

LOCKHART ELEMENTARY SCHOOL

MASTER PLAN SUBMITTAL

WAKE COUNTY BOARD OF EDUCATION
 1320 N SMITHFIELD RD
 KNIGHTDALE, NC 27545
 DP # ZMA-5-24

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PROJECT TEAM

ARCHITECTURAL

DTW ARCHITECTS & PLANNERS, LTD.
 333 DURHAM CHAPEL HILL BLVD, SUITE D100
 DURHAM, NC 27702

CIVIL ENGINEERING AND LANDSCAPE ARCHITECTURE

CLH DESIGN, PA
 400 REGENCY FOREST DR., STE. 120
 CARY, NC 27518

SITE DATA

PROJECT: LOCKHART ELEMENTARY SCHOOL
OWNER: WAKE COUNTY BOARD OF EDUCATION
OWNER CONTACT: SHANE WEBSTER – SENIOR FACILITIES PLANNER, PD & C
 111 CORNING ROAD, STE 190
 CARY, NC 27518
 PHONE: 919-588-3608

LANDSCAPE ARCHITECT: CLH DESIGN, PA
DESIGNER CONTACT: RENE PFEFFER – LANDSCAPE ARCHITECT
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 FAX: 919-319-7516

CIVIL ENGINEER: CLH DESIGN, PA
DESIGNER CONTACT: STEVE MILLER – CIVIL ENGINEER
 400 REGENCY FOREST DR., SUITE 120
 CARY, NC 27518
 PHONE: 919-319-6716
 FAX: 919-319-7516

ARCHITECTURAL DESIGNER CONTACT: DTW ARCHITECTS AND PLANNERS, LTD.
 PAUL YOUNG – ARCHITECT
 333 DURHAM CHAPEL HILL BLVD, SUITE D100
 DURHAM, NC 27702
 PHONE: 919-317-4020

PROJECT ADDRESS: 1320 N SMITHFIELD RD
 KNIGHTDALE, NC 27545

PIN: 1754279615

ZONING: RMX
OVERLAY DISTRICTS: NONE

EXISTING USE: SCHOOL
PROPOSED USE: SCHOOL

TRACT ACREAGE: 16.29 ACRES
DISTURBED ACREAGE: 12.43 ACRES

REQUIRED SETBACKS: FRONT: 10', SIDE: 10', REAR: 30'

PARKING: REQUIRED MAXIMUM 0.35 SPACE PER STUDENT
 MINIMUM 1/2 SPACE OF MAXIMUM
 800 CORE CAPACITY
 10% DEDUCTION FOR PROXIMITY TO BUS STOP
 10% DEDUCTION FOR PROXIMITY TO NEIGHBORHOODS
 112 SPACES REQUIRED

ACCESSIBLE PARKING: PROVIDED 122 SPACES
 REQUIRED – 4 ADA SPACES (1 VAN)
 PROVIDED – 5 ADA SPACES (2 VAN)

EV CHARGING STATIONS: REQUIRED – 3 EV STATIONS
 PROVIDED – 3 EV STATIONS

BICYCLE PARKING PROVIDED: 14 SPACES (7 RACKS)

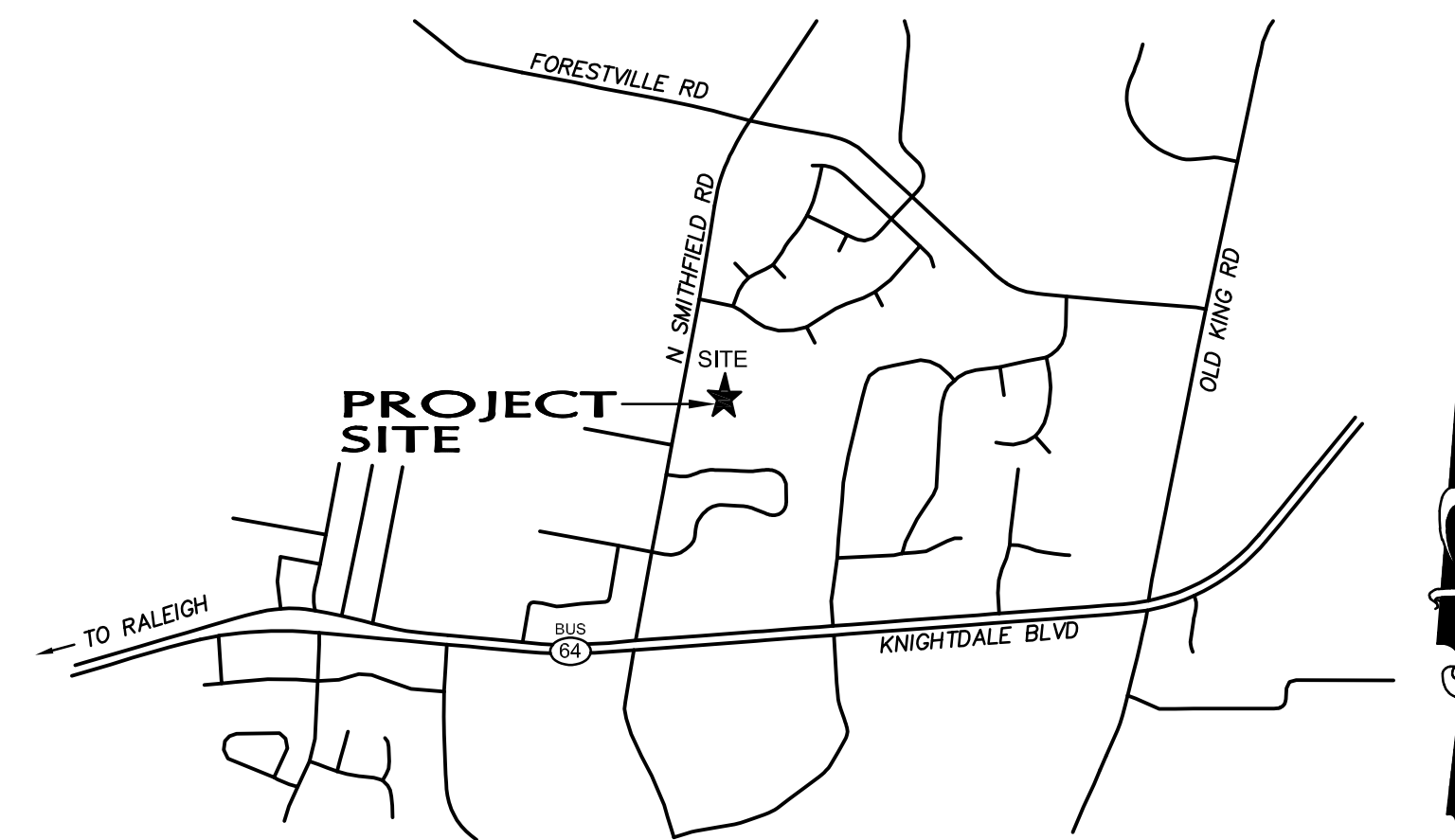
PUBLIC GATHERING SPACE: REQUIRED 1 SF. PER 25 SF. OF G.F.A. OR 500 SF.
 (WHICHEVER IS LESS) OF PUBLIC GATHERING SPACE
 PROVIDED ± 1,800 SF.

WATERSHED: LOWER NEUSE RIVER
RIVER BASIN: NEUSE RIVER BASIN
FEMA MAP PANEL #: 3720175400K

EXISTING BUA: 6.44 ACRES
PROPOSED BUA: 6.71 ACRES
NET CHANGE IN BUA: 0.27 ACRES

RENOVATED BUILDING SF: 39,773 SF.
PROPOSED ADDITION SF: 92,599 SF.
TOTAL BUILDING SF: 132,372 SF.

VICINITY MAP - NTS



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LOCKHART ES RENO/REPLACEMENT:
 LOCKHART ELEMENTARY SCHOOL
 1320 N. SMITHFIELD RD. KNIGHTDALE, NC 27545
 WCPSS PROJECT ID: 862-453
 WCPSS PROJECT MANAGER: SHANE WEBSTER
 DTW PROJECT NUMBER: 23025

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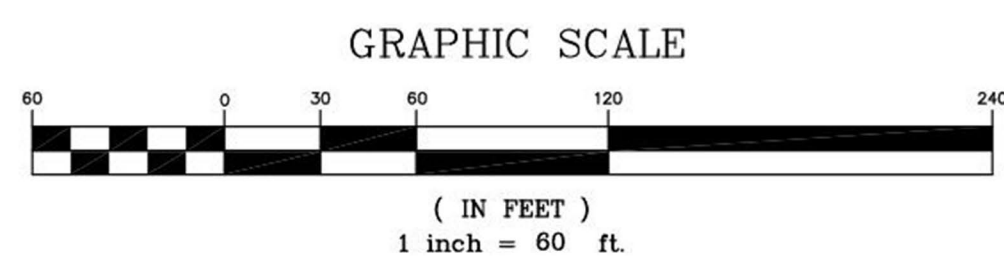
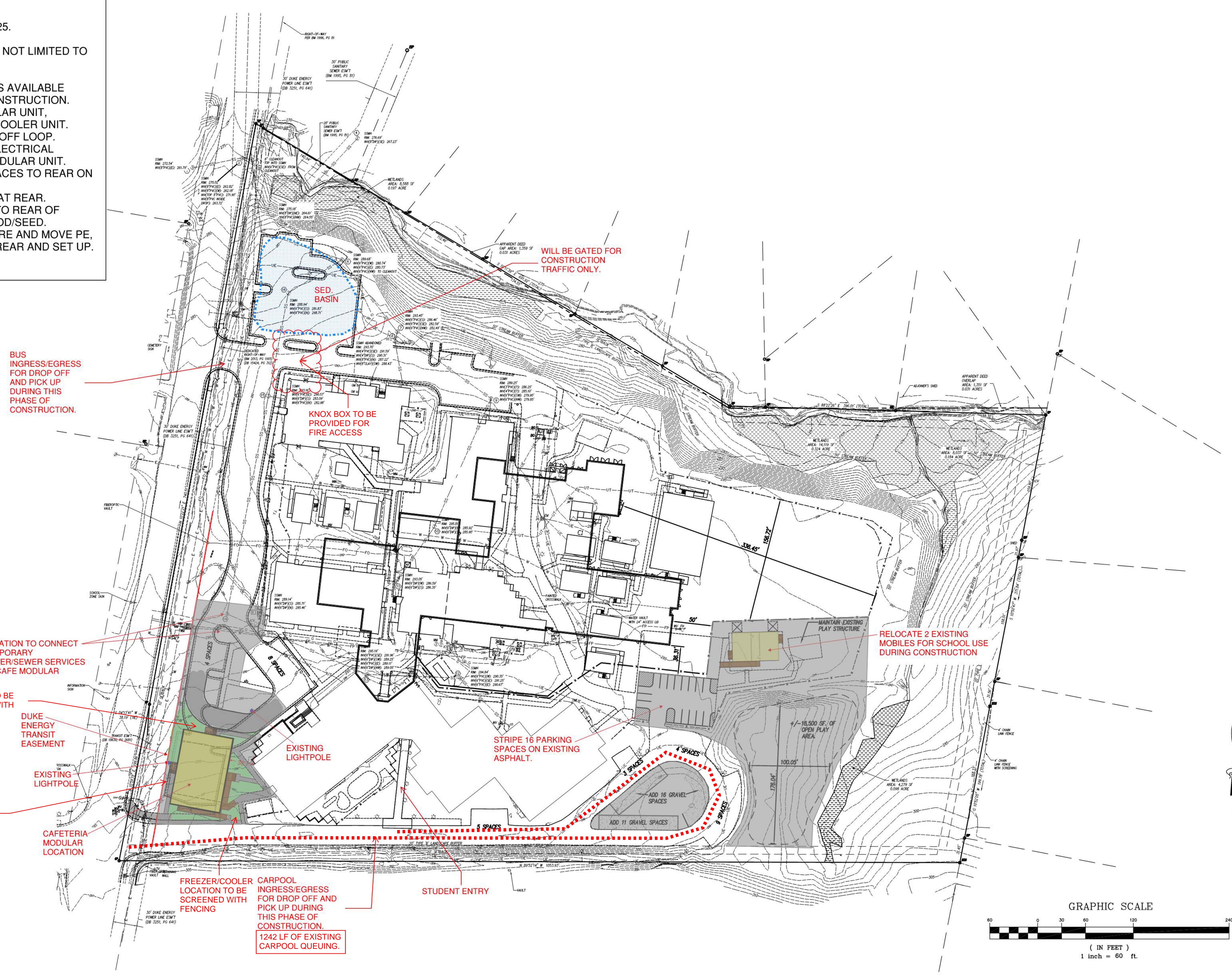
Revisions	_____
_____	_____
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Drawn	_____
Checked	_____
Date	2024-10-31
Title	_____

PHASE 1a: ANTICIPATED CONSTRUCTION TIME
3-4 MONTHS

TRACK OUT DATES:
JAN. 4, 2025- JAN. 26, 2025.
MARCH 29, 2025-APR. 21, 2025.

THIS PHASE INCLUDES, BUT NOT LIMITED TO THE FOLLOWING;

- 76 STAFF PARKING SPACES AVAILABLE DURING THIS PHASE OF CONSTRUCTION.
- INSTALL THE CAFE MODULAR UNIT, DUMPSTER AND FREEZER/COOLER UNIT.
- DEMO AND REPAVE DROP OFF LOOP.
- INSTALL WATER/SEWER/ELECTRICAL SERVICES TO THE CAFE MODULAR UNIT.
- RESTRIPE 16 PARKING SPACES TO REAR ON EXISTING ASPHALT.
- INSTALL GRAVEL IN LOOP AT REAR.
- CLEAR AND GRADE LAND TO REAR OF CARPOOL LOOP. INSTALL SOD/SEED.
- DEMOLISH PLAY STRUCTURE AND MOVE PE, MEDIA AND IT MOBILES TO REAR AND SET UP.



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LOCKHART ES RENOVATION/REPLACEMENT:
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WCPSS PROJECT ID: 862-453
WCPSS PROJECT MANAGER: SHANE WEBSTER
DTW PROJECT NUMBER: 23025

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DESIGN DEVELOPMENT

Revisions

Drawn
Checked
Date 2024-08-30
Title

PHASE 1b: ANTICIPATED CONSTRUCTION TIME 18 MONTHS- JULY 2025- DECEMBER 2026

TRACK OUT DATES:

- JULY 5, 2025- JULY 27, 2025.
- SEPTEMBER 27, 2025-OCTOBER 19, 2025.
- JAN. 3, 2026-JAN. 25, 2026.
- MARCH 28, 2026-APRIL 19, 2026.
- JULY 5, 2026-JULY 27, 2026.
- SEPTEMBER 27, 2026-OCTOBER 19, 2026 .

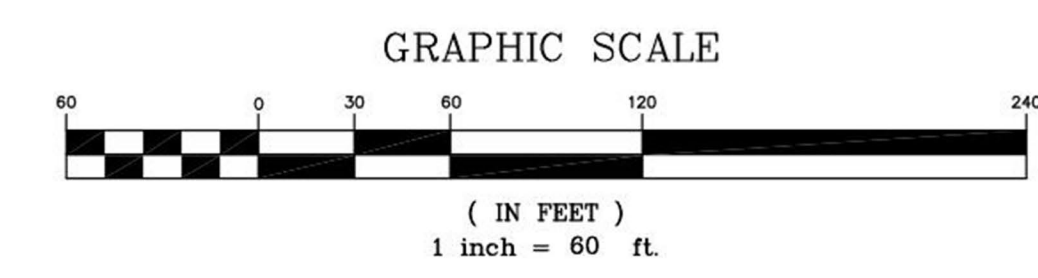
THIS PHASE INCLUDES, BUT NOT LIMITED TO THE FOLLOWING;

- 76 STAFF PARKING SPACES AVAILABLE DURING THIS PHASE OF CONSTRUCTION.
- DEMOLITION OF EXISTING BUILDINGS/UTILITIES/PARKING/PAVEMENT/MOBILES, ETC.
- INSTALL ALL EROSION CONTROL MEASURES.
- INSTALL TEMPORARY FIRE HYDRANT TO PROVIDE FIRE PROTECTION TO THE ZIG ZAG BUILDING DURING THE NEW BUILDING CONSTRUCTION.
- CONSTRUCTION OF NEW BUILDING.
- CONSTRUCTION OF RETAINING WALL AT NORTHEAST CORNER OF THE SITE.
- CONSTRUCTION OF BUS LOOP/PARKING AND ALL SIDEWALKS ASSOCIATED WITH PEDESTRIAN CIRCULATION AROUND THE NEW BUILDING.
- CONSTRUCTION OF WATER AND SEWER MAINS AND SERVICES IN THIS AREA.
- INSTALL ALL STORM DRAINAGE SHOWN IN PHASE 1b CONSTRUCTION.
- CONSTRUCTION OF ECS PLAY AREA, PRE-K PLAY AREA AND DINING PATIO.
- CONSTRUCTION OF 3-5 PLAY AREA AND PARTIAL ASPHALT PATH AND MULTIPURPOSE FIELD.

NEW DRIVE CONNECTION WILL NEED COORDINATED AND INSTALLED DURING TRACK OUT.

BUS INGRESS/EGRESS FOR DROP OFF AND PICK UP DURING THIS PHASE OF CONSTRUCTION.

CARPPOOL INGRESS/EGRESS FOR DROP OFF AND PICK UP DURING THIS PHASE OF CONSTRUCTION.
1242 LF OF EXISTING CARPOOL QUEUING.



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WCPSS PROJECT ID: 862-453
WCPSS PROJECT MANAGER: SHANE WEBSTER
DTW PROJECT NUMBER: 23025

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DESIGN DEVELOPMENT

Revisions

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Date 2024-08-30
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PHASING PLAN
1B ADDITION
Sheet
C-002

PHASE 2a: ANTICIPATED CONSTRUCTION TIME 10 MONTHS- DECEMBER 2026- OCTOBER 2027

TRACK OUT DATES:

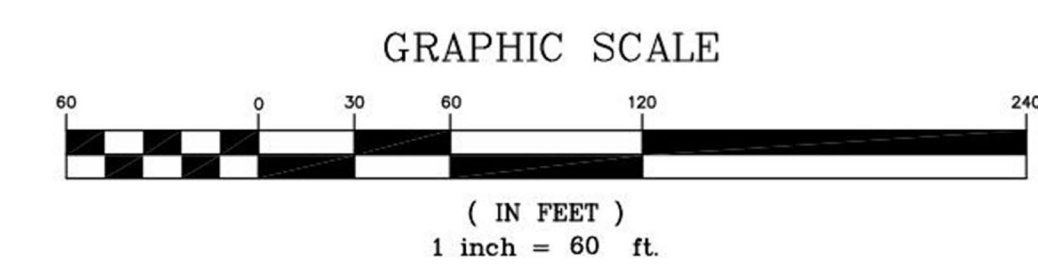
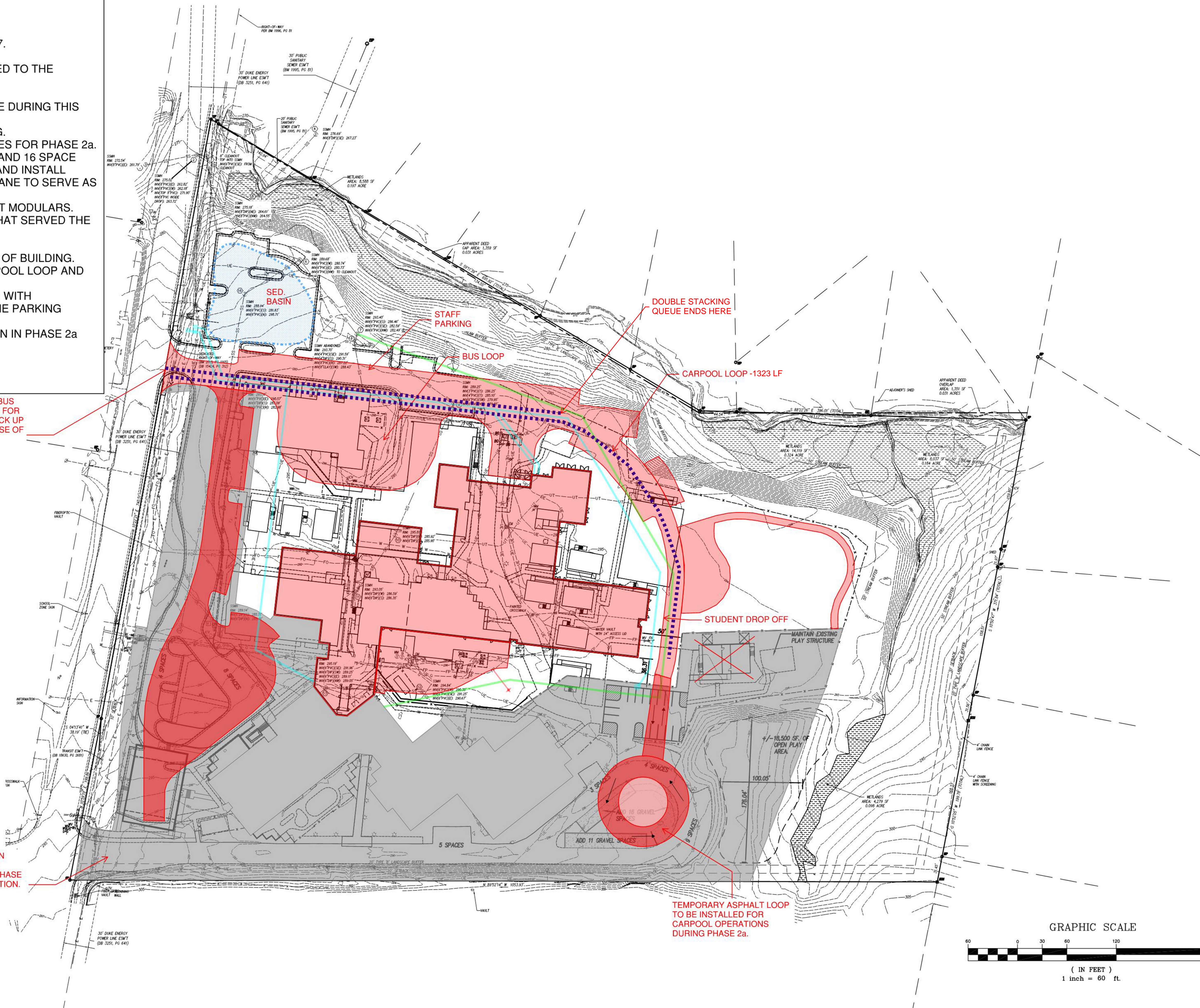
DEC. 22, 2026-JAN.25, 2027.
MARCH 28, 2027-APR. 20, 2027.
JULY 5, 2027-JULY 27, 2027.
SEPTEMBER 27, 2027-OCTOBER 19, 2027.

THIS PHASE INCLUDES, BUT NOT LIMITED TO THE FOLLOWING;

- 82 STAFF PARKING SPACES AVAILABLE DURING THIS PHASE OF CONSTRUCTION.
- MOVE STUDENTS IN TO NEW BUILDING.
- INSTALL EROSION CONTROL MEASURES FOR PHASE 2a.
- DEMOLISH EXISTING CARPOOL LOOP AND 16 SPACE PARKING LOT AT REAR OF PROPERTY AND INSTALL TEMPORARY DRIVE LOOP FROM FIRE LANE TO SERVE AS CARPOOL LOOP DURING PHASE 2a.
- REMOVE CAFETERIA, PE, MEDIA AND IT MODULARS.
- CAP WATER AND SEWER SERVICES THAT SERVED THE CAFETERIA MODULAR.
- RENOVATE THE ZIG ZAG BUILDING.
- DEMOLISH EXISTING DRIVE AT FRONT OF BUILDING.
- CONSTRUCT NEW FRONT DRIVE CARPOOL LOOP AND PARKING.
- INSTALL ALL SIDEWALKS ASSOCIATED WITH PEDESTRIAN CIRCULATION AROUND THE PARKING AREAS AND DRIVES.
- INSTALL ALL STORM DRAINAGE SHOWN IN PHASE 2a CONSTRUCTION.

STAFF/CARPOOL/BUS INGRESS/EGRESS FOR DROP OFF AND PICK UP DURING THIS PHASE OF CONSTRUCTION.

CONSTRUCTION TRAFFIC ONLY DURING THIS PHASE OF CONSTRUCTION.



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1320 N. SMITHFIELD RD. KNIGHTSDALE, NC 27545

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DTW PROJECT NUMBER: 23025

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Revisions

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Date 2024-08-30
Title

PHASING PLAN
2A EXISTING WING

Sheet
C-003

PHASE b: ANTICIPATED CONSTRUCTION TIME 3 MONTHS- OCTOBER 2027- JANUARY 2028

TRACK OUT DATES:
SEPTEMBER 27, 2027-OCTOBER 19, 2027.
DECEMBER 20, 2027- JAN. 25, 2028.

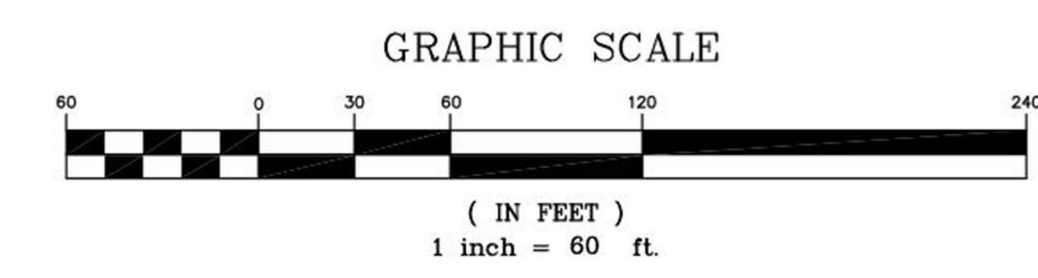
THIS PHASE INCLUDES, BUT NOT LIMITED TO THE FOLLOWING;

- 121 STAFF PARKING SPACES AVAILABLE DURING THIS PHASE OF CONSTRUCTION (ALL PARKING ON SITE).
- ZIG ZAG BUILDING RENOVATION CONTINUES.
- DEMOLISH TEMPORARY DRIVE LOOP OFF OF THE FIRE LANE THAT SERVED AS CARPOOL DURING PHASE 2a.
- DEMOLISH REMAINDER OF SOUTHERN DRIVE.
- CONSTRUCTION OF NEW CARPOOL LOOP ALONG THE SOUTHERN PROPERTY LINE.
- CONSTRUCTION OF THE REMAINDER OF THE FIRE LANE.
- INSTALL ALL SIDEWALKS ASSOCIATED WITH PEDESTRIAN CIRCULATION AROUND THE DRIVES AND SITE.
- CONSTRUCTION OF K-2 PLAY AREA AND PARTIAL ASPHALT PATH AND THE REMAINDER OF THE MULTIPURPOSE FIELD.
- CONSTRUCTION OF THE OUTDOOR LEARNING COURTYARD SOUTH OF THE ZIG ZAG BUILDING.
- INSTALL ALL STORM DRAINAGE SHOWN IN PHASE 2b CONSTRUCTION.
- STUDENT OCCUPY BOTH THE ZIG ZAG BUILDING AND THE NEW ELEMENTARY SCHOOL ADDITION.

STAFF/CARPOOL/BUS INGRESS/EGRESS FOR DROP OFF AND PICK UP DURING THIS PHASE OF CONSTRUCTION.
1448 TOTAL QUEUING

CARPOOL LOOP
605 LF - K-2 STUDENTS

CONSTRUCTION TRAFFIC ONLY DURING THIS PHASE OF CONSTRUCTION.



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WCPSS PROJECT ID: 862-453
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PHASING PLAN
2B FINAL SITE
Sheet
C-004

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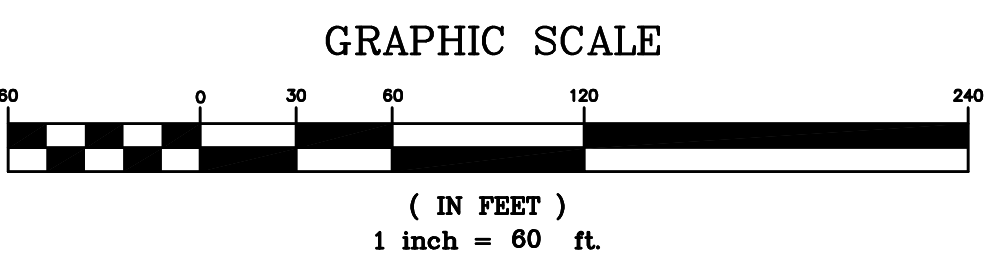
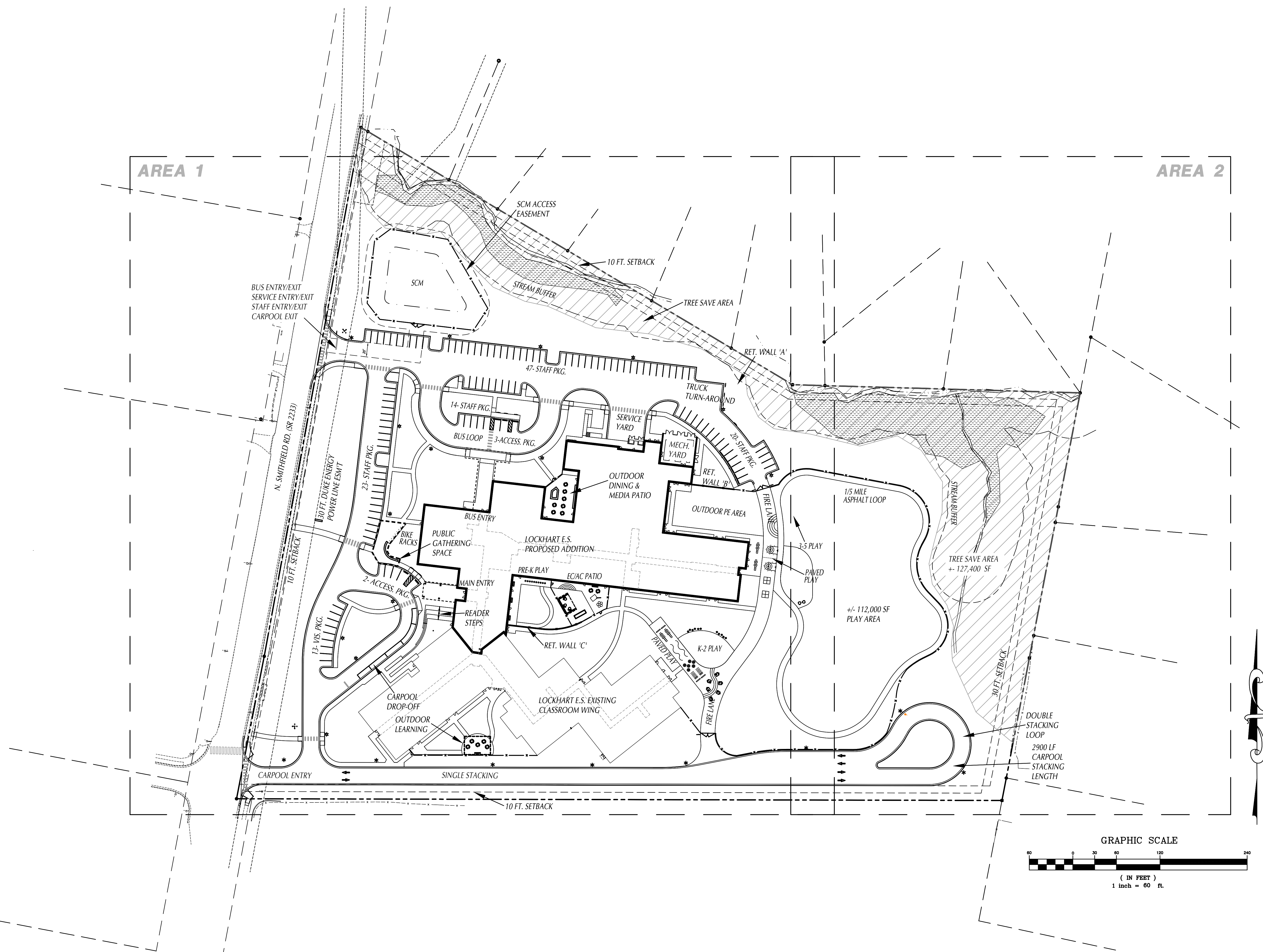
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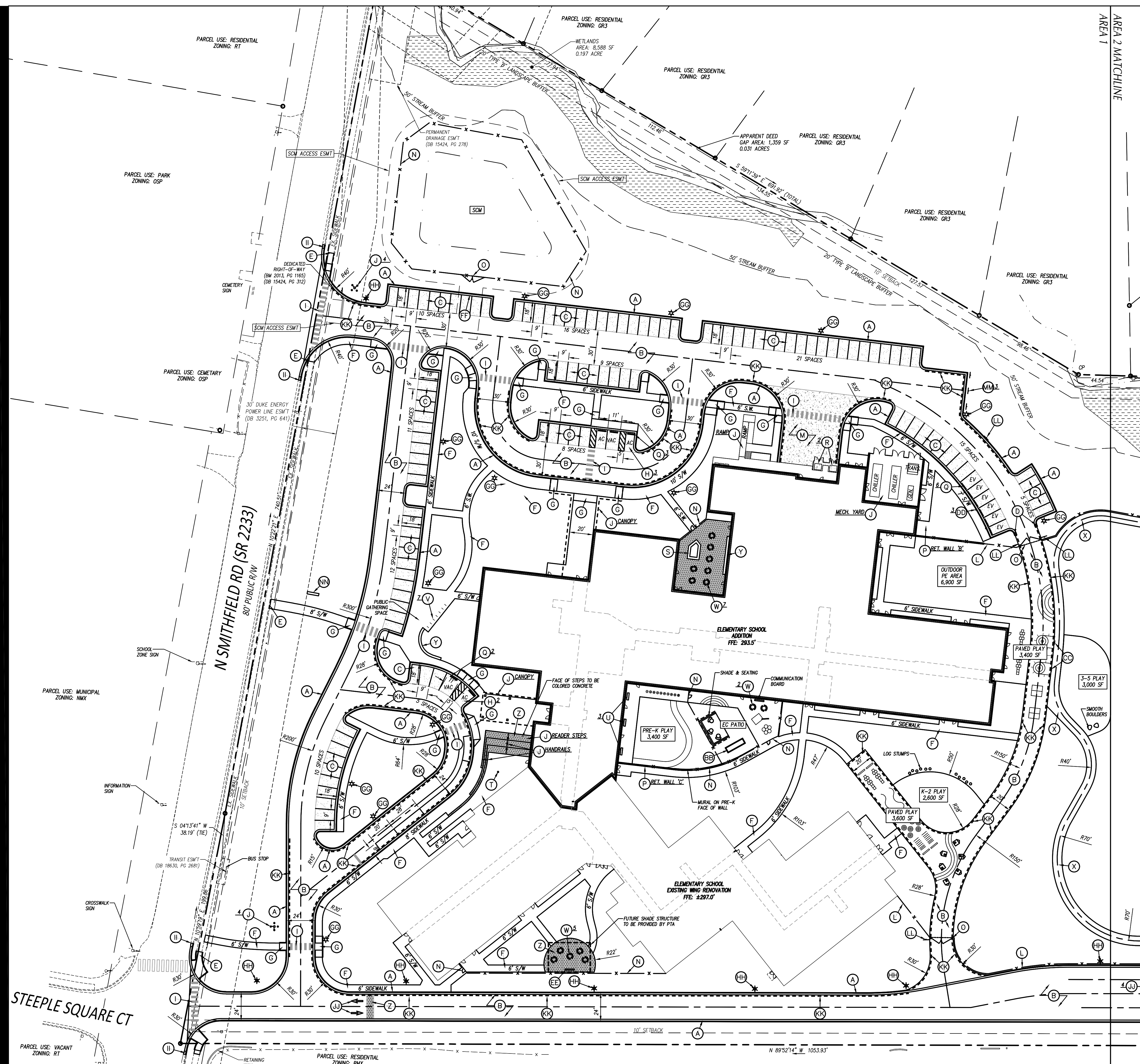
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Revisions	
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Date	2024-10-31
Title	

SITE OVERALL PLAN

Sheet **C-100**





- GENERAL NOTES**
1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL TOWN OF KNIGHTDALE AND NCDOT STANDARDS AND SPECIFICATIONS.
 2. ALL DIMENSIONS SHOWN ARE TO FACE OF CURB AND FACE OF BUILDING WALL, UNLESS OTHERWISE SHOWN.
 3. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF ALL DIMENSIONS SHOWN AND CONTACT THE ARCHITECT IF ANY DISCREPANCIES OCCUR.
 4. CONSTRUCTION STAKE OUT IS THE RESPONSIBILITY OF THE CONTRACTOR.
 5. ALL PAVEMENT MARKINGS AND SIGNAGE SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
 6. ALL FACE OF RADIUS ARE 4 FT UNLESS OTHERWISE SHOWN.
 7. ALL PARKING SPACES SHALL BE 9' WIDE X 18 FT DEEP MIN.
 8. (AC) DENOTES ACCESSIBLE PARKING SPACE.
 9. (VAC) DENOTES VAN ACCESSIBLE PARKING SPACE.
 10. 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.
 11. CONTRACTOR SHALL SUBMIT SCALED PLANS OF ALL SCORING/JOINTS FOR APPROVAL BY ARCHITECT 30 DAYS MINIMUM PRIOR TO INSTALLATION.
 12. THE CROSS-SLOPE ON ALL SIDEWALKS SHALL BE A MAXIMUM OF 2.0%.
 13. 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.

- KEY NOTES**
- (A) 24" CURB & GUTTER, SEE DETAIL SHEET C-901.
 - (B) HEAVY DUTY ASPHALT PAVEMENT, SEE DETAIL SHEET C-901.
 - (C) LIGHT DUTY ASPHALT PAVEMENT, SEE DETAIL SHEET C-901.
 - (D) STANDARD CURB & GUTTER TERMINUS, SEE DETAIL SHEET C-902.
 - (E) TIE IN TO EXISTING SIDEWALK.
 - (F) CONCRETE SIDEWALK, SEE DETAIL SHEET C-901.
 - (G) ACCESSIBLE CURB RAMP, SEE DETAIL SHEET C-901.
 - (H) ACCESSIBLE PARKING, SEE SIGNAGE AND STRIPING PLAN.
 - (I) HI-VIS CROSSWALK, SEE SIGNAGE AND STRIPING TRAFFIC PLAN.
 - (J) SEE ARCHITECTURAL PLANS FOR CANOPY, SCREEN AND STRUCTURAL WALLS, BUILDING COLUMNS, LOADING DOCK, RAMPS, STAIRS, HANDRAILS, GUARDRAILS, BOLLARDS AND MECHANICAL SERVICE YARD.
 - (K) STEEL BOLLARD, SEE DETAIL SHEET C-901.
 - (L) BLACK VINYL COATED CHAIN LINK FENCE, SEE DETAIL SHEET C-901.
 - (M) HEAVY DUTY CONCRETE PAVEMENT, SEE DETAIL SHEET C-901.
 - (N) 4" ORNAMENTAL ALUMINUM FENCE AND GATES, SEE DETAIL SHEET C-901 & STRUCTURAL DWGS.
 - (O) LOCKED PIPE GATE, SEE DETAIL SHEET C-903.
 - (P) CONCRETE RETAINING WALL WITH BRICK FACADE, SEE STRUCTURAL DRAWINGS FOR DETAILS.
 - (Q) PRECAST CONCRETE WHEELSTOP, SEE DETAIL SHEET C-902.
 - (R) DUMPSTER, PROVIDED BY OWNER.
 - (S) SEATWALL AROUND RAISED PLANTER.
 - (T) FLAGPOLE, SEE DETAIL SHEET C-903.
 - (U) BENCH, SEE SPECIFICATIONS; "GLIDE" BY LANDSCAPE FORMS.
 - (V) BIKE RACK, SEE SPECIFICATIONS; "LOOP" BY LANDSCAPE FORMS.
 - (W) TABLE, SEE SPECIFICATIONS; "CHARLIE" BY LANDSCAPE FORMS.
 - (X) 8" ASPHALT TRAIL, SEE DETAIL SHEET C-901.
 - (Y) SEAT WALL.
 - (Z) PRECAST PAVER.
 - (AA) BENCH, SEE SPECIFICATIONS; "OGDEN R7" BY MAGLIN.
 - (BB) RAISED PLANTER.
 - (CC) BASKETBALL COURT AND LAYOUT, SEE DETAIL SHEET C-904.
 - (DD) EV CHARGING STATION, SEE ELECTRICAL PLANS.
 - (EE) OUTDOOR CHALKBOARD.
 - (FF) VALLEY CURB, SEE DETAIL SHEET C-902.
 - (GG) PEDESTRIAN LIGHTING, SEE DUKE LIGHTING PLAN.
 - (HH) STREET LIGHTING, SEE DUKE LIGHTING PLAN.
 - (II) 24" TO 30" C&G TRANSITION, SEE DETAIL SHEET C-902.
 - (JJ) DIRECTIONAL ARROW, SEE TRAFFIC CONTROL NOTES.
 - (KK) NO PARKING - FIRE LANE MARKINGS, SEE TRAFFIC CONTROL NOTES.
 - (LL) NO PARKING - FIRE LANE SIGNAGE, SEE TRAFFIC CONTROL NOTES.
 - (MM) END ROAD SIGNAGE, SEE TRAFFIC CONTROL NOTES.
 - (NN) SCHOOL MONUMENT SIGN, SEE ARCHITECTURE FOR DETAILS.

GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft.

Revisions

Drawn _____
Checked _____
Date 2024-10-31
Title _____

SHEET **C-101**

AREA 1

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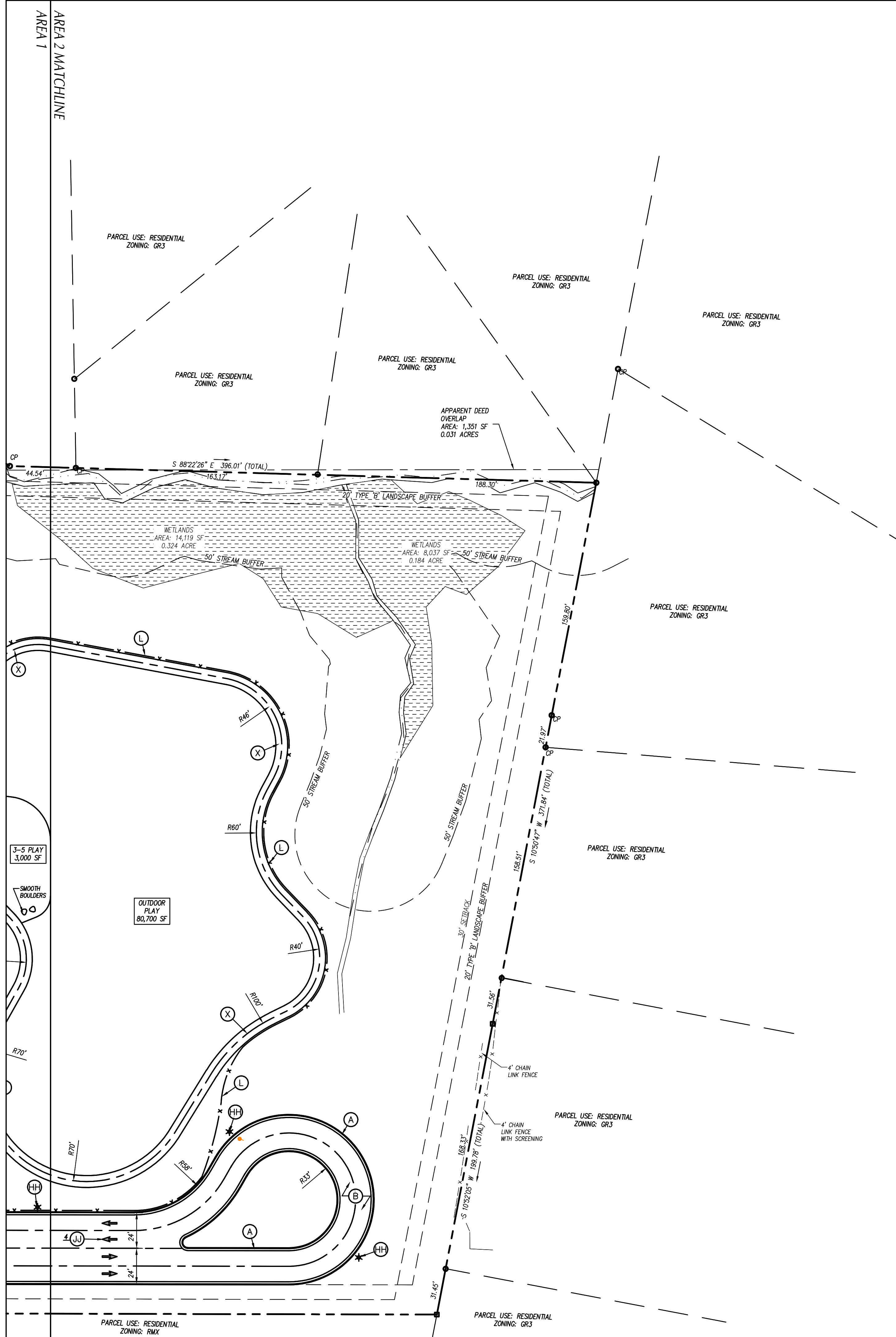
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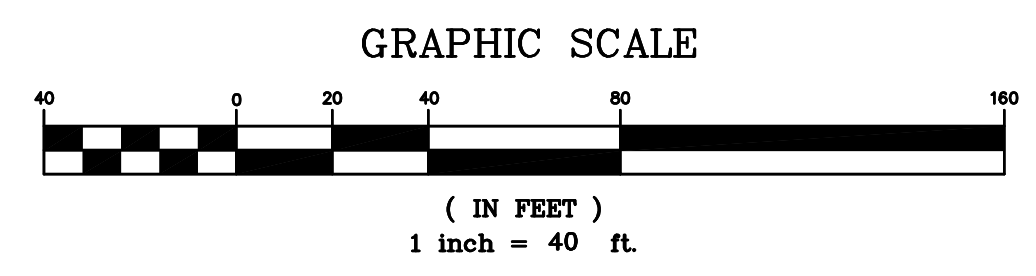


GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL TOWN OF KNIGHTDALE AND NCDOT STANDARDS AND SPECIFICATIONS.
- 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 18 FT DEEP MIN.
- (AC) 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.

KEY NOTES

- (A) 24" CURB & GUTTER, SEE DETAIL SHEET C-901.
- (B) HEAVY DUTY ASPHALT PAVEMENT, SEE DETAIL SHEET C-901.
- (C) LIGHT DUTY ASPHALT PAVEMENT, SEE DETAIL SHEET C-901.
- (D) STANDARD CURB & GUTTER TERMINUS, SEE DETAIL SHEET C-902.
- (E) TIE IN TO EXISTING SIDEWALK.
- (F) CONCRETE SIDEWALK, SEE DETAIL SHEET C-901.
- (G) ACCESSIBLE CURB RAMP, SEE DETAIL SHEET C-901.
- (H) ACCESSIBLE PARKING, SEE SIGNAGE AND STRIPING PLAN.
- (I) HI-VIS CROSSWALK, SEE SIGNAGE AND STRIPING TRAFFIC PLAN.
- (J) SEE ARCHITECTURAL PLANS FOR CANOPY, SCREEN AND STRUCTURAL WALLS, BUILDING COLUMNS, LOADING DOCK, RAMPS, STAIRS, HANDRAILS, GUARDRAILS, BOLLARDS AND MECHANICAL SERVICE YARD.
- (K) STEEL BOLLARD, SEE DETAIL SHEET C-901.
- (L) BLACK VINYL COATED CHAIN LINK FENCE, SEE DETAIL SHEET C-901.
- (M) HEAVY DUTY CONCRETE PAVEMENT, SEE DETAIL SHEET C-901.
- (N) 4" ORNAMENTAL ALUMINUM FENCE AND GATES, SEE DETAIL SHEET C-901 & STRUCTURAL DWGS.
- (O) LOCKED PIPE GATE, SEE DETAIL SHEET C-903.
- (P) CONCRETE RETAINING WALL WITH BRICK FACADE, SEE STRUCTURAL DRAWINGS FOR DETAILS.
- (R) PRECAST CONCRETE WHEELSTOP, SEE DETAIL SHEET C-902.
- (S) DUMPSTER, PROVIDED BY OWNER.
- (T) SEATWALL AROUND RAISED PLANTER.
- (U) FLAGPOLE, SEE DETAIL SHEET C-903.
- (V) BENCH, SEE SPECIFICATIONS; "GLIDE" BY LANDSCAPE FORMS.
- (W) BIKE RACK, SEE SPECIFICATIONS; "LOOP" BY LANDSCAPE FORMS.
- (X) TABLE, SEE SPECIFICATIONS; "CHARLIE" BY LANDSCAPE FORMS.
- (Y) 8' ASPHALT TRAIL, SEE DETAIL SHEET C-901.
- (Z) SEAT WALL.
- (AA) PRECAST PAVER.
- (BB) BENCH, SEE SPECIFICATIONS; "ODGEN R7" BY MAGLIN.
- (CC) RAISED PLANTER.
- (DD) BASKETBALL COURT AND LAYOUT, SEE DETAIL SHEET C-904.
- (EE) EV CHARGING STATION, SEE ELECTRICAL PLANS.
- (FF) OUTDOOR CHALKBOARD.
- (GG) VALLEY CURB, SEE DETAIL SHEET C-902.
- (HH) PEDESTRIAN LIGHTING, SEE DUKE LIGHTING PLAN.
- (II) STREET LIGHTING, SEE DUKE LIGHTING PLAN.
- (JJ) 24" TO 30" C&G TRANSITION, SEE DETAIL SHEET C-902.
- (KK) DIRECTIONAL ARROW, SEE TRAFFIC CONTROL NOTES.
- (LL) NO PARKING - FIRE LANE MARKINGS, SEE TRAFFIC CONTROL NOTES.
- (MM) NO PARKING - FIRE LANE SIGNAGE, SEE TRAFFIC CONTROL NOTES.
- (NN) END ROAD SIGNAGE, SEE TRAFFIC CONTROL NOTES.
- (OO) SCHOOL MONUMENT SIGN, SEE ARCHITECTURE FOR DETAILS.



