LAKE MYRA COUNTY PARK
EAST PARCEL
Wake County, North Carolina
JULY 27, 2026 - CONSTRUCTION DOCUMENT SET

TOWN OF WENDELL CASE NUMBER: SP26-06

PROPERTY ADDRESS:
10300 POOLE RD
WENDELL, NC 27591

PIN: 1763-84-1077

REID: 0359350

OWNER:
WAKE COUNTY
WAKE COUNTY ATTORNEY'S OFFICE
PO BOX 550
RALEIGH NC 27602-0550

TOTAL PARCEL AREA: 125.76 ACRES
(PORTION OF PARK WITHIN WENDELL'S ETJ

CURRENT ZONING:
R-3

DISTURBED AREA = 586,312 SF / 13.46 ACRES

IMPERVIOUS SURFACE AREA:

EXISTING:	20,473.20 SF	(0.47 ACRES)
PROPOSED:	202,118.40 SF	(4.64 ACRES)
TOTAL:	222,591.60 SF	(5.11 ACRES)

EXISTING LAND USE: VACANT

PROPOSED USE: COMMUNITY PARK

EXISTING BUILDING SF: 988 SF

PROPOSED BUILDING SF:

PARK CENTER:	11,875 SF
MAINTENANCE FACILITY:	5,031 SF
PICNIC SHELTER:	3,330 SF

A PORTION OF THE SUBJECT PROPERTY IS IN A SPECIAL FLOOD HAZARD AREA PER MAP NUMBER 3720176300K, 3720176200K & 3720177300K. MAP EFFECTIVE DATE JULY 19TH, 2022. FLOOD INFORMATION IS BASED ON INFORMATION GIVEN FROM NC FLOOD RISK INFORMATION SYSTEM (FRIS).

PROJECT DIRECTORY
Landscape Architect / Prime Consultant:
Susan Hatchell Landscape Architecture, PLLC
711 W. North Street
Raleigh, NC 27603
T: (919) 838-9600

Civil Engineer, Site Structural, and Surveyor:
NV5
3300 Regency Parkway, Suite 100
Cary, NC 27518

Architect:
Esse Architects
632 Pershing Road
Raleigh, NC 27608

Building Structural Engineer:
Lynch Mykins Structural Engineers, PC/IMEG
301 N. West Street, Suite 105
Raleigh, NC 27603

MEP Engineer:
The Wooten Company
120 N Boylan Avenue
Raleigh, NC 27603

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COVER SHEET

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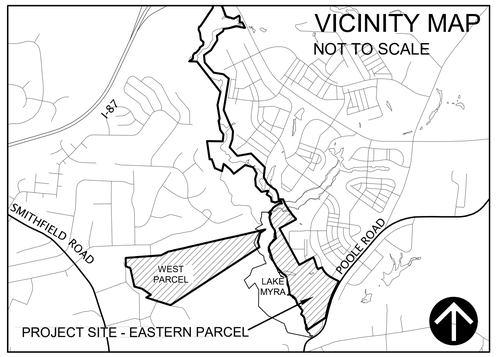


GENERAL NOTES:

1. All constuction shall be in accordance with applicable municipality standards, specifications, and details. Work in this project shall also conform to these plans, the Town of Wendell, the City of Raleigh Standards and Specifications, the latest editions of the North Carolina Department of Transportaion (NCDOT) Road and Bridge Specifications, the Road and Bridge Standards, the North Carolina Erosion and Sediment Control Handbook, the North Carolina erosion and Sediment Control Regulations, the final geotechnical report, and General Design Standard. In the event of conflict between any of the standards, specifications, or plans, the most stringent shall govern.

2. The contractor shall be solely responsible for trench safety during all phases of construction.

3. The location and size of existing utilities as shown is approximate only. the contractor is responsible for horizontally and vertically locating and protecting all public or private utilities that lie in or adjacent to the construction site. The Contractor is fully responsible for notifying all utility owners in accordance with NC General Statue - Chapeter 87, Article 8, The Underground Damage Prevention Act.

4. The contractor shall salvage and protect all existing power poles, signs, manholes, telephone risers, water valves, etc. during all construction phases. The contractor shall repair, at his own expense, any existing utilities damaged during constuction.

5. Traffic control on public streets ahsll be in conformance with the traffic control plan, the "Manual of Uniform Traffic Control Devices," and as further directed by City and State Inspectors.

6. Any discrepancies found between the drawings and specifications and site conditions or any inconsistencies or ambiguities in drawings or specifications shall be immediately reported to the engineer, in writing, who shall promptly address such iconsistencies or ambiguities. Work done by the Contractor after his discovery of shuch discrepancies, inconsistencies, or ambiguities shall be done at the contractors's risk.

7. Contractor is responsible for verifying all required permits and approvals prior to commencing construction.

8. All areas shall be graded for positive drainage, and as shown on these plans. The contractor shall maintain adequate site drainage during all phases of construction. The contractor shall use silt fences (or other methods approved by the engineer and applicable municipality) as required to prevent silt and construction debris from flowing onto adjacent properties. Contractor shall comply with all applicable federal, state, or local erosion, convervation, and siltation ordinances. Contractor shall remove all temporary erosion control devices upon completion of permanent drainage facilities and the establishment of a stand of grass or other growth to prevent erosion.

9. The contractor shall clear and grub the site and place, compact, and moisture condition all fill per the project geotechnical engineer's specifications. The fill material to be used shall be approved by the Geotechnical Engineer prior to placement.

10. Fill type, compaction, and moisture condition should be according to the Geotechnical Engineer's specifications, but at a minimum, the following must be met:
Materials used to construct embankments for any purpose, backfill around drainage structures, or in utility trenches or any other depression requiring fill or backfill shall be compacted to 95% of maximum density as determined by the modified proctor test as set out in ASTM Standard D-968. The contractor shall, prior to any operations involving filling or backfilling, submit the results of the proctor test together with a certification that the soil tested is representative of the mateials to be used on the project. Tests shall be conducted by a certified materials testing laboratory and the certifications made by a licensed professional engineer representing the laboratory.

11. Proposed contours and gutter gradients are approximate. Proposed spot elevations and roadway profiles/super-elevations/typical sections are to be used in case of discrepancy.

12. The contractor shall verify and coordinate all dimensions shown, including the horizontal and vertical location of curb inlets and grate inlets and all utilities crossing the storm sewer.

13. All distances shown represent horizontal ground distances.

14. Rim elevations are given as top of curb for Catch Basins, top of grate for Drop Inlets, and top of cover for Junctions Boxes.

15. Storm Sewer (RCP) shall be constructed to the following classes:
Cover less than 10 feet - Class C bedding, Class III walls
Cover 10 feet to 15 feet - Class B bedding, Class III walls
Cover greater than 15 feet and less than 2 feet - Class B bedding Class IV walls

16. All curb joints shall extend through the curb. Minimum length of offset joints at radius points is 1.5 feet. All joints shall be sealed with joint sealant.

17. All handicap ramps and associated pavement markings shall conform to ADA requirements, North Carolina State Building Code and the Town of Wendell Standard Details.

18. Existing water and sewer main/services to the property are to be verified by the contractor prior to the start of construction. The project engineer has attempted to verify sizes from relevant plans, however, exact size/dimensions can only be determined from field exposure of the relevant line.

ATTENTION CONTRACTORS
The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Inspector at 919-996-3245 or https://cityworks.raleighnc.gov/pucontractors/New and schedule a Pre-construction meeting prior to beginning any construction.

Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

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

Failure to call for Inspection, install a downstream plug, have permitted plans on the jobsite, or any other violation of City of Raleigh Standards will result in a fine and possible exclusion from future work in the City of Raleigh.

RALEIGH WATER CONDITIONS OF APPROVAL:

•All Water, Sanitary Sewer and Reuse facilities shall be installed, inspected, tested, and accepted by the City of Raleigh Public Utilities Department for operations and maintenance prior to 1st CO.

•Construction Drawings must be approved by the City of Raleigh Public Utilities Department for all public water, public sewer and/or private sewer extensions prior to plat recordation.

•A plat and deed must be recorded at the Wake County Register of Deeds office for all utility easement dedications prior to building permit issuance.

•NCDOT Three-party Encroachment agreement required prior to start of construction. Submit to Eric Cramer with Raleigh Transportation at Eric.Cramer@raleighnc.gov for routing for signature.

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECTURAL FIRM C-175 SUSAN HATCHELL LANDSCAPE ARCHITECTURE, PLLC

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 5228 SUSAN M. HATCHELL 7-27-2026

TOWN OF WENDELL NOTES:

1. Permanent and temporary signage requires an approved sign permit prior to installation. Signage is a separate submittal, review, and approval.

This note shall apply to each and every sheet in this set:

The Engineer does not guarantee that all existing facilities such as pipelines, electrical lines, conduit, telephone cable, service connections, or other facilities are shown on the Plans. It shall be the Contractor's responsiblity to have all utilities located by their respective owners, field mark the utility locations, and protect all such existing facilities prior to beginning construction. The Contractor is fully responsible for notifying all utility owners in accordance with NC General Statute - Chapter 87, Article 8, The Underground Damage Prevention Act.

LAKE MYRA COUNTY PARK
PARKING REQUIREMENTS

ACTIVITY	SF	REQUIRED PARKING	PARKING REQUIRED
PARK CENTER	11,875	2 SPACES PER 1,000 SF	24
MAINTENANCE FACILITY	5,031	1 SPACE PER 1,000 SF	6
PICNIC SHELTER	3,330	2 SPACES PER 1,000 SF	8
PLAYGROUND	17,000	2 SPACES PER 1,000 SF	34
BOATING			4
FISHING			4
TOTAL SPACES REQUIRED			**80**
TOTAL STANDARD SPACES PROVIDED			**104**
TOTAL GOLF CART SPACES PROVIDED			**4**
TOTAL ADA SPACES PROVIDED			**10**
BICYCLE SPACES REQUIRED			**3**
TOTAL BICYCLE SPACES PROVIDED			**7**

"ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF WENDELL, CITY OF RALEIGH AND / OR NCDOT STANDARDS AND SPECIFICATIONS"

EXISTING CONDITIONS SURVEY PROVIDED BY NV5 AND ENTITLED TOPOGRAPHIC & EXISTING CONDITIONS SURVEY OF THE LAKE MYRA COUNTY PARK ON THE PROPERTY OWNED BY WAKE COUNTY, DATED JUNE 19TH 2025.

AN AERIAL SURVEY WAS CONDUCTED BY NV5 GEOSPATIAL, INC. ON SEPTEMBER 9, 2024 USING LIDAR DATA TO PRODUCE A 3D SURFACE FOR THE SUBJECT AREA. A TECHNICAL DATA REPORT WAS COMPILED AND SIGNED BY STEVEN J. HYDE ON DECEMBER 16, 2024. FINAL CONTOURS SHOWN HEREON ARE DERIVED FROM LIDAR DATA AND CONVENTIONAL FIELD SURVEYING TECHNIQUES.

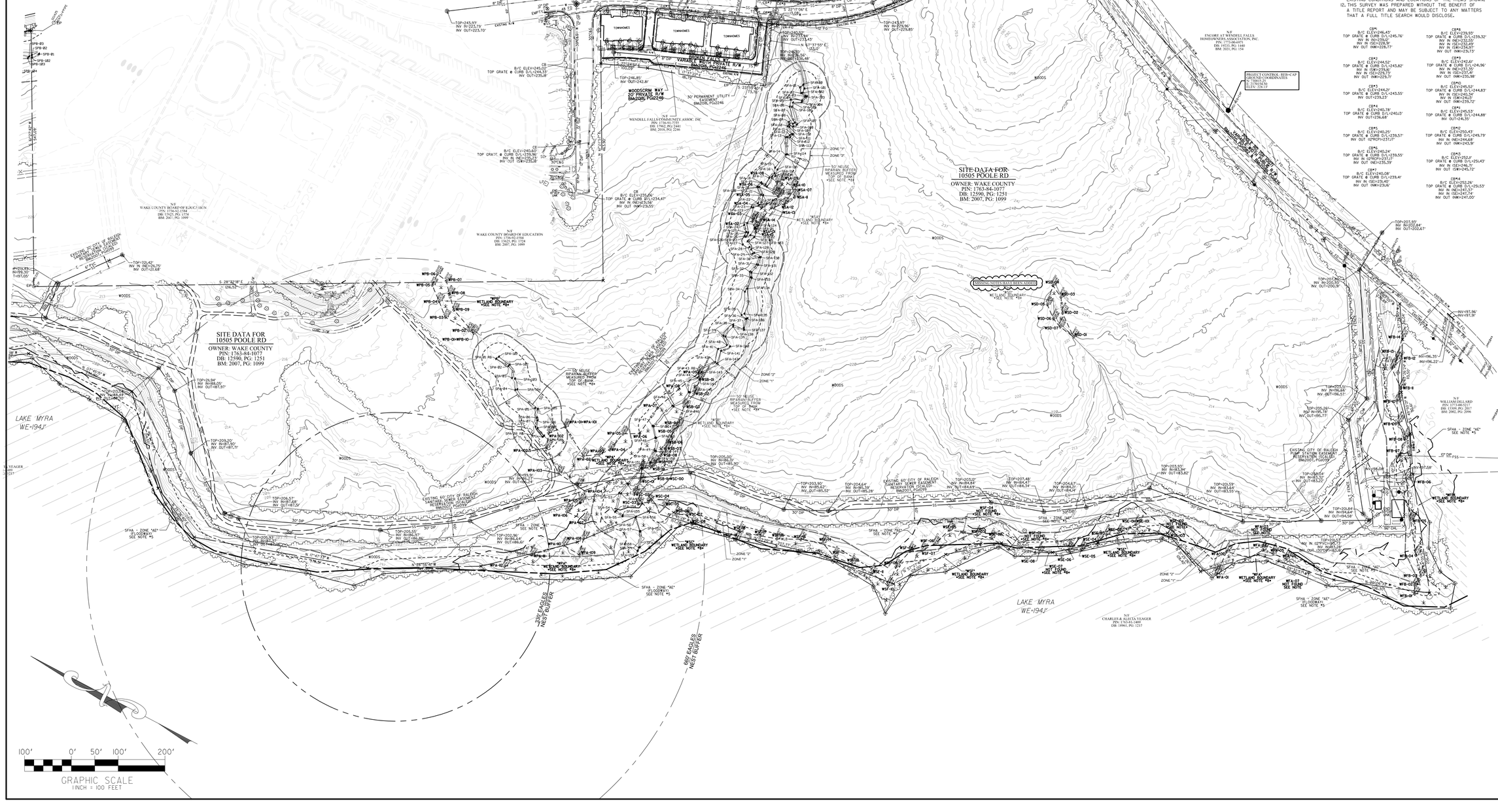
PORTIONS OF THE SUBJECT PROPERTY IS IN A SPECIAL FLOOD HAZARD AREA (SFHA) OF FLOOD SOURCE MARKS CREEK. AREAS "AE" & "AE (FLOODWAY)"AS DEFINED BY FEMA FIRM PANEL 3720176300K, 3720176200K & 3720177300K, EFFECTIVE DATE JULY 19, 2022. FLOOD ZONES SHOWN HEREON ARE GRAPHICALLY DEPICTED USING THE GIS DATA FROM THE FLOOD RISK INFORMATION SYSTEM (FRIS).

SURVEYOR'S NOTES :

1. THE BASIS OF BEARINGS FOR THIS SURVEY IS NAD 83 (2011) SPCS, USING A TRIMBLE R10 GNSS GPS UNIT AND THE REAL TIME NETWORK (RTN).
2. ALL DISTANCES SHOWN ARE HORIZONTAL GROUND DISTANCES UNLESS OTHERWISE NOTED.
3. ALL AREAS SHOWN WERE COMPUTED BY COORDINATE GEOMETRY UNLESS OTHERWISE SHOWN.
4. SURFACE DTM SET AT 1' CONTOUR INTERVALS.
5. PORTIONS OF THE SUBJECT PROPERTY IS IN A SPECIAL FLOOD HAZARD AREA (SFHA) OF FLOOD SOURCE MARKS CREEK. AREAS "AE" & "AE (FLOODWAY)"AS DEFINED BY FEMA FIRM PANEL 3720176300K, 3720176200K & 3720177300K, EFFECTIVE DATE JULY 19, 2022. FLOOD ZONES SHOWN HEREON ARE GRAPHICALLY DEPICTED USING THE GIS DATA FROM THE FLOOD RISK INFORMATION SYSTEM (FRIS).
6. NO HORIZONTAL NCGS MONUMENT OF SUITABLE ORDER FOUND WITHIN 2000 FEET OF THIS PROPERTY.
7. ZONING FOR THE THE ENTIRE SUBJECT PROPERTY RESIDES IN THE TOWN OF WENDELL ZONE "R3". ZONING VERIFICATION WAS PROVIDED BY THE WAKE COUNTY GIS (MAPS).
8. STREAM, WETLAND AND BUFFER DETERMINATIONS WERE COMPLETED BY AXIOM ENVIRONMENTAL, INC IN AUGUST 2023. 50' RIPARIAN BUFFERS WERE MEASURED FROM THE TOP OF BANK OF THE PONDS AND STREAMS WHERE AVAILABLE PER 15A NCAC 2B.0714. WETLAND FLAGGING SET BY AXIOM ENVIRONMENTAL, INC AND FOUND WITHIN THE GROUND SURVEY LIMITS LABELED HEREON WERE FIELD LOCATED BY WAS FIELD MEASURED BY NV5 SURVEYS GROUP. NOT ALL FLAGGING WAS ABLE TO BE LOCATED POSSIBLY DUE TO THE LENGTH OF TIME FROM WHEN FLAGGING WAS SET.
9. AN AERIAL SURVEY WAS CONDUCTED BY NV5 GEOSPATIAL, INC. ON SEPTEMBER 9, 2024 USING LIDAR DATA TO PRODUCE A 3D SURFACE FOR THE SUBJECT AREA. A TECHNICAL DATA REPORT WAS COMPILED AND SIGNED BY STEVEN J. HYDE ON MAY 24, 2023. FINAL CONTOURS SHOWN HEREON ARE DERIVED FROM LIDAR DATA AND CONVENTIONAL FIELD SURVEYING TECHNIQUES.
10. AREA OUTLINED AND NOTED "GROUND SURVEY LIMITS" ARE THE LIMITS OF THE COMBINED AERIAL DATA AND CONVENTIONAL SURVEYS. DATA OUTSIDE OF THE "GROUND SURVEY LIMITS" IS AERIAL DATA ONLY. BREAKLINES, CREEKS, OR ANY OTHER DATA IN THIS AREA HAS NOT BEEN VERIFIED OR PERFORMED WITH ANY GROUND SURVEYS.
11. THE PURPOSE OF THIS SURVEY IS TO PROVIDE A REPORT OF EXISTING CONDITIONS AND LOCATIONS OF THE ITEMS SHOWN.
12. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND MAY BE SUBJECT TO ANY MATTERS THAT A FULL TITLE SEARCH WOULD DISCLOSE.

SITE DATA FOR
10505 POOLE RD

OWNER: WAKE COUNTY
PIN: 1763-84-1077
DB: 12590, PG: 1251
BM: 2007, PG: 1099



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NV5
NV5 ENGINEERS & CONSULTANTS, INC.
3300 REGENCY PARKWAY
CARY, NC 27518
P: 919.851.1912 www.NV5.com
NC License # P-1333

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 22514 ENGINEER MICHAEL D. ALLEN 7/28/26

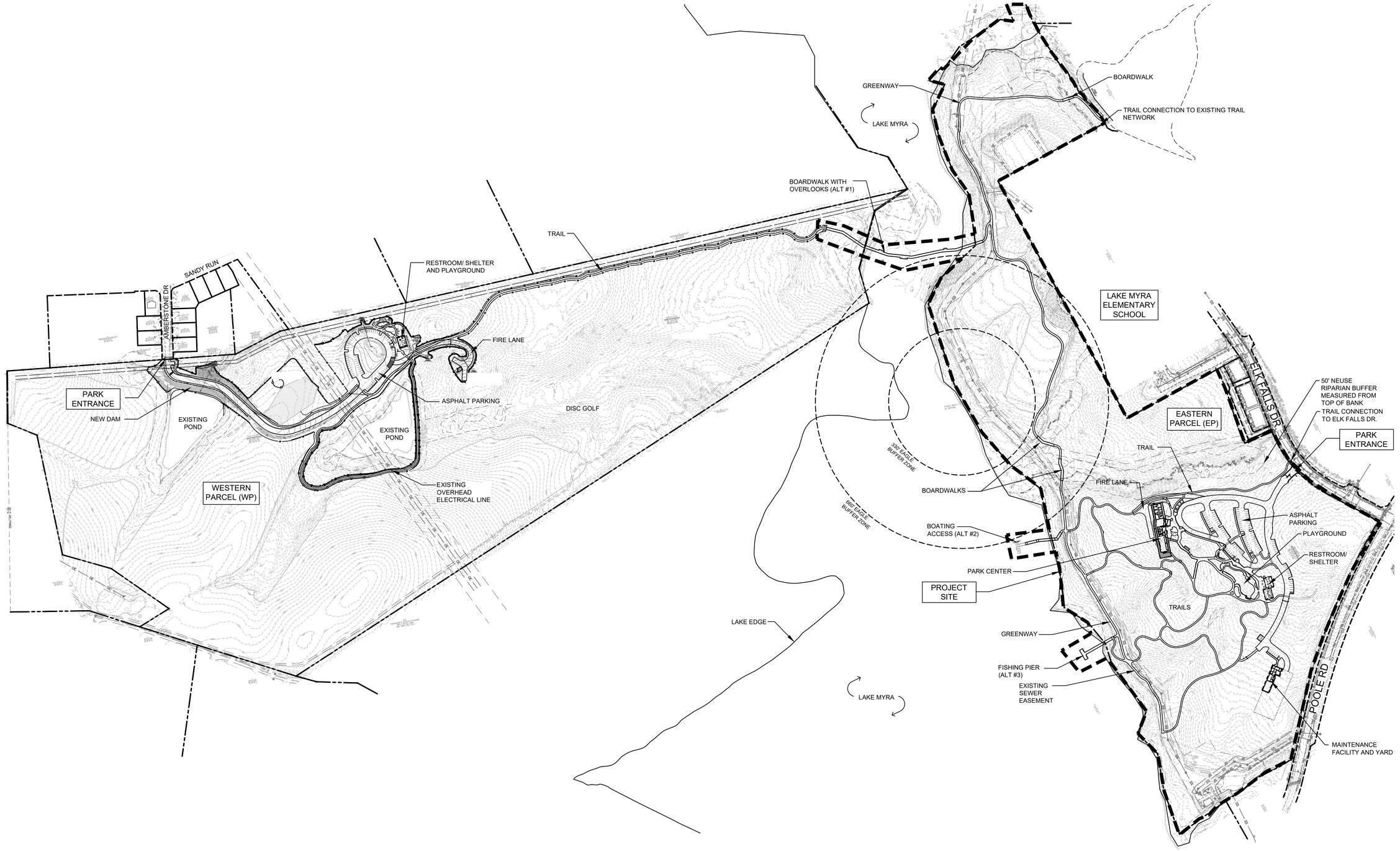
EXISTING CONDITIONS

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 07/28/26

EX-001



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EASTERN (EP) AND WESTERN (WP) PARCELS

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 7/27/26

L-001

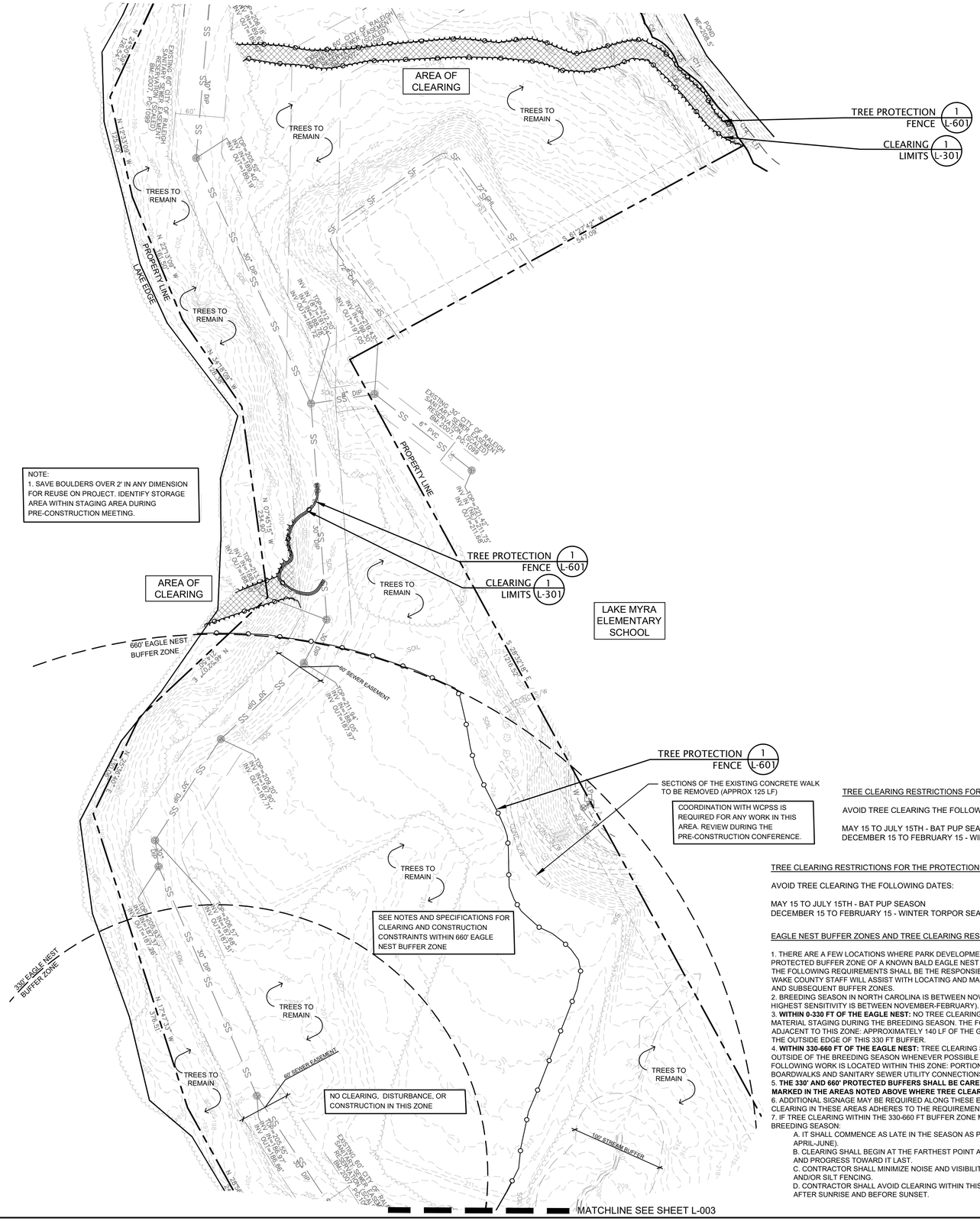
NORTH CAROLINA LANDSCAPE ARCHITECTURAL CORP. C-175 SUSAN HATCHELL LANDSCAPE ARCHITECTURE, PLLC

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 1528 SUSAN M. HATCHELL 7-27-2026

NAD 83 NC GRID

0 100 200 400

SCALE: 1" = 200' - 0"



DEMOLITION NOTES:
1. CONTRACTOR SHALL REPORT ALL DISCREPANCIES TO LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.
2. CONTRACTOR SHALL BECOME THOROUGHLY FAMILIAR WITH PROJECT PLANS, SPECIFICATIONS AND SITE CONDITIONS PRIOR TO STARTING CONSTRUCTION. SOME FIELD ADJUSTMENT IS EXPECTED, ESPECIALLY FOR TRAIL LAYOUT. ONLY SPECIFIC AREAS OF THE SITE HAS BEEN SURVEYED.
3. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, DEPTHS, DISTANCES, ANGLES AND SLOPES PRIOR TO ORDERING MATERIALS OR CONSTRUCTING PROJECT. LIMITS OF DEMOLITION SHALL BE MARKED IN THE FIELD PRIOR TO CONSTRUCTION.
4. REFER TO CONSTRUCTION SEQUENCE ON CIVIL SHEETS.
5. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION AND SHALL BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF THESE UTILITIES DURING THE CONSTRUCTION OF THE PROJECT WITHOUT ANY ADDITIONAL COST TO THE OWNER.
6. CONTRACTOR SHALL DEMOLISH AND REMOVE ITEMS LABELED "TO BE REMOVED" AND DISPOSE OF THEM OFFSITE IN A LAWFUL MANNER.
7. TREE/SILT PROTECTION FENCE SHALL BE INSTALLED PRIOR TO START OF DEMOLITION. LAYOUT LIMITS OF TREE CLEARING FOR APPROVAL BY LA AND OWNER PRIOR TO CLEARING.
8. THROUGHOUT THE DURATION OF THE CONTRACT, THE CONTRACTOR SHALL PROVIDE TEMPORARY BARRICADES AT THE PARK ENTRANCE TO PROTECT THE PUBLIC AND KEEP PEDESTRIANS OUT OF THE CURRENT PORTION OF THE WORK.
9. CONTRACTOR SHALL MAKE EVERY EFFORT TO MINIMIZE DAMAGE TO EXISTING TREES AND VEGETATION ALONG CONSTRUCTION ACCESS ROUTE. ANY DAMAGE OUTSIDE APPROVED CLEARING LIMITS SHALL BE REPAIRED AND RESTORED BY THE CONTRACTOR. ACTUAL CLEARING LIMITS WILL BE NEGOTIATED AT THE PRE-CONSTRUCTION MEETING AND AT THE TIME OF TRAIL FLAGGING AND ADHERED TO DURING THE PROJECT.

TREE CLEARING RESTRICTIONS FOR THE PROTECTION OF BATS:

AVOID TREE CLEARING THE FOLLOWING DATES:

MAY 15 TO JULY 15TH - BAT PUP SEASON
DECEMBER 15 TO FEBRUARY 15 - WINTER TORPOR SEASON

TREE CLEARING RESTRICTIONS FOR THE PROTECTION OF BATS:

AVOID TREE CLEARING THE FOLLOWING DATES:

MAY 15 TO JULY 15TH - BAT PUP SEASON
DECEMBER 15 TO FEBRUARY 15 - WINTER TORPOR SEASON

EAGLE NEST BUFFER ZONES AND TREE CLEARING RESTRICTIONS:

1. THERE ARE A FEW LOCATIONS WHERE PARK DEVELOPMENT SHALL OCCUR WITHIN A PROTECTED BUFFER ZONE OF A KNOWN BALD EAGLE NEST SITE. STRICT ADHERENCE TO THE FOLLOWING REQUIREMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. WAKE COUNTY STAFF WILL ASSIST WITH LOCATING AND MARKING THE BALD EAGLE NEST AND SUBSEQUENT BUFFER ZONES.
2. BREEDING SEASON IN NORTH CAROLINA IS BETWEEN NOVEMBER 1 - JUNE 30 (THE HIGHEST SENSITIVITY IS BETWEEN NOVEMBER-FEBRUARY).
3. **WITHIN 0-330 FT OF THE EAGLE NEST:** NO TREE CLEARING, CONSTRUCTION OR MATERIAL STAGING DURING THE BREEDING SEASON. THE FOLLOWING WORK IS ADJACENT TO THIS ZONE: APPROXIMATELY 140 LF OF THE GREENWAY TRAIL FOLLOWS THE OUTSIDE EDGE OF THIS 330 FT BUFFER.
4. **WITHIN 330-660 FT OF THE EAGLE NEST:** TREE CLEARING SHOULD BE SCHEDULED OUTSIDE OF THE BREEDING SEASON WHENEVER POSSIBLE (JULY-OCTOBER). THE FOLLOWING WORK IS LOCATED WITHIN THIS ZONE: PORTIONS OF THE GREENWAY TRAIL, BOARDWALKS AND SANITARY SEWER UTILITY CONNECTIONS.
5. **THE 330' AND 660' PROTECTED BUFFERS SHALL BE CAREFULLY AND CLEARLY MARKED IN THE AREAS NOTED ABOVE WHERE TREE CLEARING SHALL TAKE PLACE.**
6. ADDITIONAL SIGNAGE MAY BE REQUIRED ALONG THESE EDGES TO ENSURE TREE CLEARING IN THESE AREAS ADHERES TO THE REQUIREMENTS ABOVE.
7. IF TREE CLEARING WITHIN THE 330-660 FT BUFFER ZONE MUST OCCUR DURING BREEDING SEASON:
   A. IT SHALL COMMENCE AS LATE IN THE SEASON AS POSSIBLE (IDEALLY APRIL-JUNE).
   B. CLEARING SHALL BEGIN AT THE FARTHEST POINT AWAY FROM THE NEST AND PROGRESS TOWARD IT LAST.
   C. CONTRACTOR SHALL MINIMIZE NOISE AND VISIBILITY USING TREE PROTECTION AND/OR SILT FENCING.
   D. CONTRACTOR SHALL AVOID CLEARING WITHIN THIS ZONE IN THE TWO HOURS AFTER SUNRISE AND BEFORE SUNSET.

NAD 83 NC GRID

0 50 100 200

SCALE: 1" = 100' - 0"

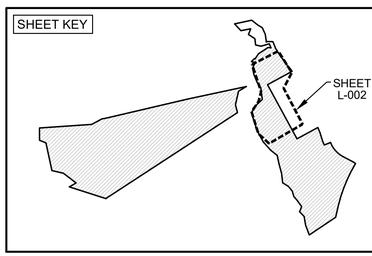
NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT C-175 SUSAN HATCHELL LANDSCAPE ARCHITECTURE, PLLC

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 528 SUSAN M. HATCHELL 7-27-2026

LEGEND:

TREE CLEARING

SHEET KEY



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EP DEMOLITION PLAN NORTH

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 7/27/26

L-002

MATCHLINE SEE SHEET L-002

NO CLEARING, DISTURBANCE, OR CONSTRUCTION IN THIS ZONE

100' STREAM BUFFER

SEE NOTES AND SPECIFICATIONS FOR CLEARING AND CONSTRUCTION CONSTRAINTS WITHIN 660' EAGLE NEST BUFFER ZONE

CONTRACTOR SHALL MAKE EVERY EFFORT TO MINIMIZE DAMAGE TO EXISTING TREES AND VEGETATION ALONG CONSTRUCTION ACCESS ROUTE. ANY DAMAGE OUTSIDE APPROVED CLEARING LIMITS SHALL BE REPAIRED AND RESTORED BY THE CONTRACTOR. ACTUAL CLEARING LIMITS WILL BE NEGOTIATED AT THE PRE-CONSTRUCTION MEETING, AND AT THE TIME OF TRAIL FLAGGING, AND ADHERED TO DURING THE PROJECT.

TREE PROTECTION FENCE 1 L-601

SEE CIVIL SHEETS FOR CONSTRUCTION ACCESS

CLEARING LIMITS 1 L-301

NOTE:
1. SAVE BOULDERS OVER 2' IN ANY DIMENSION FOR REUSE ON PROJECT. IDENTIFY STORAGE AREA WITHIN STAGING AREA DURING PRE-CONSTRUCTION MEETING.

AREA OF CLEARING

TREES TO REMAIN

EXISTING WETLAND

660' EAGLE NEST BUFFER ZONE

30' CITY OF RALEIGH SANITARY SEWER EASEMENT

EXISTING 30' CITY OF RALEIGH SANITARY SEWER EASEMENT RESERVATION (SCALED) DM: 2007, PG:1099

EXISTING 60' CITY OF RALEIGH SANITARY SEWER EASEMENT RESERVATION (SCALED) DM: 2007, PG:1099

60' SEWER EASEMENT

PROPERTY LINE

LAKE EDGE

LAKE MYRA

50' UNDISTURBED VEGETATED BUFFERYARD

50' UNDISTURBED VEGETATION

ELK FALLS DR.

POOLE RD.

NEW ROW

EXISTING ROW

SUSAN HATCHELL DR.

NC 751 BUS

NC 751

NAD 83 NC GRID

0 50 100 200

SCALE: 1" = 100' - 0"

DEMOLITION NOTES:
1. CONTRACTOR SHALL REPORT ALL DISCREPANCIES TO LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.
2. CONTRACTOR SHALL BECOME THOROUGHLY FAMILIAR WITH PROJECT PLANS, SPECIFICATIONS AND SITE CONDITIONS PRIOR TO STARTING CONSTRUCTION. SOME FIELD ADJUSTMENT IS EXPECTED, ESPECIALLY FOR TRAIL LAYOUT. ONLY SPECIFIC AREAS OF THE SITE HAS BEEN SURVEYED.
3. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, DEPTHS, DISTANCES, ANGLES AND SLOPES PRIOR TO ORDERING MATERIALS OR CONSTRUCTING PROJECT. LIMITS OF DEMOLITION SHALL BE MARKED IN THE FIELD PRIOR TO CONSTRUCTION.
4. REFER TO CONSTRUCTION SEQUENCE ON CIVIL SHEETS.
5. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION AND SHALL BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF THESE UTILITIES DURING THE CONSTRUCTION OF THE PROJECT WITHOUT ANY ADDITIONAL COST TO THE OWNER.
6. CONTRACTOR SHALL DEMOLISH AND REMOVE ITEMS LABELED "TO BE REMOVED" AND DISPOSE OF THEM OFFSITE IN A LAWFUL MANNER.
7. TREE/SILT PROTECTION FENCE SHALL BE INSTALLED PRIOR TO START OF DEMOLITION. LAYOUT LIMITS OF TREE CLEARING FOR APPROVAL BY LA AND OWNER PRIOR TO CLEARING.
8. THROUGHOUT THE DURATION OF THE CONTRACT, THE CONTRACTOR SHALL PROVIDE TEMPORARY BARRICADES AT THE PARK ENTRANCE TO PROTECT THE PUBLIC AND KEEP PEDESTRIANS OUT OF THE CURRENT PORTION OF THE WORK.
9. CONTRACTOR SHALL MAKE EVERY EFFORT TO MINIMIZE DAMAGE TO EXISTING TREES AND VEGETATION ALONG CONSTRUCTION ACCESS ROUTE. ANY DAMAGE OUTSIDE APPROVED CLEARING LIMITS SHALL BE REPAIRED AND RESTORED BY THE CONTRACTOR. ACTUAL CLEARING LIMITS WILL BE NEGOTIATED AT THE PRE-CONSTRUCTION MEETING AND AT THE TIME OF TRAIL FLAGGING AND ADHERED TO DURING THE PROJECT.

TREE CLEARING RESTRICTIONS FOR THE PROTECTION OF BATS:

AVOID TREE CLEARING THE FOLLOWING DATES:

MAY 15 TO JULY 15TH - BAT PUP SEASON
DECEMBER 15 TO FEBRUARY 15 - WINTER TORPOR SEASON

EAGLE NEST BUFFER ZONES AND TREE CLEARING RESTRICTIONS:

1. THERE ARE A FEW LOCATIONS WHERE PARK DEVELOPMENT SHALL OCCUR WITHIN A PROTECTED BUFFER ZONE OF A KNOWN BALD EAGLE NEST SITE. STRICT ADHERENCE TO THE FOLLOWING REQUIREMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. WAKE COUNTY STAFF WILL ASSIST WITH LOCATING AND MARKING THE BALD EAGLE NEST AND SUBSEQUENT BUFFER ZONES.
2. BREEDING SEASON IN NORTH CAROLINA IS BETWEEN NOVEMBER 1 - JUNE 30 (THE HIGHEST SENSITIVITY IS BETWEEN NOVEMBER-FEBRUARY).
3. **WITHIN 0-330 FT OF THE EAGLE NEST:** NO TREE CLEARING, CONSTRUCTION OR MATERIAL STAGING DURING THE BREEDING SEASON. THE FOLLOWING WORK IS ADJACENT TO THIS ZONE: APPROXIMATELY 140 LF OF THE GREENWAY TRAIL FOLLOWS THE OUTSIDE EDGE OF THIS 330 FT BUFFER.
4. **WITHIN 330-660 FT OF THE EAGLE NEST:** TREE CLEARING SHOULD BE SCHEDULED OUTSIDE OF THE BREEDING SEASON WHENEVER POSSIBLE (JULY-OCTOBER). THE FOLLOWING WORK IS LOCATED WITHIN THIS ZONE: PORTIONS OF THE GREENWAY TRAIL, BOARDWALKS AND SANITARY SEWER UTILITY CONNECTIONS.
5. **THE 330' AND 660' PROTECTED BUFFERS SHALL BE CAREFULLY AND CLEARLY MARKED IN THE AREAS NOTED ABOVE WHERE TREE CLEARING SHALL TAKE PLACE.**
6. ADDITIONAL SIGNAGE MAY BE REQUIRED ALONG THESE EDGES TO ENSURE TREE CLEARING IN THESE AREAS ADHERES TO THE REQUIREMENTS ABOVE.
7. IF TREE CLEARING WITHIN THE 330-660 FT BUFFER ZONE MUST OCCUR DURING BREEDING SEASON:
   A. IT SHALL COMMENCE AS LATE IN THE SEASON AS POSSIBLE (IDEALLY APRIL-JUNE).
   B. CLEARING SHALL BEGIN AT THE FARTHEST POINT AWAY FROM THE NEST AND PROGRESS TOWARD IT LAST.
   C. CONTRACTOR SHALL MINIMIZE NOISE AND VISIBILITY USING TREE PROTECTION AND/OR SILT FENCING.
   D. CONTRACTOR SHALL AVOID CLEARING WITHIN THIS ZONE IN THE TWO HOURS AFTER SUNRISE AND BEFORE SUNSET.

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECTURAL CORP. C-175 SUSAN HATCHELL LANDSCAPE ARCHITECTURE, PLLC

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 528 SUSAN M. HATCHELL 7-27-2026

LEGEND:
TREE CLEARING

SHEET KEY
SHEET L-003

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EP DEMOLITION PLAN SOUTH

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 7/27/26

L-003

BOARDWALKS, GREENWAY TRAILS, AND THE SANITARY SEWER UTILITY CONNECTIONS ARE WITHIN THE 660' EAGLE NEST BOUNDARY. SEE NOTES AND SPECIFICATIONS FOR CLEARING AND CONSTRUCTION CONSTRAINTS.

330' EAGLE NEST BUFFER

660' EAGLE NEST BUFFER

BOARDWALK B

BOARDWALK C

SHEET L-402

30' CITY OF RALEIGH SANITARY SEWER EASEMENT

100 YEAR FLOOD PLAIN

PROPERTY LINE

PARK ENTRANCE

ELK FALLS DR.

PARK CENTER

SHEET L-102

SHEET L-103

RESTROOM/SHELTER

SITE PARK DR. (PRIVATE ACCESS EASEMENT)

ALTERNATE #2
BOATING ACCESS
SHEET L-106

60' SEWER EASEMENT

PROPERTY LINE

LAKE EDGE

ALTERNATE #3
FISHING PIER
SHEET L-106

LAKE MYRA

MAINTENANCE FACILITY
SHEET L-105

NEW ROW

EXISTING R/W

POOLE RD.

NAD 83 NC GRID

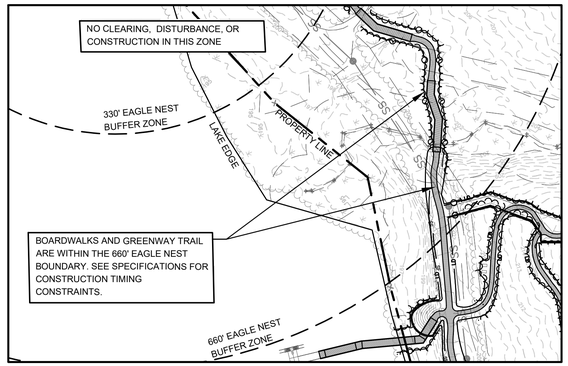
0 30 90 120

SCALE: 1" = 60' - 0"

TREE CLEARING RESTRICTIONS FOR THE PROTECTION OF BATS:

AVOID TREE CLEARING THE FOLLOWING DATES:

MAY 15 TO JULY 15TH - BAT PUP SEASON
DECEMBER 15 TO FEBRUARY 15 - WINTER TORPOR SEASON



EAGLE NEST BUFFER ZONES AND TREE CLEARING RESTRICTIONS:

1. THERE ARE A FEW LOCATIONS WHERE PARK DEVELOPMENT SHALL OCCUR WITHIN A PROTECTED BUFFER ZONE OF A KNOWN BALD EAGLE NEST SITE. STRICT ADHERENCE TO THE FOLLOWING REQUIREMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. WAKE COUNTY STAFF WILL ASSIST WITH LOCATING AND MARKING THE BALD EAGLE NEST AND SUBSEQUENT BUFFER ZONES.
2. BREEDING SEASON IN NORTH CAROLINA IS BETWEEN NOVEMBER 1 - JUNE 30 (THE HIGHEST SENSITIVITY IS BETWEEN NOVEMBER-FEBRUARY).
3. **WITHIN 0-330 FT OF THE EAGLE NEST:** NO TREE CLEARING, CONSTRUCTION OR MATERIAL STAGING DURING THE BREEDING SEASON. THE FOLLOWING WORK IS ADJACENT TO THIS ZONE: APPROXIMATELY 140 LF OF THE GREENWAY TRAIL FOLLOWS THE OUTSIDE EDGE OF THIS 330 FT BUFFER.
4. **WITHIN 330-660 FT OF THE EAGLE NEST:** TREE CLEARING SHOULD BE SCHEDULED OUTSIDE OF THE BREEDING SEASON WHENEVER POSSIBLE (JULY-OCTOBER). THE FOLLOWING WORK IS LOCATED WITHIN THIS ZONE: PORTIONS OF THE GREENWAY TRAIL, BOARDWALKS AND SANITARY SEWER UTILITY CONNECTIONS.
5. **THE 330' AND 660' PROTECTED BUFFERS SHALL BE CAREFULLY AND CLEARLY MARKED IN THE AREAS NOTED ABOVE WHERE TREE CLEARING SHALL TAKE PLACE.**
6. ADDITIONAL SIGNAGE MAY BE REQUIRED ALONG THESE EDGES TO ENSURE TREE CLEARING IN THESE AREAS ADHERES TO THE REQUIREMENTS ABOVE.
7. IF TREE CLEARING WITHIN THE 330-660 FT BUFFER ZONE MUST OCCUR DURING BREEDING SEASON:
   A. IT SHALL COMMENCE AS LATE IN THE SEASON AS POSSIBLE (IDEALLY APRIL-JUNE).
   B. CLEARING SHALL BEGIN AT THE FARTHEST POINT AWAY FROM THE NEST AND PROGRESS TOWARD IT LAST.
   C. CONTRACTOR SHALL MINIMIZE NOISE AND VISIBILITY USING TREE PROTECTION AND/OR SILT FENCING.
   D. CONTRACTOR SHALL AVOID CLEARING WITHIN THIS ZONE IN THE TWO HOURS AFTER SUNRISE AND BEFORE SUNSET.

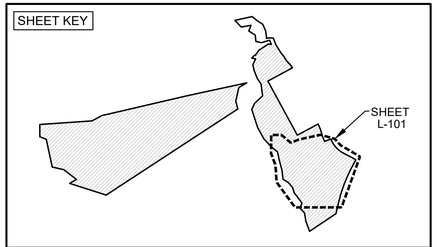
STAKING NOTES:

1. CONTRACTOR SHALL REPORT ALL DISCREPANCIES TO LANDSCAPE ARCHITECT.
2. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, DEPTHS, DISTANCES, ANGLES, AND SLOPES PRIOR TO ORDERING MATERIALS OR CONSTRUCTING PROJECT.
3. STAKE ACCESSIBLE PARKING SPACES AND SIDEWALKS IN THE FIELD AND VERIFY LONGITUDINAL AND CROSS-SLOPES MEET PLANS AND BUILDING CODE. GET OWNER AND LANDSCAPE ARCHITECT APPROVAL. NOTIFY LANDSCAPE ARCHITECT OF ANY ADJUSTMENTS OR IF CLARIFICATION IS NECESSARY. CONTRACTOR SHALL GIVE LANDSCAPE ARCHITECT A MINIMUM OF 48 HOURS NOTICE FOR APPROVAL OF STAKING.
4. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION AND SHALL BE RESPONSIBLE FOR THE PROTECTION OF THESE UTILITIES DURING THE CONSTRUCTION OF THE PROJECT.
5. THE CONTRACTOR SHALL ADEQUATELY AND FULLY PROTECT ALL PARTS OF THE WORK AGAINST DAMAGE UNTIL COMPLETED AND ACCEPTED BY THE OWNER. ANY DAMAGES INCLUDING VANDALISM SHALL BE PROPERLY REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
6. THROUGHOUT THE DURATION OF THE CONTRACT, THE CONTRACTOR SHALL PROVIDE TEMPORARY BARRICADES TO KEEP VEHICULAR AND PEDESTRIAN TRAFFIC OUT OF THE CURRENT PORTION OF THE WORK.
7. THE CONTRACTOR SHALL PROTECT EXPOSED SURFACES ADJACENT TO THE WORK FROM PHYSICAL DAMAGE RESULTING FROM CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL CLEAN, REPAIR, OR REPLACE AS REQUIRED SURFACES DAMAGED DURING THE COURSE OF THE WORK AT NO ADDITIONAL EXPENSE TO THE OWNER.
8. ADJUSTMENTS AND VARIATIONS FROM THE DRAWING MAY BE NECESSARY IN ORDER TO MAINTAIN A MAXIMUM 4.8% LONGITUDINAL SLOPE AND 2% CROSS-SLOPE ON ALL SIDEWALKS AND TRAILS.
9. CONCRETE SIDEWALKS SHALL BE A MINIMUM OF 4" THICK.
10. CONCRETE SIDEWALKS SHALL HAVE A LIGHT BROOM FINISH. SCORING TO BE LAID OUT RADIALLY WHEN WALK CURVES UNLESS OTHERWISE SHOWN ON PLANS. SIDEWALKS THAT ARE 6' WIDE TO BE SCORED AT ±SIX FOOT (±6') INTERVALS. SIDEWALKS THAT ARE 8' WIDE TO BE SCORED AT ±EIGHT FOOT (±8') INTERVALS

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECTURAL CORP. C-175 SUSAN HATCHELL LANDSCAPE ARCHITECTURE, PLLC

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 528 SUSAN M. HATCHELL 7-27-2026

SHEET KEY



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EP SITE LAYOUT KEY SHEET

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 7/27/26

L-101

PLAZA/PLAYGROUND RAILING 3 L-605
CONCRETE RETAINING WALL WITH GUARDRAIL, SEE STRUCTURAL SHEETS
REINFORCED TURF FIRE LANE, SEE CIVIL SHEETS
BUFFER
CONCRETE TRANSITION AT ASPHALT 10 L-602
6" THICK HEAVY DUTY CONCRETE 9 L-602
REINFORCED TURF FIRE LANE, SEE CIVIL SHEETS
TREES TO REMAIN
6' ASPHALT TRAIL 2 L-602
HEAVY DUTY ASPHALT TRAIL, SEE CIVIL SHEETS
PLAZA/ PLAYGROUND RAILING 3 L-605
ACCESSIBLE PARKING SIGNS (4)
6" THICK CONCRETE
6" THICK CONCRETE
COLLAPSIBLE BOLLARD 3 L-603
FIRE LANE, NO PARKING SIGN
ONE WAY SIGN, SEE SHEET L-107
ASPHALT DRIVE AND PARKING, SEE CIVIL SHEETS. CONTRACTOR TO STAKE IN FIELD FOR APPROVAL OF LANDSCAPE ARCHITECT & OWNER
TREES TO REMAIN
MATCHLINE - SEE BELOW
RAIN GARDEN
FOOD TRUCK HOOK UP, SEE ELECTRICAL SHEETS
STOP SIGN, TYP. SEE SHEET L-107
LIGHT POLE, TYP. SEE SITE ELECTRICAL SHEETS
WHEEL STOP, TYP.
LIGHT POLE, TYP.
4 SPACES
COMPOSITE DECKING SEE SITE STRUCTURAL SHEETS
STAFF AREA
VAN
PERMEABLE CONCRETE PAVER AND CONCRETE EDGING, SEE CIVIL SHEETS
LIGHT POLE, TYP.
ACCESSIBLE PARKING STRIPING 12 L-602
TREE PROTECTION FENCE 1 L-601
LANDFORM
PARK CENTER
FOOD TRUCK HOOK UP, SEE ELECTRICAL SHEETS
FIRE HYDRANT
8 SPACES
10 SPACES
TREES TO REMAIN
BUS PARKING SIGN, SEE SHEET L-107
SEATING AREA
4" THICK CONCRETE SIDEWALK 5 L-602
MAIN ENTRANCE
EXHIBIT AREA
CANOPY
PLAZA
PLAZA LAYOUT SHEET L-104
SEE SHEET L-104 FOR PLAZA LAYOUT ENLARGEMENT
ASPHALT PARKING LOT (51) STANDARD SPACES AND (5) ACCESSIBLE SPACES THIS SHEET INCLUDES (2) VAN ACCESSIBLE SPACES
ACCESSIBLE PAVEMENT MARKINGS 12 L-602
12 SPACES
WHEEL STOP, TYP.
BUS PARKING
SEATING AREA
DECK
METAL GRATING, SEE CIVIL SHEETS
FUTURE EV (2 SPACES) WITH CONDUIT
7 SPACES
ELECTRICAL LINE EASEMENT
LIGHT POLE, TYP.
1 SPACE
BUS PARKING SIGN, SEE SHEET L-107
TREES TO REMAIN
CURB AND GUTTER, SEE CIVIL SHEETS
TRANSFORMER, SEE ELECT SHEETS
SEE CIVIL SHEETS FOR ROAD ALIGNMENT
REINFORCED TURF FIRE LANE
SEATING AREA
LANDFORM
CLASSROOM
DECK
DECKING, SEE ARCH. STRUCTURAL SHEETS
RIFFLE WEIR AND POOLS 6 L-607
CROSSWALK 11 L-602
PROPERTY LINE
TIE FLUSH TO EXISTING CONCRETE SIDEWALK
LIGHT POLE, TYP.
CONSTRUCTED WETLAND, SEE CIVIL SHEETS
CURB RAMP AND 2' x 4' CAST-IN-PLACE DETECTABLE WARNING SURFACE, SEE CIVIL SHEETS
CONCRETE CURB RAMP, SEE CIVIL SHEETS
6 L-602 DOG WASTE BAG DISPENSER
6' ASPHALT TRAIL 2 L-602
TEMP. PROJECT SIGN 1 L-101
PARK ENTRANCE
CROSSWALK 11 L-602
SPLIT DX SYSTEM SEE MECHANICAL SHEETS
MAINTENANCE ACCESS
CLASSROOM
WETLAND OVERLOOK WITH 42" SURFACE MOUNTED PLAZA/PLAYGROUND RAILING, SEE DETAIL 3, PC-A409 AND DETAIL 3, L-606. SEE SITE STRUCTURAL SHEETS FOR OVERLOOK DETAILS.
ADA CURB RAMP, SEE CIVIL SHEETS
CONCRETE STEPS AND HANDRAIL 2 L-605
COLUMN
OVERFLOW COMPOSITE DECKING, SEE SITE STRUCTURAL SHEETS
LIGHT POLE, TYP.
STOP SIGN, TYP. SEE SHEET L-107
MAINTENANCE ACCESS BELOW
SPLIT DX SYSTEM SEE MECHANICAL SHEETS
STEPS
OUTDOOR CLASSROOM ON UPPER DECK
RAMP
RIFFLE WEIR AND POOLS 6 L-607
PLAZA/PLAYGROUND RAILING 3 L-605
EMBED IN CONCRETE WALL
TIE FLUSH TO EXISTING CONCRETE SIDEWALK
PARK ENTRANCE SIGN, N.I.C.
BOULDERS SOURCED ONSITE, FIELD LOCATE FOR APPROVAL
AUTOMATIC GATE SYSTEM, SEE CIVIL SHEETS
CURB AND GUTTER, SEE CIVIL SHEETS
TREES TO REMAIN
RIFFLE WEIR AND POOLS 6 L-607
4" THICK CONCRETE SIDEWALK 5 L-602
RAMP
CONCRETE POURED IN PLACE RETAINING WALL, SEE SITE STRUCTURAL SHEETS
SPEED LIMIT SIGN
MATCHLINE - SEE ABOVE
MATCHLINE - SEE SHEET L-103
6' ASPHALT TRAIL 2 L-602
CONCRETE TRANSITION AT ASPHALT 10 L-602
TYPICAL 10' X 10' BOARDWALK CROSSING WITH 4" HIGH WHEEL GUARDS, SEE STRUCTURAL SHEETS
NAD 83 NC GRID
0 10 20 40
SCALE: 1" = 20' - 0"
TREE PROTECTION FENCE 1 L-601
ASPHALT DRIVE AND PARKING, SEE CIVIL SHEETS. CONTRACTOR TO STAKE IN FIELD FOR APPROVAL OF LANDSCAPE ARCHITECT & OWNER

SHEET KEY
SHEET L-102

LEGEND:
- BOARDWALK
- 6' OR 8' WIDE ASPHALT TRAIL
- ASPHALT PAVING
- CONCRETE PAVING
- METAL GRATING
- PERMEABLE PAVERS
- TURF FIRE LANE
- SLATE CHIP SURFACING
- LD — LIMITS OF DISTURBANCE
- TREE PROTECTION FENCE
- SF — SILT FENCE

TOWN OF WENDELL PARKING LOT CALCULATIONS:

Per the Town of Wendell Code of Ordinances (COD) Chapter 10 - Parking, parking spaces for entertainment / recreation uses are required at a rate of 1-2 per 1,000 square feet, and bicycle parking at 1/20 auto spaces.

Number of parking spaces required and provided for the Eastern Parcel of Lake Myra County Park is shown on the Cover Sheet.

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECTURAL CORP. SUSAN HATCHELL LANDSCAPE ARCHITECTURE, PLLC C-175

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 528 SUSAN M. HATCHELL 7/27/2026

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EP SITE LAYOUT NORTH

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 7/27/26

L-102

MATCHLINE - SEE SHEET L-102

MATCHLINE - SEE SHEET L-104

ASPHALT PARKING, SEE CIVIL SHEETS
CONTRACTOR TO STAKE IN FIELD FOR APPROVAL OF LANDSCAPE ARCHITECT & OWNER

6 L-607 RIFFLE WEIR AND POOLS

RAMP AND HANDRAIL 1 L-605

4 L-602 TRAIL DRAIN

TREES TO REMAIN

METAL GRATING, SEE CIVIL SHEETS

CURB AND GUTTER, SEE CIVIL SHEETS

5 SPACES

7 SPACES

10 SPACES

ACCESSIBLE PARKING STRIPING 12 L-602

ACCESSIBLE PARKING SIGNS (2)

VAN

4" THICK CONCRETE SIDEWALK 5 L-602

SIGN, TYP. GOLF CART PARKING

COMPOSITE BOARDWALK DECKING, SEE STRUCTURAL SHEETS

LANDING

HANDRAIL

RAMP

PLANTING AREA

FOOD TRUCK HOOK UP, SEE ELECTRICAL SHEETS

BIKE RACK 5 L-603
SEE SPECS (4) TOTAL

DROP OFF

PEDESTRIAN CROSSING SIGN, SEE SHEET L-107

CROSSWALK 11 L-602

CONCRETE SEAT WALL 'A' 8 L-603

PLAZA/PLAYGROUND RAILING 3 L-605

PLAYGROUND SEE SHEET L-201

LIGHT POLE, TYP. SEE ELECT. SHEETS

POURED CONCRETE RETAINING WALL, SEE STRUCTURAL SHEETS

2' x 4' CAST-IN-PLACE DETECTABLE WARNING SURFACE

WASTE AND RECYCLING RECEPTACLE, SEE SPECS

GRILL, SEE SPECS

CISTERN, SEE CIVIL SHEETS

DOWNSPOUT, TYP.

RESTROOM/SHELTER

TABLES, SEE SPECS

OPEN PLAY

LANDFORM

PICNIC/OPEN PLAY

PLANTING AREA

DOG WASTE STATION

TREE PROTECTION FENCE 1 L-601

4" THICK CONCRETE SIDEWALK 5 L-602

6' ASPHALT TRAIL 2 L-602

KNEE RAIL 4 L-605

6 L-602 DOG WASTE BAG DISPENSER

2 L-602 6' ASPHALT TRAIL

WASTE AND RECYCLING RECEPTACLE, SEE SPECS

BUS PARKING

ASPHALT PARKING LOT (48) STANDARD SPACES AND (4) ACCESSIBLE SPACES THIS SHEET INCLUDES (2) VAN ACCESSIBLE SPACES

8 SPACES

WHEEL STOP, TYP.

PEDESTRIAN CROSSING SIGN, SEE SHEET L-107

LIGHT POLE, TYP. SEE ELECT. SHEETS

ELECTRICAL LINE EASEMENT

STOP SIGN, SEE SHEET L-107

TREE PROTECTION FENCE 1 L-601

FIRE HYDRANT

7 SPACES

SEE CIVIL SHEETS FOR ROAD ALIGNMENT

6 SPACES

PEDESTRIAN CROSSING SIGN, SEE SHEET L-107

LIGHT POLE, TYP. SEE ELECT. SHEETS

STRIPING, TYP. TURN AROUND

AUTHORIZED VEHICLES ONLY SIGN, SEE SHEET L-107

FUTURE TRAIL

CROSSWALK 11 L-602

GATE HOLD BACK POST, BOTH SIDES

EMERGENCY KNOX BOX 2 L-603

DOUBLE PARK GATE 7 L-603

LEGEND:

- BOARDWALK
- 6' OR 8' WIDE ASPHALT TRAIL
- ASPHALT PAVING
- CONCRETE PAVING
- METAL GRATING
- LD — LIMITS OF DISTURBANCE
- TREE PROTECTION FENCE
- SF — SILT FENCE

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECTURAL CORPORATION C-175 SUSAN HATCHELL LANDSCAPE ARCHITECTURE, PLLC

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 528 SUSAN M. HATCHELL 7-27-2026

NAD 83 NC GRID

0 10 20 40

SCALE: 1" = 20' - 0"

SHEET KEY

SHEET L-103

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EP SITE LAYOUT SOUTH

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 7/27/26

L-103

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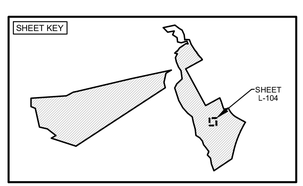
EP SITE LAYOUT PLAZA ENLARGEMENT

LAKE MYRA COUNTY PARK
Wake County, NC

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECTURAL CORPORATION C-175 SUSAN HATCHELL LANDSCAPE ARCHITECTURE, PLLC

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 528 SUSAN M. HATCHELL 7-27-2026

SHEET KEY



NAD 83 NC GRID

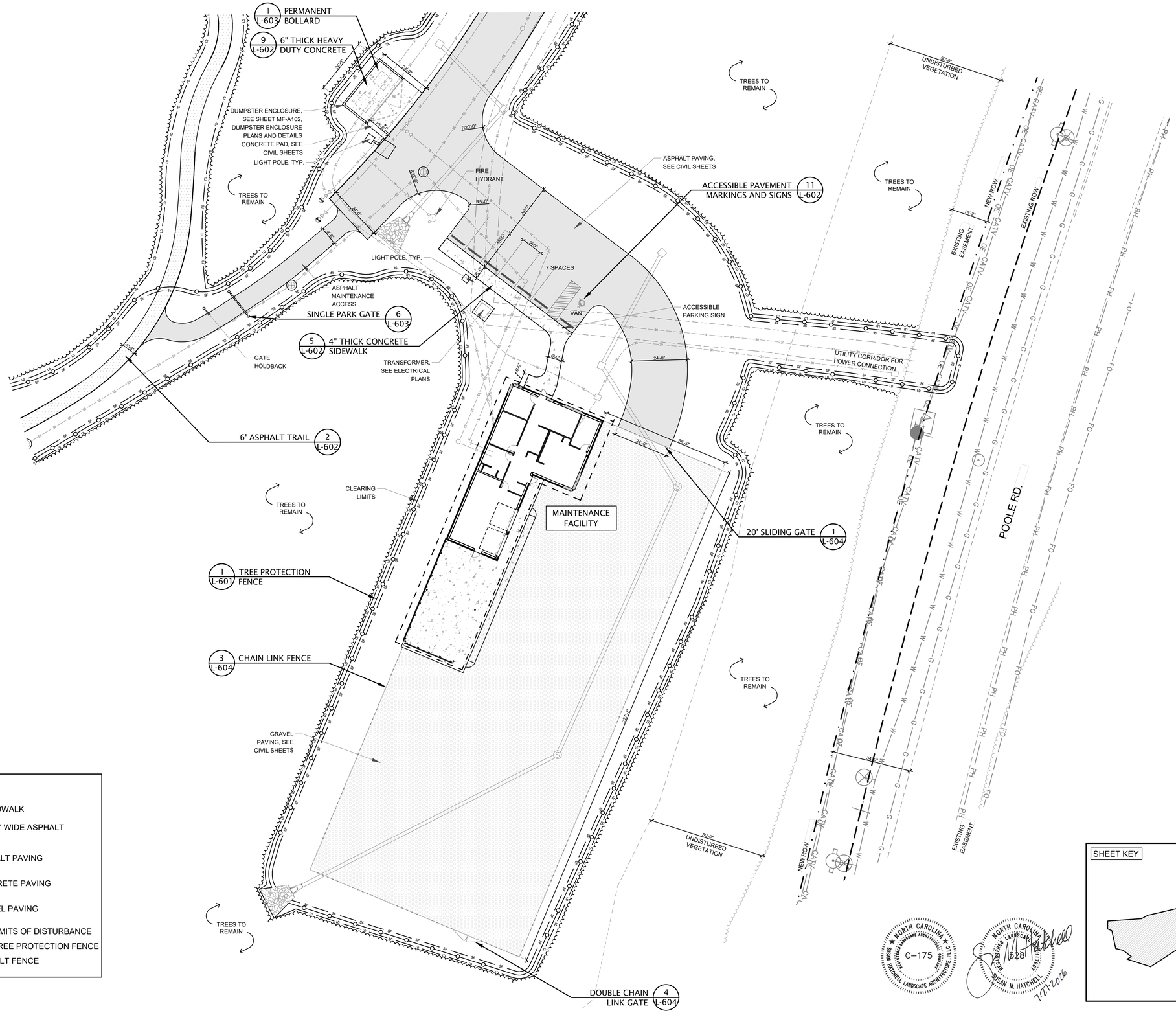
0 5 10 20

SCALE: 1" = 10' - 0"

REVISIONS

Date: 7/27/26

L-104



LEGEND:

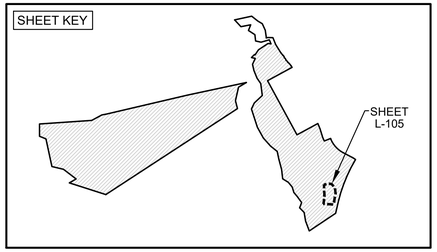
- BOARDWALK
- 6' OR 8' WIDE ASPHALT TRAIL
- ASPHALT PAVING
- CONCRETE PAVING
- GRAVEL PAVING
- LD — LIMITS OF DISTURBANCE
- TREE PROTECTION FENCE
- SF — SILT FENCE

NAD 83 NC GRID

0 10 20 40

SCALE: 1" = 20' - 0"

SHEET KEY



NORTH CAROLINA LANDSCAPE ARCHITECTURAL CORPORATION SUSAN HATCHELL LANDSCAPE ARCHITECTURE, PLLC C-175

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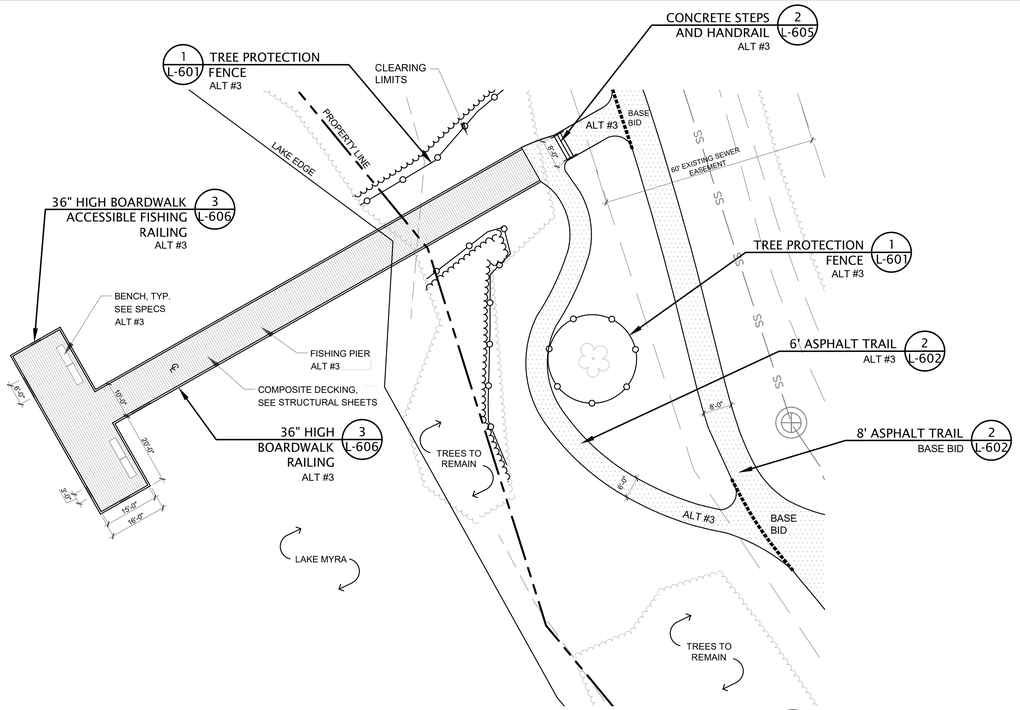
EP SITE LAYOUT PLAN MAINTENANCE FACILITY

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

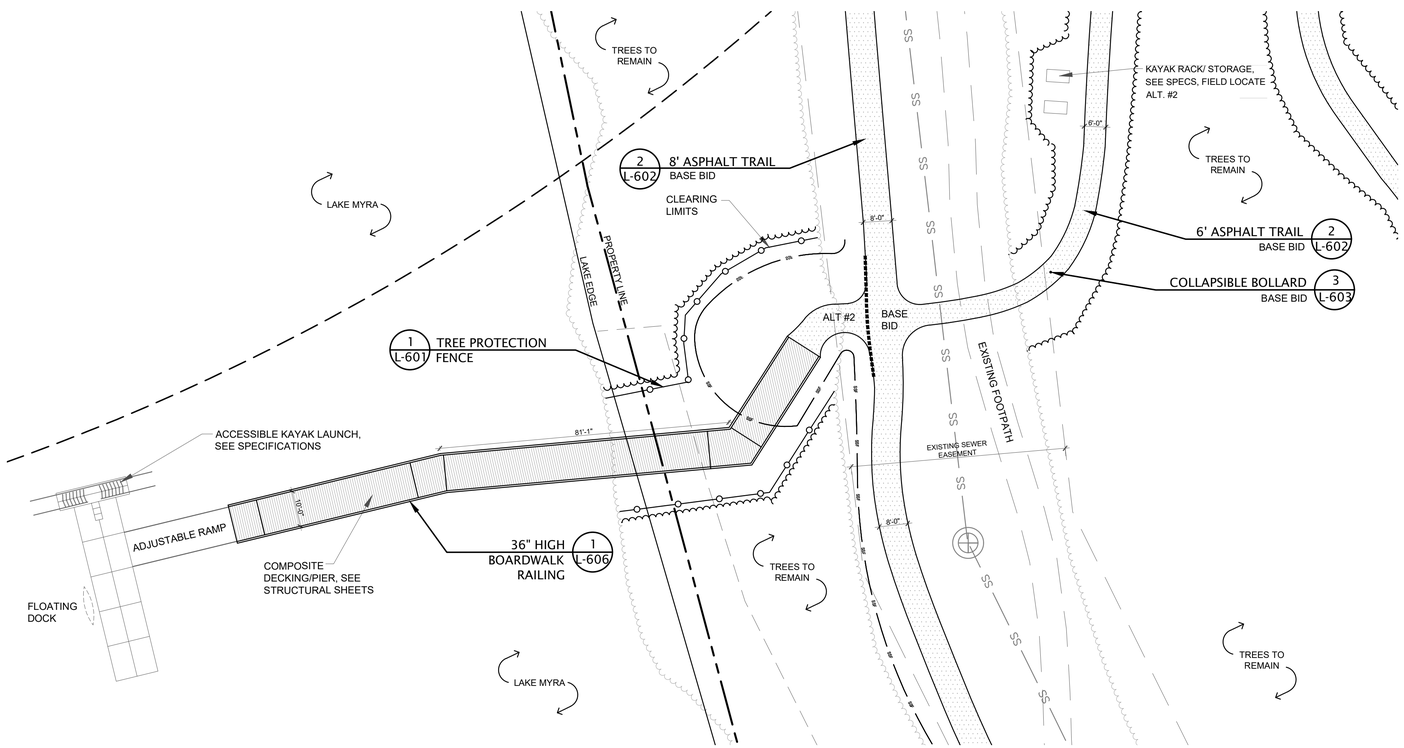
Date: 7/27/26

L-105



FISHING PIER - (ALTERNATE #3)
Scale: 1"=20'-0"

2 L-106



BOATING ACCESS (ALTERNATE #2)
Scale: 1"=20'-0"

1 L-106

TREE CLEARING RESTRICTIONS FOR THE PROTECTION OF BATS:

AVOID TREE CLEARING THE FOLLOWING DATES:

MAY 15 TO JULY 15TH - BAT PUP SEASON
DECEMBER 15 TO FEBRUARY 15 - WINTER TORPOR SEASON

NORTH CAROLINA LANDSCAPE ARCHITECTURAL REGISTRATION BOARD SUSAN HATCHELL LANDSCAPE ARCHITECTURE, PLLC C-175

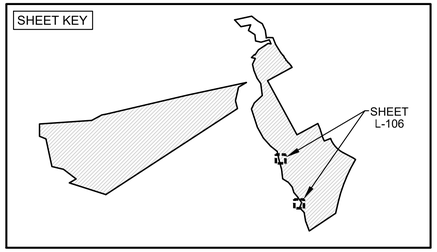
NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 528 SUSAN W. HATCHELL 7/27/2026

NAD 83 NC GRID

0 10 20 40

SCALE: 1" = 20' - 0"

SHEET KEY



Susan Hatchell
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EP SITE LAYOUT
FISHING PIER AND BOATING ACCESS ENLARGEMENT

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 7/27/26

L-106

BOARDWALKS AND THE BOATING ACCESS ARE WITHIN THE 660' EAGLE NEST BOUNDARY. SEE NOTES AND SPECIFICATIONS FOR CLEARING AND CONSTRUCTION CONSTRAINTS.

