



**CHANGE IS  
COMING TO IAH**

**NEW TERMINAL  
IN THE MAKING**



# **IAH Terminal Redevelopment Program Update**

## **Economic Development Committee Meeting**

June 21<sup>st</sup>, 2023



# Contents

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1. ITRP Overview
2. International Terminal - North Terminal & Concourse Construction Photos
3. International Terminal - Central Processor Construction Photos
4. International Terminal – Enabling Projects
5. ITRP Budget Update
6. ITRP Upcoming Council Actions



# 1. IAH Terminal Redevelopment Program (ITRP) Overview

# IAH Terminal Redevelopment Program (ITRP) - Scope Overview

New C North (NCN)  
Concourse – Apron & Utilities  
Project - **COMPLETED**



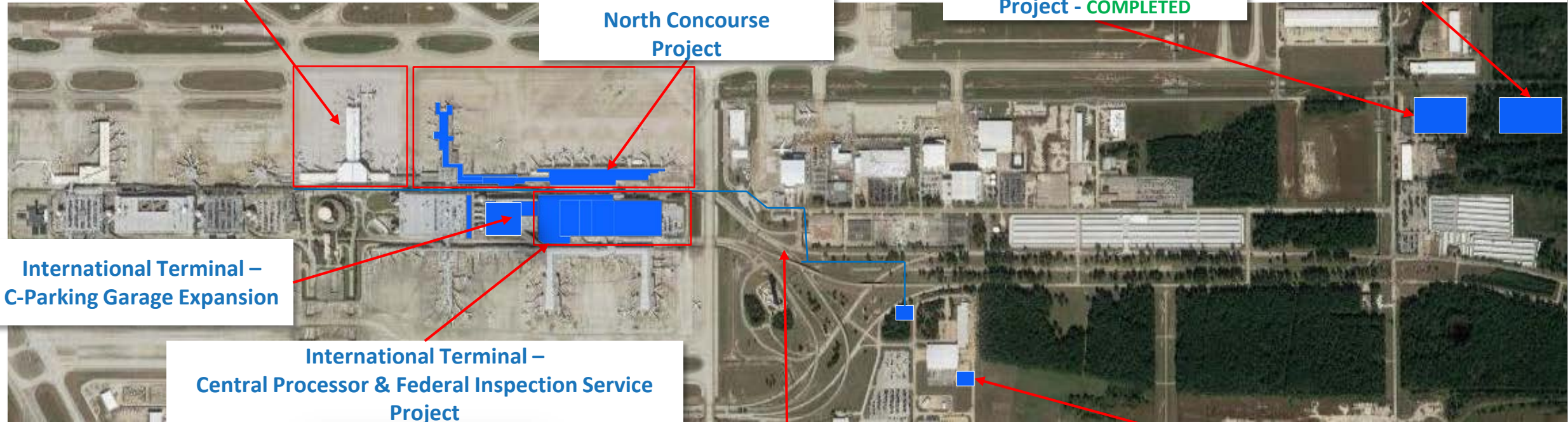
International Terminal –  
North Concourse  
Project



Infrastructure Division  
Office (PMO) Building  
Project - **COMPLETED**



IAH Regional Detention  
Pond Project - **COMPLETED**



International Terminal –  
C-Parking Garage Expansion

International Terminal –  
Central Processor & Federal Inspection Service  
Project

Enabling Utilities – Landside  
Project

Radio Intermediate  
Distribution Frame (RIDF)  
Relocation Project -  
**COMPLETED**



## IAH Terminal Redevelopment Program (ITRP) – Milestone Overview

KEY PROGRAM ACTIVITIES	FORECAST ARRIVALS	STATUS
New C North Pier Opening	Mar 2017	LANDED
HAS Infrastructure Division (PMO Building) Operational	Apr 2019	LANDED
United Airlines Vacate Old C-North Pier	Jul 2019	LANDED
Old C-North Pier Abatement & Demolition Activities Commence	Oct 2019	LANDED
International Terminal Concept Design Complete	Oct 2019	LANDED
New Pier Construction Commences	Oct 2019	LANDED
D/E Parking Garage Closes for Demolition	Mar 2021	LANDED
International Terminal and Central Processor Contract GMP (MLIT & FIS)	Nov 2021	LANDED
International Terminal North Concourse Refurbishment Complete	Oct 2023	ON TIME
New Pier Construction Complete	Q4 2023	ON TIME
New Parking Levels Complete	Jan 2024	ON TIME
International Terminal Central Processor – Opening	Q4 2024	ON TIME

# International Terminal Is Open for Business

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## 1. International Terminal D Complex - Summer 2023

- All new finishes and fixtures
- New flooring, LED lighting and ceiling tiles
- State of the art air filtration
- New furniture, seating and gate counters

## 2. New International Concourse and Gates - Winter 2023

- Designed to LEED Silver Equivalent
- New furniture, seating and gate counters
- State of the art air filtration
- Bright and airy spaces filled
- Immersive art installations

## 3. New International Central Processor - Winter 2024

- Designed to LEED Silver Equivalent
- New state of the art ticketing hall and self-service technologies
- 17 lane screening lane checkpoint
- Video Oculus feature
- New open concept ticketing and arrivals level halls
- State of the art air filtration
- Immersive art installations

# Program Safety

- The overall program has logged more than 3 million program man-hours to date.
- ITRP was selected by Hensel Phelps to host the national Safety Week celebration and Event.



