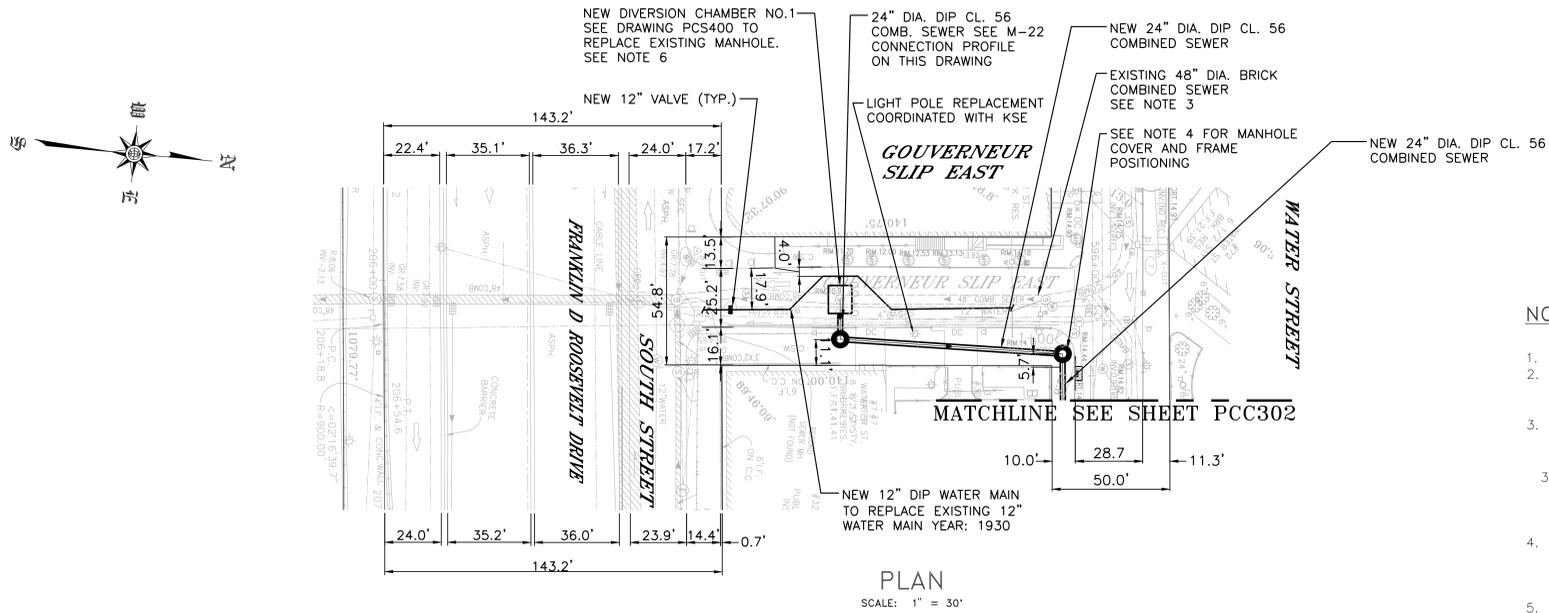


Appendix C1j
Preferred Alternative - Parallel Conveyance
Civil Plan and Profile

TABLE OF CONTENTS

SHEET NO.	DRAWING NO.	SHEET TITLE
PCC301	SANDRESM1-PCC301-00.DWG	PARALLEL CONVEYANCE CIVIL PLAN & PROFILE REGULATORS M-22 & M-23 SHEET 1 OF 3
PCC302	SANDRESM1-PCC302-00.DWG	PARALLEL CONVEYANCE CIVIL PLAN & PROFILE REGULATORS M-22 & M-23 SHEET 2 OF 3
PCC303	SANDRESM1-PCC303-00.DWG	PARALLEL CONVEYANCE CIVIL PLAN & PROFILE REGULATORS M-22 & M-23 SHEET 3 OF 3
PCC304	SANDRESM1-PCC304-00.DWG	PARALLEL CONVEYANCE CIVIL PLAN & PROFILE REGULATORS M-27 & M-28
PCC305	SANDRESM1-PCC305-00.DWG	PARALLEL CONVEYANCE CIVIL PLAN & PROFILE REGULATORS M-31
PCC306	SANDRESM1-PCC306-00.DWG	PARALLEL CONVEYANCE CIVIL PLAN & PROFILE EAST 10TH STREET
PCC307	SANDRESM1-PCC307-00.DWG	PARALLEL CONVEYANCE CIVIL PLAN & PROFILE REGULATORS M-37 & M-38
PCC308	SANDRESM1-PCC308-00.DWG	PARALLEL CONVEYANCE CIVIL PLAN & PROFILE REGULATORS M-38 & M-38A
PCC309	SANDRESM1-PCC309-00.DWG	PARALLEL CONVEYANCE CIVIL PLAN & PROFILE REGULATORS M-38B & M-39

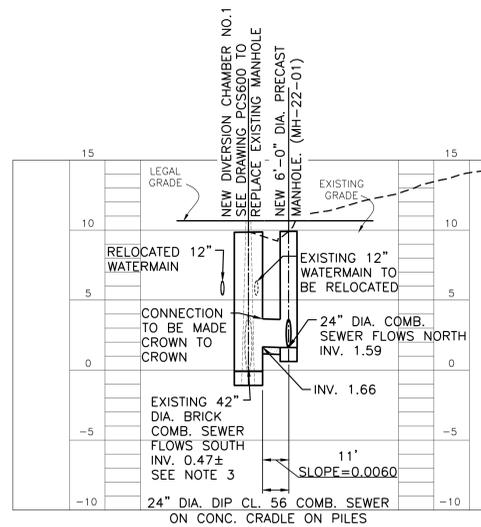
REVISED MASS MAILING #1 SUBMISSION 7/18/2019



PLAN
SCALE: 1" = 30'

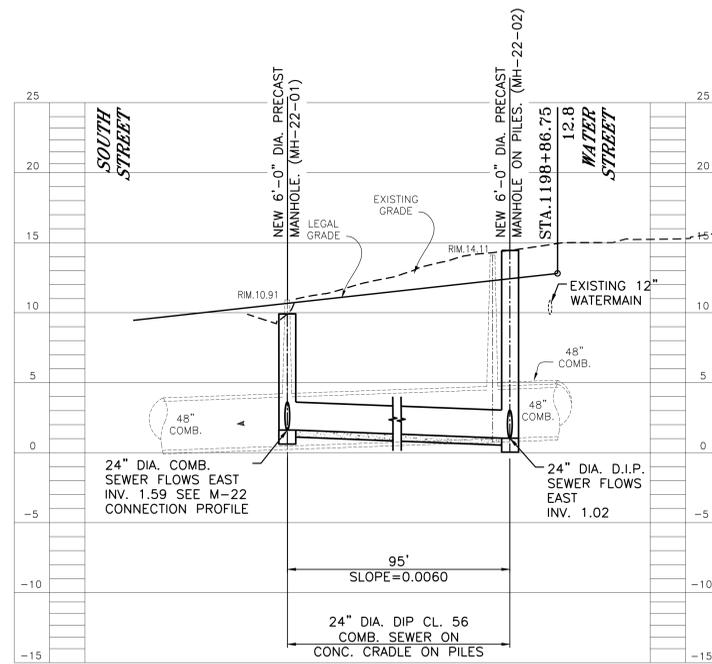
NOTES:

- FOR CIVIL GENERAL NOTES, SEE DRAWING PCC001
- THE PILE SUPPORT DESIGN FOR THE PROPOSED COMBINED SEWERS IS CONTINGENT UPON THE COMPLETION OF THE GEOTECHNICAL INVESTIGATION FOR THIS AREA INCLUDING FINAL RECOMMENDATIONS ON PILE TYPE, SIZE, SPACING, ETC.
- ACCORDING TO RECORD DRAWINGS, THE EXISTING 48" DIAMETER BRICK COMBINED SEWER ON GOUVERNEUR SLIP EAST HAS BEEN GUNITED 3" LEAVING AN EFFECTIVE DIAMETER TO 42". ELEVATIONS WERE CALCULATED WITH THE FOLLOWING:
 - CONSOLIDATION ACT 1882 AS-BUILT DRAWINGS: GOUVERNEUR SLIP EAST AND WEST SIDES BETWEEN SOUTH AND WATER STREETS WITH ALTERATION AND IMPROVEMENT TO CONNECTING SEWERS IN FRONT, WATER AND GOUVERNEUR STS. JULY 12, 1897 UNDER CHAPTER 381, SECTION 4, LAWS 1865.
- MANHOLE MH-22-02 SHALL BE INSTALLED SO THE FRAME AND COVER IS PLACED AT A MAXIMUM DISTANCE FROM THE PEDESTRIAN RAMP LOCATED AT THE CORNER OF GOUVERNEUR SLIP EAST AND WATER STREET. REPLACEMENT OF PEDESTRIAN RAMP TO BE COORDINATED WITH KSE.
- ALL DUCTILE IRON PIPE SEWERS AND WATER MAINS SHALL BE FURNISHED WITH NITRILE GASKETS. THE COST TO FURNISH AND INSTALL THE NITRILE GASKETS SHALL BE INCLUDED IN THE ASSOCIATED DUCTILE IRON PIPE SEWER ITEM(S) 50.41
- FLOW TO BE MAINTAINED IN EXISTING 48" DIAMETER COMBINED SEWER THROUGHOUT CONSTRUCTION. FULL PIPE FLOW IS 65.46 MGD PER MANNING'S EQUATION WHERE $n=0.015$, ASSUMING A SLOPE OF 0.662%, PER RECORD DRAWING MENTIONED IN NOTE 3.1



M-22 CONNECTION PROFILE

SCALE:
VERT.: 1" = 5'
HORIZ.: 1" = 30'

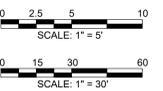


PROFILE - GOUVERNEUR SLIP EAST

SCALE:
VERT.: 1" = 5'
HORIZ.: 1" = 30'

NOTE: ALL ELEVATIONS SHOWN ON THIS SURVEY REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). TO CONVERT THIS DATUM TO MANHATTAN DATUM, SUBTRACT 1.652 FEET FROM EACH ELEVATION

PRELIMINARY
SUBMITTED DATE: 07/18/2019



TOPOGRAPHIC SURVEY PREPARED BY: FOR SURVEYOR
INFORMATION SEE SURVEY SET SUI00 DRAWINGS SERIES

FINAL DESIGN SUBMITTED BY:



FINAL DESIGN PREPARED BY:



