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Project:	Kansas City Streetcar Main Street Extension	T&B Project No: 54-1010
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This technical memo was prepared to confirm the existing site conditions along Main Street for the proposed streetcar extension. The goal is to note any existing site conditions that could potentially impact the track alignment and stop locations. This memorandum outlines the purpose of the field verification, the field investigation findings, and the recommendations.

**Purpose**

The primary reason of this field verification is to identify items that may impact the cost estimate or otherwise cause a stop to shift along the corridor. HNTB provided a spreadsheet of the existing site conditions vs. proposed location of 15 streetcar stations from a previous field investigation. All notes from the field investigation are included in red in the attached spreadsheet. Items that were field verified are grades for the stations, existing curb cuts for driveways, major visible utility impacts, the existing sidewalk widths, adjacent property concerns, impacts of proposed platform terminations on existing ADA ramps and curb inlets, and any other site constraints.

**Field Investigation Findings**

**51<sup>st</sup> and Brookside Blvd (NB):** There is a proposed operator restroom to be constructed within the existing parking lot median. Figure 1 shows the potential utility conflicts (to include overhead electrical lines and poles) of the proposed restroom location, looking in the southwest direction. There are major utility impacts in this area that should be considered when locating the facility.



**Figure 1: Potential Utility Conflicts at 51<sup>st</sup> and Brookside Blvd.**

**Ward Parkway and Brookside Blvd (NB):** There several electrical/utility boxes located on the northeast side of the intersection which may need to be relocated due to the construction of the NB track alignment and new sidewalk and landscape area. Figure 2 shows the potential utility conflicts (to include traffic signal cabinets and other utility boxes) at this location, looking in the northwest direction. There is also significant grade change between the existing sidewalk and the existing parking lot to the east.



**Figure 2: Potential Utility Conflicts at Ward Pkwy and Brookside Blvd.**

**45<sup>th</sup> and Main Street (NB):** The conceptual plan shows a bumpout tapering directly in front of the Marriott hotel driveway entrance. The bumpout (in its current configuration) will block the ingress driveway into the hotel dropoff area. Hotel access and circulation will need to be resolved during design. One option to retain the driveway is to remove pedestrian ramp access at the north end of the platform, reducing the length of the stop footprint and possibly eliminating the taper. Figure 3 shows the Marriott hotel driveway entrance and exit.



**Figure 3: Existing Marriott Hotel Driveway Entrance and Exit**

**31<sup>st</sup> and Main (NB):** There are 2 businesses whose entrances would be visually impacted by the construction of a station. The Lutfi's Fried Fish restaurant and Union Hills Commons storefronts

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have a proposed stop located in front of their entrances and signage. The stop design should consider minimizing any visual impacts to these adjacent properties.

**Pershing and Main (NB):** There is a storm inlet that would be impacted by the construction of a station. The inlet will need to be adjusted during the design phase.

**Other Stations:** Refer to the attached spreadsheet.

### **Conclusions/Recommendations**

The field investigation findings are incorporated with, and support, the existing conditions provided in the attached spreadsheet. In most locations, the stations will be constructed in the street. Existing sidewalk widths were recorded to ensure an adequate walkway behind proposed stations. It is recommended, at Ward Parkway and Brookside Blvd., to adjust the eastern most track alignment to avoid utilities and existing traffic signal, if possible. At 45<sup>th</sup> and Main Street, it is recommended to shift the station south a few feet and modify the taper to a curb return to allow access to the hotel driveway entrance.

KANSAS CITY STREETCAR MAIN STREET EXTENSION - EXISTING VS. PROPOSED CONDITIONS MATRIX

Station No.	Platform Intersection	Street Grade (%)	Near of Far Side of Int.?	Adjacent Tenants [Property Owners]	Access To Platform	Any Pedestrian Walkway Obstructions?	Are We Building Out Into Street?	Will the platform be integrated into the sidewalk?	Additional Pedestrian or ADA Accommodations Required?	Bus Connections
15	51st & Brookside Blvd (NB)	0.62	Far	-[UMKC Trustees] -Pride Cleaners -UMKC	Trolley Track Trail Ex. Grass shoulder =9.5' min. (BC to back of MSE wall) trail width = 9'	Retaining wall along trail-slope approx. 2.70:1	No - In CCROW	No	Substantial grading needed to match trail and platform Shoulder embankment slope varies - 2.5:1 to 3:1. Several big trees will have to be removed on back of curbs. Light pole required to be relocated.	Waldo Brookside Connector and UMKC Shuttle
14	Ward Pkwy N & Brookside Blvd (NB)	-0.68	Bi-directional platforms: SB Far, NB Near	-[KCATA, KCMO Parks] -Grand Street Café	Crosswalk across Brookside Blvd Ex. sw width = 8' + 5' landscape to BC	No-slope to parking lot approx. 4:1	Yes - platform in dedicated right-of-way	No	Crosswalk will need to be accounted for; pedestrian refuge in median; sight lines at center stop Group of electrical/utility equipment (6boxes and traffic signal) may need to be relocated. One light pole may be required to be relocated. Crosswalks between tracks should be raised median to protect pedestrians.	Multiple routes - WBC, 47, 35, 55, 40, 401. Primary transfer point.
13	45th and Main (SB)	0.95	Near	American Century Investments	Sidewalk Ex.sw width =10' to BC	-Sculpture outside American Century -MAX stop (to be removed) -Driveway into American Century	No	Yes	Platform is on sidewalk, may need to get agreement with American Century to widen onto their property; subterranean parking garage is adjacent to platform	None
12	45th and Main (NB)	0.95	Far	-[American Century] -Marriott -One Main Plaza	Sidewalk Ex. sw width = 5.83' min / 9' max to BC	-Marriot -MAX stop (to be removed)	Yes (in street parallel parking)	No	Not on sidewalk; storm sewer inlet potentially impacted by platform construction Hotel drive approx. 97' from curb return, conceptual plans show bumpout tapering directly in front of hotel southern drive entrance. The platform will conflict with street traffic at 45th st. NE quad. curb return and ADA ramps will have to be modified.	None
11	43rd and Main (SB)	-2.39	Far	-[American Century] -Luyben Music Parking Lot -Gilda's Club Parking Lot -Vacant Lot, former Berbiglia's	Sidewalk Ex. sw width = 11.67' to BC	-MAX stop (to be removed) -Fire hydrant -Gilda's Club Parking Lot	Yes	No	Steep ex. road grade New curb return at SW quad will affect existing ADA ramps.	None