330' EAGLE NEST BUFFER

660' EAGLE NEST BUFFER

BOARDWALK B

BOARDWALK C

SHEET L-402

30' CITY OF RALEIGH SANITARY SEWER EASEMENT

50' RIPARIAN BUFFER

PROPERTY LINE

TEMPORARY PROJECT SIGN (1 / L-107)

DOG WASTE BAG DISPENSER

PARK ENTRANCE

PARK RULES SIGN, OWNER FABRICATED, FURNISHED AND INSTALLED

15 MPH SPEED LIMIT SIGN

STOP SIGN

ELK FALLS DR.

PROPERTY LINE

PARK ENTRANCE SIGN, OWNER FABRICATED, FURNISHED AND INSTALLED.

(3) ADA ACCESSIBLE PARKING SIGN - STANDARD

NO PARKING FIRE LANE SIGN

ONE WAY SIGN

ADA ACCESSIBLE PARKING SIGN - VAN

ADA ACCESSIBLE PARKING SIGN - VAN

DO NOT ENTER SIGN

PARK CENTER

(4) GOLF CART PARKING SIGNS

BUS PARKING ONLY SIGN

ADA ACCESSIBLE PARKING SIGN - STANDARD

ADA ACCESSIBLE PARKING SIGN - VAN

PEDESTRIAN CROSSING SIGN

PEDESTRIAN CROSSING SIGN

BOATING ACCESS SHEET L-106

(2) ADA ACCESSIBLE PARKING SIGN - STANDARD

STOP SIGN

RESTROOM/SHELTER

PEDESTRIAN CROSSING SIGN

AUTHORIZED VEHICLES ONLY SIGN

60' SEWER EASEMENT

PROPERTY LINE

LAKE EDGE

POOLE RD

ADA ACCESSIBLE PARKING SIGN - VAN

FISHING PIER SHEET L-106

LAKE MYRA

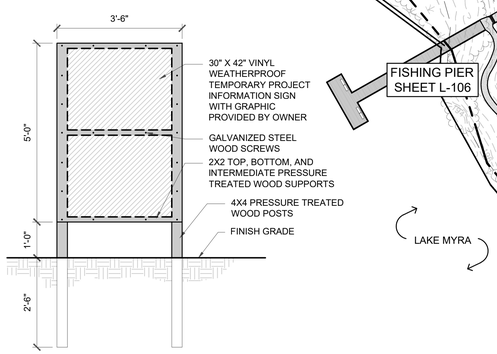
MAINTENANCE FACILITY SHEET L-505

SITE SIGNAGE NOTES:

1. CONTRACTOR SHALL REPORT ALL DISCREPANCIES TO LANDSCAPE ARCHITECT.
2. ALL VEHICULAR TRAFFIC SIGNAGE SHALL BE FABRICATED AND INSTALLED ACCORDING TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL (MUTCD).
3. PARK ENTRANCE SIGN TO BE FABRICATED AND FURNISHED BY WAKE COUNTY SIGN SHOP.

LEGEND - SIGNAGE TYPES:

- NO PARKING FIRE LANE SIGN (R7-200) 18" X 24"
- STOP SIGN (R1-1) 30" X 30"
- 15 MPH SPEED LIMIT SIGN (R2-1) 18" X 24"
- ONE WAY SIGN (R6-2R) 18" X 24"
- DO NOT ENTER - WRONG WAY (K2-0675) 18" X 24"
- PEDESTRIAN CROSSING SIGN (W11-2) 24" X 24"
- AUTHORIZED VEHICLES ONLY SIGN (R5-11) 24" X 30"
- ADA ACCESSIBLE PARKING - STANDARD (R7-8A) 12" X 18" AND (R7-8D) 9" X 12"
- ADA ACCESSIBLE PARKING - VAN (R7-8P) 6" X 12"
- GOLF CART PARKING SIGN (K-2593) 12" X 18"
- BUS PARKING ONLY SIGN (K-6138) 12" X 18"



NOTES:

1. CONTRACTOR SHALL SUBMIT SHOW DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SIGN THROUGHOUT THE DURATION OF THE PROJECT AND REMOVING SIGN UPON PROJECT COMPLETION.
3. FIELD LOCATE FOR APPROVAL.

TEMPORARY PROJECT SIGN (1 / L-107)

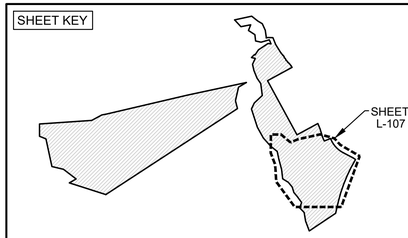
Not to Scale

NAD 83 NC GRID

0 30 90 120

SCALE: 1" = 60' - 0"

SHEET KEY



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NORTH CAROLINA BOARD OF LANDSCAPE ARCHITECTURE — SUSAN MITCHELL HATCHELL LANDSCAPE ARCHITECTURE, PLLC — C-175

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT — 528 — SUSAN M. HATCHELL — 7-27-2016

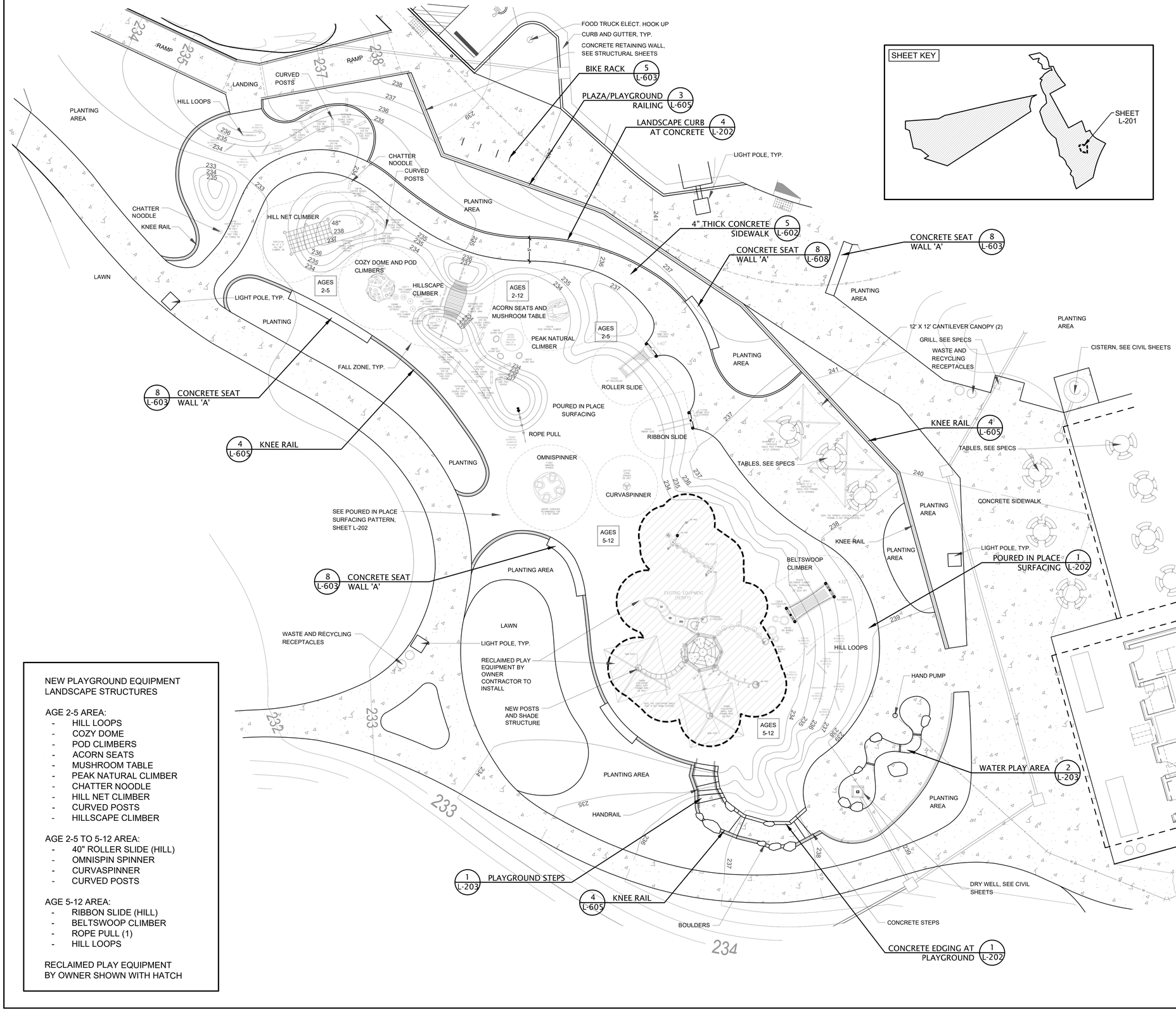
EP SITE SIGNAGE PLAN

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 7/27/26

L-107



NEW PLAYGROUND EQUIPMENT
LANDSCAPE STRUCTURES

AGE 2-5 AREA:
- HILL LOOPS
- COZY DOME
- POD CLIMBERS
- ACORN SEATS
- MUSHROOM TABLE
- PEAK NATURAL CLIMBER
- CHATTER NOODLE
- HILL NET CLIMBER
- CURVED POSTS
- HILLSCAPE CLIMBER

AGE 2-5 TO 5-12 AREA:
- 40" ROLLER SLIDE (HILL)
- OMNISPIN SPINNER
- CURVASPINNER
- CURVED POSTS

AGE 5-12 AREA:
- RIBBON SLIDE (HILL)
- BELTSWOOP CLIMBER
- ROPE PULL (1)
- HILL LOOPS

RECLAIMED PLAY EQUIPMENT
BY OWNER SHOWN WITH HATCH

STAKING NOTES:

1. CONTRACTOR SHALL REPORT ALL DISCREPANCIES TO LANDSCAPE ARCHITECT.
2. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, DEPTHS, DISTANCES, ANGLES AND SLOPES PRIOR TO ORDERING MATERIALS OR CONSTRUCTING PROJECT.
3. ADJUSTMENTS AND VARIATIONS FROM THE DRAWING MAY BE NECESSARY IN ORDER TO MAINTAIN A MAXIMUM 4.99% SLOPE ON ALL WALKWAYS.
4. STAKE WALKWAYS AND PLAYGROUND AREA IN THE FIELD FOR LANDSCAPE ARCHITECT'S APPROVAL. NOTIFY LANDSCAPE ARCHITECT OF ANY ADJUSTMENTS OR IF CLARIFICATION IS NECESSARY. CONTRACTOR SHALL GIVE LANDSCAPE ARCHITECT A MINIMUM OF 48 HOURS NOTICE FOR APPROVAL OF STAKING.
5. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION AND SHALL BE RESPONSIBLE FOR THE PROTECTION OF THESE UTILITIES DURING THE CONSTRUCTION OF THE PROJECT.
6. THE CONTRACTOR SHALL ADEQUATELY AND FULLY PROTECT ALL PARTS OF THE WORK AGAINST DAMAGE UNTIL COMPLETED AND ACCEPTED BY THE OWNER. ANY DAMAGES SHALL BE PROPERLY REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
7. THE CONTRACTOR SHALL PROTECT EXPOSED SURFACES ADJACENT TO THE WORK FROM PHYSICAL DAMAGE RESULTING FROM CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL CLEAN, REPAIR, OR REPLACE, AS REQUIRED, SURFACES DAMAGED DURING THE COURSE OF THE WORK AT NO ADDITIONAL EXPENSE TO THE OWNER.
8. CONCRETE SIDEWALKS SHALL BE A MIN. OF 4" THICK.
9. SIDEWALKS SHALL HAVE A LIGHT BROOM FINISH, BE SCORED AT ± FIVE FOOT (5') INTERVALS AND BE LAID OUT RADIALLY WHEN WALK CURVES, UNLESS OTHERWISE SHOWN ON PLANS.

PLAYGROUND NOTES:

1. PLAYGROUND EQUIPMENT SHALL BE PURCHASED BY WAKE COUNTY AND DELIVERED TO THE JOB SITE.
2. CONTRACTOR TO PROVIDE INSTALLATION OF EQUIPMENT AND SURFACING.
3. PLAYGROUND EQUIPMENT INSTALLER SHALL BE A CERTIFIED INSTALLER FOR PLAYGROUND STRUCTURES EQUIPMENT AND POURED IN PLACE SURFACING.
4. CONTRACTOR SHALL PERFORM INSPECTION AND TESTING BY PERSONNEL WITH CERTIFIED PLAYGROUND SAFETY INSPECTOR (CPSI) CERTIFICATION FOR EACH TYPE OF INSTALLED PLAYGROUND EQUIPMENT ACCORDING TO ASTM F1487.
5. SEE CIVIL SHEETS FOR SUBDRAINAGE LAYOUT.
6. SEE CIVIL SHEETS FOR DETAILED GRADING PLAN.

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EP PLAYGROUND EQUIPMENT

LAKE MYRA COUNTY PARK
Wake County, NC

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECTURE C-175 SUSAN HATCHELL LANDSCAPE ARCHITECTURE, PLLC

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 528 SUSAN W. HATCHELL 7-27-2026

REVISIONS

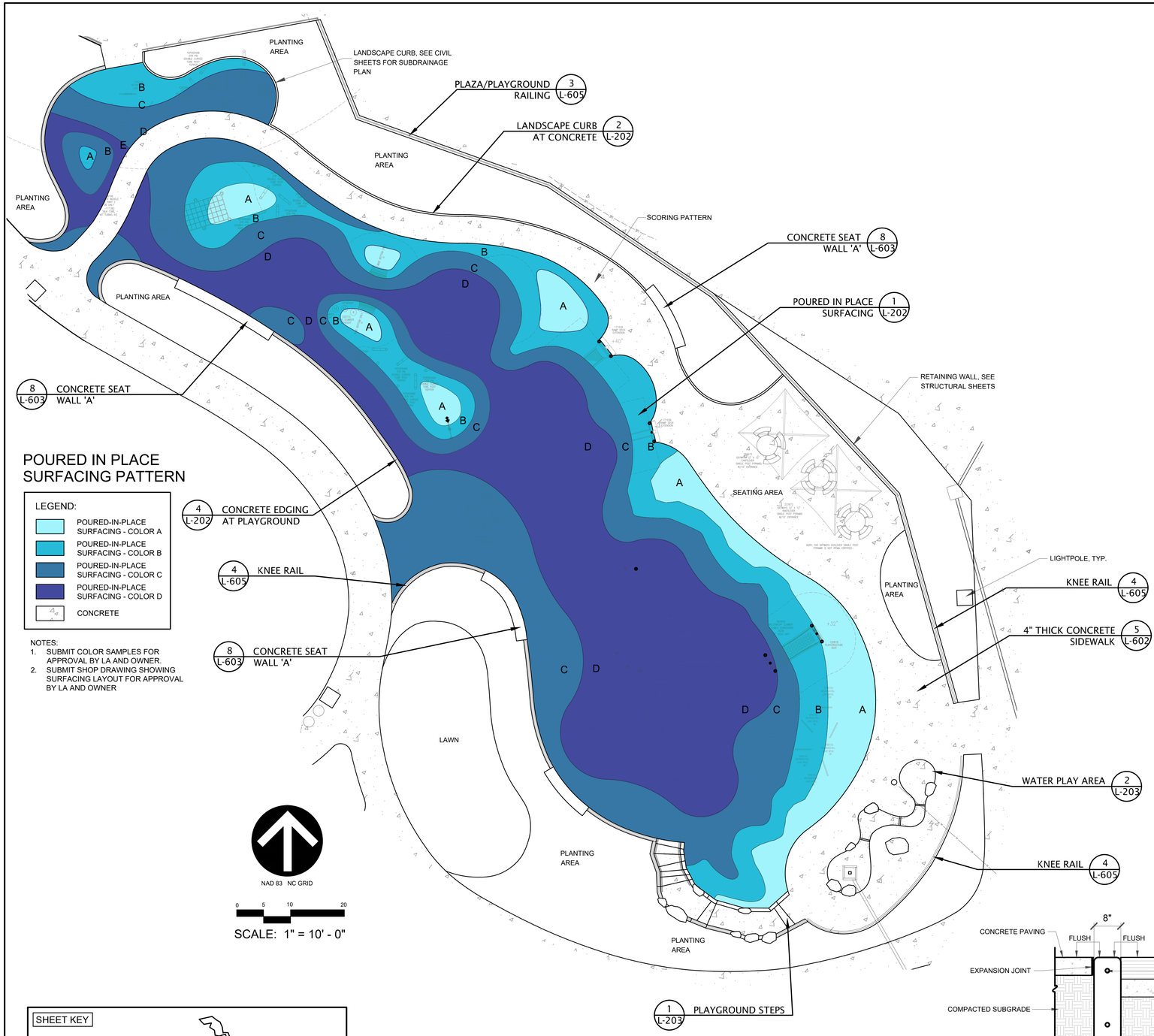
NAD 83 NC GRID

0 5 10 20

SCALE: 1" = 10' - 0"

Date: 7/27/26

L-201



POURED IN PLACE SURFACING PATTERN

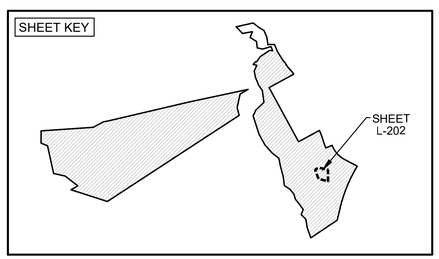
LEGEND:

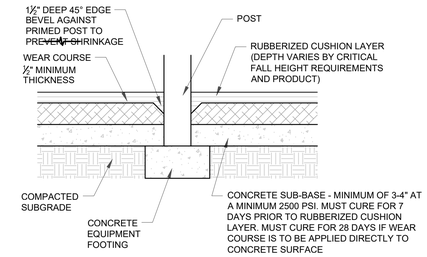
- POURED-IN-PLACE SURFACING - COLOR A
- POURED-IN-PLACE SURFACING - COLOR B
- POURED-IN-PLACE SURFACING - COLOR C
- POURED-IN-PLACE SURFACING - COLOR D
- CONCRETE

NOTES:

1. SUBMIT COLOR SAMPLES FOR APPROVAL BY LA AND OWNER.
2. SUBMIT SHOP DRAWING SHOWING SURFACING LAYOUT FOR APPROVAL BY LA AND OWNER

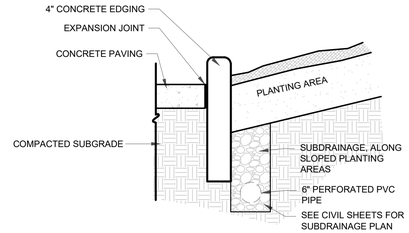
SHEET KEY





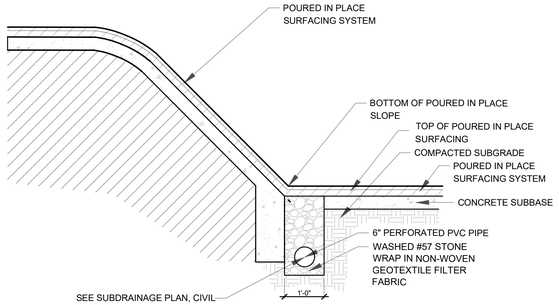
POURED IN PLACE SURFACING

Not to Scale — 1 / L-202



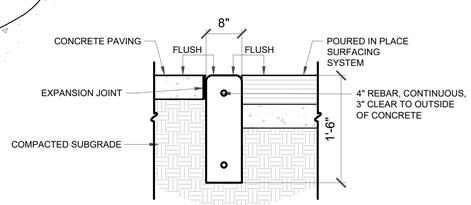
LANDSCAPE CURB AT CONCRETE

Not to Scale — 2 / L-202

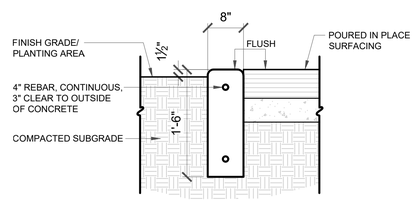


POURED IN PLACE SURFACING ON A SLOPE

Not to Scale — 3 / L-202



EDGING BETWEEN POURED IN PLACE SURFACING AND CONCRETE SIDEWALK CONDITION



POURED IN PLACE ADJACENT TO NATURAL GRADE CONDITION

CONCRETE EDGING AT PLAYGROUND

Not to Scale — 4 / L-202

NORTH CAROLINA LANDSCAPE ARCHITECTURAL CORP. C-175 SUSAN HATCHELL LANDSCAPE ARCHITECTURE, PLLC

NORTH CAROLINA LANDSCAPE ARCHITECT 528 SUSAN M. HATCHELL 7-27-2026

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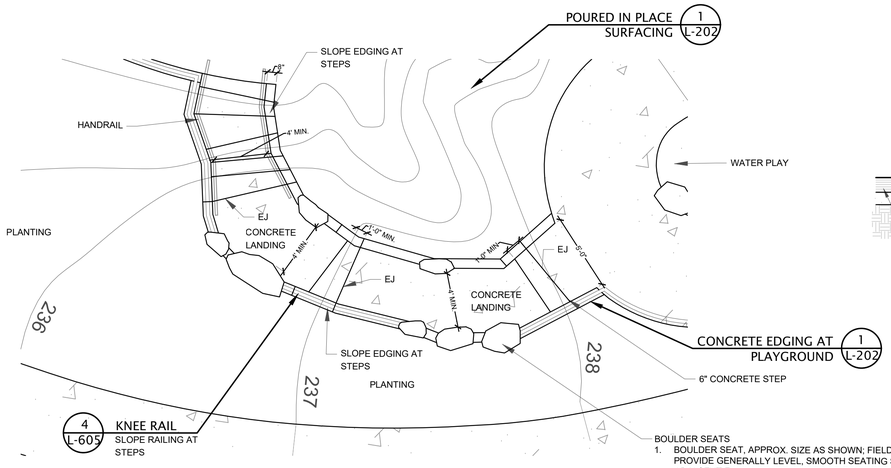
EP PLAYGROUND SURFACING AND DETAILS

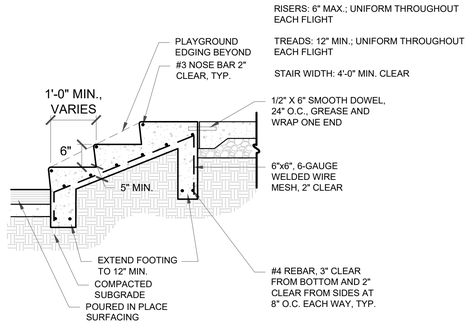
LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 7/27/26

L-202





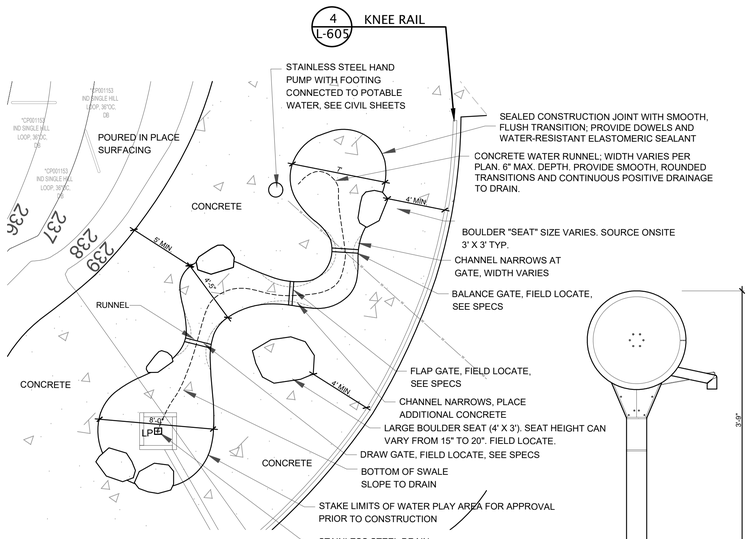
BOULDER SEATS

1. BOULDER SEAT, APPROX. SIZE AS SHOWN; FIELD-SELECT AND LOCATE. PROVIDE GENERALLY LEVEL, SMOOTH SEATING SURFACE 15"–20" ABOVE ADJACENT FINISH GRADE. EMBED AS REQUIRED TO PREVENT ROCKING, ROTATION OR SETTLEMENT. SET ON 6" MIN. COMPACTED AGGREGATE BASE. LANDSCAPE ARCHITECT TO APPROVE EACH BOULDER AND FINAL ORIENTATION BEFORE INSTALLATION.
2. BOULDER SEATS SHALL HAVE ROUNDED EDGES AND SHALL BE FREE OF SHARP PROJECTIONS, SPALLS, FRACTURES AND UNSTABLE SURFACES.
3. MAINTAIN REQUIRED CLEAR WIDTH AT STEPS AND LANDINGS; BOULDERS SHALL NOT ENCROACH INTO THE REQUIRED PEDESTRIAN ROUTE.
4. PROVIDE POSITIVE DRAINAGE AROUND BOULDER SEATS; DO NOT CREATE LOW AREAS THAT RETAIN WATER.

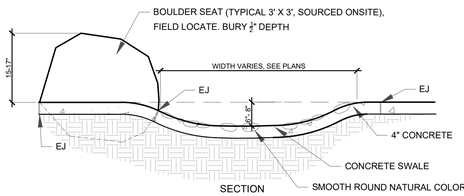
GENERAL NOTES:

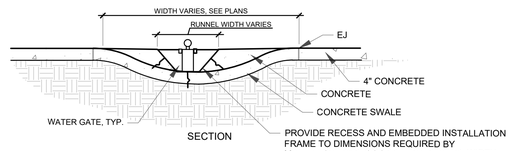
1. LAY OUT STEPS, LANDINGS, CONCRETE EDGING, RAILINGS AND BOULDERS FOR LANDSCAPE ARCHITECT'S APPROVAL BEFORE FORMING CONCRETE.
2. VERIFY ALL FINISH ELEVATIONS, RISER HEIGHTS AND TREAD DEPTHS BEFORE CONSTRUCTION. RISERS AND TREADS SHALL BE UNIFORM WITHIN EACH FLIGHT.
3. PROVIDE LIGHT BROOM FINISH PERPENDICULAR TO DIRECTION OF TRAVEL ON TREADS AND LANDINGS.
4. ROUND EXPOSED CONCRETE EDGES WITH 1/2" RADIUS UNLESS OTHERWISE SHOWN. REMOVE SHARP EDGES, FINS AND PROJECTIONS.
5. SLOPE LANDINGS 1% MIN. AND 2% MAX. TO DRAIN. DO NOT DRAIN WATER ACROSS STAIR TREADS.
6. PROVIDE 4,000-PSI MINIMUM AIR-ENTRAINED EXTERIOR CONCRETE OVER APPROVED COMPACTED SUBGRADE.
7. COORDINATE CONCRETE JOINTS WITH STAIR EDGES, LANDINGS, RAILING POSTS AND CHANGES IN GEOMETRY. DO NOT PLACE JOINTS THROUGH POST ANCHORAGES.
8. CONCRETE EDGING, BOULDERS AND RAILINGS SHALL REMAIN OUTSIDE REQUIRED PLAY EQUIPMENT USE ZONES AND FALL SURFACING LIMITS.
9. GRADE TO DRAIN AWAY FROM STEPS AND CONCRETE EDGING.

PLAYGROUND STEPS
1"=10'-0
1
L-203



HAND PUMP WITH FOOTING AND TIED TO POTABLE WATER SOURCE, FOR ILLUSTRATION ONLY. SEE SPECS





NOTES:

1. LAY OUT THE COMPLETE WATER PLAY AREA, INCLUDING RUNNEL EDGES, BOULDERS, WATER GATES, PUMP AND DRAIN, FOR LANDSCAPE ARCHITECT'S APPROVAL PRIOR TO EXCAVATION OR FORMING.
2. CONTRACTOR SHALL COORDINATE ALL WATER PLAY EQUIPMENT, INSTALLATION FRAMES, FOOTINGS, ANCHORAGES, UTILITIES AND FINISH ELEVATIONS WITH APPROVED MANUFACTURER'S SHOP DRAWINGS PRIOR TO CONCRETE PLACEMENT.
3. PROVIDE CONTINUOUS POSITIVE DRAINAGE FROM THE HAND PUMP TO THE DRAIN. VERIFY RUNNEL INVERT ELEVATIONS IN THE FIELD BEFORE FORMING. FINISHED WORK SHALL DRAIN COMPLETELY WITHOUT PONDING.
4. CONCRETE SHALL BE 4,000 PSI MIN., AIR-ENTRAINED EXTERIOR CONCRETE. PROVIDE REINFORCEMENT, BASE, JOINTING AND CURING IN ACCORDANCE WITH THE CONCRETE PAVING SPECIFICATIONS.
5. PROVIDE A LIGHT BROOM SLIP-RESISTANT FINISH. ALL EXPOSED CONCRETE EDGES, TRANSITIONS AND RUNNEL CORNERS SHALL BE SMOOTH AND ROUNDED. PROVIDE 1/2" MIN. RADIUS AT EXPOSED RUNNEL EDGES AND OTHER CONCRETE EDGES. REMOVE SHARP EDGES, FINS, BURRS AND PROJECTIONS.
6. LOCALLY THICKEN CONCRETE AT EMBEDDED STONES, WATER GATES, PUMP FOOTINGS, DRAIN AND OTHER EMBEDDED COMPONENTS. MAINTAIN 4" MIN. CONCRETE BELOW EMBEDDED ITEMS UNLESS OTHERWISE REQUIRED BY THE MANUFACTURER.
7. FIELD-SELECT BOULDERS FOR SIZE, SHAPE, COLOR AND SURFACE CHARACTER. OBTAIN LANDSCAPE ARCHITECT'S APPROVAL BEFORE INSTALLATION.
8. BOULDERS AND EMBEDDED STONES SHALL BE STABLE, NON-ROCKING AND FREE OF SHARP EDGES, CRACKS, SPALLS AND HAZARDOUS PROJECTIONS.
9. ALL WATER GATE COMPONENTS, FASTENERS, FRAMES AND ANCHORAGES SHALL BE STAINLESS STEEL AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS. WATER GATE WITH MANUFACTURER-PROVIDED INSTALLATION FRAME; APPROXIMATE LOCATION SHOWN. FINAL LOCATION, ORIENTATION AND ELEVATION PER APPROVED SHOP DRAWINGS AND LANDSCAPE ARCHITECT'S FIELD APPROVAL PRIOR TO FORMING CONCRETE.
10. TAPER RUNNEL UNIFORMLY TO GATE FRAME; PROVIDE SMOOTH TRANSITION WITHOUT SHARP CORNERS OR ABRUPT CHANGES IN ELEVATION.
11. PROTECT MOVING GATE COMPONENTS FROM CONCRETE, GROUT AND CONSTRUCTION DEBRIS. VERIFY FREE OPERATION AFTER COMPLETING ADJACENT WORK.
12. COORDINATE POTABLE-WATER SUPPLY, SHUTOFF VALVE, BACKFLOW PREVENTION, PRESSURE REGULATION, FILTER, WINTERIZATION AND DRAINAGE WITH PLUMBING DRAWINGS AND LOCAL REQUIREMENTS.
13. ALL UTILITY ACCESS COMPONENTS SHALL BE LOCATED OUTSIDE THE ACTIVE WATER PLAY AREA WHERE PRACTICABLE AND SHALL BE ACCESSIBLE FOR MAINTENANCE.
14. WATER-PLAY FEATURES SHALL NOT ENCROACH UPON REQUIRED PLAY-EQUIPMENT USE ZONES OR THE REQUIRED ACCESSIBLE ROUTE. MAINTAIN A 36" MIN. CLEAR ACCESSIBLE ROUTE AROUND THE FEATURE AS SHOWN.
15. CLEAN, FLUSH AND TEST THE COMPLETE SYSTEM. DEMONSTRATE POSITIVE DRAINAGE, PROPER GATE OPERATION AND PUMP OPERATION BEFORE ACCEPTANCE.
16. STAINLESS-STEEL AREA DRAIN WITH REMOVABLE, HEEL-RESISTANT GRATE AND SEDIMENT BASKET; SET GRATE FLUSH WITH RUNNEL INVERT. CONNECT TO DRAINAGE SYSTEM; SEE CIVIL DRAWINGS.
17. GRATE OPENINGS SHALL NOT EXCEED 1/2" IN THE DIRECTION OF TRAVEL. PROVIDE ACCESS FOR CLEANING AND MAINTENANCE.
18. BOULDER SEATS SHALL HAVE ROUNDED EDGES AND SHALL BE FREE OF SHARP PROJECTIONS, SPALLS, FRACTURES AND UNSTABLE SURFACES.
19. MAINTAIN REQUIRED CLEAR WIDTH. BOULDERS SHALL NOT ENCROACH INTO THE REQUIRED PEDESTRIAN ROUTE.
20. PROVIDE POSITIVE DRAINAGE AROUND BOULDER SEATS; DO NOT CREATE LOW AREAS THAT RETAIN WATER.

WATER PLAY AREA
1"=10'-0
2
L-203

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECTURAL C-175 SUSAN HATCHELL LANDSCAPE ARCHITECTURE, PLLC 711 W. NORTH ST. RALEIGH, NC 27603

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 528 SUSAN M. HATCHELL 7-27-2026

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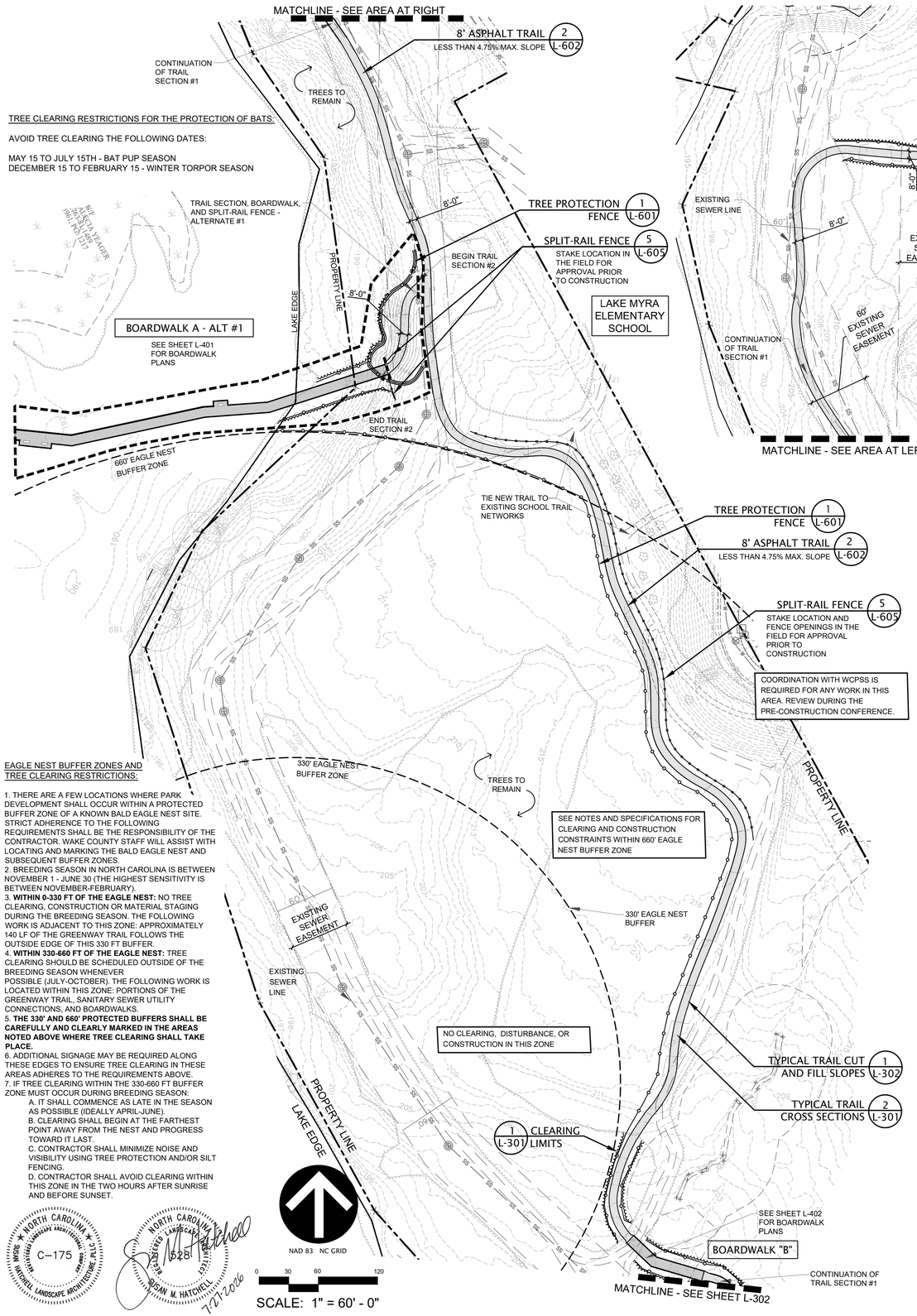
EP PLAYGROUND DETAILS

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 7/27/26

L-203



TRAIL LAYOUT:

1. TRAIL WIDTHS ARE 6' OR 8' AS INDICATED ON THE PLAN. A 2' SHOULDER IS ON EACH SIDE OF THE TRAILS IS INCLUDED.
2. MAXIMUM LONGITUDINAL SLOPE ON LANDINGS IS 2%, MAXIMUM LONGITUDINAL SLOPE ON ALL TRAILS AND AT ALL TRAIL HEADS IS 4.75%.
3. MAXIMUM CROSS SLOPE ON TRAILS, LANDINGS, AND BOARDWALKS IS 2%.
4. LOW HANGING OBJECTS OR BRANCHES THAT ARE LOWER THAN 96 INCHES ABOVE THE TRAIL SURFACE ARE NOT ALLOWED. VERTICAL CLEARANCE OF THE TRAIL SHALL NOT BE LESS THAN 96 INCHES.
5. FINAL TRAIL ALIGNMENT INCLUDING LOCATIONS OF BOARDWALK CROSSINGS TO BE DETERMINED IN THE FIELD USING MAXIMUM SLOPES OF FIELD CONDITIONS AND AVOIDING MAJOR TREE REMOVAL, STEEP SLOPES, AND ROCK OUTCROPS. THE CONTRACTOR SHALL LAYOUT AND FLAG THE TRAIL FOR REVIEW BY THE LANDSCAPE ARCHITECT AND THE OWNER.

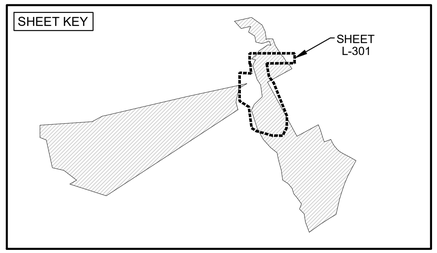
TRAIL SEGMENT CHART:

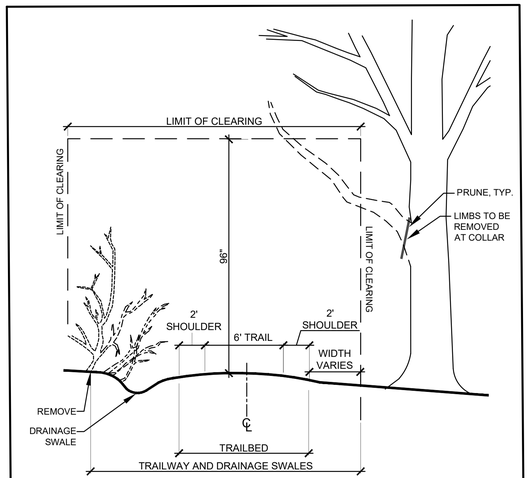
TRAIL SECTION	SURFACE TYPE	WIDTH	APPROXIMATE LENGTH	# OF PIPE CROSSINGS
#1	ASPHALT	8'	2,700 LF	0
#2	ASPHALT (ALTERNATE #1)	8'	100 LF	0
#3	ASPHALT	6'	1,210 LF	3
#4	ASPHALT	6'	1,030 LF	3
#5	ASPHALT	6'	910 LF	2
#6	ASPHALT	6'	240 LF	1
#7	ASPHALT	6'	100 LF	0
#8	ASPHALT	6'	340 LF	0
#9	ASPHALT	6'	420 LF	2
#10	ASPHALT	8'	1,100 LF	0
#11	ASPHALT (ALTERNATE #2)	8'	20 LF	0

TREE CLEARING RESTRICTIONS FOR THE PROTECTION OF BATS:

AVOID TREE CLEARING THE FOLLOWING DATES:

MAY 15 TO JULY 15TH - BAT PUP SEASON
DECEMBER 15 TO FEBRUARY 15 - WINTER TORPOR SEASON

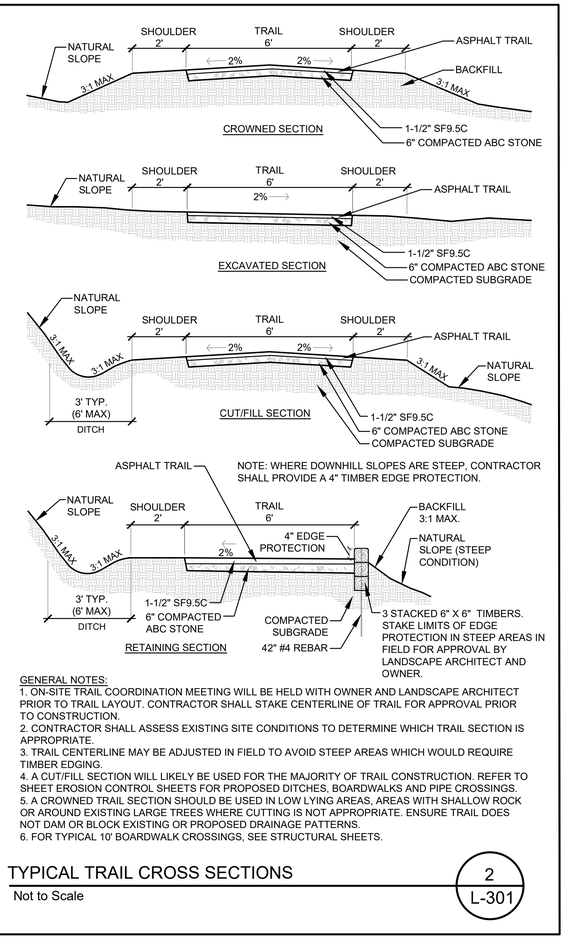




NOTES:

1. SELECT TRAIL ALIGNMENT TO AVOID ANY LARGE OR SIGNIFICANT TREES, STEEP SLOPES AND ROCK OUTCROPS. FINAL TRAIL CENTERLINE TO BE FLAGGED OR STAKED IN THE FIELD FOR APPROVAL BY LANDSCAPE ARCHITECT AND OWNER PRIOR TO CONSTRUCTION.
2. VEGETATION SHOULD BE CLEARED TO A HEIGHT OF 96" ABOVE TRAILBED. BRANCHES THAT COULD RESTRICT TRAIL USE WHEN WEIGHTED DOWN WITH RAIN OR SNOW SHOULD ALSO BE REMOVED.
3. AN OVERHEAD CANOPY OF BRANCHES SHOULD REMAIN TO SLOW THE GROWTH OF GRASSES OR WEEDS THAT THRIVE IN SUNLIGHT.
4. VERIFY REMOVAL AND/OR PRUNING OF LARGE TREES ON TRAIL WITH OWNER PRIOR TO CONSTRUCTION.

CLEARING LIMITS
Not to Scale
1
L-301



GENERAL NOTES:
1. ON-SITE TRAIL COORDINATION MEETING WILL BE HELD WITH OWNER AND LANDSCAPE ARCHITECT PRIOR TO TRAIL LAYOUT. CONTRACTOR SHALL STAKE CENTERLINE OF TRAIL FOR APPROVAL PRIOR TO CONSTRUCTION.
2. CONTRACTOR SHALL ASSESS EXISTING SITE CONDITIONS TO DETERMINE WHICH TRAIL SECTION IS APPROPRIATE.
3. TRAIL CENTERLINE MAY BE ADJUSTED IN FIELD TO AVOID STEEP AREAS WHICH WOULD REQUIRE TIMBER EDGING.
4. A CUT/FILL SECTION WILL LIKELY BE USED FOR THE MAJORITY OF TRAIL CONSTRUCTION. REFER TO SHEET EROSION CONTROL SHEETS FOR PROPOSED DITCHES, BOARDWALKS AND PIPE CROSSINGS.
5. A CROWNED TRAIL SECTION SHOULD BE USED IN LOW LYING AREAS, AREAS WITH SHALLOW ROCK OR AROUND EXISTING LARGE TREES WHERE CUTTING IS NOT APPROPRIATE. ENSURE TRAIL DOES NOT DAM OR BLOCK EXISTING OR PROPOSED DRAINAGE PATTERNS.
6. FOR TYPICAL 10' BOARDWALK CROSSINGS, SEE STRUCTURAL SHEETS.

TYPICAL TRAIL CROSS SECTIONS
Not to Scale
2
L-301

NORTH CAROLINA LANDSCAPE ARCHITECTURE C-175 SUSAN HATCHELL LANDSCAPE ARCHITECTURE, PLLC

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 528 SUSAN M. HATCHELL

7/27/2026

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EP TRAILS NORTH

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 7/27/26

L-301

MATCHLINE - SEE SHEET L-301

CONTINUATION OF TRAIL SECTION #1

CITY OF RALEIGH SANITARY SEWER EASEMENT

SEE NOTES AND SPECIFICATIONS FOR CLEARING AND CONSTRUCTION CONSTRAINTS WITHIN 660' EAGLE NEST BUFFER ZONE

BOARDWALK "C"

TRAIL LAYOUT:

1. TRAIL WIDTHS ARE 6' OR 8' AS INDICATED ON THE PLAN. A 2' SHOULDER IS ON EACH SIDE OF THE TRAILS.
2. MAXIMUM LONGITUDINAL SLOPE ON LANDINGS IS 2%, MAXIMUM LONGITUDINAL SLOPE ON ALL TRAILS AND AT ALL TRAIL HEADS IS 4.75%.
3. MAXIMUM CROSS SLOPE ON TRAILS, LANDINGS, AND BOARDWALKS IS 2%.
4. LOW HANGING OBJECTS OR BRANCHES THAT ARE LOWER THAN 96 INCHES ABOVE THE TRAIL SURFACE ARE NOT ALLOWED. VERTICAL CLEARANCE OF THE TRAIL SHALL NOT BE LESS THAN 96 INCHES.
5. FINAL TRAIL ALIGNMENT INCLUDING LOCATIONS OF BOARDWALK CROSSINGS TO BE DETERMINED IN THE FIELD USING MAXIMUM SLOPES OF FIELD CONDITIONS AND AVOIDING MAJOR TREE REMOVAL, STEEP SLOPES, AND ROCK OUTCROPS. THE CONTRACTOR SHALL LAYOUT AND FLAG THE TRAIL FOR REVIEW BY THE LANDSCAPE ARCHITECT AND THE OWNER.

3 L-603 COLLAPSIBLE BOLLARD

TREE PROTECTION FENCE 1 L-601

660' EAGLE NEST BUFFER

42" GUARDRAIL
HEAVY DUTY ASPHALT FIRE LANE. SEE CIVIL SHEETS
RETAINING WALL

BEGIN HEAVY DUTY CONCRETE WALK

3 L-603 COLLAPSIBLE BOLLARD

BEGIN TRAIL SECTION #6

HEAVY DUTY CONCRETE

CONCRETE CURB RAMP, SEE CIVIL SHEETS
BEGIN TRAIL SECTION #3

NEIGHBORHOOD PEDESTRIAN ACCESS

ELK FALLS DR

CROSSWALK

PARK ENTRANCE SIGN, N.I.C.

AUTOMATIC GATE

6' ASPHALT TRAIL 2 L-602
LESS THAN 4.75% MAX. SLOPE

TREES TO REMAIN

(2) FREESTANDING KAYAK RACK, SEE SPECS

BEGIN TRAIL SECTION #1

6' ASPHALT TRAIL 2 L-602
LESS THAN 5% MAX. SLOPE

BENCH, SEE SPECS

PARK CENTER

BEGIN TRAIL SECTION #11 (ALTERNATE #2)

END TRAIL SECTION #3

END TRAIL SECTION #10

TREES TO REMAIN

1 L-602 BENCH PAD

END TRAIL SECTION #6

END TRAIL SECTION #4

BOAT ACCESS, SEE SHEET L-106 ALTERNATE #2

BEGIN TRAIL SECTION #7

END TRAIL SECTION #7

BENCH, SEE SPECS

1 L-602 BENCH PAD

TYPICAL 10' X 10' BOARDWALK CROSSING, SEE SITE STRUCTURAL SHEETS

TREES TO REMAIN

3 L-603 COLLAPSIBLE BOLLARD

2 L-602 6' ASPHALT TRAIL
LESS THAN 4.75% MAX. SLOPE

BEGIN TRAIL SECTION #4

TREES TO REMAIN

8' ASPHALT TRAIL 2 L-602
LESS THAN 4.75% MAX. SLOPE

BEGIN TRAIL SECTION #8

END TRAIL SECTION #9

6' ASPHALT TRAIL 2 L-602
LESS THAN 4.75% MAX. SLOPE

6' ASPHALT TRAIL 2 L-602
LESS THAN 4.75% MAX. SLOPE

BEGIN TRAIL SECTION #5

FUTURE TRAIL CONNECTION

LAKE MYRA

FISHING PIER, ALT #3, SEE SHEET L-106

6' ASPHALT TRAIL 2 L-602
LESS THAN 4.75% MAX. SLOPE

COLLAPSIBLE BOLLARD 3 L-603

END TRAIL SECTION #8

TRAIL DRAINS 4 L-602

ASPHALT MAINTENANCE ACCESS

GATE

TREE PROTECTION FENCE 1 L-601

BEGIN TRAIL SECTION #9

TREES TO REMAIN

TYPICAL TRAIL CUT AND FILL SLOPES 1 L-302

TYPICAL TRAIL CROSS SECTIONS 2 L-301

CLEARING LIMITS 1 L-301

PROPERTY LINE

LAKE EDGE

TREES TO REMAIN

END TRAIL SECTION #5
END TRAIL SECTION #10

COLLAPSIBLE BOLLARD 3 L-603

NAD 83 NC GRID

0 30 60 120

SCALE: 1" = 60' - 0"

CONTRACTOR SHALL MAKE EVERY EFFORT TO MINIMIZE DAMAGE TO EXISTING TREES AND VEGETATION ALONG CONSTRUCTION ACCESS ROUTE. ANY DAMAGE OUTSIDE APPROVED CLEARING LIMITS SHALL BE REPAIRED AND RESTORED BY THE CONTRACTOR. ACTUAL CLEARING LIMITS WILL BE NEGOTIATED AT THE PRE-CONSTRUCTION MEETING, AND AT THE TIME OF TRAIL FLAGGING, AND ADHERED TO DURING THE PROJECT.

PLAYGROUND

RESTROOM/SHELTER

CONTRACTOR SHALL MAKE EVERY EFFORT TO MINIMIZE DAMAGE TO EXISTING TREES AND VEGETATION ALONG CONSTRUCTION ACCESS ROUTE. ANY DAMAGE OUTSIDE APPROVED CLEARING LIMITS SHALL BE REPAIRED AND RESTORED BY THE CONTRACTOR. ACTUAL CLEARING LIMITS WILL BE NEGOTIATED AT THE PRE-CONSTRUCTION MEETING, AND AT THE TIME OF TRAIL FLAGGING, AND ADHERED TO DURING THE PROJECT.

TREE CLEARING RESTRICTIONS FOR THE PROTECTION OF BATS:

AVOID TREE CLEARING THE FOLLOWING DATES:

MAY 15 TO JULY 15TH - BAT PUP SEASON
DECEMBER 15 TO FEBRUARY 15 - WINTER TORPOR SEASON

EAGLE NEST BUFFER ZONES AND TREE CLEARING RESTRICTIONS:

1. THERE ARE A FEW LOCATIONS WHERE PARK DEVELOPMENT SHALL OCCUR WITHIN A PROTECTED BUFFER ZONE OF A KNOWN BALD EAGLE NEST SITE. STRICT ADHERENCE TO THE FOLLOWING REQUIREMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. WAKE COUNTY STAFF WILL ASSIST WITH LOCATING AND MARKING THE BALD EAGLE NEST AND SUBSEQUENT BUFFER ZONES.
2. BREEDING SEASON IN NORTH CAROLINA IS BETWEEN NOVEMBER 1 - JUNE 30 (THE HIGHEST SENSITIVITY IS BETWEEN NOVEMBER-FEBRUARY).
3. **WITHIN 0-330 FT OF THE EAGLE NEST:** NO TREE CLEARING, CONSTRUCTION OR MATERIAL STAGING DURING THE BREEDING SEASON. THE FOLLOWING WORK IS ADJACENT TO THIS ZONE: APPROXIMATELY 140 LF OF THE GREENWAY TRAIL FOLLOWS THE OUTSIDE EDGE OF THIS 330 FT BUFFER.
4. **WITHIN 330-660 FT OF THE EAGLE NEST:** TREE CLEARING SHOULD BE SCHEDULED OUTSIDE OF THE BREEDING SEASON WHENEVER POSSIBLE (JULY-OCTOBER). THE FOLLOWING WORK IS LOCATED WITHIN THIS ZONE: PORTIONS OF THE GREENWAY TRAIL, SANITARY SEWER UTILITY CONNECTIONS, AND BOARDWALKS.
5. **THE 330' AND 660' PROTECTED BUFFERS SHALL BE CAREFULLY AND CLEARLY MARKED IN THE AREAS NOTED ABOVE WHERE TREE CLEARING SHALL TAKE PLACE.**
6. ADDITIONAL SIGNAGE MAY BE REQUIRED ALONG THESE EDGES TO ENSURE TREE CLEARING IN THESE AREAS ADHERES TO THE REQUIREMENTS ABOVE.
7. IF TREE CLEARING WITHIN THE 330-660 FT BUFFER ZONE MUST OCCUR DURING BREEDING SEASON:
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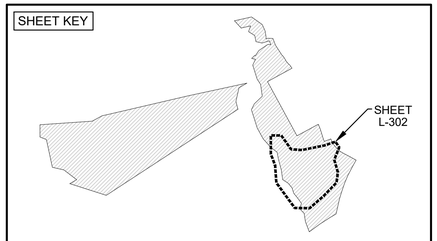
   B. CLEARING SHALL BEGIN AT THE FARTHEST POINT AWAY FROM THE NEST AND PROGRESS TOWARD IT LAST.
   C. CONTRACTOR SHALL MINIMIZE NOISE AND VISIBILITY USING TREE PROTECTION AND/OR SILT FENCING.
   D. CONTRACTOR SHALL AVOID CLEARING WITHIN THIS ZONE IN THE TWO HOURS AFTER SUNRISE AND BEFORE SUNSET.

SHEET KEY



TRAIL SEGMENT CHART:

TRAIL SECTION	SURFACE TYPE	WIDTH	APPROXIMATE LENGTH	# OF PIPE CROSSINGS
#1	ASPHALT	8'	2,710 LF	0
#2	ASPHALT (ALTERNATE #1)	8'	100 LF	0
#3	ASPHALT	6'	1,210 LF	3
#4	ASPHALT	6'	1,030 LF	3
#5	ASPHALT	6'	910 LF	2
#6	ASPHALT	6'	240 LF	1
#7	ASPHALT	6'	100 LF	0
#8	ASPHALT	6'	340 LF	0
#9	ASPHALT	6'	420 LF	2
#10	ASPHALT	8'	1,100 LF	0
#11	ASPHALT (ALTERNATE #2)	8'	20 LF	0

TREE CLEARING RESTRICTIONS FOR THE PROTECTION OF BATS:

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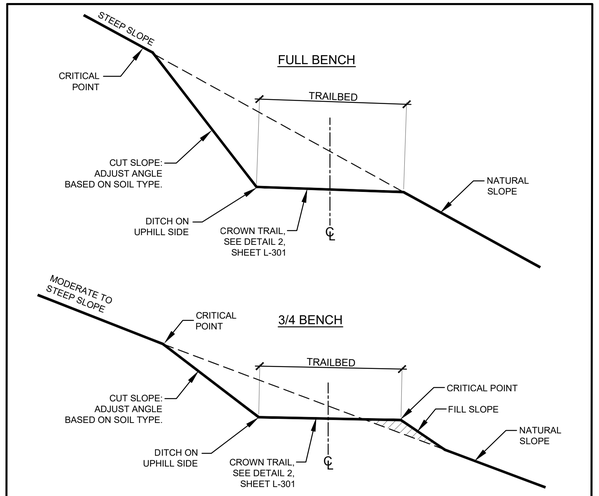
NORTH CAROLINA LANDSCAPE ARCHITECTURAL CORP C-175 HATCHELL LANDSCAPE ARCHITECTURE, PLLC

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 528 SUSAN M. HATCHELL 7-27-2026



NOTES:

1. USE 3/4 BENCH CUT WHEREVER POSSIBLE.
2. IF NATIVE MATERIAL CONSISTS OF LARGE AMOUNTS OF TOPSOIL OR ORGANIC MATTER, IT SHOULD BE REMOVED AND SET ASIDE FOR LATER USE AS A COVER AND PLANTING SURFACE FOR EXPOSED SUBSOIL.
3. MAINTAIN CROSS SLOPE SO THAT WATER RUNS ACROSS INSTEAD OF DOWN TRAIL. 2% MAX. CROSS SLOPE.
4. SELECT TRAIL ALIGNMENT TO PROVIDE A ROLLING GRADE OF CRESTS AND DIPS IN ORDER TO MINIMIZE WATER FLOW ALONG TRAIL. SEE CIVIL SHEETS FOR DRAINAGE.
5. REMOVE ANY SHARP OR LOOSE STONES.
6. ROUND OFF AND COMPACT CRITICAL POINTS WHERE SIDE SLOPES MEET EXISTING GRADES IN ORDER TO MINIMIZE EROSION OF CUT AND FILL SLOPES.
7. BROADCAST EXCESS CUT SOIL DOWNHILL TO AVOID CREATING A BERM AT TRAIL EDGE. 6" DEPTH MAX. AVOID FILLING AT SENSITIVE VEGETATION.
8. SEED OR MULCH TO STABILIZE CUT AND FILL AREAS.
9. CUT/FILL SLOPES NOT TO EXCEED 3:1.

