

WATER AND SEWER TABLE

LENGTH OF PUBLIC WATERMAIN	1,250 LF
NUMBER OF PROPOSED SERVICES	2
LENGTH OF PUBLIC SEWER	253 LF
LENGTH OF PRIVATE SEWER	53 LF
TOTAL PROJECTED SEWER FLOW	18,360 GPD
FROM NORTH CAROLINA DEQ SUBCHAPTER 2T, DAILY FLOW FOR DESIGN FOR HOTEL/MOTEL WITHOUT IN-ROOM COOKING FACILITIES	120 GALLONS/ROOM X 153 ROOMS = 18,360 GPD

SANITARY STRUCTURE TABLE

STRUCTURE ID	DESCRIPTION	RIM	INVERT
A1.0	CONNECT TO EXISTING MANHOLE AT MINIMUM 90 DEGREE ANGLE FROM ADJACENT LATERALS	363.84	8" = 363.05 (S) 8" = 361.61 (E) 8" = 361.66 (W)
A1.1	SANITARY MANHOLE	369.06	8" = 365.56 (SE) 8" = 364.06 (N)
A1.2	SANITARY MANHOLE	373.19	8" = 368.30 (NW) 8" = 369.80 (S) 8" = 370.21 (W)
A1.3	SANITARY MANHOLE	374.09	8" = 370.86 (SW) 8" = 370.86 (N)

UTILITY LEGEND

	PROPOSED BOUNDARY
	PROPOSED SANITARY SEWER
	PROPOSED STORM DRAIN
	PROPOSED WATER MAIN
	PROPOSED ELECTRIC
	PROPOSED GAS
	PROPOSED TELEPHONE
	PROPOSED CATCH BASIN
	PROPOSED CURB INLET
	PROPOSED STORM MANHOLE
	PROPOSED SANITARY MANHOLE
	PROPOSED FLARED END SECTION
	PROPOSED CLEAN OUT
	PROPOSED FIRE HYDRANT
	PROPOSED VALVE
	PROPOSED VALVE VAULT
	PROPOSED ELECTRIC TRANSFORMER
	FIRE DEPARTMENT CONNECTION, FDC
	PROPOSED WATER PROTECTION AREA (SEE DETAIL 7/C805)
	LIGHT POLES
	PROPOSED SANITARY STRUCTURE CALLOUT
	PROPOSED STORM STRUCTURE CALLOUT
	PROPOSED WATER MAIN STRUCTURE CALLOUT
	PROPOSED UTILITY CROSSING CALLOUT

- ### UTILITY NOTES
- 2~4" SCHEDULE 40 PVC CONDUIT FOR LOCATIONS UNDER PROPOSED PAVEMENT. CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER FOR ELECTRIC SERVICE AND TRANSFORMER LOCATION.
 - TELEPHONE AND GAS SERVICE SHOWN FOR REFERENCE ONLY. CONTRACTOR TO COORDINATE TIE-IN LOCATIONS WITH UTILITY PROVIDER FOR BOTH TELEPHONE AND NATURAL GAS SERVICE TO BUILDINGS.
 - 2~4" SCHEDULE 40 PVC CONDUIT WITH PULL ROPES MINIMUM 24" BELOW GRADE FOR LOCATIONS UNDER PROPOSED PAVEMENT. CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER FOR TELEPHONE SERVICE.
 - ALL TOWN OF CARY UTILITY CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH TOWN OF CARY STANDARD SPECIFICATION AND DETAILS IN EFFECT AT TIME OF UTILITY PERMITTING. ALL CONSTRUCTION SHALL MEET 2017 TOWN OF CARY STANDARD SPECIFICATIONS AND DETAILS EXCEPT WHERE SPECIFICALLY NOTED.
 - CONTRACTOR SHALL COORDINATE ALL POINTS OF SERVICE WITH PLUMBING PLANS.
 - SEE DETAIL DRAWINGS FOR THRUST BLOCK AND RESTRAINED JOINT DETAILS AND LOCATIONS. ALL VALVES AND FITTINGS SHALL BE RESTRAINED IN ACCORDANCE WITH SECTION 05010.A.5 OF THE 2017 STANDARD SPECIFICATIONS FOR WATER DISTRIBUTION SYSTEMS.
 - FIRE HYDRANTS SHALL BE SET 4' CLEAR TO THE FACE OF CURB.
 - ALL CLEANOUTS LOCATED IN PAVED AREAS SHALL UTILIZE A DUCTILE IRON RISER, DUCTILE IRON FITTINGS, AND TRAFFIC RATED CAST IRON ASSEMBLY.
 - CONTRACTOR TO DIP PROPOSED 8" WATER A MINIMUM OF 1.5' UNDERNEATH PROPOSED 15" STORM SEWER (SEE DETAIL 5/C806). IF 10' CLEARANCE CANNOT BE ACHIEVED, CONTRACTOR MUST REMOVE A PORTION OF EXISTING 8" WATER TO ACHIEVE MEET REQUIREMENTS.

