

Ample Storage Center
6839 Knightdale Blvd
Knightdale, NC 27545
Proposed Indoor Self Storage
Proposed +/-28,800 SF, 3-Story Indoor Self-Storage Building
Sketch Plan Submittal
Comprehensive Plan Consistency
July 28, 2023

General Narrative

Ample Storage Center, located at 6839 Knightdale Blvd, desires to expand their existing facility on the north end of their property (Parcel # 1744868623). Enclosed is the Sketch Plan for review.

The existing facility was developed in two phases. Phase 1 is located at and includes the more traditional one-story exterior storage units. Phase 2 is located at 6839 Knightdale Blvd and includes a multi-story mini-storage building. The proposed development will be the construction of one 29,280 sf, 3-story indoor mini-storage facility (87,840 sf total floor area) at the rear of the property, abutting TRW Electric Supply and the Wake Stone Corporation quarry.

The project area is currently wooded. No other environmental features are present on site. Proposed development is consistent with the existing development on the same parcel. The project area is bounded on two sides by the existing quarry and a third side by the existing on-site development. The final side adjoins TRW Electric Supply and will include preservation of the existing wooded area as part of the requisite screening buffer. The existing and proposed tree lines are shown on the Natural Resources Sketch Plan.

The proposed development will be accessed via the existing Phase 1 entrance at the end of Great Falls Ct. The proposed use will likely not increase traffic demand along the street significantly, and will not require any additional public infrastructure outside of fire protection.

Given that the proposed development matches the existing development on site, and given the adjacent land use and site location, the proposed indoor mini-storage facility fits within the spirit of the Knightdale Comprehensive Plan. Detailed reasonings are discussed below.

Growth Framework Map Consistency

The site is located within existing town limits. The project area is described as a 2-acre section of a 7-acre parcel (zoned MI). Existing development on the property includes 95,600 sf of self-storage (Mini-Warehouses).

Growth & Conservation Map Consistency

The site is located within a Retail place type category. Adjacent land uses, along with the designated place type from the published map are as follows:

- Site: Ample Storage (Retail)
- North & West: Wake Stone Corporation – Knightdale Quarry (Heavy Industrial).
- Northeast: TRW Electric and Supply Company (Retail).
- East: Auto DRS (Light Industrial)
Tractor Supply Company (Retail)
- Southeast: Knightdale Pediatrics (Retail).

The growth map designates the property for commercial development (retail). The proposed development is allowed under the UDO zoning and is consistent with existing development.

Given the location and surrounding uses, the proposed office development is consistent with and promotes the vision of the Growth & Conservation Map.

Trails & Greenways Map Consistency

The site is not located adjacent to any existing or proposed trails, greenways, bicycle routes, parks or open space located within or adjacent to the site, it is consistent with the Trails & Greenways Map.

Street Network Map Consistency

Existing development abuts Knightdale Blvd (NCDOT arterial) and Great Falls Ct. Development will be accessed via the exiting driveway at the end of the cul-de-sac on Great Falls Ct (city). The proposed development (mini-warehouses) will not significantly increase the number of trips along Great Falls Ct. Due to the nature of both the existing and proposed development, pedestrian and bike traffic will be very minimal, if ever. Any increase in vehicular traffic will not pose any risks to either group. The proposed development is consistent with the street network plan.

Transit Network

The project area is not located along any planned transit route. As noted above, demand for transit use will be virtually non-existent for either the existing or proposed uses along Great Falls Ct. The proposed development fits the overall transit network plan.

Focus Area Studies

The project area is not located within any existing Focus Area Study.

Water Allocation

As the proposed development is an expansion of the existing mini-storage facility, no new office/residential facilities are included. Customers will have access to bathroom facilities in the Phase 2 building. No water connections will be used to provide any janitorial services. Submitted plans show only a fire line as part of development. No water demand will be needed to be allocated for the proposed development.

CIVIL ENGINEER

Rivers & Associates, INC.
Greenville, NC



107 East Second Street
Greenville, NC 27858
(252) 752-4135

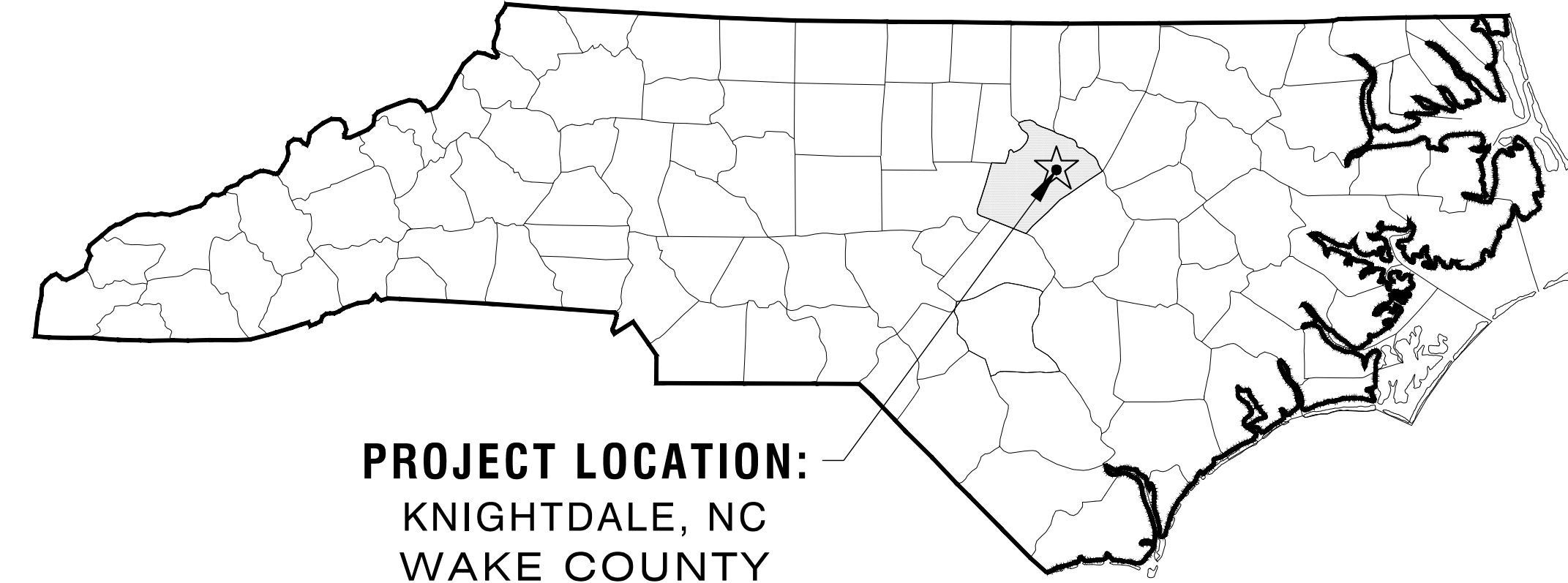
Contact: MATTHEW J. PROKOP, PE
mprokop@riversandassociates.com

OWNER/DEVELOPER

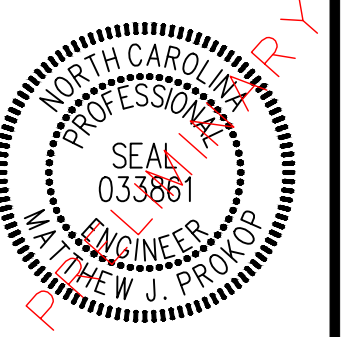
AMPLE STORAGE LAKE
WORTH LLC

P.O. BOX 608
SMITHFIELD, NC 27577-0608

Contact:



PROJECT LOCATION:
KNIGHTDALE, NC
WAKE COUNTY

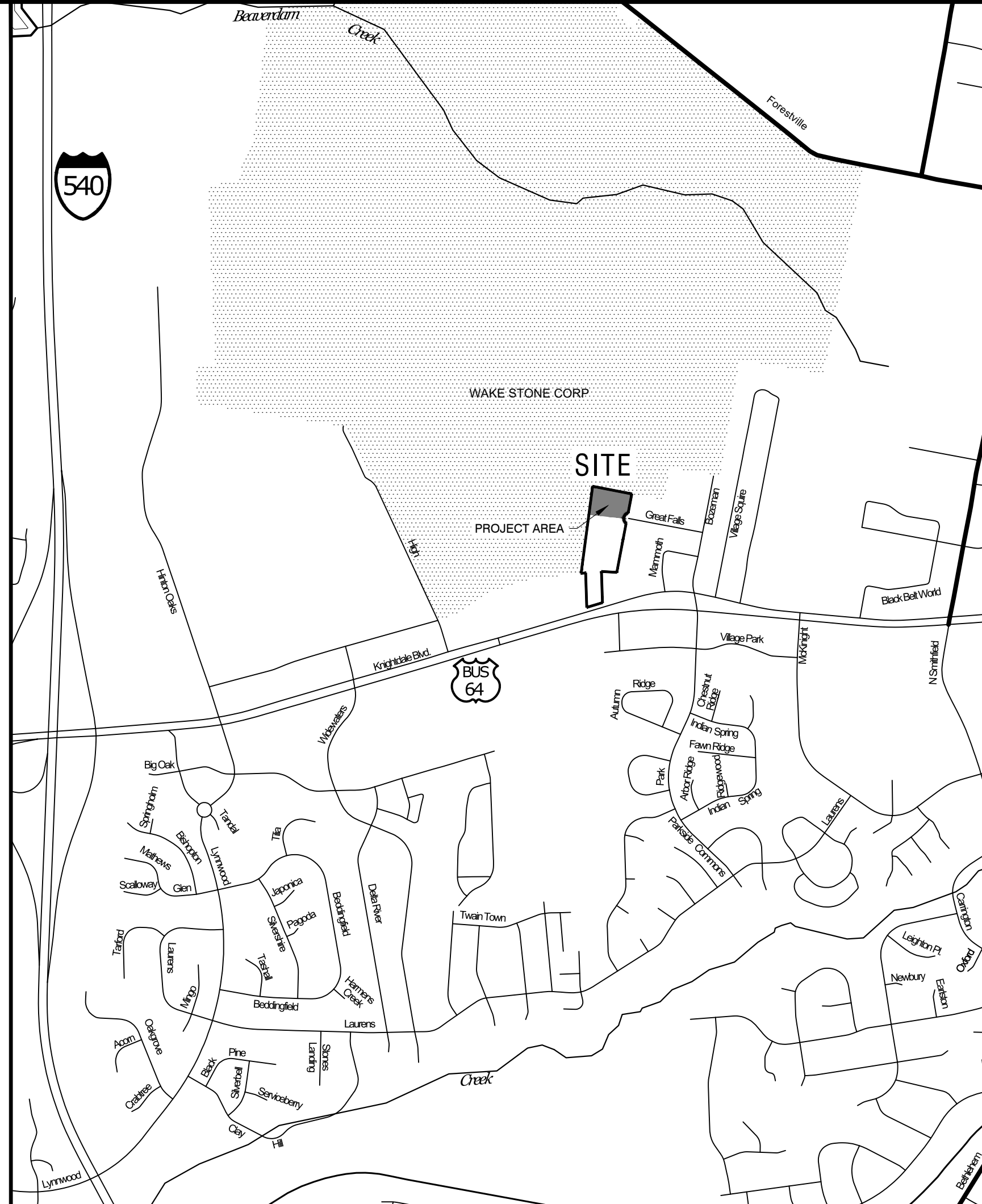


SKETCH PLAN SUBMITTAL
**AMPLE STORAGE
EXPANSION**

REVISIONS:

NO.	DESCRIPTION	DATE	BY

SITE DATA	
SITE ADDRESS PHASE 1:	1107 GREAT FALLS COURT KNIGHTDALE, NORTH CAROLINA 27545
SITE ADDRESS PHASE 2:	6839 KNIGHTDALE BLVD, KNIGHTDALE, NORTH CAROLINA 27545
MUNICIPALITY:	ST. MATTHEWS
PARCEL NO.:	1744868623
DEED REFERENCE:	DB 15706, PG 63
AREA IN SITE:	6.98 ACRES (+/- 303,818 SF)
ZONING / LAND USE CLASSIFICATION:	GENERAL COMMERCIAL - HB & MI
EXISTING/PROPOSED USE:	MINI-WAREHOUSES
PROPOSED BUILDING AREA:	29,280± SF (BUILDING FOOTPRINT)
BUILDING HEIGHT:	30' (3-STORY)
TOTAL NUMBER OF STORAGE UNITS:	
IMPERVIOUS AREA	
EXISTING BUILDINGS FOOTPRINT:	62,611 SF
EXISTING CONCRETE:	4,197 SF
EXISTING ASPHALT PARKING:	87,965 SF
TOTAL EXISTING IMPERVIOUS AREA:	154,773 SF (3.55 ACRE)
EXISTING:	50.9 %
PROPOSED BUILDING FOOTPRINT:	29,280 SF
PROPOSED CONCRETE:	15,752 SF
TOTAL PROPOSED IMPERVIOUS AREA:	45,032SF (1.03ACRES)
TOTAL IMPERVIOUS AREA :	199,805 SF (4.59 ACRES)
TOTAL POST DEVELOPMENT:	65.8 %
PARKING SUMMARY	
EXISTING REQUIREMENTS	
MINI-STORAGE:	MAXIMUM - 25 PER 1,000 SF(95,645 SF) = 23.9 SPACES
MINIMUM - 1/2 OF MAXIMUM() = 12 SPACES	
PROPOSED REQUIREMENTS	
MINI-STORAGE:	MAXIMUM - 25 PER 1,000 SF(87,840 SF) = 22 SPACES
MINIMUM - 1/2 OF MAXIMUM() = 11 SPACES	
TOTAL PARKING SPACES REQUIRED:	23
TOTAL EXISTING PARKING SPACES:	12
NEW PARKING SPACES REQUIRED:	11
NEW PARKING SPACES PROVIDED:	16
TOTAL PARKING SPACES PROVIDED:	28
EXISTING H/C PARKING SPACES:	2
H/C PARKING SPACES REQUIRED:	1
TOTAL H/C PARKING SPACES PROVIDED:	3



Vicinity Map
SCALE: 1" = 1000'

SHEET INDEX

Sheet Number	Sheet Title
C1.01	COVER SHEET
C1.11	BOUNDARY SURVEY
C1.12	NATURAL RESOURCES SKETCH PLAN
C1.21	EXISTING CONDITIONS
C2.01	SKETCH PLAN OVERALL
C2.10	SKETCH PLAN - PROJECT AREA
C2.51	SITE DETAILS
C2.52	BUILDING ELEVATIONS
C3.01	FIRE PREVENTION PLAN
C4.01	GRADING & DRAINAGE PLAN
C5.01	SEDIMENTATION & EROSION CONTROL PLAN - PH 1
C5.02	SEDIMENTATION & EROSION CONTROL PLAN - PH 2
C5.11	SEDIMENTATION & EROSION CONTROL NOTES
C5.21	SEDIMENTATION & EROSION CONTROL DETAILS
C5.22	SEDIMENTATION & EROSION CONTROL DETAILS

GENERAL NOTES:

- NO CHANGES TO ANY ASPECT OF THIS SITE PLAN, INCLUDING BUT NOT LIMITED TO, LANDSCAPING, GRADING, BUILDING ELEVATIONS, LIGHTING OR UTILITIES WILL BE MADE WITHOUT THE APPROVAL OF THE TOWN OF KNIGHTDALE AND THE ENGINEER.
- ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE TOWN OF KNIGHTDALE STANDARDS AND SPECIFICATIONS.
- CONTRACTOR MUST NOTIFY ONE CALL CENTER, INC (NC ONE CALL) 1-800-632-4949 AT LEAST 72 HOURS PRIOR TO THE START OF EXCAVATION OR TRENCHING TO HAVE ALL UNDERGROUND UTILITIES LOCATED.
- CONTACT TOWN OF KNIGHTDALE AT 919-217-2255 TO SCHEDULE PRE-CONSTRUCTION MEETING WITH GRADING CONTRACTOR, EROSION CONTROL ADMINISTRATOR, PROJECT ENGINEER AND OWNER. NO PERSON MAY INITIATE A LAND DISTURBING ACTIVITY, BEFORE NOTIFYING ALL APPROPRIATE AUTHORITIES TO THE DATE OF SAID ACTIVITY.
- THIS PROPERTY IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA AS DETERMINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA). THIS PROPERTY IS LOCATED IN ZONE X, AS SHOWN ON FIRM PANEL NUMBER 3720174400K, DATED JULY 19, 2022.
- WETLANDS AND PONDS, IF PRESENT, ARE DENOTED ON THE SURVEY. NO IMPACTS TO WETLANDS ARE ANTICIPATED.
- PLEASE BE ADVISED TO OF THE RULES WHICH PROTECT AND MAINTAIN EXISTING BUFFERS ALONG WATERCOURSES IN THE NEUSE AND TARPAMULICO RIVER BASINS. THIS RULE IS ENFORCED BY THE DIVISION OF WATER QUALITY (DWQ). DIRECT ANY QUESTIONS ABOUT THE APPLICABILITY OF THIS RULE TO THE RALEIGH REGIONAL OFFICE. (919) 791-4200
- NEW BUILDINGS MUST COMPLY WITH NC FIRE CODE SECTION 510 - EMERGENCY RESPONDER RADIO COVERAGE. FIRE DEPARTMENT VEHICULAR ACCESS TO ALL STRUCTURES UNDER CONSTRUCTION SHALL BE PROVIDED AT ALL TIMES.
- CONTRACTOR TO FURNISH ALL PAVEMENT MARKINGS AS SHOWN.
- THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR PRECISE BUILDING DIMENSIONS AND EXACT UTILITY ENTRANCE POINTS.
- SITE LIGHTING IS TO BE INSTALLED WITH COORDINATION BETWEEN CONTRACTOR, OWNER/DEVELOPER AND DUKE ENERGY.
- COPIES OF ALL PERMITS AND APPROVED PLANS MUST BE KEPT ON SITE IN A PERMIT BOX THAT IS CONSPICUOUSLY LOCATED AND EASILY ACCESSIBLE DURING CONSTRUCTION. THIS INCLUDES APPROVED CONSTRUCTION PLANS, APPROVED EROSION CONTROL PLANS, ENCROACHMENT AGREEMENTS, DRIVEWAY PERMITS, WATER/S.S. PERMITS, ETC.

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Administrator

IN THE EVENT OF A CONFLICT OR INCONSISTENCY BETWEEN THESE CONSTRUCTION DRAWINGS AND THE TOWN OF KNIGHTDALE'S APPROVED STANDARDS FOR THIS PROJECT, THE APPROVED STANDARDS SHALL CONTROL. TOWN OF KNIGHTDALE APPROVED STANDARDS SHALL MEAN ALL DEVELOPMENT DOCUMENTS NECESSARY FOR APPROVAL FOR THE PROPERTY INCLUDING, BUT NOT LIMITED TO, ANY SPECIAL USE PERMIT, SUBDIVISION PLAN, SITE PLAN, SUBDIVISION PLAT(S), PHASING SCHEDULE, DEVELOPMENT AGREEMENT, UTILITY ALLOCATION AGREEMENT, ANNEXATION AGREEMENT, THE TOWN OF KNIGHTDALE STANDARD SPECIFICATION AND DETAILS MANUAL AND APPLICABLE PROVISIONS OF THE NORTH CAROLINA STATE BUILDING CODE.

Professional Design Engineer Certification. These improvements shall be constructed in accordance with the following drawings and with the Standard Specifications of the Town of Knightdale.

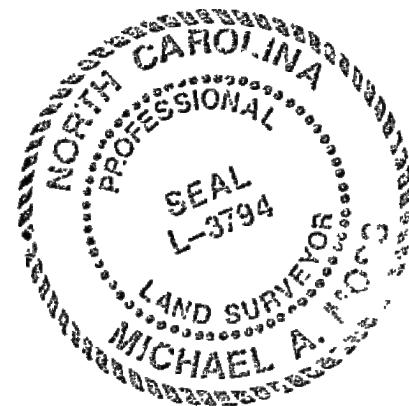
I, _____ PE, certify that the Standard Specifications of the Town of Knightdale have been thoroughly checked and found to be applicable to this project. All exceptions to the applicable Town standards have been previously approved by the Town of Knightdale and said exceptions are shown on Sheet(s) _____ of these drawings.

Scale _____ PE
By: _____
Date: _____

LAMPE MANAGEMENT COMPANY
AMPLE STORAGE - EXPANSION
CITY OF KNIGHTDALE - ST. MATTHEWS TWP. - WAKE CO. - NORTH CAROLINA
COVER SHEET

DATE: AUGUST 11, 2023
DESIGNED BY: MJP
DRAWN BY: EDN
CHECKED BY: JSJ
PROJECT No. 2023008
DRAWING No. W-4073-SK
SCALE: 1" = 20'
SHEET No. **C1.01**

I, MICHAEL A. MOSS, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION; THAT THE SOURCE OF INFORMATION FOR THE SURVEY IS SHOWN HEREON; THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED; THAT THE RATIO OF PRECISION IS GREATER THAN 1:10,000; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED; AND THAT THIS MAP MEETS THE REQUIREMENTS OF THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA (21 NCAC 56. 1600). WITNESS MY ORIGINAL SIGNATURE, REGISTRATION NUMBER AND SEAL



Michael A. Moss
PROFESSIONAL LAND SURVEYOR (L-3794)

CERTIFICATE OF OWNERSHIP AND DEDICATION

I HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY SHOWN AND DESCRIBED, WHICH IS LOCATED IN THE SUBDIVISION JURISDICTION OF THE TOWN OF KNIGHTDALE AND THAT I HEREBY ADOPT THIS PLAN OF SUBDIVISION WITH MY FREE CONSENT, ESTABLISH MINIMUM BUILDING SETBACK LINES, PRESERVE AND PROTECT ALL SOILS AND VEGETATION IN THE TREE PROTECTION AREAS AS REQUIRED IN SECTION 8.5 OF THE TOWN OF KNIGHTDALE UNIFIED DEVELOPMENT ORDINANCE, PLANT SUPPLEMENTARY OR REPLACEMENT TREES AS REQUIRED, AND DEDICATE ALL STREETS, ALLEYS, WALKS, PARKS, AND OTHER SITES AND EASEMENTS, TO PUBLIC OR PRIVATE USES AS NOTED. FURTHERMORE, I HEREBY DEDICATE ALL SANITARY SEWER, STORM SEWER, AND WATER LINES THAT ARE LOCATED IN PUBLIC UTILITY EASEMENTS OR RIGHTS-OF-WAY TO THE CITY OF RALEIGH, AND I HEREBY DEDICATE ALL STORM SEWER LINES THAT ARE LOCATED IN PUBLIC UTILITY EASEMENTS OR RIGHTS-OF-WAY TO THE TOWN OF KNIGHTDALE.

