



GREEN LINE EXTENSION PROJECT



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Massachusetts Department of Transportation



GLX Community Working Group
Monthly Meeting #36
December 1, 2020

Agenda - Meeting #37

- **Welcome & Safety Moment**
 - Terry McCarthy, MBTA – GLX Deputy Program Director, Stakeholder Engagement

- **Systems Update**
 - Aaron Neeley, GLXC Public Involvement Manager

- **Q & A**
 - All



Safety – New COVID-19 Requirements



- Mask or face covering must be worn at all times while on MBTA property
- Previously if you were in your office or cubicle and could maintain 6 feet spacing it wasn't required
- When eating or drinking a mask may be removed but spacing must be maintained
- Masks and face coverings must follow latest CDC guidelines by completely covering the nose and mouth





MBTA Update

- Terry McCarthy, GLX Deputy Program Manager, Stakeholder Engagement



Forging Ahead

- Pre-Covid-19 2019 MBTA Trips 1.26 Million a day
- October 2020 MBTA Trips 330,000 Daily Trips
- The 80 Bus Route will be phased out as GLX comes on-line
- MBTA second proposal - consolidate Highland Ave bus service after GLX opens. 88/90 would be combined into only 90, but extended to Clarendon Hill like 88 and with similar frequency to 88.
- Adjustment – as Covid-19 cases subside reduced service will be increased based on needs of the Ridership.
- MassDOT Telework Work Force Survey
 - 40.6% Full Time Telework, 38.4% Consistent Schedule
 - 17.8% Occasional, 3.3% No Telework





Public Meeting

Wednesday December 9, 2020

6:30 pm to 8:00 pm



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MassDOT / MBTA Virtual Meeting Guidelines

Planning – Design vs. Project Update

- Public Comment period- email and voice record comments.
- Sometimes no actual live meeting just a pre-record of presentation material.
- Like MassDOT / FMCB receive Public Comment, no specific Q&A
- Use of Zoom vs. Go to Webinar – Transition in progress
- Zoom provides TitleVI, Closed Caption and soother hand raising feature.



Public Meeting Format

- Lesson Learned
- June 24, 2020 – Go to Webinar
- December 9, 2020 – Zoom Webinar
- We considered Go to Meeting, like the CWG uses. 251 max participation
- Zoom Webinar Participants increase to 1000 Participants
- Hand Raising Feature and Q&A Box*
- *Due to a participation of close to 300 and registration of 470 We are going to strongly recommend that everyone type their question in to the Q&A Box and vocal comments will be for elected and first come first serve.





GLXC Systems Integration

➤ Aaron Neeley, GLX Testing & Commissioning Manager



GLX Systems: What do we mean by “Systems”



- Traction Power Substations (TPSS)
- Overhead Contact System (OCS)
- Signals
- Communications



GLX Systems: Traction Power Substations (TPSS)



We have 3 Brick and Mortar TPSS's

Red Bridge: our largest TPSS located at grade in the junction where the Medford Branch and Union Branch come together. Provides AC power to Lechmere, East Somerville and Union Stations. This substation basically provides the DC Power on the Medford Branch from the tie-in to the existing historic Lechmere Viaduct to the track turnouts for the Union Branch, the entire Union Branch and the Vehicle Maintenance Facility Yard.