TYPICAL TRAIL CUT AND FILL SLOPES — Not to Scale — 1 L-302

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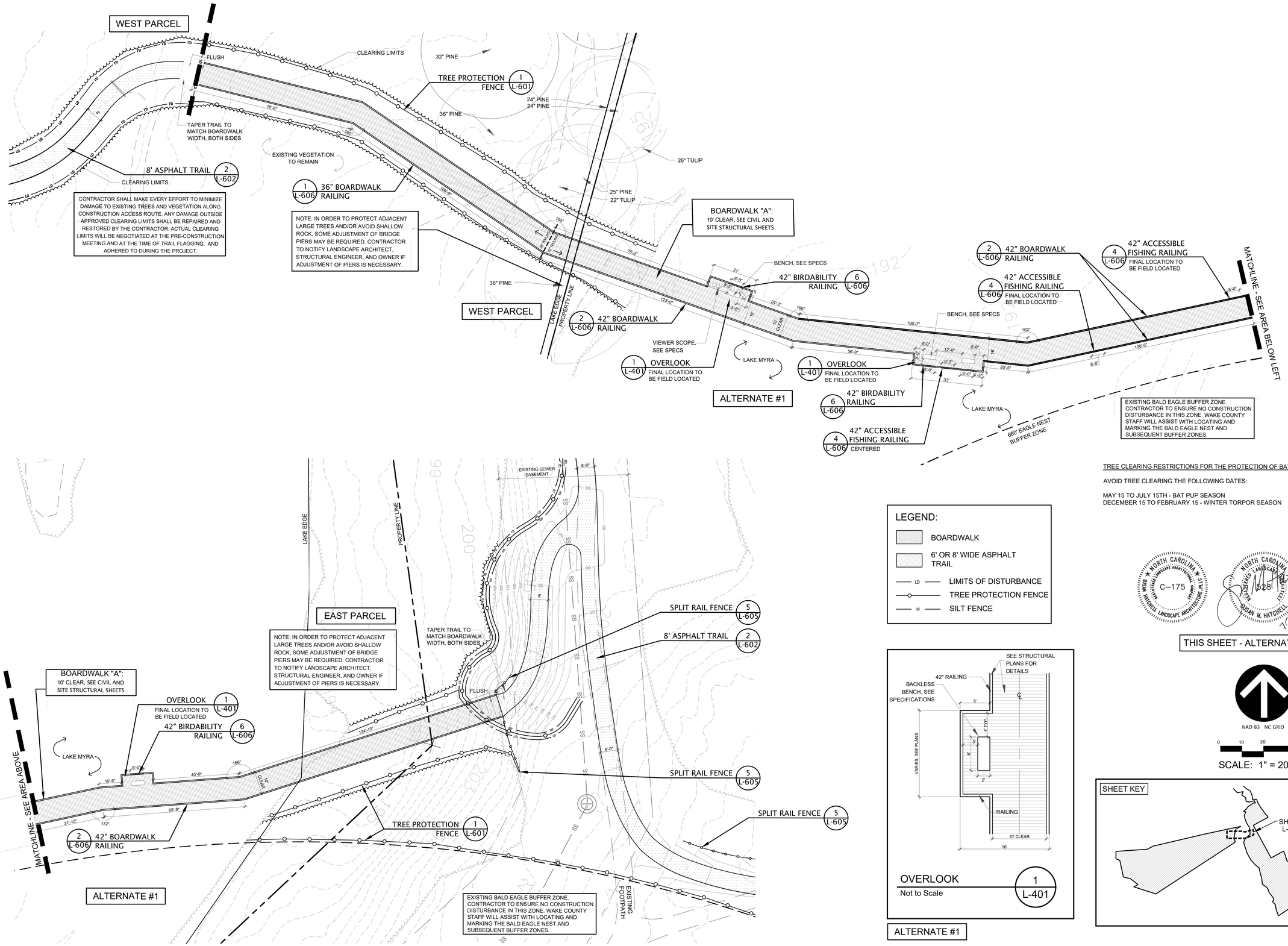
EP TRAILS SOUTH

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 7/27/26

L-302



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LEGEND:

- BOARDWALK
- 6' OR 8' WIDE ASPHALT TRAIL
- LD — LIMITS OF DISTURBANCE
- TREE PROTECTION FENCE
- SF — SILT FENCE

OVERLOOK — 1 L-401
Not to Scale

ALTERNATE #1

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NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECTURAL CORPORATION SUSAN HATCHELL LANDSCAPE ARCHITECTURE, PLLC C-175

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 1521 6528 SUSAN M. HATCHELL 7/27/2026

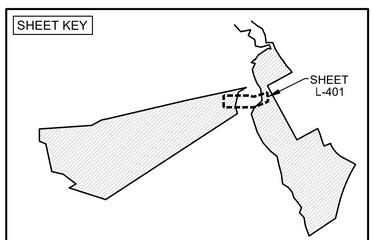
THIS SHEET - ALTERNATE #1

NAD 83 NC GRID

0 10 20 40

SCALE: 1" = 20' - 0"

SHEET KEY



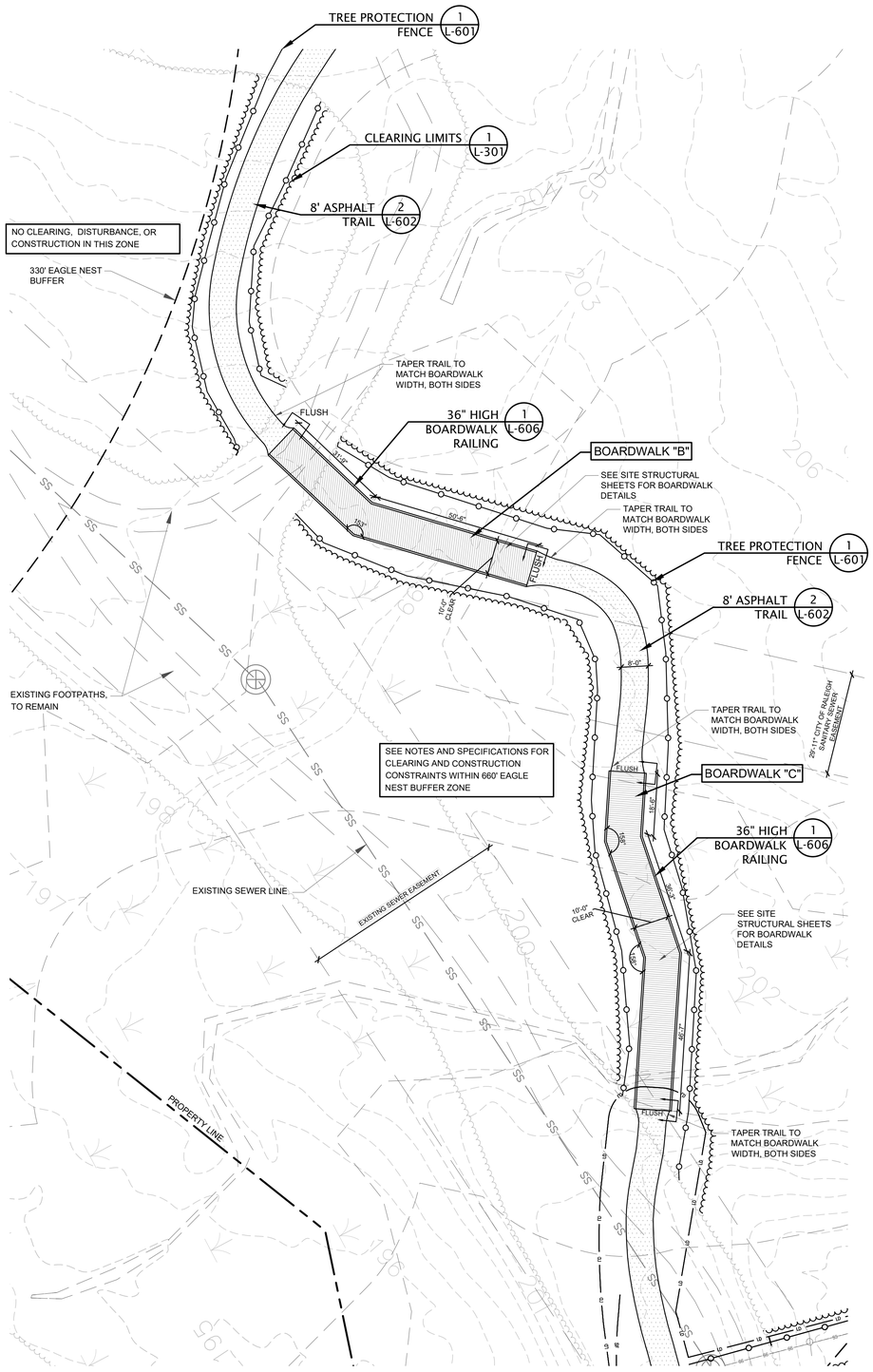
EP BOARDWALK A ACROSS LAKE MYRA

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 7/27/26

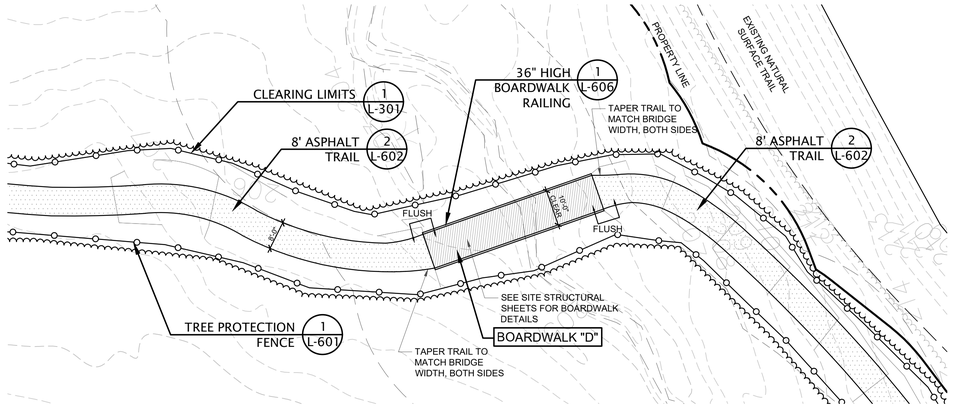
L-401



BOARDWALKS B & C

Scale: 1"=20'-0"

1 L-402



BOARDWALK D

Scale: 1"=20'-0"

2 L-402

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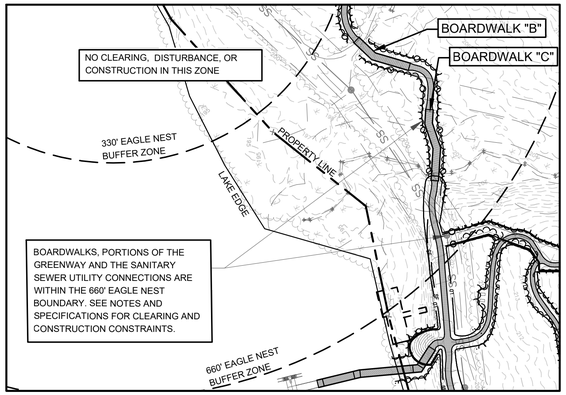
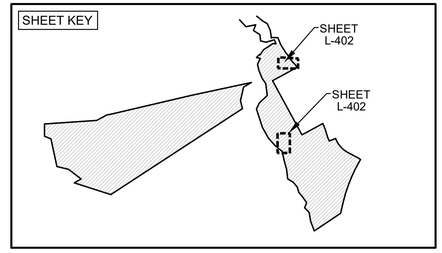


NAD 83 NC GRID

0 10 20 40

SCALE: 1" = 20' - 0"



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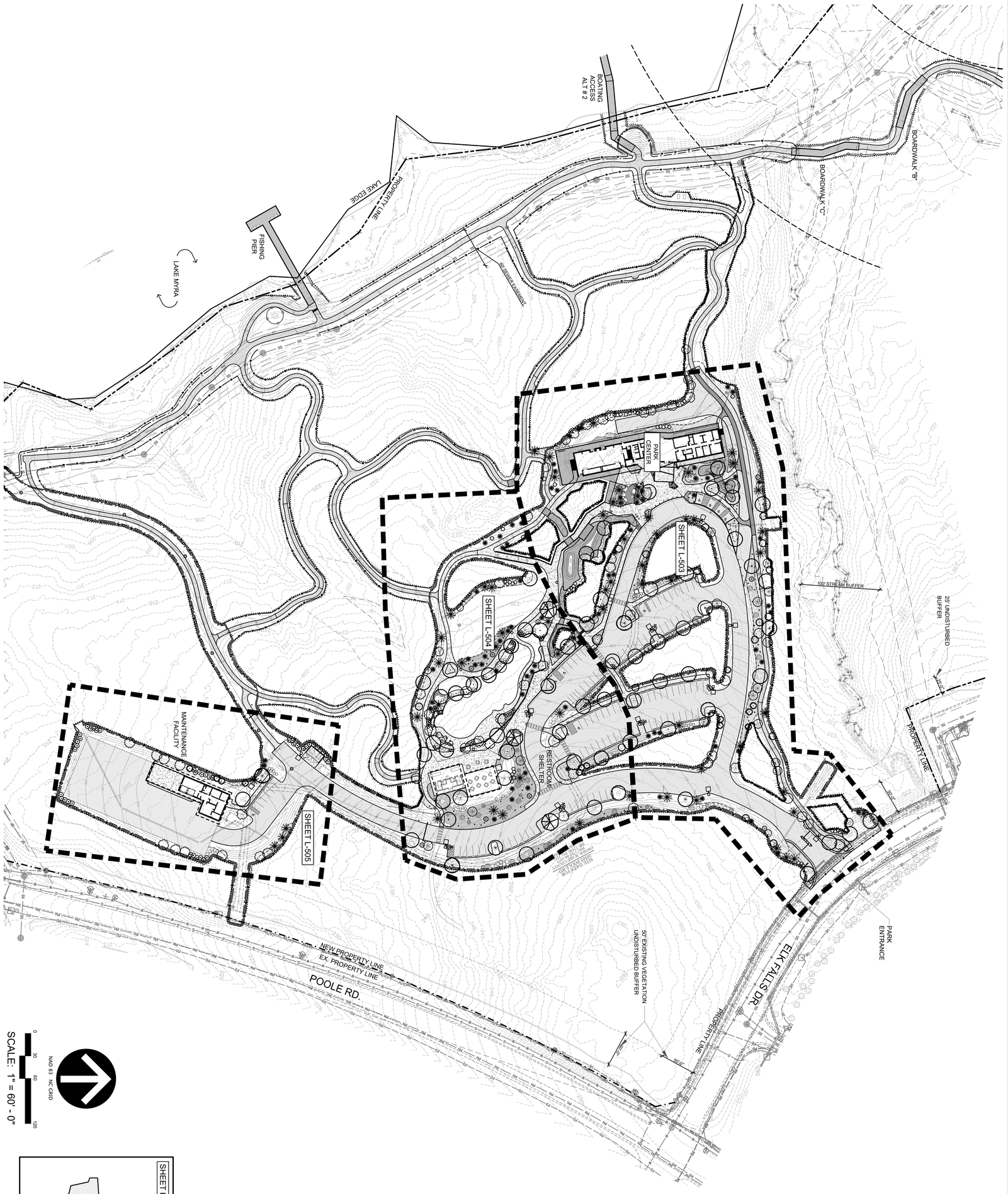
EP BOARDWALKS B, C, AND D

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 7/27/26

L-402



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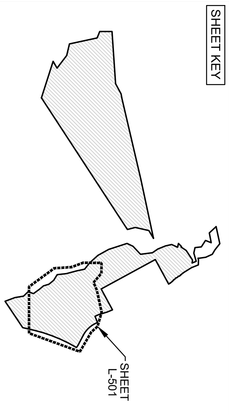

SUSAN W. HATCHELL C-175 REGISTERED LANDSCAPE ARCHITECT NORTH CAROLINA LANDSCAPE ARCHITECTURE, PLLC APPROVED

SUSAN W. HATCHELL 1828 REGISTERED LANDSCAPE ARCHITECT NORTH CAROLINA
7-27-2006

L-501

Date: 7/27/26

REVISIONS

LAKE MYRA COUNTY PARK
Wake County, NC

EP PLANTING PLAN KEY SHEET

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PLANT SCHEDULE

*	Key	QTY.	Botanical Name	Common Name	Size	Notes
TREES / SHRUBS						
*	AR	7	ACER RUBRUM	RED MAPLE	3" CAL.,12-14' MIN. HT., B&B	SINGLE STEM
	ARG	13	ACER RUBRUM	RED MAPLE	15 GAL., CONT.	SINGLE STEM
	CAC	6	CARPINUS CAROLINIANA	AMERICAN HORNBEAM	1.5" CAL., 6' MIN. HT., B&B	SINGLE STEM
	CC	26	CERCIS CANADENSIS	REDBUD	2" CAL., 8' MIN. HT., B&B	SINGLE STEM
	CF	9	CORNUS FLORIDA	DOGWOOD	1.5" CAL., 6' MIN. HT., B&B	SINGLE STEM
	IO	20	ILEX OPACA	AMERICAN HOLLY	8'-10' MIN. HT., B&B	SINGLE STEM
	IOG	6	ILEX OPACA	AMERICAN HOLLY	10 GAL., CONT.	SINGLE STEM
	JV	14	JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	4' MIN. HT., B&B	SINGLE STEM
	JVG	10	JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	10 GAL., CONT.	SINGLE STEM
*	LS	14	LIQUIDAMBAR STYRACIFLUA 'ROTUNDILOBA'	FRUITLESS SWEETGUM	2" CAL., 8' MIN. HT., B&B	SINGLE STEM
	LSG	2	LIQUIDAMBAR STYRACIFLUA 'ROTUNDILOBA'	FRUITLESS SWEETGUM	15 GAL., CONT.	SINGLE STEM
	LT	3	LIRIODENDRON TULIPIFERA	TULIP POPLAR	15 GAL., CONT.	SINGLE STEM
	MV	13	MAGNOLIA VIRGINIANA	SWEETBAY MAGNOLIA	6' MIN. HT., B&B	SINGLE STEM
	MC	43	MYRICA CERIFERA	WAX MYRTLE	4' MIN. HT., B&B	SINGLE STEM
*	NS	26	NYSSA SYLVATICA 'WILDFIRE'	'WILDFIRE' BLACK GUM	3" CAL., 12' MIN. HT., B&B	SINGLE STEM
	PE	59	PINUS ECHINATA	SHORTLEAF PINE	SEEDLING	
	PT	64	PINUS TAEDA	LOBLOLLY PINE	2.5" CAL., 8' MIN. HT., B&B	SINGLE STEM
	PTG	74	PINUS TAEDA	LOBLOLLY PINE	15 GAL., CONT.	SINGLE STEM
	PTS	14	PINUS TAEDA	LOBLOLLY PINE	SEEDLING	
	PV	13	PINUS VIRGINIANA	VIRGINIA PINE	2" CAL., 6' MIN. HT., B&B	SINGLE STEM
	PVG	10	PINUS VIRGINIANA	VIRGINIA PINE	10 GAL., CONT.	SINGLE STEM
	QA	3	QUERCUS ALBA	WHITE OAK	2" CAL., B&B	SINGLE STEM
*	QC	3	QUERCUS COCCINEA	SCARLET OAK	3" CAL., B&B	SINGLE STEM
	QF	3	QUERCUS FALCATA	SOUTHERN RED OAK	2.5" CAL., B&B	SINGLE STEM
*	QS	6	QUERCUS STELLATA	POST OAK	2.5" CAL., B&B	SINGLE STEM
*	TD	11	TAXODIUM DISTICHUM	BALD CYPRESS	2" CAL., 8' MIN. HT., B&B	SINGLE STEM
	AA	9	ARONIA ARBUTIFOLIA	CHOKEBERRY	3 GAL., CONT.	
	AM	43	ARONIA MELANOCARPA 'UCONNAM165'	LOW SCAPE MOUND BLACK CHOKEBERRY	3 GAL., CONT.	
*	CA	38	CALLICARPA AMERICANA	DWARF AMERICAN BEAUTYBERRY	5 GAL., CONT.	
	FG	27	FOTHERGILLA GARDENII	DWARF FOTHERGILLA	3 GAL., CONT.	
	FGS	27	FOTHERGILLA GARDENII 'SUZANNE'	'SUZANNE' DWARF FOTHERGILLA	3 GAL., CONT.	
	HV	26	HAMAMELIS VIRGINIANA 'LITTLE SUZIE'	'LITTLE SUZIE' WITCHHAZEL	5 GAL., CONT.	
*	IVR	22	ILEX VERTICILLATA 'NCIV1'	LITTLE GOBLIN RED WINTERBERRY HOLLY	7 GAL., CONT.	FEMALE VARIETY
*	IVG	5	ILEX VERTICILLATA 'NCIV3'	LITTLE GOBLIN GUY WINTERBERRY HOLLY	5 GAL., CONT.	MALE VARIETY
	IG	10	ILEX VOMITORIA 'NANA'	DWARF INKBERRY	3 GAL., CONT.	
*	IV	74	ITEA VIRGINICA 'LITTLE HENRY'	'LITTLE HENRY' SWEETSPIRE	3 GAL., CONT.	
	RA	14	RHUS AROMATICA	AROMATIC SUMAC	3 GAL., CONT.	
	VA	64	VACCINIUM 'ZF06-043' PEACH SORBET	'PEACH SORBET' BLUEBERRY	2 GAL., CONT.	
	EP	122	ECHINACEA PURPUREA	PURPLE CONEFLOWER	1 GAL., CONT.	
	LI	65	LIATRIS SPICATA	BLAZING STAR	1 GAL., CONT.	
	PA	71	PENNISETUM ALOPECUROIDES 'HAMELN'	DWARF FOUNTAIN GRASS	1 GAL., CONT.	
	SS	18	SCHIZACHYRIUM SCOPARIUM 'TARA'	DWARF PRAIRIE DROPSEED	1 GAL., CONT.	
GRASSES / GROUNDCOVERS / PERENNIALS						
			WETLAND PLANTING			
ZONE A	500 SF		JUNCUS EFFUSUS	SOFT RUSH	1 GAL.	18" O.C.
			CAREX VULPINOIDEA	FOX SEDGE	1 GAL.	18" O.C.
			ELEOCHARIS OBTUSA	SPIKERUSH	1 GAL.	18" O.C.
			SCHOENOPLECTUS TABERNAEMONTANI	SOFTSTEM BULRUSH	1 GAL.	24" O.C.
ZONE B	1,500 SF		JUNCUS EFFUSUS	SOFT RUSH	1 GAL.	18" O.C.
			IRIS VERSICOLOR	BLUE FLAG IRIS	1 GAL.	24" O.C.
			EUPATORIUM PERFOLIATUM	BONESET	1 GAL.	30" O.C.
			CAREX STRICTA	TUSSOCK SEDGE	1 GAL.	24" O.C.
			LOBELIA CARDINALIS	CARDINAL FLOWER	1 GAL.	24" O.C.
ZONE C	2,900 SF		CAREX STRICTA	TUSSOCK SEDGE	1 GAL.	24" O.C.
			PANICUM VIRGATUM	SWITCHGRASS	1 GAL.	30" O.C.
			SCIRPUS CYPERINUS	WOOLGRASS	1 GAL.	24" O.C.
			CHASMANTHIUM LATIFOLIUM	RIVER OATS	1 GAL.	24" O.C.

* = INDICATES TREES/SHRUBS THAT SATISFY TOWN OF WENDELL STREET TREE OR PARKING REQUIREMENTS

PLANT SCHEDULE, CONT.

Key	QTY.	Botanical Name	Common Name	Size	Notes
GRASSES / GROUNDCOVERS / PERENNIALS, CONT.					
LGP	21,920 SF	LOW GROWING PRAIRIE PLUG MIX: 30% MUHLENBERGIA REVERCHONII 30% SCHIZACHYRIUM SCOPARIUM 'CAROUSEL' 30% SPOROBOLUS HETEROLEPIS 'TARA' 5% IONACTIS LINARIIFOLIA 5% SALVIA LYRATA SEE DETAIL 9, SHEET L-601, STAGGERED PLUG PLANTING	 ROSE MUHLY CAROUSEL LITTLE BLUESTEM DWARF PRAIRIE DROPSEED STIFF ASTER LYRELEAF SAGE	PLUGS	18" O.C.
PPM	5,030 SF	PRAIRIE PLUG MIX: 3% ASCLEPIAS PURPURASCENS 2% BAPTISIA ALBA 2% BAPTISIA AUSTRALIS 4% CHRYSOPSIS MARIANA 4% EUPATORIUMS HYSSOPIFOLIUM 4% EUTHAMIA CAROLINIANA 4% HELIANTHUS ATRORUBENS 4% IONACTIS LINARIIFOLIA 5% LIATRIS PILOSA 2% MONARDA FISTULOSA 4% OENOTHERA FRUTICOSA 4% PACKERA ANONYMA 4% PENSTEMON AUSTRALIS 4% PENSTEMON LAEVIGATUS 4% PITYOPSIS GRAMNIFOLIA 2% SABATIA ANGULARIS 3% SALVIA LYRATA 3% SOLIDAGO ERECTA 3% SOLIDAGO NEMORALIS 4% SYMPHYOTRICHUM GRANDIFLORUM 4% SYMPHYOTRICHUM PATENS 7% ANDROPOGON VIRGINICUS 9% SCHIZACHYRIUM SCOPARIUM 'PRAIRIE BLUES' 7% SPOROBOLUS HETEROLEPIS SEE DETAIL 9, SHEET L-601, STAGGERED PLUG PLANTING	 PURPLE MILKWEED FALSE INDIGO BLUE FALSE INDIGO GOLDEN ASTER HYSSOP-LEAVED BONSET CAROLINA GRASS-LEAVED GOLDENROD APPALACHIAN SUNFLOWER STIFF ASTER GRASS LEAF BLAZING STAR EASTERN BERGAMOT NARROW-LEAF EVENING PRIMROSE APPALACHIAN RAGWORT EUSTIS LAKE BEARDTONGUE EASTERN BEARDTONGUE NARROW-LEAF SILKGRASS ROSE-PINK LYRELEAF SAGE SLENDER GOLDENROD COMMON GOLDENROD LARGEFLOWER ASTER LATE PURPLE ASTER BROOM SEDGE PRAIRIE BLUES LITTLE BLUESTEM PRAIRIE DROPSEED	PLUGS	18" O.C.
PSM	2,110 SF	POLLINATOR SHADE MIX: 14% AGROSTIS HYEMALIS 25% ANDROPOGON GERARDII 0.5% ANEMONE VIRGINIANA 0.5% AQUILEGIA CANADENSIS 10% BIDENS ARISTOSA 1% CAREX VULPINOIDEA 25% CHAMAECRISTA NICTITANS 10% ELYMUS VIRGINICUS 0.5% GEUM CANADENSE 2.5% JUNCUS TENUIS 0.1% OENOTHERA FRUTICOSA 0.5% PENSTEMON LAEVIGATUS 0.1% PYCNANTHEMUM TENUIFOLIUM 4.2% SCHIZACHYRIUM SCOPARIUM 0.5% SISYRINCHIUM ANGUSTIFOLIUM 0.1% SYMPHYOTRICHUM LATERIFLORUM 5.5% ZIZIA AUREA	 WINTER BENTGRASS BIG BLUESTEM TALL THIMBLEWEED EASTERN COLUMBINE SHOWY TICKSEED SUNFLOWER FOX SEDGE SENSITIVE PARTRIDGE PEA VIRGINIA WILDRYE WHITE AVENS PATH RUSH NARROWLEAF EVENING PRIMROSE EASTERN SMOOTH BEARDTONGUE NARROWLEAF MOUNTAINMINT LITTLE BLUESTEM NARROWLEAF BLUE-EYED GRASS CALICO ASTER GOLDEN ZIZIA	SEED	20-25 LBS PER ACRE
SEED		SEE SPECIFICATIONS			

PLANTING NOTES:

1. THE LANDSCAPE PLANTING CONTRACTOR SHALL BE A LICENSED LANDSCAPE CONTRACTOR IN NC, AND SHALL PROVIDE PROOF OF LICENSE AFTER BIDDING.
2. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, DEPTHS, QUANTITIES, DISTANCES, ANGLES AND SLOPES PRIOR TO ORDERING MATERIALS OR INSTALLING PROJECT.
3. CONTRACTOR SHALL ACCEPT ACTUAL CONDITIONS AT THE SITE AND PERFORM THE WORK SPECIFIED WITHOUT ADDITIONAL COMPENSATION FOR POSSIBLE VARIATION FROM GRADES AND CONDITIONS SHOWN WHETHER SURFACE OR SUBSURFACE, EXCEPT AS PROVIDED FOR BY THE CONTRACT DOCUMENTS.
4. CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM LANDSCAPE ARCHITECT FOR ANY PLANT SUBSTITUTIONS OF SPECIES, SIZES, OR TYPE OF CONTAINER.
5. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION, AND SHALL BE RESPONSIBLE FOR THE PROTECTION OF THESE UTILITIES DURING THE CONSTRUCTION OF THE PROJECT, AND SHALL PROMPTLY REPAIR AND RESTORE SERVICES AT NO ADDITIONAL COST TO THE OWNER.
6. THE CONTRACTOR SHALL VISIT THE SITE, FAMILIARIZE HIMSELF WITH ACTUAL CONDITIONS AND VERIFY EXISTING CONDITIONS IN THE FIELD.
7. CONTRACTOR SHALL MAINTAIN CAREFULLY ALL BENCH MARKS, MONUMENTS AND OTHER REFERENCED POINTS. IF DISTURBED OR DESTROYED, THE CONTRACTOR SHALL REPLACE AS DIRECTED AT NO ADDITIONAL COST TO THE OWNER.
8. CONTRACTOR SHALL BECOME THOROUGHLY FAMILIAR WITH THE FULL SET OF CONSTRUCTION DRAWINGS AND SPECIFICATIONS FOR COORDINATION WITH UTILITIES.
9. CONTRACTOR WILL LEAVE DISTURBED AREAS LEVEL AND RAKED SMOOTH, REMOVING ALL ROCKS AND DEBRIS.
10. IF FORMAL ARRANGEMENTS OR CONSECUTIVE ORDER OF TREES OR SHRUBS IS SHOWN, SELECT STOCK FOR UNIFORM HEIGHT AND SPREAD FROM SAME SOURCE TO ASSURE SYMMETRY IN PLANTING.
11. IF ANY EXISTING CONDITIONS OUTSIDE THE CONTRACT LIMITS, CURBS, SIDEWALKS, TURF AREAS AND PAVING ARE DAMAGED IN PERFORMANCE OF THIS WORK, THEY SHALL BE RESTORED WITHOUT EXTRA COST TO THE OWNER IN THE MANNER PRESCRIBED BY AUTHORITIES HAVING JURISDICTION.
12. CONTRACTOR SHALL REPORT ALL DISCREPANCIES TO LANDSCAPE ARCHITECT. IN CASE OF DISCREPANCY BETWEEN THE QUANTITY OF PLANTS ON THE PLANS COMPARED TO THE PLANT LIST, THE CONTRACTOR SHALL SUPPLY QUANTITIES AS DRAWN ON PLANS.
13. CONTRACTOR SHALL SEED ALL AREAS DISTURBED DURING INSTALLATION NOT SPECIFIED TO BE COVERED BY MULCH. AREAS DAMAGED FROM ACTIVITIES OF CONTRACTOR TO BE RESEEDED AND ESTABLISHED AT NO ADDITIONAL COST TO THE OWNER.
14. CONTRACTOR TO PREPARE PLANTING BEDS PER THE SPECIFICATIONS.
15. CONTRACTOR IS RESPONSIBLE FOR IMPORTING, TESTING AND PREPARING THE SOIL ON SITE PER THE SPECIFICATIONS.
16. ALL SIX FOOT MULCH RINGS AND STAND ALONE MULCH AREAS SHALL BE BE MULCHED WITH A 3" LAYER OF TRIPLE SHREDDED HARDWOOD MULCH UNLESS OTHERWISE NOTED ON THE CONTRACT DRAWINGS. ALL MULCH AREAS SHOWN TO TIE INTO NATURAL AREAS SHALL BE MULCHED WITH TRIPLE SHREDDED HARDWOOD MULCH FEATHERED BACK TO CREATE SMOOTH TRANSITIONS.
17. ALL AREAS WITHIN PROJECT LIMITS SHALL BE EITHER PAVED, SEEDED OR MULCHED. SUBMIT SAMPLES FOR APPROVAL.
18. CONTRACTOR SHALL MAINTAIN PLANTS FROM TIME OF INSTALLATION UNTIL THE FINAL INSPECTION, AND FOR ONE YEAR AFTER ACCEPTANCE.
19. MAINTENANCE SHALL INCLUDE WATERING, KEEPING PLANTS PLUMB, WEEDING, FERTILIZING, RESTORING PLANT SAUCERS, TIGHTENING AND REPAIRING SUPPORTS, RESETTING TO PROPER GRADES AND VERTICAL POSITION, AND PROTECTION OF PLANTINGS AS WELL AS ANY OTHER NECESSARY OPERATIONS FOR THE PERIOD OF ONE YEAR.
20. CONTRACTOR IS RESPONSIBLE FOR WATERING PLANTS TO SUSTAIN THEIR HEALTH AS NEEDED, WHICH INCLUDES SUPPLYING, PAYING FOR AND TRANSPORTING WATER FOR THIS PURPOSE.
21. IN AREAS NOT UNDER IRRIGATION, CONTRACTOR WILL SUPPLY "GATOR" WATERING BAGS AND KEEP THEM OPERATIONAL AS NEEDED.
22. CONTRACTOR MAY ESTABLISH A TEMPORARY IRRIGATION SYSTEM TO AID IN THIS, PROVIDING THE SYSTEM IS ATTRACTIVE AND SAFE. OBTAIN WRITTEN PERMISSION OF THE OWNER AND LANDSCAPE ARCHITECT IF TEMPORARY IRRIGATION IS TO BE USED.

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECTURAL CORP. C-175 SUSAN MARIE HATCHELL

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 1528 SUSAN M. HATCHELL 7/27/2026

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EP PLANT SCHEDULE & NOTES

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 7/27/26

L-502

NOTE:
ASSUME ALL DISTURBED AREAS RECEIVE 4" OF SOIL AMENDMENTS AND 3" OF TRIPLE SHREDDED HARDWOOD MULCH OR SEED UNLESS OTHERWISE INDICATED. BEDLINES T.B.D.

PARK CENTER
MAIN ENTRANCE
CANOPY
RAINWATER RUNOFF COLLECTION
FIRE HYDRANT
DROP OFF
RAMP
RAMP
REINFORCED TURF FIRE LANE
DECK
OUTDOOR CLASSROOM
MAINTENANCE ACCESS DRIVE
RAIN GARDEN PLANTING
ZONE A
ZONE B
ZONE C
LANDFORM
LANDFORM
TRANSFORMER
SIGN
LIGHT POLE, TYP.
LIGHT POLE, TYP.
LIGHT POLE, TYP.
TREE PROTECTION FENCE 1 L-601
TREES TO REMAIN
* = INDICATES REQUIRED TOWN OF WENDELL PARKING LOT PLANTING
EACH SPACE TO BE WITHIN 60' OF A REQUIRED TREE IN THE PARKING LOT
* = INDICATES REQUIRED TOWN OF WENDELL PARKING LOT PLANTING
LGP - SEE AREA ON SHEET L-504
PPM - SEE AREA ON SHEET L-504
6' MULCH RING, TYP.
SIGN, TYP.
GATE
PARK ENTRANCE SIGN, N.I.C.
GATE EQUIPMENT
ENTRANCE DRIVE
SIGN
CONSTRUCTED WETLAND AND POOLS
BOT: 225.50
UNDISTURBED 50' VEGETATED BUFFERYARD
50' OT
MATCHLINE - SEE SHEET L-503A
MATCHLINE - SEE SHEET L-504
MATCHLINE - SEE SHEET L-504
MULCH
SEED
PSM 700 SF
PSM 200 SF
PSM 140 SF
PSM 250 SF
PSM 150 SF
PSM 600 SF
PPM 145 SF
PPM 3,360 SF
LGP 570 SF
LGP 360 SF
LGP 780 SF
LGP 1490 SF
LGP 220 SF
LGP 35 SF
LGP 600 SF
LGP 620 SF
LGP 100 SF
LGP 200 SF
LGP 300 SF
LGP 160 SF
LGP 405 SF
LGP 565 SF
5-EP 3-LI
7-EP 8-LI
3-EP 5-LI
5-EP 5-LI
5-EP 3-LI
9-EP
9-SS
1-PT 3-PTG 4-PE
1-PTG 3-PE
7-EP 9-LI
5-EP 7-LI
5-EP 3-LI
3-EP 5-LI
2-PT 3-PTG 2-PE 5-EP 7-LI
3-HV
ZONE B 5-HV
3-PE
3-PTS
3-TD
2-PTS
1-TD*
1-PV
1-ARG 1-PT
1-QS
1-IO
1-ARG
1-AR* 2-PT
6-IVR* 1-IVG*
5-IV*
1-AR* 1-PT
1-LS
1-PVG
1-PTS
1-PTG 1-ARG
1-PT 1-PTG 1-ARG
1-PT 1-PTG
1-PVG
1-LS
1-PT 1-PTG 1-IOG
2-PT 1-PTG
1-ARG
1-NS 1-PV
1-PV 1-ARG
1-PT 1-PTG 1-ARG
1-PV 1-PE
2-PTG 1-ARG
1-QS
2-CAC
2-PE
1-PE
1-PV 1-PE
1-PE
1-QS
3-PE 1-PVG
1-JV SIGN
1-JV
1-LSG
1-ARG
1-PTG
1-JV
1-NS
1-PTG
MULCH
1-PE
1-MV
1-IO
2-PV
3-PE
3-MV
1-PTG 1-PT
1-CC
1-CF
1-PT
1-ARG
TREES TO REMAIN
2-MV
MULCH
1-PTG
2-CC
4-RA
SEED
1-PT
1-JVG 1-PTG 3-RA 1-PT
1-JV
1-QS*
1-PT 1-PTG
SEED
1-PE
1-JVG
1-PE 1-IO
1-PT
2-PE
1-QC
1-LS*
5-IV*
1-PV
1-PT
1-NS
1-LS*
3-PTG
1-ARG
1-LS*
1-LS*
1-PT
1-PTG
SEED
1-NS*
1-CC
1-CF
LGP 100 SF
5-HV
TREES TO REMAIN
1-NS*
LGP 565 SF
1-NS*
SEED
TREES TO REMAIN
2-CC
LGP 405 SF
3-HV
1-PT
2-PT
TREES TO REMAIN
1-PTG
1-PT
1-ARG
1-LT
1-PVG
1-IO 1-PT
SEED
1-CF
SEED
SEED
MULCH
1-PTG
1-ARG
1-JVG
1-CF
TREES TO REMAIN
1-IO
1-PT
SEED
SEED
1-CC
2-PTG
1-CC
1-PTG 1-CF
6-IVR 2-IVG
9-CA 1-PT
TREES TO REMAIN
1-CF 1-PT
1-IOG 2-PTG
2-PTG 1-IOG
TREES TO REMAIN
1-IO
TREES TO REMAIN
TREES TO REMAIN
TREES TO REMAIN
TREES TO REMAIN
2-CC
3-FG
1-CC
5-FG
1-CC
PSM 700 SF
2-CC
TREES TO REMAIN
PSM 200 SF
8-FG
2-CC
8-CA
1-PT
1-CC
2-PTG
1-CC
1-PTG 1-CF
1-PT
1-CC
2-PTG
1-CC
1-PT
1-PTG
1-CF
1-PT
1-PTG
1-PT
1-PTG
1-PT
1-PTG

NOTE:
ASSUME ALL DISTURBED AREAS RECEIVE 4" OF SOIL AMENDMENTS AND 3" OF TRIPLE SHREDDED HARDWOOD MULCH OR SEED UNLESS OTHERWISE INDICATED. BEDLINES T.B.D.

MATCHLINE - SEE SHEET L-503

MATCHLINE - SEE SHEET L-503

SEE SHEET L-503 FOR QUANTITIES IN THIS AREA

PSM - SEE AREA ON SHEET L-503

CROSSWALK

4-AM

SIGN

6-AM
3-VA

LGP 290 SF

9-AM

LGP 180 SF

5-IV*

METAL GRATING, SEE CIVIL SHEETS

1-PTG
1-LS*

SIGN, TYP.

LGP 290 SF

LGP 150 SF

1-PT

MULCH

LIGHT POLE, TYP.

ZONE B

ZONE C

LGP

TREES TO REMAIN

RAMP

1-LS
7-VA

9-EP

8-FGS

1-QA

1-NS

SEED

1-PTG

3-PTG

1-IOG

1-PVG

LGP 210 SF

MULCH

5-IV
1-TD
11-AM

5-HV

BEDLINE, TYP.

LANDING

HANDRAIL

1-IO

OPEN PLAY

2-PTG
1-PE

2-NS
3-AM

1-PT

2-PT

2-PE

1-CAC

1-PTG

1-PT
1-PVG
MULCH

4-PE

3-PTG
1-PE

1-PVG
LGP 1,640 SF

2-PE

1-PTG

1-PT

1-LT

1-LS
LGP 125 SF

1-LS
7-IV

1-AR

9-FGS

1-CAC
3-IV
SEED

5-PA

1-LS

5-IVR
1-IVG

MULCH
1-PTG

SEED

1-NS
10-FGS

LGP 910 SF

1-CC

17-EP
3-PTG

LGP 150 SF

BIKE RACK

5-VA
SIGN, SEE SHEET L-107

LIGHT POLE

1-CC

1-NS
1-PTG
FOOD TRUCK HOOK UP

1-PT

1-CC

1-QA

1-PT
1-PTG

2-JV

1-PV
1-JVG

1-PE

1-PTG

9-VA

MULCH

15-EP

1-CC

2-PE

1-NS
2-TD

1-CC

8-IV

MULCH
1-CC

3-VA

25-PA

TABLES, SEE SPECS

1-CC
3-VA

RESTROOM/SHELTER

1-TD

3-VA
MULCH
1-AR
6-IV

3-VA
1-NS

9-VA

37-PA

9-EP

1-PT

2-PTG

1-CC

7-VA

SEED

6-IV

1-CAC

1-AR

1-PT

1-NS

MULCH

1-IO

1-LSG

1-PT

1-IO

1-NS

TREES TO REMAIN

6' ASPHALT TRAIL
2 L-602

TREE PROTECTION FENCE
1 L-601

DOG WASTE STATION

TREES TO REMAIN

TREES TO REMAIN

TREES TO REMAIN

TREES TO REMAIN

TREES TO REMAIN

LGP 300 SF

TREES TO REMAIN

LGP 420 SF

1-NS

1-ARG

5-IVR*
1-IVG*

MULCH

1-AR

EACH SPACE TO BE WITHIN 60' OF A REQUIRED TREE IN THE PARKING LOT

5-IV*

1-QC*

LGP 1,265 SF

3-MV

1-QC

6" MULCH RING, TYP.

SEED

1-JV

1-PE

TREES TO REMAIN

PPM 1,525 SF

1-NS*

1-PT

1-PTG

2-PE
BEDLINE, TYP.

1-CC

LIGHT POLE, TYP.

1-QA

SEED

1-JVG

1-JV

1-PE

LGP 370 SF
LGP 6,500 SF

SIGN
1-PTG

1-PE

1-PT
1-PTG

2-JV

1-PVG

1-JVG

1-PE

1-PV
1-JVG

FIRE HYDRANT

1-JV

2-PE

1-NS*

1-JV

1-PTS

2-PT

SEED

1-JV
7-RA

6-FG

SEED

2-PTG

1-PTG

1-PTS

1-PVG

5-IV

SEED

3-PE

1-QS*

1-JV

1-JVG

BEDLINE, TYP.

1-JVG

1-JV

1-PV

5-IV

1-JVG

SEED

1-JV

2-PE

1-QF

SIGN, TYP.

LIGHT POLE, TYP.

TREES TO REMAIN

2-PTS
1-NS

1-QS

3-PTS

1-PT

1-PV

SEED

1-PVG

PSM 500 SF

SEED

SEED

1-NS

TREE PROTECTION FENCE
1 L-601

SHEET KEY

SHEET L-504

NAD 83 NC GRID

0 10 20 40

SCALE: 1" = 20' - 0"

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECTURAL FIRM SUSAN HATCHELL LANDSCAPE ARCHITECTURE, PLLC C-175

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 1628 SUSAN M. HATCHELL 7/27/2026

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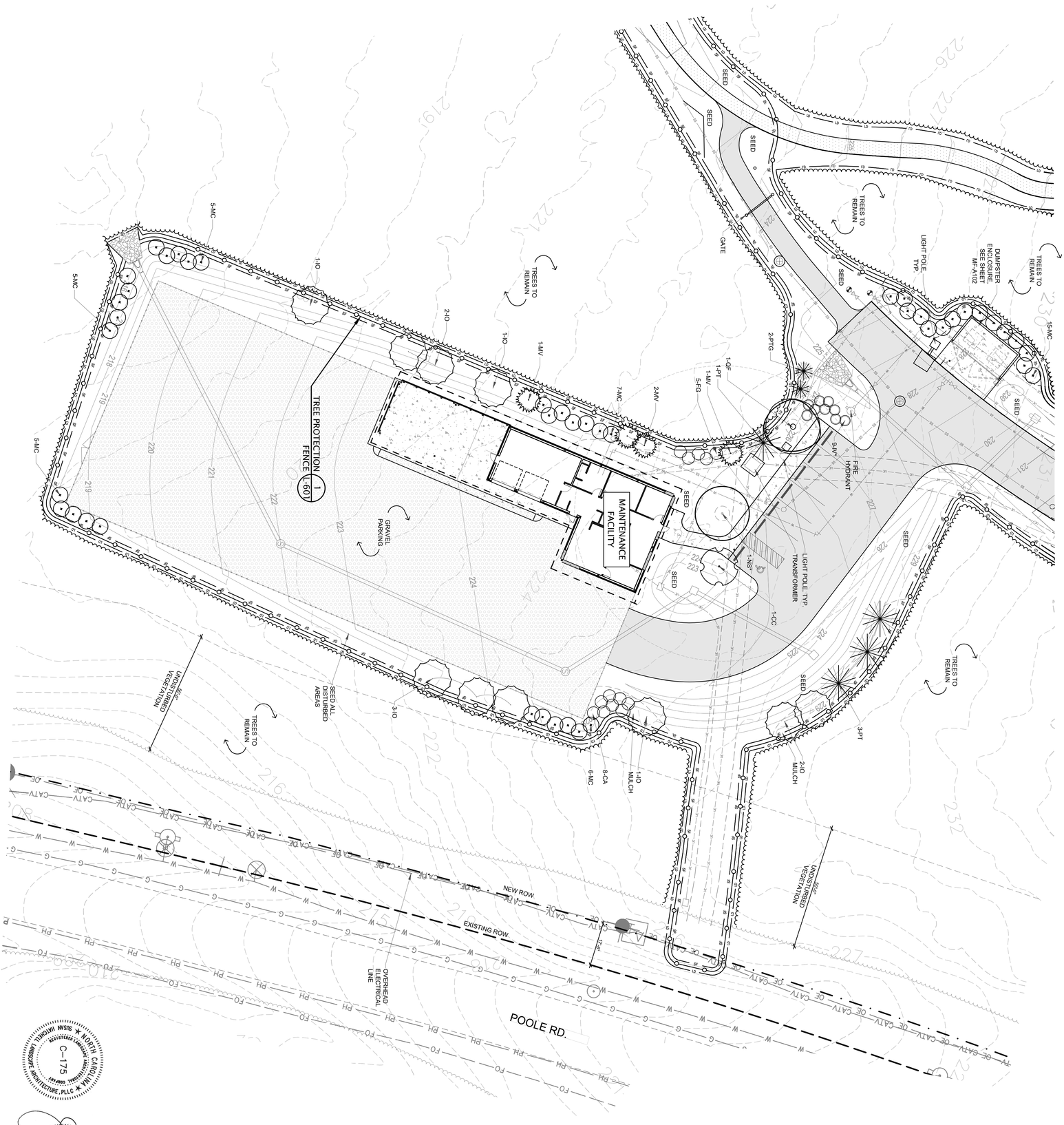
EP PLANTING PLAN SOUTH

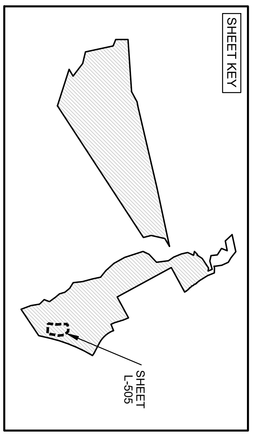
LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 7/27/26

L-504

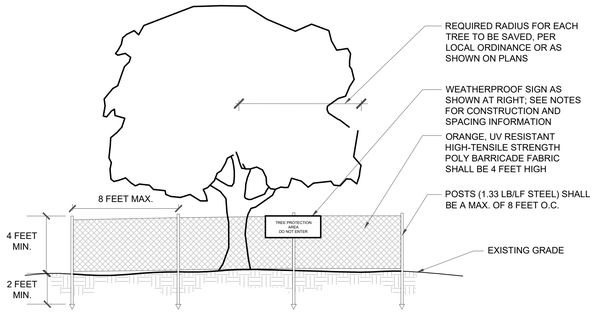




SCALE: 1" = 20' - 0"

NAD 83 NC GRID

L-505	Date: 7/27/26		REVISIONS	LAKE MYRA COUNTY PARK Wake County, NC	EP PLANTING MAINTENANCE FACILITY	Susan Hatchell Landscape Architecture, PLLC 711 W. North Street, Raleigh, NC 27603 p: 919-838-9600 f: 919-838-9700



NOTES:

1. ROOT PRUNE TREES TO REMAIN WHERE CONSTRUCTION ACTIVITIES WILL SEVER ROOTS.
2. CONTRACTOR SHALL CUT A MINIMUM TWO FEET DEEP TRENCH WITH A ROCK SAW OR TRENCHER 3 INCHES WIDE ALONG THE LIMITS OF DISTURBANCE, SO AS TO CUT, RATHER THAN TEAR PLANT ROOTS. BACKFILL TRENCH WITH SPECIFIED SOIL.
3. DO NOT DRIVE EQUIPMENT UPON OR DISTURB THE SOIL WITHIN THE CRITICAL ROOT ZONE OR TREE PROTECTION FENCE OF EXISTING TREES.
4. SIGNAGE SHALL BE MADE OF DURABLE WEATHERPROOF MATERIAL. SIGNAGE IN BOTH ENGLISH AND SPANISH SHALL BE PLACED ON THE TREE PROTECTION FENCING. SIGNAGE SHALL READ "NO TRESPASSING TREE PROTECTION AREA ", AND "PROHIBIDO ENTRAR - ZONA PROTECTORA PARA LOS ARBOLES".
5. ATTACH SIGNS SECURELY TO TREE PROTECTION FENCE POSTS AND FABRIC. MAINTAIN TREE PROTECTION FENCE THROUGHOUT THE DURATION OF THE PROJECT.
6. TREE PROTECTION ZONE SIGNS SHALL BE SPACED PER LOCAL ORDINANCE. PLACE SIGNS AT EACH END OF LINEAR TREE PROTECTION AREAS AND 100 FEET ON-CENTER THEREAFTER. SIGNS ARE TO BE PLACED NOT GREATER THAN 100 FEET ON CENTER. ADDITIONAL SIGNS MAY BE REQUIRED BASED ON FIELD CONDITIONS.
7. FOR TREE PROTECTION AREA LESS THAN 100 FEET IN PERIMETER, PROVIDE NO LESS THAN ONE SIGN PER AREA.
8. TREE PROTECTION ZONE SIGNS SHALL BE A MIN. SIZE OF 40 INCHES X 18 INCHES WITH 3 INCHES HIGH LETTERS, CLEARLY LEGIBLE, AND SPACED AS SHOWN.
9. INSTALL TREE PROTECTION FENCE & SIGNAGE PRIOR TO CALLING FOR THE INITIAL ON-SITE INSPECTION.

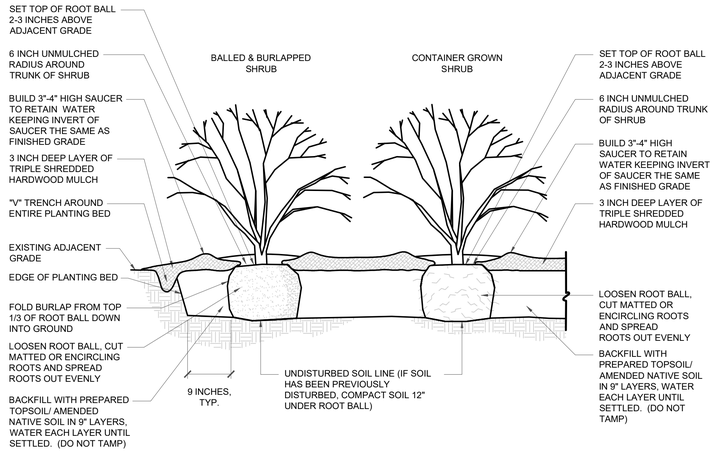
SIGN DETAIL
NO SCALE

NOTE:
CONTRACTOR TO NOTIFY LANDSCAPE ARCHITECT AND OWNER IF LARGE TREES NOT SHOWN ON SURVEY ARE IN CLOSE PROXIMITY TO LIMITS OF DISTURBANCE. IN CASES WHERE LARGE TREES WILL BE IMPACTED, CONTRACTOR, OWNER AND LANDSCAPE ARCHITECT WILL CONFER TO DETERMINE ALLOWABLE CUT AND FILL.

TREE PROTECTION FENCE

Not to Scale

1 L-601



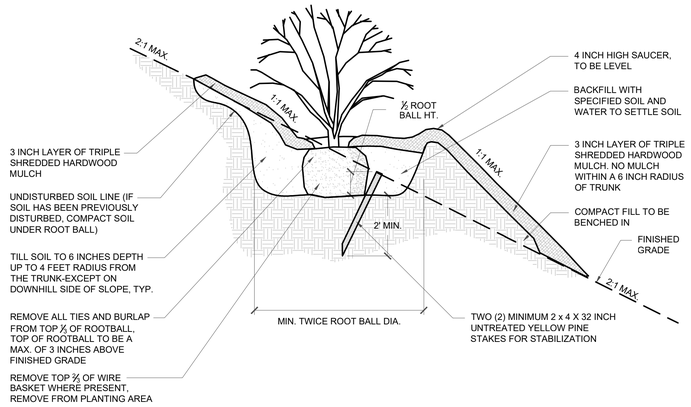
NOTES:

1. SEE SPECIFICATIONS FOR DETAILS ON PLANT BED PREPARATION.
2. DO NOT INSTALL SHRUBS DURING PERIODS OF WET OR FREEZING SOIL CONDITIONS.
3. NO SYNTHETIC FABRIC IS ALLOWED ON ROOT BALLS.
4. REMOVE ALL BALL TIES OR STRAPPING FROM ROOT BALL.
5. FOR MASS PLANTINGS OF SHRUBS AND GROUNDCOVERS, USE STAGGERED ROWS WITH EQUAL SPACING BETWEEN ALL PLANTS.
6. TAMP SOIL FIRMLY AS PIT IS FILLED AROUND EACH PLANT BALL.

SHRUB PLANTING

Not to Scale

2 L-601



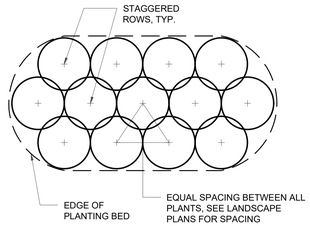
NOTES:

1. SEE SPECIFICATIONS FOR DETAILS ON PLANT BED PREPARATION.
2. DO NOT INSTALL SHRUBS DURING PERIODS OF WET OR FREEZING SOIL CONDITIONS.
3. NO SYNTHETIC FABRIC IS ALLOWED ON ROOT BALLS.
4. REMOVE ALL BALL TIES OR STRAPPING FROM ROOT BALL.
5. FOR MASS PLANTINGS OF SHRUBS AND GROUNDCOVERS, USE STAGGERED ROWS WITH EQUAL SPACING BETWEEN ALL PLANTS.
6. TAMP SOIL FIRMLY AS PIT IS FILLED AROUND EACH PLANT BALL.
7. SET ALL SHRUBS LARGER THAN 5 GAL. PLUMB VERTICALLY IN ALL DIRECTIONS PRIOR TO STABILIZING WITH TWO (2) MINIMUM 2'-8" LENGTH, 2" x 4" UNTREATED YELLOW PINE STAKES. STAKE LENGTH SHALL BE PROPORTIONATE TO HEIGHT OF ROOTBALL. STAKE SHALL EXTEND BY AT LEAST HALF OF THE ROOT BALL HEIGHT ABOVE GRADE.

SHRUB PLANTING ON SLOPE

Not to Scale

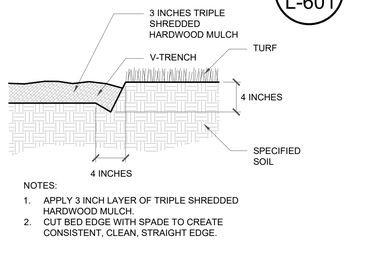
3 L-601



STAGGERED SHRUB PLANTING

Not to Scale

6 L-601



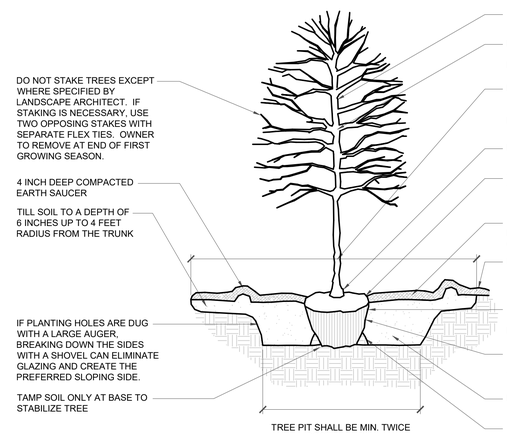
NOTES:

1. APPLY 3 INCH LAYER OF TRIPLE SHREDDED HARDWOOD MULCH.
2. CUT BED EDGE WITH SPADE TO CREATE CONSISTENT, CLEAN, STRAIGHT EDGE.

V-TRENCH

Not to Scale

7 L-601



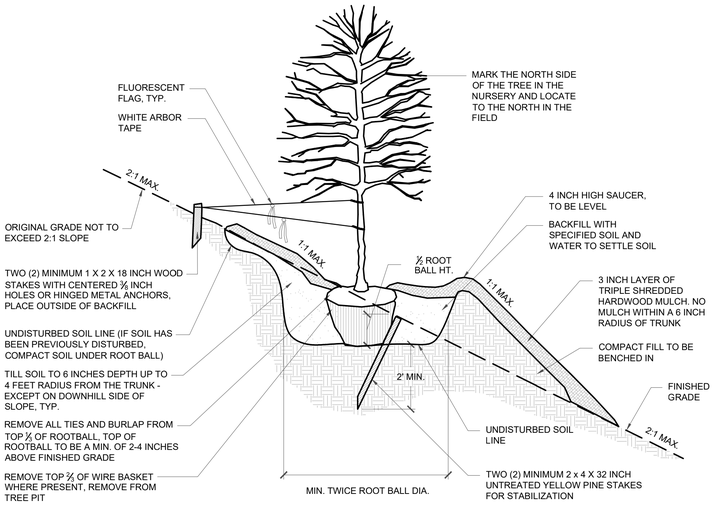
NOTES:

1. THIS STANDARD APPLIES TO SINGLE AND MULTI-STEM TREES.
2. NO SYNTHETIC FABRIC IS ALLOWED ON ROOT BALL.
3. DO NOT INSTALL TREES DURING PERIODS OF WET OR FROZEN SOIL CONDITIONS.
4. THOROUGHLY SOAK THE TREE ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
5. SET TREE PLUMB IN ALL DIRECTIONS. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING THE TREE UPRIGHT AND PLUMB IN ALL DIRECTIONS.
6. DO NOT CUT OR PRUNE LEADER EXCEPT TO STABILIZE DAMAGE OR AS DIRECTED BY OWNER.
7. REMOVE ALL BALL TIES OR STRAPPING FROM ROOT BALL.
8. DO NOT STAKE TREES EXCEPT WHERE SPECIFIED BY LANDSCAPE ARCHITECT. IF STAKING IS NECESSARY, USE TO OPPOSING STAKES WITH SEPARATE FLEXIBLE TIES. REMOVE STAKING AT END OF FIRST GROWING SEASON.
9. WHERE SEVERAL TREES WILL BE PLANTED CLOSE TOGETHER SUCH THAT THEY WILL LIKELY SHARE ROOT SPACE, TILL IN SOIL AMENDMENTS TO A DEPTH OF 4-6" OVER THE ENTIRE AREA.
10. FOR CONTAINER-GROWN TREES, USE FINGERS OR SMALL HAND TOOLS TO PULL THE ROOTS OUT OF THE OUTER LAYER OF POTTING SOIL; THEN CUT OR PULL APART ANY ROOTS CIRCLING THE PERIMETER OF THE CONTAINER.
11. DURING THE DESIGN PHASE, CONFIRM THAT WATER DRAINS OUT OF THE SOIL; USE LOWERED PLANTING HOLE DEPTH AND DESIGN ALTERNATIVE DRAINAGE SYSTEM AS REQUIRED.
12. THE PLANTING PROCESS IS SIMILAR FOR DECIDUOUS AND EVERGREEN TREES.

TREE PLANTING

Not to Scale

4 L-601



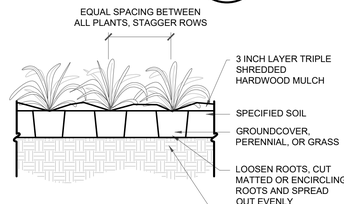
NOTES:

1. THIS STANDARD APPLIES TO SINGLE AND MULTI-STEM TREES.
2. NO SYNTHETIC FABRIC IS ALLOWED ON ROOT BALLS.
3. REMOVE ALL BALL TIES OR STRAPPING FROM ROOT BALL.
4. SOAK ROOT BALL AND PLANT PIT IMMEDIATELY AFTER INSTALLATION.
5. SET TREE PLUMB VERTICALLY IN ALL DIRECTIONS PRIOR TO STABILIZING WITH TWO (2) MINIMUM 2'-8" LENGTH, 2 x 4" UNTREATED YELLOW PINE STAKE LENGTH SHALL BE PROPORTIONATE TO HEIGHT OF ROOTBALL. STAKE SHALL EXTEND BY AT LEAST HALF OF THE ROOT BALL HEIGHT ABOVE GRADE.
6. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING THE TREE UPRIGHT AND PLUMB IN ALL DIRECTIONS.
7. ALL TREES PLANTED ON SLOPES STEEPER THAN 3:1 SHALL BE STAKED WITH AN MINIMUM OF TWO (2) STAKES AND GUYS AT A MINIMUM OF 2'-8" LENGTH, 2" x 4" UNTREATED YELLOW PINE STAKES.
8. DO NOT PRUNE OR CUT LEADER EXCEPT TO STABILIZE DAMAGE OR AS DIRECTED BY OWNER.
9. DO NOT INSTALL TREES DURING PERIODS OF WET OR FREEZING SOIL CONDITIONS.

TREE PLANTING ON SLOPE

Not to Scale

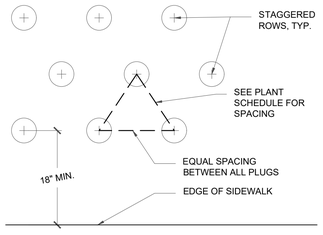
5 L-601



GROUNDCOVER, PERENNIAL, AND GRASS PLANTING

Not to Scale

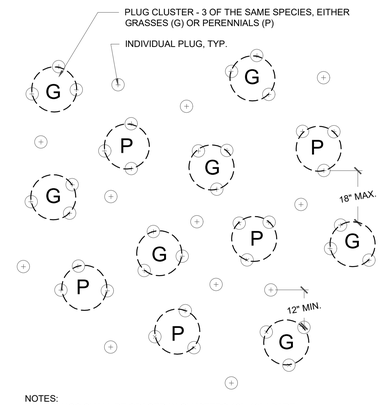
8 L-601



STAGGERED PLUG PLANTING

Not to Scale

9 L-601



NOTES:

1. PLUGS SHALL BE SPACED IN CLUSTERS 12"- 18" APART
2. INDIVIDUAL PLUGS SHALL BE SPACED BETWEEN CLUSTERS TO PROVIDE ADEQUATE COVERAGE.

IRREGULAR PLUG PLANTING

Not to Scale

10 L-601

Susan Hatchell
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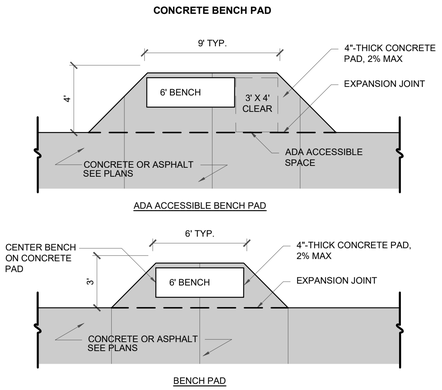
EP SITE DETAILS

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

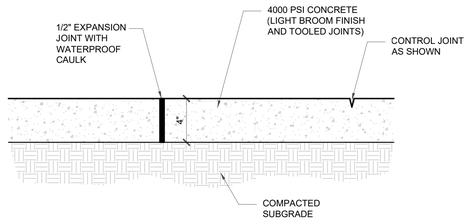
Date: 7/27/26

L-601



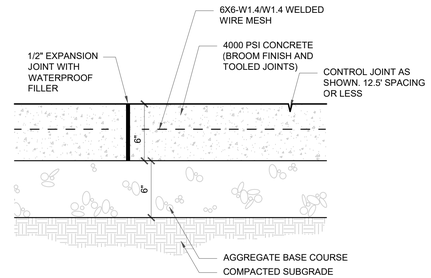
NOTE:
1. SEE PLANS FOR BENCH LAYOUT CONFIGURATION.

BENCH PAD
Not to Scale — 1 / L-602



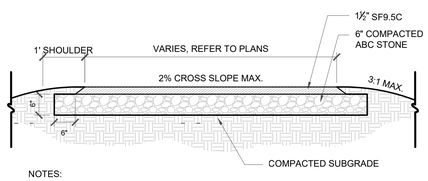
NOTES:
1. PLACE A 1/2 INCH EXPANSION JOINT WITH WATERPROOF CAULK EVERY 18' OR BETWEEN POURS.
2. SCORE CONCRETE FOR SIDEWALKS AS SHOWN ON PLANS.
3. SCORE CONCRETE RADIALLY TO MATCH CURVE WHEN WALK CURVES.

4" THICK CONCRETE SIDEWALK
Not to Scale — 5 / L-602



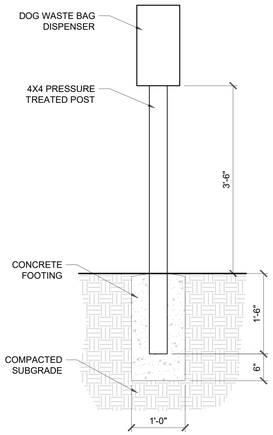
NOTES:
1. PLACE A 1/2 INCH EXPANSION JOINT WITH WATERPROOF CAULK EVERY 20' OR BETWEEN POURS.
2. PLACE A 1/2 INCH EXPANSION JOINT BETWEEN 6" AND 4" CONCRETE POURS.
3. SCORE CONCRETE AS SHOWN ON PLANS.
4. SCORE CONCRETE RADIALLY TO MATCH CURVE WHEN PAVEMENT CURVES.

6" THICK HEAVY DUTY CONCRETE
Not to Scale — 9 / L-602

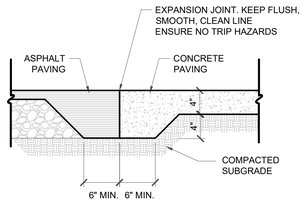


NOTES:
1. BACK FILL, SMOOTH AND SEED SHOULDERS AFTER PAVING.
2. WHERE ADJOINING EXISTING ASPHALT TRAIL, CREATE A FLUSH CONDITION.

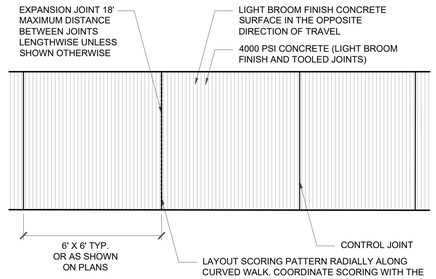
ASPHALT TRAIL
Not to Scale — 2 / L-602



DOG WASTE BAG DISPENSER
Not to Scale — 6 / L-602

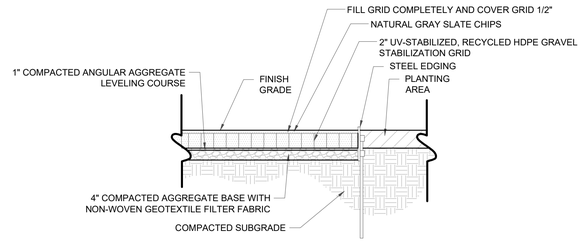


CONCRETE TRANSITION AT ASPHALT
Not to Scale — 10 / L-602



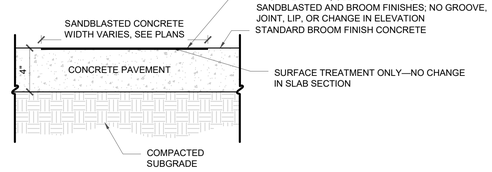
NOTES:
1. HEAVY DUTY CONCRETE PAVING REQUIRES SAW JOINTS AT 12.5' SPACING OR LESS.

CONCRETE FINISH/SCORING PATTERN
Not to Scale — 3 / L-602



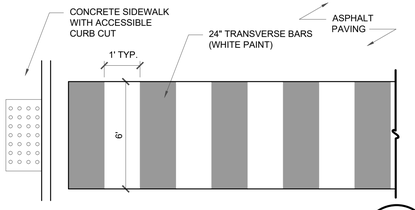
NOTES:
1. PROVIDE MAX. 2% CROSS-SLOPE FOR ADEQUATE DRAINAGE.
2. INSTALL STEEL EDGING ONLY ALONG LANDSCAPE BEDS, NOT REQUIRED WHERE SLATE CHIPS ABUT CONCRETE OR WALLS. INSTALL EDGING PER MANUFACTURER'S RECOMMENDATIONS WITH REQUIRED STAKES.
3. GRID DEPTH AND CELL SIZE COMPATIBLE WITH SELECTED AGGREGATE
4. SUBMIT SIZE AND COLOR SAMPLES FOR SLATE CHIPS FOR APPROVAL BY LA.

SLATE CHIP SURFACING
Not to Scale — 7 / L-602

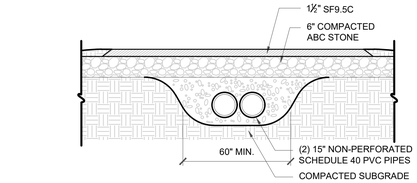


NOTES:
1. SANDBLASTED SWOOSH IS A SURFACE TREATMENT OF THE CONTINUOUS CONCRETE SIDEWALK; DO NOT CONSTRUCT AS A SEPARATE POUR.
2. LOCATION, WIDTH, CURVATURE AND EXTENT OF SANDBLASTED FINISH SHALL FOLLOW THE PAVING PLANS.
3. MASK ADJACENT CONCRETE TO PRODUCE SMOOTH, SHARP AND CONTINUOUS CURVED EDGES. REMOVE MASKING WITHOUT CHIPPING OR DAMAGING CONCRETE.
4. PROVIDE UNIFORM LIGHT-TO-MEDIUM SANDBLASTED FINISH WITH CONSISTENT AGGREGATE EXPOSURE, COLOR AND TEXTURE, AS ESTABLISHED BY THE APPROVED MOCKUP.
5. SANDBLASTING SHALL NOT CREATE DEPRESSIONS, GROOVES, LIPS OR ABRUPT TEXTURE CHANGES THAT RETAIN WATER OR CREATE A TRIP HAZARD.
6. PROTECT ADJACENT BROOM-FINISHED CONCRETE FROM OVERBLAST, DISCOLORATION AND DAMAGE.
7. CONSTRUCT CONTROL AND EXPANSION JOINTS CONTINUOUSLY THROUGH BOTH SURFACE TREATMENTS AT LOCATIONS SHOWN ON THE PLANS. DECORATIVE FINISH LIMITS DO NOT CONSTITUTE JOINTS.
8. PREPARE A MINIMUM 4 FT × 4 FT MOCKUP SHOWING THE BROOM FINISH, SANDBLASTED FINISH AND CURVED TRANSITION. OBTAIN LANDSCAPE ARCHITECT'S APPROVAL BEFORE BEGINNING PRODUCTION WORK. APPROVED MOCKUP SHALL ESTABLISH THE STANDARD FOR THE WORK.

SANDBLASTED CONCRETE
Not to Scale — 8 / L-602

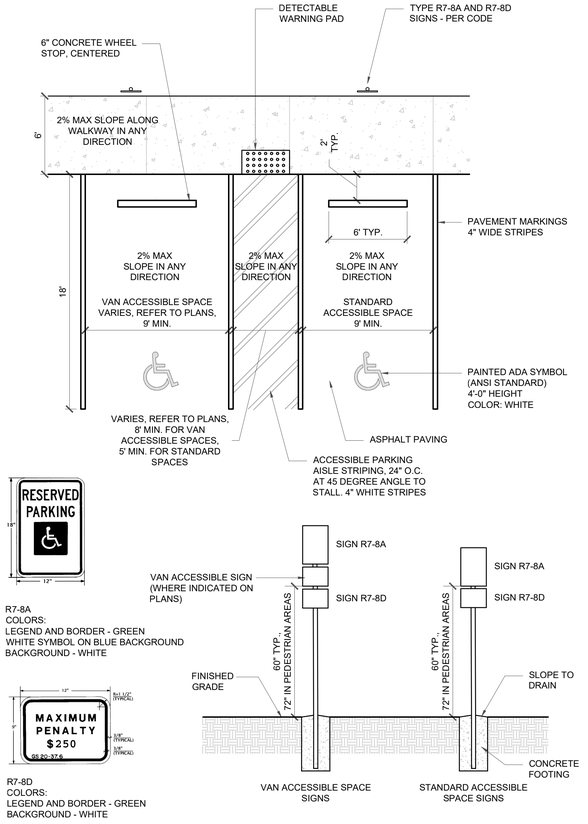


CROSSWALK
Not to Scale — 11 / L-602



NOTE:
1. TRAIL DRAIN END TO BE CUT TO BE FLUSH WITH GRADE.
2. RIP RAP MAY BE NECESSARY AT THE ENDS OF PIPES DEPENDING ON SITE CONDITIONS.

TRAIL DRAINS
Not to Scale — 4 / L-602



NOTES:
1. LOCATION AND DESIGN OF SIGNAGE SHALL COMPLY WITH THE REQUIREMENTS OF N.C.G.S. 20-37.6 AND 136-30, AND THE NCDOT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
2. MAY ALSO USE COMBINATION SIGN R7-8E IN LIEU OF R7-8A AND R7-8D. COLORS/CORNER RADII SAME AS R7-8A, AND SIGN MOUNTED AT LEAST 72 INCHES (72") ABOVE THE GROUND MEASURED TO THE BOTTOM OF THE SIGN IN PEDESTRIAN AREAS.
3. VAN ACCESSIBLE SIGN TO BE PLACED UNDER R7-8E IF APPLICABLE WITH VAN ACCESSIBLE SIGN MOUNTED AT LEAST 72 INCHES (72") ABOVE THE GROUND MEASURED TO THE BOTTOM OF THE SIGN IN PEDESTRIAN AREAS.