1-25-2017 *Ample Storage Lake Worth LLC*
DATE OWNER(S)

I, *Patricia D. Hildreth*, DO HEREBY CERTIFY

THAT *Guy Lampe*, PERSONALLY APPEARED BEFORE ME THIS DAY AND ACKNOWLEDGED THE DUE EXECUTION OF THIS CERTIFICATE. WITNESS MY HAND AND (WHERE AN OFFICIAL SEAL IS REQUIRED BY LAW) OFFICIAL SEAL THIS 25 DAY OF Jan, A.D., 2017 (YEAR)



Patricia D. Hildreth
NOTARY
09/27/2021
COMMISSION EXPIRES

CERTIFICATE OF APPROVAL FOR RECORDING

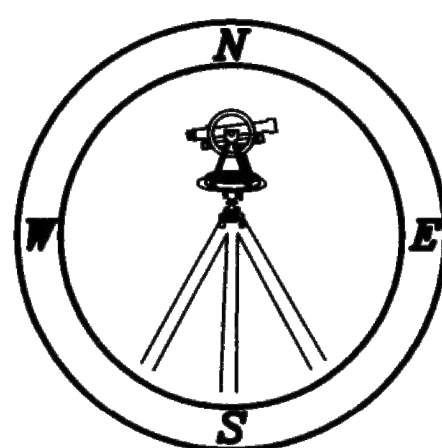
I HEREBY CERTIFY THAT THE SUBDIVISION PLAT SHOWN IS EXEMPT FROM THE SUBDIVISION PROVISIONS OF THE UNIFIED DEVELOPMENT ORDINANCE FOR THE TOWN OF KNIGHTDALE, NORTH CAROLINA, AND IS THEREFORE EXEMPT FROM ITS PROVISIONS. THE PLAT HAS BEEN FOUND TO COMPLY WITH THE ZONING REGULATIONS OF THE UNIFIED DEVELOPMENT ORDINANCE FOR THE TOWN OF KNIGHTDALE, NORTH CAROLINA, AND HAS BEEN APPROVED BY THE TOWN OF KNIGHTDALE FOR RECORDING IN THE OFFICE OF THE REGISTER OF DEEDS OF WAKE COUNTY.

2/10/17 *[Signature]*
DATE ADMINISTRATOR, TOWN OF KNIGHTDALE

REVIEW OFFICER CERTIFICATION

I, *Jennifer Currin*, REVIEW OFFICER OF WAKE COUNTY, CERTIFY THAT THE MAP OR PLAT TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL THE STATUTORY REQUIREMENTS FOR RECORDING.

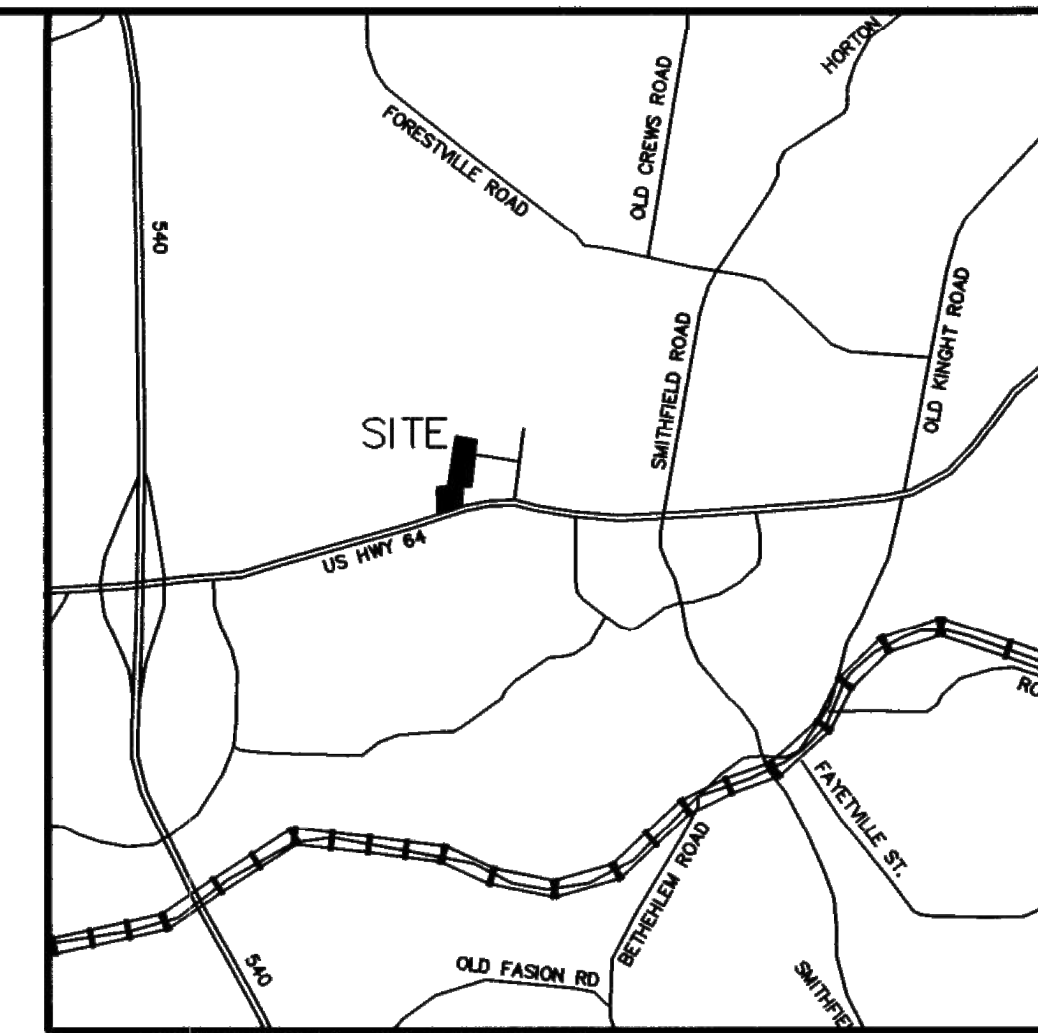
2-10-17 *[Signature]*
DATE REVIEW OFFICER, TOWN OF KNIGHTDALE, WAKE COUNTY



CAWTHORNE, MOSS & PANCIERA, P.C. PROFESSIONAL LAND SURVEYORS, C-1525, 333 S. WHITE STREET, P.O. BOX 1253, WAKE FOREST N.C., 27588, (919) 556-3148

LINE	LENGTH	BEARING
L-1	141.12'	N 85°53'01" W
L-3	42.02'	N 84°35'44" E
L-4	58.39'	N 39°38'36" W

CURVE	LENGTH	RADIUS	CHORD	BEARING
C-1	61.61'	55.00'	58.44'	S 42°54'26" W
C-2	61.51'	55.00'	58.36'	S 21°13'27" E



VICINITY MAP

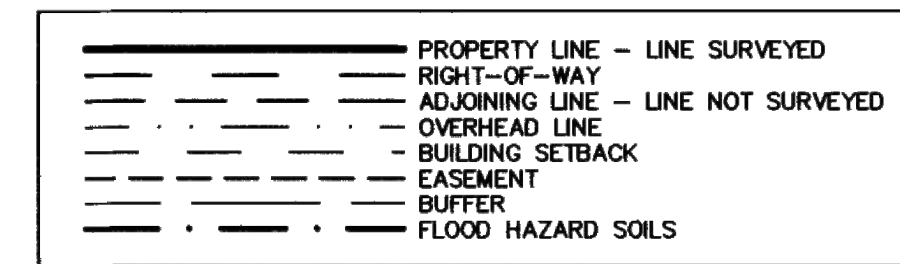
EASEMENT LINE TABLE

LINE	LENGTH	BEARING
EL-1	10.34'	N 73°31'12" E
EL-2	95.34'	N 01°43'54" W
EL-3	53.04'	N 22°31'01" E
EL-4	104.59'	N 01°36'11" W
EL-5	51.82'	N 68°07'32" E
EL-6	63.07'	N 85°13'41" E
EL-7	53.22'	S 01°46'35" E
EL-8	91.85'	N 84°35'44" E
EL-9	51.25'	S 00°17'28" W
EL-10	29.94'	S 68°07'32" W
EL-11	109.42'	S 01°36'11" E
EL-12	53.05'	S 22°31'01" W
EL-13	100.12'	S 01°43'54" E
EL-14	72.24'	S 01°36'11" E
EL-15	84.97'	S 26°13'12" E
EL-16	48.18'	S 01°55'22" W
EL-17	189.56'	S 06°03'46" W
EL-18	107.89'	S 06°03'46" W
EL-19	26.80'	S 83°17'45" E
EL-20	81.19'	S 06°41'32" W
EL-21	178.73'	S 08°27'21" W
EL-22	36.84'	S 03°38'40" W
EL-23	42.45'	S 01°55'22" W
EL-24	60.32'	S 26°13'12" E
EL-25	94.74'	S 01°36'11" E

LEGEND:

- EIP - EXISTING IRON PIPE
- EPK - EXISTING PK NAIL
- NIP - NEW IRON PIPE SET
- R/W - RIGHT OF WAY SET
- CATV - CABLE TV BOX
- EB - ELECTRIC BOX
- TEL - TELEPHONE PEDESTAL
- PP - POWER POLE
- OHL - OVERHEAD LINE
- LP - LIGHT POLE
- WM - WATER METER
- WV - WATER VALVE
- CO - SEWER CLEAN-OUT
- SCP - SECURITY CAMERA POLE

LINE TYPE LEGEND

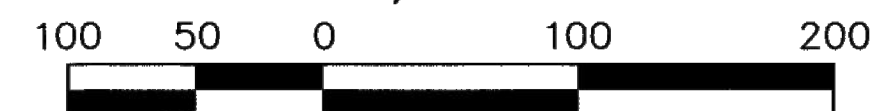


FINAL PLAT FOR NEW STORMWATER BMP MAINTENANCE & ACCESS AMPLE STORAGE LAKE WORTH, LLC

OWNER: AMPLE STORAGE LAKE WORTH, LLC

- REF: D.B. 15706 PAGE 63
- REF: B.M. 2005 PAGE 450
- REF: B.M. 2013 PAGE 683
- REF: B.M. 2015, PAGE 400

ST. MATTEWS TOWNSHIP
WAKE COUNTY, NORTH CAROLINA

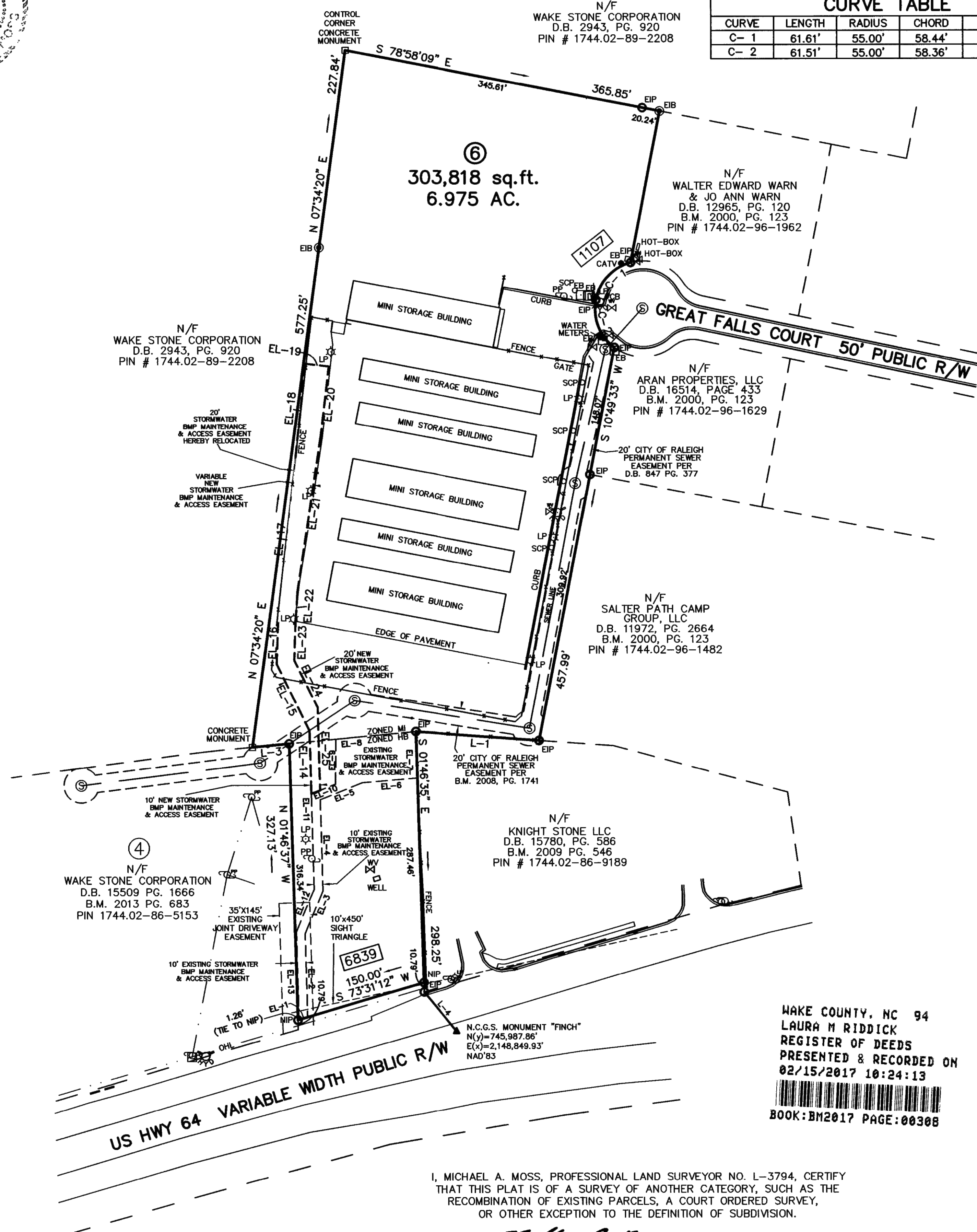


SCALE 1"=100'

- DECEMBER 15, 2014
- REVISED MAY 25, 2016
- REVISED DECEMBER 1, 2016
- REVISED JANUARY 16, 2017
- REVISED JANUARY 17, 2017

ZONED HB & MI
PIN # 1744-86-8623

EX-10-16
ZCP-7-14



WAKE COUNTY, NC 94
LAURA H RIDDICK
REGISTER OF DEEDS
PRESENTED & RECORDED ON
02/15/2017 10:24:13
BOOK: BM2017 PAGE: 00308

I, MICHAEL A. MOSS, PROFESSIONAL LAND SURVEYOR NO. L-3794, CERTIFY THAT THIS PLAT IS OF A SURVEY OF ANOTHER CATEGORY, SUCH AS THE RECOMBINATION OF EXISTING PARCELS, A COURT ORDERED SURVEY, OR OTHER EXCEPTION TO THE DEFINITION OF SUBDIVISION.

Michael A. Moss
MICHAEL A. MOSS, PROFESSIONAL LAND SURVEYOR NO. L-3794

Rivers
ENGINEERS, PLANNERS, SURVEYORS, ARCHITECTS
107 East Second Street
Greenville, NC 27658
(252) 752-4135

REVISIONS:

NO.	DESCRIPTION	DATE	BY

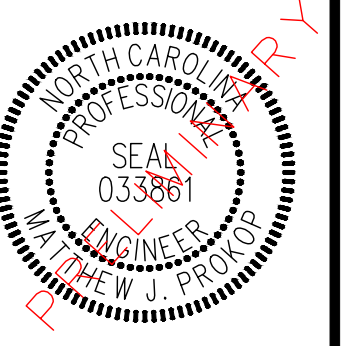
LAMPE MANAGEMENT COMPANY
AMPLE STORAGE - EXPANSION
CITY OF KNIGHTDALE - ST. MATTHEWS TOWNSHIP - WAKE CO. - NORTH CAROLINA
BOUNDARY SURVEY

DATE: AUGUST 11, 2023

DESIGNED BY:	MJP
DRAWN BY:	EDN
CHECKED BY:	JSJ
PROJECT No.:	2023008
DRAWING No.:	W-4073-SK
SCALE:	NOT TO SCALE
SHEET No.:	

C1.11

P:\LANDDEV\LAMPE-AMPLE-STG-KNIGHTDALE-2023008\CADD_DRAWINGS\RESOURCES-DWG-LAYOUT - 8/11/2023 1:57:12 PM - MATI PRINCP



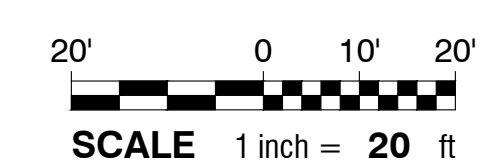
Engineers
 Planners
 Surveyors
 Landscape Architects

REVISIONS:

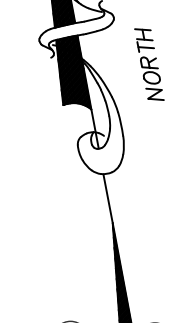
NO.	DESCRIPTION	DATE	BY

LAMPE MANAGEMENT COMPANY
AMPLE STORAGE - EXPANSION
CITY OF KNIGHTDALE - ST. MATTHEWS TWP. - WAKE CO. - NORTH CAROLINA
NATURAL RESOURCES SKETCH PLAN

DATE: AUGUST 11, 2023
 DESIGNED BY: MJP
 DRAWN BY: EDN
 CHECKED BY: JSJ
 PROJECT No. 2023008
 DRAWING No. W-4073-SK
 SCALE: 1" = 20'
 SHEET No.



PROPOSED	EXISTING	
W	WATER MAIN / SERVICE	--- W ---
WM	WATER VALVE	X WM
FH	WATER METER	○ WM
	FIRE HYDRANT	⊕ FH
S	SANITARY SEWER MAIN / SERVICE	--- S ---
CO	CLEAN-OUT	○ CO
FH	FIRE HYDRANT	FH ⊕
*	LIGHT POLE	☼
	TRANSFORMER	⊗
•	BOLLARD	
	UTILITY HAND HOLE	⊞
	HOT BOX	⊞
	CAMERA	⊞
	TELEPHONE PEDESTAL	⊞
	STORM DRAIN MANHOLE (MHSD)	⊞
	SIGN	⊞
- - - -	EXISTING MINOR CONTOURS	- - - - 70 - - - -
---	EXISTING MAJOR CONTOURS	---
---	PROPOSED CONTOURS	---



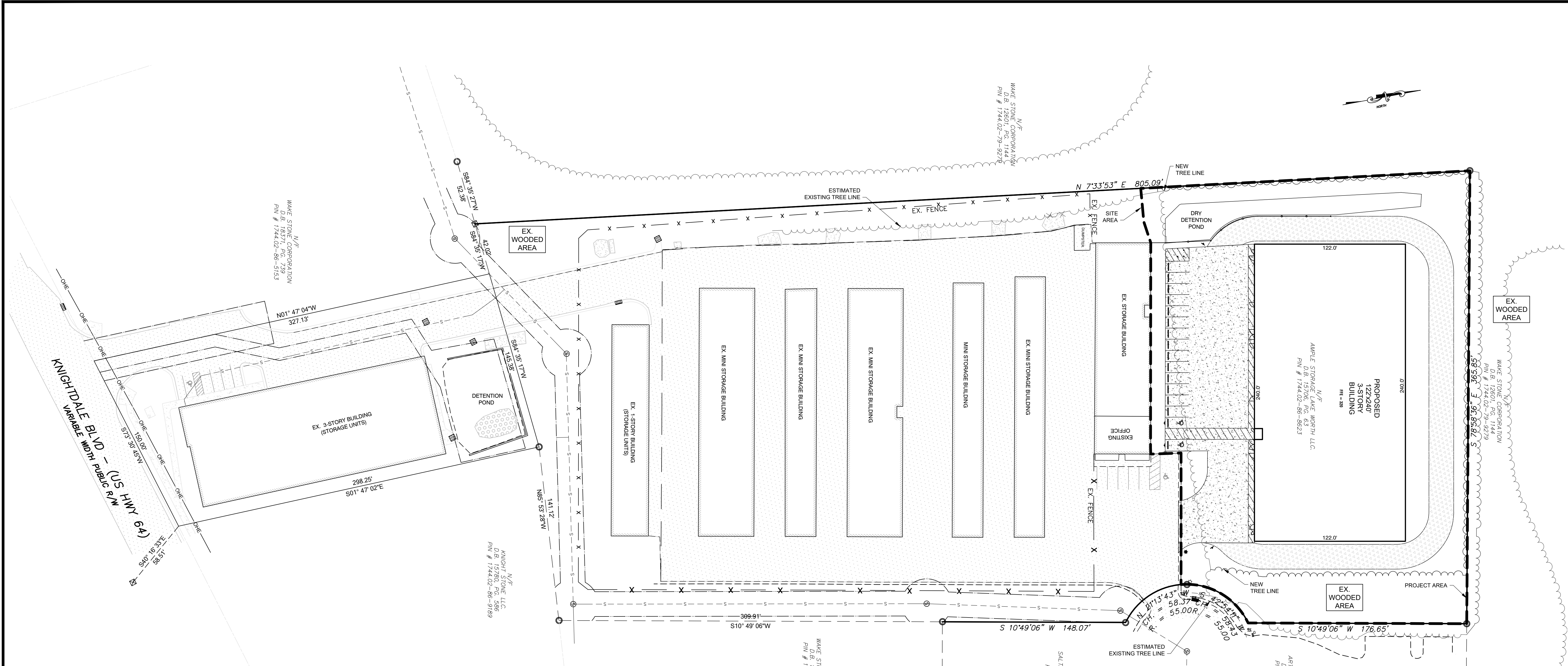
Rivers
NC License # F-0334
& ASSOCIATES, INC.
Since 1918
riversandassociates.com
 Engineers
 Planners
 Surveyors
 Landscape Architects
 107 East Second Street
 Greenville, NC 27658
 (252) 752-4135

NO.	DESCRIPTION	DATE	BY

LAMPE MANAGEMENT COMPANY
AMPLE STORAGE - EXPANSION
CITY OF KNIGHTDALE - ST. MATTHEWS TWP. - WAKE CO. - NORTH CAROLINA
EXISTING CONDITIONS

DATE: **AUGUST 11, 2023**
 DESIGNED BY: **MJP**
 DRAWN BY: **EDN**
 CHECKED BY: **JSJ**
 PROJECT No. **2023008**
 DRAWING No. **W-4073-SK**
 SCALE: **1" = 20'**
 SHEET No. **C1.21**

P:\LANDDEV\AMPE-AMPE_SITG\KIGHTDALE-2023008\CADD_DRAWINGS\GENERAL\DWG - SKETCH PLAN OVERALL.DWG - LAYOUT - 8/11/2023 11:57:09 PM - MATT PRODD