UTILITY CROSSINGS

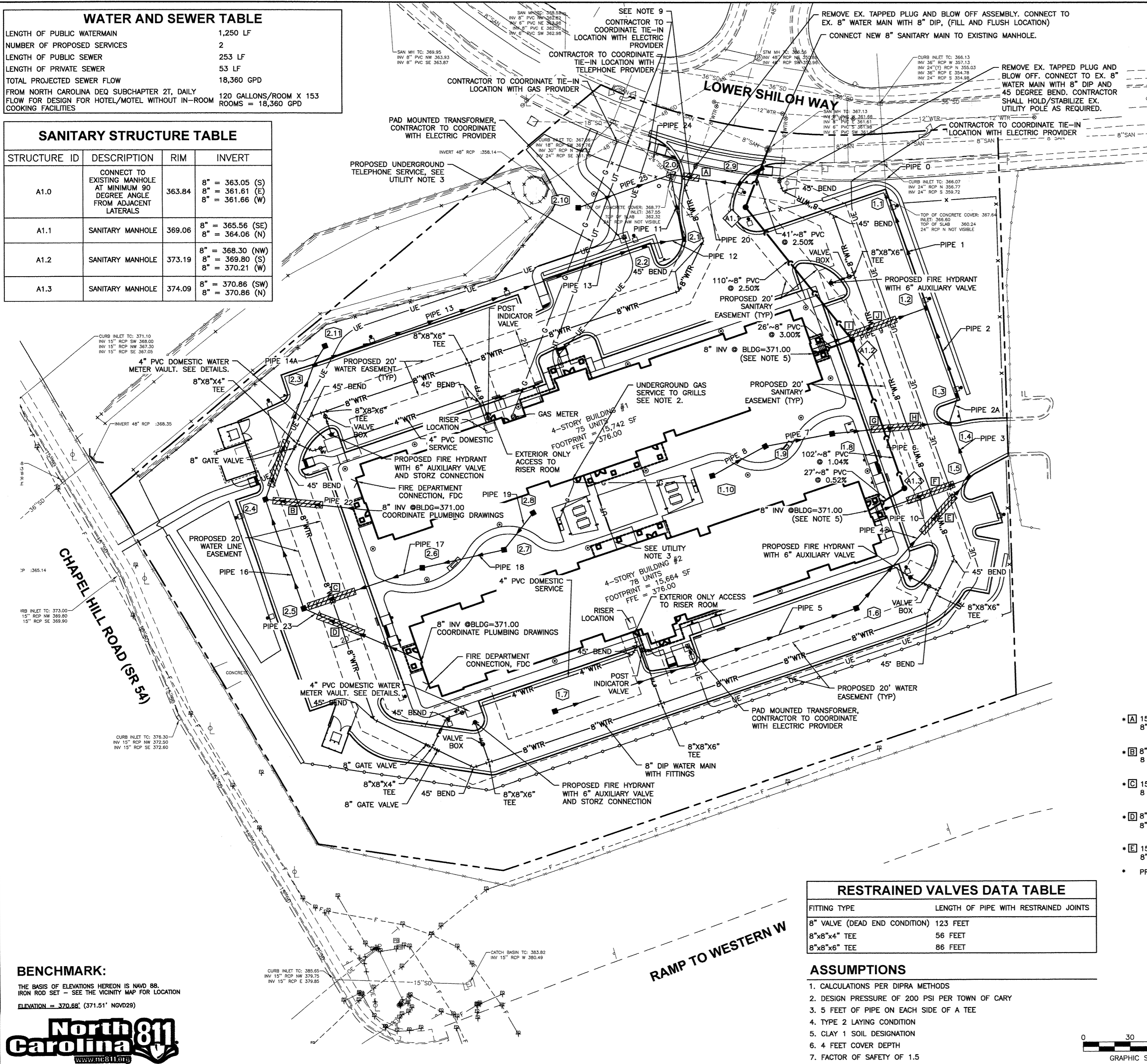
• [A] 15" FINISH GRADE=367.93 STORM B/PIPE=363.53 8" WATER T/PIPE=362.03	• [E] 8" FINISH GRADE=373.55 STORM B/PIPE=370.58 8" WATER T/PIPE=366.75
• [B] 8" FINISH GRADE=374.64 STORM B/PIPE=370.53 8" WATER T/PIPE=369.03	• [G] 8" FINISH GRADE=373.23 SAN B/PIPE=370.40 15" STORM T/PIPE=368.91
• [C] 15" FINISH GRADE=374.35 STORM B/PIPE=369.10 8" WATER T/PIPE=367.60	• [H] 15" FINISH GRADE=372.87 STORM B/PIPE=367.86 8" WATER T/PIPE=366.36
• [D] 8" FINISH GRADE=374.65 STORM B/PIPE=370.41 8" WATER T/PIPE=367.75	• [I] 8" FINISH GRADE=373.12 STORM B/PIPE=370.61 8" SAN T/PIPE=368.89
• [F] 15" FINISH GRADE=373.83 STORM B/PIPE=368.59 8" WATER T/PIPE=367.09	• [J] 8" FINISH GRADE=372.68 STORM B/PIPE=370.24 8" WATER T/PIPE=365.25

