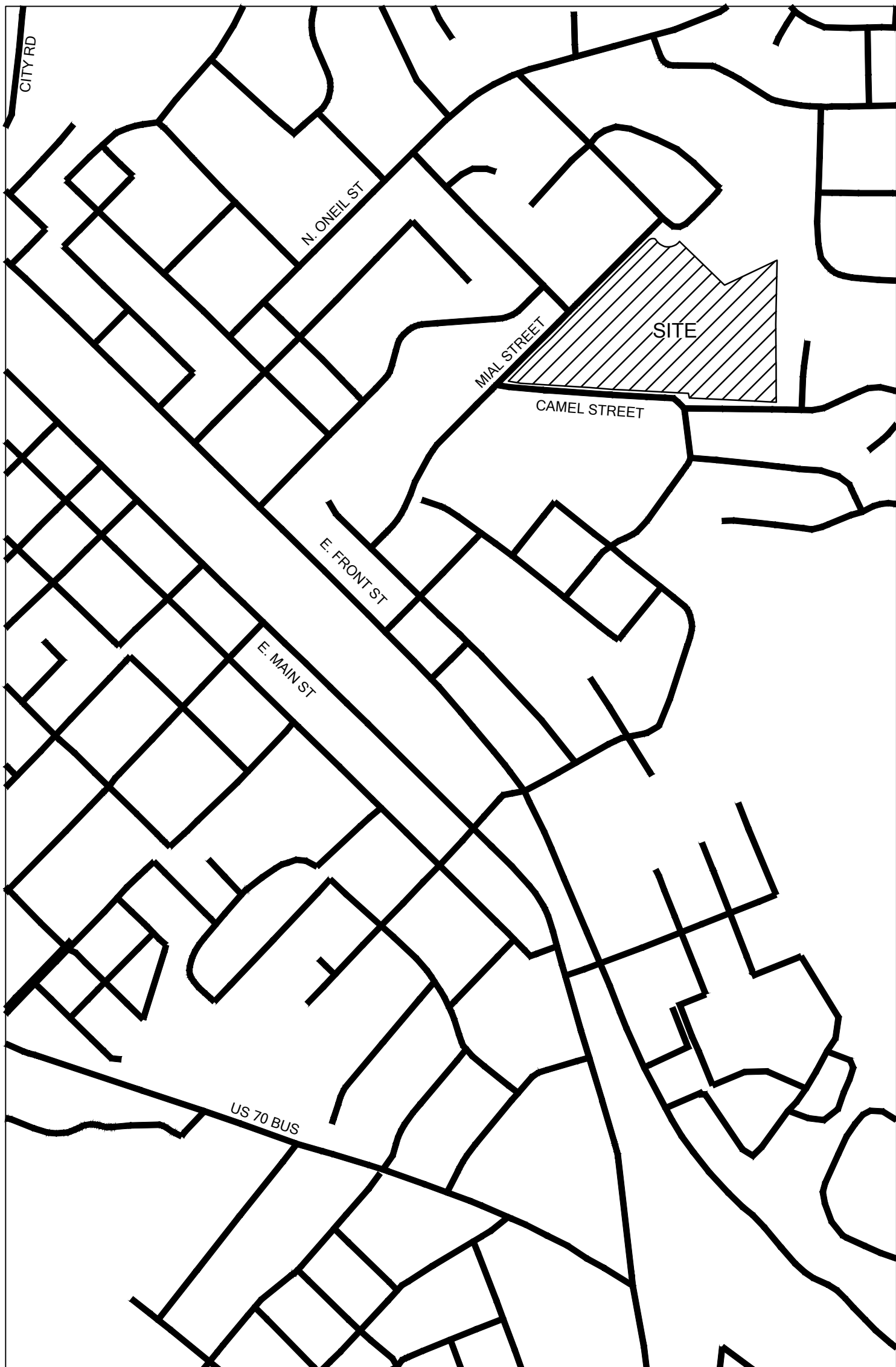


COOPER ACADEMY
ELEMENTARY SCHOOL ADDITION RENOVATION
BID SET

JOHNSTON COUNTY SCHOOLS
849 MIAL ST,
CLAYTON, NC 27520

PROJECT #
TBD

VICINITY MAP 1" = 600'



INDEX OF DRAWINGS

CIVIL	
C000	COVER SHEET
C001	OVERALL PLAN
C101	EXISTING CONDITIONS/DEMO PLAN
C201	STAKING
C202	STAKING ENLARGEMENTS
C301	GRADING PLAN
C302	STORM SYSTEM PROFILES - SHEET 1 OF 2
C303	STORM SYSTEM PROFILES - SHEET 2 OF 2
C401	INITIAL EROSION CONTROL PLAN
C402	EROSION CONTROL PLAN
C501	UTILITY PLAN
C601	LANDSCAPE PLAN
C701-C711	DETAILS

SITE DATA

TOWN OF CLAYTON SITE PLAN #	JCS COOPER ACADEMY BUILDING ADDITION/RENOVATION
PROJECT:	JOHNSTON COUNTY BOARD OF EDUCATION
OWNER:	BROOKS MOORE, CHIEF OF FACILITIES AND CONSTRUCTION
OWNER CONTACT:	2320 BUS US 70 E, PO BOX 1336 SMITHFIELD, NC 27577 PHONE: 919-319-6031 BROOKSMOORE@JOHNSTONK12.EDU
DESIGNER:	CLH DESIGN, PA
DESIGNER CONTACT:	KETH DOWNING 400 REGENCY FOREST DR., SUITE 120 CARY, NC 27518 PHONE: 919-319-6716 FAX: 919-319-7516
PROJECT ADDRESS:	849 MIAL ST., CLAYTON, NC 27520
PIN:	166914-33-1988
DEED BOOK AND PAGE:	DB 00501 PG 0020
TRACT AREA:	17.23 AC
CURRENT ZONING:	R-1
EXISTING USE:	UNFURNISHED PROTECTION OVERLAY (PARTIAL)
PROPOSED USE:	ELEMENTARY SCHOOL / INSTITUTIONAL
BUILDING SETBACKS:	FRONT-25' SIDE INTERIOR-10' SIDE STREET-15' REAR-25'
MAXIMUM BUILDING HEIGHT:	35'
MAXIMUM BUILDING COVERAGE:	35%
PARKING BUFFER:	FRONT STREET-15' SIDE STREET-15' OR SIDE/REAR-5'
PROPOSED GRA OF ADDITION:	39.289 SF
BUILDING CONSTRUCTION:	TYPE II-B
MAXIMUM IMPERVIOUS SURFACE:	55%
EXISTING IMPERVIOUS:	3.61 AC
PROPOSED IMPERVIOUS:	4.35 AC
NET IMPERVIOUS:	+ 0.74 AC
DISTURBED AREA:	5.6 ACRES
PARKING REQUIREMENTS PER UDO SECTION 6.8.4 AND 6.8.5:	
PARKING CODE VEHICULAR:	1 SPACE PER EVERY EMPLOYEE ON LARGEST SHIFT
PARKING REQ'D VEHICULAR:	86 EMPLOYEES = 86 PARKING SPACES
PARKING PROVIDED:	60 EXISTING + 70 NEW SPACES = 130 SPACES
PARKING CODE BICYCLE:	1 SPACE PER 5,000 SF FLOOR AREA
BICYCLE PARKING:	1 RACK = 2 BICYCLE PARKING SPACES 12 RACKS PROVIDED (AT MAIN ENTRY)
ACCESSIBLE PARKING:	
EXISTING MAIN ENTRY FRONT LOT (11) -	1 VAC REQUIRED, 2 VAC PROVIDED
EXISTING NORTH STAFF LOT (44) -	1 VAC 1 AC REQUIRED, 1 VAC AND 1 AC PROVIDED
EXISTING CAFETERIA LOT (3) -	1 VAC REQUIRED, 1 VAC PROVIDED
PROPOSED LOWER LOT (70) -	1 VAC AND 2 AC REQUIRED, 1 VAC AND 2 AC PROVIDED

PUBLIC INFRASTRUCTURE
TABLE

PUBLIC WATER (LF)	N/A
PUBLIC SEWER (LF)	N/A
PUBLIC STREET (LF)	N/A
PUBLIC SIDEWALK (LF)	N/A
PUBLIC GREENWAY (LF)	N/A
PUBLIC RIGHT OF WAY (SF)	N/A

QUANTITY TABLE

PRIVATE WATER	RESIDENTIAL DRIVEWAY - N/A
WATER TAPS 1/2"x3"	
3" PVC = 389-LF	
PRIVATE SEWER	
6" PVC = 85-LF	
6" DIP = 72-LF	

Town of Clayton
Planning Department
Planning Director:

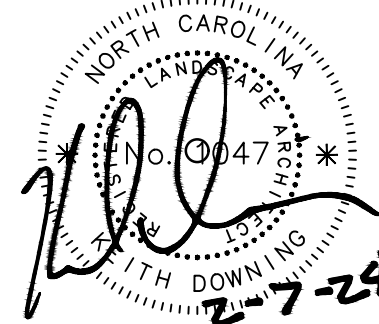
Official Document
This document has been reviewed by the Town of Clayton and to the best of our knowledge and belief, conforms to all laws, ordinances, policies and specifications that are applicable. Approval by the Town shall not relieve the Applicant/Design Professional from the responsibility for adequacy of design or for errors or omissions in the plans and specifications and meeting all applicable standards and regulations.

SITE PLAN REVIEW NOTES:
1. PER TOWN OF CLAYTON, THIS SITE DOES NOT REQUIRE ANY CORRECTION TO NONCONFORMING SITE FEATURES.
2. PER TOWN OF CLAYTON, NON-RESIDENTIAL DESIGN STANDARDS ARE NOT APPLICABLE TO THE NEW ADDITION (UDO SECTION 6.2.5.B.2).

COOPER ACADEMY
A & R

PROJECT TITLE

"CLIENT'S PROJECT" # - XXX



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1	2/27/24	ADDENDUM #2

BID DOCUMENTS

PROJECT PHASE

2307

BOOMERANG DESIGN PROJECT NUMBER

02.07.24

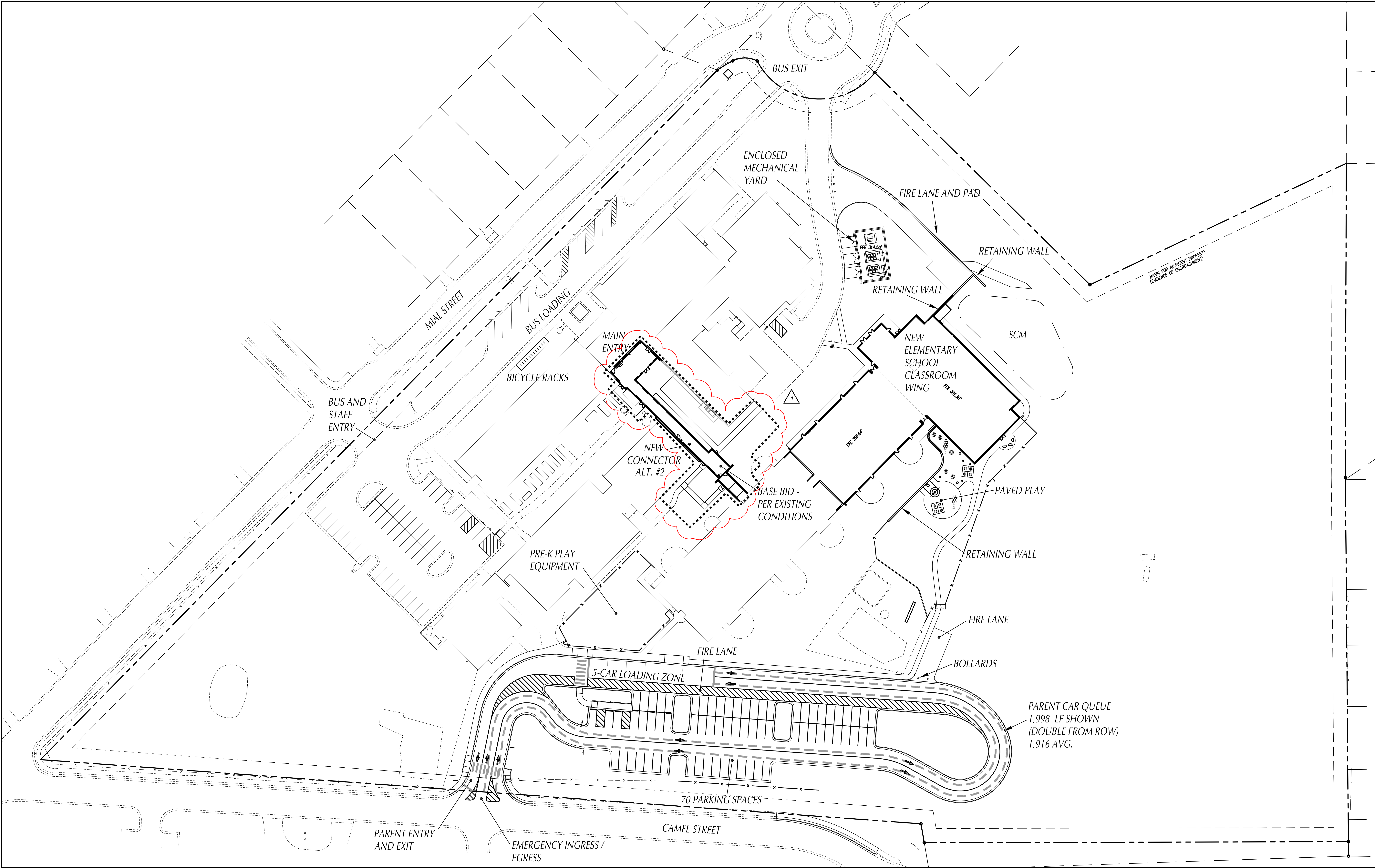
DRAWING RELEASE DATE

COVER SHEET

SHEET TITLE

C000

SHEET





boomerang
DESIGN
rethink, repurpose, results

SHARBY
207 S. Trade Street
Shelby, NC 28150
704/711-7000

CHARLOTTE
1230 W. Morehead St., Suite 214
Charlotte, NC 28208
704/711-7000

RALEIGH
6131 Falls of Neuse Rd., Suite 204
Raleigh, NC 27609
919/775-6600

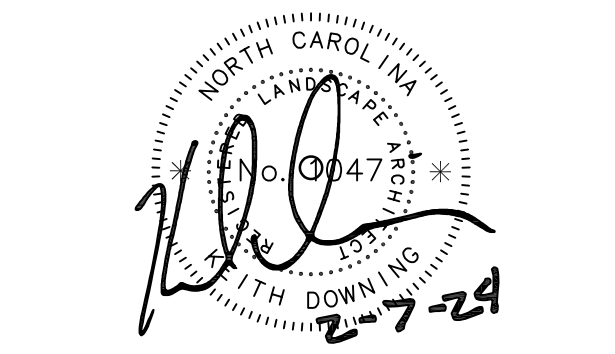
LEWINGTON
1070 S. Lake Dr., Suite J
Lewington, NC 28757
919/755-0507



CLH DESIGN, P.A.
400 Regency Forest Drive
Suite 100
Cary, North Carolina 27518
Phone: (919)319-5718
Fax: (919)319-7518
LA: C-106, PE: C-1595

COOPER ACADEMY A & R

PROJECT TITLE
"CLIENT'S PROJECT" # - XXX



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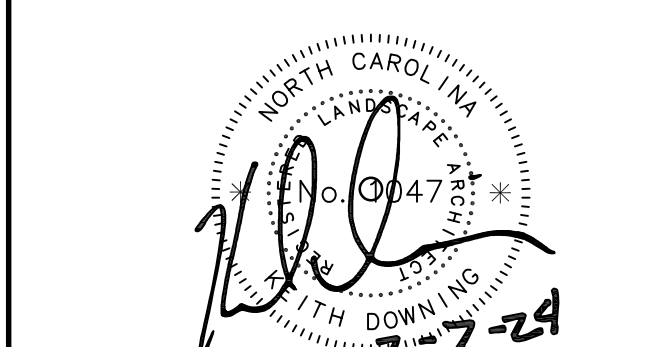
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BID DOCUMENTS
PROJECT PHASE
2307
BOOMERANG DESIGN PROJECT NUMBER
02.07.24
DRAWING RELEASE DATE

OVERALL PLAN
SHEET TITLE
C001
SHEET

COOPER ACADEMY A & R

PROJECT TITLE
"CLIENT'S PROJECT" # - XXX

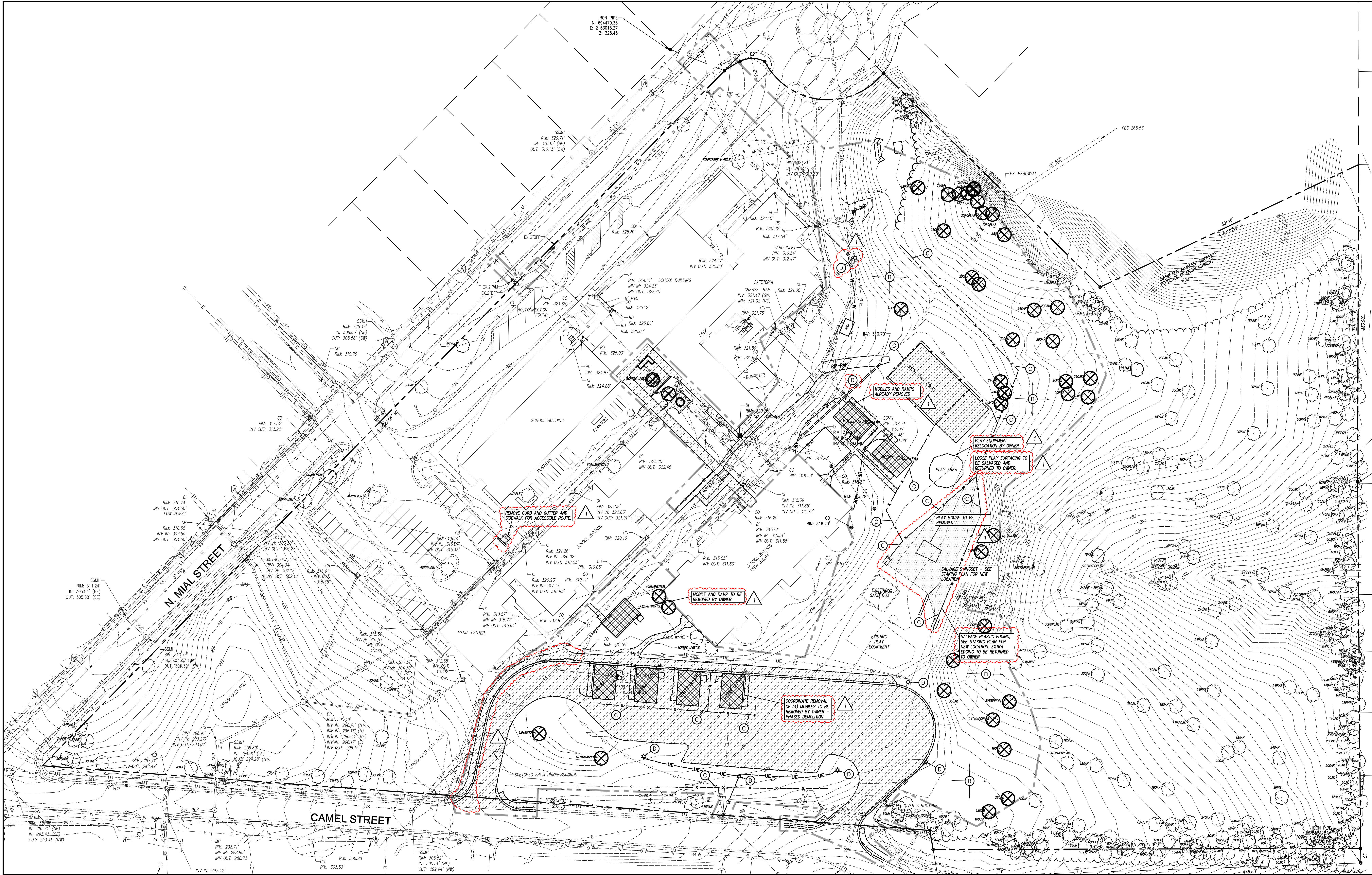


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BID DOCUMENTS
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2307
BOOMERANG DESIGN PROJECT NUMBER
02.07.24
DRAWING RELEASE DATE