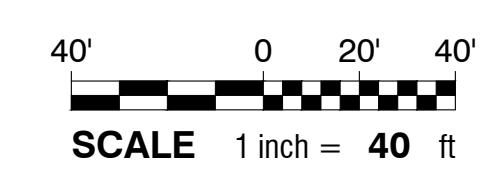
SITE DATA	
SITE ADDRESS PHASE 1:	1107 GREAT FALLS COURT KNIGHTDALE, NORTH CAROLINA 27545
SITE ADDRESS PHASE 2:	6839 KNIGHTDALE BLVD. KNIGHTDALE, NORTH CAROLINA 27545
MUNICIPALITY:	ST. MATTHEWS
PARCEL NO.:	1744868623
DEED REFERENCE:	DB 15706, PG 63
AREA IN SITE:	6.98 ACRES (+/- 303,818 SF)
ZONING / LAND USE CLASSIFICATION:	GENERAL COMMERCIAL - HB & MI
EXISTING/PROPOSED USE:	MINI-WAREHOUSES
PROPOSED BUILDING AREA:	29,280± SF (BUILDING FOOTPRINT)
BUILDING HEIGHT:	30' (3-STORY)
TOTAL NUMBER OF STORAGE UNITS:	
IMPERVIOUS AREA	
EXISTING BUILDINGS FOOTPRINT:	62,611 SF
EXISTING CONCRETE:	4,197 SF
EXISTING ASPHALT PARKING:	87,965 SF
TOTAL EXISTING IMPERVIOUS AREA:	154,773 SF (3.55 ACRES)
EXISTING:	50.9 %
PROPOSED BUILDING FOOTPRINT:	29,280 SF
PROPOSED CONCRETE:	15,752 SF
TOTAL PROPOSED IMPERVIOUS AREA:	45,032 SF (1.03 ACRES)
TOTAL IMPERVIOUS AREA :	199,805 SF (4.59 ACRES)
TOTAL POST DEVELOPMENT:	65.8 %
PARKING SUMMARY	
EXISTING REQUIREMENTS	MAXIMUM - .25 PER 1,000 SF(95,645 SF) = 23.9 SPACES
MINI-STORAGE:	MINIMUM - 1/2 OF MAXIMUM() = 12 SPACES
PROPOSED REQUIREMENTS	MAXIMUM - .25 PER 1,000 SF(87,840 SF) = 22 SPACES
MINI-STORAGE:	MINIMUM - 1/2 OF MAXIMUM() = 11 SPACES
TOTAL PARKING SPACES REQUIRED:	23
TOTAL EXISTING PARKING SPACES:	12
NEW PARKING SPACES REQUIRED:	11
NEW PARKING SPACES PROVIDED:	16
TOTAL PARKING SPACES PROVIDED:	28
EXISTING H/C PARKING SPACES:	2
H/C PARKING SPACES REQUIRED:	1
TOTAL H/C PARKING SPACES PROVIDED:	3

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

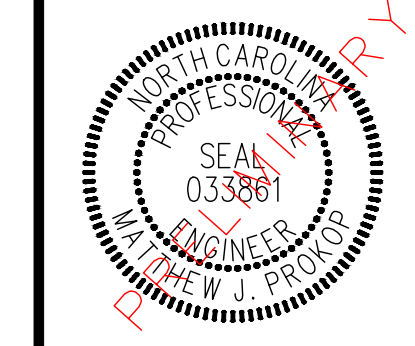
By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Administrator



NC License: F-0334
Rivers
 & ASSOCIATES, INC.
 Since 1918
 PLANNING ENGINEERS
 SURVEYORS
 ARCHITECTS
 107 East Second Street
 Greenville, NC 27658
 (252) 752-4135

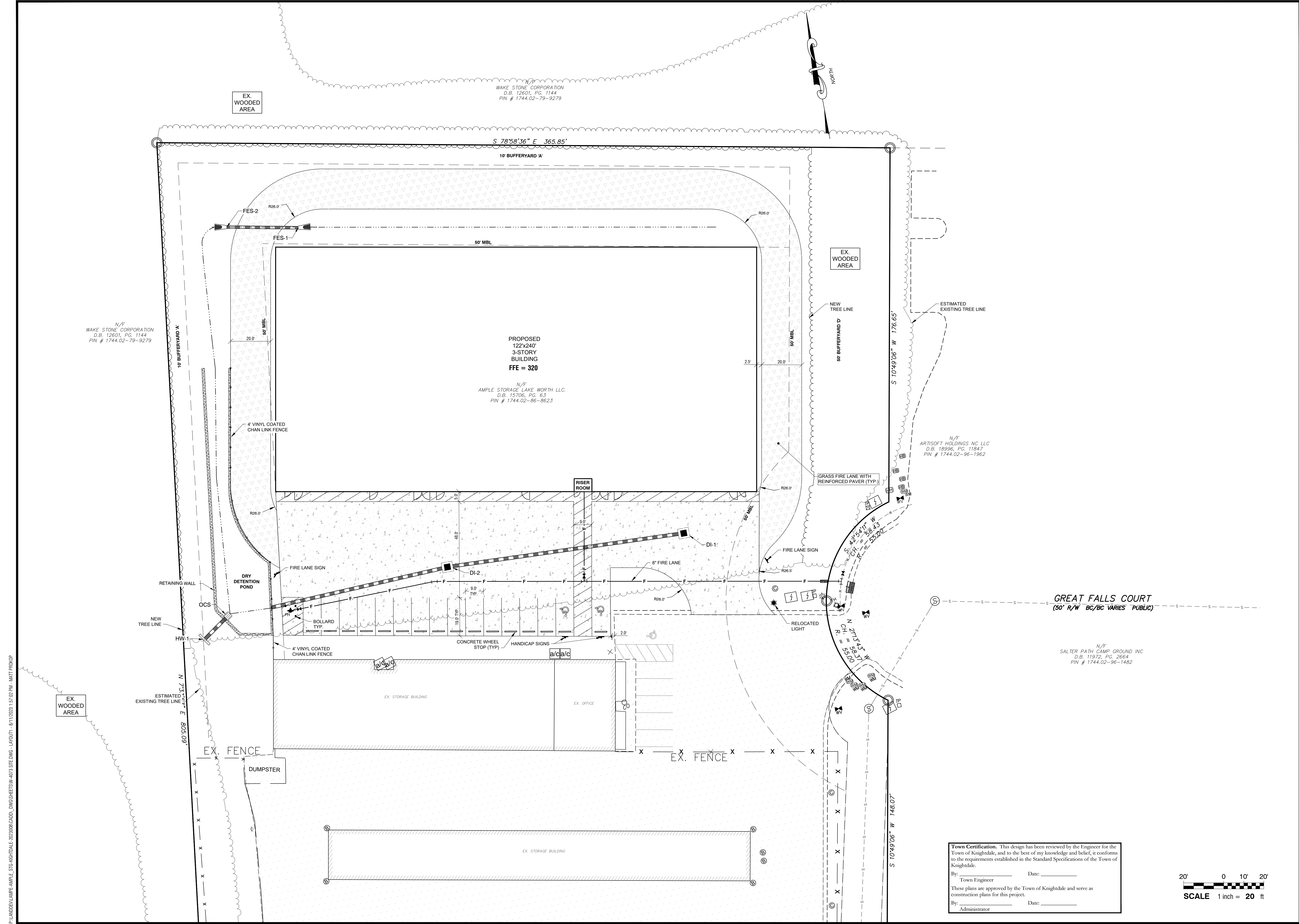


REVISIONS:		
NO.	DESCRIPTION	DATE BY

LAMPE MANAGEMENT COMPANY
AMPLE STORAGE - EXPANSION
 CITY OF KNIGHTDALE - ST. MATTHEWS TOWNSHIP - WAKE CO. - NORTH CAROLINA
SKETCH PLAN OVERALL

DATE: AUGUST 11, 2023
 DESIGNED BY: MJP
 DRAWN BY: EDN
 CHECKED BY: JSJ
 PROJECT No. 2023008
 DRAWING No. W-4073-SK
 SCALE: 1"=40'
 SHEET No.
C2.01

Do Not Use for Construction - PRELIMINARY



P:\LANDDEV\AMPE-AMPE_SITING\KNDL-202308\CADD_DRAWINGS\KNDL-4073\SITING_LAYOUT_18112023_15:02.PLT - MAT.FRX(0/0)

NC License # 0334
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 riversandassociates.com
 107 East Second Street
 Greenville, NC 27658
 (252) 752-4135
 Engineers
 Planners
 Surveyors
 Landscape Architects



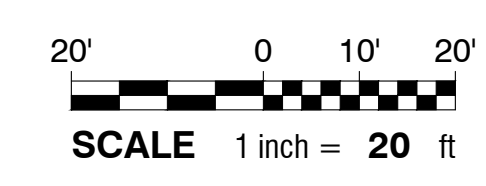
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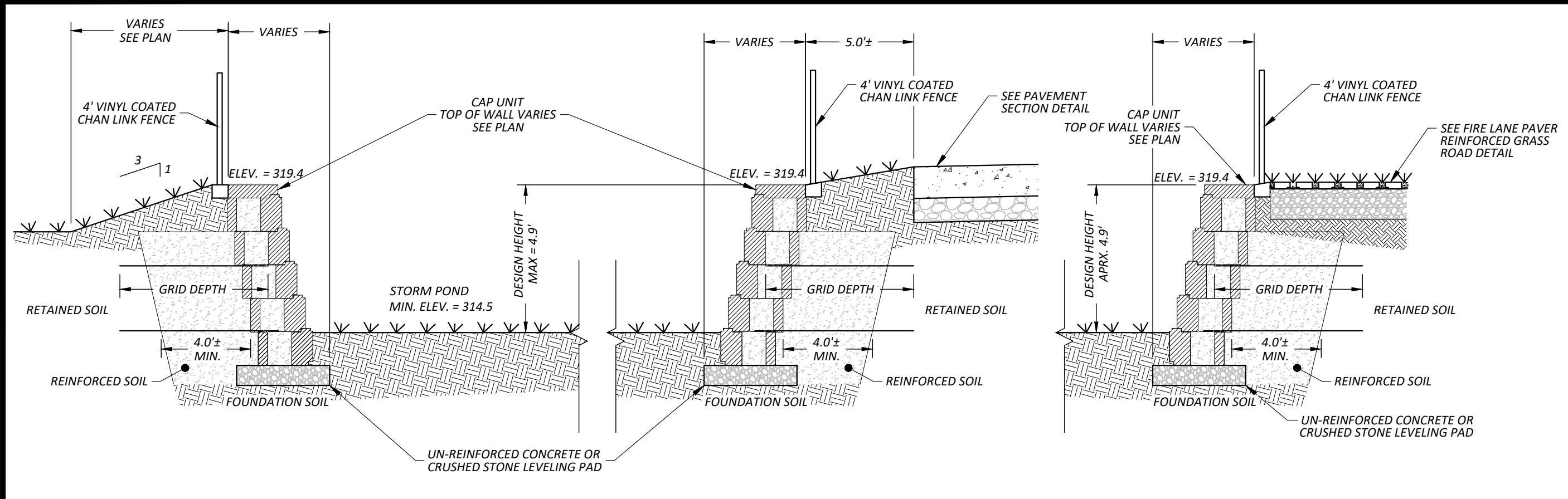
NO.	DESCRIPTION	DATE	BY

LAMPE MANAGEMENT COMPANY
AMPLE STORAGE - EXPANSION
 CITY OF KNIGHTDALE - ST. MATTHEWS TOWNSHIP - WAKE CO. - NORTH CAROLINA
SKETCH PLAN - PROJECT AREA

DATE: AUGUST 11, 2023
 DESIGNED BY: MJJ
 DRAWN BY: EDN
 CHECKED BY: JSJ
 PROJECT No. 2023008
 DRAWING No. W-4073-SK
 SCALE: 1" = 20'
 SHEET No.
C2.10

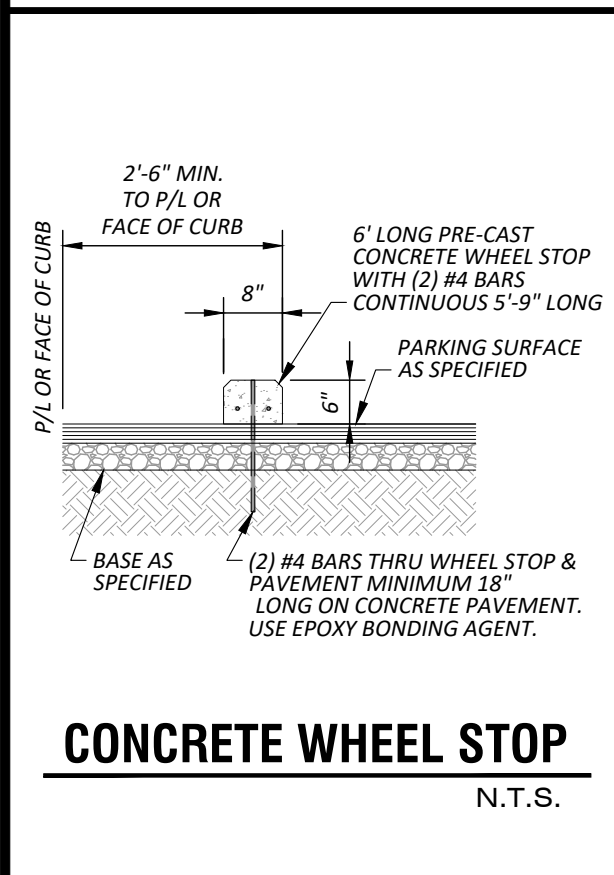
Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.
 By: _____ Date: _____
 Town Engineer
 These plans are approved by the Town of Knightdale and serve as construction plans for this project.
 By: _____ Date: _____
 Administrator



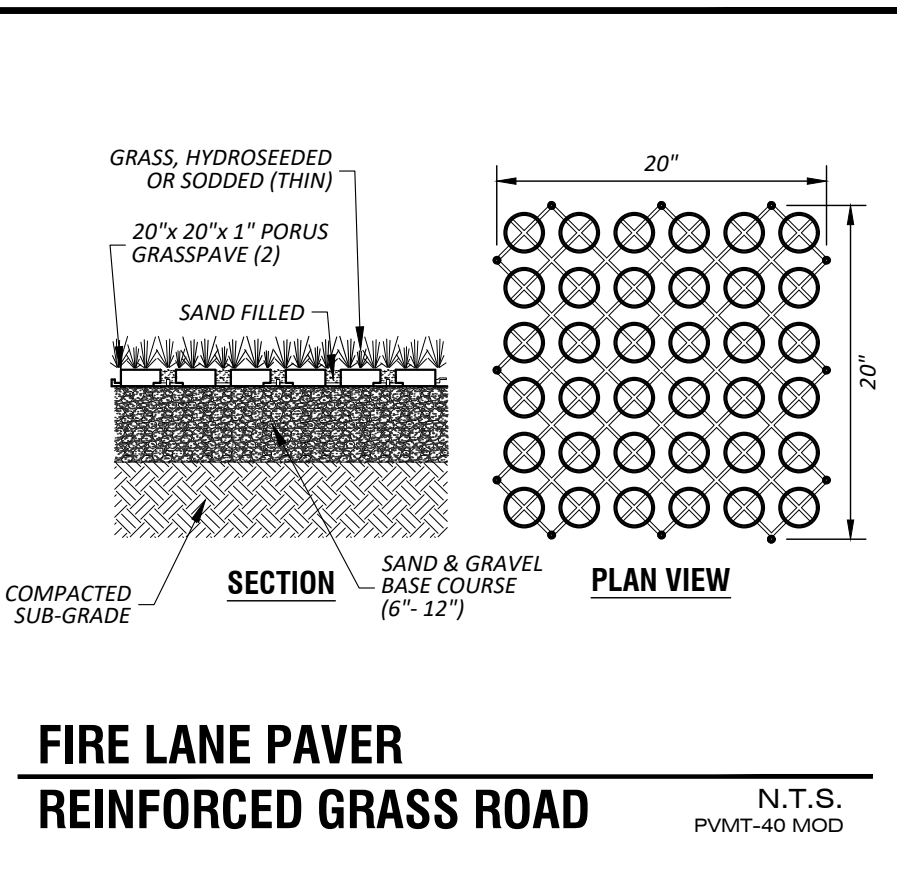


RETAINING WALL SECTIONS

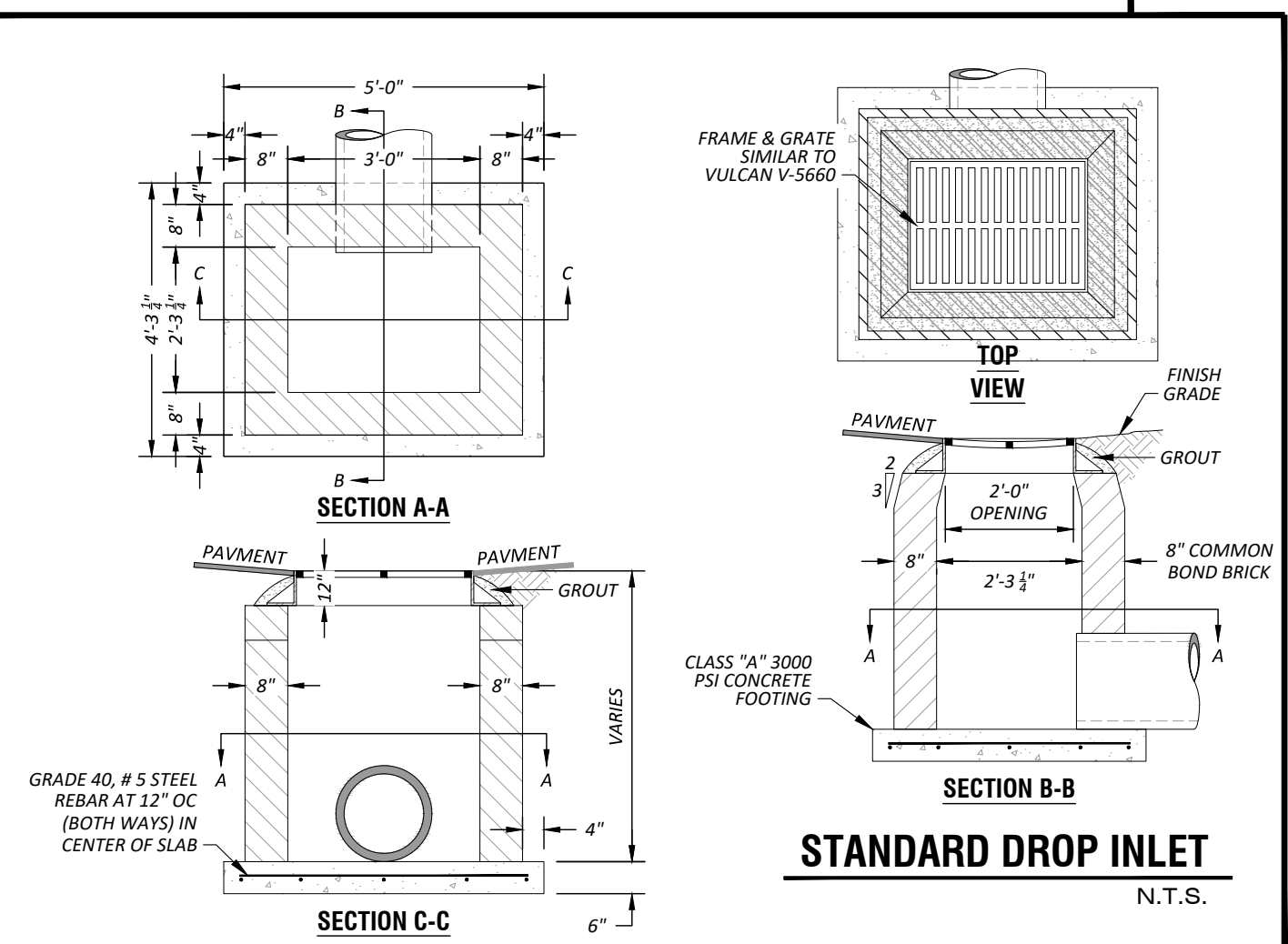
N.T.S.
RWAL-11 MOD



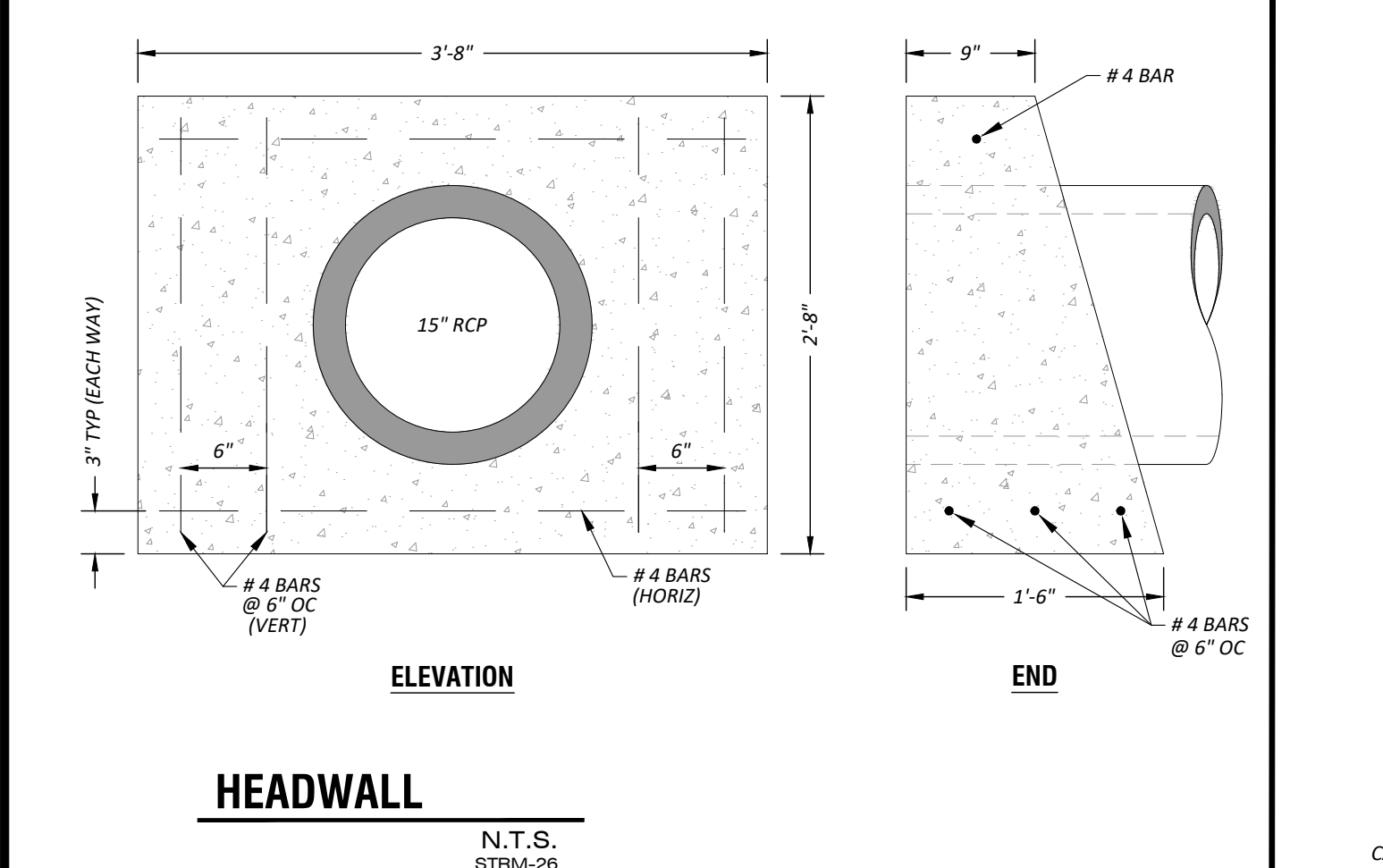
CONCRETE WHEEL STOP
N.T.S.



FIRE LANE PAVER REINFORCED GRASS ROAD
N.T.S.
PVMT-40 MOD



STANDARD DROP INLET
N.T.S.



HEADWALL
N.T.S.
STRM-26

MAINTENANCE

INSPECTION ACTIVITIES - (FREQUENCY)

WHERE MAINTENANCE REQUIRES DOWATERING, DO SO BY MEANS OF DOWATERING PUMP.

AFTER CONSTRUCTION

INSPECT AFTER SEVERAL STORM EVENTS FOR BANK STABILITY, VEGETATION GROWTH, DRAINAGE SYSTEM FUNCTIONING, AND STRUCTURAL DAMAGE.

