



McADAMS

The John R. McAdams Company, Inc.  
2905 Meridian Parkway  
Durham, NC 27713

phone 919. 361. 5000  
fax 919. 361. 2269  
license number: C-0293, C-187

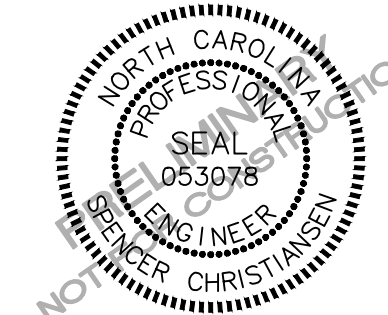
www.mcadamsco.com

CLIENT

TOLL BROTHERS APARTMENT LIVING  
1140 VIRGINIA DR  
FORT WASHINGTON, PA, 19034  
Contact  
PHONE: 202.577.6491



BARBEE CHAPEL APARTMENTS  
CONDITIONAL ZONING PERMIT  
DRAWINGS  
5101 BARBEE CHAPEL RD  
CHAPEL HILL, NC 27517



REVISIONS

NO. DATE

PLAN INFORMATION

PROJECT NO. TLA-22001  
FILENAME TLA22001-SW1  
CHECKED BY SJC  
DRAWN BY WHM/LIL  
SCALE 1" = 40'  
DATE 09.29.2022

SHEET

SOLID WASTE PLAN

C2.01

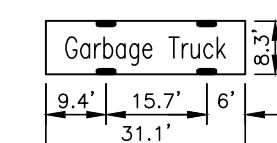
GENERAL SOLID WASTE AND RECYCLING NOTES:

- ALL EXISTING STRUCTURES 500 SQUARE FEET AND LARGER IN SIZE SHALL BE ASSESSED PRIOR TO DEMOLITION TO ENSURE COMPLIANCE WITH THE COUNTY'S REGULATED RECYCLABLE MATERIALS ORDINANCE (RMO) AND TO ASSESS THE POTENTIAL FOR DE-CONSTRUCTION AND/OR THE RE-USE OF SALVAGEABLE MATERIALS.
- BY ORANGE COUNTY ORDINANCE, CLEAN WOOD WASTE, SCRAP METAL, AND CORRUGATED CARDBOARD PRESENT IN CONSTRUCTION OR DEMOLITION WASTE MUST BE RECYCLED.
- BY ORANGE COUNTY ORDINANCE, ALL HAULERS OF MIXED CONSTRUCTION AND DEMOLITION WASTE THAT INCLUDES ANY REGULATED RECYCLABLE MATERIALS SHALL BE LICENSED BY ORANGE COUNTY.
- PRIOR TO ANY DEMOLITION OR CONSTRUCTION ACTIVITY ON THE SITE THE APPLICANT SHALL HOLD A PRE-DEMOLITION/PRE-CONSTRUCTION CONFERENCE WITH THE SOLID WASTE STAFF (919-968-2788). THIS MAY BE THE SAME PRE-CONSTRUCTION MEETING HELD WITH OTHER DEVELOPMENT/ENFORCEMENT OFFICIALS.
- THE PRESENCE OF ANY ASBESTOS CONTAINING MATERIALS (ACM) AND/OR OTHER HAZARDOUS MATERIALS IN CONSTRUCTION AND DEMOLITION WASTE SHALL BE HANDLED IN ACCORDANCE WITH ANY AND ALL LOCAL, STATE, AND FEDERAL REGULATIONS AND GUIDELINES.
- IF ANY VEHICLES ARE PARKED IN THE REFUSE OR RECYCLABLES COLLECTION VEHICLE ACCESS AREA, THE CONTAINERS WILL NOT RECEIVE SERVICE UNTIL THE NEXT SCHEDULED COLLECTION DAY.
- THE OWNER, OR THEIR DESIGNEE, SHALL BE RESPONSIBLE FOR MAINTAINING A FIRE WATCH DURING CONSTRUCTION AND DEMOLITION WHERE MATERIALS SUBJECT TO SPONTANEOUS COMBUSTION OR OTHER HAZARDOUS CONSTRUCTION OR DEMOLITION IS OCCURRING.
- ALL CONSTRUCTION AND DEMOLITION SHALL BE CONDUCTED IN COMPLIANCE WITH THE CURRENT EDITION OF CHAPTER 14 OF THE NC FPC.
- ITEMS TO BE RECYCLED WILL INCLUDE ALL MATERIALS ACCEPTED BY ORANGE COUNTY SOLID WASTE (INCLUDED BUT NOT LIMITED TO):
  - 9.1.1. GLASS (CLEAR, BROWN AND GREEN)
  - 9.1.2. PLASTIC
  - 9.1.3. NEWSPAPERS, MAGAZINES AND OTHER PAPER
  - 9.1.4. METAL CANS
  - 9.1.5. CARDBOARD
- ADEQUATE SITE LIGHTING SHALL BE PROVIDED IN/AROUND THE SOLID WASTE AND RECYCLING STORAGE AREAS.
- HEAVY DUTY ASPHALT AND CONCRETE SECTIONS ARE PROVIDED ON SHEET C2.01. THESE SECTIONS APPLY UNLESS OTHERWISE INSTRUCTED BY THE GEOTECHNICAL ENGINEER.

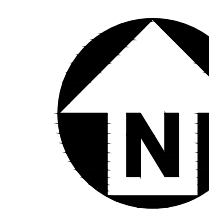
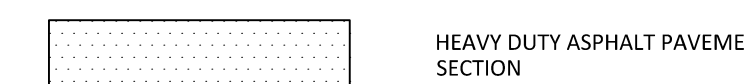
RESIDENTIAL REFUSE COLLECTION NOTES:

- CERTAIN REFUSE (PAINT, MEDICAL WASTE, ETC.) CANNOT BE COLLECTED FROM STANDARD REFUSE RECEPTACLES. RESIDENTS ARE ADVISED TO CONTACT THE TOWN OF CHAPEL HILL PUBLIC WORKS DEPARTMENT FOR ADDITIONAL INFORMATION ABOUT REFUSE REQUIRING SPECIAL HANDLING AND REFUSE, YARD WASTE, LEAF, AND WHITE GOOD COLLECTION SCHEDULE.
- REFUSE, RECYCLING, AND YARD WASTE CONTAINERS ALONG WITH LOOSE YARD WASTE PILES MAY NOT BE STORED IN THE PUBLIC STREET RIGHT-OF-WAY BUT BE STORED OUT OF SIGHT FROM THE STREET OR SCREENED.
- CONTAINERS AND LOOSE PILES SHALL BE BROUGHT TO THE STREET AND PLACED BEHIND THE CURB OR EDGE OF PAVEMENT ON THE COLLECTION DAY AND BE REMOVED BY 7:00 PM ON THE DAY OF COLLECTION.

TRUCK DIMENSIONS:



PAVEMENT LEGEND:



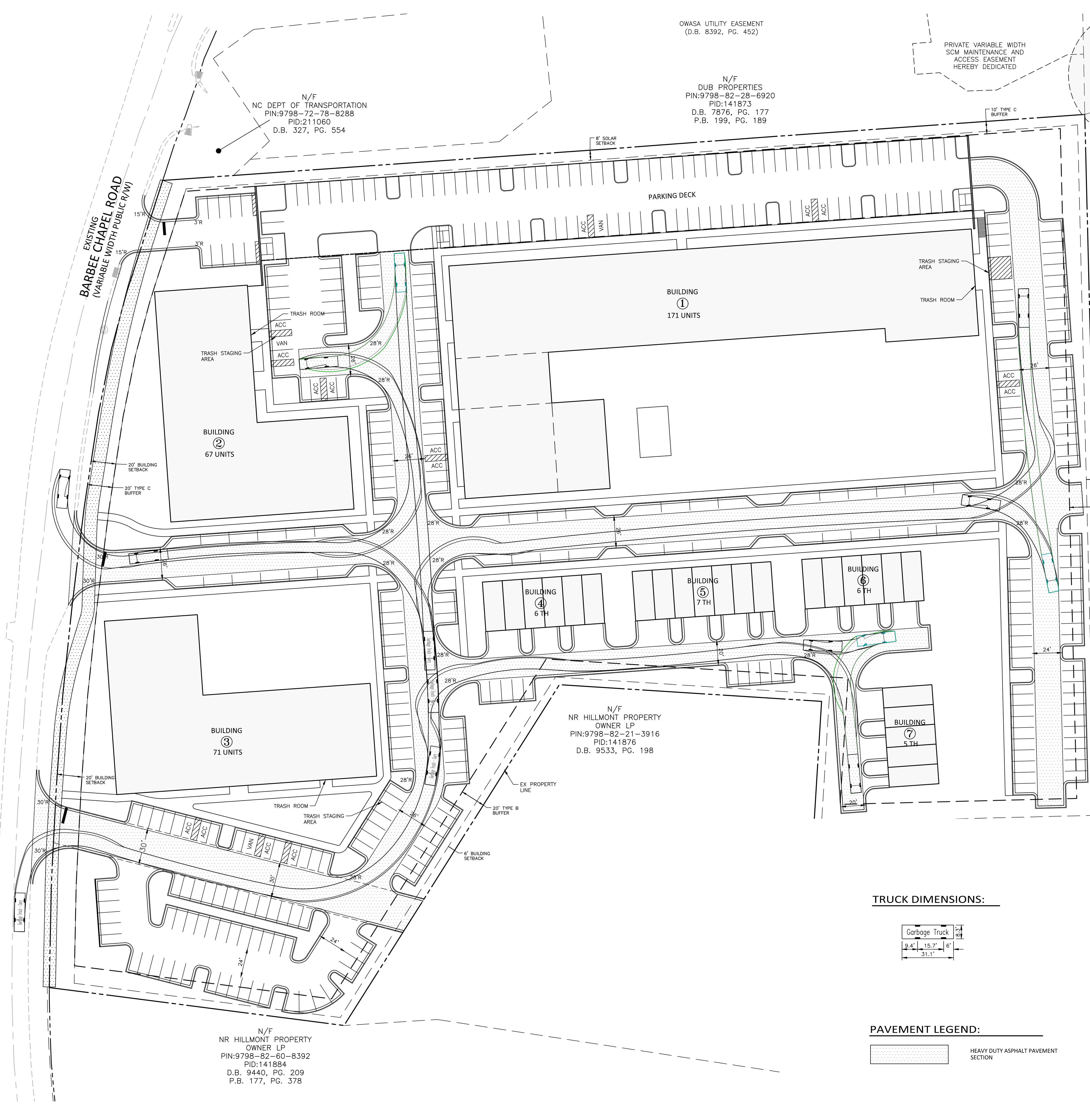
GRAPHIC SCALE  
1 inch = 40 ft.