DEMOLITION PLAN
SHEET TITLE
C101
SHEET



GENERAL NOTES

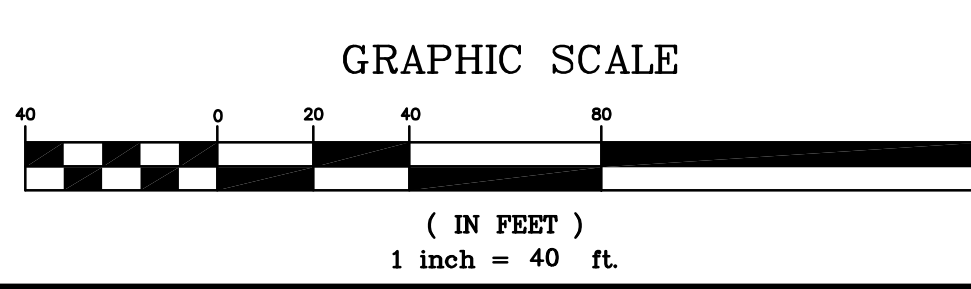
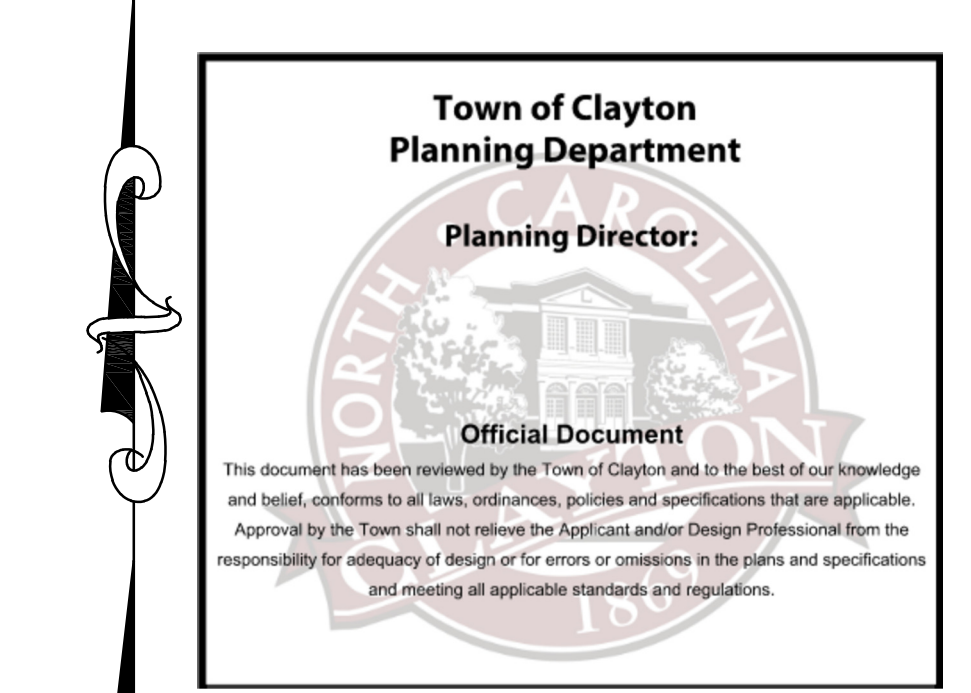
- ALL EXISTING STRUCTURES AND UTILITIES SHALL BE REMOVED AS NEEDED TO ALLOW NEW CONSTRUCTION. IN GENERAL, FEATURES INDICATED IN BOLD ON THIS PLAN SHALL BE REMOVED.
- ALL PAVEMENT OR CONCRETE TO BE REMOVED SHALL BE SAW CUT TO PROVIDE A STRAIGHT AND UNIFORM JOINT FOR NEW PAVEMENT, SIDEWALK, OR CURB AND GUTTER, ETC. ANY EXISTING PAVEMENT, SIDEWALK, CURB AND GUTTER, ETC. THAT MUST BE REMOVED TO ALLOW NEW CONSTRUCTION SHALL BE REMOVED AND REPAIRED PER THE SPECIFICATIONS AND DETAILS OR TO MATCH PRE-CONSTRUCTION CONDITIONS (WHETHER OR NOT SHOWN ON THE DRAWINGS TO BE REMOVED).
- ALL UTILITIES OR STRUCTURES NOT INDICATED FOR REMOVAL OR MODIFICATION ARE TO REMAIN AND BE PROTECTED FROM DAMAGE.
- ALL WASTE MATERIAL GENERATED FROM DEMOLITION ACTIVITIES SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL APPLICABLE RULES AND REGULATIONS.
- EXISTING SITE BOUNDARY AND TOPOGRAPHIC SURVEY INFORMATION WAS TAKEN FROM PRELIMINARY SURVEY BY STOKES SURVEYING & MAPPING, PLLC. THESE PLANS DO NOT ASSUME ANY LIABILITY FOR ANY EXISTING INFORMATION BOTH SHOWN AND NOT SHOWN ON THE SURVEY AND ANY CHANGES TO THE EXISTING CONDITIONS THAT MAY HAVE OCCURRED AFTER THE SURVEY WAS ISSUED. CONTRACTOR SHALL VERIFY ALL EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION.
- INSTALL TREE PROTECTION FENCING PRIOR TO BEGINNING CLEARING OPERATIONS. CLEAR AND GRUB ALL AREAS AS SHOWN AND REQUIRED TO PERMIT INSTALLATION OF NEW CONSTRUCTION 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). ALL CONTRACTORS SHALL VISIT THE SITE AND OBSERVE EXISTING CONDITIONS PRIOR TO BIDDING.
- TO MINIMIZE DAMAGE TO EXISTING TREES NEAR THE INTERIOR EDGE OF CLEARING LIMITS, THE CONTRACTOR SHALL CUT 2-FT DEEP TRENCHES ALONG THE LIMITS OF DISTURBANCE, SO AS TO CUT, RATHER THAN TEAR ROOTS.
- PRIOR TO DEMOLISHING EXISTING STRUCTURES, MAKE AN INSPECTION FOR ANY HAZARDOUS MATERIALS. CONTACT ARCHITECT IMMEDIATELY IF ANY HAZARDOUS MATERIALS ARE DISCOVERED. CAP AND REMOVE UTILITY
- SERVICES, FUEL TANKS AND SEPTIC SYSTEMS. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.
- VERIFY ALL ILLUSTRATED UNDERGROUND ELEMENTS/UTILITIES EXERCISE REASONABLE EFFORTS TO PROTECT ANY UNKNOWN UNDERGROUND ELEMENTS/UTILITIES. NOTIFY THE ARCHITECT IMMEDIATELY IF UNKNOWN ELEMENTS/UTILITIES ARE DISCOVERED THAT WOULD NECESSITATE MODIFICATION TO THE PROPOSED DESIGN.
- CONTACT UTILITY LOCATING SERVICE AT LEAST 48-HRS PRIOR TO EXCAVATION.
- PROTECT ALL ADJACENT PROPERTIES, THE GENERAL PUBLIC AND ALL OF THE OWNER'S FACILITIES. SHOULD DAMAGES OCCUR, REPAIR IMMEDIATELY AS DIRECTED BY THE ARCHITECT. AREAS TO BE PROTECTED, REPAIRED AND CLEANED SHALL ALSO INCLUDE ANY STAGING AREAS, ACCESS ROUTES AND OTHER EXISTING IMPROVEMENTS WITHIN THE CONSTRUCTION LIMITS THAT ARE TO REMAIN.
- ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF CLAYTON AND/OR NCOT STANDARDS AND SPECIFICATIONS.
- ALL EXISTING VAULTS, MANHOLES, STORM DRAIN STRUCTURES, CLEANOUTS, ETC. SHALL BE ADJUSTED AS NEEDED TO MATCH FINISH GRADE.
- DEMOLITION AND PATCHING OF PAVEMENT, SIDEWALK, CURB AND GUTTER AND OTHER EXISTING PAVED SURFACES IN ADDITION TO THAT INDICATED ON THIS PLAN SHALL BE PERFORMED AS REQUIRED TO CONSTRUCT AND INSTALL NEW UTILITIES. ALL SUCH DEMOLITION AND PATCHING SHALL BE INCLUDED IN THE BASE BID SCOPE OF WORK. SEE SHEET C102 FOR PAVEMENT REPAIR DETAILS.
- THIS SITE IS NOT LOCATED WITHIN SPECIAL FLOOD HAZARD AREAS AS DETERMINED BY FEMA AND DEPICTED ON F.I.R.M. MAP #1720185500K, DATED JUNE 20, 2018 AS BEING WITHIN ZONE X-OTHER AREA.
- NO WORK SHALL BE PERFORMED ON RIGHT-OF-WAYS OR ADJACENT PROPERTIES UNTIL THE OWNER NOTICES CONTRACTOR IN WRITING OF PROCUREMENT OF APPROPRIATE PERMITS, EASEMENTS, AGREEMENTS OR RIGHTS-OF-WAY.

LEGEND

STRUCTURES/UTILITIES TO BE REMOVED	STRUCTURES/UTILITIES TO REMAIN
OVERHEAD ELECTRICAL	OVERHEAD ELECTRICAL
UNDERGROUND ELECTRICAL	UNDERGROUND ELECTRICAL
FIRE PROTECTION	FIRE PROTECTION
GAS	GAS
SANITARY SEWER	SANITARY SEWER
TELEPHONE	TELEPHONE
UNDERGROUND TELEPHONE	UNDERGROUND TELEPHONE
FIBER OPTIC	FIBER OPTIC
WATER	WATER
FORCE MAIN	FORCE MAIN
STORM DRAIN	STORM DRAIN
INDIVIDUAL TREE TO BE REMOVED	INDIVIDUAL TREE TO REMAIN
LIGHT POLE	LIGHT POLE
UTILITY POLE	UTILITY POLE
MANHOLE	MANHOLE
CLEAN OUT	CLEAN OUT
DROP INLET/CATCH BASIN	DROP INLET/CATCH BASIN
FIRE HYDRANT	FIRE HYDRANT
WATER VALVE	WATER VALVE
CONSTR./CLEARING LIMITS	PAVEMENT, S/W, C&G TO BE REMOVED
GRAVEL AREA TO BE REMOVED	BUILDING TO BE REMOVED

KEY NOTES

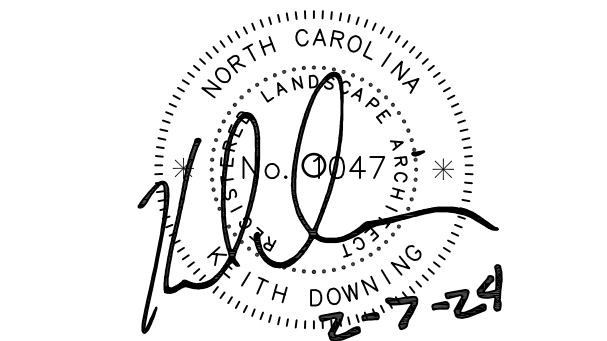
- NOT USED
- CLEAR AND GRUB, STRIP TOPSOIL WITHIN CONSTRUCTION LIMITS.
- REMOVE FENCE, SALVAGE AND STORE FABRIC TO BE REUSED. SEE STAKING PLAN FOR LOCATIONS.
- EXISTING UTILITY LINE/STRUCTURE TO BE REMOVED/RELOCATED BY LOCAL UTILITY COMPANY. LOCAL UTILITY COMPANY SHALL DETERMINE THE LIMITS AND EXTENT OF REMOVAL/RELOCATION OF UTILITIES REQUIRED FOR NEW CONSTRUCTION. COORDINATE SCHEDULE AND WORK WITH LOCAL UTILITY COMPANY AND ARCHITECT/OWNER.



COOPER ACADEMY A & R

PROJECT TITLE

"CLIENT'S PROJECT" # - XXX



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2	2/27/24		ADDENDUM #2

BID DOCUMENTS

PROJECT PHASE

2307

BOOMERANG DESIGN PROJECT NUMBER

02.07.24

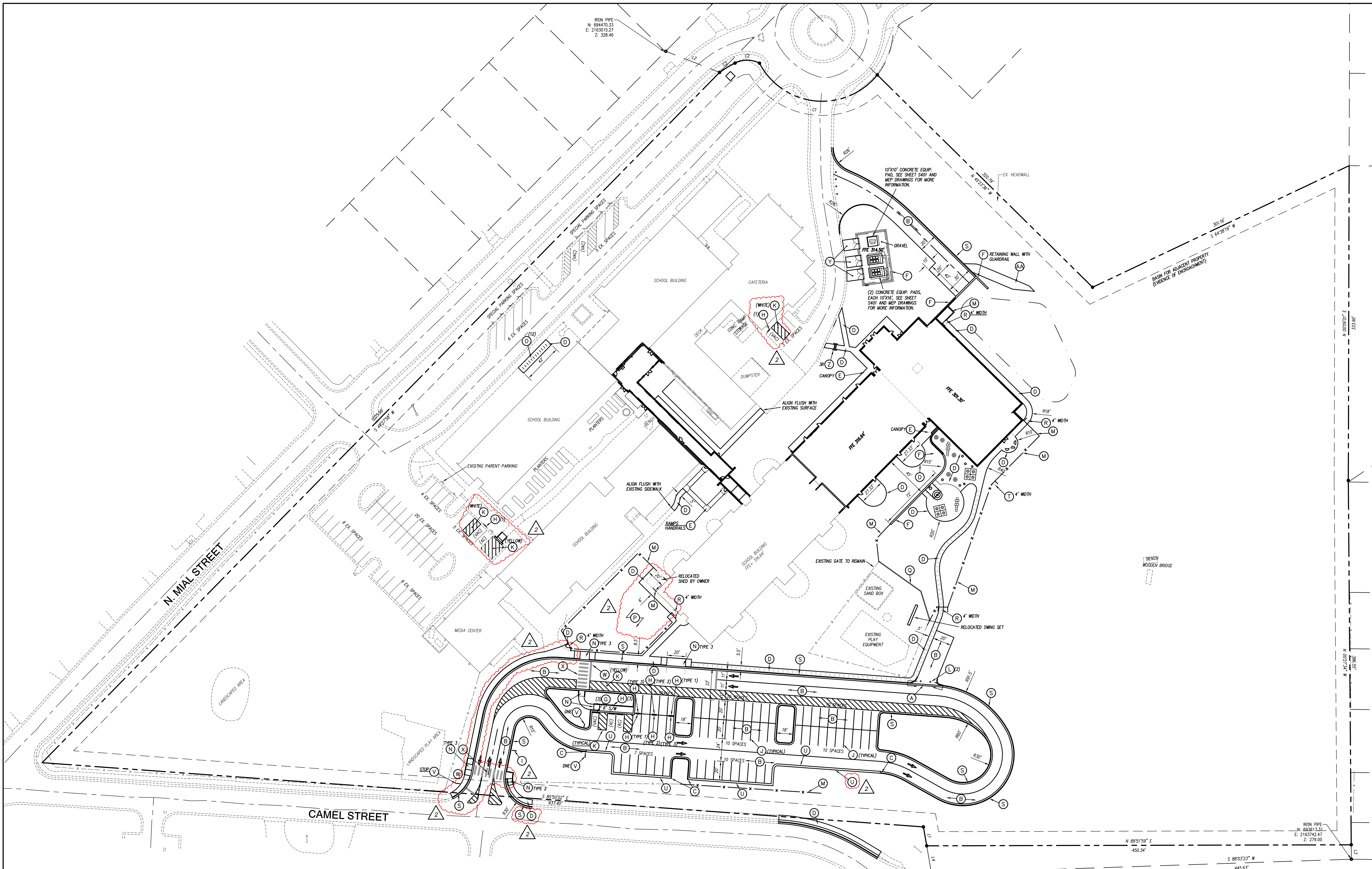
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STAKING AND PAVEMENT MARKING PLAN

SHEET TITLE

C201

SHEET



GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL TOWN OF CLAYTON AND NCDOT STANDARDS AND SPECIFICATIONS. ALL TOWN OF CLAYTON UTILITY CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH TOWN OF CLAYTON STANDARD SPECIFICATIONS AND DETAILS IN EFFECT AT TIME OF UTILITY PERMITTING.
- ALL DIMENSIONS SHOWN ARE TO FACE OF CURB AND FACE OF BUILDING WALL, UNLESS OTHERWISE SHOWN.
- CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF ALL DIMENSIONS SHOWN AND CONTACT THE ARCHITECT IF ANY DISCREPANCIES OCCUR.
- CONSTRUCTION STAKE OUT IS THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL PAVEMENT MARKINGS AND SIGNAGE SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
- ALL FACE OF RADII ARE 4 FT UNLESS OTHERWISE SHOWN.
- ALL PARKING SPACES SHALL BE 9' WIDE X 20' DEEP MIN. PER TOWN OF CLAYTON CODE OF ORDINANCES.
- (VAC) DENOTES ACCESSIBLE PARKING SPACE.
- (VAC) DENOTES VAN ACCESSIBLE PARKING SPACE.
- ANY AND ALL LANDSCAPING, EXISTING TREES OR 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.
- CONTRACTOR SHALL SUBMIT SCALED PLANS OF ALL SCORING/JOINTS FOR APPROVAL BY ARCHITECT 30 DAYS MINIMUM PRIOR TO INSTALLATION.
- THE CROSS-SLOPE ON ALL SIDEWALKS SHALL BE A MAXIMUM OF 2.0%.
- NO WORK SHALL BE PERFORMED ON RIGHT-OF-WAYS OR ADJACENT PROPERTIES UNTIL THE OWNER NOTIFIES CONTRACTOR IN WRITING OF PROCUREMENT OF APPROPRIATE PERMITS, EASEMENTS, AGREEMENTS, OR RIGHTS-OF-WAY.

TYP. PARKING DIMENSIONS

- NOTES:
- ALL DIMENSIONS ARE FROM FACE OF CURB.
 - ALL PARALLEL PARKING SPACES ARE MINIMUM OF 9' WIDE AND 22' LONG.
 - ALL VAN ACCESSIBLE AND ACCESSIBLE PARKING SPACES SHALL BE 9' WIDE BY 20' DEEP WITH A 9' AISLE.
 - ALL 90 DEGREE PARKING SPACES ARE 9' WIDE X 20' LONG.
 - ALL RADII 4' UNLESS DIMENSIONED OTHERWISE.

TRAFFIC CONTROL NOTES

- ALL SITE SIGNAGE SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND NCDOT STANDARDS.
- ALL SIGNS SHALL BE MOUNTED WITH 7-FT MIN. VERTICAL CLEARANCE TO THE BOTTOM OF THE SIGN ON 3-LB. GALV. STEEL U-CORNER POST SET IN 3-FT DEEP X 12-IN DIA. CONCRETE FOOTING.
- ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MUTCD AND NCDOT STANDARDS AND THE PROJECT SPECIFICATIONS.

