

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER AND SEWER OPERATIONS
WATER AND SEWER PLANNING

AMENDED DRAINAGE PLAN
2¹/₂-O/2-CQ/3-DO

THIS DRAINAGE PLAN AMENDS PARTS OF PREVIOUSLY DESIGNED/ADOPTED DRAINAGE PLAN #####, 2CO/2¹/₂-L/3-DK, 3-DL/2¹/₂-M/2-CP, 2-CQ/3-DN/2¹/₂-N SHOWING LOCATION, SIZES AND GRADES OF COMBINED SEWERS IN AN AREA BOUNDED BY 7TH AVENUE, WEST 26TH STREET, 12TH AVENUE, AND WEST 50TH STREET

BOROUGH OF MANHATTAN

This plan was prepared by The Department of Environmental Protection under Section 24-503 of The Administrative Code of The City of New York

APPROVED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION

APPROVED BY THE DEPARTMENT OF HEALTH AND MENTAL HYGIENE

P.E.	DATE	P.E.	DATE
SECTION CHIEF, DRAINAGE AND MODELING BUREAU OF WATER AND SEWER OPERATIONS		DIRECTOR BUREAU OF PUBLIC HEALTH AND HYGIENE	
APPROVED BY THE DEPARTMENT OF CITY PLANNING			
P.E.	DATE	P.E.	DATE
DIRECTOR, ENGINEERING BUREAU OF WATER AND SEWER OPERATIONS		DIRECTOR OF CITY PLANNING	
P.E.	DATE	P.E.	DATE
EXECUTIVE DIRECTOR, ENGINEERING AND PLANNING BUREAU OF WATER AND SEWER OPERATIONS			
P.E.	DATE	P.E.	DATE
DEPUTY COMMISSIONER BUREAU OF WATER AND SEWER OPERATIONS			
P.E.	DATE	P.E.	DATE
COMMISSIONER			

SEWER SYMBOLS

BULKHEAD LINE	U.S. BULKHEAD	SEWER STRUCTURES:	MANHOLE	PUMP STATION
BOUNDARIES OF DRAINAGE AREA		CHAMBER	OUTFALL	
SEWERS HEREWITH ESTABLISHED:		REGULATOR CHAMBER	BULKHEAD	
SANITARY	10" - 10.60 - 15"	DIVERSION CHAMBER	TIDE GATE	
STORM WATER	12" - 10.60 - 15"	FOR SEWERS OTHER THAN CIRCULAR SECTION, SHOW THE WIDTH AND HEIGHT IN THIS MANNER:		
HIGH LEVEL STORM WATER	12" - 10.60 - 15"	FLAT TOP SEWER		
COMBINED	15" - 10.60 - 15"	EXISTING:		
FORCE MAIN	2.00 - 20' F.M. - 20.20	SINGLE BARREL (10'-0"W X 8'-0"H-SW)		
EXISTING SEWERS:		DOUBLE BARREL (10'-0"W X 8'-0"H-SW-DB)		
BUILT (S, SW, HLS, C, INT)	(2.00) - (20' F.M.) - (20.20)	TRIPLE BARREL (10'-0"W X 8'-0"H-SW-TB)		
BUILT (FORCE MAIN)	(48" W.M.)	QUADRUPLE BARREL (10'-0"W X 8'-0"H-SW-QB)		
BUILT (WATER MAIN GREATER THAN OR EQUAL TO 48")	(48" W.M.)	PROPOSED:		
EXISTING SEWERS NEVER LEGALIZED (S, SW, HLS, C, INT)	(12"C) - (10.60) - (15"C)	SINGLE BARREL 10'-0"W X 8'-0"H		
EXISTING SEWERS TO BE ABANDONED (S, SW, HLS, C, INT)	(12"C) - (10.60) - (15"C)	DOUBLE BARREL 10'-0"W X 8'-0"-DB		
DEAD END	10.00 - 15"	TRIPLE BARREL 10'-0"W X 8'-0"-TB		
SEWER SUMMIT	12" - 10.00 - 12"	QUADRUPLE BARREL 10'-0"W X 8'-0"-QB		
UNIFORM SEWER GRADIENT	12" - 15" - 24"	ELLIPTICAL SEWER		
DROP MANHOLE	+10.81 - +5.20	EXISTING: 76"W X 48"H-SW		
INTERSECTING SEWERS HAVE MATCHING INNER TOP ELEV.	+15" - +2.34 - 24"	PROPOSED: 76"W X 48"H		
SEWER JUNCTIONS:	+8.00 - +7.89 - 24"	ALSO SHOW THE TYPICAL CROSS SECTIONS IN THE COMPUTATION SHEETS.		
INTERSECTING SEWERS AT VARIOUS INNER TOP ELEV.	+8.00 - +7.89 - 24"	STREET GRADE ELEVATION		
RAILROAD		ADOPTED 12.34		
SUBWAY		EXISTING 12.34		
DRAINAGE EASEMENT-CORRIDOR		LOWER ELEVATION AT GRADE SEPARATION <12.34		
ADOPTED/MAPPED/RECORD STREET		MODIFIED 12.34		
UNMAPPED STREET		MEAN HIGH WATER 12.34		
PARK		TAX BLOCK NUMBER -1234		
STEP STREET		ALL SEWER ELEVATIONS SHOWN ARE INNER TOP ELEVATIONS		
TYPICAL STREAM CROSS SECTION		A = TOTAL TRIBUTARY AREA IN ACRES		
PARALLEL RELIEF SEWER		A _h = TOTAL TRIBUTARY AREA IN ACRES FOR HIGH LEVEL STORM SEWER (A _h = 0.5A)		
		R = RAINFALL INTENSITY IN IN/HR COMPUTED BY THE FORMULA $R = \frac{125}{T+15}$		
		T = TIME OF CONCENTRATION IN MINUTES COMPUTED BY THE FORMULA $T = t + e$		
		t = INITIAL ENTRANCE TIME IN MINUTES		
		e = ACCUMULATIVE SEWER TRAVEL TIME IN MINUTES BETWEEN MANHOLES		
		C = COEFFICIENT OF RUNOFF		



