



CITY COUNCIL MEETING & PUBLIC HEARING JANUARY 3, 2023

ALPHARETTA CITY HALL
COUNCIL CHAMBERS
2 PARK PLAZA
6:30 PM

- I. **CALL TO ORDER**
- II. **ROLL CALL**
- III. **PLEDGE TO THE FLAG**
- IV. **PRESENTATIONS & PROCLAMATIONS**
 - A. **Proclamation: Fulton County Board of Education Member, Katie Reeves**
 - B. **Honoring Investments in Recruiting and Employing American Military Veterans Gold Medallion Award**
- V. **BOARDS & COMMISSIONS**
 - A. **Planning Commission: Alternate Appointment by the Mayor and City Council**
 - B. **Board of Zoning Appeals: Board Member Appointment by Mayor Pro Tem Merkel**
 - C. **Swearing-In of City Board and Commission Members**
- VI. **CONSENT AGENDA**
 - A. **Council Meeting Minutes (Meeting of 12/12/2022)**
Approval of the City Council meeting minutes from the December 12, 2022 meeting.
 - B. **City Benefits Package: Increasing Costs towards Peace Officer Annuity Benefit Fund and Georgia Firefighter's Pension Fund**
Approval of adding to the City's Benefits Package the coverage of costs for the supplemental retirement plans offered through the Peace Officers' Annuity and Benefit Fund (POAB) and the Georgia Firefighters' Pension Fund (GFPF).
 - C. **Georgia Law Enforcement Certification Program Agency Application & Participation Agreement**
Approval of the Georgia Law Enforcement Certification Program Agency Application & Participation Agreement and authorization of the Mayor to execute all necessary and related documents.
- VII. **PUBLIC HEARING**
 - A. **Ordinance: Failure to Appear**
Consideration of an Ordinance to amend Article I of Chapter 30 of the Code of the City of Alpharetta, Georgia, to add a provision related to Section 30-8 (Currently Reserved); to provide an effective date; and for other purposes.
- VIII. **OLD BUSINESS**
 - A. **PH-22-15 Unified Development Code (UDC) Text Amendments – Tree Conservation, Landscape, and Buffer Requirements**
Second Reading
First Reading occurred during the December 12, 2022 City Council Meeting & Public Hearing.
Consideration of text amendments to the Unified Development Code related to tree preservation in the Downtown Overlay. Regulations are proposed requiring that specimen trees and trees of quality be conserved if they are located within building setbacks along certain roads, including Academy Street, Canton Street, Church Street, Cumming Street, Marietta Street, Mayfield Road, Milton Avenue, and Roswell Street.

IX. NEW BUSINESS

A. Contract Award: ITB # 23-004 Big Creek Greenway Boardwalk Replacement

Approval of award of ITB 23-004 to Excellere Construction, LLC for the replacement of the Big Creek Greenway Boardwalk near Mansell Road for an amount not to exceed \$2,240,000.00 and authorize the Mayor to execute all necessary documents.

B. Intergovernmental Agreement: Alpharetta Jail

Approval of an Intergovernmental Agreement by and between the City of Alpharetta, Georgia, the City of Milton, Georgia, the Fulton County Sheriff's Office, and Fulton County, Georgia, to Board and Provide for the Housing of Inmates at the Alpharetta Jail.

X. WORKSHOP ITEMS

A. Alpha Loop Tunnel under Haynes Bridge Road

Discussion of options in constructing a tunnel under Haynes Bridge Road for the Alpha Loop.

XI. PUBLIC COMMENT

XII. REPORTS

XIII. EXECUTIVE SESSION (IF NEEDED)

XIV. ADJOURNMENT



STAFF REPORT

Submitting Department: City Clerk

Submitted By: Lauren Shapiro

Sponsored By:

Meeting Date: January 3, 2023

I. AGENDA ITEM TITLE: PROCLAMATION: FULTON COUNTY BOARD OF EDUCATION MEMBER, KATIE REEVES

II. RECOMMENDATION:

This proclamation is for presentation purposes only.

III. BUDGET IMPLICATIONS:

BUDGETED ITEM: NO

FISCAL IMPACT: NO

INCLUDED IN CURRENT FY CPTL BUDGET: NO

INCLUDED IN CURRENT FY OPRT. BUDGET: NO

TOTAL PROJECT COST:

APPROPRIATIONS:

<u>ACCOUNT TITLE/NUMBER</u>	<u>DOLLAR AMOUNT</u>
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EXTERNAL FUNDING SOURCES:

<u>ACCOUNT TITLE/NUMBER</u>	<u>DOLLAR AMOUNT</u>
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IV. REPORT IN BRIEF:

V. ALTERNATIVES:

VI. ATTACHMENTS:



STAFF REPORT

Submitting Department: Human Resources

Submitted By: Lauren Shapiro

Sponsored By:

Meeting Date: January 3, 2023

I. AGENDA ITEM TITLE: HONORING INVESTMENTS IN RECRUITING AND EMPLOYING AMERICAN MILITARY VETERANS GOLD MEDALLION AWARD

II. RECOMMENDATION:

This item is for presentation purposes only.

III. BUDGET IMPLICATIONS:

BUDGETED ITEM: NO

FISCAL IMPACT: NO

INCLUDED IN CURRENT FY CPTL BUDGET: NO

INCLUDED IN CURRENT FY OPRT. BUDGET: NO

TOTAL PROJECT COST:

APPROPRIATIONS:

<u>ACCOUNT TITLE/NUMBER</u>	<u>DOLLAR AMOUNT</u>
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EXTERNAL FUNDING SOURCES:

<u>ACCOUNT TITLE/NUMBER</u>	<u>DOLLAR AMOUNT</u>
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IV. REPORT IN BRIEF:

The Honoring Investments in Recruiting and Employing American Military Veterans (HIRE Vets) Medallion Award is the only federal award recognizing exceptional achievement in veteran employment.

This is the second consecutive year that the City of Alpharetta has received this award. In 2021, 10.6% of the City's employees were veterans (44%), and we retained 100% of the ones hired the prior year (2020).

V. ALTERNATIVES:

VI. ATTACHMENTS:



STAFF REPORT

Submitting Department: City Clerk

Submitted By: Lauren Shapiro

Sponsored By:

Meeting Date: January 3, 2023

I. AGENDA ITEM TITLE: COUNCIL MEETING MINUTES (MEETING OF 12/12/2022)

APPROVAL OF THE CITY COUNCIL MEETING MINUTES FROM THE DECEMBER 12, 2022 MEETING.

II. RECOMMENDATION:

Approve the City Council Meeting minutes from the meeting of December 12, 2022.

III. BUDGET IMPLICATIONS:

BUDGETED ITEM: NO

FISCAL IMPACT: NO

INCLUDED IN CURRENT FY CPTL BUDGET: NO

INCLUDED IN CURRENT FY OPRT. BUDGET: NO

TOTAL PROJECT COST:

APPROPRIATIONS:

<u>ACCOUNT TITLE/NUMBER</u>	<u>DOLLAR AMOUNT</u>
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EXTERNAL FUNDING SOURCES:

<u>ACCOUNT TITLE/NUMBER</u>	<u>DOLLAR AMOUNT</u>
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IV. REPORT IN BRIEF:

City Clerk, Lauren Shapiro, attended, recorded, and prepared a synopsis of the pertinent information that occurred during the City Council Meeting and Public Hearing on December 12, 2022 at 6:30 p.m.

V. ALTERNATIVES:

VI. ATTACHMENTS:

CC Minutes 12.12.2022



City Council Meeting & Public Hearing
DECEMBER 12, 2022
UNOFFICIAL MINUTES
Office of the City Clerk

ALPHARETTA CITY HALL
COUNCIL CHAMBERS | 2 PARK PLAZA | 12:00 PM

This action summary is provided as a convenience and service to the public, media and staff. It is not the intent to record proceedings verbatim. Any reproduction of this summary must include this notice. This is not an official record of the Alpharetta City Council Meeting proceedings. Meetings are recorded and available for review at <https://www.youtube.com/user/alpharettagov>.

I. CALL TO ORDER

- Mayor Gilvin called the meeting to order at 6:30 p.m.
- Mayor Gilvin announced that CU-22-10 Foamworks Alpharetta / 11725 Cotton Creek Entry has been deferred by the applicant and will not be heard during tonight's meeting. This application will be heard during the January 17, 2023 City Council Meeting & Public Hearing.

II. ROLL CALL

- **Council Members**
 - Mayor Jim Gilvin
 - Mayor Pro Tem Dan Merkel
 - Donald F. Mitchell
 - Douglas J. DeRito
 - Brian Will
 - John Hipes
 - Jason Binder
- **Council Members Absent**
 - Jason Binder
- **Staff**
 - Chris Lagerbloom, City Administrator
 - Molly Esswein, City Attorney with Jarrard & Davis
 - James Drinkard, Asst. City Administrator
 - Lauren Shapiro, City Clerk
 - Brooke Lappin, Director of Municipal Court

- John Robison, Director of Public Safety
- Kathi Cook, Director of Community and Economic Development
- Morgan Rodgers, Director of Parks, Recreation, and Cultural Services
- Pete Sewczwicz, Director of Public Works
- Randy Bundy, Director of Information Technology
- Thomas Harris, Director of Finance
- Amanda Musilli, Community Services Manager
- Michael Woodman, Planning & Development Services Manager

III. PLEDGE TO THE FLAG

IV. PRESENTATIONS & PROCLAMATIONS

A. Proclamation: Fulton County Commissioner Liz Hausmann

- Mayor Gilvin and City Council presented Fulton County Commissioner Liz Hausmann with a proclamation to thank her for her service in representing the City of Alpharetta.

B. The Bees Needs Fundraiser: Donor Appreciation

- Mayor Gilvin, Council Member Hipes, and Community Services Manager, Amanda Musilli, presented an appreciation award to the following community members who donated to the Bees Needs Fundraiser.
 - Bev Shiotelis
 - Jessica Jackson and Rae Shepard
 - Melanie Bailey
 - Whitney Cresci
 - Deborah Honan
 - Elle and Lauren Batchelor
 - Judith Dovers
 - Sally, Ian and Jemma Rose
 - Randall Kent and Anthony DeLong
 - Tiffany Jansen
 - Andrea Stalemark

V. CONSENT AGENDA

A. Special Called Council Meeting Minutes (Meeting of 11/9/2022)

Approval of the City Council meeting minutes from the November 9, 2022 Special Called meeting.

B. Council Meeting Minutes (Meeting of 11/28/2022)

Approval of the City Council meeting minutes from the November 28, 2022 meeting.

C. Alcoholic Beverage License Applications

Approval of the following alcoholic beverage license application:

i. PH-22-AB-36 First Watch Restaurants, Inc.

d/b/a First Watch #10015035 Windward Parkway, Alpharetta, GA 30004

Restaurant

Consumption on Premises

Liquor, Beer, Wine & Sunday Sales

Owner: First Watch Restaurants, Inc.

Registered Agent: Todd C. Smith

D. Financial Management Report (Month Ending October 31, 2022)

Approval of the Financial Management Report for the month ending October 31, 2022.

E. Intergovernmental Agreement: Fulton County Animal Control Services

Approval of the First Extension of the Intergovernmental Agreement for the provision of animal control services between Fulton County, Georgia and Alpharetta, Georgia.

F. Contract Award: Professional Probation Services, Inc. for Probation Supervision and Rehabilitation Services

Approval of the Contract for probation supervision and rehabilitation services between the City of Alpharetta and Professional Probation Services, Inc.

G. Cities of Alpharetta & Johns Creek Parks Without Borders Memorandum of Understanding

Consideration of a Memorandum of Understanding between the City of Alpharetta and the City of Johns Creek to allow residents and employees to access each city's softball, baseball, lacrosse, and soccer programs and facilities at the respective city's resident rate and to authorize the Mayor to execute all necessary documents.

H. City of Alpharetta – Northside Hospital, Inc. Memorandum of Understanding

Consideration of the Memorandum of Understanding between the City of Alpharetta and Northside Hospital, Inc. to renew the partnered sponsorship program focusing on the health and wellness aspects of the city's parks and programs and to authorize the mayor to execute all related documents.

I. City of Alpharetta Youth Athletic Association Facility Use agreement: 2023 Renewal

Approval of the 2023 facility use agreements between the City of Alpharetta and the Alpharetta Youth Baseball Association, the Alpharetta Girls Youth Softball Association, Inc., the Alpharetta Ambush Soccer Club, Inc., and the North Atlanta Football League respectively, and to authorize the mayor to execute all necessary documents.

❖ Council Member DeRito offered a motion to approve the Consent Agenda.

○ Mayor Pro Tem Merkel seconded the motion.

- The motion was approved unanimously (6-0).

VI. PUBLIC HEARING

A. Z-22-14 / CU-22-08 / V-22-27 North Fulton Pharmacy / 2385 Old Milton Parkway

Consideration of a rezoning, conditional use and variances to allow for the construction of an 8,000 SF office over retail building and 8 'For-Sale' townhomes on 1.31 acres in the Downtown. A rezoning is requested from R-12 (Dwelling, 'For-Sale', Residential) to DT-LW (Downtown Live-Work) and a conditional use is requested to allow a 'Drug Store (Pharmacy)' and 'Restaurant' to allow a coffee shop. A variance is requested to allow front loaded townhome units. The property is located at 2385 Old Milton Parkway and is legally described as being located in Land Lot 748, 1st District, 2nd Section, Fulton County, Georgia.

- Planning & Development Services Manager, Michael Woodman, came forward to present this item.
- This item was considered at the 12/1/2022 Planning Commission meeting. Staff recommended approval subject to 28 conditions. There was one (1) public comment in support of the applicant's request. After discussion, Planning Commission recommended approval subject to staff's recommended conditions and adding language to conditions #2 and 26 (vote 6-0).
- Staff is recommending that Mayor and Council approve Z-22-14 / CU-22-08 / V-22-27 / 2385 Old Milton Parkway subject to the following conditions:
 1. Approximately 1.31 acres shall be zoned DT-LW and developed substantially similar to site plan prepared by KSi Design Group, labeled Exhibit A, except for modifications required to comply with the conditions below. However, lot yield depicted is not guaranteed and subject to meeting all City code requirements and conditions of zoning.
 2. Architecture and materials shall be substantially similar to the submitted renderings, labeled Exhibit B, and developed in compliance with the Downtown Code building design regulations and Downtown Consultant comments, subject to final approval by DRB. Storefront glass shall not extend to the ground. Non-residential building and townhomes shall have 4-sided architecture, materials and details.
 3. Density shall not exceed 6.11 dwelling units per acre.
 4. Developer shall improve Old Milton Parkway streetscape with a minimum 4' planter planted with street trees and/or shrubs (subject to Staff and GDOT approval), minimum 8' sidewalk west of project entrance and 12' sidewalk east of project entrance, and decorative pedestrian lighting, with final approval by Staff. In lieu of tree grates, the soil area around street trees shall

be planted with evergreen ornamental grasses, groundcovers and/or shrubs.

5. Minimum 20' landscape strip/building setback shall be provided along Old Milton Parkway. Landscape strip shall be planted with shade trees as a continuation of what has been planted or designed in the Downtown and outside of utility easements and overhead utilities, as approved by DRB.
6. New internal street, alley and sidewalks shall be developed as depicted on the site plan prepared by KSi Design Group, labeled Exhibit A, with final approval by Staff. Decorative pedestrian lighting shall be required throughout the development. Internal streets and alleys shall be private and maintained by the HOA.
7. Minimum 10' landscape strip shall be required along both sides of internal street, not including the alley. Landscape strips shall be exclusive of utilities and easements, except that if Fulton County requires an unencumbered easement shrubs shall replace tree requirements on one side of the street.
8. Landscape strips along the west, south and east property lines shall be planted with a double row of evergreen and hardwood trees and shrubs adjacent to the on-site townhomes and adjacent to the residential portion of Chelsea Walk, as approved by DRB.
9. Project entrance shall include a decorative paver apron, landscaping, and hardscape, as approved by DRB.
10. Developer shall be responsible for all costs associated with upgrading the Old Milton Parkway traffic signal to accommodate the new development. Traffic signal modification to be complete prior to final plat.
11. Developer shall upgrade the crosswalks across Old Milton Parkway at Kingry Lane to provide an enhanced pedestrian and bicycle crossing, as approved by Staff and GDOT. This improvement shall be eligible for impact fee credits.
12. Open space shall be developed substantially similar to the site plan prepared by KSi Design Group, labeled Exhibit A, as approved by Staff. Open space shall be developed with a park-like setting with decorative landscape, hardscape and seating. Landscape shall include plant selections promoting the historic Downtown.
13. Creeping vines shall be planted to cover retaining and low walls, as approved by DRB.
14. Developer shall save the following specimen trees: #676 (26" Cedar), #677 (50" Water Oak), #678 (44" Water Oak), and #683 (23" Pecan). Construction within the CRZ of saved specimen trees shall be limited to no more than a 20% encroachment and shall be accomplished using innovative

techniques to bridge over the root zones, as approved by Staff. Demolition and construction within the CRZ of saved specimen trees shall be completed under the supervision of an ISA Certified Arborist.

15. Developer shall save additional trees of quality and/or tree groupings, as approved by Staff.
16. Each townhome unit shall have at least 1 tree or large ornamental tree planted in the front yard along the alley, as approved by Staff.
17. Future interparcel connection to the east shall be striped as parking until such time that the adjacent property is developed.
18. Fences and walls visible from the public right-of-way shall be decorative, as approved by DRB. Unfinished wood fences and decks shall not be visible from the street.
19. HVAC and similar equipment shall not be visible from the public right-of-way.
20. Dumpster enclosure shall not be visible from the public right-of-way and shall be no closer than 100' from the adjacent townhomes in Chelsea Walk.
21. Garbage pickup shall be from within the development.
22. Underground stormwater management infrastructure may be placed in the parking lot and private alley as depicted on the site plan prepared by KSi Design Group, labeled Exhibit A, with final approval by Staff. Underground stormwater shall not be located in the fire truck turnaround. Stormwater facilities shall be indicated on the recorded final plat, clearly describing the underground facilities, their function, purpose, ownership, and granting access for inspection, maintenance and repair rights to the HOA and the City. Maintenance responsibilities shall be included in the recorded covenants with all costs to be borne by the HOA, home and business owners of the development.
23. 'No On-Street Parking' signage shall be posted at the hammerhead turnaround, alley and internal street.
24. No more than 1 of the residential units shall be permitted to be rented, as recorded in the HOA's declarations and covenants.
25. 'Drug Store, Pharmacy' and 'Restaurant' shall be added as a conditional use at 2385 Old Milton Parkway. 'Drug Store, Pharmacy' shall be limited to Avalon Pharmacy and no more than 2,500 square feet and 'Restaurant' shall be limited to Avalon Coffee Bar and no more than 1,500 square feet. No additional 'Drug Store, Pharmacy' or 'Restaurant' use or subleasing shall be permitted within the approved spaces.

26. 'Drug Store, Pharmacy' shall be limited to a retail pharmacy and 'Restaurant' shall be limited to a coffee shop. Neither conditional use shall have drive-through facilities.
27. Hours of operation for Avalon Pharmacy should be limited to Monday – Friday 9:00 AM – 6:00 PM and Saturday 10:00 AM – 2:00 PM. Hours of operation for Avalon Coffee Bar shall be limited to Monday – Sunday 8:00 AM – 6:00 PM.
28. There shall be joint property owners association for the entire property providing for the maintenance of site improvements.
- The applicant, Moslem Eskandari, is requesting a rezoning, conditional use and variance to allow for the construction of a two (2) story, 8,000 square foot office over retail building and eight (8) 'For-Sale' townhomes on 1.31 acres in the Downtown. The proposed density is 6.11 dwelling units per acre. A rezoning is requested from R-12 (Dwelling, 'For-Sale', Residential) to DT-LW (Downtown Live-Work) and a conditional use is requested to allow 'Drug Store, Pharmacy' and 'Restaurant' for a coffee shop. A variance is requested to allow townhomes to be front loaded. The subject property is located at 2385 Old Milton Parkway on the south side of Old Milton Parkway at the intersection with Kingry Lane.
 - The property is developed with a one (1) story, 852 square foot single-family detached home. Surrounding properties are zoned O-I (Office-Institutional) to the north and west and DT-LW to the south and east. Chelsea Walk subdivision is located to the south and east, U.S. Postal Office and Cadence Bank are located to the north, and Beauty Facial Plastic Surgery is located to the west. The comprehensive land use plan designation of the property is 'Mixed Use Live Work', which allows the proposed uses.
 - The applicant requests a variance to modify Downtown Overlay site regulations (building orientation) to allow townhomes to be front loaded. The applicant provided a site plan depicting rear loaded townhomes; however, the current site plan is preferred as it saves a 23" Pecan tree in the middle of the property.
 - The submitted site plan depicts a two (2) story, 8,000 square foot office over retail building oriented to Old Milton Parkway with parking to the rear. Access to the property is from a curb cut off Old Milton Parkway at the traffic signal at Kingry Lane. Just south of the parking lot are eight (8), 3-story front-loaded 'For-Sale' townhomes with access from a new private alley. Townhomes are approximately 24' wide. The non-residential building is depicted with a twenty-foot (20') setback and landscape strip along Old Milton Parkway, which is consistent with setbacks approved along Old Milton Parkway in the Downtown.
 - An eight-foot (8') sidewalk is depicted along Old Milton Parkway and a five-foot (5') sidewalk is depicted along the west side of the new private street. Future interparcel

access is accommodated to the east and west. A ten-foot (10') landscape strip is depicted along the new internal street.

- Sixteen (16) parking spaces are depicted to the rear of the non-residential building and an additional eleven (11) parking spaces are depicted on the east side of the new internal street. Townhomes will have two (2) side-by-side parking spaces in a garage and a Code-compliant driveway accommodating two (2) additional cars. Seven (7) shared commercial/guest parking spaces are provided at the end of the new street near the townhomes. As shown in the table below, the Downtown Code requires 40 parking spaces for the proposed development, of which 59 spaces are provided on the site plan.
- The site plan depicts 0.13 acres, or 10.3% amenity space within the proposed development. Amenity space is proposed to include a pocket park at the front of the development and a plaza to the side of the non-residential building, and a central park with tree save area in the middle of the property.
- Nine (9) specimen trees are identified in the applicant's arborist report, of which four (4) are proposed to be saved. Two (2) of the saved specimen trees are located on the subject property with the other two (2) trees are just off-site on the adjacent Chelsea Walk property.
- Underground stormwater management facilities are depicted in the commercial parking lot and at the end of the alley.
- The applicant submitted renderings depicting a two (2) story office over retail building and three (3) story townhomes in the Greek Revival style. Townhomes are depicted to have an exterior of brick, stone and siding and the commercial building has a varied exterior consisting of brick, stone and stucco.
- Staff estimates that the eight (8) townhome units and 8,000 square foot office of retail building would generate approximately 173 AM Peak Hour trips and 94 PM Peak Hour trips.
- Based on the total figure for all three school levels, it can be assumed that the proposed development could house approximately 0 – 5 school age children for Fulton County Schools. Numbers provided by Fulton County Schools show that Northwestern Middle School and Milton High School are over capacity.
- Staff has reviewed the applicant's proposal against the established review criteria for a rezoning, conditional use and variance. The zoning proposal is consistent with the future land use designation of the property and surrounding area, which is 'Mixed Use Live Work'. The zoning proposal is similar to the adjacent Chelsea Walk development, which was approved with a non-residential building at the front and townhomes behind. In addition, the proposed conditional uses would be compatible with surrounding uses and other locations for these businesses, which are similarly situated along commercial corridors.

- The report submitted by the applicant states that property owners within 500' were contacted regarding the applicant's intent. The report states that no comments were received. report states that no comments were received.
- Staff received correspondence from area residents with concerns over proximity of townhomes to Chelsea Walk along the rear property line, height of buildings in relation to Chelsea Walk, overall site density, lack of landscape screening, maintenance of underground detention, and outdoor space on rear townhome building.
- CZIM was held on October 12, 2022. There were public comments with concerns over the close proximity of townhomes to Chelsea Walk, lack of outdoor space for rear townhome building, height of townhomes, and underground detention maintenance with so few townhomes.
- The applicant, Moslem Eskandari, came forward to speak on behalf of this application.

CITY COUNCIL DISCUSSION

- Council Member Will asked about the application of Condition #25.
 - Manager Woodman shared that Condition #25 is limited to the applicant's proposed businesses. For example, a Starbucks could not come into this location at a later date based on tonight's approval.
- Council Member Hipes asked about the signage requirements for this property and asked about the number of signs available for this proposal.
 - Manager Woodman shared that he believes (but would need to confirm) that the applicant would be allotted a monument sign at the front of the development and wall signage for the first-floor retail. Also, he was unsure if the development would be entitled to wall signage for the third floor retail, but generally, the code does all rear signage facing the parking lot (smaller wall sign).

PUBLIC COMMENTS

- There were no public comments.
- ❖ Mayor Pro Tem Merkel offered a motion to approve Z-22-14 / CU-22-08 / V-22-27 / 2385 Old Milton Parkway subject to the following conditions:
 1. Approximately 1.31 acres shall be zoned DT-LW and developed substantially similar to site plan prepared by KSi Design Group, labeled Exhibit A, except for modifications required to comply with the conditions below. However, lot yield depicted is not guaranteed and subject to meeting all City code requirements and conditions of zoning.
 2. Architecture and materials shall be substantially similar to the submitted renderings, labeled Exhibit B, and developed in compliance with the Downtown Code building design regulations and Downtown Consultant comments, subject

to final approval by DRB. Storefront glass shall not extend to the ground. Non-residential building and townhomes shall have 4-sided architecture, materials and details.

3. Density shall not exceed 6.11 dwelling units per acre.
4. Developer shall improve Old Milton Parkway streetscape with a minimum 4' planter planted with street trees and/or shrubs (subject to Staff and GDOT approval), minimum 8' sidewalk west of project entrance and 12' sidewalk east of project entrance, and decorative pedestrian lighting, with final approval by Staff. In lieu of tree grates, the soil area around street trees shall be planted with evergreen ornamental grasses, groundcovers and/or shrubs.
5. Minimum 20' landscape strip/building setback shall be provided along Old Milton Parkway. Landscape strip shall be planted with shade trees as a continuation of what has been planted or designed in the Downtown and outside of utility easements and overhead utilities, as approved by DRB.
6. New internal street, alley and sidewalks shall be developed as depicted on the site plan prepared by KSi Design Group, labeled Exhibit A, with final approval by Staff. Decorative pedestrian lighting shall be required throughout the development. Internal streets and alleys shall be private and maintained by the HOA.
7. Minimum 10' landscape strip shall be required along both sides of internal street, not including the alley. Landscape strips shall be exclusive of utilities and easements, except that if Fulton County requires an unencumbered easement shrubs shall replace tree requirements on one side of the street.
8. Landscape strips along the west, south and east property lines shall be planted with a double row of evergreen and hardwood trees and shrubs adjacent to the on-site townhomes and adjacent to the residential portion of Chelsea Walk, as approved by DRB.
9. Project entrance shall include a decorative paver apron, landscaping, and hardscape, as approved by DRB.
10. Developer shall be responsible for all costs associated with upgrading the Old Milton Parkway traffic signal to accommodate the new development. Traffic signal modification to be complete prior to final plat.
11. Developer shall upgrade the crosswalks across Old Milton Parkway at Kingry Lane to provide an enhanced pedestrian and bicycle crossing, as approved by Staff and GDOT. This improvement shall be eligible for impact fee credits.
12. Open space shall be developed substantially similar to the site plan prepared by KSi Design Group, labeled Exhibit A, as approved by Staff. Open space shall be developed with a park-like setting with decorative landscape, hardscape

and seating. Landscape shall include plant selections promoting the historic Downtown.

13. Creeping vines shall be planted to cover retaining and low walls, as approved by DRB.
14. Developer shall save the following specimen trees: #676 (26" Cedar), #677 (50" Water Oak), #678 (44" Water Oak), and #683 (23" Pecan). Construction within the CRZ of saved specimen trees shall be limited to no more than a 20% encroachment and shall be accomplished using innovative techniques to bridge over the root zones, as approved by Staff. Demolition and construction within the CRZ of saved specimen trees shall be completed under the supervision of an ISA Certified Arborist.
15. Developer shall save additional trees of quality and/or tree groupings, as approved by Staff.
16. Each townhome unit shall have at least 1 tree or large ornamental tree planted in the front yard along the alley, as approved by Staff.
17. Future interparcel connection to the east shall be striped as parking until such time that the adjacent property is developed.
18. Fences and walls visible from the public right-of-way shall be decorative, as approved by DRB. Unfinished wood fences and decks shall not be visible from the street.
19. HVAC and similar equipment shall not be visible from the public right-of-way.
20. Dumpster enclosure shall not be visible from the public right-of-way and shall be no closer than 100' from the adjacent townhomes in Chelsea Walk.
21. Garbage pickup shall be from within the development.
22. Underground stormwater management infrastructure may be placed in the parking lot and private alley as depicted on the site plan prepared by KSi Design Group, labeled Exhibit A, with final approval by Staff. Underground stormwater shall not be located in the fire truck turnaround. Stormwater facilities shall be indicated on the recorded final plat, clearly describing the underground facilities, their function, purpose, ownership, and granting access for inspection, maintenance and repair rights to the HOA and the City. Maintenance responsibilities shall be included in the recorded covenants with all costs to be borne by the HOA, home and business owners of the development.
23. 'No On-Street Parking' signage shall be posted at the hammerhead turnaround, alley and internal street.
24. No more than 1 of the residential units shall be permitted to be rented, as recorded in the HOA's declarations and covenants.

25. 'Drug Store, Pharmacy' and 'Restaurant' shall be added as a conditional use at 2385 Old Milton Parkway. 'Drug Store, Pharmacy' shall be limited to Avalon Pharmacy and no more than 2,500 square feet and 'Restaurant' shall be limited to Avalon Coffee Bar and no more than 1,500 square feet. No additional 'Drug Store, Pharmacy' or 'Restaurant' use or subleasing shall be permitted within the approved spaces.
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27. Hours of operation for Avalon Pharmacy should be limited to Monday – Friday 9:00 AM – 6:00 PM and Saturday 10:00 AM – 2:00 PM. Hours of operation for Avalon Coffee Bar shall be limited to Monday – Sunday 8:00 AM – 6:00 PM.
28. There shall be joint property owners association for the entire property providing for the maintenance of site improvements.
 - Council Member DeRito seconded the motion.
 - Council Member Hipes offered a friendly amendment to add "Condition #29: The entirety of the property is entitled to one monument sign."
 - Mayor Pro Tem Merkel did not accept the friendly amendment, as he would prefer to stick to the City's Code in terms of signage and not add this condition for signage.
 - The motion was approved unanimously (6-0).

B. CU-22-11 Jean-Claude Salon / 312 Maxwell Road, Suite 500

Consideration of a conditional use to allow a 'Barber/Beauty Shop' for Jean-Claude Salon in a 1,100 square foot suite in the Colony Park Offices on South Main. The property is located at 312 Maxwell Road, Suite 500 and is legally described as being located in Land Lot 693, 1st District, 2nd Section, Fulton County, Georgia.

- Planning and Development Services Manager, Michael Woodman, came forward to present this item.
- This item was considered at the 12/1/2022 Planning Commission meeting. Staff recommended approval subject to 5 conditions. There were no public comments. After discussion, Planning Commission recommended approval subject to staff's recommended conditions (vote 6-0).
- Staff is recommending that Mayor and Council approve CU-22-11 Jean-Claude Salon/312 Maxwell Road, subject to the following conditions:

1. 'Beauty Shop' shall be added as a conditional use at 312 Maxwell Road, Suite 500 and limited to no more than 1,100 square feet.
 2. Conditional use approval shall be limited to Jean-Claude Salon; no additional 'Beauty Shop' use or subleasing shall be permitted within the approved space.
 3. 'Beauty Shop' shall be limited to cosmetology services that do not require a customer to disrobe.
 4. Hours of operation shall be limited to Monday – Sunday 9:00 AM – 5:00 PM.
 5. Signage shall be limited to a wall sign no larger than three (3) square feet and located beside the front door. No additional signage shall be permitted. No lighting window trim.
- The applicant, Jean-Claude Salon, is requesting a conditional use to operate a 'Beauty Shop' in a 1,100 square foot suite in an existing building in the Colony Park Offices on South Main. The business provides image and hair consulting services with seniors being the targeted customer. The subject property is located at 312 Maxwell Road near the southeast corner of South Main Street and Maxwell Road.
 - Colony Park Offices on South Main is an office (condominium) park developed with sixteen (16), two (2) story office buildings. A variety of businesses operate in the office park, including medical offices, professional offices, a medical spa, commercial schools, insurance agencies, a bank, law offices, and financial services. The applicant's business is proposed in a building toward the front of the office park. The subject property is zoned O-I (Office-Institutional), which allows 'Beauty Shop' with approval of a conditional use. Surrounding properties are zoned C-2 (General Commercial) to the north, west and south and R-12 (Dwelling, 'For-Sale', Residential) to the east. Alpha Park Subdivision is located to the east; Chevron, Reds Package Store, Gourmania, and Lamp & Shade City Lighting are located to the north; ALMAS Center to the west; and the former Comcast cable office is located to the south.
 - Jean-Claude Salon is a new concept offering beauty services including image and hair consulting by appointment only. The applicant proposes to utilize an 1,100 square foot suite in an existing building. Parking on the property was developed to support professional and medical offices, which has a requirement of one (1) parking space per 200 square feet. The applicant's business has the same parking requirement and there are more than 50 parking spaces within 100' of the applicant's proposed location.
 - Staff calculated trips for the proposed use which would generate an estimated one (1) AM Peak Hour trip and two (2) PM Peak Hour trips.

- compatible with surrounding businesses, which consist of a mix of medical, professional office, and personal services businesses. In addition, the applicant's business is by appointment, which is similar to other businesses operating in the office park. If approved, conditions should be established that regulate and limit an expansion of services and signage.
- The report submitted by the applicant states that property owners within 500' were contacted regarding the applicant's intent. The report states that comments were received in support of the applicant's request.
- The CZIM was held on November 9, 2022. There were a few public comments in support of the applicant's request.
- The applicant, Ana Rocha, came forward to speak on behalf of this application.

PUBLIC COMMENTS:

- There were no public comments.
- Mayor Pro Tem Merkel offered a motion to approve CU-22-11 Jean-Claude Salon/312 Maxwell Road, subject to the following conditions:
 1. 'Beauty Shop' shall be added as a conditional use at 312 Maxwell Road, Suite 500 and limited to no more than 1,100 square feet.
 2. Conditional use approval shall be limited to Jean-Claude Salon; no additional 'Beauty Shop' use or subleasing shall be permitted within the approved space.
 3. 'Beauty Shop' shall be limited to cosmetology services that do not require a customer to disrobe.
 4. Hours of operation shall be limited to Monday – Sunday 9:00 AM – 5:00 PM.
 5. Signage shall be limited to a wall sign no larger than three (3) square feet and located beside the front door. No additional signage shall be permitted. No lighting window trim.
 - Council Member Mitchell seconded the motion.
 - The motion was approved unanimously (6-0).

C. CU-22-10 Foamworks Alpharetta / 11725 Cotton Creek Entry

DEFERRED: *This item has been deferred by the applicant and will not be heard, discussed, or considered during the December 12, 2022 City Council Meeting & Public Hearing. This item will be heard during the January 17, 2023 City Council Meeting & Public Hearing.*

Consideration of a conditional use to allow a 'Car Wash' for Foamworks on a property previously developed and used for a car wash. The property is located at 11725 Cotton

Creek Entry and is legally described as being located in Land Lot 44, 1st District, 1st Section, Fulton County, Georgia.

D. PH-22-15 Unified Development Code (UDC) Text Amendments – Tree Conservation, Landscape, and Buffer Requirements

Consideration of text amendments to the Unified Development Code related to tree preservation in the Downtown Overlay. Regulations are proposed requiring that specimen trees and trees of quality be conserved if they are located within building setbacks along certain roads, including Academy Street, Canton Street, Church Street, Cumming Street, Marietta Street, Mayfield Road, Milton Avenue, and Roswell Street.

- Director for Community and Economic Development, Kathi Cook, came forward to present this item.
- This item was considered at the 12/1/2022 Planning Commission meeting. There were no public comments. After discussion, Planning Commission recommended approval. (vote 6-0).
- In order to preserve the character and existing tree canopy in the Downtown District, Staff proposes that specimen trees and trees of quality located in front building setbacks along certain streets in the Downtown be conserved. The following streets have been identified for tree conservation:
 - Academy Street
 - Canton Street
 - Church Street
 - Cumming Street
 - Marietta Street
 - Mayfield Road
 - Milton Avenue
 - Roswell Street
- City Attorney, Molly Esswein, read the ordinance aloud.

CITY COUNCIL DISCUSSION

- Council Member Hipes shared that he would like a definition of the word “conserved” added for clarity.
- Council Member Mitchell asked why North Main Street is not on this list.
 - Director Cook shared that this area was removed because it is a part of the GDOT construction project.

PUBLIC COMMENTS

- There were no public comments.
- ❖ Mayor Pro Tem Merkel offered a motion to approve PH-22-15 Unified Development Code (UDC) Text Amendments – Tree Conservation, Landscape, and Buffer Requirements.
 - Council Member Hipes seconded the motion.
 - The motion was approved unanimously (6-0).

VII. NEW BUSINESS

A. Reconsideration of Consent Agenda

- City Administrator, Chris Lagerbloom, came forward to ask for Mayor and Council to please reconsider the Consent Agenda for tonight's meeting due to the fact that Mayor did not announce "Item E: Intergovernmental Agreement: Fulton County Animal Control Services" when reading the Consent Agenda items aloud, as it was not printed on the Mayor's copy of the agenda. However, Item E was printed on the agenda that was posted in advance of the meeting and at the place of the meeting (outside of City Council Chambers), and on the agenda that was posted online on the City's website.
- City Attorney, Molly Esswein, shared that out of an abundance of caution, it would be best for Mayor and Council to reconsider the Consent Agenda to ensure that Item E received approval. She also clarified that Mayor Gilvin does not need to read each item title aloud for the Consent Agenda.
 - ❖ Council Member DeRito offered a motion to reconsider the Consent Agenda.
 - Council Member Will seconded the motion.
 - The motion was approved unanimously (6-0).
 - ❖ Council Member Hipes offered a motion to approve the Consent Agenda, including items "A" through "I," consecutively.
 - Mayor Pro Tem Merkel seconded the motion.
 - The motion was approved unanimously (6-0).

B. Contract Award and Intergovernmental Agreement: Webb Bridge Road: East of North Point Parkway to Greenway Construction

Consideration of the award of ITB 23-003 to Georgia Bridge & Concrete, LLC for the construction of Webb Bridge Road from East of North Point Parkway to the Big Creek Greenway in an amount not to exceed \$9,557,603.40, approval of \$270,800.00 for the bridge construction ecological permit from the US Army Corps of Engineers, approval of \$333,925.00 and the Intergovernmental Government Agreement with Fulton County associated with Waterline Work, and approval of Atkins North America, Inc.'s proposal for the bridge construction and stream bank restoration management and inspections

services in an amount not to exceed of \$255,729.10, and to authorize the Mayor to execute all necessary documents.

- Director of Public Works, Pete Sewczwicz, came forward to present this item.
- The project includes the addition of a roundabout at the intersection of Webb Bridge Road and Webb Bridge Way and the replacement of the bridge over Big Creek.
- The overall project stretches from Webb Bridge Way westward to Morris Road but is divided into multiple phases and funding is in TSPLOST 1 and 2; (1) Extending the Culvert/Tunnel and access to Big Creek Greenway from Webb Bridge Road, (2a) Roundabout to Webb Bridge Park, (2b) Roundabout to Big Creek Greenway, (3) Big Creek Greenway to North Point Parkway, and (4) Morris Road to North Point Parkway. Phases 1 and 2 are funded through TSPLOST 1, while Phases 3 and 4 are funded through TSPLOST 2. Phase 1 has been constructed and accepted by the City. Phase 1 was constructed earlier than the other phases to permit Big Creek Greenway to remain open predominately through construction.
- The item under consideration is the award of a contract for construction of a portion of Phase 3 of the Webb Bridge Road Improvement Project, specifically a 0.72-mile section running from a point east of North Point Parkway to the Big Creek Greenway and including the replacement of the bridge over Big Creek.
- The Fulton County waterline on the existing bridge will, as required by the County, be removed and replaced with a new waterline that will be attached to the new bridge. Under an intergovernmental agreement (IGA) between the City and the County, the County will reimburse the City for this waterline work. The IGA is included as an attachment to this report.
- It is important to note that the installation of landscaping is not included as part of this contract. Rather, a separate contract for landscape installation by the City's on-call landscape contractor will be presented for consideration by Mayor and Council at a later date.
- The existing pedestrian bridge located on the south side of Webb Bridge Road will be salvaged by the City's contractor and delivered to Wills Park for use on a future project. This work will cost \$20,000, which is more cost-effective than demolishing the bridge and building a new one as part of a future project.
- Project construction is anticipated to take 30 months after issuance of a notice to proceed. This timeline is protracted due to supply chain issues resulting in extensive lead times of 3 to 10 months for materials such as ductile iron pipe, reinforced concrete pipe, and precast beams. Availability of concrete and scheduling of concrete pours (near school zone) also continue to be issues that will impact the construction timeline.

- Procurement for this project was initiated through Invitation to Bid (ITB 23-003), which was issued on September 29, 2022 with a response deadline of October 27, 2022. A total of six proposals were received in response to this invitation.
- After evaluation and verifying the submitted bids, staff from the Public Works Department met with representatives of Georgia Bridge & Concrete (GBC), as the low bidder, on Thursday, November 3, 2022.
- The construction of the new bridge will unavoidably have impacts on the Big Creek wetland and water stream. As a result, the City will be required to obtain a permit from the US Army Corps of Engineers (USACE) using ecological offsets in the form of mitigation credits. The necessary credits and permits will have to be purchased from USACE at a cost to the City of \$270,800.00.
- Atkins will provide management services for the bridge construction and the stream bank restoration and will cost \$255,729.10.
- These costs bring the total cost of this project to \$10,084,132.50, of which \$339,925.00 is associated with the waterline work and can be reimbursed by Fulton County.

PUBLIC COMMENTS

- There were no public comments.
 - ❖ Council Member DeRito offered a motion to approve the award of ITB 23-003 to Georgia Bridge & Concrete, LLC for the construction of Webb Bridge Road from East of North Point Parkway to the Big Creek Greenway in an amount not to exceed \$9,557,603.40, approval of \$270,800.00 for the bridge construction ecological permit from the US Army Corps of Engineers, approval of \$333,925.00 and the Intergovernmental Government Agreement with Fulton County associated with Waterline Work, and approval of Atkins North America, Inc.'s proposal for the bridge construction and stream bank restoration management and inspections services in an amount not to exceed of \$255,729.10, and to authorize the Mayor to execute all necessary documents.
 - Council Member Will seconded the motion.
 - The motion was approved unanimously (6-0).

C. Contract Award: Webb Bridge Road Maid Marion Close to Webb Bridge Park Construction

Approval of the award of ITB 23-002 to Sol Construction, LLC for the construction of Webb Bridge Road from Maid Marion Close to Webb Bridge Park in an amount not to exceed \$3,994,545.00 and to authorize the Mayor to execute all necessary documents.

- Director of Public Works, Pete Sewczwicz, came forward to present this item.
- The project includes the addition of a roundabout at the intersection of Webb Bridge Road and Webb Bridge Way and the replacement of the bridge over Big Creek.

- The overall project stretches from Webb Bridge Way westward to Morris Road but is divided into multiple phases and funding is in TSPLOST 1 and 2; (1) Extending the Culvert/Tunnel and access to Big Creek Greenway from Webb Bridge Road, (2a) Roundabout to Webb Bridge Park, (2b) Roundabout to Big Creek Greenway, (3) Big Creek Greenway to North Point Parkway, and (4) Morris Road to North Point Parkway. Phases 1 and 2 are funded through TSPLOST 1, while Phases 3 and 4 are funded through TSPLOST 2. Phase 1 has been constructed and accepted by the City. Phase 1 was constructed earlier than the other phases to permit Big Creek Greenway to remain open predominately through construction.
- The item under consideration is the award of a contract for construction of the Phase 2 section of the Webb Bridge Road Improvement Project, which includes the span running from the intersection with Maid Marion Close to Webb Bridge Park and includes construction of the new roundabout at the current intersection of Webb Bridge Road and Webb Bridge Way. The total length of this section is approximately 0.4 mile.
- It is important to note that the installation of landscaping is not included as part of this contract. Rather, a separate contract for landscape installation by the City's on-call landscape contractor will be presented for consideration by Mayor and Council at a later date.
- Project construction is anticipated to take 18 months from the issuance of a notice to proceed.
- Procurement for this project was initiated through Invitation to Bid (ITB 23-002), which was issued on September 29, 2022 with a response deadline of October 27, 2022. A total of four proposals were received in response to this invitation.
- After evaluation and verifying the submitted bids, staff from the Public Works Department met with representatives of Sol Construction (Sol), as the low bidder, on Tuesday November 8, 2022.

PUBLIC COMMENTS

- There were no public comments.
 - ❖ Council Member DeRito offered a motion to approve Approval of the award of ITB 23-002 to Sol Construction, LLC for the construction of Webb Bridge Road from Maid Marion Close to Webb Bridge Park in an amount not to exceed \$3,994,545.00 and to authorize the Mayor to execute all necessary documents.
 - Council Member Mitchell seconded the motion.
 - The motion was approved unanimously (6-0).

D. Grant Acceptance: Environmental Protection Division Grant for Wills Park Stream Reforestation

Consideration of the use of grant funds authorized under section 319(h) of the Federal Water Pollution Control Act administered through the Georgia Environmental Protection Division up to \$200,000.00 toward buffer enhancement and native plantings along the tributary to Foe Killer Creek within Wills Park, and to authorize the Mayor to execute all necessary documents.

- Director of Public Works, Pete Sewczwicz, came forward to present this item.
- The U.S. Environmental Protection Agency (USEPA) annually awards federal allocations from the Nonpoint Source Implementation Grant under Section 319(h) of the Clean Water Act to the Georgia Environmental Protection Division (EPD) that EPD, in turn, grants to local jurisdictions. The City of Alpharetta Public Works Department staff submitted a stream restoration project targeting a section of Foe Killer Creek located inside of Wills Park for available 319(h) grant funding through this EPD program. The grant would provide \$200,000.00 towards approved projects pertaining to water quality with a \$0 local match. In lieu of local match funding, in kind services provided by Public Works staff will be the only local match required if the grant request is approved.
- Located within Wills Park, this section of Foe Killer Creek is currently grassed and mowed to the stream banks. The Foe Killer Creek Watershed Improvement Plan (WIP) identifies Measure 13a: Wills Park Stream Restoration (750 feet of buffer enhancement) as the #2 priority project.
- The City of Alpharetta Urban Forestry Manager will provide the design and construction management services as the in-kind match for this project. The City has two on-call landscape companies, secured through competitive bidding processes, that would be able to install the buffer vegetation. The final project would vegetate approximately 750 feet of stream with native trees and shrubs along the stream.
- The grant requires that all work proposed should be completed no later than March 31st, 2023 and all in kind design and contractor oversight should be recorded/logged for submission to EPD for local funding match.

PUBLIC COMMENTS

- There were no public comments.
 - ❖ Council Member DeRito offered a motion to approve the use of grant funds authorized under section 319(h) of the Federal Water Pollution Control Act administered through the Georgia Environmental Protection Division up to \$200,000.00 toward buffer enhancement and native plantings along the tributary to Foe Killer Creek within Wills Park, and to authorize the Mayor to execute all necessary documents.

- Mayor Pro Tem Merkel seconded the motion.
- The motion was approved unanimously (6-0).

E. Waters Road & Kimball Bridge Road Community Park Design/Build Construction Award

Approval to award a contract with Prime Contractors, Inc. under the State of Georgia convenience contract (#99999-S20200901) for design and construction of the community park at the intersection of Kimball Bridge Road and Waters Road in an amount totaling \$1,232,233.34 through Gordian and to authorize the Mayor to execute all necessary documents.

- Director of Public Works, Pete Sewczwicz, came forward to present this item.
- Property located at Waters Road and Kimball Bridge Road was purchased utilizing funds from the Series 2016 Bond issue with the design and buildout funded through the Series 2022 Bond issue.
- Upon acquisition, the Department of Recreation, Parks, & Cultural Services Staff developed a preliminary plan of what might be possible for the site's future. To ensure resident engagement with the surrounding neighborhoods and the citizens of Alpharetta at large, staff held a virtual public input meeting on March 9, 2022, and an in-person public meeting at the Preston Ridge Community Center on March 10, 2022. For those unable to attend the public meetings, an online survey was made available on the City's website to allow for additional comments.
- A rendering was conceptualized and provided by Breedlove Planning & Associates. The conceptual site plan, Exhibit A-1 & A-2, includes a park entrance off Kimball Bridge Road, minimal parking, a restroom, a playground, picnic amenities, benches, and soft surface walking paths. Visually, the community park's design is in keeping with the same basic template as the City's other community parks such as Cogburn Road Park and Windward Community Park.
- On September 13, 2022, the final rendering was approved by the Alpharetta Recreation Commission for City Council approval. The conceptualized plan was then presented to Mayor and Council on October 3, 2022, for discussion and was approved at the October 17, 2022, Council Meeting.
- The ezIQC (indefinite quantity contract) solution is administered by Gordian through the GA Dept. of Administrative Services (convenience contract #99999- S20200901). The ezIQC program enables governmental entities to take advantage of cooperative volume discounts on contracts that have already been competitively awarded while working with numerous contractors across the state, such as Prime Contractors Inc.
- For a multitude of reasons, not the least of which is a fixed design and construction budget of \$1.25 million for the buildout of this park in an inflationary environment, the Department determined this project was a good fit for the ezIQC program.

- Utilizing the ezQC program, staff requested a proposal from Prime Contractors Inc. given the conceptualized plan that was drafted by Breedlove Planning & Associates, a sub of Prime Contractors Inc. The resulting proposal, attached hereto, included all the specifications to design and construct the community park and the total cost fell under the bond's project amount of \$1.25 million.
- The approximate timeline for development of the Waters Road/Kimball Bridge Community Park will be 6-8 months from the execution of a contract.

CITY COUNCIL DISCUSSION

- Council Member Will shared his concerns with a contract that has not been bid out to multiple people.
 - Director Sewczwicz shared that the design fee of \$40,000 would have been much higher if staff did not use the Gordian process.

PUBLIC COMMENTS

- There were no public comments.
 - ❖ Council Member DeRito offered a motion to approve the award of a contract with Prime Contractors, Inc. under the State of Georgia convenience contract (#99999-S20200901) for design and construction of the community park at the intersection of Kimball Bridge Road and Waters Road in an amount totaling \$1,232,233.34 through Gordian and to authorize the Mayor to execute all necessary documents.
 - Mayor Pro Tem Merkel seconded the motion.
 - The motion was approved (5-1; with Council Member Will in opposition).

F. Contract Award: AT&T Network Integration Change Order Request for AT&T Network Integration Pricing Schedule dated 6/27/2017

Consideration of a contract award to AT&T to provide for telephony management, monitoring, and service for the City of Alpharetta in the amount of \$60,256.20 and authorize the Mayor to execute all necessary documents.

- Director of Information Technology, Randy Bundy, came forward to present this item.
- This contract (amount of \$60,256.20) provides for the telephony management, monitoring, and support services for the City of Alpharetta. This will provide greater reliability, greater efficiency for the use of the Voice Over IP (VOIP) telephony network services and support for individual employees of the City.
- This is procured via the existing AT&T telephony services contract. There is no alternative for FY2023 as this is under an existing AT&T Contract through June 2023.

PUBLIC COMMENTS

- There were no public comments.

- ❖ Council Member Mitchell offered a motion to approve the contract award to AT&T to provide for telephony management, monitoring, and service for the City of Alpharetta in the amount of \$60,256.20 and authorize the Mayor to execute all necessary documents.
 - Council Member DeRito seconded the motion.
 - The motion was approved unanimously (6-0).

G. Memorandum of Understanding Renewal: City of Alpharetta & BrewAble

Approval of the 2023 Memorandum of Understanding between the City of Alpharetta and Brewable, Inc., and to authorize the Mayor to execute all necessary documents.

- Director of Recreation, Parks, and Cultural Services, Morgan Rodgers, came forward to present this item.
- BrewAble, Inc. has developed a program that offers fun, creative, vocational training for city residents with intellectual or developmental disabilities. Through an agreement with the City, BrewAble occupies a small space at the Alpharetta Community Center (ACC) to provide coffee concessions for City Staff and citizens who frequent the center.
- Today, the program has proven to be so effective and supported that the City wishes to further foster the partnership with BrewAble, Inc. With the MOU up for renewal, the two organizations have conceptualized a way to promote the program's growth and continued success while meeting a need recognized by City Staff. The new concept is simple. Brewable will be able to establish pop-up coffee kiosks in other City facilities, such as City Hall, and at parks during select special events. This idea increases the exposure of BrewAble's program, provides staff and residents with hot beverages to kick-start a workday or event, and both organizations' core missions are advanced – offering the highest quality services for citizens.
- Under the revised MOU, the City of Alpharetta will continue to permit BrewAble to operate primarily at the ACC under the same provisions as in the years prior, and give a five-year option to renew (renewable yearly). Additionally, the City would allow BrewAble coffee concession kiosks at multiple city facilities and at parks during select special events. As in the past, the City will not charge a rental fee for facility usage and BrewAble, Inc. will be solely responsible for securing funding for the program.

PUBLIC COMMENTS

- There were no public comments.
- ❖ Council Member Hipes offered a motion to approve the 2023 Memorandum of Understanding between the City of Alpharetta and Brewable, Inc., and to authorize the Mayor to execute all necessary documents.
 - Mayor Pro Tem Merkel seconded the motion.
 - The motion was approved unanimously (6-0).

H. Resolution: City of Alpharetta Community Agriculture Plan

Adoption of a resolution to approve the City of Alpharetta Community Agriculture Plan and authorize the Mayor to execute all necessary documents.

- Director of Recreation, Parks, and Cultural Services, Morgan Rodgers, came forward to present this item.
- Together, the City of Alpharetta, Food Well Alliance, and Atlanta Regional Commission have established a vision and formal plan for the City's agricultural program to ensure the best success and sustainability. The formulation process included connecting with the Alpharetta's growers, residents, and City officials to develop a plan that was not only consensus-based and community-led, but also integrative into the City's overall plans and programs.
- The Memorandum of Understanding approved by City Council on January 18, 2022 and entered into by the City of Alpharetta in support of the City Agriculture Plan includes acceptance of a \$75,000 monetary grant from the Food Well Alliance with required matching fiscal support match from the City of Alpharetta in the amount of \$75,000. The grant and match would result in \$150,000 being applied towards implementation of the plan.
- City Attorney, Molly Esswein, read the resolution title aloud.
 - ❖ Council Member Hipes offered a motion to approve a resolution to approve the City of Alpharetta Community Agriculture Plan and authorize the Mayor to execute all necessary documents.
 - Council Member Mitchell seconded the motion.
 - The motion was approved unanimously (6-0).

VIII. PUBLIC COMMENT

- There were no public comments.

IX. REPORTS

- Council Member DeRito thanked the Evans Family, Evans Family Construction, and everyone in the City (Directors and Staff) who made the Downtown City Center a tremendous success during the Season of Celebration event last week. City Center looks beautiful.
- Council Member Hipes shared that the annual food drive is underway and we are collecting non-perishable food items for North Fulton Community Charities. There are both indoor and outdoor donation locations.
 - Indoor Donation Locations: Alpharetta Adult Activity Center at North Park, Alpharetta City Hall, Alpharetta Community Center, Alpharetta First Baptist

Church, Avalon Concierge, Preston Ridge Community Center, and Wills Park Community Center.

- Outdoor Donation Locations: City Hall, Alpharetta Town Green, Milton Avenue at Canton Street, and the Teasley Fountain.
- Council Member Hipes also shared that on Friday, December 16th from 5:00 to 8:00 p.m. there will snow on the Town Green and two movies will be shown (Frosty the Snowman and Rudolph the Red-nosed Reindeer). There may also be holiday karaoke.

X. EXECUTIVE SESSION

- ❖ Council Member Will offered a motion to recess to Executive Session.
 - Council Member Mitchell seconded the motion.
 - The motion was approved unanimously (6-0).
- Mayor Gilvin recessed the meeting at 8:25 p.m.
- ❖ Council Member Will offered a motion to reconvene the meeting.
 - Council Member Mitchell seconded the motion.
 - The motion was approved unanimously (6-0).

XI. ADJOURNMENT

- ❖ Council Member Will offered a motion to adjourn.
 - Council Member Mitchell seconded the motion.
 - The motion was approved unanimously (6-0).
- With there being no further items to consider or discuss, Mayor Gilvin adjourned the meeting at 9:08 p.m.

Respectfully submitted,



Lauren Shapiro, City Clerk



STAFF REPORT

Submitting Department: Finance

Submitted By: Shawn Mitchell

Sponsored By:

Meeting Date: January 3, 2023

I. AGENDA ITEM TITLE: CITY BENEFITS PACKAGE: INCREASING COSTS TOWARDS PEACE OFFICER ANNUITY BENEFIT FUND AND GEORGIA FIREFIGHTER'S PENSION FUND

APPROVAL OF ADDING TO THE CITY'S BENEFITS PACKAGE THE COVERAGE OF COSTS FOR THE SUPPLEMENTAL RETIREMENT PLANS OFFERED THROUGH THE PEACE OFFICERS' ANNUITY AND BENEFIT FUND (POAB) AND THE GEORGIA FIREFIGHTERS' PENSION FUND (GFPE).

II. RECOMMENDATION:

Adding to the City's Benefits Package the coverage of costs for the supplemental retirement plans offered through the Peace Officers' Annuity and Benefit Fund (POAB) and the Georgia Firefighters' Pension Fund (GFPE).

III. BUDGET IMPLICATIONS:

BUDGETED ITEM: NO

FISCAL IMPACT: YES

INCLUDED IN CURRENT FY CPTL BUDGET: NO

INCLUDED IN CURRENT FY OPRT. BUDGET: NO

TOTAL PROJECT COST: \$75,900.

APPROPRIATIONS:

ACCOUNT TITLE/NUMBER	DOLLAR AMOUNT
Public Safety Departmental Budget (General Fund)	\$66,000
Public Safety Departmental Budget (911 Fund)	\$9,900

EXTERNAL FUNDING SOURCES:

ACCOUNT TITLE/NUMBER	DOLLAR AMOUNT
-	\$0.00
-	\$0.00

IV. REPORT IN BRIEF:

As certified police officers, 911 operators, and firefighters in the State of Georgia, these personnel within our Department of Public Safety are eligible to participate in supplemental retirement plans offered through the Peace Officers' Annuity and Benefit Fund (POAB) and the Georgia Firefighters' Pension Fund (GFPE). To date, the membership has been funded by the employees wishing to join. As many agencies pay these memberships on behalf of their employees (e.g. Approximately 30% of the POAB memberships are employer-funded), staff is requesting that the City fund the necessary contributions to provide these employees' annual membership in the Funds.

POAB

Dues: \$25/month.

Retirement Eligibility: Vested after 15 years of creditable service. Must be aged 55 to draw benefits and no longer employed in law enforcement (with exceptions).

Benefit: Base rate for each year of creditable service = \$30. This, times the complete years and months of service, equals the amount of benefit the member will receive at retirement.

Annual cost to the City to cover E911 officers (33 FTE) and police officers (113 FTE) = \$43,800.

GFPE

Dues: \$25/month

Retirement Eligibility: Vested after 15 years of creditable service. Must be aged 55 to draw benefits and no longer employed as a firefighter (with exceptions).

Benefit: Currently \$895 per month for members with 25 years of service; pro-rata amount for years less than 25.

Annual cost to the City to cover Firefighters (107 FTE) = \$32,100.

Funding is available within the FY 2023 Base Operating Budget to cover this initiative due to staffing vacancies. If approved, funding will be added in the proposed 2024 Operational Budget for this initiative.

V. ALTERNATIVES:

Maintain the current practice of not funding costs for the supplemental retirement plans offered through the Peace Officers' Annuity and Benefit Fund (POAB) and the Georgia Firefighters' Pension Fund (GFPF).

VI. ATTACHMENTS:



STAFF REPORT

Submitting Department: Public Safety

Submitted By: Lauren Shapiro

Sponsored By:

Meeting Date: January 3, 2023

I. AGENDA ITEM TITLE: GEORGIA LAW ENFORCEMENT CERTIFICATION PROGRAM AGENCY APPLICATION & PARTICIPATION AGREEMENT
APPROVAL OF THE GEORGIA LAW ENFORCEMENT CERTIFICATION PROGRAM AGENCY APPLICATION & PARTICIPATION AGREEMENT AND AUTHORIZATION OF THE MAYOR TO EXECUTE ALL NECESSARY AND RELATED DOCUMENTS.

II. RECOMMENDATION:

Approve the Georgia Law Enforcement Certification Program Agency Application & Participation Agreement and authorize the Mayor to execute all necessary and related documents.

III. BUDGET IMPLICATIONS:

BUDGETED ITEM: NO

FISCAL IMPACT: NO

INCLUDED IN CURRENT FY CPTL BUDGET: NO

INCLUDED IN CURRENT FY OPRT. BUDGET: NO

TOTAL PROJECT COST: \$515.00

APPROPRIATIONS:

<u>ACCOUNT TITLE/NUMBER</u>	<u>DOLLAR AMOUNT</u>
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EXTERNAL FUNDING SOURCES:

<u>ACCOUNT TITLE/NUMBER</u>	<u>DOLLAR AMOUNT</u>
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IV. REPORT IN BRIEF:

This application, if approved, allows the Alpharetta Department of Public Safety to participate in the Georgia Law Enforcement Certification Program.

There is a non-refundable application fee of \$515.00 payable to the Georgia Association Chiefs of Police, which is based on the number of full-time, sworn officers employed by the City of Alpharetta.

V. ALTERNATIVES:

VI. ATTACHMENTS:

Georgia Law Enforcement Certification Program Application

Georgia Law Enforcement Certification Program
AGENCY APPLICATION & PARTICIPATION
AGREEMENT



The Agency Application and Participation Agreement (hereinafter the "Agreement") is entered into between the:

Alpharetta Department of Public Safety

(hereinafter referred to as the "Agency") and the Georgia Association of Chiefs of Police (hereinafter referred to as the "Association").

I. APPLICATION

The Alpharetta Department of Public Safety ("Agency") hereby applies to participate in the Georgia Law Enforcement Certification Program (GLECP) and affirms that it is committed to earning certification in accordance with the requirements set forth by the Association. The Agency and the Association agree to the provisions and terms set forth in this Agency Application and Participation Agreement, and to be bound by them in the execution of the Agreement.

A. AGENCY

Name of Law Enforcement Agency:

Alpharetta Department of Public Safety

Address:

2565 Old Milton Parkway

Alpharetta, GA 30009

Telephone: 678-297-6352 Cell: 470-306-8216

County: Fulton

Number of Authorized Full-time Sworn Personnel: 108

Number of Authorized Full-time Civilian Personnel: 15

Number of Authorized Part-time Sworn Personnel: 0

Number of Authorized Part-time Civilian Personnel: 1

Service Area Population: 65,818 Square Miles: 27
Agency Chief Executive Officer: Chief John Robison
Certification Contact Person: Katherine Fies
Telephone: 678-297-6352 CELL: 470-306-8216
E-mail: kfies@alpharetta.ga.us

All correspondence should be sent to the agency at: (if different from above):

B. ASSOCIATION

The official address of the Association for all matters relating to the Certification Program is:

Chuck Groover
State Certification Coordinator
Georgia Association of Chiefs of Police
3500 Duluth Park Lane
Suite 700
Duluth, Georgia 30096
Telephone: 770-495-9650
E-mail: groover@gachiefs.com

II. PARTICIPATION AGREEMENT

The Agency and Association agree as follows:

A. PURPOSE AND LIMITATIONS OF THIS AGREEMENT

1. The purpose of this Agreement is to establish the terms of the relationship between the Agency and the Association and to establish their mutual responsibilities in the certification process.
2. It is understood that the Agency is not legally bound to participate in the Certification Program and that any responsibilities or expenses incurred by the Agency pursuant to this Agreement have been assumed voluntarily.
3. It is further understood that the Agency participation in the Certification Program is contingent upon the continued approval of the chief executive officer of the Agency and the governing body.

B. AGENCY RESPONSIBILITIES

The Agency agrees to:

1. Provide all information requested by the Association in good faith and to the best of the Agency's knowledge and honest judgment. Such information should include documents, files, records, and other data required by the Association insofar as they may be provided in accordance with the laws and regulations of the State of Georgia and of the municipality/county of which the agency is a part.
2. Cooperate fully with the Association assessors during the on-site verification of the Agency's compliance with program standards. The agency further agrees to provide all necessary files, records, and facilities requested by the assessors.
3. Pay the Association a non-refundable application fee based on the size of the agency.
 - Less than 25 full-time, sworn officers - \$375
 - 25-99 full-time, sworn officers - \$445
 - 100-199 full-time, sworn officers - \$515
 - 200+ full-time, sworn officers - \$600

The application expires three (3) years from the date of execution. The application fee is waived upon agency recertification. Application fee payable by check should accompany the application agreement. Application fee payable by credit card may be handled by email to have an invoice created.

4. Pay for the costs of assessors' travel, including gas, lodging, and parking, and seventy-five dollar (\$75) per diem per day for the Team Leader and fifty dollar (\$50) per diem per day for the assessor to cover meals and incidentals during the on-site evaluation. The per diem should be available to the assessment team upon their arrival at the agency.
5. If an agency is awarded a conditional certification by the Joint Review Committee (JRC) and a re-visit is necessary to ensure compliance with any standard(s) found not in compliance during the initial on-site, the agency shall be responsible for a fifty dollar (\$50) per diem fee for the assessor conducting the re-visit.
6. Once certified, pay the Association an annual fee based on agency size during the entire certification period. The agency will be invoiced in January

with a due date of sixty (60) days from the date of the invoice. (See **7. PENALTIES**)

7. Agency will provide a minimum of one State Certified Assessor. If the agency has less than twenty (20) authorized personnel, this requirement is not applicable.
8. In order to maintain the integrity of the GLECP, the Association retains the right to conduct a follow-up inspection of an agency's certification files at any time during the 36-month contract period (48 months for CALEA Agencies) after the agency is awarded certification. This inspection shall be done by the Coordinator of the GLECP, or his/her designee. The purpose of this inspection is to ensure that the certified agency is maintaining certification files on a timely and consistent basis. This inspection in no way constitutes any type of mock assessment nor is the agency responsible for any expenses. If, in the opinion of the person conducting the inspection, the files are found to be inadequate or insufficient, a letter to the CEO will be sent from the Association to inform the CEO of potential problems with the certification files. The purpose of this inspection is to help agencies with difficult standards and to maintain a level of performance and transparency needed to retain future certification.

