

2017 MAX Program

Red & Blue Line Platform Extension

John Rhone
Vice President, Capital Design & Construction
June 22, 2017

Project Goals and Objectives

- Increase capacity: Move more passengers by 2021 with ability to run three car train
- Minimize impact to customers
- Engage multiple Architectural/Engineering/Contracting Community to provide opportunities to small and/or disadvantaged businesses

Project Narrative

- The project will modify platforms at 28 rail stations along the Red and Blue light rail lines to accommodate 3-car trains. Modifications include extending platforms and/or raising portions of the platform to permit level boarding. This modification will increase the carrying capacity of the system and enhance the core capacity of the network.
- The construction phase is anticipated to be complete in 2021 with final contract closeouts in 2nd quarter 2022.



Project Description

- Increase platform length by 100 ft. at 28 stations
- CROF Cleaning platform
- Westmoreland track and roadway

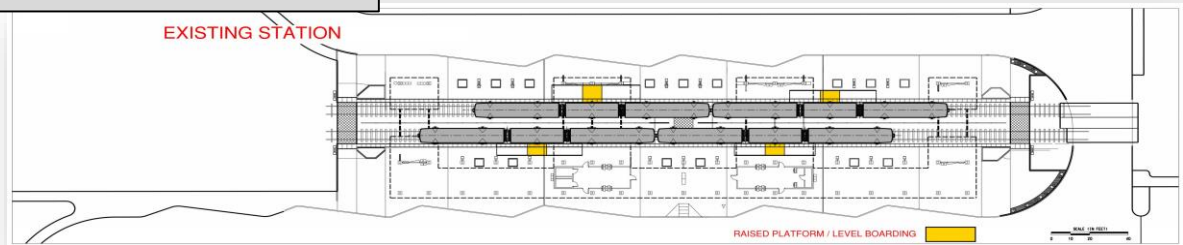
Platform Extensions

Existing Station

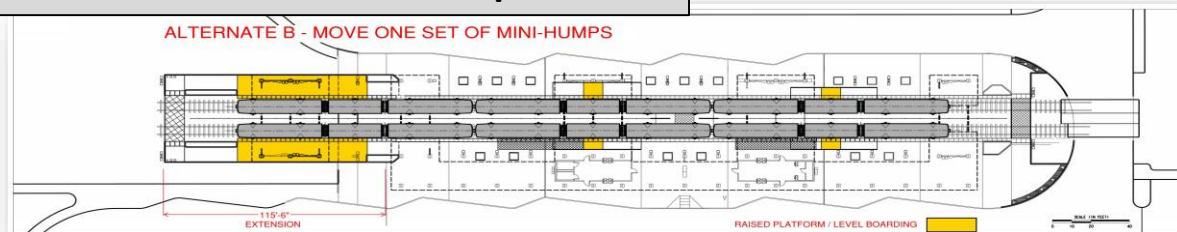


- Allow 3-car trains at each station
- Increase passenger capacity by 33%
- Operational Flexibility
- Minimize passenger disruption