ACCESSIBLE PAVEMENT MARKINGS AND SIGNS
Not to Scale — 12 / L-602

NORTH CAROLINA LANDSCAPE ARCHITECTURE C-175 SUSAN HATCHELL LANDSCAPE ARCHITECTURE, PLLC

NORTH CAROLINA LANDSCAPE ARCHITECT 528 SUSAN M. HATCHELL 7-27-2026

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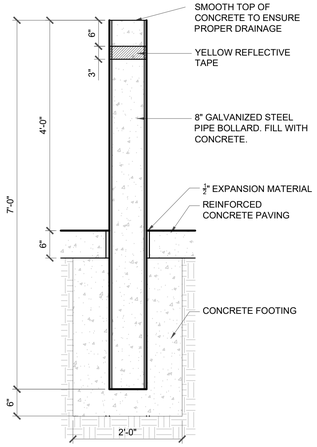
EP SITE DETAILS

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

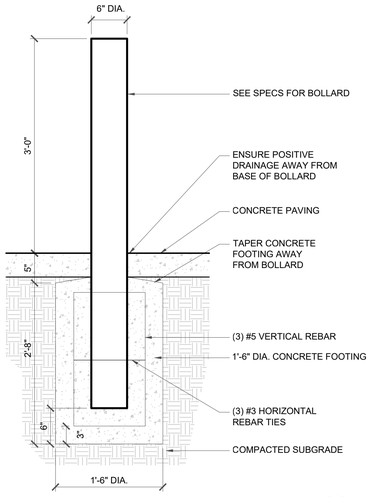
Date: 7/27/26

L-602

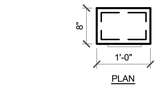


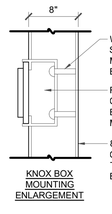
NOTE:
1. SEE DUMPSTER ENCLOSURE PLAN MF-A102 FOR LOCATIONS.
2. VERIFY ALL DIMENSIONS IN THE FIELD.
3. ALL METAL SHALL BE GALVANIZED.
4. PAINT ONE COAT METAL PRIMER AND TWO COATS BLACK METAL ENAMEL OR VINYL COATING

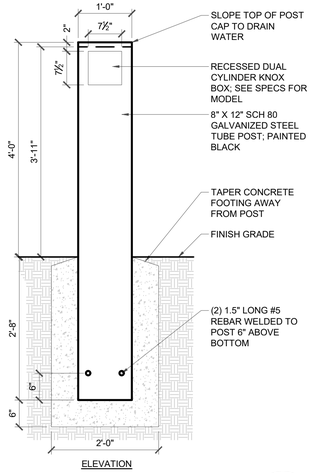
PERMANENT BOLLARD
Not to Scale — 1 / L-603



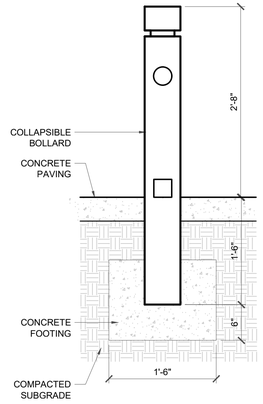
PLAZA BOLLARD
Not to Scale — 4 / L-603



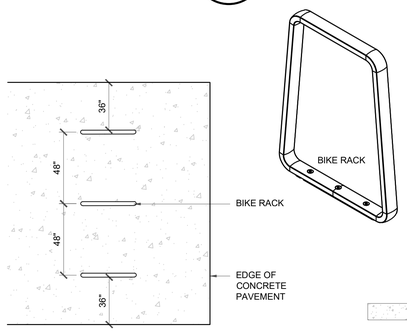




EMERGENCY KNOX BOX
Not to Scale — 2 / L-603

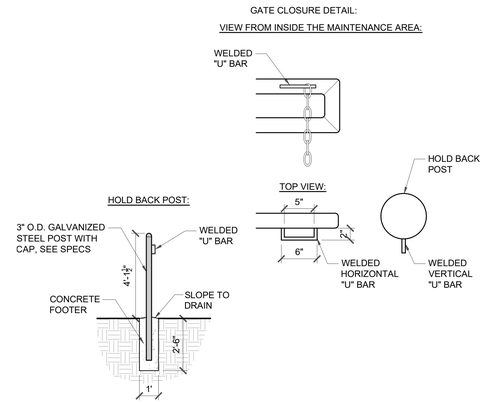


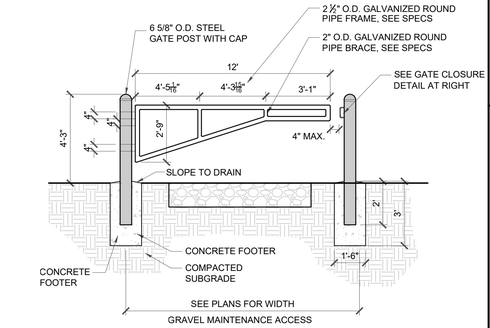
COLLAPSIBLE BOLLARD
Not to Scale — 3 / L-603



NOTES:
1. PRIOR TO INSTALLATION, FIELD LOCATE FOR APPROVAL BY LANDSCAPE ARCHITECT.
2. COLOR TO BE SELECTED BY OWNER.
3. WHEN INSTALLED ON CONCRETE SURFACE, USE 3/8" ANCHORS TO PLATE MOUNT. SHIM AS NECESSARY TO ENSURE VERTICAL PLACEMENT.

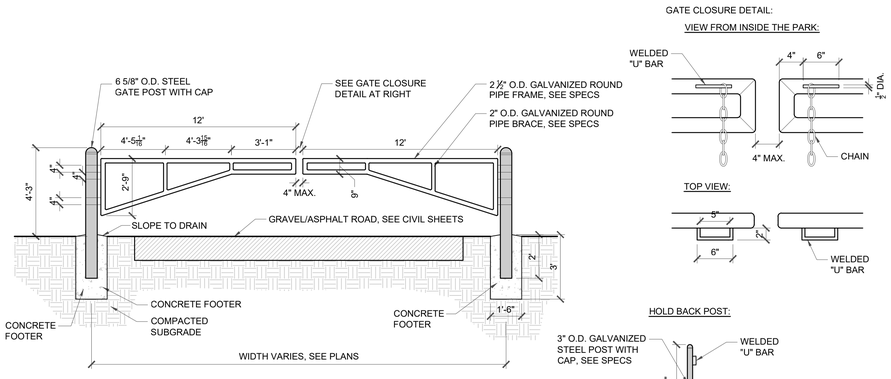
BIKE RACK
Not to Scale — 5 / L-603





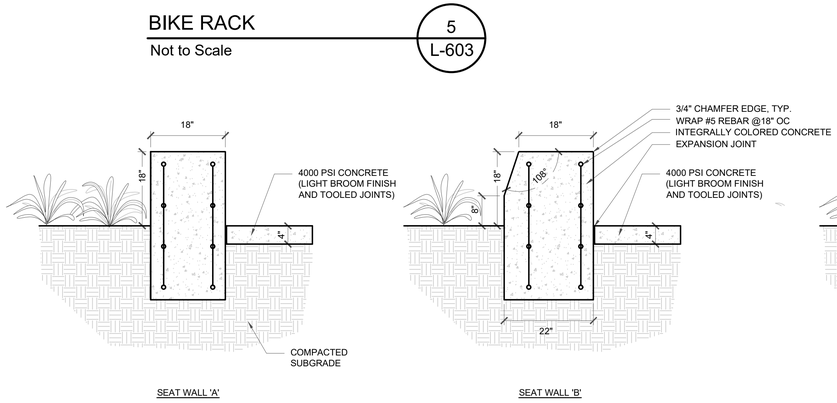
NOTE:
1. SEE PLANS FOR LOCATIONS. ONE (1) HOLD BACK POST PER GATE REQUIRED.
2. VERIFY ALL DIMENSIONS IN THE FIELD.

SINGLE PARK GATE
Not to Scale — 6 / L-603



NOTE:
1. SEE PLANS FOR LOCATIONS. ONE (1) HOLD BACK POST PER GATE REQUIRED.
2. VERIFY ALL DIMENSIONS IN THE FIELD.

DOUBLE PARK GATE
Not to Scale — 7 / L-603



NOTE:
1. SEE PLAZA AND PLAYGROUND PLANS FOR SEAT WALL TYPES/LOCATIONS.
2. PREPARE FORMWORK FOR APPROVAL PRIOR TO POURING CONCRETE.
3. COLOR: TO BE APPROVED BY OWNER, SUBMIT INTEGRAL CONCRETE COLOR TO LA FOR APPROVAL.
4. VERIFY ALL DIMENSIONS IN THE FIELD.

CONCRETE SEAT WALL A, B, C
Not to Scale — 8 / L-603

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NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECTURE C-175 SUSAN HATCHELL LANDSCAPE ARCHITECTURE, PLLC

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 528 SUSAN M. HATCHELL 7/27/2026

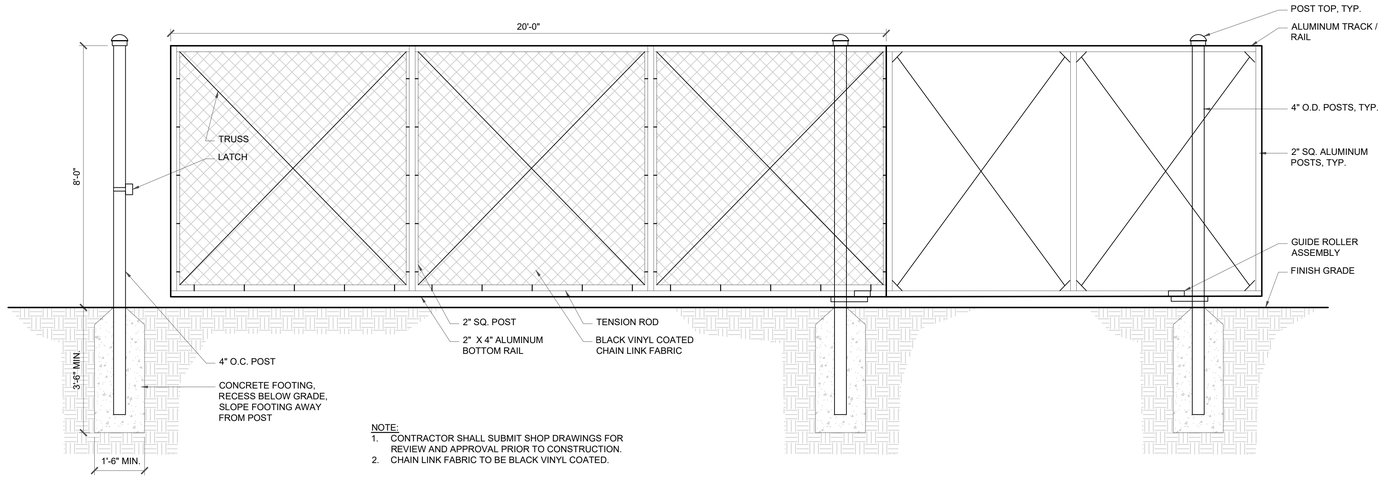
EP SITE DETAILS

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 7/27/26

L-603

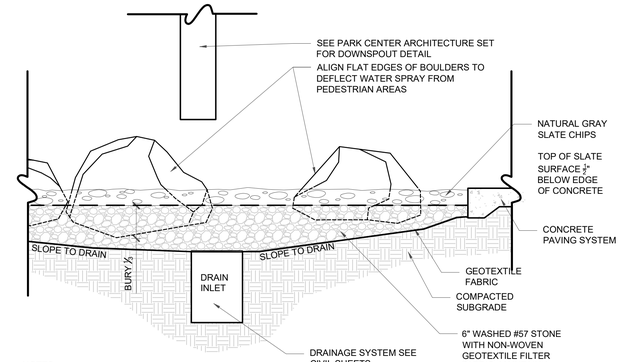


NOTE:
1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
2. CHAIN LINK FABRIC TO BE BLACK VINYL COATED.

20' SLIDING GATE

Not to Scale

1 / L-604

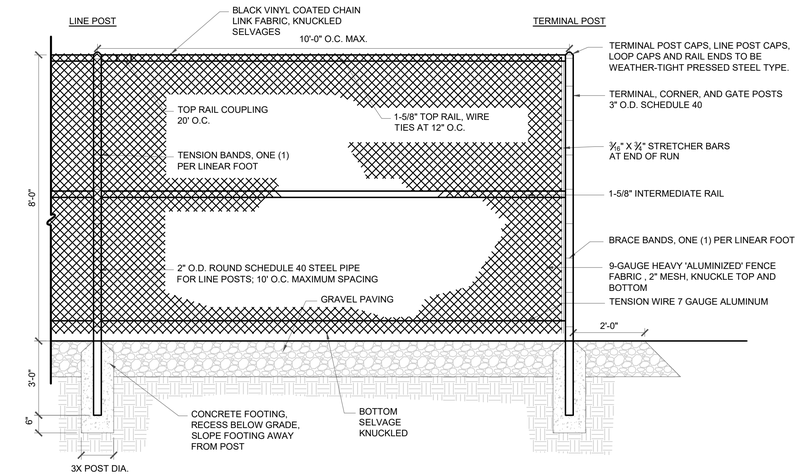


NOTES:
1. SEE PLANS FOR LOCATIONS.
2. BOULDERS TO BE SOURCED ON SITE OR SELECTED BY LA AT LOCATION OR APPROVED BY PHOTOGRAPHS. MEASUREMENTS PROVIDED BY CONTRACTOR.
3. STONE COLOR TO BE DETERMINED BY LA.
4. LAY OUT FOR LA APPROVAL PRIOR TO BURYING BOULDERS.
5. SUBMIT SLATE CHIP COLORS TO LA FOR APPROVAL.

STONE RAINWATER CAPTURE AREA

Not to Scale

2 / L-604

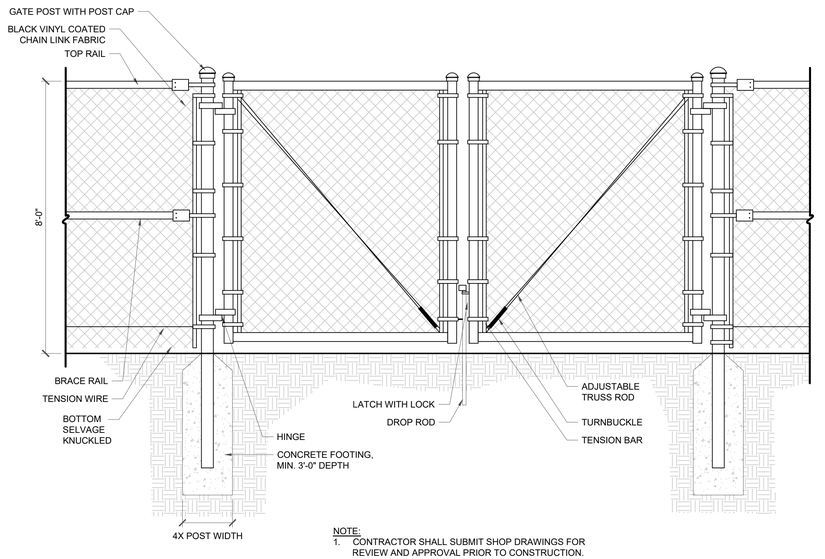


NOTES:
1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
2. POSTS SHALL BE ROUND SCHEDULE 40 STEEL PIPE.
3. FABRIC SHALL BE 9 GAUGE 'ALUMINIZED' WIRE, 2" MESH, KNUCKLED TOP AND BOTTOM FINISH.
4. ALL POST AND RAIL TIE WIRES SHALL BE 12" O.C.
5. CHAIN LINK FENCE TO BE BLACK VINYL COATED.

CHAIN LINK FENCE

Not to Scale

3 / L-604

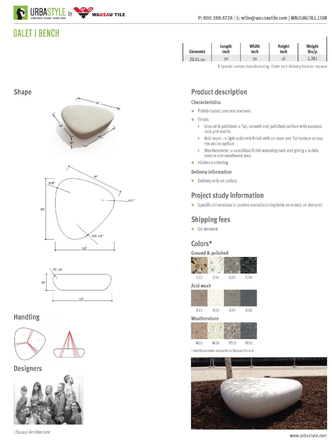


NOTE:
1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
2. CHAIN LINK GATE TO BE BLACK VINYL COATED.

DOUBLE CHAIN LINK GATE

Not to Scale

4 / L-604



PRODUCT: ZB.GL.01 GALET I BENCH, ZB.GL.02 GALET II BENCH, ZB.GL.03 GALET III BENCH, ZB.GL.04 GALET IV BENCH, ZB.GL.05 GALET V BENCH, AND ZB.GL.06 GALET VI BENCH, CONCRETE, FINISH: GROUND & POLISHED, COLOR: TBD

SUPPLIER: WAUSAU TILE, 800.388.8728, WTILE@WAUSAUTILE.COM, SEE WEBSITE FOR CUTSHEETS FOR GALET II, III, IV, V, AND VI BENCHES.

PEBBLE BENCHES

Not to Scale

5 / L-604

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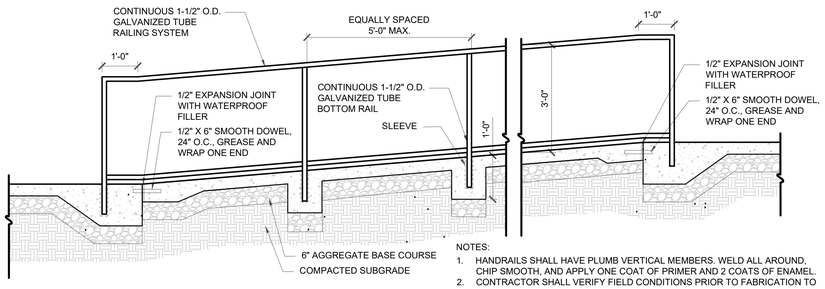
EP SITE DETAILS

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 7/27/26

L-604

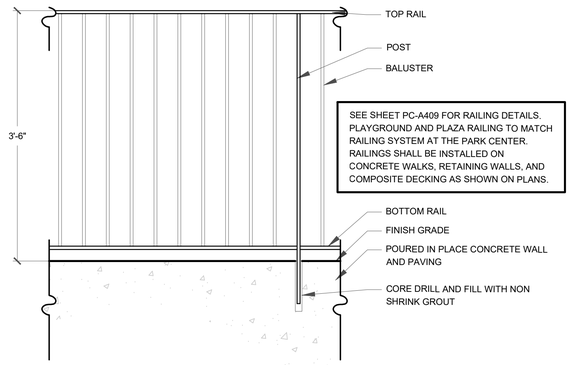


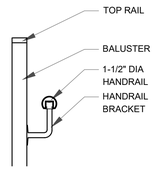
NOTES:
1. HANDRAILS SHALL HAVE PLUMB VERTICAL MEMBERS. WELD ALL AROUND, CHIP SMOOTH, AND APPLY ONE COAT OF PRIMER AND 2 COATS OF ENAMEL.
2. CONTRACTOR SHALL VERIFY FIELD CONDITIONS PRIOR TO FABRICATION TO ENSURE COMPLIANCE WITH CODE.
3. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.

CONCRETE RAMP AND HANDRAIL

Not to Scale

1 / L-605



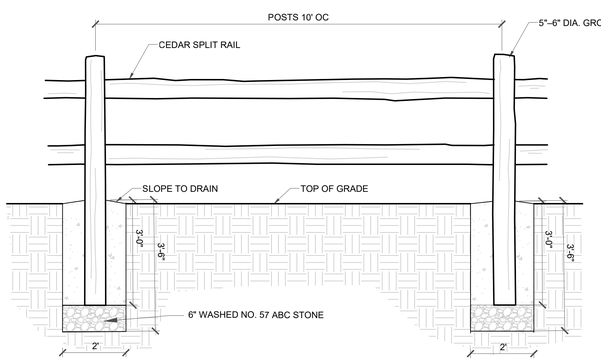


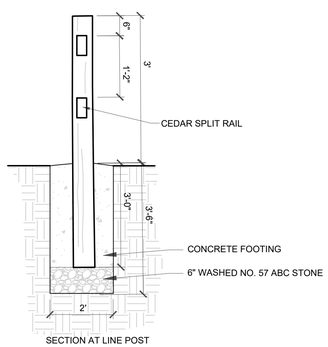
HANDRAIL CONDITION

PLAZA/PLAYGROUND RAILING

Not to Scale

3 / L-605





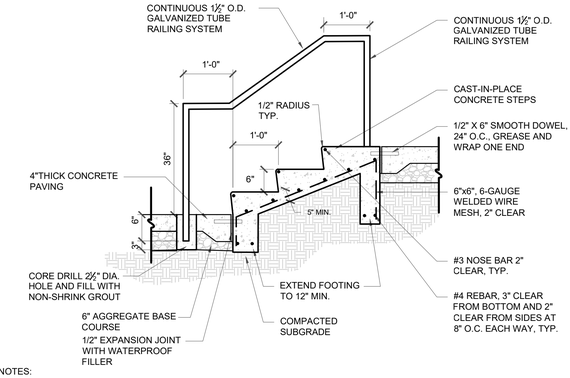
SECTION AT LINE POST

NOTES:
1. FIELD-VERIFY THE RAIL LENGTH BEFORE ESTABLISHING POST LOCATIONS.
2. ORIENT POSTS SO RAIL MORTISES ALIGN AND RAILS ARE APPROXIMATELY LEVEL. STEP THE FENCE WHERE REQUIRED.
3. DO NOT CUT, NOTCH OR FIELD-MODIFY STRUCTURAL PORTIONS OF POSTS WITHOUT APPROVAL.
4. PROVIDE MATCHING END, CORNER AND GATE POSTS WHERE APPLICABLE.
5. SET POSTS PLUMB. MAINTAIN A CONSISTENT TOP-OF-POST ELEVATION ABOVE THE UPPER RAIL.
6. REMOVE LOOSE OR ORGANIC MATERIAL FROM POST HOLES.
7. DO NOT PLACE STONE BACKFILL IN STANDING WATER OR SATURATED SOIL.

SPLIT-RAIL FENCE

Not to Scale

5 / L-605



NOTES:
1. PROVIDE INTERMEDIATE VERTICAL RAIL FOR HANDRAIL IF MORE THAN THREE STEPS. RAIL SHALL MATCH THE SLOPE OF THE WALK OR STEPS, PARALLEL TO THE SURFACE.
2. HANDRAILS SHALL HAVE PLUMB VERTICAL MEMBERS. WELD ALL AROUND, CHIP SMOOTH, AND APPLY ONE COAT OF PRIMER AND 2 COATS OF ENAMEL.

CONCRETE STEPS AND HANDRAIL

Not to Scale

2 / L-605

NOTES:
1. SEE SPEC 09 9600 FOR PAINTING REQUIREMENTS.
2. SEE PLANS FOR LAYOUT OF KNEE RAIL.
3. KNEE RAIL STEEL PIPE SHALL CURVE ON SECTIONS OF CURVED EDGING. AND SLOPE WHERE INDICATED ON PLANS.
4. CONTRACTOR SHALL VERIFY FIELD CONDITIONS PRIOR TO FABRICATION TO ENSURE COMPLIANCE WITH CODE.
5. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.

KNEE RAIL

Not to Scale

4 / L-605

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EP SITE DETAILS

LAKE MYRA COUNTY PARK
Wake County, NC

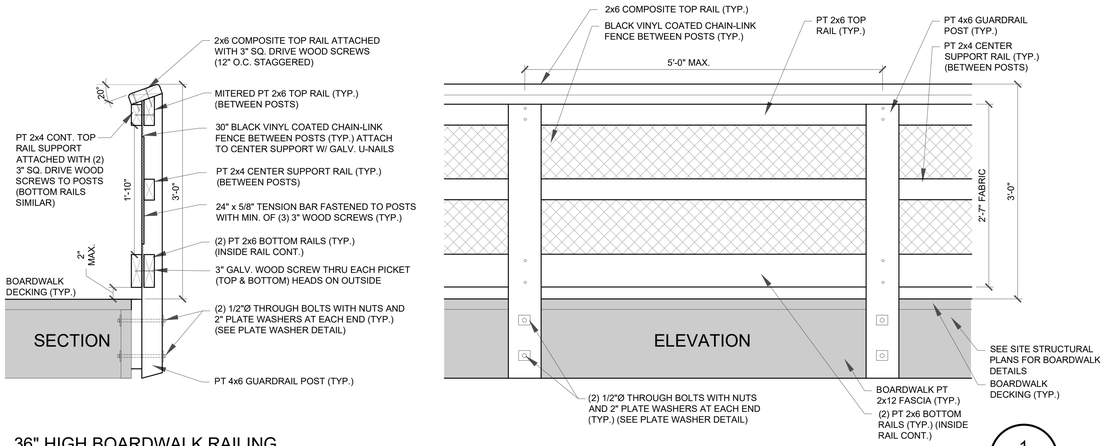
REVISIONS

Date: 7/27/26

L-605

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECTURAL COMPANY C-175 SUSAN HATCHELL, LANDSCAPE ARCHITECTURE, PLLC

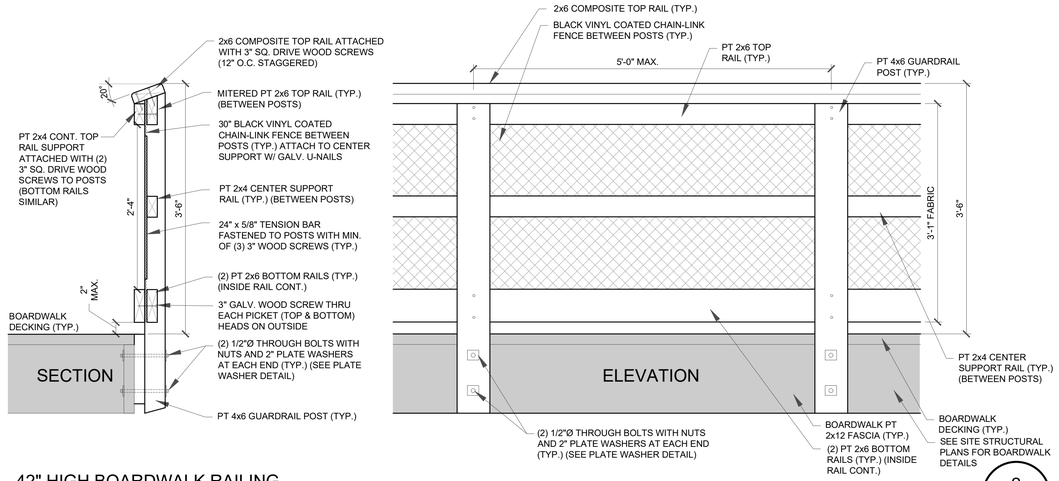
NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 528 SUSAN M. HATCHELL 7/27/2026



36" HIGH BOARDWALK RAILING

Not to Scale

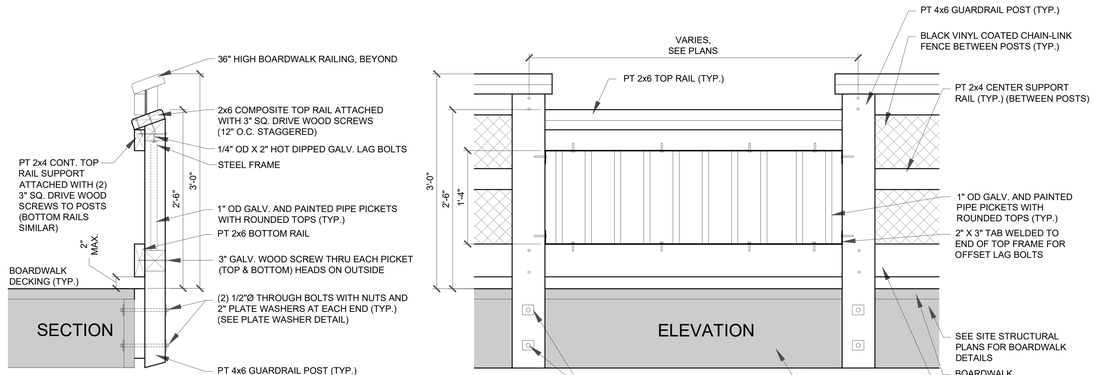
1 / L-606



42" HIGH BOARDWALK RAILING

Not to Scale

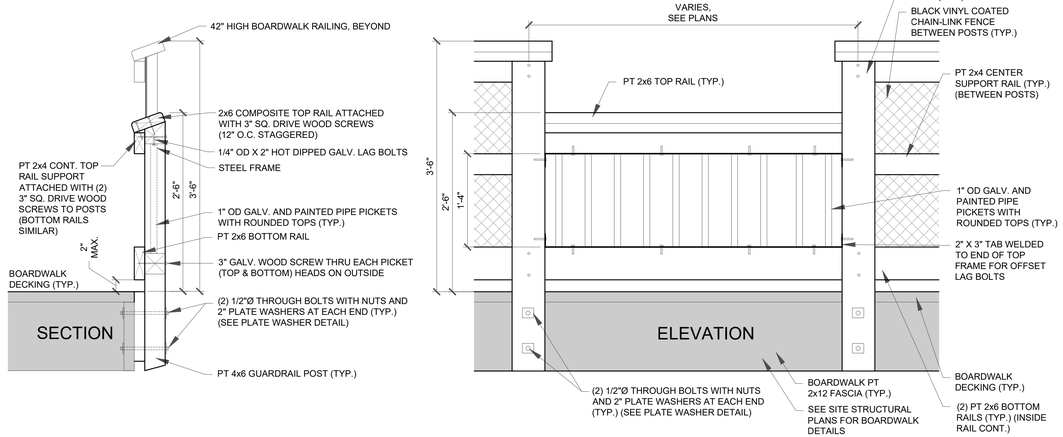
2 / L-606



36" HIGH BOARDWALK ACCESSIBLE FISHING RAILING

Not to Scale

3 / L-606

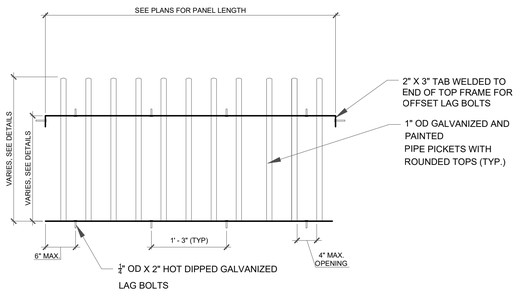


42" HIGH BOARDWALK ACCESSIBLE FISHING RAILING

Not to Scale

4 / L-606

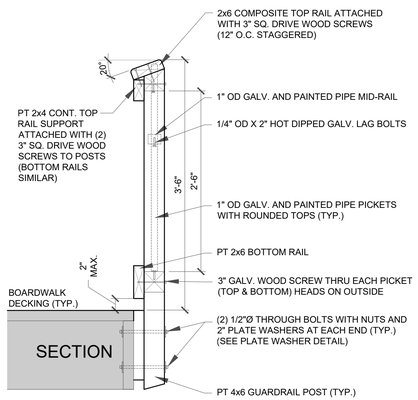
NOTES:
1. STAKE LOCATIONS IN THE FIELD FOR APPROVAL BY LANDSCAPE ARCHITECT AND OWNER.
2. ENSURE 10' MINIMUM CLEARANCE ALONG BOARDWALKS.



PIPE PICKET PANEL

Not to Scale

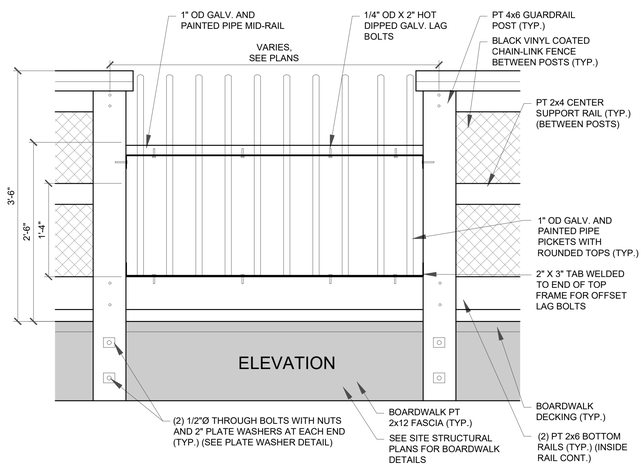
5 / L-606



42" HIGH BOARDWALK BIRDABILITY RAILING

Not to Scale

6 / L-606



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EP SITE DETAILS

LAKE MYRA COUNTY PARK
Wake County, NC

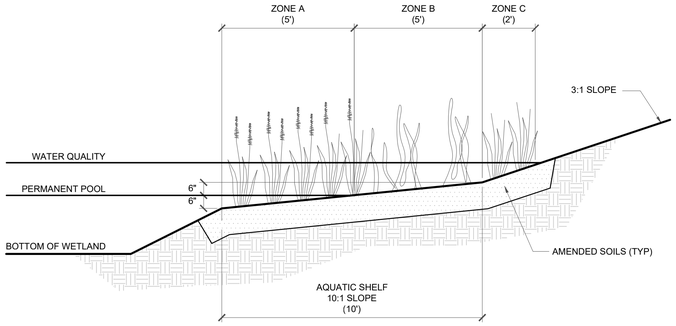
REVISIONS

Date: 7/27/26

L-606

NORTH CAROLINA LANDSCAPE ARCHITECTURE SUSAN HATCHELL LANDSCAPE ARCHITECTURE, PLLC C-175

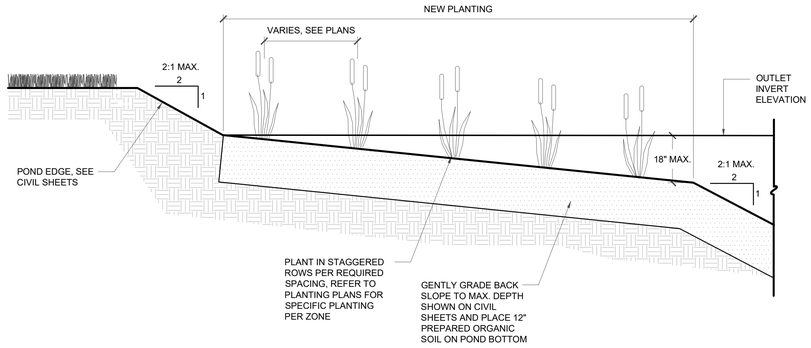
NORTH CAROLINA LANDSCAPE ARCHITECT 528 SUSAN M. HATCHELL 7/27/2026



WETLAND PLANTING DIAGRAM

Not to Scale

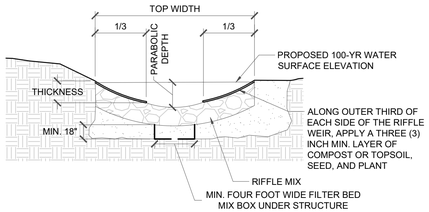
1
L-607



ENHANCED POND EDGE

Not to Scale

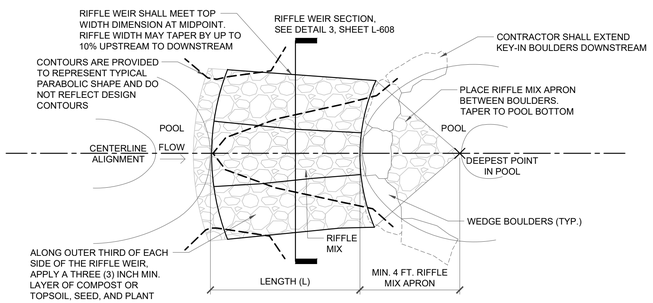
2
L-607



RIFFLE WEIR SECTION

Not to Scale

3
L-608



RIFFLE WEIR PLAN VIEW

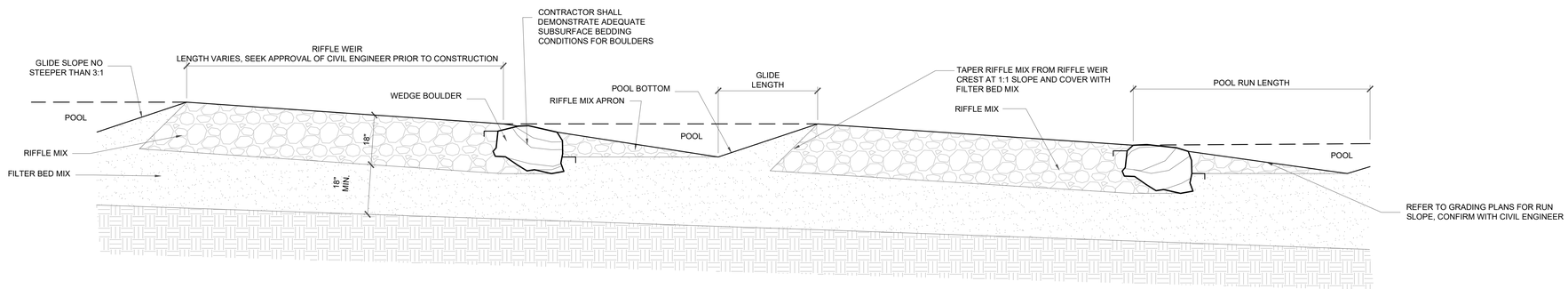
Not to Scale

4
L-607

DETAIL IS ILLUSTRATIVE ONLY: LAYOUT OF RIFFLE WEIR AND POOLS TO BE REVIEWED AND APPROVED BY CIVIL ENGINEER

INTENTIONALLY LEFT BLANK

5
L-607



DETAIL IS ILLUSTRATIVE ONLY: LAYOUT OF RIFFLE WEIR AND POOLS TO BE REVIEWED AND APPROVED BY CIVIL ENGINEER

RIFFLE WEIR AND POOLS

Not to Scale

6
L-607

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECTURAL CORPORATION SEAL — SUSAN HATCHELL LANDSCAPE ARCHITECTURE, PLLC — C-175

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT — 528 — SUSAN M. HATCHELL — 7-27-2026

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EP SITE DETAILS

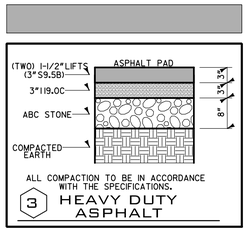
LAKE MYRA COUNTY PARK
Wake County, NC

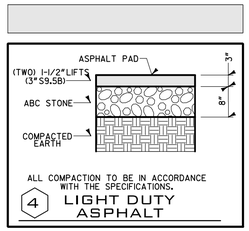
REVISIONS

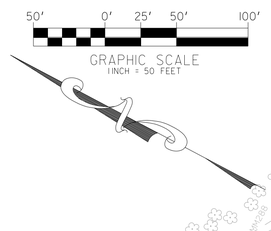
Date: 7/27/26

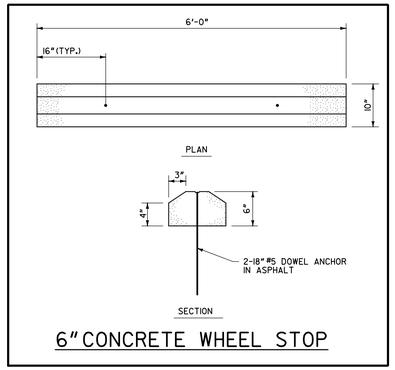
L-607

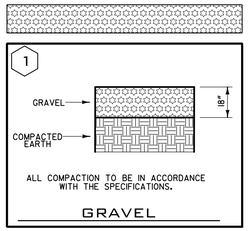
"ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF WENDELL, CITY OF RALEIGH AND / OR NCDOT STANDARDS AND SPECIFICATIONS"

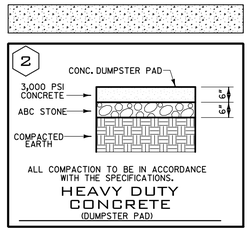


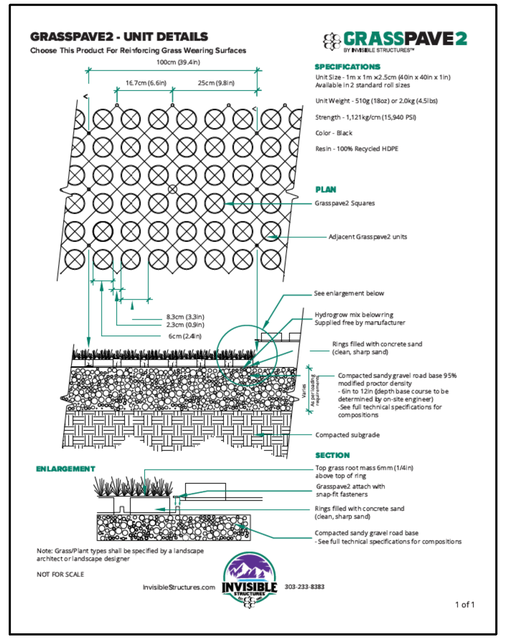


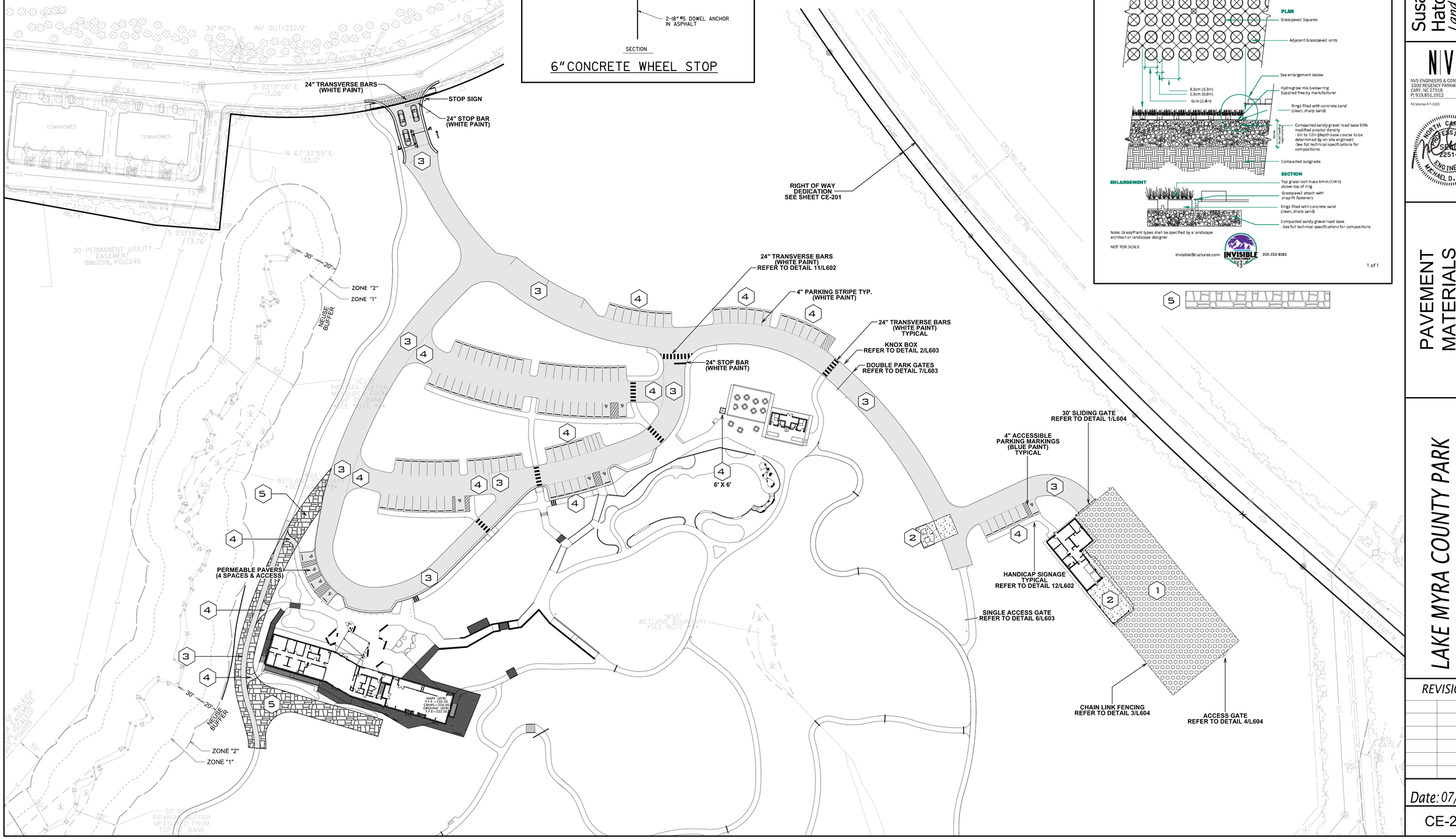












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NC License # F-1333

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 22514 MICHAEL D. ALLEN 7/28/26

PAVEMENT MATERIALS PLAN EAST

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 07/28/26

CE-200

"ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF WENDELL, CITY OF RALEIGH AND / OR NCDOT STANDARDS AND SPECIFICATIONS"

50' 0' 25' 50' 100'

GRAPHIC SCALE
1 INCH = 50 FEET

POOLE ROAD (SR 1007)
VARIABLE WIDTH PUBLIC R/W
B.M. 2020 PG. 1582 &
B.M. 2009 PG. 626

EXISTING R/W

PROPOSED R/W

92.50'

75'

17.50' R/W DEDICATION

R/W DEDICATION
20,236.45 SF
0.465 AC.

ELK FALLS DRIVE
60.00' PUBLIC R/W
B.M. 2009 PG. 626

NEUSE BUFFER

ZONE "2"

ZONE "1"

30'

20'

EXISTING CITY OF RALEIGH PUMP STATION EASEMENT RESERVATION (RECORDED) BM2007, PG4099

WETLAND FLAGS ARE NOT ACCURATE

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 22514 MICHAEL D. ALLEN
7/28/26

POOLE ROAD RIGHT-OF-WAY DEDICATION PLAN

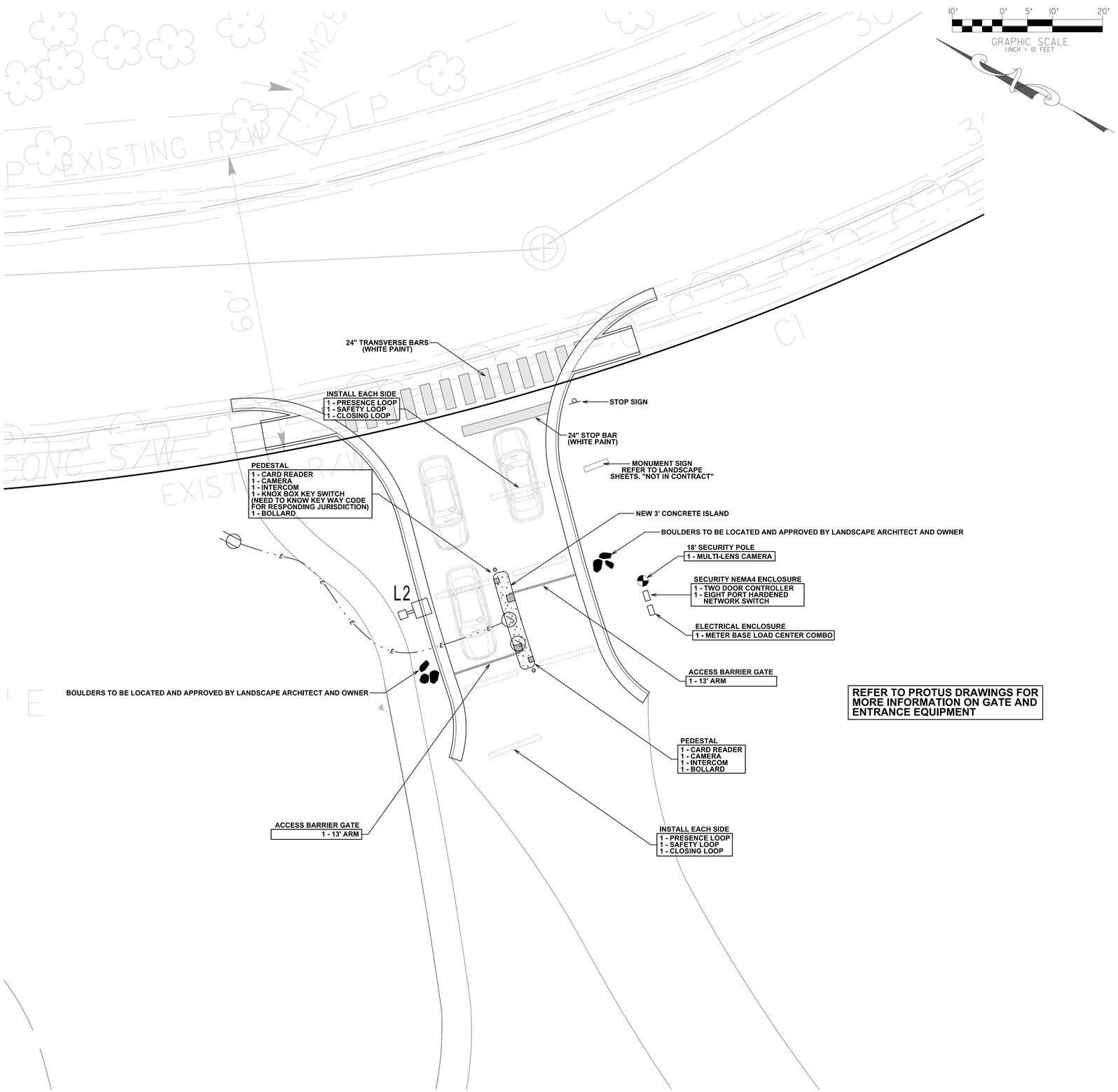
LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 07/28/26

CE-201

"ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF WENDELL, CITY OF RALEIGH AND / OR NCDOT STANDARDS AND SPECIFICATIONS"



REFER TO PROTUS DRAWINGS FOR MORE INFORMATION ON GATE AND ENTRANCE EQUIPMENT

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NORTH CAROLINA PROFESSIONAL SEAL 22514 ENGINEER MICHAEL D. ALLEN 7/28/26

ENTRANCE DRIVE ENLARGEMENT

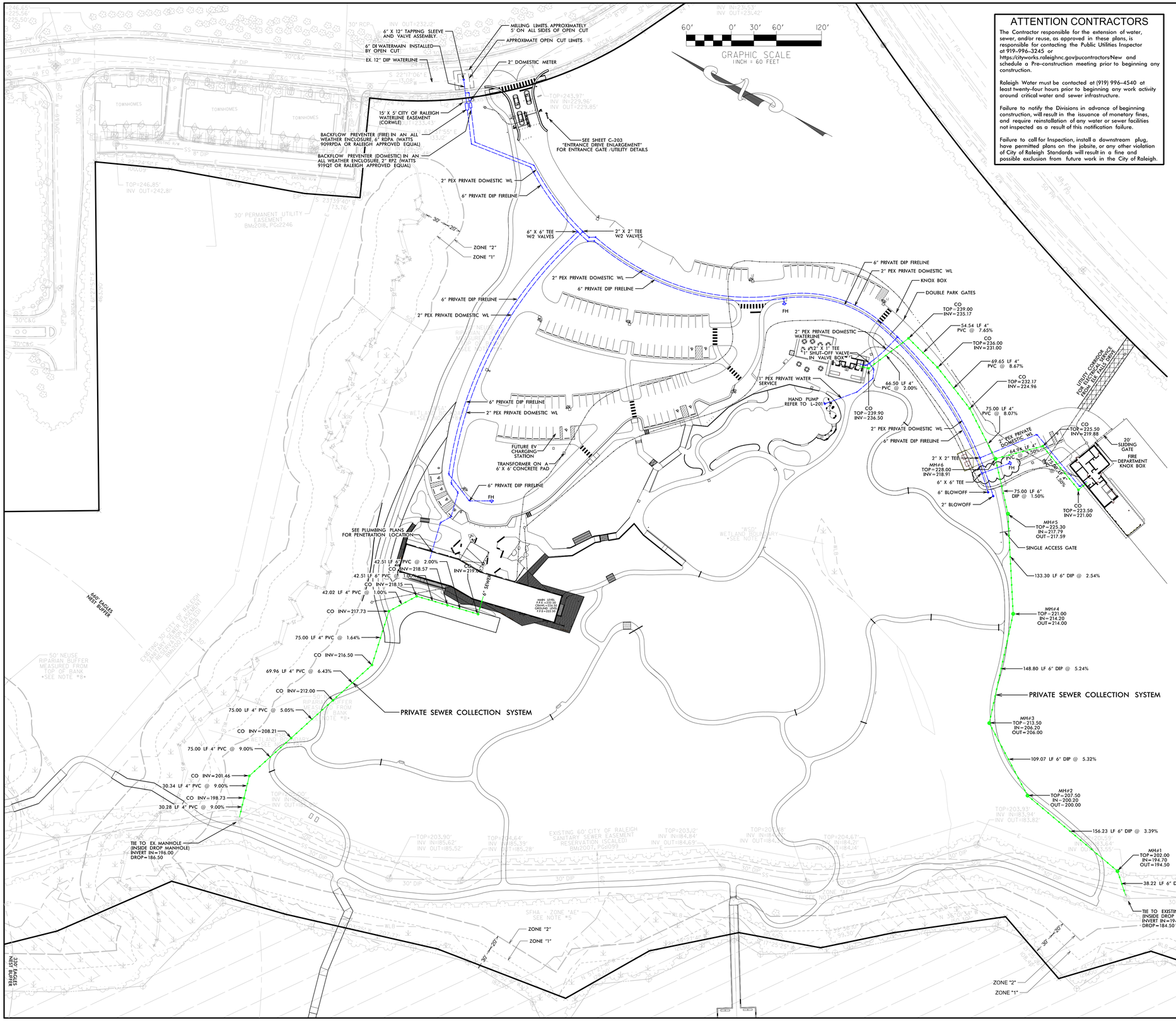
LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 07/28/26

CE-202

"ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF WENDELL, CITY OF RALEIGH AND / OR NCDOT STANDARDS AND SPECIFICATIONS"



ATTENTION CONTRACTORS

The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Inspector at 919-996-3245 or https://cityworks.raleighnc.gov\pucontractors\New and schedule a Pre-construction meeting prior to beginning any construction.

Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

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

Failure to call for Inspection, install a downstream plug, have permitted plans on the jobsite, or any other violation of City of Raleigh Standards will result in a fine and possible exclusion from future work in the City of Raleigh.

STANDARD UTILITY NOTES:

1. All materials & construction methods shall be in accordance with City of Raleigh design standards, details & specifications (reference: CORPUD Handbook, current edition)
2. Utility separation requirements:
   a) A distance of 100' shall be maintained between sanitary sewer & any private or public water supply source such as an impounded reservoir used as a source of drinking water. If adequate lateral separation cannot be achieved, ferrous sanitary sewer pipe shall be specified & installed to waterline specifications. However, the minimum separation shall not be less than 25' from a private well or 50' from a public well.
   b) When installing water &/or sewer mains, the horizontal separation between utilities shall be 10'. If this separation cannot be maintained due to existing conditions, the variation allowed is the water main in a separate trench with the elevation of the water main at least 18" above the top of the sewer & must be approved by the Public Utilities Director. All distances are measured from outside diameter to outside diameter.
   c) Where it is impossible to obtain proper separation, or anytime a sanitary sewer passes over a watermain, DIP materials or steel encasement extended 10' on each side of crossing must be specified & installed to waterline specifications.
   d) 5.0' minimum horizontal separation is required between all sanitary sewer & storm sewer facilities, unless DIP material is specified for sanitary sewer.
   e) Maintain 18" min. vertical separation at all watermain & RCP storm drain crossings; maintain 18" min. vertical separation at all sanitary sewer & RCP storm drain crossings. Where adequate separations cannot be achieved, specify DIP materials & a concrete cradle having 6" min. clearance (per CORPUD details W-41 & S-49).
   f) All other underground utilities shall cross water & sewer facilities with 18" min. vertical separation required.
3. Any necessary field revisions are subject to review & approval of an amended plan &/or profile by the City of Raleigh Public Utilities Department prior to construction.
4. Developer shall provide 30 days advance written notice to owner for any work required within an existing City of Raleigh Utility Easement traversing private property.
5. Contractor shall maintain continuous water & sewer service to existing residences & businesses throughout construction of project. Any necessary service interruptions shall be preceded by a 24-hour advance notice to the City of Raleigh Public Utilities Department.
6. SEWER BYPASS PUMPING – A bypass plan sealed by an NC Professional Engineer shall be provided to Raleigh Water prior to pumping operations for approval. The operations and equipment shall comply with the Public Utilities Handbook.
7. 3.0' minimum cover is required on all water mains & sewer force mains. 4.0' minimum cover is required on all reuse mains.
8. It is the developer's responsibility to abandon or remove existing water & sewer services not being used in redevelopment of a site unless otherwise directed by the City of Raleigh Public Utilities Department. This includes abandoning tap at main & removal of service from ROW or easement per CORPUD Handbook procedure.
9. Install water services with meters located at ROW or within a 2'x2' Waterline Easement immediately adjacent. NOTE: it is the applicant's responsibility to properly size the water service for each connection to provide adequate flow & pressure.
10. Inspections of 4" and larger water mains of the private distribution system will be inspected as part of the infrastructure permit.
11. Private sewer mains as part of a collection system are permitted and inspected under the private Infrastructure permit for sewer.
12. Any water or sewer services on private property that will be installed under Construction Drawings may require a Plumbing Utility Permit in the City of Raleigh. Consult with the Engineering Inspection Coordinator during the pre-construction meeting on the necessary permits.
13. Install sewer services with cleanouts located at ROW or easement line & spaced per the current NC Plumbing code.
14. Pressure reducing valves are required on all water services exceeding 80 psi; backwater valves are required on all sanitary sewer services having building drains lower than 1.0' above the next upstream manhole.
15. All environmental permits applicable to the project must be obtained from NCDWQ, USACE &or FEMA for any riparian buffer, wetland &/or floodplain impacts (respectively) prior to construction.
16. NCDOT /Railroad Encroachment Agreements are required for any utility work (including main extensions & service taps) within state or railroad ROW prior to construction.
17. Grease Interceptor /Oil Water Separator sizing calculations & installation specifications shall be approved by the RW FOG Program Coordinator prior to issuance of a UC and/or Building Permit. Contact (919) 996-4516 or fog@raleighnc.gov for more information.
18. Cross-connection control protection devices are required based on the degree of health hazard involved as listed in Appendix B of the Rules Governing Public Water Systems in North Carolina.
19. The devices shall meet the American Society of Sanitary Engineering (ASSE) standards and be on the University of Southern California approval list.
20. The device and installation shall meet the guidelines of Appendix A – Guidelines and Requirements for the Cross Connection Program in Raleigh's Service Area.
21. The devices shall be installed and tested (both, initial and periodic testing thereafter) in accordance with the manufacturer's recommendations or the local cross connection control program, whichever is more stringent. Contact Cross.Connection@raleighnc.gov for more information.
22. NOTICE for projects that involve an oversized main or urban main replacement. Any City reimbursement greater than $250,000.00 must undergo the public bidding process.
23. Private sub-metering – No resale of water shall occur without approval of the North Carolina Utility Commission. Sub-metering shall be in accordance with Section 1400 of the "SAFE DRINKING WATER ACT".

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Electronic Approval: This approval is being issued electronically. This approval is valid only upon the signature of a City of Raleigh Review Officer below. The City will retain a copy of the approved plans. Any work authorized by this approval must proceed in accordance with the plans kept on file with the City. This electronic approval may not be edited once issued. Any modification to this approval once issued will invalidate this approval.

City of Raleigh Development Approval _____

Raleigh Water Review Officer _____

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NORTH CAROLINA PROFESSIONAL SEAL 22514 ENGINEER MICHAEL D. ALLEN 7/28/26

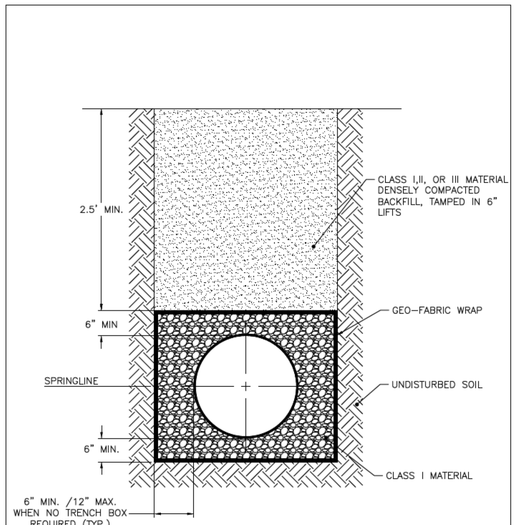
UTILITY PLAN EAST

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

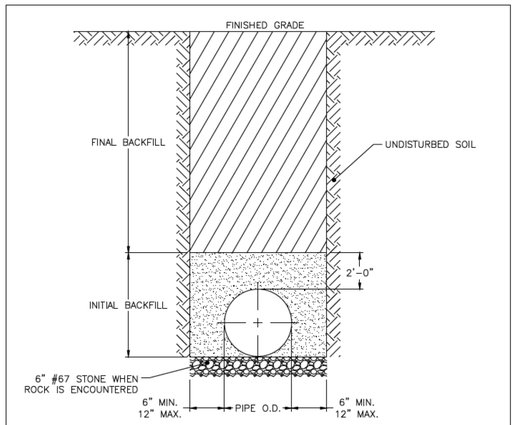
Date: 07/28/26

CE-300



CITY OF RALEIGH
STANDARD DETAIL

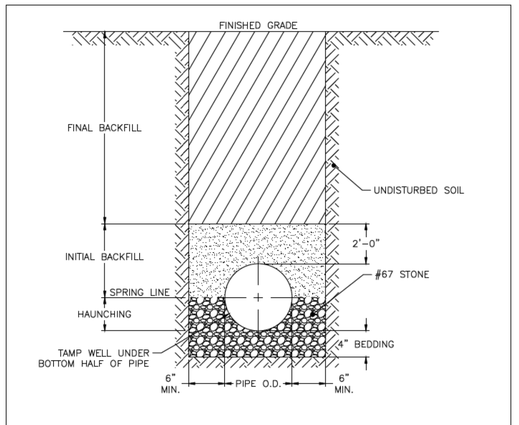
REVISIONS	DATE: 01/19/2025	NOT TO SCALE
	STANDARD BEDDING DETAIL FOR CCFRPM PIPES	
		S-1



NOTES:
1. FOR TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
2. NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN INITIAL BACKFILL.
3. ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
4. BACKFILL SHALL BE TAMPED IN 6" LIFTS IN TRAFFIC AREAS, 12" IN NON-TRAFFIC AREAS.
5. ACHIEVE 80% COMPACTION IN NON-TRAFFIC AREAS, AND 95% COMPACTION IN TRAFFIC AREAS.
6. IF IN EASEMENT, 4" TOPSOIL AND 12" CLEAN SELECT FILL MAY BE REQUIRED.
7. NO BOULDERS 8" IN DIAMETER OR GREATER ALLOWED IN FINAL BACKFILL.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/19/2025	NOT TO SCALE
	TRENCH BOTTOM DIMENSIONS & BACKFILLING REQUIREMENTS FOR DUCTILE IRON	
		S-4

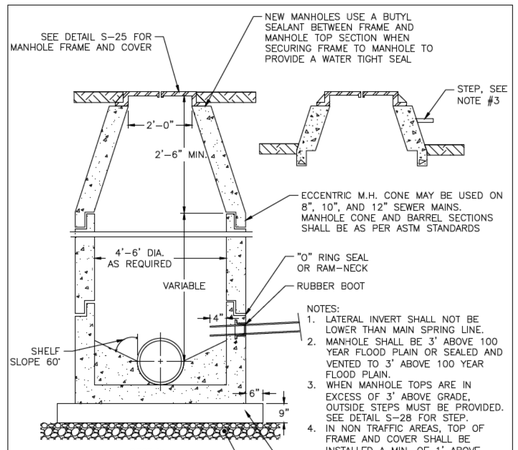


TYPICAL TRENCH BOTTOM DIMENSIONS FOR SDR 35 PVC GRAVITY PIPE

NOTES:
1. FOR TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
2. NO ROCKS OR BOULDERS, 4" OR LARGER, TO BE USED IN INITIAL BACKFILL.
3. ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
4. BACKFILL SHALL BE TAMPED IN 6" LIFTS IN TRAFFIC AREAS, 12" IN NON-TRAFFIC AREAS.

CITY OF RALEIGH
STANDARD DETAIL

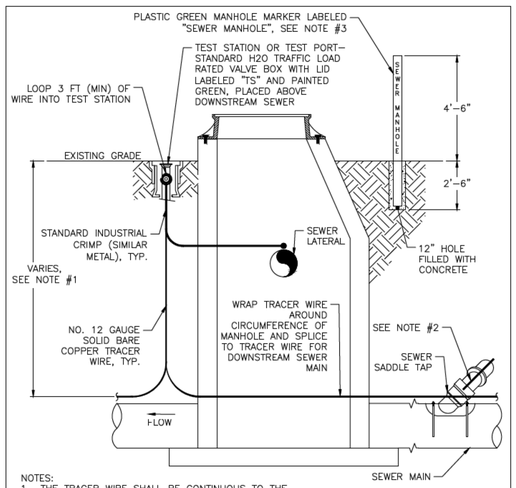
REVISIONS	DATE: 01/19/2025	NOT TO SCALE
	TRENCH BOTTOM DIMENSIONS & BACKFILLING REQUIREMENTS FOR PVC GRAVITY SEWER MAIN	
		S-5



NOTES:
1. LATERAL INVERT SHALL NOT BE LOWER THAN MAIN SPRING LINE.
2. MANHOLE SHALL BE 3' ABOVE 100 YEAR FLOOD PLAIN OR SEALED AND VENTED TO 3' ABOVE 100 YEAR FLOOD PLAIN.
3. WHEN MANHOLE TOPS ARE IN EXCESS OF 3' ABOVE GRADE, OUTSIDE STEPS MUST BE PROVIDED. SEE DETAIL S-28 FOR STEP.
4. IN NON TRAFFIC AREAS, TOP OF FRAME AND COVER SHALL BE INSTALLED A MIN. OF 1' ABOVE FINISHED GROUND SURFACE.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/19/2025	NOT TO SCALE
	STANDARD PRECAST SANITARY SEWER MANHOLE	
		S-20

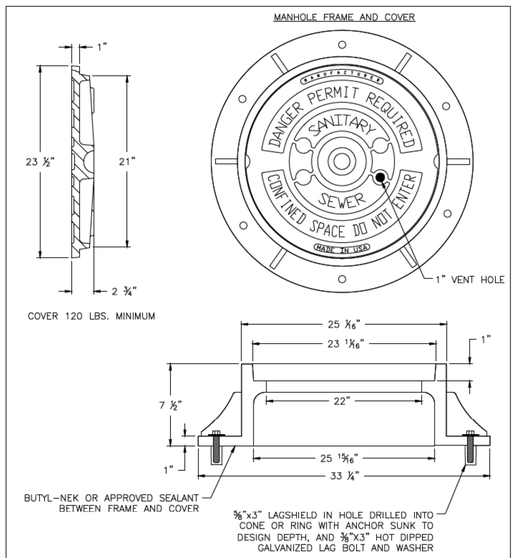


NOTES:
1. THE TRACER WIRE SHALL BE CONTINUOUS TO THE GREATEST EXTENT POSSIBLE. FOR GRAVITY MAIN AND OR LATERAL INSTALLATIONS LESS THAN 8 FT, THE TRACING WIRE SHALL BE ATTACHED TO THE PIPE. TRACER WIRE SHALL BE LAID FLAT AND SECURELY AFFIXED TO THE PIPE AT 10 FOOT INTERVALS. FOR GRAVITY MAIN AND OR LATERAL INSTALLATION DEEPER THAN 8 FT, THE TRACING WIRE SHALL BE INSTALLED AT A DEPTH OF 7-8 FT. THE WIRE SHALL BE PROTECTED FROM DAMAGE DURING THE EXECUTION OF THE WORK. NO BREAKS OF CUTS IN THE TRACER WIRE SHALL BE PERMITTED.
2. WHERE LATERAL TAPS ARE MADE BY SERVICE SADDLES, THE TRACER WIRE SHALL NOT BE ALLOWED TO TO BE PLACED BETWEEN THE SADDLE AND MAIN.
3. MANHOLE MARKERS SHALL BE PLACED ADJACENT TO MANHOLES AT THE DISCRETION OF OWNER OR OWNER'S REPRESENTATIVE.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/19/2025	NOT TO SCALE
	GRAVITY SEWER MAIN TRACER WIRE AND MANHOLE MARKER	
		S-20A

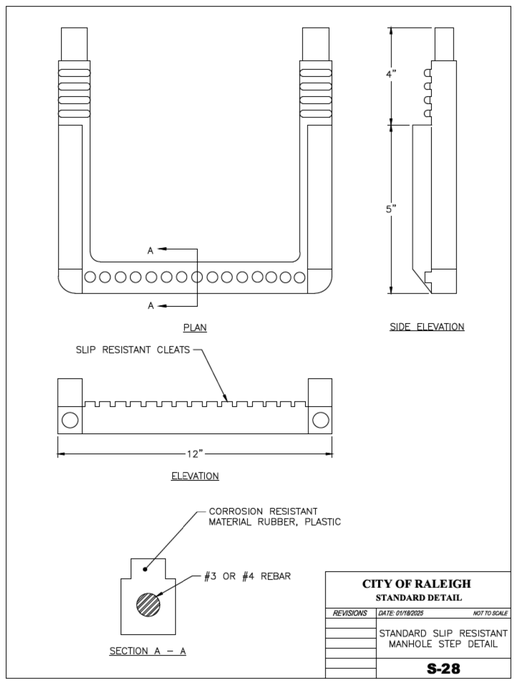
MANHOLE FRAME AND COVER



NOTES:
1. ALL MANHOLE FRAMES SHALL BE DOMESTICALLY CAST.
2. FRAME SHALL BE A MINIMUM WEIGHT OF 182 LBS. WITHIN PUBLIC ROW AND 160 LBS. WITHIN EASEMENTS.
3. COVER SHALL WEIGH A MIN. OF 120 LBS.
4. ALL MANHOLE FRAMES OUTSIDE OF PAVED SURFACES SHALL BE BOLTED TO THE CONE SECTION OR RING WITH A MINIMUM OF 4 BOLTS PER FRAME.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/19/2025	NOT TO SCALE
	STANDARD MANHOLE COVER	
		S-25



CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/19/2025	NOT TO SCALE
	STANDARD SLIP RESISTANT MANHOLE STEP DETAIL	
		S-28

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

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NORTH CAROLINA PROFESSIONAL SEAL 22514 ENGINEER MICHAEL D. ALLEN 7/28/26

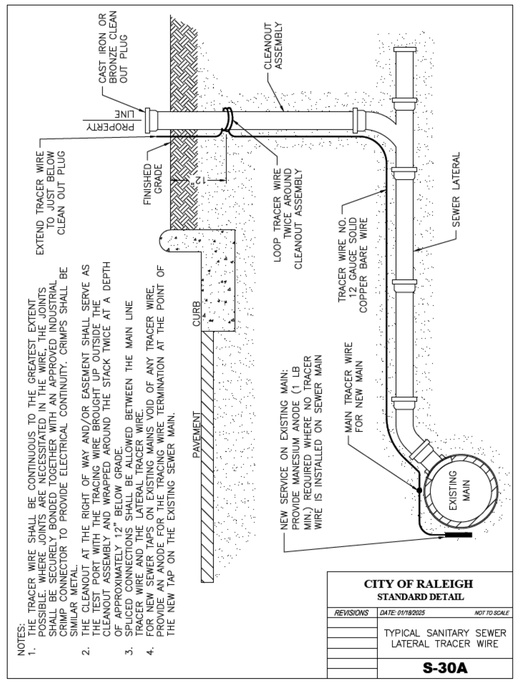
UTILITY DETAILS

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 07/28/26

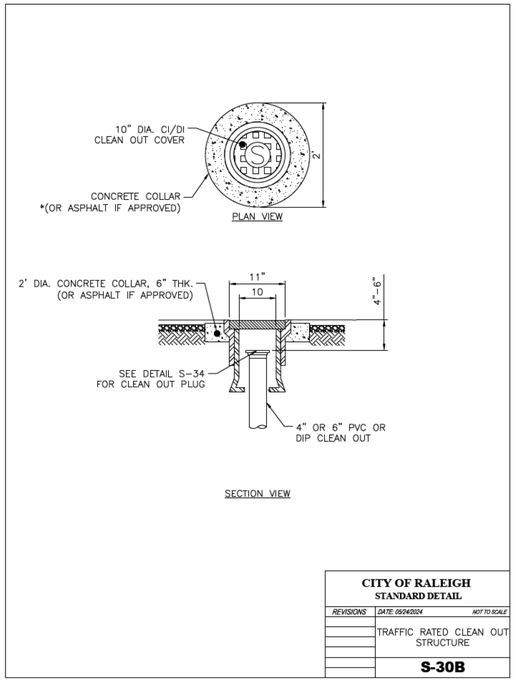
CE-301



NOTES:
1. THE TRACER WIRE SHALL BE CONTINUOUS TO THE GREATEST EXTENT POSSIBLE. WHERE JOINTS ARE NECESSITATED IN THE WIRE, THE JOINTS SHALL BE SECURELY BONDED TOGETHER WITH AN APPROVED INDUSTRIAL CRIMP CONNECTOR TO PROVIDE ELECTRICAL CONTINUITY. CRIMPS SHALL BE SEALED AS WELL.
2. THE CLEANOUT AT THE RIGHT OF WAY AND/OR EASEMENT SHALL SERVE AS THE TEST PORT WITH THE TRACING WIRE BROUGHT UP OUTSIDE THE CLEANOUT ASSEMBLY AND WRAPPED AROUND THE STACK TWICE AT A DEPTH OF APPROXIMATELY 12" BELOW GRADE.
3. SPLICE CONNECTIONS SHALL BE ALLOWED BETWEEN THE MAIN LINE TRACER WIRE AND THE LATERAL TRACER WIRE.
4. FOR NEW SEWER TAPS ON EXISTING MAINS VOID OF ANY TRACER WIRE, PROVIDE AN ANODE FOR THE TRACING WIRE TERMINATION AT THE POINT OF THE NEW TAP ON THE EXISTING SEWER MAIN.