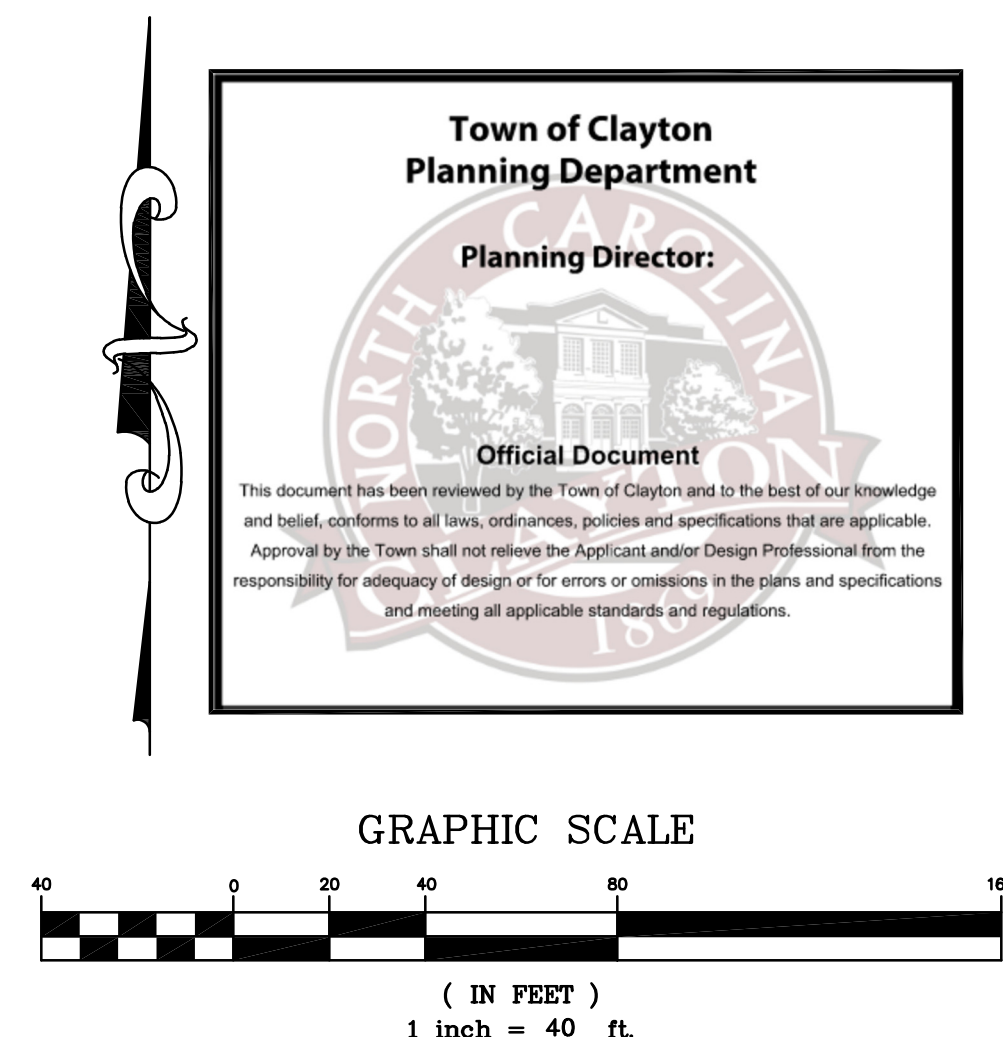
MARKING	NCDOT STD.	SIZE	COLOR
PARKING SPACES	1205.09	4'-IN	WHT.
DIAGONAL CROSSWALK	1205.07(H-VS)	24'-IN	WHT.
STOP BAR		24'-IN	WHT.

- ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC TYPE EXCEPT FOR PARKING SPACE LINES WHICH SHALL BE ALUMINUM-PAINT TYPE PAINT.
- ALL SIGNAGE SHALL BE FIELD STAKED AND THE LOCATIONS APPROVED BY CLH DESIGN PRIOR TO SIGN INSTALLATION.
- CENTER ALL DIRECTIONAL ARROWS WITHIN TRAVEL LANE.
- COORDINATE FIRE LANE MARKINGS WITH TOWN OF CLAYTON FIRE MARSHAL.
- ALL SIGNS SHALL USE PRISMATIC SHEETING THAT MEETS MINIMUM REFLECTIVITY STANDARDS FOUND IN THE LATEST EDITION OF THE MUTCD.

KEY NOTES

- ROLL CURB, SEE DETAIL SHEET C704.
- STANDARD ASPHALT, SEE DETAIL SHEET C705.
- STANDARD METHOD OF ENDING CURB AND GUTTER, SEE DETAIL SHEET C704.
- CONCRETE SIDEWALK, SEE DETAIL SHEET C704.
- SEE ARCHITECTURAL PLANS.
- CONCRETE RETAINING WALL WITH FENCING, SEE STRUCTURAL DRAWINGS.
- PRECAST CONCRETE WHEELSTOP, SEE DETAIL SHEET C705.
- ACCESSIBLE SIGNAGE, SEE DETAIL SHEET C705.
- SCHOOL DIRECTIONAL SIGNAGE, SEE DETAIL SHEET C704.
- PARKING SPACE STRIPING, SEE TRAFFIC CONTROL NOTES THIS SHEET.
- DIAGONAL STRIPING, SEE TRAFFIC CONTROL NOTES THIS SHEET.
- COLLAPSABLE BOLLARD, SEE SPECIFICATIONS SEE DETAIL C704.
- 4' HT. CHAINLINK FENCING, BLACK VINYL COATED, SEE DETAIL SHEET C704.
- ACCESSIBLE CURB CUT, SEE DETAIL SHEET C703.
- BICYCLE RADII, SEE SPECIFICATIONS SEE DETAIL SHEET C705.
- APPROXIMATE LOCATION FOR OWNER-FURNISHED, OWNER-INSTALLED PRE-K PLAY EQUIPMENT AND PLAY SURFACING.
- REINSTALL SALVAGED PLASTIC EDGING FOR EXISTING PLAY MATERIAL SURFACING.
- 4' HT. ORNAMENTAL GATE WITH PANE HARDWARE, SEE DETAIL SHEET C704.
- 24" CURB AND GUTTER, SEE DETAIL SHEET C704.
- CONCRETE BENCHES BY MAUSAL, SEE SPECIFICATIONS AND PLANS FOR MODEL #.
- CONCRETE BAND FLUSH WITH ASPHALT, SEE DETAIL SHEET C704.
- TRAFFIC CONTROL SIGNAGE, SEE NOTES THIS SHEET.

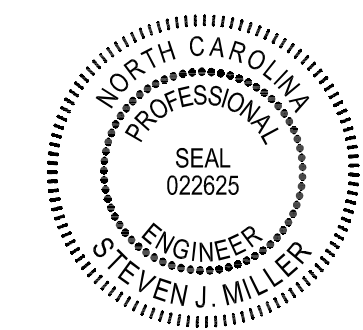
- (W) STOP BAR, SEE NOTES THIS SHEET.
- (X) HI-VIS CROSSWALK, SEE NOTES THIS SHEET.
- (Y) HEAVY DUTY CONCRETE, SEE DETAIL SHEET C704.
- (Z) CONCRETE STAIR WITH CHEEK WALLS, SEE DETAIL SHEET C705.
- (AA) 6" ABC GRAVEL ACCESS DRIVE



COOPER ACADEMY A & R

PROJECT TITLE

"CLIENT'S PROJECT" # - XXX



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1	2/20/24	ADDENDUM #1
2	2/25/24	ADDENDUM #2

BID DOCUMENTS
PROJECT PHASE
2307
BOOMERANG DESIGN PROJECT NUMBER
02.07.24
DRAWING RELEASE DATE

GRADING PLAN
SHEET TITLE

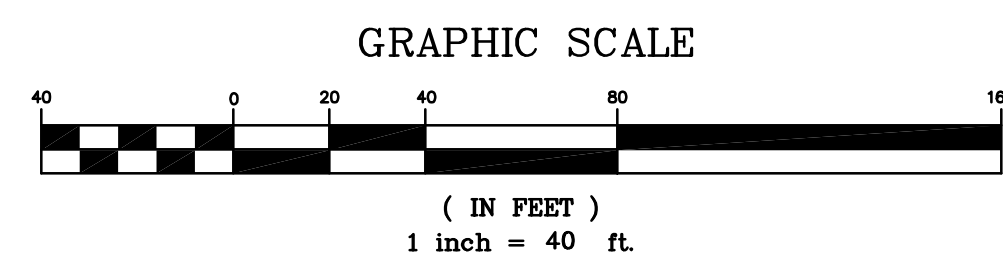
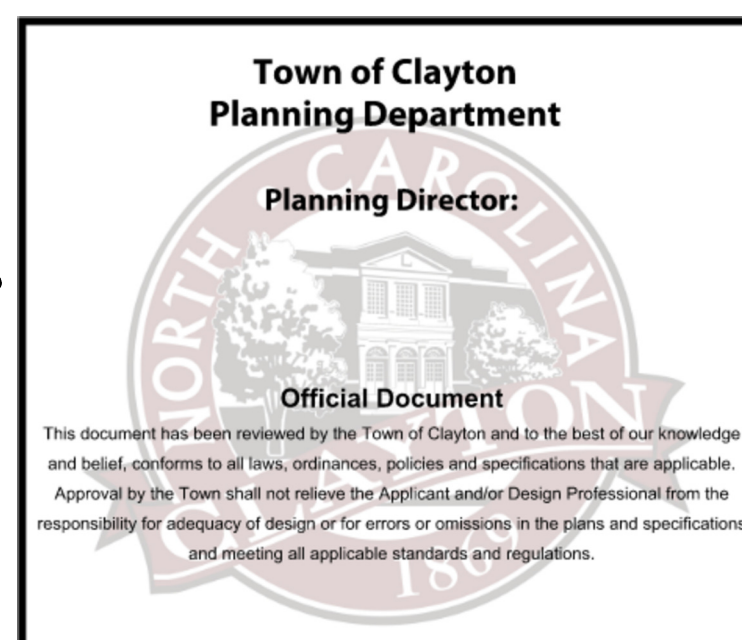
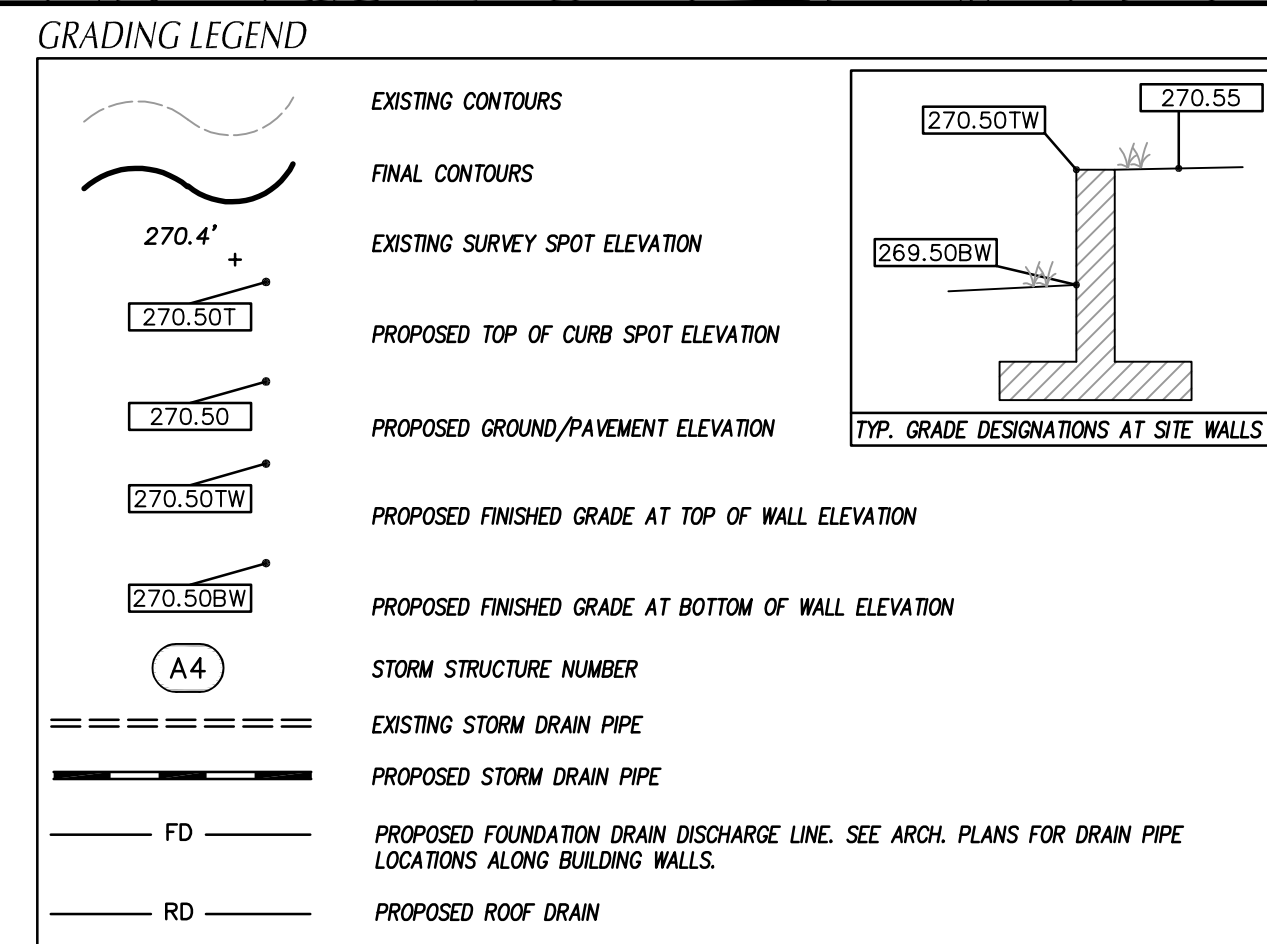
C301

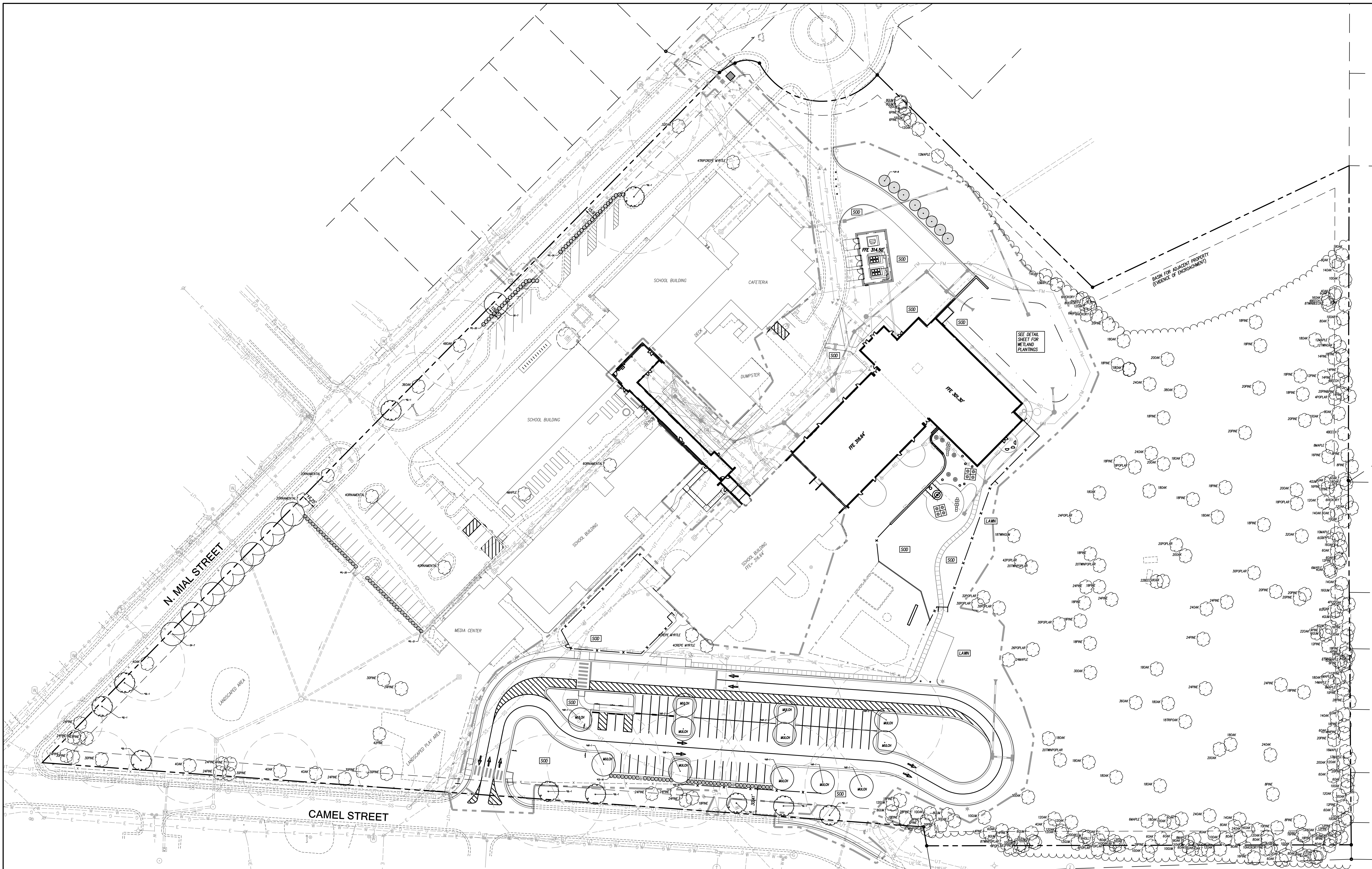
SHEET



DRAINAGE STRUCTURE SCHEDULE											
STRUCTURE NO.	PIPE	PIPE	PIPE	PIPE	UPPER	LOWER	UPSTREAM STRUCTURE DATA				NOTES
UP STRM	DN STRM	DN STRM	DN STRM	DN STRM	DI	DI	DI	DI	DI	DI	
NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.
A1	A2	0.82%	15	24	RCP	296.50	296.35	301.50	5.00	CB	(3)
A2	A3	2.88%	15	78	RCP	296.25	294.00	301.50	5.25	CB	(3)
B1	B2	4.12%	15	34	RCP	316.80	317.40	322.50	4.40	DI	
B2	B3	8.18%	15	34	RCP	317.30	315.20	321.75	4.45	DI	
B3	B4	2.04%	15	54	RCP	315.10	314.00	319.50	4.40	MH	
B4	B5	0.55%	15	73	RCP	311.30	310.80	317.00	5.70	DI	
B5	B6	1.02%	15	49	RCP	310.80	310.30	315.90	5.10	DI	
B6	B7	7.00%	15	100	RCP	310.20	303.20	315.80	5.60	DI	
B7	B8	3.87%	15	30	RCP	303.10	301.95	308.00	4.90	DI	
B8	B9	5.71%	15	35	RCP	300.00	298.00	306.50	6.50	DI	
B10	B5	0.59%	15	17	RCP	311.50	311.40	315.90	4.40	DI	
B11	B6	0.62%	15	32	RCP	300.30	300.10	305.90	5.60	CB	(3)
C1	C2	0.61%	15	41	RCP	296.10	295.85	300.50	4.40	DI	
C2	C3	0.54%	15	102	RCP	295.75	295.20	301.00	5.25	MH	
C4	C5	0.50%	15	27	RCP	295.10	294.95	300.50	5.40	MH	
D1	D2	2.13%	15	94	RCP	295.00	293.00	300.50	5.50	DI	
E1	E2	9.57%	15	115	RCP	307.00	296.00	312.00	5.00	DI	
LEGEND											
MH MANHOLE, SEE DETAIL SHEET C708.											
DI DROP INLET, SEE DETAIL SHEET C708.											
CB OPEN-THROAT CATCH BASIN, SEE DETAIL SHEET C708.											
FES PRECAST FLARED END SECTION											
(A2) STRUCTURE ID NUMBER											
NOTES											
1. TOP ELEVATION IS TOP OF RM FOR MANHOLES, TOP OF GRADE FOR DROP INLETS, TOP OF GUTTER FOR CATCH BASINS, & FINISH GRADE FOR CLEANOUTS.											
2. ALL FES INLETS & OUTLETS SHALL BE RCP.											
3. GUTTER SHALL BE DERESSED A TOTAL OF 8" FROM THE TOP OF CATCH BASIN.											