C. ASSOCIATION RESPONSIBILITIES

The Association agrees to:

1. Provide all publications, documents, forms, instructions, and assistance as necessary for the Agency to participate in the certification process.
2. Provide trained assessors to the Agency for the purposes of conducting an on-site assessment of Agency compliance with relevant standards.
3. Review and evaluate all information and findings obtained from the assessment and advise the Agency of the results thereof.
4. Provide formal certification and other necessary materials to the Agency in recognition of the certification status.
5. If certification is not granted, advise the Agency of the reason for denial and the necessary steps to gain certification.
6. Send the Agency an invoice for the annual fee once the Agency is certified.

D. LENGTH OF CERTIFICATION

Certification shall be for a period of 36 months. Agencies wishing to be re-certified at the end of this term will be expected to follow a procedure similar to the initial certification process and to comply with all guidelines then in effect. Agencies that are accredited by CALEA and under a four-year cycle may opt to move to a four-year cycle in certification.

E. MAINTENANCE OF AGENCY CERTIFICATION STATUS

1. Upon Certification by the Association, the Agency shall maintain compliance with all certification standards.
2. The Agency agrees to submit an annual report attesting to its continued compliance with all applicable standards. The Agency will notify the Association in the event that it cannot maintain compliance with any of the required standard(s).

F. PENALTIES

1. Certified Agencies that fail to pay the annual fee within sixty (60) days of the invoice date will be invoiced an additional penalty fee of twenty-five dollars (\$25.00). If the annual fee has not been paid within ninety (90) days of the invoice date, the Agency's Certification may be suspended by the Joint Review Committee.
2. An agency is prohibited from representing themselves as a state certified agency if they are no longer certified. If an agency loses their certification or voluntarily withdraws from the process, they have thirty (30) days to remove any certification decals from their patrol vehicles, remove the certification pins from their uniforms, and remove the certification logo from their website or stationery that identifies them as a state certified agency.

G. MISCELLANEOUS

1. This agreement shall take effect upon execution by authorized representatives of the Agency and the Association.
2. The Agency retains the right to terminate this Agreement for any reason by submitting written notice to the Association that the Agency intends to withdraw from the certification process. In this event, all fees and costs paid

to the Association by the Agency during and in connection with the certification process are nonrefundable.

3. The Association retains the right to terminate this Agreement if it determines that the Agency is not acting in good faith to honor the terms of the Agreement. The Association will submit written notice to the Agency's Chief Executive Officer if it chooses to exercise this privilege.
4. This document contains the full agreement of both parties. The parties to this Agreement acknowledge that there are no provisions, terms, or obligations other than those set forth herein.
5. The Georgia Association of Chiefs of Police or its designee will act on behalf of and in the name of the Association in all matters pursuant to this Agreement.
6. All disputes relative to this Agreement or any other matters pertaining to certification will be resolved by the Association following a hearing in which Agency representatives may participate.
7. Unless otherwise terminated by the Association or the Agency, this Agreement shall terminate on the _____ day of _____, _____. (To be completed by the Association).

III. EXECUTION OF AGREEMENT

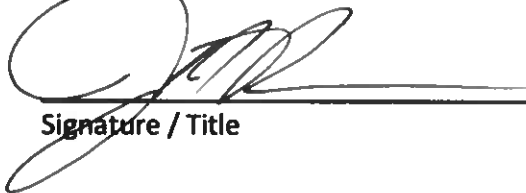
IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the date and year appearing opposite the respective signatures.

Georgia Association of Chiefs of Police:

Signature / State Certification Coordinator

Date

Agency Chief Executive Officer:



Signature / Title

11-14-22

Date

Governmental Body Chief Executive Officer:

Signature / Title

Date



STAFF REPORT

Submitting Department: Legal
Submitted By: Lauren Shapiro
Sponsored By:
Meeting Date: January 3, 2023

I. AGENDA ITEM TITLE: ORDINANCE: FAILURE TO APPEAR

CONSIDERATION OF AN ORDINANCE TO AMEND ARTICLE I OF CHAPTER 30 OF THE CODE OF THE CITY OF ALPHARETTA, GEORGIA, TO ADD A PROVISION RELATED TO SECTION 30-8 (CURRENTLY RESERVED); TO PROVIDE AN EFFECTIVE DATE; AND FOR OTHER PURPOSES.

II. RECOMMENDATION:

Adopt an Ordinance to amend Article I of Chapter 30 of the Code of the City of Alpharetta, Georgia, to add a provision related to Section 30-8 (Currently Reserved); to provide an effective date; and for other purposes.

III. BUDGET IMPLICATIONS:

BUDGETED ITEM: NO

FISCAL IMPACT: NO

INCLUDED IN CURRENT FY CPTL BUDGET: NO

INCLUDED IN CURRENT FY OPRT. BUDGET: NO

TOTAL PROJECT COST:

APPROPRIATIONS:

ACCOUNT TITLE/NUMBER	DOLLAR AMOUNT
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EXTERNAL FUNDING SOURCES:

ACCOUNT TITLE/NUMBER	DOLLAR AMOUNT
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IV. REPORT IN BRIEF:

If approved, this ordinance will create a violation for failure to appear and would authorize the Municipal Court to issue warrants for arrest of a person for failing to appear and to bring an additional charge and violation as a function for failing to appear at a designated court session.

This is a newly proposed ordinance, and the subject is not currently addressed within the City's Code.

V. ALTERNATIVES:

Do not adopt this ordinance and have no violations for persons failing to appear.

VI. ATTACHMENTS:

Failure to Appear Ordinance



AN ORDINANCE OF THE MAYOR AND COUNCIL OF THE CITY OF ALPHARETTA, GEORGIA TO AMEND ARTICLE 1 OF CHAPTER 30 OF THE CODE OF THE CITY OF ALPHARETTA, GEORGIA, TO ADD A PROVISION RELATED TO FAILURE TO APPEAR; TO ASSIGN THAT PROVISION TO SECTION 30-8 (CURRENTLY RESERVED); TO PROVIDE AN EFFECTIVE DATE; AND FOR OTHER PURPOSES

WHEREAS, the Mayor and Council of the City of Alpharetta (the “City Council” or “Council”) are charged with the protection of the public health, safety, and welfare of the citizens of Alpharetta; and

WHEREAS, the City Council has adopted Chapter 30 of the Code of the City of Alpharetta, Georgia (“City Code”) regarding offenses and miscellaneous provisions; and

WHEREAS, the City Council is charged with the protection of the public health, safety, and welfare of the citizens of the City of Alpharetta; and the City Code was designed to be amended from time to time when circumstances warrant that modifications be made in order to make said Codes more responsive to its needs; and

WHEREAS, the City of Alpharetta maintains a Municipal Court that is authorized to try and punish certain violations of city ordinances and such other offenses as allowed and provided by general law; and

WHEREAS, the Municipal Court has authority to ensure the presence of those charged with violations; and

WHEREAS, creating a violation for failure to appear would authorize the Municipal Court to issue warrants for arrest of person for failure to appear and to bring an additional charge and violation as a function for failing to appear at a designated court session; and

WHEREAS, the City Council deems it appropriate to amend Section 30-8 of the City Code to add a provision regarding failure to appear before Municipal Court of anyone charged with violations;

NOW THEREFORE, the Council of the City of Alpharetta hereby ordains, as follows:

Section 1: Section 30-8 of the Code of the City of Alpharetta, Georgia, which is currently reserved, is hereby amended by inserting a new Section 30-8 to read as follows:

Sec. 30-8. Failing to appear to answer summons; arrest.

- (a) It shall be unlawful for any defendant lawfully summoned to answer charges in the municipal court to either fail, neglect, or refuse to appear at the time and place specified in the summons or fail to provide a satisfactory explanation for this absence;
- (b) The trial may be continued to such time as the municipal court may direct, and the court shall issue an order requiring the police chief, or other members of the city police department, or its designee, to arrest the defendant and bring the defendant before the court to answer both the initial charges and the charge for failing to appear at trial;

-
- (c) The defendant shall remain in custody until brought before the court, unless the defendant posts bond for appearance, as provided by law.

Section 2: Secs. 30-9 – 30-32 of the Code of the City of Alpharetta, Georgia shall remain as Reserved.

Section 3: It is the intention of Council, and it is hereby ordained by the authority of Council, that the provisions of this Ordinance shall become and be made a part of the Code of the City of Alpharetta, Georgia, and the codifier is authorized to make the specified deletions, insertions, additions, and to insert headings, article numbers and section numbers as and where appropriate.

Section 4: All ordinances or parts of ordinances in conflict with this Ordinance are hereby repealed to the extent of such conflict.

Section 5: If any section, subsection, provisions, or clause of any part of this Ordinance shall be declared invalid or unconstitutional or, if the provisions of any part of this Ordinance as applied to any particular situation or set of circumstances shall be declared invalid or unconstitutional, such invalidity shall not be construed to affect the portions of this Ordinance not so held to be invalid, or the application of this Ordinance to other circumstances not so held to be invalid. It is hereby declared as the intent of the City Council that this Ordinance would have been adopted in its current form without the invalid or unconstitutional provision contained therein.

Section 6: This Ordinance shall be effective immediately upon its adoption by the City Council.

SO ORDAINED, the _____ day of _____, 2023.

CITY OF ALPHARETTA, GEORGIA

By: _____
Jim Gilvin, Mayor

COUNCIL MEMBERS

Donald F. Mitchell

Brian Will

Douglas J. Derito

John Hipes

Jason Binder

Dan Merkel

ATTEST:

APPROVED AS TO FORM:

Lauren Shapiro, City Clerk

Molly Esswein, City Attorney



CITY COUNCIL MEETING STAFF REPORT

SUBMITTING DEPARTMENT: COMMUNITY DEVELOPMENT

SUBMITTED BY: KATHI COOK

DRAFTED BY: MICHAEL WOODMAN

CITY COUNCIL SPONSOR: STAFF INITIATED

I. **AGENDA ITEM TITLE:** PH-22-15 UNIFIED DEVELOPMENT CODE TEXT AMENDMENTS – TREE CONSERVATION

CITY COUNCIL: DECEMBER 12, 2022

This item was considered at the 12/1/2022 Planning Commission meeting. There were no public comments. After discussion, Planning Commission recommended approval. Vote 6-0

II. **REPORT IN BRIEF:**

Consideration of text amendments to Unified Development Code (UDC) Subsection 3.2.8 Tree Replanting, Buffer, and Landscape Standards, to require that specimen trees and trees of quality in building setbacks along certain roads in the Downtown be conserved.

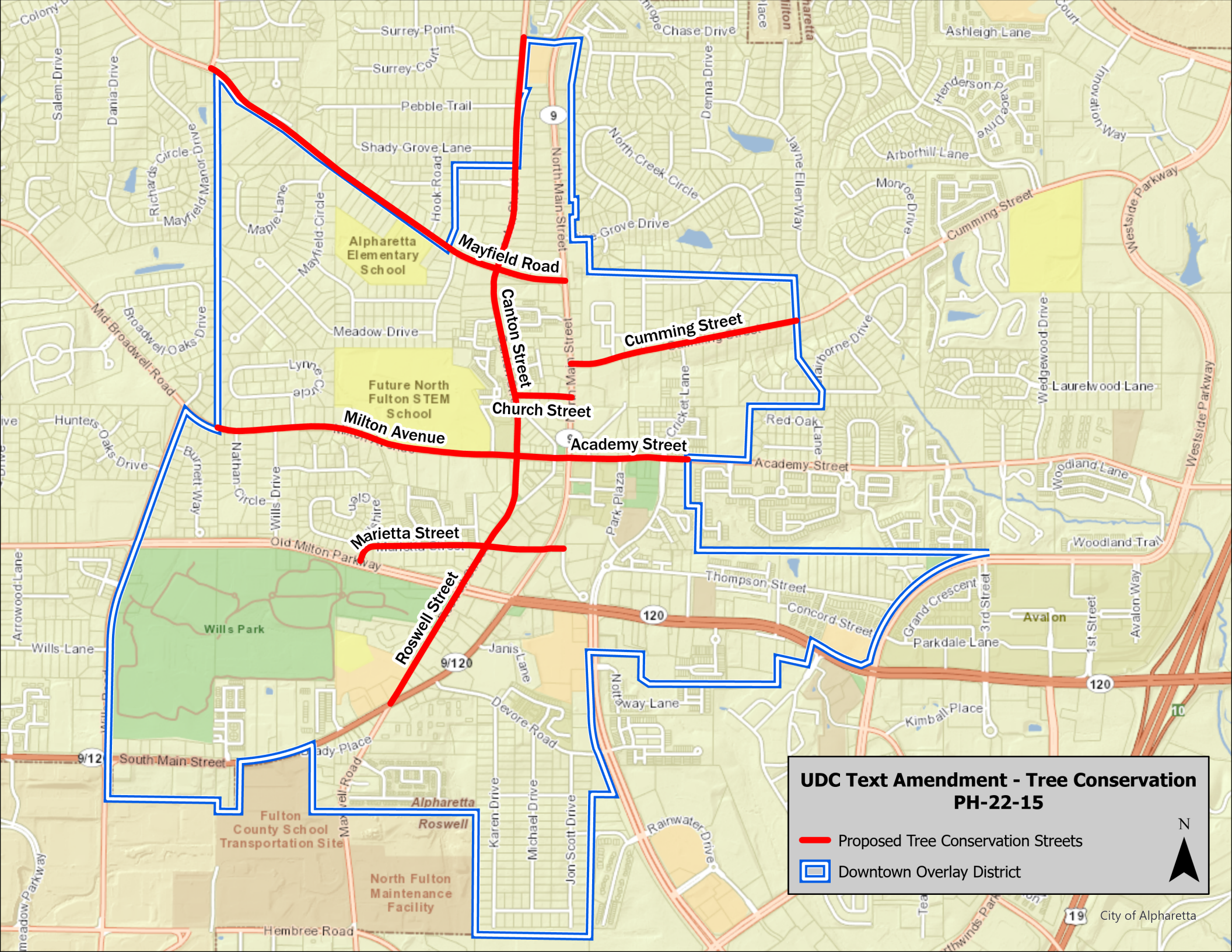
DISCUSSION

In order to preserve the character and existing tree canopy in the Downtown District, Staff proposes that specimen trees and trees of quality located in front building setbacks along certain streets in the Downtown be conserved. The following streets have been identified for tree conservation:

- Academy Street
- Canton Street
- Church Street
- Cumming Street
- Marietta Street
- Mayfield Road
- Milton Avenue
- Roswell Street

III. **ATTACHMENTS:**

- Map
- Edits
- Ordinance



**UDC Text Amendment - Tree Conservation
PH-22-15**

-  Proposed Tree Conservation Streets
-  Downtown Overlay District



SECTION 3.2 TREE CONSERVATION, LANDSCAPE, AND BUFFER REQUIREMENTS¹

3.2.1 General.

In order to maintain and promote the public health, safety and welfare, the City has established regulations governing the conservation, planting, and replacement of trees. The importance of trees is recognized for their contribution toward quality of life, visual quality of the city, and improved property values. It is the City's intent to prevent the indiscriminate removal of trees without denying the reasonable use and enjoyment of real property. It is also the intent of these regulations that all applicable sites within the City maintain or obtain minimum tree density, as defined herein. Consistent with the expressed purpose of these regulations, all persons shall make reasonable efforts to protect and retain certain existing, self-supporting trees as defined herein. Each person shall be responsible for the normal care of trees located on its premises.

- A. Willful injury or disfigurement of any tree growing within the City shall be a violation of this Ordinance.
- B. No person shall:
 - 1. Attach any sign, notice or other object to any tree or fasten wires, cables, nails or screws to any tree in a manner that could prove harmful to the tree.
 - 2. Pour any material on any tree or on nearby ground which could be harmful to the tree.
 - 3. Cause or encourage any unnecessary fire or burning near or around any tree.
 - 4. Construct a concrete, asphalt, brick or gravel sidewalk, significantly compact the soil, place fill material, or create other impervious or semi-impervious surfaces around any tree so as to cut off air, light or water from the roots of the tree so as to adversely impact the tree's root system.
 - 5. Pile building material or equipment around any tree so as to cause injury thereto.
 - 6. Deny routine maintenance, watering and reasonable arboricultural care to existing and newly established trees as may be required as a result of activities taking place under this Section.
 - 7. Remove any tree without Permit.
 - 8. Remove or prune a tree on commercial property during non-development activity unless they follow ISA industry standard protocols for pruning or have written approval from the Director.
 - 9. Park any vehicle on the unpaved area underneath existing tree canopies.

(Ord. No. 739 , 5-1-2017)

3.2.2 Definitions.

For the purposes of this Section, unless the context indicates otherwise, the following terms shall have the meaning set forth below:

Boundary Tree. Any tree located on adjacent property with a critical root zone that will be impacted by proposed land disturbance activity.

¹Editor's note(s)—Ord. No. 739 , adopted May 1, 2017, amended Section 3.2 in its entirety to read as herein set out. Former Section 3.2, Subsections 3.2.1—3.2.19, pertained to tree protection, and derived from the original codification.

Buffer. An area required to remain undisturbed or replanted where existing vegetation is sparse, as determined by the director.

Caliper. A standard of trunk measurement for replacement trees. Caliper inches are measured at the height of 6 inches above the ground for trees up to and including 4 inch caliper and 12 inches above the ground for trees larger than 4 inch caliper.

Conifer Tree. Any tree with needle leaves and a woody cone fruit including, but not limited to, pine, juniper and cedar species.

Conserve. Protect from harm or destruction; preserve; save.

Critical Root Zone (CRZ). The minimum area beneath a tree which must be left undisturbed in order to preserve a sufficient root mass to give a tree a reasonable chance of survival. The Critical Root Zone will typically be represented by a concentric circle centering on the tree's trunk with a radius equal in feet to one and three-tenths times the number of inches of the trunk diameter. EXAMPLE: The CRZ radius of a twenty (20) inch diameter tree is twenty-six (26) feet.

Dead Tree. Any standing tree which is no longer alive or has the ability to sustain itself through natural processes as determined by a qualified professional.

Development Activity. Any alteration of the natural environment, which requires the approval of a development or site plan and issuance of a Land Disturbance Permit. Development Activity shall also include the "thinning" or removal of trees from land in conjunction with a forest management program, the removal or destruction of trees incidental to the development of land or to the marketing of land for development, the removal or destruction of trees in conjunction with any grading activity, including the removal or filling (stockpiling) of soil, and logging or the removal of trees not in conjunction with an ongoing forest management program. Nothing in this definition shall be deemed to require or authorize the issuance of a permit for any activity described herein.

Diameter Breast-Height (DBH). The standard measure of tree size (for trees existing on a site). The tree trunk is measured at a height of 4½ feet above the ground. If a tree splits into multiple trunks below 4½ feet, the trunk is measured at its most narrow point beneath the split.

Director. The Director of Community Development or designee shall administer and enforce the provisions of this Ordinance; provided, however, that a designee shall have no authority to revoke permits.

Georgia 400 Tree Protection Zone. All property within a horizontal distance of 120 feet of the right-of-way of Georgia 400. At major intersections on Georgia 400 having exit and/or entrance ramps the protection zone shall be reduced to 60 feet. The reduction shall apply for the length of each such ramp. The Georgia 400 Tree Protection Zone is a Buffer.

Grading Activity. Altering ground surfaces to specified elevations, dimensions and/or slopes; this includes stripping, cutting, filling, stockpiling and shaping or any combination thereof and shall include the land in its cut or filled condition.

Guidance Document. A document maintained by the City of Alpharetta Arborist that includes clarifications to requirements with examples and additional technical standards about tree protection, tree planting, species selection, and other information relevant to the protection and replanting of trees in the City of Alpharetta. The document may be revised by the City Arborist as conditions and technical standards evolve.

Hardwood Tree. Any tree that is not coniferous (cone bearing). This definition is based on the colloquialism, and does not necessarily reflect any true qualities of the tree.

International Society of Arboriculture (ISA). A professional organization that promotes the professional practice of arboriculture, sets standards for obtaining professional credentials for arborist, and establishes best practices for tree care, pruning, and protection.

Land Disturbance Permit. A permit issued by the City that authorizes Development Activity and includes, but is not limited to, Soil Erosion Protection, clearing and grubbing, land disturbance and building construction.

Landscape Strip. A portion of a lot required to be reserved for, installed with, and maintained with vegetation. Such a strip may or may not be required to be of a linear form. No utilities or parking shall be allowed within a required landscape strip.

Landscape Tree. A tree or trees that were planted or retained on a developed or previously developed site.

Lot Building Area. The area of a lot encompassed by front sides and rear yard setbacks or building line as required by City Ordinance and Subdivision Regulations.

Mass Grading. The grading within existing or across proposed property lines including the removal of trees and disturbance of soils in order to prepare a site for construction where buildings are not approved.

Mulch. An organic material spread around the base of a plant or on a plant bed to enrich and insulate the soil. Types of mulch include Pine Straw, Shredded Hardwood, Wood Chips, and Bark Chips. Mulch should be free of disease and pests. Synthetic or artificial mulches are not acceptable for use in the City of Alpharetta.

Non-Development Activity. Any alteration of the natural environment which does not require development or site plan approval, but which would include the proposed removal or destruction of any tree(s). Any removal of trees that constitutes Development Activity as that term is herein defined shall not constitute non-development activity.

Ornamental Tree. A tree that provides a visual impact in the landscape. The impact may be provided through form, bark, branching structure, leaf color, and/or flower color. Typically a small or medium size tree.

Overstory Tree. Those trees that compose the top layer or canopy of vegetation and will generally reach a mature height greater than 40 feet and typically have a spreading canopy.

Permit (Tree Removal Permit). An official Permit for tree removal issued by the City of Alpharetta.

Pervious Surface. All that area of land that can be landscaped or planted, allows natural passage through by water, and is not covered by man-made materials or structures such as buildings or paving.

Pine Tree. An evergreen coniferous tree that has clusters of needle-shaped leaves.

Plantable Area. The pervious surface area available for the preservation or planting of trees. Plantable Area shall not include that portion of the lot that is covered by buildings and structures permitted pursuant to the maximum lot coverage standards of this Ordinance.

Planted Area. An area of living plant material created for the purpose of establishing open space and consisting of a minimum of 50% of the area devoted to trees and shrubs.

Pruning (Tree Pruning). To cut away dead, overgrown, or undesirable branches or stems. Pruning of trees to be done in compliance with standard arboricultural practices as outlined in ANSI A300 and shall maintain the trees natural form and structure.

Qualified Professional. An International Society of Arboriculture (ISA) Certified Arborist, an American Society of Consulting Arborists (ASCA) Registered Consulting Arborist, or a Registered Forester.

Recompense. Replacement of trees or payment into the City held tree fund for the removal of Specimen Trees.

Replacement Planting. The planting of trees on a site that before development had more trees, and after development shall have less trees per acre.

Responsible Party. Any individual, firm, principal, or other entity who is a signatory to a Tree Removal Permit Application or Land Disturbance Permit for Development Activity or any person or company caught in the act of tree removal without a City-issued permit, or who violates any other provision of this Ordinance.

Shade Tree. Any tree that has a spreading canopy that provides partial to full shade to the ground with a minimum height of 20 feet.

Semi-Pervious. Hardscape, aggregate or porous paver that allows at least fifty percent (50%) of surface water to pass through the manmade material and into the underlying soil.

Softwood Tree. Any coniferous (cone bearing) tree. This definition is based on the colloquialism, and does not necessarily reflect any true qualities of the tree.

Specimen Tree. Any tree which qualifies for special consideration for preservation due to its size, type, condition, location or historical significance and which also meets the minimum size criteria set forth below.

Size Criteria:

<i>Pine Trees:</i>	30-inch diameter or larger for trees in the Pinus (Pine) genus.
<i>Coniferous Trees:</i>	20" diameter or larger for trees in the cedrus (deodar cedar), Thuja (Arborvitae), or other ecologically similar trees,
<i>Overstory Trees:</i>	30-inch diameter or larger for trees in the Liquidambar (Sweetgum) or Liriodendron (Tulip poplar) genus
	20-inch diameter or larger for trees in the Fagus (Beech), Nyssa (Tupelo), Diospyros (Persimmon), Sassafras (Sassafras), or other ecologically similar trees
	20-inch diameter or larger for Magnolia grandiflora (Southern magnolia) and those cultivars that generally reach a mature height over 40'
	24-inch (24") diameter or larger for trees in all other genera
<i>Understory Trees:</i>	8-inch (8") diameter or larger.
	10-inch (10") diameter or larger for Oxydendron arboretum (Sourwood).

See additional requirements for Specimen Trees in "The Guidance Document."

Street/Streetscape Tree. Any tree located or proposed to be located along a public or private street. The actual location will be determined by the specific zoning district or overlay. In situations where there is limited planting space in the right-of-way and or safety concerns, street trees may be located at the back of the sidewalk or within the landscape strip on private property and the discretion of the Director.

Structural Root Plate. The zone of rapid root taper that provides the tree stability against wind throw. The radius of the structural root plate is equal to 0.5 feet per inch of DBH.

Timber Harvest. Harvesting of timber from sites as a timber management activity as part of a demonstrated ongoing agricultural land use.

Tree. Any living, self-supporting woody or fibrous plant which normally obtains a diameter breast height of at least three (3) inches, and typically has one (1) main stem or trunk and many branches.

Tree Care Plan. A plan developed to provide an impacted tree the best possible chance of survival. A tree care plan should be prepared by a qualified professional and conform to the requirements of ANSI A300 and the Guidance Document

Tree Density. A measurement of trees on a property, expressed as inches per acre. For existing trees density is calculated based on DBH. For proposed trees tree density is calculated based on the caliper.

Tree Grouping. A community of trees as determined by the Director to merit special consideration as an ecological feature based upon species composition, form, structure, age, and condition. Specimen trees and trees of quality may be included in tree groupings and every alternative should be evaluated to save these trees. Except as otherwise provided in Section 3.2., Tree Groupings will be treated as specimen trees for preservation credits and every alternative should be evaluated to save these trees.

Tree of Quality. A tree that merits special consideration due to historical significance, ideal shape and structure, or uniqueness of the species as determined by the Director. Except as otherwise provided in Section 3.2., Trees of Quality will be treated as specimen trees for preservation credits and every alternative should be evaluated to save these trees.

Tree Removal or Removal of Trees. Removal of trees through an act of cutting down a tree or any act which causes a tree to die within 2 years after commission of the act or impedes the ability of the tree to sustain itself, including but not limited to damage inflicted upon the root system, trunk, or canopy as a result of:

1. The improper use of machinery on the trees;
2. The storage of materials in or around the trees;
3. Soil compaction;
4. Altering the natural grade to expose the roots or to cover the tree's root system with more than 4 inches of soil;
5. Causing the infection or infestation of the tree by pests, fungus or harmful bacteria;
6. Pruning judged to be excessive by the Director or not in accordance with the standard set forth by the International Society of Arboriculture (ISA);
7. Paving with concrete, asphalt or other impervious surface within such proximity as to be harmful to the tree or its root system; and
8. Application of herbicides or defoliant to any tree without first obtaining a permit.

Tree Planting List. List of preferred tree species for use in the City of Alpharetta. Species not included on this list may be approved at the discretion of the Director. The Tree Planting List is included in the Arborist Guidance Document.

Tree Protection Area. An area encompassing the critical root zone of a tree that shall remain in an a pervious state.

Tree Save Area. An area designated for the purpose of meeting tree density requirements, saving natural trees, and/or preserving natural buffers that shall remain in a pervious state.

Understory Trees. Those trees that grow beneath the overstory, and will generally reach a mature height less than 40 feet. Understory trees may include coniferous trees that meet these same height characteristics.

Zoning Districts. Those areas as defined in the Zoning Ordinance and shown on the Zoning Map.
(Ord. No. 739 , 5-1-2017; Ord. No. 749 , § 4, 9-18-2017; Ord. No. 769 , § 1, 11-12-2018)

3.2.3 Exemptions.

- A. The following shall be exempt from the provisions of this section:
1. The removal of trees with a Permit.
 2. The removal of trees from horticultural properties such as farms, nurseries or orchards. This exception shall not be interpreted to include timber harvesting incidental to development of the land;
 3. The necessary removal of trees by a utility company within dedicated utility easements;
 4. The removal of trees on public rights-of-way conducted by, on behalf of, or any activity pursuant to work to be dedicated to, a federal, state, county, municipal or other governmental agency in pursuance of its lawful activities or functions in the construction or improvement of public rights-of-way;

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5. The removal of trees from lakes and detention ponds, and drainage easements, unless specifically planted to be part of the stormwater system; or
 6. The removal of any tree which is dead or has become or threatens to become a danger to human life or property;
- B. Notwithstanding the foregoing, all reasonable efforts shall be made to save specimen trees and trees of quality, and tree groupings.
- C. Nothing in this section shall be deemed to authorize, directly or indirectly, the removal of a tree from the Georgia 400 Tree Protection Zone or any buffer.

(Ord. No. 739 , 5-1-2017)

3.2.4 Permit required for non-development activity (activity which does not require a building permit, etc.).

- A. Except for routine or seasonal pruning or transplanting of trees, and except as exempted, no person shall engage in any Non-Development Activity as defined without first obtaining a permit. The request for a permit shall be submitted to the Director in the form of a tree removal permit application through the City process and shall include:
1. The reason for the proposed work
 2. Either a site sketch or photograph of the tree(s) proposed to be removed, identifying such tree(s) by size and species.
 3. Specimen Trees shall only be approved for removal if they are in declining health or as approved by the Director. If a request includes a Specimen Tree, the applicant shall provide a risk assessment or similar report, following currently accepted industry standards and protocols, prepared by a qualified professional outlining the condition of the trees and associated risks.

If the request for a permit is complete, complies with the Ordinance, and requests tree removal for one of the purposes identified in Paragraph B below, the Director shall issue a permit no later than ten (10) working days from receipt and shall inform applicant if replanting will be required. If the request is incomplete or denied, the Director shall notify applicant in writing regarding the specific reason for denial.

- B. The Director shall issue a permit for the following:
1. The removal of dead, substantially injured, damaged or diseased trees;
 2. The removal of any non-specimen tree, provided the tree is not a required landscape strip tree, buffer tree, or other code required trees and that the applicable minimum tree density requirement is maintained.
 3. The removal of any specimen tree, landscape strip tree, buffer tree or other code required tree with a replanting agreement approved by the director.

(Ord. No. 739 , 5-1-2017)

3.2.5 Land disturbance permit for development activity.

- A. No person shall engage in a Development Activity and no Land Disturbance Permit shall be issued without first obtaining an approved site plan stamped and signed by the Director.
1. Trees and/or soils shall not be disturbed or removed in order to pad grade or mass-grade a site unless building construction is imminent. In order to be imminent, proposed buildings shall require approval.

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- B. Except as provided in Section 3.2.4 and Paragraph (c) of this subsection, no tree removal shall be approved for any site not under active development. For the purposes of this Ordinance, a site is not under active development unless there exists an approved development plan delineating the improvements to be constructed on the site consistent with the use for which the site is zoned, and there is a reasonable certainty that construction is imminent.
- C. A Land Disturbance Permit may be issued for Grading Activity on a site not under active development provided that:
1. The sole purpose of the Grading Activity is for the storage, removal or altering of soil for fill balancing on another site under active development;
 2. The site not under active development must be under common ownership or common development control with the site that is under active development;
 3. The site not under active development must be contiguous to, or located within one (1) mile of, the site under active development. For the purposes of this Section, the measurement of distances shall be from property line to property line along the most direct route of travel on a public road;
 4. The proposed Grading Activity shall not result in the damage or removal of more than ten percent (10%) of the total tree density (inches per acre) on the site not under active development;
 5. The proposed Grading Activity shall not decrease the tree density below the minimum inches per acre required for the site. For the purposes of this Section, trees in Buffers that will be required shall be excluded from minimum density calculations;
 6. The area to be disturbed within the site shall be the area that will have the least adverse impact on existing trees, Specimen Trees, Trees of Quality, and Groupings of Trees as determined by the Director. In addition, the area must be visually screened from public or private roads and drives, developed residential and commercial properties, by a one hundred foot (100') buffer or a buffer of sufficient depth to provide reasonable visual screening. In order to provide reasonable visual screening, it may be necessary to locate access roads to the impacted area in a winding manner to prevent a straight line of site to the impacted area; and
 7. The disturbed area within the site shall be replanted with trees to a tree density of 130 inches per acre no later than eighteen (18) months from the issuance of the Land Disturbance Permit authorizing the Grading Activities. A tree replacement plan and a bond shall be submitted and approved by the Director prior to the issuance of the permit authorizing the Grading Activities. The completion bond shall be held until the planting is complete and at that time transfer to an eighteen (18) month maintenance bond to ensure survival of the replacement trees. The applicant shall be responsible for the irrigation (watering) of trees during the period of the bonds. The replanting requirements of this Section shall not apply, and the initial bond shall be released, if, on or before fifteen (15) months from the issuance of the permit authorizing the Grading Activity, the site becomes under active development pursuant to the issuance of a Land Disturbance Permit and the approval of development plans in compliance with the provisions of this Ordinance.
- D. Nothing in this Section shall be deemed to authorize any Grading Activity or similar activity not otherwise in compliance with the Land Subdivision Regulations of the City of Alpharetta, including, the Soil and Sedimentation Control Ordinance. Further, nothing in this Section shall be deemed to eliminate the requirement that all reasonable efforts must be taken to save and not adversely impact the Critical Root Zones of Specimen Trees, trees of quality, and tree groupings and that all applicable sites from the City shall maintain or obtain the minimum tree density required by this Ordinance.

(Ord. No. 739 , 5-1-2017; Ord. No. 769 , § 2, 11-12-2018)

3.2.6 Application requirements.

- A. When a person applies for a Land Disturbance Permit as defined herein, such person shall provide the following information:
1. A complete tree survey and inventory, which shall contain the following information:
 - a. All Specimen Trees, Trees of Quality, Tree Groupings, Landscape Trees, and Boundary Trees on the site and within 30 feet of the limits of disturbance; with an indication whether they are to be retained or removed;
 - b. All trees that are to be counted toward the tree density requirement greater than 2" DBH, including size (Caliper or DBH) and species. Sampling methods may be used to determine tree densities for forested areas (over 5 acres) that are to be preserved. Sampling methods must conform to industry standards and protocols and be no less than a 10% sample;
 - c. Tree Protection Zones and Tree Save Areas must be delineated on the plan;
 - d. All buffers with existing trees to be delineated on plans as Tree Save Areas. Land Disturbance within any Buffer is subject to Director approval;
 - e. The tree survey and inventory shall be a to-scale map or a site plan prepared and sealed by a registered surveyor.
 2. An integrated site plan showing Specimen Trees, Trees of Quality, Tree Groupings, Boundary Trees, the trees to be saved and those to be removed, existing utilities and those to be installed, grading, the approximate location of all structures, driveways and curb cuts and all proposed tree plantings and other landscaping. It is required that all reasonable efforts be made to save Specimen trees, Trees of Quality, Tree Groupings. (Reasonable efforts shall include, but not be limited to, alternate building design, building location, parking area layout, parking area location, stormwater BMP locations and the like).
 - a. If a Specimen Tree, Tree of Quality, or Tree Grouping cannot be saved a hardship justification in the form of a letter shall be submitted to the Director for review and approval and be included within the plan set;
 - b. If a Boundary Tree cannot be saved or results in an encroachment into the Critical Root Zone of greater than 10%, evidence of notification to the owner of the tree will be required to be provided to the Director. This notification shall generally include the current condition of the tree, % encroachment, potential outcomes of the encroachment, and proposed tree care to offset the encroachment. In no way does this authorize any encroachment into the Structural Root Plate of a Boundary Tree.
 3. A detailed plan to protect and preserve landscaping and trees before, during and for a period of two (2) years after construction, which shall contain the following information:
 - a. All items found on the Arborist Checklist located in the Arborist Guidance Document;
 - b. Existing roads, utility lines, drainage and detention facilities, and other pertinent items in the vicinity of the site.
 - c. The locations of existing and proposed structures, paving, driveways, cut and fill areas, detention areas, etc.
 - d. Phase lines or limits of construction;
 - e. A delineation of all protected zones with any required dimensions;

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- f. Calculations showing compliance with the required Tree Density and Recompense per section 3.2.7
 - g. Locations of all existing and proposed utility lines and easements;
 - h. Locations of any boring sites for underground utilities;
 - i. Locations of all Specimen Trees, Trees of Quality, Groupings of Trees, Landscape Trees and Boundary Trees and indications whether they are to be removed or preserved;
 - j. Locations of all tree protection devices, materials to be used in each location and details;
 - k. A delineation of tree save areas in which trees have been inventoried for density calculations;
 - l. If applicable, locations and details of all permanent tree protection measures (tree wells, aeration systems, permeable paving, retaining walls, bollards, etc.); and
 - m. A tree care plan developed by a Qualified Professional designed specifically for each tree to be saved that warrants care due to the changes in site conditions or as approved by the Director. The tree care plan shall be prepaid prior to issuance of the land disturbance permit and a paid invoice provided to the City. In the event of a change in ownership, arrangements must be made to allow access for the tree care to continue throughout the required timeframe.
 - n. A full landscape plan meeting all of the requirements of this Section including tree density, recompense, landscape strip, parking lot tree coverage and screening, groundcover, hardscapes, etc. The landscape plan submitted shall be the one that is expected to be planted. Permit only plans will not be accepted by the Director.
 - o. Additional information as required on a case-by-case basis.

The above items may be integrated into the normal application requirements and submittals.

- B. Minor additions to existing development require only a sketch showing changes to be submitted to the Director for review and approval.

(Ord. No. 739 , 5-1-2017)

3.2.7 Minimum tree density and recompense requirements.

The intent and goal of these regulations is to insure that a minimum density of trees is maintained on all developed sites and that a significant amount of tree canopy coverage and pervious soil area is maintained throughout the City. The density requirement must be met whether or not a property or site had trees prior to development or any tree removal. The density may be achieved by counting existing trees 2" in diameter or greater to be preserved, planting new trees in accordance with the minimum standards of this Section, or some combination of the two. Vegetated runoff reduction measures which include trees also count toward the tree density requirement. Minimum tree density shall be calculated and established pursuant to the formula and analysis set forth in the Guidance Document.

- A. All sites within the City other than 'For-Sale' residential lots shall maintain or achieve a Minimum Tree Density of 130 inches per acre. The owner shall be subject to the minimum tree density requirement set forth in this paragraph, but the owner shall base the density calculations on the net site area excluding the acreage required for Buffers and infrastructure improvements (roads, utility lines, detention ponds, etc.). In no event shall a parking lot be considered an infrastructure improvement.
- B. All 'For-Sale' residential lots in the City shall maintain a minimum tree density of 130 inches per acre or provide a calculation as described in the Guidance Document that shows the lot meets or exceeds a 30% canopy coverage based upon trees growing within the property lines. For new construction or new plantings this calculation may be based upon the mature spread of the newly planted trees at 20 years

after planting. If replacement planting is required on a 'For-Sale' residential lot, it is encouraged to provide at a minimum a two-inch (2") caliper tree or larger in the lawn area in the front yard or landscape strip if space allows.

- C. Owners shall receive a density credit of two (2) times the inches for each Specimen Tree saved by utilizing an alternate design during development. Specimen trees that cannot be saved must be replaced with recompense plantings equal to three (3) times the DBH of the tree(s) removed. Recompense trees shall be a minimum of four-inch (4") caliper at time of planting. Trees of Quality or Tree Groupings shall receive a density credit of one (1) times the inches for each tree saved. Specimen Trees removed without prior approval shall be subject to the recompense replanting requirements as described in section 3.2.10 Tree Damage and subject to the applicable penalties as described in Section 3.2.17.
- D. An owner may request a reduction in recompense plantings, which may be granted at the discretion of the Director. The reduction shall be calculated considering Specimen Trees, Trees of Quality or Tree Groupings and other landscape amenities that are incorporated into the site plan utilizing an approved alternative design.
- E. In the event that Specimen Tree Recompense cannot be achieved through planting on the subject property, two alternative methods of compliance may, at the discretion of the Director, be approved: planting at a location remote from the project site; or, a recompense payment to the City of Alpharetta Tree Replacement Fund. The following standards have been established for administering these alternative recompense methods.
 - 1. The director must review and approve all requests for alternative recompense. In no instance shall 100% of the required recompense be met through these alternative methods. As many trees as can reasonably be expected to survive and thrive must be planted on the subject property. No permit shall be issued until the Director has approved the request and received the necessary documentation and/or funds.
 - 2. If trees are to be planted at another location, the off-site location should be in the same area of the City as the project site and a tree replacement plan meeting all applicable standards must be provided by the owner and reviewed and approved by the City Arborist. If tree planting is proposed on City property all specifications for such planting shall be met as determined by the Director of Public Works or the Director of Recreation and Parks. A completion bond in the amount of 100% of the installation and materials cost shall be provided prior to issuance of any land disturbance permit.
 - 3. If a recompense payment to the City of Alpharetta Tree Replacement Fund is approved, the amount of the donation shall be established by the Director. The amount of the recompense payment shall be 100% of the estimated costs of the average 3 bids from reputable landscape contractors, licensed to do business in the City, for the materials, installation, and care during the trees establishment period (18 months) provided by the owner and reviewed and approved by the City.

(Ord. No. 739 , 5-1-2017)

3.2.8 Tree Replanting, Buffer, and Landscape standards.

- A. Tree Replanting.
 - 1. Unless otherwise approved by the Director, it is recommended that trees selected for replanting be on the Recommended Tree List. Trees selected for planting must be free from injury, pests, disease, nutritional disorders or root defects, and must be of good vigor and form in order to assure a reasonable expectation of survivability. Standards for transplanting shall be in keeping with those

established in the International Society of Arboriculture publication Tree and Shrub Transplanting Manual or similar publication. Reference the American Association of Nurserymen publication American Standard for Nursery Stock (ANSI Z60.1-2014) for plant material quality specifications. Reference the Manual of Woody Landscape Plants (Michael Dirr, 2009, Stipes Pub LLC.) or similar publication for information on tree species and site requirements.

2. It is desirable that replanted trees be ecologically compatible with the site and neighboring sites. Accordingly, the replanted trees shall be of the same or similar species as those removed when practical.
3. All replanted overstory trees shall be at least six (6) feet tall and have a trunk of not less than two (2) caliper inches. All replanted understory trees shall be at least four (4) feet tall or have a trunk not less than one (1) caliper inch. In order to provide sufficient growing area for planted trees, the following minimum criteria must be observed unless otherwise approved by the Director.
 - a. No more than 25% of any one genus may be included in any replanting plan.
 - b. A minimum of 40% of the required tree density on a site is recommended to be met through overstory tree planting.
 - c. Greater than 50% of the trees shall be natives.

B. Buffer Requirements.

1. A lot zoned or used for a rental dwelling, office, institutional, commercial, industrial uses or occupied by a non 'For-Sale' residential use shall provide a fifty foot wide undisturbed buffer along all property lines adjoining property zoned for or used by 'For-Sale' residential purposes. Where commercial or industrial districts or developments abut R-10M zoning districts, the same buffer requirements apply. The buffer shall be in addition to the required building setback line.
 - a. When a new, 'For-Sale' development is proposed adjacent to an existing, non-residential use with no buffer present, the 50' buffer must be provided by the residential development.
 - b. If a 50' buffer has been provided on the property adjacent to a proposed, non-residential development, the buffer requirement may be waived with the approval of the Director.
2. Except as otherwise provided, herein, buffer strips shall be preserved in their natural undisturbed state, except that sparsely planted buffers shall be enhanced with additional plant material. Enhancement plants must provide an opaque screen within two (2) years of planting and must consist of trees, shrubs, and groundcover plants meeting the following standards:
 - a. Plant selection will consist of eighty (80) percent evergreen species and twenty (20) percent deciduous species;
 - b. Deciduous trees must be a minimum of 2 inch caliper at time of installation;
 - c. Evergreen trees must be a minimum of 9 feet tall at time of installation;
 - d. Shrubs must be a minimum of 3 feet tall at time of installation;
 - e. Plants will be spaced a maximum of eight (8) feet on center or as approved by the Director;
 - f. Plantings shall be designed with plant palette containing a mixture of colors, textures, and heights.
3. Undisturbed buffers shall not contain any surface parking or storm water, detention facilities, or any structures except that the Director may approve underground facilities within the buffer or the crossing of the buffer for the purpose of extending utilities.
4. The Director may approve vegetated runoff reduction measures within the buffer. The planting requirements above may be varied to accommodate vegetated runoff reduction measures as part of an

approved stormwater management plan, if properly designed to provide stormwater management and screening functions.

5. Stream buffers must be replanted where disturbed for approved access and utility crossing. Replacement plantings must be native and be arranged to have a natural appearance.
6. All buffer plantings are subject to the approval of the Director.

C. Parking Lot Landscaping.

1. Surface parking lots shall provide a minimum 200 square foot wide landscape island at the end of each parking bay, and a 200 square foot island located each 72 feet of single parking length. Each landscape island shall be planted with one shade tree. Islands shall be excavated to 3 feet deep or to a depth 6 inches greater than the height of the root ball and backfilled with a minimum of 600 cubic feet of friable soil. Islands that are 400 square feet or larger and corner islands shall be planted with a large overstory tree. Parking lot trees must be 2" caliper minimum at time of planting and have a clear trunk to a minimum height of 6 feet. The remainder of a landscape island shall be planted with shrubs, ornamental grasses, and ground covers; and mulch shall be applied. Turf grass will not be accepted. Utilities and lighting shall not be allowed within required parking lot landscape islands.
2. Alternate landscape configurations may be approved if the Director determines that the alternate design exceeds the standards above and/or is part of a smart stormwater design for the site that includes multi-functional, vegetated runoff reduction measures. An alternate configuration could also include a stormwater component or the preservation and enhancement of existing trees which are provided above and beyond other tree preservation requirements; which are deemed of community value by the Director; and shall result in a minimum of 50% parking lot canopy coverage within 15 years.
3. The required tree area shall be protected against compaction and shall provide sufficient area for tree growth. Utilities are not allowed within the minimum area. The trees shall be maintained in accordance with best management practices as defined by the International Society of Arboriculture guidelines, and shall not be removed or pruned without permission from the City Arborists.
4. Shrubs shall be provided to screen paved areas and parking lots from the public right-of-way, private drives and adjacent property year round. Shrubs shall be 2 feet tall at time of planting, 2 rows deep and shall provide a screen within 3 years of planting. Alternate screening methods such as fencing may be approved by the Director.

D. Landscape Strips.

1. The City wants to promote tree lined streets therefore, a minimum of ten (10) feet wide landscape strip shall be provided along all public right-of-ways and private roads. Main streets which are listed below shall have twenty (20) foot landscape strips, except those located within the Downtown Overlay District. which shall have ten (10) feet wide landscape strips or landscaping as approved by the Director.

MAIN STREETS:

Highway 9
Mansell Road
Windward Parkway
Northpoint Parkway
Westside Parkway
Old Milton Parkway

Haynes Bridge Road

Kimball Bridge Road

2. No permanent structures other than signage are permitted within the landscape strip. This includes pavement, retaining walls, drainage structures, detention ponds, flumes, curbing, etc. unless approved by the Director.
 - a. Retaining walls built with decorative masonry and designed as a landscape feature may be located within the landscape strip subject to approval by the Director. All required plantings must be installed so as not to interfere with the structural integrity of the wall.
 3. Actual spacing of street trees is based on the average canopy spread of the species selected as outlined in the Arborist Guidance document. If the spacing of shade trees exceeds 25 feet on center understory trees shall be required to fill in the gaps between each shade tree. Spacing of shade trees shall not exceed 40 feet on center. Shade trees shall be a minimum 4" caliper; ornamental trees shall be a minimum 3" caliper. The use of a combination of shade trees and ornamental trees is recommended.
 4. For commercial development and for master plan subdivisions, a minimum of five (5) foot landscape strip shall be provided along all property lines which do not adjoin a public right-of-way or private road. One (1) shade tree, minimum 4" caliper, shall be provided for every fifty (50) linear feet of landscape strip. For master plan subdivisions, this requirement is only required along the external property line of the overall project.
 5. Shrubs shall be provided in all landscape strips. Shrubs shall be a minimum of 2 feet tall at time of planting. Shrubs located in landscape strips may be used to meet the parking lot screening requirement.
- E. Additional screening shall be provided around all utility areas, detention facilities, dumpster/refuse areas, drive through areas, loading and unloading zones, etc. to screen views from the public right-of-way, private roads, drives, and adjacent properties year round. Screening shall be provided in any combination of the standards below or as approved by the Director.
1. Plant selection will consist of eighty (80) percent evergreen species and twenty (20) percent deciduous species;
 2. Deciduous trees must be a minimum of 2 inch caliper at time of installation;
 3. Evergreen trees must be a minimum of 6 foot tall at time of installation;
 4. Shrubs must be a minimum of 4 foot tall at time of installation;
 5. Screening for detention facilities must incorporate an alternating double row of evergreen shrubs 4 foot tall at time of planting.
 6. A combination of decorative walls, fences, and landscape material may be used with the approval of the Director.
- F. Lighting Fixtures shall be arranged so that the source of any light is screened from residential views and located as to not interfere with the tree canopy at time of planting or in the future.
- G. All required landscape areas shall be provided with a minimum of 1 water spigot or other water source within 150 feet.
- H. A bond shall be required for a minimum of 18 months to ensure the maintenance and irrigation of the landscaping materials.

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- I. All landscape plans and tree planting plans for non "For Sale" residential properties shall be prepared as a to-scale map or a site plan prepared and sealed by a Registered Landscape Architect in the State of Georgia. Tree only plans may be prepared by a Qualified Professional.
 - J. Outdoor Dining Areas. At-grade outdoor dining areas shall include perimeter landscaping and decorative detectable barriers in order to define the area. Detectable barriers shall include decorative planters, low walls or other improvement approved by the Community Development Director. Uncovered outdoor dining areas shall include one (1) shade tree per 750 square feet.
 - K. Tree Conservation. To preserve the character and existing tree canopy within the Downtown Overlay it is desired to maintain good quality trees. Specimen trees and trees of quality within the building setbacks along the roads listed below shall be conserved.

ROADS:

Academy Street

Canton Street

Church Street

Cumming Street

Marietta Street

Mayfield Road

Milton Avenue

Roswell Street

(Ord. No. 739 , 5-1-2017)

3.2.9 Tree Protection and Conservation Standards.

Prior to commencement of any grading, construction, or tree removal authorized through the issuance of a land disturbance permit and continuing until a final subdivision plat has been recorded or a certificate of occupancy has been issued, the following system shall be used:

- A. A tree protection area shall be required for any tree located within 30 feet of any proposed grading, construction or tree removal; and shall be established by physical barriers and maintained until such work is complete.
- B. Location and Types of Tree Protection Devices.
 - 1. Tree protection devices are to be installed as shown on the plan or otherwise completely surrounding the Critical Root Zone of all trees to be preserved.
 - 2. The plan shall indicate which types of tree protection are to be installed and where they are to be installed. The types identified on the plan shall be consistent with the City's Tree Protection Details, available in the Arborist Guidance Document.
 - 3. The locations of all tree protection devices will be verified by the City prior to the issuance of the construction permit for clearing and/or grading.
 - 4. Once Protected Zones are established and approved, any changes are subject to Development and Inspections Department review.
- C. Tree Protection measures are to be installed as shown on the City's Tree Protection Details, available in the Arborist Guidance Document.

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- D. Sequence of Installation and Removal. All tree protection devices shall be installed prior to any land disturbance permit authorizing tree removal. Community Development Department must inspect the installation of tree protection and erosion and sedimentation control devices prior to the issuance of the land disturbance permit. Tree protection must remain in functioning condition until the certificate of occupancy is issued.
 - E. The cleaning of equipment, storage of materials or dirt, disposal of waste materials such as paint, oil, solvents or other harmful substances, or any other such act which may be harmful to the continued vitality of the tree(s) within the tree protection area, is prohibited.

(Ord. No. 739 , 5-1-2017)

3.2.10 Tree damage.

Any tree designated in the plan to be saved, Including Trees of Quality and Tree Groupings, that is damaged during construction or grading, or as a result of such activities, shall be treated according to accepted International Society of Arboriculture Standards, or replaced with a tree(s) equal to the DBH of the tree removed. However, any Specimen Tree damaged as described above shall be replaced with a tree(s) eight (8) times the DBH of the tree removed with a minimum four-inch (4") tree Caliper. In the event that a damaged specimen tree must be removed, the location occupied by the tree's Critical Root Zone must remain in a pervious state with no structures or buildings placed in this area and violations shall be subject to the applicable penalties as described herein. Any specimen tree damaged on "For-Sale" residential lots as the result of failure to receive tree removal approval for non-construction tree removal or as a result of failure to protect a specimen tree during non-construction tree removal will result in up to three (3) times recompense.

(Ord. No. 739 , 5-1-2017)

3.2.11 Tree survey inspection.

Following the receipt of the completed tree removal application and supporting data, the Director shall schedule and conduct an inspection of the proposed development site. Following inspection, the Director shall advise the applicant of any recommended changes in the applicant's proposed tree removal, protection or replanting plans necessary to make the plans comply with the provisions of this Ordinance.

(Ord. No. 739 , 5-1-2017)

3.2.12 Tree removal applications, approval and expiration.

- A. The Director shall review all applications and supporting data and take one (1) of the following actions: approve, approve with conditions or disapprove. Applications, which meet the requirements of this Ordinance, shall be approved.
- B. Development Activity will not be authorized until such time as appropriate Land Disturbance Permits have been issued and approval granted.
- C. Tree removal and replacement shall begin no later than one hundred eighty (180) days after issuance of the permit and shall be completed no later than two (2) years after the issuance of the permit. Except as provided in these regulations authorizing certain cut and fill activities. The Director may refuse to issue any permit for tree removal until the submission of all development plans and receipt of other evidence satisfactory to the Director that there is a reasonable certainty that the Development is imminent.

(Ord. No. 739 , 5-1-2017)

3.2.13 Tree removal and landscaping compliance inspection.

- A. Following the issuance of a Land Disturbance Permit for the development site, the Director shall from time to time inspect the site for the purpose of certifying compliance with the requirements of the tree removal. In the event of non-compliance, the Director may revoke or modify any City permit pertaining to the Development Activity for which the Land Disturbance Permit has been issued. No certificate of occupancy shall be issued until actual compliance is obtained.
- B. If any required Land Disturbance Permit conditions have not been met within the time specified in the Land Disturbance Permit, and provided the Director has not granted a written extension, the City may use the cash or bond proceeds to insure that these conditions are met. The bond will have an expiration date no longer than one (1) year, and the proceeds will go to the City of Alpharetta Tree Replacement Fund.
- C. After development is complete, the Director shall continue to make random inspections to insure that required trees and landscaping are maintained. Replacement shall be required or bond/letter of credit posted within thirty (30) days of notice by the Director should any of the tree(s) or landscaping die, be removed or be destroyed.
- D. Notwithstanding any other provision of this Ordinance to the contrary, a home builder's responsibility to replace a newly planted tree or trees shall terminate upon the issuance of a certificate of occupancy or at the end of the maintenance bond time frame, whichever is longer, provided that an inspection conducted immediately prior to the issuance of the certificate of occupancy confirms that the replanted tree or trees were planted properly as established in the ISA (International Society of Arboriculture) standards, and are healthy and free of pests and disease. Nothing in this Ordinance shall be deemed to eliminate any other obligation the homebuilder may have pursuant to any private agreement between the homebuilder and homeowner, or any restrictive covenants that are applicable to the property.

(Ord. No. 739 , 5-1-2017)

3.2.14 Permit fee.

The fee for review of a request for permits shall be \$5.00. The fee for review of an application for a Land Disturbance Permit (which only applies to Development Activity and Grading Activity) shall be \$50.00 per acre and a maximum of \$500.00. These fees may be revised from time to time by resolution of the City Council, or delegated to the Director to be administratively established and revised from time to time.

(Ord. No. 739 , 5-1-2017)

3.2.15 Enforcement, appeals and variances.

- A. Enforcement. All requests for permits and all applications for tree removal shall initially be submitted to and reviewed by the City Arborist. The City Arborist shall be responsible for recommending to the Director the approval or denial of applications for Land Disturbance Permits.
- B. Appeals.
 - 1. Requests for appeal of any administrative decision shall first be addressed to the Director.
 - 2. Written requests for appeal of any administrative decision are permitted and must be submitted to the Board of Zoning Appeals within ten (10) days after notice of such decision. Such written appeal shall be made in the form of a letter, which outlines the salient points upon which the appeal is based.
 - 3. The Board of Zoning Appeals shall schedule a hearing as soon as reasonably practicable to consider the appeal, and shall issue a written decision within thirty (30) days of the hearing.

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4. If the appeal concerns an administrative decision regarding Specimen Trees, Trees of Quality, Tree Groupings, or Boundary Trees it shall be the applicant's burden to demonstrate that reasonable alternatives have been considered in order to save said trees (as described herein). Documented evidence shall be filed by the applicant with the written request for appeal and shall include, but not be limited to the following:
 - a. Boundary survey showing topography, easements, creeks and other features of the property.
 - b. Two alternative development plans, which include the Specimen Tree(s), Trees of Quality, Groupings of Trees, or Boundary Trees.
 - c. An itemized estimate of additional costs associated with saving the trees.
- C. Variance.
1. Written requests for a variance are permitted.
 2. The Director shall have the authority to grant variances not to exceed twenty percent (20%) of the minimum or maximum standards of this Ordinance.
 3. Variances that exceed twenty percent (20%) or variances that exceed the allowance of administrative variances shall be heard by the Board of Zoning Appeals.
 4. Variances can be granted only in the case of extreme hardship or unusual circumstance. The factors to be taken into consideration by the Board may include the following, but shall not be solely economic:
 - a. The ease with which the applicant can alter or revise the proposed development or improvement to accommodate existing trees.
 - b. The economic hardship that would be imposed upon the applicant were the variance denied.
 - c. The heightened desirability of preserving tree cover in densely developed or densely populated areas.
 - d. The need for visual screening in transitional zones or relief from glare, blight, commercial or industrial unsightliness or any other visual affront.
 - e. Whether the continued presence of the tree or trees is likely to cause danger to a person or property.
 - f. Whether the topography of the area in which the tree is located is of such a nature to be damaging or injurious to trees.
 - g. Whether the removal of the trees is for the purpose of thinning a heavily wooded area where some trees will remain.
 - h. Whether tree removal would have an adverse impact upon existing biological and ecological systems.
 - i. Whether tree removal would affect noise pollution by increasing source noise levels to such a degree that a public nuisance may be anticipated or a violation of the noise control ordinance will occur.
 - j. Whether the general health and life expectancy of the tree or trees warrant the measures necessary to prolong the life of the trees based upon accepted ISA practices.
- D. Appeal from the Decisions of the Board of Appeals shall be by Writ of Certiorari to the Fulton Superior Court, and must be filed within thirty (30) days of the date of the Board's decision.

(Ord. No. 739 , 5-1-2017)

3.2.16 Natural Resources Commission.

The Mayor and each City Council member shall appoint one (1) member to a seven (7) member Natural Resources Commission.

- A. The Natural Resources Commission shall give advice to the Council based on an annual re-evaluation of experience under the Ordinance, provide leadership in the development of understanding of the objectives and methods of the tree program, and assist the Director in the development and maintenance of technical specifications and guidelines. In addition, the natural Resources Commission primary objectives shall be:
 - 1. To promote the benefits of maintaining a healthy tree canopy for the City of Alpharetta;
 - 2. To provide educational outreach activities for the purpose of informing the community about resource conservation, protection of the environment, and the maintenance of the city's natural amenities, in particular its trees;
 - 3. To plan and organize Arbor Day and facilitate other events, activities, meetings and projects that support environmental awareness and education;
 - 4. To encourage Alpharetta's citizens to take greater responsibility for improving their community through litter prevention, waste reduction, recycling, tree plantings and other, similar means.
 - 5. To oversee the following:
 - a. Alpharetta's Tree Conservation, Landscape, and Buffer Ordinance.
 - b. Tree City USA designation.
 - c. Keep America Beautiful affiliation.
- B. The Natural Resources Commission shall assist the Arborist in producing and maintaining the Arborist Guidance Document, including the list of proposed changes to the kinds and species of trees described in the Tree Planting List. Any such changes may be adopted and may be changed from time to time.
- C. The Natural Resources Commission shall enlist technical advisors in the fields of land development, landscape architecture and horticulture or related professions.
- D. The Natural Resources Commission shall have the power and authority to maintain the Tree City USA and Keep America Beautiful (KAB) certifications by:
 - 1. Strengthening environmental outreach opportunities associated with the Tree City USA and KAB organizations by promoting community participation and acting as an advocate of tree and environmental conservation efforts;
 - 2. Supporting the City's efforts through public/private partnerships;
 - 3. Making recommendations for the enhancement of public outreach and education programs concerning environmental and tree related issues;
 - 4. Developing and implementing a sustainable program for their environmental accomplishments; and
 - 5. Providing regular updates to City Council regarding Natural Resources Commission activities.

(Ord. No. 739 , 5-1-2017)

3.2.17 Penalties.

Any person, firm, corporation, limited liability company, Responsible Party, or other entity found guilty of violating or knowingly assisting in the commission of a violation of this Section shall be subject to the penalties specified herein. Each day any violation of any provision of this Section shall occur and each day any violation shall continue shall constitute a separate offense of this Section.

- A. A violation of this Section shall constitute a misdemeanor punishable by a fine of up to one thousand dollars per incident. Replacement plantings shall also be required. Penalties and fines, including replacement plantings must be satisfied within the timeline stated on the violation and/or stop work order. Appeals can be filed with the Board of Zoning Appeals.
- B. In the event that a Specimen Tree is damaged or removed in violation of this Section on non "For-Sale" residential property or as part of a construction project, violators shall be subject to replace Specimen Trees with trees having a total density equal to eight (8) times the unit value of the tree removed with a minimum four-inch (4") tree caliper. Furthermore, the location and extent of the tree's Critical Root Zone shall permanently remain in a pervious state with no structures or buildings placed on it. In the event that a Specimen Tree is damaged or removed in violation of this Section on a "For-Sale" residential property not in conjunction with a construction project, violators shall be subject to replace Specimen Trees with trees having a total density up to three (3) times the unit value of the tree removed. The city shall take into consideration the amount of trees that can be reasonably placed on the property in violation. If the DBH of the removed tree cannot be determined the measurement shall be taken at the upper most portion of the remaining stump.
- C. In the event that a non-specimen tree, including Trees of Quality and Tree Groupings, is damaged or removed in violation of this Section, violators shall be subject to replacement plantings equal to one (1) times the DBH of the tree removed with a minimum two inch (2") caliper trees. If the DBH of the removed tree cannot be determined the measurement shall be taken as stated in Section 3.2.17.B.
- D. In addition to A. and B., upon notice from the Director, work on any development that is being done contrary to the provisions of this Section shall immediately cease. The stop-work notice shall be in writing and shall go to the owner of the property, or to his agent, or to the person doing the work, and shall state the conditions under which work may be resumed. When an emergency exists, the Director shall not be required to give written notice prior to stopping the work. Further, in the event that work on any development is being done contrary to the provisions of this Section, the Director may revoke any permit pertaining to the development activity for which the Land Disturbance Permit has been issued and may refuse to issue any further permit until, at the discretion of the Director, the work on the development is brought into compliance with the provisions of this Section.

(Ord. No. 739 , 5-1-2017)

AN ORDINANCE TO AMEND ARTICLE III OF THE UNIFIED DEVELOPMENT CODE OF THE CITY OF ALPHARETTA, GEORGIA; TO ADD REGULATIONS PERTAINING TO TREE CONSERVATION; TO REPEAL CONFLICTING ORDINANCES; AND FOR OTHER PURPOSES.

WHEREAS, on or about May 21, 2001, the City of Alpharetta (the “City”) adopted a comprehensive zoning ordinance known and cited as the Unified Development Code of the City of Alpharetta, Georgia, which has subsequently been amended from time to time (the “Unified Development Code”); and

WHEREAS, the Mayor and Council of the City of Alpharetta (the “City Council” or “Council”) are charged with the protection of the public health, safety, and welfare of the citizens of the City of Alpharetta; and

WHEREAS, the Unified Development Code was designed to be amended from time to time when circumstances warrant that modifications be made in order to make said Codes more responsive to community needs; and

WHEREAS, the City Council finds that ordinances and regulations governing the uses of land and development of land within the City, as well as the City’s operations, should be continually improved from time to time and modified as necessary to better protect and promote the public health, safety and welfare of the residents and businesses of the City of Alpharetta; and

WHEREAS, the City Council desires to amend Article III of the Unified Development Code for the foregoing purposes; and

WHEREAS, the City Council finds that the following amendments to the Unified Development Code promote the health, safety, morals, convenience, order, prosperity and general welfare of the present and future inhabitants of the City of Alpharetta; and

NOW THEREFORE, The Council of the City of Alpharetta hereby ordains, as follows:

Section 1: Article III, Subsection 3.2.2 titled “Definitions” and Subsection 3.2.8(K) titled “Tree Conservation” of the Unified Development Code is hereby added by amending same as set forth in Exhibit “A” attached hereto as if fully set forth herein.

Section 2: If any section, subsection, provisions, or clause of any part of this Ordinance shall be declared invalid or unconstitutional or, if the provisions of any part of this Ordinance as applied to any particular situation or set of circumstances shall be declared invalid or unconstitutional, such invalidity shall not be construed to affect the portions of this Ordinance not so held to be invalid, or the application of this Ordinance to other circumstances not so held to be invalid. It is hereby declared as the intent of the City Council that this Ordinance would have been adopted in its current form without the invalid or unconstitutional provision contained therein.

Section 3: This Ordinance shall be effective immediately upon its adoption by the City Council and the amendments made herein shall be incorporated into the Unified Development Code of the City of Alpharetta, Georgia, as applicable. This Ordinance hereby repeals any and all conflicting ordinances and amendments.

SO ORDAINED this the _____ day of _____, 2022.

Approved:

Jim Gilvin, Mayor

Attest:

COUNCILMEMBERS

Lauren Shapiro, City Clerk
(Seal)

Approved as to Form:

City Attorney

Exhibit “A”

3.2.2 Definitions.

For the purposes of this Section, unless the context indicates otherwise, the following terms shall have the meaning set forth below:

Boundary Tree. Any tree located on adjacent property with a critical root zone that will be impacted by proposed land disturbance activity.

Buffer. An area required to remain undisturbed or replanted where existing vegetation is sparse, as determined by the director.

Caliper. A standard of trunk measurement for replacement trees. Caliper inches are measured at the height of 6 inches above the ground for trees up to and including 4 inch caliper and 12 inches above the ground for trees larger than 4 inch caliper.

Conifer Tree. Any tree with needle leaves and a woody cone fruit including, but not limited to, pine, juniper and cedar species.

Conserve. Protect from harm or destruction; preserve; save.

Critical Root Zone (CRZ). The minimum area beneath a tree which must be left undisturbed in order to preserve a sufficient root mass to give a tree a reasonable chance of survival. The Critical Root Zone will typically be represented by a concentric circle centering on the tree's trunk with a radius equal in feet to one and three-tenths times the number of inches of the trunk diameter. EXAMPLE: The CRZ radius of a twenty (20) inch diameter tree is twenty-six (26) feet.

Dead Tree. Any standing tree which is no longer alive or has the ability to sustain itself through natural processes as determined by a qualified professional.

Development Activity. Any alteration of the natural environment, which requires the approval of a development or site plan and issuance of a Land Disturbance Permit. Development Activity shall also include the "thinning" or removal of trees from land in conjunction with a forest management program, the removal or destruction of trees incidental to the development of land or to the marketing of land for development, the removal or destruction of trees in conjunction with any grading activity, including the removal or filling (stockpiling) of soil, and logging or the removal of trees not in conjunction with an ongoing forest management program. Nothing in this definition shall be deemed to require or authorize the issuance of a permit for any activity described herein.

