

# Additive Option Proposal

# Original



East  
Somerville

Union  
Square



Lechmere



# GREEN LINE EXTENSION DESIGN-BUILD PROJECT

MBTA Contract No. E22CN07

Submitted to:



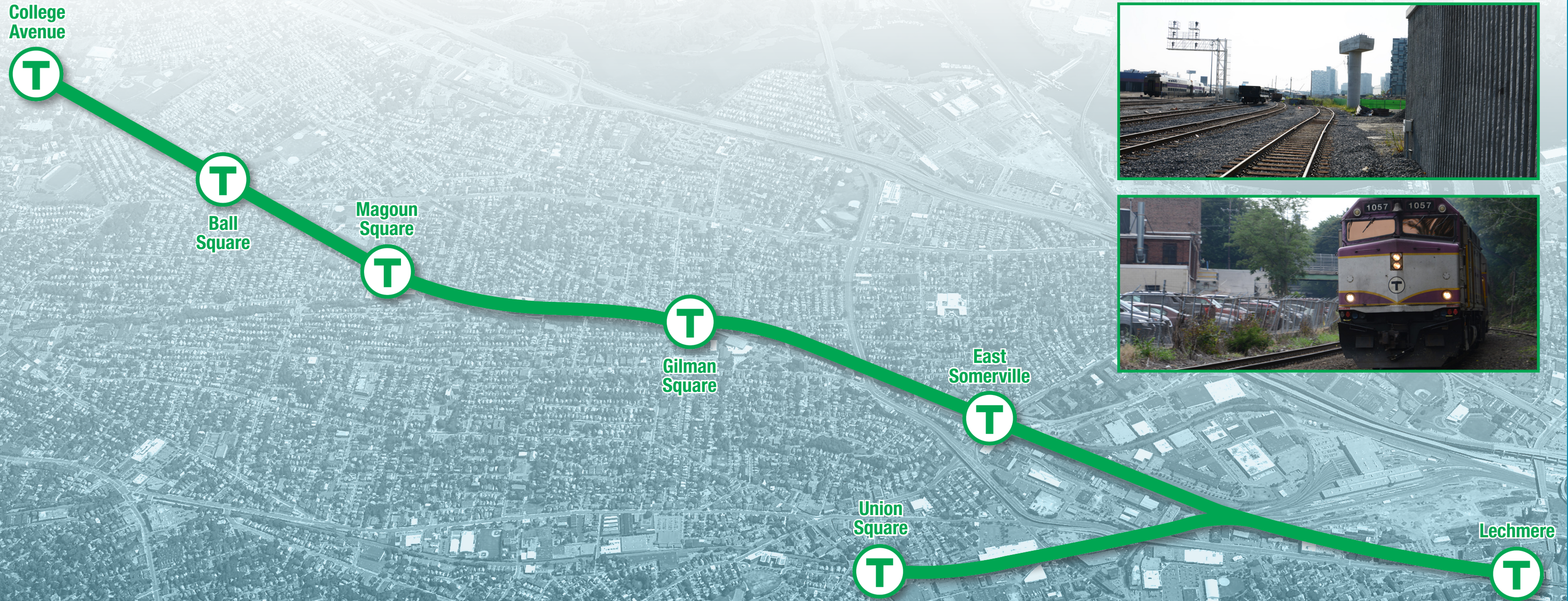
Submitted by:



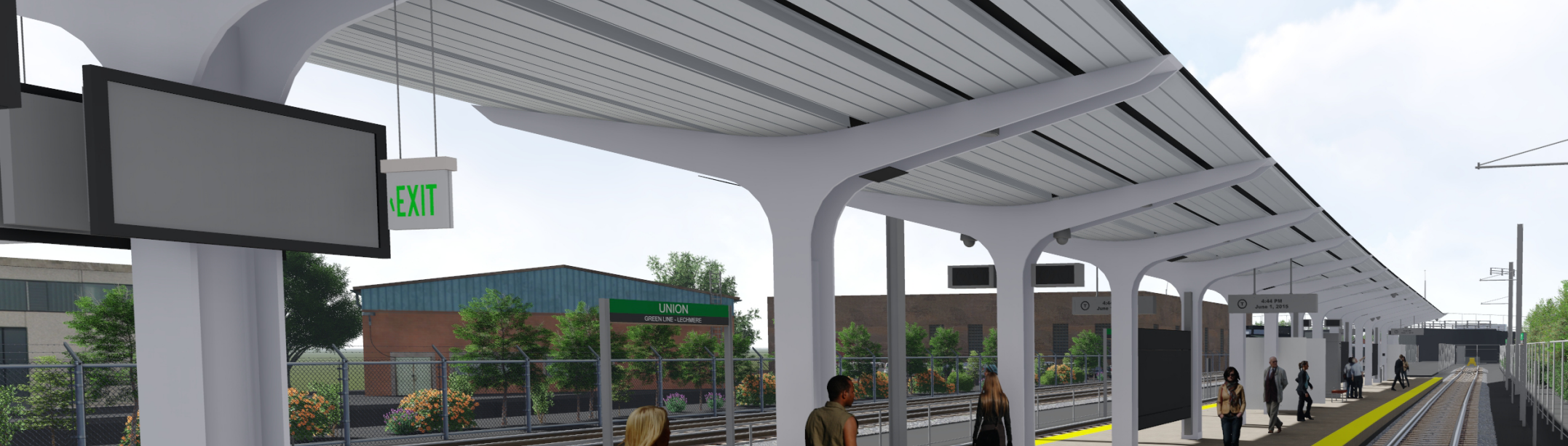
in association with











# Additive Option 1

## Addition of Station Canopies to all Stations

### INTRODUCTION

The Green Line Partners (“GLP”) Design Team has reviewed in detail the RFP requirements for Additive Option #1 – Addition of Station Canopies to All Stations. GLP’s design meets these requirements with an aesthetically pleasing canopy design that will be installed at each station, replacing the weather shelters included in the base proposal. The canopy design will feature a single row of steel columns with the roof pitching to the center of the platform to rainwater leaders integrated into the columns and connected to the track area drainage system. This design will avoid draining the water at the platform edge. The edge of the canopies will extend slightly beyond the edge of the platform, ensuring adequate cover for boarding passengers, as well as for those waiting on the platform.

The canopy structure will also be used to support light fixtures, speakers, the public information system, and other equipment. The use of metal decking spanning between the arms of the canopy structure will be ideal places to conceal lighting and conduit.

### 1.A APPROACH

GLP’s design approach for the canopies focuses not only on aesthetics, but also includes passenger comfort and safety, efficiency of pedestrian movement, and durability of the canopy materials. The proposed form of the platform canopy, to be installed at each station, is an elegant T-shaped structure that consolidates the canopy structure, platform amenities, and rainwater collection to the middle of the platform, thereby opening up the edge for passenger movement and maximizing accessibility clearances for persons with disabilities using the platform.

### PASSENGER COMFORT

The Customer Assistance Area (“CAA”), which provides benches, signage, maps, and accessible waiting areas, will be covered by the canopy instead of being out in the open per the base platform design. The platform canopy will cover the full length of the platform and will

extend over the platform edge into the track area by 5¼ inches, thereby ensuring maximum coverage during extreme weather events.

### SAFETY

The center column system allows for obstruction-free viewing along the entire length of the platform, providing passengers with visual access to the main entrance as well as the second means of egress. This design also allows complete visual access for the train operators, providing for safe boarding and alighting movements.

### EFFICIENCY

All station amenities and services are clearly organized along the canopy line or attached to the canopy structure. The placement of these items is consistent with other stations included in the Green Line Extension Design Build Project (“GLX Project” or “Project”), making it easy for passengers to find information, purchase tickets, and sit to wait for a train.

### DURABILITY

The Massachusetts Bay Transportation Authority (“MBTA”) design standards employ long-lasting, durable materials that withstand not only the abuse from everyday use, but the effects of weather as well. The platform canopies will employ similar materials; the canopy frame will be galvanized and painted steel, and the roof will be galvanized and painted metal decking finished with flat seam aluminum roofing panels.

### DESIGN CRITERIA AND THE ADDITIVE OPTION

The addition of the platform canopies provides complete overhead coverage for the entire length of the platform, but there will be limited wind/weather protection. The CAAs will provide some wind protection, but this protection occurs at one location on the platform and is limited to 15 feet.

### CHANGES FROM TECHNICAL PROPOSAL

The addition of the platform canopies results in the following changes to the base scope of work:





- › The removal of the weather shelters at each station. The base scope of work for all stations except Lechmere include three weather shelters. Lechmere, which is built out to the full 300-foot platform length, was scheduled to receive four weather shelters.
- › The removal of the aluminum poles, arms, and light fixtures associated with the weather shelters.
- › Installation of conduit for lighting, communications, closed circuit television (“CCTV”) etc., will be installed overhead in the canopy structure instead of below the platform slab per the base scope.

## 1.B PRELIMINARY BASELINE SCHEDULE

The installation of platform canopies is not expected to significantly extend the Project Baseline Schedule. Constructing the canopies will eliminate the early utility work that would have been required without them. The current schedule anticipates roughly five work days to install the weather shelters at each station. The time anticipated to install proposed canopies would be roughly 15 work days per station, excluding Lechmere Station, where it would take roughly 25 days to complete.

### SCHEDULE IMPACT ASSESSMENT

Although the addition of the canopies will require additional time to perform work in their specific locations, it is not anticipated that these activities will have any impact on the final forecasted completion date of the Project.

## 1.C DRAWINGS

The platform canopy drawings included in the proposal demonstrate our understanding of the Additive Option scope and the needs of the MBTA. The drawings show that our proposed design meets or exceeds the requirements of the Technical Proposal. A description of the drawings and their number series is as follows:

### A500 SERIES – PLATFORM CANOPY PLANS (7 SHEETS)

Scale 1/16”=1’-0”

These drawings show the extent of the station canopies, confirming that they run the full length of the platform.

### A600 SERIES – PLATFORM CANOPY SECTIONS (1 SHEET)

Scale 1/2”=1’-0”

These drawings show that the form of the station canopies is similar to the concept sketch issued with Additive Option #1, that the edge of the canopies will extend beyond the platform edge, and that the canopies and equipment affixed to them will be easily maintainable, and can accommodate the future platform elevation increase without being removed or replaced.

### A700 SERIES – PLATFORM CANOPY DETAILS (3 SHEETS)

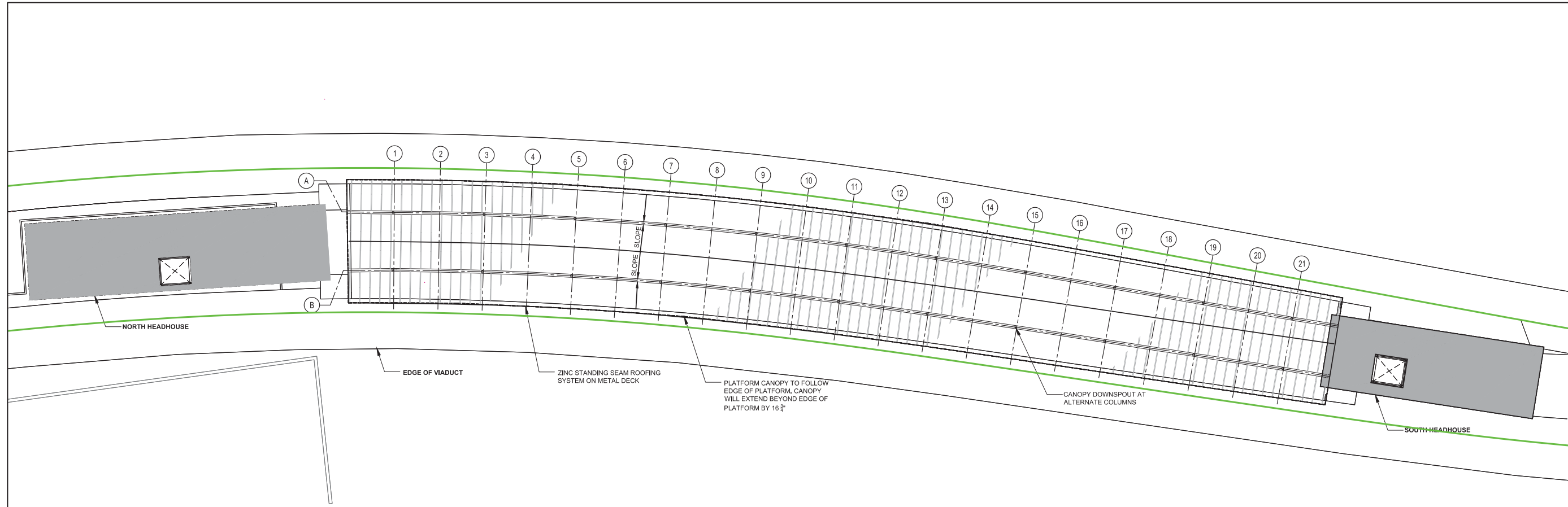
Scale 1/2”=1’-0”

These drawings show the constructability of the canopies and the integration of lighting and other equipment.

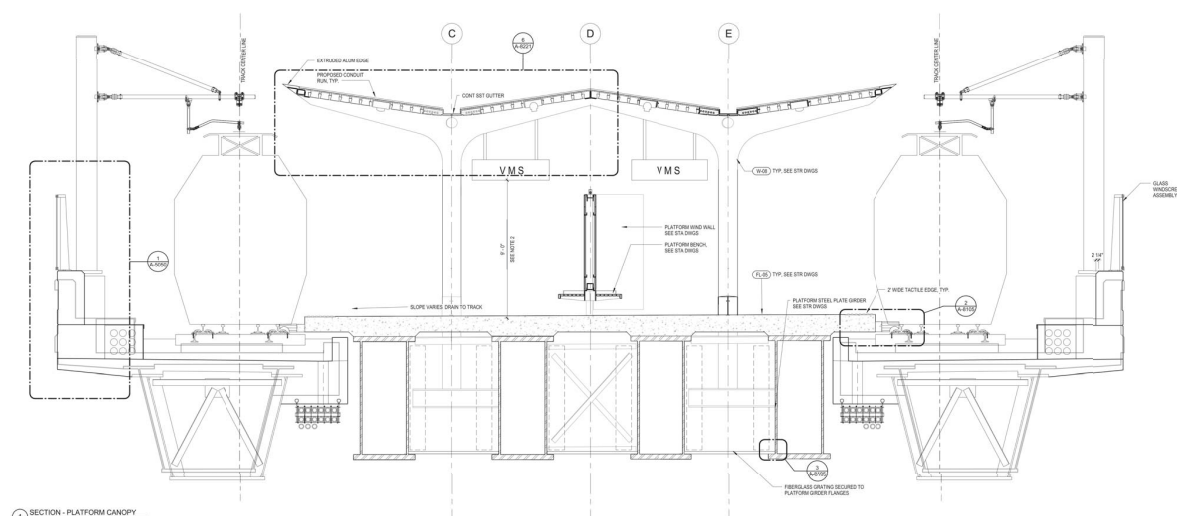
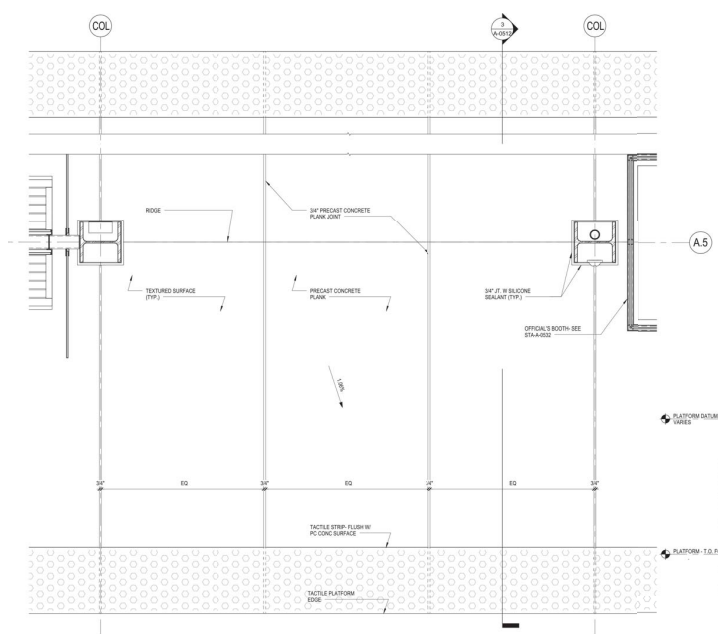








1 CANOPY PLAN - LECHMERE  
SCALE: 1/16" = 1' - 0"



2 CANOPY SECTION - LECHMERE  
NTS

NOT FOR CONSTRUCTION



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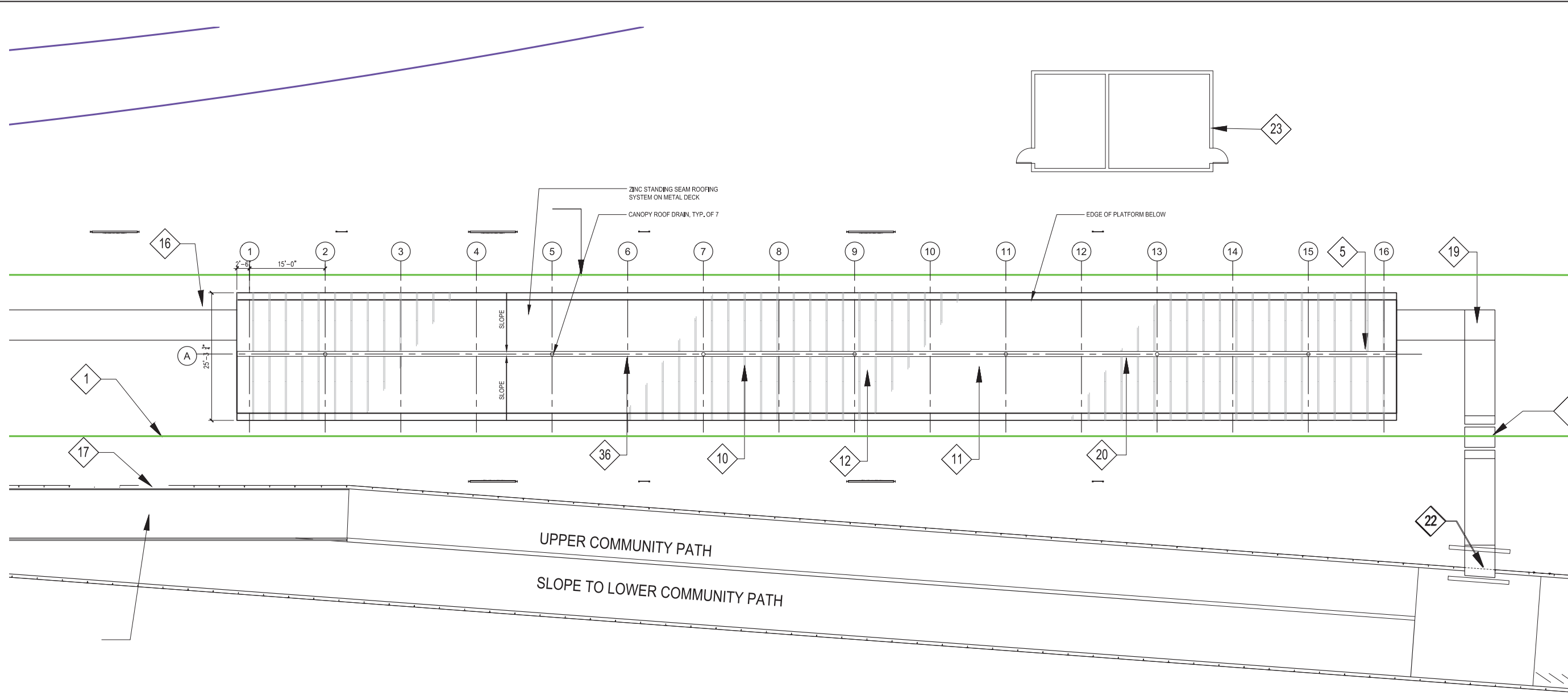
**LECHMERE STATION**  
**ADDITIVE OPTION 1 - PLATFORM CANOPY**



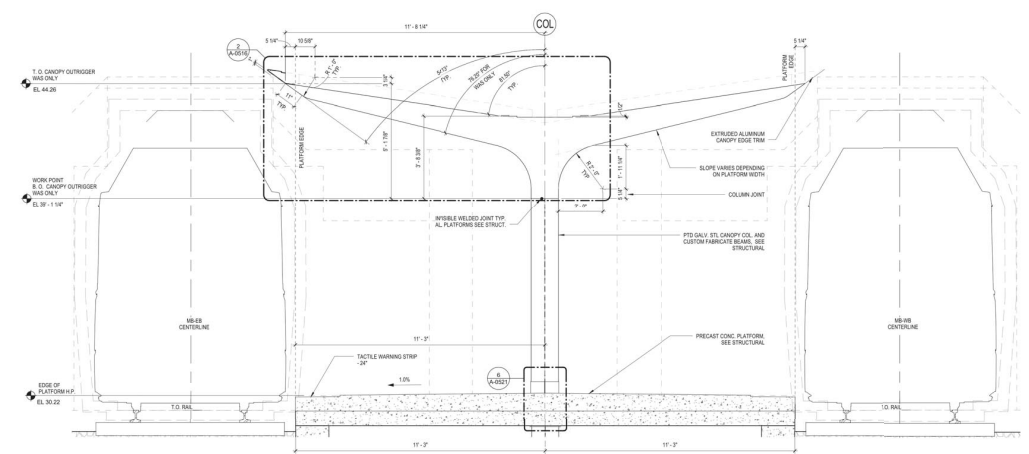
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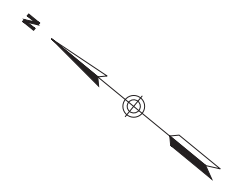
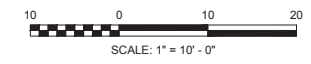




1 CANOPY PLAN - EAST SOMERVILLE  
SCALE: 1" = 10' - 0"



2 CLEARANCE ENVELOPE



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**EAST SOMERVILLE STATION**  
**ADDITIVE OPTION 1 - PLATFORM CANOPY**

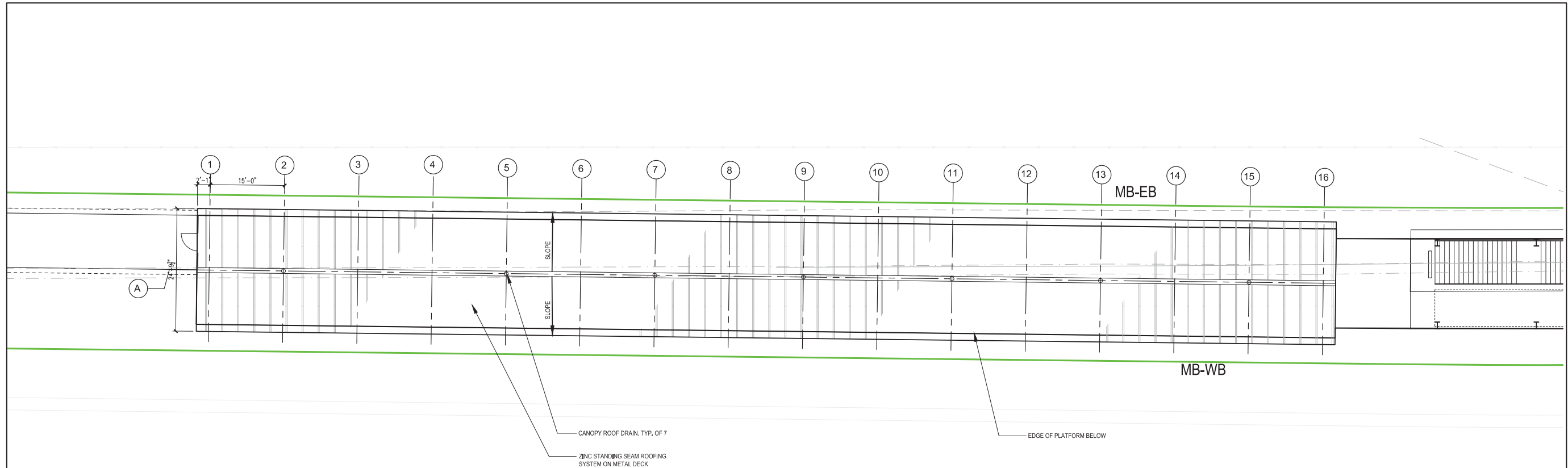
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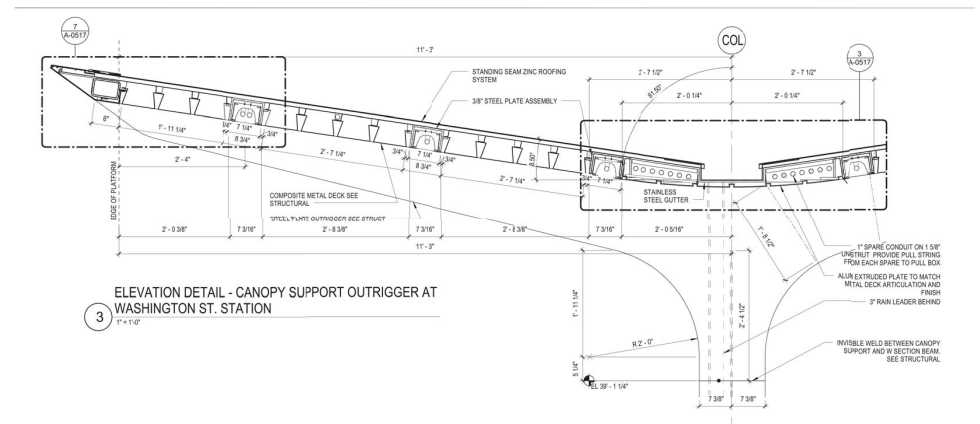


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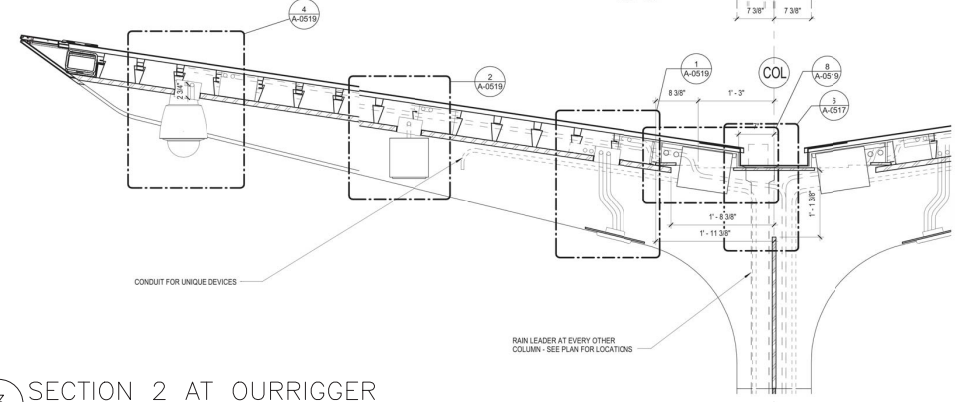




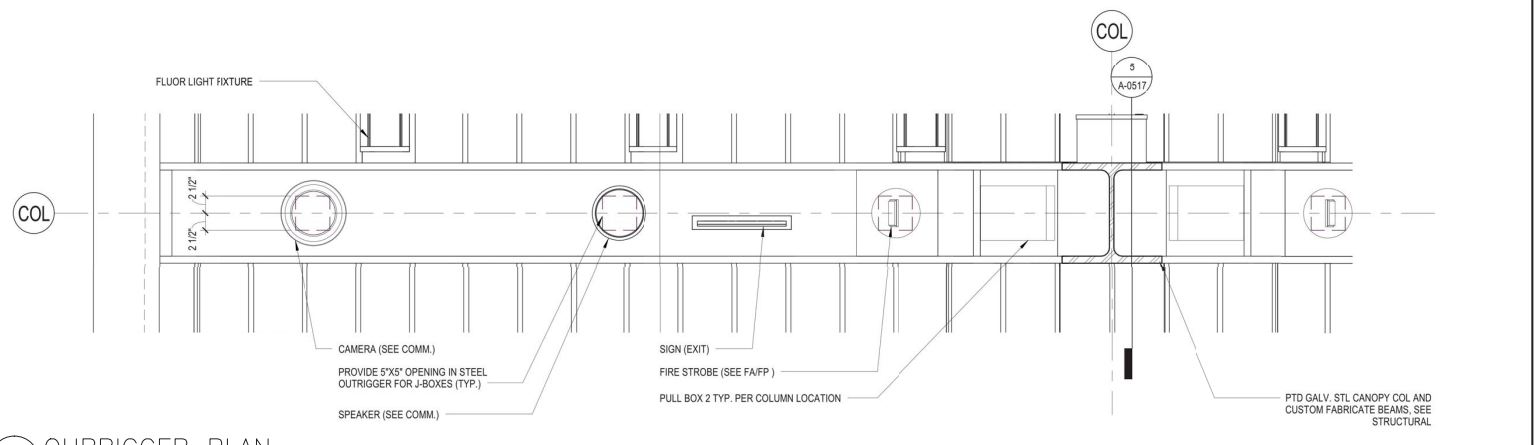
1 CANOPY PLAN - GILMAN SQUARE  
SCALE: 1" = 10' - 0"



