

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 1.11 **Room Name:** District 6 - Open Lab **Department:** District 6
Quantity: 1 **Area (SF):** 1,634 **Occupants:** 4-5
Function: Aggregate, Concrete, and Soils Testing along with sample check-in and staging

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input checked="" type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input checked="" type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input checked="" type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input checked="" type="checkbox"/> CMU		<input checked="" type="checkbox"/> Height- 4"	<input checked="" type="checkbox"/> Cased opening
<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Door size 6'x8'H
Note G.1	Note G.1	Note G.1	Note G.1	Note G.1	Note G.1

LABORATORY SERVICES

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input checked="" type="checkbox"/> Mobile Casework Note G.3
<input type="checkbox"/> Snorkel	<input type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework Note G.3
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input checked="" type="checkbox"/> Counter Material Stainless Steel
<input checked="" type="checkbox"/> Other Note G.2	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization Negative	<input type="checkbox"/> Scullery Sink	<input type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour 8 ACH	<input type="checkbox"/> Floor Sink	<input checked="" type="checkbox"/> Tall Shelving Note G.2
<input checked="" type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input checked="" type="checkbox"/> Other Note G.2	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input checked="" type="checkbox"/> Island Bench power	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Lockers
<input type="checkbox"/> Perimeter Bench Duplex @ 24" O.C., type: Direct	<input type="checkbox"/> Compressed air	<input type="checkbox"/> Mobile Cabinets
<input type="checkbox"/> Ceiling Mounted <input checked="" type="checkbox"/> Floor Mounted	<input type="checkbox"/> Purified Water	<input checked="" type="checkbox"/> Vibration Control Note G.2
<input type="checkbox"/> Emergency <input type="checkbox"/> UPS Note G.2, G.4	<input type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Temperature Note E.1, E.4
<input checked="" type="checkbox"/> 120V Note B.1	<input checked="" type="checkbox"/> Other/Specialty Note G.2	<input checked="" type="checkbox"/> Acoustics Note E.3
<input type="checkbox"/> 208V	HAZARDOUS MATERIAL STORAGE	<input checked="" type="checkbox"/> Humidity Note E.2

<input type="checkbox"/> 480V	<input type="checkbox"/> Acid/ Corrosive	<input type="checkbox"/> Flammable
<input checked="" type="checkbox"/> Data <input checked="" type="checkbox"/> WiFi Router <input type="checkbox"/> Comm.	<input type="checkbox"/> Toxic	<input type="checkbox"/> Radioactive
<input checked="" type="checkbox"/> Other Note G.2, G.5, G.6	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Other

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Level 60-80 FC	<input checked="" type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input checked="" type="checkbox"/> Eyewash At all sinks	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input checked="" type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	

		SECURITY
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	<input type="checkbox"/> CCTV
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type Wet pipe type	<input type="checkbox"/> Keyed Entry
<input checked="" type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher ABC	<input checked="" type="checkbox"/> Access Control Note G.3
	<input checked="" type="checkbox"/> Other Note G.2	<input checked="" type="checkbox"/> Other Note G.6

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 1.11 **Room Name:** District 6 - Open Lab **Department:** _____

NOTES

A. Adjacencies: The Open lab directly contains these zones: Aggregate (1.11.1), Soils (1.11.4), Sort and Log Area (1.11.5), and Concrete (1.11.6). The Open lab must be directly adjacent to the Open HMA Lab (1.23). The Open lab must be adjacent to the Separate District 6 Entrance and the District 6 laboratory staff office area. The Open lab must also be adjacent to Storage (1.18) and the Calibration/Repair Room (1.25). The Open lab must also have access to the shared loading dock and dumpsters.

B. Equipment:

1. Refer to the equipment matrix for equipment requirements such as power, water, gas etc.
2. Refer to the Room Data sheets areas within the lab.

C. Primary Areas:

1. Open Lab contains these zones:
 - 1.11.1 Aggregate
 - 1.11.4 Soils
 - 1.11.5 Sort & Log
 - 1.11.6 Concrete

D. Material Flow:

Sample delivery is anticipated to be primarily through the separate D6 entrance. All HMA, PCC, Agg, and Soil samples delivered to the D6 lab will be checked in and temporarily stored awaiting testing at a central location Sort/Log (1.11.5) near the entrance. After testing, samples will be disposed of in a dumpster or moved to the storage room (1.18) for longer-term storage. A computer workstation should be located in the sample check-in area.

Double doors are required for access to the shared loading dock area and storage (1.18) to facilitate bulk sample movement and large equipment delivery. There should be clear circulation space between the open lab entrance closest to the sort/log area (1.11.5) and the double doors, but they do not need to be adjacent.

Field technicians will also utilize the separate D6 entrance to pick-up and drop off field testing equipment. This equipment will be stored in adjacent D6 Storage (1.18). It is anticipated carts will be used to transport equipment from the sort/log (1.11.5) to the storage area (1.18) because storage is not required to be adjacent to (1.11.5) or the separate D6 entrance.

An overhang and adjacent sample drop-off parking is desired at the separate D6 entrance.

E. Environmental Conditions

1. Temperature: 68-72deg F +/- 2degF, After hour temperature is 77deg F to ensure that the concrete curing tank water temperature is maintained in concrete (1.11.6)
2. Humidity: 23-55%RH +/- 5%
3. Acoustic: NC-36
4. After hours temperature: Refer to MEP Narrative.

F. General Notes:

- a. No natural gas or speciality gases are required in District 6.
- b. Dust collection and room ventilation system are required to collect the silica dust that shall be generated in this spaces. Ensure that filters are provided at exhaust grilles.

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 1.11 **Room Name:** District 6 - Open Lab **Department:** _____

G. RDS Notes:

1. Final interior finishes to be selected by the Design Team selected for this project.
2. Refer to the specific zones for Additional laboratory Requirements.
3. Casework requirements, refer to the RDS of each zone.
4. UPS only for selected equipment, refer to equipment matrix and electrical Narrative.
5. Phone required in Open Lab.
6. Door bell/intercom at the sort Log Area - Refer to Security Narrative.

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 1.11.1 **Room Name:** Aggregate **Department:** _____
Quantity: 1 **Area (SF):** 302.5 **Occupants:** 1-2 max. **District** 6
Function: Aggregate Testing Area

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input checked="" type="checkbox"/> Cased Opening 6' x 8'H
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Door Size
Note C.1	Note C.1	Note C.1	Note C.1	Note C.1	

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input checked="" type="checkbox"/> Snorkel <u>Note E.4</u>	<input type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework <u>base cabinets</u>
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material <u>Stainless Steel</u>
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input checked="" type="checkbox"/> Counter Material <u>Stainless Steel</u>
<input type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization <u>Note D.1</u>	<input checked="" type="checkbox"/> Scullery Sink <u>Note D.4</u>	<input type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour <u>Note D.1</u>	<input type="checkbox"/> Floor Sink	<input checked="" type="checkbox"/> Tall Shelving
<input checked="" type="checkbox"/> Air Filtration (Supply and/or Exhaust) <u>Note D.1</u>	<input checked="" type="checkbox"/> Other <u>Sediment trap @ sink</u>	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Lockers
<input checked="" type="checkbox"/> Perimeter Bench <u>Duplex @ 24" O.C.</u>	<input type="checkbox"/> Compressed air	<input type="checkbox"/> Mobile Cabinets
<input type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Purified Water	<input checked="" type="checkbox"/> Vibration Control <u>Note D.3</u>
<input type="checkbox"/> Emergency	<input type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Temperature <u>Note E.1,E.3</u>
<input checked="" type="checkbox"/> 120V <u>Note B.2</u>	<input type="checkbox"/> Other/Specialty	<input type="checkbox"/> Acoustics
<input type="checkbox"/> 208V		<input checked="" type="checkbox"/> Humidity <u>Note E.2</u>
<input type="checkbox"/> 480V		<input checked="" type="checkbox"/> Sound Isolation <u>Note B.3</u>

HAZARDOUS MATERIAL STORAGE
<input type="checkbox"/> Acid/ Corrosive
<input type="checkbox"/> Toxic
<input type="checkbox"/> Other
<input type="checkbox"/> Flammable
<input type="checkbox"/> Radioactive
<input type="checkbox"/> Other

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Level <u>60-80FC</u>	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input checked="" type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type <u>Note D.1</u>	
<input type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher <u>Note D.1</u>	

SECURITY
<input type="checkbox"/> CCTV
<input type="checkbox"/> Keyed Entry
<input type="checkbox"/> Access Control
<input checked="" type="checkbox"/> Other <u>Note D.5</u>

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 1.11.1 **Room Name:** Aggregate **Department:** _____

NOTES

A. Adjacencies: Must be directly connected to the Aggregate Isolation Room (1.12). Close access is also desired to the sort/log area (1.11.5), the soils area (1.11.4), and the HMA Extraction/Ignition Room (1.24).

B. Equipment:

Ovens, Balance, Agg Washer, Gilson Splitter

1. Refer to equipment matrix for list of equipment.
2. Refer to the equipment matrix for equipment requirements such as power, water, gas etc.
3. Equipment that generates a lot of noise and dust shall be located In the Aggregate Isolation room (1.12), refer to RDS.

C. Material Flow:

Samples are delivered, logged in, and staged in the sort/log (1.11.5) prior to testing in the aggregate area. Some testing is performed on samples that are prepared in the HMA Extraction/Ignition Room (1.24), and some aggregate samples are prepared for testing in the Soils Area (1.11.4).

D. RDS Notes:

1. Refer to RDS 1.11 Open lab.
2. Refer to Narratives for additional information.
3. Vibration control using concrete blocks/pedestals for mounting equipment.
4. Heavy Duty Scullery Sink is needed to support Ploog Washing equipment. The Scullery sink must be two-compartment with a minimum depth of 16" with a drip tray on both sides. The left drip tray must support the Ploog Washer (120 lbs.) Equipment DAG-05.
5. Refer to Security Narratives.

E. Environmental Conditions:

1. Temperature: Refer to RDS 1.11
2. Humidity: Refer to RDS 1.11
3. After hours temperature: Refer to Mechanical Narrative.
4. Dust Collection(Silica): –Provide a snorkel to collect silica dust above work stations with the ovens, balances , agg. washer.

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 1.11.4 **Room Name:** Soils **Department:** _____
Quantity: 1 **Area (SF):** 544.5 **Occupants:** 2 max. **District** 6
Function: Soil Testing

INTERIOR FINISHES

FLOORING	CEILINGS	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input checked="" type="checkbox"/> Cased Opening 6'Wx8"H
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Door Size
Note D.1	Note D.1	Note D.1	Note D.1	Note D.1	

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input checked="" type="checkbox"/> Snorkel	<input type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input checked="" type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input checked="" type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization	<input checked="" type="checkbox"/> Scullery Sink	<input type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour	<input type="checkbox"/> Floor Sink	<input type="checkbox"/> Tall Shelving
<input checked="" type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input checked="" type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Perimeter Bench	<input checked="" type="checkbox"/> Compressed air	<input checked="" type="checkbox"/> Temperature
<input type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Purified Water	<input checked="" type="checkbox"/> Acoustics
<input type="checkbox"/> Emergency	<input type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Humidity
<input checked="" type="checkbox"/> 120V	<input type="checkbox"/> Other/Specialty	<input type="checkbox"/> Sound Isolation
<input checked="" type="checkbox"/> 208V		<input type="checkbox"/> Radioactivity
<input type="checkbox"/> 480V		<input type="checkbox"/> Other

HAZARDOUS MATERIAL STORAGE	
<input type="checkbox"/> Acid/ Corrosive	<input type="checkbox"/> Flammable
<input type="checkbox"/> Toxic	<input type="checkbox"/> Radioactive
<input type="checkbox"/> Other	

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Leve	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input checked="" type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type	
<input checked="" type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	

SECURITY
<input type="checkbox"/> CCTV
<input type="checkbox"/> Keyed Entry
<input type="checkbox"/> Access Control

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 1.11.4 **Room Name:** Soils **Department:** _____

NOTES

A. Adjacencies:

The soils testing area must be directly connected to the Soils Isolation Room (1.15). The soils testing area must be adjacent to the Aggregate testing area (1.11.1) and the sort/log area (1.11.5).

B. Equipment:

230 Oven, line of (9) Hotplates, electric water bath/chiller.

1. Refer to equipment matrix for list of equipment.
2. Refer to the equipment matrix for equipment requirements such as power, water, gas etc.

C. Material Flow:

Samples are delivered, logged in, and staged in the sort/log (1.11.5) prior to testing in the soils area.

D. RDS Notes:

1. Refer to RDS 1.11 Open lab.
2. Vibration control using concrete blocks/pedestals for mounting equipment.
3. The scullery sink must be two-compartment a minimum of 14" deep with drip trays on both sides.

E. Environmental Conditions:

1. Temperature: Refer to RDS 1.11
2. Humidity: Refer to RDS 1.11
3. After hours temperature: Refer to MEP Narrative
4. Dust Collection(Silica): Provide snorkels to collect silica dust above the workstations with with ovens, and hotplates.

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 1.11.5 **Room Name:** Sort/Log **Department:** _____
Quantity: 1 **Area (SF):** 605 **Occupants:** 1-2 max. **District** 6
Function: Sample intake, logging, and staging.

INTERIOR FINISHES

FLOORING	CEILINGS	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input checked="" type="checkbox"/> Cased Opening 6'Wx 8'H
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Door Size
Note C.1	Note C.1	Note C.1	Note C.1	Note C.1	

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input checked="" type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework <u>base cabinets</u>
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input checked="" type="checkbox"/> Casework Material <u>Stainless Steel</u>
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input checked="" type="checkbox"/> Counter Material <u>Stainless Steel</u>
<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization <u>Note D.1</u>	<input type="checkbox"/> Scullery Sink	<input type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour <u>Note D.1</u>	<input type="checkbox"/> Floor Sink	<input checked="" type="checkbox"/> Tall Shelving <u>heavy duty</u>
<input checked="" type="checkbox"/> Air Filtration (Supply and/or Exhaust) <u>Note</u>	<input type="checkbox"/> Other	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Lockers
<input checked="" type="checkbox"/> Perimeter Bench <u>Duplex @ 24" O.C.</u>	<input type="checkbox"/> Compressed air	<input type="checkbox"/> Mobile Cabinets
<input type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Purified Water	<input checked="" type="checkbox"/> Vibration Control
<input type="checkbox"/> Emergency	<input type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Temperature <u>Note C.1</u>
<input checked="" type="checkbox"/> 120V <u>Note D.1</u>	<input checked="" type="checkbox"/> Other/Specialty <u>Note D.1</u>	<input checked="" type="checkbox"/> Acoustics <u>Note C.1</u>
<input type="checkbox"/> 208V		<input checked="" type="checkbox"/> Humidity <u>Note C.1</u>
<input type="checkbox"/> 480V		<input type="checkbox"/> Sound Isolation

HAZARDOUS MATERIAL STORAGE		
<input checked="" type="checkbox"/> Data	<input checked="" type="checkbox"/> Acid/ Corrosive	<input type="checkbox"/> Flammable
<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Toxic	<input type="checkbox"/> Radioactive
<u>Note D.1 , Note C.3, Note D.4</u>	<input type="checkbox"/> Other	<input type="checkbox"/> Other

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Level <u>60-80FC</u>	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input checked="" type="checkbox"/> Eyewash <u>at sinks</u>	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type <u>D.1</u>	
<input type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher <u>D.1</u>	

SECURITY
<input type="checkbox"/> CCTV
<input type="checkbox"/> Keyed Entry
<input type="checkbox"/> Access Control
<input checked="" type="checkbox"/> Other <u>Note D.3</u>

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 1.11.5 **Room Name:** Sort/Log **Department:** _____

NOTES

A. Adjacencies:

The sort/log area needs to be adjacent to the separate D6 entrance and the D6 lab staff offices. The sort/log area also needs to be adjacent to the HMA sample staging area (1.23.6), aggregate testing area (1.11.1), soils testing area (1.11.4), and concrete testing area (1.11.6).

B. Equipment:

1. Refer to equipment matrix for list of equipment.
2. Refer to the equipment matrix for equipment requirements such as power, water, gas etc.

C. Material Flow:

Samples are delivered, logged in, and staged in the sort/log (1.11.5).

D. RDS Notes:

1. Refer to RDS 1.11 Open lab.
2. Refer to the equipment matrix for equipment requirements such as power, water, gas etc.
3. Door bell/intercom - Refer to Security Narrative
4. Comm port needed for VOIP phone and computer. VOIP phone should also ring in the Open HMA Lab 1.23.

E. Environmental Conditions:

1. Temperature: Refer to RDS 1.11
2. Humidity: Refer to RDS 1.11
3. After hours temperature: Refer to MEP Narrative

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 1.11.6 **Room Name:** Concrete Lab **Department:** _____
Quantity: 1 **Area (SF):** 181.5 **Occupants:** 2 **District** 6
Function: Concrete Cylinder testing and Curing Area

INTERIOR FINISHES

FLOORING	CEILINGS	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input checked="" type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> GWB	<input checked="" type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> Integral Cove	<input type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input checked="" type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input checked="" type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input checked="" type="checkbox"/> Height- 4"	<input checked="" type="checkbox"/> Cased Opening. 6'W x 8' H
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Other
See Note 1	See Note 1	See Note 1	See Note 1	See Note 1	

LABORATORY SERVICES

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input checked="" type="checkbox"/> Snorkel <u>Note E.4</u>	<input type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework <u>Base cabinet</u>
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input checked="" type="checkbox"/> Casework Material <u>Stainless Steel</u>
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input checked="" type="checkbox"/> Counter Material <u>Stainless Steel</u>
<input type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization <u>Negative</u>	<input type="checkbox"/> Scullery Sink	<input type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour <u>Note D.1</u>	<input checked="" type="checkbox"/> Floor Sink <u>Note D.2</u>	<input checked="" type="checkbox"/> Tall Shelving <u>heavy duty</u>
<input checked="" type="checkbox"/> Air Filtration (Supply and/or Exhaust) <u>Note D.1</u>	<input checked="" type="checkbox"/> Other <u>Sediment trap @ sink; Note D.4</u>	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Lockers
<input checked="" type="checkbox"/> Perimeter Bench <u>Duplex @ 24" O.C.</u>	<input checked="" type="checkbox"/> Compressed air	<input type="checkbox"/> Mobile Cabinets
<input checked="" type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Purified Water	<input checked="" type="checkbox"/> Vibration Control <u>Note D.3</u>
<input type="checkbox"/> Emergency <u><input type="checkbox"/> UPS</u>	<input type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Temperature <u>Note E.1</u>
<input checked="" type="checkbox"/> 120V <u>Note B.2</u>	<input type="checkbox"/> Other/Specialty	<input type="checkbox"/> Acoustics
<input type="checkbox"/> 208V		<input checked="" type="checkbox"/> Humidity <u>Note E.1</u>
<input type="checkbox"/> 480V		<input type="checkbox"/> Sound Isolation

HAZARDOUS MATERIAL STORAGE
<input checked="" type="checkbox"/> Data <u><input checked="" type="checkbox"/> WiFi Router <input type="checkbox"/> Comm.</u>
<input checked="" type="checkbox"/> Other <u>See RDS 1.11</u>
<input type="checkbox"/> Acid/ Corrosive <input type="checkbox"/> Flammable
<input type="checkbox"/> Toxic <input type="checkbox"/> Radioactive
<input type="checkbox"/> Other

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Level <u>60-80FC</u>	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	SECURITY
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type <u>Note D.1</u>	<input type="checkbox"/> CCTV
<input type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher <u>Note D.1</u>	<input type="checkbox"/> Keyed Entry
		<input type="checkbox"/> Access Control

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 1.11.6 **Room Name:** Concrete Lab **Department:** _____

NOTES

A. Adjacencies:

The concrete testing area must be adjacent to the sort/log area (1.11.5).

B. Equipment:

Curing Tanks (Qty 3) + future tank (Qty1), cylinder breaker. Curing tanks should be elevated for more ergonomic use.

1. Refer to equipment matrix for list of equipment.
2. Refer to the equipment matrix for equipment requirements such as power, water, gas etc.

C. Material Flow:

Samples are delivered, logged in, and staged in the sort/log (1.11.5) prior to testing in the concrete area.

D. RDS Notes:

1. Refer to RDS 1.11 Open lab.
2. The floor sink would need a hose connection to facilitate with the filling and draining of curing tanks.
3. Vibration control using concrete blocks/pedestals for mounting equipment.
4. Provide a CW water hose bib to fill curing tanks.

E. Environmental Conditions:

1. Temperature: Refer to RDS 1.11
2. Humidity: Refer to RDS 1.11
3. After hours temperature: Refer to MEP Narrative
4. Dust Collection(Silica): –Provide exhaust via snorkels over workstation and above cylinder breaker.

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 1.12 **Room Name:** Aggregate Isolation Room **Department:** _____
Quantity: 1 **Area (SF):** 181.5 **Occupants:** 1-2 max. **District** 6
Function: Location of Aggregate Shakers

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input checked="" type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input checked="" type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input checked="" type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input checked="" type="checkbox"/> CMU		<input checked="" type="checkbox"/> Height- 4"	<input type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size
Note D.1	Note D.1	Note D.1	Note D.1	Note D.1	3'-6"x 8'H

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input checked="" type="checkbox"/> Snorkel <u>Note E.5</u>	<input type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework <u>base cab.</u>
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization <u>Negative</u>	<input type="checkbox"/> Scullery Sink	<input type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour <u>See RDS 1.11</u>	<input type="checkbox"/> Floor Sink	<input checked="" type="checkbox"/> Tall Shelving
<input checked="" type="checkbox"/> Air Filtration (Supply and/or Exhaust) <u>See RDS 1.11</u>	<input type="checkbox"/> Other	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Perimeter Bench <u>Duplex @ 24" O.C.</u>	<input type="checkbox"/> Compressed air	<input checked="" type="checkbox"/> Temperature <u>Note E.1. E.4</u>
<input type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Purified Water	<input type="checkbox"/> Acoustics
<input type="checkbox"/> Emergency	<input type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Humidity <u>Note E.2</u>
<input checked="" type="checkbox"/> 120V <u>See note</u>	<input type="checkbox"/> Other/Specialty	<input checked="" type="checkbox"/> Sound Isolation <u>Note D.2</u>

HAZARDOUS MATERIAL STORAGE		
<input checked="" type="checkbox"/> Data	<input checked="" type="checkbox"/> WiFi Router	<input type="checkbox"/> Comm.
<input type="checkbox"/> Other	<input type="checkbox"/> Acid/ Corrosive	<input type="checkbox"/> Flammable
	<input type="checkbox"/> Toxic	<input type="checkbox"/> Radioactive
	<input type="checkbox"/> Other	<input type="checkbox"/> Other

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Leve <u>60-80 FC</u>	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	SECURITY
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	<input type="checkbox"/> CCTV
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type	<input type="checkbox"/> Keyed Entry
<input type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	<input type="checkbox"/> Access Control
		<u>Wet Pipe Type</u>
		<u>ABC</u>

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 1.12 **Room Name:** Aggregate Isolation Room **Department:** _____

NOTES

A. Adjacencies: Direct connection to the Aggregate Area

B. Equipment- Noisy equipment:

Aggregate shakers, Sifters, ovens, hotplates, plog washer

1. Refer to equipment matrix for list of equipment.
2. Refer to the equipment matrix for equipment requirements such as power, water, gas etc.

C. General Notes: -

- a. Dust collection and room ventilation system are required to collect the silica dust that shall be generated in this spaces. Ensure that filters are provided at exhaust grilles.

D. RDS Notes

1. Final interior Finishes to be selected by the Design Team selected for this project.
2. The equipment in this room generates allot of noise. Isolate the slab and ensure walls go to ceiling to ensure no noise leaks into other spaces.

E. Environmental Conditions

1. Temperature: Refer to RDS 1.11
2. Humidity: Refer to RDS 1.11
3. Acoustic: Refer to RDS 1.11
4. After Hours Temperature: Refer to Mechanical Narrative
5. Dust Collection (Silica) – Provide Snorkel(s) over workstations with sifters.

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 1.13 **Room Name:** Repair Isolation Room **Department:** _____
Quantity: 1 **Area (SF):** 181.5 **Occupants:** 1 to 2 **District** 6
Function: Location for for maintenance service equipment- sandblaster

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input checked="" type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input checked="" type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input checked="" type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input checked="" type="checkbox"/> CMU		<input checked="" type="checkbox"/> Height- 4"	<input type="checkbox"/> Cased Opening
<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size
Note D.1	Note D.1	Note D.1	Note D.1	Note D.1	3'W x 8'H

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework
<input checked="" type="checkbox"/> Canopy <u>Note E.5</u>	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization <u>Negative</u>	<input type="checkbox"/> Scullery Sink	<input type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour <u>Note D.2</u>	<input type="checkbox"/> Floor Sink	<input type="checkbox"/> Tall Shelving
<input checked="" type="checkbox"/> Air Filtration (Supply and/or Exhaust) <u>Note D.2</u>	<input type="checkbox"/> Other	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	STORAGE
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Lockers
<input checked="" type="checkbox"/> Perimeter Bench <u>Duplex @ 24" O.C.</u>	<input checked="" type="checkbox"/> Compressed air <u>at sandblaster</u>	<input type="checkbox"/> Mobile Cabinets
<input type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Purified Water	
<input type="checkbox"/> Emergency <u><input type="checkbox"/> UPS</u>	<input type="checkbox"/> Vacuum	
<input checked="" type="checkbox"/> 120V <u>Note B.2</u>		
<input type="checkbox"/> 208V	<input type="checkbox"/> Other/Specialty	
<input type="checkbox"/> 480V		
<input checked="" type="checkbox"/> Data <u><input checked="" type="checkbox"/> WiFi Router <input type="checkbox"/> Comm.</u>		
<input type="checkbox"/> Other		

HAZARDOUS MATERIAL STORAGE	SPECIAL REQUIREMENTS
<input type="checkbox"/> Acid/ Corrosive	<input type="checkbox"/> Vibration Control
<input type="checkbox"/> Toxic	<input checked="" type="checkbox"/> Temperature <u>Note E.1, E.4</u>
<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Acoustics <u>Note E.3</u>
<input type="checkbox"/> Flammable	<input checked="" type="checkbox"/> Humidity <u>Note E.2</u>
<input type="checkbox"/> Radioactive	<input checked="" type="checkbox"/> Sound Isolation <u>Note B.1</u>
<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Radioactivity
	<input type="checkbox"/> Other

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Leve <u>60-80 FC</u>	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type <u>Wet pipe type</u>	
<input type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	

SECURITY
<input type="checkbox"/> CCTV
<input type="checkbox"/> Keyed Entry
<input type="checkbox"/> Access Control
<input checked="" type="checkbox"/> Other <u>Note D.3</u>

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 1.13 **Room Name:** Repair Isolation Room **Department:** _____

NOTES

A. Adjacencies:

Direct connection to the Calibration / Repair Room (1.25)

B. Equipment:

1. The Sandblasters (used for cleaning field equipment), grinders are very noisy and needs to be isolated from the open lab. Refer to equipment matrix for list of equipment.
2. Refer to the equipment matrix for equipment requirements such as power, water, gas etc.

C. General Notes: n/a

a. Dust collection and room ventilation system are required to collect the silica dust that shall be generated in this spaces. Ensure that filters are provided at exhaust grilles.

D. RDS Notes:

1. Final interior Finishes to be selected by the Design Team selected for this project.
2. Refer to RDS sheet 1.11.
3. Refer to Security Narratives.

E. Environmental Conditions

1. Temperature: 68-72deg F +/- 2degF
2. Humidity: 23-55%RH +/- 5%
3. Acoustic: NC-36
4. After Hours Temperature: Refer to MEP Narrative
5. Dust Collection (Silica) - A canopy is required for backup dust exhaust collection in the event a sandblaster seal leaks or dust is generated cleaning the sandblaster recirculation filter. Canopy does not have to be on at all times, but can be controlled via a switch.

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 1.14 **Room Name:** HMA Isolation Room **Department:** _____
Quantity: 1 **Area (SF):** 121 **Occupants:** 1 to 2 **District 6**
Function: Location of noisy equipment- Wet saw equipment

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input checked="" type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input checked="" type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input checked="" type="checkbox"/> CMU		<input checked="" type="checkbox"/> Height- 4"	<input type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size
Note D.1	Note D.1	Note D.1	Note D.1, D.4	Note D.1	Note D.1

DUCTED LAB EQUIPMENT

- Fume Hood
- Snorkel Note D.5
- Canopy
- Biological Safety Cabinet
- Other

PLUMBING SERVICES

- Lab Sink
- Hand Wash
- Cup Sink
- Deep Sink
- Floor Drain
- Scullery Sink
- Floor Sink Note D.3, B.3
- Other Sediment trap @ sink, Note D.3

CASEWORK

- Mobile Casework
- Fixed Casework
- Casework Material
- Counter Material
- Other

HVAC

- Pressurization Negative
- Air Change Per Hour 6ACH MIN.
- Air Filtration (Supply and/or Exhaust)

STORAGE

- Tall Cabinets
- Tall Shelving
- Peg Board
- Lockers
- Mobile Cabinets

POWER AND DATA

- Island Bench
- Perimeter Bench Duplex @ 24" O.C.
- Ceiling Mounted
- Emergency UPS
- 120V Note B.2
- 208V
- 480V
- Data WiFi Router Comm.
- Other

LABORATORY SERVICES

- Nitrogen
- Compressed air
- Purified Water
- Vacuum
- Other/Specialty

SPECIAL REQUIREMENTS

- Vibration Control
- Temperature Note E.1, E.4
- Acoustics Note E.3
- Humidity Note E.2
- Sound Isolation Note B.1

HAZARDOUS MATERIAL STORAGE

- Acid/ Corrosive
- Toxic
- Other
- Flammable
- Radioactive

- Radioactivity
- Other

LIGHTING

- Ambient Light Level 60-80 FC
- Task Light
- Zoned Lighting
- Dimmer
- Occ Sensor
- Window Treatment
- Natural Light

SAFETY EQUIP./FIRE PROTECTION

- Safety Shower
- Eyewash
- Goggles
- PPE
- In-Use Signage
- Sprinkler Type Note D.2
- Fire Extinguisher Note D.2

VISUAL

- White Board
- Monitor
- Projection

SECURITY

- CCTV
- Keyed Entry
- Access Control

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 1.14 **Room Name:** HMA Isolation Room **Department:** _____

NOTES

A. Adjacencies:

Direct connection to the Open HMA Lab (1.23). Also adjacent to the Hamburg Wheel area (1.23.1) and I-FIT area (1.23.2)

B. Equipment:

1. Noisy equipment- Wet saws, Refer to equipment matrix for list of equipment.
2. Refer to the equipment matrix for equipment requirements such as power, water, gas etc.
3. Wet Saw Plumbing requirements:
The largest wet saw reservoir is 43"L x 21.5"W x 5" H. The smaller reservoir is 33"L x 18"W x 4"H. In both cases, they are filled with roughly 2 inches of water, which converts to the largest reservoir holding about 8 gallons of water for sawing. Once the reservoir is filled, the water is recirculated during sawing. The reservoirs are usually filled once for the day and then cleaned at the end of the day. The biggest issue is disposing of the sludge generated by the sawing, which may accumulate around 0.5 to 1 inch thick. The sludge is composed primarily of aggregate fines with some component of asphalt binder. Currently, the water is drained from the reservoir into a 5 gallon bucket. The sludge is then washed out with a hose into a 5 gallon bucket. The sludge and water are disposed of outside. In the new facility, we need to be able to fill, drain, wash the sludge out of the reservoirs, and dispose of the sludge while remaining in the HMA isolation room (1.14). We assume there will be an occasional need to clean out some sort of sludge trap.

C. General Notes: None

D. RDS Notes:

1. Final interior Finishes to be selected by the Design Team selected for this project.
2. Refer to RDS sheet 1.11
3. The floor sink/ floor trench is intended to drain and facilitate cleaning out the wet saw water reservoir pans. Additionally, there are large amounts of sediment generated during wet sawing, so a sediment trap should be provided. Floor sink to be 16" x 16".
4. The wall finish needs to be able to tolerate water spray from the wet saws and be easy to clean.

E. Environmental Conditions

1. Temperature: 68-72deg F +/- 2degF
2. Humidity: 23-55%RH +/- 5%
3. Acoustic: NC-36
4. After Hours Temperature: Refer to Mechanical Narrative
5. Silica Dust Collection - Provide dust collection above the wet saws in the event dust is generated during usage.

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 1.15 **Room Name:** Soils Isolation Room **Department:** _____
Quantity: 1 **Area (SF):** 181.5 **Occupants:** _____ **District 6**
Function: location of soil breakdown mixers and proctor hammer.

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input checked="" type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input checked="" type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input checked="" type="checkbox"/> CMU		<input checked="" type="checkbox"/> Height- 4"	<input type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size
Note D.1	Note D.1	Note D.1	Note D.1 & D.4	Note D.1	Note D.1
					3'-6" x8'H

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input checked="" type="checkbox"/> Snorkel	<input type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other
	<input type="checkbox"/> Scullery Sink	
	<input type="checkbox"/> Floor Sink	
	<input checked="" type="checkbox"/> Other	

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour	<input type="checkbox"/> Compressed air	<input checked="" type="checkbox"/> Tall Shelving
<input checked="" type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input type="checkbox"/> Purified Water	<input type="checkbox"/> Peg Board
	<input type="checkbox"/> Vacuum	<input type="checkbox"/> Lockers
	<input type="checkbox"/> Other/Specialty	<input type="checkbox"/> Mobile Cabinets

POWER AND DATA	HAZARDOUS MATERIAL STORAGE	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Acid/ Corrosive	<input type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Perimeter Bench	<input type="checkbox"/> Toxic	<input checked="" type="checkbox"/> Temperature
<input type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Acoustics
<input type="checkbox"/> Emergency		<input checked="" type="checkbox"/> Humidity
<input checked="" type="checkbox"/> 120V		<input checked="" type="checkbox"/> Sound Isolation
<input type="checkbox"/> 208V		<input type="checkbox"/> Radioactivity
<input type="checkbox"/> 480V		<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Data		
<input type="checkbox"/> Other		

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Leve	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type	
<input type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Leve	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type	
<input type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	SECURITY
Ambient Light Leve	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> CCTV
<input type="checkbox"/> Task Light	<input type="checkbox"/> Eyewash	<input type="checkbox"/> Keyed Entry
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Access Control
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type	
<input type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 1.15 **Room Name:** Soils Isolation Room **Department:** _____

NOTES

A. Adjacencies: Direct connection to the Soils Area in the main Lab.

B. Equipment: ovens, hydrometer station, limits station

1. The Soil sample prep equipment(Counter current Mixer/crusher), are very noisy and needs to be isolated from the open lab.
2. Refer to the equipment matrix for equipment requirements such as power, water, gas etc.

C. General Notes:

- a. Dust collection and room ventilation system are required to collect the silica dust that shall be generated in this spaces. Ensure that filters are provided at exhaust grilles.

D. RDS Notes:

1. Final interior Finishes to be selected by the Design Team selected for this project.
2. Refer to RDS sheet 1.11
3. A snorkel is need for dust collection above the breakdown mixers.
4. The wall finish around the Proctor Hammer (DS-07) needs to be able to tolerate wet splashes from the testing operation and be easy to clean.

E. Environmental Conditions

1. Temperature: 68-72deg F +/- 2degF
2. Humidity: 23-55%RH +/- 5%
3. Acoustic: NC-36
4. After Hours Temperature: Refer to MEP Narrative
5. Dust Collection (Soils) – Snorkel

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 1.16 **Room Name:** Nuclear Storage **Department:** _____
Quantity: 1 **Area (SF):** 242 **Occupants:** 1-2 (occasional) **District** 6
Function: Store nuclear density gages.

