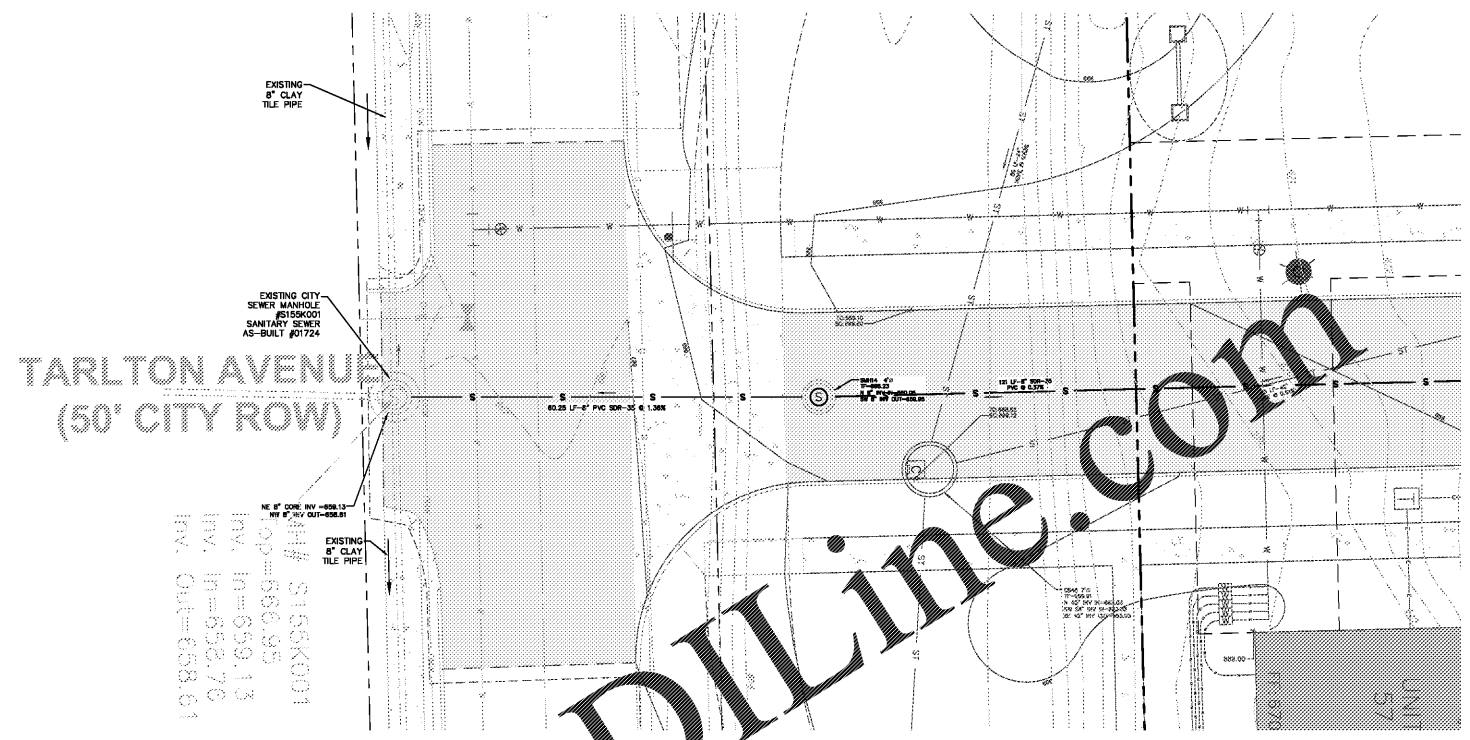
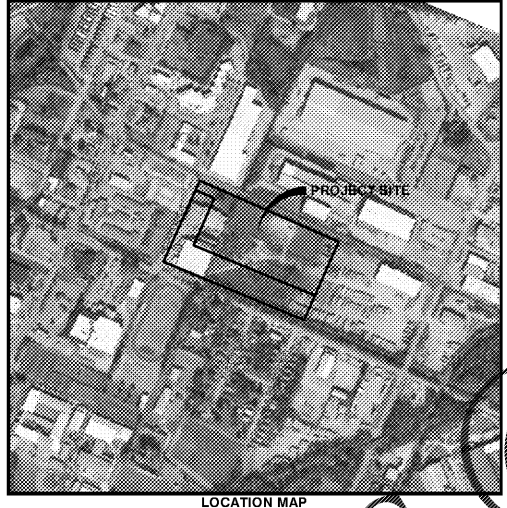


