

# THE METROPOLITAN TRANSPORTATION AUTHORITY ACTING BY THE NEW YORK CITY TRANSIT AUTHORITY

Network for Columbus Circle Subway Station

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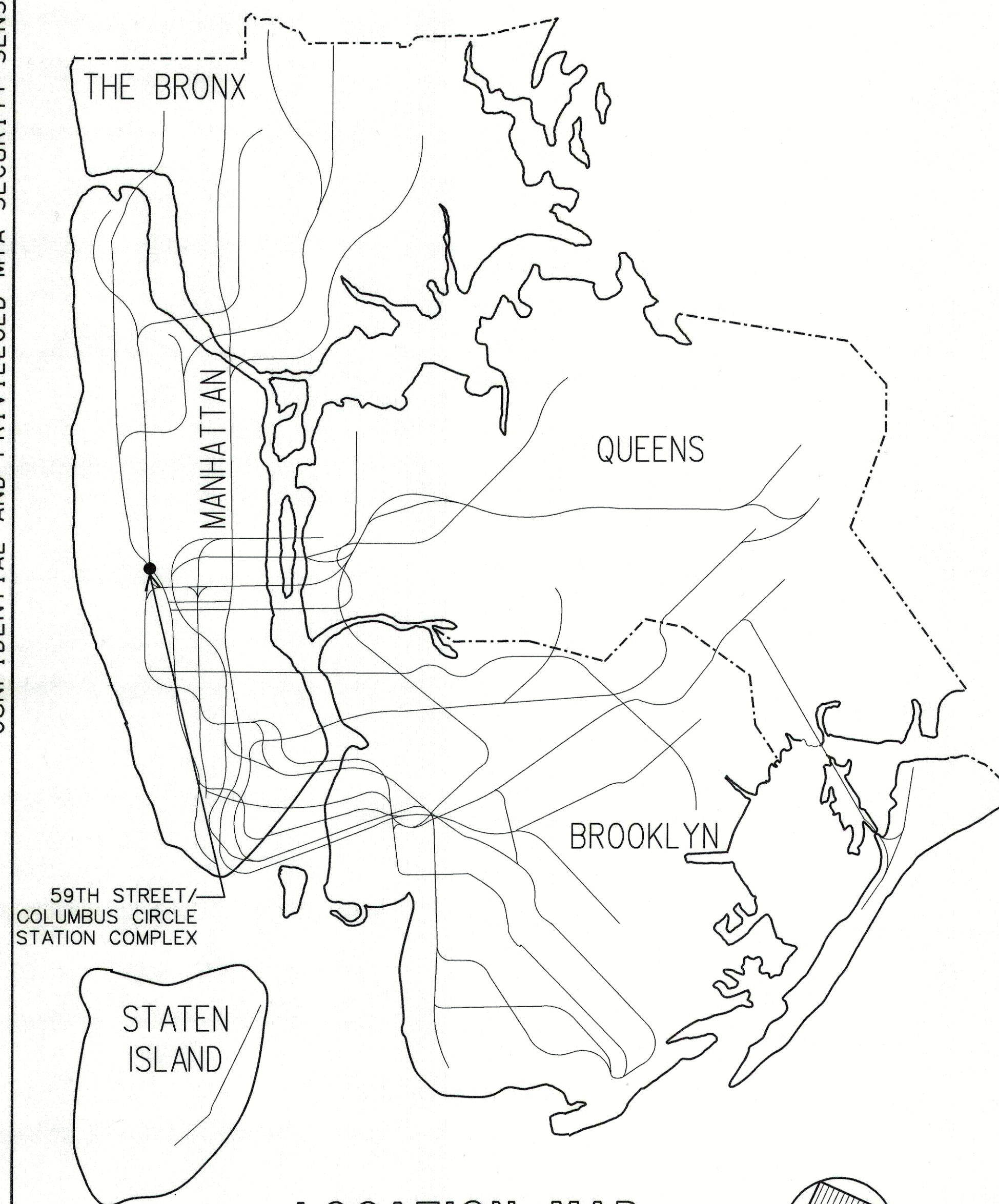
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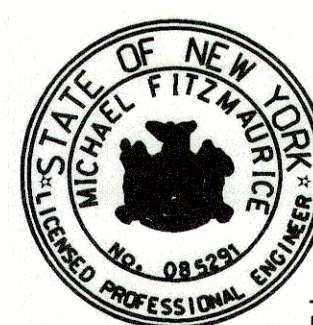
## CONTRACT C-5 2141