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input checked="" type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input checked="" type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input checked="" type="checkbox"/> CMU		<input checked="" type="checkbox"/> Height- 4"	<input checked="" type="checkbox"/> 42in x8' min.
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Door Size
Note G.1, G.4	Note G.1	Note G.6	Note G.1	Note G.1	Note G.1

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input type="checkbox"/> Hand Wash	<input type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization <u>Negative</u>	<input type="checkbox"/> Scullery Sink	<input type="checkbox"/> Tall Cabinets
<input type="checkbox"/> Air Change Per Hour _____	<input type="checkbox"/> Floor Sink	<input type="checkbox"/> Tall Shelving
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input type="checkbox"/> Other	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Lockers
<input checked="" type="checkbox"/> Perimeter Bench <u>Note G.3</u>	<input type="checkbox"/> Compressed air	<input type="checkbox"/> Mobile Cabinets
<input type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Purified Water	<input checked="" type="checkbox"/> Vibration Control
<input type="checkbox"/> Emergency	<input type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Temperature <u>Note E.1, E.4</u>
<input checked="" type="checkbox"/> 120V <u>Note B.1</u>	<input type="checkbox"/> Other/Specialty	<input checked="" type="checkbox"/> Acoustics <u>Note E.3</u>
<input type="checkbox"/> 208V		<input checked="" type="checkbox"/> Humidity <u>Note E.2</u>
<input type="checkbox"/> 480V		<input type="checkbox"/> Sound Isolation

HAZARDOUS MATERIAL STORAGE		
<input checked="" type="checkbox"/> Data	<input checked="" type="checkbox"/> WiFi Router <input type="checkbox"/> Comm.	<input type="checkbox"/> Acid/ Corrosive
<input type="checkbox"/> Other		<input type="checkbox"/> Toxic
		<input checked="" type="checkbox"/> Flammable
		<input checked="" type="checkbox"/> Radioactive
		<input type="checkbox"/> Other

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Leve <u>60-80 FC</u>	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input checked="" type="checkbox"/> In-Use Signage <u>Note G.5</u>	<input type="checkbox"/> CCTV
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type <u>Wet Type</u>	<input checked="" type="checkbox"/> Keyed Entry <u>Note G.2</u>
<input type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	<input checked="" type="checkbox"/> Access Control <u>Note G.2</u>

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 1.16 **Room Name:** Nuclear Storage **Department:** _____

NOTES

A. Adjacencies:

Direct connection to the Nuclear Workstation (1.17). No other access point is allowed.

B. Equipment:

1. Refer to equipment matrix for list of equipment.
2. Refer to the equipment matrix for equipment requirements such as power, water, gas etc.

C. Primary Areas: n/a

D. Test Description: n/a

E. Environmental Conditions

1. Temperature: 68-72deg F +/- 2degF
2. Humidity: 23-55%RH +/- 5%
3. Acoustic: NC-36
4. After Hours Temperature: Refer to Mechanical Narrative

F. General notes:

1. Nuclear gages are stored on the floor with their corresponding case and accessories.

G. RDS Notes:

1. Final interior Finishes to be selected by the Design Team selected for this project.
Partition, flooring, ceiling and door design features to meet IEMA nuclear equipment storage requirements.
Walls - Concrete or concrete filled CMUS. The D6 Nuclear gage storage and work room is a smaller version of the Central Bureau Nuclear Lab and would need to have the same partition, flooring, ceiling and door design features to meet IEMA nuclear equipment storage requirements.
2. Access must be controlled as the second of three gage access restrictions required. The third is a padlock on the gage itself.
3. Provide outlets 48" on center around the perimeter for charging gauges.
4. ESD flooring is NOT required.
5. Provide radioactive sign out side room per guidelines.
6. Depending on design it may require 16" block walls filled with high density concrete.

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 1.17 **Room Name:** Nuclear Workstation **Department:** _____
Quantity: 1 **Area (SF):** 121 **Occupants:** 1-2 (occasional) **District** 6
Function: Perform basic nuclear equipment checks.

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input checked="" type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input checked="" type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input checked="" type="checkbox"/> CMU		<input checked="" type="checkbox"/> Height- 4"	<input checked="" type="checkbox"/> 42"x 8'H min.
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other
Note G.1, G.3	Note G.1	Note G.1, G.4	Note G.1		

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework <u>base cabinets</u>
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization <u>Negative</u>	<input type="checkbox"/> Scullery Sink	<input type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour <u>6-8 ACH</u>	<input type="checkbox"/> Floor Sink	<input type="checkbox"/> Tall Shelving
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input type="checkbox"/> Other	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Perimeter Bench	<input type="checkbox"/> Compressed air	<input checked="" type="checkbox"/> Temperature <u>Note E.1, E.4</u>
<input type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Purified Water	<input checked="" type="checkbox"/> Acoustics <u>Note E.3</u>
<input type="checkbox"/> Emergency	<input type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Humidity <u>Note E.2</u>
<input checked="" type="checkbox"/> 120V <u>Note B.2</u>	<input type="checkbox"/> Other/Specialty	<input type="checkbox"/> Sound Isolation
<input type="checkbox"/> 208V		
<input type="checkbox"/> 480V		

HAZARDOUS MATERIAL STORAGE		
<input checked="" type="checkbox"/> Data	<input checked="" type="checkbox"/> WiFi Router	<input checked="" type="checkbox"/> Comm.
<input type="checkbox"/> Other		
<input type="checkbox"/> Acid/ Corrosive	<input type="checkbox"/> Flammable	<input checked="" type="checkbox"/> Radioactivity
<input type="checkbox"/> Toxic	<input checked="" type="checkbox"/> Radioactive	<input type="checkbox"/> Other
<input type="checkbox"/> Other		

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Level <u>60-80FC</u>	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input checked="" type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type <u>wet type</u>	
<input type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	

SECURITY
<input type="checkbox"/> CCTV
<input type="checkbox"/> Keyed Entry
<input checked="" type="checkbox"/> Access Control <u>Note G.2</u>

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 1.17 **Room Name:** Nuclear Workstation **Department:** _____

NOTES

A. Adjacencies:

Must be adjacent to the separate District 6 entrance and directly connected to Nuclear Storage (1.16).

B. Equipment:

1. No equipment is located in this area.

C. Primary Areas: N/a

D. Test Description: n/a

E. Environmental Conditions:

1. Temperature: 68-72deg F +/- 2degF
2. Humidity: 23-55%RH +/- 5%
3. Acoustic: NC-36
4. After Hours Temperature: Refer to MEP Narrative

F. General Notes: None

G. RDS Notes:

1. Final interior Finishes to be selected by the Design Team selected for this project.
Partition, flooring, ceiling and door design features to meet IEMA nuclear equipment storage requirements.
Walls - Concrete or concrete filled CMUS. The D6 Nuclear gage storage and work room is a smaller version of the Central Bureau Nuclear Lab and would need to have the same partition, flooring, ceiling and door design features to meet IEMA nuclear equipment storage requirements.
2. Access control is required as the first of the three gage access restrictions required. Refer to Architectural narratives.
3. ESD flooring is NOT required. District 6 does not perform maintenance of gage electronics.
4. Depending on design it may require 16" block walls filled with high density concrete.

H. Workflow:

Nuclear Gages will be delivered and picked up at the separate District 6 entrance and immediately taken directly to the nuclear workstation (1.17) and nuclear storage (1.16)

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 1.18 **Room Name:** Storage **Department:** _____
Quantity: 1 **Area (SF):** 1452 **Occupants:** _____ **District 6**
Function: Storage of samples and equipment for the District 6

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input checked="" type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input checked="" type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input checked="" type="checkbox"/> CMU		<input checked="" type="checkbox"/> Height- 4"	<input type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size
Note C.1	Note C.1	Note C.1	Note C.1	Note C.1	Note C.4

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input type="checkbox"/> Hand Wash	<input type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization <u>Negative</u>	<input type="checkbox"/> Scullery Sink	<input checked="" type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour <u>6 ACH</u>	<input type="checkbox"/> Floor Sink	<input checked="" type="checkbox"/> Tall Shelving <u>heavy duty</u>
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input type="checkbox"/> Other	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Vibration Control
<input type="checkbox"/> Perimeter Bench	<input type="checkbox"/> Compressed air	<input type="checkbox"/> Temperature
<input type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Purified Water	<input type="checkbox"/> Acoustics
<input type="checkbox"/> Emergency	<input type="checkbox"/> Vacuum	<input type="checkbox"/> Humidity
<input checked="" type="checkbox"/> 120V <u>convenience outlets</u>	<input type="checkbox"/> Other/Specialty	<input type="checkbox"/> Sound Isolation
<input type="checkbox"/> 208V		<input type="checkbox"/> Radioactivity
<input type="checkbox"/> 480V		<input type="checkbox"/> Other

HAZARDOUS MATERIAL STORAGE		
<input checked="" type="checkbox"/> Data	<input checked="" type="checkbox"/> WiFi Router	<input type="checkbox"/> Comm.
<input type="checkbox"/> Other	<input type="checkbox"/> Acid/ Corrosive	<input type="checkbox"/> Flammable
	<input type="checkbox"/> Toxic	<input type="checkbox"/> Radiactive
	<input type="checkbox"/> Other	

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Level <u>70-80 FC</u>	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type	
<input type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	

SECURITY
<input type="checkbox"/> CCTV
<input type="checkbox"/> Keyed Entry
<input checked="" type="checkbox"/> Access Control
Note C.3

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 1.18 **Room Name:** Storage **Department:** _____

NOTES

A. Adjacencies:

Access to/from an entrance to the Main Open Lab (1.11) and the Open HMA Lab (1.23), along with the shared loading dock and dumpsters. A direct connection to the Calibration / Repair room (1.25).

B. Equipment:

1. Refer to equipment matrix for list of equipment.
2. Refer to the equipment matrix for equipment requirements such as power, water, gas etc.

C. RDS Notes:

1. Final interior Finishes to be selected by the Design Team selected for this project.
2. Refer to Open Lab 1.11
3. Access must be limited to D6 laboratory staff and other designated individuals. Refer to Narratives.
4. An overhead door access enabling forklift access is required in addition to standard door(s). Forklift access is required to facilitate deliveries of bulk supplies and the removal of pallets of obsolete stored samples ready for disposal.

D. Materials that shall be stored in room:

- a. HMA samples where longer term storage is required following testing.
- b. Field testing equipment
- c. Testing supplies - Sample containers, cylinder molds, etc.
- d. Extra testing equipment for replacing wear items - aggregate sieves, molds, etc.
- e. Obsolete equipment waiting for pick-up & disposal

E. Environmental Conditions:

1. After Hours Temperature: Refer to MEP Narrative

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 1.23 **Room Name:** Open HMA Lab **Department:** _____
Quantity: 1 **Area (SF):** 1452 **Occupants:** 1-4 **District 6**
Function: Asphalt Testing

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other
Note G.1	Note G.1	Note G.1	Note G.1	Note G.1	Note G.4, G.9

LABORATORY SERVICES

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input checked="" type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework
<input checked="" type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other
Note E.6		
Note G.2		

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization	<input type="checkbox"/> Scullery Sink	<input type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour	<input type="checkbox"/> Floor Sink	<input checked="" type="checkbox"/> Tall Shelving
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Peg Board
Negative	Note G.6, G.7	
12 ACH		

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input checked="" type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input checked="" type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Perimeter Bench	<input checked="" type="checkbox"/> Compressed air	<input checked="" type="checkbox"/> Temperature
<input type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Purified Water	<input type="checkbox"/> Acoustics
<input type="checkbox"/> Emergency	<input type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Humidity
<input checked="" type="checkbox"/> 120V	<input type="checkbox"/> Other/Specialty	<input type="checkbox"/> Sound Isolation
<input checked="" type="checkbox"/> 208V		<input type="checkbox"/> Radioactivity
<input type="checkbox"/> 480V		<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Data		
<input checked="" type="checkbox"/> Other		
power		
Duplex @ 24" O.C.		
<input checked="" type="checkbox"/> Floor Mounted		
<input type="checkbox"/> UPS for Hamburg wheel PC		
Note B.2		
Note B.2		
<input checked="" type="checkbox"/> WiFi Router		
<input type="checkbox"/> Comm.		
Note G.3, G.8		

HAZARDOUS MATERIAL STORAGE

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Leve	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input checked="" type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type	
<input type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	
60-80 FC	Note G.1	
	Note G.1	

SECURITY

<input type="checkbox"/> CCTV
<input type="checkbox"/> Keyed Entry
<input type="checkbox"/> Access Contol

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 1.23 **Room Name:** Open HMA Lab **Department:** _____

NOTES

A. Adjacencies:

The Open HMA Lab includes the following zones: Hamburg Wheel (1.23.1), I-FIT (1.23.2), Specific Gravity (1.23.3), Mixture Prep (1.23.4), TSR (1.23.5), and Sample Staging (1.23.6). The Open HMA Lab entrance must be adjacent to the Open Lab sort/log area (1.11.5). The Hamburg Wheel area and I-FIT area must be adjacent to the HMA Isolation Room (1.14). The mixture prep area (1.23.4) must be adjacent to the Specific Gravity area (1.23.3) and HMA Extraction/Ignition Room (1.24). The Open HMA Lab must also have access to the Storage (1.18), shared loading dock, and dumpsters.

Sample staging (1.23.6) is adjacent to Mixture Prep Area (1.23.4) and Open Lab sort/log area (1.11.5)

B. Equipment:

1. Primary equipment for these areas:

1.23.1 Hamburg Wheel: Hamburg Wheel

1.23.2 I-FIT : IFIT w/ computer

1.23.3 Specific Gravity: Specific Tank

1.23.4 Mixture Prep: Gyrotory Compactors w/ Printer

- a. Fume exhaust canopies is required over the splitting table, parts washer, and part of the HMA sample preparation area/surfaces – User controlled.

1.23.5 TSR - TSR Load Frame/digital indicator

1.23.6 Sample Staging

2. Refer to the equipment matrix for equipment requirements such as power, water, gas etc.

C. Material Flow:

Samples enter from the open lab sort/log area (1.11.5) and are staged in the sample staging area (1.23.6). A majority of samples will go to the mixture prep area (1.23.4) and will then be distributed to other areas for additional testing. Following testing, samples will either be transferred to storage (1.18) or disposal in a dumpster.

D. Primary Area within open HMA Lab

1.23.1 Hamburg Wheel Area-

Function: Hamburg Wheel Testing

1.23.2 I-FIT

Function: I-FIT Testing

1.23.3 Specific Gravity

Function: Bulk and Maximum Specific Gravity Determination

1.23.4 Mixture Prep

Function: Splitting samples into appropriate test sizes, preparing compacted specimens, and preparing mixtures.

1.23.5 TSR

Function: Performing Split Tensile Strength Testing and Visual Strip Ratings

1.23.6 Sample Staging

Function: Stage samples for testing.

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 1.23 **Room Name:** Open HMA Lab **Department:** _____

E. Environmental Conditions

1. Temperature: 68-72deg F +/- 2degF
2. Humidity: 23-55%RH +/- 5%
3. Acoustic: NC-36
4. After Hours Temperature: Refer to MEP Narrative
5. Dust Collection (silica)-None
6. Fume Exhaust: Mixture Prep (1.23.4) -Provide canopies over the HMA sample preparation area/surfaces.

F. General Notes:

1. Provide eyewash at all sinks
2. No natural gas or spatiality gases are re

G. RDS Notes:

1. Refer to RDS 1.11 Open lab.
2. Vented equipment such as vented ovens, refer to the equipment matrix
3. Phone required in Open HMA Lab
4. Single door for access to 1.11 Open Lab. Double door for access to 1.18 Storage and shared loading dock.
5. Vibration control using concrete blocks/pedestals for mounting equipment.
6. Floor sink(s) required to facilitate drainage of specific gravity tanks. A hose connection is needed to facilitate filling specific gravity tanks.
7. Floor Sink with sediment trap needed below Hamburg Wheel Cleanout drain, as well as a cold water hose connection is needed.
8. IT/COMM cable ports requirements for equipment/computers in the following spaces: 1.23.1 Hamburg requires two, 1.23.6 Staging requires one, 1.23.2 I-FIT requires one, 1.23.4 Mix Prep requires two
9. Double door for access to 1.18 Storage and shared loading dock. door size 2-3'-6" wide door x 8'H/
10. Equipment that generates a lot of noise and dust shall be located In the HMA isolation room, refer to RDS 1.14.

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 2.11 **Room Name:** Open Lab **Department:** _____

Quantity: 1 **Area (SF):** 847 **Occupancy:** 6 **Traffic Instr.** _____

Function: Traffic Instrumentation provides data management and support for traffic counter equipment across IL and neighboring states. Traffic counter test done in field.

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR	
<input type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> GWB	<input checked="" type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal	grounded/ FRP
<input checked="" type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input checked="" type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood	
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input checked="" type="checkbox"/> Glass	
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input checked="" type="checkbox"/> Height- 4"	<input checked="" type="checkbox"/> Cased opening	
<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size	6' x 8'
Note G.1 & G.3	Note G.1	Note G. 1	Note G.1	Note G.1		

LABORATORY SERVICES

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input checked="" type="checkbox"/> Mobile Casework
<input checked="" type="checkbox"/> Snorkel	<input checked="" type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework
<input checked="" type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input checked="" type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input checked="" type="checkbox"/> Deep Sink	<input checked="" type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization	<input type="checkbox"/> Scullery Sink	<input checked="" type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour	<input type="checkbox"/> Floor Sink	<input checked="" type="checkbox"/> Tall Shelving
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input type="checkbox"/> Other	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Perimeter Bench	<input type="checkbox"/> Compressed air	<input checked="" type="checkbox"/> Temperature
<input type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Purified Water	<input checked="" type="checkbox"/> Acoustics
<input type="checkbox"/> Emergency	<input type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Humidity
<input checked="" type="checkbox"/> 120V	<input type="checkbox"/> Other/Specialty	<input type="checkbox"/> Sound Isolation
<input type="checkbox"/> 208V		<input type="checkbox"/> Radioactivity
<input type="checkbox"/> 480V		<input checked="" type="checkbox"/> Other

HAZARDOUS MATERIAL STORAGE	
<input type="checkbox"/> Acid/ Corrosive	<input type="checkbox"/> Flammable
<input type="checkbox"/> Toxic	<input type="checkbox"/> Radiative
<input type="checkbox"/> Other	

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Leve	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input checked="" type="checkbox"/> Task Light	<input type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input checked="" type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type	
<input checked="" type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	

SECURITY
<input type="checkbox"/> CCTV
<input checked="" type="checkbox"/> Keyed Entry
<input type="checkbox"/> Access Contol

**Department of Transportation
New Materials Lab and Training Center**

Program ID:	2.11	Room Name:	Open Lab	Department:
Quantity:	1	Area (SF):	847	Traffic Instr.
		Occupancy:	6	

NOTES

A. Adjacencies: Directly adjacent to Loading Dock, Storage, and Metals and Miscellaneous Products - Machine Shop; Truck Storage and Offices have relationship to the Traffic Instrumentation Open Lab.

Open lab must have access to the roof to service Antenna.

Primary spaces within the open lab: Packaging/Shipping Area & (6) Workstation Areas (w/ soldering/ rework station for circuits, station for magnetic counter, station for service permanent counters, and cataloging).

B. Equipment List:

1. Refer to the equipment matrix for power, water, gas requirements etc.
2. Equipment for the areas within the open lab.

2.11.1 Packaging:

workbench/packing-prep (132"W x 30"D x 41"H), packing overhead bin (48"W x 48"D x 48"H).

2.11.2 Soldering & 2.11.3 Rework:

- a. Soldering/rework, magnetic counter: microscope,
- b. workbench/ATR test and calibrate (240"W x 30"D x 35"H),
- c. workbench/solder-rework PCB's (132"W x 30"D x 35"H)-:Provide fume extractor at this station
- d. workbench/testing (60"W x 30"D x 41"H).

2.11.4 Permanent Counters: Soldering/rework, magnetic counter, microscope, workbench/ATR test and calibrate (240"W x 30"D x 35"H), workbench/solder-rework PCB's (132"W x 30"D x 35"H), fume extractor, workbench/testing (60"W x 30"D x 41"H).

2.11.5 Cataloging:

- a. Provide the heavy duty shelves

2.11.6 & 2.11.7 Future:

- a. Provide the heavy duty shelves

3. 2.13 Roof Access to Antenna

Antenna information shall be provided by owner.

C. Genral Notes:

1. All new ESD workspaces and cabinets in the lab area.

D. Final Notes:

1. At each workstation: Provide electrical 6-8 duplex outlets.
2. Provide new ESD tall cabinets
3. Provide new ESD adjustable shelving.

**Department of Transportation
New Materials Lab and Training Center**

Program ID:	2.11	Room Name:	Open Lab	Department:
Quantity:	1	Area (SF):	847	Occupancy:
			6	Traffic Instr.

F. General Notes:

For primary areas within the open lab.

1. 2.11.1 Packaging:

- a. Provide Floor space for large floor mounted items.
- b. Provide base cabinets and upper cabinets
- c. Provide tall shelving for storage

2. 2.11.2 Soldering & 2.11.3 Rework:

- a. Provide canopy along the rework workstation
- b. Provide base cabinets and upper cabinets.

3. 2.11.4 Permanent Counters:

- a Provide base cabinets and upper cabinets

4. 2.11.5 Cataloging:

- a. Half of the materials come in the trucks are on pallets, go to the loading dock/garage/storage next to District 6.
- b. Items are storage or unpacked and distributed to the labs. The other half of the materials coming in go directly to the lab and are logged and distributed.
- c. Provide clearance for a Pallet jack.
- d. Provide the heavy duty shelves

5. 2.11.6 & 2.11.7 Future:

- a. Provide base cabinets and upper cabinets

G. RDS Notes:

1. Final interior Finishes to be selected by the Design Team selected for this project.
2. Refer to architectural narrative.
3. Provide Electrostatic dissipative material(ESD) flooring .
4. UPS required only for specific equipment and **shall be provided by the user agency . Refer to equipment matrix.**
5. Traffic Instrumentation has an Antenna that shall be located on the roof.

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 2.12 **Room Name:** Storage **Department:** _____
Quantity: 1 **Area (SF):** 605 **Occupancy:** 6 **Traffic Instr.** _____
Function: Storage of pallets and equipment

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> GWB	<input checked="" type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input checked="" type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input checked="" type="checkbox"/> Height- 4"	<input checked="" type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size 6'W x 8'H
Note D.3, D.1		Note G.1	Note G.1	Note G.1	Note G.1

LABORATORY SERVICES

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input type="checkbox"/> Hand Wash	<input type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC
<input checked="" type="checkbox"/> Pressurization <u>Negative</u>
<input checked="" type="checkbox"/> Air Change Per Hour <u>6-8 ACH</u>
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)

POWER AND DATA
<input type="checkbox"/> Island Bench
<input type="checkbox"/> Perimeter Bench
<input type="checkbox"/> Ceiling Mounted <input type="checkbox"/> Floor Mounted
<input type="checkbox"/> Emergency <input type="checkbox"/> UPS
<input checked="" type="checkbox"/> 120V <u>Note B.2</u>
<input type="checkbox"/> 208V
<input type="checkbox"/> 480V
<input checked="" type="checkbox"/> Data <input type="checkbox"/> WiFi Router <input type="checkbox"/> Comm.
<input type="checkbox"/> Other

LABORATORY SERVICES
<input type="checkbox"/> Nitrogen
<input type="checkbox"/> Compressed air
<input type="checkbox"/> Purified Water
<input type="checkbox"/> Vacuum
<input type="checkbox"/> Other/Specialty

HAZARDOUS MATERIAL STORAGE
<input type="checkbox"/> Acid/ Corrosive
<input type="checkbox"/> Toxic
<input type="checkbox"/> Other
<input type="checkbox"/> Flammable
<input type="checkbox"/> Radioactive

STORAGE
<input checked="" type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Tall Shelving Note D.4
<input type="checkbox"/> Peg Board
<input type="checkbox"/> Lockers
<input type="checkbox"/> Mobile Cabinets

SPECIAL REQUIREMENTS
<input type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Temperature <u>See RDS 2.11</u>
<input checked="" type="checkbox"/> Acoustics <u>See RDS 2.11</u>
<input checked="" type="checkbox"/> Humidity <u>See RDS 2.11</u>
<input type="checkbox"/> Sound Isolation
<input type="checkbox"/> Radioactivity
<input checked="" type="checkbox"/> Other <u>Everything ESD & Grounded</u>

LIGHTING
Ambient Light Level <u>60-80 fc</u>
<input type="checkbox"/> Task Light
<input type="checkbox"/> Zoned Lighting
<input type="checkbox"/> Dimmer
<input type="checkbox"/> Occ Sensor
<input type="checkbox"/> Window Treatment
<input type="checkbox"/> Natural Light

SAFETY EQUIP./FIRE PROTECTION
<input type="checkbox"/> Safety Shower
<input type="checkbox"/> Eyewash
<input type="checkbox"/> Goggles
<input type="checkbox"/> PPE
<input type="checkbox"/> In-Use Signage
<input checked="" type="checkbox"/> Sprinkler Type <u>wet pipe</u>
<input checked="" type="checkbox"/> Fire Extinguisher

VISUAL
<input type="checkbox"/> White Board
<input type="checkbox"/> Monitor
<input type="checkbox"/> Projection
SECURITY
<input type="checkbox"/> CCTV
<input checked="" type="checkbox"/> Keyed Entry <u>Note D.2</u>
<input type="checkbox"/> Access Control

**Department of Transportation
New Materials Lab and Training Center**

Program ID: <u>2.12</u>	Room Name: <u>Storage</u>	Department:
Quantity: <u>1</u>	Area (SF): <u>605</u>	Traffic Instr.
Occupancy: 6		

NOTES

A. Adjacencies: Directly adjacent to Loading Dock and Traffic Instrumentation - Open Lab. Truck Storage and Packaging have relationship with Traffic Instrumentation - Storage.

B. Equipment:

Tool/part cabinet (17"W x 30"D x 60"H), parts storage (63"W x 30"D), 7 Storage Shelving (96"W x 20"D x 75"H). Refer to equipment matrix for additional equipment.

2. Refer to the equipment matrix for power, water, gas requirements etc.

C. General Notes:

1. Half of the materials come in the trucks are on pallets, go to the loading dock/garage/storage next to District 6. Items are storage or unpacked and distributed to the labs. The other half of the materials coming in go directly to the lab and are logged and distributed.

D. RDS Notes:

1. Final interior Finishes to be selected by the Design Team selected for this project.

2. Refer to architectural narrative.

3. Provide Electrostatic dissipative material(ESD) flooring.

4. All storage shelves shall be new and be similar in depth and height as the existing shelves. Refer to equipment matrix.

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 2.21 **Room Name:** Metals Lab **Department:** Metals& Misc. Products Lab
Quantity: 1 **Area (SF):** 1452 **Occupants:** 6 to 8
Function: tests over 350 steel, plastic, fabric, and other materials; see test types in notes

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input checked="" type="checkbox"/> Acrylic PNT	<input checked="" type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input checked="" type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input checked="" type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input checked="" type="checkbox"/> CMU		<input checked="" type="checkbox"/> Height- 4"	<input type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size Note G.2
Note G.1	Note G.1	Note G.1	Note G.1	Note G.1	<input type="checkbox"/> Other

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input checked="" type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework base cabs.
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input checked="" type="checkbox"/> Casework Material Wood
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input checked="" type="checkbox"/> Counter Material Stainless Steel
<input checked="" type="checkbox"/> Other See Note G.1	<input type="checkbox"/> Floor Drain	<input checked="" type="checkbox"/> Other Note G.1, G.4

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization Negative	<input type="checkbox"/> Scullery Sink	<input type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour 6 ACH min.	<input type="checkbox"/> Floor Sink	<input type="checkbox"/> Tall Shelving
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input checked="" type="checkbox"/> Other Note G.1	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input checked="" type="checkbox"/> Vibration Control Note G.7
<input checked="" type="checkbox"/> Perimeter Bench duplex outlets @ 24" o.c.	<input checked="" type="checkbox"/> Compressed air 120 PSI, See G.5	<input checked="" type="checkbox"/> Temperature Note E.1
<input type="checkbox"/> Ceiling Mounted <input type="checkbox"/> Floor Mounted	<input type="checkbox"/> Purified Water	<input type="checkbox"/> Acoustics
<input type="checkbox"/> Emergency <input type="checkbox"/> UPS	<input type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Humidity Note E.2
<input checked="" type="checkbox"/> 120V		<input checked="" type="checkbox"/> Sound Isolation Note G.7
<input checked="" type="checkbox"/> 208V	<input checked="" type="checkbox"/> Other/Specialty Note G.1	<input type="checkbox"/> Radioactivity
<input checked="" type="checkbox"/> 480V		<input checked="" type="checkbox"/> Other Note G.6

HAZARDOUS MATERIAL STORAGE

<input checked="" type="checkbox"/> Data <input type="checkbox"/> Wi-Fi Router <input type="checkbox"/> Comm.	<input type="checkbox"/> Acid/ Corrosive	<input type="checkbox"/> Flammable
<input checked="" type="checkbox"/> Other See RDS 2.21.2, 2.21.4	<input type="checkbox"/> Toxic	<input type="checkbox"/> Radioactive
	<input type="checkbox"/> Other	

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Level 60-80 fc	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input checked="" type="checkbox"/> Eyewash at all sinks	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input checked="" type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	SECURITY
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	<input type="checkbox"/> CCTV
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type Wet Pipe	<input type="checkbox"/> Keyed Entry
<input checked="" type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher ABC	<input type="checkbox"/> Access Control
	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Other Note G.8

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 2.21 **Room Name:** Metals Lab **Department:** _____

NOTES

A. Adjacencies: Locate lab along exterior of the building; Directly adjacent to Misc. products, Machine Shop, and Loading Dock. In close proximity to the Offices.

B. Equipment: Refer to the RDS for each area for equipment information.

C. Processes: Refer to the RDS for each area.

D. Primary Areas: Metals Lab has 3 zones:
 2.21.2 Universal Testing Machine Area
 2.21.4 Sort and Log
 2.21.5 Failed Storage

E. Environmental Conditions:
 1. Temperature: 68-74F +/-2F
 2. Humidity: 50% RH +/- 5%

F. General Notes:

1. Refer to RDS for each area.
2. ~~Ceilings shall be 16' 0" minimum from finished floor.~~ **Ceiling shall accomodate crane/hoist system described in F.4 and F.5.**
3. The lighting, mechanical, plumbing, power and data and, special requirement apply to all areas with the room unless noted otherwise.
4. **Contractor to provide a 4 ton hoist system, motor driven trolley attached to a bridge crane system mounted to structure above.**
5. **This hoist system/crane system shall transport samples from the loading/sorting area in the Metals lab area (2.21) to the machine shop (2.23). The hoist system hook height shall be 16' A.F.F. in both rooms.**

G. Room data Sheet (RDS) Notes:

1. Interior Finishes provided is the preferred option, final interior finishes shall be selected by the design team.
2. Roll-up door, 8'x12' to the central corridor. Room requires a door large enough to transport large equipment in and out of building. ~~Gantry crane located between roll up door and equipment.~~
3. Provide 120V outlet around perimeter unless noted otherwise.
4. Provide a 36" deep countertop that is tough and durable.
5. Provide compressed air at all areas at the Universal Testing Machine Area, Sort and Log, and Failed Storage) with regulators.
6. Refer to Mechanical narrative.
7. Refer to RDS for each area.
8. **Refer to the Security narrative.**

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 2.21.2 **Room Name:** Metals Lab-Universal Testing Machine Area **Department:** Metals& Misc. Products Lab
Quantity: 1 **Area (SF):** 726 **Occupants:** 6 to 8
Function: Tests over 350 steel, plastic, fabric, and other materials; See test types in notes

INTERIOR FINISHES

FLOORING	CEILINGS	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size Note G.3
Note G.1	Note G.1, F.6	Note G.1	Note G.1	Note G.1	<input checked="" type="checkbox"/> Other Note G.8

DUCTED LAB EQUIPMENT

- Fume Hood
- Snorkel
- Canopy
- Biological Safety Cabinet
- Other

PLUMBING SERVICES

- Lab Sink
- Hand Wash
- Cup Sink
- Deep Sink
- Floor Drain
- Scullery Sink
- Floor Sink
- Other

CASEWORK

- Mobile Casework
- Fixed Casework See RDS 2.21
- Casework Material
- Counter Material
- Other Note G.5

HVAC

- Pressurization See RDS 2.21
- Air Change Per Hour See RDS 2.21
- Air Filtration (Supply and/or Exhaust)

STORAGE

- Tall Cabinets
- Tall Shelving Note G.4
- Peg Board
- Lockers
- Mobile Cabinets

POWER AND DATA

- Island Bench
- Perimeter Bench See RDS 2.21
- Ceiling Mounted
- Emergency
- 120V See RDS 2.21
- 208V Note G.2
- 480V Note G.2
- Data
- Other

LABORATORY SERVICES

- Nitrogen
- Compressed air See RDS 2.21
- Purified Water
- Vacuum
- Other/Specialty

SPECIAL REQUIREMENTS

- Vibration Control Note G.6
- Temperature Note E.1
- Acoustics
- Humidity Note E.1
- Sound Isolation Note G.6

HAZARDOUS MATERIAL STORAGE

- Acid/ Corrosive
- Toxic
- Other
- Flammable
- Radioactive

Note G.5

LIGHTING

- Ambient Light Level: _____
- Task Light
- Zoned Lighting
- Dimmer
- Occ Sensor
- Window Treatment
- Natural Light
- Other See RDS 2.21

SAFETY EQUIP./FIRE PROTECTION

- Safety Shower
- Eyewash
- Google
- PPE
- In-Use Signage
- Sprinkler Type
- Fire Extinguisher
- Other

at all sinks

See RDS 2.21

VISUAL

- White Board
 - Monitor
 - Projection
- SECURITY**
- CCTV
 - Keyed Entry
 - Access Control
 - Other See RDS 2.21

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 2.21.2 **Room Name:** Metals Lab-Universal Testing Machine Area **Department:**

NOTES

A. Adjacencies: Refer to RDS sheet 2.21.

B. Primary Equipment:

1. 3 UTMs (universal testing machine), 600K Universal Testing Machine Qty-1, additional NTPEP testing machine, gantry crane/hoist supported by building structure, electronic fork lift. For additional equipment, refer to the equipment matrix.

C. Processes: conducts over 3000 tests for the National Transportation Products Evaluation Program (NTPEP) as an AASHTO-accredited testing facility for various steel products. These tests are part of nearly 100 annual audits for reinforcement bar, welded wire reinforcement, cold-drawn wire, and seven-wire strand producers who wish to be NTPEP-certified.

D. Test Types: Yield/tensile testing, impact testing, galvanization thickness readings, compression and deflection testing, hardness and durometer testing, and heat resistance/aging testing.

E. Environmental Conditions:

1. Refer to RDS 2.21.

F. General Notes:

1. Presently, IDOT have four Universal Testing Machines (UTM). The 600K Universal Testing Machine(OFCI), however it is the only one that requires a pit. Provide a 5' deep pit, refer to the sketch provided in the equipment matrix.
2. The 600K Universal testing Machine also has a crane/Hoist that is part of the equipment and is attached to the equipment.
3. Refer to Metals Lab 2.21 for information about crane/hoist system
4. Provide immediate access to Metal Scrap Dumpster.
5. More countertop and storage needed near the UTM's equipment for material to be prepped before testing.
6. Refer to RDS 2.21 for ceiling requirements.