SEMI-ANNUAL INSPECTION

INSPECT FOR INVASIVE VEGETATION, DIFFERENTIAL SETTLEMENT, CRACKING, EROSION, LEAKAGE, OR TREE GROWTH ON THE EMBANKMENT, THE CONDITION OF THE RIPRAP IN THE INLET, OUTLET, AND PILOT CHANNELS, SEDIMENT ACCUMULATION IN THE BASIN, CLOGGING OF OUTLET, AND THE VEGOR AND DENSITY OF THE VEGETATION ON THE BASIN SIDE SLOPES AND FLOOR. CORRECT OBSERVED PROBLEMS AS NECESSARY.

NOTE: SIGNS OF HYDROCARBON BULDDIP SUCH AS FLOATING OIL ON WATER SURFACE. - INSPECT FOR DAMAGE TO THE EMBANKMENT AND INLET/OUTLET STRUCTURES. REPAIR AS NECESSARY. - MONITOR FOR SEDIMENT ACCUMULATION IN THE FACILITY AND FOREBAY. EXAMINE INLET AND OUTLET DEVICES TO ENSURE THEY ARE FREE OF DEBRIS AND ARE OPERATIONAL.

MAINTENANCE ACTIVITIES - (FREQUENCY)

ONE TIME

- REPLACE WET POND VEGETATION TO MAINTAIN AT LEAST 50% OF SURFACE AREA COVERAGE IN WET POND PLANTS AFTER THE SECOND GROWING SEASON.

AS NEEDED

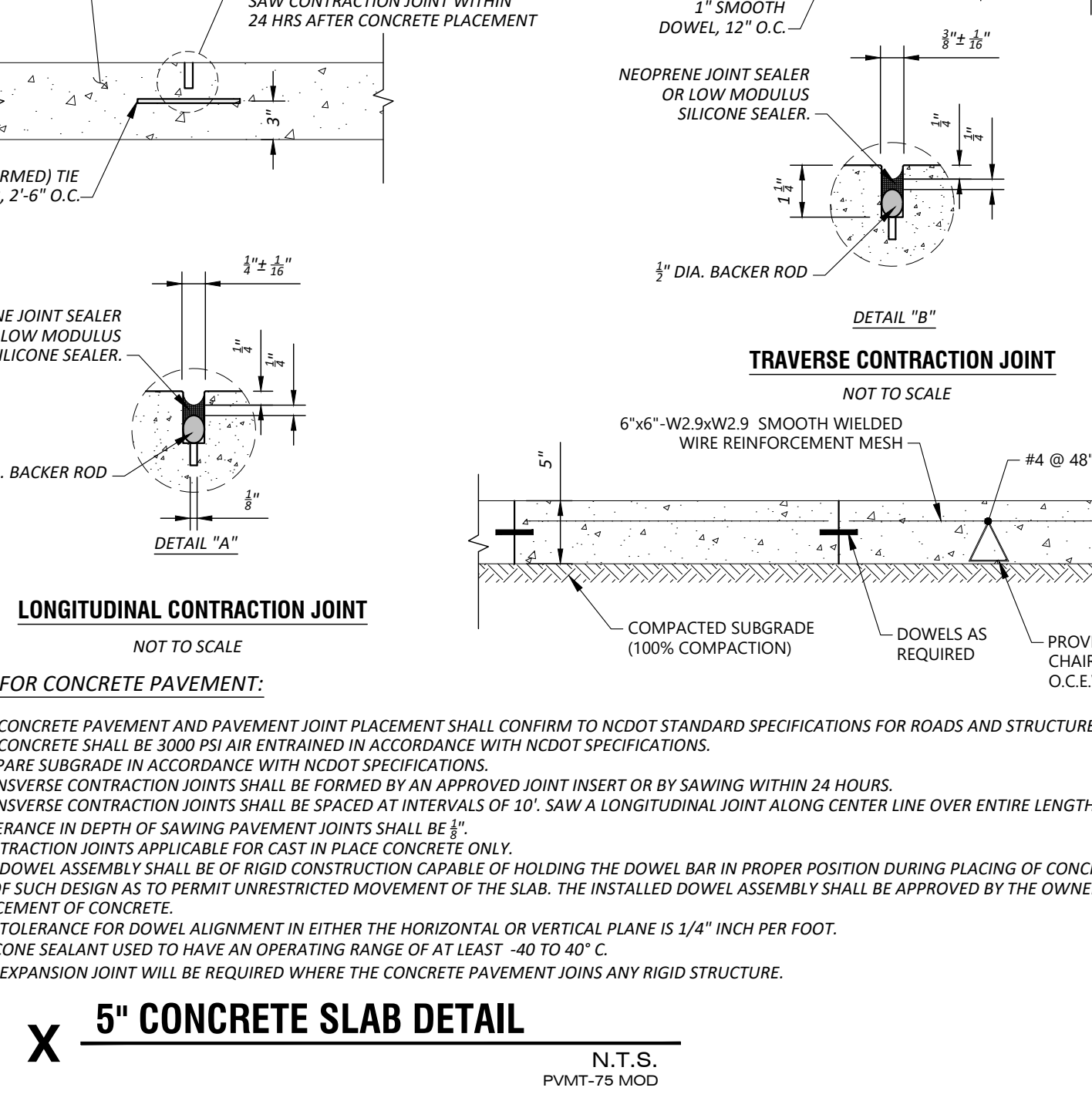
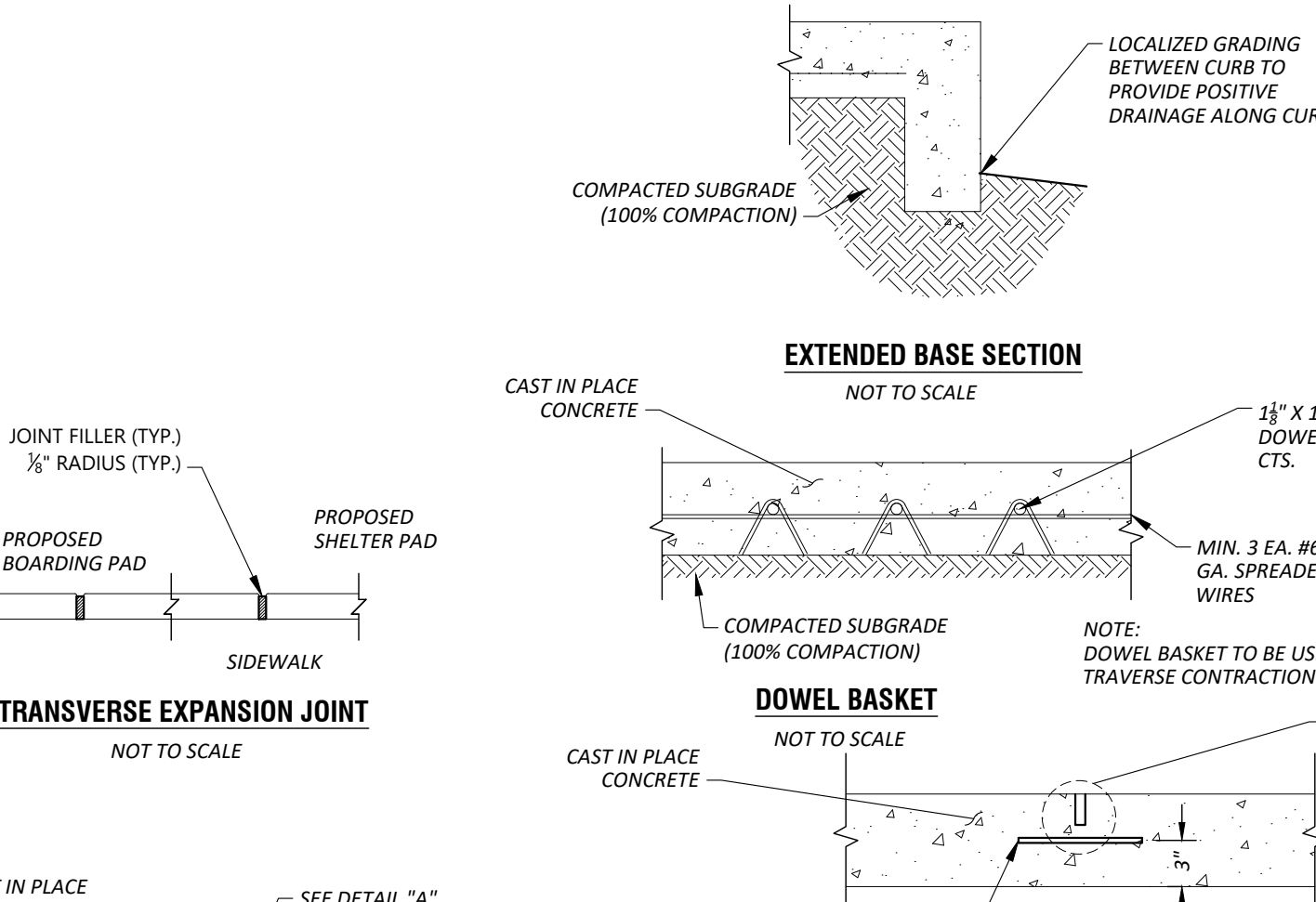
- REPAIR UNDERCUT AREAS, EROSION TO BANKS, AND BOTTOM AS REQUIRED, WHERE PERMITTED BY THE DEPARTMENT OF FISH AND GAME OR OTHER AGENCY REGULATIONS. STOCK CONSTRUCTED WET PONDS REGULARLY WITH MOSQUITO FISH (GAMBUSIA SPP.) TO ENHANCE NATURAL MOSQUITO AND MIDGE CONTROL.

3 TO 4 TIMES PER YEAR

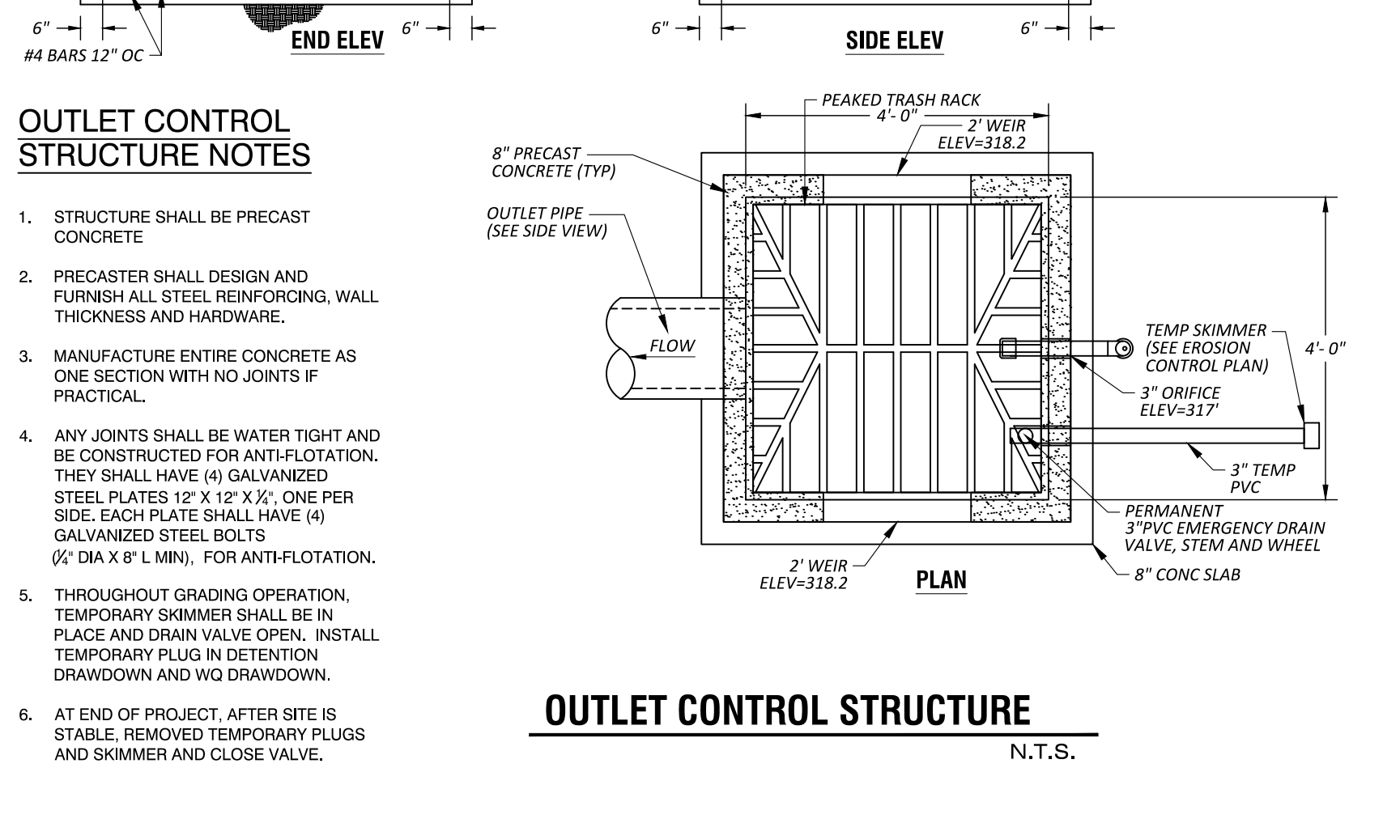
- CLEAN AND REMOVE DEBRIS FROM INLET AND OUTLET STRUCTURES.
- MOW SIDE SLOPES AND REMOVE GRASS CLIPPINGS, REMOVE LITTER AND DEBRIS FROM BANKS, BASIN BOTTOM, TRASH RACKS, OUTLET STRUCTURES, AND VALVES AS REQUIRED.

ANNUAL (IF NEEDED)

- SUPPLEMENT WET POND PLANTS IF A SIGNIFICANT PORTION HAVE NOT ESTABLISHED (AT LEAST 50% OF THE SURFACE AREA).
- REMOVE NUISANCE PLANT SPECIES.
- CLEAN FOREBAY TO AVOID ACCUMULATION IN MAIN WET POND AREA TO MINIMIZE WHEN THE MAIN WET POND AREA NEEDS TO BE CLEARED.
- HARVEST PLANT SPECIES IF VEGETATION BECOMES TOO THICK CAUSING FLOW BACKUP AND FLOODING. MORE FREQUENT PLANT HARVESTING MAY BE REQUIRED BY LOCAL VECTOR CONTROL AGENCIES.
- FERTILIZE NEW VEGETATION ONE TIME ONLY. THE OWNER SHALL NOT FERTILIZE VEGETATION AFTER THE INITIAL OCCURRENCE.
- MONITOR SEDIMENT ACCUMULATIONS, AND REMOVE SEDIMENT WHEN THE ACCUMULATED SEDIMENT VOLUME EXCEEDS 10-20% OF THE BASIN VOLUME. PLANTS ARE "CHOKED" WITH SEDIMENT, OR THE WET POND BECOMES EUTROPHIC, IT IS SUGGESTED THAT THE MAIN AREA BE CLEARED ONE HALF AT A TIME WITH AT LEAST ONE GROWING SEASON IN BETWEEN CLEANINGS. THIS WILL HELP TO PRESERVE THE VEGETATION AND ENABLE THE WET POND TO RECOVER MORE QUICKLY FROM THE CLEANING.

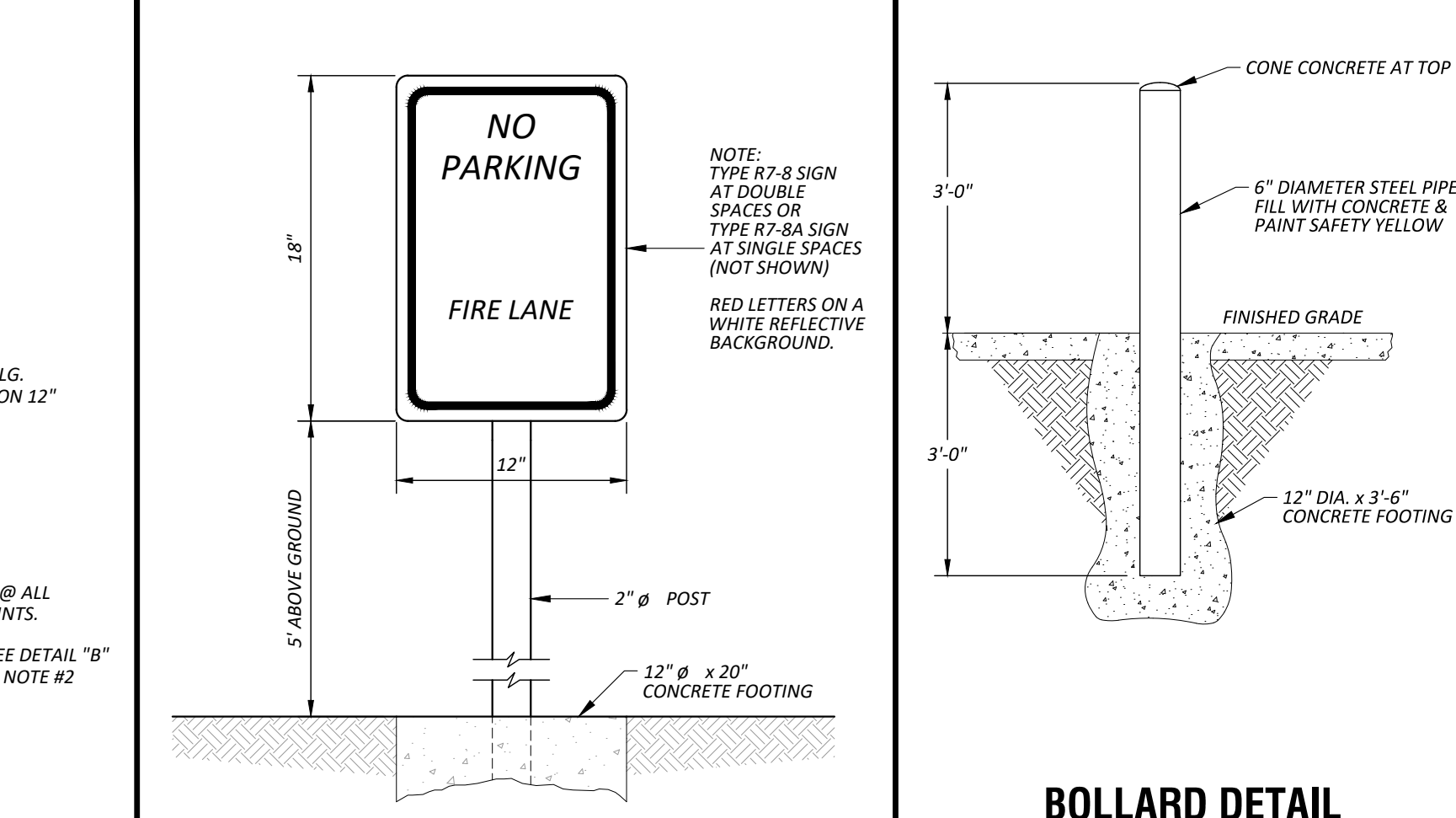


5" CONCRETE SLAB DETAIL
N.T.S.
PVMT-75 MOD



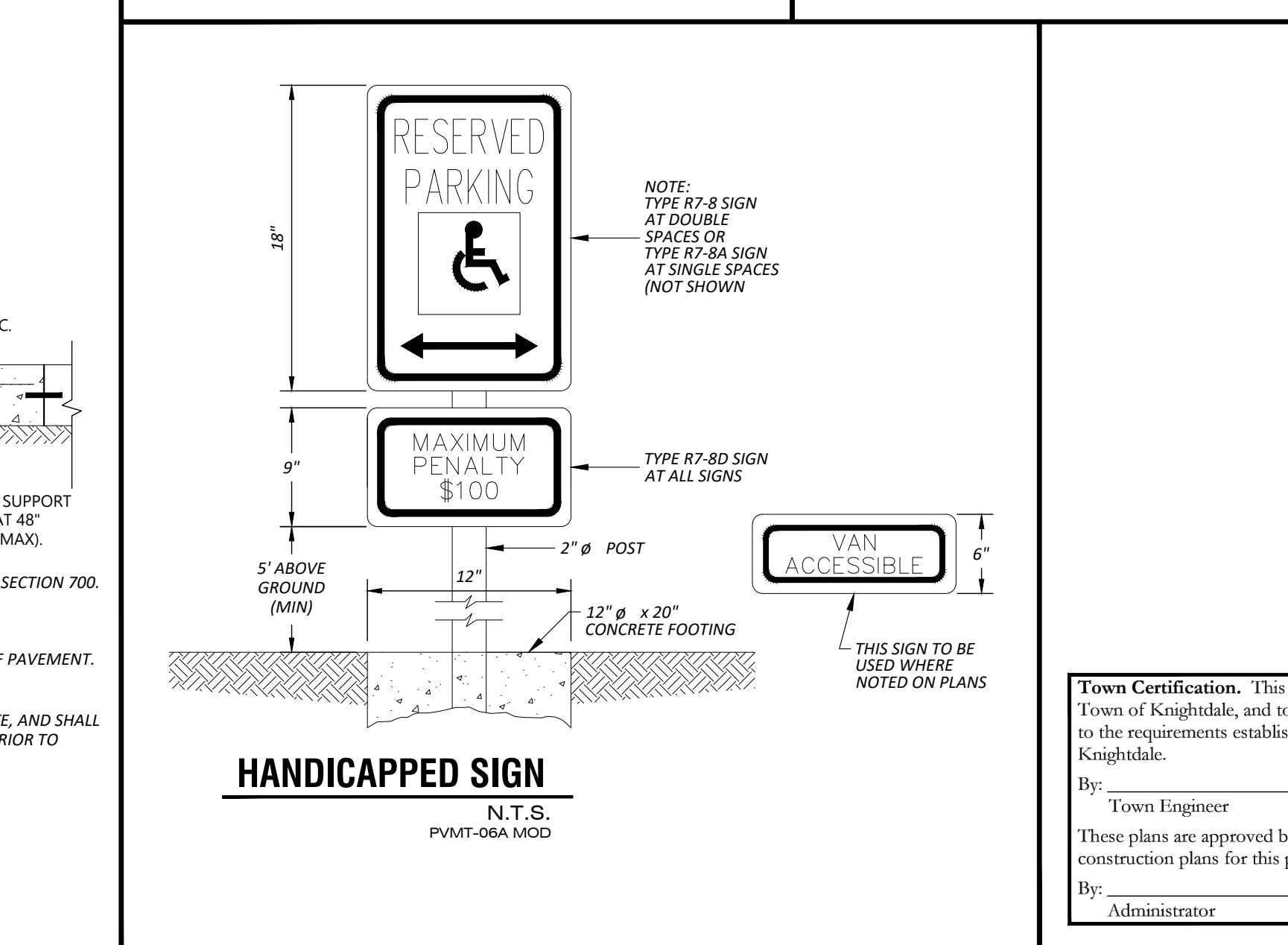
OUTLET CONTROL STRUCTURE
N.T.S.

- OUTLET CONTROL STRUCTURE NOTES**
- STRUCTURE SHALL BE PRECAST CONCRETE.
 - PRECASTER SHALL DESIGN AND FURNISH ALL STEEL REINFORCING, WALL THICKNESS AND HARDWARE.
 - MANUFACTURE ENTIRE CONCRETE AS ONE SECTION WITH NO JOINTS IF PRACTICAL.
 - ANY JOINTS SHALL BE WATER TIGHT AND BE CONSTRUCTED FOR ANTI-FLOTATION. THEY SHALL HAVE (4) GALVANIZED STEEL PLATES 12" X 12" X 1/2", ONE PER SIDE. EACH PLATE SHALL HAVE (4) GALVANIZED STEEL BOLTS (1/2" DIA X 8" L MIN), FOR ANTI-FLOTATION.
 - THROUGHOUT GRADING OPERATION, TEMPORARY SKIMMER SHALL BE IN PLACE AND DRAIN VALVE OPEN. INSTALL TEMPORARY PLUGS IN DETENTION DRAWDOWN AND WQ DRAWDOWN.
 - AT END OF PROJECT, AFTER SITE IS STABLE, REMOVED TEMPORARY PLUGS AND SKIMMER AND CLOSE VALVE.