# ITRP Fly Through

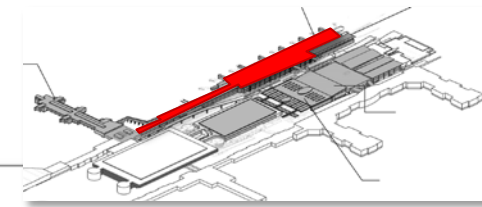
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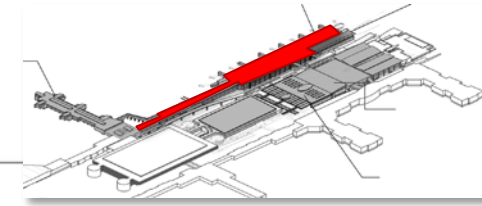


## 2. International Terminal D Complex

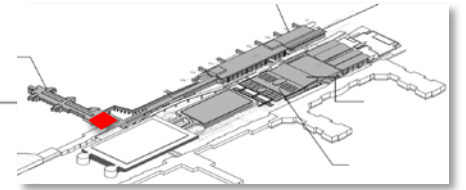
# International Terminal – Terminal D Refurbishment



# International Terminal – Terminal D Refurbishment



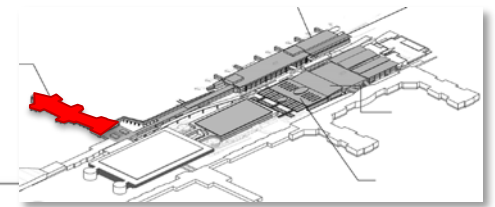
# International Terminal - Concourse & Concessions



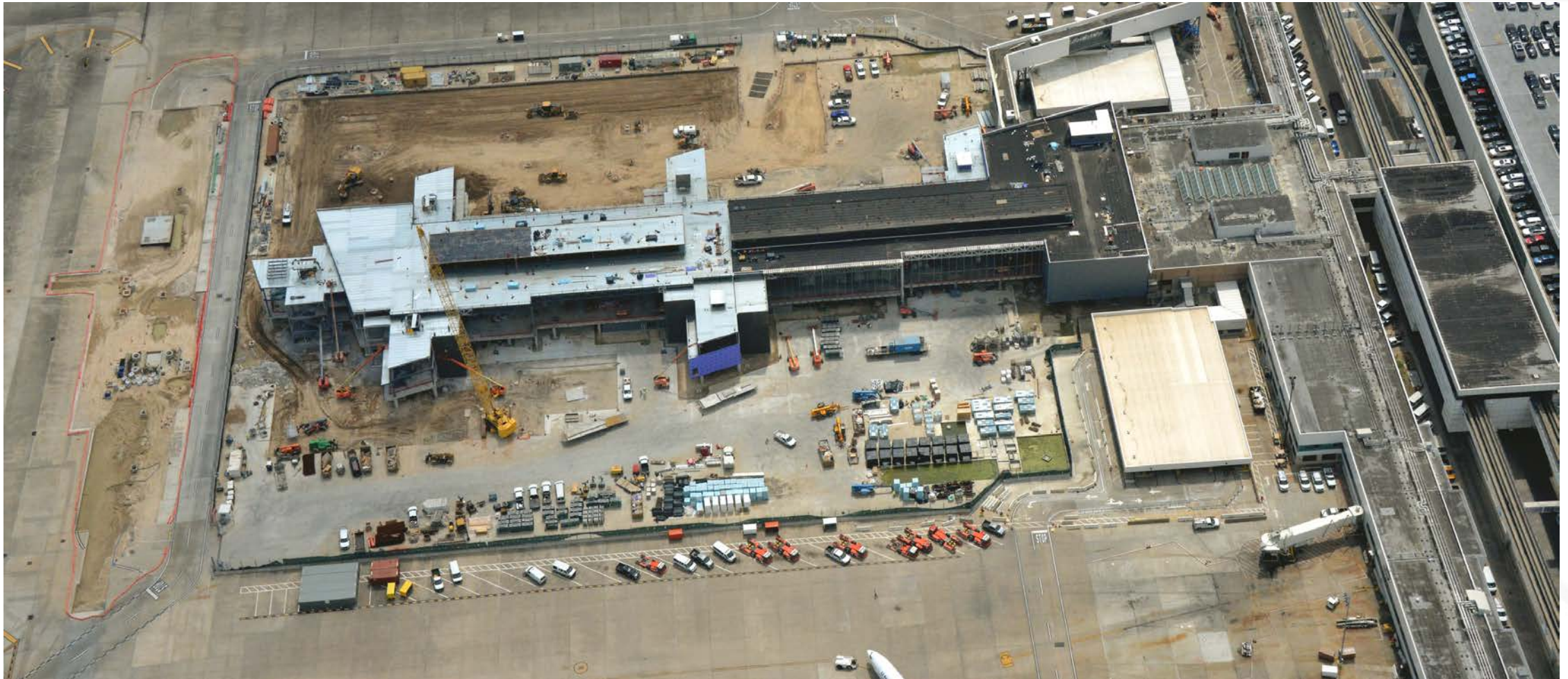
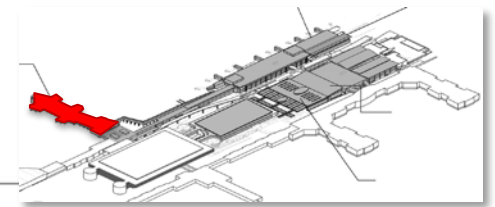