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LOCKHART ES RENO/REPLACEMENT:
LOCKHART ELEMENTARY SCHOOL
1320 N. SMITHFIELD RD. KNIGHTDALE, NC 27545
WCPSS PROJECT ID: 862-453
WCPSS PROJECT MANAGER: SHANE WEBSTER
DTW PROJECT NUMBER: 23025

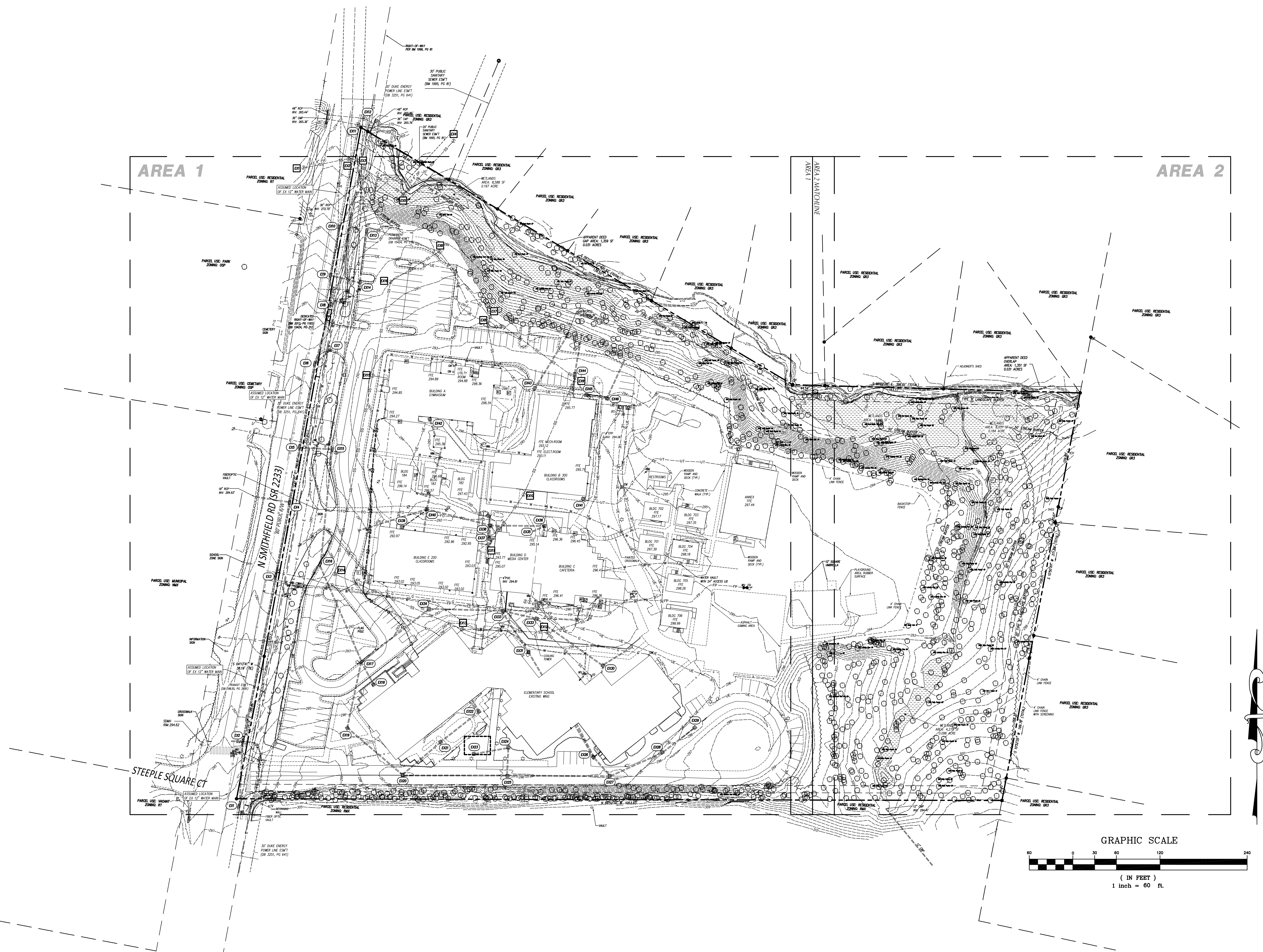
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Revisions

Drawn _____
Checked _____
Date 2024-10-31
Title _____

AREA 1

AREA 2

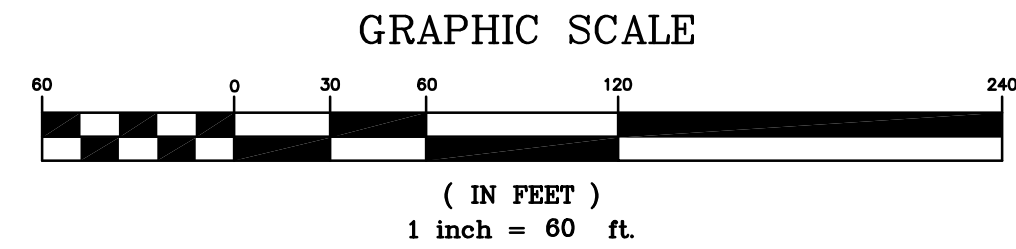


STEEPLE SQUARE CT

PARCEL USE: WASTON ZONING RT

LOCKHART ES RENOREPLACEMENT:
LOCKHART ELEMENTARY SCHOOL
1320 N. SMITHFIELD RD. KNIGHTDALE, NC 27545
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WCPSS PROJECT MANAGER: SHANE WEBSTER
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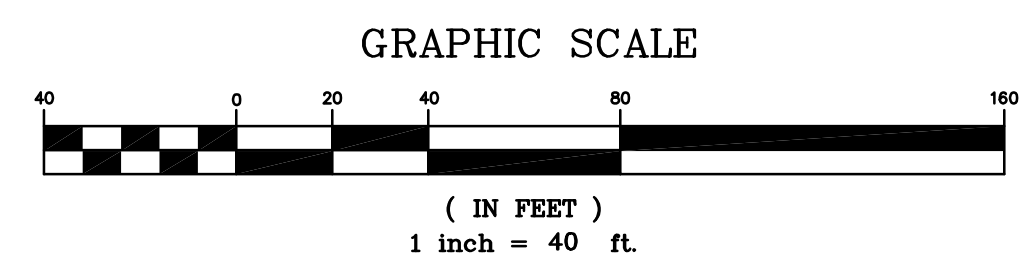
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Date	2024-10-31
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LEGEND

STRUCTURES/UTILITIES

OVERHEAD ELECTRICAL	---	E
UNDERGROUND ELECTRICAL	---	UE
FIRE PROTECTION	---	FP
GAS	---	G
SANITARY SEWER	---	SS
TELEPHONE	---	T
UNDERGROUND TELEPHONE	---	UT
FIBER OPTIC	---	FO
WATER	---	W
FORCE MAIN	---	FM
STORM DRAIN	---	SD
INDIVIDUAL TREE TO BE REMOVED	(Symbol)	
LIGHT POLE	(Symbol)	LP
UTILITY POLE	(Symbol)	UP
MANHOLE	(Symbol)	MH
CLEAN OUT	(Symbol)	CO
DROP INLET/CATCH BASIN	(Symbol)	DI, CB
FIRE HYDRANT	(Symbol)	FH
WATER VALVE	(Symbol)	WV
EXISTING STORM STRUCTURE LABEL, SEE SHEET C-202 FOR INVERTS	(Symbol)	EX5
EXISTING SEWER STRUCTURE LABEL, SEE SHEET C-202 FOR INVERTS	(Symbol)	EX1



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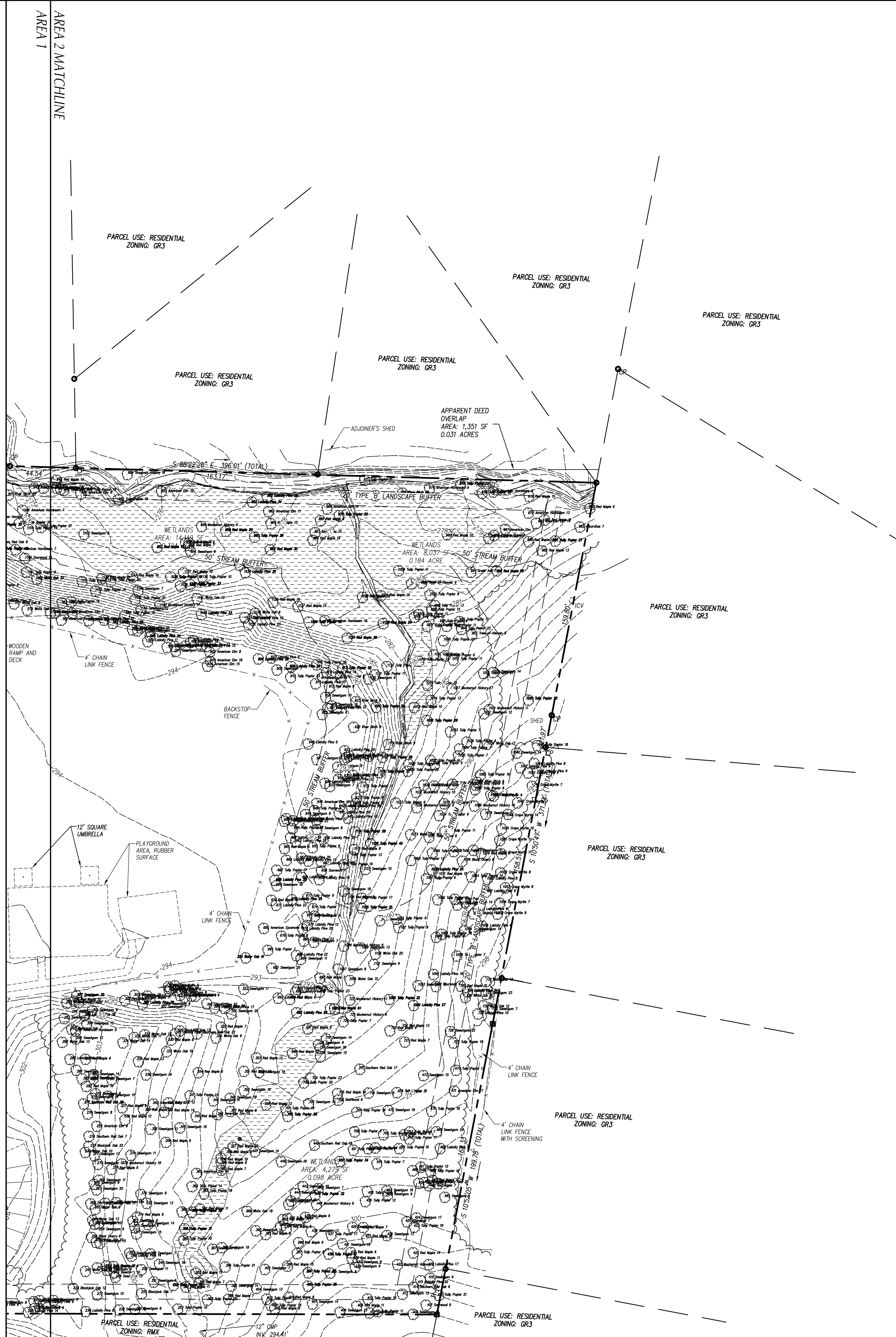
EXISTING CONDITIONS
PLAN - AREA 1
Sheet
C-201

STORM DRAINAGE STRUCTURES

EX1 CB TOC: 296.72' GRATE: 288.21' INV(15"RC)(N): 292.91'	EX12 SMH (DEBRIS) RM: 273.62' INV(48"RC)(E): 264.97' INV(48"RC)(W): 264.52'	EX24 DI RM: 296.20' INV(15"RC)(W): 293.33' INV(15"RC)(S): 293.00'	EX35 DI TOP: 295.01' INV (6"PI)(NW): 293.07'
EX2 CB TOC: 294.29' GRATE: 283.84' INV(15"RC)(S): 291.14' INV(15"RC)(N): 291.05'	EX13 CB TOC: 286.79' GRATE: 288.15' INV(15"RC)(S): 283.67'	EX25 DI RM: 295.85' INV(15"RC)(E): 291.22' INV(15"RC)(W): 291.17'	EX36 DI TOP: 295.02' INV (6"PI)(SW): 293.54' INV(6"PI)(S): 292.02' INV(12"PI)(S): 292.07'
EX3 CB TOC: 289.51' GRATE: 288.83' INV(15"RC)(S): 286.64' INV(15"RC)(W): 286.46'	EX14 CB TOC: 288.33' GRATE: 287.86' INV(15"RC)(N): 283.31' INV(15"RC)(W): 283.06'	EX26 DI RM: 296.02' INV(15"RC)(SE): 291.66' INV(6"DP)(NE): 283.58' INV(6"DP)(NW): 283.97' INV(6"DP)(W): 283.96'	EX37 DI TOP: 292.53' INV (4"DP)(NW): 291.88' INV(4"PI)(E): 291.75' INV(6"PI)(N): 291.10'
EX4 CB TOC: 288.61' GRATE: 288.02' INV(15"RC)(S): 286.07' INV(15"RC)(W): 286.02'	EX15 CB TOC: 291.08' GRATE: 290.64' INV(24"RC)(S): 284.69' INV(30"RC)(W): 284.54'	EX27 DI RM: 295.77' INV(15"RC)(NW): 292.04' INV(15"RC)(N): 292.03' INV(15"RC)(W): 291.74'	EX38 DI TOP: 293.78' INV(4"PI)(SE): 292.83' INV(6"PI)(S): 290.86' INV(12"PI)(W): 290.33' INV(12"RC)(E): 291.86'
EX5 CB TOC: 288.76' GRATE: 288.21' INV(6"RC)(S): 283.82' INV(30"RC)(W): 283.76'	EX16 CB TOC: 288.42' GRATE: 288.28' INV(24"RC)(S): 285.62' INV(24"RC)(N): 285.59'	EX28 DI RM: 295.83' INV(15"RC)(SW): 292.95' INV(15"RC)(S): 292.21'	EX39 DI GRATE: 292.43' INV(6"PI)(NW): 291.27'
EX6 CB TOC: 287.81' GRATE: 288.02' INV(15"RC)(NE): 282.39' INV(30"RC)(S): 282.42'	EX17 CB TOC: 293.04' GRATE: 292.83' INV(15"RC)(N): 287.21' INV(15"RC)(S): 287.80'	EX29 DI RM: 295.76' INV(15"RC)(SW): 292.76'	EX40 DI GRATE: 291.15' INV(6"PI)(SW): 290.30' INV(10"RC)(W): 288.47' INV(6"CP)(S): 288.89' INV(12"RC)(SE): 288.44' INV(6"CLAY)(S): 290.17'
EX7 CB TOC: 288.45' GRATE: 287.85' INV(6"DP)(SE): 284.35'	EX18 DI GRATE: 295.97' INV(6"DP)(S): 283.55' INV(15"RC)(NW): 288.79'	EX30 DI GRATE: 286.30' INV(15"RC)(S): 284.41' INV(6"DP)(NE): 294.02' INV(15"RC)(W): 282.83'	EX41 DI GRATE: 295.19' INV (4"CP)(E): 294.51'
EX8 SMH RM: 284.91' INV(6"RC)(S): 278.52' INV(30"RC)(W): 278.36'	EX19 DI GRATE: 293.91' INV(24"RC)(E): 288.31' INV(24"RC)(W): 289.14'	EX31 DI RM: 295.97' INV(15"RC)(NW): 291.19' INV(6"DP)(SE): 294.33' INV(6"DP)(W): 294.32'	EX42 DI GRATE: 294.46' INV(6"DP)(S): 292.48' INV(6"PI)(W): 292.48'
EX9 CB TOC: 283.16' GRATE: 282.55' INV(15"RC)(NE): 278.45' INV(30"RC)(S): 278.41'	EX20 DI RM: 295.89' INV(15"RC)(NE): 291.00' INV(15"RC)(W): 290.14' INV(4"RC)(S): 289.86'	EX32 DI GRATE: 294.30' INV(6"DP)(S): 292.75' INV(6"DP)(W): 292.10' INV(15"RC)(W): 291.52'	EX43 CB TOP OF GRATE: 295.06' INV(15"RC)(N): 292.15'
EX10 CB TOC: 279.23' GRATE: 278.57' INV(30"RC)(S): 273.91' INV(36"RC)(N): 273.68'	EX21 DI RM: 296.46' INV(4"DP)(S): 294.55' INV(15"RC)(NE): 292.74' INV(15"RC)(W): 292.40'	EX33 CB TOC: 293.54' GRATE: 283.60' INV(4"PI)(W): 292.06' INV(15"RC)(S): 290.75' INV(15"RC)(E): 290.46'	EX44 CB TOP: 293.46' INV(6"CLAY)(S): 291.54' INV(6"CP)(N): 291.40'
EX11 SMH (DEBRIS) RM: 273.45' INV(36"RC)(E): 264.78' INV(36"RC)(W): 264.48'	EX22 DI RM: 286.40' INV(4"DP)(N): 295.00' INV(4"DP)(S): 294.33' INV(6"PI)(S): 294.98' INV(15"RC)(W): 292.75'	EX34 DI TOP: 291.42' GRATE: 291.60' INV(15"RC)(S): 289.17' INV(6"PI)(E): 292.06' INV(15"RC)(S): 288.06'	EX45 CB TOP: 293.01' INV(6"PI)(E): 292.24'
	EX23 DI RM: 296.13' INV(15"RC)(E): 291.22'		EX46 CB TOP: 293.85' INV(6"PI)(NW): 291.73' INV(15"RC)(NE): 291.24'

SANITARY SEWER STRUCTURES

EX1 SSMH RM: 272.54' INV(6"PI)(E): 261.79'	EX9 SSMH RM: 289.25' INV(3"PI)(T): 286.25' INV(4"PI)(T): 285.10'
EX2 SSMH RM: 275.02' INV(6"PI)(E): 262.82' INV(6"PI)(W): 262.81' INV(TOP 6"PI)(S): 271.90' INV(6"PI) INSIDE DROPS): 263.72'	EX10 SSMH RM: 295.81' INV(6"PI)(N): 285.92' INV(6"PI)(S): 285.90'
EX3 6" CLEANOUT TOP INTO SSMH INV(6"PI)(SE): FROM CLEANOUT	EX11 SSMH RM: 293.05' INV(6"PI)(S): 286.59' INV(6"PI)(S): 286.35'
EX4 SSMH RM: 276.69' INV(6"DP)(SE): 267.23'	EX12 SSMH RM: 294.84' INV(6"PI)(W): 290.35' INV(6"PI)(SE): 291.25' INV(6"PI)(E): 290.67'
EX5 SSMH RM: 275.18' INV(6"DP)(NE): 264.61' INV(6"PI)(NW): 264.55'	EX13 SSMH RM: 295.19' INV(6"PI)(SE): 291.96' INV(6"DP)(SW): 288.25' INV(6"PI)(S): 288.11'
EX6 SSMH RM: 288.68' INV(6"PI)(W): 280.74' INV(6"PI)(S): 280.75' INV(6"PI)(NW): TO CLEANOUT	EX14 SSMH RM: 289.14' INV(6"DP)(S): 285.71' INV(6"DP)(N): 285.46'
EX7 SSMH RM: 293.40' INV(6"PI)(S): 286.46' INV(6"PI)(SE): 282.59' INV(6"PI)(NW): 282.49'	EX15 SSMH RM: 293.16' INV(6"PI)(S): 290.57' INV(6"DP)(S): 283.09' INV(6"PI)(N): 282.98'
EX8 SSMH ABANDONED RM: 283.77' INV(4"PI)(SE): 291.59' INV(4"DP)(S): 290.31' INV(6"PI)(N): 291.22' INV(6"CLAY)(W): 288.43'	EX16 SSMH RM: 288.94' INV(6"PI)(S): 281.83' INV(6"PI)(W): 298.71'



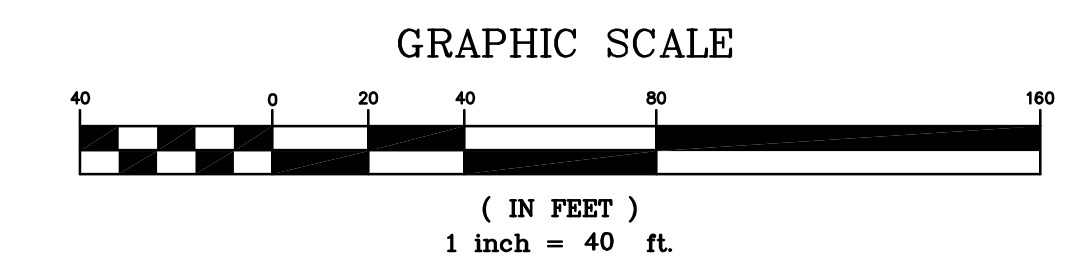
LEGEND

STRUCTURES/UTILITIES

- OVERHEAD ELECTRICAL ----- E -----
- ELECTRICAL UNDERGROUND ----- UE -----
- FIRE PROTECTION ----- FP -----
- GAS ----- G -----
- SANITARY SEWER ----- SS -----
- TELEPHONE ----- T -----
- UNDERGROUND TELEPHONE ----- UT -----
- FIBER OPTIC ----- FO -----
- WATER ----- W -----
- FORCE MAIN ----- FM -----
- STORM DRAIN ----- SD -----
- INDIVIDUAL TREE TO BE REMOVED.
- LIGHT POLE LP
- UTILITY POLE UP
- MANHOLE MH
- CLEAN OUT CO
- DROP INLET/CATCH BASIN DI, CB
- FIRE HYDRANT FH
- WATER VALVE WV

EXISTING STORM STRUCTURE LABEL, SEE SHEET C-202 FOR INVERTS EX5

EXISTING SEWER STRUCTURE LABEL, SEE SHEET C-202 FOR INVERTS EX1



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LOCKHART'S RENOVATION/REPLACEMENT:
LOCKHART ELEMENTARY SCHOOL
1320 N. SMITHFIELD RD. KNIIGHTDALE, NC 27545
WCPSS PROJECT ID: 862-453
WCPSS PROJECT MANAGER: SHANE WEBSTER
DTW PROJECT NUMBER: 23025

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EXISTING CONDITIONS
PLAN - AREA 2

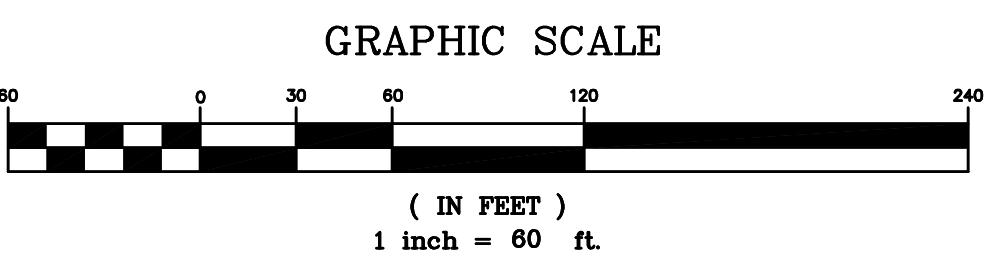
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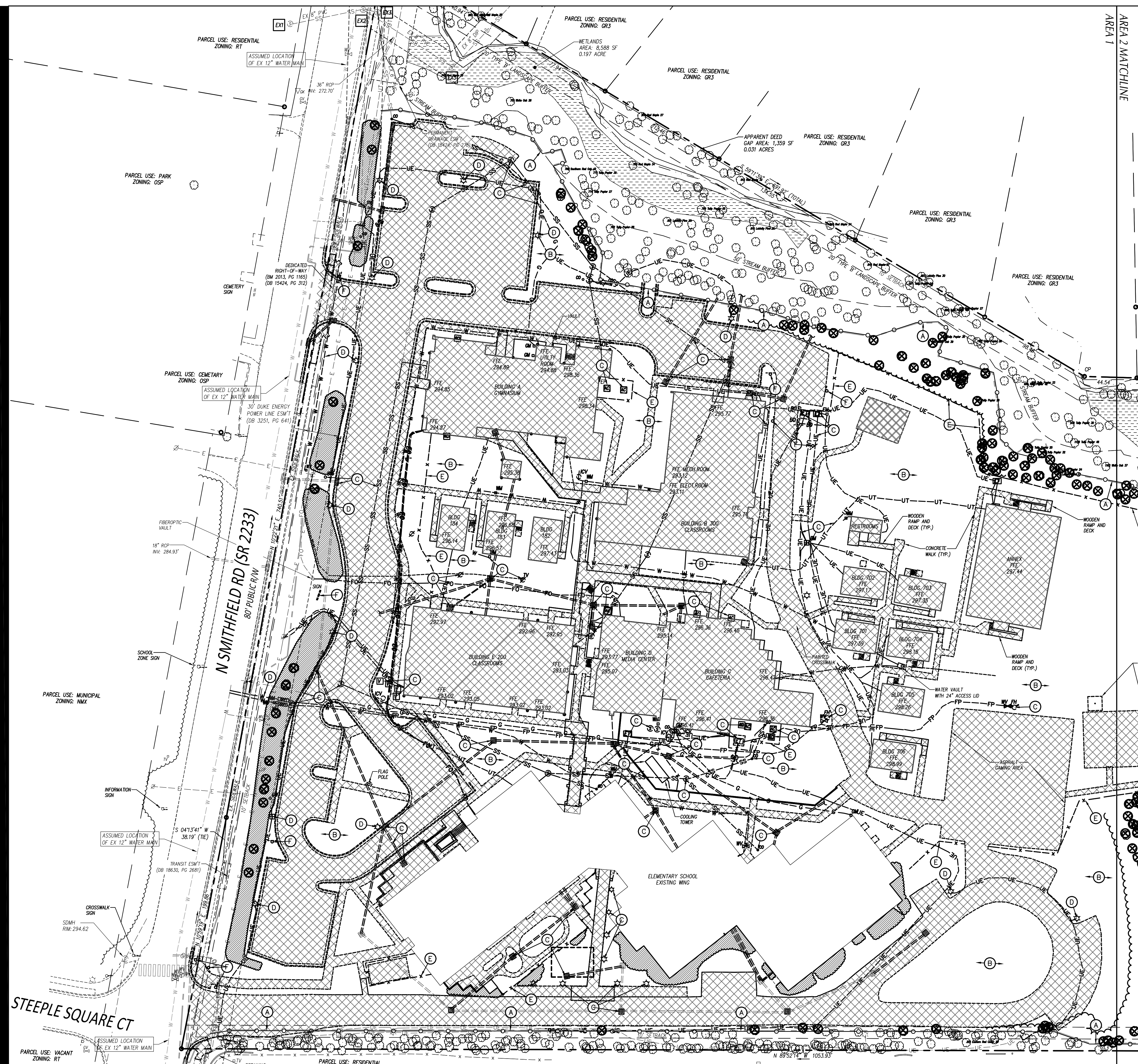
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Date 2024-10-31
Title _____





LEGEND

STRUCTURES/UTILITIES TO BE REMOVED	STRUCTURES/UTILITIES TO REMAIN
OVERHEAD ELECTRICAL ----- E -----	OVERHEAD ELECTRICAL ----- E -----
UNDERGROUND ELECTRICAL ----- UE -----	UNDERGROUND ELECTRICAL ----- UE -----
FIRE PROTECTION ----- FP -----	FIRE PROTECTION ----- FP -----
GAS ----- G -----	GAS ----- G -----
SANITARY SEWER ----- SS -----	SANITARY SEWER ----- SS -----
TELEPHONE ----- T -----	TELEPHONE ----- T -----
UNDERGROUND TELEPHONE ----- UT -----	UNDERGROUND TELEPHONE ----- UT -----
FIBER OPTIC ----- FO -----	FIBER OPTIC ----- FO -----
WATER ----- W -----	WATER ----- W -----
FORCE MAIN ----- FM -----	FORCE MAIN ----- FM -----
STORM DRAIN ----- SD -----	STORM DRAIN ----- SD -----
INDIVIDUAL TREE TO BE REMOVED. (Symbol: tree with X)	INDIVIDUAL TREE TO REMAIN. (Symbol: tree)
LIGHT POLE (Symbol: LP)	LIGHT POLE (Symbol: LP)
UTILITY POLE (Symbol: UP)	UTILITY POLE (Symbol: UP)
MANHOLE (Symbol: MH)	MANHOLE (Symbol: MH)
CLEAN OUT (Symbol: CO)	CLEAN OUT (Symbol: CO)
DROP INLET/CATCH BASIN (Symbol: DI, CB)	DROP INLET/CATCH BASIN (Symbol: DI, CB)
FIRE HYDRANT (Symbol: FH)	FIRE HYDRANT (Symbol: FH)
WATER VALVE (Symbol: WV)	WATER VALVE (Symbol: WV)
CONSTR./CLEARING LIMITS (Symbol: dashed line)	PAVEMENT, S/W, C&G TO BE REMOVED. (Symbol: hatched box)
TREE PROTECTION FENCE (Symbol: line with X)	BUILDING/STRUCTURE TO BE REMOVED. SEE ARCHITECTURAL PLANS. (Symbol: hatched box)

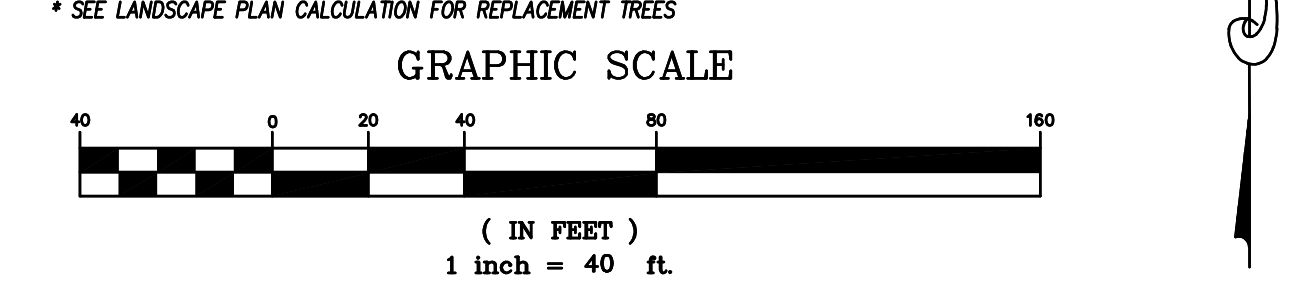
- GENERAL NOTES**
- ALL EXISTING STRUCTURES AND UTILITIES SHALL BE REMOVED AS NEEDED TO ALLOW NEW CONSTRUCTION. IN GENERAL, FEATURES INDICATED IN BOLD ON THIS PLAN SHALL BE REMOVED.
 - ALL PAVEMENT OR CONCRETE TO BE REMOVED SHALL BE SAW CUT TO PROVIDE A STRAIGHT AND UNIFORM JOINT FOR NEW PAVEMENT, SIDEWALK, OR CURB AND GUTTER. ANY EXISTING PAVEMENT, SIDEWALK, CURB AND GUTTER, ETC. THAT MUST BE REMOVED TO ALLOW NEW CONSTRUCTION SHALL BE DEMOLISHED 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 SURVEY BY TRANSYSTEMS, PERFORMED. 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 UNDERGROUND 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 KNIGHTDALE AND/OR NC DOT 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.
 - THIS SITE IS NOT LOCATED WITHIN SPECIAL FLOOD HAZARD AREAS AS DETERMINED BY FEMA AND DEPICTED ON F.I.R.M. MAP 37207400K, DATED 7/19/2022 AS BEING WITHIN ZONE "X" OTHER AREA.
 - 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.

- KEY NOTES**
- (A) TEMPORARY TREE PROTECTION FENCE.
 - (B) CLEAR AND GRUB, STRIP TOPSOIL WITHIN CONSTRUCTION LIMITS.
 - (C) REMOVE STRUCTURE/UTILITY.
 - (D) 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.
 - (E) REMOVE FENCE.
 - (F) REMOVE SIGN AND POST. RELOCATE SIGN ON NEW POST AS INDICATED ON SITE STAKING PLAN.

TREES REMOVED TO BE REPLACEMENT LIST

#	NAME	DBH
252	TULIP POPLAR	26
277	SOUTHERN RED OAK	29
297	SWEETGUM	32
299	LOBLOLLY PINE	32
306	LOBLOLLY PINE	30
311	LOBLOLLY PINE	24
320	LOBLOLLY PINE	26
366	TULIP POPLAR	38
368	TULIP POPLAR	31
399	TULIP POPLAR	32
400	TULIP POPLAR	35
438	TULIP POPLAR	31
441	TULIP POPLAR	32
450	TULIP POPLAR	34
544	LOBLOLLY PINE	27
551	LOBLOLLY PINE	26
572	LOBLOLLY PINE	33
574	TULIP POPLAR	24
692	LOBLOLLY PINE	28
668	LOBLOLLY PINE	29
672	LOBLOLLY PINE	25
700	TULIP POPLAR	28
882	WHITE OAK	39
883	TULIP POPLAR	35
1165	TULIP POPLAR	25
1166	TULIP POPLAR	32
TOTAL:		783

* SEE LANDSCAPE PLAN CALCULATION FOR REPLACEMENT TREES



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LOCKHART ES RENOVATION/REPLACEMENT:
LOCKHART ELEMENTARY SCHOOL
1320 N. SMITHFIELD RD. KNIGHTDALE, NC 27545
WCPSS PROJECT ID: 862-453
WCPSS PROJECT MANAGER: SHANE WEBSTER
DTW PROJECT NUMBER: 23025

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Revisions

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Checked _____
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WCPSS PROJECT ID: 862-453
WCPSS PROJECT MANAGER: SHANE WEBSTER
DTW PROJECT NUMBER: 23025

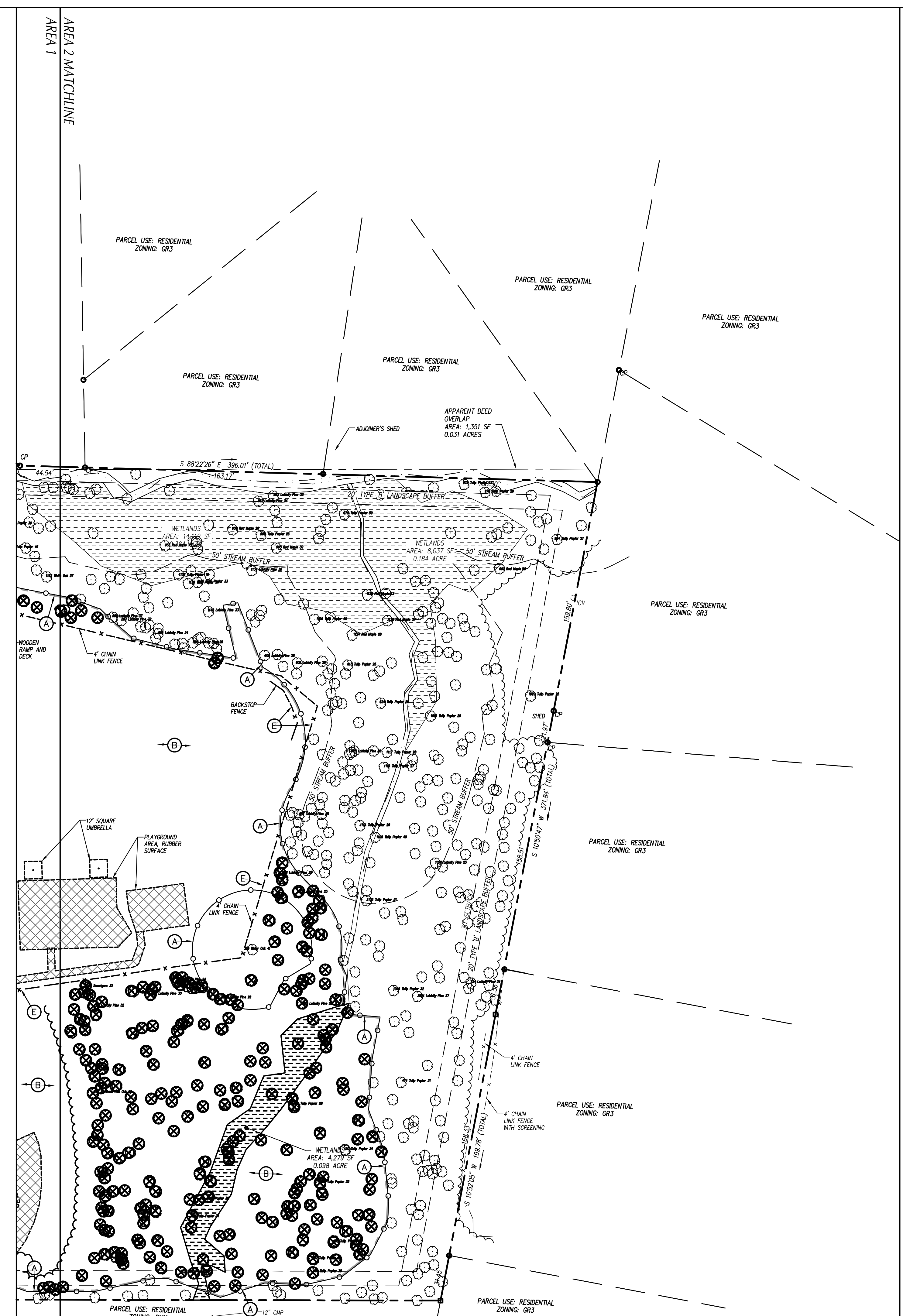
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Revisions

NO.	DESCRIPTION

Drawn _____
Checked _____
Date 2024-10-31
Title _____

DEMOLITION PLAN - AREA 2
Sheet
C-205



LEGEND

STRUCTURES/UTILITIES TO BE REMOVED		STRUCTURES/UTILITIES TO REMAIN	
OVERHEAD ELECTRICAL	--- E ---	OVERHEAD ELECTRICAL	--- E ---
UNDERGROUND ELECTRICAL	--- UE ---	UNDERGROUND ELECTRICAL	--- UE ---
FIRE PROTECTION	--- FP ---	FIRE PROTECTION	--- FP ---
GAS	--- G ---	GAS	--- G ---
SANITARY SEWER	--- SS ---	SANITARY SEWER	--- SS ---
TELEPHONE	--- T ---	TELEPHONE	--- T ---
UNDERGROUND TELEPHONE	--- UT ---	UNDERGROUND TELEPHONE	--- UT ---
FIBER OPTIC	--- FO ---	FIBER OPTIC	--- FO ---
WATER	--- W ---	WATER	--- W ---
FORCE MAIN	--- FM ---	FORCE MAIN	--- FM ---
STORM DRAIN	--- SD ---	STORM DRAIN	--- SD ---
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	
TREE PROTECTION FENCE		BUILDING/STRUCTURE TO BE REMOVED - SEE ARCHITECTURAL PLANS	

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. 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 SURVEY BY TRANSYSTEMS, INC. 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 KNIIGHTDALE AND/OR NCDOT 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.
- THIS SITE IS NOT LOCATED WITHIN SPECIAL FLOOD HAZARD AREAS AS DETERMINED BY FEMA AND DEPICTED ON F.I.R.M. MAP 572072400K, DATED 7/19/2022 AS BEING WITHIN ZONE "X"-OTHER AREA.
- 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.

KEY NOTES

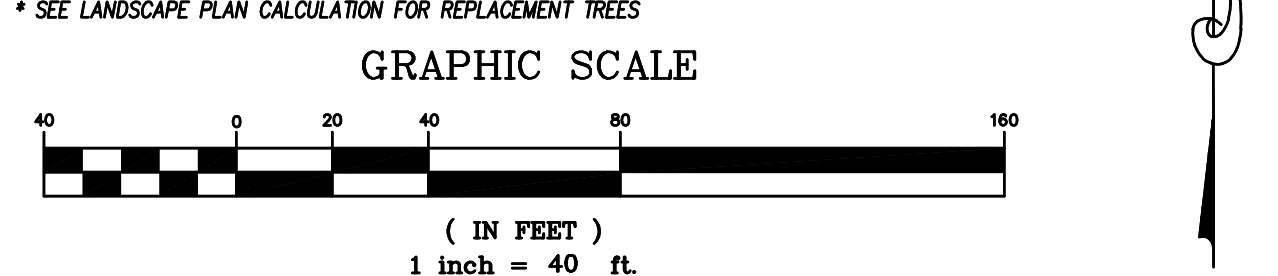
- (A) TEMPORARY TREE PROTECTION FENCE.
- (B) CLEAR AND GRUB, STRIP TOPSOIL WITHIN CONSTRUCTION LIMITS.
- (C) REMOVE STRUCTURE/UTILITY.
- (D) EXISTING UTILITY LINE/STRUCTURE TO BE REMOVED/RELOCATED BY LOCAL UTILITY COMPANY. LOCAL UTILITY COMPANY SHALL DETERMINE THE LIMITS AND EXTENT OF REMOVAL/RELOCATION OF UTILITIES REQUIRED FOR NEW CONSTRUCTION. COORDINATE SCHEDULE AND WORK WITH LOCAL UTILITY COMPANY AND ARCHITECT/OWNER.
- (E) REMOVE FENCE.
- (F) REMOVE SIGN AND POST. RELOCATE SIGN ON NEW POST AS INDICATED ON SITE STAKING PLAN.

TREES REMOVED TO BE REPLACEMENT LIST

#	NAME	DBH
252	TULIP POPLAR	26
277	SOUTHERN RED OAK	32
297	SWEETGUM	32
299	LOBLOLLY PINE	32
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311	LOBLOLLY PINE	24
320	LOBLOLLY PINE	26
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450	TULIP POPLAR	34
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551	TULIP POPLAR	26
572	LOBLOLLY PINE	33
574	TULIP POPLAR	24
682	LOBLOLLY PINE	28
668	LOBLOLLY PINE	29
672	LOBLOLLY PINE	25
700	TULIP POPLAR	28
882	WHITE OAK	39
883	TULIP POPLAR	35
1165	TULIP POPLAR	25
1166	TULIP POPLAR	32

TOTAL: 783

* SEE LANDSCAPE PLAN CALCULATION FOR REPLACEMENT TREES



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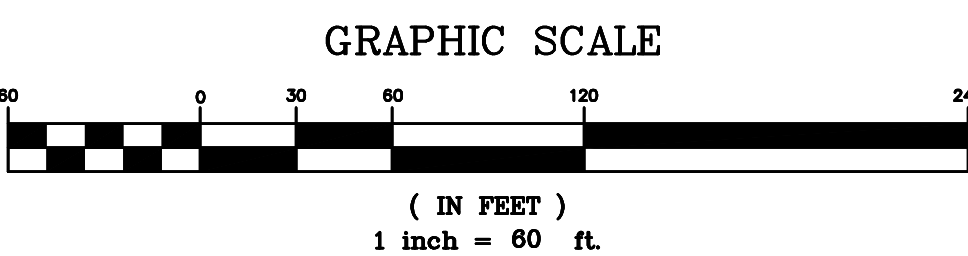
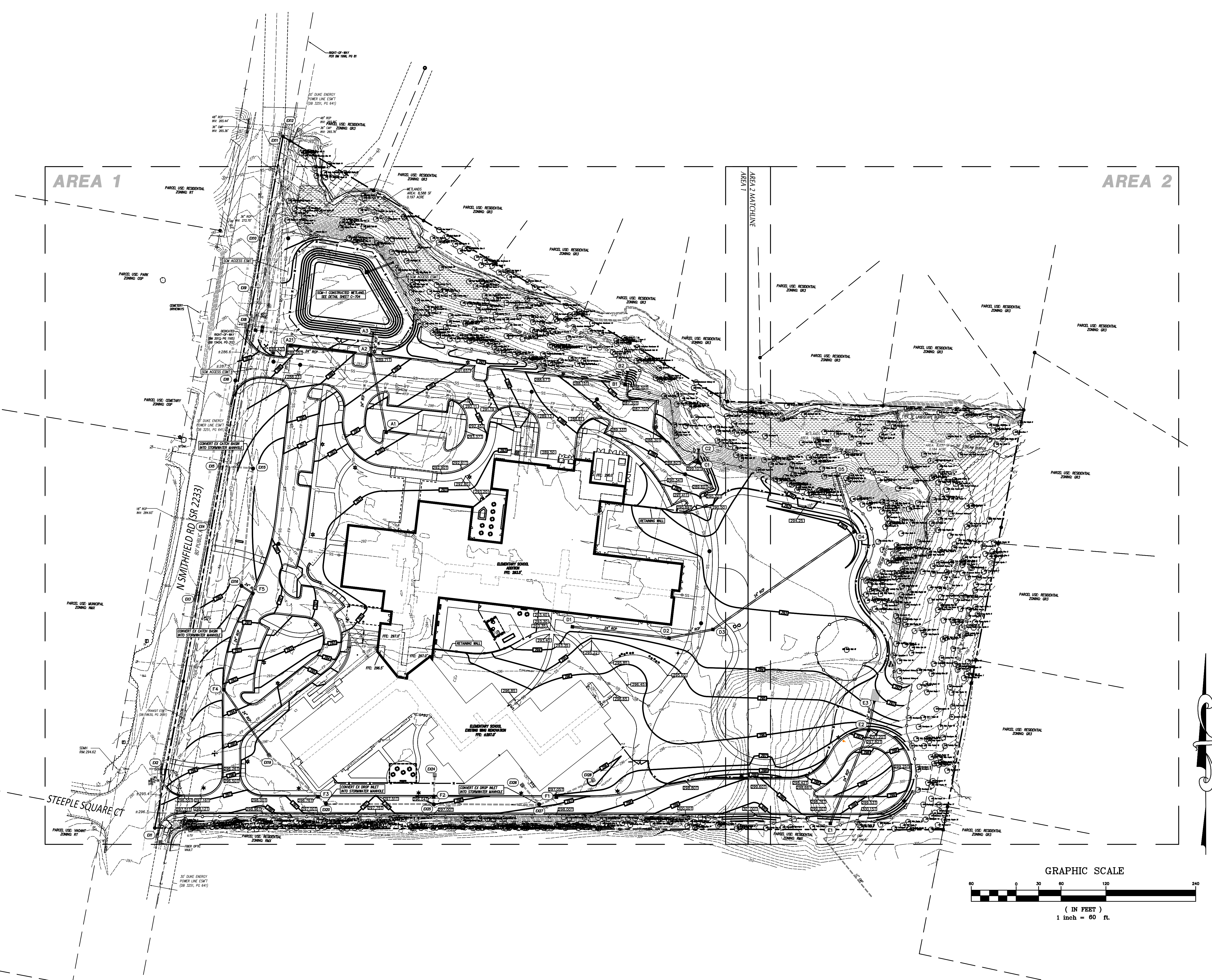
LOCKHART ES RENO/REPLACEMENT:
LOCKHART ELEMENTARY SCHOOL
1320 N. SMITHFIELD RD. KNIGHTDALE, NC 27545
WCPSS PROJECT ID: 862-453
WCPSS PROJECT MANAGER: SHANE WEBSTER
DTW PROJECT NUMBER: 23025

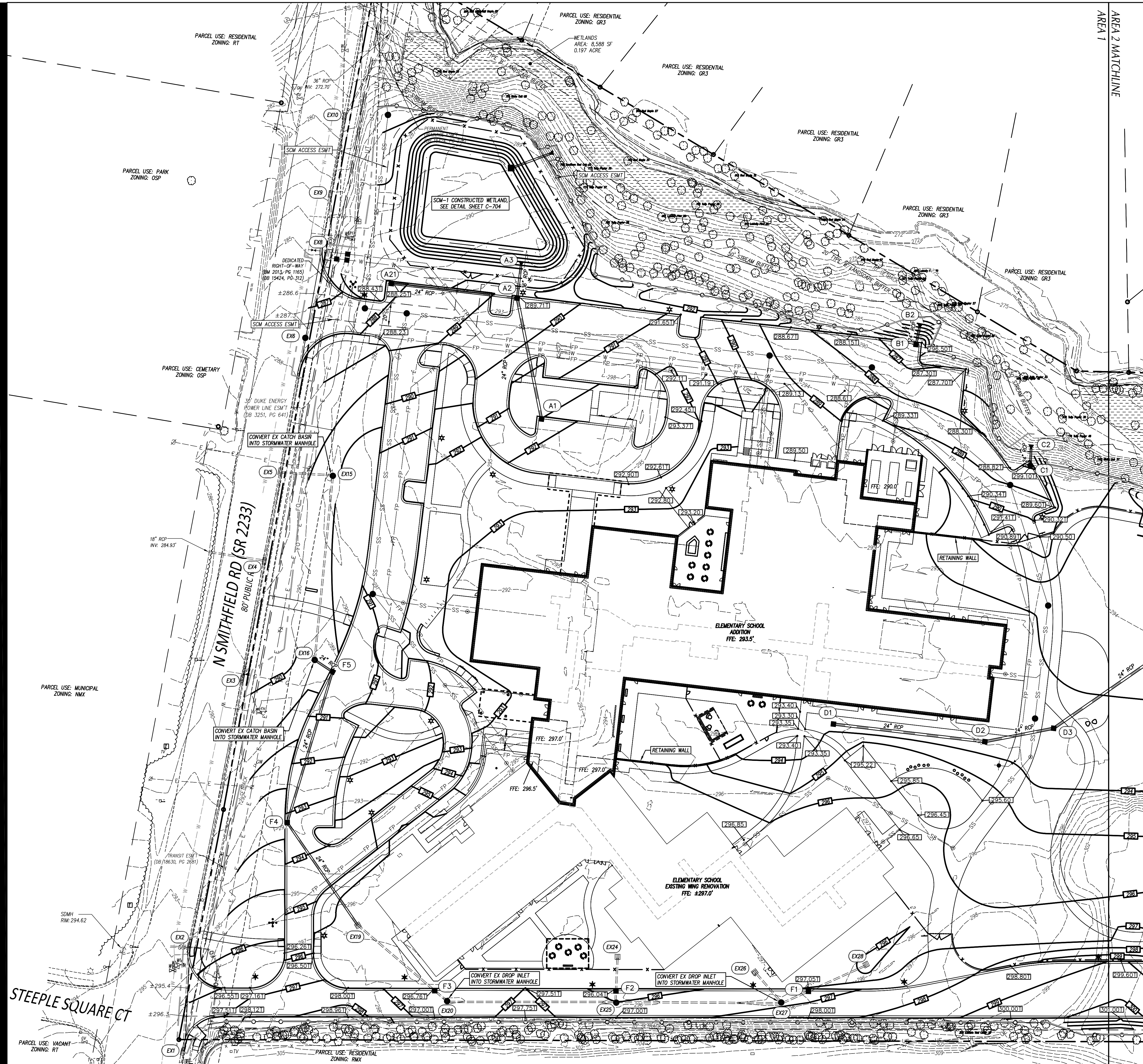
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Revisions

Drawn _____
Checked _____
Date 2024-10-31
Title _____

OVERALL GRADING PLAN
Sheet
C-300





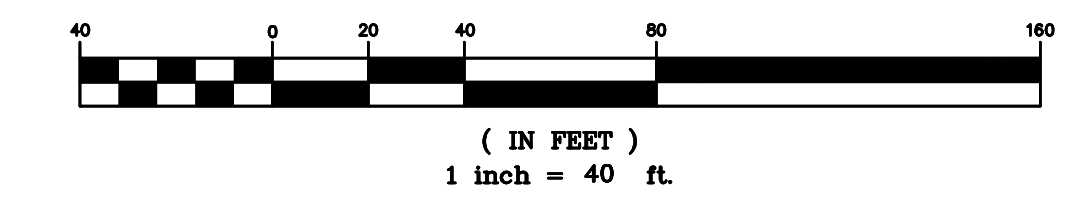
GRADING LEGEND

	EXISTING CONTOURS		FINAL CONTOURS		TYP. GRADE DESIGNATIONS AT SITE WALLS
	±270.4		±270.501		±270.501
	±270.501		±270.501		±270.501
	±270.501		±270.501		±270.501
	±270.501		±270.501		±270.501
	(A4)		(A4)		(A4)
	EXISTING STORM DRAIN PIPE		PROPOSED STORM DRAIN PIPE		PROPOSED FOUNDATION DRAIN DISCHARGE LINE. SEE ARCH. PLANS FOR DRAIN PIPE LOCATIONS ALONG BUILDING WALLS.
	FD		RD		PROPOSED ROOF DRAIN
	TREE PROTECTION FENCE				

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL TOWN OF KNIGHTDALE AND NCDOT STANDARDS AND SPECIFICATIONS.
- ALL SPOT ELEVATIONS INDICATED AT CURB AND GUTTER AND ARE DENOTED TO TOP OF CURB, UNLESS OTHERWISE SHOWN.
- TOTAL DEVELOPED AREA = 12.43 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. SEE DETAIL ON SHEET C-701.
- EXISTING VEGETATION WITHIN TREE PROTECTION AREAS 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 RIGID STRUCTURES. NOTIFY ARCHITECT IF DISCREPANCIES OCCUR.