NOTES

- UNLESS THE DEPARTMENT OF HEALTH AND MENTAL HYGIENE (DOHMH) AND DEPARTMENT OF CITY PLANNING (DCP) SHALL FILE A STATEMENT WITH SUCH NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION (NYCDEP) COMMISSIONER IN RELATION TO SUCH PLAN WITHIN 30 DAYS SUBSEQUENT TO THE SUBMISSION OF SAID PLAN, SUCH PLAN SHALL BE DEEMED TO CONFORM WITH THE CITY MAP AND SHALL CONSTITUTE THE CERTIFICATION THEREOF.
- THE SEWERS SHOWN ON THIS DRAINAGE PLAN ARE INTENDED TO HAVE A CAPACITY ADEQUATE TO THE REASONABLE NEEDS OF THE DRAINAGE DISTRICT FOR A LIMITED PERIOD AND ARE NOT INTENDED TO BE OF SUFFICIENT CAPACITY TO IMMEDIATELY REMOVE STORM WATER WHEN THE RATE OF PRECIPITATION EXCEEDS AN INTENSITY OF "R" INCHES PER HOUR CONTINUING THROUGH "T" MINUTES, "C" PERCENT OF WHICH WILL REACH THE SEWERS WITHIN THAT TIME AS SHOWN FOR SEWER SEGMENTS. THE CAPACITY OF THE SYSTEM HAS BEEN RESTRICTED PER NYCDEP DRAINAGE PLAN DESIGN CRITERIA FOR THE PURPOSE OF KEEPING THE COST WITHIN LIMITS WHICH ARE DEEMED ECONOMICALLY REASONABLE.
- THE CITY OF NEW YORK ASSUMES NO LIABILITY FOR DAMAGES DUE TO SURCHARGING OF "BUILT SEWERS PREVIOUSLY AND HEREWITH ESTABLISHED" WHICH MAY OCCUR BEFORE THE FUTURE ESTABLISHED OUTLET SEWERS, DESIGNED ON THE BASIS OF ESTABLISHED ZONING HAVE BEEN BUILT, UNTIL THE FUTURE OUTLET SEWERS ARE ESTABLISHED AND BUILT. ALLOWABLE FLOWS INTO THE "HEREWITH ESTABLISHED SEWERS" ARE LIMITED TO THE FLOW VALUES WHICH THE EXISTING OUTLET SEWERS WERE DESIGNED TO ACCEPT.
- THE CITY OF NEW YORK WILL NOT BE RESPONSIBLE FOR DAMAGES BY SURCHARGING IN ANY CASE IN WHICH THE INVERT ELEVATION OF THE HOUSE CONNECTION AT THE CURB LINE IS LESS THAN THE HYDRAULIC GRADE OF ANY SEWER THROUGH WHICH IT OUTLETS.
- THE ELEVATIONS SHOWN ON THIS MAP REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
- ZONING BOUNDARIES SHOWN ON THIS MAP ARE CURRENT AS OF DATE PREPARED.