Diameter Breast-Height (DBH). The standard measure of tree size (for trees existing on a site). The tree trunk is measured at a height of 4½ feet above the ground. If a tree splits into multiple trunks below 4½ feet, the trunk is measured at its most narrow point beneath the split.

Director. The Director of Community Development or designee shall administer and enforce the provisions of this Ordinance; provided, however, that a designee shall have no authority to revoke permits.

Georgia 400 Tree Protection Zone. All property within a horizontal distance of 120 feet of the right-of-way of Georgia 400. At major intersections on Georgia 400 having exit and/or entrance ramps the protection zone shall be reduced to 60 feet. The reduction shall apply for the length of each such ramp. The Georgia 400 Tree Protection Zone is a Buffer.

Grading Activity. Altering ground surfaces to specified elevations, dimensions and/or slopes; this includes stripping, cutting, filling, stockpiling and shaping or any combination thereof and shall include the land in its cut or filled condition.

Guidance Document. A document maintained by the City of Alpharetta Arborist that includes clarifications to requirements with examples and additional technical standards about tree protection, tree planting, species selection, and other information relevant to the protection and replanting of trees in the City of Alpharetta. The document may be revised by the City Arborist as conditions and technical standards evolve.

Hardwood Tree. Any tree that is not coniferous (cone bearing). This definition is based on the colloquialism, and does not necessarily reflect any true qualities of the tree.

International Society of Arboriculture (ISA). A professional organization that promotes the professional practice of arboriculture, sets standards for obtaining professional credentials for arborist, and establishes best practices for tree care, pruning, and protection.

Land Disturbance Permit. A permit issued by the City that authorizes Development Activity and includes, but is not limited to, Soil Erosion Protection, clearing and grubbing, land disturbance and building construction.

Landscape Strip. A portion of a lot required to be reserved for, installed with, and maintained with vegetation. Such a strip may or may not be required to be of a linear form. No utilities or parking shall be allowed within a required landscape strip.

Landscape Tree. A tree or trees that were planted or retained on a developed or previously developed site.

Lot Building Area. The area of a lot encompassed by front sides and rear yard setbacks or building line as required by City Ordinance and Subdivision Regulations.

Mass Grading. The grading within existing or across proposed property lines including the removal of trees and disturbance of soils in order to prepare a site for construction where buildings are not approved.

Mulch. An organic material spread around the base of a plant or on a plant bed to enrich and insulate the soil. Types of mulch include Pine Straw, Shredded Hardwood, Wood Chips, and Bark Chips. Mulch should be free of disease and pests. Synthetic or artificial mulches are not acceptable for use in the City of Alpharetta.

Non-Development Activity. Any alteration of the natural environment which does not require development or site plan approval, but which would include the proposed removal or destruction of any tree(s). Any removal of trees that constitutes Development Activity as that term is herein defined shall not constitute non-development activity.

Ornamental Tree. A tree that provides a visual impact in the landscape. The impact may be provided through form, bark, branching structure, leaf color, and/or flower color. Typically a small or medium size tree.

Overstory Tree. Those trees that compose the top layer or canopy of vegetation and will generally reach a mature height greater than 40 feet and typically have a spreading canopy.

Permit (Tree Removal Permit). An official Permit for tree removal issued by the City of Alpharetta.

Pervious Surface. All that area of land that can be landscaped or planted, allows natural passage through by water, and is not covered by man-made materials or structures such as buildings or paving.

Pine Tree. An evergreen coniferous tree that has clusters of needle-shaped leaves.

Plantable Area. The pervious surface area available for the preservation or planting of trees. Plantable Area shall not include that portion of the lot that is covered by buildings and structures permitted pursuant to the maximum lot coverage standards of this Ordinance.

Planted Area. An area of living plant material created for the purpose of establishing open space and consisting of a minimum of 50% of the area devoted to trees and shrubs.

Pruning (Tree Pruning). To cut away dead, overgrown, or undesirable branches or stems. Pruning of trees to be done in compliance with standard arboricultural practices as outlined in ANSI A300 and shall maintain the trees natural form and structure.

Qualified Professional. An International Society of Arboriculture (ISA) Certified Arborist, an American Society of Consulting Arborists (ASCA) Registered Consulting Arborist, or a Registered Forester.

Recompense. Replacement of trees or payment into the City held tree fund for the removal of Specimen Trees.

Replacement Planting. The planting of trees on a site that before development had more trees, and after development shall have less trees per acre.

Responsible Party. Any individual, firm, principal, or other entity who is a signatory to a Tree Removal Permit Application or Land Disturbance Permit for Development Activity or any person or company caught in the act of tree removal without a City-issued permit, or who violates any other provision of this Ordinance.

Shade Tree. Any tree that has a spreading canopy that provides partial to full shade to the ground with a minimum height of 20 feet.

Semi-Pervious. Hardscape, aggregate or porous paver that allows at least fifty percent (50%) of surface water to pass through the manmade material and into the underlying soil.

Softwood Tree. Any coniferous (cone bearing) tree. This definition is based on the colloquialism, and does not necessarily reflect any true qualities of the tree.

Specimen Tree. Any tree which qualifies for special consideration for preservation due to its size, type, condition, location or historical significance and which also meets the minimum size criteria set forth below.

Size Criteria:

Pine Trees:	30-inch diameter or larger for trees in the Pinus (Pine) genus.
Coniferous Trees:	20" diameter or larger for trees in the cedrus (deodar cedar), Thuja (Arborvitae), or other ecologically similar trees,
Overstory Trees:	30-inch diameter or larger for trees in the Liquidambar (Sweetgum) or Liriodendron (Tulip poplar) genus
	20-inch diameter or larger for trees in the Fagus (Beech), Nyssa (Tupelo), Diospyros (Persimmon), Sassafras (Sassafras), or other ecologically similar trees
	20-inch diameter or larger for Magnolia grandiflora (Southern magnolia) and those cultivars that generally reach a mature height over 40'
	24-inch (24") diameter or larger for trees in all other genera
Understory Trees:	8-inch (8") diameter or larger.
	10-inch (10") diameter or larger for Oxydendron arboretum (Sourwood).

See additional requirements for Specimen Trees in "The Guidance Document."

Street/Streetscape Tree. Any tree located or proposed to be located along a public or private street. The actual location will be determined by the specific zoning district or overlay. In situations where there is limited planting space in the right-of-way and or safety concerns, street trees may be located at the back of the sidewalk or within the landscape strip on private property and the discretion of the Director.

Structural Root Plate. The zone of rapid root taper that provides the tree stability against wind throw. The radius of the structural root plate is equal to 0.5 feet per inch of DBH.

Timber Harvest. Harvesting of timber from sites as a timber management activity as part of a demonstrated ongoing agricultural land use.

Tree. Any living, self-supporting woody or fibrous plant which normally obtains a diameter breast height of at least three (3) inches, and typically has one (1) main stem or trunk and many branches.

Tree Care Plan. A plan developed to provide an impacted tree the best possible chance of survival. A tree care plan should be prepared by a qualified professional and conform to the requirements of ANSI A300 and the Guidance Document

Tree Density. A measurement of trees on a property, expressed as inches per acre. For existing trees density is calculated based on DBH. For proposed trees tree density is calculated based on the caliper.

Tree Grouping. A community of trees as determined by the Director to merit special consideration as an ecological feature based upon species composition, form, structure, age, and condition. Specimen trees and trees of quality may be included in tree groupings and every alternative should be evaluated to save these trees. Except as otherwise provided in Section 3.2., Tree Groupings will be treated as specimen trees for preservation credits and every alternative should be evaluated to save these trees.

Tree of Quality. A tree that merits special consideration due to historical significance, ideal shape and structure, or uniqueness of the species as determined by the Director. Except as otherwise provided in Section 3.2., Trees of Quality will be treated as specimen trees for preservation credits and every alternative should be evaluated to save these trees.

Tree Removal or Removal of Trees. Removal of trees through an act of cutting down a tree or any act which causes a tree to die within 2 years after commission of the act or impedes the ability of the tree to sustain itself, including but not limited to damage inflicted upon the root system, trunk, or canopy as a result of:

1. The improper use of machinery on the trees;
2. The storage of materials in or around the trees;
3. Soil compaction;
4. Altering the natural grade to expose the roots or to cover the tree's root system with more than 4 inches of soil;
5. Causing the infection or infestation of the tree by pests, fungus or harmful bacteria;
6. Pruning judged to be excessive by the Director or not in accordance with the standard set forth by the International Society of Arboriculture (ISA);
7. Paving with concrete, asphalt or other impervious surface within such proximity as to be harmful to the tree or its root system; and
8. Application of herbicides or defoliants to any tree without first obtaining a permit.

Tree Planting List. List of preferred tree species for use in the City of Alpharetta. Species not included on this list may be approved at the discretion of the Director. The Tree Planting List is included in the Arborist Guidance Document.

Tree Protection Area. An area encompassing the critical root zone of a tree that shall remain in an a pervious state.

Tree Save Area. An area designated for the purpose of meeting tree density requirements, saving natural trees, and/or preserving natural buffers that shall remain in a pervious state.

Understory Trees. Those trees that grow beneath the overstory, and will generally reach a mature height less than 40 feet. Understory trees may include coniferous trees that meet these same height characteristics.

Zoning Districts. Those areas as defined in the Zoning Ordinance and shown on the Zoning Map. (Ord. No. 739 , 5-1-2017; Ord. No. 749 , § 4, 9-18-2017; Ord. No. 769 , § 1, 11-12-2018)

3.2.8 Tree Replanting, Buffer, and Landscape standards.

A. Tree Replanting.

1. Unless otherwise approved by the Director, it is recommended that trees selected for replanting be on the Recommended Tree List. Trees selected for planting must be free from injury, pests, disease, nutritional disorders or root defects, and must be of good vigor and form in order to assure a reasonable expectation of survivability. Standards for transplanting shall be in keeping with those established in the International Society of Arboriculture publication Tree and Shrub Transplanting Manual or similar publication. Reference the American Association of Nurserymen publication American Standard for Nursery Stock

(ANSI Z60.1-2014) for plant material quality specifications. Reference the Manual of Woody Landscape Plants (Michael Dirr, 2009, Stipes Pub. LLC.) or similar publication for information on tree species and site requirements.

2. It is desirable that replanted trees be ecologically compatible with the site and neighboring sites. Accordingly, the replanted trees shall be of the same or similar species as those removed when practical.
3. All replanted overstory trees shall be at least six (6) feet tall and have a trunk of not less than two (2) caliper inches. All replanted understory trees shall be at least four (4) feet tall or have a trunk not less than one (1) caliper inch. In order to provide sufficient growing area for planted trees, the following minimum criteria must be observed unless otherwise approved by the Director.
 - a. No more than 25% of any one genus may be included in any replanting plan.
 - b. A minimum of 40% of the required tree density on a site is recommended to be met through overstory tree planting.
 - c. Greater than 50% of the trees shall be natives.

B. Buffer Requirements.

1. A lot zoned or used for a rental dwelling, office, institutional, commercial, industrial uses or occupied by a non 'For-Sale' residential use shall provide a fifty foot wide undisturbed buffer along all property lines adjoining property zoned for or used by 'For-Sale' residential purposes. Where commercial or industrial districts or developments abut R-10M zoning districts, the same buffer requirements apply. The buffer shall be in addition to the required building setback line.
 - a. When a new, 'For-Sale' development is proposed adjacent to an existing, non-residential use with no buffer present, the 50' buffer must be provided by the residential development.
 - b. If a 50' buffer has been provided on the property adjacent to a proposed, non-residential development, the buffer requirement may be waived with the approval of the Director.
2. Except as otherwise provided, herein, buffer strips shall be preserved in their natural undisturbed state, except that sparsely planted buffers shall be enhanced with additional plant material. Enhancement plants must provide an opaque screen within two (2) years of planting and must consist of trees, shrubs, and groundcover plants meeting the following standards:
 - a. Plant selection will consist of eighty (80) percent evergreen species and twenty (20) percent deciduous species;
 - b. Deciduous trees must be a minimum of 2 inch caliper at time of installation;
 - c. Evergreen trees must be a minimum of 9 feet tall at time of installation;
 - d. Shrubs must be a minimum of 3 feet tall at time of installation;
 - e. Plants will be spaced a maximum of eight (8) feet on center or as approved by the Director;
 - f. Plantings shall be designed with plant palette containing a mixture of colors, textures, and heights.
3. Undisturbed buffers shall not contain any surface parking or storm water, detention facilities, or any structures except that the Director may approve underground facilities within the buffer or the crossing of the buffer for the purpose of extending utilities.
4. The Director may approve vegetated runoff reduction measures within the buffer. The planting requirements above may be varied to accommodate vegetated runoff reduction

measures as part of an approved stormwater management plan, if properly designed to provide stormwater management and screening functions.

5. Stream buffers must be replanted where disturbed for approved access and utility crossing. Replacement plantings must be native and be arranged to have a natural appearance.
6. All buffer plantings are subject to the approval of the Director.

C. Parking Lot Landscaping.

1. Surface parking lots shall provide a minimum 200 square foot wide landscape island at the end of each parking bay, and a 200 square foot island located each 72 feet of single parking length. Each landscape island shall be planted with one shade tree. Islands shall be excavated to 3 feet deep or to a depth 6 inches greater than the height of the root ball and backfilled with a minimum of 600 cubic feet of friable soil. Islands that are 400 square feet or larger and corner islands shall be planted with a large overstory tree. Parking lot trees must be 2" caliper minimum at time of planting and have a clear trunk to a minimum height of 6 feet. The remainder of a landscape island shall be planted with shrubs, ornamental grasses, and ground covers; and mulch shall be applied. Turf grass will not be accepted. Utilities and lighting shall not be allowed within required parking lot landscape islands.
2. Alternate landscape configurations may be approved if the Director determines that the alternate design exceeds the standards above and/or is part of a smart stormwater design for the site that includes multi-functional, vegetated runoff reduction measures. An alternate configuration could also include a stormwater component or the preservation and enhancement of existing trees which are provided above and beyond other tree preservation requirements; which are deemed of community value by the Director; and shall result in a minimum of 50% parking lot canopy coverage within 15 years.
3. The required tree area shall be protected against compaction and shall provide sufficient area for tree growth. Utilities are not allowed within the minimum area. The trees shall be maintained in accordance with best management practices as defined by the International Society of Arboriculture guidelines, and shall not be removed or pruned without permission from the City Arborists.
4. Shrubs shall be provided to screen paved areas and parking lots from the public right-of-way, private drives and adjacent property year round. Shrubs shall be 2 feet tall at time of planting, 2 rows deep and shall provide a screen within 3 years of planting. Alternate screening methods such as fencing may be approved by the Director.

D. Landscape Strips.

1. The City wants to promote tree lined streets therefore, a minimum of ten (10) feet wide landscape strip shall be provided along all public right-of-ways and private roads. Main streets which are listed below shall have twenty (20) foot landscape strips, except those located within the Downtown Overlay District. which shall have ten (10) feet wide landscape strips or landscaping as approved by the Director.

MAIN STREETS:

Highway 9

Mansell Road

Windward Parkway

Northpoint Parkway

Westside Parkway

Old Milton Parkway

Haynes Bridge Road

Kimball Bridge Road

2. No permanent structures other than signage are permitted within the landscape strip. This includes pavement, retaining walls, drainage structures, detention ponds, flumes, curbing, etc. unless approved by the Director.
 - a. Retaining walls built with decorative masonry and designed as a landscape feature may be located within the landscape strip subject to approval by the Director. All required plantings must be installed so as not to interfere with the structural integrity of the wall.
 3. Actual spacing of street trees is based on the average canopy spread of the species selected as outlined in the Arborist Guidance document. If the spacing of shade trees exceeds 25 feet on center understory trees shall be required to fill in the gaps between each shade tree. Spacing of shade trees shall not exceed 40 feet on center. Shade trees shall be a minimum 4" caliper; ornamental trees shall be a minimum 3" caliper. The use of a combination of shade trees and ornamental trees is recommended.
 4. For commercial development and for master plan subdivisions, a minimum of five (5) foot landscape strip shall be provided along all property lines which do not adjoin a public right-of-way or private road. One (1) shade tree, minimum 4" caliper, shall be provided for every fifty (50) linear feet of landscape strip. For master plan subdivisions, this requirement is only required along the external property line of the overall project.
 5. Shrubs shall be provided in all landscape strips. Shrubs shall be a minimum of 2 feet tall at time of planting. Shrubs located in landscape strips may be used to meet the parking lot screening requirement.
- E. Additional screening shall be provided around all utility areas, detention facilities, dumpster/refuse areas, drive through areas, loading and unloading zones, etc. to screen views from the public right-of-way, private roads, drives, and adjacent properties year round. Screening shall be provided in any combination of the standards below or as approved by the Director.
1. Plant selection will consist of eighty (80) percent evergreen species and twenty (20) percent deciduous species;
 2. Deciduous trees must be a minimum of 2 inch caliper at time of installation;
 3. Evergreen trees must be a minimum of 6 foot tall at time of installation;
 4. Shrubs must be a minimum of 4 foot tall at time of installation;
 5. Screening for detention facilities must incorporate an alternating double row of evergreen shrubs 4 foot tall at time of planting.
 6. A combination of decorative walls, fences, and landscape material may be used with the approval of the Director.
- F. Lighting Fixtures shall be arranged so that the source of any light is screened from residential views and located as to not interfere with the tree canopy at time of planting or in the future.
- G. All required landscape areas shall be provided with a minimum of 1 water spigot or other water source within 150 feet.
- H. A bond shall be required for a minimum of 18 months to ensure the maintenance and irrigation of the landscaping materials.
- I. All landscape plans and tree planting plans for non "For Sale" residential properties shall be prepared as a to-scale map or a site plan prepared and sealed by a Registered Landscape Architect in the State of Georgia. Tree only plans may be prepared by a Qualified Professional.
- J. Outdoor Dining Areas. At-grade outdoor dining areas shall include perimeter landscaping and decorative detectable barriers in order to define the area. Detectable barriers shall include decorative planters, low

walls or other improvement approved by the Community Development Director. Uncovered outdoor dining areas shall include one (1) shade tree per 750 square feet.

- K. Tree Conservation. To preserve the character and existing tree canopy within the Downtown Overlay it is desired to maintain good quality trees. Specimen trees and trees of quality within the building setbacks along the roads listed below shall be conserved.

ROADS:

Academy Street

Canton Street

Church Street

Cumming Street

Marietta Street

Mayfield Road

Milton Avenue

Roswell Street



STAFF REPORT

Submitting Department: Public Works

Submitted By: Arash Moradkhani

Sponsored By:

Meeting Date: January 3, 2023

I. AGENDA ITEM TITLE: CONTRACT AWARD: ITB # 23-004 BIG CREEK GREENWAY BOARDWALK REPLACEMENT

APPROVAL OF AWARD OF ITB 23-004 TO EXCELLERE CONSTRUCTION, LLC FOR THE REPLACEMENT OF THE BIG CREEK GREENWAY BOARDWALK NEAR MANSELL ROAD FOR AN AMOUNT NOT TO EXCEED \$2,240,000.00 AND AUTHORIZE THE MAYOR TO EXECUTE ALL NECESSARY DOCUMENTS.

II. RECOMMENDATION:

Approve the award of ITB 23-004 to Excellere Construction, LLC for the replacement of the Big Creek Greenway Boardwalk near Mansell Road for an amount not to exceed \$2,240,000.00 and authorize the Mayor to execute all necessary documents.

III. BUDGET IMPLICATIONS:

BUDGETED ITEM: YES

FISCAL IMPACT: YES

INCLUDED IN CURRENT FY CPTL BUDGET: YES

INCLUDED IN CURRENT FY OPRT. BUDGET: NO

TOTAL PROJECT COST: \$2,240,000.00

APPROPRIATIONS:

ACCOUNT TITLE/NUMBER	DOLLAR AMOUNT
GREENWAY REPAIR/MAINTENANCE / 30361150-541500-C1636	\$1,912,481.06
GREENWAY REPAIR/MAINTENANCE / 30161150-541500-C1636	\$327,518.94

EXTERNAL FUNDING SOURCES:

ACCOUNT TITLE/NUMBER	DOLLAR AMOUNT
N/A	\$0.00
N/A	\$0.00

IV. REPORT IN BRIEF:

Background:

In 2008 the City constructed approximately 1,200 linear feet of timber boardwalk providing a connection to the Big Creek Greenway from the sidewalk along the southern side of Mansell Road to the existing Greenway. Over the last fourteen years, this boardwalk has been problematic to maintain, and several sections have either failed or are failing. Due to safety concerns of the boardwalk, this section of the Greenway has been closed to users.

Overview of Project Construction:

In late 2021, the City hired Heath and Lineback Engineers to design a boardwalk system that will minimize maintenance for Recreation, Parks and Cultural Services, improve the usability of the Greenway in this area, and last longer than the wooden boardwalk. The scope of the work on the project is to remove all of the existing components of the timber boardwalk (piles and decks) and replace it with a new concrete-decked boardwalk. The boardwalk will remain elevated and, due to the existing height limitations of the Greenway under Mansell Road, the Boardwalk may still flood due to its proximity to Big Creek and due to 4' below the 100-year flood elevation. The project scope includes items such as demolition and removal of existing timber boardwalk, installation of helical piles with steel beams and concrete decking. Installation of helical piers will expedite construction of the boardwalk and minimize disturbance of the area.

Project Duration:

Project construction is anticipated to take 12 months after issuance of a notice to proceed; this includes the necessary time to fabricate and deliver the structural steel components of the boardwalk. Lead time of the steel is significant and a major reason for the 12 month construction schedule. Additionally, because construction is in close proximity to Big Creek, the soil will stay wet longer, which will make it more challenging to construct the boardwalk.

Procurement and Project Bid Process:

Procurement for this project was initiated through Invitation to Bid (ITB 23-004), which was issued on October 20, 2022 (with a response deadline of November 17, 2022). A total of three proposals were received in response to this invitation:

Company/Bidder	Proposed Price
Excellere Construction, LLC	\$2,240,000.00
Lewallen Construction Co., Inc.	\$3,024,839.48
J.G. Leone Enterprises, Inc.	\$4,301,761.00

After evaluation and verifying the submitted bids, staff from the Public Works Department met with representatives of Excellere Construction, as the low bidder, on Wednesday, December 14, 2022. The project scope, schedule, and bid package as submitted by Excellere were discussed with the contractor during the meeting. Excellere is an experienced contractor that has successfully completed similar projects for agencies in Georgia and has completed numerous projects for the City over the last couple of years.

Department of Public Works staff will oversee the boardwalk replacement project.

V. ALTERNATIVES:

Do not approve and the construction services will not be procured.

VI. ATTACHMENTS:

Construction Services Agreement - Grnwy Boardwalk, ITB 23-004 City Issued Docs, ITB 23-004 Excellere Response Docs, Site Map - Mansell Big Creek Boardwalk Replacement

CONSTRUCTION SERVICES AGREEMENT

BIG CREEK GREENWAY BOARDWALK REPLACEMENT

This Construction Services Agreement (the “Agreement”) is made and entered into on _____ (date) (the “Effective Date”), by and between the **CITY OF ALPHARETTA, GEORGIA**, a municipal corporation of the State of Georgia, acting by and through its governing authority, the Mayor and Alpharetta City Council (hereinafter referred to as the “City”), and **EXCELLERE CONSTRUCTION, LLC**, a Georgia limited liability corporation (hereinafter referred to as the “Contractor”), collectively referred to herein as the “Parties”.

W I T N E S S E T H:

WHEREAS, the City desires to retain a contractor to perform services for the construction of a Project, as defined below; and

WHEREAS, the City solicited bids from qualified proponents for construction of the Project pursuant to Invitation to Bid (“ITB”) 23-004, copy of which is attached hereto as **Exhibit A** and incorporated herein by reference; and

WHEREAS, the Contractor submitted a complete and timely bid in response to ITB 23-004, a copy of which is attached hereto as **Exhibit B** and incorporated herein by reference, which bid was determined by the City to meet all bid requirements such that the City awarded ITB 23-004 to the Contractor; and

WHEREAS, the City finds that specialized knowledge, skills, and training are necessary to perform the Work (defined below) contemplated under this Agreement; and

WHEREAS, the Contractor has represented that it is qualified by training and experience to perform the Work; and

WHEREAS, based upon the Contractor’s bid, the City has selected the Contractor as the successful proponent, and

WHEREAS, the Contractor desires to perform the Work as set forth in this Agreement under the terms and conditions provided in this Agreement; and

WHEREAS, the public interest will be served by this Agreement; and

WHEREAS, the Contractor has familiarized itself with the nature and extent of the Contract Documents, the Project, and the Work, and with all local conditions and federal, state and local laws, ordinances, rules and regulations that may in any manner affect cost, progress or performance of Work, and the Contractor is aware that it must be licensed to do business in the State of Georgia.

NOW THEREFORE, for and in consideration of the mutual promises, the public purposes, and the acknowledgements and agreements contained herein and other good and adequate consideration, the sufficiency of which is hereby acknowledged, the Parties hereto do mutually agree as follows:

Section 1. Contract Documents

This Agreement along with the following documents, attached hereto (except as expressly noted otherwise below) and incorporated herein by reference, constitute the “Contract Documents”:

- A. City’s ITB 23-004, attached hereto as **Exhibit A**;
 - 1. Forms of Performance Bond and Payment Bond, included within **Exhibit A**;
 - 2. Forms of Subcontractor Affidavits (E-Verify), included within **Exhibit A**;
- B. Bid Response Documents from Contractor, attached hereto as **Exhibit B**;
 - 1. Completed Contractor Affidavit (E-Verify), included within **Exhibit B**;
- C. Scope of Work, included in **Exhibit C**;
- D. Additional Payment/Retainage Requirements, attached hereto as **Exhibit D**;
- E. The following, which may be delivered or issued after the Effective Date of the Agreement and are not attached hereto: All Change Orders (defined in Section 6 below), other written amendments, and other documents amending, modifying, or supplementing the Contract Documents if properly adopted in writing and executed by the Parties.

Section 2. Project Description; Contract Administrator

- A. Project. A general description of the Project is as follows: **BIG CREEK GREENWAY BOARDWALK REPLACEMENT**, including, but not limited to, demolition of existing boardwalk, installation of concrete boardwalk, installation of landscape materials, and related work. The location of the work is Mansell Road bridge over Big Creek --- within the City of Alpharetta, Georgia.
- B. Contract Administrator; Project Manager. The City shall be the Contract Administrator for this Agreement. The City’s Project and Construction Manager for this contract is Scott Campbell.

Section 3. The Work

- A. The Work. The Work to be completed under this Agreement (the “Work”) includes, but shall not be limited to, the work described in the Scope of Work

provided in Contract Documents, attached hereto and incorporated herein by reference. The Work includes all material, labor, insurance, tools, equipment, machinery, water, heat, utilities, transportation, facilities, services and any other miscellaneous items and work reasonably inferable from the Contract Documents. The term “reasonably inferable” takes into consideration the understanding of the Parties that some details necessary for proper execution and completion of the Work may not be shown on the drawings or included in the specifications or Scope of Work, but they are a requirement of the Work if they are a usual and customary component of the Work or are otherwise necessary for proper and complete installation and operation of the Work. Contractor shall complete the Work in strict accordance with the Contract Documents. In the event of any discrepancy among the terms of the various Contract Documents, the provision most beneficial to the City, as determined by the City in its sole discretion, shall govern.

- B. Notice to Proceed. The City will issue a Notice to Proceed, which Notice to Proceed shall state the dates for beginning Work (“Commencement Date”) and the Expected Date of Final Completion (defined in Section 4(A) below). Unless otherwise approved, the Contractor shall perform its obligations under this Agreement as expeditiously as is consistent with reasonable skill and care and the orderly progress of the Work.
- C. Shop Drawings, Product Data, and Samples. Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents, but must be in conformity therewith. The purpose of their submittal is to demonstrate, for those portions of the Work for which submittals are required by the Contract Documents, the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents.
 - (i) “Shop Drawings” are drawings, diagrams, schedules and other data specifically prepared for the Work by the Contractor or a subcontractor, sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.
 - (ii) “Product Data” are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.
 - (iii) “Samples” are physical examples that illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

The Contractor shall review for compliance with the Contract Documents and shall approve and submit to the Contract Administrator Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the City or of separate contractors. By approving and submitting

Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents that the Contractor has determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents. Submittals which are not marked as reviewed for compliance with the Contract Documents and approved by the Contractor may be returned by the Contract Administrator without action. The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved in writing by the Contract Administrator, provided that submittals that are not required by the Contract Documents may be returned without action.

The Work shall be completed in accordance with approved submittals, provided that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Contract Administrator's approval of Shop Drawings, Product Data, Samples or similar submittals, unless the Contractor has specifically informed the Contract Administrator in writing of such deviation at the time of submittal and (1) the Contract Administrator has given written approval to the specific deviation as a minor change in the Work, or (2) a written Change Order has been issued and approved to authorize the deviation. The Contract Administrator's approval of the Shop Drawings, Product Data, Samples or similar submittals shall not relieve the Contractor of responsibility for errors or omissions therein.

The Contractor shall, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, direct the Contract Administrator's attention to any additional revisions included other than those requested by the Contract Administrator on previous submittals. In the absence of such written notice drawing the Contract Administrator's attention to such additional revisions, the Contract Administrator's approval of a resubmission shall not apply to such additional revisions.

The Contractor shall maintain at the Project site(s) one record copy of the Contract Documents in good order and marked currently to record field changes and selections made during construction and one record copy of approved Shop Drawings, Product Data, Samples and similar required submittals. These documents shall be available to the City and Contract Administrator and shall be delivered to the Contract Administrator or City upon completion of the Work.

Section 4. Contract Term; Liquidated Damages; Expedited Completion; Partial Occupancy or Use

- A. Contract Term. Contractor shall promptly commence the Work with adequate force and equipment within ten (10) calendar days from receipt of the Notice to Proceed, or as otherwise specified in the Notice to Proceed, continuously pursue the Work

without interruption to completion, and fully complete the Work (i.e., achieve final completion) within **THREE HUNDRED SIXTY-FIVE (365) CALENDAR DAYS** following Contractor's receipt of the Notice to Proceed (the "Expected Date of Final Completion").

The Parties agree that this Agreement, as required by O.C.G.A. § 36-60-13, shall terminate absolutely and without further obligation on the part of the City on December 31 each calendar year of the Term, and further, that this Agreement shall automatically renew on January 1 of each subsequent calendar year absent the City's provision of written notice of non-renewal to Contractor at least five (5) calendar days prior to the end of the then current calendar year. Title to any supplies, materials, equipment, or other personal property shall remain in Contractor until fully paid for by the City.

- B. Time is of the Essence; Liquidated Damages. Contractor specifically acknowledges that TIME IS OF THE ESSENCE of this Agreement and that City will suffer financial loss if the Work is not completed in accordance with the deadlines specified in Section 4(A) above and within the Contract Documents. The City and Contractor also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by the City if the Work is not completed within the specified times. In accordance with Georgia Department of Transportation Standard Specifications Construction 2021, Section 108.08, if Contractor fails to achieve Substantial Completion and/or Final Completion within three hundred sixty-five (365) calendar days from Contractor's receipt of the Notice to Proceed, Contractor shall be liable to the City for the sum of **\$638.00 per day** for each and every calendar day of unexcused delay in achieving Substantial Completion beyond three hundred sixty-five (365) calendar days from receipt of the Notice to Proceed; and **\$638 per day** for each and every calendar day of unexcused delay in achieving Final Completion beyond three hundred sixty-five (365) calendar days from receipt of the Notice to Proceed, as applicable. Any sums due and payable hereunder by Contractor shall be payable, not as a penalty, but as liquidated damages representing a reasonable pre-estimate of delay damages likely to be sustained by the City for any such breach, as it is mutually agreed that any such actual and consequential damages incurred by the City for such breach would otherwise be difficult to ascertain.
- C. Expediting Completion. The Contractor is accountable for completing the Work within the time period provided in the Contract Documents. If, in the judgment of the City, the Work is behind schedule and the rate of placement of work is inadequate to regain scheduled progress to ensure timely completion of the entire Work or a separable portion thereof, the Contractor, when so informed by the City, shall immediately take action to increase the rate of work placement by:
- (1) An increase in working forces;
 - (2) An increase in equipment or tools;
 - (3) An increase in hours of work or number of shifts;

- (4) Expediting delivery of materials; and/or
- (5) Other action proposed if acceptable to City.

Within five (5) calendar days after such notice from City that the Work is behind schedule, the Contractor shall notify the City in writing of the specific measures taken and/or planned to increase the rate of progress. The Contractor shall include an estimate as to the date of scheduled progress recovery. Should the City deem the plan of action inadequate, the Contractor shall take additional steps to make adjustments as necessary to its plan of action until it meets with the City's approval and such approval is provided in writing by the City.

- D. Partial Occupancy or Use. The City may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement between the City and Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Work. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the City and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. Immediately prior to such partial occupancy or use, the City, Contractor and Contract Administrator shall jointly inspect the area to be occupied, or portion of the Work to be used, in order to determine and record the condition of the Work. Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

Section 5. Contractor's Compensation; Time and Method of Payment

- A. Maximum Contract Price. For Contractor's performance and completion of the Project, the City shall pay Contractor a fee in accordance with the unit costs established in Contractor's Bid and as finally awarded by the City for a total sum not to exceed **TWO MILLION, TWO HUNDRED FORTY THOUSAND DOLLARS AND 00/100 (\$2,240,000.00)** (the "Maximum Contract Price"). At Contractor's own cost and expense, Contractor shall furnish all materials, supplies, machinery, equipment, tools, superintendence, labor, insurance, and other accessories and services necessary or convenient to the successful completion of the Project and the carrying out of all duties and obligations in accordance with the terms and conditions set forth in ITB 23-004, including any addenda thereto, Contractor's bid response, the General Conditions, as modified by the Supplementary Conditions, the Plans and Specifications and/or Technical Specifications, including all explanatory matter thereof, as prepared by the City, and any other documents forming the Contract Documents as enumerated in the General Conditions, all of which are made a part hereof and collectively constitute

the Contract (the “Work”). Contractor represents that the Maximum Contract Price is sufficient to perform all of the Work set forth in and contemplated by this Agreement.

- B. Additional Payment/Retainage Requirements. Additional payment and retainage requirements are included as **Exhibit D**, attached hereto and incorporated herein by reference.
- C. Material Deviations. Any material deviations in tests or inspections performed, or times or locations required to complete such tests or inspections, and like deviations from the Work described in this Agreement shall be clearly communicated to the City *before* charges are incurred and shall be handled through written Change Orders, as described in Section 6 below. Whenever the Contract Administrator considers it necessary or advisable, it shall have authority to require inspection or testing of the Work. However, neither this authority of the Contract Administrator nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Contract Administrator to the Contractor, subcontractors, material and equipment suppliers, their agents or employees, or other persons or entities performing portions of the Work.
- D. Taxes. The City is a governmental tax-exempt entity and shall not be responsible for paying any taxes on any materials or services provided for herein. At Contractor’s request, City shall provide evidence of its tax-exempt status. To the extent, if any, that the City furnishes tangible personal property to Contractor for incorporation into the Project, Contractor shall be responsible for paying the amount of tax owed for such tangible personal property.

Section 6. Change Orders

- A. Change Order Defined. A “Change Order” means a written modification of the Contract Documents, signed by representatives of the City and the Contractor with appropriate authorization.
- B. Right to Order Changes. The City reserves the right to order changes in the Work to be performed under this Agreement by altering, adding to, or deducting from the Work. All such changes shall be incorporated in written Change Orders and executed by the Contractor and the City. Such Change Orders shall specify the changes ordered and any necessary adjustment of compensation and completion time. If the Parties cannot reach an agreement on the terms for performing the changed work within a reasonable time to avoid delay or other unfavorable impacts as determined by the City in its sole discretion, the City shall have the right to determine reasonable terms, and the Contractor shall proceed with the changed work.
- C. Change Order Requirement. Any work added to the scope of this Agreement by a Change Order shall be executed under all the applicable conditions of this

Agreement. No claim for additional compensation or extension of time shall be recognized, unless contained in a written Change Order duly executed on behalf of the City and the Contractor.

- D. Authority to Execute Change Order. The authority to execute a change order on behalf of the City shall be in accordance with the City's Procurement Policy, as may be amended from time to time.
- E. Minor Changes in the Work. The Contract Administrator will have the authority to order minor changes in the Work not involving adjustment in the Maximum Contract Price or extension of the Term and not inconsistent with the intent of the Contract Documents. Such changes shall be effected by written order signed by the Contract Administrator. The Contractor shall carry out such written orders promptly. If the minor changes subsequently may affect adjustments in the Maximum Contract Price or the Term, the changes shall then be converted to a written Change Order by the requesting Party.

Section 7. Covenants of Contractor

- A. Ethics Code; Conflict of Interest.
 - (i) Contractor agrees that it shall not engage in any activity or conduct that would result in a violation of the City of Alpharetta Code of Ethics or any other similar law or regulation. Contractor certifies that to the best of his knowledge no circumstances exist which will cause a conflict of interest in performing the Work. Should Contractor become aware of any circumstances that may cause a conflict of interest during the Term of this Agreement, Contractor shall immediately notify the City. If the City determines that a conflict of interest exists, the City may require that Contractor take action to remedy the conflict of interest or terminate the Agreement without liability. The City shall have the right to recover any fees paid for services rendered by Contractor when such services were performed while a conflict of interest existed if Contractor had knowledge of the conflict of interest and did not notify the City within five (5) business days of becoming aware of the existence of the conflict of interest.
 - (ii) Contractor and the City acknowledge that it is prohibited for any person to offer, give, or agree to give any City employee or official, or for any City employee or official to solicit, demand, accept, or agree to accept from another person, a gratuity of more than nominal value or rebate or an offer of employment in connection with any decision, approval, disapproval, recommendation, or preparation of any part of a program requirement or a purchase request, influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing, or in any other advisory capacity in any proceeding or application, request for ruling, determination, claim or controversy, or other particular matter, pertaining to any program

requirement or a contract or subcontract, or to any solicitation or bid therefor. The Contractor and the City further acknowledge that it is prohibited for any payment, gratuity, or offer of employment to be made by or on behalf of a sub-consultant under a contract to the prime Contractor or higher tier sub-consultant, or any person associated therewith, as an inducement for the award of a subcontract or order.

- B. Meetings. The Contractor is required to meet with the City's personnel, or designated representatives, to resolve technical or contractual problems that may occur during the Term of this Agreement at no additional cost to the City. Meetings will occur as problems arise and will be coordinated by the City or the Contract Administrator. The Contractor will be given a minimum of three (3) full business days' notice of meeting date, time, and location. Face-to-face meetings are desired. However, at the Contractor's option and expense, a conference call meeting may be substituted. Consistent failure to participate in problem resolution meetings, two consecutive missed or rescheduled meetings, or failure to make a good faith effort to resolve problems, may result in termination of the contract for cause.
- C. Expertise of Contractor. Contractor accepts the relationship of trust and confidence established between it and the City, recognizing that the City's intention and purpose in entering into this Agreement is to engage an entity with the requisite capacity, experience, and professional skill and judgment to provide the Work in pursuit of the timely and competent completion of the Work undertaken by Contractor under this Agreement. The Contractor agrees to use its best efforts, skill, judgment, and abilities to perform its obligations and to further the interests of City and the Project in accordance with City's requirements and procedures, and Contractor shall employ only persons duly qualified in the appropriate area of expertise to perform the Work described in this Agreement.
- D. Proper Execution by Contractor. Contractor agrees that it will perform its services in accordance with the usual and customary standards of the Contractor's profession or business and in compliance with all federal, state, and local laws, regulations, codes, ordinances, or orders applicable to the Project, including, but not limited to, O.C.G.A. § 50-5-63, any applicable records retention requirements, and Georgia's Open Records Act (O.C.G.A. § 50-18-70, *et seq.*). Any additional work or costs incurred as a result of error and/or omission by Contractor as a result of not complying with the Contract Documents or not meeting the applicable standard of care or quality, including but not limited to those of repeated procedures and compensation for the Contract Administrator's services or expenses, will be provided at Contractor's expense and at no additional cost to the City. This provision shall survive termination of this Agreement.

It is the Contractor's responsibility to be reasonably aware of all applicable laws, statutes, ordinances, building codes, and rules and regulations. If the Contractor observes that portions of the Contract Documents are at variance therewith, the Contractor shall promptly notify the Contract Administrator and the City in writing

of any portions of the Contract Documents that are at variance with the applicable laws, statutes, ordinances, building codes, and rules and regulations.

The Contractor's duties shall not be diminished by any approval by the City or Contract Administrator of Work completed or produced; nor shall any approval by the City or Contract Administrator of Work completed or produced release the Contractor from any liability therefor, it being understood that the City is ultimately relying upon the Contractor's skill and knowledge in performing the Work required under the Contract Documents.

Organization of the specifications into divisions, sections and articles, and arrangement of drawings shall not control the Contractor in dividing the Work among subcontractors or in establishing the extent of Work to be performed by any trade.

E. Familiarity with the Work.

- (i) *Contractor Familiarity with Work.* Contractor represents that it has familiarized itself with the nature and extent of the Contract Documents, the Work, work site(s), locality, and all local conditions, laws and regulations that in any manner may affect cost, progress, performance, or furnishing of the Work. Since the Contract Documents are complementary, before starting each portion of the Work, the Contractor shall carefully study and compare the various Contract Documents, site conditions, authorities, tests, reports and studies relative to that portion of the Work, as well as the information furnished by the City, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the Project site(s) affecting it. Contractor represents and agrees that it has correlated the results of all such observations, examinations, investigations, explorations, tests, reports, and studies with the terms and conditions of the Contract Documents. These obligations are for the purpose of facilitating construction by the Contractor and are not for the purpose of discovering errors, omissions, inconsistencies, or ambiguities in the Contract Documents; however, any errors, inconsistencies, omissions, or ambiguities discovered by the Contractor shall be reported promptly to the Contract Administrator and City in writing. Contractor represents that it has given the City written notice of all errors, omissions, inconsistencies, or ambiguities that the Contractor has discovered in the Contract Documents so far, and the written resolution thereof by the City is acceptable to the Contractor. Further, Contractor acknowledges that its obligation to give notice of all such errors, omissions, inconsistencies, or ambiguities shall be continuing during the Term of this Agreement. Any failure on the part of the Contractor to notify the Contract Administrator and City in writing of any errors, omissions, inconsistencies, or ambiguities in the Contract Documents that Contractor discovered or reasonably should have discovered shall result in a waiver

and full release by the Contractor of any future arguments or defenses based on such errors, omissions, inconsistencies, or ambiguities against the City. Further, if the Contractor fails to perform its obligations pursuant to this paragraph, the Contractor shall pay such costs and damages to the City as would have been avoided if the Contractor had performed such obligations.

- (ii) *Inspection of Prior Work.* If part of the Contractor's Work depends for proper execution or results upon construction or operations by a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Contract Administrator apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgment that the City's or separate contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable, and Contractor shall be responsible for all costs and damages resulting from its failure to report reasonably discoverable defects.
- (iii) *Contractor Requests for Information.* If, with undue frequency (as determined by the City in its sole discretion), the Contractor requests information that is obtainable through reasonable examination and comparison of the Contract Documents, site conditions, and previous correspondence, interpretations or clarifications, the Contractor shall be liable to the City for reasonable charges from the Contract Administrator for the additional services required to review, research and respond to such requests for information.

- F. Supervision, Inspection and Construction Procedures. The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Agreement, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety therefor and, except as stated below, shall be fully and solely responsible for the jobsite safety for such means, methods, techniques, sequences, or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely written notice to the City and Contract Administrator and shall not proceed with that portion of the Work without further written instructions from the City or Contract Administrator as approved in writing by the City.

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of this Agreement. The Contractor shall take reasonable precautions for the safety of, and

shall provide reasonable protection to prevent damage, injury or loss to: (a) employees and other persons who may be affected, (b) the Work and materials and equipment to be incorporated therein, whether in storage on or off the Project site(s), under care, custody or control of the Contractor or Contractor's subcontractors or sub-subcontractors, and (c) other property at the Project site(s) or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction. The Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel. If reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the Project site(s) by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the City and Contract Administrator in writing.

- G. Tests and Inspections. Tests, inspections and approvals of portions of the Work required by the Contract Documents or by laws, or ordinances, rules, regulations or orders of public authorities having jurisdiction shall be made promptly at an appropriate time to avoid unreasonable delay in the Work. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the City, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. The Contractor shall give the Contract Administrator timely notice of when and where tests and inspections are to be made so that the Contract Administrator may be present for such procedures. Required permits or certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and delivered to the Contract Administrator within ten (10) calendar days of issuance.
- H. Budgetary Limitations. Contractor agrees and acknowledges that budgetary limitations are not a justification for breach of sound principals of Contractor's profession and industry. Contractor shall take no calculated risk in the performance of the Work. Specifically, Contractor agrees that, in the event it cannot perform the Work within the budgetary limitations established without disregarding sound principals of Contractor's profession and industry, Contractor will give written notice immediately to the City.
- I. City's Reliance on the Work. The Contractor acknowledges and agrees that the City does not undertake to approve or pass upon matters of expertise of the

Contractor and that therefore, the City bears no responsibility for Contractor's Work performed under this Agreement. The Contractor acknowledges and agrees that the acceptance of Work by the City is limited to the function of determining whether there has been compliance with what is required to be produced under this Agreement. The City will not, and need not, inquire into adequacy, fitness, suitability or correctness of Contractor's performance. Contractor further agrees that no approval of designs, plans, or specifications by any person, body, or agency shall relieve Contractor of the responsibility for adequacy, fitness, suitability, and correctness of Contractor's Work under professional and industry standards, or for performing services under this Agreement in accordance with sound and accepted professional and industry principles.

- J. Contractor's Reliance on Submissions by the City. Contractor must have timely information and input from the City in order to perform the Work required under this Agreement. Contractor is entitled to rely upon information provided by the City, but Contractor shall be required to provide immediate written notice to the City if Contractor knows or reasonably should know that any information provided by the City is erroneous, inconsistent, or otherwise problematic.
- K. Uncovering and Correction of Work. If a portion of the Work is covered contrary to the Contract Administrator's request or to requirements specifically expressed in the Contract Documents, it must, if required in writing by the Contract Administrator, be uncovered for examination by the Contract Administrator and be replaced at the Contractor's expense without change in the Agreement Term.

If a portion of the Work has been covered which the Contract Administrator has not specifically requested to examine prior to its being covered or which the Contract Documents did not require to remain uncovered until examined, the Contract Administrator may request to see such Work, and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be at the City's expense, which expense shall be agreed upon in writing prior to being incurred. If such Work is not in accordance with the Contract Documents, correction shall be at the Contractor's expense, unless the condition was caused by the City, in which event the City shall be responsible for payment of such costs including reasonable charges, if any, by the Contract Administrator for additional service, which expense shall be agreed upon in writing prior to being incurred.

If the City prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the City may do so instead of requiring its removal and correction, in which case the Maximum Contract Price will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

- L. Clean Up. Contractor shall keep the Project site(s) and surrounding area free from accumulation of waste materials or rubbish caused by operations under this

Agreement. At completion of the Work, the Contractor shall remove from and about the Project waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials. The Contractor shall also restore any temporary easement areas to substantially their original condition (less any removed structures or vegetation for which the owner has been compensated). If the Contractor fails to clean up and remediate temporary easement areas as provided in the Contract Documents, the City may do so, and the cost thereof shall be charged to the Contractor.

- M. Contractor's Representative. **LUIGI HERNANDEZ, President**, shall be authorized to act on Contractor's behalf with respect to the Work as Contractor's designated representative.
- N. Independent Contractor. Contractor hereby covenants and declares that it is engaged in an independent business and agrees to perform the Work as an independent contractor and not as the agent or employee of the City. Nothing contained in this Agreement shall be construed to make the Contractor, or any of its employees, servants or subcontractors, an employee, servant or agent of the City for any purpose. The Contractor agrees to be solely responsible for its own matters relating to the time and place the Work is performed and the method used to perform such Work; the instrumentalities, tools, supplies, and/or materials necessary to complete the Work; hiring of subcontractors, agents, or employees to complete the Work; and the payment of employees, including benefits and compliance with Social Security, withholding, and all other regulations governing such matters. The Contractor agrees to be solely responsible for its own acts and those of its subordinates, employees, and subcontractors during the life of this Agreement. There shall be no contractual relationship between any subcontractor or supplier and the City by virtue of this Agreement with the Contractor. Any provisions of this Agreement that may appear to give the City the right to direct Contractor as to the details of the services to be performed by Contractor or to exercise a measure of control over such services will be deemed to mean that Contractor shall follow the directions of the City with regard to the results of such services only. It is further understood that this Agreement is not exclusive, and the City may hire additional entities to perform Work related to this Agreement.

Inasmuch as the City and the Contractor are independent of each other, neither has the authority to bind the other to any third person or otherwise to act in any way as the representative of the other, unless otherwise expressly agreed to in writing signed by both Parties hereto. The Contractor agrees not to represent itself as the City's agent for any purpose to any party or to allow any employee of the Contractor to do so, unless specifically authorized, in advance and in writing, to do so, and then only for the limited purpose stated in such authorization. The Contractor shall assume full liability for any contracts or agreements the Contractor enters into on behalf of the City without the express knowledge and prior written consent of the City.

- O. Responsibility of Contractor and Indemnification of City. The Contractor covenants and agrees to take and assume all responsibility for the Work rendered in connection with this Agreement. The Contractor shall bear all losses and damages directly or indirectly resulting to it and/or the City on account of the performance or character of the Work rendered pursuant to this Agreement. To the fullest extent permitted by law, Contractor shall defend, indemnify, and hold harmless the City and the City's elected and appointed officials, officers, boards, commissions, employees, representatives, consultants, servants, agents, attorneys and volunteers (individually an "Indemnified Party" and collectively "Indemnified Parties") from and against any and all claims, suits, actions, judgments, injuries, damages, losses, costs, expenses and liability of any kind whatsoever, including, but not limited to, attorney's fees and costs of defense ("Liabilities"), which may arise from or be the result of alleged willful, negligent, or tortious act or omission arising out of the Work, performance of contracted services, or operations by the Contractor, any subcontractor, anyone directly or indirectly employed by the Contractor or subcontractor, or anyone for whose acts the Contractor or subcontractor may be liable, regardless of whether or not the act or omission is caused in part by a party indemnified hereunder. This indemnity obligation does not include Liabilities caused by or resulting from the sole negligence of an Indemnified Party. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this provision.

In any and all claims against an Indemnified Party, by any employee of the Contractor, its subcontractor, anyone directly or indirectly employed by the Contractor or subcontractor, or anyone for whose acts the Contractor or subcontractor may be liable, the indemnification obligation set forth in this provision shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the Contractor or any subcontractor under workers' or workmen's compensation acts, disability benefit acts, or other employee benefit acts. This obligation to indemnify, defend, and hold harmless the Indemnified Party(ies) shall survive expiration or termination of this Agreement, provided that the claims are based upon or arise out of actions or omissions that occurred during the performance of this Agreement.

P. Insurance.

- (1) Requirements: The Contractor shall have and maintain in full force and effect for the duration of this Agreement, insurance insuring against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the Work by the Contractor, its agents, representatives, employees or subcontractors. All policies shall be subject to approval by the City as to form and content. These requirements are subject to amendment or waiver if so approved in writing by the City Administrator.

- (2) Minimum Limits of Insurance: Contractor shall maintain the following insurance policies with coverage and limits no less than:
- (a) *Commercial General Liability:* \$2,000,000 (two million dollars) combined single limit per occurrence aggregate comprehensive/extended/enhanced Commercial General Liability policy with coverage including bodily and personal injury, sickness, disease or death, injury to or destruction of property, including loss of use resulting therefrom, damage to premises/operations, products/completed operations, independent consultants and contractual liability (specifically covering the indemnity), broad-from property damage, and underground, explosion and collapse hazard. This coverage may be achieved by using an excess or umbrella policy. The policy or policies must be on “an occurrence” basis (“claims made” coverage is not acceptable). If a general aggregate limit applies, the general aggregate limit shall apply separately to this project/location, and the general aggregate limit shall be twice the required occurrence limit.
 - (b) *Commercial Automobile Liability (owned, non-owned, hired):* \$1,000,000 (one million dollars) for bodily or personal injury liability (including sickness, disease or death) and \$100,000 (one hundred thousand dollars) for property damage liability (including destruction of property), combined single limit per occurrence aggregate comprehensive Commercial Automobile liability coverage (owned, non-owned, hired), including loss of use resulting therefrom.
 - (c) *Workers’ Compensation and Employers’ Liability:* Workers’ Compensation policy with limits as required by the State of Georgia and Employers’ Liability limits of \$500,000 (five hundred thousand dollars) per occurrence or disease, per employee.
 - (d) *Builder’s Risk Insurance:* Contractor shall provide a Builder’s Risk Insurance Policy to be made payable to the City and Contractor, as their interests may appear. The policy amount shall be equal to 100% of the Maximum Contract Price, written on a Builder’s Risk “All Risk,” or its equivalent. The policy shall provide, or be endorsed to provide, as follows: “The following may occur without diminishing, changing, altering or otherwise affecting the coverage and protection afforded the insured under this policy: i) Equipment may be delivered to the insured premises and installed in place ready for use; and ii) Partial or complete occupancy by City; and iii) Performance of Work in connection with construction operations insured by the City, by its agents or lessees, or other contractors of the City or using agency.” The insurance coverage shall include

extended coverage, and providing coverage for transit, with sub-limits sufficient to insure the full replacement value of the property or equipment removed from its site and while located away from its site until the date of final acceptance of the Work.

- (e) *Commercial Umbrella Liability Coverage:* \$5,000,000 (five million dollars) per occurrence and in the aggregate shall be provided and will apply over all liability policies, without exception, including but not limited to Commercial General Liability, Commercial Automobile Liability, and Employers' Liability.
- (3) Deductibles and Self-Insured Retentions: Any deductibles or self-insured retentions must be declared to and approved by the City in writing so that the City may ensure the financial solvency of the Contractor; self-insured retentions should be included on the certificate of insurance.
- (4) Other Insurance Provisions: Each policy shall contain, or be endorsed to contain, the following provisions respectively:
 - (a) General Liability, Automobile Liability and (if applicable) Umbrella Liability Coverage.
 - (i) *Additional Insured Requirement.* The City and City's elected and appointed officials, officers, boards, commissioners, employees, representatives, consultants, servants, agents and volunteers (individually "Insured Party" and collectively "Insured Parties") shall be named as additional insureds as respects: liability arising out of activities performed by or on behalf of the Contractor; products and completed operations of the Contractor; premises owned, leased, or used by the Contractor; automobiles owned, leased, hired, or borrowed by the Contractor. The coverage shall contain no special limitations on the scope of protection afforded to the Insured Parties. Nothing contained in this section shall be construed to require the Contractor to provide liability insurance coverage to any Insured Party for claims asserted against such Insured Party for its sole negligence.
 - (ii) *Primary Insurance Requirement.* The Contractor's insurance coverage shall be primary noncontributing insurance as respects to any other insurance or self-insurance available to the Insured Parties. Any insurance or self-insurance maintained by the Insured Parties shall be in excess of the Contractor's insurance and shall not contribute with it.

- (iii) *Reporting Requirement.* Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the Insured Parties.
 - (iv) *Separate Coverage.* Coverage shall state that the Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to limits of insurance provided.
 - (v) *Defense Costs/Cross Liability.* Coverage shall be provided on a "pay on behalf" basis, with defense costs payable in addition to policy limits. There shall be no cross-liability exclusion.
 - (vi) *Subrogation.* The insurer shall agree to waive all rights of subrogation against the Insured Parties for losses arising from Work performed by the Contractor for the City.
- (b) Workers' Compensation Coverage: The insurer providing Workers' Compensation Coverage will agree to waive all rights of subrogation against the Insured Parties for losses arising from Work performed by the Contractor for the City.
- (c) All Coverages:
 - (i) *Notice Requirement.* Each insurance policy required by this Agreement shall be endorsed to state that coverage shall not be reduced, suspended, voided, or canceled except after thirty (30) calendar days prior written notice (or 10 calendar days if due to non-payment) has been given to the City. The City reserves the right to accept alternate notice terms and provisions, provided they meet the minimum requirements under Georgia law.
 - (ii) *Starting and Ending Dates.* Policies shall have concurrent starting and ending dates.
 - (iii) *Incorporation of Indemnification Obligations.* Policies shall include an endorsement incorporating the indemnification obligations assumed by the Contractor under the terms of this Agreement, including but not limited to Section 7(O) of this Agreement.
- (5) Acceptability of Insurers: The insurance to be maintained by Contractor must be issued by a company licensed or approved by the Insurance

Commissioner to transact business in the State of Georgia. Such insurance shall be placed with insurer(s) with an A.M. Best Policyholder's rating of no less than "A-" and with a financial rate of Class VII or greater. The Contractor shall be responsible for any delay resulting from the failure of its insurer to provide proof of coverage in the prescribed form.

- (6) Verification of Coverage: Contractor shall furnish to the City for City approval certificates of insurance and endorsements to the policies evidencing all coverage required by this Agreement prior to the start of work. Without limiting the general scope of this requirement, Contractor is specifically required to provide an endorsement naming the City as an additional insured when required. The certificates of insurance and endorsements for each insurance policy are to be on a form utilized by Contractor's insurer in its normal course of business and are to be signed by a person authorized by that insurer to bind coverage on its behalf, unless alternate sufficient evidence of their validity and incorporation into the policy is provided. The City reserves the right to require complete, certified copies of all required insurance policies at any time. The Contractor shall provide proof that any expiring coverage has been renewed or replaced prior to the expiration of the coverage.
- (7) Contractor's Duty to Provide Notice of Reduction in Coverage: Contractor shall provide written notice to City at least thirty (30) days prior to any reduction, suspension, voiding, or cancellation of coverage. Contractor shall require the same notice to the City in all subcontractor contracts.
- (8) Subcontractors: Contractor shall either (1) ensure that its insurance policies (as described herein) cover all subcontractors and the Work performed by such subcontractors or (2) ensure that any subcontractor secures separate policies covering that subcontractor and its Work. All coverage for subcontractors shall be subject to all of the requirements stated in this Agreement, including, but not limited to, naming the Insured Parties as additional insureds.
- (9) Claims-Made Policies: Contractor shall extend any claims-made insurance policy for at least six (6) years after termination or final payment under the Agreement, whichever is later, and have an effective date which is on or prior to the Effective Date.
- (10) Progress Payments: The making of progress payments to the Contractor shall not be construed as relieving the Contractor or its subcontractor or insurance carriers from providing the coverage required in this Agreement.

Q. Bonds. The Contractor shall provide Performance and Payment bonds on the forms attached hereto within **Exhibit A**. All bond sureties shall be licensed to do business in Georgia and listed on the Treasury Department's most current list (Circular 570

as amended). All bonds shall be approved as to form and as to the solvency of the surety by an officer of the City negotiating this Agreement. Contractor shall maintain the payment and performance bonds throughout the Term of this Agreement and shall increase the amount of such bonds if the total payment amount of this Agreement increases. Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under this Agreement, the Contractor shall promptly furnish a copy of the bonds or shall permit a copy to be made.

- R. Assignment of Agreement. The Contractor covenants and agrees not to assign or transfer any interest in, or delegate any duties of this Agreement, without the prior express written consent of the City. As to any approved subcontractors, the Contractor shall be solely responsible for reimbursing them, and the City shall have no obligation to them.
- S. Employment of Unauthorized Aliens Prohibited – E-Verify Affidavit. Pursuant to O.C.G.A. § 13-10-91, the Contractor hereby verifies that it has, prior to executing this Agreement, executed a notarized affidavit, the form of which is provided in **Exhibit B**, and submitted such affidavit to City. Further, Contractor hereby agrees to comply with the requirements of the federal Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603, O.C.G.A. § 13-10-91 and Georgia Department of Labor Rule 300-10-1-.02.

In the event the Contractor employs or contracts with any subcontractor(s) in connection with the covered contract, the Contractor agrees to secure from such subcontractor(s) attestation of the subcontractor's compliance with O.C.G.A. § 13-10-91 and Rule 300-10-1-.02 by the subcontractor's execution of the subcontractor affidavit, the form of which is provided in **Exhibit A**, which subcontractor affidavit shall become part of the contractor/subcontractor agreement; or evidence that the subcontractor is not required to provide such an affidavit because it is licensed and in good standing as noted in sub-subsection (2); or, in the case of a sole proprietor subcontractor, a copy of subcontractor's state issued driver's license or state issued identification card as noted in sub-subsection (3) above. Contractor agrees to provide a completed copy of the above-required materials to the City within five (5) business days of receipt from any subcontractor.

Contractor agrees that the employee-number category designated below is applicable to the Contractor.

- _____ 500 or more employees.
_____ 100 or more employees.
XX Fewer than 100 employees.

Contractor hereby agrees that, in the event Contractor employs or contracts with any subcontractor(s) in connection with this Agreement and where the subcontractor is required to provide an affidavit pursuant to O.C.G.A. § 13-10-91,

the Contractor will secure from the subcontractor(s) such subcontractor(s') indication of the above employee-number category that is applicable to the subcontractor.

The above requirements shall be in addition to the requirements of State and federal law and shall be construed to be in conformity with those laws.

T. Records, Reports and Audits.

(1) Records:

(a) Books, records, documents, account ledgers, data bases, and similar materials relating to the Work performed for the City under this Agreement ("Records") shall be established and maintained by the Contractor in accordance with applicable law and requirements prescribed by the City with respect to all matters covered by this Agreement. Such Records shall include, but not be limited to, current and complete books of account of all transactions with respect to the Project. Such books of account shall be kept in accordance with sound accounting practices consistently applied, and otherwise in such manner as shall be reasonably required by the City. Except as otherwise authorized or required, such Records shall be maintained for at least three (3) years from the date that final payment is made to Contractor by City under this Agreement. Furthermore, Records that are the subject of audit findings shall be retained for three (3) years or until such audit findings have been resolved, whichever is later.

(b) All costs claimed or anticipated to be incurred in the performance of this Agreement shall be supported by properly executed payrolls, time records, invoices, contracts, or vouchers, or other official documentation evidencing in proper detail the nature and propriety of the charges. All checks, payrolls, invoices, contracts, vouchers, orders, or other accounting documents pertaining in whole or in part to this Agreement shall be clearly identified and readily accessible.

(2) Reports and Information: Upon request, the Contractor shall furnish to the City any and all Records in the form requested by the City. All Records stored on a computer database must be of a format compatible with the City's computer systems and software.

(3) Audits and Inspections: At any time during normal business hours and as often as the City may deem necessary, Contractor shall make available to the City or City's representative(s) for examination all Records. The Contractor will permit the City or City's representative(s) to audit, examine, and make excerpts or transcripts from such Records. Contractor shall

provide proper facilities for City or City's representative(s) to access and inspect the Records, or, at the request of the City, shall make the Records available for inspection at the City's office. Further, Contractor shall permit the City or City's representative(s) to observe and inspect any or all of Contractor's facilities and activities during normal hours of business for the purpose of evaluating Contractor's compliance with the terms of this Agreement. In such instances, the City or City's representative(s) shall not interfere with or disrupt such activities.

- U. Confidentiality. Contractor acknowledges that it may receive confidential information of the City and that it will protect the confidentiality of any such confidential information and will require any of its subcontractors, contractors, and/or staff to likewise protect such confidential information. The Contractor agrees that confidential information it receives or such reports, information, opinions, or conclusions that Contractor creates under this Agreement shall not be made available to, or discussed with, any individual or organization, including the news media, without prior written approval of the City. Contractor shall exercise reasonable precautions to prevent the unauthorized disclosure and use of City information whether specifically deemed confidential or not.

Contractor acknowledges that the City's disclosure of documentation is governed by Georgia's Open Records Act, and Contractor further acknowledges that, if Contractor submits records containing trade secret information and if Contractor wishes to keep such records confidential, Contractor must submit and attach to such records an affidavit affirmatively declaring that specific information in the records constitutes trade secrets pursuant to Article 27 of Chapter 1 of Title 10, and the Parties shall follow the requirements of O.C.G.A. § 50-18-72(a)(34) related thereto.

- V. Licenses, Certifications and Permits. The Contractor covenants and declares that it has obtained all diplomas, certificates, licenses, permits, or the like required of the Contractor by any and all national, state, regional, county or local boards, agencies, commissions, committees or other regulatory bodies in order to perform the Work contracted for under this Agreement; provided that some permits or licenses related to the Project may be obtained as part of the Work and shall be obtained as required. The Contractor shall secure and pay for the building permit and other permits and governmental fees, licenses and inspections necessary for proper execution and completion of the Work, which are customarily secured after execution of the Agreement and which are legally required. Contractor shall furnish copies of such permits, licenses, etc. to the City within ten (10) days after issuance.

- W. Personnel

- (i) *Employment of City Personnel*. Contractor shall not employ any person or persons in the employ of, or having any contractual relationship with, the City for any Work required by the terms of this Agreement without the written permission of the City.

- (iii) *Subcontractors.* Contractor shall not subcontract with any third party for the performance of any portion of the Work without the prior written consent of the City. By appropriate written agreement, Contractor shall require each subcontractor, to the extent of the Work to be performed by the subcontractor, to be bound to Contractor by terms of the Contract Documents, and to assume toward Contractor all obligations and responsibilities, including the responsibility for safety of the subcontractor's Work, which Contractor, by the Contract Documents, assumes toward the City. Each subcontract agreement for a portion of the Work must contain a provision allowing assignment of the subcontract agreement by Contractor to the City in the event that this Agreement is terminated by the City for cause and City notifies Contractor and subcontractor of its intent to accept such assignment; provided that any assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Agreement. Contractor shall be solely responsible for any such subcontractors in terms of performance and compensation.
- X. Authority to Contract. The Contractor covenants and declares that it has obtained all necessary approvals of its board of directors, stockholders, general partners, limited partners, or similar authorities to simultaneously execute and bind Contractor to the terms of this Agreement, if applicable.
- Y. Ownership of Work. All reports, designs, drawings, plans, specifications, schedules, work product, and other materials, including, but not limited to, those in electronic form, prepared or in the process of being prepared for the Work to be performed by the Contractor ("Materials") shall be the property of the City, and the City shall be entitled to full access and copies of all Materials in the form prescribed by the City. Any Materials remaining in the hands of the Contractor or subcontractor upon completion or termination of the Work shall be delivered immediately to the City whether or not the Project or Work is commenced or completed, provided; however, that Contractor may retain a copy of any deliverables for its records. The Contractor assumes all risk of loss, damage or destruction of or to Materials. If any Materials are lost, damaged, or destroyed before final delivery to the City, the Contractor shall replace them at its own expense. Any and all copyrightable subject matter in all Materials is hereby assigned to the City, and the Contractor agrees to execute any additional documents that may be necessary to evidence such assignment.
- Z. Nondiscrimination. In accordance with Title VI of the Civil Rights Act of 1964, as amended, 42 U.S.C. § 2000d, section 303 of the Age Discrimination Act of 1975, as amended, 42 U.S.C. § 6102, section 202 of the Americans with Disabilities Act of 1990, 42 U.S.C. § 12132, and all other provisions of Federal law, the Contractor agrees that, during performance of this Agreement, Contractor, for itself, its assignees and successors in interest, will not discriminate against any employee or applicant for employment, any subcontractor, or any supplier because of race, color,

creed, national origin, gender, age or disability. In addition, Contractor agrees to comply with all applicable implementing regulations and shall include the provisions of this paragraph in every subcontract for services contemplated under this Agreement.