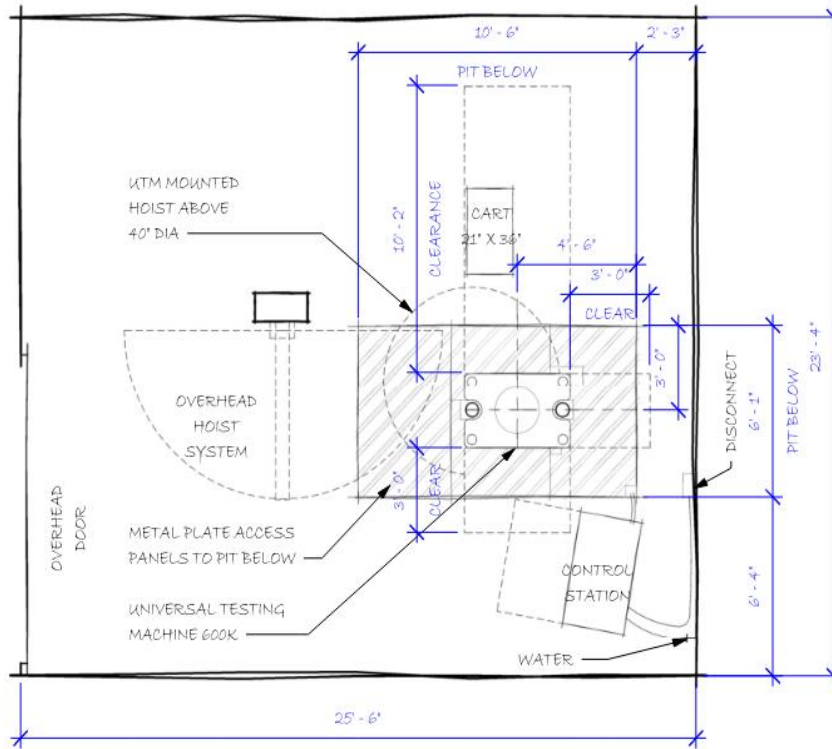
G. Room Data Sheet (RDS) Notes

1. Refer to RDS Sheet 2.21 for interior finishes.
2. Refer to the equipment matrix for power, water, gas requirements etc.
3. Provide a Roll-up door system 8'wide x ~~16'H~~ 12'H. Room requires a door large enough to transport large equipment in and out of building.
4. Provide heavy duty shelving units to store samples that are ready to be tested; shelves 36" deep.
5. Presently, five 5 gallons of fuel is stored in a portion of the pit under the 600K universal Testing Machine.
6. Isolated slab needed in this area to ensure that sound does not transfer to the rest of building when the 600K universal Testing machine is in operation.

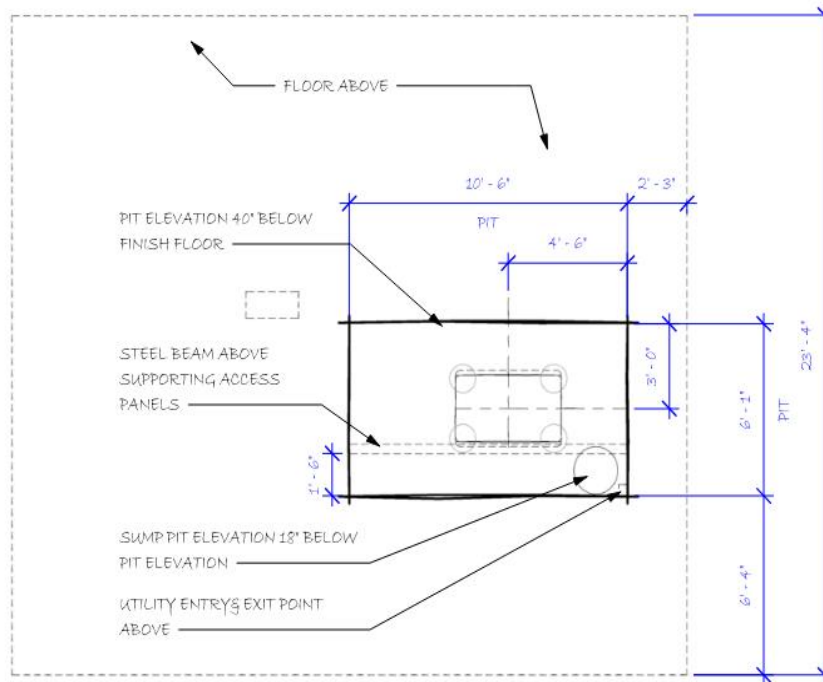
Department of Transportation
New Materials Lab and Training Center

Program ID: 2.21.2 Room Name: Metals Lab-Universal Testing Machine Area Department:

UNIVERSAL TESTING MACHINE
PLAN AT OPERATING LEVEL



UNIVERSAL TESTING MACHINE
PLAN AT EQUIPMENT PIT
LEVEL



**Department of Transportation
New Materials Lab and Training Center**

Program ID: 2.21.4 **Room Name:** Metals Lab - Sort/Log **Department:** Metals& Misc. Products Lab
Quantity: 1 **Area (SF):** 242 **Occupants:** 6 to 8 max.
Function: Samples received, logged and sorted

INTERIOR FINISHES

FLOORING	CEILINGS	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Door Size
Note G.1	Note G.1	Note G.1	Note G.1	Note G.1	<input checked="" type="checkbox"/> Other See RDS 2.21

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input checked="" type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework base cabs.
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input checked="" type="checkbox"/> Other Note G.3, G.2

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization See RDS 2.21	<input type="checkbox"/> Scullery Sink	<input type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour See RDS 2.21	<input type="checkbox"/> Floor Sink	<input checked="" type="checkbox"/> Tall Shelving Note G.4
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input type="checkbox"/> Other	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Vibration Control
<input type="checkbox"/> Perimeter Bench	<input checked="" type="checkbox"/> Compressed air See RDS 2.21	<input checked="" type="checkbox"/> Temperature Note E.1
<input type="checkbox"/> Ceiling Mounted <input type="checkbox"/> Floor Mounted	<input type="checkbox"/> Purified Water	<input type="checkbox"/> Acoustics
<input type="checkbox"/> Emergency <input type="checkbox"/> UPS	<input type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Humidity Note E.1
<input checked="" type="checkbox"/> 120V	<input type="checkbox"/> Other/Specialty	<input type="checkbox"/> Sound Isolation
<input type="checkbox"/> 208V		<input type="checkbox"/> Radioactivity
<input type="checkbox"/> 480V		<input type="checkbox"/> Other

HAZARDOUS MATERIAL STORAGE		
<input type="checkbox"/> Data <input type="checkbox"/> Wi-Fi Router <input type="checkbox"/> Comm.	<input type="checkbox"/> Acid/ Corrosive	<input type="checkbox"/> Flammable
<input checked="" type="checkbox"/> Other computer stations	<input type="checkbox"/> Toxic	<input type="checkbox"/> Radioactive
	<input type="checkbox"/> Other	

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Level	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input checked="" type="checkbox"/> Eyewash at all sinks	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	SECURITY
<input type="checkbox"/> Window Treatment	<input type="checkbox"/> Sprinkler Type	<input type="checkbox"/> CCTV
<input checked="" type="checkbox"/> Natural Light	<input type="checkbox"/> Fire Extinguisher	<input type="checkbox"/> Keyed Entry
<input checked="" type="checkbox"/> Other See RDS 2.21	<input checked="" type="checkbox"/> Other See RDS 2.21	<input type="checkbox"/> Access Control
		<input checked="" type="checkbox"/> Other See RDS 2.21

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 2.21.4 **Room Name:** Metals Lab - Sort/Log **Department:** _____

NOTES

A. Adjacencies: Located near the Metals Lab.

B. Equipment: ~~Gantry crane/hoist~~, electronic forklift.

C. Processes: N/A

D. Test Types: N/A

E. Environmental conditions:

1. Refer to RDS 2.21

F. General Notes:

1. Refer to RDS 2.21.

2. Refer to Metals Lab 2.21 for information about crane/hoist system.

G. Room data Sheet (RDS) Notes

1. Refer to RDS Sheet 2.21 for interior finishes.
2. Provide heavy duty shelving units to store samples that are ready to be tested; shelves 36" deep.
3. Provide new worktables. This casework need to withstand significant impact, ensure that the selected material is better and tougher than the existing.

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 2.21.5 **Room Name:** Metals Lab - Failed Storage **Department:** Metals& Misc. Products Lab
Quantity: 1 **Area (SF):** 484 **Occupants:** 1 to 2
Function: tests over 350 steel, plastic, fabric, and other materials; see test types in notes

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input type="checkbox"/> 48in
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Door Size
Refer note G.1	Note G.1	Refer note G.1	Refer note G.1	Refer note G.1	

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework base cabs.
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization See RDS 2.21	<input type="checkbox"/> Scullery Sink	<input type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour See RDS 2.21	<input type="checkbox"/> Floor Sink	<input checked="" type="checkbox"/> Tall Shelving Note G.3
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input type="checkbox"/> Other	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Vibration Control
<input type="checkbox"/> Perimeter Bench	<input checked="" type="checkbox"/> Compressed air See RDS 2.21	<input checked="" type="checkbox"/> Temperature Note E.1
<input type="checkbox"/> Ceiling Mounted <input type="checkbox"/> Floor Mounted	<input type="checkbox"/> Purified Water	<input type="checkbox"/> Acoustics
<input type="checkbox"/> Emergency <input type="checkbox"/> UPS	<input type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Humidity Note E.1
<input checked="" type="checkbox"/> 120V Note G.2	<input type="checkbox"/> Other/Specialty	<input type="checkbox"/> Sound Isolation
<input checked="" type="checkbox"/> 208V Note G.2		<input type="checkbox"/> Radioactivity
<input type="checkbox"/> 480V		<input type="checkbox"/> Other See RDS 2.21

HAZARDOUS MATERIAL STORAGE		
<input type="checkbox"/> Data <input type="checkbox"/> Wi-Fi Router <input type="checkbox"/> Comm.	<input type="checkbox"/> Acid/ Corrosive	<input type="checkbox"/> Flammable
<input checked="" type="checkbox"/> Other See RDS 2.21	<input type="checkbox"/> Toxic	<input type="checkbox"/> Radioactive
	<input type="checkbox"/> Other	

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Level	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	SECURITY
<input type="checkbox"/> Window Treatment	<input type="checkbox"/> Sprinkler Type	<input type="checkbox"/> CCTV -
<input type="checkbox"/> Natural Light	<input type="checkbox"/> Fire Extinguisher	<input type="checkbox"/> Keyed Entry -
<input checked="" type="checkbox"/> Other See RDS 2.21	<input checked="" type="checkbox"/> Other See RDS 2.21	<input type="checkbox"/> Access Control -
		<input type="checkbox"/> Other

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 2.21.5 **Room Name:** Metals Lab - Failed Storage **Department:** _____

NOTES

A. Adjacencies: Directly Adjacent to Machine Shop .

B. Equipment: For additional equipment, refer to the equipment matrix for a list .

C. Process Types: N/A

D. Primary Areas: N/A

E. Environmental conditions:

1. Refer to RDS 2.21

F. General Notes:

1. Refer to RDS 2.21.

G. RDS Notes:

1. Refer to RDS Sheet 2.21 for interior finishes.
2. Refer to the equipment matrix for power, water, gas requirements etc.
3. Provide backup sample storage area for the extra metal samples, used only if test fail and are required to be redone. Users are requested doubling the existing storage area.

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 2.22 **Room Name:** Miscellaneous Products Lab **Department:** Metals & Misc. Products Lab
Quantity: 1 **Area (SF):** 484 **Occupants:** 1 to 2
Function: _____

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input checked="" type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input checked="" type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input checked="" type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input checked="" type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size
Note F.1	Note D.3, F.1	Note F.1	Note E.1	Note E.1	Roll-up door & larger than 6'x8' door off central corridor

DUCTED LAB EQUIPMENT

- Fume Hood _____
- Snorkel _____
- Canopy exhaust hood at ovens
- Biological Safety Cabinet _____
- Other _____

PLUMBING SERVICES

- Lab Sink _____
- Hand Wash _____
- Cup Sink _____
- Deep Sink _____
- Floor Drain _____
- Scullery Sink _____
- Floor Sink _____
- Other _____

CASEWORK

- Mobile Casework _____
- Fixed Casework base cabs.
- Casework Material _____
- Counter Material _____
- Other _____

HVAC

- Pressurization Negative
- Air Change Per Hour 6 ACH
- Air Filtration (Supply and/or Exhaust) _____

STORAGE

- Tall Cabinets _____
- Tall Shelving store samples
- Peg Board _____
- Lockers _____
- Mobile Cabinets _____

POWER AND DATA

- Island Bench _____
- Perimeter Bench duplex outlets @ 24" o.c.
- Ceiling Mounted Floor Mounted
- Emergency UPS
- 120V Note F.2
- 208V Note F.2
- 480V Note F.2
- Data Wi-Fi Router Comm.
- Other _____

LABORATORY SERVICES

- Nitrogen _____
- Compressed air 120 PSI w/ regulator
- Purified Water _____
- Vacuum _____
- Other/Specialty _____

SPECIAL REQUIREMENTS

- Vibration Control _____
- Temperature Note E.1
- Acoustics _____
- Humidity Note E.2
- Sound Isolation _____
- Radioactivity _____
- Other _____

HAZARDOUS MATERIAL STORAGE

- Acid/ Corrosive _____
- Toxic _____
- Other shards & projectiles
- Flammable _____
- Radioactive _____

LIGHTING

- Ambient Light Level 60-80 fc
- Task Light _____
- Zoned Lighting _____
- Dimmer _____
- Occ Sensor _____
- Window Treatment _____
- Natural Light _____

SAFETY EQUIP./FIRE PROTECTION

- Safety Shower _____
- Eyewash at all sinks
- Goggles _____
- PPE _____
- In-Use Signage _____
- Sprinkler Type See RDS 2.21
- Fire Extinguisher See RDS 2.21

VISUAL

- White Board _____
- Monitor _____
- Projection _____

SECURITY

- CCTV _____
- Keyed Entry _____
- Access Control _____
- Other Note F.5

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 2.22 **Room Name:** Miscellaneous Products Lab **Department:** _____

NOTES

A. Adjacencies: At the exterior of the building; Directly adjacent to Machine Shop and Pipe Storage and Cutting

B. Equipment:

C. Processes: conducts over 3000 tests for the National Transportation Products Evaluation Program (NTPEP) as an AASHTO-accredited testing facility for various steel products. These tests are part of nearly 100 annual audits for reinforcement bar, welded wire reinforcement, cold-drawn wire, and seven-wire strand producers who wish to be NTPEP-certified.

D. General Notes:

1. Open configurable space preferred.
2. ~~Gantry crane supported by building structure, optional portable hoist.~~ **No crane/ hoist system is required in this space.**
3. Ceilings shall be 16' A.F.F.
5. Immediate access to Metal Scrap Dumpster

E. Environmental conditions:

1. Temperature: ~~73.5 +/- 3.6F.~~ **73.4 degrees F with a tolerance of 3.6 degrees F (69.8 to 77.0 degrees F) .**
2. Humidity: 50% RH+/- 5%. Humidity must be maintained at all times to properly condition the plastic samples. Humidity ranges will need to adjustable between 45-65% relative humidity, depending on the materials being tested in the Miscellaneous Products Room.
3. Dust collection System: Exhaust needed to collect fine and coarse plastic dust generated while cutting plastic piping. The air-borne dust needs to be collected and the fumes exhausted from the space.
 - a. Dust Collection (plastic dust) exhaust connected directly to equipment : connect directly to pipe cutting machine.

F. RDS Notes:

1. Final interior finishes to be selected by the design team selected for this project.
2. Refer to the equipment matrix for power, water, gas requirements etc.
3. Provide a Misc. Products Failed Storage Area -- potentially could be in Metals Lab if the environmental controls were better, but will keep separate for now.
4. Provide heavy duty shelves, depth 48" deep with 48" clearance in front of shelves. All storage shelves, cabinets, and worktables to be new.
5. Refer to the Security narrative.

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 2.23 **Room Name:** Machine Shop **Department:** Metals& Misc. Products Lab
Quantity: 1 **Area (SF):** 2420 **Occupants:** 1 to 2
Function: tests over 350 steel, plastic, fabric, and other materials; see test types in notes

INTERIOR FINISHES

FLOORING	CEILINGS	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input checked="" type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input checked="" type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input checked="" type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input checked="" type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input type="checkbox"/> 48in
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size
Note F.1	Note F.7	Note F.1/F.3	Note F.1	Note F.1	Roll-up door 10' W x 12' H door off central corridor

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input checked="" type="checkbox"/> Snorkel	<input checked="" type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework
<input checked="" type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input checked="" type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Floor Drain	<input checked="" type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization	<input type="checkbox"/> Scullery Sink	<input type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour	<input type="checkbox"/> Floor Sink	<input checked="" type="checkbox"/> Tall Shelving
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input type="checkbox"/> Other	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Perimeter Bench	<input checked="" type="checkbox"/> Compressed air	<input checked="" type="checkbox"/> Temperature
<input type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Purified Water	<input type="checkbox"/> Acoustics
<input type="checkbox"/> Emergency	<input checked="" type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Humidity
<input checked="" type="checkbox"/> 120V	<input type="checkbox"/> Other/Specialty	<input checked="" type="checkbox"/> Sound Isolation
<input checked="" type="checkbox"/> 208V		<input type="checkbox"/> Radioactivity
<input checked="" type="checkbox"/> 480V		<input checked="" type="checkbox"/> Other

HAZARDOUS MATERIAL STORAGE

<input type="checkbox"/> Data	<input type="checkbox"/> Acid/ Corrosive	<input type="checkbox"/> Flammable
<input type="checkbox"/> Other	<input type="checkbox"/> Toxic	<input type="checkbox"/> Radioactive
	<input checked="" type="checkbox"/> Other	shards & projectiles

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Level	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input checked="" type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input checked="" type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type	
<input checked="" type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	

SECURITY
<input type="checkbox"/> CCTV
<input type="checkbox"/> Keyed Entry
<input type="checkbox"/> Access Control
<input checked="" type="checkbox"/> Other

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 2.23 **Room Name:** Machine Shop **Department:** _____

NOTES

A. Adjacencies: Directly adjacent to Metals Lab, and Misc. Products; Failed Storage and along the exterior of the building.

1. The areas within Machine Shop:

2.23.1 Nuts /Bolts Storage

2.23.2 Welding Station

2.23.3 Paint Area

2. Machine Shop Shared with Traffic Instrumentation.

B. Equipment: ~~Gantry crane/hoist supported by building structure, option for portable hoist,~~ electronic forklift, welding booth, sandblaster, drill press. For additional equipment, refer to the equipment matrix.

1. New CNC Lathe with capacity for Chuck (chucks can get bigger) and shall occupy more floor area.

C. Processes: None

D. Environmental Conditions:

1. Temperature: 72-75 +/-2F

2. Humidity: 45-55%RH+/- 5%. Humidity should be low enough to limit the corrosion of machinery equipment **and limit corrosion of steel components.**

3. Dust collection System: Exhaust needed to collect the wood, plastic and metal dust generated in the machine shop. Dust Collection exhaust connected directly to equipment (Metal Dust cannot be within the same systems as plastic and wood.):

a. Dust Collection (Wood and plastic dust) shall connect directly to table saw and lathe

b. Dust Collection (Metal dust) shall connect directly to the grinder and lathe.

4. **Welding Station (2.23.2):** Metal Dust collection and welding fume exhaust required. Canopy can provide above the countertop.

5. **Paint Area (2.23.3):** A fancy paint booth is not required, all the painting is done using spray cans. Provide exhaust for paint spray-paint fumes above the work area.

E. General Notes:

1. Open configurable space preferred.

2. Need for portable hoist

3. Space needs immediate access to Metal Scrap Dumpster.

4. **Refer to RDS 2.21 on Hoist/ crane system.**

F. RDS Notes:

1. Interior Finishes provided is the preferred option, Final interior finishes shall be selected by the design team

2. Refer to the equipment matrix for power, water, gas requirements etc.

3. Provide solid filled CMU wall that extend to the ceiling.

4. Provide new storage shelves, and base cabinets, tool storage.

5. Provide new worktables. The casework needs to withstand significant impact, ensure that the selected material is better and tougher than the existing.

6. Refer to the Security narrative.

7. Provide open ceiling with 16' above finished floor for maintenance and access above equipment.

8. Extremely noisy space, isolation of the sound is important for this space.

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 2.24 **Room Name:** Pipe Storage and Cutting **Department:** _____
Quantity: 1 **Area (SF):** 484 **Occupants:** 1 to 2 **Metals& Misc. Products Lab**
Function: _____

INTERIOR FINISHES

FLOORING	CEILINGS	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input checked="" type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input type="checkbox"/> 48in
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size
Note G.1	Note G.1, F.3	Note G.1	Note G.1	Note G.1	

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input checked="" type="checkbox"/> Snorkel	<input type="checkbox"/> Hand Wash	<input type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input checked="" type="checkbox"/> Other
dust collection - Note E.3		None
non-chemistry lab hood-Note F.6		

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization	<input type="checkbox"/> Scullery Sink	<input type="checkbox"/> Tall Cabinets
Negative	<input type="checkbox"/> Floor Sink	<input checked="" type="checkbox"/> Tall Shelving
<input checked="" type="checkbox"/> Air Change Per Hour	<input type="checkbox"/> Other	Note G.3
6 ACH min.		<input type="checkbox"/> Peg Board
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)		

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Vibration Control
<input type="checkbox"/> Perimeter Bench	<input checked="" type="checkbox"/> Compressed air	See note C.8
<input type="checkbox"/> Ceiling Mounted	120PSI w/ regulator	<input checked="" type="checkbox"/> Temperature
<input type="checkbox"/> Floor Mounted	<input type="checkbox"/> Purified Water	See RDS 2.21
<input type="checkbox"/> UPS	<input type="checkbox"/> Vacuum	<input type="checkbox"/> Acoustics
<input checked="" type="checkbox"/> 120V		<input checked="" type="checkbox"/> Humidity
Refer note G.2		Note E.2
<input checked="" type="checkbox"/> 208V	<input checked="" type="checkbox"/> Other/Specialty	<input checked="" type="checkbox"/> Sound Isolation
Refer note G.2		Noise space
<input checked="" type="checkbox"/> 480V		<input type="checkbox"/> Radioactivity
Refer note G.2		<input checked="" type="checkbox"/> Other
<input checked="" type="checkbox"/> Data		Note E.3
<input type="checkbox"/> Wi-Fi Router		
<input type="checkbox"/> Comm.		

HAZARDOUS MATERIAL STORAGE

<input type="checkbox"/> Acid/ Corrosive	<input type="checkbox"/> Flammable	
<input type="checkbox"/> Toxic	<input type="checkbox"/> Radioactive	
<input checked="" type="checkbox"/> Other	shards & projectiles	

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Level	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
60-80 fc	<input checked="" type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Task Light	<input checked="" type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> PPE	
<input type="checkbox"/> Dimmer	<input type="checkbox"/> In-Use Signage	SECURITY
<input type="checkbox"/> Occ Sensor	<input checked="" type="checkbox"/> Sprinkler Type	<input type="checkbox"/> CCTV
<input type="checkbox"/> Window Treatment	Wet Pipe	<input type="checkbox"/> Keyed Entry
<input checked="" type="checkbox"/> Natural Light	ABC	<input type="checkbox"/> Access Control
		<input checked="" type="checkbox"/> Other
		Note G.4

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 2.24 **Room Name:** Pipe Storage and Cutting **Department:** _____

NOTES

A. Adjacencies: At the exterior of the building; Directly adjacent to Machine Shop and the Miscellaneous Products Lab.

B. Equipment: For additional equipment, refer to the equipment matrix.

C. Processes: Refer to the RDS for each area.

D. Primary Areas: None

E. Environmental Conditions:

1. Temperature: ~~73.5 +/- 3.6F~~ **73.4 degrees F with a tolerance of 3.6 degrees F (69.8 to 77.0 degrees F) .**
2. Humidity: 50% RH+/- 5%. Humidity must be maintained at all times to properly condition the plastic samples.
3. Dust collection System: Exhaust needed to collect fine and coarse plastic dust generated while cutting plastic piping. The air-borne dust needs to be collected and the fumes exhausted from the space.
 - a. Dust Collection exhaust connected directly to equipment :
 - Dust Collection (plastic dust) shall connect directly to pipe cutting machine.

F. General Notes:

1. Open configurable space preferred.
2. ~~Gantry crane/hoist supported by building structure, option for portable hoist.~~ **No crane/ hoist system is required in this space, any portable gantry crane shall be owner furnished owner installed.**
3. Ceiling height 16' clearance required for access and maintenance.
4. Space shall be extremely noisy.
5. Immediate access to Metal Scrap Dumpster.

G. RDS Notes:

1. Selected finishes are the preferred option, final interior finishes to be selected by the design team selected for this project.
2. Refer to the equipment matrix for power, water, gas requirements etc.
3. Provide heavy duty shelving units; shelves 36" deep.
4. Refer to the Security narrative.

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 2.34 **Room Name:** Calibration Lab **Department:** _____
Quantity: 1 **Area (SF):** 363 **Occupancy:** 4 **Nuclear**
Function: perform equipment calibrations for pavement density and moisture testing equipment

INTERIOR FINISHES

FLOORING	CEILINGS	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input checked="" type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Door Size
Note G.1, G.2	Note G.1	Note G.1/G.4	Note G.1	Note G.1	

Rooms should be accessed from diagnostics lab

DUCTED LAB EQUIPMENT

- Fume Hood
- Snorkel
- Canopy
- Biological Safety Cabinet
- Other

PLUMBING SERVICES

- Lab Sink
- Hand Wash
- Cup Sink
- Deep Sink
- Floor Drain
- Scullery Sink
- Floor Sink
- Other

CASEWORK

- Mobile Casework
- Fixed Casework
- Casework Material
- Counter Material
- Other

HVAC

- Pressurization
- Air Change Per Hour 6-8 ACH
- Air Filtration (Supply and/or Exhaust)

STORAGE

- Tall Cabinets
- Tall Shelving
- Peg Board
- Lockers
- Mobile Cabinets

POWER AND DATA

- Island Bench
- Perimeter Bench Duplex @ 24" O.C.
- Ceiling Mounted Floor Mounted
- Emergency UPS
- 120V Note B.1
- 208V
- 480V
- Data WiFi Router Comm.
- Other

LABORATORY SERVICES

- Nitrogen
- Compressed air
- Purified Water
- Vacuum
- Other/Specialty

SPECIAL REQUIREMENTS

- Vibration Control
- Temperature Note E.1
- Acoustics Note E.3
- Humidity Note E.2
- Sound Isolation
- Radioactivity license rq'd
- Other shielding

HAZARDOUS MATERIAL STORAGE

- Acid/ Corrosive
- Toxic
- Other
- Flammable
- Radioactive

LIGHTING

- Ambient Light Level 60-80 fc
- Task Light
- Zoned Lighting
- Dimmer
- Occ Sensor
- Window Treatment
- Natural Light

SAFETY EQUIP./FIRE PROTECTION

- Safety Shower
- Eyewash
- Goggles
- PPE
- In-Use Signage
- Sprinkler Type Wet pipe
- Fire Extinguisher

VISUAL

- White Board
- Monitor
- Projection

SECURITY

- CCTV
- Keyed Entry
- Access Control Note G.3

**Department of Transportation
New Materials Lab and Training Center**

Program ID: <u>2.34</u>	Room Name: <u>Calibration Lab</u>	Department:
Quantity: <u>1</u>	Area (SF): <u>363</u>	Occupancy: <u>4</u>
		Nuclear

NOTES

A. Adjacency: Refer to the RDS 2.31 Diagnostics/Shop

B. Equipment: No equipment but Gauges may need to be charged during calibration.
1. For additional equipment, refer to equipment matrix for power, water, gas requirements, etc.

C. Primary Areas:

1. Calibration Lab has two Bays:
 - 2.34.1 Bay 1
 - 2.34.2 Bay 2

D. Test Description:

1. Two separate rooms for each set of calibration blocks. This setup allows for two gauges to be calibrated per day.
2. In each calibration room there are four bays of block test for the densities of different materials- Aluminum, mag/poly, etc. One gauge goes into each bay at a time. Every 4 mins a count is taken.

E. Environmental Conditions:

1. Temperature: 68-72deg F +/- 2degF
2. Humidity: 23-55%RH +/- 5%
3. Acoustic: NC-36

F. General Notes:

1. Reference standards: ANSI D7013, ASHTO T310. Department must follow ALARA.
2. Parking stop for District personnel delivering/picking up nuclear gauges. Entry level should be on ground level or no more than a step to prevent tripping while carrying a gauge that weighs more than 40lbs.
3. Unshielding gauges must be 33' away from other gauges, or it would be seen by the the gauge being calibrated with the suite.
4. The calibration blocks density are tested every five years, if specs change for testing this block would need to be replaced and the block would get larger. Weight: approximately 160lbs per cubic feet, presently on rollers.
5. No dumpster are required. Licenced companies that are certified to handle radioactive material are hired to dispose of anyun repairable gauges.

G. RDS Notes:

1. Refer to RDS 2.31 Diagnostics/Shop.
2. Provide Electrostatic dissipative material(ESD) flooring .
3. Refer to the Narratives for additional information.
4. Depending on design it may require 16" block walls filled with high density concrete.

Program ID: 2.41 **Room Name:** Open Lab **Department:** _____
Quantity: 1 **Area (SF):** 4356 **Occupants:** 6 **Concrete**
Function: Testing of concrete related materials to populate a minimum of 17 qualified product lists

INTERIOR FINISHES

FLOORING	CEILINGS	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input checked="" type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input checked="" type="checkbox"/> Rubber Mat	<input checked="" type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input checked="" type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input checked="" type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size Note G.3
See Note G.1	See Note G.1	See Note G.1	See Note G.1	See Note G.1	<input checked="" type="checkbox"/> Other

MECHANICAL, PLUMBING, ELECTRICAL, DATA, FIRE PROTECTION, SECURITY, ARCHITECTURAL/LAB

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input checked="" type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input checked="" type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework Note G.5
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input checked="" type="checkbox"/> Other Note G.6	<input checked="" type="checkbox"/> Floor Drain	<input type="checkbox"/> Other
	<input checked="" type="checkbox"/> Scullery Sink	

HVAC	STORAGE
<input checked="" type="checkbox"/> Pressurization Negative	<input checked="" type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour 6-8 ACH	<input checked="" type="checkbox"/> Tall Shelving
<input checked="" type="checkbox"/> Air Filtration (Supply and/or Exhaust) Note G.8	<input checked="" type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input checked="" type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Perimeter Bench Duplex @ 24" O.C.	<input checked="" type="checkbox"/> Compressed air	<input checked="" type="checkbox"/> Temperature Note E.1
<input type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Purified Water	<input checked="" type="checkbox"/> Acoustics Note E.3
<input checked="" type="checkbox"/> Emergency	<input checked="" type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Humidity Note E.2
<input checked="" type="checkbox"/> 120V Note G.4, and G.2	<input type="checkbox"/> Other/Specialty	<input checked="" type="checkbox"/> Sound Isolation Note G.7
<input checked="" type="checkbox"/> 208V Note G.2		
<input type="checkbox"/> 480V		

HAZARDOUS MATERIAL STORAGE	SECURITY
<input checked="" type="checkbox"/> Acid/ Corrosive	<input checked="" type="checkbox"/> Access Control G.10
<input checked="" type="checkbox"/> Toxic	
<input checked="" type="checkbox"/> Other	
<input checked="" type="checkbox"/> Flammable	
<input type="checkbox"/> Radioactive	
<input type="checkbox"/> explosive	

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Level 60-80 FC, Direct/ Indirect	<input checked="" type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input checked="" type="checkbox"/> Task Light 70-80 FC	<input type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input checked="" type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input checked="" type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input checked="" type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type wet Pipe	
<input checked="" type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher ABC	

Program ID: 2.41 Room Name: Open Lab Department: _____

NOTES

A. Adjacencies: The concrete lab is directly adjacencies to Polymer Concrete Testing, Tool Storage, Moist/Cure, Salt scale, Freeze/Thaw (with access to the utility room), Length Meas., Loading Dock, Office, and in close proximity to the Aggregate Bulk Storage.

B. Equipment: Refer to each section within the open lab area for the equipment.
Separator pit (cleaned out by septic company).

C. Processes: Refer to the RDS for each area.
Material Flow:

1. Material comes from Aggregate (aggregate samples presently are transported down the corridor via flatbed cart).
2. Cement material to the concrete lab (moist curing room and occasionally to the freezer room).
3. Chemistry also receive concrete samples for testing.
4. Material (Raw Material, Large Commercial Products, Small Commercial Products) are also delivered via courier to the concrete lab.

D. Primary Areas: Concrete Open Lab shall have the following areas Mixing, Cast Molding, Curing Compound, Compression Flexural Testing, Sample Receiving , Sort and Logging.

E. Environmental Conditions: Refer to RDS sheet for each area.

1. Temperature: 68-74F +/- 2F
2. Humidity: 23-55%RH +/- 5%
3. Acoustic: NC-36

F. General Notes:

1. Refer for Laboratory narrative for additional information.
2. ~~Ceilings shall be 12' 0" unless noted otherwise.~~ **Ceiling height shall not be below the hoist system hook height stated in Note F.7 above of in Mixing 2.41.1, 2.41.2 and the 2.41.5.**
3. The lighting, mechanical, plumbing, power and data and, special requirement apply to all areas within the room unless noted otherwise.
4. The lab offices need to be directly attached to the lab space, allowing easy access to equipment should any malfunctions occur during a test.
5. Do not use Daiken products - these have proven not to work in our lab environment. Also, the lab has very specific requirements for temperature and humidity based upon the performed tests.
6. Openness of lab allows for easier maneuvering of large carts to transport items.
7. **Contractor to provide a 1 ton hoist system, motor driven trolley attached to a bridge crane mounted to structure above. Provide a hoist system hook height of 12' A.F.F. This hoist system/ crane system shall transport samples/and raw materials from the sample receiving area 2.41.5 to the mixing area 2.41 to casting area/molding 2.41.2.**

G. RDS Notes:

1. Interior Finishes provided are the preferred option, final interior finishes shall be selected by the design team.
2. Refer to equipment matrix for power, water, gas requirement etc.
3. Roll-up door Size 8'x 8', (door height may need to increases due to the equipment in the room) with access to the central corridor., with a 42"x96" man door leads to the loading dock.
4. Provide 120V outlet around perimeter unless noted otherwise.
5. Provide a countertop that is tough and durable. Provide 36" deep countertop.
6. Dust collection system required for the sila dust that shall be generated in this space.
7. Solid filled cmu wall that extend to ceiling, is an option to isolate the noise and prevent noise transfer to other departments. Equipment in the open lab tends to be loud, and can transfer quite easy through the space.

Program ID: 2.41 Room Name: Open Lab Department: _____

8. Significant silica dust shall be generated in this space. Ensure that filters are provided at exhaust grilles. Refer to mechanical narrative for additional information.
9. Provide double sink scullery
10. Refer to Architectural narrative.
11. Provide Sediment trap at all sink and floor drains.

**Department of Transportation
New Materials Lab and Training Center**

10/30/2023

Program ID: 2.41.1 **Room Name:** Open Lab - Mixing **Department:** Concrete
Quantity: 1 **Area (SF):** 544.5 **Occupants:** 6
Function: _____

INTERIOR FINISHES

FLOORING	CEILINGS	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input checked="" type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size 8'W x 8'H
Note G.1	Note G.1	Note G.1	Note G.1	Note G.1	<input type="checkbox"/> Other

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input checked="" type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input checked="" type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input checked="" type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input checked="" type="checkbox"/> Other See Note G.7	<input checked="" type="checkbox"/> Floor Drain	<input type="checkbox"/> Other
	<input type="checkbox"/> Scullery Sink	
	<input type="checkbox"/> Floor Sink	
	<input checked="" type="checkbox"/> Other	

HVAC	LABORATORY SERVICES	STORAGE
<input type="checkbox"/> Pressurization See 2.41	<input type="checkbox"/> Nitrogen	<input checked="" type="checkbox"/> Tall Cabinets
<input type="checkbox"/> Air Change Per Hour	<input checked="" type="checkbox"/> Compressed air	<input checked="" type="checkbox"/> Tall Shelving
<input checked="" type="checkbox"/> Air Filtration (Supply and/or Exhaust) Note G.1	<input type="checkbox"/> Purified Water	<input type="checkbox"/> Peg Board
	<input checked="" type="checkbox"/> Vacuum	<input type="checkbox"/> Lockers
	<input type="checkbox"/> Other/Specialty	<input type="checkbox"/> Mobile Cabinets

POWER AND DATA	HAZARDOUS MATERIAL STORAGE	SPECIAL REQUIREMENTS
<input checked="" type="checkbox"/> Island Bench G.6	<input checked="" type="checkbox"/> Acid/ Corrosive	<input type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Perimeter Bench See RDS 2.41	<input checked="" type="checkbox"/> Toxic	<input checked="" type="checkbox"/> Temperature
<input type="checkbox"/> Ceiling Mounted <input type="checkbox"/> Floor Mounted	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Acoustics
<input checked="" type="checkbox"/> Emergency <input type="checkbox"/> UPS		<input checked="" type="checkbox"/> Humidity
<input checked="" type="checkbox"/> 120V Note B.2		<input checked="" type="checkbox"/> Sound Isolation
<input checked="" type="checkbox"/> 208V Note B.2	<input checked="" type="checkbox"/> Flammable	<input type="checkbox"/> Radioactivity
<input type="checkbox"/> 480V	<input type="checkbox"/> Radioactive	<input checked="" type="checkbox"/> Other
<input type="checkbox"/> Data <input type="checkbox"/> Wi-Fi Router <input type="checkbox"/> Comm.		Note G.3
<input type="checkbox"/> Other		

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Level Note G.2	<input checked="" type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input checked="" type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input checked="" type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input checked="" type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type	
<input type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	
<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	

SECURITY
<input type="checkbox"/> CCTV
<input type="checkbox"/> Keyed Entry
<input type="checkbox"/> Access Control
<input checked="" type="checkbox"/> Other See RDS 2.41

Program ID: 2.41.1 Room Name: Open Lab - Mixing Department: _____

NOTES

A. Adjacencies: See RDS 2.41 Open Lab.

B. Equipment:

1. ~~Ceiling mounted hoist system~~, forklift, (2) gilson shakers, (1) floor scale, (1) oven, (3) mixers, (1) fractionator.
2. Refer to equipment matrix for additional equipment and the power, water, gas requirement.
3. For Hoist/ crane system information, Refer RDS 2.41 Note F.2.