• PROVIDE WATER MAIN PROTECTION

RESTRAINED VALVES DATA TABLE

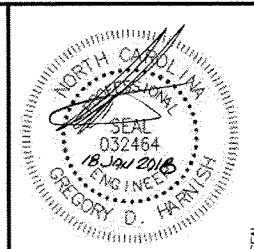
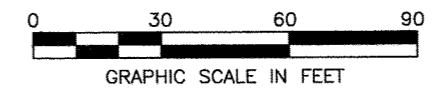
FITTING TYPE	LENGTH OF PIPE WITH RESTRAINED JOINTS
8" VALVE (DEAD END CONDITION)	123 FEET
8"x8"x4" TEE	56 FEET
8"x8"x6" TEE	86 FEET

- ### ASSUMPTIONS
- CALCULATIONS PER DIPRA METHODS
 - DESIGN PRESSURE OF 200 PSI PER TOWN OF CARY
 - 5 FEET OF PIPE ON EACH SIDE OF A TEE
 - TYPE 2 LAYING CONDITION
 - CLAY 1 SOIL DESIGNATION
 - 4 FEET COVER DEPTH
 - FACTOR OF SAFETY OF 1.5



BENCHMARK:

THE BASIS OF ELEVATIONS HEREON IS NAVD 88.
IRON ROD SET - SEE THE VICINITY MAP FOR LOCATION
ELEVATION = 370.88' (371.51' NGVD29)



REVISION

No.	DATE	REVISION

PROJECT No.

075356

DATE

01/24/17

DES.

JG

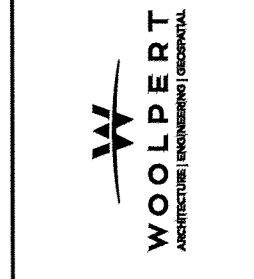
DR.

DH

CKD.

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SITE IMPROVEMENT PLANS

WATERWALK MORRISVILLE

1012 & 1016 LOWER SHILOH WAY
MORRISVILLE, NORTH CAROLINA

UTILITY PLAN

MORRISVILLE PROJECT #: 17-11000001 FILE #: 17-0001-S/C

Town of Morrisville
APPROVED FOR CONSTRUCTION

Signature: Date: 5/31/18
Town of Morrisville, Town Engineer

Signature: Date: 5/23/18
Town of Cary Utilities, Water and Sewer

Engineering: Date/initials
Planning: Date/initials
Other (specify): Date/initials

Engineering Inspection Services must be contacted (919) 463-6907 at a minimum 24 hours prior to the commencement of any construction activities.

SHEET No. **C400**

Layout, Tab Name: C400 UTILITY PLAN, Xrefs: 075356-X.dwg; 075356-TBLK.dwg; 075356-X-DIGITIZED.dwg; Buildings.dwg
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