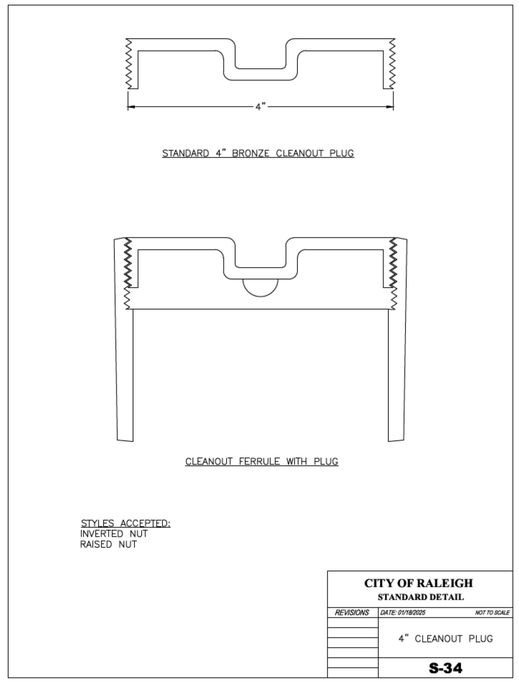
CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/18/2025	NOT TO SCALE
	TYPICAL SANITARY SEWER LATERAL TRACER WIRE	
	S-30A	



CITY OF RALEIGH
STANDARD DETAIL

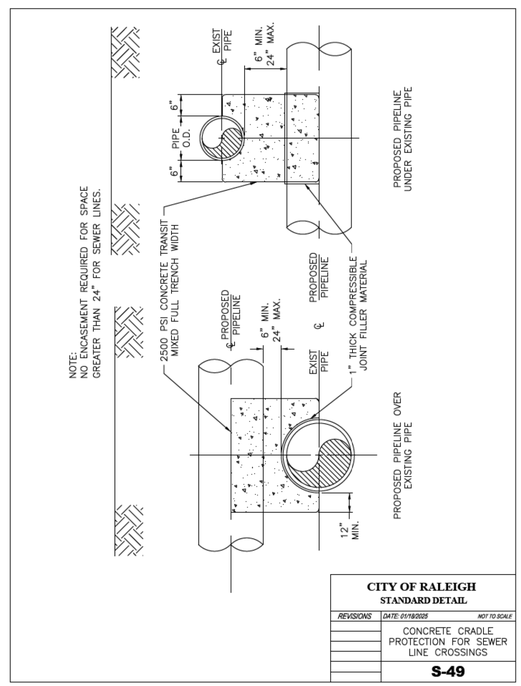
REVISIONS	DATE: 09/24/2024	NOT TO SCALE
	TRAFFIC RATED CLEAN OUT STRUCTURE	
	S-30B	



STYLES ACCEPTED:
INVERTED NUT
RAISED NUT

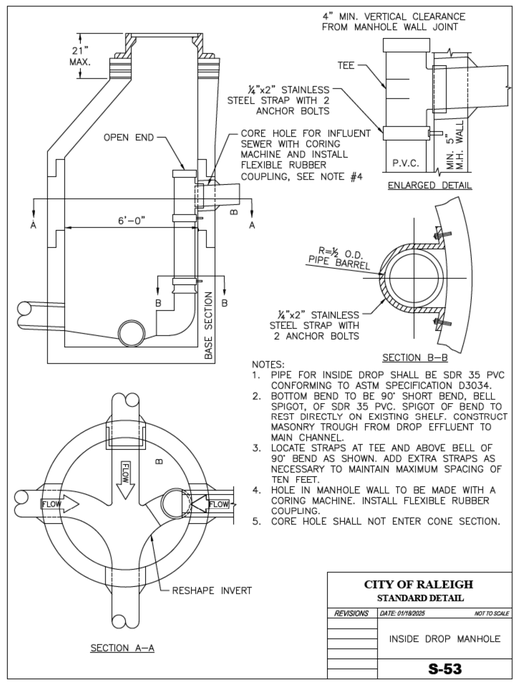
CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/18/2025	NOT TO SCALE
	4" CLEANOUT PLUG	
	S-34	



CITY OF RALEIGH
STANDARD DETAIL

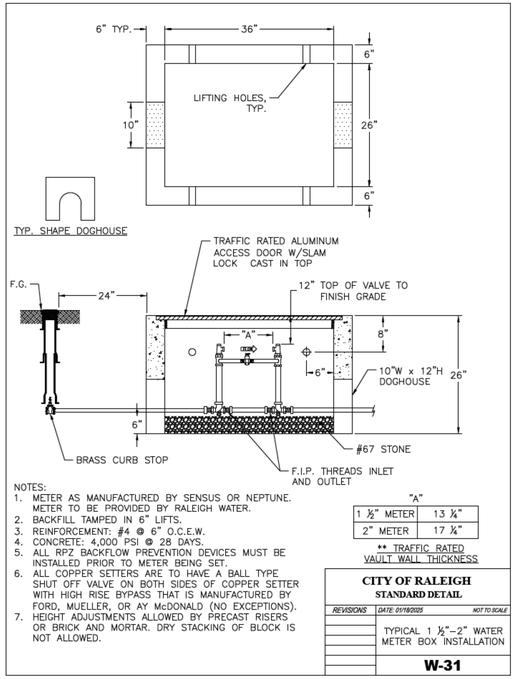
REVISIONS	DATE: 01/18/2025	NOT TO SCALE
	CONCRETE CRADLE PROTECTION FOR SEWER LINE CROSSINGS	
	S-49	



NOTES:
1. PIPE FOR INSIDE DROP SHALL BE SDR 35 PVC CONFORMING TO ASTM SPECIFICATION D3034.
2. BOTTOM BEND TO BE 90° SHORT BEND, BELL SPIGOT, OF SDR 35 PVC. SPIGOT OF BEND TO REST DIRECTLY ON EXISTING SHELF. CONSTRUCT MASONRY TROUGH FROM DROP EFFLUENT TO MAIN CHANNEL.
3. LOCATE STRAPS AT TEE AND ABOVE BELL OF 90° BEND AS SHOWN. ADD EXTRA STRAPS AS NECESSARY TO MAINTAIN MAXIMUM SPACING OF TEN FEET.
4. HOLE IN MANHOLE WALL TO BE MADE WITH A CORING MACHINE. INSTALL FLEXIBLE RUBBER COUPLING.
5. CORE HOLE SHALL NOT ENTER CONE SECTION.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/18/2025	NOT TO SCALE
	INSIDE DROP MANHOLE	
	S-53	



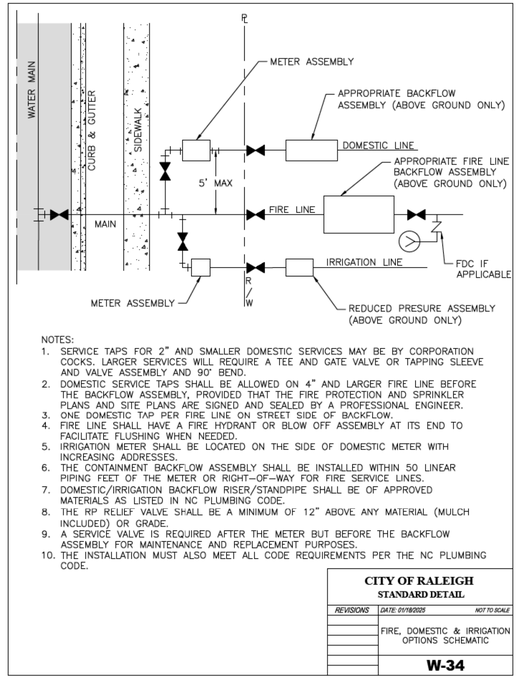
NOTES:
1. METER AS MANUFACTURED BY SENSUS OR NEPTUNE. METER TO BE PROVIDED BY RALEIGH WATER.
2. BACKFILL TAMPED IN 6" LIFTS.
3. REINFORCEMENT: #4 @ 6" O.C.E.W.
4. CONCRETE: 4,000 PSI @ 28 DAYS.
5. ALL RPZ BACKFLOW PREVENTION DEVICES MUST BE INSTALLED PRIOR TO METER BEING SET.
6. ALL COPPER SETTERS ARE TO HAVE A BALL TYPE SHUT OFF VALVE ON BOTH SIDES OF COPPER SETTER WITH HIGH RISE BYPASS THAT IS MANUFACTURED BY FORD, MUELLER, OR AY McDONALD (NO EXCEPTIONS).
7. HEIGHT ADJUSTMENTS ALLOWED BY PRECAST RISERS OR BRICK AND MORTAR. DRY STACKING OF BLOCK IS NOT ALLOWED.

"A"	
1 ½" METER	13 ¼"
2" METER	17 ¼"

** TRAFFIC RATED VAULT WALL THICKNESS

CITY OF RALEIGH
STANDARD DETAIL

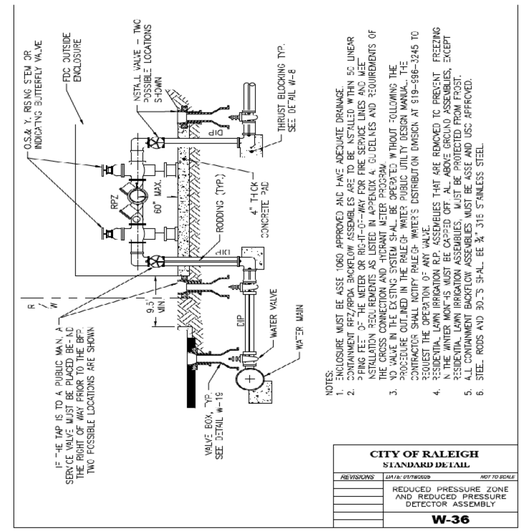
REVISIONS	DATE: 01/18/2025	NOT TO SCALE
	TYPICAL 1 ½"-2" WATER METER BOX INSTALLATION	
	W-31	



NOTES:
1. SERVICE TAPS FOR 2" AND SMALLER DOMESTIC SERVICES MAY BE BY CORPORATION COCKS. LARGER SERVICES WILL REQUIRE A TEE AND GATE VALVE OR TAPPING SLEEVE AND VALVE ASSEMBLY AND 90° BEND.
2. DOMESTIC SERVICE TAPS SHALL BE ALLOWED ON 4" AND LARGER FIRE LINE BEFORE THE BACKFLOW ASSEMBLY, PROVIDED THAT THE FIRE PROTECTION AND SPRINKLER PLANS AND SITE PLANS ARE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER.
3. ONE DOMESTIC TAP PER FIRE LINE ON STREET SIDE OF BACKFLOW.
4. FIRE LINE SHALL HAVE A FIRE HYDRANT OR BLOW OFF ASSEMBLY AT ITS END TO FACILITATE FLUSHING WHEN NEEDED.
5. IRRIGATION METER SHALL BE LOCATED ON THE SIDE OF DOMESTIC METER WITH INCREASING ADDRESSES.
6. THE CONTAINMENT BACKFLOW ASSEMBLY SHALL BE INSTALLED WITHIN 50 LINEAR PIPING FEET OF THE METER OR RIGHT-OF-WAY FOR FIRE SERVICE LINES.
7. DOMESTIC/IRRIGATION BACKFLOW RISER/STANDPIPE SHALL BE OF APPROVED MATERIALS AS LISTED IN NC PLUMBING CODE.
8. THE RP RELIEF VALVE SHALL BE A MINIMUM OF 12" ABOVE ANY MATERIAL (MULCH INCLUDED) OR GRADE.
9. A SERVICE VALVE IS REQUIRED AFTER THE METER BUT BEFORE THE BACKFLOW ASSEMBLY FOR MAINTENANCE AND REPLACEMENT PURPOSES.
10. THE INSTALLATION MUST ALSO MEET ALL CODE REQUIREMENTS PER THE NC PLUMBING CODE.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/18/2025	NOT TO SCALE
	FIRE, DOMESTIC & IRRIGATION OPTIONS SCHEMATIC	
	W-34	



NOTES:
1. ENCLOSURE MUST BE ASSE 1060 APPROVED AND HAVE ADEQUATE DRAINAGE.
2. ENCLOSURE MUST BE CONSTRUCTED AS LISTED IN APPENDIX A, DETAILS #1 & #2.
3. PIPING FEET: 3" THE METER OR RIGHT-OF-WAY FOR FIRE SERVICE LINES AND WATER INSTALLATION REQUIREMENTS AS LISTED IN APPENDIX A, GUIDELINES AND REQUIREMENTS OF THE CROSS CONNECTION AND HYDRANT METER PROGRAM.
4. THE CONTRACTOR SHALL NOTIFY RALEIGH WATER'S DISTRIBUTION DIVISION AT 919-996-3245 TO REQUEST THE OPERATION OF ANY VALVE.
5. THE WINTER MONTHS MUST BE CAPPED OFF AT ABOVE GROUND ASSEMBLIES, EXCEPT IN RESIDENTIAL LAWN IRRIGATION ASSEMBLIES. MUST BE PROTECTED FROM FROST.
6. ALL CONTAINMENT BACKFLOW ASSEMBLIES MUST BE ASSE AND USC APPROVED.
7. STEEL RODS AND 90'S SHALL BE #4 316 STAINLESS STEEL.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/18/2025	NOT TO SCALE
	REDUCED PRESSURE ZONE AND REDUCED PRESSURE DETECTOR ASSEMBLY	
	W-36	

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

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City of Raleigh Development Approval _____

Raleigh Water Review Officer _____

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NC License # F-1333

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 22514 MICHAEL D. ALLEN
7/28/26

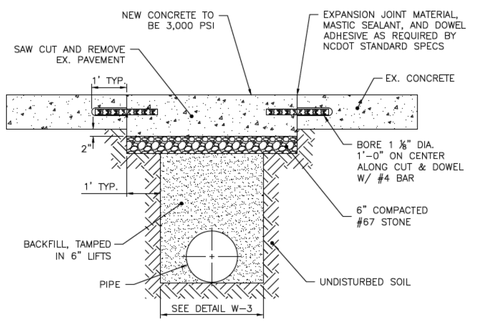
UTILITY DETAILS

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 07/28/26

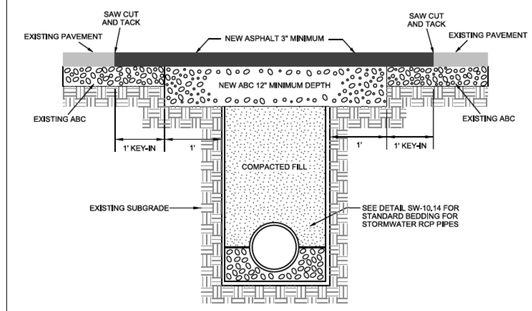
CE-302



NOTES:
1. SEE DETAIL W-3 FOR ADDITIONAL TRENCH AND PIPE BEDDING DETAILS.
2. PAVEMENT CUTS WITHIN NCDOT ROW SHALL CONFORM TO THE APPROVED ON SITE ENCROACHMENT PERMIT.
3. THE PAVEMENT CUT SHALL BE DEFINED BY A STRAIGHT EDGE AND CUT WITH AN APPROVED SAW CUT MACHINE.
4. THE TRENCH SUBGRADE MATERIAL SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY AASHTO T 99 AS MODIFIED BY NCDOT.
5. THE FINAL 6" OF FILL SHALL CONSIST OF ABC MATERIAL COMPACTED TO AT LEAST 100% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY AASHTO T 180 AS MODIFIED BY NCDOT.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/18/2025	NOT TO SCALE
	STANDARD CONCRETE PAVEMENT PATCH	
	W-1	

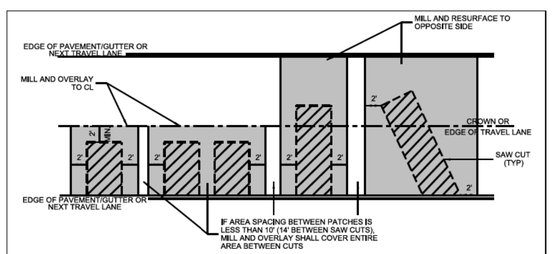


NOTES:
1. THE PAVEMENT EDGE SHALL BE DEFINED BY A STRAIGHT EDGE FORMED BY A MACHINED SAW CUT.
2. THE TRENCH SUBGRADE MATERIAL SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED TO A DENSITY OF AT LEAST 95% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY NCDOT.
3. THE FINAL 1' OF FILL SHALL CONSIST OF ABC MATERIAL COMPACTED TO A DENSITY EQUAL TO 100% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-80 AS MODIFIED BY NCDOT. BITUMINOUS BASE OR BINDER MAY BE SUBSTITUTED IF APPROVED BY TRANSPORTATION DIRECTOR OR DESIGNEE.
4. THE ENTIRE THICKNESS/VERTICAL EDGE OF THE CUT SHALL BE TACKED.
5. THE SAME DEPTH OF PAVEMENT MATERIAL WHICH EXISTS SHALL BE REINSTALLED, BUT IN NO CASE SHALL THE ASPHALT BE LESS THAN 3" THICK.
6. THE ASPHALT PAVEMENT MATERIAL SHALL BE INSTALLED AND COMPACTED THOROUGHLY AND ROLLED WITH A SMOOTH DRUM ROLLER TO ACHIEVE A SMOOTH, LEVEL PATCH.

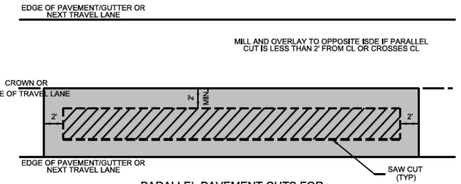
SHEET 1 OF 2

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 9/2003	NOT TO SCALE
DATE: 09/2023	ASPHALT PAVEMENT PATCH AND RCP PIPE BACKFILL	
	T-10.05.1	



LATERAL PAVEMENT CUTS FOR UTILITY SERVICE



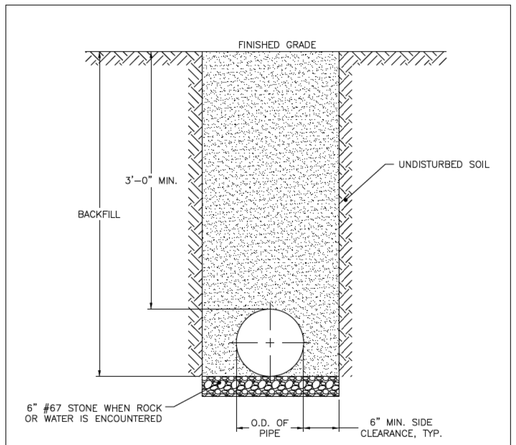
PARALLEL PAVEMENT CUTS FOR UTILITY SERVICE

NOTES:
1. THE PAVEMENT EDGES SHALL BE DEFINED BY A STRAIGHT EDGE FORMED BY A MACHINED SAW CUT OR MILLING MACHINE
2. THE TRENCH SUBGRADE MATERIAL SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED TO A DENSITY OF AT LEAST 95% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY NCDOT
3. THE FINAL 1" OF FILL SHALL CONSIST OF ABC MATERIAL COMPCATED TO A DENSITY EQUAL TO 100% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-80 AS MODIFIED BY NCDOT
4. THE ENTIRE THICKNESS/VERTICAL EDGE OF THE CUT SHALL BE TACKED
5. THE SAME DEPTH OF PAVEMENT MATERIAL WHICH EXISTS SHALL BE REINSTALLED, BUT IN NO CASE SHALL THE ASPHALT BE LESS THAN 3" THICK
6. THE ASPHALT PAVEMENT MATERIAL SHALL BE INSTALLED, COMPACTED THOROUGHLY AND ROLLED WITH A SMOOTH DRUM ROLLER TO LEVEL PATCH

SHEET 2 OF 2

CITY OF RALEIGH
STANDARD DETAIL

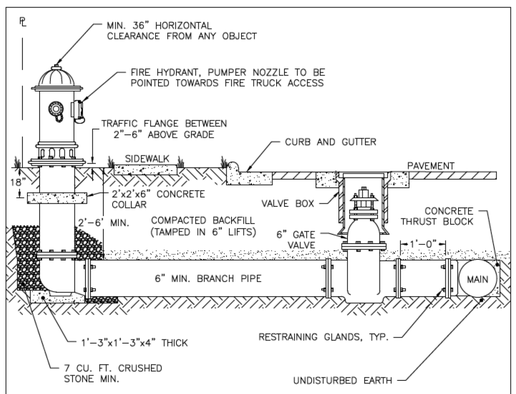
REVISIONS	DATE: 9/2023	NOT TO SCALE
	ASPHALT PAVEMENT PATCH AND RCP PIPE BACKFILL	
	T-10.05.2	



NOTES:
1. TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
2. NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN BACKFILL.
3. ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
4. BACKFILL SHALL BE TAMPED IN 6" LIFTS.
5. ACHIEVE 95% COMPACTION IN BACKFILL.

CITY OF RALEIGH
STANDARD DETAIL

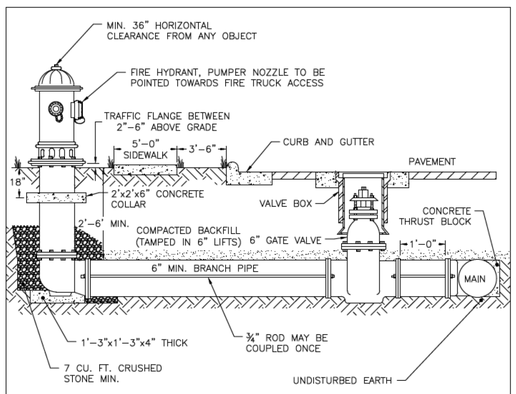
REVISIONS	DATE: 01/18/2025	NOT TO SCALE
	TRENCH BOTTOM DIMENSIONS AND BACKFILLING REQUIREMENTS FOR DUCTILE IRON	
	W-3	



NOTES:
1. FIRE HYDRANT SHALL BE AS MANUFACTURED: MUELLER, AMERICAN DARLING, KENNEDY OR CLOW.
2. BRANCH PIPE SHALL BE DUCTILE IRON AWWA C150.
3. 6" GATE VALVE SHALL BE AWWA C500 OPEN LEFT.
4. RODS AND BOLTS SHALL BE ¾" 316 STAINLESS STEEL.
5. FIRE HYDRANTS WILL BE INSTALLED IN TRUE VERTICAL POSITION.
6. RODS SHALL NOT BE COUPLED MORE THAN ONCE. IF THE LENGTH FROM THE VALVE TO THE HYDRANT EXCEEDS 20' THEN A MECHANICAL RESTRAINING GLAND WITH A REBAR CAGE SHALL BE INSTALLED NO MORE THAN 10' FROM HYDRANT AND POURED IN CONCRETE.
7. FIRE HYDRANTS TO BE LOCATED IN ROW OR 2.5 FOOT EASEMENT (ON ALL SIDES OF HYDRANT) FOOT EASEMENT ADJACENT TO ROW.
8. ANYTIME SITE WORK, CONSTRUCTION, ROAD WORK, OR ANY OTHER WORK CHANGES THE GRADE OF THE FIRE HYDRANT, THE PERSON RESPONSIBLE FOR THE WORK IS RESPONSIBLE FOR ADJUSTING THE FIRE HYDRANT TO STAY WITHIN COMPLIANCE.

CITY OF RALEIGH
STANDARD DETAIL

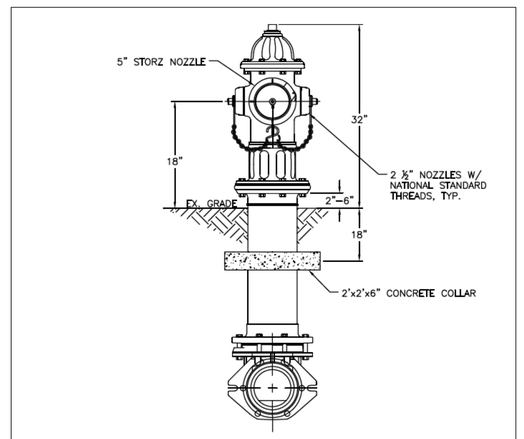
REVISIONS	DATE: 01/18/2025	NOT TO SCALE
	STANDARD FIRE HYDRANT INSTALLATION (RESTRAINT GLANDS)	
	W-4	



NOTES:
1. FIRE HYDRANT SHALL BE AS MANUFACTURED: MUELLER, AMERICAN DARLING, KENNEDY OR CLOW.
2. BRANCH PIPE SHALL BE DUCTILE IRON AWWA C150.
3. 6" GATE VALVE SHALL BE AWWA C500 OPEN LEFT.
4. RODS AND BOLTS SHALL BE ¾" 316 STAINLESS STEEL.
5. FIRE HYDRANTS WILL BE INSTALLED IN TRUE VERTICAL POSITION.
6. RODS SHALL NOT BE COUPLED MORE THAN ONCE. IF THE LENGTH FROM THE VALVE TO THE HYDRANT EXCEEDS 20' THEN A MECHANICAL RESTRAINING GLAND WITH A REBAR CAGE SHALL BE INSTALLED NO MORE THAN 10' FROM HYDRANT AND POURED IN CONCRETE.
7. FIRE HYDRANTS TO BE LOCATED IN ROW OR 2.5 FOOT EASEMENT (ON ALL SIDES OF HYDRANT) FOOT EASEMENT ADJACENT TO ROW.
8. ANYTIME SITE WORK, CONSTRUCTION, ROAD WORK, OR ANY OTHER WORK CHANGES THE GRADE OF THE FIRE HYDRANT, THE PERSON RESPONSIBLE FOR THE WORK IS RESPONSIBLE FOR ADJUSTING THE FIRE HYDRANT TO STAY WITHIN COMPLIANCE.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/18/2025	NOT TO SCALE
	STANDARD FIRE HYDRANT INSTALLATION (RESTRAINT RODS)	
	W-4A	



NOTES:
1. ALL PUBLIC FIRE HYDRANTS IN THE CITY OF RALEIGH AND THE MERGER TOWNS OF GARNER, ROLESVILLE, WAKE FOREST, KNIGHTDALE, WENDELL AND ZEBULON SHALL BE PAINTED CHROME YELLOW WITH HIGH REFLECTIVE ALUMINUM SILVER CAPS.
2. ALL PRIVATE FIRE HYDRANTS SHALL BE RED.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/18/2025	NOT TO SCALE
10/2025	STANDARD FIRE HYDRANT WITH 5" STORZ PUMPER NOZZLE	
	W-5	

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

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NORTH CAROLINA PROFESSIONAL SEAL 22514 ENGINEER MICHAEL D. ALLEN 7/28/26

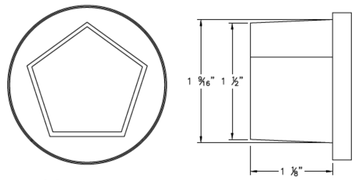
UTILITY DETAILS

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

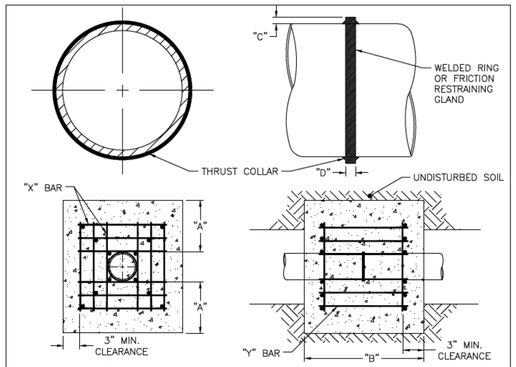
Date: 07/28/26

CE-303



CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/19/2023	NOT TO SCALE
	HYDRANT OPERATING NUT AND 2 ½" OUTLET THREADS	
	W-6	



REINFORCING REQUIREMENTS

I.D. PIPE	REBAR SIZE	"X" BAR LENGTH	"X" BAR WEIGHT	"Y" BAR LENGTH	"Y" BAR WEIGHT	NO. REQUIRED
6"–36"	#5	2'–2"+ O.D. PIPE	1.043 LBS/FT	1'–1"	1.1 LBS. EACH	X–24 Y–12
≥48"	#6	3'–0"+ O.D. PIPE	1.502 LBS/FT	1'–3"	1.9 LBS. EACH	X–24 Y–12

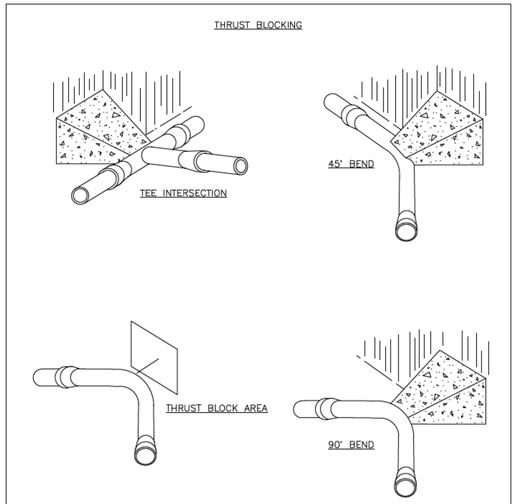
THRUST COLLAR AND THRUST SCHEDULE

I.D. PIPE	"A"	"B"	"C"	"D"
6"–16"	1'–4"	1'–7"	2"	⅜"
20"–24"	1'–4"	1'–7"	3"	½"
30"–36"	1'–4"	1'–7"	4"	⅝"
≥48"	1'–8"	1'–9"	6"	⅜"

NOTES:
1. SEE DETAIL W–9 FOR THRUST BLOCK LOCATIONS.
2. CONCRETE SHALL BE 3,000 PSI AND TRANSIT MIXED.
3. REINFORCING BARS SHALL BE DEFORMED AND TIED TOGETHER.
4. TRENCH BOTTOM WIDTH IN VICINITY OF THRUST BLOCK INSTALLATION SHALL BE THE MINIMUM WIDTH AS SHOWN ON DETAIL W–3.
5. BACKFILL TAMPED IN 6" LIFTS, SEE DETAIL W–3.
6. THRUST COLLAR MUST BE FACTORY WELDED ON BOTH SIDES ALONG BOTH EDGES OF COLLAR AROUND CIRCUMFERENCE.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/19/2023	NOT TO SCALE
	THRUST BLOCKING DESIGN DATA FOR WATER MAINS	
	W-7	



NOTES:
1. CONCRETE SHALL BE 3,000 PSI.
2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT FITTINGS.
3. TRENCHES SHALL CONFORM TO DETAIL W–3.
4. SEE DETAIL W–10 & W–11 (THRUST BLOCK TABLES) FOR AREA OF CONCRETE REQUIRED.
5. ALL BENDS AND INTERSECTIONS SHALL HAVE CONCRETE THRUST BLOCKING.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/19/2023	NOT TO SCALE
	THRUST BLOCKING VIEWS	
	W-9	

REACTION BEARING AREAS FOR HORIZONTAL WATER PIPE BENDS
BASED ON TEST PRESSURE OF 200 PSI

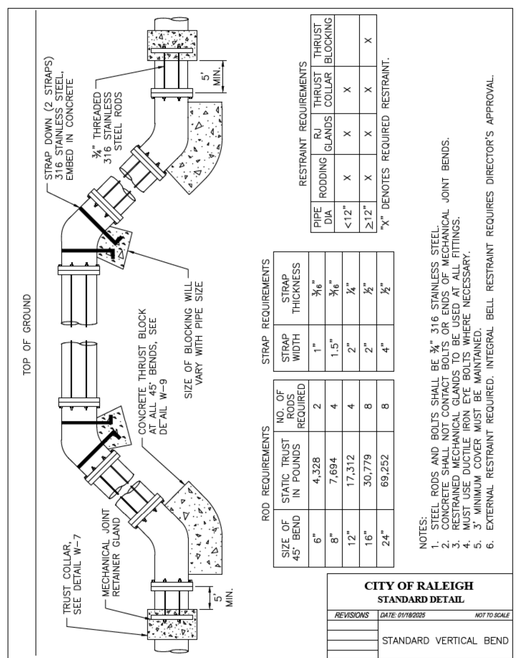
ALL AREAS GIVEN IN SQUARE FEET

SIZE OF BEND	DEGREE OF BEND	STATIC THRUST IN POUNDS	MODERATELY DRY CLAY 4,000 LBS/FT²	SOFT CLAY 2,000 LBS/FT²	1,600 LBS/FT² GRAVEL/ COARSE SAND	8,000 LBS/FT² DRY CLAY (ALWAYS DRY)	SAND, COMPACT FIRM 8,000 LBS/FT²	SAND– CLEAN DRY 4,000 LBS/FT²	SOIL 1,000 LBS/FT² QUICKSAND (VERY POOR)	ROCK– POOR 10,000 LBS/FT²
6"	11 ¼°	1,108	1	1	1	1	1	1	2	1
	22 ½°	2,207	1	2	2	1	1	1	3	1
	45°	4,328	2	3	3	1	1	2	5	1
	90°	7,996	2	4	5	1	1	2	8	1
	PLUG	5,655	2	3	4	1	1	2	6	1
8"	11 ¼°	1,970	1	1	2	1	1	1	2	1
	22 ½°	3,922	1	2	3	1	1	1	4	1
	45°	7,694	2	4	5	1	1	2	8	1
	90°	14,215	4	8	9	2	2	4	15	2
	PLUG	10,053	3	5	6	2	2	3	10	1
12"	11 ¼°	4,433	2	3	3	1	1	2	5	1
	22 ½°	8,826	3	5	6	2	2	3	9	1
	45°	17,312	5	9	11	3	3	5	18	2
	90°	31,983	8	16	19	4	4	8	32	4
	PLUG	22,619	6	12	14	3	3	6	23	3
16"	11 ¼°	7,881	2	4	5	1	1	2	8	1
	22 ½°	15,691	4	8	10	2	2	4	16	2
	45°	30,779	8	16	19	4	4	8	31	4
	90°	56,861	15	29	35	8	8	15	57	6
	PLUG	40,213	10	21	25	5	5	10	41	5

NOTES:
1. REACTION BEARING AREAS ARE IN SQUARE FEET MEASURED IN A VERTICAL PLANE IN THE TRENCH SIDE AT AN ANGLE OF 90° TO THE THRUST VECTOR.
2. USE 6" 90° BEND VALUE FOR HYDRANTS FOR ADDITIONAL SAFETY FACTOR.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/19/2023	NOT TO SCALE
	THRUST BLOCKING DESIGN QUANTITY TABLE	
	W-10	



ROD REQUIREMENTS

SIZE OF 45° BEND	STATIC THRUST IN POUNDS	NO. OF RODS REQUIRED
6"	4,328	2
8"	7,694	4
12"	17,312	4
16"	30,779	8
24"	69,252	8

STRAP REQUIREMENTS

STRAP WIDTH	STRAP THICKNESS
1"	⅜"
1.5"	⅜"
2"	½"
2"	½"
4"	½"

RESTRAINT REQUIREMENTS

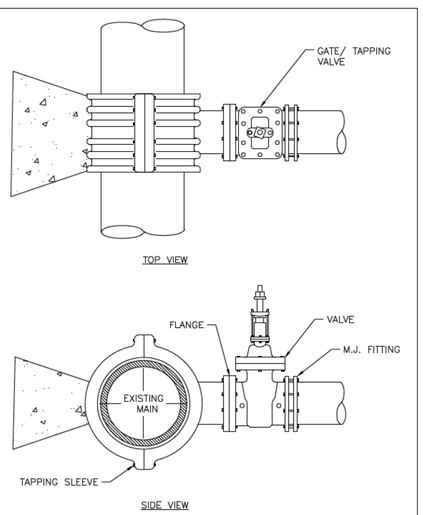
PIPE DIA	RODDING	RJ GLANDS	THRUST COLLAR	THRUST BLOCKING
<12"	X	X	X	
≥12"	X	X	X	X

"X" DENOTES REQUIRED RESTRAINT.

NOTES:
1. STEEL RODS AND BOLTS SHALL BE ¾" 316 STAINLESS STEEL.
2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT BENDS.
3. RESTRAINED MECHANICAL GLANDS TO BE USED AT ALL FITTINGS.
4. 3" MINIMUM COVER MUST BE MAINTAINED.
5. EXTERNAL RESTRAINT REQUIRED. INTEGRAL BELL RESTRAINT REQUIRES DIRECTOR'S APPROVAL.
6. 3" MINIMUM COVER MUST BE MAINTAINED. INTEGRAL BELL RESTRAINT REQUIRES DIRECTOR'S APPROVAL.

CITY OF RALEIGH
STANDARD DETAIL

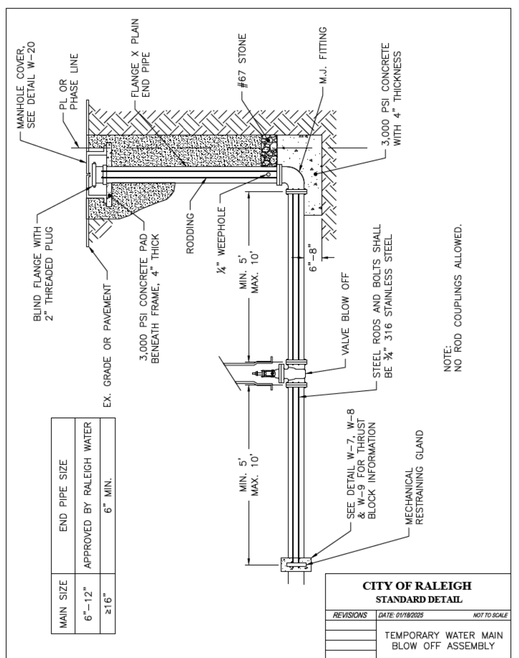
REVISIONS	DATE: 01/19/2023	NOT TO SCALE
	STANDARD VERTICAL BEND	
	W-12	



NOTES:
1. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT FITTINGS.
2. SEE DETAIL W–10 & W–11 (REACTION BLOCK TABLES) FOR AREA OF CONCRETE REQUIRED.
3. 3,000 PSI SOLID CONCRETE SHALL BE USED AS FOOTING FOR DUCTILE IRON PIPE.
4. FULL CIRCUMFERENCE SLEEVE, STAINLESS STEEL MATERIAL REQUIRED.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/19/2023	NOT TO SCALE
	4"–24" STANDARD TAPPING SLEEVE AND VALVE ASSEMBLY	
	W-14	



MAIN SIZE	END PIPE SIZE APPROVED BY RALEIGH WATER
6"–12"	6" MIN.
≥16"	

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/19/2023	NOT TO SCALE
	TEMPORARY WATER MAIN BLOW OFF ASSEMBLY	
	W-21	

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

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Raleigh Water Review Officer _____

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NORTH CAROLINA PROFESSIONAL SEAL 22514 ENGINEER MICHAEL D. ALLEN 7/28/26

UTILITY DETAILS

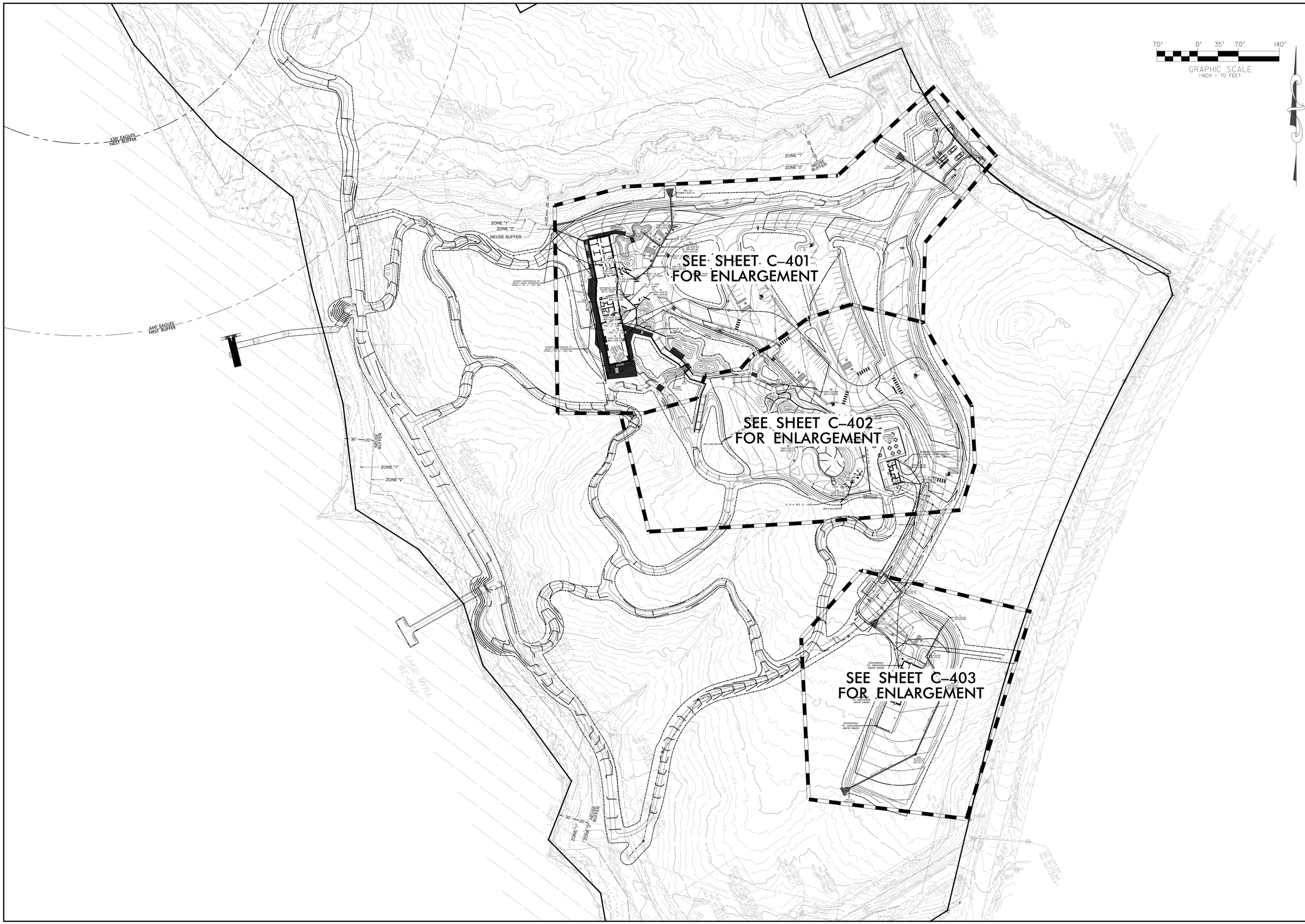
LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 07/28/26

CE-304

"ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF WENDELL, CITY OF RALEIGH AND / OR NCDOT STANDARDS AND SPECIFICATIONS"



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NORTH CAROLINA PROFESSIONAL SEAL 22514 ENGINEER MICHAEL D. ALLEN 7/28/26

GRADING PLAN EAST

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 07/28/26

CE-400

"ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF WENDELL, CITY OF RALEIGH AND / OR NCDOT STANDARDS AND SPECIFICATIONS"

PIPE AND RIP RAP CALCULATIONS TABLE

PIPE ID	PIPE SIZE	Q10	V10	RIP RAP SIZE	APRON LENGTH	APRON WIDTH @ PIPE OUTLET	APRON WIDTH @ END	D50	D_MAX	THICKNESS
	(IN)	(CFS)	(FT/S)		(FT)	(FT)	(FT)	(IN)	(IN)	(IN)
FES-1	15	2.00	5.14	CLASS B	7.50	3.75	8.75	6	9.00	18
FES-2	12	3.51	5.55	CLASS B	6.00	3.00	7.00	6	9.00	18
FES-3	12	4.04	5.57	CLASS B	6.00	3.00	7.00	6	9.00	18
FES-4	12	2.65	5.58	CLASS B	6.00	3.00	7.00	6	9.00	18

30' 0' 15' 30' 60'
GRAPHIC SCALE
1 INCH = 30 FEET

RETAINING WALL REFER TO SITE STRUCTURAL DRAWINGS
FES #2 INV=223.74
TIE FOUNDATION DRAIN TO STORM SYSTEM
SIDEWALK FLUSH WITH PARKING
DI TOP=229.50 INV=224.26
25 LF 12" HDPE @ 1.00%
ZONE "1"
ZONE "2"
NEUSE BUFFER
INV=221.00
DI TOP=227.50 INV=225.00
36 LF 12" HDPE @ 1.00%
DI TOP=231.32 IN CB=229.03 IN DI=224.62 OUT=224.62
FOUNDATION DRAIN
37 LF 6" PVC @ 1.00%
33 LF 6" PVC @ 1.00%
CB TOP=231.59 INV=229.40
YI TOP=232.20 INV=230.00
27 LF 6" PVC @ 1.00%
YI TOP=232.20 INV=229.67
CONNECT DOWNSPOUTS TO BELOW GRADE UNDERDRAIN SYSTEM. 6" PVC @ 1.00% MIN.
DOWNSPOUT INTO PLANTER FEATURE SEE LS. DWGS.
25 LF 6" PVC @ 1.00%
YI TOP=231.95 INV=229.83
FOUNDATION DRAIN
RD INV=220.50
YI TOP=232.20 INV=230.08
CONCRETE FLUMES WITH METAL COVER
YI TOP=232.25 INV=230.00
TIE FOUNDATION DRAIN TO STORM SYSTEM
17 LF 6" PVC @ 1.00%
60 LF 6" PVC @ 0.95%
26 LF 6" PVC @ 1.00%
INV=229.00
YI TOP=232.25 INV=229.57
RETAINING WALL & UNDER BOARDWALK
FOUNDATION DRAIN
MAIN LEVEL F.F.E.=232.50
GROUND LEVEL F.F.E.=222.50
CONNECT DOWNSPOUTS TO BELOW GRADE UNDERDRAIN SYSTEM. 6" PVC @ 1.00% MIN.
FOUNDATION DRAIN
DAYLIGHT FOUNDATION DRAIN
INV=218.00
OPEN BELOW
STONE LINED CHANNEL
REFER TO RIFFLE WEIRS AND POOLS, LANDSCAPE DRAWINGS
SIDEWALK FLUSH WITH PARKING
CONCRETE FLUMES WITH METAL COVER
BOT: 225.50
INV= 235.70
8" PVC
CURB TAPERS TO FLUSH
CB TOP=239.88 INV=236.38
CURB TAPERS TO FLUSH
SIDEWALK FLUSH WITH PARKING
SIDEWALK FLUSH WITH PARKING
FES #1 INV=236.50
88 LF 15" RCP @ 1.14%
DI TOP=240.00 OUT=227.50
DI TOP=232.75 INV=229.75
76 LF 15" RCP @ 0.99%
68 LF 15" RCP @ 1.47%
INV=229.00
DI TOP=233.75 INV=230.75
YI TOP=238.50 INV=236.00
500 GALLON GALVANIZED CISTERN. INSTALL ON 6' x 6' HEAVY DUTY CONCRETE PAD. OVERFLOW TO DISCHARGE TO ADJACENT YI. REFR TO SHEET CE-406.
24 LF 6" PVC @ 1.00%
DI TOP=239.90 INV=235.66
CONNECT DOWNSPOUT TO CISTERN (6" PVC)
85 LF
CONNECT DOWNSPOUT TO STORM DRAIN SYSTEM

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NORTH CAROLINA PROFESSIONAL SEAL 22514 ENGINEER MICHAEL D. ALLEN 7/28/26

GRADING ENLARGEMENT EAST

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 07/28/26

CE-401

"ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF WENDELL, CITY OF RALEIGH AND / OR NCDOT STANDARDS AND SPECIFICATIONS"

PIPE AND RIP RAP CALCULATIONS TABLE										
PIPE ID	PIPE SIZE	Q10	V10	RIP RAP SIZE	APRON LENGTH	APRON WIDTH @ PIPE OUTLET	APRON WIDTH @ END	D50	D_MAX	THICKNESS
	(IN)	(CFS)	(FT/S)		(FT)	(FT)	(FT)	(IN)	(IN)	(IN)
FES-1	15	2.00	5.14	CLASS B	7.50	3.75	8.75	6	9.00	18
FES-2	12	3.51	5.55	CLASS B	6.00	3.00	7.00	6	9.00	18
FES-3	12	4.04	5.57	CLASS B	6.00	3.00	7.00	6	9.00	18
FES-4	12	2.65	5.58	CLASS B	6.00	3.00	7.00	6	9.00	18

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NORTH CAROLINA PROFESSIONAL SEAL 22514 ENGINEER MICHAEL D. ALLEN 7/28/26

GRADING ENLARGEMENT EAST

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

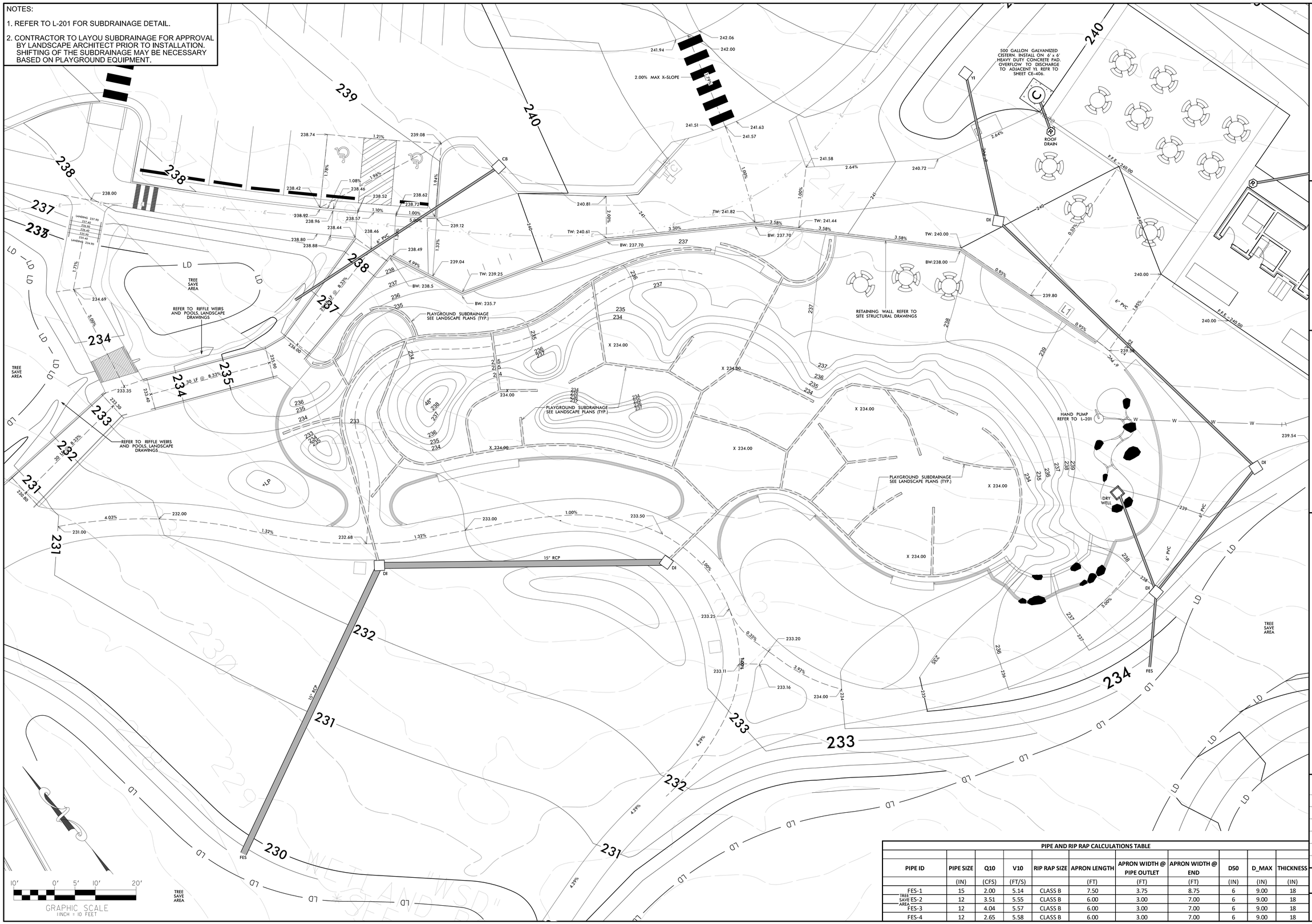
Date: 07/28/26

CE-402

"ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF WENDELL, CITY OF RALEIGH AND / OR NCDOT STANDARDS AND SPECIFICATIONS"

NOTES:

1. REFER TO L-201 FOR SUBDRAINAGE DETAIL.
2. CONTRACTOR TO LAYOU SUBDRAINAGE FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. SHIFTING OF THE SUBDRAINAGE MAY BE NECESSARY BASED ON PLAYGROUND EQUIPMENT.



PIPE AND RIP RAP CALCULATIONS TABLE										
PIPE ID	PIPE SIZE	Q10	V10	RIP RAP SIZE	APRON LENGTH	APRON WIDTH @ PIPE OUTLET	APRON WIDTH @ END	D50	D_MAX	THICKNESS
	(IN)	(CFS)	(FT/S)		(FT)	(FT)	(FT)	(IN)	(IN)	(IN)
FES-1	15	2.00	5.14	CLASS B	7.50	3.75	8.75	6	9.00	18
FES-2	12	3.51	5.55	CLASS B	6.00	3.00	7.00	6	9.00	18
FES-3	12	4.04	5.57	CLASS B	6.00	3.00	7.00	6	9.00	18
FES-4	12	2.65	5.58	CLASS B	6.00	3.00	7.00	6	9.00	18

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NORTH CAROLINA PROFESSIONAL SEAL 22514 ENGINEER MICHAEL D. ALLEN 7/28/26

GRADING ENLARGEMENT EAST

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 07/28/26

CE-402.5

"ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF WENDELL, CITY OF RALEIGH AND / OR NCDOT STANDARDS AND SPECIFICATIONS"

PIPE AND RIP RAP CALCULATIONS TABLE

PIPE ID	PIPE SIZE	Q10	V10	RIP RAP SIZE	APRON LENGTH	APRON WIDTH @ PIPE OUTLET	APRON WIDTH @ END	D50	D_MAX	THICKNESS
	(IN)	(CFS)	(FT/S)		(FT)	(FT)	(FT)	(IN)	(IN)	(IN)
FES-1	15	2.00	5.14	CLASS B	7.50	3.75	8.75	6	9.00	18
FES-2	12	3.51	5.55	CLASS B	6.00	3.00	7.00	6	9.00	18
FES-3	12	4.04	5.57	CLASS B	6.00	3.00	7.00	6	9.00	18
FES-4	12	2.65	5.58	CLASS B	6.00	3.00	7.00	6	9.00	18

17 LF 6" PVC @ 1.00%
INV=234.28
INV=234.90
DITCH BERM
Y1 TOP=228.80 INV=226.30
37 LF 12" HDPE @ 1.00%
Y1 TOP=228.50 INV=225.93
65 LF 12" HDPE @ 1.00%
FES #3 INV=225.30
Y1 TOP=223.00 INV=220.00
UTILITY CORRIDOR FOR POWER CONNECTION
50 LF 12" HDPE @ 1.00%
Y1 TOP=222.00 INV=219.48
SINGLE ACCESS GATE REFER TO DETAIL 6\L603
DOWNSPOUT TO DISCHARGE ABOVE GRADE
F.F.E.=224.23
20' SLIDING GATE REFER TO DETAIL 1\L604
SMH TOP=224.70 IN=218.88 OUT=218.78
DOWNSPOUT TO DISCHARGE ABOVE GRADE
175 LF 12" HDPE @ 1.00%
CHAIN LINK FENCE REFER TO DETAIL 3\L604
DOWNSPOUT TO DISCHARGE ABOVE GRADE
SMH TOP=222.00 IN=217.55 OUT=217.45
137 LF 12" HDPE @ 1.14%
FES #4 INV=216.00
DOUIBLE ACCESS GATE REFER TO DETAIL 4\L604
EXISTING CITY OF RALEIGH PUBLIC WATER RESERVOIR #2 ELEV=240'
TOP=203.54 INV IN=183.94 OUT=183.84
TOP=205.29 INV IN=195.78 OUT=195.77
TOP=207.51 INV IN=196.66 OUT=196.56
TOP=207.93 INV IN=202.84 OUT=202.67
12" DIP
SS
JMM1429
JMM1430
JMM1431
JMM1432
SILT FENCE
EIP
OHE

30' 0' 15' 30' 60'
GRAPHIC SCALE
1 INCH = 30 FEET

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NORTH CAROLINA PROFESSIONAL SEAL 22514 ENGINEER MICHAEL D. ALLEN 7/28/26

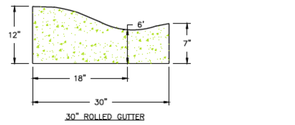
GRADING ENLARGEMENT EAST

LAKE MYRA COUNTY PARK
Wake County, NC

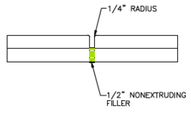
REVISIONS

Date: 07/28/26

CE-403



30" ROLLED GUTTER



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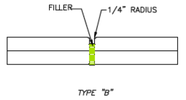

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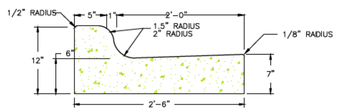


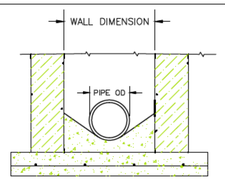
STANDARD 2'-6" CURB AND GUTTER

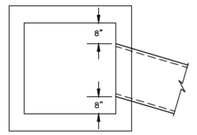
NOTES:
1. USE OF STRAIGHT SECTIONS ON CURVES WILL NOT BE PERMITTED. CURVED SECTIONS OF CURB AND GUTTER MUST CONFORM TO INDICATED RADII.
2. CONSTRUCT TYPE "A" JOINT MAX. 80' APART.
3. CONSTRUCT TYPE "B" JOINT MAX. 10' APART.

REVISIONS	
DATE	DESCRIPTION

TOWN OF WENDELL
Effective Date: 7/2/2018
Supersede Date: N/A
Policy Number: 120

CURB AND GUTTER — 13





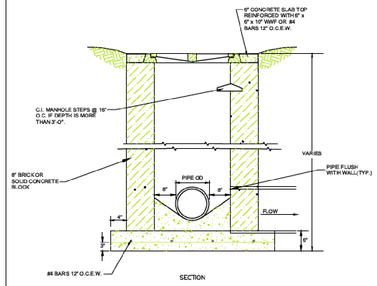
PIPE DIAMETER	MINIMUM WALL DIMENSION
15"	3'-0"
18"	3'-3"
24"	3'-10"
30"	4'-5"
36"	5'-1"
42"	5'-8"
48"	6'-4"
54"	6'-10"
60"	7'-6"

NOTE: THE ABOVE DIMENSIONS ARE APPLICABLE ONLY FOR PIPE INSTALLED AT RIGHT ANGLES TO BOX. FOR PIPES ENTERING AT AN ANGLE, THE INSIDE DIMENSION OF THE WALL SHALL BE THE DISTANCE ACROSS THE PIPE (OUTSIDE TO OUTSIDE) PLUS 8" ON EACH SIDE. SEE SKETCH ABOVE.

REVISIONS	
DATE	DESCRIPTION

TOWN OF WENDELL
Effective Date: 7/2/2018
Supersede Date: N/A
Policy Number: 120

INSIDE DIMENSIONS FOR CATCH BASINS, JUNCTION BOXES AND DROP INLETS — 17



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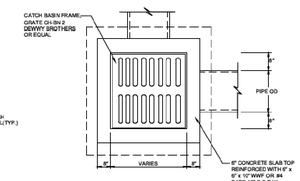
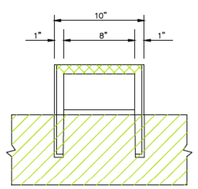
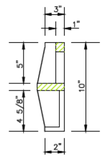


REVISIONS	
DATE	DESCRIPTION

TOWN OF WENDELL
Effective Date: 7/2/2018
Supersede Date: N/A
Policy Number: 120

DROP INLET DETAIL — 18

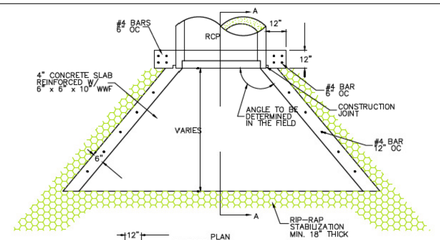




REVISIONS	
DATE	DESCRIPTION

TOWN OF WENDELL
Effective Date: 7/2/2018
Supersede Date: N/A
Policy Number: 120

CAST IRON BLOCK BASIN STEP DETAIL — 20



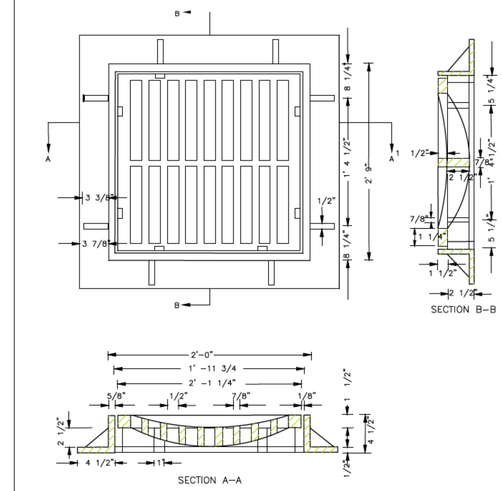
NOTE: FOR SOME INSTALLATIONS PREFABRICATED FLARED END SECTIONS MAY BE ALLOWED IN LIEU OF A HEADWALL, SUBJECT TO THE APPROVAL OF THE TOWN.

SECTION VIEW

REVISIONS	
DATE	DESCRIPTION

TOWN OF WENDELL
Effective Date: 7/2/2018
Supersede Date: N/A
Policy Number: 120

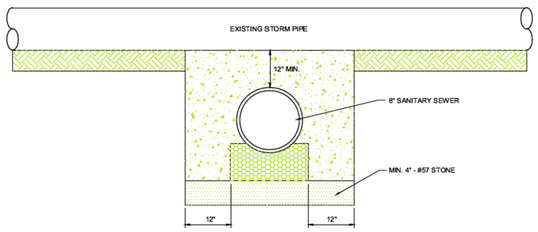
STORMDRAIN FLARED ENDS — 21



REVISIONS	
DATE	DESCRIPTION

TOWN OF WENDELL
Effective Date: 7/2/2018
Supersede Date: N/A
Policy Number: 120

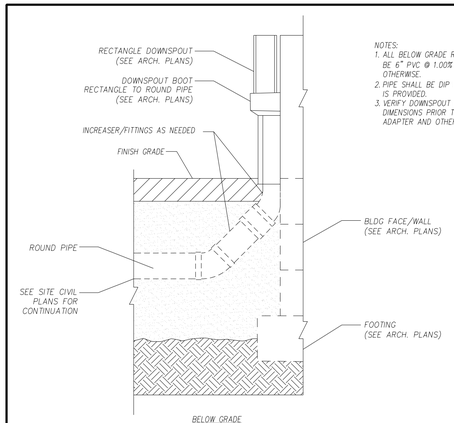
STANDARD 24" x 24" DROP INLET CASTING — 19



REVISIONS	
DATE	DESCRIPTION

TOWN OF WENDELL
Effective Date: 7/2/2018
Supersede Date: N/A
Policy Number: 120

STORM SEWER CROSSING DETAIL — 23



NOTES:
1. ALL BELOW GRADE ROOF DRAINAGE PIPING SHALL BE 6" PVC @ 1.00% MIN. SLOPE UNLESS NOTED OTHERWISE.
2. PIPE SHALL BE DIP WHEN LESS THAN 24" OF COVER IS PROVIDED.
3. VERIFY DOWNSPOUT DIMENSIONS MATCH BOOT DIMENSIONS PRIOR TO ORDERING & INSTALLING ADAPTER AND OTHER MATERIAL.

BELOW GRADE MOUNTING DETAIL

ROOF DRAIN CONNECTION — N.T.S.

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 22514 MICHAEL D. ALLEN
7/28/26

STORMWATER DETAILS

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 07/28/26

CE-405

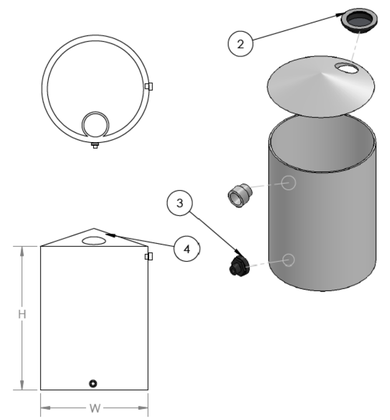
U.S. Gallons	W	H	Weight (lbs.)
150	3'	2'9"	100
200	3'6"	2'9"	115
300	3'	5'8"	150
400	3'6"	5'8"	170
500	4'	5'8	210
830	5'	5'8"	285
1000	5'	7'	325
1200	6'	5'8"	365
1480	6'	7'	410
1620	7'	6'	475
2015	7'	7'	510
2500	7'	8'	565

Notes:

- Tanks are constucted from 20 gage G-90 grade galvanized steel.
- Tops are constructed from 22 gage G-90 grade galvanized steel.
- Internal tank surfaces are treated with a FDA approved for potable water and meets ANSI/NSF 61 specifications.

1. Optional PVC mpt/slip male adapter 1" thru 4" for inlet or overflow.
2. Optional 12" or 16" stainless steel screened filter basket.
3. Standard polypropelyne bulkhead fitting fpt thread 3/4", 1 1/4" , or 2".
4. Add 6"-14" for top height.

CONTRACTOR TO PROVIDE HOSE SPIGOT AND 4" OVERFLOW, INCLUDING PIPING AND ATTACHMENT TO TANK



PLASTIC-MART

Title: Galvanized Metal Tank Specifications

SIZE A | Drawn: | Checked: | Approved:

SCALE: 1:1 | Rev C | SHEET 1 OF 1

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NORTH CAROLINA PROFESSIONAL SEAL 22514 ENGINEER MICHAEL D. ALLEN 7/28/26

STORMWATER DETAILS

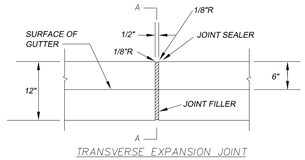
LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

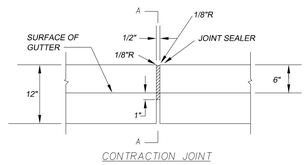
Date: 07/28/26

CE-406

"ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF WENDELL, CITY OF RALEIGH AND / OR NCDOT STANDARDS AND SPECIFICATIONS"



TRANSVERSE EXPANSION JOINT



CONTRACTION JOINT

GENERAL NOTES:

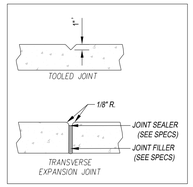
A GROOVE JOINT 1" DEEP WITH 1/8" RADII SHALL BE REQUIRED IN THE CONCRETE EDGE AT 5' INTERVALS UNLESS INDICATED OTHERWISE. SEE SPECS FOR ADDITIONAL JOINT SPACING REQUIREMENTS.