No.	Date	Revisions	By

WARNING
IT IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK STATE EDUCATION LAW FOR ANY PERSON, UNLESS HE OR SHE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER IN ANY WAY PLANS, SPECIFICATIONS, PLATS OR REPORTS TO WHICH THE SEAL OF A PROFESSIONAL ENGINEER HAS BEEN APPLIED. IF AN ITEM BEARING THE SEAL OF A PROFESSIONAL ENGINEER OR LAND SURVEYOR IS ALTERED, THE ALTERING ENGINEER OR LAND SURVEYOR SHALL AFFIX TO THE ITEM HIS OR HER SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS OR HER SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

2¹/₂-O/2-CQ/3-DO



ENGINEER-IN-CHARGE
DATE

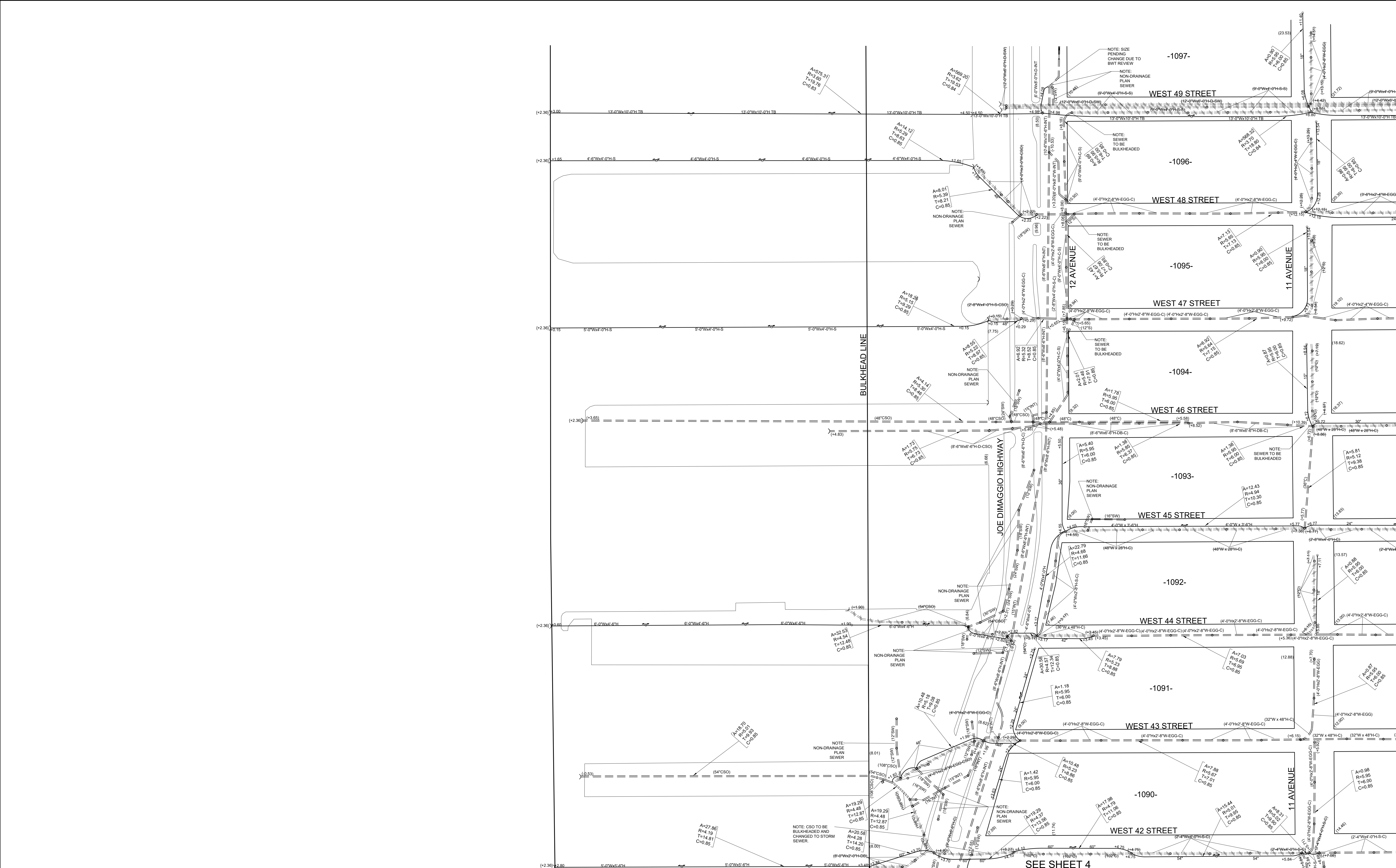
Designed by: E.ECOCK
Checked by: M. SCHECTOR, P.E.