2 SECTION 1 AT OURRIGGER  
NTS



3 SECTION 2 AT OURRIGGER  
NTS



4 OURRIGGER PLAN  
NTS

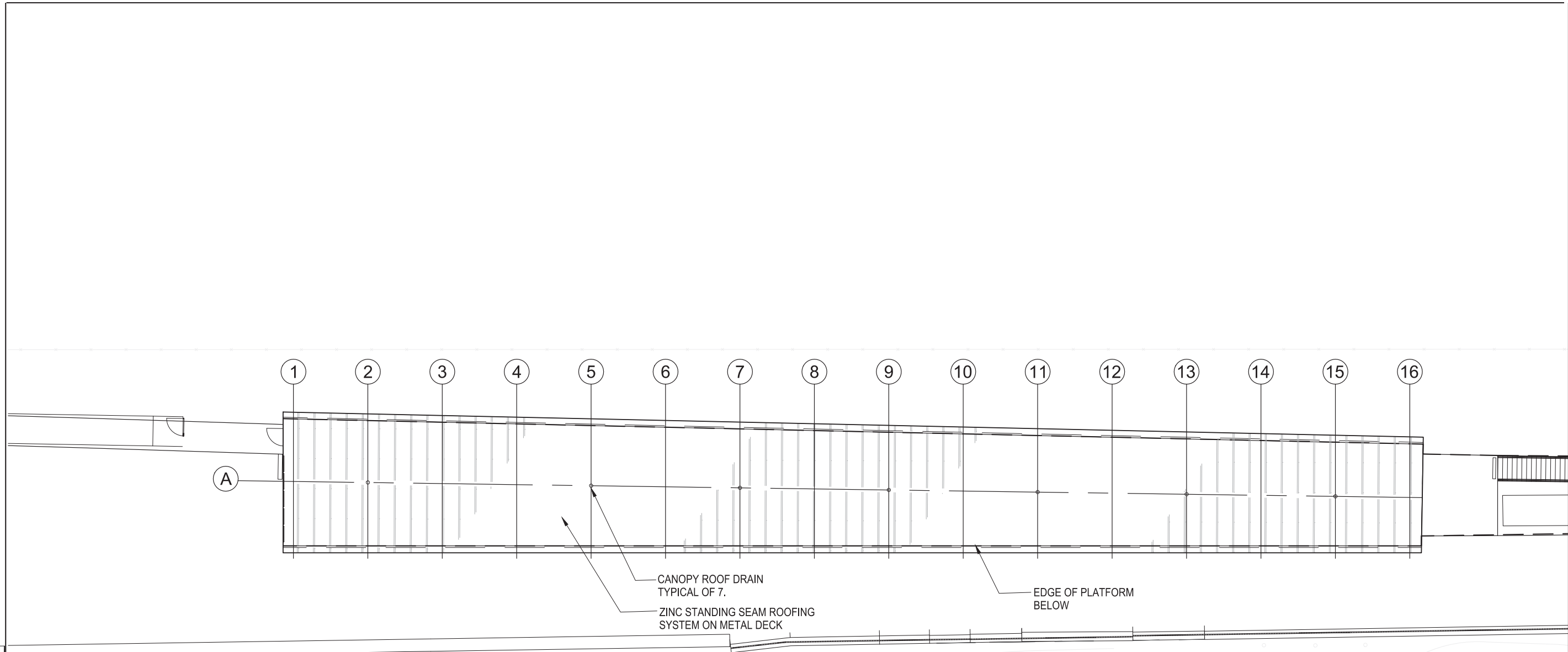


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	GREEN LINE EXTENSION DESIGN-BUILD PROJECT MBTA CONTRACT NO. E22CN07 SOMERVILLE/MEDFORD, MASSACHUSETTS	
	<b>GILMAN SQUARE STATION</b> ADDITIVE OPTION 1 - PLATFORM CANOPY	
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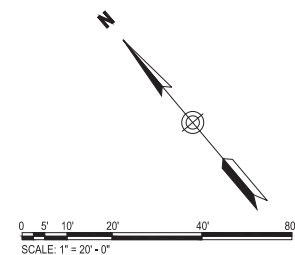




1 CANOPY PLAN - MAGOUN SQUARE  
SCALE: 1" = 10' - 0"

2 CANOPY GUTTER DETAIL  
NTS

3 CANOPY ROOF DRAIN DETAIL  
NTS



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**MAGOUN SQUARE STATION**  
**ADDITIVE OPTION 1 - PLATFORM CANOPY**

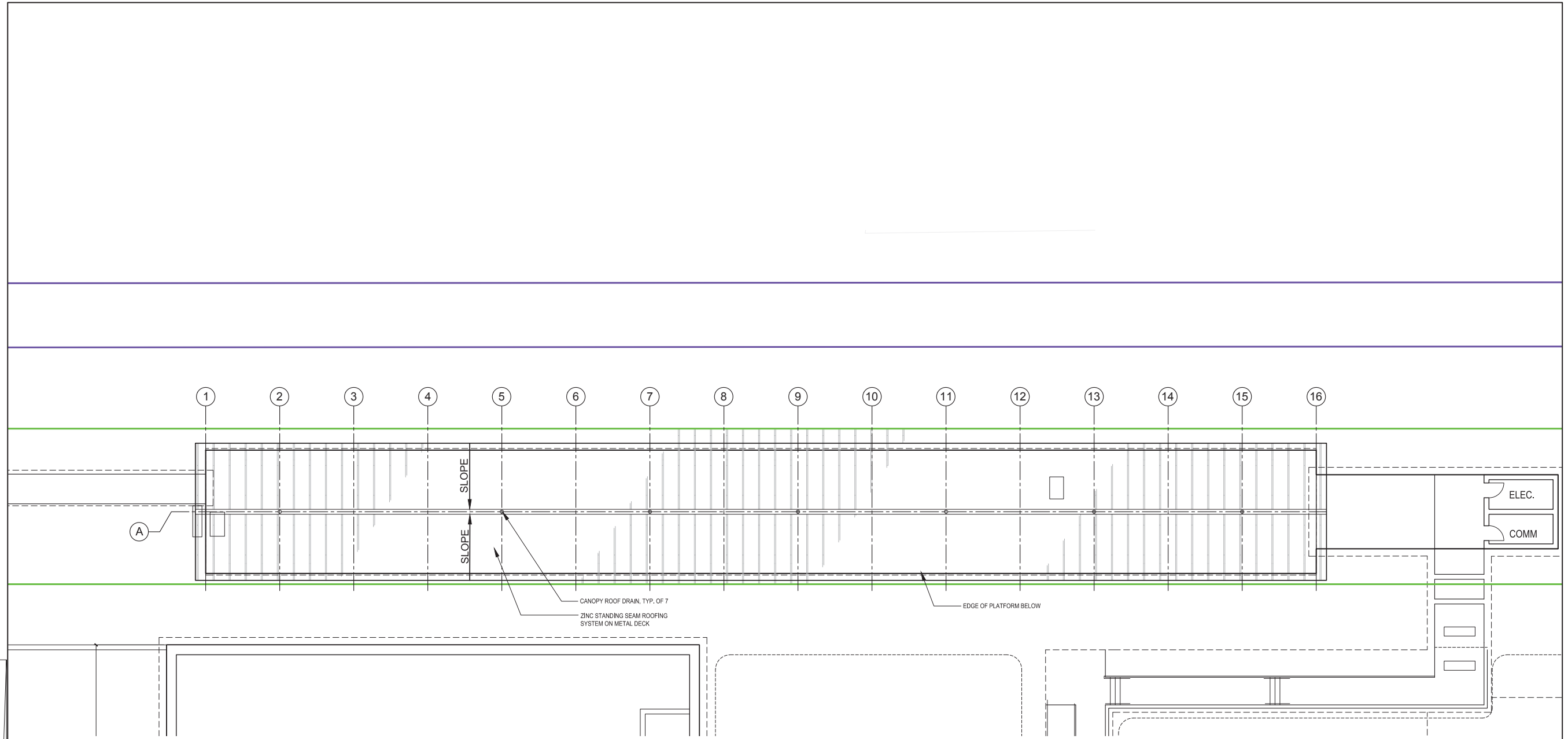
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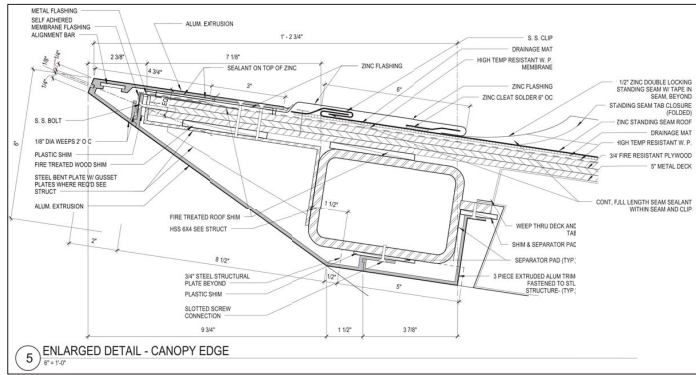


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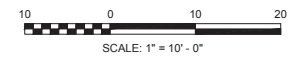




1 CANOPY PLAN - BALL SQUARE  
SCALE: 1" = 10' - 0"



2 CANOPY EDGE DETAIL  
NTS



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**BALL SQUARE STATION**  
**ADDITIVE OPTION 1 - PLATFORM CANOPY**

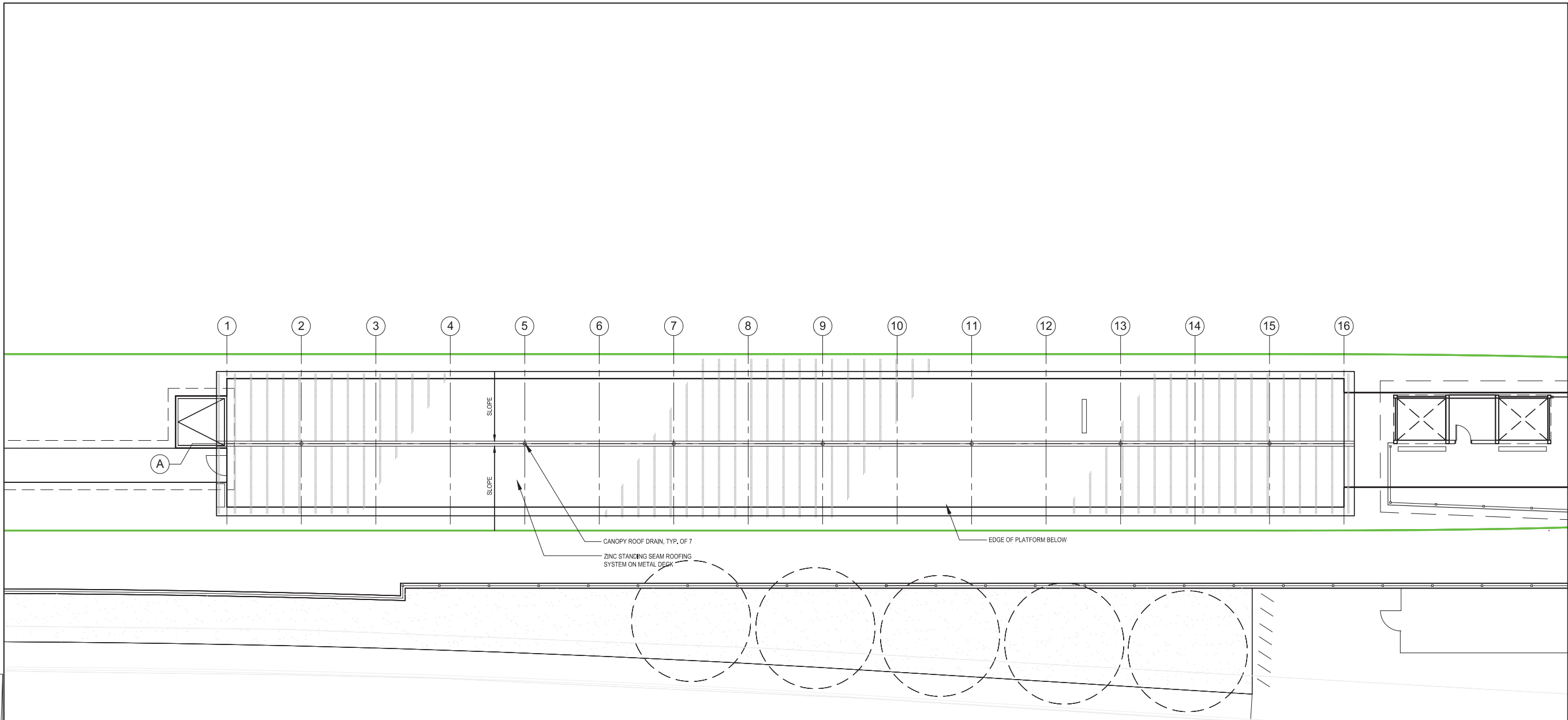


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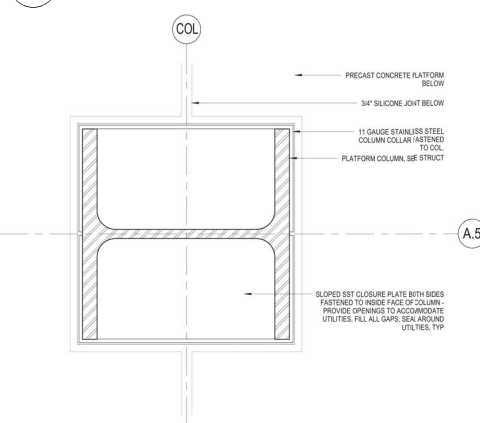
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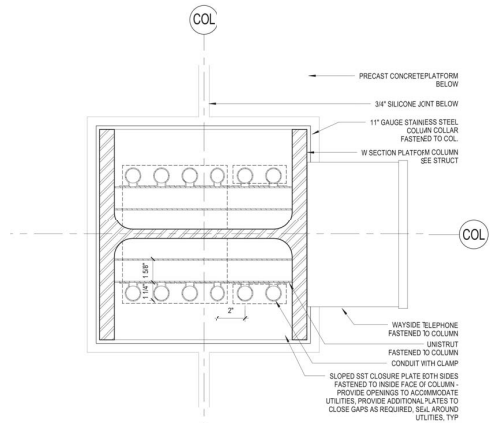




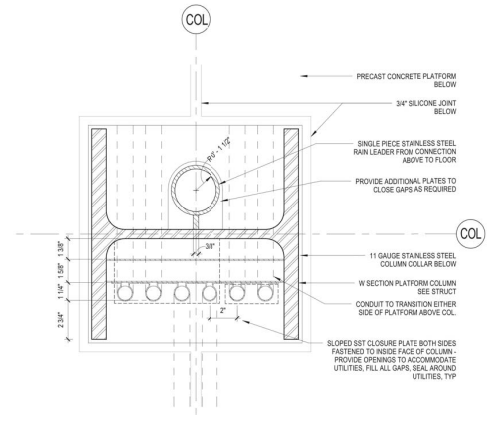
1 CANOPY PLAN - COLLEGE AVENUE  
SCALE: 1" = 10' - 0"



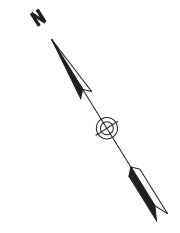
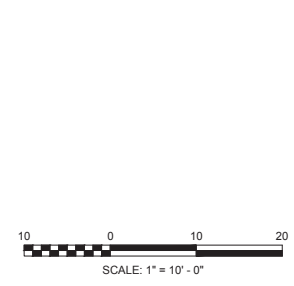
2 TYP. COLUMN PLAN DETAIL  
NTS



3 COLUMN DETAIL - CONDUIT  
NTS



4 COLUMN DETAIL - DOWNSPOUT  
NTS



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**COLLEGE STATION**  
**ADDITIVE OPTION 1 - PLATFORM CANOPY**

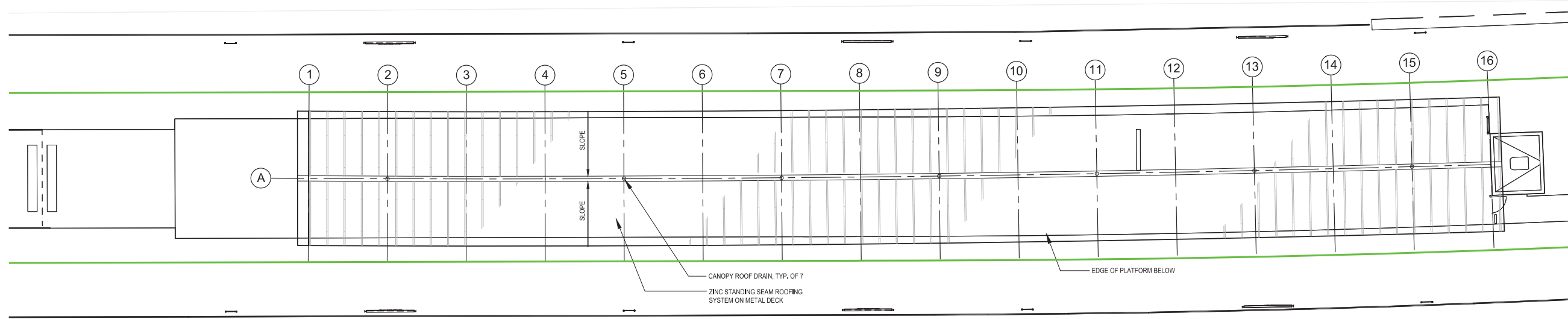


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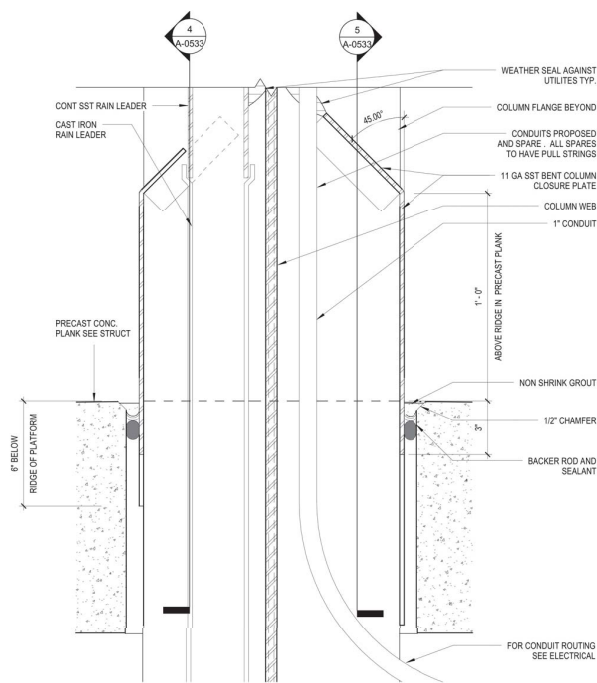
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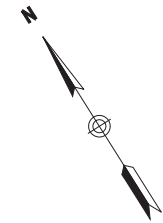
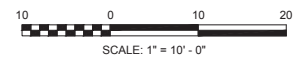




1 CANOPY PLAN - UNION SQUARE  
SCALE: 1" = 10' - 0"



2 COLUMN SECTION  
NTS



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**UNION SQUARE STATION**  
**ADDITIVE OPTION 1 - PLATFORM CANOPY**

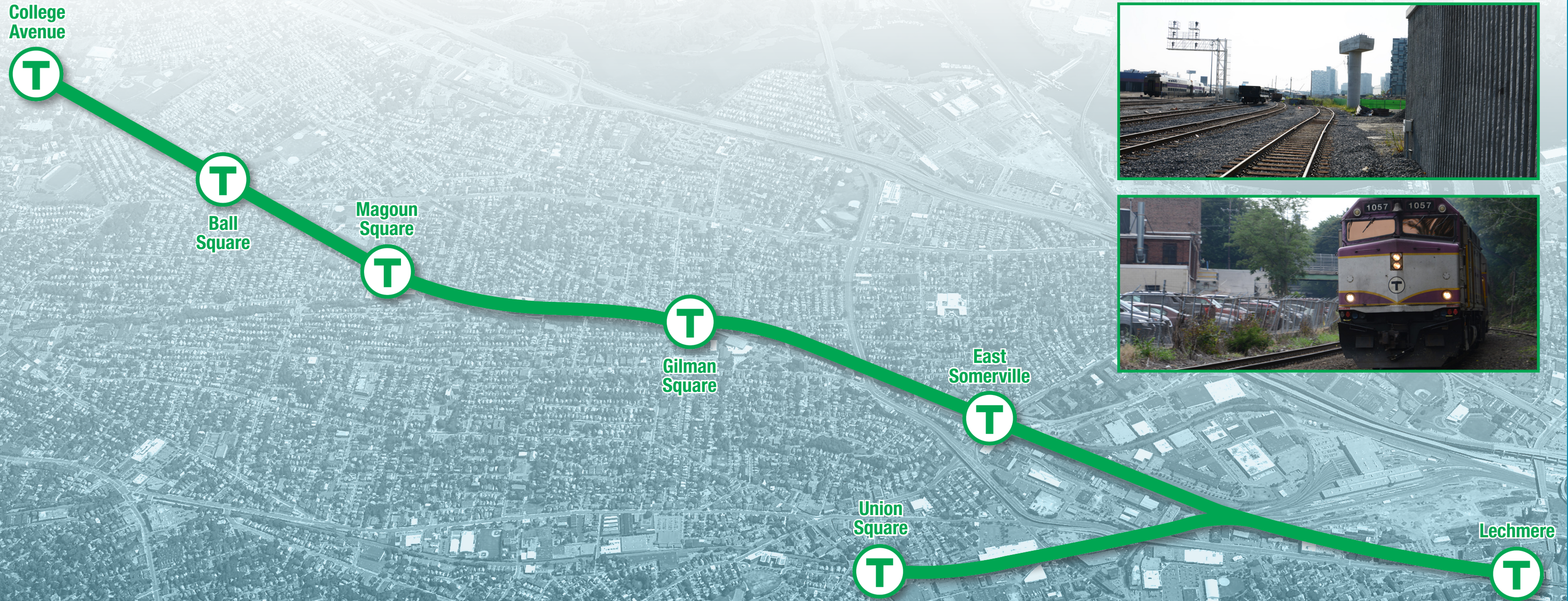


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# Addition of Elevators to Stations Proposed for New/Additional Elevators

## INTRODUCTION

The GLP Design Team has reviewed in detail the RFP requirements for Additive Option #2 – Addition of Elevators to Stations Proposed for New/Additional Elevators. A total of four new/additional elevators and two new staircases are required per Additive Option #2; the location of these elevators and stairs is as follows:

- › **Lechmere Station** – Provide one additional elevator adjacent to the original elevator and noted as “Future Elevator” in Exhibit 2B.
- › **Gilman Square Station** – Provide one additional elevator and staircase from the School Street Bridge to the northwest end-of-platform access to this station.
- › **Magoun Square Station** – Provide one additional elevator adjacent to the elevator required in Volume 2.
- › **Ball Square Station** – Provide one elevator and staircase from the Broadway Bridge to the southeast end-of-platform access to this station.

GLP’s elevator design meets all the requirements of the Technical Provisions (“TP”), Additive Option #2, the Massachusetts Board of Elevator Regulations 524 CMR, and the MBTA Guidelines and Standards. The stations will employ Machine-Roomless (“MRL”) elevators and the towers will feature a steel tube frame with glass infill panels the full height of the tower. The elevators are a critical part of the design and are a key element in each station’s accessible path, providing direct access from the station entrances at street level to the platforms for persons with disabilities.

As described herein and shown on the technical drawings, our elevator design will enhance not only the station aesthetics, but the passenger experience as well.

## 2.A APPROACH

The elevators feature prominently in the design of the stations, and because of their height the towers are landmarks within the station and visible on approach from adjacent streets. This visibility is important

because it promotes the fact that the station is accessible and the path to the platform used by disabled persons is just as important as the path used by non-disabled passengers. This is further reinforced by the direct route one takes to the elevators after entering the station. At most stations, the path to the elevator from the entrance is clear, direct, and free from turns.

The MBTA is committed to providing equal access to its transit system and installing elevators at its stations is a key initiative of the MBTA/BCIL Settlement Agreement, which ensures the T make “improvements to equipment, facilities, and services that will enhance accessibility for people with disabilities while improving service for all T passengers.”

The Technical Provisions (“TP”) require accommodations be made in the Project for future construction including the vertical relocation of the platforms to 14 inches above top of rail. This work entails adding a 6-inch thick topping slab to the existing platform to accommodate the Type 9 light rail vehicles (“LRVs”). This raising of the platform height shall not impact the elevator landings, so as part of this Project, sloped portions will be provided to transition between the elevator landings and the platforms.

## DESIGN CRITERIA AND ADDITIVE OPTIONS

The installation of the additional elevators does not forfeit any key design criteria or requirements of the TPs.

## CHANGES FROM TECHNICAL PROPOSAL

The impact of Additive Option #2 on the TPs includes work at the following stations:

- › **Gilman Square** – The addition of the elevator at the Gilman Square Station replaces the ramp structure on the west side of School Street.

## 2.B PRELIMINARY BASELINE SCHEDULE

The current duration to install a single elevator is 47 work days. It is anticipated that this duration will be required for each additional elevator.





This duration includes 25 work days of testing and inspection, which, in locations with multiple elevators, would occur concurrently with other elevators.

## SCHEDULE IMPACT ASSESSMENT

Although the addition of the elevators will require additional time to perform work in their specific locations, it is not anticipated that these activities will have any impact on the final forecasted completion date of the Project.

### 2.C

## DRAWINGS

### ELEVATOR PLANS

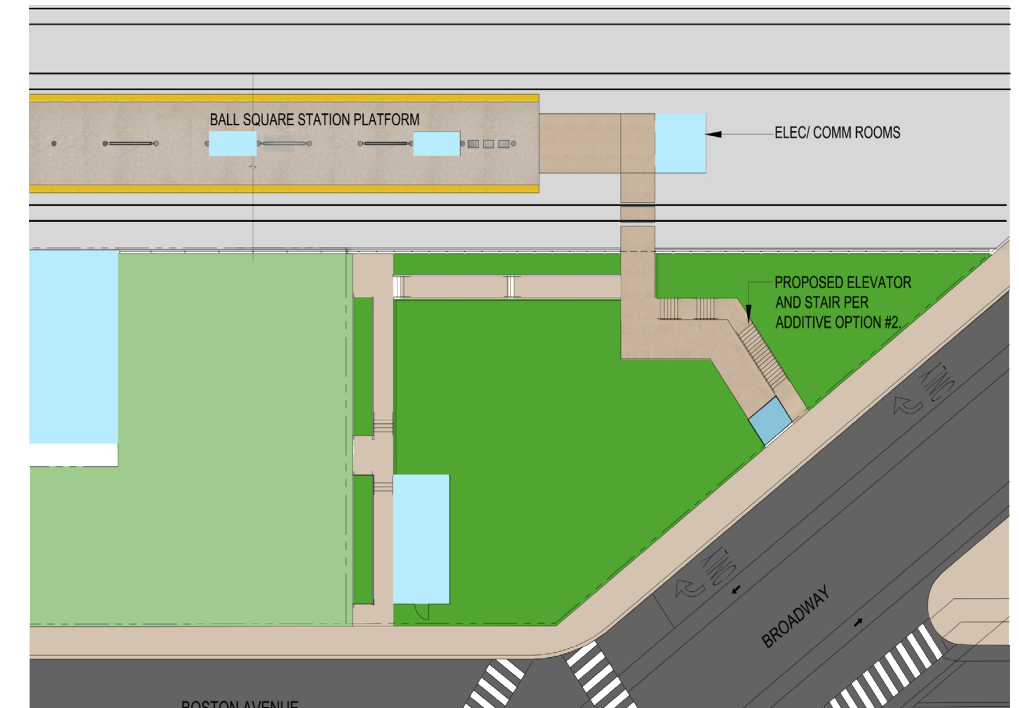
These drawings illustrate the plan locations of the additional elevators and staircases. The plans include the location of the base elevator if applicable, and the relationship to the station entry.