SEE SHEET C0.00 FOR ALL PROJECT, SITE, GRADING, STORM DRAINAGE AND UTILITY NOTES

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CURRENT TOWN OF CHAPEL HILL AND NCDOT ENGINEERING DESIGN AND CONSTRUCTION STANDARDS

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

M:\Projects\TLA\22001\04-Production\Engineering\Construction Drawings\Current Drawings\2 - CZP Drawings\TLA22001-SW1.dwg, 9/29/2022, 11:08:49 AM, Lindsay Lopez



OWASA UTILITY EASEMENT  
(D.B. 8392, PG. 452)

N/F  
DUB PROPERTIES  
PIN:9798-82-28-6920  
PID:141873  
D.B. 7876, PG. 177  
P.B. 199, PG. 189

N/F  
NC DEPT OF TRANSPORTATION  
PIN:9798-72-76-8288  
PID:211060  
D.B. 327, PG. 554

N/F  
NR HILLMONT PROPERTY  
OWNER LP  
PIN:9798-82-65-2259  
PID:141871  
D.B. 9440, PG. 209  
P.B. 177, PG. 378

N/F  
NR HILLMONT PROPERTY  
OWNER LP  
PIN:9798-82-21-3916  
PID:141876  
D.B. 9533, PG. 198

N/F  
NR HILLMONT PROPERTY  
OWNER LP  
PIN:9798-82-60-8392  
PID:141884  
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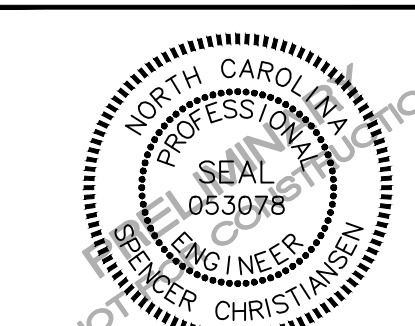
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CONDITIONAL ZONING PERMIT  
DRAWINGS  
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CHAPEL HILL, NC 27517**



**REVISIONS**

NO. DATE

**PLAN INFORMATION**

PROJECT NO. TLA-22001  
FILENAME TLA22001-FP1  
CHECKED BY SJC  
DRAWN BY WHM/LJL  
SCALE 1" = 40'  
DATE 09.29.2022

**SHEET**

**FIRE PROTECTION PLAN**

**C2.02**

OWASA UTILITY EASEMENT  
(D.B. 8392, PG. 452)

PRIVATE VARIABLE WIDTH  
SCM MAINTENANCE AND  
ACCESS EASEMENT  
HEREBY DEDICATED

N/F  
DUB PROPERTIES  
PIN:9798-82-28-6920  
PID:141873  
D.B. 7876, PG. 177  
P.B. 199, PG. 189

N/F  
NC DEPT OF TRANSPORTATION  
PIN:9798-72-78-8288  
PID:211060  
D.B. 327, PG. 554

EXISTING  
BARBEE CHAPEL ROAD  
(VARIABLE WIDTH PUBLIC R/W)

PARKING DECK

BUILDING  
①  
171 UNITS

BUILDING  
②  
84 UNITS

BUILDING  
④  
6 TH

BUILDING  
⑤  
7 TH

BUILDING  
⑥  
6 TH

BUILDING  
③  
89 UNITS

N/F  
NR HILLMONT PROPERTY  
OWNER LP  
PIN:9798-82-21-3916  
PID:141876  
D.B. 9533, PG. 198

N/F  
NR HILLMONT PROPERTY  
OWNER LP  
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PID:141871  
D.B. 9440, PG. 209  
P.B. 177, PG. 378

N/F  
NR HILLMONT PROPERTY  
OWNER LP  
PIN:9798-82-60-8392  
PID:141884  
D.B. 9440, PG. 209  
P.B. 177, PG. 378

**GENERAL NOTES:**

- 1. OUTER PATH IS TRUCK OVERHANG, INNER PATH IS TIRE TRACKING

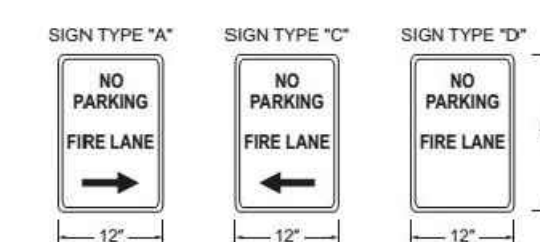
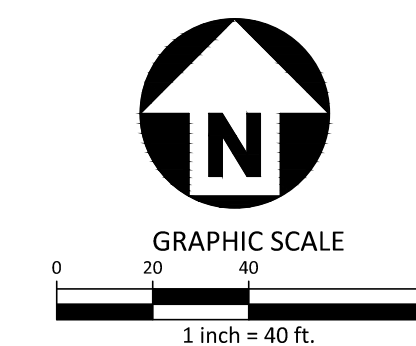
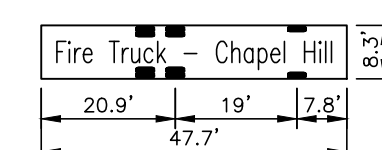


FIGURE D103.6  
FIRE LANE SIGNS

**PAVEMENT LEGEND:**



**TRUCK DIMENSIONS:**



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GRADING, STORM DRAINAGE AND UTILITY  
NOTES

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DESIGN AND CONSTRUCTION STANDARDS

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M:\Projects\TLA\TLA22001\04-Production\Engineering\Construction Drawings\Current Drawings\CZF Drawings\TLA22001-FP1.dwg, 9/29/2022 11:05:20 AM, Lindsay Lopez





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REVISIONS

NO. DATE

PLAN INFORMATION

PROJECT NO. TLA-22001  
FILENAME TLA22001-G1  
CHECKED BY SJC  
DRAWN BY WHM  
SCALE 1" = 40'  
DATE 09.29.2022

SHEET

GRADING PLAN

C3.00

GRADING LEGEND

	FLARED END SECTION
	ENDWALL SECTION
	CATCH BASIN
	DROP INLET
	STORM SERVICE INLET
	STORM SERVICE ROOF-RAIN
	JUNCTION BOX
	DRAINAGE FLOW ARROW
	LINE BREAK SYMBOL
	TOP & BOTTOM CURB ELEVATIONS
	TOP OF WALL ELEVATION
	BOTTOM OF WALL ELEVATION (NOTE: BOTTOM OF WALL IS GROUND ELEVATION NOT WALL FOUNDATION)
	SPOT ELEVATION
	STORM DRAINAGE
	STORM SERVICE LINE
	ROOF DRAIN, 8" ADS NON-PERFORATED TUBING OR EQUAL 1.0% MIN. SLOPE 3' MIN. COVER PVC SCHEDULE 40 IN TRAFFIC AREAS
	TREE PROTECTION FENCE
	LIMITS OF DISTURBANCE
	WOODED AREA
	MAJOR CONTOUR
	MINOR CONTOUR
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	EASEMENT LINE
	ACCESSIBLE PARKING AREA (2% MAX. SLOPE IN ALL DIRECTIONS)

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OWASA UTILITY EASEMENT  
(D.B. 8392, PG. 452)

PRIVATE VARIABLE WIDTH  
SCM MAINTENANCE AND  
ACCESS EASEMENT  
HEREBY DEDICATED

N/F  
DUB PROPERTIES  
PIN:9798-82-28-6920  
PID:141873  
D.B. 7876, PG. 177  
P.B. 199, PG. 189

N/F  
NC DEPT OF TRANSPORTATION  
PIN:9798-72-78-8288  
PID:211060  
D.B. 327, PG. 554

PARKING DECK  
FFE: 289.50

BUILDING ①  
FFE: 301.00

1ST FLOOR  
CLUBHOUSE

POOL

POTENTIAL RAIN  
GARDEN

STORMWATER  
CONTROL  
MEASURE "B"

BUILDING ②  
FFE: 300.50

BUILDING ③  
FFE: 297.00

BUILDING ④  
FFE: 299.50

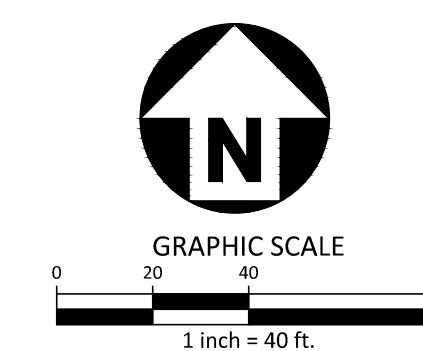
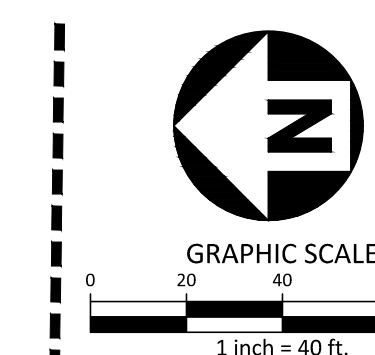
BUILDING ⑤  
FFE: 300.25

BUILDING ⑥  
FFE: 300.25

BUILDING ⑦  
FFE: 301.50

N/F  
NR HILLMONT PROPERTY  
OWNER LP  
PIN:9798-82-21-3916  
PID:141876  
D.B. 9533, PG. 198

N/F  
NR HILLMONT PROPERTY  
OWNER LP  
PIN:9798-82-65-2259  
PID:141871  
D.B. 9440, PG. 209  
P.B. 177, PG. 378



SEE THIS SHEET

N/F  
NR HILLMONT PROPERTY  
OWNER LP  
PIN:9798-82-60-8392  
PID:141884  
D.B. 9440, PG. 209  
P.B. 177, PG. 378

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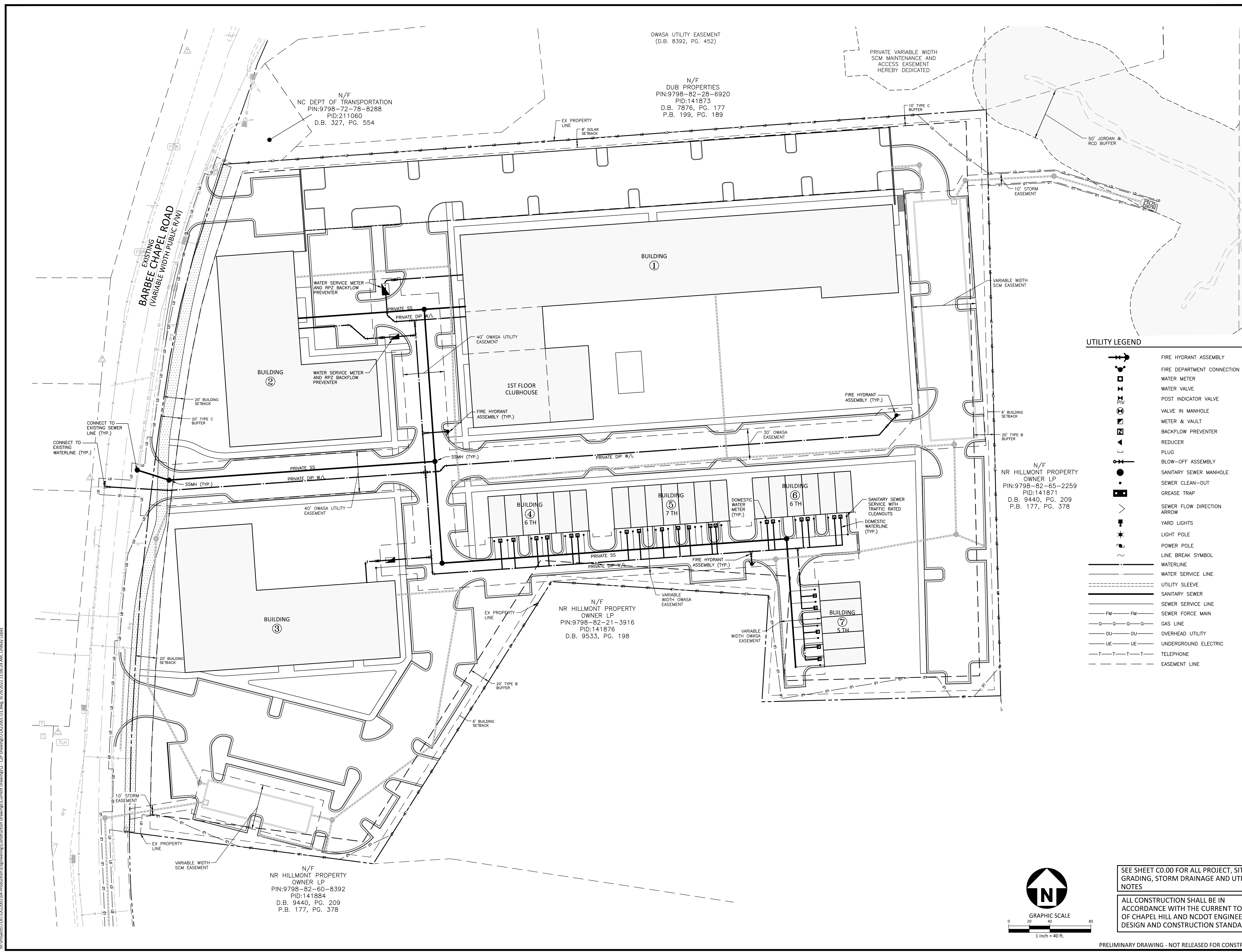
**PLAN INFORMATION**

