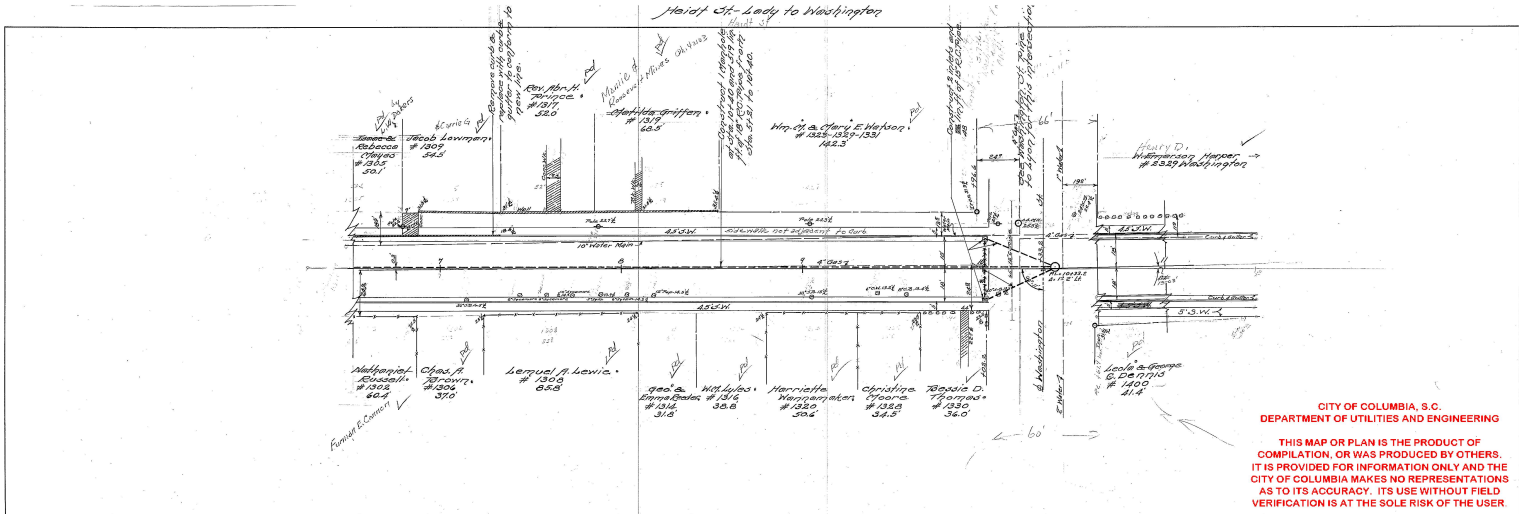


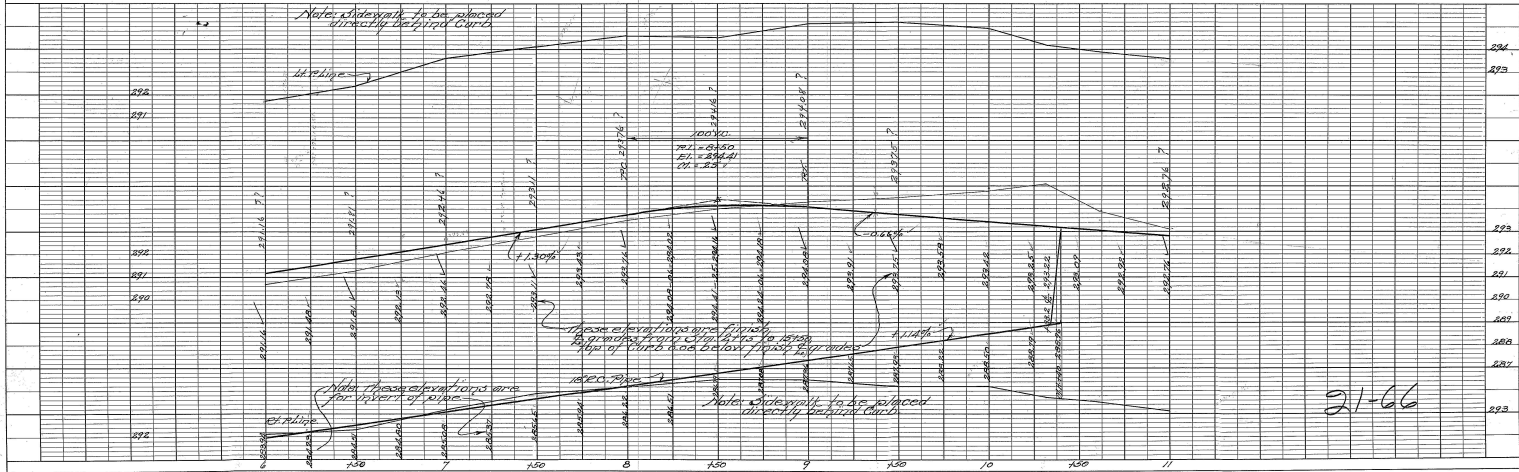
PLAN	
DATE	NO.
REVISIONS	
BY	DATE
APPROVED	
DATE	NO.
EXHIBIT REFERENCE SHEET	



CITY OF COLUMBIA, S.C.  
 DEPARTMENT OF UTILITIES AND ENGINEERING

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 VERIFICATION IS AT THE SOLE RISK OF THE USER

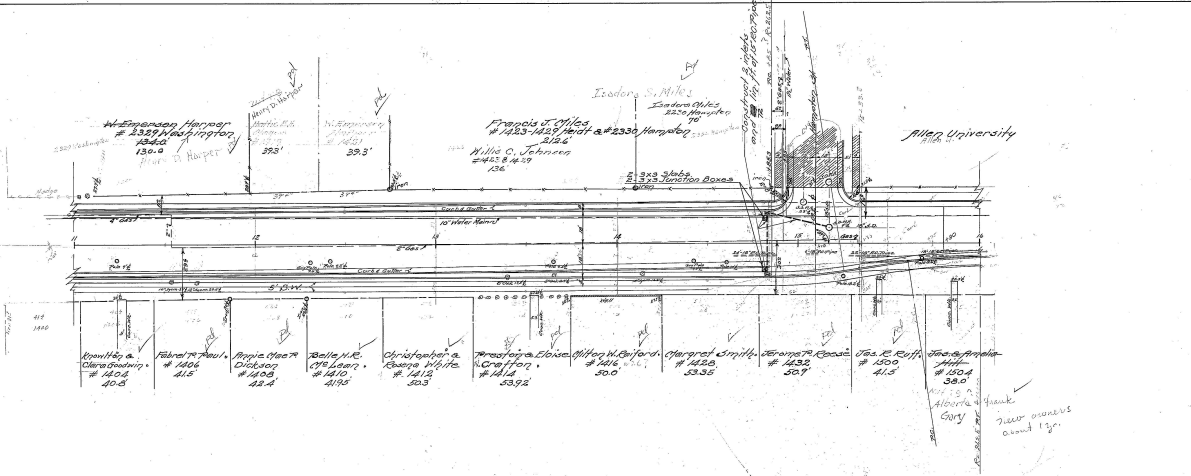
PROFILE	
DATE	NO.
REVISIONS	
BY	DATE
APPROVED	
DATE	NO.
EXHIBIT REFERENCE SHEET	



**CITY OF COLUMBIA, S.C.**  
**DEPARTMENT OF UTILITIES AND ENGINEERING**

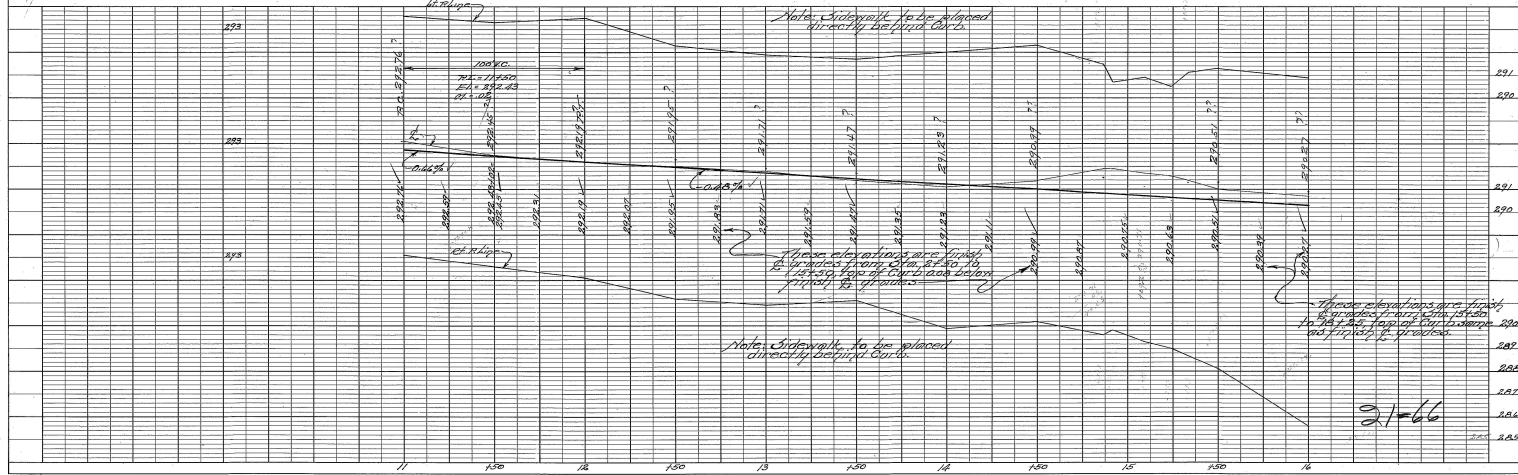
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 VERIFICATION IS AT THE SOLE RISK OF THE USER**