### ELECTRONIC SECURITY SYSTEM 59TH STREET COLUMBUS CIRCLE STATION COMPLEX

### CONTRACT DRAWINGS



**LOCATION MAP**  
NOT TO SCALE



MICHAEL FITZMAURICE, P.E.  
PRINCIPAL COMMUNICATIONS MANAGER

Nov. 30, 2018  
DATE

MTA LIMITED DISTRIBUTION

*for*   
CARL HARRIS, P.E.  
DESIGN MANAGER - SYSTEMS AND SECURITY PROGRAM  
CAPITAL PROGRAM MANAGEMENT  
MTA, NYCT

12-26-2018  
DATE

ALOK SAHA, P.E.  
VICE PRESIDENT AND CHIEF ENGINEER  
CAPITAL PROGRAM MANAGEMENT  
MTA, NYCT

12/31/2018  
DATE



GENERAL NOTES

1. THESE CONTRACT DOCUMENTS HAVE BEEN PREPARED BASED ON FIELD INSPECTION AND OTHER INFORMATION AVAILABLE DURING THE DESIGN PHASE OF THIS PROJECT. THE CONTRACTOR AS REQUIRED IN THE CONTRACT DOCUMENTS SHALL ASCERTAIN ACTUAL FIELD CONDITIONS. THE INSTALLATION CONTRACTOR SHALL EXAMINE AND VERIFY IN THE FIELD ALL RELEVANT EXISTING CONDITIONS AND DIMENSIONS WITH THOSE ON THE DRAWINGS. IF FIELD DIMENSIONS AND CONDITIONS DIFFER FROM THOSE SHOWN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER.
2. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS AND APPROVAL AND COMPLY WITH ALL APPLICABLE LOCAL, MUNICIPAL, STATE AND FEDERAL LAWS AND REGULATIONS FOR THE PERFORMANCE OF THE PROJECT WORK.
3. ALL ELECTRICAL AND COMMUNICATION DEVICES SHALL NOT BE INSTALLED NEAR PLUMBING PIPES, VALVES, SPRINKLER HEADS, ETC.
4. ALL EQUIPMENT SHALL BE ARRANGED TO PERMIT EASY ACCESS FOR OPERATION AND MAINTENANCE.
5. ALL CONDUIT CONNECTIONS SHALL BE WATERTIGHT. USE WATERTIGHT HUBS FOR ALL CONDUIT ENTRANCES INTO EQUIPMENT ENCLOSURES. ALL CONDUITS MUST BE INSTALLED MORE THAN 1 FOOT AWAY FROM WATER PIPES.
6. ALL WALL MOUNTED EQUIPMENT SHALL BE SUPPORTED BY CHANNELS OR SPACERS TO KEEP EQUIPMENT OFF THE WALL.
7. NO MORE THAN TWO 90 DEGREE BENDS SHALL BE PERMITTED IN CONDUIT RUNS BETWEEN ANY TWO BOXES UNLESS APPROVED BY THE ENGINEER.
8. TO MAINTAIN STRUCTURAL INTEGRITY, CORE DRILLING SHALL NOT BE ALLOWED WITHIN 12" ABOVE DOORS OR OTHER OPENINGS OF LOAD- BEARING OR MASONRY WALLS.