PROJECT NO.	TLA-22001
FILENAME	TLA22001-U1
CHECKED BY	SJC
DRAWN BY	WHM/LIL
SCALE	1" = 40'
DATE	09.29.2022

**SHEET**

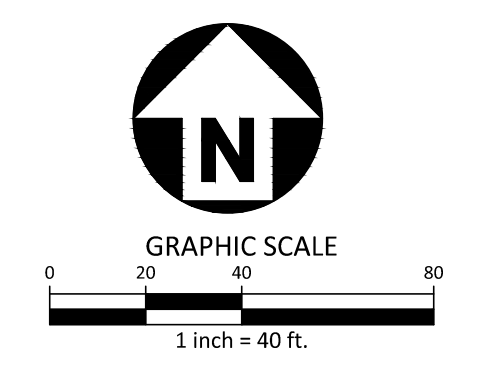
**UTILITY PLAN**

**C4.00**



**UTILITY LEGEND**

- FIRE HYDRANT ASSEMBLY
- FIRE DEPARTMENT CONNECTION (FDC)
- WATER METER
- WATER VALVE
- POST INDICATOR VALVE
- VALVE IN MANHOLE
- METER & VAULT
- BACKFLOW PREVENTER
- REDUCER
- PLUG
- BLOW-OFF ASSEMBLY
- SANITARY SEWER MANHOLE
- SEWER CLEAN-OUT
- GREASE TRAP
- SEWER FLOW DIRECTION ARROW
- YARD LIGHTS
- LIGHT POLE
- POWER POLE
- LINE BREAK SYMBOL
- WATERLINE
- WATER SERVICE LINE
- UTILITY SLEEVE
- SANITARY SEWER
- SEWER SERVICE LINE
- SEWER FORCE MAIN
- GAS LINE
- OVERHEAD UTILITY
- UNDERGROUND ELECTRIC
- TELEPHONE
- EASEMENT LINE



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OWASA UTILITY EASEMENT  
(D.B. 8392, PG. 452)

N/F  
DUB PROPERTIES  
PIN:9798-82-28-6920  
PID:141873  
D.B. 7876, PG. 177  
P.B. 199, PG. 189

N/F  
NC DEPT OF TRANSPORTATION  
PIN:9798-72-78-8288  
PID:211060  
D.B. 327, PG. 554

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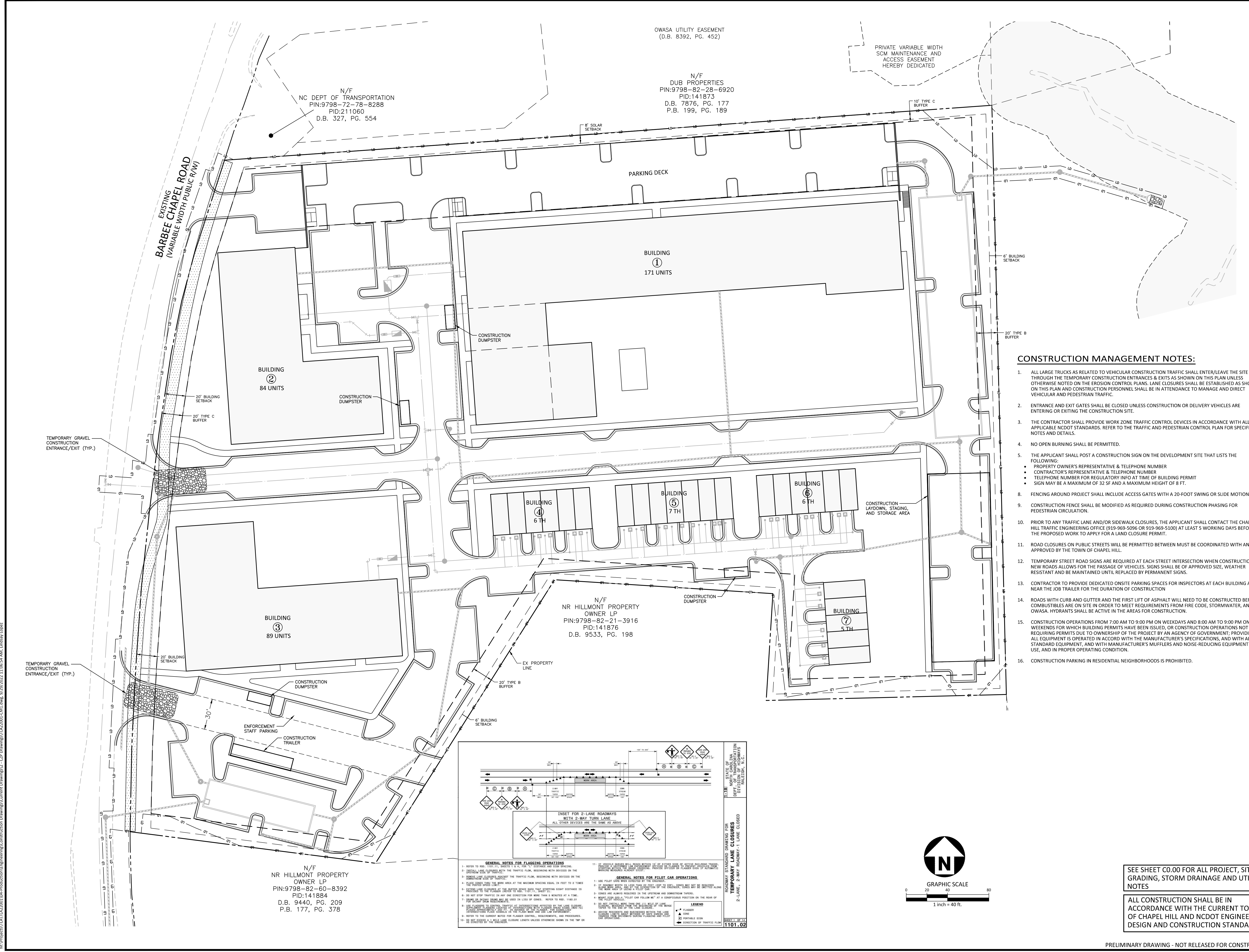
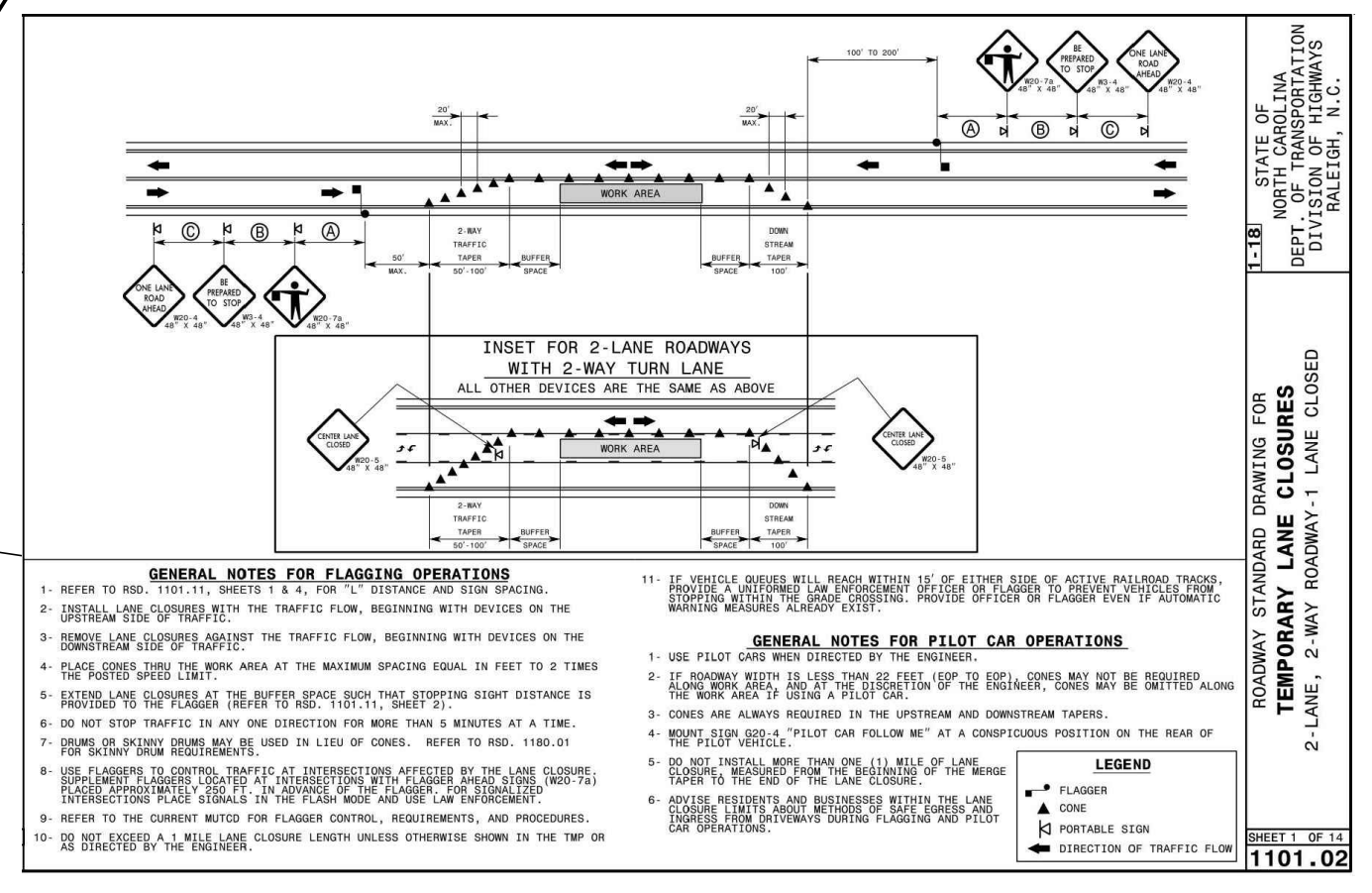
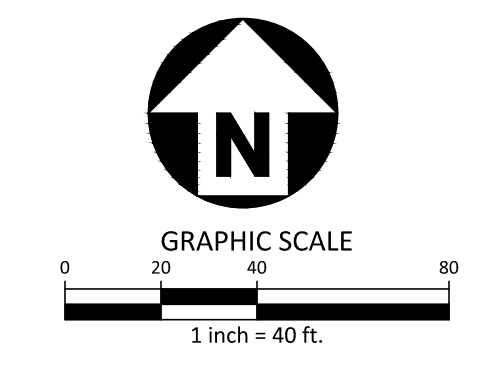
**CONSTRUCTION  
MANAGEMENT PLAN  
C7.00**

