

- MA-22-09 CONDITIONS OF APPROVAL:**
- DEVELOPMENT OF THE PROPERTY SHALL BE IN SUBSTANTIAL CONFORMANCE WITH THE ACCOMPANYING EXHIBIT D CONCEPT PLAN. LOCATIONS SHOWN FOR COMMITTED ELEMENTS INCLUDING, BUT NOT LIMITED TO BUILDINGS, PARKING, AND STORMWATER CONTROL MEASURES SHOWN ON EXHIBIT D, ARE CONCEPTUAL AND PROVIDED FOR ILLUSTRATION AND CONTEXT ONLY. FINAL LOCATIONS OF ELEMENTS SHALL BE DETERMINED AT SUBSEQUENT STAGES OF APPROVAL.
  - SUBJECT TO APPROVAL BY THE TOWN OF ROLESVILLE, THE VEGETATION IN THE AREA THAT EXTENDS AT LEAST 55 (55') FEET FROM THE PROPERTY LINE ABUTTING PINS 1850604353, 1850605343, 1850606333, 1850607323, AND 1850608313 EXISTING AT THE TIME OF SITE DEVELOPMENT PLAN APPLICATION SUBMISSION SHALL NOT BE DISTURBED AND SHALL BE INCLUDED IN THE BUFFER OTHERWISE REQUIRED BY THE LDO (THE "UNDISTURBED VEGETATION AREA"). THIS SHALL EXCLUDE MINOR ENCROACHMENTS FOR SITE DESIGN FEATURES, SUCH AS DRAINAGE AREAS OR PIPES AND UTILITY EASEMENTS.
  - ALL EXTERIOR LIGHT FIXTURES SHALL BE FULL CUTOFF FIXTURES, EXCEEDING THE MINIMUM STANDARD OF "CUTOFF FIXTURES" AS REQUIRED BY LDO § 6.6 G.2.
  - IF THE EXISTING VEGETATION IS REMOVED IN THE BUFFER AREA OTHERWISE REQUIRED BY THE LDO ON THE PROPERTY LINE ABUTTING PIN 1850700632 AND EXTENDING FROM THE UNDISTURBED VEGETATION AREA TO THE RIGHT-OF-WAY ON JONES DAIRY ROAD, THE FOLLOWING ADDITIONAL VEGETATION SHALL BE PROVIDED IN THE REQUIRED BUFFER OR WITHIN 5 (5) FEET OF ANY PERIMETER EASEMENT THAT WOULD PREVENT SUCH PLANTINGS: FAST-GROWING DENSE EVERGREEN TREES 15-FT ON CENTER, THE EVERGREEN TREES SHALL HAVE A MINIMUM MATURE HEIGHT OF 30-FT AND A SPREAD OF 12-FT. INSTALL HEIGHT SHALL BE 4-FT MINIMUM.
  - AT LEAST SEVENTY-FIVE PERCENT (75%) OF ANY REQUIRED PLANTS IN THE STORMWATER CONTROL MEASURE POND, EXCLUDING GRASSES, SHALL BE POLLINATOR PLANTS SUCH AS NATIVE MILKWEEDS AND OTHER NECTAR-RICH FLOWERS.
  - GATES TO ACCESS AREAS WITH EXTERIOR-ACCESS STORAGE UNITS SHALL BE LOCKED BETWEEN 10PM AND 6AM.
  - ON EXTERIOR FAÇADES FACING A PUBLIC RIGHT-OF-WAY OR EXTERIOR FAÇADES FACING PINS 1850700632, 1850604353, 1850605343, 1850606333, 1850607323, AND 1850608313:
    - THE FOLLOWING MATERIALS ARE PROHIBITED: CINDERBLOCK, CONCRETE, METAL SIDING, AND VINYL SIDING; AND
    - BRICK, EIFS BRICK, STONE, OR CONCRETE MASONRY COMPONENTS SHALL BE A MINIMUM OF 10%.

# SITE PLAN REVIEW DRAWINGS: FOR JONES DAIRY STORAGE FACILITY

1200 JONES DAIRY RD  
ROLESVILLE, NC 27587

SITE PLAN#: SDP-23-03  
REZONING CASE #: MA-22-09  
TEXT AMENDMENT CASE #: TA-22-02

**APPROVED TA-22-02:**

- 5.1.6.D.5.b. - INDUSTRIAL, LIGHT PRINCIPAL USE - SELF-SERVICE STORAGE SHALL BE CONTAINED WITHIN A FULLY ENCLOSED BUILDING AND CONTAINED IN A SINGLE BUILDING. ACCESS INTERNALLY, EXCEPT IN THE GENERAL INDUSTRIAL DISTRICT NOT LOCATED ON N MAIN ST OR S MAIN ST.
- 5.1.6.I.4. - 'WAREHOUSING' PRINCIPAL USE - EXAMPLES. INCLUDES WAREHOUSES AND MINI-WAREHOUSES.

**APPROVED ALTERNATE PARKING PLAN CONDITIONS:**

- 1 PARKING SPACE PER 100 SELF-STORAGE UNITS.
- PARKING PERMITTED BETWEEN A PROPOSED BUILDING AND THE STREET FRONTAGE.

**ATTENTION CONTRACTORS**  
The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the **Public Utilities Department** at (919) 996-4540 at least **twenty four hours** prior to beginning any of their construction.

**Failure** to notify both City Departments in advance of beginning construction, will result in the issuance of **monetary fines**, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

**Failure** to call for inspection, install a Downstream Plug, have Permitted Plans on the Jobsite, or any other Violation of City of Raleigh Standards will result in a Fine and Possible Exclusion from future work in the City of Raleigh.

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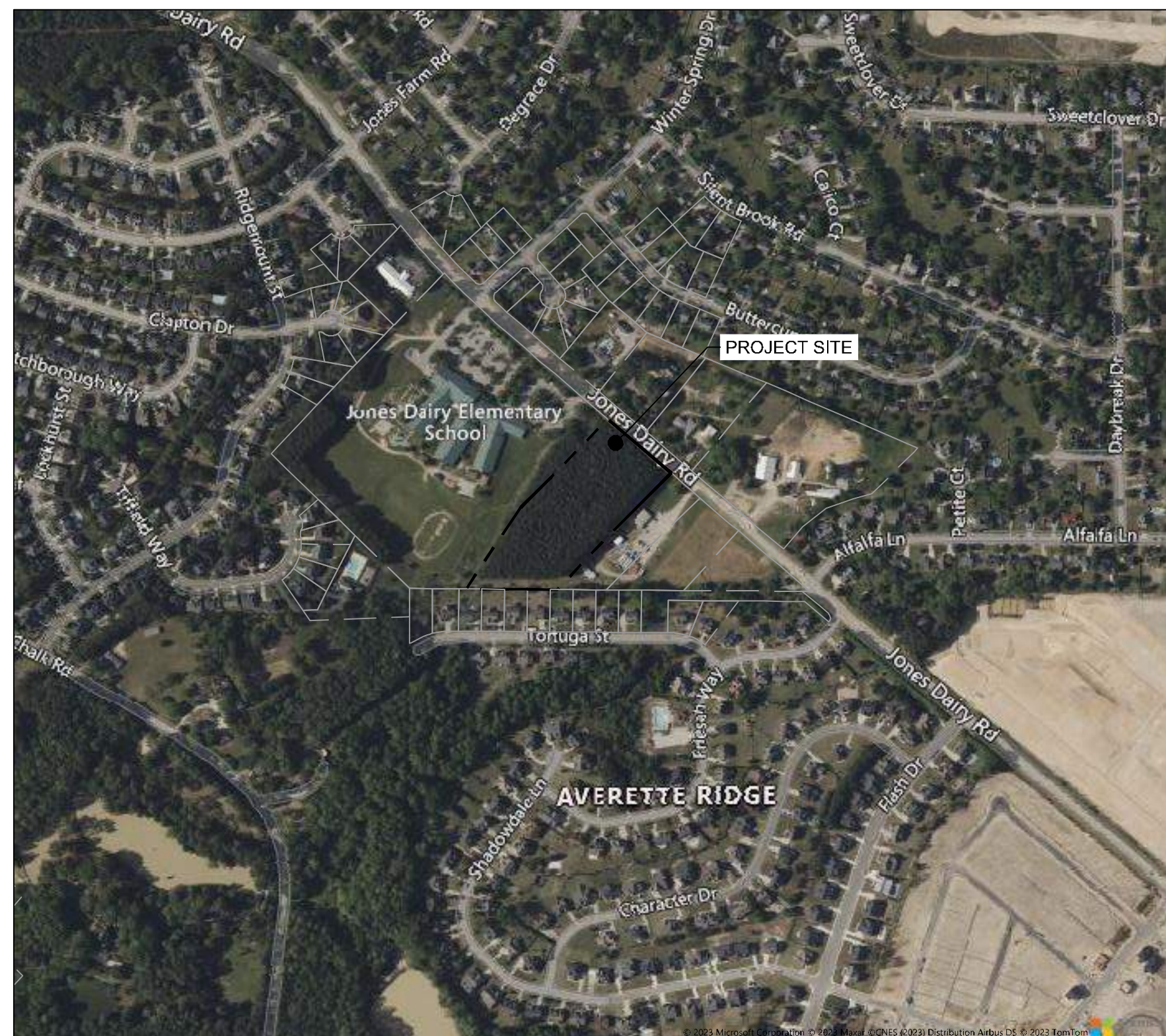
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08/01/2023	ADDRESSED TOWN OF ROLESVILLE 2ND REVIEW COMMENTS
11/01/2023	ADDRESSED TOWN OF ROLESVILLE 3RD REVIEW COMMENTS

DATE: 04/05/2023  
DRAWN BY: L. BARNES  
DESIGNED BY: G. FRANK  
CHECKED BY: G. FRANK  
SCALE: AS SHOWN

**SITE DATA TABLE**

PROJECT NAME:	JONES DAIRY STORAGE FACILITY
SITE PLAN NUMBER:	SDP-23-03
PROPERTY OWNER/ DEVELOPER:	WARD, SUZANNE SHOAF 10925 ENCHANTED HOLLOW WAY RALEIGH, NC 27614
REAL ESTATE ID:	0162697
PIN:	1850608722
DEED ACRES:	5.55 ACRES
PROPERTY ADDRESS:	1200 JONES DAIRY RD, ROLESVILLE NC 27587
PROPERTY ZONING:	GI-CZ
CURRENT USE:	VACANT
PROPOSED USE:	SELF STORAGE (COMMERCIAL)
DISTURBED AREA:	5.77 ACRES
CURRENT IMPERVIOUS:	0 ACRES
PROPOSED IMPERVIOUS:	2.92 ACRES
TREE SAVE SUMMARY:	
REQUIRED TREE PRESERVATION:	10% SAVE = 0.10*4.76 (TREE AREA ON-SITE) = 0.476 ACRES
PROVIDED TREE PRESERVATION:	0.607 ACRES = 13%
PARKING SUMMARY:	
REQUIRED VEHICULAR SPACES:	1 SPACE PER 100 STORAGE UNITS = 540/100 = 6 SPACES
PROVIDED VEHICULAR SPACES:	7 SPACES
ADA PARKING SUMMARY:	
REQUIRED VEHICULAR SPACES:	1 SPACE
PROVIDED VEHICULAR SPACES:	1 SPACE
BUILDING HEIGHT:	MAXIMUM BUILDING HEIGHT: WITHOUT SPRINKLERS: 35-FT WITH SPRINKLERS: 60-FT PROVIDED BUILDING HEIGHTS: 16 FT
BUILDING SQUARE FOOTAGE(S):	CLIMATE CONTROLLED BUILDING: 62,610 SQFT STORAGE BUILDING(S): 1800 SQFT (2), 3600 SQFT (2), 6600 SQFT
NUMBER OF STORAGE UNITS:	TOTAL NUMBER OF UNITS: 540 BUILDING 'A' 5X5: 61 UNITS 5X10: 82 UNITS 10X7.5: 28 UNITS 10X10: 137 UNITS 10X15: 53 UNITS 10X20: 53 UNITS 10X25: 16 UNITS 10X30: 16 UNITS BUILDING 'B' 10X20: 18 UNITS BUILDING 'C' 10X20: 18 UNITS BUILDING 'D' 10X30: 22 UNITS BUILDING 'E' 10X10: 18 UNITS BUILDING 'F' 10X10: 18 UNITS
BUILDING/STRUCTURE SETBACKS:	
FRONT:	30-FT
SIDE:	15-FT
REAR:	35-FT
LANDSCAPE BUFFERS:	
ADJACENT PROPERTY:	50' TYPE "4" BUFFER (SOUTH & WEST OF PARCEL)
ADJACENT PROPERTY:	SEE CONDITION 4 (EAST OF PARCEL)
WATERSHED:	NEUSE RIVER
RIVER BASIN:	SANFORD CREEK (NEUSE)
SURFACE WATER CLASSIFICATION:	NONE



VICINITY MAP  
SCALE 1"=500'

**PROJECT TEAM**

**LAND OWNER**  
CONTACT: SUZANNE SHOAF WARD  
PHONE: N/A  
10925 ENCHANTED HOLLOWWAY  
RALEIGH NC, 27614

**DEVELOPER**  
RIVERCREST REALTY INVESTORS  
CONTACT: BRIAN HOLDER  
PHONE: (919) 846-4046  
8816 SIX FORKS ROAD, SUITE 201  
RALEIGH, NC 27615

**CIVIL ENGINEER**  
TIMMONS GROUP  
CONTACT: GARRETT FRANK, PE, PLA  
PHONE: (919) 866-4503  
5410 TRINITY ROAD, SUITE 102  
RALEIGH, NC 27607

Sheet List Table		Sheet List Table (Cont.)	
Sheet Number	Sheet Title	Sheet Number	Sheet Title
C0.0	COVER	C7.0	ROAD WIDENING PLAN - DEMO, SITE AND SIGNAGE & STRIPING PLANS
C0.1	OVERALL SITE PLAN & KEY MAP	C7.1	ROAD WIDENING PLAN - GRADING, DRAINAGE & EROSION CONTROL PLAN
C1.0	EXISTING CONDITIONS & DEMOLITION PLAN	C7.2	JONES DAIRY ROAD - CROSS SECTIONS STA. 10+00 - 10+50
C2.0	SITE PLAN	C7.3	JONES DAIRY ROAD - CROSS SECTIONS STA. 11+00 - 11+50
C2.1	VEHICULAR ROUTING PLAN	C7.4	JONES DAIRY ROAD - CROSS SECTIONS STA. 12+00 - 12+50
C3.0	GRADING & DRAINAGE PLAN	C7.5	JONES DAIRY ROAD - CROSS SECTIONS STA. 13+00 - 13+50
C3.1	SPOT ELEVATION PLAN	C7.6	JONES DAIRY ROAD - CROSS SECTIONS STA. 14+00 - 14+50
C3.2	STORM SEWER PROFILES	C7.7	JONES DAIRY ROAD - CROSS SECTIONS STA. 15+00 - 15+50
C3.3	STORM SEWER PROFILES	C7.8	JONES DAIRY ROAD - CROSS SECTIONS STA. 16+00 - 16+50
C3.4	SCM PLAN & PROFILE	L1.0	LANDSCAPE PLAN
C3.5	SCM NOTES & DETAILS	L1.1	TREE PRESERVATION PLAN
C4.0	SITE UTILITY PLAN	L2.0	LANDSCAPE NOTES AND DETAILS
C4.1	SITE UTILITY PLAN & PROFILE	PS1.0	PUMP STATION SITE AND FORCEMAIN
C4.2	FIRE HOSE LAY PLAN	PS1.1	PUMP STATION NOTES AND DETAILS
C5.0	EROSION & SEDIMENTATION CONTROL PLAN - PH I	W1.0	HYDRAULIC ANALYSIS LAYOUT AND RESULTS
C5.1	EROSION & SEDIMENTATION CONTROL PLAN - PH II	A-101	FLOOR PLAN
C6.0	SITE DETAILS	A-200	BUILDING ELEVATIONS - BUILDING A AND B
C6.1	SITE DETAILS	A201	BUILDING ELEVATIONS - BUILDING C AND D
C6.2	SITE DETAILS	A202	BUILDING ELEVATIONS - BUILDING E AND F
C6.3	SITE DETAILS	E-010	SITE PHOTOMETRICS
C6.4	SITE DETAILS		
C6.5	SITE DETAILS		
C6.6	SITE DETAILS		
C6.7	SITE DETAILS		
C6.8	SITE DETAILS		
C6.9	NCG01 GROUND STABILIZATION AND MATERIALS HANDLING		
C6.10	NCG01 SELF-INSPECTION, RECORDKEEPING, AND REPORTING		

**EROSION CONTROL, STORMWATER AND FLOODPLAIN MANAGEMENT**  
APPROVED  
EROSION CONTROL  S-  
STORMWATER MGMT.  S-  
FLOOD STUDY  S-  
DATE: \_\_\_\_\_  
ENVIRONMENTAL CONSULTANT SIGNATURE

**CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION**  
ELECTRONIC APPROVAL: THIS APPROVAL IS 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.  
CITY OF RALEIGH DEVELOPMENT APPROVAL \_\_\_\_\_  
RALEIGH WATER REVIEW OFFICER

**Public Sewer Collection / Extension System**  
The City of Raleigh consents to the connection and extension of 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 # S-5375  
Authorization to Construct \_\_\_\_\_  
Date \_\_\_\_\_

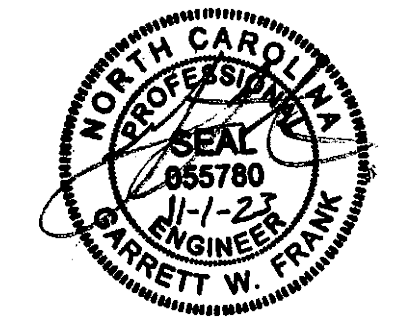
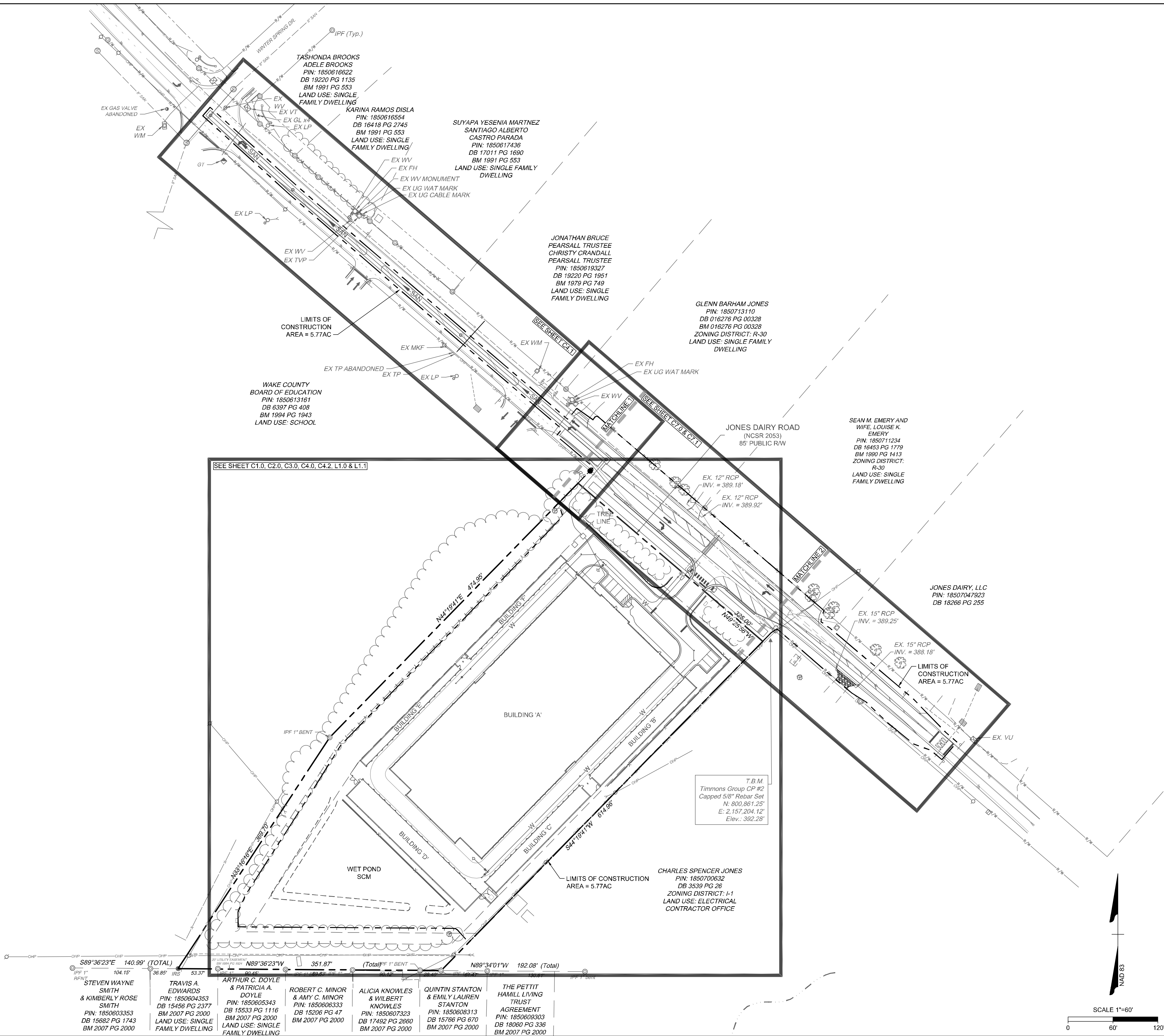
**TIMMONS GROUP**  
NORTH CAROLINA LICENSE NO. C-1652  
JONES DAIRY STORAGE FACILITY  
TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA  
COVER

JOB NO. 54832  
SHEET NO. C0.0

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 CHECKED BY: G. FRANK  
 SCALE: AS SHOWN

# TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

## JONES DAIRY STORAGE FACILITY

TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

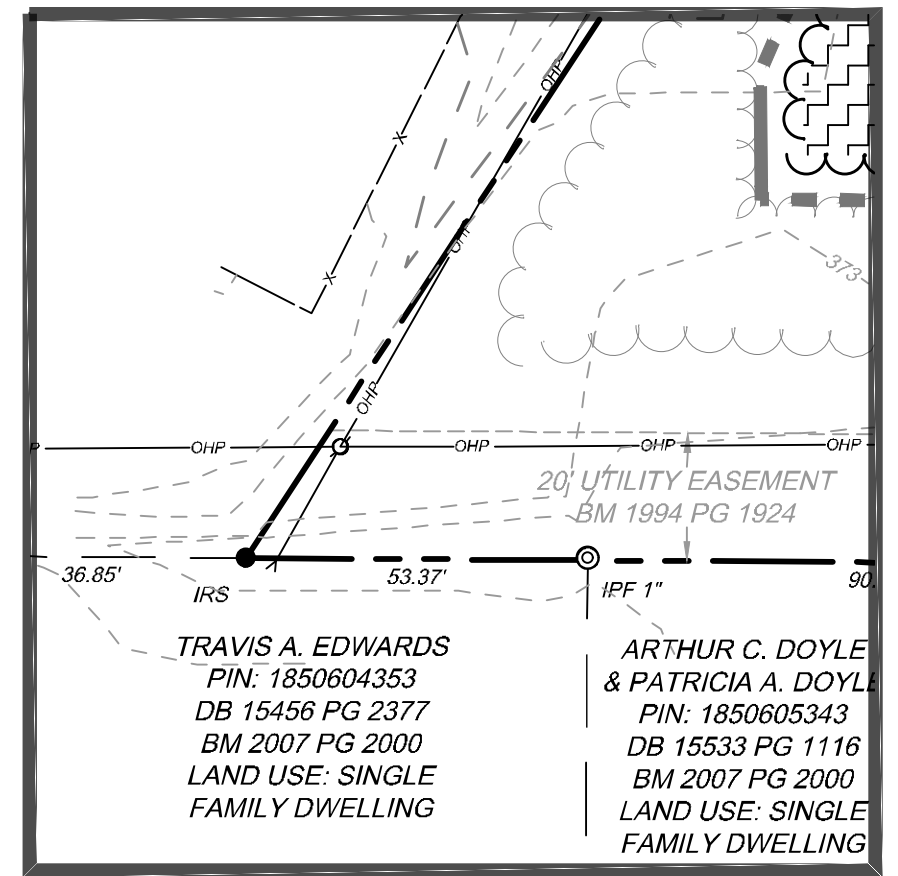
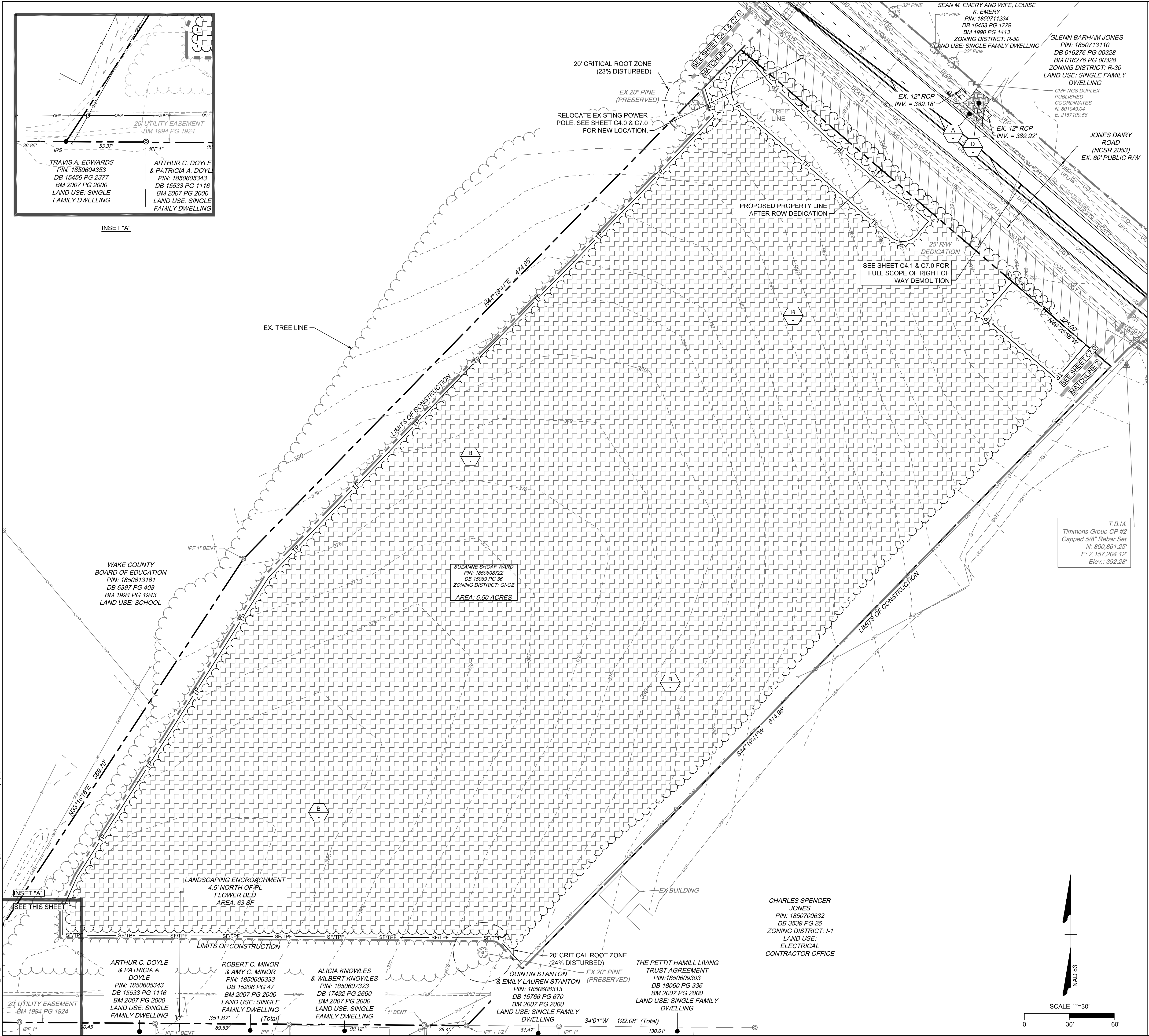
### OVERALL SITE PLAN & KEY MAP

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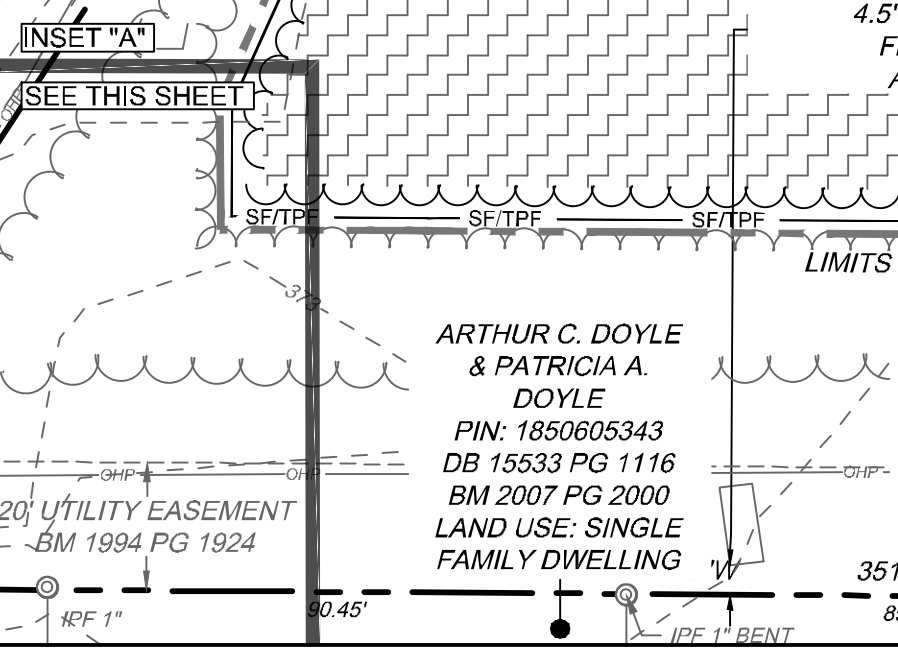
JOB NO. 54832  
 SHEET NO. C0.1

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INSET "A"



INSET "A"

- ### DEMOLITION NOTES
- ALL UTILITIES OR STRUCTURES NOT INDICATED FOR REMOVAL OR MODIFICATION ARE TO REMAIN AND BE PROTECTED FROM DAMAGE. ALL WASTE MATERIAL GENERATED FROM CLEARING AND DEMOLITION ACTIVITIES SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL APPLICABLE RULES AND REGULATIONS. CONTRACTOR SHALL SALVAGE ALL SIGNAGE, METERS, ETC. TO OWNER. COORDINATE WITH OWNER PRIOR TO DEMOLITION.
  - CLEAR AND GRUB AS NEEDED WITHIN CONSTRUCTION LIMITS PER SPECIFICATIONS AND DRAWINGS. EXISTING TREES, SHRUBS OR OTHER LANDSCAPE MATERIAL WHICH WILL CONFLICT WITH NEW CONSTRUCTION SHALL BE REMOVED (WHETHER OR NOT SHOWN ON THE DRAWINGS) FOLLOWING APPROVAL OF ENGINEER. BY SUBMITTING A BID, CONTRACTOR ACKNOWLEDGES THAT THE SITE HAS BEEN INVESTIGATED TO DETERMINE TYPE, SIZE AND QUANTITY OF CLEARING REQUIRED FOR CONSTRUCTION.
  - ALL PAVEMENT OR CONCRETE TO BE REMOVED SHALL BE SAW CUT TO PROVIDE A STRAIGHT AND UNIFORM JOINT WITH NEW CONSTRUCTION. ANY EXISTING PAVEMENT, SIDEWALK, CURB & GUTTER, ETC. THAT MUST BE REMOVED TO ALLOW NEW CONSTRUCTION SHALL BE REMOVED AND REPAIRED PER THE SPECIFICATIONS AND DETAILS OR TO MATCH EXISTING CONDITIONS (WHETHER OR NOT SHOWN ON THE DRAWINGS TO BE REMOVED). UTILITY INSTALLATIONS MAY UTILIZE OPEN CUT OF PAVEMENTS UNLESS INDICATED OTHERWISE. TRENCH IN EXISTING ASPHALT SHALL BE PATCHED PER PAVEMENT REPAIR DETAIL.
  - PROTECT ALL ADJACENT PROPERTIES, THE GENERAL PUBLIC AND ALL OF THE OWNERS FACILITIES. SHOULD DAMAGES OCCUR, NOTIFY ENGINEER IMMEDIATELY.
  - THE CONTRACTOR SHALL EMPLOY A QUALIFIED UTILITY LOCATOR SERVICE TO LOCATE ALL UNDERGROUND UTILITIES (INCLUDING BUT NOT LIMITED TO ELECTRICAL, TELEPHONE, GAS, CABLE, FIBER OPTIC) WITHIN THE LIMITS OF CONSTRUCTION.
  - VERIFY ALL ILLUSTRATED KNOWN UNDERGROUND ELEMENTS. EXERCISE REASONABLE EFFORTS TO PROTECT ANY UNKNOWN UNDERGROUND ELEMENTS. NOTIFY THE ENGINEER IMMEDIATELY IF UNKNOWN ELEMENTS ARE DISCOVERED THAT WOULD NECESSITATE MODIFICATION TO THE PROPOSED DESIGN.
  - ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND OSHA REGULATIONS.
  - EXISTING MANHOLES, VALVE BOXES, VAULTS, CLEANOUTS, UTILITY POLES ETC. TO REMAIN WITHIN THE GRADING LIMITS SHALL BE ADJUSTED AS NEEDED TO FUNCTION PROPERTY WITH THE PROPOSED FINISHED GRADES (WETHER OR NOT INDICATED TO BE MODIFIED). ANY AND ALL LANDSCAPING AND EXISTING TREES & SHRUBS TO REMAIN WHICH ARE DAMAGED DURING DEMOLITION OR CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR UTILIZING A LICENSED LANDSCAPE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
  - PROTECT EXISTING SITE FURNISHINGS AND PLAYGROUNDS DURING CONSTRUCTION. REPLACE AT NO COST TO THE OWNER IF DAMAGED.
  - A TREE SURVEY PER ROLESVILLE LDO SECTION 6 WAS PERFORMED BY STEVEN BALL, RF AT SOIL & ENVIRONMENTAL CONSULTANTS, PA.
  - ALL TREE PROTECTION FENCING MUST REMAIN IN PLACE THROUGHOUT THE ENTIRE SITE DEVELOPMENT PROCESS UNTIL THE TIME A CERTIFICATE OF OCCUPANCY IS ISSUED

- ### DEMOLITION KEY NOTES
- REMOVE ASPHALT PAVEMENT AND STONE BASE
  - REMOVE TREE CLEARING
  - 50-FT MILL TAPER FROM 0" - 1.5" (SEE C7.0)
  - SAW CUT AND REMOVE CONCRETE AT NEAREST JOINT.
  - REMOVE AND REPLACE EXISTING CULVERT
  - RELOCATE EXISTING MAILBOX

### EXISTING CONDITIONS LEGEND

EX. CONSTRUCTION LIMITS	---
EX. STORM PIPE	----
EX. FENCE	X
EX. GAS LINE	G
EX. POWER LINE	UGP
EX. TELEPHONE LINE	UGT
EX. WATER LINE	W
EX. SANITARY SEWER FORCE MAIN	FM
EX. SANITARY SEWER LINE	SAN
EX. CABLE TV LINE	UCATV
EX. FIBER OPTIC LINE	UFO
EX. TREE LINE	~
LIGHT POLE	☆
SITE BOLLARD	⊙
UTILITY POLE	⊙
SANITARY SEWER MANHOLE	⊙
STORM SEWER MANHOLE	⊙
CLEANOUT (SANITARY OR STORM)	⊙
DROP INLET	⊙
FIRE HYDRANT	⊙
WATER VALVE	⊙
TELECOM BOX	⊙
GROUND MOUNTED SIGN	⊙

### TREE DISTURBANCE LEGEND

PN	PINE
----	------

### TREE SAVE AREA NOTES

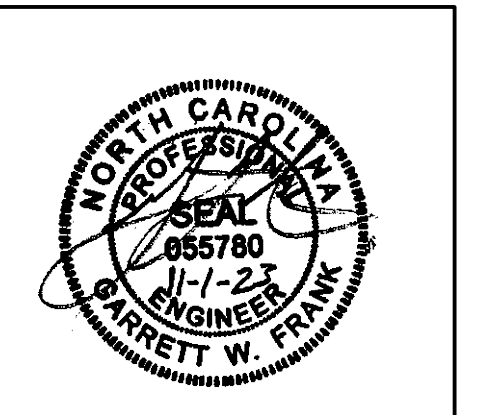
TREE SURVEY PERFORMED BY STEVEN BALL, RF, PWS ON 01/30/23.

TOTAL EXISTING TREES: 4.76 AC

TOTAL TREE SAVE REQUIRED: 10% OF TOTAL EXISTING TREES: 0.476 AC

TREE SAVE AREA: 0.592 AC

TREE CLEAR AREA: 4.168 AC



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 CHECKED BY: G. FRANK  
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# TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

## JONES DAIRY STORAGE FACILITY

TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

### EXISTING CONDITIONS & DEMOLITION PLAN

JOB NO. 54832  
 SHEET NO. C1.0

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**TRAFFIC CONTROL NOTES**

- ALL SITE SIGNAGE SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND NCDOT STANDARDS.
- PAVEMENT MARKINGS WITHIN RIGHT-OF-WAY SHALL BE THERMOPLASTIC. PAVEMENT MARKINGS ON SITE SHALL BE 2-COATS ALKYD RESIN PAINT.
- ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH NCDOT STANDARDS AND THE PROJECT SPECIFICATIONS, WHICHEVER IS MORE STRINGENT.
- ALL SIGNAGE SHALL HAVE HIGH INTENSITY PRISMATIC SHEETING.
- SIGNS SHALL BE FABRICATED FROM ALUMINUM ALLOY SHEETS.
- ALL MOUNTING HARDWARE SHALL BE GALVANIZED.
- "VAPS" ON PLANS DENOTES VAN ACCESSIBLE PARKING SIGN. INSTALL R7-8A, R7-8D, & R7-8P.
- "APS" ON PLANS DENOTES ACCESSIBLE PARKING SIGN. INSTALL R7-8A & R7-8D ONLY.

**STRIPING KEY NOTES**

	NCDOT STD.	WIDTH	COLOR
(11) C6.0	HIGH VISIBILITY CROSSWALK MARKINGS	-	WHITE
(1) C6.2	PARKING STALL AND TRAFFIC STRIPE	1205.07 (STD)	4-IN WHITE
(7) C6.2	ACCESSIBLE PARKING LAYOUT	-	WHITE
(9) C6.2	TRAFFIC ARROWS	1205.08	WHITE
(10) C6.2	FIRE LANE MARKING	1205.01	4-IN YELLOW
(E)	STOP BAR	1205.01	24-IN WHITE

**SIGNAGE KEY NOTES**

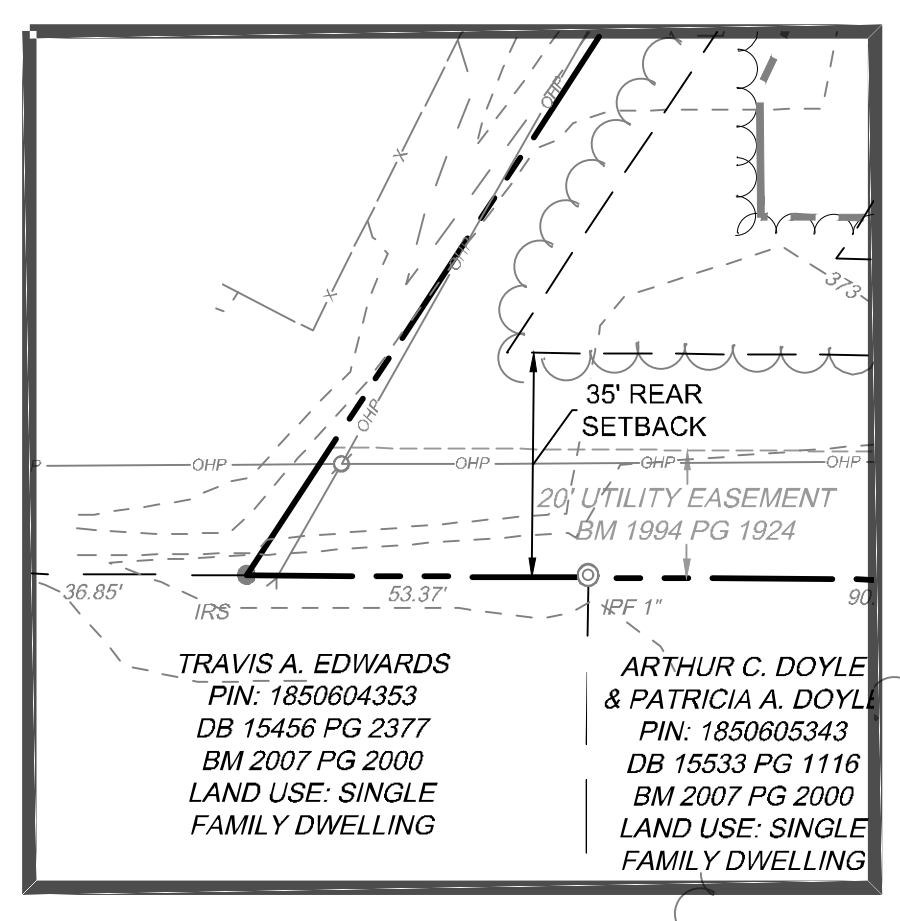
	MUTCD
(2) C6.2	STOP SIGN R1-1 (PER PLAN & DETAIL)
(3) C6.2	VAN ACCESSIBLE PARKING SIGN R7-8P, R7-8A, R7-8D (PER PLAN & DETAIL)
(M)	GROUND SIGN (REQUIRES SEPARATE PERMIT)

**SITE LAYOUT NOTES**

- ALL CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE ROLESVILLE, WAKE COUNTY, NCDOT AND OSHA STANDARDS AND SPECIFICATIONS.
- ALL DIMENSIONS ARE TO FACE OF CURB, EDGE OF PAVEMENT, BUILDING WALL FACE OR PROPERTY LINE, UNLESS OTHERWISE NOTED.
- ALL RADII ARE DIMENSIONED FROM BACK OF CURB. IF NOT STATED, RADII DIMENSION IS 5'.
- CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, UTILITIES AND GRADES PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO COMMENCING ANY RELATED CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OFF-SITE DISPOSAL OF ALL WASTE MATERIALS GENERATED DURING CONSTRUCTION AND FOR OBTAINING ALL APPLICABLE PERMITS FOR OFF-SITE STOCKPILES AND/OR WASTE AREAS.
- CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES DURING CONSTRUCTION AND SHALL MAKE REPAIRS AT NO EXPENSE TO THE OWNER.
- AT LEAST 72 HOURS PRIOR TO CONSTRUCTION OR EXCAVATION THE CONTRACTOR SHALL NOTIFY "NORTH CAROLINA ONE CALL" (811) OR (1-800-632-4949) TO HAVE EXISTING UTILITIES LOCATED. ALL PRIVATE UTILITIES SHALL BE LOCATED AS NEEDED BY A PRIVATE UTILITY LOCATE COMPANY EMPLOYED BY THE CONTRACTOR.
- ALL CURB AND GUTTER OFFSITE SHALL BE 30" WIDE UNLESS NOTED OTHERWISE.
- ALL DISTURBED CURB & GUTTER AND ASPHALT SHALL BE REPLACED PER PROJECT DETAILS AND NCDOT STANDARDS AND SPECIFICATIONS.
- RAISE ALL STRUCTURES AT NO ADDITIONAL COST TO THE OWNER SO THAT THE TOP OF THE STRUCTURE EQUALS THE FINISH GRADE OF THE NEW ASPHALT.
- COORDINATE THE PROJECT SCHEDULE WITH THE CIVIL ENGINEER AND OWNER. ANY UTILITY INTERRUPTIONS SHALL BE COORDINATED WITH THE OWNER AT LEAST 72 HOURS PRIOR TO THE INTERRUPTION. PROVIDE A SMOOTH TRANSITION BETWEEN NEW ASPHALT AND EXISTING ASPHALT SURFACES.
- ALL SIDEWALKS ARE TO HAVE NO MORE THAN A 1:20 (5.0%) SLOPE FOR THE LENGTH OF THE SIDEWALK AND NO MORE THAN A 1:50 (2.0%) SLOPE FOR THE WIDTH OF THE SIDEWALK. NOTIFY ENGINEER IF THIS CANNOT BE ACHIEVED.

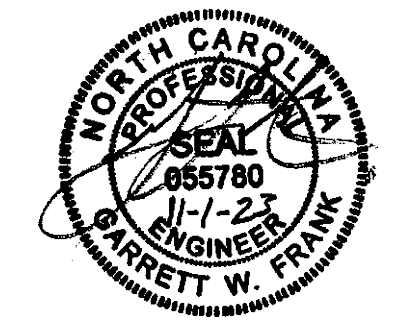
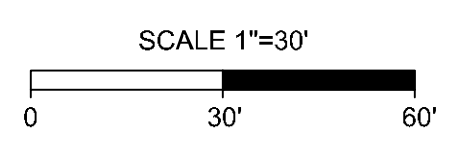
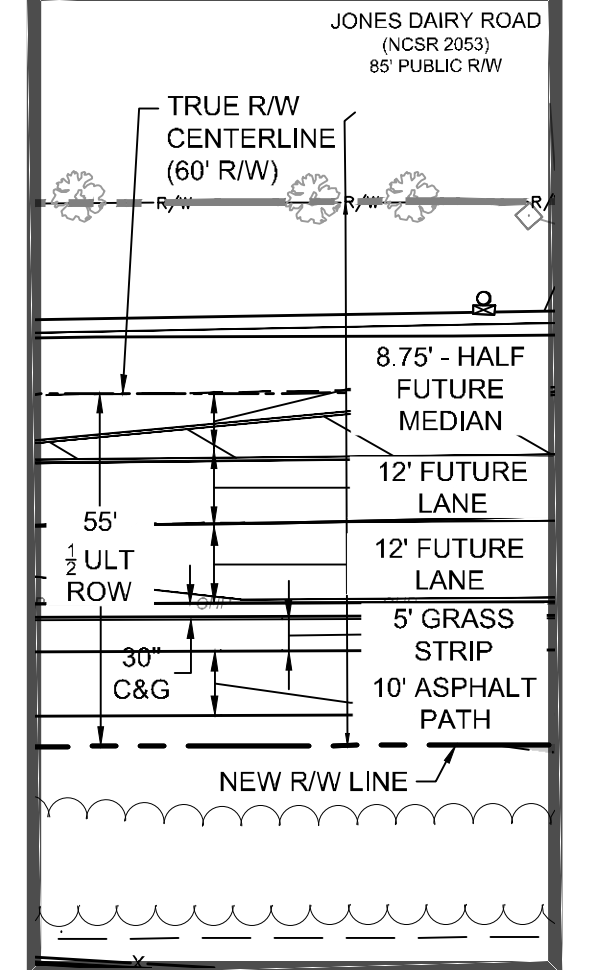
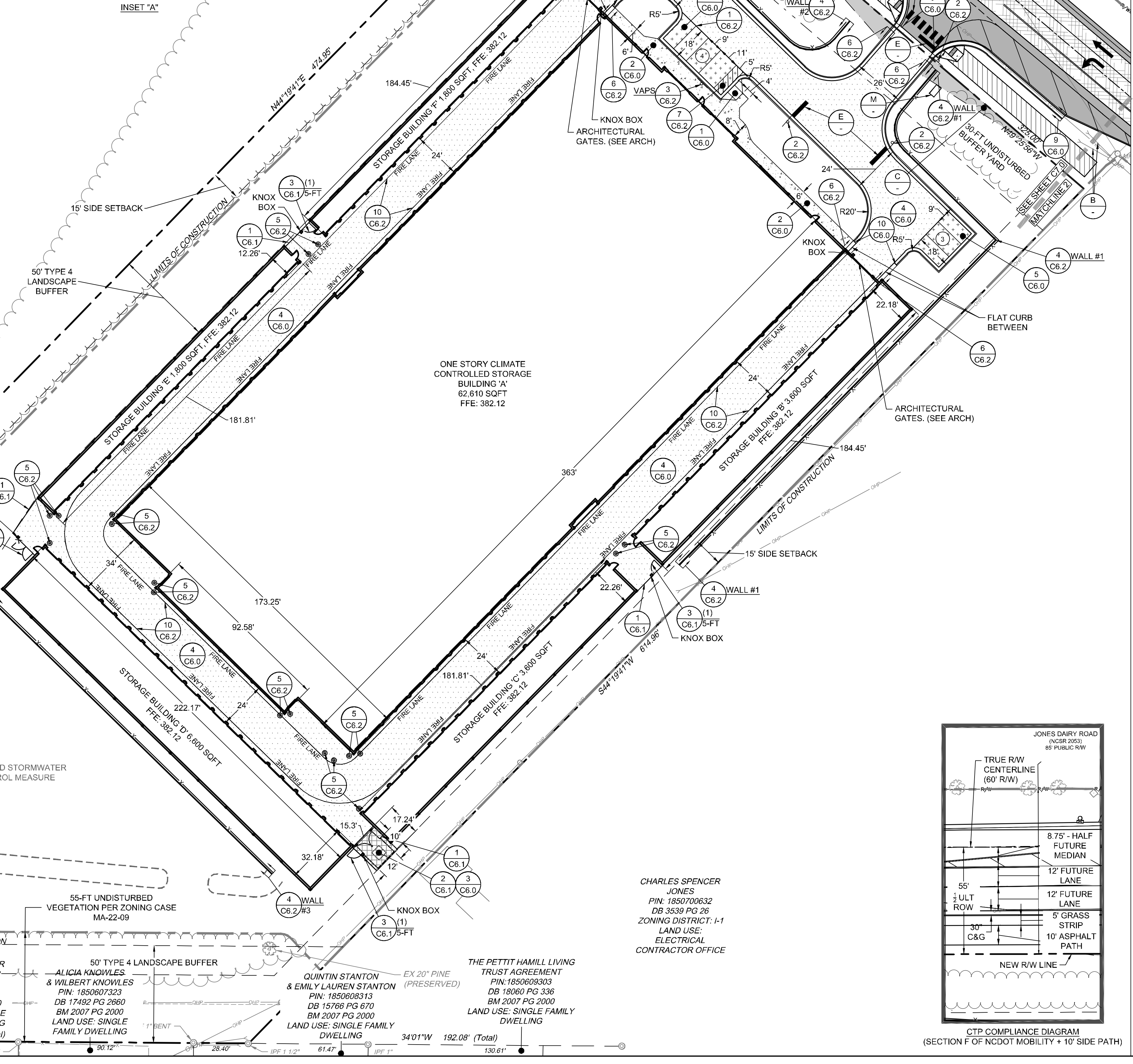
**KEY NOTES**

(1) C6.0	ACCESSIBLE CURB RAMP	
(2) C6.0	STANDARD DUTY CONCRETE PAVEMENT	
(3) C6.0	HEAVY DUTY CONCRETE PAVEMENT	
(4) C6.0	STANDARD DUTY ASPHALT PAVEMENT	
(5) C6.0	LIGHT DUTY ASPHALT PAVEMENT	
(6) C6.0	NCDOT ASPHALT (FULL DEPTH)	
(7) C6.0	NCDOT OVERLAY	
(9) C6.0	ASPHALT MULTI-USE PATH	
(10) C6.0	NCDOT 30" CONCRETE CURB & GUTTER	
(1) C6.1	CURB ENDING TAPER	
(2) C6.1	8-FT ORNAMENTAL FENCE	
(3) C6.1	DUMPSTER ENCLOSURE	
(4) C6.2	ORNAMENTAL GATES WITH KNOX BOX	
(5) C6.2	GRAVITY RETAINING WALL	
(6) C6.2	BOLLARD TYP.	
(A)	24" CONCRETE CURB & GUTTER	
(B)	RELOCATED MAILBOX	
(C)	RELOCATE OR PROVIDE TURN DOWN GUY WIRE BAR	
(D)	10-FT X 70-FT SIGHT TRIANGLE	
(E)	1.5" MILL & LAP JOINT (1.5" S-9.5B)	
(E)	REPLACE EXISTING MAIL BOX	



SEAN M. EMERY AND WIFE, LOUISE K. EMERY  
 PIN: 1850711234  
 DB 16453 PG 1779  
 BM 1990 PG 1413  
 ZONING DISTRICT: R-30  
 LAND USE: SINGLE FAMILY DWELLING

GLENN BARHAM JONES  
 PIN: 1850713110  
 DB 016276 PG 00328  
 BM 016276 PG 00328  
 ZONING DISTRICT: R-30  
 LAND USE: SINGLE FAMILY DWELLING



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11/07/2023	ADDRESSED TOWN OF ROLESVILLE 3RD REVIEW COMMENTS

DATE: 04/05/2023

DRAWN BY: L. BARNES

DESIGNED BY: G. FRANK

CHECKED BY: G. FRANK

SCALE: AS SHOWN

**TIMMONS GROUP**

NORTH CAROLINA LICENSE NO. C-1652

**JONES DAIRY STORAGE FACILITY**

TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

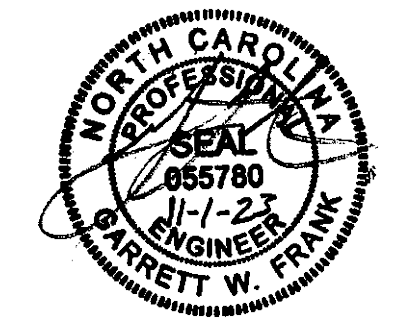
**SITE PLAN**

JOB NO. 54832

SHEET NO. C2.0

S:\33304832-Rolesville\_Site\_Storage\DWG\Sheet\CD-54832-333-C2.0-SITE.dwg | Plotted on 11/11/2023, 4:04 PM | by Lynnea Barnes





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 11/01/2023

DATE  
 04/05/2023

DRAWN BY  
**L. BARNES**

DESIGNED BY  
**G. FRANK**

CHECKED BY  
**G. FRANK**

SCALE  
**AS SHOWN**

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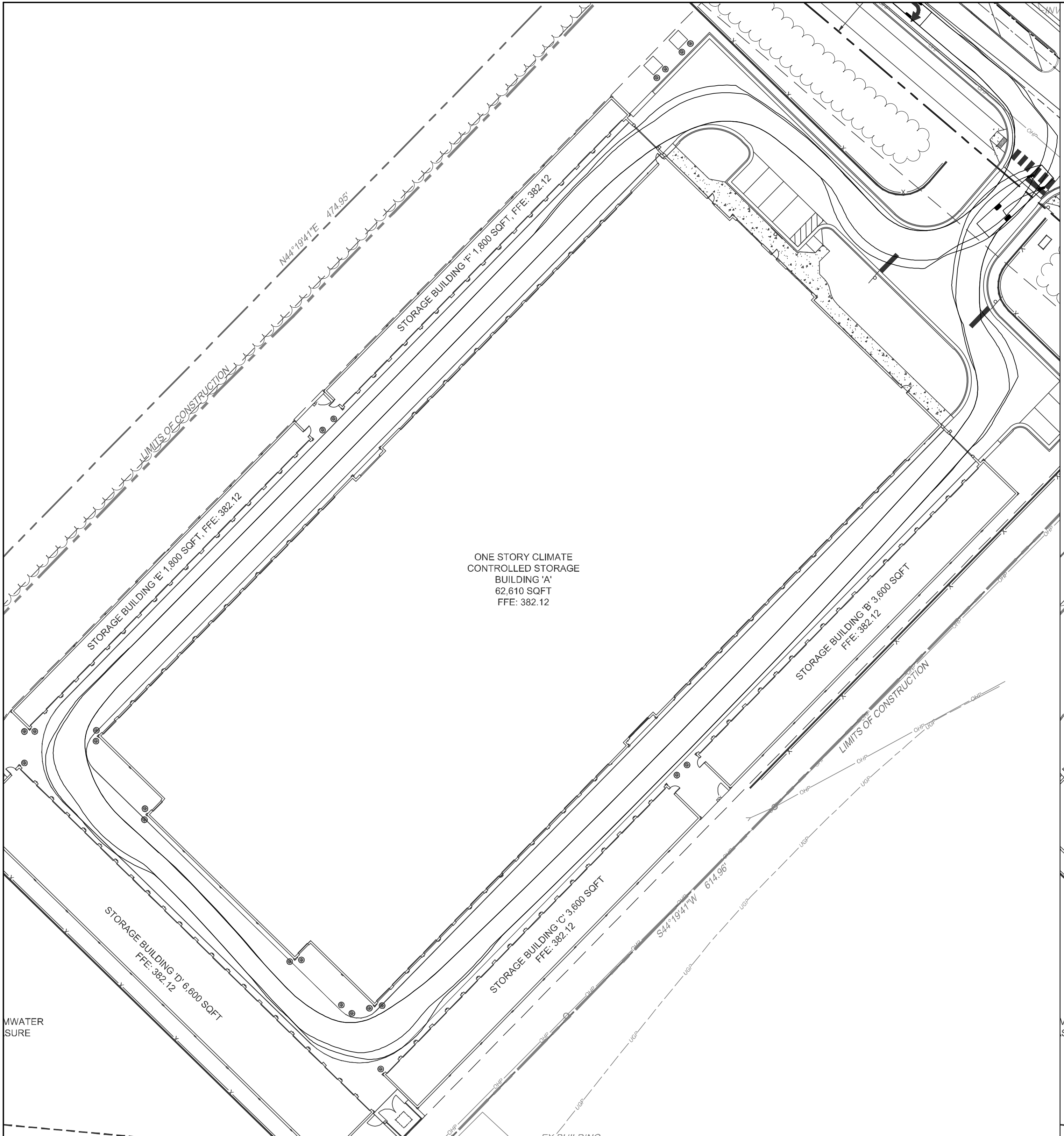
NORTH CAROLINA LICENSE NO. C-1652

## JONES DAIRY STORAGE FACILITY

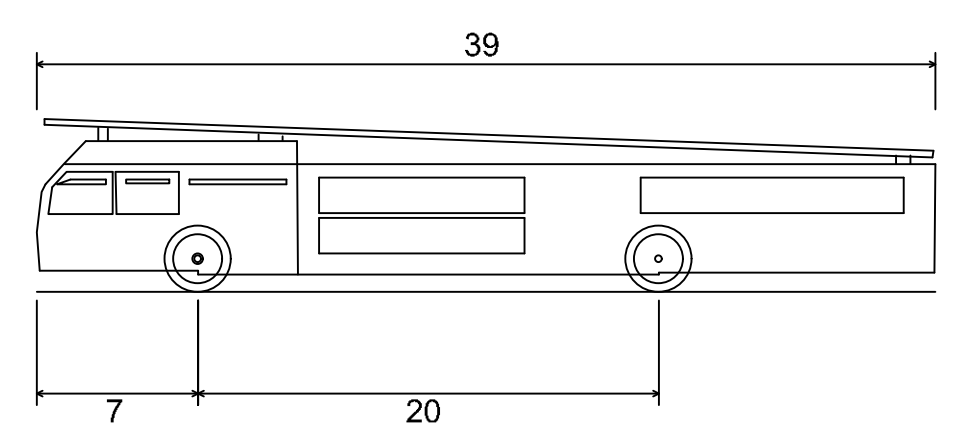
TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

### VEHICULAR ROUTING PLAN

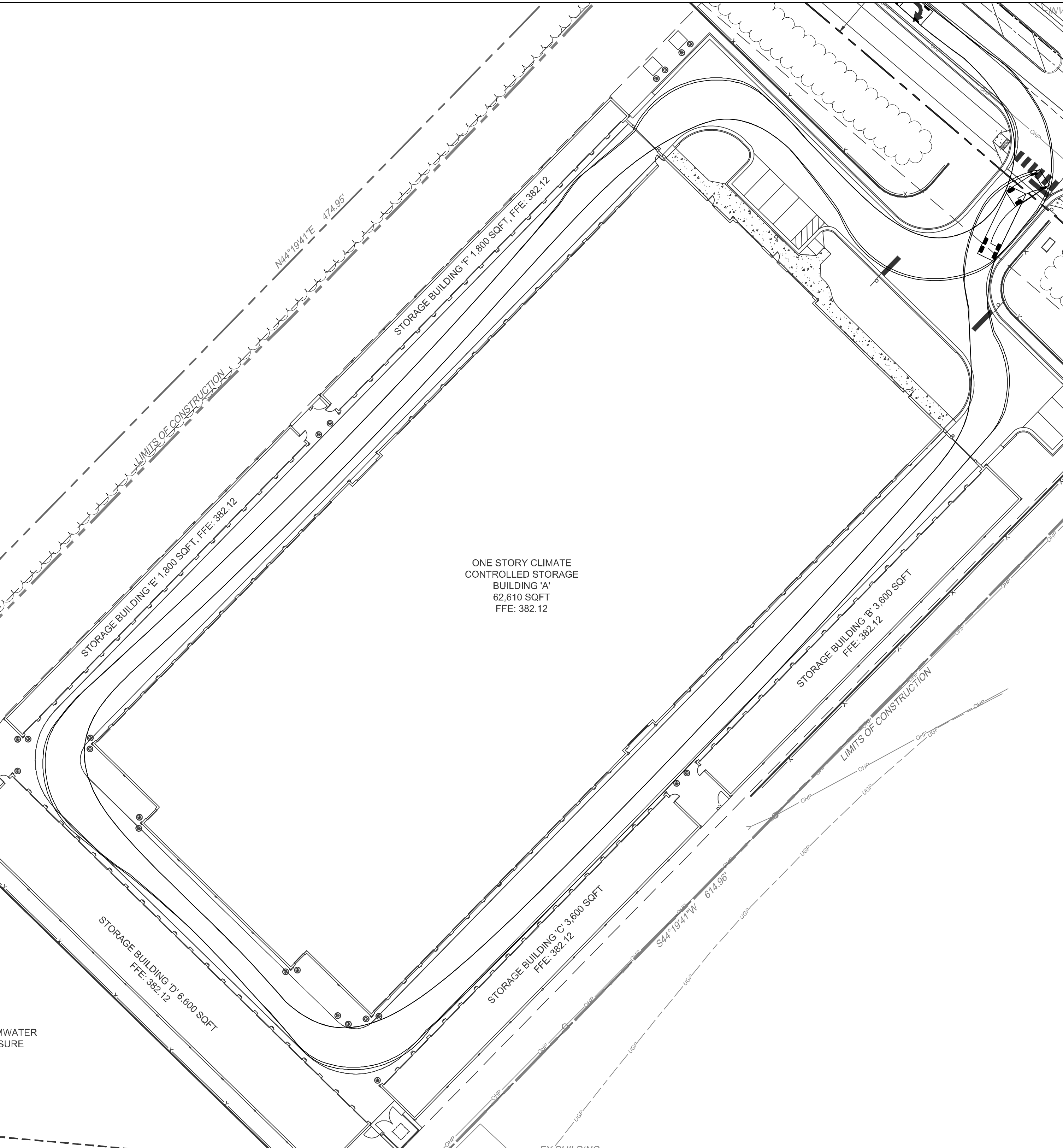
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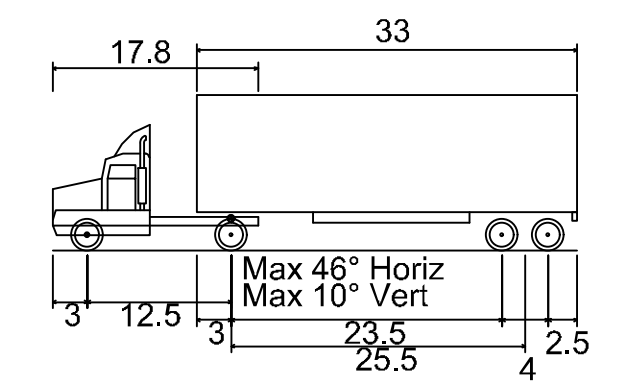
**FIRE LADDER APPARATUS TURNING PLAN**



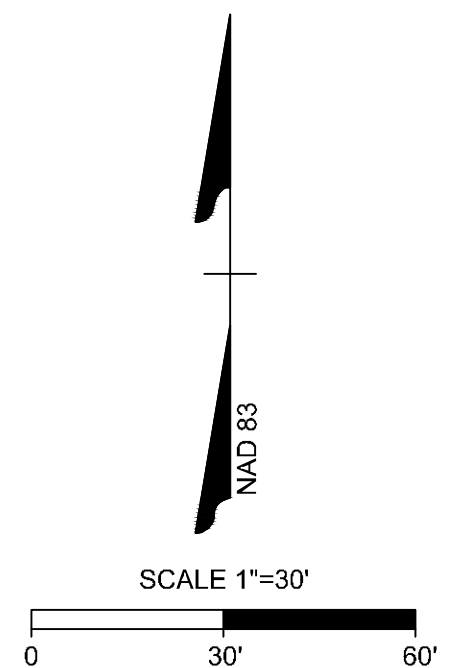
Aerial Fire Truck	39.000ft
Overall Length	8.167ft
Overall Width	7.500ft
Overall Body Height	0.750ft
Min Body Ground Clearance	8.167ft
Track Width	5.00s
Lock-to-lock time	45.00°
Max Wheel Angle	



**WB-40 INTERMEDIATE SEMI-TRAILER TURNING PLAN**



WB-40 - Intermediate Semi-Trailer	45.499ft
Overall Length	8.000ft
Overall Width	13.500ft
Overall Body Height	1.334ft
Min Body Ground Clearance	8.000ft
Track Width	4.00s
Lock-to-lock time	20.30°
Max Steering Angle (Virtual)	



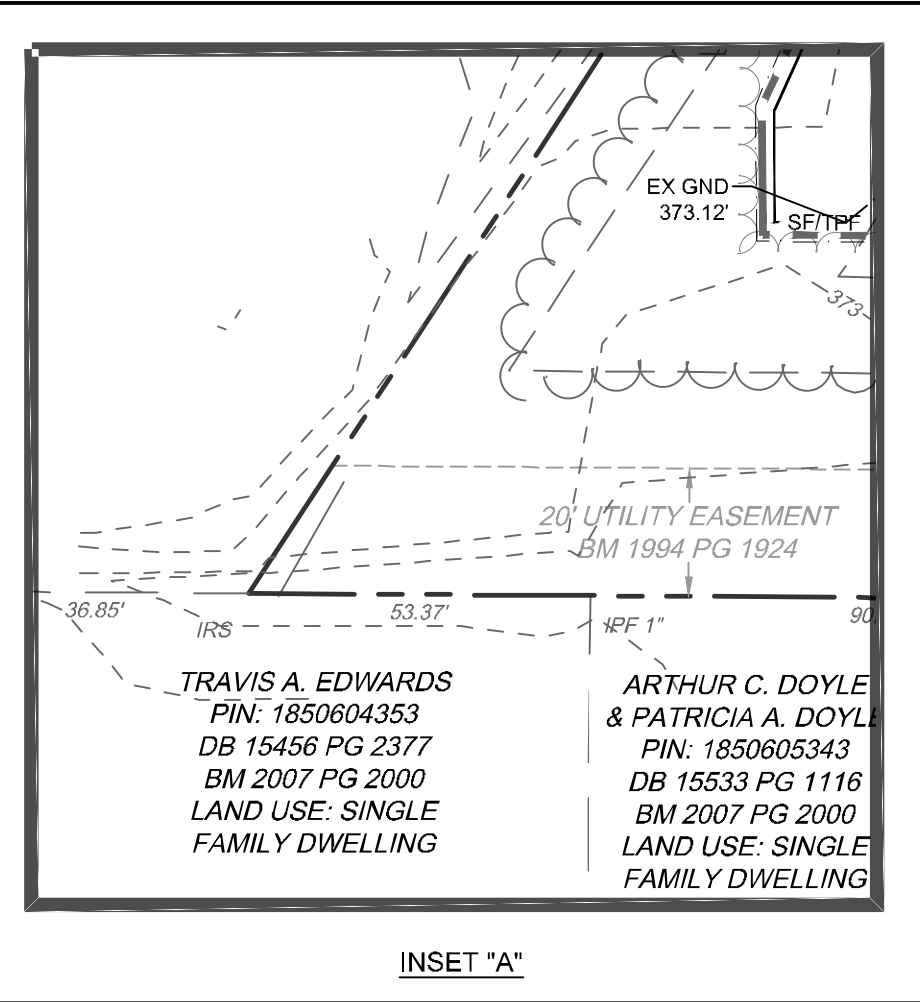
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JOB NO.  
**54832**

SHEET NO.  
**C2.1**





INSET "A"

TRAVIS A. EDWARDS  
PIN: 1850604353  
DB 15456 PG 2377  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

ARTHUR C. DOYLE & PATRICIA A. DOYLE  
PIN: 1850605343  
DB 15533 PG 1116  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

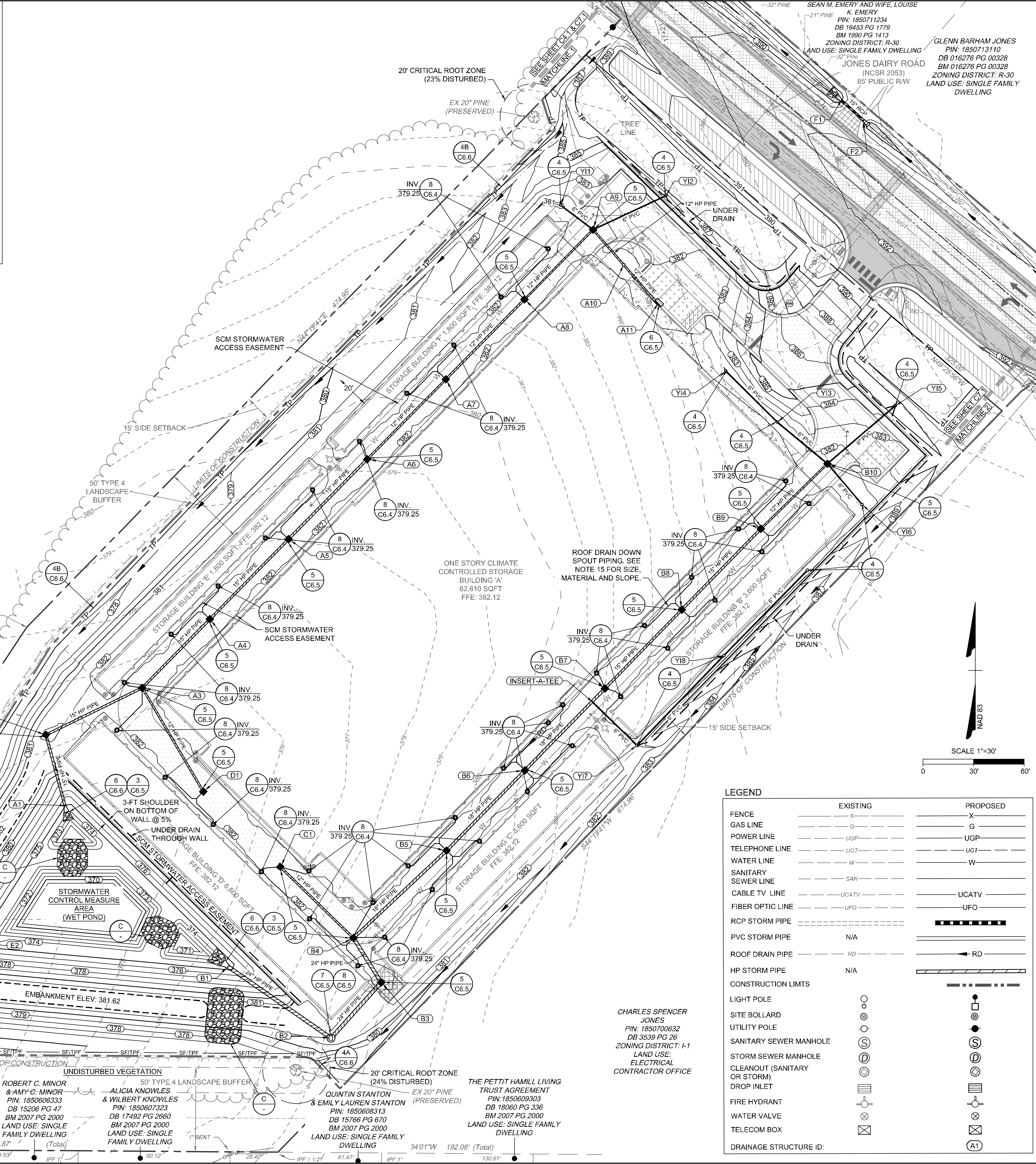
WAKE COUNTY BOARD OF EDUCATION  
PIN: 1850613161  
DB 6397 PG 408  
BM 1994 PG 1943  
LAND USE: SCHOOL

ARTHUR C. DOYLE & PATRICIA A. DOYLE  
PIN: 1850605343  
DB 15533 PG 1116  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

ROBERT C. MINOR & AMY G. MINOR  
PIN: 1850607323  
DB 15206 PG 47  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

ALICIA KNOWLES & WILBERT KNOWLES  
PIN: 1850608313  
DB 17492 PG 2660  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

QUINTIN STANTON & EMILY LAUREN STANTON  
PIN: 1850608313  
DB 15768 PG 670  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

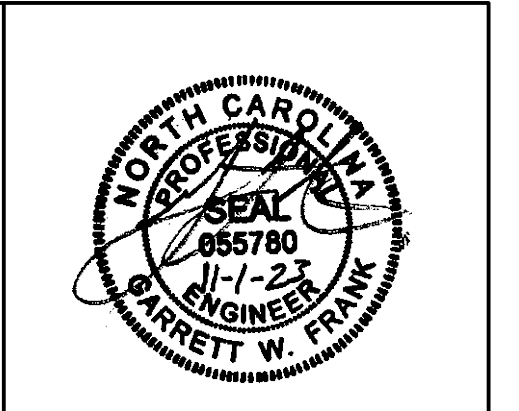


**LEGEND**

	EXISTING	PROPOSED
FENCE	- - - - -	X
GAS LINE	- - - - -	G
POWER LINE	UGP	UGP
TELEPHONE LINE	UGT	UGT
WATER LINE	W	W
SANITARY SEWER LINE	SAN	SAN
CABLE TV LINE	UCATV	UCATV
FIBER OPTIC LINE	UFO	UFO
RCP STORM PIPE	- - - - -	- - - - -
PVC STORM PIPE	N/A	- - - - -
ROOF DRAIN PIPE	RD	RD
HP STORM PIPE	N/A	- - - - -
CONSTRUCTION LIMITS	- - - - -	- - - - -
LIGHT POLE	○	○
SITE BOLLARD	⊙	⊙
UTILITY POLE	○	○
SANITARY SEWER MANHOLE	⊙	⊙
STORM SEWER MANHOLE CLEANOUT (SANITARY OR STORM)	⊙	⊙
DROP INLET	⊙	⊙
FIRE HYDRANT	⊙	⊙
WATER VALVE	⊙	⊙
TELECOM BOX	⊙	⊙
DRAINAGE STRUCTURE ID:	○	○

- GRADING & DRAINAGE NOTES**
- ALL CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE ROLESVILLE, WAKE COUNTY, NCDOT AND OSHA STANDARDS AND SPECIFICATIONS.
  - COORDINATE THE PROJECT SCHEDULE WITH THE OWNER, AND ADJACENT USERS OF THE PROPERTY. MAINTAIN TRAFFIC FLOW AND DO NOT INTERRUPT UTILITIES AROUND THE SITE. DO NOT DISTURB OPERATIONS OF ADJACENT SITES AND FACILITIES AND/OR THEIR OWNER'S ONGOING OPERATIONS.
  - ALL EXISTING VAULTS, MANHOLES, STORM DRAIN STRUCTURES, VALVE BOXES, CLEANOUTS, ETC. SHALL BE ADJUSTED AS NEEDED TO MATCH FINISHED GRADE.
  - ALL BACKFILL, COMPACTION, SOILS TESTING, ETC. SHALL BE PERFORMED BY THE OWNER'S INDEPENDENT TESTING LABORATORY.
  - ALL SPOT ELEVATIONS INDICATED ARE AT TOP OF CURB UNLESS NOTED OTHERWISE.
  - SPOT GRADE ABBREVIATIONS:
    - TC: TOP OF CURB
    - EP: EDGE OF PAVEMENT
    - HP: HIGH POINT
    - SWK: SIDEWALK
    - FFE: FINISHED FLOOR ELEVATION
    - TW: TOP OF WALL
    - BW: BOTTOM OF WALL
    - FL: FLOW LINE
    - GND: GROUND
    - EX GND: EXISTING GROUND
  - SPOT ELEVATIONS ARE GIVEN AT THE MAJORITY OF THE MAJOR BREAK POINTS BUT IT SHOULD NOT BE ASSUMED THAT ALL NECESSARY SPOT ELEVATIONS ARE SHOWN. DUE TO SPACE LIMITATIONS, THERE MAY BE OTHER CRITICAL SPOTS NOT LABELED THAT SHOULD BE TAKEN INTO CONSIDERATION. THE CONTRACTOR SHALL REVIEW THE GRADING PLAN IN DETAIL AND SHALL ENSURE THAT ALL CRITICAL GRADE POINTS ARE STAKED AND FOLLOWED TO PROVIDE POSITIVE DRAINAGE.
  - ALL ELEVATIONS ARE BASED ON NC GRID NORTH (NAD 83 2011).
  - THE CONTRACTOR SHALL USE NC ONE CALL (811) TO LOCATE ALL UNDERGROUND UTILITIES. PRIVATE UTILITIES SHALL BE LOCATED BY A PRIVATE LOCATE SERVICE AT THE EXPENSE OF THE CONTRACTOR.
  - INSTALL ALL STORM SEWERS TO PROVIDE REQUIRED CLEARANCES TO CROSSING UTILITIES AS INDICATED IN THE DRAWINGS AND SPECIFICATIONS.
  - PROVIDE HALF-BENCH CONCRETE INLET SHAPING FOR ALL CONCRETE STORM SEWER STRUCTURES.
  - ALL ROOF DRAINS FROM BUILDING 'A' SHALL BE 8" PVC (SCH 40) @ 1.04% MIN. SLOPE UNLESS INDICATED OTHERWISE. ALL ROOF DRAINS FROM BUILDING 'B', 'C', AND 'D', SHALL BE 6" PVC (SCH 40) @ 1.04% MIN. SLOPE UNLESS INDICATED OTHERWISE. USE DUCTILE IRON WHEN COVER IS LESS THAN 24-IN. MATCH PIPE CROWNS WITH CONNECTION TO DROP INLET.
  - PVC ROOF DRAIN PIPING UNDER PAVEMENT SHALL HAVE 24-IN MINIMUM COVER. IF ROOF DRAIN PIPING UNDER PAVEMENT HAS LESS THAN 24-IN COVER, ROOF DRAIN PIPING SHALL BE 8" DIP (IN LIEU OF PVC).
  - JOINT FILL AND CAULK EACH CONCRETE EXPANSION JOINT AND WHERE CONCRETE PAVEMENT ABUTS OTHER PAVEMENTS, SIDEWALKS, OR HARD SURFACES.
  - MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAINFALL EVENT IN ACCORDANCE WITH NCDCEQ LAND QUALITY REQUIREMENTS AND AS DIRECTED BY THE NCDCEQ AND CIVIL ENGINEER.
  - FLUSH ALL SEDIMENT OUT OF STORM DRAINAGE PIPES AND STRUCTURES FOLLOWING SITE STABILIZATION AND AT THE END OF CONSTRUCTION. FLUSH OUT PIPES AS NEEDED THROUGHOUT CONSTRUCTION TO MAINTAIN PROPER FUNCTIONING OF THE DRAINAGE SYSTEM.
  - IN DISTURBED AREAS, AMEND THE TOP 6 INCHES OF LAWN AREAS WITH TOPSOIL FROM THE SITE.
  - ALL SIDEWALKS ARE TO HAVE NO MORE THAN A 1:20 (5.0%) SLOPE FOR THE LENGTH OF THE SIDEWALK AND NO MORE THAN A 1:50 (2.0%) SLOPE FOR THE WIDTH OF THE SIDEWALK.
  - IF CONTRACTOR NOTICES ANY DISCREPANCIES IN ANY OF THESE SLOPE REQUIREMENTS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE OWNER & ENGINEER PRIOR TO POURING ANY CONCRETE.
  - PRIOR TO FINAL PROJECT ACCEPTANCE, PROVIDE AN AS-BUILT SURVEY OF ALL UTILITY SYSTEMS AND STORM SEWERS.
  - ANY AND ALL LANDSCAPING AND EXISTING TREES & SHRUBS TO REMAIN WHICH ARE DAMAGED DURING DEMOLITION OR CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR USING A LICENSED LANDSCAPE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

- KEY NOTES**
- ⊙ B C6.4 DOWNSPOUT BOOT CONNECTOR
  - ⊙ 1 C6.5 STORM SEWER CLEANOUT
  - ⊙ 2 C6.5 STORM DRAINAGE TRENCHES
  - ⊙ 3 C6.5 FLARED END SECTION
  - ⊙ 4 C6.5 YARD INLET
  - ⊙ 5 C6.5 CONCRETE DROP INLET
  - ⊙ 6 C6.5 CONCRETE CATCH BASIN
  - ⊙ 7 C6.5 STORM SEWER MANHOLE
  - ⊙ 8 C6.5 STORM SEWER MANHOLE COVER
  - ⊙ 4A C6.6 SILT FENCE (COMBINATION FENCE; SEE TREE FENCE DETAIL; SEE EROSION CONTROL PLAN)
  - ⊙ 4B C6.6 TREE PROTECTION FENCE (SEE EROSION CONTROL PLAN)
  - ⊙ 6 C6.6 RIP RAP OUTLET PROTECTION (SEE EROSION CONTROL PLAN)
  - ⊙ A - PROVIDE SMOOTH PAVING TRANSITION
  - ⊙ B - CONCRETE RISER STRUCTURE (SEE SHEET C3.3)
  - ⊙ C - CLASS B RIP RAP. SEE SCM DETAIL SHEETS.



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DATE: 04/05/2023  
DRAWN BY: L. BARNES  
DESIGNED BY: G. FRANK  
CHECKED BY: G. FRANK  
SCALE: AS SHOWN

**TIMMONS GROUP**  
NORTH CAROLINA LICENSE NO. C-1652

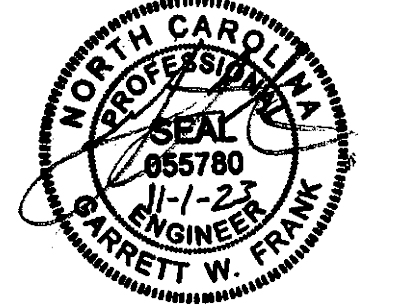
**JONES DAIRY STORAGE FACILITY**  
TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

**GRADING & DRAINAGE PLAN**

JOB NO.: 54832  
SHEET NO.: C3.0

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# TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

## JONES DAIRY STORAGE FACILITY

TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

### SPOT ELEVATION PLAN

JOB NO. 54832  
SHEET NO. C3.1

#### GRADING & DRAINAGE NOTES

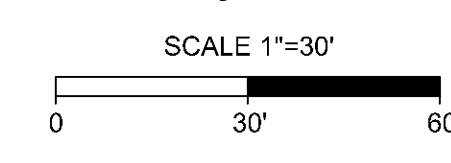
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  - 6.5. FFE: FINISHED FLOOR ELEVATION
  - 6.6. TW: TOP OF WALL
  - 6.7. BW: BOTTOM OF WALL
  - 6.8. FL: FLOW LINE
  - 6.9. GND: GROUND
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- MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAINFALL EVENT IN ACCORDANCE WITH NCDEQ LAND QUALITY REQUIREMENTS AND AS DIRECTED BY THE NCDEQ AND CIVIL ENGINEER.
- FLUSH ALL SEDIMENT OUT OF STORM DRAINAGE PIPES AND STRUCTURES FOLLOWING SITE STABILIZATION AND AT THE END OF CONSTRUCTION. FLUSH OUT PIPES AS NEEDED THROUGHOUT CONSTRUCTION TO MAINTAIN PROPER FUNCTIONING OF THE DRAINAGE SYSTEM.
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#### KEY NOTES

- (B, C6.4) DOWNSPOUT BOOT CONNECTOR
- (1, C6.5) STORM SEWER CLEANOUT
- (2, C6.5) STORM DRAINAGE TRENCHES
- (3, C6.5) FLARED END SECTION
- (4, C6.5) YARD INLET
- (5, C6.5) CONCRETE DROP INLET
- (6, C6.5) CONCRETE CATCH BASIN
- (7, C6.5) STORM SEWER MANHOLE
- (8, C6.5) STORM SEWER MANHOLE COVER
- (4A, C6.6) SILT FENCE (COMBINATION FENCE; SEE TREE FENCE DETAIL, SEE EROSION CONTROL PLAN)
- (4B, C6.6) TREE PROTECTION FENCE (SEE EROSION CONTROL PLAN)
- (6, C6.6) RIP RAP OUTLET PROTECTION (SEE EROSION CONTROL PLAN)
- (A, C) PROVIDE SMOOTH PAVING TRANSITION
- (B, C) CONCRETE RISER STRUCTURE (SEE SHEET C3.3)
- (C, C) CLASS B RIP RAP. SEE SCM DETAIL SHEETS.