Existing Station



Platform Extension Concept Plan

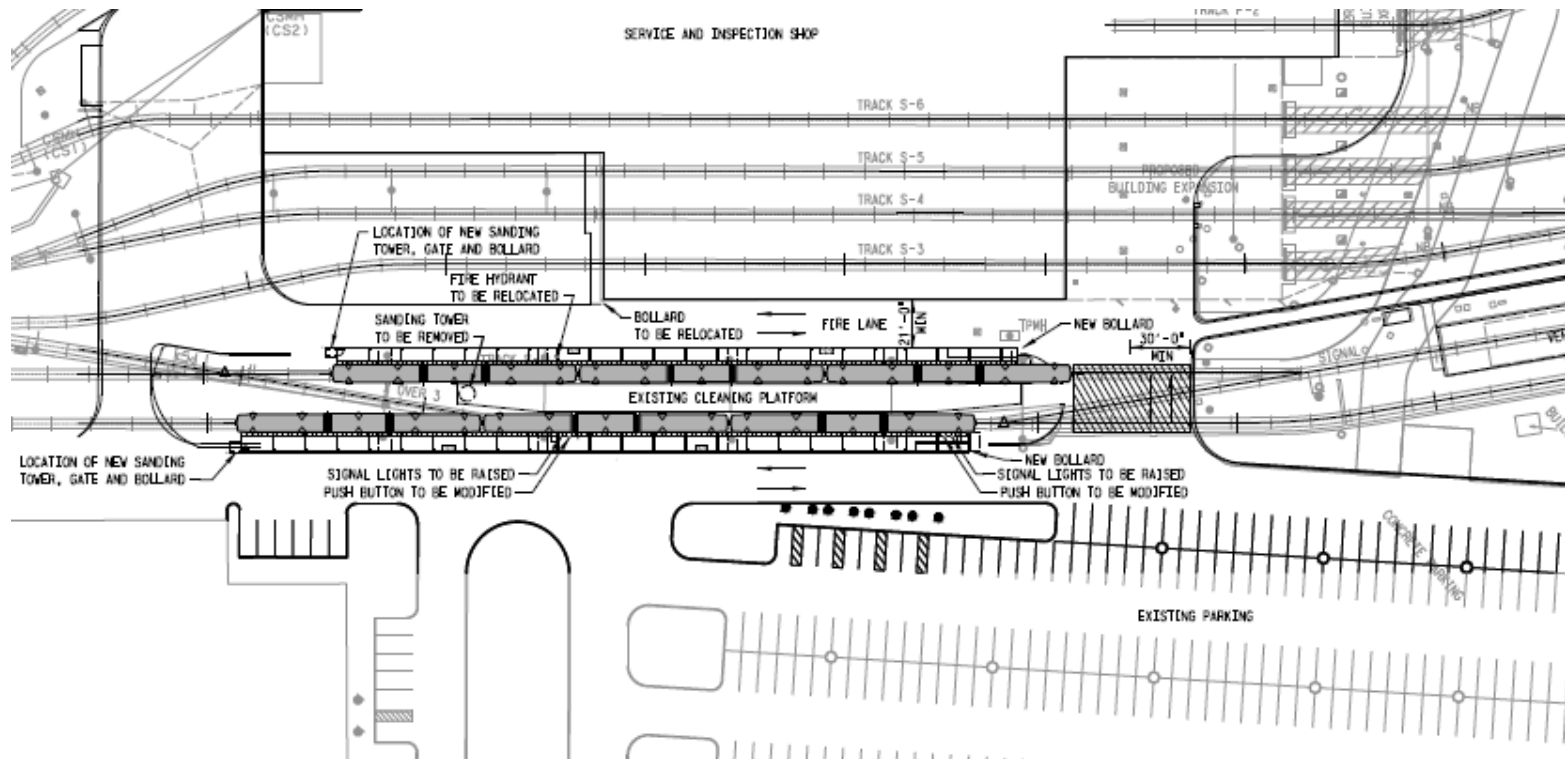


- Mini-humps are rebuilt on one platform to align with those on the other
- A future construction phase is required prior to fleet replacement to achieve full, level boarding

Related Platform Extensions Issues

- Existing CROF Cleaning Platform only accommodates 2-car trains: Included in Final 30% Design
- Westmoreland Tail Track only accommodates 2-car trains: Included in Final 30% Design

CROF Cleaning Platform



Platform Extensions

CROF Cleaning Platform Scope of Work:

- Add new cleaning platforms (2) on both sides of existing cleaning platform.
- New Platform will long enough to accommodate 3-car trains.
- Canopies are included in the platform plans.
- Cleaning platforms design is subject to Value Engineering Recommendations

Program of Interrelated Projects

Platform Extensions

Schedule Overview

- FTA acknowledgment of PD completion and approval to postpone Request to Enter Engineering received October 6, 2016
- Request to Enter Engineering January 2017
- Anticipated approval to Enter Engineering July 2017
- Anticipated FFGA executed December 2018
- Anticipated Revenue Service 2021

Station Concept Review

CONCEPT TYPES

Concept 1	Side Platform	Relocate all mini-humps & extend platform
Concept 2	Side Platform	Relocate mini-humps on one side of platform & extend platform
Concept 3	Aerial Platform	Relocate mini-humps & add one mini-hump with elevator mods
Concept 4	Aerial Platform	Relocate mini-humps & add one mini-hump
Concept 5	Center Platform	Relocate all mini-humps & extend platform
Concept 6	Mockingbird	Relocate mini-humps & add single humps each side
Concept 7A	City Place	Maintain mini-humps & extend platform at level boarding elevation
Concept 7B	City Place	Maintain mini-humps & extend platform at existing elevation, add one mini-hump at each platform

Concept 1

Arapaho
Lovers Lane
White Rock
Dallas Zoo

Concept 2

Hampton
Illinois
LBJ/Skillman
8th & Corinth
Cedars
LBJ/Central
Galatyn Park
Bush Turnpike
Downtown Plano
Tyler/Vernon
Morrell
Convention Center

Concept 3

Park Lane
Forest lane
Spring Valley

Concept 4

Walnut Hill

Concept 5

Parker Road
Forest/Jupiter
Downtown Garland
VA Medical Center
Kiest
Westmoreland

Concept 6

Mockingbird

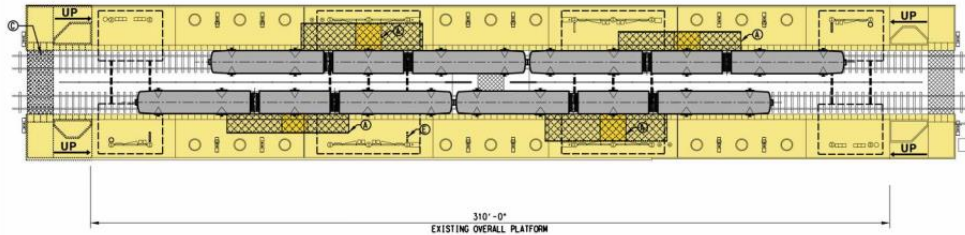
Concept 7A & 7B

City Place

Station Concept Review

- The following is a review of all 7 concepts in the project. The following items will be addressed at each concept:
- Demolition of existing humps
- New location of humps, platform extension and canopy addition
- Site adaptations

Station Concept 1



EXISTING PLATFORM CONDITION

- SLOPE SURFACE
- LEVEL BOARDING PLATFORM
- EXISTING MINI-HUMP TO BE RELOCATED



NOTES:

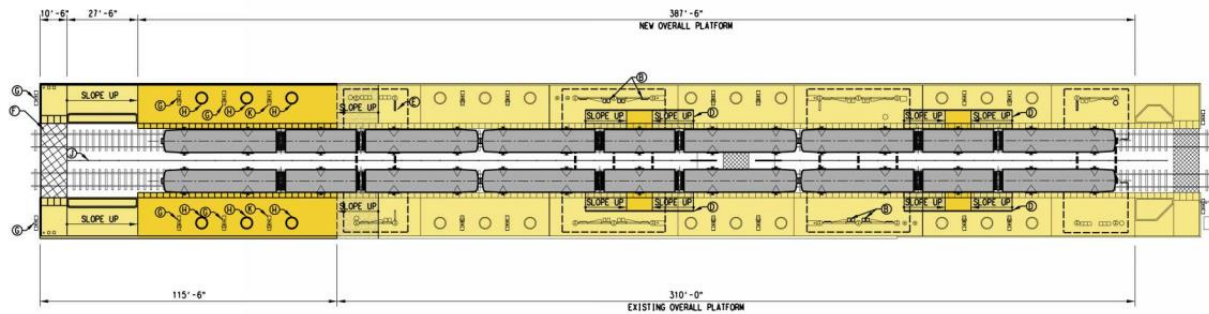
1. CONCEPT 1 APPLIES ONLY FOR THE FOLLOWING EXISTING STATIONS:
 - ARPAHO
 - LOVERS LANE
 - WHITE ROCK
 - DALLAS ZOO

2. PROPOSED PLATFORM CONCEPT:

- ① REMOVE EXISTING MINI-HUMPS AT BOTH PLATFORMS. STORE AND RE-USE CONC PAVERS AND GUARDRAIL.
- ② ADJUST SEATS TO FALL BETWEEN 17"MIN AND 19"MAX ADA COMPLIANT. ADJUST SEAT RAIL TO 27"MAX A.F.F..
- ③ REMOVE END CROSSING PANELS, DEMO END CONC CURB AND PREPARE AREA FOR EXTENSION AND MODIFICATIONS.
- ④ INSTALL MINI-HUMP AT NEW LOCATION.
- ⑤ REMOVE AND RELOCATE WINDSCREEN.
- ⑥ NEW END CROSSING.
- ⑦ NEW LIGHT POLE.
- ⑧ NEW TREE GRATE AND IRRIGATION.
- ⑨ EXTEND TRACKWAY FENCE.
- ⑩ RAISE EXISTING LIGHT POLE.

NOTES TO DESIGNER:

1. REFERENCE TO ALTERNATIVE PLATFORM DESIGNS FOR SIDE RAMP OPTION CROSSING WHEN PLATFORM EXTENSION IN CONFLICT.
2. REFERENCE TO STATION DATA FOR POSSIBLE SITE RELATED MODIFICATIONS.
3. EXTEND SIDE PLANTERS, IRRIGATION AND LANDSCAPE WHEN PRESENT.



PROPOSED PLATFORM EXTENSION

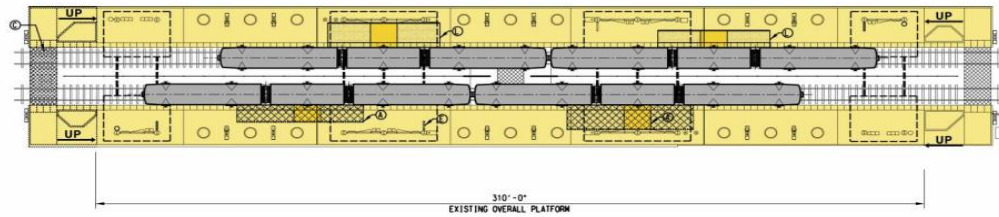
- SLOPE SURFACE
- LEVEL BOARDING PLATFORM



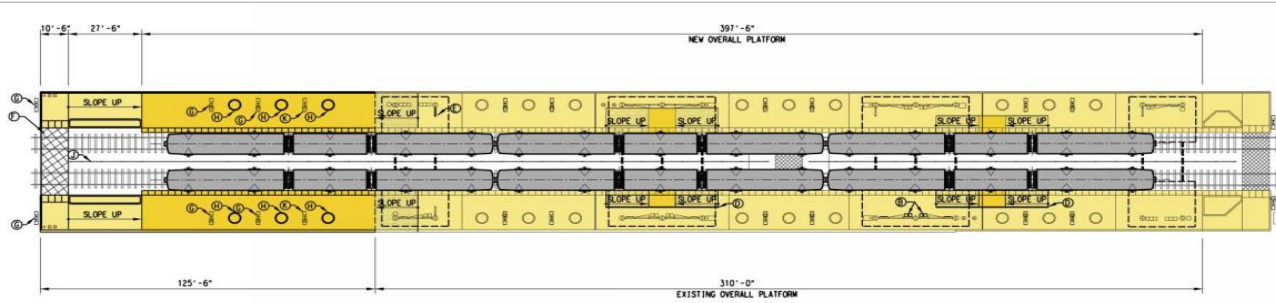
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02	01.08.2014	ISSUED FOR PERMIT
03	01.08.2014	ISSUED FOR PERMIT
04	01.08.2014	ISSUED FOR PERMIT
05	01.08.2014	ISSUED FOR PERMIT

SIDE PLATFORM CONCEPT PLATFORM DESIGN CONCEPT 1

Station Concept 2



EXISTING PLATFORM CONDITION



PROPOSED PLATFORM EXTENSION



NOTES:

- CONCEPT 1 APPLIES ONLY FOR THE FOLLOWING EXISTING STATIONS:
 - HAMPFON
 - ILLINOIS
 - LEJ/STILLMAN
 - 8TH & CORINTH
 - CEDARS
 - LEJ/CENTRAL
 - GALATYN PARK
 - BUSH TURNPIKE
 - DOWNTOWN PLANO
 - TYLER/VERNON
 - MORRELL
 - CONVENTION CENTER
- PROPOSED PLATFORM CONCEPT:
 - REMOVE EXISTING MINI-HUMPS AT ONE PLATFORMS, STORE AND RE-USE CONC PANELS AND GUARDRAIL.
 - ADJUST SEATS TO FALL BETWEEN 17"MIN AND 19"MAX ADA COMPLIANT. ADJUST SEAT BAIL TO 27"MAX A.F.F.
 - REMOVE END CROSSING PANELS, DEMO END CONC CURB AND PREPARE AREA FOR EXTENSION AND MODIFICATIONS.
 - INSTALL MINI-HUMP AT NEW LOCATION WATCHING OPPOSITE PLATFORM.
 - REMOVE AND RELOCATE WINDSCREEN.
 - NEW END CROSSING.
 - NEW LIGHT POLE.
 - NEW TREE GRATE AND IRRIGATION.
 - EXTEND TRACKWAY FENCE.
 - RAISE EXISTING LIGHT POLE.
 - EXISTING MINI-HUMP TO REMAIN

NOTES TO DESIGNER:

- REFERENCE TO ALTERNATIVE PLATFORM DESIGNS FOR SIDE RAMP OPTION CROSSING WHEN PLATFORM EXTENSION IN CONFLICT.
- REFERENCE TO STATION DATA FOR POSSIBLE SITE RELATED MODIFICATIONS.
- EXTEND SIDE PLANTERS, IRRIGATION AND LANDSCAPE WHEN PRESENT.



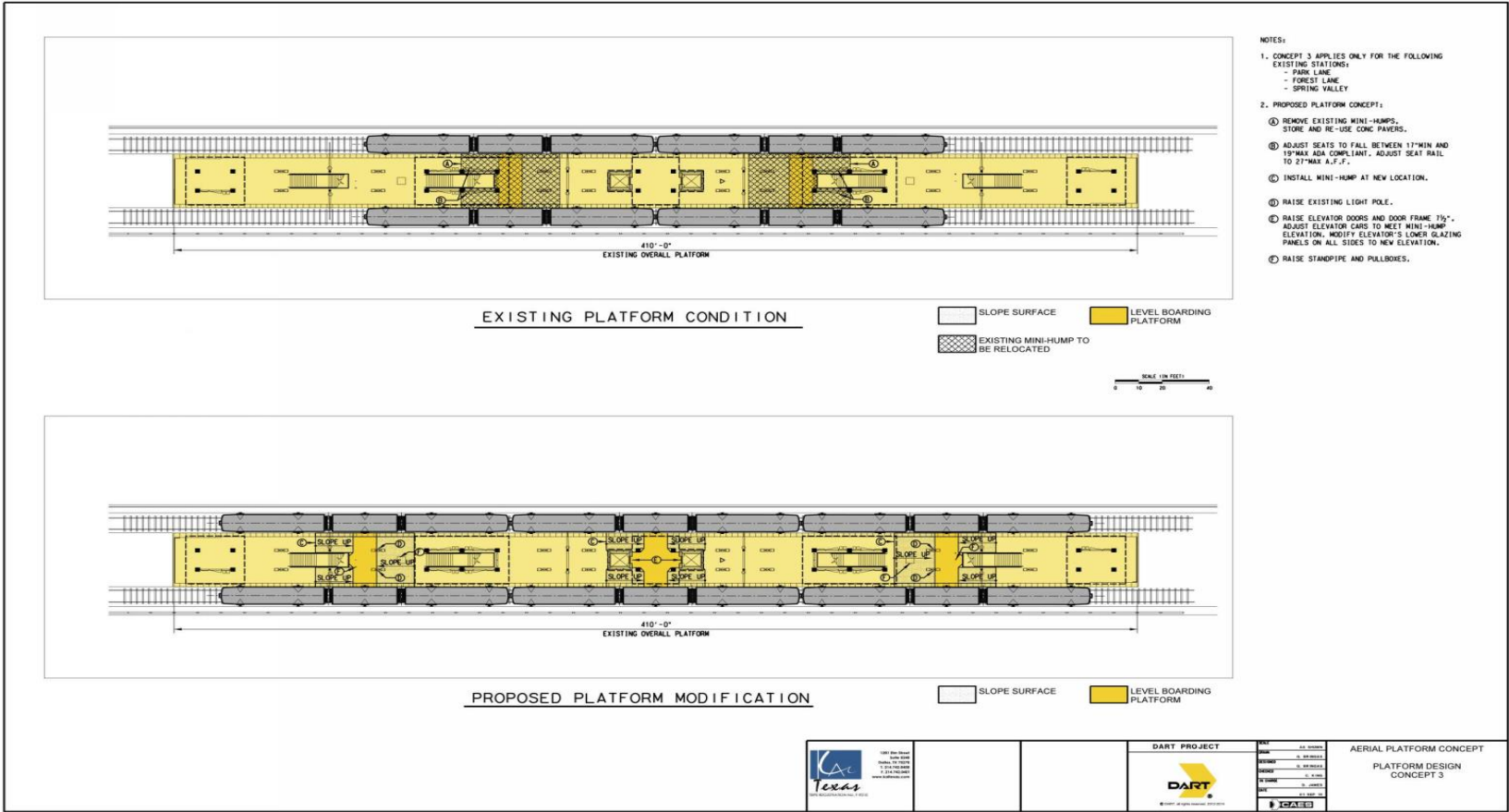
1001 Elm Street
Austin, TX 78701
512.463.0000
www.texas.gov