C. Processes: Refer to the RDS for each area.

D. Primary Areas: None

E. Environmental Conditions:

1. Temperature: See RDS 2.41
2. Humidity: See RDS 2.41
3. Acoustic: See RDS 2.41

F. General Notes:

1. If a new mixer is needed in the future the mixer alone will take up 1 module.

G. RDS Notes:

1. Refer to the RDS 2.41 Open lab, unless noted otherwise.
2. Refer to the RDS 2.41, the lighting, mechanical, plumbing, power and data and, special requirement apply to all areas with the room, unless noted otherwise.
3. Sila dust shall be generated in this space and it requires general Dust collection.
4. Provide a countertop that is tough and durable. Provide 36" deep countertop along the perimeter.
5. Provide base cabinets under the Island Bench and perimeter with base cabinets below.
6. Provide sediment traps in the Concrete Pit located by the Mixers.

Program ID: 2.41.2 **Room Name:** Open Lab - Casting/Molding **Department:** Concrete
Quantity: 1 **Area (SF):** 544.5 **Occupants:** 6

Function: _____

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size
Note G.1	Note G.1	Note G.1	Note G.1	Note G.1	<input checked="" type="checkbox"/> Other Note G.1

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input checked="" type="checkbox"/> Lab Sink	<input checked="" type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input checked="" type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input checked="" type="checkbox"/> Other See Note G.7	<input checked="" type="checkbox"/> Floor Drain	<input checked="" type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input type="checkbox"/> Pressurization	<input type="checkbox"/> Scullery Sink	<input checked="" type="checkbox"/> Tall Cabinets
<input type="checkbox"/> Air Change Per Hour	<input type="checkbox"/> Floor Sink	<input checked="" type="checkbox"/> Tall Shelving
<input checked="" type="checkbox"/> Air Filtration (Supply and/or Exhaust) dust filtration	<input type="checkbox"/> Other	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input checked="" type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Perimeter Bench Duplex @ 24" O.C.	<input checked="" type="checkbox"/> Compressed air	<input checked="" type="checkbox"/> Temperature
<input type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Purified Water	<input checked="" type="checkbox"/> Acoustics
<input checked="" type="checkbox"/> Emergency	<input type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Humidity
<input checked="" type="checkbox"/> 120V	<input type="checkbox"/> Other/Specialty	<input checked="" type="checkbox"/> Sound Isolation
<input checked="" type="checkbox"/> 208V		<input type="checkbox"/> Radioactivity
<input checked="" type="checkbox"/> 480V		<input checked="" type="checkbox"/> Other
<input checked="" type="checkbox"/> Data		Dust collection
<input type="checkbox"/> Other		

HAZARDOUS MATERIAL STORAGE

<input checked="" type="checkbox"/> Acid/ Corrosive	<input checked="" type="checkbox"/> Flammable
<input checked="" type="checkbox"/> Toxic	<input type="checkbox"/> Radioactive
<input checked="" type="checkbox"/> Other	explosive

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Leve Note G.2	<input checked="" type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input checked="" type="checkbox"/> Task Light	<input checked="" type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input checked="" type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input checked="" type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	SECURITY
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type	<input type="checkbox"/> CCTV
<input type="checkbox"/> Natural Light	<input type="checkbox"/> Fire Extinguisher	<input type="checkbox"/> Keyed Entry
<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Access Control

Program ID: 2.41.2 Room Name: Open Lab - Casting/Molding Department:

NOTES

A. Adjacencies: See RDS 2.41 Open Lab.

B. Primary Equipment:

1. ~~Ceiling-mounted hoist system, forklift. Refer to the equipment matrix.~~ For Hoist/ crane system information, Refer RDS 2.41 Note .
2. Refer to equipment matrix for additional equipment and the power, water, gas requirement.

C. Processes:

D. Primary Areas: None

E. Environmental Conditions:

1. Temperature: See RDS 2.41
2. Humidity: See RDS 2.41
3. Acoustic: See RDS 2.41

F. General Notes:

G. RDS Notes:

1. Refer to the RDS 2.41 Open lab, unless noted otherwise.
2. Refer to the RDS 2.41, the lighting, mechanical, plumbing, power and data and, special requirement apply to all areas with the room, unless noted otherwise.
3. Refer to the architectural narratives.
4. Not used
5. Provide long tables with shelf below (probably 25' x 3') w/ room for cart to move around pans that have 4' diameter.
6. Provide a countertop that is tough and durable. Provide 36" deep countertop along the perimeter. Provide base cabinets under the Island Bench and perimeter casework.
7. Dust collection for the dust that shall be generated in this space.

Program ID: 2.41.3 **Room Name:** Open Lab - Curing Compound **Department:** _____
Quantity: 1 **Area (SF):** 363 **Occupants:** 6 **Concrete**
Function: _____

INTERIOR FINISHES

FLOORING	CEILINGS	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input type="checkbox"/> Cased opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size 8'x8'
Note G.1	Note G.1	Note G.1	Note G.1	Note G.1	

Note G.2

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input checked="" type="checkbox"/> Fume Hood Qty:1, Note G.5	<input checked="" type="checkbox"/> Lab Sink Note G.2	<input checked="" type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input checked="" type="checkbox"/> Hand Wash Note G.2	<input checked="" type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Floor Drain Note G.2	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization Note G.1	<input type="checkbox"/> Scullery Sink	<input checked="" type="checkbox"/> Tall Cabinets
<input type="checkbox"/> Air Change Per Hour	<input type="checkbox"/> Floor Sink	<input checked="" type="checkbox"/> Tall Shelving
<input checked="" type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input type="checkbox"/> Other	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Perimeter Bench Note G.2	<input type="checkbox"/> Compressed air	<input checked="" type="checkbox"/> Temperature Note E.1
<input type="checkbox"/> Ceiling Mounted <input type="checkbox"/> Floor Mounted	<input checked="" type="checkbox"/> Purified Water Type II (Env. Ch)	<input type="checkbox"/> Acoustics Note E.3
<input checked="" type="checkbox"/> Emergency <input type="checkbox"/> UPS	<input type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Humidity Note E.2
<input checked="" type="checkbox"/> 120V Refer note G.2	<input type="checkbox"/> Other/Specialty	<input type="checkbox"/> Sound Isolation
<input checked="" type="checkbox"/> 208V Refer note G.2		<input type="checkbox"/> Radioactivity
<input type="checkbox"/> 480V		<input checked="" type="checkbox"/> Other Dust collection

HAZARDOUS MATERIAL STORAGE

<input type="checkbox"/> Data <input type="checkbox"/> Wi-Fi Router <input type="checkbox"/> Comm.	<input type="checkbox"/> Acid/ Corrosive	<input checked="" type="checkbox"/> Flammable
<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Toxic	<input type="checkbox"/> Radioactive
	<input checked="" type="checkbox"/> Other	

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Level Note G.2	<input checked="" type="checkbox"/> Safety Shower Note G.1	<input type="checkbox"/> White Board
<input checked="" type="checkbox"/> Task Light	<input checked="" type="checkbox"/> Eyewash Note G.1	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input checked="" type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input checked="" type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type Note G.1	
<input type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher Note G.1	

SECURITY

<input type="checkbox"/> CCTV
<input type="checkbox"/> Keyed Entry
<input type="checkbox"/> Access Control

Program ID: 2.41.3 Room Name: Open Lab - Curing Compound Department:

NOTES

A. Adjacencies: See RDS 2.41 Open Lab.

B. Primary Equipment:

1. ~~Ceiling mounted hoist system, forklift,~~ (2) environmental chambers, (1) hood, (1) 76" worktable, (1) 97" worktable.
2. Refer to equipment matrix for additional equipment and the power, water, gas requirement required.

C. Processes:

D. Primary Areas: None

E. Environmental Conditions:

1. Temperature: See RDS 2.41
2. Humidity: See RDS 2.41
3. Acoustic: See RDS 2.41

F. General Notes:

1. Openness of lab allows for easier maneuvering of large carts to transport items.

G. RDS Notes:

1. Refer to the RDS 2.41 Open lab, unless noted otherwise.
2. Refer to the RDS 2.41, the lighting, mechanical, plumbing, power and data and, special requirement apply to all areas with the room, unless noted otherwise.
3. Not used
4. Refer to the architectural narratives.
5. 5' bench top fume hood for spraying curing compound

Program ID: 2.41.4 **Room Name:** Open Lab - Compression/Flexural Testing **Department:** Concrete
Quantity: 1 **Area (SF):** 363 **Occupants:** 6
Function: Compression / Flexural Testing

INTERIOR FINISHES

FLOORING	CEILINGS	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input type="checkbox"/> Cased opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size 8'x8'
Refer note D.1	Refer note D.1	Refer note D.1	Refer note D.1	Refer note D.1	<input type="checkbox"/> Other

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input checked="" type="checkbox"/> Lab Sink	<input checked="" type="checkbox"/> Mobile Casework
<input checked="" type="checkbox"/> Snorkel	<input checked="" type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework
<input checked="" type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization Note G.2	<input type="checkbox"/> Scullery Sink	<input checked="" type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour Note G.2	<input type="checkbox"/> Floor Sink	<input checked="" type="checkbox"/> Tall Shelving
<input checked="" type="checkbox"/> Air Filtration (Supply and/or Exhaust) dust filtration	<input type="checkbox"/> Other	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	STORAGE
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Lockers
<input checked="" type="checkbox"/> Perimeter Bench Duplex @ 24" O.C.	<input checked="" type="checkbox"/> Compressed air	<input type="checkbox"/> Mobile Cabinets
<input type="checkbox"/> Ceiling Mounted <input type="checkbox"/> Floor Mounted	<input type="checkbox"/> Purified Water	
<input checked="" type="checkbox"/> Emergency <input type="checkbox"/> UPS	<input checked="" type="checkbox"/> Vacuum	
<input checked="" type="checkbox"/> 120V Refer note B.2		
<input checked="" type="checkbox"/> 208V Refer note B.2	<input type="checkbox"/> Other/Specialty	
<input type="checkbox"/> 480V		

HAZARDOUS MATERIAL STORAGE	SPECIAL REQUIREMENTS
<input type="checkbox"/> Acid/ Corrosive <input checked="" type="checkbox"/> Flammable	<input checked="" type="checkbox"/> Vibration Control Note B.3
<input checked="" type="checkbox"/> Toxic <input type="checkbox"/> Radioactive	<input checked="" type="checkbox"/> Temperature Note E.1
<input checked="" type="checkbox"/> Other explosive	<input checked="" type="checkbox"/> Acoustics Note E.3
	<input checked="" type="checkbox"/> Humidity Note E.2
	<input type="checkbox"/> Sound Isolation
	<input type="checkbox"/> Radioactivity
	<input checked="" type="checkbox"/> Other Dust collection

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Level: <u>60-80 FC</u>	<input checked="" type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input checked="" type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input checked="" type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input checked="" type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type	
<input type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	

SECURITY
<input type="checkbox"/> CCTV
<input type="checkbox"/> Keyed Entry
<input checked="" type="checkbox"/> Access Control

Program ID: 2.41.4 Room Name: Open Lab - Compression/Flexural Testing Department:

NOTES

A. Adjacencies: See RDS 2.41 Open Lab.

B. Primary Equipment:

1. ~~ceiling mounted hoist system~~, forklift, currently have 3 instruments (2) compressive strength machines & (1) flexural strength machine), (1) vibrating table.
2. Refer to equipment matrix for additional equipment and the power, water, gas requirement.
3. Refer to equipment matrix for information for vibration sensitive equipment.

C. Processes:

D. Primary Areas: None

E. Environmental Conditions:

1. Temperature: See RDS 2.41
2. Humidity: See RDS 2.41
3. Acoustic: See RDS 2.41

F. General Notes:

1. The lab offices need to be directly attached to the lab space. This means we are more efficient in catching equipment malfunctions.

G. RDS Notes:

1. Refer to RDS 2.41
2. Refer to the RDS 2.41, the lighting, mechanical, plumbing, power and data and, special requirement apply to all areas with the room, unless noted otherwise.
3. Refer to the architectural narratives.
4. Any equipment sensitive vibration please refer to equipment matrix for information.

Program ID: 2.41.5 **Room Name:** Open Lab - Sample Receiving **Department:** Concrete
Quantity: 1 **Area (SF):** 242 **Occupants:** 6
Function: removed from Concrete program; to be a part of the building's main loading dock

INTERIOR FINISHES

FLOORING	CEILINGS	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size 6'x8'
See note G.1	See note G.1	See note G.1	See note G.1	See note G.1	<input checked="" type="checkbox"/> Other

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input checked="" type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input checked="" type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input type="checkbox"/> Pressurization	<input type="checkbox"/> Scullery Sink	<input checked="" type="checkbox"/> Tall Cabinets
<input type="checkbox"/> Air Change Per Hour	<input type="checkbox"/> Floor Sink	<input checked="" type="checkbox"/> Tall Shelving
<input checked="" type="checkbox"/> Air Filtration (Supply and/or Exhaust) Note G.1	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Vibration Control
<input type="checkbox"/> Perimeter Bench	<input checked="" type="checkbox"/> Compressed air	<input checked="" type="checkbox"/> Temperature Note E.1
<input type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Purified Water	<input checked="" type="checkbox"/> Acoustics Note E.3
<input checked="" type="checkbox"/> Emergency	<input type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Humidity Note E.2
<input checked="" type="checkbox"/> 120V	<input type="checkbox"/> Other/Specialty	<input type="checkbox"/> Sound Isolation
<input type="checkbox"/> 208V		<input type="checkbox"/> Radioactivity
<input type="checkbox"/> 480V		<input checked="" type="checkbox"/> Other Dust collection

HAZARDOUS MATERIAL STORAGE
<input type="checkbox"/> Acid/ Corrosive
<input checked="" type="checkbox"/> Toxic
<input checked="" type="checkbox"/> Other
<input type="checkbox"/> Flammable
<input type="checkbox"/> Radioactive
<input type="checkbox"/> explosive

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Level: Note G.2	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input checked="" type="checkbox"/> Task Light	<input type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input checked="" type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type	
<input checked="" type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	

SECURITY
<input type="checkbox"/> CCTV
<input type="checkbox"/> Keyed Entry
<input checked="" type="checkbox"/> Access Control

Program ID: 2.41.5 Room Name: Open Lab - Sample Receiving Department:

NOTES

A. Adjacencies: Direct adjacency to Aggregate Bulk Storage, Sorting and Logging and the loading dock.

B. Equipment:

- ~~Ceiling mounted hoist system from sampling receiving to the Mixing Area.~~ For Hoist/ crane system information, Refer RDS 2.41 Note F.2.
- Refer to equipment matrix for additional equipment and the power, water, gas requirement.

C. Processes:

D. Test Types: None

E. Environmental Conditions:

- Temperature: See RDS 2.41
- Humidity: See RDS 2.41
- Acoustic: See RDS 2.41

F. General Notes:

- Bulk Aggregate Bin Storage shall be located for easy loading of aggregate from the exterior of building and unloading from the interior of the mixing area.
Requirements for the Aggregate delivery system:
 - System should be similar to the existing setup with improved technology. See the attached information related to the material transfer chute concept diagram.
 - Request for access to the top of Aggregate bins to visual observe the material in the bins and for maintenance.
 - Request of interior shut- out valves to manually control the material flow from the bins to the interior of the mixing area.
- Sample Disposal – 55 gallon drum ferried by forklift to dumpster. Not optimal.
- Samples: Product list includes 17 qualified products: chemical, cure compounds, grouts, liquid polymers compounds (commercial product), 13 tons of sand.
 - Small Commercial Products -- delivered in quart and gallon cans.
 - Large Commercial Products- Truck delivery in pallets, 18" x 18" samples.
 - Raw material - includes bulk aggregate storage delivered via loading dock from outside and then transported into lab; 13 tons of sand, Aggregates Product (from Aggregates department).
 - Some samples came already molded. Smaller samples arrive by mail delivery and Larger materials by courier.
 - Purchase pallet of cement at a time ~3500lbs -- bulky and heavy.
- Purchase pallet of cement at a time ~3500lbs -- bulky and heavy.
- If not a part of the building's main loading dock, it should be 2 modules.

G. RDS Notes:

- Refer to RDS 2.41 for additional information.
- Refer to the RDS 2.41, the lighting, mechanical, plumbing, power and data and, special requirement apply to all areas with the room, unless noted otherwise.
- Refer to the architectural narratives.
- Provide Sediment traps.

Program ID: 2.41.5 Room Name: Open Lab - Sample Receiving Department: _____

EXISTING CONDITIONS:

Exterior Building View
Aggregate Delivery chutes



Interior Building View

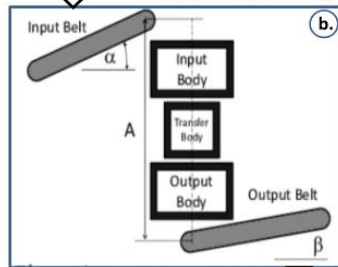


Concrete Interior shut-out panels

PROCESS OF DELIVERING AND TRANSFERING MATERIAL TO THE CONCRETE LAB:



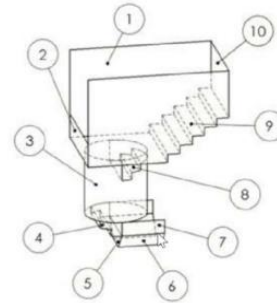
Elevation:
Material Transfer Chute



Material Bins shall located in Concrete Lab



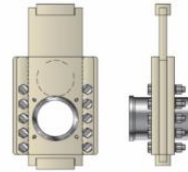
MATERIAL TRANSFER CHUTE:



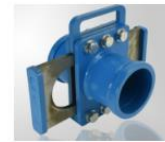
Section Axo: Material Transfer Chute

INTERIOR SHUT-OUT VALVES OPTIONS: (d.)

Controls the flow of material.



HAMMER SHUT-OFF VALVES WITH EXTRA HEAVY PLATES



Legend for Image C:

1. Anti-scatter side Plates
2. Black Contention plate
3. Transfer cylinder
4. Lower cylinder bed
5. Anti-backup plates
6. Centering plates
7. Unload skirt
8. Upper bed
9. Impact Bed
10. Faceplate

Reference Images a, b, c, d :
<https://diamond8concrete.com/how-volumetric-mixers-work/>

<https://conforms.com/products/lay-down-high-rise-systems/system-valves/manual-diversion-shutoff-valves/manual-heavy-hammer-shutoff-valve/>

CONCEPT DRAWINGS ARE REFERENCE INFORMATION DOCUMENTS AND ARE NOT CONSIDERED CONTRACT DOCUMENTS.

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CBD Project #630-442-057



HERA laboratory planners

Program ID: 2.42 **Room Name:** Polymer Concrete Testing **Department:** Concrete
Quantity: 1 **Area (SF):** 121 **Occupants:** 6
Function: testing noxious materials

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size 8' x 8'
See Note G.1	See note G.1	See note G.1	See note G.1	See note G.1	<input type="checkbox"/> Other

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input checked="" type="checkbox"/> Fume Hood Qty:1 , Note G.3	<input checked="" type="checkbox"/> Lab Sink	<input checked="" type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input checked="" type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization <u>negative</u>	<input type="checkbox"/> Scullery Sink	<input type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour <u>8 ACH</u>	<input type="checkbox"/> Floor Sink	<input checked="" type="checkbox"/> Tall Shelving
<input checked="" type="checkbox"/> Air Filtration (Supply and/or Exhaust) <u>dust filtration</u>	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	HAZARDOUS MATERIAL STORAGE	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Acid/ Corrosive	<input type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Perimeter Bench <u>Duplex @ 24" O.C.</u>	<input checked="" type="checkbox"/> Compressed air	<input checked="" type="checkbox"/> Flammable	<input checked="" type="checkbox"/> Temperature <u>Note E.1</u>
<input type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Purified Water	<input type="checkbox"/> Radioactive	<input type="checkbox"/> Acoustics
<input checked="" type="checkbox"/> Emergency	<input checked="" type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Humidity <u>Note E.1</u>
<input checked="" type="checkbox"/> 120V <u>Refer note B.2</u>	<input type="checkbox"/> Other/Specialty	<input checked="" type="checkbox"/> explosive	<input type="checkbox"/> Sound Isolation
<input checked="" type="checkbox"/> 208V <u>Refer note B.2</u>			<input type="checkbox"/> Radioactivity
<input type="checkbox"/> 480V			<input checked="" type="checkbox"/> Other <u>Dust collection</u>
<input checked="" type="checkbox"/> Data	<input type="checkbox"/> Wi-Fi Router <input type="checkbox"/> Comm.		
<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Building UPS and Emergency power		

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL	SECURITY
Ambient Light Level: <u>60-80 FC</u>	<input checked="" type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board	
<input type="checkbox"/> Task Light	<input checked="" type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor	
<input type="checkbox"/> Zoned Lighting	<input checked="" type="checkbox"/> Goggles	<input type="checkbox"/> Projection	
<input type="checkbox"/> Dimmer	<input checked="" type="checkbox"/> PPE		
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	<input type="checkbox"/> CCTV	
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type	<input type="checkbox"/> Keyed Entry	
<input checked="" type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	<input checked="" type="checkbox"/> Access Control	

Program ID: 2.42 Room Name: Polymer Concrete Testing Department:

NOTES

A. Adjacencies: Direct adjacency to 2.41 Concrete Open Lab

B. Primary Equipment:

1. Fume hood CFCI
2. Refer to equipment matrix for additional equipment and the power, water, gas requirement.

C. Processes:

D. Test types:

1. Polymer Test

E. Environmental Conditions:

1. Temperature: 68-74F +/- 2F
2. Humidity: 23-55%RH +/- 5%
3. Acoustic: NC-36

F. General Notes:

1. Ceilings shall be 12'-0" unless noted otherwise.
2. Low exhaust (near floor level) required in this room. Presently the polymer testing is being done outside due to hazardous fumes and lack of space in the existing lab.

G. RDS Notes:

1. Refer to RDS 2.41 open lab, unless noted otherwise.
2. Refer to equipment matrix for power, water, gas requirement etc.
3. Provide a floor mounted fume hood, draws the fumes downward to the floor in effort to push fumes away from the users.

Program ID: 2.43 **Room Name:** Salt Scale (Freezer Room) **Department:** Concrete
Quantity: 1 **Area (SF):** 242 **Occupants:** _____

Function: _____

INTERIOR FINISHES

FLOORING	CEILINGS	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input checked="" type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> Integral Cove	<input type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input checked="" type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input checked="" type="checkbox"/> CMU		<input checked="" type="checkbox"/> Height- 4"	<input type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size 6'x8'
Note G.1	Note G.1	Note G.1	Note G.1	Note G.1	<input checked="" type="checkbox"/> Other

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	STORAGE
<input type="checkbox"/> Pressurization	<input type="checkbox"/> Tall Cabinets
<input type="checkbox"/> Air Change Per Hour	<input type="checkbox"/> Tall Shelving
<input checked="" type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	MOBILE CABINETS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Mobile Cabinets
<input type="checkbox"/> Perimeter Bench	<input type="checkbox"/> Compressed air	
<input type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Purified Water	
<input checked="" type="checkbox"/> Emergency	<input type="checkbox"/> Vacuum	
<input type="checkbox"/> 120V	<input type="checkbox"/> Other/Specialty	
<input checked="" type="checkbox"/> 208V		
<input checked="" type="checkbox"/> 480V		
<input checked="" type="checkbox"/> Data		
<input checked="" type="checkbox"/> Other		

SPECIAL REQUIREMENTS
<input type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Temperature
<input type="checkbox"/> Acoustics
<input type="checkbox"/> Humidity
<input type="checkbox"/> Sound Isolation
<input type="checkbox"/> Radioactivity
<input type="checkbox"/> Other

HAZARDOUS MATERIAL STORAGE
<input type="checkbox"/> Acid/ Corrosive
<input type="checkbox"/> Toxic
<input type="checkbox"/> Other
<input type="checkbox"/> Flammable
<input type="checkbox"/> Radioactive

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Level <u>60-80 FC</u>	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input checked="" type="checkbox"/> Task Light	<input type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input type="checkbox"/> Sprinkler Type	
<input type="checkbox"/> Natural Light	<input type="checkbox"/> Fire Extinguisher	

SECURITY
<input type="checkbox"/> CCTV
<input type="checkbox"/> Keyed Entry
<input type="checkbox"/> Access Control

Program ID: 2.43 Room Name: Salt Scale (Freezer Room) Department: _____

NOTES

A. Adjacencies: Direct adjacency 2.41.1 Mixing and 2.44 Moist/Cure

B. Equipment: Large Premanufactured freezer room. All condensing units and humidity control must have redundancy.

C. Processes: temperature, humidity requirement in the freezer.

1. Temperature: $-18 \pm 2^{\circ}\text{C}$ ($0 \pm 3^{\circ}\text{F}$).
2. Humidity: No Humidity requirements.
3. Acoustic: No acoustic requirements.

D. Test Types: None

E. Environmental conditions: None

F. General Notes:

G. RDS Notes:

1. Final interior finishes to be selected by the Design Team selected for this project.
2. Refer to equipment matrix for power, water, gas requirement etc.

Program ID: 2.44 **Room Name:** Moist/Cure Area **Department:** Concrete
Quantity: 1 **Area (SF):** 242 **Occupants:** 6
Function: _____

INTERIOR FINISHES

FLOORING	CEILINGS	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input checked="" type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input checked="" type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input checked="" type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input checked="" type="checkbox"/> CMU	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Height- 4"	<input type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	mold/moist resist	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size 6'x8'
See note D.1	See note D.1	See note D.1	See note D.1	See note D.1	<input checked="" type="checkbox"/> Other

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input checked="" type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input type="checkbox"/> Hand Wash	<input type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input checked="" type="checkbox"/> Other <i>direct exhaust for moisture</i>	<input checked="" type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input type="checkbox"/> Pressurization	<input type="checkbox"/> Scullery Sink	<input type="checkbox"/> Tall Cabinets
<input type="checkbox"/> Air Change Per Hour	<input type="checkbox"/> Floor Sink	<input checked="" type="checkbox"/> Tall Shelving <i>Note G.3</i>
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Peg Board
	garden hose	<input type="checkbox"/> Lockers
		<input type="checkbox"/> Mobile Cabinets

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Perimeter Bench <i>Duplex @ 24" O.C.</i>	<input type="checkbox"/> Compressed air	<input type="checkbox"/> Temperature <i>see note E.1</i>
<input type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Purified Water	<input type="checkbox"/> Acoustics
<input type="checkbox"/> Emergency	<input type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Humidity <i>100%</i>
<input checked="" type="checkbox"/> 120V	<input type="checkbox"/> Other/Specialty	<input type="checkbox"/> Sound Isolation
<input checked="" type="checkbox"/> 208V		<input type="checkbox"/> Radioactivity
<input checked="" type="checkbox"/> 480V		<input checked="" type="checkbox"/> Other <i>Dust collection</i>

HAZARDOUS MATERIAL STORAGE
<input type="checkbox"/> Acid/ Corrosive
<input type="checkbox"/> Toxic
<input type="checkbox"/> Other
<input type="checkbox"/> Flammable
<input type="checkbox"/> Radioactive
<input type="checkbox"/> explosive

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Level <i>60-80 FC</i>	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input checked="" type="checkbox"/> Task Light <i>water proof</i>	<input type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type <i>Wet</i>	
<input type="checkbox"/> Natural Light	<input type="checkbox"/> Fire Extinguisher	

SECURITY
<input type="checkbox"/> CCTV
<input type="checkbox"/> Keyed Entry
<input checked="" type="checkbox"/> Access Control

Program ID: 2.44 Room Name: Moist/Cure Area Department: _____

NOTES

A. Adjacencies: Direct adjacency to 2.43 Salt Scale (Freezer), 2.41.2 Casting/Molding, 2.45 Freeze/Thaw, 2.41.4 Compression/Flexural Testing and Offices

B. Equipment: Provide a sprinkler system (misting System) with stainless steel tall shelving.

D. Primary Areas: Moist Cure is made up of one other zone:
2.44.1 Utility Room for Moist

E. Environmental Conditions: Refer to RDS sheet for each area.

1. Temperature: 73.4+/-2F (According to ASTM C 511)
2. Humidity: See RDS 2.41
3. Acoustic: See RDS 2.41

F. General Notes:

1. Currently this is shared with Cement.
2. Temperature and humidity requirements specific to tests performed.
3. There is heavy stuff in this room, so space is needed to move things around, as well as room to put things on the floor.
4. Shelving to storing samples and must be heavy duty and mold/moisture resistant.

G. RDS Notes:

1. Final interior finishes to be selected by the Design Team selected for this project.
2. Refer to equipment matrix for power, water, gas requirement etc.
3. Provide heavy duty and mold/moisture resistant shelving that can withstand the environment in the room.

Program ID: 2.44.1 **Room Name:** Utility Room for Moist **Department:** Concrete
Quantity: 1 **Area (SF):** 121 **Occupants:** 6
Function: _____

INTERIOR FINISHES

FLOORING	CEILINGS	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input checked="" type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input checked="" type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input checked="" type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input checked="" type="checkbox"/> CMU		<input checked="" type="checkbox"/> Height- 4"	<input checked="" type="checkbox"/> 48in
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size 6'x8'
Refer note D.1	Refer note D.1	Refer note D.1	Refer note D.1	Refer note D.1	

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input checked="" type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input checked="" type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input type="checkbox"/> Pressurization	<input type="checkbox"/> Scullery Sink	<input type="checkbox"/> Tall Cabinets
<input type="checkbox"/> Air Change Per Hour	<input type="checkbox"/> Floor Sink	<input checked="" type="checkbox"/> Tall Shelving
<input checked="" type="checkbox"/> Air Filtration (Supply and/or Exhaust) dust filtration	<input type="checkbox"/> Other	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Perimeter Bench Duplex @ 24" O.C.	<input type="checkbox"/> Compressed air	<input type="checkbox"/> Temperature see note F.2
<input type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Purified Water	<input type="checkbox"/> Acoustics
<input checked="" type="checkbox"/> Emergency	<input type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Humidity see note F.2
<input checked="" type="checkbox"/> 120V	<input type="checkbox"/> Other/Specialty	<input type="checkbox"/> Sound Isolation
<input checked="" type="checkbox"/> 208V		<input type="checkbox"/> Radioactivity
<input checked="" type="checkbox"/> 480V		<input type="checkbox"/> Other

HAZARDOUS MATERIAL STORAGE

<input type="checkbox"/> Data	<input type="checkbox"/> Wi-Fi Router	<input type="checkbox"/> Comm.	<input type="checkbox"/> Acid/ Corrosive	<input checked="" type="checkbox"/> Flammable	<input type="checkbox"/> Radioactivity
<input checked="" type="checkbox"/> Other	Building Emergency power		<input checked="" type="checkbox"/> Toxic	<input type="checkbox"/> Radioactive	<input type="checkbox"/> Other
			<input checked="" type="checkbox"/> Other	explosive	

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Level: <u>60-80 FC</u>	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input checked="" type="checkbox"/> Task Light	<input type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input checked="" type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type wet	
<input checked="" type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	

SECURITY

<input type="checkbox"/> CCTV	
<input type="checkbox"/> Keyed Entry	
<input checked="" type="checkbox"/> Access Control	Note D.2

Program ID: 2.44.1 Room Name: Utility Room for Moist Department: _____

NOTES

A. Adjacencies: Within 2.45 Freeze/Thaw Testing and directly adjacent to 2.41 Concrete - Open Lab, and Offices

B. Equipment: (1) sonometer, (1) length measurer (ft)

1. Refer to equipment matrix for power, water, gas requirement etc.

C. Processes: None

D. Primary Areas: None

E. Test Types: None

C. General Notes:

1. To be its own room within the 2.45 Freeze/Thaw Testing
2. Temperature and humidity requirements specific to tests performed.