SECURITY SYSTEM NOTES

1. THIS CONTRACT SHALL PROVIDE IMPLEMENTATION OF THE SECURITY SYSTEMS IN THE 59TH STREET - COLUMBUS CIRCLE STATION COMPLEX INCLUDE BUT ARE NOT LIMITED TO CCTV SYSTEM AND ACCESS CONTROL.
2. THE PURPOSE OF THIS PROJECT IS TO PROVIDE ACCESS CONTROL, CCTV MONITORING OF EVENTS AT 59TH STREET - COLUMBUS CIRCLE STATION COMPLEX AS IDENTIFIED IN THE DRAWINGS. THE CONTRACTOR SHALL INTEGRATE THE SITE ESS INTO EXISTING PSIM (PHYSICAL SECURITY INFORMATION MANAGEMENT SYSTEM) AT REGIONAL C3 CENTER (130 LIVINGSTON PLAZA) AND OTHER LOCATIONS AS PER THE CONTRACT DRAWINGS AND SPECIFICATIONS.
3. THE EQUIPMENT TO BE FURNISHED AND INSTALLED UNDER THIS CONTRACT SHALL INCLUDE, BUT NOT BE LIMITED TO IP FIXED AND PTZ CAMERAS, ETHERWAN SWITCHES, ACCESS AND APPLICATION NODES AND ENCLOSURES, WIRE, CABLE, CONNECTORS AND ALL OTHER MISCELLANEOUS EQUIPMENT AND MATERIAL REQUIRED FOR A COMPLETE AND OPERATIONAL SECURITY SYSTEM.
4. THE LOCATIONS OF EQUIPMENT SHOWN ON THESE DRAWINGS ARE APPROXIMATE. THE FINAL LOCATIONS SHALL BE AS APPROVED BY THE NYCT.
5. ALL EQUIPMENT, DEVICES, CONDUITS AND CABLES SHALL BE NEW UNLESS OTHERWISE NOTED.
6. ALL EQUIPMENT, DEVICES, CONDUITS, AND CABLES LAYOUTS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO THE START OF INSTALLATION.
7. THE INSTALLATION CONTRACTOR SHALL FURNISH AND INSTALL ALL MOUNTING HARDWARE REQUIRED FOR THE PROPER INSTALLATION OF ALL EQUIPMENT, DEVICES, CONDUITS, AND CABLES AS PER MTA COMPANY STANDARDS, APPLICABLE CODES AND MANUFACTURERS RECOMMENDATION WHERE APPLICABLE. INSTALLATION AND MOUNTING DETAILS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
8. FURNISH OF POWER SUPPLIES REQUIRED TO POWER ALL FIELD DEVICES. ALL SECURITY DEVICES POWER SUPPLIES SHALL BE FED FROM EXISTING PANEL BOARDS CONNECTING TO THE EXISTING POWER UNINTERRUPTIBLE POWER SOURCE PLANT IN MR161/315, WITH SPARES RESERVED FOR ESS USE.
9. ALL CABLING AND WIRING BETWEEN RACK MOUNTED EQUIPMENT AND FIELD DEVICES SHALL BE DONE VIA PATCH PANELS. PROVIDE PATCH PANELS NEAR THE EQUIPMENT CABINET. ALL CABLES BETWEEN PATCH PANELS AND EQUIPMENT CABINET SHALL RUN ON OVERHEAD CABLE TRAYS.
10. THE INSTALLATION CONTRACTOR SHALL TEST ALL EQUIPMENT AND SYSTEMS IN ACCORDANCE WITH AN APPROVED TESTING PROCEDURE PRIOR TO PLACING THE EQUIPMENT IN SERVICE.