DATE	01.2020
DESIGNER	S. MORRELL
CHECKER	S. MORRELL
SCALE	AS SHOWN
DATE	01.2020
SCALE	AS SHOWN

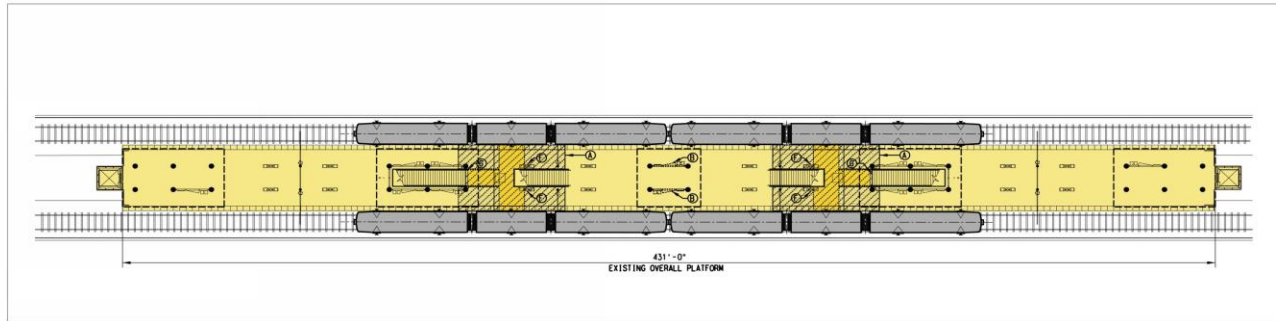
SIDE PLATFORM CONCEPT
PLATFORM DESIGN
CONCEPT 2

Station Concept 3



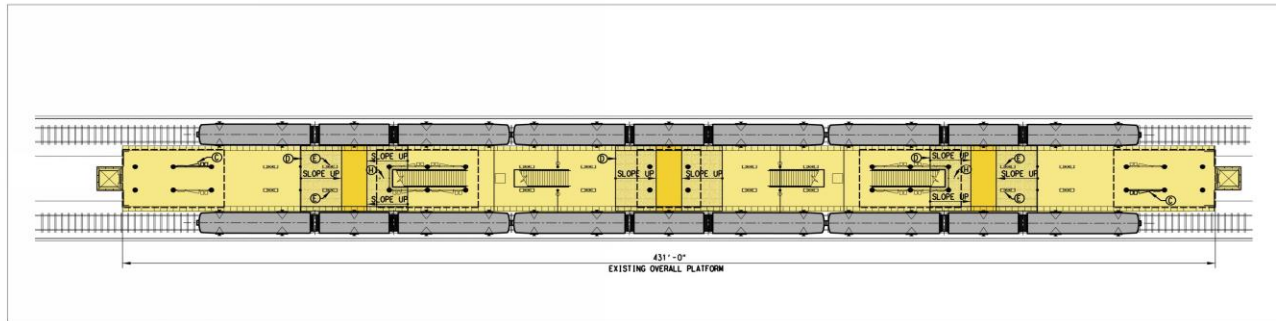
	1001 East Street Austin, TX 78701 T 512.463.9800 F 512.463.9801		DART PROJECT		AERIAL PLATFORM CONCEPT PLATFORM DESIGN CONCEPT 3
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Station Concept 4