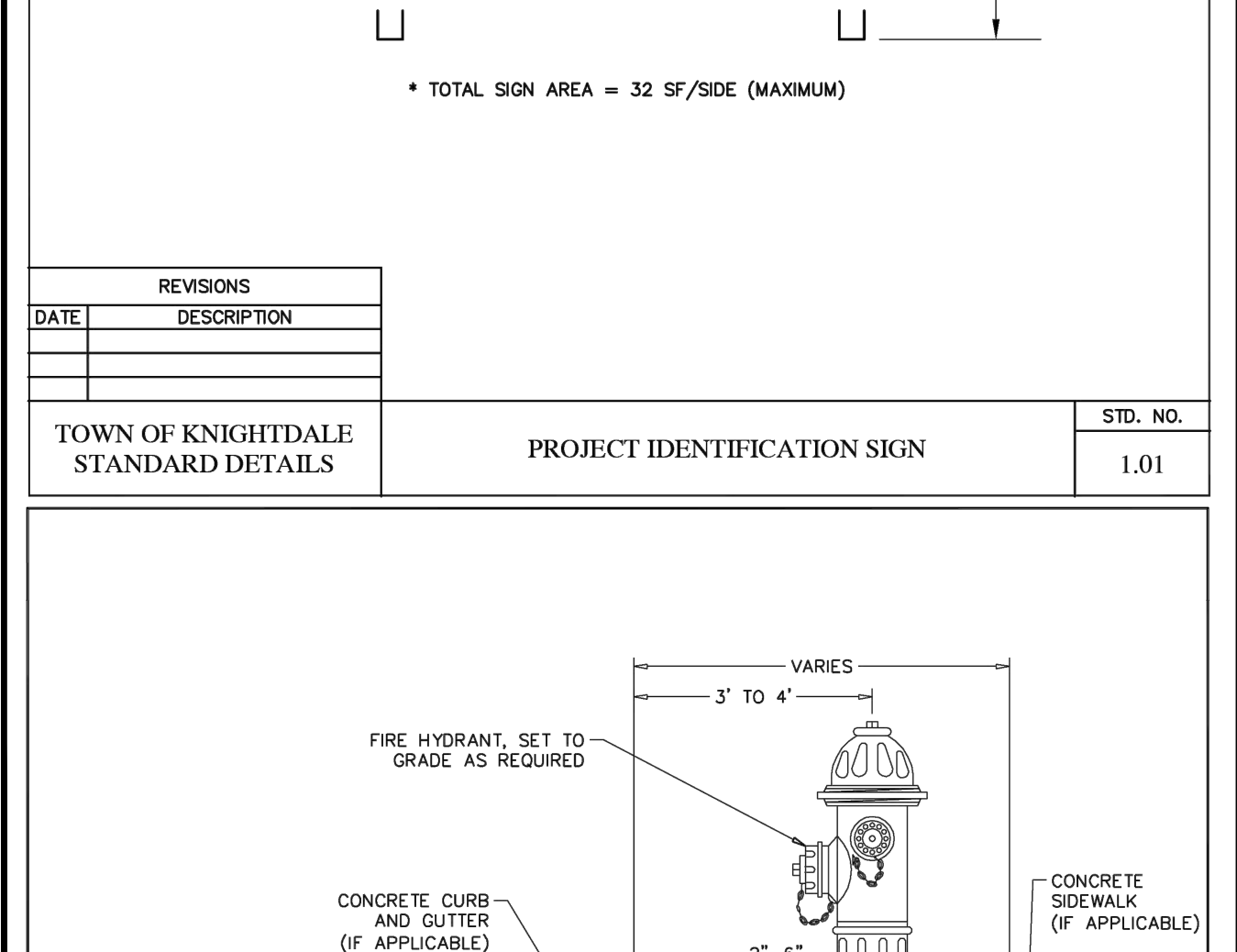


FIRE LANE SIGN
N.T.S.
PVMT-04A MOD

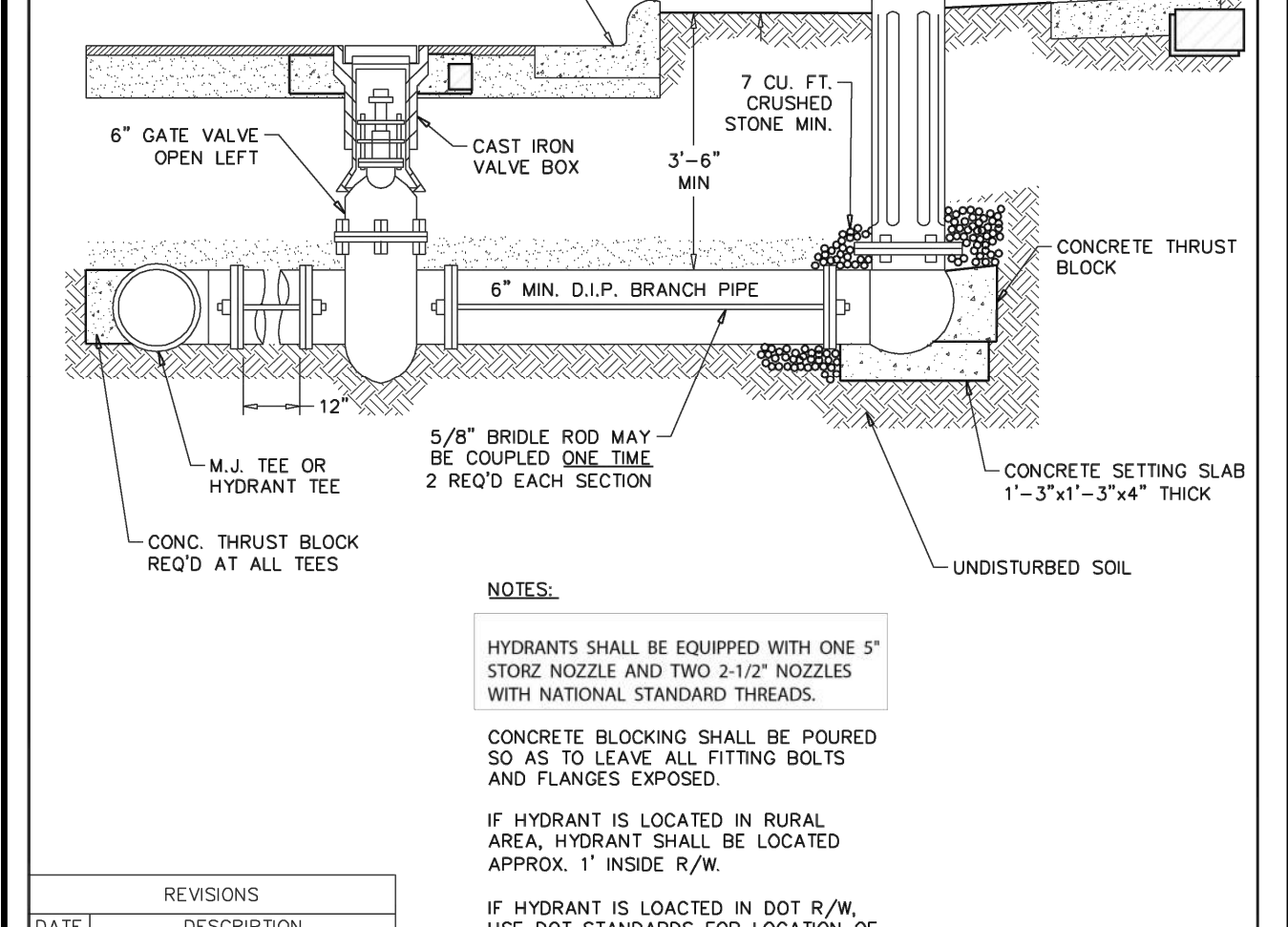
BOLLARD DETAIL CONCRETE
N.T.S.
BLDG-13D MOD



HANDICAPPED SIGN
N.T.S.
PVMT-06A MOD



TOWN OF KNIGHTDALE STANDARD DETAILS
PROJECT IDENTIFICATION SIGN
STD. NO. 1.01



TOWN OF KNIGHTDALE STANDARD DETAILS
STANDARD HYDRANT INSTALLATION - URBAN
STD. NO. 6.02

REVISIONS

DATE	DESCRIPTION	STD. NO.
7/08	CORRECTED NOZZLE SIZE & TYPE	6.02

NOTES:

HYDRANTS SHALL BE EQUIPPED WITH ONE 5" STORE NOZZLE AND TWO 2-1/2" NOZZLES WITH NATIONAL STANDARD THREADS.

CONCRETE BLOCKING SHALL BE POURED SO AS TO LEAVE ALL FITTING BOLTS AND FLANGES EXPOSED.

IF HYDRANT IS LOCATED IN RURAL AREA, HYDRANT SHALL BE LOCATED APPROX. 1' INSIDE R/W.

IF HYDRANT IS LOCATED IN DOT R/W, USE DOT STANDARDS FOR LOCATION OF HYDRANT.

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

By: _____ Date: _____
Administrator

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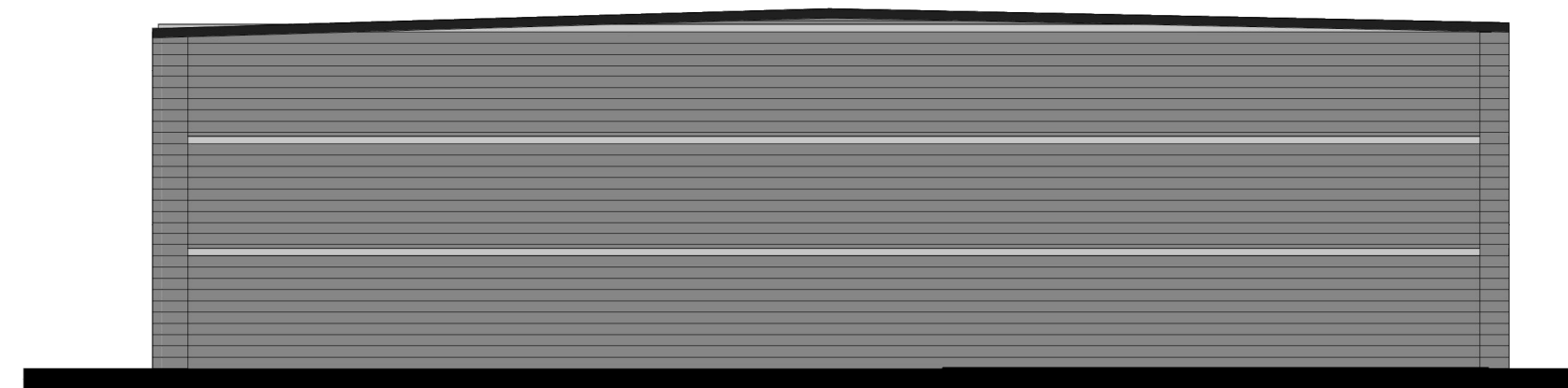
REVISIONS:

NO.	DESCRIPTION	DATE	BY

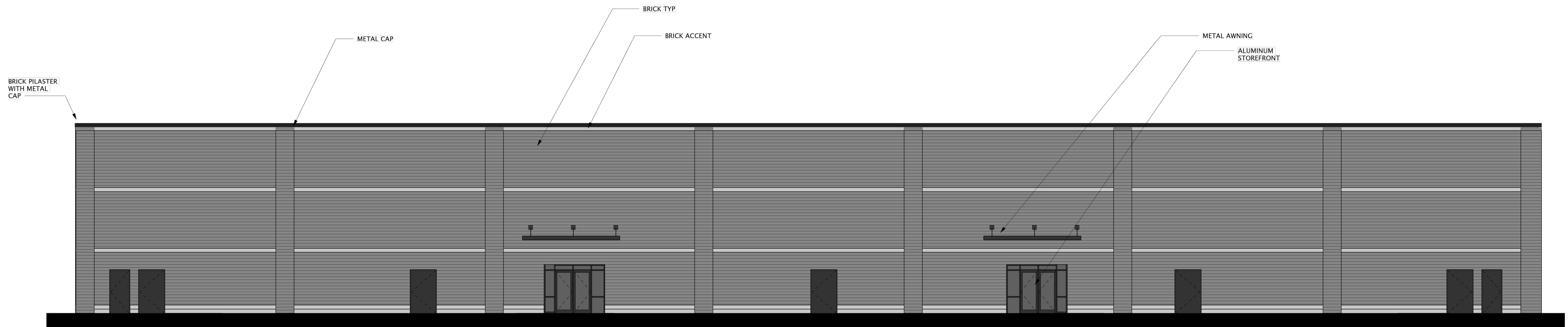
LAMPE MANAGEMENT COMPANY

AMPLE STORAGE - EXPANSION
CITY OF KNIGHTDALE - ST. MATTHEWS TOWNSHIP - WAKE CO. - NORTH CAROLINA

DATE: AUGUST 11, 2023
DESIGNED BY: MJP
DRAWN BY: EDN
CHECKED BY: JSJ
PROJECT No. 2023008
DRAWING No. W-4073-SK
SCALE: 1" = 20'
SHEET No. C2.51



2 SIDE ELEVATION FACING CUL-DE-SAC
A1



1 FRONT ELEVATION
1/8" = 1'-0"

Ample Storage Knightdale

A1 BUILDING ELEVATIONS

Scale As indicated

RND Project No. 2118

Date 6.29.23

N/F
WAKE STONE CORPORATION
D.B. 12601, PG. 1144
PIN # 1744.02-79-9279

N/F
WAKE STONE CORPORATION
D.B. 12601, PG. 1144
PIN # 1744.02-79-9279

PROPOSED
122x240 3-STORY
BUILDING

N/F
AMPLE STORAGE LAKE WORTH LLC.
D.B. 15706, PG. 63
PIN # 1744.02-86-8623

N/F
ARTISOFT HOLDINGS NC LLC
D.B. 18996, PG. 11847
PIN # 1744.02-96-1962

N/F
SALTER PATH CAMP GROUND INC
D.B. 11972, PG. 2064
PIN # 1744.02-96-1482

S 78°58'36" E 365.85'

S 10°49'06" W 176.65'

N 73°53'53" E 805.09'

S 10°49'06" W 146.07'

GREAT FALLS COURT
(50' R/W BC/BC VARIES PUBLIC)

WATER AND SEWER PERMITS IF APPLICABLE

THE CITY OF RALEIGH CONSENTS TO THE CONNECTION AND EXTENSION THE CITY'S PUBLIC SEWER SYSTEM AS SHOWN ON THIS PLAN. THE MATERIAL AND CONSTRUCTION METHODS USED FOR THIS PROJECT SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE CITY'S PUBLIC UTILITIES HANDBOOK. CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT PERMIT # _____

THE CITY OF RALEIGH CONSENTS TO THE CONNECTION AND EXTENSION OF THE CITY'S PUBLIC WATER SYSTEM AS SHOWN ON THIS PLAN. THE MATERIAL AND CONSTRUCTION METHODS USED FOR THIS PROJECT SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE CITY'S PUBLIC UTILITIES HANDBOOK. CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT PERMIT # _____

THE CITY OF RALEIGH CONSENTS TO THE CONNECTION AND EXTENSION OF THE CITY'S PUBLIC SEWER SYSTEM AND EXTENSION OF THE PRIVATE SEWER COLLECTION SYSTEM AS SHOWN ON THIS PLAN. THE MATERIAL AND CONSTRUCTION METHODS USED FOR THIS PROJECT SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE CITY'S PUBLIC UTILITIES HANDBOOK. CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT PERMIT # _____

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

ELECTRONIC APPROVAL: THIS APPROVAL'S BEING ISSUED ELECTRONICALLY. THIS APPROVAL IS VALID ONLY UPON THE SIGNATURE OF A CITY OF RALEIGH REVIEW OFFICER BELOW. THE CITY WILL RETAIN A COPY OF THE APPROVED PLANS. ANY WORK AUTHORIZED BY THIS APPROVAL MUST PROCEED IN ACCORDANCE WITH THE PLANS KEPT ON FILE WITH THE CITY. THIS ELECTRONIC APPROVAL MAY NOT BE EDITED ONCE ISSUED. ANY MODIFICATION TO THIS APPROVAL ONCE ISSUED WILL INVALIDATE THIS APPROVAL.

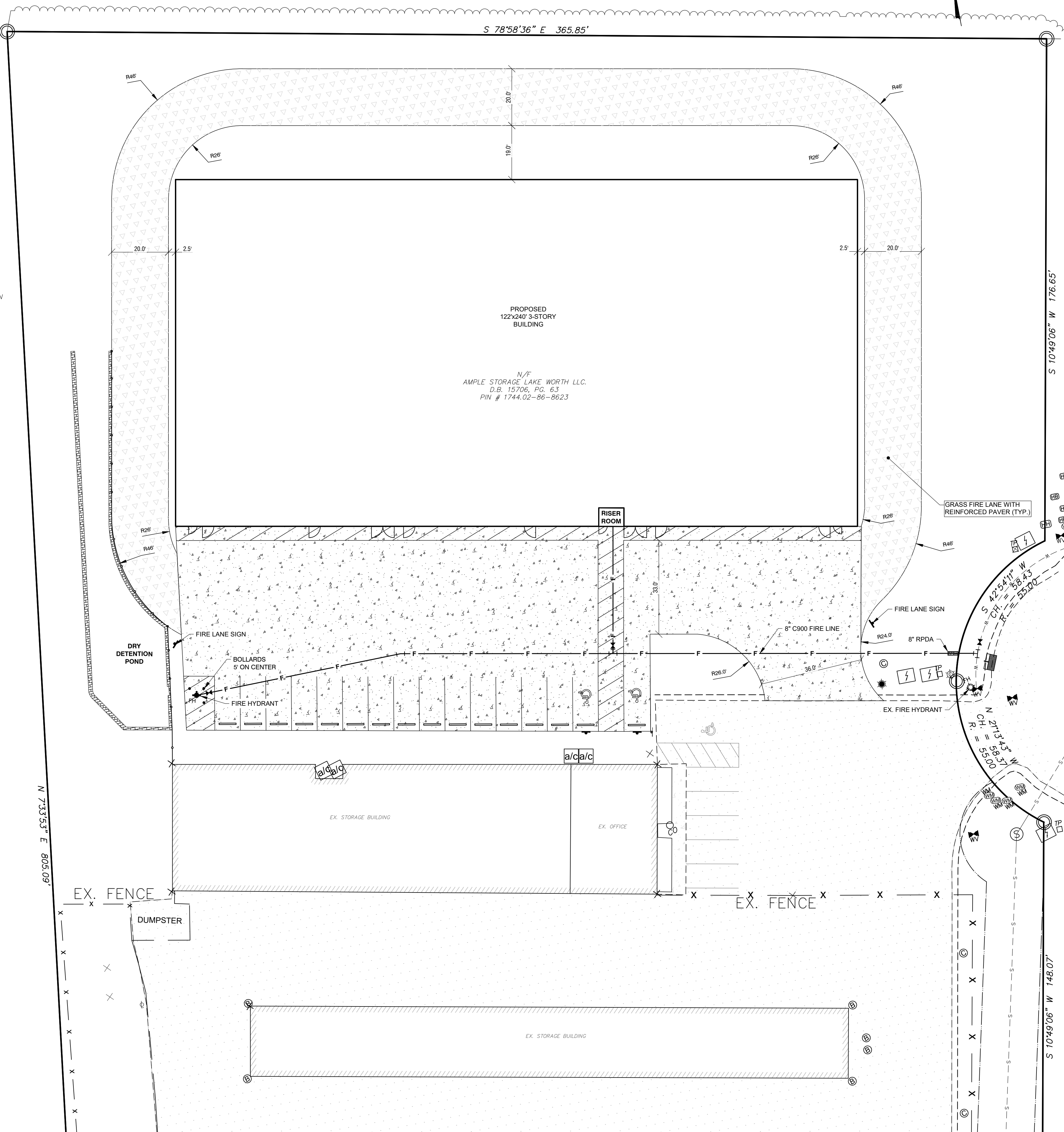
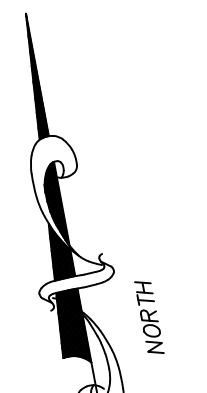
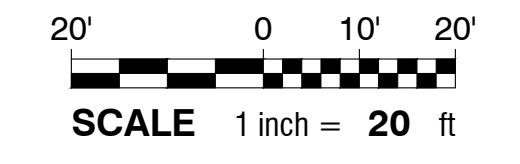
RALEIGH WATER REVIEW OFFICER _____

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Administrator



P:\LANDDEV\LAKE-AMPLE-STG-NC\KNTDLE-2023008\CADD_DRAWINGS\GEN-4073 UTILS.DWG - LAYOUT1 - 8/11/2023 11:15:44 AM - HANT PRO/OP

NC License # 0334

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Greenville, NC 27658
(252) 752-4135

Engineers
Planners
Surveyors
Landscape Architects



REVISIONS:		
NO.	DESCRIPTION	DATE BY

LAMPE MANAGEMENT COMPANY

AMPLE STORAGE - EXPANSION

CITY OF KNIGHTDALE - ST. MATTHEWS TOWNSHIP - WAKE CO. - NORTH CAROLINA

FIRE PREVENTION PLAN

DATE: AUGUST 11, 2023

DESIGNED BY: MJP

DRAWN BY: EDN

CHECKED BY: JSJ

PROJECT No. 2023008

DRAWING No. W-4073-SK

SCALE: 1" = 20'

SHEET No.