- GENERAL NOTES**
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL TOWN OF CLAYTON AND NCDOT STANDARDS AND SPECIFICATIONS.
 - ALL SPOT ELEVATIONS INDICATED AT CURB AND GUTTER ARE DOTTED TO TOP OF CURB, UNLESS OTHERWISE SHOWN.
 - TOTAL DEMOLISHED AREA = 1.4 AC.
 - CONTRACTOR SHALL ADJUST ALL EXISTING VAULTS, MANHOLES, STORM DRAIN STRUCTURES, CLEANOUTS, ETC. AS NEEDED TO MATCH FINISH GRADE.
 - ALL BACKFILL, COMPACTION, SOILS TESTING, ETC. SHALL BE PERFORMED BY THE OWNERS INDEPENDENT TESTING LABORATORY. (SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION)
 - ALL STORM DRAIN PIPES SHALL BE PROTECTED WITH STONE FILTER PROTECTION AFTER STOPPAGE OF WORK EACH DAY.
 - EXISTING VEGETATION SHALL REMAIN UNDISTURBED UNLESS NOTED OTHERWISE.
 - 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.
 - THE GRADING CONTRACTOR SHALL COMPLY WITH ALL STATE CODES IN OBSERVING EROSION CONTROL MEASURES BOTH ON AND OFF-SITE.
 - THE GRADING CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAINFALL EVENT OR AS DIRECTED BY STATE AUTHORITIES OR THE ARCHITECT.
 - THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR OFF-SITE DISPOSAL OF ALL CLEARING AND GRADING WASTE MATERIALS GENERATED DURING CONSTRUCTION AND FOR OBTAINING ALL APPLICABLE PERMITS FOR OFF-SITE STOCKPILES AND/OR WASTE AREAS.
 - THE CROSS-SLOPE ON ALL SIDEWALKS SHALL BE A MAXIMUM OF 2.0%.
 - CONTRACTOR SHALL VERIFY ALL EXISTING ELEVATIONS WHERE NEW CONSTRUCTION JOIN OR CONNECT TO EXISTING PAVEMENT, CURB AND OTHER ROAD STRUCTURES. NOTIFY ARCHITECT IF DISCREPANCIES OCCUR.

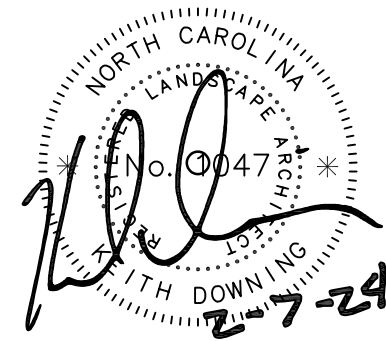




COOPER ACADEMY A & R

PROJECT TITLE

"CLIENT'S PROJECT" # - XXX



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- DO NOT SCALE OFF DIMENSIONS.

REVISIONS		NO.	DATE	DESCRIPTION
1		2/27/24		ADDENDUM #2

GENERAL NOTES-LANDSCAPING

- LOCATE ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF PLANT MATERIAL. NOTIFY OWNER OF ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND THOSE SHOWN ON THE PLAN. LIST SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND THE TOTAL QUANTITIES SHALL BE AS SHOWN ON THE PLAN.
- VERIFICATION OF TOTAL QUANTITIES AS SHOWN ON THE PLAN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND THE TOTAL QUANTITIES SHALL BE AS SHOWN ON THE PLAN.
- ALL PLANT MATERIAL SHALL CONFORM WITH THE STANDARDS SET FORTH BY THE AMERICAN ASSOCIATION OF NURSERMEN AND THE WRITTEN SPECIFICATIONS.
- ALL PLANT MATERIAL (SHRUBS/TREES) SHALL BE A MINIMUM DISTANCE OF 4 1/2 FEET FROM BACK OF CURB, EXCEPT ALONG ANY NEW WALLS ADJACENT TO PARKING WHERE CURB STOPS WILL BE USED. ALL PLANTING BEDS TO BE MULCHED WITH A MINIMUM OF 3" OF MULCH.
- ALL PLANT GROUPINGS SHALL BE MULCHED AS ONE BED. 3" OF TRIPLE SHREDED HARDWOOD MULCH SHALL BE USED AROUND ALL PLANTINGS WITH THE EXCEPTION OF BUTTER PLANTINGS.
- APPLY PRE-EMERGENT HERBICIDE TO ALL NEW PLANTING BEDS AT MANUFACTURER'S RECOMMENDED RATE PRIOR TO INSTALLATION OF MULCH.
- ESTABLISH POSITIVE DRAINAGE IN ALL PLANTING BEDS AND AWAY FROM BUILDINGS.
- DO NOT INSTALL PLANT MATERIAL IN IMPERVIOUS SOILS (1+ INCHES WHICH, WHEN FILLED WITH WATER, DO NOT COMPLETELY DRAIN WITHIN TWO HOURS). SEE SPECIFICATIONS FOR TOPSOIL REQUIREMENTS.
- LAWN AREAS SHALL BE SEED WITH RIVERA OR SUNSTAR BERMOUDA GRASS 95% COVERAGE (BASED ON A PER SQUARE YARD SAMPLE) SHALL BE ATTAINED PRIOR TO FINAL INSPECTION. SEE DETAIL SHEET FOR RATES AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- CONTACT THE LANDSCAPE ARCHITECT FOR INSPECTION 48 HOURS IN ADVANCE OF THE SCHEDULED SITE VISIT AND AT THE FOLLOWING INTERVALS:
 - REVIEW OF PLANT MATERIAL PRIOR TO INSTALLATION.
 - REVIEW OF PLANT MATERIAL PRIOR TO INSTALLATION.
 - ONE SUBSTANTIAL COMPLETION MEETING FOR PLANT INSTALLATION.
 - ONE FINAL INSPECTION FOR ALL SEEDING/PLANTING OPERATIONS.
 - TOWN OF CLAYTON WILL REQUIRE A FINAL SITE INSPECTION PRIOR TO C.O.
 - THE TREE PROTECTION FENCE SHALL BE MAINTAINED ON THE SITE UNTIL ALL SITE WORK IS COMPLETED AND THE FINAL SITE INSPECTION PRIOR TO THE CERTIFICATE OF OCCUPANCY (CO) IS SCHEDULED. THE FENCING SHALL BE

REMOVED PRIOR TO FINAL SITE INSPECTION FOR THE CO.

LANDSCAPE SUB-CONTRACTOR (UNDER GC CONTRACT) SHALL BE RESPONSIBLE FOR WATERING ALL PLANTS AND LAWN AREAS AT HIS COST FROM HIS OWN WATER SOURCE INCLUDING DURING PERIODS OF DROUGHT UNTIL THE PLANTS AND LAWN MEET FINAL COMPLETION. PLANT MATERIALS OR AREAS OF GRASS WHICH PERISH SHALL BE RE-ESTABLISHED BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.

GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ALL EQUIPMENT & SUBCONTRACTORS AWAY FROM SEEDING AREAS. IF DAMAGE OCCURS, THROUGH NO FAULT OF THE OWNER, AREAS SHALL BE REGRADED AND RESEED IMMEDIATELY AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL WATER AND MAINTAIN THOSE AREAS UNTIL THEY ARE AT 95% COVERAGE AT FINAL COMPLETION.

SUBSTITUTIONS OF PLANT MATERIAL SHALL ONLY BE ACCEPTED 60 DAYS PRIOR TO COMMENCEMENT OF PLANTING OPERATIONS. SUBSTITUTION REQUESTS MUST BE IN WRITING AND WILL ONLY BE ACCEPTED FOR LACK OF AVAILABILITY REASONS WHICH CAN BE SUBSTANTIATED OR FOR SUPERIOR STOCK SUBSTITUTIONS.

LANDSCAPE CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT TO REVIEW GRADING ONE WEEK PRIOR TO SEEDING, IF THE LANDSCAPE CONTRACTOR AND LANDSCAPE ARCHITECT FIND GRADING UNACCEPTABLE FOR FINAL SEEDING, LANDSCAPE CONTRACTOR SHALL BRING IT TO THE ATTENTION OF THE GENERAL CONTRACTOR. LANDSCAPE CONTRACTOR SHALL NOT PROCEED WITHOUT APPROVAL BY LANDSCAPE ARCHITECT.

IF CONFLICTS OCCUR BETWEEN WRITTEN SPECIFICATIONS AND THE DRAWINGS, THE WRITTEN SPECIFICATIONS SHALL PREVAIL.

ALL 3:1 SLOPES SHALL BE STABILIZED WITH EROSION CONTROL MATTING.

ALL FOUNDATION SHRUBS AND TREES TO BE PLANTED A MINIMUM OF 5-FT FROM BUILDING WALL. NOTIFY LANDSCAPE ARCHITECT FOR ANY DISCREPANCIES.

INSTALL PERMANENT SEEDING ALONG ALL ROADSIDE DITCHES AND CHANNELS WITHIN CONSTRUCTION LIMITS OF PROJECT. SEE EROSION CONTROL PLANS FOR ADDITIONAL INFORMATION.

TOWN LANDSCAPING REQUIREMENTS

6.6.11 OFF-STREET PARKING LOT LANDSCAPING
PARKING LOTS IN RESIDENTIAL DISTRICTS (OLD PROPERTY IS ZONED R-8) SHALL HAVE FRONT YARDS OF NOT LESS THAN 15 FEET AND SIDE AND REAR YARDS OF NOT LESS THAN FIVE FEET.

PARKING AREAS IN EXCESS OF FIVE SPACES SHALL PROVIDE LANDSCAPED AREAS IN ACCORDANCE WITH REQUIREMENTS.

A. INTERIOR ISLANDS SHALL BE PROVIDED EVERY 12 SPACES WITH A MIN. 180 SF AREA AND MIN. WIDTH 9 FT. 1 CANOPY TREE MIN. CALIPER 2.5" OR THREE OR MORE SHRUBS/UNDERSTORY TREES. PROPERLY PREPARED AND AMENDED STRUCTURAL SOIL IS REQUIRED IN THE ISLANDS. (PROVIDED, SEE PLANS).

B. PERIMETER SCREENING: PERIMETER OF ALL PARKING AREAS AND OTHER VEHICULAR USE AREAS WITH FRONTAGE ON OR VISIBILITY FROM ANY PORTION OF A PUBLIC RIGHT-OF-WAY SHALL BE SCREENED TO A HEIGHT OF THREE FEET AND MAINTAINED WITH A MINIMUM AND MAXIMUM HEIGHT OF 36 INCHES WITHIN TWO YEARS OF PLANTING. SHRUBS MAY BE SUBSTITUTED WITH BIRNS, FENCE, OR WALL. (PROVIDED, SEE PLANS).

C. PARKING LOTS MUST CONTAIN ONE CANOPY TREE FOR EVERY 12 SPACES; NO PARKING SPACE MAY BE MORE THAN 60 FEET FROM THE TRUNK OF A CANOPY TREE.

PERIMETER AND LANDSCAPE BUFFERS: N/A

SCREENING: MECHANICAL YARD SCREENING - SEE MECHANICAL YARD ENCLOSURE

STREET TREES: N/A

STREET YARD TREES

REQUIRED ALONG ALL ROW ONE CANOPY TREE EVERY 40 FT BETWEEN 5 AND 15 FEET FROM BACK OF SIDEWALK, 2.5" CAL. CREDIT GIVEN FOR ANY EXISTING TREE MIN. 6" WITHIN PLANTING STRIP AT 1:2

MAIL FRONTAGE/ROUNDABOUT: 1:40 IF = 20 TREES REQUIRED SPACING ALONGS EXISTING UTILS.	
EXISTING TREE VALUE	
52" OAK	2
48" OAK	2
36" OAK	2
2" ORNAMENTAL	1
2" ORNAMENTAL	1
2" OAK	1
24" PINE	2
13 EXISTING	
+15 PROVIDED	

CAMEL STREET: 630 LF = 21 TREES REQUIRED	
EXISTING TREE VALUE	
52" OAK	2
48" OAK	2
36" OAK	2
2" ORNAMENTAL	1
2" ORNAMENTAL	1
2" OAK	1
24" PINE	2
24" PINE	2
24" PINE	2
18" PINE	2
21 EXISTING	
+5 PROVIDED	

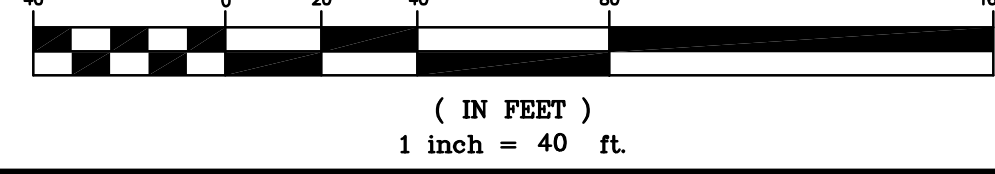
NOTE: 6 TREES WERE PROVIDED ALONG CAMEL STREET TO PROVIDE CODE-REQUIRED SPACING.

PLANT SCHEDULE - TBD

KEY	QTY	PLANT NAME	MINIMUM SIZE	REMARKS
TREES (LARGE DECAIDUOUS)				
AR	12	RED MAPLE Acer rubrum 'October Glory'	2.5" CAL. 8' HT.	CONT. STRAIGHT TRUNK FULL CROWN
QL	10	OVERCUP OAK Quercus imbricaria 'Highborn'	2.5" CAL. 8' HT.	CONT. STRAIGHT TRUNK FULL CROWN
TREES (LARGE EVERGREEN)				
JV	8	EASTERN RED CEDAR Juniperus virginiana 'Brodia'	8" MIN. HT.	LOOSELY STAKED, 12" O.C. STRAIGHT TRUNK
TREES (SMALL DECAIDUOUS)				
OK	10	KOUSA DOGWOOD Cornus kousa	2" CAL. 6' HT.	CONT. STRAIGHT TRUNK FULL CROWN
SHRUBS				
CS	44	CAMELLIA Camellia japonica	24" HT.	FULL PLANTS
PL	79	DWARF CHERRY LAUREL Prunus laurocerasus 'Otto Luyken'	1.0 CAL. CONT. 24" HT.	MATCHING 5' O.C. FULL PLANTS

NOTE: PLANT CALLOUTS WITH AN *ASTERISK ON THE PLAN ARE REQUIRED IN ORDER TO MEET THE TOWN OF CLAYTON'S LANDSCAPE ORDINANCE.

GRAPHIC SCALE



BID DOCUMENTS

PROJECT PHASE

2307
BOOMERANG DESIGN PROJECT NUMBER

02.07.24

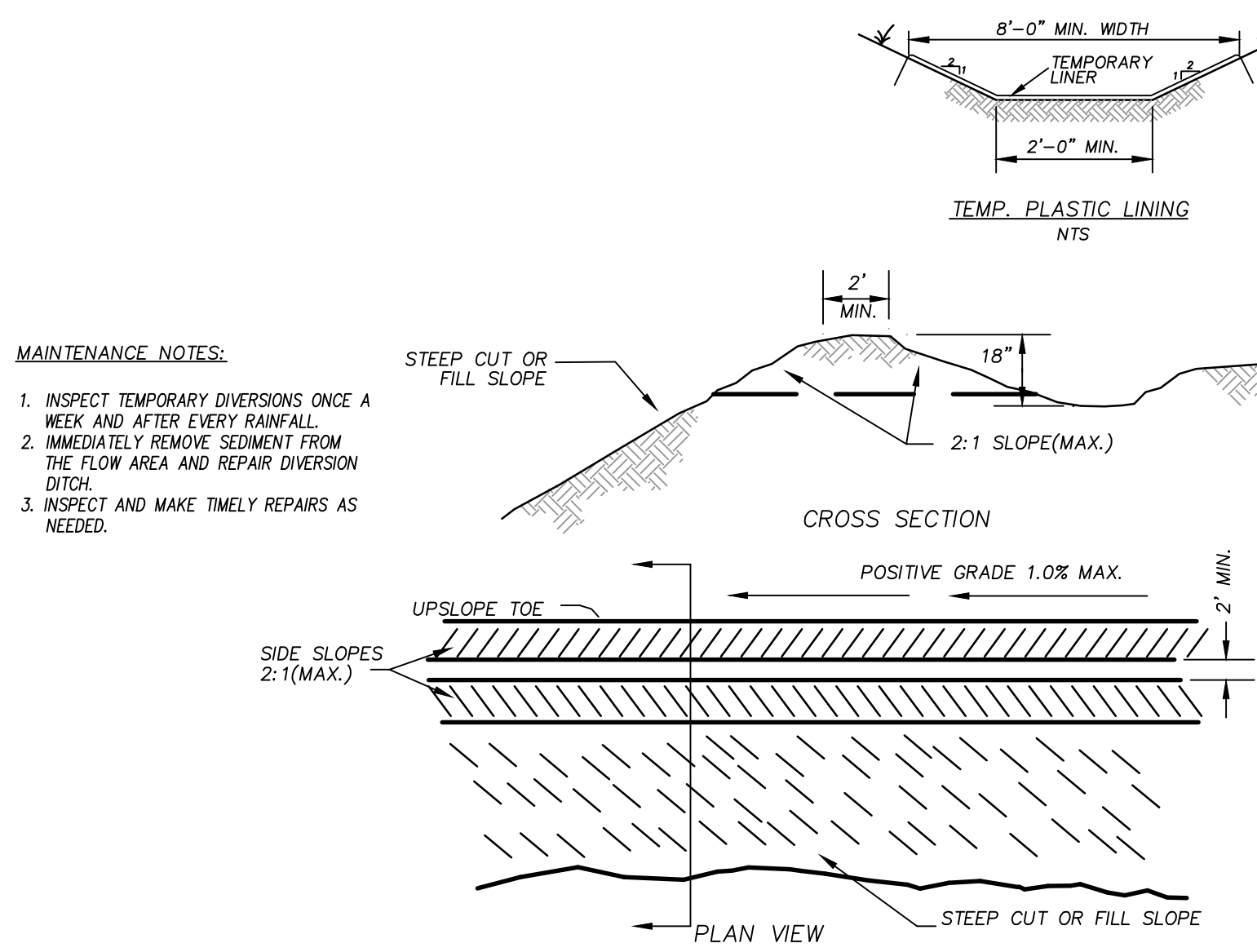
DRAWING RELEASE DATE

LANDSCAPING PLAN

SHEET TITLE

C601

SHEET



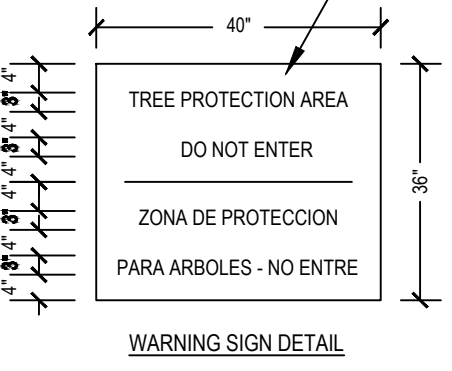
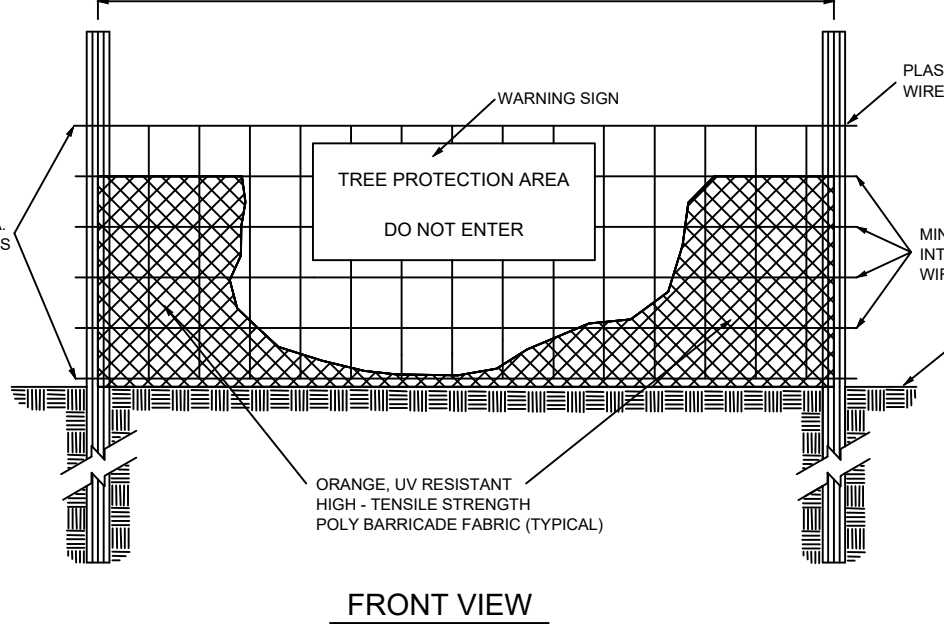
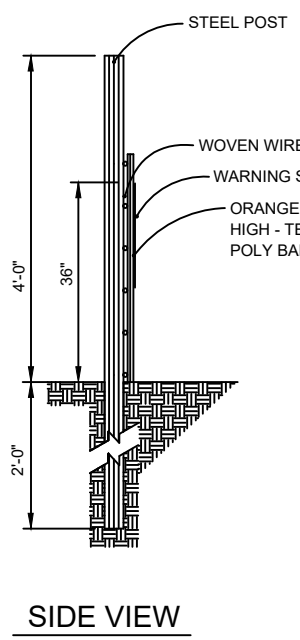
DIVERSION DITCH SCHEDULE

DITCH	BOTTOM WIDTH (FT)	SIDE SLOPE (H:V)	CHANNEL GRADE	CHANNEL LENGTH	TEMP. LINING	MIN. TOP WIDTH OF LINING (FT)
DIV-1	1	3:1	5.0%	240 LF	EXCELSTON	10
DIV-2	1	3:1	2.5%	280 LF	EXCELSTON	10

- CONSTRUCTION SPECIFICATIONS**
1. REMOVE AND PROPERLY DISPOSE OF ALL TREES, BRUSH, STUMPS, AND OTHER OBJECTIONABLE MATERIALS.
 2. ENSURE THAT THE MINIMUM CONSTRUCTED CROSS SECTION MEETS ALL DESIGN REQUIREMENTS.
 3. ENSURE THAT THE TOP OF THE DIKE IS NOT LOWER AT ANY POINT THAN THE DESIGN ELEVATION PLUS THE SPECIFIED SETTLEMENT.
 4. PROVIDE SUFFICIENT ROOM AROUND DIVERSIONS TO PERMIT MACHINE REGRADING AND CLEANOUT.
 5. VEGETATE THE RIDGE IMMEDIATELY AFTER CONSTRUCTION, UNLESS IT WILL REMAIN IN PLACE LESS THAN 30 WORKING DAYS.
 6. APPLY SOLID PLASTIC (BLACK, 20 MIL) LINING ON SURFACE OF DIVERSION DITCH ON ANY SLOPES GREATER THAN 10% ENTERING BASINS/PONDS.