### TYPICAL ELEVATIONS AND SECTIONS

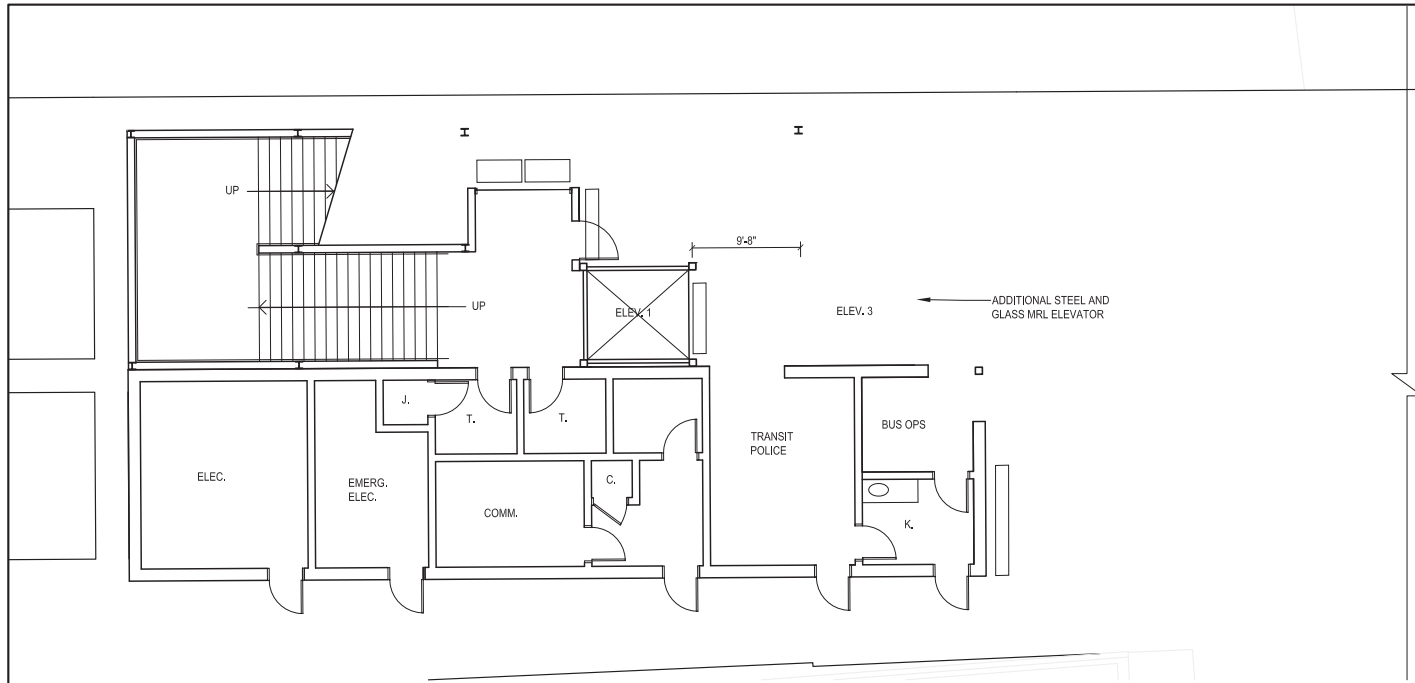
These drawings illustrate the typical elevator tower elevations and sections. Similar to the plans, they show how the design coordinates with adjacent structures, and how it conforms to the requirements in the Technical Proposal.

### TYPICAL ELEVATOR DETAILS

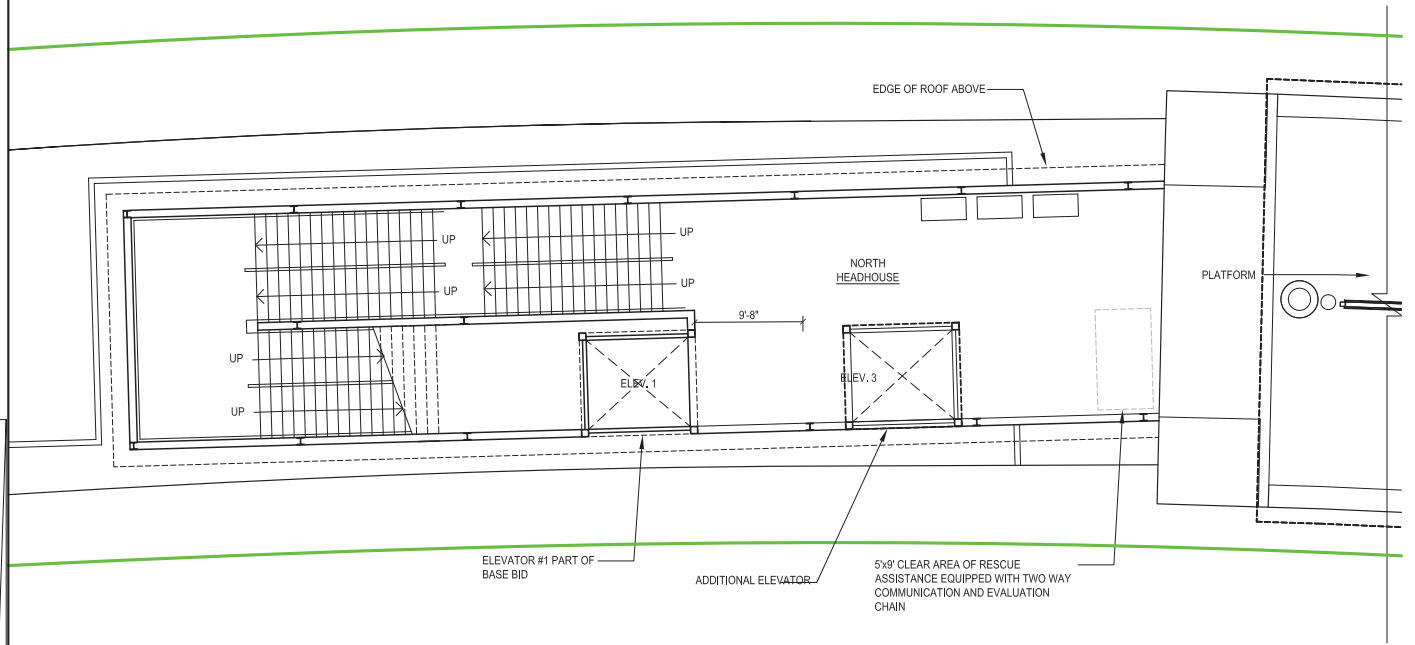
These drawings illustrate the typical elevator details and how the design conforms to the requirements of the Technical Proposal and MBTA elevator standards for materials.



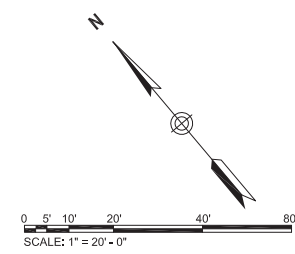




1 STREET LEVEL ELEVATOR PLAN-LECHMERE  
SCALE: 1/8" = 1' - 0"



2 PLATFORM LEVEL ELEVATOR PLAN-LECHMERE  
SCALE: 1/8" = 1' - 0"



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**LECHMERE STATION**  
**ADDITIVE OPTION 2 - ADDITIONAL ELEVATOR**

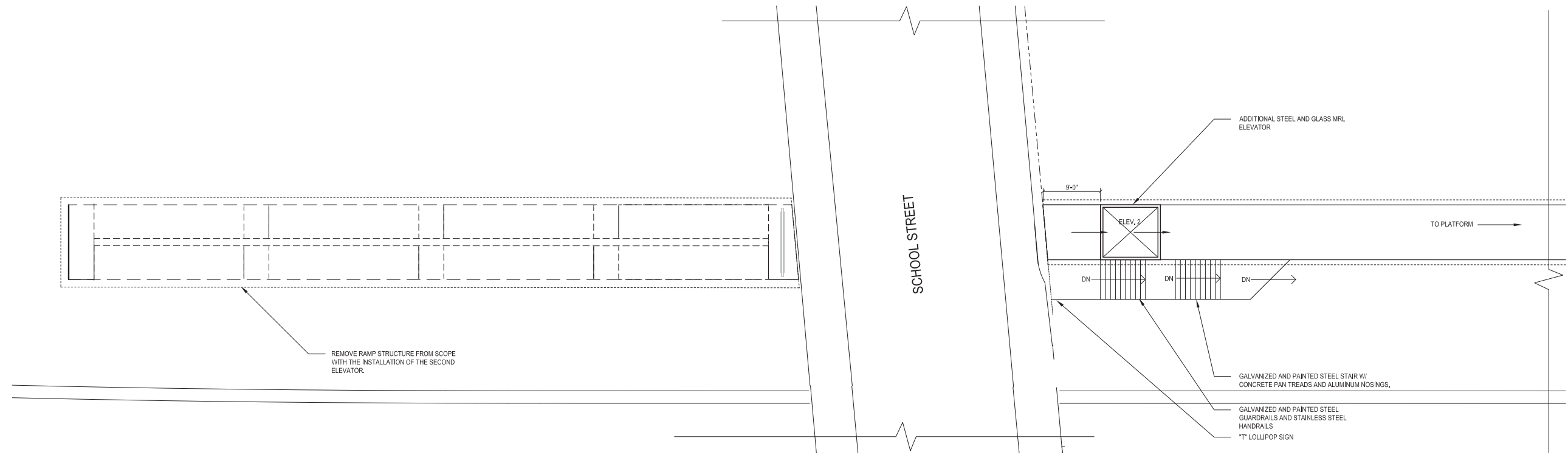
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CONSTRUCTION

<b>GLX</b>		<b>massDOT</b> Massachusetts Department of Transportation	
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1 PROPOSED ELEVATOR – GILMAN SQUARE  
SCALE: 3/32" = 1' - 0"

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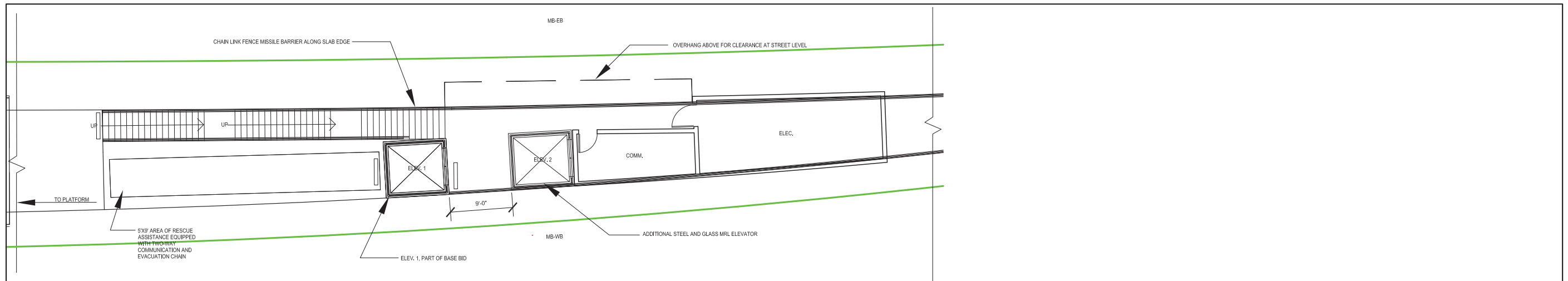
**GILMAN SQUARE STATION  
 ADDITIVE OPTION 2 - ADDITIONAL  
 ELEVATORS**

NOT FOR  
 CONSTRUCTION

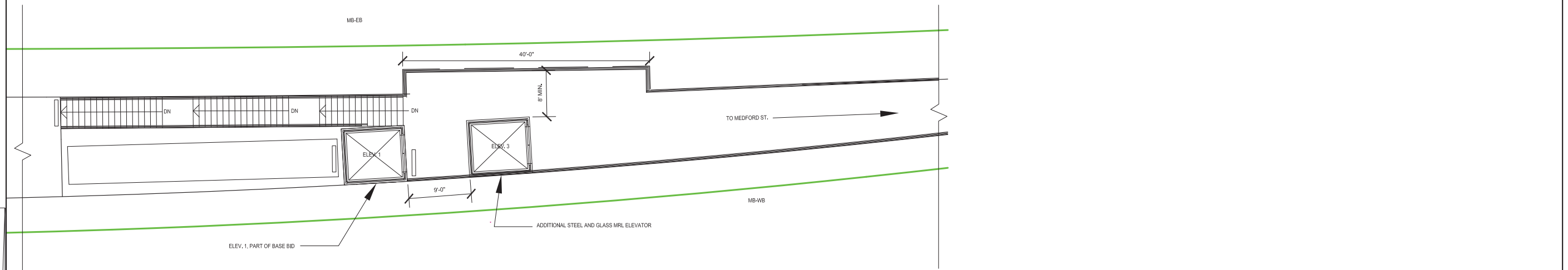


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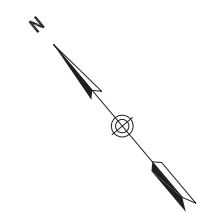




1 PLATFORM LEVEL ELEVATOR—MAGOUN SQUARE  
SCALE: 1/8" = 1' - 0"



2 STREET LEVEL ELEVATOR—MAGOUN SQUARE  
SCALE: 1/8" = 1' - 0"



**T** MASSACHUSETTS BAY TRANSPORTATION AUTHORITY  
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SOMERVILLE/MEDFORD, MASSACHUSETTS

**MAGOUN SQUARE STATION  
ADDITIVE OPTION 2 -  
ADDITIONAL ELEVATORS**

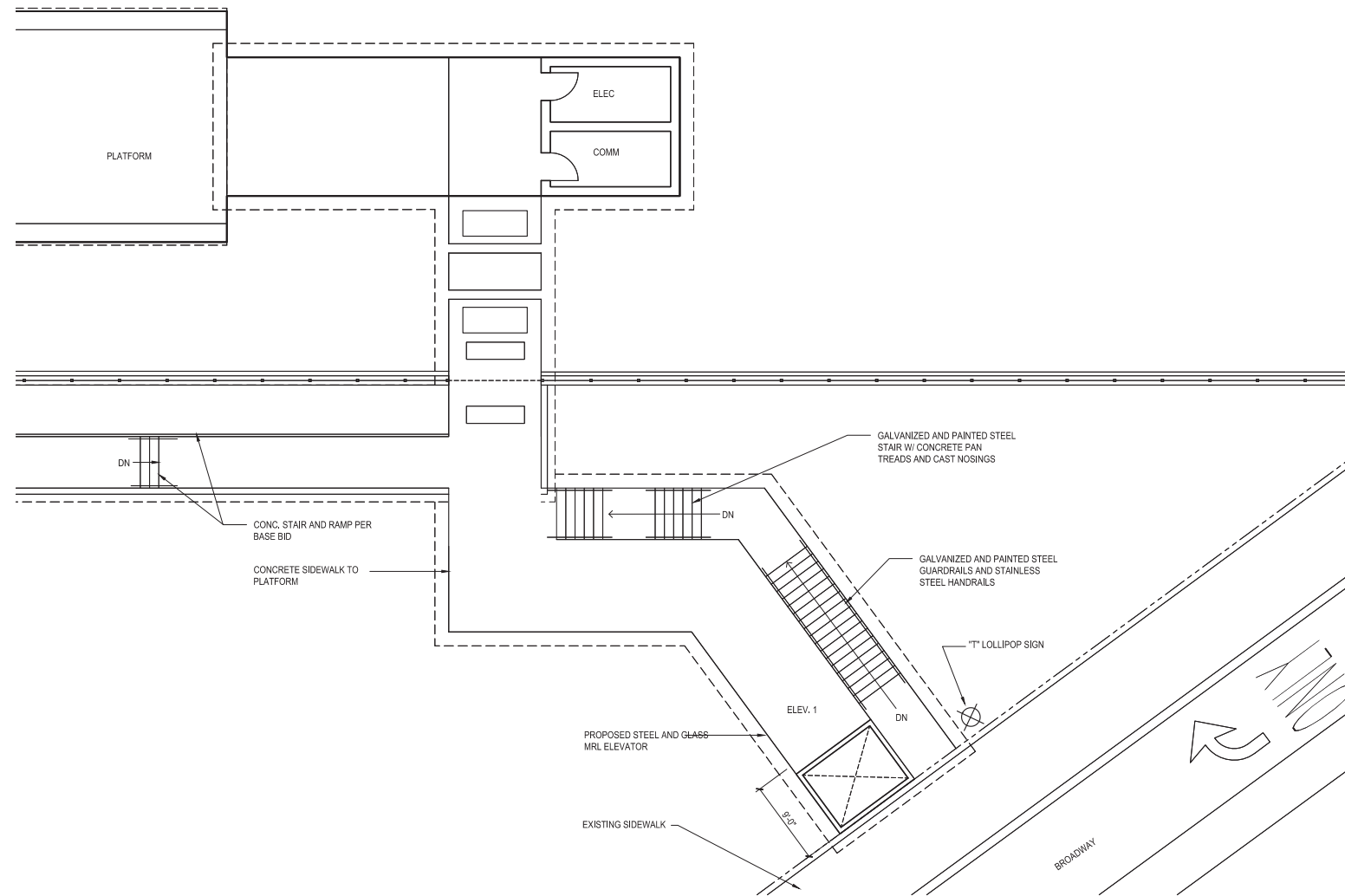
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ISSUE	DATE	DESCRIPTION	BY	CHKD	APP.

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DATE:				SHEET: <b>MSS-A-ADD1</b>	<b>0</b>





1 PROPOSED ELEVATOR - BALL SQUARE  
SCALE: 1/8" = 1' - 0"

**T** MASSACHUSETTS BAY TRANSPORTATION AUTHORITY  
GREEN LINE EXTENSION DESIGN-BUILD PROJECT  
MBTA CONTRACT NO. E22CN07  
SOMERVILLE/MEDFORD, MASSACHUSETTS

**BALL SQUARE STATION  
ADDITIVE OPTION 2 - ADDITIONAL  
ELEVATORS**

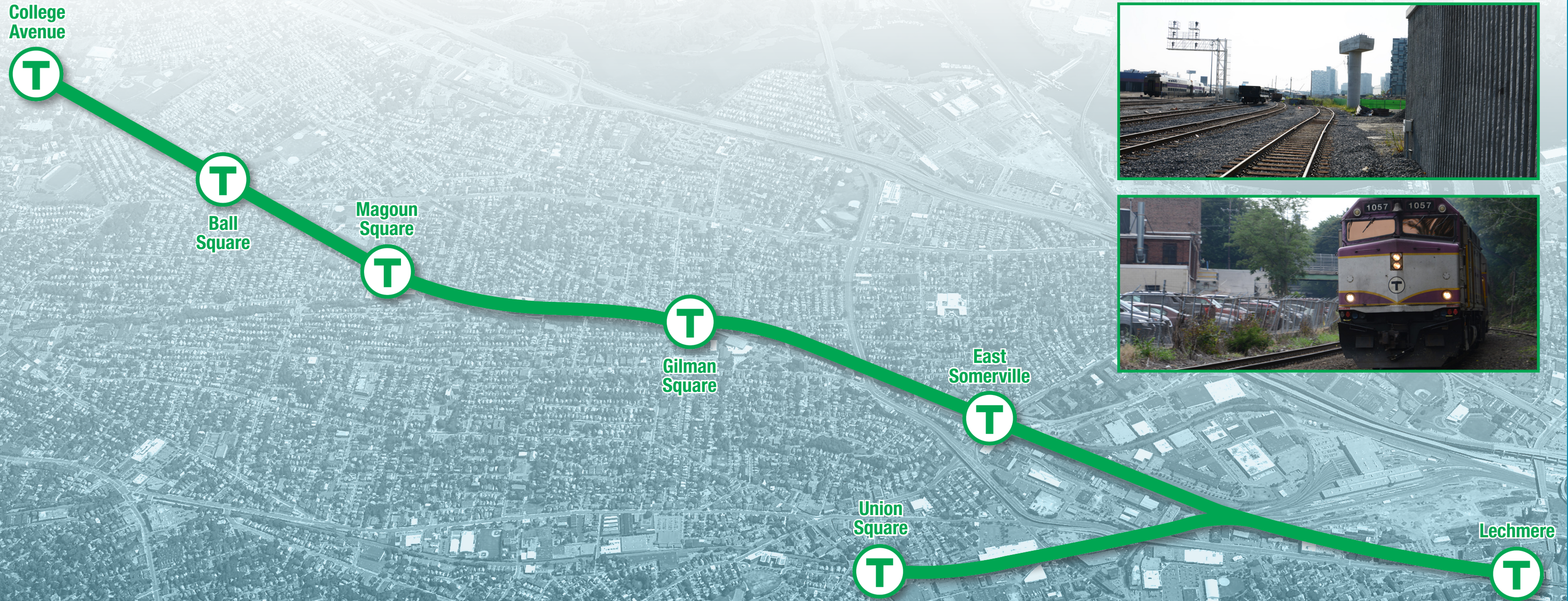
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## Inclusion of an Art Program

### INTRODUCTION

The MBTA has been incorporating artwork into its stations since 1967, and the Arts on the Line program, which started in 1977 during the Red Line Northwest Extension, was the first Art in Transit program in the country. The GLX Project will be no exception and the scope of work includes a unique installation at each of the seven stations in the Project.

The artwork will be covered by an “Enhancement Budget,” which is in addition to the overall Project budget, which includes the standard station elements. MBTA design standards result in functional, efficient, and uniform stations, but with very little distinction between one station and another. Therefore, the art program will provide a practical wayfinding benefit, as well as an aesthetic boost, to the GLX design with the following goals:

- › ***Enhance the station elements to create a warm and welcoming environment in key areas experienced by the riding public***
- › ***Both unify and differentiate station platforms***
- › ***Enhance the connection between the station and the community***

An innovative idea for the art program involves including the local community in the making of the art itself. An example of this interactive approach is the Southeastern Pennsylvania Transportation Authority’s (“SEPTA”) bus loop at 33rd and Dauphin streets in Philadelphia. This project featured a brick sculpture installation and the artist engaged the community by having a brick making workshop and the bricks created were included in the finished sculpture. This innovation would strengthen each community’s connection to the station and provide a degree of ownership not available when the artwork is created independently. This is not a requirement the artist needs to comply with; instead, this is an idea to strengthen the community’s connection to the artwork.



Figure Add03-1: SEPTA Dauphin Art.







**FigureAdd03-2:** Green Line Artwork. “Currents” by Gary Duehr, North Station.

3.A

**APPROACH**

The artwork installations are intended to compliment and integrate into the station design, and will be reflective of the neighborhood it serves. The artwork will unify the line and the transit system and enhance the passenger experience.

The artists have been preselected and will contract with the MBTA. There is a three-phase process for reviewing and approving the installations:

**PHASE 1**

**CONFIRM THE FEASIBILITY OF THE ARTWORK**

MBTA-approved artwork will be reviewed by GLP for technical and budgetary compliance. The technical portion will include a constructability review as well as any impacts on the accessibility, station egress, and transparency. We will submit the results of this review, which will include:

- › Comments relating to any technical issues and how to resolve those issues.
- › Confirmation that the budget for the artwork is adequate. If there is a difference, the GLP will provide the magnitude of difference and identify cost savings. The MBTA will review these findings with the artist.

**PHASE 2**

**FINAL DESIGN AND FABRICATION OF THE ARTWORK**

The artwork shall be designed and fabricated by GLP as part of the station design.

- › A full technical submission shall be made to the MBTA and will include the following:
  - 2-D drawings incorporating the artwork into the station architecture
  - Engineering drawings verifying technical feasibility

**Art Program**

Station	Type of Art Anticipated	Budget Allowance	Notes
College Avenue	Artistic treatment of fences, screen walls, railings, porcelain enamel panels, site elements, retaining walls, glazing, lighting, ceilings, tile wall surfaces, or other features.	\$100,000	Budget allowance shall include › design of the art installation › art materials › art fabrication › installation of the art
Ball Square			
Magoun Square			
Gilman Square			
East Somerville			
Union Square			
Lechmere		\$120,000	

**Figure Add03-3:** Artwork Type and Budget Table

- Structural calculations as required by the MBTA
- Specifications required based on the artwork that are in addition to those provided by GLP for the station structures

**PHASE 3**

**INSTALLATION OF THE ARTWORK**

GLP will coordinate with the artist to install the work and provide access to the site for inspection of the art during construction. GLP will fabricate and install the artwork at each station in compliance with the artist’s design.

- › The artist will make periodic inspections.
- › The artist will perform an inspection of the completed work for conformance with the design, and provide a punch list for a follow-up review. Formal acceptance will be per Volume 2, Section 2.8 – Construction Requirements.

By awarding a commission to a different artist for each station, the MBTA is ensuring a diverse display of artwork across the line.

**DESIGN CRITERIA AND THE ADDITIVE OPTION**

The inclusion of an art program does not affect any of the design criteria or requirements set forth in the Technical Proposal. The artwork will be required to meet the same durability and maintenance requirements as other station elements, including resistance to corrosion, weathering, and impact.

**CHANGES FROM THE TECHNICAL PROPOSAL**

An Art Program was included in the Additive Options issued as part of the Final RFP. The scope of the Art Program Additive Option was further

defined in Addendum #3, when dollar value allowances were provided for each station for a combined value of \$720,000:

- › Fences
- › Screen walls
- › Railings
- › Porcelain enamel panels
- › Site elements
- › Retaining walls
- › Glazing
- › Lighting
- › Ceilings
- › Tile wall surfaces
- › Other locations as approved

This list gives the artist flexibility with the type of art and guarantees that passengers using the station will experience the artwork.

3.B

**PRELIMINARY BASELINE SCHEDULE**

It is estimated that the art program option will require roughly 30 work days to complete near the end of the Project.

**SCHEDULE IMPACT ASSESSMENT**

Although the addition of the Art program will require additional time to perform work in some specific locations, it is not anticipated that these activities will have any impact on the final forecasted completion date of the Project..

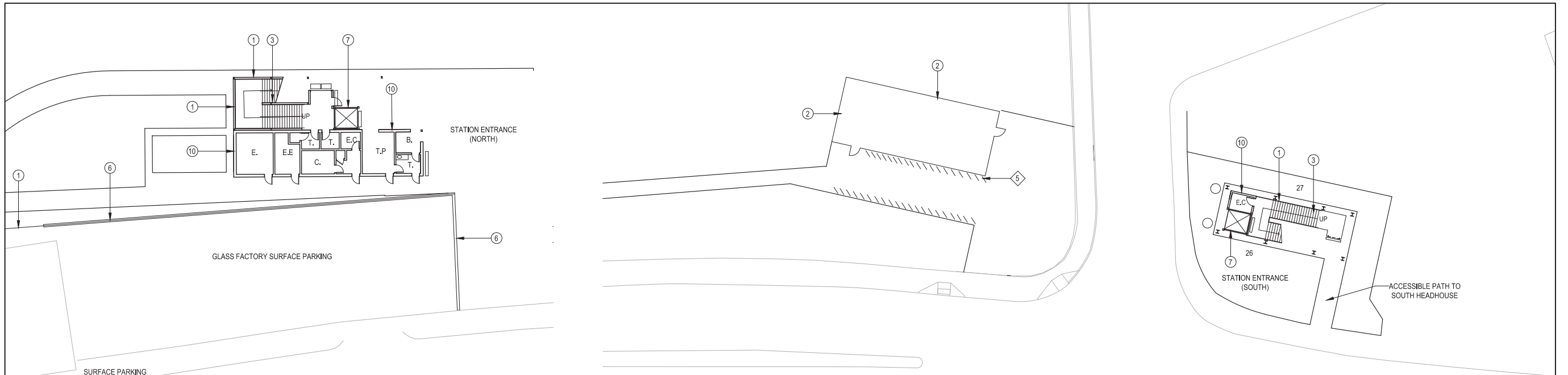


3.C  
DRAWINGS

**STATION ARTWORK PLANS**

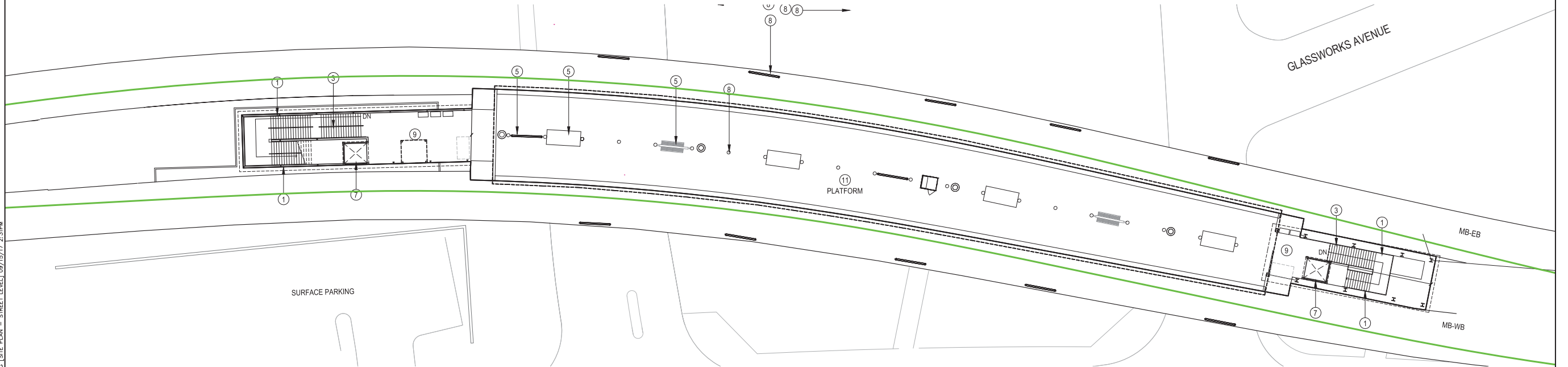
These drawings illustrate the possible artwork locations based on the table in Addendum #3. The plans will identify the base material of the proposed station elements and will indicate required clearances for egress and accessibility which the artwork cannot encroach upon.