C3.01

Do Not Use for Construction - PRELIMINARY



EROSION CONTROL LEGEND

- LIMITS OF DISTURBANCE — LOD — LOD —
- SILT FENCE — SF —
- DIVERSION DITCH — TD —
- WATTLE —
- SILT FENCE OUTLET —
- TEMPORARY GRAVEL CONSTRUCTION EXIT —
- CONCRETE WASHOUT —
- TEMPORARY STOCKPILE —
- ROCK INLET SEDIMENT TRAP —
- EXISTING MINOR CONTOURS — 70 —
- EXISTING MAJOR CONTOURS — 70 —
- PROPOSED CONTOURS — 70 —

CONSTRUCTION SCHEDULE

- PHASE 2
- INSTALL REMAINING STORM SEWER AND PROTECT INLETS WITH GRAVEL INLET CONTROLS, ROCK CHECK DAMS OR OTHER APPROVED MEASURES AS SHOWN ON PLAN. INSTALL END OF DAY MEASURES.
 - FINAL GRADE BUILDING PAD AND PAVEMENT AREA.
 - INSTALL DROP INLET GRATES. REPLACE ROCK INLET PROTECTION WITH SEDIMENT BAGS.
 - PROVIDE A GROUND COVER (TEMPORARY OR PERMANENT) ON EXPOSED SLOPES 14 CALENDAR DAYS FOLLOWING COMPLETION OF ANY PHASE OF GRADING FOR SLOPES 3:1 OR FLATTER INCLUDING ALL OTHER SLOPES 4:1 OR FLATTER. PROVIDE A GROUND COVER (TEMPORARY OR PERMANENT) ON EXPOSED SLOPES WITHIN 7 CALENDAR DAYS FOLLOWING COMPLETION OF ANY PHASE OF GRADING FOR SLOPES 3:1 OR STEEPER, INCLUDING ALL PERMANENT DIKES, SWALES, DITCHES, SLOPES AND DISTURBANCES WITHIN HIGH QUALITY WATER (HQWQ) ZONES.
 - CONSTRUCT PERMANENT SCM. INSTALL RETAINING WALL FINAL GRADE ADJACENT FIRE LANE.
 - PERMANENT GROUND COVER SHALL BE PROVIDED FOR ALL DISTURBED AREAS WITHIN THE TIMEFRAME AS SPECIFIED IN THE STABILIZATION TIMEFRAME TABLE (SEE TABLE IN PLANS)
 - DEWATERING OF ANY TRENCHES IS TO BE DONE THROUGH A SILT BAG.
 - ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES MAY BE REQUIRED BY THE STATE, OWNER OR TOWN OF KNIGHTDALE IF DEEMED NECESSARY.
 - FINE GRADE DISTURBED AREAS AND INSTALL PERMANENT VEGETATION.
 - ONCE 90% STABILIZATION HAS BEEN ACHIEVED, REMOVE ALL TEMPORARY MEASURES.
 - MAINTAIN PERMANENT VEGETATION BY TOP DRESSING WITH 700 LBS PER ACRE OF FERTILIZER EVERY 6 MONTHS UNTIL THE COMPLETION OF THE PROJECT.
 - WITHIN 6" OF FINAL GRADE, RE-DISTRIBUTE 6" OF TOP SOIL.
 - FINE GRADE PERMANENTLY SEED AND MULCH ALL LANDSCAPED AREAS.
 - REMOVE ALL REMAINING TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES UPON COMPLETION AND STABILIZATION OF PROJECT.

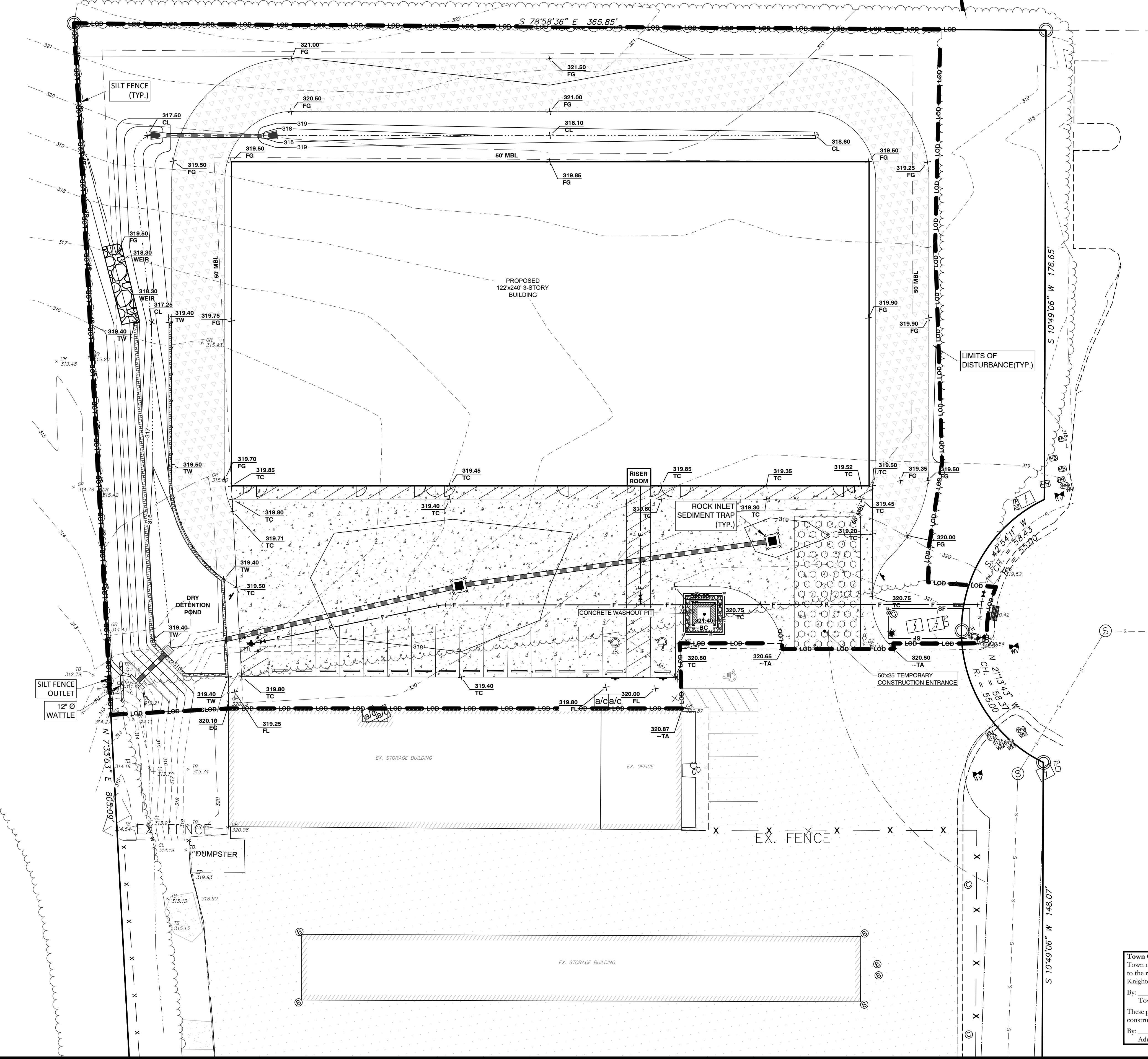
REVISIONS:

NO.	DESCRIPTION	DATE	BY

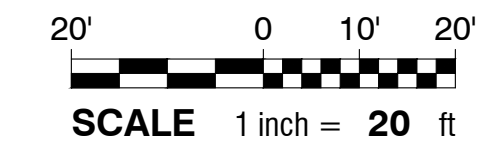
LAMPE MANAGEMENT COMPANY
AMPLE STORAGE - EXPANSION
 CITY OF KNIGHTDALE - ST. MATTHEWS TOWNSHIP - WAKE CO. - NORTH CAROLINA
SEDIMENTATION & EROSION CONTROL PLAN - PH 2

DATE: AUGUST 11, 2023
 DESIGNED BY: MJP
 DRAWN BY: EDN
 CHECKED BY: JSJ
 PROJECT No. 2023008
 DRAWING No. W-4073-SK
 SCALE: 1" = 20'
 SHEET No.

C5.02



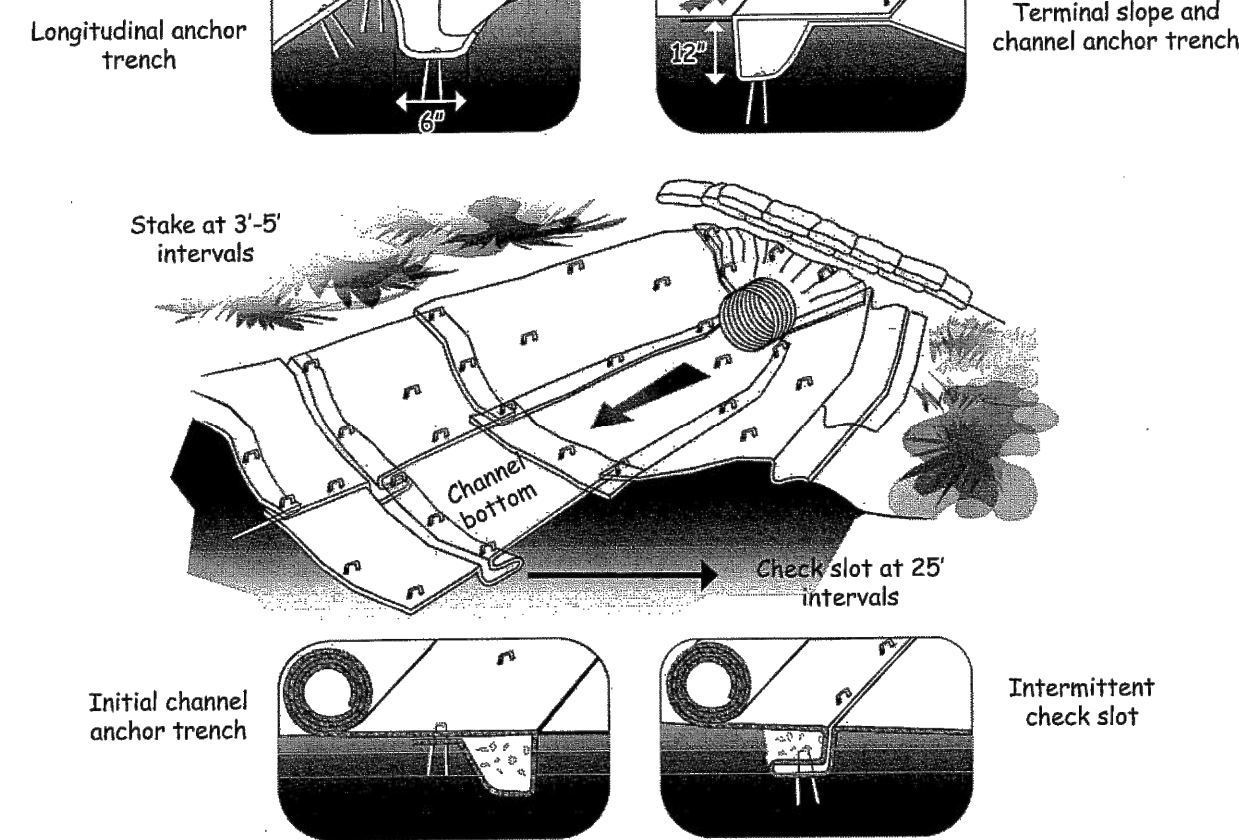
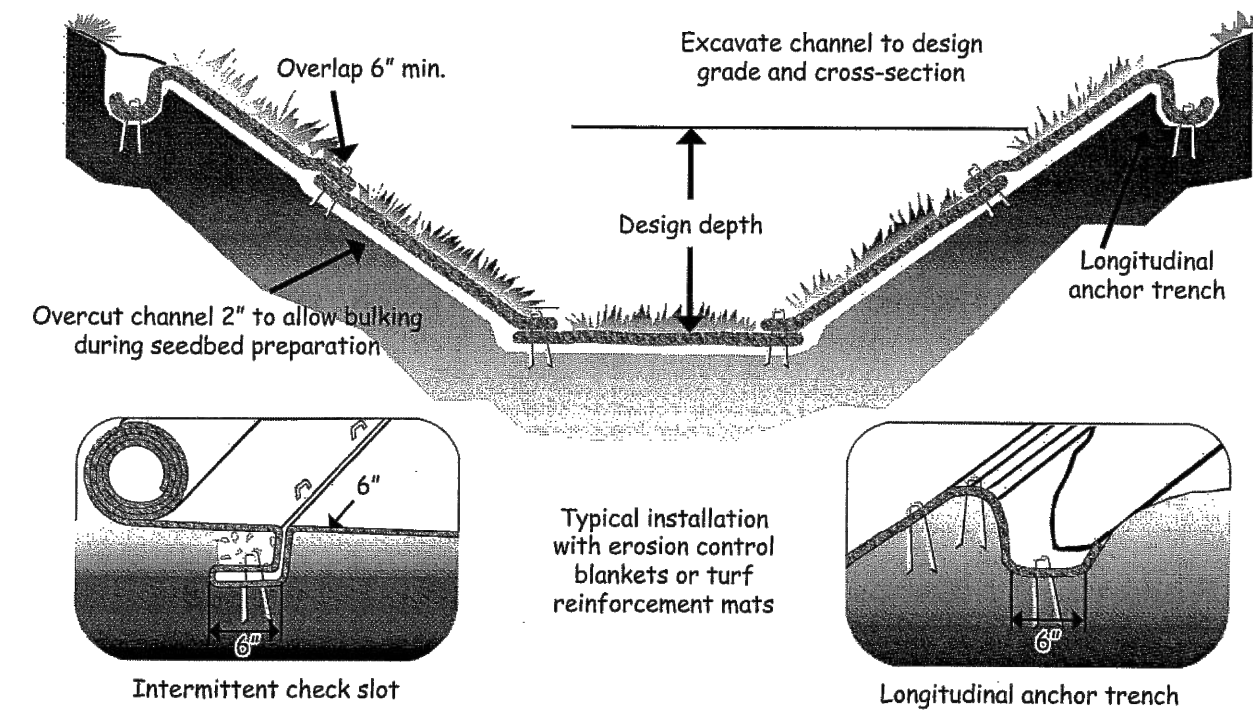
Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.
 By: _____ Date: _____
 Town Engineer
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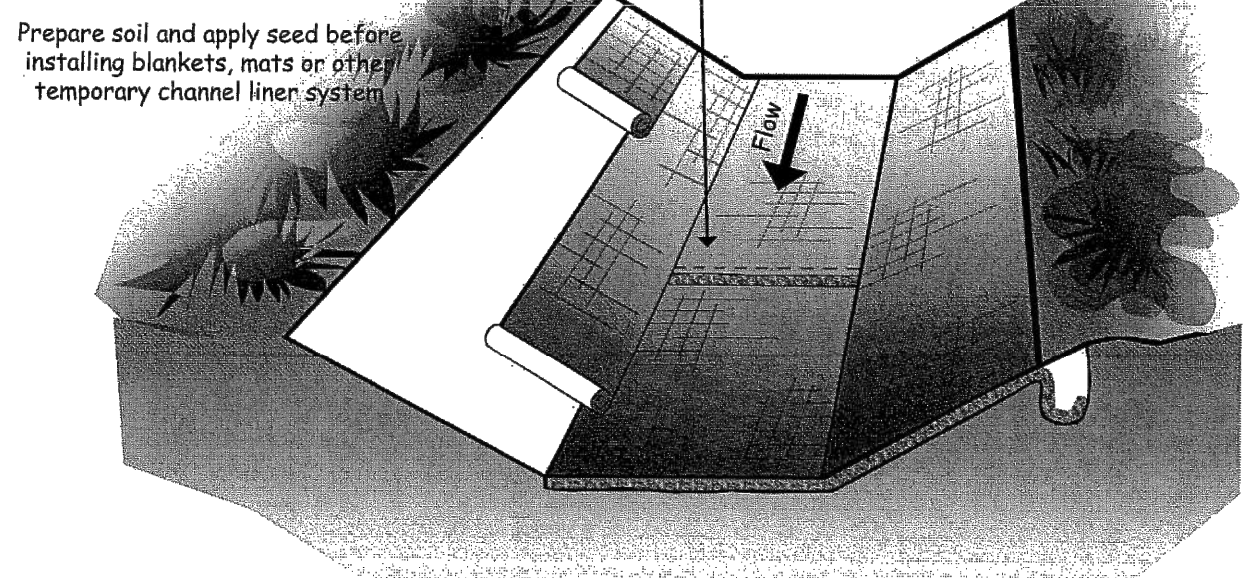
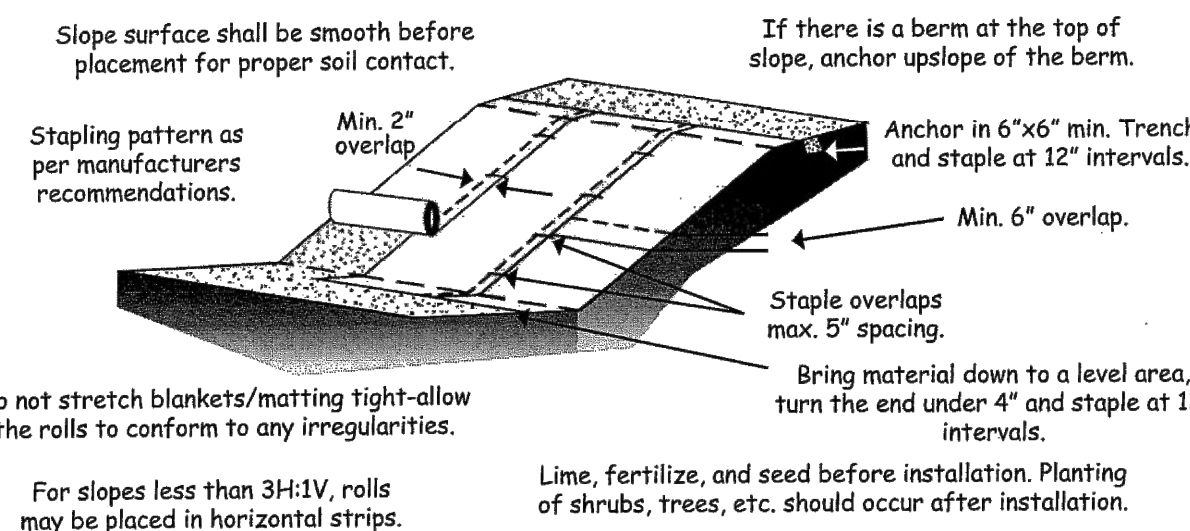
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RECP DETAIL

N.T.S.



NOTE:
1. Check slots to be constructed per manufacturers specifications.
2. Staking or stapling layout per manufacturers specifications.



NOTES:
1. Design velocities exceeding 2 ft/sec require temporary blankets, mats or similar liners to protect seed and soil until vegetation becomes established.
2. Grass-lined channels with design velocities exceeding 6 ft/sec should include turf reinforcement mats

LINER
CONSTRUCTION SPECIFICATIONS

EVEN IF PROPERLY DESIGNED, IF NOT PROPERLY INSTALLED, RECP'S WILL PROBABLY NOT FUNCTION AS DESIRED. PROPER INSTALLATION IS IMPERATIVE. EVEN IF PROPERLY INSTALLED, IF NOT PROPERLY TIMED AND NOURISHED, VEGETATION WILL PROBABLY NOT GROW AS DESIRED. PROPER SEED/VEGETATION SELECTION IS ALSO IMPERATIVE.
GRADE THE SURFACE OF INSTALLATION AREAS SO THAT THE GROUND IS SMOOTH AND LOOSE. WHEN SEEDING PRIOR TO INSTALLATION, FOLLOW THE STEPS FOR SEED BED PREPARATION, SOIL AMENDMENTS, AND SEEDING IN SURFACE STABILIZATION, E.T.C. ALL GULLIES, RILLS, AND ANY OTHER DISTURBED AREAS MUST BE FINE GRADED PRIOR TO INSTALLATION. SPREAD SEED BEFORE RECP INSTALLATION. (IMPORTANT: REMOVE ALL LARGE ROCKS, DIRT CLOUDS, STUMPS, ROOTS, GRASS CLUMPS, TRASH, AND OTHER OBSTRUCTIONS FROM THE SOIL SURFACE TO ALLOW FOR DIRECT CONTACT BETWEEN THE SOIL SURFACE AND THE RECP.)

TERMINAL ANCHOR TRENCHES ARE REQUIRED AT RECP ENDS AND INTERMITTENT TRENCHES MUST BE CONSTRUCTED ACROSS CHANNELS AT 25-FOOT INTERVALS. TERMINAL ANCHOR TRENCHES SHOULD BE A MINIMUM OF 12 INCHES IN DEPTH AND 6 INCHES IN WIDTH, WHILE INTERMITTENT TRENCHES NEED BE ONLY 6 INCHES DEEP AND 6 INCHES WIDE.
INSTALLATION FOR SLOPES - PLACE THE RECP 2-3 FEET OVER THE TOP OF THE SLOPE AND INTO AN EXCAVATED END TRENCH MEASURING APPROXIMATELY 12 INCHES DEEP BY 6 INCHES WIDE. PIN THE RECP AT 1 FOOT INTERVALS ALONG THE BOTTOM OF THE TRENCH, BACKFILL, AND COMPACT. UNROLL THE RECP DOWN (OR ALONG) THE SLOPE MAINTAINING DIRECT CONTACT BETWEEN THE SOIL AND THE RECP. OVERLAP ADJACENT ROLLS A MINIMUM OF 3 INCHES. PIN THE RECP TO THE GROUND USING STAPLES OR PINS IN A 3 FOOT CENTER-TO-CENTER PATTERN. LESS FREQUENT STAPLING/PINNING IS ACCEPTABLE ON MODERATE SLOPES.

INSTALLATION IN CHANNELS - EXCAVATE TERMINAL TRENCHES (12 INCHES DEEP AND 6 INCHES WIDE) ACROSS THE CHANNEL AT THE UPPER AND LOWER END OF THE LINED CHANNEL SECTIONS. AT 25-FOOT INTERVALS ALONG THE CHANNEL, ANCHOR THE RECP ACROSS THE CHANNEL EITHER IN 6 INCH BY 6 INCH TRENCHES OR BY INSTALLING TWO CLOSELY SPACED ROWS OF ANCHORS. EXCAVATE LONGITUDINAL TRENCHES 6 INCHES DEEP AND WIDE ALONG CHANNEL EDGES (ABOVE WATER LINE) IN WHICH TO BURY THE OUTSIDE RECP EDGES. PLACE THE FIRST RECP AT THE DOWNSTREAM END OF THE CHANNEL. PLACE THE END OF THE FIRST RECP IN THE TERMINAL TRENCH AND PIN IT AT 1 FOOT INTERVALS ALONG THE BOTTOM OF THE TRENCH.

NOTE: THE RECP SHOULD BE PLACED UPSIDE DOWN IN THE TRENCH WITH THE ROLL ON THE DOWNSTREAM SIDE OF THE BENCH.

ONCE PINNED AND BACKFILLED, THE RECP IS DEPLOYED BY WRAPPING OVER THE TOP OF THE TRENCH AND UNROLLING UPSTREAM. IF THE CHANNEL IS WIDER THAN THE PROVIDED ROLLS, PLACE ENDS OF ADJACENT ROLLS IN THE TERMINAL TRENCH, OVERLAPPING THE ADJACENT ROLLS A MINIMUM OF 3 INCHES. PIN AT 1 FOOT INTERVALS, BACKFILL, AND COMPACT. UNROLL THE RECP IN THE UPSTREAM DIRECTION UNTIL REACHING THE FIRST INTERMITTENT TRENCH. FOLD THE RECP BACK OVER ITSELF, POSITIONING THE ROLL ON THE DOWNSTREAM SIDE OF THE TRENCH, AND ALLOWING THE MAT TO CONFORM TO THE TRENCH.