*Head St. Washington to Hampton*



PLAN	DATE	BY	CHKD

PROFILE	DATE	BY	CHKD



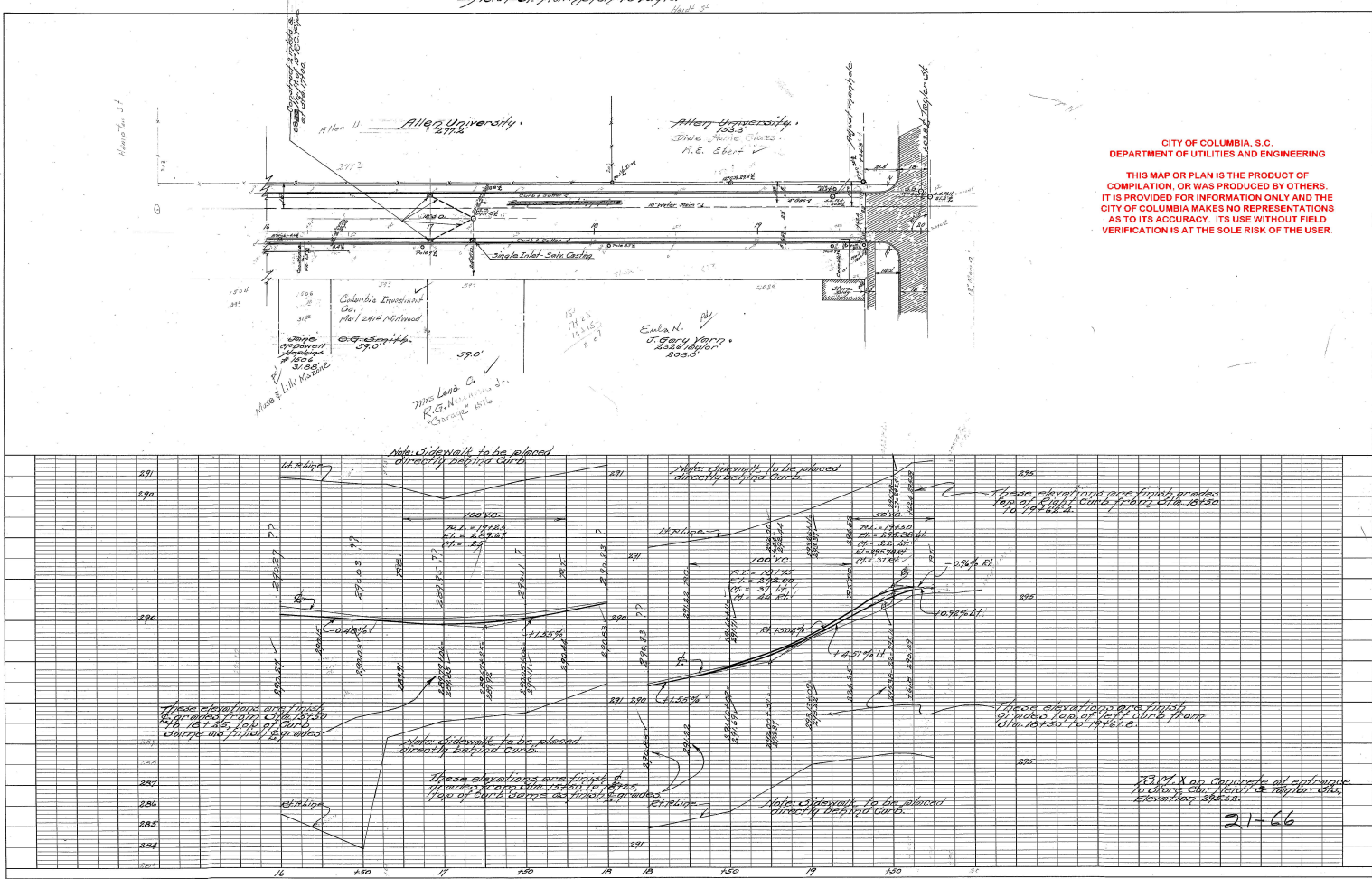
21-66



PLAN
DATE
BY
CHECKED
APPROVED
SCALE

PROFILE
DATE
BY
CHECKED
APPROVED
SCALE

Height of Harriott to Taylor



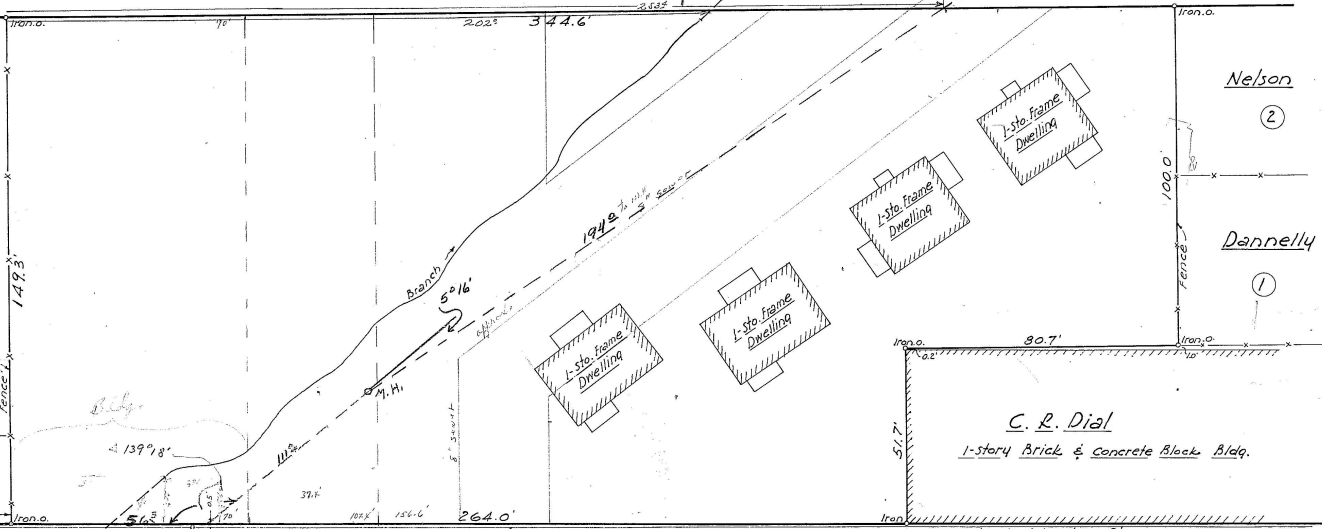


CITY OF COLUMBIA, S.C.  
DEPARTMENT OF UTILITIES AND ENGINEERING

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Ontario Street

(M<sup>c</sup>Callum Lumber Co.)  
M. C. Goodwin



Legare Street  
U. S. Highway No. 1

(Paved)

curb

conc. Sidewalk

C. R. Dial  
1-story Brick & concrete Block Bldg.

SS.  
ENCH BOOK  
#54, PG 30

Plat prepared for  
Julius L. McCallum & James L. Gibbs  
Columbia, S.C.

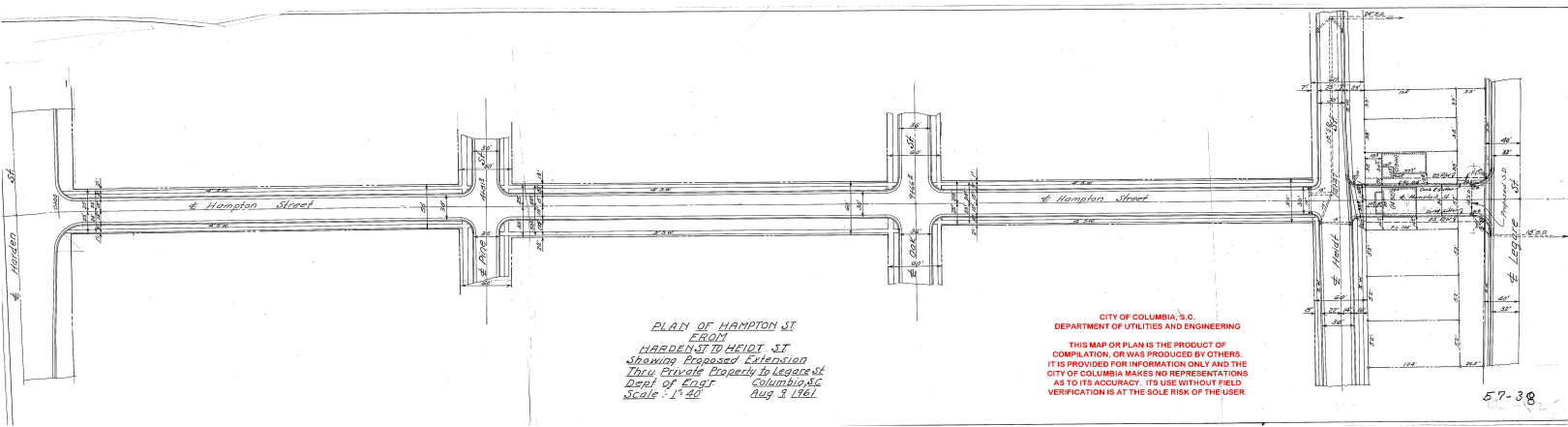
Scale: 1"=20'