**CONSTRUCTION MANAGEMENT NOTES:**

- ALL LARGE TRUCKS AS RELATED TO VEHICULAR CONSTRUCTION TRAFFIC SHALL ENTER/LEAVE THE SITE THROUGH THE TEMPORARY CONSTRUCTION ENTRANCES & EXITS AS SHOWN ON THIS PLAN UNLESS OTHERWISE NOTED ON THE EROSION CONTROL PLANS. LANE CLOSURES SHALL BE ESTABLISHED AS SHOWN ON THIS PLAN AND CONSTRUCTION PERSONNEL SHALL BE IN ATTENDANCE TO MANAGE AND DIRECT VEHICULAR AND PEDESTRIAN TRAFFIC.
- ENTRANCE AND EXIT GATES SHALL BE CLOSED UNLESS CONSTRUCTION OR DELIVERY VEHICLES ARE ENTERING OR EXITING THE CONSTRUCTION SITE.
- THE CONTRACTOR SHALL PROVIDE WORK ZONE TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH ALL APPLICABLE NCDOT STANDARDS. REFER TO THE TRAFFIC AND PEDESTRIAN CONTROL PLAN FOR SPECIFIC NOTES AND DETAILS.
- NO OPEN BURNING SHALL BE PERMITTED.
- THE APPLICANT SHALL POST A CONSTRUCTION SIGN ON THE DEVELOPMENT SITE THAT LISTS THE FOLLOWING:
  - PROPERTY OWNER'S REPRESENTATIVE & TELEPHONE NUMBER
  - CONTRACTOR'S REPRESENTATIVE & TELEPHONE NUMBER
  - TELEPHONE NUMBER FOR REGULATORY INFO AT TIME OF BUILDING PERMIT
  - SIGN MAY BE A MAXIMUM OF 32 SF AND A MAXIMUM HEIGHT OF 8 FT.
- FENCING AROUND PROJECT SHALL INCLUDE ACCESS GATES WITH A 20-FOOT SWING OR SLIDE MOTION.
- CONSTRUCTION FENCE SHALL BE MODIFIED AS REQUIRED DURING CONSTRUCTION PHASING FOR PEDESTRIAN CIRCULATION.
- PRIOR TO ANY TRAFFIC LANE AND/OR SIDEWALK CLOSURES, THE APPLICANT SHALL CONTACT THE CHAPEL HILL TRAFFIC ENGINEERING OFFICE (919-969-5096 OR 919-969-5100) AT LEAST 5 WORKING DAYS BEFORE THE PROPOSED WORK TO APPLY FOR A LAND CLOSURE PERMIT.
- ROAD CLOSURES ON PUBLIC STREETS WILL BE PERMITTED BETWEEN MUST BE COORDINATED WITH AND APPROVED BY THE TOWN OF CHAPEL HILL.
- TEMPORARY STREET ROAD SIGNS ARE REQUIRED AT EACH STREET INTERSECTION WHEN CONSTRUCTION OF NEW ROADS ALLOWS FOR THE PASSAGE OF VEHICLES. SIGNS SHALL BE OF APPROVED SIZE, WEATHER RESISTANT AND BE MAINTAINED UNTIL REPLACED BY PERMANENT SIGNS.
- CONTRACTOR TO PROVIDE DEDICATED ONSITE PARKING SPACES FOR INSPECTORS AT EACH BUILDING AND NEAR THE JOB TRAILER FOR THE DURATION OF CONSTRUCTION
- ROADS WITH CURB AND GUTTER AND THE FIRST LIFT OF ASPHALT WILL NEED TO BE CONSTRUCTED BEFORE COMBUSTIBLES ARE ON SITE IN ORDER TO MEET REQUIREMENTS FROM FIRE CODE, STORMWATER, AND OWASA. HYDRANTS SHALL BE ACTIVE IN THE AREAS FOR CONSTRUCTION.
- CONSTRUCTION OPERATIONS FROM 7:00 AM TO 9:00 PM ON WEEKDAYS AND 8:00 AM TO 9:00 PM ON THE WEEKENDS FOR WHICH BUILDING PERMITS HAVE BEEN ISSUED, OR CONSTRUCTION OPERATIONS NOT REQUIRING PERMITS DUE TO OWNERSHIP OF THE PROJECT BY AN AGENCY OF GOVERNMENT; PROVIDING ALL EQUIPMENT IS OPERATED IN ACCORD WITH THE MANUFACTURER'S SPECIFICATIONS, AND WITH ALL STANDARD EQUIPMENT, AND WITH MANUFACTURER'S MUFFLERS AND NOISE-REDUCING EQUIPMENT IN USE, AND IN PROPER OPERATING CONDITION.
- CONSTRUCTION PARKING IN RESIDENTIAL NEIGHBORHOODS IS PROHIBITED.

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P.B. 199, PG. 189

PARKING DECK

BUILDING ①  
171 UNITS

BUILDING ②  
84 UNITS

BUILDING ④  
6 TH

BUILDING ⑤  
7 TH

BUILDING ⑥  
6 TH

BUILDING ③  
89 UNITS

BUILDING ⑦  
5 TH

N/F  
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M:\Projects\TLA\TLA22001\04-Production\Engineering\Construction\Drawings\Current Drawings\3 - CFP Drawings\TLA22001-CM1.dwg, 9/29/2022, 11:06:54 AM, Lindsay Logez





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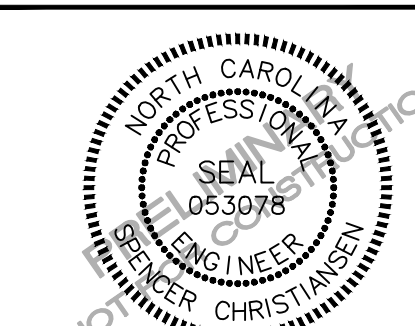
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CLIENT

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PHONE: 202.577.6491



BARBEE CHAPEL APARTMENTS  
CONDITIONAL ZONING PERMIT  
DRAWINGS  
5101 BARBEE CHAPEL RD  
CHAPEL HILL, NC 27517



REVISIONS

NO. DATE

PLAN INFORMATION

PROJECT NO. TLA-22001  
FILENAME TLA22001-D1  
CHECKED BY SJC  
DRAWN BY WHM/LIL  
SCALE NTS  
DATE 09.29.2022

SHEET

SITE DETAILS

C8.00

SEE SHEET C0.00 FOR ALL PROJECT, SITE,  
GRADING, STORM DRAINAGE AND UTILITY  
NOTES

ALL CONSTRUCTION SHALL BE IN  
ACCORDANCE WITH THE CURRENT TOWN  
OF CHAPEL HILL AND NCDOT ENGINEERING  
DESIGN AND CONSTRUCTION STANDARDS