## 2. New International Concourse and Gates

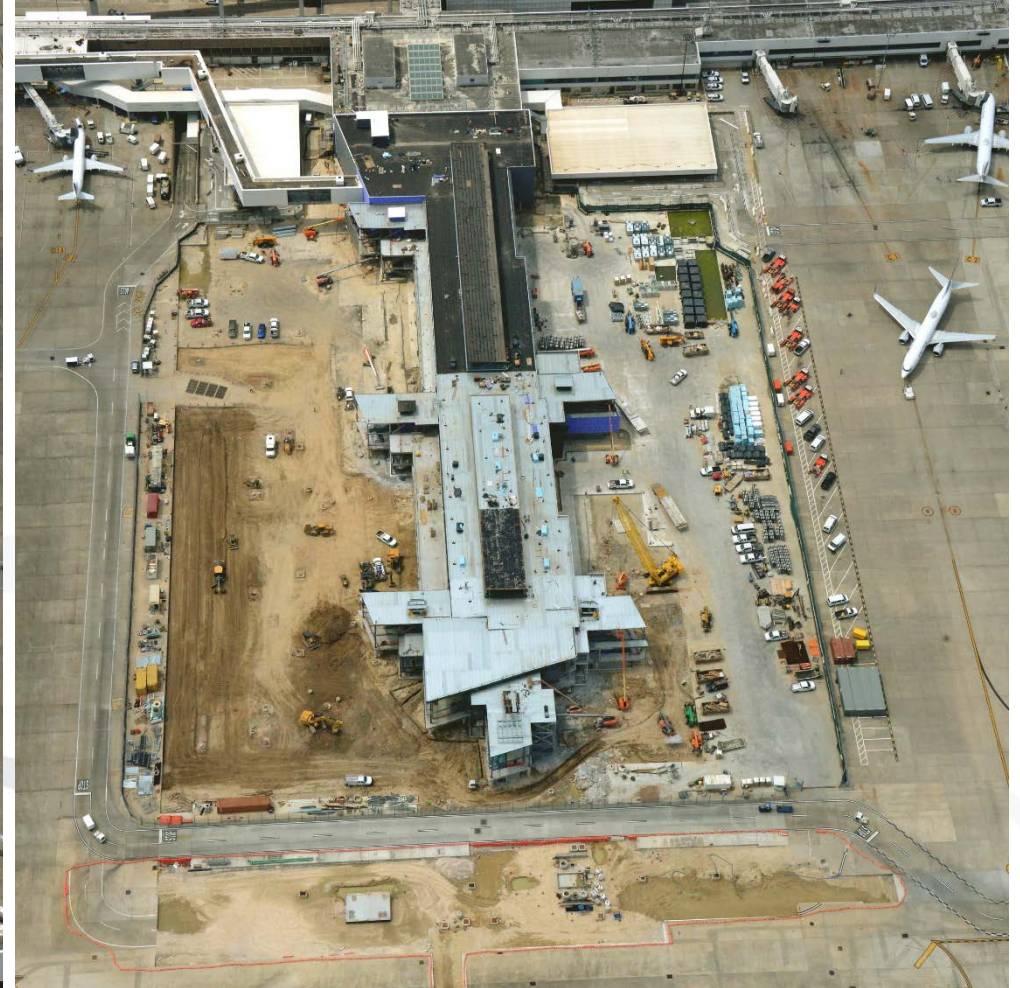
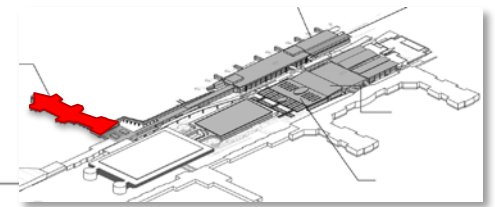
# International Terminal – New Concourse and Gates



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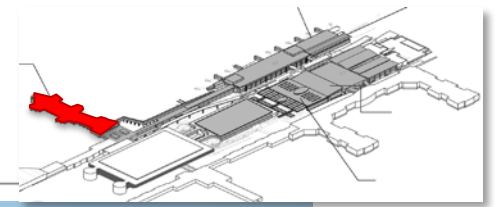


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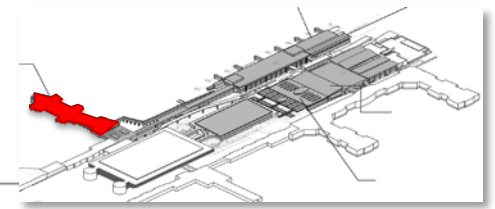