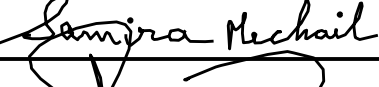

11. BEFORE THE ACCEPTANCE TEST, INSTALLATION CONTRACTOR SHALL SUBMIT ALL AS BUILT DRAWINGS, EQUIPMENT AND DEVICES BILL OF MATERIALS, SPARE PARTS LISTS, AND MANUFACTURERS WARRANTY DOCUMENTATION.
12. PRIOR TO THE ACCEPTANCE TEST, INSTALLATION CONTRACTOR SHALL PROVIDE TRAINING ON THE FULL OPERATION OF THE SECURITY SYSTEM.
13. ONE YEAR WARRANTY SHALL START FROM THE ACCEPTANCE TEST COMPLETION DATE.
14. THE CONTRACTOR SHALL PROVIDE CONDUIT TAGS, CONDUIT MARKERS (EVERY 50 FEET), WIRE TAGS AND EQUIPMENT LABELS.
15. ALL CONDUITS SHALL BE HOT DIP GALVANIZED RIGID STEEL. MINIMUM SIZE OF THE CONDUIT SHALL BE 3/4" DIAMETER FOR ABOVE GROUND AND 1" DIAMETER FOR UNDERGROUND.
16. THE CONTRACTOR SHALL FOLLOW EXISTING CONDUIT RUNS IN THE STATION AREAS, MANHOLES, AND WHEN ENTERING THE COMMUNICATION ROOM MR161/315. THE CONTRACTOR MUST USE CORRECTLY SIZED CONDUIT PER NEC CODE.
17. MINIMUM CLEAR DISTANCE OF 3 FEET BETWEEN PANELS FACING EACH OTHER AND MINIMUM HEADROOM OF WORKING SPACE ABOUT PANEL-BOARDS SHALL BE 6.5 FEET FOR OPERATION AND MAINTENANCE.
18. ALL EQUIPMENT AND SURFACES DAMAGED IN THE COURSE OF WORK SHALL BE RESTORED TO A STATE OF GOOD REPAIR BY THE CONTRACTOR, AT NO ADDITIONAL EXPENSE TO THE AUTHORITY.
19. CONTRACTOR SHALL FURNISH AND INSTALL ALL WIRING AND CABLING REQUIRED TO CONNECT TO EXISTING PSLAN WITH ALL COMMUNICATIONS COMPONENTS AS PER CONTRACT REQUIREMENTS AND FIELD CONDITIONS AT THE TIME OF INSTALLATION OF THIS CONTRACT.
20. THE INSTALLATION CONTRACTOR SHALL VERIFY ON SITE ALL CONDITIONS AND MEASUREMENTS SHOWN ON THE DRAWINGS. MAJOR DISCREPANCIES MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PERFORMING THE WORK.
21. THE CONTRACTOR SHALL RUN CABLE AND CONDUIT IN MEZZANINE AND PLATFORM AREAS IN THE MOST INCONSPICUOUS MANNER AND OUT OF THE PUBLIC VIEW WHENEVER POSSIBLE. THE INSTALLATION OF CONDUIT AND/OR BRACKETS OVER STATION MOSAIC TILES, STATION NAME PLAQUES, SIGNAGE OR ARTWORK IS EXPRESSLY PROHIBITED. ALL CABLE, EQUIPMENT AND CONDUIT LAYOUTS ARE TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION. CONDUIT WITHIN PASSENGER STATIONS SHALL BE PAINTED TO MATCH SURROUNDING SURFACES. PAINT SHALL BE APPROVED BY THE ENGINEER BEFORE PROCEEDING IN AREAS WHERE HISTORICAL ARTIFACTS (SUCH AS TILES) EXIST, NO CONDUITS AND DEVICES SHALL BE ATTACHED TO THE HISTORICAL ARTIFACTS. NO CONDUITS AND DEVICES SHALL BE ATTACHED TO ANY TILED SURFACE WITHOUT SPECIFIC PERMISSION FROM THE ENGINEER.
22. "MOGUL" SERIES CONDULETS TO BE INSTALLED EVERY 80' BETWEEN PULLING POINTS. FOR CONDUITS CARRYING FIBER CABLE, PULL BOXES SHALL BE USED IN PLACE OF CONDULETS TO ALLOW FOR WIDER SWEEPS SO AS TO ENSURE BENDS DO NOT EXCEED MINIMUM BEND RADIUS REQUIREMENTS FOR CABLE.
23. FASTEN EACH CONDUIT RUN TO THE STRUCTURE BY GALVANIZING MALLEABLE IRON CLAMPS, PER APPROVED DESIGN. SPACE NOT MORE THAN:  

EVERY 5 FEET WHEN FASTEN TO STEEL.  
EVERY 7-1/2 FEET WHEN FASTEN TO CONCRETE  
EVERY 3 FEET WHEN FASTEN OVER TRACKWAYS.
24. CLAMPS WILL NOT BE INSTALLED WITHIN 6 INCHES OF COUPLINGS, BOXES, OR FITTINGS IN CONDUIT RUNS IN WHICH EXPANSION JOINS ARE INSTALLED.
25. ROUTING OF CONDUITS INTO COMMUNICATIONS ROOMS VIA DRILLING THROUGH "MOSAIC ART WORKS" IS NOT PERMITTED.
26. CONDUIT SHALL BE RUN TOGETHER WHEN CROSSING THE PLATFORM CEILING.
27. FLAGGING IS REQUIRED FOR ALL WORK WITHIN EIGHT (8) FEET OF THE EDGE OF THE PLATFORM. FOR THE PURPOSE OF BIDDING, ASSUME THAT ALL PLATFORM CONDUIT SHALL BE INSTALLED UNDER FLAGGING CONDITIONS.
28. ALL PAINTED SURFACES AND METAL SHEATHED CABLES SHALL BE CONSIDERED AS LEAD CONTAINING. CONFORM TO SPECIFICATION SECTION 12L FOR CONTAINMENT, PAINT DEBRIS COLLECTION AND REMOVAL, WORKER PROTECTION AND ENVIRONMENTAL REQUIREMENTS.