HAZEN AND SAWYER, D.P.C.
NAME OF CONSULTANT

SIGNATURE
DATE

CITY OF NEW YORK
DEPARTMENT OF DESIGN + CONSTRUCTION
DIVISION OF INFRASTRUCTURE
BUREAU OF DESIGN

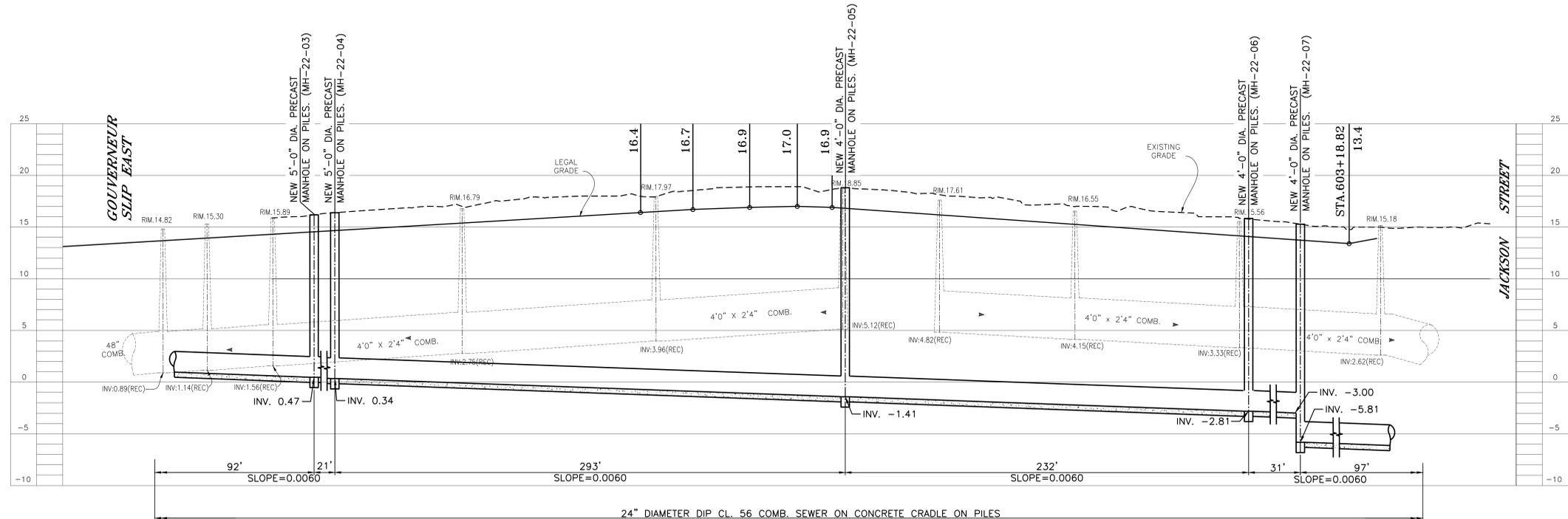
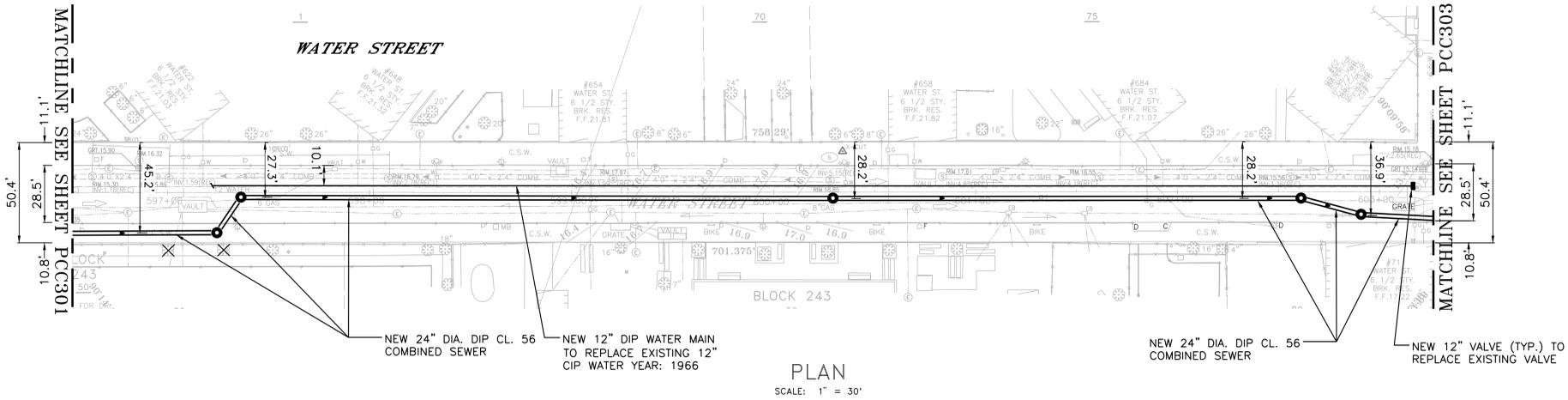
PARALLEL CONVEYANCE
CIVIL PLAN & PROFILE
REGULATORS M-22 & M-23 SHEET 1 OF 3
HAZEN AND SAWYER
DRAWN BY: SANDRESM1-PCC301-00.DWG
CADD FILE

INSTALLATION OF
EAST SIDE COASTAL RESILIENCY
BOROUGH OF MANHATTAN

NO.	DATE	DESCRIPTIONS	BY	APPR'D

CAPITAL PROJECT NO. SANDRESM1 7/18/2019 SHEET 752 OF 1594 PCC301

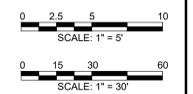
REVISED MASS MAILING #1 SUBMISSION 7/18/2019



NOTES:

1. FOR CIVIL GENERAL NOTES, SEE DRAWING PCC001
2. THE PILE SUPPORT DESIGN FOR THE PROPOSED COMBINED SEWERS IS CONTINGENT UPON THE COMPLETION OF THE GEOTECHNICAL INVESTIGATION FOR THIS AREA.
3. ALL DUCTILE IRON PIPE SEWERS AND WATER MAINS SHALL BE FURNISHED WITH NITRILE GASKETS. THE COST TO FURNISH AND INSTALL THE NITRILE GASKETS SHALL BE INCLUDED IN THE ASSOCIATED DUCTILE IRON PIPE SEWER ITEM(S) 50.41

PRELIMINARY
SUBMITTED DATE: 07/18/2019



NOTE: ALL ELEVATIONS SHOWN ON THIS SURVEY REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). TO CONVERT THIS DATUM TO MANHATTAN DATUM, SUBTRACT 1.652 FEET FROM EACH ELEVATION

TOPOGRAPHIC SURVEY PREPARED BY: FOR SURVEYOR
INFORMATION SEE SURVEY SET SU100 DRAWINGS SERIES

<p style="font-size: x-small;">FINAL DESIGN SUBMITTED BY:</p> <p style="font-size: x-small;">The AKRF-KSE JV</p>	<p style="font-size: x-small;">FINAL DESIGN PREPARED BY:</p> <p style="font-size: x-small;">Hazen HAZEN AND SAWYER, D.P.C. NAME OF CONSULTANT</p>	<p style="font-size: x-small;">SIGNATURE _____</p> <p style="font-size: x-small;">DATE _____</p>
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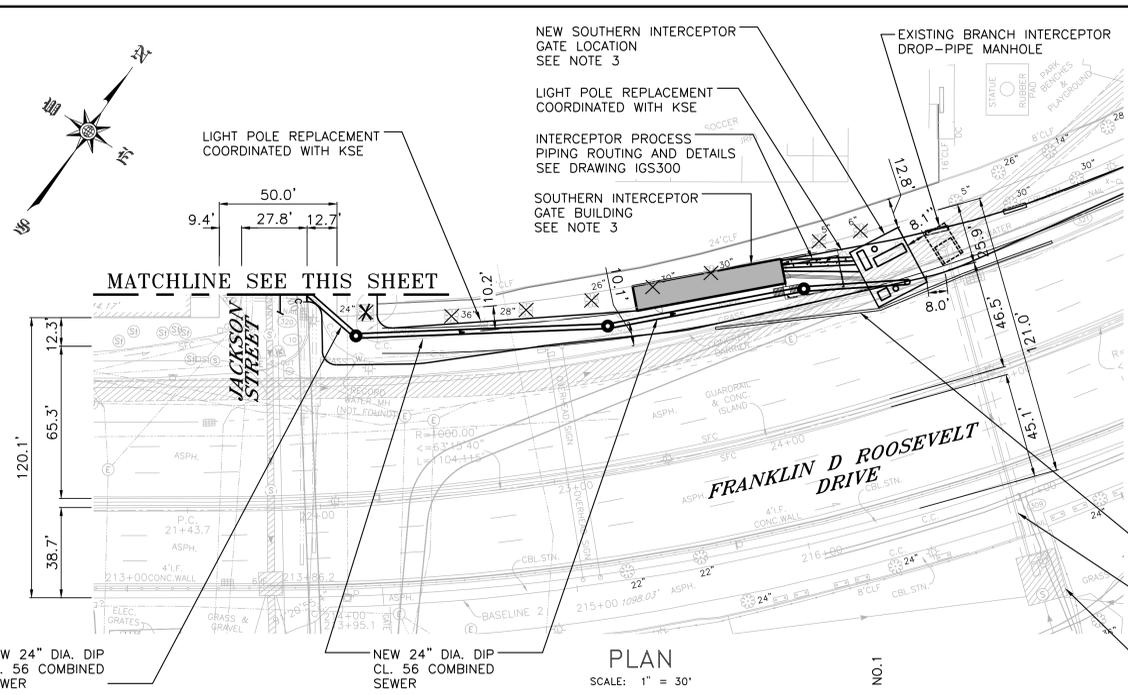
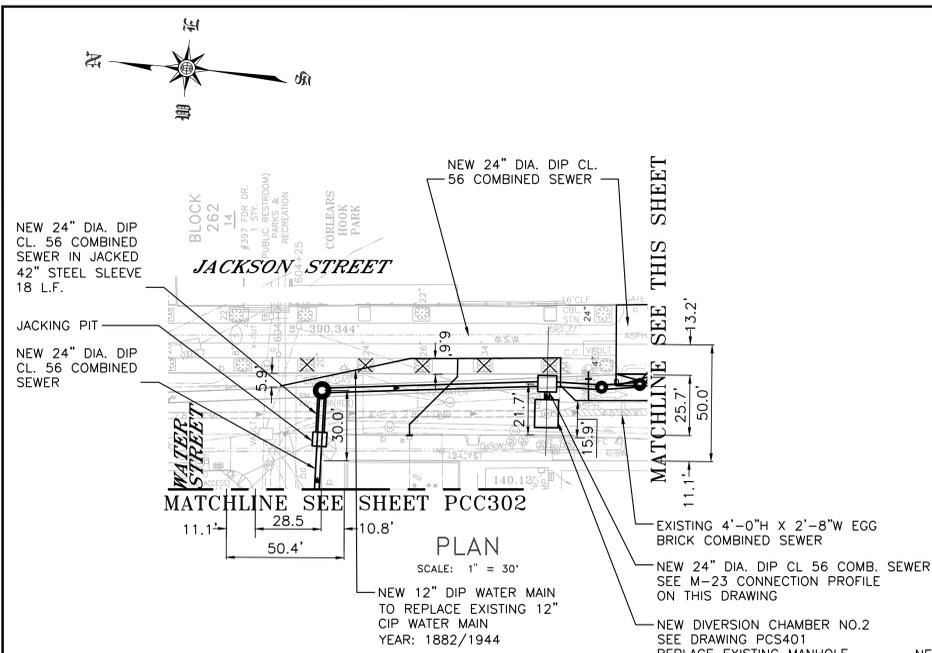
CITY OF NEW YORK
DEPARTMENT OF DESIGN + CONSTRUCTION
DIVISION OF INFRASTRUCTURE
BUREAU OF DESIGN

PARALLEL CONVEYANCE
CIVIL PLAN & PROFILE
REGULATORS M-22 & M-23 SHEET 2 OF 3
HAZEN AND SAWYER
DRAWN BY SANDRESM1-PCC302-00.DWG
CADD FILE

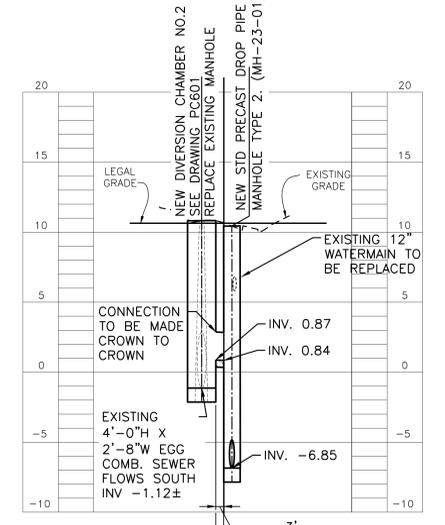
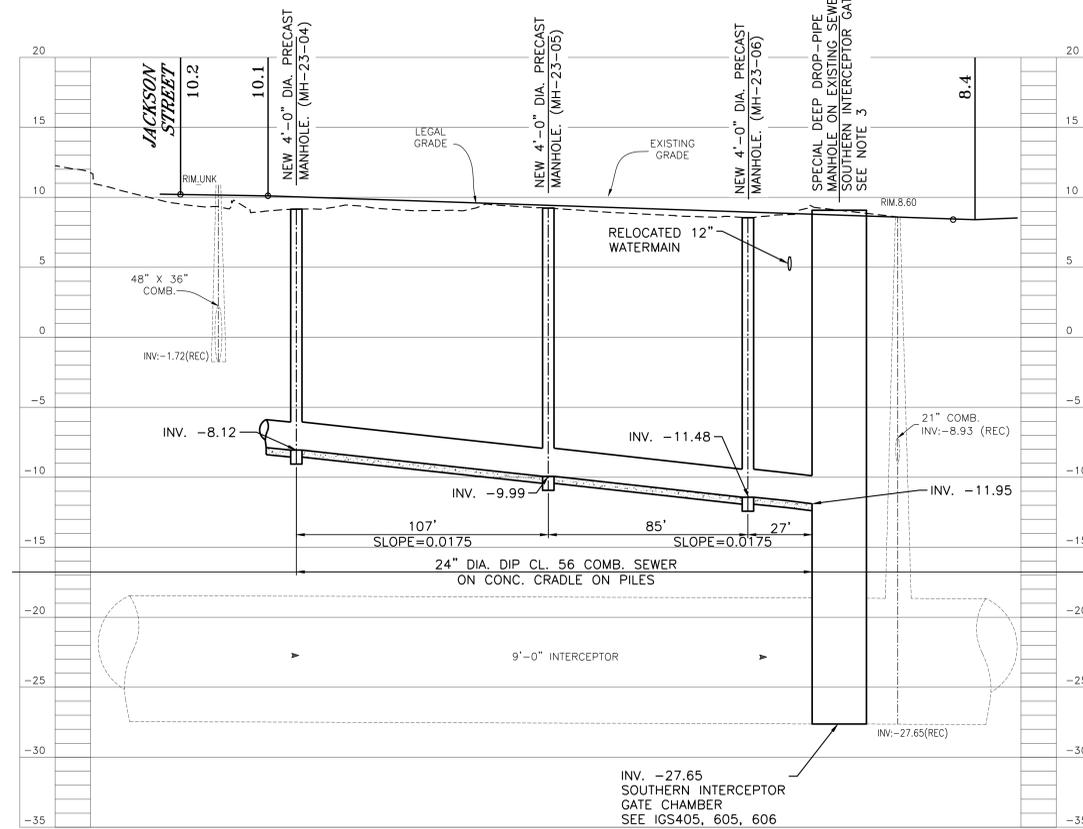
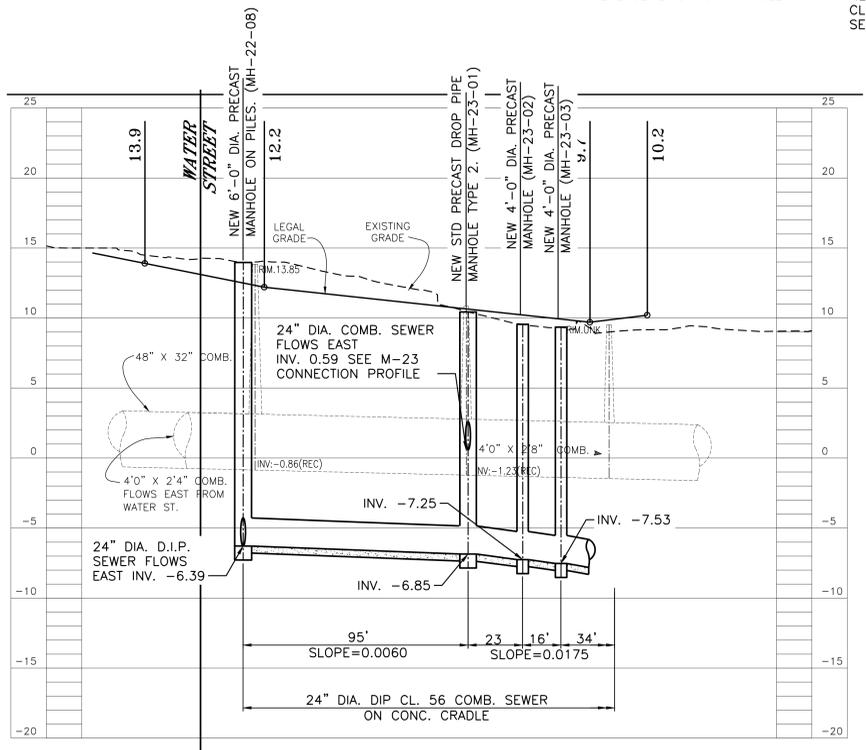
NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