1 NORTH HEADHOUSE ART LOCATIONS – STREET LEVEL  
SCALE: 1" = 20' - 0"

2 SOUTH HEADHOUSE ART LOCATIONS – STREET LEVEL  
SCALE: 1/20" = 1' - 0"

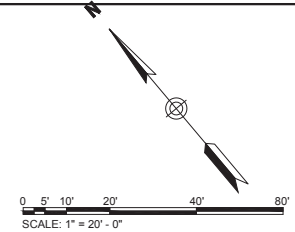


3 PLATFORM ART LOCATIONS – LECHMERE STATION  
SCALE: 1/20" = 1' - 0"

ARTWORK LOCATION NOTES

- 1 FENCES, MISSILE BARRIERS
- 2 SCREEN WALLS
- 3 RAILINGS
- 4 PORCELAIN ENAMEL PANELS
- 5 SITE ELEMENTS - BENCHES, BIKE RACKS, SHELTERS, TRASH RECEPTACLES
- 6 RETAINING WALLS - WITHIN STATION LIMITS
- 7 GLAZING
- 8 LIGHTING
- 9 CEILINGS
- 10 TILE WALL SURFACES
- 11 OTHER ELEMENTS

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MASSACHUSETTS BAY TRANSPORTATION AUTHORITY  
 GREEN LINE EXTENSION DESIGN-BUILD PROJECT  
 MBTA CONTRACT NO. E22CN07  
 SOMERVILLE/MEDFORD, MASSACHUSETTS

**LECHMERE STATION**  
**ADDITIVE OPTION 3 - ART PROGRAM**

NOT FOR CONSTRUCTION

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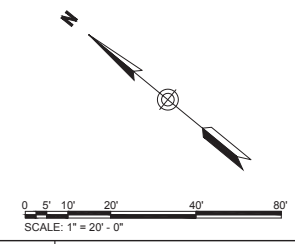
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**1 ART LOCATIONS - EAST SOMERVILLE STATION**  
 SCALE: 1" = 20' - 0"

**ARTWORK LOCATION NOTES**

- |  |                       |
|--|-----------------------|
| 1 FENCES, MISSILE BARRIERS   | 9 CEILINGS            |
| 2 SCREEN WALLS   | 10 TILE WALL SURFACES |
| 3 RAILINGS   | 11 OTHER ELEMENTS     |
| 4 PORCELAIN ENAMEL PANELS  |                       |
| 5 SITE ELEMENTS - BENCHES, BIKE RACKS, SHELTERS, TRASH RECEPTACLES |                       |
| 6 RETAINING WALLS - WITHIN STATION LIMITS                          |                       |
| 7 GLAZING  |                       |
| 8 LIGHTING   |                       |



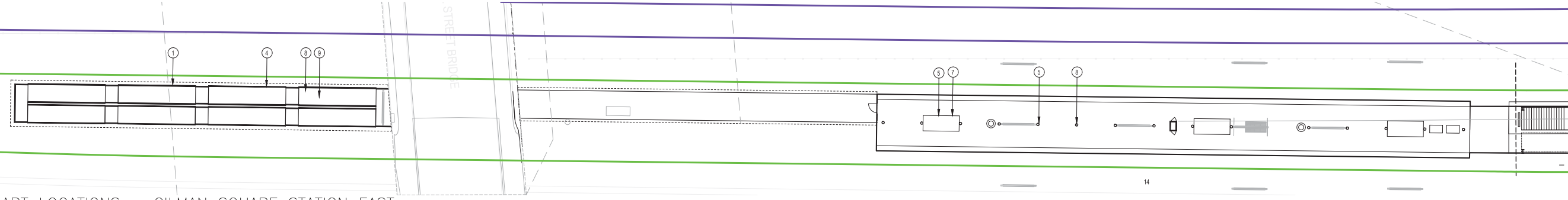
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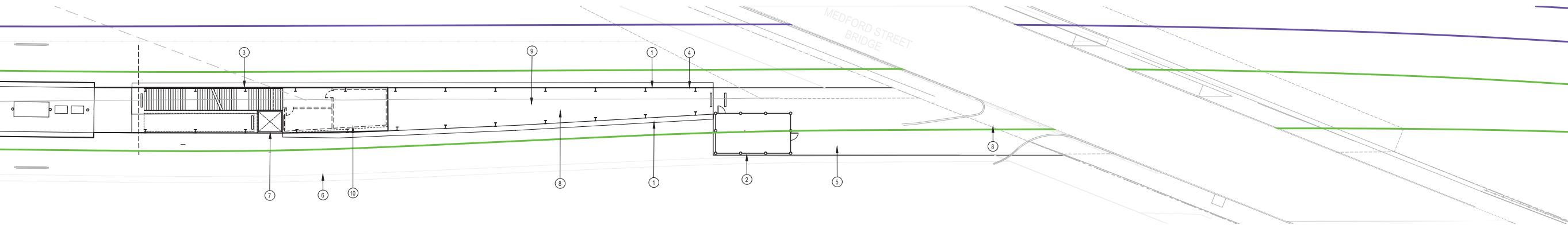
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ISSUE	DATE	DESCRIPTION	BY	CHK'D	APP.	

<b>T</b>	MASSACHUSETTS BAY TRANSPORTATION AUTHORITY	
	GREEN LINE EXTENSION DESIGN-BUILD PROJECT	
	MBTA CONTRACT NO. E22CNO7 SOMERVILLE/MEDFORD, MASSACHUSETTS	
<b>EAST SOMERVILLE STATION</b>		
<b>ADDITIVE OPTION 3 - ART PROGRAM</b>		
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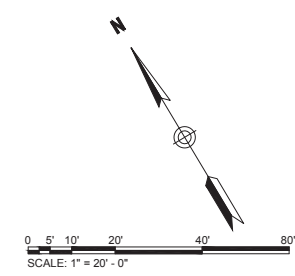
1 ART LOCATIONS - GILMAN SQUARE STATION EAST  
SCALE: 1" = 20' - 0"



2 ART LOCATIONS - GILMAN SQUARE STATION WEST  
SCALE: 1" = 20' - 0"

**ARTWORK LOCATION NOTES**

- 1 FENCES - AT HEAD HOUSES, ALONG R.O.W. AT STATIONS ON WALLS.
- 2 SCREEN WALLS
- 3 RAILINGS - HEAD HOUSE STAIR GUARDRAILS, AND HANDRAILS
- 4 PORCELAIN ENAMEL PANELS - HORIZONTAL BANDS
- 5 SITE ELEMENTS - BENCHES, BIKE RACKS, SHELTERS, TRASH RECEPTACLES
- 6 RETAINING WALLS - WITHIN STATION LIMITS
- 7 GLAZING - ELEVATOR TOWERS, SCREENS AT CAA
- 8 LIGHTING - PLATFORM, PATHWAY, BOLLARDS
- 9 CEILINGS - HEAD HOUSES, STAIRS, EGRESS PATHS
- 10 TILE WALL SURFACES - BUILDINGS
- 11 OTHER ELEMENTS



**T** MASSACHUSETTS BAY TRANSPORTATION AUTHORITY  
GREEN LINE EXTENSION DESIGN-BUILD PROJECT  
MBTA CONTRACT NO. E22CN07  
SOMERVILLE/MEDFORD, MASSACHUSETTS

**GILMAN SQUARE STATION  
ADDITIVE OPTION 3 - ART PROGRAM**



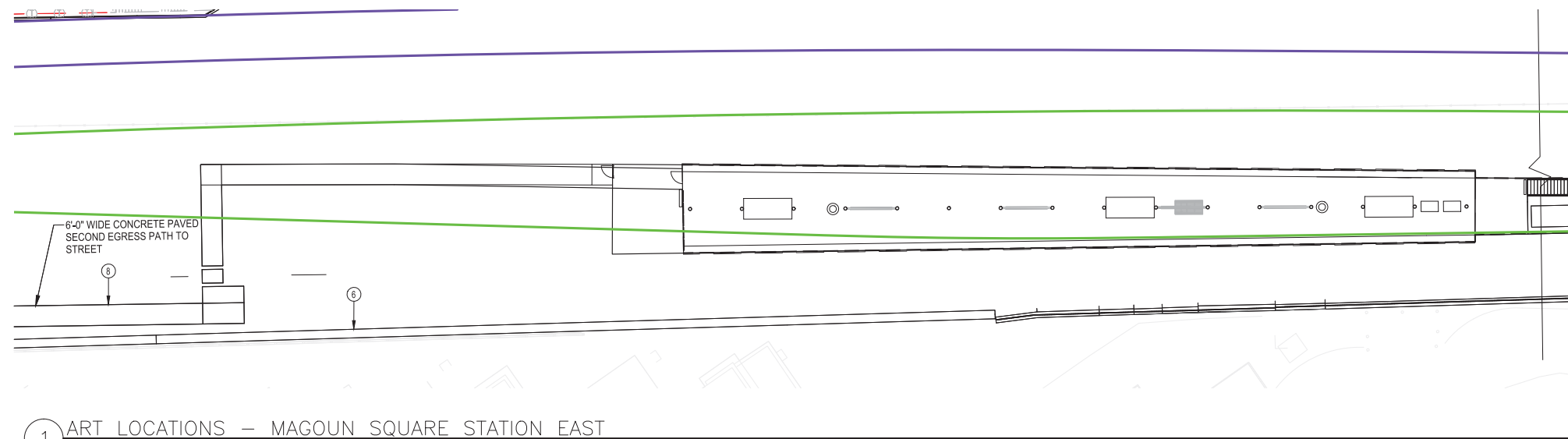
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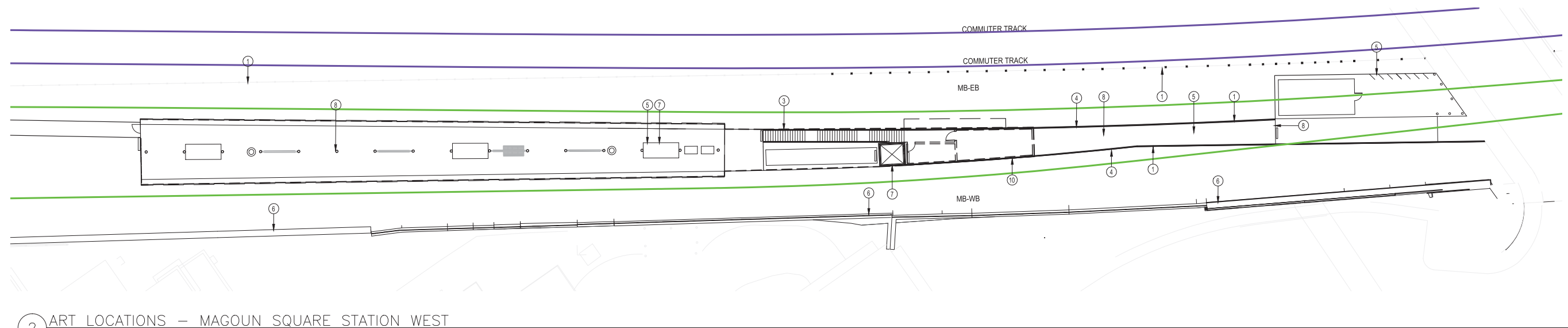
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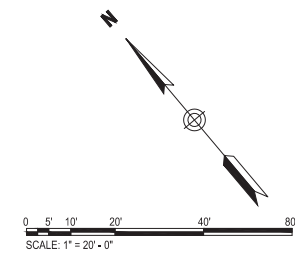
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SCALE: 1" = 20' - 0"



2 ART LOCATIONS – MAGOUN SQUARE STATION WEST  
SCALE: 1" = 20' - 0"

ARTWORK LOCATION NOTES

- 1 FENCES - AT HEAD HOUSES, ALONG R.O.W. AT STATIONS ON WALLS.
- 2 SCREEN WALLS
- 3 RAILINGS - HEAD HOUSE STAIR GUARDRAILS, AND HANDRAILS
- 4 PORCELAIN ENAMEL PANELS - HORIZONTAL BANDS
- 5 SITE ELEMENTS - BENCHES, BIKE RACKS, SHELTERS, TRASH RECEPTACLES
- 6 RETAINING WALLS - WITHIN STATION LIMITS
- 7 GLAZING - ELEVATOR TOWERS, SCREENS AT CAA
- 8 LIGHTING - PLATFORM, PATHWAY, BOLLARDS
- 9 CEILINGS - HEAD HOUSES, STAIRS, EGRESS PATHS
- 10 TILE WALL SURFACES - BUILDINGS
- 11 OTHER ELEMENTS



**T** MASSACHUSETTS BAY TRANSPORTATION AUTHORITY  
GREEN LINE EXTENSION DESIGN-BUILD PROJECT  
MBTA CONTRACT NO. E22CN07  
SOMERVILLE/MEDFORD, MASSACHUSETTS

**MAGOUN SQUARE STATION**  
**ADDITIVE OPTION 3 - ART PROGRAM**



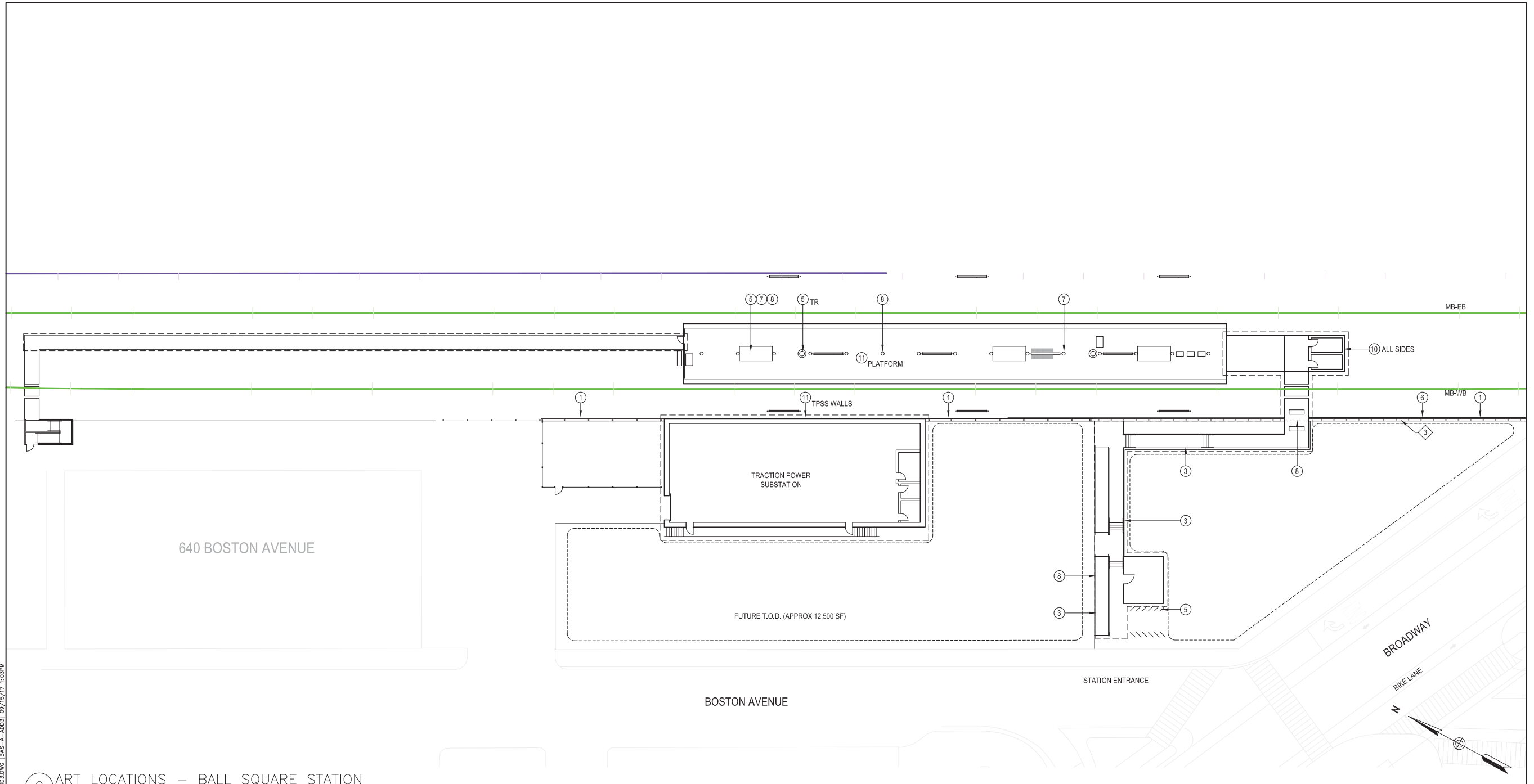
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2 ART LOCATIONS - BALL SQUARE STATION  
SCALE: 1" = 20' - 0"

ARTWORK LOCATION NOTES

- |  |                       |
|--|-----------------------|
| 1 FENCES, MISSILE BARRIERS   | 9 CEILINGS            |
| 2 SCREEN WALLS   | 10 TILE WALL SURFACES |
| 3 RAILINGS   | 11 OTHER ELEMENTS     |
| 4 PORCELAIN ENAMEL PANELS  |                       |
| 5 SITE ELEMENTS - BENCHES, BIKE RACKS, SHELTERS, TRASH RECEPTACLES |                       |
| 6 RETAINING WALLS - WITHIN STATION LIMITS                          |                       |
| 7 GLAZING  |                       |
| 8 LIGHTING   |                       |



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**T** GREEN LINE EXTENSION DESIGN-BUILD PROJECT  
 MBTA CONTRACT NO. E22CN07  
 SOMERVILLE/MEDFORD, MASSACHUSETTS

**BALL SQUARE STATION**  
**ADDITIVE OPTION 3 - ART PROGRAM**

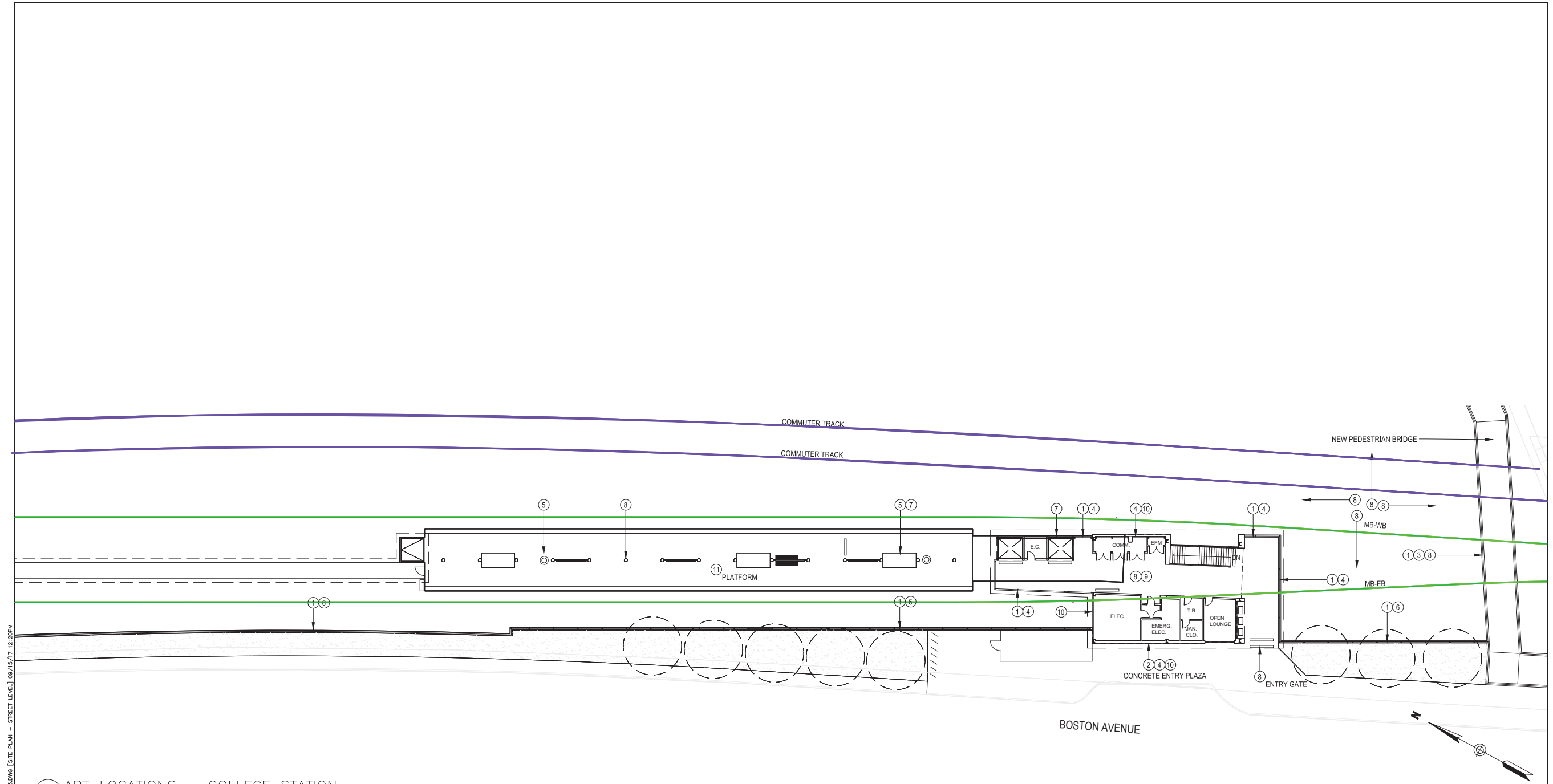
GLP Green Line Partners  
 Lane • Si • Judlau • LMH-CMC JV

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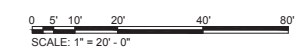




1 ART LOCATIONS - COLLEGE STATION  
SCALE: 1" = 20' - 0"

ARTWORK LOCATION NOTES

- |  |                       |
|--|-----------------------|
| 1 FENCES, MISSILE BARRIERS   | 9 CEILINGS            |
| 2 SCREEN WALLS   | 10 TILE WALL SURFACES |
| 3 RAILINGS   | 11 OTHER ELEMENTS     |
| 4 PORCELAIN ENAMEL PANELS  |                       |
| 5 SITE ELEMENTS - BENCHES, BIKE RACKS, SHELTERS, TRASH RECEPTACLES |                       |
| 6 RETAINING WALLS - WITHIN STATION LIMITS                          |                       |
| 7 GLAZING  |                       |
| 8 LIGHTING   |                       |

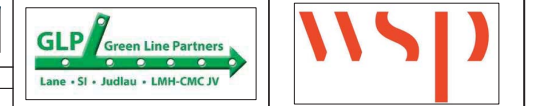


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<b>GLX</b>		<b>massDOT</b> Massachusetts Department of Transportation	
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ISSUE	DATE	DESCRIPTION	BY CHK'D APP.

**T** MASSACHUSETTS BAY TRANSPORTATION AUTHORITY  
GREEN LINE EXTENSION DESIGN-BUILD PROJECT  
MBTA CONTRACT NO. E22CN07  
SOMERVILLE/MEDFORD, MASSACHUSETTS

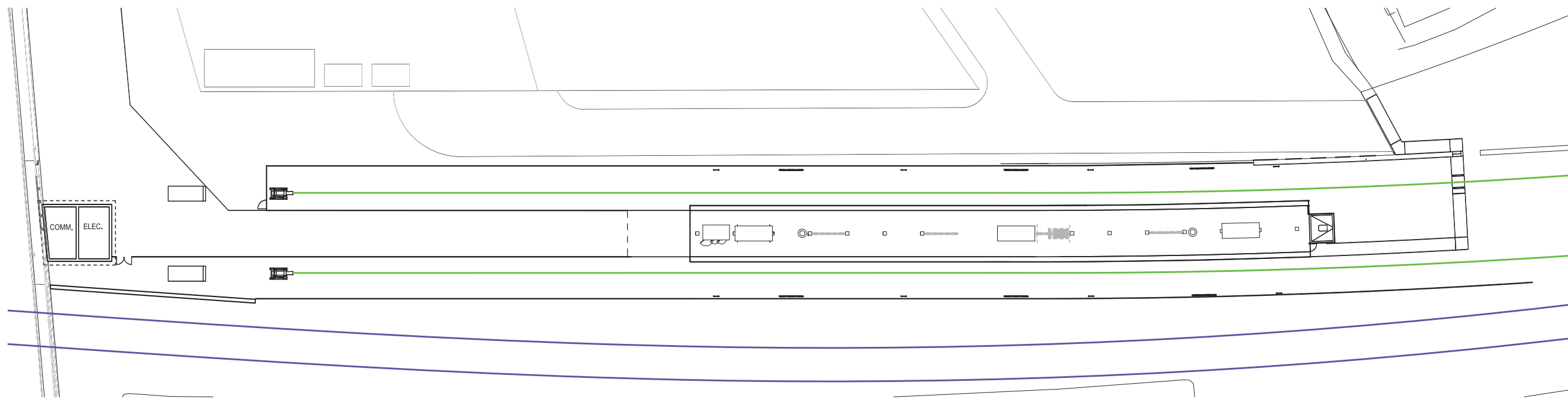
**COLLEGE STATION**  
**ADDITIVE OPTION 3 - ART PROGRAM**



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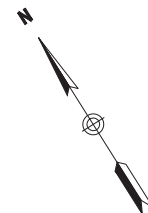
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1 ART LOCATIONS - UNION SQUARE STATION  
 SCALE: 1" = 20' - 0"

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0 5' 10' 20' 40' 80'  
 SCALE: 1" = 20' - 0"

**T** MASSACHUSETTS BAY TRANSPORTATION AUTHORITY  
 GREEN LINE EXTENSION DESIGN-BUILD PROJECT  
 MBTA CONTRACT NO. E22CN07  
 SOMERVILLE/MEDFORD, MASSACHUSETTS

**UNION SQUARE STATION**  
**ADDITIVE OPTION 3 - ART PROGRAM**



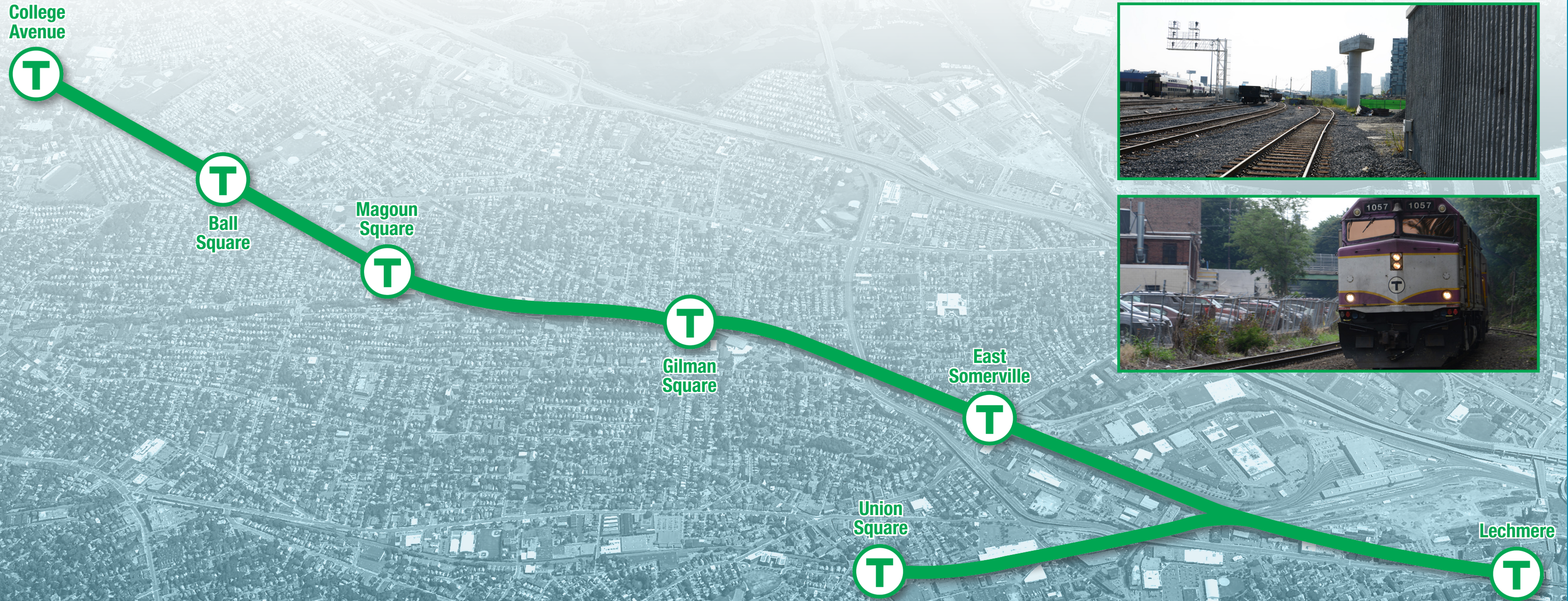
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# Design and Construction of Chester Street Path Connection



## INTRODUCTION

The Chester Street Path Connection provides an important link between the Community Path and the neighborhoods of Prospect Hill and East Somerville. The GLP design aims to minimize construction efforts and schedule impact while providing a functional and attractive Path connection. We achieve this goal by using a series of shorter simple retaining walls that are structurally independent. We also take advantage of the existing crib wall with our innovative micro-pile wall solution (described in Section A5.2.2.A of the proposal).

### 4.A APPROACH

GLP’s solution for the Chester Street Path Connection satisfies all RFP requirements. Per Section 9.2 of the TPs, the Chester Street Connection Path access will satisfy the codes, standards, and manuals listed. The Path will have a minimum width of 10 feet, with 1-foot shoulders on either side. The path grades are all below the maximum grade of 5.0%. In fact, only the ramp section to Cross Street approaches the maximum, while the main path grades are below 2.50%. The Chester Street connection will ramp to Cross Street on the west side of the GLX tracks without affecting the current roadway elevations.

To minimize the construction of walls to accommodate this connection, we propose to raise the main path to an elevation halfway up to street-level at a point approximately midway between Cross Street and McGrath Highway. We will use low-cost Modular Precast Blocks (“MPB”) on the GLX side of the path while taking advantage of an existing crib wall on the other. At this high point in the main Path, the connection spur breaks off and rise to achieve the remaining 10 feet of elevation gain. The spur is supported by a micro-pile wall constructed inside the existing crib wall on the main path side and while a short Soldier Pile and Lagging (“SPL”) wall will be used to support the adjacent Chester Street on the other side of the spur. This incremental elevation gain is the key that allows us to meet the 5% maximum grade requirement for the spur up to the street.