29. CONTRACTOR TO PROVIDE AS-BUILTS TO INDICATE NUMBER AND TYPES OF CABLES INSIDE EACH CONDUIT BY FOLLOWING STATION LAYOUT PLANS AND SCHEDULES.
30. ALL NEWLY INSTALLED EQUIPMENT AND WIRING SHALL COMPLY WITH THE APPLICABLE PROVISIONS OF NFPA 70, 2014 EDITION.
31. ALL PENETRATIONS SHALL BE FIRE-STOPPED WITH AN APPROVED FIRE-STOPPING SYSTEM PURSUANT TO 2017 BCNYS, CHAPTER 714, IN ORDER TO MAINTAIN THE INTEGRITY OF THE FIRE-RATED PARTITIONS.
32. ALL WORK SHALL BE IN COMPLIANCE WITH THE 2017 NYS UNIFORM CODE.
33. SAFEGUARDS DURING CONSTRUCTION AND DEMOLITION SHALL COMPLY WITH CHAPTER 33 OF BOTH THE 2017 FIRE CODE NYS AND THE 2017 BCNYS.

NETWORK/PSLAN

1. THE CONTRACTOR SHALL FURNISH AND INSTALL CONCENTRIC PSLAN DEDICATED TO IP CAMERAS INSTALLED AT MEZZANINE, IND AND IRT PLATFORMS THROUGH CONNECTION TO EXISTING FOC AVAILABLE IN EXISTING PSLAN DISTRIBUTED IN THE STATION COMPLEX. THIS INCLUDES ACCESS NODES, APPLICATION NODES, CABLES/CONDUITS, FIELD RUGGED L2 SWITCHES ETC. REFER TO FOC SERIES TO LOCATION PLANS AND INSTALLATION DETAILS.
2. THE CONTRACTOR SHALL MAKE ALL NECESSARY CONNECTIONS FROM THE CONCENTRIC PSLAN TO EXISTING RTO CCTV CABINET AND EXISTING NYCT COE CABINET IN COMM. ROOM MR161/315 FOR HIGH-SPEED VIDEO TRANSPORT TO NYCT REGIONAL C3 CENTER AND NYPD COMMAND CENTER.
3. THE CONTRACTOR SHALL RECONFIGURE THE EXISTING VMS SERVER (THEMIS) IN EXISTING RTO CCTV CABINET TO MULTISTREAM EXISTING ADA CAMERAS TO (2) C3 CENTERS OF NYCT/NYPD.
4. THE CONTRACTOR SHALL FOLLOW PSIM SITE READINESS PROCEDURES IN SPECIFICATION IAB TO INTEGRATE THE STATION ESS TO THE EXISTING PSIM PLATFORM (QOQNIFY SITUATOR) AT NYCT REGIONAL C3 CENTER LOCATED IN 130 LIVINGSTON PLAZA.
5. SEE DWG. FOC-G01 FOR MORE FOC NOTES.

REVISION	DESCRIPTION	DATE	APPROVED
IT IS A VIOLATION OF THE PROFESSIONAL LICENSE LAW FOR ANY PERSON TO ALTER THIS DRAWING IN ANYWAY, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ARCHITECT OR ENGINEER. THE ALTERING ARCHITECT OR ENGINEER SHALL AFFIX HIS/HER SEAL AND THE NOTATION OF "ALTERED BY" FOLLOWED BY HIS/HER SIGNATURE AND DATE OF ALTERATION. A TA ENGINEER DOES NOT NEED TO ADD HIS/HER SEAL.			
 <div>New York City Transit Authority</div>		CONTRACT C-52141 ELECTRONIC SECURITY SYSTEMS 59TH STREET-COLUMBUS CIRCLE STATION COMPLEX	
 <div>100 Broadway New York, NY 10005</div>		GENERAL NOTES	
DRAWN BY	CYNTHIA MEDINA		DATE : 11/30/2018
DESIGNED BY	YUQING DING P.E.		DRAWING NO.
CHECKED BY	SAMIRA MICHAEL		G-02
APPROVED BY	M. FITZMAURICE P.E.		REVISION