CAPITAL PROJECT NO. SANDRESM1 7/18/2019 SHEET 753 OF 1594 PCC302

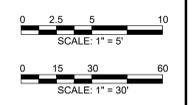
REVISED MASS MAILING #1 SUBMISSION 7/18/2019



- NOTES:**
- FOR CIVIL GENERAL NOTES, SEE DRAWING PCC001
 - THE PILE SUPPORT DESIGN FOR THE PROPOSED COMBINED SEWERS IS CONTINGENT UPON THE COMPLETION OF THE GEOTECHNICAL INVESTIGATION FOR THIS AREA.
 - REFERENCE THE FOLLOWING DRAWING SECTIONS:
 - SOUTHERN INTERCEPTOR GATE BUILDING (IGB) DETAILS CAN BE FOUND IN THE ARCHITECTURAL DRAWINGS.
 - INTERCEPTOR GATE (IG) CHAMBER DETAILS CAN BE FOUND IN THE IG DRAWINGS.
 - SUPPORT OF EXCAVATION (SOE) DETAILS CAN BE FOUND IN THE STRUCTURAL DRAWINGS.
 - ALL DUCTILE IRON PIPE SEWERS AND WATER MAINS SHALL BE FURNISHED WITH NITRILE GASKETS. THE COST TO FURNISH AND INSTALL THE NITRILE GASKETS SHALL BE INCLUDED IN THE ASSOCIATED DUCTILE IRON PIPE SEWER ITEM(S) 50.41
 - FLOW TO BE MAINTAINED IN EXISTING 4'-0" H X 2'-0" W "EGG" COMBINED SEWER THROUGHOUT CONSTRUCTION. FULL PIPE FLOW IS 29.29 MGD PER MANNING'S EQUATION WHERE $n=0.015$, ASSUMING A SLOPE OF 0.412%, PER RECORD DRAWING ALTERNATION AND IMPROVEMENT TO OUTLET AND SEWER IN JACKSON STREET BETWEEN EAST RIVER AND FRONT STREET SEPTEMBER 27TH 1898 UNDER CHAPTER 378, LAWS 1897



PRELIMINARY
SUBMITTED DATE: 07/18/2019



TOPOGRAPHIC SURVEY PREPARED BY: FOR SURVEYOR INFORMATION SEE SURVEY SET SU100 DRAWINGS SERIES

NOTE: ALL ELEVATIONS SHOWN ON THIS SURVEY REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). TO CONVERT THIS DATUM TO MANHATTAN DATUM, SUBTRACT 1.652 FEET FROM EACH ELEVATION

FINAL DESIGN SUBMITTED BY: **AKRF KSE**
The AKRF-KSE JV

FINAL DESIGN PREPARED BY: **Hazen**
HAZEN AND SAWYER, D.P.C.
NAME OF CONSULTANT

SIGNATURE _____
DATE _____

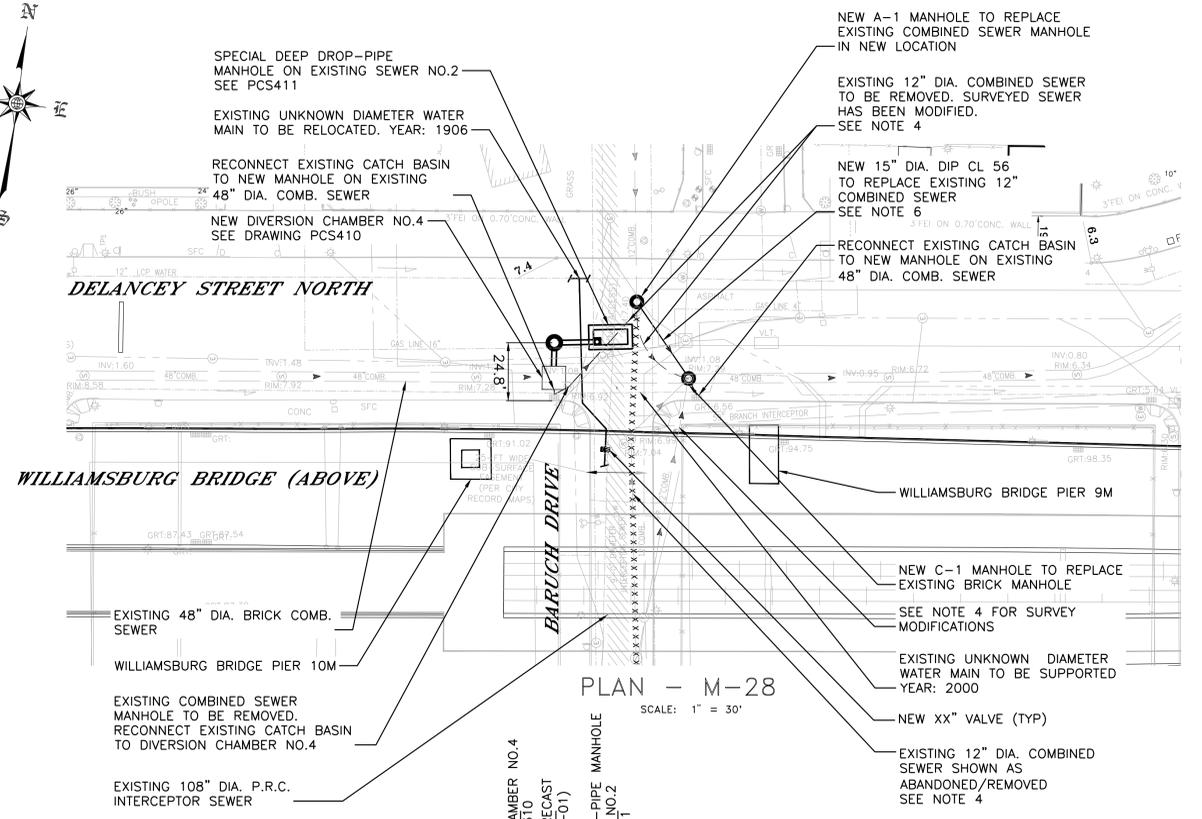
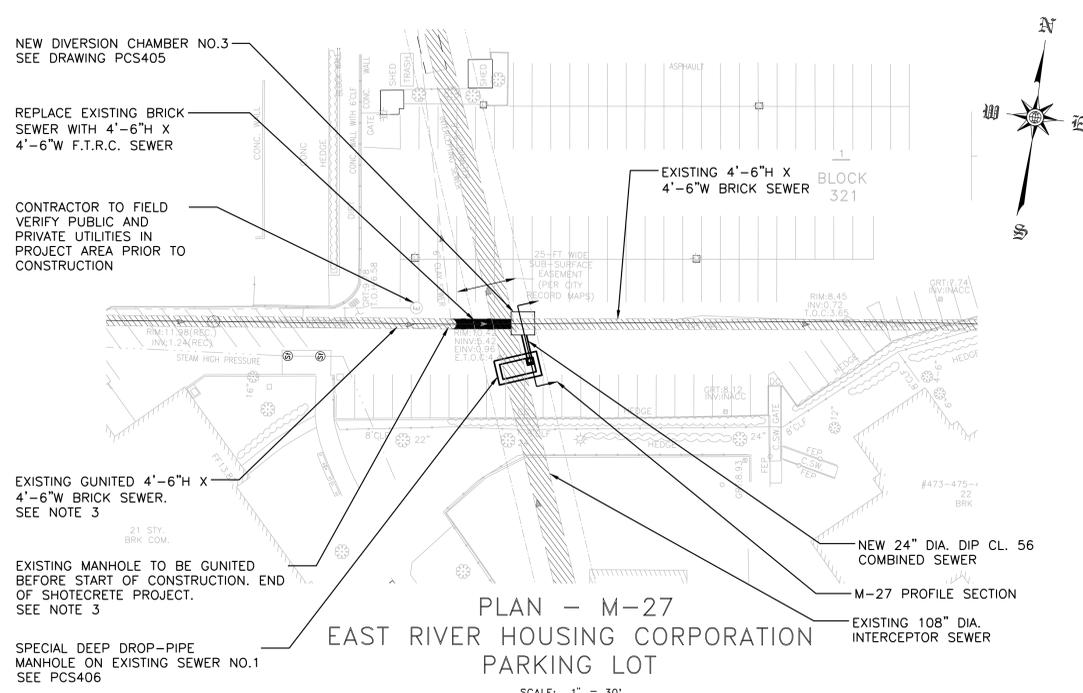
CITY OF NEW YORK
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DIVISION OF INFRASTRUCTURE
BUREAU OF DESIGN

PARALLEL CONVEYANCE
CIVIL PLAN & PROFILE
REGULATORS M-22 & M-23 SHEET 3 OF 3
HAZEN AND SAWYER
DRAWN BY SANDRESM1-PCC303-00.DWG
CADD FILE

NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

CAPITAL PROJECT NO. SANDRESM1 7/18/2019
SHEET 754 OF 1594
PCC303

REVISED MASS MAILING #1 SUBMISSION 7/18/2019

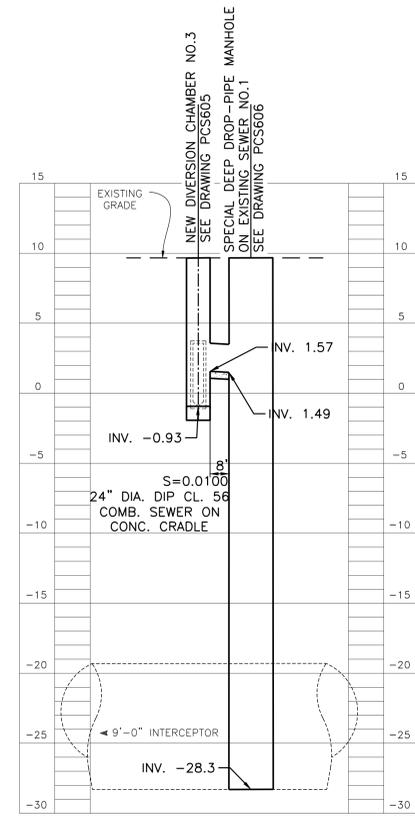


PLAN - M-27
EAST RIVER HOUSING CORPORATION
PARKING LOT
SCALE: 1" = 30'