Drawn by: E. ECOCK
Checked by: M. SCHECTOR, P.E.

Date Prepared: June 14, 2019

0' 150' 300'
Scale

Sheet 1 of 7



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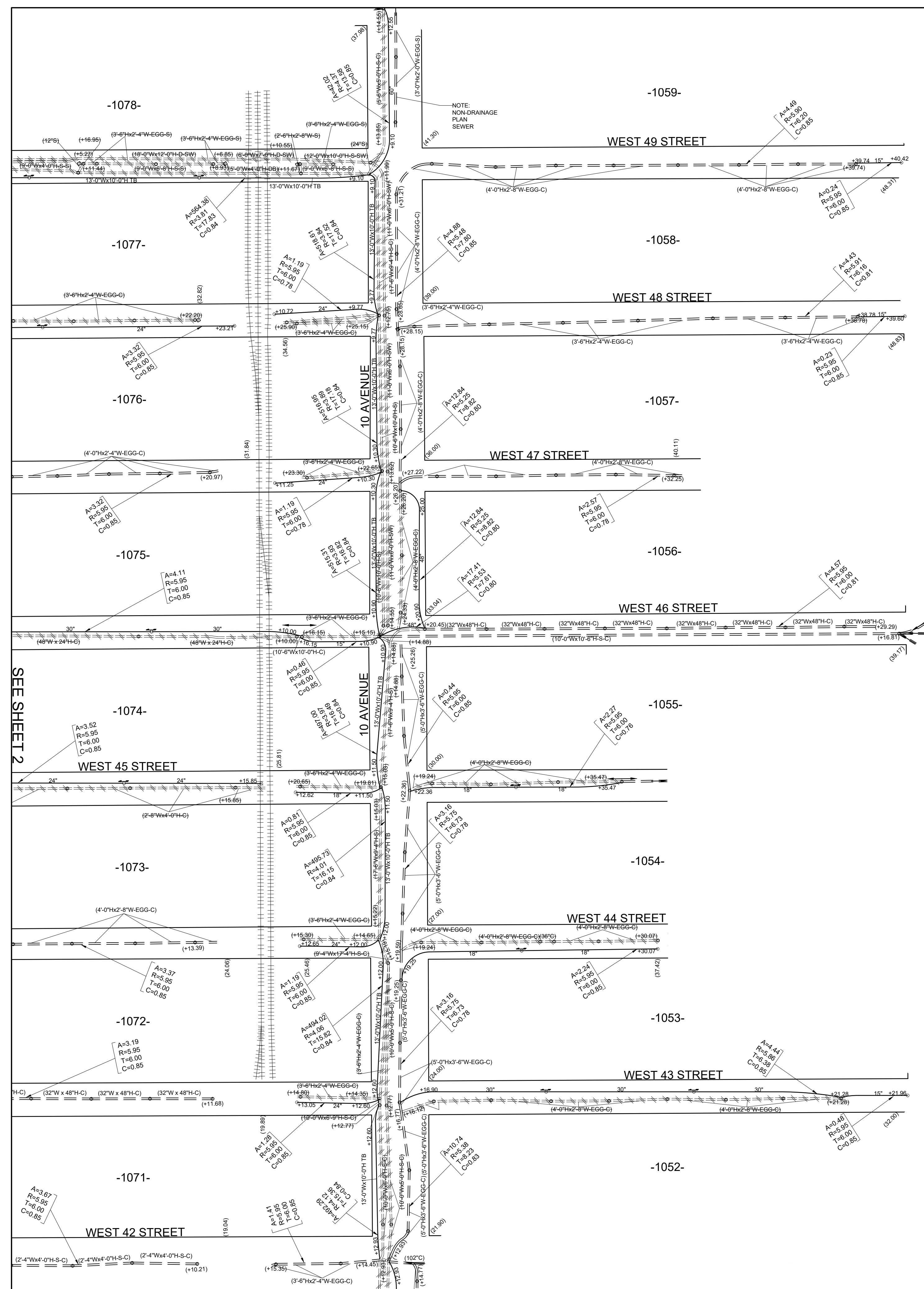
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SEE SHEET 5