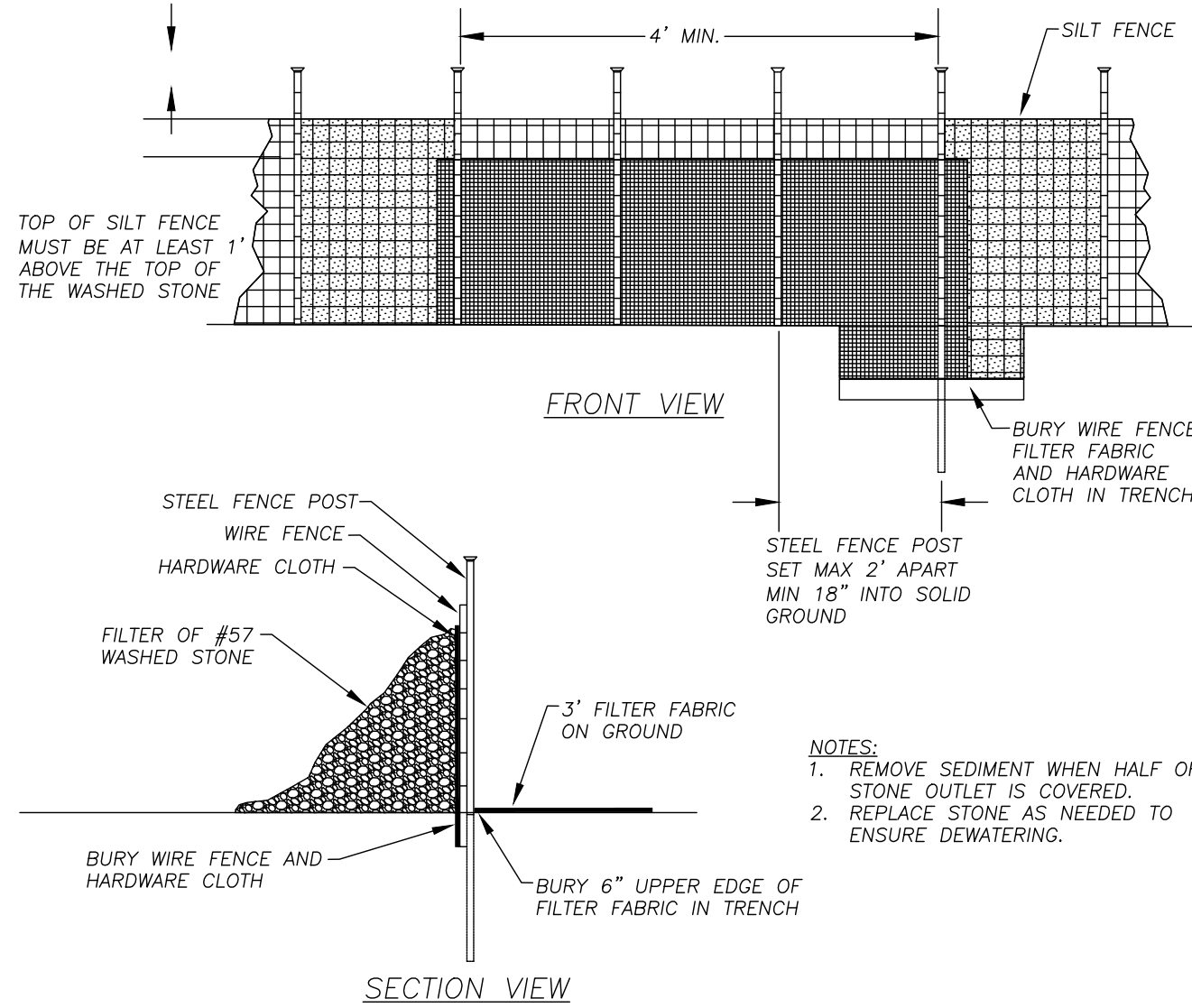
THEN PIN THE RECP (TWO LAYERS) TO THE BOTTOM OF THE TRENCH, BACKFILL, AND COMPACT. CONTINUE UP THE CHANNEL (WRAPPING OVER THE TOP OF THE INTERMITTENT TRENCH) REPEATING THIS STEP AT OTHER INTERMITTENT TRENCHES, UNTIL REACHING THE UPPER TERMINAL TRENCH.

AT THE UPPER TERMINAL TRENCH, ALLOW THE RECP TO CONFORM TO THE TRENCH, SECURE WITH PINS OR STAPLES, BACKFILL, COMPACT AND THEN BRING THE MAT BACK OVER THE TOP OF THE TRENCH AND ONTO THE EXISTING MAT (2 TO 3 FEET OVERLAP IN THE DOWNSTREAM DIRECTION), AND PIN AT 1 FOOT INTERVALS ACROSS THE RECP. WHEN STARTING INSTALLATION OF A NEW ROLL, BEGIN IN A TRENCH OR SHINGLE-LAP ENDS OF ROLLS A MINIMUM OF 1 FOOT WITH UPSTREAM RECP ON TOP TO PREVENT UPLIFTING. PLACE THE OUTSIDE EDGES OF THE RECP(S) IN LONGITUDINAL TRENCHES, PIN, BACKFILL, AND COMPACT.

ANCHORING DEVICES - 11 GAUGE, AT LEAST 6 INCHES LENGTH BY 1 INCH WIDTH STAPLES OR 12 INCH MINIMUM LENGTH WOODEN STAKES ARE RECOMMENDED FOR ANCHORING THE RECP TO THE GROUND.

DRIVE STAPLES OR PINS SO THAT THE TOP OF THE STAPLE OR PIN IS FLUSH WITH THE GROUND SURFACE. ANCHOR EACH RECP EVERY 3 FEET ALONG ITS CENTER. LONGITUDINAL OVERLAPS MUST BE SUFFICIENT TO ACCOMMODATE A ROW OF ANCHORS AND UNIFORM ALONG THE ENTIRE LENGTH OF OVERLAP AND ANCHORED EVERY 3 FEET ALONG THE OVERLAP LENGTH. ROLL ENDS MAY BE SPLICED BY OVERLAPPING 1 FOOT (IN THE DIRECTION OF WATER FLOW), WITH THE UPSTREAM/UNDSLOPE MAT PLACED ON TOP OF THE DOWNSTREAM/DOWNSLOPE RECP. THIS OVERLAP SHOULD BE ANCHORED AT 1 FOOT SPACING ACROSS THE RECP. WHEN INSTALLING MULTIPLE WIDTH MATS HEAT SEALED IN THE FACTORY, ALL FACTORY SEAMS AND FIELD OVERLAPS SHOULD BE SIMILARLY ANCHORED.

- MAINTENANCE**
1. INSPECT ROLLED EROSION CONTROL PRODUCTS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAIN FALL EVENT REPAIR IMMEDIATELY.
 2. GOOD CONTACT WITH THE GROUND MUST BE MAINTAINED, AND EROSION MUST NOT OCCUR BENEATH THE RECP.
 3. ANY AREAS OF THE RECP THAT ARE DAMAGED OR NOT IN CLOSE CONTACT WITH THE GROUND SHALL BE REPAIRED AND STAPLED.
 4. IF EROSION OCCURS DUE TO POORLY CONTROLLED DRAINAGE, THE PROBLEM SHALL BE FIXED AND THE ERODED AREA PROTECTED.
 5. MONITOR AND REPAIR THE RECP AS NECESSARY UNTIL GROUND COVER IS ESTABLISHED.



STANDARD SILT FENCE OUTLET
N.T.S.

SILT FENCE

MAINTENANCE

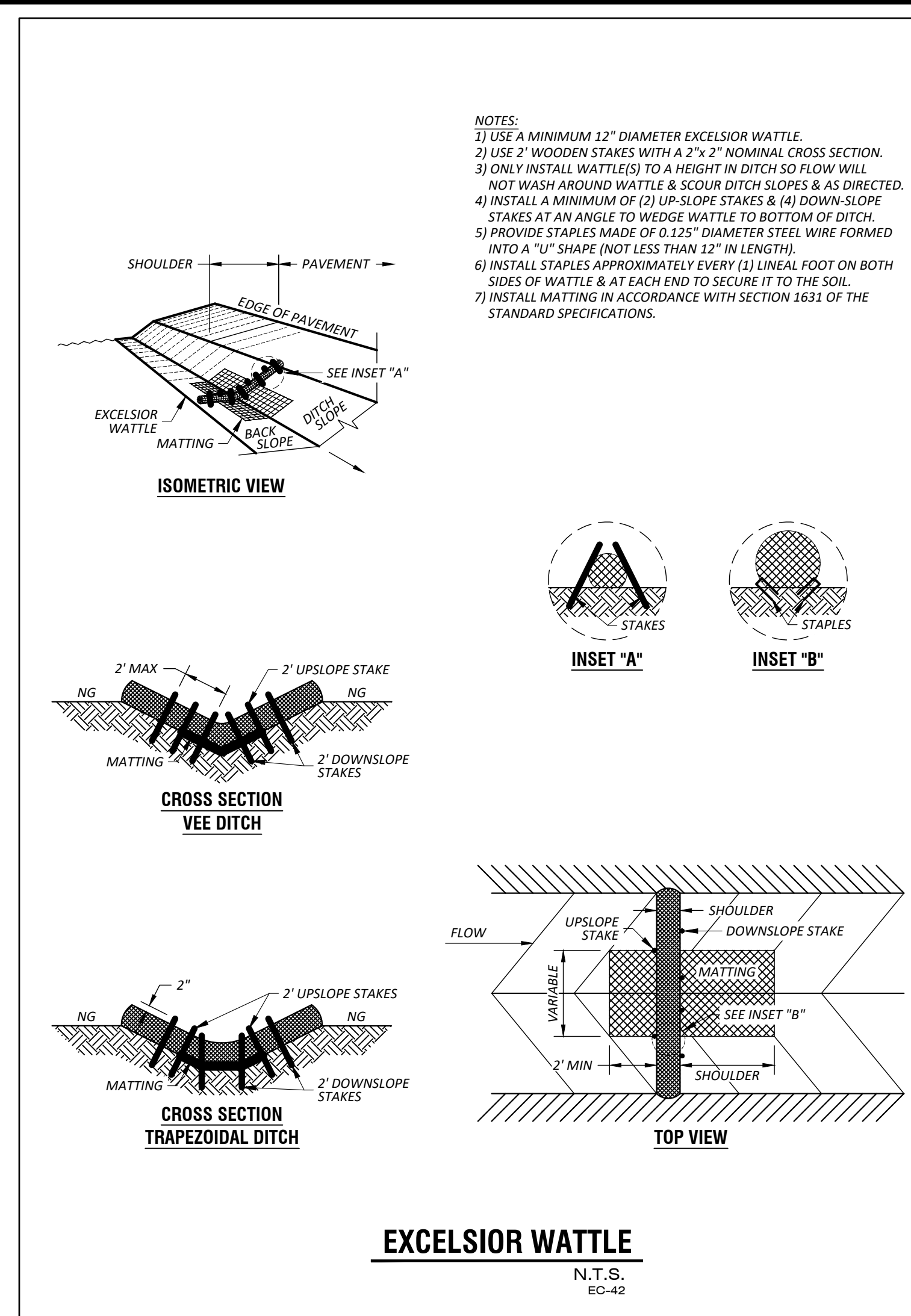
INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL, MAKE ANY REQUIRED REPAIRS IMMEDIATELY.

SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.

REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.

REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

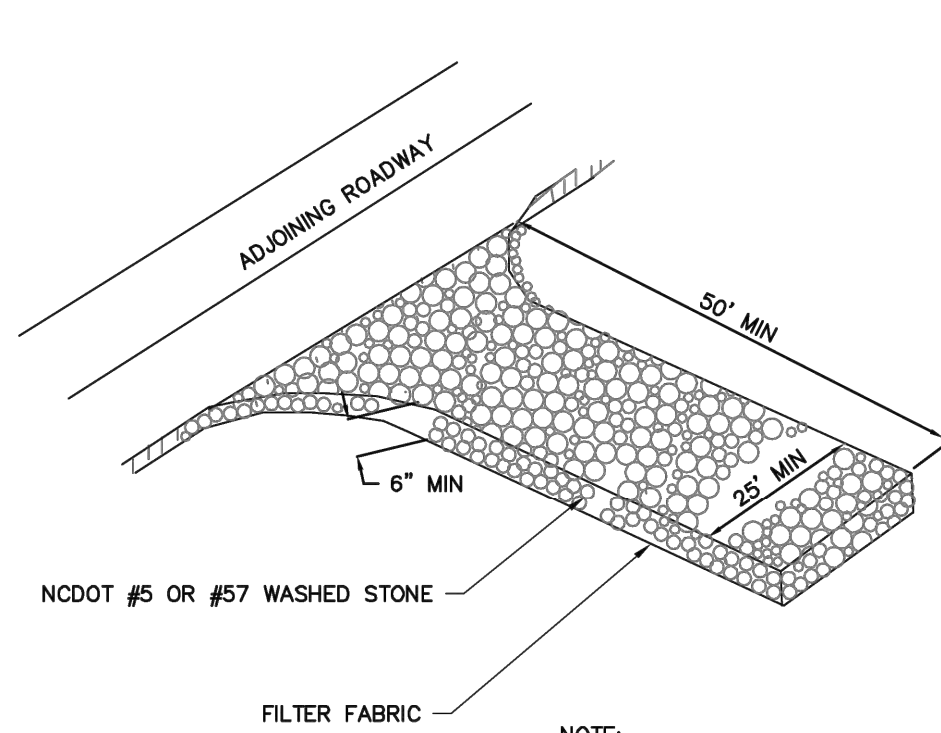
DATE	REVISIONS	DESCRIPTION	STD. NO.
	1	TEMPORARY CONSTRUCTION ENTRANCE/EXIT	2.04



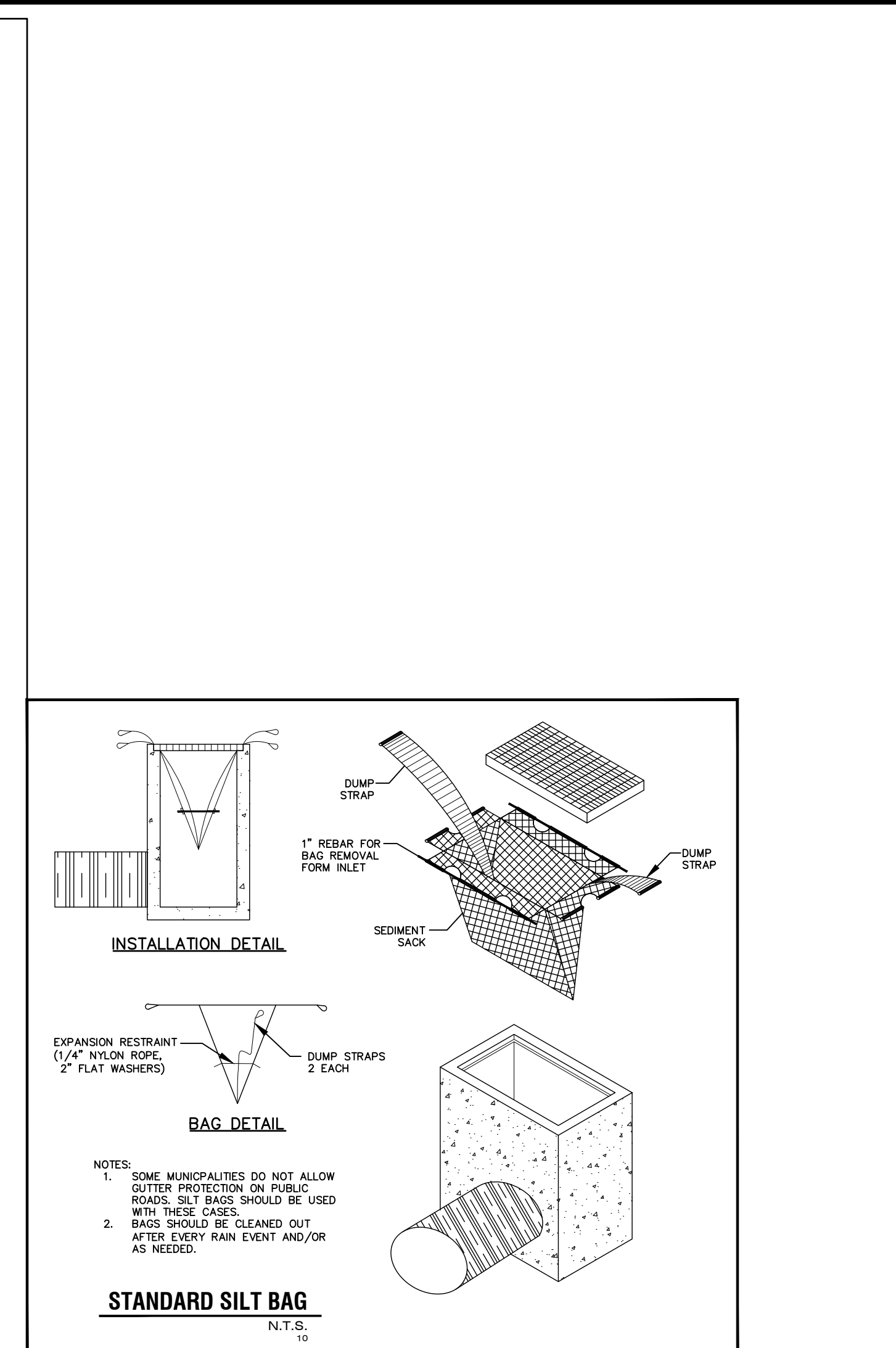
EXCELSIOR WATTLE

N.T.S.
EC-42

- NOTES:**
1. NDOT # 5 OR #57 WASHED STONE SHALL BE USED. PAD TO BE 50' L X 20' W X 6" D AT A MINIMUM.
 2. TURNING RADIUS SUFFICIENT TO ACCOMMODATE LARGE TRUCKS IS TO BE PROVIDED.
 3. ENTRANCE(S) SHOULD BE LOCATED TO PROVIDE FOR MAXIMUM UTILITY BY ALL CONSTRUCTION VEHICLES.
 4. MUST BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR DIRECT FLOW OF MUD ONTO STREETS. PERIODIC TOPDRESSING WITH STONE WILL BE NECESSARY; KEEP SOME HANDY.
 5. ANY MATERIAL WHICH STILL MAKES IT ONTO THE ROAD MUST BE CLEANED UP IMMEDIATELY.



NOTE:
APPLICABLE AT ALL POINTS OF INGRESS & EGRESS UNTIL SITE IS STABILIZED. FREQUENT CHECKS OF THE DEVICE AND TIMELY MAINTENANCE MUST BE PROVIDED.

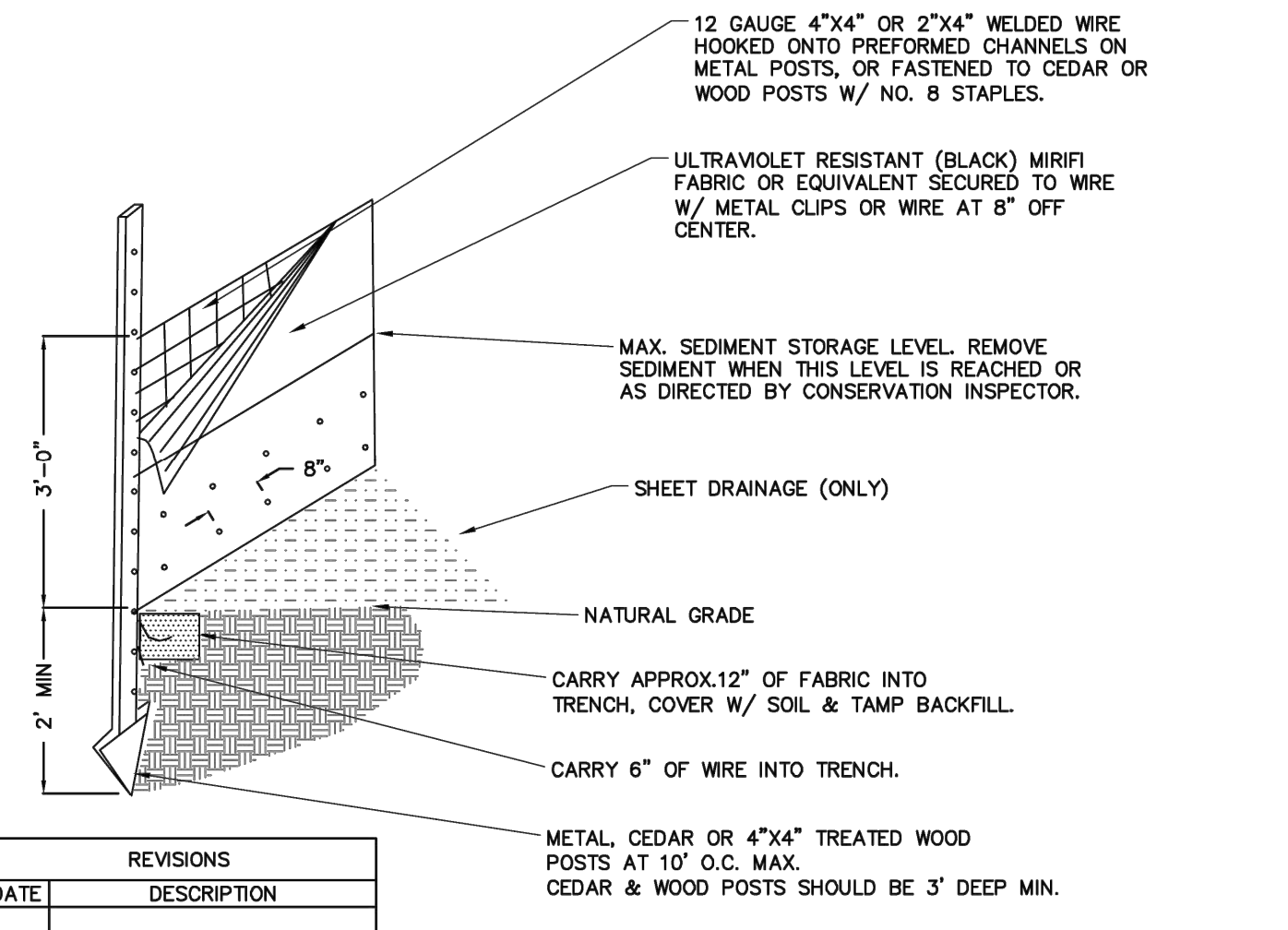


STANDARD SILT BAG

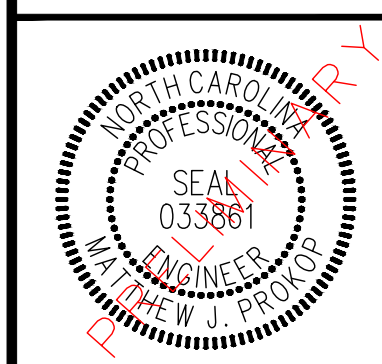
N.T.S.
EC-10

NOTES:

1. TOTAL DRAINAGE AREA FLOWING TO SILT FENCE MAY NOT EXCEED 1 ACRE.
2. SILT FENCES SHOULD NOT BE USED AT PIPE OUTLETS OR IN AREAS OF CONCENTRATED FLOW (CREEKS, DITCHLINES, SWELLS ETC.).