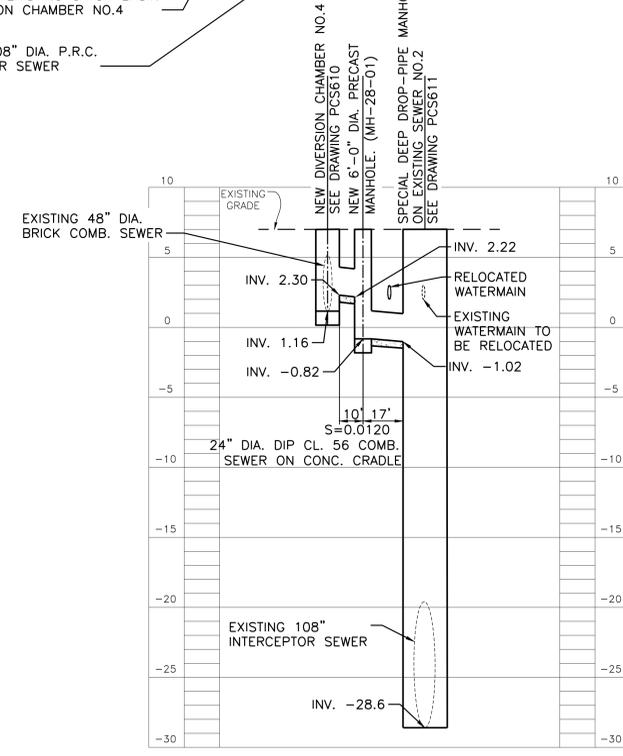
PLAN - M-28
SCALE: 1" = 30'

NOTES:

1. FOR CIVIL GENERAL NOTES, SEE DRAWING PCC001
2. THE PILE SUPPORT DESIGN FOR THE PROPOSED COMBINED SEWER IS CONTINGENT UPON THE COMPLETION OF THE GEOTECHNICAL INVESTIGATION FOR THIS AREA.
3. THE EXISTING 4'-6"H X 4'-6"W BRICK SEWER HAS BEEN MODIFIED WITH SHOTCRETE WITH AN ADDED INTERNAL THICKNESS OF 3" ALL AROUND. THE EFFECT DIAMETER FOR THE SEWER WEST OF THE INDICATED MANHOLE IS 4'-0"W X 4'-0"H. REFERENCE RECORD DRAWING:
 - 3.1. NYCDP BWSO RECORD AS-BUILT DRAWING: EMERGENCY REHABILITATION OF SANITARY AND COMBINED SEWERS BY THE SHOTCRETE METHOD IN VARIOUS LOCATIONS CITY-WIDE SE-GUN-06. EN-TECH CORP RECORD NO. 6997 SHEET 3 OF 3. DATE SEWER COMPLETED: 02/15/2005
4. SURVEY DRAWINGS HAVE BEEN MODIFIED ON M-28 FOR THE 48" DIAMETER COMBINED SEWER AND ADJACENT 12" DIAMETER V.C.P. COMBINED SEWER. ALIGNMENTS WERE VERIFIED WITH THE FOLLOWING:
 - 4.1. NYCDOT RECORD AS-BUILT DRAWING: CONTRACT NO.BRC 253 C, SHEET 517, DATE: 5/02/2006
 - 4.2. NYCDP RECORD DRAWING: CONTRACT NO.4 SOUTH BRANCH INTERCEPTING SEWER - EAST SIDE DELANCEY STREET - BARUCH PL. TO RIVER PROMENADE, SHEET 20, DATE: 6/30/1967
5. THE M-27 SEWER ALIGNMENT IS LOCATED IN THE PARKING LOT OF THE EAST RIVER HOUSING CORPORATION. STREETS WEST AND EAST ARE LEWIS STREET AND FDR DRIVE, RESPECTIVELY. STREETS NORTH AND SOUTH ARE DELANCEY STREET AND GRAND STREET, RESPECTIVELY. THE M-27 AND M-28 PROFILE IS THE PIPE CENTERLINE PROFILE.
6. PROFILE TO BE CREATED WHEN AS-BUILT DRAWINGS FOR 12" COMBINED SEWER IS RECEIVED.
7. ALL DUCTILE IRON PIPE SEWERS AND WATER MAINS SHALL BE FURNISHED WITH NITRILE GASKETS. THE COST TO FURNISH AND INSTALL THE NITRILE GASKETS SHALL BE INCLUDED IN THE ASSOCIATED DUCTILE IRON PIPE SEWER ITEM(S) 50.41
8. FLOW TO BE MAINTAINED IN M-27 EXISTING 4'-0"H X 4'-0"W COMBINED SEWER AND M-28 EXISTING 48" DIAMETER COMBINED SEWER THROUGHOUT CONSTRUCTION. FULL PIPE FLOW FOR M-27 AND M-28 IS 55.07 MGD AND 45.94 MGD, RESPECTIVELY PER MANNING'S EQUATION WHERE $n=0.015$. M-27 AND M-28 INTERPOLATED SLOPES OF 0.289% AND 0.326%, RESPECTIVELY.
- 9.1. M-27 SLOPE INTERPOLATED FROM RECORD DRAWING MENTIONED IN NOTE 3.1
- 9.2. M-28 SLOPE INTERPOLATED FROM INVERTS PROVIDED IN THIS SURVEY

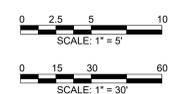


M-27 PROFILE SECTION
EAST RIVER HOUSING CORPORATION PARKING LOT
SCALE:
VERT.: 1" = 5'
HORIZ.: 1" = 30'



M-28 PIPE CENTERLINE PROFILE - DELANCEY STREET NORTH
SCALE:
VERT.: 1" = 5'
HORIZ.: 1" = 30'

PRELIMINARY
SUBMITTED DATE: 07/18/2019



TOPOGRAPHIC SURVEY PREPARED BY: FOR SURVEYOR INFORMATION SEE SURVEY SET SUI00 DRAWINGS SERIES

NOTE: ALL ELEVATIONS SHOWN ON THIS SURVEY REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVOD88). TO CONVERT THIS DATUM TO MANHATTAN DATUM, SUBTRACT 1.652 FEET FROM EACH ELEVATION

FINAL DESIGN SUBMITTED BY:
AKRF KSE
The AKRF-KSE JV

FINAL DESIGN PREPARED BY:
Hazen
HAZEN AND SAWYER, D.P.C.
NAME OF CONSULTANT

SIGNATURE _____
DATE _____

CITY OF NEW YORK
DEPARTMENT OF DESIGN + CONSTRUCTION
DIVISION OF INFRASTRUCTURE
BUREAU OF DESIGN

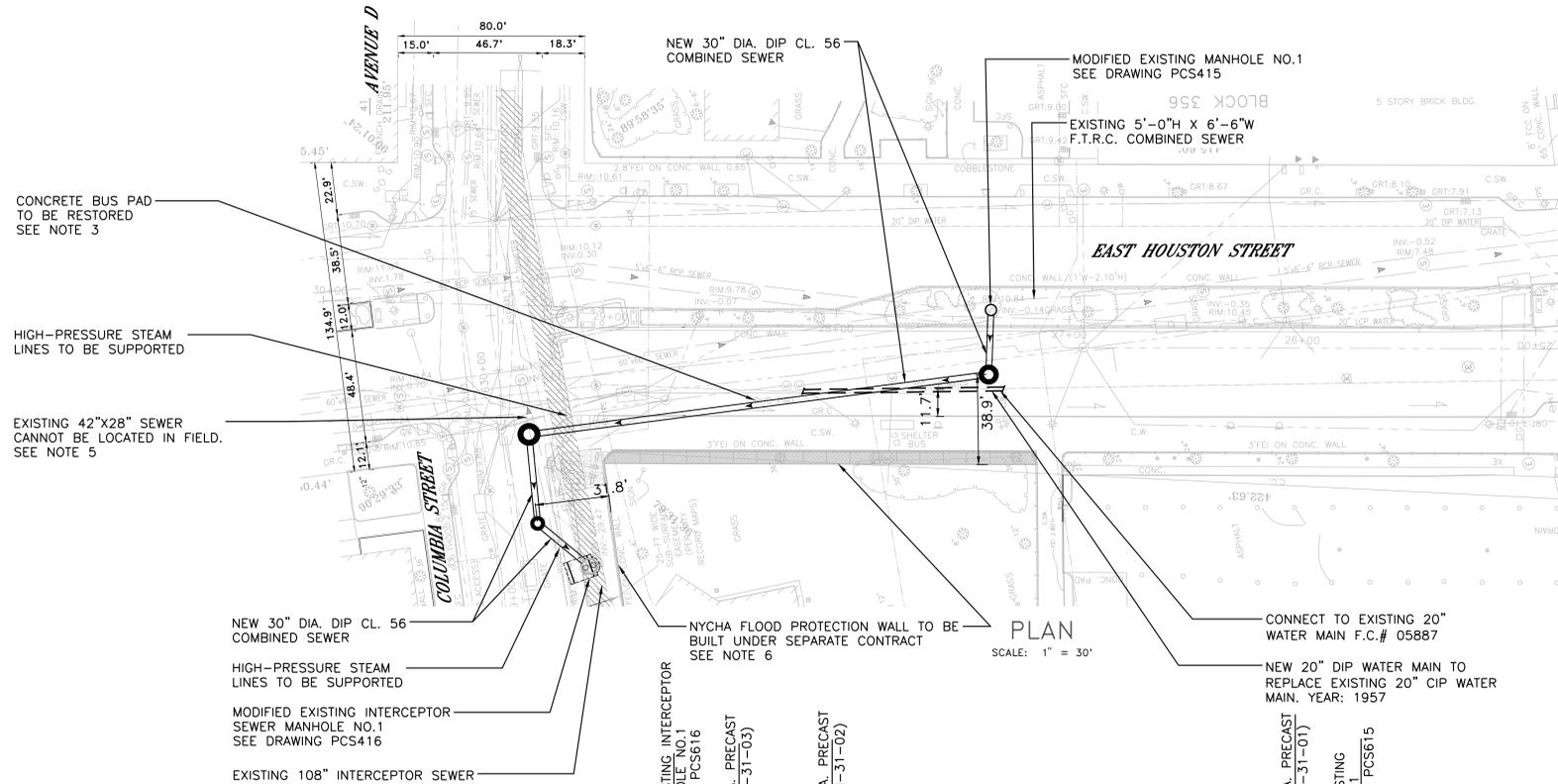
PARALLEL CONVEYANCE
CIVIL PLAN & PROFILE
REGULATORS M-27 & M-28
HAZEN AND SAWYER
DRAWN BY SANDRESM1-PCC304-00.DWG
CADD FILE

INSTALLATION OF
EAST SIDE COASTAL RESILIENCY
BOROUGH OF MANHATTAN

NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

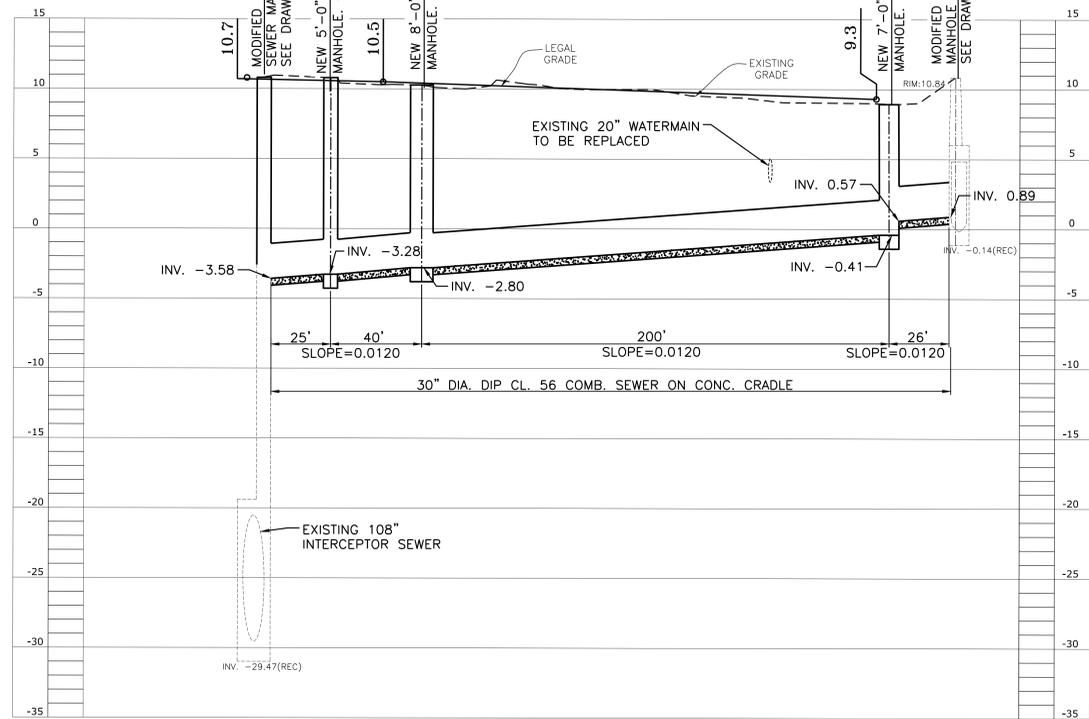
CAPITAL PROJECT NO. SANDRESM1 7/18/2019 SHEET 755 OF 1594 PCC304