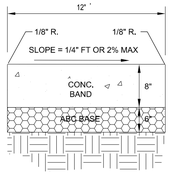
ONE 1/2" EXPANSION JOINT WILL BE REQUIRED AT 50' INTERVALS.

A 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE CONCRETE EDGE JOINS ANY RIGID STRUCTURE.

CONCRETE SHALL BE 4,000 PSI @ 28 DAYS.

FINISH SHALL BE BROOM.

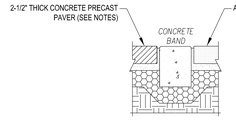




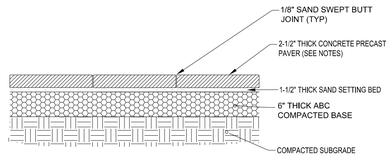
TYPICAL SECTION

CONCRETE BAND/FLUSH CURB

N.T.S.



TYPICAL PRE-CAST PAVER @ FLUSH SIDEWALK

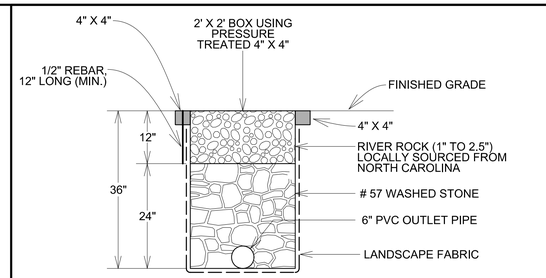


TYPICAL PRE-CAST

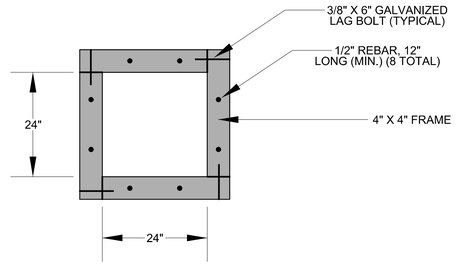
NOTES:
1. LANDSCAPE ARCHITECT TO IDENTIFY COLOR(S)
2. PATTERN: SEE LANDSCAPE PLAN.
3. CUT PAVERS AS NEEDED.
4. PREVENT CUTS LESS THAN 1/4 OF A BLOCK.
5. POLYMERIC SAND SHALL FOR ALL JOINT - COLOR TO MATCH EXISTING.
6. JOINT SPACING PER MANUFACTURER.
7. SEE SPECIFICATION SECTION 32 14 15 FOR ADDITIONAL INFORMATION.

PAVER DETAIL

N.T.S.



CROSS SECTION



PLAN VIEW

DRY WELL

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NORTH CAROLINA PROFESSIONAL SEAL 22514 ENGINEER MICHAEL D. ALLEN 7/28/26

MISCELLANEOUS DETAILS

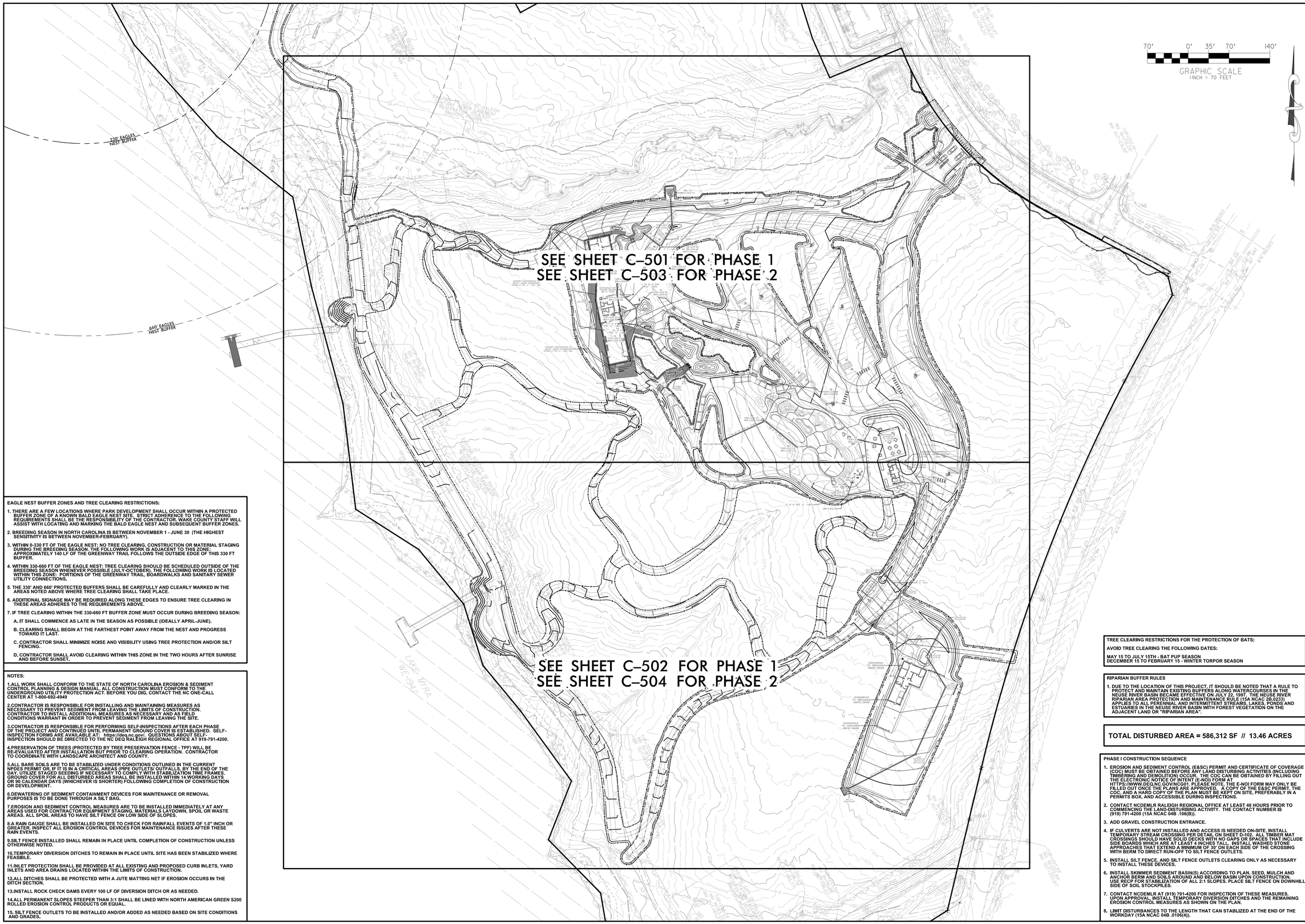
LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 07/28/26

CE-407

"ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF WENDELL, CITY OF RALEIGH AND / OR NCDOT STANDARDS AND SPECIFICATIONS"



EAGLE NEST BUFFER ZONES AND TREE CLEARING RESTRICTIONS:

1. THERE ARE A FEW LOCATIONS WHERE PARK DEVELOPMENT SHALL OCCUR WITHIN A PROTECTED BUFFER ZONE OF A KNOWN BALD EAGLE NEST SITE. STRICT ADHERENCE TO THE FOLLOWING REQUIREMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. WAKE COUNTY STAFF WILL ASSIST WITH LOCATING AND MARKING THE BALD EAGLE NEST AND SUBSEQUENT BUFFER ZONES.
2. BREEDING SEASON IN NORTH CAROLINA IS BETWEEN NOVEMBER 1 - JUNE 30 (THE HIGHEST SENSITIVITY IS BETWEEN NOVEMBER-FEBRUARY).
3. WITHIN 0-330 FT OF THE EAGLE NEST; NO TREE CLEARING, CONSTRUCTION OR MATERIAL STAGING DURING THE BREEDING SEASON. THE FOLLOWING WORK IS ADJACENT TO THIS ZONE: APPROXIMATELY 140 LF OF THE GREENWAY TRAIL FOLLOWS THE OUTSIDE EDGE OF THIS 330 FT BUFFER.
4. WITHIN 330-660 FT OF THE EAGLE NEST: TREE CLEARING SHOULD BE SCHEDULED OUTSIDE OF THE BREEDING SEASON WHENEVER POSSIBLE (JULY-OCTOBER). THE FOLLOWING WORK IS LOCATED WITHIN THIS ZONE: PORTIONS OF THE GREENWAY TRAIL, BOARDWALKS AND SANITARY SEWER UTILITY CONNECTIONS.
5. THE 330' AND 660' PROTECTED BUFFERS SHALL BE CAREFULLY AND CLEARLY MARKED IN THE AREAS NOTED ABOVE WHERE TREE CLEARING SHALL TAKE PLACE.
6. ADDITIONAL SIGNAGE MAY BE REQUIRED ALONG THESE EDGES TO ENSURE TREE CLEARING IN THESE AREAS ADHERES TO THE REQUIREMENTS ABOVE.
7. IF TREE CLEARING WITHIN THE 330-660 FT BUFFER ZONE MUST OCCUR DURING BREEDING SEASON:
   - A. IT SHALL COMMENCE AS LATE IN THE SEASON AS POSSIBLE (IDEALLY APRIL-JUNE).
   - B. CLEARING SHALL BEGIN AT THE FARTHEST POINT AWAY FROM THE NEST AND PROGRESS TOWARD IT LAST.
   - C. CONTRACTOR SHALL MINIMIZE NOISE AND VISIBILITY USING TREE PROTECTION AND/OR SILT FENCING.
   - D. CONTRACTOR SHALL AVOID CLEARING WITHIN THIS ZONE IN THE TWO HOURS AFTER SUNRISE AND BEFORE SUNSET.

NOTES:

1. ALL WORK SHALL CONFORM TO THE STATE OF NORTH CAROLINA EROSION & SEDIMENT CONTROL PLANNING & DESIGN MANUAL. ALL CONSTRUCTION MUST CONFORM TO THE UNDERGROUND UTILITY PROTECTION ACT. BEFORE YOU DIG, CONTACT THE NC ONE-CALL CENTER AT 1-800-632-4949
2. CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND MAINTAINING MEASURES AS NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE LIMITS OF CONSTRUCTION. CONTRACTOR TO INSTALL ADDITIONAL MEASURES AS NECESSARY AND AS FIELD CONDITIONS WARRANT IN ORDER TO PREVENT SEDIMENT FROM LEAVING THE SITE.
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5. ALL BARE SOILS ARE TO BE STABILIZED UNDER CONDITIONS OUTLINED IN THE CURRENT NPDES PERMIT OR, IF IT IS IN A CRITICAL AREAS (PIPE OUTLETS/ OUTFALLS) BY THE END OF THE DAY. UTILIZE STAGED SEEDING IF NECESSARY TO COMPLY WITH STABILIZATION TIME FRAMES. GROUND COVER FOR ALL DISTURBED AREAS SHALL BE INSTALLED WITHIN 14 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER) FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.
6. DEWATERING OF SEDIMENT CONTAINMENT DEVICES FOR MAINTENANCE OR REMOVAL PURPOSES IS TO BE DONE THROUGH A SILT BAG.
7. EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED IMMEDIATELY AT ANY AREAS USED FOR CONTRACTOR EQUIPMENT STAGING, MATERIALS LAYDOWN, SPOIL OR WASTE AREAS. ALL SPOIL AREAS TO HAVE SILT FENCE ON LOW SIDE OF SLOPES.
8. A RAIN GAUGE SHALL BE INSTALLED ON SITE TO CHECK FOR RAINFALL EVENTS OF 1.0" INCH OR GREATER. INSPECT ALL EROSION CONTROL DEVICES FOR MAINTENANCE ISSUES AFTER THESE RAIN EVENTS.
9. SILT FENCE INSTALLED SHALL REMAIN IN PLACE UNTIL COMPLETION OF CONSTRUCTION UNLESS OTHERWISE NOTED.
10. TEMPORARY DIVERSION DITCHES TO REMAIN IN PLACE UNTIL SITE HAS BEEN STABILIZED WHERE FEASIBLE.
11. INLET PROTECTION SHALL BE PROVIDED AT ALL EXISTING AND PROPOSED CURB INLETS, YARD INLETS AND AREA DRAINS LOCATED WITHIN THE LIMITS OF CONSTRUCTION.
12. ALL DITCHES SHALL BE PROTECTED WITH A JUTE MATTING NET IF EROSION OCCURS IN THE DITCH SECTION.
13. INSTALL ROCK CHECK DAMS EVERY 100 LF OF DIVERSION DITCH OR AS NEEDED.
14. ALL PERMANENT SLOPES STEEPER THAN 3:1 SHALL BE LINED WITH NORTH AMERICAN GREEN S200 ROLLED EROSION CONTROL PRODUCTS OR EQUAL.
15. SILT FENCE OUTLETS TO BE INSTALLED AND/OR ADDED AS NEEDED BASED ON SITE CONDITIONS AND GRADES.

TREE CLEARING RESTRICTIONS FOR THE PROTECTION OF BATS:

AVOID TREE CLEARING THE FOLLOWING DATES:

MAY 15 TO JULY 15TH - BAT PUP SEASON
DECEMBER 15 TO FEBRUARY 15 - WINTER TORPOR SEASON

RIPARIAN BUFFER RULES

1. DUE TO THE LOCATION OF THIS PROJECT, IT SHOULD BE NOTED THAT A RULE TO PROTECT AND MAINTAIN EXISTING BUFFERS ALONG WATERCOURSES IN THE NEUSE RIVER BASIN BECAME EFFECTIVE ON JULY 22, 1997. THE NEUSE RIVER RIPARIAN AREA PROTECTION AND MAINTENANCE RULE (15A NCAC 2B.0233) APPLIES TO ALL PERENNIAL AND INTERMITTENT STREAMS, LAKES, PONDS AND ESTUARIES IN THE NEUSE RIVER BASIN WITH FOREST VEGETATION ON THE ADJACENT LAND OR "RIPARIAN AREA".

TOTAL DISTURBED AREA = 586,312 SF // 13.46 ACRES

PHASE I CONSTRUCTION SEQUENCE

1. EROSION AND SEDIMENT CONTROL (E&SC) PERMIT AND CERTIFICATE OF COVERAGE (COC) MUST BE OBTAINED BEFORE ANY LAND DISTURBING ACTIVITIES (INCLUDING TIMBERING AND DEMOLITION) OCCUR. THE COC CAN BE OBTAINED BY FILLING OUT THE ELECTRONIC NOTICE OF INTENT (E-NOI) FORM AT HTTPS://WWW.DEQ.NC.GOV/NCGI01. PLEASE NOTE, THE E-NOI FORM MAY ONLY BE FILLED OUT ONCE THE PLANS ARE APPROVED. A COPY OF THE E&SC PERMIT, THE COC, AND A HARD COPY OF THE PLAN MUST BE KEPT ON SITE, PREFERABLY IN A PERMITS BOX, AND ACCESSIBLE DURING INSPECTIONS.
2. CONTACT NCDEMLR RALEIGH REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO COMMENCING THE LAND-DISTURBING ACTIVITY. THE CONTACT NUMBER IS (919) 791-4200 (15A NCAC 04B .106(B)).
3. ADD GRAVEL CONSTRUCTION ENTRANCE.
4. IF CULVERTS ARE NOT INSTALLED AND ACCESS IS NEEDED ON-SITE, INSTALL TEMPORARY STREAM CROSSING PER DETAIL ON SHEET D-102. ALL TIMBER MAT CROSSINGS SHOULD HAVE SOLID DECKS WITH NO GAPS OR SPACES THAT INCLUDE SIDE BOARDS WHICH ARE AT LEAST 4 INCHES TALL. INSTALL WASHED STONE APPROACHES THAT EXTEND A MINIMUM OF 30' ON EACH SIDE OF THE CROSSING WITH BERM TO DIRECT RUN-OFF TO SILT FENCE OUTLETS.
5. INSTALL SILT FENCE, AND SILT FENCE OUTLETS CLEARING ONLY AS NECESSARY TO INSTALL THESE DEVICES.
6. INSTALL SKIMMER SEDIMENT BASIN(S) ACCORDING TO PLAN. SEED, MULCH AND ANCHOR BERM AND SOILS AROUND AND BELOW BASIN UPON CONSTRUCTION. USE RECP FOR STABILIZATION OF ALL 2:1 SLOPES. PLACE SILT FENCE ON DOWNHILL SIDE OF SOIL STOCKPILES.
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8. LIMIT DISTURBANCES TO THE LENGTH THAT CAN STABLIZED AT THE END OF THE WORKDAY (15A NCAC 04B .0106(4)).

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NORTH CAROLINA PROFESSIONAL SEAL 22514 ENGINEER MICHAEL D. ALLEN 7/28/26

OVERALL EROSION CONTROL PLAN EAST

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 07/28/26

CE-500

"ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF WENDELL, CITY OF RALEIGH AND / OR NCDOT STANDARDS AND SPECIFICATIONS"

LEGEND

- CHECK DAM
- SILT FENCE
- SUPER SILT FENCE
- TREE PROTECTION FENCE
- LIMITS OF CONSTRUCTION
- SILT FENCE OUTLET
- CONCRETE WASHOUT
- INLET PROTECTION
- WATTLE

40' 0' 20' 40' 80'

GRAPHIC SCALE
1 INCH = 40 FEET

SPECIAL NOTES FOR TRAIL GRADING / EROSION

CONTRACTOR TO STAKE OUT THE LIMITS OF DISTURBANCE (LD) FOR THE PROPOSED PROJECT. ONCE THESE HAVE BEEN IDENTIFIED, THE CONTRACTOR TO CONTACT THE COUNTY AND LANDSCAPE ARCHITECT SO THAT THE TREES TO BE REMOVED WITHIN THE CORRIDOR CAN BE IDENTIFIED. ONLY THE TREES IDENTIFIED ARE TO BE REMOVED.

DURING TRAIL CONSTRUCTION, THE CONTRACTOR WILL NOT GRADE MORE THAN 3 DAYS BEFORE INSTALLING THE STONE BASE TO MINIMIZE THE AREA LEFT DISTURBED. AT THE END OF EVERY DAY, SILT SOCKS/WATTLES ARE TO BE INSTALLED ON THE LOW SIDE OF THE DISTURBED AREA AND AT THE END OF THE GRADING, AFTER A MAXIMUM OF THREE DAYS OF GRADING, THE STONE BASE IS TO BE INSTALLED AND THE SILT SOCKS/WATTLES REMOVED TO BE UTILIZED ON THE NEXT SECTION OF GRADED AREA. IF RAIN IS FORECASTED, ANY DISTURBED AREA SHOULD HAVE STONE APPLIED OR ADDITIONAL SILT SOCKS/WATTLES INSTALLED.

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2. BREEDING SEASON IN NORTH CAROLINA IS BETWEEN NOVEMBER 1 - JUNE 30 (THE HIGHEST SENSITIVITY IS BETWEEN NOVEMBER-FEBRUARY).
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TOTAL DISTURBED AREA = 586,312 SF // 13.46 ACRES

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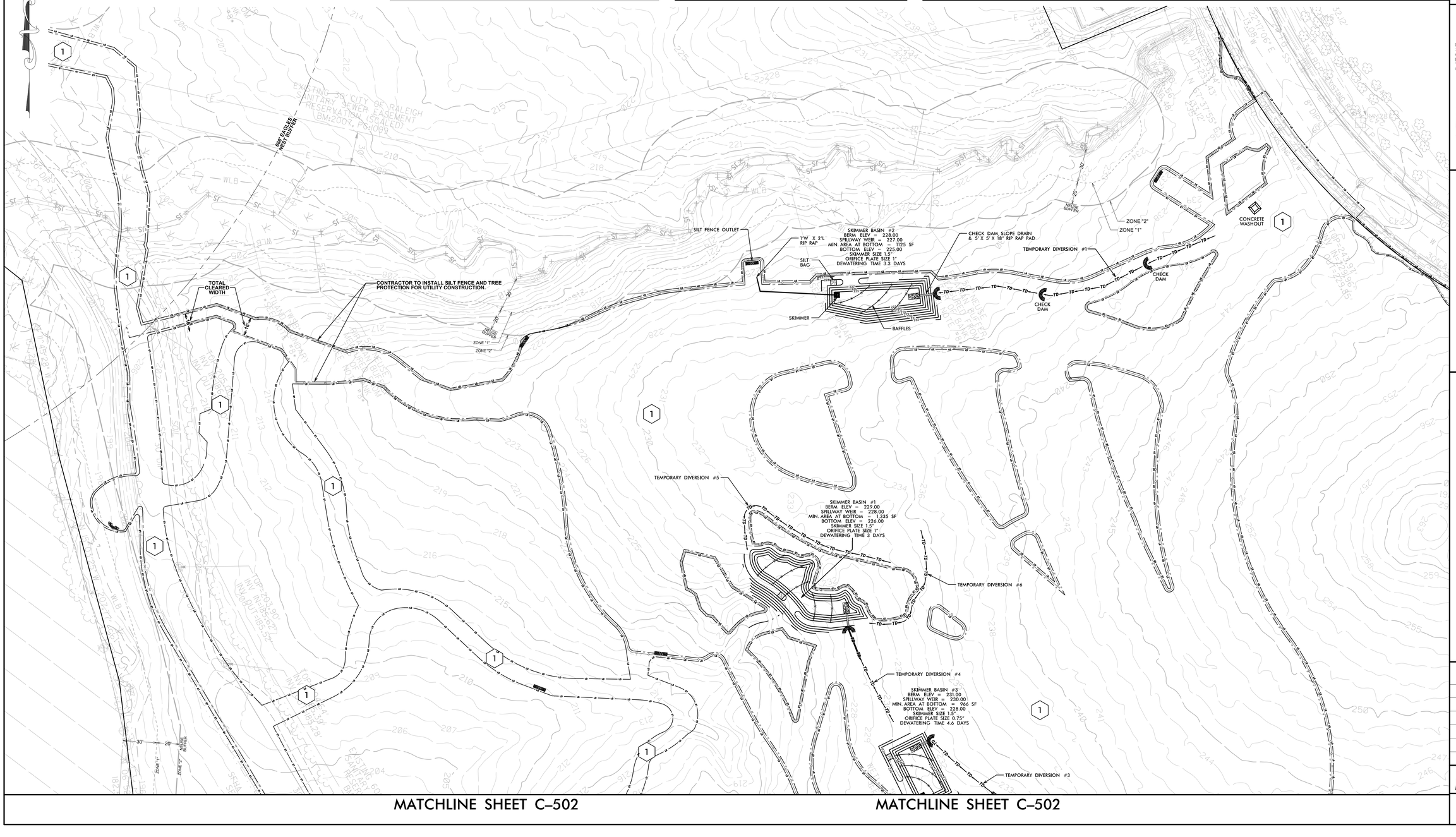

MATCHLINE SHEET C–502

MATCHLINE SHEET C–502

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NORTH CAROLINA PROFESSIONAL SEAL 22514 ENGINEER MICHAEL D. ALLEN 7/28/26

EROSION CONTROL ENLARGEMENT PHASE 1

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 07/28/26

CE-501

"ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF WENDELL, CITY OF RALEIGH AND / OR NCDOT STANDARDS AND SPECIFICATIONS"

LEGEND

- CHECK DAM
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TOTAL DISTURBED AREA = 586,312 SF // 13.46 ACRES

MATCHLINE SHEET C–501

MATCHLINE SHEET C–501

40' 0' 20' 40' 80'

GRAPHIC SCALE
1 INCH = 40 FEET

ZONE "1"
ZONE "2"

TEMPORARY DIVERSION #3

CONTRACTOR TO INSTALL SILT FENCE AND TREE PROTECTION FOR UTILITY CONSTRUCTION.

CONTRACTOR TO INSTALL SILT FENCE AND TREE PROTECTION FOR UTILITY CONSTRUCTION.

CONTRACTOR TO INSTALL SILT FENCE AND TREE PROTECTION FOR UTILITY CONSTRUCTION.

SILT FENCE OUTLET

PHASE I CONSTRUCTION SEQUENCE

1. EROSION AND SEDIMENT CONTROL (E&SC) PERMIT AND CERTIFICATE OF COVERAGE (COC) MUST BE OBTAINED BEFORE ANY LAND DISTURBING ACTIVITIES (INCLUDING TIMBERING AND DEMOLITION) OCCUR. THE COC CAN BE OBTAINED BY FILLING OUT THE ELECTRONIC NOTICE OF INTENT (E-NOI) FORM AT HTTPS://WWW.DEQ.NC.GOV/NCG01. PLEASE NOTE, THE E-NOI FORM MAY ONLY BE FILLED OUT ONCE THE PLANS ARE APPROVED. A COPY OF THE E&SC PERMIT, THE COC, AND A HARD COPY OF THE PLAN MUST BE KEPT ON SITE, PREFERABLY IN A PERMITS BOX, AND ACCESSIBLE DURING INSPECTIONS.
2. CONTACT NCDEMLR RALEIGH REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO COMMENCING THE LAND-DISTURBING ACTIVITY. THE CONTACT NUMBER IS (919) 791-4200 (15A NCAC 04B .106(B)).
3. ADD GRAVEL CONSTRUCTION ENTRANCE.
4. IF CULVERTS ARE NOT INSTALLED AND ACCESS IS NEEDED ON-SITE, INSTALL TEMPORARY STREAM CROSSING PER DETAIL ON SHEET D-102. ALL TIMBER MAT CROSSINGS SHOULD HAVE SOLID DECKS WITH NO GAPS OR SPACES THAT INCLUDE SIDE BOARDS WHICH ARE AT LEAST 4 INCHES TALL. INSTALL WASHED STONE APPROACHES THAT EXTEND A MINIMUM OF 30' ON EACH SIDE OF THE CROSSING WITH BERM TO DIRECT RUN-OFF TO SILT FENCE OUTLETS.
5. INSTALL SILT FENCE, AND SILT FENCE OUTLETS CLEARING ONLY AS NECESSARY TO INSTALL THESE DEVICES.
6. INSTALL SKIMMER SEDIMENT BASIN(S) ACCORDING TO PLAN. SEED, MULCH AND ANCHOR BERM AND SOILS AROUND AND BELOW BASIN UPON CONSTRUCTION. USE RECP FOR STABILIZATION OF ALL 2:1 SLOPES. PLACE SILT FENCE ON DOWNHILL SIDE OF SOIL STOCKPILES.
7. CONTACT NCDEMLR AT (919) 791-4200 FOR INSPECTION OF THESE MEASURES. UPON APPROVAL, INSTALL TEMPORARY DIVERSION DITCHES AND THE REMAINING EROSION CONTROL MEASURES AS SHOWN ON THE PLAN.
8. LIMIT DISTURBANCES TO THE LENGTH THAT CAN STABLIZED AT THE END OF THE WORKDAY (15A NCAC 04B .0106(4)).

EAGLE NEST BUFFER ZONES AND TREE CLEARING RESTRICTIONS:

1. THERE ARE A FEW LOCATIONS WHERE PARK DEVELOPMENT SHALL OCCUR WITHIN A PROTECTED BUFFER ZONE OF A KNOWN BALD EAGLE NEST SITE. STRICT ADHERENCE TO THE FOLLOWING REQUIREMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. WAKE COUNTY STAFF WILL ASSIST WITH LOCATING AND MARKING THE BALD EAGLE NEST AND SUBSEQUENT BUFFER ZONES.
2. BREEDING SEASON IN NORTH CAROLINA IS BETWEEN NOVEMBER 1 - JUNE 30 (THE HIGHEST SENSITIVITY IS BETWEEN NOVEMBER-FEBRUARY).
3. WITHIN 0-330 FT OF THE EAGLE NEST: NO TREE CLEARING, CONSTRUCTION OR MATERIAL STAGING DURING THE BREEDING SEASON. THE FOLLOWING WORK IS ADJACENT TO THIS ZONE: APPROXIMATELY 140 LF OF THE GREENWAY TRAIL FOLLOWS THE OUTSIDE EDGE OF THIS 330 FT BUFFER.
4. WITHIN 330-660 FT OF THE EAGLE NEST: TREE CLEARING SHOULD BE SCHEDULED OUTSIDE OF THE BREEDING SEASON WHENEVER POSSIBLE (JULY-OCTOBER). THE FOLLOWING WORK IS LOCATED WITHIN THIS ZONE: PORTIONS OF THE GREENWAY TRAIL, BOARDWALKS AND SANITARY SEWER UTILITY CONNECTIONS.
5. THE 330' AND 660' PROTECTED BUFFERS SHALL BE CAREFULLY AND CLEARLY MARKED IN THE AREAS NOTED ABOVE WHERE TREE CLEARING SHALL TAKE PLACE.
6. ADDITIONAL SIGNAGE MAY BE REQUIRED ALONG THESE EDGES TO ENSURE TREE CLEARING IN THESE AREAS ADHERES TO THE REQUIREMENTS ABOVE.
7. IF TREE CLEARING WITHIN THE 330-660 FT BUFFER ZONE MUST OCCUR DURING BREEDING SEASON:
   - A. IT SHALL COMMENCE AS LATE IN THE SEASON AS POSSIBLE (IDEALLY APRIL-JUNE).
   - B. CLEARING SHALL BEGIN AT THE FARTHEST POINT AWAY FROM THE NEST AND PROGRESS TOWARD IT LAST.
   - C. CONTRACTOR SHALL MINIMIZE NOISE AND VISIBILITY USING TREE PROTECTION AND/OR SILT FENCING.
   - D. CONTRACTOR SHALL AVOID CLEARING WITHIN THIS ZONE IN THE TWO HOURS AFTER SUNRISE AND BEFORE SUNSET.

NOTES:

1. ALL WORK SHALL CONFORM TO THE STATE OF NORTH CAROLINA EROSION & SEDIMENT CONTROL PLANNING & DESIGN MANUAL. ALL CONSTRUCTION MUST CONFORM TO THE UNDERGROUND UTILITY PROTECTION ACT. BEFORE YOU DIG, CONTACT THE NC ONE-CALL CENTER AT 1-800-692-4949
2. CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND MAINTAINING MEASURES AS NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE LIMITS OF CONSTRUCTION. CONTRACTOR TO INSTALL ADDITIONAL MEASURES AS NECESSARY AND AS FIELD CONDITIONS WARRANT IN ORDER TO PREVENT SEDIMENT FROM LEAVING THE SITE.
3. CONTRACTOR IS RESPONSIBLE FOR PERFORMING SELF-INSPECTIONS AFTER EACH PHASE OF THE PROJECT AND CONTINUED UNTIL PERMANENT GROUND COVER IS ESTABLISHED. SELF-INSPECTION FORMS ARE AVAILABLE AT: https://deq.nc.gov/. QUESTIONS ABOUT SELF-INSPECTION SHOULD BE DIRECTED TO THE NC DEQ RALEIGH REGIONAL OFFICE AT 919-791-4200.
4. PRESERVATION OF TREES (PROTECTED BY TREE PRESERVATION FENCE - TPF) WILL BE RE-EVALUATED AFTER INSTALLATION BUT PRIOR TO CLEARING OPERATION. CONTRACTOR TO COORDINATE WITH LANDSCAPE ARCHITECT AND COUNTY.
5. ALL BARE SOILS ARE TO BE STABILIZED UNDER CONDITIONS OUTLINED IN THE CURRENT NPDES PERMIT OR, IF IT IS IN A CRITICAL AREAS (PIPE OUTLETS/ OUTFALLS), BY THE END OF THE DAY. UTILIZE STAGED SEEDING IF NECESSARY TO COMPLY WITH STABILIZATION TIME FRAMES. GROUND COVER FOR ALL DISTURBED AREAS SHALL BE INSTALLED WITHIN 14 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER) FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.
6. DEWATERING OF SEDIMENT CONTAINMENT DEVICES FOR MAINTENANCE OR REMOVAL PURPOSES IS TO BE DONE THROUGH A SILT BAG.
7. EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED IMMEDIATELY AT ANY AREAS USED FOR CONTRACTOR EQUIPMENT STAGING, MATERIALS LAYDOWN, SPOIL OR WASTE AREAS. ALL SPOIL AREAS TO HAVE SILT FENCE ON LOW SIDE OF SLOPES.
8. A RAIN GAUGE SHALL BE INSTALLED ON SITE TO CHECK FOR RAINFALL EVENTS OF 1.0" INCH OR GREATER. INSPECT ALL EROSION CONTROL DEVICES FOR MAINTENANCE ISSUES AFTER THESE RAIN EVENTS.
9. SILT FENCE INSTALLED SHALL REMAIN IN PLACE UNTIL COMPLETION OF CONSTRUCTION UNLESS OTHERWISE NOTED.
10. TEMPORARY DIVERSION DITCHES TO REMAIN IN PLACE UNTIL SITE HAS BEEN STABILIZED WHERE FEASIBLE.
11. INLET PROTECTION SHALL BE PROVIDED AT ALL EXISTING AND PROPOSED CURB INLETS, YARD INLETS AND AREA DRAINS LOCATED WITHIN THE LIMITS OF CONSTRUCTION.
12. ALL DITCHES SHALL BE PROTECTED WITH A JUTE MATTING NET IF EROSION OCCURS IN THE DITCH SECTION.
13. INSTALL ROCK CHECK DAMS EVERY 100 LF OF DIVERSION DITCH OR AS NEEDED.
14. ALL PERMANENT SLOPES STEEPER THAN 3:1 SHALL BE LINED WITH NORTH AMERICAN GREEN S200 ROLLED EROSION CONTROL PRODUCTS OR EQUAL.
15. SILT FENCE OUTLETS TO BE INSTALLED AND/OR ADDED AS NEEDED BASED ON SITE CONDITIONS AND GRADES.

Susan Hatchell
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NORTH CAROLINA PROFESSIONAL SEAL 22514 ENGINEER MICHAEL D. ALLEN 7/28/26

EROSION CONTROL ENLARGEMENT PHASE 1

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 07/28/26

CE-502

"ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF WENDELL, CITY OF RALEIGH AND / OR NCDOT STANDARDS AND SPECIFICATIONS"

LEGEND

- CHECK DAM
- SILT FENCE
- SUPER SILT FENCE
- TREE PROTECTION FENCE
- LIMITS OF CONSTRUCTION
- SILT FENCE OUTLET
- CONCRETE WASHOUT
- INLET PROTECTION
- WATTLE

40' 0' 20' 40' 80'

GRAPHIC SCALE
1INCH = 40 FEET

SPECIAL NOTES FOR TRAIL GRADING / EROSION

CONTRACTOR TO STAKE OUT THE LIMITS OF DISTURBANCE (LD) FOR THE PROPOSED PROJECT. ONCE THESE HAVE BEEN IDENTIFIED, THE CONTRACTOR TO CONTACT THE COUNTY AND LANDSCAPE ARCHITECT SO THAT THE TREES TO BE REMOVED WITHIN THE CORRIDOR CAN BE IDENTIFIED. ONLY THE TREES IDENTIFIED ARE TO BE REMOVED.

DURING TRAIL CONSTRUCTION, THE CONTRACTOR WILL NOT GRADE MORE THAN 3 DAYS BEFORE INSTALLING THE STONE BASE TO MINIMIZE THE AREA LEFT DISTURBED. AT THE END OF EVERY DAY, SILT SOCKS/WATTLES ARE TO BE INSTALLED ON THE LOW SIDE OF THE DISTURBED AREA AND AT THE END OF THE GRADING. AFTER A MAXIMUM OF THREE DAYS OF GRADING, THE STONE BASE IS TO BE INSTALLED AND THE SILT SOCKS/WATTLES REMOVED TO BE UTILIZED ON THE NEXT SECTION OF GRADED AREA. IF RAIN IS FORECASTED, ANY DISTURBED AREA SHOULD HAVE STONE APPLIED OR ADDITIONAL SILT SOCKS/WATTLES INSTALLED.

TREE CLEARING RESTRICTIONS FOR THE PROTECTION OF BATS:

AVOID TREE CLEARING THE FOLLOWING DATES:

MAY 15 TO JULY 15TH - BAT PUP SEASON
DECEMBER 15 TO FEBRUARY 15 - WINTER TORPOR SEASON

EAGLE NEST BUFFER ZONES AND TREE CLEARING RESTRICTIONS:

1. THERE ARE A FEW LOCATIONS WHERE PARK DEVELOPMENT SHALL OCCUR WITHIN A PROTECTED BUFFER ZONE OF A KNOWN BALD EAGLE NEST SITE. STRICT ADHERENCE TO THE FOLLOWING REQUIREMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. WAKE COUNTY STAFF WILL ASSIST WITH LOCATING AND MARKING THE BALD EAGLE NEST AND SUBSEQUENT BUFFER ZONES.
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3. WITHIN 0-330 FT OF THE EAGLE NEST: NO TREE CLEARING, CONSTRUCTION OR MATERIAL STAGING DURING THE BREEDING SEASON. THE FOLLOWING WORK IS ADJACENT TO THIS ZONE: APPROXIMATELY 140 LF OF THE GREENWAY TRAIL FOLLOWS THE OUTSIDE EDGE OF THIS 330 FT BUFFER.
4. WITHIN 330-660 FT OF THE EAGLE NEST: TREE CLEARING SHOULD BE SCHEDULED OUTSIDE OF THE BREEDING SEASON WHENEVER POSSIBLE (JULY-OCTOBER). THE FOLLOWING WORK IS LOCATED WITHIN THIS ZONE: PORTIONS OF THE GREENWAY TRAIL, BOARDWALKS AND SANITARY SEWER UTILITY CONNECTIONS.
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   - C. CONTRACTOR SHALL MINIMIZE NOISE AND VISIBILITY USING TREE PROTECTION AND/OR SILT FENCING.
   - D. CONTRACTOR SHALL AVOID CLEARING WITHIN THIS ZONE IN THE TWO HOURS AFTER SUNRISE AND BEFORE SUNSET.

PHASE II CONSTRUCTION SEQUENCE

1. COMPLETE PHASE I CONSTRUCTION SEQUENCE.
2. PERFORM GRADING OPERATIONS, AS SITE IS BROUGHT TO GRADE, CONTRACTOR TO ENSURE POSITIVE DRAINAGE AND TO ENSURE THAT ALL SEDIMENT LADEN WATER IS DIRECTED INTO THE SKIMMER BASIN.
3. INSTALL EXCAVATED INLET PROTECTION DEVICES AS SOON AS INLETS ARE INSTALLED. ALL STORM DRAINAGE SHALL BE ROUTED INTO SKIMMER BASINS VIA TEMPORARY PIPES SHOWN ON PLANS.
4. CLEAN SEDIMENT BASIN AND EXCAVATED INLET PROTECTION DEVICES WHEN THEY ARE HALF-FULL AND MONITOR FOR MAINTENANCE OF ALL EROSION CONTROL DEVICES WEEKLY OR AFTER EVERY 1" OF RAIN.
5. SOIL STOCKPILES SHALL BE STABILIZED IF INACTIVE FOR MORE THAN 7 DAYS.
6. ANY OFF-SITE BORROW AND WASTE REQUIRED FOR THIS PROJECT MUST COME FROM A SITE WITH AN APPROVED EROSION CONTROL PLAN, A SITE REGULATED UNDER THE MINING ACT OF 1971, OR A LANDFILL REGULATED BY THE DIVISION OF SOLID WASTE MANAGEMENT. TRASH/DEBRIS FROM DEMOLITION ACTIVITIES OR GENERATED BY ANY ACTIVITIES ON SITE MUST BE DISPOSED OF AT A FACILITY REGULATED BY THE DIVISION OF SOLID WASTE MANAGEMENT OR PERMITTED BY DIVISION OF SOLID WASTE MANAGEMENT OR DIVISION OF WATER RESOURCES RULES AND REGULATIONS.
7. MAINTAIN EROSION CONTROL MEASURES UNTIL ALL UPSTREAM AREA HAS BEEN STABILIZED AND PERMANENT GROUNDCOVER IS ESTABLISHED PER LANDSCAPE PLANS.
8. PERIMETER MEASURES MUST BE LEFT IN PLACE UNTIL ALL UPLAND AREAS ARE PERMANENTLY STABLIZED. AFTER SITE IS PERMANENTLY STABILIZED, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AND PROVIDE PERMANENT SEEDING WHERE TEMPORARY MEAURES HAVE BEEN REMOVED AND GROUND COVER IS NOT ADEQUATE. SEDIMENT BASINS MAY NOT BE REMOVED OR CONVERTED TO PERMENANT SCMS UNTIL ALL UPLAND AREAS ARE PERMANENTLY STABILIZED. PROVIDE WETLANDS VEGETATION MIX FOR STABILIZATION WITHIN BUFFERED AREAS. SEE DETAILS FOR SEED MIX. NCDEQ SHOULD BE NOTIFIED 10-DAYS PRIOR TO THE REMOVAL OF A BASIN. (GS 113A-57(3), 15A NCAC 04B .0113).
9. ONCE APPROVAL IS GIVEN FOR REMOVAL OR CONVERSION OF THE SKIMMER BASINS: THE TEMPORARY DIVERSION DITCHES AND INLET PROTECTION SHALL BE REMOVED PER THE FOLLOWING:
   - A. REMOVE SEDIMENT FROM DITCHES.
   - B. REMOVE CHECK DAMS FROM DITCHES.
   - C. BRING DITCHES TO FINAL GRADE AND PERMANENTLY STABILIZE PER THE GRADING PLAN.
   - D. REMOVE SEDIMENT FROM TEMPORARY INLET PROTECTION AND REMOVE TEMPORARY INLET PROTECTIONS.
   - E. BRING AREAS AROUND DRAINAGE STRUCTURES TO PERMANENT GRADE AND STABILIZE PER GRADING PLANS.
   - F. REMOVE SLOPE DRAINS FROM SKIMMER BASINS.
10. THE SKIMMER BASINS SHALL BE DEWATERED THROUGH A SILT BAG. INSTALL THE DRY POND RISER PER DETAIL ON SHEET CW-404. ONCE THE SKIMMER BASINS HAVE BEEN CLEANED OF SEDIMENT AND DRAINED, THEY SHALL BE BROUGHT TO FINAL GRADE, PERMANENTLY STABILIZED AND PLANTED IN ACCORDANCE WITH THE GRADING AND STORM PLAN.
11. WHEN THE PROJECT IS COMPLETE, AND PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION HAS BEEN ESTABLISHED, THE PERMITTEE SHALL CONTACT NCDENR.LR TO CLOSE OUT THE E&SC PLAN. AFTER NCDENR.LR INFORMS THE PERMITTEE OF THE PROJECT CLOSE OUT VIA INSPECTION REPORT, THE PERMITTEE SHALL VISIT HTTPS://WWW.DEQ.NC.GOV/NCG01 TO SUBMIT AN ELECTRONIC NOTICE OF TERMINATION (E-NOT). A $127 ANNUAL GENERAL PERMIT FEE WILL BE CHARGED UNTIL THE E-NOT HAS BEEN FILLED OUT.

RIPARIAN BUFFER RULES

1. DUE TO THE LOCATION OF THIS PROJECT, IT SHOULD BE NOTED THAT A RULE TO PROTECT AND MAINTAIN EXISTING BUFFERS ALONG WATERCOURSES IN THE NEUSE RIVER BASIN BECAME EFFECTIVE ON JULY 22, 1997. THE NEUSE RIVER RIPARIAN AREA PROTECTION AND MAINTENANCE RULE (15A NCAC 2B.0233) APPLIES TO ALL PERENNIAL AND INTERMITTENT STREAMS, LAKES, PONDS AND ESTUARIES IN THE NEUSE RIVER BASIN WITH FOREST VEGETATION ON THE ADJACENT LAND OR "RIPARIAN AREA".

TOTAL DISTURBED AREA = 586,312 SF // 13.46 ACRES

NOTES:

1. ALL WORK SHALL CONFORM TO THE STATE OF NORTH CAROLINA EROSION & SEDIMENT CONTROL PLANNING & DESIGN MANUAL. ALL CONSTRUCTION MUST CONFORM TO THE UNDERGROUND UTILITY PROTECTION ACT. BEFORE YOU DIG, CONTACT THE NC ONE-CALL CENTER AT 1-800-632-4949
2. CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND MAINTAINING MEASURES AS NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE LIMITS OF CONSTRUCTION. CONTRACTOR TO INSTALL ADDITIONAL MEASURES AS NECESSARY AND AS FIELD CONDITIONS WARRANT IN ORDER TO PREVENT SEDIMENT FROM LEAVING THE SITE.
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NOTES:

5. ALL BARE SOILS ARE TO BE STABILIZED UNDER CONDITIONS OUTLINED IN THE CURRENT NPDES PERMIT OR, IF IT IS IN A CRITICAL AREAS (PIPE OUTLETS/ OUTFALLS, BY THE END OF THE DAY. UTILIZE STAGED SEEDING IF NECESSARY TO COMPLY WITH STABILIZATION TIME FRAMES. GROUND COVER FOR ALL DISTURBED AREAS SHALL BE INSTALLED WITHIN 14 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER) FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.
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NORTH CAROLINA PROFESSIONAL SEAL 22514 ENGINEER MICHAEL D. ALLEN 7/28/26

EROSION CONTROL ENLARGEMENT PHASE 2

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 07/28/26

CE-503

"ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF WENDELL, CITY OF RALEIGH AND / OR NCDOT STANDARDS AND SPECIFICATIONS"

LEGEND

- CHECK DAM
- SILT FENCE
- SUPER SILT FENCE
- TREE PROTECTION FENCE
- LIMITS OF CONSTRUCTION
- SILT FENCE OUTLET
- CONCRETE WASHOUT
- INLET PROTECTION
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SPECIAL NOTES FOR TRAIL GRADING / EROSION

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RIPARIAN BUFFER RULES

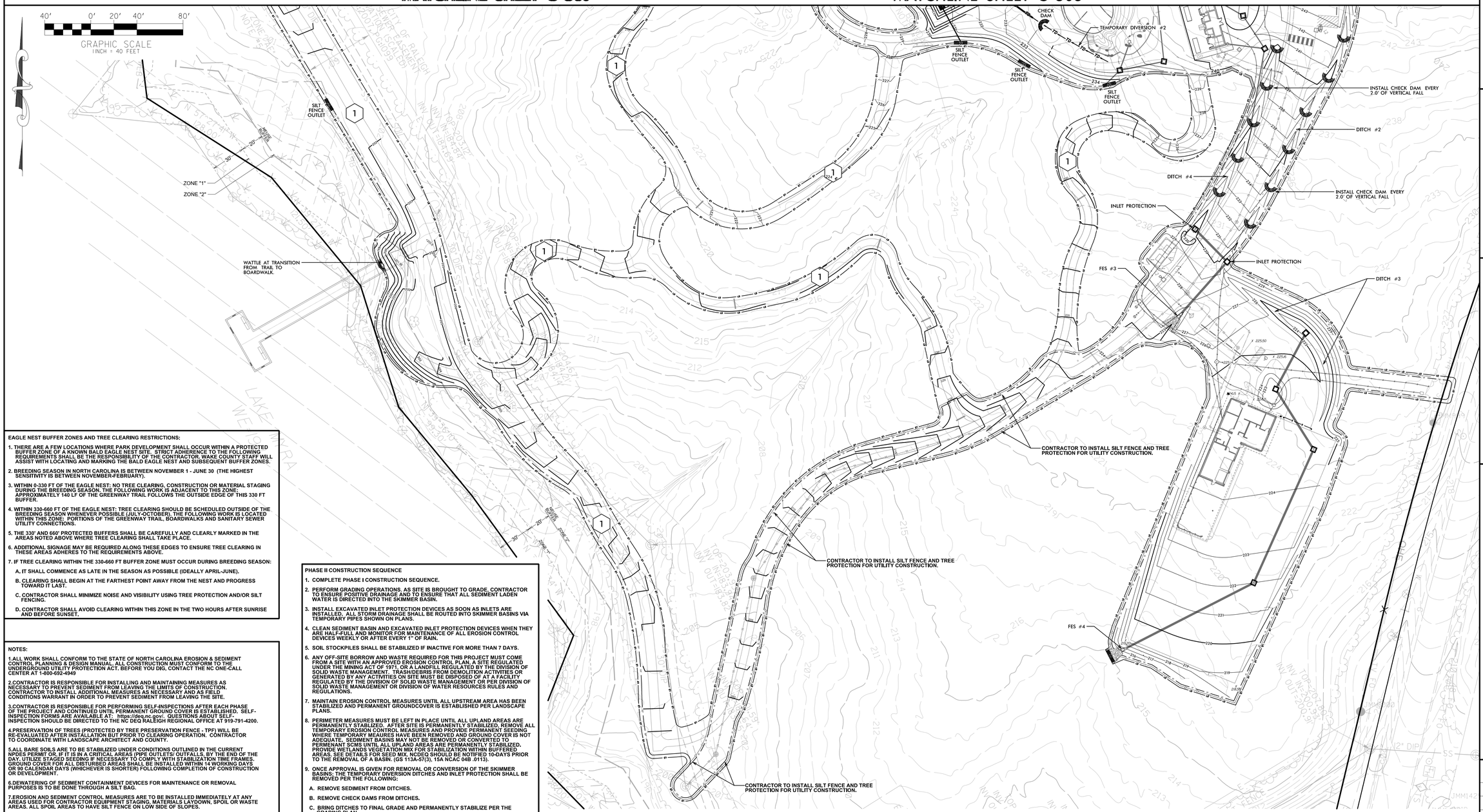
1. DUE TO THE LOCATION OF THIS PROJECT, IT SHOULD BE NOTED THAT A RULE TO PROTECT AND MAINTAIN EXISTING BUFFERS ALONG WATERCOURSES IN THE NEUSE RIVER BASIN BECAME EFFECTIVE ON JULY 22, 1997. THE NEUSE RIVER RIPARIAN AREA PROTECTION AND MAINTENANCE RULE (15A NCAC 2B.0233) APPLIES TO ALL PERENNIAL AND INTERMITTENT STREAMS, LAKES, PONDS AND ESTUARIES IN THE NEUSE RIVER BASIN WITH FOREST VEGETATION ON THE ADJACENT LAND OR "RIPARIAN AREA".

TOTAL DISTURBED AREA = 586,312 SF // 13.46 ACRES

MATCHLINE SHEET C–503

MATCHLINE SHEET C–503

GRAPHIC SCALE
1 INCH = 40 FEET



EAGLE NEST BUFFER ZONES AND TREE CLEARING RESTRICTIONS:

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NOTES:

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3. CONTRACTOR IS RESPONSIBLE FOR PERFORMING SELF-INSPECTIONS AFTER EACH PHASE OF THE PROJECT AND CONTINUED UNTIL PERMANENT GROUND COVER IS ESTABLISHED. SELF-INSPECTION FORMS ARE AVAILABLE AT: https://deq.nc.gov/. QUESTIONS ABOUT SELF-INSPECTION SHOULD BE DIRECTED TO THE NC DEQ RALEIGH REGIONAL OFFICE AT 919-791-4200.
4. PRESERVATION OF TREES (PROTECTED BY TREE PRESERVATION FENCE - TPF) WILL BE RE-EVALUATED AFTER INSTALLATION BUT PRIOR TO CLEARING OPERATION. CONTRACTOR TO COORDINATE WITH LANDSCAPE ARCHITECT AND COUNTY.
5. ALL BARE SOILS ARE TO BE STABILIZED UNDER CONDITIONS OUTLINED IN THE CURRENT NPDES PERMIT OR, IF IT IS IN A CRITICAL AREAS (PIPE OUTLETS/ OUTFALLS) BY THE END OF THE DAY. UTILIZE STAGED SEEDING IF NECESSARY TO COMPLY WITH STABILIZATION TIME FRAMES. GROUND COVER FOR ALL DISTURBED AREAS SHALL BE INSTALLED WITHIN 14 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER) FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.
6. DEWATERING OF SEDIMENT CONTAINMENT DEVICES FOR MAINTENANCE OR REMOVAL PURPOSES IS TO BE DONE THROUGH A SILT BAG.
7. EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED IMMEDIATELY AT ANY AREAS USED FOR CONTRACTOR EQUIPMENT STAGING, MATERIALS LAYDOWN, SPOIL OR WASTE AREAS. ALL SPOIL AREAS TO HAVE SILT FENCE ON LOW SIDE OF SLOPES.
8. A RAIN GAUGE SHALL BE INSTALLED ON SITE TO CHECK FOR RAINFALL EVENTS OF 1.0" INCH OR GREATER. INSPECT ALL EROSION CONTROL DEVICES FOR MAINTENANCE ISSUES AFTER THESE RAIN EVENTS.
9. SILT FENCE INSTALLED SHALL REMAIN IN PLACE UNTIL COMPLETION OF CONSTRUCTION UNLESS OTHERWISE NOTED.
10. TEMPORARY DIVERSION DITCHES TO REMAIN IN PLACE UNTIL SITE HAS BEEN STABILIZED WHERE FEASIBLE.
11. INLET PROTECTION SHALL BE PROVIDED AT ALL EXISTING AND PROPOSED CURB INLETS, YARD INLETS AND AREA DRAINS LOCATED WITHIN THE LIMITS OF CONSTRUCTION.
12. ALL DITCHES SHALL BE PROTECTED WITH A JUTE MATTING NET IF EROSION OCCURS IN THE DITCH SECTION.
13. INSTALL ROCK CHECK DAMS EVERY 100 LF OF DIVERSION DITCH OR AS NEEDED.
14. ALL PERMANENT SLOPES STEEPER THAN 3:1 SHALL BE LINED WITH NORTH AMERICAN GREEN S200 ROLLED EROSION CONTROL PRODUCTS OR EQUAL.
15. SILT FENCE OUTLETS TO BE INSTALLED AND/OR ADDED AS NEEDED BASED ON SITE CONDITIONS AND GRADES.

PHASE II CONSTRUCTION SEQUENCE

1. COMPLETE PHASE I CONSTRUCTION SEQUENCE.
2. PERFORM GRADING OPERATIONS. AS SITE IS BROUGHT TO GRADE, CONTRACTOR TO ENSURE POSITIVE DRAINAGE AND TO ENSURE THAT ALL SEDIMENT LADEN WATER IS DIRECTED INTO THE SKIMMER BASIN.
3. INSTALL EXCAVATED INLET PROTECTION DEVICES AS SOON AS INLETS ARE INSTALLED. ALL STORM DRAINAGE SHALL BE ROUTED INTO SKIMMER BASINS VIA TEMPORARY PIPES SHOWN ON PLANS.
4. CLEAN SEDIMENT BASIN AND EXCAVATED INLET PROTECTION DEVICES WHEN THEY ARE HALF-FULL AND MONITOR FOR MAINTENANCE OF ALL EROSION CONTROL DEVICES WEEKLY OR AFTER EVERY 1" OF RAIN.
5. SOIL STOCKPILES SHALL BE STABILIZED IF INACTIVE FOR MORE THAN 7 DAYS.
6. ANY OFF-SITE BORROW AND WASTE REQUIRED FOR THIS PROJECT MUST COME FROM A SITE WITH AN APPROVED EROSION CONTROL PLAN, A SITE REGULATED UNDER THE MINING ACT OF 1971, OR A LANDFILL REGULATED BY THE DIVISION OF SOLID WASTE MANAGEMENT. TRASH/DEBRIS FROM DEMOLITION ACTIVITIES OR GENERATED BY ANY ACTIVITIES ON SITE MUST BE DISPOSED OF AT A FACILITY REGULATED BY THE DIVISION OF SOLID WASTE MANAGEMENT OR PER DIVISION OF SOLID WASTE MANAGEMENT OR DIVISION OF WATER RESOURCES RULES AND REGULATIONS.
7. MAINTAIN EROSION CONTROL MEASURES UNTIL ALL UPSTREAM AREA HAS BEEN STABILIZED AND PERMANENT GROUNDCOVER IS ESTABLISHED PER LANDSCAPE PLANS.
8. PERIMETER MEASURES MUST BE LEFT IN PLACE UNTIL ALL UPLAND AREAS ARE PERMANENTLY STABILIZED. AFTER SITE IS PERMANENTLY STABILIZED, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AND PROVIDE PERMANENT SEEDING WHERE TEMPORARY MEAURES HAVE BEEN REMOVED AND GROUND COVER IS NOT ADEQUATE. SEDIMENT BASINS MAY NOT BE REMOVED OR CONVERTED TO PERMENANT SCMS UNTIL ALL UPLAND AREAS ARE PERMANENTLY STABILIZED. PROVIDE WETLANDS VEGETATION MIX FOR STABILIZATION WITHIN BUFFERED AREAS. SEE DETAILS FOR SEED MIX. NCDEQ SHOULD BE NOTIFIED 10-DAYS PRIOR TO THE REMOVAL OF A BASIN. (GS 113A-57(3), 15A NCAC 04B .0113).
9. ONCE APPROVAL IS GIVEN FOR REMOVAL OR CONVERSION OF THE SKIMMER BASINS: THE TEMPORARY DIVERSION DITCHES AND INLET PROTECTION SHALL BE REMOVED PER THE FOLLOWING:
   - A. REMOVE SEDIMENT FROM DITCHES.
   - B. REMOVE CHECK DAMS FROM DITCHES.
   - C. BRING DITCHES TO FINAL GRADE AND PERMANENTLY STABILIZE PER THE GRADING PLAN.
   - D. REMOVE SEDIMENT FROM TEMPORARY INLET PROTECTION AND REMOVE TEMPORARY INLET PROTECTIONS.
   - E. BRING AREAS AROUND DRAINAGE STRUCTURES TO PERMANENT GRADE AND STABILIZE PER GRADING PLANS.
   - F. REMOVE SLOPE DRAINS FROM SKIMMER BASINS.
10. THE SKIMMER BASINS SHALL BE DEWATERED THROUGH A SILT BAG. INSTALL THE DRY POND RISER PER DETAIL ON SHEET CW-404. ONCE THE SKIMMER BASINS HAVE BEEN CLEANED OF SEDIMENT AND DRAINED, THEY SHALL BE BROUGHT TO FINAL GRADE. PERMANENTLY STABILIZED AND PLANTED IN ACCORDANCE WITH THE GRADING AND STORM PLAN.
11. WHEN THE PROJECT IS COMPLETE, AND PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION HAS BEEN ESTABLISHED, THE PERMITTEE SHALL CONTACT NCDEMLR TO CLOSE OUT THE E&SC PLAN. AFTER NCDEMLR INFORMS THE PERMITTEE OF THE PROJECT CLOSE OUT, VIA INSPECTION REPORT, THE PERMITTEE SHALL VISIT HTTPS://WWW.DEQ.NC.GOV/NCG01 TO SUBMIT AN ELECTRONIC NOTICE OF TERMINATION (E-NOT). A $127 ANNUAL GENERAL PERMIT FEE WILL BE CHARGED UNTIL THE E-NOT HAS BEEN FILLED OUT.

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NORTH CAROLINA PROFESSIONAL SEAL 22514 ENGINEER MICHAEL D. ALLEN 7/28/26

EROSION CONTROL ENLARGEMENT PHASE 2

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 07/28/26

CE-504

DATE: PAGE:

CONSIDERATIONS FOR CONSTRUCTION SCHEDULING

CONSTRUCTION ACTIVITY	SCHEDULE CONSIDERATION
CONSTRUCTION ACCESS: Construction entrance, construction routes, equipment parking areas.	First land-disturbing activity- Stabilize bare areas immediately with gravel and temporary vegetation as construction takes place.
SEDIMENT TRAPS AND BARRIERS: Basin traps, sediment fences, and outlet protection.	Install principal basins after construction site is accessed. Install additional traps and barriers as needed during grading.
RUNOFF CONTROL: Diversions, perimeter dikes, water bars, and outlet protection.	Install key practices after principal sediment traps and before land grading. Install additional runoff-control measures during grading.
RUNOFF CONVEYANCE SYSTEM: Stabilize streambanks, storm drains, channels, inlet and outlet protection, and slope drains.	Where necessary, stabilize streambanks as early as possible. Install principal runoff conveyance system with runoff-control measures. Install remainder of system after grading.
LANDING CLEARING AND GRADING: Site preparation- cutting, filling and grading, sediment traps, barriers, diversions, drains, and surface roughening.	Begin major clearing and grading **AFTER** principal sediment and key runoff-control measures are installed. Clear borrow and disposal areas only as needed. Install additional control measures as grading progresses. Mark trees and buffer areas for preservation.
SURFACE STABILIZATION: Temporary and permanent seeding, mulching, sodding and riprap.	Apply temporary or permanent stabilization measures immediately on all disturbed areas where work is delayed or complete.
BUILDING CONSTRUCTION: Buildings, utilities, and paving.	Install necessary additional erosion and sedimentation control practices as work takes place.
LANDSCAPE AND FINAL STABILIZATION: Topsoiling, trees and shrubs, permanent seeding, mulching, sodding, and riprap.	Last construction phase: Stabilize all open areas, including borrow and spoil areas. Remove and stabilize all temporary control areas.

NOTE: The above are the main aspects of a typical construction sequence in general terms. A detailed Construction Sequence should be site specific based on your project and site needs. As a minimum, the construction sequence schedule should show the following:

- The erosion and sedimentation control practices to be installed,
- Principal development activities,
- What measures should be in place before other activities are begun, and
- Compatibility with the general construction schedule of the contract.

Many timely construction techniques can reduce the erosion potential of a site, such as (1) shaping earthen fills daily to prevent overflows and (2) constructing temporary diversions ahead of anticipated storms. These types of activities cannot be put on the construction sequence schedule, but should be used whenever possible.

DEQ

CONSTRUCTION SEQUENCING

Effective Date: 9/1/2023
In accordance with the 2013 Design Manual Updates

DATE: PAGE:

SPACING GUIDE FOR SLOPE BREAKS

	SLOPE	SPACING (FT)
Steep Slopes	2:1	20
	3:1	35
	4:1	45
Long Slopes	15-25%	50
	10-15%	80
	6-10%	125
	3-6%	200
	<3%	300

Use slope breaks, such as diversions, wattles, or benches, as appropriate, to reduce the length of cut-and-fill slope to limit sheet and rill erosion and prevent gullying.

MAINTENANCE:

1. Periodically check all graded areas and the supporting erosion and sedimentation control practices, especially after heavy rainfalls.
2. Promptly remove all sediment from diversions and other water-disposal practices.
3. If washouts or breaks occur, repair immediately.
4. Prompt maintenance of small eroded areas before they become significant gullies is an essential part of an effective erosion and sedimentation control plan.

NOTES:

1. Construct and maintain all erosion and sediment control practices and measures in accordance with the approved sedimentation control plan and construction schedule.
2. Remove good topsoil from areas to be graded and filled, and preserve it for use in finishing the grading of all critical areas.
3. Scarify areas to be topsoiled to a minimum depth of 2 inches before placing topsoil.
4. Clear and grub areas to be filled by removing trees, vegetation, roots, or other objectionable material that would affect the planned stability of the fill.
5. Ensure that fill material is free of brush, rubbish, rocks, logs, stumps, building debris, and other materials inappropriate for constructing stable fills.
6. Place all fill in layers not to exceed 9 inches in thickness, and compact the layers as required to reduce erosion, slippage, settlement, or other related problems.
7. Do not incorporate frozen, soft, mucky, or highly compressible materials into fill slopes.
8. Do not place fill on a frozen foundation, due to possible subsidence and slippage.
9. Keep diversions and other water conveyance measures free of sediment during all phases of development.
10. Handle seeps or springs encountered during construction in accordance with approved methods (subsurface drain).
11. Permanently stabilize all graded areas immediately after final grading is completed on each area in the grading plan. Apply temporary stabilization measures on all graded areas when work is to be interrupted or delayed for 30 days or longer.
12. Show topsoil, stockpiles, borrow areas, and spoil areas on the plans, and make sure they are adequately protected from erosion. Include final stabilization of these areas in the plan.

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LAND GRADING

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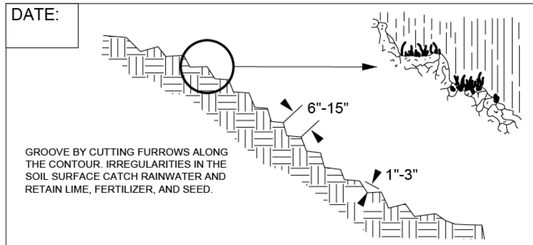
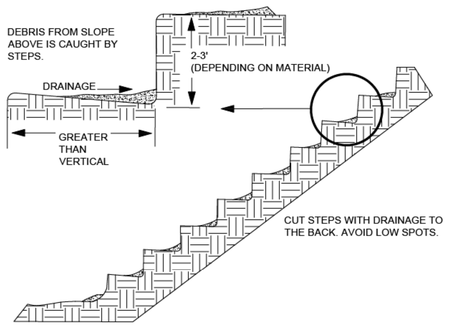
DATE: PAGE:



GROOVING SLOPES



STAIR STEPPING CUT SLOPES

CUT SLOPE ROUGHENING FOR AREAS NOT TO BE MOWED:

1. Stair-step grade or groove cut slopes with a gradient steeper than 3:1.
2. Use stair-step grading on any erodible material soft enough to be ripped with a bulldozer. Slopes consisting of soft rock with some subsoil are particularly suited to stair-stepping.
3. Make the vertical cut distance less than the horizontal distance, and slightly slope the horizontal position of the "step" in toward the vertical wall.
4. Do not make individual vertical cuts more than 2 feet in soft materials or more than 3 feet in rocky materials.
5. Grooving uses machinery to create a series of ridges and depressions that run across the slope (on the contour).
6. Groove using any appropriate implement that can be safely operated on the slope. Such as disks, tillers, spring harrows, or the teeth on a front-end loader bucket. Do not make such grooves less than 3 inches deep nor more than 15 inches apart.

FILL SLOPE ROUGHENING FOR AREAS NOT TO BE MOWED:

1. Place fill slopes with a gradient steeper than 3:1 in lifts not to exceed 9 inches, and make sure each lift is properly compacted. Ensure that the face of the slope consists of loose, uncompacted fill 4 to 6 inches deep. Use grooving, as described above, to roughen the face of the slopes, if necessary.
2. Do not blade or scrape the final slope face.

CUTS, FILLS, AND GRADED AREAS THAT WILL BE MOWED:

1. Make mowed slopes **no steeper than 3:1**
2. Roughen these areas to shallow grooves by normal tilling, disking, harrowing, or use of a cultipacker-seeder. Make the final pass of any such tillage implement on the contour.
3. Make grooves, formed by such implements, close together (less than 10 inches) and not less than 1 inch deep.
4. Excessive roughness is undesirable where mowing is planned.

ROUGHENING WITH TRACKED MACHINERY:

1. Limit roughening with tracked machinery to sandy soils to avoid undue compaction of the soil surface. Tracking is generally not as effective as the other roughening methods described.
2. Operate tracked machinery up and down the slope to leave horizontal depressions in the soil. Do not back-blade during the final grading operation.

SEED AND MULCH ROUGHENED AREAS IMMEDIATELY TO OBTAIN OPTIMUM SEED GERMINATION AND GROWTH.

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SURFACE ROUGHENING

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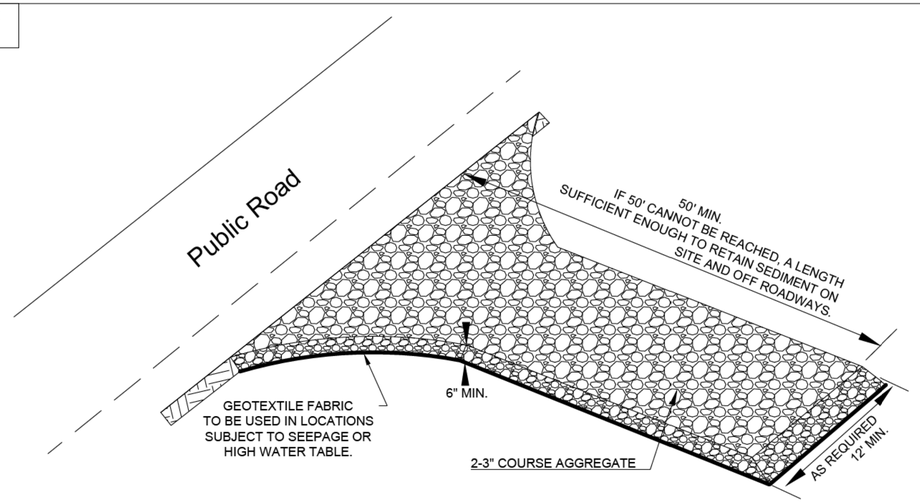

Construction:

1. Clear the entrance and exit area of all vegetation, roots, and other objectionable material and properly grade it.
2. Place the gravel to the specific grade and dimensions shown on the plans, and smooth it.
3. Provide drainage to carry water to a sediment trap or other suitable outlet.
4. Use geotextile fabrics in order to improve stability of the foundation in locations subject to seepage or high water table.

Maintenance:

1. Inspect all measures at least weekly and after each rainfall of 1.0 inch or greater. Make any required repairs immediately.
2. Maintain the gravel pad in a condition to prevent mud or sediment from leaving the construction site. This may require periodic topdressing with 2-inch stone.
3. Sediment on roadways is to be removed immediately by broom and shovel, either by manual or mechanical means, and not to be washed off where it has the potential to enter a stream, drainage way or storm drain system.

DEQ

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT

Effective Date: 9/1/2023
In accordance with the 2013 Design Manual Updates

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 22514 ENGINEER MICHAEL D. ALLEN
7/28/26

EROSION CONTROL DETAILS

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 07/28/26

CE-505

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

Omit annual lespedeza when duration of temporary cover is not to extend beyond June.