DATE	REVISIONS	DESCRIPTION	STD. NO.
	1	TEMPORARY SILT FENCE	2.03



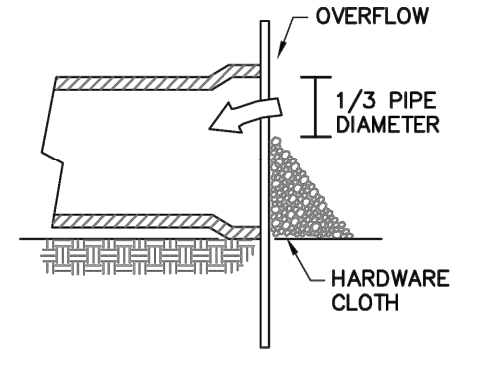
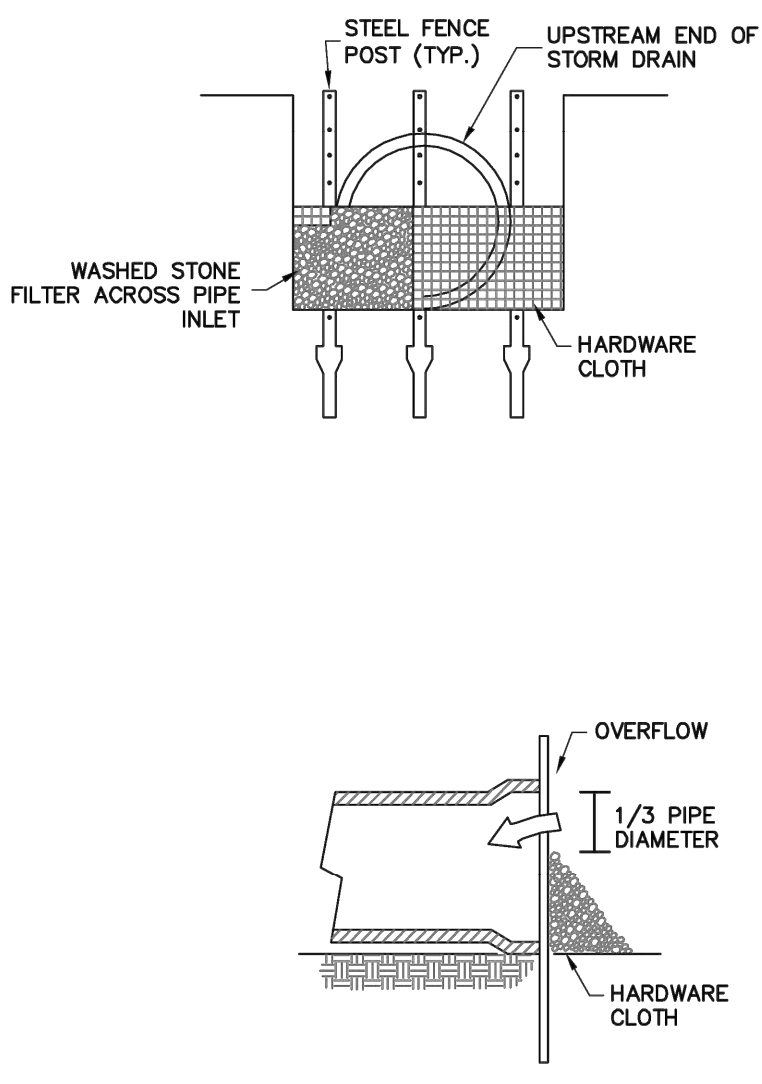
REVISIONS:

NO.	DESCRIPTION	DATE	BY

DATE: AUGUST 11, 2023
DESIGNED BY: MJP
DRAWN BY: EDN
CHECKED BY: JSJ
PROJECT No. 2023008
DRAWING No. W-4073-SK
SCALE: 1" = 20'
SHEET No.

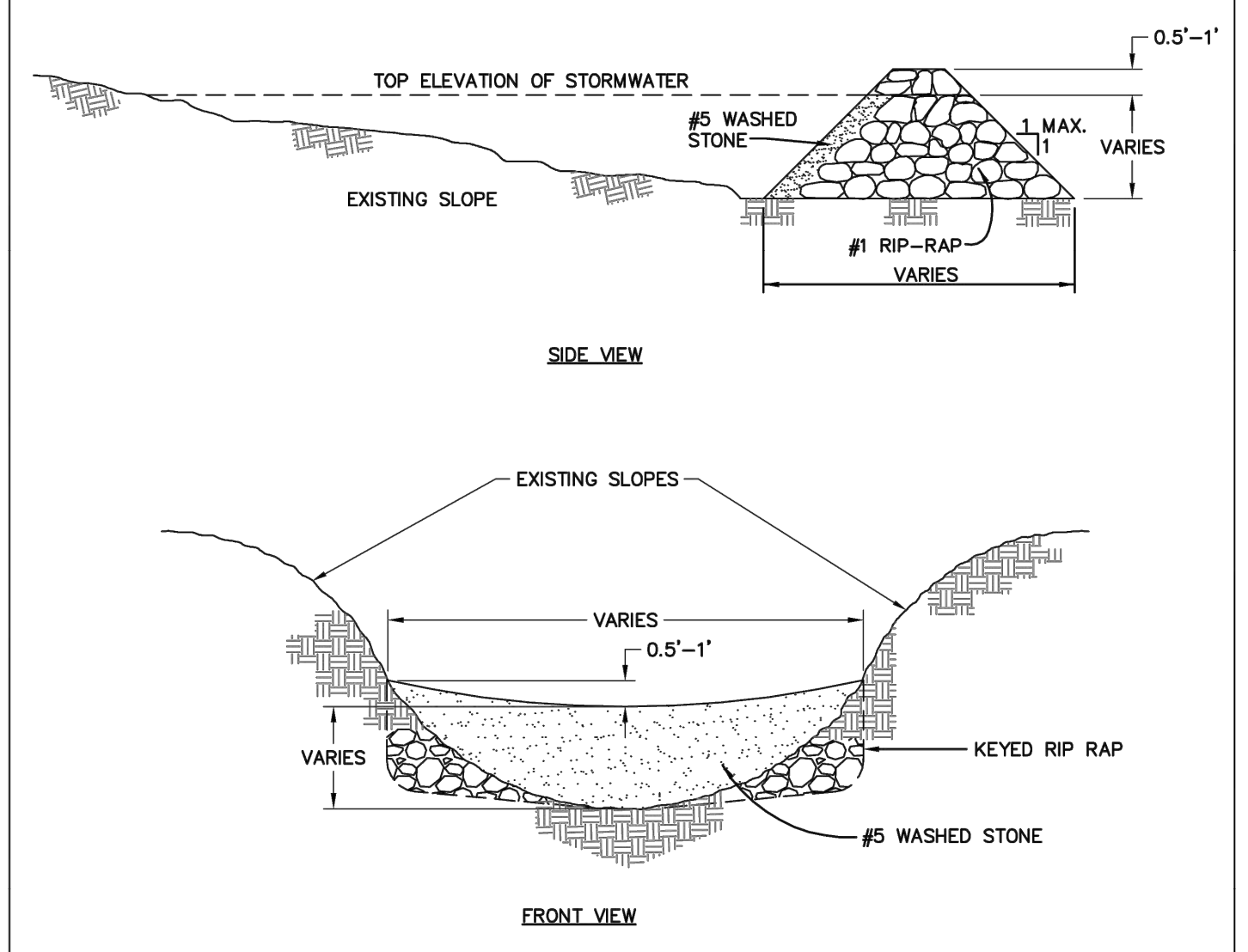
NOTE:

ALL PARTIALLY COMPLETED STORM DRAINS SHALL BE PROTECTED AT THE END OF EACH DAY IN ACCORDANCE WITH THESE DRAWINGS.



REVISIONS		STD. NO.
DATE	DESCRIPTION	
		2.09

TOWN OF KNIGHTDALE STANDARD DETAILS	PIPE INLET PROTECTION	2.09
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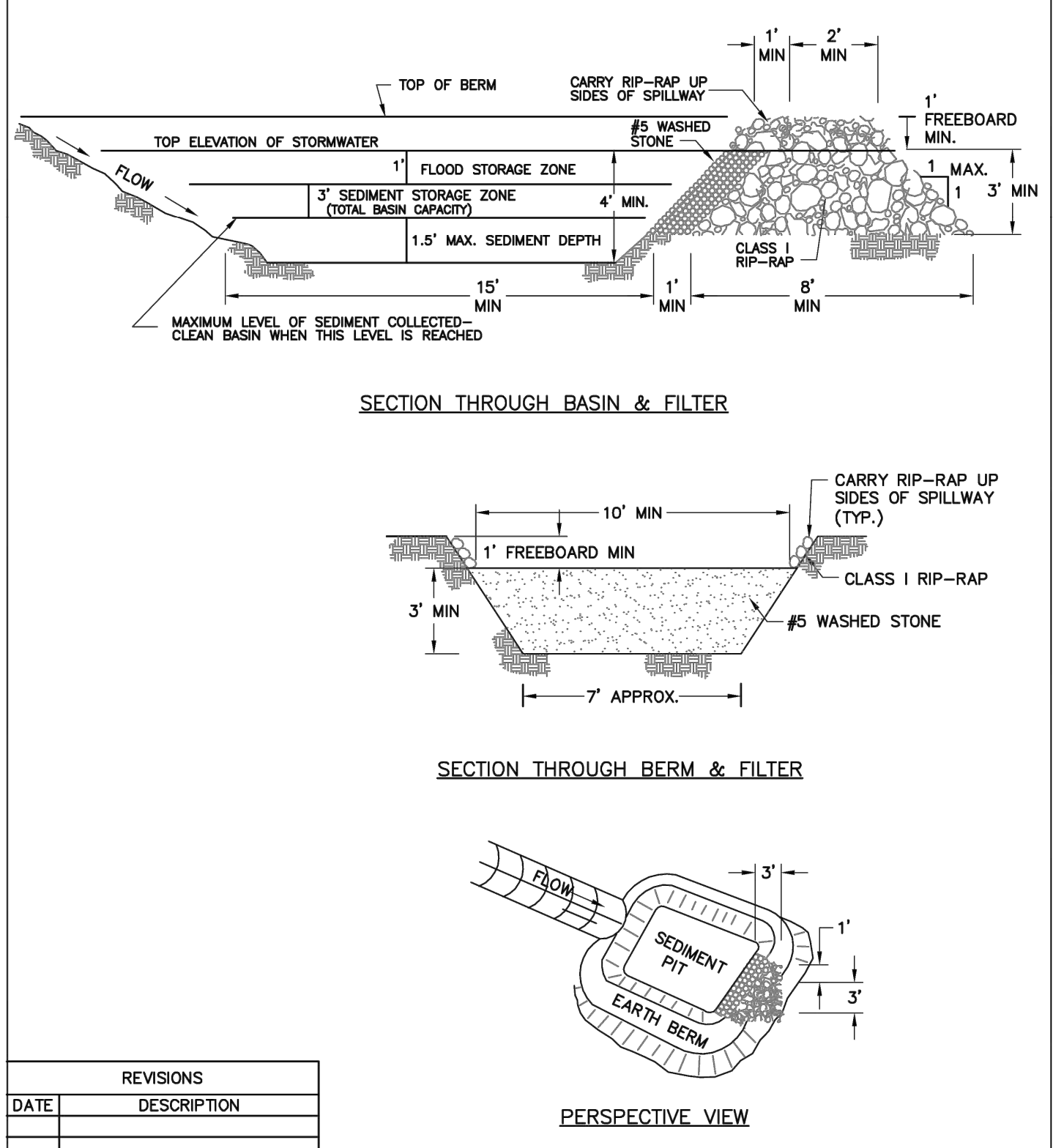
DESIGN OF SPILLWAYS

DRAINAGE AREA (ACRES)	MINIMUM WEIR LENGTH (FT)
1	4.0
2	6.0
3	8.0
4	10.0
5	12.0

- NOTES:**
- HEIGHT & WIDTH DETERMINED BY EXISTING TOPOGRAPHY AND SEDIMENT STORAGE REQUIRED.
 - KEY RIP RAP INTO THE DAM FOR STABILIZATION.

REVISIONS		STD. NO.
DATE	DESCRIPTION	
		2.05

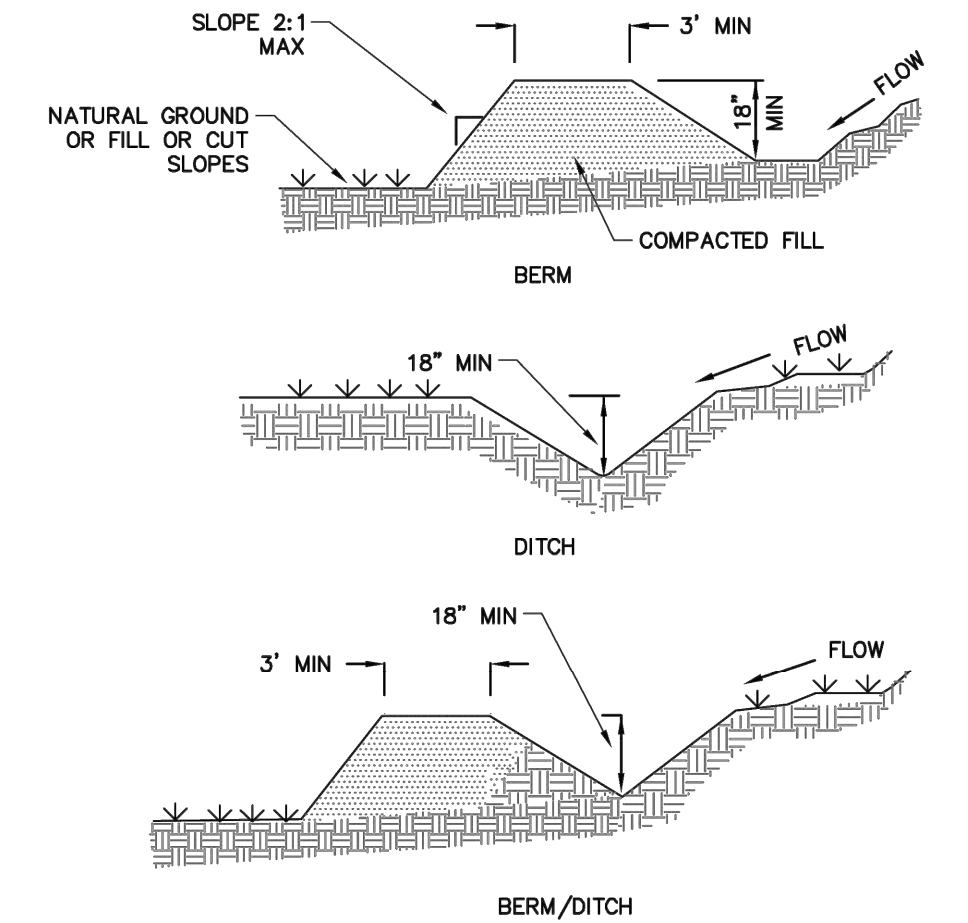
TOWN OF KNIGHTDALE STANDARD DETAILS	STANDARD CHECK DAM	2.05
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REVISIONS		STD. NO.
DATE	DESCRIPTION	
		2.07

TOWN OF KNIGHTDALE STANDARD DETAILS	STANDARD SEDIMENT BASIN	2.07
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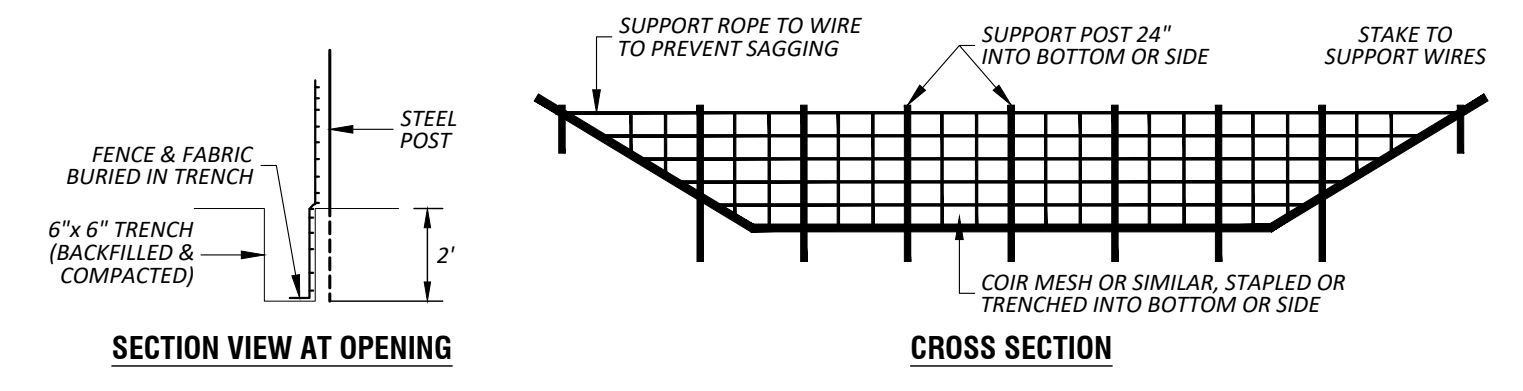
- NOTES:**
- MACHINE COMPACTION OF ALL FILL IS REQUIRED. DIVERSIONS SUFFICIENT TO DIRECT ALL SEDIMENT-LADEN STORMWATER INTO A SEDIMENT CONTROL DEVICE MUST BE INSTALLED PRIOR TO CLEARING AND GRUBBING OF THE AREA (OR IN CONJUNCTION WITH THIS OPERATION IF SEDIMENT CONTROLS AND DIVERSIONS ARE INSTALLED AS EACH CRITICAL POINT IS REACHED).
 - DIVERSIONS SHOULD BE LOCATED TO MINIMIZE DAMAGES BY CONSTRUCTION OPERATIONS.
 - DIVERSIONS SHOULD BE SEED AND MULCHED IF THEY ARE TO REMAIN IN PLACE OVER 30 DAYS.
 - CHECK DEVICE AFTER EACH RAIN, BUT ONCE A WEEK REGARDLESS. REPAIR AS NECESSARY.



- NOTE:**
- POSITIVE GRADE MUST BE PROVIDED TO ASSURE DRAINAGE. IF SLOPE EXCEEDS 2% SEED AND MULCH DIVERSION. TRY NOT TO EXCEED 5% (HIGH VELOCITIES RESULT). MAXIMUM DRAINAGE AREA = 5 ACRES WITHOUT SUPPORTING CALCS. DIVERSIONS AT THE TOP OF SLOPES MUST BE EMPTY INTO AN APPROVED SLOPE DRAIN. BERM/DITCH IS MOST COMMONLY USED.

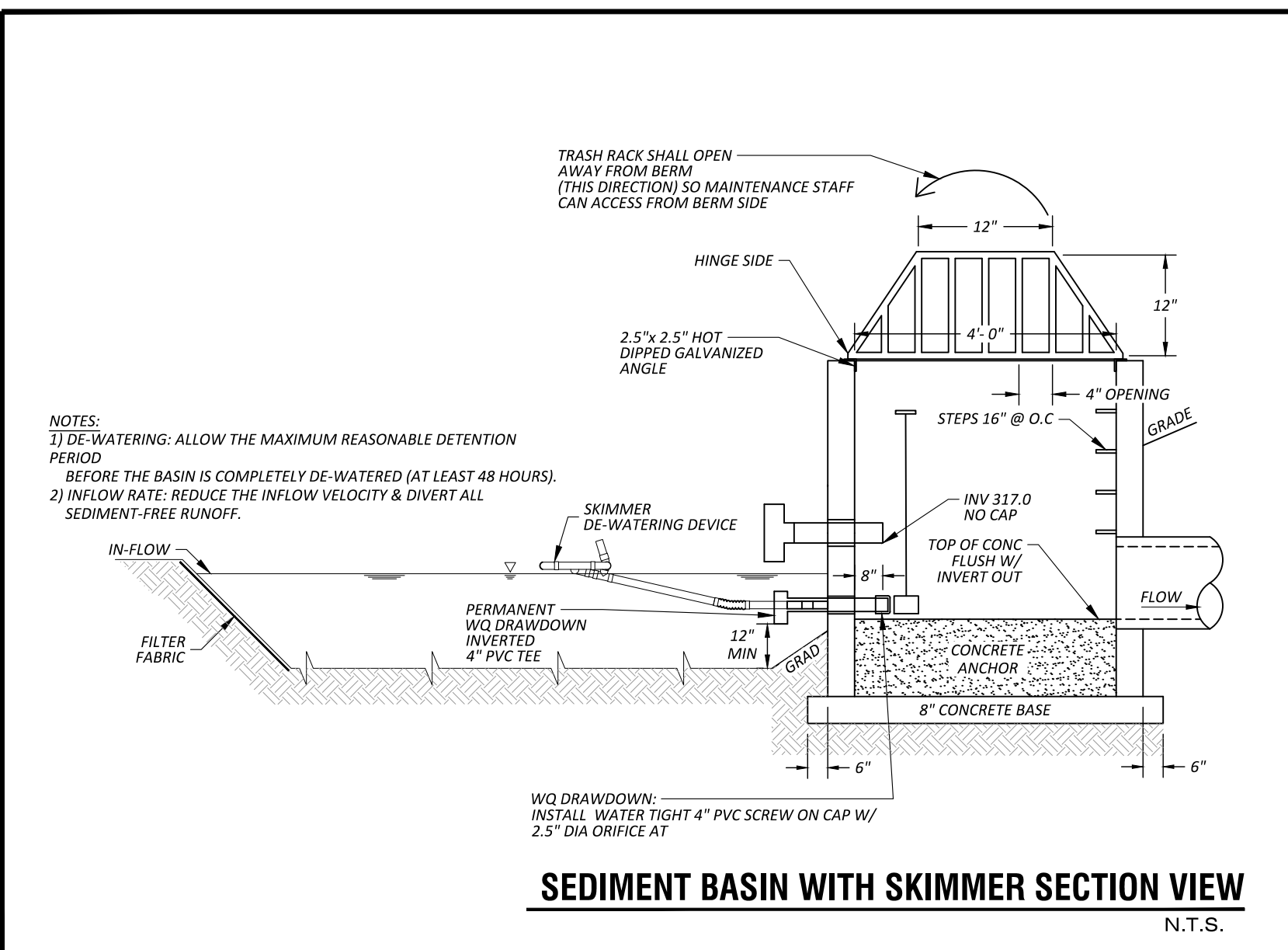
REVISIONS		STD. NO.
DATE	DESCRIPTION	
		2.02

TOWN OF KNIGHTDALE STANDARD DETAILS	TEMPORARY DIVERSION BERM/DITCH	2.02
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- NOTES:**
- BAFFLE MATERIAL SHOULD BE SECURED AT THE BOTTOM & SIDES USING STAPLES OR BY TRENCHING AS FOR SILT FENCE.
 - MOST OF THE SEDIMENT WILL ACCUMULATE IN THE FIRST BAY, WHICH SHOULD BE READILY ACCESSIBLE FOR MAINTENANCE.
 - PROVIDE 3 BAFFLES (USE 2 IF LESS THAN 20' IN LENGTH). PROVIDE 5 BAFFLES FOR DRAINAGE AREAS GREATER THAN 10 ACRES.
 - BAFFLE SHALL BE 700 G/M2 COIR EROSION BLANKET.
 - TOPS OF BAFFLES SHALL BE 2" LOWER THAN THE TOP OF THE BERMS.
 - INSPECT BAFFLES FOR REPAIR ONCE A WEEK AND AFTER EACH RAINFALL.

STANDARD BAFFLES
N.T.S.



- NOTES:**
- DE-WATERING: ALLOW THE MAXIMUM REASONABLE DETENTION PERIOD BEFORE THE BASIN IS COMPLETELY DE-WATERED (AT LEAST 48 HOURS).
 - INFLOW RATE: REDUCE THE INFLOW VELOCITY & DIVERT ALL SEDIMENT-FREE RUNOFF.

SEDIMENT BASIN WITH SKIMMER SECTION VIEW
N.T.S.

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Administrator

P:\LANDDEV\LAMPE-AMPE-SIT-06\KNTDALE-2023008\CADD_DRAWINGS\EROSION\DETAILS.DWG - LAYOUT1 - 8/11/2023 11:34:16 AM - MAT PRODDP



REVISIONS:		DATE	BY

DATE:	AUGUST 11, 2023
DESIGNED BY:	MJP
DRAWN BY:	EDN
CHECKED BY:	JSJ
PROJECT No.	2023008
DRAWING No.	W-4073-SK
SCALE:	1" = 20'
SHEET No.	