D. RDS Notes:

1. Final interior finishes to be selected by the Design Team selected for this project.
2. Refer to RDS 2.45

Program ID: 2.45 **Room Name:** Freeze/Thaw Testing **Department:** Concrete
Quantity: 1 **Area (SF):** 1,452 **Occupants:** 6

Function: _____

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input checked="" type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input checked="" type="checkbox"/> Mold/Moisture	<input checked="" type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input checked="" type="checkbox"/> Open	<input checked="" type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input checked="" type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input checked="" type="checkbox"/> CMU		<input checked="" type="checkbox"/> Height- 4"	<input checked="" type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Opening 8' x 8'
Note E.1	Note E.1	Note E.1	Note E.1	Note E.1	

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input checked="" type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization <u>Negative (solvents)</u>	<input type="checkbox"/> Scullery Sink	<input checked="" type="checkbox"/> Tall Cabinets
<input type="checkbox"/> Air Change Per Hour	<input checked="" type="checkbox"/> Floor Sink	<input type="checkbox"/> Tall Shelving
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Peg Board
	Sump pit & pump; see note E2	

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Perimeter Bench <u>Refer note C.3</u>	<input checked="" type="checkbox"/> Compressed air <u>to (4) machines</u>	<input checked="" type="checkbox"/> Temperature <u>see note D.2</u>
<input type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Purified Water	<input type="checkbox"/> Acoustics
<input type="checkbox"/> Emergency	<input type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Humidity <u>see note D.2</u>
<input checked="" type="checkbox"/> 120V <u>Refer note C.3</u>	<input checked="" type="checkbox"/> Other/Specialty <u>cooled tap water</u>	<input type="checkbox"/> Sound Isolation
<input checked="" type="checkbox"/> 208V <u>Refer note C.3</u>		<input type="checkbox"/> Radioactivity
<input type="checkbox"/> 480V <u>Refer note C.3</u>		<input checked="" type="checkbox"/> Other <u>hoist system</u>
<input checked="" type="checkbox"/> Data		
<input checked="" type="checkbox"/> Other <u>See Lab Narrative for emergency power info</u>		

LIGHTING	HAZARDOUS MATERIAL STORAGE	VISUAL
Ambient Light Level: <u>60-80 FC</u>	<input type="checkbox"/> Acid/ Corrosive	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input checked="" type="checkbox"/> Toxic	<input type="checkbox"/> Monitor
<input checked="" type="checkbox"/> Zoned Lighting	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer		
<input type="checkbox"/> Occ Sensor		
<input type="checkbox"/> Window Treatment		
<input checked="" type="checkbox"/> Natural Light		

SAFETY EQUIP./FIRE PROTECTION	SECURITY
<input type="checkbox"/> Safety Shower	<input type="checkbox"/> CCTV
<input type="checkbox"/> Eyewash	<input type="checkbox"/> Keyed Entry
<input type="checkbox"/> Goggles	<input checked="" type="checkbox"/> Access Control <u>Note E.2</u>
<input type="checkbox"/> PPE	
<input type="checkbox"/> In-Use Signage	
<input checked="" type="checkbox"/> Sprinkler Type <u>see note C4</u>	
<input checked="" type="checkbox"/> Fire Extinguisher	

Program ID: 2.45 Room Name: Freeze/Thaw Testing Department:

NOTES

A. Adjacencies: Direct adjacency to 2.44 Moist/Cure, 2.41.4 Compression/Flexural Testing, 2.45.2 Length Meas. and Offices

B. Areas in Freeze/Thaw:

- 2.45.1 Tempering & Freeze Thaw Tank Systems
- 2.45.2 Exterior reservoir Tank
- 2.45.3 Length Measurement (as its own room within Freeze Thaw Testing)

C. Equipment:

1. (3) large freeze-thaw chambers. (~~on back up power, need cooled water for refrigeration~~). Need exterior access and shaded structure over the condenser units for the freeze-thaw chambers) (HVAC company that fabricated these is called Airmasters). Large tank that provides/stores water to the freeze-thaw chambers/cabinets is recommended by the manufacturer to be outside but still to be confirmed if above ground or below ground.
2. ~~Provide Hoist above chambers.~~ Contractor to provide a 1 ton hoist system, motor driven trolley attached to a bridge crane system mounted to structure above. Refer to layout in RDS 2.45 for coverage in room. The hoist shall move a sample racks with 18 concrete beams. Refer to Laboratory Narrative.
3. Refer to architectural narrative for power, water, gas requirement etc.
4. Wet pipe sprinklers located away from high voltage electrical equipment

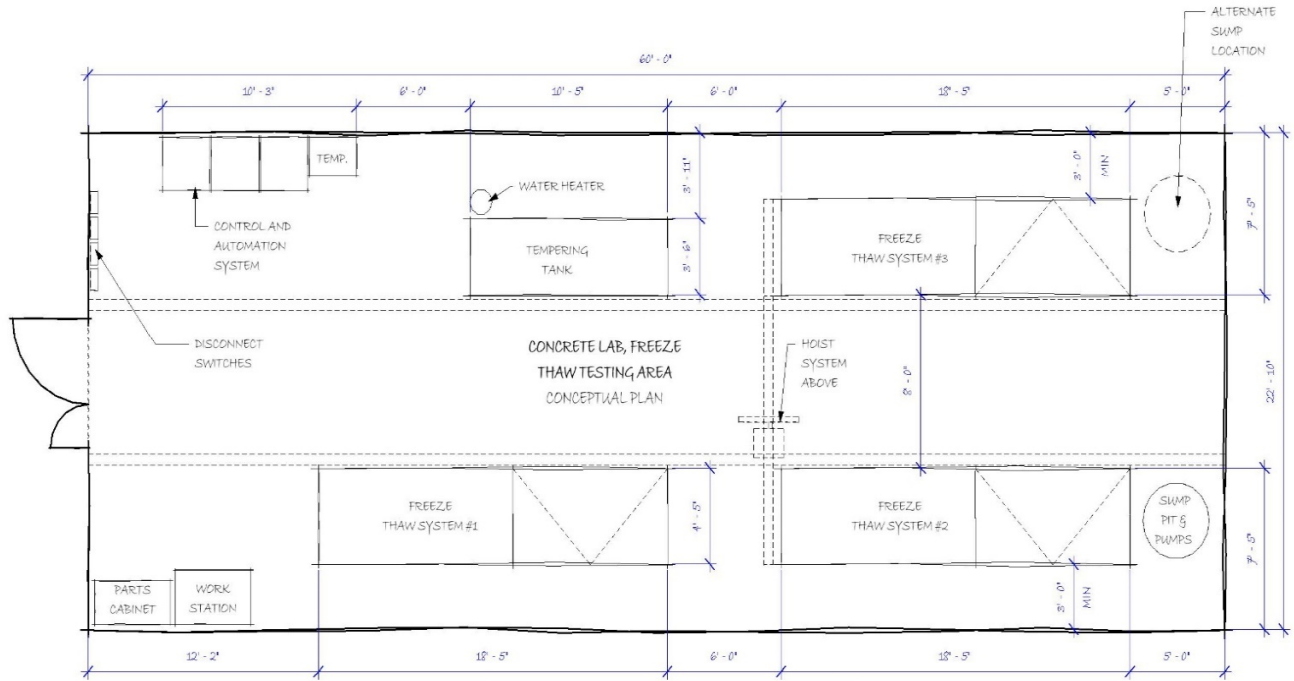
D. General Notes:

1. Openness of lab allows for easier maneuvering of large carts to transport items.
2. Temperature and humidity requirements specific to tests performed, refer to architectural narrative.
3. When test are complete samples are disposed off.
4. High voltage equipment that requires clearances due to the voltages.

E. RDS Notes:

1. Final interior finishes to be selected by the Design Team selected for this project.
2. Refer to architectural narrative.

Program ID: 2.45 Room Name: Freeze/Thaw Testing Department: _____



**Department of Transportation
New Materials Lab and Training Center**

Program ID: 2.51 **Room Name:** Open Lab **Department:** _____
Quantity: 1 **Area (SF):** 1028.5 **Occupancy:** 3 **Cement**
Function: The Cement Lab performs physical testing of cement and finely divided minerals (e.g., fly ash, slag cement) according to ASTM/AASHTO standards.

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input checked="" type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input checked="" type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input checked="" type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input checked="" type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input checked="" type="checkbox"/> CMU		<input checked="" type="checkbox"/> Height- 4"	<input type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size
Note G.1	Note G.1	Note G.1	Note G.1	Note G.1	

DUCTED LAB EQUIPMENT PLUMBING SERVICES CASEWORK

<input type="checkbox"/> Fume Hood		<input type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input checked="" type="checkbox"/> Snorkel	<u>Note E.5</u>	<input checked="" type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy		<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet		<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other		<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC Scullery Sink Note G.3 STORAGE

<input checked="" type="checkbox"/> Pressurization	<u>Negative</u>	<input type="checkbox"/> Floor Sink	<input type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour	<u>6 ACH min.</u>	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Tall Shelving
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)			<input type="checkbox"/> Peg Board
		<u>Sediment trap @ sink</u>	<input type="checkbox"/> Lockers
			<input type="checkbox"/> Mobile Cabinets

POWER AND DATA LABORATORY SERVICES SPECIAL REQUIREMENTS

<input type="checkbox"/> Island Bench		<input type="checkbox"/> Nitrogen	<input checked="" type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Perimeter Bench	<u>Duplex @ 24" O.C.</u>	<input checked="" type="checkbox"/> Compressed air	<input checked="" type="checkbox"/> Temperature
<input type="checkbox"/> Ceiling Mounted	<input checked="" type="checkbox"/> Floor Mounted	<input checked="" type="checkbox"/> Purified Water	<input checked="" type="checkbox"/> Acoustics
<input type="checkbox"/> Emergency	<input type="checkbox"/> UPS	<input checked="" type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Humidity
<input checked="" type="checkbox"/> 120V	<u>Note B.1</u>	<input type="checkbox"/> Other/Specialty	<input type="checkbox"/> Sound Isolation
<input checked="" type="checkbox"/> 208V	<u>Note B.1</u>		<input type="checkbox"/> Radioactivity
<input type="checkbox"/> 480V			<input checked="" type="checkbox"/> Other
<input checked="" type="checkbox"/> Data	<input checked="" type="checkbox"/> Wi-Fi Router <input type="checkbox"/> Comm.		<u>Silica Dust collection</u>
<input type="checkbox"/> Other			

HAZARDOUS MATERIAL STORAGE

<input type="checkbox"/> Acid/ Corrosive	<input type="checkbox"/> Flammable
<input type="checkbox"/> Toxic	<input type="checkbox"/> Radioactive
<input type="checkbox"/> Other	

LIGHTING SAFETY EQUIP./FIRE PROTECTION VISUAL

Ambient Light Leve	<u>60-80FC</u>	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light		<input checked="" type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting		<input checked="" type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer		<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor		<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment		<input checked="" type="checkbox"/> Sprinkler Type	
<input checked="" type="checkbox"/> Natural Light		<input checked="" type="checkbox"/> Fire Extinguisher	

SECURITY

<input type="checkbox"/> CCTV	
<input checked="" type="checkbox"/> Keyed Entry	<u>Note G.2</u>
<input checked="" type="checkbox"/> Access Control	<u>Note G.2</u>

**Department of Transportation
New Materials Lab and Training Center**

Program ID: <u>2.51</u>	Room Name: <u>Open Lab</u>	Department:
Quantity: <u>1</u>	Area (SF): <u>1028.5</u>	Occupancy: <u>3</u>
Cement		

NOTES

A. Adjacencies: Access to loading dock is not high-priority.

1. Main areas in the Open Lab:

2.51.1 Sample Logging/Breakdown :

Access to loading dock

2.51.3 Mixing/Time Sets/Autoclaves:

Direct connection to moisture #1

2.51.4 Mixing/ASR:

Direct connection to moisture #2, and adjacent to Length Measurement Area and the ovens

2.51.5 Mixing/CS/Air Content:

Direct connection to moisture #3

2.51.6 Length Measuring Area:

To the Mixing/Time Sets/Autoclaves area and the Mixing/ASR Testing

2.51.7 Compression:

Direct connection to Mixing/CS/Air Content and Moist Room

2.51.8 Disposal: Access to loading dock

B. Primary Equipment:

1. Equipment for the areas within the Open Lab: For additional equipment, refer to equipment matrix for power, water, gas requirements, etc.

2.51.1 Sample Logging/Breakdown : Blender with attachment (30"W x 15"D x 23"H),
Balance High Cap (14"W x 13"D x 5"H)

2.51.3 Mixing/Time Sets/Autoclaves:

Mixer, scale, 2 autoclaves on table (58"W x 18"D x 51"H)

2.51.4 Mixing/ASR:

Mixer, scale, ovens (Qty 3; 34"W x 23"D x 46"H, 28"W x 28"D x 64"H, 28"W x 28"D x 64"H),
incubators

2.51.5 Mixing/CS/Air Content:

Mixer, scale, Holding Tank with lime-saturated water in them (currently located in Moist Room,
and is accessible by a sealed metal door in the Moist Room's wall).

Flow table – standards specs, cork base (15"W x 15"D x 42"H)

2.51.6 Length Measuring Area:

Compression length equipment

2.51.7 Compression:

Compression Machine 300K (30"W x 24"D x 60"H) and cart-mounted holding tank

2.51.8 Disposal:

Disposal – 55 gallon drums, collect debris and cart to removal point.

C. Processes in the lab:

1. Paste/mortar mixing stations
2. Testing stations (e.g., set time, length, compressive strength, fineness)
3. Mold prep stations for cube molds and bar molds
4. Cleaning stations (i.e., sinks) for mixer bowls, paddles, etc.
5. Bulk material and sample storage

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 2.51 **Room Name:** Open Lab **Department:**
Quantity: 1 **Area (SF):** 1028.5 **Occupancy:** 3 **Cement**

D. Test:**2.51.3 Mixing/Time sets/Autoclaves**

2.51.3.a Sample Holding

2.51.4 Mixing/ASR:

2.51.4.a Sample Holding

2.51.5 Mixing/CS/Air Content: Compression stress test, air content (finess) test

2.51.5.a Sample Holding

2.51.6 Length Measuring Area: Length compression Test**2.51.7 Compression:** Forming of the Compression strength cubes and testing.E. Environmental Conditions:

1. Temperature: Not extremes, but the Cement Lab does require specific temperature and humidity controls/tolerances 23°C ±4.0 °C
2. Humidity: least 50% relative humidity
3. Acoustic: NC 36
4. Moist rooms/cabinets must be 23°C±2.0 °C and minimum 95% RH.
5. Dust Collection (silica):

2.51.3 Mixing/Time Sets/Autoclaves :	Provide dust collection via snorkels.
2.51.4 Mixing/ASR:	Provide dust collection via snorkels.
2.51.5 Mixing/CR/Air Content:	Provide dust collection via snorkels.
2.51.8 Disposal:	Provide Canopy/Hood for Silica Dust Collection

F. General Notes:

1. All testing is hands-on and test specimens are stored in a moist room* accessible from within the lab space.
2. Access to loading dock is not high-priority, since most samples and bulk materials received can be easily transported on a cart by in-house mail staff.
3. Seasonal volume fluctuations.
4. General notes per Primary areas:

2.51.1 Sample Logging/Breakdown

1. Receive/log/sort: 5 gallon drums, 25 cement samples, 25 fly ash sources, 15 sources of slag & micro silicas. Min. sample : 6lb powder
2. Approximately 600 samples are tested per year (each sample is a minimum 6lbs.)
3. samples are weighed then stored in mason jars and then moved into the labs for testing
4. Avoid scale interference due to air movement needed for dust control.
5. Silica Dust Collection via canopy over workstations

C. Storage:

1. Includes its own Sample Storage within Sample Logging/Breakdown (2.51.1.a)
2. More vertical storage rack space for sample storage. Offset space for bulk material storage (e.g., 5-gal buckets, bags of cement, boxes)

D. Sample Prep:

Air block for balances to reduce fluctuations in weights

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 2.51 **Room Name:** Open Lab **Department:**
Quantity: 1 **Area (SF):** 1028.5 **Occupancy:** 3 **Cement**

2.51.3 Mixing/Time Sets/Autoclaves

1. Mixing Stations: Provide heavy duty casework
2. Provide each station to have work spaces and sample holding.
3. Wash Stations:
 - a) Clean equipment.
 - b) Sediment removal.
 - c) Liners that can be removed/cleaned/replaced.
 - d) Stainless steel plate counter tops.
4. Mixers on top of the tables, and other equipment could be moved as you use them from the floor to the bench, etc.
5. At Mixing workstation: Provide a carboy of de- ionized water at each workstation

2.51.4 Mixing/ASR

1. Mixing Stations: Provide heavy duty casework.
2. Provide each station to have work spaces and sample holding.
3. Wash Stations:
 - a) Clean equipment.
 - b) Sediment removal.
 - c) Liners that can be removed/cleaned/replaced.
 - d) Stainless steel plate counter tops.
4. At Mixing workstation: Provide a carboy of de- ionized water at each workstation

2.51.5 Mixing/CR/Air Content

1. Mixing Stations: Provide heavy duty casework
2. Provide each station to have work spaces and sample holding.
3. Wash Stations:
 - a) Clean equipment
 - b) Sediment removal
 - c) Liners that can be removed/cleaned/replaced
 - d) Stainless steel plate counter tops
4. Mixers on top of the tables, and other equipment could be moved as you use them from the floor to the bench, etc.

2.51.6 Length Measured Area

1. Mixing Stations: Provide heavy duty casework.
2. Provide each station to have work spaces and sample holding.
3. Wash Stations:
 - a) Clean equipment.
 - b) Sediment removal.
 - c) Liners that can be removed/cleaned/replaced.
 - d) Stainless steel plate counter tops.

2.51.7 Compression Area:

1. Provide mixing workstation
2. Provide each station to have work spaces and sample holding.

2.51.8 Disposal: None.

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 2.51 **Room Name:** Open Lab **Department:**
Quantity: 1 **Area (SF):** 1028.5 **Occupancy:** 3 **Cement**

G. RDS Notes:

1. Final interior finishes to be selected by the Design Team selected for this project. Due to the high humidity requirements, the Interior Finishes of the lab area(s) need to be of a mold and moisture resistant material like sealed concrete or tile, not drywall or sheet flooring
2. Refer to Security narrative.
3. Provide one scullery sink in each of these areas 2.51.3 Mixing/Time set/Autoclaves, 2.51.4 Mixing/ASR, 2.51.5 Mixing/CS/Air Content area.

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 2.52 **Room Name:** Moist **Department**
Quantity: 1 **Area (SF):** 121 **Occupancy:** 3 **Cement**
Function: _____

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input checked="" type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> Integral Cove	<input type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input checked="" type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input checked="" type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input checked="" type="checkbox"/> Height- 4"	<input type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size
Note G.1	Note G.1	Note G.1	Note G.1	Note G.1	

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input type="checkbox"/> Hand Wash	<input type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization <u>Negative</u>	<input type="checkbox"/> Scullery Sink	<input type="checkbox"/> Tall Cabinets
<input type="checkbox"/> Air Change Per Hour	<input type="checkbox"/> Floor Sink	<input type="checkbox"/> Tall Shelving
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Peg Board
	Sediment trap @ sink	

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Vibration Control
<input type="checkbox"/> Perimeter Bench	<input checked="" type="checkbox"/> Compressed air	<input checked="" type="checkbox"/> Temperature <u>Note E.1</u>
<input checked="" type="checkbox"/> Ceiling Mounted	<input checked="" type="checkbox"/> Purified Water <u>DI water</u>	<input type="checkbox"/> Acoustics
<input type="checkbox"/> Emergency	<input type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Humidity <u>Note E.2</u>
<input checked="" type="checkbox"/> 120V	<input type="checkbox"/> Other/Specialty	<input type="checkbox"/> Sound Isolation
<input checked="" type="checkbox"/> 208V		<input type="checkbox"/> Radioactivity
<input type="checkbox"/> 480V		<input type="checkbox"/> Other

HAZARDOUS MATERIAL STORAGE
<input type="checkbox"/> Acid/ Corrosive
<input type="checkbox"/> Toxic
<input type="checkbox"/> Other
<input type="checkbox"/> Flammable
<input type="checkbox"/> Radioactive

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Leve <u>60-80fc</u>	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input checked="" type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input type="checkbox"/> Sprinkler Type	
<input type="checkbox"/> Natural Light	<input type="checkbox"/> Fire Extinguisher	

SECURITY
<input type="checkbox"/> CCTV
<input checked="" type="checkbox"/> Keyed Entry
<input type="checkbox"/> Access Control

**Department of Transportation
New Materials Lab and Training Center**

Program ID: <u>2.52</u>	Room Name: <u>Moist</u>	Department
Quantity: <u>1</u>	Area (SF): <u>121</u>	Cement
Occupancy: <u>3</u>		

NOTES

A. Adjacencies:

1. Refer to RDS 2.51 Open Lab.
2. Refer to the adjacency diagrams and concept diagrams.

B. Primary Equipment:

Moist cabinets

1. For additional equipment, refer to equipment matrix for power, water, gas requirements, etc.

C. Processes in the lab:

1. Paste/mortar mixing stations
2. Testing stations (e.g., set time, length, compressive strength, fineness)
3. Mold prep stations for cube molds and bar molds
4. Cleaning stations (i.e., sinks) for mixer bowls, paddles, etc.
5. Bulk material and sample storage.

D. Test Description: N/A

E. Environmental Conditions:

1. Temperature: Moist rooms/cabinets must be 23°C±2.0 °C
2. Humidity: minimum 95% RH.

F. General Notes:

1. Moist room is currently shared with the Concrete Lab, but will **NOT** in the new facility; the use of commercially-available moist cabinets may be an alternative option depending on capacities available.
Client to provide manufacturer and model number for moisture curing cabinet to confirm electrical and utility needs.

G. RDS Notes:

1. Final interior finishes to be selected by the Design Team selected for this project. Due to the high humidity requirements, the Interior Finishes of the lab area(s) need to be mold and moisture resistant material.

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 2.53 **Room Name:** Air Permeability **Department**
Quantity: 1 **Area (SF):** 121 **Occupancy:** 3 **Cement**
Function: Air permeability/fineness Test

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input checked="" type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input checked="" type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input checked="" type="checkbox"/> CMU		<input checked="" type="checkbox"/> Height- 4"	<input type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size min. 42" x8' H
Note G.1	Note G.1	Note G.1	Note G.1	Note G.1	

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input checked="" type="checkbox"/> Mobile Casework <u>carts</u>
<input type="checkbox"/> Snorkel	<input type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework <u>base cabinets</u>
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization <u>Negative</u>	<input checked="" type="checkbox"/> Scullery Sink	<input type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour <u>6-8 ACH</u>	<input type="checkbox"/> Floor Sink	<input checked="" type="checkbox"/> Tall Shelving <u>heavy duty</u>
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input checked="" type="checkbox"/> Other <u>Sediment trap @ sink. Refer note A3</u>	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Perimeter Bench <u>Duplex @ 24" O.C.</u>	<input checked="" type="checkbox"/> Compressed air <u>Note G.2</u>	<input checked="" type="checkbox"/> Temperature
<input type="checkbox"/> Ceiling Mounted	<input checked="" type="checkbox"/> Purified Water <u>DI water</u>	<input type="checkbox"/> Acoustics
<input type="checkbox"/> Emergency <u><input type="checkbox"/> UPS</u>	<input type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Humidity
<input checked="" type="checkbox"/> 120V <u>Note B.2</u>	<input checked="" type="checkbox"/> Other/Specialty <u>Note</u>	<input type="checkbox"/> Sound Isolation
<input checked="" type="checkbox"/> 208V <u>Note B.2</u>		<input type="checkbox"/> Radioactivity
<input checked="" type="checkbox"/> 480V <u>Note B.2</u>		<input type="checkbox"/> Other

HAZARDOUS MATERIAL STORAGE
<input type="checkbox"/> Acid/ Corrosive
<input type="checkbox"/> Toxic
<input type="checkbox"/> Other
<input type="checkbox"/> Flammable
<input type="checkbox"/> Radioactive

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Level <u>60-80FC</u>	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input checked="" type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type <u>Wet pipe</u>	
<input checked="" type="checkbox"/> Natural Light <u>if possible</u>	<input checked="" type="checkbox"/> Fire Extinguisher	

SECURITY
<input type="checkbox"/> CCTV
<input type="checkbox"/> Keyed Entry
<input type="checkbox"/> Access Control

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 2.53 **Room Name:** Air Permeability **Department**
Quantity: 1 **Area (SF):** 121 **Occupancy:** 3 **Cement**

NOTES

A. Adjacencies:

1. Refer to RDS 2.51 Open Lab.
2. Refer to the adjacency diagrams and concept diagrams.

B. Primary Equipment:

1. Ultrasonic cleaner (approximately 1x1x1 ft), Blaine apparatus (approximately 1x1x1.5 ft), Scale (approximately 1x1x1 ft), Hot plate (approximately 1.5x1.5x0.5 ft)
2. Air Permeability Workstation should be adjacent to faucet and sink. The faucet is fitted with a special piece to regulate flow per test requirements.

2. For additional equipment, refer to equipment matrix for power, water, gas requirements, etc.

C. Processes in the lab:

1. Paste/mortar mixing stations
2. Testing stations (e.g., set time, length, compressive strength, fineness)
3. Mold prep stations for cube molds and bar molds
4. Cleaning stations (i.e., sinks) for mixer bowls, paddles, etc.
5. Bulk material and sample storage.

D. Test Description:

325 Test- work area zone-

E. Environmental Conditions:

1. Temperature: Not extremes, but the Cement Lab does require specific temperature and humidity controls/tolerances 23°C ±4.0 °C
2. Humidity: least 50% relative humidity
3. Acoustic: NC 36
4. Dust collection:

F. General Notes:

1. The Air Permeability lab zone/area should be separate from the rest of the areas (i.e., those requiring high-humidity).
4. The scale is very sensitive so air movement can be problematic.
3. Air Permeability Workstation should be adjacent to faucet and sink. The faucet is fitted with a special piece to regulate flow per test requirements.

G. RDS Notes:

1. Final interior finishes to be selected by the Design Team selected for this project. This lab can accommodate a more conventional office interior finish.
2. Provide compressed air at multiple locations.

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 2.61 **Room Name:** Open Lab **Department:** _____
Quantity: 1 **Area (SF):** 726 **Occupants:** 4 **Soils**
Function: The Soils Lab analyzes soils and performs various testing to determine the engineering properties of the material for highway use.

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input checked="" type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input checked="" type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input checked="" type="checkbox"/> CMU		<input checked="" type="checkbox"/> Height- 4"	<input type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size Double- 6'x8'H
Note G.1	Note G.1	wall protection	Note G.1	Note G.1	

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework Base cabinets
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization Negative	<input checked="" type="checkbox"/> Scullery Sink	<input type="checkbox"/> Tall Cabinets
<input type="checkbox"/> Air Change Per Hour	<input type="checkbox"/> Floor Sink	<input checked="" type="checkbox"/> Tall Shelving
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Peg Board
	deep sink	<input type="checkbox"/> Lockers
	Sediment trap @ sink	<input type="checkbox"/> Mobile Cabinets

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input checked="" type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Perimeter Bench Duplex @ 24" O.C., type: Direct	<input checked="" type="checkbox"/> Compressed air air hose	<input checked="" type="checkbox"/> Temperature Note E.1
<input type="checkbox"/> Ceiling Mounted	<input checked="" type="checkbox"/> Purified Water DI water	<input checked="" type="checkbox"/> Acoustics Note E.2
<input type="checkbox"/> Emergency	<input checked="" type="checkbox"/> Vacuum Note F.2	<input checked="" type="checkbox"/> Humidity Note E.3
<input checked="" type="checkbox"/> 120V	<input type="checkbox"/> Other/Specialty	<input checked="" type="checkbox"/> Sound Isolation
<input checked="" type="checkbox"/> 208V		<input type="checkbox"/> Radioactivity
<input type="checkbox"/> 480V	HAZARDOUS MATERIAL STORAGE	<input checked="" type="checkbox"/> Other Dust collection
<input checked="" type="checkbox"/> Data	<input type="checkbox"/> Acid/ Corrosive	
<input type="checkbox"/> Other	<input type="checkbox"/> Toxic	
	<input type="checkbox"/> Other	
	<input type="checkbox"/> Flammable	
	<input type="checkbox"/> Radioactive	

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Level 70-80 FC	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input checked="" type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	SECURITY
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	<input type="checkbox"/> CCTV
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type wet	<input type="checkbox"/> Keyed Entry
<input checked="" type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	<input checked="" type="checkbox"/> Access Control Note G.2

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 2.61 **Room Name:** Open Lab **Department:**
Quantity: 1 **Area (SF):** 726 **Occupants:** 4 **Soils**

NOTES

A. Adjacencies: Open lab direct connection to the Breakdown/ Storage and dedicated loading dock. Close proximity to the EFA Room and Vibratory Room.

B. Equipment:

1. For additional equipment, refer to equipment matrix for power, water, gas requirements, etc.
2. List of the areas in the open labs:
 - 2.61.1 Classification Area:
oven (Qty 1), hydrometer (50"W x 14"D x 30"H, needs access to a sink for water baths and drain), desiccator (for gravity testing -- used for the gravity test for soils).
* client indicated that they are expecting new equipment, like a maryann chamber. **Mary Ann shaker shall be similar in size to the AG-25 in the Aggregate and shall be O.F.O.I. refer to equipment matrix. Provide electrical for the new Mary Ann equipment - 120V, 15A, coordinate with user Agency.**
 - 2.61.2 Conslidometers area:
Equipment (Machines 1&2 are on table w/ dimensions 33"W x 36"D x 73"H) (Machines 3-7 span dimensions 105"W x 36"D x 73"H) - Soil is crushed slowly to these the soil properties. Access need on both sides, pneumatic control.
 - 2.61.3 Equipment Zone/ Small Shelby Tube Area
Small Shelby Tube: compression test (Farnell 32"W x 24"D x 83"H) (Soil Test 20"W x 11"D x 31"H), pressurized test.
 - 2.61.5 Compression Area
 - 2.61.7 Triaxial Area:
Geocomp LoadTrac & FlowTrac-II (42"W x 29"D x 83"H), Geocomp LoadTrac (18"W x 21"D x 48"H), Geotac Sigma-1 (32"W x 16"D x 50"H), Future 12" Large Capacity Triaxial Frame & Pumps (42"W x 29"D x 83"H), crane - (future to lift heavier samples; don't want it to be in the open lab at all times, maybe large door to the vibratory lab).

3. Dust collection needed in these area.

C. Primary Areas:

1. In this open Lab we have these areas
 - 2.61.1 Classification
 - 2.61.2 Consolidometers
 - 2.61.3 Equipment Zone/ Small Shelby Tube Area
 - 2.61.4 Write-up Area
 - 2.61.5 Compression Area
 - 2.61.7 Triaxial Area

D. Test Description:

1. Shelby tube processing, i.e. triaxial, consolidation, unconfined compression and moisture determination.
2. Soils classifications, i.e. grain-size analysis, Atterberg Limits, moisture-density testing, specific gravity.
3. Soil subgrade modification/stabilization, base course stabilization, load bearing capacity (IBV).
4. MSE Wall select fill testing.
5. Hydraulic conductivity determination, intact rock core compression testing.

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 2.61 **Room Name:** Open Lab **Department:**
Quantity: 1 **Area (SF):** 726 **Occupants:** 4 **Soils**

E. Test Types:

1. Temperature: 72-75 +/-2F
2. Humidity: 23-55%RH+/- 5%
3. Acoustic: NC-36

F. General Notes:

1. Need heavy consistent vacuum for specific gravity (SPG) absolute zero.
2. Classification Area: These test do not generate a lot of dust. Cleaner space required.
3. Classification Area: Lots of glassware and tools, provide adequate storage

G. RDS Notes:

1. Final interior finishes to be selected by the Design Team selected for this project.
2. Refer to the Narratives for additional information.

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 2.62 **Room Name:** Breakdown Room **Department:** Soils
Quantity: 1 **Area (SF):** 847 **Occupants:** 4
Function: Log-in of all samples

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input checked="" type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input checked="" type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input checked="" type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input checked="" type="checkbox"/> CMU		<input checked="" type="checkbox"/> Height- 4"	<input checked="" type="checkbox"/> Cased Opening 6'W x 8'H
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size rolling door- 6'Wx8'H
Note G.1	Note G.1	Note G.1	Note G.1	Note G.1	

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other dust not to be drawn upwards	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization <u>Negative</u>	<input checked="" type="checkbox"/> Scullery Sink <u>deep</u>	<input type="checkbox"/> Tall Cabinets
<input type="checkbox"/> Air Change Per Hour <u>6-8 ACH</u>	<input type="checkbox"/> Floor Sink	<input checked="" type="checkbox"/> Tall Shelving <u>heavy duty</u>
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input checked="" type="checkbox"/> Other <u>Sediment trap @ sink</u>	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	LOCKERS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Mobile Cabinets
<input type="checkbox"/> Perimeter Bench <u>Duplex @ 24" O.C.</u>	<input checked="" type="checkbox"/> Compressed air <u>air hose</u>	
<input type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Purified Water	
<input type="checkbox"/> Emergency	<input type="checkbox"/> Vacuum	
<input checked="" type="checkbox"/> 120V <u>Note B.1</u>	<input type="checkbox"/> Other/Specialty	
<input type="checkbox"/> 208V		
<input type="checkbox"/> 480V		
<input checked="" type="checkbox"/> Data <u><input checked="" type="checkbox"/> Wi-Fi Router <input checked="" type="checkbox"/> Comm.</u>		
<input type="checkbox"/> Other		

HAZARDOUS MATERIAL STORAGE	SPECIAL REQUIREMENTS
<input type="checkbox"/> Acid/ Corrosive	<input type="checkbox"/> Vibration Control
<input type="checkbox"/> Toxic	<input checked="" type="checkbox"/> Temperature <u>Note E.1</u>
<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Acoustics <u>Note E.3</u>
<input type="checkbox"/> Flammable	<input checked="" type="checkbox"/> Humidity <u>Note E.2</u>
<input type="checkbox"/> Radioactive	<input type="checkbox"/> Sound Isolation
<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Radioactivity
	<input checked="" type="checkbox"/> Other <u>Dust collection</u>

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Leve <u>70-80 FC</u>	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input checked="" type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type <u>Wet</u>	
<input type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	

SECURITY
<input type="checkbox"/> CCTV
<input type="checkbox"/> Keyed Entry
<input checked="" type="checkbox"/> Access Control <u>Note G.2</u>

**Department of Transportation
New Materials Lab and Training Center**

Program ID:	2.62	Room Name:	Breakdown Room	Department:	
Quantity:	1	Area (SF):	847	Occupants:	4
				Soils	

NOTES

A. Adjacencies: Adjacency to open lab, vibratory lab, and EFA Room

B. Equipment: storage shelves to store drying trays.

1. For additional equipment, refer to equipment matrix for power, water, gas requirements, etc.

C. Area within Breakdown Room:

2.62.1 Storage

2.62.2 Proctor Area

2. Proctor and stiffness test- Dedicated island bench workstation

D. Test Description:

1. Proctor Area: Proctor and stiffness test

E. Room Requirements:

1. Temperature: 72-75 +/-2F

2. Humidity: 23-55%RH+/- 5%

3. Acoustic: NC-36

F. General Notes:

1. Breakdown: Logging in Station-computer station for logging in soil samples. Most soil samples comes in bags.

2. Breakdown: 2-3 tiers of shelving. Design team to provide lifting solutions to get material loaded on shelves.

3. Breakdown: Provide mesh mats for slip resistance.

4. Provide area under the island bench for storage of samples. Tall shelves near to the workstation for storage.

5. Proctor Area: Provide a dedicated island bench workstation

G. RDS Notes:

1. Final interior finishes to be selected by the Design Team selected for this project.

2. Refer to the Narratives for additional information.

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 2.63 **Room Name:** EFA Room **Department:** Soils
Quantity: 1 **Area (SF):** 121 **Occupants:** 4
Function: Space stores the Erosion Fine apparatus equipment(EFA), and some area for storage

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input checked="" type="checkbox"/> GWB	<input checked="" type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input checked="" type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input checked="" type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input checked="" type="checkbox"/> Height- 4"	<input type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size Double- 6'x8'H
Note G.1	Note G.1	Note G.1	water resistant	Note G.1	

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework Base; wall cabinet
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization <u>Negative</u>	<input type="checkbox"/> Scullery Sink	<input type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour <u>6-8 ACH</u>	<input type="checkbox"/> Floor Sink	<input checked="" type="checkbox"/> Tall Shelving for samples
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input checked="" type="checkbox"/> Other Sediment trap @ sink	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench <u>Power reals above</u>	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Perimeter Bench <u>Duplex @ 24" O.C.</u>	<input type="checkbox"/> Compressed air	<input checked="" type="checkbox"/> Temperature Note E.1
<input checked="" type="checkbox"/> Ceiling Mounted <input checked="" type="checkbox"/> Floor Mounted	<input type="checkbox"/> Purified Water	<input checked="" type="checkbox"/> Acoustics Note E.3
<input type="checkbox"/> Emergency <input type="checkbox"/> UPS	<input type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Humidity Note E.2
<input checked="" type="checkbox"/> 120V <u>Refer note B.1</u>	<input checked="" type="checkbox"/> Other/Specialty Note G.3	<input checked="" type="checkbox"/> Sound Isolation
<input checked="" type="checkbox"/> 208V <u>Refer note B.1</u>		
<input type="checkbox"/> 480V		

HAZARDOUS MATERIAL STORAGE
<input type="checkbox"/> Acid/ Corrosive
<input type="checkbox"/> Toxic
<input type="checkbox"/> Other
<input type="checkbox"/> Flammable
<input type="checkbox"/> Radioactive
<input type="checkbox"/> Other

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Leve <u>70-80FC</u>	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type Wet	
<input type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	

SECURITY
<input type="checkbox"/> CCTV
<input type="checkbox"/> Keyed Entry
<input checked="" type="checkbox"/> Access Control Note G.2

**Department of Transportation
New Materials Lab and Training Center**

Program ID: <u>2.63</u>	Room Name: <u>EFA Room</u>	Department:
Quantity: <u>1</u>	Area (SF): <u>121</u>	Occupants: <u>4</u>
		Soils

NOTES

A. Adjacencies: Refer to RDS 2.61

B. Equipment: EFA equipment (94"W x 40"D x 96"H)

1. For additional equipment, refer to equipment matrix for power, water, gas requirements, etc.
2. NOTE: In the existing space near the EFA are some equipment not be utilized for any of the existing test .
 - Compression machine used to crush rock cores. still in working condition in main Lab
 - All equipment to be relocated

C. Area within EFA Room:

2.63.1 Shelby Tube prep Area

D. Test Description: N/A

E. Test Types:

1. Temperature: 72-75 +/-2F
2. Humidity: 23-55%RH+/- 5%
3. Acoustic: NC-36

F. General Notes:

1. Room needs to be isolated from the main lab because it generates significant noise and generates a lot of heat. Maintain clearances around the unit to allow for proper equipment ventilation.
2. Provide mesh mats for slip resistance.

G. RDS Notes:

1. Final interior finishes to be selected by the Design Team selected for this project.
2. Refer to the Narratives for additional information.
3. Provide hot and cold water to the EFA equipment

**Department of Transportation
New Materials Lab and Training Center**

Program ID: 2.64 **Room Name:** Open Lab - Vibratory Lab **Department:** Soils
Quantity: 1 **Area (SF):** 121 **Occupants:** 2 min.
Function: Compacting test, resistivity test, proctor and stiffness test.