## DESIGN CRITERIA AND THE ADDITIVE OPTION

GLP’s solution complies with all the design criteria and requirements set forth in the TPs. There are no key design criteria or requirements that cannot be met by including this path connection in the overall Project. Specifically:

- › Our connection design is Americans with Disabilities Act (“ADA”)-compliant and connects to grade at the northwest intersection of Cross Street with Chester Street. At this point, it connects to the recently constructed wheelchair ramps and crosswalk across Chester Street. We will add a crosswalk across Cross Street, thereby providing safe crossings that will connect the Community Path to both sidewalks of Cross Street and the one sidewalk on Chester Street.
- › Due to raising the grade of the main path, our design will include a single run in the spur to Cross Street, thereby avoiding the need for switchbacks.
- › Signage for the spur at the main path will indicate this is a connection to Cross and Chester streets, while at the street level, signage will indicate this is an entrance to the Community Path.
- › The design of our proposed retaining wall systems will meet the applicable provisions of TP 8.1 Retaining Walls.

## CHANGES FROM TECHNICAL PROPOSAL

GLP’s solution has two primary differences from the base Technical Proposal: the introduction of new retaining walls rather than a crib wall rehabilitation between Cross Street and McGrath Highway, and a profile change in which the main Community Path climbs from track level, halfway to street level, and back down to track level, rather than remaining at track level. All the remaining work to achieve this additive is removed from the critical base design work.

### 4.B PRELIMINARY BASELINE SCHEDULE

GLP anticipate that the added connection of the Community Path to Chester Street will require a duration of 24 work days to construct.





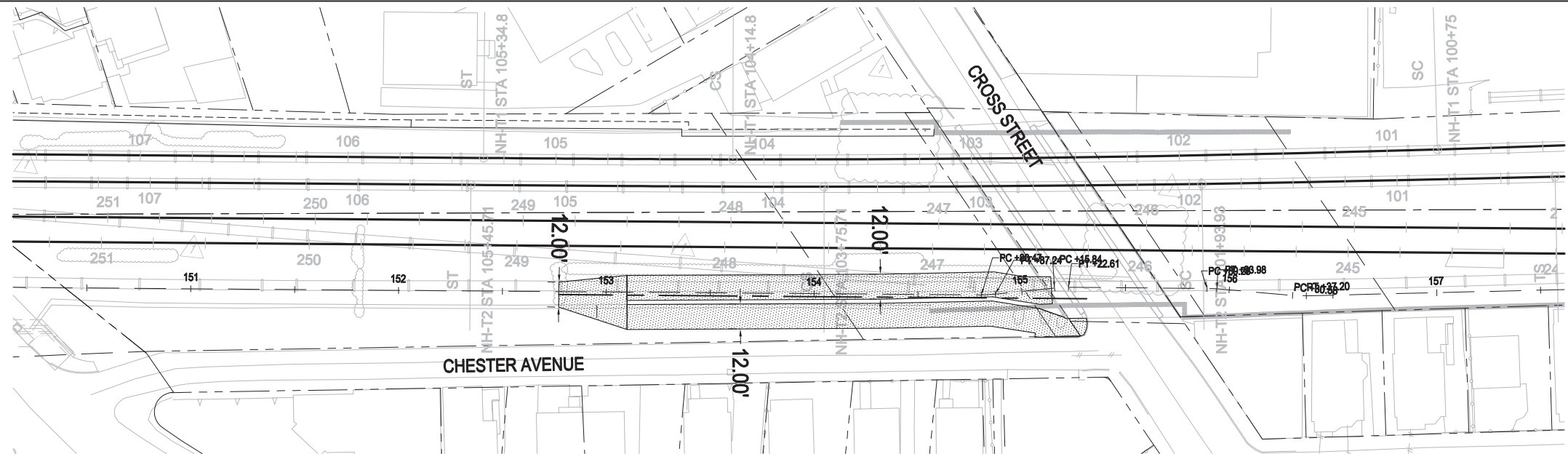
## SCHEDULE ASSESSMENT

The additional connection of the Community Path to Chester Street will require additional time to perform work, but it is not anticipated that it will have any impact on the final forecasted completion date of the Project.

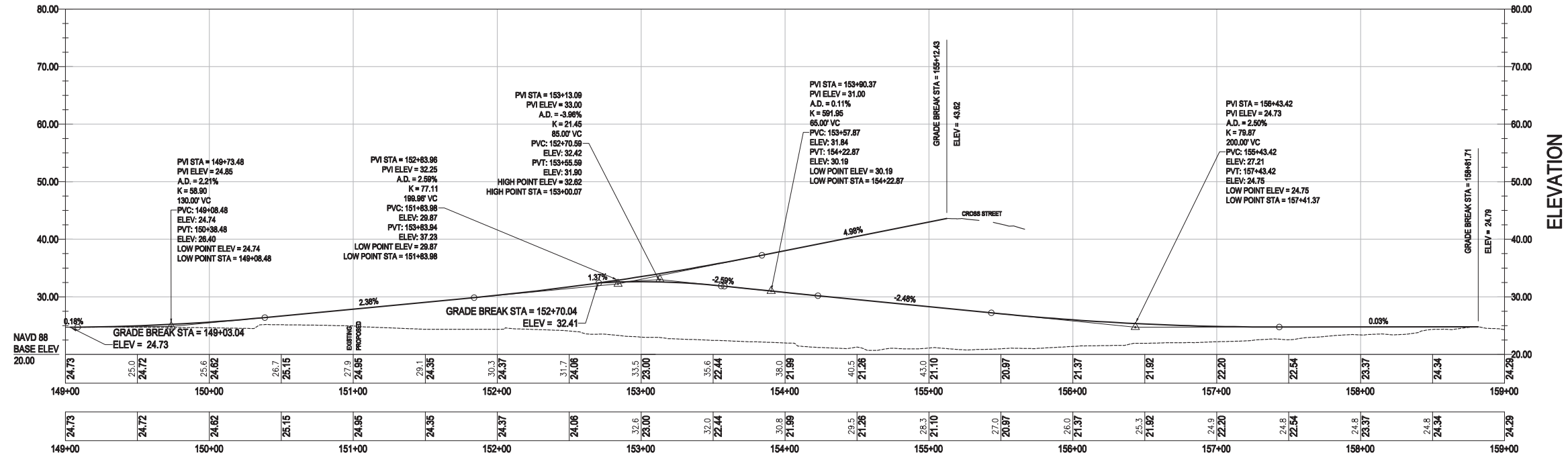
### 4.C DRAWINGS

GLP has developed a set of four drawings to communicate the design intent of our solution. The drawings consist of a civil alignment and profile, a Structural Plan and Elevation, typical sections, and typical details.





**PLAN**  
HORIZONTAL  
SCALE IN FEET  
100 0 100 200



**PROFILE**  
HORIZONTAL  
SCALE IN FEET  
40 0 40 80  
10 0 10 20

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY  
**T** GREEN LINE EXTENSION DESIGN-BUILD PROJECT  
MBTA CONTRACT NO. E22CN07  
SOMERVILLE/MEDFORD, MASSACHUSETTS

**COMMUNITY PATH  
ADDITIVE OPTION #4  
ALIGNMENT AND PROFILE**



**NOT FOR  
CONSTRUCTION**

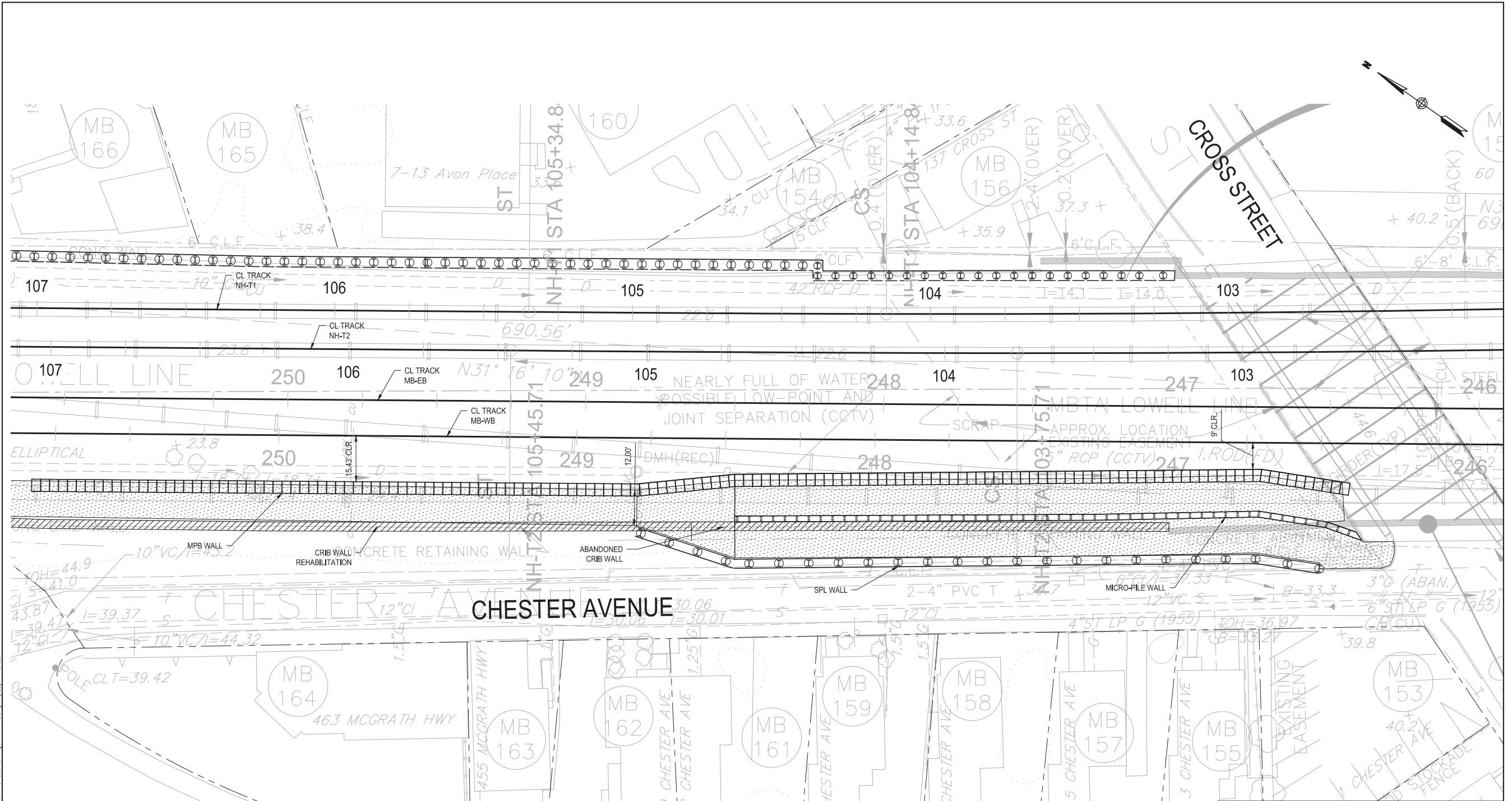
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ISSUE	DATE	DESCRIPTION	BY	CHKD	APP.	DATE	

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DATE: 28SEPT2017	LN	LN	SD	SHEET: CMP-C-2001	( )

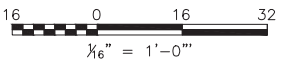
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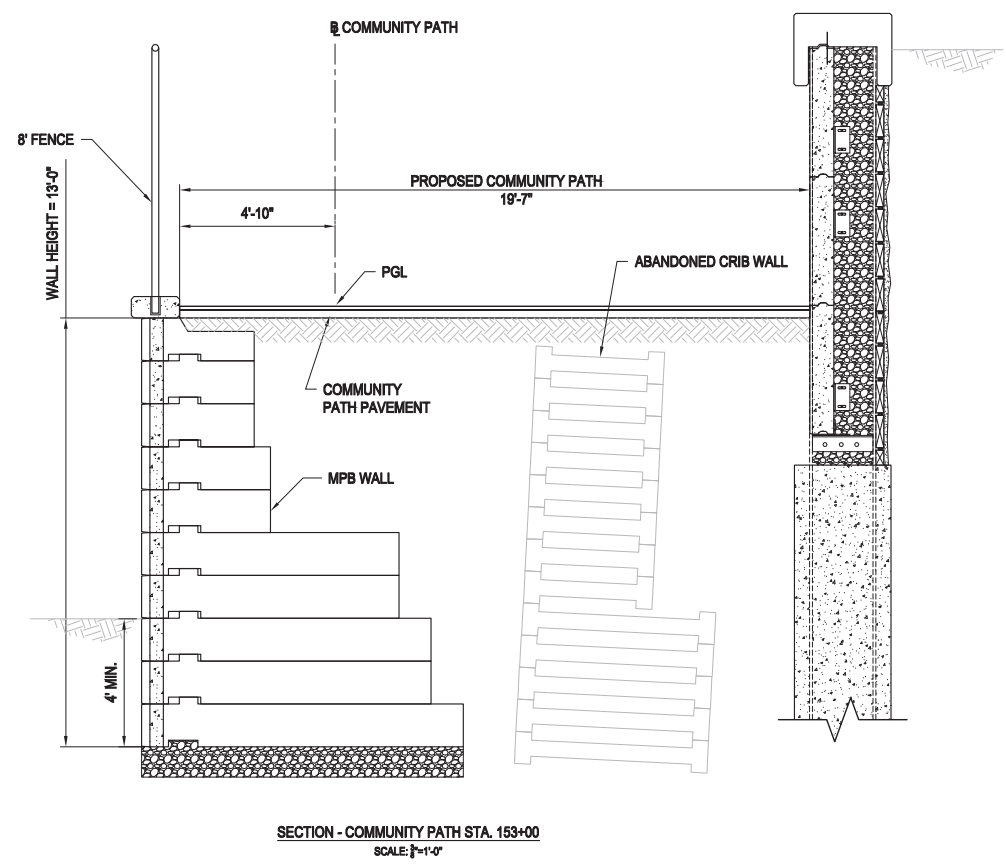
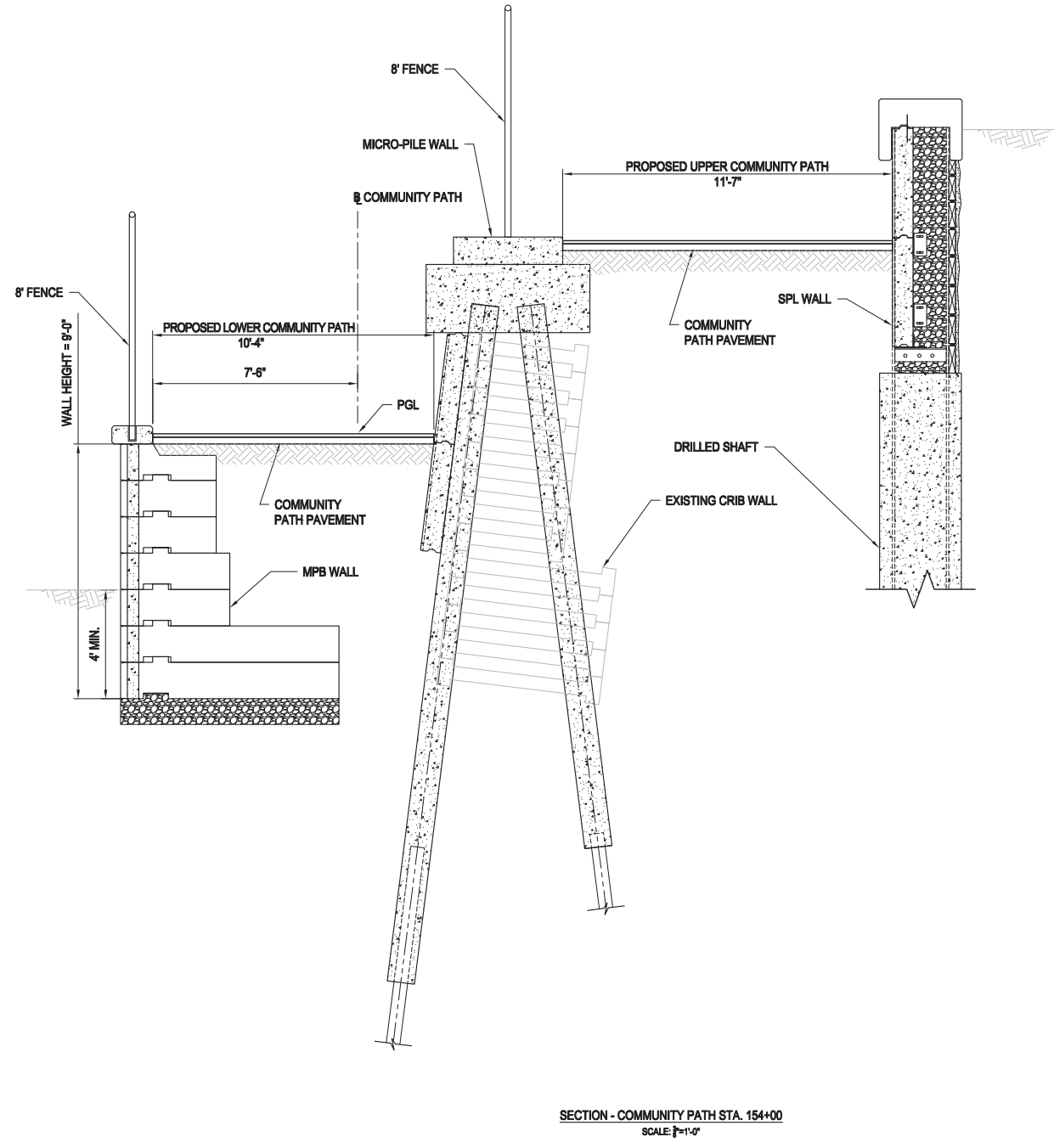
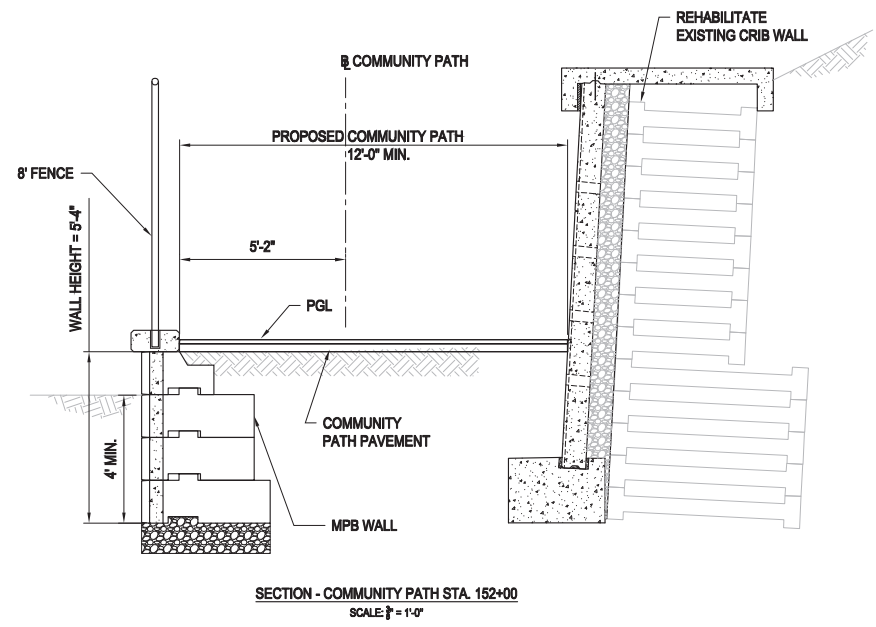


PLAN



<b>T</b>	MASSACHUSETTS BAY TRANSPORTATION AUTHORITY GREEN LINE EXTENSION DESIGN-BUILD PROJECT MBTA CONTRACT NO. E22CN07 SOMERVILLE/MEDFORD, MASSACHUSETTS	
	<b>COMMUNITY PATH          ADDITIVE OPTION #4          WALLS PLAN</b>	
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NOT FOR CONSTRUCTION		ISSUE: -



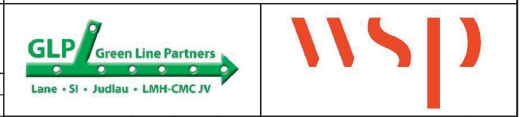


NOT FOR CONSTRUCTION

<b>GLP</b>		<b>massDOT</b> Massachusetts Department of Transportation	
0	09/28/2017	TECHNICAL PROPOSAL	
ISSUE	DATE	DESCRIPTION	BY CHKD APP.

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY  
**T** GREEN LINE EXTENSION DESIGN-BUILD PROJECT  
 MBTA CONTRACT NO. E22CN07  
 SOMERVILLE/MEDFORD, MASSACHUSETTS

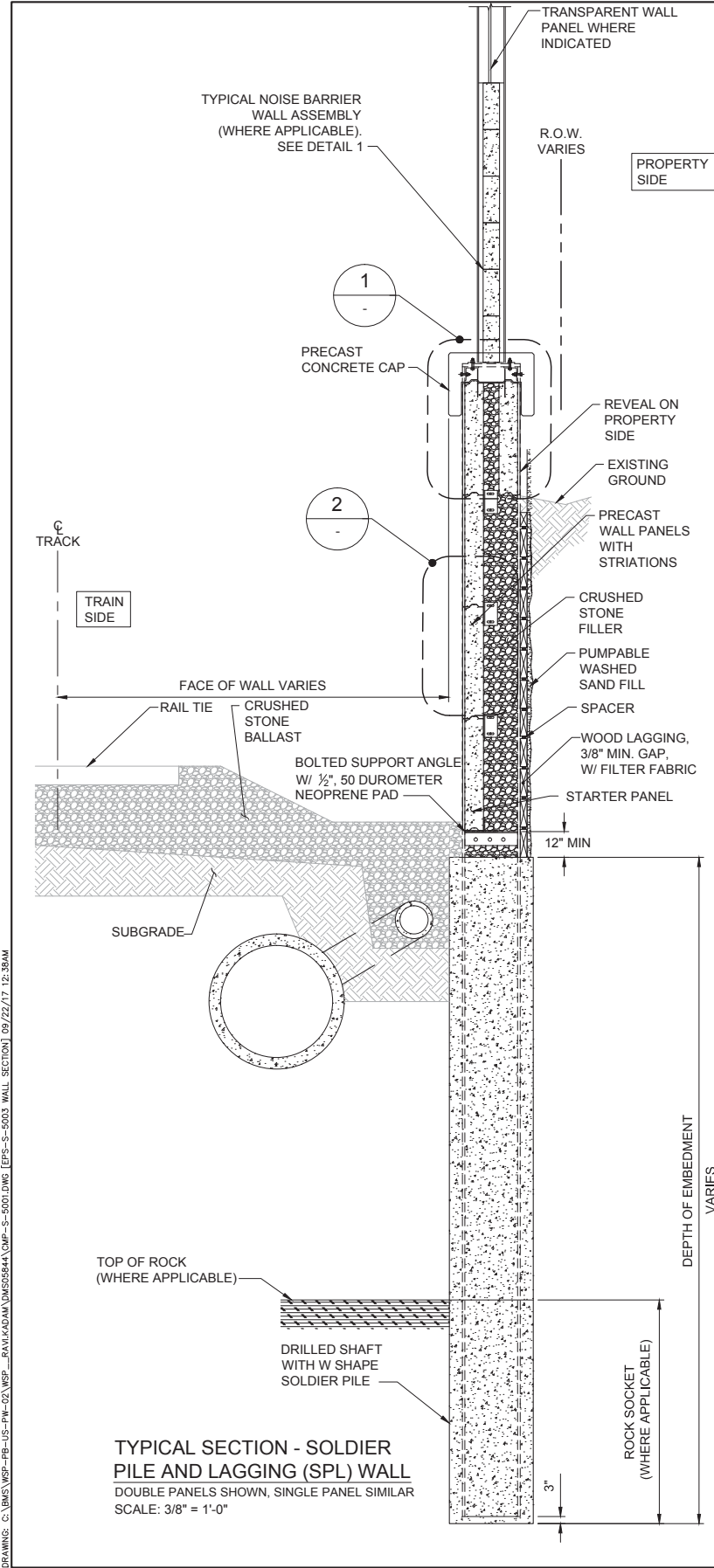
COMMUNITY PATH  
 ADDITIVE OPTION #4  
 WALL SECTIONS



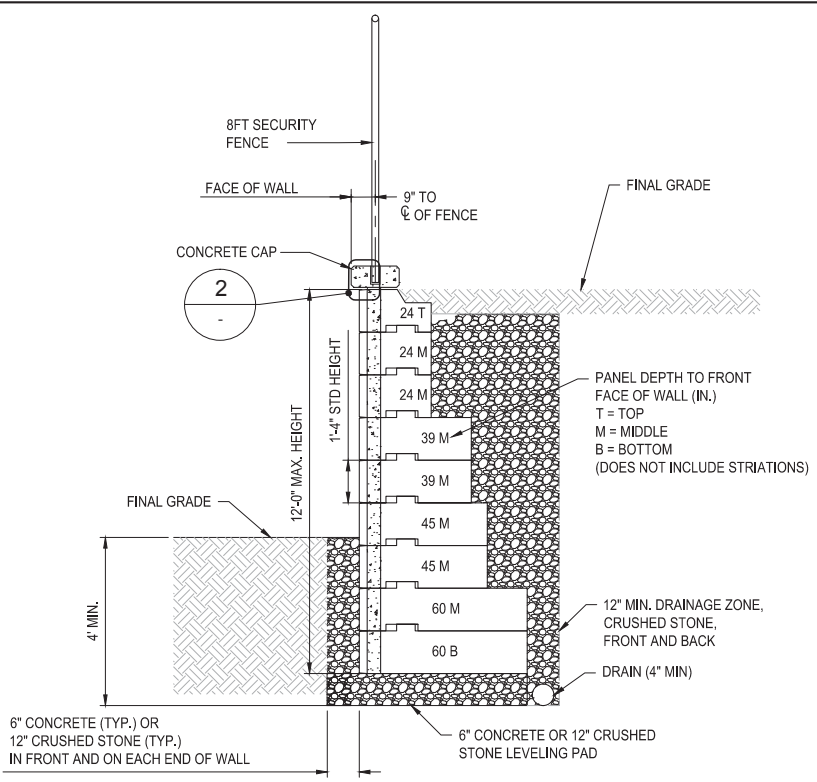
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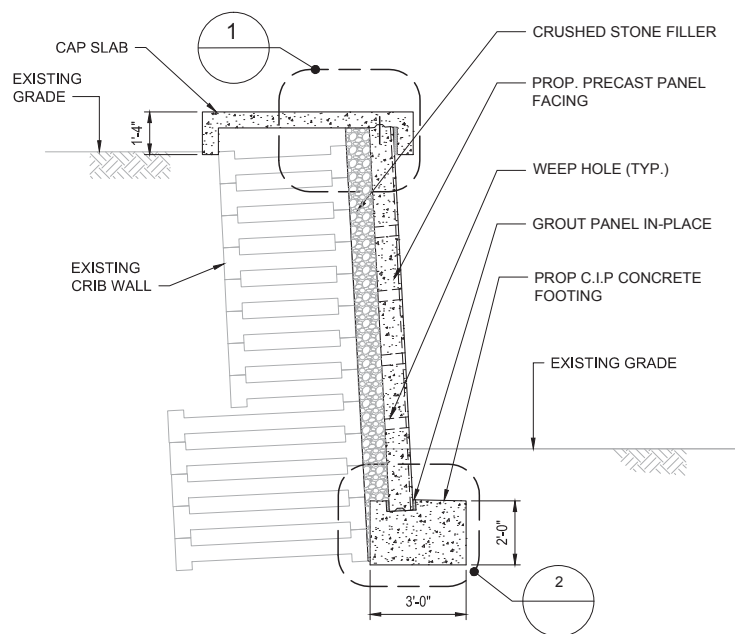




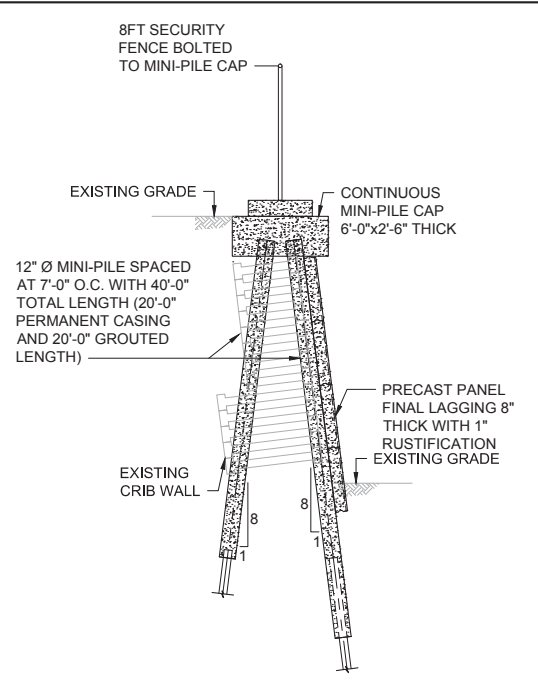
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DOUBLE PANELS SHOWN, SINGLE PANEL SIMILAR  
SCALE: 3/8" = 1'-0"



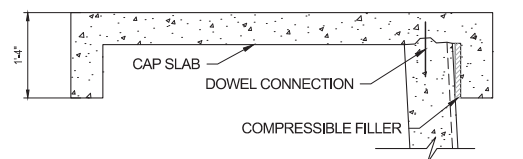
**TYPE A (MPB) WALL WITH CAP - TYPICAL**  
SECTION DRAWN IS BASED ON SHEA  
SCALE: 3/8" = 1'-0"



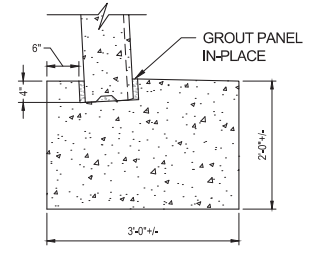
**TYPICAL CRIB WALL REHABILITATION SECTION**  
SCALE: 3/8" = 1'-0"



**MICRO PILE WALL DETAIL**  
SCALE: 3/16" = 1'-0"



**1 CRIB WALL REHABILITATION TOP DETAIL**  
SCALE: 3/4" = 1'-0"



**2 CRIB WALL REHABILITATION BOTTOM DETAIL**  
SCALE: 3/4" = 1'-0"

**T** MASSACHUSETTS BAY TRANSPORTATION AUTHORITY  
GREEN LINE EXTENSION DESIGN-BUILD PROJECT  
MBTA CONTRACT NO. E22C407  
SOMERVILLE/MEDFORD, MASSACHUSETTS

**COMMUNITY PATH  
ADDITIVE OPTION #4  
WALL DETAILS**

NOT FOR  
CONSTRUCTION

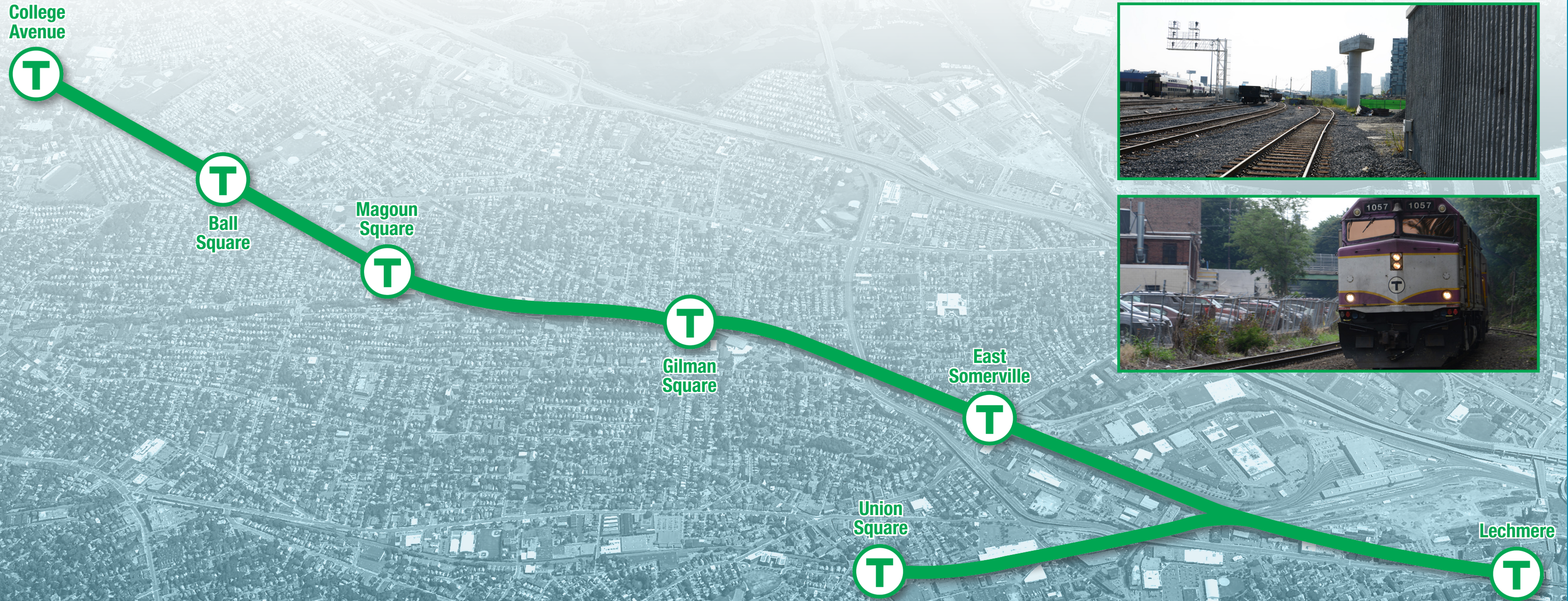
<b>GLX</b>	<b>massDOT</b> Massachusetts Department of Transportation
09/28/2017	TECHNICAL PROPOSAL
ISSUE	DATE
DESCRIPTION	BY
CHK'D	APP.