GRAPHIC SCALE



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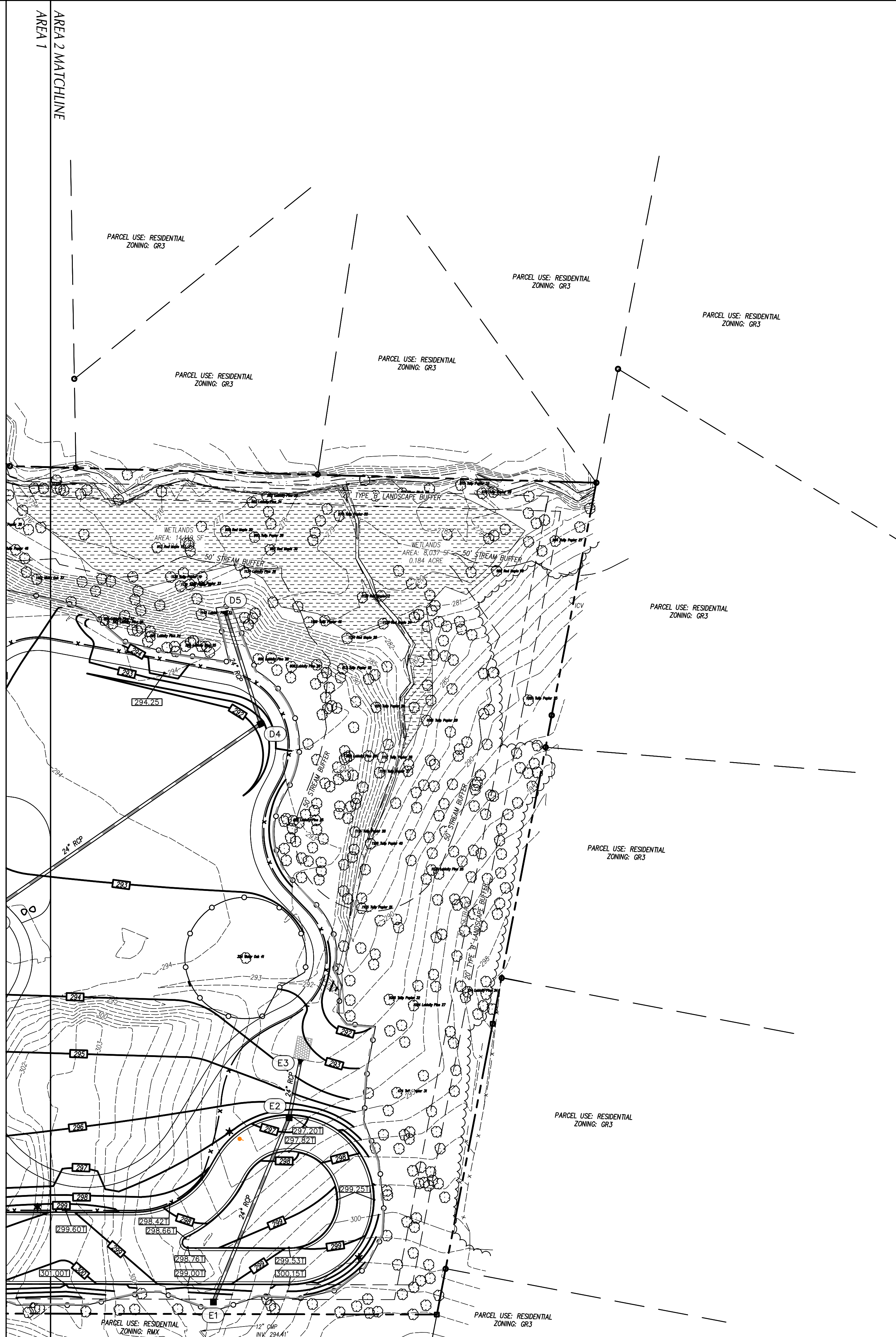
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Chapel Hill, NC 27514
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919.953.9102

LOCKHART ES RENOVATION/REPLACEMENT:
LOCKHART ELEMENTARY SCHOOL
1320 N. SMITHFIELD RD. KNIGHTDALE, NC 27545
WCPSS PROJECT ID: 862-453
WCPSS PROJECT MANAGER: SHANE WEBSTER
DTW PROJECT NUMBER: 23025

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_____	_____
_____	_____
Drawn	_____
Checked	_____
Date	2024-10-31
Title	_____

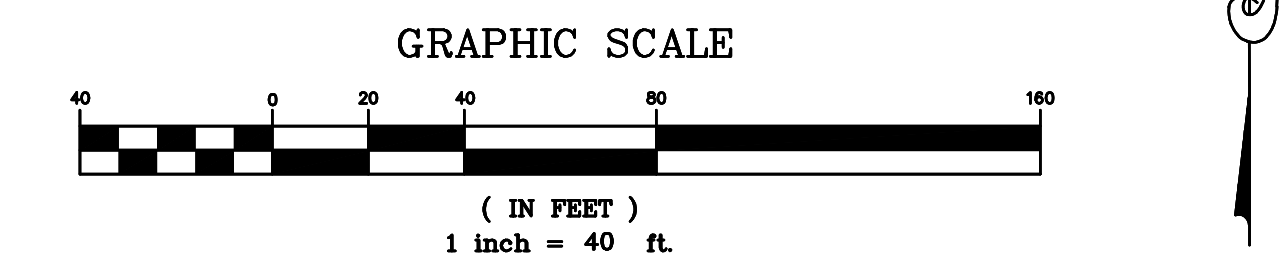
GRADING PLAN
AREA 1
Sheet
C-301



GRADING LEGEND

	EXISTING CONTOURS	
	FINAL CONTOURS	
	INTERPOLATED EXISTING SPOT ELEVATION	
	PROPOSED TOP OF CURB SPOT ELEVATION	
	PROPOSED GROUND/PAVEMENT ELEVATION	
	PROPOSED FINISHED GRADE AT TOP OF WALL ELEVATION	
	PROPOSED FINISHED GRADE AT BOTTOM OF WALL ELEVATION	
	STORM STRUCTURE NUMBER	
	EXISTING STORM DRAIN PIPE	
	PROPOSED STORM DRAIN PIPE	
	PROPOSED FOUNDATION DRAIN DISCHARGE LINE. SEE ARCH. PLANS FOR DRAIN PIPE LOCATIONS ALONG BUILDING WALLS.	
	PROPOSED ROOF DRAIN	
	TREE PROTECTION FENCE	

- GENERAL NOTES**
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL TOWN OF KNIGHTDALE AND NCDOT STANDARDS AND SPECIFICATIONS.
 - ALL SPOT ELEVATIONS INDICATED AT CURB AND GUTTER AND ARE DENOTED TO TOP OF CURB, UNLESS OTHERWISE SHOWN.
 - TOTAL DENUDE AREA = 12.43 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. SEE DETAIL ON SHEET C-701.
 - EXISTING VEGETATION WITHIN TREE PROTECTION AREAS 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 RIGID STRUCTURES. NOTIFY ARCHITECT IF DISCREPANCIES OCCUR.



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 WCPSS PROJECT MANAGER: SHANE WEBSTER
 DTW PROJECT NUMBER: 23025

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GRADING PLAN
 AREA 2

Sheet
C-302

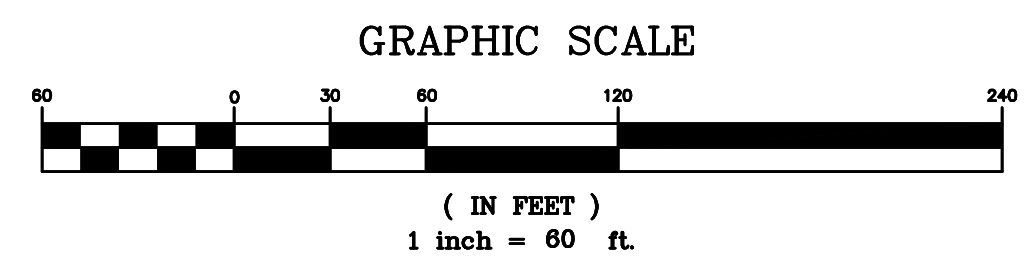
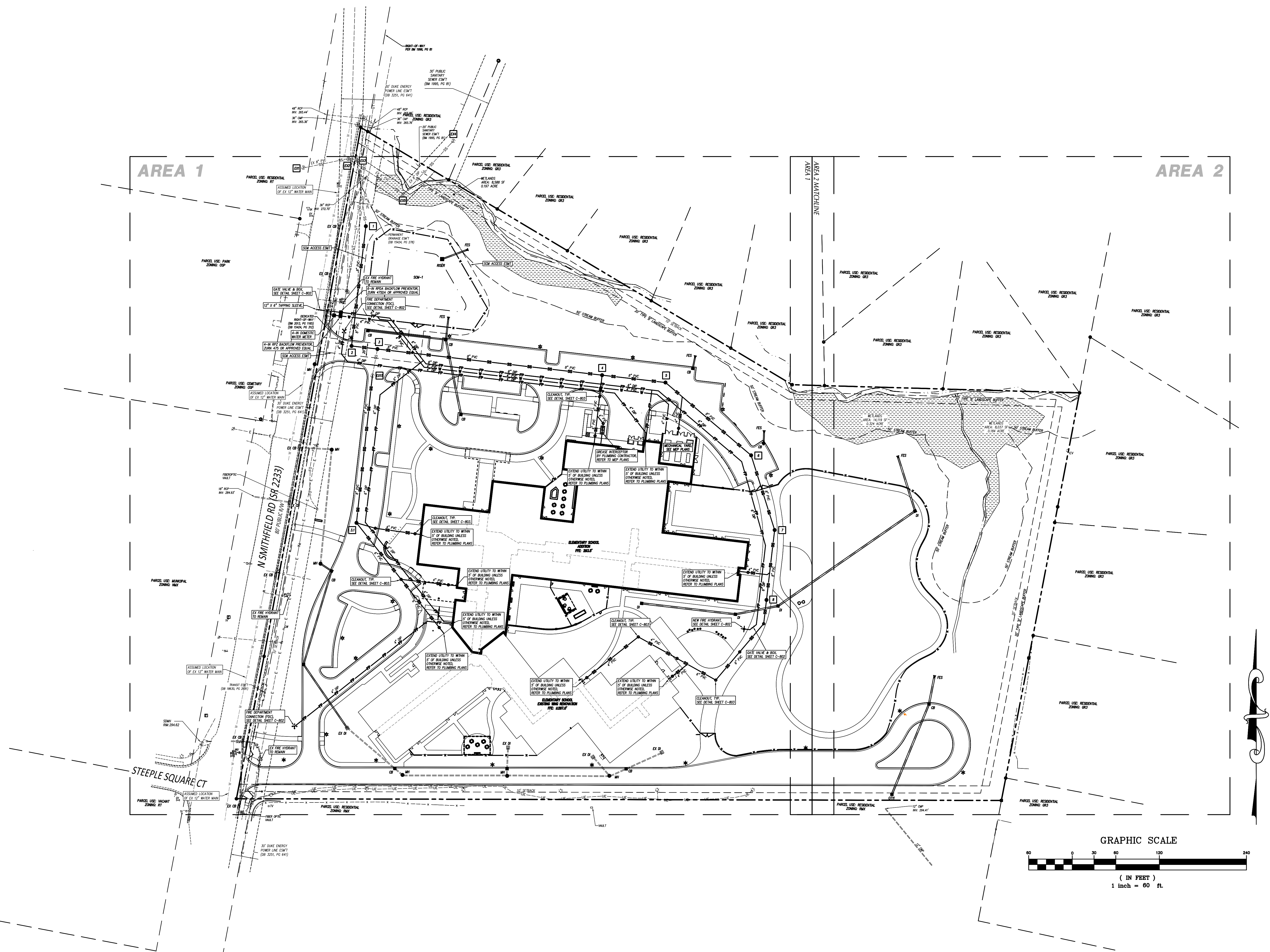
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AREA 1 **AREA 2**



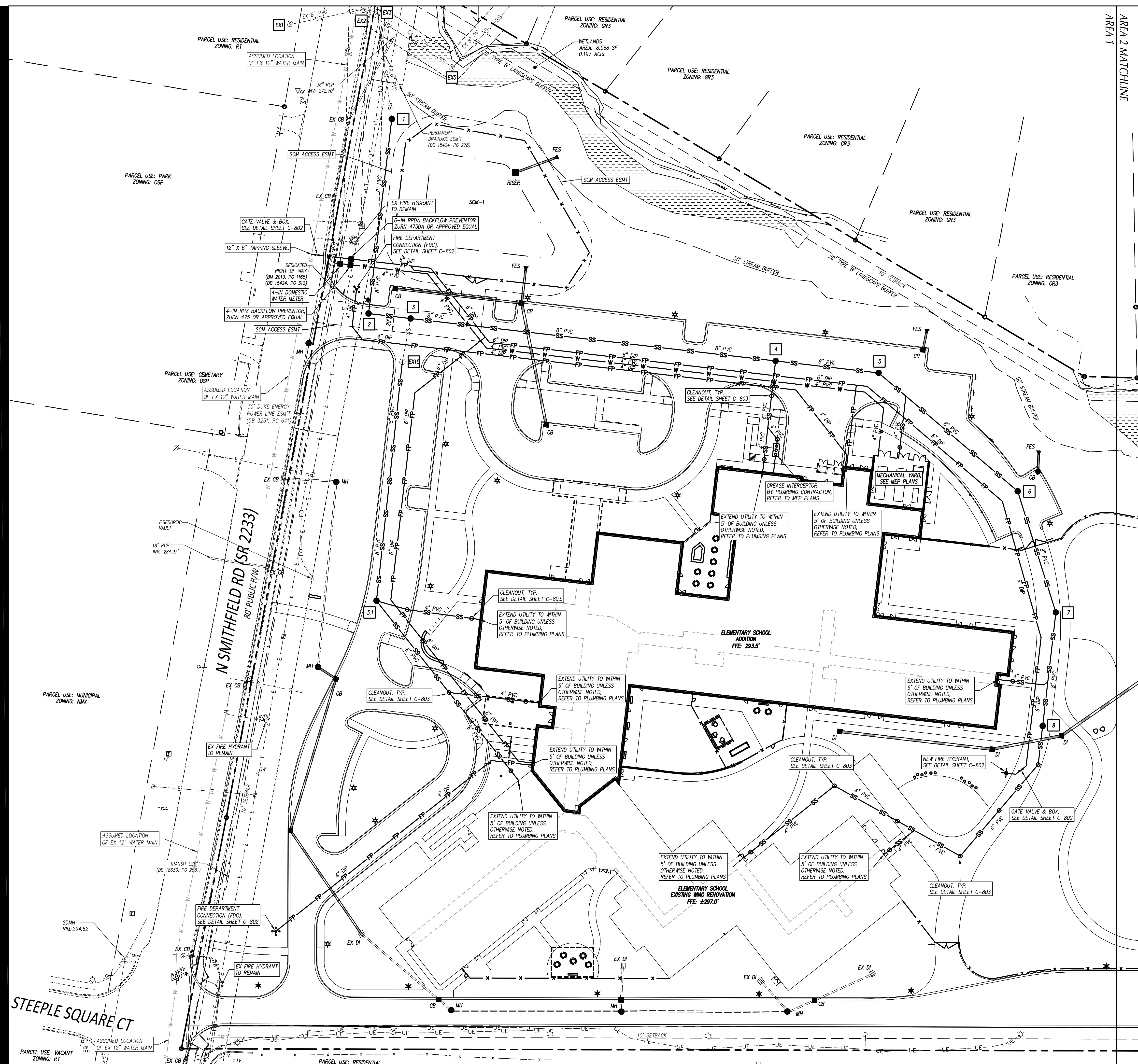
LOCKHART ES RENOVATION REPLACEMENT:
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WCPSS PROJECT MANAGER: SHANE WEBSTER
DTW PROJECT NUMBER: 23025

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Drawn	
Checked	
Date	2024-10-31
Title	

OVERALL UTILITY PLAN

Sheet
C-500



- GENERAL NOTES-UTILITY**
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL TOWN OF KNIGHTDALE, CITY OF RALEIGH UTILITIES, & NCDOT STANDARDS, SPECIFICATIONS AND DETAILS.
 - INSTALL WATERMANS WITH A COVER OF NO LESS THAN 3'-FT.
 - INSTALL SEWER MAINS WITH A COVER OF NO LESS THAN 3'-FT TO FINISH GRADE IN NON-TRAFFIC AREAS, 4'-FT TO FINISH GRADE IN TRAFFIC AREAS.
 - INSTALL ALL UTILITIES TO PROVIDE REQUIRED CLEARANCES AS INDICATED IN THE SPECIFICATIONS.
 - WATERLINES AND SEWER MAINS SHALL BE INSTALLED WITH A MINIMUM HORIZONTAL CLEARANCE OF 10'-FT.
 - SEWER MAINS SHALL BE INSTALLED WITH A MINIMUM VERTICAL CLEARANCE OF 24"-IN TO STORM DRAINAGE PIPES.
 - COORDINATE AND SCHEDULE INSTALLATION OF ALL UTILITIES WITH OTHER PRIME CONTRACTORS, UTILITY COMPANIES AND OTHER TRADES INCLUDING BUT NOT LIMITED TO: NATURAL GAS, ELECTRICITY, TELEPHONE AND CABLE.
 - VERIFY EXISTING CONDITIONS AND CONNECTIONS TO EXISTING UTILITIES PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT IF ANY DISCREPANCIES ARE DISCOVERED.
 - CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGES DURING CONSTRUCTION AND SHALL MAKE REPAIRS AT NO EXPENSE TO THE OWNER.
 - ALL CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE NCSBC AND OSHA REQUIREMENTS.
 - THE CONTRACTOR SHALL PROVIDE AN AS-BUILT SURVEY OF ALL UTILITY AND STORM DRAINAGE IMPROVEMENTS FOLLOWING CONSTRUCTION.
 - CONTRACTOR SHALL PHASE DEMOLITION AND NEW CONSTRUCTION TO ENSURE UNINTERRUPTED ACCESS AND UTILITY SERVICE TO ADJACENT FACILITIES. COORDINATE SHORT-TERM, OFF-HOUR, TEMPORARY SHUT-DOWNS WITH THE OWNER.
 - SEE GENERAL NOTES ON EXISTING CONDITIONS AND DEMOLITION PLAN FOR REQUIREMENTS FOR REMOVAL AND PATCHING OF PAVEMENT FOR UTILITY INSTALLATION.
 - ALL ROOF DRAINS SHALL BE 6" PVC (SCH 40) @ 1.04% MIN. SLOPE UNLESS INDICATED OTHERWISE. USE DUCTILE IRON WHEN COVER IS LESS THAN 24"-IN.
 - ALL SANITARY SEWER SERVICES SHALL BE 4" PVC (SCH 40) @ 0.04% MIN. SLOPE UNLESS INDICATED OTHERWISE. USE DUCTILE IRON WHEN COVER IS LESS THAN 24"-IN.
 - ALL CONDENSATE LINES SHALL BE CONNECTED TO STORM DRAINAGE SYSTEM.
 - 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.

SANITARY SEWER STRUCTURES

EX1	SSMH RM: 272.54' INV(8" PVC)(E): 261.79'	1	SSMH RM: 780' INV(8" PVC)(S): 780' INV(8" PVC)(W): 780'	5	SSMH RM: 780' INV(8" PVC)(S): 780' INV(8" PVC)(W): 780'
EX2	SSMH RM: 275.02' INV(8" PVC)(W): 262.18' INV(TOP 8" PVC): 271.90' INV(8" PVC) INSIDE DROP: 263.72'	2	SSMH RM: 780' INV(8" PVC)(E): 780' INV(8" PVC)(W): 780'	6	SSMH RM: 780' INV(8" PVC)(S): 780' INV(8" PVC)(W): 780'
EX3	8" CLEANOUT TOP INTO SSMH INV(8" PVC)(S): FROM CLEANOUT	3	SSMH RM: 780' INV(8" PVC)(E): 780' INV(8" PVC)(S): 780' INV(8" PVC)(W): 780'	7	SSMH RM: 780' INV(8" PVC)(S): 780' INV(8" PVC)(W): 780'
EX4	SSMH RM: 276.69' INV(8" DP)(SE): 267.23'	3.1	SSMH RM: 780' INV(8" PVC)(E): 780' INV(8" PVC)(S): 780' INV(8" PVC)(W): 780'	8	SSMH RM: 780' INV(8" PVC)(S): 780' INV(8" PVC)(W): 780'
EX5	SSMH RM: 275.16' INV(8" DP)(NE): 264.61' INV(8" PVC)(NW): 264.55'	4	SSMH RM: 780' INV(8" PVC)(E): 780' INV(8" PVC)(S): 780' INV(8" PVC)(W): 780'		

GRAPHIC SCALE

1 inch = 40 ft.

Revisions

No.	Description

Drawn _____
Checked _____
Date 2024-10-31
Title

SITE UTILITY PLAN
AREA 1
Sheet

C-501

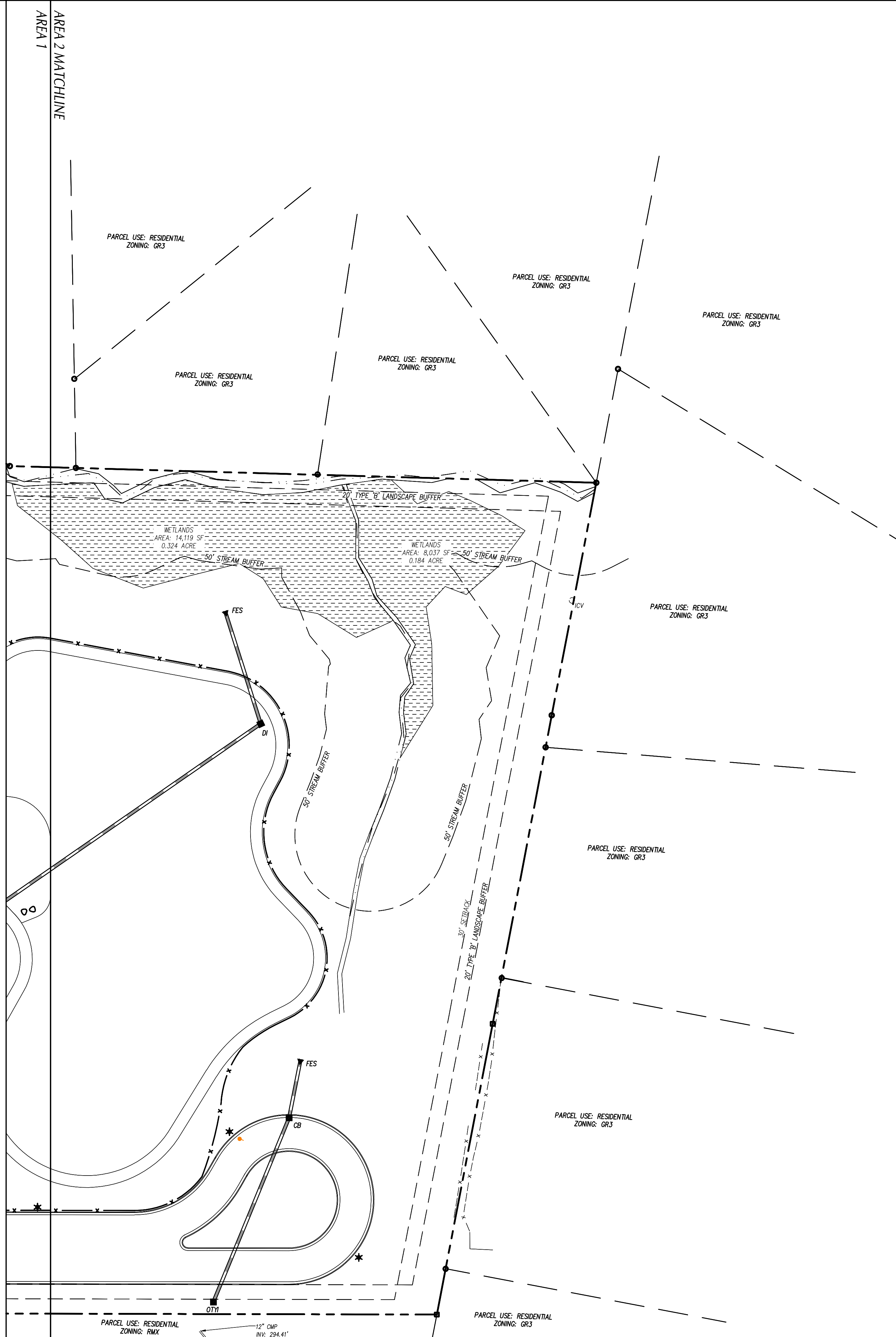
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LOCKHART'S RENOVATION/REPLACEMENT:
LOCKHART ELEMENTARY SCHOOL
1320 N. SMITHFIELD RD. KNIGHTDALE, NC 27545
WCPSS PROJECT ID: 862-453
WCPSS PROJECT MANAGER: SHANE WEBSTER
DTW PROJECT NUMBER: 23025

NOT FOR CONSTRUCTION



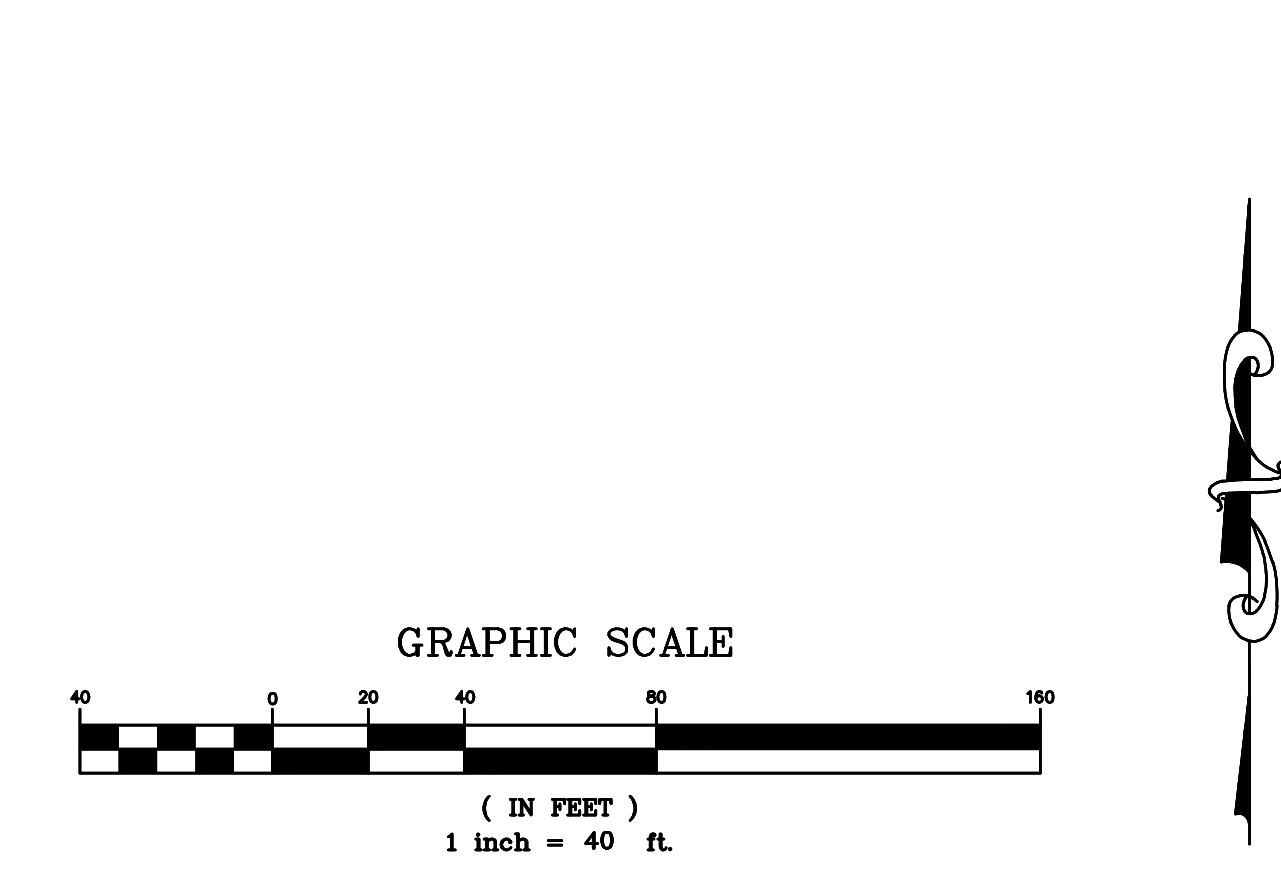
UTILITY LEGEND

	EXISTING	PROPOSED
CHILLED WATER	-----CW-----	CW
ELECTRICAL (OVERHEAD)	-----E-----	E
ELECTRICAL (UNDERGROUND)	-----UE-----	UE
FOUNDATION DRAIN	-----FD-----	FD
GAS	-----G-----	G
SANITARY SEWER	-----SS-----	SS
TELEPHONE (OVERHEAD)	-----T-----	T
TELEPHONE (UNDERGROUND)	-----UT-----	UT
WATER	-----W-----	W
ROOF DRAIN	-----RD-----	RD
FIRE PROTECTION	-----FP-----	FP
STORM DRAIN	=====	=====
TREE PROTECTION FENCING, SEE EROSION CONTROL PLANS	○ ○ ○ ○ ○	○ ○ ○ ○ ○
LIGHT POLE	☆ LP	☆
UTILITY POLE	PP	PP
MANHOLE	○ MH	○
CLEAN OUT	○ CO	○
DROP INLET, CATCH BASIN	□ DI, CB	□
FIRE HYDRANT	⊕ FH	⊕
WATER VALVE	⊙ WV	⊙
POST INDICATOR VALVE (PIV)	⊕	⊕
FIRE DEPARTMENT CONNECTION (FDC)	⊕	⊕
THRUST BLOCKING	⊕	⊕
SANITARY SEWER STRUCTURE IDENTIFICATION	EX1	1
STORMWATER SEWER STRUCTURE IDENTIFICATION	EX1	A

- GENERAL NOTES-UTILITY**
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL TOWN OF KNIGHTDALE, CITY OF RALEIGH UTILITIES, & NCDOT STANDARDS, SPECIFICATIONS AND DETAILS.
 - INSTALL WATERMANS WITH A COVER OF NO LESS THAN 3'-FT.
 - INSTALL SEWER MAINS WITH A COVER OF NO LESS THAN 3'-FT TO FINISH GRADE IN NON-TRAFFIC AREAS, 4'-FT TO FINISH GRADE IN TRAFFIC AREAS.
 - INSTALL ALL UTILITIES TO PROVIDE REQUIRED CLEARANCES AS INDICATED IN THE SPECIFICATIONS.
 - WATERLINES AND SEWER MAINS SHALL BE INSTALLED WITH A MINIMUM HORIZONTAL CLEARANCE OF 10'-FT.
 - SEWER MAINS SHALL BE INSTALLED WITH A MINIMUM VERTICAL CLEARANCE OF 24"-IN TO STORM DRAINAGE PIPES.
 - COORDINATE AND SCHEDULE INSTALLATION OF ALL UTILITIES WITH OTHER PRIME CONTRACTORS, UTILITY COMPANIES AND OTHER TRADES INCLUDING BUT NOT LIMITED TO: NATURAL GAS, ELECTRICITY, TELEPHONE AND CABLE.
 - VERIFY EXISTING CONDITIONS AND CONNECTIONS TO EXISTING UTILITIES PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT IF ANY DISCREPANCIES ARE DISCOVERED.
 - CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGES DURING CONSTRUCTION AND SHALL MAKE REPAIRS AT NO EXPENSE TO THE OWNER.
 - ALL CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE NCSBC AND OSHA REQUIREMENTS.
 - THE CONTRACTOR SHALL PROVIDE AN AS-BUILT SURVEY OF ALL UTILITY AND STORM DRAINAGE IMPROVEMENTS FOLLOWING CONSTRUCTION.
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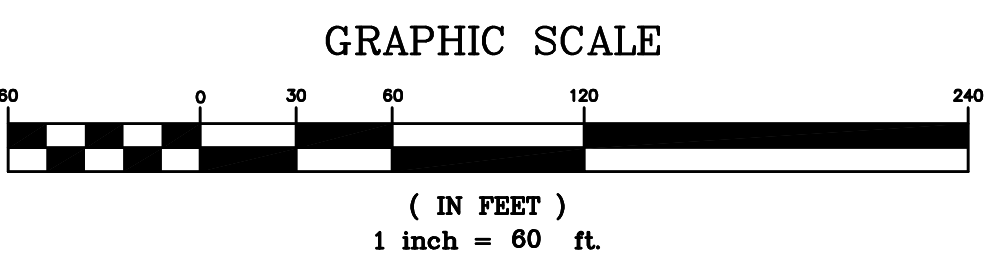
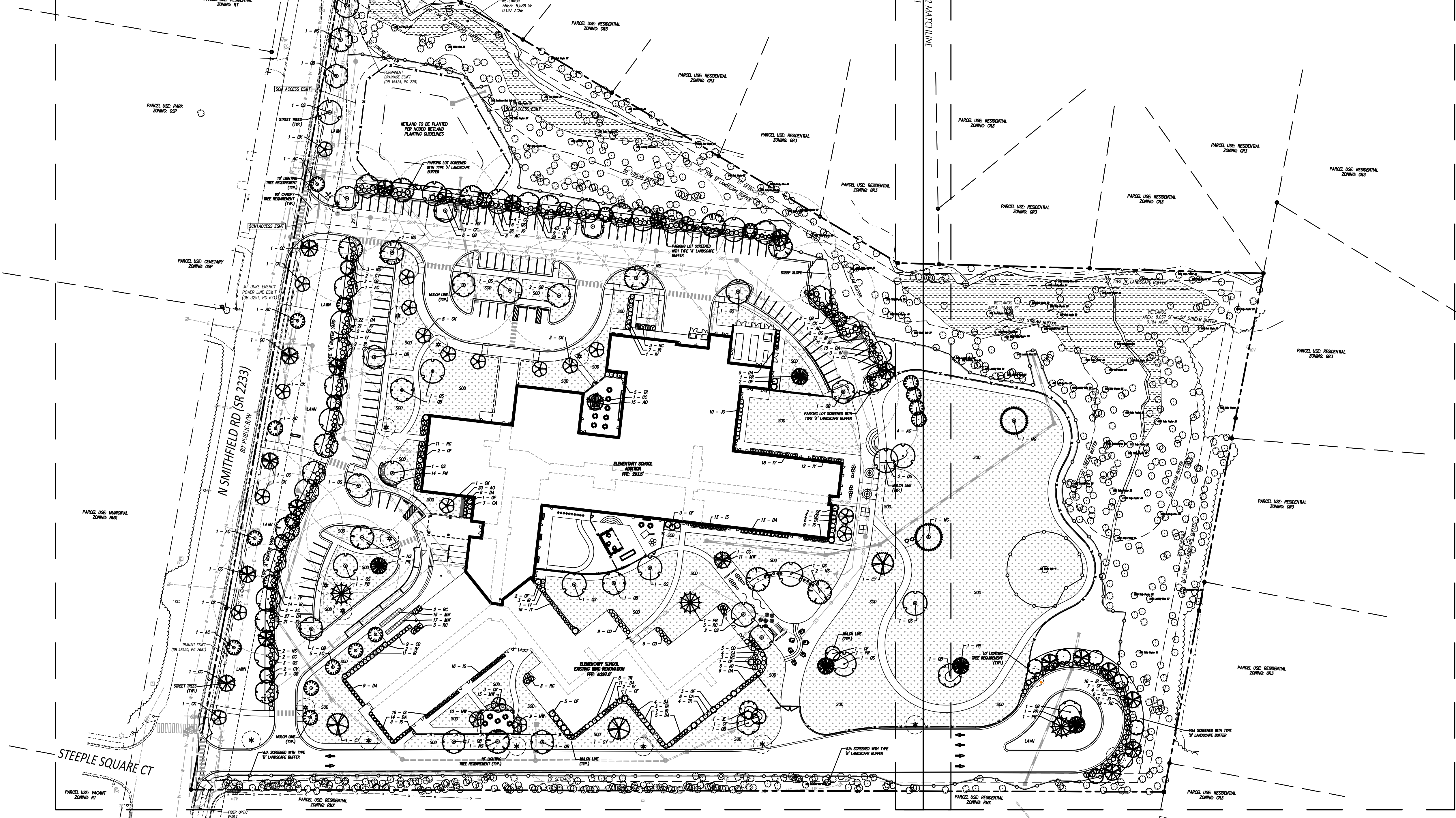
LOCKHART ES RENO/REPLACEMENT:
LOCKHART ELEMENTARY SCHOOL
1320 N. SMITHFIELD RD. KNIGHTDALE, NC 27545
WCPSS PROJECT ID: 862-453
WCPSS PROJECT MANAGER: SHANE WEBSTER
DTW PROJECT NUMBER: 23025

NOT FOR CONSTRUCTION

- GENERAL NOTES-LANDSCAPING**
1. LOCATE ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF PLANT MATERIAL. NOTIFY OWNER OF ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND THOSE SHOWN ON THE PLAN.
 2. VERIFICATION OF TOTAL QUANTITIES AS SHOWN ON THE PLAN LIST SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND THE TOTAL QUANTITIES SHALL BE AS SHOWN ON THE PLAN.
 3. ALL PLANT MATERIAL SHALL CONFORM WITH THE STANDARDS SET FORTH BY THE AMERICAN ASSOCIATION OF NURSERYMEN AND THE WRITTEN SPECIFICATIONS.
 4. 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.
 5. ALL PLANT GROUPINGS SHALL BE MULCHED AS ONE BED. 3" OF DYED BROWN DOUBLE SHREDED HARDWOOD MULCH SHALL BE USED AROUND ALL PLANTINGS WITH THE EXCEPTION OF BUFFER PLANTINGS.
 6. APPLY PRE-EMERGENT HERBICIDE TO ALL NEW PLANTING BEDS AT MANUFACTURER'S RECOMMENDED RATE PRIOR TO INSTALLATION OF MULCH.
 7. ESTABLISH POSITIVE DRAINAGE IN ALL PLANTING BEDS AND AWAY FROM BUILDINGS.
 8. DO NOT INSTALL PLANT MATERIAL IN IMPERVIOUS SOILS. (i.e. HOLES WHICH WHEN FILLED WITH WATER, DO NOT COMPLETELY DRAIN WITHIN TWO HOURS.) SEE SPECIFICATIONS FOR TOPSOIL REQUIREMENTS.
 9. LAWN AREAS SHALL BE SEEDED WITH RIVERA OR SUNSTAR BERMOUDA GRASS SOLE COVERAGE (BASED ON A PER SQUARE YARD SAMPLE) SHALL BE OBTAINED PRIOR TO FINAL INSPECTION. SEE DETAIL SHEET FOR RATES AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
 10. CONTACT THE LANDSCAPE ARCHITECT FOR INSPECTION 48 HOURS IN ADVANCE OF THE SCHEDULED SITE VISIT AND AT THE FOLLOWING INTERVALS:
 - 10.1. REVIEW OF GRADING PRIOR TO PLANT AND LAWN INSTALLATION.
 - 10.2. REVIEW OF PLANT MATERIAL PRIOR TO INSTALLATION.
 - 10.3. ONE SUBSTANTIAL COMPLETION MEETING FOR PLANT INSTALLATION.
 - 10.4. ONE FINAL INSPECTION FOR ALL SEEDING/PLANTING OPERATIONS.
 11. 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.
 12. 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.
 13. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ALL EQUIPMENT & SUBCONTRACTORS AWAY FROM SEEDED AREAS. IF DAMAGE OCCURS, THROUGH NO FAULT OF THE OWNER, AREAS SHALL BE REGRADED AND RESEEDED IMMEDIATELY AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL WATER AND MAINTAIN THOSE AREAS UNTIL THEY ARE AT SOLE COVERAGE AT FINAL COMPLETION.
 14. 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 SUBSTITUTED OR FOR SUPERIOR STOCK SUBSTITUTIONS.
 15. 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.
 16. IF CONFLICTS OCCUR BETWEEN WRITTEN SPECIFICATIONS AND THE DRAWINGS, THE WRITTEN SPECIFICATIONS SHALL PREVAIL.
 17. GENERAL LAWN AREAS SHALL BE SEEDED WITH RIVERA OR SUNSTAR BERMOUDA. PLAYING FIELDS SHALL BE SEEDED WITH TIPWAY-419 BERMOUDA. SEE PLANTING PLAN FOR LIMITS.
 18. ALL 3:1 SLOPES SHALL BE STABILIZED WITH "NO-MOW" NATURALIZED SEED MIX AND EROSION CONTROL MATTING.
 19. ALL FOUNDATION SHRUBS AND TREES TO BE PLANTED A MINIMUM OF 5-FT FROM BUILDING WALL. NOTIFY LANDSCAPE ARCHITECT FOR ANY DISCREPANCIES.
 20. INSTALL PERMANENT SEEDING ALONG ALL ROADSIDE DITCHES AND CHANNELS WITHIN CONSTRUCTION LIMITS OF PROJECT. SEE EROSION CONTROL PLANS FOR ADDITIONAL INFORMATION.

AREA 1

AREA 2



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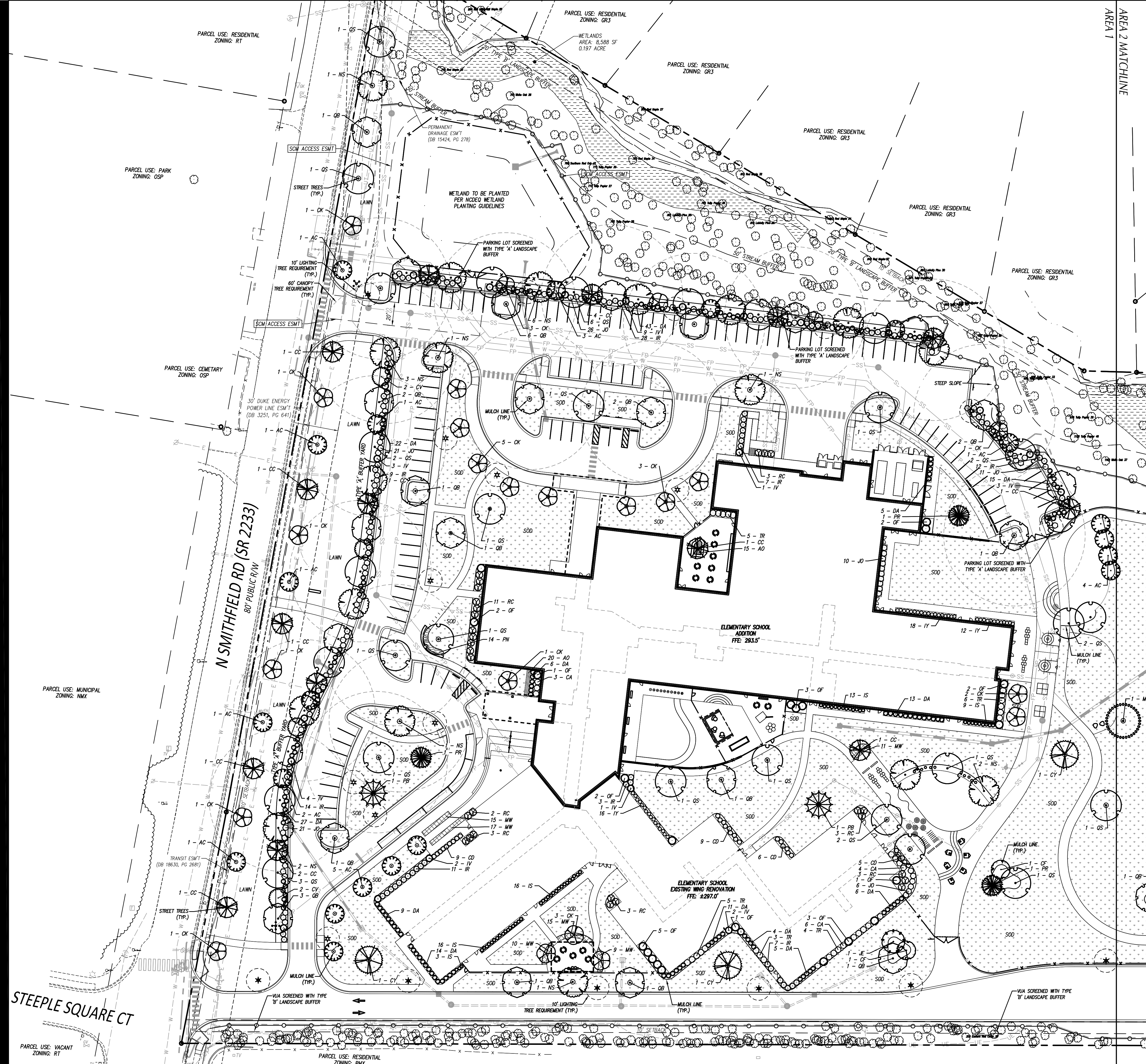
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NOT FOR CONSTRUCTION

Revisions

Drawn _____
Checked _____
Date 2024-10-31
Title _____

OVERALL LANDSCAPE PLAN
Sheet
C-600



CODE	QTY	BOTANICAL / COMMON NAME	CONT.	CAL.	SIZE	REMARKS
TREES						
AC	21	<i>Amenchier canadensis</i> Canadian Serviceberry	CONT./B&B	1.5" CAL MIN.	6' HT MIN.	NATIVE, DROUGHT/SALT TOLERANT
CC	21	<i>Cercis canadensis</i> Eastern Redbud	CONT./B&B	1.5" CAL MIN.	6' HT MIN.	NATIVE, DROUGHT TOLERANT
CV	4	<i>Chionanthus virginicus</i> White Fringetree	CONT./B&B	1.5" CAL MIN.	6' HT MIN.	NATIVE, DROUGHT TOLERANT
CF	9	<i>Cornus florida</i> Flowering Dogwood	CONT./B&B	1.5" CAL MIN.	6' HT MIN.	NATIVE
CK	24	<i>Cornus kousa</i> Kousa Dogwood	CONT./B&B	1.5" CAL MIN.	6' HT MIN.	NON-NATIVE, DROUGHT/SALT TOLERANT
CY	3	<i>Cryptomeria japonica</i> 'Yoshino' Yoshino Japanese Cedar	B&B, STRAIGHT TRUNK	2" CAL MIN.	8' HT MIN.	NON-NATIVE, DROUGHT/SALT TOLERANT
JE	1	<i>Juniperus virginiana</i> Eastern Redcedar	B&B, STRAIGHT TRUNK	2" CAL MIN.	8' HT MIN.	NATIVE, DROUGHT/SALT TOLERANT
MG	2	<i>Magnolia grandiflora</i> Southern Magnolia	B&B, STRAIGHT TRUNK	2" CAL MIN.	8' HT MIN.	NATIVE, DROUGHT/SALT TOLERANT
NS	18	<i>Nyssa sylvatica</i> Tupelo	B&B, STRAIGHT TRUNK	2" CAL MIN.	8' HT MIN.	NATIVE, DROUGHT/SALT TOLERANT
PB	3	<i>Pieris barbatum</i> Redbay	B&B	2" CAL MIN.	6' HT MIN.	NATIVE, DROUGHT/SALT TOLERANT
PR	5	<i>Pinus rigida</i> Pitch Pine	B&B, STRAIGHT TRUNK	2" CAL MIN.	6' HT MIN.	NATIVE, DROUGHT/SALT TOLERANT
QB	26	<i>Quercus bicolor</i> Swamp White Oak	B&B, STRAIGHT TRUNK	2" CAL MIN.	8' HT MIN.	NATIVE, DROUGHT/SALT TOLERANT
QS	30	<i>Quercus shumardii</i> Shumard Oak	B&B, STRAIGHT TRUNK	2" CAL MIN.	8' HT MIN.	NATIVE, DROUGHT/SALT TOLERANT
SHRUBS						
CA	13	<i>Calliopsis americana</i> American Beautyberry	CONT.		18" HT MIN.	NATIVE, DROUGHT TOLERANT
CD	29	<i>Cephalotaxus harringtonia</i> 'Duke Gardens' Duke Gardens Plum Yew	CONT.		18" HT MIN.	NON-NATIVE, DROUGHT TOLERANT
DA	180	<i>Diatyllum x PANDOLFI</i> Blue Coccoloba Diatylum	CONT.		18" HT MIN.	NON-NATIVE, DROUGHT/SALT TOLERANT
IS	57	<i>Ilex crenata</i> 'Soft Touch' Soft Touch Japanese Holly	CONT.		18" HT MIN.	NON-NATIVE, DROUGHT/SALT TOLERANT
IV	29	<i>Ilex verticillata</i> 'Jim Dandy' Jim Dandy Winterberry	CONT.		18" HT MIN.	NATIVE, DROUGHT/SALT TOLERANT
IR	107	<i>Ilex verticillata</i> 'Red Sprite' Red Sprite Winterberry	CONT.		18" HT MIN.	NATIVE, DROUGHT/SALT TOLERANT
IY	46	<i>Ilex virginica</i> 'Little Henry' Little Henry Virginia Sweetgum	CONT.		18" HT MIN.	NATIVE, DROUGHT/SALT TOLERANT
JO	107	<i>Juniperus virginiana</i> 'Grey Owl' Grey Owl Eastern Redcedar	CONT.		18" HT MIN.	NATIVE, DROUGHT/SALT TOLERANT
OF	22	<i>Osmanthus fragrans</i> Sweet Olive	CONT.		48" HT.	NON-NATIVE, DROUGHT TOLERANT
RC	47	<i>Rhododendron catawbiense</i> Catawba Rhododendron	CONT.		18" HT MIN.	NATIVE, DROUGHT TOLERANT
TR	23	<i>Thuja occidentalis</i> 'Rheingold' Rheingold Arborvitae	CONT.		18" HT MIN.	NATIVE, DROUGHT TOLERANT
GROUND COVERS						
AO	35	<i>Aster oblongifolius</i> 'October Skies' October Skies Fall Aster	QUART		4" HT MIN.	NATIVE, DROUGHT/SALT TOLERANT
MW	77	<i>Muhlenbergia coarctata</i> 'White Cloud' White Cloud Muhly Grass	GAL		12" HT MIN	NATIVE, DROUGHT/SALT TOLERANT
PN	14	<i>Panicum virgatum</i> 'Northwind' Northwind Switch Grass	GAL		12" HT MIN	NATIVE, DROUGHT/SALT TOLERANT

- LANDSCAPE REQUIREMENTS**
- BUFFER YARD REQUIREMENTS**
- ADJACENT TO ZONING GR3 (NORTH SIDE)**
- TYPE 'B' BUFFER REQUIRED
 - EXISTING BUFFER USED TO FULFILL BUFFER REQUIREMENTS
 - TOTAL BUFFER LENGTH: 1,067 LF
 - 3 CANOPY TREES, 5 UNDERSTORY TREES & 20 SHRUBS PER 100 LF
 - 3 x 10.67 = 32 + 5 x 10.67 = 53
 - 32 + 53 = 85 TREES TOTAL
 - 85 TREES REQUIRED / 85+ EXISTING
- ADJACENT TO ZONING GR3 (EAST SIDE)**
- TYPE 'B' BUFFER REQUIRED
 - EXISTING BUFFER USED TO FULFILL BUFFER REQUIREMENTS
 - TOTAL BUFFER LENGTH: 562 LF
 - 3 CANOPY TREES, 5 UNDERSTORY TREES & 20 SHRUBS PER 100 LF
 - 3 x 5.52 = 17 + 5 x 5.52 = 28
 - 17 + 28 = 45 TREES TOTAL
 - 45 TREES REQUIRED / 45+ EXISTING
- ADJACENT TO ZONING RMX (SOUTH SIDE)**
- NO BUFFER REQUIRED
- STREET YARD REQUIREMENTS**
- N SMITHFIELD RD.**
- 1 CANOPY TREE PER 40 LF
 - UNDERSTORY TREES USED UNDER EXISTING ABOVE-GROUND POWER LINES
 - 813 LF STREET FRONTAGE (940 - 127 LF DRIVEWAY)
 - (813/40) 20 STREET TREES REQUIRED / 20 PROVIDED
- PARKING LOT YARDS**
- NO PARKING SPACE FARTHER THAN 60' FROM CANOPY TREE.
 - PLANTING ISLAND EVERY 36 PARKING SPACES
 - 1 CANOPY TREE PER PLANTING ISLAND
- VIA AREAS**
- FRONTING PUBLIC R.O.W. (N SMITHFIELD RD.)**
- TYPE 'A' BUFFER REQUIRED
 - 10 FT TYPE 'A' BUFFER YARD PROVIDED
- OTHER VIA AREAS**
- ALL SIDES OF PARKING LOTS FRONTING STREET RIGHTS-OF-WAY SHALL BE SCREENED WITH TYPE 'A' BUFFER YARD
 - VIA AREAS NOT OTHERWISE PROTECTED BY A BUFFER YARD MUST BE SCREENED FROM OFF-SITE VIEW WITH TYPE 'B' BUFFER YARD
 - EXISTING LANDSCAPE BUFFERS USED TO FULFILL BUFFER REQUIREMENTS ALONG NORTH, EAST & SOUTH SIDES
- TREE SAVE AREAS**
- PERIMETER OF SITE: 3,654 LF
 - TREE COVER AREA REQUIRED: 73,080 SQFT (3,654 X 20 = 73,080)
 - TREE COVER AREA PROVIDED: + 127,400 SF
 - TREES GREATER THAN 24" DBH SHALL REMAIN UNDISTURBED OUTSIDE OF REQUIRED T.S.A. (OR REPLACED AT A RATE OF 1 NEW TREE PER 12" DBH EX. TREE REMOVED)
 - 24" DBH TREES REMOVED: 26
 - DBH TOTAL REMOVED: 783
 - TREES REMOVED MUST BE REPLACED AT A RATE OF 1 NEW TREE PER 12" DBH EX. TREE REMOVED
 - REQUIRED STREET TREES, PARKING LOT LANDSCAPING AND BUFFER YARD PLANTINGS MAY NOT BE COUNTED TOWARD REPLACEMENT REQUIREMENTS
 - NEW TREES REQUIRED TO REPLACE 24+ DBH TREES: 66 (783 / 12 = 65.25)
 - 66 NEW TREES PROVIDED

GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft.