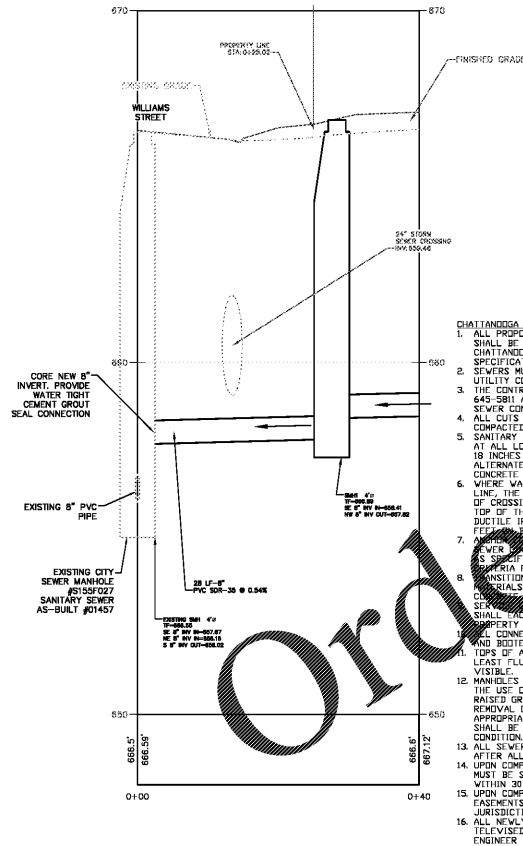
1 PRIVATE SANITARY SEWER CONNECTION PLAN - WILLIAMS  
SCALE: SCALE-H



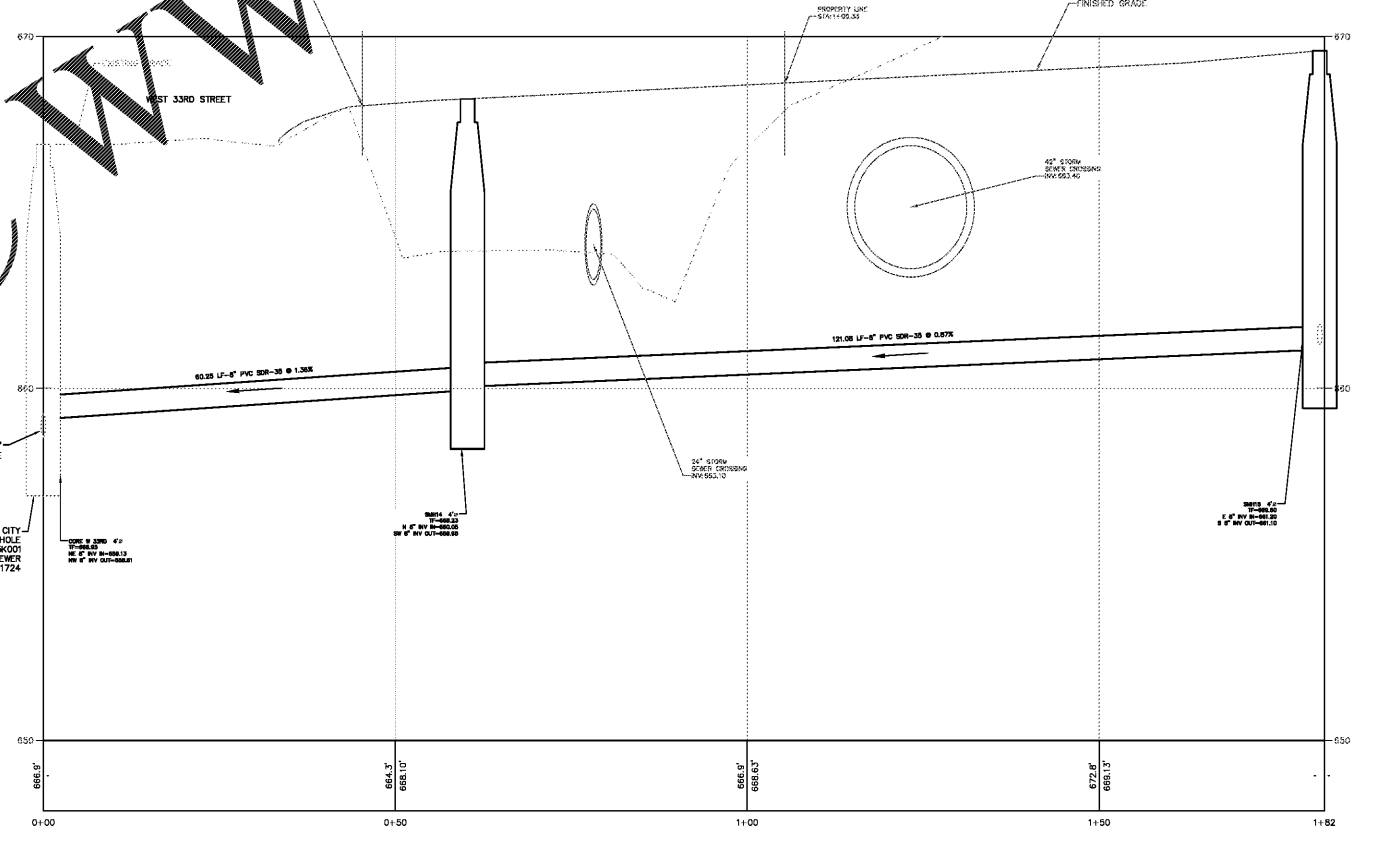
2 PRIVATE SANITARY SEWER CONNECTION PLAN - W. 33RD  
SCALE: 1" = 10'