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

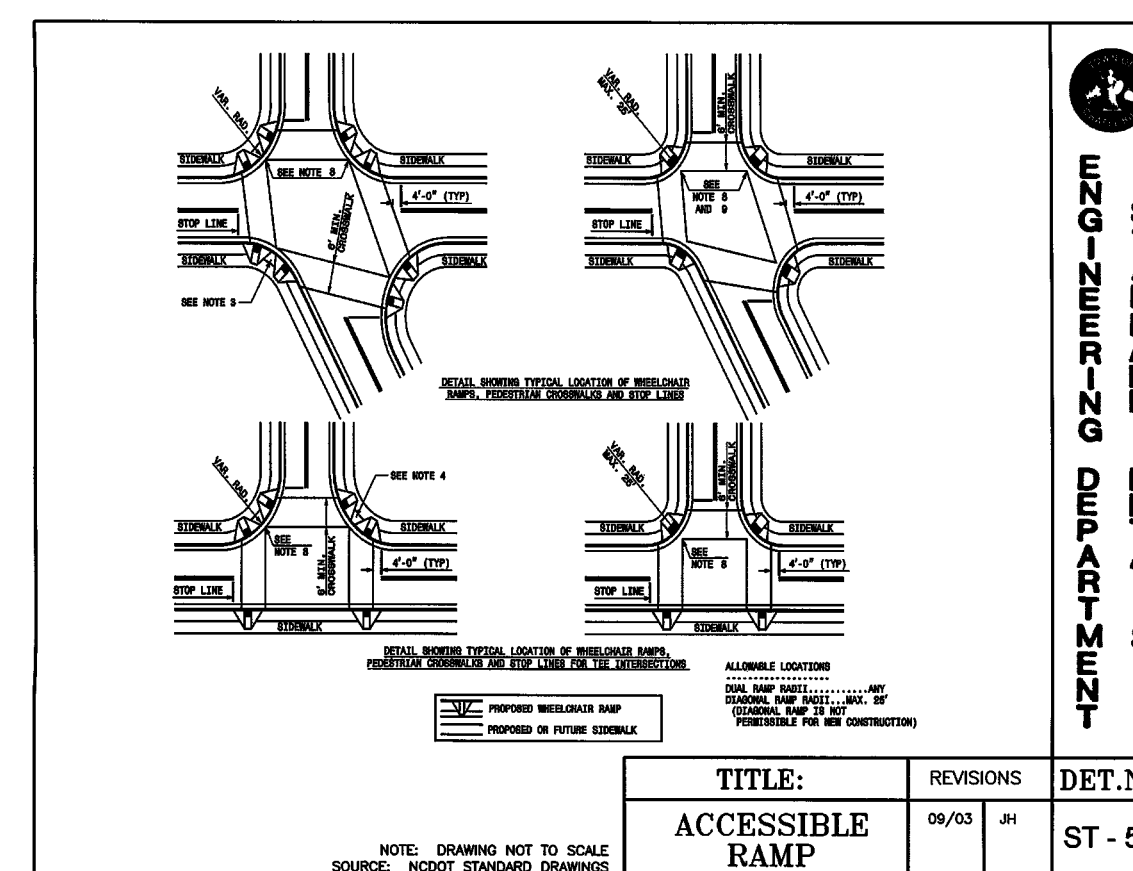


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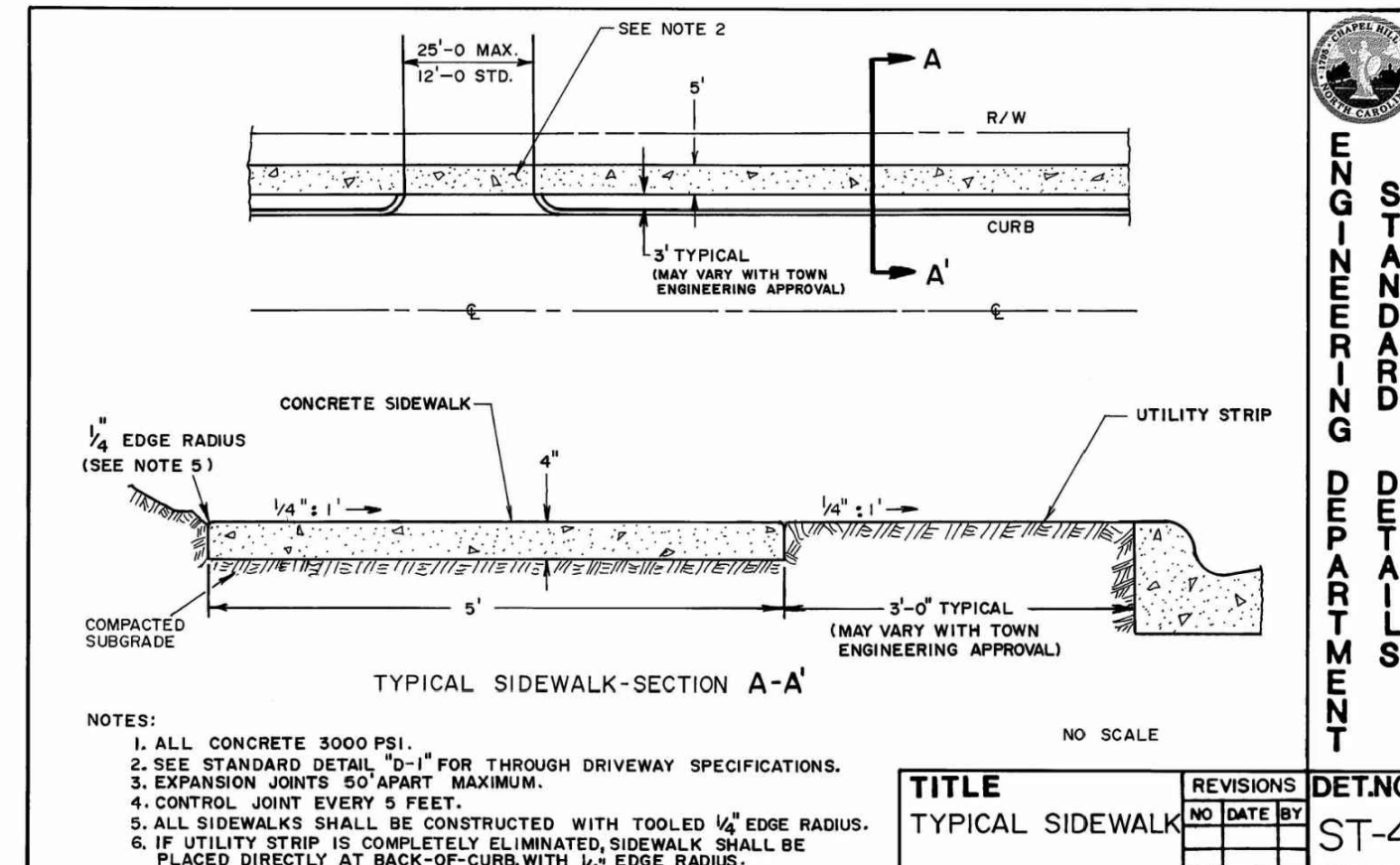


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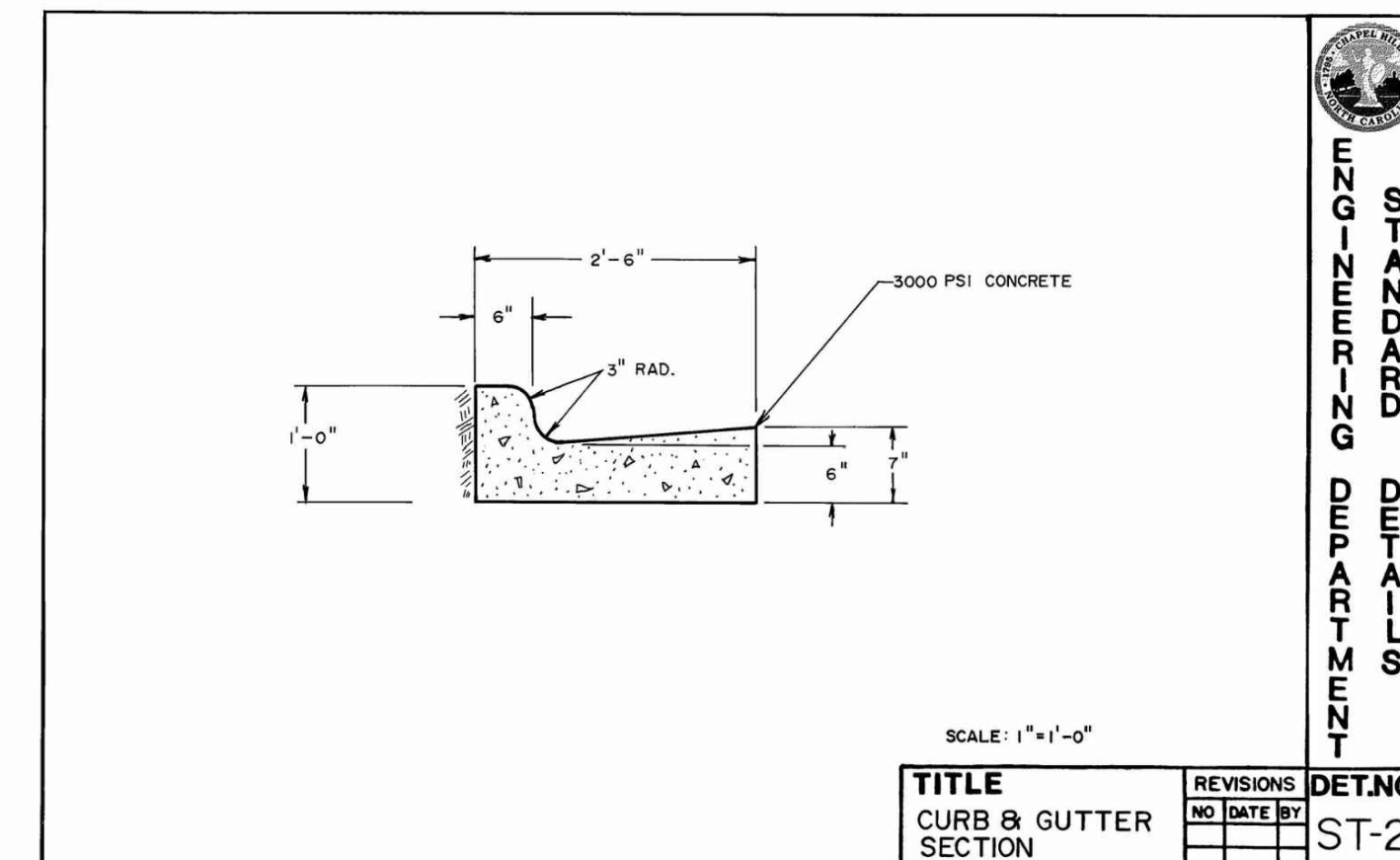


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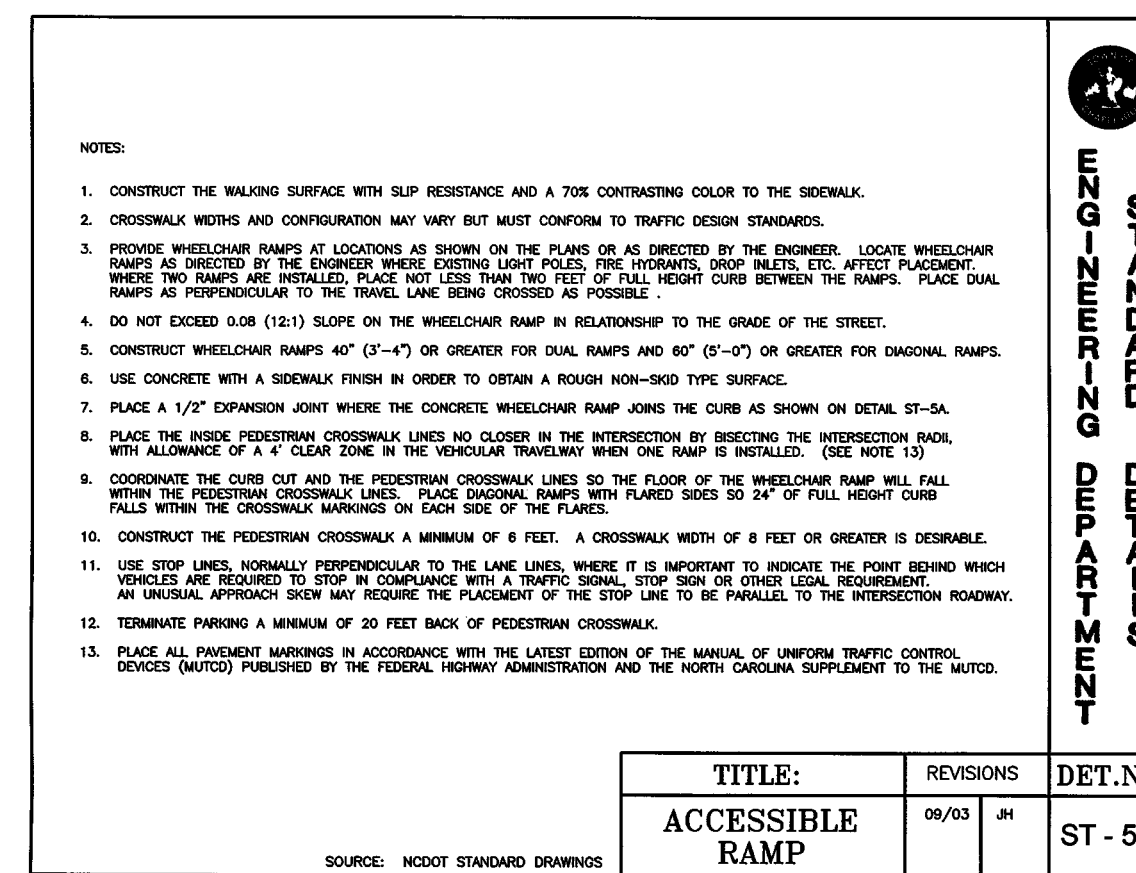


