

Mezzanine Inspection Report

REVISION 1

Date: 11/19/2014	Station Name: E02 - Shaw/Howard U (North)	Mezzanine #: 072	Completed By: Mike Butler
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Summary

- Video scoping and pull string installation was completed for communication ducts in upper faregate array; video scoping of the upper power ducts was also completed, however there were minor obstructions in power duct caused by corrosion. It was not possible to complete video scoping and pull string installation for communication duct in lower faregate array due to collapsed duct. Video scoping was completed in lower power duct.
- Video scoping and pull string installation in power duct between Kiosk, Handhole 1, Handhole 2 and Junction Box could not be completed due to multiple collapses. It should be noted that all ducts are in very bad condition and have been subjected to extensive water damage. In addition, pull string installation could not be completed in conduit between Junction Box and AFC Panel due to obstructions / bends.
- Scanning of the mezzanine was completed to identify a new power route from the Kiosk to AFC Panel. The scanning results confirmed that there is no direct path to the AFC panel without crossing existing ducts / conduit or having to core drill through structural wall.
- It is recommended to install a proposed duct, which will run parallel to the outside of existing duct from Kiosk to Handhole 2. A new handhole is proposed adjacent to Handhole 2, where the proposed duct will connect perpendicular. There is an empty 6" duct running from Handhole 2 to Junction Box, which is partially collapsed. It is recommended to repair / replace the empty duct and utilize the existing run from Handhole 2 to Junction Box (Room 217). It is assumed that the three existing 2.5" conduits (two of which are empty) have a continuous route from the Junction Boxes (Room 217) to the Junction Box (Room 205) to the AFC Panel. It is recommended to utilize one of the two empty conduits as part of the proposed run. If that is not possible, it is recommended to run a proposed conduit from Junction Box to AFC Panel by running up wall, across ceiling and core drilling through CMU wall into Room 205 where the AFC Panel is located.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (3 faregates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Shaw-Howard Upper Comm Duct Video.avi"
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	3" ducts with less than 6 wires.
Communications Duct - Lower Faregate Array (3 faregates)		
Was video scoping completed for the entire duct run?	No	Refer to "WMATA Shaw-Howard Upper Lower Comm Duct Video.avi"
Were pull strings installed at all faregates in the array?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Duct is collapsed and not viable for future use.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	3" ducts with less than 6 wires.
Power Duct - Upper Faregate Array (3 faregates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Shaw-Howard Upper Power Duct Video.avi"
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	Minor obstructions caused by mud/debris/water corrosion.
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" ducts with less than 10 wires
Power Duct - Lower Faregate Array (3 faregates)		
Was video scoping completed for the entire duct run?	Yes	Refer to "WMATA Shaw-Howard Lower Power Duct Video (1).avi"
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	6" ducts with less than 10 wires


Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Handhole 1 (Distance: 15')		
Was video scoping completed for the entire duct / conduit run?	No	
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	The duct is collapsed at 10' from the kiosk; water damage evident.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" duct with less than 12 wires.
Handhole 1 to Handhole 2 (30')		
Was video scoping completed for the entire duct / conduit run?	No	
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	The duct is collapsed just beyond Handhole 1; water damage evident.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" duct with less than 12 wires.
Handhole 2 to Junction Box in Room 217 (10')		
Was video scoping completed for the entire duct / conduit run?	No	
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	Yes	The duct is collapsed just beyond Handhole 2; water damage evident.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	6" duct with less than 12 wires.
Junction Boxes at floor and ceiling in Room 217 to Junction Box at ceiling in Room 205 and AFC Panel in Room 205 (60' assumed)		
Was video scoping completed for the entire duct / conduit run?	No	Scoping of conduits not required.
Was pull string installed?	No	
Were there any obstructions or blockages? Provide details of type and specific location.	No	It is assumed that the conduit runs are not obstructed, and the visible portions of the runs look to be in good condition. However, the conduit run between the two junction boxes on the ceiling was not visible.
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	N/A	Three 2.5" conduits
Observations / Issues / Next Steps		
The total distance of proposed power route is 133', including 63' of proposed duct, 10' of existing repaired/ replaced duct and 60' of existing /proposed conduit.		
Photos and drawings are for reference purposes only; see new schematic drawing/proposed pathway on last page.		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	04/03/15	