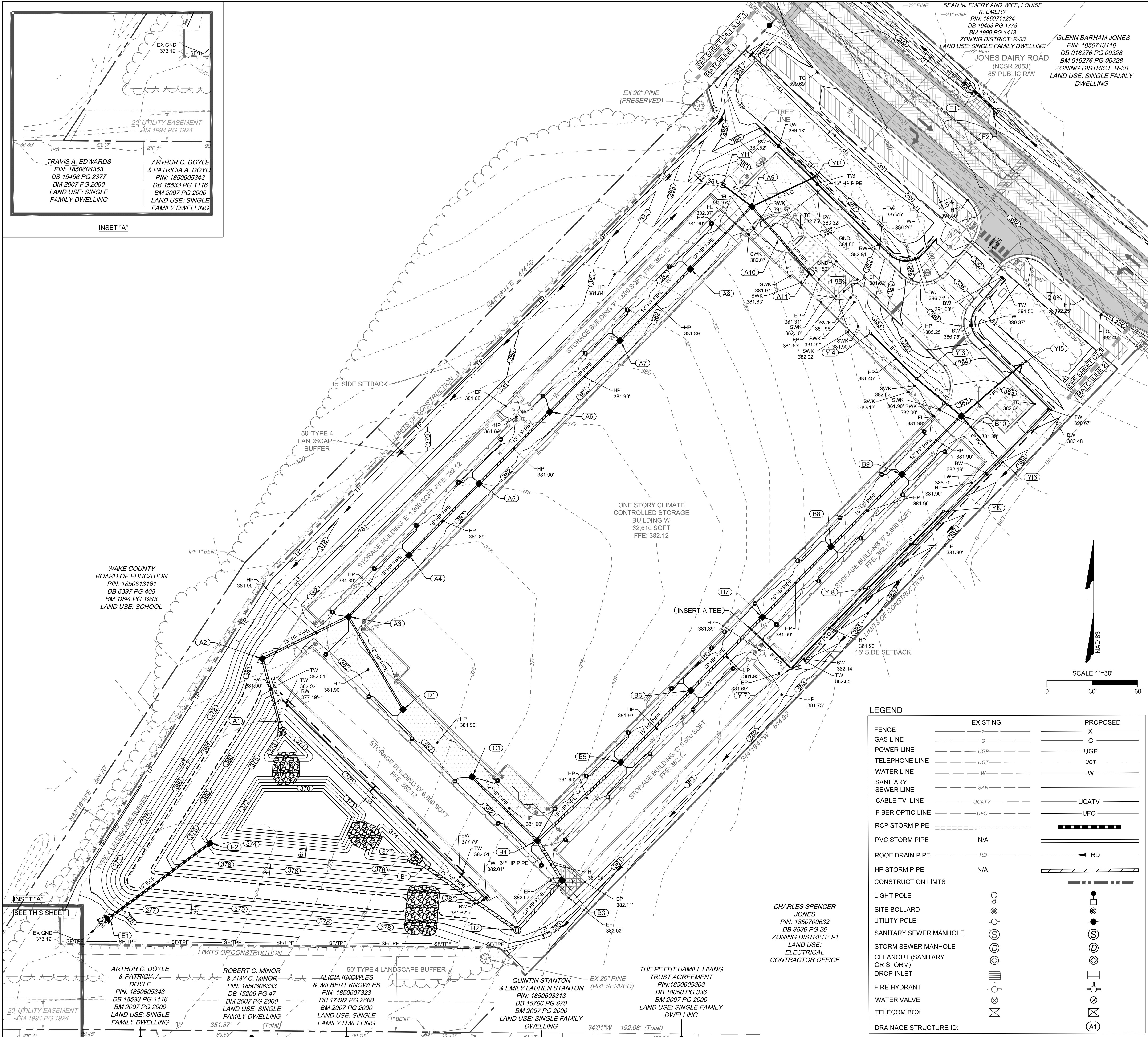
#### LEGEND

	EXISTING	PROPOSED
FENCE	- - - - -	- - - - -
GAS LINE	- - - - -	- - - - -
POWER LINE	- - - - -	- - - - -
TELEPHONE LINE	- - - - -	- - - - -
WATER LINE	- - - - -	- - - - -
SANITARY SEWER LINE	- - - - -	- - - - -
CABLE TV LINE	- - - - -	- - - - -
FIBER OPTIC LINE	- - - - -	- - - - -
RCP STORM PIPE	- - - - -	- - - - -
PVC STORM PIPE	N/A	- - - - -
ROOF DRAIN PIPE	- - - - -	- - - - -
HP STORM PIPE	N/A	- - - - -
CONSTRUCTION LIMITS	- - - - -	- - - - -
LIGHT POLE	○	○
SITE BOLLARD	●	●
UTILITY POLE	○	○
SANITARY SEWER MANHOLE	⊙	⊙
STORM SEWER MANHOLE CLEANOUT (SANITARY OR STORM)	⊙	⊙
DROP INLET	⊙	⊙
FIRE HYDRANT	⊙	⊙
WATER VALVE	⊙	⊙
TELECOM BOX	⊙	⊙
DRAINAGE STRUCTURE ID:	○	○



SCALE 1"=30'

NAD 83



TRAVIS A. EDWARDS  
PIN: 1850604353  
DB 15456 PG 2377  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

ARTHUR C. DOYLE & PATRICIA A. DOYLE  
PIN: 1850605343  
DB 15533 PG 1116  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

INSET "A"

WAKE COUNTY BOARD OF EDUCATION  
PIN: 1850613161  
DB 6397 PG 408  
BM 1994 PG 1943  
LAND USE: SCHOOL

ARTHUR C. DOYLE & PATRICIA A. DOYLE  
PIN: 1850605343  
DB 15533 PG 1116  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

ROBERT C. MINOR & AMY G. MINOR  
PIN: 1850607323  
DB 15206 PG 47  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

ALICIA KNOWLES & WILBERT KNOWLES  
PIN: 1850608313  
DB 17492 PG 2660  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

QUINTIN STANTON & EMILY LAUREN STANTON  
PIN: 1850608313  
DB 15768 PG 670  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

50' TYPE 4 LANDSCAPE BUFFER

THE PETTIT HAMILL LIVING TRUST AGREEMENT  
PIN: 1850609303  
DB 18060 PG 336  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

CHARLES SPENCER JONES  
PIN: 1850700632  
DB 3539 PG 28  
ZONING DISTRICT: I-1  
LAND USE: ELECTRICAL CONTRACTOR OFFICE

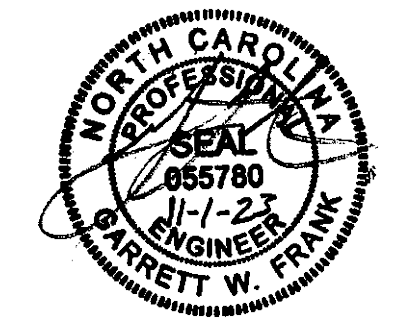
EX 20" PINE (PRESERVED)

INSET "A"

SEE THIS SHEET

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NORTH CAROLINA LICENSE NO. C-1652

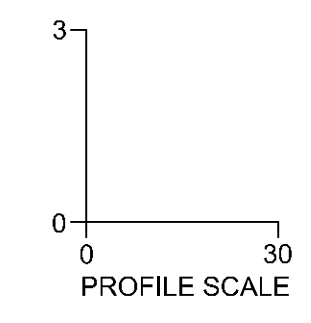
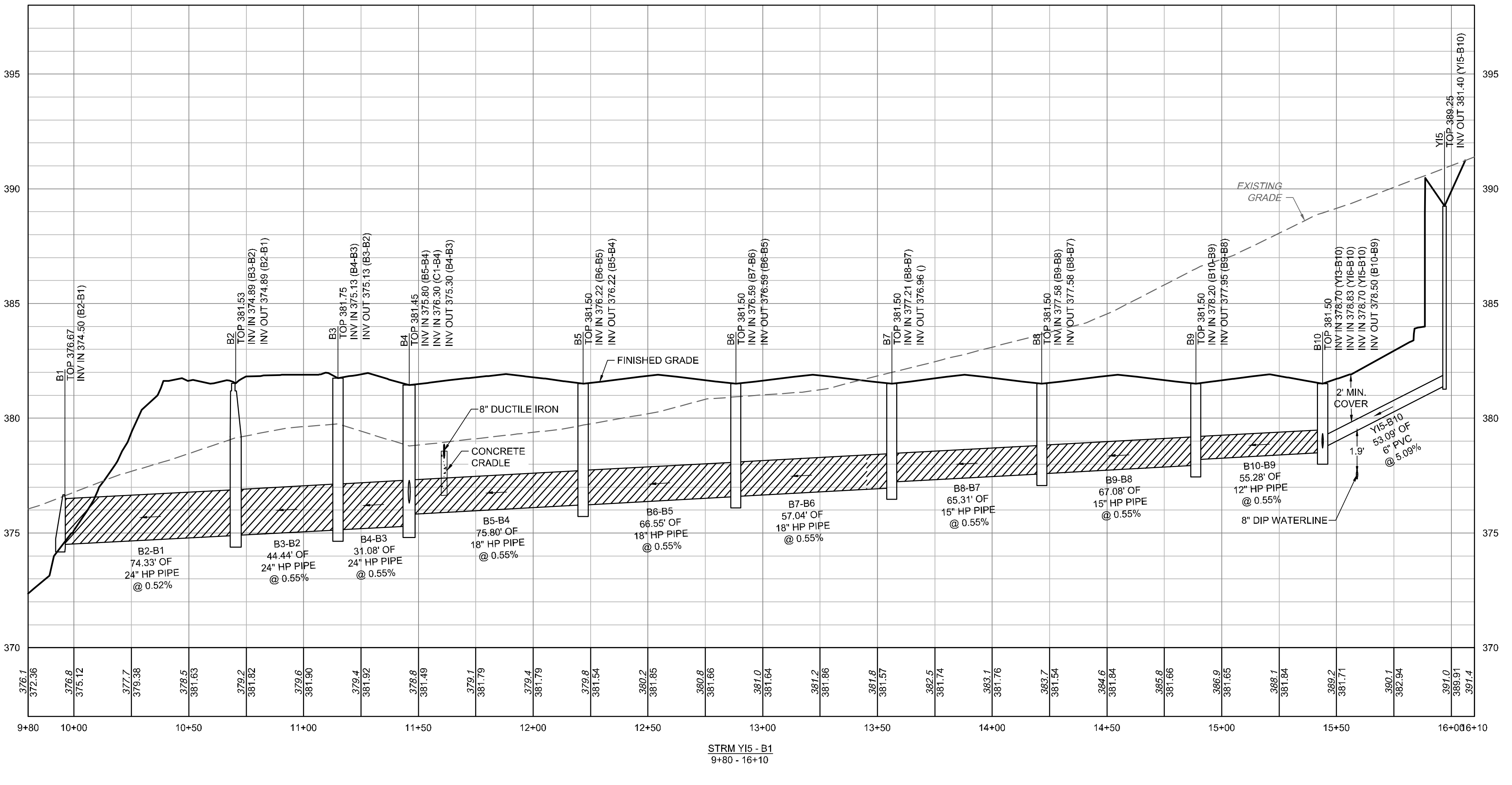
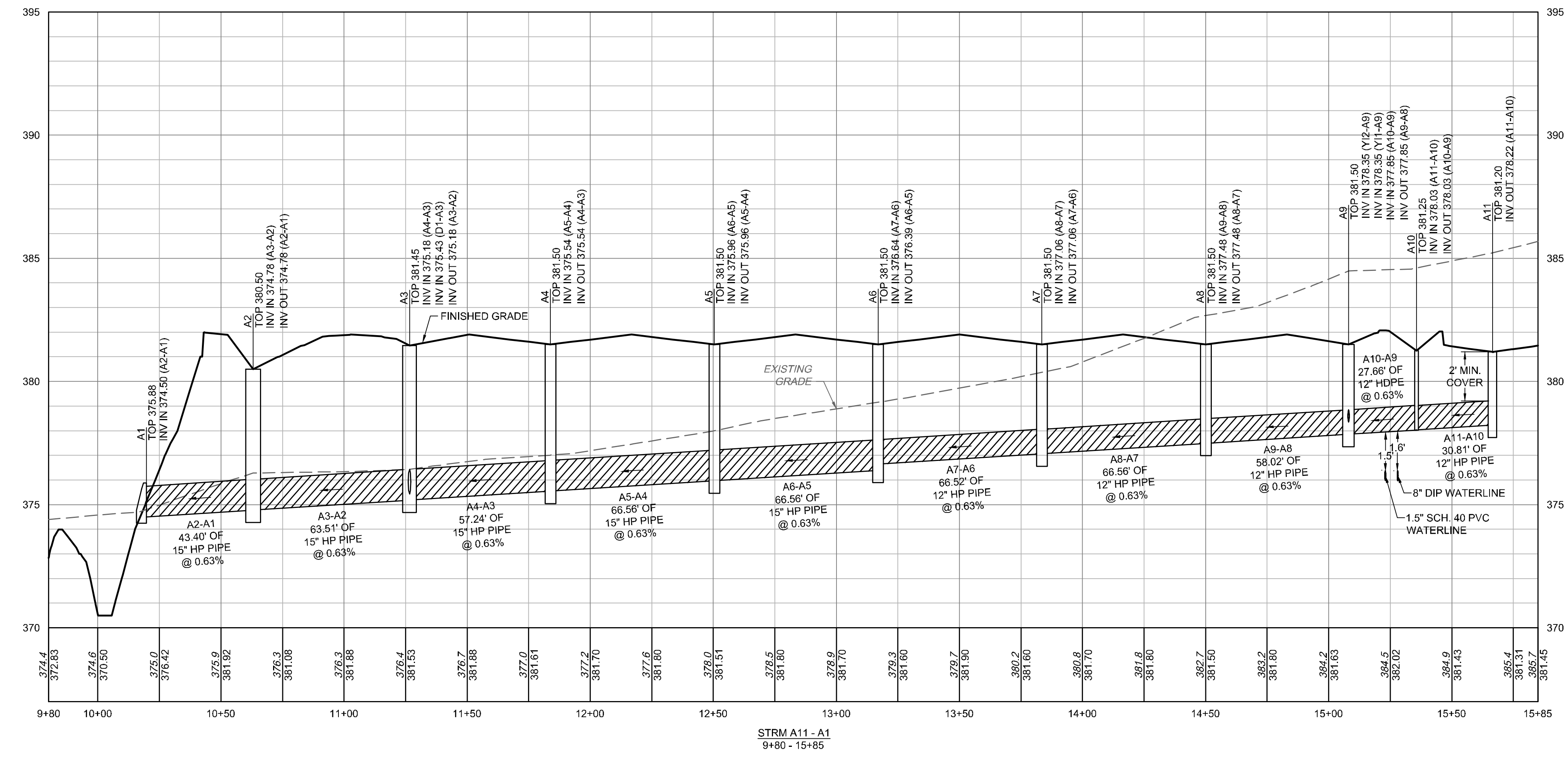
## JONES DAIRY STORAGE FACILITY

TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

### STORM SEWER PROFILES

JOB NO. 54832  
 SHEET NO. C3.2

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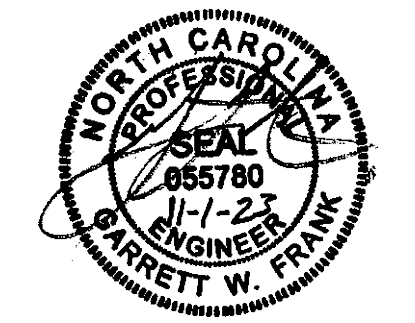
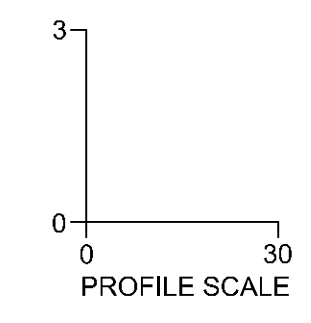
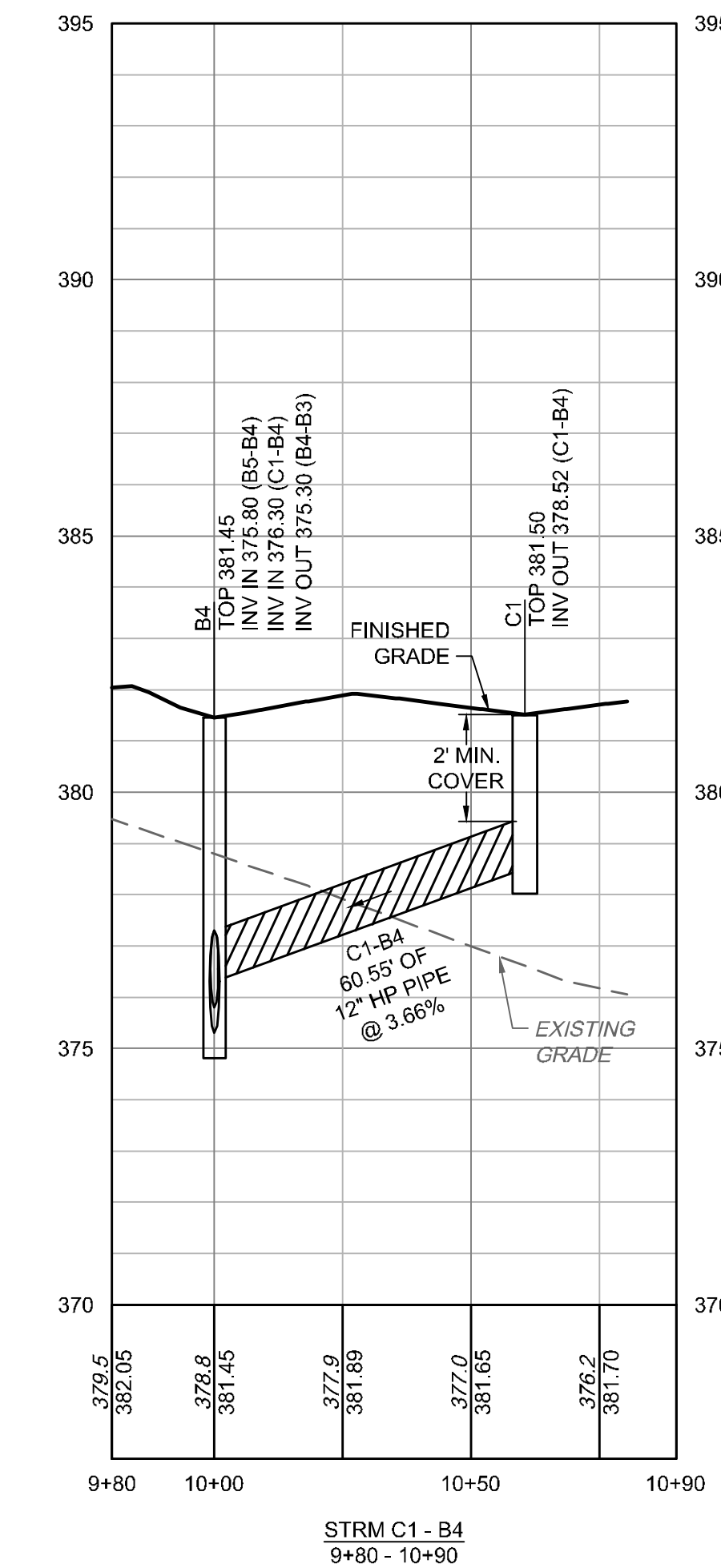
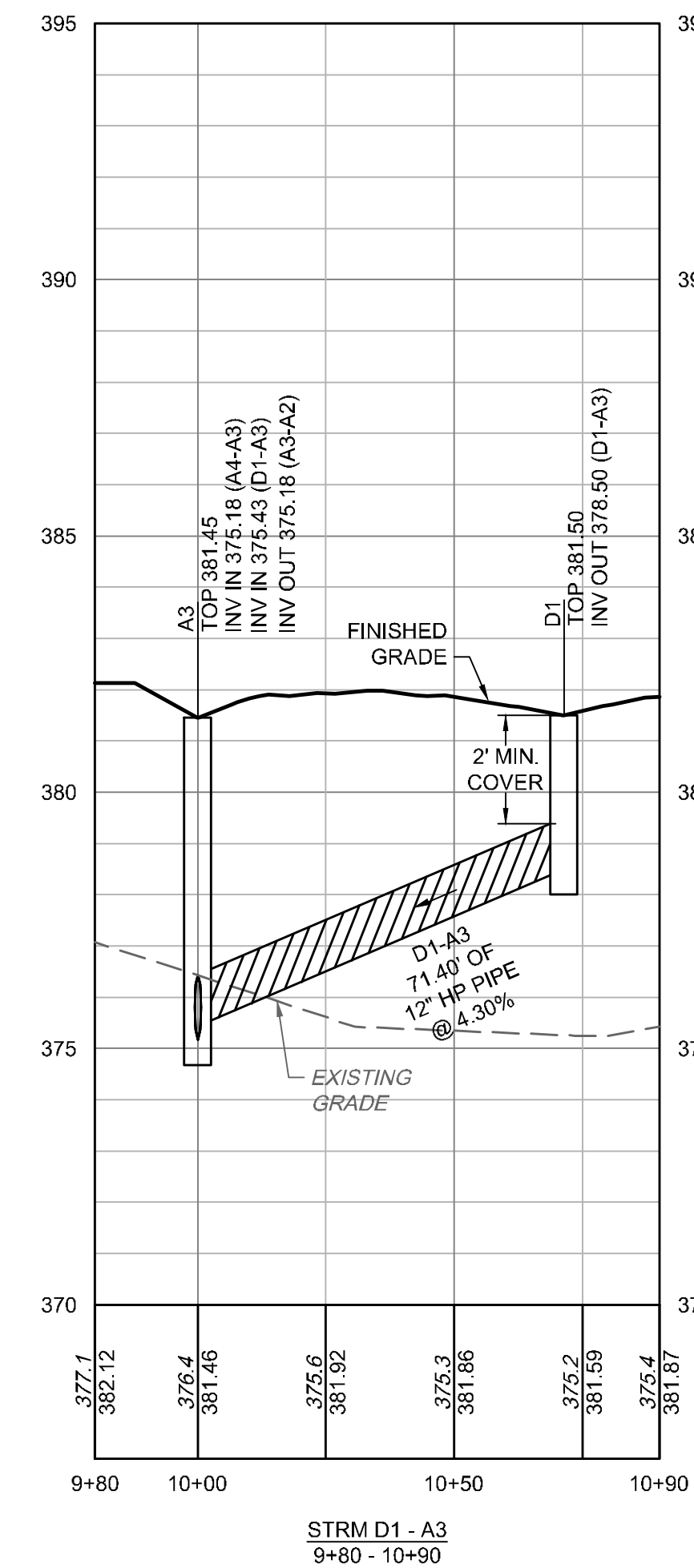
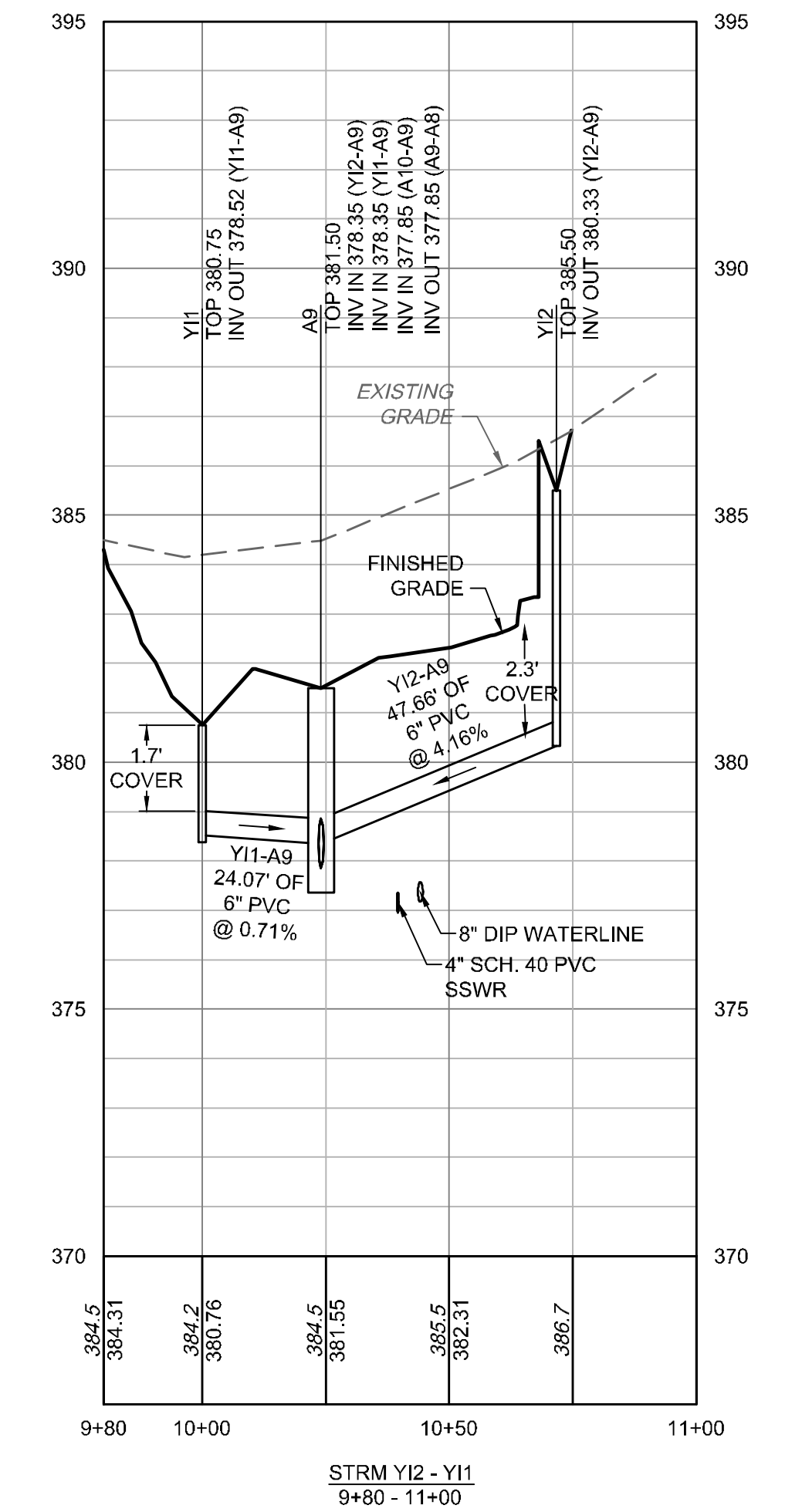
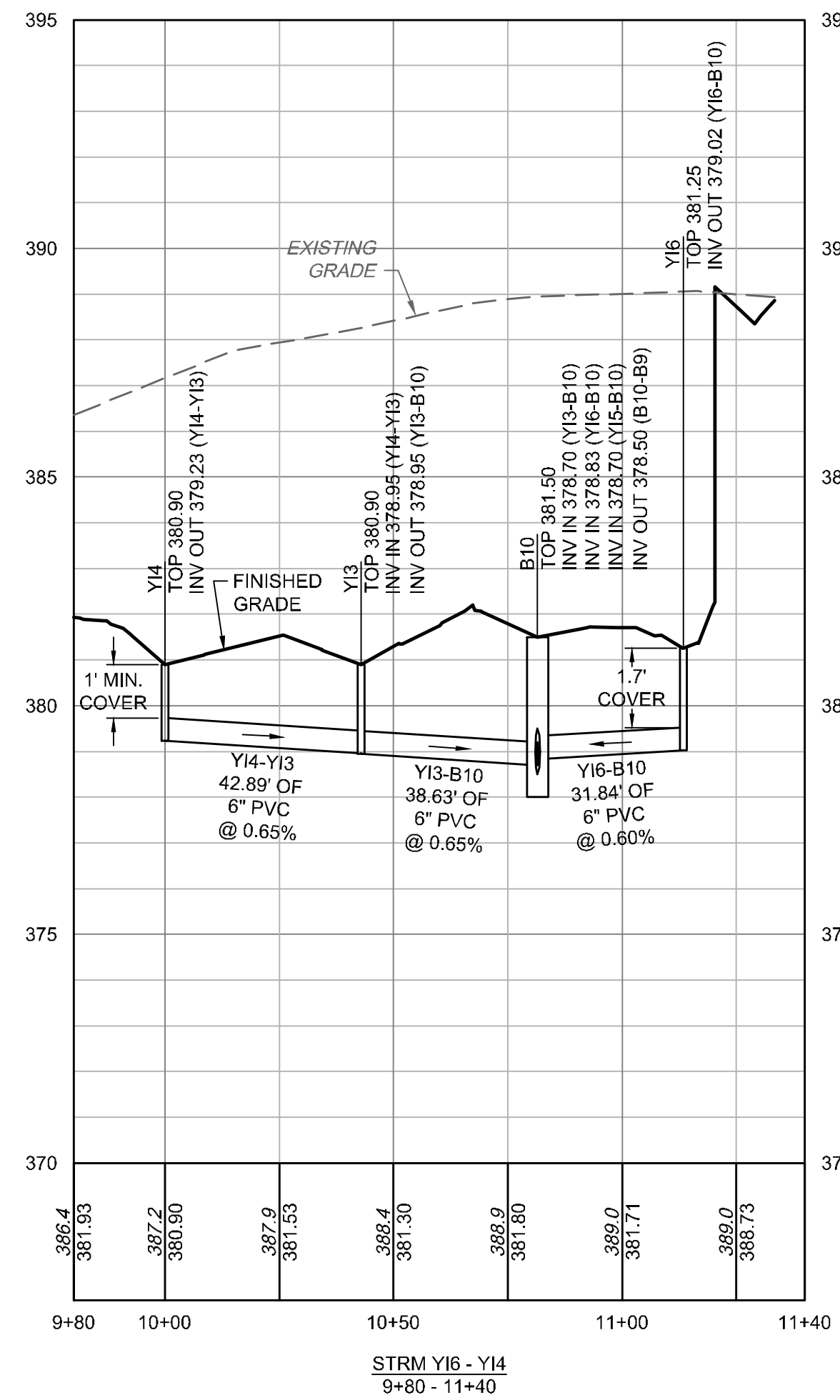
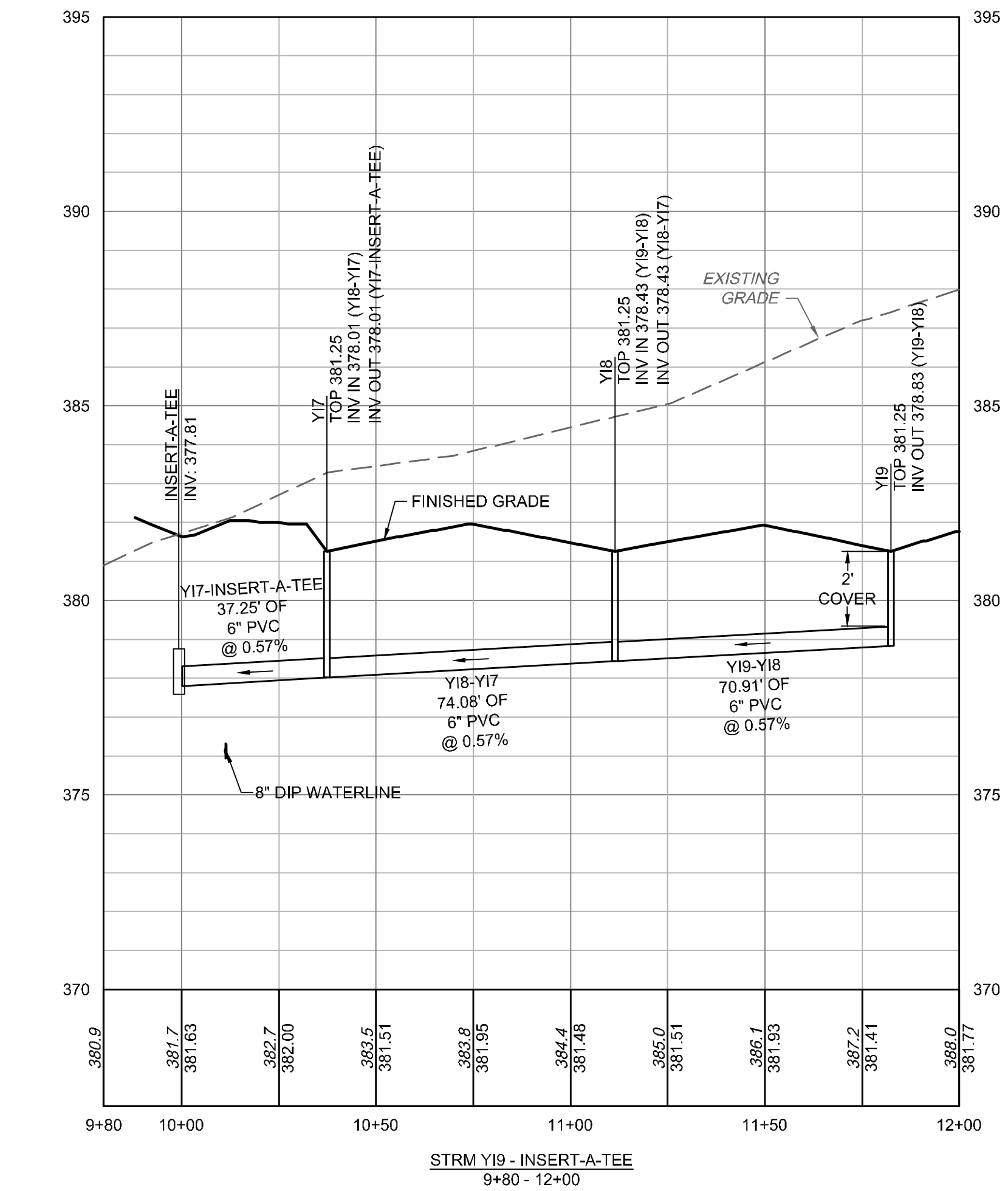


STORM STRUCTURE TABLE			
STRUCTURE #	TOP	STRUCTURE HEIGHT	DESCRIPTION
A1	375.88	N/A	15" FES
A2	380.50	5.73'	CONCRETE DROP INLET
A3	381.45	6.27'	CONCRETE DROP INLET
A4	381.50	5.96'	CONCRETE DROP INLET
A5	381.50	5.54'	CONCRETE DROP INLET
A6	381.50	5.11'	CONCRETE DROP INLET
A7	381.50	4.44'	CONCRETE DROP INLET
A8	381.50	4.02'	CONCRETE DROP INLET
A9	381.50	3.65'	CONCRETE DROP INLET
A10	381.25	3.22'	YARD INLET
A11	381.20	2.97'	CONCRETE CURB INLET
B1	376.67	N/A	24" FES
B2	381.53	6.64'	MANHOLE
B3	381.75	6.62'	CONCRETE DROP INLET
B4	381.45	6.15'	CONCRETE DROP INLET
B5	381.50	5.28'	CONCRETE DROP INLET
B6	381.50	4.91'	CONCRETE DROP INLET
B7	381.50	4.54'	CONCRETE DROP INLET
B8	381.50	3.92'	CONCRETE DROP INLET
B9	381.50	3.55'	CONCRETE DROP INLET
B10	381.50	3.00'	CONCRETE DROP INLET
C1	381.50	2.98'	CONCRETE DROP INLET
D1	381.50	3.00'	CONCRETE DROP INLET
E1	374.84	N/A	15" FES
E2	379.50	5.70'	CONCRETE DROP INLET
INSERT-A-TEE	378.68	N/A	INSERT-A-TEE
Y11	380.75	2.37'	18" Basin - Circular Grate
Y12	385.50	5.17'	YARD INLET
Y13	380.90	1.95'	YARD INLET
Y14	380.90	1.67'	YARD INLET
Y15	389.25	7.99'	YARD INLET
Y16	381.25	2.23'	YARD INLET
Y17	381.25	3.24'	YARD INLET
Y18	381.25	2.82'	YARD INLET
Y19	381.25	2.42'	YARD INLET

NCDOT STORM STRUCTURE TABLE			
STRUCTURE #	TOP	STRUCTURE HEIGHT	DESCRIPTION
F1	390.44	N/A	15" FES
F2	390.19	N/A	15" FES
F3	389.69	N/A	15" FES
F4	390.19	N/A	15" FES

STORM PIPE TABLE						
PIPE #	DIA	UPSTREAM INVERT	DOWNSTREAM INVERT	SLOPE	LENGTH	DESCRIPTION
	18"	376.96	376.90	0.55%	10.89 LF	18" HDPE
A2-A1	15"	374.78	374.50	0.63%	43.40 LF	15" HP PIPE
A3-A2	15"	375.18	374.78	0.63%	63.51 LF	15" HP PIPE
A4-A3	15"	375.54	375.18	0.63%	57.24 LF	15" HP PIPE
A5-A4	15"	375.96	375.54	0.63%	66.56 LF	15" HP PIPE
A6-A5	15"	376.39	375.96	0.63%	66.56 LF	15" HP PIPE
A7-A6	12"	377.06	376.64	0.63%	66.52 LF	12" HP PIPE
A8-A7	12"	377.48	377.06	0.63%	66.56 LF	12" HP PIPE
A9-A8	12"	377.85	377.48	0.63%	58.02 LF	12" HP PIPE
A11-A10	12"	378.22	378.03	0.63%	30.81 LF	12" HP PIPE
B2-B1	24"	374.89	374.50	0.52%	74.33 LF	24" HP PIPE
B3-B2	24"	375.13	374.89	0.55%	44.44 LF	24" HP PIPE
B4-B3	24"	375.30	375.13	0.55%	31.08 LF	24" HP PIPE
B5-B4	18"	376.22	375.80	0.55%	75.80 LF	18" HP PIPE
B6-B5	18"	376.59	376.22	0.55%	66.55 LF	18" HP PIPE
B7-B6	18"	376.90	376.59	0.55%	57.04 LF	18" HP PIPE
B8-B7	15"	377.58	377.21	0.55%	65.31 LF	15" HP PIPE
B9-B8	15"	377.95	377.58	0.55%	67.08 LF	15" HP PIPE
B10-B9	12"	378.50	378.20	0.55%	55.28 LF	12" HP PIPE
C1-B4	12"	378.52	376.30	3.66%	60.55 LF	12" HP PIPE
D1-A3	12"	378.50	375.43	4.30%	71.40 LF	12" HP PIPE
E2-E1	15"	373.80	373.40	0.48%	82.89 LF	15" RCP
Y11-A9	6"	378.52	378.35	0.71%	24.07 LF	6" PVC
Y12-A9	6"	380.33	378.35	4.16%	47.66 LF	6" PVC
Y13-B10	6"	378.95	378.70	0.65%	38.63 LF	6" PVC
Y14-Y13	6"	379.23	378.95	0.65%	42.99 LF	6" PVC
Y15-B10	6"	381.40	378.70	5.09%	53.09 LF	6" PVC
Y16-B10	6"	379.02	378.83	0.60%	31.84 LF	6" PVC
Y17-INSERT-A-TEE	6"	378.01	377.80	0.57%	37.25 LF	6" PVC
Y18-Y17	6"	378.43	378.01	0.57%	74.08 LF	6" PVC
Y19-Y18	6"	378.83	378.43	0.57%	70.91 LF	6" PVC

NCDOT STORM PIPE TABLE						
PIPE #	DIA	UPSTREAM INVERT	DOWNSTREAM INVERT	SLOPE	LENGTH	DESCRIPTION
F2-F1	15"	389.00	388.75	1.40%	17.85 LF	15" RCP
F4-F3	15"	388.75	388.25	1.59%	31.45 LF	15" RCP



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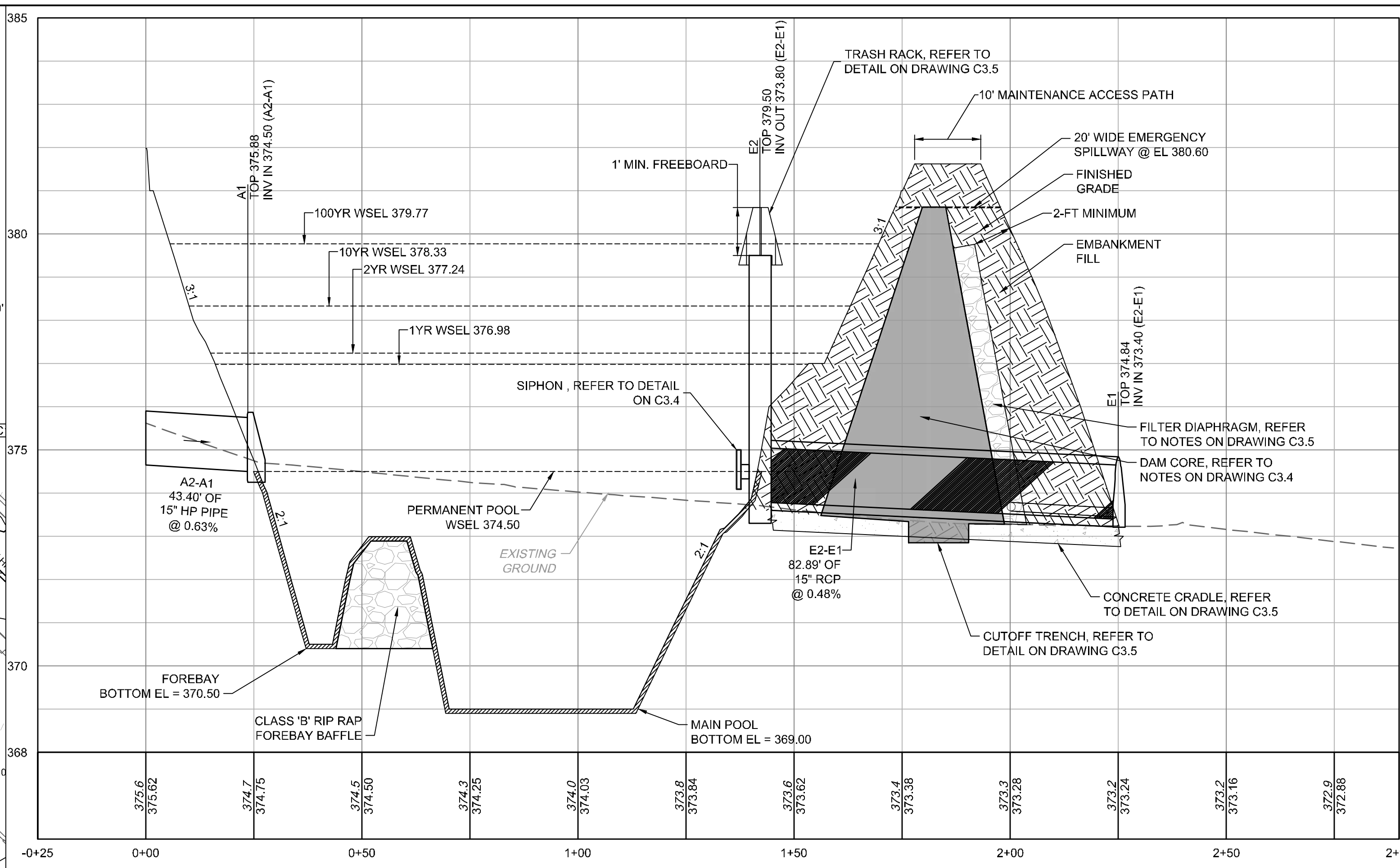
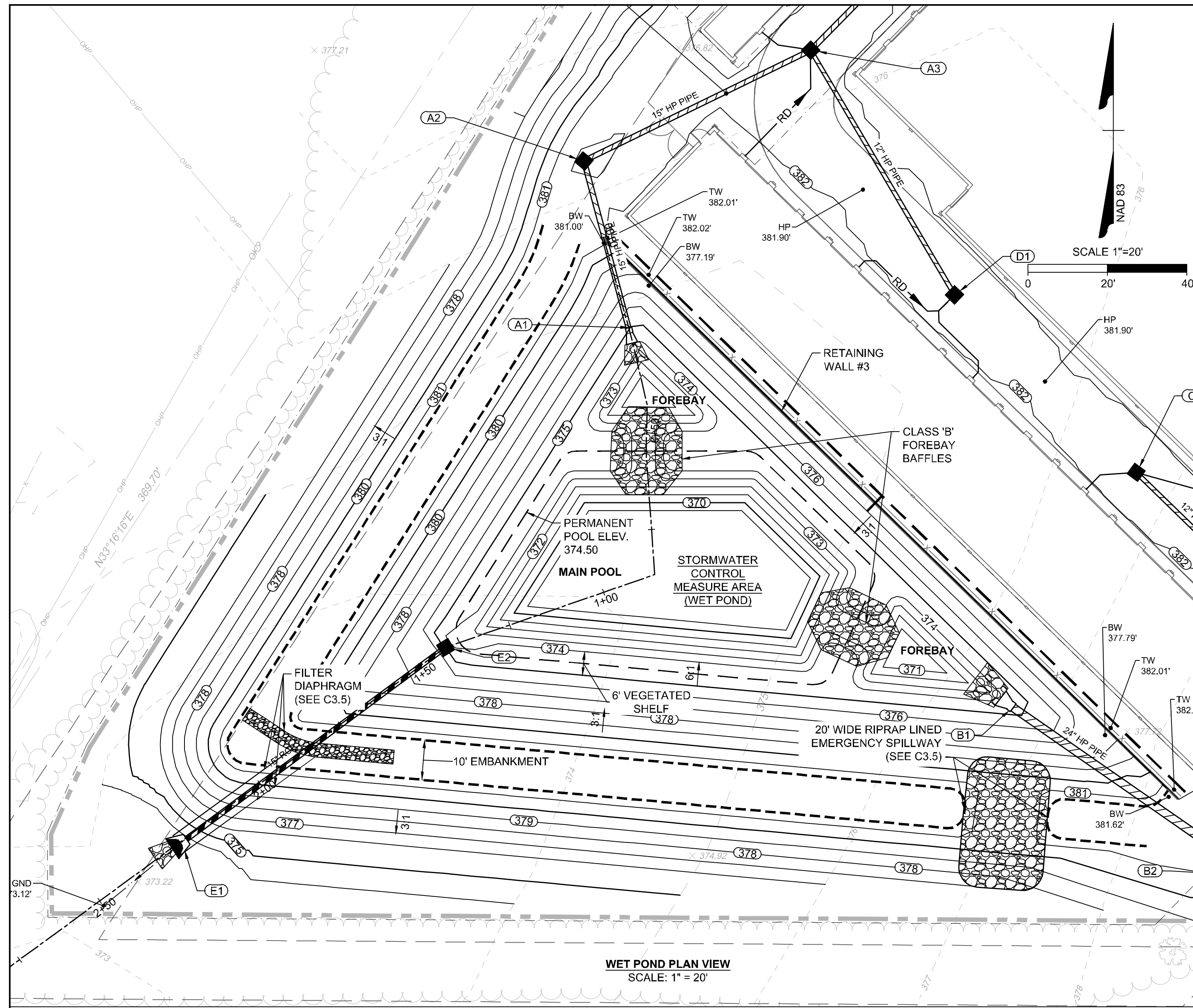
**JONES DAIRY STORAGE FACILITY**  
 TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

STORM SEWER PROFILES

JOB NO. 54832  
 SHEET NO. C3.2

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**WET POND CROSS SECTION**  
 Horz: 1" = 20'  
 Vert: 1" = 2'

- AS-BUILT SURVEY REQUIREMENTS**
- NOTE: CONTRACTOR SHALL PROVIDE AS-BUILT TOPOGRAPHIC SURVEY PERFORMED BY A PROFESSIONAL LAND SURVEYOR CERTIFYING WET DETENTION POND AREA DIMENSIONS AND ELEVATIONS OF THE FOLLOWING:
1. TOPOGRAPHIC SURVEY OF THE WET POND AND EMBANKMENT
  2. OUTLET STRUCTURE TOPS AND INVERTS
  3. OUTLET STRUCTURE DIMENSIONS
  4. ORIFICE DIAMETERS
  5. BARREL PIPE SIZES AND INVERTS
  6. EMERGENCY SPILLWAY ELEVATION AND DIMENSIONS.
- OUTLET STRUCTURE NOTES**
1. CAST-IN-PLACE CONCRETE RISER IS REQUIRED WITHOUT EXCEPTION.
  2. CLASS "A" (3,000 PSI) CONCRETE TO BE USED.
  3. ALL MORTAR JOINTS ARE 1/2" ± 1/8".
  4. GROUT SHALL BE NON-SHRINK (ASTM-C1107)
  5. ALL STRUCTURES OVER 3'-6" IN DEPTH TO BE PROVIDED WITH STEPS 1'-2" ON CENTERS. STEPS SHALL BE IN ACCORDANCE WITH STANDARD 840.66.
  6. LOCATE MANHOLE OVER STEPS.

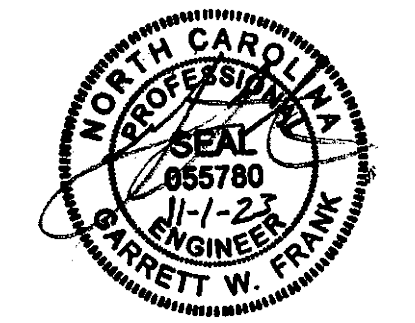
WET DETENTION BASIN MAINTENANCE SCHEDULE			
DESCRIPTION	METHOD	FREQUENCY	SEASON
EMBANKMENT			
INSPECT AND REPAIR EROSION / ANIMAL NESTINGS	VISUAL	ONCE PER YEAR	ALL
INSPECT AND RESEED GRASS COVERAGE	VISUAL	WHENEVER NEEDED	ALL
OUTLET STRUCTURE			
DEBRIS / OBSTRUCTIONS	BY HAND	WHENEVER NEEDED	ALL
OPERATE POND DRAIN VALVE	BY HAND	ONCE PER YEAR	ALL
EROSION AT OUTLET DISCHARGE	VISUAL	ONCE PER YEAR	ALL
FOREBAY / MAIN POOL			
SEDIMENT / DEBRIS	BY HAND	ONCE PER YEAR	ALL
REMOVE TRASH	BY HAND	WHENEVER NEEDED	ALL

CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE UNTIL PROJECT CLOSE OUT AT WHICH TIME OWNER WILL ASSUME MAINTENANCE RESPONSIBILITY.

- DAM CORE, CUTOFF TRENCH, AND EMBANKMENT FILL NOTES:**
1. DAM CORE AND CUTOFF TRENCH FILL MATERIAL SHALL CLASSIFY AS ML, MH, CL OR CH PER USCS. THIS MATERIAL MAY CONSIST OF MATERIAL FROM ON-SITE BORROW PITS, OR APPROVED OFF-SITE BORROW SOURCES.
  2. EMBANKMENT FILL SOIL MATERIAL SHALL CLASSIFY SM, SC, ML OR CL PER USCS. THIS MATERIAL MAY CONSIST OF MATERIAL FROM ON-SITE EXCAVATIONS, ON-SITE BORROW PITS OR APPROVED OFF-SITE BORROW SOURCES.
  3. UNSUITABLE EMBANKMENT FILL IS CLASSIFIED AS GW, GM, GC, SW, SP, OH, OL PER USCS

- CLAY LINER NOTES**
1. THE CONTRACTOR WILL NEED TO INSTALL A CLAY LINER A MINIMUM OF 1-FOOT BELOW THE LOWEST GRADE. THE CLAY LINER SHALL BE AT LEAST 12" THICK AND MEET THE FOLLOWING SPECIFICATIONS:
    - 1.1. UNIFIED SOIL CLASSIFICATION SYSTEM DESIGNATION OF CL, CH, ML
    - 1.2. MINIMUM PLASTICITY INDEX OF 12
    - 1.3. MINIMUM OF 2 TESTS OF EACH ABOVE PARAMETER SHALL BE COMPLETED BY THE CONTRACTOR ON THE LINER MATERIAL AND PRESENTED TO THE ON-SITE GEOTECHNICAL ENGINEER FOR APPROVAL. SHOULD THESE TESTS NOT MEET THE ABOVE REQUIREMENTS, THE ON-SITE GEOTECHNICAL ENGINEER MAY PROVIDE PERMEABILITY TESTING DEMONSTRATING AN INFILTRATION RATE OF NO MORE THAN 0.01 IN/HR
    - 1.4. COMPACTION TO A MINIMUM OF 95% PER ASTM D698 AND WITHIN 2% OF THE OPTIMUM MOISTURE CONTENT (1 COMPACTION DENSITY TEST PER 2500 SQ. FT.)
  2. IF IT IS DETERMINED BY THE ON-SITE GEOTECHNICAL ENGINEER THAT A LINER IS NOT NEEDED, THEN A LETTER TO THE DESIGN ENGINEER CERTIFYING THE INFILTRATION RATE SHALL BE PROVIDED, WHICH WILL BE USED DURING THE AS-BUILT CERTIFICATION PROCESS.
  2. THE GRADES SHOWN ON THIS PLAN ARE FINISHED GRADES AND INCLUDE THE CLAY LINER.
- GENERAL NOTES:**
1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE WAKE COUNTY (TOWN OF ROLESVILLE), NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS AND DETAILS.
  2. SEE GRADING PLAN FOR MORE INFORMATION ON ENTIRE SITE GRADING.

- DAM EMBANKMENT AND SOIL COMPACTION SPECIFICATIONS**
1. CONTROLLED FILL, AS SPECIFIED BY THE GEOTECHNICAL ENGINEER, IN THE DAM EMBANKMENT /KEY TRENCH SHALL BE PLACED IN 6-INCH LOOSE LAYERS (3-INCH LOOSE LAYERS WITHIN 3-FEET OF EITHER SIDE OF THE PRINCIPAL SPILLWAY PIPE TO A DEPTH OF 2-FEET OVER THE PIPE) AND SHALL BE COMPACTED TO A DENSITY OF NO LESS THAN 95% OF THE STANDARD PROCTOR MAXIMUM DENSITY AT A MOISTURE CONTENT OF + OR - TWO PERCENTAGE POINTS OF THE OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D698.
  2. ALL VISIBLE ORGANIC DEBRIS SUCH AS ROOTS AND LIMBS SHALL BE REMOVED FROM THE FILL MATERIAL PRIOR TO COMPACTION TO THE REQUIRED DENSITY. SOILS WITH ORGANIC MATTER CONTENT EXCEEDING 5% BY WEIGHT SHALL NOT BE USED. STONES GREATER THAN 3-INCH (IN ANY DIRECTION) SHALL BE REMOVED FROM THE FILL PRIOR TO COMPACTION.
  3. FILL MATERIAL PLACED AT DENSITIES LOWER THAN SPECIFIED MINIMUM DENSITIES OR AT MOISTURE CONTENTS OUTSIDE THE SPECIFIED RANGES OR OTHERWISE NOT CONFORMING TO SPECIFIED REQUIREMENTS SHALL BE REMOVED AND REPLACED WITH ACCEPTABLE MATERIALS.
  4. ANY FILL LAYER THAT IS SMOOTH DRUM ROLLED TO REDUCE MOISTURE PENETRATION DURING A STORM EVENT SHALL BE PROPERLY SCARIFIED PRIOR TO THE PLACEMENT OF THE NEXT SOIL LIFT.
  5. SURFACE WATER AND STREAM FLOW SHALL BE CONTINUOUSLY CONTROLLED THROUGHOUT CONSTRUCTION AND THE PLACEMENT OF CONTROLLED FILL.
  6. FOUNDATION AREAS MAY REQUIRE UNDERCUTTING OF COMPRESSIBLE AND/OR UNSUITABLE SOILS IN ADDITION TO THAT INDICATED ON THE PLANS. ALL SUCH UNDERCUTTING SHALL BE PERFORMED AT THE DISCRETION OF THE GEOTECHNICAL ENGINEER AND SHALL BE MONITORED AND DOCUMENTED. IN NO CASE, SHALL THERE BE AN ATTEMPT TO STABILIZE ANY PORTIONS OF THE FOUNDATION SOILS WITH CRUSHED STONE.
  7. TREATMENT OF SEEPAGE AREAS, SUBGRADE PREPARATION, FOUNDATION DEWATERING AND ROCK FOUNDATION PREPARATION (I.E., TREATMENT WITH SLURRY GROUTING, DENTAL CONCRETE, ETC.) MAY BE REQUIRED AT THE DISCRETION OF THE
- TESTING, OBSERVATION, AND CERTIFICATION**
1. TESTS OF THE DEGREE (%) OF COMPACTION OF THE PLACED FILL IN THE DAM KEY TRENCH SHALL BE PERFORMED AS A PART OF THE PERMITTEE'S NORMAL QUALITY CONTROL PROGRAM FOR THE CONSTRUCTION OF THE DAM. TESTS SHALL BE CONDUCTED CONCURRENT WITH THE INSTALLATION OF THE COMPACTED FILL AND THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION OF THE DAM SO THAT THE TESTING CAN BE COMPLETED. SHOULD THE RESULTS OF THE TESTS INDICATE THAT THE SPECIFIED DEGREE OF COMPACTION HAS NOT BEEN OBTAINED, THE PORTIONS OF THE DAM REPRESENTED BY SUCH TESTS SHALL BE REWORKED OR REBUILT. ALL PORTIONS OF THE DAM SHALL ACHIEVE THE SPECIFIED MINIMUM DEGREE OF COMPACTION.
- CONSTRUCTION OF THE SCM SHALL BE DONE UNDER THE OBSERVATION OF A QUALIFIED GEOTECHNICAL ENGINEER, WHO IS REGISTERED AS A PROFESSIONAL ENGINEER IN THE STATE OF NORTH CAROLINA. THE GEOTECHNICAL ENGINEER MUST HAVE EXPERIENCE IN THE DESIGN AND CONSTRUCTION MONITORING OF SCM'S OF THE SIZE AND SCOPE COVERED BY THESE STANDARDS AND GUIDELINES.



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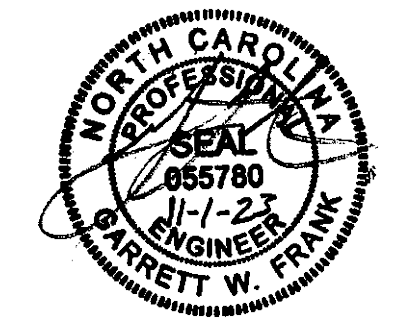
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 TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

**SCM PLAN & PROFILE**

JOB NO. 54832  
 SHEET NO. C3.4

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DATE: 04/05/2023

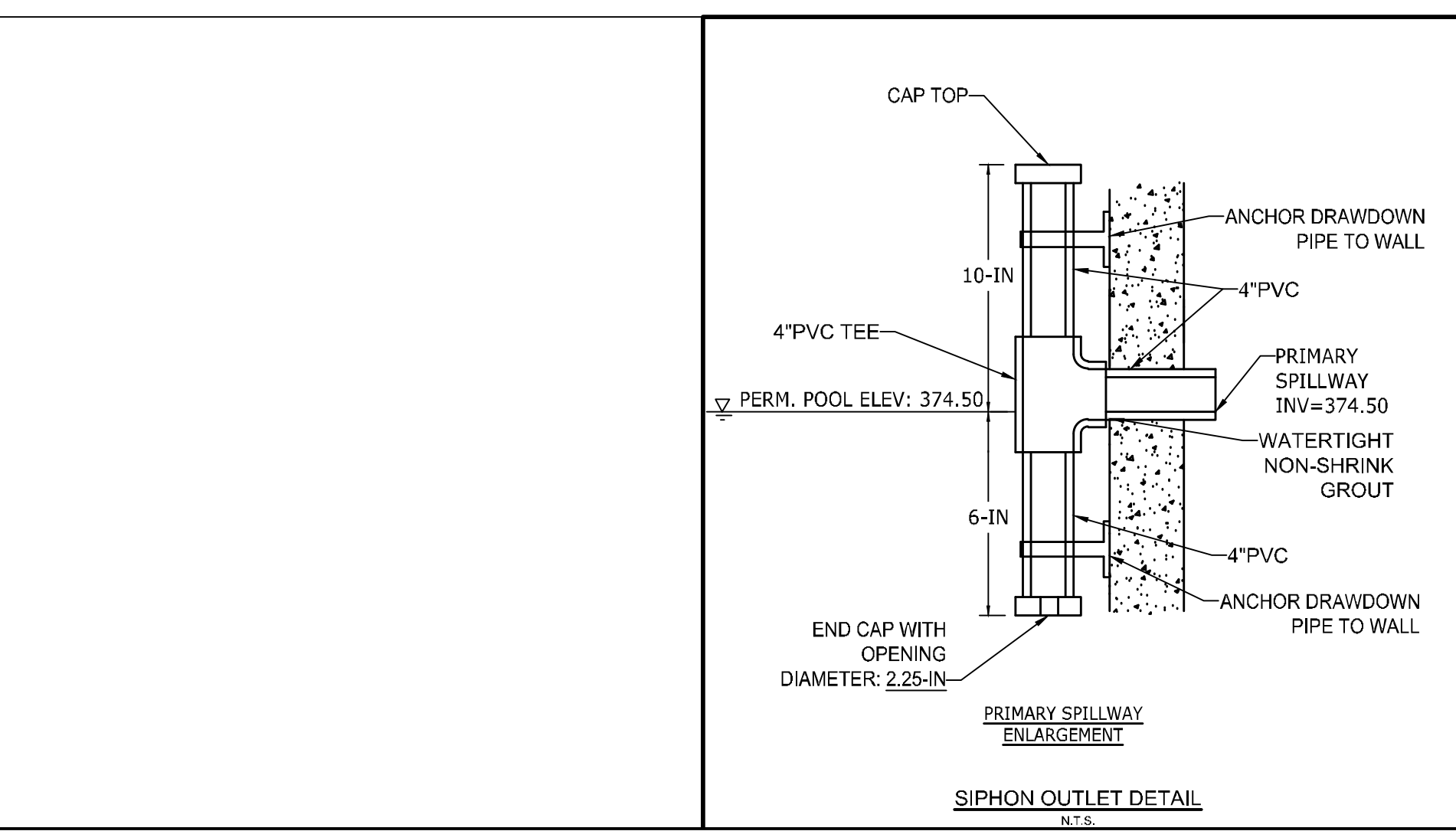
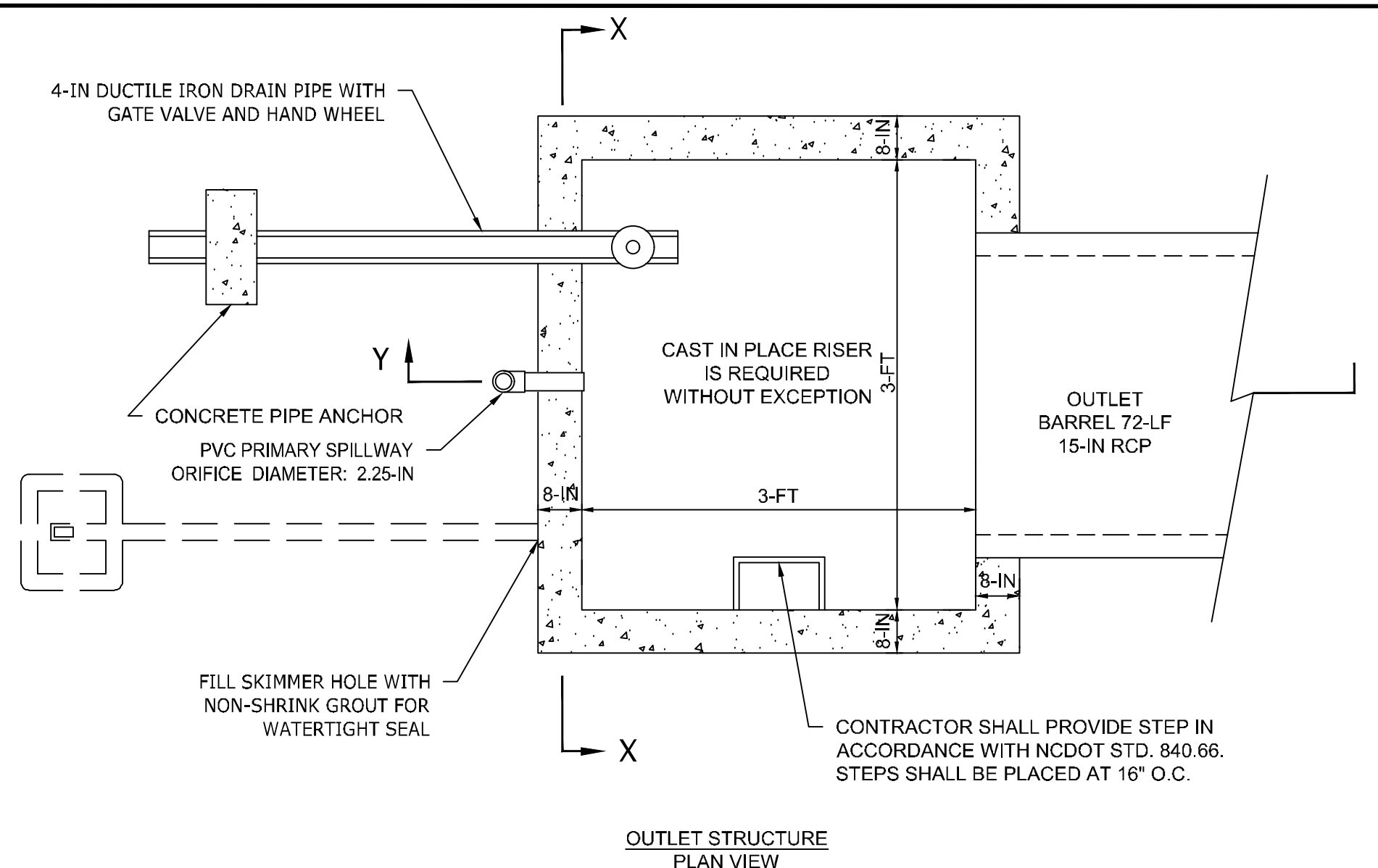
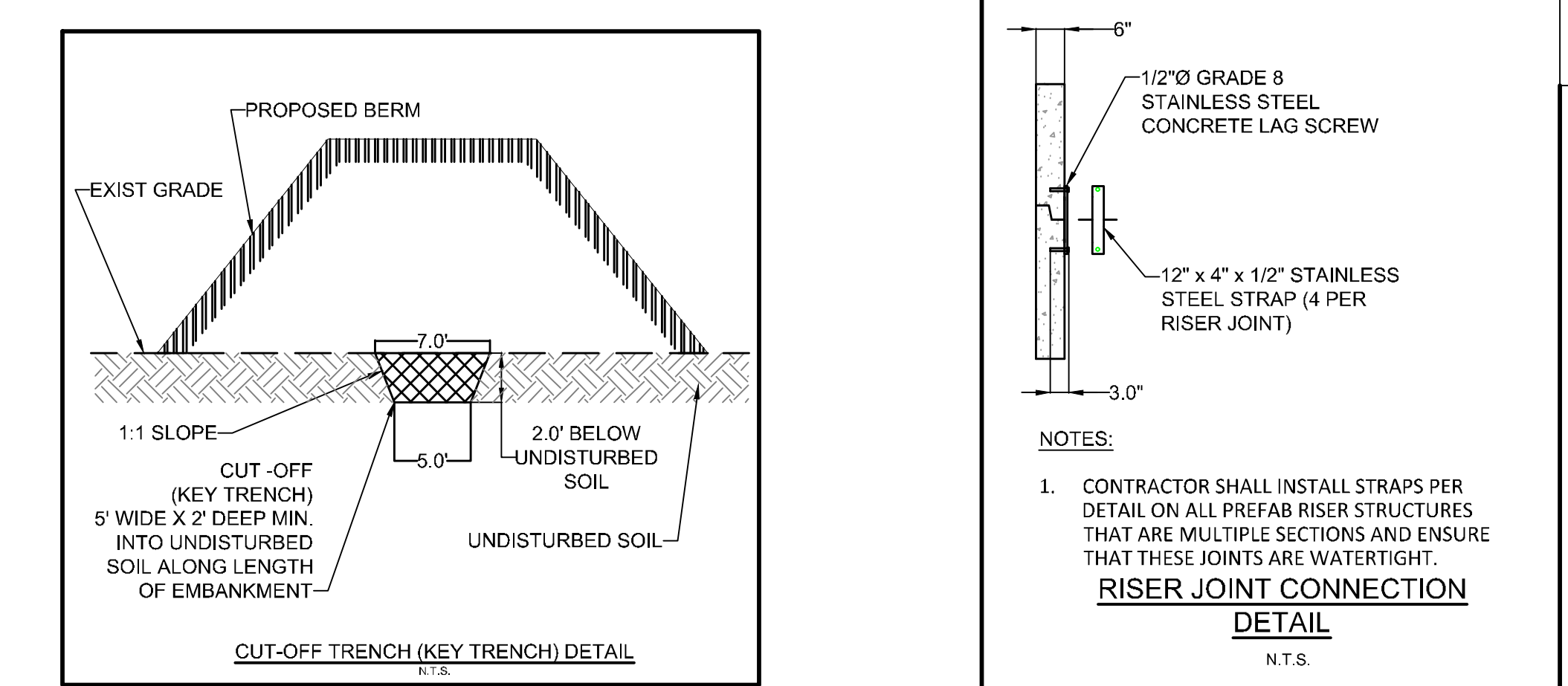
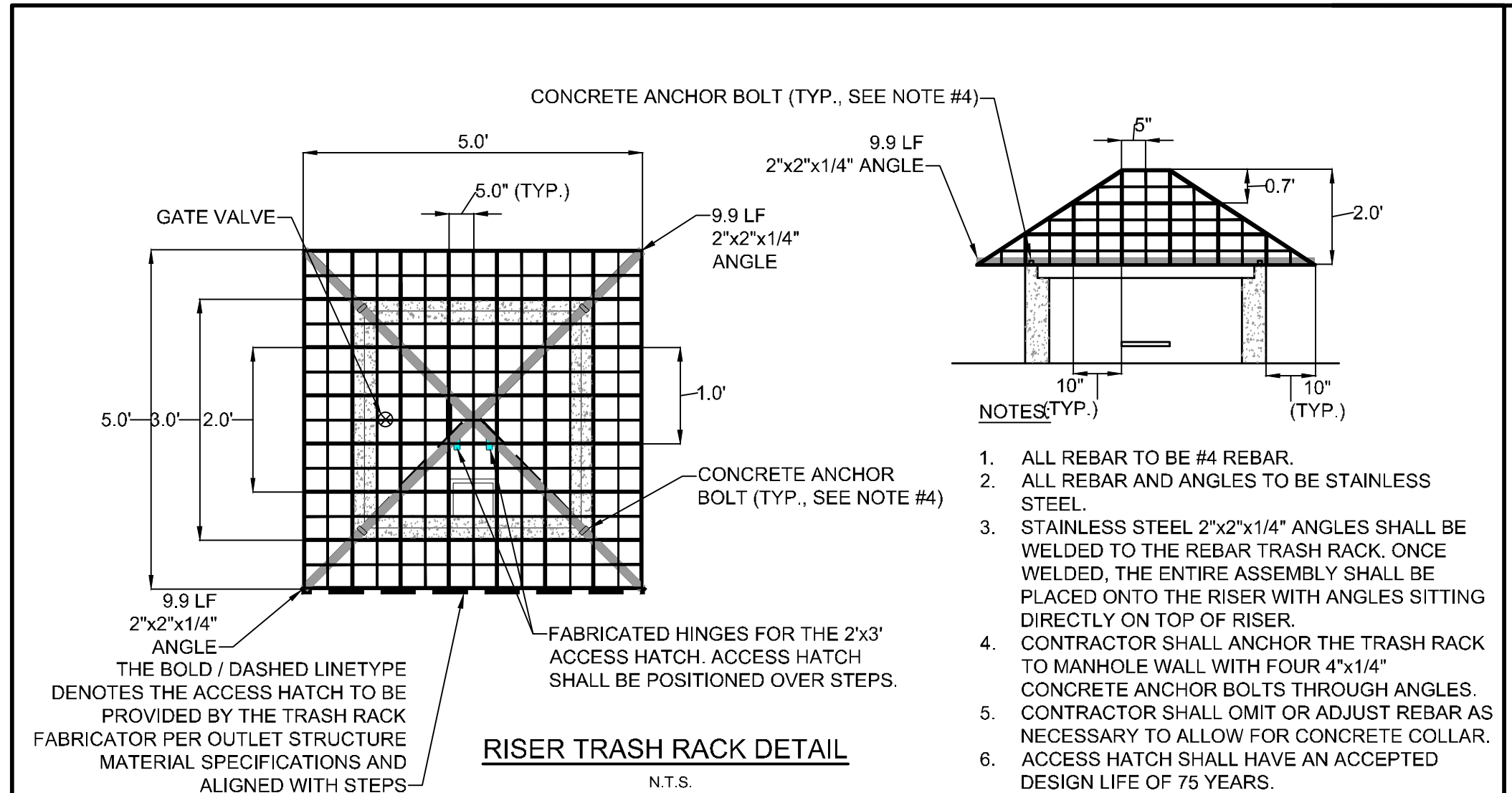
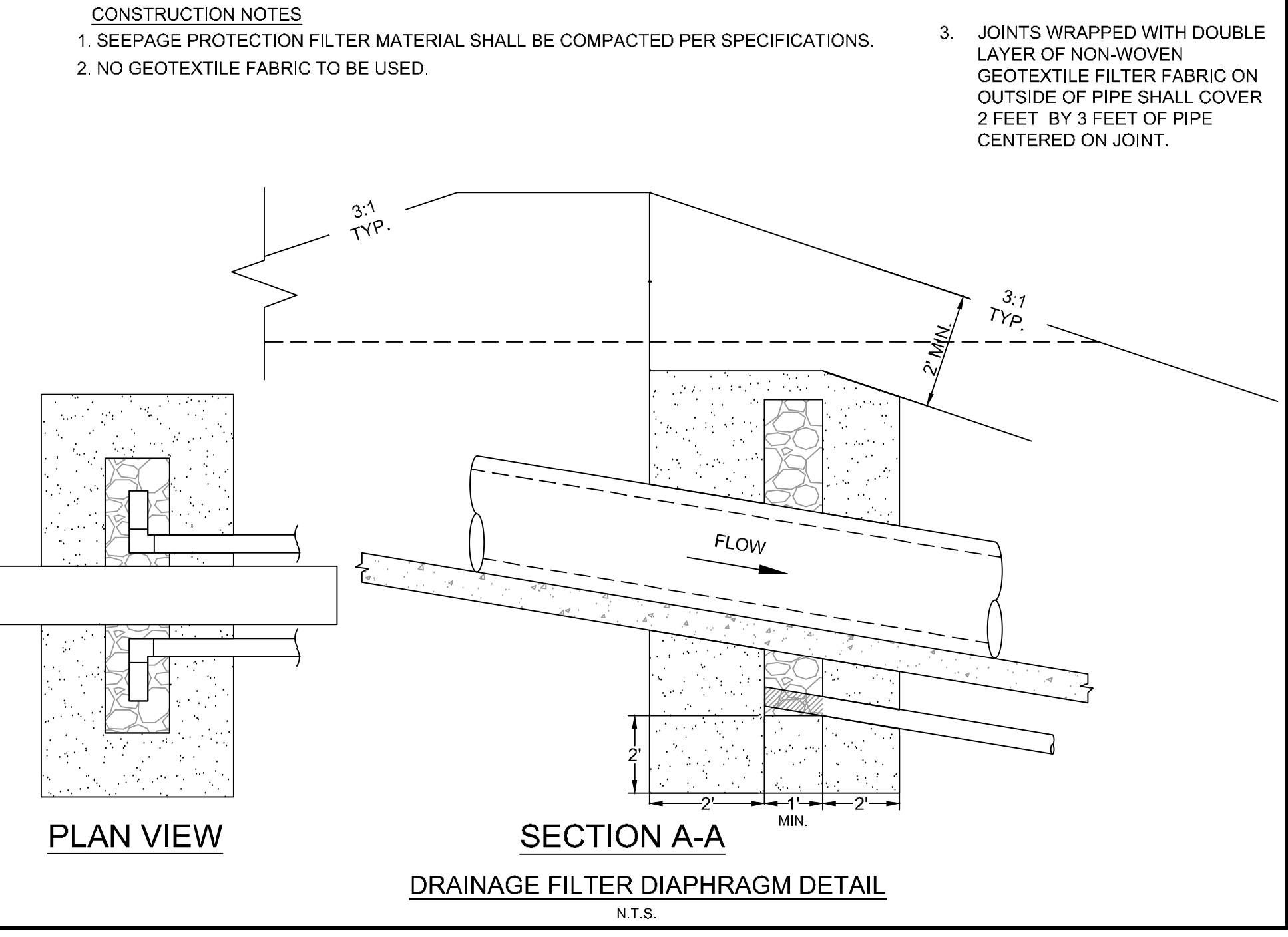
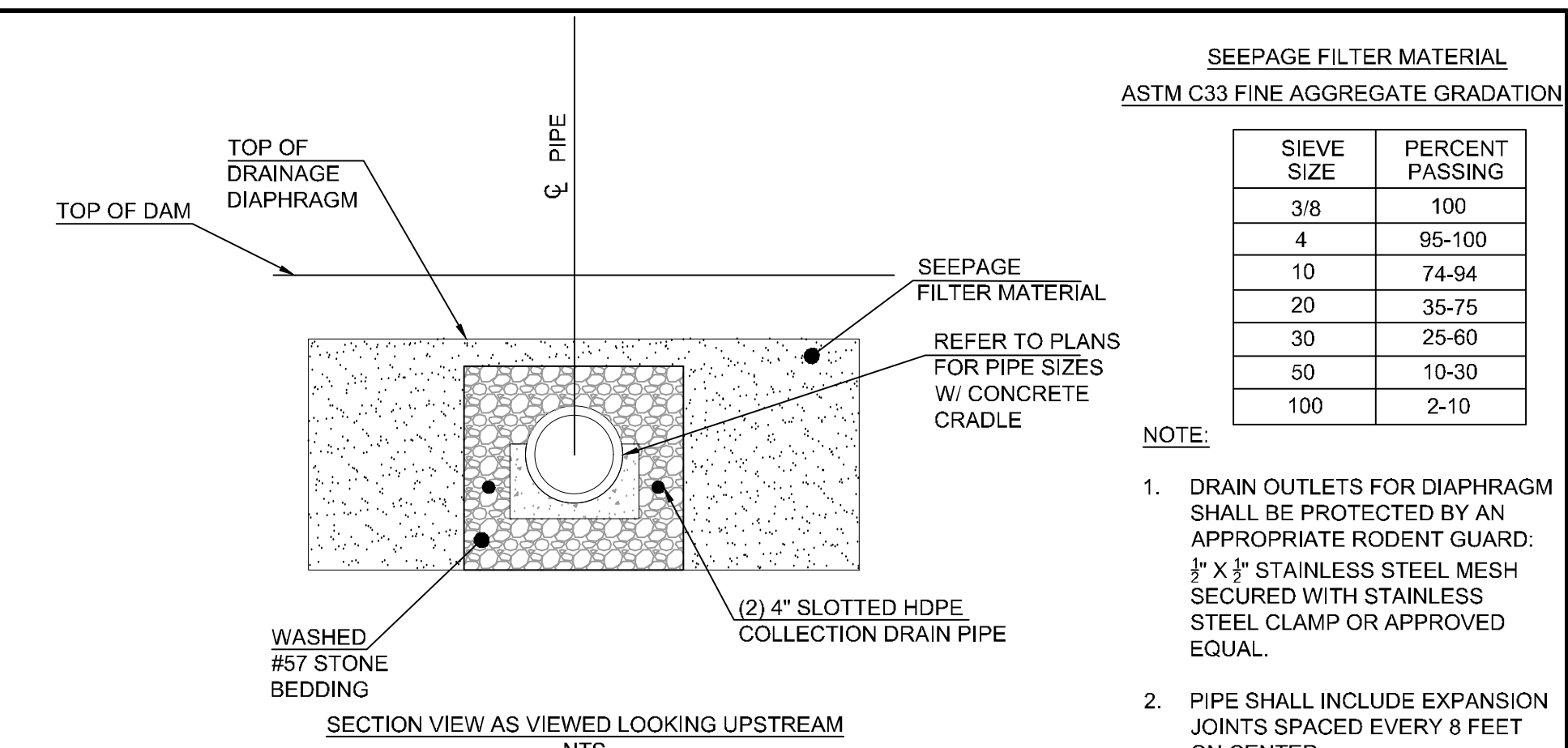
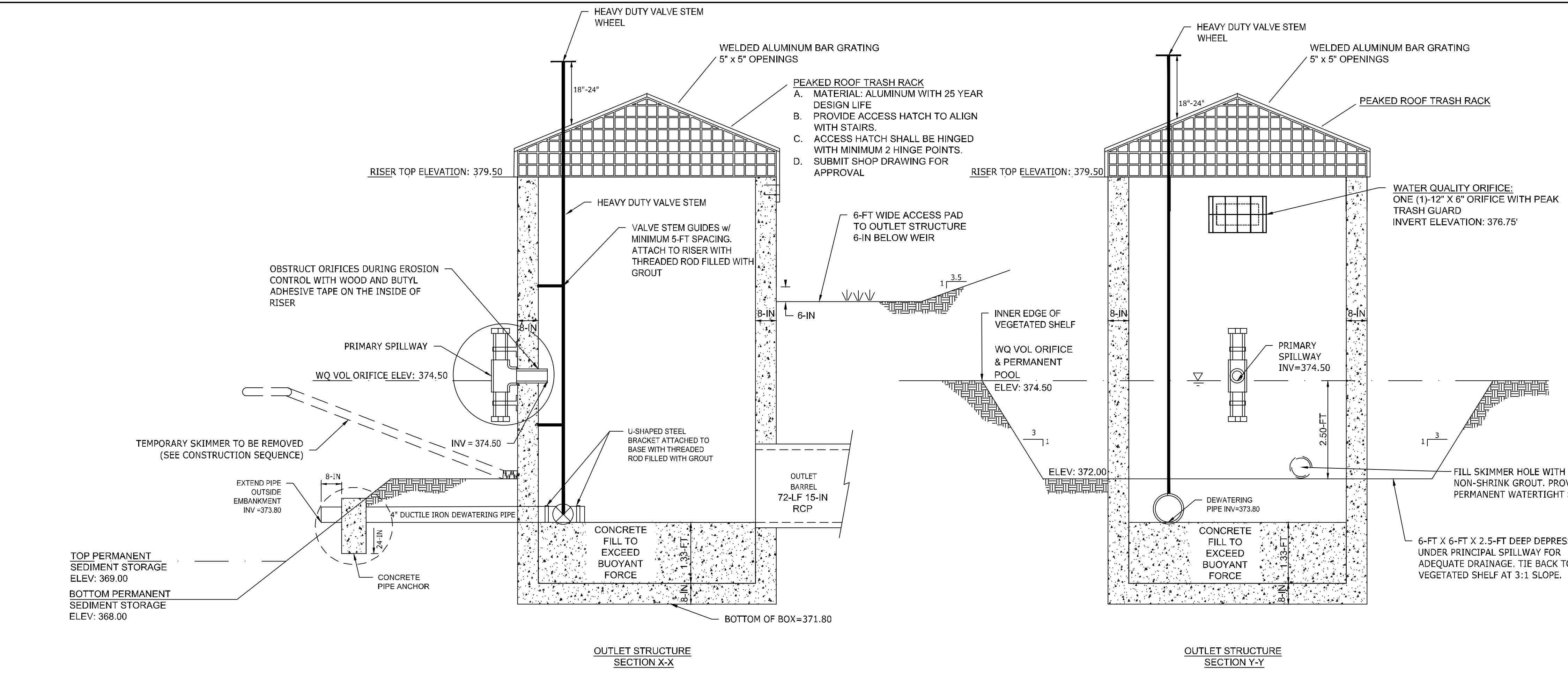
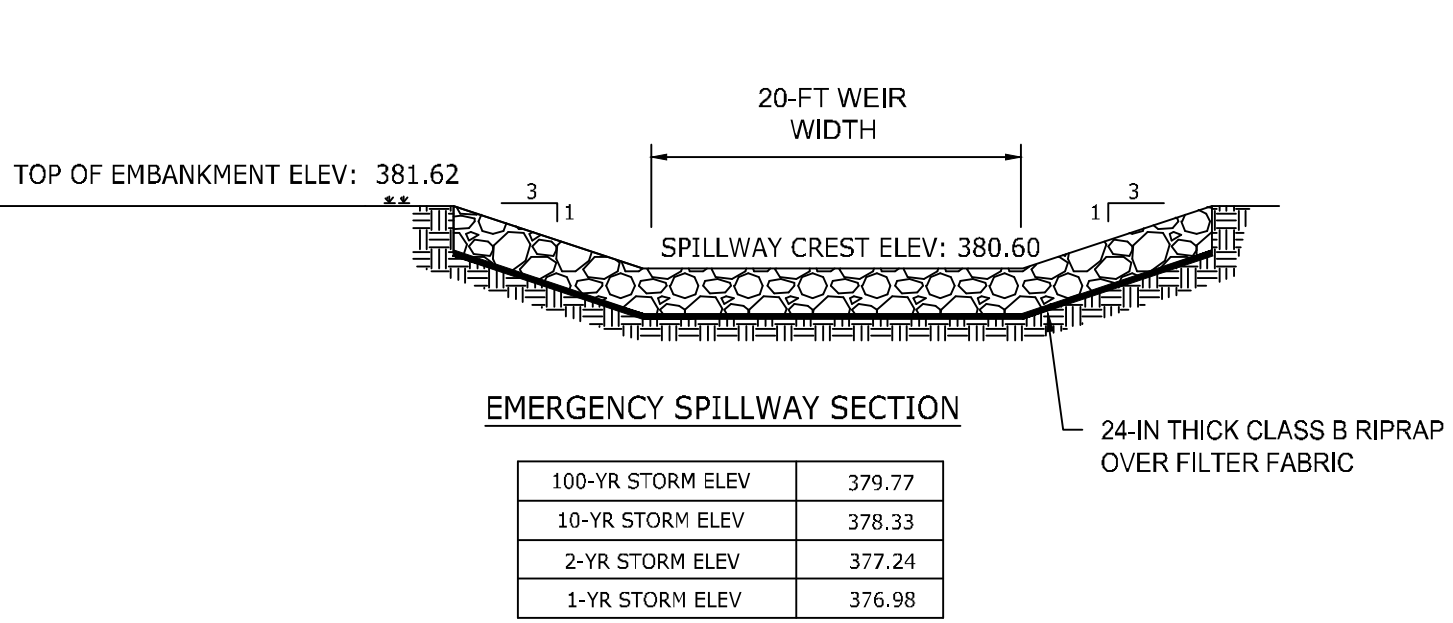
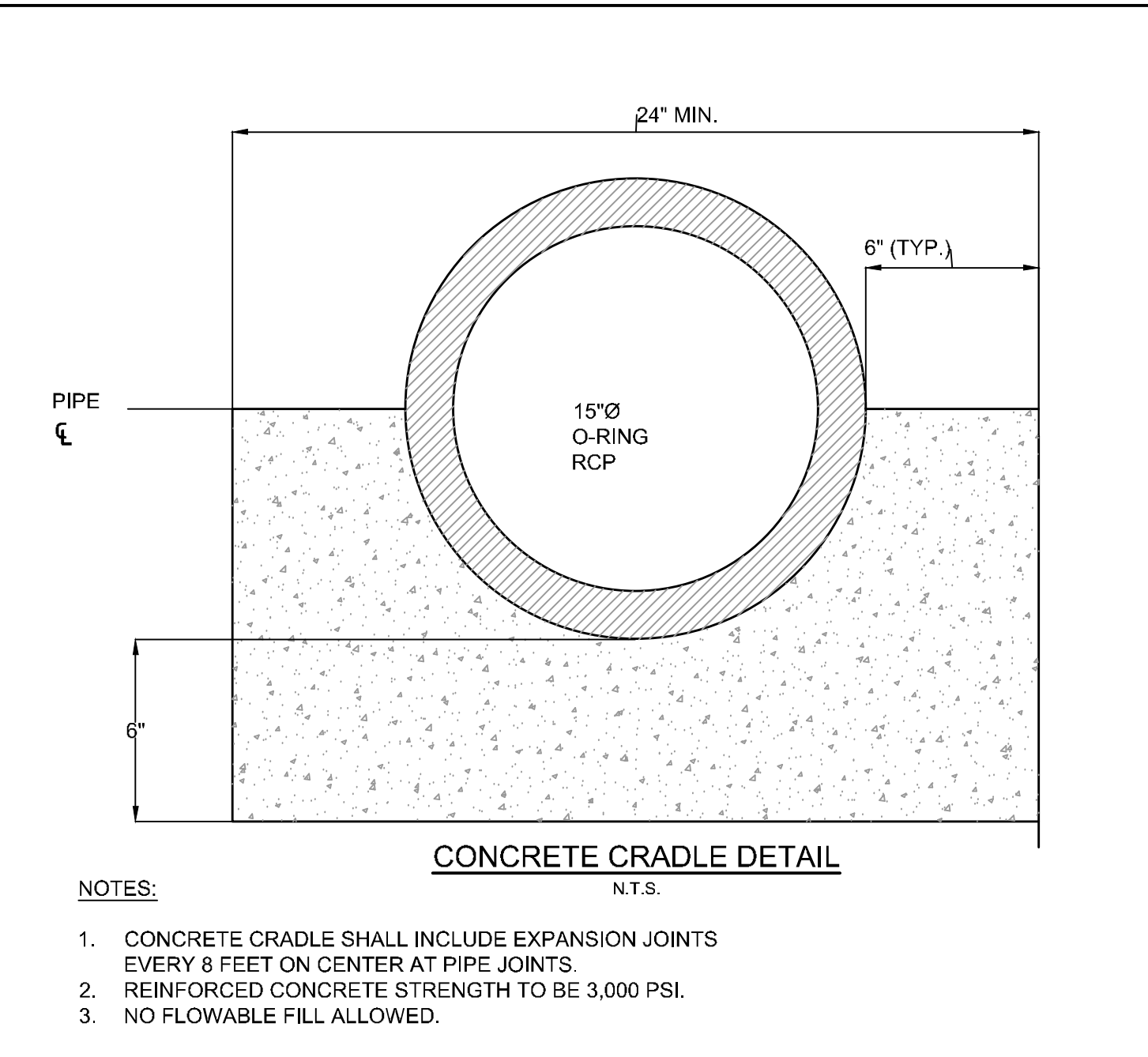
DRAWN BY: L. BARNES  
 DESIGNED BY: G. FRANK  
 CHECKED BY: G. FRANK  
 SCALE: AS SHOWN