EXISTING PLATFORM CONDITION

□ SLOPE SURFACE ■ LEVEL BOARDING PLATFORM



PROPOSED PLATFORM EXTENSION

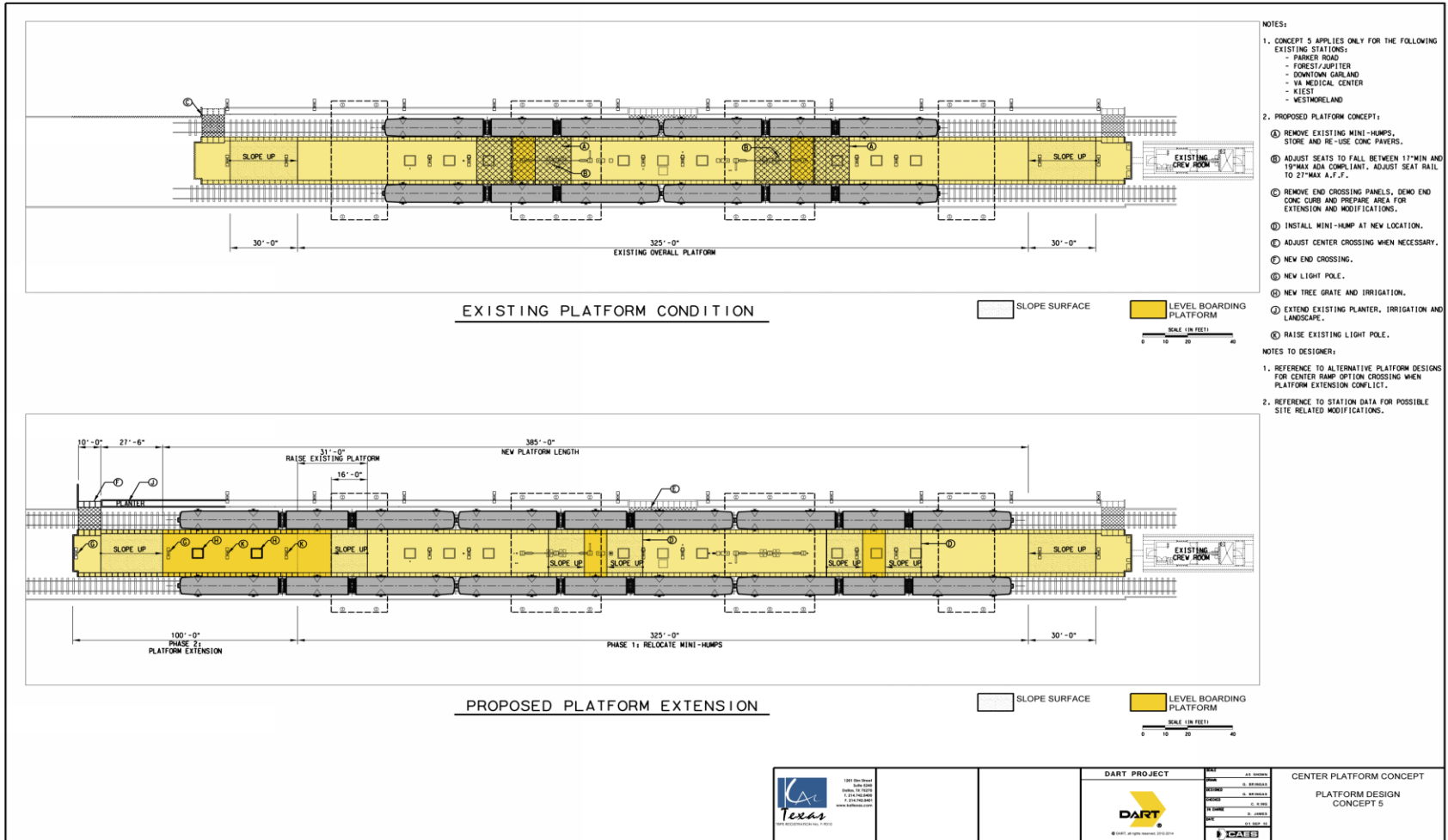
□ SLOPE SURFACE ■ LEVEL BOARDING PLATFORM

NOTES:

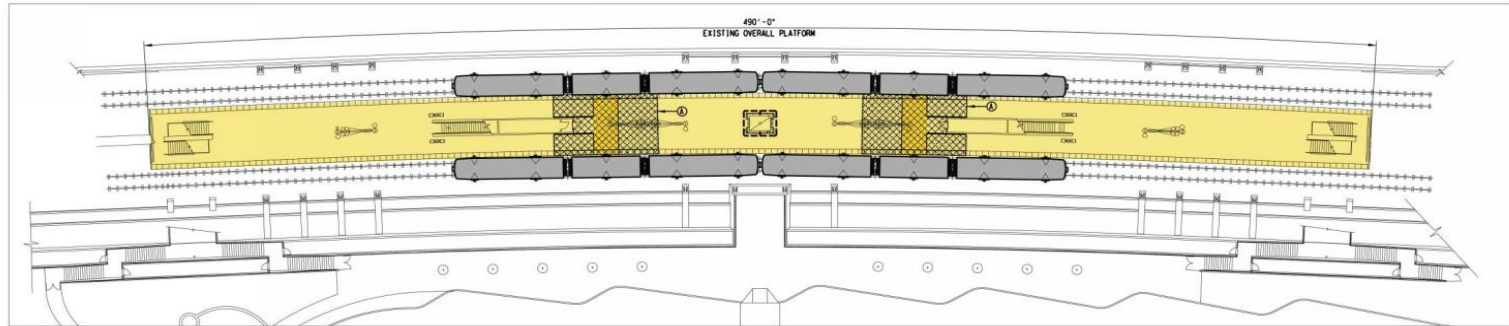
1. CONCEPT 3 APPLIES ONLY FOR THE FOLLOWING EXISTING STATIONS:
- WALNUT HILL
2. PROPOSED PLATFORM CONCEPT:
 - ① REMOVE EXISTING MINI-HUMPS, STORE AND RE-USE CONC PAVERS.
 - ② REMOVE EXISTING WINDSCREEN, PROTECT FOR RELOCATION.
 - ③ RELOCATED WINDSCREEN.
 - ④ INSTALL MINI-HUMP AT NEW LOCATION.
 - ⑤ RAISE EXISTING LIGHT POLE.
 - ⑥ ADJUST LIGHTPOLE BASE TO NEW ELEVATION.
 - ⑦ REMOVE ADDITIONAL RISER, HANDRAIL/GUARDRAIL AT TOP OF STAIR AND BRING BACK TO ORIGINAL PLATFORM ELEVATION.
 - ⑧ RAISE STANDPIPE AND PULLBOXES.

	1001 West Loop Suite 4000 Dallas, TX 75240 P: 214.742.6000 F: 214.742.6001 www.cactexas.com		DART PROJECT	DATE: 12.2022 DRAWN: S. J. JONES CHECKED: S. J. JONES DESIGNED: S. J. JONES SCALE: 1" = 40'-0" SHEET: 15.000-04	AERIAL PLATFORM CONCEPT WALNUT HILL STATION CONCEPT 4
				DATE: 12.2022 DRAWN: S. J. JONES CHECKED: S. J. JONES DESIGNED: S. J. JONES SCALE: 1" = 40'-0" SHEET: 15.000-04	