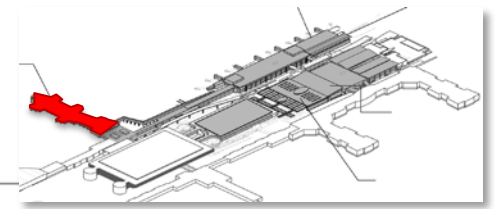
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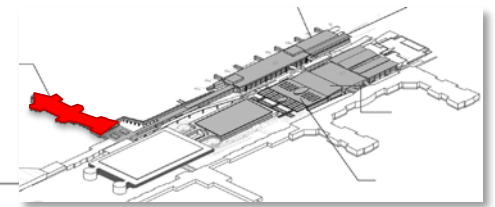
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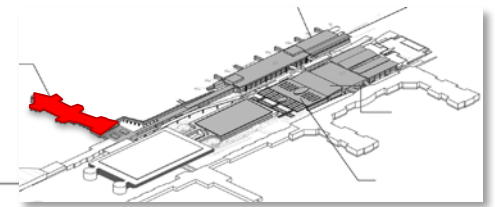
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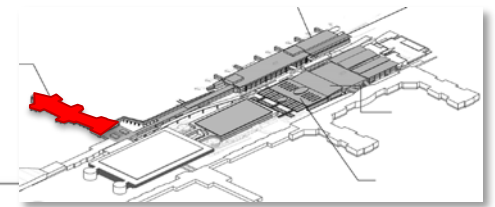
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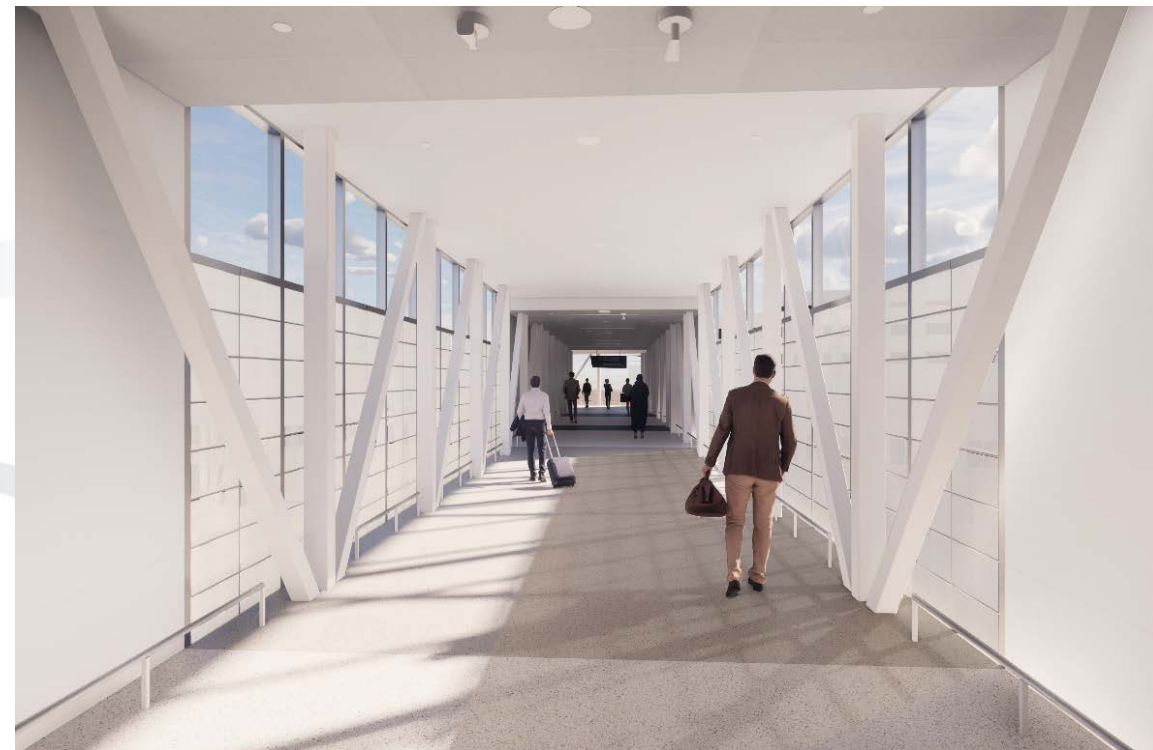
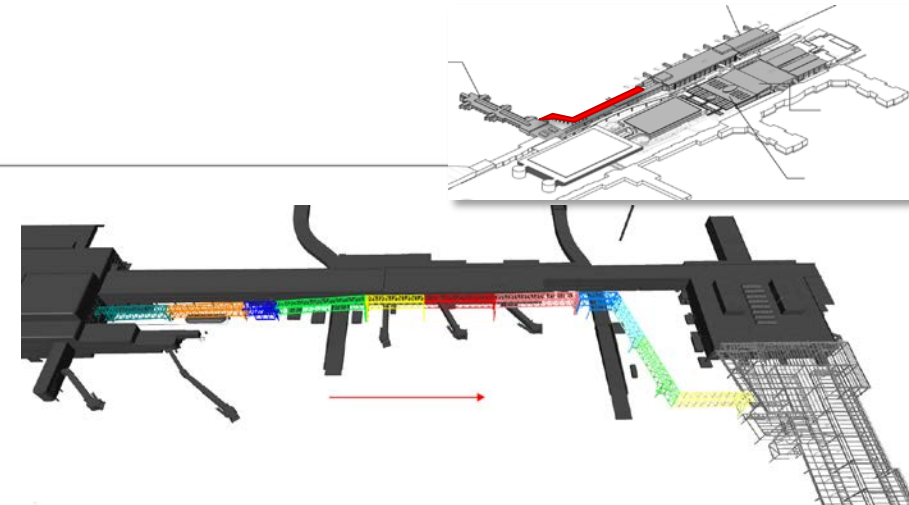
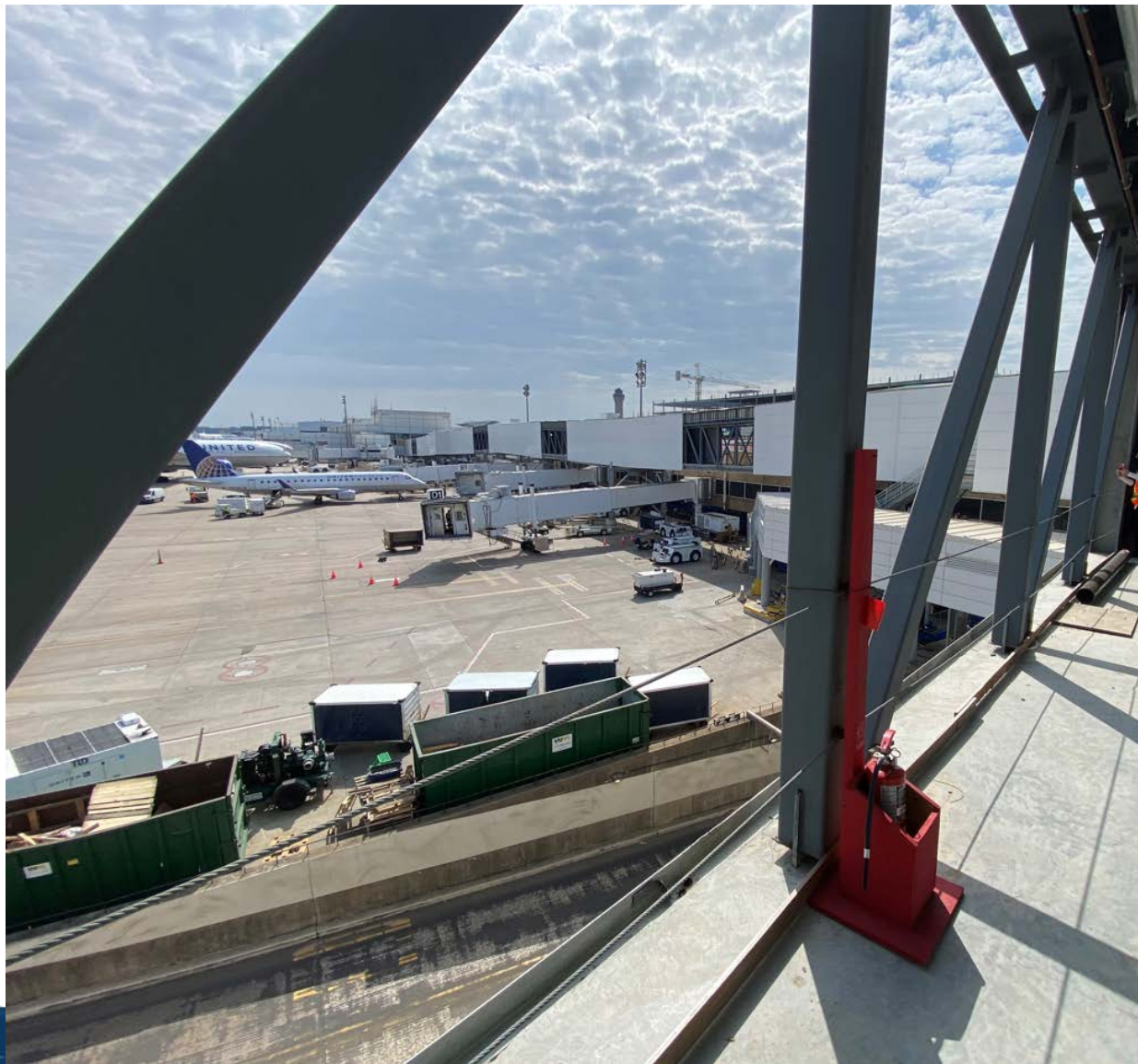
# International Terminal – New Concourse and Gates