B. P. Barber & Assocs., Engineers - Columbia, S.C. - March 15, 1955



48-109

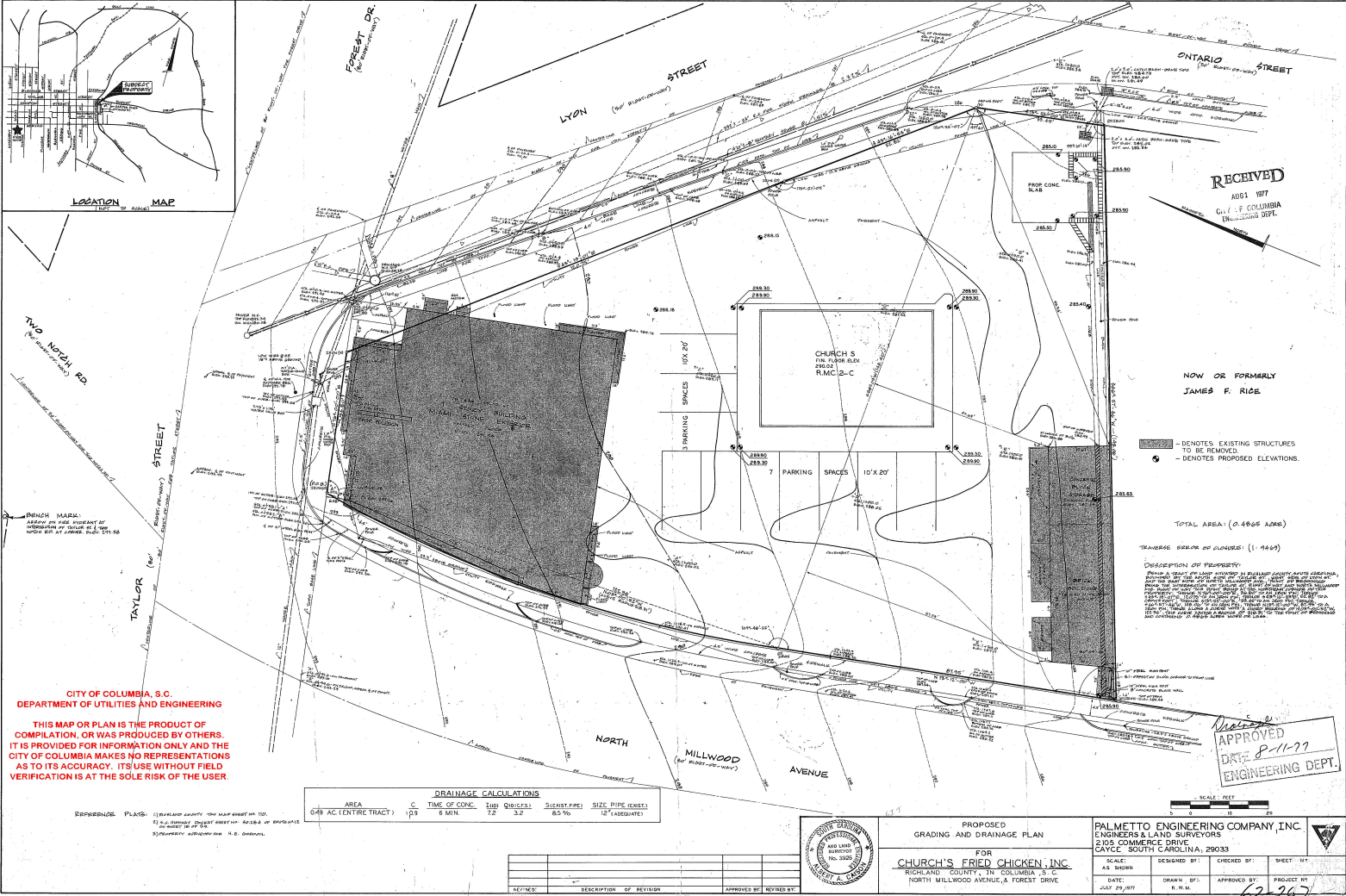
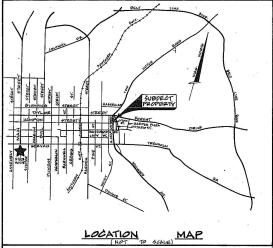
10003-E6



PLAN OF HAMPTON ST  
 FROM  
 HARDEN ST TO HEIDI ST  
 Showing Proposed Extension  
 Thru Private Property To Legare St  
 Dept of Eng. Columbia SC  
 Scale: 1" = 40' Aug. 3, 1961

CITY OF COLUMBIA, S.C.  
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RECEIVED  
AUG 1 1977  
CITY OF COLUMBIA  
ENGINEERING DEPT.

NOW OR FORMERLY  
JAMES F. RICE

— DENOTES EXISTING STRUCTURES  
TO BE REMOVED.  
— DENOTES PROPOSED ELEVATIONS.

TOTAL AREA: 0.4866 ACRES

TRANSVERSE SLOPE OF ALLEYS: (1:144)

DISCUSSION OF PROPOSED: Please refer to the notes on this plan and the notes on the sheets of the plan for a complete description of the proposed work. The proposed work is shown on this plan and the notes on the sheets of the plan. The proposed work is shown on this plan and the notes on the sheets of the plan.

CITY OF COLUMBIA, S.C.  
DEPARTMENT OF UTILITIES AND ENGINEERING

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VERIFICATION IS AT THE SOLE RISK OF THE USER.

DRAINAGE CALCULATIONS					
AREA	C	TIME OF CONC.	TIME OF TRAVEL	PEAK FLOW	PIPE SIZE
0.48 AC (ENTIRE TRACT)	1.0	5 MIN.	7.2	3.2	8.5 IN.

REFERENCE: PLANS: 1) RICHLAND COUNTY, THE MAP SHEET NO. 10.  
2) RICHLAND COUNTY, THE MAP SHEET NO. 11.  
3) RICHLAND COUNTY, THE MAP SHEET NO. 12.

NO.	DATE	DESCRIPTION OF REVISION	APPROVED BY	REVISED BY



PROPOSED  
GRADING AND DRAINAGE PLAN  
FOR  
**CHURCH'S FRIED CHICKEN, INC.**  
RICHLAND COUNTY, IN COLUMBIA, S.C.  
NORTH MILLWOOD AVENUE & FOREST DRIVE

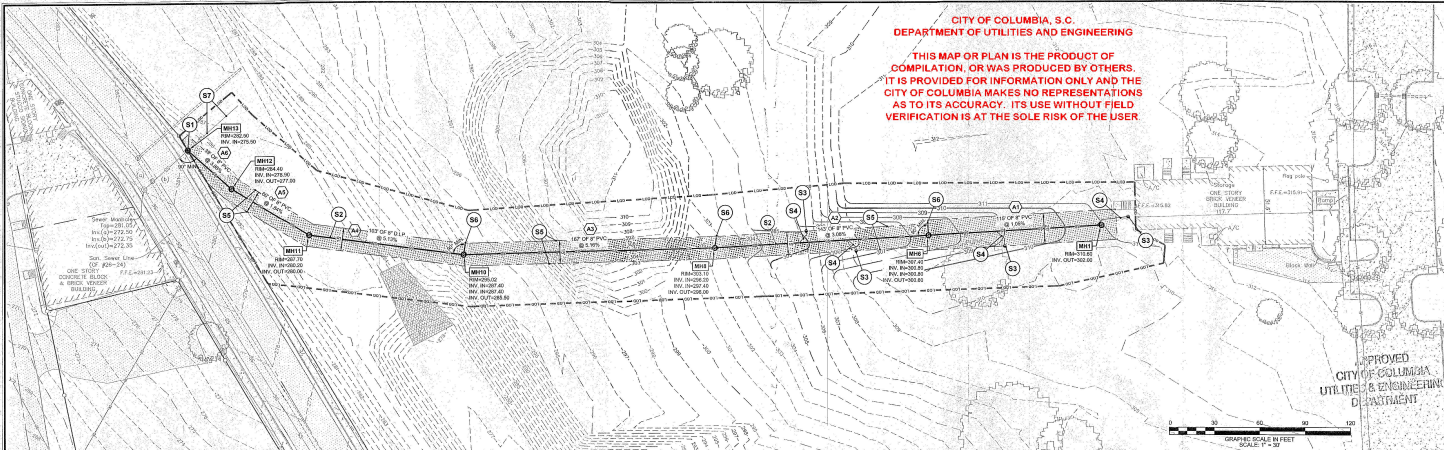
PALMETTO ENGINEERING COMPANY, INC.  
ENGINEERS & LAND SURVEYORS  
2405 COMMERCE DRIVE  
COLUMBIA, SOUTH CAROLINA, 29033  
SCALE: AS SHOWN  
DESIGNED BY: AS SHOWN  
CHECKED BY: R.W.M.  
DATE: JULY 29, 1977  
APPROVED BY: R.W.M.