Section 8. Covenants of the City

- A. Right of Entry. The City shall provide for right of entry for Contractor and Contractor's equipment as required for Contractor to complete the Work, provided that Contractor shall not unreasonably encumber the Project site(s) with materials or equipment.
- B. City's Representative. **PETE SEWCZWICZ, Director of Public Works**, shall be authorized to act on the City's behalf with respect to the Work as the City's designated representative on this Project, provided that any changes to the Work or the terms of this Agreement must be approved as provided in Section 6 above.

Section 9. Final Project Documents

Prior to final payment, Contractor shall deliver to City a written assignment of all warranties, guaranties, certificates, permits, and other documents, including without limitation, all contractors' and manufacturers' warranties. At such time, Contractor shall also deliver to the City copies of all as-built drawings, operations, and maintenance manuals, and any other pertinent documents relating to the construction and operation of the Work that is not otherwise in the possession of the City.

Section 10. Termination

- A. For Convenience. The City may terminate this Agreement for convenience at any time upon providing written notice thereof to Contractor at least seven (7) calendar days in advance of the termination date.
- B. For Cause. The Contractor shall have no right to terminate this Agreement prior to completion of the Work, except in the event of City's failure to pay the Contractor within thirty (30) calendar days of Contractor providing the City with notice of a delinquent payment and a reasonable opportunity to cure. The City may terminate this Agreement for cause as provided in Section 11 of this Agreement. The City shall give Contractor at least seven (7) calendar days' written notice of its intent to terminate the Agreement for cause and the reasons therefor, and if Contractor, or its Surety, fails to cure the default within that period, the termination shall take place without further notice. The City shall then make alternative arrangements for completion of the Project.
- C. Statutory Termination. In compliance with O.C.G.A. § 36-60-13, this Agreement shall be deemed terminated as provided in Section 4(A) of this Agreement. Further,

this Agreement shall terminate immediately and absolutely at such time as appropriated or otherwise unobligated funds are no longer available to satisfy the obligation of the City.

- D. Payment. Provided that no damages are due to the City for Contractor's failure to perform in accordance with this Agreement, and except as otherwise provided herein, the City shall, upon termination for convenience or statutory termination, pay Contractor for Work performed prior to the date of termination in accordance with Section 5 herein. The City shall have no further liability to Contractor for such termination. At its sole discretion, the City may pay Contractor for additional value received as a result of Contractor's efforts, but in no case shall said payment exceed any remaining unpaid portion of the Maximum Contract Price.

If this Agreement is terminated for cause, the City will make no further payment to the Contractor or its Surety until the Project is completed and all costs of completing the Project are paid. If the unpaid balance of the amount due the Contractor, according to this Agreement, exceeds the cost of finishing the Project, City shall provide payment to the Contractor (or its Surety) for services rendered and expenses incurred prior to the termination date, provided that such payment shall not exceed the unpaid balance of the amount otherwise payable under this Agreement minus the cost of completing the Project. If the costs of completing the Project exceed the unpaid balance, the Contractor or its Surety shall pay the difference to the City.

- E. Assumption of Contracts. The City reserves the right in termination for cause to take assignment of all contracts between the Contractor and its subcontractors, vendors, and suppliers. The City will promptly notify the Contractor of the contracts the City elects to assume. Upon receipt of such notice, the Contractor shall promptly take all steps necessary to effect such assignment.
- F. Conversion to Termination for Convenience. If the City terminates this Agreement for cause and it is later determined that the City did not have grounds to do so, the termination will be converted to and treated as a termination for convenience under the terms of Section 10(A) above.
- G. Requirements Upon Termination. Upon termination, the Contractor shall: (1) promptly discontinue all services, cancel as many outstanding obligations as possible if requested to do so by the City, and not incur any new obligations, unless the City directs otherwise; and (2) promptly deliver to the City all data, drawings, reports, summaries, and such other information and materials as may have been generated or used by the Contractor in performing this Agreement, whether completed or in process, in the form specified by the City.
- H. Reservation of Rights and Remedies. The rights and remedies of the City and the Contractor provided in this Section are in addition to any other rights and remedies provided under this Agreement or at law or in equity. Specifically, and without

limiting the generality of the foregoing, City may, with or without terminating this Agreement, bring an action against Consultant to recover from Consultant all damages, recoverable at law, suffered, incurred or sustained by City as a result of, by reason of, in connection with, or arising out of Consultant's default.

Section 11. City's Rights; Contractor Default

A. City Rights Related to the Work.

(i) *City's Right to Stop the Work.* If the Contractor fails to correct Work which is not in accordance with the requirements of the Contract Documents, as required by the Contract Administrator, or persistently fails to carry out Work in accordance with the Contract Documents, the City may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the City to stop the Work shall not give rise to a duty on the part of the City to exercise this right for the benefit of the Contractor or any other person or entity. Such a stoppage of Work shall not extend the Expected Date of Final Completion of the Work.

(ii) *City's Right to Carry Out the Work.* If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a seven (7) calendar day period after receipt of written notice from the City to commence and/or continue correction of such default or neglect with diligence and promptness, the City may, without prejudice to other remedies the City may have, correct such deficiencies. In such case, an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including City's expenses and compensation for the Architect/Engineer's and/or Contract Administrator's additional services (if any) made necessary by such default, neglect or failure. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the City.

B. Contractor Default. For the purposes of this Agreement, Contractor shall be in default if any of the following occur during the Term of this Agreement: (a) a failure to fulfill in a timely and proper manner Contractor's obligations under this Agreement; (b) Contractor violates any of the material provisions, agreements, representations or covenants of this Agreement or any applicable city, state, or federal laws, which do not fall within the force majeure provisions of this Agreement; (c) the Contractor becomes insolvent or unable to pay its debts as they mature, or makes an assignment for the benefit of creditors, or files a bankruptcy petition under the United States Bankruptcy Code; or (d) Contractor is the subject of a judgment or order for payment of money, which judgment or order exceeds \$100,000 and is no longer subject to appeal or, in the opinion of the City, would be fruitless to appeal and where (i) such judgment or order shall continue un-discharged or unpaid for a period of thirty (30) calendar days and an insurer has not acknowledged that such judgment or order is fully covered by a relevant policy of insurance, or (ii) the City is otherwise reasonably

satisfied that such judgment or order is not likely to be satisfied or complied with within sixty (60) calendar days of its issuance.

In the event of Contractor's default under this Agreement, the City shall send written notice to the Contractor setting forth the specific instances of the default and providing the Contractor with at least seven (7) calendar days to cure or otherwise remedy the default to the reasonable satisfaction of the City. If the default is not remedied during the stated cure period, then the City may, at its election: (a) in writing terminate the Agreement in whole or in part; (b) cure such default itself and charge the Contractor for the costs of curing the default against any sums due or which become due to the Contractor under this Agreement; and/or (c) pursue any other remedy then available, at law or in equity, to the City for such default.

Section 12. Miscellaneous

- A. Complete Agreement. This Agreement, including all of the Contract Documents, constitutes the complete agreement between the Parties and supersedes any and all other agreements, either oral or in writing, between the Parties with respect to the subject matter of this Agreement. No other agreement, statement, or promise relating to the subject matter of this Agreement not contained in this Agreement or the Contract Documents shall be valid or binding. This Agreement may be modified or amended only by a written document signed by representatives of both Parties with appropriate authorization.
- B. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Georgia without regard to choice of law principles. If any action at law or in equity is brought to enforce or interpret the provisions of this Agreement, the rules, regulations, statutes and laws of the State of Georgia will control. Any action or suit related to this Agreement shall be brought in the Superior Court of Fulton County, Georgia, or the U.S. District Court for the Northern District of Georgia, and Contractor submits to the jurisdiction and venue of such court.
- C. Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be deemed to be an original, but all of which together shall constitute one and the same instrument.
- D. Invalidity of Provisions; Severability. Should any article(s) or section(s) of this Agreement, or any part thereof, later be deemed illegal, invalid or unenforceable by a court of competent jurisdiction, the offending portion of the Agreement should be severed, and the remainder of this Agreement shall remain in full force and effect to the extent possible as if this Agreement had been executed with the invalid portion hereof eliminated, it being the intention of the Parties that they would have executed the remaining portion of this Agreement without including any such part, parts, or portions that may for any reason be hereafter declared invalid.
- E. Business License. Prior to commencement of the Work to be provided hereunder, Contractor shall apply to the City for a business license, pay the applicable business

license fee, and maintain said business license during the Term of this Agreement, unless Contractor provides evidence that no such license is required.

F. Notices.

(1) *Communications Relating to Day-to-Day Activities.*

All communications relating to the day-to-day activities of the Work shall be exchanged between **PETE SEWCZWICZ, Director of Public Works**, for the City, and **LUIGI HERNANDEZ, President**, for the Contractor.

(2) *Official Notices.*

All other notices, requests, demands, writings, or correspondence, as required by this Agreement, shall be in writing and shall be deemed received, and shall be effective, when (1) personally delivered, or (2) on the third calendar day after the postmark date when mailed by certified mail, postage prepaid, return receipt requested, or (3) upon actual delivery when sent *via* national overnight commercial carrier to the Party at the addresses given below, or at a substitute address previously furnished to the other Party by written notice in accordance herewith:

NOTICE TO CITY shall be sent to:

City of Alpharetta, Georgia
Attn: Pete Sewczwicz, Director of Public Works
Alpharetta City Hall
2 Park Plaza
Alpharetta, GA 30009
Tel: 678-297-6219
Email: psewczwicz@alpharetta.ga.us
With a copy to City's Project Manager:

City of Alpharetta
Attn: Scott Campbell
1790 Hembree Road
Alpharetta, GA 30009
Tel: 678-297-6227
Email: sjcampbell@alpharetta.ga.us

NOTICE TO CONTRACTOR shall be sent to:

Excellere Construction, LLC
Attn: Luigi Hernandez, President
4343 Shallowford Road
Suite 161

Marietta, GA 30062
Email: luigih@excellere-ga.com

- G. Waiver of Agreement. No failure by the City to enforce any right or power granted under this Agreement, or to insist upon strict compliance by Contractor with this Agreement, and no custom or practice of the City at variance with the terms and conditions of this Agreement shall constitute a general waiver of any future breach or default or affect the City's right to demand exact and strict compliance by Contractor with the terms and conditions of this Agreement. Further, no express waiver shall affect any term or condition other than the one specified in such waiver, and that one only for the time and manner specifically stated.
- H. Survival. All sections of this Agreement which by their nature should survive termination will survive termination, including, without limitation, confidentiality obligations, warranties, and insurance maintenance requirements.
- I. Sovereign Immunity. Nothing contained in this Agreement shall be construed to be a waiver of the City's sovereign immunity or any individual's qualified good faith or official immunities.
- J. No Personal Liability. Nothing herein shall be construed as creating any individual or personal liability on the part of any of City's elected or appointed officials, officers, boards, commissions, employees, representatives, consultants, servants, agents, attorneys or volunteers. No such individual shall be personally liable to the Contractor or any successor in interest in the event of any default or breach by the City or for any amount which may become due to the Contractor or successor or on any obligation under the terms of this Agreement. Likewise, Contractor's performance of services under this Agreement shall not subject Contractor's individual employees, officers, or directors to any personal liability, except where Contractor is a sole proprietor. The Parties agree that their sole and exclusive remedy, claim, demand, or suit shall be directed and/or asserted only against Contractor or the City, respectively, and not against any elected or appointed official, officers, boards, commissions, employees, representatives, consultants, servants, agents, attorneys and volunteers.
- K. Force Majeure. Neither the City nor Contractor shall be liable for their respective non-negligent or non-willful failure to perform or shall be deemed in default with respect to the failure to perform (or cure a failure to perform) any of their respective duties or obligations under this Agreement or for any delay in such performance due to: (i) any cause beyond their respective reasonable control; (ii) any act of God; (iii) any change in applicable governmental rules or regulations rendering the performance of any portion of this Agreement legally impossible; (iv) earthquake, fire, explosion, or flood; (v) strike or labor dispute, excluding strikes or labor disputes by employees and/or agents of Contractor; (vi) delay or failure to act by any governmental or military authority; or (vii) any war, hostility, embargo,

sabotage, civil disturbance, riot, insurrection, or invasion. In such event, the time for performance shall be extended by an amount of time equal to the period of delay caused by such acts, and all other obligations shall remain intact.

- L. Headings. All headings herein are intended for convenience and ease of reference purposes only and in no way define, limit, or describe the scope or intent thereof, or of this Agreement, or in any way affect this Agreement.
- M. No Third-Party Rights. This Agreement shall be exclusively for the benefit of the Parties and shall not provide any third parties with any remedy, claim, liability, reimbursement, cause of action or other right.
- N. Successors and Assigns. Subject to the provision of this Agreement regarding assignment, each Party binds itself, its partners, successors, assigns, and legal representatives to the other Party hereto, its partners, successors, assigns, and legal representatives with respect to all covenants, agreements, and obligations contained in the Contract Documents.
- O. Agreement Construction and Interpretation. Contractor represents that it has reviewed and become familiar with this Agreement. The Parties hereto agree that, if an ambiguity or question of intent or interpretation arises, this Agreement is to be construed as if the Parties had drafted it jointly, as opposed to being construed against a Party because it was responsible for drafting one or more provisions of the Agreement. In the interest of brevity, the Contract Documents may omit modifying words such as “all” and “any” and articles such as “the” and “an,” but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.
- P. Material Condition. Each term of this Agreement is material, and Contractor’s breach of any term of this Agreement shall be considered a material breach of the entire Agreement and shall be grounds for termination or exercise of any other remedies available to the City at law or in equity.
- Q. Use of Singular and Plural. Words or terms used as nouns in the Agreement shall be inclusive of their singular and plural forms, unless the context of their usage clearly requires contrary meaning.
- R. Exhibits. Each and every exhibit referred to or otherwise mentioned in this Agreement is attached to this Agreement and is and shall be construed to be made a part of this Agreement by such reference or other mention at each point at which such reference or other mention occurs, in the same manner and with the same effect as if each exhibit were set forth in full and at length every time it is referred to or otherwise mentioned.
- S. Defined Terms. Capitalized terms used in this Agreement shall have the meanings ascribed to them at the point where first defined, irrespective of where their use

occurs, with the same effect as if the definitions of such terms were set forth in full and at length every time such terms are used.

- T. Pronouns. Wherever appropriate in this Agreement, personal pronouns shall be deemed to include the other genders and the singular to include the plural.

[signature page follows]

IN WITNESS WHEREOF, the parties hereto have each caused this Contract to be executed and delivered by a duly authorized officer, agent or official as of the date set forth below.

CITY OF ALPHARETTA, GEORGIA

By: _____
Jim Gilvin, Mayor

Date: _____

Approved as to substance:

Pete Sewczwicz, Director of Public Works

Approved as to form:
JARRARD & DAVIS, LLP

Molly N. Esswein, City Attorney

EXCELLERE CONSTRUCTION, LLC

By: _____
Luigi Hernandez, President

Contract: Big Creek Greenway Boardwalk Replacement
Contract No.: 23-004

EXHIBIT A

**CITY SOLICITATION DOCUMENT
INVITATION TO BID 23-004**

Contract: Big Creek Greenway Boardwalk Replacement
Contract No.: 23-004

EXHIBIT B

BID DOCUMENTS FROM CONTRACTOR

EXHIBIT C

SCOPE OF WORK

As provided in Exhibit A and Exhibit B, and as follows:

EXHIBIT D

ADDITIONAL PAYMENT/RETAINAGE TERMS

- A. **Defined Terms.** Terms used in this Agreement shall have their ordinary meaning, unless otherwise defined below or elsewhere in the Contract Documents.
- (i) “Substantial Completion” means when the Work or designated portion thereof is complete in accordance with the Contract Documents so that any remaining Work includes only (1) Minor Items that can be completed or corrected within the following thirty (30) calendar days, (2) Permitted Incomplete Work that will be completed by the date agreed upon by the Parties, and (3) any Warranty Work. Substantial Completion shall require complete operation of all applicable building systems including, but not limited to, mechanical, electrical, plumbing, fire protection, fire alarm, telecom, data, security, elevators, life safety, and accessibility (if any).
 - (ii) “Minor Item” means a portion or element of the Work that can be totally complete within thirty (30) calendar days.
 - (iii) “Permitted Incomplete Work” means Work that is incomplete through no fault of the Contractor, as determined by the City in its sole discretion.
 - (iv) “Final Completion” means when the Work has been completed in accordance with terms and conditions of the Contract Documents.
- B. **Payment for Work Completed and Costs Incurred.** City agrees to pay the Contractor for the Work performed and costs incurred by Contractor upon certification by the Contract Administrator and the City that the Work was actually performed and costs actually incurred in accordance with this Agreement. Payment shall be based on the value of the Work completed, as provided in the Contract Documents, plus the value of materials and equipment suitably stored, insured, and protected at the construction site, and, only if approved in writing by the City (which approval shall be given at the sole discretion of the City), such materials and equipment suitably stored, insured, and protected off site at a location approved by the City in writing, less retainage (as described below). Compensation for Work performed and reimbursement for costs incurred shall be paid to the Contractor upon receipt and approval by the City of invoices setting forth in detail the Work performed and costs incurred, along with all supporting documents required by the Contract Documents or requested by the City to process the invoice. Invoices shall be submitted on a monthly basis, and such invoices shall reflect costs incurred versus costs budgeted. Each invoice shall be accompanied by an Interim Waiver and Release upon Payment (or a Waiver and Release upon final payment in the case of the invoice for final payment) procured by the Contractor from all subcontractors in accordance with O.C.G.A. § 44-14-366. The final invoice shall also be accompanied by the Final Affidavit shown in **Exhibit A** of this Agreement.

The City shall pay the Contractor within thirty (30) calendar days after approval of the invoice by City staff, less any retainage as described in Section D below. No payments will be made for unauthorized work. Payment will be sent to the designated address by U. S. Mail only; payment will not be hand-delivered, though the Contractor may arrange to pick up payments directly from the City or may make written requests for the City to deliver payments to the Contractor by Federal Express delivery at the Contractor's expense.

- C. Evaluation of Payment Requests. The Contract Administrator will evaluate the Contractor's applications for payment and will either issue to the City a Certificate for Payment (with a copy of the Contractor's application for payment) for such amount as the Contract Administrator determines is properly due, or notify the Contractor and City in writing of the Contract Administrator's reasons for withholding certification in whole or in part. The Contract Administrator may reject Work that does not conform to the Contract Documents and may withhold a Certificate of Payment in whole or in part, to the extent reasonably necessary to protect the City. When the reasons for withholding certification are removed, certification will be made for amounts previously withheld.

Even following a Certificate of Payment, the City shall have the right to refuse payment of any invoice or part thereof that is not properly supported, or where requests for payment for Work or costs are in excess of the actual Work performed or costs incurred, or where the Work product provided is unacceptable or not in conformity with the Contract Documents, as determined by the City in its sole discretion. The City shall pay each such invoice or portion thereof as approved, provided that neither the approval or payment of any such invoice, nor partial or entire use or occupancy of the Project by the City, shall be considered to be evidence of performance by the Contractor to the point indicated by such invoice, or of receipt or acceptance by the City of Work covered by such invoice, where such work is not in accordance with the Contract Documents.

- D. Final Payment and Retainage. The City and Contractor shall comply with the provisions of O.C.G.A. § 13-10-80. The Contractor through each invoice may request payment of no more than ninety-five percent (95%) of that portion of the Work completed during the term covered by such invoice. Payment for the remaining five percent (5%) of Work completed and covered by such invoices shall be retained by the City until Substantial Completion. At the discretion of the City and with the written approval of the Contractor, the retainage of each subcontractor may be released separately as the subcontractor completes his or her work.

At Substantial Completion of the Work and as the Contract Administrator determines the Work to be reasonably satisfactory, the City shall, within thirty (30) days after the invoice and other appropriate documentation as may be required by the Contract Documents are provided to the City, pay the retainage to the Contractor. If at that time there are any remaining incomplete Minor Items or Permitted Incomplete Work, an amount equal to 200 percent (200%) of the value of each Minor Item or Permitted Incomplete Work, as determined by the Contract Administrator in its sole discretion, shall be withheld until such item, items or work are completed. The reduced retainage shall be shared by the Contractor and subcontractors as their interests may appear.

The Contractor shall, within ten (10) days from its receipt of retainage from the City, pass through payments to subcontractors and shall reduce each subcontractor's retainage in the same manner as the Contractor's retainage is reduced by the City, provided that the work of the subcontractor is proceeding satisfactorily and the subcontractor has provided or provides such satisfactory reasonable assurances of continued performance and financial responsibility to complete his or her work including any warranty work as the Contractor in his or her reasonable discretion may require, including, but not limited to, a payment and performance bond.

The subcontractor shall, within ten (10) days from the subcontractor's receipt of retainage from the Contractor, pass through payments to lower tier subcontractors and shall reduce each lower tier subcontractor's retainage in the same manner as the subcontractor's retainage is reduced by the Contractor, provided that the work of the lower tier subcontractor is proceeding satisfactorily and the lower tier subcontractor has provided or provides such satisfactory reasonable assurances of continued performance and financial responsibility to complete his or her work including any warranty work as the subcontractor in his or her reasonable discretion may require, including, but not limited to, a payment and performance bond.

Final payment of any retained amounts to the Contractor shall be made after certification by the Contract Administrator that the Work has been satisfactorily completed and is accepted in accordance with the Agreement and Contract Documents.

Neither final payment nor any remaining retainage shall become due until the Contractor submits to the Contract Administrator:

- (1) an affidavit (as exemplified in **Exhibit A** of this agreement) that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the City or City property might be responsible or encumbered (less amounts withheld by City) have been paid or otherwise satisfied; and
- (2) a certificate evidencing that insurance, required by the Contract Documents to remain in force after final payment, is currently in effect and will not be canceled or allowed to expire until at least thirty (30) calendar days prior written notice has been given to the City; and
- (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents; and
- (4) consent of surety, if any, to final payment; and
- (5) a release or waiver of liens, claims, security interests, and encumbrances by all subcontractors and material suppliers; and
- (6) if required by the City, other data establishing payment or satisfaction of

obligations, such as receipts, to the extent and in such form as may be designated by the City. If a subcontractor or material supplier refuses to furnish a release or waiver as required by the City, the Contractor may furnish a bond satisfactory to the City to indemnify the City against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the City all money that the City may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

Acceptance of final payment by the Contractor, a subcontractor or material supplier shall constitute a waiver of claims by that payee, except those claims previously made in writing and identified by that payee as unsettled at the time of final application for payment.

CITY OF ALPHARETTA INVITATION TO BID (ITB)

ITB Number: 23-004

ITB Title: Big Creek Greenway Boardwalk Replacement



ITB SPECIFICATIONS; BIDDING INSTRUCTIONS

1. ITB Period of Non-communication

The no communication period starts on the issue date of this ITB October 20, 2022 and lasts until the City Council meeting for contract award recommendation (or until contract award if this isn't required to go before council for approval).

Any person or company, their employees, representatives, agents, attorneys, etc. involved in bidding this project must not contact the City's elected officials or any City staff concerning this ITB.

Contacting anyone other than the Procurement Agent named below for this ITB during this time will be reason to remove a proposal from review.

2. Procurement Agent, Single Point of Contact

Debora Westbrook is the Procurement Agent and Single Point of Contact for this RFP and is the only contact representing the City for this RFP.

Enter all questions or comments using Opportunity Q&A tab at the Bonfire project web page. Debora can be reached at 678-297-6052 or purchasing@alpharetta.ga.us.

City of Alpharetta
2 Park Plaza
Alpharetta, GA 30009
Attn: Debora Westbrook, Procurement Agent

3. ITB Schedule of Events, Addenda, Additional Communications

1. **Bidding Close Date, Deadline for Submissions: November 17, 2022, at 10:00 am.** We may change this date during the ITB process. We will post any change in an addendum. Review web page for addenda.
2. Link to Bonfire Project Web Page: <https://cityofalpharetta.bonfirehub.com/>
3. This project web page has the important dates and all project documents for this ITB.
4. Enter all questions, comments, requests for information before the Questions Due Date using ☒ **Message – Opportunity Q&A** at the project web page.
5. In each question, clearly tell the ITB document and section that is in question.
6. We will share any changes or added information from the City by a written addendum. We will make the information available to the public on the project web page.
7. It is your responsibility to check the project web page for any addenda, other information, or other messages before finally uploading a bid. You must respond using any updated information.
8. A virtual public bid opening will be held shortly after the ITB due date / time has passed. To attend, use the following Zoom login information.

Zoom Public Bid Opening Details, November 17, 2022 at 10:00 AM

Topic: ITB 23-004 Zoom Public Opening: Big Creek Greenway Boardwalk Replacement

Time: November 17, 2022 at 10:00 AM Eastern Time (US and Canada)

Join Zoom Meeting

<https://us04web.zoom.us/j/3051332793?pwd=UFNoWHhrVlBpQ2gyZWtDWW5rcHpIdz09>

Meeting ID: 305 133 2793

Passcode: BidOpening

WHAT THE CITY WANTS TO DO

1. Project Background and General Description

The City is requesting bids from qualified contractors to provide all materials, labor, and equipment for the complete construction of the **Big Creek Greenway Boardwalk Replacement** project. The project scope includes, but is not limited to, demolition of existing boardwalk, installation of concrete boardwalk, installation of landscape materials, and related work. The location of the work is Mansell Road bridge over Big Creek --- within the City of Alpharetta, Georgia.

2. Specifications

The Bidder shall comply with all specifications set forth in Appendix A of this document.

3. Project Specific Requirements

- A. The Bidder shall commence the Work with adequate force and equipment within **ten (10)** calendar days from receipt of Notice to Proceed and shall continuously pursue the work without interruption to completion and to achieve **Final Completion** of the Work in **three hundred sixty-five (365) calendar days from Notice to Proceed**.
- B. The Bidder shall be responsible for performing with their own organization at least thirty percent (30%) of the work in this contract. The Bidder shall not subcontract, transfer, assign, or otherwise dispose of the contract or any portion thereof, without the written consent of the City.
- C. Bonds:
 - a. Bidders must submit a bid bond for 5% of bid total and it must be submitted with each bid prior to bid due date/time.
 - b. Performance and Payment Bonds each in the amount of 100% of the awarded contractor's contract will be required.
- D. The City will withhold retainage of 5% of the gross value from each invoice or pay application submitted and approved for payment.
- E. Liquidated damages will apply per GDOT Standard Specifications for Construction of Transportation Systems, 2021, Section 108.08.
- F. The cost of any work performed, materials furnished, services provided, or expenses incurred, which are not specifically delineated in the Contract Documents, but which are incidental to the scope, intent, and completion of the Contract, shall be included in the prices for the various items scheduled.
- G. Construction is only permitted between the hours of 7:00 AM and 7:00 PM Monday through Friday. Work on Saturday is only allowable with a minimum 72 hours of advance notice and is only permitted between the hours of 9:00 AM and 5:00 PM. Work on Sunday is not permitted.

- a. Construction outside of these hours requires approval by both the Department of Public Works and the Department of Public Safety.
 - b. Once approved by the Department of Public Works, Contractor must submit request in writing to the Director of Public Safety for modified work hours.
- H. Contractor shall be responsible for implementing and maintaining all necessary traffic control measures. Contractor shall submit a traffic control plan to the City for approval prior to commencing any operations at a given location. Traffic can only be impeded between the hours of 9:00 AM and 4:00 PM. Traffic control is entirely the responsibility of the Bidder and must comply with MUTCD standards.
- I. Should the Contractor desire to utilize police officers as part of their traffic control, only City of Alpharetta Police may be so utilized. Contact Sergeant Jomo Bent (678-297-6350) or Sergeant Dan Lambert (678-297-6361) with the City of Alpharetta Department of Public Safety.
- J. The Contractor shall be responsible for all required testing as set forth in the Technical Specifications (Appendix A). Testing services must be provided by an independent source. All testing costs shall be incorporated into the unit price for the associated line items.
- K. Unless specified otherwise, all hand rails, pedestrian signal poles, strain poles and mast arms shall have a black powder-coat finish. All pedestrian and roadway lighting poles shall have a black finish applied by the manufacturer.
- L. Utility coordination shall be the responsibility of the Contractor. Costs for utility relocations will be paid by the City directly to the utility owner.
- M. Contractor WILL NOT be responsible for the purchase or installation of trees, shrubs, or other plants shown on the Vegetation Plans. Contractor WILL be responsible for the purchase and installation of seed mix, coir mat, and/or other stabilization items shown on the Vegetation Plans. See City Specification 2900 for details.
- N. Any limbs overhanging the limits of disturbance that may be ripped, torn, or damaged during construction shall be properly pruned under the direction of an ISA Certified Arborist.
- O. All tree-save fence shall be Type B per City of Alpharetta Detail L-6, provided on the plan sheet number C-502.

4. Public Works Construction

According to Georgia Public Works Law, public works construction means the building, altering, repairing, improving, or demolishing of any public structure or building or other public improvements of any kind to any public real property *other than* road construction or the routine operation, repair, or maintenance of existing structures, buildings, or real property.

- i. No federal permits are anticipated for this project. Land Disturbance Permits from the City of Alpharetta will be issued for this project.
- ii. The City of Alpharetta has applied for a Stream Buffer Variance for this project. No work can commence until this permit is approved.
- iii. Contractor shall submit an updated construction schedule with each application for payment.
- iv. No rights of way and/or easements required for this project have been obtained. The work is within existing easements or within City-owned parcels or right of way.
- v. The Schedule of Items form will be used as the primary representation of each Bidder's cost/price. Award of this project will be by base bid plus any selected alternates.

FOLLOW THIS OUTLINE

How We Want You to Construct Your Bid

1. Using Bonfire to Submit Bid

- 1.1. This is the link to Bonfire Project Web Page to get our documents and to upload your bid: <https://cityofalpharetta.bonfirehub.com/>
- 1.2. We are accepting all bids by online response only. You must upload completed bids online before the closing date and time found in Project Details of the project web page for this ITB.
- 1.3. Don't send bids by mail, fax, or email. We will not accept paper copy bids. We will not accept any bids after the closing time deadline has passed.
- 1.4. You have not completed your response simply by uploading bid documents and information. You must successfully upload all the required documents, including filling out any questionnaires, price sheets, or data requests, and then you must click the submit button before the closing time.
- 1.5. You will receive an email confirmation receipt with a unique confirmation number shortly after you complete your bid upload. This confirms that you have successfully turned in your bid with all required information.
- 1.6. You can update your bid at any time until the closing time.
- 1.7. All uploaded items and responses are Sealed in the project web page and will only be visible by the City after the closing time has passed.
- 1.8. If the file is 'mandatory' or 'required', you won't be able to complete your bid until you have met all requirements.
- 1.9. Uploading large documents may take more time, depending on the size of the file(s) and your Internet connection speed.
- 1.10. Pay attention to the type and number of files we have asked you to upload.
- 1.11. The largest upload file size is 1000 MB.
- 1.12. Don't embed any documents within your uploaded files. They won't be accessible or evaluated.
- 1.13. Minimum system requirements: Internet Explorer 11, Microsoft Edge, Google Chrome, or Mozilla Firefox. Java Script must be enabled.

2. Required Bid Documents and Formats

- ❖ Each bid must follow these document formats.
 - Failure to follow these formats will reduce our review team's ability to review and evaluate supplied information.
 - Format your documents using this outline:
 - ❑ no more than twelve (12) pages per document,

- ☐ formatted to single space lines,
- ☐ 10 to 12-point font size,
- ☐ black font color, and
- ☐ upload documents in PDF format.

a) Bid Package and Company Information

IMPORTANT NOTE: By submitting a bid to the City in response to this ITB, Bidder acknowledges the understanding that each Bid and all information received in response to this ITB, including copyrighted material, is deemed “public record” in accordance with O.C.G.A § 50-18-70, et seq., and will be subject to Public inspection.

For any information required to submit a response to the ITB that may be confidential information, matters involving individual safety, or other required information that may be exempt from public disclosure, Bidders must include this information on a separate page(s) within the bid package with the page(s) clearly marked at the top of page(s), **CONFIDENTIAL INFORMATION**. City Procurement will review and separate out any information that meets the referenced exceptions to disclosure as public record. *(See ITB 23-002 Info Contract document for more details)*

- A. **Cover Letter with Brief Business Profile**, include a brief business profile length of time in business, and a summary describing strong points and why your firm’s/team’s experience, particularly with similar projects, will benefit the City.
- B. **Business information**, including business name and home office address. If another office address oversees work of this project, add that address information too.
- C. **Contact**, one person to be the single point of contact for this bid. All communication with the City will be with this person. Supply the following contact information in the bid:
 - Name, including business title and preferred personal/honorific title (Mr. Ms. Dr. etc.)
 - mailing address,
 - telephone number, cell phone number, and
 - e-mail address.
- D. **References**. Supply at least three references for work or services similar in scope, specifications, and complexity to the project in this ITB (don’t include the City of Alpharetta). These references must be for work or services provided by your company within the last five years. Also supply a list of three active projects or upcoming projects, awarded and yet to begin.

NOTE: We contact references to verify your ability to do the work. We also reserve the right to use any information or other references to decide your ability to perform the work in this ITB. Poor references from any source are grounds to disqualify a bid.

- E. **Georgia Department of Transportation Prequalification.** Bidders submitting bids over \$2,000,000.00 shall be prequalified with the Georgia Department of Transportation and shall provide a copy of their current Certificate of Qualification. Bidders submitting bids of \$2,000,000.00 or less shall be prequalified or registered subcontractors with the Georgia Department of Transportation and shall provide a copy of their current Certificate of Qualification or Certificate of Registration.
- F. **Technical Bid Information.**
- **Examples of Previous Projects.** If it fits the purpose of this ITB, you can use this section to highlight previous work, services, installations, etc. Keep this section to projects that are like our request in this ITB. Include no more than six (6) examples.
 - **Timeline.** If it fits the purpose of this ITB, include a timeline to complete the work or service requested in this ITB. Note any major milestones. Along with the timeline, include a written description of the plan of approach for each project phase, and a plan to deal with any setbacks.
 - **Wrap-up.** Use this section to add any other information about how you can supply the work or services requested in this ITB.

b) Bid Bond

We require bid bond equal to 5% of Grand Total bid price as listed in the ITB 23-002 Schedule of Items. A bid bond form has been supplied as a separate document for you to download and have completed by your surety. Return the completed bid bond to us as a separate document. All information must be readable including all seals (ex: Notary Seal).

c) Schedule of Items, Bid Pricing

We will supply a pricing sheet or cost form for you to complete. We may either have the form completed online, or it may be an Excel document for you to complete and upload with your bid.

By submitting a response and schedule of items pricing to the City, bidders acknowledge and agree that bidders are required to honor their bids for 60 days after the bid opening. A bid may not be revoked or withdrawn until 60 days after the time set by the governmental entity for opening of bids.

d) Required Forms:

- We have provided required forms. You must complete these forms and return to us with every bid.
 - A. **IRS Form W-9**
 - B. **Bidder's Disclosures and Certifications**

C. **E-Verify** (Affidavit Verifying Contractor Participation in Federal Work Authorization Program)

- ❖ *E-Verify side note:* Companies return this form to us incorrectly more often than anything else we request in our ITBs.
- ❖ Top mistakes include wrong number or missing information.
- ❖ State of Georgia law requires that we have this completed form before we can review a bid or bid.
- ❖ A form with errors doesn't fulfill this requirement.

- ⊗ No A,B,Cs.
- ⊗ It's different from your Tax ID, Employer Identification, or Social Security Number.
- ⊗ It won't have a combination of letters and numbers.
- Date of Authorization – this is when you first signed up and got the E-verify number.
- Name of Contractor – your company
- Name of Project – Same as ITB title
- Date, City, and State – when and where this form was signed
- Signature of Authorized Officer or Agent – to be signed
- Printed Name and Title of Authorized Officer or Agent – the person that signed the form.
- Notarized with seal

e) **Questionnaire:**

We use a questionnaire to gather important information needed for legal requirements, your acknowledgements, our proposal review, or information needed for writing a contract.

In answering these questions, you will fill out the questionnaire provided. There is no other form or document to upload.

Information requests and response types are as follows:

- Addenda Acknowledgement, enter the number of addenda received: 0, 1, 2, etc.
- Authorized signer for contract execution in DocuSign: Name, business title, email address, text entry.
- Corporate secretary for contract execution in DocuSign: Name, business title, email address, Response Type: Response Type: text entry.
- Contact for legal notices-needed for contracting: Business name and mailing address, contact name, text entry.
- Unique Entity ID / identifier used at SAM.gov, Response Type: alphanumeric entry.

- Note the employee-number category for your company (all locations). Select either 500 or more employees, 100 or more employees, or less than 100 employees.
- Acknowledgement of Contract and T&C review, Yes, No entry.
- Insurance Requirement Acknowledgement, Yes, No entry.
- Performance Bond Acknowledgment, Yes, No entry.
- Note any Exceptions to Contract T&Cs, text entry.

f) ITB 23-004 Spec Document

Spec Document, which includes the following, has been posted as a separate document online for bidder review.

Spec Number -	Spec Title
000110 -	Table of Contents
007312 -	Special Provisions
011111 -	Unique Requirements
012000 -	Price and Payment Procedures
013300 -	Submittal Procedures
013323 -	Shop Drawings, Product Data and Samples
014500 -	Quality Control
017423 -	Site Cleanup and Finish
017800 -	Closeout Documents
024100 -	Demolition
034800 -	Precast Concrete Specialties – Boardwalk
311100 -	Clearing and Grubbing
321313 -	Concrete Sitework
329000 -	Landscaping
999999 -	Miscellaneous Construction

CITY OF ALPHARETTA REQUEST FOR BIDS (ITB)

ITB Number: 23-004

ITB Title: Big Creek Greenway Boardwalk Replacement



INFORMATION AND CONTRACT TERMS & CONDITIONS

ITB Information

1. Bidder Acknowledgement

By submitting a Bid for this request, the authorized signer and represented firm have read, understand, and agree to information within this ITB's documents including all required and informational documents, files, and forms posted to the Bonfire project webpage for this ITB. These documents make up the ITB. They will become part of any contract that may be awarded because of responses to this ITB.

By sending a Bid, the Bidder acknowledges and agrees that:

- a. The Bidder has carefully examined and fully understands the conditions and requirements of any proposed Work within this ITB.
- b. The Bidder acknowledges that they completed a personal examination of the site of the proposed work (if applicable).
- c. The Bidder is satisfied with the actual conditions and requirements of the proposed Work.
- d. By submitting a response and schedule of items pricing in response to this ITB, Bidders agree and acknowledge that they are required to honor their bids for 60 days after the bid opening. A bid may not be revoked or withdrawn until 60 days after the time set by the governmental entity for opening of bids.

Acknowledging these statements, the Bidder proposes and agrees that if the Bidder's Bid is accepted, the Bidder will contract with the City in full agreement with the Contract Documents.

2. City's Authority and Right to Investigate

This procurement is issued under the authority of the City of Alpharetta's Procurement Policy, also following State of Georgia and Federal applicable laws. The City has the right to reject all bids or Bids, to reject any bid or Bid that has not followed or met the City's scope of work or specifications (non-responsive), or reject any bid or Bid that shows that a bidder cannot meet one or more of the requirements (non-responsibility). The City has the right to ignore unimportant mistakes that do not affect the work or service to be provided, the purchase of requested item(s), or Bid pricing in order to award a contract that is in the best interest of the City.

The City may make such investigations as considered necessary to determine the ability of the Bidder to provide the supplies and/or perform the services specified.

3. Receipt of Bids and Public Inspection

- a. Public Information:

During the opening of Bids, the Bidder's name, Bid amount and other pertinent information will be read aloud and recorded. No other information will be disclosed at that time. Each Bid and all information received in response to this ITB, including copyrighted material, is deemed "public

record” in accordance with O.C.G.A § 50-18-70, et seq., and will be subject to Public inspection and copying shortly after Bid opening with the following four exceptions:

1. bona fide trade secrets that have been specifically identified, properly marked, separated, and documented and to which the Bidder has attached an affidavit declaring that such specific information constitutes a trade secret pursuant to Article 27 of Chapter 1 of Title 10 of the Official Code of Georgia Annotated, will not be disclosed; provided however, if the City determines that such specifically identified information does not in fact constitute a trade secret, the City will notify the Bidder of its intent to disclose such information prior to its initial disclosure as required by law;
2. matters involving individual safety, as determined by the City, may be withheld from disclosure;
3. any company financial information in the form of records containing tax matters or tax information that is confidential under state or federal law, which has been requested by the City to determine vendor responsibility, unless prior written consent has been given by the Bidder will not be disclosed;
4. any document or record, or portion thereof, containing information exempt from disclosure pursuant to O.C.G.A. § 50-18-70, et seq., may be withheld from disclosure as determined by the City; and
5. any other document or record, or portion thereof, mandated by law to be kept confidential, as determined by the City.

All open records requests must be presented in writing along with specific items requested. The Open Records Request form is available from the City’s main website and requested through the City Clerk’s office.

b. Procurement Agent’s Review of Bids:

The Procurement Agent in charge of the solicitation will open and review the Bids and separate out any information that meets the referenced exceptions noted above, providing the following conditions have been met:

1. Documents or records containing information that the Bidder wishes to keep confidential must be specifically identified and clearly marked and separated from the rest of the Bid by the Bidder;
2. The Bid does not contain any such confidential material in the cost/price section; and
3. An affidavit from the Bidder specifically identifying information as a trade secret and declaring that such information constitutes a trade secret pursuant to Article 27 of Chapter 1 of Title 10 of the Official Code of Georgia Annotated is attached to each separated document or record in the Bid that Bidder wishes to be kept confidential because it contains trade secrets.

Information separated out under this process will be available for initial review only by the Procurement Officer, Procurement Agent, and limited other designees. Bidders acknowledge that the act of separating out such information by the Procurement Agent does not operate to exempt such information from disclosure as a public record; rather, the disclosure of such information is governed by O.C.G.A. § 50-18-70, et seq. Bidders should be prepared to pay all legal costs and fees associated with defending a claim for confidentiality in the event an (open records) request is submitted by another party and the City determines that such information is subject to disclosure.

General Terms and Conditions

We will incorporate the City's standard terms and conditions into the Contract. Those terms and conditions are set forth below in this document and contract draft. Vendors must notify the City of any Terms and Conditions that either prevent them from responding to this procurement or add unnecessary cost. The Vendor must make this in writing notification either as a written question sent before the question deadline or with the Vendor's response.

We will address any requests received prior to the deadline for receipt of questions for material, substantive, important exceptions to the Terms and Conditions by formal written addendum issued by the designated Procurement Agent. The City reserves the right to address any non-material, minor, and/or insubstantial exceptions to the Terms and Conditions.

1. Additional Contract Provisions and Terms

The procurement, including all documents and appendices attached hereto, referenced herein and/or incorporated herein, and any addenda hereto, and the response of the awarded Contractor, including any amendments thereto, will be incorporated into the Contract (as previously set forth, all of such documents are collectively referred to as the "Contract Documents").

The Terms and Conditions set forth herein do not define the total extent of the contract language. In the event of a conflict or dispute as to the duties and responsibilities of the City and Contractor under any resulting Contract Documents, the Contract, will govern in accordance with the order of precedence set forth therein.

2. Time for Completion & Liquidated Damages

The Contractor shall commence performance of the Work with adequate force and equipment **within ten (10) calendar days** from receipt of Notice to Proceed or otherwise in the Contract or by Special Provision. The Contractor shall be required to continuously pursue the Work without interruption to completion, and to achieve **Final Completion** of the Work in **three hundred sixty-five (365) calendar days from Notice to Proceed**. "Substantial Completion" shall mean that stage in the progression of the Work in which same is sufficiently complete in accordance with the Contract such that the City can enjoy beneficial use and occupancy of the subject property or site and can utilize the improvements or renovations completed by the Work for their intended purpose. "Final Completion" shall mean the Work is complete in full accordance with this Contract and this Contract has been fully performed as determined by a final inspection of the City following the Contractor's request for same.

Liquidated damages will apply per GDOT Standard Specifications for Construction of Transportation Systems, 2021, Section 108.08. If the Contractor fails to achieve Substantial Completion and/or Final Completion by the dates set forth in the resulting contract, the Contractor shall be liable to the City for a sum per day, as noted in referenced GDOT document and based on awarded contract amount, for each and every calendar day of unexcused delay in achieving Substantial Completion beyond the date set forth in the Contract; and a sum per day, as noted in referenced GDOT document and based on awarded contract amount, for each and every calendar day of unexcused delay in achieving Final Completion beyond the date set forth in the Contract, as applicable. Any sums due and payable hereunder by the Contractor shall be payable, not as a penalty, but as liquidated damages representing a reasonable pre-estimate of delay damages likely to be sustained by the City for any such breach, as it is mutually agreed that any such actual and consequential damages incurred by the City for such breach would otherwise be difficult to ascertain.

3. **Performance Prior to Contract Execution**

The successful Contractor shall not begin performance of the Project prior to the execution of a formal written contract by the City and the successful Contractor. Any Contractor beginning performance prior to the execution of the Contract shall be deemed to be proceeding at the Contractor's risk and shall not be entitled to any compensation for such performance. Under such circumstances, the City reserves the right to withdraw or cancel the award of the procurement.

4. **Subcontractors**

The lowest responsive and responsible Contractor will be the prime contractor if a contract is awarded and executed and shall be responsible, in total, for all work of any subcontractors. All subcontractors, if any, must be listed in the Contractor's response to this procurement. The City reserves the right to approve all subcontractors. The Contractor shall be responsible to the City for the negligent acts and negligent omissions of all subcontractors or agents and of persons directly or indirectly employed by such subcontractors, and for the acts and omissions of persons employed directly by the Contractor. Further, nothing contained within the procurement, or otherwise in the Contract Documents created as a result of any contract award derived from the procurement, shall create any contractual relationships between any subcontractor of the Contractor and the City.

5. **Independent Contractor**

The Contractor shall at all times be acting as an independent contractor and not be considered or deemed to be an agent, employee, joint venture, or partner of the City. The Contractor shall have no authority to contract for or bind City in any manner. Neither the Contractor nor its employees are employees of the City. The Contractor shall have and maintain the responsibility for and control of the rendition of the Work (including, the services performed) under the Contract, the discipline of its employees, and other matters incident to the performance of the Work (services, duties, and responsibilities as described and contemplated in the Contract). The Contractor is required to supply the City with proof of compliance with the Workers' Compensation Act while performing work for the City. Proof of compliance must be received with the Contractor's response to the procurement at the address listed on the Cover Page of the procurement.

6. **Compliance with Illegal Immigration Reform and Enforcement Act**

E-Verify Program:

The City of Alpharetta is committed to compliance with Federal and State laws requiring the verification of newly hired employees to ensure they are lawfully entitled to work in the United States. As such, the City shall not enter into a contract for the physical performance of services unless the Contractor registers and participates in a federal work authorization program (E-Verify). Further, Contractors submitting a Bid or Bid for the physical performance of service shall include a fully executed E-Verify affidavit as part of their Response to the procurement.

Requirement to Participate in a Federal Work Authorization Program (E-Verify):

No Contractor shall submit a response for the physical performance of service unless the Contractor participates in a Federal Work Authorization Program and complies with the requirements of O.C.G.A. § 13-10-91.

- (1) Pursuant to O.C.G.A. § 13-10-91, the Contractor represents, warrants, acknowledges, and/or agrees that:
 - a. The Contractor has registered and participates in a federal work authorization program to verify the employment eligibility of all newly hired employees;
 - b. Subcontractors shall not enter into any contract with the Contractor for the physical performance of services within the State of Georgia unless such

subcontractor registers and participates in a federal work authorization program to verify the employment eligibility of all newly hired employees; and

- c. Sub-subcontractors shall not enter into any contract with a subcontractor or sub-subcontractor for the physical performance of services within the State of Georgia unless such sub-subcontractor registers and participates in a federal work authorization program to verify the employment eligibility of all newly hired employees.
- (2) As of the date of enactment of O.C.G.A. § 13-10-91, the applicable federal work authorization program is "E-Verify" (<https://e-verify.uscis.gov/enroll/StartPage.aspx?IS=YES>), operated by the United States Citizenship and Immigration Services Bureau of the United States Department of Homeland Security. Information and instructions regarding E-Verify program registration, corporate administrator registration, and designated agent registration can be found at such website address.

Contractor, Subcontractor, and Sub-subcontractor Evidence of Compliance:

- (1) The Contractor, if entering a contract with the City providing the physical performance of services, shall comply with the requirements of O.C.G.A. § 13-10-91.
- (2) Pursuant to O.C.G.A. §13-10-91, in the event the Contractor employs or contracts with a subcontractor in connection with a covered contract, Contractor shall secure from such subcontractor attestation of the subcontractor's compliance with O.C.G.A. § 13-10-91 by the subcontractor's execution of the subcontractor affidavit, the form of which is provided in *Appendix A*, hereof, and maintain records of such attestation for inspection by the City at any time. Such subcontractor affidavit shall become a part of the contractor/subcontractor agreement.
- (3) Pursuant to O.C.G.A. §13-10-91, in the event the Contractor employs or contracts with a subcontractor that employs or contracts with any sub-subcontractor, the subcontractor will secure from such sub-subcontractor attestation of the sub-subcontractor's compliance with O.C.G.A. § 13-10-91 by the sub-subcontractor's execution of the sub-subcontractor affidavit, the form of which is also provided in *Appendix A* hereof, and maintain records of such attestation for inspection by the City at any time. Such sub-subcontractor affidavit shall become a part of the subcontractor/sub-subcontractor agreement.
- (4) The Contractor shall comply with any and all other applicable requirements and provisions of O.C.G.A. § 13-10-91 and other applicable rules and regulations promulgated in relation thereto.
- (5) All portions of contracts pertaining to compliance with O.C.G.A. § 13-10-91 and all other applicable rules and regulations promulgated in relation thereto, and any affidavit related hereto, shall be open for public inspection in this State at reasonable times during normal business hours.

Forms necessary to ensure compliance with this section are included in Required Forms and must be received at the address listed on the procurement's Cover Page prior to review of Contractor's response.

7. Compliance with Laws

The Contractor shall, in performance of work under the Contract, fully comply with all applicable federal, state, or local laws, rules, and regulations, including, but not limited to, Title VI of the Civil Rights Act of 1964 and its amendments, the Age Discrimination Act of 1975, the Americans with Disabilities Act of 1990, and Section 504 of the Rehabilitation Act of 1973. Any subletting or subcontracting by the Contractor subjects subcontractors to the same provision. The Contractor agrees that the hiring of persons to perform the contract will be made on the basis of merit and

qualifications and there will be no discrimination based upon race, color, religion, gender, national origin or ancestry, age, creed, marital status, physical or mental disability, or political ideas by the persons performing the contract.

8. Termination

This Contract may be terminated prior to the term ending by either party in the event of substantial failure or default of the other party to fulfill its obligations under this Contract. Prior to such termination, the non-defaulting party shall give notice to the defaulting party of the failure or default. Such party shall have fifteen (15) days from the date of the notice to cure the default or failure if such default or failure is capable of being cured. Upon failure to cure the default or failure within fifteen (15) days, or if such failure or default is not capable of being cured, the non-defaulting party may terminate the Contract effective immediately upon the provision of written notice as provided in Section 15 (*Notices*). The Contract may also be terminated prior to expiration of the term by the City for City's convenience upon the provision of not less than fourteen (14) days written notice to the Contractor. In the event of such termination, the Contractor shall be compensated for services performed prior to termination. Such amount shall be paid by the City upon the Contractor's delivering or otherwise making available to the City, all data, drawings, specifications, reports, estimates, summaries and other information and materials as may have been accumulated by the Contractor in performing the services included in this Contract, whether completed or in progress. All unperformed obligations incurred by Contractor prior to such date shall survive termination of this Contract.

9. Annual Appropriation and Renewal

Notwithstanding any other provision or provisions of this Contract, pursuant to O.C.G.A. § 36-60-13, this Contract will terminate immediately and absolutely if the City determines that adequate funds are not appropriated or granted or funds are de-appropriated such that the City cannot fulfill its obligations under the Contract, which determination is at the City's sole discretion and shall be conclusive.

10. Ownership of Work Product

In the event Contractor prepares, pursuant to the performance of this Contract, any drawings, plans, studies, reports, specifications, other documents (the "Work Product"), the City shall be deemed the owner of the original of all such Work Product, and all statutory and common law rights with respect to such Work Product shall accrue to the City, provided the City has paid for the services in full.

11. General Insurance Requirements

A. Required with each bid:

Bidders shall provide certificate of current Proof of Insurance.

B. Insurance Requirements:

Upon Council approval, the awarded Contractor shall provide the City with a Certificate of Insurance (COI) to the procurement agent listed on the cover page for this ITB. The COI shall indicate the existence of the policies prior to the beginning of the contract work or term. Thereafter, a renewal certificate shall be delivered to the City at least thirty (30) days prior to the expiration date of each expiring policy. If at any time, any of the policies shall be or become unsatisfactory to the City as to form or substance, or any of the carriers issuing such policies shall be or become unsatisfactory to the City, the Contractor shall deliver to the City representative upon demand a

certified copy of any policy required herein for review. The Certificates of Insurance shall state that the City of Alpharetta is additionally insured.

- **Workers Compensation:** Workers Compensation \$500,000 per accident per employee with waiver of subrogation. Required documentation includes certificate from insurance company showing issuance of workmen's compensation coverage for the State of Georgia.
- **Comprehensive General Liability Insurance:**

Commercial General Liability	\$1,000,000 each occurrence
	\$1,000,000 aggregate
- **Comprehensive Auto Liability Insurance:**

Bodily Injury Liability	\$1,000,000 each occurrence
Property Damage Liability	\$ 100,000 each occurrence
- **Excess Umbrella Liability:**

Combined Single Limit Bodily Injury and / or Property Damage	\$1,000,000 each occurrence \$1,000,000 aggregate
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Insurance; Indemnification. The awarded Contractor shall maintain the types and amounts of insurance set forth as from time to time reasonably shall be requested by the City. The awarded Contractor shall provide proof of such insurance to the City at the same time as the execution of any resulting Contract and/or purchase order, and as and when requested by the City during the term hereof. Acceptance of a certificate or proof of insurance does not constitute approval or agreement by the City that the insurance requirements have been satisfied. The awarded Contractor shall indemnify and hold the City harmless from all claims, demands, losses, attorneys' fees and liabilities of any type or nature arising out of or related to the Contractor's, or Contractor's agents', employees' or subcontractors', negligent performance or non-performance of any resulting Contract and/or purchase order, including, but not limited to, claims for injury to person or property; provided, however, that this indemnification obligation shall not apply to claims arising from the sole negligence of the City or its employees. Nothing in this paragraph or any resulting Contract and/or purchase order shall be deemed to constitute a waiver of the City's sovereign immunity, create rights in any third party, or create any third-party beneficiaries.

12. Retainage Requirements

For construction contracts (O.C.G.A § 13-10-80), including road construction contracts (other than GDOT projects), the City will withhold retainage of 5% of the gross value from each invoice or pay application.

In the instance that change order is added to the contract value, total retainage to be withheld will increase proportionately.

No retainage shall be held from design services. Contractor must submit separate invoices for design services

When all Work is completed and final acceptance has been approved by the City, the Contractor may invoice for the amount retained.

13. Sample Contracting Documents

- A. **Subcontractor Participation List:** For all applicable projects totaling over \$50,000.00 and with a service-related component, the City requires contractors to agree to the public disclosure of the names of any first-tier subcontractors engaged to perform services in relation to the contract.

Contractors are required to inform relevant subcontractors that the subcontractor's participation in fulfilling the contract may be publicly disclosed.

The contractor shall provide a list of subcontractors to the City with each invoice or application for payment submitted. The list shall include the subcontractor's name and scope of service provided.

- B. **Final Affidavit:** For all applicable projects involving construction or progress milestones, Final Affidavit may be required as part of project close-out.
- C. **Subcontractor E-Verify Affidavit and Sub-Subcontractor E-Verify Affidavit:** It is the responsibility of the awarded contractor to require all subcontractors and sub-subcontractors to complete the correct affidavit. It will be the duty of the awarded Contractor to submit copies of all affidavits, drivers' licenses, and/or identification cards required pursuant to this Section, as applicable, to the City within five (5) business days of receipt.
- D. **Report and Affidavit Sample Copies** are included at the end of this document in Appendix B

14. Disclosure

Any Consultant as defined in O.C.G.A. §36-80-28 that is engaged to develop or draft specifications/requirements or serve in a consultative role during the procurement process for any City procurement method, by entering into such an arrangement or executing a contract that the consultant agrees to: (1) Avoid any appearance of impropriety and must follow all policies and procedures of the City; (2) disclose to the City any material transaction or relationship pursuant to §36-80-28, considered a conflict of interest, any involvement in litigation or other dispute, relationship or financial interest not disclosed in the Disclosure form; and (3) Acknowledge that any violation or threatened violation of the agreement may cause irreparable injury to the City, entitling the City, to seek injunctive relief in addition to all other legal remedies. This requirement does not apply to confidential economic development activities pursuant to §50-18-72 or to any development authority for the purpose of promoting the development of trade, commerce, industry, and employment opportunities or for other purposes and, without limiting the generality of the foregoing, must specifically include all authorities created pursuant to Title 36 Chapter 62; However, per provisions of subparagraph (e)(1)(B) of Code Section 36-62-5 reporting of potential conflicts of interest by development authority board members is required.

15. Compliance with Title VI of the Civil Rights Act of 1964

The City of Alpharetta, as a federal grant recipient, conforms to Title VI of the Civil Rights Act of 1964 and its amendments. Title VI of the Civil Rights Act of 1964 requires that no person in the United States will, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. Presidential Executive Order 12898 addresses environmental justice in minority and low-income populations. Presidential Executive Order 13166 addresses services to those individuals with limited English ability.

The City is committed to enforcing the provisions of Title VI and to taking positive and realistic affirmative steps to ensure the protection of rights and opportunities for all persons affected by its programs.

Any person who believes they have been subjected to unlawful discriminatory practice under Title VI has a right to file a formal complaint. Any such complaint must be filed in writing or in person with the City of Alpharetta's, Title VI Compliance Officer, within one hundred-eighty (180) days following the date of the alleged discriminatory action. For more information on Title VI Discrimination Complaint Forms contact the Title VI Compliance Officer at the following:

Human Resources: Title VI Compliance
City of Alpharetta

2 Park Plaza
Alpharetta, GA 30009
Tel: 678-297-6014

16. Substitutions and Change Orders

NO substitutions of material, schedule cancellations, or Change Orders are allowed after Contract award without written approval by the Director of the contracting City Department or his authorized representative. Cumulative Change Orders more than \$50,000.00 or 10% of the original contract will require the approval of the City Council.

Where specific employees are proposed by the Contractor for the work, those employees must perform the work as long as those employees work for the Contractor, either as employees or subcontractors, unless the City agrees to a replacement or requests same based on an objective standard of review of past performance. We will review requests for any substitution and may be approved by the City at its sole discretion. We will not recognize any verbal agreements to the contrary. In the event a substitution of a Contractor employee is required due to termination of employment by Contractor, Contractor must provide the City with prompt written notice of the need for such substitution and must cooperate with the City in providing a replacement.

17. Bonding Requirements

A. Bid Bond

A bid bond for 5% of bid total required and must be submitted with bid prior to bid due date/time.

By signing and submitting this bid to the City, **BIDDER** agrees that in case of failure on their part to execute said contract and bond, or provide satisfactory proof of carriage of the insurance required, within fourteen (14) calendar days after the award thereof, the Bid Bond or certified check accompanying their bid and the money payable thereon will be forfeited to the **CITY** as liquidated damages; otherwise, the check or Bond accompanying this bid will be returned to the **BIDDER**.

Refer to ITB Forms, Bid Bond for required Bid Bond form.

B. Performance and Payment Bonds

Prior to commencing the Work, the Contractor, as principal, and a surety company listed in the Federal Register and licensed to write surety insurance in the State of Georgia, as surety, must give a Performance Bond in the amount of one hundred percent (100%) of the price of the Contract and a Payment (Labor and Material) Bond, in the amount of one hundred percent (100%) of the price of the Contract.

“Performance bond” means a bond with good and sufficient sureties or guarantees for the faithful performance of the Contract and to indemnify the City for any damages occasioned by a failure to perform same within the prescribed time. Such bond must be payable to, in favor of, and for the protection of the City.

“Payment bond” means a bond with good and sufficient sureties or guarantees payable to the City and intended for the use and protection of all subcontractors and all persons supplying labor, materials, machinery, and equipment in the prosecution of the Work provided for in the Contract for the use of all persons doing work or furnishing skills, tools, machinery, or materials under or for the purpose of constructing the Project. The life of these bonds must extend through the Final Completion date of the Project for an added sixty (60) day maintenance period (where applicable) and a twelve-month warranty/guarantee period after Final Completion.

Refer to Appendix C at the end of this document for Sample Performance and Payment Bond forms.

18. Invoicing, Payment Processing, ePayables

Replying to this ITB confirms Bidder's agreement to accept electronic payments (*ePayables*) of invoices if awarded the contract.

Appendix A: City Truck Route Allowed Truck Routes and Map

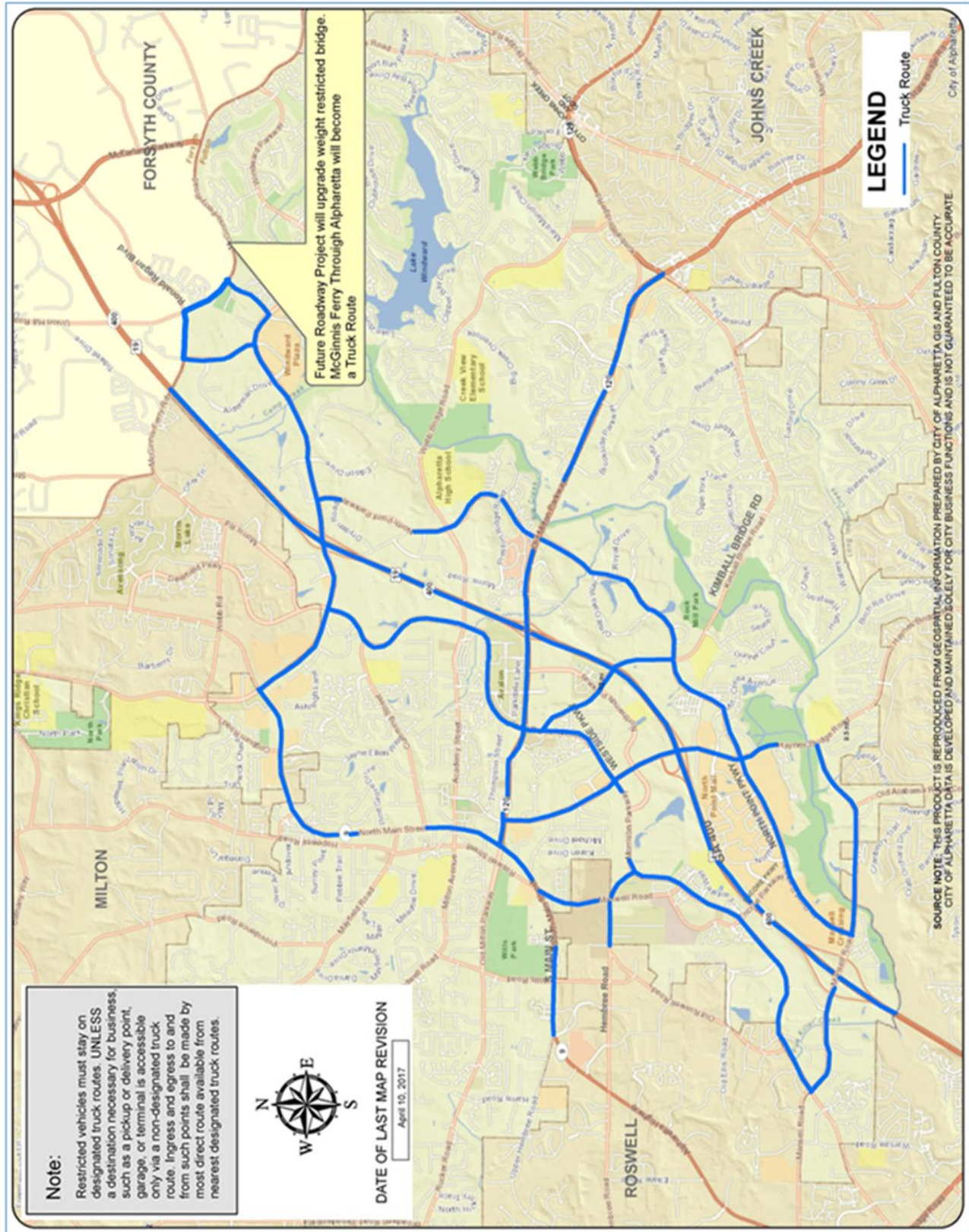
Certain trucks may travel in and through the City of Alpharetta using only those streets and roads highlighted in the Truck Route Map provided in Appendix A of this document and available for review online at:

<http://www.alpharetta.ga.us/government/departments/public-works/alpharetta-truck-routes>.

As noted in Chapter 18 (Traffic) of the Code of the City of Alpharetta, Georgia, except as specifically set out herein, trucks (defined as motor vehicle having a gross vehicular weight rating (G.V.W.R.) in excess of thirty-six thousand pounds (36,000 lbs.) or having an overall length in excess of thirty feet (30'), except vehicles designed to carry passengers) are prohibited from using any street within the City except those designated below:

- 1) SR 9 (North Main Street – South Main Street)
- 2) SR 120
- 3) Haynes Bridge Road (SR 120 to City Limits)
- 4) Hembree Road (Westside Parkway to Roswell City Limits continuing on Roswell Truck Route)
- 5) Mansell Road
- 6) Maxwell Road (SR 9 to Hembree Road)
- 7) McGinnis Ferry Road
- 8) North Point Parkway
- 9) Union Hill Road
- 10) Westside Parkway
- 11) Windward Concourse
- 12) Windward Parkway (SR 9 to Union Hill Road)

Exceptions to the above schedule are when the terminal, parking lot, repair garage, headquarters, place of pickup or delivery of the restricted motor vehicle is not on a designated truck route, ingress to and egress from such places will be made by the most direct route available between the terminal, parking lot, repair garage, headquarters, place of pickup or delivery and the nearest designated truck route.



Appendix B: Informational Forms

Subcontractor E-verify Affidavit



AFFIDAVIT VERIFYING SUBCONTRACTOR PARTICIPATION IN FEDERAL WORK AUTHORIZATION PROGRAM

By executing this affidavit, the undersigned subcontractor verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services under a contract with _____ (contractor) on behalf of the **City of Alpharetta (GA)** has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. § 13-10-91. Furthermore, the undersigned subcontractor will continue to use the federal work authorization program throughout the contract period and the undersigned subcontractor will contract for the physical performance of services in satisfaction of such contract only with sub-subcontractors who present an affidavit to the subcontractor with the information required by O.C.G.A. § 13-10-91(b). Additionally, the undersigned subcontractor will forward notice of the receipt of an affidavit from a sub-subcontractor to the contractor within five business days of receipt. If the undersigned subcontractor receives notice that a sub-subcontractor has received an affidavit from any other contracted sub-subcontractor, the undersigned subcontractor must forward, within five (5) business days of receipt, a copy of the notice to the contractor.

Subcontractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

Federal Work Authorization (E-Verify) User Identification Number

Date of Authorization

Name of Subcontractor

Name of Project

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on _____, _____, 201__ in _____ (city), _____ (state).

Signature of Authorized Officer or Agent

Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME ON THIS THE ____ DAY OF _____, 201__.

NOTARY PUBLIC

My Commission Expires

Sub-subcontractor E-verify Affidavit

**AFFIDAVIT VERIFYING SUB-
SUBCONTRACTOR PARTICIPATION IN
FEDERAL WORK AUTHORIZATION PROGRAM**

By executing this affidavit, the undersigned sub-subcontractor verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services under a contract for _____ (name of subcontractor or sub-subcontractor with whom such sub-subcontractor has privity of contract) and _____ (contractor) on behalf of the **City of Alpharetta (GA)** has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. § 13-10-91. Furthermore, the undersigned sub-subcontractor will continue to use the federal work authorization program throughout the contract period and the undersigned sub-subcontractor will contract for the physical performance of services in satisfaction of such contract only with sub-subcontractors who present an affidavit to the sub-subcontractor with the information required by O.C.G.A. § 13-10-91(b). The undersigned sub-subcontractor shall submit, at the time of such contract, this affidavit to _____ (name of subcontractor or sub-subcontractor with whom such sub-subcontractor has privity of contract). Additionally, the undersigned sub-subcontractor will forward notice of receipt of any affidavit from a sub-subcontractor to _____ (name of subcontractor or sub-subcontractor with whom such sub-subcontractor has privity of contract).

Sub-subcontractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

Federal Work Authorization (E-Verify) User Identification Number

Date of Authorization

Name of Sub-subcontractor

Name of Project

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on _____, _____, 201__ in _____ (city), _____ (state).

Signature of Authorized Officer or Agent

Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME ON THIS THE _____ DAY OF _____, 201__.

NOTARY PUBLIC

My Commission Expires

Appendix C: Sample Contract Bond Forms

Do not return these forms with Bids. Only the awarded contractor will have to supply these bonds.

- A. 100% Performance Bond
- B. 100% Labor and Material Payment Bond

[The rest of page intentionally blank]

**100% Performance Bond**

BOND # _____

KNOW ALL MEN BY THESE PRESENTS: that, _____, as Principal, hereinafter called **CONTRACTOR**, and _____, a corporation organized and existing under the laws of the State of Georgia, hereinafter called **SURETY**, are held and firmly bound unto CITY OF ALPHARETTA, GEORGIA, as obligee, hereinafter called **CITY** and their successors and assigns, _____ in the _____ penal amount of _____ DOLLARS

(\$ _____) for the payment of which the **CONTRACTOR** and **SURETY** bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly be these presents.

WHEREAS, **CONTRACTOR** has by written agreement dated _____, 20____, entered into a written construction contract, hereinafter referred to as the **CONTRACT**, with **CITY** for:

BIG CREEK GREENWAY BOARDWALK REPLACEMENT, more particularly described in the **CONTRACT** (hereafter called the **PROJECT**) as providing all materials, labor, and equipment for the complete construction, which includes, but is not limited to, demolition of existing boardwalk, installation of concrete boardwalk, installation of landscape materials, and related work. The location of the work is Mansell Road bridge over Big Creek --- within the City of Alpharetta, Georgia.

in accordance with drawings and specifications prepared by **CITY**, which **CONTRACT** is by reference made a part hereof.

NOW, THEREFORE, the conditions of this obligation is such that, if **CONTRACTOR** must fully and completely perform all the undertakings, covenants, terms, conditions, warranties and guarantees contained in said **CONTRACT**, including all modifications, amendments, changes, deletions, additions and alterations thereto that may hereafter be made, then this obligation will be null and void, otherwise it will remain in full force and effect.

Whenever **CONTRACTOR** is, and declared by **CITY** to be in default under the **CONTRACT**, the **CITY** having performed **CITY**'s obligation thereunder, the **SURETY** will promptly remedy the default promptly as follows:

1. Complete the **CONTRACT** in accordance with its terms and conditions; or,
2. Obtain a bid or bids for completing the **CONTRACT** in accordance with its terms and conditions, and upon determination by **SURETY** and the **CITY** of the lowest responsible bidder, arrange for a contract between such Bidder and the **CITY**, and make available as **PROJECT** progresses (even though there should be a default or a succession of defaults under the **CONTRACT** or Contract of Completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price; but not exceeding, including other costs and damages for which the **SURETY** may be liable hereunder, the penal sum set forth in the first paragraph hereof. The term "Balance of the Contract Price", as used in this paragraph will mean the total amount payable by **CITY** to **CONTRACTOR** under the **CONTRACT** and any amendments hereto, less the amount properly paid by **CITY** to **CONTRACTOR**.
3. Allow the **CITY** to complete the **PROJECT** and reimburse the **CITY** for all reasonable costs incurred in completing the **PROJECT**.

100% Performance Bond

Page 2 of 2

The **SURETY** hereby waives notice of any and all modifications, omissions, additions, changes, alterations, extensions of time, changes in payment terms, and any other amendments in or about the **CONTRACT**, and agrees that the obligations undertaken by this bond will not be impaired in any manner by reason of any such modifications, omissions, additions, changes, alterations, extensions of time, change in payment terms, and amendments.

The **SURETY** hereby agrees that this bond will be deemed amended automatically and immediately, without formal or separate amendments hereto, upon any amendment to the **CONTRACT**, so as to bind the **CONTRACTOR** and the **SURETY** to the full and faithful performance of the **CONTRACT** as so amended or modified, and so as to increase the penal sum to the adjusted Contract Price of the **CONTRACT**.

No right of action will accrue on this bond to or for the use of any person, entity, or corporation other than the **CITY** and any other obligee named herein, or their executors, administrators, successors or assigns.

This Bond is intended to comply with O.C.G.A. § 36-91-70 and will be interpreted to comply with the minimum requirements thereof. However, in the event the express language of this bond extends protection to the **CITY** beyond that contemplated by O.C.G.A. § 36-91-70, or any other statutory law applicable to this **PROJECT**, then the additional protection will be enforced in favor of the **CITY**, whether or not such protection is found in the applicable statutes.

No action can be instituted on this bond after one year from the completion of the **CONTRACT** and the acceptance by the **CITY** of the work thereunder.

IN WITNESS WHEREOF the undersigned have caused this instrument to be executed and their respective corporate seals to be affixed and attested by their duly authorized representatives this

Signed and sealed this _____ day of _____, 201____ .

In the presence of:

CONTRACTOR: _____

Witness

By: _____ (Seal)

SURETY: _____

Witness

By: _____ (Seal)
Georgia Representative

SURETY Contact Information:

Address: _____

Phone: _____

Email: _____

Surety companies executing bonds must appear on the Treasury Department's most current list (Circular 570, as amended) and be authorized to conduct business in the State of Georgia.



BOND # _____

100% Labor and Material Payment Bond

KNOW ALL MEN BY THESE PRESENTS: that, _____, as Principal, hereinafter called **CONTRACTOR**, and _____, a corporation organized and existing under the laws of the State of Georgia, hereinafter called **SURETY**, are held and firmly bound unto CITY OF ALPHARETTA, GEORGIA, as obligee, hereinafter called **CITY** and their successors and assigns, _____ in _____ the _____ penal _____ amount _____ of _____ DOLLARS

(\$_____) for the payment of which the **CONTRACTOR** and **SURETY** bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly be these presents.

WHEREAS, **CONTRACTOR** has by written agreement dated _____, 20____, entered into a written construction contract, hereinafter referred to as the **CONTRACT**, with **CITY** for:

BIG CREEK GREENWAY BOARDWALK REPLACEMENT, more particularly described in the **CONTRACT** (hereafter called the **PROJECT**) as providing all materials, labor, and equipment for the complete construction, which includes, but is not limited to, demolition of existing boardwalk, installation of concrete boardwalk, installation of landscape materials, and related work. The location of the work is Mansell Road bridge over Big Creek --- within the City of Alpharetta, Georgia.

in accordance with drawings and specifications prepared by **CITY**, which **CONTRACT** is by reference made a part hereof.

NOW, THEREFORE, the condition of this obligation is such that if **CONTRACTOR** will promptly make payment to all persons working on or supplying labor or materials under the **CONTRACT**, and any amendments thereto, with regard to labor or materials furnished and used in the **PROJECT**, and with regard to labor or materials furnished but not so used, then tis obligation will be void; but otherwise it will remain in full force and effect subject, however, to the following conditions:

1. A Claimant will be defined as any subcontractor, person, [arty, partnership, corporation or other entity furnishing labor, services, or materials used, or reasonably required for use, in performance of the **CONTRACT**, without regard to whether such labor, services, or materials were sold, eased, or rented, and without regard to whether such Claimant is or is not in privity of contract with the **CONTRACTOR** or any subcontractor performing work on the **PROJECT**, including, but not limited to, the following labor, services, or materials: water, gas, power, light, heat, oil, gasoline, telephone service, or rental of equipment directly applicable to the **CONTRACT**.
2. In the event a Claimant files a claim against the **CITY**, or the property of the **CITY**, and the **CONTRACTOR** fails or refuses to satisfy or discharge it promptly, the **SURETY** will satisfy or discharge the claim promptly upon written notice from the **CITY**, either by bond or as otherwise provided in the **CONTRACT**.
3. The **SURETY** hereby waives notice of any and all modifications, omissions, additions, changes, alterations, extensions of time, changes in payment terms, and any other amendments in or about the **CONTRACT** and agrees that the obligations undertaken by this bond will not be impaired in any manner by reason of any such modifications, omissions, additions, changes, alterations, extensions of time, changes in payment terms, and amendments.

100% Labor and Material Payment Bond

Page 2 of 3

4. The **SURETY** hereby agrees that this Bond will be deemed amended automatically and immediately, without formal or separate amendments hereto, upon any amendment or modification to the **CONTRACT**, so as to bind the **CONTRACTOR** and **SURETY**, jointly and severally, to the full payment of any Claimant under the **CONTRACT**, as amended or modified, provided only that the **SURETY** will not be liable for more than the penal sum of the Bond, as specified in the first paragraph hereof.
5. This Bond is made for the use and benefit of all persons, firms, and corporations who or which may furnish any materials or perform any labor for or on account of the construction to be performed or supplied under the **CONTRACT**, and any amendments thereto, and they and each of them may sue hereon.
6. No action may be maintained on this Bond after one (1) year from the date the last services, labor, or materials were provided under the **CONTRACT** by the Claimant prosecuting said action.
7. This Bond is intended to comply with O.C.G.A. § 36-91-90 and will be interpreted to comply with the minimum requirements thereof. However, in the event the express language of this Bond extends protection to the **CITY** beyond that contemplated by O.C.G.A. § 36-91-90, or any other statutory law applicable to this **PROJECT**, then the additional protection will be enforced in favor of the **CITY**, whether or not such protection is found in the applicable statutes.

Signed and sealed this _____ day of _____, 201____ .

In the presence of:

CONTRACTOR: _____

Witness

By: _____ (Seal)

SURETY: _____

Witness

By: _____ (Seal)

Georgia Representative

100% Labor and Material Payment Bond

Page 3 of 3

Surety Contact Information:

Address:

Phone:

Fax:

Email:

Surety companies executing bonds must appear on the Treasury Department's most current list (Circular 570, as amended) and be authorized to conduct business in the State of Georgia.

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Spec Number -	Spec Title
000110	- Table of Contents
007312	- Special Provisions
011111	- Unique Requirements
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014500	- Quality Control
017423	- Site Cleanup and Finish
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034800	- Precast Concrete Specialties – Boardwalk
311100	- Clearing and Grubbing
321313	- Concrete Sitework
329000	- Landscaping
999999	- Miscellaneous Construction

SECTION 007312

SPECIAL PROVISIONS

- SP-1 Georgia Department of Transportation specifications as published in the Georgia Department of Transportation Standard Specifications Construction of Transportation Systems, 2021 Edition are incorporated by reference into the Project Manual and contract documents. They shall supersede all other specifications unless more stringent requirements are listed. Where the supplemental specifications or drawings are silent on requirements, GDOT standard specifications shall rule. It is the responsibility of the Contractor to become familiar with these specifications before bidding and to adhere to them during construction. Copies of the manuals can be obtained from the GDOT website.
- SP-2 Measurements: Before ordering any material or doing any work, the Contractor shall verify all on-site measurements. The Contractor is responsible for the correctness of all material measurements. No extra charge or compensation will be allowed on account of difference between actual dimensions and the measurements indicated on the Construction Drawings. Any discrepancies, which may be found, shall be submitted to the Design professional for consideration prior to beginning the work.
- SP-3 Materials and Workmanship: All workmanship and materials shall be as prescribed by the Drawings and Specifications. Whenever not explicitly described, all workmanship used or employed in carrying out the work shall be to the best of the respective grades and qualities. Where equipment, materials or articles are referred to in the Specifications as "equal to" any particular standard, the Design professional shall decide the question of equality. When required by the Specifications or when called for by the Design professional, the Contractor shall furnish for approval information concerning the materials or articles to be incorporated in the work. Samples of materials shall be submitted for approval when so directed by the Design professional. Machinery, equipment, materials, and articles installed or used without such approval by the Design professional shall be at the risk of subsequent rejection and will be replaced at no additional cost to the Owner.
- SP-4 Temporary Facilities:
- A. Sanitary Facilities: At Contractor's option provide either piped (wet) toilet facilities or self-contained toilet units of type acceptable to governing authorities. These facilities shall be adequate for use of personnel at Project site.
 - B. Water and Electric Power: The Contractor shall be responsible for obtaining or providing temporary water and electric power as necessary for construction operations.
 - C. The Contractor shall provide potable water adequate for personnel at Project site. Furnish paper cups and waste receptacles.

- D. The Contractor shall provide temporary security and protection. The types of provisions required include, but not by way of limitation, barricades, fencing warning signs/lights, environmental protection, and similar provisions intended to minimize property losses, personal injuries and claims for damages at Project site.
- SP-5 Unknown Conditions: Should the Contractor encounter, during the progress of the work, subsurface latent physical conditions at the site, materially differing from those shown on the Drawings or specified for unknown conditions of an unusual nature differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Construction Drawings and Specifications, the Contractor shall inform the Design professional immediately of such conditions before they are disturbed. The Design professional shall thereupon promptly investigate the conditions; and the Design professional finds that they do so materially differ, the Contract price shall, with the written approval of the Design professional, be increased or decreased in accordance with such conditions.
- SP-6 Utilities Not Shown: Contractor shall be responsible for securing the services of a utility locator to determine any unknown utilities that may be on the site. Any utilities encountered that are not shown on the Construction Drawings and are to remain as active utilities, if inadvertently damaged by the Contractor, shall be repaired by the Contractor at the Contractor's own expense. If an extra expense is incurred in protecting and maintaining any utility line not shown on the Construction Drawings, an adjustment in the Contract price may be submitted to the Design professional for consideration. The Contractor shall not be compensated if the utility was improperly located or omitted by locator if it is deemed that the utility could have been detected.
- SP-7 Inclusion of Accessories: Unless specifically mentioned otherwise, all anchors, bolts, screws, fittings, fillers, hardware accessories, trim and other parts required for, or in connection with, an item of material to make a complete, serviceable, finished and first quality installation shall be furnished and installed as part of the item whether or not shown on the Construction Drawings identified in the Specifications.
- SP-8 Reference to Standard Specifications: When standard specifications such as The American Society for Testing and Materials, Federal Specifications, Department of Commerce (Commercial Standards), American Institute of Steel Construction, or other well-known public or trade associates are cited as a standard to govern materials, and/or workmanship, such specifications or portions thereof as referred to shall be equally as binding and have the full force and effect as though it were copied into these Specifications. Such standard as are mentioned are generally recognized by and available to the trades concerned.
- SP-9 Minor Modifications: The Contractor shall make such minor changes in the execution of the work to be done under these Specifications, which in the judgment of the Design professional shall be necessary or expedient to carry out the intent of the Contract before or during the progress of the Contract. No increase over the Contract price shall be paid to the Contractor on account of such minor

modifications. Work, which materially increases the cost to the Contractor, shall not be ordered under the provisions of this Paragraph.

- SP-10 Record of Construction Changes and As-Built Documents: Upon completion of the work, the Contractor shall show the final locations of all underground installations including, but not limited to, power lines, irrigation lines, sewage lines, drainage lines, etc. The Contractor shall record the proper location of all installations above ground where they have been changed on the site from designated locations on the Construction Drawings.
- SP-11 All references to “Architect”, “Project Landscape architect”, “City Representative”, “Project Engineer”, and “Engineer” contained within the Project Specifications and Drawings (except for Geotechnical Engineer or sub-consultant) shall be defined as “Design professional”. The Design professional may be a representative of the City, such as the City’s project manager, or a consultant working on behalf of the City.
- SP-12 Per provisions of O.C.G.A. § 12-7-17(9) and § 12-7-7.1(c), Erosion Control/Land Disturbance is under jurisdiction of the Georgia Environmental Protection Division (EPD). Erosion Control Plans have been submitted to EPD Watershed Protection Branch. A Notice of Intent (NOI) is required for this project and appropriate fees and plans shall be submitted by the Owner to the appropriate EPD district office as a part of the NOI submittal. The Contractor, as primary permittee, shall coordinate the NOI submittal with the Owner and Design Professional.

END OF SECTION

SECTION 011111

UNIQUE REQUIREMENTS

PART 1 GENERAL

1.01 Scope

The scope of this Section is to convey to the Contractor unique and unusual stipulations and requirements which have been established for this Project. Some of the stipulations and requirements are a result of negotiations with various entities and organizations which have an interest in this Project. Some requirements are based on technical aspects of the Project which are not otherwise conveyed to the Contractor. The provisions of this Section shall supersede the provisions of the Division 1 through 17 Specifications but shall not supersede the Bidding Requirements, Contract Forms or Conditions of the Contract.

1.02 Sequencing

- A. The Contractor shall be solely responsible for all construction staging and sequencing.
- B. The completion of specific preliminary sequencing tasks indicated will be required prior to any significant site demolition.

1.03 Sequencing Constraints

- A. The following construction sequencing constraints are to emphasize critical tasks of the work in this Contract. It is not a complete list of all work to be completed.
- B. The scope includes work to be performed within stream buffer areas under the permitting jurisdiction of the Environmental Protection Division of the Georgia Department of Natural Resources. The Contractor must follow the following construction methods:
 - 1. Within the 25-foot stream buffer, the Contractor shall construct the boardwalk from top-down methods to avoid disturbance of existing grade.
 - 2. Within the 25-foot stream buffer, contractor shall flush-cut vegetation to existing soil surface. There shall be no grubbing, grading, stump removal, dredging of soil, or discharge of fill material.
 - 3. Within the 25-foot stream buffer, contractor shall utilize suitable construction matting for all equipment access and workspace in order to avoid soil disturbance and rutting.
 - 4. For boardwalk areas outside stream buffers, the Contractor may disturb the ground if necessary, but stumps for all trees to be removed may remain.

END OF SECTION

SECTION 012000

PRICE AND PAYMENT PROCEDURES

PART 1-GENERAL

1.01 SECTION INCLUDES

- A. Procedures for preparation and submittal of applications for progress payments.
- B. Documentation of changes in Contract Sum and Contract Time.
- C. Change procedures.
- D. Correlation of Contractor submittals based on changes.
- E. Procedures for preparation and submittal of application for final payment.

1.02 SCHEDULE OF VALUES

- A. Submit a printed schedule on AIA Form G703 - Application and Certificate for Payment Continuation Sheet. Contractor's standard form or electronic media printout will be considered.
- B. The schedule of values shall be the exact same as the schedule of items in this project manual. Section summary totals shall be omitted.
- C. Revise schedule to list approved Change Orders, with each Application for Payment.

1.03 APPLICATIONS FOR PROGRESS PAYMENTS

- A. Submit no more than one progress payment a month.
- B. Present required information in typewritten form or electronic media printout.
- C. Utilize the AIA G702 Application and Certificate for Payment and AIA G703 - Continuation Sheet(s). Approval from the City shall be obtained prior to the submission of any other form utilized besides what is specified herein.

1.04 APPLICATION FOR PROGRESS PAYMENTS-LUMP SUM CONTRACT

- A. For each item, provide a column listing each of the following:
 - 1. Item Number.
 - 2. Description of work and authorized change orders.
 - 3. Scheduled Values.

4. Work completed and accepted by the City from previous applications.
5. Work completed and accepted by the City for current period.
6. Materials presently stored (if applicable).
7. Total completed and stored to date of application.
8. Percent of completion.
9. Balance to finish.
10. Retainage.

B. Execute certification by signature of authorized officer.

C. Use data from Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored Products.

D. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of Work.

E. Submit one copy of each Application for Payment.

F. Include the following with the application:

1. Transmittal letter.
2. Construction progress schedule, revised and current.
3. Partial release of liens from major Subcontractors and vendors.
4. Other documents as required.

1.05 APPLICATION FOR PROGRESS PAYMENT-LUMP SUM CONTRACT WITH UNIT PRICE ITEMS

A. For each item, provide a column listing each of the following:

1. Item Number.
2. Description of work and authorized change orders.
3. Unit of measure.
4. Bid quantity.
5. Unit price.

6. Bid total.
7. Work completed from previous applications.
 - a. Percentages for Lump Sum items installed and accepted by the City.
 - b. Quantities for Unit Price items installed and accepted by the City.
8. Work completed for current period.
 - a. Percentage for Lump Sum items installed and accepted by the City.
 - b. Quantities for Unit Price items installed and accepted by the City.
9. Total work completed to date.
 - a. Percentage for Lump Sum items installed and accepted by the City.
 - b. Quantities for Unit Price items installed and accepted by the City.
10. Total due this month.
11. Total due to date.

- B. Execute certification by signature of authorized officer.
- C. Use data from Schedule of Values. Provide percentages and/or actual quantities in each column for each line item for portion of work performed.
- D. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of Work.
- E. Submit one copy of each Application for Payment.
- F. Include the following with the application:
 1. Transmittal letter.
 2. Construction progress schedule, revised and current.
 3. Partial release of liens from major Subcontractors and vendors.
 4. Other documents as required.

1.06 CONTRACT MODIFICATION PROCEDURES

- A. Construction Change Directive.

1. The City Representative may issue a document instructing Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
2. The document will describe changes in the Work, and will designate method of determining any change in Contract Sum or Contract Time.
3. Contractor shall promptly execute the change in Work.

B. Proposal Request.

1. The City Representative may issue a document which includes a detailed description of a proposed change.
2. Document may be accompanied with supplementary or revised Drawings and specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid.
3. Contractor shall prepare and submit a fixed price quotation within 10 days.

C. Contractor Request for Change.

1. Contractor may propose a change by submitting a request for change to the City Representative.
2. Request for change shall describe the proposed change and its full effect on the Work, with a statement describing the reason for the change, and the effect on the Contract Sum and Contract Time with full documentation and a statement describing the effect on Work by separate or other contractors.
3. The Contractor shall not stop work while waiting on approval of the submitted Request for Change unless written consent is provided by the City Representative.

D. Computation of Change in Contract Amount.

1. For changes requested by the City Representative for work falling under a contract with Unit Price items, the amount will be based on the Contractor's bid prices.

E. Substantiation of Costs.

1. Contractor shall provide full information required for evaluation.
2. The following data shall be provided:
 - a. Quantities of materials, labor, and equipment.
 - b. Taxes, insurance, and bonds.
 - c. Overhead and profit.
 - d. Justification for any change in Contract Time.

- e. Credit for deletions from Contract, similarly documented.
- 3. Contractor shall support each claim for additional costs with additional information. The minimum following information shall be included:
 - a. Origin and date of claim.
 - b. Dates and times work was performed, and by whom.
 - c. Time records and wage rates paid.
 - d. Invoices and receipts for products, equipment, and subcontracts, similarly documented.
- F. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.
- G. Promptly enter changes in Project Record Documents.

1.07 APPLICATION FOR FINAL PAYMENT

- A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments and sum remaining due.
- B. A separate application for payment shall be submitted for retainage release accompanied by all required close out documents specified in Section 01780.

END OF SECTION 01200

SECTION 013330

SUBMITTAL PROCEDURES

PART 1 – GENERAL

1.01 DEFINITIONS

- A. Data: Submittals that provide calculations, descriptions, or documentation regarding the work.
- B. Drawings: Submittals which graphically show relationship of various components of the work, schematic diagrams of systems, details of fabrication, layouts of particular elements, connections, and other relational aspects of the work.
- C. Instructions: Preprinted material describing installation of a product, system or material, including special notices and material safety data sheets, if any, concerning impedances, hazards, and safety precautions.
- D. Schedules: Tabular lists showing location, features, or other pertinent information regarding products, materials, equipment, or components to be used in the work.
- E. Statements: A document, required of the Contractor, or through the Contractor, from a supplier, installer, manufacturer, or other lower tier Contractor, the purpose of which is to confirm the quality or orderly progression of a portion of the work by documenting procedures, acceptability of methods or personnel, qualifications, or other verifications of quality.
- F. Reports: Reports of inspections or tests, including analysis and interpretation of test results.
- G. Certificates: Statement signed by an official authorized to certify on behalf of the manufacturer of a product, system or material, attesting that the product, system or material meets specified requirements. The statement must be dated after the award of the contract, must state the Contractor's name and address, must name the project and location, and must list the specific requirements which are being certified.
- H. Samples: Samples, including both fabricated and unfabricated physical examples of materials, products, and units of work as complete units or as portions of units of work.
- I. Records: Documentation to record compliance with technical or administrative requirements.
- J. Operation and Maintenance Manuals: Data which forms a part of an operation and maintenance manual.

1.02 SUBMITTAL CLASSIFICATION

- A. City approval is required for extensions of design, critical materials, deviations, equipment whose compatibility with the entire system must be checked, and other items as designated by the Department of Public Works.

1.03 APPROVED SUBMITTALS

- A. The Department of Public Works approval of submittals shall not be construed as a complete check but will indicate only that the general method of construction, materials, detailing and other information are satisfactory.
- B. Approval will not relieve the Contractor of the responsibility for any error that may exist. The Contractor is responsible for dimensions, the design of adequate connections and details, and the satisfactory construction of all work.
- C. After submittals have been approved by the Department of Public Works, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

1.04 DISAPPROVED SUBMITTALS

- A. The Contractor shall make all corrections required by the Department of Public Works and promptly furnish a corrected submittal in the form and number of copies specified for the initial submittal.
- B. If the Contractor considers any correction indicated on the submittals to constitute a change to the contract, a notice in accordance with the Contract Clause "Changes" shall be given promptly to the Department of Public Works.

1.05 WITHHOLDING OF PAYMENT

- A. Payment for materials incorporated in the work will not be made if required approvals have not been obtained.

PART 2 - EXECUTION

2.01 GENERAL

- A. The Contractor shall make submittals as required by the specifications or as required by The Department of Public Works in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections.
- B. Units of weights and measures used on all submittals shall be the same as those used in the contract drawings. Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with contract requirements.
- C. Prior to submittal, all items shall be checked and approved by the Contractor and each item shall be stamped, signed, and dated by the Contractor indicating the action taken.
- D. Proposed deviations from the contract requirements shall be clearly identified.
- E. Submittals shall include items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals (including parts list); certifications; warranties; and other such required submittals.

- F. Submittals shall be scheduled and made prior to the acquisition of the material or equipment covered thereby. Samples remaining upon completion of the work shall be picked up and disposed of in accordance with manufacturer's Material Safety Data Sheets (MSDS) and in compliance with existing laws and regulations.

2.02 SCHEDULING

- A. Submittals covering component items forming a system or items that are interrelated, shall be scheduled to be coordinated and submitted concurrently. Certifications to be submitted with the pertinent drawings shall be included.
- B. A minimum of seven (7) calendar days (exclusive of mailing time) shall be allowed for review and approval. No delay damages or time extensions will be allowed for time lost in late submittals.

2.03 SUBMITTAL PROCEDURE

- A. Contractor shall send a minimum of three (3) copies of submittals to the Department of Public Works located at, 1790 Hembree Road, Alpharetta, Georgia 30009. Two (2) copies shall be kept by the Department of Public Works and the remaining copies submitted shall be returned to the Contractor.
- B. The Contractor shall set forth in writing the reason for any deviations and annotate such deviations on the submittal. The City reserves the right to rescind inadvertent approval of submittals containing unnoted deviations.

2.04 CONTROL OF SUBMITTALS

- A. The Contractor shall carefully control his procurement operations to ensure that each individual submittal is made before the Contractor scheduled date of installing items requiring approval by the City.

2.05 CITY APPROVED SUBMITTALS

- A. Upon completion of City review of submittals, the submittals will be identified as having "No Exceptions Taken", "Make Corrections Noted" or "Reject/Resubmit" by being so stamped and dated. Two (2) copies of the submittal will be retained by the Department of Public Works and the remaining copies of the submittal will be returned to the Contractor.
- B. The City reserves the right to require the Contractor to resubmit any item found not to comply with the contract. This does not relieve the Contractor from the obligation to furnish material conforming to the plans and specifications; will not prevent the Department of Public Works from requiring removal and replacement of nonconforming material incorporated in the work; and does not relieve the Contractor of the requirement to furnish samples for testing by the City or for check testing by the City in those instances where the technical specifications so prescribe.

2.06 STAMPS

A. Stamps used by the Contractor on the submittal data to certify that the submittal meets contract requirements shall include the following minimum information:

1. Name of Contractor
2. Approved
3. Approved with corrections as noted on submittal data and/or attached sheets
4. Signature
5. Title of signee
6. Date

END OF SECTION

SECTION 013323

SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

PART 1 – GENERAL

1.1 SCOPE

- A. The work under this Section includes submittal to the Engineer of shop drawings, product data and samples required by the various sections of these Specifications.
- B. Submittal Contents: The submittal contents required are specified in each section.
- C. Definitions: Submittals are categorized as follows:
 - 1. Shop Drawings
 - a. Shop drawings shall include technical data, drawings, diagrams, procedure and methodology, performance curves, schedules, templates, patterns, test reports, calculations, instructions, measurements, and similar information as applicable to the specific item for which the shop drawing is prepared.
 - b. Provide newly prepared information, on reproducible sheets, with graphic information at accurate scale (except as otherwise indicated) or appropriate number of prints hereof, with name or preparer (firm name) indicated. The Contract Drawings shall not be traced or reproduced by any method for use as or in lieu of detail shop drawings. Show dimensions and note dimensions that are based on field measurement. Identify materials and products in the work shown. Indicate compliance with standards and special coordination requirements. Do not allow shop drawings to be used in connection with the Work without appropriate final “Action” markings by the Engineer.
 - c. Drawings shall be presented in a clear and thorough manner. Details shall be identified by reference to sheet and detail, specification section, schedule or room numbers shown on the Contract Drawings.
 - d. Minimum assembly drawings sheet size shall be 24 x 36 inches.
 - e. Minimum detail sheet size shall be 8 1/2 x 11 inches.
 - f. Minimum Scale:
 - i. Assembly Drawings Sheet, Scale: 1 inch = 30 feet.
 - ii. Detail Sheet, Scale: 1/4 inch = 1 foot.

2. Product Data
 - a. Product data includes standard printed information on materials, products, and systems, not specially prepared for this Project, other than the designation of selections from among available choices printed therein.
 - b. Collect required data into one submittal for each unit of work or system and mark each copy to show which choices and options are applicable to the Project. Include manufacturer's standard printed recommendations for application and use, compliance with standards, application of labels and seals, notation of field measurements which have been checked and special coordination requirements.
3. Samples
 - a. Samples include both fabricated and unfabricated physical examples of materials, products, and units of work, both as complete units and as smaller portions of units of work, either for limited visual inspection or, where indicated, for more detailed testing and analysis.
 - b. Provide units identical with final condition of proposed materials or products for the work. Include "range" samples, not less than three units, where unavoidable variations must be expected, and describe or identify variations between units of each set. Provide full set of optional samples where the Engineer's selection is required. Prepare samples to match the Engineer's sample where indicated. Include information with each sample to show generic description, source or product name and manufacturer, limitations, and compliance with standards. Samples are submitted for review and confirmation of color, pattern, texture and "kind" by the Engineer. Engineer will note "test" samples, except as otherwise indicated, for other requirements, which are the exclusive responsibility of the Contractor.
4. Miscellaneous submittals related directly to the Work (non-administrative) warranties, maintenance agreements, workmanship bonds, project photographs, survey data and reports, physical work records, statements of applicability, quality testing and certifying reports, copies of industry standards, record drawings, field measurement data, operating and maintenance materials, overrun stock, security/protection/safety keys and similar information, devices and materials applicable to the Work but not processed as shop drawings, product data or samples.

1.2 SPECIFIC CATEGORY REQUIREMENTS

- A. General: Except as otherwise indicated in the individual work sections, comply with general requirements specified herein for each indicated category of submittal. Submittals shall contain:
 1. The date of submittal and the dates of any previous submittals.
 2. The Project title.

3. Numerical submittal numbers, starting with 1.0, 2.0, etc. Revisions to be numbered 1.1, 1.2, etc.
4. The Names of:
 - a. Contractor
 - b. Supplier
 - c. Manufacturer
5. Identification of the product, with the Specification section number, permanent equipment tag numbers and applicable Drawing No.
6. Field dimensions clearly identified as such.
7. Relation to adjacent or critical features of the Work or materials.
8. Applicable standards, such as ASTM or Federal Specification numbers.
9. Notification to the Engineer in writing, at time of submissions, of any deviations on the submittals from requirements of the Contract Documents.
10. Identification of revisions on resubmittals.
11. An 8 x 3-inch blank space for Contractor and Engineer stamps.
12. Contractor's stamp, initialed or signed, certifying to review of submittal, verification of products, field measurements and field construction criteria and coordination of the information within the submittal with requirements of the Work and of Contract Documents.
13. Submittal sheets or drawings showing more than the particular item under consideration shall have all but the pertinent description of the item for which review is requested crossed out.

1.3 ROUTING OF SUBMITTALS

- A. Submittals and routine correspondence shall be routed as follows:
 1. Supplier to Contractor (through representative if applicable)
 2. Contractor to Engineer
 3. Engineer to Contractor and Owner
 4. Contractor to Supplier

PART 2 - PRODUCTS

2.1 SHOP DRAWINGS

- A. Unless otherwise specifically directed by the Engineer, make all shop drawings accurately to a scale sufficiently large to show all pertinent features of the item and its method of connection to the Work.
- B. Submit all shop drawings in the form of six hard copies and one pdf file.
- C. One reproducible for all submittals larger than 11 x 17 inches and no more than three prints of other submittals will be returned to the Contractor.

2.2 MANUFACTURER'S LITERATURE

- A. Where content of submitted literature from manufacturers includes data not pertinent to this submittal, clearly indicate which portion of the contents is being submitted for the Engineer's review.
- B. Submit the number of copies which are required to be returned (not to exceed three) plus three copies which will be retained by the Engineer.

2.3 SAMPLES

- A. Samples shall illustrate materials, equipment or workmanship and established standards by which completed work is judged.
- B. Unless otherwise specifically directed by the Engineer, all samples shall be of the precise article proposed to be furnished.
- C. Submit all samples in the quantity which is required to be returned plus one sample which will be retained by the Engineer.

2.4 COLORS

- A. Unless the precise color and pattern is specifically described in the Contract Documents, wherever a choice of color or pattern is available in a specified product, submit accurate color charts and pattern charts to the Engineer for review and selection.
- B. Unless all available colors and patterns have identical costs and identical wearing capabilities, and are identically suited to the installation, completely describe the relative costs and capabilities of each.

PART 3 - EXECUTION

3.1 CONTRACTOR'S COORDINATION OF SUBMITTALS

- A. Prior to submittal for the Engineer's review, the Contractor shall use all means necessary to fully coordinate all material, including the following procedures:
 - 1. Determine and verify all field dimensions and conditions, catalog numbers and similar

data.

2. Coordinate as required with all trades and all public agencies involved.
 3. Submit a written statement of review and compliance with the requirements of all applicable technical Specifications as well as the requirements of this Section.
 4. Clearly indicate in a letter or memorandum on the manufacturer's or fabricator's letterhead, all deviations from the Contract Documents.
- B. Each and every copy of the shop drawings and data shall bear the Contractor's stamp showing that they have been so checked. Shop drawings submitted to the Engineer without the Contractor's stamp will be returned to the Contractor for conformance with this requirement.
- C. The Owner may back charge the Contractor for costs associated with having to review a particular shop drawing, product data or sample more than two times to receive a "No Exceptions Taken" mark.
- D. Grouping of Submittals
1. Unless otherwise specifically permitted by the Engineer, make all submittals in groups containing all associated items.
 2. No review will be given to partial submittals of shop drawings for items which interconnect and/or are interdependent. It is the Contractor's responsibility to assemble the shop drawings for all such interconnecting and/or interdependent items, check them and then make one submittal to the Engineer along with Contractor's comments as to compliance, noncompliance or features requiring special attention.
- E. Schedule of Submittals
1. Within 30 days of Contract award and prior to any shop drawing submittal, the Contractor shall submit a schedule showing the estimated date of submittal and the desired approval date for each shop drawing anticipated. A reasonable period shall be scheduled for review and comments. Time lost due to unacceptable submittals shall be the Contractor's responsibility and some time allowance for resubmittal shall be provided. The schedule shall provide for submittal of items which relate to one another to be submitted concurrently.

3.2 TIMING OF SUBMITTALS

- A. Make all submittals far enough in advance of scheduled dates for installation to provide all required time for reviews, for securing necessary approvals, for possible revision and resubmittal, and for placing orders and securing delivery.
- B. In scheduling, allow sufficient time for the Engineer's review following the receipt of the submittal.

3.3 REVIEWED SHOP DRAWINGS

- A. Engineer Review
 1. Allow a minimum of 30 days for the Engineer's initial processing of each submittal requiring review and response, except allow longer periods where processing must be delayed for coordination with subsequent submittals. The Engineer will advise the Contractor promptly when it is determined that a submittal being processed must be

delayed for coordination. Allow a minimum of two weeks for reprocessing each submittal. Advise the Engineer on each submittal as to whether processing time is critical to progress of the Work, and therefore the Work would be expedited if processing time could be foreshortened.

2. Acceptable submittals will be marked "No Exceptions Taken". A minimum of three copies will be retained by the Engineer for Engineer's and the Owner's use and the remaining copies will be returned to the Contractor.
 3. Submittals requiring minor corrections before the product is acceptable will be marked "Make Corrections Noted". The Contractor may order, fabricate and ship the items included in the submittals, provided the indicated corrections are made. Drawings must be resubmitted for review and marked "No Exceptions Taken" prior to installation or use of products.
 4. Submittals marked "Amend and Resubmit" must be revised to reflect required changes and the initial review procedure repeated.
 5. The "Rejected See Remarks" notation is used to indicate products which are not acceptable. Upon return of a submittal so marked, the Contractor shall repeat the initial review procedure utilizing acceptable products.
 6. Only two copies of items marked "Amend and Resubmit" and "Rejected See Remarks" will be reviewed and marked. One copy will be retained by the Engineer and the other copy with all remaining unmarked copies will be returned to the Contractor for resubmittal.
- B. No work or products shall be installed without a drawing or submittal bearing the "No Exceptions Taken" notation. The Contractor shall maintain at the job site a complete set of shop drawings bearing the Engineer's stamp.

- C. Substitutions: In the event the Contractor obtains the Engineer's approval for the use of products other than those which are listed first in the Contract Documents, the Contractor shall, at the Contractor's own expense and using methods approved by the Engineer, make any changes to structures, piping and electrical work that may be necessary to accommodate these products.
- D. Use of the "No Exceptions Taken" notation on shop drawings or other submittals is general and shall not relieve the Contractor of the responsibility of furnishing products of the proper dimension, size, quality, quantity, materials and all performance characteristics, to efficiently perform the requirements and intent of the Contract Documents. The Engineer's review shall not relieve the Contractor of responsibility for errors of any kind on the shop drawings. Review is intended only to assure conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Contractor is responsible for dimensions to be confirmed and correlated at the job site. The Contractor is also responsible for information that pertains solely to the fabrication processes or to the technique of construction and for the coordination of the work of all trades.

3.4 RESUBMISSION REQUIREMENTS

- A. Shop Drawings
 - 1. Revise initial drawings as required and resubmit as specified for initial submittal, with the resubmittal number shown.
 - 2. Indicate on drawings all changes which have been made other than those requested by the Engineer.
- B. Project Data and Samples: Resubmit new data and samples as specified for initial submittal, with the resubmittal number shown.

END OF SECTION

SECTION 014500
QUALITY CONTROL

PART 1 – GENERAL

1.01 SERVICES

- A. Quality control services include inspections, tests, and related actions, including reports performed by the Contractor, independent agencies and by governing authorities. They do not include contract enforcement activities performed by the City.
- B. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, test, or approvals required by the Standard Specifications or the Owner's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to the Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to the City.

1.02 INSPECTIONS AND TESTING

- A. Contractor shall provide inspections and tests specified and required by authorities having jurisdiction. Costs for these services are included in the Contract Sum.
- B. The Contractor shall employ and pay a qualified independent testing agency to perform these services. Costs for these services are included in the Contract Sum.
- C. The Contractor is responsible for retesting where results of inspections and tests prove unsatisfactory and indicate noncompliance with requirements. The cost of retesting is the Contractor's responsibility where tests performed indicated noncompliance with requirements.

1.03 AUXILIARY SERVICES

- A. The Contractor shall cooperate with agencies performing inspections and tests and provide auxiliary services as requested. The Contractor shall notify the agency in advance of operations to permit assignment of personnel. Auxiliary services include the following:
 - 1. Providing access to the Work.
 - 2. Furnishing incidental labor and facilities to assist inspections and tests.
 - 3. Taking adequate quantities of representative samples of materials that require testing or assisting the agency in taking samples.
 - 4. Providing facilities for storage and curing of test samples.
 - 5. Delivering samples to testing laboratories.

6. Providing preliminary design mix proposed for use for materials mixes that require control by the testing agency.
7. Providing security and protection of samples and test equipment.

1.04 TESTING AGENCY RESPONSIBILITIES

- A. The testing agency shall cooperate with the Design professional and the Contractor in performing its duties. The agency shall provide qualified personnel to perform inspections and tests.
- B. The agency shall notify the Design professional and the Contractor of irregularities or deficiencies observed in the Work during performance of its services.
- C. The agency shall communicate the results of their tests to the Design professional and the Contractor either orally or in writing immediately after performance of services prior to leaving the site.
- D. The agency shall not release, revoke, alter, or enlarge requirements or approve or accept any portion of the Work.
- E. The agency shall not perform duties of the Contractor.

1.05 COORDINATION

- A. Coordinate activities to accommodate services with a minimum of delay. Avoid removing and replacing construction to accommodate inspections and tests.
- B. The Contractor is responsible for scheduling inspections, tests, taking samples and similar activities.

1.06 SUBMITTALS

- A. The testing agency shall submit a certified written report, in duplicate, of each inspection and test to the Design professional.
- B. Submit additional copies of each report to the governing authority, when the authority so directs.
- C. Reports of each inspection, test, or similar service shall include, but are not limited to, the following:
 1. Date of issue.
 2. Project title and number.
 3. Name, address, and telephone number of testing agency.
 4. Dates and locations of samples and tests or inspections.
 5. Names of individuals making the inspection or test.
 6. Designation of the Work and test method.
 7. Identification of product and Specification Section.
 8. Complete inspection or test data.
 9. Test results and an interpretation of test results.
 10. Ambient conditions at the time of sample taking and testing.

11. Comments or professional opinion on whether inspected or tested Work complies with requirements.
12. Name and signature of laboratory inspector.
13. Recommendations on retesting.

1.07 QUALIFICATIONS

- A. Engage inspection and testing service agencies that are prequalified as complying with the American Council of Independent Laboratories' "Recommended Requirements for Independent Laboratory Qualification" and that specialize in the types of inspections and tests to be performed.
- B. Each agency shall be authorized by authorities having jurisdiction to operate in the state where the Project is located.

PART 2 – EXECUTION

2.01 REPAIR AND PROTECTION

- A. Upon completion of inspection, testing, and sample taking, repair damaged construction.
- B. Protect construction exposed by or for quality control service activities and protect repaired construction.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for inspection and testing.

END OF SECTION

SECTION 017423

SITE CLEAN UP AND FINISH

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. This section covers the clean up of the site prior to final inspections. The contractor is to provide all labor and equipment required to complete section.

1.02 RELATED DOCUMENTS

- A. Provisions established within the General and Supplementary Conditions of the Contract, Division 1 – General Requirements, and the Construction Drawings are collectively applicable to this section.

1.03 TRAFFIC CONTROL

- A. The Contractor shall be fully responsible for traffic control on the project.
- B. Traffic control shall comply with the Manual for Uniform Traffic Control Devices (MUTCD), Latest Addition.
- C. The Contractor shall submit a traffic control plan to the City of Alpharetta Traffic Department for approval. The traffic control plan shall detail all lane shifts, lane closures, detours, barrel spacing etc. and shall comply with the Manual for Uniform Traffic Control Devices (MUTCD), Latest Addition.
- D. Contractor shall not impact traffic before 9:00 AM and after 4:00 PM.

PART II- EXECUTION

2.01 CLEAN UP

- A. The Contractor shall dispose of any and all trash and debris off site.
- B. All debris, construction materials, stumps, roots, boulders or any other extraneous material deposited during construction shall be removed from the site.
- C. Contractor shall remove office trailer, all storage buildings, stockpile of materials and equipment from site.

2.02 FINAL INSPECTIONS

- A. Contractor shall remove all tree save fence only with the approval of the City of Alpharetta's arborist or City Representative.

- B. Contractor shall remove all erosion control devices only with the approval of the City of Alpharetta's storm water engineer or City Representative.
- C. Contractor shall have the entire site clean, swept and washed down prior to final inspections.
- D. Provide the City Representative with at least 48 hours notice of final inspections.

END OF SECTION

SECTION 017800

CLOSEOUT DOCUMENTS

PART 1-GENERAL

1.01 SECTION INCLUDES

- A. Project Record Documents.
- B. Operation and Maintenance Data.
- C. Warranties and bonds.

1.02 SUBMITTALS

A. Project Record Documents

1. Submit documents to City Representative with Retainage Release Application for Payment.

B. Operation and Maintenance Data (Where Applicable)

1. For equipment, or component parts of equipment put into service during construction and operated by the City, submit completed documents within ten days after acceptance.
2. Submit 1 copy of completed documents 15 days prior to final inspection. This copy will be reviewed and returned after final inspection, with City Representative comments. Revise content of all document sets as required prior to final submission.
3. Submit two sets of revised final documents in final form within 10 days after final inspection.

C. Warranties and Bonds

1. For equipment or component parts of equipment put into service during construction with City Representative's permission, submit documents within ten days after acceptance.
2. Make other submittals within ten days after Date of Substantial Completion, prior to final Application for Payment.
3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within ten days after acceptance, listing the date of acceptance as the beginning of the warranty period.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
 - 1. Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other modifications to the Contract.
 - 5. Reviewed shop drawings, product data, and samples.
 - 6. Manufacturer's instruction for assembly, installation, and adjusting.
- B. Ensure entries are complete and accurate, enabling future reference by City Representative.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress.
- E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
 - 1. Manufacturer's name and product model and number.
 - 2. Product substitutions or alternates utilized.
 - 3. Changes made by Addenda and modifications.
- F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
 - 1. Measured depths of foundations in relation to finish first floor datum.
 - 2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - 3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 - 4. Field changes of dimension and detail.
 - 5. Details not on original Contract drawings.

3.02 OPERATION AND MAINTENANCE DATA

- A. For Each Product or System: List names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.

- B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
- C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.
- D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

3.03 OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES

- A. For Each Product, Applied Material, and Finish:
 - 1. Product data, with catalog number, size, composition, and color and texture designations.
- B. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.
- C. Moisture protection and weather-exposed products: Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.
- D. Provide a listing in Table of Contents for design data, with tabbed fly sheet and space for insertion of data.

3.04 OPERATION AND MAINTENANCE MANUALS

- A. Prepare instructions and data by personnel experienced in maintenance and operation of described products.
- B. Prepare data in the form of an instructional manual.
- C. Binders: Commercial quality, 8-1/2 x 11 inch (216 x 280 mm) three D side ring binders with durable plastic covers; 2 inch (50 mm) maximum ring size. When multiple binders are used, correlate data into related consistent groupings.
- D. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of Project; identify subject matter of contents.
- E. Provide tabbed dividers for each separate product and system, with typed description of product and major component parts of equipment.
- F. Text: Manufacturer's printed data, or typewritten data on 24 pound paper.
- G. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.

- H. Arrange content by systems under section numbers and sequence of Table of Contents of this Project Manual.
- I. Contents: Prepare a Table of Contents for each volume, with each product or system description identified, in three parts as follows:
 - 1. Part 1: Directory, listing names, addresses, and telephone numbers of City Representative, Contractor, Subcontractors, and major suppliers.
 - 2. Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
 - a. Significant design criteria.
 - b. List of equipment.
 - c. Parts list for each component.
 - d. Operating instructions.
 - e. Maintenance instructions for equipment and systems.
 - f. Maintenance instructions for special finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
 - 3. Part 3: Project documents and certificates, including the following:
 - a. Shop drawings and product data.

3.05 WARRANTIES AND BONDS

- A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within ten days after completion of the applicable item of work. Except for items put into use with City Representative's permission, leave date of beginning of time of warranty until the Date of Substantial completion is determined.
- B. Verify that documents are in proper form, contain full information, and are notarized.
- C. Co-execute submittals when required.
- D. Retain warranties and bonds until time specified for submittal.
- E. Manual: Bind in commercial quality 8-1/2 x 11 inch (216 x 279 mm) three D side ring binders with durable plastic covers.
- F. Cover: Identify each binder with typed or printed title WARRANTIES AND BONDS, with title of Project; name, address and telephone number of Contractor and equipment supplier; and name of

responsible company principal.

- G. Table of Contents: Neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the specification section in which specified, and the name of product or work item.
- H. Separate each warranty or bond with index tab sheets keyed to the Table of Contents listing. Provide full information, using separate typed sheets as necessary. List Subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.

END OF SECTION

SECTION 024100

DEMOLITION

PART 1-GENERAL

1.01 SCOPE OF WORK

- A. This section covers demolition and removal of existing items on site which interfere with proposed construction and protection of existing items to remain. This includes removal of existing structures, foundations, pavements, broken & dumped concrete and construction debris. The Contractor shall coordinate with the City phasing the work to accommodate existing site users.

1.02 TRAFFIC CONTROL

- A. The Contractor shall be fully responsible for traffic control on the project.
- B. Traffic control shall comply with the Manual for Uniform Traffic Control Devices (MUTCD), Latest Addition.
- C. The Contractor shall submit a traffic control plan to the City of Alpharetta Traffic Department for approval. The traffic control plan shall detail all lane shifts, lane closures, detours, barrel spacing etc. and shall comply with the Manual for Uniform Traffic Control Devices (MUTCD), Latest Addition.
- D. Contractor shall not impact traffic before 9:00 AM and after 4:00 PM.

PART 2-EXECUTION

2.01 UTILITY PROTECTION

- A. The Contractor shall comply with the Georgia Utilities Protection Law. Notice must be given to the Utilities Protection Center at 800-811-7411, three (3) working days prior to starting any work.
- B. The Contractor shall protect all existing utilities that are not slated for demolition at all times throughout the project. Contractor shall make such explorations and probes as necessary to ascertain any wet sewer lines, water supply lines, live electrical conduits, live phone lines, etc. and shall make sure these utilities can be broken or changed without danger or disruption to any necessary service. De-activate and disconnect all existing utilities before proceeding with the work, except as specified above or otherwise shown on plans.
- C. Follow rules and regulations of authorities having jurisdiction for the respective utilities in executing work under this section.
- D. Inactive and Abandoned Utilities: Remove, plug or cap. In absence of specified requirements, plug or cap such utility lines as required by local regulations.

2.02 DEMOLITION AND REMOVAL

- A. Demolish and remove from site existing structures, foundations, curb & gutter, slabs, walks, paving, steps, and any other item above or below ground that interferes with construction of the project as shown on plans.
- B. Materials demolished and items removed shall become the property of the Contractor and shall be removed promptly from the site, except for salvageable items as specified by the City Representative. All demolished material shall be legally disposed of off the Owner's property. Any cost incurred by the City in cleaning up such materials and debris left behind shall be deducted from funds due the Contractor under this contract.
- C. The Contractor shall be responsible for removing any demolition debris or mud from any street, alley or right-of-way resulting from the execution of the demolition work. Any cost incurred by the City in cleaning up any debris or mud shall be charged to the Contractor and be deducted from funds due to the Contractor.
- E. Littering of the site shall not be permitted.
- F. All construction equipment used in conjunction with this project shall be in good repair and adequately muffled. The Contractor shall comply with the City's noise ordinance.
- G. The Contractor shall comply with all applicable air pollution control requirements. The Contractor shall take appropriate actions to minimize atmospheric pollution. The City shall have the authority to require that reasonable precautions be taken to prevent particulate matter from becoming airborne.
- H. No fires of any kind will be permitted on site.
- I. No material obstructions or debris shall be placed or allowed to accumulate within fifteen feet of any fire hydrant. All fire hydrants shall be accessible at all times.
- J. Hazardous Materials: It is not expected that hazardous materials will be encountered in the work. If materials suspected of containing hazardous characteristics are encountered, do not disturb; immediately notify City Representative.

2.03 UTILITY ADJUSTMENTS

- A. All existing utilities shown within the construction area shall be removed, adjusted or relocated as needed at the Contractor's expense including valves, meter boxes, pull boxes, etc. Contractor shall be responsible for coordinating (with the appropriate utility provider) the removal, relocation, abandonment, adjustment or modification of all utilities that interfere with construction of the project as shown on plans. The Contractor shall pay for temporary relocation of utilities, which are relocated at the Contractor's request for his convenience.

2.04 PUBLIC SAFETY

- A. The Contractor shall provide all barricades, guards, lights and other installations required to protect persons and property during the work period. This shall be in addition to such protection required elsewhere in this specification.

END OF SECTION

SECTION 034800

PRECAST CONCRETE SPECIALTIES – BOARDWALK (DEDUCTIVE ALTERNATE)

PART 1-GENERAL

1.1 SUMMARY

- A. These specifications are for a precast concrete boardwalk which is to be priced as a deductive alternate in lieu of steel and concrete bridge deck planned as the base bid boardwalk (refer to GDOT standard specifications) and shall be regarded as the minimum standards for this project. These specifications are based upon products designed and supplied by:

PermaTrak North America
LLC Ph: 980-229-3036
Ph: 877-332-7862
Fax: 704-541-3675
www.permatrak.com
Contact: Mr. Jason
Philbin
jphilbin@permatrak.com

- B. All reference to “Professional Engineer” in this section shall refer to an engineer provided by PermaTrak and for PermaTrak products only. This item shall also include the design, specification, and construction of a railing and foundation system that is attached to the proposed boardwalk system.
- C. If the contractor is to supply an equivalent design and product, the proposed design shall include shop drawings signed and sealed by a Professional Engineer in the state of Georgia. Any deviation from the specifications herein shall be submitted for approval along with the proposed shop drawings.

1.2 QUALITY ASSURANCE

- A. The contractor performing the installation of the pile foundations shall have installed piles of size and length similar to those shown on the plans for a minimum of three (3) years prior to the bid date for this project. The contractor shall submit a list containing at least three (3) projects completed in the last three (3) years on which the contractor has installed piles of a size and length similar to those shown on the plans. The list of projects shall contain names and phone numbers of owner’s representatives who can verify the Contractor’s participation on those projects.
- B. Prior to the installation of the pile foundations, a survey must be performed to stake pile locations in the field as shown on the project plans. The survey shall be performed by a licensed surveyor in the state of Georgia. The surveyor shall have a minimum experience of five (5) years in surveying foundation locations for projects of similar length and environmental complexity. The surveyor shall have a minimum of five (5) years experience using equipment that is adequate to stake locations in field using a CAD file

- plan location and that has tolerance to achieve accurate locations as described below.
1. If timber pilings are detailed on project documents as pile foundations, pilings shall be placed within the tolerances indicated on the shop drawings and driven to refusal. If pilings extend further than anticipated per Geotechnical report, additional piling lengths may be spliced and paid by additional depth of piling. As construction is placed, it is anticipated to build from a top-down approach to avoid disturbance of sensitive areas.
 2. If helical piers are detailed on project documents as pile foundations, production anchors shall be placed such that the anchor head is within one (1) inch laterally and one (1) inch longitudinally of location specified on the project plans, and the anchor shaft alignment shall be within two (2) degrees of the inclination angle shown on the project plans.
- C. Manufacturer Qualifications: Not less than 5 years experience in the actual production of precast products as described below.
1. Components shall be factory fabricated and engineered by single entity. This entity shall be registered to do business in the State of Georgia.
 2. Boardwalk supplier (Precaster) for the boardwalk shall have in-house color mixing facilities for color pigmentation.
 3. Boardwalk supplier (Precaster) shall have either a minimum experience of 5 years or 20 boardwalk projects in design, production, and field consultation.
 4. Boardwalk supplier (Precaster) must be certified by PCI or NPCA.
 5. Precast components must be manufactured with the use of hot rolled steel skin in reinforced steel forms. Temporary (i.e., Timber) and/or single use forms are unacceptable unless approved in writing by the Professional Engineer.
- D. Acceptability Criteria for Treads and Curbs (if applicable): The finished visible (in the final installed position) surface shall have no obvious imperfections other than minimal color or texture variations from the approved samples or evidence of repairs when viewed in good typical daylight illumination with the unaided naked eye at a 20 ft. viewing distance. Appearance of the surface shall not be evaluated when light is illuminating the surface from an extreme angle as it tends to accentuate the minor surface irregularities. The following is a list of finish defects that shall be properly repaired, if obvious when viewed at a 20 ft. distance. Patching (by a trained skilled concrete repair person) is an acceptable repair method.
1. Ragged or irregular surfaces.
 2. Excessive air voids (commonly called bug holes) larger than 1/4 in. evident on the top surface of the tread or curbs (if applicable).
 3. Adjacent flat and return surfaces with greater texture and/or color differences than the approved samples or mockups.
 4. Casting and/or aggregate segregation lines evident from different concrete placement lifts and consolidation.
 5. Visible mold joints or irregular surfaces.
 6. Rust stains on exposed surfaces.
 7. Units with excessive variation in texture and/or color from the approved samples, within the unit or compared with adjacent units.
 8. Blocking stains evident on exposed surfaces.
 9. Areas of backup concrete bleeding through the facing concrete.
 10. Foreign material embedded in the surface.
 11. Visible repairs at a 20 ft. viewing distance.
 12. Reinforcement shadow lines.

13. Cracks visible at a 20 ft. viewings distance.
- E. Installer Qualifications: Boardwalk Installer shall demonstrate verifiable experience in the following areas within the past three (3) years:
 1. Experience in boardwalk installation is required. The Contractor shall show not less than three examples of boardwalk installation for projects of similar size and scope.
 2. Installation of at least one precast concrete boardwalk is preferred, but not mandatory. The Contractor will need to demonstrate experience with precast components or modular systems (i.e., precast 3-sided bridges, precast wall panels or precast MSE walls) on a project of not less than \$100,000 in precast scope.
- F. Mock-Up: Provide, if required by the Owner's Representative, a mock-up for evaluation of the boardwalk showing the surface preparation techniques and application workmanship.
 1. Finish areas designated by the Owner's Representative.
 2. Do not proceed with remaining work until mock-up is accepted by the Owner's Representative.
 3. Refinish mock-up area as required to produce acceptable work.
- 1.3 SUBMISSIONS: Prior to the start of fabrication or construction, the Contractor shall submit to the Engineer a design package, which shall include, but is not limited to, the following:
 - A. PRELIMINARY SUBMISSIONS: Prior to the start of fabrication or construction, the Contractor shall submit to the Owner's Representative a design package, which shall include but not limited to the following:
 1. DETAILED PLANS:
 - a. REGISTRATION / SEAL: Sealed by a licensed Professional Engineer (Georgia).
 - b. PLAN VIEW: Full plan view of the boardwalk, foundation and railing system drawn to scale. The plan view must reflect the proposed horizontal alignment as shown on the design plans.
 - c. ELEVATION VIEW: Full elevation view of the boardwalk, railing and foundation system drawn to scale which reflect the actual vertical alignment. Elevation views shall indicate the elevation at the top and bottom of the boardwalk and foundation system components, horizontal and vertical break points, and location of the finished grade.
 - d. DETAILS: Details of all boardwalk and railing system components and their connections such as the length, size and where changes occur; connections; etc.
 - e. CODE REFERENCE: Design parameters used along with AASHTO references.
 2. DESIGN COMPUTATIONS: computations shall:
 - a. Be stamped by a licensed Professional Engineer in the State of Georgia.
 - b. Clearly refer to the applicable AASHTO provisions.

- c. Include documentation of computer programs including all design parameters.
- d. Clearly show that all reinforced precast treads and beams meet AASHTO requirements for the loading per Section 1.3.F.
- e. Include sketches of reinforcement in treads and beams, shear and moment diagrams, and all equations used shall be referenced to applicable code.

3. CONSTRUCTION SPECIFICATIONS:

- a. Construction methods specific to the boardwalk vendor chosen. Submittal requirements such as certification, quality and acceptance/rejection criteria shall be included. Details on connection of boardwalk units and foundation system such that assurance of uniform load transfer shall be checked.
- B. FINAL SUBMISSION: Once a boardwalk, foundation and railing system design has been reviewed and accepted by the Owner, the Contractor shall submit the final plans. The designer of the boardwalk, foundation and railing system is responsible for the review of any drawings prepared for fabrication. One set of all approved shop drawings shall be submitted to the Owner's Representative permanent records.
- C. SUBMITTALS: Product Data: Submit Manufacturer's technical product data for railing components and accessories.

Manufacturer to supply submittal drawings for approval to include the following:

- 1. Section-thru details.
 - 2. Mounting methods.
 - 3. Typical Elevations.
 - 4. Key plan layout.
- D. SHOP DRAWINGS: Shop drawings shall:
- a. Be stamped by a licensed Professional Engineer in the State of Georgia.
 - b. Show actual field conditions and true elevation and location supplied after field verification.
 - c. Clearly detail reinforcement in beams, treads and curbs including clear dimension from concrete edge, size and amount of rebar.
 - d. Clearly state concrete reinforcement strength and epoxy coating where required as well as component weight and lifting locations.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Field Measurements: Where handrails and railings are indicated to fit to other construction, check actual dimensions of other construction by accurate field measurements before fabrication; show recorded measurements on final shop drawings.

1. Where field measurements cannot be made without delaying the railing fabrication and delivery, obtain guaranteed dimensions in writing by the Contractor and proceed with fabrication of products so as not to delay fabrication, delivery and installation.
- C. Coordinate fabrication and delivery schedule of handrails with construction progress and sequence to avoid delay of railing installation.
- D. The Owner supplied PermaTrak material will be stored at a location on site with full coordination between the Contractor and Owner. If the Owner elects to store material at PermaTrak's manufacturing facility, delivery requests can be made directly by the Contractor to PermaTrak's logistics manager.
- E. The Owner will notify the Contractor when material is available to be scheduled for delivery. The Contractor will schedule delivery directly with PermaTrak. One (1) week notice must be given prior to any delivery of material and two (2) trucks per day is the maximum that can be delivered. All truckloads must be full truckloads.
- F. Acceptance and off-loading of material shall be performed by the Contractor. The Owner shall be notified and updated regarding delivery and off-loading schedules. The Contractor will be responsible for the inspection of all materials during off-loading. Deficient materials shall be noted and photographed. The Owner and PermaTrak shall be immediately notified of any deficient materials. Acceptability criteria shall be per Section 1.2.D. Minor patching and repair to be performed by the installer.

1.5 WARRANTY:

- A. Contractor will be responsible for installation defects associated with the boardwalk and abutment components, foundation system, and railings for a period of 12 calendar months from the date of final acceptance by the Owner.
- B. Boardwalk manufacturer shall warranty all precast concrete components against defects in material and workmanship for a period of 10 years.
- C. Railing manufacturer shall warranty the railing against defects in materials and workmanship for a period of 12 months.

1.6 MEASUREMENT AND PAYMENT

- A. Precast concrete boardwalk and foundations shall be paid for at the contract unit price as listed in the bid proposal for "Concrete Boardwalk - Permatrak on timber pilings". This price shall include all materials, equipment, labor and work necessary for and incidental to the design, construction, delivery, unloading, assembly, and placement of the boardwalk and foundation as shown in the contract plans.
- B. Railings for the boardwalk shall be paid for at the contract unit price as listed in the bid proposal for "Boardwalk Guardrail". This price shall include all materials, equipment, labor and work necessary for and incidental to the design, construction, delivery, unloading, assembly, and placement of boardwalk railings as shown in the contract plans.
- C. Precast abutments, if used, shall be paid for at the contract unit price as listed in the bid proposal for "Boardwalk Abutment Walls – Precast." This price shall include all

materials, equipment, labor and work necessary for and incidental to the design, construction, delivery, unloading, assembly, and placement of abutments as shown in the contract plans.

PART 2-MATERIALS & TESTING

2.1 PRECAST CONCRETE: shall conform to the following:

- a. The minimum compressive strength of the concrete shall be 4000 psi measured at 28 days.
- b. All precast concrete shall contain fiber reinforcing as well as structural steel reinforcement as designed by the Professional Engineer.
- c. All precast concrete components shall be air entrained composed of Portland cement, fine and coarse aggregates, admixtures and water. The air-entraining feature may be obtained by the use of either an air entraining Portland cement or an air entraining admixture. The entrained air-content shall be not less than four percent or more than seven percent.

PART 3 - EXECUTION

1.1 PRECAST CONCRETE BOARDWALK

- A. Installation of the precast concrete boardwalk system and railings, if applicable, shall be performed in accordance to the approved plans and manufacturers installation instructions. Boardwalk manufacturer shall provide a field representative to review installation instructions with the Contractor and Engineer and to certify that the installation has been performed according to the approved drawings and manufacturer's instructions.

END OF SECTION

SECTION 311100

CLEARING AND GRUBBING

PART 1-GENERAL

1.01 SCOPE OF WORK

- A. This section covers clearing of vegetation, grubbing of stumps, roots, and debris, stripping of topsoil, disposal of unutilized materials and other incidental work related to preparing the site for later use.

1.02 DEFINITIONS

- A. Clearing: Clearing shall consist of the felling, trimming, and cutting of obstructions such as trees into sections and the satisfactory disposal of the trees and other surface vegetation designated for removal, including down timber, snags, brush, and rubbish occurring in the areas to be cleared.
- B. Grubbing: Grubbing shall consist of the removal and disposal of below-surface stumps, roots larger than 3 inches in diameter, and matted roots from the designated grubbing areas.
- C. Hazardous Material: Substance likely to cause death or injury by reason of being explosive, flammable, poisonous, corrosive, oxidizing, irritating, or otherwise harmful; and includes, but is not limited to flammable dust, flammable fiber, combustible liquid, dangerous chemical, flammable gas, liquefied flammable gas, and flammable liquid.
- D. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, stones, and other objects more than 1 inch in diameter; and free of subsoil and weeds, roots, toxic materials, and other non-soil materials.
- E. Tree Protection Zone: Area surrounding individual trees or groups of trees to be protected during construction.