Photo #1: Existing and proposed ducts on mezzanine floor

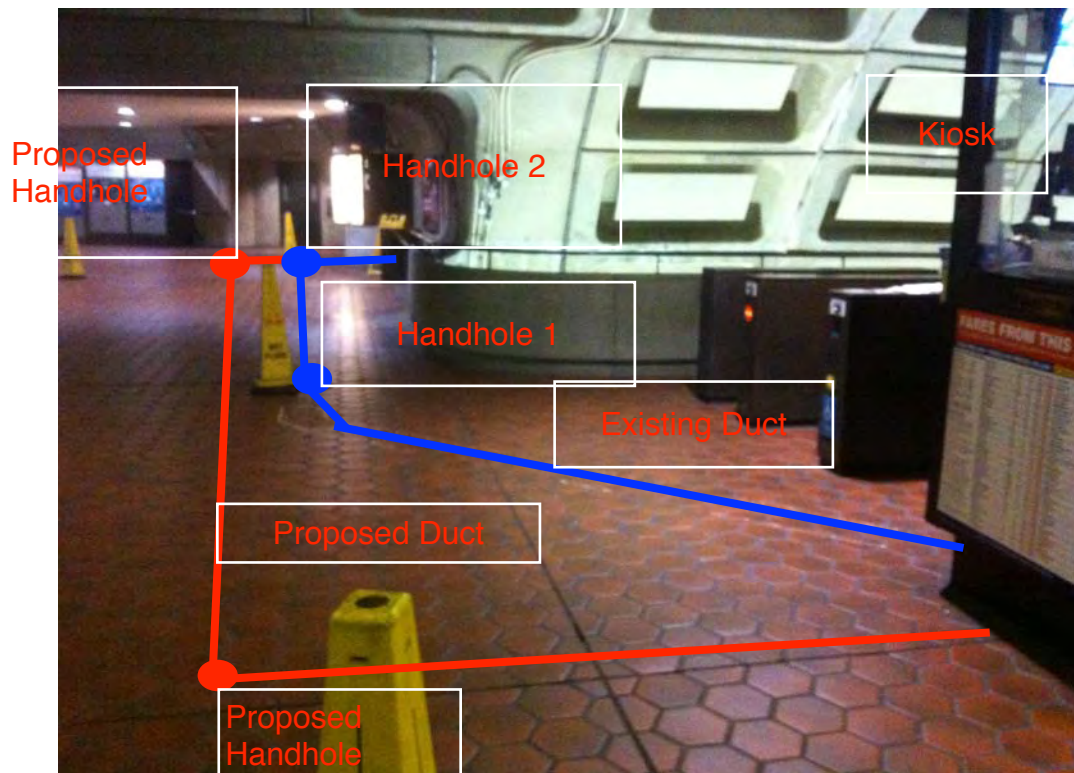


Photo #2: Existing and proposed ducts on mezzanine floor

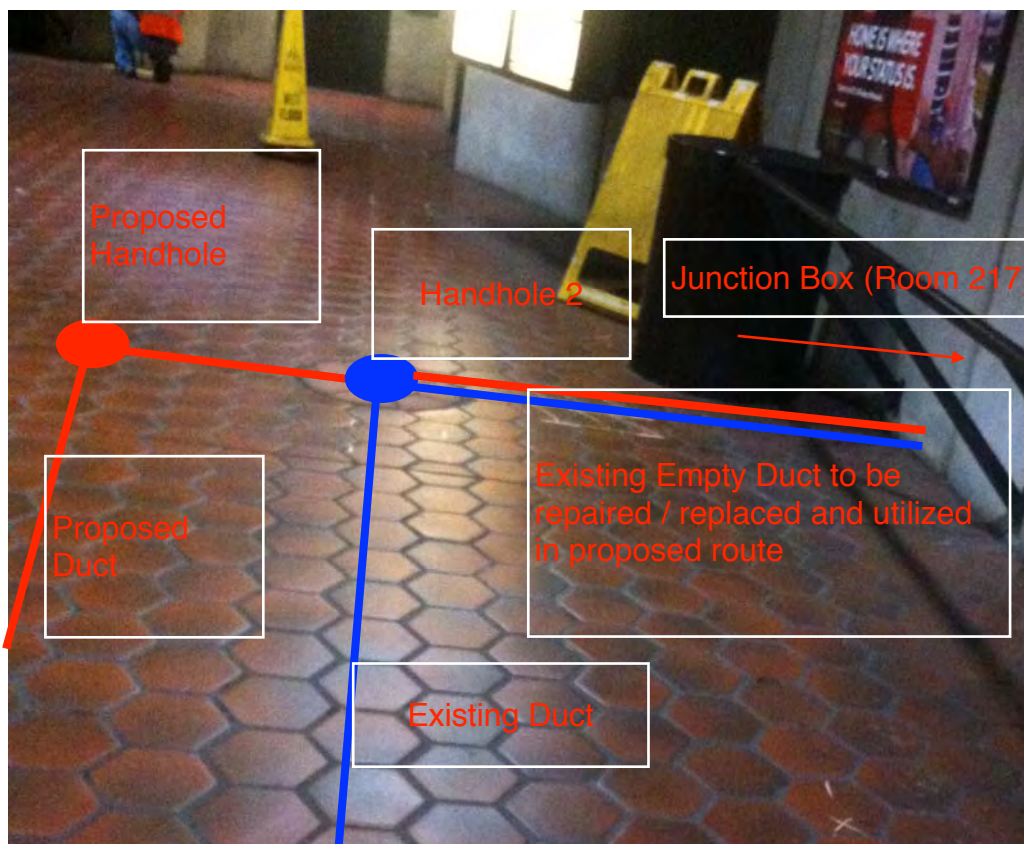


Photo #3: Existing and proposed conduits in Room 217

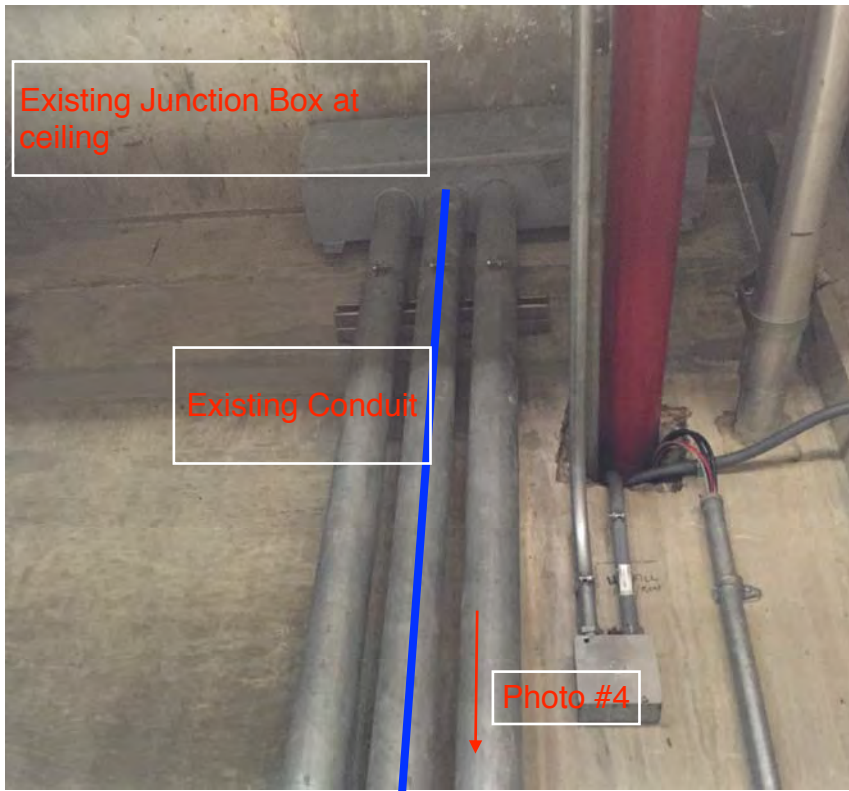