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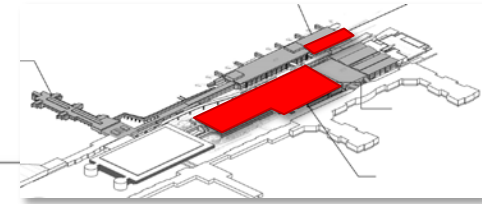


## 3. International Terminal Complex

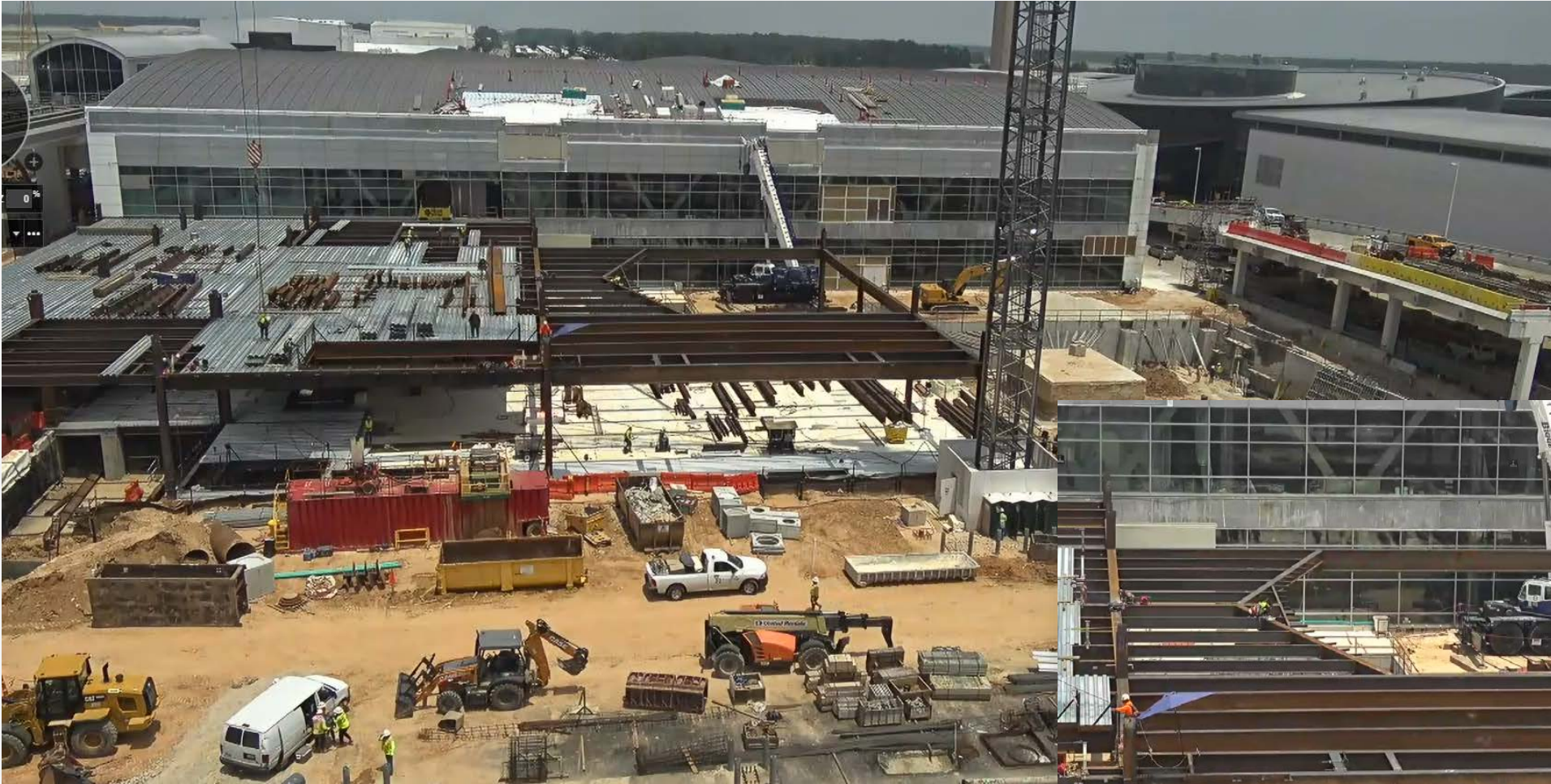
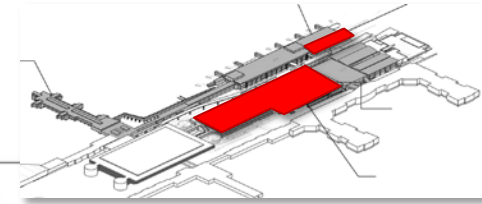
### Central Processor



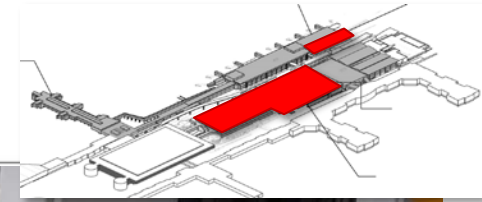
# International Terminal – Central Processor Departures Curb



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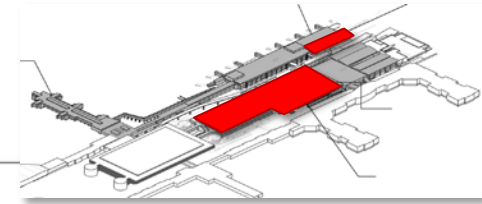
# International Terminal – Central Processor Departures Curb 85,000 Pound Steel beams



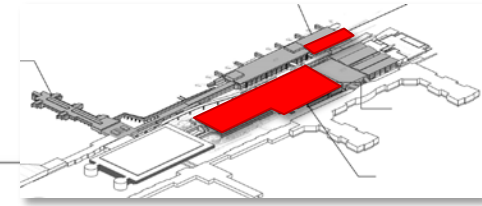
- [Video Link](#)



# International Terminal – Central Processor Departures Curb



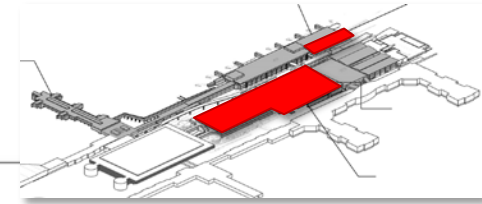
# International Terminal – Drone Footage





## 4. International Terminal Enabling Projects

# International Terminal – Central Processor Departures Curb



## Enabling Utilities Landside Water Project - IAH New Pump Station #3





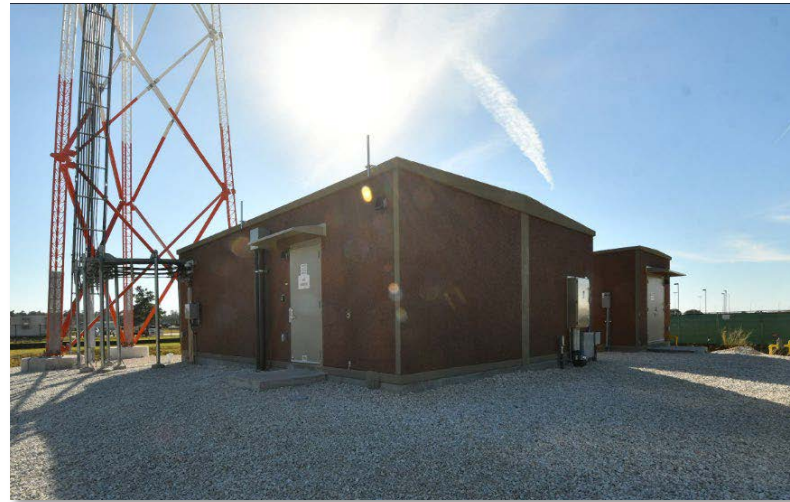
## IAH Regional Detention Pond – Completed