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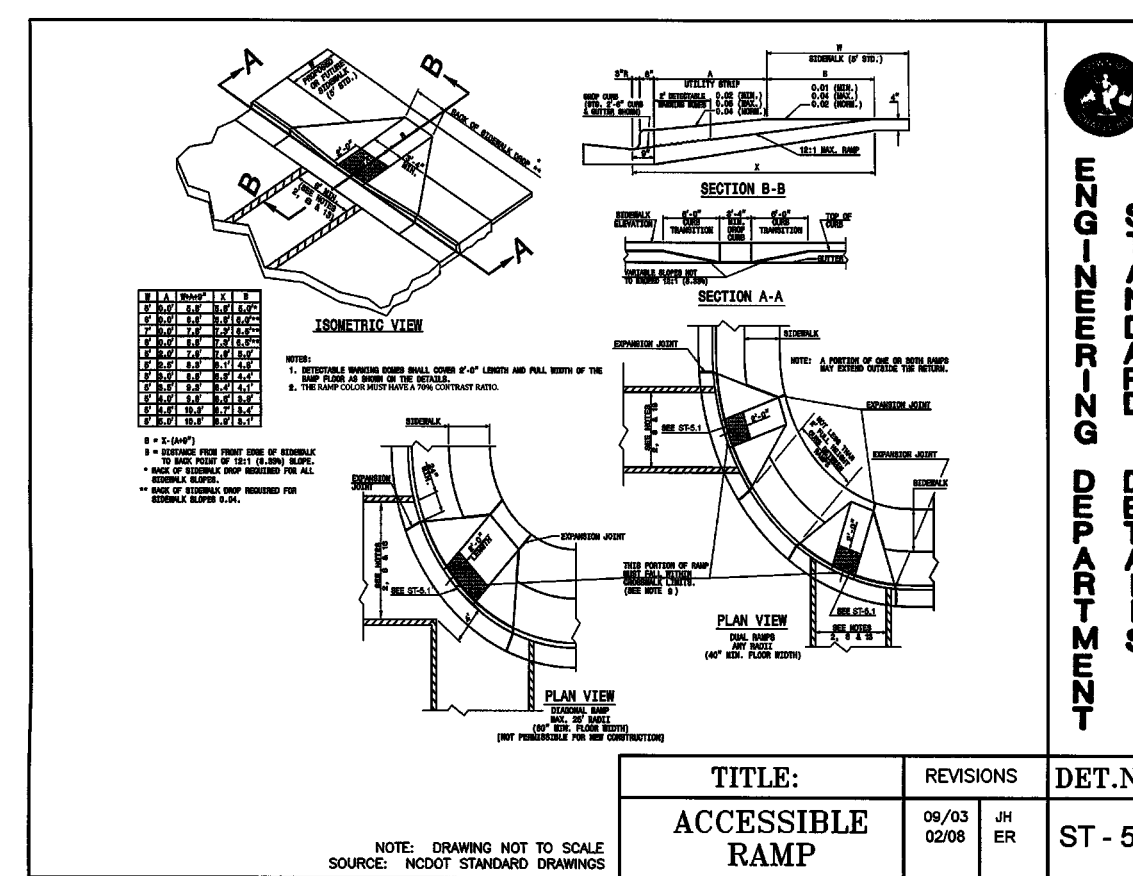


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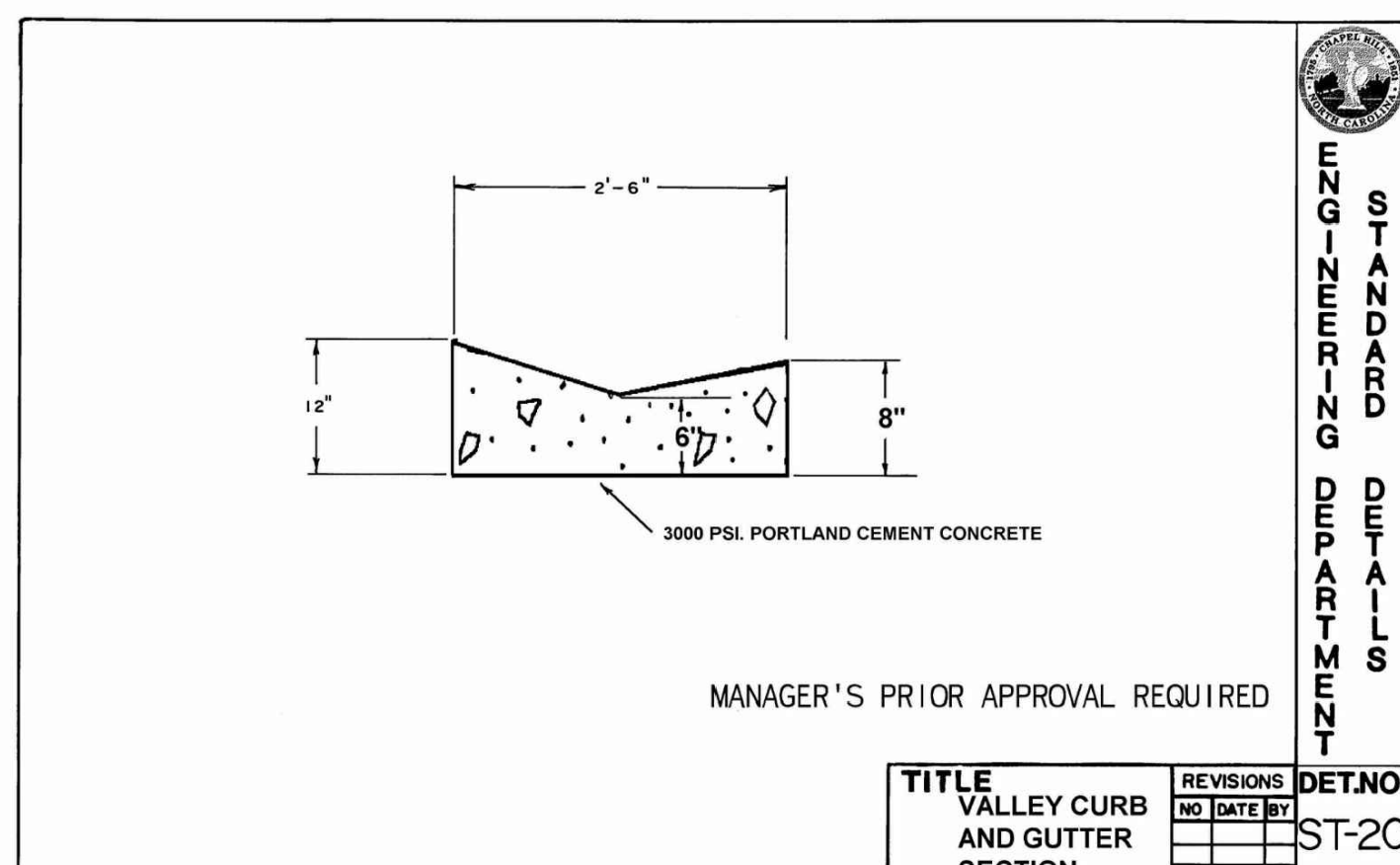


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# STORMWATER CONTROL MEASURE 'A' CONSTRUCTION SPECIFICATIONS

## GENERAL NOTES

- PRIOR TO CONSTRUCTION, ANY DISCREPANCIES IN THE PLANS AND NOTES SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION.
- PRIOR TO ANY CONSTRUCTION OR PLACEMENT OF ANY BACKFILL, THE ONSITE GEOTECHNICAL ENGINEER SHALL INSPECT THE EXCAVATION AREA FOR THE UNDERGROUND SCM WITHIN THIS AREA TO ASSESS WHETHER SUITABLE SOILS EXIST AT THE SUBGRADE LEVEL. IF THE CONTRACTOR CONSTRUCTS AND COVERS UP THE UNDERGROUND SCM PRIOR TO INSPECTION, THEN THIS AREA SHALL BE UNCOVERED AND TESTED (TO THE ENGINEER'S AND OWNER'S APPROVAL) AT THE CONTRACTOR'S EXPENSE.
- THE FACILITY SHALL NOT BE USED AS A TEMPORARY EROSION CONTROL DEVICE (I.E. SEDIMENT TRAP OR SEDIMENT BASIN) DURING CONSTRUCTION.
- PRIOR TO PLACING STORMFILTER CARTRIDGES WITHIN THE UNDERGROUND SYSTEM, THE CONTRACTOR SHALL REQUEST AN ONSITE MEETING WITH THE DESIGN ENGINEER AND THE EROSION CONTROL INSPECTOR TO ENSURE THE UPSTREAM DRAINAGE AREA IS COMPLETELY STABILIZED (I.E. GOOD VEGETATIVE COVER). IF THE CONTRACTOR DECIDES TO PLACE THE STORMFILTER CARTRIDGES PRIOR TO APPROVAL FROM THE DESIGN ENGINEER AND THE EROSION CONTROL INSPECTOR, THEN THE CONTRACTOR SHALL EXCAVATE/REPLACE, AS NECESSARY, THE COMPONENTS NEEDED FOR THE SYSTEM TO FUNCTION PROPERLY AT HIS / HER EXPENSE SHOULD THE STORMFILTER CARTRIDGES NOT FUNCTION PROPERLY (I.E. WILL NOT DRAIN DUE TO SEDIMENT DEPOSITION) DUE TO AN UNSTABILIZED UPSTREAM DRAINAGE AREA.
- ONCE CONSTRUCTED, THE STORMFILTER CARTRIDGES SHALL NOT RECEIVE STORMWATER RUNOFF UNTIL THE ENTIRE CONTRIBUTING DRAINAGE AREA TO THE UNDERGROUND SYSTEM HAS BEEN COMPLETELY STABILIZED AND SITE CONSTRUCTION IS COMPLETE.
- ALL COMPONENTS OF THE UNDERGROUND SCM SYSTEM (STORMFILTER MANHOLE, CONCRETE VAULT, JOINT / RISER CONNECTIONS, ENDCAPS, ACCESS MANHOLES, ETC.) SHALL BE DESIGNED BY OTHERS. ANY VARIATIONS OR CHANGES MADE FROM THESE SPECIFICATIONS AND DRAWINGS DURING THE ORDERING AND/OR INSTALLATION OF ALL COMPONENTS MUST BE APPROVED BY THE DESIGN ENGINEER. THE STRUCTURAL DESIGN OF THE UNDERGROUND SCM, ALONG WITH ITS ASSUMPTIONS, IS ALSO BY OTHERS. THE JOHN R. MCADAMS COMPANY, INC. AND ITS EMPLOYEES ASSUME NO LIABILITY WITH RESPECT TO ANY ASPECT OF THE STRUCTURAL DESIGN FOR THE UNDERGROUND SCM SYSTEM.
- ALL PIPE / RISER CONNECTIONS AND JOINTS ASSOCIATED WITH THE UNDERGROUND SCM SYSTEM SHALL BE WATER TIGHT. THE MECHANISM FOR ACHIEVING THIS SHALL BE SUBMITTED TO THE DESIGN ENGINEER FOR REVIEW.
- THE CONTRACTOR SHALL FURNISH, INSTALL, OPERATE, AND MAINTAIN ANY PUMPING EQUIPMENT, ETC. NEEDED FOR REMOVAL OF WATER FROM VARIOUS PARTS OF THE UNDERGROUND SCM SYSTEM SITE. IT IS ANTICIPATED THAT PUMPING WILL BE NECESSARY IN THE EXCAVATION AREAS DURING PLACEMENT OF FILL WITHIN THIS AREA AS NECESSARY. THE CONTRACTOR SHALL KEEP THE WATER LEVEL BELOW THE BOTTOM OF THE EXCAVATION. THE MANNER IN WHICH THE WATER IS REMOVED SHALL BE SUCH THAT THE EXCAVATION BOTTOM AND SIDE SLOPES ARE STABLE.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADHERE TO ALL CURRENT OSHA REGULATIONS FOR CONFINED SPACE ENTRY AND PROVIDE SUCH DURING ENGINEER WALK-THROUGH/INSPECTION.
- ALL PIPE PENETRATIONS THROUGH A CONCRETE STRUCTURE (I.E. STORMFILTER CARTRIDGE / DETENTION SYSTEM, STORM DRAINAGE MANHOLES, ETC.) SHALL BE MADE WATERTIGHT USING NON-SHRINK CEMENTITIOUS GROUT.
- EXISTING UTILITIES AND STRUCTURES SHOWN, BOTH UNDERGROUND AND ABOVE GROUND, ARE BASED ON A FIELD SURVEY AND THE BEST AVAILABLE RECORD DRAWINGS. THE CONTRACTOR SHALL VERIFY FIELD CONDITIONS PRIOR TO BEGINNING RELATED CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.