Revisions

Drawn _____
Checked _____
Date 2024-10-31
Title _____

SITE LANDSCAPE PLAN
AREA 1

Sheet **C-601**

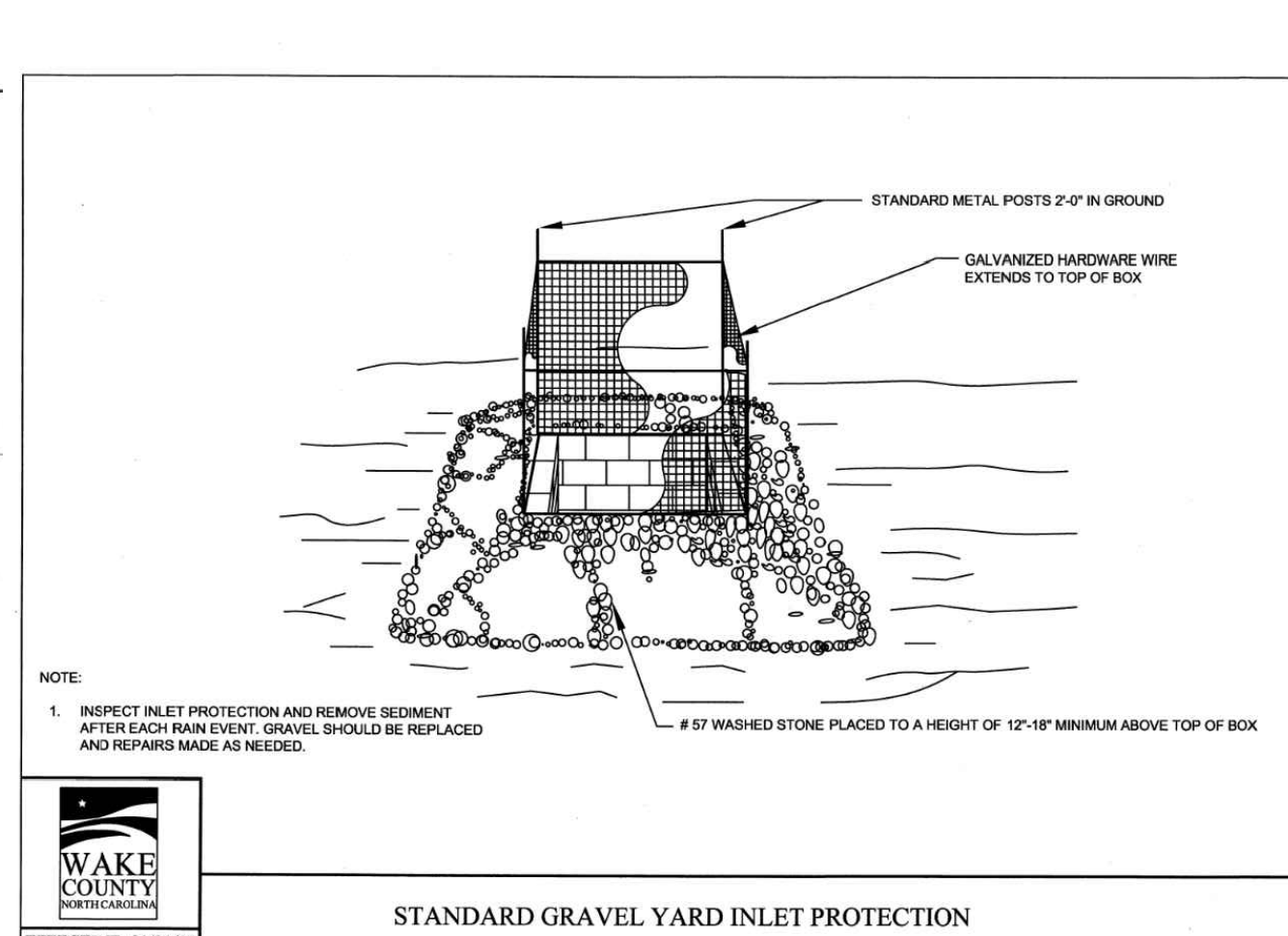
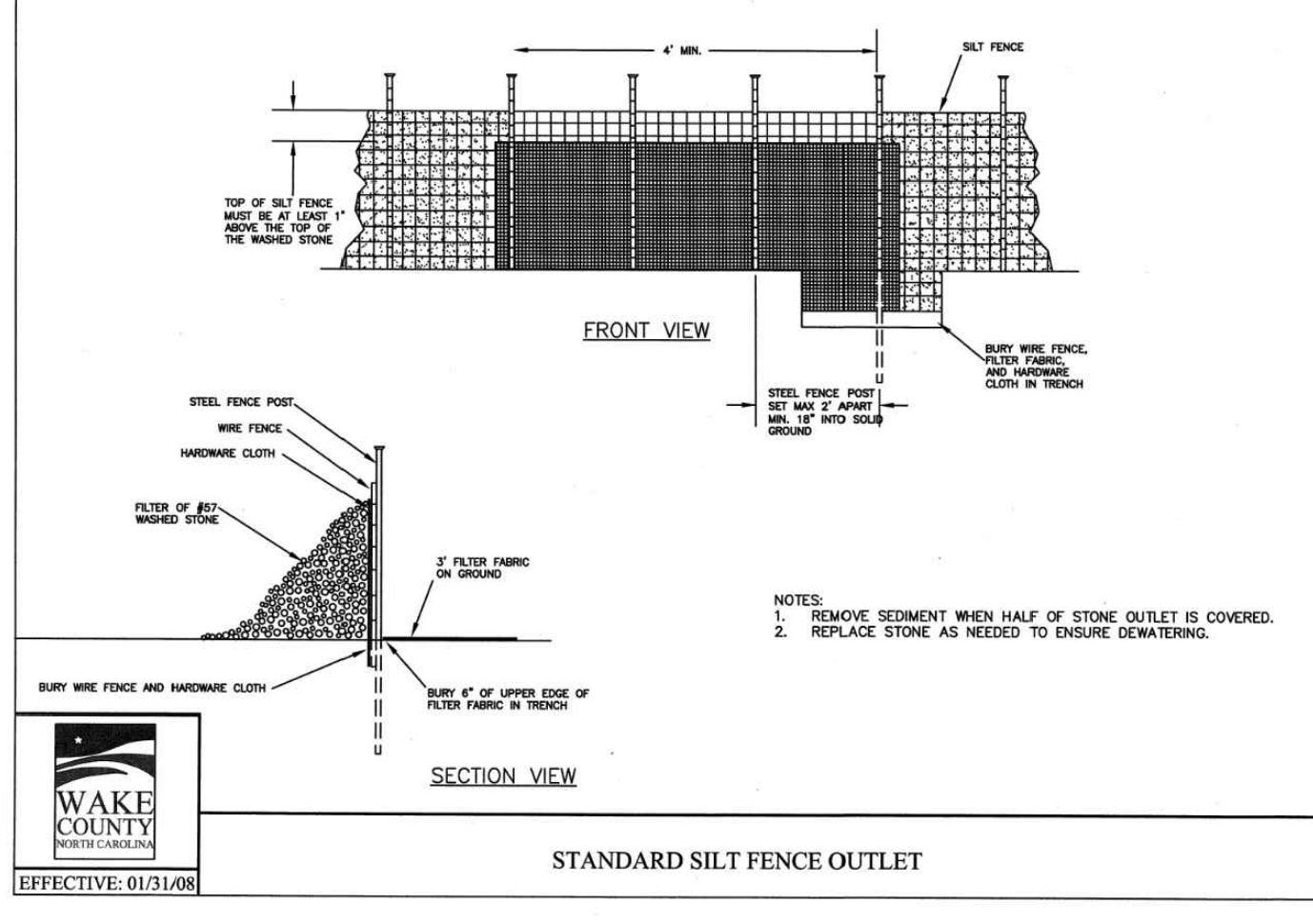
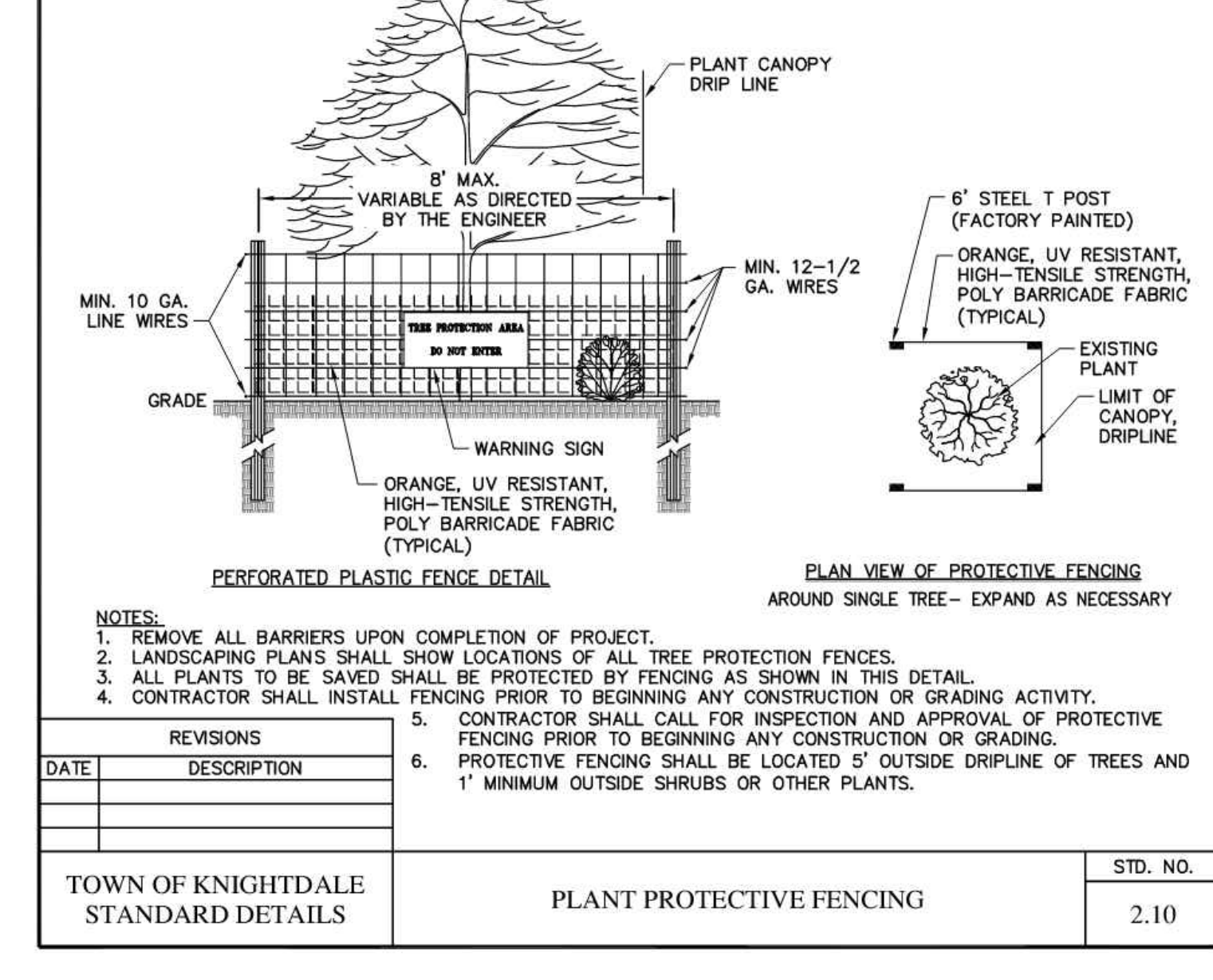
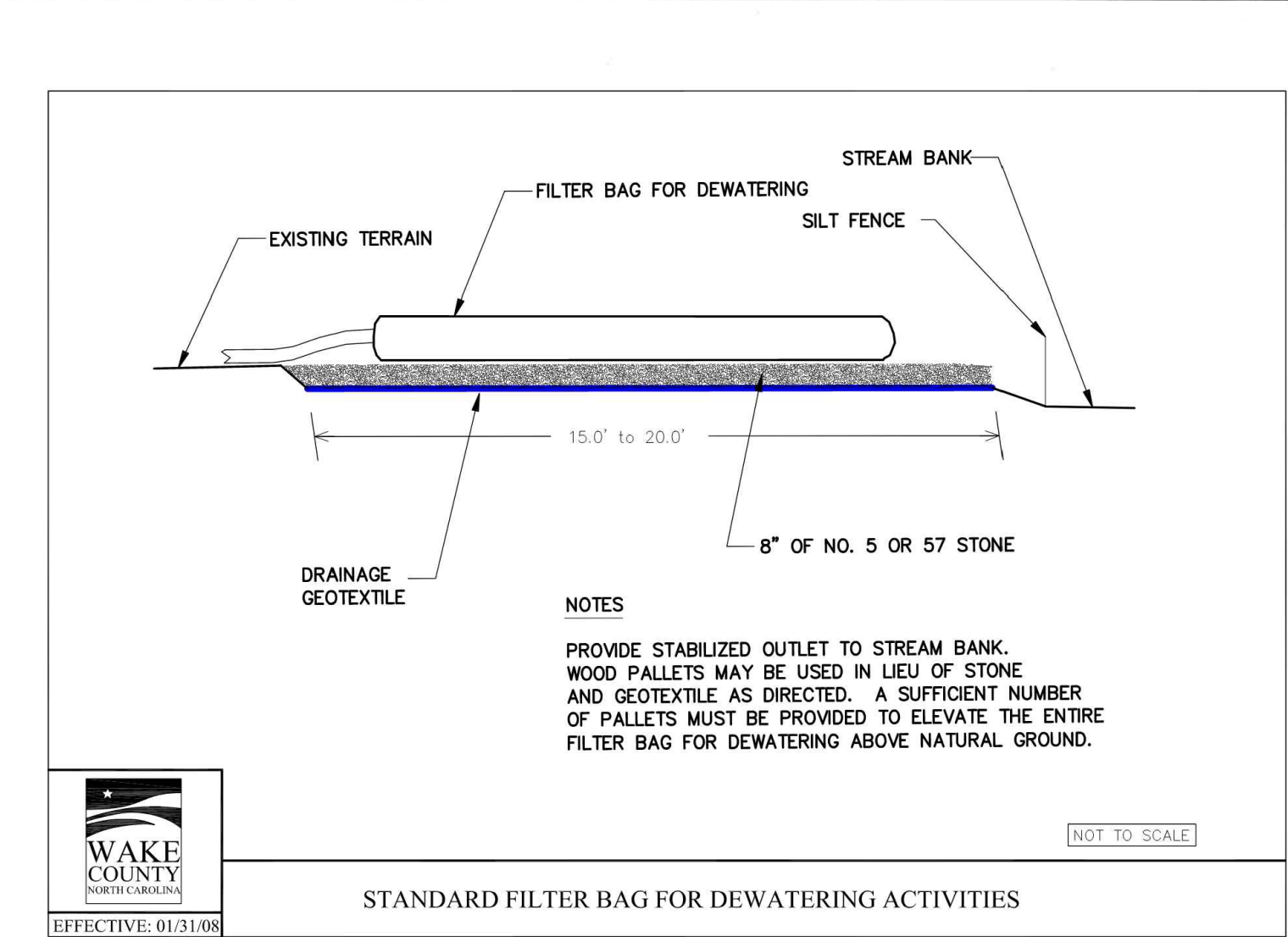
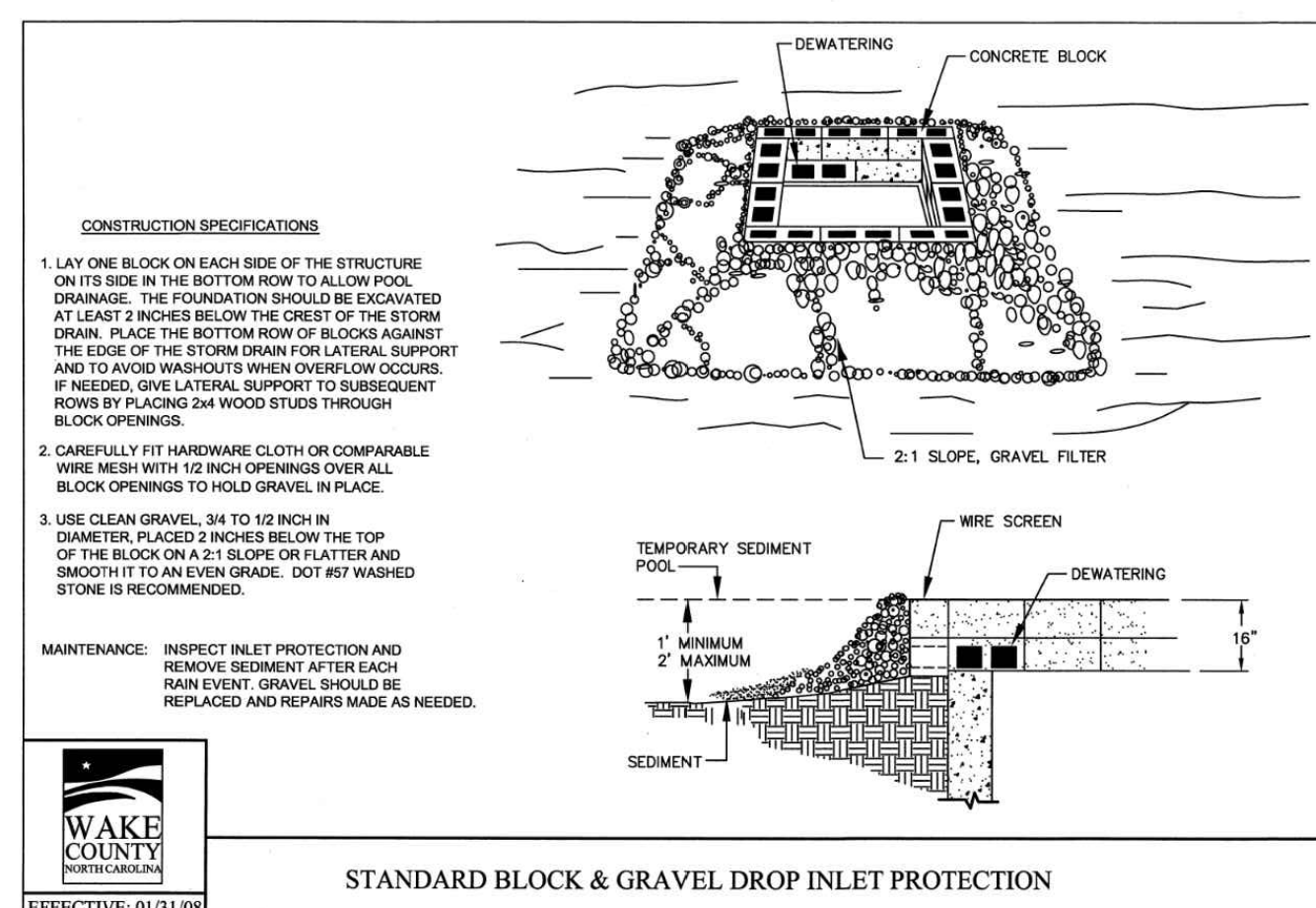
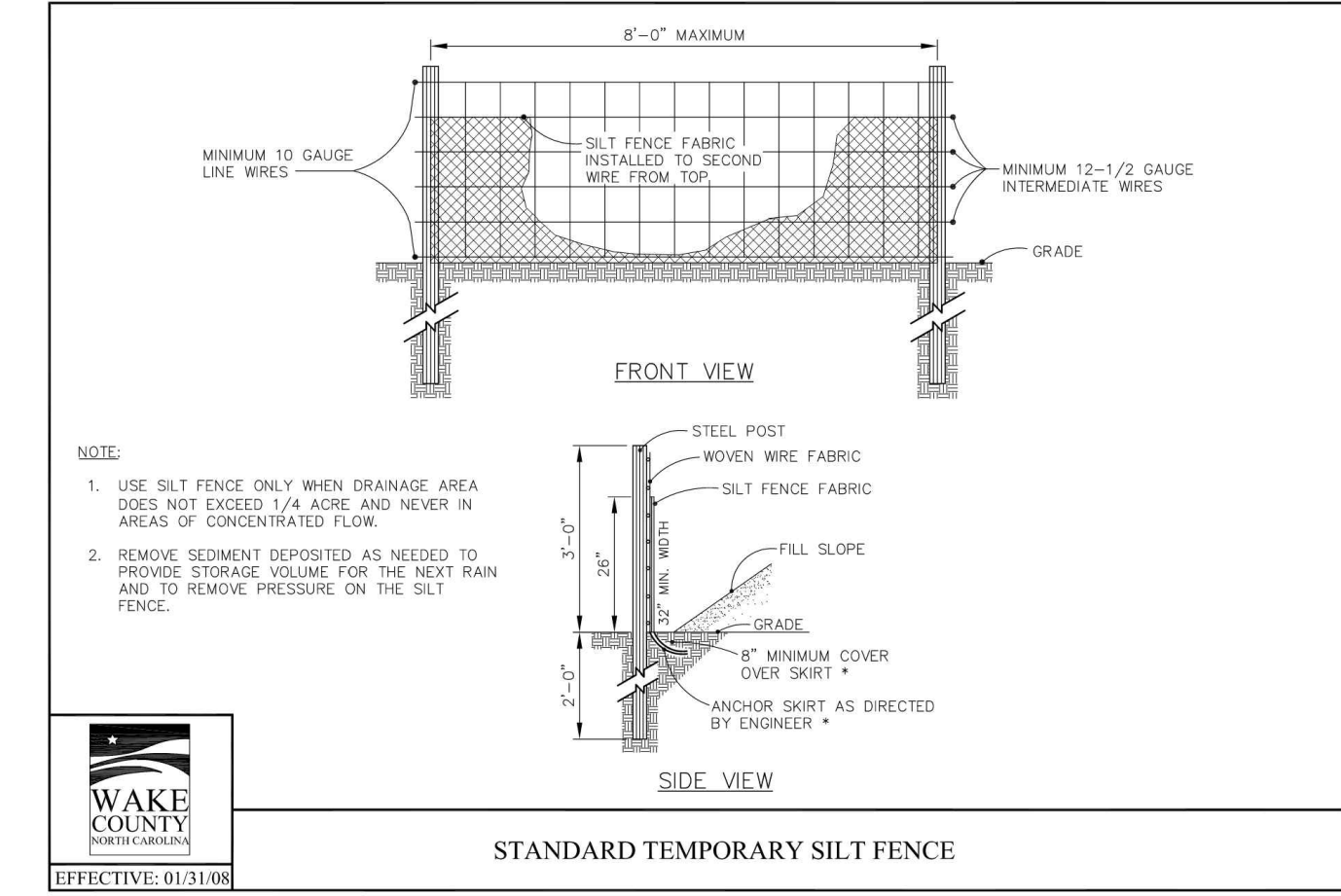
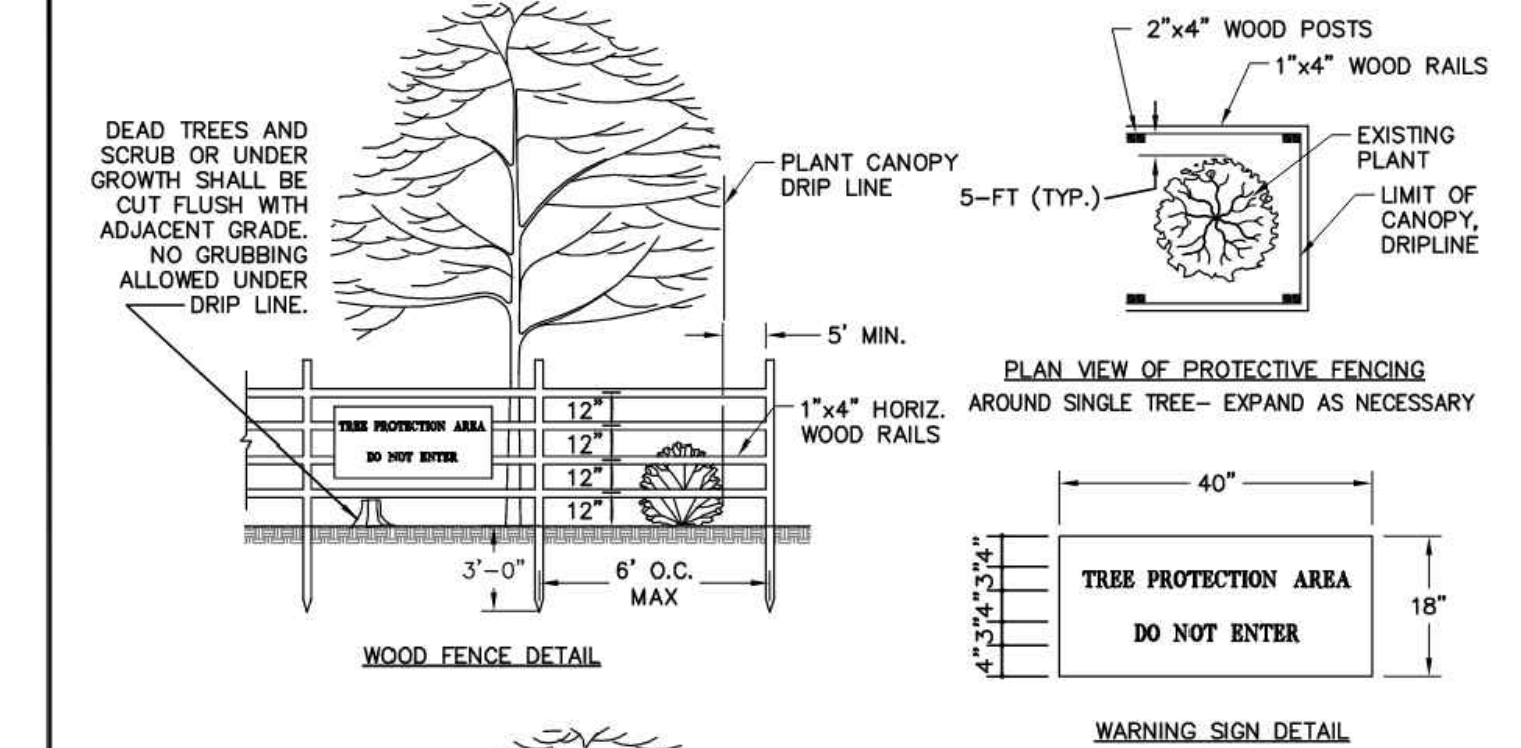
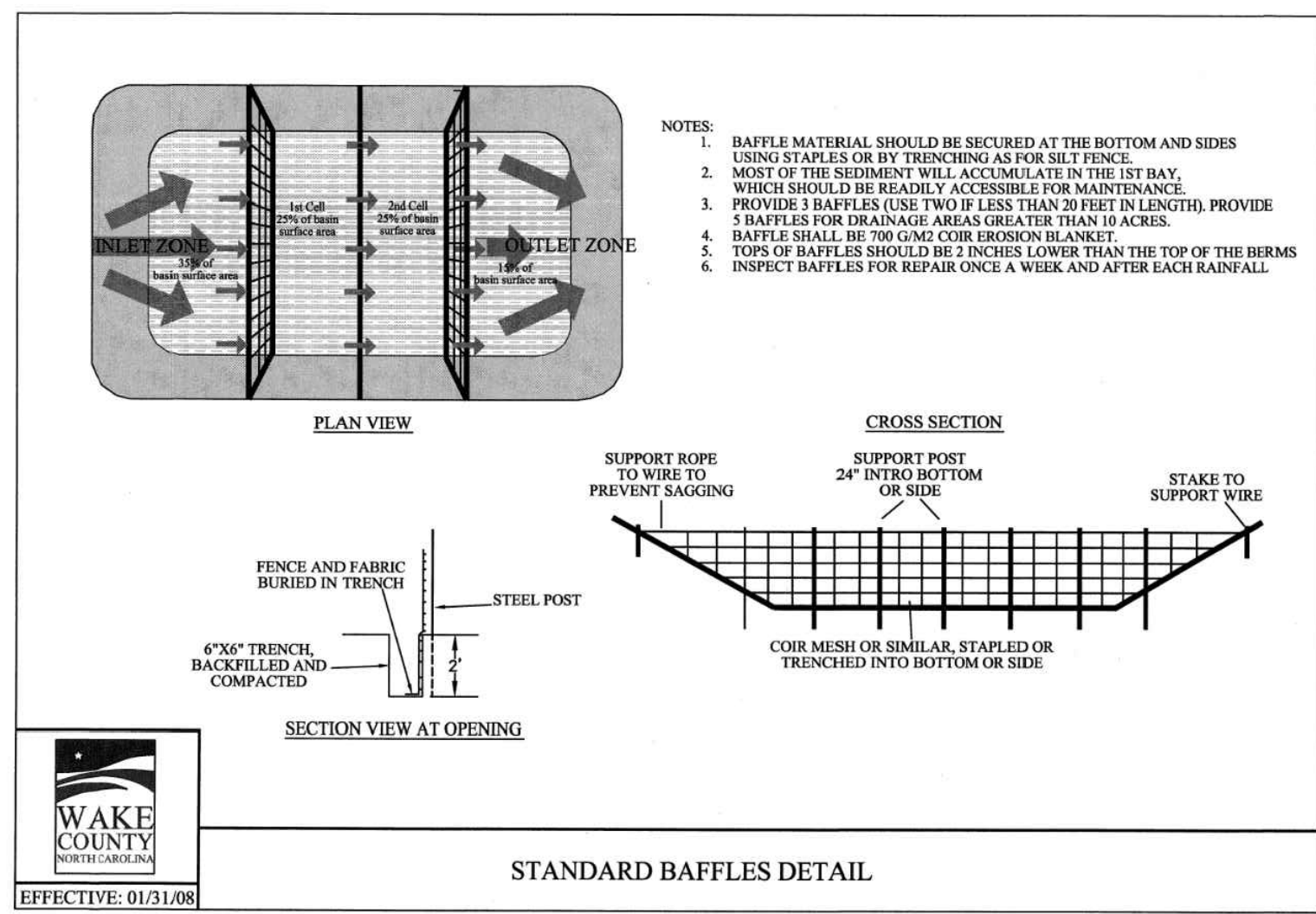
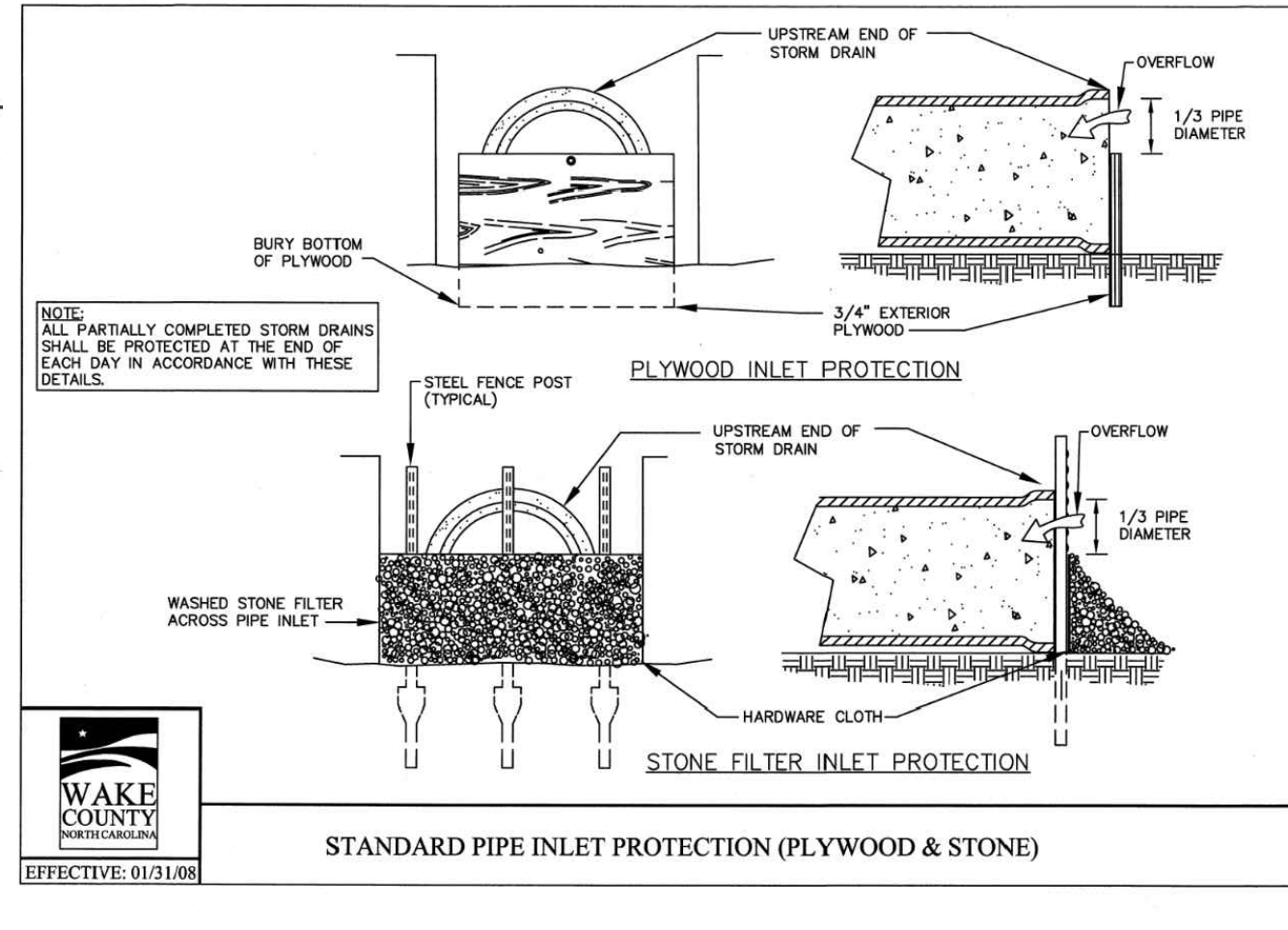
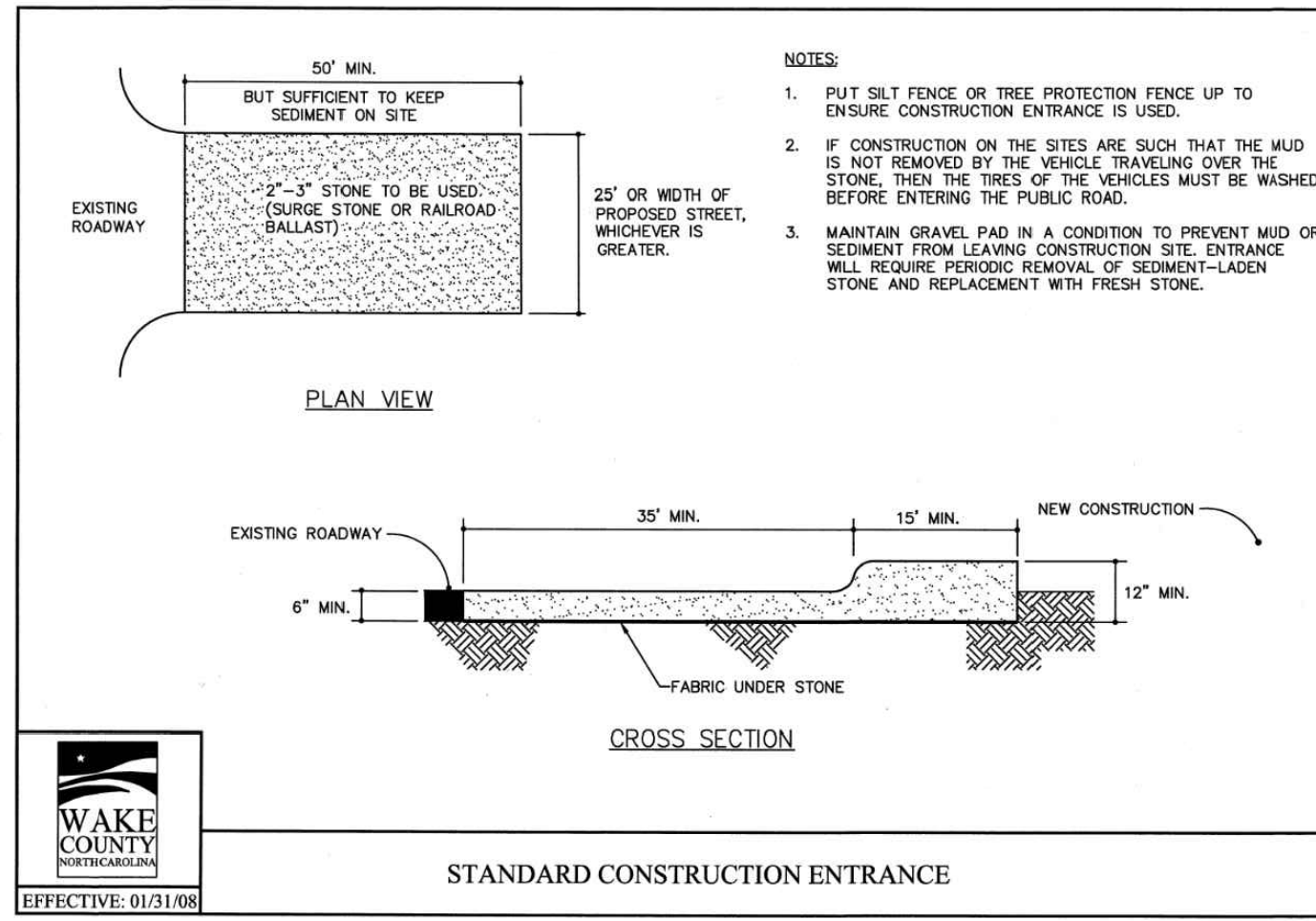
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LOCKHART ES RENOVATION/REPLACEMENT:
LOCKHART ELEMENTARY SCHOOL
1320 N. SMITHFIELD RD. KNIGHTDALE, NC 27545
WCPSS PROJECT ID: 862-453
WCPSS PROJECT MANAGER: SHANE WEBSTER
DTW PROJECT NUMBER: 23025

NOT FOR CONSTRUCTION



DATE: _____ PAGE: _____

TEMPORARY SEEDING RECOMMENDATIONS FOR LATE WINTER AND EARLY SPRING

SEEDING MIXTURE	Species	Rate (lb/acre)
	Rye (grain)	120
	Annual lespedeza (Kobe in Piedmont and Coastal Plain, Korean in Mountains)	50
	Orch annual lespedeza when duration of temporary cover is not to exceed beyond June.	

TEMPORARY SEEDING RECOMMENDATIONS FOR SUMMER

SEEDING MIXTURE	Species	Rate (lb/acre)
	Rye (grain)	40

TEMPORARY SEEDING RECOMMENDATIONS FOR FALL

SEEDING MIXTURE	Species	Rate (lb/acre)
	Rye (grain)	120

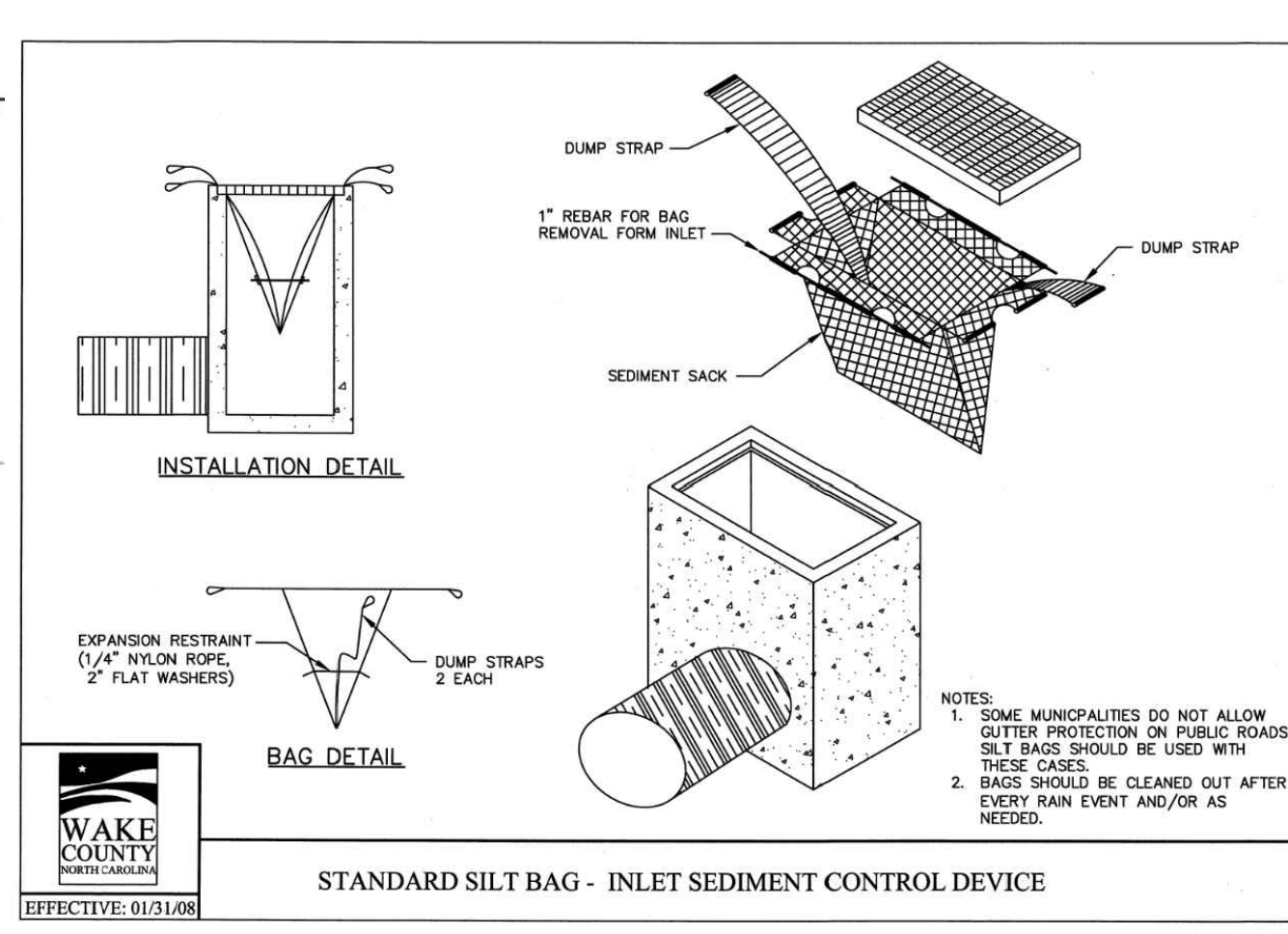
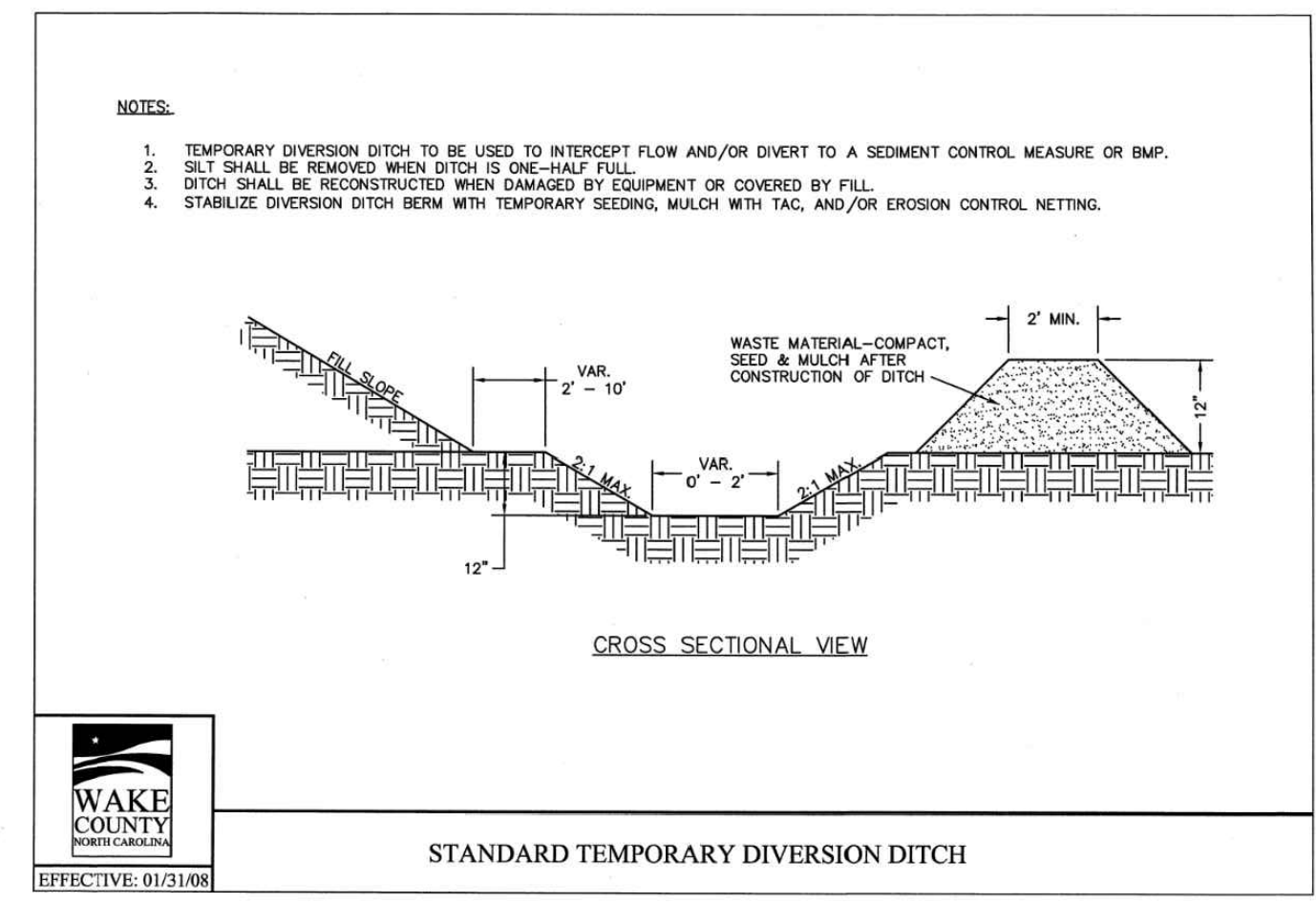
SEED BED PREPARATION:
LIMING - Apply lime according to soil test recommendations. If the pH (acidity) of the soil is not known, an application of ground agricultural limestone at the rate of 1-1 1/2 tons/acre on coarse-textured soils and 2-3 tons/acre on fine-textured soils is usually sufficient. Apply 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 700-1,000 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 raking, harrowing, or other suitable methods for fine grading. The finished grade shall be a smooth even soil surface with a loose uniform fine texture. All ridges and depressions shall be removed and filled to provide the approved surface drainage. Planting is to be done immediately after finished grades are obtained and seedbed preparation is completed.

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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 1 to 1 1/2 tons/acre on coarse-textured soils and 2-3 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.
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NOTES:

- Depending upon mix with other species. See table 6.11 d from Chapter 6 of the NC Erosion and Sediment Control Planning and Design Manual.
- Depending upon mix with other species. See table 6.11 d from Chapter 6 of the NC Erosion and Sediment Control Planning and Design Manual.
- Significant maintenance may be required to obtain desired cover once centipede is planted. Acceptable for sodding.
- Hard Fescue is not recommended for slopes > 5%. Prefers shade.
- Some municipalities do not allow gutter protection on public roads. Silt bags should be used with these cases. Bags should be cleaned out after every rain event and/or as needed.
- Ground cover shall be maintained until permanent vegetation is established and stable against accelerated erosion.

WAKE COUNTY
Effective: 01/31/08



DATE: _____ PAGE: _____

NON-INVASIVE PERMANENT SEEDING RECOMMENDATIONS FOR LATE WINTER AND EARLY SPRING

SEEDING MIXTURE	Species	Rate
	Centipede	5 lb/acre
	Indian Woodoats	1.5-2.5 lbs/acre*
	Virginia Wild Rye	4-6 lbs/acre*

NON-INVASIVE PERMANENT SEEDING RECOMMENDATIONS FOR SUMMER

SEEDING MIXTURE	Species	Rate
	Indian Woodoats	1.5-2.5 lbs/acre*
	Virginia Wild Rye	4-6 lbs/acre*

NON-INVASIVE PERMANENT SEEDING RECOMMENDATIONS FOR FALL

SEEDING MIXTURE	Species	Rate
	Hard Fescue	15 lb/acre
	Switchgrass	2.5-3.5 lbs/acre*
	Indian Grass	5-7 lbs/acre*
	Big Bluestem	5-7 lbs/acre*
	Indian Woodoats	1.5-2.5 lbs/acre*
	Virginia Wild Rye	4-6 lbs/acre*

SEED BED PREPARATION:
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 1 to 1 1/2 tons/acre on coarse-textured soils and 2-3 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 700-1,000 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 raking, harrowing, or other suitable methods for fine grading. The finished grade shall be a smooth even soil surface with a loose uniform fine texture. All ridges and depressions shall be removed and filled to provide the approved surface drainage. Planting is to be done immediately after finished grades are obtained and seedbed preparation is completed.

NOTES:

- Permanent seeding, sodding or other means of stabilization are required when all construction work is completed according to the NCDES timeline's table.
- A North Carolina Department of Agriculture soil test (or equivalent) is highly recommended to be obtained for all areas to be seeded, sprigged, sodded or planted.
- Use a seeding mix that will produce fast growing nurse crops and includes non-invasive species that will eventually provide a permanent groundcover. Soil blankets may be used in lieu of nurse crops. Mat, tack or crumb mulch, as needed to protect seeded areas until root establishment. Mulch must be applied uniformly over the area with a cover density of at least 90%.
- Ground cover shall be maintained until permanent vegetation is established and stable against accelerated erosion.