- Part of and works in coordination with the IAH regional detention system.
- 1500 ft long, 290 ft wide and about 12 feet deep.
- The pond has a capacity of roughly **50 Acre feet** (enough water to cover 50 acres in 1ft deep of water) or 2,200,000 cubic feet.
- The pond can flow water from Garners bayou at a rate of over **2,000 cubic feet per second** and prevents the bayou water level from rising at an uncontrolled rate providing flood protection for the surrounding area.
- It was designed in coordination with Harris County Flood Control District and fits into their long-term plan for this drainage watershed.

# Radio Intermediate Distribution Frame (RIDF) Relocation - Completed

- The RIDF is a key component that supports over 25,000 radio subscribers.
- RIDF supports the system providing >1,700 square miles of radio coverage for mission critical first responders.
- The top of the tower stands at 217 feet tall.
- The new RIDF site, tower and shelter all have been designed for room for expansion.
- Over 36,000 lbs. of batteries. (96 batteries @ 383lbs each= 36,768 lbs.)





## 5. ITRP Budget Update

# Budget Summary

The ITRP Budget Update accounts for significant external impacts outside the programs control. The estimated ITRP budget is \$1.43B from \$1.36B.

## 1. Market Conditions 2.3% (\$31.4M)

- Driven by the highly volatile supply chain disruption from geopolitical conflicts, post COVID surge in capital plan investments (reverb effect) and COVID changes to the labor market.
- Most notably electrical components and Mechanical Electrical Plumbing (MEP) work continue to be difficult to procure timely and are well above pre-covid and Ukrainian war pricing.
- Adjusting procurement strategies has held this to **2.3%** vs. **23% industry average increases** in bid pricing.

## 2. Increased Traffic Mitigation 0.6% (\$8.7M)

- Increased terminal curb & traffic management.
- Sophisticated 3 step traffic impact construction process (Model, Test, Build).
- Adjusting construction design, methodologies and plans to support highly nimble construction phasing requiring hour by hour planning and adaptations to passenger forecasts.

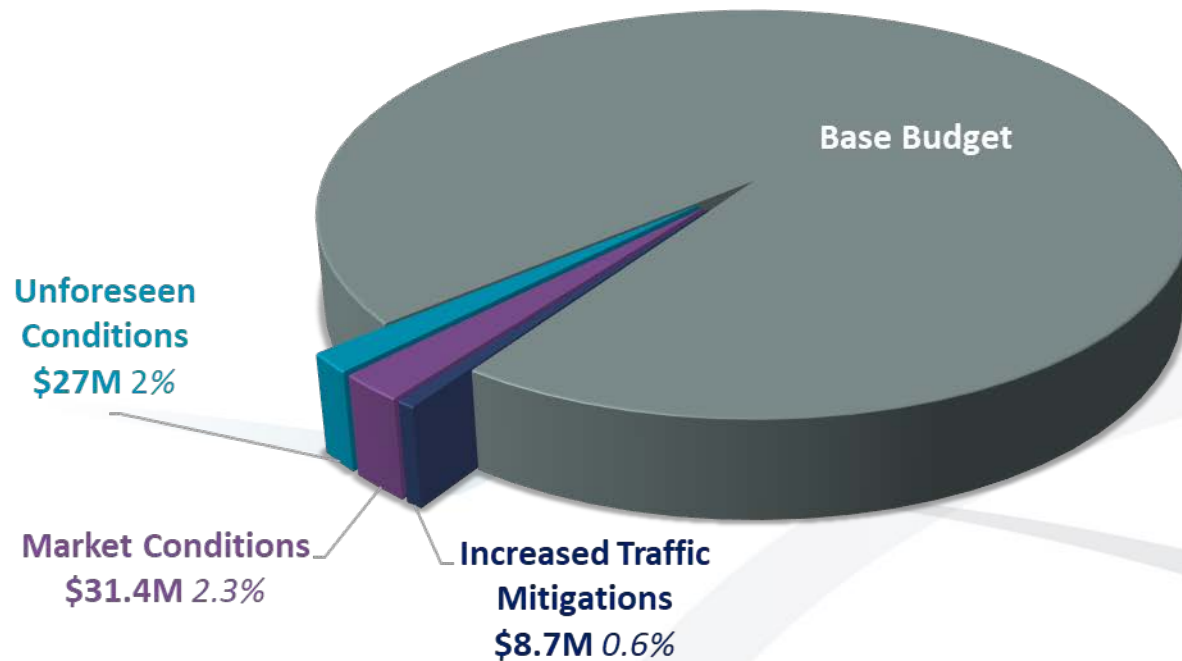
## 3. Unforeseen Conditions 2% (\$27M)

- Significant unanticipated site conditions
  - The central processor and baggage building sites are extremely complex and are very sensitive to operations. *Building a “cube within a cube, constrained by all 6 sides”.*
  - Corrects code gaps from old building identified during construction
- Supports remaining Unforeseen Conditions risks to complete the work providing
  - Underground utilities remaining, construction phasing flexibility to support operational needs, and the final interior trade phasing / low voltage, final finishes etc.