NORTH CAROLINA LICENSE NO. C-1652

**JONES DAIRY STORAGE FACILITY**  
 TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

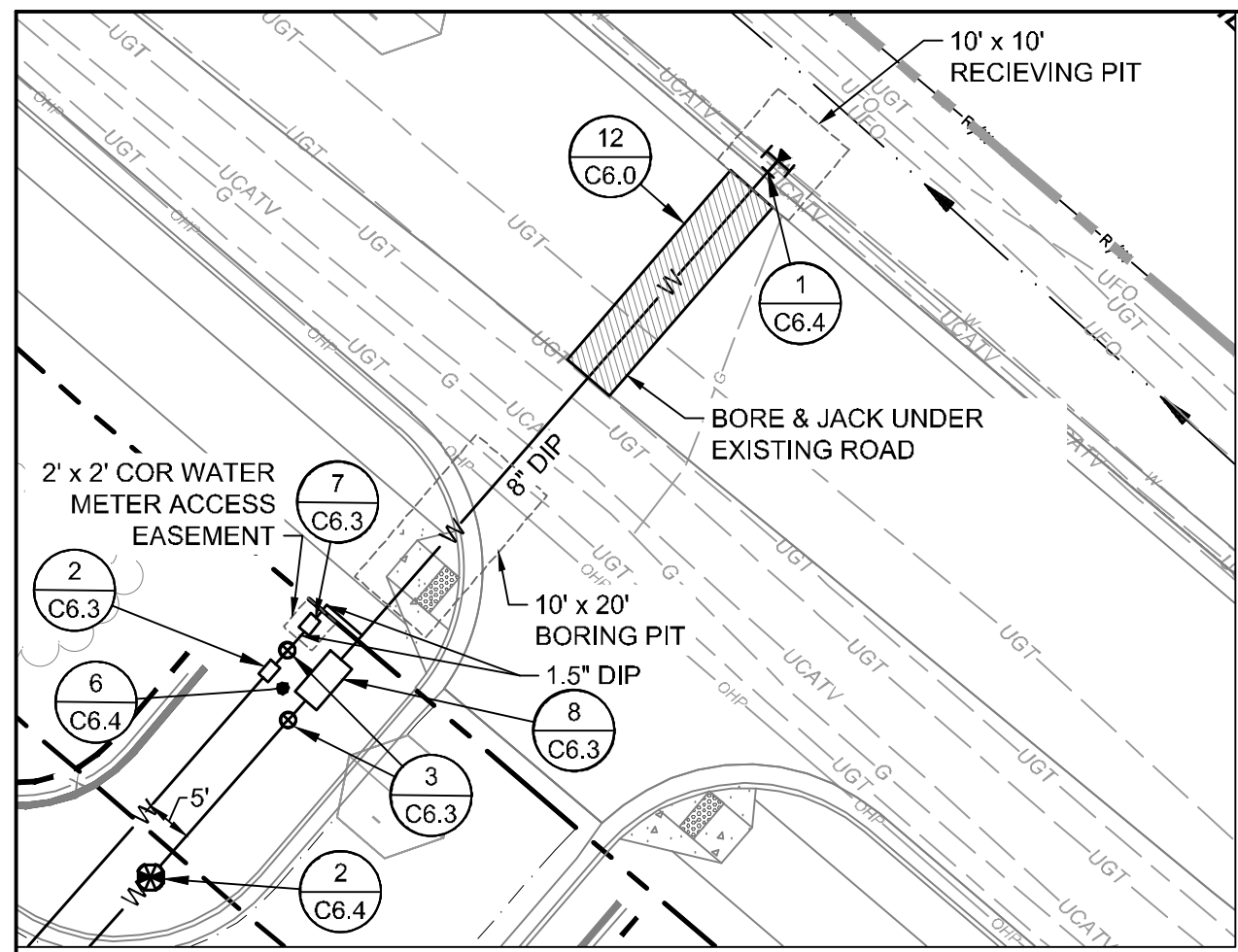
JOB NO. 54832  
 SHEET NO. C3.5

**TIMMONS GROUP**  
 NORTH CAROLINA LICENSE NO. C-1652  
 JONES DAIRY STORAGE FACILITY  
 TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA  
 SCM NOTES & DETAILS



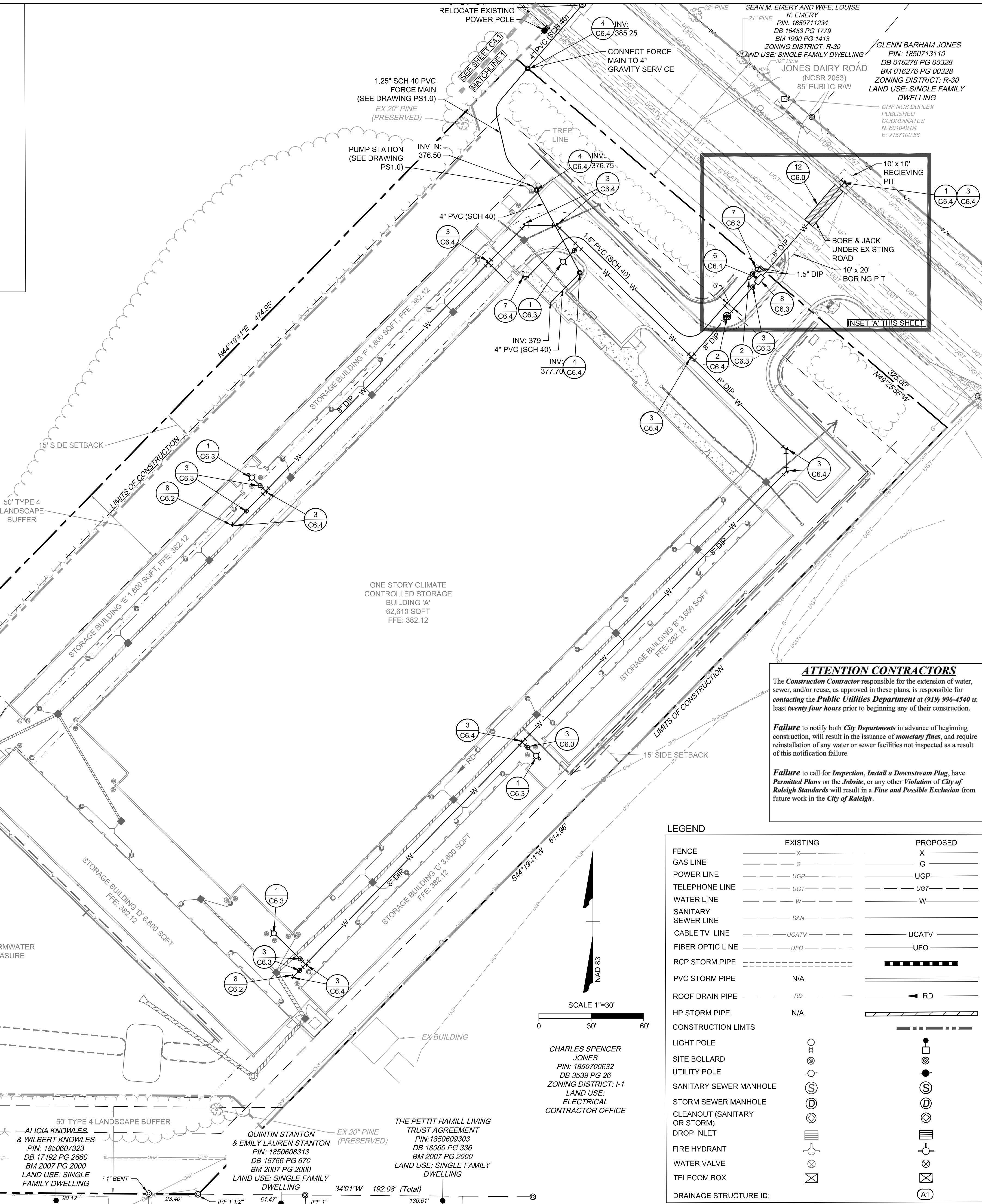
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**KEY NOTES**

12 C6.0 BORE & JACK	8 C6.3 FIRE SERVICE BACKFLOW (8" RPDA)
8 C6.2 FIRE LINE CAPPING	1 C6.4 TAPPING SLEEVE w/ GATE VALVE
1 C6.3 FIRE HYDRANT ASSEMBLY	2 C6.4 POST INDICATOR VALVE ASSEMBLY
2 C6.3 1.5" RPZ BACKFLOW PREVENTER (DOMESTIC SERVICE)	3 C6.4 THRUST BLOCKING (TYP.)
3 C6.3 GATE VALVE ASSEMBLY	4 C6.4 SANITARY CLEANOUT
4 C6.3 SANITARY SEWER MANHOLE	5 C6.4 UTILITY TRENCHING AND BACKFILL
5 C6.3 SANITARY SEWER MANHOLE RING & COVER	6 C6.4 FIRE & DOMESTIC SCHEMATIC WALL MOUNTED FIRE DEPARTMENT CONNECTION (STORZ)
6 C6.3 SEWER MANHOLE STEPS	7 C6.4 1-1/2" WATER METER AND VAULT



**CITY OF RALEIGH UTILITY NOTES**

- ALL MATERIALS & CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH DESIGN STANDARDS, DETAILS & SPECIFICATIONS (REFERENCE: CORPUD HANDBOOK, CURRENT EDITION)
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  - A) DISTANCE OF 100' SHALL BE MAINTAINED BETWEEN SANITARY SEWER & ANY PRIVATE OR PUBLIC WATER SUPPLY SOURCE SUCH AS AN IMPOUNDED RESERVOIR USED AS A SOURCE OF DRINKING WATER. IF ADEQUATE LATERAL SEPARATION CANNOT BE ACHIEVED, FERROUS SANITARY SEWER PIPE SHALL BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS. HOWEVER, THE MINIMUM SEPARATION SHALL NOT BE LESS THAN 25' FROM A PRIVATE WELL OR 50' FROM A PUBLIC WELL
  - B) WHEN INSTALLING WATER &/OR SEWER MAINS, THE HORIZONTAL SEPARATION BETWEEN UTILITIES SHALL BE 10'. IF THIS SEPARATION CANNOT BE MAINTAINED DUE TO EXISTING CONDITIONS, THE VARIATION ALLOWED IS THE WATER MAIN IN A SEPARATE TRENCH WITH THE ELEVATION OF THE WATER MAIN AT LEAST 18" ABOVE THE TOP OF THE SEWER & MUST BE APPROVED BY THE PUBLIC UTILITIES DIRECTOR. ALL DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER
  - C) WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, OR ANYTIME A SANITARY SEWER PASSES OVER A WATERMAIN, DIP MATERIALS OR STEEL ENCASEMENT EXTENDED 10' ON EACH SIDE OF CROSSING MUST BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS
  - D) 5.0' MINIMUM HORIZONTAL SEPARATION IS REQUIRED BETWEEN ALL SANITARY SEWER & STORM SEWER FACILITIES, UNLESS DIP MATERIAL IS SPECIFIED FOR SANITARY SEWER
  - E) MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL WATERMAIN & RCP STORM DRAIN CROSSINGS; MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER & RCP STORM DRAIN CROSSINGS. WHERE ADEQUATE SEPARATIONS CANNOT BE ACHIEVED, SPECIFY DIP MATERIALS & A CONCRETE CRADLE HAVING 6" MIN. CLEARANCE (PER CORPUD DETAILS W-41 & S-49)
  - F) ALL OTHER UNDERGROUND UTILITIES SHALL CROSS WATER & SEWER FACILITIES WITH 18" MIN. VERTICAL SEPARATION REQUIRED
- ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW & APPROVAL OF AN AMENDED PLAN &/OR PROFILE BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT PRIOR TO CONSTRUCTION
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- INSTALL 4" PVC SEWER SERVICES @ 1.0% MINIMUM GRADE WITH CLEANOUTS LOCATED AT ROW OR EASEMENT LINE & SPACED EVERY 75 LINEAR FEET MAXIMUM
- PRESSURE REDUCING VALVES ARE REQUIRED ON ALL WATER SERVICES EXCEEDING 80 PSI. BACKWATER VALVES ARE REQUIRED ON ALL SANITARY SEWER SERVICES HAVING BUILDING DRAINS LOWER THAN 1.0' ABOVE THE NEXT UPSTREAM MANHOLE
- ALL ENVIRONMENTAL PERMITS APPLICABLE TO THE PROJECT MUST BE OBTAINED FROM NCDWQ, USACE &/OR FEMA FOR ANY RIPARIAN BUFFER, WETLAND &/OR FLOODPLAIN IMPACTS (RESPECTIVELY) PRIOR TO CONSTRUCTION
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- CROSS-CONNECTION CONTROL PROTECTION DEVICES ARE REQUIRED BASED ON DEGREE OF HEALTH HAZARD INVOLVED AS LISTED IN APPENDIX-B OF THE RULES GOVERNING PUBLIC WATER SYSTEMS IN NORTH CAROLINA. THESE GUIDELINES ARE THE MINIMUM REQUIREMENTS. THE DEVICES SHALL MEET AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE) STANDARDS OR BE ON THE UNIVERSITY OF SOUTHERN CALIFORNIA APPROVAL LIST. THE DEVICES SHALL BE INSTALLED AND TESTED (BOTH INITIAL AND PERIODIC TESTING THEREAFTER) IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS OR THE LOCAL CROSS-CONNECTION CONTROL PROGRAM, WHICHEVER IS MORE STRINGENT. A CERTIFICATE OF COMPLIANCE SHALL ALSO BE OBTAINED FROM THE RW CROSS-CONNECTION COORDINATOR FOR EACH DEVICE PRIOR TO ISSUANCE OF A UC / BLDG PERMIT. CONTACT (919) 996-5923 OR CROSS.CONNECTION@RALEIGHNC.GOV FOR MORE INFORMATION.

**ATTENTION CONTRACTORS**

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Failure to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

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**LEGEND**

	EXISTING	PROPOSED
FENCE	-X-	-X-
GAS LINE	-G-	-G-
POWER LINE	-UGP-	-UGP-
TELEPHONE LINE	-UGT-	-UGT-
WATER LINE	-W-	-W-
SANITARY SEWER LINE	-SAW-	-SAW-
CABLE TV LINE	-UCATV-	-UCATV-
FIBER OPTIC LINE	-UFO-	-UFO-
RCP STORM PIPE	-RCP-	-RCP-
PVC STORM PIPE	-N/A-	-RCP-
ROOF DRAIN PIPE	-RD-	-RD-
HP STORM PIPE	-N/A-	-RCP-
CONSTRUCTION LIMITS	-DASHED-	-DASHED-
LIGHT POLE	○	○
SITE BOLLARD	⊙	⊙
UTILITY POLE	○	○
SANITARY SEWER MANHOLE	⊙	⊙
STORM SEWER MANHOLE	⊙	⊙
CLEANOUT (SANITARY OR STORM)	⊙	⊙
DROP INLET	⊙	⊙
FIRE HYDRANT	⊙	⊙
WATER VALVE	⊙	⊙
TELECOM BOX	⊙	⊙
DRAINAGE STRUCTURE ID:		(A1)

**Public Sewer Collection / Extension System**

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City of Raleigh  
Public Utilities Department Permit # S-5375  
Authorization to Construct \_\_\_\_\_  
Date \_\_\_\_\_

**CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION**

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CITY OF RALEIGH DEVELOPMENT APPROVAL \_\_\_\_\_  
RALEIGH WATER REVIEW OFFICER \_\_\_\_\_

THIS DRAWING PREPARED AT THE RALEIGH OFFICE  
5410 Trinity Road, Suite 102 | Raleigh, NC 27607  
TEL: 919.966.4951 FAX: 919.953.8124 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.

DATE: 04/05/2023  
DRAWN BY: L. BARNES  
DESIGNED BY: G. FRANK  
CHECKED BY: G. FRANK  
SCALE: AS SHOWN

**TIMMONS GROUP**  
NORTH CAROLINA LICENSE NO. C-1652

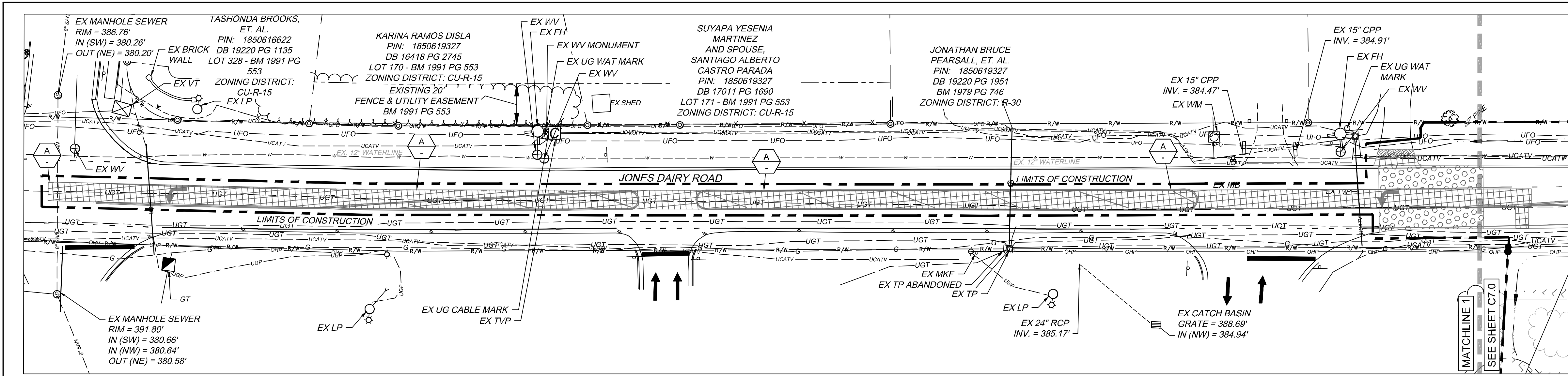
**JONES DAIRY STORAGE FACILITY**  
TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

**SITE UTILITY PLAN**

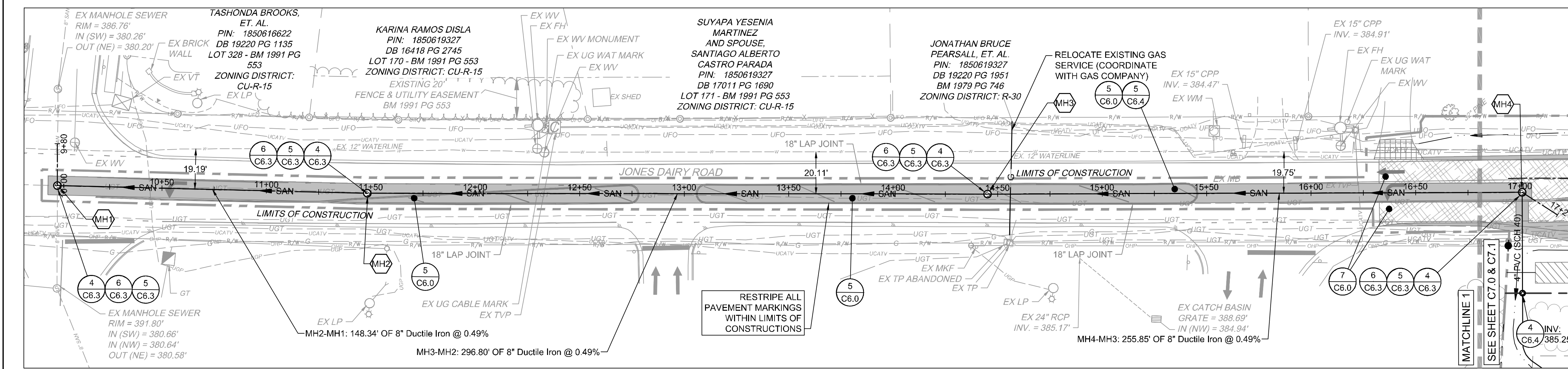
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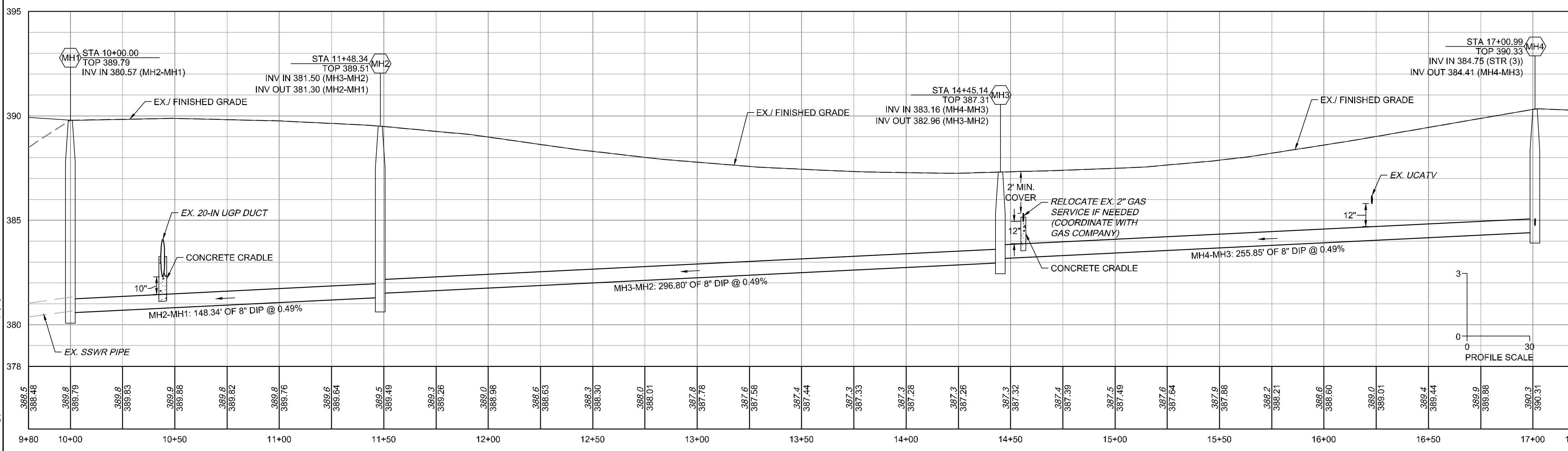




PLAN VIEW 1 - EX CONDITIONS & DEMOLITION



PLAN VIEW 2 - SITE, UTILITY & GRADING PLAN



PROFILE VIEW

**SANITARY SEWER SCHEDULE**

MANHOLE	TOP	INVERT	DIAMETER	LENGTH	SLOPE	BEARING
MH1	389.79	389.57 (SE)	8"	148.34 LF	0.49%	N47° 48' 15"W
MH2	389.51	381.50 (SE)	8"	296.80 LF	0.49%	N49° 08' 39"W
MH3	387.31	382.96 (NW)	8"	95.34 LF	0.42%	N41° 04' 56"E
MH4	390.33	384.75 (SW)	4"	48.25 LF	1.04%	N40° 31' 42"E

**PIPE TABLE**

PIPE NAME	SIZE	LENGTH	SLOPE	BEARING
MH2-MH1	8"	148.34 LF	0.49%	N47° 48' 15"W
MH4-MH3	8"	255.85 LF	0.49%	N49° 24' 12"W
MH3-MH2	8"	296.80 LF	0.49%	N49° 08' 39"W
STR (1)	8"	95.34 LF	0.42%	N41° 04' 56"E
STR (3)	4"	48.25 LF	1.04%	N40° 31' 42"E

**KEY NOTES**

(A)	REMOVE ASPHALT PAVEMENT AND STONE BASE	(4)	SANITARY SEWER MANHOLE
(C)	50-FT MILL TAPER FROM 0" - 1.5" (SEE C7.0)	(5)	SANITARY SEWER MANHOLE RING & COVER
(D)	SAW CUT AND REMOVE CONCRETE AT NEAREST JOINT	(6)	SEWER MANHOLE STEPS
(2)	STANDARD DUTY CONCRETE PAVEMENT	(4)	SANITARY CLEANOUT
(6)	NCDOT ASPHALT (FULL DEPTH)	(5)	UTILITY TRENCHING AND BACKFILL
(7)	NCDOT OVERLAY		

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City of Raleigh  
Public Utilities Department Permit # S-5375

Authorization to Construct \_\_\_\_\_

Date \_\_\_\_\_

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CITY OF RALEIGH DEVELOPMENT APPROVAL \_\_\_\_\_

RALEIGH WATER REVIEW OFFICER \_\_\_\_\_

**TIMMONS GROUP**  
NORTH CAROLINA LICENSE NO. C-1652

**JONES DAIRY STORAGE FACILITY**  
TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

**SITE UTILITY PLAN & PROFILE**

THIS DRAWING PREPARED AT THE RALEIGH OFFICE  
5410 Trinity Road, Suite 102 | Raleigh, NC 27607  
TEL: 919.866.4951 FAX: 919.853.8124 www.timmons.com

DATE	REVISION DESCRIPTION
06/07/2023 <td>ADDRESSED TOWN OF ROLESVILLE COMMENTS</td>	ADDRESSED TOWN OF ROLESVILLE COMMENTS
08/07/2023 <td>ADDRESSED TOWN OF ROLESVILLE 2ND REVIEW COMMENTS</td>	ADDRESSED TOWN OF ROLESVILLE 2ND REVIEW COMMENTS
11/01/2023 <td>ADDRESSED TOWN OF ROLESVILLE 3RD REVIEW COMMENTS</td>	ADDRESSED TOWN OF ROLESVILLE 3RD REVIEW COMMENTS

YOUR VISION ACHIEVED THROUGH OURS.

DATE: 04/05/2023

DRAWN BY: L. BARNES

DESIGNED BY: G. FRANK

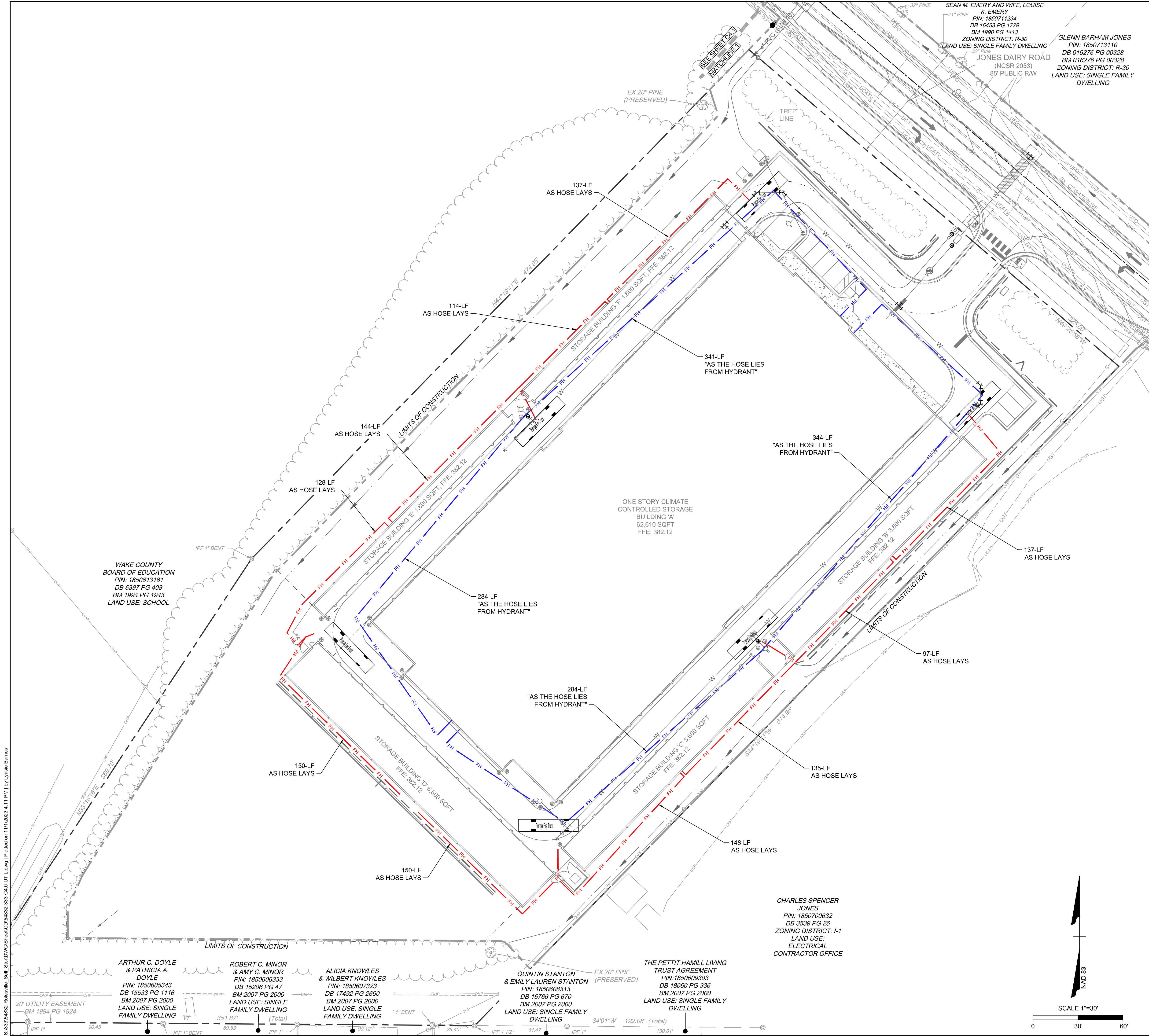
CHECKED BY: G. FRANK

SCALE: AS SHOWN

JOB NO. 54832

SHEET NO. C4.1





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CITY OF RALEIGH DEVELOPMENT APPROVAL \_\_\_\_\_ RALEIGH WATER REVIEW OFFICER \_\_\_\_\_

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DATE: 04/05/2023

DRAWN BY: L. BARNES

DESIGNED BY: G. FRANK

CHECKED BY: G. FRANK

SCALE: AS SHOWN

**TIMMONS GROUP**

NORTH CAROLINA LICENSE NO. C-1652

**JONES DAIRY STORAGE FACILITY**

TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

**FIRE HOSE LAY PLAN**

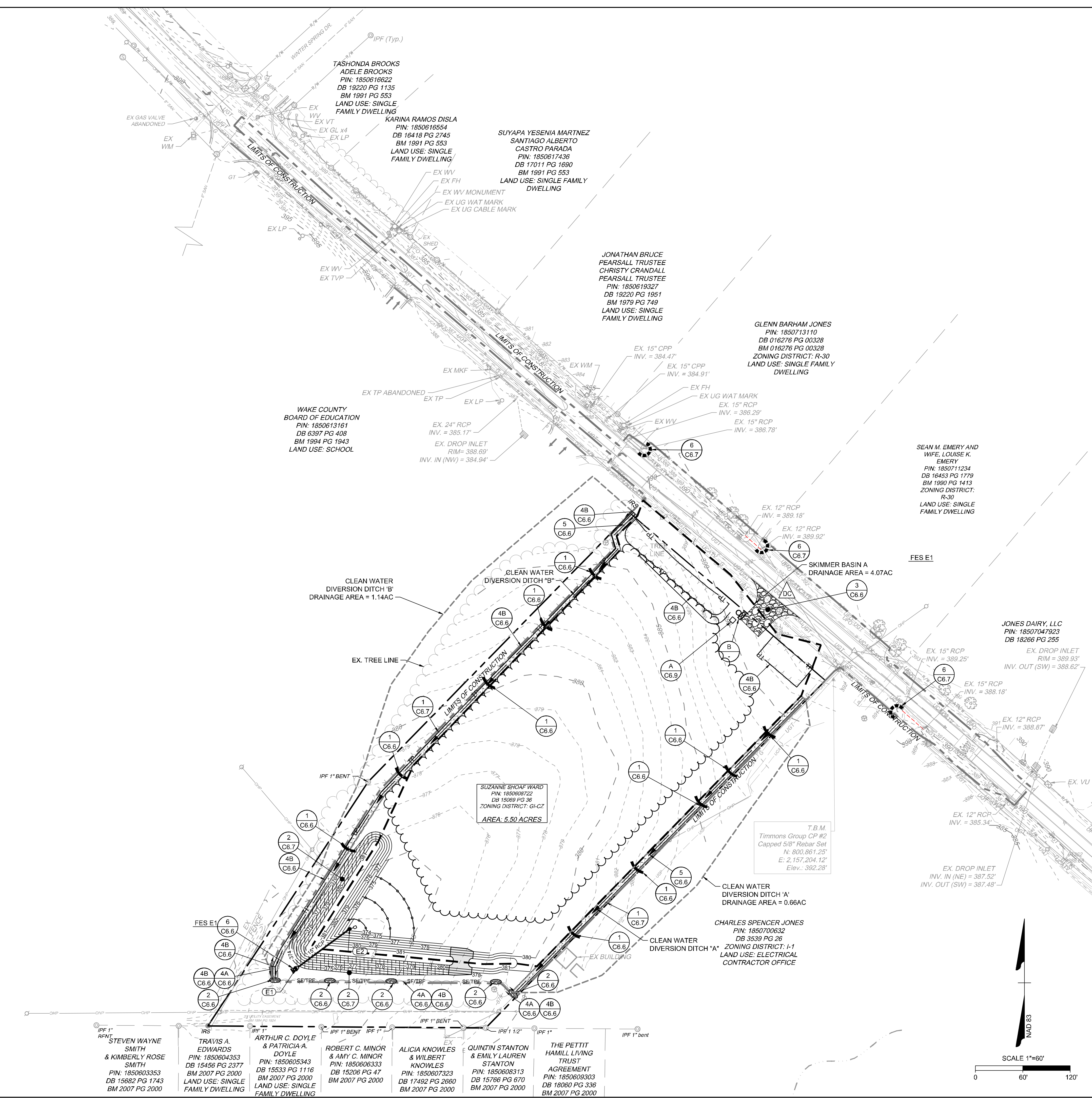
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REVISION DESCRIPTION

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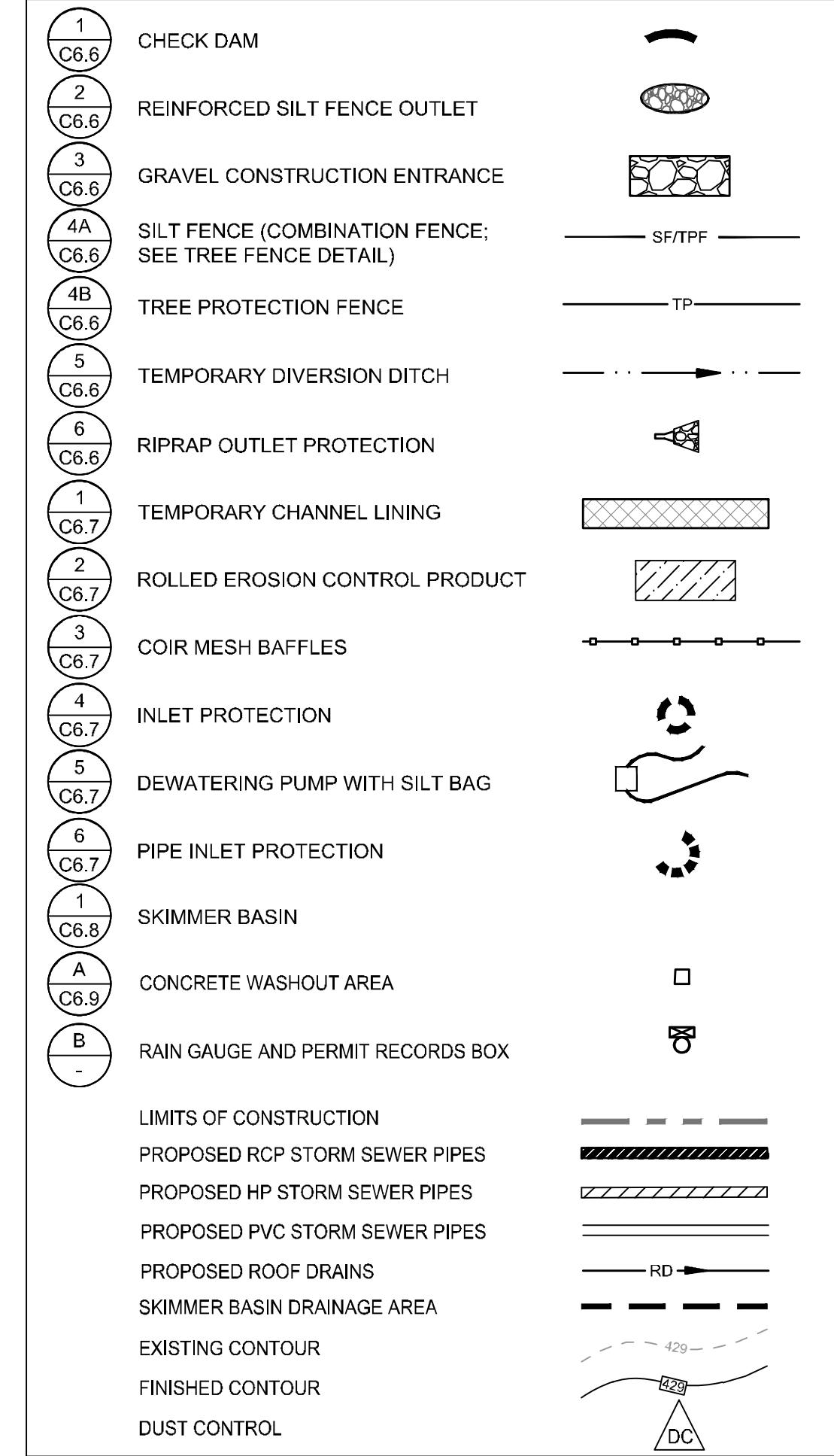




**EROSION CONTROL NOTES**

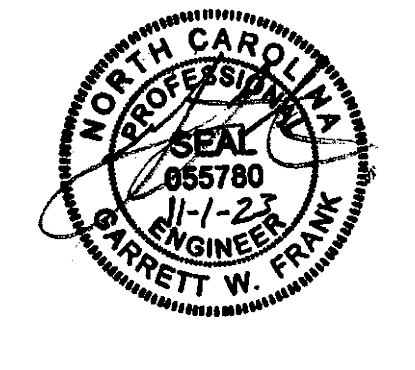
1. THE CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL CODES IN OBSERVING EROSION CONTROL MEASURES BOTH ON AND OFF SITE. ALL OFF-SITE SOIL BORROW AND WASTE SITES SHALL BE PROPERLY PERMITTED FOR SUCH ACTIVITIES.
2. THE CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAINFALL EVENT OR AS DIRECTED BY LOCAL AUTHORITIES OR ENGINEER.
3. ALL OPEN STORM PIPES SHALL BE PROTECTED WITH STONE FILTER PROTECTION AFTER WORK STOPPAGE EACH DAY.
4. ALL STORM DRAINAGE PIPES SHALL BE THOROUGHLY FLUSHED OF ALL SEDIMENT FOLLOWING SITE STABILIZATION. INTERIOR FLUSHING OF SYSTEM SHALL BE PERFORMED AS NEEDED TO MAINTAIN PROPER FUNCTIONING OF THE DRAINAGE SYSTEM.
5. THE INDICATED STAGING AREA IS INTENDED FOR VEHICLES AND NON-ERODIBLE MATERIALS ONLY. NO SOIL, SAND OR OTHER ERODIBLE, FINE GRAINED MATERIAL SHALL BE STORED OUTSIDE OF THE LIMITS OF THE SITE PROTECTED BY SEDIMENT AND EROSION CONTROL DEVICES AND MEASURES.
6. SOIL AND OTHER MATERIALS SHALL ONLY BE TEMPORARILY STOCKPILED WITHIN THE CONSTRUCTION LIMITS PROTECTED BY SEDIMENT AND EROSION CONTROL DEVICES AND MEASURES.
7. TREE PROTECTION INSPECTION SHALL BE COMPLETED PRIOR TO INSTALLING EROSION CONTROL DEVICES.
8. ALL APPLICABLE EAS CONTROL MEASURES ARE TO BE PROPERLY MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED. PERMANENT GROUND COVER SHALL BE PROVIDED FOR ALL DISTURBED AREAS WITHIN 15 WORKING DAYS OR NO MORE THAN 90 CALENDAR DAYS (WHICHEVER IS SHORTER).
9. TOTAL DISTURBED AREA: 5.77 AC.

**KEYNOTES**



**CONSTRUCTION SEQUENCE - PH I**

1. OBTAIN AN APPROVED PLAN AND APPLICABLE PERMIT PRIOR TO COMMENCING ANY LAND DISTURBING ACTIVITY. A COPY OF THE APPROVED PLAN AND APPROVAL LETTER MUST BE ON FILE AT THE JOB SITE. NOTIFY EROSION CONTROL AUTHORITIES OF PROPOSED STARTING DATE OF LAND DISTURBING ACTIVITIES BY CALLING JEEVAN NEUPANE, PE AT (919) 819-8907.
2. SCHEDULE A PRECONSTRUCTION CONFERENCE WITH JEEVAN NEUPANE, PE BY CALLING AT (919) 819-8907. OBTAIN A LAND DISTURBING PERMIT.
3. INSTALL GRAVEL CONSTRUCTION PAD, TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS OR OTHER MEASURES AS SHOWN ON THE APPROVED PLAN. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS AND BASINS IMMEDIATELY AFTER CONSTRUCTION.
4. INSTALL STORM STRUCTURES E2-E1 WITH RIP RAP OUTLET PROTECTION RR-1 AS SHOWN ON PLANS (PRIOR TO SKIMMER BASIN INSTALLATION)
5. CALL ENVIRONMENTAL CONSULTANT, JEEVAN NEUPANE, PE, FOR AN ONSITE INSPECTION BY THE ENVIRONMENTAL CONSULTANT TO OBTAIN A CERTIFICATE OF COMPLIANCE.
6. BEGIN CLEARING AND GRUBBING. MAINTAIN DEVICES AS NEEDED. ROUGH GRADE SITE.
7. INSTALL STORM SEWER, IF SHOWN, AND PROTECT INLETS WITH BLOCK AND GRAVEL INLET CONTROLS, SEDIMENT TRAPS OR OTHER APPROVED MEASURES AS SHOWN ON THE PLAN. BEGIN CONSTRUCTION, BUILDING, ETC.
8. MAINTAIN ALL EROSION & SEDIMENT CONTROL MEASURES THROUGHOUT CONSTRUCTION. REMOVE AND STABILIZE CONSTRUCTION LAY DOWN, STAGING, DIRT & WASTE PILE AREAS. ALL APPLICABLE E&S CONTROL MEASURES ARE TO REMAIN UNTIL PERMANENT VEGETATION IS ESTABLISHED.
9. ONCE THE SITE IS READY TO MOVE FORWARD WITH SITE PAVING, STABILIZE THE SITE AND PROCEED TO PHASE 2 EROSION CONTROL.



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DATE: 04/05/2023  
 DRAWN BY: L. BARNES  
 DESIGNED BY: G. FRANK  
 CHECKED BY: G. FRANK  
 SCALE: AS SHOWN

**TIMMONS GROUP**  
 NORTH CAROLINA LICENSE NO. C-1652  
**JONES DAIRY STORAGE FACILITY**  
 TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA  
**EROSION & SEDIMENTATION CONTROL PLAN - PH I**

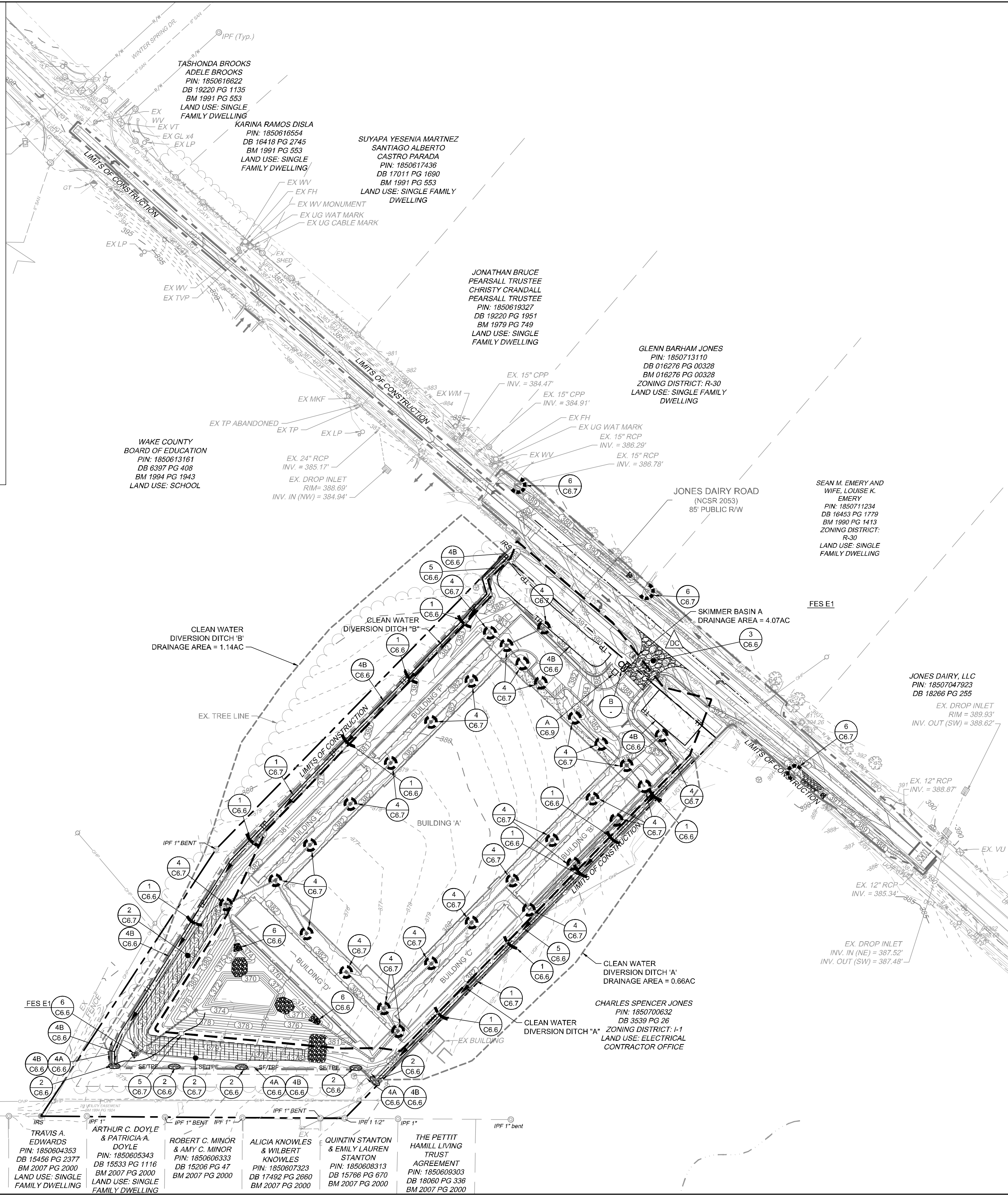
JOB NO.: 54832  
 SHEET NO.: C5.0

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CONSTRUCTION SEQUENCE - PH II

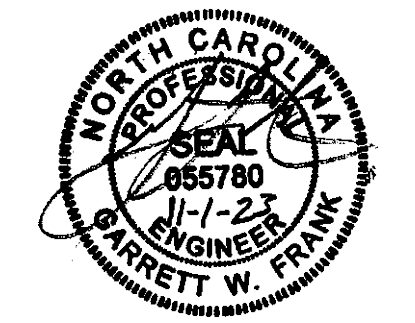
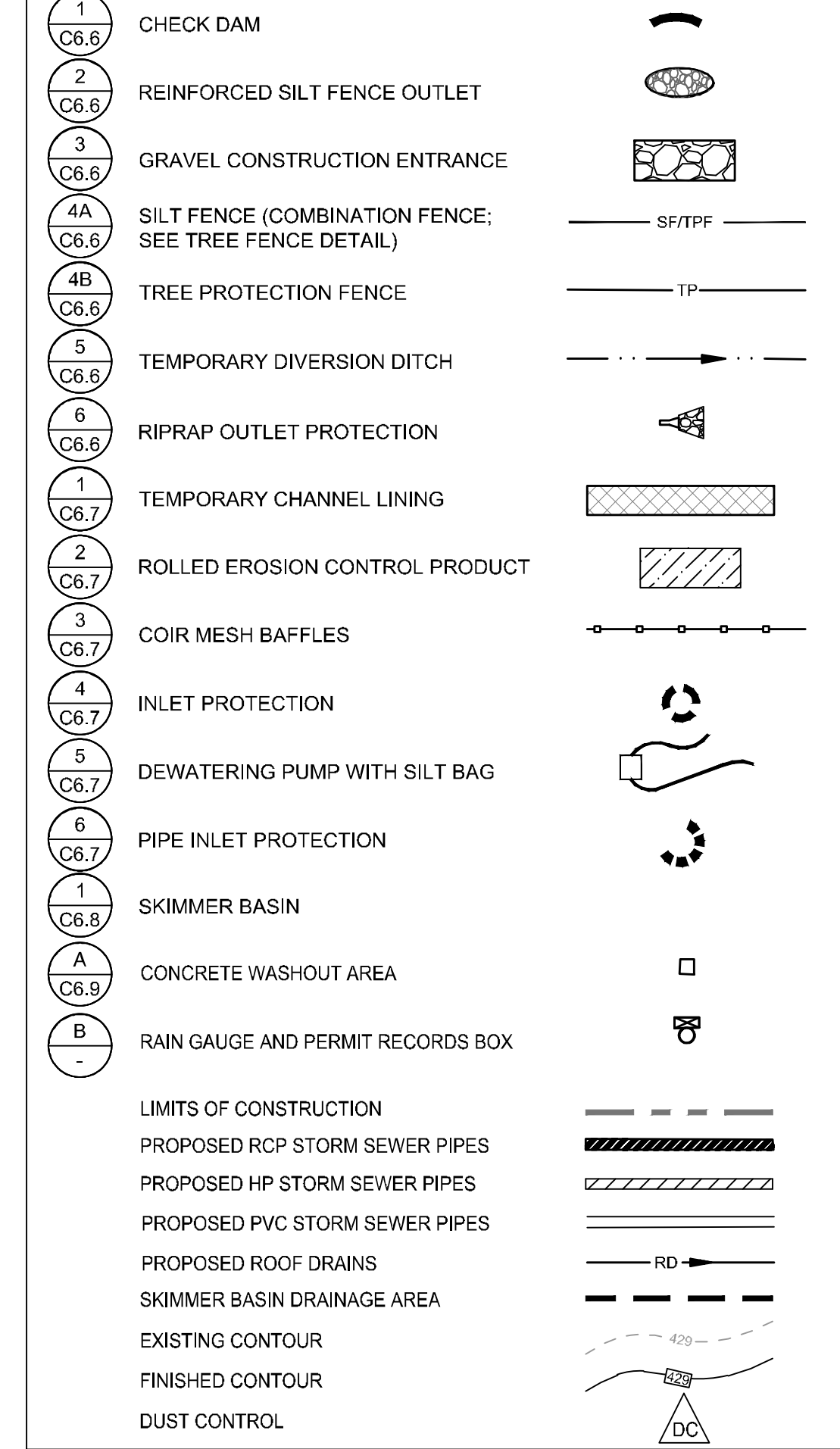
1. MAINTAIN ALL EXISTING EROSION & SEDIMENT CONTROL MEASURES PREVIOUSLY CONSTRUCTED AND ASSOCIATED WITH PHASE I. ADJUST AS NEEDED.
2. AS SITE IS PAVED AND BROUGHT UP TO FINAL GRADE, INSTALL THE REMAINDER OF THE STORM DRAINAGE SYSTEM. INSTALL INLET AND OUTLET PROTECTION DEVICES AT NEW STRUCTURES AS THEY ARE CONSTRUCTED.
3. STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC. SEED AND MULCH DENUDEED AREAS PER GROUND STABILIZATION TIME FRAMES.
4. INSTALL REMAINDER OF PAVING AND SITE FEATURES.
5. RESPREAD TOPSOIL, INSTALL SLOPE PROTECTION BLANKETS ON ANY 3:1 SLOPES AND VEGETATE STEEP SLOPES AS THEY ARE ESTABLISHED AS SHOWN ON PLANS.
6. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL JEEVAN NEUPANE, PE AT (919) 819-8907 AND TIMMONS GROUP AT (919) 868-4503 FOR AN INSPECTION AND APPROVAL FOR SEDIMENT BASIN CONVERSION.
7. CONTACT NCDEQ - RALEIGH REGIONAL OFFICE (919) 791-4200 TO DETERMINE THE DIVISION OF ENERGY, MINERAL AND LAND RESOURCES CONTACT PERSON TO RECEIVE DEWATERING NOTIFICATIONS. AT LEAST 10 DAYS PRIOR TO BEGINNING DEWATERING ACTIVITY, SEND EMAIL TO NCDEQ-DEMLR CONTACT PERSON AND COPY ENVIRONMENTAL CONSULTANT THAT MET YOU ONSITE. THE EMAIL SHOULD INCLUDE: E&S JURISDICTION: WAKE COUNTY, WAKE COUNTY PROJECT: NAME, NUMBER, AND LOCATION (CITY/TOWN), ENVIRONMENTAL CONSULTANT NAME, AND ADDRESS THE FOLLOWING: A) REASON FOR CONVERSION, B) BASIN #, C) DEWATERING METHOD, AND D) ALL OTHER NECESSARY INFO FROM PART II, SECTION G, ITEM 4 OF THE NCG01. (KEEP EMAIL FOR YOUR NPDES MONITORING DOCUMENTATION)
8. AFTER RECEIVING POSITIVE CONFIRMATION FROM NCDEQ-DEMLR THAT YOU MAY REMOVE THE BASIN OR ON > DAY 11, WHICHEVER IS SOONER. REMOVE BASIN(S) AND ASSOCIATED TEMPORARY DIVERSION DITCHES. IF PIPES NEED TO BE EXTENDED, PERFORM THIS OPERATION AT THIS TIME. FINE GRADE AREA IN PREPARATION FOR SEEDING. PERFORM SEEDBED PREPARATION, SEED, MULCH AND ANCHOR ANY RESULTING BARE AREAS IMMEDIATELY.
9. INSTALL VELOCITY DISSIPATORS AND/OR LEVEL SPREADERS AS REQUIRED ON THE EROSION CONTROL PLAN.
10. WHEN SITE IS FULLY STABILIZED, CALL JEEVAN NEUPANE, PE AT (919) 819-8907 FOR APPROVAL OF REMOVING REMAINING TEMPORARY EROSION CONTROL MEASURES AND ADVICE ON WHEN SITE CAN BE ISSUED A CERTIFICATE OF COMPLETION.
11. IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES, SUCH AS VELOCITY DISSIPATORS, SHOULD NOW BE INSTALLED.
12. WHEN VEGETATION HAS BECOME ESTABLISHED, CALL FOR A FINAL SITE INSPECTION BY JEEVAN NEUPANE, PE. OBTAIN A CERTIFICATE OF COMPLETION.



EROSION CONTROL NOTES

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10. TOTAL DISTURBED AREA: 5.77 AC.

KEYNOTES



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 NORTH CAROLINA LICENSE NO. C-1652

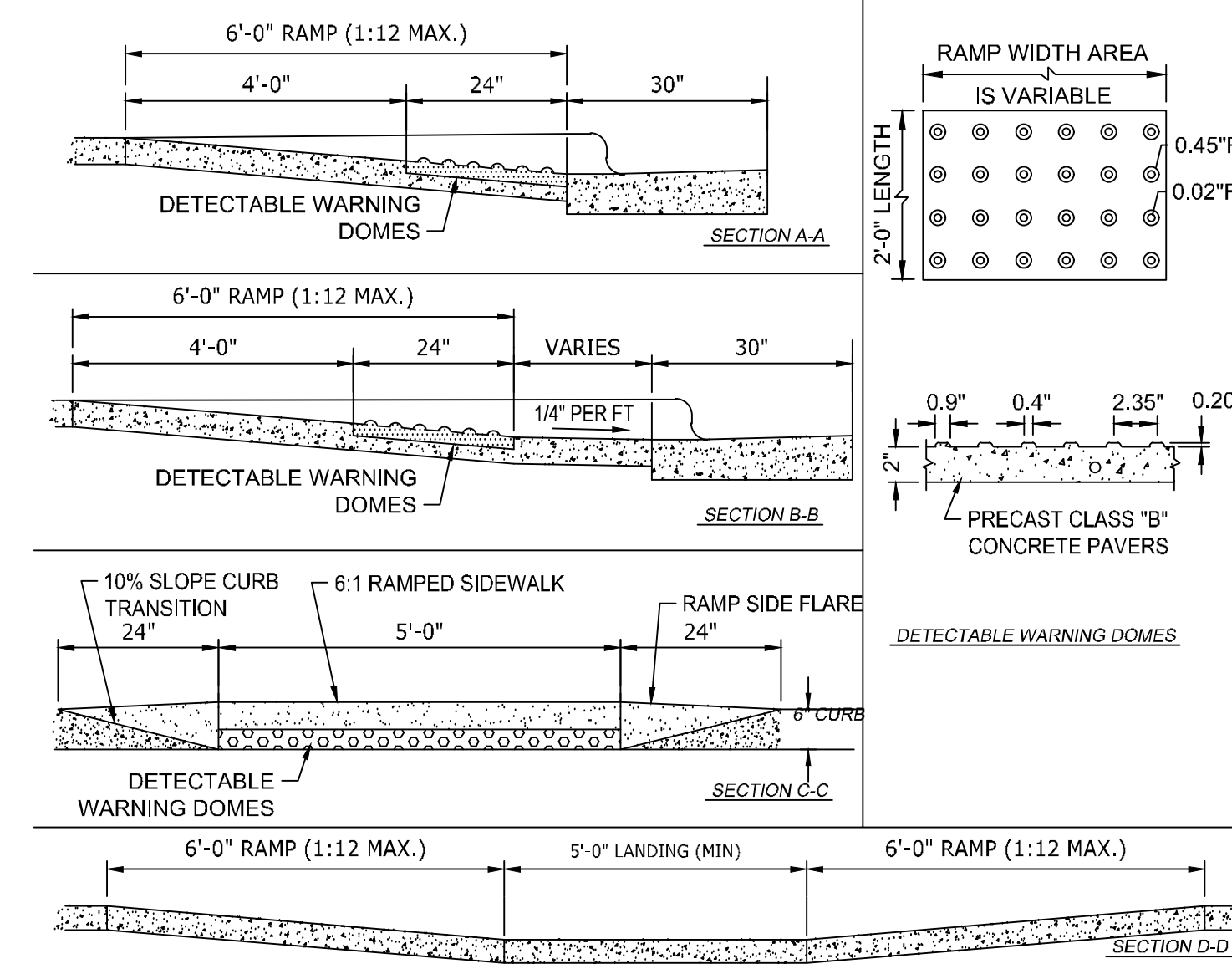
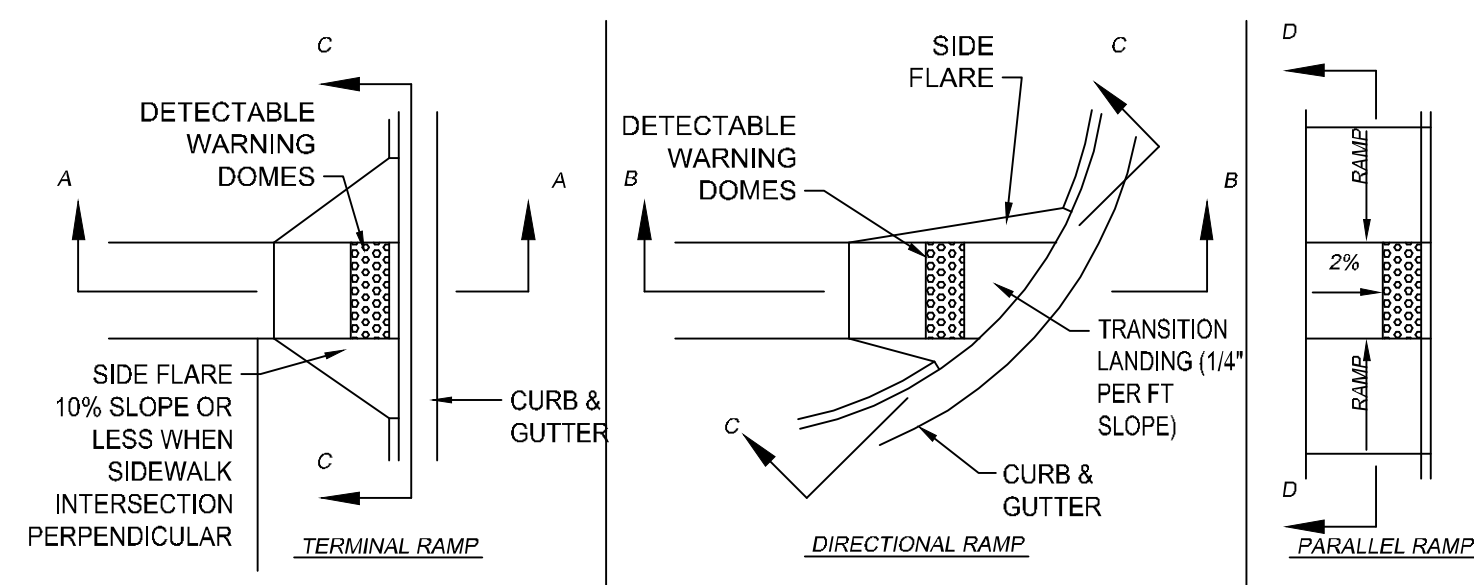
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 TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

**EROSION & SEDIMENTATION CONTROL PLAN - PH II**

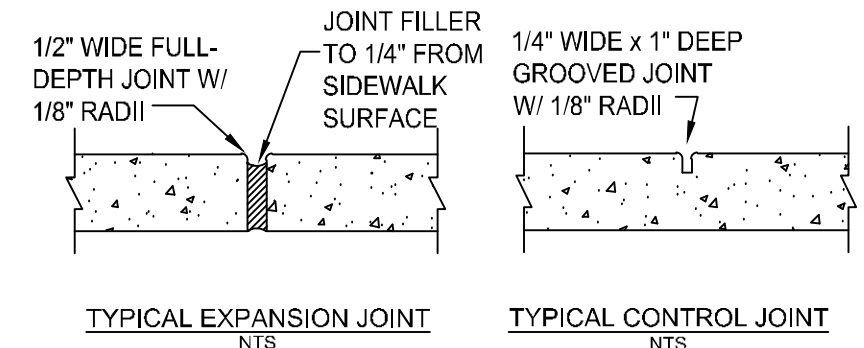
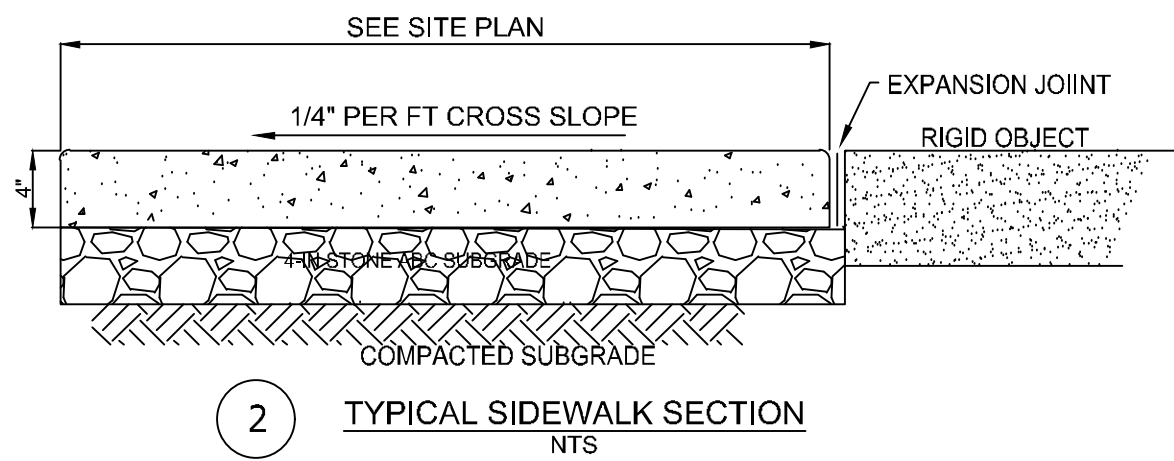
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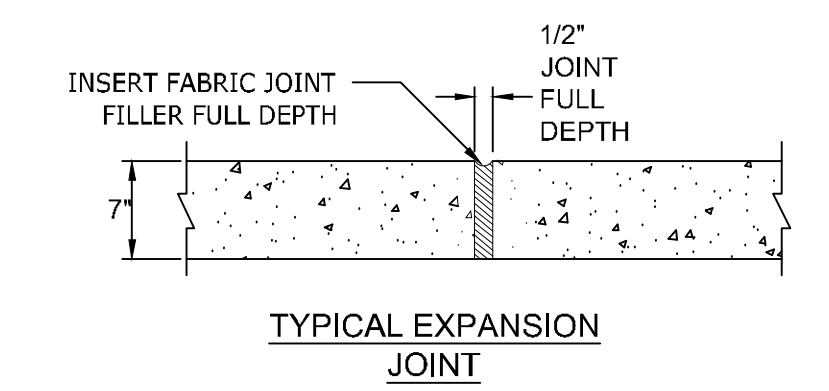
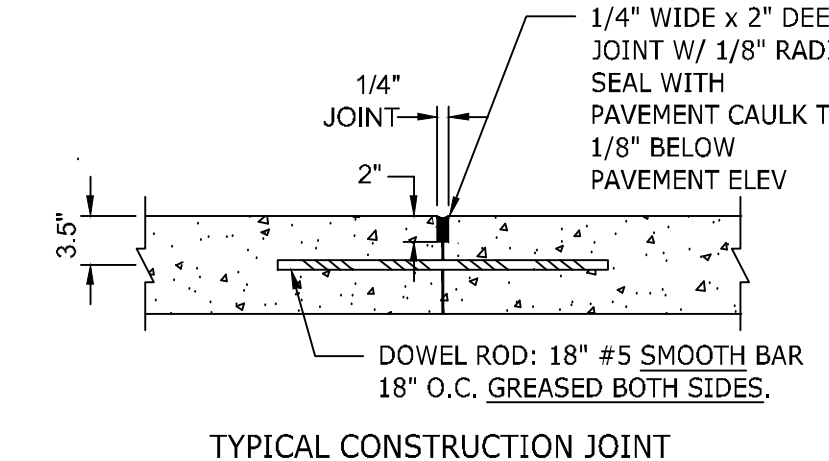
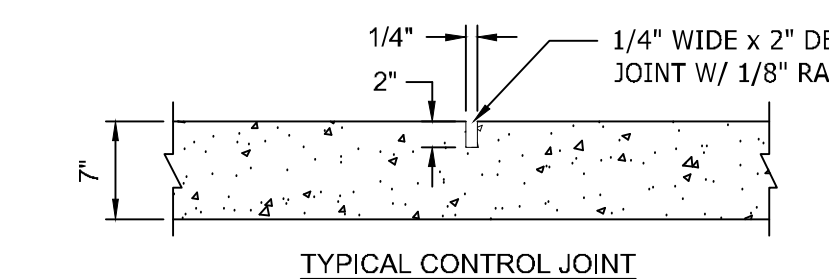
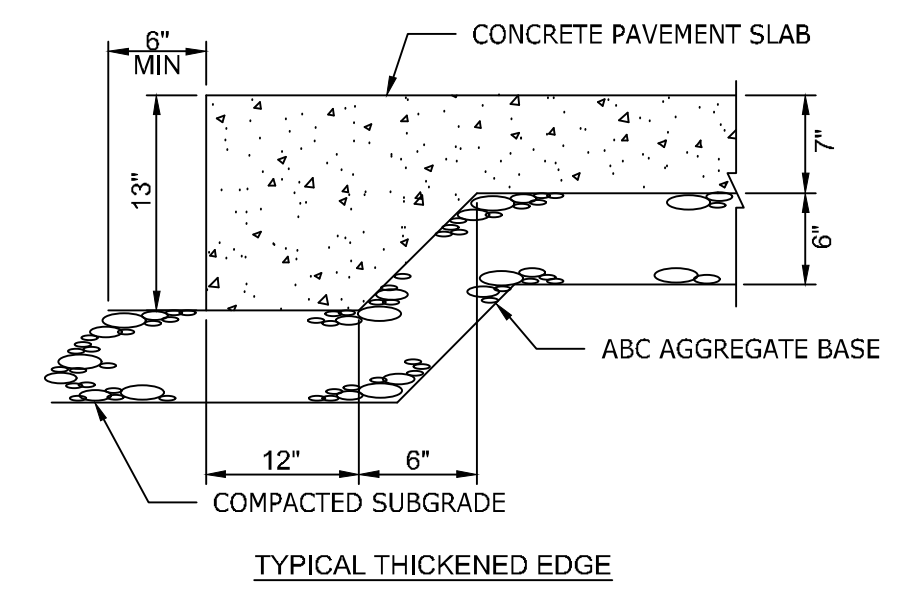




- NOTES:
- NO SLOPE ON THE SIDEWALK ACCESS RAMP SHALL EXCEED 1/4" (1:12) IN RELATIONSHIP TO THE GRADE OF THE STREET. WHERE SIDEWALK INTERSECTS RAMP PERPENDICULAR, SIDE FLARES SHALL BE LESS THAN 10% SLOPE.
  - IN NO CASE SHALL THE WIDTH OF THE ACCESS RAMP BE LESS THAN 48" (4'-0")
  - DETECTABLE WARNING DOMES SHALL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN.
  - FLARES MAY BE SLOPED GREATER THAN 10% WHEN A SIDEWALK IS NOT INTERSECTING PERPENDICULAR WITH RAMP



- GENERAL NOTES:
- PROVIDE GROOVE CONTROL JOINT 1-IN DEEP WITH 1/8-IN RADI IN SIDEWALK AT 5' INTERVALS UNLESS INDICATED OTHERWISE.
  - PROVIDE 1/2-IN EXPANSION JOINT AT 50' INTERVALS.
  - PROVIDE 1/2-IN EXPANSION JOINT WHERE THE SIDEWALK ABUTS ANY RIGID STRUCTURE.
  - SEE SPECIFICATIONS FOR ADDITIONAL JOINT SPACING REQUIREMENTS.
  - ALL CONCRETE SHALL BE 3,000 P.S.I. WITH BROOM FINISH.
  - ALL SIDEWALKS SHALL HAVE 2% OR LESS CROSS SLOPE.
  - ALL SIDEWALKS SHALL HAVE 5% OR LESS LONGITUDINAL SLOPE.
  - CAULK ALL EXPANSION JOINTS WITH SELF LEVELING COMPOUND.



CONCRETE PAVEMENT DIMENSIONS  
 CONC SLAB THICKNESS = 7"  
 CABC THICKNESS = 6"  
 REINFORCEMENT = 6x6 - W2.9xW2.9  
 DOWEL RODS = 18" #5 SMOOTH BARS  
 GREASED BOTH SIDES

- NOTES:
- ALL CONCRETE PAVEMENT SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH OF 4,000 PSI MIN. (ASTM C39).
  - CONTROL JOINTS SHALL BE SPACED AT 10' O.C.E.W. MAX. OR AS INDICATED ON THE PLAN.
  - EXPANSION JOINTS SHALL BE SPACED AT 30' O.C.E.W. MAX. OR AS INDICATED ON THE PLAN AND WHERE CONCRETE PAVEMENT ABUTS ANY RIGID OBJECT.
  - INSTALL THICKENED EDGES ALONG ALL EDGES / SIDES OF CONCRETE PAVEMENT.
  - O.C.E.W. REFERS TO "ON CENTER EACH WAY".
  - CAULK ALL EXPANSION JOINTS WITH SELF LEVELING COMPOUND.

1 ACCESSIBLE CURB RAMPS N.T.S.

2 CONCRETE SIDEWALK N.T.S.

12 HEAVY DUTY CONCRETE PAVEMENT N.T.S.

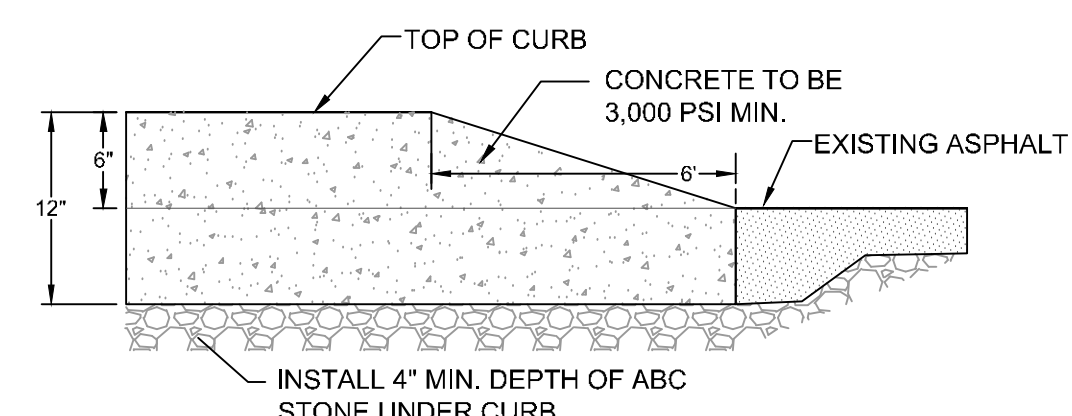
- COMPACTION NOTES:
- SUBGRADE AND ABC STONE
- COMPACT TO MAXIMUM DRY DENSITY PER ASTM D698 STANDARD PROCTOR AND WITHIN 3% MAXIMUM MOISTURE CONTENT.
  - COMPACT SUBGRADE SOIL TO 95%
  - COMPACT ABC STONE TO 100%.
  - REFER TO NCDOT SPECIFICATION FOR ADDITIONAL INFORMATION.
- ASPHALT
- COMPACT ASPHALT TO 92% MAXIMUM SPECIFIC GRAVITY.
  - REFER TO NCDOT SPECIFICATIONS FOR ADDITIONAL INFORMATION.

KEYNOTE	4	5	6	7	8
PATTERN					
CLASSIFICATION	STANDARD DUTY ASPHALT	LIGHT DUTY ASPHALT	NCDOT FULL DEPTH ASPHALT	NCDOT OVERLAY	ASPHALT MULTI-USE PATH
TYPE 5-9.5B (2018) SURFACE COURSE	3" (2-1.5" LIFTS)	3" (2-1.5" LIFTS)	3" (2-1.5" LIFTS)	1.5"	2"
TYPE 1-19.0C (2018) INTERMEDIATE COURSE	-	-	4"	-	-
NCDOT CABC STONE	8"	6"	-	-	4"
B 25.0C BASE COURSE	-	-	5"	-	-
GEOGRID (SEE ALLOWANCE)	-	-	-	-	-
COMPACTED SUBGRADE	-	-	-	-	-

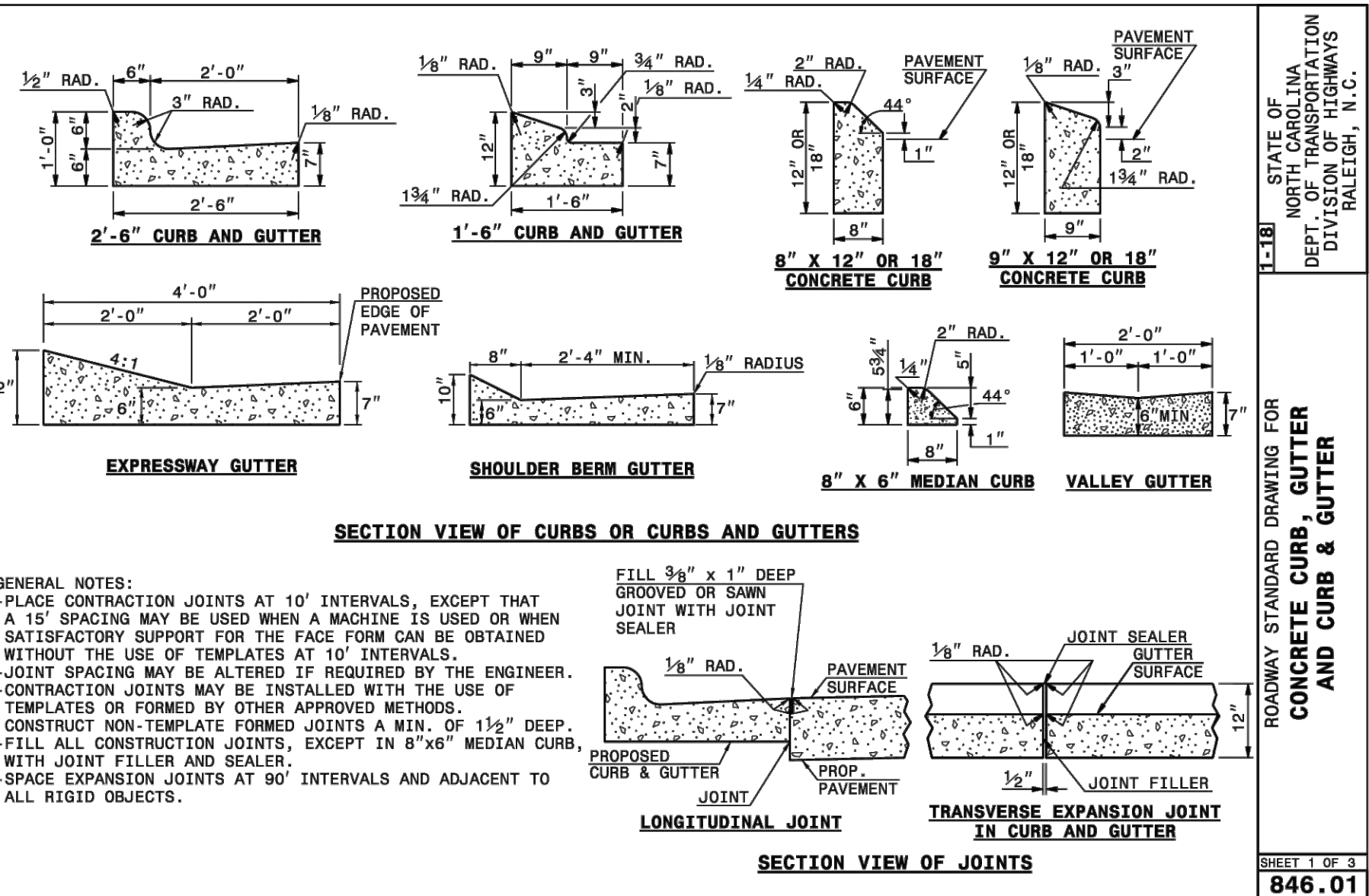
- NOTES:
- THE CONTRACTOR MAY CHOOSE TO INSTALL INTERMEDIATE COURSES OF PAVEMENT TO STABILIZE THE SITE DURING CONSTRUCTION AT NO ADDITIONAL COST. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE ADEQUATE THICKNESS REQUIRED FOR INTERMEDIATE PAVING. INCREASES IN THE DESIGN PAVEMENT SECTION TO FACILITATE INTERMEDIATE PAVING SHALL BE PROVIDED AT NO ADDITIONAL COST.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING PAVEMENT DURING ALL PHASES OF WORK. THE FINAL SURFACE OF PAVEMENT SHALL BE FREE OF ALL DEFECTS OR DAMAGE.
  - CONTRACTOR IS RESPONSIBLE FOR THEIR OWN QC TESTING, PROOF ROLL, AND REQUIREMENTS NOTED IN SPECIFICATIONS.
  - OWNER WILL ACQUIRE 3RD PARTY QC TESTING SERVICES FOR SOILS AND PAVEMENTS.
  - REFER TO NCDOT SPECIFICATIONS FOR ADDITIONAL INFORMATION.