TEMPORARY DIVERSION DITCH

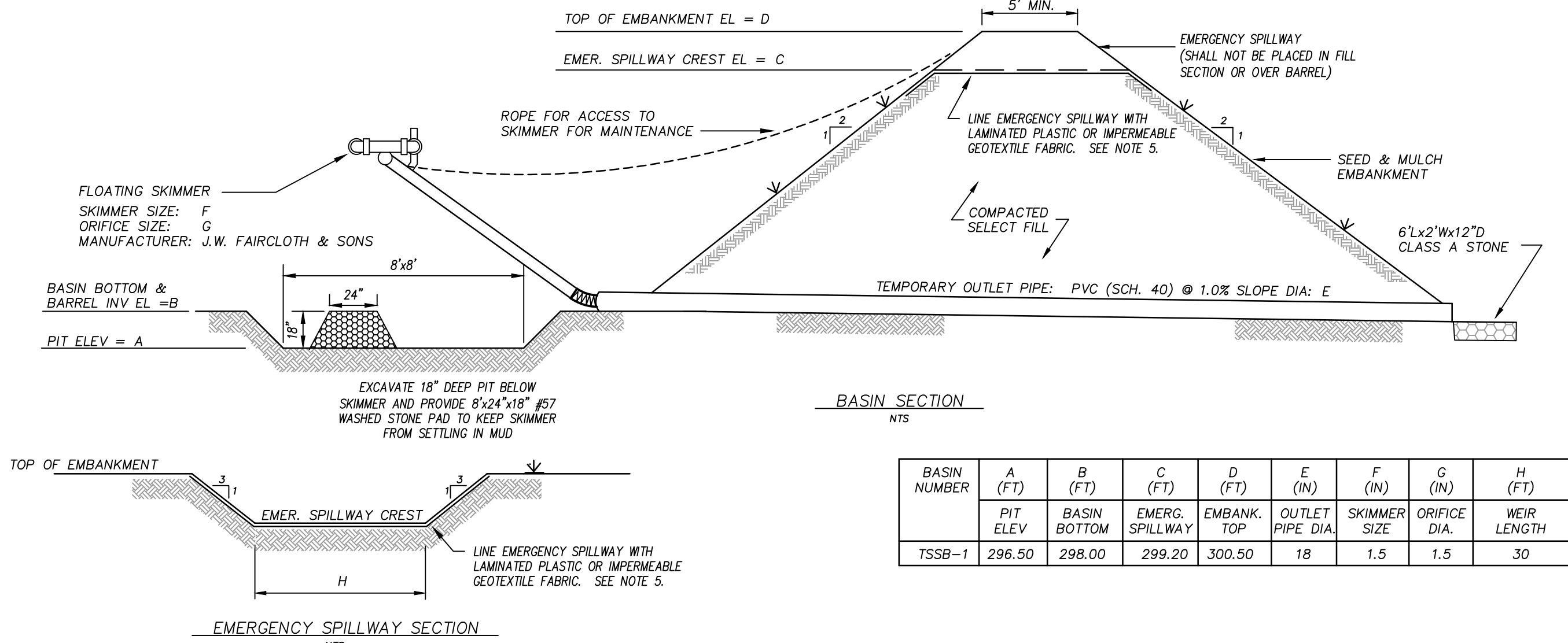
N.T.S.



- NOTES:**
1. TREE PROTECTION FENCING MUST BE INSTALLED AT A MINIMUM RADIUS OF THE CRITICAL ROOT ZONE (SEE DETAIL, TREE PROTECTION FOR EXAMPLES).
 2. THE TREE PROTECTION FENCING MUST REMAIN IN PLACE FOR THE DURATION OF THE PROJECT UNLESS OTHERWISE APPROVED BY URBAN FORESTRY DEPT.
 3. APPROVED IMPACT PROTECTION DEVICES MUST BE REMOVED AFTER CONSTRUCTION WHEN APPLICABLE.
 4. SIGNS SHALL BE PLACED AT 60' MAXIMUM INTERVALS. PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AND 50' ON CENTER FOR THE REMAINDER.
 5. FOR TREE PROTECTION AREAS LESS THAN 200' IN PERIMETER, PROVIDE NO LESS THAN ONE SIGN PER PROTECTED AREA.
 6. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC.
 7. ADDITIONAL SIGNS MAY BE REQUIRED BY CITY OF RALEIGH BASED ON ACTUAL FIELD CONDITIONS.
 8. SIGNS ARE TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL WITH LETTERS A MINIMUM OF 2" HIGH, CLEARLY LEGIBLE AND SPACED AS SHOWN.

TREE PROTECTION FENCING

N.T.S.



BASIN NUMBER	A (FT)	B (FT)	C (FT)	D (FT)	E (IN)	F (IN)	G (IN)	H (FT)
PIT ELEV								
BASIN BOTTOM	296.50	298.00	299.20	300.50	18	1.5	1.5	30
EMERG. SPILLWAY								
EMBANK. TOP								
OUTLET PIPE DIA.								
SKIMMER SIZE								
ORIFICE DIA.								
WEIR LENGTH								

CONSTRUCTION NOTES:

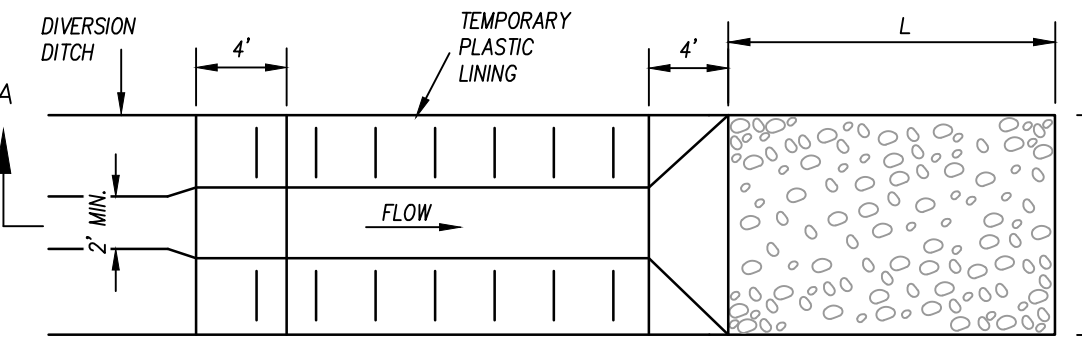
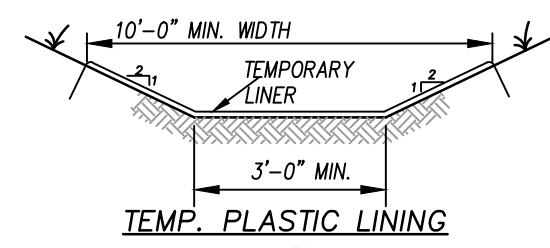
1. PLACE TEMPORARY SEDIMENT CONTROL MEASURES BELOW BASIN AS INDICATED. CLEAR, GRUB AND STRIP THE AREA UNDER THE EMBANKMENT OF ALL VEGETATION AND ROOT MAT. REMOVE ALL SURFACE SOILS CONTAINING HIGH AMOUNTS OF ORGANIC MATTER.
2. PLACE OUTLET BARREL ON A FIRM, SMOOTH FOUNDATION OF MEANUSOUS SOIL. DO NOT USE PERVIOUS MATERIAL SUCH AS SAND, GRAVEL OR CRUSHED STONE AS BACKFILL AROUND PIPE. PLACE FILL MATERIAL AROUND PIPE IN 4-IN LAYERS AND COMPACT IT UNDER AND AROUND THE PIPE TO AT LEAST 80% OF THE STANDARD PROCTOR DENSITY. CARE SHALL BE TAKEN TO NOT RAISE THE PIPE FROM FIRM CONTACT WITH ITS FOUNDATION.
3. ASSEMBLE THE SKIMMER IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ATTACH SKIMMER TO BARREL PIPE WITH FLEXIBLE JOINT AND POSITION THE SKIMMER OVER THE EXCAVATED PIT. ATTACH A ROPE TO THE SKIMMER AND ANCHOR IT TO THE SIDE OF THE BASIN.
4. EMBANKMENT SHALL BE CONSTRUCTED OF CLEAN STRUCTURAL SOIL, FREE OF ROOTS, VEGETATION, ROCKS & OTHER OBJECTIONABLE MATERIAL. SCARPY SURFACES BEFORE PLACING FULL PLACE FILL IN 6-8 INCH LOOSE LIFTS. COMPACT TO AT LEAST 80% OF THE STANDARD PROCTOR DENSITY.
5. LINE THE ENTIRE EMERGENCY SPILLWAY WITH LAMINATED PLASTIC OR IMPERMEABLE GEOTEXTILE FABRIC. FABRIC SHALL BE WIDE ENOUGH TO COVER THE BOTTOM AND SIDES OF THE SPILLWAY AND EXTEND ONTO THE TOP OF THE DAM FOR ANCHORING IN A TRENCH. THE EDGES SHALL BE SECURED WITH 8-IN STAPLES OR PINS. THE FABRIC SHALL BE LONG ENOUGH TO EXTEND DOWN THE SLOPE AND EXT ONTO STABLE GROUND. THE WIDTH OF THE FABRIC SHALL BE ONE PIECE, NOT JOINED OR SPICED. 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 SECTIONS SHALL OVERLAP THE LOWER SECTIONS SO WATER CANNOT FLOW UNDER THE FABRIC. SECURE THE UPPER EDGE AND SIDES OF THE FABRIC IN A TRENCH WITH STAPLES OR PINS.
6. INSTALL BAFELS ACROSS BOTTOM OF BASIN.

MAINTENANCE NOTES:

1. INSPECT DEVICE AFTER EACH RAINFALL REMOVE SEDIMENT WHEN SEDIMENT REACHES A DEPTH OF NO MORE THAN ONE-HALF THE HEIGHT OF THE RISER. REPAIR BAFELS IF THEY ARE DAMAGED.
2. PULL SKIMMER TO SIDE OF BASIN WITH ROPE AND INSPECT REGULARLY. KEEP SKIMMER HEAD, ORIFICE AND PIPE FREE OF DEBRIS. REMOVE SEDIMENT FROM BENEATH SKIMMER AND ENSURE VEGETATION DOES NOT INTERFERE WITH SKIMMER OPERATION.
3. CHECK FABRIC LINED SPILLWAY FOR DAMAGE AND MAKE ANY REPAIRS WITH FABRIC THAT SPANS THE FULL WIDTH OF THE SPILLWAY.

PLASTIC LINING OUTLET PROTECTION

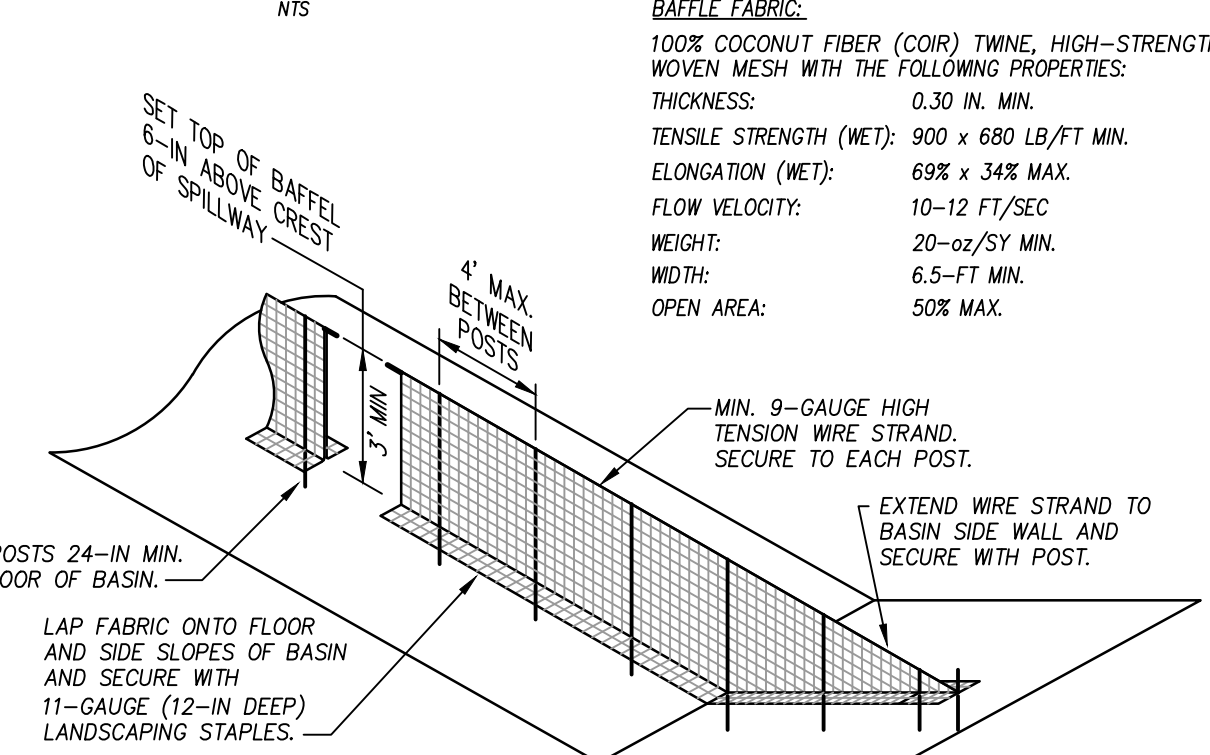
TYPE OUTLET PROTECTION	L (FT)	W (FT)	TH (IN)	TYPE STONE
TYPE 1	18	9	22	CLASS B
TYPE 2	24	9	27	CLASS 1
TYPE 3	30	9	32	CLASS 2



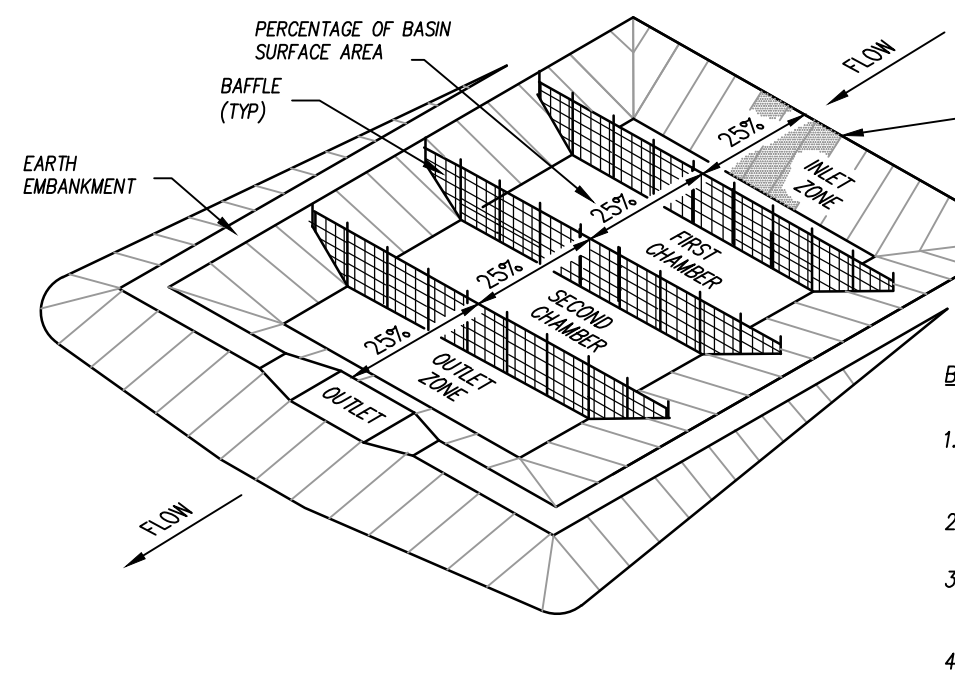
* WEIR IS RIM OF SCM OUTLET STRUCTURE.

TEMP. PLASTIC LINING OUTLET PROTECTION

N.T.S.



BAFFLE INSTALLATION

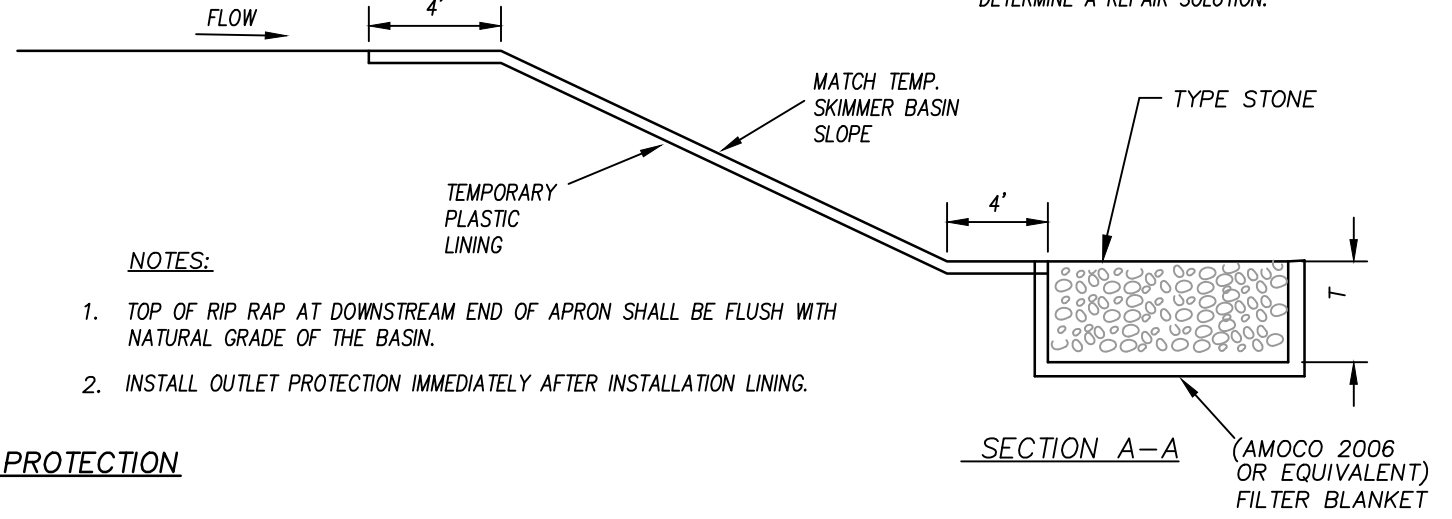


BAFFLE PLACEMENT

- BAFFLE NOTES:**
1. INSTALL AT LEAST 3 BAFELS SPACED AS SHOWN. BASINS LESS THAN 20-FT IN LENGTH MAY USE 2 BAFELS.
 2. DO NOT SPICE FABRIC. USE CONTINUOUS PRICE ACROSS THE BASIN.
 3. INSPECT BAFELS AT LEAST ONCE PER WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
 4. SHOULD BAFLE FABRIC COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE PROMPTLY.
 5. TAKE CARE TO AVOID DAMAGE TO BAFELS DURING PERIODIC SEDIMENT REMOVAL. REPAIR ANY DAMAGE AS NEEDED.

