT POLE AND SITE ELECTRICAL, REF: ELEC DWGS AND CIVIL DWGS A2/L-709 (26-56-03) IN-GROUND LIGHT, REF: ELEC DWGS FOR MORE INFORMATION D1/L-709 32 EXTERIOR IMPROVEMENTS A1/L-701 CONCRETE PAVING, LIGHT DUTY CONCRETE PAVING, CLASS III DRIVE PER INDOT STANDARD DRAWING E610-DRIV-04 **UNIT PAVING** CONCRETE PAVERS, BITUMINOUS SETTING BED A5/L-701 AGGREGATE SURFACING MINERAL MULCH, REF. SPEC. 329300 FOR COLOR AND SIZE B6/L-702 CURBS, GUTTERS, SIDEWALKS, AND DRIVEWAYS E2/L-701 (32-16-01) CONCRETE RIBBON CURB, 6"W PAVING SPECIALTIES D7/L-701 (32-17-10) WHEEL STOP ATHLETIC AND RECREATIONAL SURFACING PLAYGROUND PROTECTIVE SURFACING, POURED-IN-PLACE RUBBER A7/L-701 DOG PARK SURFACING, ENGINEERED WOOD FIBER C7/L-701 ASPHALT, BASKETBALL COURT A3/L-703

- (32-17-10) TYP. (17)

- DETAIL-PLANTER F



![](_page_25_Figure_0.jpeg)

![](_page_25_Picture_26.jpeg)

![](_page_26_Figure_0.jpeg)

with Cement)

- Note:
- 1. Retrofit Tie Bars shall be used wherever new pavement will be added next to the existing pavement placed along the longitudinal joint and spaced 3 FT c/c.See Landscape Plans for Treatment

  - to Non Paved Areas.

## F Sidewalk, Concrete, 4 Inch

- (F1) Sidewalk, Concrete, 6 Inch
- O Compacted Aggregate No. 53

- (10) Guardrail, MGS, W-Beam

- S Saw Cut
- - (13) Concrete Curb, Integral, 6 Inch
- U 6" Underdrain

- D1) PCCP, Concrete, 4 inch on 6 Inch Compacted Aggregate No. 53, on Subgrade Treatment Type III, 6" of soil compacted to the density and moisture requirement

![](_page_26_Picture_34.jpeg)

- (11) Guardrail, MGS, W-Beam, End Treatment, Type OS (12) Guardrail, MGS, W-Beam, Cable Terminal Anchor
- (14) Concrete Curb, Integral, 8 Inch
- (15) Concrete Curb Turnout
- 26 Sodding
- 27 48" Chain Link Fence

![](_page_27_Figure_0.jpeg)

![](_page_28_Figure_0.jpeg)