APPROVED  
DATE 8-11-77  
ENGINEERING DEPT.

62-267

**CITY OF COLUMBIA, S.C.  
DEPARTMENT OF UTILITIES AND ENGINEERING**

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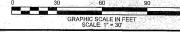
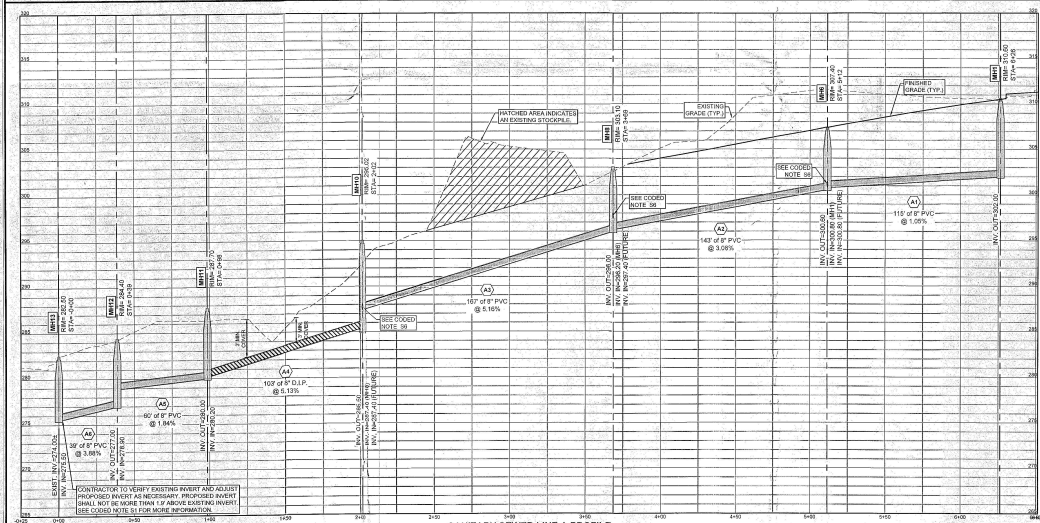


**COX AND DINKINS**  
ENGINEERS - SURVEYORS  
1704 BELLE MEADE  
COLUMBIA, SC 29205  
803-254-6118  
Email: cde@coxanddinkins.com

**REGISTERED PROFESSIONAL ENGINEER**  
No. 14899

**REGISTERED PROFESSIONAL ENGINEER**  
No. 14899

**CERTIFICATE OF AUTHORIZATION**



**NOTES**

1. CONSULT UTILITY CROSSINGS MAY DATE THAT ARE NOT SHOWN ON THIS PROFILE.
2. AS SHOWN, THIS PROFILE IS CENTER TO CENTER OF PIPEWORK.

**SANITARY SEWER LEGEND**

—	EXISTING SANITARY SEWER MAIN
—	PROPOSED SANITARY SEWER MAIN
○	EXISTING SANITARY SEWER CLEANOUT
○	PROPOSED SANITARY SEWER CLEANOUT
○	EXISTING SANITARY SEWER MANHOLE
○	PROPOSED SANITARY SEWER MANHOLE
○	PROPOSED EXCLUSIVE CITY OF COLUMBIA SANITARY SEWER EASEMENT (SEE PLAN FOR DETAILS)
○	PROPOSED SANITARY SEWER DEBRIDEMENT

- CODED NOTES**
- 81 CONTRACTOR SHALL FURNISH AND INSTALL NEW SANITARY SEWER MANHOLE AT THIS LOCATION. SEE PROFILES FOR APPROXIMATE ELEVATION AT THE TOP IN LOCATION. CONTRACTOR SHALL VERIFY EXISTING INVERT PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER IMMEDIATELY IF DISCREPANCIES ARE FOUND. COVER HOLES FOR EXISTING PIPE CONNECTIONS AND ABOUT WATERIGHT SEAL.
  - 82 CONTRACTOR SHALL FURNISH AND INSTALL NEW 36" PVC SANITARY SEWER GRAVITY MAIN. SEE SANITARY SEWER PROFILES FOR MORE INFORMATION.
  - 83 CONTRACTOR SHALL FURNISH AND INSTALL 18" 150' OF 36" PVC SANITARY SEWER SERVICE LINE AT THE MANHOLE. COVER IS LESS THAN 18" INSTALL EXISTING SERVICE LINE WITH PROTECTIVE LINING.
  - 84 CONTRACTOR SHALL FURNISH AND INSTALL 18" 150' OF 36" PVC SANITARY SEWER SERVICE LINE AT THE MANHOLE. COVER IS LESS THAN 18" INSTALL EXISTING SERVICE LINE WITH PROTECTIVE LINING.
  - 85 PROPOSED EXCLUSIVE SANITARY SEWER EASEMENT TO BE CONVEYED TO THE CITY OF COLUMBIA UPON COMPLETION OF CONSTRUCTION IN ACCORDANCE WITH THE CITY OF COLUMBIA. SEE PLAN FOR WORK.
  - 86 FUTURE STUB-OUT AND CONNECTION SHOWN ARE FOR REFERENCE ONLY. CONTRACTOR SHALL NOT INSTALL THE STUB-OUT PER SEWAGE AS SHOWN. CONTRACTOR SHALL INSTALL THE PROPER INVERT IN THE MANHOLE AS THE ELEVATION SHOWN ON THE PROFILE TO ACCOMMODATE EACH FUTURE SEWER PIPE CONNECTION. THE MANHOLES WILL HAVE TO BE CORRECTED IN THE FUTURE FOR THE PIPE INSTALLATIONS ACCORDING TO THE CITY OF COLUMBIA. THE MANHOLE COVER AND STUB-OUTS ARE NOT INCLUDED IN THIS CONTRACT.
  - 87 CONTRACTOR SHALL MAINTAIN AND PROPERLY OPERATE EXISTING SANITARY SEWER LINE UPSTREAM OF NEW MANHOLE.

**NOTE:** THE ENGINEER HAS REVIEWED THE SUBMITTED PROFILES, BUT DOES NOT WARRANT THE ACCURACY OF THE DATA PROVIDED TO HIM. CONTRACTOR SHALL VERIFY ALL DATA AND CONDITIONS ON THE GROUND AND NOTIFY THE ENGINEER IMMEDIATELY IF DISCREPANCIES ARE FOUND. CONTRACTOR SHALL VERIFY EXISTING INVERT PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER IMMEDIATELY IF DISCREPANCIES ARE FOUND. COVER HOLES FOR EXISTING PIPE CONNECTIONS AND ABOUT WATERIGHT SEAL.

**Palmetto Utility Protection Service, Inc.**  
**South Carolina 811**  
CALL 811  
CONTRACTOR SHALL CONTACT THE UNDERGROUND LOCATIONS DIVISION FOR INFORMATION ON SPECIFIC UTILITY LOCATIONS.

- REFERENCES:**
1. SECONDARY & TOPOGRAPHIC MAP PREPARED FOR COLUMBIA POLYMER AUTHORITY DEVELOPMENT, INC. GONZALES GARDENS BY COX AND DINKINS, INC. DATED AUGUST 18, 2016.
  2. GROUND PREPARED FOR FORNIE ROBERTS - GONZALES GARDENS GROUND BY ASSOCIATED S & B, INC. DATED NOVEMBER 12, 2017.
  3. PLAT PREPARED FOR FORNIE ROBERTS AUTHORITY OF THE CITY OF COLUMBIA, SOUTH CAROLINA, BY COX AND DINKINS, INC. DATED MARCH 14, 2016.
- GENERAL NOTES:**
1. THE MAP NUMBERS WILL BE ASSIGNED TO THE SUBJECT PARCELS UPON APPROVAL AND RECORDS OF A NEW SECONDARY MAP.
  2. TOTAL AREA OF ALL PARCELS ASSOCIATED WITH THIS LOP IS 12 ACRES.
  3. STAKES OF THE SUBJECT PARCELS IS 1/4" = 1'.
  4. CONTIGUOUS ELEVATIONS ARE ONE (1) FOOT. ELEVATIONS SHOWN ARE NAVD 83 DATUM.
  5. THE LOCATION OF UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE. THE LOCATION OF OTHER UNDERGROUND UTILITIES AND THEIR SERVICES ARE UNKNOWN. CONTRACTOR SHALL LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION.
  6. THE PROPERTY IS LOCATED WITHIN A FLOOD HAZARD AREA. PER FLOOD INSURANCE RATE MAP NUMBER 48020244L, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY OF COLUMBIA AND THEIR SUBCONTRACTORS HAVE THE CORRECTMOST UP-TO-DATE PLANS AVAILABLE.

**PRODUCED BY**  
**GONZALES GARDENS COMMUNITY**  
**BUILDING SANITARY SEWER**  
LOCATED IN THE CITY OF COLUMBIA,  
RICHLAND COUNTY, SOUTH CAROLINA.