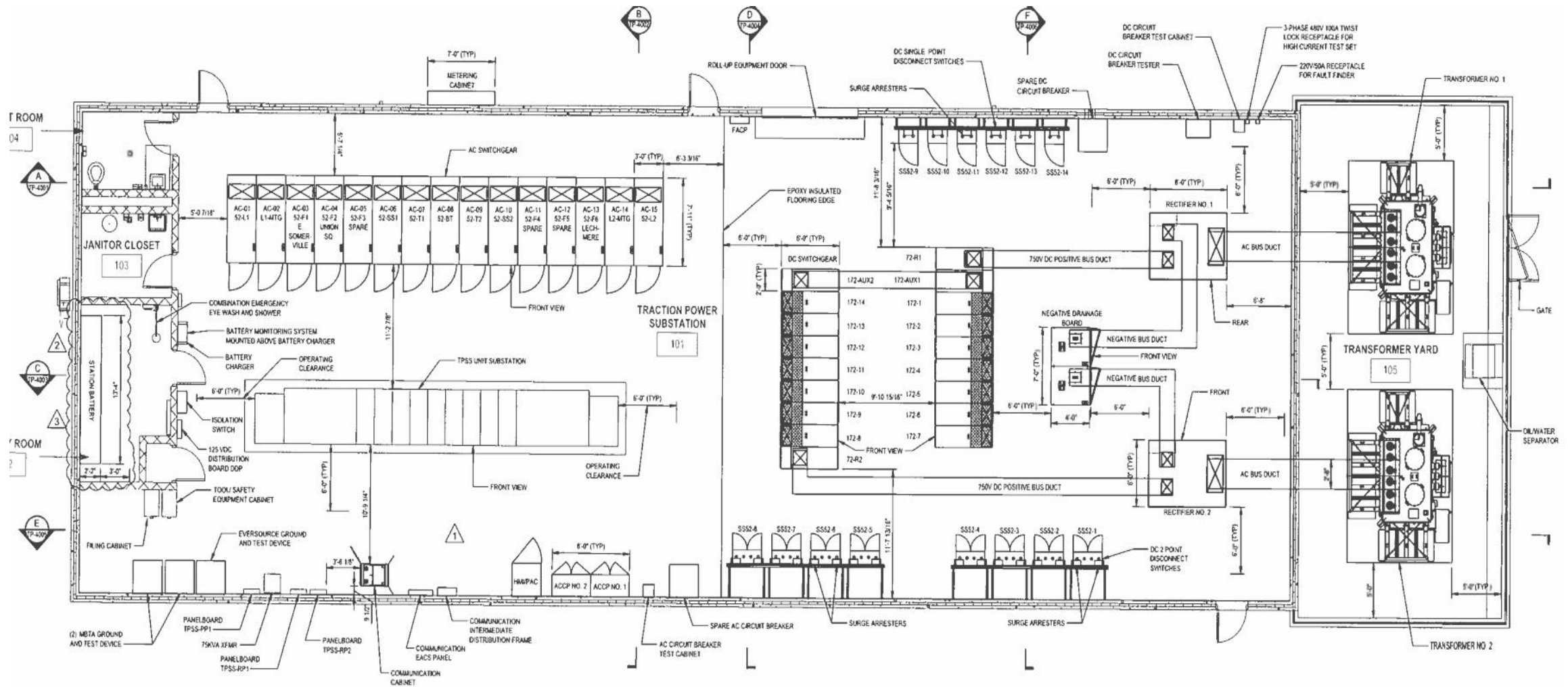
Pearl Street: This is a two-story substation located on the other side of the commuter rail near Gilman Station. Provides AC Power to Gilman and Magoun and DC power from Medford Viaduct to approximately School Street.

Ball Square: This is located at the Ball Square Station and provides AC Power for Ball Square and Tufts (College Ave) Station and DC power on the Medford Branch from approximately School Street to the end of the Medford Branch.

(137,000' of DC Cable and 153,000' of AC Cable total for project)



Traction Power Substations (TPSS)



GLX Systems – Overhead Contact System (OCS)



- Also called Overhead Catenary, which could be applied to most of this project except for the Vehicle Maintenance Facility and Yard.
- The Messenger Wire (Top Wire) acts as both support for the Contact Wire and as a voltage carrying conductor.
- The Contact Wire is meant to contact the LRV pantograph, providing 600vdc to the propulsion motors.
- This is an Auto Tension Systems, using weights and springs to account for thermal expansion of Messenger and Contact Cable
- The running rails (track) also play a part in the traction power, acting as the negative return path for the 600vdc



GLX Systems – Overhead Contact System (OCS) (2)



- More than 800 Overhead Contact System (OCS) Poles to be place, 79,200' of Messenger Wire, 95,000' of Contact Wire.
- Once track is in final position each OCS pole assemblies (arms) is custom fabricated based on distance to the track and rail superelevation. About 8000 bolts that require specific torque verification.
- 1" tolerance for up/down/right/left
- Pantographs in Boston are small compared to other systems and account for the number of poles & precision of placement