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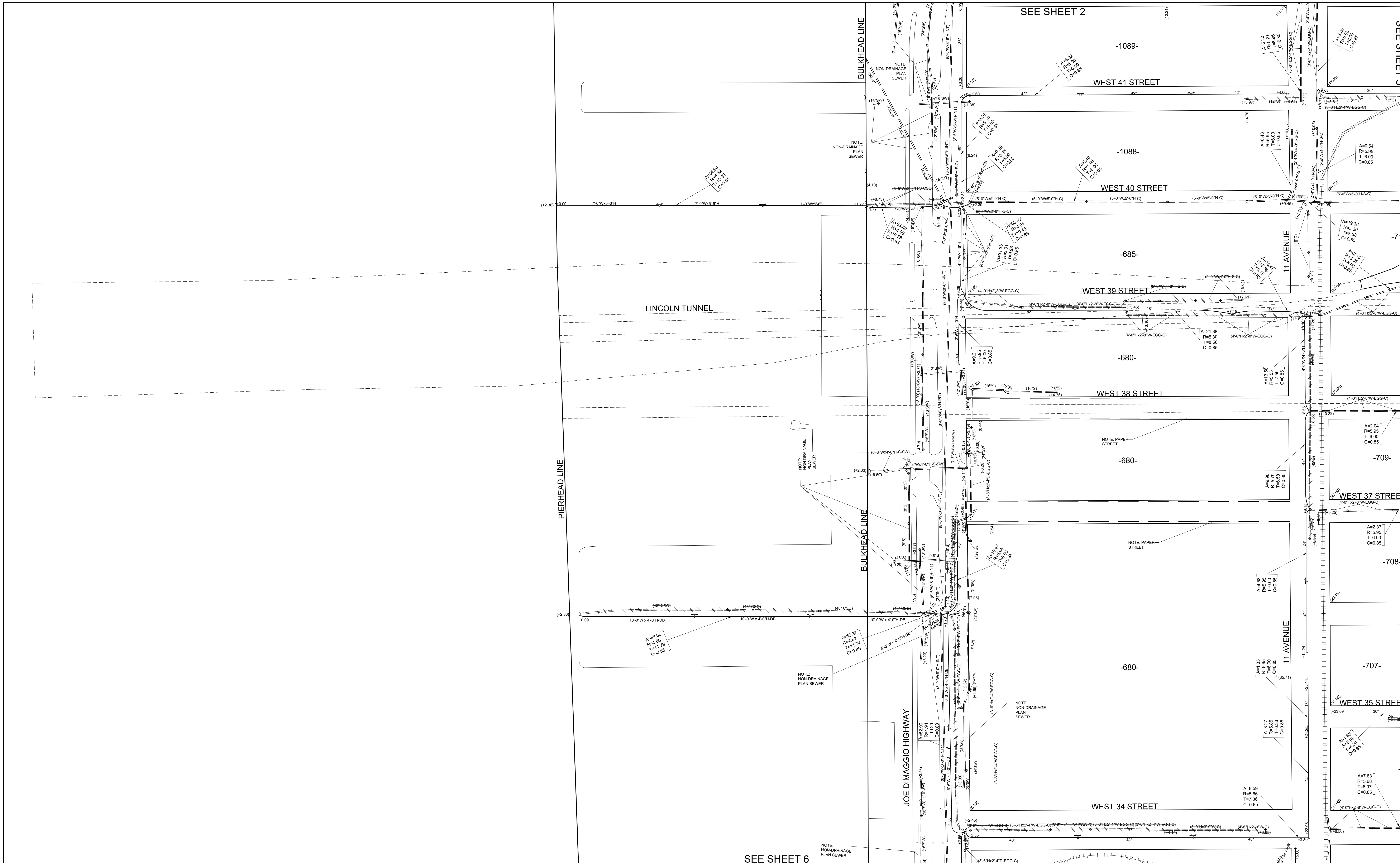