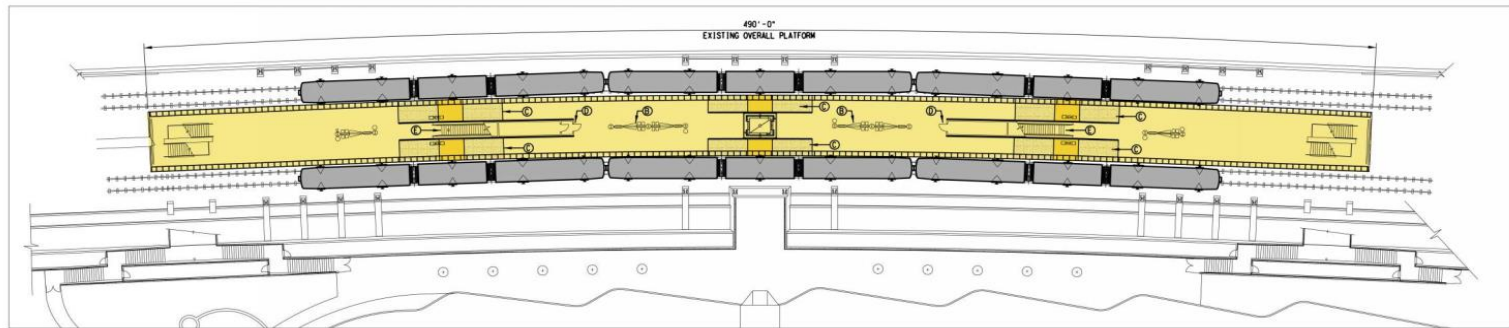
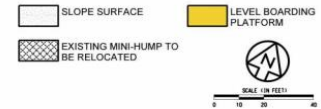
Station Concept 5



Station Concept 6



EXISTING PLATFORM CONDITION



PROPOSED PLATFORM MODIFICATION



NOTES:

1. CONCEPT 6 APPLIES ONLY TO MOCKINGBIRD STATION.
2. PROPOSED PLATFORM CONCEPT:
 - Ⓐ REMOVE EXISTING MINI-HUMPS.
 - Ⓑ ADJUST SEATS TO FALL BETWEEN 17"MIN AND 19"MAX ADA COMPLIANT. ADJUST SEAT RAIL TO 27"MAX A.F.F.
 - Ⓒ INSTALL MINI-HUMP AT NEW LOCATION.

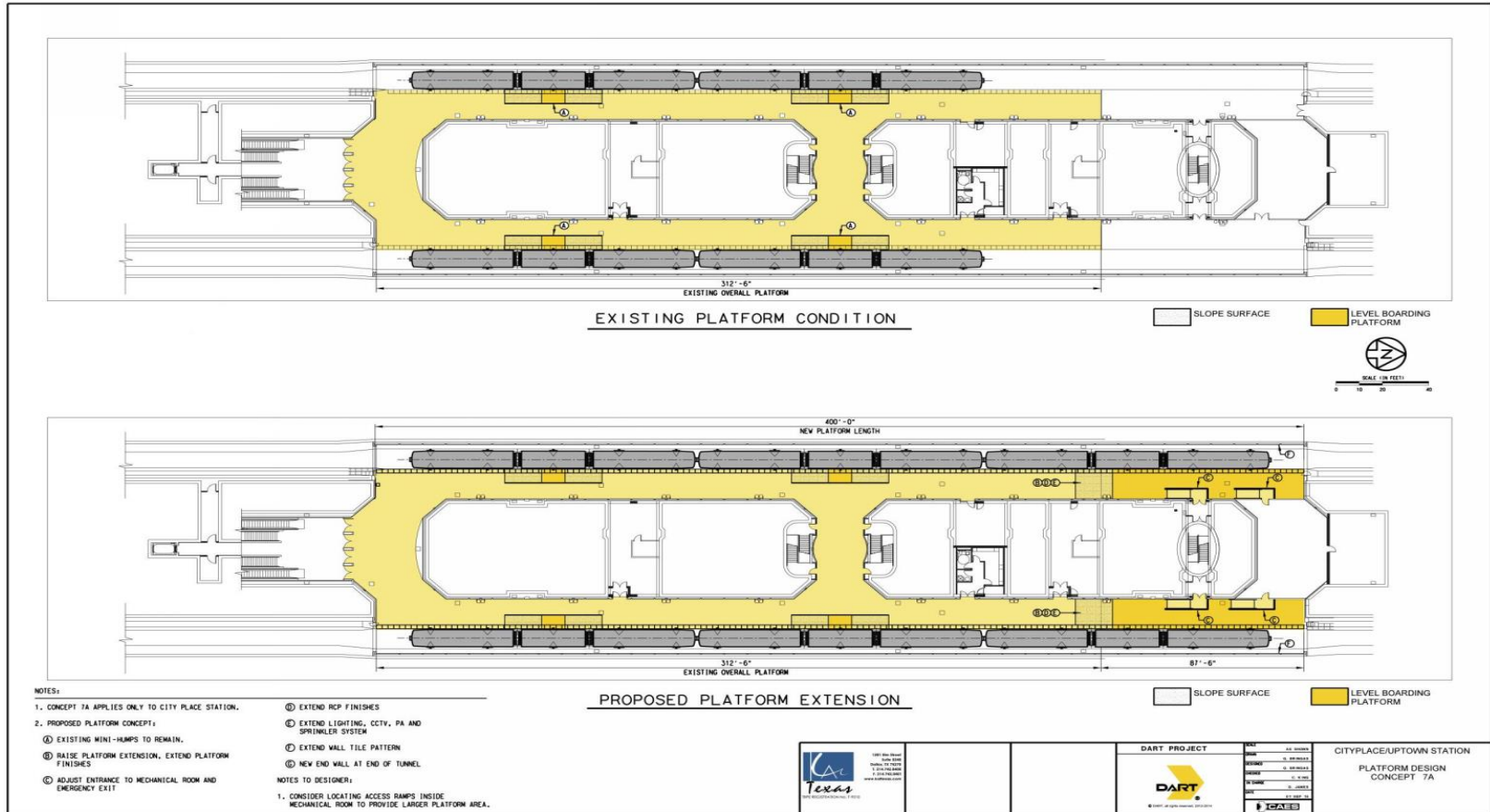
- Ⓓ ADJUST ENTRANCE TO MECHANICAL ROOM.
- Ⓔ PROTECT ESCALATOR, PROVIDE GUARDRAIL.