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10	43rd and Main (NB)	-4.54	Far	H&R Block/The Roasterie	Sidewalk Ex. sw width = 11.17' (face of CS curb to face of wall)	-MAX stop (to be removed) -H&R Block/The Roasterie parking lot	Yes	No	Steep ex. road grade ADA ramps will be affected by new curb return at NE quadrant.	None
9	39th and Main (SB)	0.97	Far	CVS	Sidewalk Ex. sw width = 11.5' (back of CS curb to face of wall)	-CVS parking lot -MAX stop (to be removed)	Yes	No; may need to expand sidewalk	39th and Main ped ramp needs improvement; storm sewer inlet grate potentially impacted by platform construction	Route 39, EB and WB. Primary transfer point
8	39th and Main (NB)	1.44	Far	-H&R Block -Gumby's Barber Shop -Hawthorne Plaza Apts.	Sidewalk Ex. sw width = 9.5' (face of CS curb to bldg)	-MAX stop (to be removed)	Yes	No	Low curb could affect tie-back ability (3"± curb height) 3 business doorways. New curb return at NE quad will impact existing ADA ramps.	Route 39, EB and WB. Primary transfer point
7	Armour and Main (SB)	-4.33	Far	US Bank	Sidewalk Ex. sw width = 10' (face of CS curb to face of wall)	-US Bank Main St entrance -Pancho's parking lot -MAX stop (to be removed)	Yes	No	Steep ex. Road grade. Accessibility to bank is limited by split-level sidewalks. New curb return at SW wuad will impact ADA ramps.	Route 35, EB and WB
6	Armour and Main (NB)	-0.7	Far	-Burger King -3435 Main Apts.	Sidewalk Ex. sw width = 9.67' (BC to face of wall)	-Burger King and 3435 Main Apts. Entrances -MAX stop (to be removed) -Signal pole near corner	Yes	No	Storm inlet may be impacted by platform construction New curb return at NE quad will impact existing ADA ramps.	Route 35, EB and WB
5	31st and Main (SB)	-3.61	Far	-3100 Main Plaza -Wendy's	Sidewalk Ex. sw width = 11.25' (BC to face of wall)	-Bank of America Main St exit visually obstructed -Wendy's entrance -MAX stop (to be removed)	Yes	No	Steep ex. road grade New curb returns will impact existing ADA ramps.	Route 31, EB and WB. Primary transfer point
4	31st and Main (NB)	-3.21	Far	-Metro Insurance Express -Union Hill Commons -Lutfi's Fried Fish	Sidewalk Ex. sw width = 11.83' (BC to bldg)	Parking lot entrance north of Lutfi's	Yes, but eliminating on-street parking to accommodate stop	No	<del>No</del> YES. New curb returns in the street at intersection and driveway will impact ADA ramps, curb inlet and pedestrian crosswalks. 2 business doorways (Union Hill Commons and Lurfis entrance may be visually obstructed). Steep ex. Road grade, Lutfis parking entrance blocked-will need to be relocated.	Route 31, EB and WB. Primary transfer point
3	27th and Main (SB)	4.85	Near	-Penn Valley Park -Federal Reserve	Sidewalk Ex. sw width = 7.17' (back of sw to face of CS curb) 5' wide sidewalk	-Retaining wall -Liberty Memorial access	<del>No</del> YES	Yes	Steep ex. Road grade. SE corner of main and 27th needs ped ramp improvements. Will require new ADA ramp at ped crossing.	Routes 201 and 77, plus multiple express routes

KANSAS CITY STREETCAR MAIN STREET EXTENSION - EXISTING VS. PROPOSED CONDITIONS MATRIX

2	27th and Main (NB)	4.85	Far	Crown Center	New sidewalk is required	No	No, but eliminating on-street parking to accommodate stop	No	Steep ex. Road grade. <del>SE</del> NE corner of Main and 27th needs ped ramp improvements. Discontinuous sidewalk.	Routes 201 and 77, plus multiple express routes
1	Pershing and Main (New)	2.11	Far	Washington Square Park	Sidewalk Ex. sw width = 16.75' (back of sw to BC)	The Link - NO	Yes	Yes	<del>No</del> - ADA ramps should be reconstructed. Storm inlet will be impacted by platform construction. 1 business doorway.	Routes 27, 47 and 51