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NYC
 Environmental
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ENGINEER-IN-CHARGE DATE

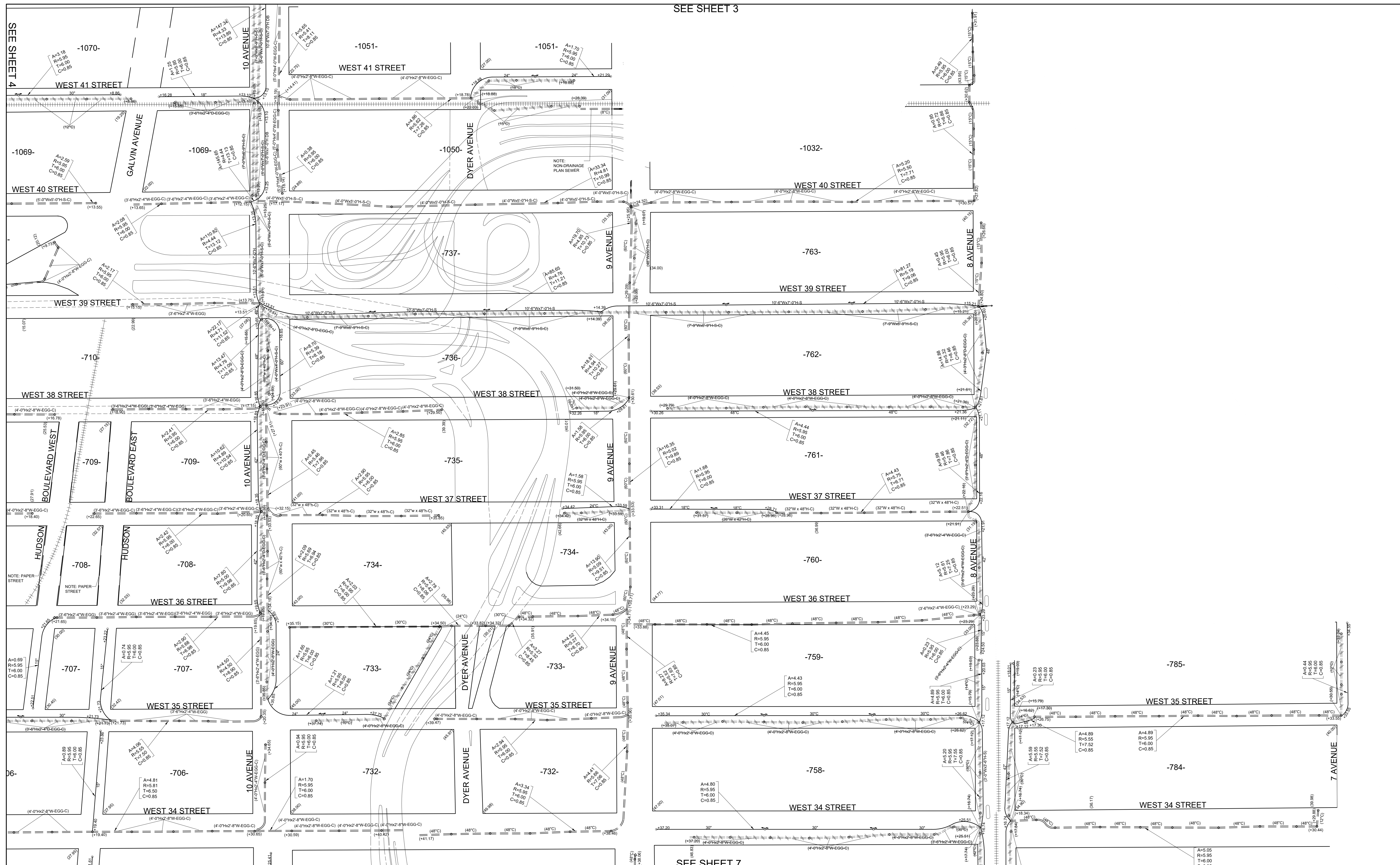
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Sheet 5 of 7