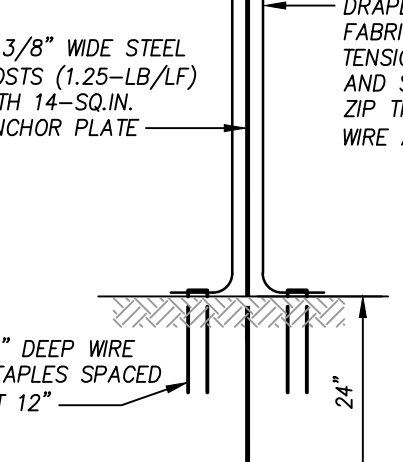
MAINTENANCE NOTES:

1. RIP RAP OUTLET STRUCTURES TO BE INSPECTED WEEKLY AND AFTER EVERY RAINFALL EVENT.
2. REPAIR DISCLOSED STONES TO DESIGN DIMENSIONS IMMEDIATELY.
3. IF MORE SUBSTANTIAL DAMAGE OCCURS, NOTIFY ENGINEER TO DETERMINE A REPAIR SOLUTION.



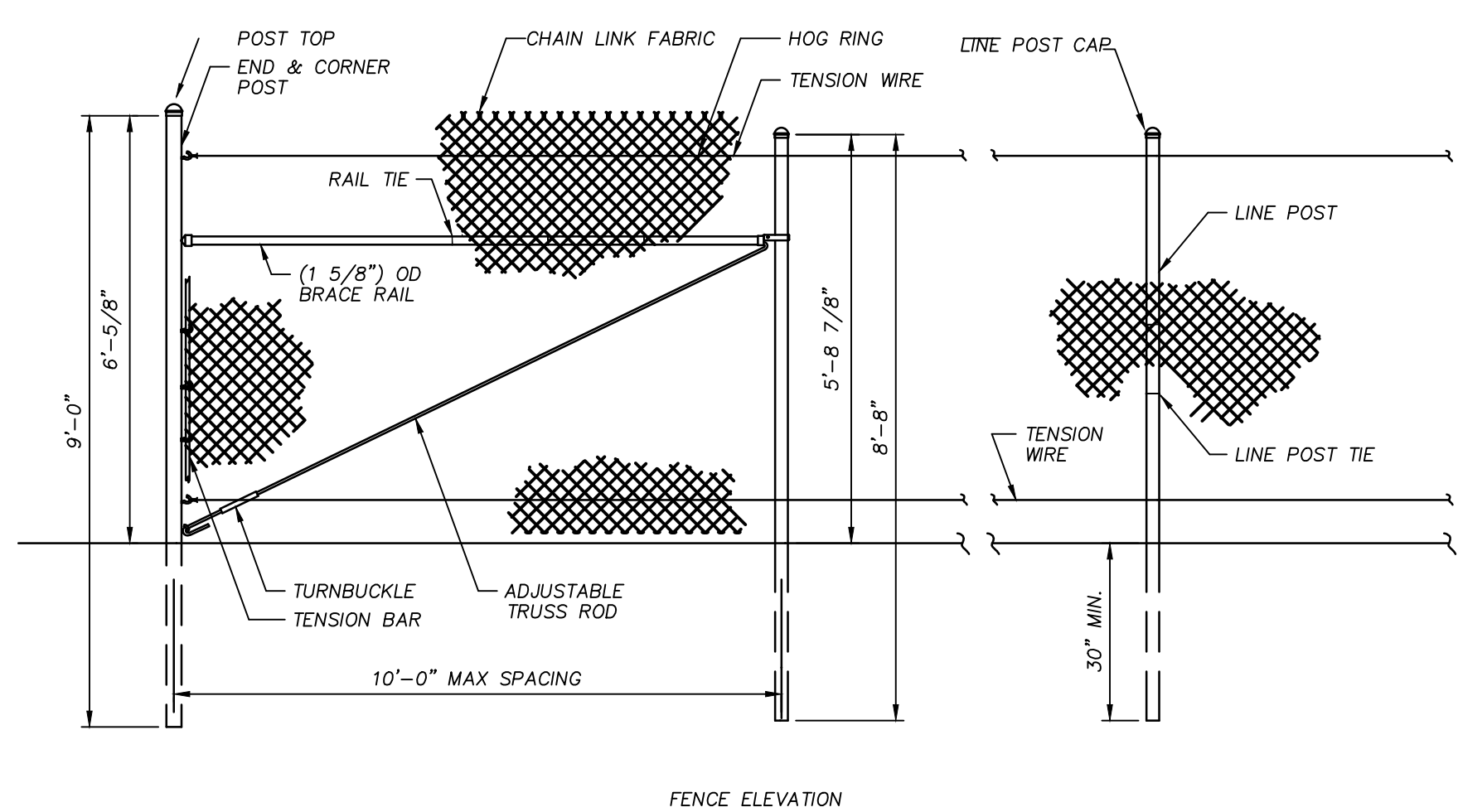
BAFFLE SECTION

SET TOP OF POST AT 6-IN ABOVE CREST OF SPILLWAY AND AT LEAST 2-IN BELOW TOP OF EMBANKMENT



TEMPORARY SKIMMER SEDIMENT BASIN

N.T.S.



FENCE ELEVATION

- NOTES:**
1. STEEL CHAIN-LINK FENCE FABRIC: MAXIMUM 2-1/4" MESH, MINIMUM 0.106" DIAMETER (#12 GAUGE).
 2. END/CORNER POSTS: 2.875" OUTSIDE DIAMETER STEEL PIPE.
 3. LINE POSTS: 2.375" OUTSIDE DIAMETER STEEL PIPE.
 4. TENSION WIRE: 7 GAUGE GALVANIZED COIL SPRING TENSION WIRE. WIRE TIES: TIE FABRIC TO RAILS & BRACES 24" ON CENTER. TIE FABRIC TO TENSION WIRE. USE HOG RINGS SPACED 24" ON CENTER.
 5. DRIVE POSTS DIRECTLY INTO FIRM GROUND. CONCRETE FOOTINGS SHALL BE UTILIZED AS NEEDED TO STABILIZE POSTS. STABILITY OF POSTS SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION TO ENSURE SAFE BARRIER.



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3. DO NOT SCALE OFF DIMENSIONS.

NO.	DATE	DESCRIPTION
1	2/27/2024	ADD COLUMN #2

BID DOCUMENTS

PROJECT PHASE

2307

BOOMERANG DESIGN PROJECT NUMBER

02.07.24

DRAWING RELEASE DATE

DETAILS

SHEET TITLE

C702

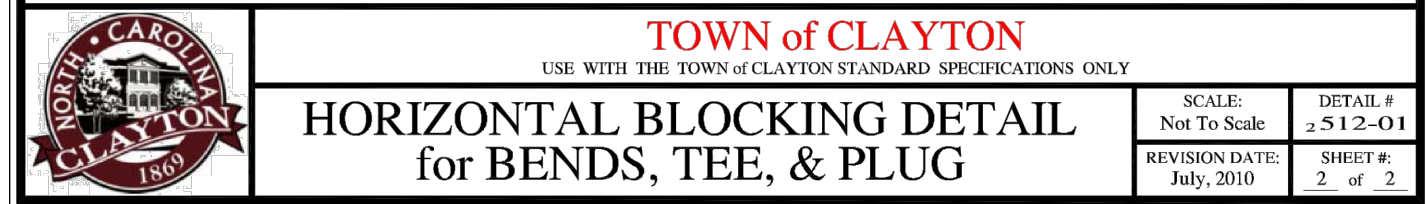
SHEET

Details Provided by ASPRIAN Consulting Engineers - www.aspranengineers.com 08/06/2010 -- 10:38:02 AM

TEST PRESSURE = 150 P.S.I.						TEST PRESSURE = 200 P.S.I.					
PIPE SIZE	TYPE FITTING	"L"	"H"	"T"	VOLUME, CONCRETE (CU. YD.)	PIPE SIZE	TYPE FITTING	"L"	"H"	"T"	VOLUME, CONCRETE (CU. YD.)
4 INCHES	11 1/4"	1.00	1.00	1.50	0.06	4 INCHES	11 1/4"	1.00	1.00	1.50	0.04
	22 1/2"	1.00	1.00	1.50	0.06		22 1/2"	1.00	1.00	1.50	0.06
	45"	1.00	1.00	2.50	0.09		45"	1.00	1.00	2.50	0.15
	90"	1.00	1.00	2.50	0.09		90"	1.00	1.00	2.50	0.15
	TEE / PLUG	1.00	1.00	2.00	0.07		TEE	1.00	1.00	2.00	0.12
6 INCHES	11 1/4"	1.50	1.50	2.50	0.09	6 INCHES	11 1/4"	1.50	1.50	2.50	0.15
	22 1/2"	1.50	1.50	2.50	0.15		22 1/2"	1.50	1.50	2.50	0.15
	45"	1.50	1.50	2.50	0.15		45"	1.50	1.50	2.50	0.15
	90"	1.50	1.50	2.50	0.15		90"	1.50	1.50	2.50	0.15
	TEE / PLUG	1.50	1.50	2.00	0.12		TEE	1.50	1.50	2.00	0.12
8 INCHES	11 1/4"	2.00	2.00	2.50	0.23	8 INCHES	11 1/4"	2.00	2.00	2.50	0.23
	22 1/2"	2.00	2.00	2.50	0.23		22 1/2"	2.00	2.00	2.50	0.23
	45"	2.00	2.00	2.75	0.25		45"	2.00	2.00	2.50	0.23
	90"	3.00	3.00	3.00	0.39		90"	4.00	2.00	3.00	0.50
	TEE / PLUG	4.50	3.00	3.00	0.32		TEE	4.00	2.00	2.50	0.42
12 INCHES	11 1/4"	2.00	2.00	3.00	0.28	12 INCHES	11 1/4"	2.00	2.00	3.00	0.28
	22 1/2"	2.00	2.00	3.00	0.28		22 1/2"	3.00	2.00	3.00	0.39
	45"	3.00	2.50	3.00	0.47		45"	4.00	2.50	3.00	0.61
	90"	4.50	3.00	3.50	0.94		90"	5.50	3.00	3.50	1.13
	TEE / PLUG	4.50	3.00	3.00	0.81		TEE	5.50	3.00	3.00	0.97
16 INCHES	11 1/4"	2.00	2.00	3.00	0.28	16 INCHES	11 1/4"	2.00	2.00	3.00	0.28
	22 1/2"	3.00	2.00	3.00	0.39		22 1/2"	4.00	2.00	3.00	0.50
	45"	4.00	3.00	3.50	0.84		45"	5.50	3.00	3.50	1.13
	90"	6.50	3.50	3.50	1.54		90"	7.50	4.00	3.50	2.01
	TEE / PLUG	6.50	3.50	3.00	1.32		TEE	7.50	4.00	3.00	1.72

CHART NOTES:

1. If blocking excavation is in lightly compacted fill areas, or in areas where boulders or stumps have been removed, blocking size must be re-sized for the specific location/circumstance by a NC licensed Professional Engineer.
2. Blocking sizes shown in these tables assume the following:
 - A. Blocking is constructed in residual soils as shown in detail.
 - B. Soil bearing pressure = 2000 psf
 - C. Velocity of flow = 15 fps.
3. This detail not applicable to reducing bends.
4. Neither the weight of the concrete blocking nor friction between concrete blocking and soil was added into blocking sizes computation. Therefore, blocking size is conservative.



HORIZONTAL BLOCKING DETAIL for BENDS, TEE, & PLUG

SCALE	DETAIL #
1/4" = 1'-0"	2512-01A
REVISION DATE	SHEET #
July 2010	2 of 2

PERMANENT OUTLET PROTECTION

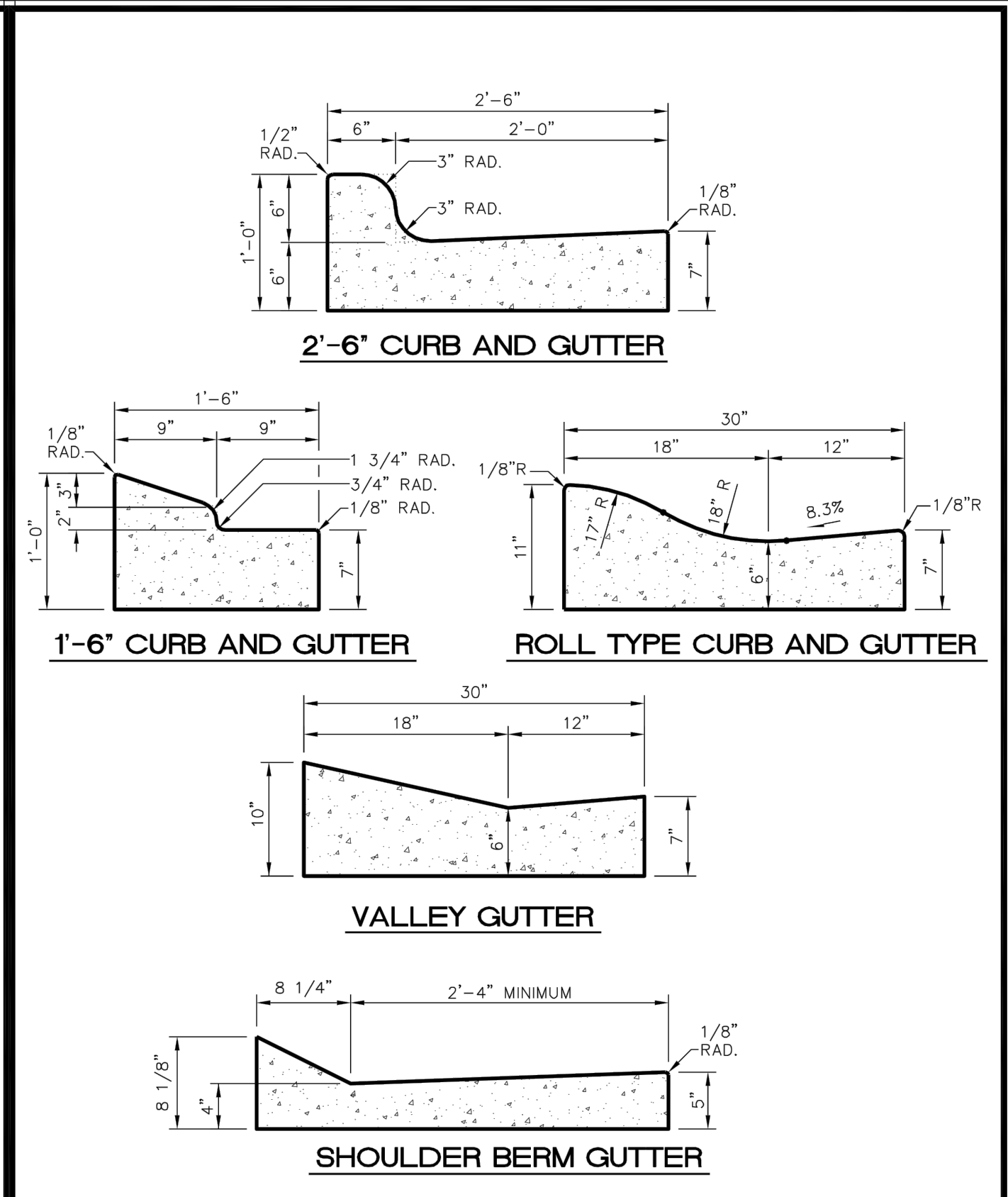
N.T.S.

TEMPORARY CONSTRUCTION FENCE

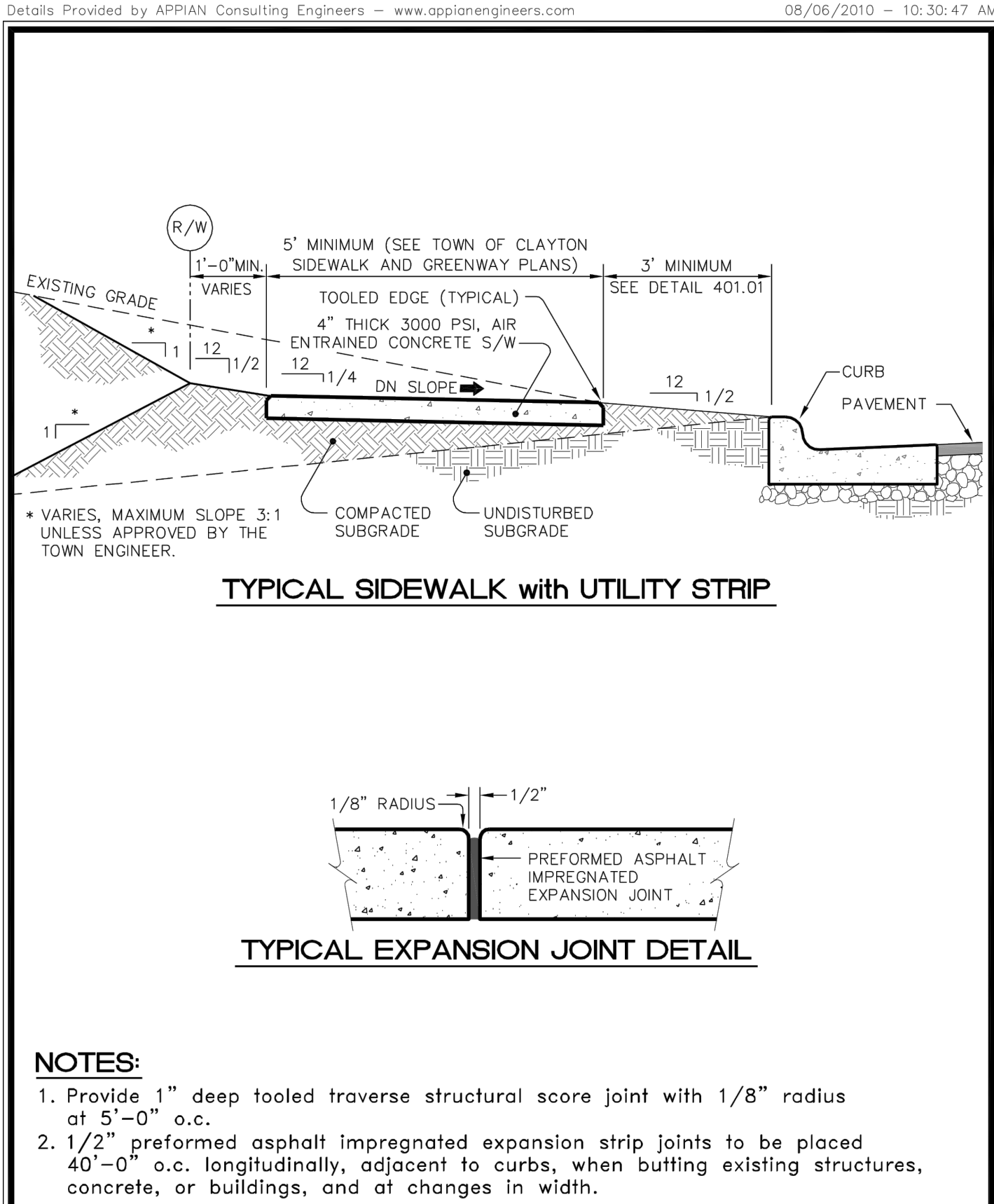
N.T.S.