WAKE COUNTY
Effective: 01/31/08

TOWN OF KNIGHTDALE STANDARD DETAILS

PLANT PROTECTIVE FENCING

DATE	REVISIONS	DESCRIPTION	STD. NO.
			2.10

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LOCKHART ES RENOVATION/REPLACEMENT:
LOCKHART ELEMENTARY SCHOOL
1320 N. SMITHFIELD RD. KNIGHTDALE, NC 27545
WCPS PROJECT ID: 862-453
WCPS PROJECT MANAGER: SHANE WEBSTER
DTW PROJECT NUMBER: 23025

NOT FOR CONSTRUCTION

Revisions	
Drawn	
Checked	
Date	2024-10-31
Title	

EROSION CONTROL
DETAILS

CONSTRUCTION SEQUENCE

- 1. THE STORMWATER WETLAND SHALL BE UTILIZED AS A TEMPORARY SEDIMENT BASIN DURING CONSTRUCTION.
1.1. SCHEDULE THE FOLLOWING WORK TO CONCLUDE WITH AN EXTENDED FORECAST OF NO PRECIPITATION SUCH THAT ALL WORK CAN BE COMPLETED DURING A PERIOD OF DRY WEATHER.

TEMPORARY SEDIMENT BASIN NOTES:

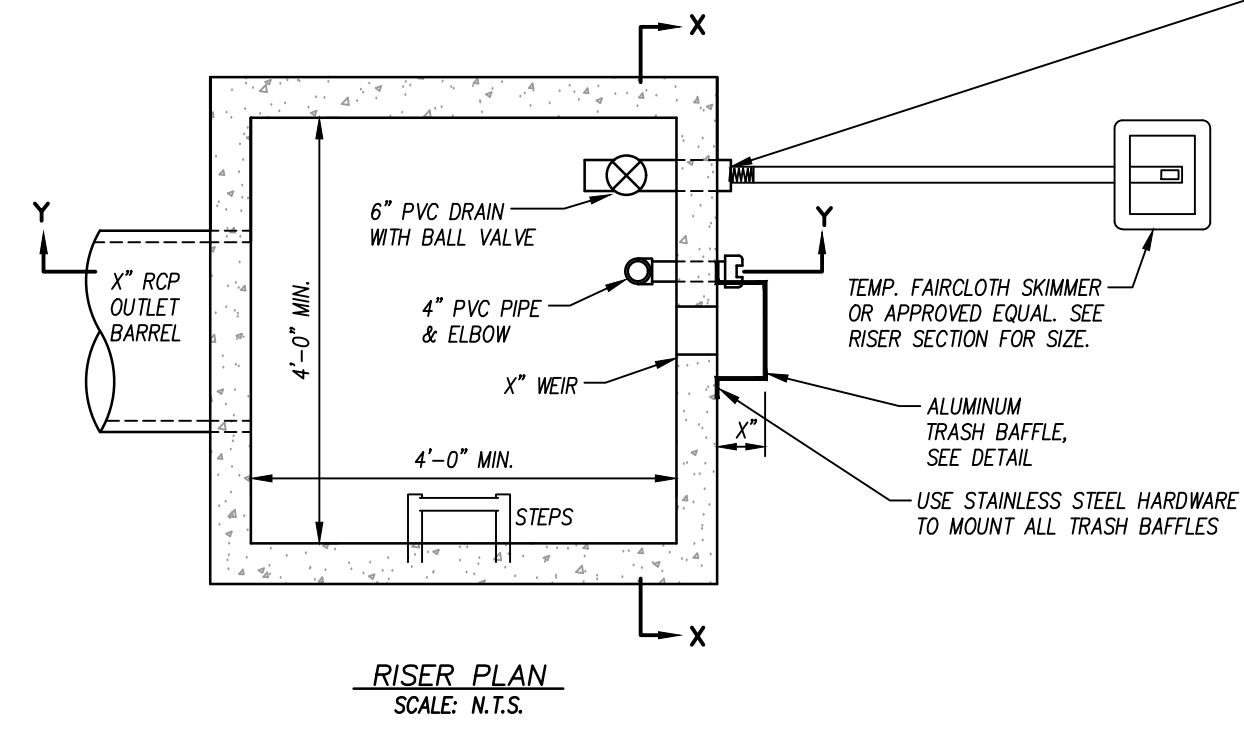
- 1. THE AREA OF THE NEW CONSTRUCTED WETLAND WILL BE UTILIZED AS A TEMP SEDIMENT BASIN DURING CONSTRUCTION.
2. A TEMP. SKIMMER SHALL BE ATTACHED TO THE OUTLET RISER DRAIN. THE BASIN SHALL BE GRADED TO TEMP. CONTOURS SHOWN ON THE EROSION CONTROL PLAN.

AS-BUILT SURVEY REQUIREMENTS

- 1. CONTRACTOR SHALL PROVIDE AS-BUILT TOPOGRAPHIC SURVEY PERFORMED BY A PROFESSIONAL LAND SURVEYOR CERTIFYING WET DETENTION POND AREA DIMENSIONS AND ELEVATIONS OF THE FOLLOWING:
1.1. OUTLET STRUCTURE TOPS AND INVERTS, ORIFICE DIAMETERS, BARREL PIPE SIZES AND INVERTS AND STRUCTURE DIMENSIONS.

WETLAND SOIL MIX

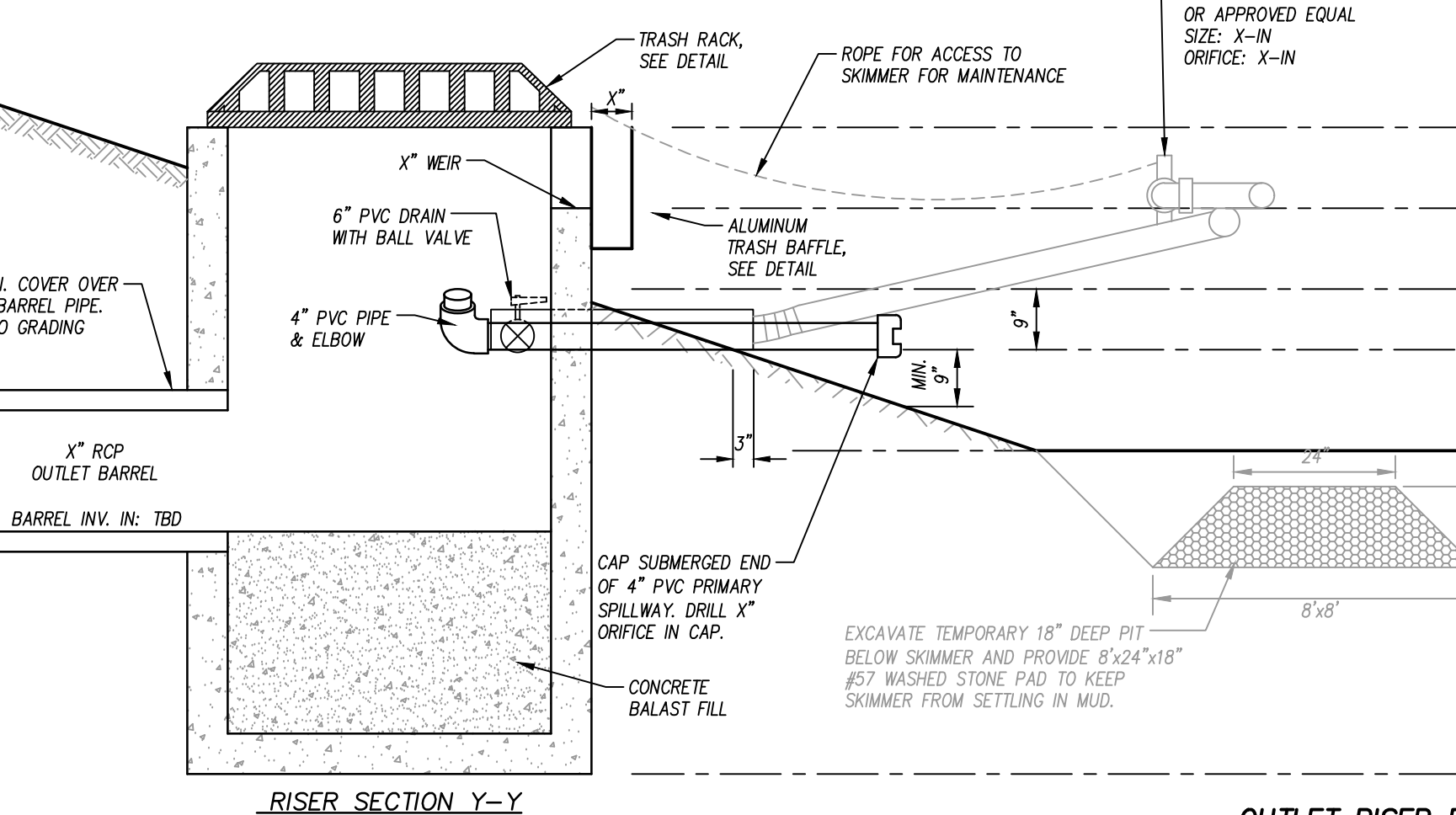
- 1. THE SOIL MUST BE UNIFORM AND FREE OF STONES, STUMPS, ROOTS, OR OTHER SIMILAR MATERIAL GREATER THAN 2 INCHES.
2. SOIL TEXTURE SHALL BE A LOAMY SAND, WITH NO MORE THAN 10% CLAY (USDA SOIL TEXTURAL CLASSIFICATION).



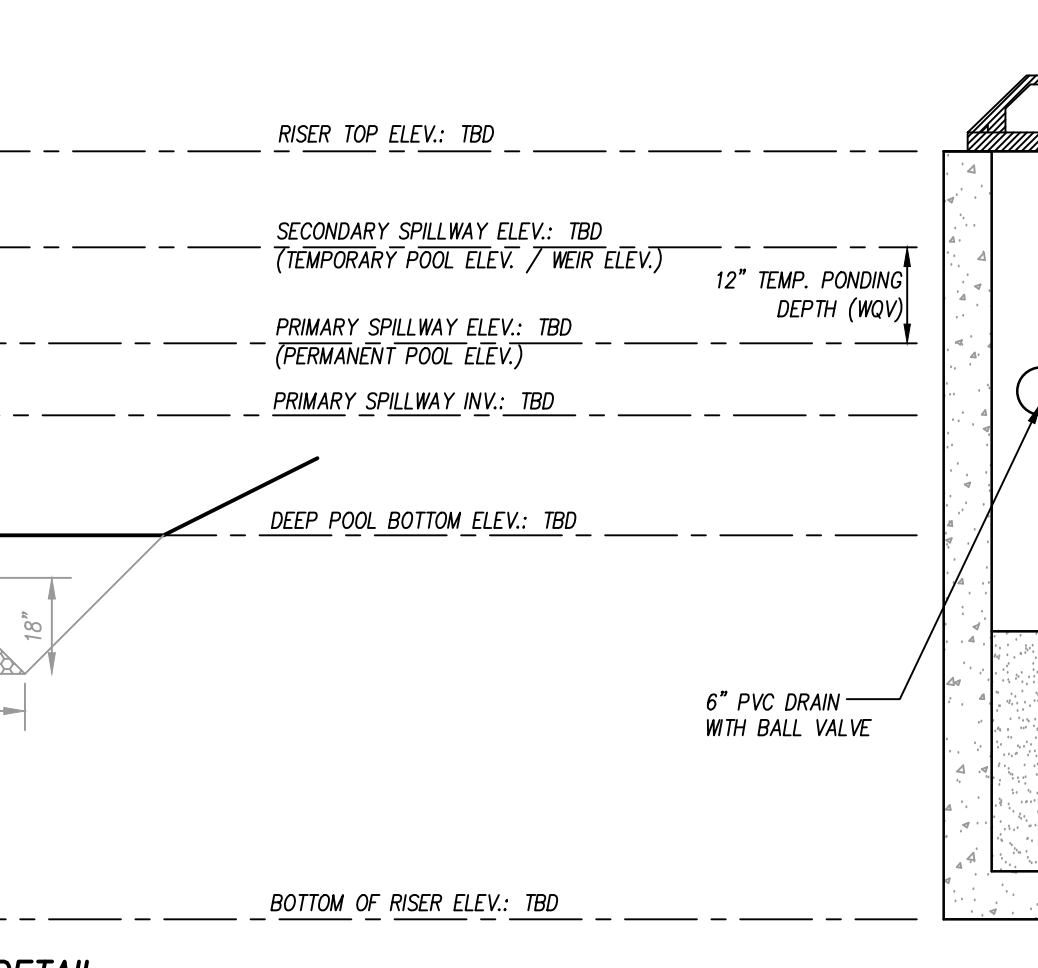
RISER PLAN SCALE: N.T.S.

CONNECT FLEXIBLE PIPE TO DRAIN. GATE VALVE SHALL REMAIN OPEN DURING CONSTRUCTION. REMOVE SKIMMER & FLEXIBLE PIPE CONNECTOR AND CLOSE VALVE ONCE SCM IS NO LONGER UTILIZED AS TEMPORARY SEDIMENT BASIN.

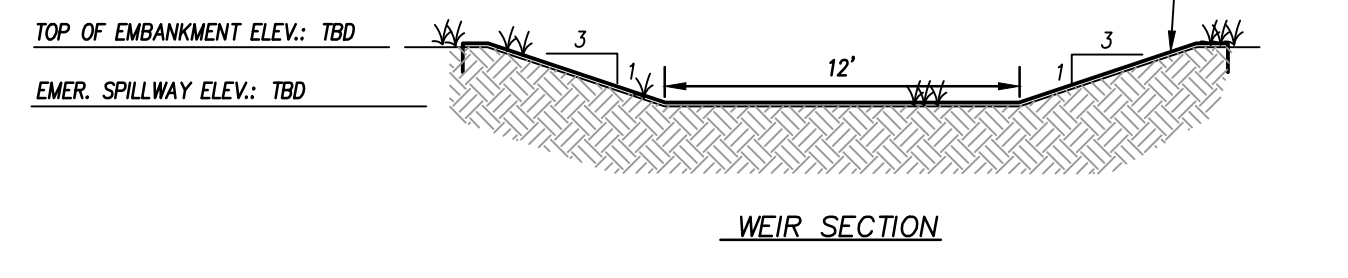
- 1. ASTM C-478, PRECAST, REINFORCED CONCRETE WITH SOLID WALLS (NOT WAFFLE). ALTERNATIVE BRICK OR CAST-IN-PLACE ALLOWED WITH APPROVAL OF SHOP DRAWINGS.
2. ALL JOINTS AND PENETRATIONS TO BE ASTM C-1107, NON-SHRINK, HYDRAULIC-CEMENT GROUT.



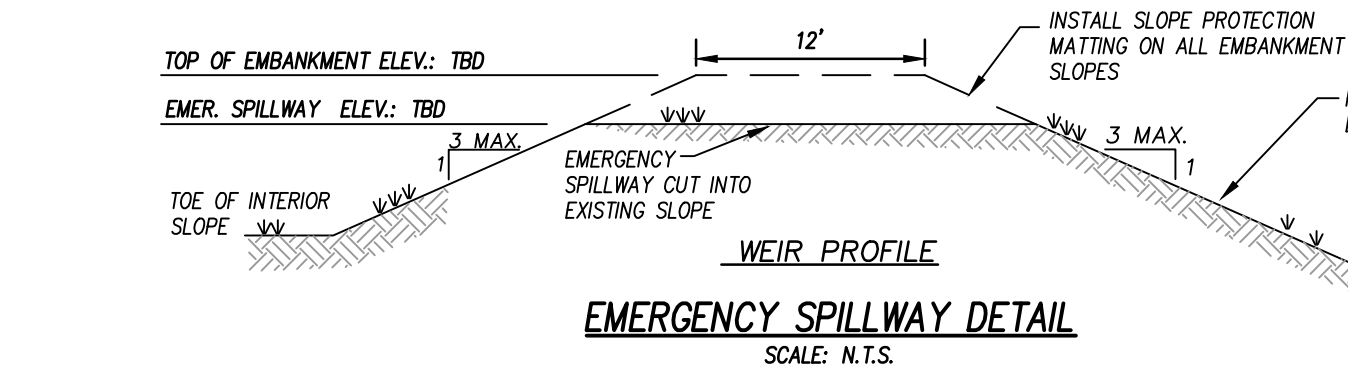
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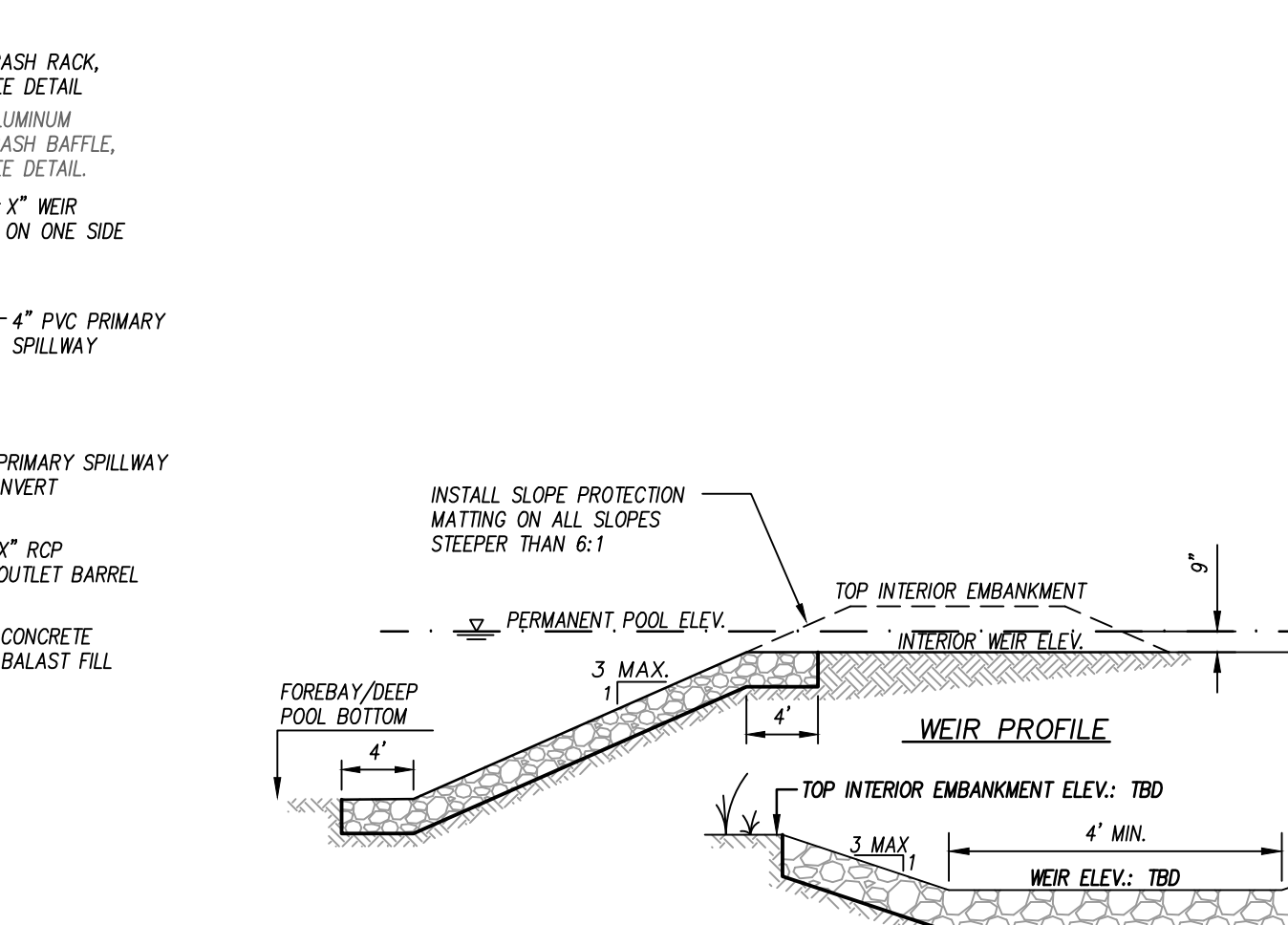
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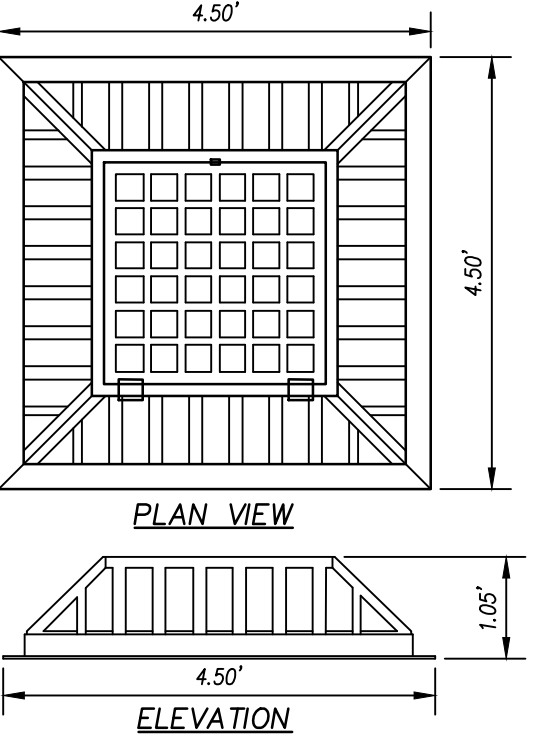
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WEIR PROFILE EMERGENCY SPILLWAY DETAIL SCALE: N.T.S.



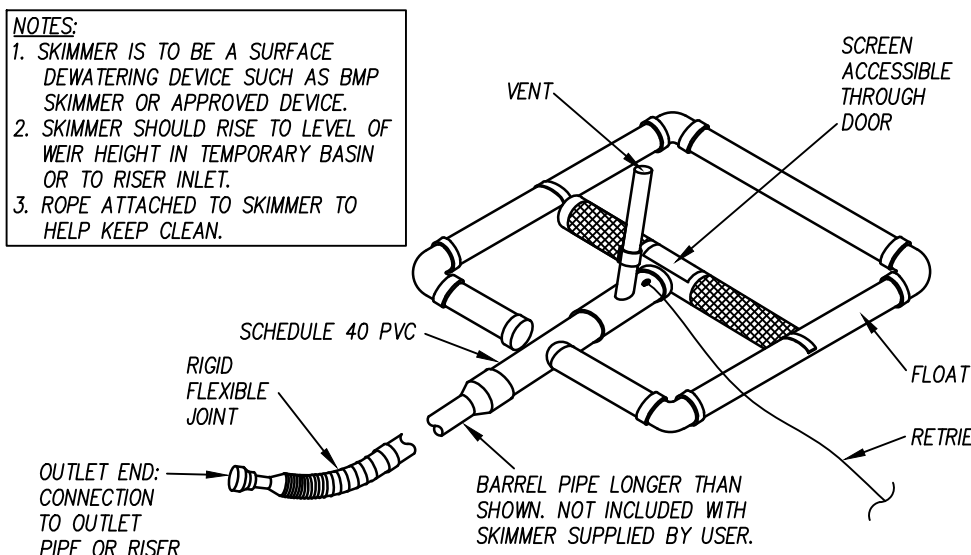
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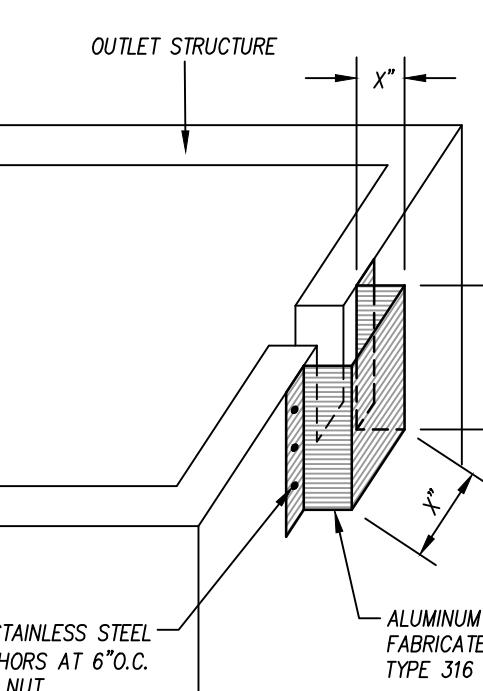
ISOMETRIC

- NOTES:
1. TRASH RACK SHALL BE ALUMINUM 48 SQUARE. TOP-MOUNT HINGED TRASH RACK, MODEL L50-48 HINGED BY TRASHRACKS.COM OR APPROVED EQUAL.

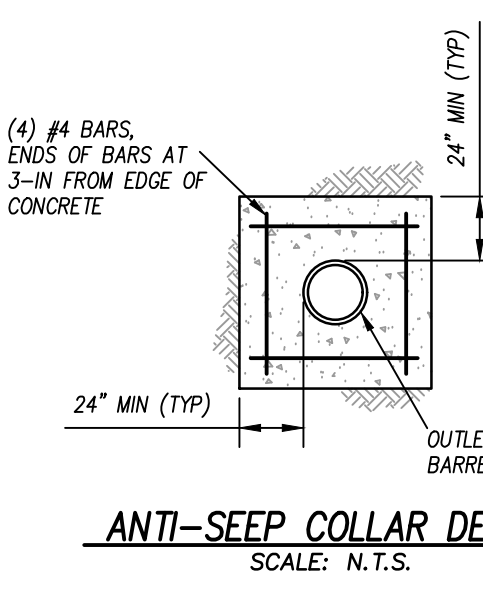
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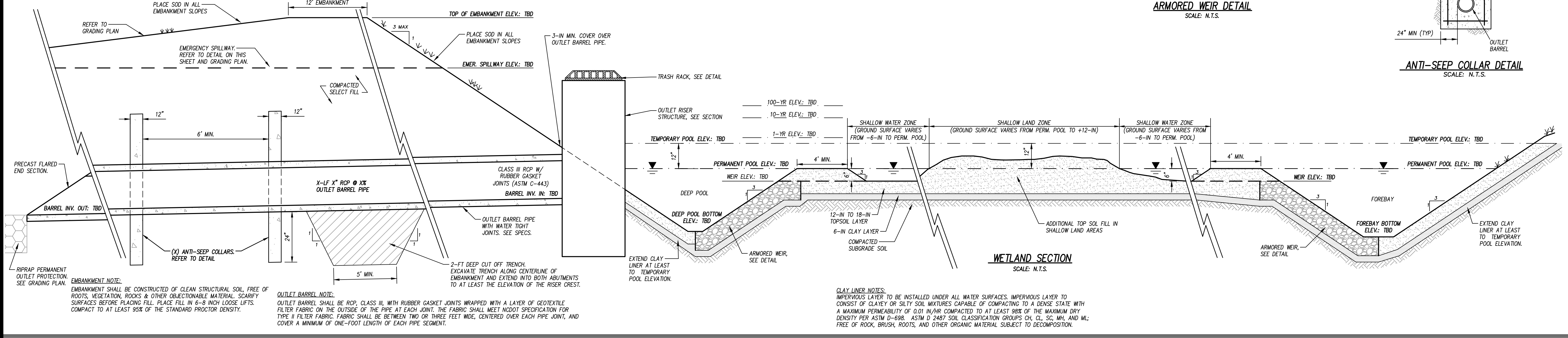
TEMPORARY SKIMMER SCALE: N.T.S.



ALUMINUM TRASH BAFFLE DETAIL SCALE: N.T.S.



ANTI-SEEP COLLAR DETAIL SCALE: N.T.S.



WETLAND SECTION SCALE: N.T.S.

CLAY LINER NOTES:
IMPERVIOUS LAYER TO BE INSTALLED UNDER ALL WATER SURFACES. IMPERVIOUS LAYER TO CONSIST OF CLAYEY OR SILTY SOIL MIXTURES CAPABLE OF COMPACTING TO A DENSE STATE WITH A MAXIMUM PERMEABILITY OF 0.01 IN/HR.

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CLH DESIGN, PA 400 Gregory Forest Drive Suite 1000 Cary, NC 27513 Phone: (919) 318-8778 Fax: (919) 318-8758 E-Mail: cld@clhdesign.com

LOCKHART ES RENOVATION: LOCKHART ELEMENTARY SCHOOL 1320 N. SMITHFIELD RD. KNIGHTDALE, NC 27545 WCPSS PROJECT ID: 862-453 WCPSS PROJECT MANAGER: SHANE WEBSTER DTW PROJECT NUMBER: 23025

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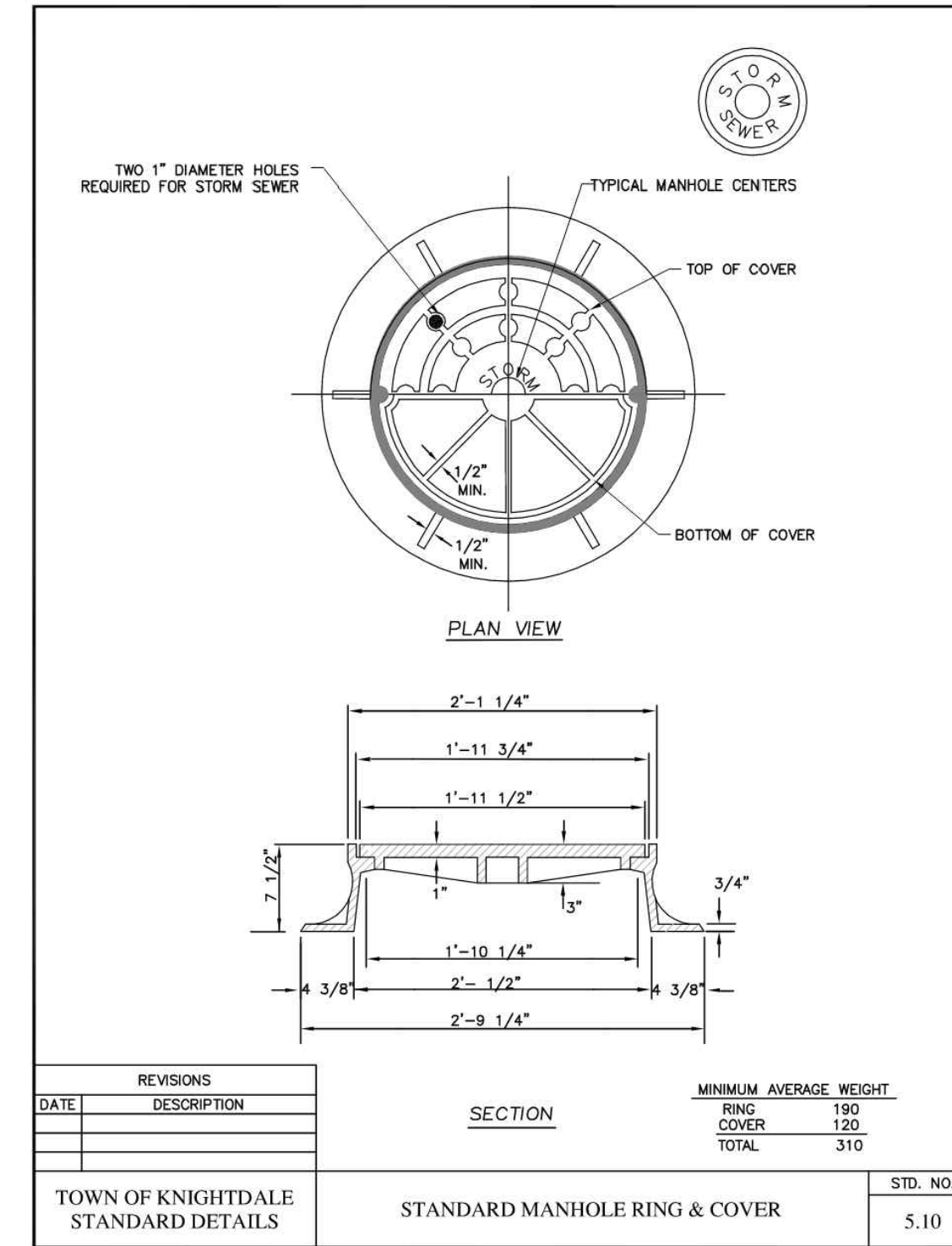
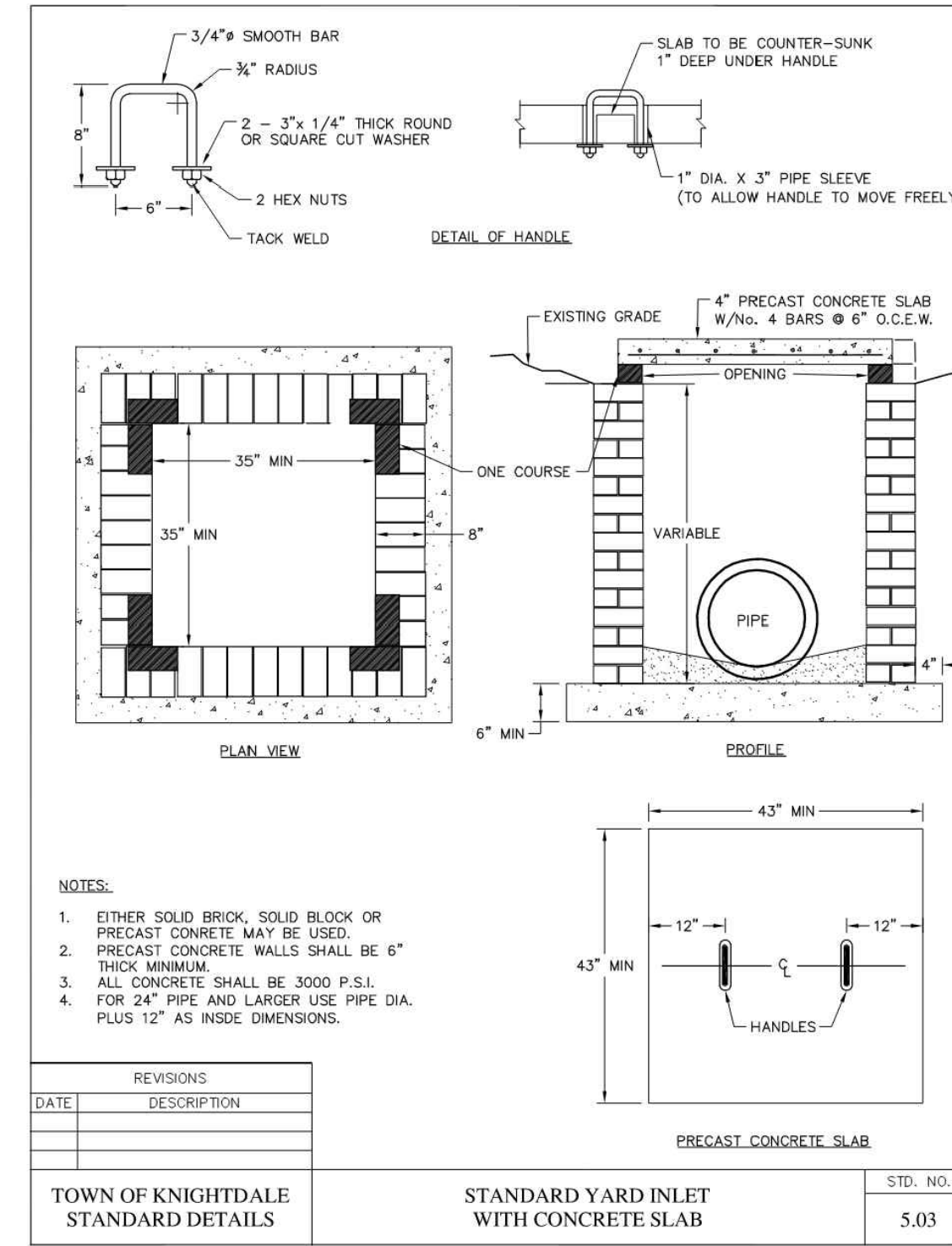
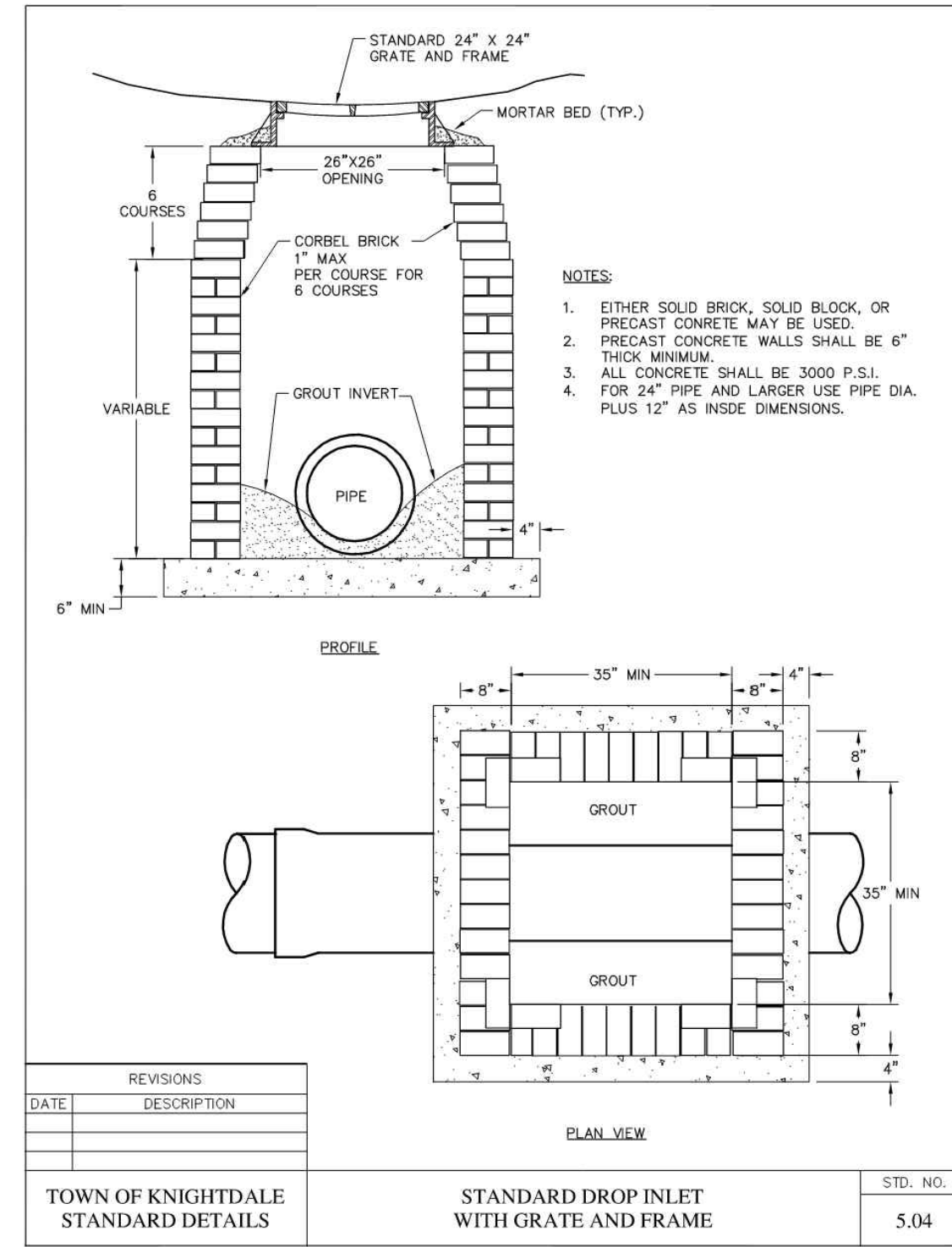
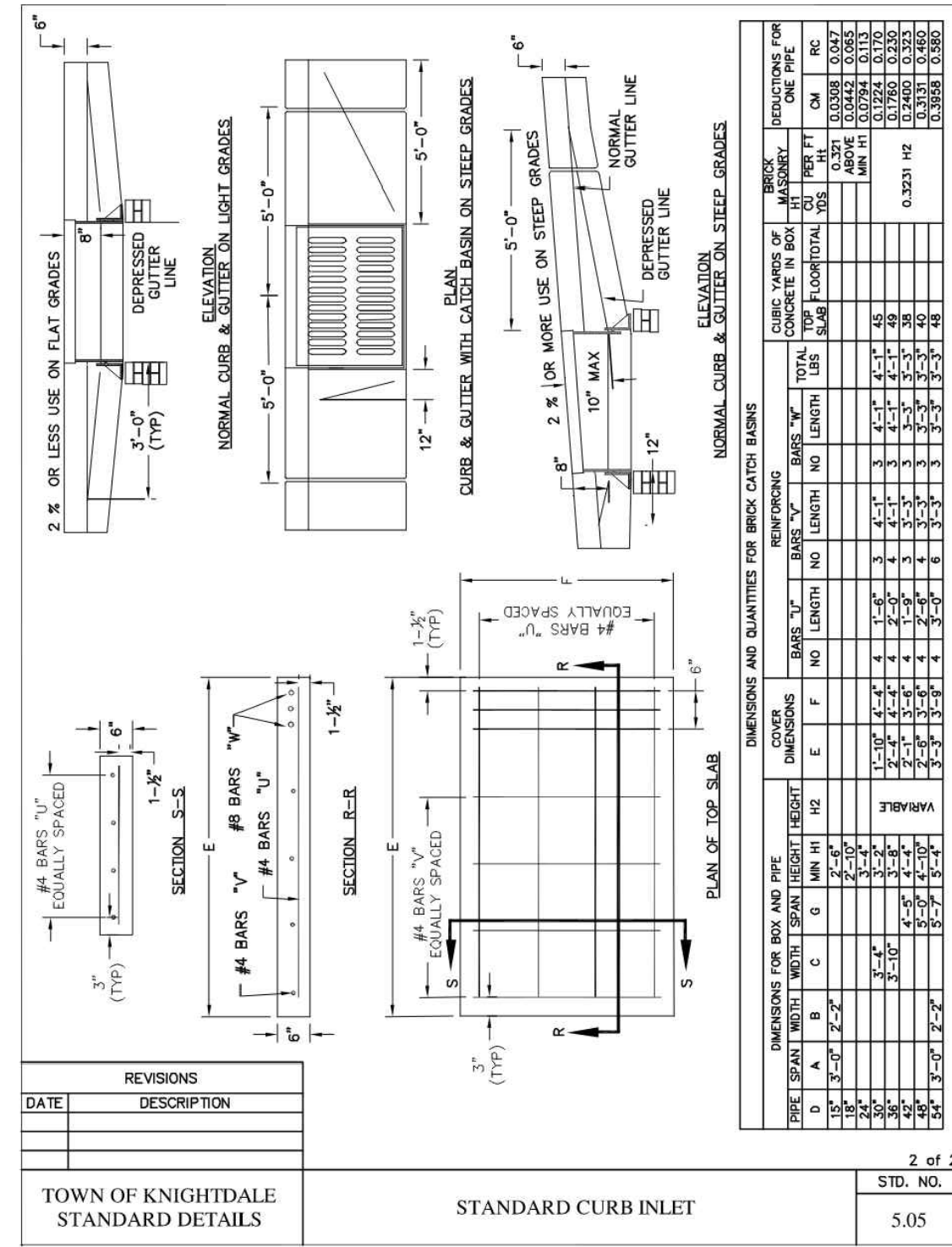
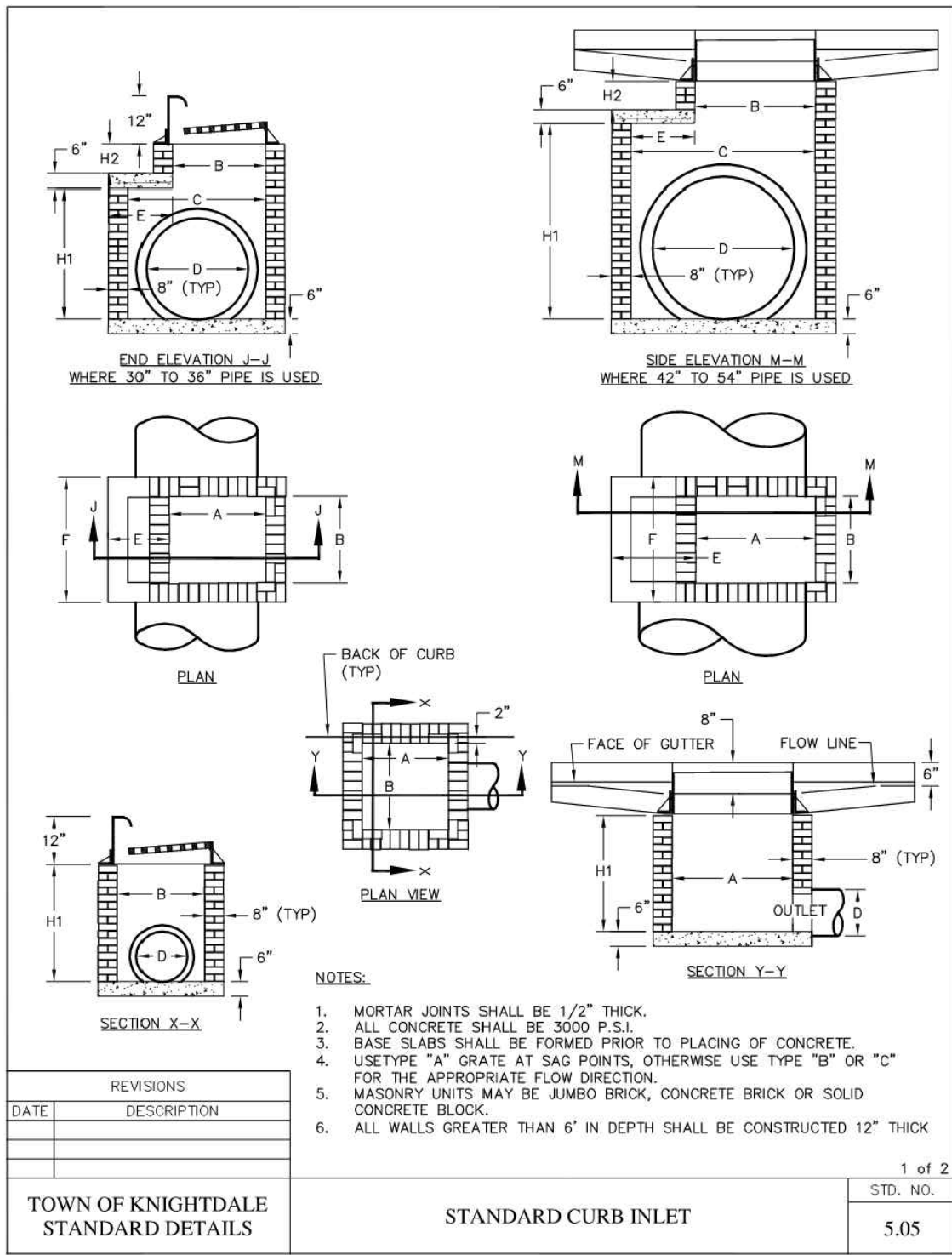
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KNIGHTDALE STANDARD DETAILS

N.T.S.