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input checked="" type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input checked="" type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input checked="" type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input checked="" type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size Double- 6'x8'H
Note G.1	Note G.1	Note G.1	Note G.1	Note G.1	

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input checked="" type="checkbox"/> Snorkel <u>Note G.3</u>	<input type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework <u>Base and wall</u>
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input checked="" type="checkbox"/> Counter Material
<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization <u>Negative</u>	<input type="checkbox"/> Scullery Sink	<input type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour <u>6-8 ACH</u>	<input type="checkbox"/> Floor Sink	<input checked="" type="checkbox"/> Tall Shelving
<input checked="" type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input type="checkbox"/> Other	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Perimeter Bench <u>Duplex @ 24" O.C.</u>	<input checked="" type="checkbox"/> Compressed air <u>air hose</u>	<input checked="" type="checkbox"/> Temperature <u>Note E.1</u>
<input type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Purified Water	<input checked="" type="checkbox"/> Acoustics <u>Note E.2</u>
<input type="checkbox"/> Emergency	<input type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Humidity <u>Note E.3</u>
<input checked="" type="checkbox"/> 120V <u>Note B.1</u>	<input type="checkbox"/> Other/Specialty	<input type="checkbox"/> Sound Isolation
<input checked="" type="checkbox"/> 208V <u>Note B.1</u>		<input type="checkbox"/> Radioactivity
<input type="checkbox"/> 480V		<input checked="" type="checkbox"/> Other <u>Dust collection system</u>

HAZARDOUS MATERIAL STORAGE
<input type="checkbox"/> Acid/ Corrosive <input type="checkbox"/> Flammable
<input type="checkbox"/> Toxic <input type="checkbox"/> Radioactive
<input type="checkbox"/> Other

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Leve <u>70-80FC</u>	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type <u>Wet</u>	
<input type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	

SECURITY
<input type="checkbox"/> CCTV
<input checked="" type="checkbox"/> Keyed Entry <u>Note G.2</u>
<input type="checkbox"/> Access Control

**Department of Transportation
New Materials Lab and Training Center**

Program ID:	2.64	Room Name:	Open Lab - Vibratory Lab	Department:
Quantity:	1	Area (SF):	121	Occupants:
			2 min.	Soils

NOTES

A. Adjacencies: adjacent to Breakdown room

B. Equipment: vibration table (30"W x 30"D x 21"H). ~~and gantry crane or hydraulic table~~ **The existing gantry crane shall be relocated to the new building by IDOT. The existing crane has no specific requirement for structural framing.**

1. For additional equipment, refer to equipment matrix for power, water, gas requirements, etc.

C. Tests:

1. Resistivity test- vibration sensitive test. Dedicated island bench workstation

D. Test Description: N/A

E. Environmental Conditions:

1. Temperature: 72-75 +/-2F

2. Humidity: 23-55%RH+/- 5%

3. Acoustic: NC-36

F. General Notes:

1. The vibratory table generates a lot of noise and some dust.

2. Most of the soil samples are air dried, provide adequate countertop for this activity. Need 2-3 tiers of shelving for storage of equipment for the vibratory testing.

3. Provide mesh mats for slip resistance.

4. Provide area under the island bench for storage of samples. Tall shelves near to the workstation for drying trays etc.

G. RDS Notes:

1. Final interior finishes to be selected by the Design Team selected for this project.

2. Refer to the Narratives for additional information.

3. Side draw would be preferable to a snorkel if there is a difference. It should be located near vibratory table.

**Department of Transportation
New Materials Lab and Training Center**

10/30/2023

Program ID: 2.71 **Room Name:** Instrument Lab **Department:** Chemistry
Quantity: 1 **Area (SF):** 726 **Occupancy:** 2
Function: _____

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input checked="" type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input checked="" type="checkbox"/> Sheet Flooring	<input checked="" type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input checked="" type="checkbox"/> Unistrut	<input checked="" type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input type="checkbox"/> Cased Opening
<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size <u>6' X 8'</u>

BUILDING SERVICES

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input checked="" type="checkbox"/> Fume Hood <u>Note B.2</u>	<input checked="" type="checkbox"/> Lab Sink <u>Qty:1</u>	<input checked="" type="checkbox"/> Mobile Casework
<input checked="" type="checkbox"/> Snorkel <u>for future equipment</u>	<input checked="" type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy	<input checked="" type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Floor Drain <u>for chiller</u>	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization <u>Negative</u>	<input type="checkbox"/> Scullery Sink	<input checked="" type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour <u>6 ACH</u>	<input type="checkbox"/> Floor Sink	<input type="checkbox"/> Tall Shelving
<input checked="" type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input checked="" type="checkbox"/> Other <u>Sediment trap @ sink</u>	<input type="checkbox"/> Peg Board
		<input type="checkbox"/> Lockers
		<input type="checkbox"/> Mobile Cabinets

POWER AND DATA	HAZARDOUS MATERIAL STORAGE	SPECIAL REQUIREMENTS
<input checked="" type="checkbox"/> Island Bench	<input checked="" type="checkbox"/> Nitrogen <u>G.5</u>	<input checked="" type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Perimeter Bench <u>Duplex @ 24" O.C.</u>	<input checked="" type="checkbox"/> Compressed air	<input checked="" type="checkbox"/> Temperature
<input type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Purified Water	<input type="checkbox"/> Acoustics
<input type="checkbox"/> Emergency <u>UPS</u>	<input type="checkbox"/> Vacuum	<input type="checkbox"/> Humidity
<input checked="" type="checkbox"/> 120V <u>Computer</u>	<input checked="" type="checkbox"/> Other/Specialty <u>Note G.4, G.5</u>	<input type="checkbox"/> Sound Isolation
<input checked="" type="checkbox"/> 208V <u>Electric Fluxer</u>		<input type="checkbox"/> Radioactivity
<input type="checkbox"/> 480V		<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Data <u>Wi-Fi Router Comm.</u>	<input checked="" type="checkbox"/> Acid/ Corrosive	
<input type="checkbox"/> Other <u>emergency power at all fumehoods</u>	<input type="checkbox"/> Toxic	
	<input type="checkbox"/> Other	
	<input checked="" type="checkbox"/> Flammable	
	<input type="checkbox"/> Radioactive	

LIGHTING	SAFETY / FIRE PROTECTION	VISUAL
Ambient Light Level: _____	<input checked="" type="checkbox"/> Safety Shower <u>Qty: 1</u>	<input checked="" type="checkbox"/> White Board
<input checked="" type="checkbox"/> Task Light	<input checked="" type="checkbox"/> Eyewash <u>at all sinks</u>	<input checked="" type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input checked="" type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type <u>Wet</u>	
<input type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	

SECURITY
<input type="checkbox"/> CCTV
<input type="checkbox"/> Keyed Entry
<input checked="" type="checkbox"/> Access Control

Program ID:	2.71	Room Name:	Instrument Lab	Department:
Quantity:	1	Area (SF):	726	Occupancy: 2
				Chemistry

NOTES

A. Adjacencies:

Refer to the adjacency diagrams.

B. Equipment:

1. Analytical Balances- (vibration sensitive). Refer to equipment matrix.
2. Refer to RDS for 2.71.1.

C. Processes associated with the lab area/ department:

1. X-ray Fluorescence Spectroscopy (XRF)
2. Fourier Transform Infrared Spectroscopy (FTIR)
3. Gas Chromatography (GC)
4. XRF sample preparation using a high temperature oven fluxer.

D. Primary Areas: Areas included sample prep lab

E. Environmental Conditions:

1. Temperature: 72-75 +/-2F
2. Humidity: 23-55%RH+/- 5%
3. Acoustic: NC-36

F. General Notes:

1. Lab needs to be close to central storage of compressed gases to reduce length of piping to instruments.
Space not required to be near loading dock. High bays not important.
2. Space must have appropriate electrical access, ample bench space, internet connections, gas/water availability, ventilation, etc. for potential new instrumentation.
3. Drain and separate space for XRF support equipment (UPS and water chiller). UPS generates a considerable amount of ambient heat. Chiller needs a floor drain.
4. No dust collection is required in the Chemistry Department.

G. RDS Notes:

1. Refer to equipment matrix for power, water, gas requirement etc.
2. Provide a countertop that is tough and durable. Provide 36" deep countertop along the perimeter.
3. Provide base cabinets under the Island Bench and perimeter with base cabinets below.
4. Natural gas line is not required, but a single bunsen burner would be beneficial for some sample preparation.
5. The instrument lab currently requires or will require new instrumentation nitrogen, helium, hydrogen, and P10 gases. The specific gases are not needed at the fume hoods. All specialty gases should be delivered by compressed cylinder and should be ultra-high purity.

**Department of Transportation
New Materials Lab and Training Center**

10/30/2023

Program ID: 2.72 **Room Name:** Bituminous Lab (QC) **Department:** Chemistry
Quantity: 1 **Area (SF):** 2178 **Occupancy:** 2
Function: _____

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input checked="" type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> GWB	<input checked="" type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input checked="" type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input checked="" type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input checked="" type="checkbox"/> Height- 4"	<input type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size <u>6' X 8'</u>
Note G.1	Note G.1	Note G.1	Note G.1		

BUILDING SERVICES

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input checked="" type="checkbox"/> Fume Hood <u>Note B.2</u>	<input checked="" type="checkbox"/> Lab Sink	<input checked="" type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input checked="" type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework <u>Store Sample</u>
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization <u>Note G.2</u>	<input type="checkbox"/> Scullery Sink	<input checked="" type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour <u>Note G.2</u>	<input type="checkbox"/> Floor Sink	<input type="checkbox"/> Tall Shelving
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input checked="" type="checkbox"/> Other <u>Sediment trap @ sink</u>	<input checked="" type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input checked="" type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Lockers
<input checked="" type="checkbox"/> Perimeter Bench <u>Duplex @ 24" O.C.</u>	<input checked="" type="checkbox"/> Compressed air <u>cylinders</u>	<input type="checkbox"/> Mobile Cabinets
<input type="checkbox"/> Ceiling Mounted <input checked="" type="checkbox"/> Floor Mounted	<input checked="" type="checkbox"/> Purified Water <u>Note G.7</u>	<input type="checkbox"/> Vibration Control
<input type="checkbox"/> Emergency <input type="checkbox"/> UPS	<input type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Temperature <u>Note E.1</u>
<input checked="" type="checkbox"/> 120V <u>Computer</u>	<input checked="" type="checkbox"/> Other/Specialty <u>CO2, Note G.6</u>	<input type="checkbox"/> Acoustics
<input checked="" type="checkbox"/> 208V <u>Future Equipment</u>	HAZARDOUS MATERIAL STORAGE	<input checked="" type="checkbox"/> Humidity <u>Note E.2</u>

HAZARDOUS MATERIAL STORAGE	HAZARDOUS MATERIAL STORAGE	HAZARDOUS MATERIAL STORAGE
<input checked="" type="checkbox"/> Data <u>Wi-Fi Router</u> <input type="checkbox"/> Comm.	<input checked="" type="checkbox"/> Acid/ Corrosive	<input checked="" type="checkbox"/> Flammable
<input checked="" type="checkbox"/> Other <u>emergency power at all fumehoods</u>	<input type="checkbox"/> Toxic	<input type="checkbox"/> Radioactive
	<input type="checkbox"/> Other	<input type="checkbox"/> Other

LIGHTING	SAFETY / FIRE PROTECTION	VISUAL
Ambient Light Level _____	<input checked="" type="checkbox"/> Safety Shower <u>Qty-2</u>	<input type="checkbox"/> White Board
<input checked="" type="checkbox"/> Task Light	<input checked="" type="checkbox"/> Eyewash <u>at all sink</u>	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input checked="" type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input checked="" type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	SECURITY
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type <u>wet</u>	<input type="checkbox"/> CCTV
<input type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	<input type="checkbox"/> Keyed Entry
<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Access Control
		<input checked="" type="checkbox"/> Other

Program ID:	2.72	Room Name:	Bituminous Lab (QC)	Department:
Quantity:	1	Area (SF):	2178	Occupancy: 2
				Chemistry

NOTES

A. Adjacency: Receives samples/materials from all other labs. Central location optimal. Refer to the adjacency diagrams.

B. Equipment:

1. Refer to equipment matrix.
2. Fume Hood:
 - a) Size: Fume Hoods are 48" W x 30" D- Qty:1
 - FH Utilities: Natural gas(NG), 3- 120V duplex electrical outlets(located at the back of FH), compressed air(CA), 1 specialty gas CO₂, Vacuum,
 - b) Size: Fume Hoods are 48" W x 30" D- Qty:1
 - FH Utilities: Natural gas(NG), 3- 120V duplex electrical outlets, compressed air(CA), 1 specialty gas CO₂, Vacuum.

C. Processes associated with the lab area/ department:

1. PG Asphalt Processes:
 - a. physical testing of products
 - b. Bending/stretching/folding/twisting of residues
 - c. Ductility machines – 2 machines for testing different temperatures
 - d. Cut back testing close to emulsifiers.
5. Improve lab visibility. Line of sight throughout lab. Clear above bench work areas.
6. Seasonal demand/processes.
7. Shared central water baths.
8. Cleaning oven to burn off asphalt residues
9. Crack-fill/seal Process (hot pour):
 - a. prep area/hood
 - b. Testing area
11. Shared refrigerator chemical storage. Refer/freezer.
12. Freeze/thaw freezer. Adjacent to sealer process.
13. Solvent cleaning/Solvent storage room.
14. Clean/dirty baths away from other areas.
15. Refer to RDS 2.72 for finishes and building systems, unless noted otherwise.

D. Primary Areas within the Lab:

- 2.72.1** Sort Log
- 2.72.2** Prep Area,
- 2.72.3** Hot Pour Sealer,
- 2.72.4** Emulsified Asphalt
- 2.72.5** Cutback Testing,
- 2.72.6** PG Asphalt,
- 2.72.7** Sample Store,
- 2.72.8** Naphtha Bath

E. Environmental Conditions:

1. Temperature: 72-75 +/-2F
2. Humidity: 23-55%RH +/- 5%
3. Acoustic: NC-36

Program ID:	<u>2.72</u>	Room Name:	<u>Bituminous Lab (QC)</u>	Department:	
Quantity:	<u>1</u>	Area (SF):	<u>2178</u>	Occupancy: <u>2</u>	Chemistry

F. General Notes:

1. Refer to equipment matrix for power, water, gas requirement etc.
2. Provide a countertop that is tough and durable. Provide 36" deep countertop along the perimeter.
3. Provide base cabinets under the Island Bench and perimeter with base cabinets below.
4. Provide floor drain below emergency showers, confirm requirements relating to the Plumbing building codes. This depends on the function and the contaminants in the lab.
5. Provide automatic switchover for each of the cylinder gases.
6. Carbon dioxide gas shall be provided via cylinders(OFOI), refer to Chemical storage (2.76)
7. Gas Purity: CO2 (quality: "100%" UN1013) and compressed air (quality: "Breathing Quality" UN1002) to be provided by cylinder.

G. RDS Notes:

1. Lab for interior finishes shall be finalized by the design team.
2. NOT USED
3. Refer to equipment matrix for power, water, gas requirement etc.
4. Provide a countertop that is tough and durable. Provide 36" deep countertop along the perimeter.
5. Provide base cabinets under the Island Bench and perimeter with base cabinets below.
- 6.
7. Plumbed Type I DI water

**Department of Transportation
New Materials Lab and Training Center**

10/30/2023

Program ID: 2.72.1 **Room Name:** Bituminous Lab (QC) - Sort/Log **Department:** Chemistry
Quantity: 1 **Area (SF):** 121 **Occupancy:** 2
Function: _____

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input checked="" type="checkbox"/> Cased opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Door Size
Note G.1	Note G.1	Note G.1	Note G.1		from the lab

BUILDING SERVICES

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input checked="" type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization	<input type="checkbox"/> Scullery Sink	<input type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour	<input type="checkbox"/> Floor Sink	<input checked="" type="checkbox"/> Tall Shelving
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Peg Board
	Sediment trap @ sink	<input type="checkbox"/> Lockers

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Perimeter Bench	<input type="checkbox"/> Compressed air	<input checked="" type="checkbox"/> Temperature
<input type="checkbox"/> Ceiling Mounted	<input checked="" type="checkbox"/> Purified Water	<input checked="" type="checkbox"/> Acoustics
<input type="checkbox"/> Emergency	<input type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Humidity
<input checked="" type="checkbox"/> 120V	<input type="checkbox"/> Other/Specialty	<input type="checkbox"/> Sound Isolation
<input type="checkbox"/> 208V		<input type="checkbox"/> Radioactivity
<input type="checkbox"/> 480V		<input checked="" type="checkbox"/> Other

HAZARDOUS MATERIAL STORAGE		
<input checked="" type="checkbox"/> Data	<input type="checkbox"/> Acid/ Corrosive	<input type="checkbox"/> Flammable
<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Toxic	<input type="checkbox"/> Radioactive
	<input type="checkbox"/> Other	

LIGHTING	SAFETY / FIRE PROTECTION	VISUAL
Ambient Light Leve	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type	
<input checked="" type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	
<input type="checkbox"/> Other	<input type="checkbox"/> Other	

SECURITY
<input type="checkbox"/> CCTV
<input type="checkbox"/> Keyed Entry
<input type="checkbox"/> Access Control
<input checked="" type="checkbox"/> Other

Program ID:	2.72.1	Room Name:	Bituminous Lab (QC) - Sort/Log	Department:	
Quantity:	1	Area (SF):	121	Occupancy: 2	Chemistry

NOTES

A. Adjacency:

Refer to the adjacency diagrams.

B. Equipment:

1. Refer to equipment matrix.
2. Requires PC Workstation

C. Processes associated with the lab area/ department:

1. Sample receiving
2. Room will be utilized by District Inspectors and Mail Room Staff.

D. Primary Areas:

1. None

E. Environmental Conditions:

1. Temperature: Refer to RDS 2.72
2. Humidity: Refer to RDS 2.72
3. Acoustic: Refer to RDS 2.72

F. General Notes:

1. Shared with the Bituminous Lab

G. RDS Notes:

1. Refer to the RDS 2.72 Open lab for interior finishes, unless noted otherwise.
2. Refer to the RDS 2.72 unless noted otherwise.
3. Refer to equipment matrix for power, water, gas requirement etc.
4. Provide a countertop that is tough and durable. Provide 36" deep countertop along the perimeter.
5. Provide base cabinets under the Island Bench and perimeter with base cabinets below.

**Department of Transportation
New Materials Lab and Training Center**

10/30/2023

Program ID: 2.72.3 **Room Name:** Bituminous Lab (QC) - Hot Pour Sealer **Department:** Chemistry
Quantity: 1 **Area (SF):** 363 **Occupancy:** 2

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input checked="" type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input checked="" type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input type="checkbox"/> 48in
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size
Note G.1	Note G.1	Note G.1	Note G.1	Note G.1	6' X 8'

BUILDING SERVICES

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input checked="" type="checkbox"/> Fume Hood	<input checked="" type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input checked="" type="checkbox"/> Hand Wash	<input type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization	<input type="checkbox"/> Scullery Sink	<input checked="" type="checkbox"/> Tall Cabinets
Note G.4	<input type="checkbox"/> Floor Sink	<input type="checkbox"/> Tall Shelving
<input checked="" type="checkbox"/> Air Change Per Hour	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Peg Board
Note G.4		<input type="checkbox"/> Lockers
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)		<input type="checkbox"/> Mobile Cabinets

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Perimeter Bench	<input type="checkbox"/> Compressed air	<input checked="" type="checkbox"/> Temperature
Duplex @ 24" O.C.	<input type="checkbox"/> Purified Water	<input type="checkbox"/> Acoustics
<input type="checkbox"/> Ceiling Mounted	<input checked="" type="checkbox"/> Floor Mounted	<input checked="" type="checkbox"/> Humidity
<input type="checkbox"/> Emergency	<input type="checkbox"/> UPS	<input type="checkbox"/> Sound Isolation
<input checked="" type="checkbox"/> 120V	Computer	<input type="checkbox"/> Radioactivity
<input checked="" type="checkbox"/> 208V	Equipment Bond Tester	<input type="checkbox"/> Other
<input type="checkbox"/> 480V		
<input checked="" type="checkbox"/> Data	<input checked="" type="checkbox"/> Wi-Fi Router	
<input type="checkbox"/> Other	<input type="checkbox"/> Comm.	

HAZARDOUS MATERIAL STORAGE

<input type="checkbox"/> Acid/ Corrosive	<input type="checkbox"/> Flammable
<input type="checkbox"/> Toxic	<input type="checkbox"/> Radioactive
<input type="checkbox"/> Other	

LIGHTING	SAFETY / FIRE PROTECTION	VISUAL
Ambient Light Level	<input checked="" type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input checked="" type="checkbox"/> Task Light	<input checked="" type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input checked="" type="checkbox"/> PPE	
<input checked="" type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	SECURITY
<input type="checkbox"/> Window Treatment	<input type="checkbox"/> Sprinkler Type	<input type="checkbox"/> CCTV
<input type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	<input type="checkbox"/> Keyed Entry
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Access Control
See RDS 2.72	See RDS 2.72	<input checked="" type="checkbox"/> Other
		See RDS 2.72

Program ID:	2.72.3	Room Name:	Bituminous Lab (QC) - Hot Pour Sealer	Department:	
Quantity:	1	Area (SF):	363	Occupancy: 2	Chemistry

NOTES

A. Adjacency:

Refer to the adjacency diagrams

B. Equipment:

1. Melter (oil bath and stirrer)

C. Processes associated with the lab area/ department:

1. Fume Hood for cutting blocks of product for melting. Can double as test specimen pouring area. (cups & blocks)

D. Primary Areas:

1. None

E. Environmental Conditions:

1. Temperature: Refer to RDS 2.72
2. Humidity: Refer to RDS 2.72
3. Acoustic: Refer to RDS 2.72

F. General Notes:

1. Refer to equipment matrix for power, water, gas requirement etc.

G. RDS SHEET NOTES

1. Refer to RDS 2.72 for finishes and building systems, unless noted otherwise.
2. Provide a countertop that is tough and durable. Provide 36" deep countertop along the perimeter.
3. Provide base cabinets under the Island Bench and perimeter with base cabinets below.
4. Refer to RDS 2.72

**Department of Transportation
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10/30/2023

Program ID: 2.72.4 **Room Name:** Bituminous Lab (QC) - Emulsified Asphalt **Department:** Chemistry
Quantity: 1 **Area (SF):** 484 **Occupancy:** 2

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size <u>6' X 8'</u>
Note F.1	Note F.1	Note F.1	Note F.1	Note F.1	

BUILDING SERVICES

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input checked="" type="checkbox"/> Fume Hood	<input checked="" type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input checked="" type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input checked="" type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	STORAGE
<input checked="" type="checkbox"/> Pressurization <u>Note F.2</u>	<input checked="" type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour <u>Note F.2</u>	<input type="checkbox"/> Tall Shelving
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Perimeter Bench <u>Duplex @ 24" O.C.</u>	<input checked="" type="checkbox"/> Compressed air	<input type="checkbox"/> Temperature <u>Note E.1</u>
<input type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Purified Water	<input type="checkbox"/> Acoustics
<input type="checkbox"/> Emergency	<input checked="" type="checkbox"/> Vacuum <u>Solubility Testing</u>	<input checked="" type="checkbox"/> Humidity <u>Note E.2</u>
<input checked="" type="checkbox"/> 120V <u>Computer</u>	<input type="checkbox"/> Other/Specialty	<input type="checkbox"/> Sound Isolation
<input type="checkbox"/> 208V		<input type="checkbox"/> Radioactivity
<input type="checkbox"/> 480V		<input type="checkbox"/> Other

HAZARDOUS MATERIAL STORAGE
<input type="checkbox"/> Acid/ Corrosive
<input checked="" type="checkbox"/> Flammable
<input type="checkbox"/> Toxic
<input type="checkbox"/> Radioactive
<input type="checkbox"/> Other

LIGHTING	SAFETY / FIRE PROTECTION	VISUAL
Ambient Light Level	<input checked="" type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input checked="" type="checkbox"/> Task Light	<input checked="" type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input checked="" type="checkbox"/> PPE	
<input checked="" type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	SECURITY
<input type="checkbox"/> Window Treatment	<input type="checkbox"/> Sprinkler Type	<input type="checkbox"/> CCTV
<input type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	<input type="checkbox"/> Keyed Entry
<input checked="" type="checkbox"/> Other <u>See RDS 2.72</u>	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Access Control
		<input checked="" type="checkbox"/> Other <u>See RDS 2.72</u>

Program ID:	<u>2.72.4</u>	Room Name:	<u>Bituminous Lab (QC) - Emulsified Asphalt</u>	Department:		
Quantity:	<u>1</u>	Area (SF):	<u>484</u>	Occupancy:	<u>2</u>	Chemistry

NOTES

A. Adjacency:

Refer to the adjacency diagrams.

B. Equipment:

1. Distillers

C. Processes associated with the lab area/ department:

1. Prep area to pour up and prep test specimens
2. Area to accommodate two distillation apparatus.

D. Primary Areas:

1. None

E. Environmental Conditions:

1. Temperature: Refer to RDS 2.72
2. Humidity: Refer to RDS 2.72
3. Acoustic: Refer to RDS 2.72

F. RDS NOTE:

1. Refer to RDS 2.72 for finishes and building systems, unless noted otherwise.
2. Refer to RDS 2.72.

**Department of Transportation
New Materials Lab and Training Center**

10/30/2023

Program ID: 2.72.5 **Room Name:** Bituminous Lab (QC) - Cutback Testing **Department:** Chemistry
Quantity: 1 **Area (SF):** 363 **Occupancy:** 2

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input type="checkbox"/> 48in
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size
Note G.1	Note G.1	Note G.1	Note G.1	Note G.1	6' X 8'

BUILDING SERVICES

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input checked="" type="checkbox"/> Fume Hood	<input checked="" type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input checked="" type="checkbox"/> Hand Wash	<input type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization	<input type="checkbox"/> Scullery Sink	<input checked="" type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour	<input type="checkbox"/> Floor Sink	<input type="checkbox"/> Tall Shelving
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Peg Board
		<input type="checkbox"/> Lockers
		<input type="checkbox"/> Mobile Cabinets

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Perimeter Bench	<input type="checkbox"/> Compressed air	<input checked="" type="checkbox"/> Temperature
<input type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Purified Water	<input type="checkbox"/> Acoustics
<input type="checkbox"/> Emergency	<input checked="" type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Humidity
<input checked="" type="checkbox"/> 120V	<input type="checkbox"/> Other/Specialty	<input type="checkbox"/> Sound Isolation
<input type="checkbox"/> 208V		<input type="checkbox"/> Radioactivity
<input type="checkbox"/> 480V		<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Data		
<input type="checkbox"/> Other		

HAZARDOUS MATERIAL STORAGE

<input type="checkbox"/> Acid/ Corrosive	<input checked="" type="checkbox"/> Flammable
<input type="checkbox"/> Toxic	<input type="checkbox"/> Radioactive
<input type="checkbox"/> Other	

LIGHTING	SAFETY / FIRE PROTECTION	VISUAL
Ambient Light Level	<input checked="" type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input checked="" type="checkbox"/> Task Light	<input checked="" type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input checked="" type="checkbox"/> PPE	
<input checked="" type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input type="checkbox"/> Sprinkler Type	
<input type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	

SECURITY

<input type="checkbox"/> CCTV
<input type="checkbox"/> Keyed Entry
<input checked="" type="checkbox"/> Access Control
<input checked="" type="checkbox"/> Other

Program ID:	<u>2.72.5</u>	Room Name:	<u>Bituminous Lab (QC) - Cutback Testing</u>	Department:
Quantity:	<u>1</u>	Area (SF):	<u>363</u>	Occupancy: 2
				Chemistry

NOTES

A. Adjacency:

Refer to the adjacency diagrams.

B. Equipment:

Refer to equipment Matrix for equipment.

C. Processes associated with the lab area/ department:

1. Prep area to pour up for viscosity and distillation.
2. Fume Hood for distillation apparatus (room for one is fine)
3. Area for vis baths w/ vacuum for cleaning.

D. Primary Areas:

1. None

E. Environmental Conditions:

1. Temperature: Refer to RDS 2.72
2. Humidity: Refer to RDS 2.72
3. Acoustic: Refer to RDS 2.72

F. General Notes:

None

G. RDS Notes:

1. Refer to RDS 2.72 for finishes and building systems, unless noted otherwise.
2. Refer to RDS 2.72 .

**Department of Transportation
New Materials Lab and Training Center**

10/30/2023

Program ID: 2.72.6 **Room Name:** Bituminous Lab (QC) - PG Asphalt **Department:** Chemistry
Quantity: 1 **Area (SF):** 847 **Occupancy:** 2

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input type="checkbox"/> 48in
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size
Note E.1	Note E.1	Note E.1	Note E.1	Note E.1	6' X 8'

BUILDING SERVICES

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input checked="" type="checkbox"/> Fume Hood	<input checked="" type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input checked="" type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework
<input checked="" type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	STORAGE
<input checked="" type="checkbox"/> Pressurization	<input checked="" type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour <u>6 ACH</u>	<input type="checkbox"/> Tall Shelving
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input checked="" type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Perimeter Bench	<input checked="" type="checkbox"/> Compressed air	<input checked="" type="checkbox"/> Temperature
<input type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Purified Water	<input type="checkbox"/> Acoustics
<input type="checkbox"/> Emergency	<input type="checkbox"/> Vacuum	<input type="checkbox"/> Humidity
<input checked="" type="checkbox"/> 120V	<input checked="" type="checkbox"/> Other/Specialty	<input type="checkbox"/> Sound Isolation
<input checked="" type="checkbox"/> 208V		<input type="checkbox"/> Radioactivity
<input type="checkbox"/> 480V		<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Data		
<input type="checkbox"/> Other		

HAZARDOUS MATERIAL STORAGE

<input type="checkbox"/> Acid/ Corrosive	<input type="checkbox"/> Flammable
<input type="checkbox"/> Toxic	<input checked="" type="checkbox"/> Radioactive
<input type="checkbox"/> Other	

LIGHTING	SAFETY / FIRE PROTECTION	VISUAL
Ambient Light Level	<input checked="" type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input checked="" type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input checked="" type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input type="checkbox"/> Sprinkler Type	
<input type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	

SECURITY

<input type="checkbox"/> CCTV
<input type="checkbox"/> Keyed Entry
<input type="checkbox"/> Access Control
<input checked="" type="checkbox"/> Other

Program ID:	<u>2.72.6</u>	Room Name:	<u>Bituminous Lab (QC) - PG Asphalt</u>	Department:		
Quantity:	<u>1</u>	Area (SF):	<u>847</u>	Occupancy:	<u>2</u>	Chemistry

NOTES

A. Adjacency:

Refer to the adjacency diagrams.

B. Equipment:

C. Processes associated with the lab area/ department:

1. Prep area to pour up.
2. DSRs and BBRs together in one place (vibration free surface)
3. RTFOs together under canopy w/area for pouring up bottles and PAV pans
4. PAV together in one area to run air lines from tanks and UPS.

D. Primary Areas:

1. None

E. Environmental Conditions:

1. Temperature: Refer to RDS 2.72
2. Humidity: Refer to RDS 2.72
3. Acoustic: Refer to RDS 2.72

F. General Notes:

G. RDS Notes:

1. Refer to RDS 2.72 for finishes and building systems, unless noted otherwise.

**Department of Transportation
New Materials Lab and Training Center**

10/30/2023

Program ID: 2.72.7 **Room Name:** Bituminous Lab (QC) - Sample Storage **Department:** Chemistry
Quantity: 1 **Area (SF):** 181.5 **Occupancy:** 2

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input checked="" type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input checked="" type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input type="checkbox"/> 48in
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size
Note G.1	Note G.1	Note G.1	Note G.1	Note G.1	6' X 8'

BUILDING SERVICES

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	STORAGE
<input checked="" type="checkbox"/> Pressurization <u>Negative</u>	<input checked="" type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour <u>6 ACH</u>	<input checked="" type="checkbox"/> Tall Shelving
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Perimeter Bench <u>Duplex @ 24" O.C.</u>	<input type="checkbox"/> Compressed air	<input type="checkbox"/> Temperature <u>Note G.1</u>
<input type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Purified Water	<input type="checkbox"/> Acoustics
<input type="checkbox"/> Emergency	<input type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Humidity <u>Note G.2</u>
<input checked="" type="checkbox"/> 120V <u>Computer</u>	<input type="checkbox"/> Other/Specialty	<input type="checkbox"/> Sound Isolation
<input type="checkbox"/> 208V		<input type="checkbox"/> Radioactivity
<input type="checkbox"/> 480V		<input type="checkbox"/> Other

HAZARDOUS MATERIAL STORAGE

<input checked="" type="checkbox"/> Data <input checked="" type="checkbox"/> Wi-Fi Router <input type="checkbox"/> Comm.	<input type="checkbox"/> Acid/ Corrosive	<input type="checkbox"/> Flammable
<input type="checkbox"/> Other	<input type="checkbox"/> Toxic	<input type="checkbox"/> Radioactive
	<input type="checkbox"/> Other	

LIGHTING	SAFETY / FIRE PROTECTION	VISUAL
Ambient Light Level	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input checked="" type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	SECURITY
<input type="checkbox"/> Window Treatment	<input type="checkbox"/> Sprinkler Type	<input type="checkbox"/> CCTV
<input type="checkbox"/> Natural Light	<input type="checkbox"/> Fire Extinguisher	<input type="checkbox"/> Keyed Entry
<input checked="" type="checkbox"/> Other <u>See RDS 2.72</u>	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Access Control
		<input checked="" type="checkbox"/> Other <u>See RDS 2.72</u>

Program ID:	<u>2.72.7</u>	Room Name:	<u>Bituminous Lab (QC) - Sample Storage</u>	Department:		
Quantity:	<u>1</u>	Area (SF):	<u>181.5</u>	Occupancy:	<u>2</u>	Chemistry

NOTES

A. Adjacency:

Refer to the adjacency diagrams.

B. Equipment:

C. Processes associated with the lab area/ department:

1. Ideal space would allow one season worth of completed samples storage (collected APR to NOV)
2. Allows for retesting of samples should issues arise in future field projects.

D. Primary Areas:

1. None

E. Environmental Conditions:

1. Temperature: Refer to RDS 2.72
2. Humidity: Refer to RDS 2.72
3. Acoustic: Refer to RDS 2.72

F. General Notes:

G. RDS Notes:

1. Refer to RDS 2.72 for finishes and building systems, unless noted otherwise.

**Department of Transportation
New Materials Lab and Training Center**

10/30/2023

Program ID: 2.72.8 **Room Name:** Bituminous Lab (QC) - Naphtha Bath **Department:** Chemistry
Quantity: 1 **Area (SF):** 181.5 **Occupancy:** 2

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input type="checkbox"/> 48in
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size
					<u>6' X 8'</u>

BUILDING SERVICES

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input checked="" type="checkbox"/> Fume Hood <u>Note B.1</u>	<input type="checkbox"/> Lab Sink	<input checked="" type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input checked="" type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input checked="" type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	STORAGE
<input checked="" type="checkbox"/> Pressurization <u>Negative</u>	<input type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour <u>6 ACH</u>	<input checked="" type="checkbox"/> Tall Shelving
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Perimeter Bench <u>Duplex @ 24" O.C.</u>	<input type="checkbox"/> Compressed air	<input checked="" type="checkbox"/> Temperature
<input type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Purified Water	<input type="checkbox"/> Acoustics
<input type="checkbox"/> Emergency	<input type="checkbox"/> Vacuum	<input type="checkbox"/> Humidity
<input checked="" type="checkbox"/> 120V <u>Computer</u>	<input type="checkbox"/> Other/Specialty	<input type="checkbox"/> Sound Isolation
<input type="checkbox"/> 208V		<input type="checkbox"/> Radioactivity
<input type="checkbox"/> 480V		<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Data <u>Wi-Fi Router</u> <input type="checkbox"/> Comm.		
<input type="checkbox"/> Other		

HAZARDOUS MATERIAL STORAGE

<input type="checkbox"/> Acid/ Corrosive	<input checked="" type="checkbox"/> Flammable
<input type="checkbox"/> Toxic	<input type="checkbox"/> Radioactive
<input type="checkbox"/> Other	

LIGHTING	SAFETY / FIRE PROTECTION	VISUAL
Ambient Light Level	<input checked="" type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input checked="" type="checkbox"/> Task Light	<input checked="" type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input checked="" type="checkbox"/> PPE	
<input checked="" type="checkbox"/> Occ Sensor	<input checked="" type="checkbox"/> In-Use Signage	SECURITY
<input type="checkbox"/> Window Treatment	<input type="checkbox"/> Sprinkler Type	<input type="checkbox"/> CCTV
<input type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	<input type="checkbox"/> Keyed Entry
<input checked="" type="checkbox"/> Other <u>See RDS 2.72</u>	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Access Control
		<input checked="" type="checkbox"/> Other <u>See RDS 2.72</u>

Program ID:	<u>2.72.8</u>	Room Name:	<u>Bituminous Lab (QC) - Naphtha Bath</u>	Department:	
Quantity:	<u>1</u>	Area (SF):	<u>181.5</u>	Occupancy: 2	Chemistry

NOTES

A. Adjacency:

Refer to the adjacency diagrams.