Photo #4: Existing and proposed conduits in Room 217

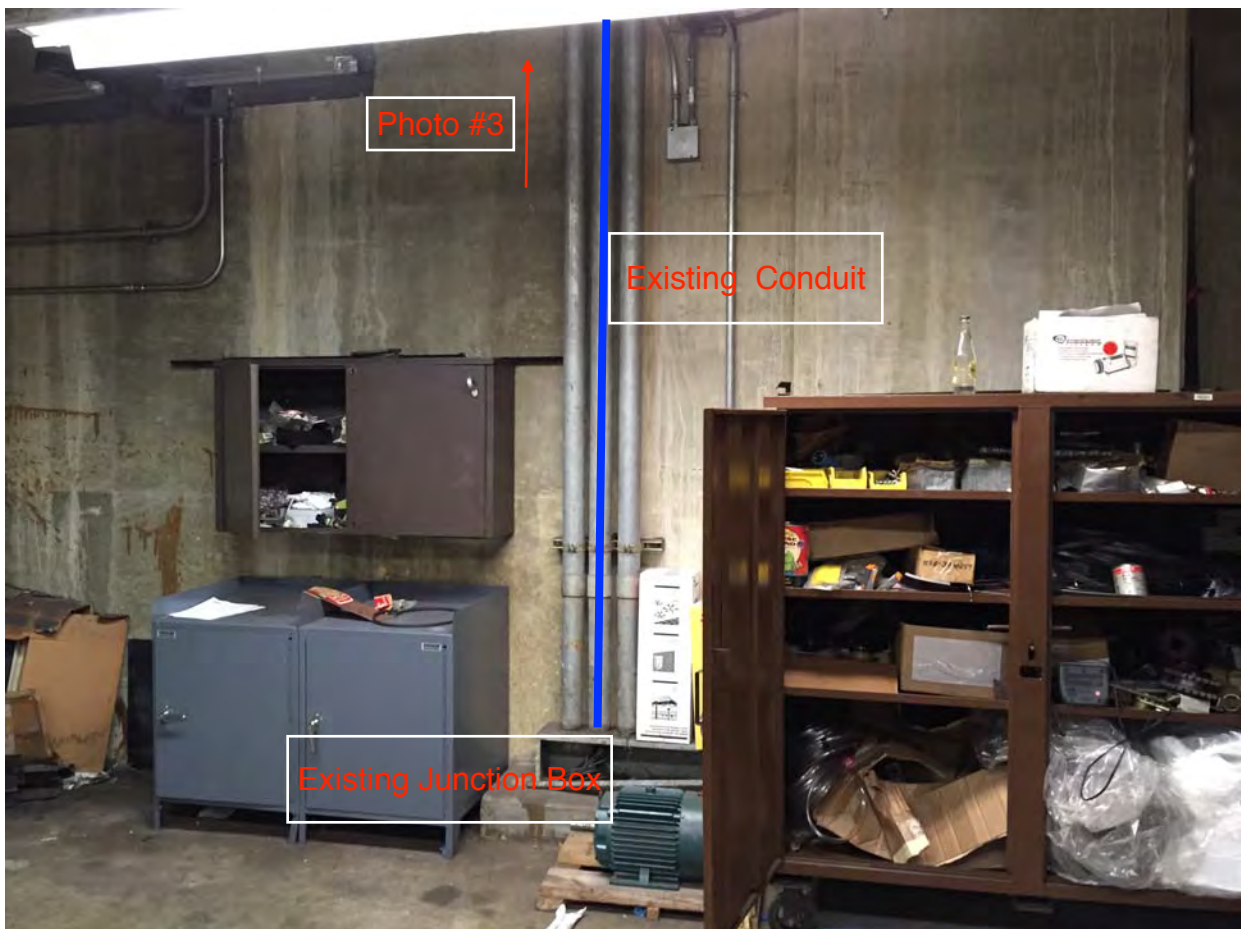


Photo #5: Existing and proposed conduits in Room 217

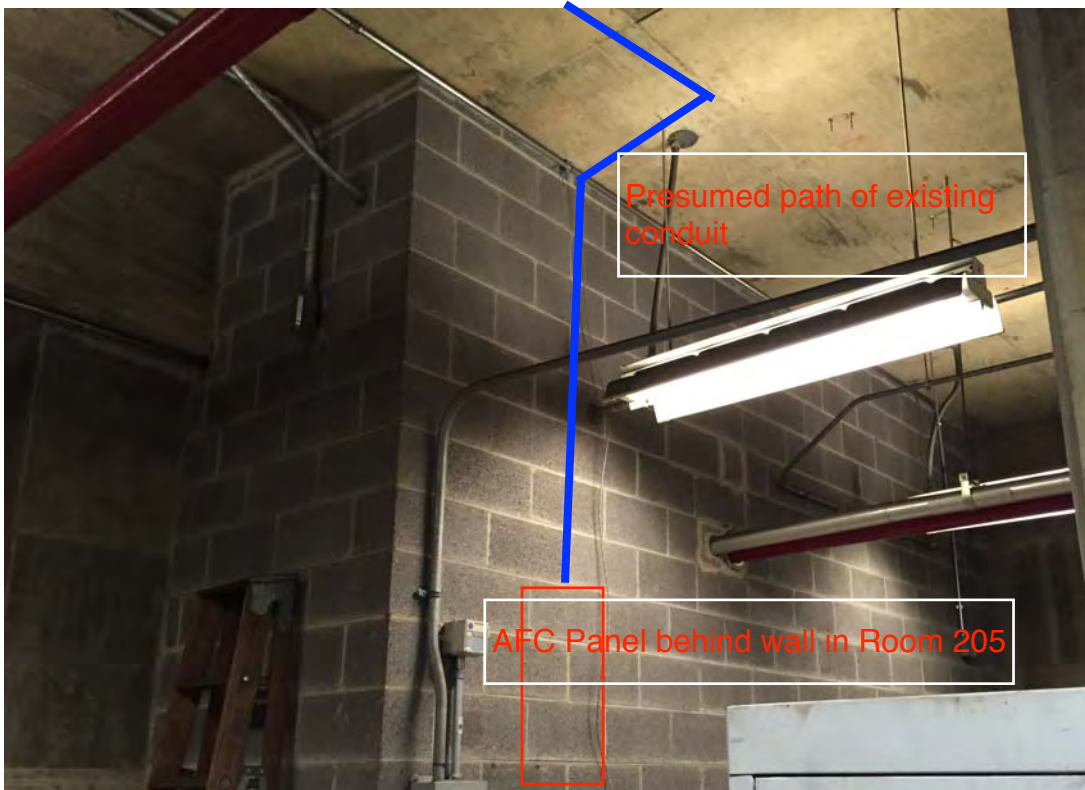


Photo #6: Existing and proposed conduits in Room 205

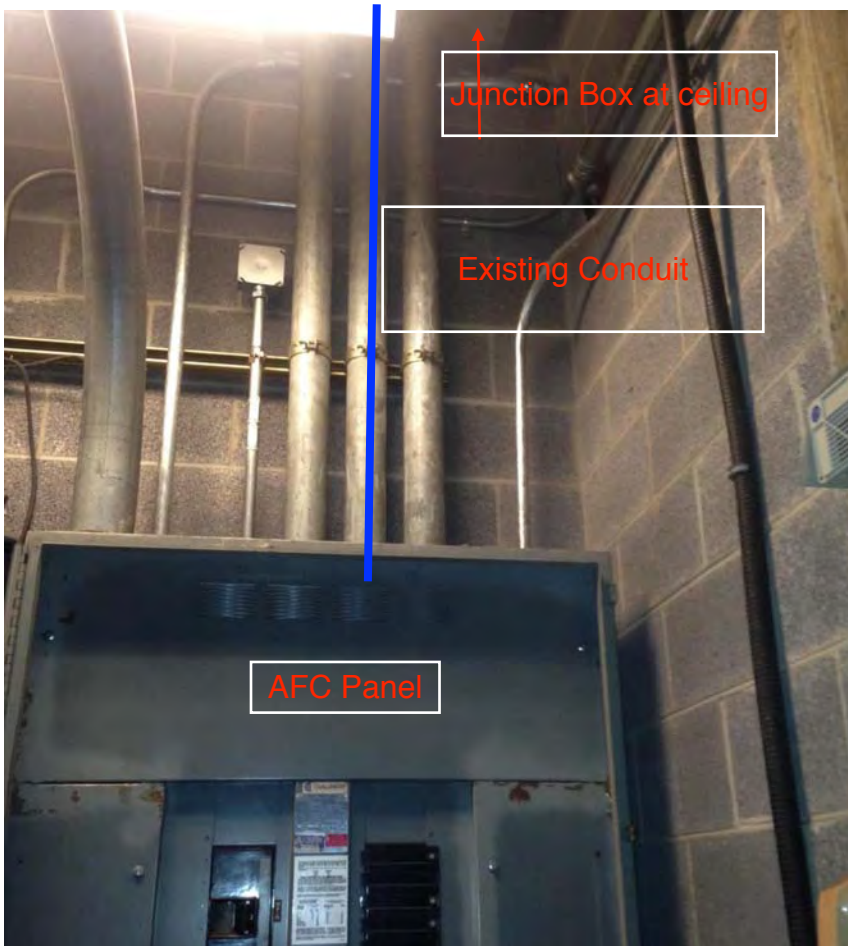


Photo #7 – Existing Handhole 2 (close-up)