LOCKHART ES RENO/RPLACEMENT:

LOCKHART ELEMENTARY SCHOOL

1320 N. SMITHFIELD RD. KNIGHTDALE, NC 27545

WCPSS PROJECT ID: 862-453

WCPSS PROJECT MANAGER: SHANE WEBSTER

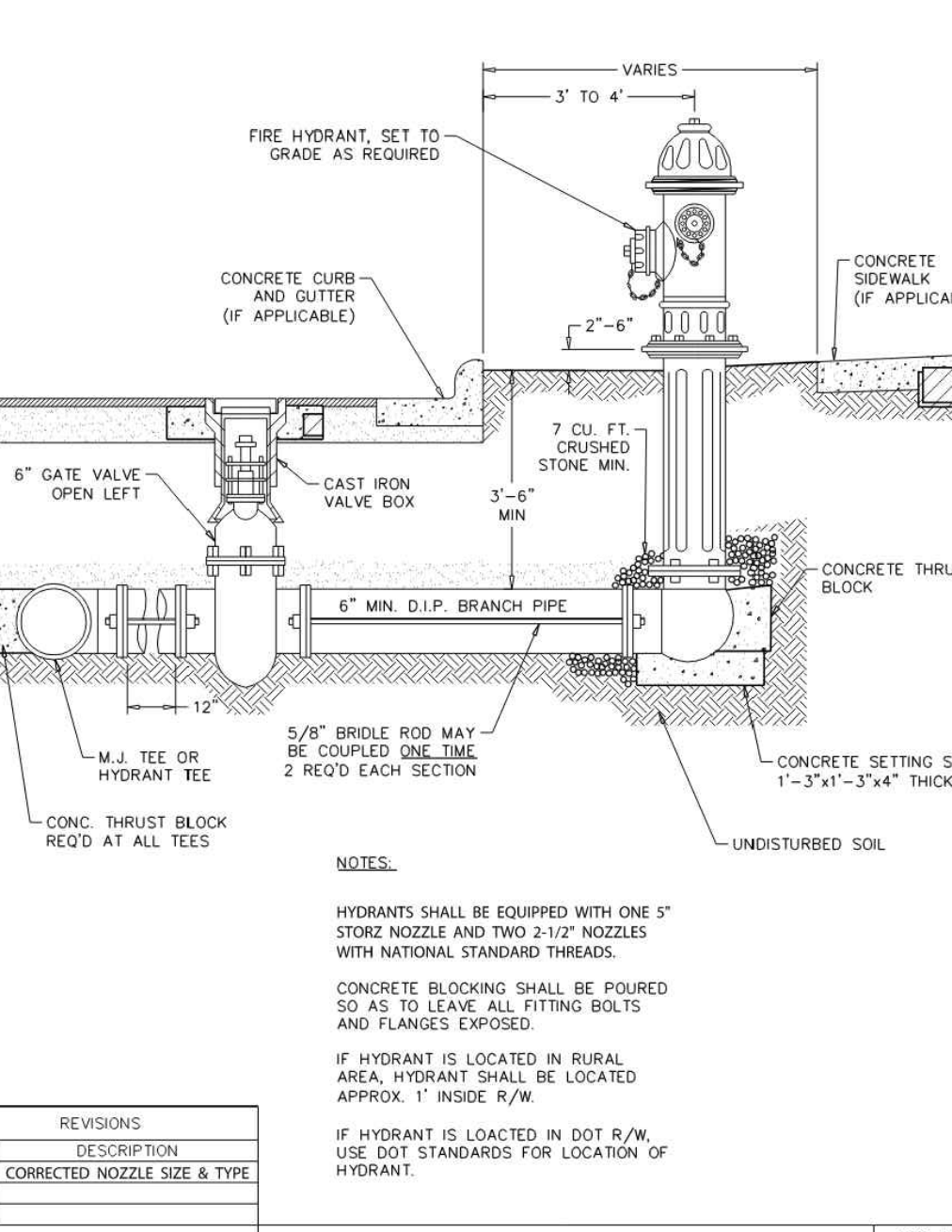
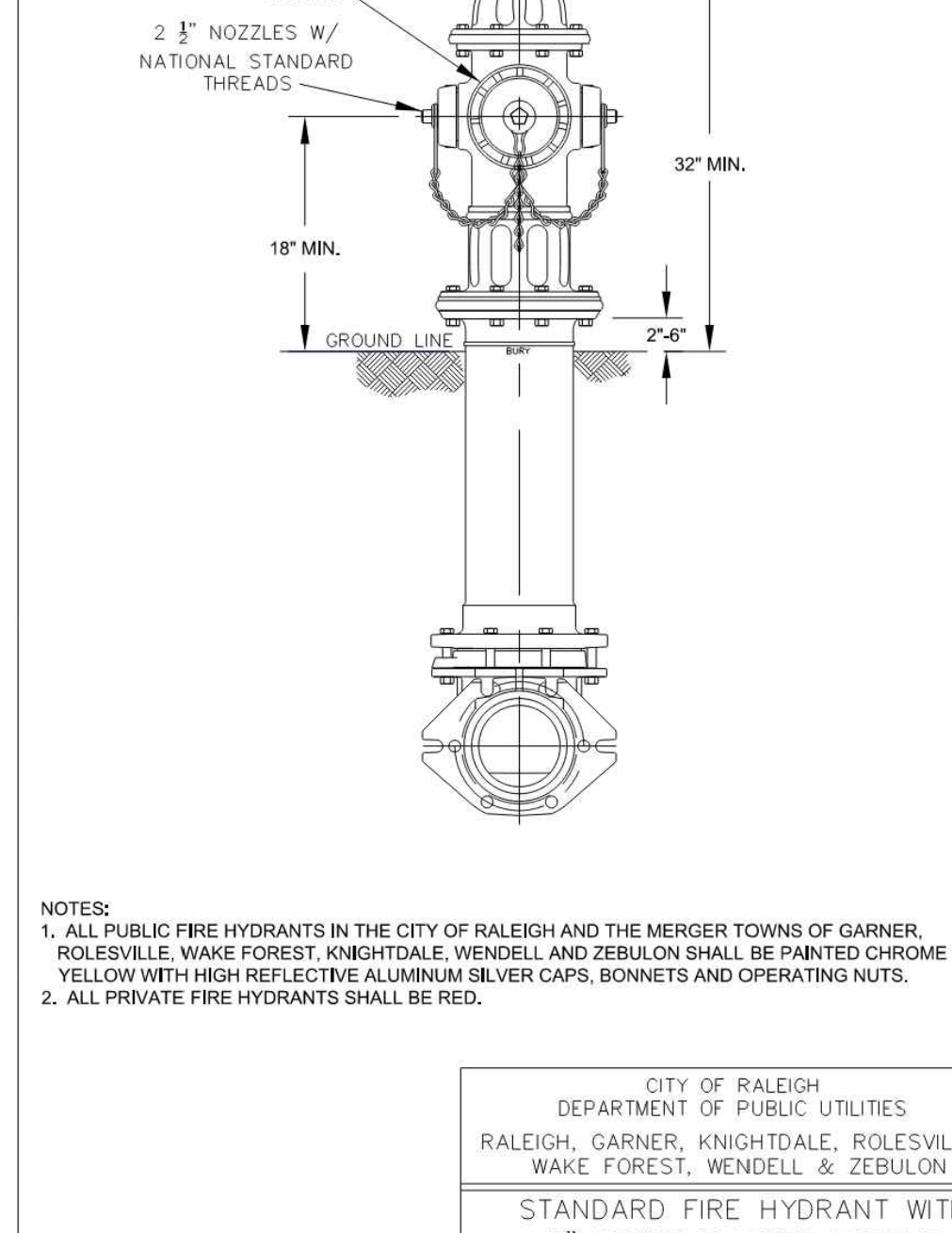
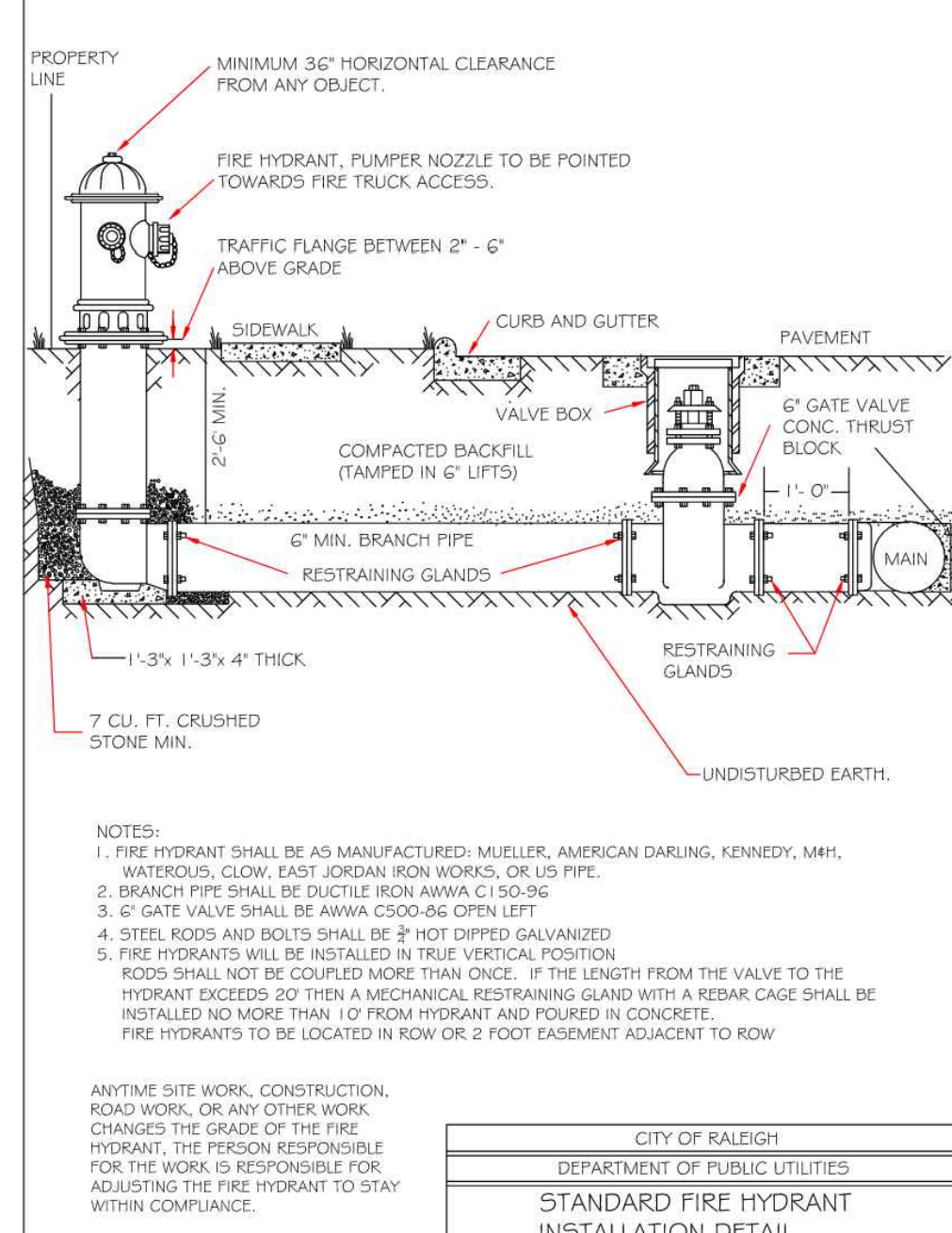
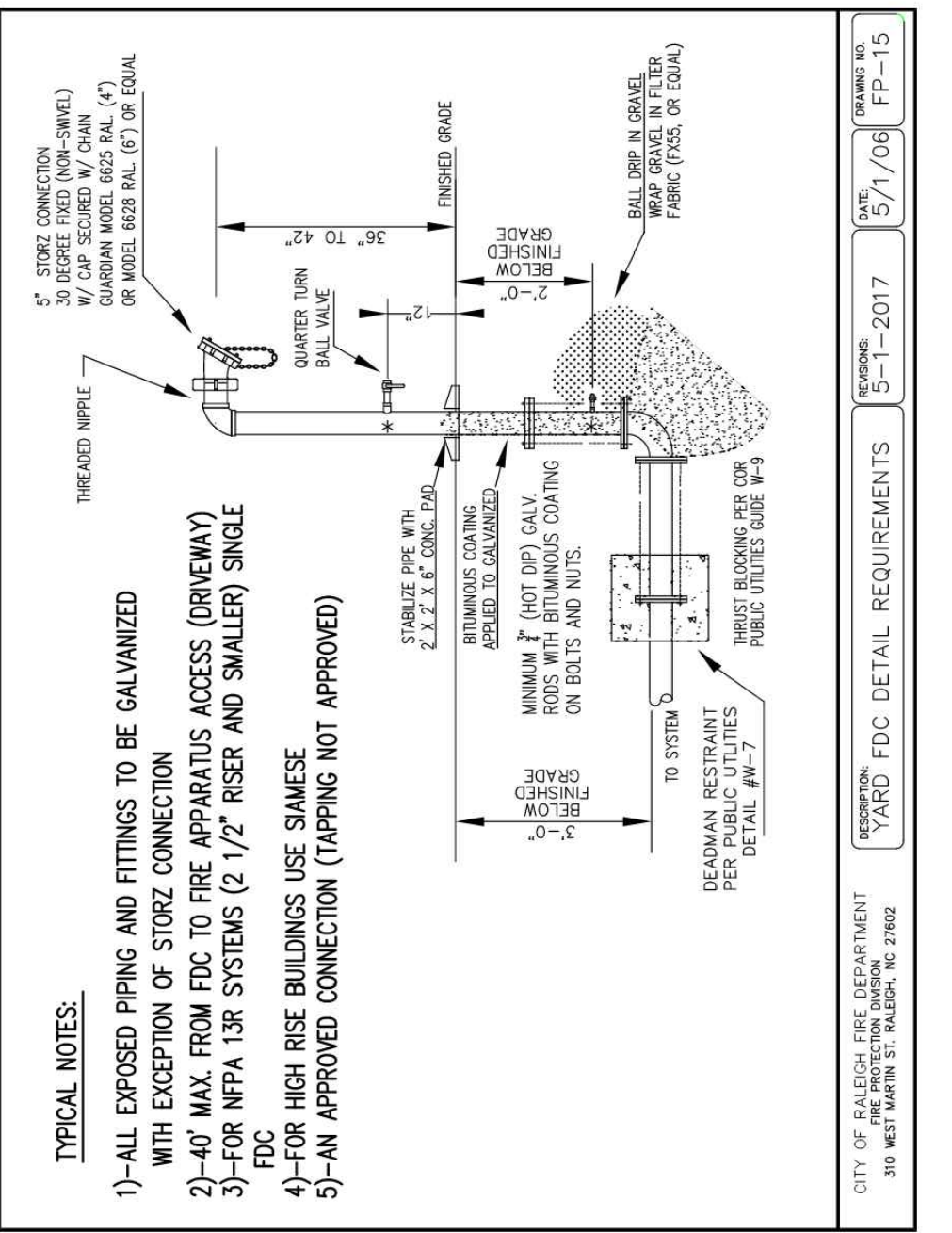
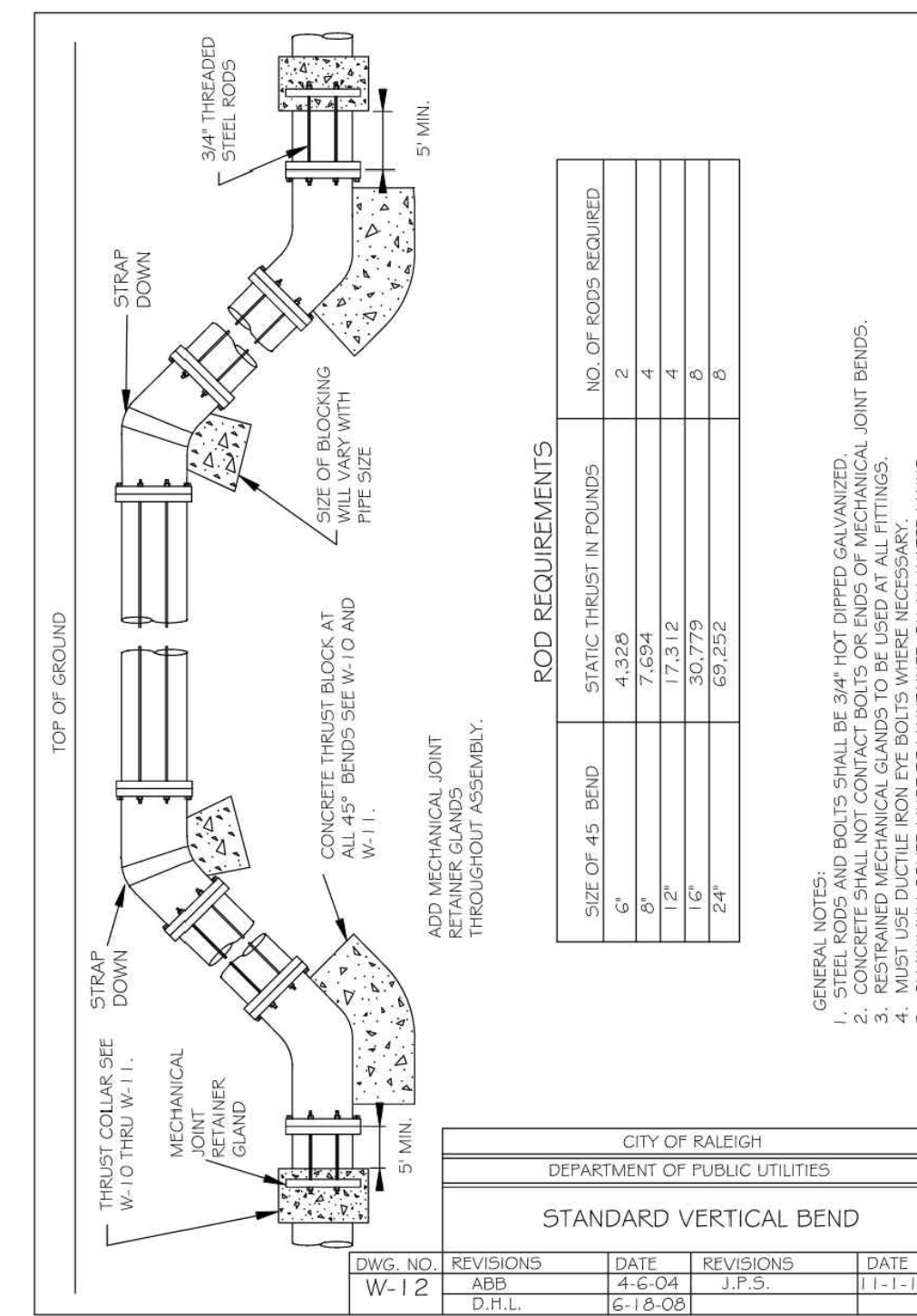
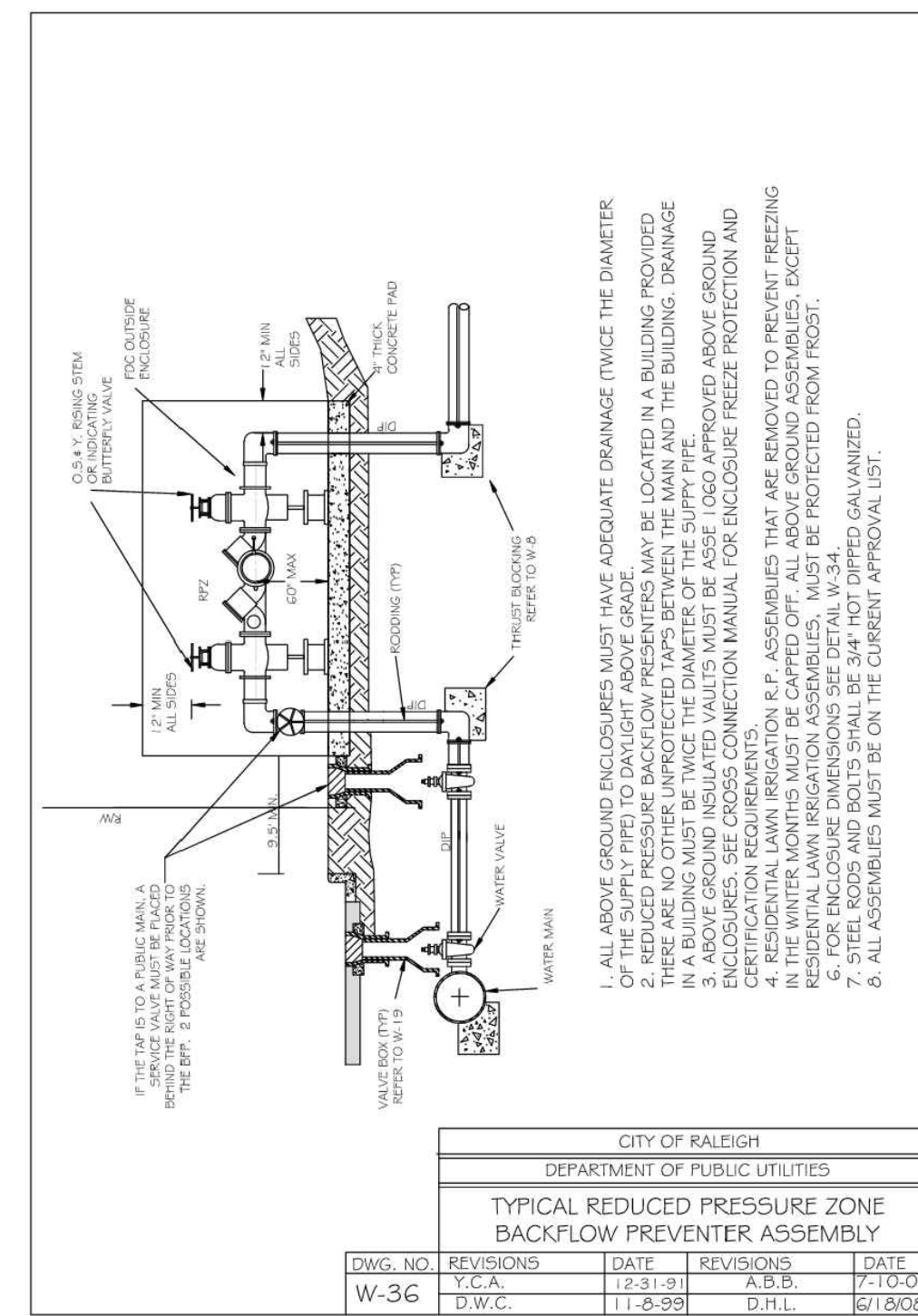
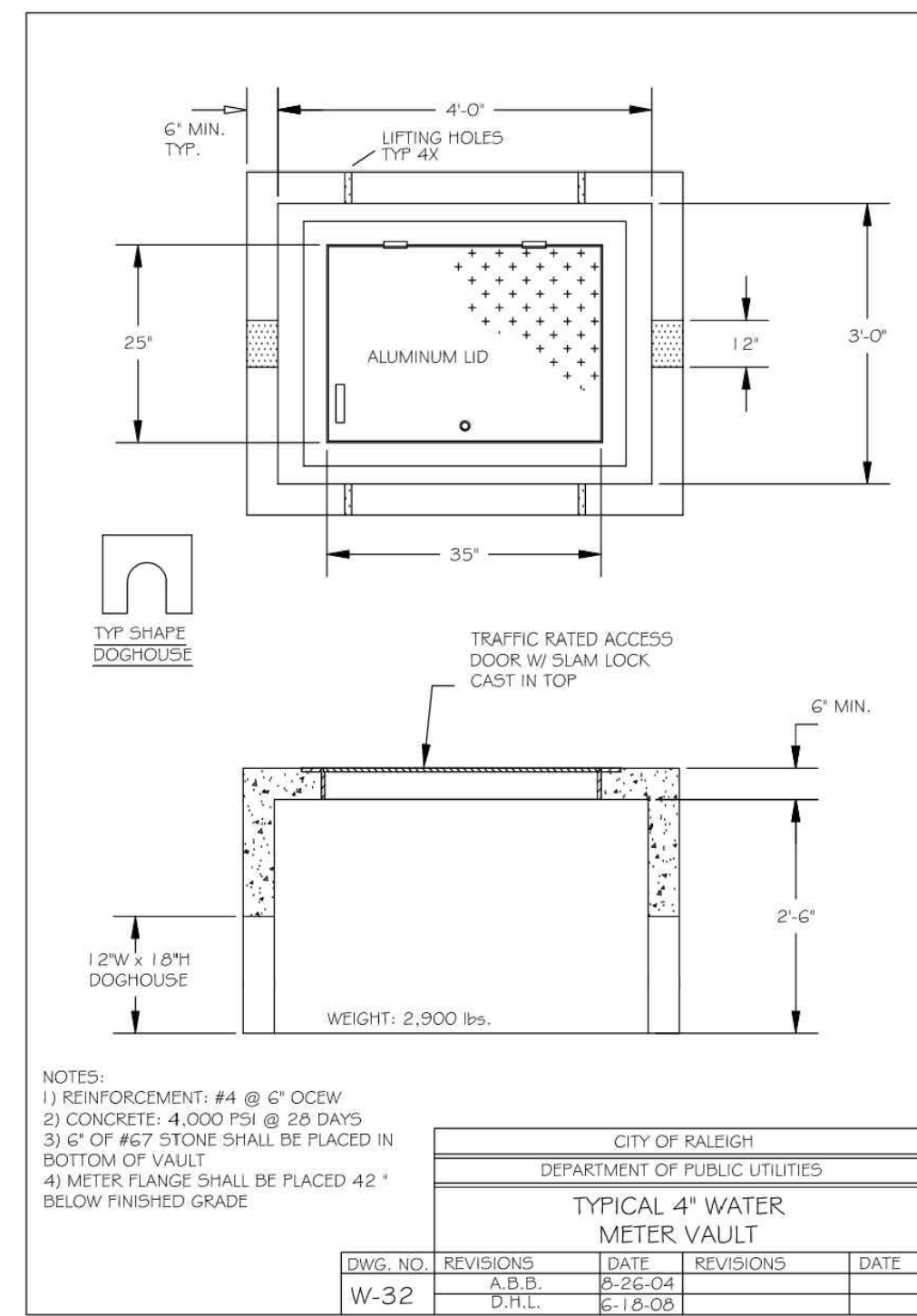
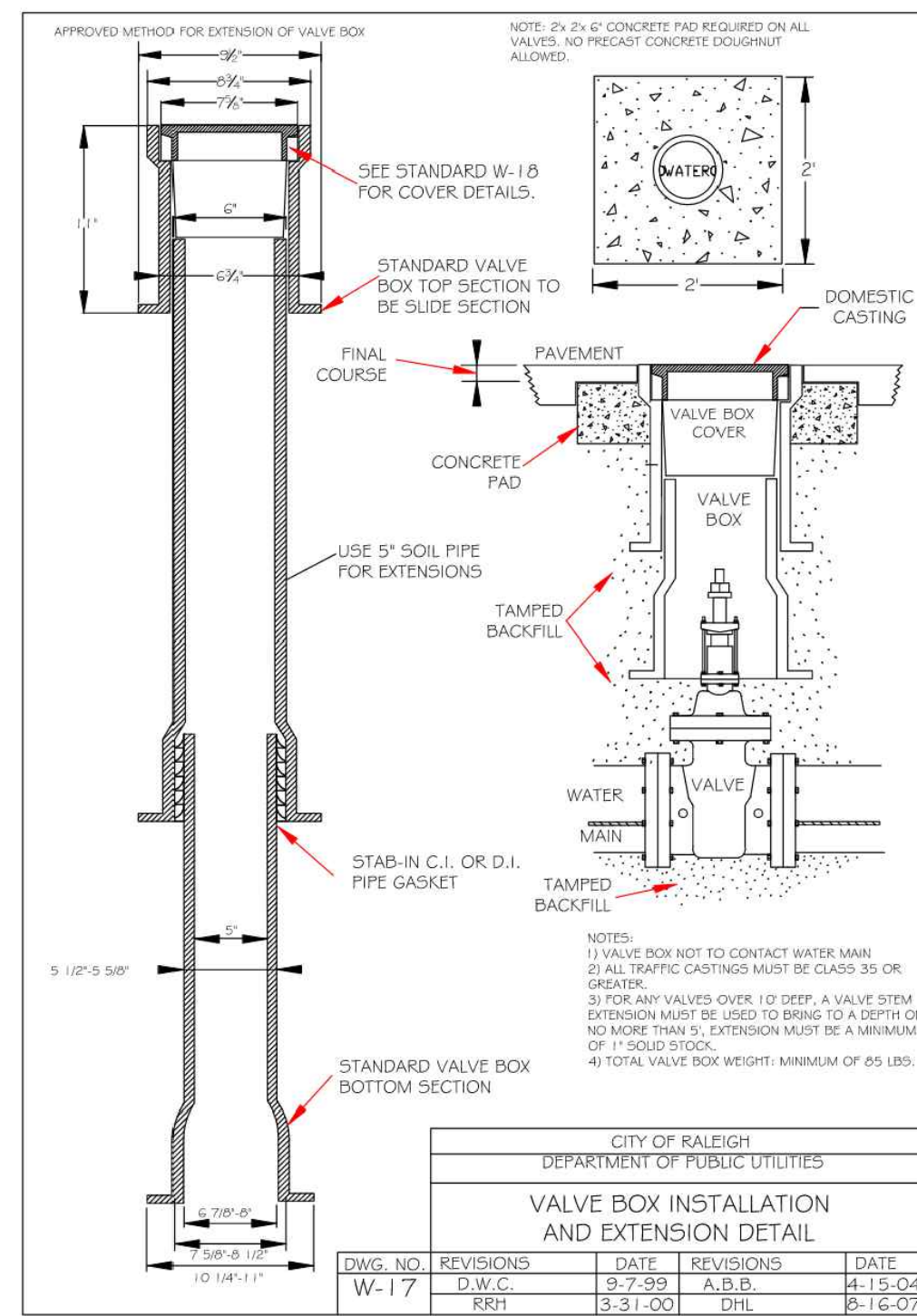
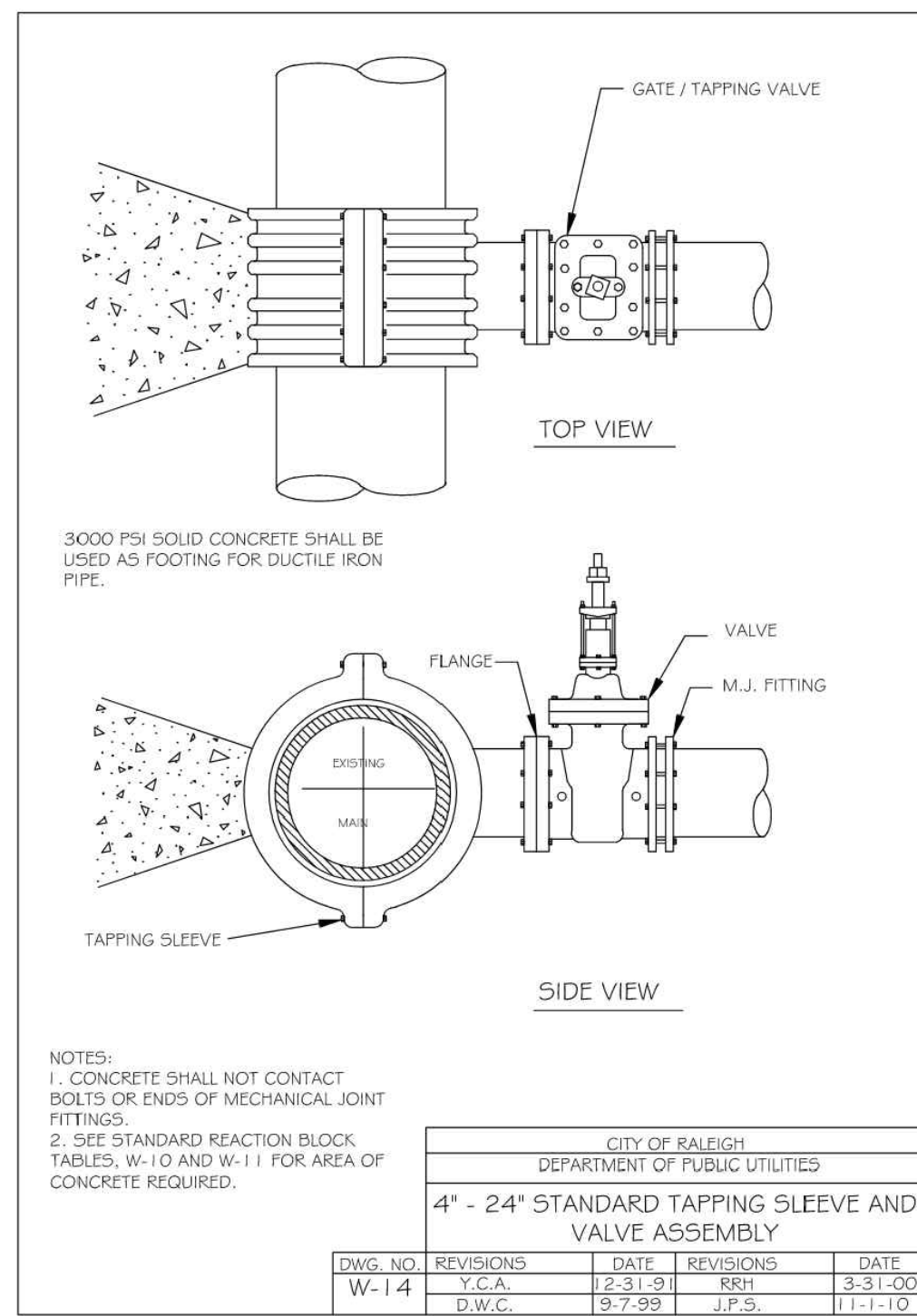
DTW PROJECT NUMBER: 23025

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Revisions

UTILITY DETAILS

Sheet **C-801**



CITY OF RALEIGH STANDARD DETAILS

N.T.S.

TOWN OF KNIGHTDALE STANDARD DETAILS

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 WCPSS PROJECT ID: 862-453
 WCPSS PROJECT MANAGER: SHANE WEBSTER
 DTW PROJECT NUMBER: 23025

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 Checked _____
 Date 2024-10-31
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UTILITY DETAILS

Sheet **C-802**

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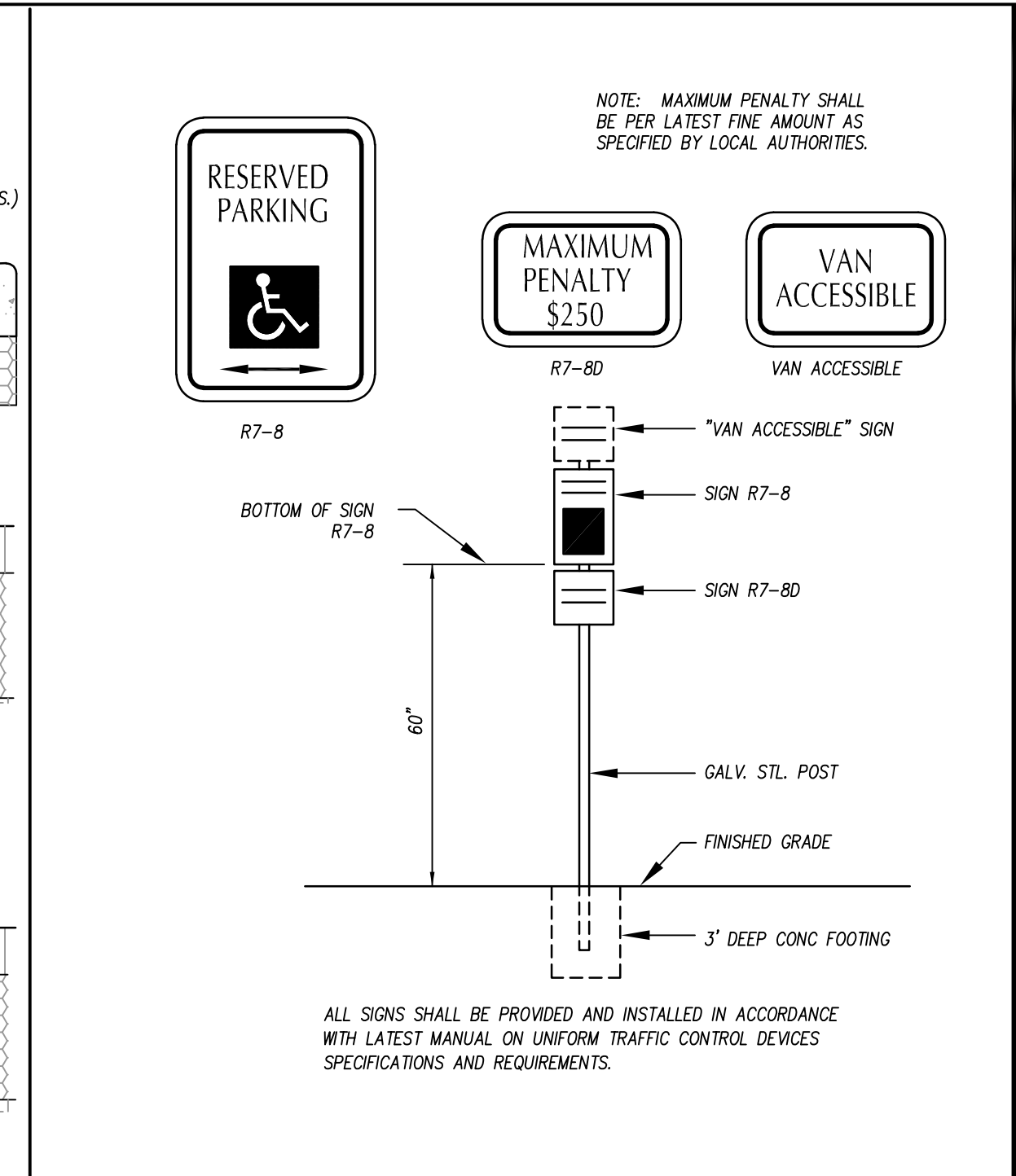
LOCKHART ES RENOVATION REPLACEMENT:
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1320 N. SMITHFIELD RD. KNIGHTDALE, NC 27545
WCPSS PROJECT ID: 862-453
WCPSS PROJECT MANAGER: SHANE WEBSTER
DTW PROJECT NUMBER: 23025

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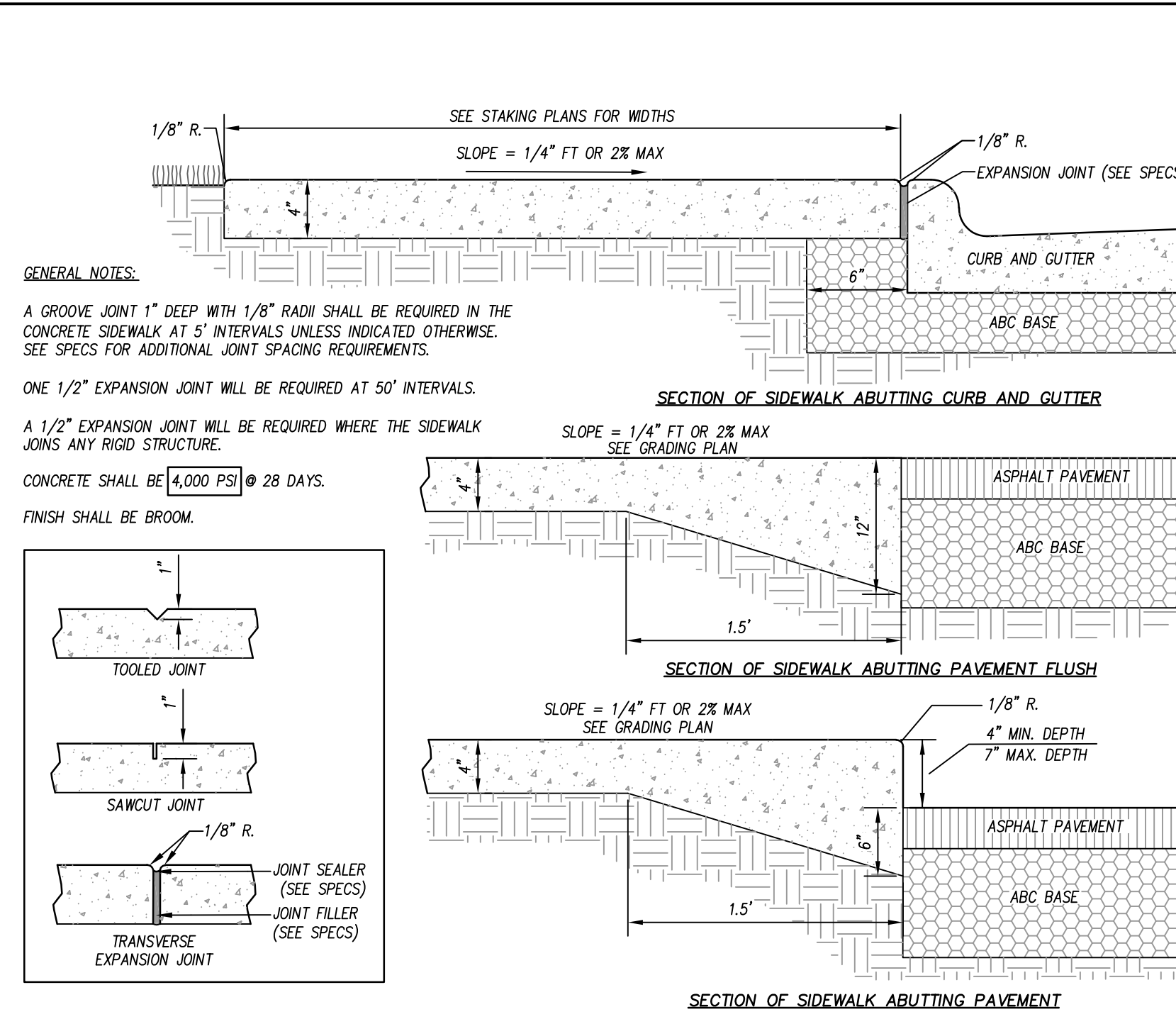
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Checked	
Date	2024-10-31
Title	

STAKING DETAILS

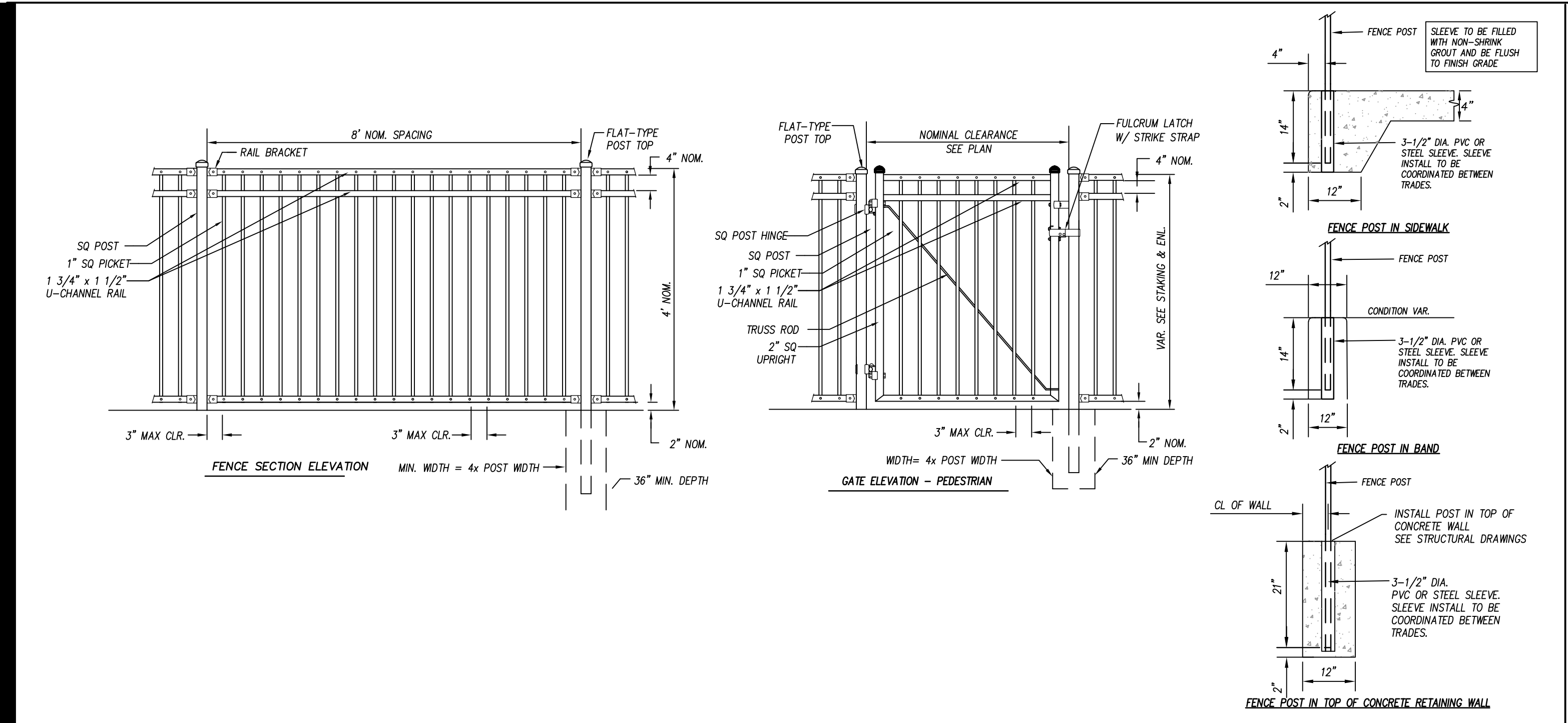
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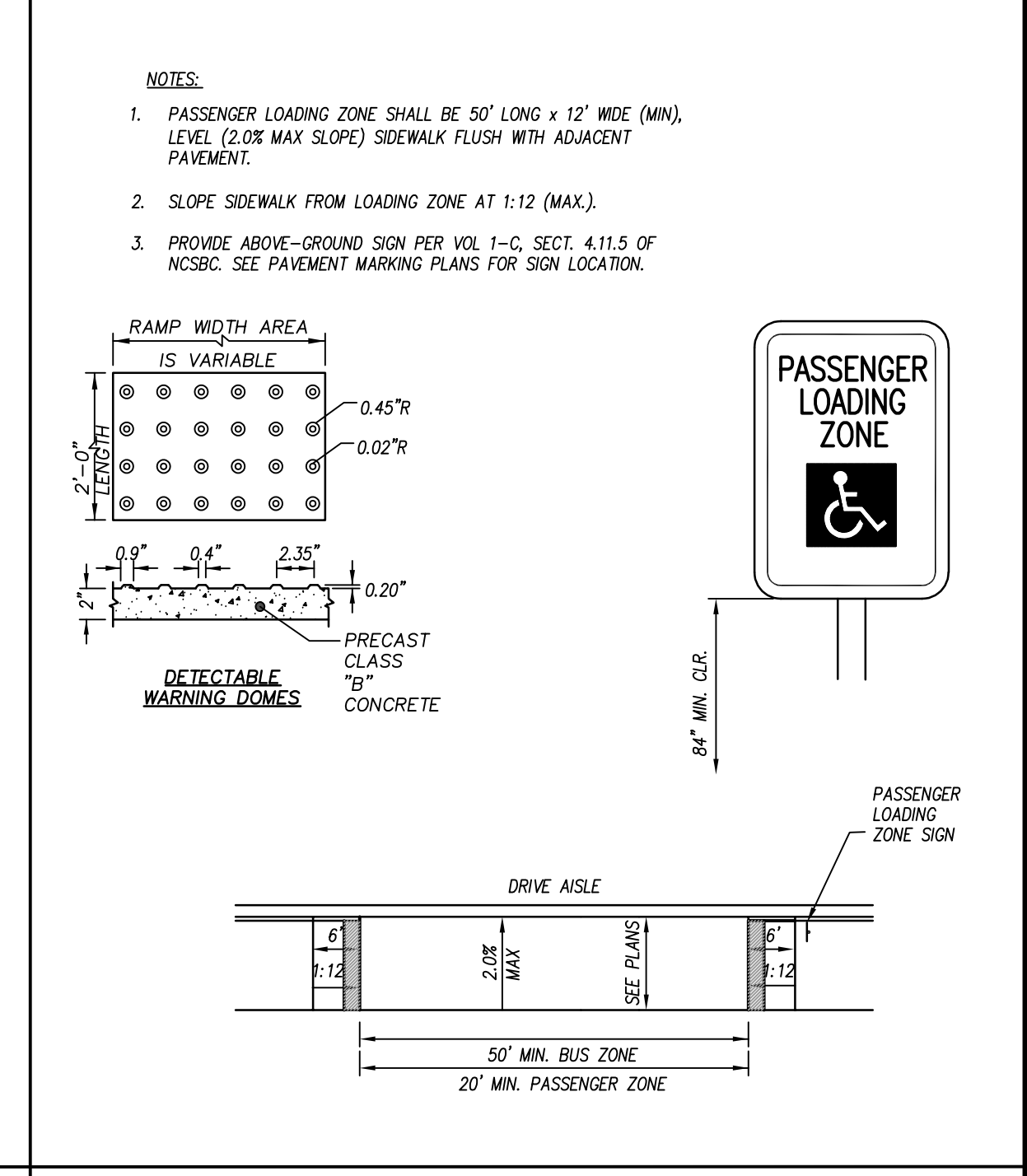
ACCESSIBLE PARKING SIGNAGE N.T.S.



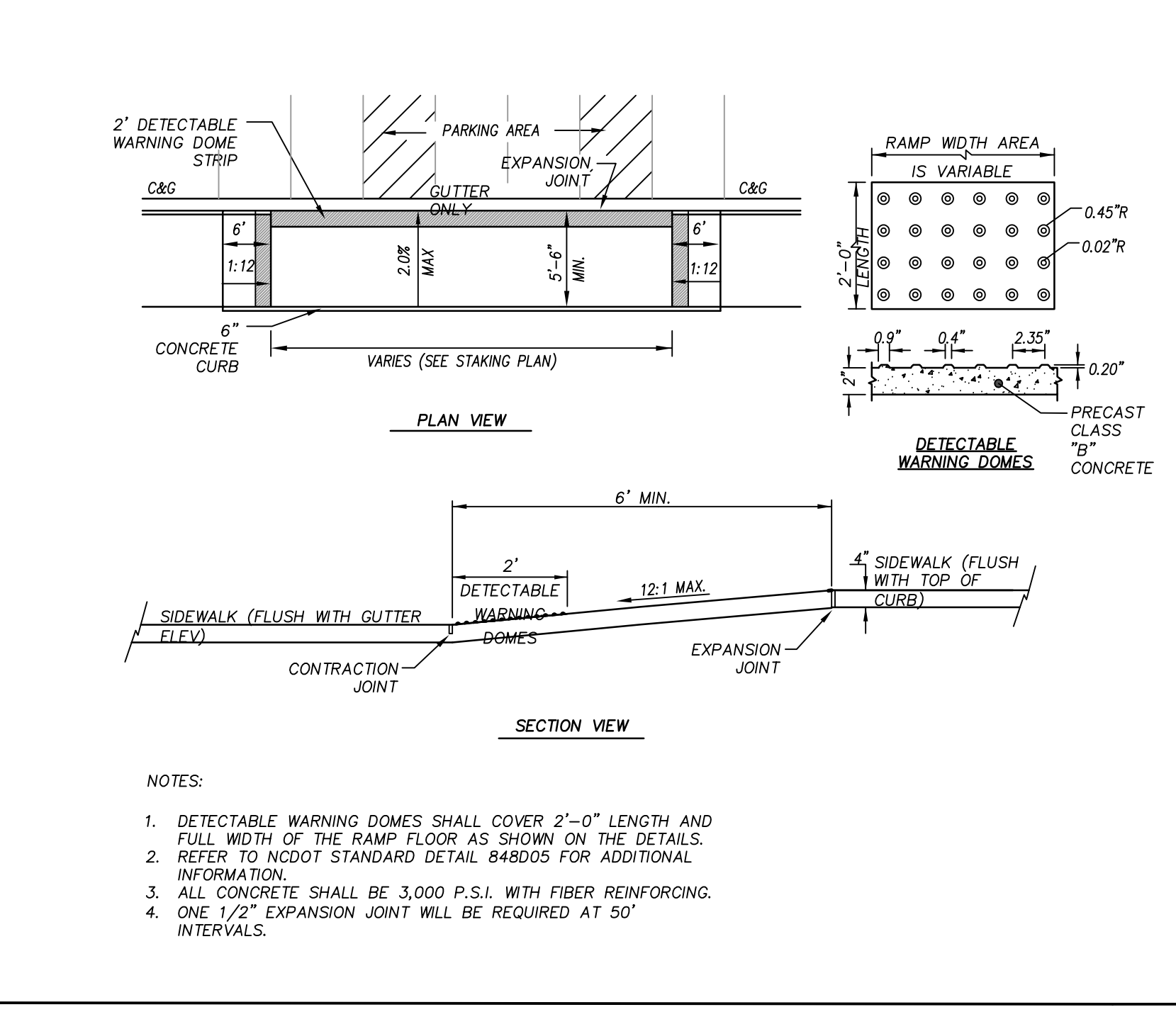
CONCRETE SIDEWALK N.T.S.



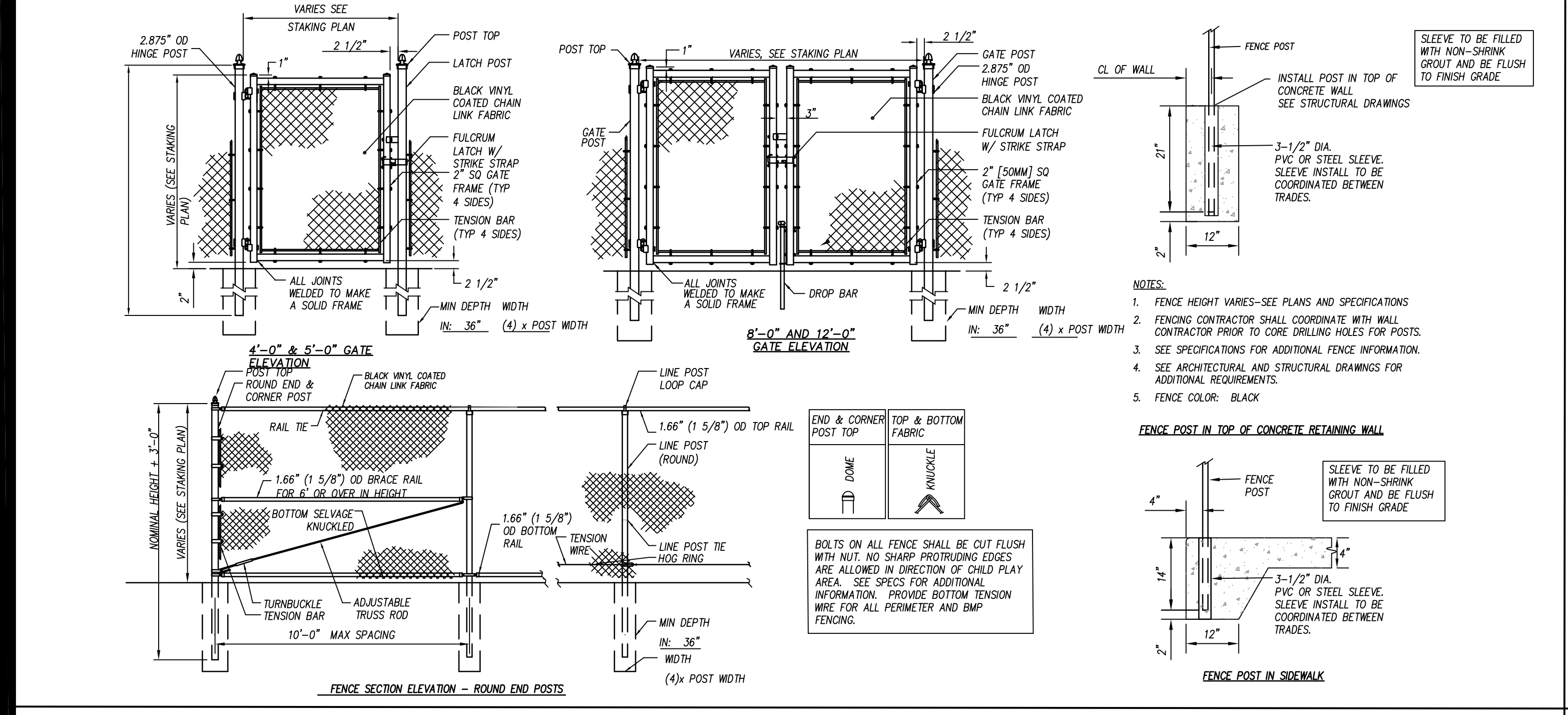
ORNAMENTAL FENCE AND GATES N.T.S.