SEE SHEET 4

PIERHEAD LINE

BULKHEAD LINE

JOE DIMAGGIO HIGHWAY

11 AVENUE

-679-

WEST 33 STREET

-676-

WEST 30 STREET

-675-

WEST 29 STREET

-674-

WEST 28 STREET

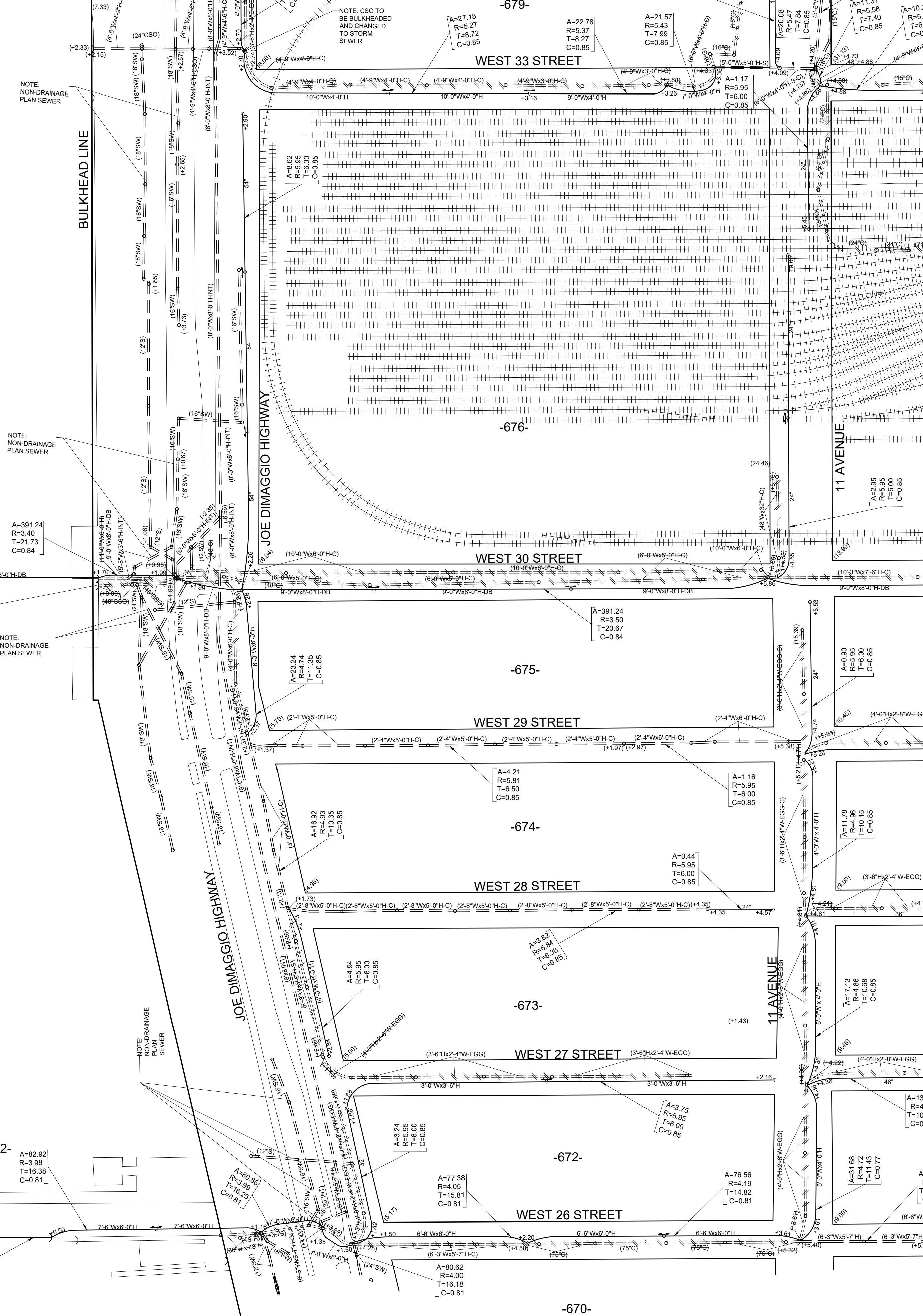