LOCATION MAP  
SCALE: 1" = 500'



3 PRIVATE SANITARY SEWER CONNECTION PROFILE - WILLIAMS  
SCALE: 1" = 10'



4 PRIVATE SANITARY SEWER CONNECTION PROFILE - W. 33RD  
SCALE: 1" = 10'

- CHATTAHOOGA PUBLIC SANITARY SEWER CONSTRUCTION NOTES**
- ALL PROPOSED SANITARY SEWER LINES AND MANHOLES SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF CHATTAHOOGA/HAMILTON COUNTY STANDARD DETAILS AND SPECIFICATIONS.
  - SEWERS MUST BE CONSTRUCTED BY A LICENSED MUNICIPAL UTILITY CONTRACTOR CLASSIFICATION NO. 645-SBI AT LEAST 7 DAYS PRIOR TO START OF SEWER CONSTRUCTION.
  - ALL CUTS AND FILLS ARE TO BE MADE IN PLACE AND FILLED PRIOR TO SEWER CONSTRUCTION.
  - SANITARY SEWER LINES SHALL BE DUCTILE IRON PIPE AT ALL LOCATIONS WHERE SANITARY LINES CROSS WITHIN 18 INCHES ABOVE OR BELOW A SANITARY SEWER LINE. AS AN ALTERNATE, IF SANITARY SEWER LINES ARE PVC, THEN CONCRETE PROTECTION SHALL BE USED.
  - WHERE WATER PIPING CROSSES SANITARY SEWER LINES, THE WATER PIPE WITHIN 18 INCHES OF THE POINT OF CROSSING SHALL BE AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER LINE OR BE OF DUCTILE IRON WITH MECHANICAL JOINTS AT LEAST 10 FEET FROM BOTH ENDS OF THE CROSSING.
  - ADAPTERS SHALL BE PROVIDED ON SANITARY SEWER LINES EXCEEDING 18" WITH SPACING AS SPECIFIED BY STATE OF TENNESSEE DESIGN OFFICE FOR SEWER WORKS.
  - CONNECTIONS TO EXISTING MANHOLES MUST BE CORED AND REFORMED TO EXISTING MANHOLES AT PROPERTY LINE.
  - TOPS OF ALL MANHOLES SHALL BE RAISED TO BE AT LEAST 18 INCHES ABOVE FINISHED GRADE AND VISIBLE.
  - MANHOLES RAISED 8 INCHES OR LESS SHALL BE DONE BY THE USE OF CONCRETE RINGS OR "DOUGHNUTS". MANHOLES RAISED GREATER THAN 8 INCHES SHALL REQUIRE THE REMOVAL OF THE CONE SECTION AND REPLACEMENT OF THE APPROPRIATE SIZE MANHOLE RINGS. THE CONE SECTION SHALL BE THEN REINFORCED OR REPLACED DEPENDING ON CONDITION.
  - ALL SEWER LINES SHALL BE TESTED AND APPROVED AFTER ALL OTHER UTILITIES HAVE BEEN INSTALLED.
  - UPON COMPLETION OF THE PROJECT, "RECORD" DRAWINGS MUST BE SUBMITTED TO THE JURISDICTIONAL ENGINEER WITHIN 30 DAYS.
  - UPON COMPLETION OF THE PROJECT, ALL PUBLIC SEWER EASEMENTS OBTAINED SHALL BE SUBMITTED TO THE JURISDICTIONAL WASTEWATER AUTHORITY WITHIN 30 DAYS.
  - ALL NEWLY CONSTRUCTED SANITARY SEWERS SHALL BE TELEVIEWED AT THE REQUEST OF THE JURISDICTIONAL ENGINEER.