4 5 6 7 8 ASPHALT & GRAVEL PAVEMENTS N.T.S.

9 NCDOT 30" CONCRETE CURB AND GUTTER N.T.S.

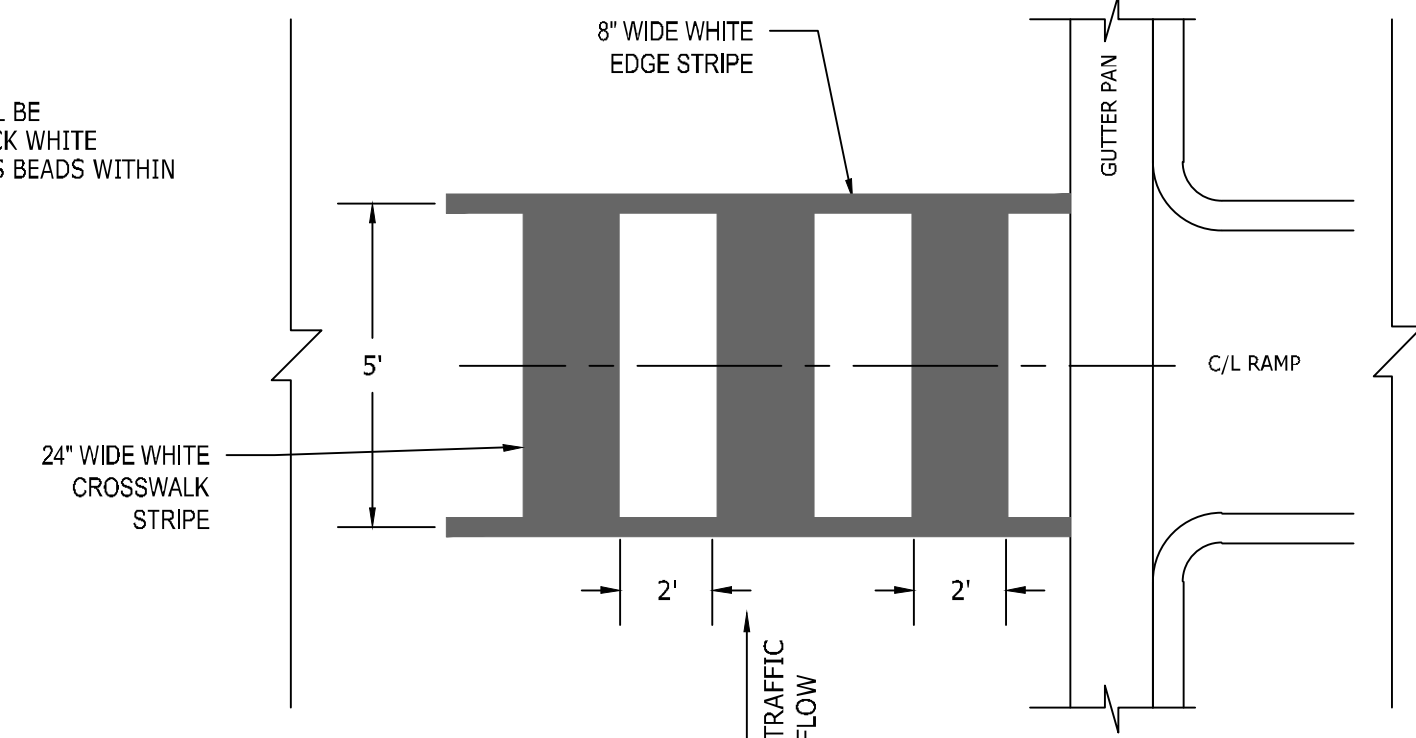


10 CURB ENDING TAPER N.T.S.

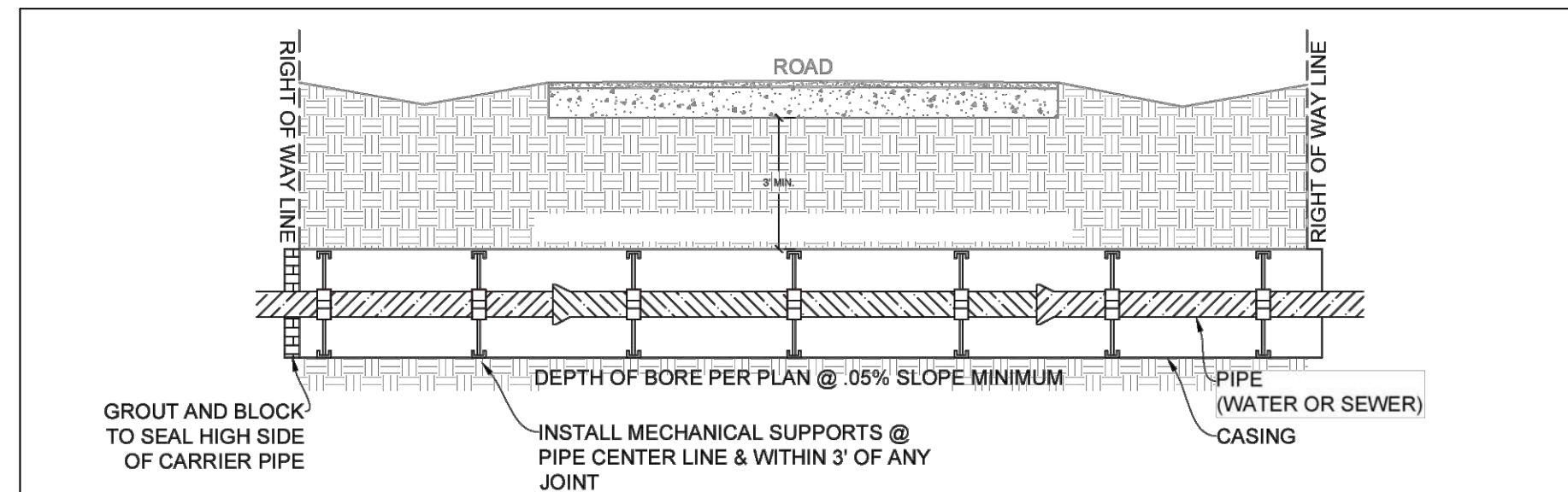


- GENERAL NOTES:
- PLACE CONTRACTION JOINTS AT 10' INTERVALS, EXCEPT THAT A 15' SPACING MAY BE USED WHEN A MACHINE IS USED OR WHEN SATISFACTORY SUPPORT FOR THE FACE FORM CAN BE OBTAINED WITHOUT THE USE OF TEMPLATES AT 10' INTERVALS.
  - JOINT SPACING MAY BE ALTERED IF REQUIRED BY THE ENGINEER.
  - CONTRACTION JOINTS MAY BE INSTALLED WITH THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS.
  - CONSTRUCT NON-TEMPLATE FORMED JOINTS A MIN. OF 1/2" DEEP.
  - FILL ALL CONSTRUCTION JOINTS, EXCEPT IN 8" X 6" MEDIAN CURB, WITH JOINT FILLER AND SEALER.
  - SPACE EXPANSION JOINTS AT 90' INTERVALS AND ADJACENT TO ALL RIGID OBJECTS.

- NOTE:
- ALL ARROW MARKINGS SHALL BE REFLECTORIZED 120-ml THICK WHITE THERMOPLASTIC WITH GLASS BEADS WITHIN RIGHT OF WAY.



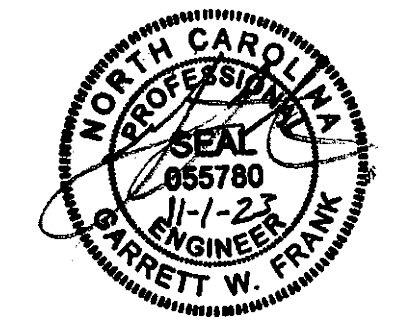
11 HIGH VISIBILITY CROSS WALK MARKING N.T.S.



- NOTES:
- CASING SHALL BE UNCOATED SPIRAL WELDED STEEL MEETING ASTM A-138, GRADE B WITH A YIELD STRENGTH OF 35,000 PSI.
  - CROSSINGS ON NCDOT MAINTAINED ROADS TO BE IN ACCORDANCE WITH CURRENT NCDOT STANDARDS AND APPROVED ENCROACHMENT AGREEMENT.
  - RESTRAINED JOINT PIPE ONLY. MEGE-LUGS ARE NOT PERMITTED.
  - SUPPORTS SHALL BE MANUFACTURED BY ADVANCE PRODUCTS & SYSTEMS, INC., PIPELINE SEAL AND INSULATOR LTD, OR BWM COMPANY.
  - THREE SUPPORTS SHALL BE INSTALLED ON EACH PIPE SEGMENT.
  - LARGER ENCASMENT SIZES MAY BE UTILIZED AT THE DISCRETION OF THE DESIGN ENGINEER AND/OR CONTRACTOR FOR EASE OF INSTALLATION AS LONG AS ALL OTHER DESIGN CRITERIA IS MET.
  - ALL PIPES 36" AND LARGER SHALL REQUIRE 4 SUPPORTS.

Carrier Pipe Nominal Diameter (inches)	Casing Minimum Inside Diameter (inches)	Casing Nominal Wall Thickness (inches)
6	14	0.375
8	16	0.375
10	18	0.375
12	20	0.375
14	24	0.375
16	30	0.500
18	30	0.500
20	36	0.500
24	36	0.625
30	42	0.625
36	48	0.750
42	54	0.875

12 BORING & JACK N.T.S.



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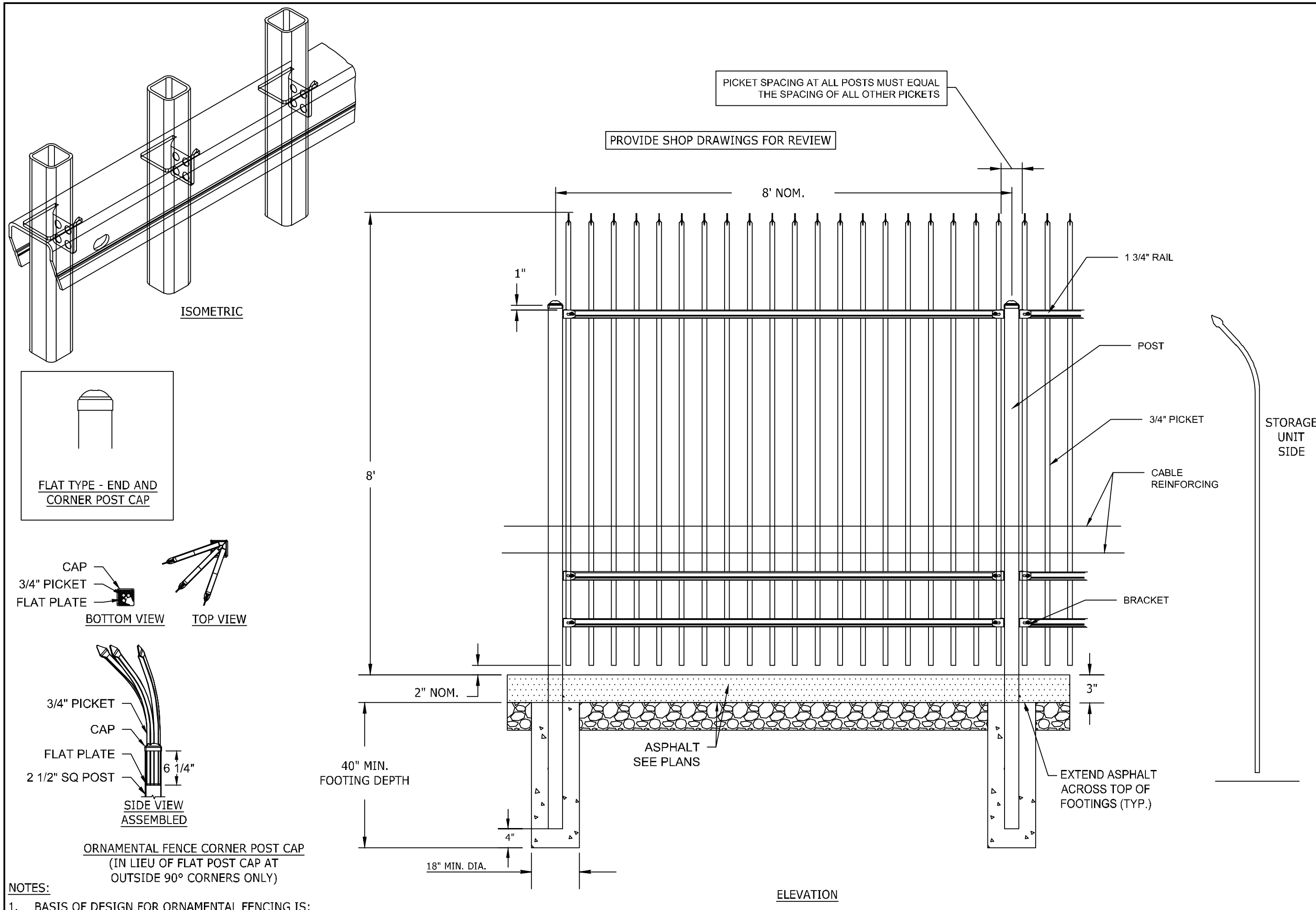
DATE: 04/05/2023  
 DRAWN BY: L. BARNES  
 DESIGNED BY: G. FRANK  
 CHECKED BY: G. FRANK  
 SCALE: AS SHOWN

**TIMMONS GROUP**  
 NORTH CAROLINA LICENSE NO. C-1652  
**JONES DAIRY STORAGE FACILITY**  
 TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA  
 SITE DETAILS

JOB NO. 54832  
 SHEET NO. C6.0

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## BRICK DUMPSTER ENCLOSURES

**MODULAR BRICK DUMPSTER ENCLOSURES**

Modular enclosures offer a range of benefits that traditional enclosures simply can't match. Not only is it easier and faster to install, but it also provides a realistic brick appearance at a fraction of the cost compared to a traditional brick enclosure.

**CUSTOM COLOR CHOICES TO FIT YOUR DESIGN STYLES**

OLD TOWN	PACIFIC CREME	SEQUOIA CLAY	WHITE	CAPE COD	CHESTNUT
----------	---------------	--------------	-------	----------	----------

EASY INSTALL URESTONE 4'x8' BRICK PANELS

**BRICK CHOICE ENCLOSURES KEY BENEFITS**

**FAST INSTALLATION**

Our Enclosure Kits feature an easy-to-install framing system that is self-supporting. Most installations can be completed in a day.

**SAVE 50% ON COSTS**

Compared to the costs of traditional masonry units, you save an average of 50% when you factor in the cost of labor and materials.

**CUSTOMIZABLE APPEARANCE**

Choose from a variety of sizes, heights, textures and stone colors to fit the needs of your business. Custom brick and colors are available.

**DURABLE & LOW MAINTENANCE**

Our brick enclosures are durable than and have a clean interior appearance which makes it easier to clean & less overall maintenance.

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Choice Enclosures  
9200 Latty Ave.  
Hazelwood, MO 63042  
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DATE	REVISION DESCRIPTION
06/07/2023	ADRESSED TOWN OF ROLESVILLE COMMENTS
08/01/2023	ADRESSED TOWN OF ROLESVILLE 2ND REVIEW COMMENTS
11/01/2023	ADRESSED TOWN OF ROLESVILLE 3RD REVIEW COMMENTS

DATE: 04/05/2023

DRAWN BY: L. BARNES

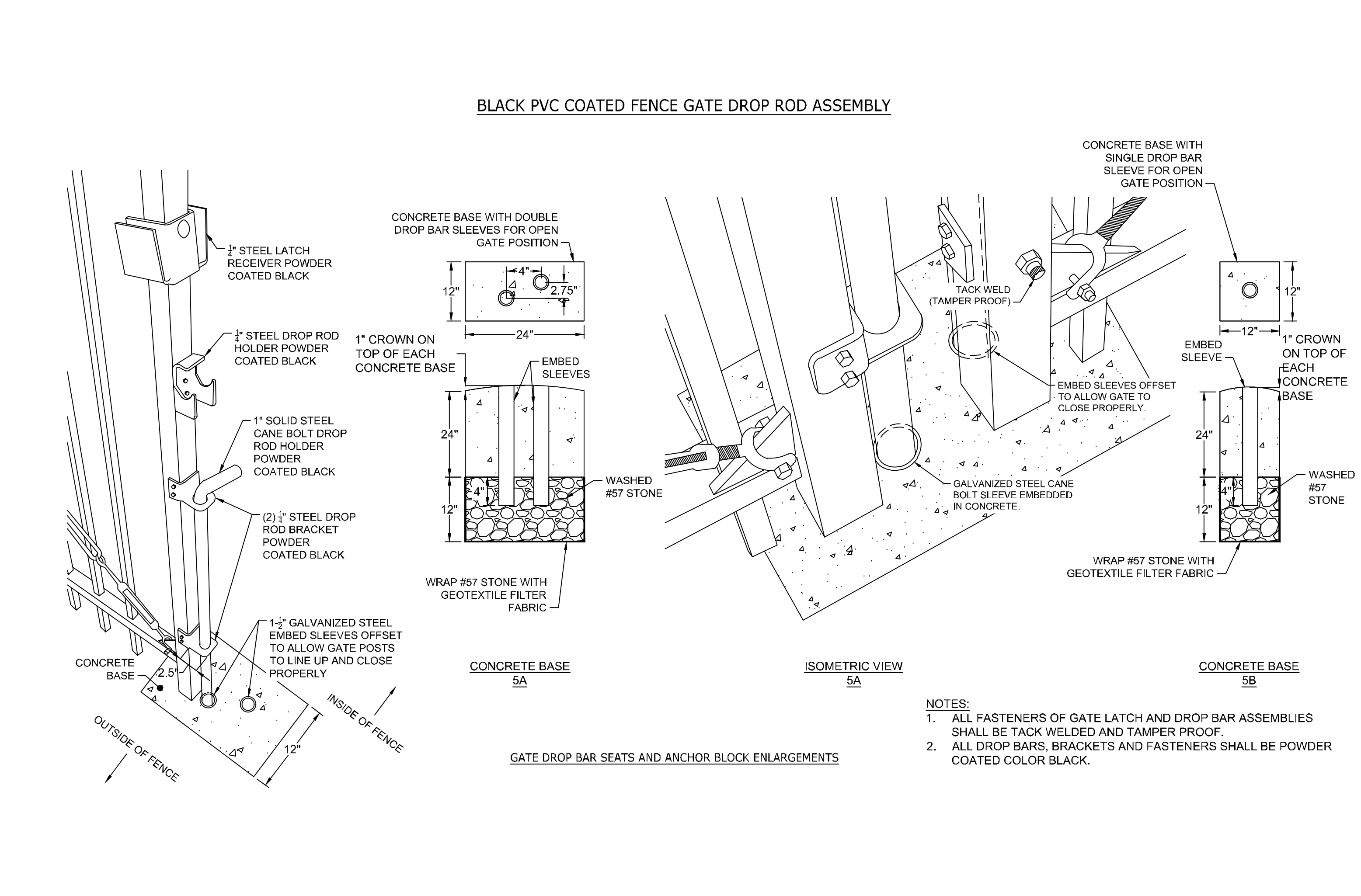
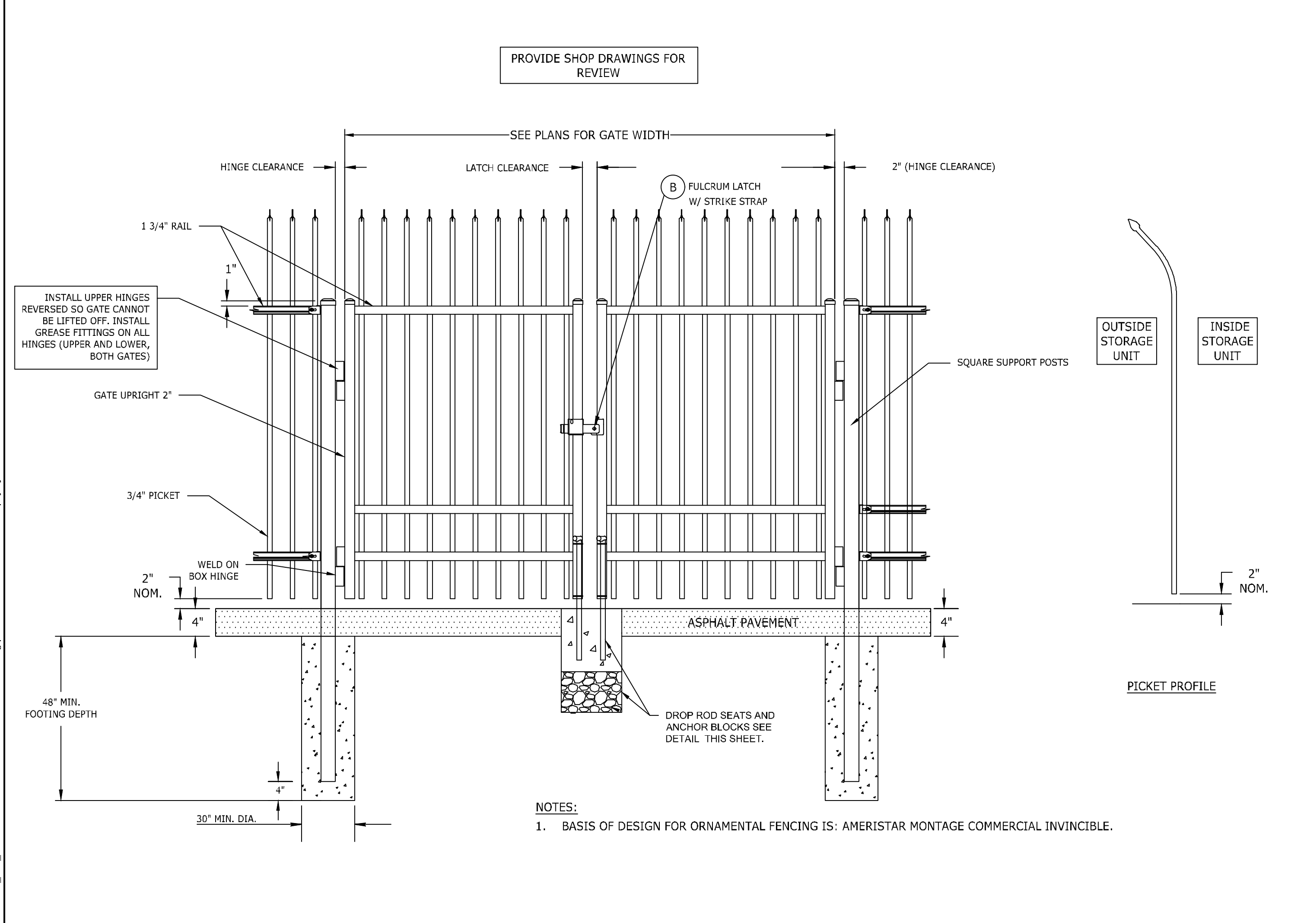
DESIGNED BY: G. FRANK

CHECKED BY: G. FRANK

SCALE: AS SHOWN

① ORNAMENTAL FENCE (8' HEIGHT) N.T.S.

② BRICK DUMPSTER ENCLOSURE N.T.S.



③ 8' TALL ORNAMENTAL GATES (SEE PLANS FOR GATE WIDTH) N.T.S.

④ GATE DROP BAR SEATS AND ANCHOR BLOCK ENLARGEMENTS N.T.S.

# TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

## JONES DAIRY STORAGE FACILITY

TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

SITE DETAILS

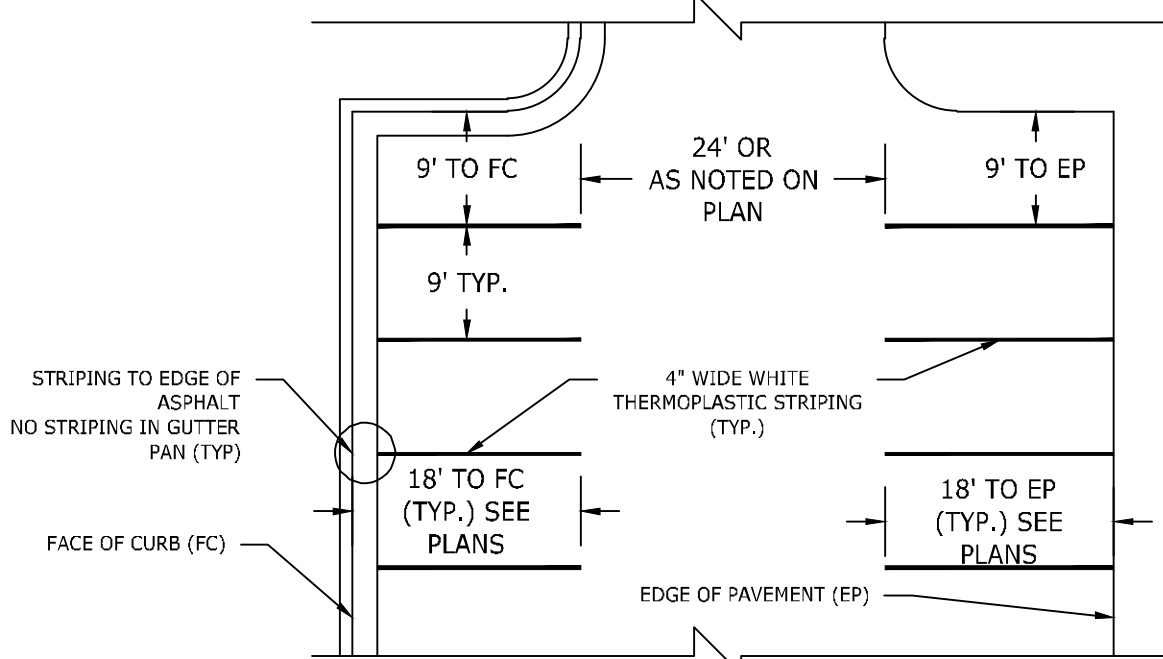
JOB NO. 54832

SHEET NO. C6.1

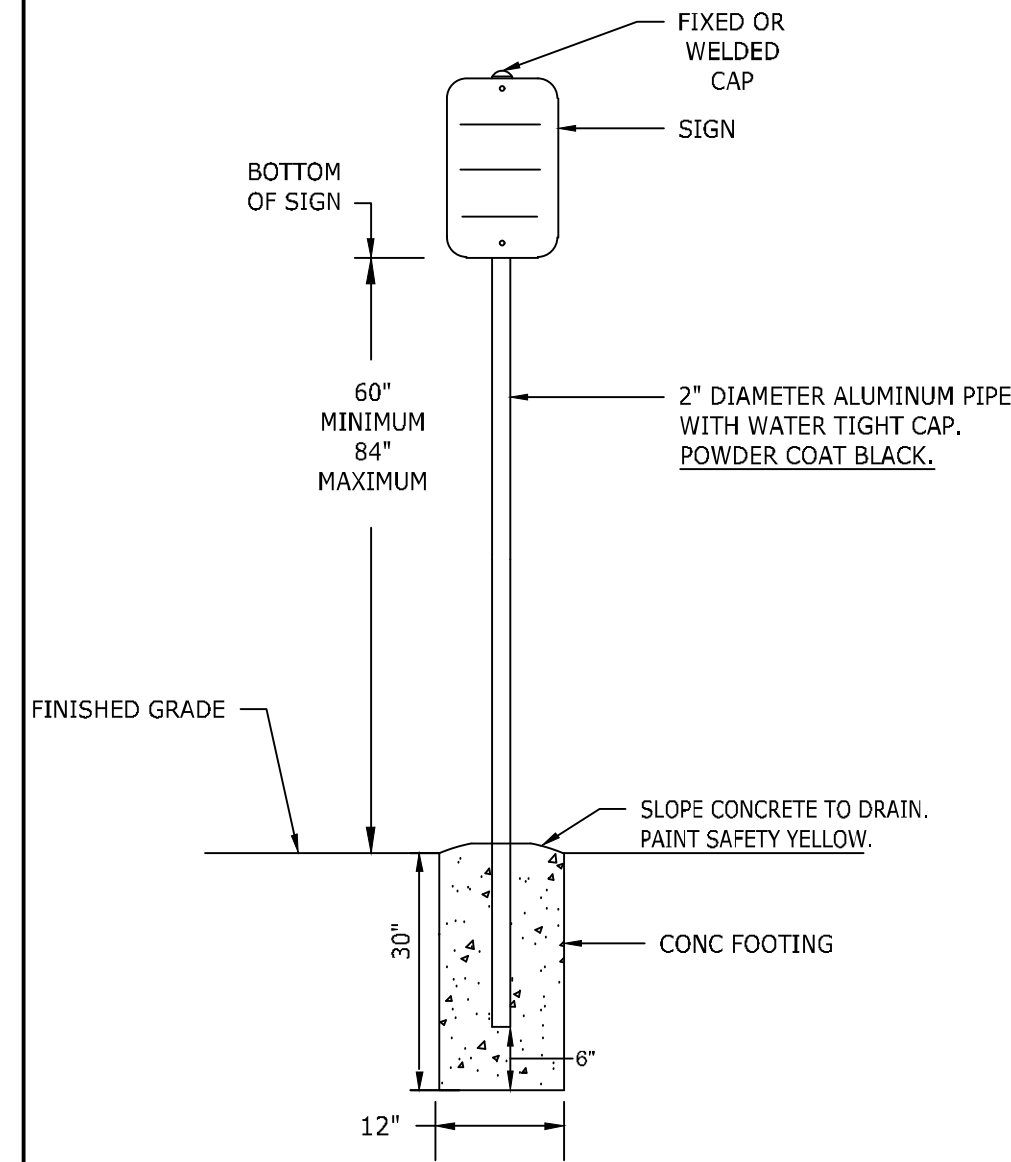
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NOTE:  
 1. ALL PARKING STALL MARKINGS SHALL BE 2 COATS 15-mil THICK ALKYD RESIN PAINT.  
 2. FC = FACE OF CURB  
 3. EP = EDGE OF PAVEMENT

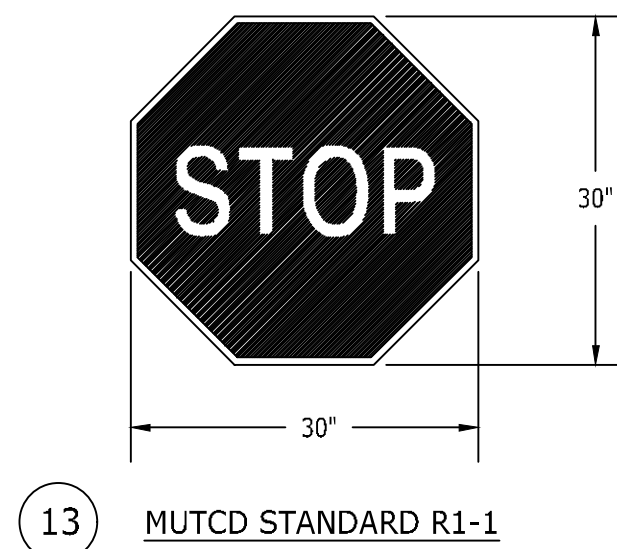


1 PARKING STALL AND TRAFFIC STRIPE N.T.S.

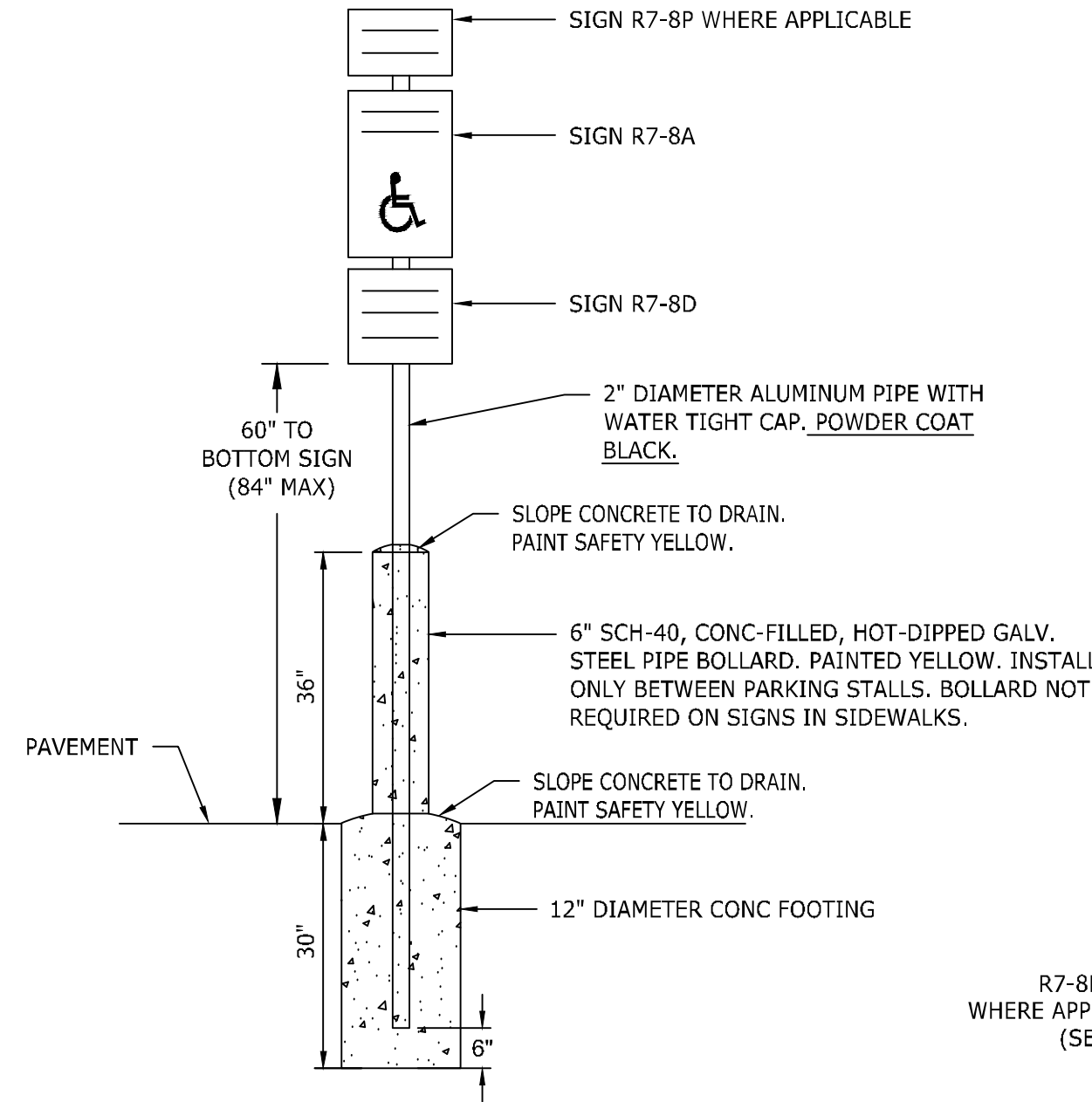


2 TYPICAL ROADWAY SIGN N.T.S.

NOTES:  
 1. MOUNTING HEIGHT TO BOTTOM OF SIGN SHALL BE 60\"/>

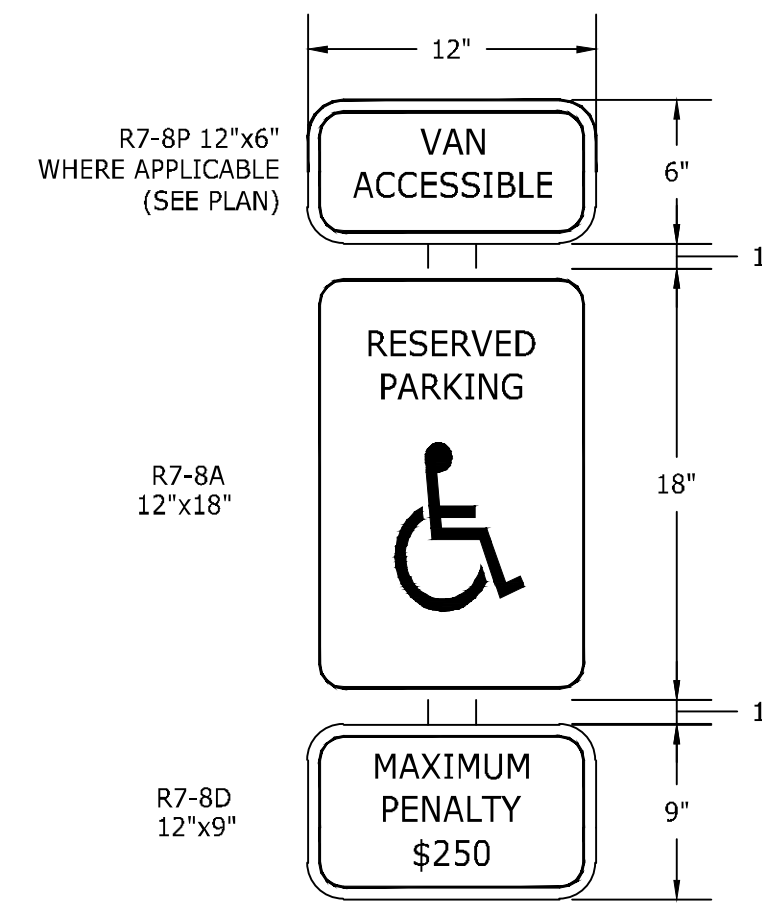


13 MUTCD STANDARD R1-1



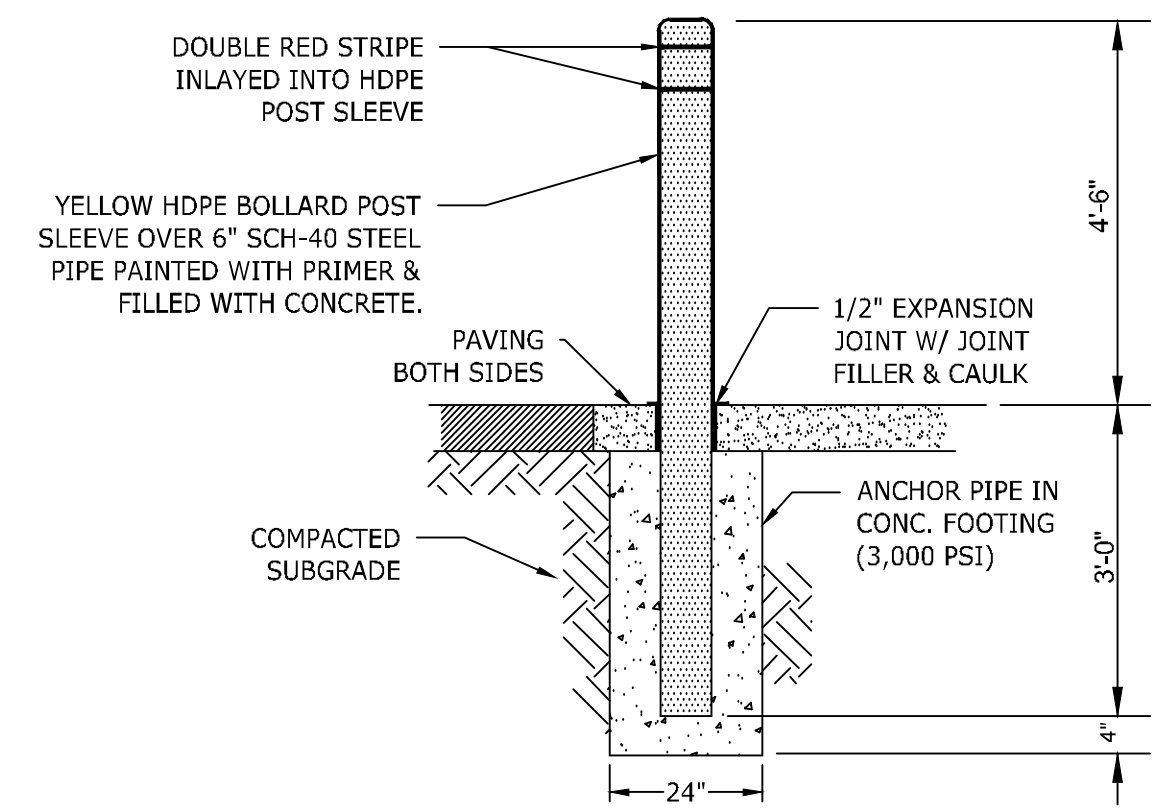
NOTES:  
 1. MOUNTING HEIGHT TO BOTTOM OF SIGN SHALL BE 60\"/>

3 ACCESSIBLE PARKING SIGN N.T.S.

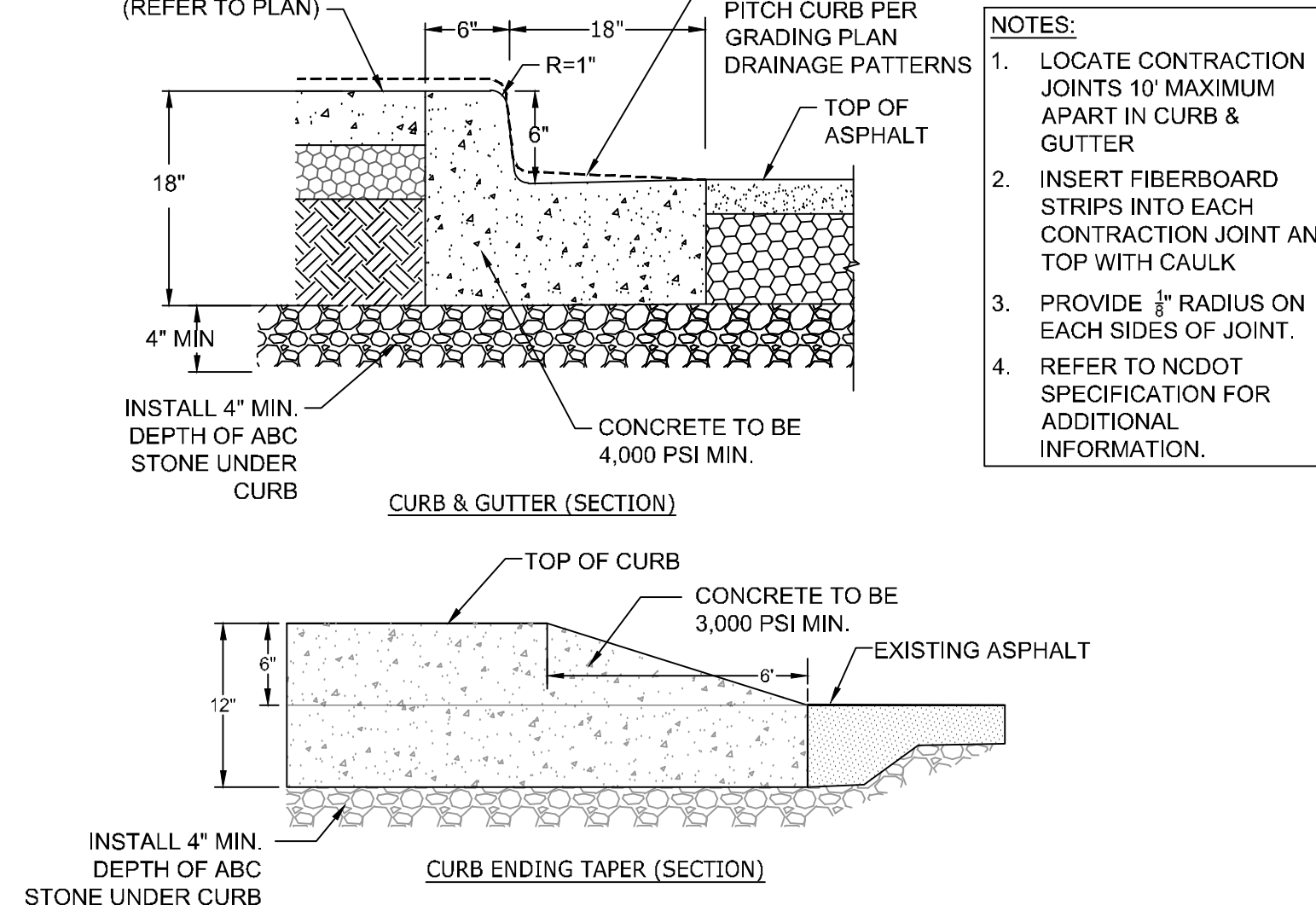
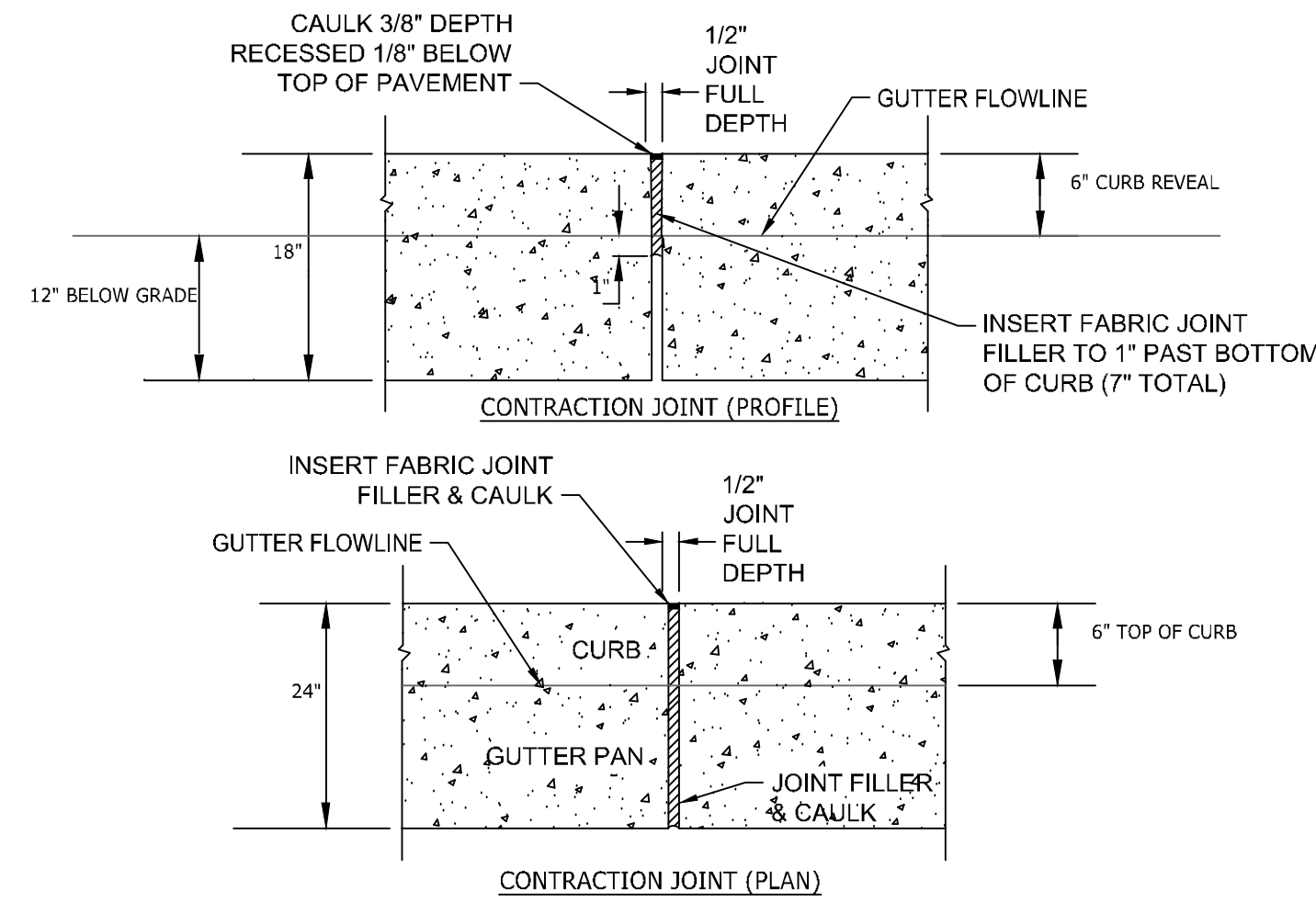


NOTES:  
 1. CONTRACTOR IS RESPONSIBLE FOR PROVIDING SHOP DRAWING OF WALL DESIGN, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER (REGISTERED IN NORTH CAROLINA), FOR APPROVAL PRIOR TO CONSTRUCTION. CONTRACTOR MUST BE CERTIFIED TO BUILD THE WALL OR HAVE LICENSE PROFESSIONAL ENGINEER CERTIFY CONSTRUCTION.  
 2. FURNISH AND INSTALL ALL MATERIALS IN ACCORDANCE WITH THE SIGNED AND SEALED RETAINING WALL SHOP DRAWING.  
 3. MODULAR CONCRETE WALL UNITS SHALL CONCRETE WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000-PSI. UNITS SHALL HAVE STRAIGHT, SPLITFACE EXTERIOR FACE. PROVIDE CAP UNITS WITH SMOOTH TOP SURFACES. BASIS OF DESIGN BLOCK IS STONE STRONG.  
 4. CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE MATERIALS IN THE REINFORCED ZONE FOR THE WALL CONSTRUCTION IN ACCORDANCE WITH THE SHOP DRAWINGS. ANY BORROW OR IMPORTED FILL MATERIAL REQUIRED FOR PROPER BACKFILLING OF THE WALL SHALL BE PROVIDED BY THE CONTRACTOR IN THE BASE BID CONTRACT. (REFER TO THE ATTACHED GEOTECHNICAL REPORT FOR EXISTING ONSITE SOILS)  
 5. A. THE FOUNDATION SOIL (BELOW THE WALL) MUST MEET THE REQUIREMENTS IN THE SHOP DRAWING. THESE SOILS WILL BE TESTED BY THE MATERIAL TESTING COMPANY HIRED BY THE OWNER. SHOULD THE SITE SOILS NOT MEET THE REQUIREMENTS CONSULT WITH THE WALL DESIGNER AND CIVIL ENGINEER PRIOR TO CONSTRUCTION.  
 B. PROVIDE A DESIGN THAT WORKS WITH THE FOUNDATION SOILS (REFER TO ATTACHED GEOTECHNICAL REPORT).  
 6. ACCOUNT FOR PREMIUM COLOR BLOCK IN THE BID. BASIS OF DESIGN COLOR IS STONE STRONG. REFER TO MANUFACTURERS SPECIFICATIONS AND GEOTECHNICAL ENGINEERING REPORTS BY GEOTECHNOLOGIES, DATED MARCH 10, 2023 FOR ADDITIONAL INFORMATION.

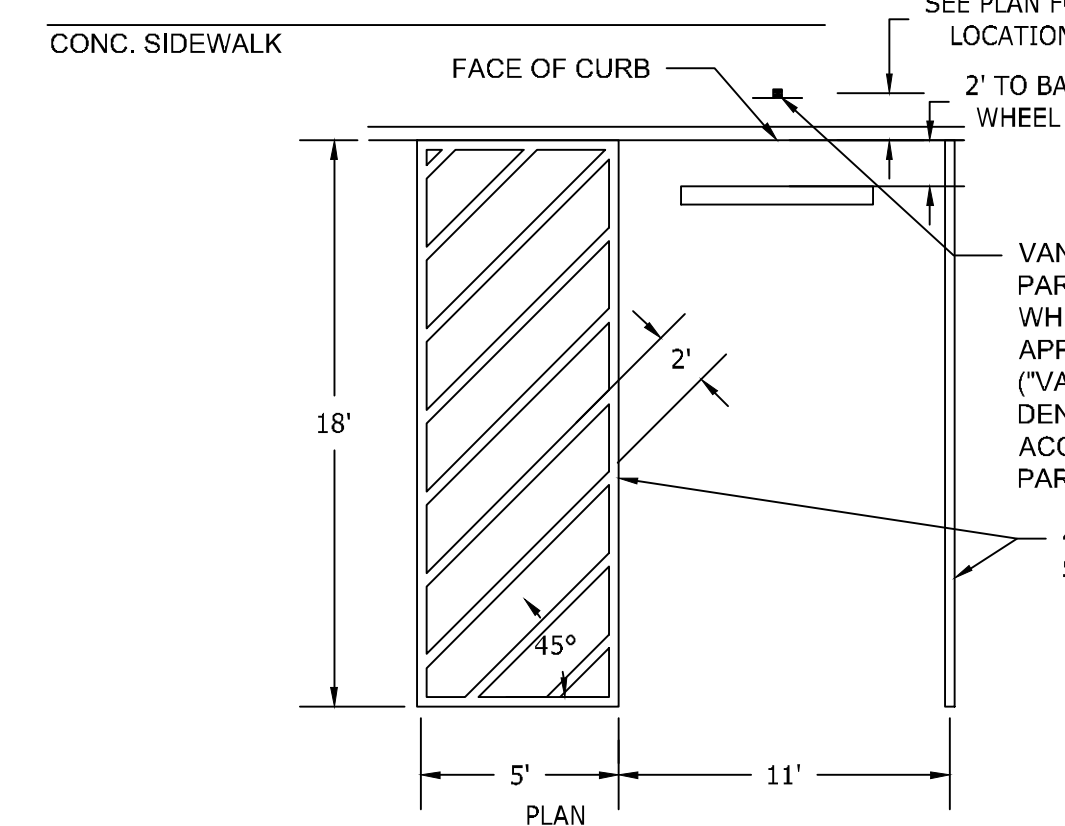
4 MODULAR BLOCK RETAINING WALL WITH BLACK SAFETY FENCE N.T.S.



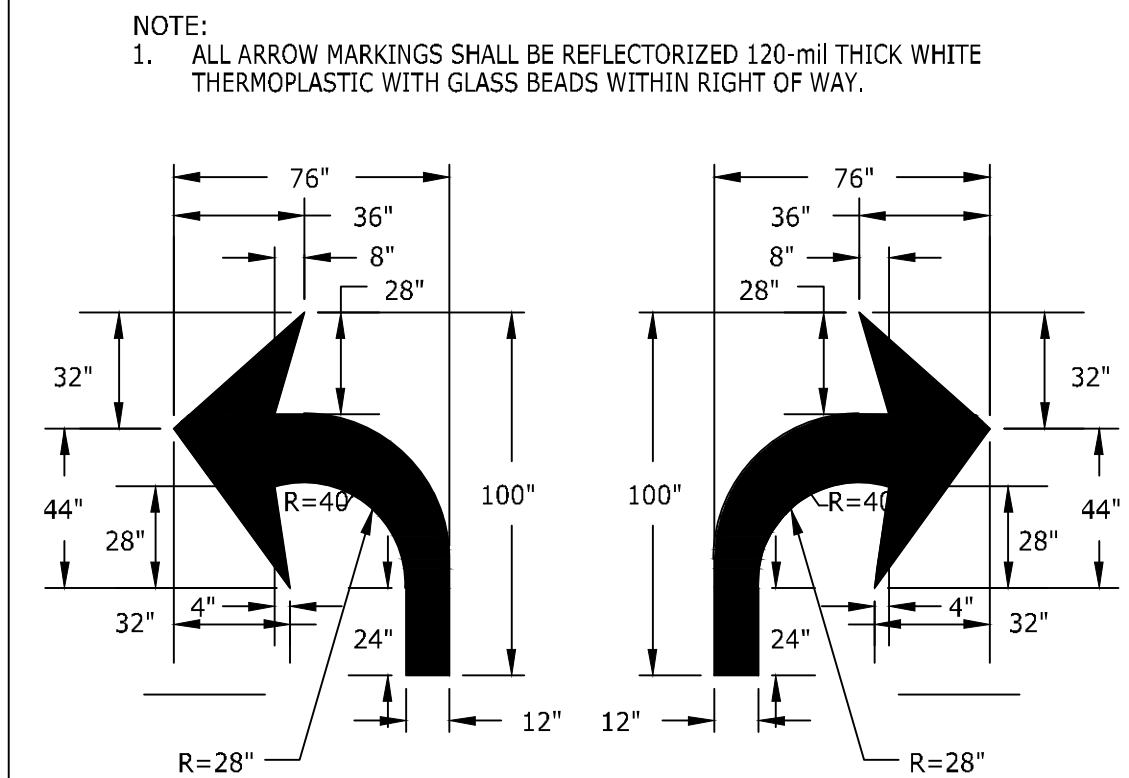
5 6\"/>



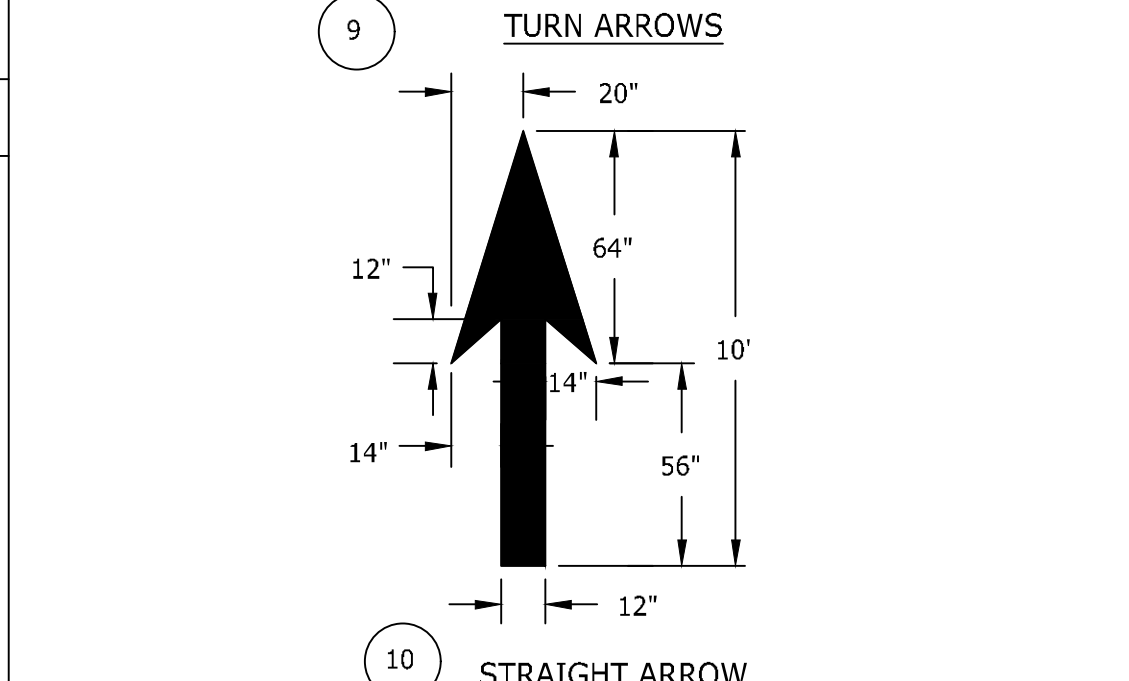
6 24\"/>



8 FIRE LINE CAPPING DETAIL N.T.S.



9 TURN ARROWS



10 STRAIGHT ARROW



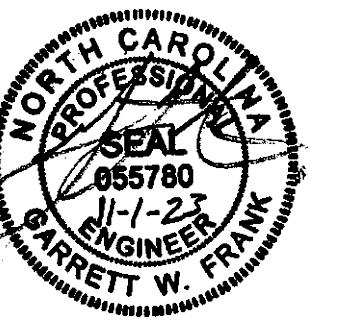
9 TRAFFIC ARROWS

MUTCD STANDARD SD 11-03

9 TRAFFIC ARROWS N.T.S.

PAINTE 4\"/>

10 FIRE LANE MARKINGS N.T.S.



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DATE

06/07/2023

08/01/2023

11/01/2023

DATE

04/05/2023

DRAWN BY

L. BARNES

DESIGNED BY

G. FRANK

CHECKED BY

G. FRANK

SCALE

AS SHOWN

**TIMMONS GROUP**  
 NORTH CAROLINA LICENSE NO. C-1652

**JONES DAIRY STORAGE FACILITY**  
 TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

SITE DETAILS

JOB NO.

54832

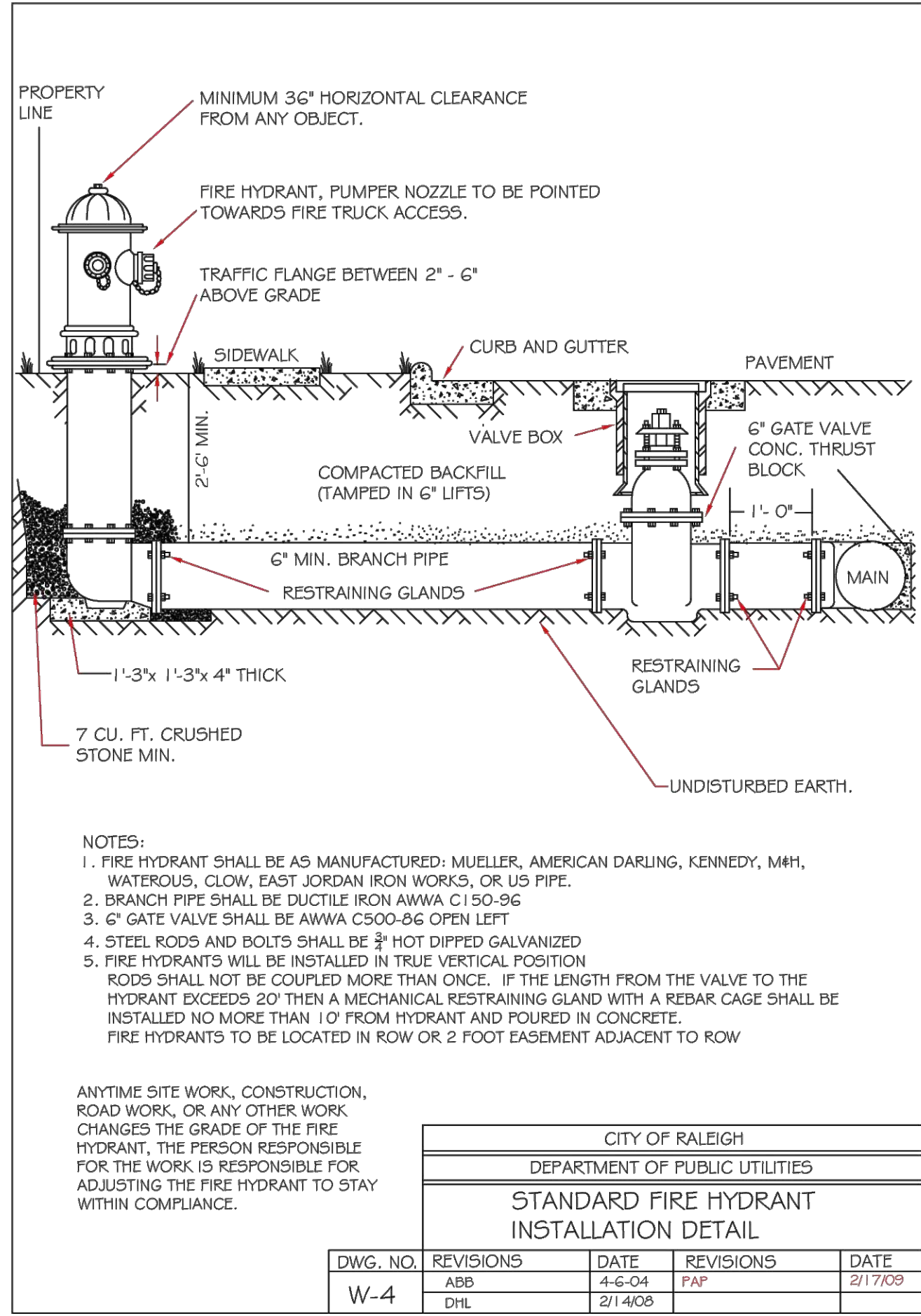
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C6.2

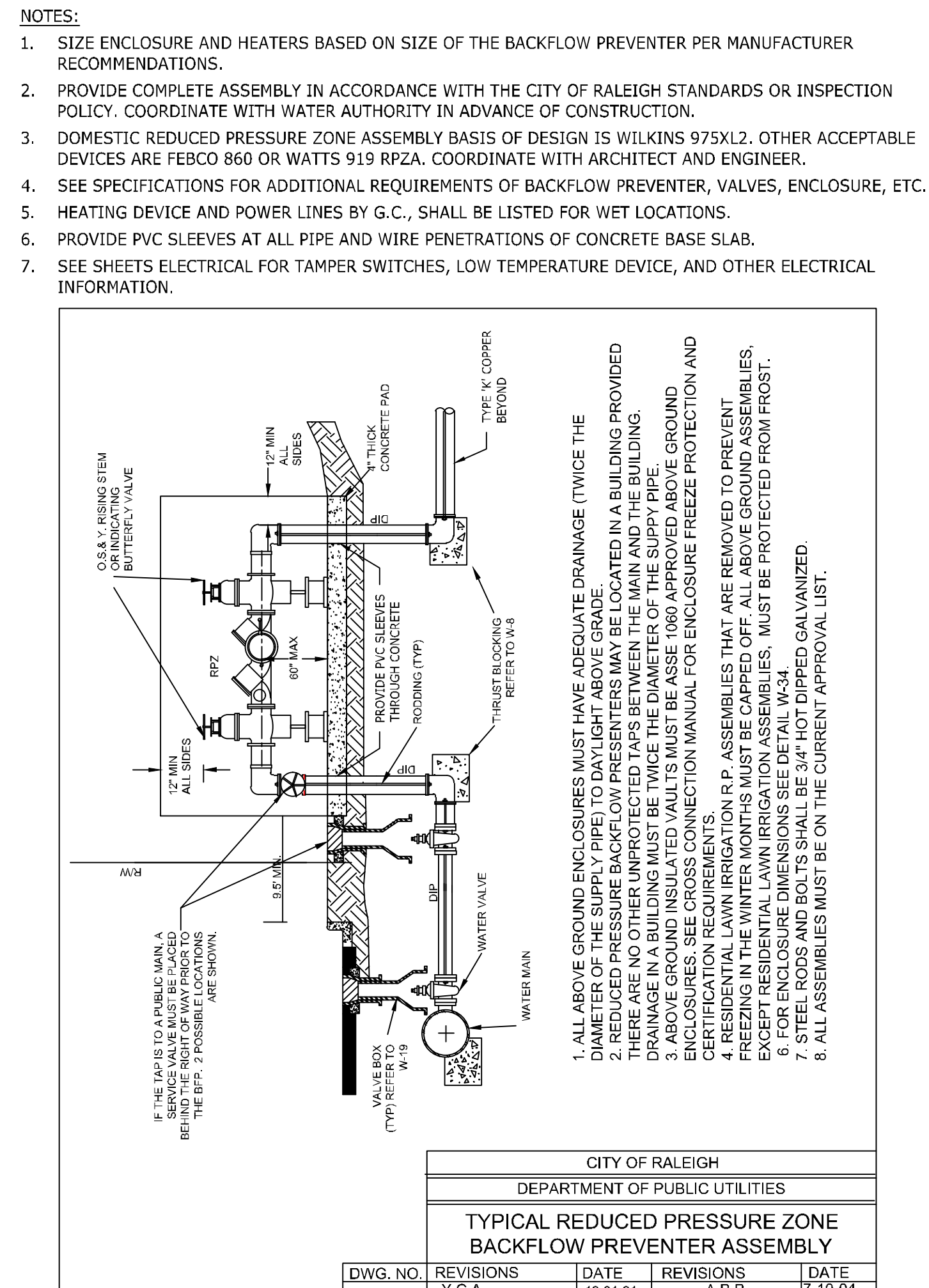
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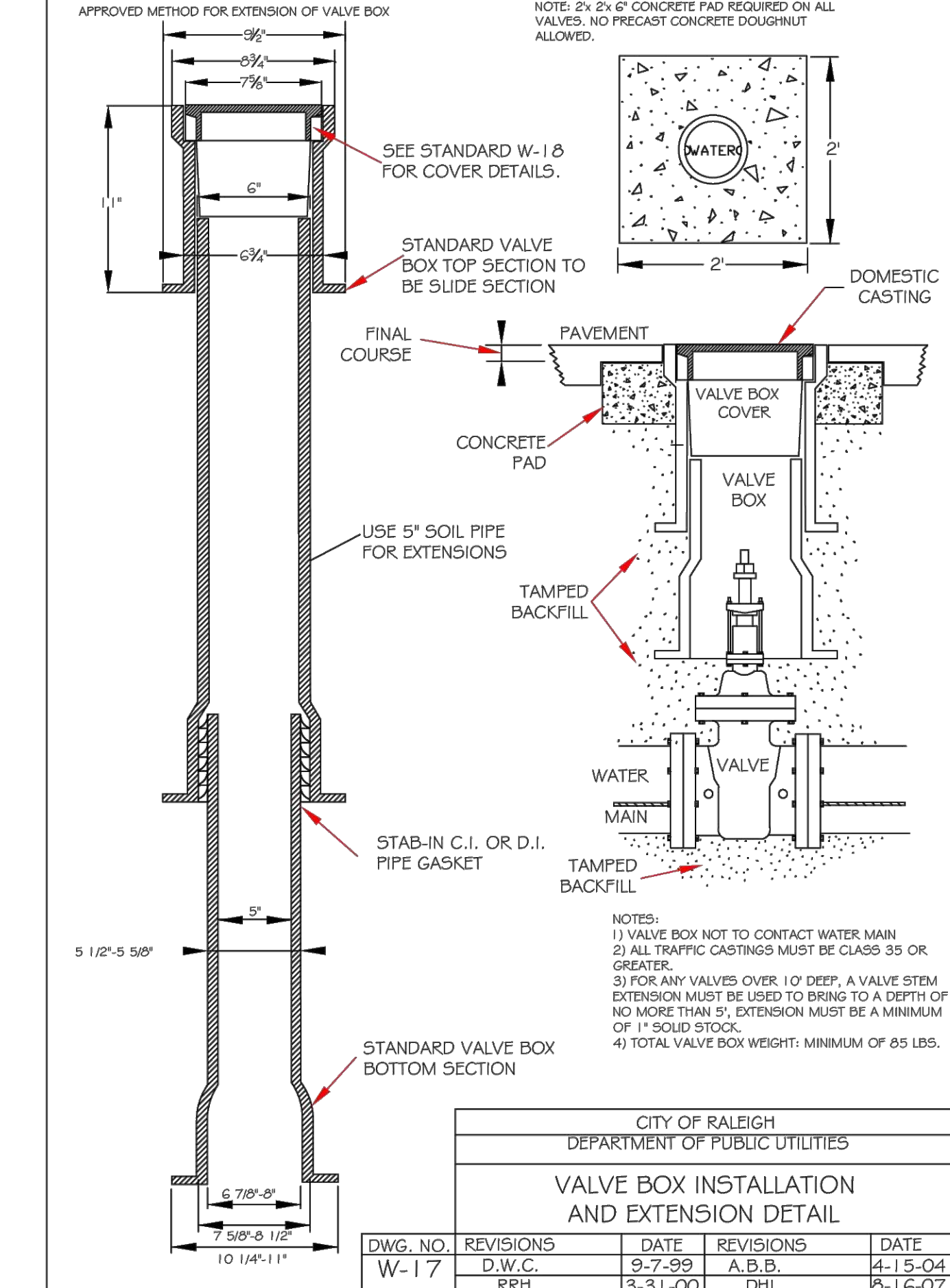




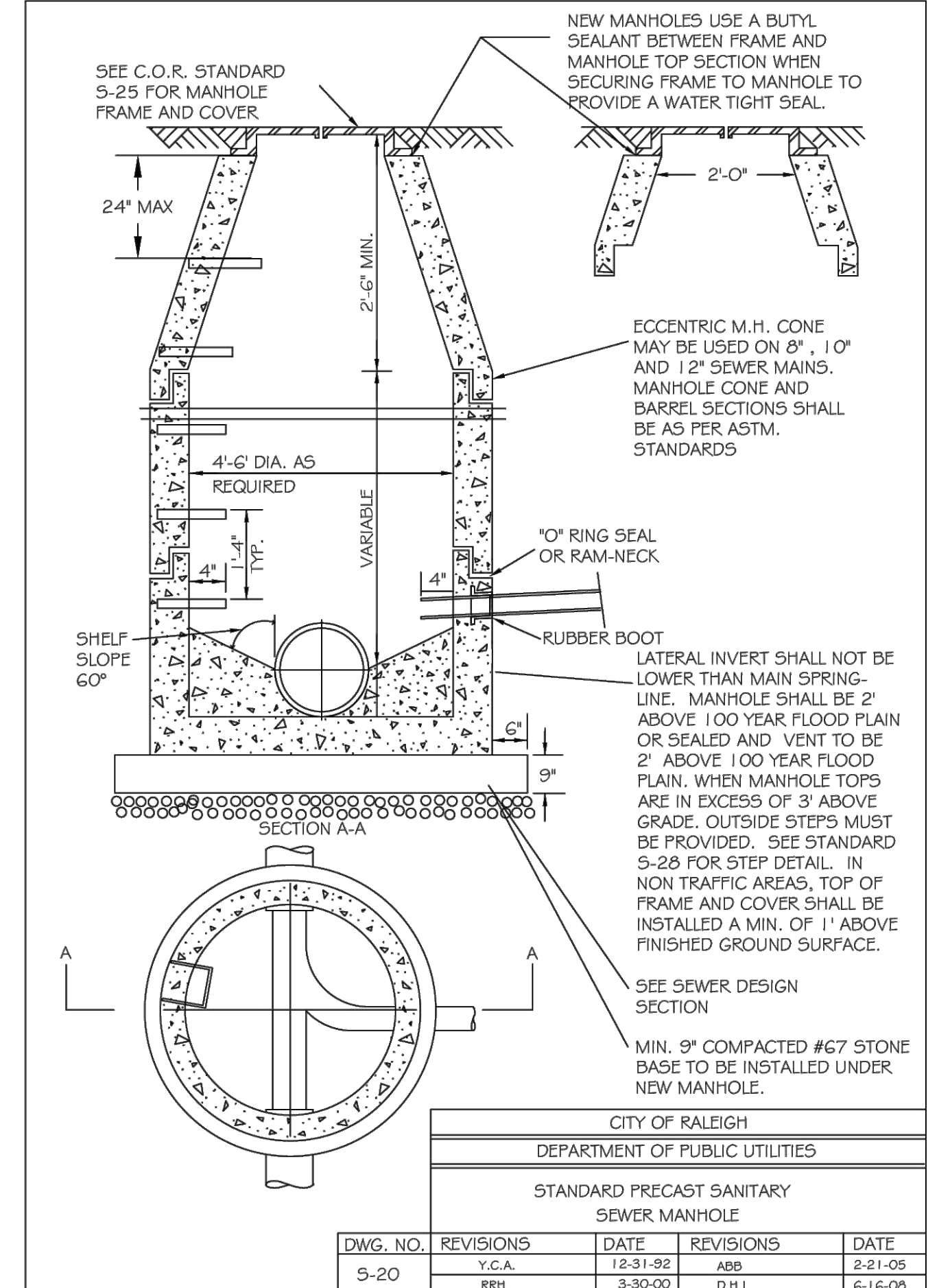
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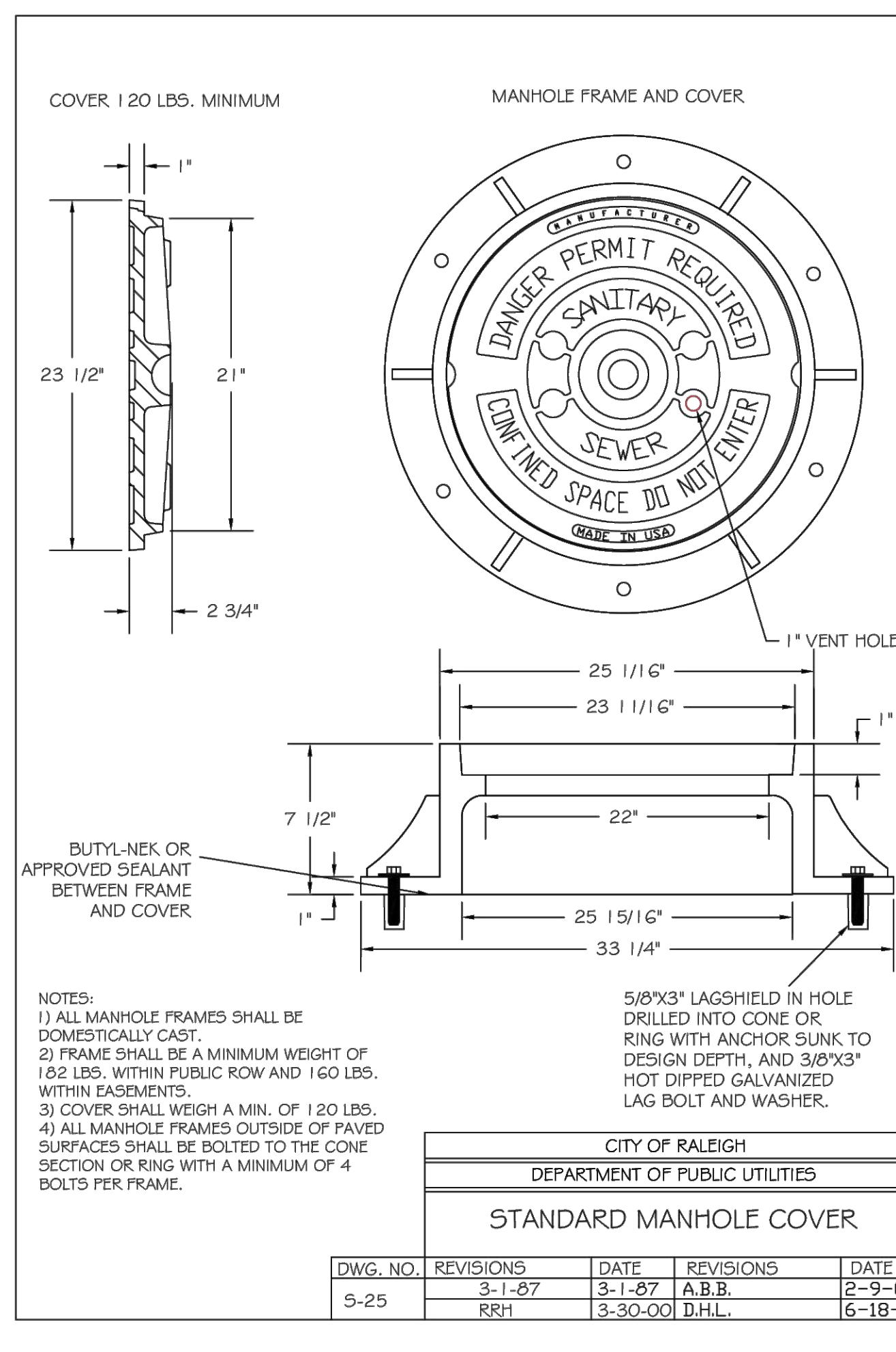
2 1.5" RPZ BACKFLOW PREVENTER (DOMESTIC SERVICE) N.T.S.



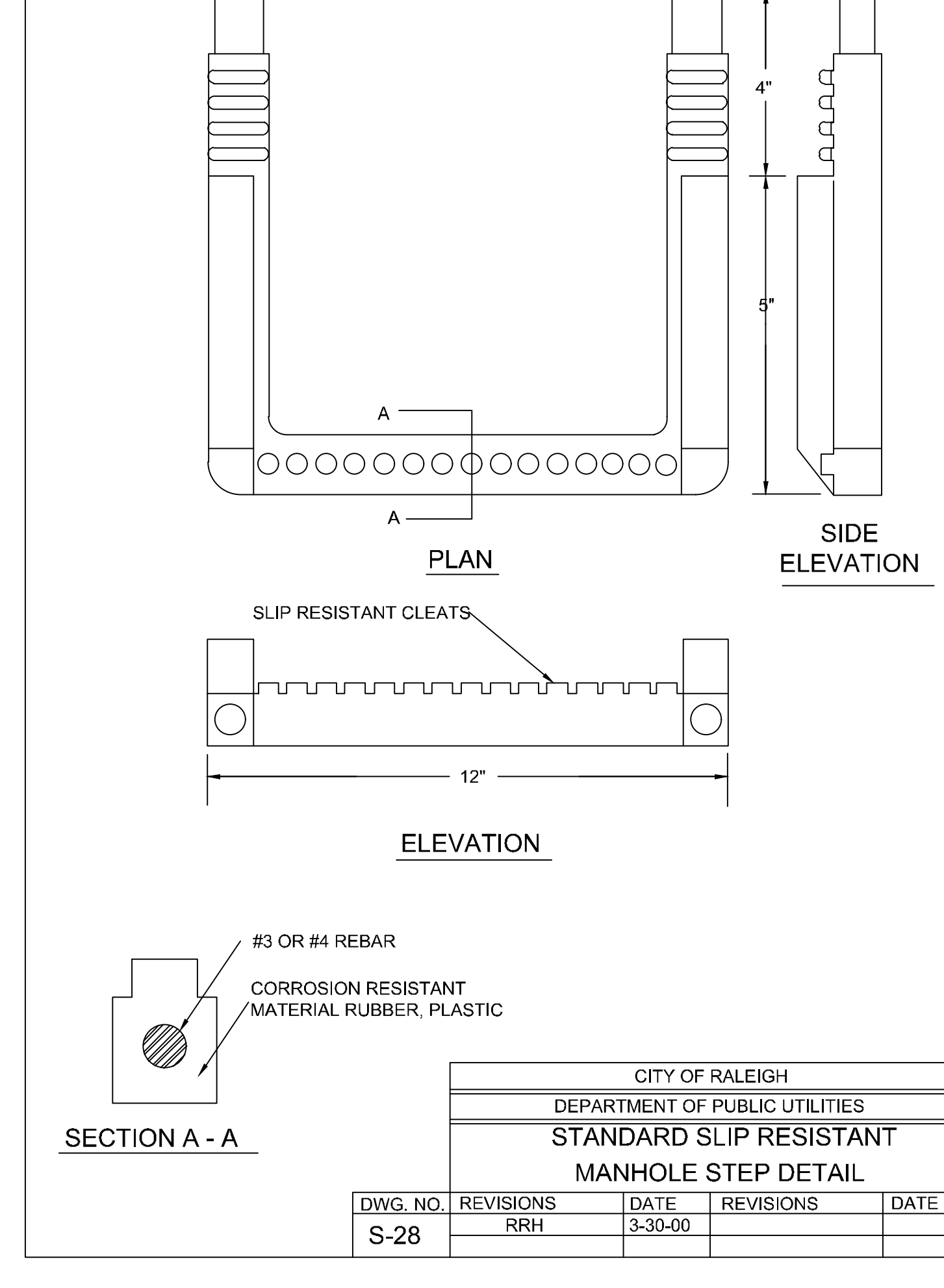
3 GATE VALVE ASSEMBLY N.T.S.