REVISED MASS MAILING #1 SUBMISSION 7/18/2019

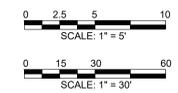


NOTES:

1. FOR CIVIL GENERAL NOTES, SEE DRAWING PCC001
2. THE PILE SUPPORT DESIGN FOR THE PROPOSED COMBINED SEWER IS CONTINGENT UPON THE COMPLETION OF THE GEOTECHNICAL INVESTIGATION FOR THIS AREA.
3. COMBINED SEWER CONSTRUCTION WILL REQUIRE RESTORATION OF ENTIRE MTA BUS STOP. BUS SERVICE TO BE COORDINATED WITH NYCT. RESTORATION PLANS PROVIDED ON PMP DRAWINGS BY AKRF.
4. COMBINED SEWER CONSTRUCTION WILL REQUIRE RESTORATION OF THE MEDIAN.
5. EXISTING 42"x28" COMBINED SEWER ON COLUMBIA STREET WEST OF THE INTERCEPTOR SEWER COULD NOT BE LOCATED BY NYCDEP. EMAIL DATED 2/20/2019 STATES THAT THE SEWER LIKELY DOES NOT EXIST. CONTRACTOR TO CONFIRM PRIOR TO CONSTRUCTION.
6. NYCHA FLOOD PROTECTION WALL WILL BE BUILT UNDER A SEPARATE CONTRACT. CONSTRUCTION OF MODIFIED INTERCEPTOR MANHOLE ANTICIPATED TO REQUIRE PARTIAL REMOVAL OF NYCHA FLOOD WALL NEAR MODIFICATION OF EXISTING INTERCEPTOR MANHOLE. THIS SEGMENT MUST BE RESTORED FOLLOWING CONSTRUCTION.
7. ALL DUCTILE IRON PIPE SEWERS AND WATER MAINS SHALL BE FURNISHED WITH NITRILE GASKETS. THE COST TO FURNISH AND INSTALL THE NITRILE GASKETS SHALL BE INCLUDED IN THE ASSOCIATED DUCTILE IRON PIPE SEWER ITEM(S) 50.41
8. FLOW TO BE MAINTAINED IN EXISTING 5'-0" X 6'-6" F.T.R.C. COMBINED SEWER THROUGHOUT CONSTRUCTION. FULL PIPE FLOW IS 104.75 MGD PER MANNING'S EQUATION WHERE $n=0.015$, ASSUMING A SLOPE OF 0.205%, PER RECORD DRAWING RECONSTRUCTION OF SEWER IN E. HOUSTON ST. FROM COLUMBIA ST. TO GOERCK ST. DATED 1/23/1936



PRELIMINARY
SUBMITTED DATE: 07/18/2019



TOPOGRAPHIC SURVEY PREPARED BY: FOR SURVEYOR
INFORMATION SEE SURVEY SET SUI100 DRAWINGS SERIES

NOTE: ALL ELEVATIONS SHOWN ON THIS SURVEY REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). TO CONVERT THIS DATUM TO MANHATTAN DATUM, SUBTRACT 1.652 FEET FROM EACH ELEVATION

NO.	DATE	DESCRIPTIONS	BY	APPR'D

FINAL DESIGN SUBMITTED BY: **AKRF KSE**
The AKRF-KSE JV

FINAL DESIGN PREPARED BY: **Hazen**
HAZEN AND SAWYER, D.P.C.
NAME OF CONSULTANT

SIGNATURE _____
DATE _____

CITY OF NEW YORK
DEPARTMENT OF DESIGN + CONSTRUCTION
DIVISION OF INFRASTRUCTURE
BUREAU OF DESIGN

PARALLEL CONVEYANCE
CIVIL PLAN & PROFILE
REGULATOR M-31

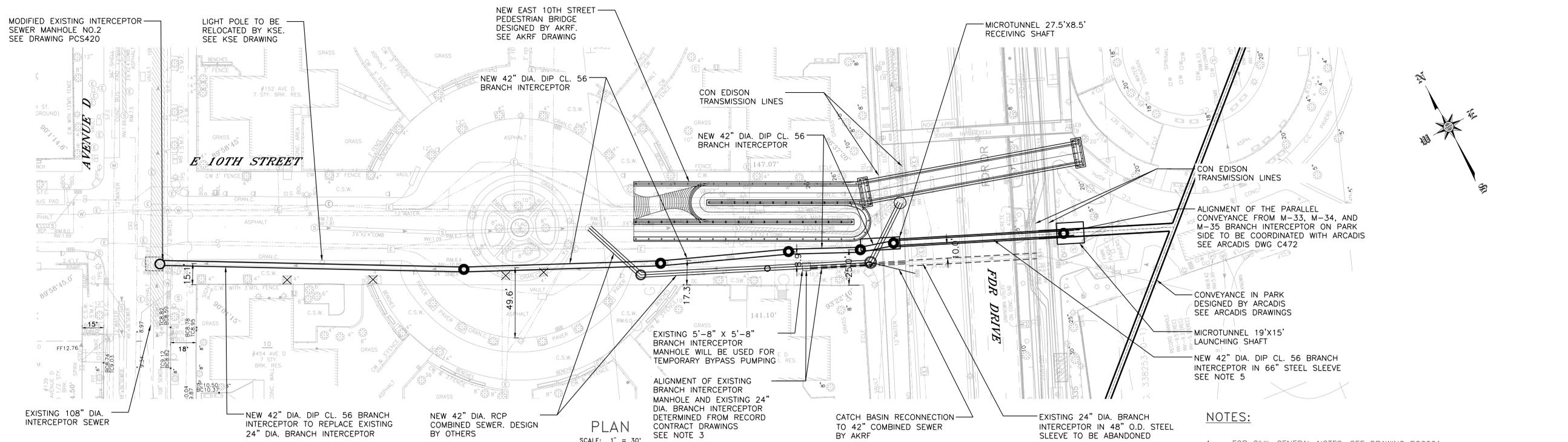
HAZEN AND SAWYER
DRAWN BY _____
SANDRESM1-PCC305-00.DWG
CADD FILE

INSTALLATION OF
EAST SIDE COASTAL RESILIENCY
BOROUGH OF MANHATTAN

CAPITAL PROJECT NO. SANDRESM1 7/18/2019

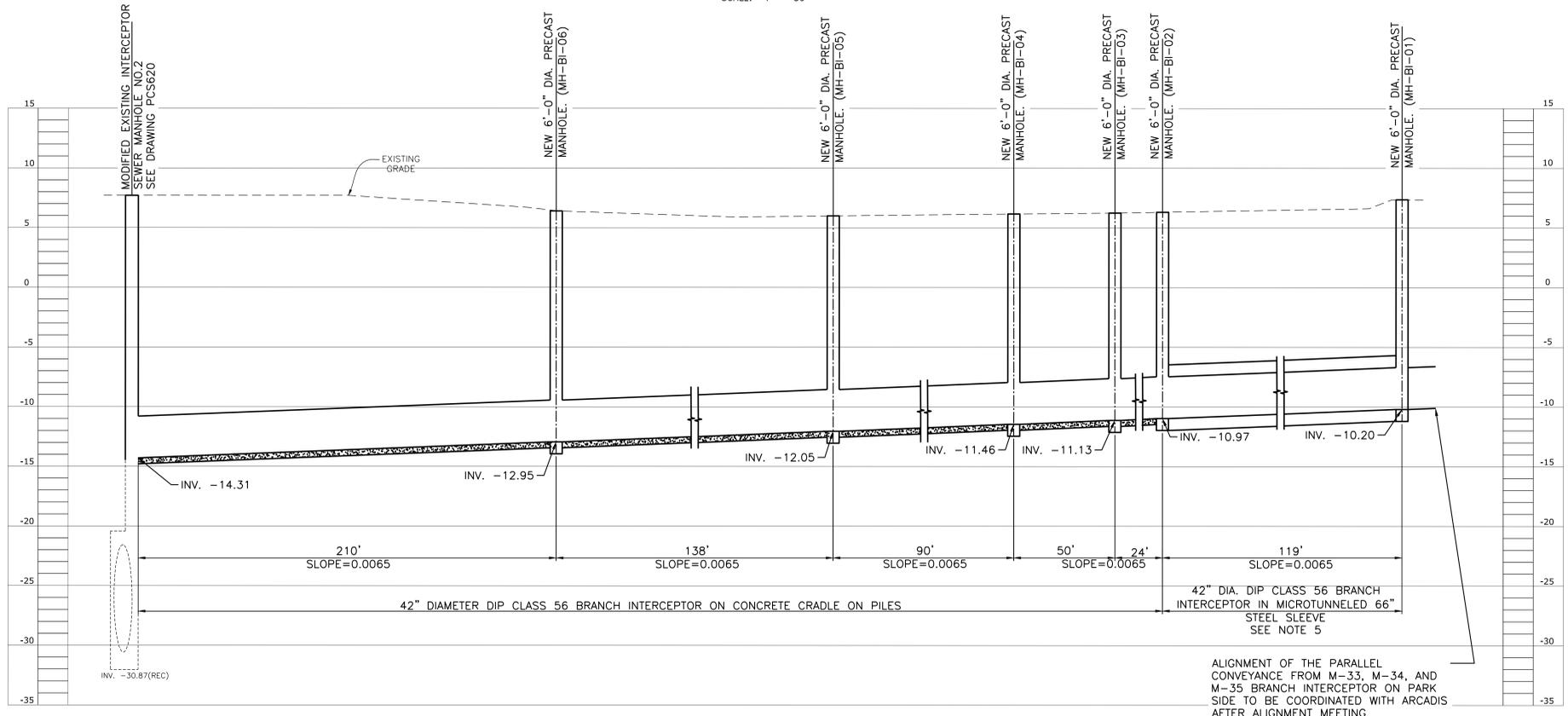
SHEET
756 OF 1594
PCC305

REVISED MASS MAILING #1 SUBMISSION 7/18/2019



NOTES:

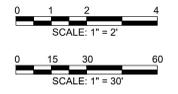
- FOR CIVIL GENERAL NOTES, SEE DRAWING PCC001
- THE PILE SUPPORT DESIGN FOR THE PROPOSED COMBINED SEWER IS CONTINGENT UPON THE COMPLETION OF THE GEOTECHNICAL INVESTIGATION FOR THIS AREA.
- CONTRACTOR TO FIELD VERIFY ORIENTATION OF INTERCEPTOR MANHOLE STRUCTURE PRIOR TO CONSTRUCTION DUE TO THE MANHOLES NOT ALIGNING WITH AS-BUILT DRAWINGS
- SEWER UNDERNEATH FDR DRIVE SHALL BE INSTALLED USING MICROTUNNELING.
- MINIMUM CLEARANCE OF 10' TO BE MAINTAINED BETWEEN THE PROPOSED 42" BRANCH INTERCEPTOR AND EXISTING 24" BRANCH INTERCEPTOR FOR THE TRENCHLESS CROSSING ACROSS FDR DRIVE. MINIMUM 8' CLEARANCE SHALL BE MAINTAINED AFTER RECEIVING SHAFT AND WILL END AFTER THE BYPASS MANHOLE FOR THE OPEN TRENCH CROSSING AS INDICATED IN THE DRAWING. THE COST OF TUNNELING, THE 42" DIAMETER CLASS 56 BRANCH INTERCEPTOR IN 66" STEEL SLEEVE, MICROTUNNEL LAUNCHING, AND RECEIVING SHAFT TO BE PAID SEPARATELY AS BID ITEM 50.61 (L.F.). LENGTH SHALL BE BETWEEN MANHOLE STRUCTURES MH-BI-01 AND MH-BI-01.
- CON EDISON TRANSMISSION LINES (OIL-O-STATIC) MUST BE SUPPORTED DURING CONSTRUCTION. MICROTUNNEL RECEIVING SHAFT IS SIZED TO ALLOW RETRIEVAL OF MICROTUNNELING MACHINERY WEST OF THE CON EDISON TRANSMISSION LINES TO AVOID THE NEED TO RELOCATE THE LINES. GEOTECHNICAL ENGINEER TO PROVIDE WATERTIGHT S.O.E. DURING CONSTRUCTION WHILE SUPPORTING THE TRANSMISSION LINES IN PLACE. IF NOT FEASIBLE, THE TRANSMISSION LINES MUST BE RELOCATED AND RECEIVING SHAFT SIZE CAN BE REDUCED TO 15'x8.5'.
- ALL DUCTILE IRON PIPE SEWERS AND WATER MAINS SHALL BE FURNISHED WITH NITRILE GASKETS. THE COST TO FURNISH AND INSTALL THE NITRILE GASKETS SHALL BE INCLUDED IN THE ASSOCIATED DUCTILE IRON PIPE SEWER ITEM(S) 50.41
- FLOW TO BE MAINTAINED IN EXISTING 24" DIAMETER P.R.C.P. BRANCH INTERCEPTOR THROUGHOUT CONSTRUCTION. FULL PIPE FLOW IS 6.09 MGD PER MANNING'S EQUATION WHERE $n=0.015$, ASSUMING A SLOPE OF 0.231%. PER RECORD DRAWING CONTRACT NO.4 SOUTH BRANCH INTERCEPTING SEWER-EAST SIDE EAST 10TH STREET-AVE. D TO EAST RIVER PARK PLAN AND PROFILE SHEET 24 OF 71, DATED 3/27/1962