## STORMWATER MANAGEMENT SYSTEM MATERIAL SPECIFICATIONS

- THE UNDERGROUND STORMWATER MANAGEMENT SYSTEM IS TO BE DESIGNED BY OTHERS. ANY CHANGES TO THE PLANS SHALL BE PROVIDED TO THE DESIGN ENGINEER FOR REVIEW. PRIOR TO INSTALLATION, SHOP DRAWINGS OF THE STORMWATER MANAGEMENT SYSTEM SHALL BE PROVIDED TO THE DESIGN ENGINEER AND TO THE TOWN OF CHAPEL HILL FOR REVIEW.
- FILTER CARTRIDGES SHALL BE CONTECH STORMFILTERS WITH PHOSPHOSORB MEDIA. INSTALLATION OF THE STORMWATER DEVICE SHALL BE PER THE MANUFACTURER'S INSTALLATION GUIDELINES AND SPECIFICATIONS.
- ACCESS RISERS SHALL BE INSTALLED PER STRUCTURAL SPECIFICATIONS. ACCESS STEPS / LADDERS SHALL BE ATTACHED TO THE RISERS TO ALLOW FOR ACCESS INTO THE STORMWATER MANAGEMENT SYSTEM.
- THE 24"Ø DIP OUTLET BARREL OF THE DETENTION SYSTEM SHALL BE CLASS 350 DIP, MEETING THE REQUIREMENTS OF ASTM A716. THE PIPE JOINTS SHALL BE LOCKING JOINTS PER ANSI/AWWA C110/A21.10 OR ANSI/AWWA C153/A21.53 STANDARDS.
- THE CONTRACTOR SHALL INSTALL THE STORMFILTER SYSTEM PER MANUFACTURER'S SPECIFICATIONS. CONTRACTOR TO PROVIDE A LETTER FROM MATERIAL SUPPLIER(S) STATING MATERIALS MEET THE SPECIFIED STANDARDS PRIOR TO INSTALLATION.
- COVER AND REVIEW OF SITE CONDITIONS TO MAINTAIN THE STRUCTURAL INTEGRITY OF THE SYSTEM TO BE THE RESPONSIBILITY OF THE MANUFACTURER.

## STATEMENT OF RESPONSIBILITY

- ALL REQUIRED MAINTENANCE AND INSPECTIONS OF THIS FACILITY SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER, PER THE EXECUTED OPERATION AND MAINTENANCE AGREEMENT FOR THIS FACILITY.

## FOUNDATION NOTES

- ONCE THE EXCAVATION IS COMPLETE AND PRIOR TO INSTALLATION OF THE UNDERGROUND STORMWATER MANAGEMENT SYSTEM, THE ONSITE GEOTECHNICAL ENGINEER SHALL VERIFY THE BEARING CAPACITY OF THE UNDERLYING SOILS TO SERVE AS A FOUNDATION FOR THE UNDERGROUND STORMWATER MANAGEMENT SYSTEM. IF THE ONSITE GEOTECHNICAL ENGINEER DEEMS THE FOUNDATION SOILS AS UNSUITABLE, THEN THE UNSUITABLE MATERIAL SHOULD BE REMOVED DOWN TO A SUITABLE DEPTH AND THEN BUILT BACK UP TO THE CORRECT ELEVATION WITH A COMPACTED BACKFILL MATERIAL THAT IS APPROVED BY THE ONSITE GEOTECHNICAL ENGINEER. THE APPROVED BACKFILL MATERIAL SHOULD HAVE A GRADATION THAT WILL NOT ALLOW THE MIGRATION OF FINES, WHICH COULD CAUSE SETTLEMENT OF THE UNDERGROUND STORMWATER MANAGEMENT SYSTEM. IF NECESSARY, A GEOTEXTILE FABRIC CAN BE USED TO SEPARATE THE UNDERLYING SOILS AND THE BACKFILL MATERIAL. THIS GEOTEXTILE FABRIC (IF USED) IS TO BE SPECIFIED BY THE ON-SITE GEOTECHNICAL ENGINEER.
- PLEASE NOTE THAT IF THE CONTRACTOR CONSTRUCTS AND COVERS UP THE EXCAVATION FOR THE UNDERGROUND STORMWATER MANAGEMENT SYSTEM PRIOR TO INSPECTION, THEN THIS AREA SHALL BE UNCOVERED AND TESTED (TO THE ENGINEER'S AND OWNER'S APPROVAL) AT THE CONTRACTOR'S EXPENSE.
- THE FOUNDATION SUBGRADE SHALL BE GRADED TO A UNIFORM OR SLIGHTLY SLOPING GRADE PRIOR TO PLACEMENT OF THE BEDDING MATERIAL. IF THE FOUNDATION SUBGRADE WILL BE EXPOSED FOR AN EXTENDED PERIOD OF TIME DURING CONSTRUCTION, THEN IT SHOULD BE GRADED TO A SLIGHT SLOPE SUCH THAT SATURATION OF THE SUBGRADE DOES NOT OCCUR.
- THE BEDDING MATERIAL FOR THE UNDERGROUND STORMWATER MANAGEMENT SYSTEM SHALL BE SPECIFIED BY THE ON-SITE GEOTECHNICAL ENGINEER. TYPICALLY, A WELL-GRADED GRANULAR MATERIAL WILL BE USED FOR THE BEDDING. PLEASE NOTE THAT IF CONSTRUCTION EQUIPMENT WILL BE OPERATING FOR AN EXTENDED PERIOD OF TIME ON THE BEDDING, THEN THE APPROPRIATE MEASURES (E.G. ENGINEERED FABRIC, STIFF GEOGRID, ETC.) SHALL BE TAKEN TO ENSURE THE INTEGRITY OF THE BEDDING IS NOT COMPROMISED.
- THE CONTRACTOR SHALL FURNISH, INSTALL, OPERATE, AND MAINTAIN ANY PUMPING EQUIPMENT, ETC. NEEDED FOR REMOVAL OF WATER FROM THE EXCAVATION. IT IS BEST TO BEGIN THE CONSTRUCTION OF THE DETENTION SYSTEMS AT THE DOWNSTREAM END WITH THE OUTLET ALREADY CONSTRUCTED TO ALLOW A ROUTE FOR WATER TO ESCAPE.
- THE ONSITE GEOTECHNICAL ENGINEER SHALL DETERMINE IF FOUNDATION DRAINS ARE REQUIRED FOR THE UNDERGROUND SCM SYSTEM. THE DESIGN ENGINEER SHALL BE NOTIFIED FOLLOWING THIS DETERMINATION. IF REQUIRED, THE FOUNDATION DRAINS ARE TO BE DESIGNED ENTIRELY BY THE ONSITE GEOTECHNICAL ENGINEER. THE FOUNDATION DRAIN SYSTEMS SHALL TIE TO THE NEAREST STORM SEWER INLET / JUNCTION BOX WITH INVERT LOWER THAN THE INVERT OF THE FOUNDATION DRAIN. FOUNDATION DRAIN SYSTEM SHALL NOT TIE INTO THE UNDERGROUND SCM AT ANY POINT.

## BEDDING NOTES

- THE EXCAVATION SUB GRADE MUST BE TRANSIT LEVEL.
- THE EXCAVATION PIT SHALL BE LINED (ON THE BOTTOM AND ALL FOUR SIDES) WITH A NON-WOVEN GEO-TEXTILE (GEOEX 401 OR APPROVED EQUIVALENT). THE ONSITE GEOTECHNICAL ENGINEER SHALL APPROVE FABRIC FOR USE.
- THE SUBGRADE FOR THE DETENTION SYSTEM CAN BE A CONCRETE SLAB, OR CLEAN GRANULAR MATERIAL WITH A MAXIMUM AGGREGATE SIZE OF 3/4". THE BEDDING SHALL BE FREE FROM ROCK FORMATIONS, PROTRUDING STONES, FROZEN LUMPS, ROOTS, AND OTHER FOREIGN MATERIAL.
- PREPARE THE SUBGRADE PER THE ONSITE GEOTECHNICAL ENGINEER'S DIRECTION (APPROXIMATELY 5'-6" BELOW GRADE ON WHICH SLAB WILL SET). THE BEDDING MATERIAL SHOULD BE GRADED SUCH THAT A SMOOTH UNIFORM GRADE IS ESTABLISHED TO ALLOW FOR OPTIMUM PLACEMENT OF THE SAND FILTER.
- THE SUBGRADE MUST SUPPORT THE DETENTION SYSTEM WITHOUT DIFFERENTIAL SETTLEMENT BETWEEN PIECES.
- IF CONSTRUCTION EQUIPMENT WILL BE OPERATING FOR AN EXTENDED PERIOD OF TIME ON THE BEDDING, THEN THE APPROPRIATE MEASURES (E.G. STIFF GEOGRID, ETC.) SHALL BE TAKEN TO ENSURE THE INTEGRITY OF THE BEDDING IS NOT COMPROMISED.