SCALE: AS NOTED	DRAWN BY: AC	DESIGN BY: RAK	CHECK BY: MB	PLAN NO.	ISSUE
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## Additive Option 5

# Design and Construction of Community Path Connection from East Somerville to Lechmere

### INTRODUCTION

The Community Path connection to the North Point development completes the crucial pedestrian and bike corridor from Somerville and WestNorth Cambridge to the Charles River and downtown Boston. GLP determined that the best solution for this connection is to provide the elevated solution that was part of the original design and vetted with the community. We will review options to improve the design during our final design process as we recertify the viaduct design to move forward with viaduct fabrication and construction.

### 5.A APPROACH

GLP's solution conforms to all the requirements of the TPs. Specifically, the bridge structures conform to Section 8.6 by following American Association of State Highway and Transportation Officials Load and Resistance Factor Design ("AASHTO LRFD") specifications and the geotechnical requirements of Section 15.1 of the TPs. Additionally, our design will provide all the required railings, lighting, and security features. Per Section 9.2 of the TPs, our East Somerville to Lechmere Community Path Connection will satisfy the codes, standards, and manuals listed. The Community Path will have a minimum width of 10 feet, with 1-foot shoulders on either side. The path will also have a maximum grade of 5.0%.

### DESIGN CRITERIA AND THE ADDITIVE OPTION

GLP's solution conforms to all the Project requirements and design criteria set forth in the TPs Volumes 2 and 3. This includes ADA compliance within the MBTA right of way ("ROW") in accordance with Volume 2, Section 5.1 from East Somerville Station to the existing terminus of the Path at NorthPoint in Cambridge. GLP will also provide emergency call boxes for the Community Path connection in complete accordance with the RFP documents located in Volumes 2 and 3.

GLP has accounted for all work to complete the Community Path. This work is in compliance with the TPs Volume 2, Sections 5, 7, 8, 9, 12 and

15, and includes utilities, power, signage, and drainage related to path connection work Volume 2.

As per Volume 3, GLP, in providing the additive option, has not included any at-grade crossings of track.

### CHANGES FROM TECHNICAL PROPOSAL

Reimplementing the 100% design viaduct would affect the Medford Branch Viaduct substructure. Piers 28 to 35 would have to be modified to accommodate the additional load and width of the Community Path Viaduct.

### 5.B PRELIMINARY BASELINE SCHEDULE

It is anticipated that the added connection of the Community Path from East Somerville to Lechmere will require a duration of roughly 120 work days to construct.

### SCHEDULE IMPACT ASSESSMENT

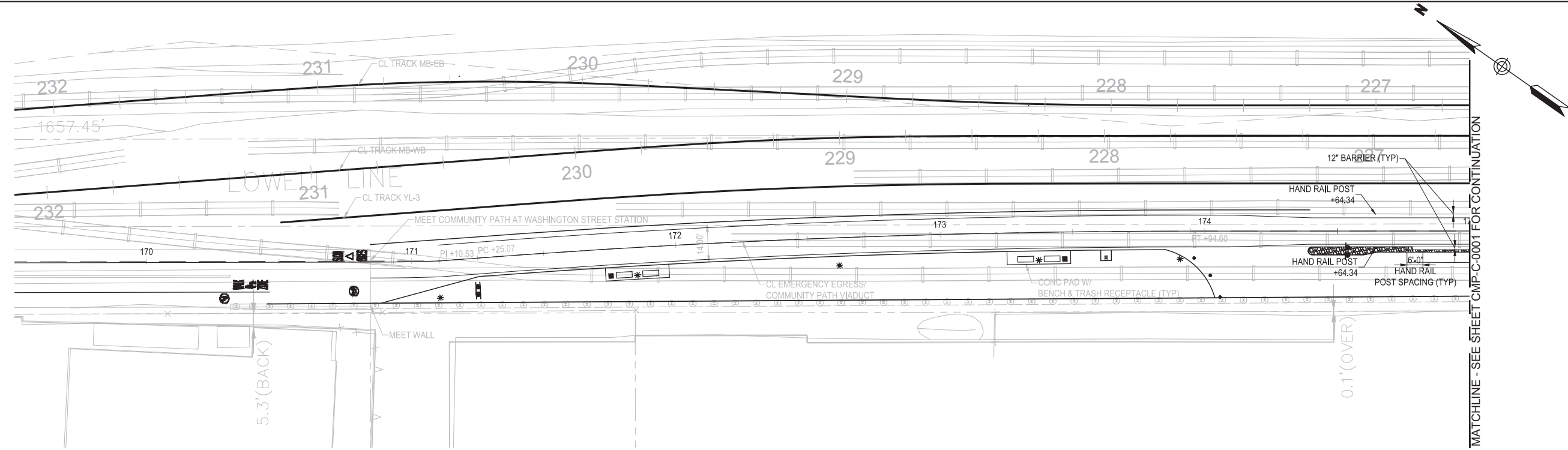
The additional connection of the Community Path from East Somerville to Lechmere will require additional time to perform work, but it is not anticipated that it will have any impact on the final forecasted completion date of the Project.

### 5.C DRAWINGS

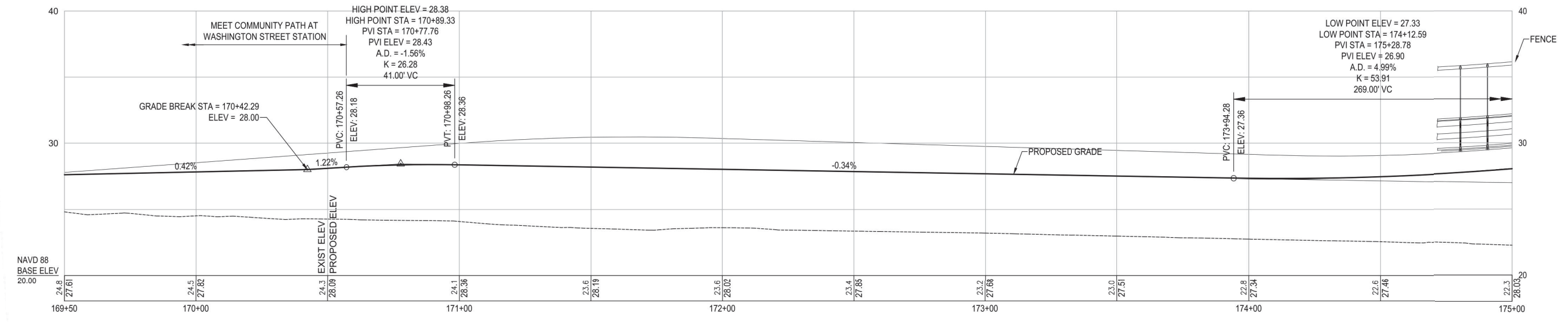
GLP has developed a set of 11 drawings to communicate the design intent of our solution. The drawings consist of a plan and profile, typical sections, and typical details.



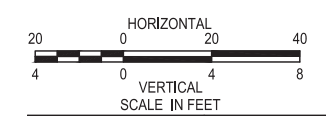




PLAN  
SCALE: 1" = 20'



PROFILE  
SCALE: 1" = 20'H  
SCALE: 1" = 4'V



MASSACHUSETTS BAY TRANSPORTATION AUTHORITY  
GREEN LINE EXTENSION DESIGN-BUILD PROJECT  
MBTA CONTRACT NO. E22CN07  
SOMERVILLE/MEDFORD, MASSACHUSETTS

COMMUNITY PATH  
ADDITIVE OPTION #5  
PLAN AND PROFILE STA 169+50 TO 175+00

NOT FOR  
CONSTRUCTION

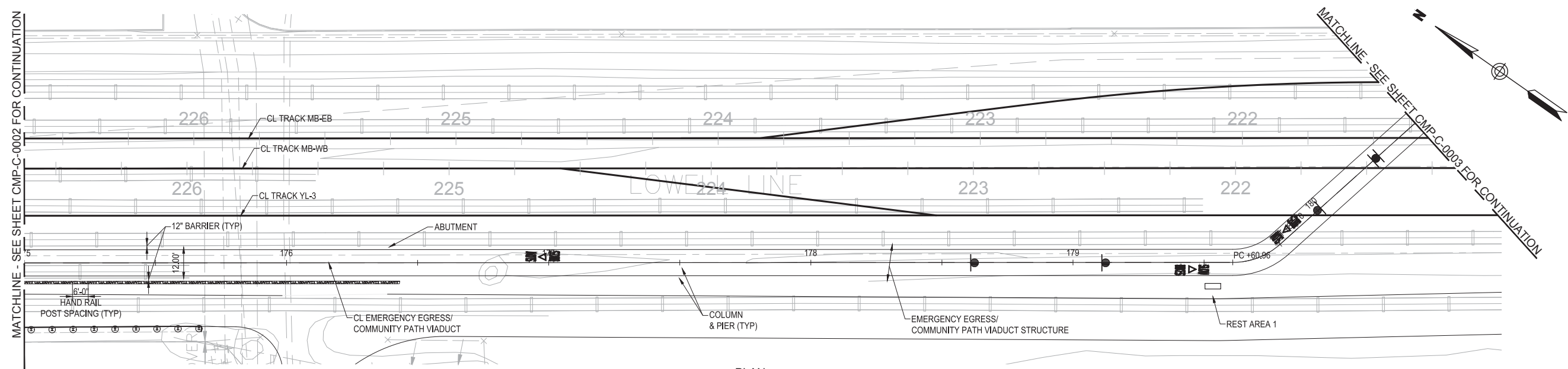
GLX		massDOT	
09/28/2017		TECHNICAL PROPOSAL	
ISSUE	DATE	DESCRIPTION	BY

GLP Green Line Partners			
Lane • Si • Judlau • LMH-CMC JV			
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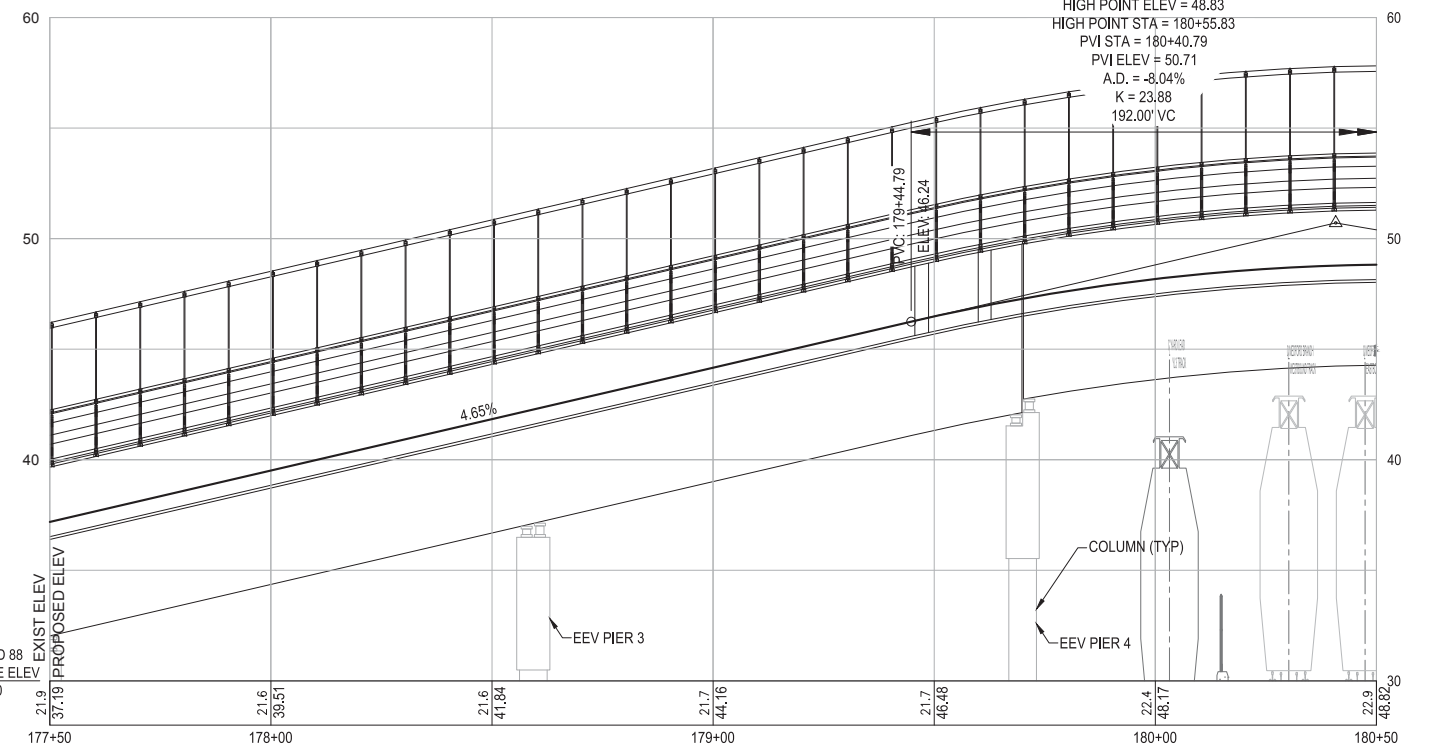
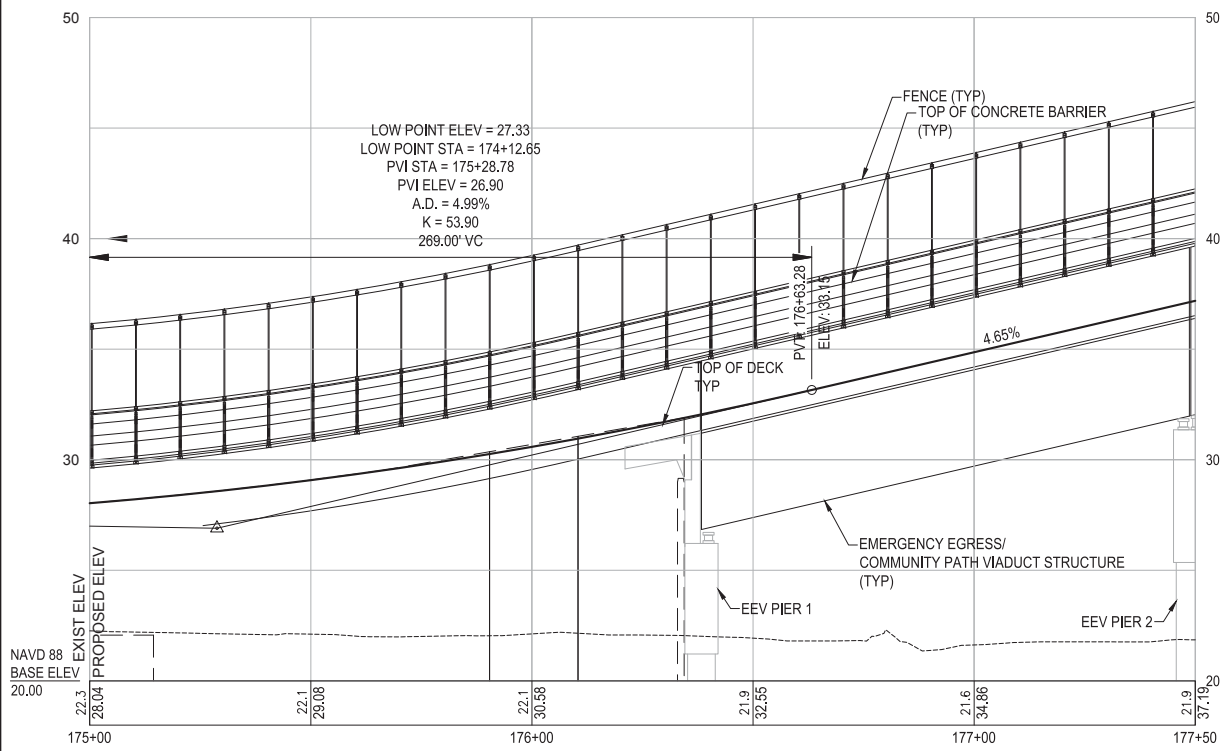
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ISSUE	ISSUE

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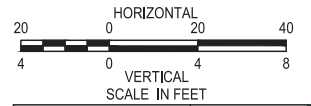




PLAN  
SCALE: 1" = 20'



PROFILE  
SCALE: 1" = 20'H  
SCALE: 1" = 4'V



MASSACHUSETTS BAY TRANSPORTATION AUTHORITY  
GREEN LINE EXTENSION DESIGN-BUILD PROJECT  
MBTA CONTRACT NO. E22C07  
SOMERVILLE/MEDFORD, MASSACHUSETTS

COMMUNITY PATH  
ADDITIVE OPTION #5  
PLAN AND PROFILE STA 175+00 TO 180+50

NOT FOR  
CONSTRUCTION

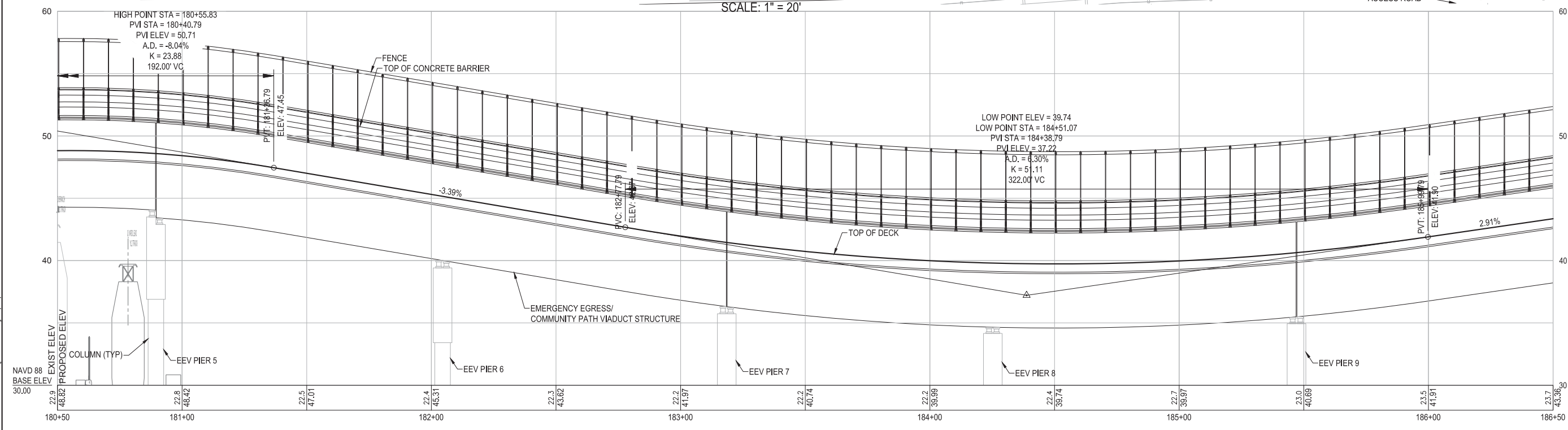
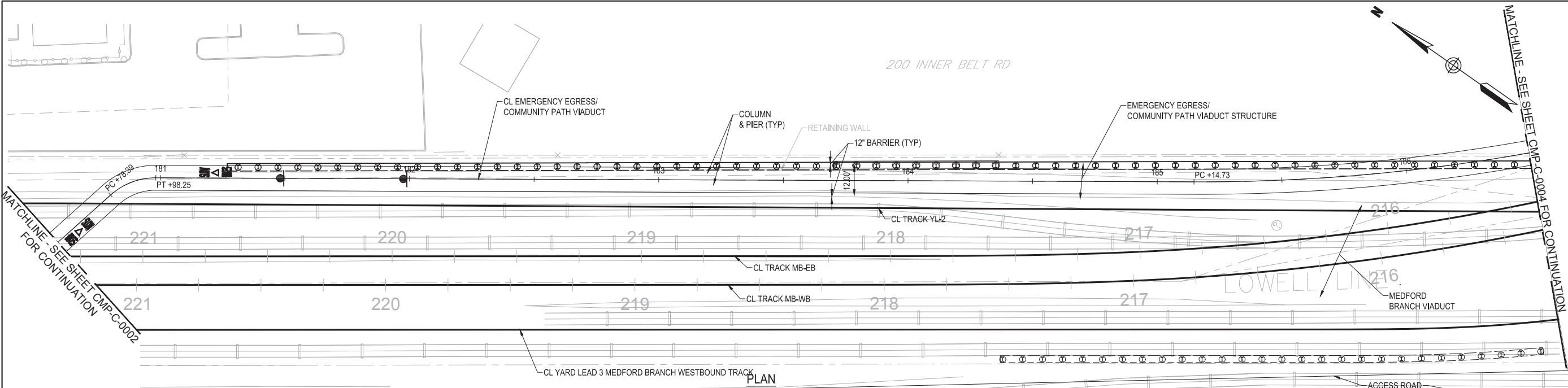
GLX		massDOT Massachusetts Department of Transportation	
0	09/28/2017	TECHNICAL PROPOSAL	



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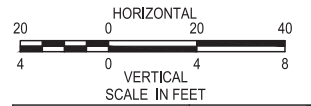
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PROFILE  
 SCALE: 1" = 20'H  
 SCALE: 1" = 4'V



NOT FOR CONSTRUCTION

<b>GLX</b>		<b>massDOT</b> Massachusetts Department of Transportation	
0	09/28/2017	TECHNICAL PROPOSAL	

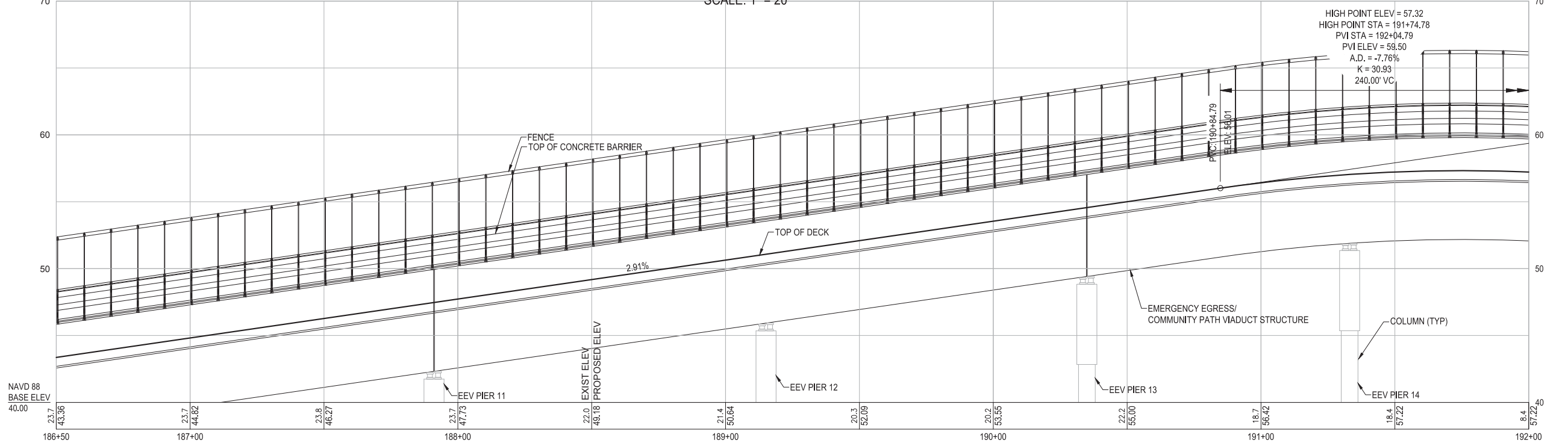
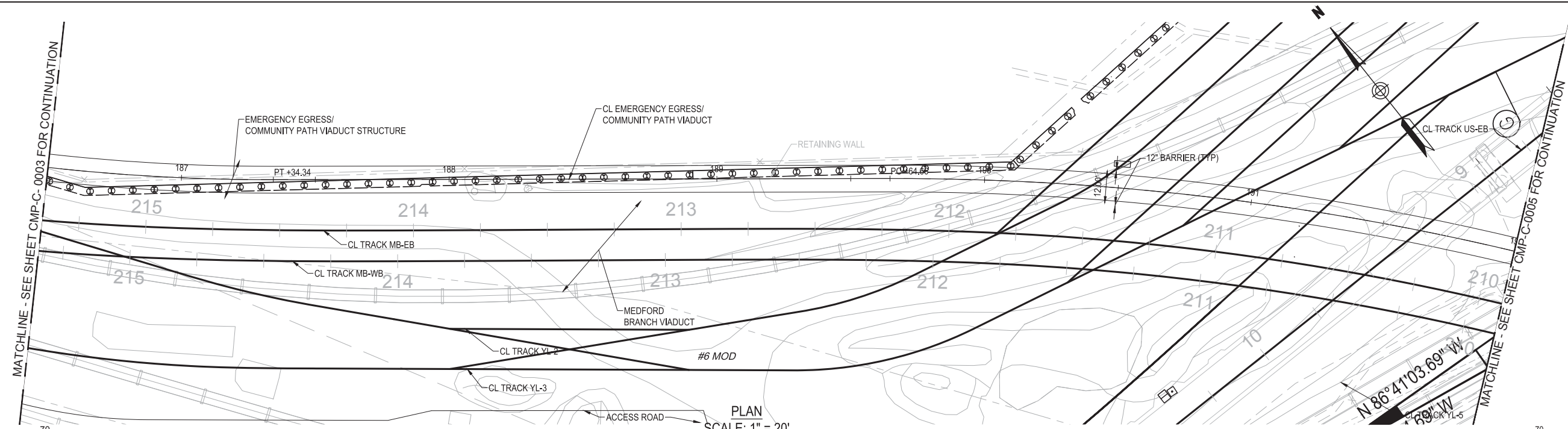
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 GREEN LINE EXTENSION DESIGN-BUILD PROJECT  
 MBTA CONTRACT NO. E22CN07  
 SOMERVILLE/MEDFORD, MASSACHUSETTS

COMMUNITY PATH  
 ADDITIVE OPTION #5  
 PLAN AND PROFILE STA 180+50 TO 186+50

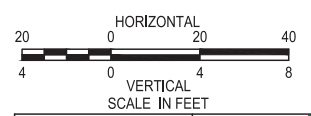


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PROFILE  
SCALE: 1" = 20'H  
SCALE: 1" = 4'V



**T** MASSACHUSETTS BAY TRANSPORTATION AUTHORITY  
GREEN LINE EXTENSION DESIGN-BUILD PROJECT  
MBTA CONTRACT NO. E22CN07  
SOMERVILLE/MEDFORD, MASSACHUSETTS

COMMUNITY PATH  
ADDITIVE OPTION #5  
PLAN AND PROFILE STA 186+50 TO 192+00

NOT FOR  
CONSTRUCTION

<b>GLX</b>	<b>massDOT</b> Massachusetts Department of Transportation				
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ISSUE	DATE	DESCRIPTION	BY	CHKD	APP.