PROFILE - EAST 10TH STREET

SCALE:
VERT.: 1" = 5'
HORIZ.: 1" = 30'

PRELIMINARY
SUBMITTED DATE: 07/18/2019



TOPOGRAPHIC SURVEY PREPARED BY: FOR SURVEYOR
INFORMATION SEE SURVEY SET SUI100 DRAWINGS SERIES

NOTE: ALL ELEVATIONS SHOWN ON THIS SURVEY REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAV88). TO CONVERT THIS DATUM TO MANHATTAN DATUM, SUBTRACT 1.652 FEET FROM EACH ELEVATION

FINAL DESIGN SUBMITTED BY:

AKRF KSE
The AKRF-KSE JV

FINAL DESIGN PREPARED BY:

Hazen
HAZEN AND SAWYER, D.P.C.
NAME OF CONSULTANT

SIGNATURE _____
DATE _____

CITY OF NEW YORK
DEPARTMENT OF DESIGN + CONSTRUCTION
DIVISION OF INFRASTRUCTURE
BUREAU OF DESIGN

BRANCH INTERCEPTOR REPLACEMENT
CIVIL PLAN AND PROFILE
EAST 10TH STREET

HAZEN AND SAWYER
DRAWN BY

SANDRESM1-PCC306-00.DWG
CADD FILE

INSTALLATION OF
EAST SIDE COASTAL RESILIENCY
BOROUGH OF MANHATTAN

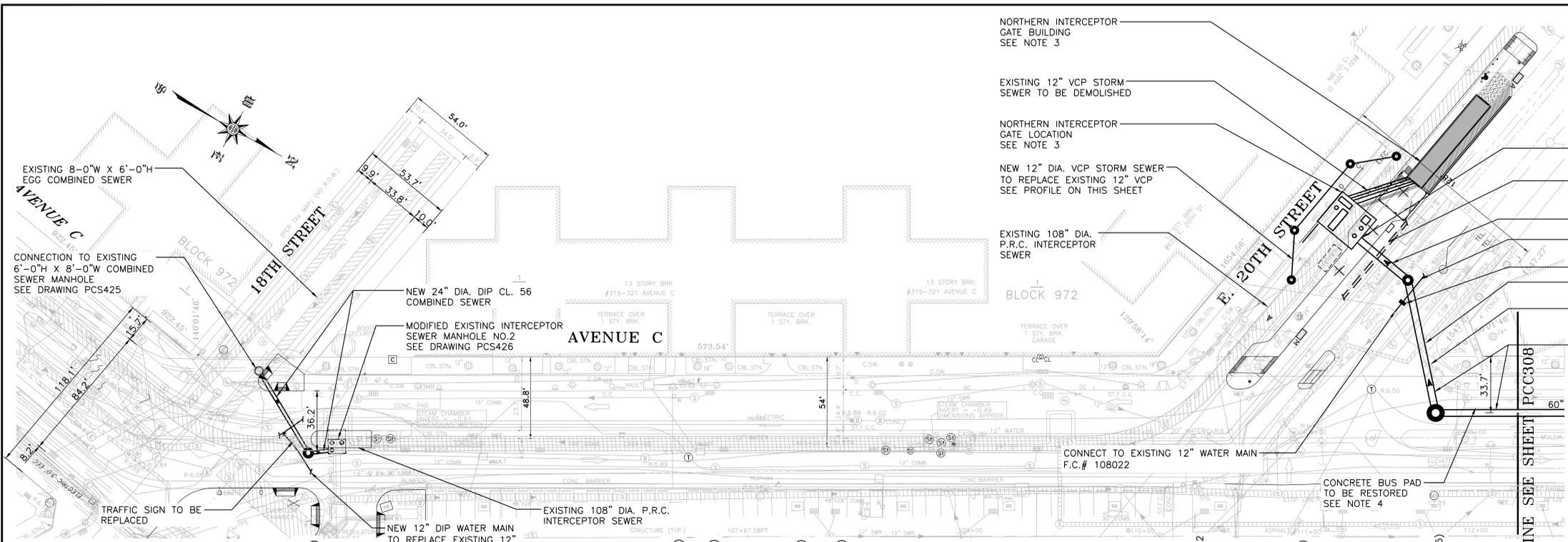
NO.	DATE	DESCRIPTIONS	BY	APPR'D

CAPITAL PROJECT NO. SANDRESM1 7/18/2019

SHEET 757 OF 1594

PCC306

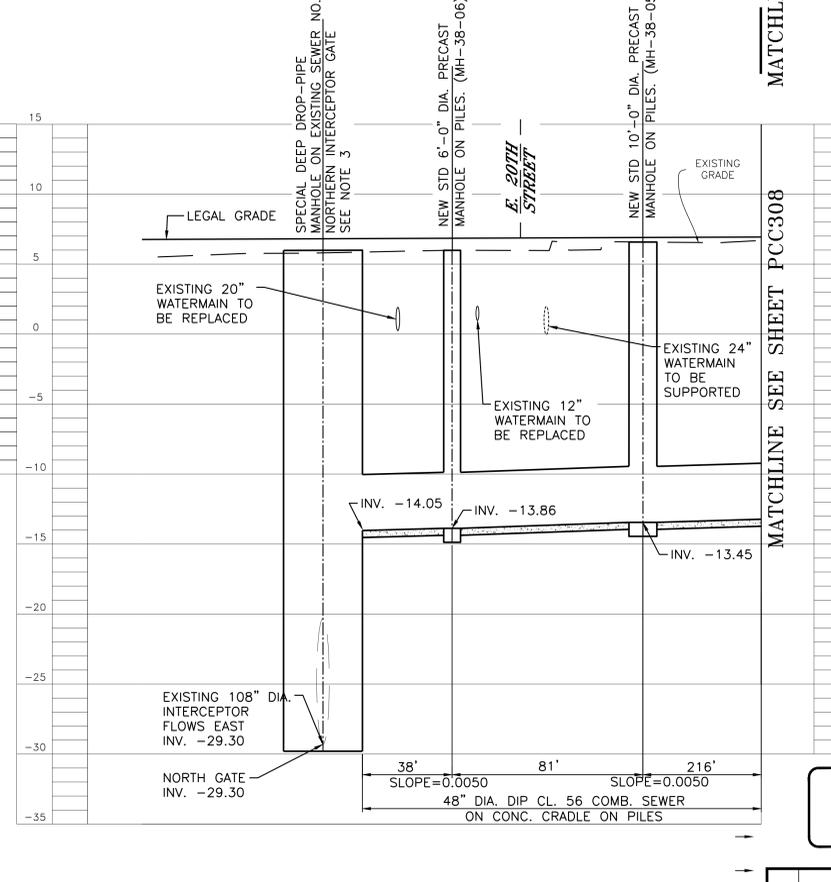
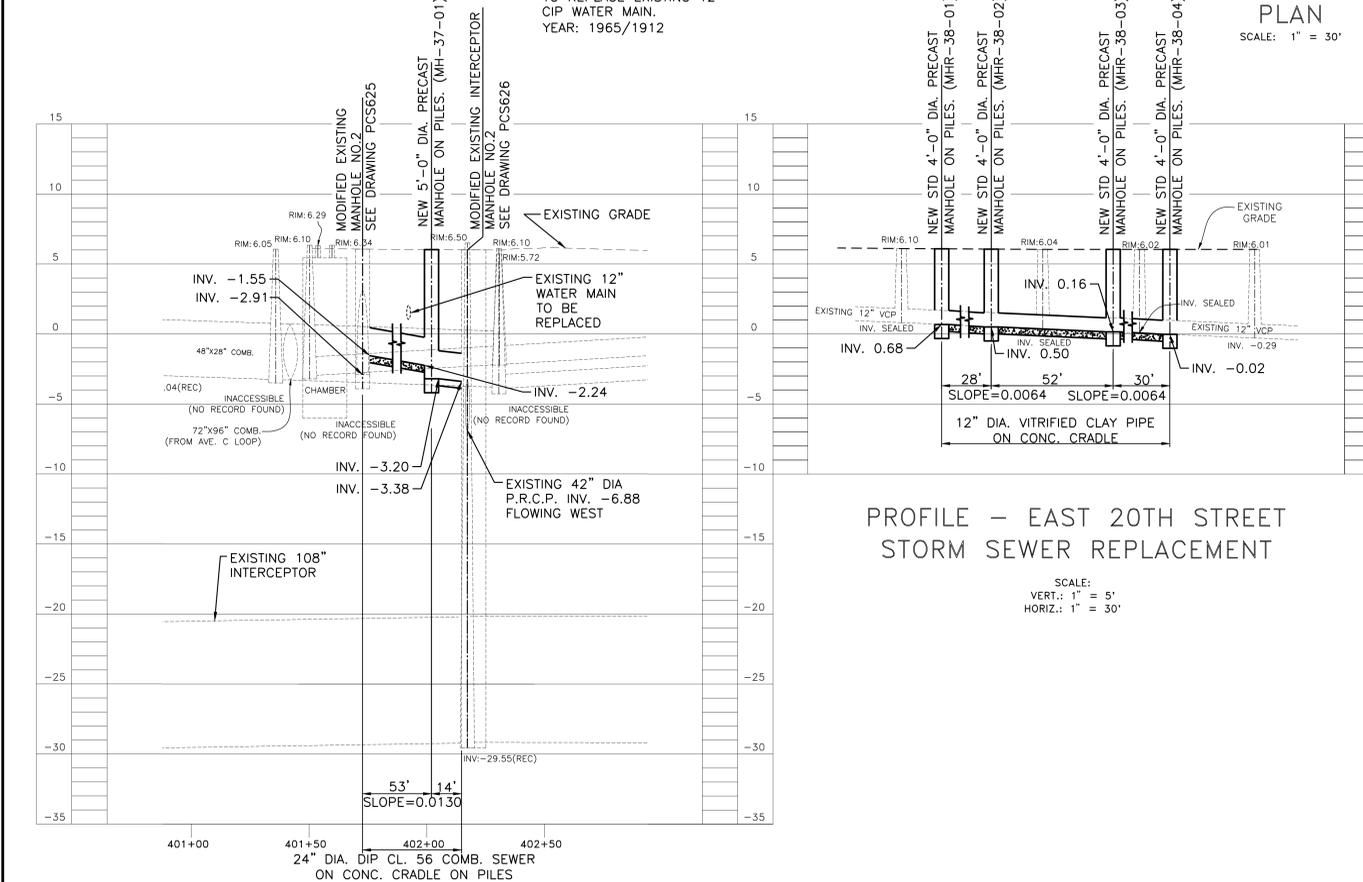
REVISED MASS MAILING #1 SUBMISSION 7/18/2019



- PARALLEL CONVEYANCE CONNECTION TO NORTH INTERCEPTOR GATE CHAMBER
- NEW 20" DIP WATER MAIN TO REPLACE EXISTING 20" CIP WATER MAIN. YEAR: 1946
- NEW 48" DIA. DIP CL. 56 COMBINED SEWER
- NEW 12" DIP WATER MAIN TO REPLACE EXISTING 12" DIP WATER MAIN YEAR: 1990
- NEW 12" VALVE (TYP.)
- EXISTING 24" DIP WATER MAIN YEAR: 2004 TO BE SUPPORTED
- EXISTING TRAFFIC SIGNAL TO BE COORDINATED WITH NYCDOT AND RELOCATED (NOT SHOWN ON SURVEY)
- NEW 48" DIA. DIP CL. 56 COMBINED SEWER

NOTES:

1. FOR CIVIL GENERAL NOTES, SEE DRAWING PCC001
2. THE PILE DESIGN FOR THE PROPOSED COMBINED SEWER IS CONTINGENT UPON THE COMPLETION OF THE GEOTECHNICAL INVESTIGATION FOR THIS AREA.
3. REFERENCE THE FOLLOWING DRAWING SECTIONS:
 - 3.1. NORTHERN INTERCEPTOR GATE BUILDING (IG) DETAILS CAN BE FOUND IN THE ARCHITECTURAL DRAWINGS.
 - 3.2. INTERCEPTOR GATE (IG) CHAMBER DETAILS CAN BE FOUND IN THE IG DRAWINGS.
 - 3.3. SUPPORT OF EXCAVATION (SOE) DETAILS CAN BE FOUND IN THE STRUCTURAL DRAWINGS.
4. COMBINED SEWER CONSTRUCTION WILL REQUIRE RESTORATION OF ENTIRE MTA BUS STOP. BUS SERVICE TO BE COORDINATED WITH NYCT. RESTORATION PLANS PROVIDED ON PMP DRAWINGS BY AKRF.
5. THE AVENUE C/EAST 20TH STREET PROFILE IS THE PIPE CENTERLINE PROFILE. REFERENCE AKRF PAVEMENT MARKING PLAN PMP314.
7. ALL DUCTILE IRON PIPE SEWERS AND WATER MAINS SHALL BE FURNISHED WITH NITRILE GASKETS. THE COST TO FURNISH AND INSTALL THE NITRILE GASKETS SHALL BE INCLUDED IN THE ASSOCIATED DUCTILE IRON PIPE SEWER ITEM(S) 50.41
8. FLOW TO BE MAINTAINED IN EXISTING 8'-0"W X 6'-0"H "EGG" COMBINED SEWER THROUGHOUT CONSTRUCTION. FULL PIPE FLOW IS 39.94 MGD PER MANNING'S EQUATION WHERE $n=0.015$, ASSUMING A SLOPE OF 0.0138%, PER RECORD DRAWING SEWERAGE DISTRICT NO.4CC ALTERATIONS AND IMPROVEMENT UNDER CHAMBER 381, SECTION 4, LAWS 1865, CONSOLIDATION ACT 1882. DRAWING DATED 4/10/1891



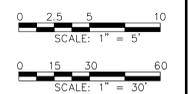
PROFILE - EAST 18TH STREET AND AVENUE C

TOPOGRAPHIC SURVEY PREPARED BY: FOR SURVEYOR INFORMATION SEE SURVEY SET S0100 DRAWINGS SERIES

NOTE: ALL ELEVATIONS SHOWN ON THIS SURVEY REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAV88). TO CONVERT THIS DATUM TO MANHATTAN DATUM, SUBTRACT 1.652 FEET FROM EACH ELEVATION

SCALE: VERT.: 1" = 5', HORIZ.: 1" = 30'

PRELIMINARY
SUBMITTED DATE: 7/18/2019



FINAL DESIGN SUBMITTED BY: **AKRF KSE**
The AKRF-KSE JV

FINAL DESIGN PREPARED BY: **Hazen**
HAZEN AND SAWYER, D.P.C.
NAME OF CONSULTANT

SIGNATURE _____
DATE _____

CITY OF NEW YORK
DEPARTMENT OF DESIGN + CONSTRUCTION
DIVISION OF INFRASTRUCTURE
BUREAU OF DESIGN

PARALLEL CONVEYANCE
CIVIL PLAN & PROFILE
REGULATORS M-37 & M-38 COMBINED
HAZEN AND SAWYER
DRAWN BY SANDRESM1-PCC307-00.DWG
CADD FILE

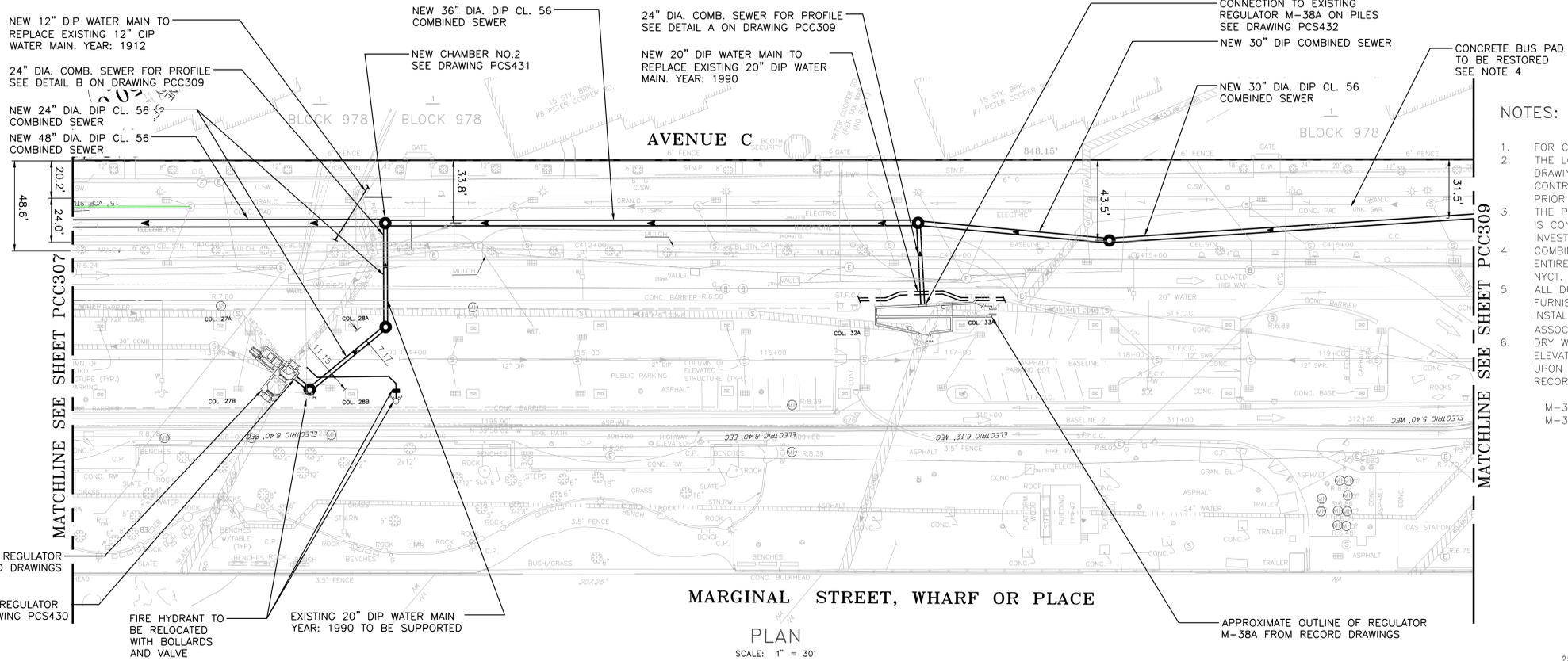
INSTALLATION OF
EAST SIDE COASTAL RESILIENCY
BOROUGH OF MANHATTAN

CAPITAL PROJECT NO. SANDRESM1 7/18/2019

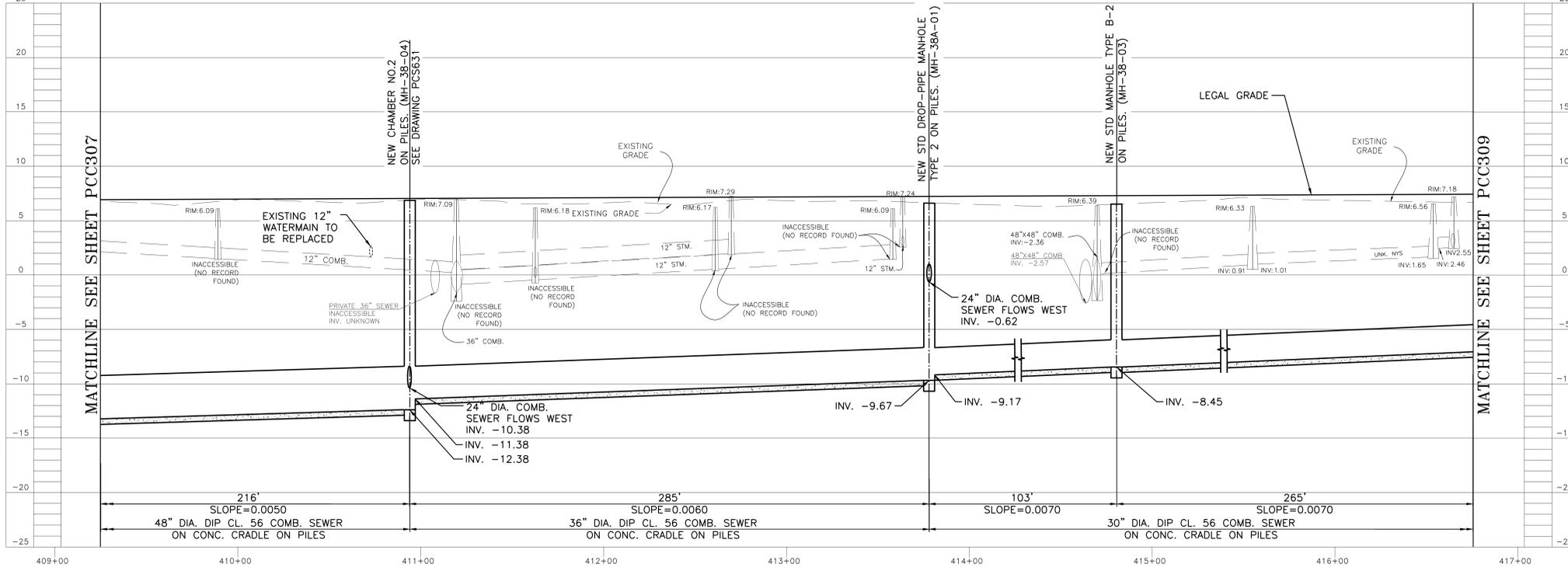
SHEET 758 OF 1594 PCC307

NO.	DATE	DESCRIPTIONS	BY	APPR'D

REVISED MASS MAILING #1 SUBMISSION 7/18/2019



- NOTES:**
- FOR CIVIL GENERAL NOTES, SEE DRAWING PCC001
 - THE LOCATION AND LAYOUT OF THE REGULATORS SHOWN ON THIS DRAWING ARE APPROXIMATE AND NOT DRAWN BY SURVEYOR. CONTRACTOR SHALL VERIFY LOCATION AND LAYOUT OF REGULATORS PRIOR TO CONSTRUCTION.
 - THE PILE SUPPORT DESIGN FOR THE PROPOSED COMBINED SEWERS IS CONTINGENT UPON THE COMPLETION OF THE GEOTECHNICAL INVESTIGATION FOR THIS AREA.
 - COMBINED SEWER CONSTRUCTION WILL REQUIRE RESTORATION OF ENTIRE MTA BUS STOP. BUS SERVICE TO BE COORDINATED WITH NYCT.
 - ALL DUCTILE IRON PIPE SEWERS AND WATER MAINS SHALL BE FURNISHED WITH NITRILE GASKETS. THE COST TO FURNISH AND INSTALL THE NITRILE GASKETS SHALL BE INCLUDED IN THE ASSOCIATED DUCTILE IRON PIPE SEWER ITEM(S) 50.41
 - DRY WEATHER FLOW TO BE MAINTAINED BELOW THE FOLLOWING ELEVATIONS IN REGULATORS THROUGHOUT CONSTRUCTION, BASED UPON ELEVATIONS OF OVERFLOW WEIR PER RECORD DRAWINGS. FOR RECORD DRAWINGS, SEE SHEET PCC001
- M-38 CONNECTION: ELEVATION -1.35 NAVD88
M-38A CONNECTION: ELEVATION 2.65 NAVD88



PROFILE - AVENUE C

SCALE:
VERT.: 1" = 5'
HORIZ.: 1" = 30'