B. Equipment:

1. (2) Fume Hoods, floor mounted, 36D x 51W (ID) for parts washers used to clean labware to ventilate solvent fumes.

C. Processes associated with the lab area/ department:

1. Parts washer currently located in Chem Storage area (not ideal)
2. Ideally would have its own dedicated space for dish washing and drying.
3. Would also be good to have a sink and drying rack for the dishes in same area.

D. Primary Areas:

1. None

E. Test Types:

1. Provide list of test and the humidity and temperature requirements need for each area.

F. General Notes:

1. Refer to RDS 2.72 for finishes and building systems, unless noted otherwise.

**Department of Transportation
New Materials Lab and Training Center**

10/30/2023

Program ID: 2.73 **Room Name:** Analytical Lab **Department:** Chemistry
Quantity: 1 **Area (SF):** 1452 **Occupancy:** 2

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input checked="" type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input checked="" type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input checked="" type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input checked="" type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input checked="" type="checkbox"/> Height- 4"	<input type="checkbox"/> Cased Opening
<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size <u>6'W X 8'H</u>

BUILDING SERVICES

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input checked="" type="checkbox"/> Fume Hood <u>Note B.2</u>	<input checked="" type="checkbox"/> Lab Sink	<input checked="" type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input checked="" type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy	<input checked="" type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	STORAGE
<input checked="" type="checkbox"/> Pressurization <u>Negative</u>	<input checked="" type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour <u>6 ACH</u>	<input checked="" type="checkbox"/> Tall Shelving
<input checked="" type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input checked="" type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input checked="" type="checkbox"/> Vibration Control <u>Note B.1</u>
<input checked="" type="checkbox"/> Perimeter Bench <u>Duplex @ 24" O.C.</u>	<input checked="" type="checkbox"/> Compressed air <u>note G.5</u>	<input checked="" type="checkbox"/> Temperature <u>Note E.1</u>
<input type="checkbox"/> Ceiling Mounted	<input checked="" type="checkbox"/> Purified Water <u>Note G.1</u>	<input type="checkbox"/> Acoustics
<input type="checkbox"/> Emergency	<input checked="" type="checkbox"/> Vacuum <u>Note G.2</u>	<input checked="" type="checkbox"/> Humidity <u>Note E.2</u>
<input checked="" type="checkbox"/> 120V <u>Computer</u>	<input type="checkbox"/> Specialty Gas	<input type="checkbox"/> Sound Isolation
<input checked="" type="checkbox"/> 208V <u>Equipment</u>	<input checked="" type="checkbox"/> Other/Specialty <u>Note G.4</u>	<input type="checkbox"/> Radioactivity
<input type="checkbox"/> 480V		<input type="checkbox"/> Other

HAZARDOUS MATERIAL STORAGE		
<input checked="" type="checkbox"/> Data <u>Wi-Fi Router</u>	<input checked="" type="checkbox"/> Acid/ Corrosive	<input checked="" type="checkbox"/> Flammable
<input checked="" type="checkbox"/> Other <u>emergency power at all fumehood</u>	<input type="checkbox"/> Toxic	<input type="checkbox"/> Radioactive
	<input checked="" type="checkbox"/> Other	<u>Note B.2</u>

LIGHTING	SAFETY / FIRE PROTECTION	VISUAL
Ambient Light Level	<input checked="" type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input checked="" type="checkbox"/> Task Light	<input checked="" type="checkbox"/> Eyewash <u>at all sinks</u>	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input checked="" type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	SECURITY
<input type="checkbox"/> Window Treatment	<input type="checkbox"/> Sprinkler Type	<input type="checkbox"/> CCTV
<input type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	<input type="checkbox"/> Keyed Entry
<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Access Control
		<input type="checkbox"/> Other

Program ID:	<u>2.73</u>	Room Name:	<u>Analytical Lab</u>	Department:
Quantity:	<u>1</u>	Area (SF):	<u>1452</u>	<u>Chemistry</u>

NOTES

A. Adjacency: Centralized area for service to other labs. Samples and equipment. Adjacent office proximity is acceptable. Refer to the adjacency diagrams.

B. Equipment:

1. Analytical Balances- (vibration sensitive).
2. Fume Hoods: Current hoods are various different sizes, but would prefer larger hoods for testing purposes.
 - a) Fume hood Size: 6'-0" wide or 8' wide.
 - Fume hood Utilities: Natural gas for Bunsen burners, compressed air (CA), vacuum. Two to three 120V duplex inside fume hood. Specialty gas: Carbon dioxide.
 - b) Fume hood : Atomic Absorption Instrument (AA)- Qty-1
FH Size: 6'-0" wide.
 - FH Utilities: Natural gas(NG) for Bunsen burners, compressed air, and vacuum. Three 120V duplex outlets inside fume hood.
 - Specialty gases: Nitrous Oxide and Acetylene are provided by cylinders. Nitrous oxide's purity should be UN1070 – AA grade -minimum purity specification 99.0%
 - Requires a 120V

One fume hood is dedicated to the Atomic Absorption Instrument (AA), for ventilating, and it currently has a snorkel vent located over the burner head.

C. Processes associated with the lab area/ department:

1. Material processing station – Sample log in
2. Cementitious testing – wet chemistry and instrument preparation
3. Wet chemistry testing to be conducted in fume hoods
4. Paint testing – Bridge and traffic paint
5. Thermoplastic materials – sample prep and testing areas
6. Retroreflective materials – Material prep station and photometric range: sign sheeting, pavement tape, and reflectors
7. Rock salt – separate testing area to insure cross contamination with the cementitious testing
8. Camsizer instrument – gradation for glass beads – thermoplastic material
9. Accelerated weathering – bridge paint, traffic marking materials, and reflective sheeting
10. Waste disposal – requires fume hood and sink
11. Field investigation storage area
12. Parts washer currently located in Chem Storage area (not ideal)
13. A dedicated space for dish washing and drying is preferred.
14. All sink shall have a drying rack for the dishes.

D. Primary Areas:

- 2.73.1 Sort/Log,
- 2.73.2 Cementitious
- 2.73.3 "Everything Else"
- 2.73.4 Weather Lab
- 2.73.5 Photometric Lab
- 2.73.6 Analytical Salt Lab
- 2.73.7 Analytical Thermoplastic Lab

E. Environmental Conditions:

1. Temperature: 72-75 +/-2F
2. Humidity: 45%RH+/- 5%
3. Acoustic: NC-36

Program ID:	<u>2.73</u>	Room Name:	<u>Analytical Lab</u>	Department:		
Quantity:	<u>1</u>	Area (SF):	<u>1452</u>	Occupancy:	<u>2</u>	Chemistry

F. General Notes:

1. CA (from building compressed air source), and vacuum line for filtration purposes (has own vacuum pump but would need a location for storage/operation).
2. Photometric Range and Weathering Acceleration.
3. Sample area for receiving and distribution. Open sample prep space.
4. Proximity for process: testing/hoods/ovens.
5. Lab process non-linear, more triangular between operations.
6. Sample prep for photometric range in photometric area.
7. Compressed air "Breathing Quality" UN1002
8. Chemical used in the labs:
 - Nitrous Oxide – UN1070 – AA grade -minimum purity specification 99.0% *Requires a 120V outlet near cylinder for heating manifold
 - Acetylene – UN1001 – AA grade -minimum purity specification 99.6% *CAUTION: Acetylene may react with copper to form a potentially explosive compound. Copper tubing or fittings for acetylene gas must be strictly avoided.
9. Specialty gases piping (Ultra High Purity):
 - Provide stainless steel piping to ensure a clean gas source is provided to the equipment, refer to plumbing Narrative

G. RDS Notes:

1. Plumbed Type I DI water
2. Provide a vacuum cabinet for the existing vacuum pump that shall provide vacuum to the FH.
3. Provide CA(from building compressed air source).
4. Provide piped natural gas to gas valves at benchtop used for a variety of test applications.
5. Compressed Air is also required for some equipment refer to equipment matrix.

**Department of Transportation
New Materials Lab and Training Center**

10/30/2023

Program ID: 2.73.2 **Room Name:** Analytical Lab - Cementitious **Department:** _____
Quantity: 1 **Area (SF):** 605 **Occupancy:** 2 **Chemistry**

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input type="checkbox"/> 48in
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size <u>6' X 8'</u>

BUILDING SERVICES

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input checked="" type="checkbox"/> Fume Hood <u>QTY-5 Size: 6'-0"</u>	<input type="checkbox"/> Lab Sink	<input checked="" type="checkbox"/> Mobile Casework
<input checked="" type="checkbox"/> Snorkel <u>at AA station</u>	<input checked="" type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework
<input checked="" type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization <u>Note G.2</u>	<input type="checkbox"/> Scullery Sink	<input checked="" type="checkbox"/> Tall Cabinets
<input type="checkbox"/> Air Change Per Hour <u>Note G.2</u>	<input type="checkbox"/> Floor Sink	<input checked="" type="checkbox"/> Tall Shelving
<input checked="" type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input checked="" type="checkbox"/> Other <u>Sediment trap @ sink</u>	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Lockers
<input checked="" type="checkbox"/> Perimeter Bench <u>Duplex @ 24" O.C.</u>	<input checked="" type="checkbox"/> Compressed air <u>via air compressor</u>	<input type="checkbox"/> Mobile Cabinets
<input type="checkbox"/> Ceiling Mounted <input checked="" type="checkbox"/> Floor Mounted	<input checked="" type="checkbox"/> Purified Water <u>Type 1</u>	<input checked="" type="checkbox"/> Vibration Control <u>Note B.2</u>
<input type="checkbox"/> Emergency <input type="checkbox"/> UPS	<input checked="" type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Temperature
<input checked="" type="checkbox"/> 120V <u>Computer</u>	<input checked="" type="checkbox"/> Other/Specialty <u>Nitrous / Acetylene</u>	<input type="checkbox"/> Acoustics
<input checked="" type="checkbox"/> 208V		<input checked="" type="checkbox"/> Humidity
<input type="checkbox"/> 480V		<input type="checkbox"/> Sound Isolation

HAZARDOUS MATERIAL STORAGE	HAZARDOUS MATERIAL STORAGE	HAZARDOUS MATERIAL STORAGE
<input checked="" type="checkbox"/> Data <input checked="" type="checkbox"/> WiFi Router <input type="checkbox"/> Comm.	<input checked="" type="checkbox"/> Acid/ Corrosive	<input checked="" type="checkbox"/> Flammable
<input checked="" type="checkbox"/> Other <u>emergency power at all fumehoods</u>	<input type="checkbox"/> Toxic	<input type="checkbox"/> Radiative
	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Other

LIGHTING	SAFETY / FIRE PROTECTION	VISUAL
Ambient Light Level: _____	<input checked="" type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input checked="" type="checkbox"/> Task Light	<input checked="" type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input checked="" type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	SECURITY
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type	<input type="checkbox"/> CCTV
<input type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	<input type="checkbox"/> Keyed Entry
<input checked="" type="checkbox"/> Other <u>See RDS 2.73</u>	<input checked="" type="checkbox"/> Other <u>See RDS 2.73</u>	<input type="checkbox"/> Access Control
		<input checked="" type="checkbox"/> Other <u>See RDS 2.73</u>

Program ID:	<u>2.73.2</u>	Room Name:	<u>Analytical Lab - Cementitious</u>	Department:		
Quantity:	<u>1</u>	Area (SF):	<u>605</u>	Occupancy:	<u>2</u>	Chemistry

NOTES

A. Adjacency:

Most not be in close proximity to the salt testing room.
Refer to the adjacency diagrams.

B. Equipment:

1. vaccuum pump.- types of vacuum:
2. Instrumentation, AA, and balances (vibration sensitive)

C. Processes associated with the lab area/ department:

1. Wet chemistry to be conducted in fume hoods
2. Snorkel or canopy hoods for hotplate / wet chemistry area / waste disposal.

D. Primary Areas:

1. None

E. Environmental Conditions:

1. Temperature: Refer to RDS 2.73
2. Humidity: Refer to RDS 2.73
3. Acoustic: Refer to RDS 2.73

F. General Notes:

G. RDS Notes:

1. Refer to RDS 2.73 for finishes and building systems, unless noted otherwise.
2. Refer to RDS 2.73 for HVAC requirements and Mechanical requirements.

**Department of Transportation
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Program ID: 2.73.4 **Room Name:** Analytical Lab - Weather Lab **Department:** Chemistry
Quantity: 1 **Area (SF):** 121 **Occupancy:** 2
Function: _____

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input checked="" type="checkbox"/> Cased opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Door Size
Note G.1	Note G.1	Note G.1		Note G.1	42" opening

BUILDING SERVICES

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input checked="" type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input checked="" type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input checked="" type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	STORAGE
<input checked="" type="checkbox"/> Pressurization <u>Note G.2</u>	<input type="checkbox"/> Tall Cabinets
<input type="checkbox"/> Air Change Per Hour <u>Note G.2</u>	<input type="checkbox"/> Tall Shelving
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	LOCKERS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Mobile Cabinets
<input checked="" type="checkbox"/> Perimeter Bench <u>Duplex @ 24" O.C.</u>	<input type="checkbox"/> Compressed air	
<input type="checkbox"/> Ceiling Mounted	<input checked="" type="checkbox"/> Purified Water <u>DI Water</u>	
<input type="checkbox"/> Emergency	<input type="checkbox"/> Vacuum	
<input checked="" type="checkbox"/> 120V <u>Computer</u>	<input type="checkbox"/> Other/Specialty	
<input type="checkbox"/> 208V		
<input type="checkbox"/> 480V		

SPECIAL REQUIREMENTS
<input type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Temperature <u>Note G.1</u>
<input type="checkbox"/> Acoustics
<input checked="" type="checkbox"/> Humidity <u>Note G.2</u>

HAZARDOUS MATERIAL STORAGE
<input type="checkbox"/> Acid/ Corrosive
<input type="checkbox"/> Flammable
<input type="checkbox"/> Toxic
<input type="checkbox"/> Radioactive
<input type="checkbox"/> Other

LIGHTING	SAFETY / FIRE PROTECTION	VISUAL
Ambient Light Level _____	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type	
<input checked="" type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	
<input checked="" type="checkbox"/> Other <u>See RDS 2.73</u>	<input checked="" type="checkbox"/> Other	

SECURITY
<input type="checkbox"/> CCTV
<input type="checkbox"/> Keyed Entry
<input type="checkbox"/> Access Control
<input checked="" type="checkbox"/> Other <u>See RDS 2.73</u>

Program ID:	2.73.4	Room Name:	Analytical Lab - Weather Lab	Department:	
Quantity:	1	Area (SF):	121	Occupancy: 2	Chemistry

NOTES

A. Adjacency:

Refer to the adjacency diagrams.

B. Equipment:

C. Processes associated with the lab area/ department:

D. Test Type:

E. Environmental Conditions:

1. Temperature: Refer to RDS 2.73
2. Humidity: Refer to RDS 2.73
3. Acoustic: Refer to RDS 2.73

F. General Notes :

1. This space can be part of the open lab or can be a separate room.
2. UV/ Condensation Weathering (UVA/UVB Fluorescent Bulbs), clearance must be provided for the replacement of the 4' length bulbs.

G. RDS Notes:

1. Refer to RDS 2.73 for finishes and building systems, unless noted otherwise.
2. Refer to RDS 2.73 for HVAC requirements and Mechanical requirements.

**Department of Transportation
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Program ID: 2.73.7 **Room Name:** Analytical Lab - Analytical Thermoplastic **Department:** Chemistry
Quantity: 1 **Area (SF):** 60.5 **Occupancy:** 2 **Chemistry**
Function:

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input checked="" type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU	Matte Black	<input type="checkbox"/> Height- 4"	<input type="checkbox"/> 48in
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size
Note G.1	Note G.1	Note G.1	Note G.1	Note G.1	6' X 8'

BUILDING SERVICES

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input checked="" type="checkbox"/> Fume Hood	<input checked="" type="checkbox"/> Lab Sink	<input checked="" type="checkbox"/> Mobile Casework
<input checked="" type="checkbox"/> Snorkel	<input type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework
<input checked="" type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC

Pressurization Negative

Air Change Per Hour 6 ACH

Air Filtration (Supply and/or Exhaust)

Scullery Sink

Floor Sink

Other Sediment trap @ sink

STORAGE

Tall Cabinets

Tall Shelving

Peg Board

Lockers

Mobile Cabinets

POWER AND DATA

Island Bench

Perimeter Bench Duplex @ 24" O.C.

Ceiling Mounted Floor Mounted

Emergency UPS

120V Computer

208V

480V

Data Wi-Fi Router Comm.

Other emergency power at all fumehood

LABORATORY SERVICES

Nitrogen

Compressed air

Purified Water

Vacuum

Specialty Gas

Other/Specialty

SPECIAL REQUIREMENTS

Vibration Control

Temperature Note G.1

Acoustics

Humidity Note G.2

Sound Isolation

Radioactivity

Other

HAZARDOUS MATERIAL STORAGE

Acid/ Corrosive

Toxic

Other

Flammable

Radioactive

LIGHTING

Ambient Light Level

Task Light

Zoned Lighting

Dimmer

Occ Sensor

Window Treatment

Natural Light

Other See RDS 2.73

SAFETY / FIRE PROTECTION

Safety Shower Note G.3

Eyewash Note G.3

Goggles

PPE

In-Use Signage

Sprinkler Type

Fire Extinguisher

Other See RDS 2.73

VISUAL

White Board

Monitor

Projection

SECURITY

CCTV

Keyed Entry

Access Control

Other See RDS 2.73

Program ID:	2.73.7	Room Name:	Analytical Lab - Analytical Thermoplastic	Department:	
Quantity:	1	Area (SF):	60.5	Occupancy: 2	Chemistry

NOTES

A. Adjacency:

Refer to the adjacency diagrams.

B. Equipment:

1. Oversized oven, water bath
2. Fume hood: Qty:1
 - 120V outlets at back of FH
 - Cold water CW , cup sink

C. Test: N/A

D. Primary Areas:

1. None

E. Environmental Conditions:

1. Temperature: Refer to RDS 2.73
2. Humidity: Refer to RDS 2.73
3. Acoustic: Refer to RDS 2.73

F. General Notes:

G. RDS Notes:

1. Refer to RDS 2.73 for finishes and building systems, unless noted otherwise.
2. Handwash sink suffice for the purpose of cold water immersion.
3. Safety shower/eyewash station to have thermostatic valve for tempered water.
4. Provide a countertop that is tough and durable. Provide 36" deep countertop along the perimeter with adequate space for the oversized oven and workspace near the oven.
5. Provide base cabinets under the Island Bench and perimeter with base cabinets below.

**Department of Transportation
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Program ID: 2.75 **Room Name:** PPE Storage (Shared) **Department:** _____
Quantity: 1 **Area (SF):** 121 **Occupancy:** 2 **Chemistry**

INTERIOR FINISHES

FLOORING	CEILINGS	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input checked="" type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input checked="" type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input checked="" type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input checked="" type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input type="checkbox"/> 48in
<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size

BUILDING SERVICES

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	STORAGE
<input checked="" type="checkbox"/> Pressurization <u>Negative</u>	<input checked="" type="checkbox"/> Tall Cabinets
<input type="checkbox"/> Air Change Per Hour	<input checked="" type="checkbox"/> Tall Shelving
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	LOCKERS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input checked="" type="checkbox"/> Lockers
<input checked="" type="checkbox"/> Perimeter Bench <u>Duplex @ 24" O.C.</u>	<input checked="" type="checkbox"/> Compressed air	<input type="checkbox"/> Mobile Cabinets
<input type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Purified Water	
<input type="checkbox"/> Emergency	<input type="checkbox"/> Vacuum	
<input checked="" type="checkbox"/> 120V <u>Computer</u>	<input type="checkbox"/> Other/Specialty	
<input type="checkbox"/> 208V		
<input type="checkbox"/> 480V		
<input checked="" type="checkbox"/> Data <input checked="" type="checkbox"/> Wi-Fi Router <input type="checkbox"/> Comm.		
<input type="checkbox"/> Other		

HAZARDOUS MATERIAL STORAGE

<input type="checkbox"/> Acid/ Corrosive	<input type="checkbox"/> Flammable	
<input type="checkbox"/> Toxic	<input type="checkbox"/> Radioactive	
<input type="checkbox"/> Other		

LIGHTING	SAFETY / FIRE PROTECTION	VISUAL
Ambient Light Level	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input checked="" type="checkbox"/> PPE	
<input checked="" type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type	
<input type="checkbox"/> Natural Light	<input type="checkbox"/> Fire Extinguisher	
<input type="checkbox"/> Other	<input type="checkbox"/> Other	

SECURITY
<input type="checkbox"/> CCTV
<input type="checkbox"/> Keyed Entry
<input type="checkbox"/> Access Control
<input type="checkbox"/> Other

Program ID:	<u>2.75</u>	Room Name:	<u>PPE Storage (Shared)</u>	Department:
Quantity:	<u>1</u>	Area (SF):	<u>121</u>	<u>Chemistry</u>

NOTES

A. Adjacency:

Refer to the adjacency diagrams.

B. Equipment: None.

C. Processes associated with the lab area/ department:

D. Primary Areas:

1. None

E. Environmental Conditions:

1. Temperature: 72-75 +/-2F
2. Humidity: 23-55%RH+/- 5%
3. Acoustic: NC-36

F. General Notes:

G. RDS Notes:

1. Locker/Storage for PPE and change/gowning in event of emergency.

**Department of Transportation
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Program ID: 2.81 **Room Name:** Open Lab **Department:** HMA
Quantity: 1 **Area (SF):** 1573 **Occupancy:** _____
Function: The HMA Lab performs physical testing of HMA/Microsurfacing according to ASTM/AASHTO standards.

INTERIOR FINISHES						
FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR	
<input checked="" type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal _____	
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input checked="" type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood _____	
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP	<input checked="" type="checkbox"/> Height- 4"	<input type="checkbox"/> Glass _____	
<input checked="" type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input checked="" type="checkbox"/> CMU	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Casing Opening	_____
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Size	Overhead door
Note G.1	Note G.1, G.5	Note G.1	Note G.1	Note G.1	<input checked="" type="checkbox"/> Other	Note G.1, G.3

BUILDING SERVICES					
DUCTED LAB EQUIPMENT		PLUMBING SERVICES		CASEWORK	
<input checked="" type="checkbox"/> Fume Hood	See sub areas	<input type="checkbox"/> Lab Sink	_____	<input checked="" type="checkbox"/> Mobile Casework	carts / shelves
<input type="checkbox"/> Snorkel	_____	<input checked="" type="checkbox"/> Hand Wash	_____	<input checked="" type="checkbox"/> Fixed Casework	base cabinets
<input type="checkbox"/> Canopy	_____	<input type="checkbox"/> Cup Sink	_____	<input type="checkbox"/> Casework Material	_____
<input type="checkbox"/> Biological Safety Cabinet	_____	<input type="checkbox"/> Deep Sink	_____	<input checked="" type="checkbox"/> Counter Material	Stainless Steel
<input checked="" type="checkbox"/> Other	all ovens vented ro outside	<input checked="" type="checkbox"/> Floor Drain	Note G.7	<input type="checkbox"/> Other	_____
HVAC			<input type="checkbox"/> Scullery Sink	STORAGE	
<input checked="" type="checkbox"/> Pressurization	Negative	<input type="checkbox"/> Floor Sink	_____	<input type="checkbox"/> Tall Cabinets	_____
<input checked="" type="checkbox"/> Air Change Per Hour	See 6ACH min.	<input type="checkbox"/> Other	_____	<input checked="" type="checkbox"/> Tall Shelving	_____
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	_____	_____	_____	<input type="checkbox"/> Peg Board	_____

POWER AND DATA		LABORATORY SERVICES		SPECIAL REQUIREMENTS	
<input type="checkbox"/> Island Bench	_____	<input type="checkbox"/> Nitrogen	_____	<input checked="" type="checkbox"/> Vibration Control	_____
<input checked="" type="checkbox"/> Perimeter Bench	Duplex @ 24" O.C.	<input checked="" type="checkbox"/> Compressed air	Note G.4	<input checked="" type="checkbox"/> Temperature	Note E.1
<input checked="" type="checkbox"/> Ceiling Mounted	power Reels	<input type="checkbox"/> Purified Water	_____	<input checked="" type="checkbox"/> Acoustics	Note E.3
<input type="checkbox"/> Emergency	<input type="checkbox"/> UPS	<input type="checkbox"/> Vacuum	_____	<input checked="" type="checkbox"/> Humidity	Note E.2
<input checked="" type="checkbox"/> 120V	Note G.2	<input type="checkbox"/> Natural Gas	_____	<input checked="" type="checkbox"/> Sound Isolation	_____
<input checked="" type="checkbox"/> 208V	Note G.2	<input type="checkbox"/> Other/Specialty	_____	<input type="checkbox"/> Radioactivity	_____
<input type="checkbox"/> 480V	_____	HAZARDOUS MTRL STORAGE			
<input type="checkbox"/> Data	<input checked="" type="checkbox"/> Wi-Fi Router <input type="checkbox"/> Comm.	<input type="checkbox"/> Acid/ Corrosive	<input checked="" type="checkbox"/> Flammable	<input type="checkbox"/> Other	_____
<input checked="" type="checkbox"/> Other	Note G.3	<input type="checkbox"/> Toxic	<input type="checkbox"/> Radioactive	_____	_____
_____	_____	<input checked="" type="checkbox"/> Other	_____	_____	_____

LIGHTING		SAFETY / FIRE PROTECTION		VISUAL	
Ambient Light Level	60-70 FC	<input type="checkbox"/> Safety Shower	_____	<input checked="" type="checkbox"/> White Board	_____
<input type="checkbox"/> Task Light	_____	<input checked="" type="checkbox"/> Eyewash	at all sinks	<input type="checkbox"/> Monitor	_____
<input type="checkbox"/> Zoned Lighting	_____	<input type="checkbox"/> Goggles	_____	<input type="checkbox"/> Projection	_____
<input type="checkbox"/> Dimmer	_____	<input type="checkbox"/> PPE	_____	SECURITY	
<input type="checkbox"/> Occ Sensor	_____	<input type="checkbox"/> In-Use Signage	_____	<input type="checkbox"/> CCTV	_____
<input type="checkbox"/> Window Treatment	_____	<input checked="" type="checkbox"/> Sprinkler Type	Wet type	<input checked="" type="checkbox"/> Keyed Entry	_____
<input checked="" type="checkbox"/> Natural Light	Optional	<input checked="" type="checkbox"/> Fire Extinguisher	Note G.6	<input type="checkbox"/> Access Control	_____
<input type="checkbox"/> Other	_____	<input type="checkbox"/> Other	_____	<input type="checkbox"/> Other	_____

Program ID:	2.81	Room Name:	Open Lab	Department:
Quantity:	1	Area (SF):	1573	HMA

NOTES

A. Adjacencies: Access to loading dock and entrance.

Open Lab Includes the following areas -

- 2.81.1 Mix
- 2.81.2 Ovens
- 2.81.3 Compaction/Mixing/Splitting
- 2.81.4 Testing

B. Equipment: See sub areas RDS

C. Test:

The HMA Lab performs physical testing of HMA/Microsurfacing according to ASTM/AASHTO standards., which includes sealed concrete.

D. Processes that take place in the lab:

1. Sample logging 2.83.
2. Aggregate sample breakdown/fractionation to specific sizes 2.84.
3. Mixing HMA/microsurfacing component materials and compacting HMA specimens.
4. Cutting compacted HMA specimens 2.84.
5. Testing HMA from asphalt binder extraction to measuring weight change of asphalt release agent samples 2.85.
6. Chemical Storage (TCE).

E. Environmental Conditions:

1. Temperature: 68°F - 86°F per AASHTO R18 as storage area for samples.
2. Humidity: 23-55% RH +/-5%
3. Acoustic: NC-36

F. General Notes:

1. Calibrating equipment on a regular basis.
2. Cleaning equipment, pans, etc.
3. Refer to the Mechanical, Electrical, Plumbing Narrative.

G. RDS Notes:

1. Final interior finishes to be selected by the Design Team selected for this project.
2. Refer to the Equipment matrix for power, water, gas requirements etc.
3. Refer to the Narratives for additional information.
4. Compressed Air for the AMPT as well as other equipment.
5. Provide 12 foot ceilings.
6. Provide Fire Extinguisher in each section.
7. Trench drain under Hamburg wheel machine.

Program ID: 2.81.1a&b **Room Name:** Open Lab - Mix (Compacted and Loose) **Department:** _____

Quantity: 1 **Area (SF):** 242 **Occupancy:** _____ **HMA**

Function: Mixing HMA component materials and compacting HMA specimens

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input checked="" type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Size 6' x 8'
Note G.1	Note G.1	Note G.1	Note G.1	Note G.1	<input checked="" type="checkbox"/> Other Note G.2

BUILDING SERVICES

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input checked="" type="checkbox"/> Fume Hood <u>Note B.2</u>	<input type="checkbox"/> Lab Sink	<input checked="" type="checkbox"/> Mobile Casework <u>Note G.4</u>
<input type="checkbox"/> Snorkel	<input type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework <u>base cabinets</u>
<input checked="" type="checkbox"/> Canopy <u>Note E.4</u>	<input type="checkbox"/> Cup Sink	<input checked="" type="checkbox"/> Casework Material <u>Steel</u>
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input checked="" type="checkbox"/> Counter Material <u>Stainless Steel</u>
<input type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input checked="" type="checkbox"/> Other <u>Note G.6</u>

HVAC	STORAGE
<input checked="" type="checkbox"/> Pressurization <u>Refer 2.81</u>	<input type="checkbox"/> Tall Cabinets
<input type="checkbox"/> Air Change Per Hour <u>Refer 2.81</u>	<input checked="" type="checkbox"/> Tall Shelving <u>Note G.7</u>
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES
<input checked="" type="checkbox"/> Island Bench <u>power reels above; Note G.8</u>	<input type="checkbox"/> Nitrogen
<input checked="" type="checkbox"/> Perimeter Bench <u>Duplex @ 24" O.C.</u>	<input checked="" type="checkbox"/> Compressed air <u>Note G.9</u>
<input checked="" type="checkbox"/> Ceiling Mounted <u>Note G.5</u>	<input type="checkbox"/> Purified Water
<input checked="" type="checkbox"/> Emergency <u><input type="checkbox"/> UPS AT ALL FUMEHOODS</u>	<input type="checkbox"/> Vacuum
<input checked="" type="checkbox"/> 120V <u>Note G.3</u>	<input type="checkbox"/> Natural Gas
<input checked="" type="checkbox"/> 208V <u>Note G.3</u>	<input type="checkbox"/> Other/Specialty
<input type="checkbox"/> 480V	

HAZARDOUS MTRL STORAGE	SPECIAL REQUIREMENTS
<input checked="" type="checkbox"/> Data <u><input checked="" type="checkbox"/> Wi-Fi Router <input type="checkbox"/> Comm.</u>	<input type="checkbox"/> Vibration Control
<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Temperature <u>Note E.1</u>
<input type="checkbox"/> Acid/ Corrosive <input type="checkbox"/> Flammable	<input type="checkbox"/> Acoustics
<input type="checkbox"/> Toxic <input type="checkbox"/> Radioactive	<input checked="" type="checkbox"/> Humidity <u>Note E.2</u>
<input type="checkbox"/> Other	<input type="checkbox"/> Sound Isolation
	<input type="checkbox"/> Radioactivity
	<input type="checkbox"/> Other

LIGHTING	SAFETY / FIRE PROTECTION	VISUAL
Ambient Light Level _____	<input type="checkbox"/> Safety Shower	<input checked="" type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input checked="" type="checkbox"/> Eyewash <u>Note G.1</u>	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	SECURITY
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type <u>Note G.1</u>	<input type="checkbox"/> CCTV
<input checked="" type="checkbox"/> Natural Light <u>Optional</u>	<input checked="" type="checkbox"/> Fire Extinguisher <u>Note G.1</u>	<input checked="" type="checkbox"/> Keyed Entry
<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Access Control
		<input type="checkbox"/> Other

Program ID:	2.81.1a&b	Room Name:	Open Lab - Mix (Compacted and Loose)	Department:
Quantity:	1	Area (SF):	242	Occupancy:
				HMA

NOTES

A. Adjacencies:

Mixing Area Includes the following areas:

- 2.81.1a Compacted Mix
- 2.81.1b Loose Mix

B. Equipment: Mixer, splitter and Scales.

1. Refer to the HMA Equipment Matrix for the OFOI and OFCI equipment.
2. Provide a new Chemical fume hoods:
 - a) Floor Mounted fume hood for Parts Cleaner - 36D x 51W (ID) - Qty:1
 - Utilities: No Natural gas or specialty gases or water needed at fume hoods. Provide 4- 120V outlets in back of all fume hoods. No 208V req' d.
 - b) Benchtop fume hood for Pots/Pans Drying - 32D x 51W (ID) - Qty:1
 - Utilities: No Natural Gas or specialty gases or water needed at fume hoods. No electrical required in the fume hood.

C. Test:- Refer to RDS 2.81.

D. Test Description:-Refer to RDS 2.81.

E. Environmental Conditions:

1. Temperature: 68°F - 86°F per AASHTO R18 as storage area for samples.
2. Humidity: 23-55% RH +/-5%
3. Acoustic: NC-36
4. Dust collection via canopy

F. General Notes:

- a. Refer to the Mechanical, Electrical, Plumbing Narrative.
- b. Part cleaner Chemicals shall be used in these fume hoods.

G. RDS Notes:

1. Refer to the open Lab RDS 2.81.
2. Provide overhead door to loading dock/shipping double door to HMA open lab
3. Refer to the Equipment matrix for power, water, gas requirements etc.
4. Provide mobile carts.
5. Provide ceiling mounted power reels.
6. Provide heat resistant, heavy duty countertop on island bench and tables.
7. Provide heavy duty tall shelving.
8. Provide power along sides of Island bench.
9. Provide Compressed Air at 120psi with regulator, for equipment like the extruder etc.