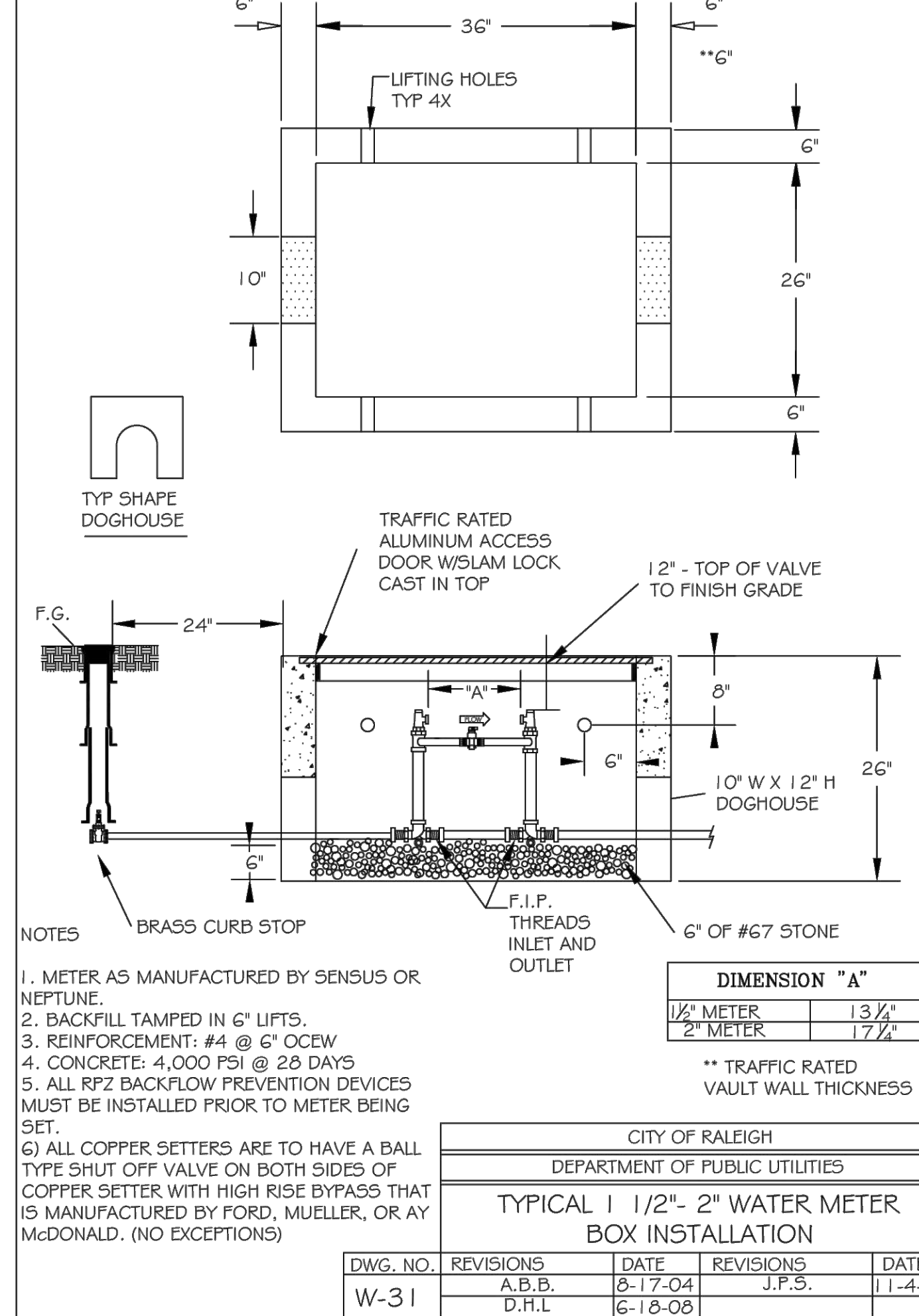
4 SANITARY SEWER MANHOLE N.T.S.



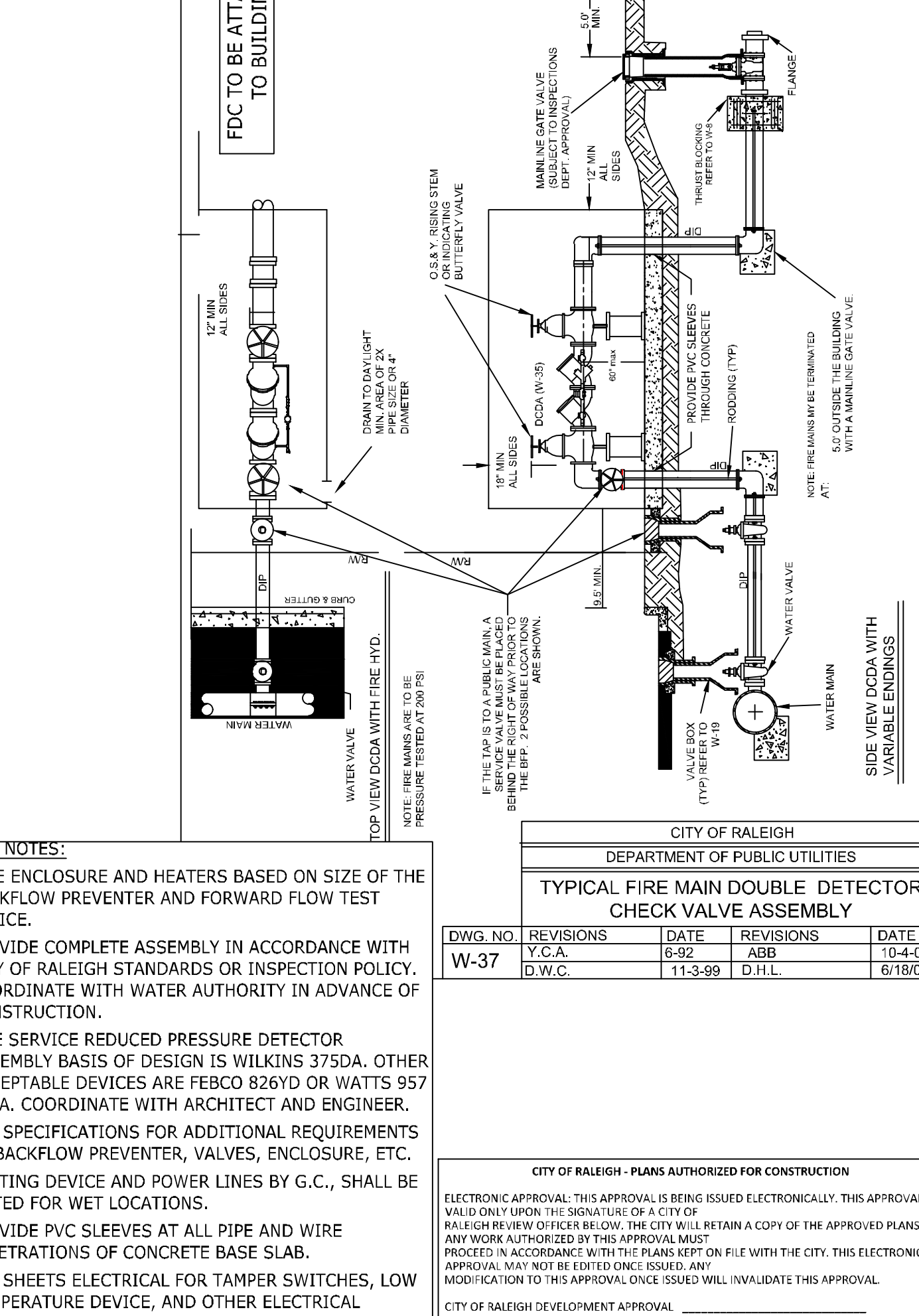
5 SANITARY SEWER MANHOLE RING & COVER N.T.S.



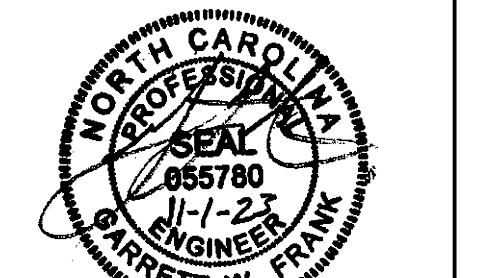
6 MANHOLE STEPS N.T.S.



7 WATER METER AND VAULT N.T.S.



8 FIRE SERVICE BACKFLOW (8" RPDA) N.T.S.



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DATE	REVISION DESCRIPTION
06/07/2023	ADDRESS TO TOWN OF ROLESVILLE 2ND REVIEW COMMENTS
08/01/2023	ADDRESS TO TOWN OF ROLESVILLE 3RD REVIEW COMMENTS
11/01/2023	ADDRESS TO TOWN OF ROLESVILLE 3RD REVIEW COMMENTS

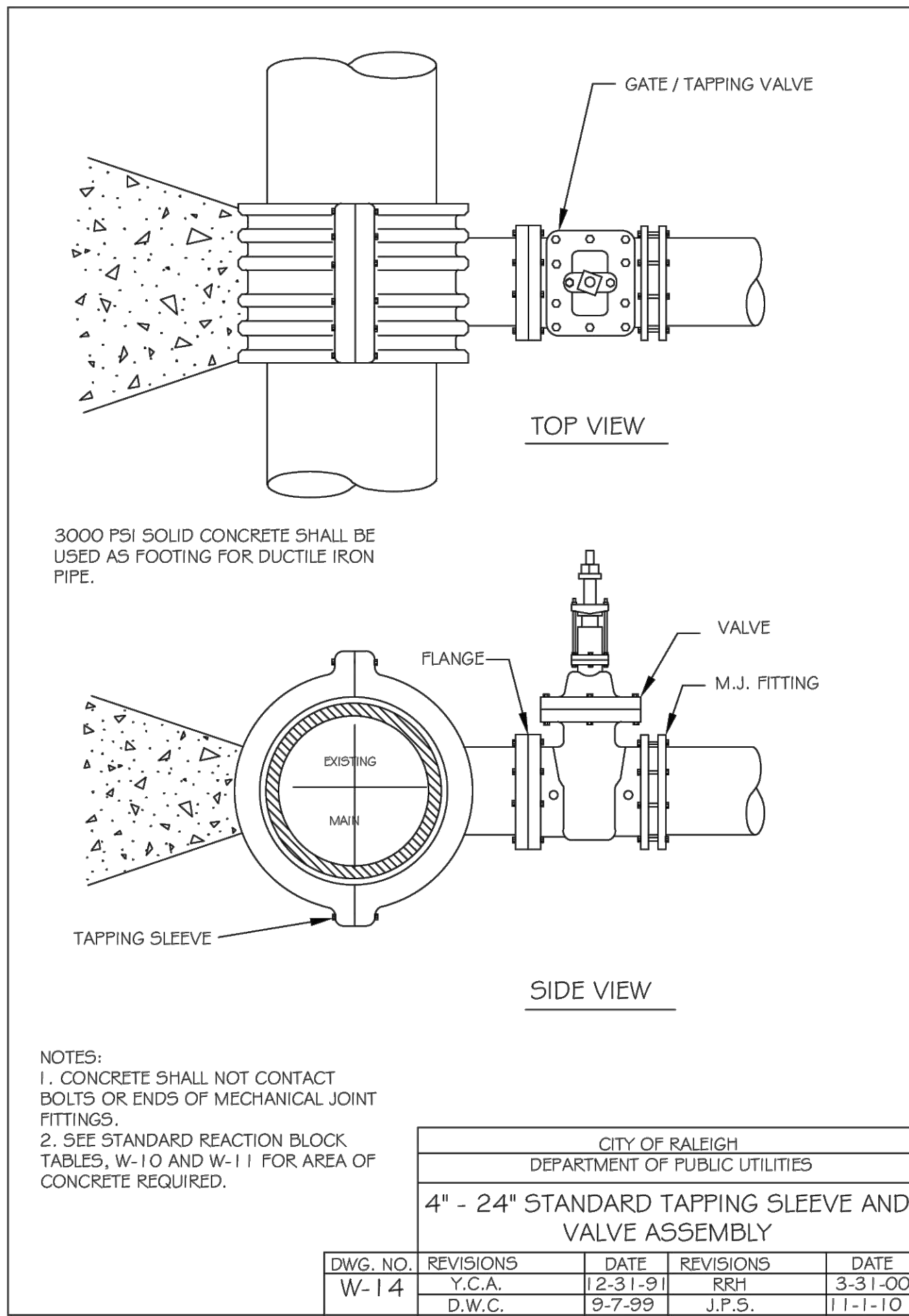
DATE: 04/05/2023  
 DRAWN BY: L. BARNES  
 DESIGNED BY: G. FRANK  
 CHECKED BY: G. FRANK  
 SCALE: AS SHOWN

**TIMMONS GROUP**  
 NORTH CAROLINA LICENSE NO. C-1652  
**JONES DAIRY STORAGE FACILITY**  
 TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA  
**SITE DETAILS**

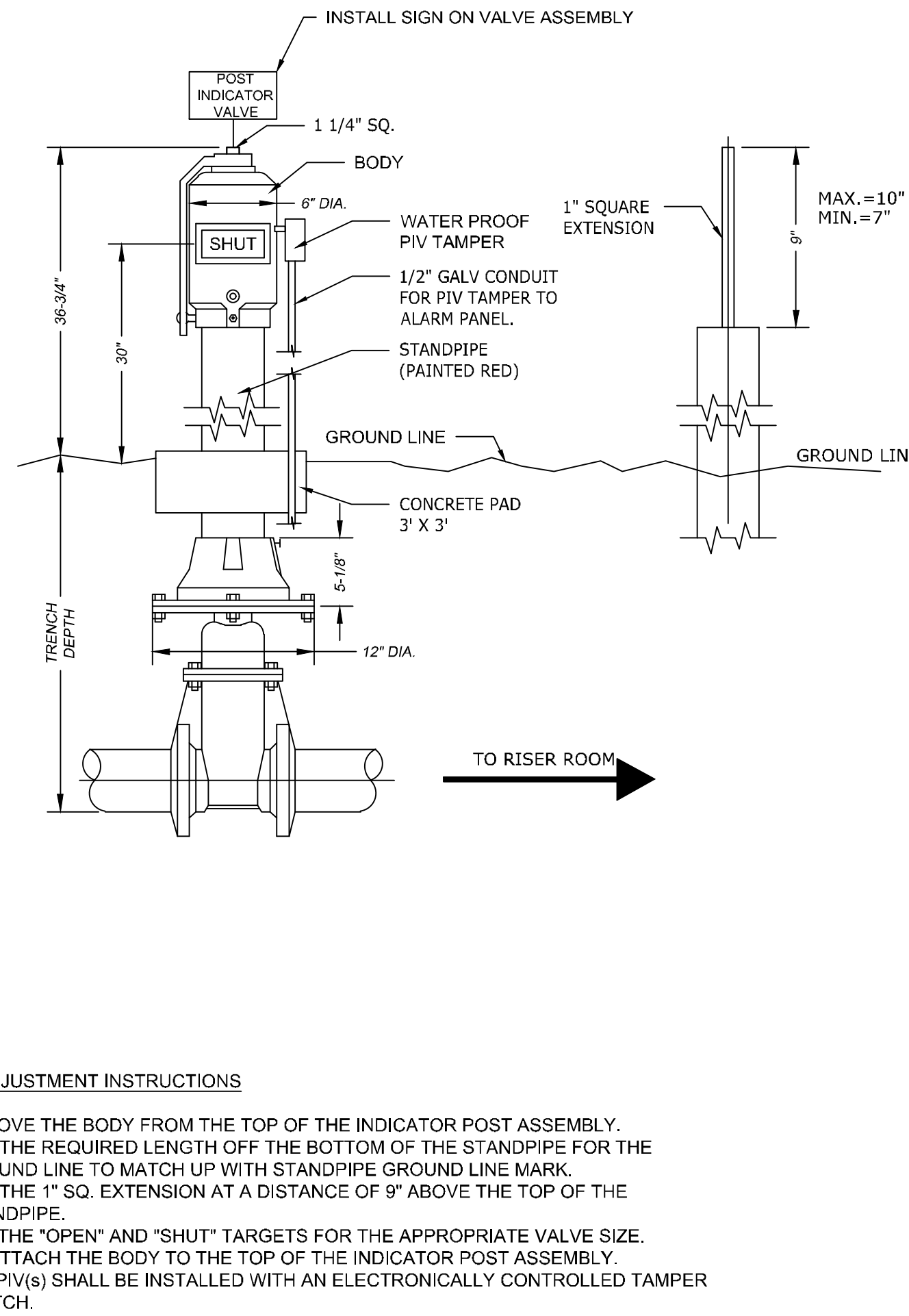
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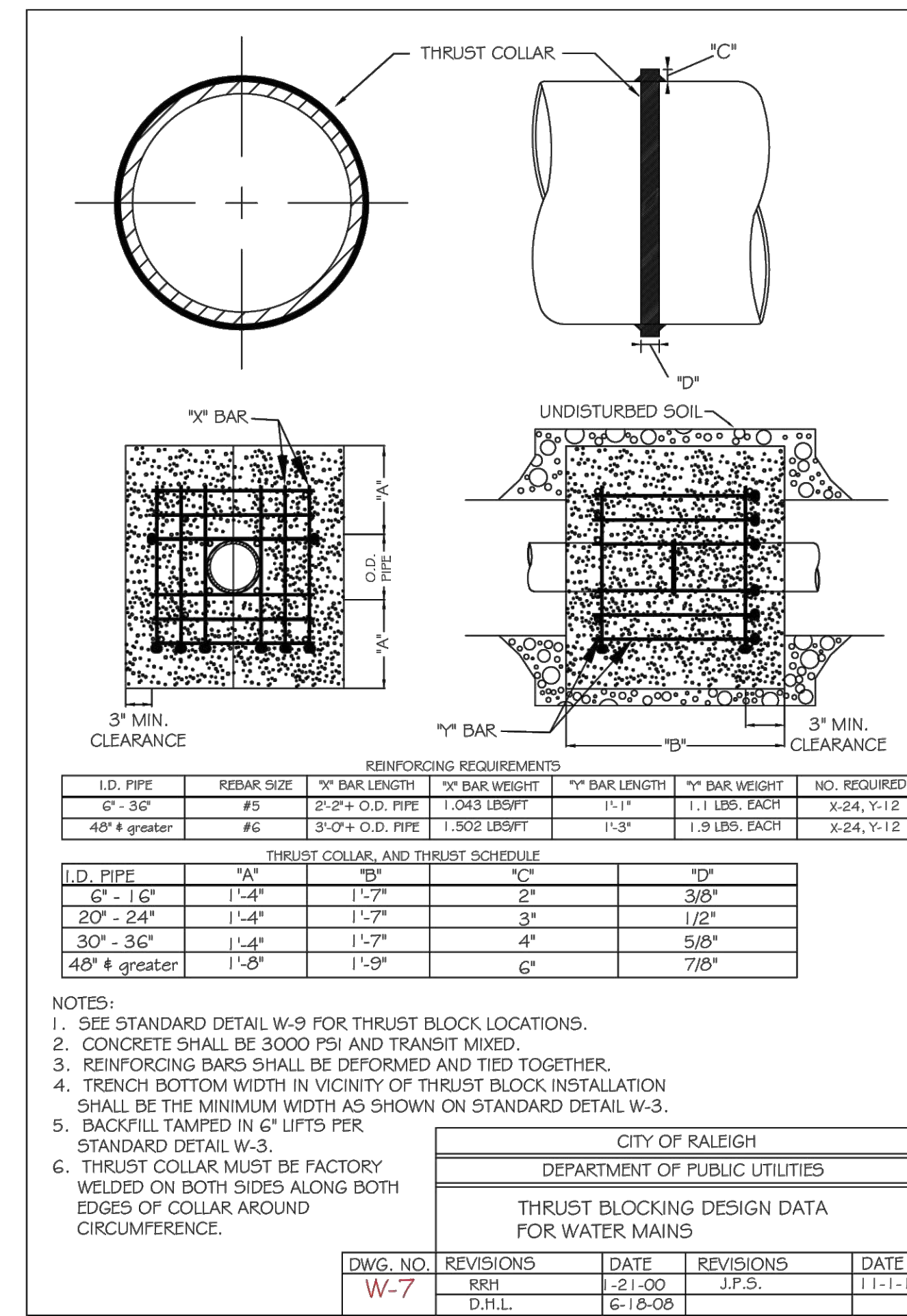




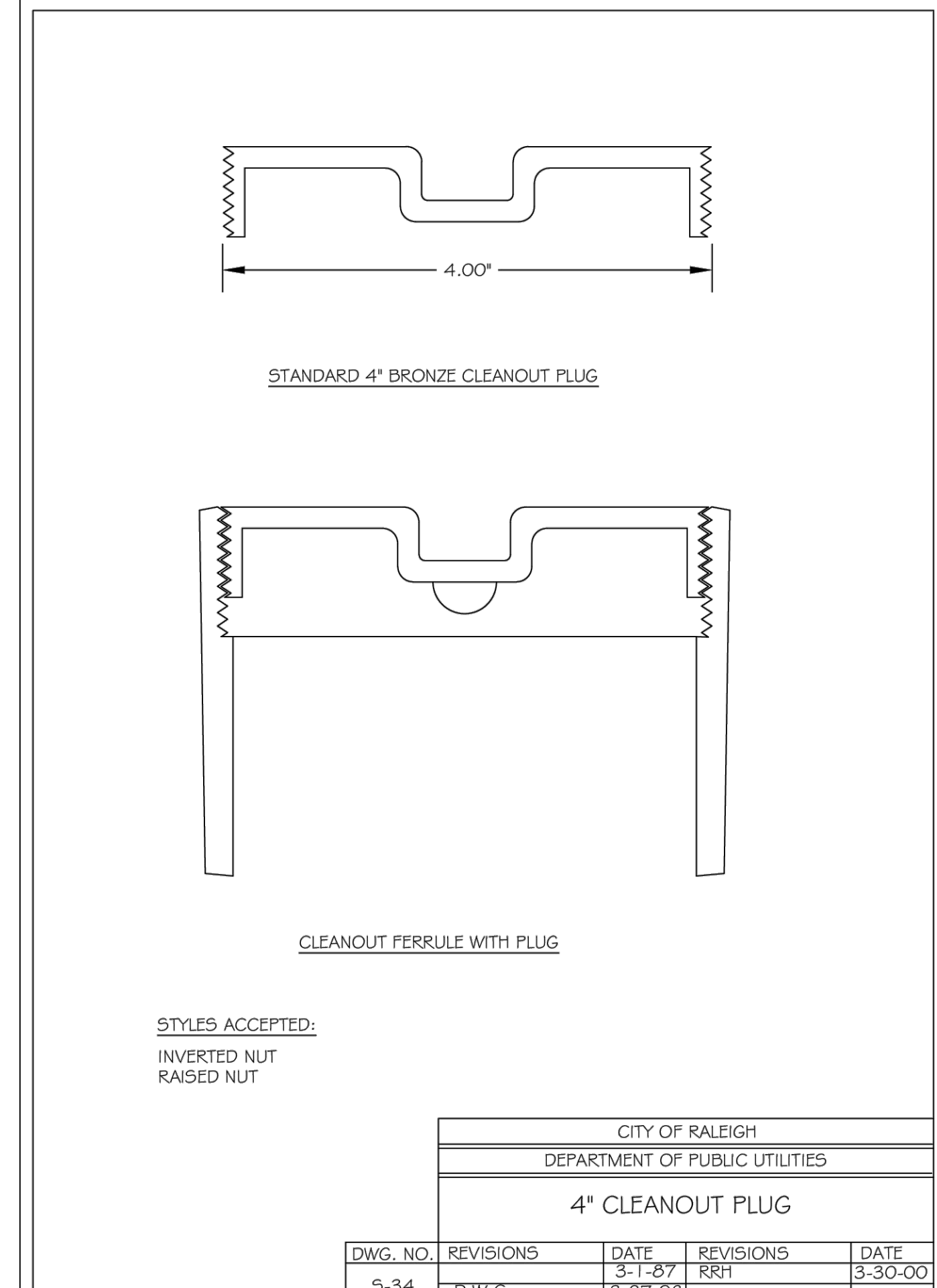
① TAPPING SLEEVE w/ GATE VALVE N.T.S.



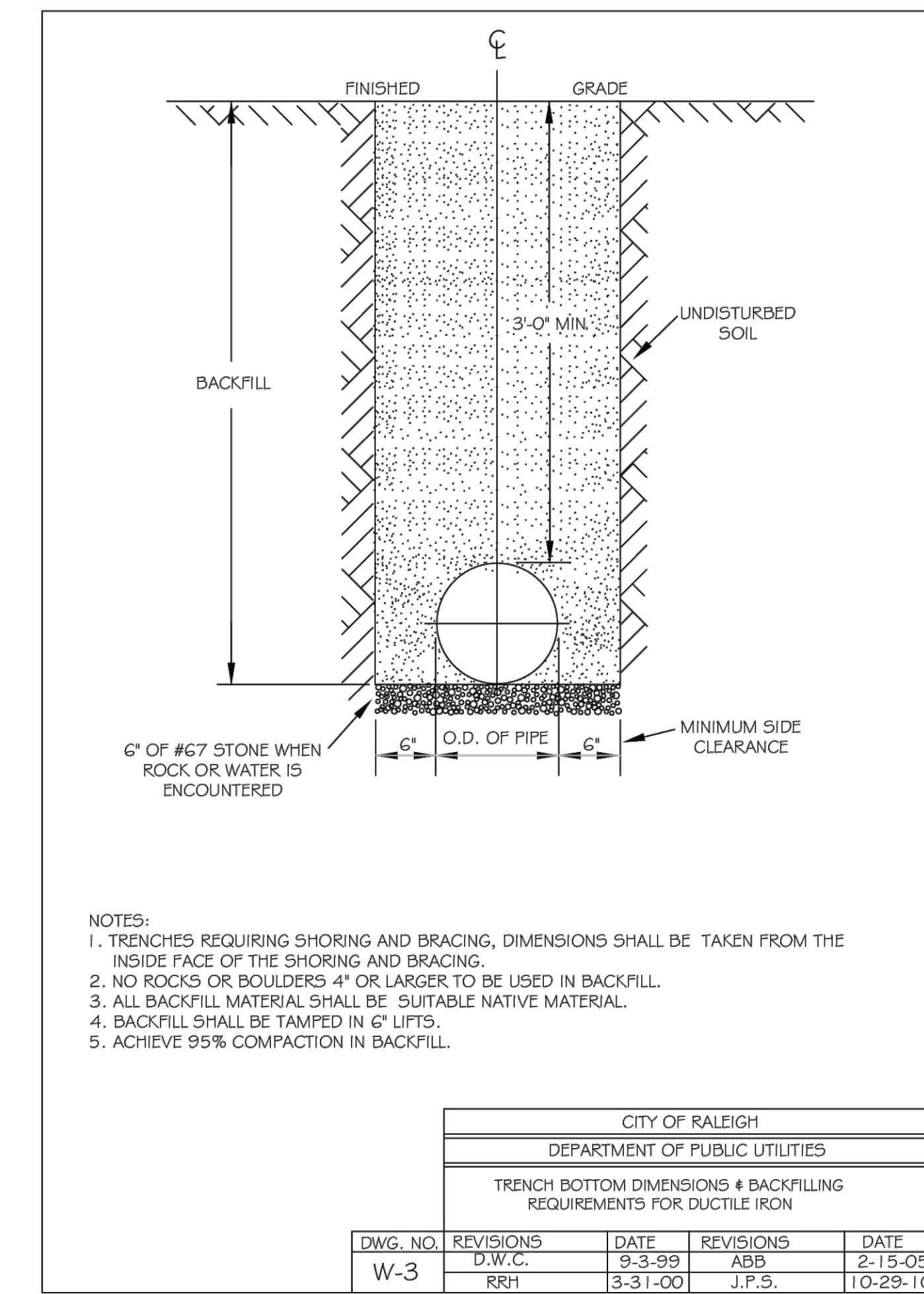
② POST INDICATOR VALVE ASSEMBLY N.T.S.



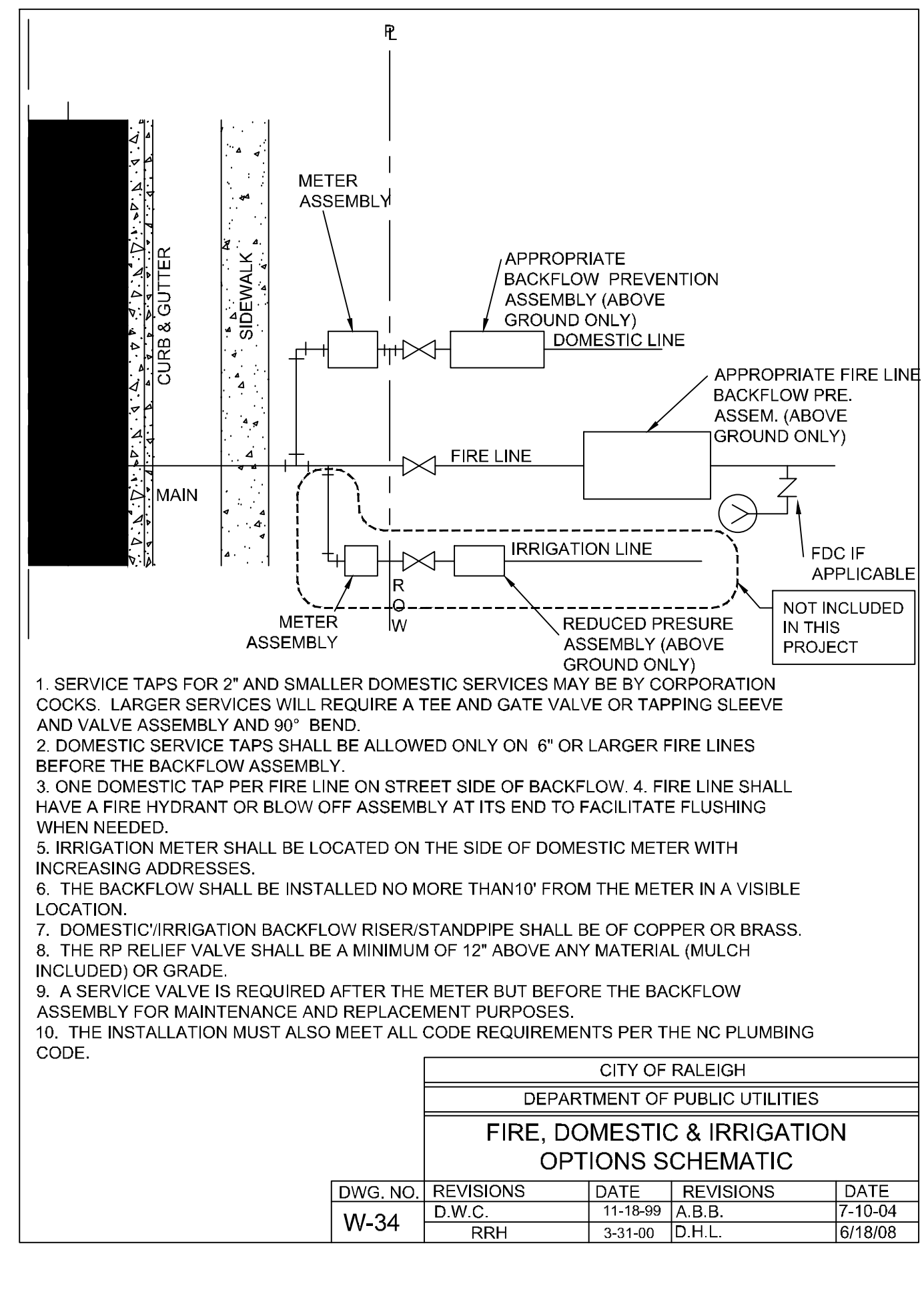
③ THRUST BLOCKING N.T.S.



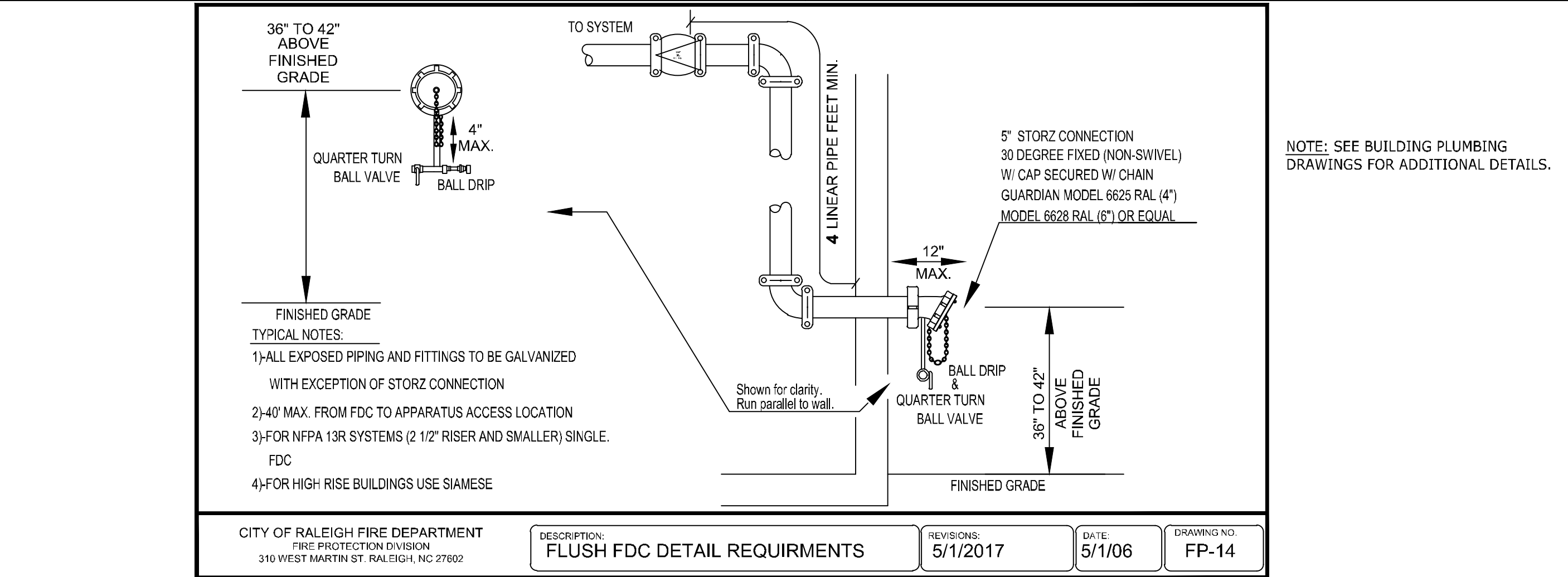
④ SANITARY SEWER CLEANOUT N.T.S.



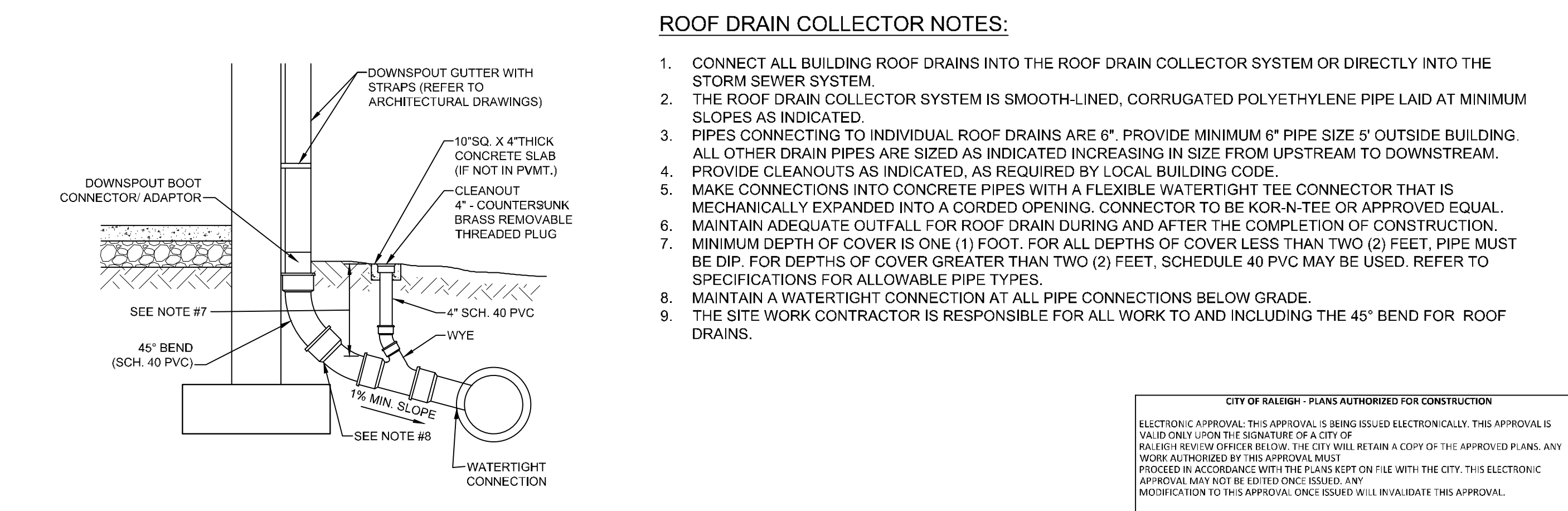
⑤ UTILITY TRENCHING AND BACKFILL N.T.S.



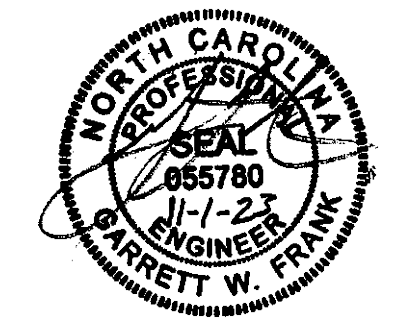
⑥ FIRE, DOMESTIC, & IRRIGATION OPTIONS N.T.S.



⑦ WALL MOUNTED FDC (STORZ) N.T.S.



⑧ 4" X 5" DOWNSPOUT BOOT CONNECTOR N.T.S.



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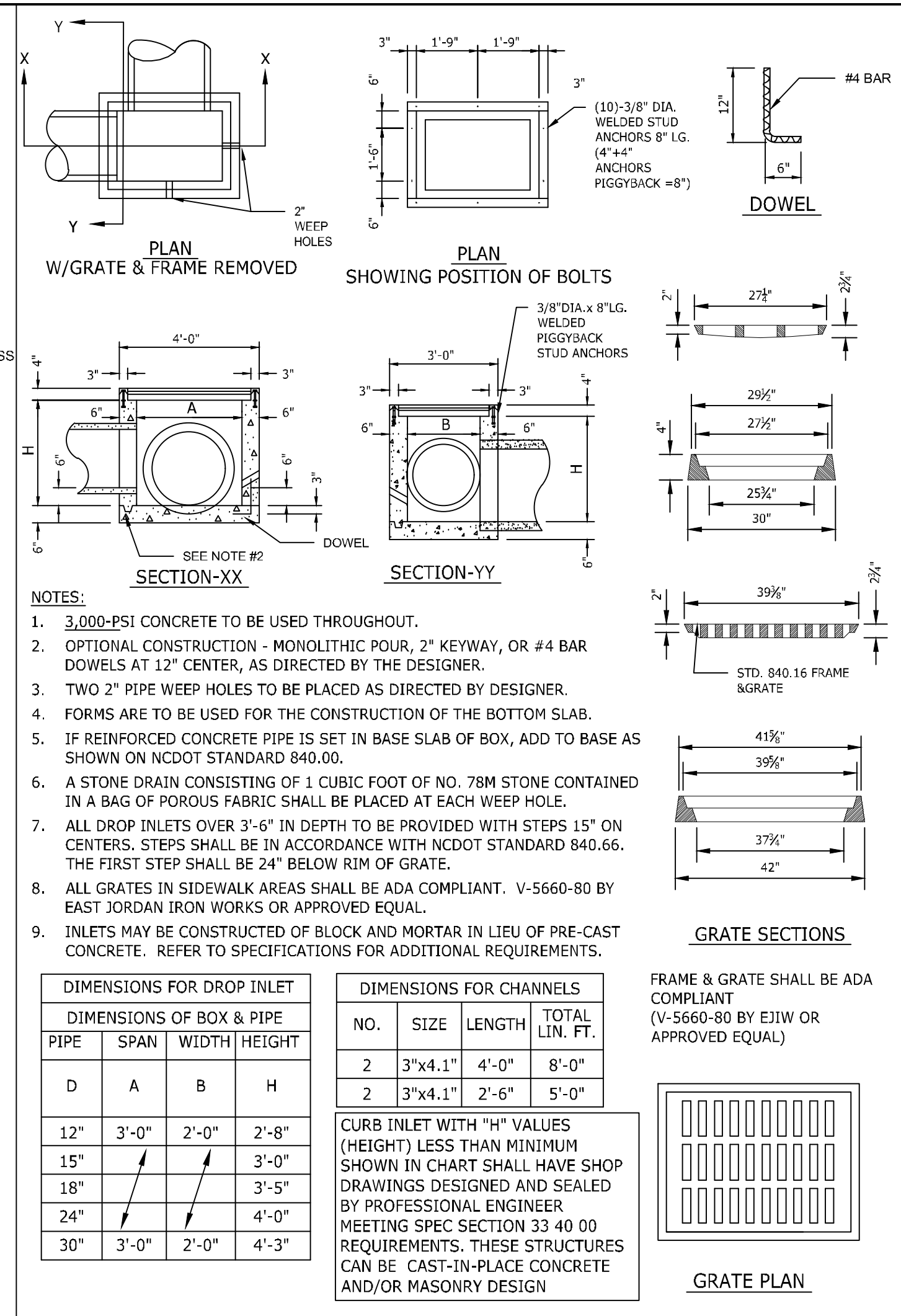
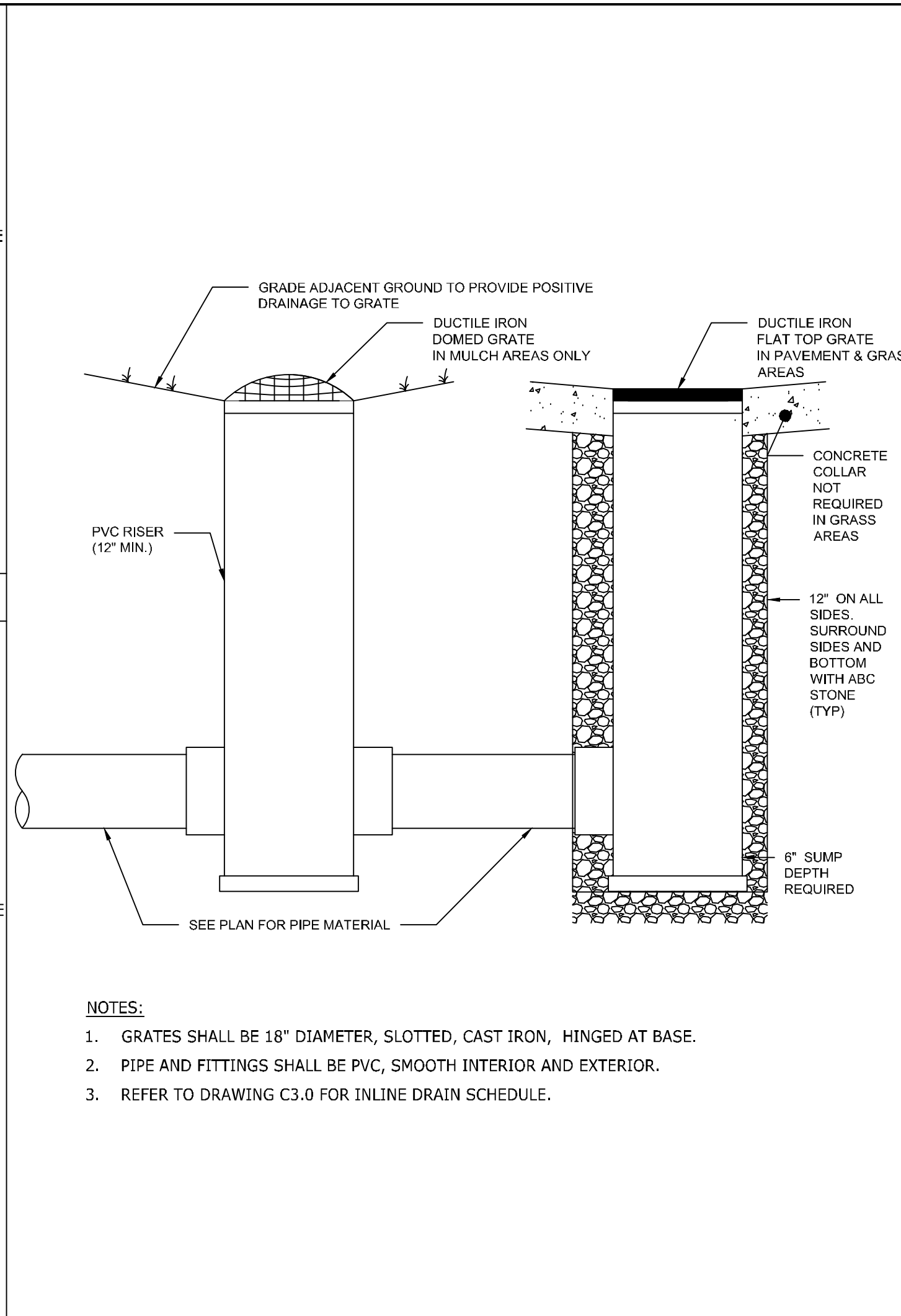
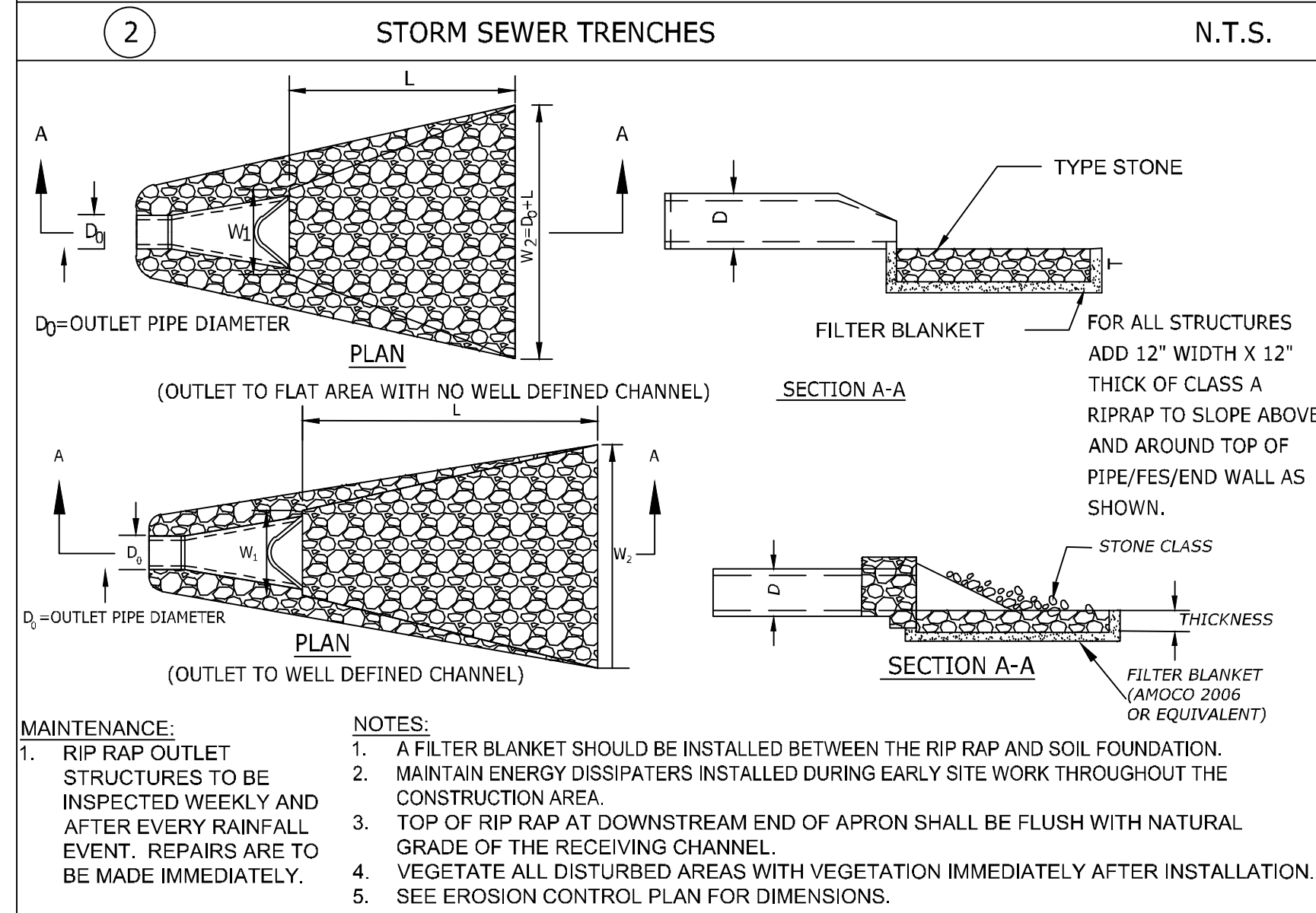
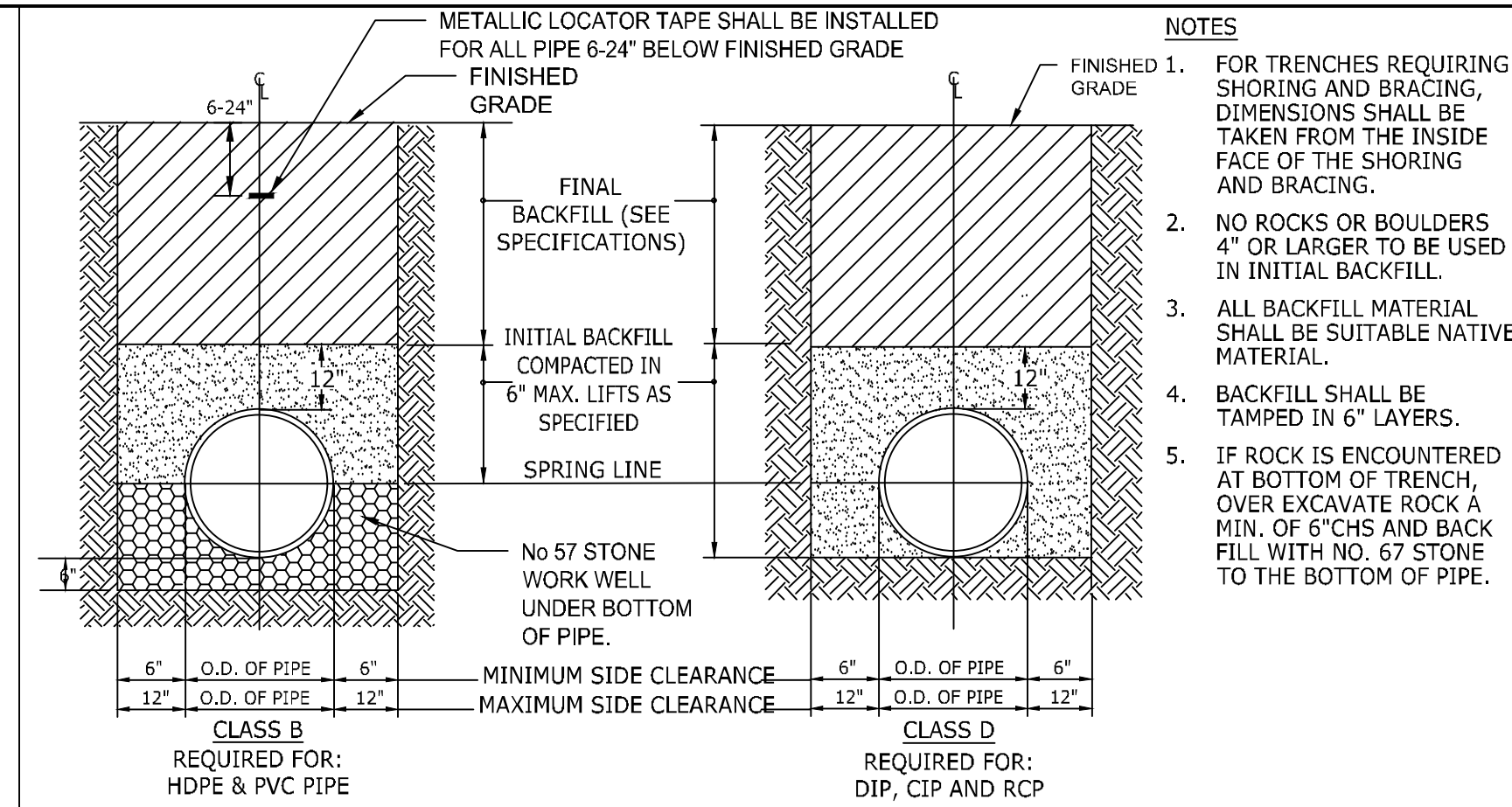
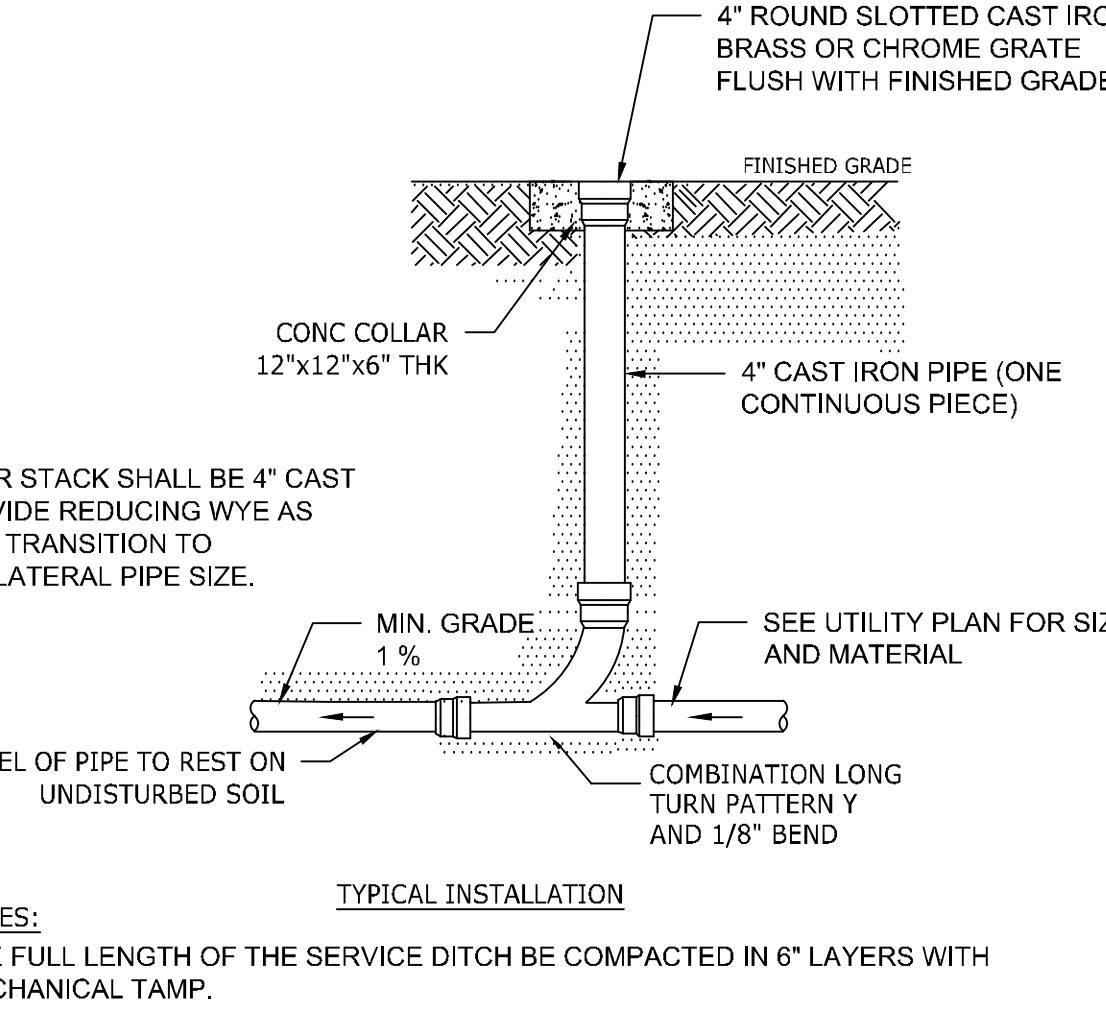
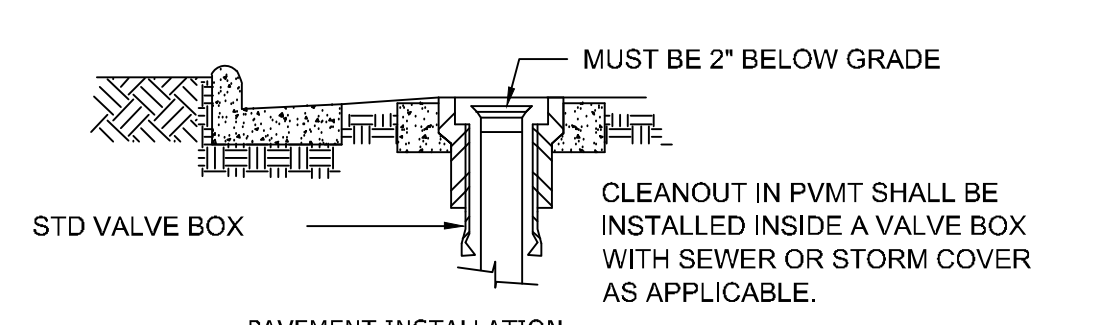
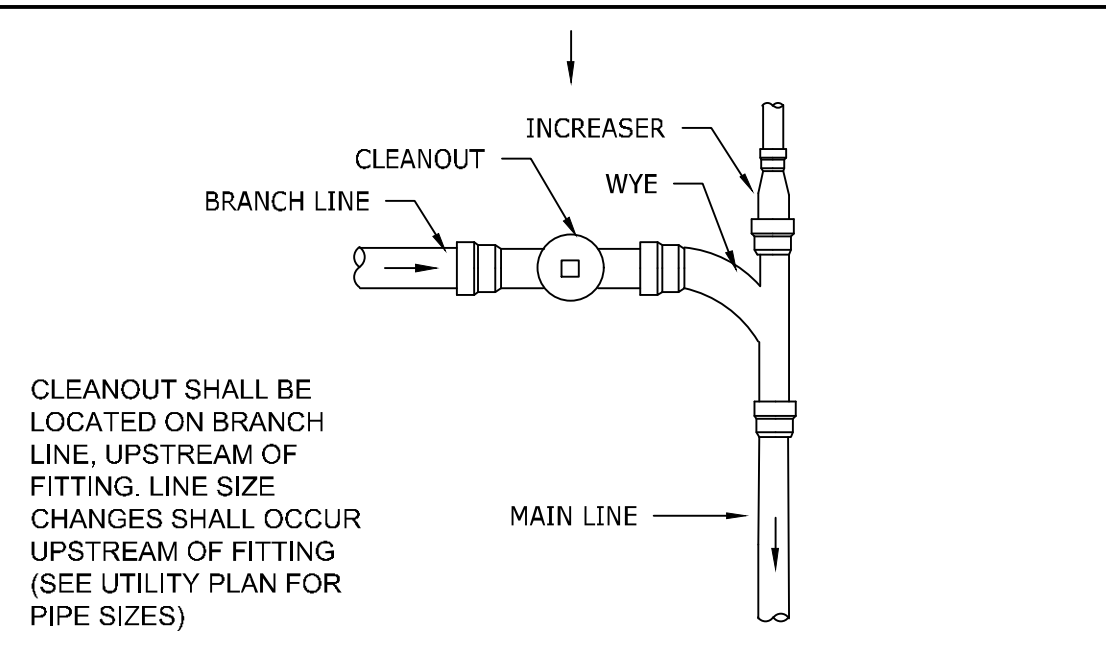
DATE 04/05/2023  
 DRAWN BY L. BARNES  
 DESIGNED BY G. FRANK  
 CHECKED BY G. FRANK  
 SCALE AS SHOWN

TIMMONS GROUP  
 NORTH CAROLINA LICENSE NO. C-1652  
 JONES DAIRY STORAGE FACILITY  
 TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA  
 SITE DETAILS

JOB NO. 54832  
 SHEET NO. C6.4

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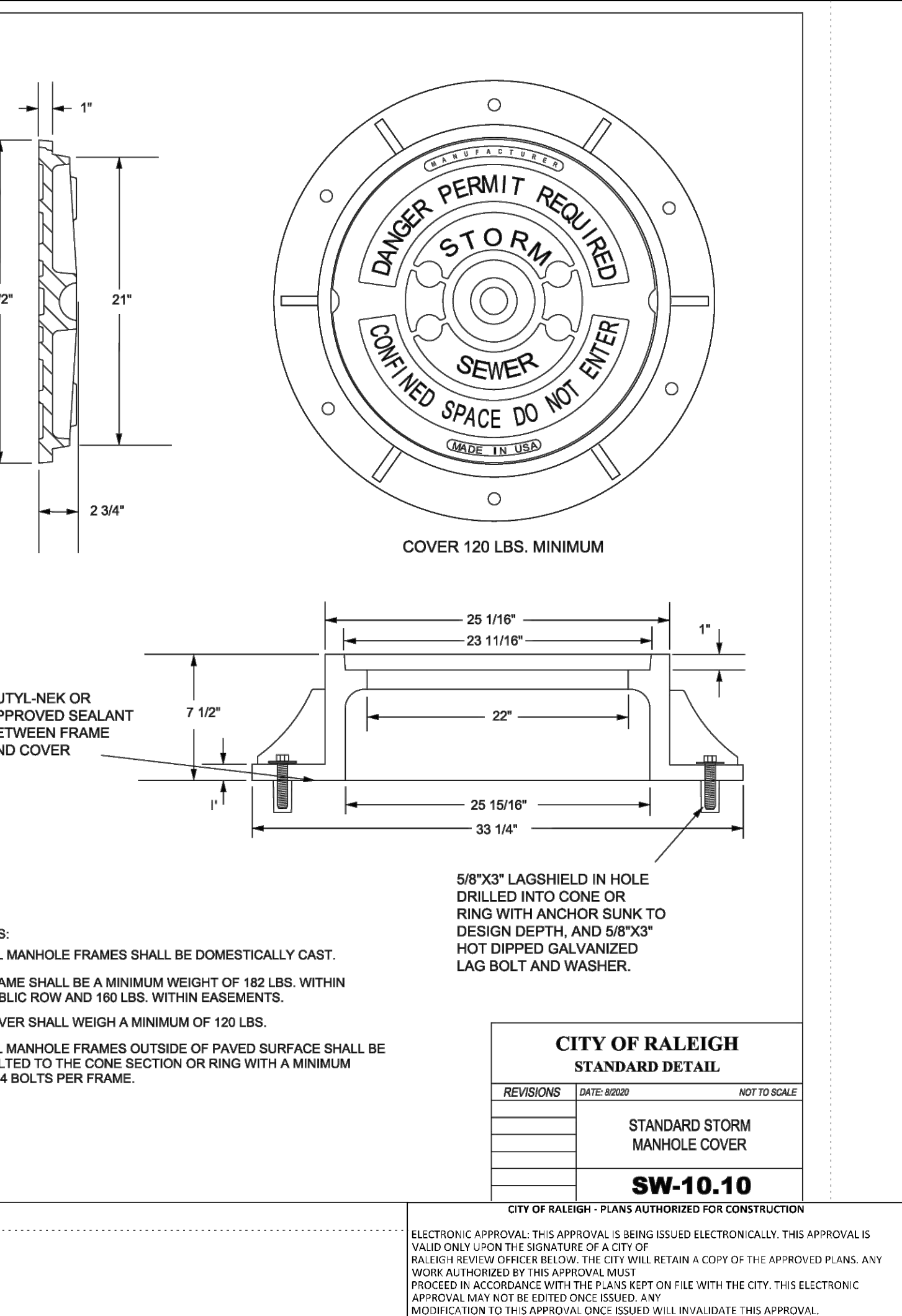
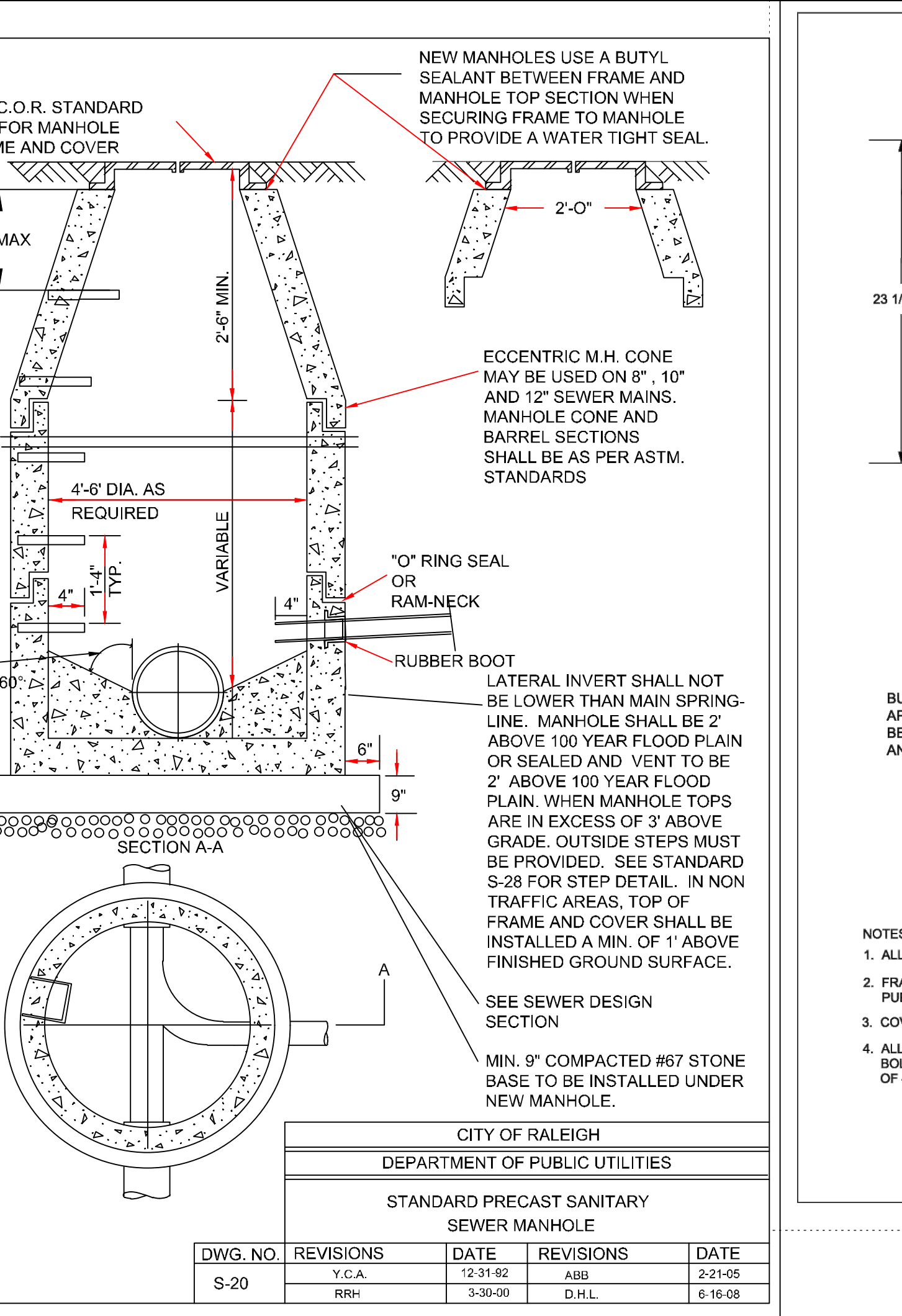
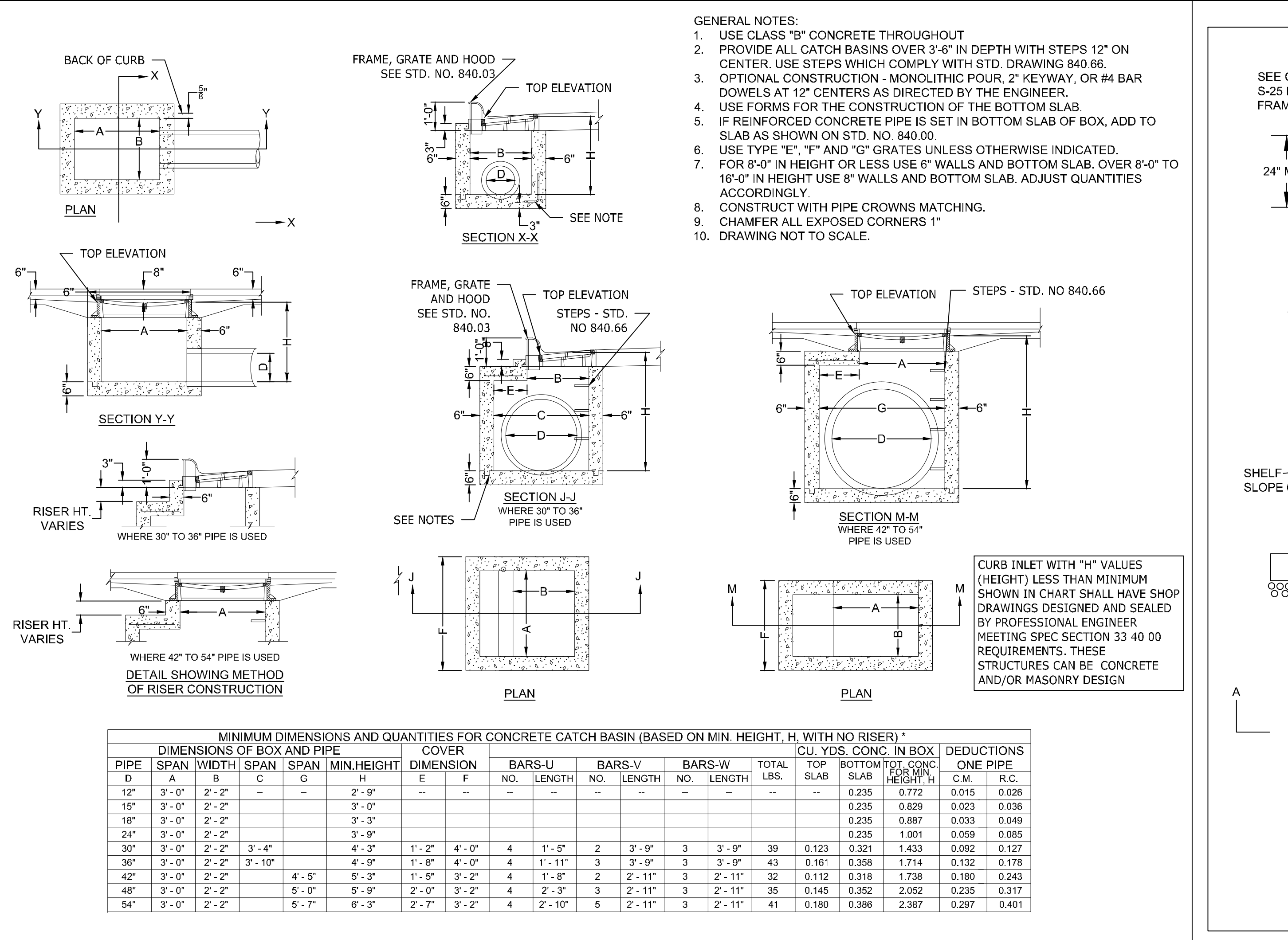


1 STANDARD SEWER CLEANOUT N.T.S.

3 FLARED END SECTION N.T.S.

4 YARD INLET N.T.S.

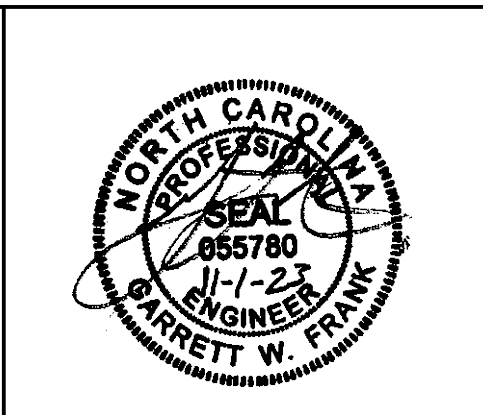
5 STANDARD CONCRETE DROP INLET N.T.S.



6 CONCRETE CATCH BASIN N.T.S.

7 SANITARY SEWER MANHOLE N.T.S.

8 STANDARD STORM MANHOLE COVER N.T.S.



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**JONES DAIRY STORAGE FACILITY**  
 TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

**SITE DETAILS**

DATE	REVISION DESCRIPTION
06/07/2023 <td>ADDRESSED TOWN OF ROLESVILLE COMMENTS</td>	ADDRESSED TOWN OF ROLESVILLE COMMENTS
08/07/2023 <td>ADDRESSED TOWN OF ROLESVILLE 2ND REVIEW COMMENTS</td>	ADDRESSED TOWN OF ROLESVILLE 2ND REVIEW COMMENTS
11/01/2023 <td>ADDRESSED TOWN OF ROLESVILLE 3RD REVIEW COMMENTS</td>	ADDRESSED TOWN OF ROLESVILLE 3RD REVIEW COMMENTS

DATE: 04/05/2023  
 DRAWN BY: L. BARNES  
 DESIGNED BY: G. FRANK  
 CHECKED BY: G. FRANK  
 SCALE: AS SHOWN

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-20	Y.C.A.	12-31-82	ABS	2-21-05
	RRH	3-30-00	D.H.L.	6-16-08

CITY OF RALEIGH  
 DEPARTMENT OF PUBLIC UTILITIES  
 STANDARD PRECAST SANITARY SEWER MANHOLE

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

STANDARD STORM MANHOLE COVER  
**SW-10.10**

REVISIONS: DATE: 8/2020 NOT TO SCALE

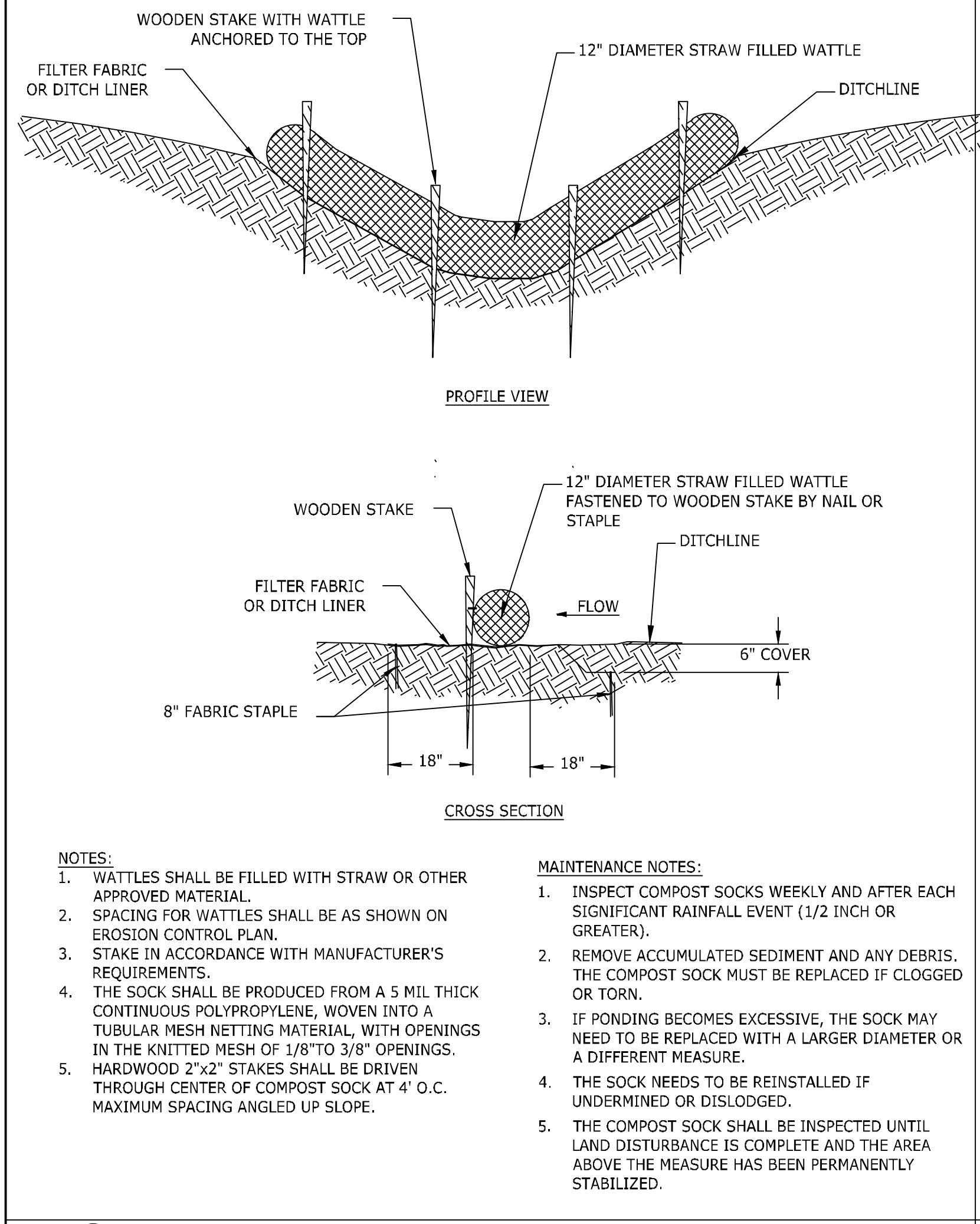
ELECTRONIC APPROVAL: THIS APPROVAL IS BEING ISSUED ELECTRONICALLY. THIS APPROVAL IS VALID ONLY UPON THE SIGNATURE OF A CITY OF RALEIGH REVIEW OFFICER BELOW. THE CITY WILL RETAIN A COPY OF THE APPROVED PLANS. ANY WORK AUTHORIZED BY THIS APPROVAL MUST PROCEED IN ACCORDANCE WITH THE PLANS KEPT ON FILE WITH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

CITY OF RALEIGH DEVELOPMENT APPROVAL  
 RALEIGH WATER REVIEW OFFICER

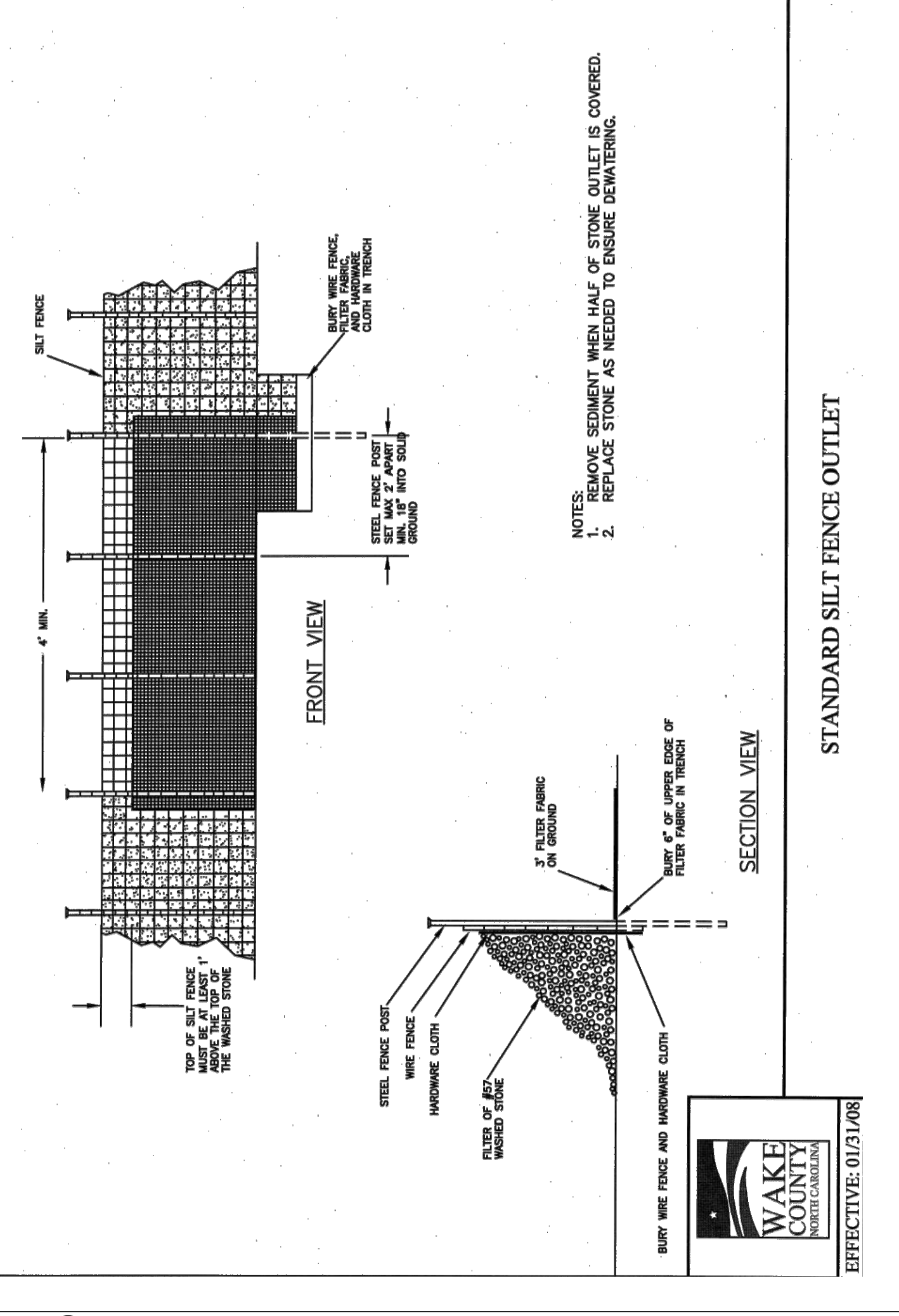
JOB NO.: 54832  
 SHEET NO.: C6.5

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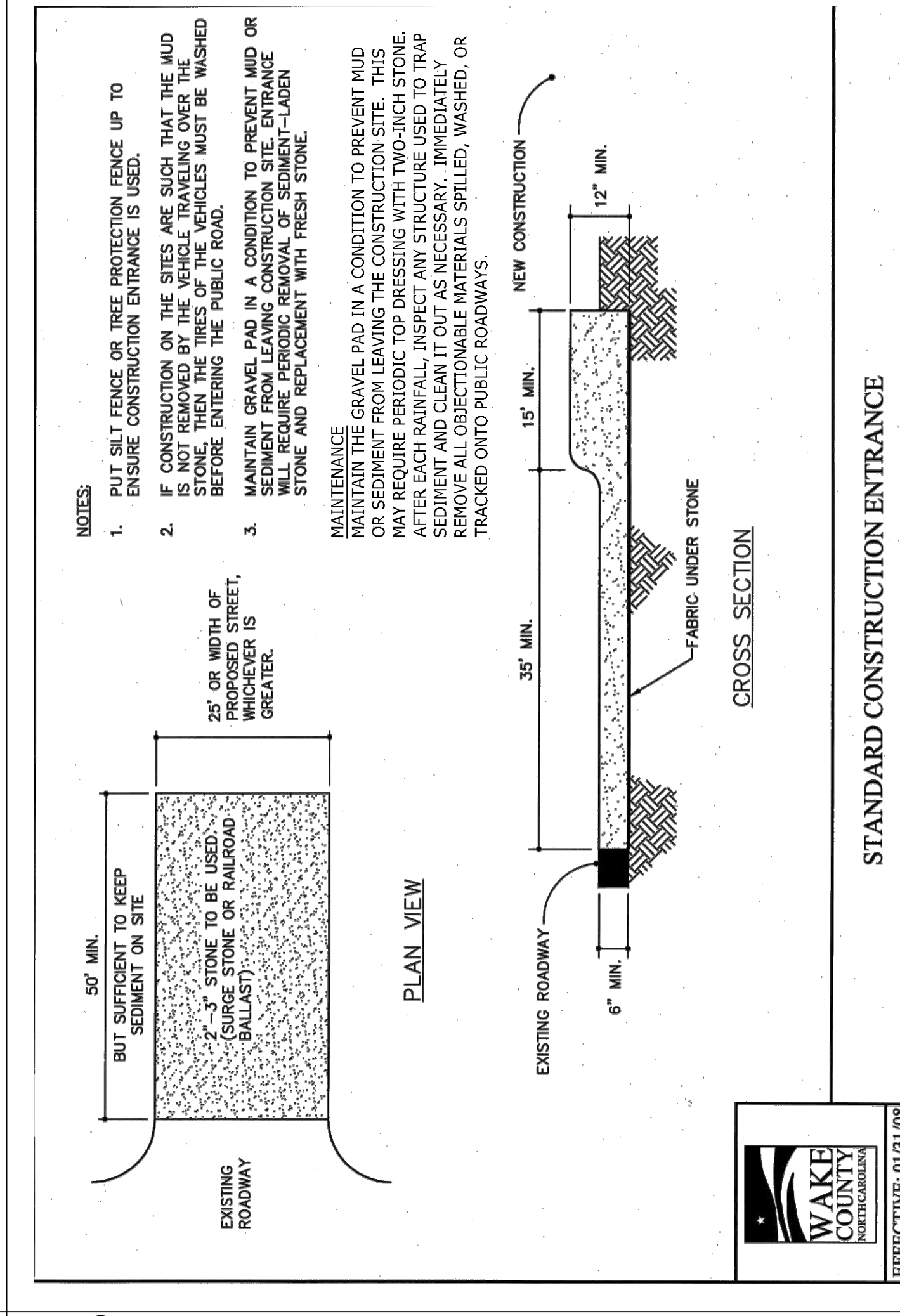




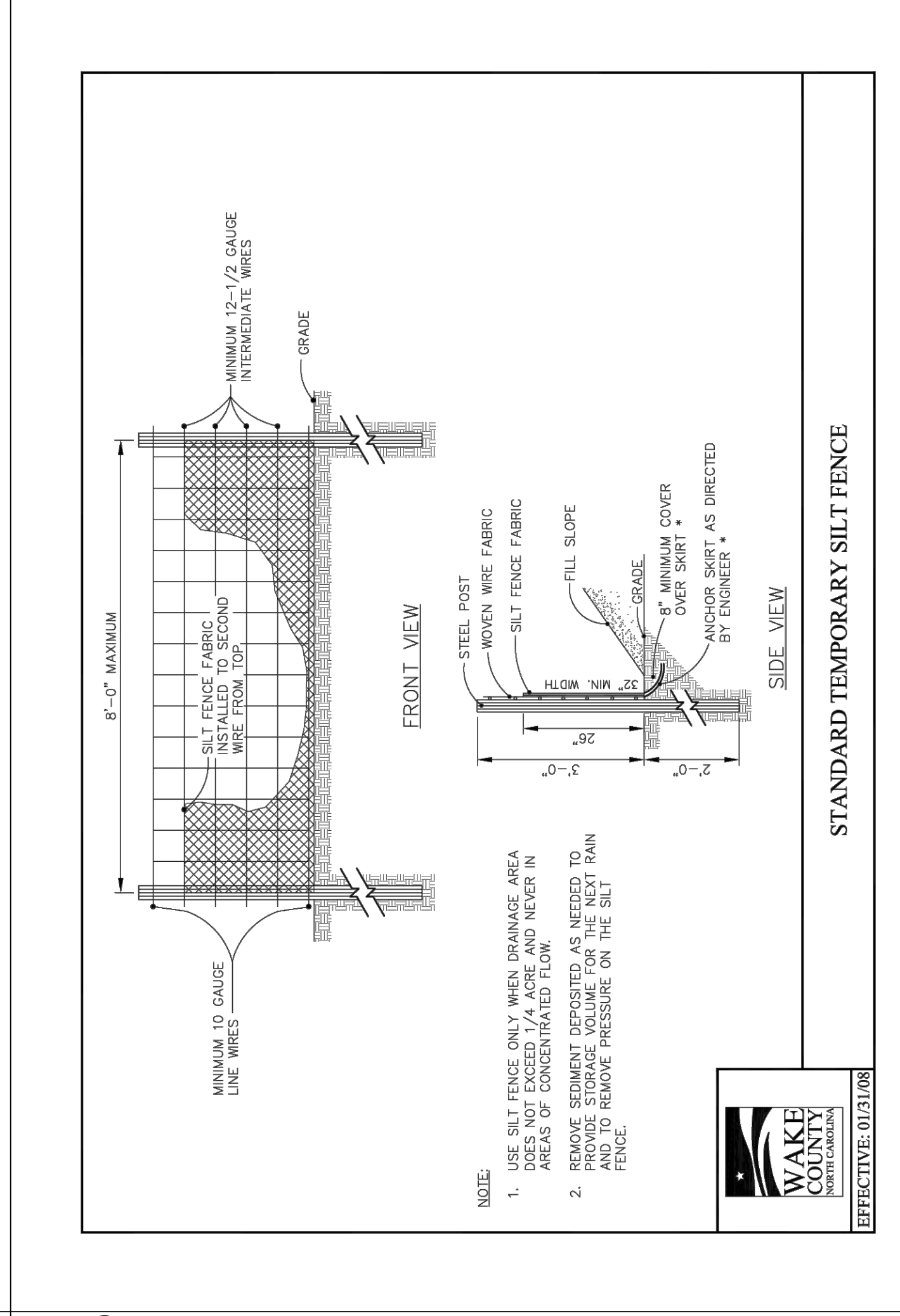
1 CHECK DAM N.T.S.