1.03 PROJECT/SITE CONDITIONS

- A. Work Limits: Area to be cleared and grubbed will be the limits of disturbance as shown on the plans.
- B. Burning: No burning of any kind shall be permitted.
- C. Landscape Preservation: Protect vegetation outside the work limits from injury. Existing trees and shrubs shall not be disturbed or damaged. Any existing trees and or shrubs that are damaged as a result of construction activities shall be pruned by an ISA Certified Arborist.
- D. Traffic: Minimize interference with adjoining roads, streets, walks and other adjacent occupied or used facilities during site clearing operations.

- E. Hazardous Materials: It is not expected that hazardous materials will be encountered in the work. If materials suspected of containing hazardous characteristics are encountered, do not disturb; immediately notify City Representative.

1.04 TRAFFIC CONTROL

- A. The Contractor shall be fully responsible for traffic control on the project.
- B. Traffic control shall comply with the Manual for Uniform Traffic Control Devices (MUTCD), Latest Addition.
- C. The Contractor shall submit a traffic control plan to the City of Alpharetta Traffic Department for approval. The traffic control plan shall detail all lane shifts, lane closures, detours, barrel spacing etc. and shall comply with the Manual for Uniform Traffic Control Devices (MUTCD), Latest Addition.
- D. Contractor shall not impact traffic before 9:00 AM and after 4:00 PM.

PART 2-EXECUTION

2.01 PROTECTION

- A. Areas within the boardwalk corridor are delineated as wetlands. Refer to plans for these areas. For trees and vegetation to be removed within the limits of disturbance delineated as wetlands on the plans, the contractor is NOT to remove stumps. A permit to disturb wetland areas has not been obtained for this project, and is to be avoided by adhering to the following directives:
 - a. Boardwalk installation is to utilize top-down construction methods to avoid disturbance in wetlands.
 - b. Soils are not to be disturbed by heavy equipment nor shall streams be piped by temporary or permanent culverts.
 - c. For tree removal in boardwalk corridor outside wetlands, do not remove stumps. For vegetation removal within wetlands, 25-foot stream buffers and boardwalk corridor, cut trees cleanly and allow no more than 6"-8" of the trunk to protrude from existing grade.
 - d. Within wetlands and 25-foot stream buffers, contractor shall utilize suitable construction matting for all equipment access and workspace in order to avoid soil disturbance and rutting. The contractor will refrain from utilizing tracked equipment within sensitive areas of boardwalk corridors to avoid disturbance of soil. There shall be no grubbing, grading, stump removal, dredging of soil, or discharge of fill material.
 - e. For all other sections of the corridor not within the boardwalk corridor, wetland or 25-foot stream buffer areas, the contractor shall clear and grub as directed in this specification.
- B. Prior to clearing and grubbing, locate and clearly flag trees and vegetation to remain or to be relocated. Erect and maintain a temporary fence around trees and vegetation to remain as indicated on the plans. Obtain approval from City Arborist for tree save fence locations prior to installing silt fence.
- C. Prior to clearing and grubbing, install erosion control measures as shown on the plans. Obtain approval from City Representative certified in erosion control inspections that erosion control measures have been installed properly and completely.

D. Protect existing site improvements to remain from damage during construction. Any existing site improvements that are damaged during construction activities shall be restored back to their original condition as acceptable to the City Representative at no additional cost.

E. Roads and Walks: Keep roads and walks free of dirt and debris at all times.

2.02 UTILITY PROTECTION

A. The Contractor shall comply with the Georgia Utilities Protection Law. Notice must be given to the Utilities Protection Center at 800-811-7411, three (3) working days prior to starting any work.

B. The Contractor shall protect all existing utilities that are indicated to remain from damage at all times throughout the project. Contractor shall make such explorations and probes as necessary to ascertain any wet sewer lines, water supply lines, live electrical conduits, live phone lines, etc. and shall make sure these utilities can be broken or changed without danger or disruption to any necessary service. De-activate and disconnect all existing utilities before proceeding with the work, except as specified above or otherwise shown on plans.

C. Notify the City of Alpharetta Public Works Department immediately of damage to an existing utility line or of an encounter with an unknown existing utility line. The Contractor shall be responsible for the repairs of damage to existing utilities. When utility lines which are to be removed are encountered within the area of operations, the Contractor shall notify the City of Alpharetta Public Works Department 72 hours prior to interruption of the service.

D. Follow rules and regulations of authorities having jurisdiction for the respective utilities in executing work under this section.

E. Inactive and Abandoned Utilities: Remove, plug or cap. In absence of specified requirements, plug or cap such utility lines as required by local regulations.

2.03 CLEARING

A. Clear trees, stumps, roots, brush, and other vegetation in areas to be graded; cut off flush with or below the original ground surface, except such trees and vegetation indicated or directed to be left standing. Trees designated to be left standing within the cleared areas shall be trimmed of dead branches 1-1/2 inches or more in diameter and be painted with an approved tree-wound paint. Limbs and branches to be trimmed shall be neatly cut close to the bole of the tree or main branches. Trees and vegetation to be left standing shall be protected from damage incident to clearing, grubbing, and construction operations by the erection of barriers or by such other means as the circumstances require. Clearing shall also include the removal of existing obstructions that are a distance of 5 feet beyond the perimeter of to-be-built structures.

2.04 GRUBBING

A. Requirements: Material to be grubbed, together with logs and other organic or metallic debris not suitable for foundation purposes, shall be removed to a depth of not less than 18 inches below the original surface level of the ground in areas indicated to be grubbed. Depressions made by grubbing

shall be filled with suitable material and compacted to make the surface conform with the original adjacent surface of the ground. Debris not suitable for foundation purposes shall be removed.

2.05 STRIPPING OF TOPSOIL

- A. Remove sod or grass before stripping topsoil.
- B. Strip topsoil to whatever depths are encountered in a manner to prevent intermingling with underlying subsoil or other waste materials.
- C. Stockpile topsoil materials on site for re-use where applicable. Any extra topsoil not incorporated into the work shall be removed promptly from the site.

2.06 SALVAGE

- A. Salvage and place any items requested by City Representative in a location approved by the City Representative.

2.07 DISPOSAL

- A. Material that is not to be salvaged shall be removed promptly from the project site and legally disposed of.

END OF SECTION 311100

SECTION 321313

CONCRETE SITEWORK

PART 1 – GENERAL

1.01 SCOPE OF WORK

- A. This section covers furnishing all labor, equipments and materials required to construct all curb and gutter, concrete paving, sidewalks and all other items indicated on the drawings, including layout, preparation of subgrade, formwork, placing, finishing and testing.

1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.
- B. Georgia Department of Transportation Standard Specifications, 2013 edition and other related supplemental documents.

1.03 REFERENCE STANDARDS

- A. City of Alpharetta Design Standards:
 - 1. STD. 901 Roadway Pavement Sections, Curb and Gutter Details
 - 2. STD. 902 Concrete Sidewalk Details, Curb Cut Ramp Details
 - 3. STD. 951 Commercial, Industrial Driveway Details
 - 4. STD. 952 Residential Driveway Details
- B. Where testing frequencies conflict between the specifications in this section and the requirements on the City of Alpharetta Standard Drawings, the frequencies outlined in this specification shall overrule.

1.04 SUBMITTALS

- A. Mix Design: Submit mix design for each concrete mix specified on plans. Submit alternate mix designs when characteristics of materials, project conditions, weather, test results, or other circumstances warrant adjustment.
 - 1. Indicate amounts of mixing water to be withheld for later addition at project site.
- B. Submit copies of Concrete Testing Reports to City Representative.
- C. Submit copies of concrete break results to City Representative.

- D. Submit (2) copies of performance and product data for concrete devices specified on the plans or as required by the City Representative.
- E. Additional submittals as required by the City Representative.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer who has completed concrete sitework similar in material, design and extent to that indicated for this project and whose work has resulted in construction with a record of successful in-service performance.
- B. Testing Agency Qualifications: An independent testing agency, hired by the City, qualified according to ASTM C 1077 and ASTM E 329 to conduct the testing specified herein as documented according to ASTM E 548.
- C. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant and each aggregate from one source.
- D. ACI Publications: Comply with ACI 301, "Specifications for Structural Concrete", unless modified by the requirements of the Contract Documents.
- E. Concrete Testing Services: Engage a qualified independent testing agency to perform material evaluation tests.
- F. All work shall be performed in accordance with applicable codes and ordinances and requirements of the local issuing authority.

1.06 TRAFFIC CONTROL

- A. The Contractor shall be fully responsible for traffic control on the project.
- B. Traffic control shall comply with the Manual for Uniform Traffic Control Devices (MUTCD).
- C. The Contractor shall submit a traffic control plan to the City of Alpharetta Traffic Department for approval. The traffic control plan shall detail all lane shifts, lane closures, detours, barrel spacing etc. and shall comply with the Manual for Uniform Traffic Control Devices (MUTCD).
- D. Contractor shall not impact traffic before 9:00 AM and after 4:00 PM.

PART II – PRODUCTS/MATERIALS

2.01 CONCRETE MIXES

- A. Prepare mix designs proportioned to ACI 211.1 and ACI 301 for each type and strength of concrete determined by either laboratory trial mixes or field experience.
- B. Provide mix designs to provide concrete with the following properties:
 - 1. Minimum compressive strength (28 Days): 3,000 PSI unless noted otherwise on the drawings.

2. Maximum Water-Cementitious Materials Ratio: 0.49.
3. Slump Limit: 3 inches plus or minus 1 inch.
4. Air Content: 4.5 % plus or minus 1.5 %.

2.02 CEMENTITIOUS MATERIALS

- A. Use the following cementitious materials of the same type, brand and source throughout the project:
1. Portland Cement: ASTM C 150, Type I supplemented with the following:
 - a. Fly Ash: ASTM C 618, Class C or F.
 - b. Ground, granulated blast furnace slag: ASTM C 989, Grade 100 or 120.
 - c. Silica Fume: ASTM C 1240, amorphous silica.
 - d. Normal weight aggregates: ASTM C 33, Class 3S coarse aggregate or better, graded. Provide aggregate from a single source.
 1. Maximum coarse aggregate size: 1 inch (25 mm) nominal.
 2. Fine aggregate: Free of materials with deleterious reactivity to alkali in cement.
 - e. Water: ASTM C 94/C 94M and potable.

2.03 ADMIXTURES

- A. Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute to water-soluble chloride ions exceeding those permitted in hardened concrete.
1. Air-entraining admixture: ASTM C 260
 2. Water-reducing admixture: ASTM C 494/C 494M, Type A.
 3. Retarding admixture: ASTM C 494/C 494M, Type B.
 4. Water-reducing and retarding admixture: ASTM C 494/C 494M, Type D.
 5. Calcium Chloride: The use of calcium chloride or admixtures containing calcium chloride is permitted provided:
 - a. No more than 2% calcium chloride is added.
 - b. The calcium chloride is mixed at the concrete plant.
 - c. No calcium chloride is added to concrete used to pour any item containing reinforcing steel

or wire mesh.

2.04 STEEL REINFORCEMENT

- A. Plain steel welded wire reinforcement: ASTM A 185, plain, fabricated from as-drawn steel wire into flat sheets.
- B. Reinforcing bars: ASTM A 615/A 615M, Grade 60 (Grade 420), deformed.

2.05 REINFORCEMENT ACCESSORIES

- A. Bar Supports: Bolsters, chairs, spacers and other devices for spacing, supporting and fastening reinforcing bars and welded wire reinforcement in place. Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice", of greater compressive strength than concrete.

2.06 FORMS

- A. Forms shall be constructed to ensure that the finished concrete will conform accurately to the indicated dimensions, lines and elevations and within tolerances specified.
- B. Forms shall be of wood or steel, straight, of sufficient strength to resist springing during deposition and consolidating concrete.

2.07 FORM RELEASE AGENT

- A. Commercially formulated form-release agent that will not bond with, stain or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.

2.08 EXPANSION JOINT MATERIAL

- A. ASTM D 1751, asphalt-saturated cellulosic fiber.

2.09 DETECTABLE WARNING SURFACE

- A. Raised truncated domes with a nominal diameter of 0.9 Inch, a nominal height of 0.2 Inch, a center to center spacing of 1.7 Inches and with a visually contrasting color selected by Owner.
 - 1. Utilized product must appear on Georgia Department of Transportation's QPL-87 Detectable Warning Surfaces. Color selected by Owner.
 - 2. Stamping of ADA warning strips into concrete will not be accepted.

PART III – EXECUTION

3.01 LAYOUT

- A. Layout shall be accomplished by a State of Georgia licensed Land Surveyor or Construction Layout Professional.

- B. Establish and maintain stakes as required for drives, parking, walks, and other site improvements.

3.02 UTILITY PROTECTION

- A. The Contractor shall comply with the Georgia Utilities Protection Law. Notice must be given to the Utilities Protection Center at 800-811-7411, three (3) working days prior to starting any work.
- B. The Contractor shall protect all existing utilities that are not slated for demolition at all times throughout the project. Contractor shall make such explorations and probes as necessary to ascertain any wet sewer lines, water supply lines, live electrical conduits, live phone lines, etc. and shall make sure these utilities can be broken or changed without danger or disruption to any necessary service. De-activate and disconnect all existing utilities before proceeding with the work, except as specified above or otherwise shown on plans.
- C. Follow rules and regulations of authorities having jurisdiction for the respective utilities in executing work under this section.
- D. Inactive and Abandoned Utilities: Remove, plug or cap. In absence of specified requirements, plug or cap such utility lines as required by local regulations.

3.03 SITE PROTECTION

- A. Protect existing and placed concrete from damage. When construction traffic is permitted, maintain concrete as clean as possible by removing surface stains and spillage of materials as they occur.
- B. Maintain concrete free of stains, discoloration, dirt and other foreign material. Clean concrete no more than two (2) days before date of final inspection.
- C. The Contractor shall maintain carefully all benchmarks, monuments, property pins and other reference points. If disturbed or destroyed, replace as directed at no additional cost to the Owner. If found at variance with the drawings, notify the City Representative. Replacement of benchmarks, monuments, property pins and other reference points shall be accomplished by a State of Georgia licensed Land Surveyor.
- D. All existing curbs, sidewalks, buildings, utilities, and paving damaged in performance of this work shall be restored at no additional cost to the Owner.
- E. Any settlement or cracking that occurs to concrete areas prior to acceptance of the work shall be repaired and or replaced.

3.04 WEATHER LIMITATIONS

- A. Cold Weather Placement: Concrete placement shall not take place when air temperature reaches 40 degrees F and falling or is already below that point. Placement may begin when air temperature reaches 35 degrees F and is rising or is already above 40 degrees F. Protect concrete from physical damage or reduced strength that could be caused by frost, freezing actions or low temperatures. Provisions shall be made to protect the concrete from freezing during the specified curing period. If necessary to place concrete when the air temperature, aggregates or water is below 35 degrees F,

placement and protection shall be approved in writing by the City Representative. Approval shall be contingent upon the following provisions:

1. The underlying material shall be prepared and protected so that it is entirely free of frost or frozen materials when concrete is placed.
 2. Mixing water and aggregates shall be heated as necessary to result in the temperature of the in-place concrete being between 50 and 80 degrees F.
 3. Aggregates shall be free of ice, snow, and frozen lumps before entering the mixer.
 4. Covering and other means shall be provided for maintaining the concrete at a temperature of at least 50 degrees F for not less than 72 hours after placing and at a temperature above freezing for the remainder of the curing period.
 5. Do not use calcium chloride, salt or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in mix designs.
 6. Cold weather concrete placement shall comply with ACI 306.1.
- B. Cold Weather Placement Time: When air temperature is below 85 degrees F contractor shall have 90 minutes from batch time printed on the delivery ticket to place concrete. If Contractor exceeds the 90 minute time limit the City Representative shall have the right to stop the concrete that is being placed. Any concrete left over due to the expired time limit shall be removed from the site at the Contractor's expense. If there is no batch time printed on the delivery ticket the City Representative shall have the right to reject the concrete prior to placement. Rejected concrete as a result of missing batch time on delivery ticket shall be removed from the site at the Contractor's expense.
- C. Hot Weather Placement: The temperature of concrete as placed shall not exceed 85 degrees F except where an approved retarder is used. The mixing water and/or aggregates shall be cooled if necessary to maintain a satisfactory placing temperature. The placing temperature shall not exceed 90 degrees F at any time.
1. Chilled mixing water or chopped ice may be used to control temperature provided water equivalent of ice is calculated into the total amount of mixing water. Using liquid nitrogen to cool concrete is the Contractor's option.
 2. Cover reinforcement steel with water-soaked burlap so reinforcement temperature will not exceed ambient air temperature immediately before placing concrete.
 3. Fog-spray forms, reinforcing steel and subgrade just before placing concrete. Keep subgrade moisture uniform without standing water, soft spots or dry areas.
 4. Hot weather concrete placement shall comply with ACI 305R.
- D. Hot Weather Placement Time: When air temperature is between 85 and 90 degrees F, the contractor shall have 75 minutes from batch time printed on the delivery ticket to place concrete. When air temperature is above 90 degrees F the Contractor shall have 60 minutes from batch time printed on the delivery ticket to place concrete. If Contractor exceeds the time limits specified herein, the City

Representative shall have the right to stop the concrete that is being placed. Any concrete left over due to expired time limits shall be removed from the site at the Contractor's expense. If there is no batch time printed on the delivery ticket the City Representative shall have the right to reject the concrete prior to placement. Rejected concrete as a result of missing batch time on delivery ticket shall be removed from the site at the Contractor's expense.

3.06 FIELD QUALITY CONTROL

- A. The Contractor shall engage a qualified testing and inspection agency to sample materials, perform field tests and inspections and prepare test reports during concrete placement according to requirements specified in this section.
- B. Testing of composite samples of fresh concrete obtained according to ASTM C 172 shall be performed according to the following requirements:
 - 1. Slump: ASTM C 143, one test at point of placement for each composite sample for each type of concrete poured. Perform additional tests when concrete consistency appears to change.
 - 2. Air Content: ASTM C 231, pressure method, one test for each composite sample for each type of concrete poured.
 - 3. Concrete Temperature: ASTM C 1064, one test hourly when air temperature is 40 degrees F and below, when air temperature is 80 degrees F and above, and one test for each composite sample.
 - 4. Compression Test Specimens: ASTM C 31, one set of four (4) standard cylinders for each composite sample. Cylinders shall be molded and stored for laboratory-cured test specimens.
 - 5. Compressive Strength Tests: ASTM C 39, one specimen shall be tested at seven (7) days and two (2) specimens at twenty-eight (28) days; one specimen shall be retained in reserve for later testing if required.
 - a. Strength of each concrete mixture will be satisfactory if every average of any three (3) consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 PSI.
 - 6. Test results shall be reported in writing to Owner, Concrete Manufacturer and Contractor within 48 hours of testing. Reports of compressive strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspection agency, location of concrete batch in work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength and type of break for both 7 and 28 day tests.
 - 7. In the event that concrete break results do not achieve specified strengths, nondestructive testing may be utilized by an independent testing agency. Impact hammer, sonoscope or other nondestructive device may be permitted by the Owner but will not be used as the sole basis for approval or rejection.
 - 8. Additional Tests: The City's selected testing agency shall make additional tests of concrete when

test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met as directed by the City Representative.

9. Additional testing and inspecting at the Contractor's expense will be performed to determine compliance of replaced or additional work with specified requirements.
10. Correct deficiencies in the work where test reports and inspections indicate noncompliance with the contract documents.

C. CONCRETE DELIVERY TICKETS

1. Place only concrete mix designs approved by the Owner. Concrete delivery tickets shall have the following minimum information on the ticket:
 - a. Approved mix code.
 - b. Batch time and date.
 - c. Maximum allowable water that may be added at the job site.
 - d. Type of concrete and amount.
 - e. Amount of concrete ordered and delivered.
 - f. Project description/location.
2. If at any point it is determined by the City Representative that the concrete delivered to the project site does not meet the minimum specifications outline above, the City Representative can reject the load of concrete. If rejected, the load of concrete shall be promptly removed from the site at the Contractor's expense.

3.07 CONCRETE CURB AND GUTTER

A. Subgrade Preparation.

1. Curb and gutter subgrade shall be constructed to specified grade and cross section.
2. Subgrade shall be placed and compacted in conformance with the contract documents and applicable City of Alpharetta Standard Drawings.
3. Subgrade shall be maintained in a smooth, compacted condition in conformity with the required section and established grade until concrete is placed.

B. Subgrade Testing.

1. Prior to concrete placement, Contractor shall have subgrade of curb and gutter tested by the City's selected testing agency per the requirements outlined in section "02310 Grading" and The City of Alpharetta Standard Drawings.

2. If at any point it rains on subgrade prior to concrete placement, Contractor shall have subgrade re-tested by the City's selected testing agency. Any areas that fail shall be undercut and replaced with clean, compacted fill at no additional cost to the Owner.

C. Concrete Testing: The Contractor shall provide molded concrete specimens for strength tests. Testing of concrete shall be made at the following frequencies:

1. For each mix poured, a minimum of one set of cylinders shall be made per day or for each 18 CY of concrete placed.
2. Additional tests may be required as determined by the City Representative.

D. Formwork.

1. Set, brace and secure forms, bulkheads and intermediate screed guides to required lines, grades and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least twenty-four (24) hours after concrete placement.
2. Clean forms after each use and coat with form release agent to ensure separation from concrete without damage.

E. Reinforcement.

1. Install reinforcing as required on the plans and City of Alpharetta Standard Drawings.
2. Comply with CRSI's "Manual of Standard Practice" for fabricating reinforcement and with recommendations in CRSI's "Placing Reinforcing Bars" for placing and supporting reinforcement.
3. Clean reinforcement of loose rust and mill scale, earth, ice, or other bond-reducing materials.
4. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement. Maintain minimum cover to reinforcement.
5. Install welded wire fabric in lengths as long as practicable. Lap adjoining pieces at least one full mesh, and lace splices with wire. Offset laps of adjoining widths to prevent continuous laps in either direction.

F. Joints and Spacing

1. Expansion Joints
 - a. Expansion joints shall be installed by means of preformed expansion joint material one-half (½) inch in thickness cut and shaped to the cross section of curb and gutter.
 - b. Expansion joints shall be installed where newly poured concrete abuts concrete curbs, catch basins, sidewalk, driveway aprons, fixed objects, structures, pour breaks and where indicated or requested by the City Representative.

- c. Expansion joints shall be installed at all radius points and structures.
- d. Expansion joints shall be installed at fifty (50) foot intervals.
- e. Extend expansion joints the full width and depth of joint.
- f. Place top of expansion material flush with finished concrete surface.
- h. Furnish expansion joints in one-piece lengths. Where more than one length is required, lace or clip sections together.

2. Contraction joints

- a. Contraction joints shall be installed by forming or tooling a joint with a minimum depth of one-quarter ($\frac{1}{4}$) inch at right angles to the line of curb and gutter. Radius of tooled edges shall be one-quarter ($\frac{1}{4}$) inch.
- b. Contraction joints shall be installed in ten (10) foot intervals where indicated or as requested by the City Representative.

G. Placement and Finish

1. Placement

- a. Prior to placing concrete the City Representative must inspect and approve formwork and subgrade preparation.
- b. Do not add water to concrete during delivery, at the project site or during placement unless approved by the City Representative. With the approval of the City Representative, water may be added at the project site prior to test sampling and placement. The amount of water added shall not exceed the maximum allowable water amount specified on the delivery ticket. If the delivery ticket does not contain the maximum allowable water to be added at the site, the City Representative may prohibit the use of additional water.
- c. If at any point it is determined by the City Representative that the concrete delivered to the project site does not meet the specifications provided, the City Representative can reject the load of concrete. If rejected the load of concrete shall be promptly removed from the site at the Contractor's expense.
- d. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness.
- e. When automatic machine placement is used for curb and gutter placement, submit revised mix design and laboratory test results that meet or exceed requirements. Produce curbs and gutters to required cross section, lines, grades, finish, and jointing as specified for formed concrete. If results are not approved, remove and replace with formed concrete.

2. Finishing

- a. Exposed surfaces shall be floated and finished with a smooth wood float until true to grade, section and uniform in texture. Floated surfaces shall then be brushed with a fine-hair brush with longitudinal strokes. The edges of the gutter and top of the curb shall be rounded with an edging tool to a radius of $\frac{1}{4}$ inch. Immediately after removing the front curb form, the face of the curb shall be rubbed with a wood or concrete rubbing block and water until blemishes, form marks, and tool marks have been removed. The front curb surface, while still wet, shall be brushed in the same manner as the gutter and curb top. The top surface of gutter and entrance shall be finished to grade with a wood float.
- b. Finished surfaces shall not vary more than $\frac{1}{4}$ inch from the testing edge of a 10-foot straightedge. Permissible deficiency in section thickness will be up to $\frac{1}{4}$ inch.

3.08 CONCRETE PAVING

A. Subgrade Preparation.

1. Concrete Paving subgrade shall be constructed to specified grade and cross section.
2. Subgrade shall be placed and compacted in conformance with the contract documents and applicable City of Alpharetta Standard Drawings.
3. Subgrade shall be maintained in a smooth, compacted condition in conformity with the required section and established grade until concrete is placed.

B. Subgrade Testing.

1. Prior to concrete placement, Contractor shall have subgrade of concrete paving tested by the City's selected testing agency per the requirements outlined in section "02310 Grading" and The City of Alpharetta Standard Drawings.
2. If at any point it rains on subgrade prior to concrete placement, Contractor shall have subgrade re-tested by the City's selected testing agency. Any areas that fail shall be undercut and replaced with clean, compacted fill at no additional cost to the Owner.

C. Concrete Testing: The Contractor shall provide molded concrete specimens for strength tests. Testing of concrete shall be made at the following frequencies:

1. For each mix poured, a minimum of one set of cylinders shall be made per day or for each 18 CY of concrete placed.
2. Additional tests may be required as determined by the City representative.

D. Formwork.

1. Set, brace and secure forms, bulkheads and intermediate screed guides to required lines, grades and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least twenty-four (24) hours after concrete placement.

2. Clean forms after each use and coat with form release agent to ensure separation from concrete without damage.

E. Reinforcement.

1. Install reinforcing as required on the plans and City of Alpharetta Standard Drawings.
2. Comply with CRSI's "Manual of Standard Practice" for fabricating reinforcement and with recommendations in CRSI's "Placing Reinforcing Bars" for placing and supporting reinforcement.
3. Clean reinforcement of loose rust and mill scale, earth, ice, or other bond-reducing materials.
4. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement. Maintain minimum cover to reinforcement.
5. Install welded wire fabric in lengths as long as practicable. Lap adjoining pieces at least one full mesh, and lace splices with wire. Offset laps of adjoining widths to prevent continuous laps in either direction.

F. Joints and Spacing

1. Expansion Joints

- a. Expansion joints shall be installed by means of preformed expansion joint material one-half ($\frac{1}{2}$) inch in thickness cut and shaped to the cross section of existing concrete.
- b. Expansion joints shall be installed where newly poured concrete abuts concrete curbs, catch basins, sidewalk, fixed objects, structures, pour breaks, where indicated on the City of Alpharetta Standard Drawings or as requested by the City representative.
- c. Expansion joints shall be installed at all radius points and structures.
- d. Extend expansion joints the full width and depth of joint.
- e. Place top of expansion material flush with finished concrete surface.
- f. Furnish expansion joints in one-piece lengths. Where more than one length is required, lace or clip sections together.

2. Contraction joints

- a. Contraction joints shall be installed by forming or tooling a joint with a minimum depth of one-quarter ($\frac{1}{4}$) inch. Radius of tooled edges shall be one-quarter ($\frac{1}{4}$) inch.
- b. Contraction joints shall be installed where indicated on the City of Alpharetta Standard Drawings or as requested by the City Representative.

G. Placement and Finish

1. Placement

- a. Prior to placing concrete the City Representative must inspect and approve formwork and subgrade preparation.
- b. Do not add water to concrete during delivery, at the project site or during placement unless approved by the City Representative. With the approval of the City Representative, water may be added at the project site prior to test sampling and placement. The amount of water added shall not exceed the maximum allowable water amount specified on the delivery ticket. If the delivery ticket does not contain the maximum allowable water to be added at the site, the City Representative may prohibit the use of additional water.
- c. If at any point it is determined by the City Representative that the concrete delivered to the project site does not meet the specifications provided, the City Representative can reject the load of concrete. If rejected the load of concrete shall be promptly removed from the site at the Contractor's expense.
- d. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness.
- e. Contractor shall pull wire mesh up while placing concrete to ensure wire mesh is installed at the required elevations per plans.
- f. Produce concrete paving to required cross section, lines, grades, finish, and jointing as specified.

2. Finishing

- a. After screeding, when most of the water sheen has disappeared, and just before the concrete hardens, the surface shall be finished with a wood float or darby to a smooth and uniformly fine granular or sandy texture free of waves, irregularities, or tool marks. A scored surface shall be produced by brooming with a fiber-bristle brush in a direction transverse to that of the traffic, followed by edging.
- b. Finished surfaces shall not vary more than $\frac{1}{4}$ inch from the testing edge of a 10-foot straightedge. Permissible deficiency in section thickness will be up to $\frac{1}{4}$ inch.

3.09 CONCRETE SIDEWALK AND MULTI-USE TRAILS

A. Protection

1. Contractor shall not encroach upon any areas outside the proposed limit of disturbance. Equipment shall not twist, turn, or backup into woodland spaces outside the area of the graded trail unless approved by the City representative.
2. Contractor shall not park vehicles, store or stage any materials or equipment under the overhanging branches or the drip line of trees to be saved. Drip line is defined as the area of

ground perpendicularly below the outer reaches of the trees' branches.

3. In delineated wetland areas, elevated boardwalk is proposed. The contractor must prevent disturbance of the existing grade and prevent the placement of fill material within the wetland. All vegetation to be cleared shall be cut to the ground with stumps remaining. Use construction mats for all removal and construction activity in wetland areas.
4. Contractor shall review all construction adjustment considerations with the City representative prior to implementation.

B. Subgrade Preparation

1. Concrete Sidewalk subgrade shall be constructed to specified grade and cross section.
2. Subgrade shall be placed and compacted in conformance with the contract documents and applicable City of Alpharetta Standard Drawings.
3. Subgrade shall be maintained in a smooth, compacted condition in conformity with the required section and established grade until concrete is placed.

C. Subgrade Testing

1. Prior to concrete placement, Contractor shall have subgrade of concrete sidewalk tested by the City's selected testing agency per the requirements outlined in section "02310 Grading" and The City of Alpharetta Standard Drawings.
2. If at any point it rains on subgrade prior to concrete placement, Contractor shall have subgrade re-tested by the City's selected testing agency. Any areas that fail shall be undercut and replaced with clean, compacted fill at no additional cost to the Owner.
3. Additional stabilization of poor subgrade areas may be necessary to achieve compaction criteria for aggregate base. These additional subgrade stabilization measures shall be performed under the direct supervision of the City's selected testing agency. These measures may include, but are not limited to, placement of geogrid reinforcement materials, aggregate bridge lifts, undercutting of unsuitable soils, and use of surge stone or #57 stone.

D. Concrete Testing: The Contractor shall provide molded concrete specimens for strength tests. Testing of concrete shall be made at the following frequencies:

1. For each mix poured, a minimum of one set of cylinders shall be made per day or for each 18 CY of concrete placed.
2. Additional tests may be required as determined by the City Representative.

E. Formwork.

1. Set, brace and secure forms, bulkheads and intermediate screed guides to required lines, grades

and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least twenty-four (24) hours after concrete placement.

2. Clean forms after each use and coat with form release agent to ensure separation from concrete without damage.
3. Form sidewalk to ensure there is no more than 2.08 % or ¼ inch per foot cross slope from front to back of sidewalk per City of Alpharetta Standard Drawings.

F. Reinforcement.

1. Install reinforcing as required on the plans and City of Alpharetta Standard Drawings.
2. Comply with CRSI's "Manual of Standard Practice" for fabricating reinforcement and with recommendations in CRSI's "Placing Reinforcing Bars" for placing and supporting reinforcement.
3. Clean reinforcement of loose rust and mill scale, earth, ice, or other bond-reducing materials.
4. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement. Maintain minimum cover to reinforcement.
5. Install welded wire fabric in lengths as long as practicable. Lap adjoining pieces at least one full mesh, and lace splices with wire. Offset laps of adjoining widths to prevent continuous laps in either direction.

G. Joints and Spacing

1. Expansion Joints
 - a. Expansion joints shall be installed by means of preformed expansion joint material one-half (½) inch in thickness cut and shaped to the cross section of existing concrete.
 - b. Expansion joints shall be installed where newly poured concrete abuts concrete curbs, catch basins, sidewalk, driveway aprons, fixed objects, structures, pour breaks, where indicated on the City of Alpharetta Standard Drawings or as requested by the City Representative.
 - c. Expansion joints shall be installed at all radius points and structures.
 - d. Expansion joints shall be installed at fifty (50) foot intervals.
 - e. Extend expansion joints the full width and depth of joint.
 - f. Place top of expansion material flush with finished concrete surface.
 - g. Furnish expansion joints in one-piece lengths. Where more than one length is required, lace or clip sections together.
2. Contraction joints

- a. Contraction joints shall be installed by forming or tooling a joint with a minimum depth of one-quarter ($\frac{1}{4}$) inch. Radius of tooled edges shall be one-quarter ($\frac{1}{4}$) inch.
- b. Contraction joints shall be installed where indicated on the City of Alpharetta Standard Drawings or as requested by the City Representative.

H. Placement and Finish

1. Placement

- a. Prior to placing concrete, the City Representative must inspect and approve formwork and subgrade preparation.
- b. Do not add water to concrete during delivery, at the project site or during placement unless approved by the City Representative. With the approval of the City representative, water may be added at the project site prior to test sampling and placement. The amount of water added shall not exceed the maximum allowable water amount specified on the delivery ticket. If the delivery ticket does not contain the maximum allowable water to be added at the site, the City Representative may prohibit the use of additional water.
- c. If at any point it is determined by the City Representative that the concrete delivered to the project site does not meet the specifications provided, the City Representative can reject the load of concrete. If rejected the load of concrete shall be promptly removed from the site at the Contractor's expense.
- d. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness.
- e. Contractor shall pull wire mesh up while placing concrete to ensure wire mesh is installed at the required elevations per plans.
- f. Produce concrete sidewalk to required cross section, lines, grades, finish, and jointing as specified.
- g. Where reinforcing bars are indicated, Contractor shall consolidate placed concrete with mechanical vibrating equipment according to ACI 301.

2. Finishing

- a. After screeding, when most of the water sheen has disappeared, and just before the concrete hardens, the surface shall be finished with a wood float or darby to a smooth and uniformly fine granular or sandy texture free of waves, irregularities, or tool marks. A scored surface shall be produced by brooming with a fiber-bristle brush in a direction transverse to that of the traffic, followed by edging.
- b. Finished surfaces shall not vary more than $\frac{1}{4}$ inch from the testing edge of a 10-foot straightedge. Permissible deficiency in section thickness will be up to $\frac{1}{4}$ inch.

3.10 ADA REQUIREMENTS

- A. Sidewalk: Contractor shall construct sidewalks per City of Alpharetta Standard Drawings. Cross slope shall not exceed $\frac{1}{4}$ Inch per foot (2.08%) for the full width of sidewalk.
- B. Multi-Use Trails: Contractor shall construct trails per the drawings. Cross slope shall not exceed $\frac{1}{4}$ Inch per foot (2.08%) for the full width of trails. Running slopes of trails shall be as noted on drawings, with the following tolerances: 5% and less for any distance. Between 5 and 8.33% for up to 200 linear feet. Between 8.33 and 10% for up to 30 linear feet. Between 10 and 12.5% for up to 10 linear feet.
- C. Driveway Aprons: Contractor shall construct driveway aprons per City of Alpharetta Standard Drawings. Cross slope of driveway aprons where sidewalk passes through shall not exceed $\frac{1}{4}$ Inch per foot (2.08%) for the full width of sidewalk.
- D. Handicap Ramps: Contractor shall construct handicap ramps per the City of Alpharetta Standard Drawings. Landing slopes shall not exceed $\frac{1}{4}$ Inch per foot (2.08%) in any direction. Ramp longitudinal slope shall not exceed 1 inch per foot (8.33%) at any point. Ramp cross slope shall not exceed $\frac{1}{4}$ Inch per foot (2.08%) at any point.
- E. If existing grades do not permit ADA compliance the City Representative shall determine the required slopes to be met.

END OF SECTION

SECTION 02900
LANDSCAPING
(Revised 09/29/2022)

PART 1 – GENERAL

1.01 SCOPE OF WORK

- A. Provisions established within the General and Supplementary Conditions of the Contract, Division 1 – General Requirements, and the Construction Drawings are collectively applicable to this section.
- B. Extent of landscape work is indicated on Drawings and in Schedules. Where specifications and plans contradict, the more stringent requirements shall apply. Where written and drawn quantities contradict, the drawn quantities shall apply.
- C. Provide all labor, material and equipment required or inferred from Drawings and Specifications to complete the Work of this Section.

1.02 QUALITY ASSURANCE

- A. Reference Standards:
 - 1. Standardized Plant Names, 1988 edition, by the American Joint Committee on Horticultural Nomenclature.
 - 2. American Standard for Nursery Stock, ANSI Z-60.1, 2014 edition, by American Horticulture Industry Association.
- B. Source Quality Control:
 - 1. General: The only plant material accepted will be grown in an established nursery within industry standard horticultural practice. The stock will be free of disease, insects, eggs, larvae, and defects such as knots, sun-scald, injuries, abrasions or disfigurement.
 - 2. Inspection of Plant Material prior to Digging:
 - a. Contractor will secure all plant material to be supplied for the Project and inform the City Representative in writing of supplier location(s) within ten (10) days of the Contract being awarded.
 - b. City Representative reserves the right to approve 100% of plant materials for the Project provided by the Contractor's sources.
 - c. Should the plant material be determined unacceptable, the Contractor will pursue other sources until acceptable plant material is obtained, at no additional cost to the City of Alpharetta.

- d. Approval at the plant source or by other means of communication such as email does not affect the City's right to reject material at the time of delivery or before, during or after installation.
 - e. Contractor will inform the City Representative 72 hours prior to delivery of plant material to arrange for an inspection. The City Representative reserves the right to be present during delivery and to inspect the plant material prior to installation. The City Representative may reject plant materials at this time. Approval of delivered material does not affect the City's right to reject material before, during or after installation.
- 3. Shipping:
 - a. Landscape materials will be shipped with certificates of inspection as required by governing authorities. Inspection by Federal and/or State Governments at the site does not preclude rejection of plant material by the City Representative. Plants must be properly prepared for shipment to avoid damage.
 - b. Plant material may be rejected if not properly shipped. Water plant material during shipment as needed to avoid damage.
 - c. Do not ship plant material when temperatures are below 20 degrees Fahrenheit.
- C. Analysis and Standards: Package standard products with manufacturer's certified analysis. For other materials, provide analysis by a recognized laboratory.
- D. Do Not Make Substitutions: If specified landscape material is not available, submit to the City Representative proof of non-availability from reliable nursery sources (AmericanHort members) and proposal for use of equivalent material. Proof of non-availability must be submitted if the plant in question is not available in the Eastern United States.

1.03 SUBMITTALS

- A. Material Approvals: All materials requiring approval by the City Representative must be submitted so that approval is obtained **prior to beginning of Work**.

Standard landscape materials that require samples to be submitted for approval include, but are not limited to:

 - 1. Hardwood Mulch
 - 2. Organic Compost Product (with certified analysis)
 - 3. Off-site Fill/Backfill Dirt (with soil test report)
 - 4. Root Barrier (at discretion of the City, product cut-sheet may be accepted in lieu of sample)
- B. Soil Test Reports: When soil test reports are required, obtain reports from a City approved laboratory such as UGA Cooperative Extension Office. Reports shall not be older than 30 days at time of submittal to City. Cost of soil test reports shall be borne by the Contractor.

Reports shall be based on the specified “crop” and include the following data:

1. Existing and Recommended pH levels.
 2. Existing phosphorous, potassium, calcium, magnesium, zinc, and manganese content.
 3. Recommended nutrient (fertilizer, lime, etc.) applications.
- C. Certified Analysis: Organic Compost Products (OCP) must provide Certified Analysis that includes all the Soil Test Report content outlined above. Additionally, it must include Organic Matter (OM) content. The analysis may be obtained from the OCP manufacturer or an independent lab. Certified Analysis shall not be older than 90 days at time of submittal to City.
- D. Planting Schedule: At least one week prior to beginning work, Contractor must submit a planting schedule with dates outlining the different components/stages of the project from start to finish.
- E. Certifications: Prior to beginning work, submit certificates of inspection (if required by governmental authorities), certified analysis for soil amendments and fertilizer materials, and any other data needed to establish that materials comply with specified requirements.
- F. Approval and Selection of Materials and Work: The selection of all Materials and the execution of all Work required under the Drawings and Specifications are subject to the approval of the City Representative. The City Representative has the right to reject any and all materials and all Work which, in their opinion, does not meet the requirements of the Contract Documents at any stage of the work operations. The Contractor shall remove rejected work and or materials from Project site and replace promptly.

1.04 DELIVERY, STAGING, AND HANDLING

- A. Packaged Materials: Deliver packaged materials in containers displaying weight, analysis, and name of manufacturer. Protect materials from damage during delivery and while stored on site.
- B. Sod: Sod should be delivered and installed within 24 hours of cutting and shall be protected from drying and breaking until installation is complete. **Sod shall not be allowed to be staged at the work site for more than 6 hours prior to installation.**
- C. Trees, Shrubs and Groundcover: Provide freshly dug trees and shrubs. Do not prune prior to delivery. Do not damage bark or branches in handling. Cover and protect during shipment.
- D. Delivery and Staging: Deliver trees and other plant material AFTER planting preparations have been completed and install IMMEDIATELY. Any delay of planting exceeding 6 hours requires proper staging and storage including: Daily watering as needed to keep roots moist, protection from severe weather, wildlife, and other physical damage. Stage all trees, shrubs, and other plants in a shaded area.
- E. Labels: Label at least one tree and one shrub of each variety with a securely attached waterproof tag designating its botanical and common name. Do not remove labels on plant materials until Final Acceptance by Owner.

1.05 JOB CONDITIONS

- A. Insurance on plant material and other stored or installed materials is the responsibility of the Contractor. The Contractor is liable for any losses due to theft, fire or vandalism incurred prior to date of Substantial Completion of the work. Owner shall in no way be held responsible for any loss of plant material and other stored or installed materials due to fire, theft, or vandalism.
- B. Proceed with and complete all landscape work as soon as portions of the site become available.
- C. Existing Utilities: Locate all underground utilities. Avoid possible damage to utilities. All damages to utilities resulting from this contract work will be repaired at the Contractor's expense. Contractor must notify the City Representative of any conflicts between proposed plant material and underground/overhead utilities.
- D. Excavations: When conditions detrimental to plant growth are encountered, such as debris, poor drainage, or other subsurface deterrents, immediately notify City Representative in writing.
- E. Planting Schedule: Prepare a proposed planting schedule per Section 1.03. Coordinate the schedule as needed with the general Contractor and/or any other concerned subcontractors. Plant trees after final grades are established and prior to planting of sod, unless otherwise stated. If planting of trees and other large plant material occurs after sodding work, protect sodded areas and promptly repair damage to sodded areas resulting from planting operations.

1.06 WARRANTY

- A. Warranty: Following the date of Substantial Completion, the Contractor shall warranty all materials against any defects or death as follows:
 - 1. **All shrubs, groundcovers and other plants, turf, irrigation, lighting, etc. shall be warrantied for a one-year period.**
 - 2. **All trees shall be warrantied for a two-year period.**Defects and death shall be determined by the City Representative. Damage by others or severe acts of nature beyond the Contractor's control are excepted.
- B. Removal and Replacement: Remove and replace all dead, defective, or undesirable plant material as soon as noticed or directed by the City Representative, during the warranty period. Make replacements as soon as possible during the next acceptable planting season (Spring or Fall) as directed by the City Representative. All replacements will be at the expense of the Contractor.
- C. Replacement Material: Replacements must match the original specifications, including size, species, variety, part number, etc. Replacements are subject to all requirements stated in the Contract Documents. **All replacements will carry the original specified warranty for that item, beginning upon the replacement planting date.** For example, a tree planted in January that dies during its first summer and is then replaced on November 1st shall result in the start of a new two-year warranty on the November 1st replacement date.

1.07 TRAFFIC CONTROL

- A. **The Contractor shall be fully responsible for traffic control on the project.**
- B. Traffic control shall comply with the Manual for Uniform Traffic Control Devices (MUTCD), Latest Edition.
- C. The Contractor shall submit a traffic control plan to the City Representative for approval. The traffic control plan shall detail all lane shifts, lane closures, detours, barrel spacing, etc. and shall comply with the Manual for Uniform Traffic Control Devices (MUTCD), Latest Edition.
- D. **Contractor shall not impact traffic before 9:00 AM and after 4:00 PM.**

PART 2 – PRODUCTS

2.01 ORGANIC COMPOST PRODUCTS (OCP)

Planting soils shall be amended with an Organic Compost Product, such as *Sugar Hill Soil Conditioner* by Cowart Mulch, as outlined in Section 3.02 of this document. The proposed OCP must include Certified Analysis and must be pre-approved by the City Representative prior to beginning work.

2.02 FERTILIZER AND OTHER SOIL NUTRIENTS

Contractor must provide nutrient applications (fertilizer, lime, etc.) as recommended by the Soil Test Report for each planting location. Products must be applied at the rate specified per Soil Test Report and according to manufacturer's instructions. All fertilizers must be slow-release products, unless otherwise specified. Proposed fertilizer/nutrient products must be pre-approved by the City Representative prior to application.

2.03 PLANT MATERIALS

A. General:

1. Provide plants true to species and variety, complying with recommendations of ANSI Z60.1-2014 "American Standard for Nursery Stock".
2. Specific requirements concerning plant material are shown on the Drawings and Plant List (or Plant Schedule).

B. Quality and Size:

1. Furnish nursery grown plants that are well branched, fully foliated when in leaf, and with healthy well developed root systems. Shrubs must have self-supporting stems. All plants must be disease free and without insect infestation (all life stages).
2. Provide vigorous plants with full and symmetrical form, unless otherwise called for.
3. Provide trees and shrubs of sizes specified. Trees and shrubs of larger size may be used if acceptable to the City Representative. If larger sizes are approved, root balls must be increased proportionately per ANSI Z260.1-2014 standards. The increased size will not result in additional cost to the Owner.
4. Within specified size ranges, not less than 50% of the plants must be of the larger size specified. For example, an 8'-10' height specification requires that not less than 50% of the plants are 10' height.
5. Balled and Burlapped Plants: Plants designated "B&B" are to have firm root balls of natural soil and corresponding to the minimum sizes specified in ANSI Z60.1-2014 "American Standard for Nursery Stock". Root balls shall be firmly wrapped in biodegradable burlap and securely tied with biodegradable heavy twine, rope and/or wire baskets. Plants with loose, broken, or manufactured root balls will be rejected. During transportation and other movement, **Root balls shall be lifted from the bottom only. Plants/trees shall not be lifted by stems or trunks.**
6. Container grown plants in plastic containers will be acceptable in lieu of balled and burlapped plants, provided they are of specified size and quality. The container must be removed with care exercised to prevent injury to the plant and roots prior to planting.

C. Trees:

1. Provide trees of size and caliper specified and with branching configuration recommended by ANSI Z60.1-2014 for type and species. Provide single stem trees except where other forms are specified. Provide minimum clear trunk height as specified.
2. Caliper shall be measured 6" above ground for trees up to and including 4" caliper. Trees over 4" caliper shall be measured 12" above ground. **Specified height and spread dimensions refer to the main body of the plant, not a dimension between individual branch tips.** Take measurements with branches in natural position.
3. Unless otherwise directed, do not limb-up tree canopies before planting. Otherwise, prune as directed by the City Representative.

D. Groundcovers:

Provide established and well-rooted groundcover plants, in removable containers or integral peat pots, having not less than the minimum number and length of runners for the pot size specified per ANSI Z60.1-2014.

E. Grass:

1. When grassing/sodding areas adjacent to residential or commercial lawns, grassing/sodding shall match the species and cultivar of grass growing on the adjacent lawn.
2. Grass Seed: Provide fresh, clean, new crop-seed complying with tolerance for purity and germination established by Official Seed Analysts of North America. Provide seed of grass species, proportions and minimum percentages of purity, germination, and maximum percentage of weed seed as specified.
3. **Sod: Unless otherwise specified, all sod shall be GCIA certified TifTuf™ Bermuda grass.** Provide strongly rooted sod, not less than two years old and free of weeds and undesirable native grasses. Only provide sod capable of growth and development at time of planting. Provide machine cut sod with a uniform minimum soil thickness of 5/8 inch, not including the thickness of top growth and thatch. Sod pieces to be consistent in size and shape.

2.04 MISCELLANEOUS LANDSCAPE MATERIALS

- A. Burlap for wrapping earthball shall be biodegradable jute mesh not less than 7.2oz per square yard. Wrapping materials made from man-made fibers are prohibited.
- B. Stakes: Unless otherwise stated, stakes shall be 2"x2" wide and pressure treated.
- C. Anchors: #4 rebars or comparable size steel stakes, 36" in length.
- D. Filter Cloth: Rot resistant polypropylene filter fabric, water permeable and unaffected by freeze-thaw.
- E. Drainage Gravel: Clean crushed stone no larger than 1" diameter.
- F. Water: Water sourcing and transportation is the sole responsibility of the Contractor.
- G. Mulch:
 1. Unless otherwise indicated on the plans, mulch shall be pine straw. Pine straw shall be clean, fresh, dark brown, and free of branches, cones, foreign matter, insects, and disease. Mulch installation shall adhere to specifications as set forth within this document or on plan details.
 2. When plans specify hardwood mulch, Contractor shall submit a sample to the City Representative for approval prior to work. Hardwood mulch shall be clean, fresh, and free of branches, leaves, pine needles, manufactured wood products, foreign matter, insects, and

disease. Mulch installation shall adhere to specifications as set forth within this document or on plan details.

- H. Anti-Desiccant: If used, anti-desiccant must be an emulsion-type film-forming agent designed to permit transpiration but retard excessive loss of moisture from plants. Deliver for use in manufacturer's original containers/packaging and apply in accordance with manufacturer's instructions.

PART 3 - EXECUTION

3.01 PREPARATION

A. General:

1. Contractor shall examine conditions under which planting is to be installed, review applicable survey drawings, and confirm location of underground utilities before digging.
2. Planting operations are to be performed according to specific dates indicated on plans.
If specific dates are not indicated on plans, planting shall be performed as follows:
Trees: November 1 to February 28
Shrubs, Groundcovers, and Other Plants: April 1 to April 30

No installation of plant material shall take place during official City Holidays or from December 24 through January 1. The Contractor guarantees the plant material as specified. Plant only during suitable weather conditions and seasons.

3. Lay out tree and shrub locations and areas for mass plantings. Flag tree locations, outline areas and secure City Representative's acceptance before start of excavation for planting work. Adjust layouts as requested by the City Representative.
4. Notify City Representative of adverse sub-surface drainage or soil conditions. State conditions and submit a proposal for correction, including costs if necessary. Obtain approval for method of correction prior to continuing Work in the affected area. If alternate locations are selected, the Contractor shall prepare such areas at no additional expense to the Owner unless otherwise agreed to between both parties prior to proceeding.

B. Excavation for Trees and Large Shrubs:

1. Excavate planting pits according to drawings and written specifications.
2. Loosen hardpan until broken and water can drain freely.
3. For balled and burlapped (B&B) trees and shrubs, make excavations at least 3x the width of the root ball diameter for the top 1/3 of the planting pit. For the remaining depth of the pit, excavate 2x the width of the root ball diameter. Planting pit shall be dug to a depth so that the

top of the root ball is 1”- 2” above the surrounding grade. **City Representative must approve sample tree pit prior to tree planting.**

4. For container grown stock, excavate as specified for B&B stock, substituting container width for root ball width.

C. Drainage Testing:

For all tree and large shrub pits: Fill each pit ¼ full of water. If percolation is less than 100% within the following 12 hours, drill a ten-inch diameter auger hole to a depth of 4’ (four feet) below the bottom of the pit. Fill auger hole with drainage gravel and cover with filter cloth. Perform new drainage test. If drainage is still unsatisfactory, Contractor must notify City Representative in writing of the locations with unsatisfactory drainage so that a solution can be arrived at before planting.

3.02 PLANTING SOIL PREPARATION

The top 12” of soil in areas to be planted with trees, shrubs, groundcovers, and other plants shall be a soil mix of:

75% Existing Native Soil

25% Organic Compost Product (OCP)

Planting areas shall be prepared as follows:

Soil Preparation within Medians and Beauty Strips

On new construction, medians and beauty strips (greenspace between curb and sidewalk) shall typically be pre-graded in preparation of landscape work so that the existing soil surface is 6” below the top of curb/sidewalk. The Landscape Contractor shall prepare a planting soil mix there as follows:

- A. Prior to work, Landscape Contractor shall first confirm grades are 6” below the top of curb/sidewalk.
- B. Rid existing soil surface of all foreign material $\geq$ the size of a golf ball. This includes rocks, stones, roots, sticks, clay clods, trash, etc. Other extraneous materials harmful or toxic to plant growth, such as asphalt and concrete, must be removed in their entirety before planting soil preparation.
- C. Spread 3” layer of approved OCP over the prepped existing native soil within the entire planting area. Till the OCP into the top 9” of underlying native soil. Hand-grade the tilled soil mix so that the surface of it is 3” below the top of curb/sidewalk. Allow for settling. The remaining 3” between the top of the soil mix and the top of curb/sidewalk shall be mulched after plant installation. **NOTE: Additional planting soil mix may be necessary to grade planting areas per planting details. For example, crowned planting areas within medians.**

Soil Preparation for Planting Beds Constructed On Existing Grade

In locations where planting beds are to be constructed on existing ground (grade), the Landscape Contractor shall prepare a planting soil mix as follows:

- A. Lay out planting beds on the ground as shown on the plans. **Bed layout to first be approved by City Representative prior to proceeding with the following steps.**

- B. Remove any existing turf, weeds, or other vegetation within entire planting bed area.
- C. Outline bed area with a trench edge.
- D. Rid existing soil surface of all foreign material $\geq$ the size of a golf ball. This includes rocks, stones, roots, sticks, clay clods, trash, etc. Other extraneous materials harmful or toxic to plant growth, such as asphalt and concrete, must be removed in their entirety before planting soil preparation.
- E. Spread 3" layer of approved OCP over the prepped existing native soil within the entire bed area. Till the OCP into the top 9" of underlying native soil. Allow for settling. **NOTE: Additional planting soil mix may be necessary to grade planting areas per planting details. For example, a planting bed area for which details call for a 6" crown.**
- F. Fine grade planting areas to ensure positive drainage after settlement has occurred. Slope surface of shrub beds to drain toward the trench edge.

Soil Preparation in Planting Pits for Trees and Large Shrubs

For tree and large shrub installation in individual planting pits outside of larger planting areas such as medians or planting beds, the Landscape Contractor shall prepare a planting soil mix for backfill as follows:

- A. Excavate planting pits according to plan details and written specifications.
- B. Amend excavated native soil with OCP so that resulting soil mixture is comprised of 25% OCP and 75% native soil. OCP must be thoroughly mixed into native soil.
- C. Backfill soil mixture into planting pit according to plan details and written specifications. Allow for settling.

Soil Preparation using Off-Site Soil Source

In areas where the existing native soil volume is insufficient to create the required amount of planting soil mix, off-site soil can be utilized. **However, the Contractor must first obtain pre-approval for the off-site soil from the City Representative.** Upon approval from the City Representative, the Landscape Contractor shall prepare a planting soil mix as follows:

- A. Amend off-site soil with OCP so that resulting soil mixture is comprised of 25% OCP and 75% off-site soil. For example, to prepare 10 cubic yards of planting soil, mix 2.5 cubic yards of OCP + 7.5 cubic yards of off-site soil. OCP must be thoroughly mixed into off-site soil.
- B. Backfill prepared soil mixture into planting areas as needed and according to plan details and written specifications. Allow for settling.

NOTE: Upon completion of preparation/installation of planting soil mix, Contractor must obtain Soil Test Reports for all locations where planting soil mix has been prepared and installed. Soil Test Reports must comply with Section 1.03 B of this document. Once reports are obtained, the Contractor shall apply nutrients (fertilizer, lime, etc.) to the corresponding planting areas as recommended by the

Soil Test Reports. Nutrients shall be applied 3-7 days prior to plant installation, unless otherwise directed by the product label.

3.03 PREPARATION OF SEASONAL COLOR BEDS

- A. Lay out seasonal color beds on the ground as shown on the plans. **Bed layout to first be approved by City Representative prior to proceeding with the following steps.**
- B. Excavate top 4" of existing soil. Break through any existing hardpan and remove all stone, roots, debris, etc. Remove excavated soil.
- C. Till excavated bed area to a depth of 6".
- D. Outline bed area with a trench edge.
- E. Backfill seasonal color bed with a soil mix best suited for seasonal color plants. **Soil mix must be pre-approved by the City.** Crown seasonal color bed for proper drainage towards edges. High point of bed should be constructed a minimum of 6" above surrounding grade. Add drainage pipe if necessary to ensure proper drainage.

3.04 PREPARATION OF LAWN/TURF AREAS

- A. **Obtain Soil Test Reports from existing soil within the lawn/turf areas. Reports shall be referred to as outlined in Section D below.**
- B. Remove existing grass/sod or other vegetation within proposed lawn/turf area. Dispose of such material off site.
- C. Till/loosen the surface of new lawn/turf areas to a minimum depth of 6". Rid soil surface of all foreign material $\geq$ the size of a golf ball. This includes rocks, stones, roots, sticks, clay clods, trash, etc. Other extraneous materials harmful or toxic to plant growth, such as asphalt and concrete, must be removed in their entirety.
- D. Prior to start of lawn/turf installation, apply ground limestone at the rate recommended by the Soil Test Report(s) and work into top 6" of soil.
- E. Prior to start of lawn/turf installation, apply fertilizer at the rate recommended by Soil Test Report(s) and work into top 2" of soil. The fertilizer application shall not precede the placement of sod by more than three days.
- F. Grade lawn/turf areas to a smooth even surface with loose fine-textured soil. Roll and rake areas as required to meet finish grades. **Limit fine grading to areas which can be planted immediately afterwards.**
- G. Prior to start of lawn/turf installation, repair any surface areas that have become eroded or otherwise disturbed after fine grading.

3.05 PLANTING TREES AND LARGE SHRUBS ($\geq$ 15 gallon or 6' height)

- A. For individual planting pits that are located outside of planting beds, prepare soil around each tree/large shrub location **prior to excavation** as follows:
 - 1. Till all soil within a 5' radius of the proposed center of the tree/large shrub to a minimum depth of 9".
 - 2. If lawn/turf is present, remove prior to tilling.
 - 3. Do not till in areas where it will result in damage to existing ornamental vegetation identified to remain.
- B. Excavate planting pit per plan details and written specifications (including Section 3.01 B of this document). Set balled and burlapped (B&B) stock on a layer of compacted planting soil mixture, plumb and in center of pit, with top of root ball 2"-3" above the finish grade. **Loosen and remove top 12" of burlap from root ball. Cut and remove at least the top two rings from wire baskets before backfilling. Cut and remove any visible encircling roots.**
- C. Backfill planting pits with soil amended per Section 3.02 of this document. Lightly compact the backfill around the root ball to eliminate voids and air pockets. When planting pit is backfilled 2/3 full, water thoroughly before placing remainder of backfill.
- D. Install container grown stock exactly as specified above for balled and burlapped stock. Remove containers without damaging root balls. Cut and remove any visible encircling roots.
- E. As needed, apply anti-desiccant if deciduous trees or shrubs are shipped and transplanted in full leaf. Spray with anti-desiccant at nursery before transporting and again after planting as per manufacturer's recommendations.
- F. Construct tree saucers as instructed per plan details and written specifications.
- G. Immediately after planting work has been completed, mulch all planting areas to a minimum depth of 3". **For individual trees, mulch ring must be a minimum radius of 5' (10' diameter). Do not mulch within 5" of trunk/base of trees.** Finish mulch ring edges according to plan details and written specifications.
- H. **All trees and specimen shrubs must be sufficiently watered at time of planting. Sufficient watering is determined by soil conditions, site conditions, weather, and season. Soil moisture must be verified using a soil moisture probe. Initial watering must include a City approved Moisture Manager product, applied per manufacturer's specifications. Water thereafter as required by Section 3.09 D of this document.**
- I. After one week and/or upon full settlement of soil, set trees/large shrubs plumb as needed.
- J. Inspect trees/large shrubs for problems such as injury, disease, insect infestation, etc. Inform City Representative of any found issues.

3.06 STAKING, GUYING, AND PRUNING OF TREES AND LARGE SHRUBS (≥ 15 gallon or 6' height)

- A. Stake and guy trees/large shrubs immediately after planting per plan details and written specifications. Set plumb if needed after staking/guying. Maintain stakes and guys until time of removal.
- B. Contractor must remove all stakes and guys exactly one year after date of Substantial Completion.**
- C. Prune as needed to remove broken or dead branches from trees/large shrubs. Also, prune to remove cross branching that may result in injury to crossed limbs. Do not prune central leaders and other main stems unless directed by the City Representative.

3.07 PLANTING SHRUBS, GROUNDCOVER, AND OTHER PLANTS

- A. Prepare planting beds according to plan details and written specifications, including Section 3.02 of this document.
- B. Remove plants from containers without damaging root balls and set in planting holes per plan specifications.
- C. Backfill planting holes with planting soil mix. Lightly compact the backfill around the root ball to eliminate voids and air pockets.
- D. Immediately after planting work has been completed, mulch all planting areas/beds to a minimum depth of 3". Keep mulch off plant bodies and foliage. Finish mulched area edges according to details and written specifications.
- E. All plants must be sufficiently watered at time of planting. Sufficient watering is determined by soil conditions, site conditions, weather, and season. Soil moisture must be verified using a soil moisture probe. Initial watering must include a City approved Moisture Manager product, applied per manufacturer's specifications. Water thereafter as required by Section 3.09 D of this document.**

3.08 INSTALLING SOD

- A. When sodding areas adjacent to residential or commercial lawns, grassing/sodding shall match the species and cultivar of grass growing on the adjacent lawn unless otherwise specified.
- B. Water soil in area to be sodded PRIOR to installing sod. Soil must be moist but not saturated when laying sod.
- C. Lay sod within 24 hours from time of cutting by grower. Sod shall not be allowed to be staged at the work site for more than 6 hours prior to installation.
- D. Do not install dormant sod.

- E. Do not install sod on frozen ground.
- F. Lay sod to form a solid mass with tightly fitted joints. Do not overlap. Stagger strips. Work from plywood to avoid damage to subgrade or sod. Tamp or roll lightly with water filled roller to ensure contact with subgrade. Work sifted soil into gaps between pieces of sod; remove excess soil to avoid smothering.
- G. Anchor sod with 6" sod staples on slopes where specified or if slippage and/or erosion is anticipated. Lay sod perpendicular to slope direction with staggered joints.
- F. **Water all sod immediately following installation, applying a minimum of 1" of water. The following day, water to apply a City approved Moisture Manager product per manufacturer's specifications. Water thereafter according to plans and written specifications.**

3.09 MAINTENANCE AND WATERING

- A. Begin maintenance immediately after planting. Maintain trees, shrubs, and other plants as necessary to keep healthy and thriving until date of Substantial Completion. Maintain trees, shrubs, and other plants by all accepted horticulture practices such as: watering, pruning, cultivating, spraying for insects and disease. Other maintenance items may include, but not be limited to, touch-up mulching, restoring planting saucers, tightening/repairing stakes and guys, pruning dead and broken limbs, straightening/plumbing trees/plants, adjusting planting depth of trees/plants. **Contractor must remove all stakes and guys exactly one year after date of Substantial Completion of the project.**
- B. Maintain lawn/turf areas until date of Substantial Completion. Maintain lawn/turf areas as needed by watering, weeding, mowing, repairing eroded areas, and re-seeding or re-sodding as necessary to establish thriving and uniform lawn/turf areas.
- C. **All trees and other plants must be sufficiently watered at time of planting and then daily throughout the landscape installation project until project completion. Initial watering must include a City approved Moisture Manager product, applied per manufacturer's specifications. Sufficient watering is determined by soil conditions, site conditions, weather, and season. SOIL MOISTURE MUST BE VERIFIED USING A SOIL MOISTURE PROBE.**

Upon completion of all planting, Contractor is responsible for watering of all trees and plants during year-one as follows:

Trees, Shrubs, Groundcovers, and Other Plants

- Daily during first 2 weeks (10 waterings)
 - Twice weekly during next 6 months (26 wks / 52 waterings)
 - Weekly until established* (24 wks / 24 waterings)
- Total for Year-One = Up to 86 Total Waterings

Trees must be watered via slow-release watering bag product such as *Treegator*. Bags must be installed according to manufacturer's specifications. For example, a double bag setup is often required for trees ≥ 4 " caliper.

Contractor must provide a watering schedule prior to tree/plant installation. If conditions do not require trees/plants to be watered, the Contractor must submit a written explanation to Owner's Representative stating the reason for bypassing watering. Explanations for skipping scheduled watering must be submitted prior to or on the same day watering is bypassed.

Contractor shall submit a weekly watering report to the City. Reports are due each Tuesday for the previous week and shall include the following:

1. Date of each watering visit.
2. Summary of moisture level readings recorded during each watering visit.
3. Percent of project watered.

Contractor shall bill for watering each month based on total watering visits. Invoices for watering are due on the 3rd of each month for the previous month. Invoices must include quantity of watering visits performed for the month.

Failure to meet the above watering requirements without prior written approval by the Owner's Representative may result in reduced payment, bond claims, or potential contract termination.

REGARDING TREES: Upon completion of year-one watering, Contractor must remove all watering bags and replace them with TreeDiaper hydration product "TD48R", unless otherwise specified. TreeDiapers must be installed according to the manufacturer's instructions and covered with mulch to match existing mulch ring or planting bed. **All existing tree saucers must be removed at this time. Soil from tree saucers shall not be placed over roots of trees.**

Contractor will be responsible for TreeDiaper removal exactly one-year after the date of installation.

3.10 CLEAN-UP AND PROTECTION

- A. Keep all work areas including roadways, sidewalks, staging locations, etc. in a safe and orderly condition.
- B. Upon completion of work, remove all debris, materials, and equipment. Any damage inflicted upon the work area or surrounding areas must be repaired to the condition of the site prior to the damage occurrence. For example, damaged sod areas may require grading and re-sodding. Damaged sidewalk panels may require removal and replacement to specifications matching the existing sidewalk.
- C. As necessary, protect installed landscape from damage due to operations by other workers and subcontractors. Maintain protection during installation and maintenance periods. For example, put barricade in place to separate newly installed planting bed from adjacent grading activity for sod installation. Damage to landscape from other workers and subcontractors will be repaired/replaced at no expense to the City.
- D. Theft: Contractor is responsible for theft of any plant material (staged, installed, or otherwise) at the Project Site until date of Substantial Completion.