GLX Systems – Signals



- GLX Signal System is an Automated Block Signal Systems that uses Power Frequency (PF) Track Circuits to detect train movement or Block Occupancy
- The GLX Project has 9 Signal Central Instrument Houses (CIH's). These CIH's control all wayside devices within their respective control area.
- Wayside Devices: Signal Aspects, Push Buttons, Automated Vehicle Identification Loops, Switch Machines, Switch Point Heaters and Track Circuits.
- The System can operate in three modes:
 - From the Operations Control Center (via fiber network)
 - Local Control Panel (located within the CIH)
 - Normal, using the CIH's Microprocessor

332,000' of signal cable on the project



GLX Systems – Communications



- GLX Communications provides the typical subsystems that everyone see when at a MBTA Station:
 - Closed Circuit Television (CCTV)
 - Public Address Variable Message Signs (PA/VMS)
 - Electronic Access Control (EACS)
 - Emergency Phone
 - Fare Collection/Ticket Vending

Approximately 243,000' of fiber and phone cable, an additional 500,000' of facility communications cable.



GLX Systems – Communications (cont)



- GLX Communications also provides many things you do not see and integrates to all systems:
 - Fiber Network
 - Provides the path for Signal Vital and non-Vital Communications
 - Provides the communication path for TPSS Systems Communication and Data Acquisition (SCADA)
 - Communication path for subsystems operations from headend networks (CCTV, PA/VMS, EACS, Phone) from the Operations Control Center (OCC).
 - Allows Communications Programable Logic Controls (CPLC's) to be monitored and controlled.
 - Phone Network
 - Head End operation of Subsystems







GLXC Construction Update

➤ Jeff Wagner, GLX Public Involvement Manager



Station Construction - Union Square Station



- Station platform work continues
- Track placement well underway along Union Square Branch
- Mechanical building interior work progressing



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Station Construction – Lechmere Station



- South elevator tower placement at Lechmere Station



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Viaduct Construction



- 1 span of decking remains to be poured next week
- Several sections parapet remain to be poured
- 3 more days of Waterproofing remain from initial phase



Vehicle Maintenance Facility

- Exterior siding installation continues on Vehicle Maintenance Facility
- Track placement well underway



Viaduct & Community Path

- The amount of work happening along Inner Belt Road is impressive



Station Construction – East Somerville Station



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Washington St. Construction



- North sidewalk is now open
- Temporary sidewalk to be closed while work progresses on south sidewalk



Retaining Walls – MCW-2



- Wall between McGrath Hwy and Walnut St
- Hillside along Medford St. stripped, graded with erosion control matting installed
- Soil nails being place along shotcrete wall



Medford St. Bridge Modification



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Gilman Square Station



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School St. Bridge Modification



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Lowell St. Bridge Modification