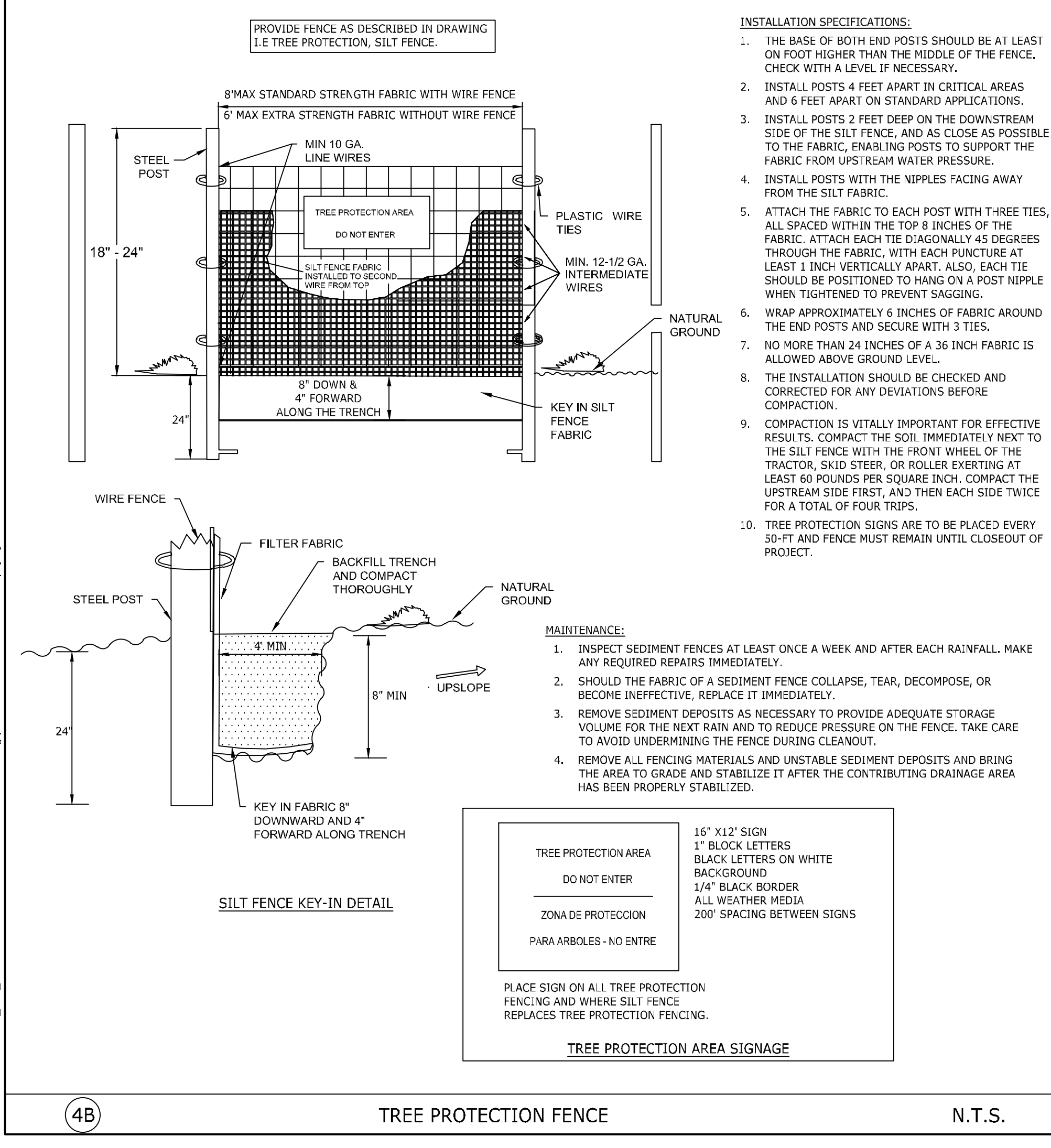
2 REINFORCED SILT FENCE OUTLET N.T.S.



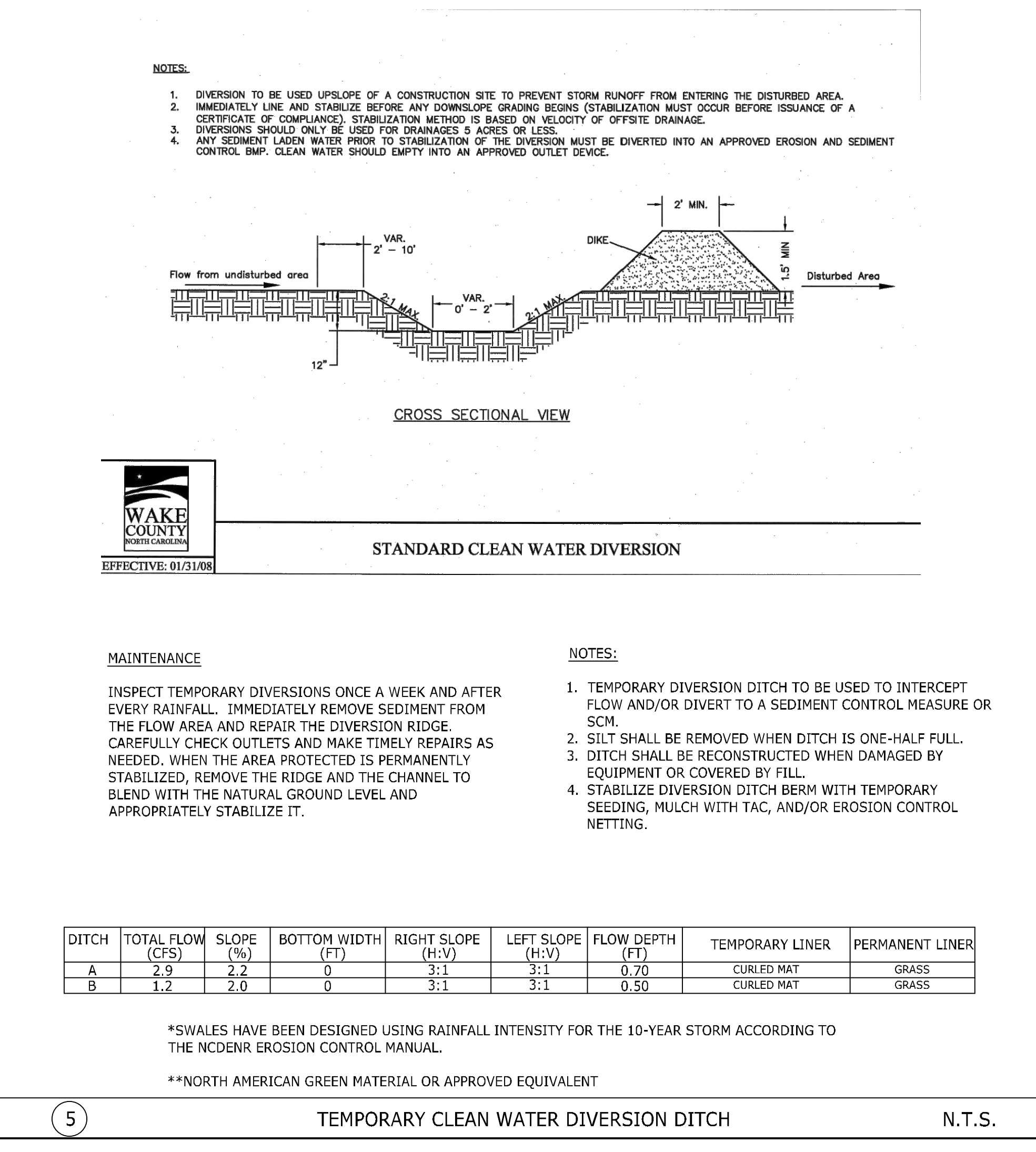
3 GRAVEL CONSTRUCTION ENTRANCE N.T.S.



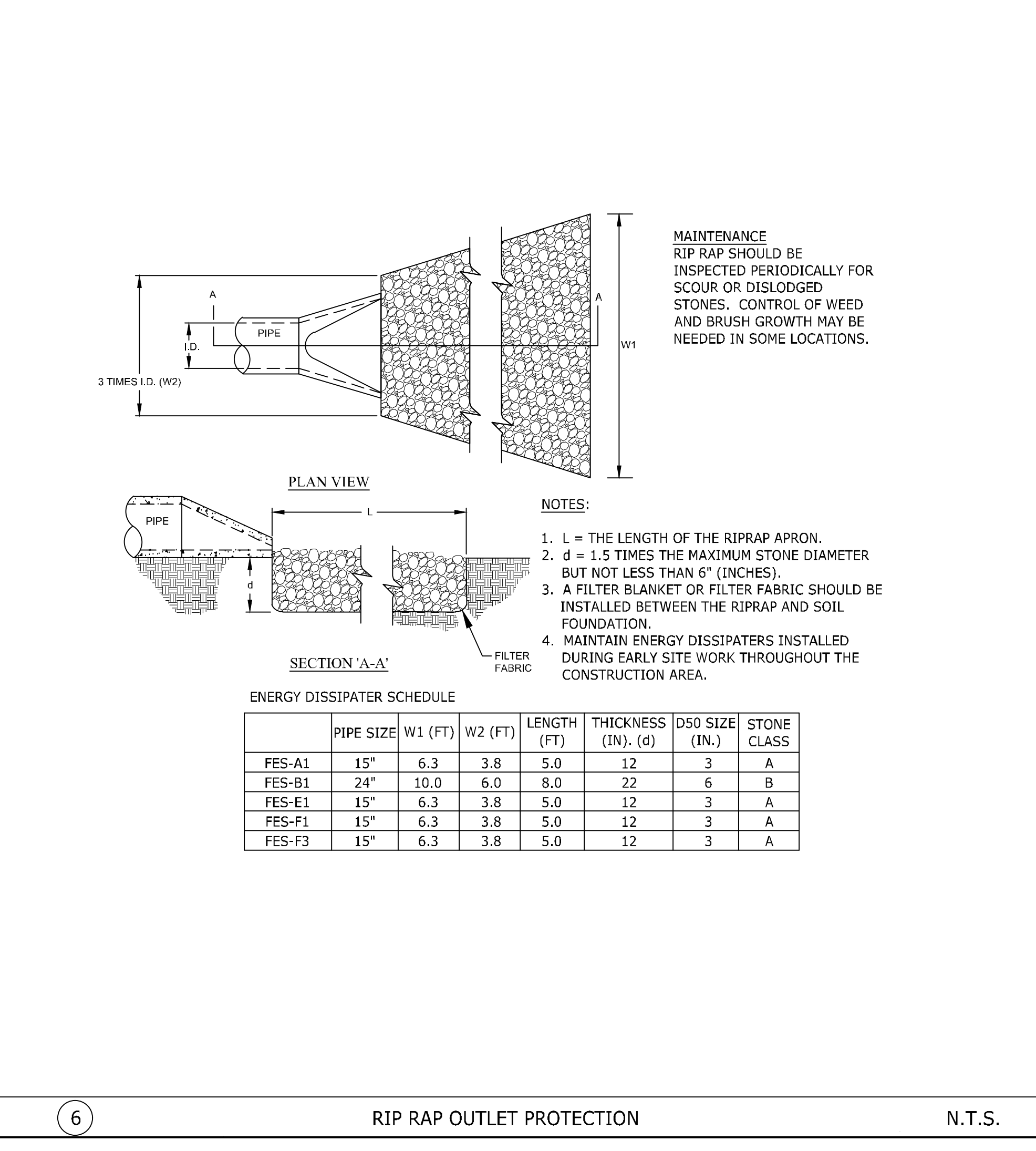
4A TEMPORARY SEDIMENT FENCE N.T.S.



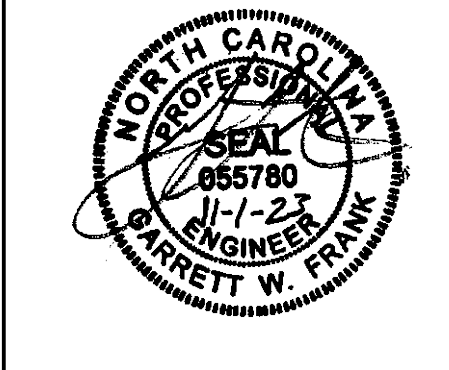
4B TREE PROTECTION FENCE N.T.S.



5 TEMPORARY CLEAN WATER DIVERSION DITCH N.T.S.



6 RIP RAP OUTLET PROTECTION N.T.S.



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DATE: 04/05/2023  
 DRAWN BY: L. BARNES  
 DESIGNED BY: G. FRANK  
 CHECKED BY: G. FRANK  
 SCALE: AS SHOWN

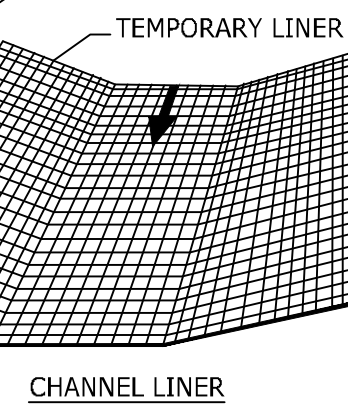
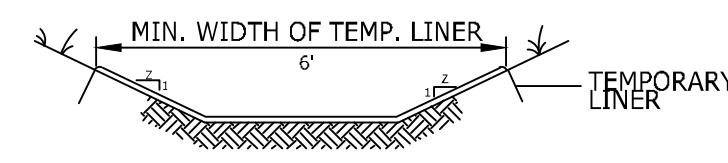
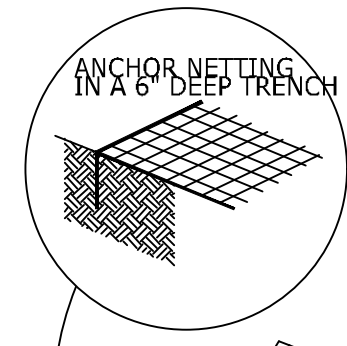
**TIMMONS GROUP**  
 NORTH CAROLINA LICENSE NO. C-1652  
**JONES DAIRY STORAGE FACILITY**  
 TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA  
**SITE DETAILS**

JOB NO. 54832  
 SHEET NO. C6.6

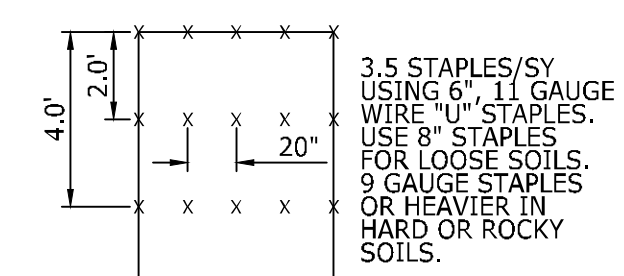
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GRASS-LINED CHANNEL NTS



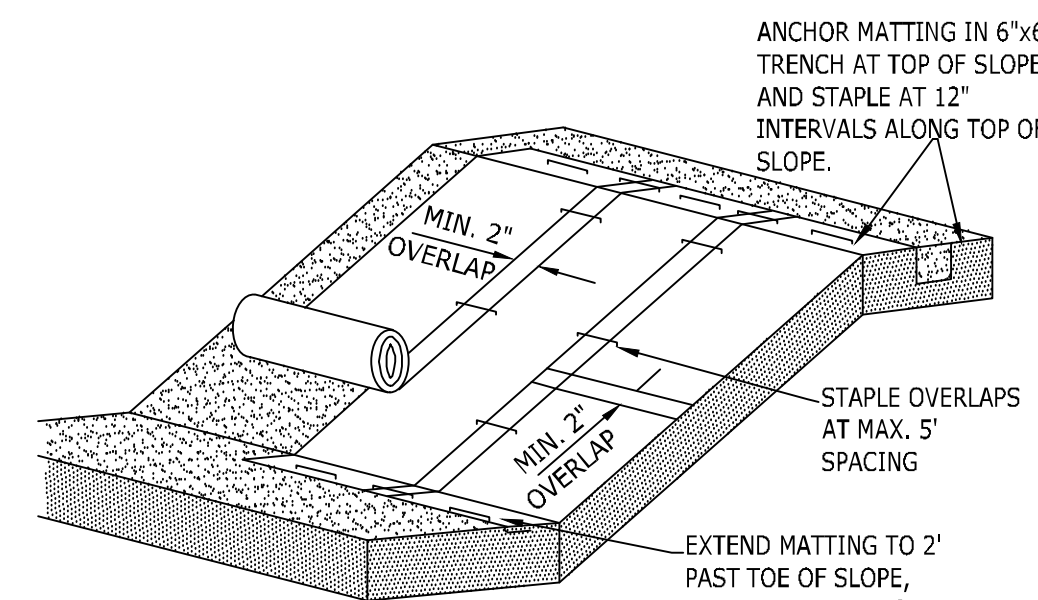
EXCELSIOR MAT STAPLE PATTERN NTS

CONSTRUCTION NOTES:

- INSTALL EXCELSIOR CHANNEL LINING IN ALL SWALES OR AREAS OF CONCENTRATED STORMWATER FLOW.
- SEE SPECIFICATIONS FOR TEMP. LINING REQUIREMENTS.
- PREPARE SOIL BEFORE INSTALLING MATS OR NETS, INCLUDING APPLICATION OF LIME, FERTILIZER AND SEED.
- BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE NET OR MAT IN A 6" DEEP TRENCH, BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
- ROLL CENTER MAT OR NET IN DIRECTION OF WATER FLOW ON BOTTOM OF CHANNEL.
- PLACE MAT OR NET END OVER END (SHINGLE STYLE) WITH A 6" OVERLAP. USE DOUBLE ROW OF STAGGERED STAPLES 4" APART TO SECURE.
- FULL LENGTH EDGE OF MAT OR NET AT TOP SIDE SLOPES SHALL BE ANCHORED IN 6" DEEP TRENCH AFTER STAPLING.
- MATS OR NETS SHALL BE OVERLAPPED 4" OVER THE CENTER BLANKET AND STAPLED.
- THE TERMINAL END OF THE MAT OR NET MUST BE ANCHORED IN A 6" DEEP TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

MAINTENANCE NOTES:

- GRASS-LINED CHANNELS TO BE INSPECTED WEEKLY AND AFTER EVERY RAINFALL EVENT, DURING THE ESTABLISHMENT AND AFTER THE ESTABLISHMENT PERIOD.
- REPAIRS ARE TO BE MADE IMMEDIATELY.
- REMOVE SEDIMENT ACCUMULATIONS TO MAINTAIN DESIGNED CARRYING CAPACITY.
- GRASS TO BE HEALTHY AND IN VIGOROUS CONDITIONS AT ALL TIMES.



ANCHOR MATTING IN 6"x6" TRENCH AT TOP OF SLOPE AND STAPLE AT 12" INTERVALS ALONG TOP OF SLOPE.

STAPLE OVERLAPS AT MAX. 5' SPACING

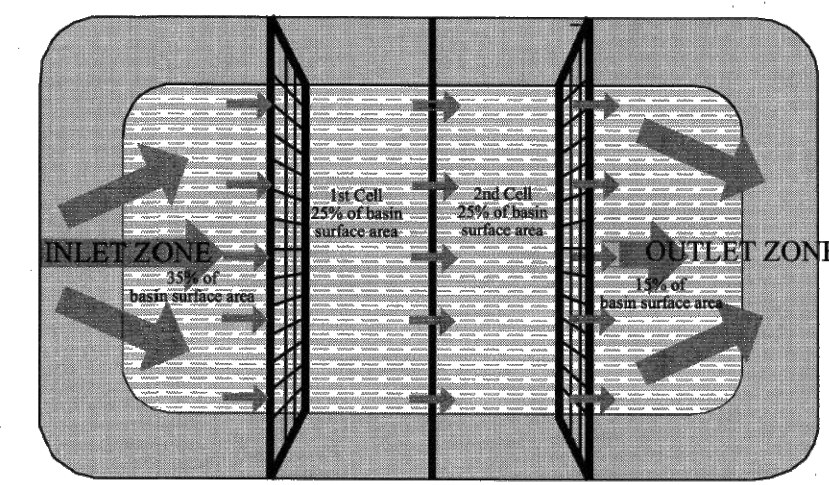
EXTEND MATTING TO 2' PAST TOE OF SLOPE, TURN-UNDER END OF MATTING AND STAPLE AT 12" INTERVALS.

NOTES:

- SLOPE SURFACE SHALL BE SMOOTH PRIOR TO PLACEMENT OF MATTING TO ENSURE PROPER SOIL CONTACT.
- LIME, FERTILIZE, AND SEED PRIOR TO PLACING MATTING. PLANT SHRUBS, TREES, ETC. FOLLOWING PLACEMENT OF MATTING.
- ON SLOPES FLATTER THAN 4:1, ROLLS MAY BE PLACED IN HORIZONTAL STRIPS.
- DO NOT STRETCH MATTING TIGHT. ALLOW ROLLS TO CONFORM TO ANY IRREGULARITIES.
- INSTALL STAPLES IN PATTERNS AS RECOMMENDED BY MATTING MANUFACTURER.

MAINTENANCE NOTES:

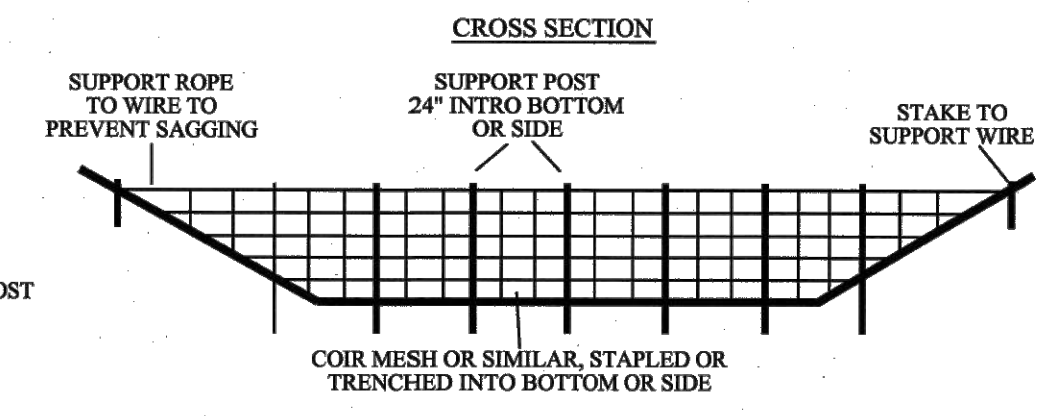
- INSPECT MATTING AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2" OR GREATER) RAINFALL AND REPAIR IMMEDIATELY AS NEEDED.
- ENSURE GOOD CONTACT WITH SOIL SURFACE IS MAINTAINED AND EROSION DOES NOT OCCUR BENEATH MATTING.
- AREAS OF MATTING THAT ARE DAMAGED OR WHERE NOT IN CLOSE CONTACT WITH THE SOIL SHALL BE REPAIRED AND STAPLED.
- IF EROSION OCCURS DUE TO POORLY CONTROLLED DRAINAGE, THE PROBLEM SHALL BE FIXED AND THE ERODED AREAS PROTECTED.
- MONITOR AND REPAIR MATTING AS NECESSARY UNTIL GROUND COVER IS ESTABLISHED.



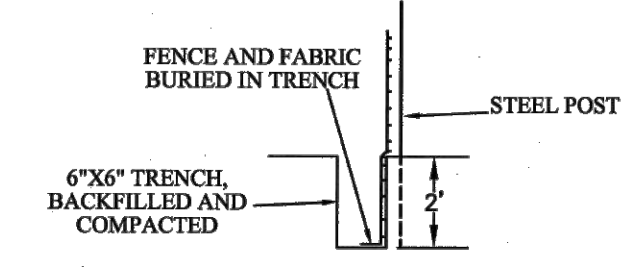
PLAN VIEW

NOTES:

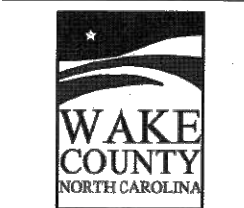
- BAFFLE MATERIAL SHOULD BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRENCHING AS FOR SILT FENCE.
- MOST OF THE SEDIMENT WILL ACCUMULATE IN THE 1ST BAY, WHICH SHOULD BE READILY ACCESSIBLE FOR MAINTENANCE.
- PROVIDE 3 BAFFLES (USE TWO IF LESS THAN 30 FEET IN LENGTH). PROVIDE 5 BAFFLES FOR DRAINAGE AREAS GREATER THAN 10 ACRES.
- BAFFLE SHALL BE 700 GMZ COIR EROSION BLANKET.
- TOPS OF BAFFLES SHOULD BE 2 INCHES LOWER THAN THE TOP OF THE BERMS.
- INSPECT BAFFLES FOR REPAIR ONCE A WEEK AND AFTER EACH RAINFALL.



CROSS SECTION



SECTION VIEW AT OPENING



EFFECTIVE: 01/31/08

STANDARD BAFFLES DETAIL

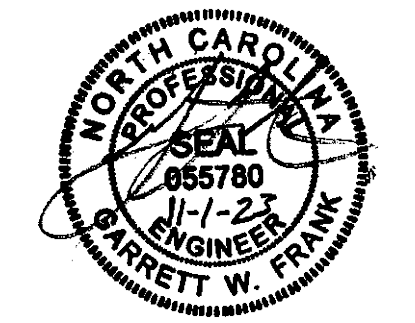
MAINTENANCE

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

BE SURE TO MAINTAIN ACCESS TO THE BAFFLES. SHOULD THE FABRIC OF A BAFFLE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.

REMOVE SEDIMENT DEPOSITS WHEN IT REACHES HALF FULL TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE BAFFLES. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT. SEDIMENT DEPTH SHOULD NEVER EXCEED HALF THE DESIGNED STORAGE DEPTH.

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



THIS DRAWING PREPARED AT THE RALEIGH OFFICE  
5410 Trinity Road, Suite 102 | Raleigh, NC 27607  
TEL: 919.866.4951 FAX: 919.853.8124 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.

DATE	REVISION DESCRIPTION
06/07/2023	ADRESSED TOWN OF ROLESVILLE COMMENTS
08/01/2023	ADRESSED TOWN OF ROLESVILLE 2ND REVIEW COMMENTS
11/01/2023	ADRESSED TOWN OF ROLESVILLE 3RD REVIEW COMMENTS

DATE	DRAWN BY
04/05/2023	L. BARNES
	DESIGNED BY G. FRANK
	CHECKED BY G. FRANK
	SCALE AS SHOWN

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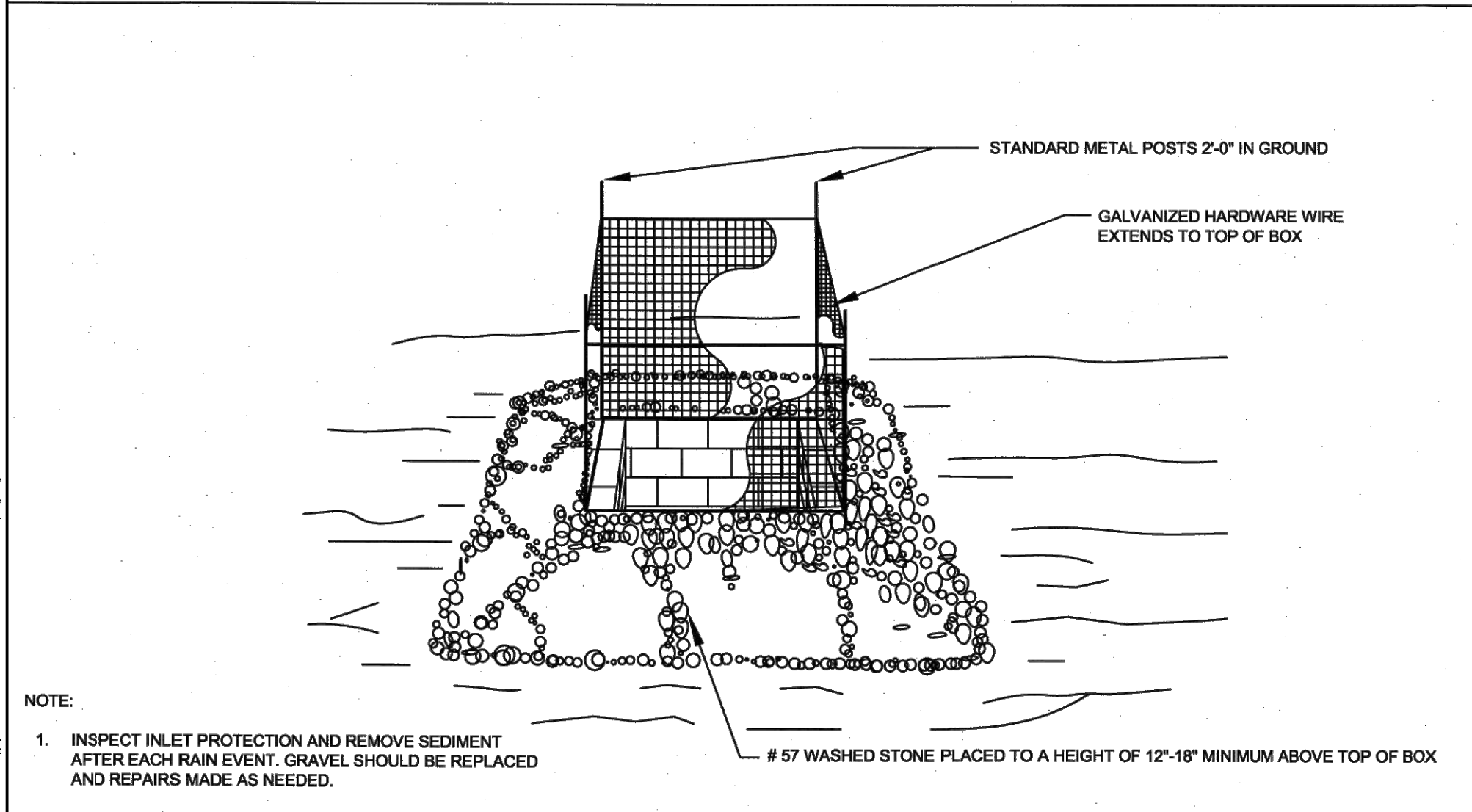
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① TEMPORARY CHANNEL LINING N.T.S.

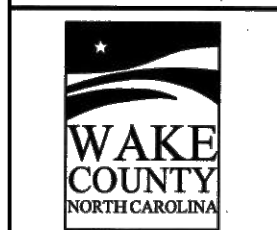
② ROLLED EROSION CONTROL PRODUCT N.T.S.

③ COIR MESH BAFFLES (NCDNR 6.65) N.T.S.



NOTE:

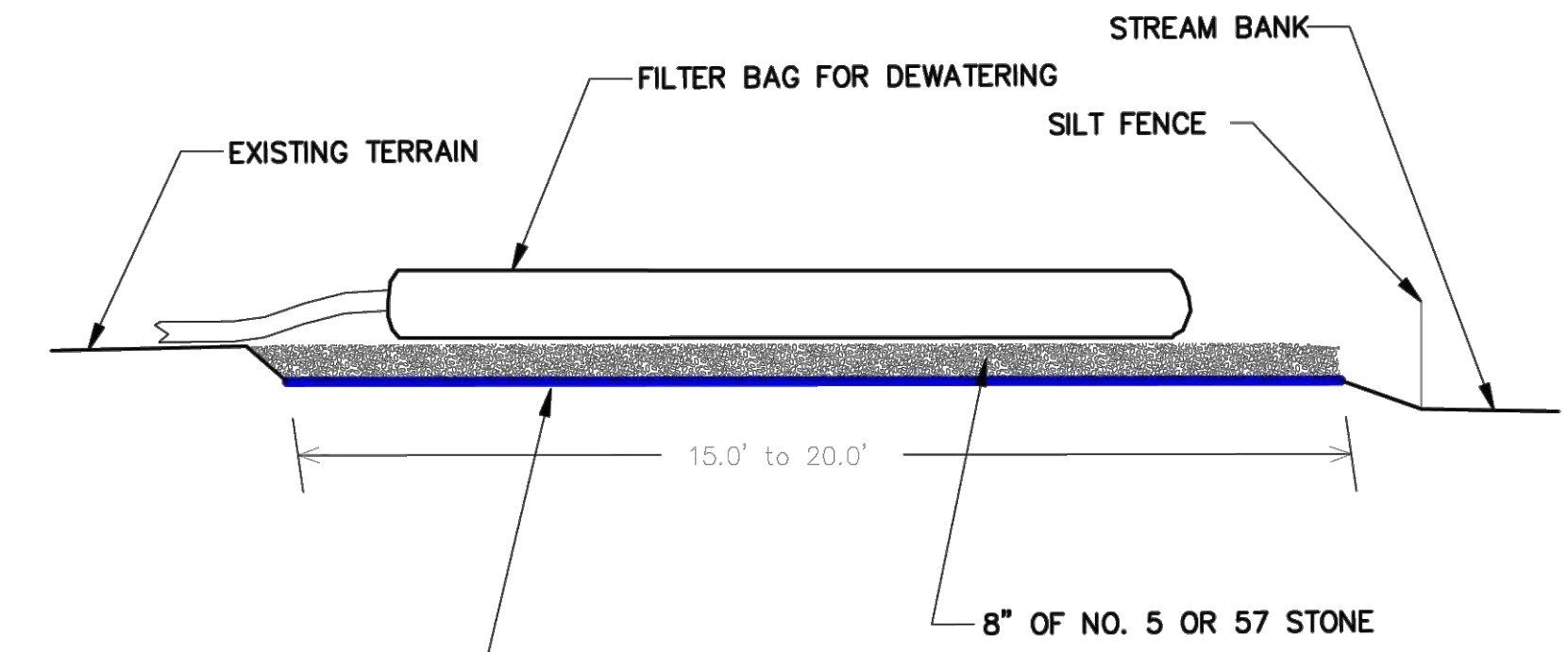
- INSPECT INLET PROTECTION AND REMOVE SEDIMENT AFTER EACH RAIN EVENT. GRAVEL SHOULD BE REPLACED AND REPAIRS MADE AS NEEDED.



EFFECTIVE: 01/31/08

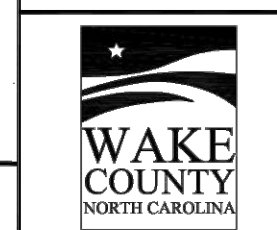
STANDARD GRAVEL YARD INLET PROTECTION

④ YARD INLET PROTECTION N.T.S.



NOTES

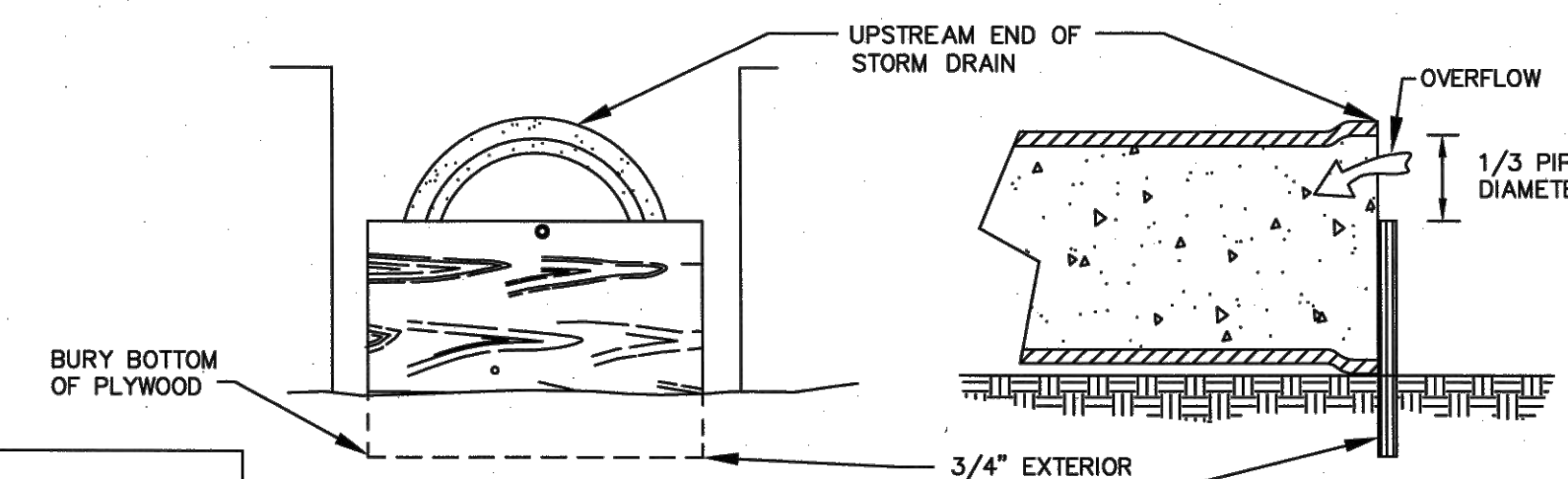
PROVIDE STABILIZED OUTLET TO STREAM BANK. WOOD PALLETS MAY BE USED IN LIEU OF STONE AND GEOTEXTILE AS DIRECTED. A SUFFICIENT NUMBER OF PALLETS MUST BE PROVIDED TO ELEVATE THE ENTIRE FILTER BAG FOR DEWATERING ABOVE NATURAL GROUND.



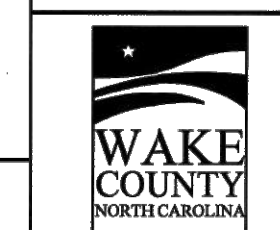
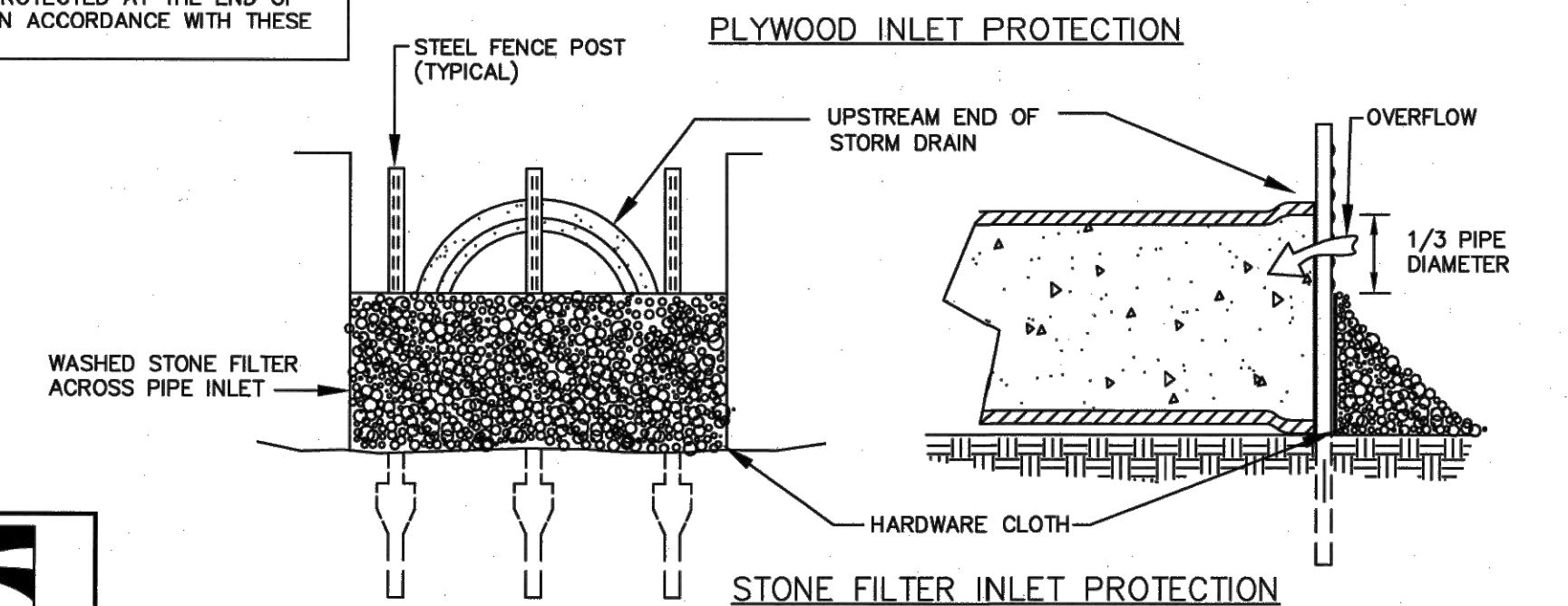
EFFECTIVE: 01/31/08

STANDARD FILTER BAG FOR DEWATERING ACTIVITIES

⑤ DEWATERING PUMP WITH SILT BAG N.T.S.



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

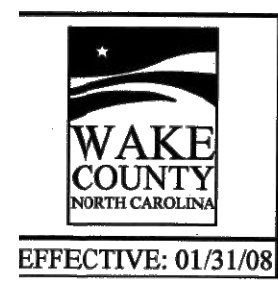
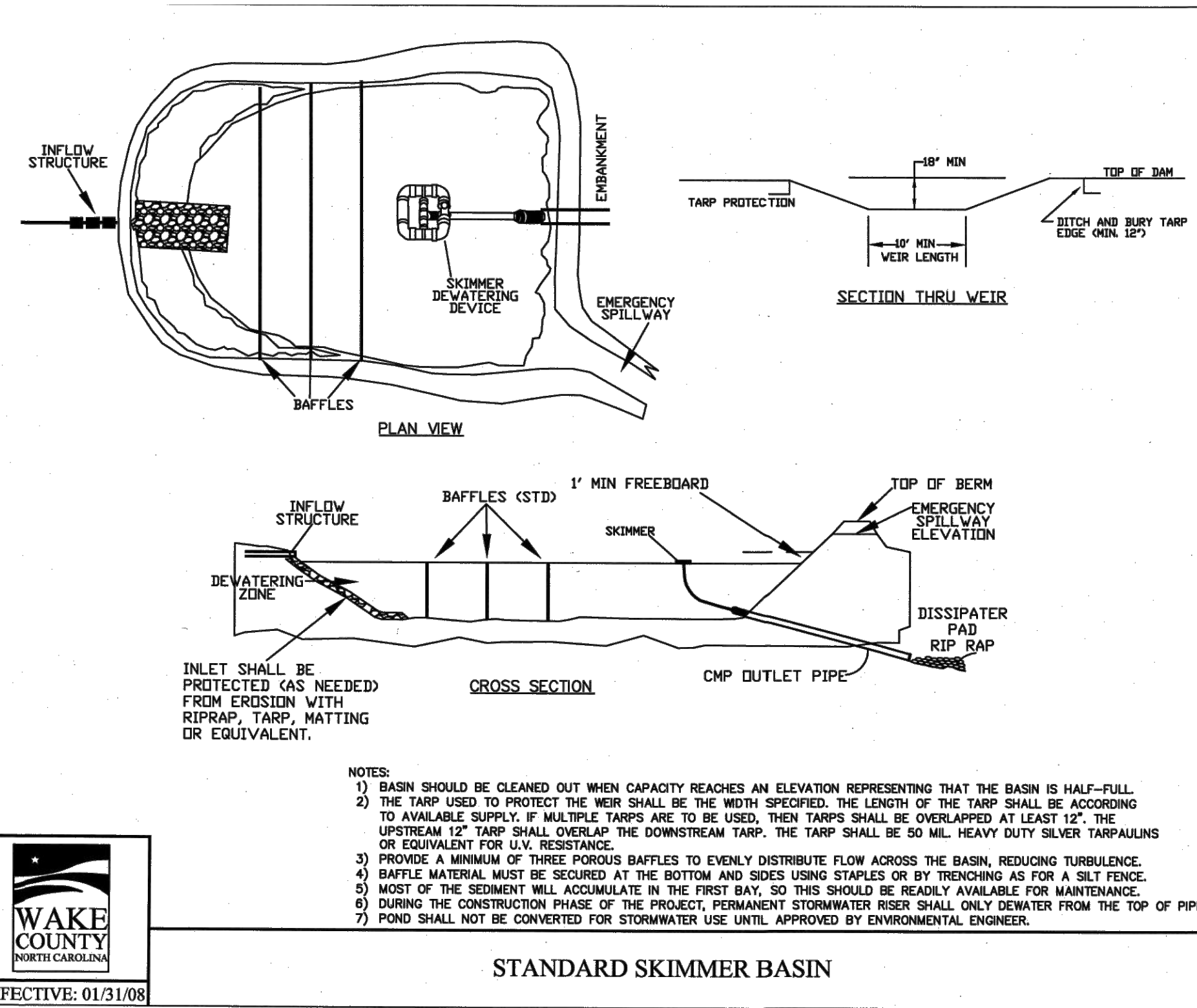


EFFECTIVE: 01/31/08

STANDARD PIPE INLET PROTECTION (PLYWOOD & STONE)

⑥ PIPE INLET PROTECTION N.T.S.





**MAINTENANCE NOTES:**

INSPECT SKIMMER SEDIMENT BASINS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (ONE-HALF INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE HEIGHT OF THE FIRST BAFFLE. PULL THE SKIMMER TO ONE SIDE SO THAT THE SEDIMENT UNDERNEATH IT CAN BE EXCAVATED. EXCAVATE THE SEDIMENT FROM THE ENTIRE BASIN, NOT JUST AROUND THE SKIMMER OR THE FIRST CELL. MAKE SURE VEGETATION GROWING IN THE BOTTOM OF THE BASIN DOES NOT HOLD DOWN THE SKIMMER.

REPAIR THE BAFFLES IF THEY ARE DAMAGED. RE-ANCHOR THE BAFFLES IF WATER IS FLOWING UNDERNEATH OR AROUND THEM. IF THE SKIMMER IS CLOGGED WITH TRASH AND THERE IS WATER IN THE BASIN, USUALLY JERKING ON THE ROPE WILL MAKE THE SKIMMER BOB UP AND DOWN AND DISLODGE THE DEBRIS AND RESTORE FLOW. IF THIS DOES NOT WORK, PULL THE SKIMMER OVER TO THE SIDE OF THE BASIN AND REMOVE THE DEBRIS. ALSO CHECK THE ORIFICE INSIDE THE SKIMMER TO SEE IF IT IS CLOGGED; IF SO REMOVE THE DEBRIS.

IF THE SKIMMER ARM OR BARREL PIPE IS CLOGGED, THE ORIFICE CAN BE REMOVED AND THE OBSTRUCTION CLEARED WITH A PLUMBER'S SNAKE OR BY FLUSHING WITH WATER. BE SURE AND REPLACE THE ORIFICE BEFORE REPOSITIONING THE SKIMMER.

CHECK THE FABRIC LINED SPILLWAY FOR DAMAGE AND MAKE ANY REQUIRED REPAIRS WITH FABRIC THAT SPANS THE FULL WIDTH OF THE SPILLWAY. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND OTHER DEBRIS FROM THE SKIMMER AND POOL AREAS.

FREEZING WEATHER CAN RESULT IN ICE FORMING IN THE BASIN. SOME SPECIAL PRECAUTIONS SHOULD BE TAKEN IN THE WINTER TO PREVENT THE SKIMMER FROM PLUGGING WITH ICE.

- CONSTRUCTION SEQUENCE**
- CLEAR, GRUB, AND STRIP THE AREA UNDER THE EMBANKMENT OF ALL VEGETATION AND ROOT MAT. REMOVE ALL SURFACE SOIL CONTAINING HIGH AMOUNTS OF ORGANIC MATTER AND STOCKPILE OR DISPOSE OF IT PROPERLY. HAUL ALL OBJECTIONABLE MATERIAL TO THE DESIGNATED DISPOSAL AREA. PLACE TEMPORARY SEDIMENT CONTROL MEASURES BELOW BASIN AS NEEDED.
  - ENSURE THAT FILL MATERIAL FOR THE EMBANKMENT IS FREE OF ROOTS, WOODY VEGETATION, ORGANIC MATTER, AND OTHER OBJECTIONABLE MATERIAL. PLACE THE FILL IN LIFTS NOT TO EXCEED 9 INCHES, AND MACHINE COMPACT IT. OVER FILL THE EMBANKMENT 6 INCHES TO ALLOW FOR SETTLEMENT.
  - SHAPE THE BASIN TO THE SPECIFIED DIMENSIONS. PREVENT THE SKIMMING DEVICE FROM SETTLING INTO THE MUD BY EXCAVATING A SHALLOW PIT UNDER THE SKIMMER OR PROVIDING A LOW SUPPORT UNDER THE SKIMMER OF STONE OR TIMBER.
  - PLACE THE BARREL (TYPICALLY 4-INCH SCHEDULE 40 PVC PIPE) ON A FIRM, SMOOTH FOUNDATION OF IMPERVIOUS SOIL. DO NOT USE PERVIOUS MATERIAL SUCH AS SAND, GRAVEL, OR CRUSHED STONE AS BACKFILL AROUND THE PIPE. PLACE THE FILL MATERIAL AROUND THE PIPE SPILLWAY IN 4-INCH LAYERS AND COMPACT IT UNDER AND AROUND THE PIPE TO AT LEAST THE SAME DENSITY AS THE ADJACENT EMBANKMENT. CARE MUST BE TAKEN NOT TO RAISE THE PIPE FROM THE FIRM CONTACT WITH ITS FOUNDATION WHEN COMPACTING UNDER THE PIPE HAUNCHES. PLACE A MINIMUM DEPTH OF 2 FEET OF COMPACTED BACKFILL OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT. IN NO CASE SHOULD THE PIPE CONDUIT BE INSTALLED BY CUTTING A TRENCH THROUGH THE DAM AFTER THE EMBANKMENT IS COMPLETE.
  - ASSEMBLE THE SKIMMER FOLLOWING THE MANUFACTURERS INSTRUCTIONS, OR AS DESIGNED.
  - LAY THE ASSEMBLED SKIMMER ON THE BOTTOM OF THE BASIN WITH THE FLEXIBLE JOINT AT THE INLET OF THE BARREL PIPE. ATTACH THE FLEXIBLE JOINT TO THE BARREL PIPE AND POSITION THE SKIMMER OVER THE EXCAVATED PIT OR SUPPORT. BE SURE TO ATTACH A ROPE TO THE SKIMMER AND ANCHOR IT TO THE SIDE OF THE BASIN. THIS WILL BE USED TO PULL THE SKIMMER TO THE SIDE FOR MAINTENANCE.
  - EARTHEN SPILLWAYS--INSTALL THE SPILLWAY IN UNDISTURBED SOIL TO THE GREATEST EXTENT POSSIBLE. THE ACHIEVEMENT OF PLANNED ELEVATIONS, GRADE, DESIGN WIDTH, AND ENTRANCE AND EXIT CHANNEL SLOPES ARE CRITICAL TO THE SUCCESSFUL OPERATION OF THE SPILLWAY. THE SPILLWAY SHOULD BE LINED WITH LAMINATED PLASTIC OR IMPERMEABLE GEOTEXTILE FABRIC. THE FABRIC MUST BE WIDE AND LONG ENOUGH TO COVER THE BOTTOM AND SIDES AND EXTEND ONTO THE TOP OF THE DAM FOR ANCHORING IN A TRENCH. THE EDGES MAY BE SECURED WITH 8-INCH STAPLES OR PINS. THE FABRIC MUST BE LONG ENOUGH TO EXTEND DOWN THE SLOPE AND EXIT ONTO STABLE GROUND. THE WIDTH OF THE FABRIC MUST BE ONE PIECE, NOT JOINED OR SPLICED; OTHERWISE WATER CAN GET UNDER THE FABRIC. IF THE LENGTH OF THE FABRIC IS INSUFFICIENT FOR THE ENTIRE LENGTH OF THE SPILLWAY, MULTIPLE SECTIONS, SPANNING THE COMPLETE WIDTH, MAY BE USED. THE UPPER SECTION(S) SHOULD OVERLAP THE LOWER SECTION(S) SO THAT WATER CANNOT FLOW UNDER THE FABRIC. SECURE THE UPPER EDGE AND SIDES OF THE FABRIC IN A TRENCH WITH STAPLES OR PINS. (ADAPTED FROM "A MANUAL FOR DESIGNING, INSTALLING AND MAINTAINING SKIMMER SEDIMENT BASINS," FEBRUARY, 1999. J. W. FAIRCLOTH & SON.).
  - INLETS--DISCHARGE WATER INTO THE BASIN IN A MANNER TO PREVENT EROSION. USE TEMPORARY SLOPE DRAINS OR DIVERSIONS WITH OUTLET PROTECTION TO DIVERT SEDIMENT-LADEN WATER TO THE UPPER END OF THE POOL AREA TO IMPROVE BASIN TRAP EFFICIENCY (REFERENCES: RUNOFF CONTROL MEASURES AND OUTLET PROTECTION).
  - EROSION CONTROL--CONSTRUCT THE STRUCTURE SO THAT THE DISTURBED AREA IS MINIMIZED. DIVERT SURFACE WATER AWAY FROM BARE AREAS. COMPLETE THE EMBANKMENT BEFORE THE AREA IS CLEARED. STABILIZE THE EMERGENCY SPILLWAY EMBANKMENT AND ALL OTHER DISTURBED AREAS ABOVE THE CREST OF THE PRINCIPAL SPILLWAY IMMEDIATELY AFTER CONSTRUCTION (REFERENCES: SURFACE STABILIZATION).
  - INSTALL POROUS BAFFLES AS SPECIFIED IN PRACTICE 6.65
  - AFTER ALL THE SEDIMENT-PRODUCING AREAS HAVE BEEN PERMANENTLY STABILIZED, REMOVE THE STRUCTURE AND ALL THE UNSTABLE SEDIMENT. SMOOTH THE AREA TO BLEND WITH THE ADJOINING AREAS AND STABILIZE PROPERLY (REFERENCES: SURFACE STABILIZATION).

BASIN NUMBER	DRAIN AREA(ACRES)	DISTB. AREA(ACRES)	PEAK FLOW(CFS)	BASIN SURFACE AREA(SF)	REQUIRED SURFACE AREA(SF)	BASIN VOLUME (CF)	REQUIRED BASIN VOLUME (CF)	SPILLWAY WIDTH (FT)	SKIMMER SIZE (IN.)	SKIMMER ORIFICE DIAMETER (IN.)	TOP OF BERM ELEV.	EMERGENCY SPILLWAY ELEV.	BOTTOM OF BASIN ELEV.	SIDE SLOPES	DEWATERING TIME (DAYS)
A	4.07	4.07	14.63	7,864	6,365	13,109	7,326	15	4	1.25	381.62	378	374	3:1	3.52

BASIN SIDES AND WEIR SHALL HAVE MAXIMUM SLOPES OF 2:1 OR FLATTER. DIMENSIONS SHOWN ARE AT WEIR ELEVATION OF BASIN VOLUMES PROVIDED ARE BASED ON AVAILABLE VOLUME AT THE PRINCIPAL SPILLWAY

1

SEDIMENT BASIN WITH STANDARD SKIMMER

N.T.S.

TEMPORARY SEED SCHEDULE (Oct 1 - May 1)

GRASS SPECIES BLEND	PLANTING RATE	MIN. % PURE SEED	MAX. % WEED SEED
ANNUAL RYE GRASS	50-LBS PER 1-ACRE	85%	1%

**SOIL AMENDMENTS:**  
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 4,000LB/ACRE GROUND AGRICULTURAL LIMESTONE IN SANDY SOILS OR 6,000LB/ACRE IN CLAY SOILS, AND 1,000 LB/ACRE 10-10-10 FERTILIZER.

**MULCH:**  
APPLY 4,000 lb/ACRE STRAW. THE GROUND SHOULD BE COMPLETELY COVERED WITH NO BARE SPOT LARGER THAN A QUARTER, THEN TACKED WITH EMULSIFIED ASPHALT. EMULSIFIED ASPHALT SHALL BE APPLIED AT A RATE OF 400 GALLONS PER ACRE.

**MAINTENANCE:**  
REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

TEMPORARY SEED SCHEDULE (May 1 - Sept 30)

GRASS SPECIES BLEND	PLANTING RATE	MIN. % PURE SEED	MAX. % WEED SEED
GERMAN MILLET	30-LBS PER 1-ACRE	85%	1%

**SOIL AMENDMENTS:**  
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 4,000LB/ACRE GROUND AGRICULTURAL LIMESTONE IN SANDY SOILS OR 6,000LB/ACRE IN CLAY SOILS, AND 1,000 LB/ACRE 10-10-10 FERTILIZER.

**MULCH:**  
APPLY 4,000 lb/ACRE STRAW. THE GROUND SHOULD BE COMPLETELY COVERED WITH NO BARE SPOT LARGER THAN A QUARTER, THEN TACKED WITH EMULSIFIED ASPHALT. EMULSIFIED ASPHALT SHALL BE APPLIED AT A RATE OF 400 GALLONS PER ACRE.

**MAINTENANCE:**  
REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

PERMANENT SEED SCHEDULE (MAY 1 - SEPT 1)

GRASS SPECIES BLEND	PLANTING RATE	MIN. % PURE SEED	MAX. % WEED SEED
CELEBRATION BERMUDA	200-LBS PER 1-ACRE	98%	1%

- NOTES:**
- PERMANENT SEEDING FOR THIS PROJECT SHALL OCCUR BETWEEN MAY - AUGUST 1. ADJUSTED AS NECESSARY FOR ADEQUATE GROUND TEMPERATURES. GROUND TEMPERATURES SHALL BE IN THE RANGE OF 60-68 DEGREES FOR GERMINATION.
  - REFER TO SPECIFICATION SECTION 329200.
  - 80% OF PERMANENT SEEDING MUST BE ESTABLISHED PRIOR TO GRADING PERMIT CLOSEOUT

TEMPORARY & PERMANENT SEEDING SPECIFICATIONS

COMPLETE GRADING BEFORE PREPARING SEEDBEDS, AND INSTALL ALL NECESSARY EROSION CONTROL PRACTICES SUCH AS, DIKES, WATERWAYS, AND BASINS. MINIMIZE STEEP SLOPES BECAUSE THEY MAKE SEEDBED PREPARATION DIFFICULT AND INCREASE THE EROSION HAZARD. IF SOILS BECOME COMPACTED DURING GRADING, LOOSEN THEM TO A DEPTH OF 6-8 INCHES USING A RIPPER, HARROW, OR CHISEL PLOW.

**SEEDBED PREPARATIONS**

GOOD SEEDBED PREPARATION IS ESSENTIAL TO SUCCESSFUL PLANT ESTABLISHMENT. A GOOD SEEDBED IS WELL-PULVERIZED, LOOSE, AND UNIFORM. WHERE HYDROSEEDING METHODS ARE USED, THE SURFACE MAY BE LEFT WITH A MORE IRREGULAR SURFACE OF LARGE CLODS AND STONES.

- LIMING** - APPLY LIME ACCORDING TO SOIL TEST RECOMMENDATIONS. IF THE PH (ACIDITY) OF THE SOIL IS NOT KNOWN, AN APPLICATION OF GROUND AGRICULTURAL LIMESTONE AT THE RATE OF 2 TONS/ACRE ON COARSE-TEXTURED SOILS AND 3 TONS/ACRE ON FINE-TEXTURED SOILS IS USUALLY SUFFICIENT. APPLY LIMESTONE UNIFORMLY AND INCORPORATE INTO THE TOP 4-6 INCHES OF SOIL. SOILS WITH A PH OF 6 OR HIGHER NEED NOT BE LIMED.
- FERTILIZER** - BASE APPLICATION RATES ON SOIL TESTS. WHEN THESE ARE NOT POSSIBLE, APPLY A 10-10-10 GRADE FERTILIZER AT 700-1,00 LB/ACRE. BOTH FERTILIZER AND LIME SHOULD BE INCORPORATED INTO THE TOP 4-6 INCHES OF SOIL. IF A HYDRAULIC SEEDER IS USED, DO NOT MIX SEED AND FERTILIZER MORE THAN 30 MINUTES BEFORE APPLICATION.
- SURFACE ROUGHENING** - IF RECENT TILLAGE OPERATIONS HAVE RESULTED IN A LOOSE SURFACE, ADDITIONAL ROUGHENING MAY NOT BE REQUIRED, EXCEPT TO BREAK UP LARGE CLODS. IF RAINFALL CAUSES THE SURFACE TO BECOME SEALED OR CRUSTED, LOOSEN IT JUST PRIOR TO SEEDING BY DISKING, RAKING, HARROWING, OR OTHER SUITABLE METHODS. GROOVE OR FURROW SLOPES STEEPER THAN 3:1 ON THE CONTOUR BEFORE SEEDING (REFER TO THE NCDEQ EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, PRACTICE 6.03, SURFACE ROUGHENING).

**PLANT SELECTION**

- SELECT AN APPROPRIATE SPECIES OR SPECIES MIXTURE FROM TABLE 6.10A FOR SEEDING IN LATE WINTER AND EARLY SPRING, TABLE 6.10B FOR SUMMER, AND TABLE 6.10C FOR FALL.
- IN THE MOUNTAINS, DECEMBER AND JANUARY SEEDING HAVE POOR CHANCES OF SUCCESS. WHEN IT IS NECESSARY TO PLANT AT THESE TIMES, USE RECOMMENDATIONS FOR FALL AND A SECURELY TACKED MULCH.

**SEEDING**

- EVENLY APPLY SEED USING A CYCLONE SEEDER (BROADCAST), DRILL, CULTIPACKER SEEDER, OR HYDROSEEDER. USE SEEDING RATES GIVEN IN TABLES 6.10A-6.10C. BROADCAST SEEDING AND HYDROSEEDING ARE APPROPRIATE FOR STEEL SLOPES WHERE EQUIPMENT CANNOT BE DRIVEN. HAND BROADCASTING IS NOT RECOMMENDED BECAUSE OF THE DIFFICULTY IN ACHIEVING A UNIFORM DISTRIBUTION.
- SMALL GRAINS SHOULD BE PLANTED NO MORE THAN 1 INCH DEEP, AND GRASSES AND LEGUMES NO MORE THAN 1/2 INCH. BROADCAST SEED MUST BE COVERED BY RAKING OR CHAIN DRAGGING, AND THEN LIGHTLY FIRMED WITH A ROLLER OR CULTIPACKER. HYDROSEEDED MIXTURES SHOULD INCLUDE A WOOD FIBER (CELLULOSE) MULCH.

**MULCHING**

THE USE OF AN APPROPRIATE MULCH WILL HELP ENSURE ESTABLISHMENT UNDER NORMAL CONDITIONS, AND IS ESSENTIAL TO SEEDING SUCCESS UNDER HARSH SITE CONDITIONS (REFER TO THE NCDEQ EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, PRACTICE 6.14, MULCHING). APPLY 4,000 LB/ACRE STRAW. THE GROUND SHOULD BE COMPLETELY COVERED WITH NO BARE SPOT LARGER THAN A QUARTER, THEN TACKED WITH EMULSIFIED ASPHALT. EMULSIFIED ASPHALT SHALL BE APPLIED AT A RATE OF 400 GALLONS PER ACRE.

**HARSH SITE CONDITIONS INCLUDE:**

- SEEDING IN FALL FOR WINTER COVER (WOOD FIBER MULCHES ARE NOT CONSIDERED ADEQUATE FOR THIS USE).
- SLOPES STEEPER THAN 3:1,
- EXCESSIVELY HOT OR DRY WEATHER,
- ADVERSE SOILS (SHALLOW, ROCKY, OR HIGH IN CLAY OR SAND), AND
- AREAS RECEIVING CONCENTRATED FLOW.

IF THE AREA TO BE MULCHED IS SUBJECT TO CONCENTRATED WATERFLOW, AND IN CHANNELS, ANCHOR MULCH WITH NETTING (REFER TO THE NCDEQ EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, PRACTICE 6.14, MULCHING).

**TEMPORARY SEEDING MAINTENANCE**

RESEED AND MULCH AREAS WHERE SEEDING EMERGENCE IS POOR, OR WHERE EROSION OCCURS, AS SOON AS POSSIBLE. DO NOT MOW. PROTECT FROM TRAFFIC AS MUCH AS POSSIBLE.

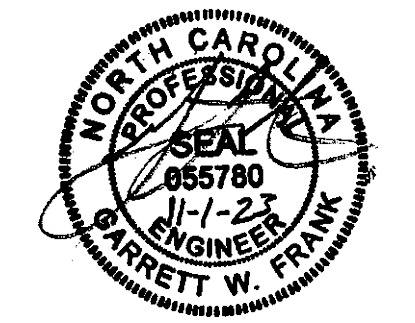
**LIME & FERTILIZER NOTES**

- CHISEL ALL CUT GRADED OR COMPACTED AREAS TO A MINIMUM DEPTH OF 6".
- DISC ALL AREAS TO RECEIVE GRASS TO A MINIMUM OF 6 INCHES, MIX AND AMEND WITH 3 INCHES OF WELL SCREENED TOPSOIL. ON-SITE TOPSOIL MAY BE USED IN PLACE OF IMPORTED TOPSOIL, IF WELL-SCREENED AND DRY PRIOR TO APPLICATION IN ACCORDANCE WITH SPECIFICATION SECTION 329000.
- REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
- APPLY AGRICULTURAL LIME, FERTILIZER, AND PHOSPHATE UNIFORMLY AS PER SPECIFICATIONS AND MIX WELL WITH SOIL.
- CONTINUE TILLAGE UNTIL A WELL-PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED TO A 6 INCHES DEPTH.
- SEED AT RATE SPECIFIED OR AS NEEDED TO ACHIEVE AND MAINTAIN A THICK HEALTHY GROUND COVERAGE.
- MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH. BEGIN THOROUGH WATERING OF GRASSSED AREAS IMMEDIATELY UPON INSTALLATION. DO NOT ALLOW GRASSSED AREAS TO BECOME EXCESSIVELY DRY.
- INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS AS NEEDED.
- IF CONFLICTS OCCUR BETWEEN WRITTEN SPECIFICATIONS AND THE DRAWINGS, THE WRITTEN SPECIFICATIONS SHALL PREVAIL.

2

TEMPORARY/PERMANENT SEEDING

N.T.S.

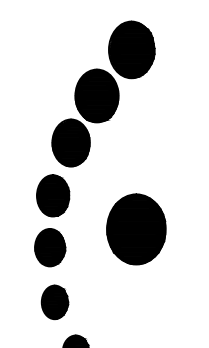


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DATE	REVISION DESCRIPTION
06/07/2023 <td>ADDRESSSED TOWN OF ROLESVILLE COMMENTS</td>	ADDRESSSED TOWN OF ROLESVILLE COMMENTS
08/07/2023 <td>ADDRESSSED TOWN OF ROLESVILLE 2ND REVIEW COMMENTS</td>	ADDRESSSED TOWN OF ROLESVILLE 2ND REVIEW COMMENTS
11/07/2023 <td>ADDRESSSED TOWN OF ROLESVILLE 3RD REVIEW COMMENTS</td>	ADDRESSSED TOWN OF ROLESVILLE 3RD REVIEW COMMENTS

DATE: 04/05/2023  
 DRAWN BY: L. BARNES  
 DESIGNED BY: G. FRANK  
 CHECKED BY: G. FRANK  
 SCALE: AS SHOWN



**TIMMONS GROUP**  
 NORTH CAROLINA LICENSE NO. C-1652  
**JONES DAIRY STORAGE FACILITY**  
 TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA  
**SITE DETAILS**

JONES DAIRY STORAGE FACILITY  
 TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

JOB NO.: 54832  
 SHEET NO.: C6.8

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**GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT**

IMPLEMENTING THE DETAILS AND SPECIFICATIONS ON THIS PLAN SHEET WILL RESULT IN THE CONSTRUCTION ACTIVITY BEING CONSIDERED COMPLIANT WITH THE GROUND STABILIZATION AND MATERIALS HANDLING SECTIONS OF THE NCG01 CONSTRUCTION GENERAL PERMIT (SECTIONS E AND F, RESPECTIVELY). THE PERMITTEE SHALL COMPLY WITH THE EROSION AND SEDIMENT CONTROL PLAN APPROVED BY THE DELEGATED AUTHORITY HAVING JURISDICTION. ALL DETAILS AND SPECIFICATIONS SHOWN ON THIS SHEET MAY NOT APPLY DEPENDING ON SITE CONDITIONS AND THE DELEGATED AUTHORITY HAVING JURISDICTION.

**SECTION E: GROUND STABILIZATION**

REQUIRED GROUND STABILIZATION TIMEFRAMES		
SITE AREA DESCRIPTION	STABILIZE WITHIN THIS MANY CALENDAR DAYS AFTER CEASING LAND DISTURBANCE	TIMEFRAME VARIATIONS
(A) PERIMETER DIKES, SWALES, DITCHES, AND PERIMETER SLOPES	7	NONE
(B) HIGH QUALITY WATER (HQW) ZONES	7	NONE
(C) SLOPES STEEPER THAN 3:1	7	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED
(D) SLOPES 3:1 TO 4:1	14	-7 DAYS FOR SLOPES > 50' IN LENGTH AND WITH SLOPES STEEPER THAN 4:1 -7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND HQW ZONES -10 DAYS FOR FALLS LAKE WATERSHED
(E) AREAS WITH SLOPES FLATTER THAN 4:1	14	-7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND HQW ZONES -10 DAYS FOR FALLS LAKE WATERSHED UNLESS THERE IS ZERO SLOPE

**NOTE:** AFTER THE PERMANENT CESSATION OF CONSTRUCTION ACTIVITIES, ANY AREAS WITH TEMPORARY GROUND STABILIZATION SHALL BE CONVERTED TO PERMANENT GROUND STABILIZATION AS SOON AS PRACTICABLE BUT IN NO CASE LONGER THAN 90 CALENDAR DAYS AFTER THE LAST LAND DISTURBING ACTIVITY. TEMPORARY GROUND STABILIZATION SHALL BE MAINTAINED IN A MANNER TO RENDER THE SURFACE STABLE AGAINST ACCELERATED EROSION UNTIL PERMANENT GROUND STABILIZATION IS ACHIEVED.

**GROUND STABILIZATION SPECIFICATION**

STABILIZE THE GROUND SUFFICIENTLY SO THAT RAIN WILL NOT DISLodge THE SOIL. USE ONE OF THE TECHNIQUES IN THE TABLE BELOW:

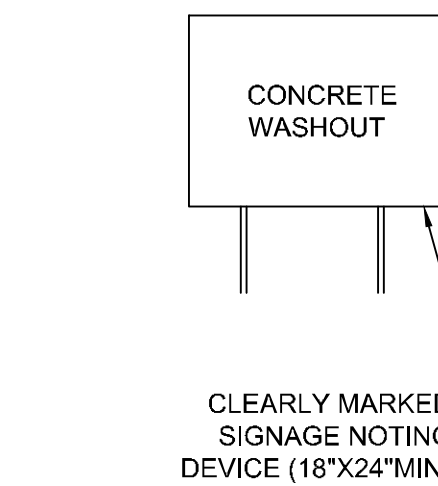
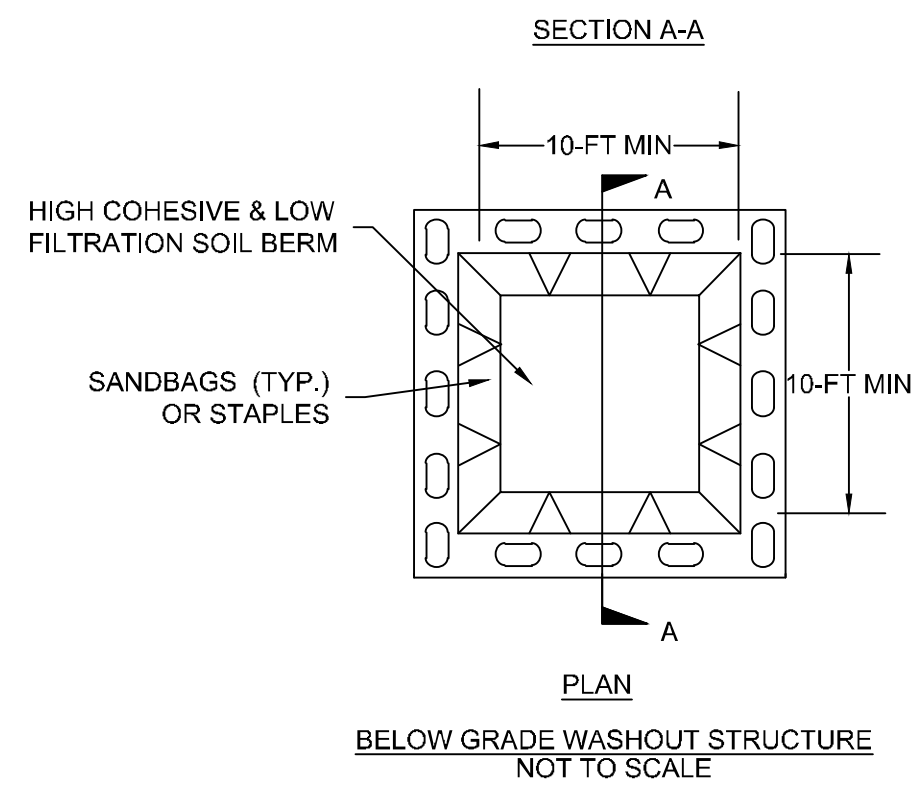
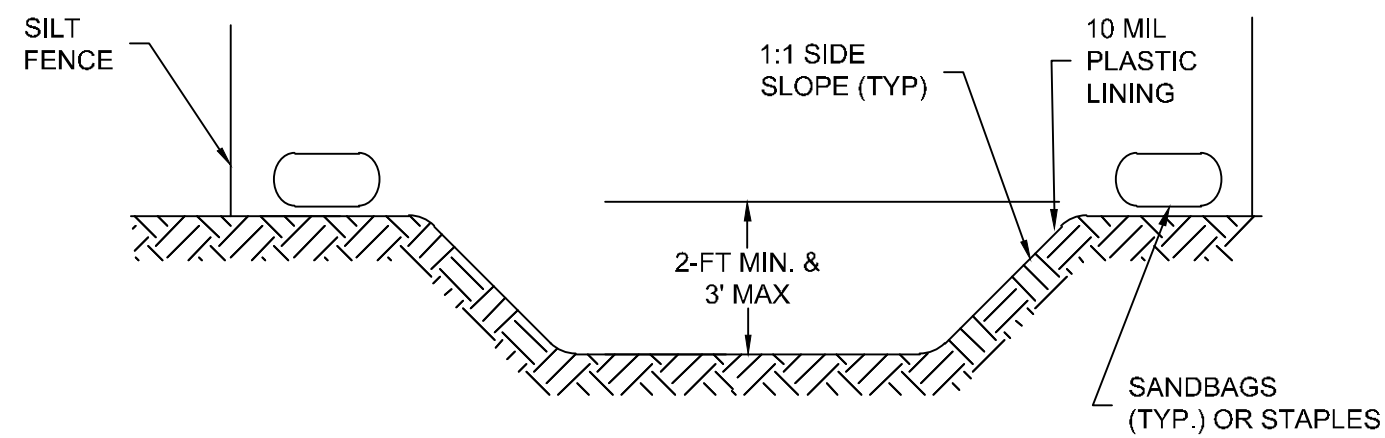
TEMPORARY STABILIZATION	PERMANENT STABILIZATION
<ul style="list-style-type: none"> <li>TEMPORARY GRASS SEED COVERED WITH STRAW OR OTHER MULCHES AND TACKIFIERS</li> <li>HYDROSEEDING</li> <li>ROLLED EROSION CONTROL PRODUCTS WITH OR WITHOUT TEMPORARY GRASS SEED</li> <li>APPROPRIATELY APPLIED STRAW OR OTHER MULCH</li> <li>PLASTIC SHEETING</li> </ul>	<ul style="list-style-type: none"> <li>PERMANENT GRASS SEED COVERED WITH STRAW OR OTHER MULCHES AND TACKIFIERS</li> <li>GEOTEXTILE FABRICS SUCH AS PERMANENT SOIL REINFORCEMENT MATTING</li> <li>HYDROSEEDING</li> <li>SHRUBS OR OTHER PERMANENT PLANTINGS COVERED WITH MULCH</li> <li>UNIFORM AND EVENLY DISTRIBUTED GROUND COVER SUFFICIENT TO RESTRAIN EROSION</li> <li>STRUCTURAL METHODS SUCH AS CONCRETE, ASPHALT OR RETAINING WALLS</li> <li>ROLLED EROSION CONTROL PRODUCTS WITH GRASS SEED</li> </ul>

**POLYACRYLAMIDES (PAMS) AND FLOCCULANTS**

- SELECT FLOCCULANTS THAT ARE APPROPRIATE FOR THE SOILS BEING EXPOSED DURING CONSTRUCTION, SELECTING FROM THE NC DWR LIST OF APPROVED PAMS/FLOCCULANTS.
- APPLY FLOCCULANTS AT OR BEFORE THE INLETS TO EROSION AND SEDIMENT CONTROL MEASURES.
- APPLY FLOCCULANTS AT THE CONCENTRATIONS SPECIFIED IN THE NC DWR LIST OF APPROVED PAMS/FLOCCULANTS AND IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- PROVIDE PONDING AREA FOR CONTAINMENT OF TREATED STORMWATER BEFORE DISCHARGING OFFSITE.
- STORE FLOCCULANTS IN LEAK-PROOF CONTAINERS THAT ARE KEPT UNDER STORM-RESISTANT COVER OR SURROUNDED BY SECONDARY CONTAINMENT STRUCTURES.

**EQUIPMENT AND VEHICLE MAINTENANCE**

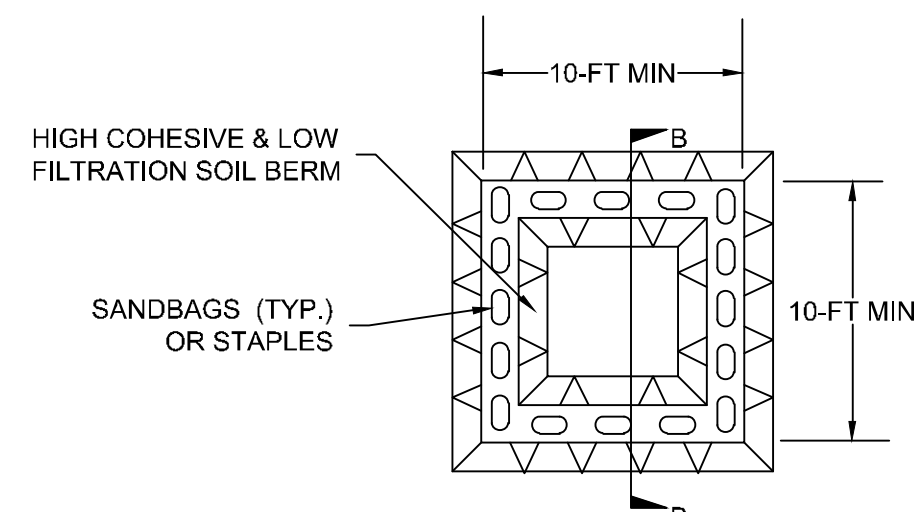
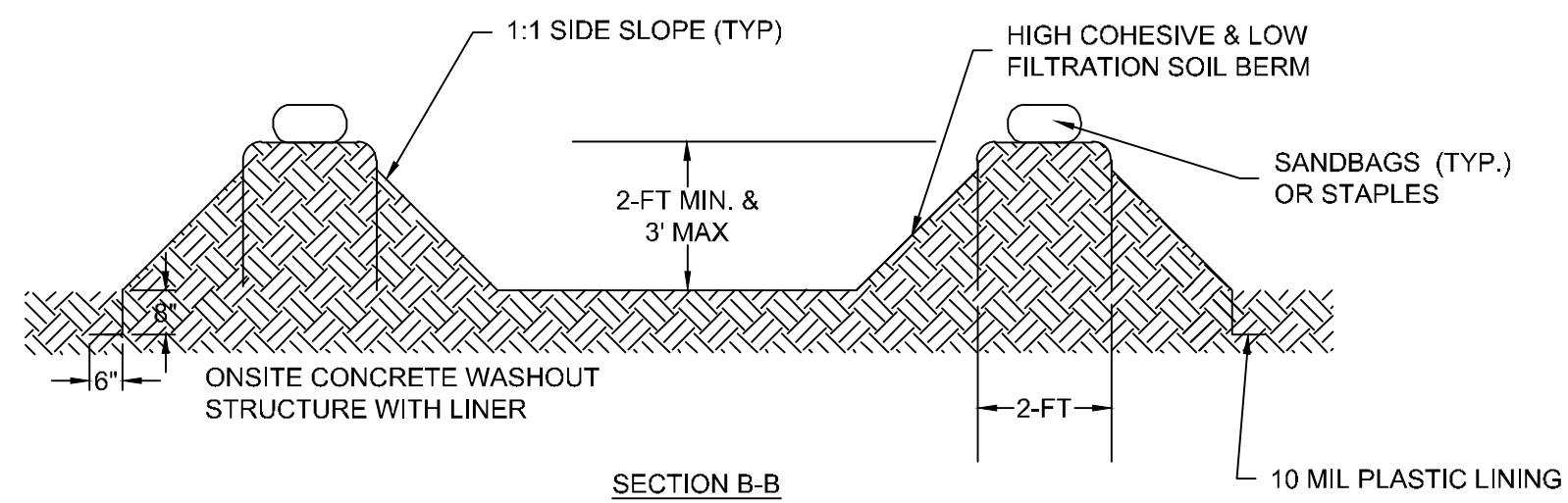
- MAINTAIN VEHICLES AND EQUIPMENT TO PREVENT DISCHARGE OF FLUIDS.
- PROVIDE DRIP PANS UNDER ANY STORED EQUIPMENT.
- IDENTIFY LEAKS AND REPAIR AS SOON AS FEASIBLE, OR REMOVE LEAKING EQUIPMENT FROM THE PROJECT.
- COLLECT ALL SPENT FLUIDS, STORE IN SEPARATE CONTAINERS AND PROPERLY DISPOSE AS HAZARDOUS WASTE (RECYCLE WHEN POSSIBLE).
- REMOVE LEAKING VEHICLES AND CONSTRUCTION EQUIPMENT FROM SERVICE UNTIL THE PROBLEM HAS BEEN CORRECTED.
- BRING USED FUELS, LUBRICANTS, COOLANTS, HYDRAULIC FLUIDS AND OTHER PETROLEUM PRODUCTS TO A RECYCLING OR DISPOSAL CENTER THAT HANDLES THESE MATERIALS.