Seeding Dates
Mountains—Above 2500 feet: Feb. 15 - May 15
Below 2500 feet: Feb. 1- May 1
Piedmont—Jan. 1 - May 1
Coastal Plain—Dec. 1 - Apr. 15

Mulch
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

Maintenance
Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage.

TEMPORARY SEEDING RECOMMENDATIONS FOR SUMMER

Seeding Mixture

Species	Rate (lb/acre)
German millet	40

In the Piedmont and Mountains, a small-stemmed Sudangrass may be substituted at a rate of 50 lb/acre.

Seeding Dates
Mountains — May 15 - Aug. 15
Piedmont — May 1 - Aug. 15
Coastal Plain — Apr. 15 - Aug. 15

Mulch
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

Maintenance
Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage.

TEMPORARY SEEDING RECOMMENDATIONS FOR FALL

Seeding Mixture

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

Seeding Dates
Mountains — Aug. 15 - Dec. 15
Coastal Plain and Piedmont — Aug. 15 - Dec. 31

Mulch
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

Maintenance
Repair and refertilize damaged areas immediately. Topdress with 50 lb/acre of nitrogen in March. If it is necessary to extend temporary cover beyond June 15, overseed with 50 lb/acre Kobe (Piedmont and Coastal Plain) or Korean (Mountains) lespedeza in late February or early March.

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 1-1½ 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 loosen uniformly 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.

TEMPORARY SEEDING

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

SEEDING MIXTURE

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

*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.

Seeding Dates
Coastal or Eastern Piedmont for Centipede- Sept. 1 - May 1
Coastal and Piedmont for Indian Woodoats and Virginia Wild Rye- Feb 15 - April 1
Mountains for Indian Woodoats and Virginia Wild Rye- March 1 - May 15

Maintenance:
Significant maintenance may be required to obtain desired cover.

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*

*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.

Seeding Dates
Mountains - July 15- Aug 15
Piedmont - Aug 15 - Oct 15

Maintenance:
Indian Woodoats and Virginia Wild Rye are both sun and shade tolerant.

NON-INVASIVE PERMANENT SEEDING RECOMMENDATIONS FOR FALL

SEEDING MIXTURE

Species	Rate
Hard Fescue	15 lbs/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*

*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.

Seeding Dates
Mountains - Hard Fescue- Aug 1 - June 1
Mountains- Switchgrass, Indian Grass, Big Bluestem- Dec 1 - April 15
Piedmont and Coastal- Switchgrass, Indian Grass, Big Bluestem- Dec 1 - April 1
Coastal- Indian Woodoats and Virginia Wild Rye- Sept 1 - Nov 1

Maintenance:
Hard Fescue is not recommended for slopes > 5%. Prefers shade.

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 1½ tons/acre on coarse0textured 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 loosen uniformly 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:
1. Permanent seeding, sodding or other means of stabilization are required when all construction work is completed according to the NPDES timeframes table.
2. A North Carolina Department of Agriculture soils test (or equal) is highly recommended to be obtained for all areas to be seeded, sprigged, sodded or planted.
3. Use a seeding mix that will produce fast0growing 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 crimp mulch, as needed to stabilize seeded areas until root establishment. Mulch must cover at leaser 80% of the soil surface.
4. Ground cover shall be maintained until permanent vegetation is established and stable against accelerated erosion.

PERMANENT SEEDING

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Mulching Materials and Application Rates

Material Organic Mulches	Rate Per Acre	Quality	Notes
Straw	1-2 tons	Dry, unchopped, unweathered; avoid weeds.	Should come from wheat or oats; spread by hand or machine; must be tacked down.
Wood Chips	5-6 tons	Air dry	Treat with 12 lbs nitrogen/ton. Apply with mulch blower, chip handle, or by hand. Not for use in fine turf.
Wood Fiber	0.5-1 tons		Also referred to as wood cellulose. May be hydroseeded. Do not use in hot, dry weather.
Bark	35 cubic yards	Air dry, shredded or hammer-milled, or chips.	Apply with mulch blower, chip handler, or by hand. Do not use asphalt tack.
Corn Stalks	4-6 tons	Cut or shredded in 4-6 inch lengths.	Apply with mulch blower or by hand. Not for use in fine turf.
Sericea Lespedeza seed-bearing stems	1-3 tons	Green or dry; should contain mature seed.	
Nets and Mats*			
Jute net	Cover area	Heavy, uniform; woven of single jute yarn.	Withstands waterflow. Best when used with organic mulch
Fiberglass net	Cover area		Withstands waterflow. Best when used with organic mulch
Excelsior (wood fiber net)	Cover area		Withstands waterflow.
Fiberglass roving	0.5-1 tons	Continuous fibers of drawn glass bound together with a non-toxic agent.	Apply with a compressed air ejector. Tack with emulsified asphalt at a rate of 25-35 gal/1,000 sq. ft.
Chemical Stabilizers**			
Aquatain Aerospray Curasol AK Pertroset SB Terra Tack Crust 500 Genaqua 743 M-145	Follow Manufacturer's specifications		Not beneficial to plant growth

*Refer to Practice No. 6.30, Grass Lined Channels in the NC DEQ E&SC Planning and Design Manual
**Use of trade names does not imply endorsement of product.

NOTES:
1. Select material based on site and practice requirements, availability of material, labor and equipment.
2. Before mulching, complete grading, install sediment control practices, and prepare the seedbed. Apply seed before mulching **except** when seed is applied as part of a hydroseeder slurry containing wood fiber mulch or a hydroseeder slurry is applied over straw.

APPLICATION OF ORGANIC MULCH
1. Spread mulch uniformly by hand, or with a mulch blower.
2. When spreading straw mulch by hand, divide the area to be mulched into sections of approximately 1,000 ft^2, and place 70-90 lb. of straw(1 1/2 to 2 bales) in each section to facilitate uniform distribution.
3. After Spreading, no more than 25% of the ground surface should be visible.
4. In hydroseeding operations a green dye, added to the slurry, assures a uniform application.

ANCHORING ORGANIC MULCH
1. Straw mulch must be anchored immediately after spreading.
2. A tractor-drawn implement designed to punch mulch into the soil or a mulch anchoring tool provides maximum erosion control with straw. A regular farm disk, weighted and set nearly straight, may substitute, but will not do a job comparable to the mulch anchoring tool. The disk should not be sharp enough to cut the straw. These methods are limited to slopes no steeper than 3:1, where equipment can operate safely.
3. Application of liquid mulch binders and tackifiers should be heaviest at the edges of areas and at crests of ridges and banks, to resist winds. Binder should be applied uniformly to the rest of the area. Binders may be applied after mulch is spread, or may be sprayed into the mulch as it is being blown onto the soil. Applying straw and binder together is the most effective method.
4. Emulsified asphalt should be applied at 0.10 gallons per square yard (10 gal/1,000 ft^2). Heavier applications cause straw to "perch" over rills. Use Rapid setting (RS or CRS) designated asphalt in traffic areas to prevent uncured asphalt from being picked up on shoes and causing damage to rugs, clothes, etc.
5. Synthetic binders may be used as recommended by the manufacturer.
6. Lightweight plastic, cotton, jute, wire or paper nets may be stapled over the mulch according to the manufacturer's recommendations.
7. For small areas where other methods cannot be used, peg and twine anchoring can be used. Drive 8-10 inch wooden pegs to within 3 inches of the soil surface, every 4 feet in all directions. Stakes can be driven before or after straw is spread. Secure mulch by stretching twine between pegs in a criss-cross-within-a-square pattern. Turn twine two or more times around each peg.
8. Rye Grain may be used to anchor mulch in fall plantings, and German Millet in spring. Broadcast at 15 lb/acre before applying mulch.

CHEMICAL MULCHES
1. May be effective for soil stabilization if used between May 1 and June 15, or Sept. 15 and Oct. 15, provided that they are used on slopes **no steeper** than 4:1, and that proper seedbed preparation has been accomplished, including surface roughening where required.
2. Chemical mulches cannot be used to bind other mulches, or with wood fiber in a hydroseeded slurry at any time. Follow the manufacturer's recommendations for application.

FIBERGLASS ROVING
1. Spread roving uniformly over the area at a rate of 0.25 to 0.35 lb/yd^2. Anchor with asphalt immediately after application, at a rate of 0.25-0.35 gal/yd^2
2. As a channel lining, and at other sites of concentrated flow, the roving mat must be further anchored to prevent undermining.
3. It may be secured with stakes placed at intervals no greater than 10 feet along the drainageway, and randomly throughout its width, but not more than 10 feet apart.
4. As an option to staking, the roving can be buried to a depth of 5 inches at the upgrade end and at intervals of 50 feet along the length of the channel.

NETS AND MATS
1. Nests alone generally provide little moisture conservation benefits and only limited erosion protection. Therefore, typically use in conjunction with an organic mulch such as straw.
2. Except when wood fiber slurry is used, netting should always be installed **over** the mulch. Wood fiber may be sprayed on top of an installed net.
3. Mats, including "excelsior" (wood fiber) blankets, are considered protective mulches and may be used alone.
4. Place the matting in firm contact with the soil, and staple securely.

MULCHING

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In accordance with the 2013 Design Manual Updates

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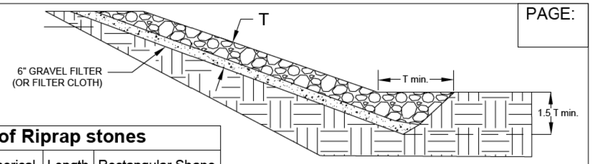

Subgrade Preparation:
1. Prepare the subgrade for riprap and filter to the required lines and grades shown on the plans.
2. Compact any fill required in the subgrade to a density approximating that of the surrounding undisturbed material or overfill depressions with riprap.
3. Remove brush, trees, stumps, and other objectionable material.

Sand and Gravel Filter Blanket:
1. Place the filter blanket immediately after the ground foundation is prepared.
2. When using gravel, spread filter stone in a uniform layer to the specified depth.
3. When more than one layer of filter material is used, spread the layers with minimal mixing.

Synthetic Filter Fabric:
1. Place the cloth filter directly on the prepared foundation.
2. Overlap the edges by at least 12 inches, and space anchor pins every 3 feet along the overlap.
3. Bury the upstream end of the cloth a minimum of 12 inches below ground and bury the lower end of the cloth or over lap with the next section as required.
4. If damage occurs while placing riprap, remove the riprap, and repair the sheet by adding another layer of filter material with a minimum overlap of 12 inches around the damaged area. If damage is extensive, remove and replace the entire sheet.
5. If placing large stones or machine placing is difficult, a 4 inch layer of fine gravel or sand may be needed to protect the filter cloth.

Maintenance:
In general, once a riprap installation has been properly designed and installed it requires very little maintenance. Riprap should be inspected periodically for scour or dislodged stones. Control of weed and brush growth may be needed in some locations.

Size of Riprap stones

Weight (lb)	Mean Spherical Diameter (ft)	Length (ft)	Rectangular Shape Width/Height (ft)
50	0.8	1.4	0.5
100	1.1	1.8	0.6
150	1.3	2.0	0.7
300	1.6	2.6	0.9
500	1.9	3.0	1.0
1000	2.2	3.7	1.3
1500	2.6	4.7	1.5
2000	2.8	5.4	1.8
4000	3.6	6.0	2.0
6000	4.0	6.9	2.3
8000	4.5	7.6	2.5
20,000	6.1	10.0	3.3

Sizes for Riprap and Erosion Control Stone Specified by NCDOT

Riprap		Erosion Control	
Class 1	Class 2	Class A	Class B
5-200 lb	25-250 lb	2"-6"	5"-15"
30% shall weigh a minimum of 60 lbs each	60% shall weigh a minimum of 100 lbs each		
No more than 10% shall weigh less than 15 lbs each	No more than 5% shall weigh less than 50 lbs each	10% tolerance top and bottom sizes	
		Equally distributed, no gradation specified	Equally distributed, no gradation specified

Riprap should be a well-graded mixture with 50% by weight larger than the specified design size.
Diameter of the largest stone size in the mix should be 1.5 times the d_{50} size with smaller sizes grading down to 1 inch.

Stone Placement:
1. Placement of riprap should follow immediately after placement of the filter.
2. Place so that riprap forms a dense, well-graded mass of stone with a minimum of voids.
3. Place to its full thickness in one operation.
4. Do not place by dumping through chutes or other methods that cause segregation of stone sizes.
5. Take care not to dislodge underlying base or filter when placing stone.
6. The toe of the riprap slope should be keyed to a stable foundation at its base.
7. The toe should be excavated to a depth about 1.5 times the design thickness of the riprap and extend horizontally from the slope, as shown above.
8. Hand placing may be necessary to achieve the proper distribution of stone sizes to produce a relatively smooth, uniform surface.

RIP RAP

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 22514 MICHAEL D. ALLEN 7/28/26

EROSION CONTROL DETAILS

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 07/28/26

CW-506

DATE:

PAGE:

Temporary Seeding Recommendations

Common Name	Scientific Name	Rate per Acre	Optimal Planting Date
Rye Grain	Secale Cereale	30 lbs	Aug. 15 - May 15
Wheat	Triticum Aestivum	30 lbs	Aug. 15 - May 15
German Millet	Setaria Italica	10 lbs	May 15 - Aug. 15
Browntop Millet	Urochloa Ramosa	10 lbs	May 15 - Aug. 15

Temporary Seeding Recommendations:

- Temporary annual seed selection should be based on season of project installation.
- A single species selection for temporary cover is acceptable.
- In some cases where seasons overlap, a mixture of two or more temporary species may be necessary; however, application rates should not exceed the total recommended rate per acre.
- Temporary seed should be mixed and applied simultaneously with the permanent seed mix if optimal planting dates allow.

Permanent Seeding Recommendations Type: Cold Season

Common Name	Scientific Name	Optimal Planting Dates	% of Mix	Soil Drainage Adaptation	Shade Tolerance	Height
Indian Woodoats	Chasmanthium latifolium	Feb. 15 - Apr. 1, Aug. 15 - Oct. 15	1-10%	Well-drained to Droughty	Moderate	4
Virginia Wildrye	Elymus virginicus	Feb. 15 - Apr. 1, Aug. 15 - Oct. 15	5-25%	Well-drained to Droughty	Moderate	3
Eastern Bottle-brush Grass	Elymus hystrix	Feb. 15 - Apr. 1, Aug. 15 - Oct. 15	5-10%	Well-drained to Droughty	Moderate	3
Rough Bentgrass	Argostis scabra	Feb. 15 - Apr. 1, Aug. 15 - Oct. 15	10-20%	Poorly-drained	Poor	2.5
Winter Bentgrass	Agrostis hyemalis	Feb. 15 - Apr. 1, Aug. 15 - Oct. 15	2-5%	Well-drained	Moderate	3.5

Permanent Seeding Recommendations Type: Wetland

Common Name	Scientific Name	Optimal Planting Dates	% of Mix	Soil Drainage Adaptation	Shade Tolerance	Height
Soft Rush	Juncus effusus	Dec. 1 - May 1, Sep. 1 - Nov. 1	1-10%	Poorly-drained	Poor	4
Shallow Sedge	Carex lurida	Dec. 1 - May 1, Sep. 1 - Nov. 1	1-10%	Poorly-drained	Poor	3
Fox Sedge	Carex vulpinoidea	Dec. 1 - May 1, Sep. 1 - Nov. 1	1-10%	Poorly-drained	Poor	3
Leathery Rush	Juncus coriaceus	Dec. 1 - May 1, Sep. 1 - Nov. 1	2-5%	Poorly-drained	Poor	2

Permanent Seeding Recommendations Type: Warm Season

Common Name	Scientific Name	Cultivars	Optimal Planting Dates	% of Mix	Soil Drainage Adaptation	Shade Tolerance	Height
Switchgrass	Panicum virgatum	Cave-in-rock -- well drained Blackwell -- well drained Shelter -- well drained Kanlow -- poorly drained Carthage -- well drained	Dec. 1 - Apr. 1	10-15%	Cultivar Dependent	Poor	6
Switchgrass	Panicum virgatum	Alamo -- poorly drained	Dec. 1 - May 1	10-15%	Cultivar Dependent	Poor	6
Indiangrass	Sorghastrum nutans	Rumsey, Osage, Cheyenne	Dec. 1 - Apr. 1	10-30%	Well-drained to Droughty	Poor	6
Indiangrass	Sorghastrum nutans	Lometa	Dec. 1 - May 1	10-30%	Well-drained to Droughty	Poor	6
Deertounge	Dichanthelium clandestinum	Tioga	Dec. 1 - Apr. 1	5-25%	Poorly-drained to Droughty	Moderate	2
Big Bluestem	Andropogon gerardii	Roundtree, Kaw, Earl	Dec. 1 - Apr. 1	10-30%	Well-drained to Droughty	Poor	6
Little Bluestem	Schizachyrium scoparium	Cimarron	Dec. 1 - Apr. 1	10-30%	Well-drained to Droughty	Poor	4
Sweet Woodreed	Cinna arundinacea		Dec. 1 - Apr. 1	1-10%	Poorly-drained to Well-drained	Moderate	5
Rice Cutgrass	Leersia oryzoides		Dec. 1 - Apr. 1	5-25%	Poorly-drained	Poor	5
Redtop Panicgrass	Panicum rigidulum		Dec. 1 - Apr. 1	10-20%	Well-drained	Poor	3.5
Baked Panicgrass	Panicum anceps		Dec. 1 - Apr. 1	10-20%	Poorly-drained	Moderate	3.5
Purple Top	Tridens flavus		Dec. 1 - Apr. 1	5-10%	Well-drained to Droughty	Poor	2.5
Eastern Gammagrass	Tripsacum dactyloides		Dec. 1 - Apr. 1	5-10%	Well-drained to Poorly-drained	Poor	4.5

- No specific seeding rate is given in order to allow for custom seed mixes based on site characteristics and season. However, permanent seed inclusion in the mix should total 15 pounds of pure live seed (PLS) per acre drilled or 15-20 pounds PLS per acre broadcast applied.
- At least 4 species should be selected for the mixture, including one species from each type(warm and cold season and wetland); selection of more than four species is recommended for increasing chances of successful vegetation establishment.
- If other species such as wildflowers are added to the mix, they should not be counted in the minimum seeding rate for grasses.

Permanent Seeding:

- Soil analysis should be performed to determine nutrient and lime needs of each site.
- Riparian buffers regulated for nutrient management may be limited to a single application of fertilizer.
- Apply seed uniformly with a cyclone seeder, drop-type spreader, drill or hydroseeder on a firm, friable seedbed.
- When using a drill, equipment should be calibrated in the field for the desired seeding rate.
- Mulch all plantings immediately after seeding (see 6.14, Mulching).If planting on stream banks steeper than 10% or areas subject to flooding, a biodegradable RECP (6.17, Rolled Erosion Control Products) is recommended to hold seed and soil in place.

Maintenance:

- Many of the recommended permanent grass species may require two years of establishment, depending on site conditions.
- Inspect seeded areas for failure and make necessary repairs, soil amendments, and reseedings.
- If weedy exotic species have overtaken the area after the first growing season, the invading species must be eradicated to allow native species to grow.
- Monitor the site until long term stability has been established.

RIPARIAN AREA SEEDING (PIEDMONT REGION)

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In accordance with the 2013 Design Manual Updates

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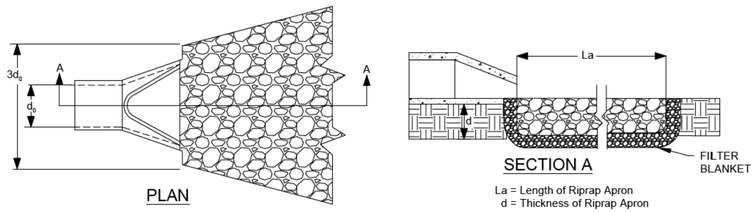
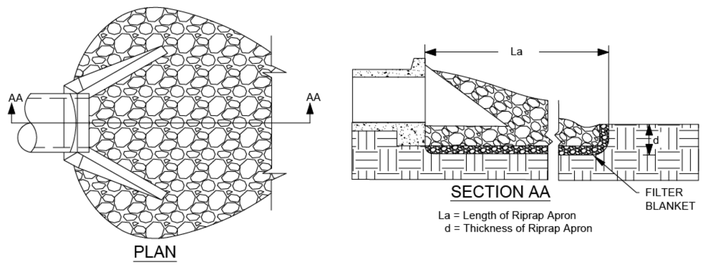
PIPE OUTLET TO FLAT AREA NO WELL-DEFINED CHANNEL



La = Length of Riprap Apron
d = Thickness of Riprap Apron

PIPE OUTLET TO WELL-DEFINED CHANNEL



La = Length of Riprap Apron
d = Thickness of Riprap Apron

NOTES:

1. Compact any fill required in the subgrade to the density of the surrounding undisturbed material. Low areas in the subgrade on undisturbed soil may also be filled by increasing the riprap thickness.
2. The riprap and gravel filter must conform to the specified grading limits shown on the plans.
3. Filter cloth, when used, must meet design requirements, and be properly protected from punching or tearing during installation. Repair any damage by removing the riprap and placing another piece over the damaged area If the damage is extensive, replace the entire filter cloth.
4. All connecting joints should overlap so the top layer is above the downstream layer a minimum of 1 foot.
5. The minimum thickness of the riprap should be 1.5 times the maximum stone diameter but not less than 6".
6. Riprap may be field stone or rough quarry stone. It should be hard, angular highly weather-resistant and well graded.
7. Construct the apron on zero grade with no overfill at the end. Make the top of the riprap at the downstream end level with the receiving area or slightly below it.
8. Ensure that the apron is properly aligned with the receiving stream and preferably straight throughout its length. If a curve is needed, place in the upper section of the apron.

MAINTENANCE:

1. Inspect outlet structures at least weekly and after each rainfall of 1.0 inch or greater.
2. Check outlets for erosion around or below riprap and for if stones have been dislodged. Make repairs immediately to prevent further damage.

OUTLET STABILIZATION STRUCTURE

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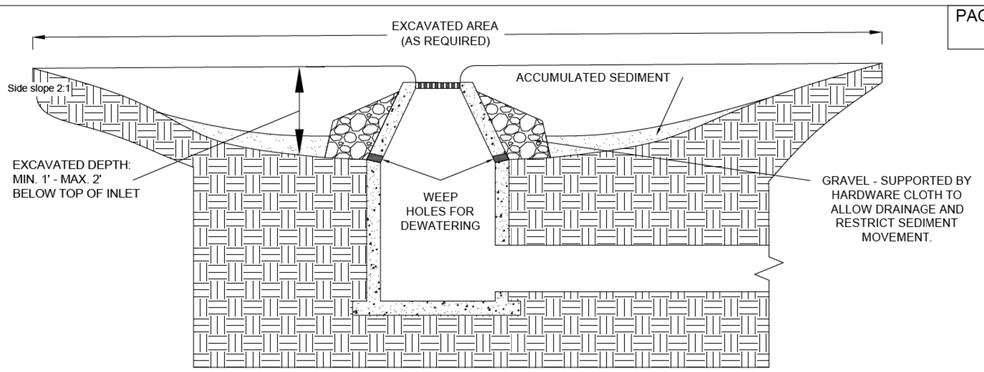

Notes:

1. Clear the area of all debris that might hinder excavation and disposal of spoil.
2. Grade the approach to the inlet uniformly.
3. Protect weep holes by gravel.
4. When the contributing drainage area has been permanently stabilized, seal weep holes, fill the basin with stable soil to final grading elevations, compact it properly and stabilize.

Maintenance:

1. Inspect all measures at least weekly and after each rainfall of 1.0 inch or greater.
2. Clean, and properly maintain the excavated basin after every storm until the contributing drainage area has been permanently stabilized.
3. remove sediment when the volume of the basin has been reduced by one-half.
4. Spread all excavated material evenly over the surrounding land area or stockpile and stabilize appropriately.

EXCAVATED DROP INLET PROTECTION (TEMPORARY)

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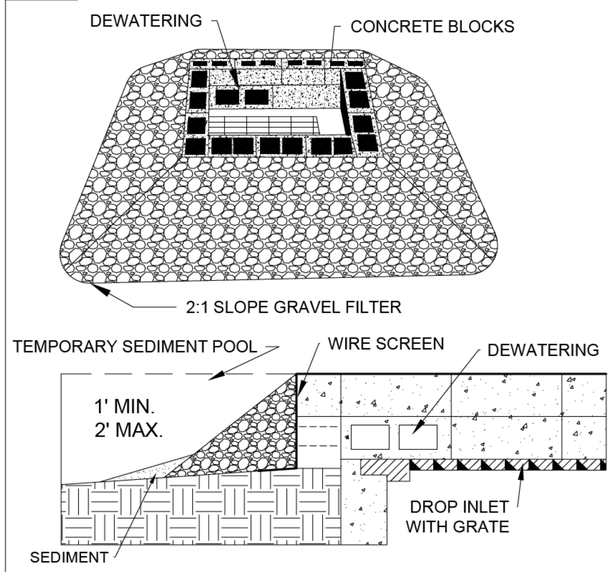

NOTES:

1. Lay one block, on each side of the structure, on its side in the bottom row to allow pool drainage. The foundation should be excavated at least 2 inches below the crest of the storm drain. Place the bottom row of blocks against the edge of the storm drain for lateral support and to avoid washouts when overflow occurs. If needed, give lateral support to subsequent rows by placing 2 inch x 4 inch wood studs through block openings.
2. Carefully fit hardware cloth or comparable wire mesh with 1/2-inch openings over all block openings to hold gravel in place.
3. Use clean gravel 1/2 to 3/4 inch in diameter, placed 2 inches below the top of the block on a 2:1 slope or flatter and smooth it to an even grade. NCDOT #57 washed stone is recommended.

MAINTENANCE:

1. Inspect all measures at least weekly and after every rainfall of 1.0 inch or greater; repair immediately.
2. Remove sediment as necessary to provide adequate storage volume for subsequent rains.
3. When the contributing drainage area has been adequately stabilized, remove all materials and any unstable soil, and either salvage or dispose of it properly. Bring the disturbed area to proper grade, then smooth and compact before stabilizing.

BLOCK AND GRAVEL INLET PROTECTION (TEMPORARY)

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 22514 MICHAEL D. ALLEN
7/28/26

EROSION CONTROL DETAILS

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 07/28/26

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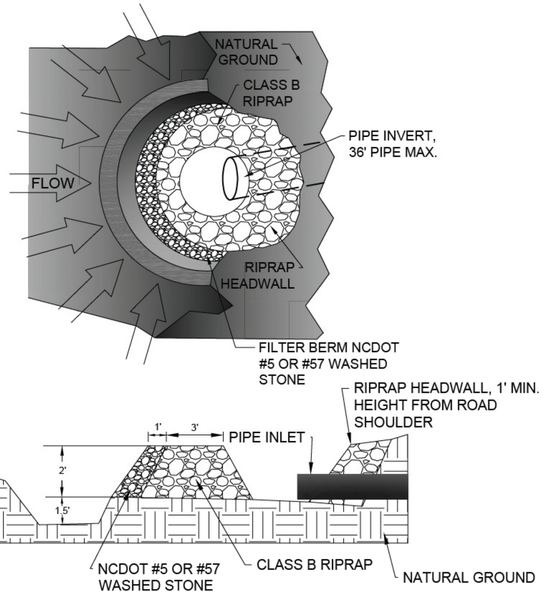
DATE: PAGE:



NOTES:
1. Clear the area of all debris that might hinder excavation and disposal of spoil.
2. Install the Class B or Class 1 riprap in a semi-circle around the pipe inlet. The stone should be built up higher on each end where it ties into the embankment. The minimum crest width of the riprap should be 3 feet, with a minimum bottom width of 11 feet. The minimum height should be 2 feet, but also 1 foot lower than the embankment of diversions.
3. A 1 foot thick layer of NC DOT #5 or #57 stone should be placed on the outside slope of the riprap.
4. The sediment storage area should be excavated around the outside of the stone horseshoe 18 inches below natural grade.
5. When contributing drainage area has been stabilized, remove the pipe and rock, fill depression, establish final grading elevations, compact the area properly, and stabilize with ground cover.

MAINTENANCE:
1. Inspect all measures at least weekly and after each rainfall of 1.0 inch or greater and repair immediately.
2. Remove sediment and restore the sediment storage area to its original dimensions when the sediment has accumulated to one-half the design depth of the trap.
3. Place the sediment that is removed in the designated disposal area and replace the contaminated part of the gravel facing.
4. Check the structure for damage. Any riprap displaced from the stone horseshoe must be replaced immediately.
5. After all the sediment-producing areas have been permanently stabilized, remove the structure and all the unstable sediment. Smooth the area to blend with the adjoining areas and provide permanent ground cover.

ROCK PIPE INLET PROTECTION

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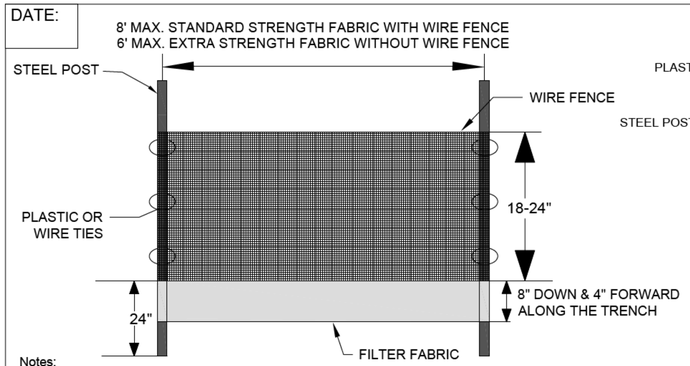

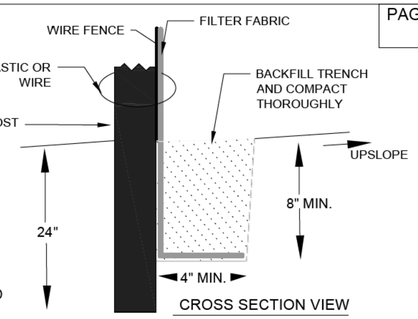

Notes:
1. Construct the sediment barrier of standard strength or extra strength synthetic filter fabrics.
2. Ensure that the height of the sediment fence does not exceed 24 inches above the ground. (Higher fences may impound volumes of water sufficient to cause failure of the structure)
3. Construct the filter fabric from a continuous roll cut to the length of the barrier to avoid joints. When joints are necessary, securely fasten the filter cloth only at a support post with 4 feet minimum overlap to the next post.
4. Support standard strength filter fabric by wire mesh fastened securely to the upslope side of the posts. Extend the wire mesh support to the bottom of the trench. Fasten the wire reinforcement, then fabric on the upslope side of the fence post. Wire or plastic zip ties should have a minimum 50 pound tensile strength.
5. When a wire mesh support fence is used, space posts a maximum of 8 feet apart. Supports should be driven securely into the ground a minimum of 24 inches. Wire mesh should be a minimum 14-gauge with 6 inch mesh spacing.
6. Extra strength filter fabric with 6 foot post spacing does not require a wire mesh support fence. Securely fasten the filter fabric directly to posts. Wire or plastic zip ties should have a minimum of 50 pound tensile strength.
7. Excavate the trench approximately 4 inches wide and 8 inches deep along the proposed line of the posts and upslope from the barrier.
8. Place 12 inches of fabric along the bottom and side of the trench.
9. Backfill the trench with soil placed over the filter fabric and compact. Thorough compaction of the backfill is critical to silt fence performance.
10. Do not attach filter fabric to existing trees.
11. Do not place across ditches, streams, or any other areas of concentrated flow.

Max. Slope Length and Slope for Which Sediment Fence is Applicable

Slope	Slope Length (ft)	Max. Area (ft^2)
<2%	100	10,000
2 to 5%	75	7,500
5 to 10%	50	5,000
10 to 20%	25	2,500
>20%	15	1,500

Maintenance:
1. Inspect all measures at least weekly and after each rainfall of 1.0 inch or greater. Make any required repairs immediately.
2. Should the fabric of a sediment fence collapse, tear, decompose, or become ineffective, replace it promptly.
3. Remove sediment deposits as necessary to provide adequate storage volume for the next rain and reduce pressure on the fence. Take care to avoid undermining the fence during cleanouts.
4. Remove all fencing materials and unstable sediment deposits and bring the area to grade and stabilize it after the contributing drainage area has been properly stabilized.

SEDIMENT FENCE

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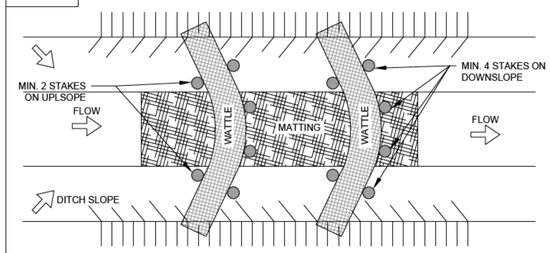
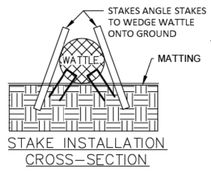
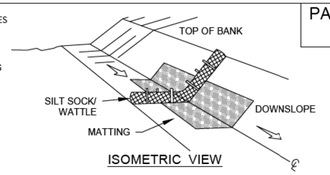


PLAN VIEW



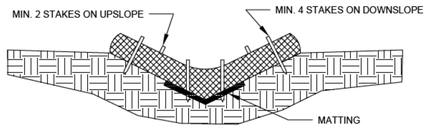
STAKE INSTALLATION CROSS-SECTION



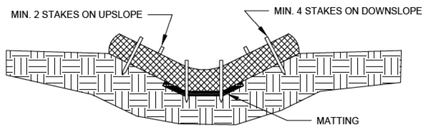
ISOMETRIC VIEW

Spacing Between Socks / Wattles (Feet)

Channel Slope (%)	8-inch Diameter Sock	12-inch Diameter Sock
1	67	100
2	33	50
3	22	33
4	17	25
5	13	20



V- DITCH SECTION VIEW



TRAPEZOIDAL DITCH SECTION VIEW

NOTES:
1. Other materials providing equivalent protection against erosive velocities may be substituted for compost use in silt socks or wattles.
2. Fill silt sock/wattle netting uniformly to the desired length such that logs do not deform.
3. Use 24 inch long wooden stakes with a 2 inch x 2 inch nominal cross section.
4. Install silt sock/wattle(s) to a height on slope so flow will not wash around silt sock/wattle and scour slopes, or as directed.
5. Install a minimum of two up-slope stakes and four down-slope stakes at an angle to wedge silt sock/wattle to ground at bottom ditch. Use staples to secure silt sock/wattle to the ground to prevent undermining.
6. The use of flocculants such as Polyacrylamide (PAM) is recommended. Apply flocculants on top of sock/wattle and to matting on either side of sock/wattle according to manufacturer recommended rates. Reapply after each 1.0 inch rainfall.

MAINTENANCE:
1. Inspect all measures weekly and after each rainfall of 1.0 inch or greater. Remove accumulated sediment and any debris.
2. Silt sock/Wattle(s) must be replaced if clogged or torn.
3. If ponding becomes excessive, the silt sock/wattle may need to be replaced with a larger diameter or a different measure.
4. Reinstall if damaged or dislodged.
5. Silt socks/Wattles shall be inspected until land disturbance is compete and the area above the measure is permanently stabilized.

SILT SOCK / WATTLE FOR CHECK DAM

Effective Date: 9/1/2023
In accordance with the 2013 Design Manual Updates

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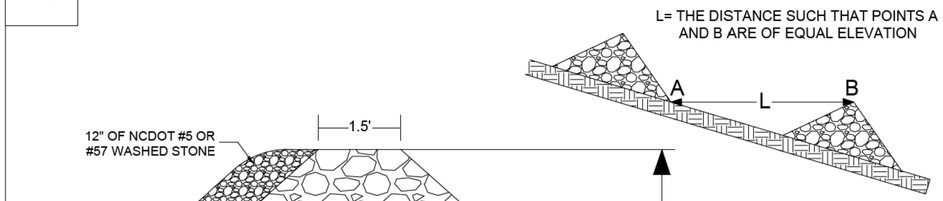
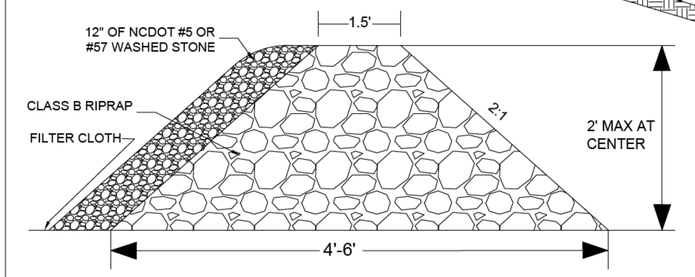
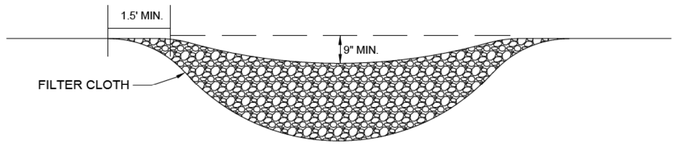




CROSS-SECTION VIEW



PLAN VIEW

NOTES:
1. Place stone on a filter fabric foundation.
2. The center stone section must be at least 9 inches below natural ground level where the dam abuts the channel banks.
3. Extend stone at least 1.5 feet beyond the ditch bank to keep water from cutting around the ends of the check dam.
4. Set spacing between dams to assure that the elevation at the top of the lower dam is the same as the toe elevation of the upper dam.
5. Protect the channel after the lowest check dam from heavy flow that could cause erosion.
6. Make sure the channel reach above the most upstream dam is stable.
7. Ensure that other areas of the channel, such as culvert entrances below the check dams, are not subject to damage or blockage from displaced stones.
8. Riprap and filter fabric should be keyed in to prevent under cutting.
9. Ends of check dams may need to be turned uphill to prevent bypass and better conform to site conditions.
10. Do not place check dams in intermittent or perennial streams.

MAINTENANCE:
1. Inspect check dams and channels at least weekly and after each rainfall of 1.0 inch or greater. Clean out sediment, straw, limbs or other debris that could clog the channel when needed.
2. Anticipate submergence and deposition above the check dam and erosion from high flows around the edges of the dam. Correct all damage immediately. If significant erosion occurs between dams, additional measures can be taken such as, installing a protective riprap liner in that portion of the channel.
3. Remove sediment accumulated behind the dams as needed to prevent damage to channel vegetation, allow the channel to drain through the stone check dam, and prevent large flows from carrying sediment over the dam. Add stones to the dams as needed to maintain design height and cross section.

CHECK DAM

Effective Date: 9/1/2023
In accordance with the 2013 Design Manual Updates

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 22514 MICHAEL D. ALLEN 7/28/26

EROSION CONTROL DETAILS

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 07/28/26

CE-508

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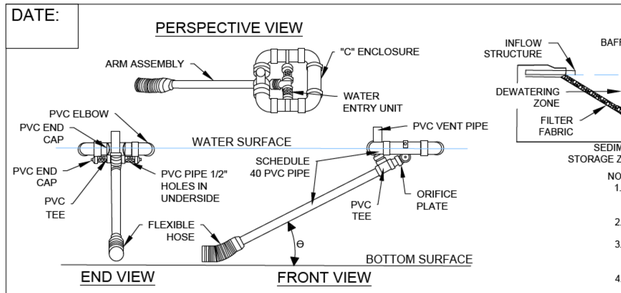

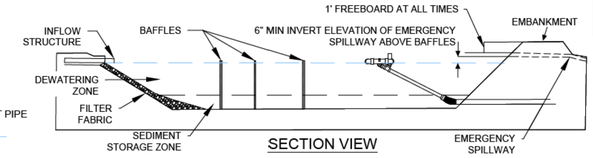

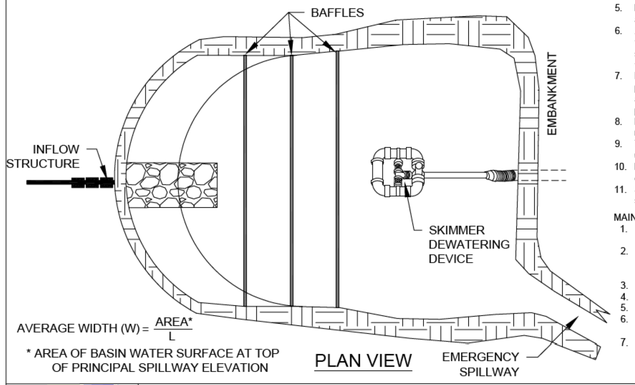

NOTES:

1. Clear, grub and strip the area under the embankment of all vegetation and root mat. Remove all surface soil containing high amounts of organic matter and stockpile or dispose of it properly. Haul all objectionable material to the designated disposal area. Place temporary sediment control measures below basin as needed.
2. Place the fill in lifts not to exceed 9 inches, and machine compact it. Over fill the embankment 6 inches to allow for settlement.
3. Place the barrel on a firm, smooth foundation of impervious soil. Do not use pervious material such as sand, gravel, or crushed stone as backfill around the pipe. Place the fill around the pipe spillway in 4-inch layers and compact it under and around the pipe to at least the same density as the adjacent embankment.
4. Place a minimum depth of 2 feet compacted backfill over the pipe spillway before crossing with construction equipment.
5. Ensure that the flow length to basin width ratio is at least 2:1 to improve trapping efficiency. Length is measured at the elevation of the principal spillway.
6. Assemble the skimmer following manufacturers instructions or as designed and lay on the bottom of the basin with the flexible joint at the inlet of the barrel pipe. Attach the flexible joint to the barrel pipe and position the skimmer over the excavated pit or support. Be sure to attach a rope and anchor it to the side of the basin.This will be used to pull the skimmer to the side for maintenance.
7. Install the spillway in undisturbed soil to the greatest extent possible. The spillway should be lined with laminated plastic or impermeable geotextile fabric. The fabric must be wide and long enough to cover the bottom and sides and extend onto the top of the dam for anchoring in a trench. The edges may be secured with 8-inch staples or pins.
8. Filter fabric must be long enough to extend down the slope and exit onto stable ground. The width of the fabric must be one piece, not joined or spliced; otherwise water can get under the fabric.
9. The upper section(s) should overlap the lower section(s) so that water cannot flow under the fabric. Secure the upper edge and sides of the fabric in a trench with staples or pins.
10. Discharge water into the basin in a manner to prevent erosion. Use temporary slope drains or diversions with outlet protection to divert sediment-laden water to the upper end of the pool area to improve basin trap efficiency.
11. Stabilize the emergency spillway embankment and all other disturbed areas above the crest of the principal spillway immediately after construction.

MAINTENANCE:

1. Inspect all measures at least weekly and after each rainfall of 1.0 inch or greater. Make necessary repairs immediately.
2. Remove sediment and restore the basin to its original dimensions when sediment accumulates to one-half the height of the first baffle. Pull the skimmer to one side so that the sediment underneath can be excavated. Excavate the sediment from the entire basin, not just around the skimmer or within the first cell.
3. Make sure any vegetation growing in the bottom of the basin does not hold down the skimmer.
4. Repair baffles if they are damaged. Re-anchor the baffles if water is flowing underneath or around them.
5. Ensure the skimmer is not clogged with trash or debris.
6. If the skimmer arm or barrel pipe is clogged, remove orifice and clear debris with a plumber's snake or by flushing with clean water. Be sure to replace the orifice before repositioning the skimmer.
7. Check fabric lined spillway for damage and make any required repairs with fabric that spans the full width of the spillway. Check the embankment, spillways, and outlet for erosion damage, and inspect the embankment for piping and settlement.

SKIMMER SEDIMENT BASIN

Effective Date: 9/1/2023
In accordance with the 2013 Design Manual Updates

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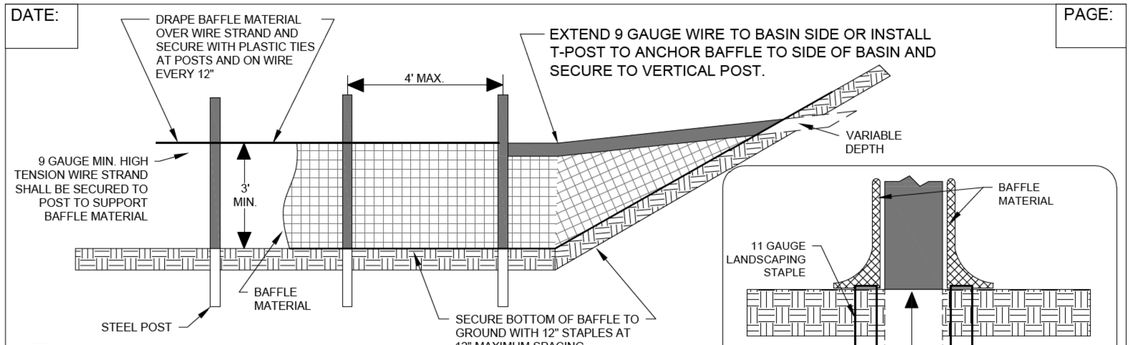

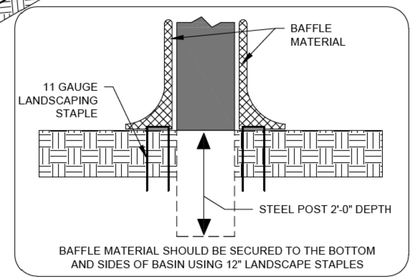

NOTES:

1. Use matting made of 100% coconut fiber(coir) twine woven into high strength matrix.
2. Staples should be made of 0.125 inch diameter, new steel wire formed into a 'U' shape not less than 12 inches in length with a throat of 1 inch in width. The staples anchor the porous baffles into the sides and bottom of the basin.
3. Grade the basin so that the bottom is level front to back and side to side.
4. Install the coir fiber baffles immediately upon excavation of the basins.
5. Install posts across the width of the sediment trap.
6. Steel posts should be driven to a depth of 24 inches and spaced in a maximum of 4 feet apart. The top of the fabric should be a minimum of 6 inches higher than the invert of the spillway. Tops of the baffles should be a minimum of 2 inches lower than the top of the earthen embankment.
7. Install 3 coir fiber baffles in basins at drainage outlets with a spacing of 1/4 the basin length. 2 coir fiber baffles can be installed in the basins less than 20 feet in length with a spacing of 1/3 the basin length.
8. Attach a 9-gauge high tension wire strand to the steel posts at a height of 6 inches above the spillway elevation with plastic ties or wire fasteners to prevent sagging. If the temporary sediment basin will be converted to a permanent stormwater basin of a greater depth, the baffle height should be based on the pool depth during use as a temporary sediment basin.

MAINTENANCE:

1. Inspect all measures at least weekly and after each rainfall of 1.0 inch or greater and repair immediately.
2. Maintain access to baffles. If the fabric collapses, tears, decomposes, or becomes ineffective, replace immediately.
3. Remove sediment deposits when it reaches half full. Replace if baffle fabric is damaged during clean-out operations. Sediment depth should never exceed half the designed storage depth.

POROUS BAFFLES

Effective Date: 9/1/2023
In accordance with the 2013 Design Manual Updates

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 22514 MICHAEL D. ALLEN 7/28/26

EROSION CONTROL DETAILS

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 07/28/26

CE-509

"ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF WENDELL, CITY OF RALEIGH AND / OR NCDOT STANDARDS AND SPECIFICATIONS"

NPDES Stormwater Discharge Permit for Construction Activities (NCGO1) NCDENR/Division of Energy, Mineral and Land Resources

STABILIZATION TIMEFRAMES
(Effective Aug. 3, 2011)

SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
Perimeter dikes, swales, ditches, slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed.
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.

LEGEND

7 DAY GROUND COVER

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NORTH CAROLINA PROFESSIONAL SEAL 22514 ENGINEER MICHAEL D. ALLEN 7/28/26

NPDES STABILIZATION PLAN

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 07/28/26

CW-700

GROUND COVER & MATERIALS HANDLING

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

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes

Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10 feet or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
• Temporary grass seed covered with straw or other mulches and tackifiers. • Hydroseeding • Rolled erosion control products with or without temporary grass seed • Appropriately applied straw or other mulch • Plastic sheeting	• Permanent grass seed covered with straw or other mulches and tackifiers • Geotextile fabrics such as permanent soil reinforcement matting (PRSM) • Hydroseeding • Shrubs or other permanent plantings covered with mulch • Uniform and evenly distributed ground cover sufficient to restrain erosion • Structural methods such as concrete, asphalt or retaining walls • Rolled erosion control products with grass seed

Note: The use of techniques listed above which promote and assist in establishment of vegetation does not consitute permanet stabilization prior to the establishment of permanent vegetation.

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

1. Select flocculants that are appropriate for the soils being exposed during construction, selecting from the NC DWR List of Approved PAMS/Flocculants
2. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
3. Apply flocculants at the concentrations specified in the NC DWR List of Approved PAMS/Flocculants and in accordance with the manufacturer's instructions.
4. Provide ponding area for containment of treated Stormwater before discharging offsite.
5. Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled, sized and placed appropriately for the needs of site.
5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

PORTABLE TOILETS

1. Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
3. Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

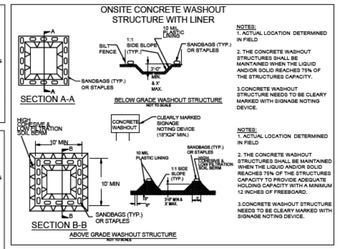
EARTHEN STOCKPILE MANAGEMENT

1. Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets and surface waters unless it can be shown no other alternatives are reasonably available. It is recommended to locate stockpile areas at least 50 feet away from skimmer basins and anywhere stormwater flow is concentrated.
2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.

HAZARDOUS AND TOXIC WASTE

1. Create designated hazardous waste collection areas on-site.
2. Place hazardous waste containers under cover or in secondary containment.
3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



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

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

CONCRETE WASHOUTS

1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
4. Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
5. Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
6. Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
7. Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
8. Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
9. Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
10. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
3. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
4. Do not stockpile these materials onsite.

DEQ — NORTH CAROLINA Department of Environmental Quality

Effective: April 1, 2024

INSPECTION, RECORD KEEPING AND REPORTING

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend on holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those unattended days (this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "Zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours.	1. Identification of the measures inspected 2. Date and Time of the inspection 3. Name of the person performing the inspection 4. Indication of whether the measures were operating properly 5. Description of maintenance needs for the measure 6. Description, Evidence, and date of corrective actions taken
(3) Stormwater discharge outfalls(SDOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours.	1. Identification of the discharge outfalls inspected 2. Date and Time of the inspection 3. Name of the person performing the inspection 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration 5. Indication of visible sediment leaving the site 6. Description, Evidence, and date corrective actions taken
(4) Perimeter of Site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours.	If visible Sedimentation is found outside site limits, then record of the following shall be made: 1) Actions taken to clean up or stabilize sediment that has left the site limits 2) Description, Evidence and date of corrective actions taken 3) An explanation as to the actions taken to control future releases
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours.	If the stream or wetland has increased visible sedimentation or has visible increased turbidity from the construction activity, then a record of the following shall be made: 1) Description, Evidence and date of corrective actions taken 2)Records of required reports to the appropriate Division Regional Office per Part III, Section C, Item(2)(a) of this permit
(6) Ground Stabilization Measures	After each phase of grading.	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation
The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Document Requirements
(a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC plan.	Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. This documentation is required upon the initial installation of the E&SC measures or if the E&SC measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC plan.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC measures.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation to be Kept on Site
In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

(a) This General Permit as well as the Certificate of Coverage, after it is received.

(b) Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

3. Documentation to be Retained for Three Years*
*All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported
Permittees shall report the following occurrences:
(a) Visible sediment deposition in a stream or wetland.
(b) Oil spills if:
- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).

(c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.
(d) Anticipated bypasses and unanticipated bypasses.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements
After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

Occurrence	Reporting Timeframe (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	• Within 24 hours, an oral or electronic notification. • Within 7 Calendar Days, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. • If the stream is named on the NC 303(d) list as impaired for sediment-related caused, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per item 1(b)-(c) above	• Within 24 Hours, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	• *A report at least ten days before the date of the bypass, if possible.* The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	• Within 24 Hours, an oral or electronic notification • Within 7 calendar days, a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment [40 CFR 122.41(l)(7)]	• Within 24 Hours, an oral or electronic notification • Within 7 calendar days, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6). • Division staff may waive the requirement for a written report on a case-by-case basis.

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

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

(a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,
(b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,
(c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems,
(d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,
(e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
(f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

DEQ — NORTH CAROLINA Department of Environmental Quality

Effective: April 1, 2024

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 22514 ENGINEER MICHAEL D. ALLEN 7/28/26

NPDES STABILIZATION DETAILS

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 07/28/26

CE-701

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GENERAL CONSTRUCTION SPECIFICATIONS

1. THESE DRAWINGS ARE THE PROPERTY OF NV5 ENGINEERS AND CONSULTANTS, INC. FOR USE SOLELY FOR THIS PROJECT AND SHALL NOT BE REPRODUCED, COPIED OR USED FOR OTHER PURPOSES WITHOUT WRITTEN PERMISSION OF NV5 ENGINEERS AND CONSULTANTS, INC.
2. THE DESIGN PROFESSIONAL WHOSE SEAL APPEARS ON THESE DRAWINGS IS THE STRUCTURAL ENGINEER OF RECORD (SER) FOR THIS PROJECT. THE SER BEARS THE RESPONSIBILITY OF THE PRIMARY STRUCTURAL SYSTEM AND THE PERFORMANCE OF THIS STRUCTURE. NO OTHER PARTY MAY REVISE, ALTER, OR DELETE THESE CONSTRUCTION DOCUMENTS WITHOUT WRITTEN PERMISSION OF THE SER. FOR THE PURPOSES OF THESE CONSTRUCTION DOCUMENTS THE SER AND NV5 ENGINEERS AND CONSULTANTS, INC SHALL BE CONSIDERED THE SAME ENTITY.
3. THIS STRUCTURE IS ONLY STABLE IN ITS COMPLETED FORM. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED TEMPORARY BRACING DURING CONSTRUCTION TO STABILIZE THE STRUCTURE. TEMPORARY SHORING AND BRACING METHODS ARE NOT THE RESPONSIBILITY OF THE SER AND ARE BEYOND THE SCOPE OF THESE DRAWINGS.
4. THE STRUCTURAL ENGINEER OF RECORD IS NOT RESPONSIBLE FOR CONSTRUCTION SEQUENCES, METHODS, OR TECHNIQUES IN CONNECTION WITH THE CONSTRUCTION OF THIS STRUCTURE. THE SER WILL NOT BE HELD RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CONFORM TO THE CONSTRUCTION DOCUMENTS, SHOULD ANY NON-CONFORMITIES OCCUR.
5. ANY STRUCTURAL ELEMENTS OR DETAILS NOT FULLY DEVELOPED ON THE CONSTRUCTION DRAWINGS SHALL BE COMPLETED UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER. THESE SHOP DRAWINGS SHALL BE SUBMITTED TO THE SER FOR REVIEW BEFORE ANY CONSTRUCTION BEGINS. SEE THE "SUBMITTALS" SECTION OF THESE SPECIFICATIONS.
6. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH AND COORDINATED WITH THE ARCHITECTURAL, MECHANICAL, PLUMBING, ELECTRICAL, AND CIVIL DRAWINGS. THIS COORDINATION IS NOT THE RESPONSIBILITY OF THE SER. SHOULD ANY DISCREPANCIES BECOME APPARENT THE CONTRACTOR SHALL NOTIFY THE SER BEFORE ANY CONSTRUCTION BEGINS.
7. VERIFICATION OF ASSUMED FIELD CONDITIONS IS NOT THE RESPONSIBILITY OF THE STRUCTURAL ENGINEER OF RECORD. THE CONTRACTOR SHALL VERIFY THE FIELD CONDITIONS FOR ACCURACY AND REPORT ANY DISCREPANCIES TO THE SER BEFORE CONSTRUCTION BEGINS.
8. THE STRUCTURAL ENGINEER OF RECORD IS NOT RESPONSIBLE FOR ANY SECONDARY STRUCTURAL ELEMENTS OR NON-STRUCTURAL ELEMENTS, EXCEPT FOR THE ELEMENTS SPECIFICALLY NOTED ON THE STRUCTURAL DRAWINGS.
9. THIS STRUCTURE AND ALL CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE SECTIONS OF THE **NORTH CAROLINA STATE BUILDING CODE** AND ANY LOCAL LAWS WHERE THE STRUCTURE IS TO BE CONSTRUCTED.

DESIGN LOADS

1. BUILDING CODES
   - A. **NORTH CAROLINA STATE BUILDING CODE 2018 EDITION**
   - B. 2015 INTERNATIONAL BUILDING CODE
   - C. MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES, ASCE 7-10
2. RISK CATEGORY — II
3. SNOW LOAD
   - A. GROUND SNOW LOAD, P_g — 15 PSF
   - B. FLAT-ROOF SNOW LOAD, P_f — 10.5 PSF
   - C. SNOW EXPOSURE FACTOR, C_e — 1.00
   - D. SNOW IMPORTANCE FACTOR, I_s — 1.00
   - E. THERMAL FACTOR, C_t — 1.00
   - F. BALANCED SNOW LOAD — 10.5 PSF
4. WIND LOADS / DATA
   - A. ULTIMATE WIND SPEED (3 SECOND GUST), V_{ULT} — 115 MPH
   - B. NOMINAL WIND SPEED, V_{ASD} — 89 MPH
   - C. EXPOSURE — C
   - D. INTERNAL PRESSURE COEFFICIENT, GC_{pi} — ± 0.18
   - E. TOPOGRAPHY FACTOR, K_{zt} — 1.00
   - F. APPLIED DIRECTIONALITY FACTOR, K_d — 0.85
5. SEISMIC LOADS / DATA
   - A. ANALYSIS PROCEDURE — EQUIVALENT LATERAL FORCE
   - B. SITE CLASS — D
   - C. SEISMIC IMPORTANCE FACTOR, I_e — 1.00
   - D. MAPPED SPECTRAL RESPONSE ACCELERATION (0.2 sec.), S_s — 0.12
   - E. MAPPED SPECTRAL RESPONSE ACCELERATION (1.0 sec.), S_1 — 0.06
   - F. SPECTRAL RESPONSE COEFFICIENT, S_{DS} — 0.122
   - G. SPECTRAL RESPONSE COEFFICIENT, S_{D1} — 0.092
   - H. SEISMIC DESIGN CATEGORY — B
   - I. BASIC STRUCTURAL SYSTEM — CANTILEVERED COLUMN SYSTEM
   - J. RESPONSE MODIFICATION FACTOR, R — 1.5
   - K. SYSTEM OVER-STRENGTH FACTOR, Ω — 1.5
   - L. DEFLECTION AMPLIFICATION FACTOR, C_d — 1.5
   - M. SEISMIC RESPONSE COEFFICIENT, C_s — 0.085
   - N. SEISMIC RESISTING SYSTEM — TIMBER FRAMES
6. LOADS ON HANDRAILS, GUARDRAILS AND GUARDS
   - A. UNIFORM LOAD: 50 PLF APPLIED IN ANY DIRECTION
   - B. CONCENTRATED LOAD: 200 LBS APPLIED IN ANY DIRECTION
   - C. INTERMEDIATE RAILS / BALUSTERS / PANEL FILLERS, EXCLUDING HANDRAIL: 50 LBS HORIZONTALLY APPLIED NORMAL LOAD ON AN AREA EQUAL TO 1 SQUARE FOOT INCLUDING OPENINGS AND SPACE BETWEEN RAILS
   - D. LOADS NOTED ABOVE ARE NOT REQUIRED TO ACT CONCURRENTLY
7. LOADS ON GRAB BARS, ACCESSIBLE SEATS / BENCHES AND GUARDS
   - A. CONCENTRATED LOAD: 250 LBS IN ANY DIRECTION AT ANY POINT
8. A PROGRAM OF SPECIAL INSPECTIONS IS PROVIDED IN ACCORDANCE WITH THE **2018 NORTH CAROLINA STATE** BUILDING CODE CHAPTER 17. THE SCOPE OF THE PROGRAM OF SPECIAL INSPECTIONS AND/OR QUALITY ASSURANCE PLANS WILL INCLUDE THE PRIMARY STRUCTURAL SYSTEM AND OTHER SECONDARY STRUCTURAL ELEMENTS WHICH ARE SPECIFICALLY DESIGNED BY THE SER. THE PROGRAM PROVIDED BY THE SER WILL SPECIFICALLY EXCLUDE ALL NON-STRUCTURAL ELEMENTS INCLUDING BUT NOT LIMITED TO SMOKE CONTROL AND SMOKE EXHAUST SYSTEMS, SPRAYED FIRE-RESISTANT MATERIALS, MECHANICAL, PLUMBING, AND ELECTRICAL SYSTEMS AND THEIR ATTACHMENTS. THE PLANS OF SPECIAL INSPECTIONS FOR THESE EXCLUDED ITEMS MUST BE PREPARED BY THE REGISTERED DESIGN PROFESSIONAL RESPONSIBLE FOR THE DESIGN OF EACH DESIGNATED SYSTEM THAT IS SUBJECT TO SPECIAL INSPECTIONS, WHETHER IT IS ARCHITECTURAL, ELECTRICAL, MECHANICAL OR STRUCTURAL IN NATURE.

SUBMITTALS

1. SHOP DRAWINGS AND SUBMITTALS SHALL BE SUBMITTED TO THE SER FOR REVIEW BEFORE ANY CONSTRUCTION BEGINS. THESE SUBMITTALS WILL BE REVIEWED FOR OVERALL COMPLIANCE AS IT RELATES TO THE STRUCTURAL DESIGN OF THIS PROJECT. VERIFICATION OF THE SHOP DRAWINGS FOR DIMENSIONS, OR FOR ACTUAL FIELD CONDITIONS IS NOT THE RESPONSIBILITY OF THE SER.
2. ALLOW ENOUGH TIME FOR SUBMITTAL REVIEW, INCLUDING TIME FOR RESUBMITTALS. TIME FOR REVIEW SHALL COMMENCE ON THE SER'S RECEIPT OF SUBMITTAL. ALLOW 15 DAYS FOR INITIAL REVIEW OF EACH SUBMITTAL AND 15 DAYS FOR REVIEW OF EACH RESUBMITTAL.
3. HIGHLIGHT, ENCIRCLE, OR OTHERWISE SPECIFICALLY IDENTIFY DEVIATIONS FROM THE CONTRACT DOCUMENTS ON SUBMITTALS.
4. REVIEW EACH SUBMITTAL AND CHECK FOR COORDINATION WITH OTHER WORK OF THE CONTRACT AND FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS. NOTE CORRECTIONS AND FIELD DIMENSIONS. MARK WITH APPROVAL STAMP BEFORE SUBMITTING TO THE SER. STAMP SHALL INCLUDE NAME OF REVIEWER, DATE OF CONTRACTOR'S APPROVAL, AND STATEMENT CERTIFYING THAT SUBMITTAL HAS BEEN REVIEWED, CHECKED, AND APPROVED FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS.
5. SHOULD CHANGES MADE BY THE SER IN THE SHOP DRAWING REVIEW PROCESS OR RESPONSES TO REQUESTS FOR INFORMATION (RFFS) RESULT IN A CHANGE IN THE CONTRACT PRICE, DO NOT PROCEED UNTIL A CHANGE ORDER IS SUBMITTED AND APPROVED
6. WHERE PROFESSIONAL DESIGN SERVICES OR CERTIFICATIONS BY A DESIGN PROFESSIONAL ARE SPECIFICALLY REQUIRED OF CONTRACTOR BY THE CONTRACT DOCUMENTS, PROVIDE PRODUCTS AND SYSTEMS COMPLYING WITH SPECIFIC PERFORMANCE AND DESIGN CRITERIA INDICATED. IN ADDITION, SUBMIT COPIES OF A STATEMENT, SIGNED AND SEALED BY THE RESPONSIBLE DESIGN PROFESSIONAL, FOR EACH PRODUCT AND SYSTEM SPECIFICALLY ASSIGNED TO CONTRACTOR TO BE DESIGNED OR CERTIFIED BY A DESIGN PROFESSIONAL. INDICATE THE LOCATIONS, MAGNITUDES, DIRECTIONS AND CONNECTION TYPES OF LOADS IMPOSED ON THE SUPPORTING STRUCTURE AND INDICATE THE LOADS AND LOAD COMBINATIONS USED IN THE DESIGN.
7. SHOP DRAWINGS, STATEMENTS, AND CALCULATIONS REQUIRING A PROFESSIONAL DESIGN SERVICES OR CERTIFICATIONS BY A DESIGN PROFESSIONAL THAT ARE SUBMITTED UNSEALED WILL BE RETURNED NOT REVIEWED BY THE SER FOR RESUBMITTAL BY THE CONTRACTOR.
8. *CONSTRUCTION ADMINISTRATION SERVICES ARE NOT INCLUDED IN THE SCOPE OF SERVICES PROVIDED BY NV5 EVEN THOUGH THEY ARE RECOMMENDED AND MAY BE REQUIRED. THE ARCHITECT, OWNER, OR CONTRACTOR MAY ARRANGE FOR THESE SERVICES TO BE PROVIDED BY NV5. NV5 MAY PROVIDE THESE SERVICES WITH PRIOR APPROVAL FROM NV5. THE FOLLOWING SUBMITTALS ARE RECOMMENDED FOR THIS PROJECT:*
9. CAST-IN-PLACE CONCRETE
   - A. IN ADDITION TO THE FOLLOWING, COMPLY WITH SUBMITTAL REQUIREMENTS IN ACI 301
   - B. PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED
   - C. DESIGN MIXTURES: FOR EACH CONCRETE MIXTURE.
   - D. REBAR SHOP DRAWINGS
   - E. SHOP DRAWINGS FOR THE DESIGN, ERECTION AND REMOVAL OF FORMWORK, SHORES AND RESHORES PREPARED BY OR UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL ENGINEER. SHOP DRAWINGS. INCLUDE STRUCTURAL ANALYSIS DATA SIGNED AND SEALED BY THE QUALIFIED PROFESSIONAL ENGINEER RESPONSIBLE FOR THEIR PREPARATION. COMPLY WITH REQUIREMENTS IN "ACI MANUAL OF CONCRETE PRACTICE".
10. TIMBER
    - A. SHOP DRAWINGS: PREPARED BY OR UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL ENGINEER. SHOW FABRICATION AND INSTALLATION DETAILS FOR TRUSSES. INCLUDING LOCATION, PITCH, SPAN, CAMBER, CONFIGURATION, SPACING, AND SPLICE DETAILS AND BEARING DETAILS FOR EACH TYPE OF TRUSS REQUIRED. INDICATE SIZES, STRESS GRADES, AND SPECIES OF LUMBER FOR TRUSSES. ALSO, INDICATE LOCATIONS OF PERMANENT BRACING REQUIRED TO PREVENT BUCKLING OF INDIVIDUAL TRUSS MEMBERS DUE TO DESIGN LOADS.
11. TIMBER PILES
    - A. PRODUCT DATA: FOR EACH TYPE OF WOOD PILE AND ACCESSORY INDICATED.
    - B. SHOP DRAWINGS: SHOW FABRICATION AND INSTALLATION DETAILS FOR PILES, INCLUDING DETAILS OF DRIVING SHOES, TIPS OR BOOTS, AND PILE BUTT PROTECTION. INCLUDE ARRANGEMENT OF STATIC PILE REACTION FRAME, TEST AND ANCHOR PILES, EQUIPMENT, AND INSTRUMENTATION. SUBMIT STRUCTURAL ANALYSIS DATA SIGNED AND SEALED BY THE QUALIFIED PROFESSIONAL ENGINEER RESPONSIBLE FOR THEIR PREPARATION.
    - C. ROUND TIMBER PILE TREATMENT DATA AS FOLLOWS, INCLUDING CHEMICAL TREATMENT MANUFACTURER'S WRITTEN INSTRUCTIONS FOR HANDLING, STORING, INSTALLING, AND FINISHING TREATED MATERIAL:
      - a. FOR EACH TYPE OF PRESERVATIVE-TREATED TIMBER PRODUCT INCLUDE CERTIFICATION BY TREATING PLANT STATING TYPE OF PRESERVATIVE SOLUTION AND PRESSURE PROCESS USED, NET AMOUNT OF PRESERVATIVE RETAINED, AND COMPLIANCE WITH APPLICABLE STANDARDS.
      - b. FOR WATERBORNE-TREATED PRODUCTS INCLUDE STATEMENT THAT MOISTURE CONTENT OF TREATED MATERIALS WAS REDUCED TO LEVELS INDICATED BEFORE SHIPMENT TO PROJECT SITE.
    - D. WARRANTY OF CHEMICAL TREATMENT MANUFACTURER FOR EACH TYPE OF TREATMENT.
    - E. STATIC PILE TEST REPORTS: SUBMIT WITHIN TWO DAYS OF COMPLETING EACH TEST.

PILE-DRIVING RECORDS: SUBMIT WITHIN TWO DAYS OF DRIVING EACH PILE.