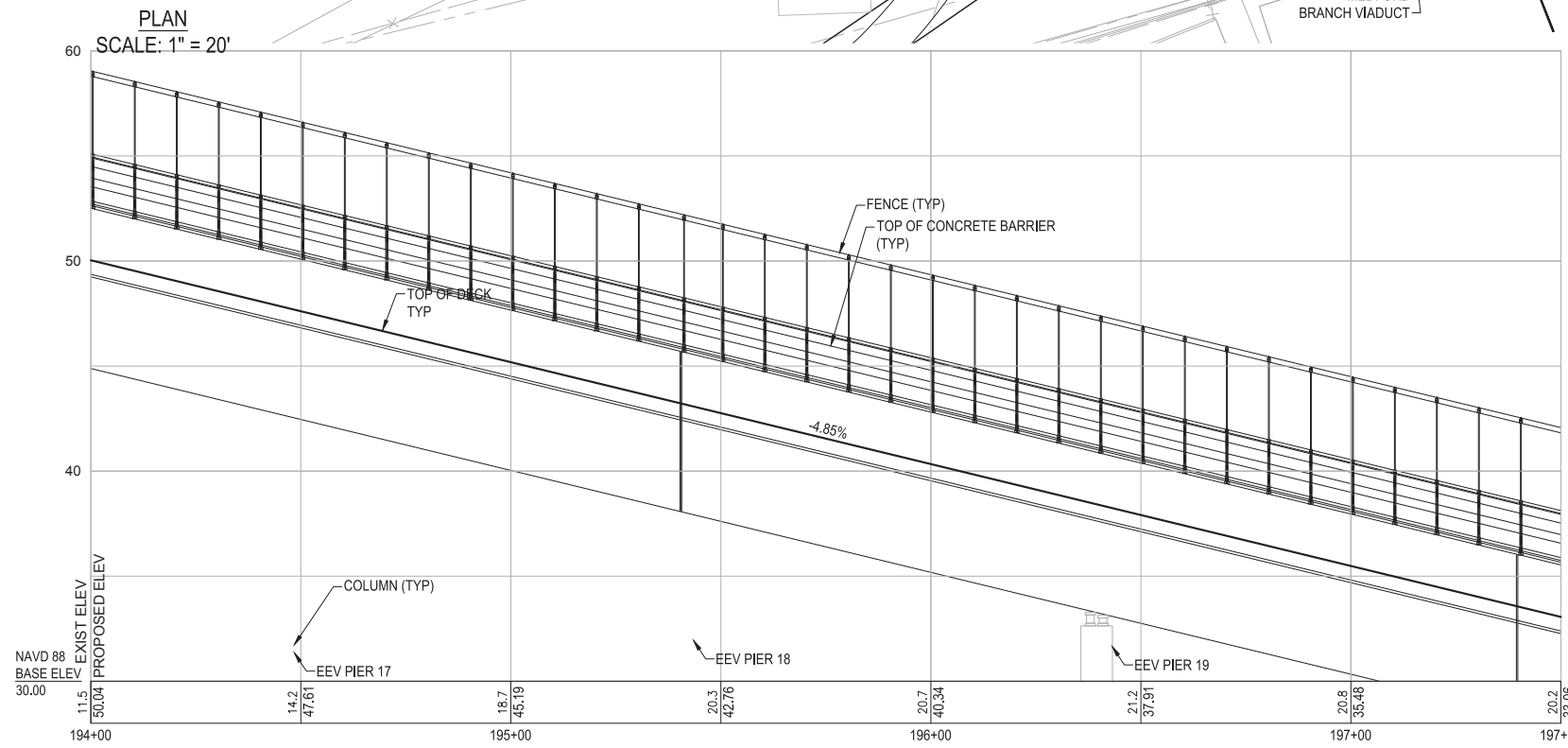
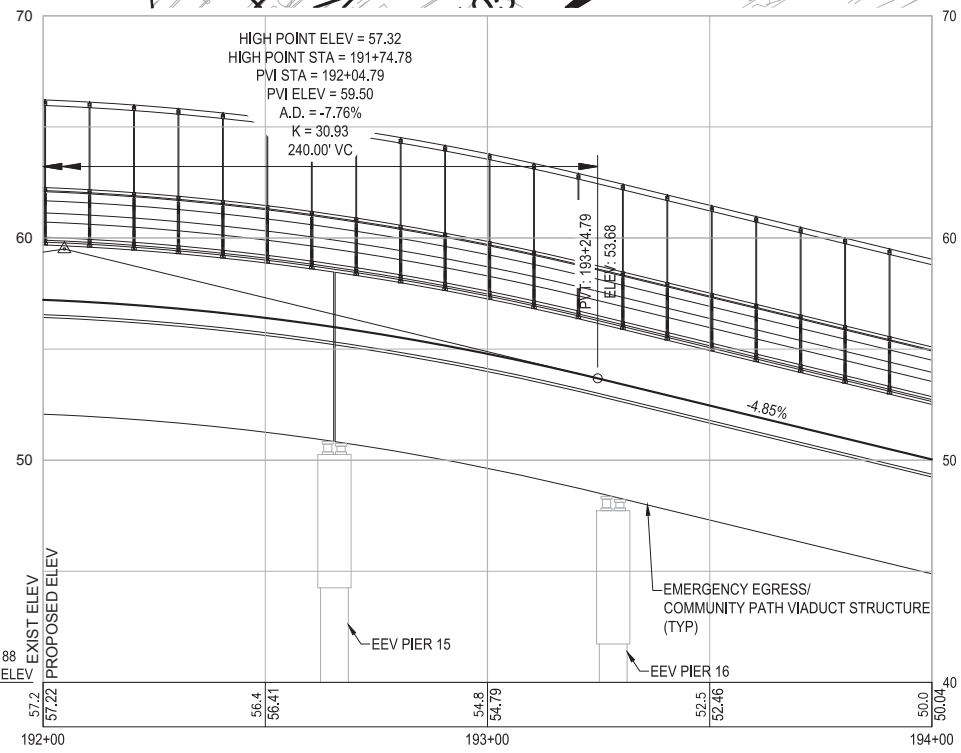
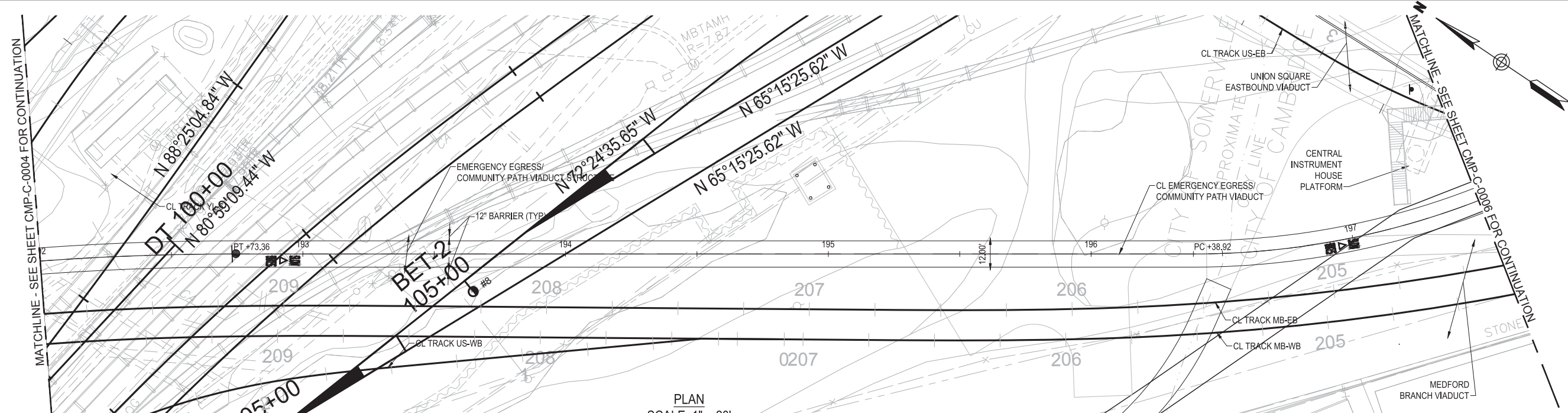


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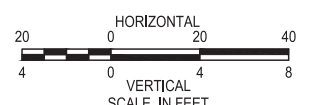
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PROFILE  
 SCALE: 1" = 20'H  
 SCALE: 1" = 4'V



MASSACHUSETTS BAY TRANSPORTATION AUTHORITY  
 GREEN LINE EXTENSION DESIGN-BUILD PROJECT  
 MBTA CONTRACT NO. E22CN07  
 SOMERVILLE/MEDFORD, MASSACHUSETTS

COMMUNITY PATH  
 ADDITIVE OPTION #5  
 PLAN AND PROFILE STA 192+00 TO 197+50

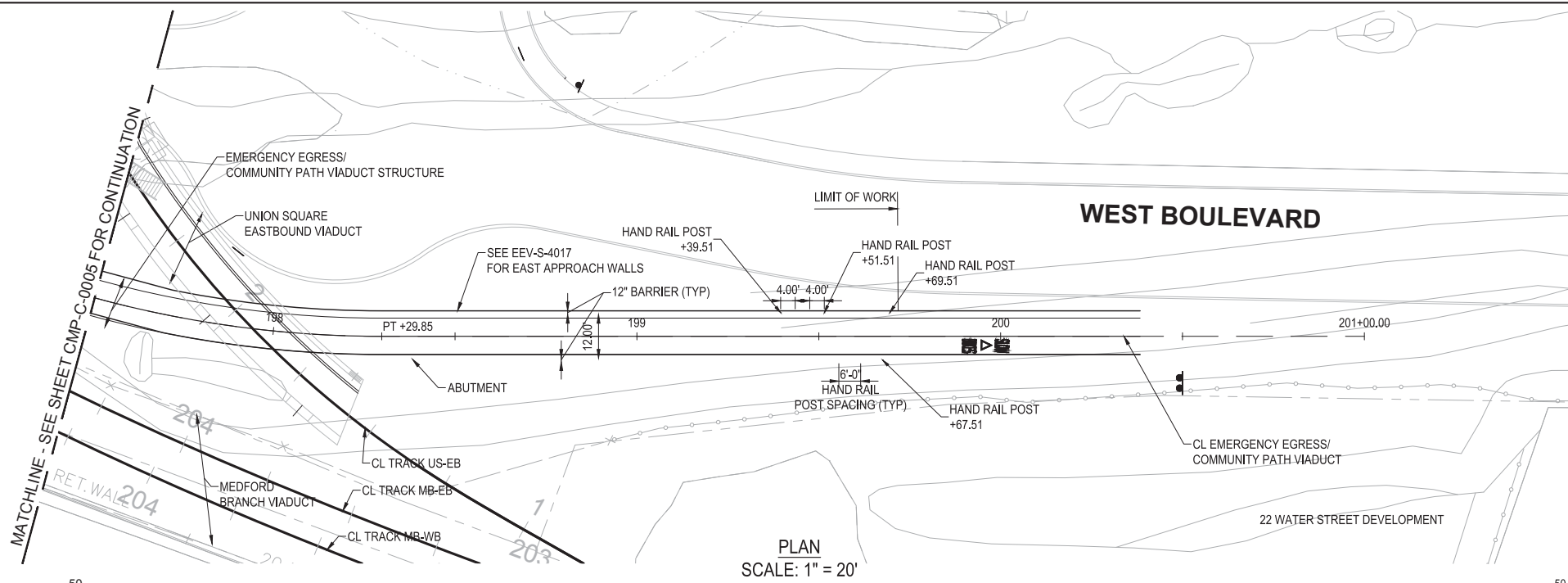
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ISSUE	DATE	DESCRIPTION	BY	CHKD	APP.

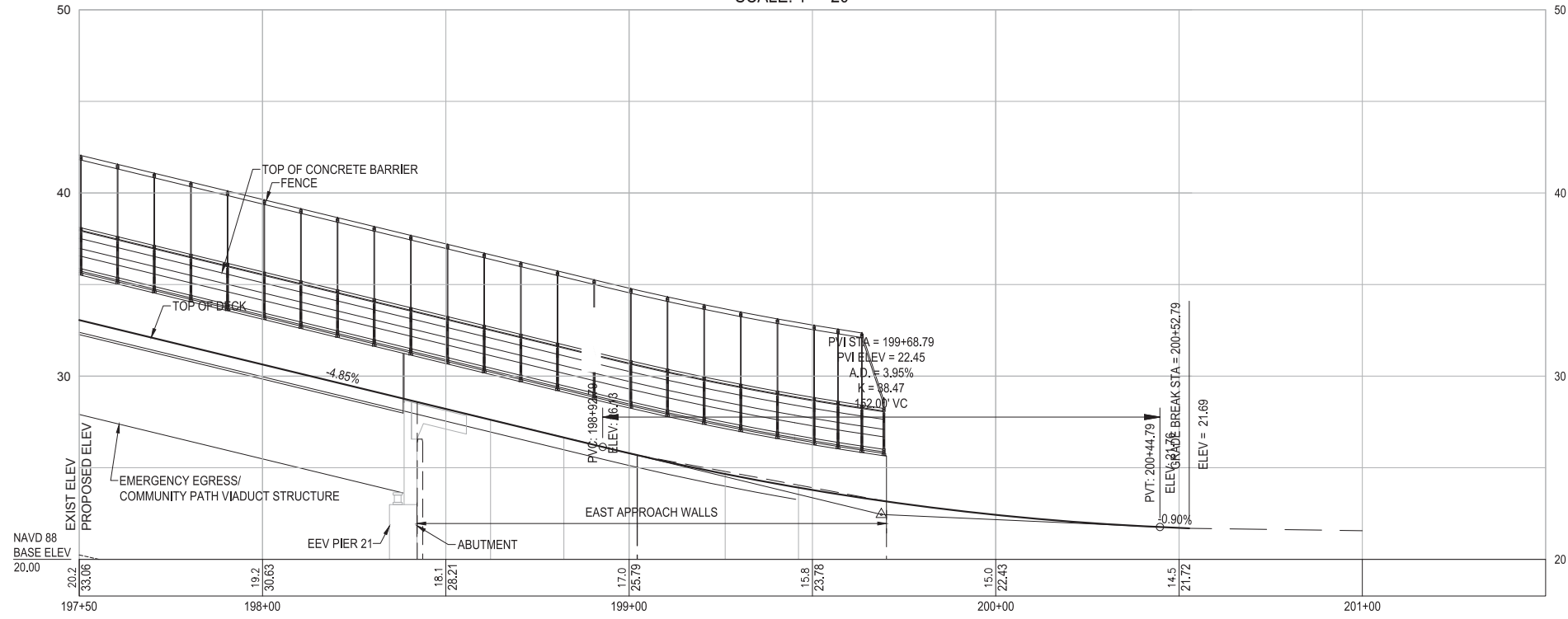


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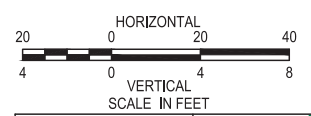


PLAN SCALE: 1" = 20'



PROFILE SCALE: 1" = 20'H SCALE: 1" = 4'V

NOTES:  
1. SEE NOTES ON EEV-C-200



MASSACHUSETTS BAY TRANSPORTATION AUTHORITY  
GREEN LINE EXTENSION DESIGN-BUILD PROJECT  
MBTA CONTRACT NO. E22CN07  
SOMERVILLE/MEDFORD, MASSACHUSETTS

COMMUNITY PATH  
ADDITIVE OPTION #5  
PLAN AND PROFILE STA 197+50 TO 201+00

NOT FOR CONSTRUCTION

<b>GLX</b>		<b>massDOT</b> Massachusetts Department of Transportation	
0	09/28/2017	TECHNICAL PROPOSAL	
ISSUE	DATE	DESCRIPTION	BY CHKD APP.



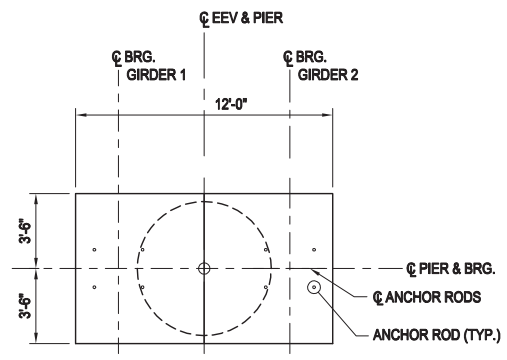
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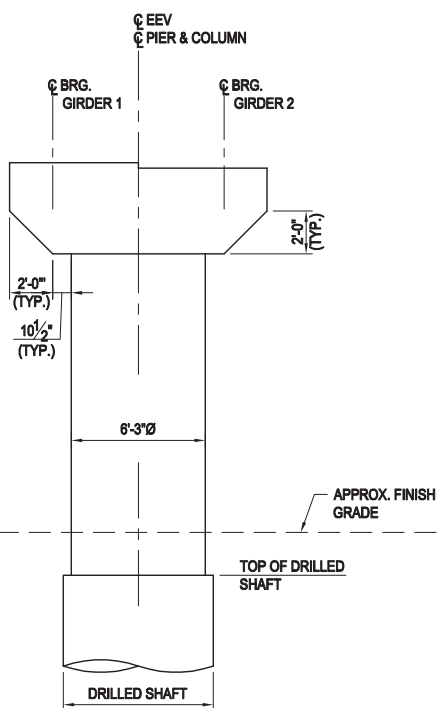




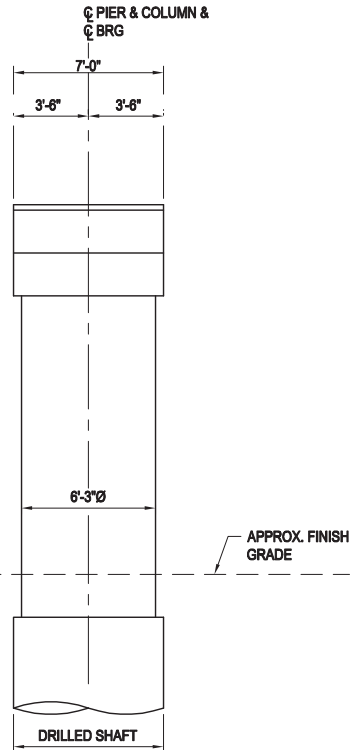




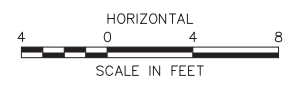
**PLAN**  
SCALE: 1/4" = 1'-0"



**ELEVATION**  
(LOOKING UPSTATION)  
SCALE: 1/4" = 1'-0"



**SIDE ELEVATION**  
SCALE: 1/4" = 1'-0"



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<b>T</b>	MASSACHUSETTS BAY TRANSPORTATION AUTHORITY			
	<b>GREEN LINE EXTENSION DESIGN-BUILD PROJECT</b> MBTA CONTRACT NO. E22CN07 SOMERVILLE/MEDFORD, MASSACHUSETTS			
<b>COMMUNITY PATH VIADUCT          ADDITIVE OPTION #5          TYPICAL FIXED PIER</b>				
SCALE: 1/4"=1'-0"	DRAWN BY: RAK	DESIGN BY: -	CHECK BY: MB	ISSUE
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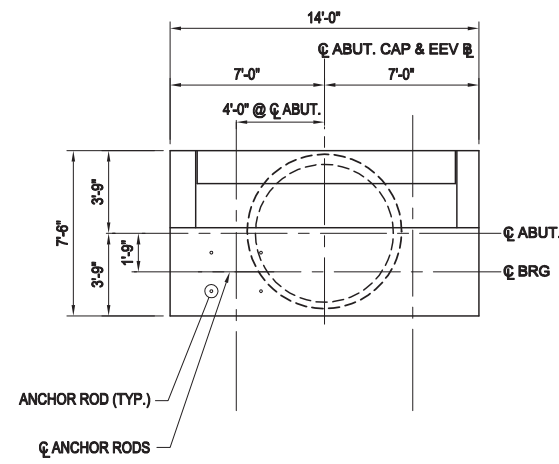
**NOT FOR CONSTRUCTION**

<b>GLP</b>		<b>massDOT</b> Massachusetts Department of Transportation	
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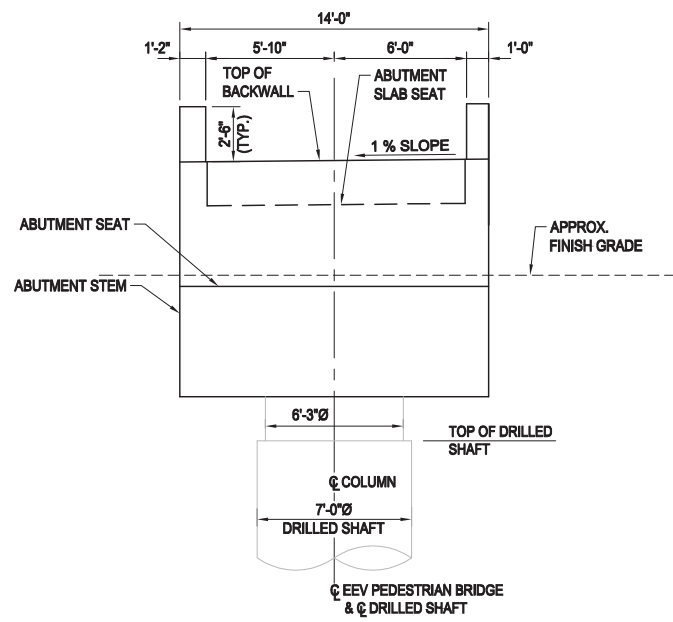




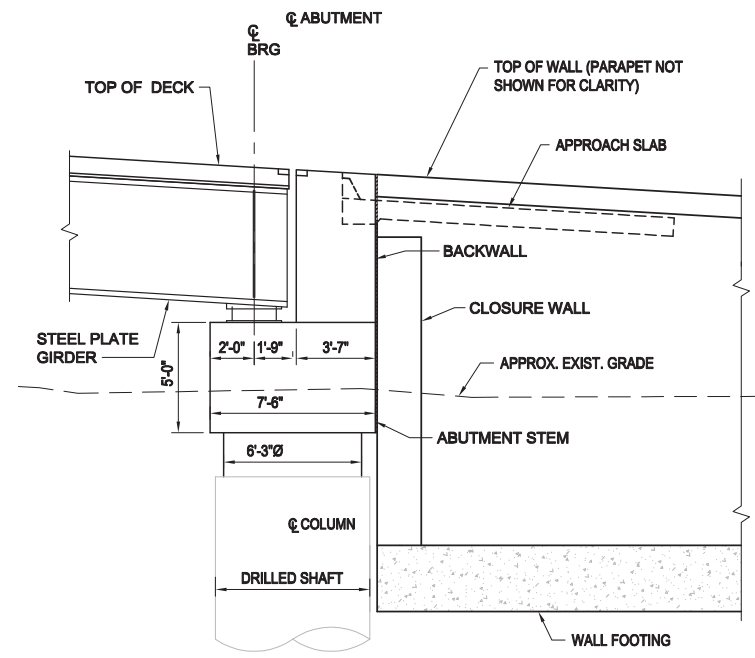




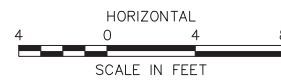
**PLAN**  
SCALE: 1/4" = 1'-0"



**ELEVATION**  
(LOOKING UPSTATION)  
SCALE: 1/4" = 1'-0"



**SECTION**  
SCALE: 1/4" = 1'-0"



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<b>T</b>	MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
	<b>GREEN LINE EXTENSION DESIGN-BUILD PROJECT</b>
	MBTA CONTRACT NO. E22CN07 SOMERVILLE/MEDFORD, MASSACHUSETTS

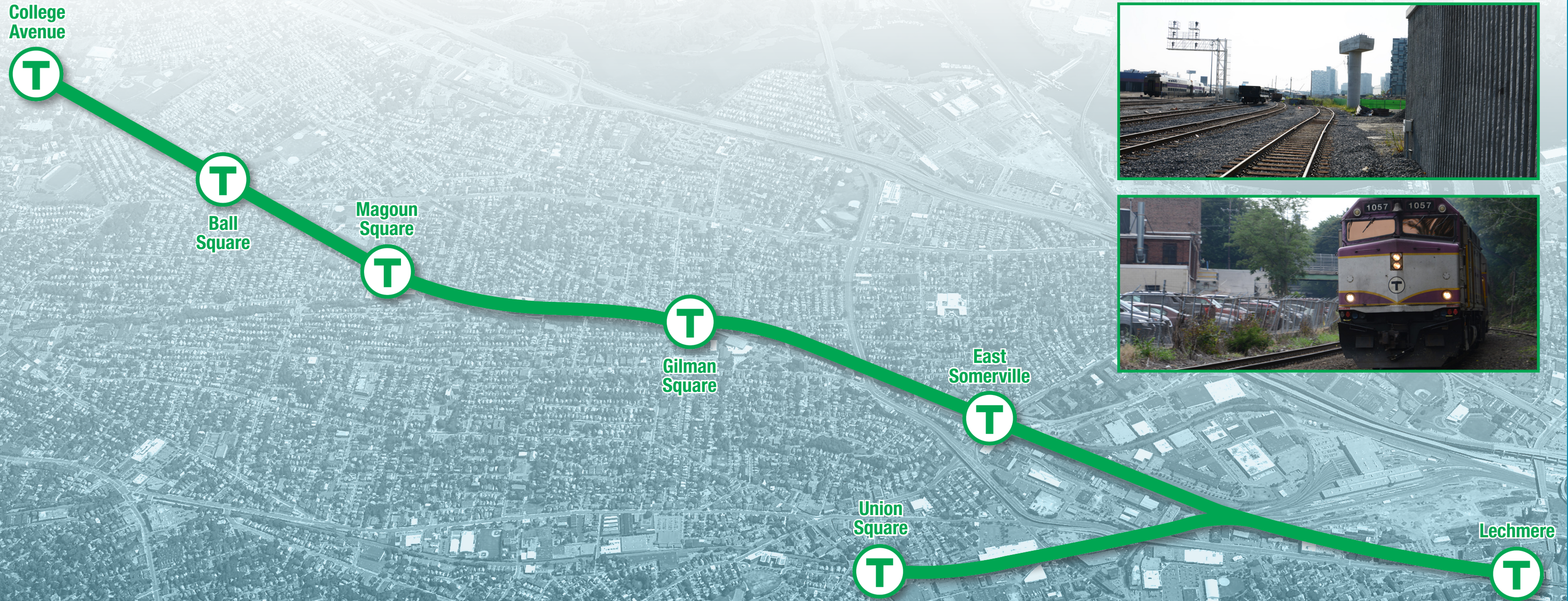
**COMMUNITY PATH VIADUCT  
 ADDITIVE OPTION #5  
 EAST ABUTMENT**

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## INTRODUCTION

The design and construction of an enhanced Vehicle Maintenance Facility (“VMF”), including the six bulleted items included in Addendum #9 Additive Option #6:

- › Installation of a wheel truer
- › Additional LRV storage tracks and one maintenance-of-way (“MOW”) track
- › Additional set of jacking equipment
- › Relocation of the Transportation Building parking lot
- › Full height storage racks
- › Enhancements to the Transportation Building

These are described in detail below.

## 6.A APPROACH

In general, the RFP documents (GLX Volume 2 TPs, Volume 2 Exhibit 2A Technical Specifications, and Volume 2 Exhibit 2B Project Definition Plans) were compared with Volume 3 Additive Options. Note that not all the options are stand-alone items. Items 1, 3, and 5 can be accomplished on their own. Items 2 and 4 are tied together.

## DESIGN CRITERIA AND THE ADDITIVE OPTION

The inclusion of the enhanced VMF will not negatively impact any key design criteria or requirements. The building footprint; location of the building on the site; and all access points to the building by pedestrian, train, and delivery trucks remain unchanged from the baseline design.