Fall Permanent Seeding		August 15 - November 1
Lime	2 tons/ac	
5-10-10 Fertilizer	1000 lbs/ac	
0-20-0	500 lbs/ac	
Unscarified Service Lespedeza	60 lbs/ac	
Ky-31 Fescue	30 lbs/ac	
Rye Grain	25 lbs/ac	
Straw Mulch	2 tons/ac	
Fall Permanent Seeding - Centipede:		September 1 - February 28
Lime	2 tons/ac	
Fertilizer (low nitrogen approved for Centipede)	(Appropriate fertilizer approved for centipede application)	
Rye Grain	90 lbs/ac	
Centipede Seed	15 lbs/ac (overseeded in spring)	
Straw Mulch	2 tons/ac	
Winter Temporary Cover		November 1 - February 28
Lime	2 tons/ac	
10-10-10 Fertilizer	700 lbs/ac	
Oats	50 lbs/ac	
Rye Grain	20 lbs/ac	
Straw Mulch	2 tons/ac	
Spring Permanent Seeding		March 1 - April 30
Lime	2 tons/ac	
5-10-10 Fertilizer	1000 lbs/ac	
0-20-0	500 lbs/ac	
Scarified Sericea Lespedeza	50 lbs/ac	
Ky-31 Fescue	30 lbs/ac	
Browntop Millet	20 lbs/ac	
Straw Mulch	2 tons/ac	
Spring Permanent Seeding - Centipede:		April 1 - July 15
Lime	2 tons/ac	
Fertilizer (low nitrogen approved for Centipede)	(Appropriate fertilizer approved for centipede application)	
Centipede Seed	90 lbs/ac	
Straw Mulch	2 tons/ac	
Late Spring Permanent Seeding		March 15 - June 30
Lime	2 tons/ac	
10-10-10 Fertilizer	1000 lbs/ac	
0-20-0	500 lbs/ac	
Scarified Sericea Lespedeza	40 lbs/ac	
Common Bermuda Grass (hulled)	8 lbs/ac	
Straw Mulch	2 tons/ac	
Summer Temporary Cover		June 30 - August 3
Lime	2 tons/ac	
10-10-10 Fertilizer	700 lbs/ac	
Browntop Millet	40 lbs/ac	
Straw Mulch	2 tons/ac	

TOWN of CLAYTON		USE WITH THE TOWN OF CLAYTON STANDARD SPECIFICATIONS ONLY
SEEDING SPECIFICATIONS		
SCALE: Not To Scale	DETAIL: 1	350.01
REVISION DATE: July, 2010	SHEET: 1	of 1

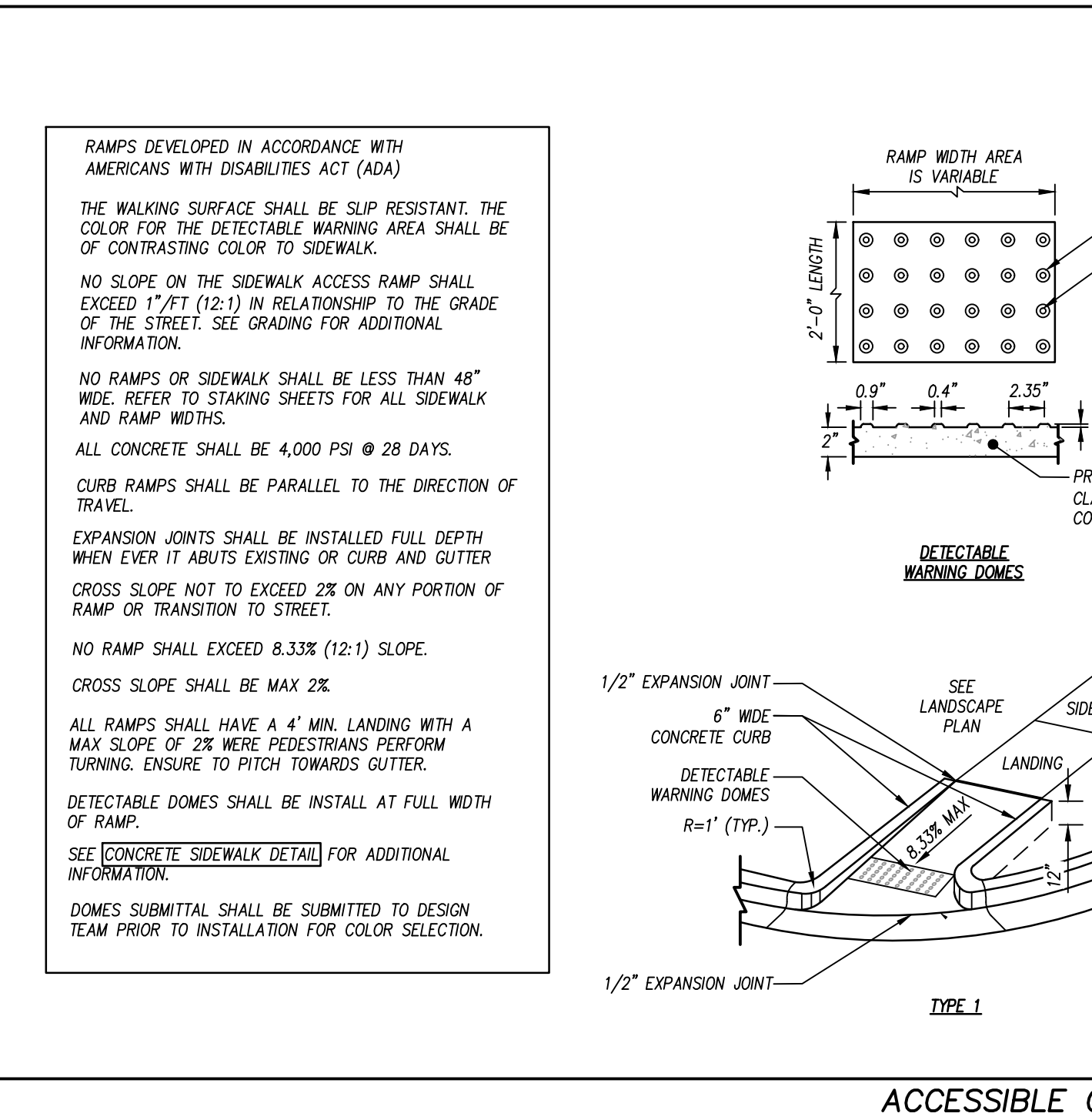


TOWN of CLAYTON		USE WITH THE TOWN OF CLAYTON STANDARD SPECIFICATIONS ONLY
CONCRETE CURB AND GUTTER SECTIONS		
SCALE: Not To Scale	DETAIL: 1	402.01
REVISION DATE: July, 2010	SHEET: 1	of 2



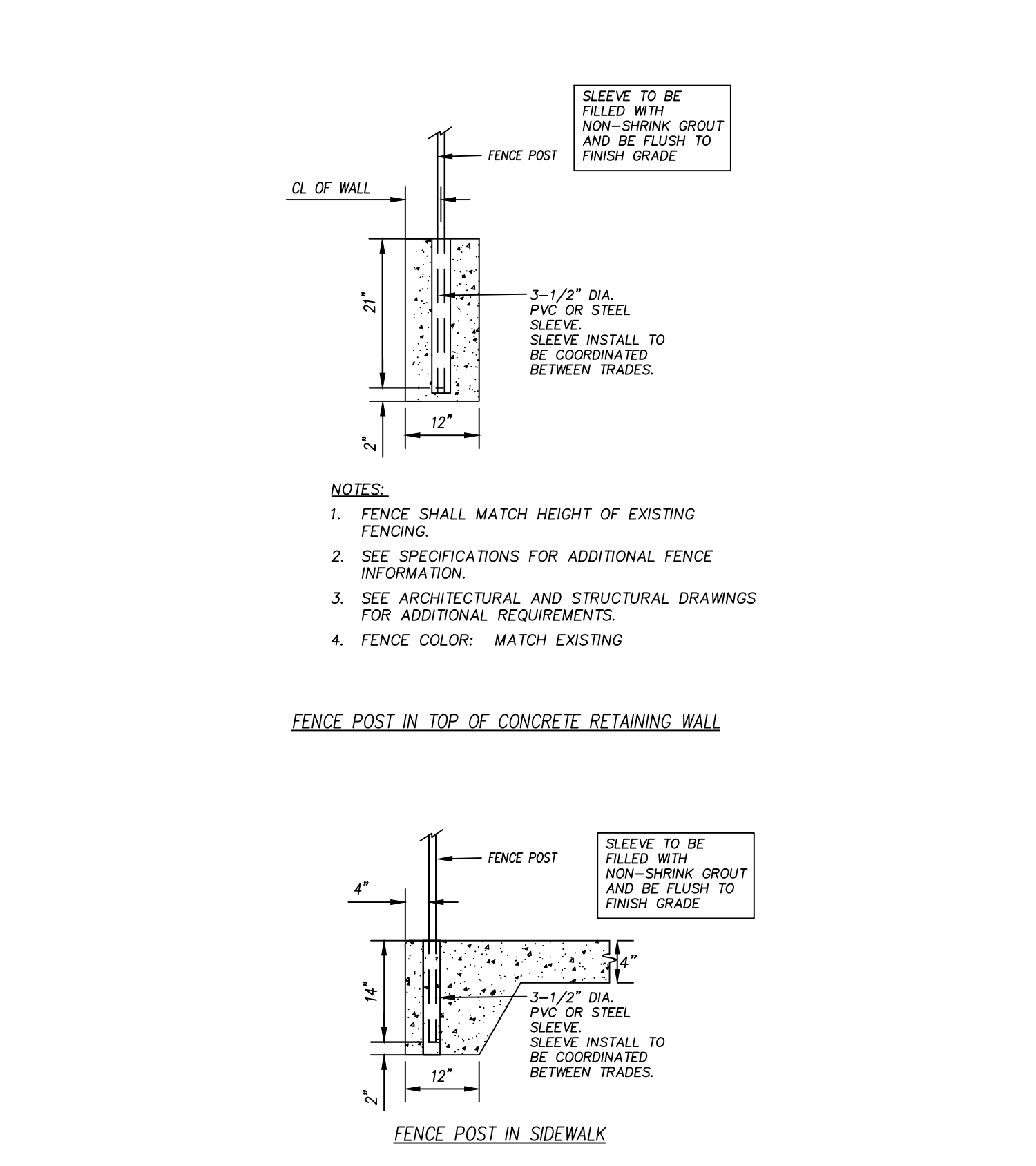
TOWN of CLAYTON		USE WITH THE TOWN OF CLAYTON STANDARD SPECIFICATIONS ONLY
TYPICAL CONCRETE SIDEWALK AND EXPANSION JOINT DETAIL		
SCALE: Not To Scale	DETAIL: 1	404.03
REVISION DATE: July, 2010	SHEET: 1	of 1

TOWN OF CLAYTON STANDARD DETAILS N.T.S.



ACCESSIBLE CURB RAMPS

N.T.S.



FENCE POST ANCHORING

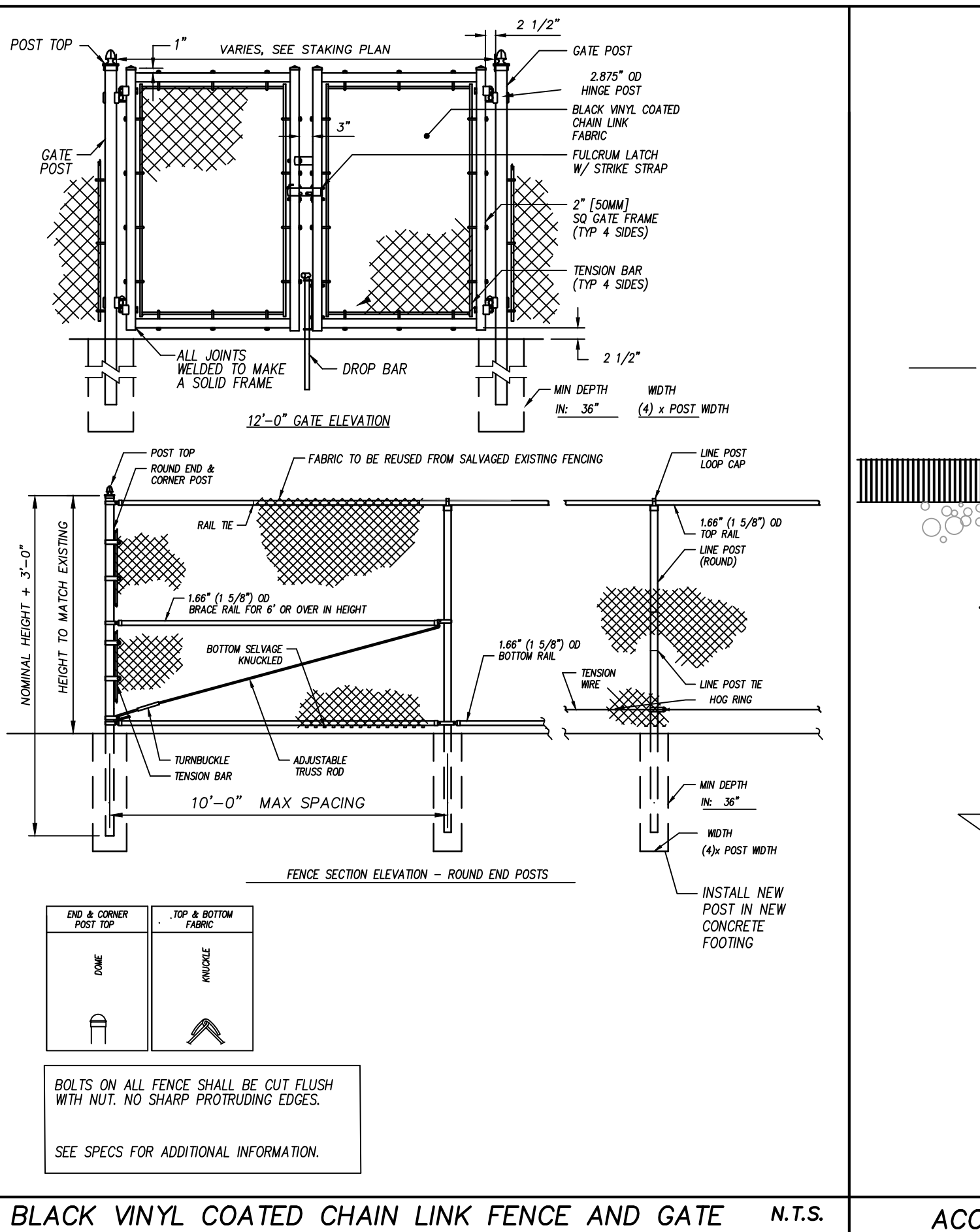
N.T.S.



NOTES:

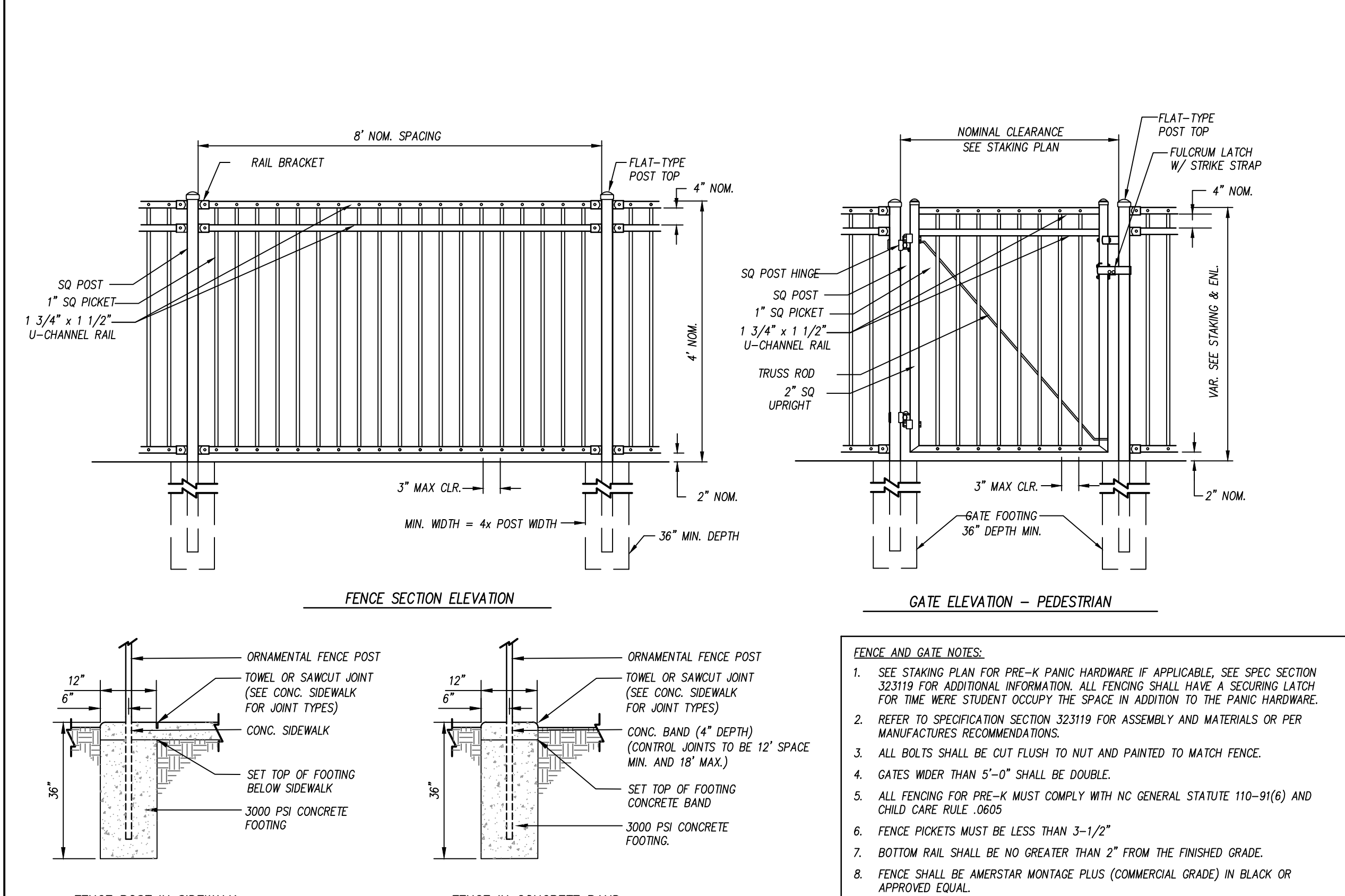
1. Contraction joints shall be placed at 10' intervals, except that a 15' spacing may be used when a machine is used.
2. Joint spacing may be altered if required by the engineer.
3. Contraction joints may be installed by the use of templates or formed by other approved methods. Where such joints are not formed by templates, a minimum depth of 1 1/2" shall be obtained.
4. All construction joints shall be filled with joint filler and sealer as directed by Town Engineer.
5. Expansion joints shall be spaced at 90' intervals, and adjacent to all rigid objects.
6. Concrete to be a minimum of 3,000 PSI @ 28 days, air entrained.
7. Spill sections will be approved on a case-by-case basis by Town Engineer.