-673-

WEST 27 STREET

-672-

WEST 26 STREET

-670-



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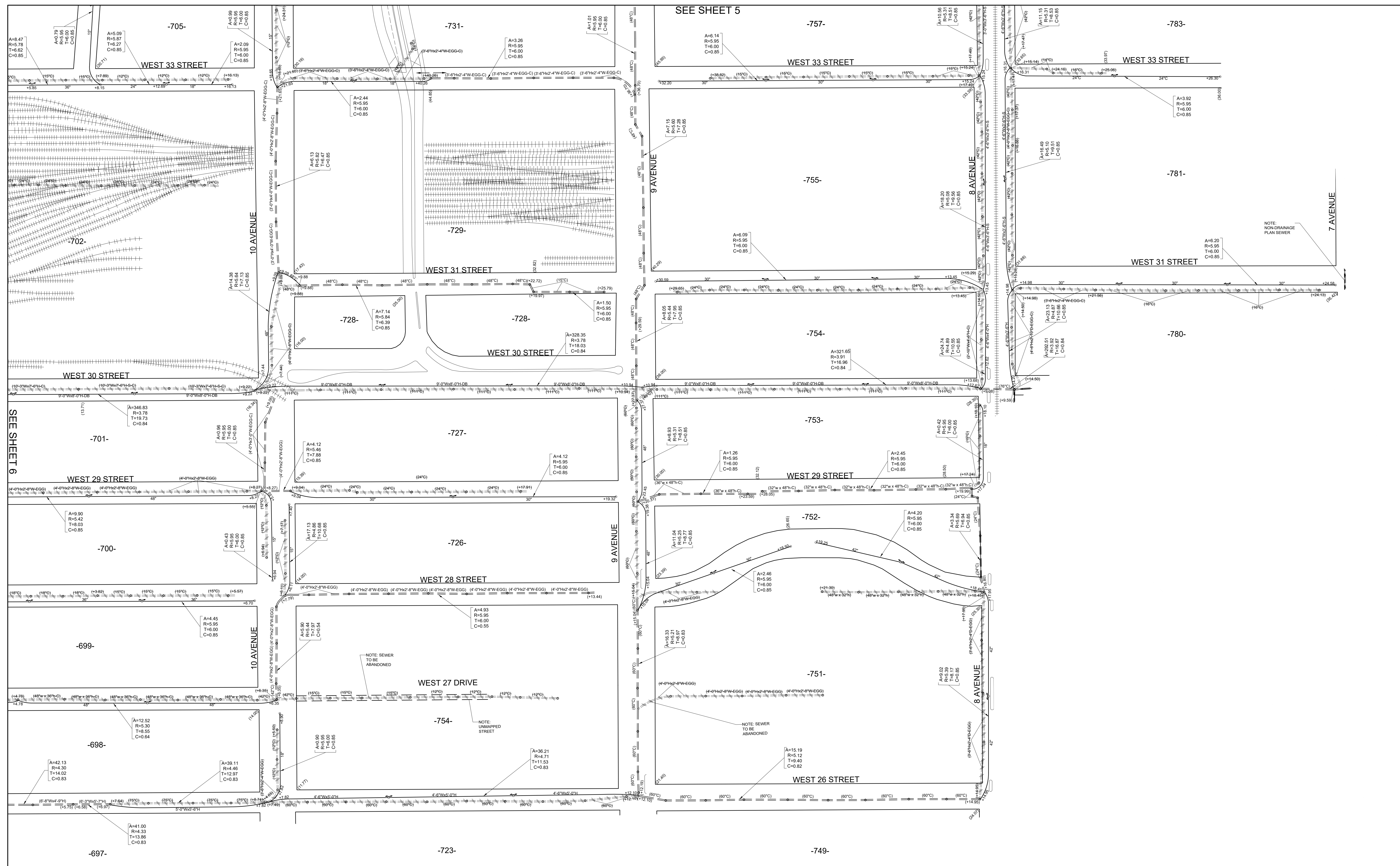
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