3.11 INSPECTION AND ACCEPTANCE

- A. Periodic site inspections will be made from time to time by the City Representative to review the quality and progress of the work. Unacceptable work must be corrected within five (5) calendar days.
- B. Upon completion of work, the Contractor shall notify the City Representative at least ten (10) days prior to requested date of Substantial Completion for inspection of all portions of the work. Based upon inspection, the City Representative will issue a punch list for work to be corrected. All work in the punch list must be completed within five (5) working days from receipt of punch list. Where inspected work does not comply with requirements, replace rejected work and continue specified maintenance until reinspected and receipt of Certificate of Substantial Completion by the City Representative.
- C. Certificate of Substantial Completion will be issued for acceptable work. Substantial Completion will not be issued for items with outstanding punch list requirements.
- D. Warranty commences on the date of issuance of the Certificate of Substantial Completion. All new plant material and maintenance is the responsibility of the Contractor. Replacements and repair during the warranty shall be at the expense of the Contractor.
- E. Final Acceptance: One year after the date of Substantial Completion, the Owner will inspect shrubs and groundcovers and associated work for Final Acceptance of those items. Two years after the Date of Substantial Completion the Owner will inspect trees and associated work for Final Acceptance of those items. Upon satisfactory completion of repairs and/or replacements, warranty obligations will have been met.

END OF SECTION 02900

SECTION 999999

MISCELLANEOUS CONSTRUCTION

Line items number 29 is intended for Miscellaneous Construction which may or may not be required on the project as directed/requested by the Engineer. Use of this item will be only as specifically authorized by the City of Alpharetta.

Every effort will be made to negotiate an acceptable price with the Contractor for miscellaneous construction. If the City of Alpharetta is unable to negotiate an agreeable price with the Contractor, Alpharetta reserves the right to negotiate both price and warranties with specialty contractors for this purpose. The Contractor will then be required to include the work authorized, utilizing the authorized specialty subcontractor. A maximum allowance of 5% may be included for overhead purposes of the prime contractor above the negotiated specialty contractor agreement.

For payment purposes, negotiated prices will be converted to a percentage of the Miscellaneous Construction Allocation line item. Payment for this item will be only for amounts authorized by the Engineer. Final Payment may or may not equal 100% of the Lump Sum Price included in the Contract.

END OF SECTION 999999

SPECIFICATIONS FOR HELICAL PILE FOUNDATIONS

BIG CREEK GREENWAY BOARDWALK REPLACEMENT (CITY OF ALPHARETTA)

1. GENERAL

1.1 Purpose of Specification

The purpose of this specification is to detail the furnishing of all materials, tools, equipment, labor supervision, and installation techniques necessary to install helical piles as detailed on the drawings, including connection details. This shall include provisions for load testing that may be part of the scope of work.

1.2 Scope of Work

This work consists of furnishing all necessary, supervision, labor, tools, materials, and equipment to perform all work necessary to install the helical piles, at **Big Creek Greenway Boardwalk Replacement** for **City of Alpharetta** per the specifications described herein, and as shown on the drawings. The Contractor shall install a helical pile that will develop the load capacities as detailed on the drawings.

1.3 Qualifications of the Helical Pile Contractor

The helical pile Contractor shall be experienced in the installation of helical pile foundations and shall furnish all materials, labor, and supervision to perform the work. The Contractor shall provide names of on-site personnel materially involved with the work, including those who carry documented certification of helical pile training. At a minimum, these personnel shall include foreman, machine operator, and project engineer/manager.

The helical pile Contractor shall not sublet the whole or any part of the contract without the express written permission of the Owner.

1.4 Definitions

A partial list follows. *The Owner may wish to add other specific, project-related items.*

Design Load (DL):

Maximum anticipated service load applied to the helical anchor.
Also known as the working load (WL).

Helical Extension:	Helical pile component installed immediately following the lead section, if required. This component consists of one or more helix plates welded to a central steel shaft of finite length.
Helix Plate:	Generally round steel plate formed into a ramped spiral. The helical shape provides the means to install the helical tieback anchor, plus the plate transfers load to soil in end-bearing. Helix plates are available in various diameters and thicknesses.
Lead Section:	The first helical pile component installed into the soil, consisting of single or multiple helix plates welded to a central steel shaft. Helix plates provide end-bearing capacity.
Plain Extension:	Central steel shaft of finite length without helix plates. It is installed following the installation of the lead section or helical extension (if used). The units are connected with integral couplings and bolts. Plain extensions are used to extend the helix plates beyond the specified minimum depth and into competent load bearing stratum.
Safety Factor:	The ratio of the ultimate capacity to the working or design load of the helical pile.
Working Load (WL):	Equivalent term for Design Load.
Ultimate Capacity (UC):	Limit state based on the structural and/or geotechnical capacity of the ground anchor defined as the point at which no additional capacity can be justified.

1.5 Allowable Tolerances

- 1.5.1 Centerline of helical pile shall not be more than 3 inches from indicated plan location.
- 1.5.2 Helical pile plumbness shall be within 2° of design alignment.
- 1.5.3 Top elevation of helical pile shall be within +1 inch to –2 inches of the design vertical elevation.

1.6 Quality Assurance

- 1.6.1 The Contractor shall employ an adequate number of skilled workers who are experienced in the necessary crafts and who are familiar with the specified requirements and methods needed for proper performance of the work of this specification.

- 1.6.2 All helical piles shall be installed in the presence of a designated representative of the Owner unless said representative informs the Contractor otherwise. The designated representative shall have the right to access any and all field installation records and test reports.
- 1.6.3 Helical pile components as specified therein shall be manufactured by a facility whose quality systems comply with ISO (International Organization of Standards) 9001 requirements. Certificates of Registration denoting ISO Standards Number shall be presented upon request to the Owner or their representative.

1.7 Ground Conditions

In consideration of the length of the project, the limited access to the different sites and the potential for varying ground conditions confidence in the performance of the proposed foundation is achieved through the development of calculations for installation torque corresponding to required capacity, completion of a pre-production pile tests as required by Section 6 of these specifications, monitoring of installation torque during the installation of each pile and additional load tests, as directed by the County during the life of the project.

2 REFERENCED CODES AND STANDARDS

Standards listed by reference, including revisions by issuing authority, form a part of this specification section to the extent indicated. Standards listed are identified by issuing authority, authority abbreviation, designation number, title, or other designation established by issuing authority. Standards subsequently referenced herein are referred to by issuing authority abbreviation and standard designation. In case of conflict, the particular requirements of this specification shall prevail. The latest publication as of the issue of this specification shall govern, unless indicated otherwise.

2.1 American Society for Testing and Materials (ASTM):

- 2.1.1 ASTM A29/A29M Steel Bars, Carbon, and Alloy, Hot-Wrought and Cold Finished.
- 2.1.2 ASTM A36/A36M Structural Steel.
- 2.1.3 ASTM A53 Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless.
- 2.1.4 ASTM A153 Zinc Coating (Hot Dip) on Iron and Steel Hardware.
- 2.1.5 ASTM A252 Welded and Seamless Steel Pipe Piles.
- 2.1.6 ASTM A775 Electrostatic Epoxy Coating
- 2.1.7 ASTM A193/A193M Alloy-Steel and Stainless-Steel Bolting Materials for High Temperature Service.
- 2.1.8 ASTM A320/A320M Alloy-Steel Bolting Materials for Low Temperature Service.
- 2.1.9 ASTM A500 Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
- 2.1.10 ASTM A572 HSLA Columbium-Vanadium Steels of Structural Quality.
- 2.1.11 ASTM A618 Hot-Formed Welded and Seamless High-Strength Low-Alloy Structural Tubing.
- 2.1.12 ASTM A656 Hot-Rolled Structural Steel, High-Strength Low-Alloy Plate with Improved Formability.

- 2.1.13 ASTM A1018 Steel, Sheet and Strip, Heavy Thickness Coils, Hot Rolled, Carbon, Structural, High-Strength Low-Alloy, Columbium or Vanadium, and High-Strength Low-Alloy with Improved Formability.
- 2.1.14 ASTM D1143 Method of Testing Piles Under Static Axial Compressive Load.
- 2.1.15 ASTM D3689 Method of Testing Individual Piles Under Static Axial Tensile Load.

2.2 American Welding Society (AWS):

- 2.2.1 AWS D1.1 Structural Welding Code – Steel.
- 2.2.2 AWS D1.2 Structural Welding Code – Reinforcing Steel.

2.3 American Society of Civil Engineers (ASCE):

- 2.3.1 ASCE 20-96 Standard Guidelines for the Design and Installation of Pile Foundations.

2.4 Deep Foundations Institute (DFI):

- 2.4.1 *Guide to Drafting a Specification for High Capacity Drilled and Grouted Micropiles for Structural Support*, 1st Edition, Copyright 2001 by the Deep Foundation Institute (DFI).

2.5 Post Tensioning Institute (PTI):

- 2.5.1 *Recommendations for Prestressed Rock and Soil Anchors*, Third Edition, Copyright 1996 By the Post-Tensioning Institute.

2.6 Society of Automotive Engineers (SAE):

- 2.6.1 SAE J429 Mechanical and Material Requirements for Externally Threaded Fasteners.

3 SUBMITTALS

3.1 Construction Submittals

- 3.1.1 The Contractor shall submit a detailed description of the construction procedures proposed for use to the Owner for review. This shall include a list of major equipment to be used.
- 3.1.2 The technical submittal shall include the following:
 - 3.1.2.a Helical pile number, location and pattern by assigned identification number if not indicated on plans
 - 3.1.2.b Load required of each helical pile
 - 3.1.2.c Type and size of central steel shaft
 - 3.1.2.d Helix configuration (number and diameter of helix plates proposed)
 - 3.1.2.e Minimum effective installation torque
 - 3.1.2.f Minimum depth
 - 3.1.2.g Helical pile attachment to structure relative to grade beam, column pad, pile cap, etc.

3.1.3 The Contractor shall submit shop drawings for all helical pile components, including corrosion protection and pile top attachment to the Owner for review and approval. This includes helical pile lead and extension section identification (manufacturer's catalog numbers).

3.1.4 Work shall not begin until all the submittals have been received and approved by the Owner.

3.2 Installation Records

The Contractor shall provide the Owner copies of helical pile installation records within 24 hours after each installation is completed. Formal copies shall be submitted on a weekly basis. These installation records shall include, but are not limited to, the following information.

- 3.2.1 Name of project and Contractor
- 3.2.2 Name of Contractor's supervisor during installation
- 3.2.3 Date and time of installation
- 3.2.4 Name and model of installation equipment
- 3.2.5 Type of torque indicator used
- 3.2.6 Location of helical pile by assigned identification number
- 3.2.7 Actual central steel shaft type and configuration – including lead section (number and size of helix plates), number and type of extension sections
- 3.2.8 Helical pile installation duration and observations
- 3.2.9 Total length of installed helical pile
- 3.2.10 Cut-off elevation
- 3.2.11 Inclination
- 3.2.12 Installation torque at one-foot intervals for the entire length
- 3.2.13 Comments pertaining to interruptions, obstructions, rate of advancement or other relevant information

4 PRODUCTS AND MATERIALS

4.1 Central Steel Shaft:

The central steel shaft, consisting of lead sections, helical extensions, and plain extensions, shall be **Pipe Shaft** as manufactured by A. B. Chance or approved equal.

4.1.1 *Solid Square Shaft Material (1.5"x1.5")*: Shall be hot rolled Round-Cornered-Square (RCS) solid steel bars meeting dimensional and workmanship requirements of ASTM A29. The bar shall be modified medium carbon steel grade (similar to AISI 1044) with improved strength due to fine grain size.

- 4.1.1.a Torsional strength rating = 5,500 ft-lb
- 4.1.1.b Minimum yield strength = 70 ksi

- 4.1.2 *Solid Square Shaft Material (1.5"x1.5")*: Shall be hot rolled Round-Cornered-Square (RCS) solid steel bars meeting the dimensional and workmanship requirements of ASTM A29. The bar shall be High Strength Low Alloy (HSLA), low to medium carbon steel grade with improved strength due to fine grain size.
- 4.1.2.a Torsional strength rating = 7,000 ft-lb
- 4.1.2.b Minimum yield strength = 90 ksi
- 4.1.3 *Solid Square Shaft Material (1.75"x1.75")*: Shall be hot rolled Round-Cornered-Square (RCS) solid steel bars meeting the dimensional and workmanship requirements of ASTM A29. The bar shall be High Strength Low Alloy (HSLA), low to medium carbon steel grade with improved strength due to fine grain size.
- 4.1.3.a Torsional strength rating: = 11,000 ft-lb
- 4.1.3.b Minimum yield strength = 90 ksi
- 4.1.4 *Solid Square Shaft Material (2.0"x2.0")*: Shall be hot rolled Round-Cornered-Square (RCS) solid steel bars meeting the dimensional and workmanship requirements of ASTM A29. The bar shall be High Strength Low Alloy (HSLA), low to medium carbon steel grade with improved strength due to fine grain size.
- 4.1.4.a Torsional strength rating: = 16,000 ft-lb
- 4.1.4.b Minimum yield strength = 90 ksi
- 4.1.5 *Solid Square Shaft Material (2.25"x2.25")*: Shall be hot rolled Round-Cornered-Square (RCS) solid steel bars meeting the dimensional and workmanship requirements of ASTM A29. The bar shall be High Strength Low Alloy (HSLA), low to medium carbon steel grade with improved strength due to fine grain size.
- 4.1.5.a Torsional strength rating: = 23,000 ft-lb
- 4.1.5.b Minimum yield strength = 90 ksi
- 4.1.6 *Pipe Shaft Material (2.875" O.D.)*: Shall be structural steel tube or pipe, seamless or straight-seam welded, per ASTM A500 Grade B. Wall thickness is 0.203" (schedule 40).
- 4.1.6.a Torsional strength rating = 5,500 ft-lb
- 4.1.6.b Minimum yield strength = 50 ksi
- 4.1.7 *Pipe Shaft Material (2.875" O.D.)*: Shall be structural steel tube or pipe, seamless or straight-seam welded, per ASTM A500 Grade B. Wall thickness is 0.276" (schedule 80).
- 4.1.7.a Torsional strength rating = 8,000 ft-lb
- 4.1.7.b Minimum yield strength = 50 ksi

4.1.8 *Pipe Shaft Material (3.5" O.D.):* Shall be structural steel tube or pipe, seamless or straight-seam welded, ASTM A53, A252, A500, or A618. Wall thickness is 0.300" (schedule 80).

4.1.8.a Torsional strength rating = 13,000 ft-lb

4.1.8.b Minimum yield strength = 50 ksi

4.2 Helix Bearing Plate:

Helix plates material shall be hot rolled carbon steel sheet, strip, or plate formed on matching metal dies to true helical shape and uniform pitch. Bearing plate material shall conform to the following ASTM specifications.

4.2.1 *Solid Square Shaft Material (Torque $\leq 5,500$ ft-lb):* Per ASTM A572, or A1018, or A656 with minimum yield strength of 50 ksi. Plate thickness is 3/8".

4.2.2 *Solid Square Shaft Material (Torque $\geq 5,500$ ft-lb):* Hot rolled steel sheet, strip or plate per ASTM A656 or A936 with minimum yield strength of 80 ksi. Plate thickness is 3/8" or 1/2".

4.2.3 *Pipe Shaft Material (Torque $\leq 5,500$ ft-lb.):* Hot Rolled carbon steel, strip, or plate per ASTM A568 with minimum yield strength of 50 ksi. Alternate materials are A-36 or ASTM A572 Grade 50. Plate thickness is 3/8".

4.2.4 *Pipe Shaft Material (Torque $\geq 5,500$ ft-lb.):* Per ASTM A36, or A572, or A1018, or A656 depending on helix diameter, with minimum yield strength of 80 ksi. Plate thickness is 3/8" or 1/2".

4.3 Bolts:

The size and type of bolts used to connect the central steel shaft sections together shall conform to the following ASTM specifications.

4.3.1 *Solid Square Shaft Material (Torque $\leq 7,000$ ft-lb):* 3/4" diameter bolt per ASTM A320 Grade L7.

4.3.2 *Solid Square Shaft Material (Torque $\geq 7,000$ ft-lb):* 7/8" – 1-1/4" per ASTM A193 Grade B7

4.3.3 *Pipe Shaft Material (Torque $\leq 13,000$ ft-lb):* 3/4" diameter bolts (# of bolts per coupling depends on torque) per SAEJ429 Grade 5.

- SAE J429 Grade 5: Sy (min) = 92 ksi, Su (min) = 120 ksi

4.4 Couplings:

Couplings shall be capable of transmitting both the maximum installation torque from the tool string to the helix plates, and the maximum axial load from the top of the pile to the helical bearing plates.

4.5 Plates, Shapes, or Pier Caps:

Structural steel plates and shapes for helical pile top attachments shall conform to ASTM A36 or ASTM A572 Grade 50.

4.6 Corrosion Protection

- 4.6.1 Galvanization: All helical pile material that is not encased in concrete shall be hot-dipped galvanized in accordance with ASTM A153 after fabrication.

5 EXECUTION

5.1 Site Conditions

- 5.1.1 Prior to commencing helical pile installation, the Contractor shall inspect the work of all other trades and verify that all said work is completed to the point where helical pile installation may commence without restriction.
- 5.1.2 The Contractor shall verify that all helical piles may be installed in accordance with all pertinent codes and regulations regarding such items as underground obstructions, right-of-way limitations, utilities, etc.
- 5.1.3 In the event of a discrepancy, the Contractor shall notify the Owner. The Contractor shall not proceed with helical pile installation in areas of discrepancies until said discrepancies have been resolved.

5.2 Installation Equipment

- 5.2.1 Shall be rotary type, hydraulic power-driven torque motor with clockwise and counter-clockwise rotation capabilities. The torque motor shall be capable of continuous adjustment to revolutions per minute (RPM's) during installation. Percussion drilling equipment shall not be permitted. The torque motor shall have torque capacity 15% greater than the torsional strength rating of the central steel shaft to be installed.
- 5.2.2 Equipment shall be capable of applying adequate down pressure (crowd) and torque simultaneously to suit project soil conditions and load requirements. The equipment shall be capable of continuous position adjustment and swing capacity at maximum installation torque to maintain proper helical pile alignment during installation. The application of bending stress to the pile during installation will not be permitted.

5.3 Installation Tooling

- 5.3.1 Shall consist of a Kelly Bar Adapter (KBA) and drive tool as appropriate for the central shaft of the helical pile under maximum installation torque and used in accordance with the manufacturers written installation instructions.
- 5.3.2 Installation tooling should be maintained in good working order and safe to operate at all times. Flange bolts and nuts should be regularly inspected for proper tightening torque. Bolts, connecting pins, and retainers should be periodically inspected for wear and/or damage and replaced with

identical items provided by the manufacturer. Heed all warning labels. Worn or damaged tooling should be replaced.

5.3.3 A torque indicator shall be used during helical pile installation. The torque indicator shall be a device that directly measures torque and that is mounted in-line with the installation tooling. Devices that infer torque from hydraulic pressure will not be permitted.

5.3.3.a Shall be capable of providing continuous measurement of applied torque throughout the installation.

5.3.3.b Shall be capable of torque measurements in increments of 200 ft-lb or less.

5.3.3.c Shall be re-calibrated, if in the opinion of the Owner and/or Contractor reasonable doubt exists as to the accuracy of the torque measurements.

5.4 Installation Procedures

5.4.1 The helical pile installation technique shall be such that it is consistent with the geotechnical, logistical, environmental, and load carrying conditions of the project.

5.4.2 The lead section shall be positioned at the location as shown on the working drawings. Battered helical piles can be positioned perpendicular to the ground to assist in initial advancement into the soil before the required batter angle shall be established. The helical pile sections shall be engaged and advanced into the soil in a smooth, continuous manner at a rate of rotation of not to exceed 16 RPM's. The extension sections shall be provided to obtain the required minimum overall length and installation torque as shown on the working drawings. Connect sections together using coupling bolt(s) and nut torqued to 40 ft-lb.

5.4.2.a Sufficient down pressure shall be applied to uniformly advance the helical pile sections approximately 3 inches per revolution. The rate of rotation and magnitude of down pressure shall be adjusted for different soil conditions and depths.

5.5 Termination Criteria

5.5.1 The torque as measured during the installation shall not exceed the torsional strength rating of the central steel shaft.

5.5.2 The minimum installation torque and minimum overall length criteria as shown on the technical submittal shall be satisfied prior to terminating the helical pile foundation installation.

5.5.3 If the torsional strength rating of the central steel shaft and has been reached prior to achieving the minimum overall length required, the Contractor shall have the following options:

5.5.3.a Terminate the installation at the depth obtained subject to the review and acceptance of the Owner, or:

5.5.3.b Remove the existing helical pile and install a new one with fewer and/or smaller diameter helix plates. The new helix configuration shall be subject to review and acceptance of the Owner.

- 5.5.4 If the minimum installation torque as shown on the working drawings is not achieved at the minimum overall length, and there is no maximum length constraint, the Contractor shall have the following options:
- 5.5.4.a Install the helical pile deeper using additional extension sections, or:
 - 5.5.4.b Remove the existing helical pile and install a new one with additional and/or larger diameter helix plates.
 - 5.5.4.c De-rate the load capacity of the helical pile and install additional helical screw foundation(s). The de-rated capacity and additional helical screw foundation location shall be subject to the review and acceptance of the Owner.
- 5.5.5 If the helical pile is refused or deflected by a subsurface obstruction, the installation shall be terminated and the pile removed. The obstruction shall be removed, if feasible, and the helical pile re-installed. If the obstruction can't be removed, the helical pile shall be installed at an adjacent location, subject to review and acceptance of the Owner.
- 5.5.6 If the torsional strength rating of the central steel shaft and has been reached prior to proper positioning of the last plain extension section relative to the final elevation, the Contractor may remove the last plain extension and replace it with a shorter length extension. If it is not feasible to remove the last plain extension, the Contractor may cut said extension shaft to the correct elevation. The Contractor shall not reverse (back-out) the helical pile to facilitate extension removal.
- 5.5.7 The average torque for the last three feet of penetration shall be used as the basis of comparison with the minimum installation torque as shown on the working drawings. The average torque shall be defined as the average of the last three readings recorded at one-foot intervals.

6 LOAD TESTS

6.1 Pre-Production Pile Tests

Load tests shall be performed to verify the suitability and capacity of the proposed Helical Pile, and the proposed installation procedures prior to installation and purchase of production piles. Additional purpose of pre-production tests is to empirically verify the ultimate capacity to the average installation torque of the helical pier foundation for the project site.

Contractor shall use best judgement to assume soil properties required to select the appropriate pile type for the required load capacity and prepare the installation calculations. The contractor may elect to perform soil borings/testing in support of the calculations which cost will be included in the bid cost for the Load Test.

Two sacrificial test piles with reaction anchors shall be constructed and tested immediately prior to the purchase and start of work on the production Helical Piles. Setup test piles at the beginning of Boardwalk and Spur Trails. Pile installation methods, procedures, equipment, and overall length shall be identical to the production piles to the extent practical except where approved otherwise by the Owner. Piles shall be tested

as per Section 6.2 for proposed compression load (Design Load) taken as the service load provided on the plans.

The Contractor shall submit for review and acceptance the following:

- | | |
|-------|--|
| 6.1.1 | Proposed Helical Pile load testing procedure. |
| 6.1.2 | Construction Submittal as per Section 3.1 for the test piles |
| 6.1.3 | Installation Record as per Section 3.2 for the test piles |
| 6.1.4 | Results of the load test as per section 6.2 |

The pre-production test proposal shall be in general conformance with ASTM D1143 and/or D-3689, and shall provide the minimum following information:

- Type and accuracy of load equipment
- Type and accuracy of load measuring equipment
- Type and accuracy of pile-head deflection equipment
- General description of load reaction system, including description of reaction anchors
- Calibration report for complete load equipment, including hydraulic jack, pump, pressure gauge, hoses, and fittings.

If the pre-production test fails to meet the design requirements, the Contractor shall modify the Helical Pile design and/or installation methods and retest the modified pile, as directed by the Owner.

6.2 Load Test Procedures

The hydraulic jack shall be positioned at the beginning of the test such that the unloading and repositioning of the jack during the test shall not be required. The jack shall also be positioned co-axial with respect to the pile-head so as to minimize eccentric loading. The hydraulic jack shall be capable of applying a load not less than two times the proposed design load (DL).

An alignment load (AL) shall be applied to the Helical Pile prior to setting the deflection measuring equipment to zero or a reference position. The AL shall be no more than 10% of the design load (i.e., 0.1 DL). After AL is applied, the test set-up shall be inspected carefully to ensure it is safe to proceed.

Axial pile load tests shall be conducted by loading the Helical Pile in step-wise fashion as shown in Table-3 to the extent practical. Pile-head deflection shall be recorded at the beginning of each step and after the end of the hold time. The beginning of the hold time shall be defined as the moment when the load equipment achieves the required load step.

Test loads shall be applied until continuous jacking is required to maintain the load step or until the test load increment equals 200% of the design load (DL) (i.e., 2.0 DL), whichever occurs first. The observation period for this last load increment shall be 10 minutes. Displacement readings shall be recorded at 1, 2, 3, 4, 5 and 10 minutes (load increment maxima only).

The applied test load shall be removed in four approximately equal decrements per the schedule in Table-3. The hold time for these load decrements shall be 1 minute, except for the last decrement, which shall be held for 5 minutes.

Table-3. Steps for Pre-Production Load Testing

LOAD STEP	HOLD TIME (MINUTES)
0	2.5 Min.
0.25 DL	2.5 Min.
0.50 DL	2.5 Min.
0.750 DL	2.5 Min.
DL	10.0 Min.
0.75 DL	1.0 Min.
0.50 DL	1.0 Min.
0.25 DL	1.0 Min.
0	1.0 Min.
0.25 DL	1.0 Min.
0.50 DL	1.0 Min.
0.75 DL	1.0 Min.
DL	1.0 Min.
1.25 DL	2.5 Min.
1.50 DL	2.5 Min.
1.75 DL	2.5 Min.
2.0 DL	10.0 Min.
1.5 DL	2.5 Min.
1.0 DL	2.5 Min.
0.5 DL	2.5 Min.
0	5.0 Min.

AL = Alignment Load; DL = Design Load

6.3 Pile Load Tests as directed by the County

During the course of the work the County may instruct additional load if field installation results indicate varying conditions. Such load tests will be performed as outlined in 6.1 and 6.2 above and paid for with the bid price for Pile Load Tests as directed by the Engineer.

END OF SPECIFICATION

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

SPECIAL PROVISION

Section 150—Traffic Control

150.01 GENERAL

This section as supplemented by the Plans, Specifications, and Manual on Uniform Traffic Control Devices (MUTCD) shall be considered the Temporary Traffic Control (TTC) Plan. Activities shall consist of furnishing, installing, maintaining, and removing necessary traffic signs, pedestrian signs, barricades, lights, signals, cones, pavement markings and other traffic control devices and shall include flagging and other means for guidance and protection of vehicular and pedestrian traffic through the Work Zone. This Work shall include both maintaining existing devices and installing additional devices as necessary in construction work zones.

When any provisions of this Specification or the Plans do not meet the minimum requirements of the MUTCD, the MUTCD shall control. The 2009 Edition of the MUTCD shall be in effect for the duration of the project.

The needs and control of all road users (motorists, bicyclists and pedestrians within the highway right-of-way and easements, including persons with disabilities in accordance with the Americans with Disabilities Act of 1990 (ADA), Title II, Paragraph 35.130) through a Temporary Traffic Control (TTC) zone shall be an essential part of highway construction, utility work, maintenance operations and management of traffic incidents.

The Worksite Traffic Control Supervisor (WTCS) shall have a copy of Part VI of the MUTCD and the Contract on the job site. Copies of the current MUTCD may be obtained from the FHWA web page at <http://mutcd.fhwa.dot.gov>.

A. WORKER SAFETY APPAREL

All workers, including emergency responders, within the right-of-way who are exposed either to traffic (vehicles using the highway for purpose of travel) or to work vehicles and construction equipment within the TTC zone shall wear high-visibility safety apparel that meets the Performance Class 2 or 3 requirements of the ANSI/ISEA 107-2004 publication entitled "American National Standard for High-Visibility Safety Apparel and Headwear", or equivalent revisions, and labeled as meeting the ANSI 107-2004 standard performance for Class 2 or 3 risk exposure. Emergency and incident responders and law enforcement personnel within the TTC zone may wear high-visibility safety apparel that meets the

performance requirements of the ANSI/ISEA 207-2006 publication entitled "American National Standard for High-Visibility Public Safety Vests", or equivalent revisions, and labeled as ANSI 207-2006, in lieu of ANSI/ISEA 107-2004 apparel. Firefighters or other emergency responders working within the right-of-way and engaged in emergency operations that directly expose them to flame, fire, heat, and/or hazardous material may wear retroreflective turn-out gear that is specified and regulated by other organizations, such as the National Fire Protection Association.

B. WORKSITE TRAFFIC CONTROL SUPERVISOR

ALL HIGHWAYS (ADDITIONAL REQUIREMENTS BELOW FOR INTERSTATES): The Contractor shall designate a qualified individual as the Worksite Traffic Control Supervisor (WTCS) who shall be responsible for selecting, installing and maintaining all traffic control devices in accordance with the Plans, Specifications, Special Provisions and the MUTCD. A written resume documenting the experience and credentials of the WTCS shall be submitted and accepted by the Engineer prior to beginning any work that involves traffic control. The WTCS shall be available on a twenty-four (24) hour basis to perform his duties. If the work requires traffic control activities to be performed during the daylight and nighttime hours it may be necessary for the Contractor to designate an alternate WTCS. An alternate WTCS must meet the same requirements and qualifications as the primary WTCS and be accepted by the Engineer prior to beginning any traffic control duties. The Worksite Traffic Control Supervisor's traffic control responsibilities shall have priority over all other assigned duties.

As the representative of the Contractor, the WTCS shall have full authority to act on behalf of the Contractor in administering the TTC Plan. The WTCS shall have appropriate training in safe traffic control practices in accordance with Part VI of the MUTCD. In addition to the WTCS all other individuals making decisions regarding traffic control shall meet the training requirements of the Part VI of the MUTCD.

The WTCS shall supervise the initial installation of traffic control devices. The Engineer prior to the beginning of construction will review the initial installation. Modifications to traffic control devices as required by sequence of operations or staged construction shall be reviewed by the WTCS.

The WTCS shall be available on a full-time basis to maintain traffic control devices with access to all personnel, materials, and equipment necessary to respond effectively to an emergency situation within forty-five (45) minutes of notification of the emergency.

The WTCS shall regularly perform inspections to ensure that traffic control is maintained. Unless modified by the special conditions or by the Engineer, routine deficiencies shall be corrected within a twenty-four (24) hour period. Failure to comply with these provisions shall be grounds for dismissal from the duties of WTCS and/or removal of the WTCS from the project. Failure of the WTCS to execute his duties shall be considered as non-performance under [Subsection 150.08](#).

The Engineer will periodically review the work for compliance with the requirements of the TTC plan.

On projects where traffic control duties will not require full time supervision, the Engineer may allow the Contractor's Project Superintendent to serve as the WTCS as long as satisfactory results are obtained.

CERTIFIED WORKSITE TRAFFIC CONTROL SUPERVISOR

ADDITIONAL REQUIREMENTS FOR INTERSTATE AND LIMITED ACCESS HIGHWAYS: In addition to the requirements above, the WTCS shall have a minimum of one year's experience directly related to work site traffic control in a supervisory or responsible capacity. The WTCS shall be currently certified by the American Traffic Safety Services Association (ATSSA) Work Site Traffic Supervisor Certification program or the National Safety Council Certification program.

Any work performed on the interstate or limited access highway right-of-way that requires traffic control shall be supervised by the Certified Worksite Traffic Control Supervisor. No work requiring traffic control shall be performed unless the certified WTCS is on the worksite. Failure to maintain a Certified Worksite Traffic Control Supervisor on the work will be considered as non-performance under Subsection 150.08.

The WTCS shall perform, as a minimum, weekly traffic control inspections on all interstate and limited access highways. The inspection shall be reported to the Engineer on a TC-1 report. The Engineer will furnish a blank copy of the TC-1 report to the Contractor prior to the beginning of any work on the interstate or limited access right-of-way.

C. TRAFFIC CONTROL DEVICES

All traffic control devices used during the construction of a project shall meet the Standards utilized in the MUTCD, and shall comply with the requirements of these Specifications, Project Plans, and Special Provisions. All devices shall be tested at NCHRP Test Level III. Reference is made to [Subsections 104.05](#), [107.07](#), and [107.09](#).

D. REFLECTORIZATION REQUIREMENTS

All rigid fluorescent orange construction warning signs (black on fluorescent orange) shall meet the reflectorization and color requirements of ASTM Type VII, VIII, IX or X regardless of the mounting height.

Portable signs which have flexible sign blanks shall meet the reflectorization and color requirements of ASTM Type VI.

Warning signs (W3-1a) for stop conditions that have rumble strips located in the travelway shall be reflectorized with ASTM Type IX fluorescent yellow sheeting.

All other signs shall meet the requirements of ASTM Type III or IV except for "Pass With Care" and "Do Not Pass" signs which may be ASTM Type I unless otherwise specified.

CHANNELIZATION DEVICES: Channelization devices shall meet the requirements of ASTM Type III or IV high intensity sheeting.

E. IMPLEMENTATION REQUIREMENTS

No work shall be started on any project phase until the appropriate traffic control devices have been placed in accordance with the Project requirements. Changes to traffic flow shall not commence unless all labor, materials, and equipment necessary to make the changes are available on the Project.

When any shift or change is made to the location of traffic or to the flow patterns of traffic, including pedestrian traffic, the permanent safety features shall be installed and fully operational before making the change. If staging or site conditions prevent the installation of permanent features then the equivalent interim devices shall be utilized. This work shall also include any necessary removal and reinstallation of guardrail panels to achieve the required panel lap to accommodate the appropriate shift and traffic flow including the final traffic flow configuration (The cost of performing this work shall be included in Traffic Control-Lump Sum).

Any section of the work that is on new location shall have all permanent safety features installed and fully operational before the work is opened to traffic. Safety features shall include but are not limited to the following items:

1. Guardrail including anchors and delineation with properly lapped panels
2. Impact attenuators
3. Traffic signals
4. Warning devices
5. Pavement markings including words, symbols, stop bars, and crosswalks
6. Roadway signs including regulatory, warning, and guide

Outdoor lighting shall be considered as a safety feature for welcome centers, rest areas, and weigh station projects. For typical roadway type projects new street lighting is not considered a safety feature unless specifically noted in the plans or in the special conditions.

F. MAINTENANCE OF TRAFFIC CONTROL DEVICES

Traffic control devices shall be in acceptable condition when first erected on the project and shall be maintained in accordance with [Subsection 104.05](#) throughout the construction period. All unacceptable traffic control devices shall be replaced within 24 hours. When not in use, all traffic control devices shall be removed, placed or covered so as not to be visible to traffic. All construction warning signs shall be removed within seven calendar days after time charges are stopped or pay items are complete. If traffic control devices are left in place for more than ten days after completion of the Work, the Department shall have the right to remove such devices, claim possession thereof, and deduct the cost of such removal from any monies due, or which may become due, the Contractor.

G. TRAFFIC INTERRUPTION RESTRICTIONS

The Department reserves the right to restrict construction operations when, in the opinion of the Engineer, the continuance of the Work would seriously hinder traffic flow, be needlessly disruptive or unnecessarily inconvenience the traveling public. The Contractor shall suspend and/or reschedule any work when the Engineer deems that conditions are unfavorable for continuing the Work.

Advanced notification requirements to the Contractor to suspend work will be according to the events and the time restrictions outlined below:

Incident management	No advanced notice required
Threatening/Inclement weather	24 hours
Holidays, sporting events, unfavorable conditions	Three (3) calendar days

If the work is suspended, the Contractor may submit a request for additional contract time as allowed under Section 108. The Department will review the request and may grant additional contract time as justified by the impact to the Contractor's schedule. Compensation for loss of productivity, rescheduling of crews, rental of equipment or delays to the Contractor's schedule will not be considered for payment. Additional contract time will be the only consideration granted to the Contractor.

H. SEQUENCE OF OPERATIONS

Any Sequence of Operations provided in this Contract in conjunction with any staging details which may be shown in the plans, is a suggested sequence for performing the Work. It is intended as a general staging plan for the orderly execution of the work while minimizing the impact on pedestrian facilities, mainline, cross-streets and side streets. The Contractor shall develop detailed staging and temporary traffic control plans for performing specific areas of the Work including but not limited to all traffic shifts, detours, bridge widenings, paces, or other activities that disrupt traffic or pedestrian flow. The Engineer may require detailed staging and TTC plans for lane closures or disruption to pedestrian facilities. These plans shall be submitted for approval at least two weeks prior to the scheduled date of the activity. Activities that have not been approved at least seven (7) days prior to the scheduled date shall be rescheduled.

Where traffic is permitted through the work area under stage construction, the Contractor may choose to construct, at no additional expense to the Department, temporary on-site bypasses or detours in order to expedite the work. Plans for such temporary bypasses or detours shall be submitted to the Engineer for review and approval 30 calendar days prior to the proposed construction. Such bypasses or detours shall be removed promptly when in the opinion of the Engineer; they are no longer necessary for the satisfactory progress of the Work. Bypasses and detours shall meet the minimum requirements of [Subsection 150.02.B.4.](#)

As an option to the Sequence of Operations in the Contract, the Contractor may submit an alternative Sequence of Operations for review and approval. Alternate Sequence of Operations for pedestrian facilities shall be in compliance with the MUTCD and ADA. Pedestrian needs identified in the preconstruction phase shall be included in the proposed alternate plan.

The Department will not pay, or in any way reimburse the Contractor for claims arising from the Contractor's inability to perform the Work in accordance with the Sequence of Operations provided in the Contract or from an approved Contractor alternate.

The Contractor shall secure the Engineer's approval of the Contractor's proposed plan of operation, sequence of work and methods of providing for the safe passage of vehicular and pedestrian traffic before it is placed in operation. The proposed plan of operation shall supplement the approved traffic control plan. Any major changes to the approved TTC plan, proposed by the Contractor, shall be submitted to the Department for approval.

Some additional traffic control details will be required prior to any major shifts or changes in traffic. The traffic control details shall include, but not be limited to, the following:

1. A detailed drawing showing traffic locations and laneage for each step of the change.
2. The location, size, and message of all signs required by the MUTCD, Plan, Special Provisions, and other signs as required to fit conditions. Any portable changeable message signs used shall be included in the details.
3. The method to be used in, and the limits of, the obliteration of conflicting lines and markings.
4. Type, location, and extent of new lines and markings.
5. Horizontal and vertical alignment and superelevation rates for detours, including cross-section and profile grades along each edge of existing pavement.
6. Drainage details for temporary and permanent alignments.
7. Location, length, and/or spacing of channelization and protective devices (temporary barrier, guardrail, barricades, etc.)
8. Starting time, duration and date of planned change.
9. For each traffic shift, a paving plan, erection plan, or work site plan, as appropriate, detailing workforce, materials, and equipment necessary to accomplish the proposed work. This will be the minimum resource allocation required in order to start the work.

A minimum of three copies of the above details shall be submitted to the Engineer for approval at least 14 days prior to the anticipated traffic shift. The Contractor shall have traffic control details for a traffic shift which has been approved by the Engineer prior to commencement of the physical shift. All preparatory work relative to the traffic shift, which does not interfere with traffic, shall be accomplished prior to the designated starting time. The Engineer and the Contractor's representative will verify that all conditions have been met prior to the Contractor obtaining materials for the actual traffic shift.

150.02 TEMPORARY TRAFFIC CONTROL (TTC) ZONES:

A. DEVICES AND MATERIALS:

In addition to the other provisions contained herein, work zone traffic control shall be accomplished using the following means and materials:

1. Portable Advance Warning Signs

Portable advance warning signs shall be utilized as per the requirements of the temporary traffic control plans. All signs shall meet the requirements of the MUTCD and shall be NCHRP 350 crashworthy compliant.

2. Arrow Panels

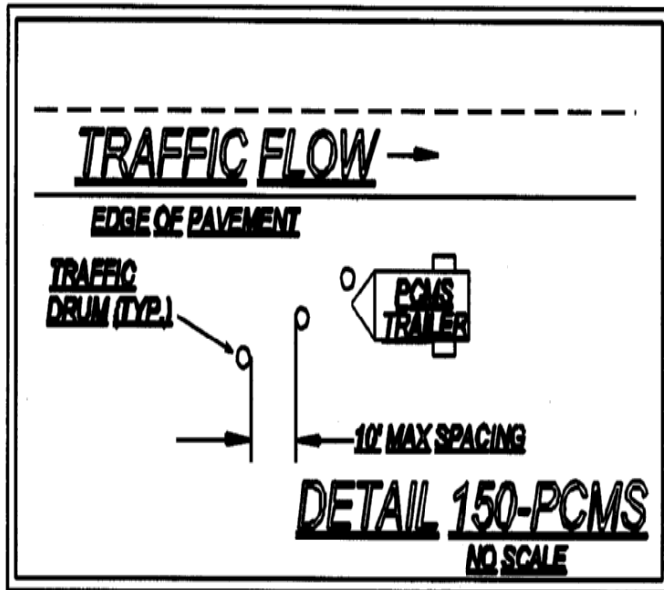
Portable sequential or flashing arrow panels as shown in the Plans or Specifications for use on Interstate or multi-lane highway lane closure only, shall be a minimum size of 48" high by 96" wide with not less than 15 lamps used for the arrow. The arrow shall occupy virtually the entire size of the arrow panel and shall have a minimum legibility distance of one mile. The minimum legibility distance is that distance at which the arrow panel can be comprehended by an observer on a sunny day, or clear night. Arrow panels shall be equipped with automatic dimming features for use during hours of darkness. The arrow panels shall also meet the requirements for a Type C panel as shown in the MUTCD. The sequential or flashing arrow panels shall not be used for lane closure on two-lane, two-way highways when traffic is restricted to one-lane operations in which case, appropriate signing, flaggers and when required, pilot vehicles will be deemed sufficient.

The sequential or flashing arrow panels shall be placed on the shoulder at or near the point where the lane closing transition begins. The panels shall be mounted on a vehicle, trailer, or other suitable support. Vehicle mounted panels shall be provided with remote controls. Minimum mounting height shall be seven feet above the roadway to the bottom of the panel, except on vehicle mounted panels which should be as high as practical.

For emergency situations, arrow display panels that meet the MUTCD requirements for Type A or Type B panels may be used until Type C panels can be located and placed at the site. The use of Type A and Type B panels shall be held to the minimum length of time possible before having the Type C panel(s) in operation. The Engineer shall determine when conditions and circumstances are considered to be emergencies. The Contractor shall notify the Engineer, in writing, when any non-specification arrow display panel(s) is being used in the work.

3. Portable Changeable Message Signs

Portable changeable message signs meeting the requirements of [Section 632](#) and the MUTCD. Any PCMS in use that is not protected by positive barrier protection shall be delineated by a minimum of three drums that meet the requirement of Section 150.05.A.1. The drum spacing shall not exceed a maximum of ten (10') feet as shown in [Detail 150-PCMS](#). When the PCMS is within twenty (20') feet of the opposing traffic flow, the trailing end of the PCMS shall be delineated with a minimum of three drums spaced in the same manner as the approach side of the PCMS.



When not in use the PCMS shall be removed from the roadway unless protected by positive barrier protection. If the PCMS is protected by positive barrier protection the sign panel shall be turned away from traffic when not in use.

4. Channelization Devices

Channelization devices shall meet the standards of the MUTCD and [Subsection 150.05](#).

5. Temporary Barrier

Temporary barrier shall meet the requirements of [Section 622](#).

6. Temporary Traffic Signals

Temporary traffic signals shall meet the requirements of [Section 647](#) and the MUTCD.

7. Pavement Marking

Pavement marking incorporated into the work shall comply with [Subsections 150.04.A](#) and [150.04.B](#).

8. Portable Temporary Traffic Control Signals

The use of Portable Temporary Traffic Control Signals shall meet the following minimum requirements:

Only two-lane two-way roadways will be allowed to utilize Portable Temporary Traffic Control Signals.

All portable traffic control signals shall meet the physical display and operational requirements of conventional traffic signals described in the MUTCD.

Each signal face shall have at least three lenses. The lenses shall be red, yellow, or green in color and shall give a circular type of indication. All lenses shall be twelve (12") inches nominal in diameter.

A minimum of two signal faces shall face each direction of traffic. A minimum of one signal head shall be suspended over the roadway travel lane in a manner that will allow the bottom of the signal head housing to be not less than seventeen (17') feet above and not more than nineteen (19') feet above the pavement grade at the center of the travel lane. The second signal head may be located over the travel lane with the same height requirements or the second signal head may be located on the shoulder. When the signal head is located on the shoulder the bottom of the signal head housing shall be at least eight (8') feet but not more than (15') feet above the pavement grade at the center of highway.

Advance warning signage and appropriate pavement markings shall be installed as part of the temporary signal operation.

The signals shall be operated in a manner consistent with traffic requirements. The signals may be operated in timed-mode or in a vehicle-actuated mode. The signals shall be interconnected in a manner to ensure that conflicting movements can not occur. To assure that the appropriate operating pattern including timing is displayed to the traveling public, regular inspections including the use of accurate timing devices shall be made by the Worksite Traffic Control Supervisor. If at any time any part of the system fails to operate within these requirements then the use of the signal shall be suspended and the appropriate flagging operation shall begin immediately.

The Worksite Traffic Control Supervisor (WTCS) shall continuously monitor the portable traffic control signal to insure compliance with the requirements for maintenance under the MUTCD. The signal shall be maintained in a manner consistent with the intention of the MUTCD, with emphasis on cleaning of the optical system. Timing changes shall be made only by the WTCS. The WTCS shall keep a written record of all timing changes.

The portable temporary signal shall have two power sources and shall be capable of running for seven calendar days continuously.

The Contractor shall have an alternate temporary traffic control plan in the event of failure of the signal.

9. RUMBLE STRIPS

Rumble strips incorporated into the work shall meet the requirements of [Section 429](#) and the MUTCD. Existing rumble strips that are positioned in the traveled way to warn traffic of a stop condition shall be reinstalled based on the following requirements:

INTERMEDIATE SURFACES: Intermediate surfaces that will be in use for more than forty-five (45) calendar days shall have rumble strips reinstalled on the traveled way in the area of a stop condition. Non-refundable deductions in accordance with [Subsection 150.08](#) will be assessed for any intermediate surface in place for greater than 45 days without rumble strips.

FINAL SURFACES: Rumble strips shall be installed on the final surface within fourteen (14) calendar days of the placement of the final surface in the area of the stop condition. Failure to install within fourteen (14) calendar days will result in assessment of non-refundable deductions in accordance with Subsection 150.08.

Prior to the removal of any rumble strips located in the travelway, stop ahead (W3-1a) warning signs shall be double indicated ahead of the stop condition. These warning signs shall be a minimum of 48 inches by 48 inches. The reflectorization of the warning signs shall be as required by [Subsection 150.01.D](#). These warning signs shall remain in place until the rumble strips have been reinstalled on the traveled way. Any existing warning signs for the stop ahead condition shall be removed or covered while the 48" X 48" (W3-1a) signs are in place. When the rumble strips have been reinstalled these warning signs should be promptly removed and any existing signage placed back in service.

10. GUARDRAIL: When the removal and installation of guardrail is required as a part of the work the following time restrictions shall apply unless modified by the special conditions:

MULTI-LANE HIGHWAYS: From the time that the existing guardrail or temporary positive barrier protection is removed the Contractor has fourteen (14) calendar days to install the new guardrail and anchors. During the interim, the location without guardrail shall be protected with drums spaced at a maximum spacing of twenty (20') feet. The maximum length of rail that can be removed at any time without being replaced with positive barrier protection is a total of 2000 linear feet of existing rail or the total length of one run of existing rail, whichever is less.

ALL OTHER HIGHWAYS: From the time that the existing guardrail is removed or from the time that temporary positive barrier protection is removed the Contractor has thirty (30) calendar days to install the new guardrail and anchors. During the interim, the location without guardrail shall be protected with drums spaced at a maximum spacing of twenty (20') feet. The maximum length of rail that can be removed at any time without being replaced with positive barrier protection is a total of 1000 linear feet of existing rail or the total length of one run of existing rail, whichever is less.

Based on existing field conditions, the Engineer may review the work and require that the guardrail be installed earlier than the maximum time allowed above by giving written notification to the Contractor via the TC-1 traffic control report.

ALL HIGHWAYS: The contractor shall install new guardrail such that traffic exposure to fixed objects is minimized. Within the same work day, temporary attenuators, as defined in [Subsection 150.05.B](#), should be installed on the approach to fixed objects that can't be protected with guardrail. Truck mounted attenuators may be used to shield exposed fixed objects for periods not to exceed forty-eight (48) hours. No separate payment will be made for truck mounted attenuators.

When the roadway is open to traffic, guardrail panels shall be lapped to comply with the directional flow of traffic. Should the staging of the work require that the lap of the guardrail be changed, this work shall be completed before the roadway is opened to traffic. The work to change the lap of any guardrail shall be included in Traffic Control-Lump Sum.

Failure to comply with the above time and quantity restrictions shall be considered as non-compliance under Subsection 150.08.

- 11. STOP SIGN REGULATED INTERSECTIONS:** For intersections that utilize stop sign(s) to control the flow of traffic and to restrict the movement of vehicles, the stop sign(s) shall be maintained for the duration of the work or until such time that the stop condition is eliminated or until an interim or permanent traffic signal can be installed to provide proper traffic control. The traffic signal shall be installed and properly functioning before the removal of the existing stop sign(s) is permitted. If the existing intersection is enhanced traffic control features such as stop bars, double indicated stop signs, oversized signs, advanced warning stop ahead signs, rumble strips on the approaches or flashing beacons located overhead or on the shoulders then these features shall be maintained for the duration of the project or until the permanent traffic control plan has been implemented.

Whenever the staging of the work requires that the traveled-way be relocated or realigned the Contractor shall reinstall all enhanced traffic control features noted above on the newly constructed sections of the work. The cost of relocating the stop bars, stop signs, advanced warning signs, the rumble strips and the flashing beacons shall be included in the price bid for Lump-Sum-Traffic Control unless individual pay items are included in the contract for rumble strips and/or flashing beacons. When pay items are included in the contract for rumble strips or flashing beacons then these items will be paid per each.

When staging requires the relocation or realignment of an existing stop condition it may be necessary to consider the addition of enhanced traffic control features even though none existed at the original location. Horizontal and vertical alignment changes at a new location may have decreased or restricted sight distance or the stop condition may occur sooner than in the previous alignment. If these conditions occur then the Engineer and/or the WTCS should consider additional measures to enhance the motorist's awareness of the changes even though the staging plans may not address enhanced features. Stop signs should be a minimum of 36 inches for interim situations. The use of 48 inch stop signs may be warranted under project specific conditions. Flags may be used on interim/permanent stop signs that are mounted at seven (7') feet in height for a short duration in order to direct additional attention to a new or relocated stop sign(s). Flags should not be used for durations exceeding two weeks unless unusual or site specify conditions warrant a longer period of time. The use of Type "A" flashing red light(s) attached to the stop sign(s) may be appropriate during the same period that the flags are in use to increase attention.

The use of rumble strips and/or portable changeable message signs may be considered. The use of new rumble strips, where none previously existed, shall have the prior approval of District Traffic Operations before being included as part of the temporary traffic control plan. The message(s) displayed on any PCMS shall have the prior approval of the Engineer and the message(s) shall be included as part of the TTC plan for the interim staging.

The placement of any additional interim ground-mounted signs and posts or stop bars shall be considered as incidental to the price bid for Lump Sum-Traffic Control. The installation of rumble strips, flashing beacons or the use of Portable Changeable Message Signs (PCMS) shall be considered as Extra Work unless pay items are included in the contract.

B. WORK ZONE RESTRICTIONS:

1. Interstate

The Contractor shall not simultaneously perform work on both the inside shoulder and outside shoulder on either direction of traffic flow when the Work is within 12 feet of the travel-way, unless such areas are separated by at least one-half mile of distance.

2. Non-Interstate Divided Highways

The Contractor shall not simultaneously perform work on both the inside shoulder and outside shoulder on either direction of traffic flow when the Work is within 12 feet of the travel-way, unless such areas are separated by at least one-half mile distance in rural areas or at least 500 feet of distance in urban areas.

3. Non-Divided Highways

- a. The Contractor shall not simultaneously perform work on opposite sides of the roadway when the work is within 12 feet of the travel-way, unless such areas are separated by at least one-half mile of distance in rural areas or at least 500 feet of distance in urban areas.
- b. On two-lane projects where full width sections of the existing subgrade, base or surfacing are to be removed, and new base, subgrade, or surfacing are to be constructed, the Contractor shall maintain one-lane traffic through the construction area by removing and replacing the undesirable material for half the width of the existing roadway at a time. Replacement shall be made such that paving is completed to the level of the existing pavement in the adjacent lane by the end of the workday or before opening all the roadway to traffic.

4. All Highways:

- a. There shall be no reduction in the total number of available traffic lanes that existed prior to construction except as specifically allowed by the Contract and as approved by the Engineer.
- b. Travelway Clearances: All portions of the work shall maintain the following minimum requirements:

Horizontal: The combined dimensions of the paved shoulder and the roadway surface remaining outside the Work Zone shall be no less than sixteen (16) feet in width at any location.

Vertical: The overhead clearance shall not be reduced to less than fifteen (15) feet at any location.

The restrictions above apply to all shifts, lane closures, on-site detours and off site detours whether shown in the contract or proposed by the Contractor. It shall be the responsibility of the Contractor to verify that these minimum requirements have been met before proceeding with any phase of the Work.

Two-lane two-way roadways may have temporary horizontal restrictions of less than sixteen (16) feet provided a flagger operation for one-way traffic is utilized to restrict access to the work area by over-width loads. The minimum horizontal clearance shall be restored before the flagging operation is removed.

- c. Highway Work Zone: All sections or segments of the roadway under construction or reconstruction shall be signed as a Highway Work Zone except non-state highway two-lane two-way resurfacing projects. Two conditions can be applied to a Highway Work Zone. Condition 1 is when no reduction in the existing speed limit is required. Condition 2 is when worksite conditions require a reduction of the speed limit through the designated Work Zone. Properly marking a Highway Work Zone shall include the following minimum requirements:

- 1. NO REDUCTION IN THE EXISTING POSTED SPEED LIMIT IN HIGHWAY WORK ZONE:

- a) Signage ([Detail 150-HWZ-1](#)) shall be posted at the beginning point of the Highway Work Zone warning the traveling public that increased penalties for speeding violations are in effect. The [HWZ-2](#) sign shall be placed a minimum of six hundred (600') feet in advance of the Highway Work Zone and shall not be placed more than one thousand (1000') feet in advance of the Work Zone. If no speed reduction is required it is recommended that the [HWZ-2](#) be placed at 750 feet from the work area between the ROAD WORK 500 FT. and the ROAD WORK 1000 FT. signs.

[HWZ-2](#) signs shall be placed at intervals not to exceed one mile for the length of the project. [HWZ-2](#) signs should be placed on the mainline after all major intersections except State Routes. State Routes shall be signed as per the requirements for intersecting roadways below.

- b) The existing speed limit shall be posted at the beginning of the Work Zone. Existing Speed Limit signs (R2-1) shall be maintained.
- c) INTERSECTING ROADWAYS: Intersecting state routes shall be signed in advance of each intersection with the Work Zone with a [HWZ-2](#) sign to warn motorists that increased fines are in effect. All other intersecting roadways that enter into a designated Highway Work Zone may be signed in advance of each intersection with the Work Zone. When construction equipment and personnel are present in the intersection on the mainline of a multi-lane roadway, the intersecting side roads shall be signed in advance with [HWZ-2](#) signs. As soon as the work operation clears the intersection the signage may be removed.
- d) Sign [HWZ-3](#) shall be posted at the end of the Highway Work Zone indicating the end of the zone and indicating that increased penalties for speeding violations are no longer in effect.
- e) When a designated Highway Work Zone is no longer necessary all signs shall be removed immediately.

2. REDUCING THE SPEED LIMIT IN A HIGHWAY WORK ZONE:

Highway Work Zone signs shall be posted as required in Condition 1 above.

For limited access (interstate) highways and controlled access multi-lane divided highways the posted speed limit shall be reduced as required below.

Speed Limit signage (R2-1) for the reduced speed limit shall be erected at the beginning of the work zone. Additional signs shall be placed to ensure that the maximum spacing of the reduced speed limit signs shall be no greater than one (1) mile apart. Existing speed limit signs shall be covered or removed. On multi-lane divided highways the speed limit signs shall be double indicated when the reduced speed is in use.

When any one or more of the following conditions exist and the existing speed limit is 65 mph or 70 mph, the speed limit shall be reduced by 10 mph. If the existing speed limit is 60 mph, the speed limit should be reduced by 5 mph. If the existing speed limit is 55 mph or less, the Contractor can only reduce the speed limit with the prior approval of the Engineer. The reduction in the speed limit shall be no greater than 10 mph:

- a) Lane closure(s) of any type and any duration.
- b) The difference in elevation exceeds two inches adjacent to a travel lane as shown in [Subsection 150.06](#), [Detail 150-B](#), [Detail 150-C](#).
- c) Any areas where equipment or workers are within ten feet of a travel lane.
- d) Temporary portable concrete barriers located less than two (2') feet from the traveled way.
- e) As directed by the Engineer for conditions distinctive to this project.

When the above conditions are not present the speed limit shall be immediately returned to the existing posted speed limit. A speed reduction shall not be put in place for the entire length of the project unless conditions warranting the speed reduction are present for the entire project length. All existing speed limit signs within the temporary speed reduction zone shall be covered or removed while the temporary reduction in the speed limit is in effect. All signs shall be erected to comply with the minimum requirements of the MUTCD.

As a minimum the following records shall be kept by the WTCS:

- a) Identify the need for the reduction.
- b) Record the time of the installation and removal of the temporary reduction.
- c) Fully describe the location and limits of the reduced speed zone.
- d) Document any accident that occurs during the time of the reduction.

A copy of the weekly records for reduced speed zones shall be submitted to the Engineer.

Reduced speed zones shall, as a minimum, be signed as per [Detail 150-HWZ-1](#). Interim signs shall meet the requirements of Subsection 150.03 D. Additional signs may be necessary to adjust for actual field conditions.

When a pilot vehicle is used on a two-lane two-way roadway the speed limit should not be reduced. For special conditions specific to the work, on two-lane two-way roadways or multi-lane highways, the contractor may reduce the posted speed limit with the prior approval of the Engineer.

5. MILLED SURFACE RESTRICTIONS:

Unless modified by the special conditions, a milled surface on any asphaltic concrete surface shall not be allowed to remain open to traffic for a period of time that exceeds thirty (30) calendar days.

6. INSTALLATION/REMOVAL OF WORK AREA SIGNAGE:

No payment will be made for Traffic Control-Lump Sum until the Work has actually started on the project. The installation of traffic control signage does not qualify as the start of work. Advanced warning signs shall not be installed until the actual beginning of work activities. Any permanent mount height signs installed as the work is preparing to start shall be covered until all signs are installed unless all signs are installed within seven (7) calendar days after beginning installation.

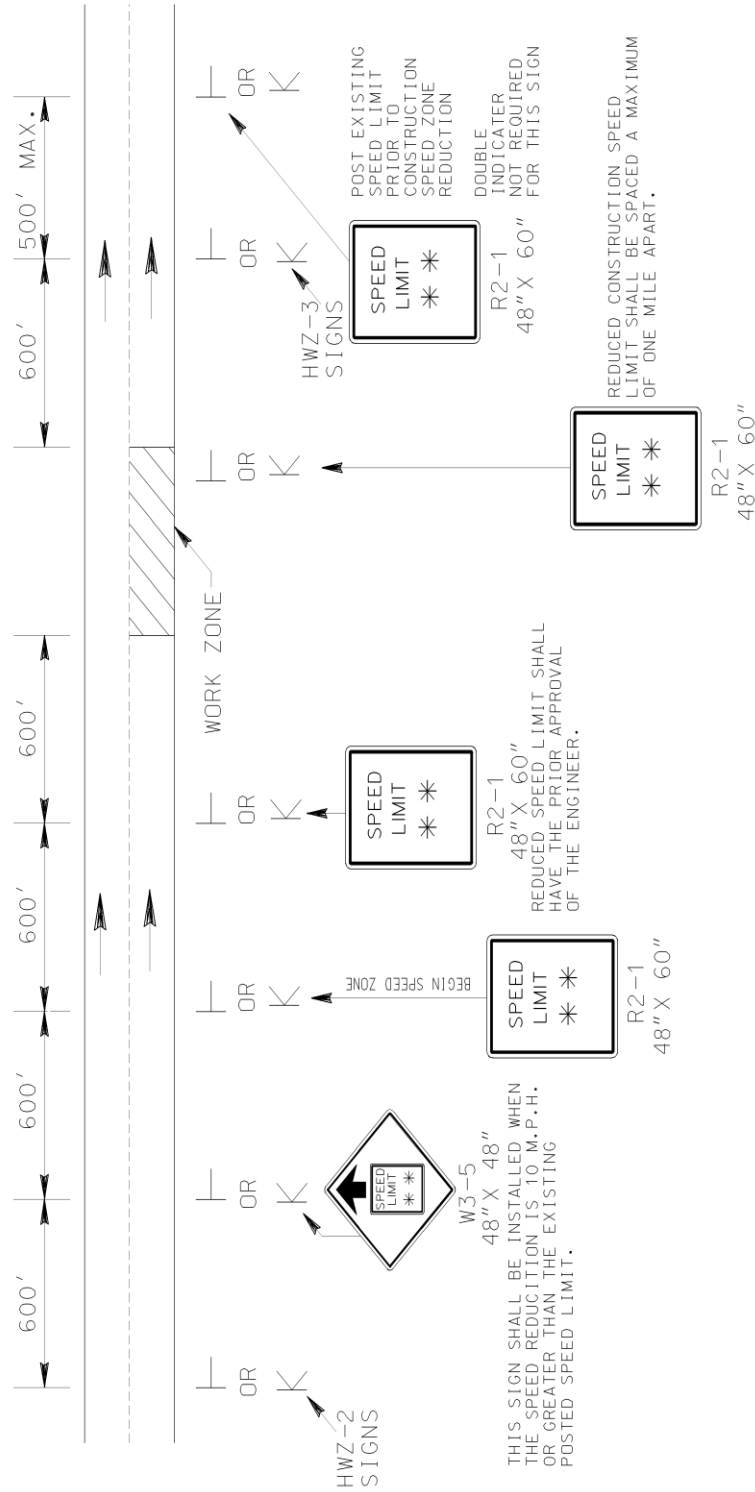
All temporary traffic control devices shall be removed as soon as practical when these devices are no longer needed. When work is suspended for short periods of time, temporary traffic control devices that are no longer appropriate shall be removed or covered.

All construction warning signs shall be removed within seven (7) calendar days after time charges are stopped or pay items are complete. If traffic control devices are left in place for more than ten (10) calendar days after completion of the Work, the Department shall have the right to remove such devices, claim possession thereof, and deduct the cost of such removal from any monies due, or which may become due, the Contractor.

PUNCHLIST WORK: Portable signs shall be utilized to accomplish the completion of all punchlist items. The portable signs shall be removed daily. All permanent mount height signs shall be removed prior to the beginning of the punchlist work except "Low/Soft Shoulder" signs and any signs that have the prior written approval of the Engineer to remain in place while the punchlist work is in progress.

Failure to promptly remove the construction warning signs within the seven (7) calendar days after the completion of the Work or failure to remove or cover signs when work is suspended for short periods of time shall be considered as non-performance under Subsection 150.08.

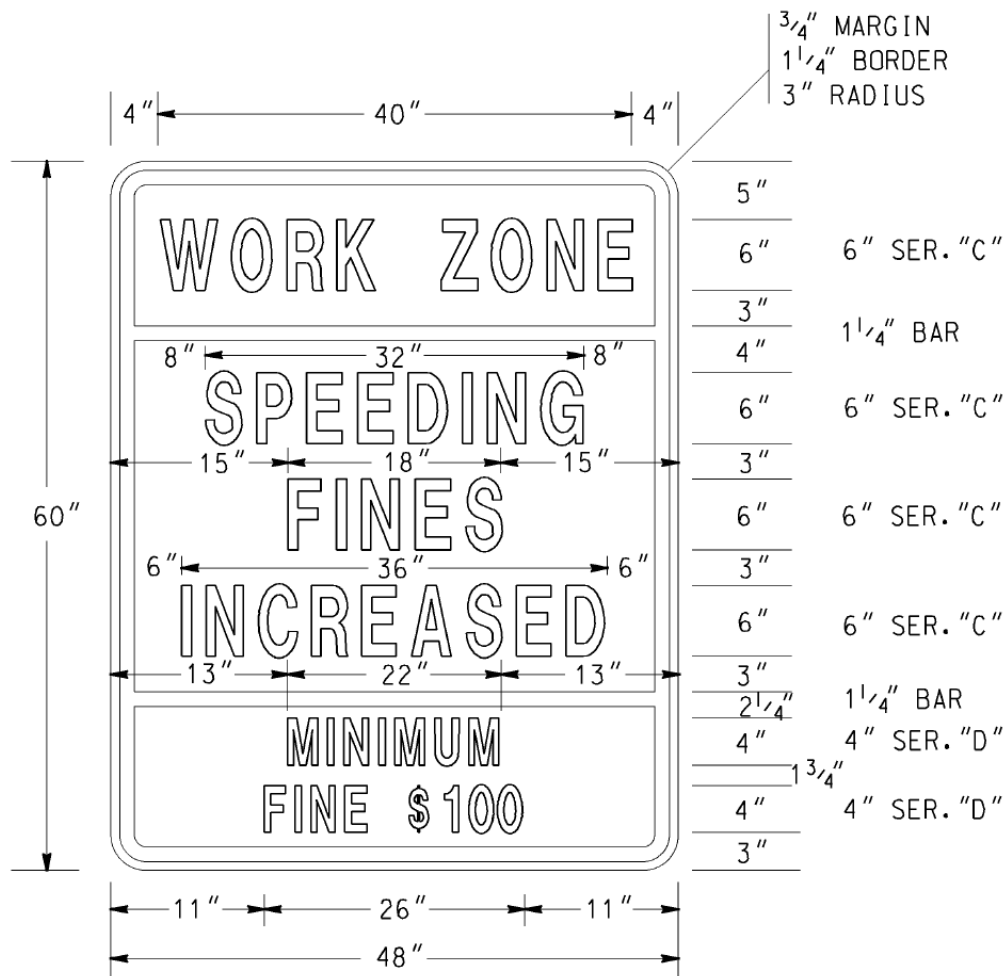
SPEED LIMIT REDUCTION FOR HIGHWAY WORK ZONE
INTERSTATE AND MULTI-LANE DIVIDED HIGHWAY SIGNING SHALL BE
DOUBLE INDICATED (RIGHT SHOULDER AND MEDIAN SHOULDER)



SIGN SIZES SHOWN ARE FOR INTERSTATE AND MULTI-LANE DIVIDED HIGHWAY. FOR OTHER HIGHWAYS USE STANDARD SIZE SIGNS AS PER THE M.U.T.C.D. EXCEPT HWZ-2 AND HWZ-3 SIGNS.