SIGNAGE FOR EITHER WASHOUT STRUCTURE

**BELOW GROUND CONCRETE WASHOUT NOTES:**

- ACTUAL LOCATION DETERMINED IN FIELD
- THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY.
- CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.



**ABOVE GRADE WASHOUT STRUCTURE NOTES:**

- ACTUAL LOCATION DETERMINED IN FIELD
- THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
- CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

(A) CONCRETE WASHOUT AREA N.T.S.

**LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE**

- NEVER BURY OR BURN WASTE. PLACE LITTER AND DEBRIS IN APPROVED WASTE CONTAINERS.
- PROVIDE A SUFFICIENT NUMBER AND SIZE OF WASTE CONTAINERS (E.G. DUMPSTER, TRASH RECEPTACLE) ON SITE TO CONTAIN CONSTRUCTION AND DOMESTIC WASTES.
- LOCATE WASTE CONTAINERS AT LEAST 50 FEET AWAY FROM STORM DRAIN INLETS AND SURFACE WATERS UNLESS NO OTHER ALTERNATIVES ARE REASONABLY AVAILABLE.
- LOCATE WASTE CONTAINERS ON AREAS THAT DO NOT RECEIVE SUBSTANTIAL AMOUNTS OF RUNOFF FROM UPLAND AREAS AND DOES NOT DRAIN DIRECTLY TO A STORM DRAIN, STREAM OR WETLAND.
- COVER WASTE CONTAINERS AT THE END OF EACH WORKDAY AND BEFORE STORM EVENTS OR PROVIDE SECONDARY CONTAINMENT. REPAIR OR REPLACE DAMAGED WASTE CONTAINERS.
- ANCHOR ALL LIGHTWEIGHT ITEMS IN WASTE CONTAINERS DURING TIMES OF HIGH WINDS.
- EMPTY WASTE CONTAINERS AS NEEDED TO PREVENT OVERFLOW. CLEAN UP IMMEDIATELY IF CONTAINERS OVERFLOW.
- DISPOSE WASTE OFF-SITE AT AN APPROVED DISPOSAL FACILITY.
- ON BUSINESS DAYS, CLEAN UP AND DISPOSE OF WASTE IN DESIGNATED WASTE CONTAINERS.

**PAINT AND OTHER LIQUID WASTE**

- DO NOT DUMP PAINT AND OTHER LIQUID WASTE INTO STORM DRAINS, STREAMS OR WETLANDS.
- LOCATE PAINT WASHOUTS AT LEAST 50 FEET AWAY FROM STORM DRAIN INLETS AND SURFACE WATERS UNLESS NO OTHER ALTERNATIVES ARE REASONABLY AVAILABLE.
- CONTAIN LIQUID WASTES IN A CONTROLLED AREA.
- CONTAINMENT MUST BE LABELED, SIZED AND PLACED APPROPRIATELY FOR THE NEEDS OF SITE.
- PREVENT THE DISCHARGE OF SOAPS, SOLVENTS, DETERGENTS AND OTHER LIQUID WASTES FROM CONSTRUCTION SITES.

**PORTABLE TOILETS**

- INSTALL PORTABLE TOILETS ON LEVEL GROUND, AT LEAST 50 FEET AWAY FROM STORM DRAINS, STREAMS OR WETLANDS UNLESS THERE IS NO ALTERNATIVE REASONABLY AVAILABLE. IF 50 FOOT OFFSET IS NOT ATTAINABLE, PROVIDE RELOCATION OF PORTABLE TOILET BEHIND SILT FENCE OR PLACE ON A GRAVEL PAD AND SURROUND WITH SAND BAGS.
- PROVIDE STAKING OR ANCHORING OF PORTABLE TOILETS DURING PERIODS OF HIGH WINDS OR IN HIGH FOOT TRAFFIC AREAS.
- MONITOR PORTABLE TOILETS FOR LEAKING AND PROPERLY DISPOSE OF ANY LEAKED MATERIAL. UTILIZE A LICENSED SANITARY WASTE HAULER TO REMOVE LEAKING PORTABLE TOILETS AND REPLACE WITH PROPERLY OPERATING UNIT.

**EARTHEN STOCKPILE MANAGEMENT**

- SHOW STOCKPILE LOCATIONS ON PLANS. LOCATE EARTHEN-MATERIAL STOCKPILE AREAS AT LEAST 50 FEET AWAY FROM STORM DRAIN INLETS, SEDIMENT BASINS, PERIMETER SEDIMENT CONTROLS AND SURFACE WATERS UNLESS IT CAN BE SHOWN NO OTHER ALTERNATIVES ARE REASONABLY AVAILABLE.
- PROTECT STOCKPILE WITH SILT FENCE INSTALLED ALONG TOE OF SLOPE WITH A MINIMUM OFFSET OF FIVE FEET FROM THE TOE OF STOCKPILE.
- PROVIDE STABLE STONE ACCESS POINT WHEN FEASIBLE.
- STABILIZE STOCKPILE WITHIN THE TIMEFRAMES PROVIDED ON THIS SHEET AND IN ACCORDANCE WITH THE APPROVED PLAN AND ANY ADDITIONAL REQUIREMENTS. SOIL STABILIZATION IS DEFINED AS VEGETATIVE, PHYSICAL OR CHEMICAL COVERAGE TECHNIQUES THAT WILL RESTRAIN ACCELERATED EROSION ON DISTURBED SOILS FOR TEMPORARY OR PERMANENT CONTROL NEEDS.

**CONCRETE WASHOUTS**

- DO NOT DISCHARGE CONCRETE OR CEMENT SLURRY FROM THE SITE.
- DISPOSE OF, OR RECYCLE SETTLED, HARDENED CONCRETE RESIDUE IN ACCORDANCE WITH LOCAL AND STATE SOLID WASTE REGULATIONS AND AT AN APPROVED FACILITY.
- MANAGE WASHOUT FROM MORTAR MIXERS IN ACCORDANCE WITH THE ABOVE ITEM AND IN ADDITION PLACE THE MIXER AND ASSOCIATED MATERIALS ON IMPERVIOUS BARRIER AND WITHIN LOT PERIMETER SILT FENCE.
- INSTALL TEMPORARY CONCRETE WASHOUTS PER LOCAL REQUIREMENTS, WHERE APPLICABLE. IF AN ALTERNATE METHOD OR PRODUCT IS TO BE USED, CONTACT YOUR APPROVAL AUTHORITY FOR REVIEW AND APPROVAL. IF LOCAL STANDARD DETAILS ARE NOT AVAILABLE, USE ONE OF THE TWO TYPES OF TEMPORARY CONCRETE WASHOUTS PROVIDED ON THIS DETAIL.
- DO NOT USE CONCRETE WASHOUTS FOR DEWATERING OR STORING DEFECTIVE CURB OR SIDEWALK SECTIONS. STORMWATER ACCUMULATED WITHIN THE WASHOUT MAY NOT BE PUMPED INTO OR DISCHARGED TO THE STORM DRAIN SYSTEM OR RECEIVING SURFACE WATERS. LIQUID WASTE MUST BE PUMPED OUT AND REMOVED FROM PROJECT.
- LOCATE WASHOUTS AT LEAST 50 FEET FROM STORM DRAIN INLETS AND SURFACE WATERS UNLESS IT CAN BE SHOWN THAT NO OTHER ALTERNATIVES ARE REASONABLY AVAILABLE. AT A MINIMUM, INSTALL PROTECTION OF STORM DRAIN INLET(S) CLOSEST TO THE WASHOUT WHICH COULD RECEIVE SPILLS OR OVERFLOW.
- LOCATE WASHOUTS IN AN EASILY ACCESSIBLE AREA, ON LEVEL GROUND AND INSTALL A STONE ENTRANCE PAD IN FRONT OF THE WASHOUT. ADDITIONAL CONTROLS MAY BE REQUIRED BY THE APPROVING AUTHORITY.
- INSTALL AT LEAST ONE SIGN DIRECTING CONCRETE TRUCKS TO THE WASHOUT WITHIN THE PROJECT LIMITS. POST SIGNAGE ON THE WASHOUT ITSELF TO IDENTIFY THIS LOCATION.
- REMOVE LEAVINGS FROM THE WASHOUT WHEN AT APPROXIMATELY 75% CAPACITY TO LIMIT OVERFLOW EVENTS. REPLACE THE TARP, SAND BAGS OR OTHER TEMPORARY STRUCTURAL COMPONENTS WHEN NO LONGER FUNCTIONAL. WHEN UTILIZING ALTERNATIVE OR PROPRIETARY PRODUCTS, FOLLOW MANUFACTURER'S INSTRUCTIONS.
- AT THE COMPLETION OF THE CONCRETE WORK, REMOVE REMAINING LEAVINGS AND DISPOSE OF IN AN APPROVED DISPOSAL FACILITY. FILL PIT, IF APPLICABLE, AND STABILIZE ANY DISTURBANCE CAUSED BY REMOVAL OF WASHOUT.

**HERBICIDES, PESTICIDES AND RODENTICIDES**

- STORE AND APPLY HERBICIDES, PESTICIDES AND RODENTICIDES IN ACCORDANCE WITH LABEL RESTRICTIONS.
- STORE HERBICIDES, PESTICIDES AND RODENTICIDES IN THEIR ORIGINAL CONTAINERS WITH THE LABEL, WHICH LISTS DIRECTIONS FOR USE, INGREDIENTS AND FIRST AID STEPS IN CASE OF ACCIDENTAL POISONING.
- DO NOT STORE HERBICIDES, PESTICIDES AND RODENTICIDES IN AREAS WHERE FLOODING IS POSSIBLE OR WHERE THEY MAY SPILL OR LEAK INTO WELLS, STORMWATER DRAINS, GROUND WATER OR SURFACE WATER. IF A SPILL OCCURS, CLEAN AREA IMMEDIATELY.
- DO NOT STOCKPILE THESE MATERIALS ONSITE.

**HAZARDOUS AND TOXIC WASTE**

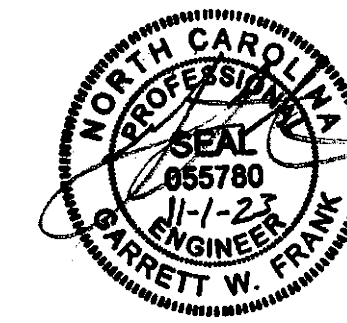
- CREATE DESIGNATED HAZARDOUS WASTE COLLECTION AREAS ON-SITE.
- PLACE HAZARDOUS WASTE CONTAINERS UNDER COVER OR IN SECONDARY CONTAINMENT.
- DO NOT STORE HAZARDOUS CHEMICALS, DRUMS OR BAGGED MATERIALS DIRECTLY ON THE GROUND.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

- CHISEL ALL CUT GRADED OR COMPACTED AREAS TO A MINIMUM DEPTH OF 6".
- DISC ALL AREAS TO RECEIVE GRASS TO A MINIMUM OF 6 INCHES. MIX AND AMEND WITH 3 INCHES OF WELL SCREENED TOPSOIL. ON-SITE TOPSOIL MAY BE USED IN PLACE OF IMPORTED TOPSOIL, IF WELL-SCREENED AND DRY PRIOR TO APPLICATION IN ACCORDANCE WITH SPECIFICATION SECTION 329000.
- REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
- APPLY AGRICULTURAL LIME, FERTILIZER, AND PHOSPHATE UNIFORMLY AS PER SPECIFICATIONS AND MIX WELL WITH SOIL.
- CONTINUE TILLAGE UNTIL A WELL-PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED TO A 6 INCHES DEPTH.
- SEED AT RATE SPECIFIED OR AS NEEDED TO ACHIEVE AND MAINTAIN A THICK HEALTHY GROUND COVERAGE.
- MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH. BEGIN THOROUGH WATERING OF GRASSED AREAS IMMEDIATELY UPON INSTALLATION. DO NOT ALLOW GRASSED AREAS TO BECOME EXCESSIVELY DRY.
- INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS AS NEEDED.
- IF CONFLICTS OCCUR BETWEEN WRITTEN SPECIFICATIONS AND THE DRAWINGS, THE WRITTEN SPECIFICATIONS SHALL PREVAIL.

LIME & FERTILIZATION SCHEDULE



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DESIGNED BY: G. FRANK  
CHECKED BY: G. FRANK  
SCALE: AS SHOWN

**TIMMONS GROUP**  
NORTH CAROLINA LICENSE NO. C-1652  
JONES DAIRY STORAGE FACILITY  
TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA  
NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

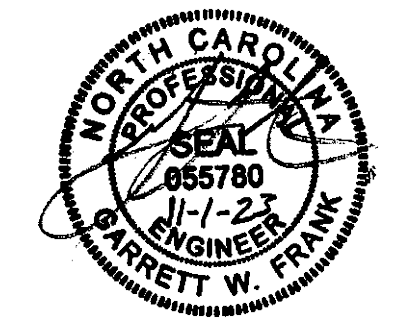
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CITY OF RALEIGH DEVELOPMENT APPROVAL: \_\_\_\_\_  
RALEIGH WATER REVIEW OFFICER: \_\_\_\_\_

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CHECKED BY: G. FRANK

SCALE: AS SHOWN

TIMMONS GROUP  
NORTH CAROLINA LICENSE NO. C-1652

JONES DAIRY STORAGE FACILITY  
TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA  
NCG01 SELF-INSPECTION, RECORDKEEPING, AND REPORTING

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**PART III  
SELF-INSPECTION, RECORDKEEPING AND REPORTING**

**SECTION A: SELF-INSPECTION**

SELF-INSPECTIONS ARE REQUIRED DURING NORMAL BUSINESS HOURS IN ACCORDANCE WITH THE TABLE BELOW. WHEN ADVERSE WEATHER OR SITE CONDITIONS WOULD CAUSE THE SAFETY OF THE INSPECTION PERSONNEL TO BE IN JEOPARDY, THE INSPECTION MAY BE DELAYED UNTIL THE NEXT BUSINESS DAY ON WHICH IT IS SAFE TO PERFORM THE INSPECTION. IN ADDITION, WHEN A STORM EVENT OF EQUAL TO OR GREATER THAN 1.0 INCH OCCURS OUTSIDE OF NORMAL BUSINESS HOURS, THE SELF-INSPECTION SHALL BE PERFORMED UPON THE COMMENCEMENT OF THE NEXT BUSINESS DAY. ANY TIME WHEN INSPECTIONS WERE DELAYED SHALL BE NOTED IN THE INSPECTION RECORD.

REQUIRED GROUND STABILIZATION TIMEFRAMES		
INSPECT	FREQUENCY (DURING NORMAL BUSINESS HOURS)	TIMEFRAME VARIATIONS
(1) RAIN GAUGE MAINTAINED IN GOOD WORKING ORDER	DAILY	DAILY RAINFALL AMOUNTS. IF NO DAILY RAIN GAUGE OBSERVATIONS ARE MADE DURING WEEKEND OR HOLIDAY PERIODS, AND NO INDIVIDUAL-DAY RAINFALL INFORMATION IS AVAILABLE, RECORD THE CUMULATIVE RAIN MEASUREMENT FOR THOSE UNATTENDED DAYS (AND THIS WILL DETERMINE IF A SITE INSPECTION IS NEEDED). DAYS ON WHICH NO RAINFALL OCCURRED SHALL BE RECORDED AS "ZERO." THE PERMITTEE MAY USE ANOTHER RAIN-MONITORING DEVICE APPROVED BY THE DIVISION.
(2) E&SC MEASURES	AT LEAST ONCE PER 7 CALENDAR DAYS AND WITHIN 24 HOURS OF A RAIN EVENT ≥ 1.0 INCH IN 24 HOURS	1. IDENTIFICATION OF THE MEASURES INSPECTED, 2. DATE AND TIME OF THE INSPECTION, 3. NAME OF THE PERSON PERFORMING THE INSPECTION 4. INDICATION OF WEATHER THE MEASURES WERE OPERATING PROPERLY 5. DESCRIPTION OF MAINTENANCE NEEDS FOR THE MEASURE 6. DESCRIPTION, EVIDENCE, AND DATE OF CORRECTIVE ACTIONS TAKEN.
(3) STORMWATER DISCHARGE OUTFALLS (SDOS)	AT LEAST ONCE PER 7 CALENDAR DAYS AND WITHIN 24 HOURS OF A RAIN EVENT ≥ 1.0 INCH IN 24 HOURS	1. IDENTIFICATION OF THE MEASURES INSPECTED, 2. DATE AND TIME OF THE INSPECTION, 3. NAME OF THE PERSON PERFORMING THE INSPECTION 4. EVIDENCE OF INDICATORS OF STORMWATER POLLUTION SUCH AS OIL SHEEN, FLOATING OR SUSPENDED SOLIDS OR DISCOLORATION. 5. INDICATION OF VISIBLE SEDIMENT LEAVING THE SITE 6. DESCRIPTION, EVIDENCE, AND DATE OF CORRECTIVE ACTIONS TAKEN.
(4) PERIMETER OF SITE	AT LEAST ONCE PER 7 CALENDAR DAYS AND WITHIN 24 HOURS OF A RAIN EVENT ≥ 1.0 INCH IN 24 HOURS	IF VISIBLE SEDIMENTATION IS FOUND OUTSIDE SITE LIMITS, THEN A RECORD OF THE FOLLOWING SHALL BE MADE: 1. ACTIONS TAKEN TO CLEAN UP OR STABILIZE THE SEDIMENT THAT HAS LEFT THE SITE LIMITS 2. DESCRIPTION, EVIDENCE, AND DATE OF CORRECTIVE ACTIONS TAKEN, AND 3. AN EXPLANATION AS TO THE ACTIONS TAKEN TO CONTROL FUTURE RELEASES.
(5) STREAMS OR WETLANDS ON SITE OR OFFSITE (WHERE ACCESSIBLE)	AT LEAST ONCE PER 7 CALENDAR DAYS AND WITHIN 24 HOURS OF A RAIN EVENT ≥ 1.0 INCH IN 24 HOURS	IF THE STREAM OR WETLAND HAS INCREASED VISIBLE SEDIMENTATION OR A STREAM HAS VISIBLE INCREASED TURBIDITY FROM THE CONSTRUCTION ACTIVITY, THEN A RECORD OF THE FOLLOWING SHALL BE MADE: 1. DESCRIPTION, EVIDENCE AND DATE OF CORRECTIVE ACTIONS TAKEN, AND 2. RECORDS OF THE REQUIRED REPORTS TO THE APPROPRIATE DIVISION REGIONAL OFFICE PER PART III, SECTION C, ITEM (2)(A) OF THIS PERMIT.
(6) GROUND STABILIZATION MEASURES	AFTER EACH PHASE OF GRADING	1. THE PHASE OF GRADING (INSTALLATION OF PERIMETER E&SC MEASURES, CLEARING AND GRUBBING, INSTALLATION OF STORM DRAINAGE FACILITIES, COMPLETION OF ALL LAND-DISTURBING ACTIVITY, CONSTRUCTION OR REDEVELOPMENT, PERMANENT GROUND COVER). 2. DOCUMENTATION THAT THE REQUIRED GROUND STABILIZATION MEASURES HAVE BEEN PROVIDED WITHIN THE REQUIRED TIMEFRAME OR AN ASSURANCE THAT THEY WILL BE PROVIDED AS SOON AS POSSIBLE

NOTE: THE RAIN INSPECTION RESETS THE REQUIRED 7 CALENDAR DAY INSPECTION REQUIREMENT.

**PART III  
SELF-INSPECTION, RECORDKEEPING AND REPORTING**

**SECTION B: RECORDKEEPING**

**1. E&SC PLAN DOCUMENTATION**  
THE APPROVED E&SC PLAN AS WELL AS ANY APPROVED DEVIATION SHALL BE KEPT ON THE SITE. THE APPROVED E&SC PLAN MUST BE KEPT UP-TO-DATE THROUGHOUT THE COVERAGE UNDER THIS PERMIT. THE FOLLOWING ITEMS PERTAINING TO THE E&SC PLAN SHALL BE KEPT ON SITE AND AVAILABLE FOR INSPECTION AT ALL TIMES DURING NORMAL BUSINESS HOURS.

OCCURRENCE	DOCUMENTATION REQUIREMENTS
(A) EACH E&SC MEASURE HAS BEEN INSTALLED AND DOES NOT SIGNIFICANTLY DEVIATE FROM THE LOCATIONS, DIMENSIONS, AND RELATIVE ELEVATIONS SHOWN ON THE APPROVED E&SC PLAN.	INITIAL AND DATE EACH E&SC MEASURE ON A COPY OF THE APPROVED E&SC PLAN OR COMPLETE, DATE AND SIGN AN INSPECTION REPORT THAT LISTS EACH E&SC MEASURE SHOWN ON THE APPROVED E&SC PLAN. THIS DOCUMENTATION IS REQUIRED UPON THE INITIAL INSTALLATION OF THE E&SC MEASURES OR IF THE E&SC MEASURES ARE MODIFIED AFTER INITIAL INSTALLATION.
(B) A PHASE OF GRADING HAS BEEN COMPLETED	INITIAL AND DATE A COPY OF THE APPROVED E&SC PLAN OR COMPLETE, DATE AND SIGN AN INSPECTION REPORT TO INDICATE COMPLETION OF THE CONSTRUCTION PHASE
(C) GROUND COVER IS LOCATED AND INSTALLED IN ACCORDANCE WITH THE APPROVED E&SC PLAN.	INITIAL AND DATE A COPY OF THE APPROVED E&SC PLAN OR COMPLETE, DATE AND SIGN AN INSPECTION REPORT TO INDICATE COMPLIANCE WITH APPROVED GROUND COVER SPECIFICATIONS
(D) THE MAINTENANCE AND REPAIR REQUIREMENTS FOR ALL E&SC MEASURES HAVE BEEN PERFORMED	COMPLETE, DATE AND SIGN AN INSPECTION REPORT
(E) CORRECTIVE ACTIONS HAVE BEEN TAKEN TO E&SC MEASURES	INITIAL AND DATE A COPY OF THE APPROVED E&SC PLAN OR COMPLETE, DATE AND SIGN AN INSPECTION REPORT TO INDICATE THE COMPLETION OF THE CORRECTIVE ACTION

**2. ADDITIONAL DOCUMENTATION TO BE KEPT ON SITE**  
IN ADDITION TO THE E&SC PLAN DOCUMENTS ABOVE, THE FOLLOWING ITEMS SHALL BE KEPT ON THE SITE AND AVAILABLE FOR INSPECTORS AT ALL TIMES DURING NORMAL BUSINESS HOURS, UNLESS THE DIVISION PROVIDES A SITE-SPECIFIC EXEMPTION BASED ON UNIQUE SITE CONDITIONS THAT MAKE THIS REQUIREMENT NOT PRACTICAL:

- (a) THIS GENERAL PERMIT AS WELL AS THE CERTIFICATE OF COVERAGE, AFTER IT IS RECEIVED.
- (b) RECORDS OF INSPECTIONS MADE DURING THE PREVIOUS TWELVE MONTHS. THE PERMITTEE SHALL RECORD THE REQUIRED OBSERVATIONS ON THE INSPECTION RECORD FORM PROVIDED BY THE DIVISION OR A SIMILAR INSPECTION FORM THAT INCLUDES ALL THE REQUIRED ELEMENTS. USE OF ELECTRONICALLY-AVAILABLE RECORDS IN LIEU OF THE REQUIRED PAPER COPIES WILL BE ALLOWED IF SHOWN TO PROVIDE EQUAL ACCESS AND UTILITY AS THE HARD-COPY RECORDS.

**3. DOCUMENTATION TO BE RETAINED FOR THREE YEARS**  
ALL DATA USED TO COMPLETE THE E-NOI AND ALL INSPECTION RECORDS SHALL BE MAINTAINED FOR A PERIOD OF THREE YEARS AFTER PROJECT COMPLETION AND MADE AVAILABLE UPON REQUEST. [40 CFR 122.41]

**PART III  
SELF-INSPECTION, RECORDKEEPING AND REPORTING**

**SECTION C: REPORTING**

**1. OCCURRENCES THAT MUST BE REPORTED**

- PERMITTEES SHALL REPORT THE FOLLOWING OCCURRENCES:
- (a) VISIBLE SEDIMENT DEPOSITION IN A STREAM OR WETLAND.
  - (b) OIL SPILLS IF:
    - THEY ARE 25 GALLONS OR MORE,
    - THEY ARE LESS THAN 25 GALLONS BUT CANNOT BE CLEANED UP WITHIN 24 HOURS,
    - THEY CAUSE SHEEN ON SURFACE WATERS (REGARDLESS OF VOLUME), OR
    - THEY ARE WITHIN 100 FEET OF SURFACE WATERS (REGARDLESS OF VOLUME).
  - (c) RELEASES OF HAZARDOUS SUBSTANCES IN EXCESS OF REPORTABLE QUANTITIES UNDER SECTION 311 OF THE CLEAN WATER ACT (REF: 40 CFR 110.3 AND 40 CFR 117.3) OR SECTION 102 OF CERCLA (REF: 40 CFR 302.4) OR G.S. 143-215.85.
  - (d) ANTICIPATED BYPASSES AND UNANTICIPATED BYPASSES.
  - (e) NONCOMPLIANCE WITH THE CONDITIONS OF THIS PERMIT THAT MAY ENDANGER HEALTH OR THE ENVIRONMENT.

**2. REPORTING TIMEFRAMES AND OTHER REQUIREMENTS**

AFTER A PERMITTEE BECOMES AWARE OF AN OCCURRENCE THAT MUST BE REPORTED, HE SHALL CONTACT THE APPROPRIATE DIVISION REGIONAL OFFICE WITHIN THE TIMEFRAMES AND IN ACCORDANCE WITH THE OTHER REQUIREMENTS LISTED BELOW. OCCURRENCES OUTSIDE NORMAL BUSINESS HOURS MAY ALSO BE REPORTED TO THE DEPARTMENT'S ENVIRONMENTAL EMERGENCY CENTER PERSONNEL AT (800) 858-0368.

OCCURRENCE	REPORTING TIMEFRAMES (AFTER DISCOVERY) AND OTHER REQUIREMENTS
(A) VISIBLE SEDIMENT DEPOSITION IN A STREAM OR WETLAND	<ul style="list-style-type: none"><li>• WITHIN 24 HOURS, AN ORAL OR ELECTRONIC NOTIFICATION</li><li>• WITHIN 7 CALENDAR DAYS, A REPORT THAT CONTAINS A DESCRIPTION OF THE SEDIMENT AND ACTIONS TAKEN TO ADDRESS THE CAUSE OF THE DEPOSITION. DIVISION STAFF MAY WAIVE THE REQUIREMENT FOR A WRITTEN REPORT ON A CASE-BY-CASE BASIS.</li><li>• IF THE STREAM IS NAMED ON THE NC 303(D) LIST AS IMPAIRED FOR SEDIMENT RELATED CAUSES, THE PERMITTEE MAY BE REQUIRED TO PERFORM ADDITIONAL MONITORING, INSPECTIONS, OR APPLY MORE STRINGENT PRACTICES IF STAFF DETERMINE THAT ADDITIONAL REQUIREMENTS ARE NEEDED TO ASSURE COMPLIANCE WITH THE FEDERAL OR STATE IMPAIRED-WATERS CONDITIONS</li></ul>
(B) OIL SPILLS AND RELEASE OF HAZARDOUS SUBSTANCES PER ITEM 1 (B)-(C) ABOVE	<ul style="list-style-type: none"><li>• WITHIN 24 HOURS, AN ORAL OR ELECTRONIC NOTIFICATION. THE NOTIFICATION SHALL INCLUDE INFORMATION ABOUT THE DATE, TIME, NATURE, VOLUME, AND LOCATION OF THE SPILL OR RELEASE</li></ul>
(C) ANTICIPATED BYPASSES [40 CFR 122.41(M)(3)]	<ul style="list-style-type: none"><li>• A REPORT AT LEAST TEN DAYS BEFORE THE DATE OF THE BYPASS, IF POSSIBLE. THE REPORT SHALL INCLUDE AN EVALUATION OF THE ANTICIPATED QUALITY AND EFFECT OF THE BYPASS</li></ul>
(D) UNANTICIPATED BYPASSES [40 CFR 122.41(I)(3)]	<ul style="list-style-type: none"><li>• WITHIN 24 HOURS, AN ORAL OR ELECTRONIC NOTIFICATION</li><li>• WITHIN 7 CALENDAR DAYS, A REPORT THAT INCLUDES AN EVALUATION OF THE QUALITY AND EFFECT OF THE BYPASS</li></ul>
(E) NONCOMPLIANCE WITH THE CONDITIONS OF THIS PERMIT THAT MAY ENDANGER HEALTH OR THE ENVIRONMENT [40 CFR 122.41(I)(7)]	<ul style="list-style-type: none"><li>• WITHIN 24 HOURS, AN ORAL OR ELECTRONIC NOTIFICATION</li><li>• WITHIN 7 CALENDAR DAYS, A REPORT THAT CONTAINS A DESCRIPTION OF THE NONCOMPLIANCE, AND ITS CAUSES; THE PERIOD OF NONCOMPLIANCE, INCLUDING EXACT DATES AND TIMES, AND IF THE NONCOMPLIANCE HAS NOT BEEN CORRECTED, THE ANTICIPATED TIME NONCOMPLIANCE IS EXPECTED TO CONTINUE; AND STEPS TAKEN OR PLANNED TO REDUCE, ELIMINATE, AND PREVENT REOCCURRENCE OF THE NONCOMPLIANCE. [40 CFR 122.41(I)(6)].</li><li>• DIVISION STAFF MAY WAIVE THE REQUIREMENT FOR A WRITTEN REPORT ON A CASE BY CASE BASIS</li></ul>

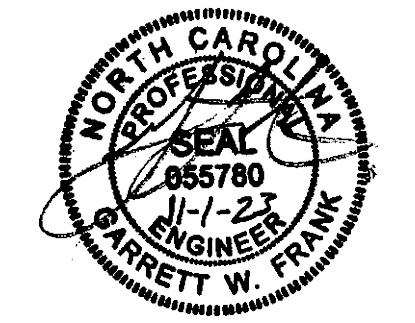
**PART II, SECTION G, ITEM (4)  
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT**

SEDIMENT BASINS AND TRAPS THAT RECEIVE RUNOFF FROM DRAINAGE AREAS OF ONE ACRE OR MORE SHALL USE OUTLET STRUCTURES THAT WITHDRAW WATER FROM THE SURFACE WHEN THESE DEVICES NEED TO BE DRAWN DOWN FOR MAINTENANCE OR CLOSE OUT UNLESS THIS IS INFEASIBLE. THE CIRCUMSTANCES IN WHICH IT IS NOT FEASIBLE TO WITHDRAW WATER FROM THE SURFACE SHALL BE RARE (FOR EXAMPLE, TIMES WITH EXTENDED COLD WEATHER). NON-SURFACE WITHDRAWALS FROM SEDIMENT BASINS SHALL BE ALLOWED ONLY WHEN ALL OF THE FOLLOWING CRITERIA HAVE BEEN MET:

- (a) THE E&SC PLAN AUTHORITY HAS BEEN PROVIDED WITH DOCUMENTATION OF THE NON-SURFACE WITHDRAWAL AND THE SPECIFIC TIME PERIODS OR CONDITIONS IN WHICH IT WILL OCCUR. THE NON-SURFACE WITHDRAWAL SHALL NOT COMMENCE UNTIL THE E&SC PLAN AUTHORITY HAS APPROVED THESE ITEMS.
- (b) THE NON-SURFACE WITHDRAWAL HAS BEEN REPORTED AS AN ANTICIPATED BYPASS IN ACCORDANCE WITH PART III, SECTION C, ITEM (2)(C) AND (D) OF THIS PERMIT.
- (c) DEWATERING DISCHARGES ARE TREATED WITH CONTROLS TO MINIMIZE DISCHARGES OF POLLUTANTS FROM STORMWATER THAT IS REMOVED FROM THE SEDIMENT BASIN. EXAMPLES OF APPROPRIATE CONTROLS INCLUDE PROPERLY SITED, DESIGNED AND MAINTAINED DEWATERING TANKS, WEIR TANKS, AND FILTRATION SYSTEMS.
- (d) VEGETATED, UPLAND AREAS OF THE SITES OR A PROPERLY DESIGNED STONE PAD IS USED TO THE EXTENT FEASIBLE AT THE OUTLET OF THE DEWATERING TREATMENT DEVICES DESCRIBED IN ITEM (C) ABOVE.
- (e) VELOCITY DISSIPATION DEVICES SUCH AS CHECK DAMS, SEDIMENT TRAPS, AND RIPRAP ARE PROVIDED AT THE DISCHARGE POINTS OF ALL DEWATERING DEVICES, AND
- (f) SEDIMENT REMOVED FROM THE DEWATERING TREATMENT DEVICES DESCRIBED IN ITEM (C) ABOVE IS DISPOSED OF IN A MANNER THAT DOES NOT CAUSE DEPOSITION OF SEDIMENT INTO WATERS OF THE UNITED STATES.

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION  
ELECTRONIC APPROVAL: THIS APPROVAL IS 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.  
CITY OF RALEIGH DEVELOPMENT APPROVAL: RALEIGH WATER REVIEW OFFICER





THIS DRAWING PREPARED AT THE  
**RALEIGH OFFICE**  
 5410 Trinity Road, Suite 102 | Raleigh, NC 27607  
 TEL: 919.866.4951 FAX: 919.853.8124 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.

DATE: 04/05/2023  
 DRAWN BY: L. BARNES  
 DESIGNED BY: G. FRANK  
 CHECKED BY: G. FRANK  
 SCALE: AS SHOWN

# TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

## JONES DAIRY STORAGE FACILITY

TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

### ROAD WIDENING PLAN - DEMO, SITE AND SIGNAGE & STRIPING PLANS

JOB NO. 54832  
 SHEET NO. C7.0

- #### DEMOLITION KEY NOTES
- A REMOVE ASPHALT PAVEMENT AND STONE BASE
  - B REMOVE TREE CLEARING
  - C 50-FT MILL TAPER FROM 0" - 1.5" (SEE C7.0)
  - D SAW CUT AND REMOVE CONCRETE AT NEAREST JOINT.
  - E REMOVE AND REPLACE EXISTING CULVERT
  - F RELOCATE EXISTING MAILBOX

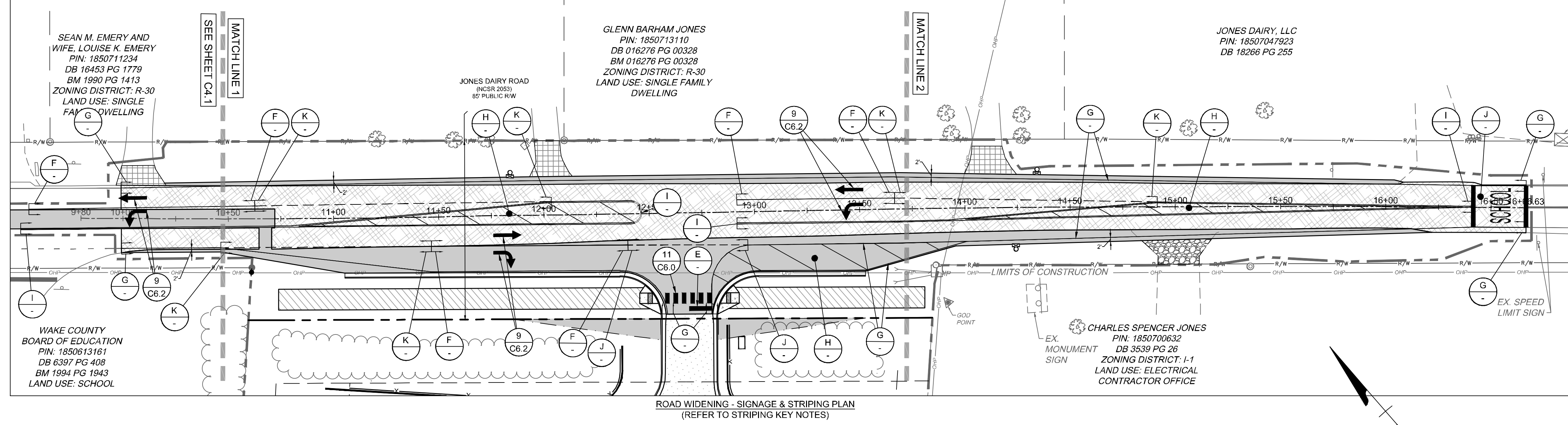
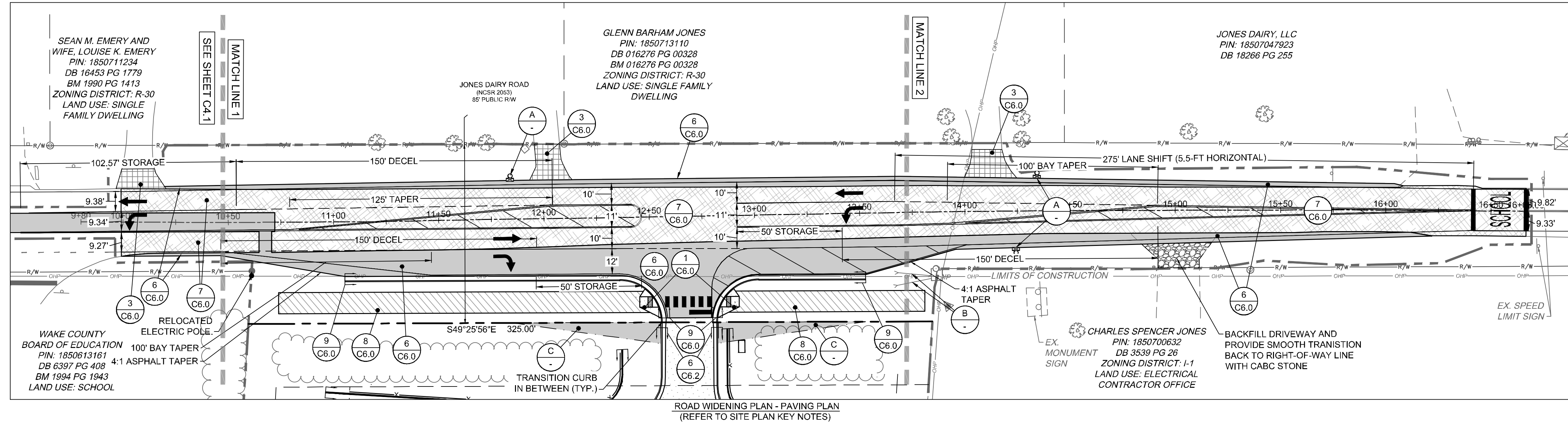
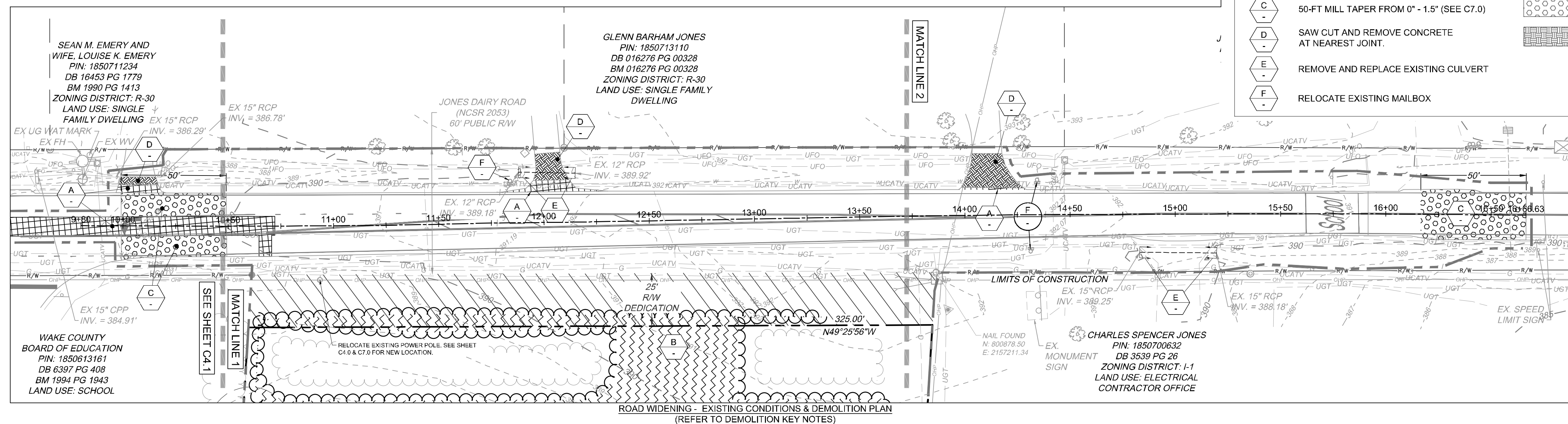
- #### SITE LAYOUT NOTES
1. ALL CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE ROLESVILLE, WAKE COUNTY, NCDOT AND OSHA STANDARDS AND SPECIFICATIONS.
  2. ALL DIMENSIONS ARE TO FACE OF CURB, EDGE OF PAVEMENT, BUILDING WALL FACE OR PROPERTY LINE, UNLESS OTHERWISE NOTED.
  3. ALL RADII ARE DIMENSIONED FROM BACK OF CURB. IF NOT STATED, RADIUS DIMENSION IS 5'.
  4. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, UTILITIES AND GRADES PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO COMMENCING ANY RELATED CONSTRUCTION.
  5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OFF-SITE DISPOSAL OF ALL WASTE MATERIALS GENERATED DURING CONSTRUCTION AND FOR OBTAINING ALL APPLICABLE PERMITS FOR OFF-SITE STOCKPILES AND/OR WASTE AREAS.
  6. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES DURING CONSTRUCTION AND SHALL MAKE REPAIRS AT NO EXPENSE TO THE OWNER.
  7. AT LEAST 72 HOURS PRIOR TO CONSTRUCTION OR EXCAVATION THE CONTRACTOR SHALL NOTIFY "NORTH CAROLINA ONE CALL" (811) OR (1-800-632-4949) TO HAVE EXISTING UTILITIES LOCATED. ALL PRIVATE UTILITIES SHALL BE LOCATED AS NEEDED BY A PRIVATE UTILITY LOCATE COMPANY EMPLOYED BY THE CONTRACTOR.
  8. ALL CURB AND GUTTER OFFSITE SHALL BE 30" WIDE UNLESS NOTED OTHERWISE.
  9. ALL DISTURBED CURB & GUTTER AND ASPHALT SHALL BE REPLACED PER PROJECT DETAILS AND NCDOT STANDARDS AND SPECIFICATIONS.
  10. RAISE ALL STRUCTURES AT NO ADDITIONAL COST TO THE OWNER SO THAT THE TOP OF THE STRUCTURE EQUALS THE FINISH GRADE OF THE NEW ASPHALT.
  11. COORDINATE THE PROJECT SCHEDULE WITH THE CIVIL ENGINEER AND OWNER. ANY UTILITY INTERRUPTIONS SHALL BE COORDINATED WITH THE OWNER AT LEAST 72 HOURS PRIOR TO THE INTERRUPTION.
  12. PROVIDE A SMOOTH TRANSITION BETWEEN NEW ASPHALT AND EXISTING ASPHALT SURFACES.
  13. ALL SIDEWALKS ARE TO HAVE NO MORE THAN A 1:20 (5.0%) SLOPE FOR THE LENGTH OF THE SIDEWALK AND NO MORE THAN A 1:50 (2.0%) SLOPE FOR THE WIDTH OF THE SIDEWALK. NOTIFY ENGINEER IF THIS CANNOT BE ACHIEVED.

- #### SITE PLAN KEY NOTES
- 1 ACCESSIBLE CURB RAMP
  - 2 STANDARD DUTY CONCRETE PAVEMENT
  - 3 HEAVY DUTY CONCRETE PAVEMENT
  - 4 STANDARD DUTY ASPHALT PAVEMENT
  - 5 LIGHT DUTY ASPHALT PAVEMENT
  - 6 NCDOT ASPHALT (FULL DEPTH)
  - 7 NCDOT OVERLAY
  - 8 ASPHALT MULTI-USE PATH
  - 9 NCDOT 30" CONCRETE CURB & GUTTER
  - 10 CURB ENDING TAPER
  - 11 24" CONCRETE CURB & GUTTER
  - A RELOCATED MAILBOX
  - B RELOCATE OR PROVIDE TURN DOWN GUY WIRE BAR
  - C 10-FT X 70-FT SIGHT TRIANGLE
  - D 1.5" MILL & LAP JOINT (1.5" S-9.5B)

- #### TRAFFIC CONTROL NOTES
1. ALL SITE SIGNAGE SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND NCDOT STANDARDS.
  2. ALL PAVEMENT MARKINGS WITHIN RIGHT-OF-WAY SHALL BE THERMOPLASTIC.
  3. ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH NCDOT STANDARDS AND THE PROJECT SPECIFICATIONS, WHICHEVER IS MORE STRINGENT.
  4. ALL SIGNAGE SHALL HAVE HIGH INTENSITY PRISMATIC SHEETING.
  5. SIGNS SHALL BE FABRICATED FROM ALUMINUM ALLOY SHEETS.
  6. ALL MOUNTING HARDWARE SHALL BE GALVANIZED.
  7. "VAPS" ON PLANS DENOTES VAN ACCESSIBLE PARKING SIGN. INSTALL R7-8A, R7-8D, & R7-8P.
  8. "APS" ON PLANS DENOTES ACCESSIBLE PARKING SIGN. INSTALL R7-8A & R7-8D ONLY.

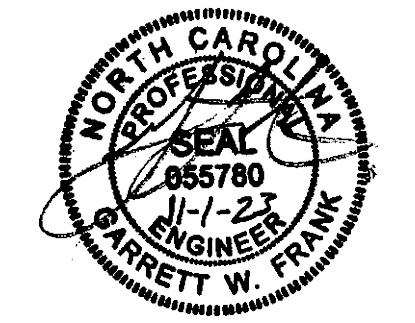
#### STRIPING KEY NOTES

	NCDOT STD.	WIDTH	COLOR
11 C6.0	HIGH VISIBILITY CROSSWALK MARKINGS	-	WHITE
9 C6.2	TRAFFIC ARROWS	1205.08	WHITE
E	STOP BAR	1205.01	24-IN WHITE
F	LANE LINE	1205.1	4-IN WHITE
G	EDGE LINE	1205.1	4-IN WHITE
H	DIAGONAL LINES (2:1 SLOPE 45-FT SPACING)	1205.1	4-IN YELLOW
I	DOUBLE YELLOW CENTER LINE	1205.1	4-IN (EA) YELLOW
J	2'-6"/SP MINI SKIP LINE	1205.1	4-IN WHITE
K	3'-9"/SP MINI SKIP LINE	1205.1	4-IN WHITE
L	MULTI-LANE WIDTH "SCHOOL"	1205.8	WHITE



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**GRADING & DRAINAGE NOTES**

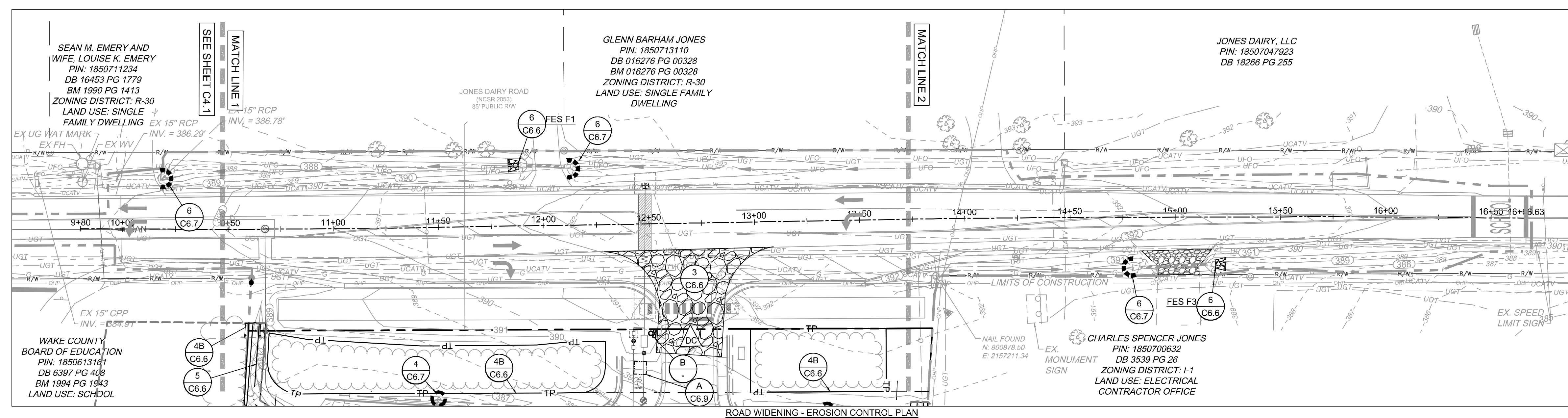
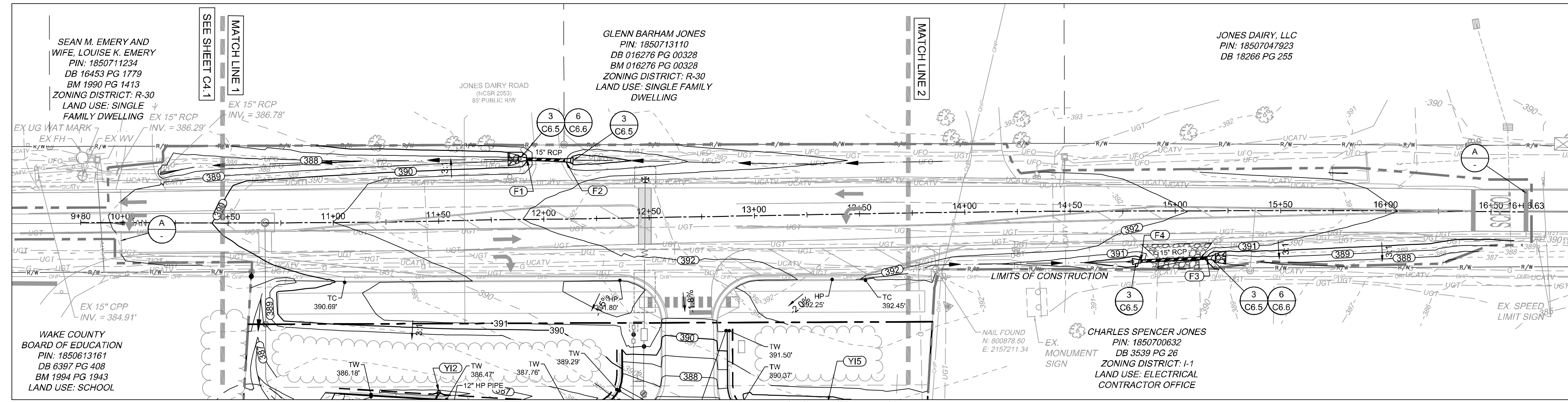
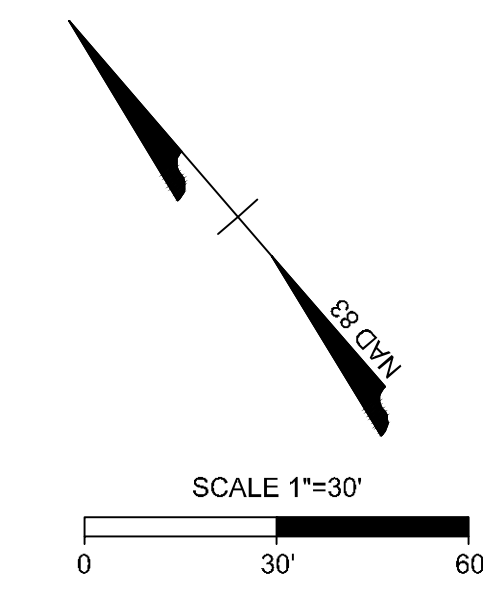
- ALL CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE ROLESVILLE, WAKE COUNTY, NCDOT AND OSHA STANDARDS AND SPECIFICATIONS.
- COORDINATE THE PROJECT SCHEDULE WITH THE OWNER, AND ADJACENT USERS OF THE PROPERTY. MAINTAIN TRAFFIC FLOW AND DO NOT INTERRUPT UTILITIES AROUND THE SITE. DO NOT DISTURB OPERATIONS OF ADJACENT SITES AND FACILITIES AND/OR THEIR OWNER'S ONGOING OPERATIONS.
- ALL EXISTING VAULTS, MANHOLES, STORM DRAIN STRUCTURES, VALVE BOXES, CLEANOUTS, ETC. SHALL BE ADJUSTED AS NEEDED TO MATCH FINISHED GRADE.
- ALL BACKFILL, COMPACTION, SOILS TESTING, ETC. SHALL BE PERFORMED BY THE OWNER'S INDEPENDENT TESTING LABORATORY.
- ALL SPOT ELEVATIONS INDICATED ARE AT TOP OF CURB UNLESS NOTED OTHERWISE.
- SPOT GRADE ABBREVIATIONS:
  - TC: TOP OF CURB
  - EP: EDGE OF PAVEMENT
  - HP: HIGH POINT
  - SWK: SIDEWALK
  - FFE: FINISHED FLOOR ELEVATION
  - TW: TOP OF WALL
  - BW: BOTTOM OF WALL
  - FL: FLOW LINE
  - GND: GROUND
  - EX GND: EXISTING GROUND
- SPOT ELEVATIONS ARE GIVEN AT THE MAJORITY OF THE MAJOR BREAK POINTS BUT IT SHOULD NOT BE ASSUMED THAT ALL NECESSARY SPOT ELEVATIONS ARE SHOWN. DUE TO SPACE LIMITATIONS, THERE MAY BE OTHER CRITICAL SPOTS NOT LABELED THAT SHOULD BE TAKEN INTO CONSIDERATION. THE CONTRACTOR SHALL REVIEW THE GRADING PLAN IN DETAIL AND SHALL ENSURE THAT ALL CRITICAL GRADE POINTS ARE STAKED AND FOLLOWED TO PROVIDE POSITIVE DRAINAGE.
- ALL ELEVATIONS ARE BASED ON NC GRID NORTH (NAD 83 2011).
- THE CONTRACTOR SHALL USE NO ONE CALL (811) TO LOCATE ALL UNDERGROUND UTILITIES. PRIVATE UTILITIES SHALL BE LOCATED BY A PRIVATE LOCATE SERVICE AT THE EXPENSE OF THE CONTRACTOR.
- INSTALL ALL STORM SEWERS TO PROVIDE REQUIRED CLEARANCES TO CROSSING UTILITIES AS INDICATED IN THE DRAWINGS AND SPECIFICATIONS.
- PROVIDE HALF-BENCH CONCRETE INLET SHAPING FOR ALL CONCRETE STORM SEWER STRUCTURES.
- ALL ROOF DRAINS FROM BUILDING 'A' SHALL BE 8" PVC (SCH 40) @ 1.04% MIN. SLOPE UNLESS INDICATED OTHERWISE. ALL ROOF DRAINS FROM BUILDING 'B', 'C', AND 'D' SHALL BE 6" PVC (SCH 40) @ 1.04% MIN. SLOPE UNLESS INDICATED OTHERWISE. USE DUCTILE IRON WHEN COVER IS LESS THAN 24-IN. MATCH PIPE CROWNS WITH CONNECTION TO DROP INLET.
- PVC ROOF DRAIN PIPING UNDER PAVEMENT SHALL HAVE 24-IN MINIMUM COVER. IF ROOF DRAIN PIPING UNDER PAVEMENT HAS LESS THAN 24-IN COVER, ROOF DRAIN PIPING SHALL BE 8" DIP (IN LIEU OF PVC).
- JOINT FILL AND CAULK EACH CONCRETE EXPANSION JOINT AND WHERE CONCRETE PAVEMENT ABUTS OTHER PAVEMENTS, SIDEWALKS, OR HARD SURFACES.
- MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAINFALL EVENT IN ACCORDANCE WITH NCDCEQ LAND QUALITY REQUIREMENTS AND AS DIRECTED BY THE NCDCEQ AND CIVIL ENGINEER.
- FLUSH ALL SEDIMENT OUT OF STORM DRAINAGE PIPES AND STRUCTURES FOLLOWING SITE STABILIZATION AND AT THE END OF CONSTRUCTION. FLUSH OUT PIPES AS NEEDED THROUGHOUT CONSTRUCTION TO MAINTAIN PROPER FUNCTIONING OF THE DRAINAGE SYSTEM.
- IN DISTURBED AREAS, AMEND THE TOP 6 INCHES OF LAWN AREAS WITH TOPSOIL FROM THE SITE.
- ALL SIDEWALKS ARE TO HAVE NO MORE THAN A 1:20 (5.0%) SLOPE FOR THE LENGTH OF THE SIDEWALK AND NO MORE THAN A 1:50 (2.0%) SLOPE FOR THE WIDTH OF THE SIDEWALK.
- IF CONTRACTOR NOTICES ANY DISCREPANCIES IN ANY OF THESE SLOPE REQUIREMENTS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE OWNER & ENGINEER PRIOR TO POURING ANY CONCRETE.
- PRIOR TO FINAL PROJECT ACCEPTANCE, PROVIDE AN AS-BUILT SURVEY OF ALL UTILITY SYSTEMS AND STORM SEWERS.
- ANY AND ALL LANDSCAPING AND EXISTING TREES & SHRUBS TO REMAIN WHICH ARE DAMAGED DURING DEMOLITION OR CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR USING A LICENSED LANDSCAPE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

**GRADING & DRAINAGE KEY NOTES**

- FLARED END SECTION
- RIP RAP OUTLET PROTECTION (SEE EROSION CONTROL PLAN)
- PROVIDE SMOOTH PAVING TRANSITION

PIPE #	DIA	UPSTREAM INVERT	DOWNSTREAM INVERT	SLOPE	LENGTH	DESCRIPTION
F2-F1	15"	389.00	388.75	1.40%	17.85 LF	15" RCP
F4-F3	15"	388.75	388.25	1.59%	31.45 LF	15" RCP

STRUCTURE #	TOP	STRUCTURE HEIGHT	DESCRIPTION
F1	390.44	N/A	15" FES
F2	390.19	N/A	15" FES
F3	389.69	N/A	15" FES
F4	390.19	N/A	15" FES



**EROSION CONTROL NOTES**

- THE CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL CODES IN OBSERVING EROSION CONTROL MEASURES BOTH ON AND OFF SITE. ALL OFF-SITE SOIL BORROW AND WASTE SITES SHALL BE PROPERLY PERMITTED FOR SUCH ACTIVITIES.
- THE CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAINFALL EVENT OR AS DIRECTED BY LOCAL AUTHORITIES OR ENGINEER.
- ALL OPEN STORM PIPES SHALL BE PROTECTED WITH STONE FILTER PROTECTION AFTER WORK STOPPAGE EACH DAY.
- ALL STORM DRAINAGE PIPES SHALL BE THOROUGHLY FLUSHED OF ALL SEDIMENT FOLLOWING SITE STABILIZATION. INTERIOR FLUSHING OF SYSTEM SHALL BE PERFORMED AS NEEDED TO MAINTAIN PROPER FUNCTIONING OF THE DRAINAGE SYSTEM.
- THE INDICATED STAGING AREA IS INTENDED FOR VEHICLES AND NON-ERODIBLE MATERIALS ONLY. NO SOIL, SAND OR OTHER ERODIBLE, FINE GRAINED MATERIAL SHALL BE STORED OUTSIDE OF THE LIMITS OF THE SITE PROTECTED BY SEDIMENT AND EROSION CONTROL DEVICES AND MEASURES.
- SOIL AND OTHER MATERIALS SHALL ONLY BE TEMPORARILY STOCKPILED WITHIN THE CONSTRUCTION LIMITS PROTECTED BY SEDIMENT AND EROSION CONTROL DEVICES AND MEASURES.
- TREE PROTECTION INSPECTION SHALL BE COMPLETED PRIOR TO INSTALLING EROSION CONTROL DEVICES.
- ALL APPLICABLE E&S CONTROL MEASURES ARE TO BE PROPERLY MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED.
- PERMANENT GROUND COVER SHALL BE PROVIDED FOR ALL DISTURBED AREAS WITHIN 15 WORKING DAYS OR NO MORE THAN 90 CALENDAR DAYS (WHICHEVER IS SHORTER).
- TOTAL DISTURBED AREA: 5.77 AC.

**EROSION CONTROL KEYNOTES**

- CHECK DAM
- GRAVEL CONSTRUCTION ENTRANCE
- SILT FENCE (COMBINATION FENCE; SEE TREE FENCE DETAIL)
- TREE PROTECTION FENCE
- TEMPORARY DIVERSION DITCH
- RIPRAP OUTLET PROTECTION
- INLET PROTECTION
- PIPE INLET PROTECTION
- CONCRETE WASHOUT AREA
- RAIN GAUGE AND PERMIT RECORDS BOX
- LIMITS OF CONSTRUCTION
- EXISTING CONTOUR
- FINISHED CONTOUR
- DUST CONTROL

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11/07/2023

DATE  
04/05/2023

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L. BARNES

DESIGNED BY  
G. FRANK

CHECKED BY  
G. FRANK

SCALE  
AS SHOWN

**TIMMONS GROUP**

NORTH CAROLINA LICENSE NO. C-1652

**JONES DAIRY STORAGE FACILITY**

TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

**ROAD WIDENING PLAN - GRADING, DRAINAGE & EROSION CONTROL PLAN**

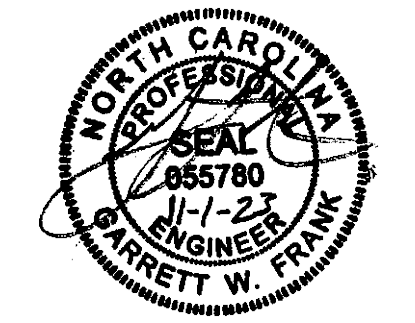
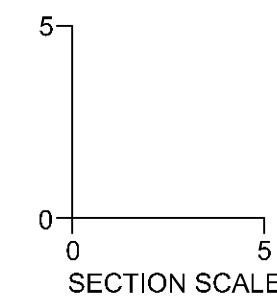
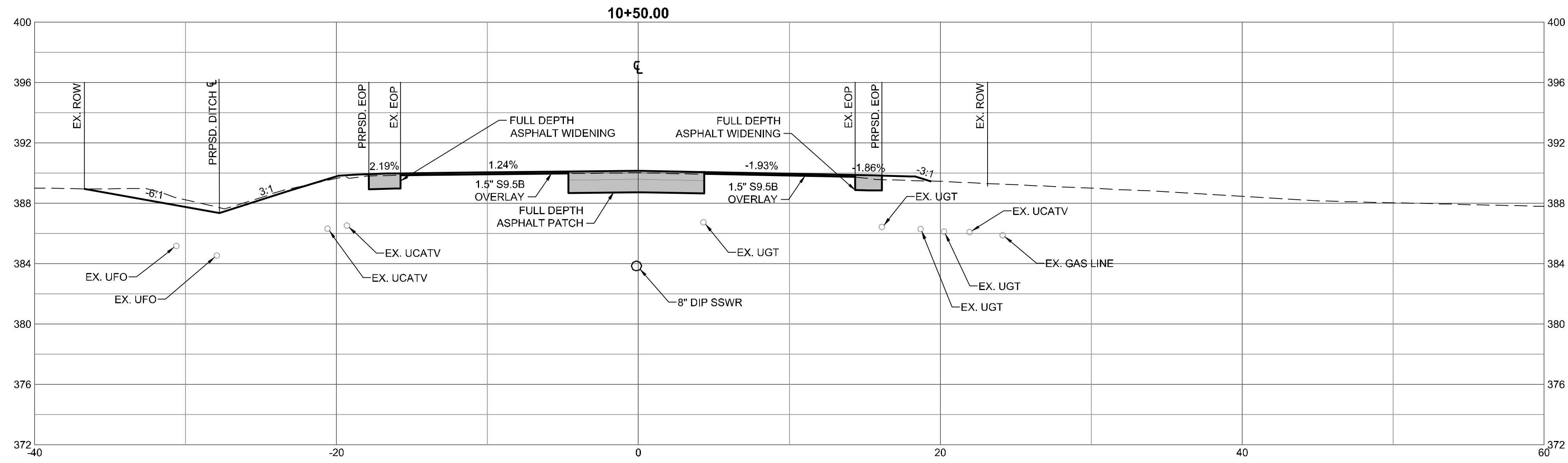
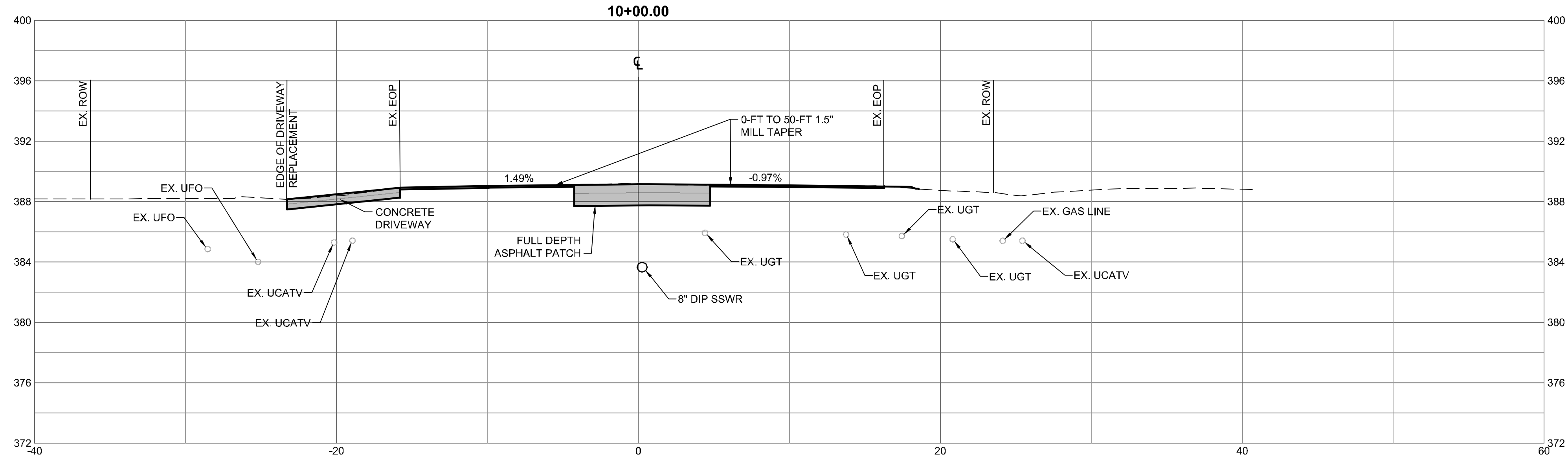
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54832

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 CHECKED BY: G. FRANK  
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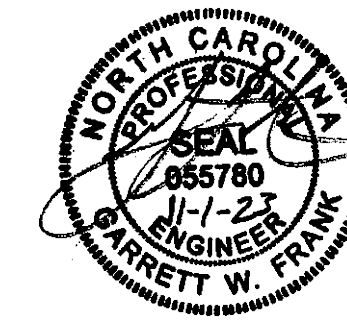
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**JONES DAIRY STORAGE FACILITY**  
 TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA  
**JONES DAIRY ROAD - CROSS SECTIONS STA. 10+00 - 10+50**

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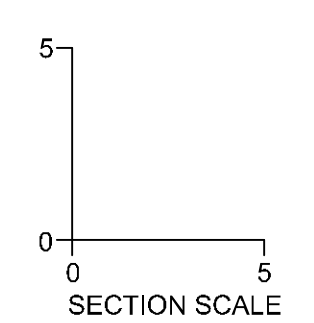
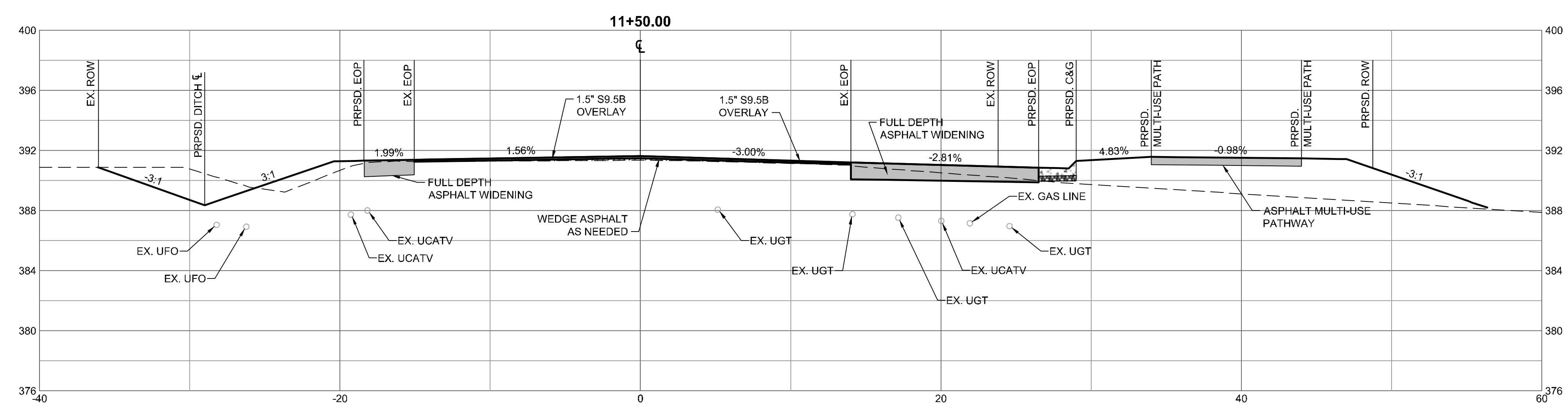
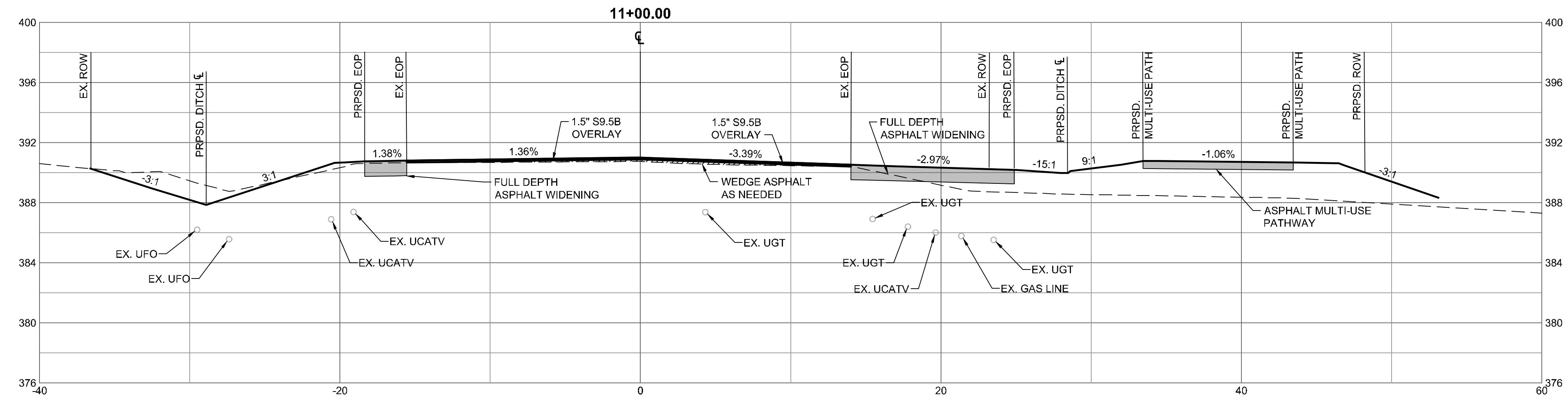
NORTH CAROLINA LICENSE NO. C-1652

## JONES DAIRY STORAGE FACILITY

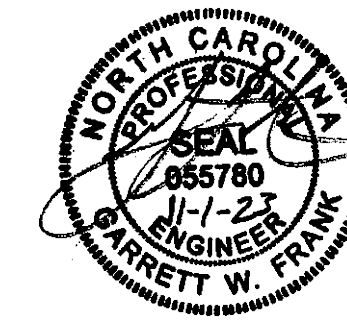
TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA  
 JONES DAIRY ROAD - CROSS SECTIONS STA. 11+00 - 11+50

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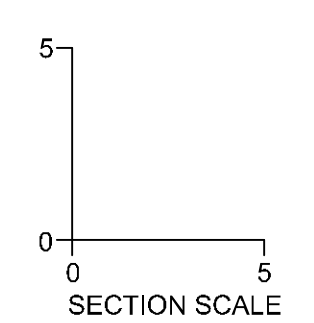
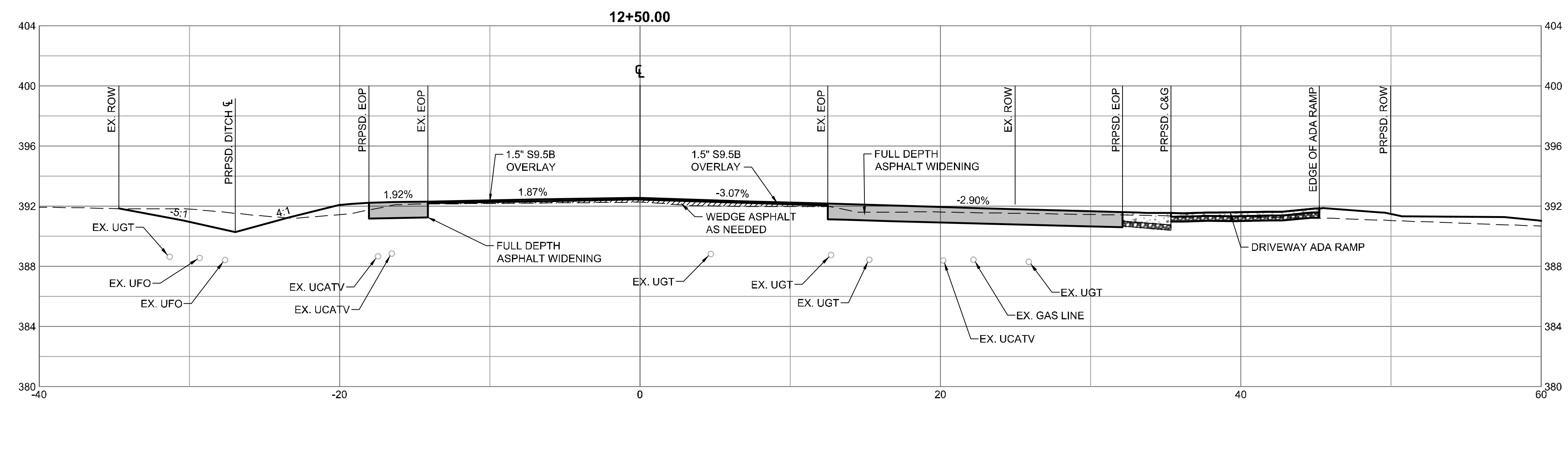
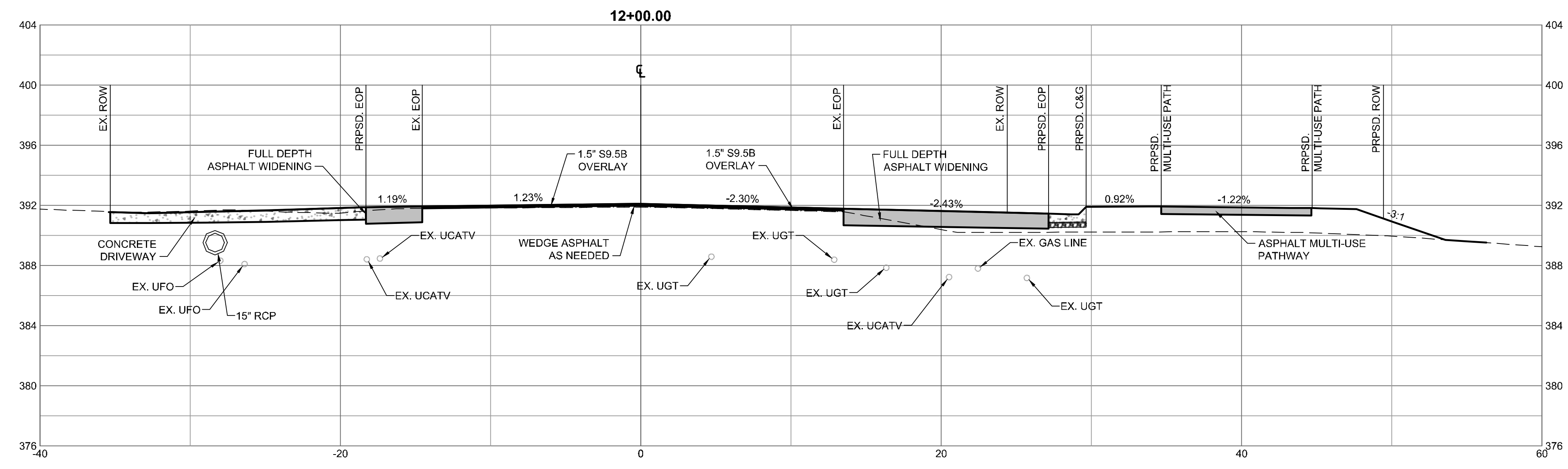
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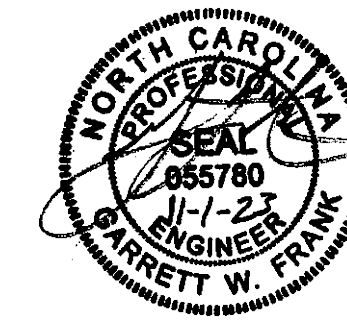
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 TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA  
**JONES DAIRY ROAD - CROSS SECTIONS STA. 12+00 - 12+50**

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11/01/2023	ADDRESSED TOWN OF ROLESVILLE 3RD REVIEW COMMENTS

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 DESIGNED BY: G. FRANK  
 CHECKED BY: G. FRANK  
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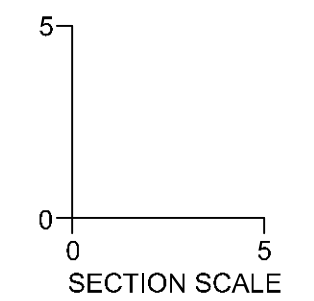
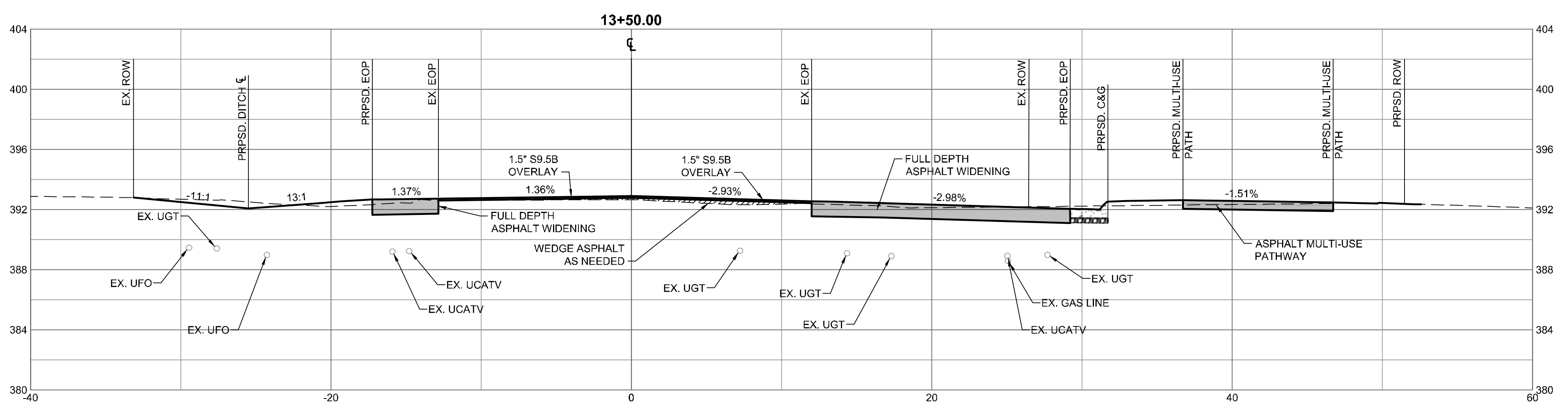
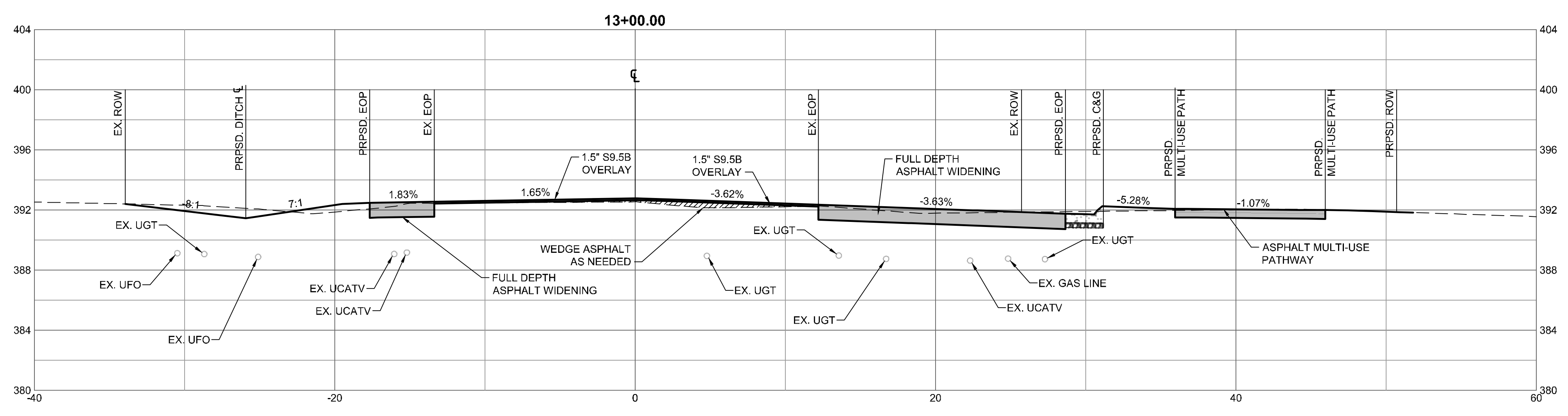
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TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

JONES DAIRY ROAD - CROSS SECTIONS STA. 13+00 - 13+50

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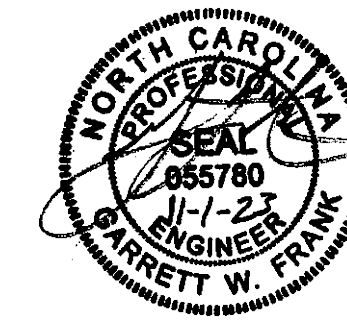
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**C7.5**











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DESIGNED BY	G. FRANK
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SCALE	AS SHOWN