<b>Producer Price Index in construction materials is experiencing <i>abnormally high</i> escalations since February 2020 to July 2022 :</b>		<ul style="list-style-type: none"> <li>▪ Plastics (PVC) <b>55%</b></li> <li>▪ Gypsum <b>44%</b></li> <li>▪ Truck Transport <b>40%</b></li> </ul>
<ul style="list-style-type: none"> <li>▪ Non-Residential Bid Prices <b>23%</b></li> <li>▪ Copper <b>60%</b></li> <li>▪ Steel Mill Products <b>124%</b></li> </ul>	<b>April 2023 Producer Price Index in construction materials is <b>39.2% Higher</b> than February 2020.</b>	

# Budget Summary

## ITRP Budget \$1.43B



- ITRP has managed and mitigated a significant number of impacts, such as:
  - Absorbing an estimated \$29M in escalation with no additional funding needed.
  - Innovative strategies to combat inflation have been successful (advanced purchasing of materials, storing large quantities of materials, receiving delivery earlier than needed, avoiding highly volatile materials like stainless steel, etc.).
  - Robust construction planning and logistics management to mitigate traffic impacts and operations.
- Continuous monitoring and tracking of market impacts on ITRP will continue over the next 18 months.



## 6. Upcoming Council Actions

## ITRP Upcoming Council Actions

Date	Contract	\$m
Jun 2023	MLIT CMAR (Austin Gilbane JV)	\$26.5M
Jun 2023	MLIT AE (Fentress)	\$10.75M
Jun 2023	TSA AIT Maintenance Memorandum of Agreement (MOA)	\$0M
Q3 2023	FIS/International Central Processor AE (HOK)	\$5.8M
Q3 2023	FIS/International Central Processor CMAR (Hensel Phelps)	\$33.6M
Q3 2023	Program Management Support Services (PMSS) Team	~\$12M
Q3 2023	PMO(IDO) Building DB – Pepper Lawson Waterworks Accept Works & Contract Close	\$ 0M
Q3 2023	United Airlines NCN Reimbursable Agreement - De-Appropriation of Contract	(\$ 13.6M)
2024/25	Final Project Contract Closeouts	

**Note:** The appropriation plan supports the financing requirements and will be achieved in a phased approach.

Thank You



# Market Condition and Escalation Comparison & Summary

- Producer Price Index in construction materials is experiencing abnormally high escalations since February 2020 to July 2022
  - Non-Residential Bid Prices **23%**
  - Copper **60%**
  - Steel Mill Products **124%**
  - Plastics (PVC) **55%**
  - Gypsum **44%**
  - Truck Transport **40%**
  - [LINK TO 2022 AGC Construction Inflation Alert](#)
  - [LINK - 35% Electrical Contractor Producer Price Index Increase 2/2020 - 03/2023](#)
  - [LINK - Electrical Component Shortage - National Association of Home Builders](#)
  - [LINK - Switchgear lead times of 14-18 months are becoming the standard](#)
  
- TxDOT is seeing project delays and cost increases across the state and seeing some materials top **100%** inflation [LINK To Story](#)
  - Austin’s voter-approved project building two light-rail lines has seen a **40%** increase, now toping **\$10B**
  - JFK Airport Terminal 6 to spend **additional \$1B** due to inflation and higher labor costs

Producer Price Index, April 2023

	1-Month % Change	12-Month % Change	Change Since Feb 2020
<b>Inputs to Industries</b>			
Inputs to Construction	0.2%	-1.1%	39.2%
Inputs to Multifamily Construction	0.4%	0.4%	37.0%
Inputs to Nonresidential Construction	0.4%	-0.8%	39.9%
Inputs to Commercial Construction	0.3%	0.3%	40.2%
Inputs to Healthcare Construction	0.3%	0.0%	39.4%
Inputs to Industrial Construction	0.5%	1.5%	35.0%
Inputs to Other Nonresidential Construction	0.4%	-1.1%	40.0%
Inputs to Maintenance and Repair Construction	0.1%	-1.2%	37.7%
<b>Commodities</b>			
Adhesives and Sealants	0.7%	9.5%	34.2%
Brick and Structural Clay Tile	0.0%	9.0%	24.8%
Concrete Products	0.3%	13.2%	30.0%
Construction Machinery and Equipment	0.3%	9.3%	25.1%
Copper Wire and Cable	-0.6%	-5.8%	36.4%
Crude Petroleum	14.2%	-20.4%	65.9%
Fabricated Structural Metal Products	-0.1%	0.1%	53.0%
Gypsum Products	-1.1%	10.2%	44.3%
Hot Rolled Steel Bars, Plates, and Structural Shapes	0.7%	-7.9%	55.6%
Insulation Materials	-0.1%	8.4%	37.2%
Iron and Steel	1.6%	-14.3%	66.3%
Lumber and Wood Products	-0.4%	-14.9%	27.4%
Natural Gas	-20.1%	-64.1%	30.6%
Plumbing Fixtures and Fittings	-0.2%	2.6%	16.5%
Prepared Asphalt, Tar Roofing and Siding Products	2.3%	4.4%	36.2%
Softwood Lumber	-1.2%	-38.9%	17.9%
Steel Mill Products	3.6%	-14.8%	75.8%
Switchgear, Switchboard, Industrial Controls Equipment	0.2%	11.2%	34.3%
Unprocessed Energy Materials	5.2%	-29.1%	70.4%

Source: U.S. Bureau of Labor Statistics