## BACKFILL MATERIAL NOTES

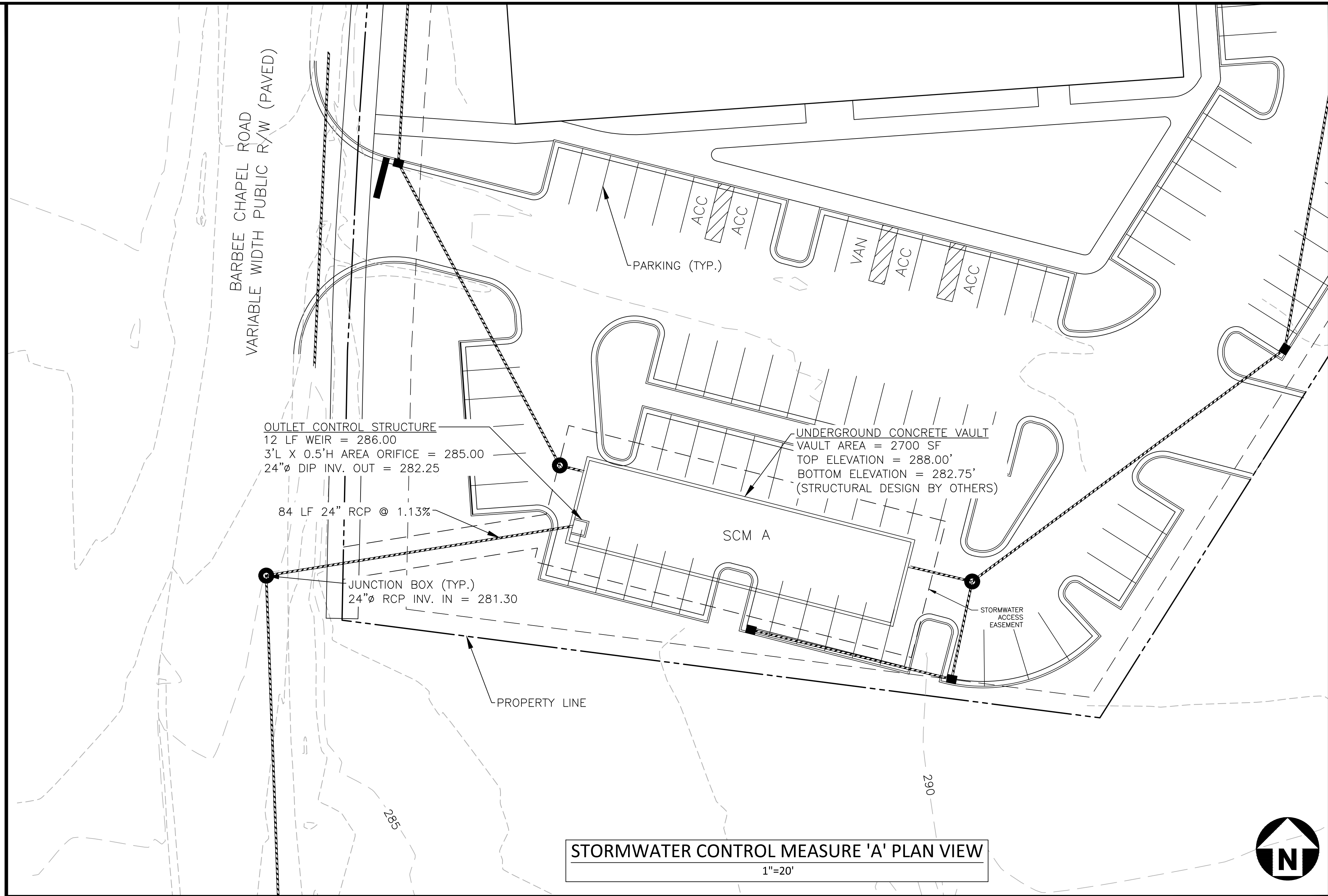
- THE ON-SITE GEOTECHNICAL ENGINEER SHALL SPECIFY THE BACKFILL MATERIAL FOR THE STORMWATER MANAGEMENT SYSTEM.
- THE BACKFILL MATERIAL SHOULD BE FREE OF ROCKS, FROZEN LUMPS, AND OTHER FOREIGN MATTER THAT COULD CAUSE HARD SPOTS WITHIN THE BACKFILL MATERIAL, OR THAT COULD DECOMPOSE AND CREATE VOIDS.
- HIGHLY PLASTIC SILTS, HIGHLY PLASTIC CLAYS, ORGANIC SILTS, ORGANIC CLAYS, AND PEATS SHOULD NOT BE USED AS A BACKFILL MATERIAL.
- THE BACKFILL MATERIAL SHOULD BE PLACED IN 6" LOOSE LIFTS AND COMPACTED TO 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM-D698). THE FILL SOILS SHALL BE COMPACTED AT A MOISTURE CONTENT WITHIN +/- TWO PERCENT OF ITS OPTIMUM MOISTURE CONTENT.
- ANY MATERIAL STOCKPILING ON TOP OF THE STORMWATER MANAGEMENT SYSTEM SHALL BE APPROVED BY THE STRUCTURAL DESIGN ENGINEER OR DETENTION SYSTEM MANUFACTURER.

## UNDERGROUND VAULT CONSTRUCTION NOTES

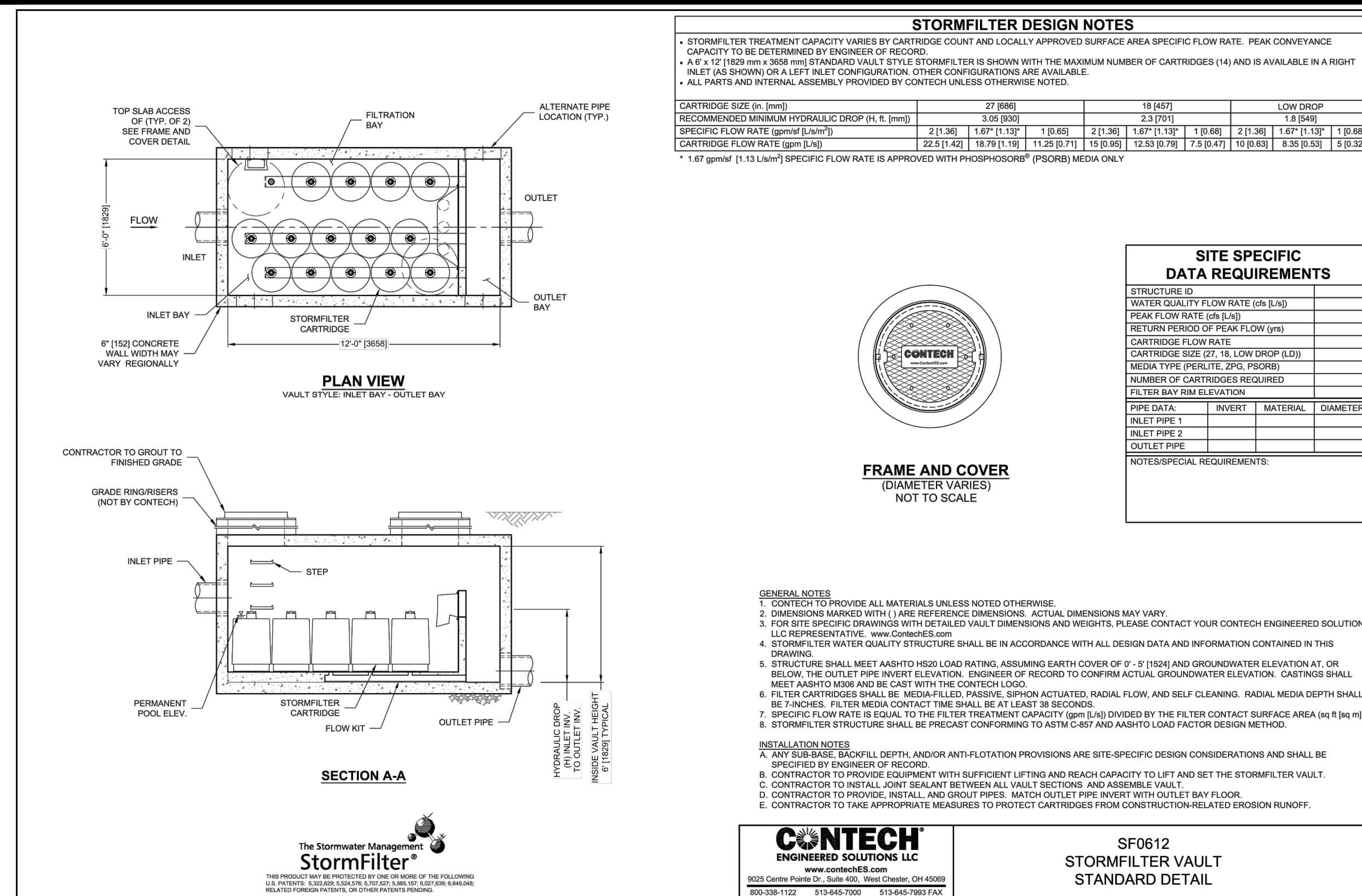
- UNDERGROUND VAULT CONFIGURATION IS TO BE DESIGNED AND PROVIDED BY OTHERS.
- ABSOLUTELY NO RUNOFF SHALL ENTER THE UNDERGROUND VAULT UNTIL ALL CONTRIBUTING DRAINAGE AREAS HAVE BEEN STABILIZED.
- MANHOLE ACCESS SHALL BE PROVIDED FOR THE UNDERGROUND VAULT. MANHOLES SHALL BE IN COMPLIANCE WITH TOWN OF CHAPEL HILL STANDARD DETAILS BUT SHALL BE A MINIMUM OF 24 INCHES IN DIAMETER TO COMPLY WITH OSHA CONFINED SPACE REQUIREMENTS (OR MINIMUM OSHA REQUIREMENTS APPLICABLE AT TIME OF CONSTRUCTION). CONTRACTOR SHALL PROVIDE ACCESS LADDERS FOR ACCESS BELOW ALL MANHOLES. MANHOLE COVERS SHALL ALLOW FOR PROPER VENTILATION.

## SYSTEM TESTING NOTES

- PRIOR TO PLACEMENT OF THE BACKFILL MATERIAL AND STORM FILTER CARTRIDGES, CONTRACTOR SHALL TEST FOR WATER TIGHTNESS. ENTRANCES AND EXITS SHALL BE PLUGGED AND THE SYSTEM COMPLETELY FILLED WITH WATER TO DEMONSTRATE WATER TIGHTNESS. WATER TIGHTNESS MEANS NO SIGNIFICANT FOR A PERIOD OF 24 HOURS. SIGNIFICANT LEAKAGE TO BE DETERMINED BY THE CERTIFYING ENGINEER. CONTRACTOR SHALL CALL AND SCHEDULE THE FIELD TESTING OF THE SYSTEM (WATER-TIGHTNESS) WITH THE ENGINEER AT LEAST 2 WORKING DAYS PRIOR TO THE TEST. THE CONTRACTOR SHALL PROVIDE WRITTEN REPORTS TO THE ENGINEER VERIFYING THE WATER TIGHTNESS OF THE STORMWATER VAULT.



STORMWATER CONTROL MEASURE 'A' PLAN VIEW  
1"=20'



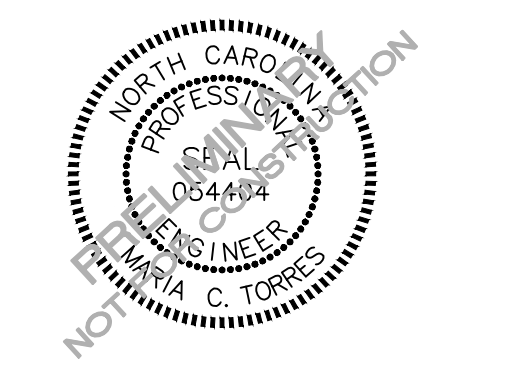
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**CHAPEL HILL, NC 27517**



**REVISIONS**

NO.	DATE

**PLAN INFORMATION**

PROJECT NO. TLA-22001  
 FILENAME TLA22001-SCMA  
 CHECKED BY MCT  
 DRAWN BY OVL  
 SCALE 1" = 20'  
 DATE 09.29.2022

**SHEET**

SCM A PLAN VIEW  
**C9.00**

SEE SHEET C0.00 FOR ALL PROJECT, SITE, GRADING, STORM DRAINAGE AND UTILITY NOTES

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