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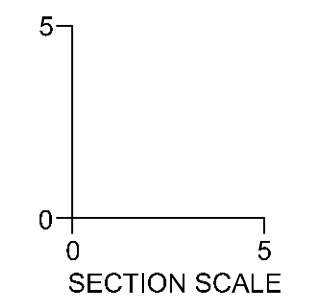
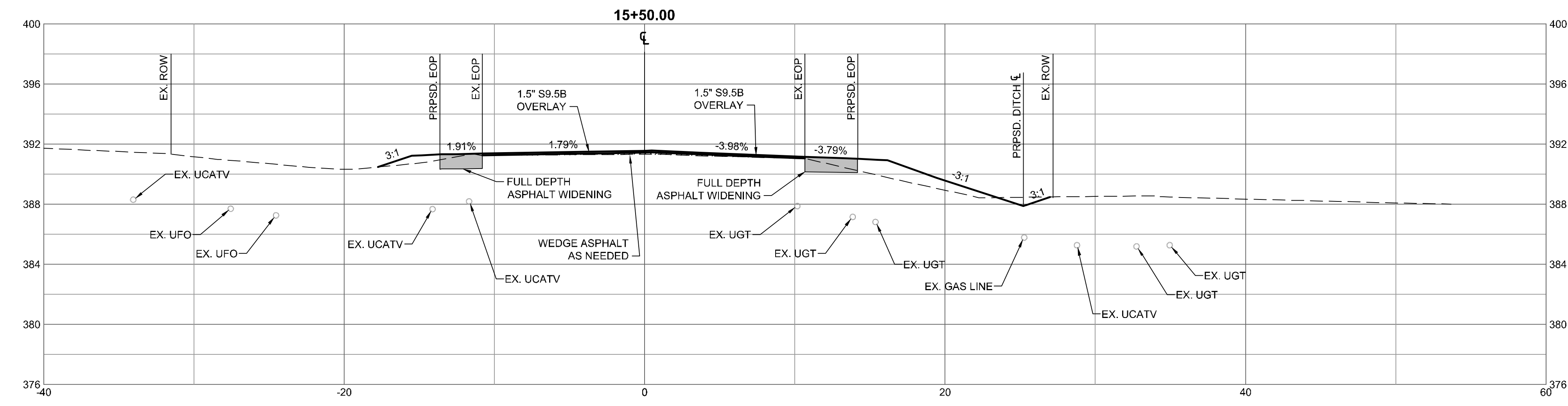
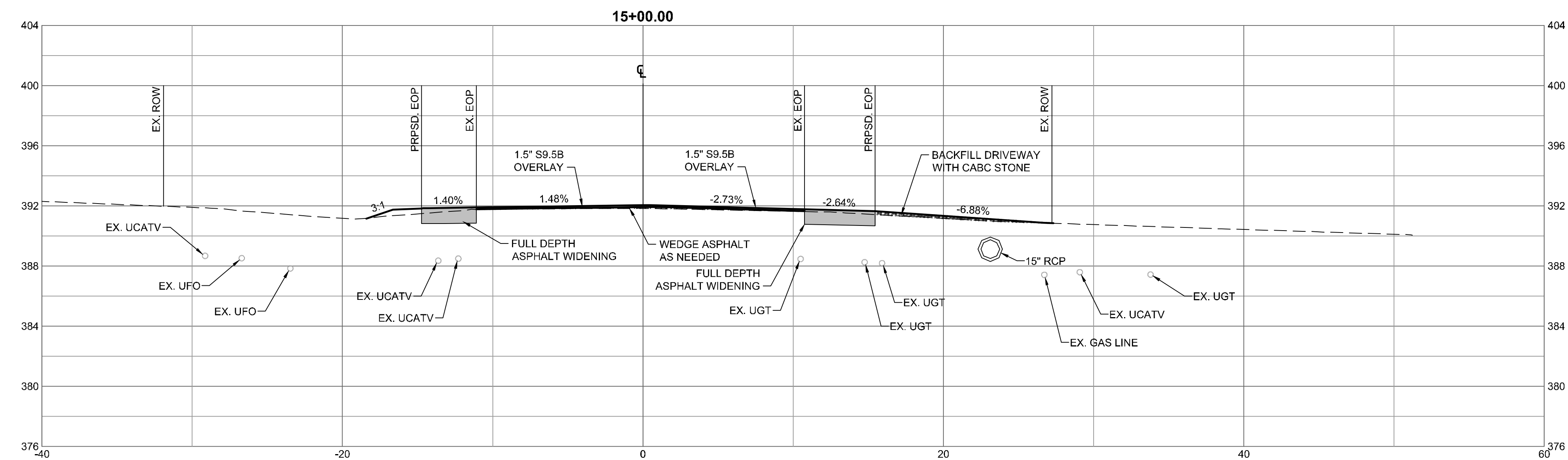
## JONES DAIRY STORAGE FACILITY

TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

### JONES DAIRY ROAD - CROSS SECTIONS STA. 15+00 - 15+50

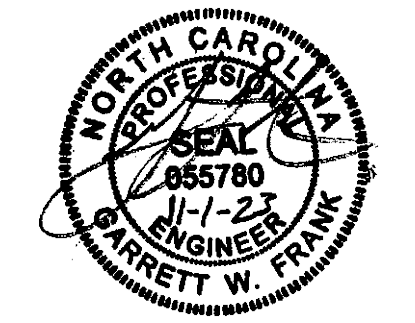
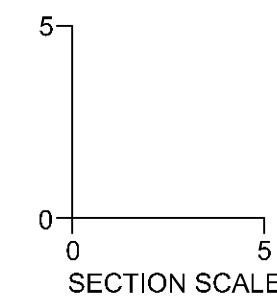
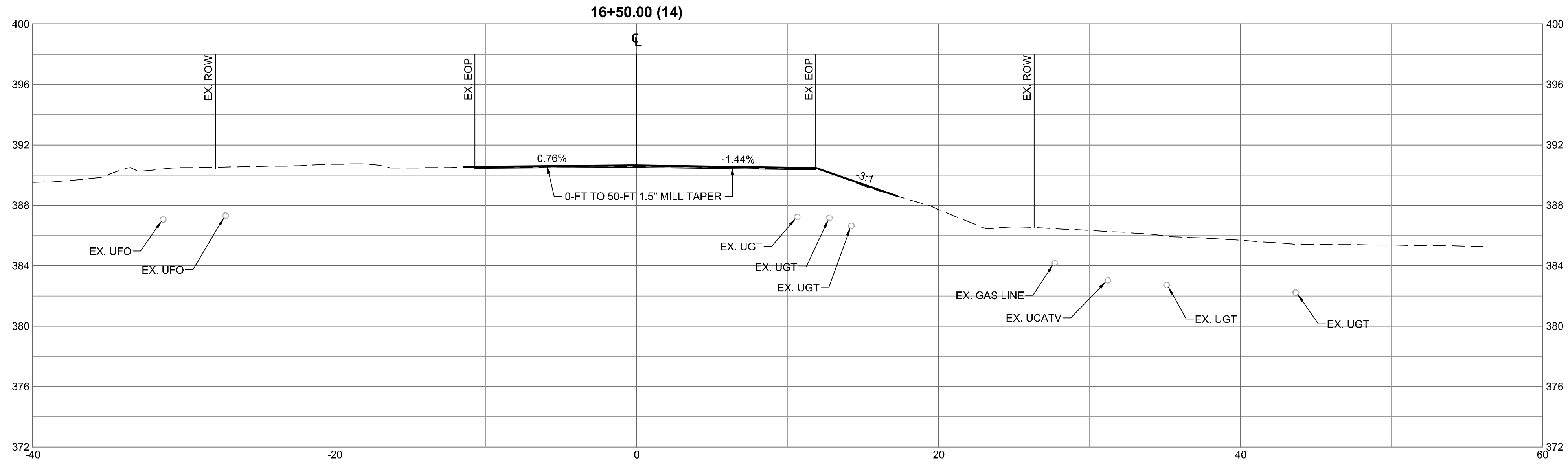
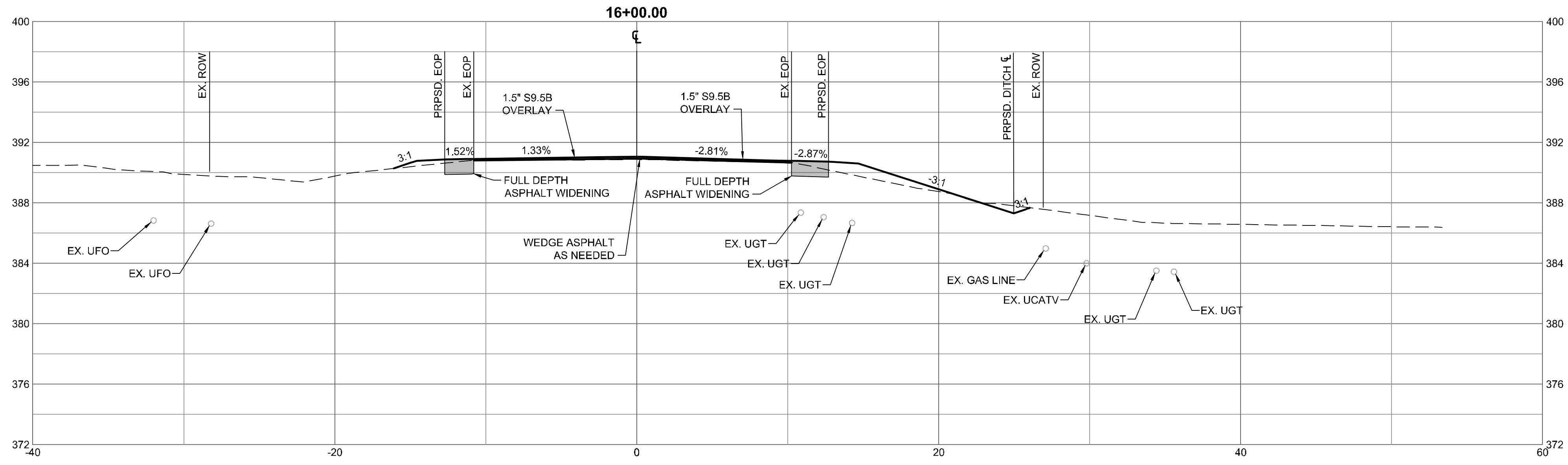
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JOB NO.	54832
SHEET NO.	C7.7





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NORTH CAROLINA LICENSE NO. C-1652

**JONES DAIRY STORAGE FACILITY**  
 TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA  
**JONES DAIRY ROAD - CROSS SECTIONS STA. 16+00 - 16+50**

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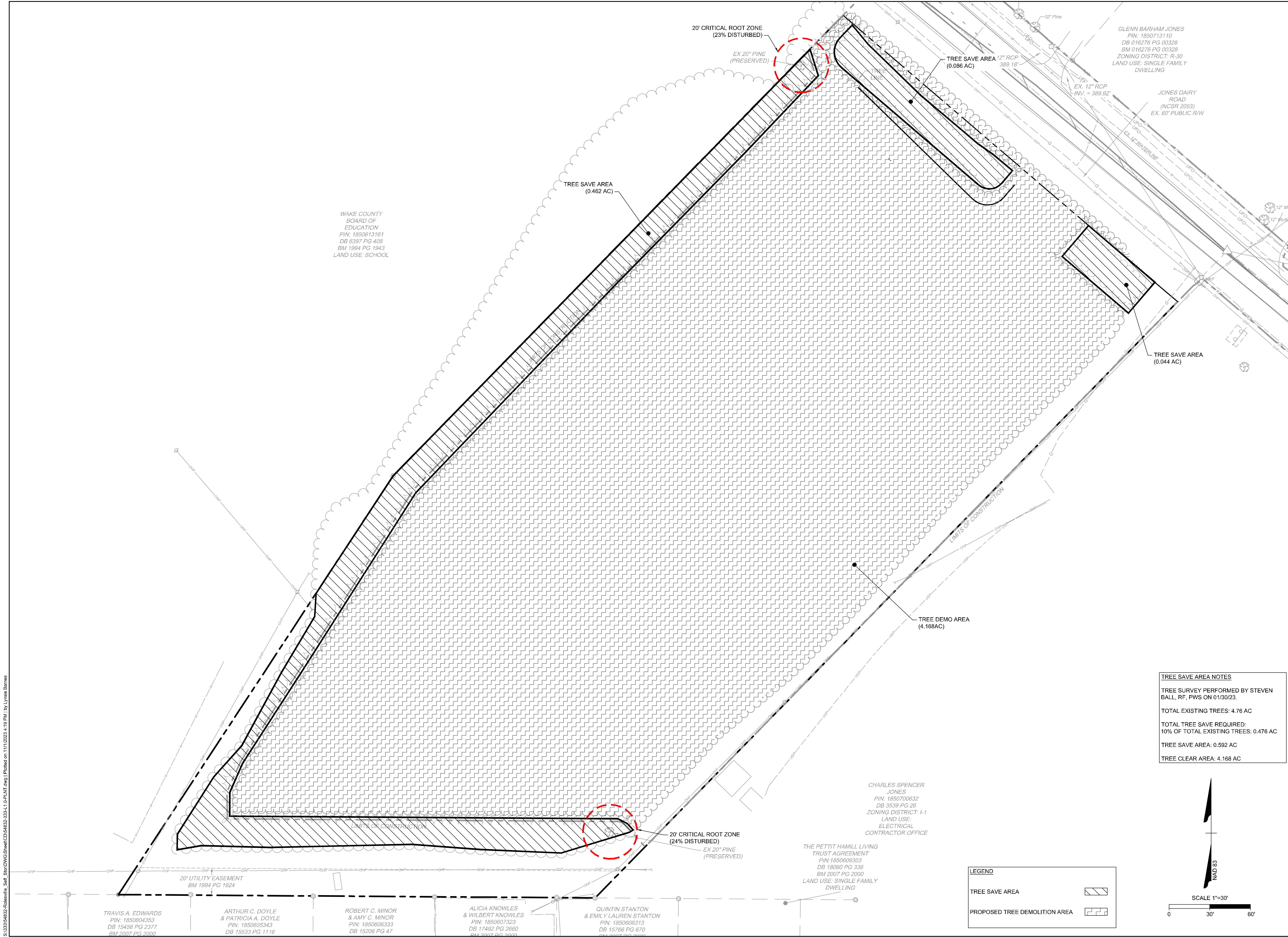
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WAKE COUNTY  
BOARD OF  
EDUCATION  
PIN: 1850613161  
DB 6397 PG 408  
BM 1994 PG 1943  
LAND USE: SCHOOL

GLENN BARHAM JONES  
PIN: 1850713110  
DB 016276 PG 00328  
BM 016276 PG 00328  
ZONING DISTRICT: R-30  
LAND USE: SINGLE FAMILY  
DWELLING

JONES DAIRY  
ROAD  
(NCSR 2053)  
EX. 60' PUBLIC R/W

CHARLES SPENCER  
JONES  
PIN: 1850700632  
DB 3539 PG 26  
ZONING DISTRICT: I-1  
LAND USE:  
ELECTRICAL  
CONTRACTOR OFFICE

THE PETTIT HAMIL LIVING  
TRUST AGREEMENT  
PIN: 1850609303  
DB 18060 PG 336  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY  
DWELLING

TRAVIS A. EDWARDS  
PIN: 1850604353  
DB 15456 PG 2377  
BM 2007 PG 2000

ARTHUR C. DOYLE  
& PATRICIA A. DOYLE  
PIN: 1850605343  
DB 15533 PG 1116

ROBERT C. MINOR  
& AMY C. MINOR  
PIN: 1850606333  
DB 15206 PG 47

ALICIA KNOWLES  
& WILBERT KNOWLES  
PIN: 1850607323  
DB 17492 PG 2660  
BM 2007 PG 2000

QUINTIN STANTON  
& EMILY LAUREN STANTON  
PIN: 1850608313  
DB 15766 PG 670  
BM 2007 PG 2000

**TREE SAVE AREA NOTES**

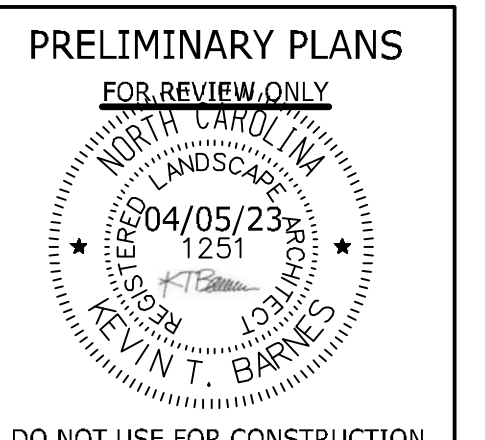
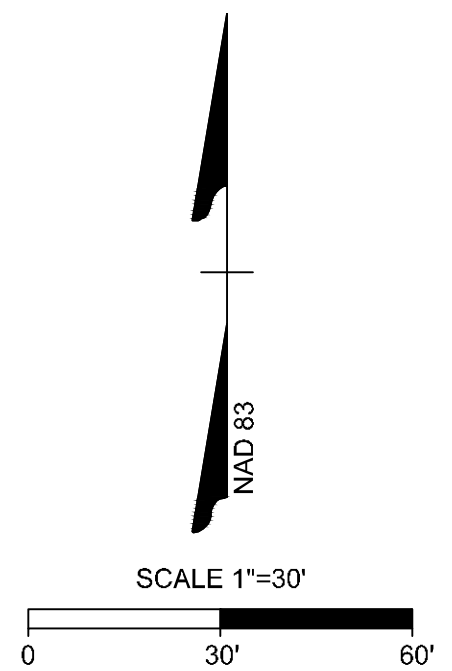
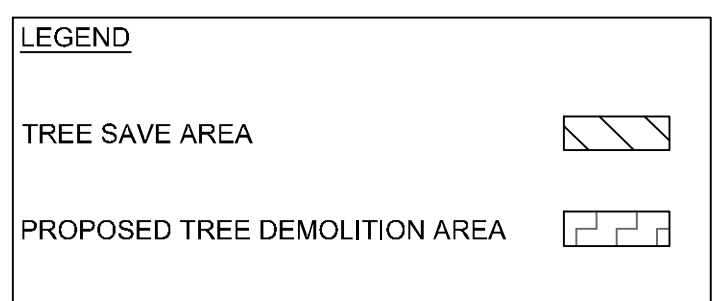
TREE SURVEY PERFORMED BY STEVEN BALL, RF, PWS ON 01/30/23.

TOTAL EXISTING TREES: 4.76 AC

TOTAL TREE SAVE REQUIRED:  
10% OF TOTAL EXISTING TREES: 0.476 AC

TREE SAVE AREA: 0.592 AC

TREE CLEAR AREA: 4.168 AC



DO NOT USE FOR CONSTRUCTION

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DESIGNED BY: S. HALISH  
CHECKED BY: K. BARNES  
SCALE: AS SHOWN

**TIMMONS GROUP**  
NORTH CAROLINA LICENSE NO. C-1652

**JONES DAIRY STORAGE FACILITY**  
TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

**TREE PRESERVATION PLAN**

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SHEET NO. L1.1

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PERIMETER LANDSCAPE REQUIREMENT (per table 6.2.2.1. & Zoning Conditions)

YARD	REQUIREMENT	LENGTH & WIDTH	CALCULATION	REQUIRED LANDSCAPE	PROVIDED LANDSCAPE
A	LANDSCAPE TYPE: 4 SM. DECID TREE: 4 / 100 LG. DECID TREE: 8 / 100 EVERGREE TREE: 0 MEDIUM SHRUB HEDGE	LENGTH: 869.7 ENTRIES: - EASEMENTS: - EXIST. VEG.: - TOTAL: 869.7 WIDTH: 50	SM. DECID TREE: (870 / 100) x 4 = 34.79 LG. DECID TREE: (870 / 100) x 8 = 69.58 EVERGREE TREE: - MEDIUM SHRUB HEDGE	SM. DECID TREE: 35.00 LG. DECID TREE: 70.00 EVERGREE TREE: 0 MEDIUM SHRUB: HEDGE	SM. DECID TREE: 51 LG. DECID TREE: 72 EVERGREE TREE: 0 MEDIUM SHRUB: 255
B	LANDSCAPE TYPE: 4 SM. DECID TREE: 4 / 100 LG. DECID TREE: 8 / 100 EVERGREE TREE: 0 MEDIUM SHRUB HEDGE	LENGTH: 351.8 ENTRIES: - EASEMENTS: - EXIST. VEG.: - TOTAL: 351.8 WIDTH: 50	SM. DECID TREE: (352 / 100) x 4 = 14.07 LG. DECID TREE: (352 / 100) x 8 = 28.14 EVERGREE TREE: - MEDIUM SHRUB HEDGE	SM. DECID TREE: 14.00 LG. DECID TREE: 29.00 EVERGREE TREE: 0 MEDIUM SHRUB: HEDGE	SM. DECID TREE: 18 LG. DECID TREE: 32 EVERGREE TREE: 0 MEDIUM SHRUB: 93
C	LANDSCAPE TYPE: C SM. DECID TREE: 1 / 100 LG. DECID TREE: 3 / 100 EVERGREE TREE: 15-ft O.C. MEDIUM SHRUB 40 / 100	LENGTH: 640.1 ENTRIES: - EASEMENTS: - EXIST. VEG.: - TOTAL: 640.1 WIDTH: 10	SM. DECID TREE: n/a LG. DECID TREE: n/a EVERGREE TREE: (641 @ 15-ft O.C.) = 42.67 MEDIUM SHRUB: n/a	SM. DECID TREE: n/a LG. DECID TREE: n/a EVERGREE TREE: 43 MEDIUM SHRUB: n/a	SM. DECID TREE: n/a LG. DECID TREE: n/a EVERGREE TREE: 50 MEDIUM SHRUB: n/a

PLANT SCHEDULE YARD A

SMALL DECIDUOUS TREES	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	REMARKS
CAR AFR	24	CARPINUS CAROLINIANA 'AUTUMN FIRE'	AUTUMN FIRE AMERICAN HORNBEAM	2" CAL.	B&B	
CHI VIR	6	CHIONANTHUS VIRGINICUS	WHITE FRINGETREE	2" CAL.	B&B	
OXY ARB	21	OXYDENDRUM ARBOREUM	SOURWOOD TREE	2" CAL.	B&B	

LARGE DECIDUOUS TREES

QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	REMARKS
35	PLATANUS X ACERIFOLIA 'BLOODGOOD'	BLOODGOOD LONDON PLANE TREE	2.5" CAL.	B&B	
37	SASSAFRAS ALBIDUM	SASSAFRAS	2.5" CAL.	B&B	

SHRUBS

QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	SPACING	REMARKS
115	ILEX CORNUTA 'CARISSA'	CARISSA CHINESE HOLLY	24" HT./SPRD.	CONTAINER	42" o.c.	
138	ILEX GLABRA	INKBERRY HOLLY	24" HT./SPRD.	3 GAL.	48" o.c.	

PLANT SCHEDULE YARD B

SMALL DECIDUOUS TREES	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	REMARKS
CAR AFR	6	CARPINUS CAROLINIANA 'AUTUMN FIRE'	AUTUMN FIRE AMERICAN HORNBEAM	2" CAL.	B&B	
CHI VIR	7	CHIONANTHUS VIRGINICUS	WHITE FRINGETREE	2" CAL.	B&B	
OXY ARB	6	OXYDENDRUM ARBOREUM	SOURWOOD TREE	2" CAL.	B&B	

LARGE DECIDUOUS TREES

QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	REMARKS
13	QUERCUS PALUSTRIS	PIN OAK	2.5" CAL.	B&B	
18	SASSAFRAS ALBIDUM	SASSAFRAS	2.5" CAL.	B&B	

SHRUBS

QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	SPACING	REMARKS
45	ABELIA X GRANDIFLORA	GLOSSY ABELIA	24" HT./SPRD.		48" o.c.	
50	ILEX CORNUTA 'CARISSA'	CARISSA CHINESE HOLLY	24" HT./SPRD.	CONTAINER	42" o.c.	

PLANT SCHEDULE YARD C

LARGE EVERGREEN TREES	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	REMARKS
ILE NEL	50	ILEX X 'NELLIE R. STEVENS'	NELLIE R. STEVENS HOLLY	4" HT. MIN.	

OVERALL PLANT SCHEDULE

SMALL DECIDUOUS TREES	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	REMARKS
CAR AFR	30	CARPINUS CAROLINIANA 'AUTUMN FIRE'	AUTUMN FIRE AMERICAN HORNBEAM	2" CAL.	B&B	
CHI VIR	13	CHIONANTHUS VIRGINICUS	WHITE FRINGETREE	2" CAL.	B&B	
OXY ARB	27	OXYDENDRUM ARBOREUM	SOURWOOD TREE	2" CAL.	B&B	

LARGE DECIDUOUS TREES

QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	REMARKS
4	BETULA NIGRA 'DURA HEAT'	DURA HEAT RIVER BIRCH	2.5" CAL.	B&B	
35	PLATANUS X ACERIFOLIA 'BLOODGOOD'	BLOODGOOD LONDON PLANE TREE	2.5" CAL.	B&B	
13	QUERCUS PALUSTRIS	PIN OAK	2.5" CAL.	B&B	
55	SASSAFRAS ALBIDUM	SASSAFRAS	2.5" CAL.	B&B	

LARGE EVERGREEN TREES

QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	REMARKS
50	ILEX X 'NELLIE R. STEVENS'	NELLIE R. STEVENS HOLLY	4" HT. MIN.		

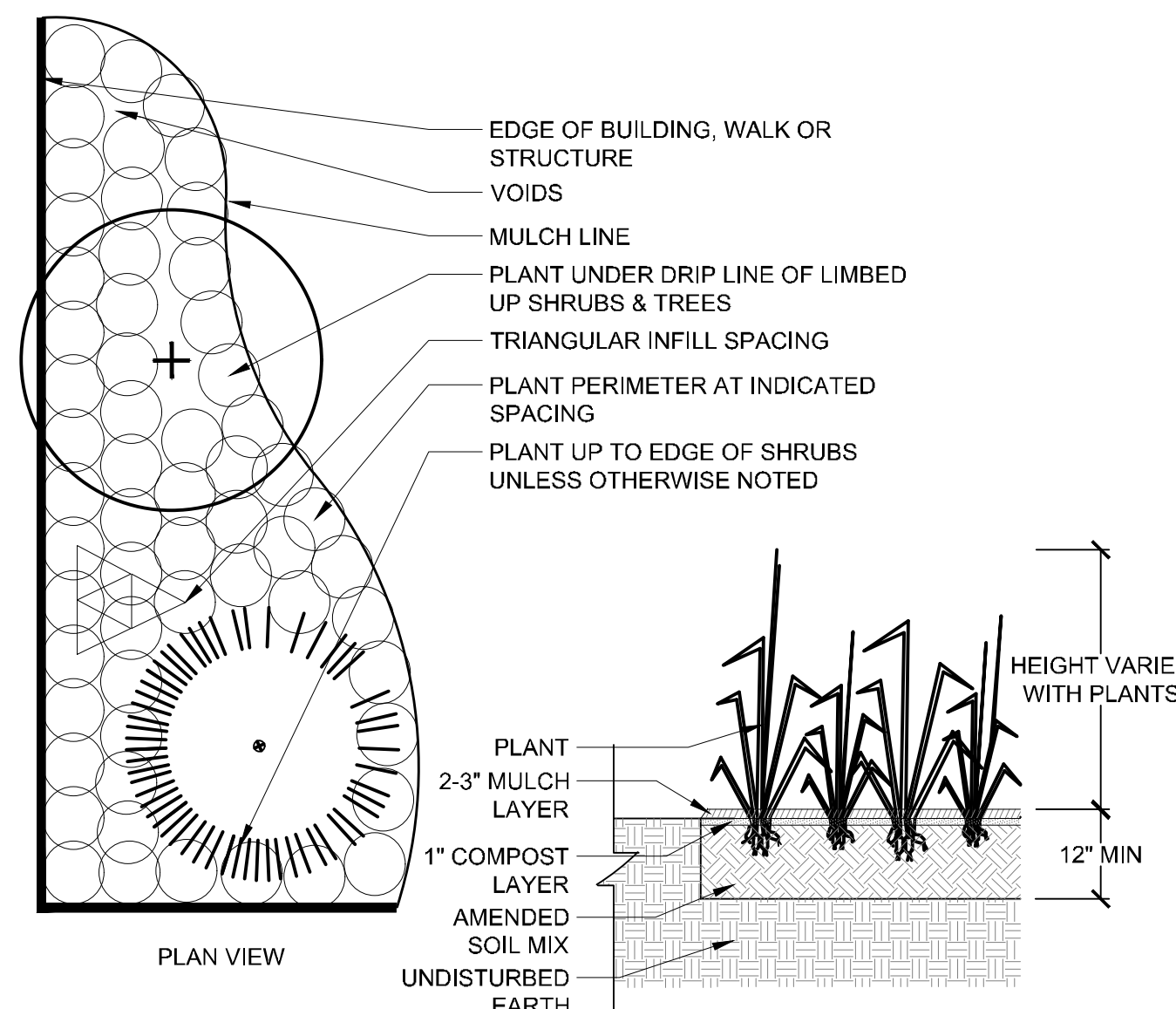
SHRUBS

QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	SPACING	REMARKS
45	ABELIA X GRANDIFLORA	GLOSSY ABELIA	24" HT./SPRD.		48" o.c.	
165	ILEX CORNUTA 'CARISSA'	CARISSA CHINESE HOLLY	24" HT./SPRD.	CONTAINER	42" o.c.	
164	ILEX GLABRA	INKBERRY HOLLY	24" HT./SPRD.	3 GAL.	48" o.c.	

WET POND

QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	SPACING	REMARKS
65	ASCLEPIAS INCARNATA	SWAMP MILKWEED	BULB	CONTAINER	24" o.c.	
130	ECHINACEA PURPUREA	CONEFLOWER	BULB	CONTAINER	24" o.c.	
99	EUPATORIADELPHUS FISTULOSUS	JOE PYE WEED	BULB	CONTAINER	24" o.c.	
67	JUNCUS EFFUSUS	COMMON RUSH	BULB	CONTAINER	24" o.c.	

WET POND DENSITY CALCULATION = TOTAL SQUARE FOOTAGE (1444) PER 200 SF SHELF AREA, PROVIDED 50 PLANTS = 361 REQUIRED PLANTS, 361 PROVIDED



4 GROUND COVER PLANTING DETAIL NTS

GENERAL NOTES

PRE-CONSTRUCTION

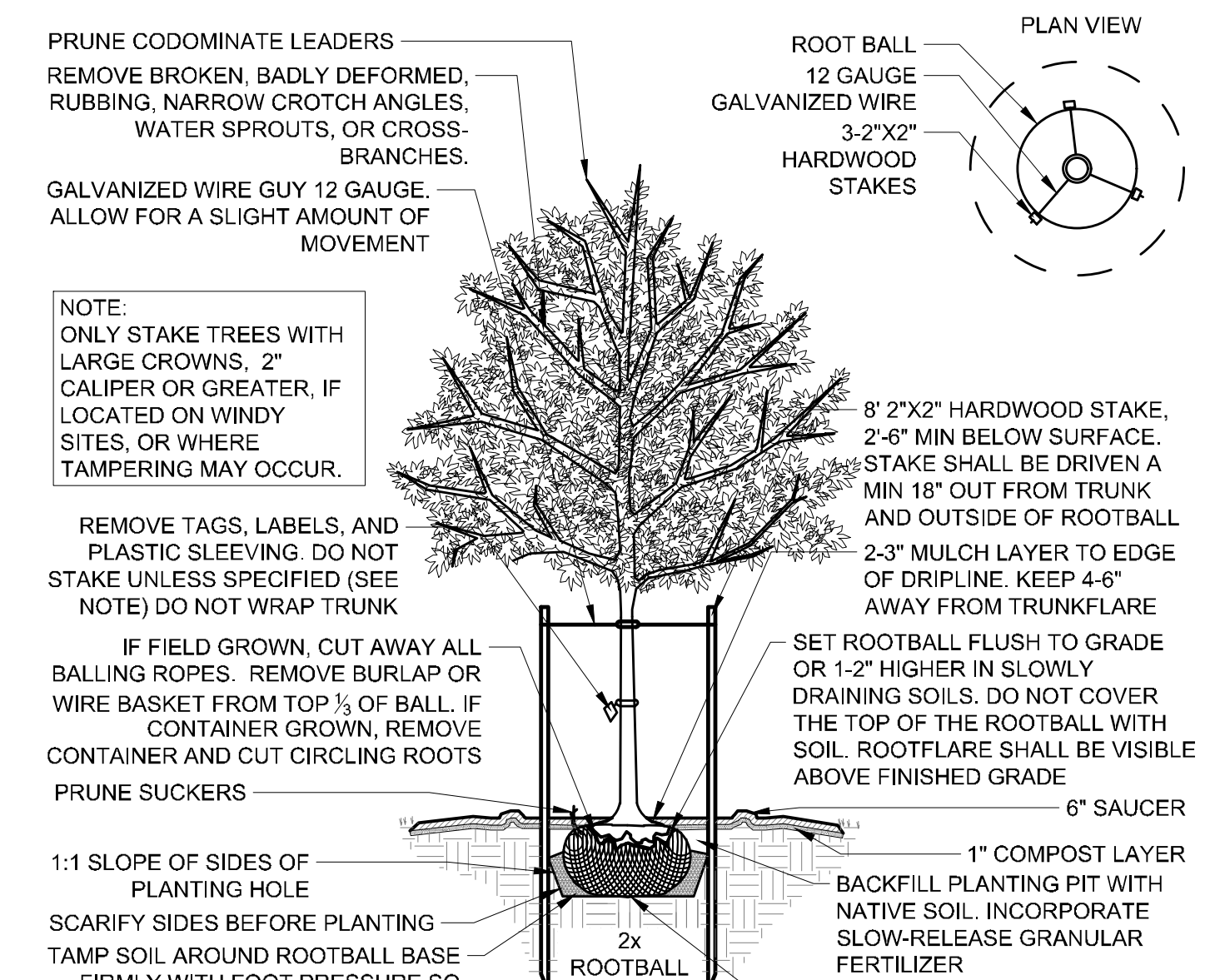
- CONTRACTOR IS RESPONSIBLE FOR CONTACTING VIRGINIA 811 AT 1.800.553.3120 FOR LOCATION OF ALL UTILITY LINES. TREES SHALL BE LOCATED A MINIMUM OF 5 FEET FROM SEWER/WATER CONNECTIONS. NOTIFY LANDSCAPE ARCHITECT OF CONFLICTS.
- VERIFY ALL PLANT MATERIAL QUANTITIES ON THE PLAN PRIOR TO BIDDING. PLANT LIST TOTALS ARE FOR CONVENIENCE ONLY AND SHALL BE VERIFIED PRIOR TO BIDDING.
- PROVIDE PLANT MATERIALS OF QUANTITY, SIZE, GENUS, SPECIES, AND VARIETY INDICATED ON PLANS. ALL PLANT MATERIALS AND INSTALLATION SHALL COMPLY WITH RECOMMENDATIONS AND REQUIREMENTS OF ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK". IF SPECIFIED PLANT MATERIAL IS NOT OBTAINABLE, SUBMIT PROOF OF NON AVAILABILITY TO THE LANDSCAPE ARCHITECT, TOGETHER WITH PROPOSAL FOR USE OF EQUIVALENT MATERIAL.
- PROVIDE AND INSTALL ALL PLANTS AS IN ACCORDANCE WITH DETAILS AND CONTRACT SPECIFICATIONS.
- SOIL TESTS SHALL BE PERFORMED TO DETERMINE SOIL CHARACTER AND QUALITY. NECESSARY SOIL AMENDMENTS SHALL BE PERFORMED PER TEST RESULTS TO ENSURE PLANT HEALTH.

CONSTRUCTION/INSTALLATION

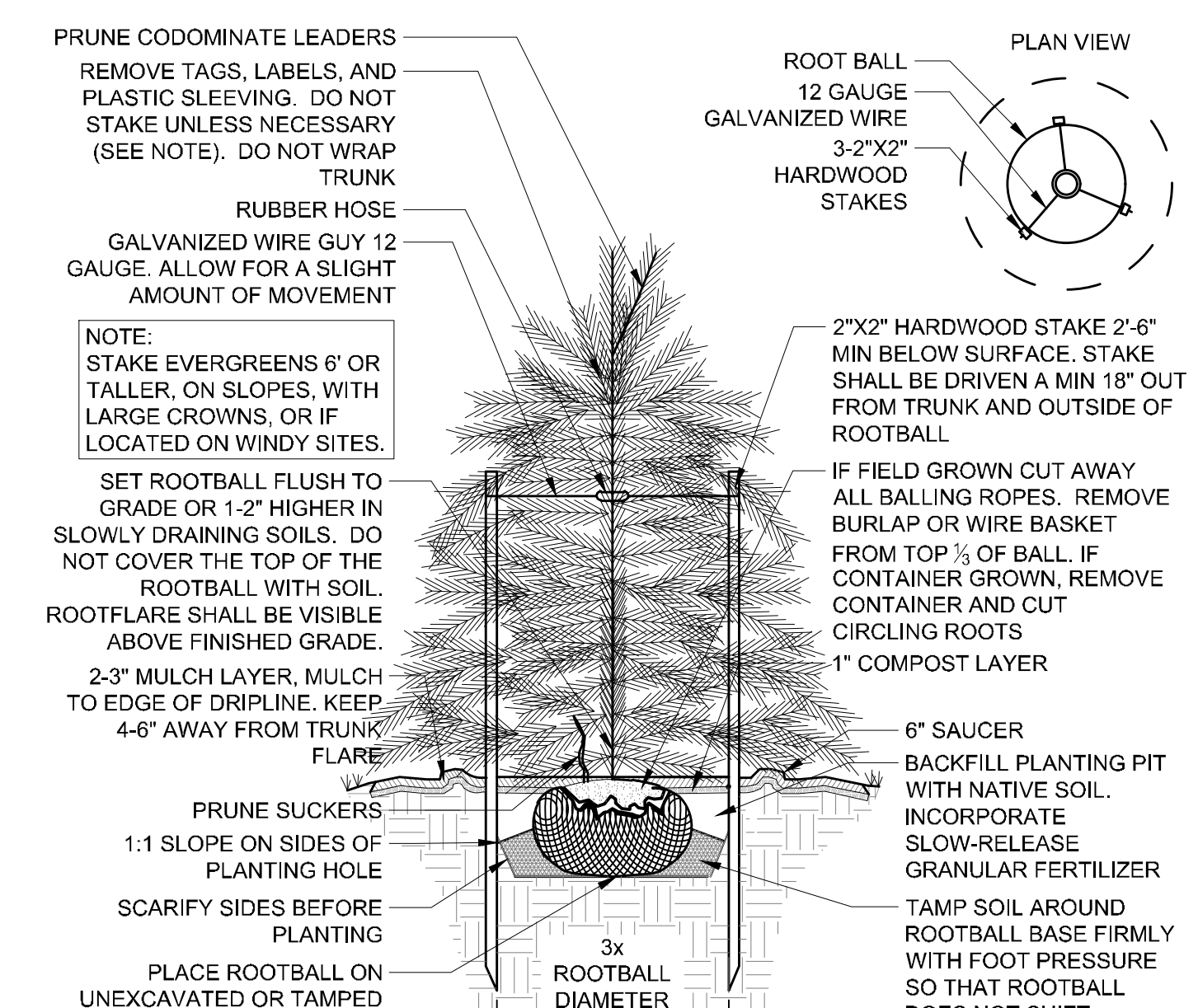
- LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY PLANTS AND MATERIALS THAT ARE IN AN UNHEALTHY OR UNSIGHTLY CONDITION, AS WELL AS PLANTS AND MATERIALS THAT DO NOT CONFORM TO ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK"
- LABEL AT LEAST ONE TREE AND ONE SHRUB OF EACH VARIETY AND CALIPER WITH A SECURELY ATTACHED, WATERPROOF TAG BEARING THE DESIGNATION OF BOTANICAL AND COMMON NAME.
- INSTALL LANDSCAPE PLANTINGS AT ENTRANCES/EXITS AND PARKING AREAS ACCORDING TO PLANS SO THAT MATERIALS WILL NOT INTERFERE WITH SIGHT DISTANCES.
- CONTRACTOR IS RESPONSIBLE FOR WATERING ALL PLANT MATERIAL DURING INSTALLATION AND UNTIL FINAL INSPECTION AND ACCEPTANCE BY OWNER. CONTRACTOR SHALL NOTIFY OWNER OF CONDITIONS WHICH AFFECTS THE GUARANTEE.

INSPECTIONS/GUARANTEE

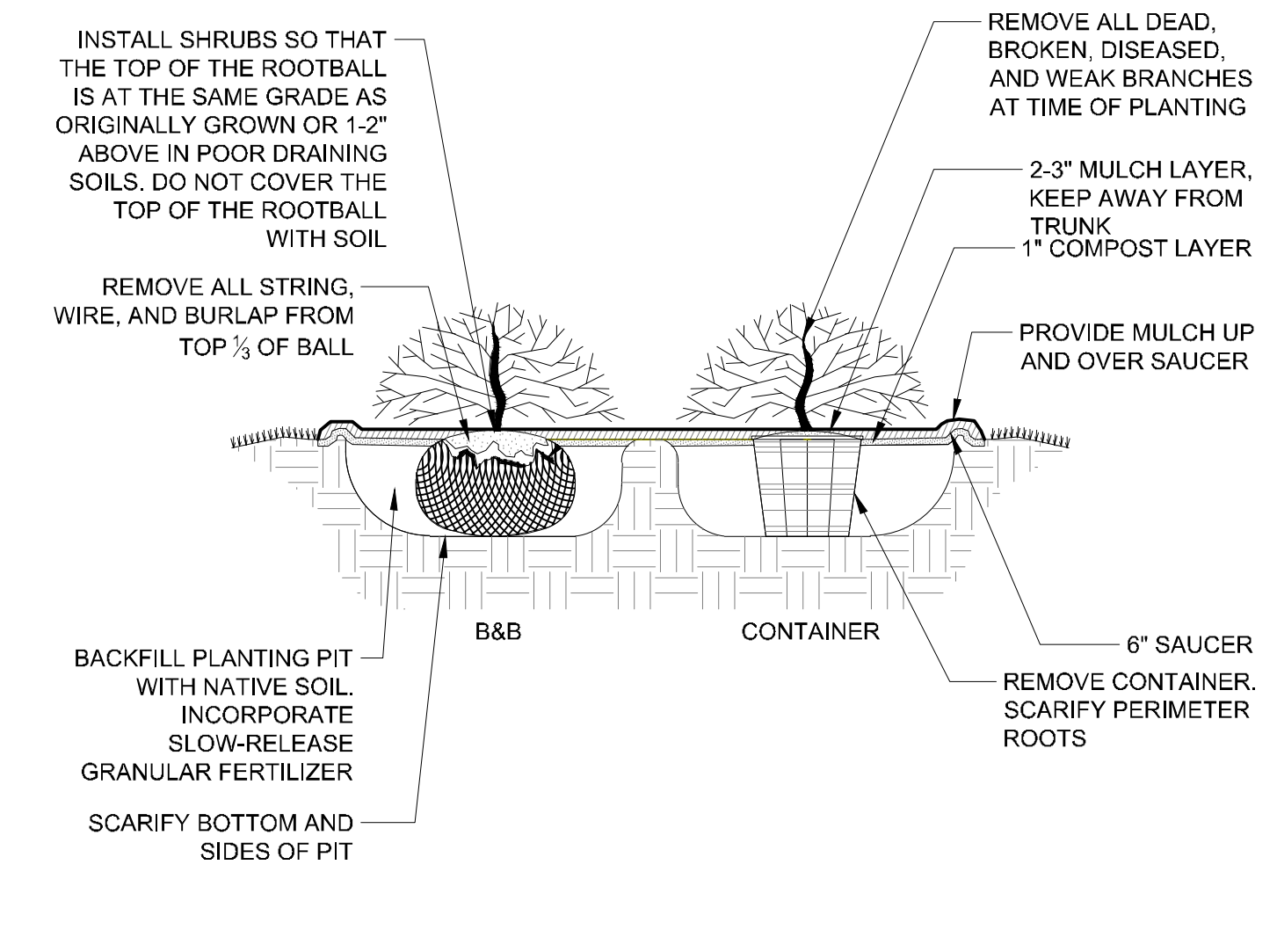
- UPON COMPLETION OF LANDSCAPE INSTALLATION, THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR WHO WILL VERIFY COMPLETENESS, INCLUDING THE REPLACEMENT OF ALL DEAD PLANT MATERIAL. CONTRACTOR IS RESPONSIBLE FOR SCHEDULING A FINAL INSPECTION BY THE LANDSCAPE ARCHITECT.
- ALL EXTERIOR PLANT MATERIALS SHALL BE GUARANTEED FOR ONE FULL YEAR AFTER DATE OF FINAL INSPECTION AGAINST DEFECTS INCLUDING DEATH AND UNSATISFACTORY GROWTH. DEFECTS RESULTING FROM NEGLIGENCE BY THE OWNER, ABUSE OR DAMAGE BY OTHERS, OR UNUSUAL PHENOMENA OR INCIDENTS WHICH ARE BEYOND THE CONTRACTORS CONTROL ARE NOT THE RESPONSIBILITY OF THE CONTRACTOR.
- PLANT MATERIAL QUANTITIES AND SIZES WILL BE INSPECTED FOR COMPLIANCE WITH APPROVED PLANS BY A SITE PLAN REVIEW AGENT OF THE PLANNING DEPARTMENT PRIOR TO THE RELEASE OF THE CERTIFICATE OF OCCUPANCY.
- REMOVE ALL GUY WIRES AND STAKES 12 MONTHS AFTER INSTALLATION.



1 DECIDUOUS TREE PLANTING DETAIL NTS

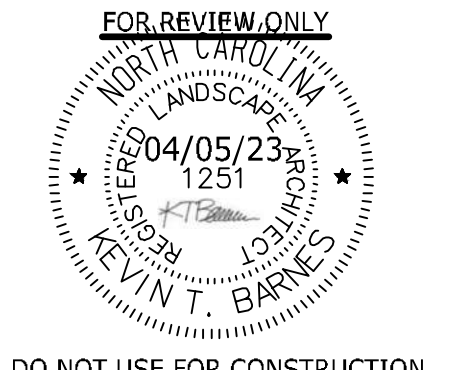


2 EVERGREEN TREE PLANTING DETAIL NTS



3 SHRUB PLANTING DETAIL NTS

PRELIMINARY PLANS



DO NOT USE FOR CONSTRUCTION

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TEL: 919.866.4951, FAX: 919.853.8124 www.timmons.com

REVISION DESCRIPTION	DATE
YOUR VISION ACHIEVED THROUGH OURS.	03/31/2023

DRAWN BY: S. HALISH  
DESIGNED BY: S. HALISH  
CHECKED BY: K. BARNES  
SCALE: AS SHOWN

**TIMMONS GROUP**  
NORTH CAROLINA LICENSE NO. C-1652

**JONES DAIRY STORAGE FACILITY**  
TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

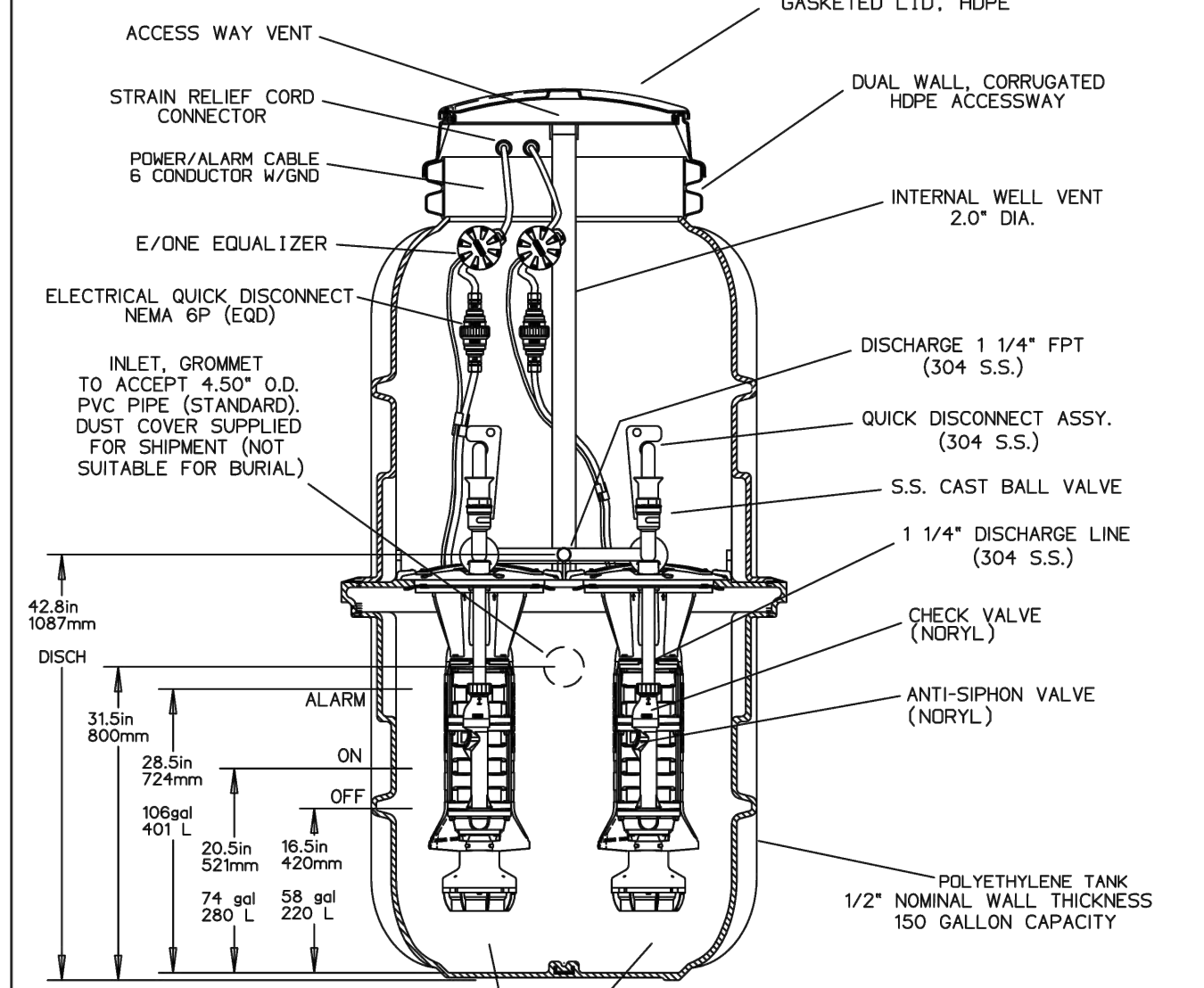
LANDSCAPE NOTES AND DETAILS

JOB NO. 54832  
SHEET NO. L2.0

S:\33054832-Rolesville\_Site\_Storage\DWG\SheetCD-54832-L2-0-NTD.dwg | Plotted on 11/17/2023 4:20 PM | by Lysak Barnes



FIELD JOINT REQUIRED FOR MODELS  
DH152-129 / DR152-129  
DH152-160 / DR152-160



OPTIONS:  DH152 (HARD WIRED LEVEL CONTROLS)  
 DR152 (WIRELESS LEVEL CONTROLS)

ACCESS WAY VENT  
STRAIN RELIEF CORD CONNECTOR  
POWER/ALARM CABLE & CONDUCTOR 4/0-6  
E/ONE EQUALIZER  
ELECTRICAL QUICK DISCONNECT NEMA 6P (EQD)  
INLET, GROMMET TO ACCEPT 4.50" O.D. PVC PIPE (STANDARD); DUST COVER SUPPLIED FOR SHIPMENT (NOT SUITABLE FOR BURIAL)

GASKETED L.I.D. HDPE  
DUAL WALL CORRUGATED HDPE ACCESSWAY  
INTERNAL WELL VENT 2.0" DIA.  
DISCHARGE 1 1/4" FPT (304 S.S.)  
QUICK DISCONNECT ASSY. (304 S.S.)  
S.S. CAST BALL VALVE  
1 1/4" DISCHARGE LINE (304 S.S.)  
CHECK VALVE (NORYL)  
ANTI-SIPHON VALVE (NORYL)  
POLYETHYLENE TANK 1/2" NOMINAL WALL THICKNESS 150 GALLON CAPACITY

ALARM ON OFF  
42.8 in 1087mm  
31.5 in 800mm  
28.5 in 724mm  
106 gal 401 L  
20.5 in 521mm  
16.5 in 420mm  
74 gal 280 L  
58 gal 220 L

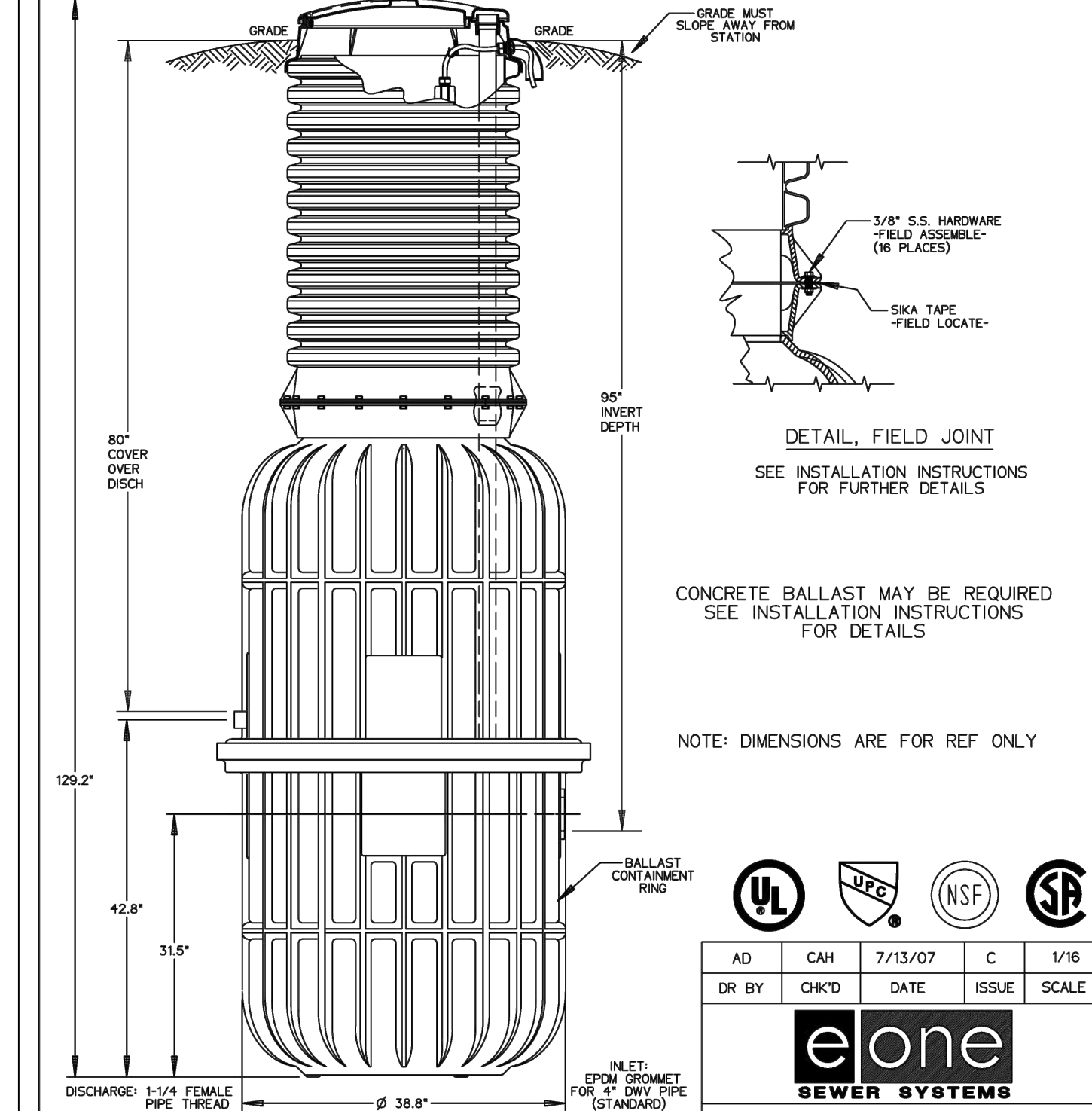
SEMI-POSITIVE DISPLACEMENT TYPE PUMP EACH DIRECTLY DRIVEN BY A 1 HP MOTOR

CONCRETE BALLAST MAY BE REQUIRED SEE INSTALLATION INSTRUCTIONS FOR DETAILS

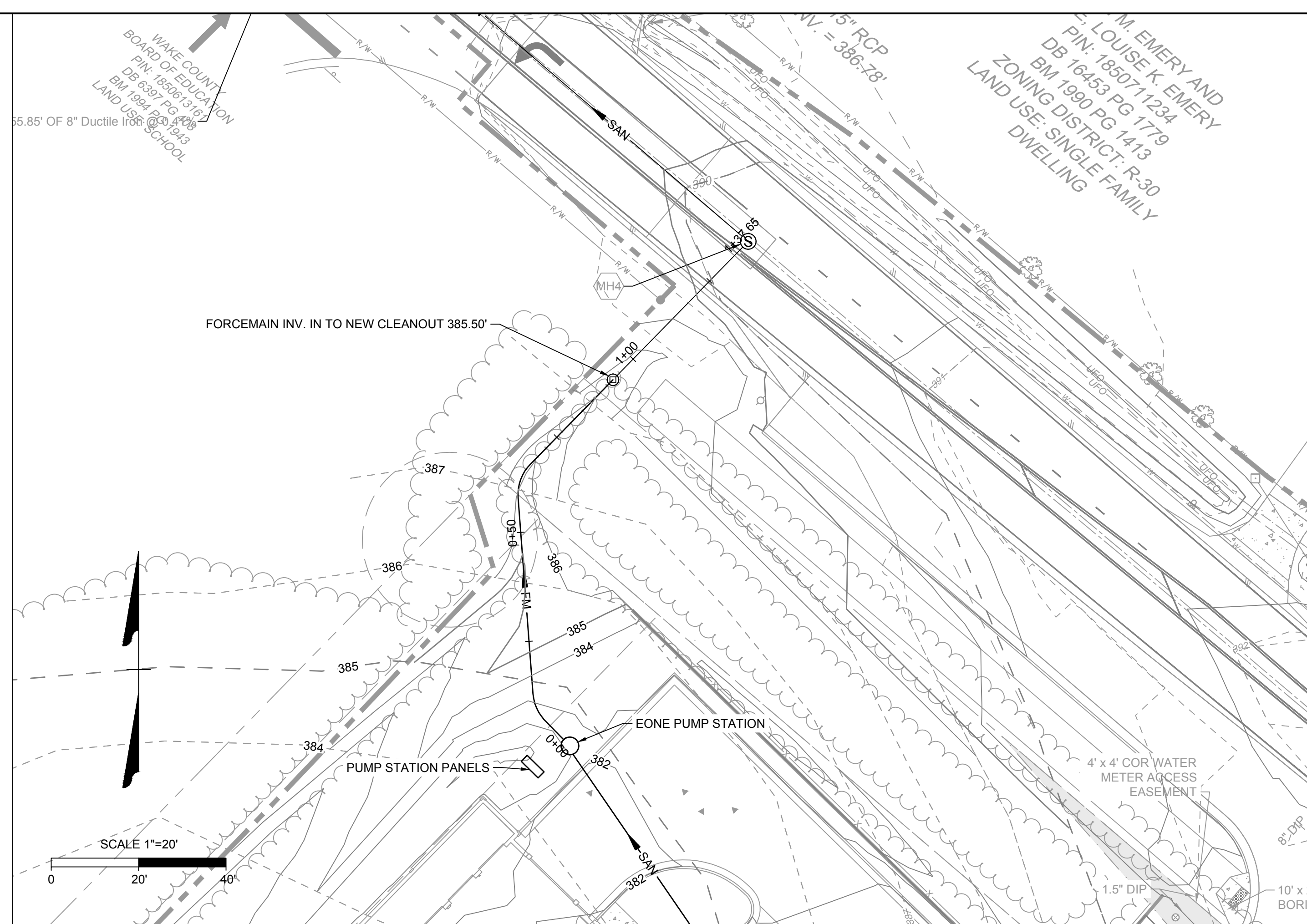
NOTE: DIMENSIONS ARE FOR REF ONLY

KC	PD	09/30/19	F
DR BY	CHK'D	DATE	ISSUE
<b>eone</b> SEWER SYSTEMS			
MODEL DH152 / DR152 DETAIL SHEET			
NA0052P02			

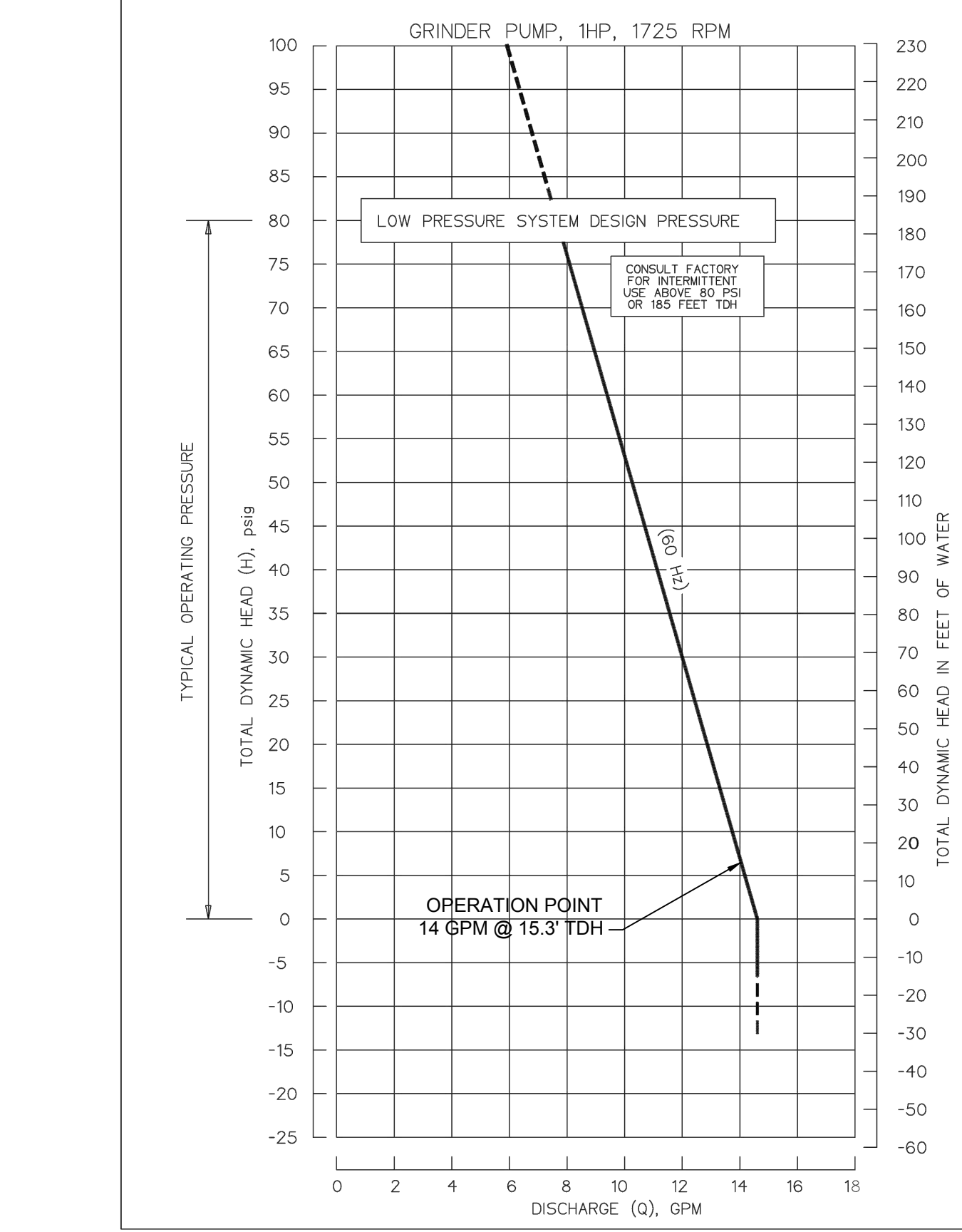
OPTIONS:  DH152-129 (HARD WIRED LEVEL CONTROLS)  
 DR152-129 (WIRELESS LEVEL CONTROLS)



AD	CAH	7/13/07	C	1/16
DR BY	CHK'D	DATE	ISSUE	SCALE
<b>eone</b> SEWER SYSTEMS				
MODEL DH152-129 / DR152-129				
NA0052P05				



EONE SPD PUMP PERFORMANCE CURVE



DESIGN CRITERIA:

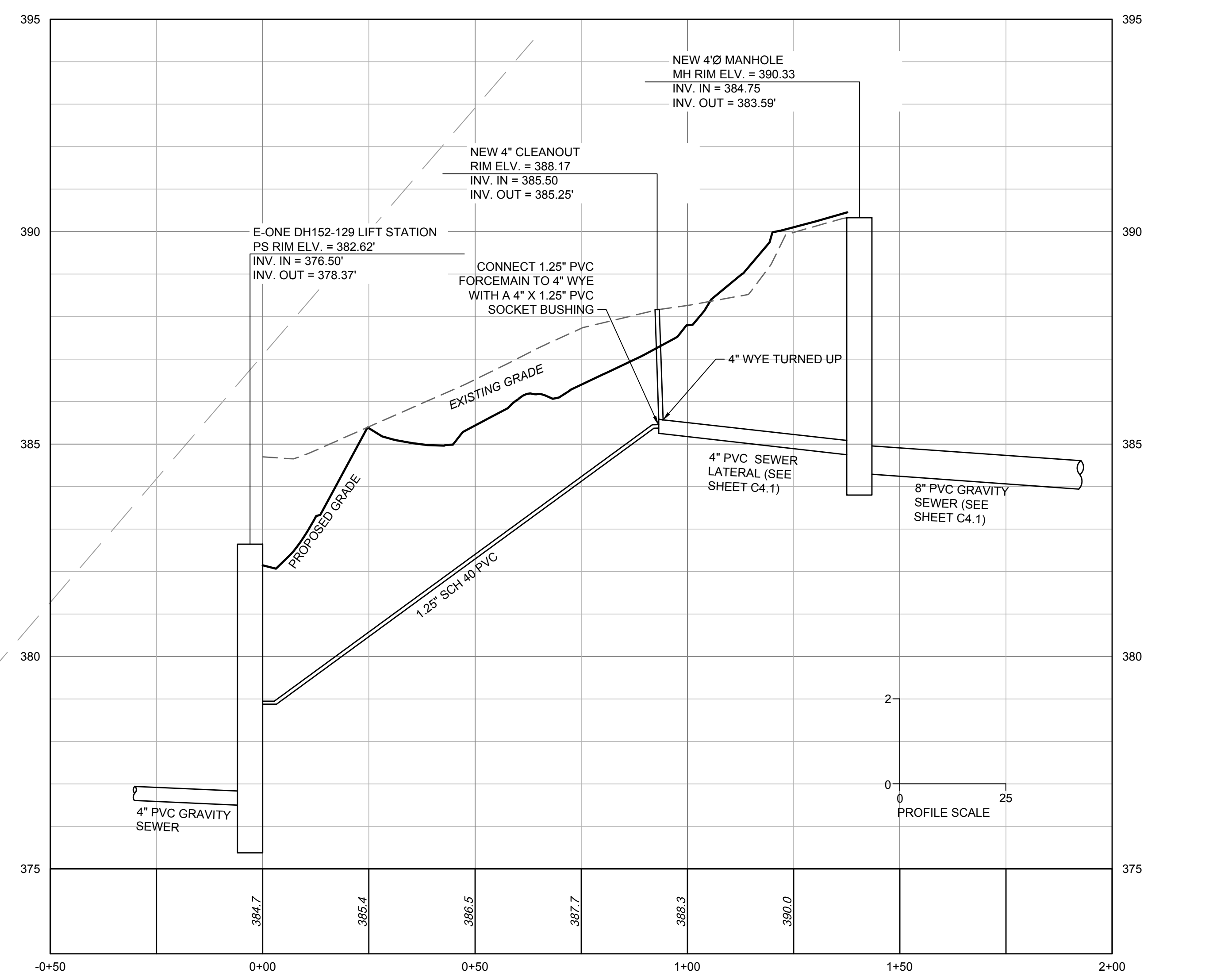
- PUMP STATION IS NOT LOCATED WITHIN 100-YR FLOODPLAIN ACCORDING TO FEMA FIRM MAP 3720185000K EFF. 07/19/2022.
- THE ROLESVILLE STORAGE FACILITY PUMP STATION HAS BEEN DESIGNED TO HANDLE AN AVERAGE DAILY FLOW OF 1,570 GALLONS PER DAY (GPD) BASED ON 15A NCAC 02T FLOW RULES: 1 GPD PER STORAGE UNIT. THE PEAK INFLUENT RATE IS 2.73 GALLONS PER MINUTE BASED ON A PEAKING FACTOR OF 2.5. THE STATION WILL BE A DUPLEX ENVIRONMENT ONE STATION (OR APPROVED EQUAL) WITH A 1.25" SCH 40 PVC FORCE MAIN, WHICH WILL DISCHARGE TO AN PROPOSED 4" CLEANOUT LOCATED AT THE RIGHT OF WAY.
- PUMP STATION FLOWS ARE HANDLED BY A SINGLE ENVIRONMENT ONE SUBMERSIBLE GRINDER PUMP OR APPROVED EQUIVALENT OPERATING AT THE RATE SHOWN BELOW. A SECOND ENVIRONMENT ONE PUMP IS PROVIDED FOR REDUNDANCY.
- THE DESIGN PUMPING RATE IS 14 GPM AT 15.3' TDH UTILIZING A SINGLE PUMP.

PUMP STATION NOTES:

- ALL PUMP STATION COMPONENTS SHALL BE SUPPLIED BY ONE MANUFACTURER: ENVIRONMENT ONE OR APPROVED EQUIVALENT.
- CONTRACTOR TO MAINTAIN A DRY EXCAVATION UNTIL ALL BACKFILLING IS COMPLETED.
- CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM PUMP STATION.
- A BACKUP GENERATOR WILL BE PROVIDED FOR THE BUILDING AND WILL BE SIZED TO SERVE THE REQUIRED PUMP STATION LOAD.

ELECTRICAL NOTES:

- ALL ABOVE-GRADE ENCLOSURES INSTALLED UNDER THIS CONTRACT SHALL BE PAD LOCKABLE AND NEMA 4X.
- ALL WIRE INSTALLED UNDER THIS CONTRACT SHALL BE COPPER.
- ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL CODES AND REGULATIONS; AND THE RECOMMENDATIONS AND REQUIREMENTS OF THE EQUIPMENT MANUFACTURERS.
- NO ELECTRICAL SPLICES ALLOWED IN WET WELL.
- ALL EXTERIOR CONDUITS SHALL BE UNDERGROUND AND SHALL BE INSTALLED PER 1996 NEC TABLE 300-5 & TABLE 300-50 AND ARTICLE 300-6 (PROTECTION AGAINST CORROSION).
- EONE CELLULAR MODEM SENTRY ADVISOR AND SENTRY PROTECT PLUS DUPLEX SHALL BE COMBINED INTO ONE PANEL.



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YOUR VISION ACHIEVED THROUGH OURS.	REVISION DESCRIPTION
DATE	CHANGED THE PUMP STATION INVERT.
07/31/2023	
DATE	
06/01/2023	
DRAWN BY	L. SOLARI
DESIGNED BY	L. SOLARI
CHECKED BY	A. KABAT
SCALE	AS SHOWN

**TIMMONS GROUP**

NORTH CAROLINA LICENSE NO. C-1652

**ROLESVILLE STORAGE FACILITY**  
TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

**PUMP STATION SITE AND FORCEMAIN**

JOB NO.  
54832

SHEET NO.  
PS1.0

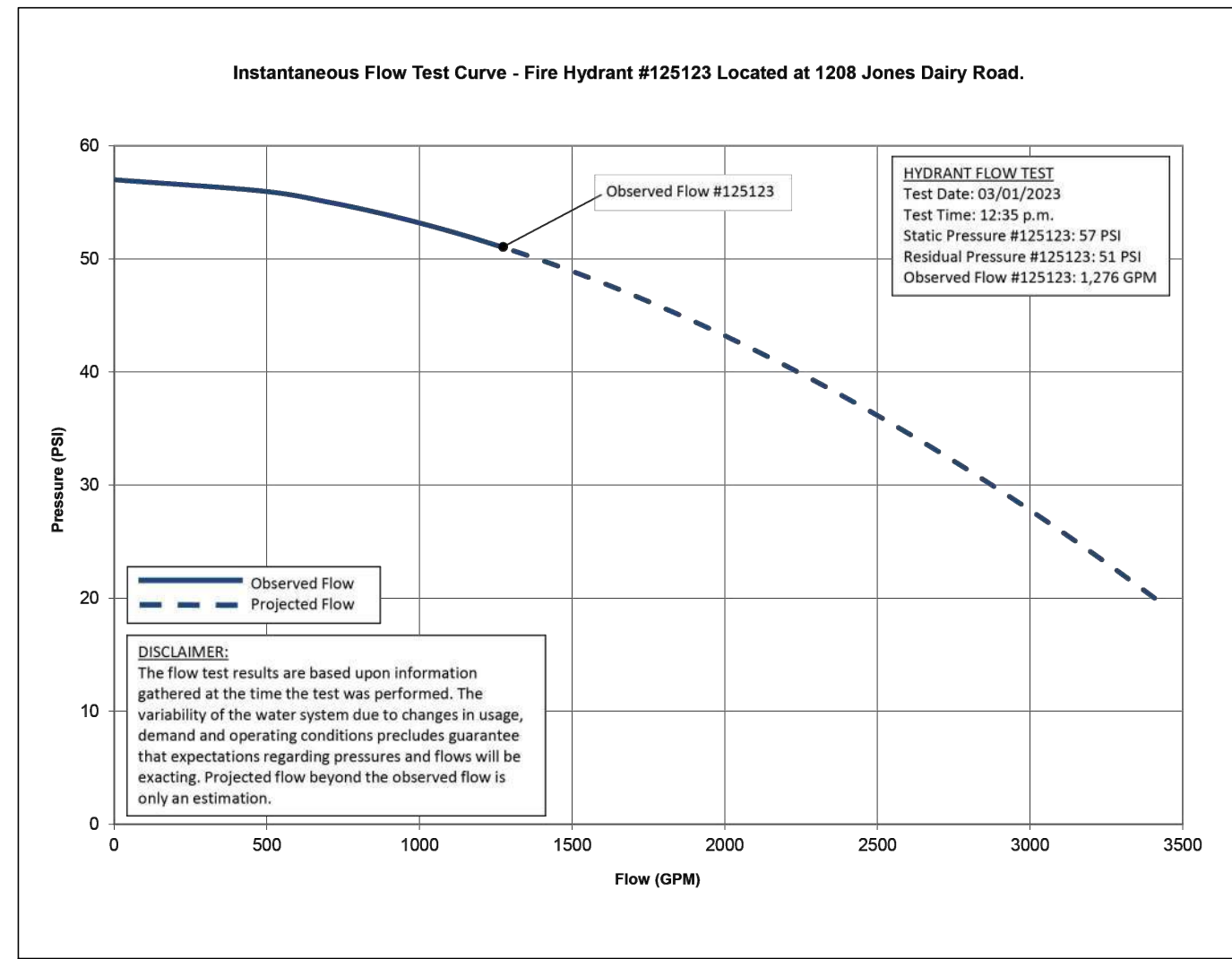
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**AVAILABLE FLOW CURVE**



**AVAILABLE FIRE FLOW**

FLOW SCENARIO	HYDRANTS			
	H-1	H-2	H-3	H-4
ELEVATION (FT)	383.4	383.4	388.0	383.3
AVAILABLE FIRE FLOW*	1,788	1,716	2,956	2,050
MINIMUM RESIDUAL PRESSURE DURING REQUIRED FIRE FLOW**	34.6	34.5	40.4	34.5

\*AVAILABLE FIRE FLOW IS MEASURED, NON-SIMULTANEOUSLY, DURING THE MAX DAILY DEMAND SCENARIO AT A SYSTEM RESIDUAL PRESSURE LIMIT OF 20 PSI.  
 \*\*1,500 GPM IS REQUIRED AT EACH ONSITE HYDRANT.

**RESIDUAL PRESSURE RESULTS (PSI)**

FLOW SCENARIO	JUNCTIONS					HYDRANTS			
	J-1	J-2	J-3	J-4	J-5	H-1	H-2	H-3	H-4
ELEVATION (FT)	391.5	388.9	383.3	383.5	383.5	383.4	383.4	388.0	383.3
STATIC	55.5	56.6	54.0	53.9	58.8	53.9	53.9	57.0	54.0
AVERAGE DAILY DEMAND (ADD)	55.5	56.6	54.0	53.9	48.7	53.9	53.9	57.0	54.0
MAXIMUM DAILY DEMAND (MDD)	55.5	56.6	54.0	53.9	48.5	53.9	53.9	57.0	54.0
MDD + SPRINKLER	54.5	55.5	51.4	51.0	47.4	51.4	51.4	56.1	51.4

**PIPE REPORT**

LABEL	LENGTH (FT)	DIA (IN.)
P-1	59	8
P-2	9	8
P-3	67	8
P-4	35	6
P-5	276	8
P-6A	9	8
P-6B	364	8
P-7	8	1.5
P-8	5	1.5
P-10	103	1.5
P-11	202	12

**DESIGN CRITERIA**

- FLOW INFORMATION WAS OBTAINED BY ASSOCIATED FIRE PROTECTION FROM ONE INSTANTANEOUS FLOW TEST ON 03/01/2023. THE FLOW TEST NODE IS THE EXISTING HYDRANT LOCATED ON THE EXISTING 12-INCH WATERLINE, AT 1208 JONES DAIRY ROAD. THE AVAILABLE FLOW CURVE IS SHOWN ON THIS SHEET.
- SYSTEM FLOW FOR IS REPRESENTED AT H-3 IN THE INCLUDED WATER MODEL LAYOUT.
- THIS WATER MODEL HAS BEEN PERFORMED TO EVALUATE AVAILABLE PRESSURE AND FLOW BASED ON THE INCLUDED WATER MODEL LAYOUT AND FLOW DEMAND CRITERIA. ALL WATERLINES WERE MODELED WITH A HAZEN-WILLIAMS ROUGHNESS COEFFICIENT OF 120.
- THE WATER MODEL LAYOUT IS BASED ON INFORMATION (SURVEY, GRADING AND SITE LAYOUT) PROVIDED BY TIMMONS GROUP.
- THE PROPOSED SYSTEM MUST MAINTAIN A MINIMUM RESIDUAL PRESSURE OF 30 PSI FOR ALL DOMESTIC SCENARIOS, AND A MINIMUM RESIDUAL PRESSURE OF 20 PSI FOR ALL FIRE SCENARIOS DURING MAXIMUM DAY DEMAND PER THE NCEQ DESIGN STANDARDS AND PROCEDURES FOR WATER DISTRIBUTION.
- GPV CURVES
  - GPV-1 = 6" WATTS 709 DCDA
  - GPV-2 = 1.5" NEPTUNE TURBINE METER
  - GPV-3 = 1.5" WATTS 009 RPZ

**FLOW DEMAND CRITERIA**

- AVERAGE DAILY DEMAND (ADD) = 1 GPD / SELF STORAGE UNIT
- 1,570 STORAGE UNITS (1.09 GPM) APPLIED AT J-5
- MAXIMUM DAILY DEMAND (MDD) = ADD X 2.5
- SPRINKLER DEMAND
- 450 GPM APPLIED AT J-4
- FIRE FLOW DEMAND
- A MINIMUM OF 1,500 GPM IS REQUIRED ON EACH ON-SITE HYDRANT.

**CONCLUSION**

- BASED ON THE INFORMATION PROVIDED, THE PROPOSED SYSTEM ADEQUATELY MEETS THE MINIMUM RESIDUAL PRESSURE REQUIREMENTS WHILE PROVIDING THE REQUIRED FLOWS FOR THE DOMESTIC AND FIRE SCENARIOS.
- THE RESULTS PRESENTED ARE BASED ON INFORMATION GATHERED AT THE TIME OF THIS ANALYSIS. THE VARIABILITY OF THE WATER SYSTEM DUE TO CHANGES IN USAGE, DEMAND, OPERATING CONDITIONS, AND LAYOUT PRECLUDES GUARANTEES OF EXACT PRESSURES AND FLOWS.
- THE PROPOSED SYSTEM MEETS BOTH TOWN OF ROLESVILLE AND NCEQ DESIGN STANDARDS



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DATE	REVISION DESCRIPTION
06/01/2023	

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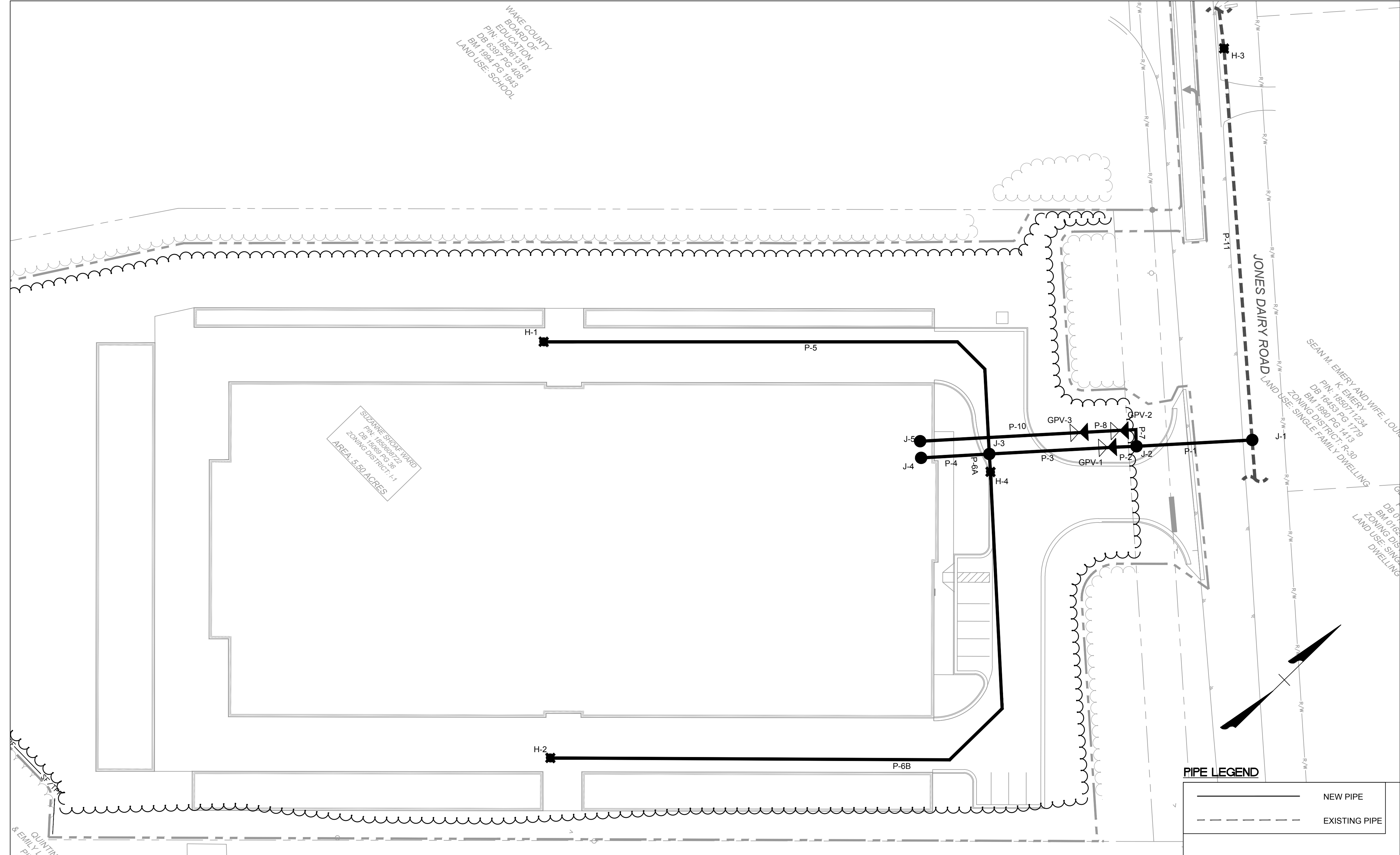
**JONES DAIRY STORAGE FACILITY**  
 TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA  
 HYDRAULIC ANALYSIS LAYOUT AND RESULTS

SEAN M. EMERY AND WIFE, LOUISIANA  
 PIN: 1858711294  
 DB: 1848 PG 1718  
 ZONING DISTRICT: R-30  
 LAND USE: SINGLE-FAMILY DWELLING

DB: 1848 PG 1718  
 ZONING DISTRICT: R-30  
 LAND USE: SINGLE-FAMILY DWELLING

QUINTON & EMERY, PLLC

JOB NO. 54832  
 SHEET NO. W1.0



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