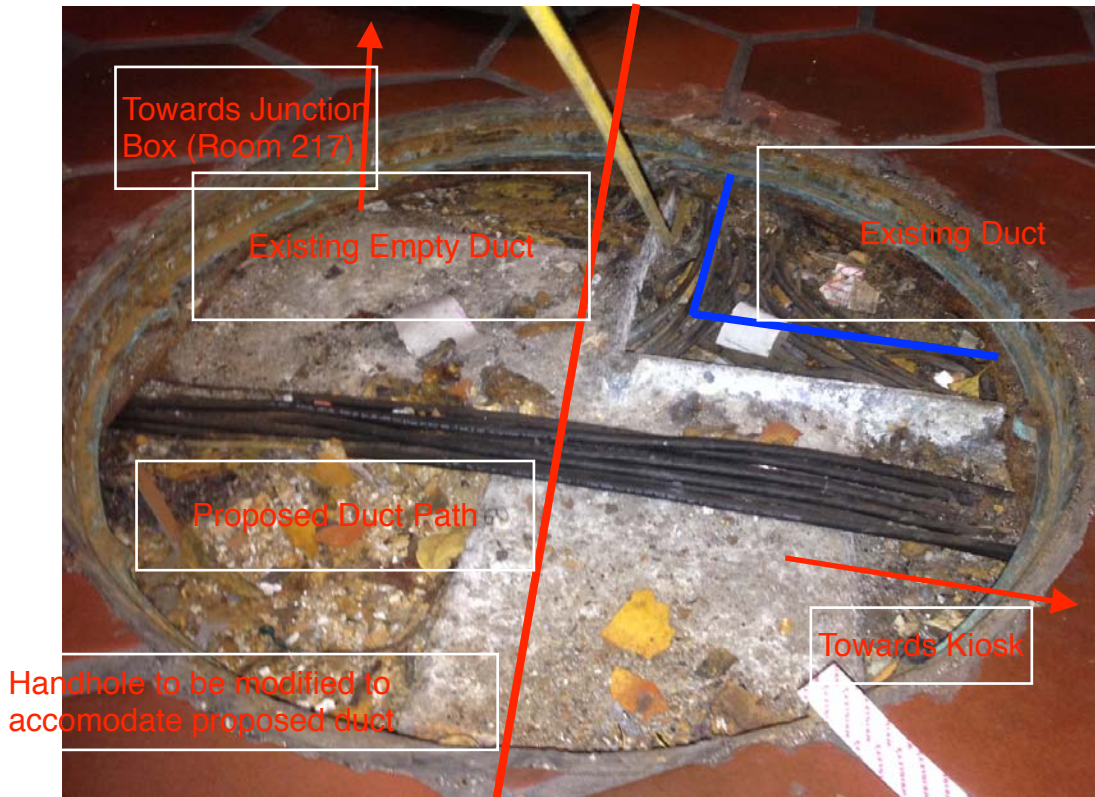
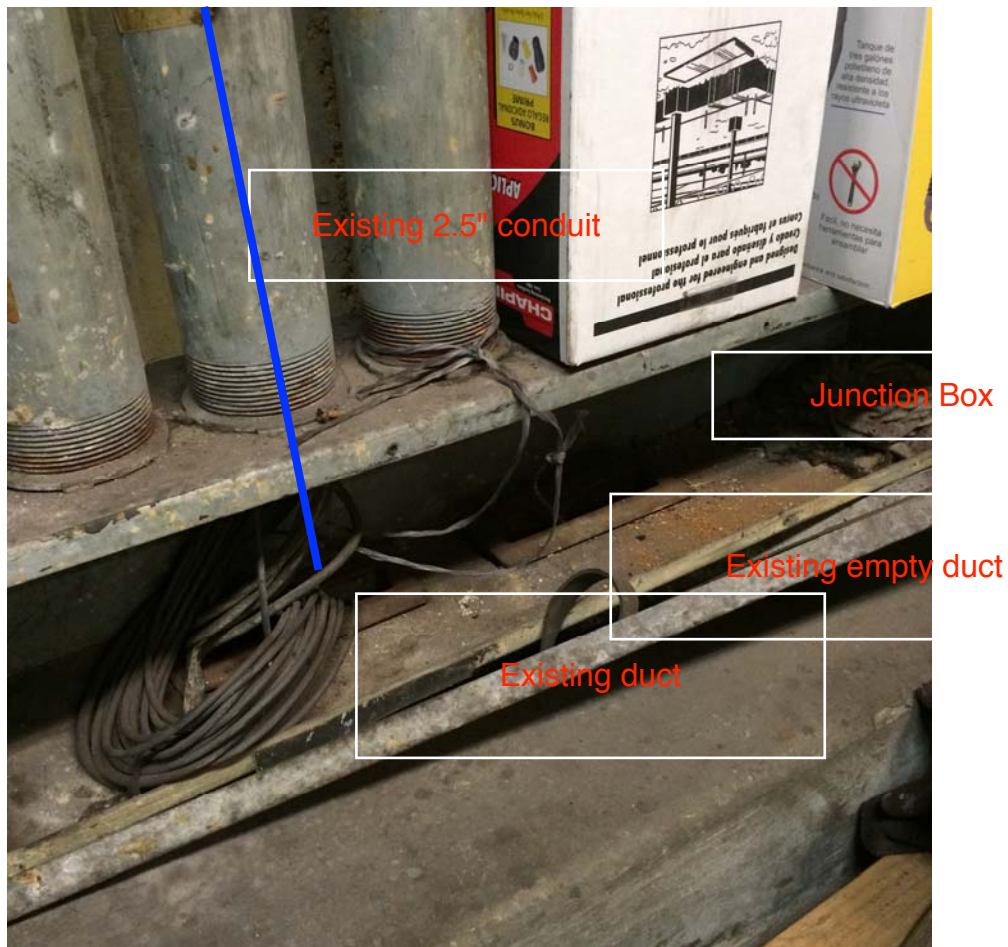


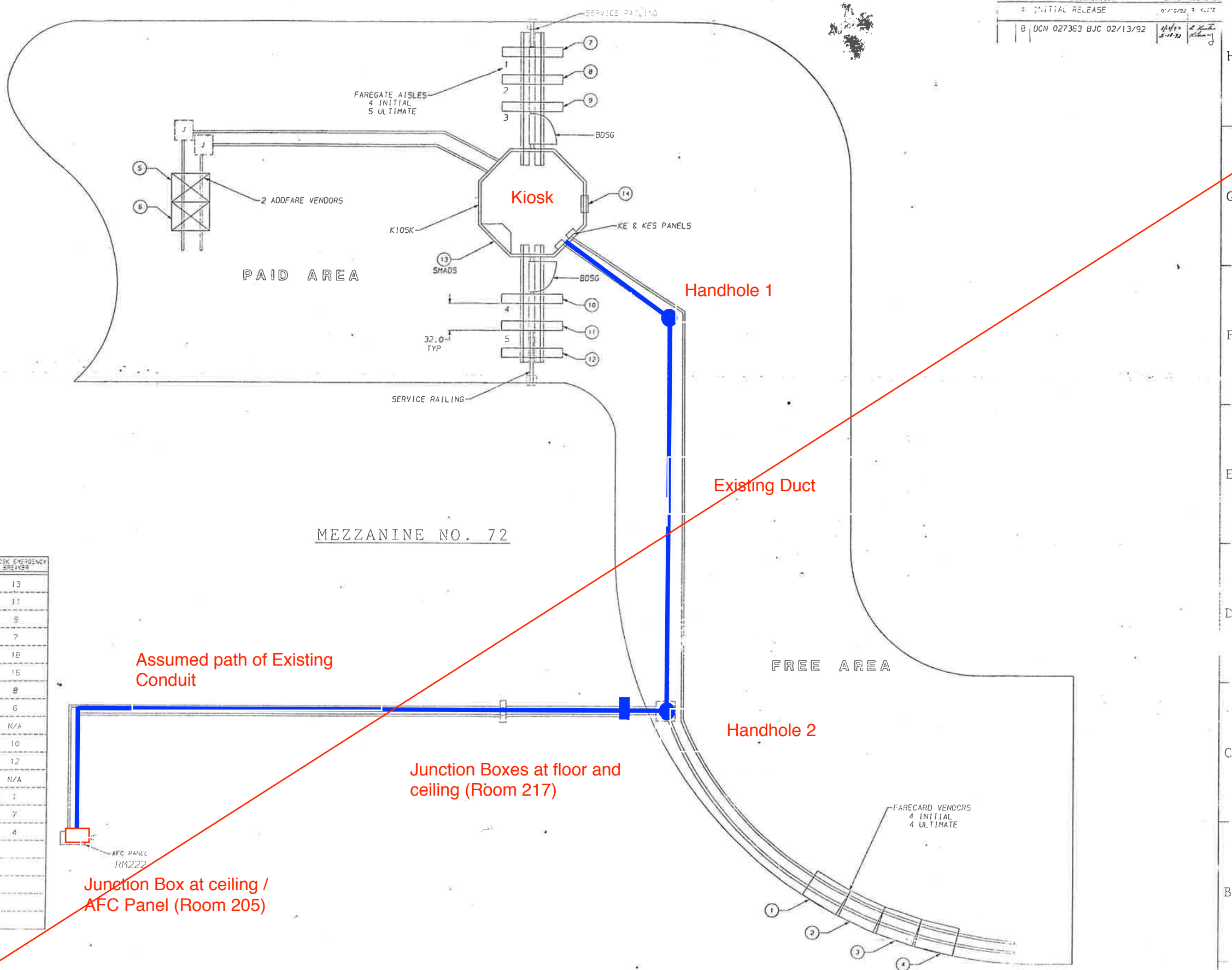
Photo #8 – Existing Open Junction Box in Room 217 (close-up)