FOUNDATIONS

1. THE SCOPE OF SERVICES FOR THIS PROJECT PROVIDED BY THE SER BEGINS FROM THE BOTTOM OF THE FOUNDATION ELEMENTS. SUBSURFACE INVESTIGATIONS ARE BEYOND THE SCOPE OF THE STRUCTURAL SERVICES PROVIDED. THE FOUNDATION SYSTEM SHOWN ON THESE DRAWINGS ARE BASED UPON THE ASSUMED SOIL PROPERTIES LISTED BELOW. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR, OWNER OR OWNER'S AGENT TO CONTACT THE SER IF ANY ADVERSE SOIL CONDITIONS ARE ENCOUNTERED DURING CONSTRUCTION. VERIFICATION OF THIS ASSUMED VALUE IS ALSO THE RESPONSIBILITY OF THE CONTRACTOR, OWNER OR OWNER'S AGENT.
2. THE SCOPE OF SERVICES FOR THIS PROJECT PROVIDED BY THE SER BEGINS FROM THE BOTTOM OF THE FOUNDATION ELEMENTS. SUBSURFACE INVESTIGATIONS ARE BEYOND THE SCOPE OF THE STRUCTURAL SERVICES PROVIDED. THE FOUNDATION SYSTEM SHOWN ON THESE DRAWINGS ARE BASED UPON THE SOIL PROPERTIES LISTED BELOW AS STATED IN THE GEOTECHNICAL REPORT BY ***D. CHAD SHERMAN, PE*** OF ***ESP ASSOCIATES, INC.*** IN THEIR REPORT **24-00661-002-GEO** ON MARCH 28, 2025. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR, OWNER OR OWNER'S AGENT TO CONTACT THE SER AND ***NV5 ENGINEERS AND CONSULTANTS, INC.*** IF ANY ADVERSE SOIL CONDITIONS ARE ENCOUNTERED DURING CONSTRUCTION.
   - A. NET ALLOWABLE SOIL BEARING PRESSURE — 1500 PSF
   - B. SUBGRADE MODULUS (k) — 100 PCI
   - C. ULTIMATE FRICTION COEFFICIENT BETWEEN CONCRETE FOUNDATIONS AND SOIL — 0.32
   - D. UNIT WEIGHT OF SOIL — 110 PCF
   - E. MINIMUM INTERNAL ANGLE OF FRICTION — 26°
3. THE BOTTOM OF ALL FOOTINGS SHALL EXTEND BELOW THE FROST LINE FOR THE REGION IN WHICH THE STRUCTURE IS TO BE CONSTRUCTED. HOWEVER, THE TOP OF FOOTING SHALL BE A MINIMUM OF 18" BELOW GRADE.
4. EXCAVATE TO INDICATED ELEVATIONS AND DIMENSIONS WITHIN A TOLERANCE OF PLUS OR MINUS 1 INCH. IF APPLICABLE, EXTEND EXCAVATIONS A SUFFICIENT DISTANCE FROM STRUCTURES FOR PLACING AND REMOVING CONCRETE FORMWORK, FOR INSTALLING SERVICES AND OTHER CONSTRUCTION, AND FOR INSPECTIONS. DO NOT DISTURB BOTTOM OF EXCAVATION. EXCAVATE BY HAND TO FINAL GRADE JUST BEFORE PLACING CONCRETE REINFORCEMENT. TRIM BOTTOMS TO REQUIRED LINES AND GRADES TO LEAVE SOLID BASE TO RECEIVE OTHER WORK
5. ANY FILL SHALL BE PLACED UNDER THE DIRECTION OR RECOMMENDATION OF A LICENSED PROFESSIONAL ENGINEER USING SUITABLE SOILS OR ENGINEERED FILL. PLOW, SCARIFY, BENCH, OR BREAK UP SLOPED SURFACES STEEPER THAN 1 VERTICAL TO 4 HORIZONTAL SO FILL MATERIAL WILL BOND WITH EXISTING MATERIAL. PLACE BACKFILL AND FILL SOIL MATERIALS IN LAYERS NOT MORE THAN 8" IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 4" IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS. COMPACT SOIL MATERIALS TO NOT LESS THAN 95% OF MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D 698, UNLESS A HIGHER PERCENTAGE IS RECOMMENDED BY THE GEOTECHNICAL ENGINEER. UNDER SLABS ON GRADE AND STEPS, SCARIFY AND RECOMPACT TOP 12" OF EXISTING SUBGRADE AND EACH LAYER OF BACKFILL OR FILL SOIL MATERIAL AT 98%.
6. IT IS STRONGLY RECOMMENDED THAT A QUALIFIED INDEPENDENT GEOTECHNICAL ENGINEERING TESTING AGENCY. INSPECT AND TEST SUBGRADES AND EACH FILL OR BACKFILL LAYER AND AT FOOTING SUBGRADES PERFORM TESTING TO VERIFY DESIGN BEARING CAPACITIES.
7. EXCAVATION FOR FOOTINGS SHALL BE LINED TEMPORARY WITH A 6 MIL POLYETHYLENE IF PLACEMENT OF CONCRETE DOES NOT OCCUR WITHIN 24 HOURS OF EXCAVATION.
8. NO CONCRETE SHALL BE POURED AGAINST ANY SUBGRADE CONTAINING WATER, ICE, FROST, OR LOOSE MATERIAL.
9. DO NOT BACKFILL AGAINST CANTILEVERED RETAINING WALL UNTIL THE CONCRETE HAS ATTAINED 100 PERCENT OF ITS DESIGN STRENGTH. REFER TO THE PLANS FOR ADDITIONAL REQUIREMENTS.
10. PROVIDE BRACING AND SHORING FOR ALL BASEMENT FOUNDATION WALLS AND WALLS INDICATED AS RESTRAINED PRIOR TO BACKFILLING. THE BRACING AND SHORING SHALL REMAIN IN PLACE UNTIL ALL SLABS ON GRADE, ELEVATED SLABS AND BEAMS FRAMING INTO THE WALL, ABOVE AND BELOW, HAVE BEEN PLACED, HAVE CURED FOR AT LEAST 7 DAYS AND HAVE ATTAINED 100 PERCENT OF THEIR DESIGN STRENGTH.
11. BACKFILL PLACED IMMEDIATELY BEHIND WALLS SHALL BE COMPACTED WITH HAND OPERATED EQUIPMENT.
12. CONSULT THE GEOTECHNICAL REPORT FOR FURTHER RECOMMENDATIONS AND REQUIREMENTS

TIMBER

1. SEE BOOK SPECIFICATIONS FOR WOOD FRAMING MEMBER REQUIREMENTS.
2. FRAMING SHALL COMPLY WITH AF&PA'S "DETAILS FOR CONVENTIONAL WOOD FRAME CONSTRUCTION," UNLESS OTHERWISE INDICATED. STRUCTURAL MEMBERS SHALL NOT BE SPLICED BETWEEN SUPPORTS, UNLESS OTHERWISE INDICATED. STUDS SHALL BE CONTINUOUS FROM THE SOLE PLATE TO THE TOP PLATE. STUDS SHALL ONLY BE DISCONTINUOUS WHEN SUPPORTING BEAMS OR HEADERS AT OPENINGS. THOSE STUDS SHALL BE ATTACHED TO CONTINUOUS STUDS IN ACCORDANCE WITH THE REQUIREMENTS ON THE DESIGN DOCUMENTS.
3. SECURELY ATTACH ROUGH CARPENTRY WORK TO SUBSTRATE BY ANCHORING AND FASTENING AS INDICATED BELOW. WHERE ROUGH CARPENTRY IS EXPOSED TO WEATHER, IN GROUND CONTACT, PRESSURE-PRESERVATIVE TREATED, OR IN AREA OF HIGH RELATIVE HUMIDITY, PROVIDE FASTENERS WITH HOT-DIP ZINC COATING COMPLYING WITH ASTM A 153:
   - A. NES NER-272 FOR POWER-DRIVEN FASTENERS.
   - B. TABLE 2304.9.1, "FASTENING SCHEDULE," IN ICC'S INTERNATIONAL BUILDING CODE.
   - C. NAILS, BRADS, AND STAPLES: ASTM F 1667
   - D. WOOD SCREWS: ASME B18.6.1.
   - E. LAG BOLTS: ASME B18.2.1.
   - F. STEEL BOLTS COMPLYING WITH ASTM A 307, GRADE A; WITH ASTM A 563 HEX NUTS AND, FLAT WASHERS.

CONCRETE

1. SEE BOOK SPECIFICATIONS FOR CONCRETE REQUIREMENTS.

DRAWING INDEX

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S1.1	TYPICAL BRIDGE DETAILS
S1.2	BOARDWALK PLANS
S1.3	TYPICAL BOARDWALK DETAILS

TOTAL: 8

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Signed by:
Joseph Thompson
4BB1C3F274B7442...

NORTH CAROLINA PROFESSIONAL ENGINEERING CORP. F-1333

SPECIFICATIONS, INDEX

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 8/20/2026

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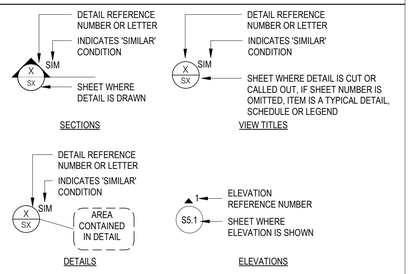
COMMON ABBREVIATIONS & DEFINITIONS

@	AT
AB	ANCHOR BOLT
ADDL	ADDITIONAL
ACI	AMERICAN CONCRETE INSTITUTE
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALT	ALTERNATE
APA	AMERICAN PLYWOOD ASSOCIATION
ARCH	ARCHITECTURAL
ASL	ABOVE SEA LEVEL
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWS	AMERICAN WELDING SOCIETY
BLDG	BUILDING
BM	BEAM
BOT	BOTTOM
BRG	BEARING
BTWN	BETWEEN
B/W	BETWEEN
C	CAMBER OR COMPRESSION
CC	CENTER TO CENTER
CANT	CANTILEVER
CIP	CAST-IN-PLACE
CJ	CONTRACTION (CONTROL) JOINT
CJP	COMPLETE JOINT PENETRATION
CL	CENTERLINE
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUOUS
CONSTR JT	CONSTRUCTION JOINT
D	DEPTH
db	BAR DIAMETER
DBA	DEFORMED BAR ANCHOR
DBE	DECK BEARING ELEVATION
DBL	DOUBLE
DEG	DEGREES
DEMO	DEMOLITION
DET	DETAIL
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIST	DISTANCE
DJ	DOUBLE JOIST
DL	DEAD LOAD
DN	DOWN
DO	DITTO
DWG	DRAWING
EA	EACH
EE	EACH END
EF	EACH FACE
EJ	EXPANSION JOINT
EL	ELEVATION
ELEV	ELEVATION OR ELEVATOR
EMBED	EMBEDMENT
ENGR	ENGINEER
EOW	EDGE OF WALL
EOS	EDGE OF SLAB, EDGE OF STRUCTURE
EQ	EQUAL
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
EW	EACH WAY
EX	EXISTING
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
fc	28 DAY COMPRESSION STRENGTH
FD	FLOOR DRAIN
FFE	FINISHED FLOOR ELEVATION
FIN	FINISH(ED)
FLR	FLOOR
FL	FULL LENGTH
FNDN	FOUNDATION
FS	FAR SIDE
FT	FOOT OR FEET
FTG	FOOTING
FUT	FUTURE
FV	FIELD VERIFY
Fy	YIELD STRENGTH
GA	GAGE
GALV	GALVINIZE(D)
GB	GRADE BEAM
GEN	GENERAL
GR	GRADE
GYP	GYPSUM
HDG	HOT DIPPED GALVANIZED
HI	HIGH
HK	HOOK
HORIZ	HORIZONTAL
HP	HIGH POINT
HSS	HOLLOW STRUCTURAL SECTION
HT	HEIGHT
ID	INSIDE DIAMETER
IF	INSIDE FACE
INT	INTERIOR
JBE	JOIST BEARING ELEVATION
JT	JOINT
K	1000 POUNDS, KIP
KIP	1000 POUNDS
KSF	KIPS PER SQUARE FOOT
KSI	KIPS PER SQUARE INCH
LBS	POUNDS
Ld	DEVELOPMENT LENGTH
Ldh	HOOK DEVELOPMENT LENGTH
LE	LEFT END
LL	LIVE LOAD
LLBB	LONG LEG BACK TO BACK
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LONG	LONGITUDINAL
LP	LOW POINT
LSH	LONG SIDE HORIZONTAL
LSL	LONG SLOTTED HOLE (AISC)
LSV	LONG SIDE VERTICAL
LVL	LEVEL
LW	LIGHTWEIGHT
LWC	LIGHTWEIGHT CONCRETE
LRFD	LOAD RESISTANCE FACTOR DESIGN
M	MOMENT
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MB	MASONRY BLOCKOUT
MC	MOMENT CONNECTION
MECH	MECHANICAL
MEP	MECHANICAL, ELECTRICAL, PLUMBING & FIRE PROTECTION
MEZZ	MEZZANINE
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MTL	METAL
NDS	NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION
NIC	NOT IN CONTRACT
NIS	NOT IN SUBMISSION
NLGA	NATIONAL LUMBER GRADES AUTHORITY
No.	NUMBER
NOM	NOMINAL
NS	NEAR SIDE
NTS	NOT TO SCALE
NWC	NORMAL WEIGHT CONCRETE
OD	OUTSIDE DIAMETER
OC	ON CENTER
OF	OUTSIDE FACE
OH	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
OVS	OVERSIZED HOLE (AISC)
P	AXIAL FORCE
PAF	POWDER ACTUATED FASTENER
PCF	POUNDS PER CUBIC FOOT
PCI	POUNDS PER SQUARE INCH PER INCH
PERP	PERPENDICULAR
PEN	PANEL EDGE NAILING
PEN	PENETRATION
PJP	PARTIAL JOINT PENETRATION
PL	PLATE
PLF	POUNDS PER LINEAR FOOT
PRELIM	PRELIMINARY
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT
PTS	POINTS
PT	POST TENSIONED (CONCRETE)
PT	PRESSURE TREATED (TIMBER)
QTY	QUANTITY
R	RADIUS OR REACTION
RAD	RADIUS
RE	RIGHT END
REF	REFERENCE
REINF	REINFORCEMENT
REQD	REQUIRED
REQ(S)	REQUIREMENT(S)
REV	REVISION
RTU	ROOF TOP UNIT
RXN	REACTION
SC	SLIP CRITICAL
SCHED	SCHEDULE
SECT	SECTION
SER	STRUCTURAL ENGINEER OF RECORD
SF	SQUARE FOOT
SHT	SHEET
SI	SPECIAL INSPECTIONS, SPECIAL INSPECTOR
SIM	SIMILAR
SLBB	SHORT LEG BACK TO BACK
SOG	SLAB ON GRADE
SPA	SPACING
SPEC	SPECIFICATIONS
SPIB	SOUTHERN PINE INSTITUTES BUREAU
SPF	SPRUCE PINE FIR
SR	STUD RAIL
SQ	SQUARE
SSL	SHORT SLOTTED HOLE (AISC)
SST	SIMPSON STRONG TIE
STD	STANDARD
STIFF	STIFFENER
STL	STEEL
STRUCT	STRUCTURAL OR STRUCTURE
SYMM	SYMMETRICAL, SYMMETRIC
SYP	SOUTHERN YELLOW PINE
T	THICKNESS OR TENSION
Tu	TRANSFER FORCE, ULTIMATE
T&B	TOP AND BOTTOM
T/	TOP OF
TEMP	TEMPERATURE OR TEMPORARY
TJ	TRIPLE JOIST
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
TOJ	TOP OF JOIST
TOM	TOP OF MASONRY
TOS	TOP OF SLAB OR TOP OF STEEL
TOW	TOP OF WALL
TPI	TRUSS PLATE INSTITUTE
TRPL	TRIPLE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
V	SHEAR FORCE
VERT	VERTICAL
W	WIDTH
W/	WITH
W/O	WITHOUT
WF	WIDE FLANGE
WP	WORK POINT
WT	WEIGHT OR WT SECTION PER AISC
WWF	WELDED WIRE FABRIC
XJ	EXTRA JOIST
XS	EXTRA STRONG
XXS	DOUBLE EXTRA STRONG

DETAIL REFERENCES



DEVELOPMENT AND LAP LENGTH SCHEDULE NOTES:

1. ALL SPLICE LENGTHS ARE IN INCHES.
2. TABULATED LAP SPLICE VALUES ARE BASED UPON ACI 318-14 CLASS B SPLICE LENGTHS.
3. THESE TABLES APPLY TO NORMAL WEIGHT CONCRETE ONLY, EXCEPT WHERE INDICATED.
4. WHEN SPECIFIED COMPRESSIVE STRENGTH (f'c) IS BETWEEN TABULATED STRENGTHS, USE LOWER f'c TO DETERMINE SPLICE LENGTHS
5. FOR EPOXY-COATED BARS, MULTIPLY SPLICE LENGTH VALUES BY 1.5.
6. FOR BARS OF DIFFERENT SIZES, USE THE LARGER OF THE DEVELOPMENT LENGTH OF THE LARGER BAR AND THE LAP LENGTH OF THE SMALLER BAR.
7. ACI DEFINES 'TOP BARS' AS HORIZONTAL REINFORCEMENT PLACED SUCH THAT MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST BELOW THE DEVELOPMENT LENGTH OR SPLICE. "OTHER BARS" ARE DEFINED AS ALL OTHER CONDITIONS.
8. WHERE BAR SPACINGS ARE LESS THAN THE MINIMUM BAR SPACINGS TABULATED, SUBMIT LAP SPLICE LENGTHS TO NV5 FOR APPROVAL.
9. SUBMIT SPLICE LENGTHS FOR APPROVAL WHERE CONDITIONS DIFFER FROM THE COMPRESIVE STRENGTHS, BAR SIZES, MINIMUM SPACINGS, AND CONCRETE WEIGHT CLASSES LISTED.

BAR DEVELOPMENT LENGTH "Ld" (INCHES)
NORMAL WEIGHT CONCRETE, GR.60 REINFORCEMENT, UNCOATED

BAR SIZE	f'c=3000 PSI	f'c=4000 PSI	f'c=5000 PSI
#3	17	15	13
#4	22	19	17
#5	28	24	22
#6	33	29	26
#7	48	42	38
#8	55	48	43

NOTE: DO NOT USE THIS TABLE FOR SPLICING REINFORCEMENT. REFER TO LAP LENGTH TABLES THIS DRAWING

HOOK DEVELOPMENT LENGTH "Ldh" (INCHES)
NORMAL WEIGHT CONCRETE, GR.60 REINFORCEMENT, UNCOATED

BAR SIZE	f'c=3000 PSI	f'c=4000 PSI	f'c=5000 PSI
#3	9	8	7
#4	11	10	9
#5	14	12	11
#6	17	15	13
#7	20	17	15
#8	22	19	17

NOTE: DO NOT USE THIS TABLE FOR SPLICING REINFORCEMENT. REFER TO LAP LENGTH TABLES THIS DRAWING

FOOTING REINFORCEMENT LAP LENGTH (INCHES)
NORMAL WEIGHT CONCRETE, GR.60 REINFORCEMENT, UNCOATED

		f'c=3000 PSI		f'c=4000 PSI		f'c=5000 PSI	
BAR SIZE	MIN. BAR SPACING	TOP BAR	OTHER BARS	TOP BAR	OTHER BARS	TOP BAR	OTHER BARS
#3	1 1/8"	28	22	25	19	22	17
#4	1 1/2"	38	29	33	25	29	23
#5	1 7/8"	47	36	41	31	36	28
#6	2 1/4"	56	43	49	37	44	34
#7	2 5/8"	81	63	71	54	63	49
#8	3"	93	72	81	62	72	56

NOTE: REFER TO NOTE 8 FOR BAR SPACINGS THAT DO NOT MEET MIN BAR SPACINGS NOTED

VERTICAL WALL REINFORCEMENT LAP LENGTH (INCHES)
NORMAL WEIGHT CONCRETE, GR.60 REINFORCEMENT, UNCOATED

BAR SIZE	MIN. BAR SPACING	f'c=3000 PSI	f'c=4000 PSI	f'c=5000 PSI
#3	1 1/8"	22	19	17
#4	1 1/2"	29	25	23
#5	1 7/8"	36	31	28
#6	2 1/4"	43	37	34
#7	2 5/8"	63	54	49
#8	3"	72	62	56

NOTE: REFER TO NOTE 8 FOR BAR SPACINGS THAT DO NOT MEET MIN BAR SPACINGS NOTED

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ABBREVIATIONS, SYMBOLS & LAP LENGTH SCHEDULES

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PLAN MARKS

- TYPICAL MARK TO DENOTE RETAINING WALL PER S1.0
- TYPICAL MARK TO DENOTE BRIDGE AND BOARDWALK FRAMING AREAS PER S1.1 & S1.2

1 LAKE MYRA PARK PLAN VIEW
SCALE: 1" = 128'-0"

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LAKE MYRA PARK PLAN VIEW

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PLAN MARKS

———	TYPICAL MARK TO DENOTE RETAINING WALL PER S1.0
▬	TYPICAL MARK TO DENOTE BRIDGE AND BOARDWALK FRAMING AREAS PER S1.1 & S1.2

1 BRIDGE PLAN VIEW
SCALE: 1" = 128'-0"

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LAKE MYRA BRIDGE PLAN VIEW

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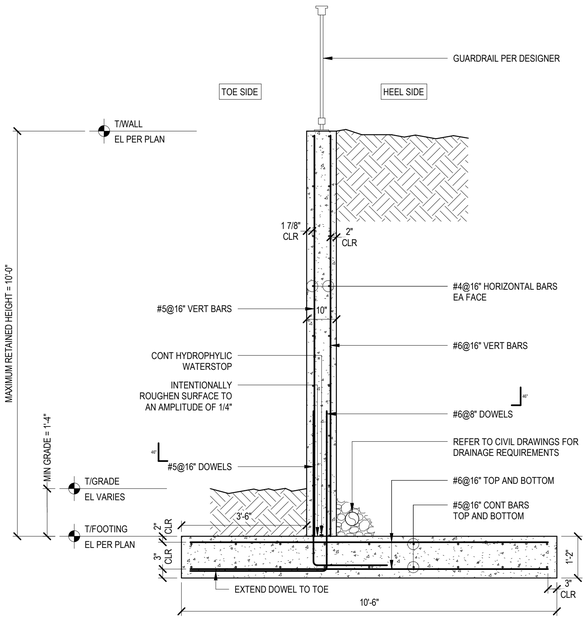
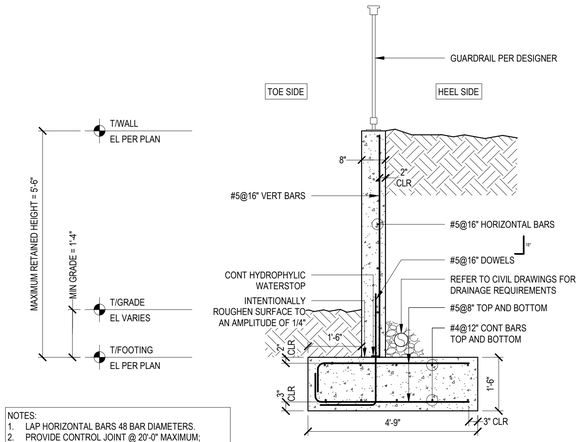


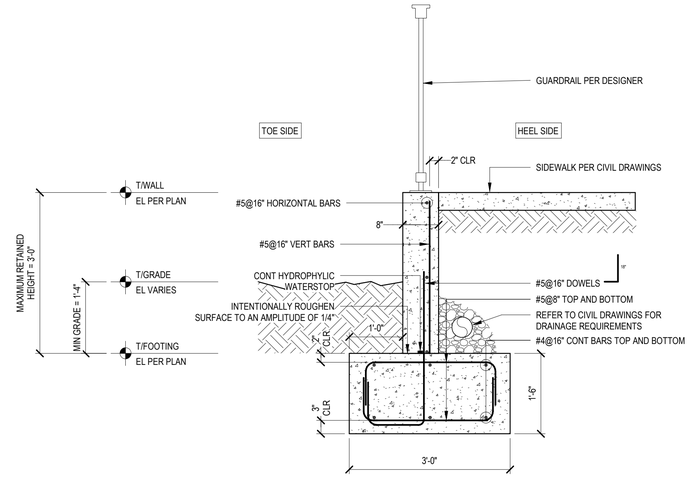
NOTES:
1. LAP HORIZONTAL BARS 48 BAR DIAMETERS.
2. PROVIDE CONTROL JOINT @ 20'-0" MAXIMUM; COORDINATE WITH ARCHITECTURAL DRAWINGS, PER TYPICAL DETAIL.
3. PROVIDE KEYED CONSTRUCTION JOINT @ 60' O.C. MAXIMUM, PER TYPICAL DETAIL.

1 SECTION
10' RETAINING WALL
SCALE: 1/2" = 1'-0"



NOTES:
1. LAP HORIZONTAL BARS 48 BAR DIAMETERS.
2. PROVIDE CONTROL JOINT @ 20'-0" MAXIMUM; COORDINATE WITH ARCHITECTURAL DRAWINGS, PER TYPICAL DETAIL.
3. PROVIDE KEYED CONSTRUCTION JOINT @ 60' O.C. MAXIMUM, PER TYPICAL DETAIL.

2 SECTION
5' RETAINING WALL
SCALE: 1/2" = 1'-0"



NOTES:
1. LAP HORIZONTAL BARS 48 BAR DIAMETERS.
2. PROVIDE CONTROL JOINT @ 20'-0" MAXIMUM; COORDINATE WITH ARCHITECTURAL DRAWINGS, PER TYPICAL DETAIL.
3. PROVIDE KEYED CONSTRUCTION JOINT @ 60' O.C. MAXIMUM, PER TYPICAL DETAIL.

3 SECTION
3' RETAINING WALL
SCALE: 3/4" = 1'-0"

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TYPICAL RETAINING WALL DETAILS

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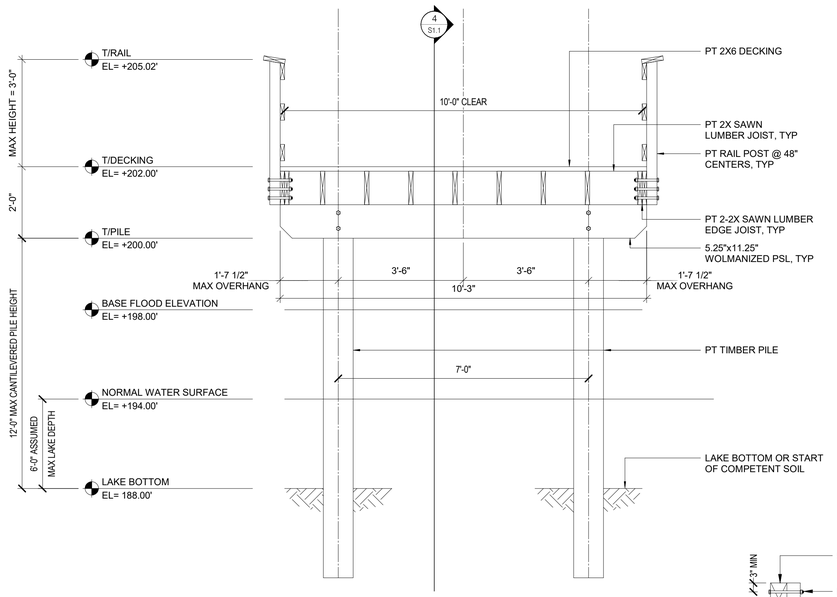
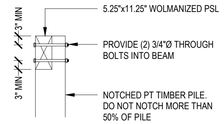
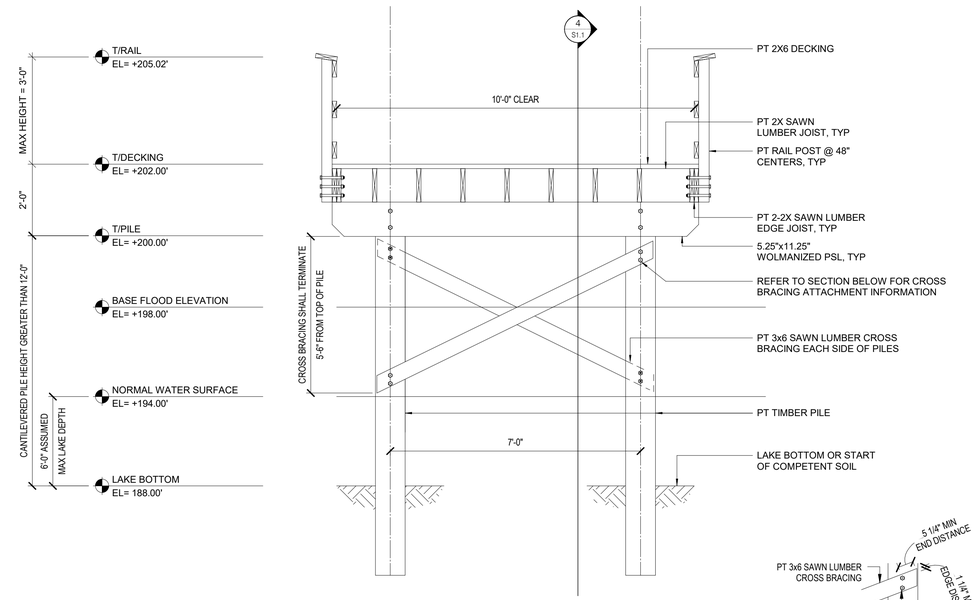


1 S1.1 SECTION
BENT ELEVATION - 12'-0" MAX CANTILEVERED HEIGHT
SCALE: 1/2" = 1'-0"

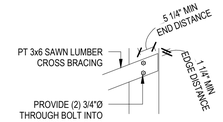


BEAM ATTACHMENT TO PILE

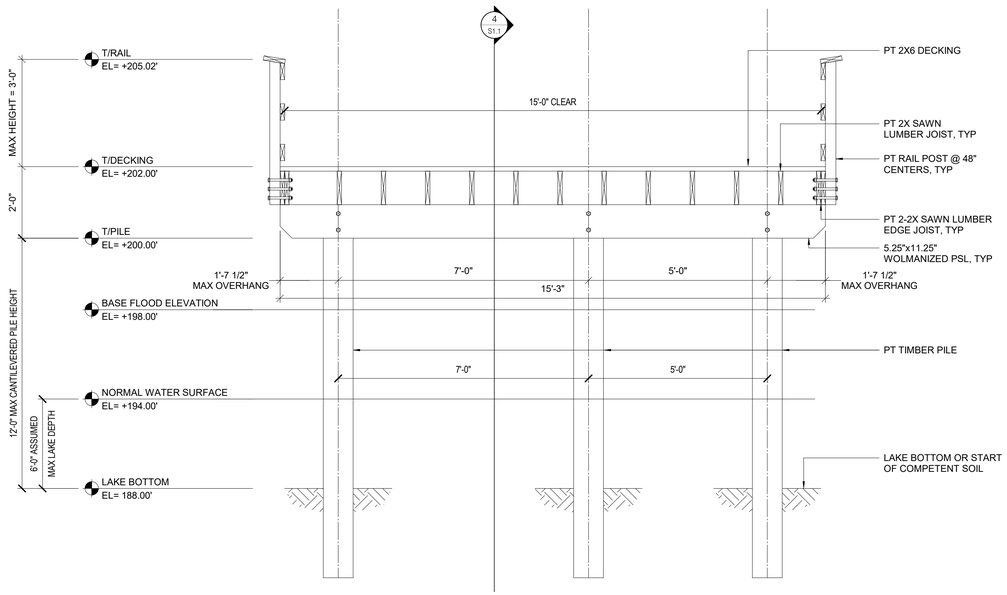
NOTES:
1. CROSS BRACING REQUIRED AT LOCATIONS WHERE HEIGHT OF PILE FROM TOP OF COMPETENT SOIL TO TOP OF PILE EXCEEDS 12'-0".
2. REFER TO DETAIL 1/S1.1 FOR ADDITIONAL INFORMATION.



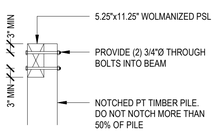
2 S1.1 SECTION
ALTERNATE 1: BENT ELEVATION - CANTILEVERED PILE HEIGHT GREATER THAN 12'-0"
SCALE: 1/2" = 1'-0"



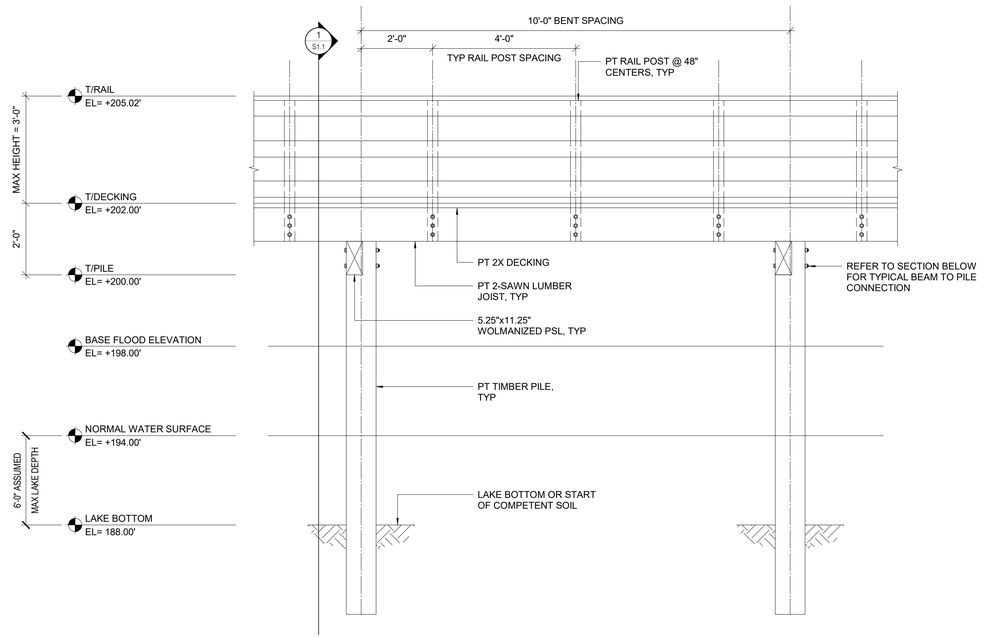
CROSS BRACING ATTACHMENT TO PILE



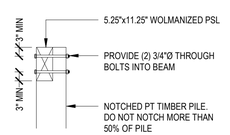
3 SECTION
ALTERNATE 1: BENT ELEVATION AT LOOKOUT
SCALE: 1/2" = 1'-0"



BEAM ATTACHMENT TO PILE



4 S1.1 SECTION
TYPICAL SPAN ELEVATION
SCALE: 1/2" = 1'-0"



BEAM ATTACHMENT TO PILE

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TYPICAL BRIDGE DETAILS

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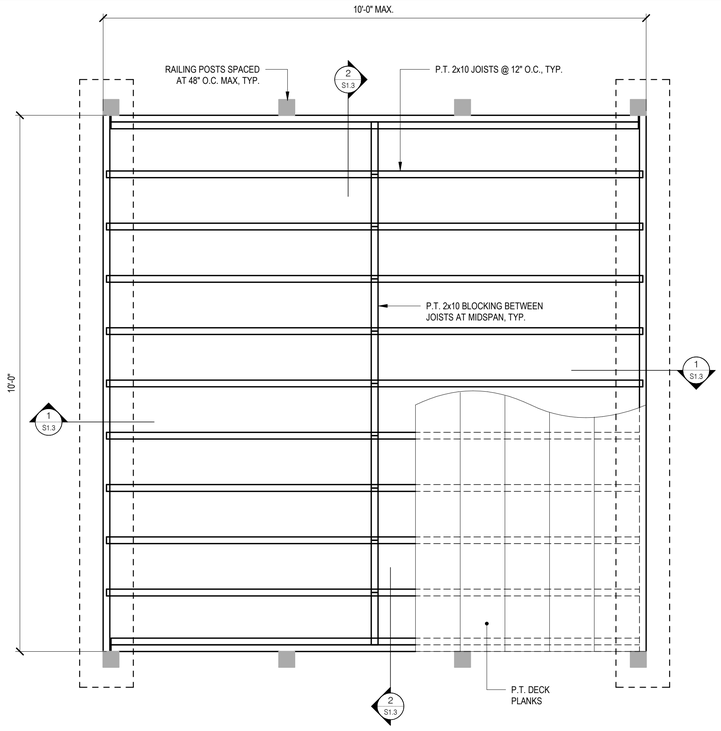
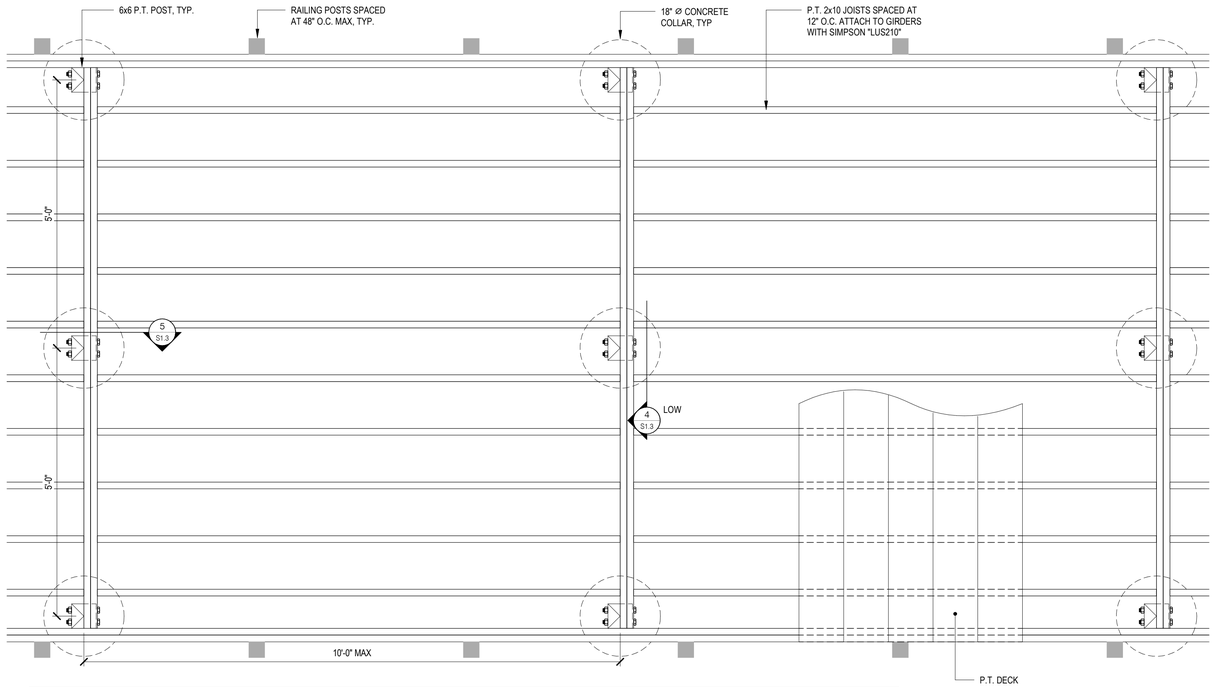
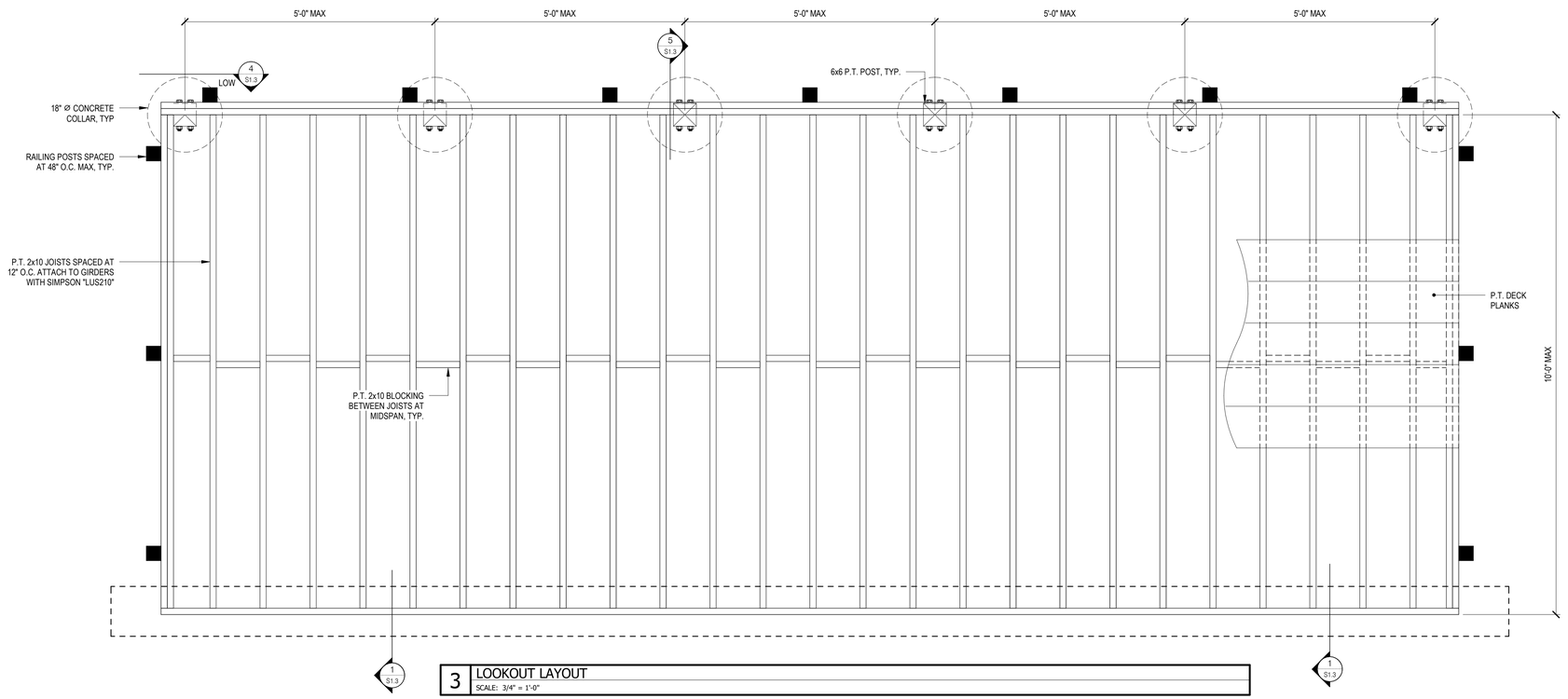


1 FRAMING PLAN - 10x10 BOARDWALK
SCALE: 3/4" = 1'-0"



2 BOARDWALK LAYOUT
SCALE: 3/4" = 1'-0"



3 LOOKOUT LAYOUT
SCALE: 3/4" = 1'-0"

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BOARDWALK PLANS

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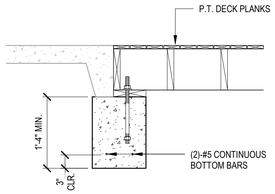
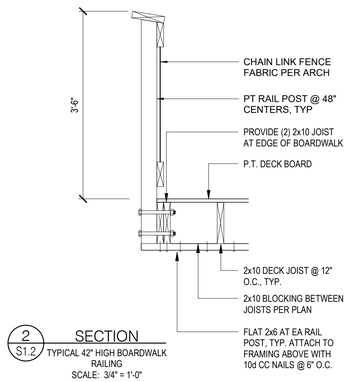
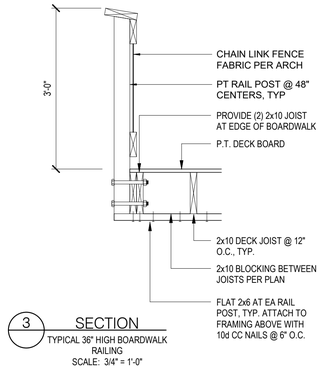


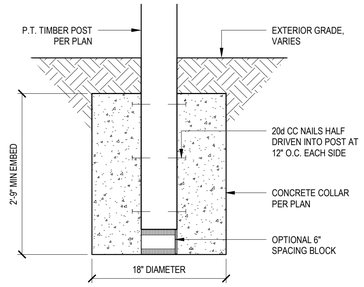
1 S1.2 SECTION
BOARDWALK END SECTION AT FOOTING
SCALE: 3/4" = 1'-0"



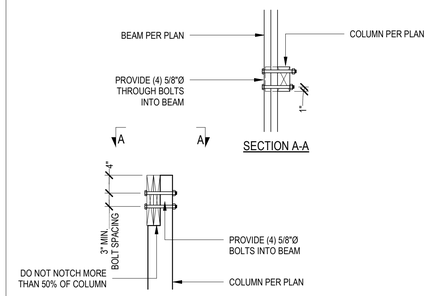
2 S1.2 SECTION
TYPICAL 42" HIGH BOARDWALK RAILING
SCALE: 3/4" = 1'-0"



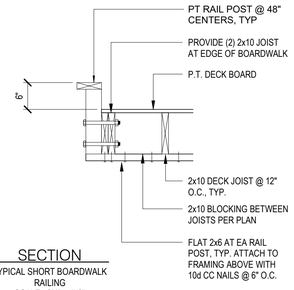
3 SECTION
TYPICAL 36" HIGH BOARDWALK RAILING
SCALE: 3/4" = 1'-0"



4 S1.2 SECTION
TIMBER POST BASE CONNECTION WITH CONCRETE COLLAR
SCALE: 3/4" = 1'-0"



5 S1.2 SECTION
TYPICAL NOTCHED COLUMN TO CONTINUOUS BEAM CONNECTION
SCALE: 3/4" = 1'-0"



6 SECTION
TYPICAL SHORT BOARDWALK RAILING
SCALE: 3/4" = 1'-0"

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Signed by:
Joseph Thompson
4BB1C3F274B7442...

NORTH CAROLINA PROFESSIONAL ENGINEERING CORP. F-1333

TYPICAL BOARDWALK DETAILS

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 8/20/2026

S1.3

8/20/2026 3:36:37 PM

Electrical Abbreviations

1P	1 Pole (2P, 3P, 4P, ETC.)		
A, Amp	Ampere	MCB	Main Circuit Breaker
AC	Above Counter	MCC	Motor Control Center
ACLG	Above Ceiling	MDC	Main Distribution Center
ADO	Automatic Door Opener	MDP	Main Distribution Panel
AF	Amp Frame	MFR	Manufacturer
AFF	Above Finished Floor	MFS	Main Fused Disconnect Switch
AFG	Above Finished Grade	MH	Manhole
AFI	Arc Fault Circuit Interrupter	MIC	Microphone
AHU	Air Handling Unit	MIN	Minimum
AL	Aluminum	MISC	Miscellaneous
ALT	Alternate	MLO	Main Lugs Only
AMP	Ampere	MMS	Manual Motor Starter
AMPL	Amplifier	MOA	Multioutlet Assembly
ANNUN	Annunciator	MSP	Motor Starter Panelboard
APPROX	Approximately	MSBD	Main Switchboard
AQ-STAT	Aquastat	MSS	Motor Starter Switch
ARCH	Architect, Architectural	MT	Mount
AS	Amp Switch	MT.C	Empty Conduit
AT	Amp Trip	MTS	Manual Transfer Switch
ATS	Automatic Transfer Switch	MTR	Motor, Motorized
AUTO	Automatic	N.C.	Normally Closed
AUX	Auxiliary	NEC	National Electrical Code
AV	Audio Visual	NEMA	National Electrical Manufacturer's Association
AWG	American Wire Gauge	NFDS	Non-Fused Safety Disconnect Switch
BATT	Battery		
BD	Board	NIC	Not In Contract
BLDG	Building	NL	Night Light
BMS	Building Management System	N.O.	Normally Open
C	Conduit	NPF	Normal Power Factor
CAB	Cabinet	NTS	Not To Scale
CAT	Catalog	OC	On Center
CATV	Cable Television	OH	Overhead
CB	Circuit Breaker	OL	Overloads
CCTV	Closed Circuit Television	PA	Public Address
CKT	Circuit	PB	Pull Box Or Pushbutton
CLG	Ceiling	PE	Pneumatic Electric
COMB	Combination	PED	Pedestal
CMPR	Compressor	PF	Power Factor
CONN	Connection	PH	Phase
CONST	Construction	PIV	Post Indicating Valve
CONT	Continuation Or Continuous	PNL	Panel
CONTR	Contractor	PP	Power Pole
CONV	Convector	PR	Pair
CP	Circulating Pump	PRI	Primary
CRT	Cathode-Ray Tube	PROJ	Projection
CT	Current Transformer	PRV	Power Roof Ventilator
CTR	Center	PT	Potential Transformer
CU	Copper	PVC	Polyvinyl Chloride (Conduit)
DCP	Domestic Water Circulating Pump	PWR	Power
DEPT	Department	QUAN	Quantity
DET	Detail	RCPT	Receptacle
DIA	Diameter	REQD	Required
DISC	Disconnect	RM	Room
DIST	Distribution	RSC	Rigid Steel Conduit
DN	Down	RTU	Roof Top Unit
DPR	Damper	SC	Surface Conduit
DS	Safety Disconnect Switch	SEC	Secondary
DT	Double Throw	SHT	Sheet
DWG	Drawing	SIM	Similar
EC	Electrical Contractor	SLD	Single-Line Diagram
ELEC	Electric, Electrical	S/N	Solid Neutral
ELEV	Elevator	SPEC	Specification
ELU	Emergency Lighting Unit	SPKR	Speaker
EM	Emergency	SP	Spare
EMS	Energy Management System	SPP	Single-Point Power
EMT	Electrical Metallic Tubing	SR	Surface Raceway
EP	Electric Pneumatic	SS	Stainless Steel
EQUIP	Equipment	SSW	Selector Switch
EWC	Electric Water Cooler	S/S	Stop/Start Pushbuttons
EXIST	Existing	STA	Station
EXH	Exhaust	STD	Standard
EXP	Explosion Proof	SURF	Surface Mounted
FA	Fire Alarm	SW	Switch
FABP	Fire Alarm Booster Power Supply Panel	SWBD	Switchboard
		SYM	Symmetrical
FACP	Fire Alarm Control Panel	SYS	System
FCU	Fan Coil Unit	TEL	Telephone
FIXT	Fixture	TERM	Terminal
FLR	Floor	TL	Twist Lock
FLUOR	Fluorescent	TR	Tamper Resistant
FU	Fuse	T-STAT	Thermostat
FUDS	Fused Safety Disconnect Switch	TTC	Telephone Terminal Cabinet
GA	Gauge	TV	Television
GAL	Gallon	TVTC	Television Terminal Cabinet
GALV	Galvanized	TYP	Typical
GC	General Contractor	UC	Under Counter
GEN	Generator	UE	Underground Electrical
GFI	Ground Fault Circuit Interrupter	UG	Underground
GFP	Ground Fault Protector	UH	Unit Heater
GND	Ground	UT	Underground Telephone
GRS	Galvanized Rigid Steel (Conduit)	UTIL	Utility
GYP BD	Gypsum Board	UV	Ultraviolet
HOA	Hands-Off-Automatic Switch	V	Volt
HORIZ	Horizontal	VA	Volt-Amperes
HP	Horsepower	VDT	Video Display Terminal
HPF	High Power Factor	VERT	Vertical
HT	Height	VFD	Variable Frequency Drive
HTG	Heating	VOL	Volume
HTR	Heater	W	Watt
HV	High Voltage	W/	With
HVAC	Heating, Ventilating And Air Conditioning	WG	Wire Guard
		WH	Water Heater
IC	Interrupting Capacity	W/O	Without
IG	Isolated Ground	WP	Weatherproof
IMC	Intermediate Metal Conduit	XFMR	Transformer
INCAND	Incandescent	XFR	Transfer
IR	Infrared		
I/W	Interlock With		
J-BOX	Junction Box		
KV	Kilovolt	∠	Angle
KVA	Kilovolt-Ampere	@	At
KVAR	Kilovolt-Ampere Reactive	▲	Delta
KW	Kilowatt	'	Feet
KWH	Kilowatt Hour	"	Inches
LOC	Locate Or Location	#	Number
LT	Light	Ø	Phase
LTG	Lighting	C	Center Line
LTNG	Lightning	P	Plate
LV	Low Voltage		
MAX	Maximum		
MAG.S	Magnetic Starter		
M/C	Momentary Contact		
MC	Mechanical Contractor		

15cd

ELECTRICAL SYMBOL LEGEND

- A — TYPICAL FIXTURE DESIGNATIONS. "A" INDICATES FIXTURE TYPE. SEE LIGHT FIXTURE SCHEDULE FOR DESCRIPTION.
- E — "E" INDICATES EMERGENCY BATTERY W/ LIGHT FIXTURE
- LIGHT FIXTURES, WITH FIXTURE DESIGNATION
- WALL MOUNTED EXIT SIGN. SHADED AREAS INDICATE NUMBER OF FACES, DIRECTION ARROWS AS INDICATED.
- CEILING MOUNTED EXIT SIGN. SHADED AREAS INDICATE NUMBER OF FACES, DIRECTION ARROWS AS INDICATED.
- WALL MOUNTED EMERGENCY BATTERY UNIT.
- $ — TOGGLE SWITCH, MOUNT CENTER AT 46"AFF.
- $3 — THREE-WAY SWITCH, MOUNT CENTER AT 46"AFF.
- $D — DIMMING SWITCH 0-10V, MOUNT CENTER AT 46"AFF.
- $OC — OCCUPANCY SENSOR WALL SWITCH, MOUNT CENTER AT 46"AFF.
- OS — CEILING MOUNTED OCCUPANCY SENSOR
- SBPG-6 — HOME RUN TO PANEL WITH PANEL DESIGNATION (SBPG) & CIRCUIT NUMBER (6). 3/4"C UNLESS NOTED OTHERWISE, SEE RISER DIAGRAM & PANELBOARD SCHEDULES FOR WIRE & CONDUIT SIZES.
- WIRING IN CONDUIT CONCEALED IN WALLS AND ABOVE CEILING.
- WIRING IN CONDUIT UNDERFLOOR OR UNDERGROUND.
- 10'-0" DRIVEN GROUND ROD
- DUPLEX RECEPTACLE, MOUNT CENTER AT 18" AFF UNLESS NOTED OTHERWISE
- SINGLE RECEPTACLE, RATING SHALL MATCH BREAKER SIZE
- PANELBOARD, SEE SCHEDULES & DETAILS.
- DISCONNECT SWITCH
- JUNCTION BOX
- CONCEALED SERVICE FLOOR BOX WITH DUPLEX RECEPTACLE
- CONCEALED SERVICE FLOOR BOX WITH DUPLEX RJ45
- DATA/DATA JACK, DATA JACK, CENTER AT 18" AFF.

Electrical General Notes

A Conductors operating at 50 volts or greater shall be in raceway. Raceway within the structure above the floor slab shall be metal. Raceway below the floor slab and underground raceway outside the structure shall be PVC.

B Low voltage cables or conductors operating at less than 50 volts shall be in metal raceway where installed within walls or inaccessible spaces. Low voltage cables may be run in cable tray where noted. Low voltage cables may be run in cable support hooks above accessible ceilings where noted. Low voltage cable shall be plenum rated in plenum spaces.

B Low voltage cables or conductors operating at less than 50 volts shall be in metal raceway. Low voltage cables may be run in cable tray where noted. Low voltage cable shall be plenum rated in plenum spaces.

C Coordinate locations of devices with architectural elevations and details. Architectural elevations and details take precedence over locations shown on electrical drawings.

D Provide cable or conduit and wire as required to achieve circuiting shown. Size conductors per NEC ampacity and wire fill criteria. Provide dedicated neutral and ground conductors for circuiting, unless noted otherwise. Increase branch circuit and/or feeder conductors including equipment grounding conductors proportionally for no more than 3% voltage drop on branch circuits and 2% on feeders per energy code.

E It is the responsibility of this contractor to coordinate installation of electrical systems and those requiring electrical connections to maintain NEC required clearances, included but not limited to areas above accessible ceilings.

F Coordinate with other trades for proper installation of equipment. Consult the drawings of other trades or crafts to avoid conflicts with equipment, etc. Conflicts shall be resolved prior to rough-in and at no additional cost to the owner.

G Leave the site clean and ready for occupancy. Remove dirt, debris, empty cartons, tools, conduit and wire scraps, and miscellaneous spare equipment and materials used in this division of the work during construction. Components shall be free of dust, grit, and foreign materials and left as new before final acceptance of work.

H The symbols and abbreviations shown on this sheet may or may not be used in this set of drawings.

I Perform work to comply with the standard practices for good workmanship published by National Electrical Contractors Association (NECA). Comply with the latest enforced edition of the National Electrical Code (NEC), local codes, amendments, and ordinances.

J Field coordinate final mechanical and equipment locations along with connection requirements and control wiring prior to rough-in. Adjust corresponding circuit breaker ratings and branch circuiting accordingly.

K Electrical work shall be performed under the supervision of a licensed master electrician. Procure permits and licenses and pay fees associated with this work.

L Materials furnished for this project shall be new, commercial grade, free of defects, and listed by a nationally recognized testing laboratory unless noted otherwise.

M Provide complete operation & maintenance manual including approved submittal drawings, warranty information for product supplied, and manufactures operation and maintenance instructions.

N The contractor is responsible for making final wiring terminations to pre-installed receptacles in office furniture. Contractor is responsible for wiring and installing voice/data devices in office furniture. Coordinate placement of devices with furniture lay-out.

O Security system to be provided under separate contract. It is the responsibility of this contractor to provide conduit provisions, back boxes, rough-ins, sleeves and power to head end equipment for exact requirements prior to start of work.

P Conduit and wire shall not be installed below floor slab unless indicated on plan by dashed conduit.

Q Contractor shall be responsible for wiring electrical items shown on drawings except for items listed in note 'R' below.

R TV outlets, volume controls, nurse call dome lights, nurse call devices, telephone outlets, data outlets, and fire alarm devices shall consist of a back box with conduit stubbed above the accessible ceiling, see stub up detail. Verify size of back box required with device to be installed. Locate back boxes 6" from adjacent power receptacle intended for computer use.

S Furnish and install conduit from back boxes for the following devices into the accessible ceiling space in the corridor, unless noted otherwise:
- 1/2"C TV outlets
- 1/2"C Volume controls
- 1/2"C Door security devices (card readers, door strikes etc..)
- 1/2"C Nurse call dome lights
- 3/4"C Nurse call devices
- 3/4"C Telephone outlets
- 3/4"C Information outlets
- 3/4"C Fire alarm devices

EAST PARCEL ELECTRICAL SHEET INDEX

ES-E001	COVER SHEET
ES-E101	POWER AND LIGHTING PLANS
ES-E301	RISERS
ES-E401	DETAILS

EAST SHELTER

ELECTRICAL SYSTEM AND EQUIPMENT

METHOD OF COMPLIANCE:

ENERGY CODE: PRESCRIPTIVE__X__ PERFORMANCE_____

ASHRAE 90.1: PRESCRIPTIVE_____ PERFORMANCE_____

LIGHTING SCHEDULE

Lamp type required in fixture - See Fixture Schedule.
Number of lamps in fixture - See Fixture Schedule.
Ballast type used in the fixture - See Specifications.
Number of ballasts in fixture - See Specifications.
Total wattage per fixture - Varies - See Fixture Schedule

Total interior wattage specified versus allowed: 309 watts versus 437 watts (whole building)
Total exterior wattage specified versus allowed: 314 watts versus 1747 watts

ADDITIONAL PRESCRIPTIVE COMPLIANCE

___ 406.2 More Efficient HVAC Performance
_X_ 406.3 Reduced Lighting Power Density
___ 406.4 Enhanced Lighting Controls
___ 406.5 On-Site Supply of Renewable Energy
___ 406.6 Provision of Dedicated Outdoor HVAC Air System
___ 406.7 High Efficiency Service Water Heating

DESIGNER STATEMENT:
To the best of my knowledge and belief, the design of this building complies with the electrical system and equipment requirements of the 2018 North Carolina State Building Code, Energy Conservation Code.

LIGHT FIXTURE SCHEDULE

MARK	FIXTURE DESCRIPTION	MOUNTING	TYPE	LUMENS	TOTAL WATTS	VOLTS	MODEL # (OR EQUAL)	NOTE NO.
A4P	4' X 2.5" RECTANGULAR LINEAR PENDANT FIXTURE	PENDANT	LED	2000	15	120	FOCAL POINT # FSM2LS-BW-500LF-935K-120LD1-C48-WH-4	1,7
A6P	6' X 2.5" RECTANGULAR LINEAR PENDANT FIXTURE	PENDANT	LED	3000	23	120	FOCAL POINT # FSM2LS-BW-500LF-935K-120LD1-C48-WH-6	1,7
A8P	8' X 2.5" RECTANGULAR LINEAR PENDANT FIXTURE	PENDANT	LED	4000	29	120	FOCAL POINT # FSM2LS-BW-500LF-935K-120LD1-C48-WH-8	1,7
A6F	8' X 2.5" RECTANGULAR LINEAR RECESSED FIXTURE	RECESSED IN GYP	LED	4000	29	120	FOCAL POINT # FSM2LS-BW-500LF-935K-120LD1-TF-WH-8	7
B2	2' X 2' LED LAY-IN FIXTURE	LAY-IN	LED	4000	51	120	FOCAL POINT # FEQ2-22-AC- 5000L-92765T-1C-UNV-LD1-G-WH	7
C6	6" ROUND RECESSED DOWNLIGHT	RECESSED	LED	2000	23	120	FOCAL POINT # FLC6D-RF-2000L-120-LD1-T-LC6-RD-935K-DN-CD-WH	7
D	8'X4' THREE GLOBE OVAL PENDANT	PENDANT	LED	4500	57	120	BUZZISURF #LED TRIO GLOBE120V 3500K	7
CP4	4.5" ROUND PENDANT CYLINDER FIXTURE	PENDANT	LED	2000	26	120	FOCAL POINT # FLCY4-RD-WHG- 2000L-935K-1C-120-SC-LH1-C72-G-WFL-CD-WH	
CX	6" ROUND RECESSED EXTERIOR DOWNLIGHT	RECESSED IN GYP	LED	2500	30	120	FOCAL POINT # FLC6D-RF-2500L-120-LD1-T-LC6-RD-935K-DN-CD-WH-WL	5
PF	15" ROUND PENDANT CANOPY FIXTURE	PENDANT TO 10'	LED	4087	50	120	LUMINIS #EG151-L2L40-SYM-35K-MVOLT-SPG-24-BZT	5
H1	22" ROUND PENDANT SHADE	PENDANT	LED	959	10	120	LIGHT ART # ACC-SHPE-EMP-22D-VL--ZN-STD-RWPC-WH-WPF-935CK-900LM-WFL-LV01	
H2	8'X4' RECTANGULAR PENDANT WING	PENDANT	LED	4400	46	120	LIGHT ART # ACC-SHPE-WING-96L-OCH--FELT-STD--935CK-550LM-PO1-STD -WPC-WH	
V1	24"W LINEAR VANITY FIXTURE	WALL	LED	1500	18	120	LITHONIA # FMVTSL 24IN MVOLT 30K 90CRI BN M4	3
V2	24"W VANDAL RESISTANT VANITY FIXTURE	WALL	LED	1500	18	120	LITHONIA # LVP524 2FT MIN1 15W 35K 120 CLP WHT	3
W2	6"X 10"X4" EXTERIOR WALL SCONCE	WALL	LED	465	12	120	LITHONIA # WDGE1 LED P2 35K 80CRI VF MVOLT SRM PE E4WH DDBXD	1,5
L2	POLE MOUNTED AREA DOWN LIGHT NEMA II DISTRIBUTION	POLE	LED	24500	194	208	LITHONIA #RSX3 LED P1 40K R3 MVOLT SPA PE DDBXD	2,6
L1	POLE MOUNTED AREA DOWN LIGHTS WITH NEMA II DISTRIBUTION	POLE	LED	6259	57	208	LUMINIS # BVA21-LIL60-LD2-35K-MVOLTNLTMSH-BKT	6
S4	4'X6" LED SERVICE LIGHT	SURFACE	LED	3000	25	120	LITHONIA #ZL1N L48 3000LM FST MVOLT 40K 80CRI	
S8	8'X6" LED SERVICE LIGHT	SURFACE	LED	3000	25	120	LITHONIA #ZL1N L96 6000LM FST MVOLT 40K 80CRI	
CR4	4'X5" LED CORROSION RESISTANT LIGHT	SURFACE	LED	5300	40	120	NUVO #65-821R1	
X	LED EGDE LIT EXIT SIGN	WALL- 8" ABOVE DOOR	LED	3000	25	120	LITHONIA #EDG-X-G-EL	

NOTES:
1 - SEE ARCHITECTURAL ELEVATIONS & COORD. W/ G.C. FOR MOUNTING HEIGHT.
2 - PROVIDE 16 ' 4" SQUARE ALUMINUM POLE, ASSOCIATED MOUNTING ARMS AND ACCESSORIES
3 - MOUNT FIXTURE ABOVE MIRROR
4 - PROVIDE INTEGRAL MOTION SENSING CONTROL
5 - WET LABEL
6 - PROVIDE PHOTCELL CONTROL
7 - 0-10V DIMMING

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NORTH CAROLINA PROFESSIONAL
Signed by: 16765
REGISTERED ENGINEER
ROBERT E. EGAN
7/24/2026

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 07/27/26

ES-E001

ES-E201

Date: 07/27/26

REVISIONS

LAKE MYRA COUNTY PARK
Wake County, NC

ELECTRICAL SITE PLAN EAST

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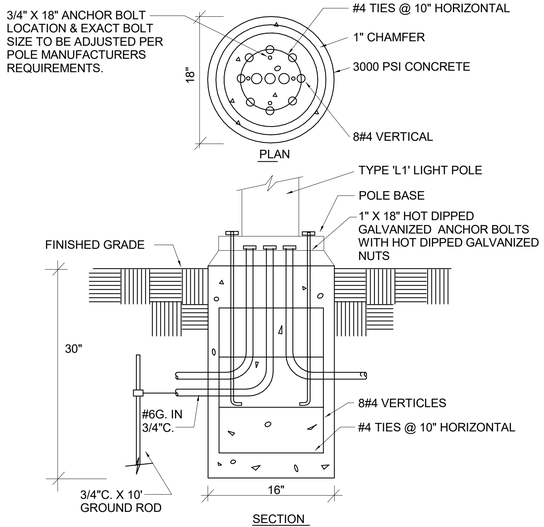

1 ES-E401 FLUSH POLE BASE DETAIL
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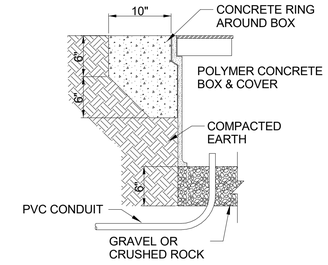

3 ES-E401 HANDHOLE INSTALLATION DETAIL
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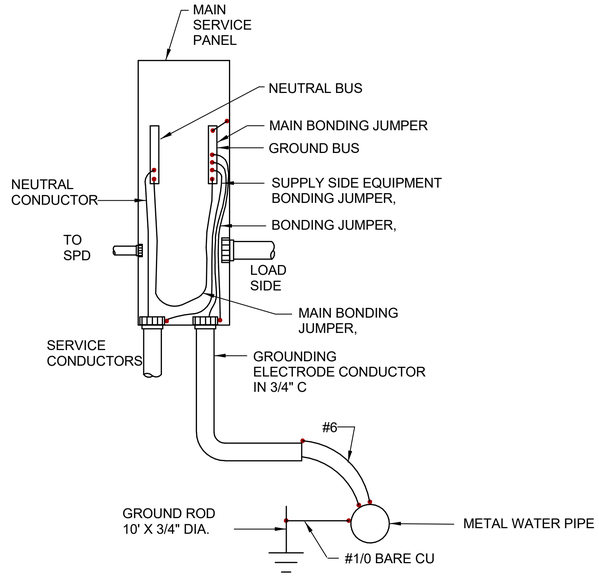
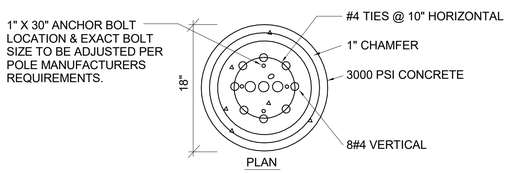
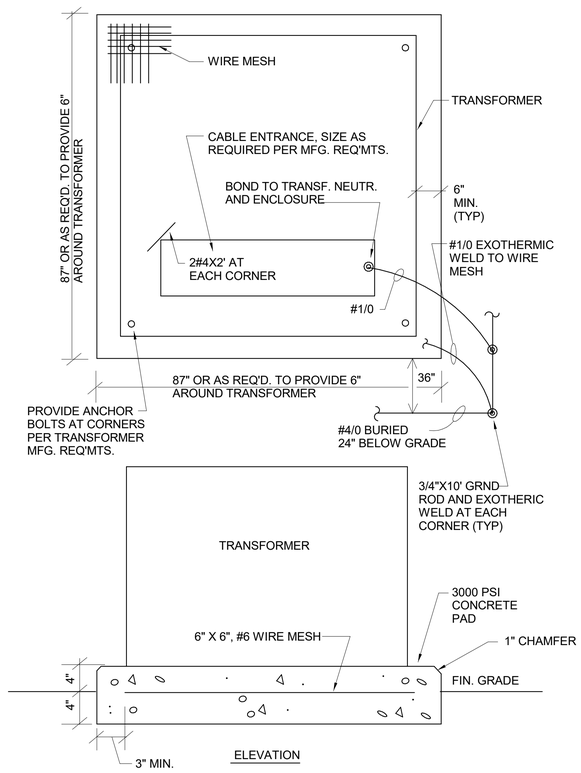


5 ES-E401 SERVICE GROUNDING DETAIL
NOT TO SCALE:



2 ES-E401 RAISED POLE BASE DETAIL
NOT TO SCALE:



4 ES-E401 TRANSFORMER PAD DETAILDUCT BANK SECTION
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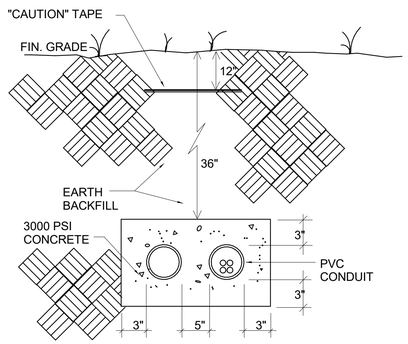

6 ES-E401 DUCT BANK SECTION
NOT TO SCALE:

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DETAILS

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REGISTERED LANDSCAPE ARCHITECT
ROBERT E. EGAN
7/24/2026

LAKE MYRA COUNTY PARK
Wake County, NC

REVISIONS

Date: 07/27/26

ES-E401