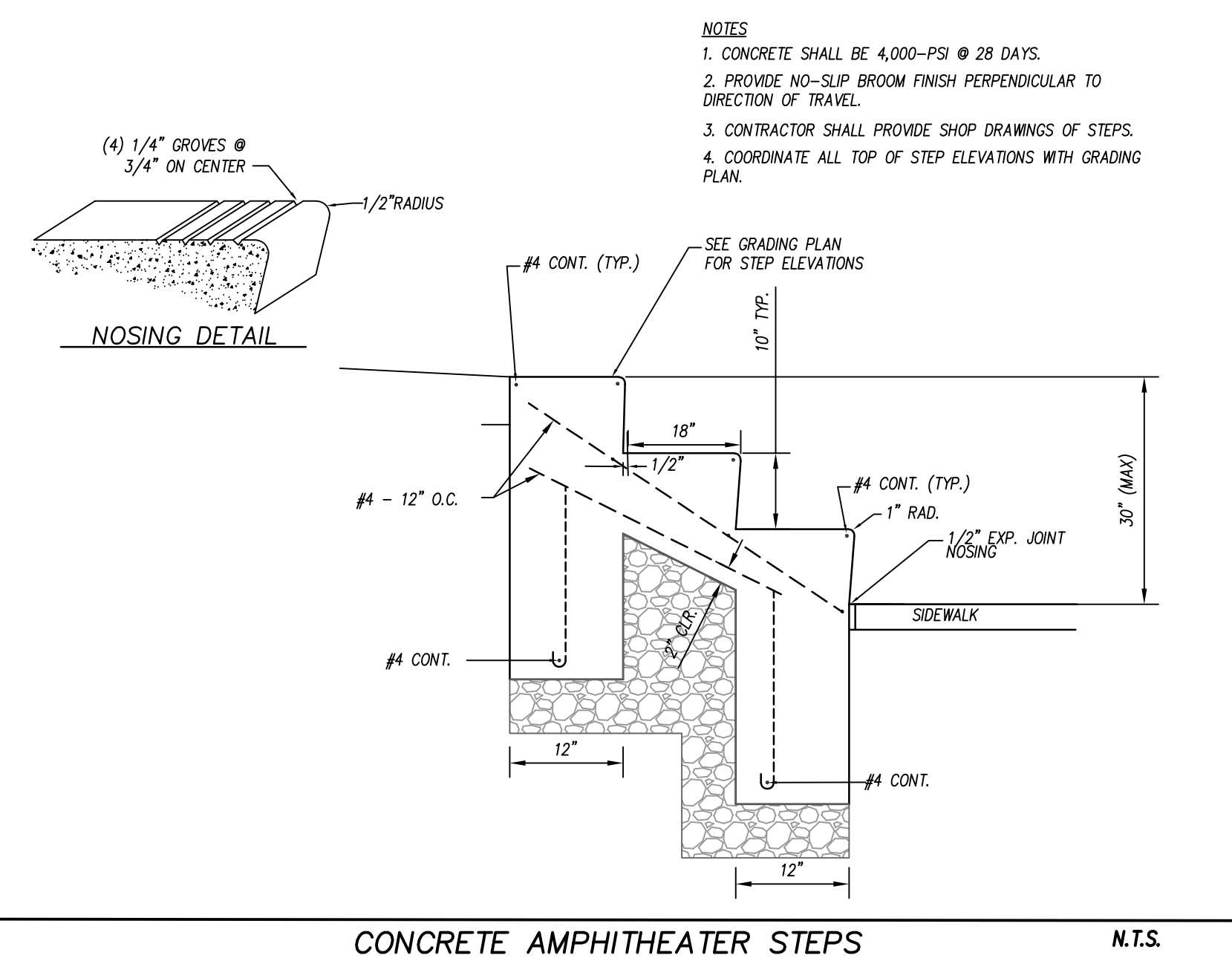
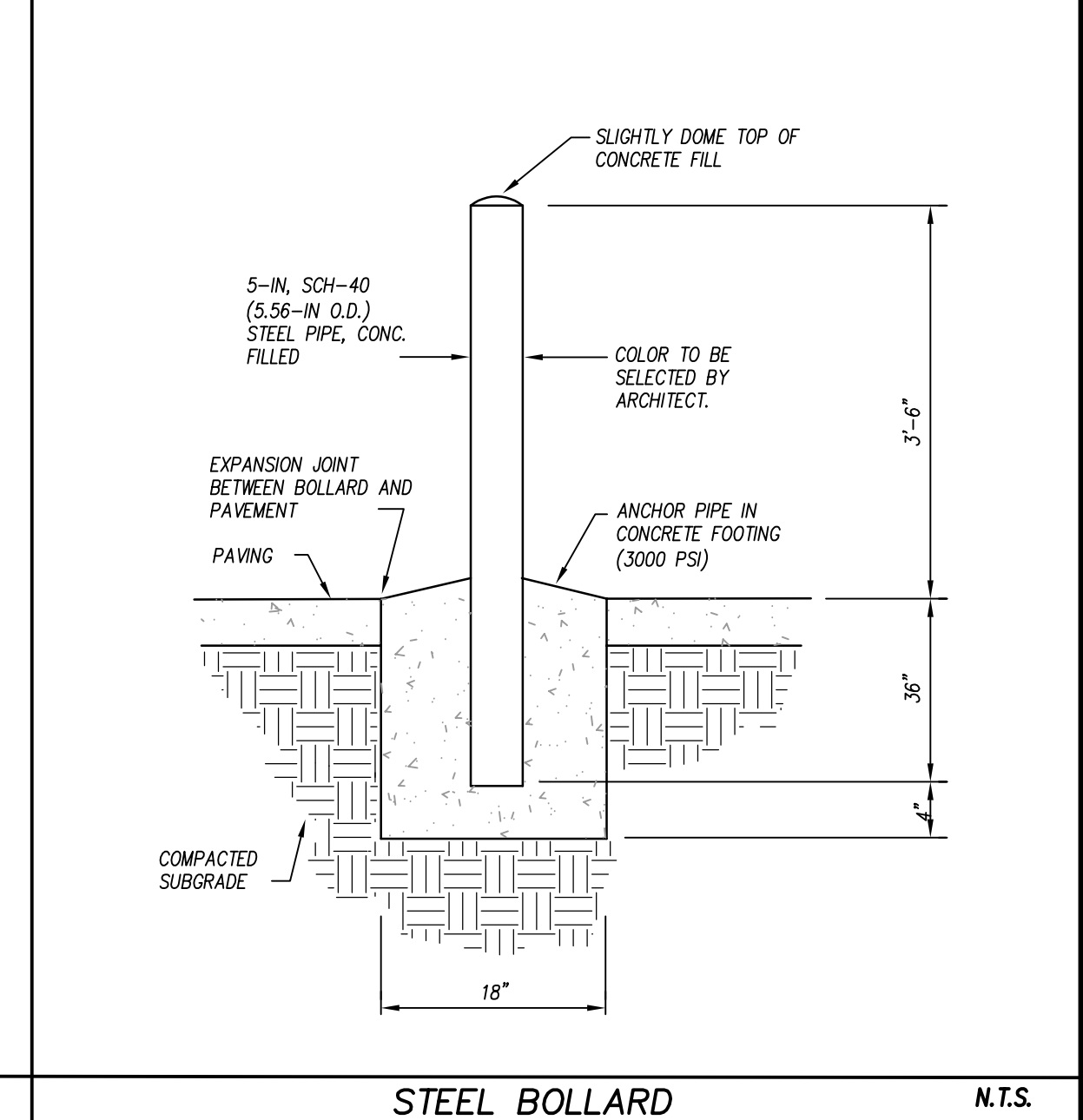
PASSENGER LOADING ZONE AND RAMPS N.T.S.



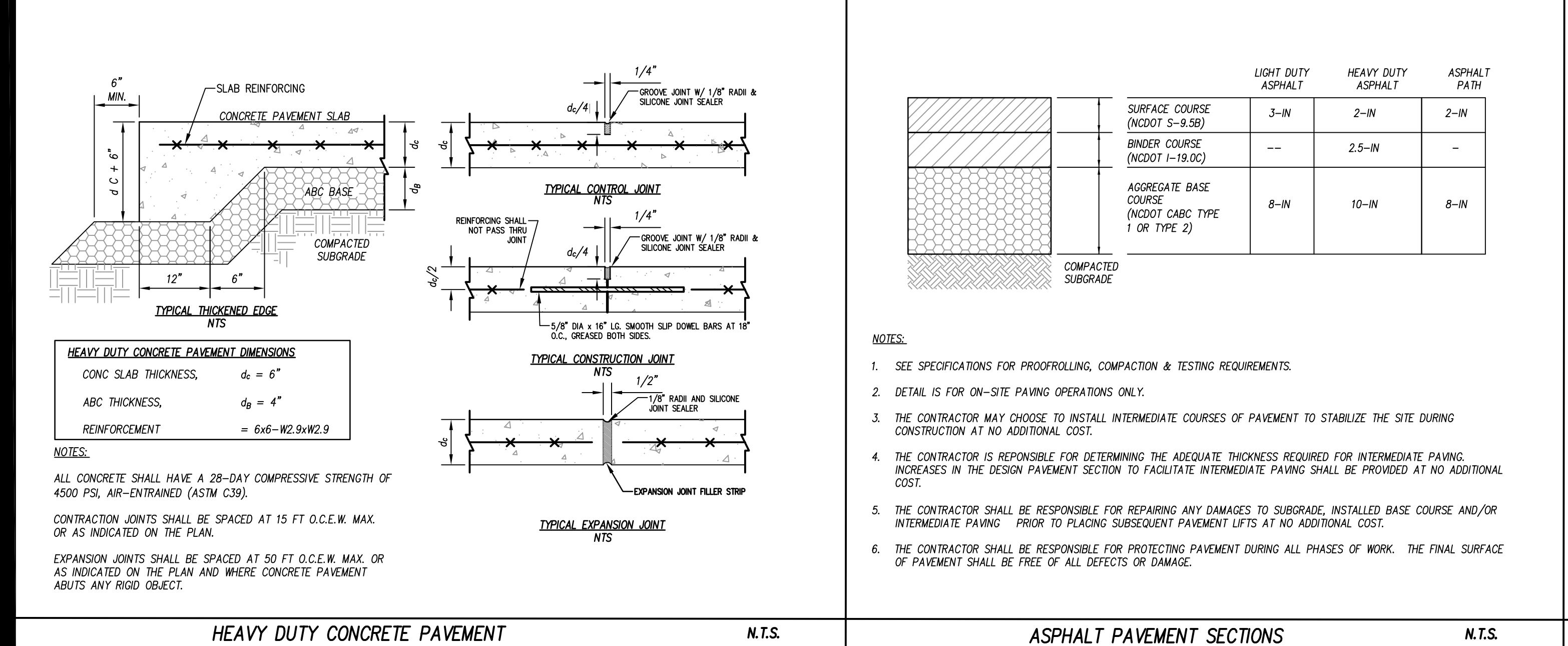
ACCESSIBLE PARKING CURB RAMP N.T.S.



VINYL COATED CHAIN LINK FENCE AND GATE N.T.S.



CONCRETE AMPHITHEATER STEPS N.T.S.



HEAVY DUTY CONCRETE PAVEMENT N.T.S.

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CLH DESIGN, P.A.
400 Ragsdale Forest Drive
Durham, NC 27705
Phone: (919) 488-0772
Fax: (919) 488-0755
E: C-108

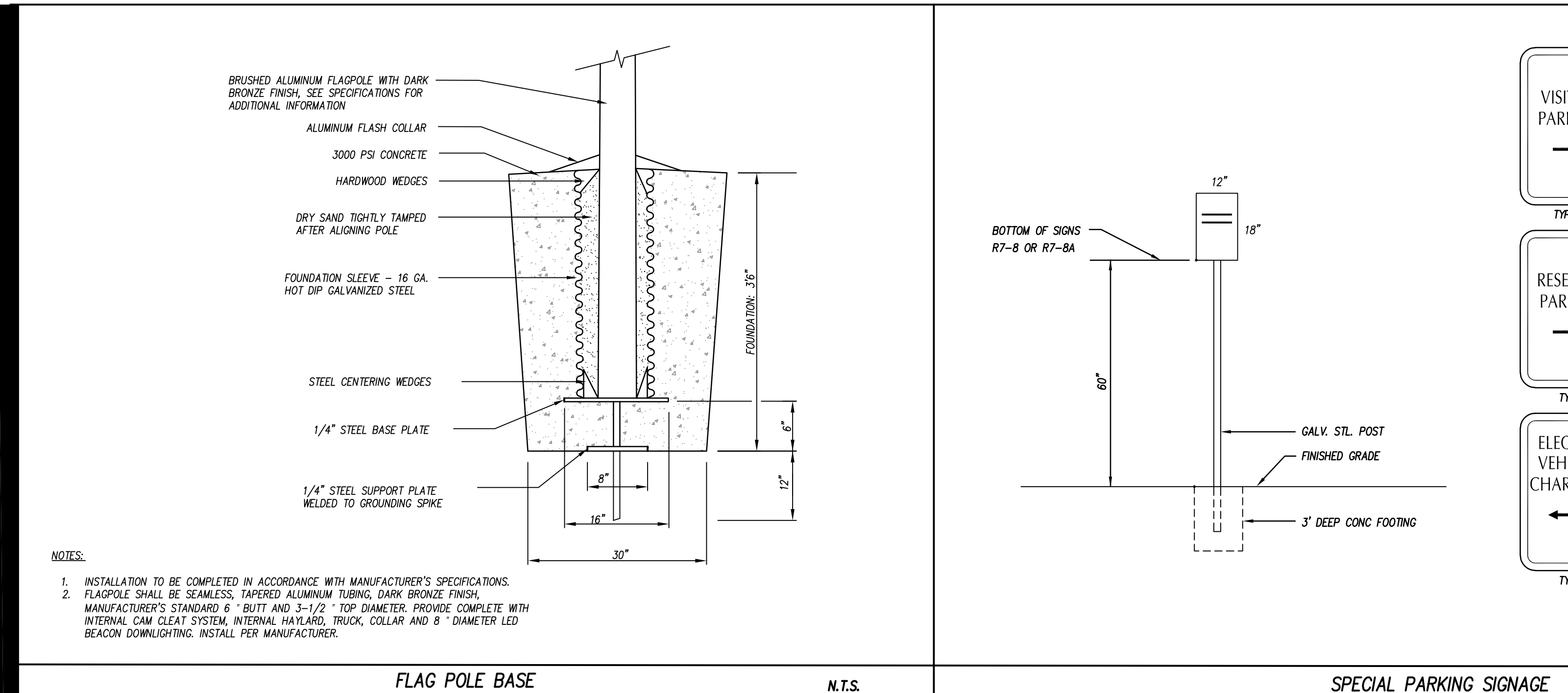
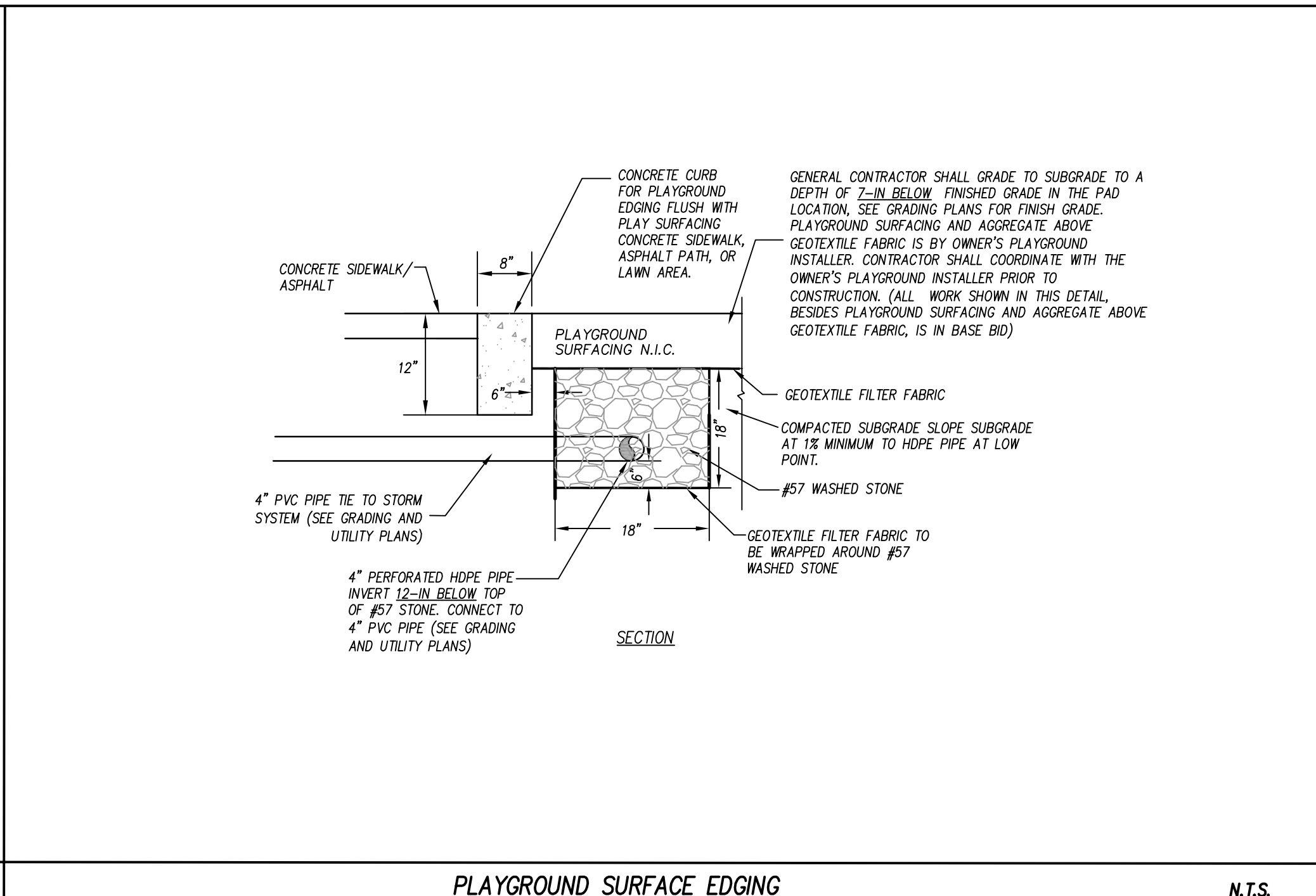
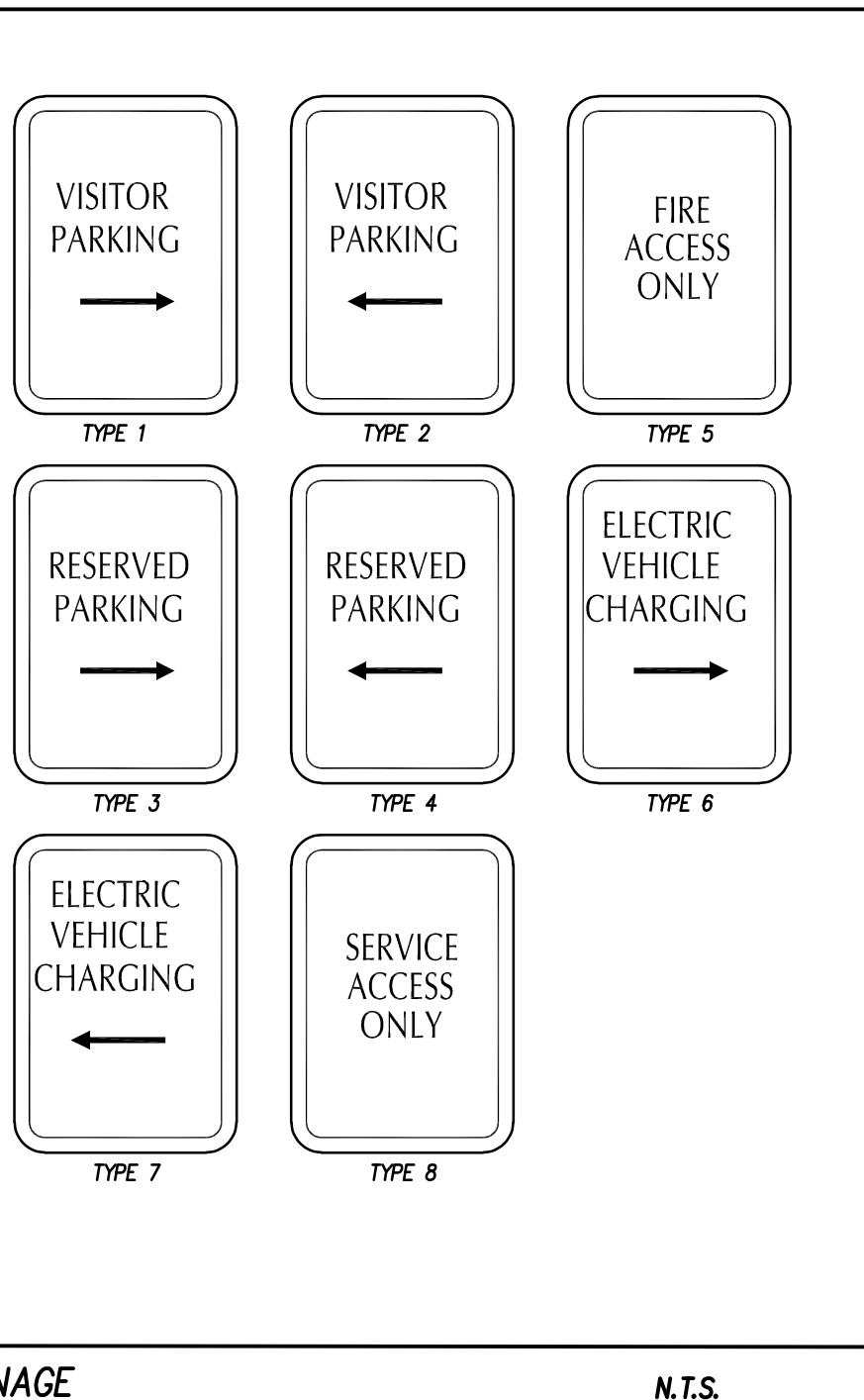
LOCKHART ES RENO/REPLACE/MENT:
LOCKHART ELEMENTARY SCHOOL
1320 N. SMITHFIELD RD. KNIGHTDALE, NC 27545
WCPSS PROJECT ID: 862-453
WCPSS PROJECT MANAGER: SHANE WEBSTER
DTW PROJECT NUMBER: 23025

NOT FOR CONSTRUCTION

Revisions table with columns for Revision Number, Description, Date, and Drawn/Checked by.

STAKING DETAILS

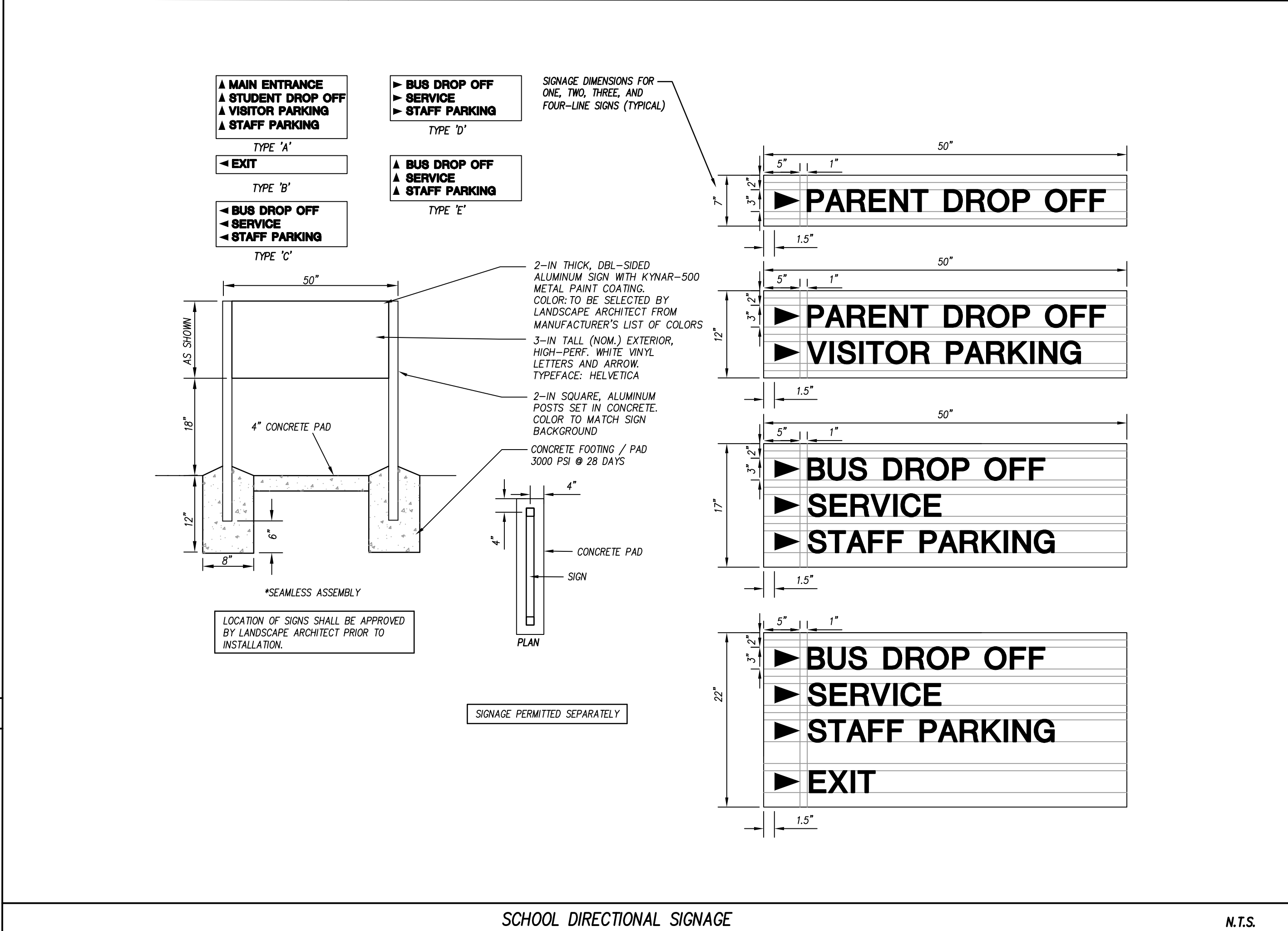
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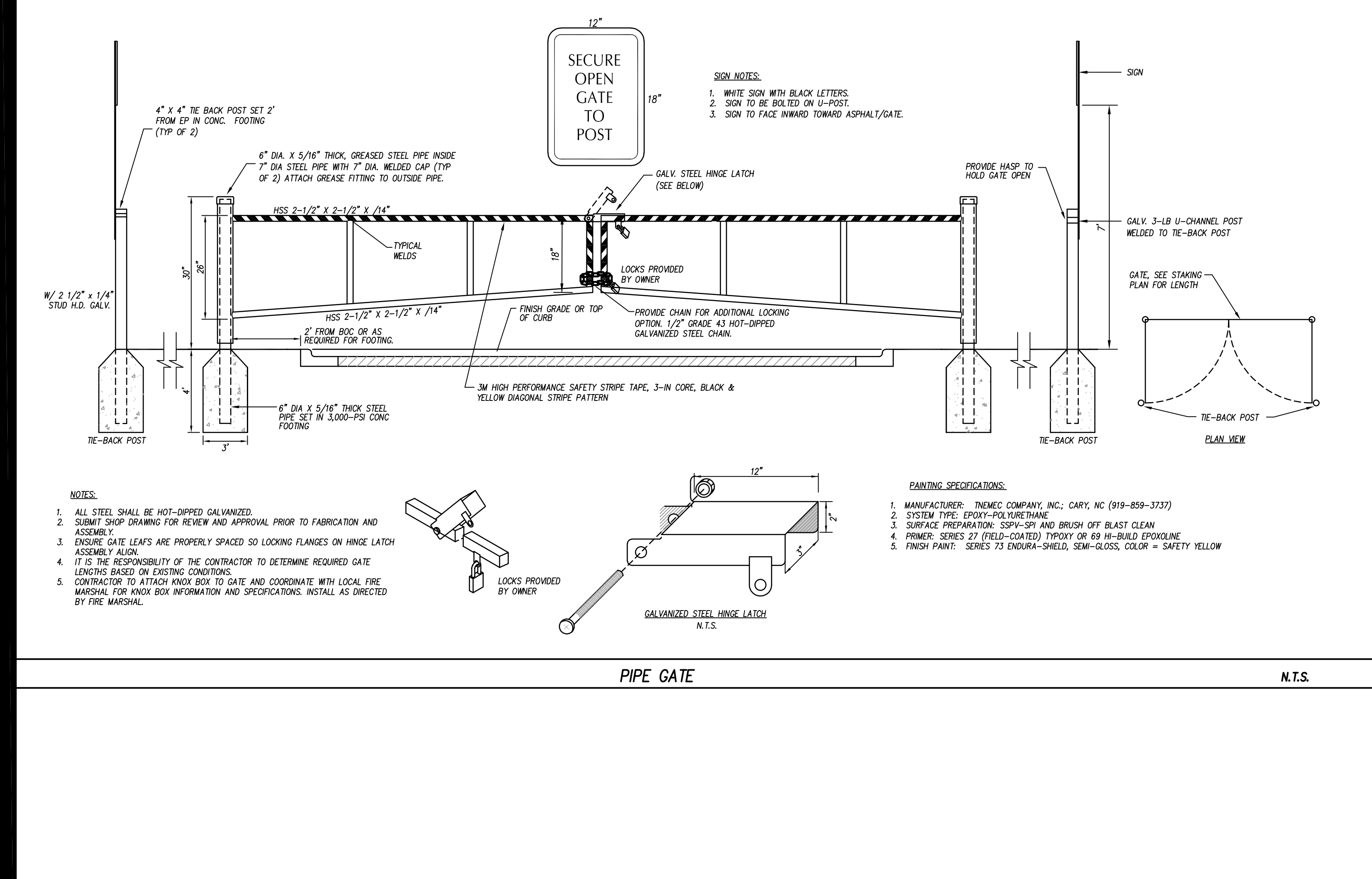
SPECIAL PARKING SIGNAGE N.T.S.

PLAYGROUND SURFACE EDGING N.T.S.

FLAG POLE BASE N.T.S.



SCHOOL DIRECTIONAL SIGNAGE N.T.S.

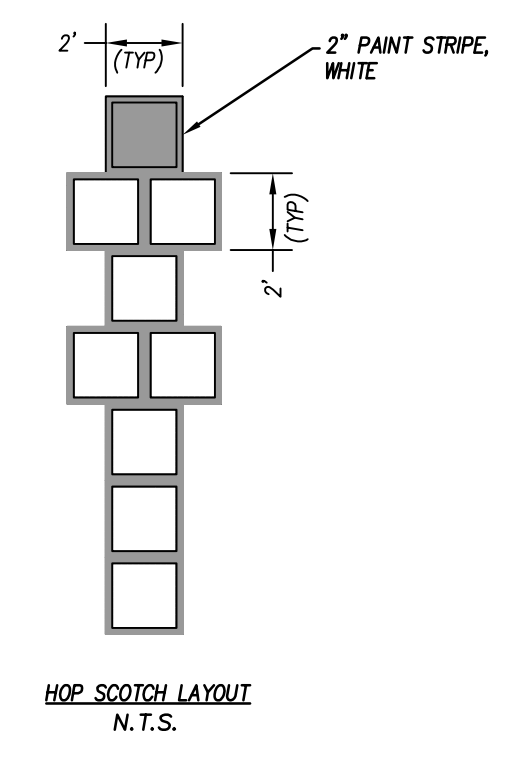
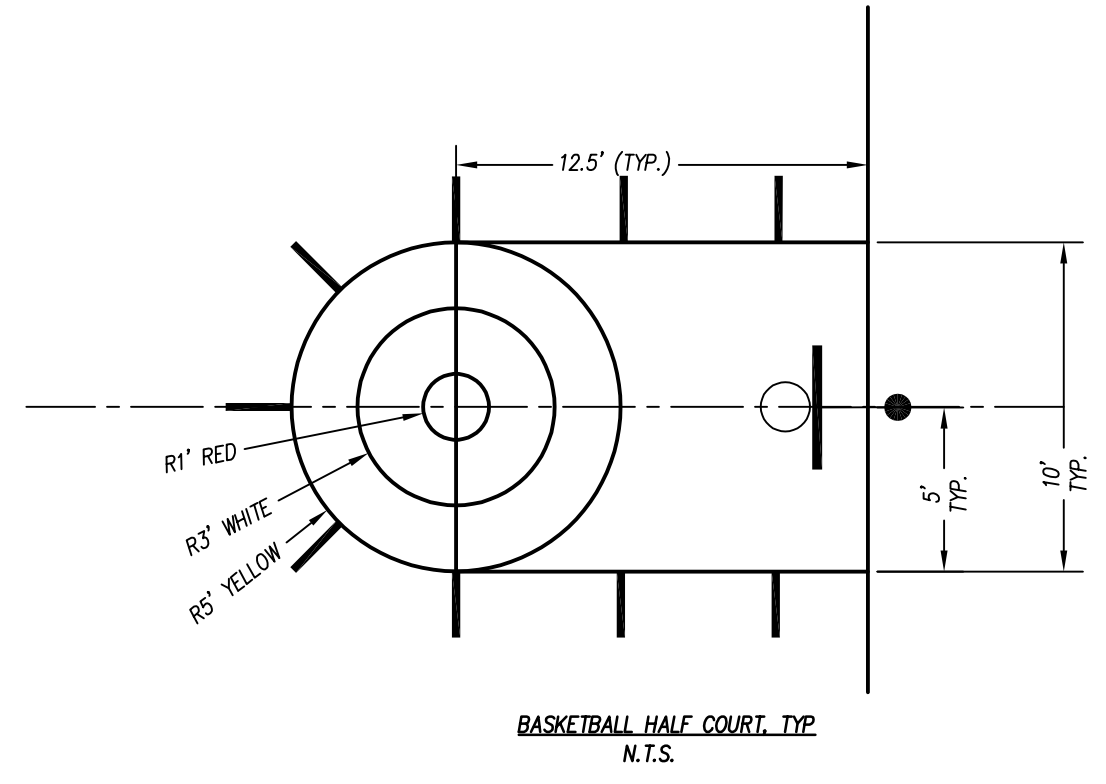


PIPE GATE N.T.S.

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 919.317.4020

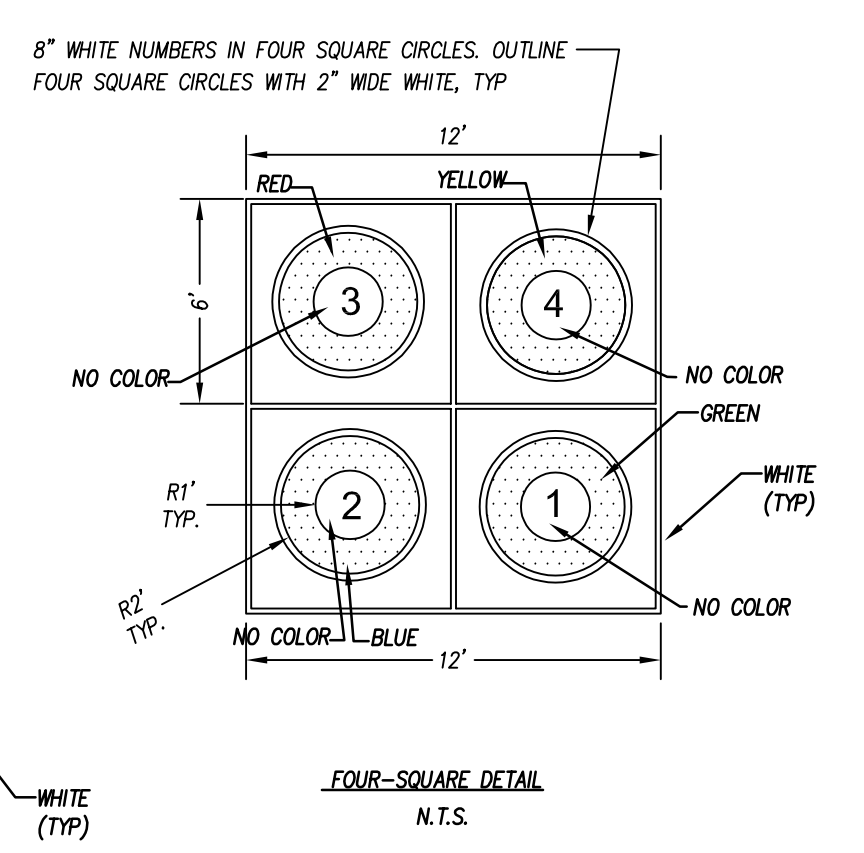
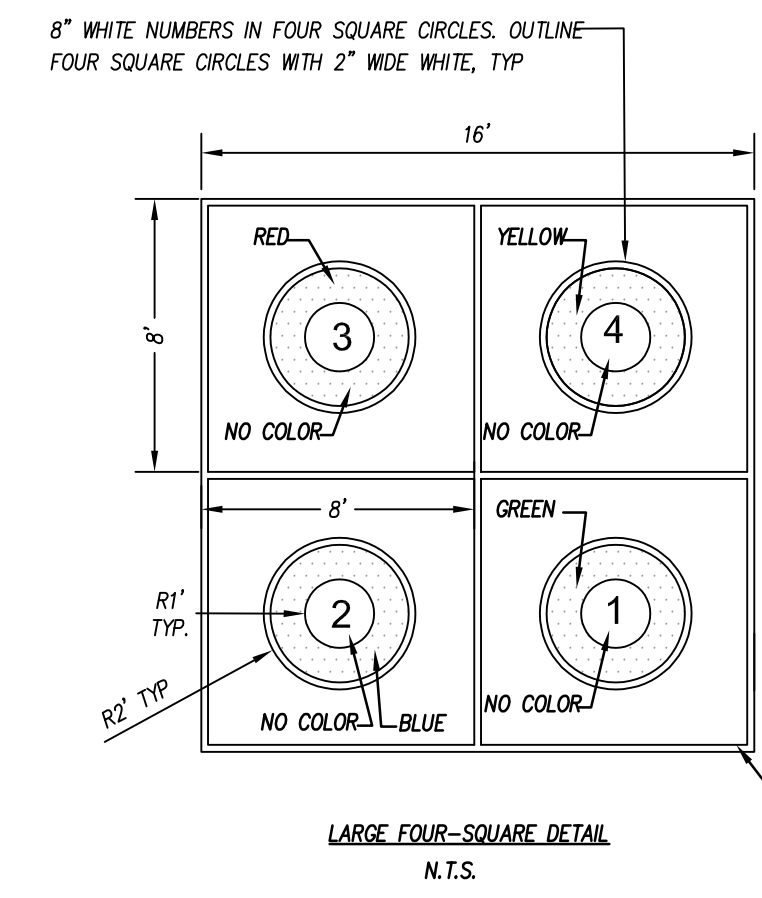
CLH DESIGN, PA
 400 Gregory Forest Drive
 Cary, NC 27513
 Phone: (919) 318-8778
 Fax: (919) 318-7026
 E: C-106



- PAINT STRIPING NOTES:**
- PLAYGROUND MARKING PAINT SHALL BE LOW VOC ACRYLIC OR LATEX TRAFFIC MARKING PAINT. CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTRUCTIONS FOR APPLICATION. ALL SURFACES SHOULD BE CURED, CLEAN, DRY & SOUND. ASPHALT SHALL CURE FOR A MINIMUM OF 6 WEEKS PRIOR TO PAINT APPLICATION. CONCRETE PLAY SURFACES SHALL BE CURED PER SPECIFICATIONS AND FREE OF CURING COMPOUNDS AND ACCELERATORS.
 - STRIPING SHALL OCCUR WITHIN TEMPERATURE RANGE SPECIFIED BY MANUFACTURER. STRIPING SHALL NOT OCCUR WHEN HUMIDITY EXCEEDS 85%.
 - ORANGE AND GREEN PAINTS MAY NOT BE AVAILABLE FROM MANUFACTURER. CONTRACTOR SHALL MIX RED AND YELLOW OR YELLOW AND BLUE TO ACHIEVE REQUIRED COLORS. MIX ONLY LIKE KINDS OF PAINT. DO NOT ADD INTERIOR COLOR TO TRAFFIC STRIPING PAINT TO ACHIEVE HUE. CONTRACTOR SHALL PROVIDE TEST SWATCH OF MIXED COLORS FOR APPROVAL BY CLH PRIOR TO PAINTING PLAY AREA.
 - SEE ASPHALT/CONCRETE PAVING SPECIFICATION SECTION FOR MORE INFORMATION.

PLAY AREA STRIPING AND GAME COLORS
 SHALL BE BRIGHT PRIMARY COLORS. COLOR ABBREVIATIONS INDICATED IN DETAILS ARE FOR REFERENCE ONLY. SPACES SHALL BE SOLID COLORS. DO NOT PAINT COLOR INITIAL IN SPACE UNLESS SPECIFICALLY NOTED.

R = RED
 Y = YELLOW
 B = BLUE
 W = WHITE
 X = NO COLOR
 G = GREEN



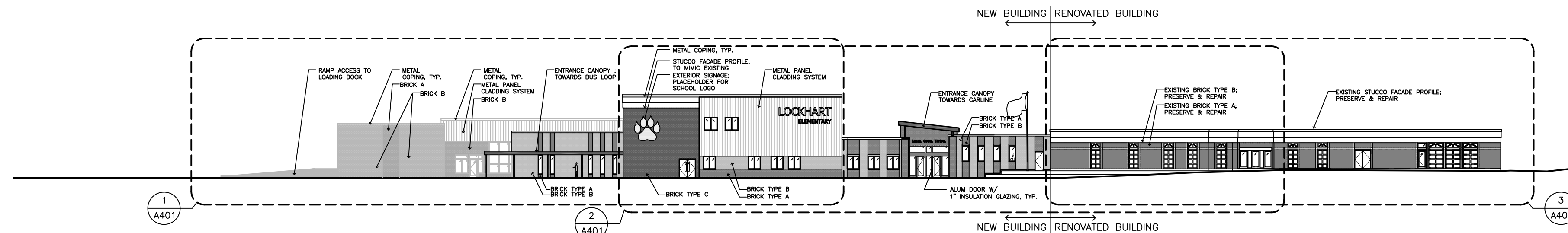
PAVED PLAY STRIPING N.T.S.

LOCKHART ES RENO/REPLACEMENT:
LOCKHART ELEMENTARY SCHOOL
 1320 N. SMITHFIELD RD. KNIGHTDALE, NC 27545
 WCPSS PROJECT ID: 862-453
 WCPSS PROJECT MANAGER: SHANE WEBSTER
 DTW PROJECT NUMBER: 23025

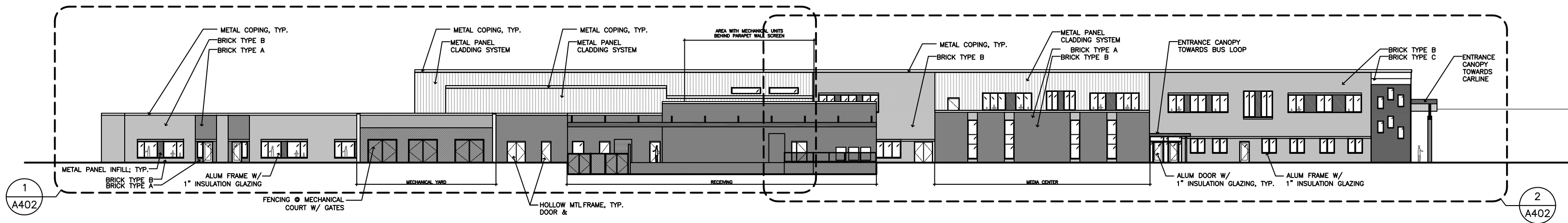
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Revisions

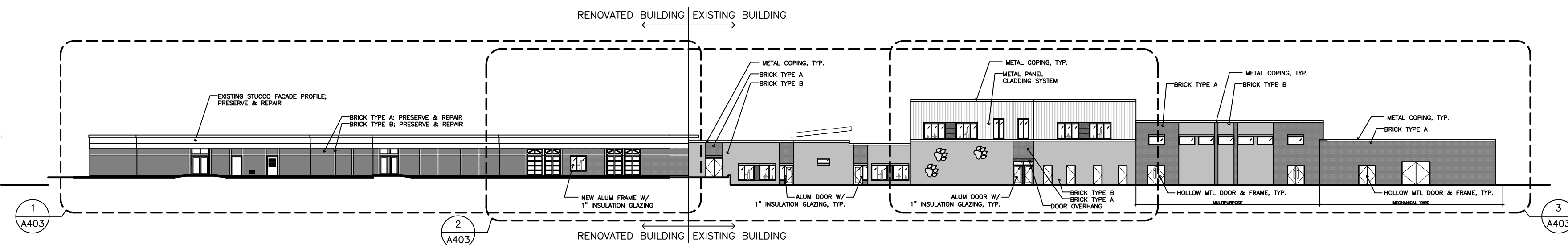
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 Checked
 Date 2024-10-31
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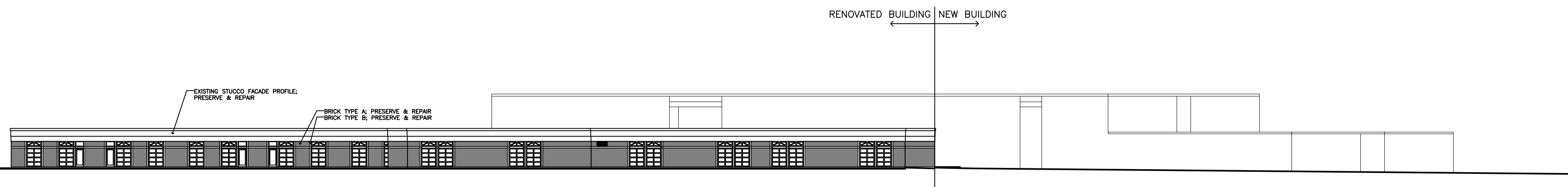
1 ELEVATION WEST - MAIN ENTRANCE
SCALE: 1/32"=1'-0"



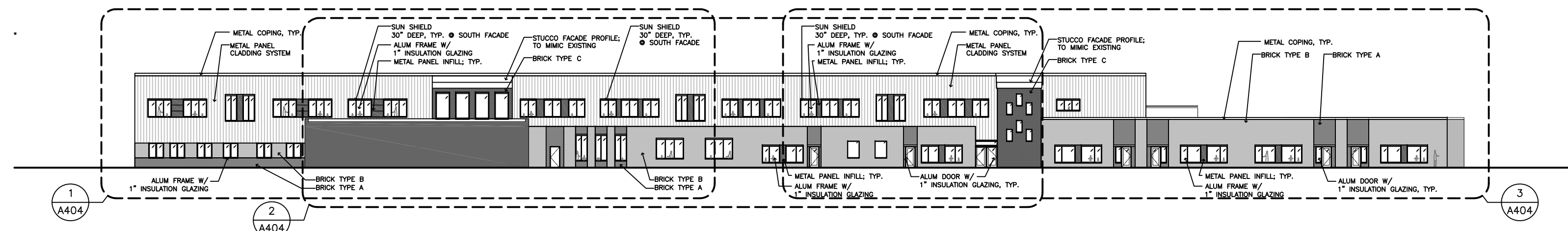
2 ELEVATION NORTH - BUS LOOP ENTRANCE & MEDIA CENTER
SCALE: 1/32"=1'-0"



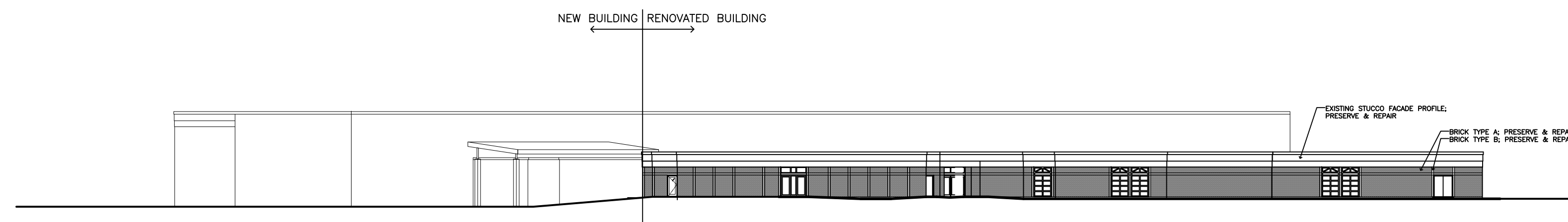
3 ELEVATION EAST - KINDERGARTEN & MULTIPURPOSE AREA
SCALE: 1/32"=1'-0"



4 ELEVATION SOUTH - BUILDING RENOVATION 1ST -3RD GRADE
SCALE: 1/32"=1'-0"



5 ELEVATION SOUTH - COURTYARD
SCALE: 1/32"=1'-0"



6 ELEVATION SOUTH - BUILDING RENOVATION 1ST -3RD GRADE
SCALE: 1/32"=1'-0"

FACADE MATERIAL CALCULATION:

	FACADE AREA	PRIMARY MATERIAL	ACCENT MATERIAL	ACCENT MATERIAL	OTHER
FACADE MATERIALS SUMMARY:	54,493 SQ.FT.	BRICK	STUCCO	METAL PANELS	WINDOWS, GLAZING, COPING
PERCENTAGE [%]	100 %	28,065 SQ.FT. 53 %	4,758 SQ.FT. 9 %	8,214 SQ.FT. 15 %	12,836 SQ.FT. 23 %

	FACADE AREA	PRIMARY MATERIAL	ACCENT MATERIAL	ACCENT MATERIAL	OTHER
WEST FACADES - RENOVATION	2,874 SQ.FT.	BRICK	STUCCO	METAL PANELS	WINDOWS, GLAZING, COPING
WEST FACADES - NEW CONSTRUCTION	6,532 SQ.FT.	1,189 SQ.FT.	731 SQ.FT.	0 SQ.FT.	754 SQ.FT.
WEST FACADES SUMMARY:	9,206 SQ.FT.	4,886 SQ.FT.	855 SQ.FT.	1,562 SQ.FT.	1,963 SQ.FT.
PERCENTAGE [%]	100 %	53 %	9 %	17 %	21 %

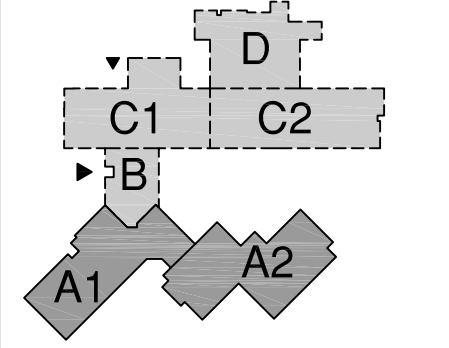
	FACADE AREA	PRIMARY MATERIAL	ACCENT MATERIAL	ACCENT MATERIAL	OTHER
NORTH FACADES - NEW CONSTRUCTION	13,250 SQ.FT.	7,927 SQ.FT.	58 SQ.FT.	2,263 SQ.FT.	3,002 SQ.FT.
NORTH FACADES SUMMARY:	13,250 SQ.FT.	7,927 SQ.FT.	58 SQ.FT.	2,263 SQ.FT.	3,002 SQ.FT.
PERCENTAGE [%]	100 %	60 %	0.5 %	17 %	23 %

	FACADE AREA	PRIMARY MATERIAL	ACCENT MATERIAL	ACCENT MATERIAL	OTHER
EAST FACADES - RENOVATION	3,519 SQ.FT.	1,898 SQ.FT.	947 SQ.FT.	0 SQ.FT.	674 SQ.FT.
EAST FACADES - NEW CONSTRUCTION	6,780 SQ.FT.	4,456 SQ.FT.	0 SQ.FT.	882 SQ.FT.	1,442 SQ.FT.
EAST FACADES SUMMARY:	10,299 SQ.FT.	6,354 SQ.FT.	947 SQ.FT.	882 SQ.FT.	2,116 SQ.FT.
PERCENTAGE [%]	100 %	62 %	9 %	9 %	21 %