NOTES:

1. FOR VENDOR AND ADDFARE INSTALLATION SEE 931-4002.
2. FOR SHADS INSTALLATION SEE 931-4001.
3. FOR ENTRY, EXIT AND REVERSIBLE GATE INSTALLATION SEE 931-4003.
4. FOR BI-DIRECTIONAL SERVICE GATE INSTALLATION SEE 931-4005.
5. FOR A TYPICAL MEZZANINE INSTALLATION SEE 931-4000.
6. CIRCUIT BREAKERS WITH COMMON NEUTRAL, 7, 9 & 11, 16 & 18, 6 & 8, 10 & 12.

REVISIONS			
ZONE REL.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	01/12/02	R. KUIE
B	DCN 027363 BJC 02/13/92	02/13/92	R. KUIE



NAME	S/N	PANEL AFZ	KIOSK EMERGENCY BREAKER
1 VENDOR	VN1828	NF	13
2 VENDOR	VN1817	NF	11
3 VENDOR	VN1816	NF	9
4 VENDOR	VN1808	NF	7
5 ADDFARE	AF2821	NF	18
6 ADDFARE	AF2820	NF	16
7 ENTRY GATE	EG3819	NF	8
8 REV. GATE	RG7870	NF	6
9 EXIT GATE	XG4821	NF	N/A
10 ENTRY GATE	EG3813	NF	10
11 REV. GATE	RG7869	NF	12
12 EXIT GATE	XG4820	NF	N/A
13 SHADS	SM4841	KE	1
14 SHADS CLOCK	SC4841	KES	7
EMERGENCY LT		YES	4

See new schematic drawing/proposed pathway on last page

MEZZANINE NO. 72 MEZZANINE LAYOUT

DATE: 02/13/92

PROJECT: SHAM STATION NORTH

SCALE: 1:50

DESIGNED BY: R. KUIE

CHECKED BY: R. KUIE

APPROVED BY: R. KUIE

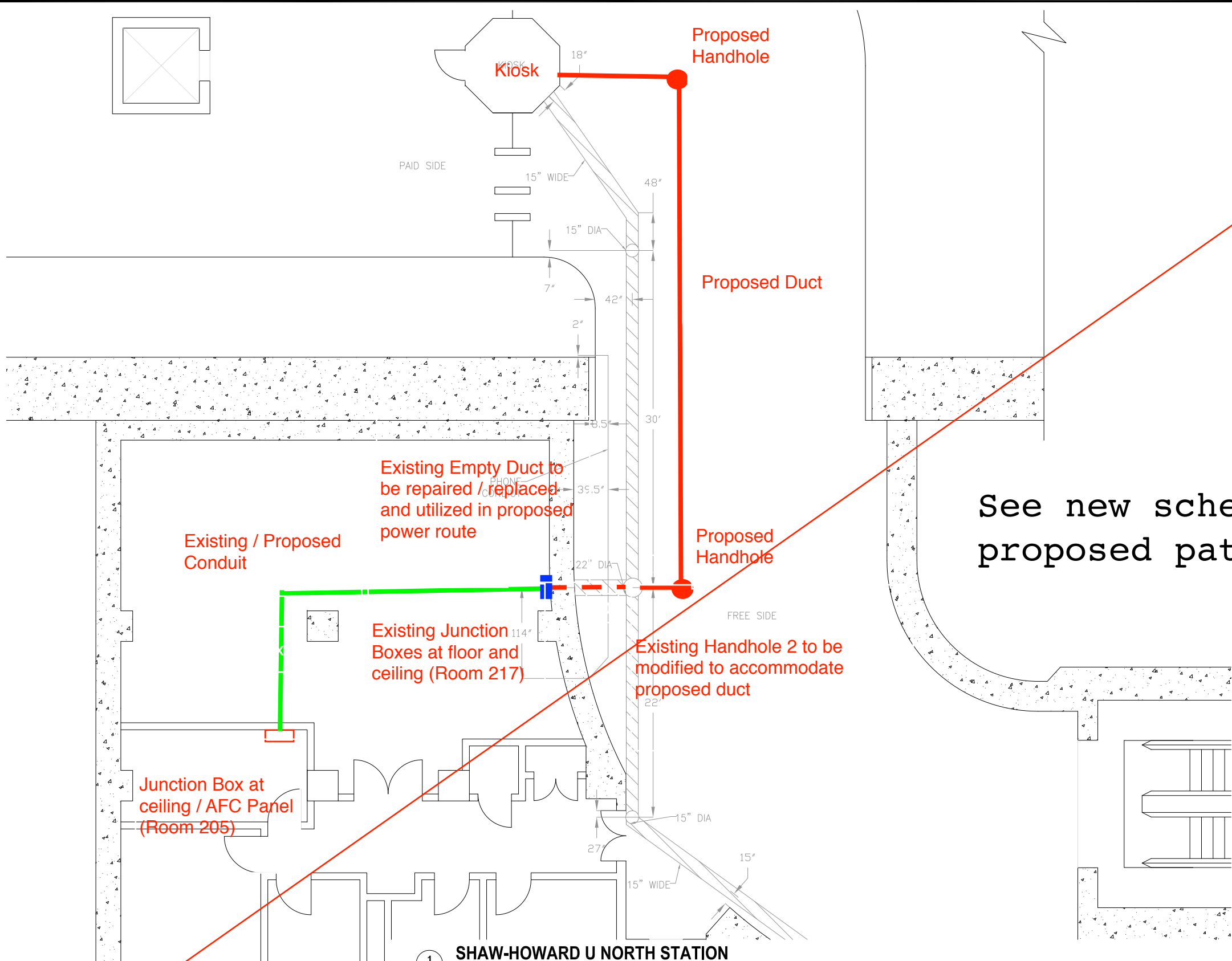
DATE: 02/13/92

PROJECT NO: 027363

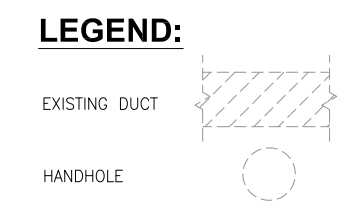
MEZZANINE NO. 72

MEZZANINE LAYOUT

931 401.1



- PLAN NOTES:**
1. DIMENSIONS ARE IN FEET AND INCHES.
 2. DIMENSIONS ARE FOR REFERENCE ONLY.
 3. EXISTING IN-FLOOR DUCTS/CONDUITS WERE IDENTIFIED USING A PORTABLE GPR SCANNING DEVICE.
 4. THE SCANNING COVERAGE IS LIMITED TO THE MEZZANINE FLOOR ONLY.
 5. GPR SCANNING HAS THE FOLLOWING LIMITATIONS: (i) 12 INCHES VISIBLE SCANNING DEPTH; (ii) VISIBILITY BEYOND CONGESTED OR NEAR SURFACE REINFORCEMENT LAYERS; (iii) DETECTION OF PVC AND OTHER NON-METALLIC OBJECTS (iv) DETERMINATION OF SIZE AND EXTENTS OF SUBSURFACE ANOMALIES SUCH AS SLAB VOIDS OR REBAR SIZES; AND (v) VISIBILITY WHEN VARIABLE MOISTURE CONDITIONS EXIST IN THE SUBSTRATE.