Program ID: 2.81.2 **Room Name:** Open Lab - Ovens **Department:** _____
Quantity: 1 **Area (SF):** 363 **Occupancy:** 3 **HMA**
Function: _____

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Size <u>6' x 8'</u>
Note G.1	Note G.1	Note G.1	Note G.1	Note G.1	<input type="checkbox"/> Other

BUILDING SERVICES

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input type="checkbox"/> Hand Wash	<input type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input checked="" type="checkbox"/> Other exhaust for all ovens	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization <u>Refer 2.81</u>	<input type="checkbox"/> Scullery Sink	<input type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour <u>Refer 2.81</u>	<input type="checkbox"/> Floor Sink	<input type="checkbox"/> Tall Shelving
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input type="checkbox"/> Other	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Perimeter Bench <u>Duplex @ 24" O.C.</u>	<input type="checkbox"/> Compressed air	<input checked="" type="checkbox"/> Temperature <u>Note E.1</u>
<input type="checkbox"/> Ceiling Mounted	<input checked="" type="checkbox"/> Purified Water <u>DI water</u>	<input type="checkbox"/> Acoustics
<input type="checkbox"/> Emergency	<input type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Humidity <u>Note E.2</u>
<input type="checkbox"/> 120V <u>Note G.2</u>	<input type="checkbox"/> Other/Specialty	<input type="checkbox"/> Sound Isolation
<input checked="" type="checkbox"/> 208V <u>Note G.2</u>		<input type="checkbox"/> Radioactivity
<input type="checkbox"/> 480V		<input type="checkbox"/> Other

POWER AND DATA	HAZARDOUS MATERIAL STORAGE
<input checked="" type="checkbox"/> Data <u>Note G.3, G.4</u>	<input type="checkbox"/> Acid/ Corrosive
<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Flammable
	<input type="checkbox"/> Toxic
	<input type="checkbox"/> Radioactive
	<input type="checkbox"/> Other

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Level <u>60-80FC</u>	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type <u>Note G.1</u>	
<input checked="" type="checkbox"/> Natural Light <u>if possible</u>	<input checked="" type="checkbox"/> Fire Extinguisher <u>Note G.1</u>	
<input type="checkbox"/> Other	<input type="checkbox"/> Other	

SECURITY
<input type="checkbox"/> CCTV
<input type="checkbox"/> Keyed Entry
<input type="checkbox"/> Access Control
<input type="checkbox"/> Other

Program ID:	2.81.2	Room Name:	Open Lab - Ovens	Department:
Quantity:	1	Area (SF):	363	Occupancy: 3
				HMA

NOTES

A. Adjacencies: Adjacent to the Mix Area

B. Equipment:

Ovens (Qty 5; 41"W x 28"D x 49"H, 90"W x 45"D x 76"H, 66"W x 36"D x 74"H, (2) 44"W x 42"D x 51"H). Refer to HMA equipment Matrix for the OFOI and OFCI equipment.

C. Test: Refer to RDS 2.81

D. Test Description: Refer to RDS 2.81

E. Environmental Conditions:

1. Temperature: 68°F - 86°F per AASHTO R18 as storage area for samples.
2. Humidity: 23-55% RH +/-5%
3. Acoustic: See RDS 2.81.

F. General Notes:

G. RDS Notes:

1. Refer to the Open Lab RDS 2.81
2. Refer to the Equipment matrix for power, water, gas requirements etc.
3. Back-up Power for all Long-Term Aging Ovens
4. Refer to the Narratives for additional information.

Program ID: 2.81.3 **Room Name:** Open Lab - Compaction/Mixing/Splitting **Department:** _____
Quantity: 1 **Area (SF):** 484 **Occupancy:** 3 **HMA**
Function: Mixing, splitting, and compacting HMA

INTERIOR FINISHES

FLOORING	CEILINGS	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input checked="" type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Size
Note G.1	Note G.1	Note G.1	Note G,1	Note G.1	<input checked="" type="checkbox"/> Other
					Note G.1

BUILDING SERVICES

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input checked="" type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input checked="" type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input checked="" type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization	<input checked="" type="checkbox"/> Scullery Sink	<input type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour	<input type="checkbox"/> Floor Sink	<input checked="" type="checkbox"/> Tall Shelving
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input type="checkbox"/> Other	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input checked="" type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Perimeter Bench	<input checked="" type="checkbox"/> Compressed air	<input checked="" type="checkbox"/> Temperature
<input type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Purified Water	<input type="checkbox"/> Acoustics
<input type="checkbox"/> Emergency	<input type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Humidity
<input checked="" type="checkbox"/> 120V	<input type="checkbox"/> Natural Gas	<input checked="" type="checkbox"/> Sound Isolation
<input type="checkbox"/> 208V	<input type="checkbox"/> Other/Specialty	<input type="checkbox"/> Radioactivity
<input type="checkbox"/> 480V		<input type="checkbox"/> Other

HAZARDOUS MTRL STORAGE	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Acid/ Corrosive	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Vibration Control
<input type="checkbox"/> Toxic	<input checked="" type="checkbox"/> Compressed air	<input checked="" type="checkbox"/> Temperature
<input type="checkbox"/> Other	<input type="checkbox"/> Purified Water	<input type="checkbox"/> Acoustics
	<input type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Humidity
	<input type="checkbox"/> Natural Gas	<input checked="" type="checkbox"/> Sound Isolation
	<input type="checkbox"/> Other/Specialty	<input type="checkbox"/> Radioactivity
	<input type="checkbox"/> Flammable	<input type="checkbox"/> Other
	<input type="checkbox"/> Radioactive	

LIGHTING	SAFETY / FIRE PROTECTION	VISUAL
Ambient Light Leve	<input type="checkbox"/> Safety Shower	<input checked="" type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input checked="" type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input checked="" type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type	
<input checked="" type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	
<input type="checkbox"/> Other	<input type="checkbox"/> Other	

SECURITY
<input type="checkbox"/> CCTV
<input type="checkbox"/> Keyed Entry
<input type="checkbox"/> Access Control
<input type="checkbox"/> Other

Program ID:	2.81.3	Room Name:	Open Lab - Compaction/Mixing/Splitting	Department:		
Quantity:	1	Area (SF):	484	Occupancy:	3	HMA

NOTES

A. Adjacencies: Refer to RDS 2.81

B. Equipment: Pine Gyrotory Compactors

1. Refer to HMA equipment Matrix for the OFOI and OFCI equipment.
2. Fumhood shared with Mix Area, Refer to RDS 2.81.1.

C. Tests: Refer to RDS 2.81.

D. Test Description: Refer to RDS 2.81.

E. Environmental Conditions:

1. Temperature Control in Lab of 68°F - 86°F per AASHTO R18.
2. Humidity: Refer to RDS 2.81.
3. Acoustic: Refer to RDS 2.81.

F. General Notes:

Refer to Narrative for Additional information.

G. RDS Notes:

1. Refer to the Open Lab RDS 2.81
2. Refer to the equipment matrix for power, water, gas requirements etc.
3. Refer to the Narratives for additional information.
4. Provide 120psi compressed air for the Extruder as well as other equipment in the room.

Program ID: 2.81.4 **Room Name:** Open Lab - Testing - Microsurfacing/Instrumentation **Department:** _____
Quantity: 1 **Area (SF):** 484 **Occupancy:** _____ **HMA**
Function: Laboratory testing of Hot-Mix Asphalt (HMA) with various types of equipment

INTERIOR FINISHES

FLOORING	CEILINGS	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input checked="" type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Size
Note G.1	Note G.1	Note G.1	Note G.1	Note G.1	<input checked="" type="checkbox"/> Other
					Note G.1

BUILDING SERVICES

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input checked="" type="checkbox"/> Lab Sink	<input checked="" type="checkbox"/> Mobile Casework carts
<input type="checkbox"/> Snorkel	<input checked="" type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework base cabinets
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input checked="" type="checkbox"/> Counter Material Stainless Steel
<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization See RDS 2.81	<input checked="" type="checkbox"/> Scullery Sink	<input type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour See RDS 2.81	<input type="checkbox"/> Floor Sink	<input checked="" type="checkbox"/> Tall Shelving
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input type="checkbox"/> Other	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Island Bench Note G.7	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Lockers
<input checked="" type="checkbox"/> Perimeter Bench Duplex @ 24" O.C., Note G.7	<input checked="" type="checkbox"/> Compressed air Note G.6	<input type="checkbox"/> Mobile Cabinets
<input checked="" type="checkbox"/> Ceiling Mounted Note G.5	<input checked="" type="checkbox"/> Purified Water DI Water	
<input type="checkbox"/> Emergency <input type="checkbox"/> UPS	<input type="checkbox"/> Vacuum	
<input checked="" type="checkbox"/> 120V Note G.2	<input type="checkbox"/> Other/Specialty	
<input checked="" type="checkbox"/> 208V Note G.2		
<input type="checkbox"/> 480V		
<input type="checkbox"/> Data <input checked="" type="checkbox"/> Wi-Fi Router <input type="checkbox"/> Comm.		
<input type="checkbox"/> Other		

HAZARDOUS MTRL STORAGE	SPECIAL REQUIREMENTS
<input type="checkbox"/> Acid/ Corrosive	<input checked="" type="checkbox"/> Vibration Control
<input type="checkbox"/> Toxic	<input checked="" type="checkbox"/> Temperature Note E.3
<input type="checkbox"/> Other	<input type="checkbox"/> Acoustics
<input type="checkbox"/> Flammable	<input checked="" type="checkbox"/> Humidity Note E.2
<input type="checkbox"/> Radioactive	<input type="checkbox"/> Sound Isolation
<input type="checkbox"/> Other	<input type="checkbox"/> Radioactivity
	<input type="checkbox"/> Other

LIGHTING	SAFETY / FIRE PROTECTION	VISUAL
Ambient Light Level 60-80FC	<input type="checkbox"/> Safety Shower	<input checked="" type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input checked="" type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type Note G.3	
<input checked="" type="checkbox"/> Natural Light Optional	<input checked="" type="checkbox"/> Fire Extinguisher Note G.3	
<input type="checkbox"/> Other	<input type="checkbox"/> Other	

SECURITY
<input type="checkbox"/> CCTV
<input type="checkbox"/> Keyed Entry
<input type="checkbox"/> Access Control
<input type="checkbox"/> Other

Program ID: 2.81.4 Room Name: Open Lab - Testing - Microsurfacing/Instrument Department:
Quantity: **1** Area (SF): **484** Occupancy: **HMA**

NOTES

A. Adjacencies:

Testing includes the following areas Microsurfacing ~~2.81.a~~ **2.81.4.a** and Instrument ~~2.81.1.b~~ **2.81.4.b**.

B. Equipment: AMPT, Hamburg, I-fit, TSR, Microsurfacing (Gmm & Gmb), Core dry (x2), water baths
Refer to the HMA equipment matrix.

C. Test:

D. Test Description:

E. Environmental Conditions:

1. Temperature: 68°F - 86°F per AASHTO R18 as storage area for samples.
2. Humidity: Refer to RDS 2.81.
3. Acoustic: Refer to RDS 2.81.

F. General Notes:

1. Refer to the Equipment matrix for power, water, gas requirements etc.

G. RDS Notes:

1. Final interior Finishes, refer RDS 2.81.
2. Refer to the equipment matrix for power, water, gas requirements etc.
3. Refer to the Narratives for additional information.
4. Provide carts and Mobile shelves.
5. Provide ceiling mounted power reels.
6. Provide Compressed air (CA) for Hamburg and Microsurfacing Equipment.
7. Provide wall mounted and Island bench mounted power.

**Department of Transportation
New Materials Lab and Training Center**

10/30/2023

Program ID: 2.85 **Room Name:** Extraction **Department:** _____
Quantity: _____ **Area (SF):** 605 **Occupancy:** 10 **HMA**
Function: Extractions of HMA and Microsurface Samples

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input checked="" type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input checked="" type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input checked="" type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input checked="" type="checkbox"/> CMU		<input checked="" type="checkbox"/> Height- 4"	<input type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Size
Note G.1	Note G.1	Note G.1	Note G.1	Note G.1	<input checked="" type="checkbox"/> Other
					6' X 8'
					Note G.1

BUILDING SERVICES

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input checked="" type="checkbox"/> Fume Hood	<input checked="" type="checkbox"/> Lab Sink	<input checked="" type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input checked="" type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input checked="" type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input checked="" type="checkbox"/> Counter Material
<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other
Note B.2	<input checked="" type="checkbox"/> Scullery Sink	See Note 4
Note G.4	<input type="checkbox"/> Floor Sink	base cabinets
	<input type="checkbox"/> Other	Steel
		Stainless Steel

HVAC

<input checked="" type="checkbox"/> Pressurization	Negative
<input checked="" type="checkbox"/> Air Change Per Hour	See 6ACH min.
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	

LABORATORY SERVICES

<input type="checkbox"/> Nitrogen	
<input type="checkbox"/> Compressed air	
<input type="checkbox"/> Purified Water	
<input type="checkbox"/> Vacuum	
<input checked="" type="checkbox"/> Other/Specialty	reflux ext water

STORAGE

<input type="checkbox"/> Tall Cabinets	
<input checked="" type="checkbox"/> Tall Shelving	
<input type="checkbox"/> Peg Board	
<input type="checkbox"/> Lockers	
<input type="checkbox"/> Mobile Cabinets	

POWER AND DATA

<input checked="" type="checkbox"/> Island Bench	power reels or along side
<input checked="" type="checkbox"/> Perimeter Bench	Duplex @ 24" O.C.
<input checked="" type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Floor Mounted
<input checked="" type="checkbox"/> Emergency	<input type="checkbox"/> UPS AT ALL FUMEHOODS
<input checked="" type="checkbox"/> 120V	See Note 2
<input checked="" type="checkbox"/> 208V	See Note 2
<input type="checkbox"/> 480V	
<input type="checkbox"/> Data	<input checked="" type="checkbox"/> WiFi Router <input type="checkbox"/> Comm.
<input checked="" type="checkbox"/> Other	

HAZARDOUS MTRL STORAGE

<input checked="" type="checkbox"/> Acid/ Corrosive	<input checked="" type="checkbox"/> Flammable
<input checked="" type="checkbox"/> Toxic	<input type="checkbox"/> Radiative
<input type="checkbox"/> Other	

SPECIAL REQUIREMENTS

<input checked="" type="checkbox"/> Vibration Control	
<input checked="" type="checkbox"/> Temperature	Note E.1
<input checked="" type="checkbox"/> Acoustics	Note E.3
<input checked="" type="checkbox"/> Humidity	Note E.2
<input type="checkbox"/> Sound Isolation	
<input type="checkbox"/> Radioactivity	
<input type="checkbox"/> Other	

LIGHTING

Ambient Light Level	60-80 FC
<input type="checkbox"/> Task Light	
<input type="checkbox"/> Zoned Lighting	
<input type="checkbox"/> Dimmer	
<input type="checkbox"/> Occ Sensor	
<input type="checkbox"/> Window Treatment	
<input checked="" type="checkbox"/> Natural Light	Optional
<input type="checkbox"/> Other	

SAFETY / FIRE PROTECTION

<input type="checkbox"/> Safety Shower	
<input checked="" type="checkbox"/> Eyewash	at all sinks
<input type="checkbox"/> Goggles	
<input type="checkbox"/> PPE	
<input type="checkbox"/> In-Use Signage	
<input checked="" type="checkbox"/> Sprinkler Type	Wet Type
<input checked="" type="checkbox"/> Fire Extinguisher	
<input type="checkbox"/> Other	

VISUAL

<input checked="" type="checkbox"/> White Board	
<input type="checkbox"/> Monitor	
<input type="checkbox"/> Projection	

SECURITY

<input type="checkbox"/> CCTV	
<input type="checkbox"/> Keyed Entry	
<input type="checkbox"/> Access Control	
<input type="checkbox"/> Other	

Program ID: <u>2.85</u>	Room Name: <u>Extraction</u>	Department:	
Quantity:	Area (SF): <u>605</u>	Occupancy: <u>10</u>	HMA

NOTES

A. Adjacencies: Connected to the Loose Area and the HMA Open lab.
Extraction included the Release Agents Area (2.85.1).

B. Equipment: Forced Air Oven (44"W x 29"D x 51"H), TCE Reclaimer (22"W x 40"D x 44"H), Chemical Storage Cabinet (60"W x 35"D x 66"H), Chemical Storage Cabinet (44"W x 19"D x 66"H), equipment stored in fume Hood (qty 3) centrifuges, Reflux (Multiple).

2. Provide new fume hoods:
- a. Benchtop 6' Fumehood - 28D x 60W (ID) - Qty:1 for Centrifuge
 - b. Benchtop 6' Fumehood (Tall Window Access)- 24D x 55W (ID) - Qty:1 for High Speed Centrifuge
 - c. Benchtop 5' Fumehood - 25D x 48W (ID) - Qty:1 for Reflux
 - i)Need Piped Water and electrical raceway.
 - f. Benchtop 5' Fumehood - 25D x 48W (ID) - Qty:1 for Ultrasonic
 - g. Benchtop 5' Fumehood - 25D x 48W (ID) - Qty:1 for Extraction Air Drying
 - h. Floor mounted 6' (46" interior depth) Fumehood - Qty: 1 for for TCE Reclaimer
 - i. General note: Provide 120V outlets Raceway at back of all fumehoods unless noted otherwise.

C. Test: Chemical test

D. Test Description:

E. Environmental Conditions:

- 1. Temperature: Control in Lab of 68°F - 86°F per AASHTO R18
- 2. Humidity: 23-55% RH +/-5%
- 3. Acoustic: NC-36

F. General Notes:-

- a. Storage Cabinets for TCE with exhaust connect for fumes extraction.

G. RDS Notes:-

- 1. Final interior Finishes to be selected by the Design Team selected for this project.
- 2. Refer to the equipment matrix for power, water, gas requirements etc.
- 3. Provide vented Fire rated cabinets for the storage of TCE chemical.
- 4. Provide carts and Mobile shelves
- 5. Provide ceiling mounted power reels.

**Department of Transportation
New Materials Lab and Training Center**

10/30/2023

Program ID: 2.85.1 **Room Name:** Extraction - Release Agent **Department:** HMA
Quantity: 1 **Area (SF):** _____ **Occupancy:** _____
Function: Gravimetric testing of Asphalt Release Agents

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input checked="" type="checkbox"/> Glass
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input type="checkbox"/> CMU		<input type="checkbox"/> Height- 4"	<input type="checkbox"/> Cased Opening
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Size 6' X 8'
Note G.1	Note G.1	Note G.1	Note G.1	Note G.1	<input checked="" type="checkbox"/> Other Note G.1

BUILDING SERVICES

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input checked="" type="checkbox"/> Fume Hood <u>same as Extraction</u>	<input type="checkbox"/> Lab Sink	<input checked="" type="checkbox"/> Mobile Casework <u>See Note 4</u>
<input type="checkbox"/> Snorkel	<input type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework <u>base cabinets</u>
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input checked="" type="checkbox"/> Casework Material <u>Steel</u>
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input checked="" type="checkbox"/> Counter Material <u>Stainless Steel</u>
<input type="checkbox"/> Other	<input type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization <u>Negative</u>	<input checked="" type="checkbox"/> Scullery Sink	<input type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour <u>See RDS 2.85</u>	<input checked="" type="checkbox"/> Floor Sink	<input checked="" type="checkbox"/> Tall Shelving
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input type="checkbox"/> Other	<input type="checkbox"/> Peg Board
		<input type="checkbox"/> Lockers

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input checked="" type="checkbox"/> Island Bench <u>power reels or along side</u>	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Vibration Control
<input checked="" type="checkbox"/> Perimeter Bench <u>Duplex @ 24" O.C.</u>	<input type="checkbox"/> Compressed air	<input checked="" type="checkbox"/> Temperature <u>Note E.1</u>
<input checked="" type="checkbox"/> Ceiling Mounted <u>Reels</u>	<input type="checkbox"/> Purified Water	<input type="checkbox"/> Acoustics
<input checked="" type="checkbox"/> Emergency <u><input type="checkbox"/> UPS SEE RDS 2.85</u>	<input type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Humidity <u>Note E.2</u>
<input checked="" type="checkbox"/> 120V <u>Note G.2</u>	<input type="checkbox"/> Other/Specialty	<input type="checkbox"/> Sound Isolation
<input checked="" type="checkbox"/> 208V <u>Note G.2</u>		<input type="checkbox"/> Radioactivity
<input type="checkbox"/> 480V		<input type="checkbox"/> Other

HAZARDOUS MATERIAL STORAGE
<input checked="" type="checkbox"/> Acid/ Corrosive
<input checked="" type="checkbox"/> Toxic
<input checked="" type="checkbox"/> Other
<input checked="" type="checkbox"/> Flammable
<input type="checkbox"/> Radioactive

LIGHTING	SAFETY / FIRE PROTECTION	VISUAL
Ambient Light Level _____	<input type="checkbox"/> Safety Shower	<input checked="" type="checkbox"/> White Board
<input type="checkbox"/> Task Light <u>60-80 FC</u>	<input checked="" type="checkbox"/> Eyewash <u>at all sink</u>	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type <u>Note G.3</u>	
<input checked="" type="checkbox"/> Natural Light <u>Optional</u>	<input checked="" type="checkbox"/> Fire Extinguisher <u>Note G.3</u>	
<input type="checkbox"/> Other	<input type="checkbox"/> Other	

SECURITY
<input type="checkbox"/> CCTV
<input type="checkbox"/> Keyed Entry
<input type="checkbox"/> Access Control
<input type="checkbox"/> Other

Program ID:	2.85.1	Room Name:	Extraction - Release Agent	Department:
Quantity:	1	Area (SF):	Occupancy:	HMA

NOTES

A. Adjacencies: Connected to the Loose Area and the HMA Open lab

B. Equipment: Forced Air Oven (44"W x 29"D x 51"H), TCE Reclaimer (22"W x 40"D x 44"H), Chemical Storage Cabinet (60"W x 35"D x 66"H), Chemical Storage Cabinet (44"W x 19"D x 66"H), 48" Lab Hood (qty 3) .
2. Fumehoods: shared with Extraction, refer to RDS 2.85.

C. Test:

D. Test Description:

E. Environmental Conditions:

1. Temperature: Control in Lab of 68°F - 86°F per AASHTO R18
2. Humidity: Refer to RDS 2.85.
3. Acoustic: Refer to RDS 2.85.

F. General Notes: -

G. RDS Notes

1. Final interior Finishes, refer Extraction Lab RDS 2.85.
2. Refer to the equipment matrix for power, water, gas requirements etc.
3. Refer to the Extraction Lab RDS 2.85.
4. Provide carts and Mobile shelves.
5. Provide ceiling mounted power reels.

Program ID: 2.92 **Room Name:** Breakdown Room **Department:** _____
Quantity: 1 **Area (SF):** 484 **Occupancy:** _____ **Aggregate**
Function: _____

INTERIOR FINISHES

FLOORING	CEILINGS	PARTITIONS	WALL FINISH	WALL BASE	DOOR
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input checked="" type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood
<input type="checkbox"/> Rubber Flooring	<input checked="" type="checkbox"/> Open	<input checked="" type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass
<input checked="" type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input checked="" type="checkbox"/> CMU		<input checked="" type="checkbox"/> Height- 4"	<input type="checkbox"/> 48in
<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size 6' X 8'
Note G.1	Note G.1	Note G.1	Note G.1	Note G.1	Note G.1

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input checked="" type="checkbox"/> Hand Wash	<input checked="" type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input checked="" type="checkbox"/> Casework Material <u>Stainless Stee</u>
<input type="checkbox"/> Biological Safety Cabinet	<input checked="" type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input checked="" type="checkbox"/> Pressurization	<input type="checkbox"/> Scullery Sink	<input type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour <u>6 ACH min.</u>	<input checked="" type="checkbox"/> Floor Sink	<input checked="" type="checkbox"/> Tall Shelving
<input checked="" type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Lockers
<input checked="" type="checkbox"/> Perimeter Bench <u>Duplex @ 24" O.C.</u>	<input type="checkbox"/> Compressed air	<input type="checkbox"/> Mobile Cabinets
<input type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Purified Water	<input checked="" type="checkbox"/> Vibration Control
<input type="checkbox"/> Emergency	<input type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Temperature <u>Note E.1</u>
<input checked="" type="checkbox"/> 120V <u>Computer</u>	<input type="checkbox"/> Other/Specialty	<input type="checkbox"/> Acoustics
<input checked="" type="checkbox"/> 208V <u>Equipment</u>		<input checked="" type="checkbox"/> Humidity <u>Note E.2</u>
<input checked="" type="checkbox"/> 480V <u>Equipment</u>		<input type="checkbox"/> Sound Isolation

HAZARDOUS MATERIAL STORAGE	HAZARDOUS MATERIAL STORAGE	HAZARDOUS MATERIAL STORAGE
<input type="checkbox"/> Acid/ Corrosive	<input type="checkbox"/> Acid/ Corrosive	<input type="checkbox"/> Radioactivity
<input checked="" type="checkbox"/> Toxic	<input checked="" type="checkbox"/> Toxic	<input checked="" type="checkbox"/> Other <u>Dust collection, Note E.4</u>
<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Leve <u>60-80FC</u>	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input checked="" type="checkbox"/> Zoned Lighting	<input checked="" type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type <u>Wet Type</u>	
<input type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher <u>ABC</u>	
	<input checked="" type="checkbox"/> Other	

SECURITY
<input type="checkbox"/> CCTV
<input type="checkbox"/> Keyed Entry
<input type="checkbox"/> Access Control
<input checked="" type="checkbox"/> Other <u>Note G.6</u>

Program ID: <u>2.92</u>	Room Name: <u>Breakdown Room</u>	Department:
Quantity: <u>1</u>	Area (SF): <u>484</u>	Occupancy:
		Aggregate

NOTES

A. Adjacencies:

B. Equipment:

C. Processes: Refer to the RDS for each area.

Material Flow:

1. Pallets received for check-in.
2. Bag samples combined then split into 'size outs'.
3. Separate storage area for drying samples.
4. Materials are typically washed multiple times throughout the process.
5. Sieves for testing sizes.
6. Environmental chamber testing.
7. Recycled solution.

D. Primary Areas: N/A

E. Environmental Conditions: Refer to RDS sheet for each area.

1. Temperature: 68-74F +/- 2F
2. Humidity: 23-55%RH +/- 5%
3. Acoustic: NC-36
4. Dust collection System: Exhaust needed to collect the silica dust generated in the space.

F. General Notes:

1. Openness of lab allows for easier maneuvering of large carts to transport items.
2. Ceilings shall be 12'-0" unless noted otherwise.
3. The lighting, mechanical, plumbing, power and data and, special requirement apply to all areas with the room unless noted otherwise.
4. The lab offices need to be directly attached to the lab space, allowing easy access to equipment should any malfunctions occur during a test.
5. Do not use Daiken products - these have proven not to work in our lab environment. Also, the lab has very specific requirements for temperature and humidity based upon the performed tests.
6. Bulk Aggregate Bin Storage allows loading the aggregate from the exterior of building and get what is need from inside of the building.
7. Disposal - 55 gallon drum ferried by forklift to dumpster. Not optimal.
8. Currently use 2 hand lifts to move materials.

G. RDS Notes:

1. Interior Finishes provided are the preferred option, final interior finishes shall be selected by the design team.
2. Refer to equipment matrix for power, water, gas requirement etc.
3. Provide double sink scullery
4. Refer to Architectural narrative.
5. Significant silica dust shall be generated in this space. Ensure that filter are provided at exhaust grilles. Refer to mechanical narrative for additional information.
6. Provide Sediment trap at all sink and floor drains.

Program ID: 2.93 **Room Name:** Specific Gravity (SPG) **Department:** _____
Quantity: 1 **Area (SF):** 242 **Occupancy:** _____ **Aggregate**
Function: Drying of Soils and Aggregate

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR	
<input type="checkbox"/> Epoxy	<input checked="" type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal	
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input checked="" type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood	
<input type="checkbox"/> Rubber Flooring	<input type="checkbox"/> Open	<input checked="" type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass	
<input checked="" type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input checked="" type="checkbox"/> CMU		<input checked="" type="checkbox"/> Height- 4"	<input type="checkbox"/> 48in	
<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Door Size	6' X 8'
Note G.1	Note G.1	Note G.1	Note G.1	Note G.1	Note G.1	

DUCTED LAB EQUIPMENT

- Fume Hood _____
- Snorkel _____
- Canopy _____
- Biological Safety Cabinet _____
- Other _____

PLUMBING SERVICES

- Lab Sink _____
- Hand Wash _____
- Cup Sink _____
- Deep Sink _____
- Floor Drain _____
- Scullery Sink _____
- Floor Sink _____
- Other _____

CASEWORK

- Mobile Casework _____
- Fixed Casework _____
- Casework Material _____
- Counter Material _____
- Other _____

HVAC

- Pressurization Negative
- Air Change Per Hour 6ACH Min.
- Air Filtration (Supply and/or Exhaust) _____

LABORATORY SERVICES

- Nitrogen _____
 - Compressed air _____
 - Purified Water _____
 - Vacuum _____
 - Other/Specialty _____
- w/ 2 wells
- Sediment trap @ sink

STORAGE

- Tall Cabinets _____
- Tall Shelving Note G.3
- Peg Board _____
- Lockers _____
- Mobile Cabinets _____

POWER AND DATA

- Island Bench _____
- Perimeter Bench Duplex @ 24" O.C.
- Ceiling Mounted Floor Mounted
- Emergency UPS
- 120V Computer
- 208V Equipment
- 480V Equipment
- Data Wi-Fi Router Comm.
- Other _____

HAZARDOUS MATERIAL STORAGE

- Acid/ Corrosive _____
- Toxic _____
- Other _____
- Flammable _____
- Radioactive _____

SPECIAL REQUIREMENTS

- Vibration Control _____
- Temperature Note E.1
- Acoustics _____
- Humidity Note E.2
- Sound Isolation _____
- Radioactivity _____
- Other Dust collection

LIGHTING

- Ambient Light Leve 60-80FC
- Task Light _____
- Zoned Lighting _____
- Dimmer _____
- Occ Sensor _____
- Window Treatment _____
- Natural Light _____

SAFETY EQUIP./FIRE PROTECTION

- Safety Shower _____
- Eyewash _____
- Goggles _____
- PPE _____
- In-Use Signage _____
- Sprinkler Type Wet Type
- Fire Extinguisher ABC
- Other _____

VISUAL

- White Board _____
- Monitor _____
- Projection _____

SECURITY

- CCTV _____
- Keyed Entry _____
- Access Control _____
- Other Note G.2

Program ID: 2.93 **Room Name:** Specific Gravity (SPG) **Department:**
Quantity: 1 **Area (SF):** 242 **Occupancy:** **Aggregate**

NOTES

A. Adjacencies:

Specific Gravity Shared Area with HMA/Chemistry
Separate room near aggregate lab.

B. Equipment: Water Tank (29"W x 23"D x 50"H)
Refer to the equipment Matrix

C. Processes: Refer to the RDS for each area.

D. Primary Areas: None

E. Environmental Conditions: Refer to RDS sheet for each area.

1. Temperature: 68-74F +/- 2F
2. Humidity: 23-55%RH +/- 5%

F. General Notes:

G. RDS Notes:

1. Interior Finishes provided are the preferred option, final interior finishes shall be selected by the design team.
2. Refer to Security Narrative.
3. ~~Heavy Duty stainless Shelves.~~ **Provide heavy duty shelves along perimeter of room. Shelves used for storing samples. for drying of soils and aggregate, 30"D x 6'-11"H x Lengths determined by room configuration and equipment locations.**

Program ID: 2.94.5.a **Room Name:** Open Lab - Soundness Test - Moisture Room **Department:** _____
Quantity: 1 **Area (SF):** 181.5 **Occupancy:** _____ **Aggregate** _____
Function: Storing and cure concrete cylinder cores.

INTERIOR FINISHES

FLOORING	CEILING	PARTITIONS	WALL FINISH	WALL BASE	DOOR	
<input type="checkbox"/> Epoxy	<input type="checkbox"/> GWB	<input type="checkbox"/> GWB	<input type="checkbox"/> Epoxy	<input type="checkbox"/> Integral Cove	<input checked="" type="checkbox"/> Hollow Metal	
<input type="checkbox"/> Sheet Flooring	<input type="checkbox"/> ACT	<input type="checkbox"/> Mold/Moisture	<input checked="" type="checkbox"/> Acrylic PNT	<input type="checkbox"/> Cove	<input type="checkbox"/> Wood	
<input type="checkbox"/> Rubber Flooring	<input checked="" type="checkbox"/> Open	<input checked="" type="checkbox"/> Impact Resistant	<input type="checkbox"/> FRP		<input type="checkbox"/> Glass	
<input type="checkbox"/> Sealed Concrete	<input type="checkbox"/> Unistrut	<input checked="" type="checkbox"/> CMU		<input checked="" type="checkbox"/> Height- 4"	<input type="checkbox"/> 48in	
<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Door Size	6' X 8'
Note G.2		Note G.5				

DUCTED LAB EQUIPMENT	PLUMBING SERVICES	CASEWORK
<input type="checkbox"/> Fume Hood	<input type="checkbox"/> Lab Sink	<input type="checkbox"/> Mobile Casework
<input type="checkbox"/> Snorkel	<input type="checkbox"/> Hand Wash	<input type="checkbox"/> Fixed Casework
<input type="checkbox"/> Canopy	<input type="checkbox"/> Cup Sink	<input type="checkbox"/> Casework Material
<input type="checkbox"/> Biological Safety Cabinet	<input type="checkbox"/> Deep Sink	<input type="checkbox"/> Counter Material
<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Floor Drain	<input type="checkbox"/> Other

HVAC	LABORATORY SERVICES	STORAGE
<input type="checkbox"/> Pressurization	<input type="checkbox"/> Scullery Sink	<input type="checkbox"/> Tall Cabinets
<input checked="" type="checkbox"/> Air Change Per Hour <u>6 Ach min.</u>	<input type="checkbox"/> Floor Sink	<input checked="" type="checkbox"/> Tall Shelving
<input type="checkbox"/> Air Filtration (Supply and/or Exhaust)	<input checked="" type="checkbox"/> Other	<input type="checkbox"/> Peg Board

POWER AND DATA	LABORATORY SERVICES	SPECIAL REQUIREMENTS
<input type="checkbox"/> Island Bench	<input type="checkbox"/> Nitrogen	<input type="checkbox"/> Lockers
<input checked="" type="checkbox"/> Perimeter Bench <u>Duplex @ 24" O.C.</u>	<input type="checkbox"/> Compressed air	<input type="checkbox"/> Mobile Cabinets
<input type="checkbox"/> Ceiling Mounted	<input type="checkbox"/> Purified Water	<input checked="" type="checkbox"/> Vibration Control
<input type="checkbox"/> Emergency	<input type="checkbox"/> Vacuum	<input checked="" type="checkbox"/> Temperature
<input checked="" type="checkbox"/> 120V <u>Computer</u>	<input type="checkbox"/> Other/Specialty	<input type="checkbox"/> Acoustics
<input checked="" type="checkbox"/> 208V		<input checked="" type="checkbox"/> Humidity
<input type="checkbox"/> 480V		<input type="checkbox"/> Sound Isolation

HAZARDOUS MATERIAL STORAGE	OTHER
<input type="checkbox"/> Acid/ Corrosive	<input type="checkbox"/> Flammable
<input type="checkbox"/> Toxic	<input type="checkbox"/> Radioactive
<input type="checkbox"/> Other	<input checked="" type="checkbox"/> Other

LIGHTING	SAFETY EQUIP./FIRE PROTECTION	VISUAL
Ambient Light Level <u>60-70FC, G.4</u>	<input type="checkbox"/> Safety Shower	<input type="checkbox"/> White Board
<input type="checkbox"/> Task Light	<input type="checkbox"/> Eyewash	<input type="checkbox"/> Monitor
<input type="checkbox"/> Zoned Lighting	<input type="checkbox"/> Goggles	<input type="checkbox"/> Projection
<input type="checkbox"/> Dimmer	<input type="checkbox"/> PPE	
<input type="checkbox"/> Occ Sensor	<input type="checkbox"/> In-Use Signage	
<input type="checkbox"/> Window Treatment	<input checked="" type="checkbox"/> Sprinkler Type	
<input type="checkbox"/> Natural Light	<input checked="" type="checkbox"/> Fire Extinguisher	

SECURITY
<input type="checkbox"/> CCTV
<input type="checkbox"/> Keyed Entry
<input checked="" type="checkbox"/> Access Control

Program ID: 2.94.5.a **Room Name:** Open Lab - Soundness Test - Moisture Room **Department:**
Quantity: 1 **Area (SF):** 181.5 **Occupancy:** **Aggregate**

NOTES

A. Adjacencies: Near the Freeze Thaw Room.

B. Equipment: Moist Room (96"W x 120"D x 96"H)

C. Tests: Core Samples used for Compression Test.

E. Environmental Conditions:

1. Temperature: 74 +/-3F
2. Humidity: 100% RH

F. General Notes:

- a. Provide a IP 65 Rated- Level 6 (need for specific test ratings-indicates a precise level of protection against moisture ingress under specific test scenarios).

G. RDS Notes:

1. Mistng systems - water quality- type III distilled water.
2. Epoxy flooring: Basis of design manufacturer: Dudick Inc., Steri- Flor T w/Urethane top coat.
3. Floor sloped towards a trench drain.
4. Light Fixture must be gasketed and water proof.
5. Provide a bumper rail around room.
6. Provide heavy duty shelves along perimeter of room. Shelves used for storing samples. **for drying of soils and aggregate, 30"D x 6'-11"H x Lengths determined by room configuration and equipment locations.**