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Magoun Square Station



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Ball Square Station

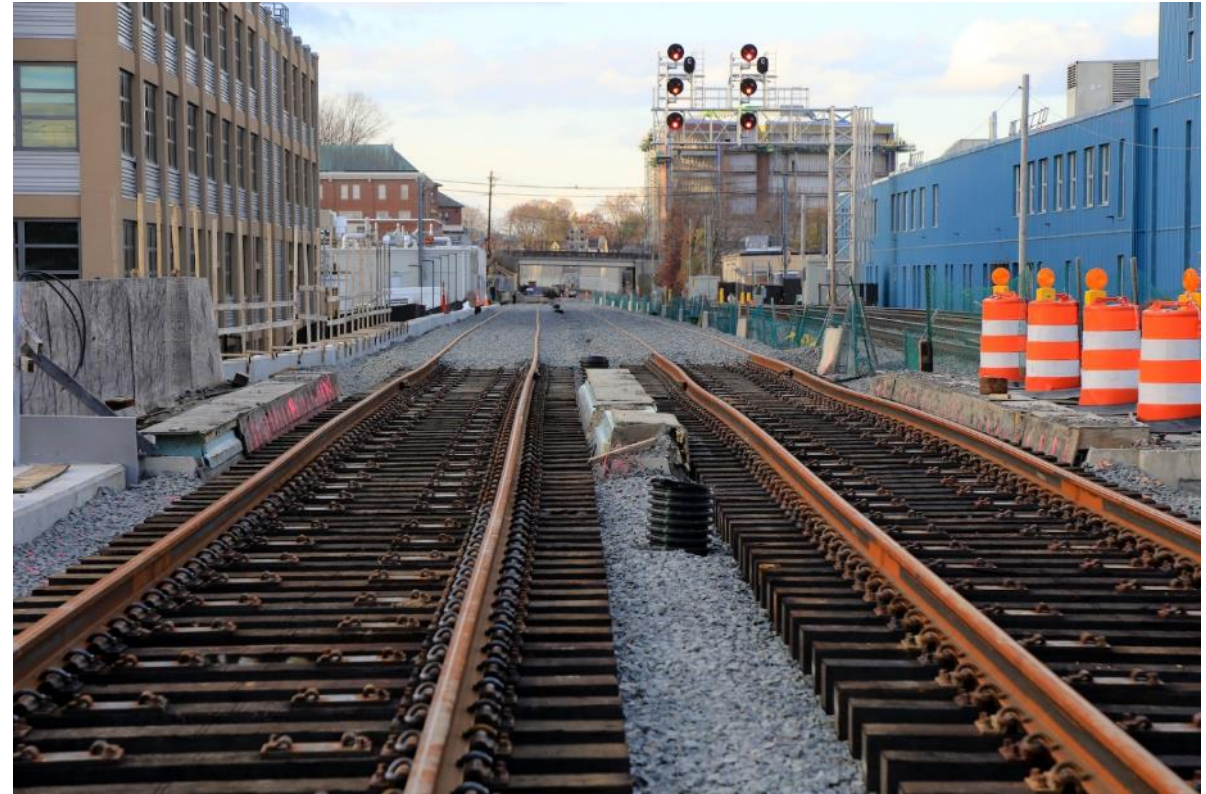


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Track Placement between College Ave & Broadway



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Medford/Tufts Station and Wall Construction



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Veterans Day



Recognizing our Veterans!

GLXC is proud of our employees who have served their country. Please take a moment on this **Veterans Day** to say thank you in person or drop them a note.



Dave Benoit Army E-5 Sargent Schofield Barracks Army Base, Oahu, HI		Daryl Box US Coast Guard Avionics Tech 2nd Class Air Station Los Angeles, CA	
Jonny Brotherton Marine Corporal Camp Pendleton, CA		Tom Coffey Marines Corporal Beirut/Grenada	
Tim Fernandes Marines Sargent Cherry Point, NC		Bill Hayden Army E-4 Fort Knox, Kentucky Aberdeen, MD	

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Recognizing our Veterans! (cont.)

	Patrick Kennally Navy AE-2(AW) VFA-146 Lemoore Naval Air Station 5th Fleet x 2 7th Fleet x 1		
Dave Geddes Marine Sargent Worcester, MA		Wayne Greig Marines PVT Naval Weapons Station Earle, New Jersey	
Tim Scanlan Navy E-2 Naval Base Coronado, San Diego, CA		Tyrone Skinner Army Reserve – 295 th Ordnance Staff Sargent, E-6 2 tours Iraq/1 tour Jordan	
Willie Spells Army Reserve E-4 Ft. Leonard Wood, MO		John Toomata Army E-5 Ft. Benning, GA Ft. Bragg, NC Camp Hovey, South Korea Ft. Knox, KY	
Brett Young Marines E-3 Fort Devens Ayer & Shirley, MA		Seth Whiteman Air Force Senior Airman Desert Storm 54th Civil Engineering Squadron US Air Force Academy, CO	

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Community Connection Team



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Community Connection Team

**FILL-A-BUS
WITH GIFTS**

Please donate a new unwrapped gift!

DEADLINE:
MONDAY DECEMBER 7, 2020

DROP OFF LOCATIONS:
35 CHARLESTOWN & 200 INNER BELT

The poster features a green background with colorful polka dots. In the center is a white bus with a large black 'T' logo. Inside the bus, a girl is playing with toys. Around the bus are various toys including a teddy bear, a train, and puzzle pieces.



GLX
Community Connection Team



**MEDFORD FAMILY
NETWORK**

Please donate a gift card!
From the following stores; Market Basket,
Stop & Shop, Kohl's, & Target

DEADLINE:
FRIDAY DECEMBER 11, 2020

DROP OFF LOCATIONS :
35 CHARLESTOWN & 200 INNER BELT

The poster has a red background with white and green polka dots. It features the Medford Family Network logo, which shows four stylized figures holding hands in a circle. The text is in a mix of green and white colors.





Q & A