See new schematic drawing/
proposed pathway on last page

1
E-100
SHAW-HOWARD U NORTH STATION
SCALE: NOT TO SCALE

CONTRACT NO.
XXXXXX

DESIGNED	C. LOOSE	02-15
		DATE
DRAWN	C. LOOSE	02-15
		DATE
CHECKED	M. BUTLER	02-15
		DATE
APPROVED		
		DATE

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

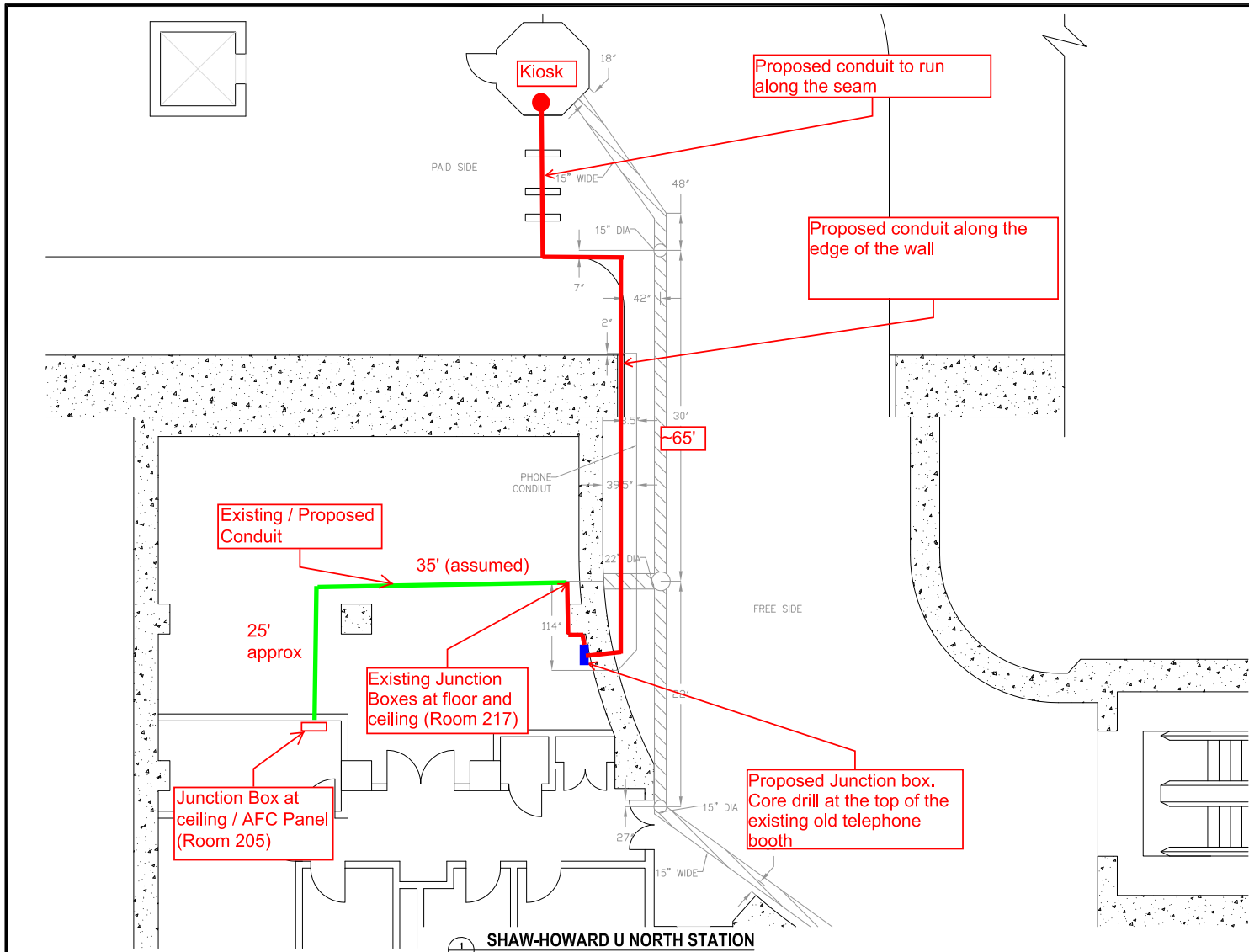
REVISIONS		
DATE	BY	DESCRIPTION

APPROVED _____

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM
APPROVED _____

GFP A Gannett Fleming/Parsons JOINT VENTURE
SUBMITTED _____
PROJECT MANAGER

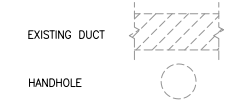
15-NEPP-01
IN - FLOOR DUCT INSPECTIONS
E02 Shaw-Howard U North
PROPOSED POWER ROUTE
SCALE NOT TO SCALE
DRAWING NO. E02-E-100
XXX



PLAN NOTES:

1. DIMENSIONS ARE IN FEET AND INCHES.
2. DIMENSIONS ARE FOR REFERENCE ONLY.
3. EXISTING IN-FLOOR DUCTS/CONDUITS WERE IDENTIFIED USING A PORTABLE GPR SCANNING DEVICE.
4. THE SCANNING COVERAGE IS LIMITED TO THE MEZZANINE FLOOR ONLY.
5. GPR SCANNING HAS THE FOLLOWING LIMITATIONS: (i) 12 INCHES VISIBLE SCANNING DEPTH; (ii) VISIBILITY BEYOND CONGESTED OR NEAR SURFACE REINFORCEMENT LAYERS; (iii) DETECTION OF PVC AND OTHER NON-METALLIC OBJECTS (iv) DETERMINATION OF SIZE AND EXTENTS OF SUBSURFACE ANOMALIES SUCH AS SLAB VOIDS OR REBAR SIZES; AND (v) VISIBILITY WHEN VARIABLE MOISTURE CONDITIONS EXIST IN THE SUBSTRATE.

LEGEND:



SHAW-HOWARD U NORTH STATION
SCALE: NOT TO SCALE

CONTRACT NO. XXXXXX

DESIGNED	C. LOOSE	02-15	REFERENCE DRAWINGS		REVISIONS		
			NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN	C. LOOSE	02-15					
CHECKED	M. BUTLER	02-15					
APPROVED							

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

GFP JOINT VENTURE
A GRUBBELL FINNING/PAPARNO

APPROVED _____ SUBMITTED _____ PROJECT MANAGER _____

15-NEPP-01
IN - FLOOR DUCT INSPECTIONS
E02 Shaw-Howard U North
PROPOSED POWER ROUTE

SCALE: NOT TO SCALE DRAWING NO. E02-E-100 XXX

Mezzanine Inspection Report (Scoping)

Date: 11/24/2014	Station Name: E03 U Street East	Mezzanine #: 073	Completed By: Mike Butler
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Summary

Scoping and pull string installation for the communication ducts was completed for the upper and lower faregate arrays. Scoping was completed for the upper power duct faregate array. The lower power duct faregate array was not scoped because the duct was at capacity. Pull string was installed in the 2" conduit run from the kiosk to the junction box and from the junction box to the AFC panel.