**SANITARY SEWER PLAN AND PROFILE**

PROJECT NO. 1141140-01-21.22.23 & 24  
SHEET NO. 66C-30  
DATE: 11/16/2017  
SCALE: C4 of 6

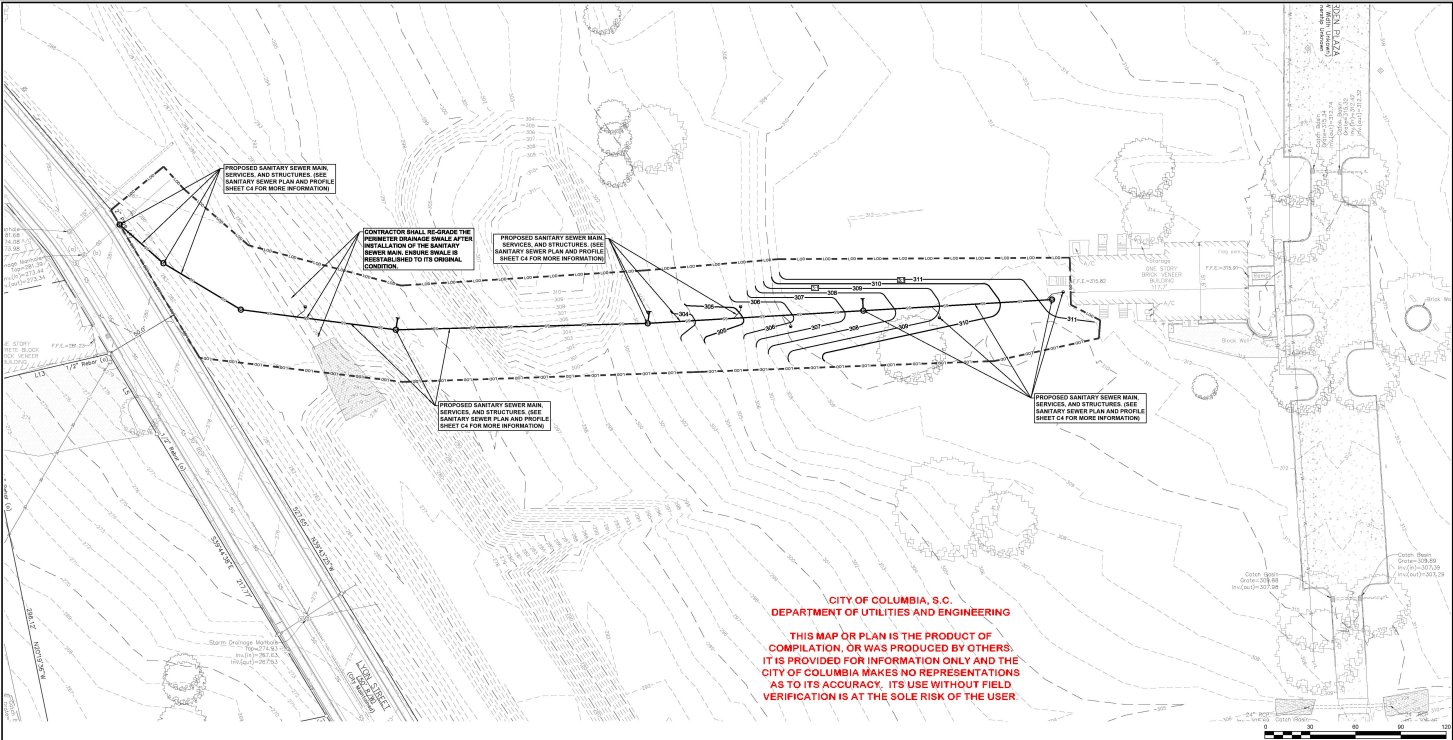
**FILE 343-12A**











**TEMPORARY STABILIZATION NOTES:**

1. TEMPORARY STABILIZATION IS REQUIRED ON ALL DISTURBED AREAS WITHIN 14 DAYS AFTER CONSTRUCTION ACTIVITY IS COMPLETE, UNLESS CONSTRUCTION ACTIVITY IS GOING TO REBUILT WITHIN 21 DAYS.
2. GRASSSEED ALL AREAS FOR THE TEMPORARY SEEDING SCHEDULE.
3. COVER SEEDS AREAS WITH AN APPROPRIATE BELLS TO PROVIDE PROTECTION FROM FROST, WEATHER, AND/OR ANIMALS. WHEN THE TEMPORARY VEGETATION DOES NOT GROW QUICKLY OR THICK ENOUGH TO PREVENT EROSION, RE-SEED AREAS AS NECESSARY AS SOON AS POSSIBLE.
4. KEEP SEEDS AREAS ADEQUATELY MOIST. IRRIGATE SEEDS AREAS IF NORMAL RAINFALL IS NOT ADEQUATE FOR THE SEEDING AND GROWTH OF SEEDINGS. WATER SEEDS AREAS AT CONTROLLED RATES THAT ARE LESS THAN THE RATE AT WHICH THE SOIL CAN ABSORB WATER TO PREVENT RUNOFF. RUNOFF OF EXCESS WATER WASTES WATER AND CAN CAUSE EROSION.
5. RE-SEED AREAS WHERE SEEDING DOES NOT GROW QUICKLY, THICK ENOUGH OR ADEQUATELY TO PREVENT EROSION.

**FINAL STABILIZATION NOTE:**

TEMPORARY SEEDING WILL NOT BE ACCEPTED AS A FINAL STABILIZATION MEASURE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT PERMANENT SEEDING IS APPLIED IN STRICT ACCORDANCE WITH PERMANENT SEEDING SCHEDULE OR PROTECTIVE MEASURES AND THAT ALL SEEDS ARE PROPERLY PLANTED AND ADEQUATELY IRRIGATED BY ANY AND ALL MEANS NECESSARY TO ESTABLISH VEGETATION AS REQUIRED TO ACHIEVE FINAL STABILIZATION, WHICH IS DEFINED BY 70% COVERAGE OVER 90% OF THE DISTURBED AREA.

**TOTAL DISTURBED AREA 1.0 ACRES**

**GRADING LEGEND**

--- 300 ---	EXISTING INDEX CONTOUR	--- 310 ---	PROPOSED INDEX CONTOUR
--- 300 ---	EXISTING INTERMEDIATE CONTOUR	--- 300 ---	PROPOSED INTERMEDIATE CONTOUR
---	CURRENT PHASE LIMITS OF DISTURBANCE	---	PROPOSED SANITARY SEWER MAIN & STRUCTURES

**GRADING NOTES:**

1. TO THE MAXIMUM EXTENT POSSIBLE ALL SLOPES SHALL BE DIRECTED TOWARD THE PERIMETER DRAINAGE SWALES INSTALLED DURING THE GONZALES GARDEN DEMOLITION PHASE.
2. THE CONTRACTOR SHALL CONTROL DUST GENERATED FROM THE PROPOSED LAND DISTURBING ACTIVITIES BY USE OF A WATER OR OTHER MEASURES NECESSARY TO LIMIT DUST GENERATED FROM THE CONSTRUCTION SITE ACTIVITIES.

**CONSTRUCTION SEQUENCE:**

1. INTERSECT CONSTRUCTION ENTRANCE AND ALL OTHER EXISTING SEDIMENT AND EROSION CONTROL MEASURES. REPAIR AS NECESSARY AND REMOVE ANY ACCUMULATED SEDIMENT.
2. ROUGH GRADING OF THE SITE AS REQUIRED FOR THE SANITARY SEWER MAIN INSTALLATION.
3. TEMPORARILY ESTABLISH VEGETATION TO THE MAXIMUM EXTENT POSSIBLE ON ALL DISTURBED AREAS WITHIN 14 DAYS OF THE COMPLETION OF THE CONSTRUCTION. UNLESS OTHERWISE NOTED, THIS VEGETATION IS TO BE ESTABLISHED WITHIN 21 DAYS. SEE THE TEMPORARY SEEDING NOTES FOR MORE INFORMATION.
4. INSTALLATION OF THE SANITARY SEWER MAIN AND ALL ASSOCIATED APPURTENANCES.
5. RE-GRACE PERIMETER DRAINAGE SWALES IN THE AREA OF THE SANITARY SEWER MAIN INSTALLATION TO ITS ORIGINAL CONDITION AND BEGIN STABILIZATION OF THE SWALE.
6. FINISH ALL EXISTING MOVING OPERATIONS UTILITY INSTALLATION.
7. INTERSECT THE SEWER MAIN INSTALLED AS PART OF THE GONZALES GARDEN DEMOLITION PHASE AND CONTRACTOR SHALL REMOVE ALL EXISTING SANITARY SEWER MAIN AND ALL ASSOCIATED APPURTENANCES AS NECESSARY. IF NECESSARY, THE CONTRACTOR SHALL REMOVE ALL EXISTING SANITARY SEWER MAIN AND ALL ASSOCIATED APPURTENANCES AS NECESSARY.
8. BEGIN PERMANENT FINAL STABILIZATION OF ALL DISTURBED AREAS WITHIN THE LIMITS OF DISTURBANCE SHOWN ON THESE PLANS.
9. SUBMIT NOTICE OF TERMINATION TO THE CITY OF COLUMBIA FOR PROJECT CLOSURE.