NOTES TO DESIGNER:

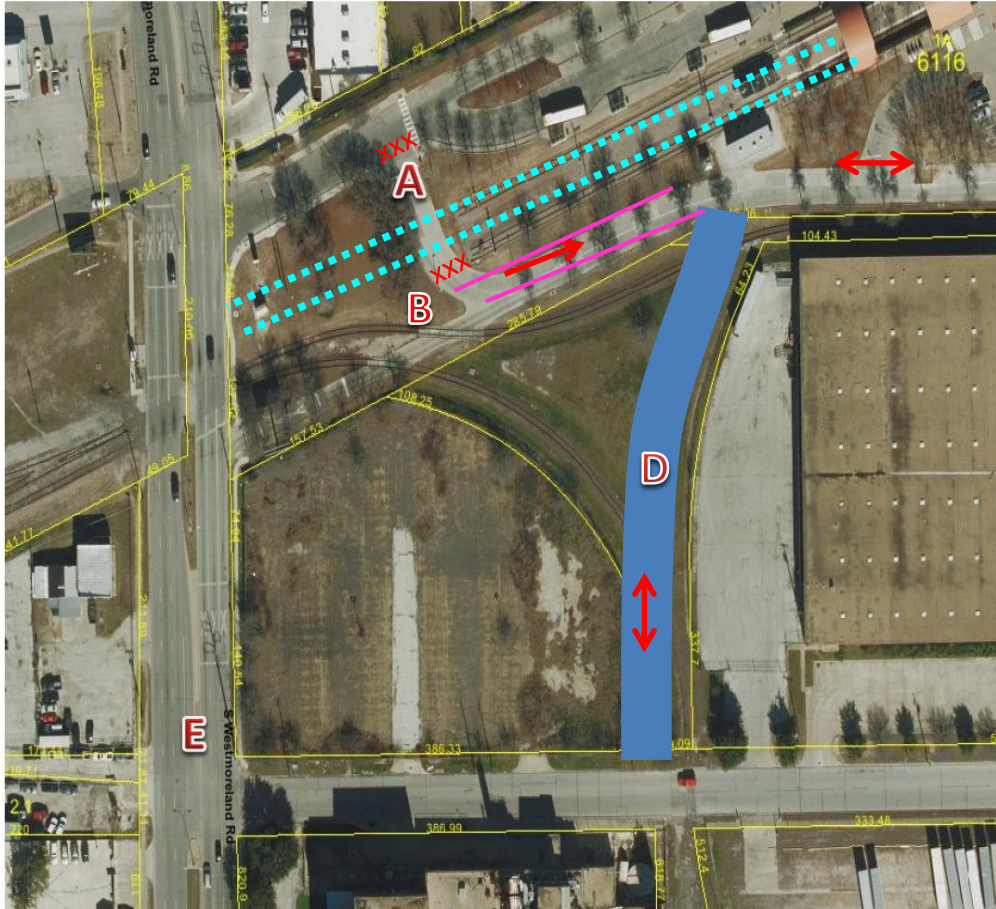
1. EXISTING TILE CAN NOT BE RE-USED, CONSIDER REPLACING ENTIRE STATION TO MATCH.

	1201 West Street Austin, TX 78701 512.463.0000 1.877.762.2882 www.txdot.gov		DATE: 03.2024 DESIGN: 02.2024 PERMIT: 02.2024 BIDD: 03.2024 CONSTRUCTION: 03.2024	MOCKINGBIRD STATION PLATFORM DESIGN CONCEPT 6

Station Concept 7



Westmoreland Tail Track Modified Concept



- Extend Tail Tracks to Westmoreland
- Close Driveway A
- Modify Driveway B
 - Extend one-way section east to new driveway D
- Add new driveway D
- Modify Intersection E
 - Add traffic signal

Westmoreland Station Tail Track and Driveway

- DART is currently extending its LRT Station Platforms to accommodate 3-car trains.
- Due to constraints to the east the Westmoreland platform must be extended to the west
- The current tail track only accommodates 2-car trains. It must also be extended to accommodate 3-car trains.
- DART must close a circulation driveway to construct the Tail Track Extension
- DART proposes to add a new drive south to Glenfield Avenue to replace this circulation
- Two new property acquisitions are required to construct the new driveway

DART Background

- **Growth:** North Texas is growing rapidly and DART and North Texas public transportations allows us to efficiently and numbly accommodate a larger population.
- **Future:** Public transportation provides mobility around North Texas now and will allow for flexibility as our region continues to grow.
- **Collaboration:** North Texas public transportation is embedded into how our region operates. Therefore, DART is committed to being a good neighbor and working with stakeholders and the public.
- **Economic Development:** Here in North Texas, public transportation is driving our local economy.

Questions?