## CHANGES FROM TECHNICAL PROPOSAL

### ITEM #1 PROVISION OF ONE WHEEL TRUING MACHINE

The baseline RFP calls for the pit and utilities for the wheel truing machine. This additive option calls for the installation of the wheel truer. See attached image below with a sample manufacturer information

for the wheel truing machine, as based on the Volume 2A Exhibit 2A Technical Specifications- Section 11550 Wheel Truing Machine.

### ITEM #2 PROVIDE AN ADDITIONAL FOUR LRV STORAGE TRACKS WITH OCS AND ONE MOW TRACK WITHOUT OCS

The track work components in this additive option include the following:

- › 440 LF stub ended LRV storage track
- › 385 LF stub ended LRV storage track
- › 360 LF stub ended LRV storage track
- › 310 LF stub ended LRV storage track
- › 190 LF stub ended MOW track

The four storage tracks will connect to the maintenance facility loop track on the east side of the proposed storage yard. These tracks will include overhead catenary (“OCS”) to allow for additional vehicle storage capacity and operational flexibility within the maintenance facility and storage yard. The MOW track will be located adjacent to the previously proposed MOW track on the west side of the maintenance facility. This additional MOW track will be a non-powered track and will increase the storage capacity for track maintenance equipment.

### ITEM #3 PROVIDE AN ADDITIONAL SET OF JACKING EQUIPMENT

The baseline RFP called for a single set of jacking equipment, Equipment Mark #9400. This would add a second #9400 set up jacking equipment above the baseline RFP. See Volume 2A Exhibit 2A Technical Specifications Section 14450 Vehicle Lifts, and Volume 2B Project Definition Plans MAF-A-1100. See Additive Option #6 RFPVMF floor plan.

### ITEM #4 RELOCATE THE TRANSPORTATION BUILDING PARKING LOT

The placement of the four additional LRV storage tracks, as described in Item #2, require that the baseline RFP parking lot be split into two lots: a smaller lot directly north of the Transportation Building and a second larger lot directly north of the added storage tracks.





## ITEM #5 FULL HEIGHT STORAGE RACKS

We are interpreting “full height” to be 16-foot, 0-inch storage racks. The racks highlighted on Figure Add6-1 are with 16-foot, 0-inch tall uprights. See Additive Option #6 VMF floor plan, and **Figure ADD6-1**.

## ITEM #6 TRANSPORTATION BUILDING ENHANCEMENTS

The original RFP base Transportation Building is 60 feet x 24 feet (1,440 square feet [SF]); Additive Option #6 is 120’x40’ (4,800 SF), an increase of 3,360 SF. The enhanced Transportation Building will include a locker room, operators room, Yard master room, conference room, supervisors room, office, men’s and women’s restrooms, men’s and women’s showers, a unisex restroom, vestibules at building entrances, a waiting room, official inspector’s room, copy/storage room, closet, clerk room, mechanical room, porter’s room, two kitchenettes, recycle/storage room, electrical room, emergency electrical room, mechanical room, and archive storage room. Both options are one story, slab on grade foundation and use the same building materials as specified in Volume 2.

The increased size of the Transportation Building will affect the space available for landscaping. The following elements will be incorporated as feasible: durable and environmentally sustainable pedestrian pavements, site furnishings including 12 three-person benches, one waste receptacle, bicycle racks, landscape plantings to define a barrier to non-public spaces, and landscape planting for visual screening along the frontage on Innerbelt Road.

## 6.B PRELIMINARY BASELINE SCHEDULE

The additional time to provide the enhanced VMF is 140 work days, including the additional work associated with the enhancement of the Transportation Building. The activities for enhancements associated with the VMF will occur concurrently with those of the Transportation Building.

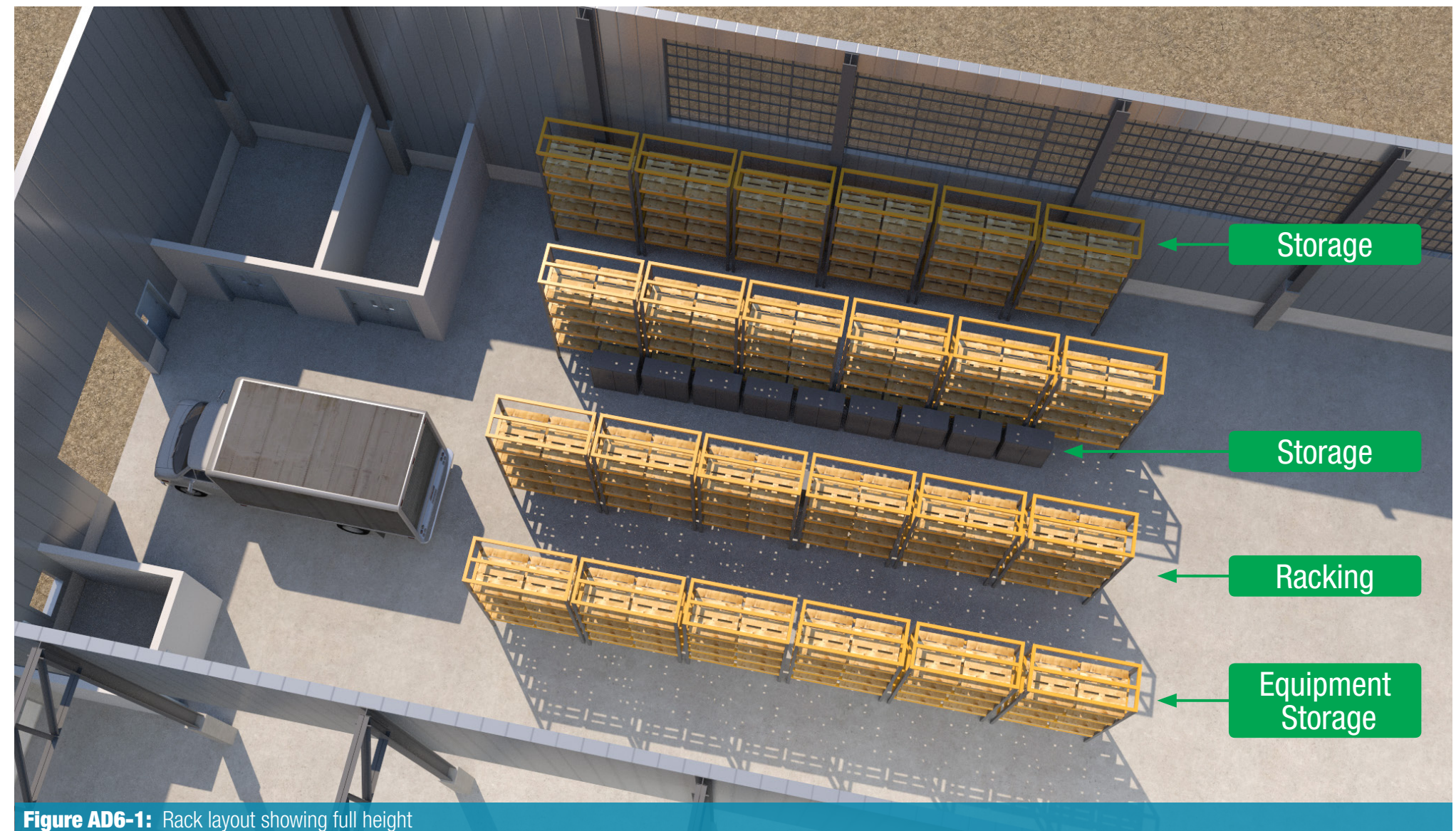
## SCHEDULE IMPACT ASSESSMENT

Although the addition of the activities for the enhanced VMF will require additional time to perform work, it is not anticipated that these activities will have any impact on the final forecasted completion date of the Project.

## 6.C DRAWINGS

The drawings for the VMF Site and Facility were kept concise to illustrate the understanding of the impacts of additive option #6 on the base scope of work.

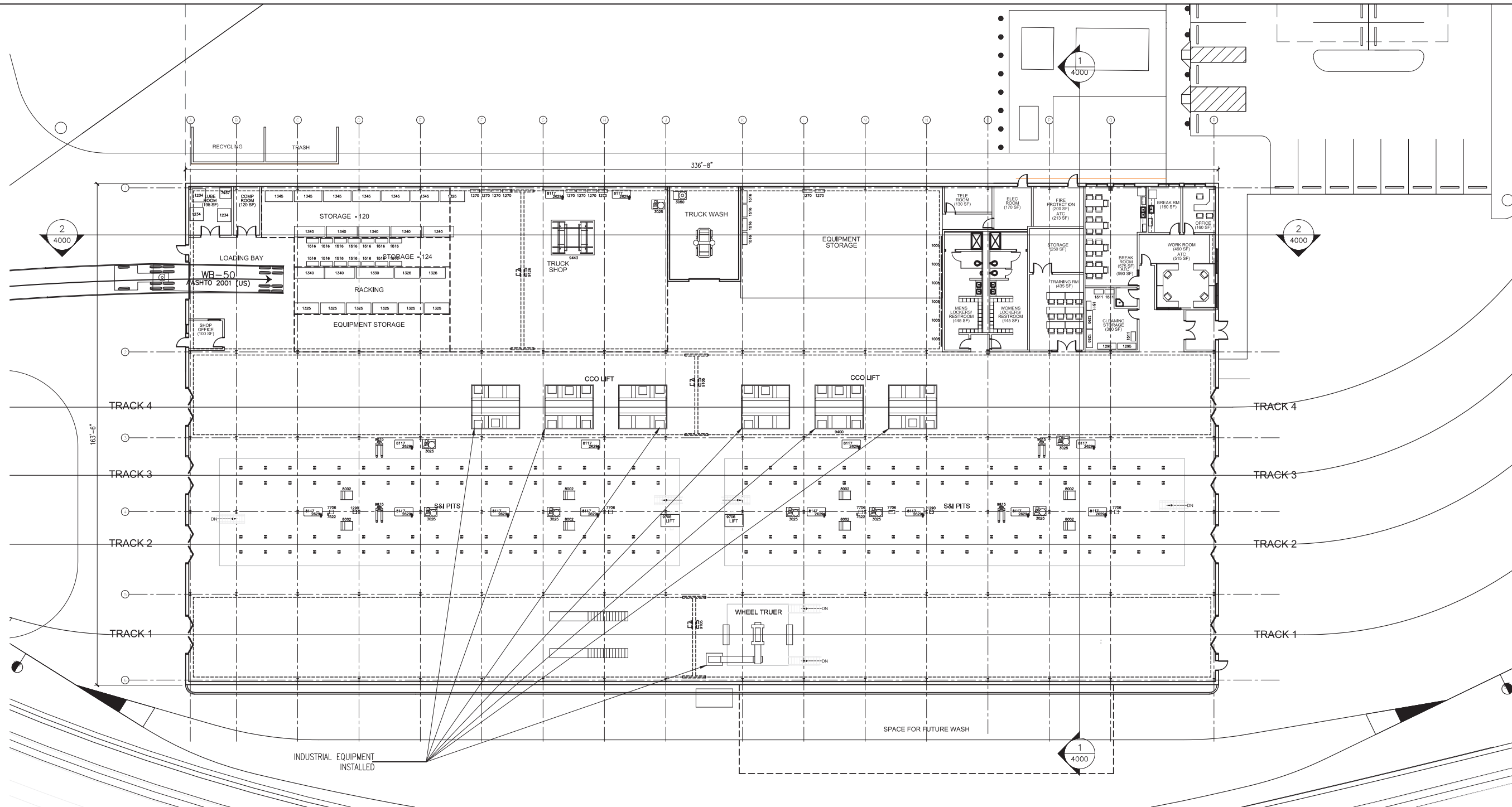
- › VMF Site Plan Part A
- › VMF Site Plan Part B
- › VMF Floor Plan/Industrial Plan
- › Transportation Building Plan
- › Transportation Building Rendering and elevations



**Figure AD6-1:** Rack layout showing full height



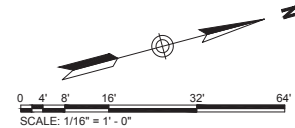
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**1 FLOOR PLAN - A06**  
 SCALE: 1/16" = 1' - 0"

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**VEHICLE MAINTENANCE FACILITY**  
**ADDITIVE OPTION #6**



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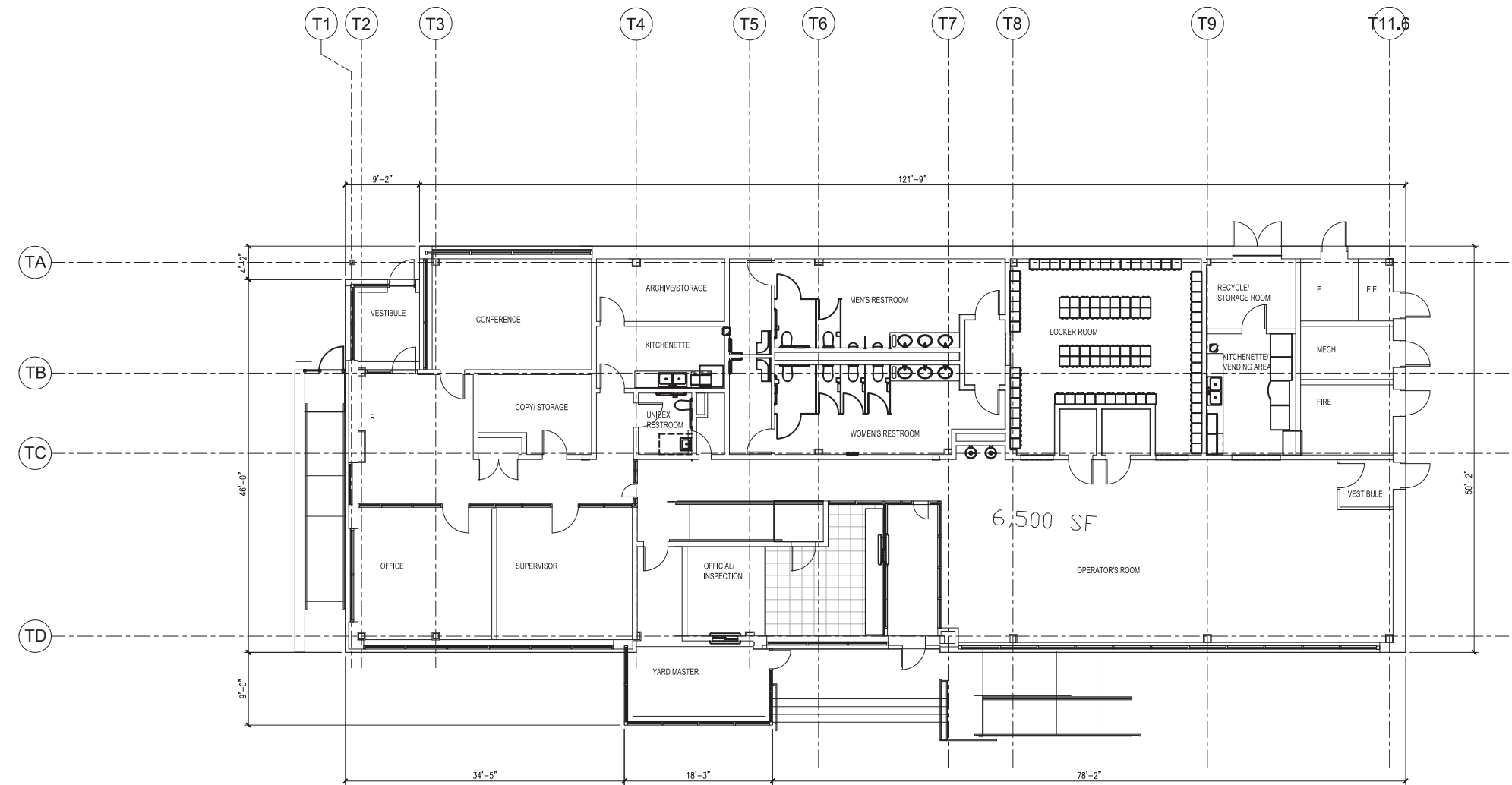
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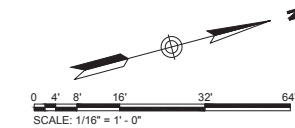
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**1 FLOOR PLAN**  
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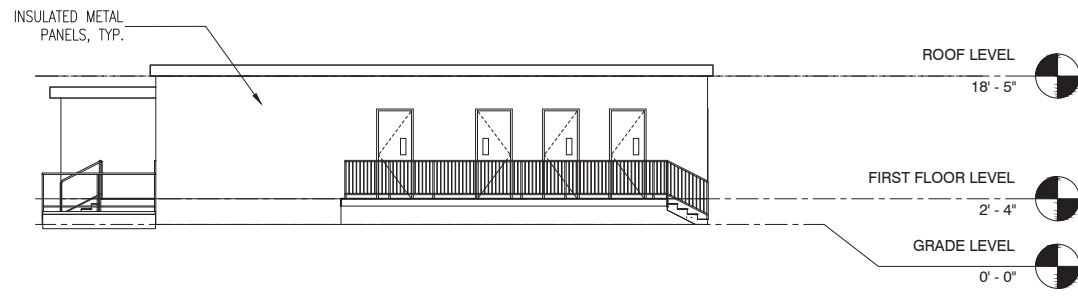
**TRANSPORTATION BUILDING**  
**ADDITIVE OPTION 06**

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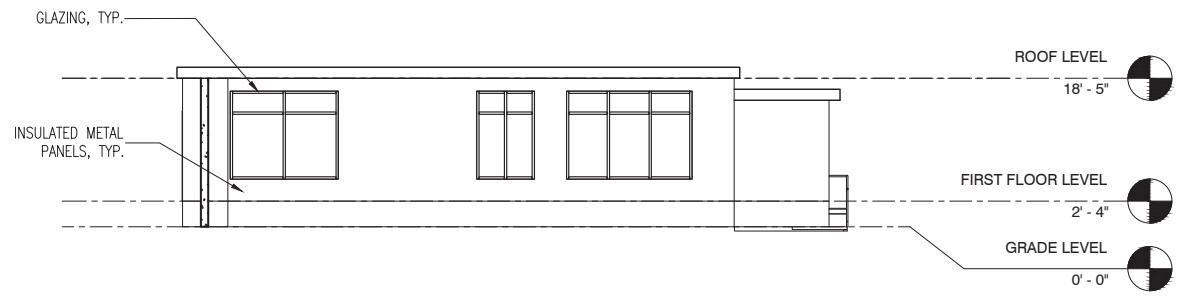


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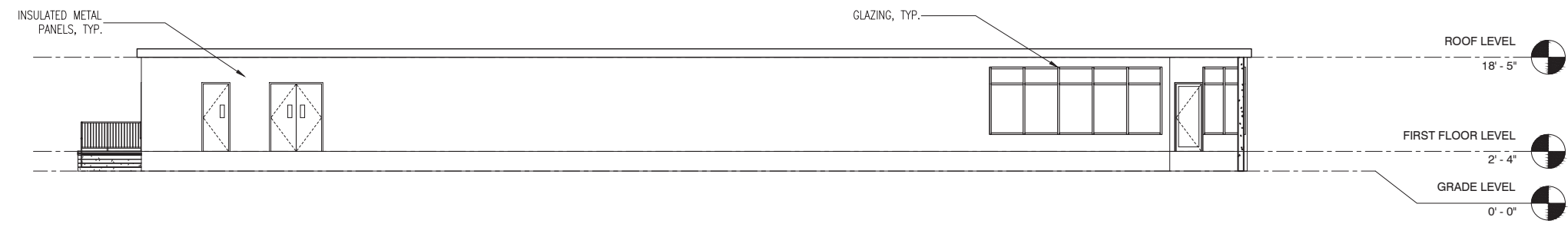
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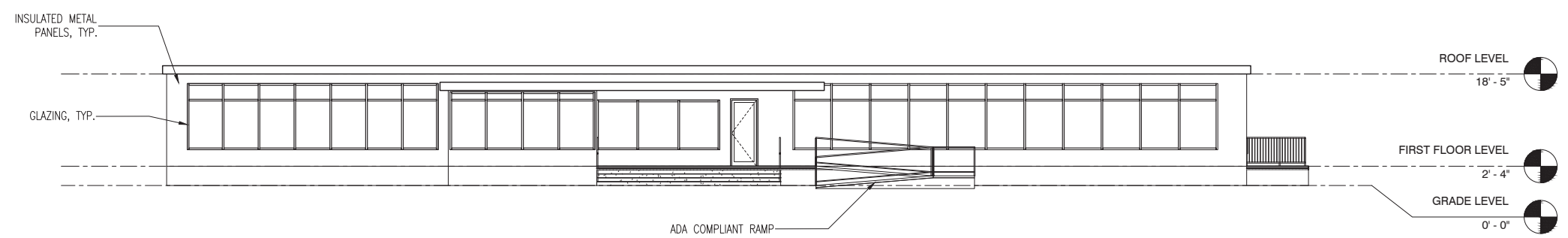
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2 WEST ELEVATION  
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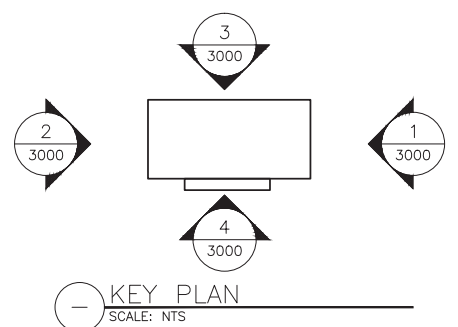
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4 SOUTH ELEVATION  
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5 PERSPECTIVE VIEW  
SCALE: NTS



0 4' 8' 16' 32' 64'  
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**TRANSPORTATION BUILDING**  
**ELEVATIONS - ADDITIVE OPTION 06**

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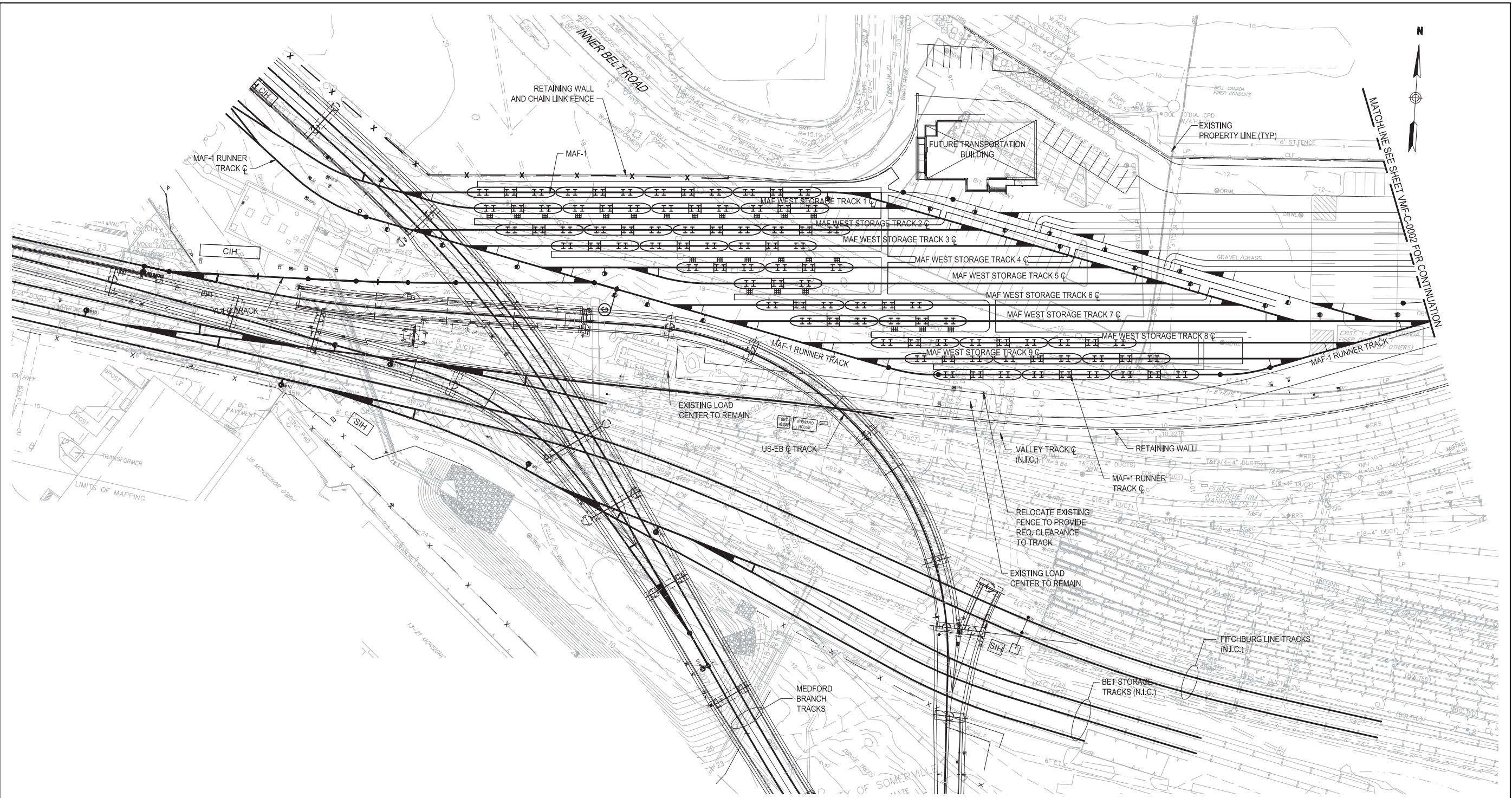


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**VEHICLE MAINT. & STORAGE FACILITY  
 ADDITIVE OPTION #6  
 SITE PLAN SHEET 1**

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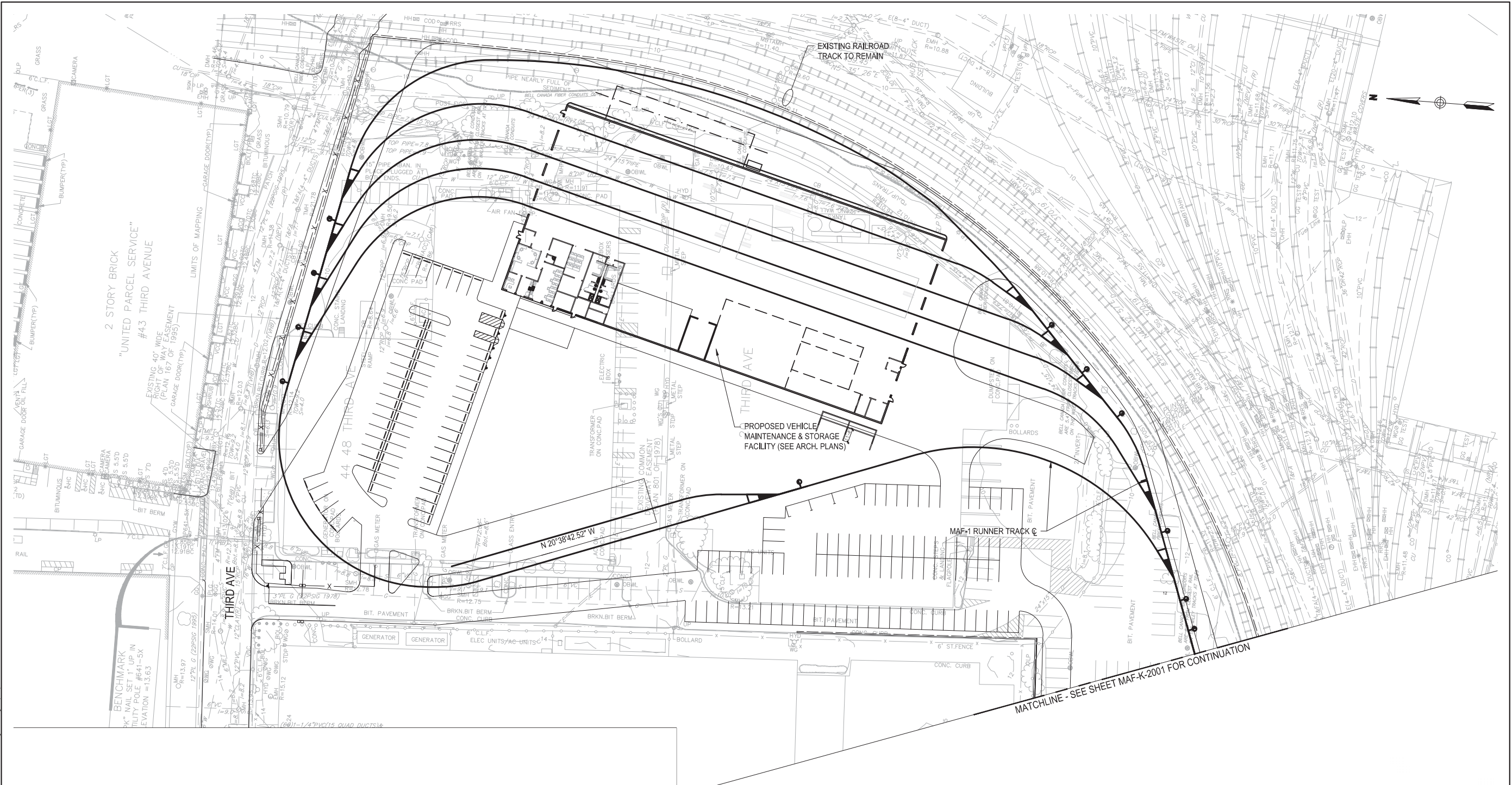
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**WSP**

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VEHICLE MAINT. & STORAGE FACILITY  
 ADDITIVE OPTION #6  
 SITE PLAN SHEET 2

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College Avenue



Ball Square



Magoun Square



Gilman Square



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