TOWN of CLAYTON		USE WITH THE TOWN OF CLAYTON STANDARD SPECIFICATIONS ONLY
CONCRETE CURB AND GUTTER SECTIONS		
SCALE: Not To Scale	DETAIL: 1	402.01
REVISION DATE: July, 2010	SHEET: 2	of 2



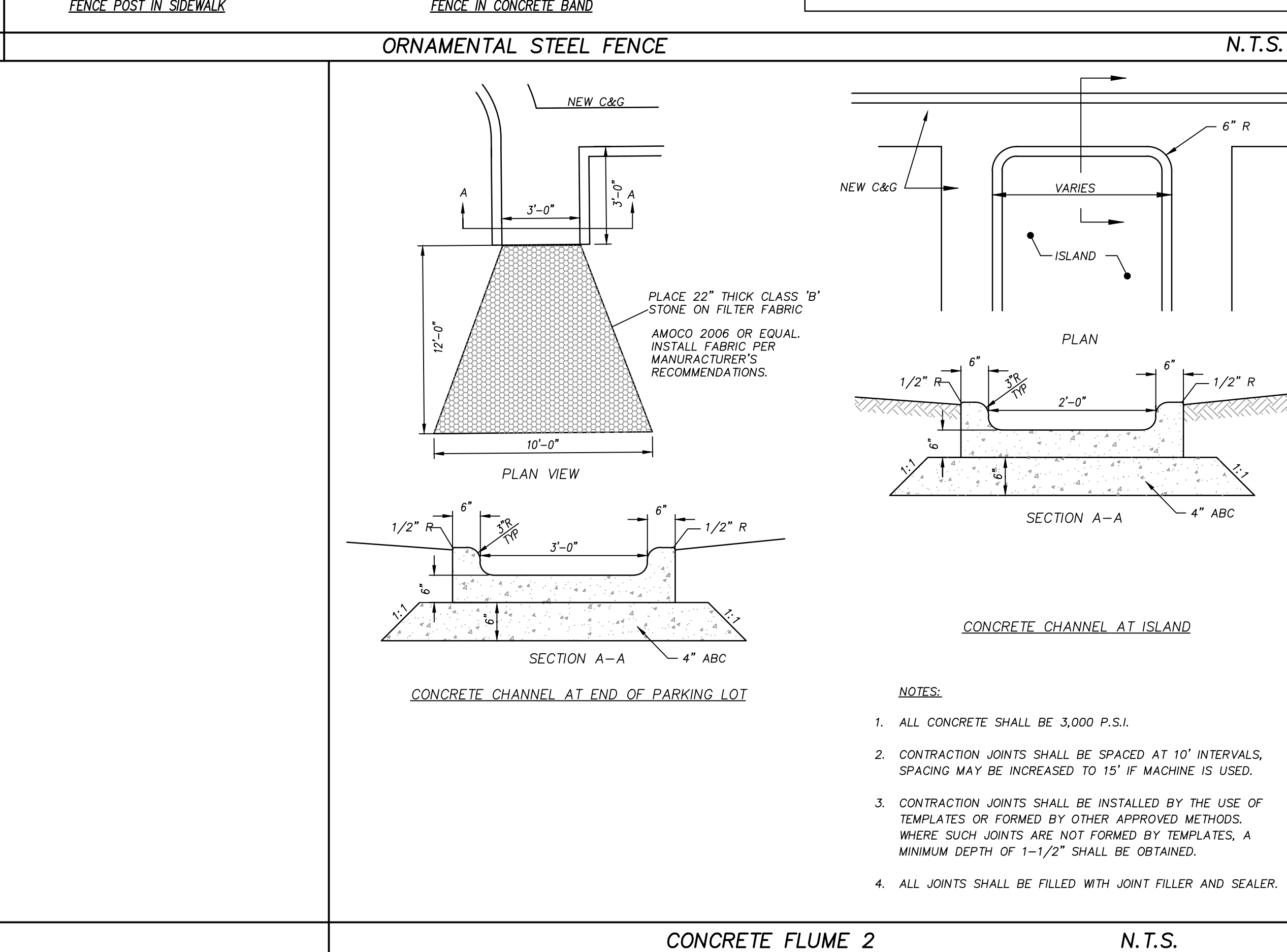
BLACK VINYL COATED CHAIN LINK FENCE AND GATE

N.T.S.



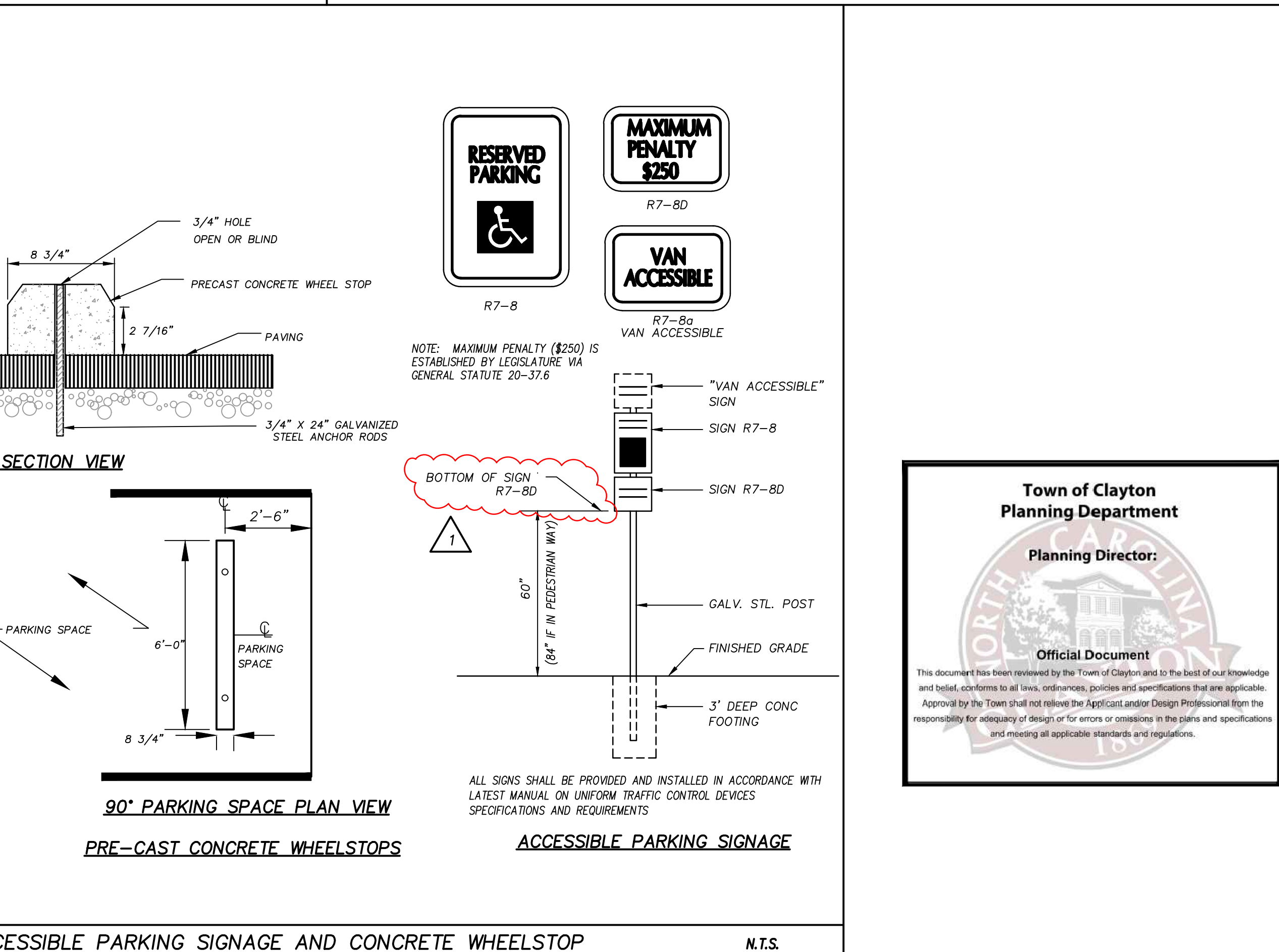
ORNAMENTAL STEEL FENCE

N.T.S.



CONCRETE FLUME 2

N.T.S.



ACCESSIBLE PARKING SIGNAGE AND CONCRETE WHEELSTOP

N.T.S.

boomerang DESIGN
rethink, repurpose, results

SHENBY
207 S. Trade Street
Shenby, NC 28380
704/731-7000

CHARLOTTE
1230 W. Morehead St., Suite 214
Charlotte, NC 28208
704/731-7000

LEWISTON
1070 S. Lake Dr., Suite 1
Lewiston, NC 28043
803/556-0507

RALEIGH
6131 Falls of Neuse Rd., Suite 204
Raleigh, NC 27609
919/775-6600

CLH DESIGN, P.A.
400 Regency Forest Drive
Suite 150
Cary, North Carolina 27518
Phone: (919)919-5718
Fax: (919)919-7518
LA: C-106, PE: C-1595

COOPER ACADEMY A & R

PROJECT TITLE

"CLIENT'S PROJECT" # - XXX

NOTES:

1. ALL CONCRETE SHALL BE 3,000 P.S.I.
2. CONTRACTION JOINTS SHALL BE SPACED AT 10' INTERVALS, SPACING MAY BE INCREASED TO 15' IF MACHINE IS USED.
3. CONTRACTION JOINTS SHALL BE INSTALLED BY THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS. WHERE SUCH JOINTS ARE NOT FORMED BY TEMPLATES, A MINIMUM DEPTH OF 1-1/2" SHALL BE OBTAINED.
4. ALL JOINTS SHALL BE FILLED WITH JOINT FILLER AND SEALER.

REVISIONS	
NO.	DATE
1	2/27/2024

BID DOCUMENTS

PROJECT PHASE

2307

BOOMERANG DESIGN PROJECT NUMBER

02.07.24

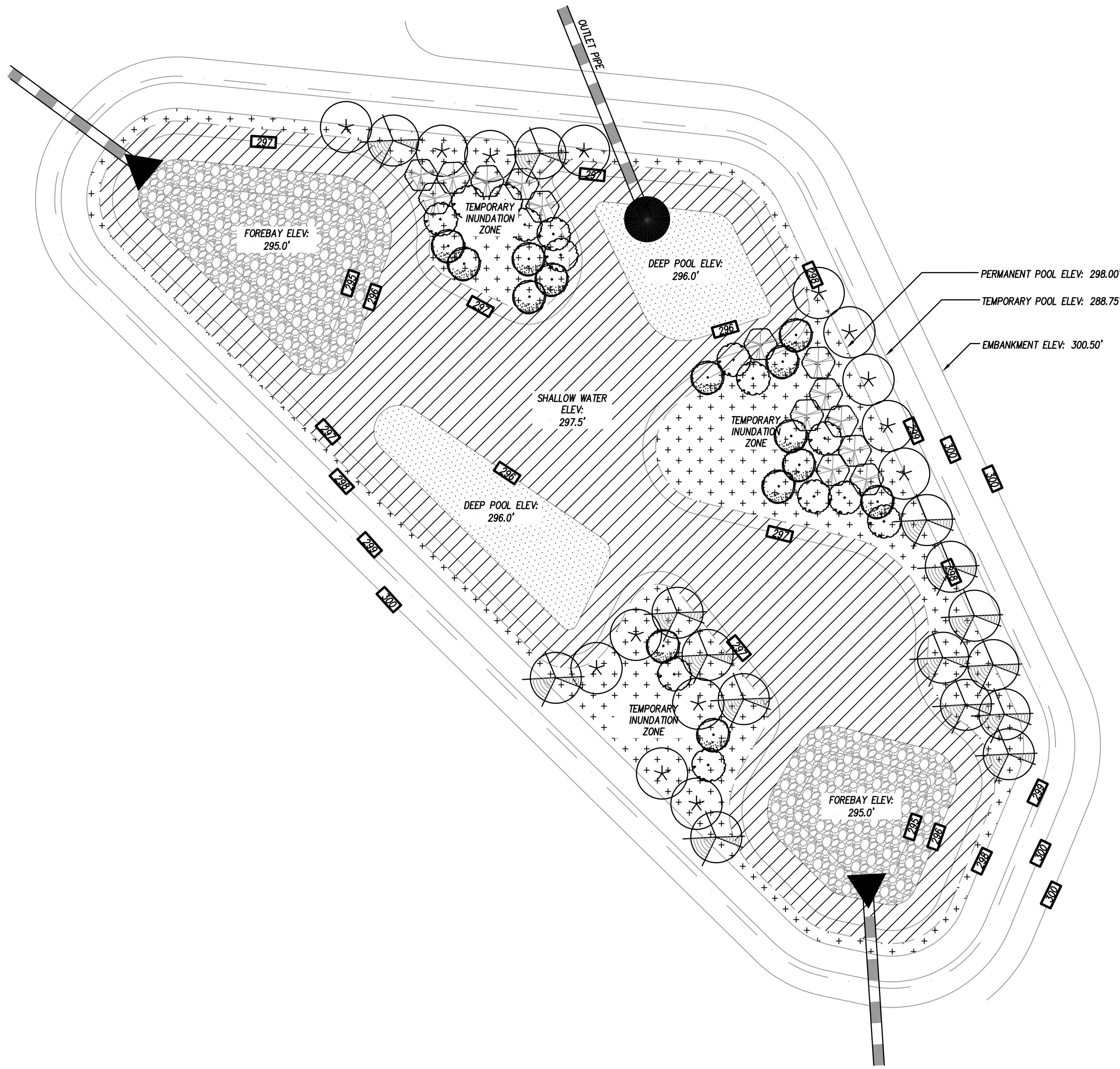
DRAWING RELEASE DATE

DETAILS

SHEET TITLE

C704

SHEET



NOTES

1. WETLAND AREA SHALL BE DRAINED ONE DAY PRIOR TO PLANTING.
2. LANDSCAPE ARCHITECT TO APPROVE ALL LOCATIONS IN FIELD.
3. PLACE PLANTINGS IN DESIGNATED AREA BY SPECIES IN GROUPINGS OF 40 PLANTS OR MORE.
4. SODDED AREA SHALL NOT BE MOWED AT SIDE SLOPES.
5. SEE PLANTING SPECIFICATIONS SECTION 32.80.00 FOR WARRANTY PERIODS.
6. ALL AREAS INDICATED AS LAWN ON LANDSCAPE PLAN TO BE PERMANENTLY STABILIZED AND ESTABLISHED AS IN SPECIFICATIONS PRIOR TO ACCEPTANCE OF THE WETLANDS, INCLUDING THE EMBANKMENT, ACCESS AND MAINTENANCE EASEMENT, AND ASSOCIATED SLOPES.






WETLAND SOIL MIX

ADD 12" OF TOPSOIL THROUGHOUT STORMWATER WETLAND AREA. TOPSOIL SHALL BE PLACED WITHIN THE SHALLOW LAND, SHALLOW WATER AND DEEP POOL AREAS AND ADHERE TO THE FOLLOWING REQUIREMENTS:

1. THE SOIL MUST BE UNIFORM AND FREE OF STONES, STUMPS, ROOTS, OR OTHER SIMILAR MATERIAL GREATER THAN 2 INCHES.
2. SOIL TEXTURE SHALL BE A LOAMY SAND, WITH NO MORE THAN 10% CLAY (USDA SOIL TEXTURAL CLASSIFICATION).
3. A MINIMUM ORGANIC CONTENT OF 10% BY DRY WEIGHT.
4. THE PH SHALL BE BETWEEN 5.5 AND 7.0.

2

SCM "P" WETLAND PLANT LIST

TEMPORARY INUNDATION ZONE - SHRUBS				
KEY	KEY	QTY	PLANT NAME	SIZE
	CO	14	CEPHALANTHUS OCCIDENTALIS - BUTTONBUSH	3-GAL. CONT.
	SC	14	SAMBUCUS CANADENSIS - ELDERBERRY	
	CA	14	CLETHRA ALNIFOLIA - SWEET PEPPERBUSH	PLANT 5' O.C.
	IT	14	ITEA VIRGINICA 'HENRY'S GARNET' - SWEETSPIRE	
	AA	14	ARONIA ARBUTIFOLIA 'BRILLIANTISSIMA' - CHOKEBERRY	

TEMPORARY INUNDATION ZONE - HERBACEOUS

AS	45	ASCLEPIAS INCARNATA - SWAMP MILKWEED	LARGE PLUGS (MIN. 6 CUBIC INCHES)
IV	45	IRIS VIRGINICA - BLUE FLAG IRIS	SPACE 2' O.C.
HM	50	HIBISCUS MOSCHEutos - MARSH HIBISCUS	2,305 SF

SHALLOW WATER ZONE - HERBACEOUS

	PV	132	PELTANDRA VIRGINIANA – ARROW ARUM	LARGE PLUGS (MIN. 6 CUBIC INCHES)
	PC	132	PONTEDERIA CORDATA – PICKEREL WEED	SPACE 2' O.C.
	AB	132	ACORUS SUBCORDATUM – SWEETFLAG	
	SC	132	SAURURUS CERNUIS – LIZARD'S TAIL	
	JE	132	JUNCUS EFFUSUS – SOFT RUSH	

DEEP POOL AND MICRO POOL

SD	30	SAGITTARIA LATIFOLIA - BROADLEAF ARROWHEAD	LARGE PLUGS (MIN. 6 CUBIC INCHES)
SD	30	NUPHAR LUTEA - SPATTERDOCK / YELLOW POND-LILY	486 SF
SD	30	NELUMBO LUTEA - AMERICAN LOTUS	

SHALLOW LAND/TEMP. INUNDATION ZONE PLANTS: 2,305 SF / 200 SF X 50 = 577 HERBACEOUS PLANTS REQUIRED (OR) 2,305 SF / 200 SF X 8 = 93 SHRUBS REQUIRED

70 SHRUBS PROVIDED (70 / 8 X 200 = 1,750 SF)

140 HERBACEOUS PROVIDED (140 / 50 X 200 = 560 SF)

1,750 SF + 560 SF = 2,310 SF ACCOUNTED FOR

SHALLOW WATER PLANTS: 2,640 SF / 200 SF X 50 = 660 HERBACEOUS PLANTS REQUIRED

SHALLOW WATER PLANTS: 660 HERBACEOUS PLANTS PROVIDED

SD - TIFU F BERMUDA

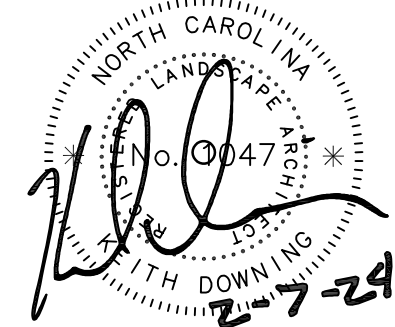
SCM-1: CONSTRUCTED WETLAND

1" = 10'-0"

COOPER ACADEMY A & R

PROJECT TITLE

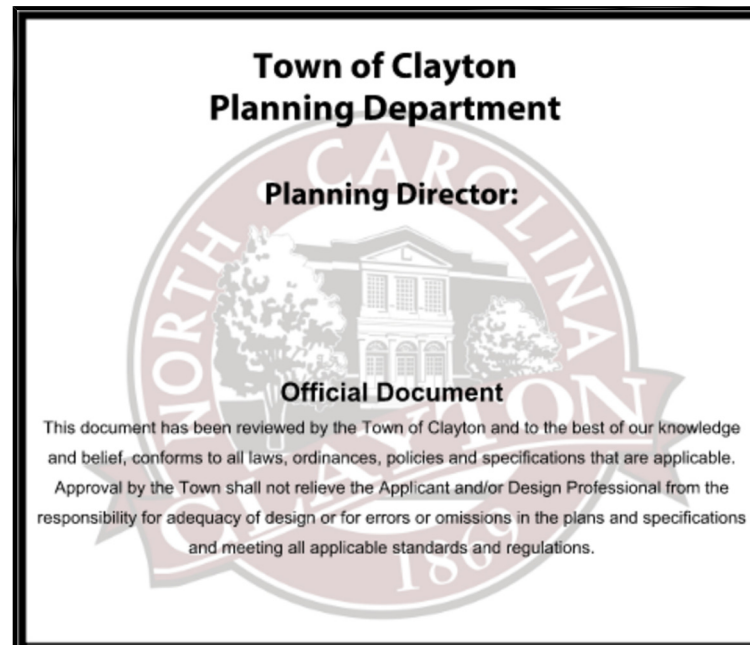
"CLIENT'S PROJECT" # - XXX



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REVISIONS

NO.	DATE	DESCRIPTION
1	2/20/24	ADDENDUM #1
2	2/27/24	ADDENDUM #2



BID DOCUMENTS

PROJECT PHASE

2307

BOOMERANG DESIGN PROJECT NUMBER

02.07.24

DRAWING RELEASE DATE

DETAILS

SHEET TITLE

C707

SHEET