No scanning is required at this mezzanine.

Scoping of Faregate Array(s)

Task	Yes/No	Notes
Communications Duct – Upper Faregate Array (3 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA U St. Mezz 73 and 74 Upper Comm 3inch Duct.avi file.
Were pull strings installed at all faregates in the array?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Communications Duct - Lower Faregate Array (3 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA U St. Mezz 74 and 73 Lower Comm 3inch duct.avi file.
Were pull strings installed at all faregates in the array?	Yes	Pull strings installed in 6" duct. The 3" duct had a welded metal plate obstructing access
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Power Duct - Upper Faregate Array (3 Gates)		
Was video scoping completed for the entire duct run?	Yes	Refer to WMATA U St. Mezz 74 and 73 Upper Power 6inch duct.avi file.
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	No	
Power Duct - Lower Faregate Array (3 Gates)		
Was video scoping completed for the entire duct run?	No	Refer to WMATA U St. Mezz 73 and 74 Lower Power 6inch Duct.avi file.
Were there any obstructions or blockages? Provide details of type and specific location.	N/A	
Is the duct at capacity? Provide additional details about the dimensions of ducts and number of wires.	Yes	6" power duct at capacity

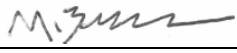
Scoping of Power Duct - Kiosk to AFC Panel		
Task	Yes/No	Notes
Kiosk to Junction Box (175' run)		
Was video scoping completed for the entire duct / conduit run?	No	2" conduit – no scoping required
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Junction Box to AFC Panel (5' run)		
Was video scoping completed for the entire duct / conduit run?	No	2" conduit – no scoping required
Was pull string installed?	Yes	
Were there any obstructions or blockages? Provide details of type and specific location.	No	
Is the duct / conduit at capacity? Provide additional details about the dimensions of duct / conduit and number of wires.	No	
Observations / Issues / Next Steps		
Total run from kiosk to AFC panel is 180'.		
Sign Off		
	GFP Representative	WMATA PRGM
Name:	Mike Butler	
Signature:		
Date:	11/24/14	

Photo #1 – E02 U Street East: existing conduit run from Kiosk towards junction box

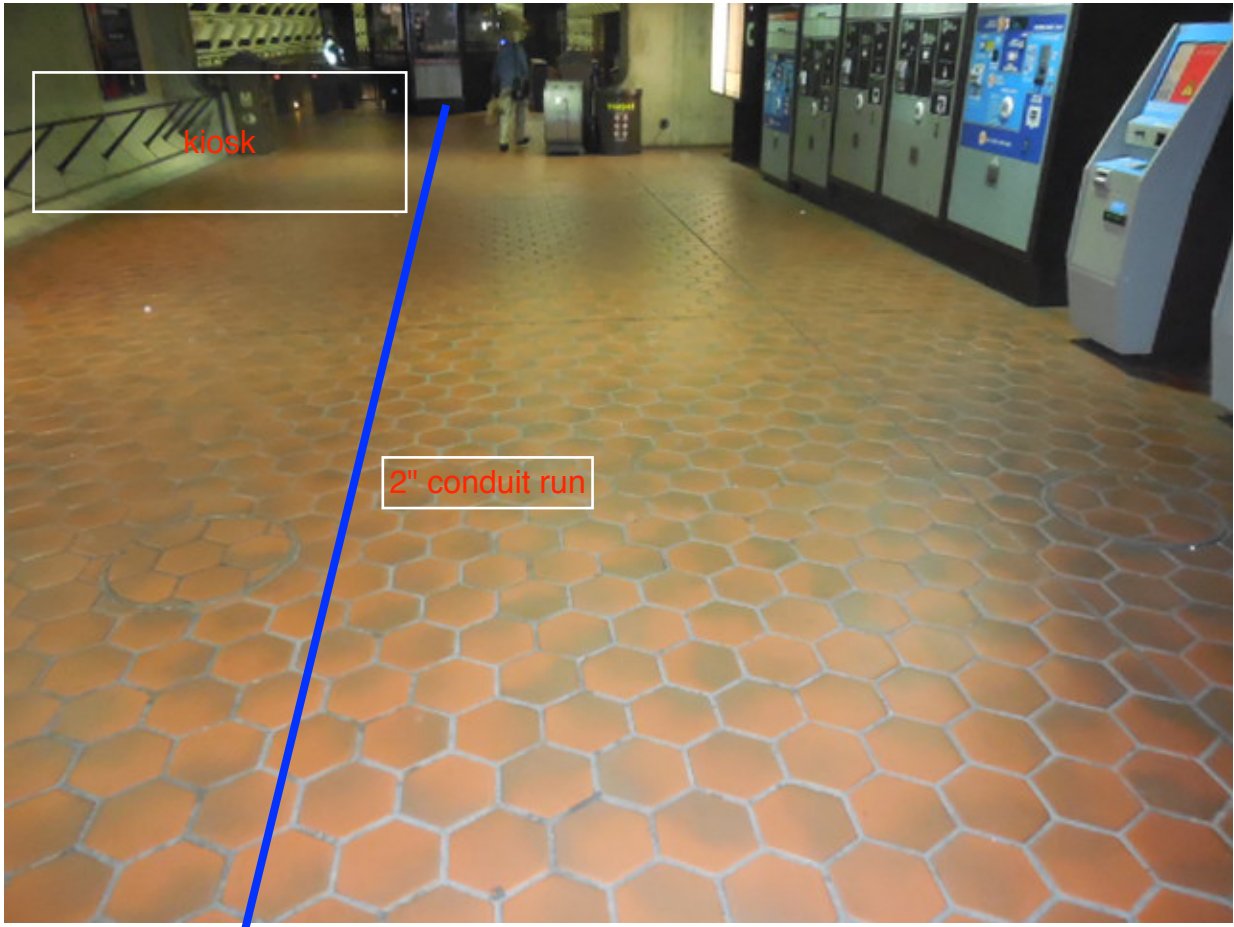
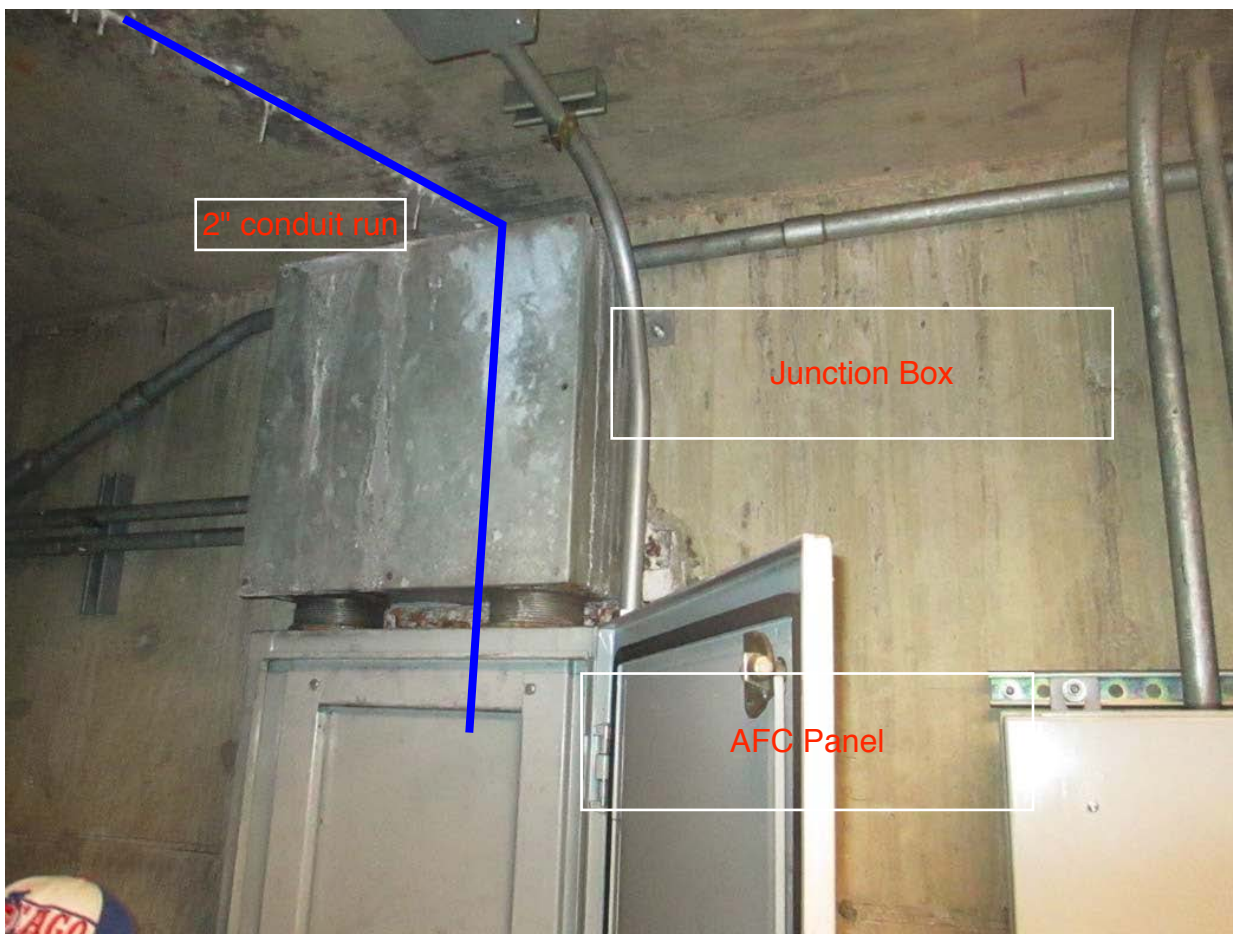