**NOTE:**

INFORMATION REGARDING THE REVISED MEASUREMENTS, SEE THE GONZALES GARDEN DEMOLITION PHASE DRAWING. THE MEASUREMENTS SHOWN ON THIS PLAN HAVE BEEN PROVIDED TO YOU FOR YOUR INFORMATION ONLY. YOU SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF THE INFORMATION AND SHALL BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF THE INFORMATION AND SHALL BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF THE INFORMATION AND SHALL BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS.

**REFERENCES:**

1. BOUNDARY TOPOGRAPHIC MAP PREPARED FOR COLUMBIA HOUSING AUTHORITY DEVELOPMENTS, INC. GONZALES GARDENS, BY COX AND DINKINS, INC. DATED AUGUST 18, 2016.
2. DRAWING PREPARED FOR COLUMBIA HOUSING AUTHORITY DEVELOPMENTS, INC. GONZALES GARDENS, BY COX AND DINKINS, INC. DATED AUGUST 18, 2016.

**GENERAL NOTES:**

1. TAX MAP NUMBERS WILL BE ASSIGNED TO THE SUBJECT PARCELS UPON APPROVAL AND RECORDING OF A NEW SUBDIVISION PLAT.
2. TOTAL AREA OF ALL PARCELS ASSOCIATED WITH THIS LCP IS 12.42 ACRES.
3. THE LOCATION OF ALL SUBJECT PARCELS IS 100.
4. CONTOUR INTERVAL ELEVATIONS ARE ONE (1) FOOT. ELEVATIONS SHOWN ARE BASED ON DATUM.
5. THE LOCATION OF ALL UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE. THE LOCATION OF OTHER UNDERGROUND UTILITIES AND THEIR SERVICES ARE UNKNOWN. CONTRACTOR SHALL LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION.
6. THIS PROJECT IS LOCATED IN FLOOD ZONE. REFER TO FLOOD PRELIMINARY DATA MAP NUMBER 46970204AL FOR FLOOD ZONE INFORMATION.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THEY AND THEIR SUBCONTRACTORS HAVE THE CORRECT LATEST OR TO DATE PLANS AVAILABLE.

**COX AND DINKINS**  
 ENGINEERS - SURVEYORS  
 COX AND DINKINS, INC.  
 724 BELLE LANE, SUITE 100  
 COLUMBIA, SC 29205  
 803.254.0218  
 Fax: 803.750.0989  
 Email: cdm@coxanddinkins.com

**SOUTH CAROLINA**  
 PROFESSIONAL ENGINEER  
 No. 14890  
 STATE OF SOUTH CAROLINA  
 REGISTERED PROFESSIONAL ENGINEER  
 No. 12892

**CITY OF COLUMBIA**  
 DEPARTMENT OF UTILITIES AND ENGINEERING  
 1917 HARDEN STREET  
 COLUMBIA, SC 29204  
 803.254.3886  
 Email: gbrator@chscnc.org

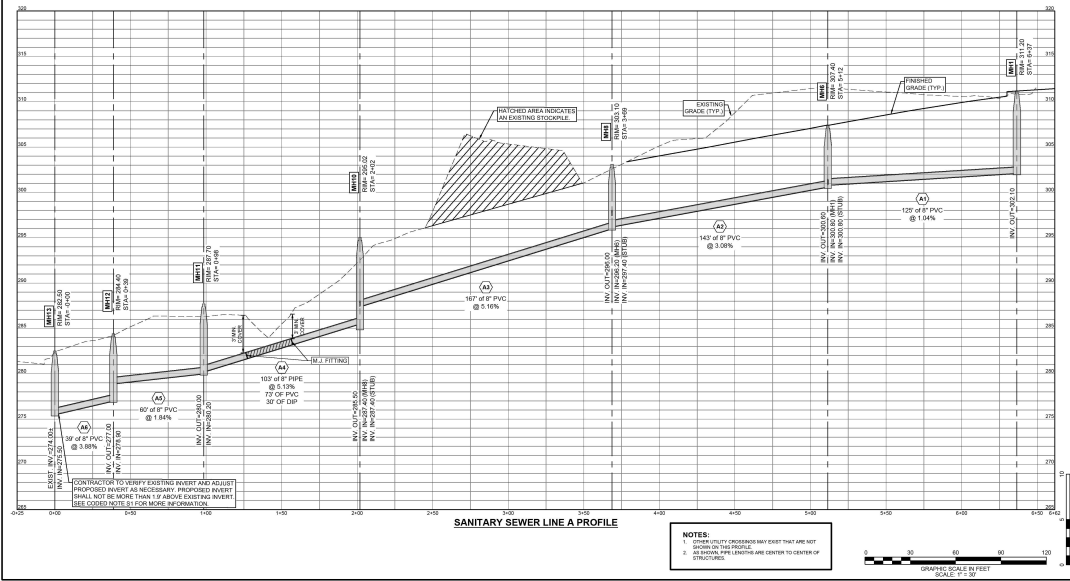
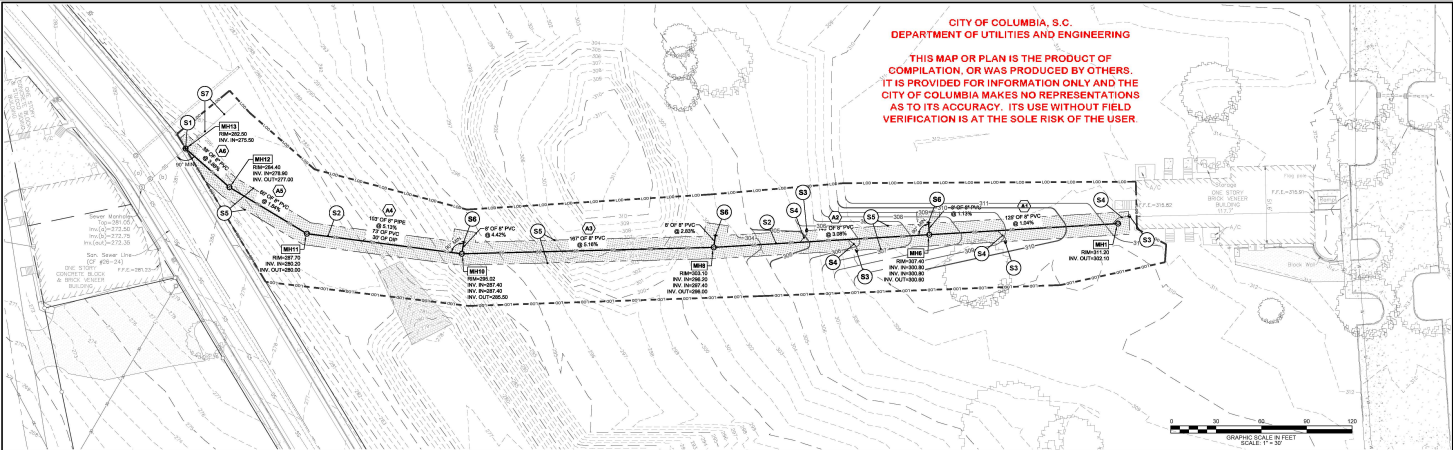
**GONZALES GARDENS COMMUNITY BUILDING SANITARY SEWER**  
 LOCATED IN THE CITY OF COLUMBIA, RICHLAND COUNTY, SOUTH CAROLINA

**GRADING AND STABILIZATION PHASE SWPP PLAN**

DATE: 11/11/2016 11:22:23 AM  
 DRAWN BY: J. J. JONES  
 CHECKED BY: J. J. JONES  
 SHEET NO. C3 of 6  
 PROJECT NO. 1584

CITY OF COLUMBIA, S.C.  
DEPARTMENT OF UTILITIES AND ENGINEERING

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**SANITARY SEWER LEGEND**

PROPOSED SANITARY SEWER MANHOLE	EXISTING SANITARY SEWER MANHOLE
PROPOSED SANITARY SEWER SERVICE	EXISTING SANITARY SEWER SERVICE
PROPOSED SANITARY SEWER SERVICE	EXISTING SANITARY SEWER SERVICE
PROPOSED SANITARY SEWER SERVICE	EXISTING SANITARY SEWER SERVICE
PROPOSED BY DEPARTMENT OF COLUMBIA SANITARY SEWER SERVICE	
PROPOSED SANITARY SEWER SERVICE	
PROPOSED SANITARY SEWER SERVICE	
PROPOSED SANITARY SEWER SERVICE	

**NOTES:**

- GENERAL INFORMATION REGARDING THE REVISED RECORDS, SEE THE INFORMATION PROVIDED IN THE REVISED RECORDS. THESE RECORDS INCLUDE THE REVISED RECORDS AND THE REVISED RECORDS. THE REVISED RECORDS SHALL BE THE REVISED RECORDS. THE REVISED RECORDS SHALL BE THE REVISED RECORDS. THE REVISED RECORDS SHALL BE THE REVISED RECORDS.