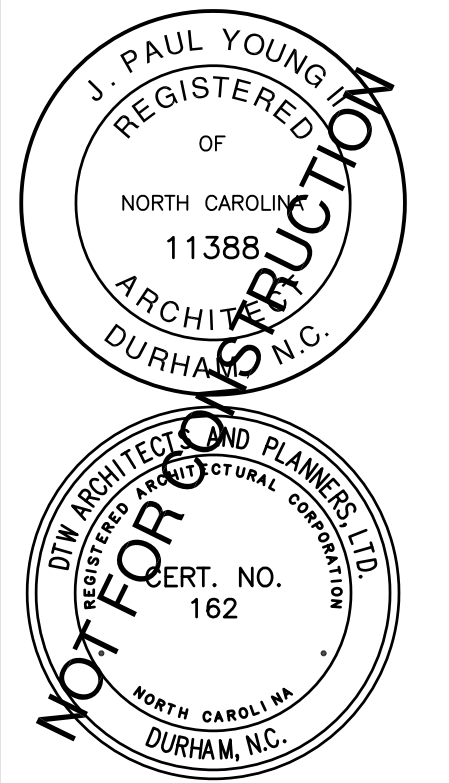
	FACADE AREA	PRIMARY MATERIAL	ACCENT MATERIAL	ACCENT MATERIAL	OTHER
SOUTH FACADES - RENOVATION	10,172 SQ.FT.	4,970 SQ.FT.	2,719 SQ.FT.	0 SQ.FT.	2,483 SQ.FT.
SOUTH FACADES - NEW CONSTRUCTION	11,556 SQ.FT.	4,848 SQ.FT.	179 SQ.FT.	3,507 SQ.FT.	3,032 SQ.FT.
SOUTH FACADES SUMMARY:	21,728 SQ.FT.	9,818 SQ.FT.	2,898 SQ.FT.	3,507 SQ.FT.	5,515 SQ.FT.
PERCENTAGE [%]	100 %	45 %	13 %	16 %	25 %

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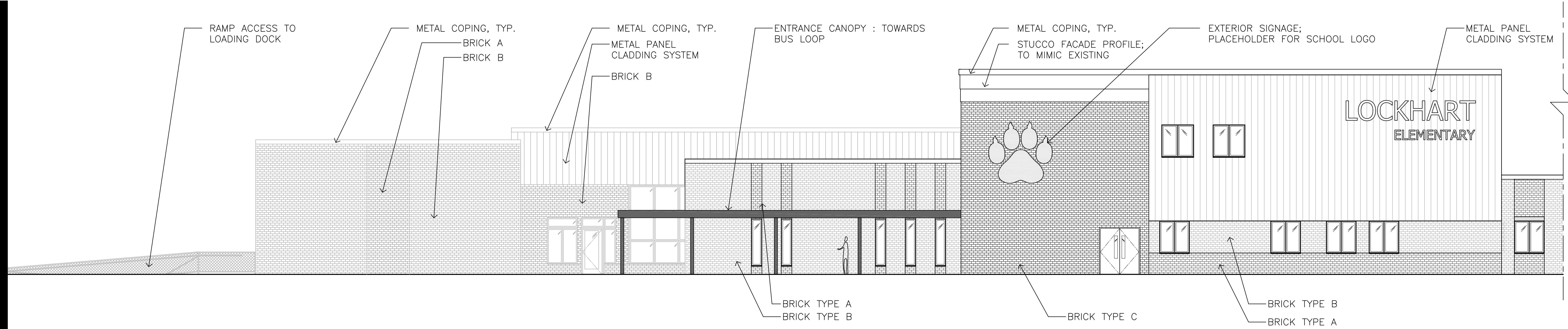


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LOCKHART ELEMENTARY SCHOOL
1320 N. SMITHFIELD RD. KNIGHTDALE, NC 27545
WCPSS PROJECT ID: 962-453
WCPSS PROJECT MANAGER: SHANE WEBSTER
DTW PROJECT NUMBER: 23025

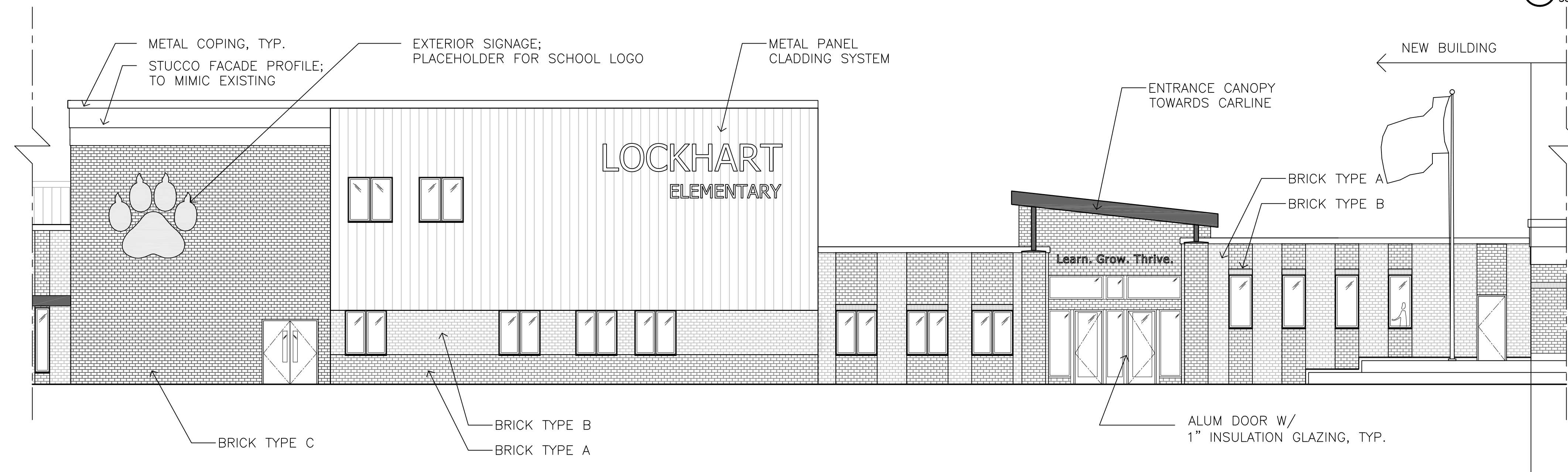


CONSTRUCTION DRAWINGS
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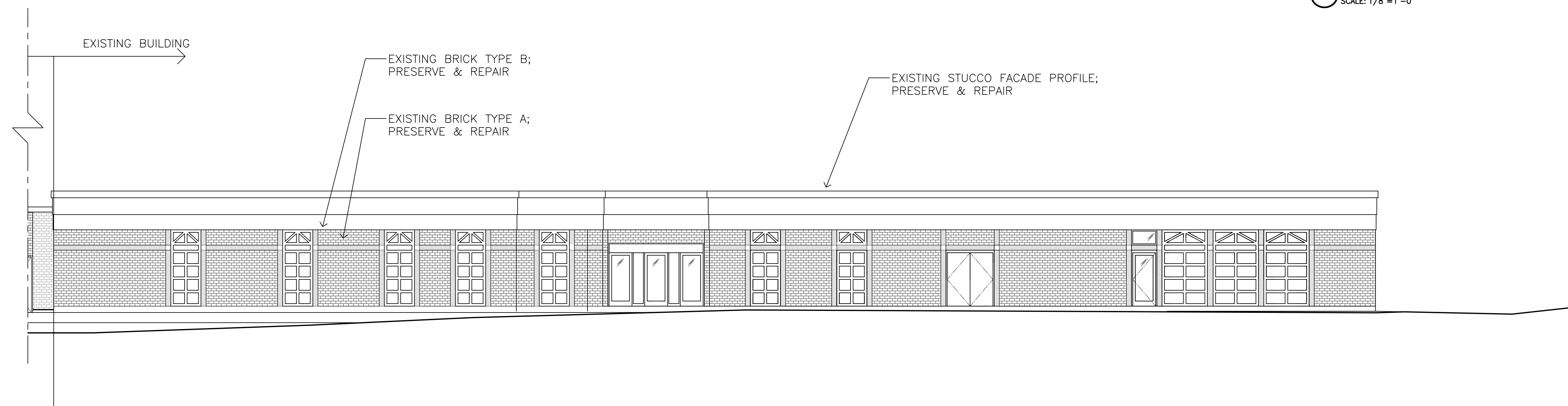
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Checked J.P.Y.
Date 2024-10-30
Title
ELEVATIONS & EXTERIOR MATERIALS
Sheet
A-400



① ELEVATION WEST – NEW BUILDING
SCALE: 1/8"=1'-0"



② ELEVATION WEST – NEW BUILDING
SCALE: 1/8"=1'-0"



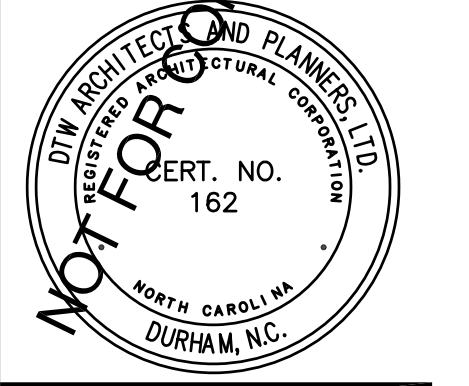
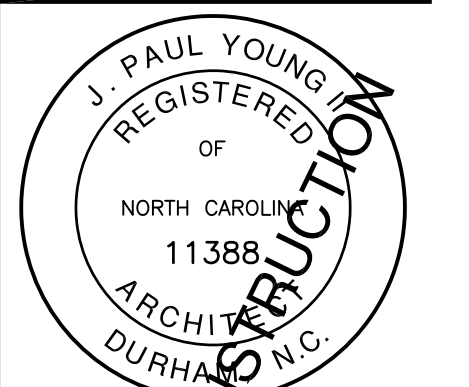
③ ELEVATION WEST – EXISTING BUILDING
SCALE: 1/8"=1'-0"

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1320 N. SMITHFIELD RD. KNIGHTDALE, NC 27545
WCPSS PROJECT ID: 862-453
WCPSS PROJECT MANAGER: SHANE WEBSTER
DTW PROJECT NUMBER: 23025

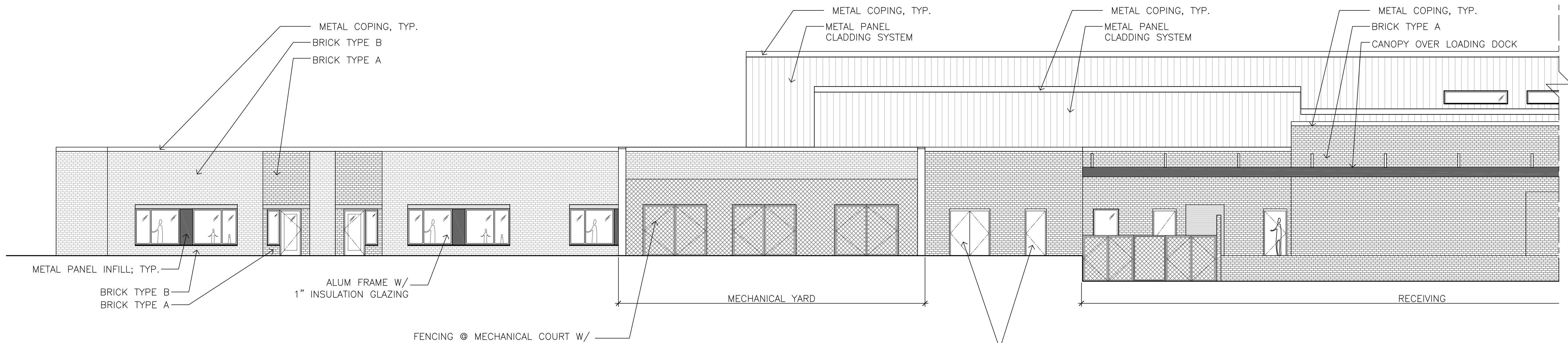


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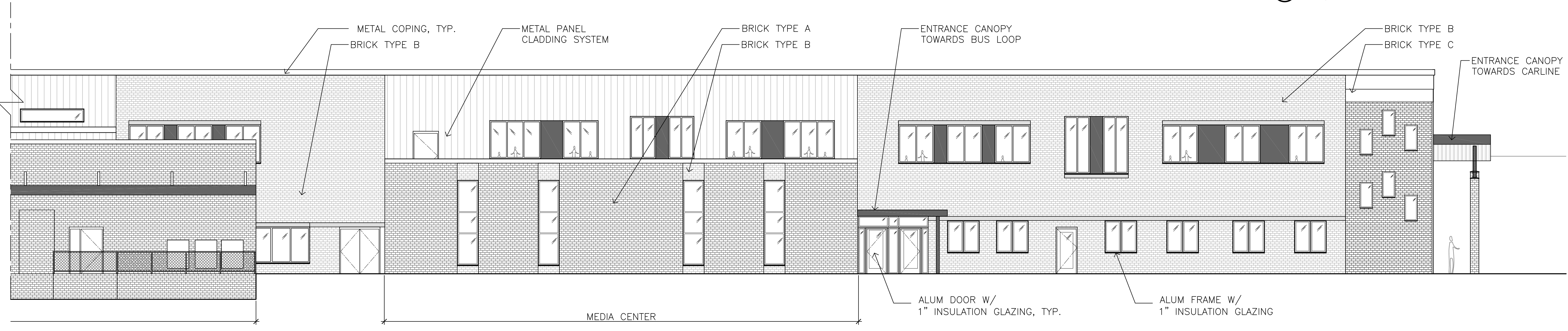
Revisions

Drawn B.N.
Checked J.P.Y.
Date 2024-10-30
Title
ELEVATION - WEST

Sheet
A-401



1 ELEVATION NORTH - NEW BUILDING
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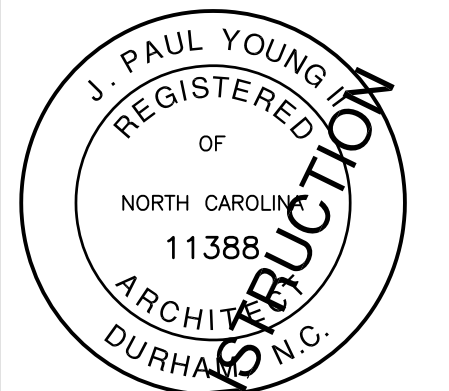


2 ELEVATION NORTH - NEW BUILDING
SCALE: 1/8"=1'-0"

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1320 N. SMITHFIELD RD. KNIGHTDALE, NC 27545
WCPSS PROJECT ID: 962-453
WCPSS PROJECT MANAGER: SHANE WEBSTER
DTW PROJECT NUMBER: 23025



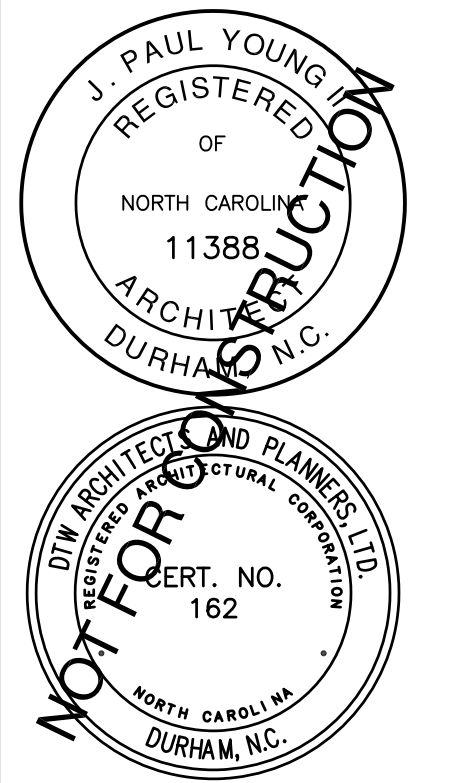
CONSTRUCTION DRAWINGS
Revisions

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Date 2024-10-30
Title
ELEVATION - NORTH

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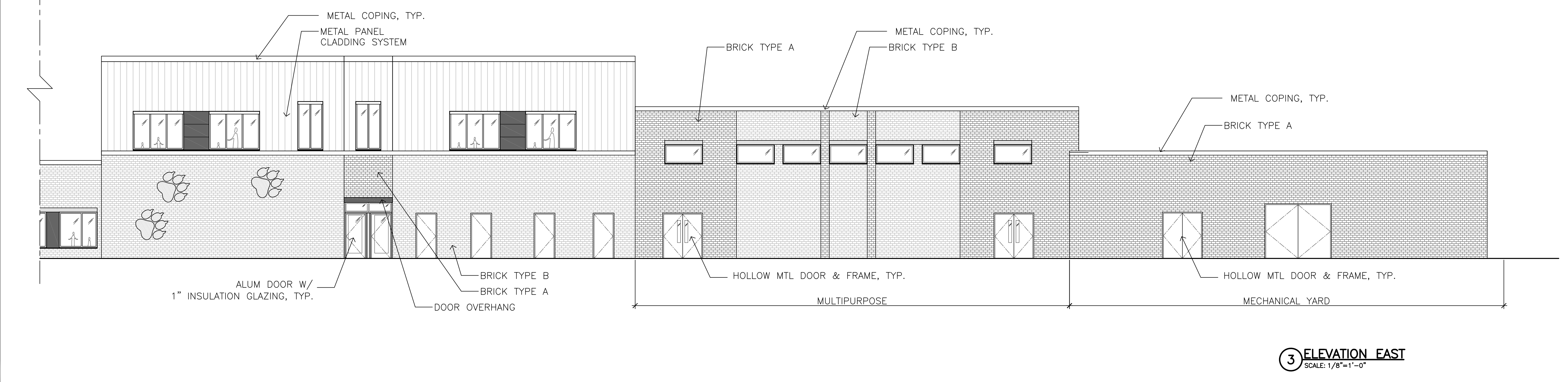
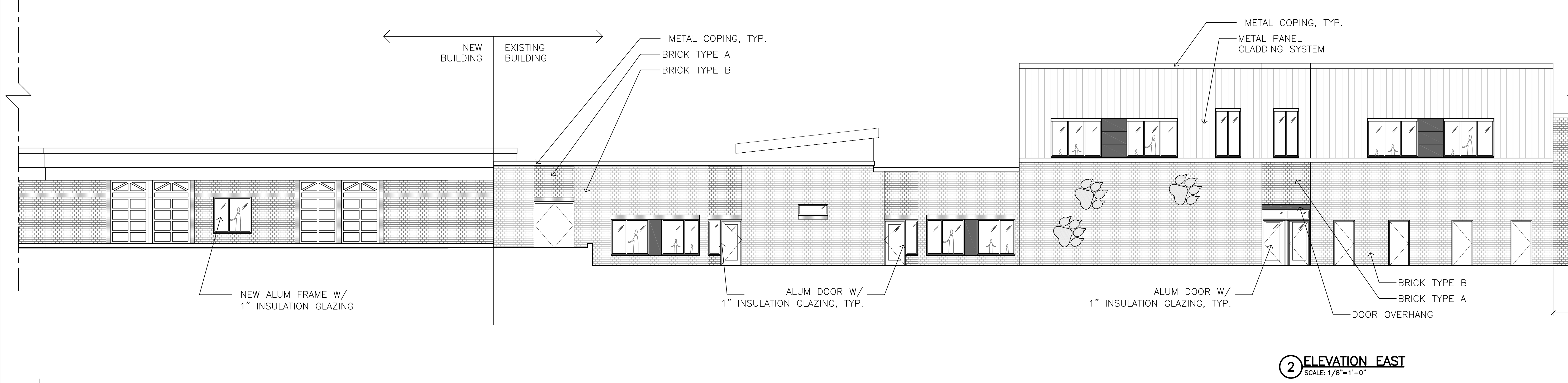
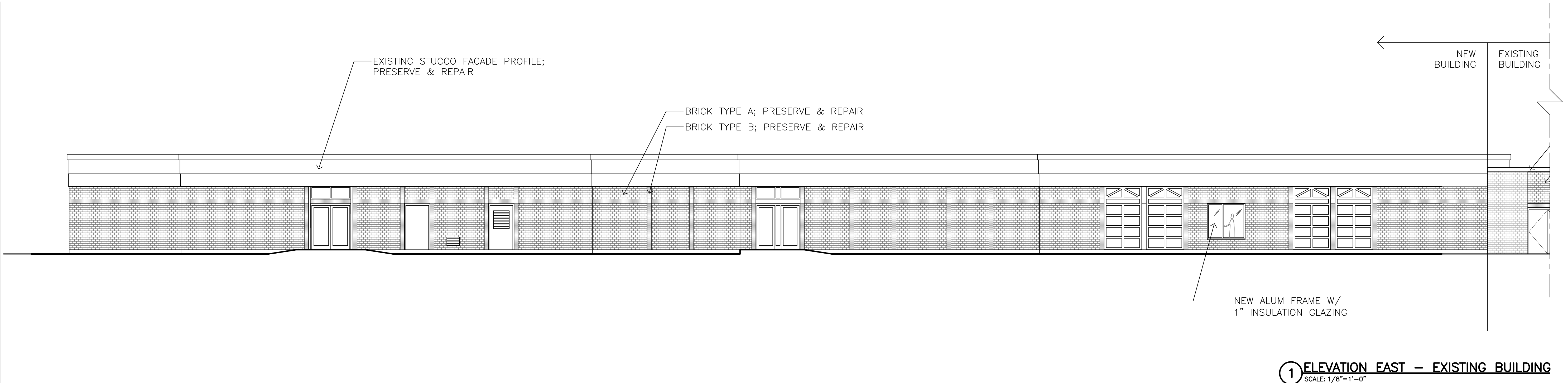
LOCKHART ES RENOVATION/REPLACEMENT:
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1320 N. SMITHFIELD RD. KNIGHTDALE, NC 27545
WCPSS PROJECT ID: 962-453
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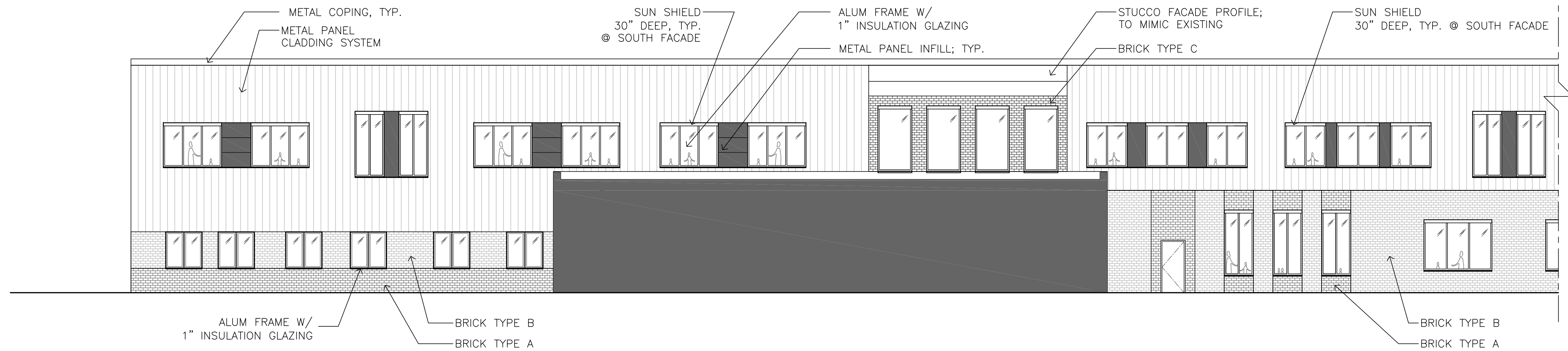


CONSTRUCTION DRAWINGS
Revisions

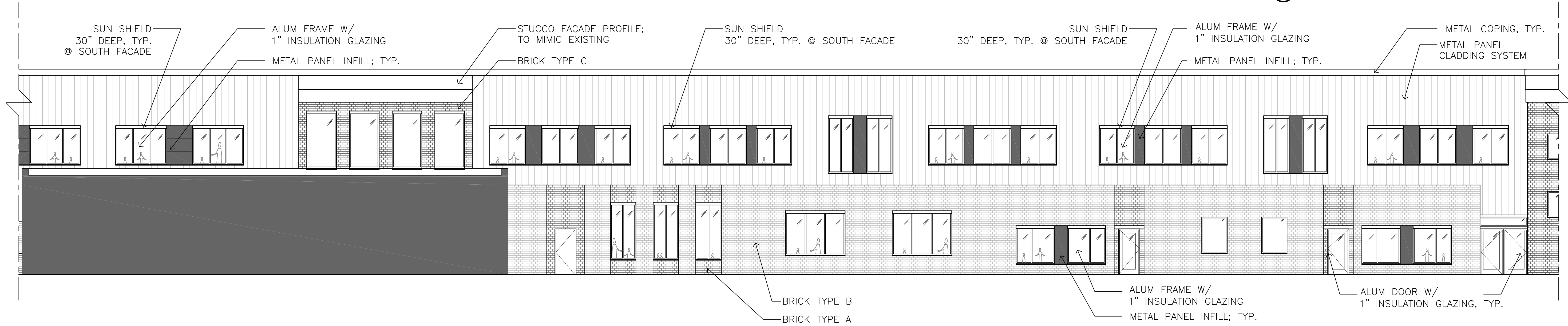
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Checked P.J.Y.
Date 2024-10-30
Title
ELEVATION - EAST

Sheet
A-403

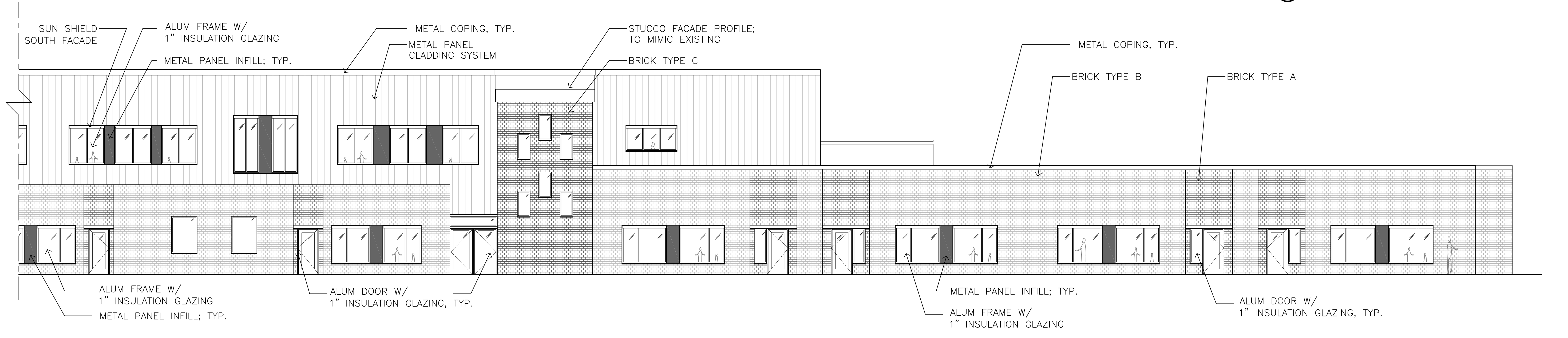




1 ELEVATION SOUTH
SCALE: 1/8"=1'-0"



2 ELEVATION SOUTH
SCALE: 1/8"=1'-0"

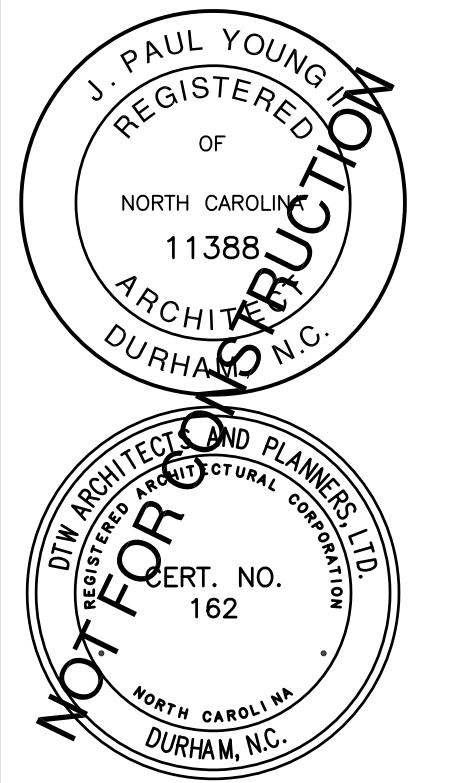


3 ELEVATION SOUTH
SCALE: 1/8"=1'-0"

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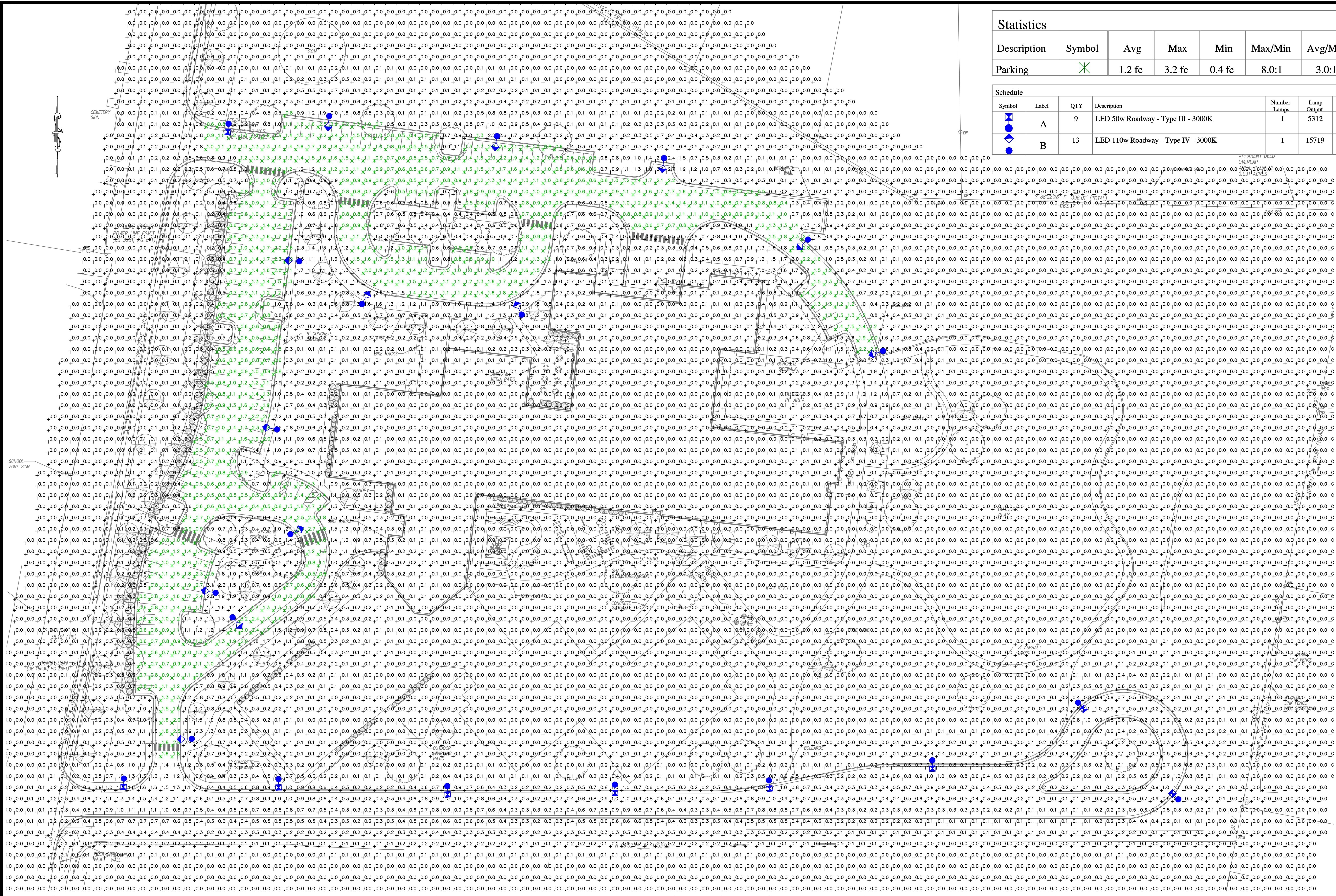
LOCKHART ES RENOVATION/REPLACEMENT:
LOCKHART ELEMENTARY SCHOOL
1320 N. SMITHFIELD RD. KNIGHTDALE, NC 27545
WCPSS PROJECT ID: 962-453
WCPSS PROJECT MANAGER: SHANE WEBSTER
DTW PROJECT NUMBER: 23025



CONSTRUCTION DRAWINGS
Revisions

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Checked J.P.Y.
Date 2024-10-30
Title
ELEVATION - SOUTH

Sheet
A-404



Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Parking	✕	1.2 fc	3.2 fc	0.4 fc	8.0:1	3.0:1

Schedule						
Symbol	Label	QTY	Description	Number Lamps	Lamp Output	LLF
⬇	A	9	LED 50w Roadway - Type III - 3000K	1	5312	0.85
⬇	B	13	LED 110w Roadway - Type IV - 3000K	1	15719	0.85

Outdoor Lighting

LED Light-emitting diode

Mounting height: 20, 25, 30'

Color: Gray / Black

Pole: Fiberglass / Metal / Wood

Applications: Neighborhoods, Parks, Streets

Light source: LED (white)

Wattage: 50 watts, 70 watts

Lumens: 6,200 lumen, 4,000 lumen

Light pattern: IESNA Type L, III, V

IESNA color classification: 3000K

Beam spread: 60°

Beam diameter: 10.5 ft (Type III), 11.5 ft (Type IV)

Type III - 3000K (5000lm)

Type IV - 3000K (15000lm)

Color temperature: 3000K, 4000K

POLE AVAILABLE MOUNTING HEIGHT COLOR

Fiberglass	25, 30, 35'	Gray, Black (additional cost)
Wood	25, 30, 35'	Standard
Metal (special conditions)	25, 30, 35'	Galvanized

FEATURES:

- Number operation
- Little or no installation cost
- Design services by lighting professionals included
- Maintenance, electricity & warranty included
- One line monthly cost on your electric bill

BENEFITS:

- Provides basic-to-high installation and service
- From up capital for other projects
- Meets industry standards and lighting ordinances
- Eliminates high and unneeded repair bills
- Convenience and savings for you

For additional information, contact us at DUKE@DukeEnergy.com

DUKE ENERGY PROGRESS

Outdoor Lighting

LED Light-emitting diode

Mounting height: 110 | 150 | 200 | 280 wfts

Color: Black / Gray

Pole: Fiberglass / Metal / Wood

Applications: Neighborhoods, Roadways, Shopping Centers

Light source: LED (white)

Wattage: 110 | 150 | 200 | 280 wfts

Light pattern: IESNA Type L, III, V

IESNA color classification: 3000K

Beam spread: 60°

Beam diameter: 16.0 ft (Type III), 16.6 ft (Type IV)

Type III - 3000K (15000lm)

Type IV - 3000K (32000lm)

Color temperature: 3000K, 4000K

POLE AVAILABLE MOUNTING HEIGHT COLOR

Fiberglass	25, 30, 35'	Gray, Black (additional cost)
Wood	25, 30, 35'	Standard
Metal (special conditions)	25, 30, 35'	Galvanized

FEATURES:

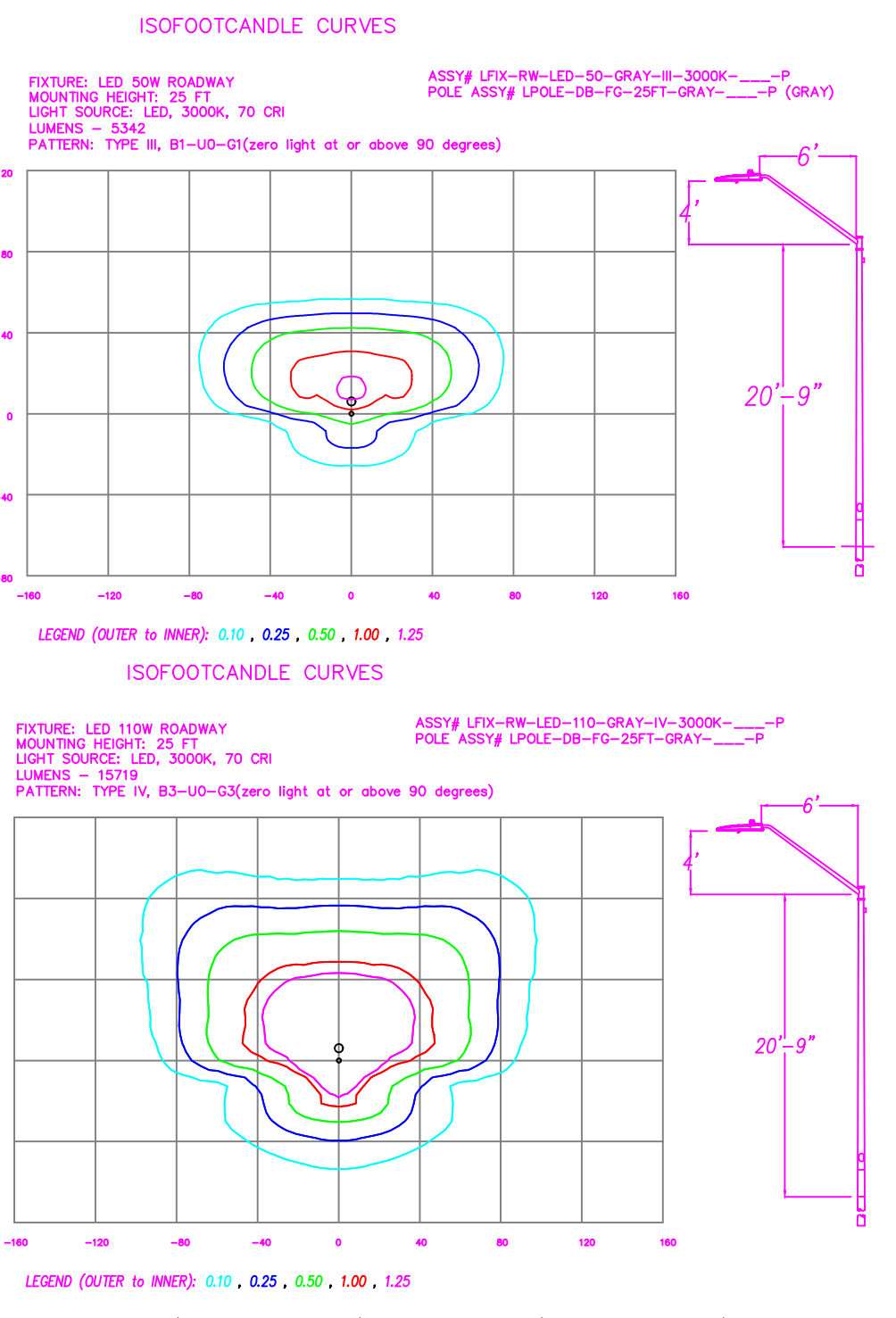
- Number operation
- Little or no installation cost
- Design services by lighting professionals included
- Maintenance, electricity & warranty included
- One line monthly cost on your electric bill

BENEFITS:

- Provides basic-to-high installation and service
- From up capital for other projects
- Meets industry standards and lighting ordinances
- Eliminates high and unneeded repair bills
- Convenience and savings for you

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DUKE ENERGY PROGRESS



LIGHTING DESIGN TOLERANCE

The calculated footcandle light levels in this lighting design are predicted values and are based on specific information that has been supplied to Duke Energy. Any inaccuracies in the supplied information, differences in luminaire installation, lighted area geometry including elevation differences, reflective properties of surrounding surfaces, obstructions (foliage or otherwise) in the lighted area, or lighting from sources other than listed in this design may produce different results from the predicted values. Normal tolerances of voltage, lamp output, and ballast and luminaire manufacture will also affect results.



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LOCKHART ELEMENTARY SCHOOL

Knightdale, NC

SITE LIGHTING ARRANGEMENT

Designed by **DUKE ENERGY PROGRESS LIGHTING SOLUTIONS**

Reviewed by **N. Johnson** Scale **1" = 40'**

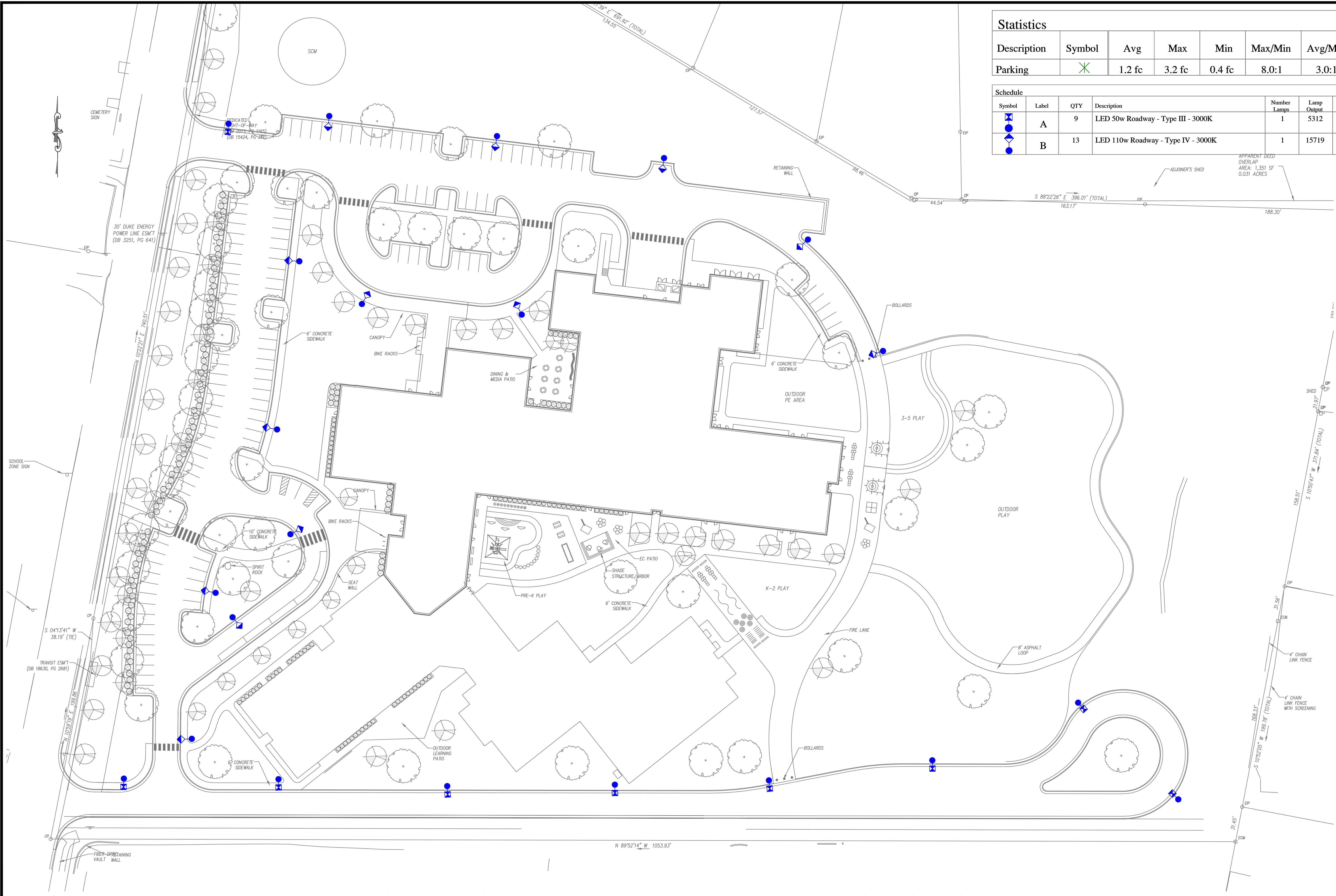
Date **07/25/2024** Size **Drawing size "D"**

Description **LED Roadway**

Drawing No. **24-0303A** Sht. **1 OF 1**

NO.	DATE	REVISION	BY

DISTANCE CALIBRATION (INCHES)



Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Parking	✕	1.2 fc	3.2 fc	0.4 fc	8.0:1	3.0:1

Schedule						
Symbol	Label	QTY	Description	Number Lamps	Lamp Output	LLF
✕	A	9	LED 50w Roadway - Type III - 3000K	1	5312	0.85
✕	B	13	LED 110w Roadway - Type IV - 3000K	1	15719	0.85

Outdoor Lighting

MICRO LED ROADWAY
Black Deck City Criteria

LED (Light-emitting diode) 50 watts
Mounting height 20', 25', 30'
Color Gray | Black
Pole Fiberglass Metal Wood
Applications Neighborhoods Parks Streets

Light source: LED (white)
Wattage: 50 watts, 70 watts
Lumens: 8,200 | 8,100
Light pattern:IESNA Type I, II, V
IESNA cutoff classification: Full cutoff
Beam spread: Type III = 85.0002 (20W)
 Type IV = 85.0001 (70W)
 Type V = 85.0001 (170W)
Color temperature: 3,000K | 4,000K

POLE AVAILABLE	MOUNTING HEIGHT	COLOR
Fiberglass	25', 30', 35'	Gray, Black (additional cost)
Wood	25', 30', 35'	Standard
Metal (Special conditions)	25', 30', 35'	Galvanized

FEATURES: Tamper operation, Little or no installation cost, Design services by lighting professionals included, Maintenance, electricity & warranty included, One low monthly cost on your electric bill.

BENEFITS: Provides hands-free installation and service, Free up capital for other projects, Meets industry standards and lighting ordinances, Eliminates high and unexpected repair bills, Convenience and savings for you.

For additional information, contact us at 000.Candace@duke-energy.com.

Outdoor Lighting

ROADWAY LED
Black Deck City Criteria

LED (Light-emitting diode) 110 | 150 | 200 | 280 watts
Mounting height 20', 25', 30'
Color Black | Gray
Pole Fiberglass Metal Wood
Applications Neighborhoods Roadways Shopping Centers

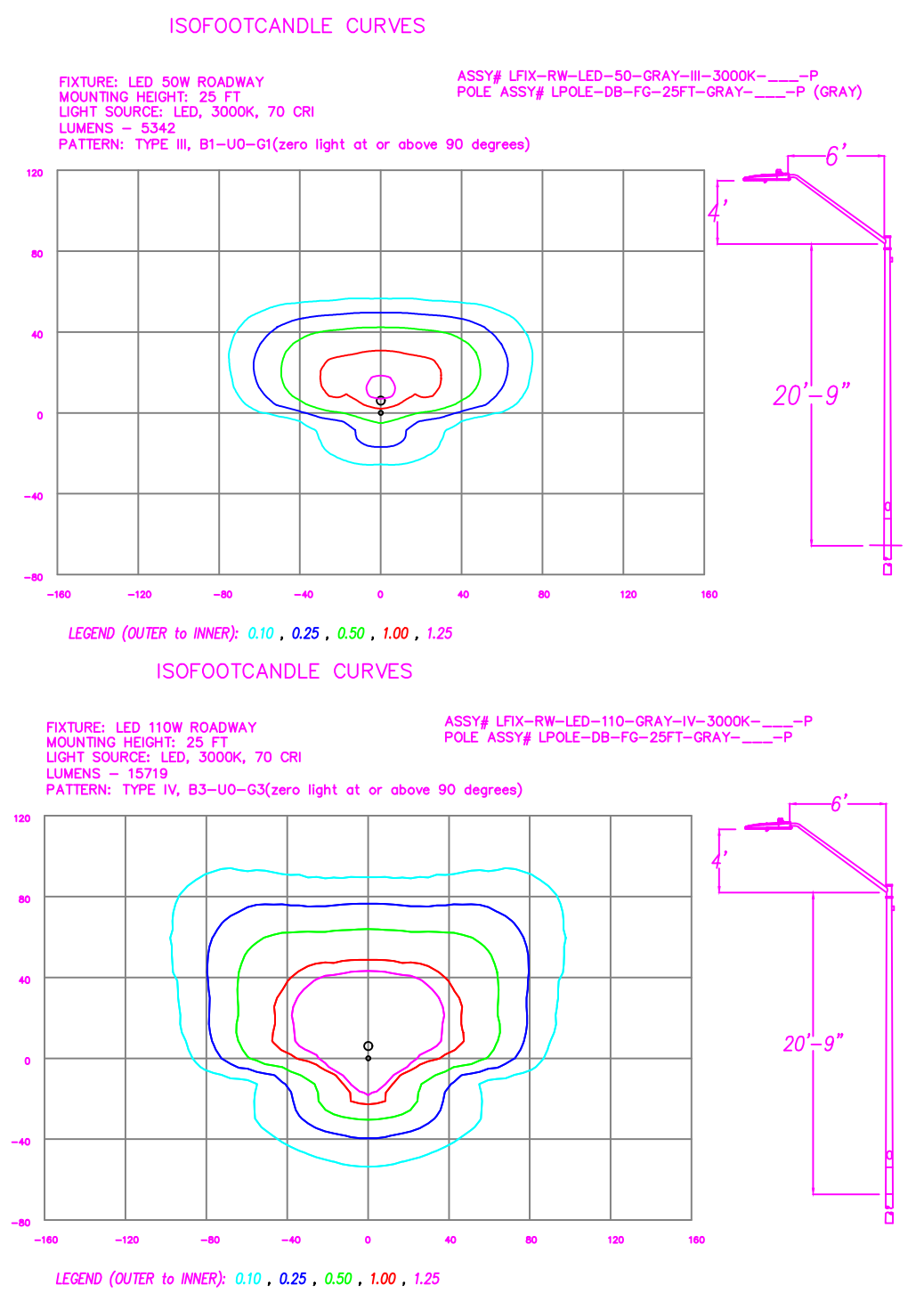
Light source: LED (white)
Wattage: 110 | 150 | 200 | 280 watts
Light pattern:IESNA Type III | Type IV (Forward throw)
IESNA cutoff classification: Full cutoff
Beam spread: Type III = 85.0003 (150W), 85.0003 (150W), 85.0004 (200W/280W)
 Type IV = 85.0003 (150W), 85.0004 (200W), 85.0005 (280W)
Color temperature: 3,000K | 4,000K

POLE AVAILABLE	MOUNTING HEIGHT	COLOR
Fiberglass	25', 30', 35'	Gray, Black (additional cost)
Wood	25', 30', 35'	Standard
Metal (Special conditions)	25', 30', 35'	Galvanized

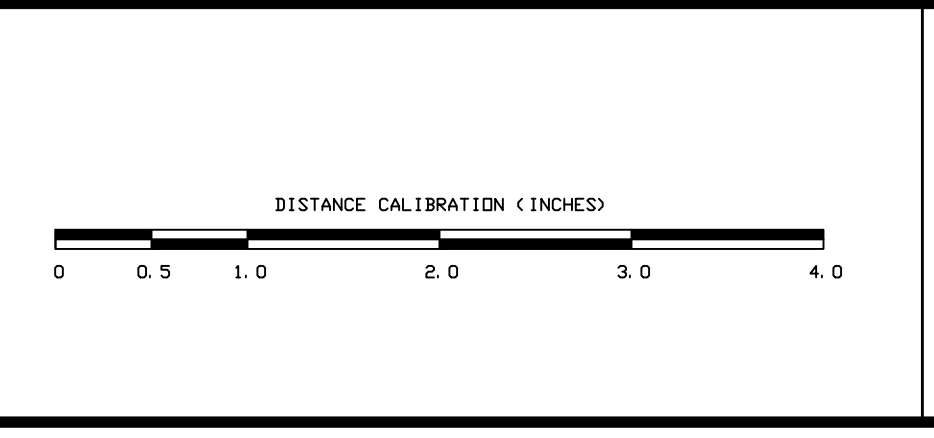
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 Description LED Roadway
 Drawing No. 24-0303A Sht. 1 OF 1