PRELIMINARY

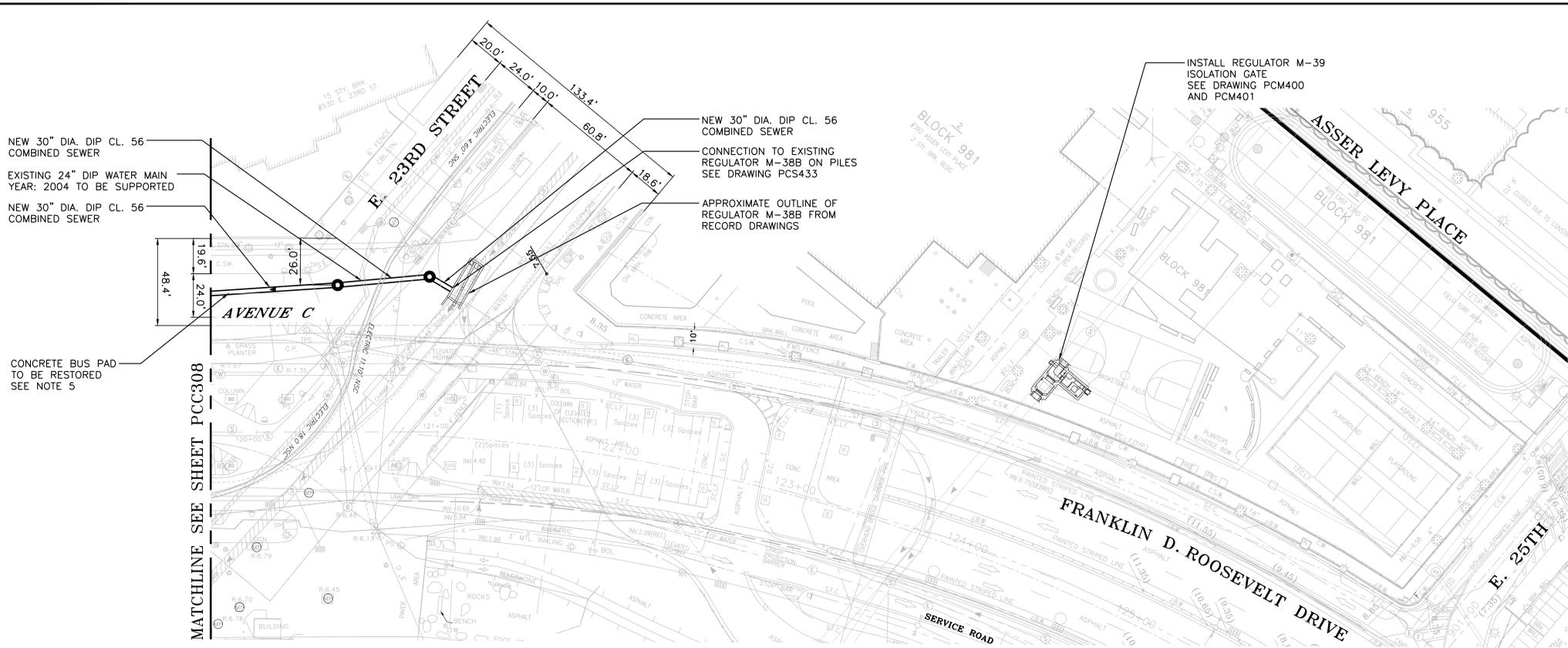
SUBMITTED DATE: 07/18/2019

0 2.5 5 10
SCALE: 1" = 5'

0 15 30 60
SCALE: 1" = 30'

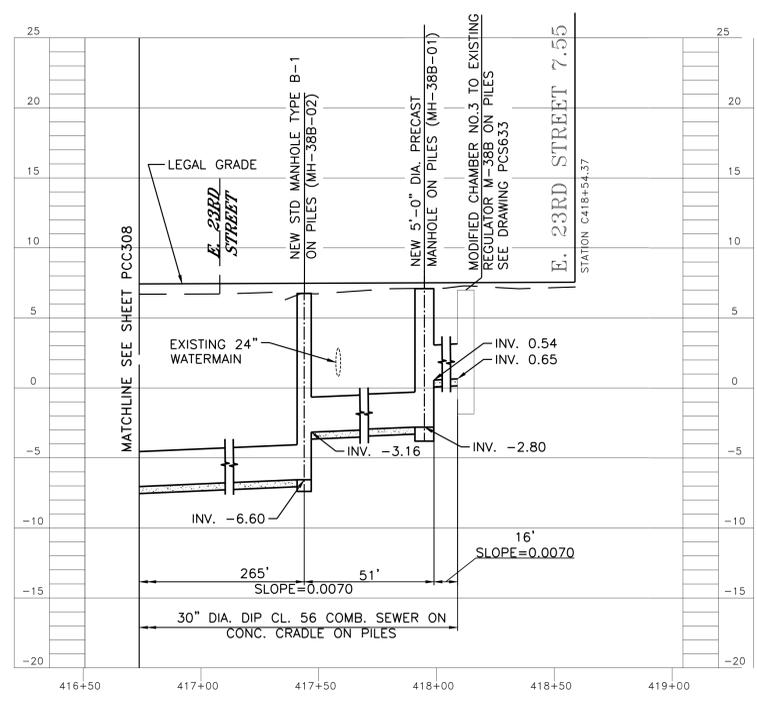
TOPOGRAPHIC SURVEY PREPARED BY: FOR SURVEYOR INFORMATION SEE SURVEY SET S0100 DRAWINGS SERIES		NOTE: ALL ELEVATIONS SHOWN ON THIS SURVEY REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). TO CONVERT THIS DATUM TO MANHATTAN DATUM, SUBTRACT 1.652 FEET FROM EACH ELEVATION		NO. DATE DESCRIPTIONS BY APPR'D REVISIONS	
FINAL DESIGN SUBMITTED BY: 	FINAL DESIGN PREPARED BY: HAZEN AND SAWYER, D.P.C. NAME OF CONSULTANT	CITY OF NEW YORK DEPARTMENT OF DESIGN + CONSTRUCTION DIVISION OF INFRASTRUCTURE BUREAU OF DESIGN	PARALLEL CONVEYANCE CIVIL PLAN & PROFILE REGULATORS M-38 & M-38A HAZEN AND SAWYER DRAWN BY SANDRESM1-PCC308-00.DWG CADD FILE	INSTALLATION OF EAST SIDE COASTAL RESILIENCY BOROUGH OF MANHATTAN	
				CAPITAL PROJECT NO. SANDRESM1 7/18/2019	SHEET 759 OF 1594

REVISED MASS MAILING #1 SUBMISSION 7/18/2019

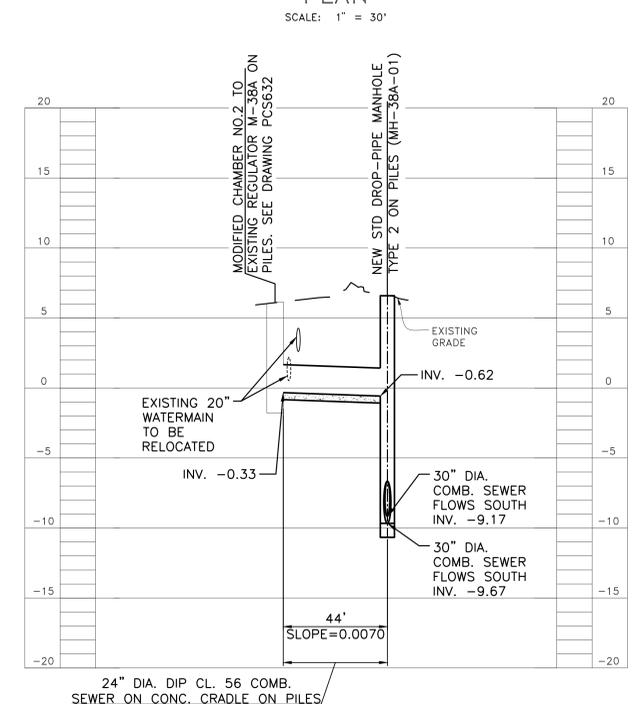


- NOTES:**
- FOR CIVIL GENERAL NOTES, SEE DRAWING PCC001
 - THE LOCATION AND LAYOUT OF THE REGULATORS SHOWN ON THIS DRAWING ARE APPROXIMATE WERE NOT SURVEYOR. CONTRACTOR SHALL VERIFY LOCATION AND LAYOUT OF REGULATORS PRIOR TO CONSTRUCTION.
 - THE PILE SUPPORT DESIGN FOR THE PROPOSED COMBINED SEWER IS CONTINGENT UPON THE COMPLETION OF THE GEOTECHNICAL INVESTIGATION FOR THIS AREA.
 - THE AVENUE C PROFILE (DETAIL A) AND AVENUE C PROFILE (DETAIL B) IS BOTH THE PIPE CENTERLINE PROFILES.
 - COMBINED SEWER CONSTRUCTION WILL REQUIRE RESTORATION OF ENTIRE MTA BUS STOP. BUS SERVICE TO BE COORDINATED WITH NYCT. RESTORATION PLANS PROVIDED ON PMP DRAWINGS BY AKRF.
 - ALL DUCTILE IRON PIPE SEWERS AND WATER MAINS SHALL BE FURNISHED WITH NITRILE GASKETS. THE COST TO FURNISH AND INSTALL THE NITRILE GASKETS SHALL BE INCLUDED IN THE ASSOCIATED DUCTILE IRON PIPE SEWER ITEM(S) 50.41
 - DRY WEATHER FLOW TO BE MAINTAINED BELOW THE FOLLOWING ELEVATIONS IN REGULATORS THROUGHOUT CONSTRUCTION, BASED UPON ELEVATIONS OF OVERFLOW WEIR PER RECORD DRAWINGS. FOR RECORD DRAWINGS, SEE SHEET PCC001
- M-38B CONNECTION: ELEVATION 2.65 NAVD88

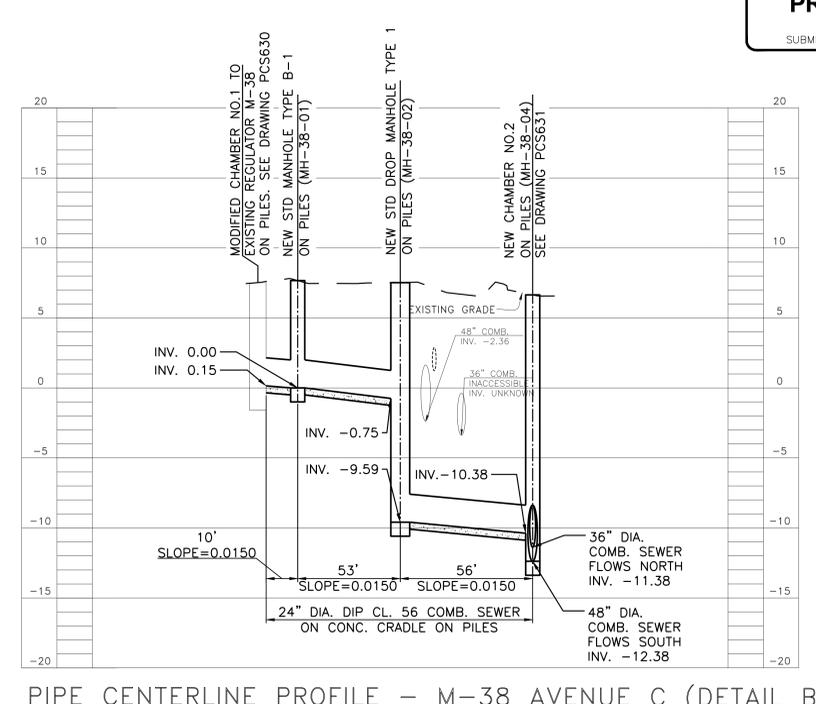
PRELIMINARY
SUBMITTED DATE: 07/18/2019



PROFILE - M-38B AVENUE C
SCALE:
VERT.: 1" = 5'
HORIZ.: 1" = 30'



PIPE CENTERLINE PROFILE - M-38A AVENUE C (DETAIL A)
FOR PLAN SEE DRAWING PCC308
SCALE:
VERT.: 1" = 5'
HORIZ.: 1" = 30'



PIPE CENTERLINE PROFILE - M-38B AVENUE C (DETAIL B)
FOR PLAN SEE DRAWING PCC308
SCALE:
VERT.: 1" = 5'
HORIZ.: 1" = 30'

TOPOGRAPHIC SURVEY PREPARED BY: FOR SURVEYOR
INFORMATION SEE SURVEY SET S0100 DRAWINGS SERIES

NOTE: ALL ELEVATIONS SHOWN ON THIS SURVEY REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). TO CONVERT THIS DATUM TO MANHATTAN DATUM, SUBTRACT 1.652 FEET FROM EACH ELEVATION

FINAL DESIGN SUBMITTED BY:
AKRF KSE
The AKRF-KSE JV

FINAL DESIGN PREPARED BY:
Hazen
HAZEN AND SAWYER, D.P.C.
NAME OF CONSULTANT

SIGNATURE
DATE

CITY OF NEW YORK
DEPARTMENT OF DESIGN + CONSTRUCTION
DIVISION OF INFRASTRUCTURE
BUREAU OF DESIGN

PARALLEL CONVEYANCE
CIVIL PLAN & PROFILE
REGULATORS M-38B & M-39
HAZEN AND SAWYER
DRAWN BY SANDRESM1-PCC309-00.DWG
CADD FILE

NO.	DATE	DESCRIPTIONS REVISIONS	BY	APPR'D

INSTALLATION OF
EAST SIDE COASTAL RESILIENCY
BOROUGH OF MANHATTAN

CAPITAL PROJECT NO. SANDRESM1 7/18/2019
SHEET 760 OF 1594
PCC309