**SANITARY SEWER FLOW CALCULATIONS**  
3204 & 3220 Foundry33 - Residential Development - Williams Street Connection

Description	# of Units	# of Bedrooms
Number of 3 BR Townhome Units:	56	168
Number of 1 BR Apt. Units:	218	218
Number of 2 BR Apt. Units:	76	152
Number of 3 BR Apt. Units:	36	48
Total Bedrooms:	588	
Unit Flow per Bedroom:	100	GPD
Peak Flow Ratio:	3.5	
Average Flow per Day:	58,600	GPD
Average Daily Flow Rate:	40.7	GPM
Peak Hour Flow Rate:	83.46	GPM
Peak Instantaneous Flow Rate:	142.4	GPM

**Pipe Connecting to Public System (SMH4 to EX MH #155F027)**

SMH4 INV OUT	657.82	
EX MH INV IN	657.67	0.15
LENGTH	28.00	FT
SLOPE	0.0054	%
DIAMETER	8	INCH
Hazen-Williams	150	
Discharge Rate Max	595	GPM
Max. Full Velocity	3.80	FTS

**SANITARY SEWER FLOW CALCULATIONS**  
3204 & 3220 Foundry33 - Residential Development - West 33RD Street Connection

Description	# of Units	# of Bedrooms
Number of 3 BR Townhome Units:	20	60
Total Bedrooms:	60	
Unit Flow per Bedroom:	100	GPD
Peak Flow Ratio:	3.5	
Average Flow per Day:	6,000	GPD
Average Daily Flow Rate:	4.2	GPM
Peak Hour Flow Rate:	8.75	GPM
Peak Instantaneous Flow Rate:	14.9	GPM

**Pipe Connecting to Public System (SMH4 to EX MH #155F027)**

SMH4 INV OUT	659.95	
EX MH #155F027 INV IN	659.13	0.82
LENGTH	60.25	FT
SLOPE	0.0136	%
DIAMETER	8	INCH
Hazen-Williams	150	
Discharge Rate Max	984	GPM
Max. Full Velocity	6.28	FTS

**ISSUED FOR CITY OF CHATTAHOOGA LAND DISTURBANCE PERMIT**

FOUNDRY33 - RESIDENTIAL DEVELOPMENT

**SANITARY SEWER PLAN & PROFILE**

CITY OF CHATTAHOOGA, HAMILTON COUNTY, TN

**CHAZEN ENGINEERING CONSULTANTS, LLC**  
 2416 21st Ave South (Suite 103)  
 Nashville, Tennessee 37212  
 Phone: (615) 330-1259

**Major Field Associates:**  
 City of Chattanooga  
 2100 Market Street  
 Chattanooga, TN 37403  
 Phone: (423) 247-6075

**PIPER ROMANO**  
 6/11/20

DATE: 5/11/2020  
 SCALE: AS NOTED  
 PROJECT NO: 11916.01  
 SHEET NO: C162