**REFERENCES:**

- STANDARD CITY ENGINEERING MAP PREPARED FOR COLUMBIA HOUSING AUTHORITY DEVELOPMENTS, INC. (COLUMBIA HOUSING AUTHORITY DEVELOPMENTS, INC. DATED AUGUST 18, 2016)
- DRAWING PREPARED FOR COLUMBIA HOUSING AUTHORITY DEVELOPMENTS, INC. (COLUMBIA HOUSING AUTHORITY DEVELOPMENTS, INC. DATED NOVEMBER 22, 2016)
- PLAN PREPARED FOR COLUMBIA HOUSING AUTHORITY DEVELOPMENTS, INC. (COLUMBIA HOUSING AUTHORITY DEVELOPMENTS, INC. DATED NOVEMBER 22, 2016)

**GENERAL NOTES:**

- TAX MAP NUMBERS WILL BE ASSIGNED TO THE SUBJECT PARCELS UPON APPROVAL AND RECORDING OF A NEW RECORDING PLAN.
- TOTAL AREA OF ALL PARCELS ASSOCIATED WITH THIS LCP IS 18.12 ACRES.
- ZONING OF THE SUBJECT PARCELS IS R-10.
- CONTIGUOUS INTERVAL ELEVATIONS ARE ONE (1) FOOT ELEVATIONS SEVEN ARE NAVD 88 DATUM.
- THE LOCATION OF UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE. THE LOCATIONS OF OTHER UNDERGROUND UTILITIES AND THEIR SERVICES ARE UNKNOWN. CONTRACTOR SHALL LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION.
- THIS PROJECT IS A LOCAL FLOOD ZONE. THE FLOOD PRELIMINARY DATA MAP NUMBER 469702004L, DATED DECEMBER 21, 2017, BY SCALED LOCATION AND GRAPHIC PLOTTING ONLY.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THEY AND THEIR SUBCONTRACTORS HAVE THE CORRECT MOST UP-TO-DATE PLANS AVAILABLE.

**COX AND DINKINS**  
ENGINEERS - SURVEYORS  
224 MILL LANE, SUITE 100  
COLUMBIA, SC 29205  
803.254.0518  
Fax: 803.750.0989  
Email: cdx@coxanddinkins.com

**South Carolina 811**  
3 DAYS BEFORE DIGGING IN SOUTH CAROLINA  
CALL 811  
CONTRACTOR SHALL CONTACT THE UNDERGROUND UTILITIES DIVISION FOR ANY UNDISCOVERED UTILITIES.

**GOZALES GARDENS COMMUNITY BUILDING SANITARY SEWER**  
LOCATED IN THE CITY OF COLUMBIA, RICHLAND COUNTY, SOUTH CAROLINA.

**SANITARY SEWER PLAN AND PROFILE**

DATE: 10/20/2018

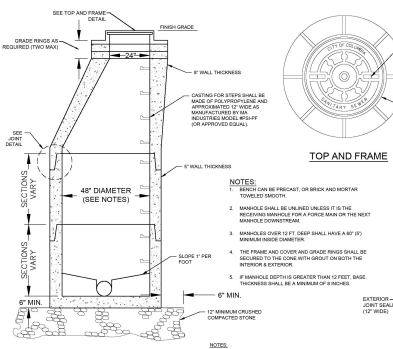
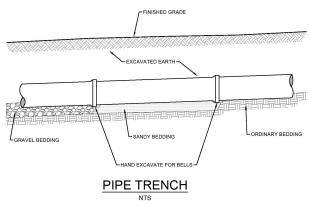
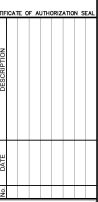
SHEET NO: C4 of 6





CITY OF COLUMBIA, S.C.  
DEPARTMENT OF UTILITIES AND ENGINEERING

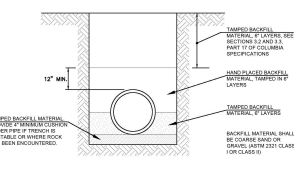
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VERIFICATION IS AT THE SOLE RISK OF THE USER.



**CROSSING NOTES**

CROSSING A WATER MAIN UNDER A SEWER: WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS OVER A SEWER, THE WATER MAIN SHALL BE LIFT AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER. UNLESS LOCAL CONDITIONS OR MANHOLE DEPTHS PRESENT AN EXCEPTION, SEPARATION FROM LATERALS BEYOND THE MAIN MANHOLE AND SEWERS SHALL BE CONSTRUCTED OF FIBERGLASS MATERIALS AND WITH JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING. A SECTION OF WATER MAIN PIPE SHALL BE CONTINUED AT THE POINT OF CROSSING.

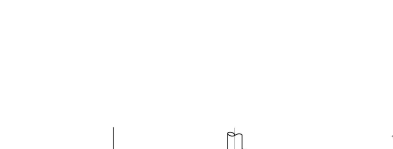
**DUCTILE IRON PIPE BEDDING AND BACKFILLING DETAIL**  
NTS



THE PIPE IS TO BE BEDDED IN COMPACTED 1/2" LAYERS TO THE SPRING LINE FIRST. THEN BACKFILLED WITH UNBLENDED SAND OR EQUIVALENT TO THE SAND SPECIFIED IN SECTION 3.04.01 OF THE STANDARD SPECIFICATIONS FOR ROADWORK OF THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION.

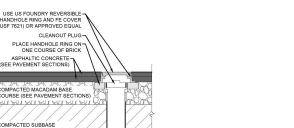
**NOTES:**

- SEE DIMENSIONS FOR WALLS AND COVER.
- SEE ALL EXTERNAL JOINTS WITH WATER SEALING AND DISPERGERS.



**NOTES:**

- USE UNBLENDED SAND OR EQUIVALENT TO THE SAND SPECIFIED IN SECTION 3.04.01 OF THE STANDARD SPECIFICATIONS FOR ROADWORK OF THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION.
- WHERE A HOUSE SEWER IS CONNECTED TO MANHOLE, THE HOUSE SEWER MUST BE A MINIMUM OF 6" ABOVE THE MANHOLE INVERT.



**NOTES:**

- USE UNBLENDED SAND OR EQUIVALENT TO THE SAND SPECIFIED IN SECTION 3.04.01 OF THE STANDARD SPECIFICATIONS FOR ROADWORK OF THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION.
- WHERE A HOUSE SEWER IS CONNECTED TO MANHOLE, THE HOUSE SEWER MUST BE A MINIMUM OF 6" ABOVE THE MANHOLE INVERT.

**SEWER NOTES**

- NOTES TO OWNER AND CONTRACTOR:**
- THE OWNER SHALL PAY ALL SANITARY SEWER FEES ASSOCIATED WITH THE PROJECT TO THE CITY OF COLUMBIA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE PAYMENT OF THOSE FEES BETWEEN THE OWNER AND THE CITY OF COLUMBIA.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND LICENSES FROM THE CITY OF COLUMBIA AND THE SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL.
  - THE CONTRACTOR SHALL PROVIDE CERTIFIED RECORD DATA FROM THE CONTRACTOR'S SOUTH CAROLINA LICENSED SURVEYOR TO THE CITY OF COLUMBIA. THE CONTRACTOR SHALL PROVIDE A TRAILER TYPED TO ALLOW SUFFICIENT TIME FOR THE RECORD DRAWING TO BE REVIEWED AND APPROVED BY THE CITY OF COLUMBIA AND SCDC.
  - THE CONTRACTOR SHALL PROVIDE A TRAILER TYPED TO ALLOW SUFFICIENT TIME FOR THE RECORD DRAWING TO BE REVIEWED AND APPROVED BY THE CITY OF COLUMBIA AND SCDC.
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**SANITARY SEWER SYSTEM NOTES:**