Photo #2 – E03 U Street East: Junction box directly above AFC panel in room #213

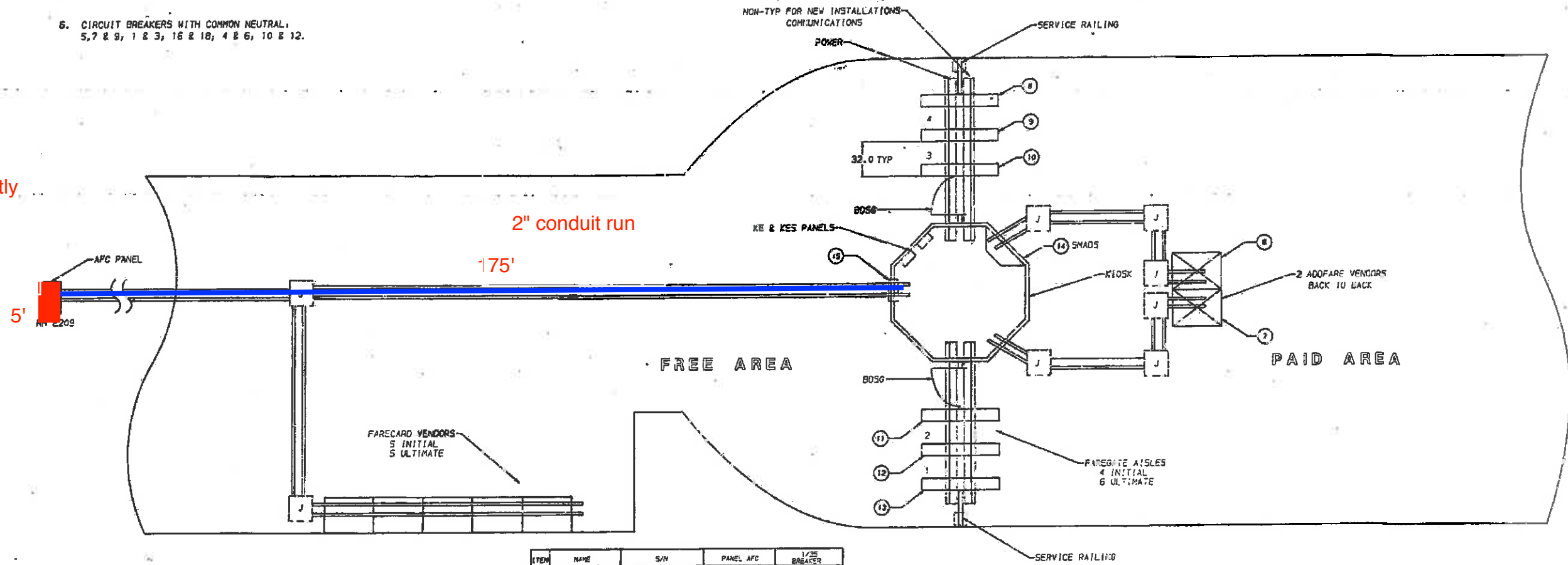


NO.	REVISIONS	DATE	APPROVED
1	INITIAL RELEASE		
2	GCN 028900 BJC 03/20/92		

NOTES:

1. FOR VENDOR AND ADDFARE INSTALLATION SEE 931-4002.
2. FOR SHADS INSTALLATION SEE 931-4001.
3. FOR ENTRY, EXIT AND REVERSIBLE GATE INSTALLATION SEE 931-4003.
4. FOR BI-DIRECTIONAL SERVICE GATE INSTALLATION SEE 931-4005.
5. FOR A TYPICAL MEZZANINE INSTALLATION SEE 931-4000.
6. CIRCUIT BREAKERS WITH COMMON NEUTRAL:
5, 7 & 9, 1 & 3, 16 & 18, 4 & 6, 10 & 12.

Junction Box directly above AFC Panel



ITEM	NAME	S/N	PANEL AFC	1/2" BREAKER
1	VENDOR	1862	EF	9
2	VENDOR	1865	EF	7
3	VENDOR	1867	EF	5
4	VENDOR	1872	EF	3
5	VENDOR	1863	EF	1
6	ADDFARE	2632	EF	18
7	ADDFARE	2631	EF	16
8	EXIT GATE	4808	EF	N/A
9	REV. GATE	7808	EF	6
10	ENTRY GATE	3811	EF	4
11	EXIT GATE	4818	EF	N/A
12	REV. GATE	7875	EF	12
13	ENTRY GATE	3823	EF	10
14	SHADS	8811	KE	1
15	SHADS CLOCK	95718	KES	8
16	EMERGENCY LT		KE	4

MEZZANINE NO. 73

SEE SEPARATE AL WHEN ITEM NUMBERS ARE USED OR IF DESIGNATOR MAY BE USED IN LIEU OF ITEM NUMBERS	UNLESS OTHERWISE SPECIFIED	UNLESS OTHERWISE SPECIFIED	UNLESS OTHERWISE SPECIFIED	UNLESS OTHERWISE SPECIFIED
1/2" BREAKER	1/2" BREAKER	1/2" BREAKER	1/2" BREAKER	1/2" BREAKER
1/2" BREAKER	1/2" BREAKER	1/2" BREAKER	1/2" BREAKER	1/2" BREAKER
1/2" BREAKER	1/2" BREAKER	1/2" BREAKER	1/2" BREAKER	1/2" BREAKER

U. ST. EAST STATION MEZZANINE LAYOUT
 931-4015