- ALL MATERIALS AND INSTALLATION OF THE PROPOSED SANITARY SEWER SYSTEM SHALL MEET THE REQUIREMENTS AS SET FORTH IN THE CITY OF COLUMBIA AND THE SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL.
- ALL PROPOSED SANITARY SEWER SERVICE MAINS AND SERVICES SHALL COMPLY TO TEN FEET AT A MINIMUM.
- THE CONTRACTOR SHALL NOTIFY THE CITY OF COLUMBIA AND THE ENGINEER 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING NECESSARY PERMITS AND LICENSES FROM THE CITY OF COLUMBIA AND SCDC PRIOR TO COMMENCING CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND/OR PERFORMING ALL NECESSARY TESTING OF THE SANITARY SEWER SYSTEM IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF COLUMBIA AND SCDC. IN A MANHOLE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING TEN FEET ALL MANHOLE AND SERVICES IN THE PRESENCE OF THE ENGINEER AND A REPRESENTATIVE OF THE CITY OF COLUMBIA.
- CONTRACTOR SHALL FURNISH AND INSTALL SELF-PUMPING AND/OR REMOTE AIRFLOW CONTROL DEVICES AS NECESSARY TO CONTROL AND LIMIT TO THE MAXIMUM EXTENT POSSIBLE, EROSION DURING THE INSTALLATION OF THE SANITARY SEWER SYSTEM.
- ALL DISTURBED AREAS RESULTING FROM THE INSTALLATION OF THE PROPOSED SANITARY SEWER SYSTEM SHALL BE RESTORED AND IMMEDIATELY RESEED OR REVEGETATED UPON COMPLETION OF THE INSTALLATION.
- OTHER UTILITY PROBLEMS MAY EXIST THAT ARE NOT SHOWN ON THE CONSTRUCTION PLANS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE LOCATION AND ELEVATION OF ALL UTILITY CROSSINGS OF BOTH EXISTING AND PROPOSED UTILITIES PRIOR TO COMMENCING CONSTRUCTION.
- THE CONTRACTOR SHALL MAINTAIN PROTECTIVE CURBS OR CONCRETE AND ALL OPERATING UTILITIES FOUND DURING CONSTRUCTION THAT ARE NOT SHOWN ON THE PLANS.
- CONTRACTOR SHALL FURNISH AND INSTALL ALL FITTINGS, SERVICES, ETC. AS REQUIRED TO COMPLETE THE SANITARY SEWER SYSTEM INSTALLATION. FITTINGS SHALL BE OF SAME MATERIAL AND PRESSURE CLASS AS THE SANITARY SEWER PIPE. FITTINGS SHALL BE DUCTILE IRON OR MINIMUM 30# STEEL (CLASSIFICATION 30) AND SHALL BE LAD WITH A MINIMUM OF 90% COVER FROM THE TOP OF THE PIPE TO THE PROPOSED GRADE ELEVATION.
- JOINTS SHALL BE INTEGRAL, BELT, SPROCKET WITH RUBBER GASKETS FORMED INTEGRAL TO BELLS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE SIZE, LOCATION, AND INVERT ELEVATION OF SANITARY SEWER SERVICES FROM THE BUILDING.
- ALL SANITARY SEWER SERVICES SHALL BE INTO SANITARY SERVICE MAINS AND NOT DIRECTLY INTO A SANITARY SEWER MANHOLE.

**SANITARY SEWER UTILITY SEPARATION NOTES:**

- SEWERIAL SEPARATION:**
- SEWERIAL SEPARATION SHALL BE PROVIDED AS FOLLOWS:
  - IF IT IS LAD IN A SEPARATE TRENCH.
  - IF IT IS LAD IN THE SAME TRENCH WITH THE WATER MAINS LOCATED AT ONE SIDE ON A BENCH OF UNDISTURBED EARTH.

**VERTICAL SEPARATION:**

- WHENEVER SEWERIAL MUST CROSS UNDER WATER MAINS, THE SEWER SHALL BE LAD AT SUCH AN ELEVATION THAT THE TOP OF THE SEWER IS AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN. WHEN THE ELEVATION OF THE SEWER CANNOT BE DURED TO MEET THE ABOVE REQUIREMENTS, THE WATER MAIN SHALL BE RELOCATED TO PROVIDE THIS SEPARATION OR BE CONSTRUCTED WITH SLIP-ON OR MECHANICAL JOINT CAST-IRON PIPE OR PRESTRESSED CONCRETE CYLINDER PIPE FOR A DISTANCE OF TEN FEET ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATER MAIN SHOULD BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE.

**RELATION TO STORM DRAIN SYSTEMS:**

- WHENEVER SEWERIAL MUST CROSS STORM DRAINS, THE SEWER SHALL BE LAD AT SUCH AN ELEVATION THAT THE TOP OF THE SEWER IS AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN. WHEN THE ELEVATION OF THE SEWER CANNOT BE DURED TO MEET THE ABOVE REQUIREMENTS, THE WATER MAIN SHALL BE RELOCATED TO PROVIDE THIS SEPARATION OR BE CONSTRUCTED WITH SLIP-ON OR MECHANICAL JOINT CAST-IRON PIPE OR PRESTRESSED CONCRETE CYLINDER PIPE FOR A DISTANCE OF TEN FEET ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATER MAIN SHOULD BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE.

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**SEWERIAL SEPARATION:**

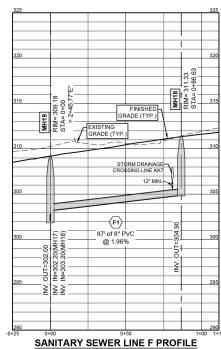
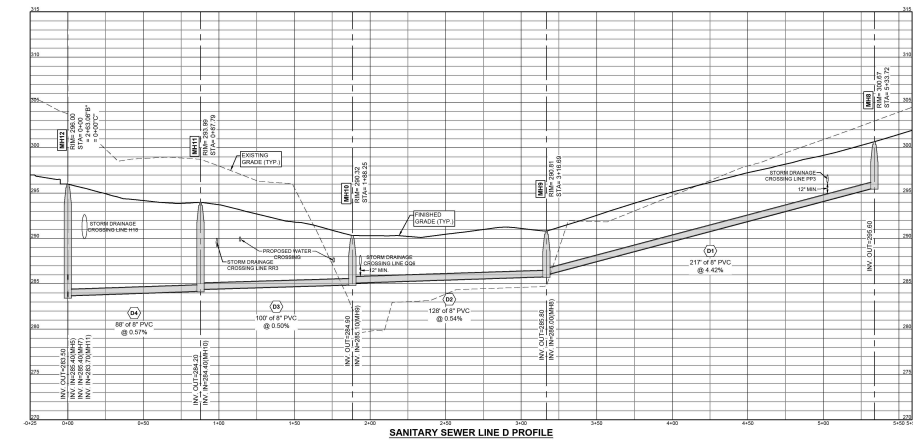
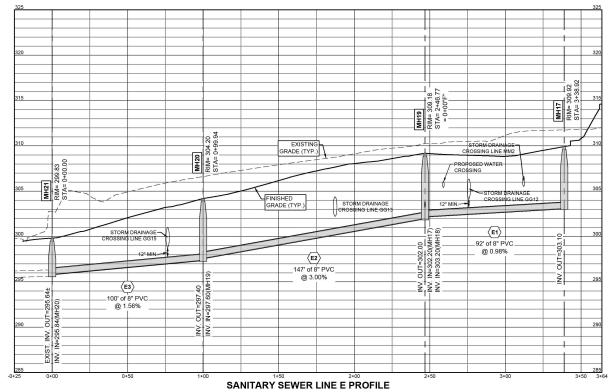
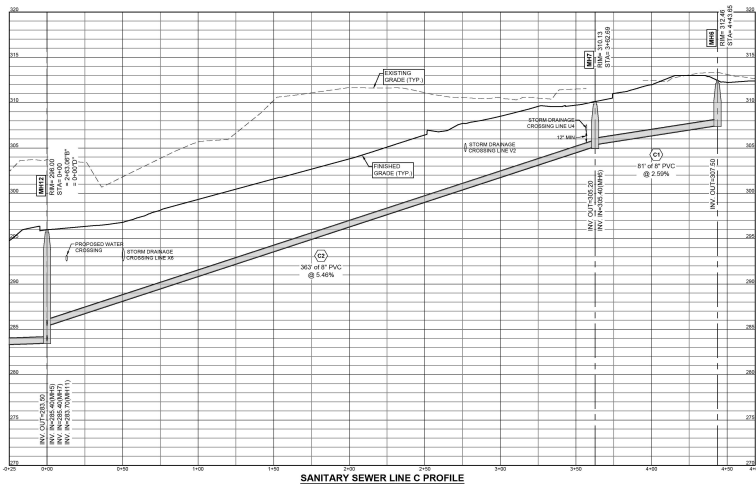
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DATE: 01/11/2024 12:22:23 +04  
DRAWN BY: J. J. J.  
CHECKED BY: J. J. J.  
SCALE: AS SHOWN  
SHEET NO: C6 of 6  
PROJECT NO: 1902024



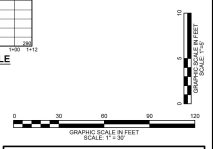







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**NOTES:**  
 1. OTHER UTILITY CROSSINGS MAY EXIST THAT ARE NOT SHOWN ON THIS PROFILE.  
 2. ALL SHOWN PIPE LENGTHS ARE CENTER TO CENTER OF STRUCTURES.



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 ENGINEERS ARCHITECTS AND SURVEYORS  
 724 BEL LINE BLVD  
 COLUMBIA, SC 29205  
 803.724.0100  
 COXANDINKINS.COM



REGISTERED PROFESSIONAL ENGINEER  
 No. 14890



CERTIFICATE OF AUTHORIZATION SEAL

REVISIONS	DATE

PROJECT: COLUMBIA HOUSING  
 CINDY HERRERA  
 SVP OF DEVELOPMENT  
 1917 HARDEN STREET  
 COLUMBIA, SC 29208  
 843-810-5073  
 email: [cherrera@coxandinkins.com](mailto:cherrera@coxandinkins.com)  
[www.coxandinkins.com](http://www.coxandinkins.com)

**THE OAKS AT ST. ANNA'S PARK**  
 LOCATED IN THE CITY OF COLUMBIA  
 RICHLAND COUNTY, SOUTH CAROLINA

PROJECT NO: 33020  
 DATE: 7/9/2021

**SANITARY SEWER PROFILES**

TO BE ASSIGNED: 48C-02C  
 DATE: 7/9/2021  
 SHEET NO: **C27** of **55**