DETAIL I50-HWZ-1

ALL INTERSECTING ROADWAYS SHALL BE SIGNED WITH A HWZ-2 SIGN TO WARN MOTORIST ENTERING THE HIGHWAY WORK ZONE. INTERSTATE AND MULTI-LANE HIGHWAY SIGNING SHALL BE DOUBLE INDICATED (RIGHT SHOULDER AND MEDIAN SHOULDER).



HWZ-2

COLORS

TOP PANEL

LEGEND & BORDER - BLACK (NON-REFL)

BACKGROUND - FLUORESENT ORANGE

(ASTM TYPE VII, VIII, IX or X)

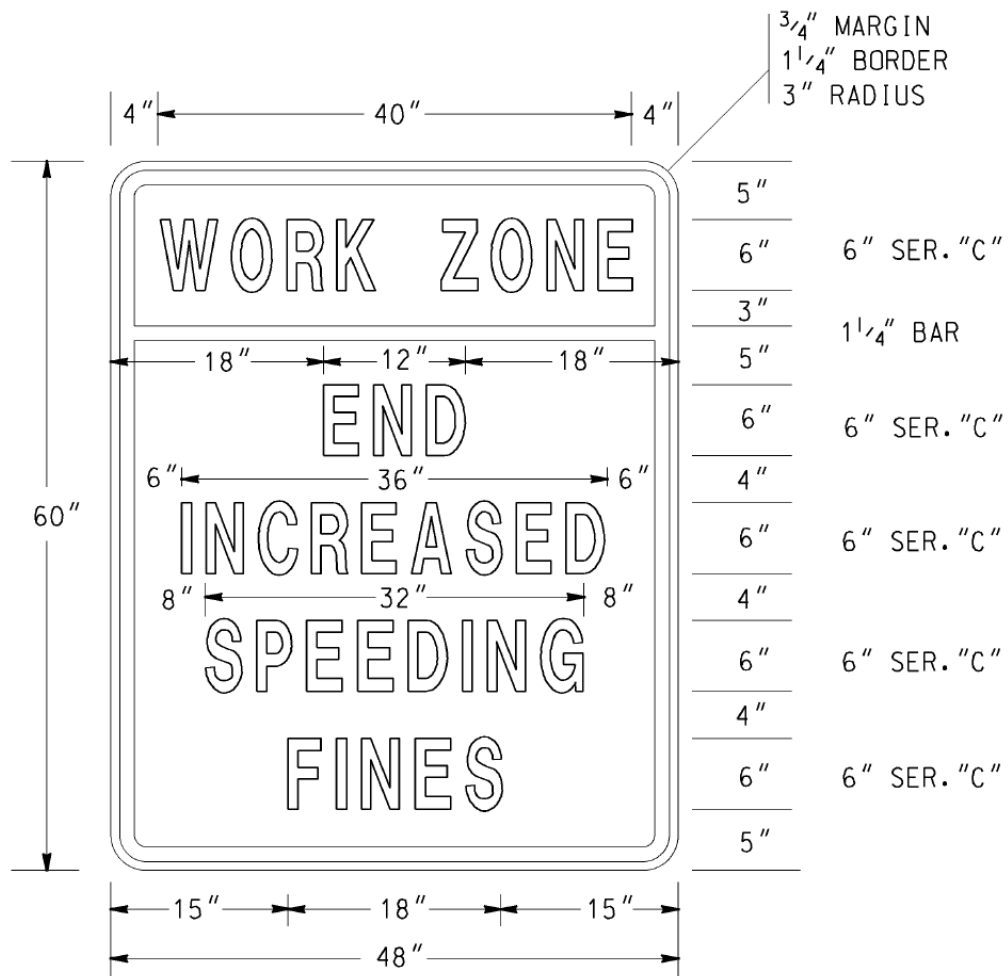
MIDDLE & BOTTOM PANELS

LEGEND & BORDER - BLACK (NON-REFL)

BACKGROUND - WHITE (ASTM TYPE III OR IV REFL SHEETING)

NOTES:

1. ALL HWZ-2 SIGN PANELS SHALL BE RIGID.
2. THE SIZE OF THE HWZ-2 SIGN SHALL NOT BE REDUCED FOR USE ON TWO-LANE ROADWAYS.



HWZ-3

COLORS

TOP PANEL

LEGEND & BORDER - BLACK (NON-REFL)

BACKGROUND - FLUORESCENT ORANGE

(ASTM TYPE VII, VIII, IX or X)

BOTTOM PANEL

LEGEND & BORDER - BLACK (NON-REFL)

BACKGROUND - WHITE (ASTM TYPE III OR IV REFL SHEETING)

NOTES:

1. ALL HWZ-3 SIGN PANELS SHALL BE RIGID.
2. THE SIZE OF THE HWZ-3 SIGN SHALL NOT BE REDUCED FOR USE ON TWO-LANE ROADWAYS.

C. LANE CLOSURES:

1. Approval/Restrictions

All lane closures of any type or duration shall have the prior approval of the Engineer.

- a. The length of a lane closure shall not exceed two (2) miles in length excluding the length of the tapers unless the prior approval of the Engineer has been obtained. The Engineer may extend the length of a lane closure based upon field conditions however the length of a workzone should be held to the minimum length required to accomplish the Work. Lane closures shall not be spaced closer than one mile. The advanced warning signs for the project should not overlap with the advanced warning signs for lane shifts, lane closures, etc.
- b. Lane closures that require same direction traffic to be split around the Work Area will not be approved for roadways with posted speeds of 35 mph or greater, excluding turn lanes.
- c. For Interstate, Limited Access and Multi-lane Divided Highways, a Portable Changeable Message Sign (PCMS) shall be placed one (1) mile in advance of a lane closure with a message denoting the appropriate lane closure one mile ahead. The Portable Changeable Message Sign (PCMS) shall be placed on the outside shoulder in accordance with Detail 150-PCMS. This is in addition to the other traffic control devices required by Standard 9106.

2. Removal Of Lane Closures

To provide the greatest possible convenience to the public in accordance with [Sub-Subsection 107.07](#), the Contractor shall remove all signs, lane closure markings, and devices immediately when lane closure work is completed or temporarily suspended for any length of time or as directed by the Engineer. All portable signs and portable sign mounting devices shall be removed from the roadway to an area which will not allow the sign to be visible and will not allow the sign or sign mounting device to be impacted by traffic.

3. Exit And Entrance Ramps

On multilane highways where traffic has been shifted to the inside lanes, the exit and entrance ramps shall have channelization devices placed on both sides of the ramp. This requirement will apply to any situation where traffic is shifted to contra flows or inside staging lanes to facilitate reconstruction work in the vicinity of exit and entrance ramps. The temporary ramp taper length shall be greater than, or equal to, the existing taper length. Interim EXIT gore signs shall be placed at the ramp divergence. The "EXIT OPEN" sign shown in Figure TA-42 of the MUTCD shall be utilized. For exit ramps, channelization device spacing shall be decreased to 10 feet for 200 feet in advance of the temporary gore, and be decreased to 10 feet for the first 100 feet of the temporary gore.

4. Lane Drop/Lane Closure

The first seven (7) calendar days of any lane closure shall be signed and marked as per Standard 9106 or 9107. However, lane closures that exist for a duration longer than seven (7) calendar days may be signed and marked as per the details in Standard 9121, provided the prior approval of the Engineer is obtained. The approved lane drop

shall utilize only the signs and markings shown for the termination end of the lane drop in Standard 9121. All warning signs in the lane drop sequence shall be used. Drums may be substituted for the Type I Crystal Delineators at the same spacing.

5. Termination Area

The transition to normal or full width highway at the end of a lane closure shall be a maximum of 150 feet.

D. TRAFFIC PACING METHOD:

1. Pacing Of Traffic

With prior approval from the Engineer, traffic may be paced allowing the Contractor up to ten (10) minutes maximum to work in or above all lanes of traffic for the following purposes:

- a. Placing bridge members or other bridge work.
- b. Placing overhead sign structures.
- c. Other work items requiring interruption of traffic.

The Contractor shall provide a uniformed police officer with patrol vehicle and blue flashing light for each direction of pacing. The police officer, Engineer, and flaggers at ramps shall be provided with a radio which will provide continuous contact with the Contractor.

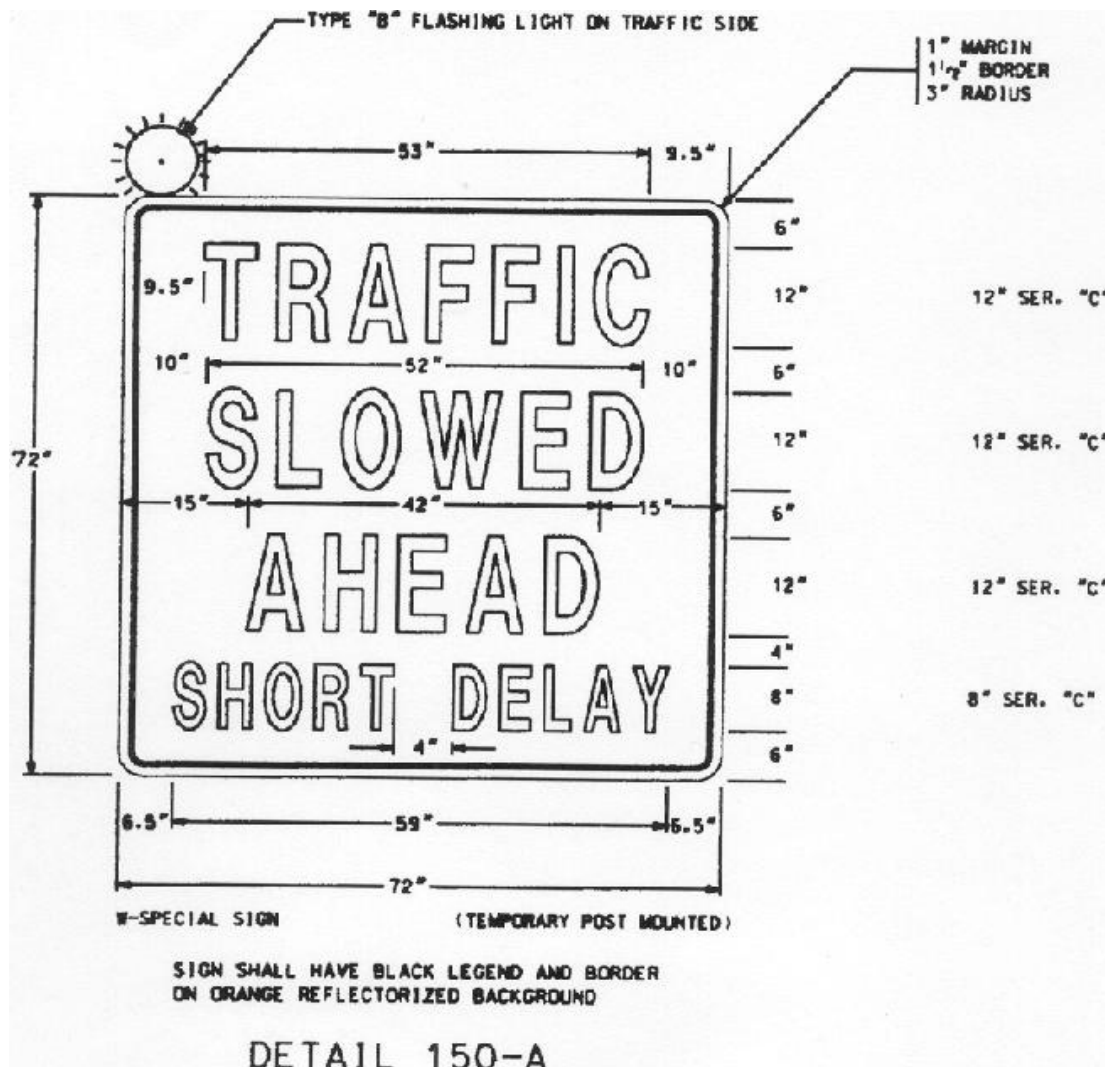
When ready to start the work activity, the police vehicle will act as a pilot vehicle slowing the traffic thereby providing a gap in traffic allowing the Contractor to perform the Work. Any on-ramps between the pace and the work area shall be blocked during pacing of traffic, with a flagger properly dressed and equipped with a Stop/Slow paddle. Each ramp should be opened after the police vehicle has passed.

Pilot vehicles shall travel at a safe pace speed, desirably not less than 20 mph interstate and 10 mph non-interstate. The Contractor shall provide a vehicle to proceed in front of the police vehicle and behind the other traffic in order to inform the Contractor's work force when all vehicles have cleared the area.

Traffic will not be permitted to stop during pacing except in extreme cases as approved by the Engineer.

2. Methods Of Signing For Traffic Pacing

At a point not less than 1,000 feet in advance of the beginning point of the pace, the Contractor shall erect and cover a W-special sign (72 inch x 72 inch) with a Type "B" flashing light, with the legend "TRAFFIC SLOWED AHEAD SHORT DELAY" (See [Detail 150-A](#)). A portable changeable message sign may be used in lieu of the W-special sign. On divided highways this sign shall be double indicated. A worker with a two-way radio shall be posted at the sign, and upon notice that the traffic is to be paced shall turn on the flashing light and reveal the sign. When traffic is not being paced, the flashing light shall be turned off and the sign covered or removed. W-special signs are reflectorized black on orange, Series "C" letter and border of the size specified.



E. CONSTRUCTION VEHICLE TRAFFIC

The Contractor's vehicles shall travel in the direction of normal roadway traffic and shall not reverse direction except at intersections, interchanges, or approved temporary crossings. The Contractor may submit a plan requesting that construction traffic be allowed to travel in the opposite direction of normal traffic when it would be desirable to modify traffic patterns to accommodate specific construction activities.

Prior approval of the Engineer shall be obtained before any construction traffic is allowed to travel in a reverse direction. If the Contractor's submittal is approved the construction traffic shall be separated from normal traffic by appropriate traffic control devices.

F. ENVIRONMENTAL IMPACTS TO THE TEMPORARY TRAFFIC CONTROL (TTC) PLAN

The Contractor shall ensure that dust, mud, and other debris from construction activities do not interfere with normal traffic operations or adjacent properties. All outfall ditches, special ditches, critical storm drain structures, erosion control structures, retention basins, etc. shall be constructed, where possible, prior to the beginning of grading operations so that the best possible drainage and erosion control will be in effect during the grading operations, thereby keeping the roadway areas as dry as possible.

Areas within the limits of the project which are determined by the Engineer to be disturbed or damaged due either directly or indirectly from the progress or the lack of progress of the work shall be cleaned up, redressed, and regrassed. All surplus materials shall be removed and disposed of as required. Surplus materials shall be disposed of in accordance with [Section 201](#) of the Specifications.

G. EXISTING STREET LIGHTS

Existing street lighting shall remain lighted as long as practical and until removal is approved by the Engineer.

H. NIGHTWORK

Adequate temporary lighting shall be provided at all nighttime work sites where workers will be immediately adjacent to traffic.

I. CONSTRUCTION VEHICLES IN THE WORKZONE

The parking of Contractor's and/or workers personal vehicles within the work area or adjacent to traffic is prohibited. It shall be the responsibility of the Worksite Traffic Control Supervisor to ensure that any vehicle present at the worksite is necessary for the completion of the work.

J. ENCROACHMENTS ON THE TRAVELED-WAY

The Worksite Traffic Control Supervisor (WTCS) shall monitor the work to ensure that all the rocks, boulders, construction debris, stockpiled materials, equipment, tools and other potential hazards are kept clear of the travelway. These items shall be stored in a location, in so far as practical, where they will not be subject to a vehicle running off the road and striking them.

K. PEDESTRIAN CONSIDERATIONS

All existing pedestrian facilities, including access to transit stops, shall be maintained. Where pedestrian routes are closed, alternate routes shall be provided. Closures of existing, interim and final pedestrian facilities shall have the prior written approval of the Engineer. When existing pedestrian facilities are disrupted, closed or relocated in a TTC zone, the temporary facilities shall be detectable and shall include accessibility features consistent with the features present in the existing pedestrian facility. Pedestrian facilities are considered improvements and provisions made to accommodate or encourage walking. Whenever a sidewalk is to be closed, the Engineer shall notify the maintaining agency two (2) weeks prior to the closure. Prior to closure, detectable barriers (that are detectable by a person with a visual disability traveling with the aid of a long cane), as described by the MUTCD, shall be placed across the full width of the closed sidewalk. Barriers and channelizing devices used along a temporary pedestrian route shall be in compliance with the MUTCD.

Temporary Traffic Control devices used to delineate a Temporary Traffic Control zone pedestrian walkway shall be in compliance with [Subsection 150.01.E](#). Temporary Traffic Control devices and construction material shall not intrude into the usable width of the pedestrian walkway. Signs and other devices shall be placed such that they do not narrow or restrict any pedestrian passage to less than 48 inches.

A pedestrian walkway shall not be severed or relocated for non-construction activities such as parking for construction vehicles and equipment. Movement by construction vehicles and equipment across designated pedestrian walkways should be minimized. When necessary, construction activities shall be controlled by flaggers. Pedestrian walkways shall be kept free of mud, loose gravel or other debris.

When temporary covered walkways are used, they shall be lighted during nighttime hours. When temporary traffic barrier is used to separate pedestrian and vehicular traffic, the temporary barrier shall meet NCHRP-350 Test Level Three. The barrier ends shall be protected in accordance with Georgia Standard 4960. Curbing shall not be used as a substitute for temporary traffic barriers when temporary traffic barriers are required. Tape, rope or plastic chain strung between temporary traffic control devices are not considered as detectable and shall not be used as a control for pedestrian movements.

The WTCS shall inspect the activity area daily to ensure that effective pedestrian TTC is being maintained. The inspection of TTC for pedestrian traffic shall be included as part of the TC-1 report.

1. Temporary Pedestrian Facilities

Temporary pedestrian facilities shall be detectable and include accessibility features consistent with the features present in the existing pedestrian facility. The geometry, alignment and construction of the facility should meet the applicable requirements of the "Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG)".

a. Temporary Walkways with Detectable Edging

A smooth, continuous hard surface (firm, stable and slip resistant) shall be provided throughout the entire length of the temporary pedestrian facility. Compacted soils, sand, crushed stone or asphaltic pavement millings shall not be used as a surface course for walkways.

Temporary walkways shall include detectable edging as defined in the MUTCD. When temporary traffic barrier is included as a pay item in the contract and where locations identified on the plans for positive protection will also allow them to serve as pedestrian detectable edging, payment will be made for the temporary traffic barrier in accordance with [Section 622](#). No payment will be made for temporary walkways with Detectable Edging where existing pavements or existing edging (that meets the requirements of MUTCD) are utilized as temporary walkways. Payment for temporary detectable edging, including approved barriers and channelizing devices, installed on existing pavements shall be included in Traffic Control-Lump Sum.

Regardless of the materials used, temporary walkways shall be constructed of sufficient thickness and durability to withstand the intended use for the duration of the construction project. If concrete or asphalt is used as the surface course for the walkway, it shall be a minimum of one and one-half inches (1-1/2") thick. Temporary walkways constructed across unimproved streets and drives shall be a minimum thickness of four inches (4") for concrete and three inches (3") for asphalt. Joints formed in concrete sidewalks shall be in accordance with [Section 441](#). Concrete surfaces shall have a broom finish.

If plywood is used as a walkway, it must be a minimum of three quarters of an inch (3/4") thick pressure treated and supported with pressure treated longitudinal joists spaced a maximum of sixteen inches (16") on center. The plywood shall be secured to the joist with galvanized nails or galvanized deck screws. Nails and screws shall be countersunk to prevent snagging or tripping the pedestrians. A slip resistant friction course shall be applied to any plywood surface that is used as a walkway. Any slip resistant material used shall have the prior written approval of the engineer.

The contractor may propose alternate types of Temporary Walkways provided the contractor can document that the proposed walkway meets the requirements of the "Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG)". Alternate types of Temporary Walkways shall have the prior written approval of the engineer.

Temporary walkways shall be constructed and maintained so there are no abrupt changes in grade or terrain that could cause a tripping hazard or could be a barrier to wheelchair use. The contractor shall construct and maintain the walkway to ensure that joints in the walkway have a vertical difference in elevation of no more than one quarter (1/4") of an inch and that the horizontal joints have gaps no greater than one half (1/2") of an inch. The grade of the temporary walkway should parallel the grade of the existing walkway or roadway and the cross slope should be no greater than 2%.

A width of sixty (60") inches, if practical, should be provided throughout the entire length of any temporary walkway. The temporary walkway shall be a minimum width of forty eight inches (48"). When it is not possible to maintain a minimum width of sixty inches (60") throughout the entire length of temporary walkway, a sixty inch (60") by sixty inch (60") passing space should be provided at least every two hundred feet (200 Ft.), to allow individuals in wheelchairs to pass.

Temporary walkways shall be constructed on firm subgrade. Compact the subgrade according to [Section 209](#). Furnish and install any needed temporary pipes prior to constructing any walkway to ensure positive drainage away from or beneath the temporary walkway. Once the walkway is no longer required, remove any temporary materials and restore the area to the original conditions or as shown in the plans.

b. Temporary Curb Cut Wheelchair Ramps

Temporary curb cut wheelchair ramps shall be constructed in accordance with [Section 441](#) and Detail A-3. Ramps shall also include a detectable warning surface in accordance with Detail A-4. Other types of material for the construction of the temporary curb cut wheelchair ramps, including the detectable warning surface, may be used provided the contractor can provide documentation that the material to be used meets the requirements of the "Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG)". When a wheelchair ramp is no longer required, remove the temporary materials and restore the area to existing conditions or as shown in the plans. For the items required to restore the area to original conditions or as shown in the plans, measures for payment shall be covered by contract pay items. If pay items are not included in the contract, then payment for these items shall be included in Traffic Control-Lump Sum.

c. Temporary Audible Information Device

Temporary audible information devices, when shown in the plans, shall be installed in compliance with the "Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG)". The devices shall be installed in accordance with the manufacturer's recommendations. Prior to installation, the contractor shall provide the engineer with a set of manufacturer's drawings detailing the proper installation procedures for each device. When no longer required, the devices shall remain the property of the contractor.

L. TRAFFIC SIGNALS

If the sequence of operations, staging, or the temporary traffic control plan requires the relocation or shifting of any components of an existing traffic signal system then any work on these traffic signals will be considered as part of Lump Sum- Traffic Control. The contractor becomes responsible for the maintenance of these traffic signals from the time that the system is modified until final acceptance. The maintenance of traffic signals that are not a part of the work and are not in conflict with any portion of the work shall not be the responsibility of the contractor.

When construction operations necessitate an existing traffic signal to be out of service, the Contractor shall furnish off-duty police officers to regulate and maintain traffic control at the site. Off-duty police officers should be used to regulate and maintain traffic control at signal sites when lane closures or traffic shifts block or restrict movements causing interference with normal road user flows and will not allow the activated traffic signal to guide the traffic through the signal site.

M. REMOVAL/REINSTALLATION OF MISCELLANEOUS ITEMS

In the prosecution of the Work, if it becomes necessary to remove any existing signs, markers, guardrail, etc. not covered by specific pay item, they shall be removed, stored and reinstalled, when directed by the Engineer, to line and grade, and in the same condition as when removed.

N. Signalized Intersections

Off duty police officers shall be used to regulate and maintain traffic control at functioning signalized intersections when lane closures or traffic shifts block or restrict movements causing interference with road user flows and will not allow the activated traffic signal to guide the traffic through the signal site. This work is considered incidental and shall be included in the overall price bid for traffic control.

150.03 SIGNS:

A. SIGNING REQUIREMENTS OF THE TEMPORARY TRAFFIC CONTROL (TTC) PLAN

When existing regulatory, warning or guide signs are required for proper traffic and pedestrian control the Contractor shall maintain these signs in accordance with the temporary traffic control (TTC) plan. The Contractor shall review the status of all existing signs, interim signs added to the work, and permanent sign installations that are part of the work to eliminate any conflicting or non-applicable signage in the TTC Plan. The Contractor's review of all signs in the TTC Plan shall establish compliance with the requirements of the MUTCD and Section 150. Any conflicts shall be reported to the Engineer immediately and the WTCS shall take the necessary measures to eliminate the conflict.

The Contractor shall make every effort to eliminate the use of interim signs as soon as the Work allows for the installation of permanent signs.

All existing illuminated signs shall remain lighted and be maintained by the Contractor.

Existing street name signs shall be maintained at street intersections.

B. CONFLICTING OR NON-APPLICABLE SIGNS

Any sign(s) or portions of a sign(s) that are not applicable to the TTC plan shall be covered so as not to be visible to traffic or shall be removed from the roadway when not in use. The WTCS shall review all traffic shifts and changes in the traffic patterns to ensure that all conflicting signs have been removed. The review shall confirm that the highest priority signs have been installed and that signs of lesser significance are not interfering with the visibility of the high priority signs. High priority signs include signs for road closures, shifts, detours, lane closures and curves. Any signs, such as speed zones and speed limits, passing zones, littering fines and litter pick up, that reference activities that are not applicable due to the presence of the Work shall be removed, stored and reinstalled when the Work is completed.

Failure to promptly eliminate conflicting or non-applicable signs shall be considered as non-performance under [Subsection 150.08](#).

C. REMOVAL OF EXISTING SIGNS AND SUPPORTS

The Contractor shall not remove any existing signs and supports without prior approval from the Engineer. All existing signs and supports which are to be removed shall be stored and protected if this material will be required later in the work as part of the TTC plan. If the signs are not to be utilized in the work then the signs will become the property of the Contractor unless otherwise specified in the contract documents.

D. INTERIM GUIDE, WARNING AND REGULATORY SIGNS

Interim guide, warning, or regulatory signs required to direct traffic and pedestrians shall be furnished, installed, reused, and maintained by the Contractor in accordance with the MUTCD, the Plans, Special Provisions, Special Conditions, or as directed by the Engineer. These signs shall remain the property of the Contractor. The bottom of all interim signs shall be mounted at least seven (7') feet above the level of the pavement edge when the signs are used for long-term stationary operations as defined by Section 6G.02 of the MUTCD. Special Conditions under Subsection 150.11 may modify this requirement.

Portable signs may be used when the duration of the work is less than three (3) days or as allowed by the special conditions in Subsection 150.11. Portable signs shall be used for all punchlist work. All portable signs and sign mounting devices utilized in work shall be NCHRP 350 compliant. Portable interim signs shall be mounted a

minimum of one (1') foot above the level of the pavement edge for directional traffic of two (2) lanes or less and a minimum of seven (7') feet for directional traffic of three (3) or more lanes. Signs shall be mounted at the height recommended by the manufacturer's crashworthy testing requirements. Portable interim signs which are mounted at less than seven (7') feet in height may have two 18 inch x 18 inch fluorescent red-orange or orange-red warning flags mounted on each sign.

All regulatory sign blanks shall be rigid whether the sign is mounted as a portable sign, on a Type III barricade or as a permanent mount height sign.

Any permanent mount height interim sign that is designed to fold in half to cover a non-applicable message on the sign shall have reflectorized material on the folded over portion of the sign. The reflectorized material shall be orange in color with a minimum of ASTM Type I engineering grade sheeting with a minimum area of six inches by six inches (6" x 6") facing the direction of traffic at all times when the sign is folded.

Interim signs may be either English or metric dimensions.

E. EXISTING SPECIAL GUIDE SIGNS

Existing special guide signs on the Project shall be maintained until conditions require a change in location or legend content. When change is required, existing signs shall be modified and continued in use if the required modification can be made within existing sign borders using design requirements (legend, letter size, spacing, border, etc.) equal to that of the existing signs, or of [Subsection 150.03.E.2](#). Differing legend designs shall not be mixed in the same sign.

1. Special Guide Signs

Special guide signs are those expressway or freeway guide signs that are designed with a message content (legend) that applies to a particular roadway location. When an existing special guide sign is in conflict with work to be performed, the Contractor shall remove the conflicting sign and reset it in a new, non-conflicting location which has been approved by the Engineer.

2. Interim Special Guide Signs

When it is not possible to utilize existing signs, either in place or relocated, the Contractor shall furnish, erect, maintain, modify, relocate, and remove new interim special guide signs in accordance with the Plans or as directed by the Engineer. Interim special guide signs that may be required in addition to, or a replacement for, existing expressway and freeway (interstate) signs shall be designed and fabricated in compliance with the minimum requirements for guide signing contained in Part 2E "Guide Signs Expressway" and Part 2F "Guide Signs Freeways" of the MUTCD, except that the minimum size of all letters and numerals in the names and places, streets and highways on all signs shall be 16 inches Series "E" initial upper-case and 12 inches lower-case. All interstate shields on these signs shall be 48 inches and 60 inches for two-numeral and three-numeral routes, respectively.

The road name of the exit or route shield shall be placed on the exit gore sign.

3. Interim Overhead Guide Sign Structures

Interim overhead special guide sign structures are not required to be lighted unless specifically required by the Plans. If lighting is required the sign shall be lighted as soon as erected and shall remain lighted, during the hours of darkness, until the interim sign is no longer required. The Contractor shall notify the Power Company at least thirty (30) days prior to desired connection to the power source.

4. Permanent Special Guide Signs

The installation of new permanent special guide signs and the permanent modification or resetting of existing special guide signs, when included in the contract, shall be accomplished as soon as practical to minimize the use of interim special guide signs. If lighting is required by the Plans, all new permanent overhead special guide signs shall be lighted as soon as erected.

F. MATERIALS- INTERIM SIGNS:

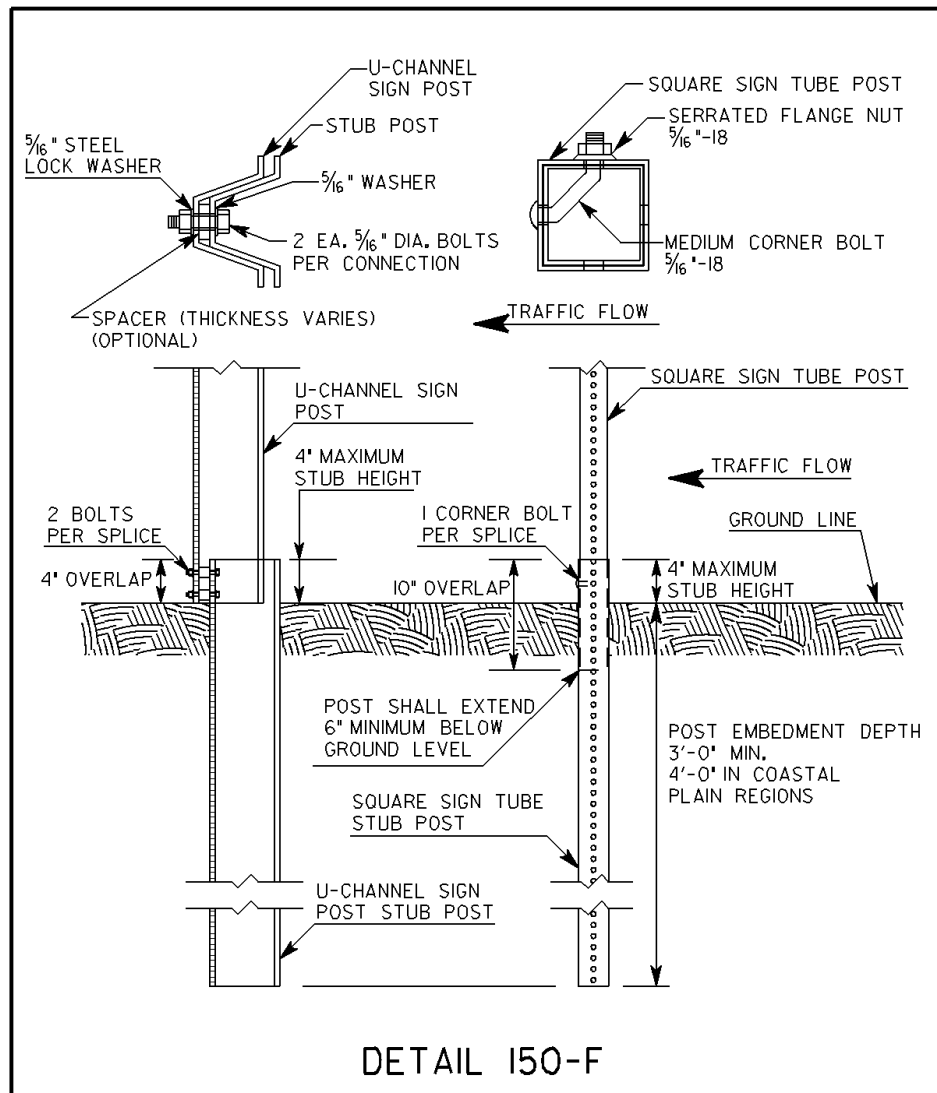
1. Posts

Permanent mounting height of seven (7') feet- Posts for all interim signs shall meet the requirements of Section 911 except that green or silver paint may be used in lieu of galvanization for steel posts or structural shape posts. Within the limits of a single project, all metal posts shall be the same color. Wood posts are not required to be pressure treated. Ground mounted sign(s) greater than nine (9) square feet shall be mounted on two posts.

Interim posts may be either metric or English in dimensions.

Posts for all interim signs shall be constructed to yield upon impact unless the posts are protected by guardrail, portable barrier, impact attenuator or other type of positive barrier protection. Unprotected posts shall meet the breakaway requirements of the "1994 AASHTO Standard Specifications for Structural Support for Highway Signs, Luminaries and Traffic Signals". Unprotected interim posts shall be spliced as shown in [Detail 150-F](#) unless full length unspliced posts are used.

Unprotected post splices will not be permitted any higher than four inches above the ground line to lessen the possibility of affecting the undercarriage of a vehicle. Installation of posts may require establishment of openings in existing pavements, islands, shoulders etc.



- 2. Sign Blanks And Panels- Permanent mounting height of seven (7') feet-**
All sign blanks and panels shall conform to [Section 912](#) of the Specifications except that blanks and panels may be ferrous based or other metal alloys. Type 1 and Type 2 sign blanks shall have a minimum thickness of 0.08 inches regardless of the sign type used. Alternative sign blank materials (composites, poly carbonates, fiberglass reinforced plastics, recycled plastics, etc.) shall have a letter of approval from the Office of Materials and Research for use as interim construction signs before these materials are allowed to be incorporated into the work unless these rigid sign blanks are currently approved as a crashworthy sign blank material under QPL 34. The back side of sign panels shall be painted orange to prevent rust if other metals are used in lieu of aluminum. Plywood blanks or panels will not be permitted. The use of flexible signs will not be permitted for permanent mount height signs.

Interim blanks and panels may be either metric or English in dimensions.

- 3. Portable Sign Mounting Devices, Portable Sign Blanks-**
All portable sign mounting devices and sign blanks utilized in the work shall be NCHRP 350 Test Level III compliant. All portable sign mounting devices and sign blanks shall be from the Qualified Products List. Any sign or sign mounting device shall have an identifying decal, logo, or manufacturer's stamping that clearly identifies the device as NCHRP 350 compliant. The required decal, logo or manufacturer's stamping shall not be displayed on the message face of the sign. The Contractor may be required to provide certification from the Manufacturer as proof of NCHRP 350 compliance. All portable signs shall be mounted according to height requirements of [Subsection 150.03.D](#).

G. SIGN VISIBILITY AND OFFSETS

All existing, interim and new permanent signs shall be installed so as to be completely visible for an advance distance in compliance with the MUTCD. Any clearing required for maintaining the line of sight to existing, interim or permanent signs shall be done as part of the requirements of the TTC plan. The clearing shall include any advance warning signs, both interim and permanent, that are installed as a part of the work including advance warning signs that are installed outside the limits of the project. Any sign installed behind W-beam or T-beam guardrail with non-breakaway posts shall be installed with the leading edge of the sign a minimum of four feet and three inches (4'3") behind the face of the guardrail with five feet (5') of clearance being desirable. Limbs, brush, construction equipment and materials shall be kept clear of the driver's line of sight to all signs that are part of the TTC plan.

H. ADVANCE WARNING SIGNS:

1. All Type Of Highways

Advance warning signs shall be placed ahead of the work area in accordance with Part VI of the MUTCD and shall include a series of at least three advance road work (W20-1) signs placed at the termini of the project. The series shall have the legend ROAD WORK (1500 FEET, 1000 FEET, AND 500 FEET).

At grade intersecting roadways and on-ramps shall be signed with a minimum of one ROAD WORK AHEAD sign.

When work terminates at a "T" intersection, a minimum of one "ROAD WORK AHEAD" sign shall be placed in advance of the intersection and one "END ROAD WORK" sign shall be placed at the termination end of the intersection. Field conditions may require the use of additional warning signage.

Advanced Warning Signs on State Routes shall be a minimum dimension of 48 inches x 48 inches. When a State Route intersects a project which consists of adding travel lanes, reconstructing an existing roadway or new location work, the State Route approaches shall have a minimum of three (W20-1) advanced warning signs (1500 ft., 1000 ft., 500 ft.). The termination end of an intersecting State Route shall have END ROAD WORK signage.

The W20-1 signs shall be placed at the termini of the project or sufficiently in advance of the termini to allow for lane shifts, lane closures and other activities which may also require advanced warning signs. The advanced warning signs for the project should not overlap with the advanced warning signs for lane shifts, lane closures, etc.

The length of a workzone should be held to the minimum length required to accomplish the work. If a project has multiple individual worksites within the overall limits of the project, each site should be signed individually if the advance warning signs for each site can be installed without overlapping an adjacent worksite. As soon as the work is completed at any individual site the warning signs shall be removed from that site. Clean-up work and punchlist work shall be performed with portable signage.

Project mileage indicated on the G20-1 sign shall be the actual project mileage rounded up to the nearest whole mile. Projects less than two (2) miles in length or individual worksites that are part of a multiple worksite project may delete this sign. The G20-1 sign shall be 60" X 36" and the G20-2 sign shall be 48" X 24".

2. Interstate, Limited Access And Multilane Divided Highways

In addition to the W20-1 signs required at 500 ft., 1000 ft. and 1500 ft., multi-lane divided highways shall also have additional advanced warning signs installed with the legend "ROAD WORK (2 MILES, 1 MILE and 1/2 MILE)". All construction warning signs on divided highways shall be double indicated (i.e., on the left and right sides of the roadway.) If the use of the 1/2 mile, 1 mile and 2 mile advanced warning signs cause an overlap with other work or do not benefit field conditions then the Engineer may review the use of these signs and eliminate their installation. When the posted speed limit is 50 MPH or less, the 1/2 mile, 1 mile and 2 mile signs should be eliminated especially in urban areas.

The W20-1 advance warning signs for ROAD WORK 500 FEET; 1000 FEET; and 1500 FEET shall be temporarily covered when work involving the advanced warning signs for lane shifts and lane closures overlap these signs. The ROAD WORK 1/2 MILE, ROAD WORK 1 MILE, and ROAD WORK 2 MILES shall be in place when the 500, 1000 and 1500 feet signs are temporarily covered.

When the temporary traffic control zone already has advanced warning (W20-1) signs installed the W20-1 signs required for lane closures under Standard 9106 should be eliminated.

RAMP WORK ON LIMITED ACCESS HIGHWAYS: The workzone shall not be signed for the entire length of the mainline of a limited access highway when only short individual worksites, interchange or ramp work is being performed.

When work is restricted to ramp reconstruction or widening activities, the advance warning signs on the mainline section of the limited access highway shall be limited to the use of portable advance warning signs. These portable advance warning signs shall only be utilized when work activity is within the gore point of the ramp and the mainline traveled way or work is active in the accel/decel lane adjacent to the mainline traveled way. Portable advance warning signs (W20-1; 1500ft. /1000 ft. /500ft.) shall be installed on the traveled way of the limited access highway when the above conditions are present. The advance warning signs shall be installed only in one direction where work is active. All portable signs shall be double indicated. When work is not active, the ramp work shall be advanced warned by the use of a single 48 inch X 48 inch "RAMP WORK AHEAD" sign along the right shoulder of the mainline traveled way prior to the beginning of the taper for the decel lane. The "RAMP WORK AHEAD" sign shall be mounted at seven (7') feet in height. Differences in elevation shall be in compliance with the requirements of [Subsection 150.06](#) prior to the removal of the portable (W20-1) advanced warning signs from the mainline.

The G20-1 sign shall be eliminated on limited access highways when the work involves only ramp work, bridge reconstruction, bridge painting, bridge joint repairs, guardrail and anchor replacement or other site specific work which is confined to a short section of limited access highway.

I. PORTABLE CHANGEABLE MESSAGE SIGN

Unless specified as a paid item in the contract the use of a portable changeable message sign will not be required. When specified, a portable changeable message sign (PCMS) shall meet the minimum requirements of [Section 632](#) and the MUTCD. The maximum amount of messages allowed to be flashed on one PCMS is two phases (flashes). The language and the timing of the messages shall comply with the MUTCD and Section 632.

When used as an advanced device the PCMS should typically be placed ahead of the construction activities. If the PCMS is used as a substitute for another device then the requirements for the other device apply.

J. FLASHING BEACON

The flashing beacon assembly, when specified, shall be used in conjunction with construction warning signs, regulatory, or guide signs to inform traffic of special road conditions which require additional driver attention. The flashing beacon assembly shall be installed in accordance with the requirements of [Section 647](#).

K. RUMBLE STRIP SIGNAGE

Signage for rumble strips located in the travelway shall be as required in [Subsection 150.01.C](#) and [Subsection 150.02.A.9](#).

L. LOW/SOFT SHOULDER SIGNAGE

Low or soft shoulder signs shall be utilized in accordance with the following conditions:

CONSTRUCTION/RECONSTRUCTION PROJECTS:

"LOW/SOFT SHOULDER" signs shall be erected when a difference in elevation exceeds one (1") inch but does not exceed three (3") inches between the travelway and any type of shoulder unless the difference in elevation is four (4') feet or greater from the edge of the traveled way.

The spacing of the signs shall not exceed one (1) mile and the signs shall be placed immediately past each crossroad intersection. The "Low/Soft" signs shall remain in place until the difference in elevation is eliminated and the shoulder has been dressed and permanently grassed for a minimum of thirty (30) calendar days. These signs shall be furnished, installed, maintained and removed by the Contractor as part of Traffic Control-Lump Sum. These signs shall be orange with black borders and meet the reflectorization requirements of [Subsection 150.01.D](#).

"SHOULDER DROP-OFF" (W8-9a) signs shall be used when a difference in elevation, less than four (4') feet from the traveled way, exceeds three (3") inches and is not protected by positive barrier protection. These warning signs shall be placed in advance of the drop-off.

For a continuous drop-off condition, the W8-9a) signs shall, as a minimum, be spaced in accordance with the above requirements for "Low/soft shoulder" signs.

PROJECTS CONSISTING PRIMARILY OF ASPHALTIC CONCRETE RESURFACING ITEMS:

"LOW/SOFT SHOULDER" signs shall be erected when a difference in elevation exceeds one (1") inch but does not exceed three (3") inches between the travelway and any type of shoulder unless the difference in elevation is four (4') feet or greater from the edge of the traveled way.

SHOULDER BUILDING INCLUDED IN THE CONTRACT: "Low/Soft Shoulder" signs shall be erected as per the requirement of Standards 9102, 9106, and 9107. "Shoulder Drop-off" signs (W8-9a) shall be erected as per the requirements of the MUTCD. These signs shall be maintained until the conditions requiring their installation have been eliminated. The Contractor shall remove all interim warning signs before final acceptance.

SHOULDER BUILDING NOT INCLUDED IN THE CONTRACT: The Department will furnish the "Low/Soft Shoulder" signs, "Shoulder Drop-off" signs and the posts. The signs shall be erected to meet the minimum requirements of [Subsection 150.03](#). The Contractor shall include the cost of furnishing installation hardware (bolts, nuts, and

washers), erection and maintenance of the signs in the bid price for Traffic Control-Lump Sum. The Contractor shall maintain the signs until final acceptance. The Department will remove the signs.

LAU/LAR PROJECTS SHOULDER BUILDING NOT INCLUDED IN THE CONTRACT: The Contractor will furnish, install and maintain LOW/SOFT SHOULDER signs (yellow with black borders, ASTM Type III or IV) at the appropriate spacing, until Final Acceptance of the project by the Department. After Final Acceptance by the Department the signs will become the property and responsibility of the local government.

M. BUMP SIGNAGE:

MULTI-LANE DIVIDED HIGHWAYS: A bump sign (W8-1) shall be utilized when a transverse joint in the pavement structure has a vertical difference in elevation of three quarters ($3/4''$) of an inch or greater in depth with no horizontal taper to ramp the traffic from one elevation to the other. This condition typically occurs at approach slabs during pavement milling operations and at transverse joints in asphaltic pavement lifts.

TWO-LANE TWO-WAY HIGHWAYS: A bump sign (W8-1) shall be utilized when a transverse joint in the pavement structure has a vertical difference in elevation that exceeds one and three quarters ($1-3/4''$) inches in depth with no horizontal taper to ramp the traffic from one elevation to the other. This includes utility and storm drainage repairs that require concrete placement for patching and/or steel plating.

The (W8-1) sign shall be placed sufficiently in advance to warn the motorist of the condition.

N. PEDESTRIAN SIGNAGE:

Appropriate signs as described in the MUTCD shall be maintained to allow safe passage of pedestrian traffic or to advise pedestrians of walkway closures (Refer to MUTCD Figures TA-28 and TA-29 for guidance). Advance closure signing should be placed at intersections rather than midblock locations so that pedestrians are not confronted with midblock work sites that will induce them to attempt skirting the work site or making a midblock crossing. Signs and other devices mounted lower than seven (7) feet above the temporary pedestrian walkway shall not project more than four (4) inches into the accessible pedestrian facilities. Signs and other devices shall be placed such that they do not narrow any pedestrian passage to less than 48 inches.

150.04 PAVEMENT MARKINGS

A. GENERAL

Full pattern pavement markings in accordance with [Section 652](#) and in conformance with Section 3A and 3B, except 3B.02, of the MUTCD are required on all courses before the roadway is opened to traffic. No passing zones shall be marked to conform to [Subsection 150.04.E](#). During construction and maintenance activities on all highways open to traffic, both existing markings and markings applied under this Section shall be fully maintained until Final Acceptance. If the pavement markings are, or become, unsatisfactory in the judgement of the Engineer due to wear, weathering, or construction activities, they shall be restored immediately.

1. Resurfacing Projects

Pavement markings shall be provided on all surfaces that are placed over existing markings. Interim and final markings shall conform in type and location to the markings that existed prior to resurfacing unless changes or additions are noted in the Contract. The replacement of parking spaces will not be required unless a specific item or note has been included in the Contract. Any work to make additions to the markings that existed prior to resurfacing is to be considered as extra work.

2. Widening And Reconstruction Projects

If the lane configuration is altered from the preconstruction layout then pavement markings will be as required by the plans or the Engineer.

3. New Location Construction Projects

Pavement marking plans will be provided.

B. MATERIALS

All traffic striping applied under this Section shall be a minimum four inches in width or as shown in plans and shall conform to the requirements of [Section 652](#), except as modified herein. Raised pavement markers (RPMs) shall meet the requirements of [Section 654](#). Markings on the final surface course, which must be removed, shall be a removable type. The Contractor will be permitted to use paint, thermoplastic, or tape on pavement which is to be overlaid as part of the project, unless otherwise directed by the Engineer. Partial (skip) reflectorization (i.e. reflectorizing only a portion of a stripe) will not be allowed.

C. INSTALLATION AND REMOVAL OF PAVEMENT MARKINGS:

INSTALLATION: All pavement markings, both interim and permanent, shall be applied to a clean surface. The Contractor shall furnish the layout and preline the roadway surface for the placement of pavement markings applied as part of the temporary traffic control plan. All interim marking tape and RPM's on the final surface shall be removed prior to the placement of the final markings.

The Contractor shall sequence the work in such a manner as to allow the installation of markings in the final lane configuration at the earliest possible stage of the work.

REMOVAL: Markings no longer applicable shall be removed in accordance with [Subsection 656.3.05](#).

THE ELIMINATION OF CONFLICTING PAVEMENT MARKINGS BY OVERPAINTING WITH UNAPPROVED PAINT OR ANY TYPE OF LIQUID ASPHALT IS NOT ACCEPTABLE.

INTERMEDIATE SURFACE: Interim markings shall be removed by methods that will cause minimal damage to the pavement surface while also ensuring that traveling public will not be confused or misdirected by any residual markings remaining on the intermediate surface. The use of approved black-out tape and black-out paint (manufactured for the sole purpose of covering existing pavement markings) may be permitted on some interim surfaces, provided the results are satisfactory to the Engineer.

FINAL SURFACE: No interim paint or thermoplastic markings will be permitted on any final surface unless the interim markings are in alignment with the location of the permanent markings and the interim marking will not interfere or adversely affect placement of the permanent markings. The proposed method of removal for layout errors that require markings to be removed from the final surface shall have the prior approval of the Engineer. Any damage to the final pavement surface caused by the pavement marking removal process shall be repaired at the Contractor's expense by methods acceptable and approved by the Engineer. [Subsection 400.3.06.C](#) shall apply when corrective measures are required. The use of black-out tape or black-out paint will not be permitted under any circumstance to correct layout errors on any final surface.

Traffic shifts that are done on the final surface shall be accomplished using interim traffic marking tape that can be removed without any blemishing of the final surface. Interim traffic marking tape shall be used on any of the following final surfaces; asphaltic concrete, Portland cement concrete, and bridge deck surfaces. The contractor may propose alternate traffic markings and removal methods on the final surface. Submitted proposals shall include the type of material, method of removal and a cost comparison to the traffic marking tape method. Prior to any approval, the contractor shall field demonstrate to the satisfaction of the Engineer that the proposed traffic markings can be removed without any blemishing of the final surface. If the proposal is determined to be acceptable, a supplemental agreement will be executed prior to the installation of the proposed alternate traffic markings. The supplemental agreement shall denote the type of traffic marking materials, method of removal and any cost and/or time savings to the Department. The Department will not consider or participate in any cost increase that may result from implementing the proposed alternate method.

PAY FACTOR REDUCTION FOR ASPHALTIC CONCRETE FINAL SURFACES: When the correction of an error in the layout of the final pavement markings requires the final surface to be grounded, blemished, scarred, or polished the pay factor shall be reduced to 0.95 for the entire surface area of the final topping that has a blemish, polished or a scarred surface. The reduced pay factor shall not be confined to only the width and length of the stripe or the dimensions of the blemished areas, the whole roadway surface shall have the reduced pay factor applied. The area of the

reduced pay factor shall be determined by the total length and the total width of the roadway affected. If the affected area is not corrected, the reduction in pay shall be deducted from the final payment for the topping layer of asphaltic concrete. The Engineer shall make the final determination whether correction or a reduced pay factor is acceptable.

The eradication of pavement markings on intermediate and final concrete surfaces shall be accomplished by a method that does not grind, polish, or blemish the surface of the concrete. The method used for the removal of the interim markings shall not spall chip the joints in the concrete and shall not damage the sealant in the joints. Any joint or sealant repairs shall be included in the bid price for Traffic Control-Lump Sum. The proposed method of removal shall have the prior approval of the Engineer.

Failure to promptly remove conflicting or non-applicable pavement markings shall be considered as non-performance under [Subsection 150.08](#).

PREPARATION AND PLANNING FOR TRAFFIC SHIFTS: When shifting of traffic necessitates removal of centerline, lane lines, or edge lines, all such lines shall be removed prior to, during, or immediately after any change so as to present the least interference with traffic. Interim traffic marking tape shall be used as a temporary substitute for the traffic markings being removed.

Before any change in traffic lane(s) alignment, marking removal equipment shall be present on the project for immediate use. If marking removal equipment failures occur, the equipment shall be repaired or replaced (including leasing equipment if necessary), so that the removal can be accomplished without delay.

Except for the final surface, markings on asphaltic concrete may be obliterated by an overlay course, when approved by the Engineer. When an asphaltic concrete overlay is placed for the sole purpose of eliminating conflicting markings and the in place asphaltic concrete section will allow, said overlay will be eligible for payment only if designated in the Plans. Overlays to obliterate lines will be paid for only once and further traffic shifts in the same area shall be accomplished with removable markings. Only the minimum asphaltic concrete thickness required to cover lines will be allowed. Excessive build-up will not be permitted. When an overlay for the sole purpose of eliminating conflicting markings is not allowed, the markings no longer applicable shall be removed in accordance with [Subsection 656.3.05](#).

D. RAISED PAVEMENT MARKERS

Raised pavement markers (RPMs) are required as listed below for all asphaltic concrete pavements before the roadway is open to traffic. On the final surface, RPM's shall be placed according to the timeframes specified in 150.04 E. for full pattern pavement markings except Interstate Highways where RPM's shall be placed and/or maintained when the roadway is open to traffic. When Portland Cement Concrete is an intermediate or final surface and is open to traffic, one calendar day is allowed for cleaning and drying before the installation of RPMs is required.

Raised pavement markers are not allowed on the right edge lines under any situation.

1. Interstate Highways

Retro-reflective raised pavement markers (RPM's) shall be placed and/or maintained on intermediate pavement surfaces on all interstate highways that are open to traffic. This includes all resurfacing projects along with widening and reconstruction projects. The spacing and placement shall be as required for MULTI-LANE DIVIDED HIGHWAYS.

2. Multi-Lane Divided Highways

Retro-reflective raised pavement markers (RPMs) shall be placed and/or maintained on intermediate pavement surfaces on all multi-lane divided highways that are opened to traffic when these roadways are being widened or reconstructed. Two lane-two way roadways that are being widened to a multi-lane facility, whether divided or undivided, are included in this provision. Projects consisting primarily of asphalt resurfacing items or shoulder widening items are excluded from this requirement. The RPMs shall be placed as follows:

a. SUPPLEMENTING LANE LINES

80 foot center on skip lines with curvature less than three degrees. (Includes tangents)

40 foot centers on solid lines and all lines with curvature between three degrees and six degrees.

20 foot centers on curves over six degrees.

20 foot centers on lane transitions or shifts.

b. SUPPLEMENTING RAMP GORE LINES

20 foot centers, two each, placed side by side.

c. OTHER LINES

As shown on the plans or directed by the Engineer.

3. Other Highways

On other highways under construction RPMs shall be used and/or maintained on intermediate pavement surfaces as follows:

a. SUPPLEMENTING LANE LINES AND SOLID LINES

40 foot centers except on lane shifts. (When required in the Plans or Contract.)

20 foot centers on lane shifts. (Required in all cases.)

b. SUPPLEMENTING DOUBLE SOLID LINES

40 foot centers (one each beside each line) except on lane shifts. (When required in the Plans or Contract.)

20 foot centers on lane shifts. (Required in all cases.)

E. EXCEPTIONS FOR INTERIM MARKINGS

Some exceptions to the time of placement and pattern of markings are permitted as noted below; however, full pattern pavement markings are required for the completed project.

1. Two-Lane, Two-Way Roadways

a. SKIP LINES

All interim skip (broken) stripe shall conform to [Section 652](#) except that stripes shall be at least two feet long with a maximum gap of 38 feet. On curves greater than six degrees, a one-foot stripe with a maximum gap of 19 feet shall be used. In lane shift areas solid lines will be required. Interim skip lines shall be replaced with markings in full compliance with [Section 652](#) prior to expiration of the 14 calendar day period.

Interim raised pavement markers may be substituted for the interim skip (broken) stripes. If raised pavement markers are substituted for the two foot interim skip stripe, three markers spaced at equal intervals over a two feet distance will be required. No separate payment will be made if the interim raised pavement markers are substituted for interim skip lines.

Interim raised pavement markers shall be retro-reflective, shall be the same color as the pavement markers for which they are substituted, and shall be visible during daytime.

The type of interim marker and method of attachment to the pavement shall be approved by the Office of Materials and Research but in no case will the markers be attached by the use of nails. Flexible reflective markers, Type 14 or Type 15, may be used for a maximum of fourteen (14) calendar days as an interim marker. Any flexible reflective markers in use shall be from the qualified products list (QPL).

The interim raised pavement markers shall be maintained until the full pattern pavement markings are applied. At the time full pattern markings are applied the interim raised markers shall be removed in a manner that will not interfere with application of the full pattern pavement markings.

b. NO PASSING ZONES-TWO-LANE, TWO-WAY ROADWAYS

Passing zones shall be re-established in the locations existing prior to resurfacing. No changes to the location of passing zones shall be done without the written approval of the Engineer. For periods not to exceed three calendar days where interim skip centerlines are in place, no-passing

zones shall be identified by using post or portable mounted DO NOT PASS regulatory signs (R4-1 24" x 30") at the beginning and at intervals not to exceed ½ mile within each no-passing zone. A post or portable mounted PASS WITH CARE regulatory sign (R4-1 24" x 30") shall be placed at the end of each no-passing zone. Post mounted signs shall be placed in accordance with the MUTCD. Portable signs shall conform to the requirements of the MUTCD and shall be NCHRP 350 compliant. Portable signs shall be secured in such a manner to prevent misalignment and minimize the possibility of being blown over by weather conditions or traffic.

On new location projects and on projects where either horizontal or vertical alignments has been modified, the location of No-Passing Zones will be identified by the Engineer.

c. EDGELINES

1) Bituminous Surface Treatment Paving

Edgelines will not be required on intermediate surfaces (including asphaltic concrete leveling for bituminous surface treatment paving) that are in use for a period of less than 60 calendar days except at bridge approaches, on lane transitions, lane shifts, and in such other areas as determined by the Engineer. On the final surface, edgelines shall be placed within 30 calendar days of the time that the final surface was placed.

2) All Other Types of Pavement

Edgelines will not be required on intermediate surfaces that are in use for a period of less than 30 calendar days except at bridge approaches, on lane transitions, lane shifts, and in such other areas as determined by the Engineer. On the final surface, edgelines shall be placed within 14 calendar days of the time that the surface was placed.

2. Multi-Lane Highways – With No Paved Shoulder(S) Or Paved Shoulder(S) Four Feet Or Less

a. UNDIVIDED HIGHWAYS (INCLUDES PAVED CENTER TURN LANE)

1) Centerlines and No-Passing Barrier-Full Pattern centerlines and no-passing barriers shall be restored before opening to traffic.

2) Lanelines- Interim skip (broken) stripe as described in [Subsection 150.04E.1.a](#). may be used for periods not to exceed three calendar days. Skiplines are not permitted in lane shift areas. Solid lines shall be used.

3) Edgelines- Edgelines shall be placed on intermediate and final surfaces within three calendar days of obliteration.

b. DIVIDED HIGHWAYS (GRASS OR RAISED MEDIAN)

- 1) Lanelines- Full pattern skip stripe shall be restored before opening to traffic. Skip lines are not permitted in lane shift areas. Solid lines shall be required.
- 2) Centerline/Edgeline- Solid lines shall be placed on intermediate and final surfaces within three calendar days of obliteration.

3. Limited Access Roadways And Roadways With Paved Shoulders Greater Than Four Feet

a. Same as [Subsection 150.04.E.2](#) except as noted in (b) below.

b. EDGELINES-

- 1) Asphaltic Concrete Pavement- Edgelines shall be placed on intermediate and final surfaces prior to opening to traffic.
- 2) Portland Cement Concrete Pavement- Edgelines shall be placed on any surface open to traffic no later than one calendar day after work is completed on a section of roadway. All water and residue shall be removed prior to daily striping.

4. Ramps For Multi-Lane Divided Highways

A minimum of one solid line edge stripe shall be placed on any intermediate surface of a ramp prior to opening the ramp to traffic. The other edge stripe may be omitted for a maximum period of three (3) calendar days on an intermediate surface. Appropriate channelization devices shall be spaced at a maximum of twenty-five (25') feet intervals until the other stripe has been installed.

The final surface shall have both stripes placed prior to opening the ramp to traffic.

5. MISCELLANEOUS PAVEMENT MARKINGS:

FINAL SURFACE: School zones, railroads, stop bars, symbols, words and other similar markings shall be placed on final surfaces conforming to [Section 652](#) within fourteen (14) calendar days of completion of the final surface. Final markings shall conform to the type of pay item in the plans. When no pay item exists in the plans the final markings shall conform to [Section 652](#) for painted markings.

INTERMEDIATE SURFACE: Intermediate surfaces that will be in use for more than forty-five (45) calendar days shall have the miscellaneous pavement markings installed to conform to the requirement of [Section 652](#). Under Subsection 150.11, Special Conditions, or as directed by the Engineer these markings may be eliminated.

F. MOBILE OPERATIONS

When pavement markings (centerlines, lane lines, and edgelines) are applied in a continuous operation by moving vehicles and equipment, the following minimum equipment and warning devices shall be required. These devices and equipment are in addition to the minimum requirements of the MUTCD.

1. All Roadways

All vehicles shall be equipped with the official slow moving vehicle symbol sign. All vehicles shall have a minimum of two flashing or rotating beacons visible in all directions. All protection vehicles shall have an arrow panel mounted on the rear. All vehicles requiring an arrow panel shall have, as a minimum, a Type B panel. All vehicle mounted signs shall be mounted with the bottom of the sign a minimum height of forty-eight inches (48") above the pavement. All sign legends shall be covered or removed from view when work is not in progress.

2. Two-Lane Two-Way Roadways

a. Lead Vehicles

The lead vehicle may be a separate vehicle or the work vehicle applying the pavement markings may be used as the lead vehicle. The lead vehicle shall have an arrow panel mounted so that the panel is easily visible to oncoming (approaching) traffic. The arrow panel should typically operate in the caution mode.

b. Work Vehicles

The work vehicle(s) applying markings shall have an arrow panel mounted on the rear. The arrow panel should typically operate in the caution mode. The work vehicle placing cones shall follow directly behind the work vehicle applying the markings.

c. Protection Vehicles

A protection vehicle may follow the cone work vehicle when the cones are being placed and may follow when the cones are being removed.

3. MULTI-LANE ROADWAYS

A lead vehicle may be used but is not required. The work vehicle placing cones shall follow directly behind the work vehicle applying the markings. A protection vehicle that does not function as a work vehicle should follow the cone work vehicle when traffic cones are being placed. A protection vehicle should follow the cone work vehicle when the cones are being removed from the roadway. Protection vehicles shall display a sign on the rear of the vehicle with the legend PASS ON LEFT (RIGHT).

INTERSTATES AND LIMITED ACCESS ROADWAYS: A protection vehicle shall follow the last work vehicle at all times and shall be equipped with a truck mounted attenuator that is certified for impacts not less than 62 mph in accordance with NCHRP350 Test Level Three (3).

150.05 CHANNELIZATION

A. GENERAL

Channelization shall clearly delineate the travelway through the work zone and alert drivers and pedestrians to conditions created by work activities in or near the travelway. Channelization shall be done in accordance with the plans and specifications, the MUTCD, and the following requirements.

All Channelization Devices utilized on any project shall be NCHRP 350 compliant. Any device used on the Work shall be from the Qualified Products List. All devices utilized on the work shall have a decal, logo, or manufacturer's stamping that clearly identifies the device as NCHRP 350 compliant. The Contractor may be required to furnish certification from the Manufacturer for any device to prove NCHRP 350 compliance.

1. Types of Devices Permitted for Channelization in Construction Work Zones:

a. DRUMS:

- 1) **DESIGN:** Drums shall meet the minimum requirement of the MUTCD and shall be reflectorized as required in [Subsection 150.01.D](#). The upper edge of the top reflectorized stripe on the drum shall be located a minimum of 33 inches above the surface of the roadway. A minimum drum diameter of 18 inches shall be maintained for a minimum of 34 inches above the roadway.
- 2) **APPLICATION:** Drums shall be used as the required channelizing device to delineate the full length of a lane closure, shift, or encroachment, except as modified by this Subsection.
- 3) **TRANSITION TAPERS FOR LANE CLOSURES:** Drums shall be used on all transition tapers. The minimum length for a merging taper for a lane closure on the travelway shall be as shown in Table 150-1:

TABLE 150-1

Posted Speed Limit, MPH	Lane Width 9 Feet	Lane Width 10 Feet	Lane Width 11 Feet	Lane Width 12 Feet	Maximum Drum Spacing in Tapers, (Feet)
	Minimum Taper Length (L) in Feet				
20	60	70	75	80	20
25	95	105	115	125	25
30	135	150	165	180	30
35	185	205	225	245	35
40	240	270	295	320	40
45	405	450	495	540	45
50	450	500	550	600	50
55	495	550	605	660	55
60	540	600	660	720	60
65	585	650	715	780	65
70	630	700	770	840	70
75	675	750	825	900	75

If site conditions require a longer taper then the taper shall be lengthened to fit particular individual situations.

The length of shifting tapers should be at least $\frac{1}{2}$ L.

The length of a closed lane or lanes, excluding the transition taper(s), shall be limited to a total of two (2) miles. Prior approval must be obtained from the Engineer before this length can be increased.

Night time conditions: When a merge taper exists into the night all drums located in the taper shall have, for the length of the taper only, a six (6") inch fluorescent orange (ASTM Type VI, VII, VIII, IX or X) reflectorized top stripe on each drum. The top six-inch stripe may be temporarily attached to the drum while in use in a taper. The Engineer may allow the fluorescent orange reflectorized six (6") inch top stripe on each drum in a merging taper to remain in place during daylight hours provided there is a lane closure(s) with a continuous operation that begins during one nighttime period and ends during another nighttime period. All drums that have the six-inch top stripe permanently attached shall not be used for any other conditions.

Multiple Lane Closures:

- (a) A maximum of one lane at a time shall be closed with each merge taper.
 - (b) A minimum tangent length of 2 L shall be installed between each individual lane closure taper.
- 4) LONGITUDINAL CHANNELIZATION: Drums shall be spaced as listed below for various roadside work conditions except as modified by

[Subsection 150.06](#). Spacing shall be used for situations meeting any of the conditions listed as follows:

(a) 40 FOOT SPACING MAXIMUM

- (1) For difference in elevation exceeding two inches.
- (2) For healed sections no steeper than 4:1 as shown in [Subsection 150.06](#), [Detail 150-E](#).

(b) 80 FOOT SPACING MAXIMUM

- (1) For difference in elevation of two inches or less.
- (2) Flush areas where equipment or workers are within ten feet of the travel lane.

(c) 200 FOOT SPACING MAXIMUM: Where equipment or workers are more than ten feet from travel lane. Lateral offset clearance to be four feet from the travel lane.

- (1) For paved areas eight feet or greater in width that are paved flush with a standard width travel lane.
- (2) For disturbed shoulder areas not completed to typical section that are flush to the travel lane and considered a usable shoulder.

REMOVAL OF DRUMS: Drums may be removed after shoulders are completed to typical section and grassed. Guardrail and other safety devices shall be installed and appropriate signs advising of conditions such as soft or low shoulder shall be posted before the drums are removed.

b. VERTICAL PANELS

- 1) DESIGN: All vertical panels shall meet the minimum requirements of the MUTCD. All vertical panels shall have a minimum of 270 square inches of retro-reflective area facing the traffic and shall be mounted with the top of the reflective panel a minimum of 36" above the roadway.
- 2) APPLICATION: Lane encroachment by the drum on the travelway should permit a remaining lane width of ten feet. When encroachment reduces the travelway to less than ten feet, vertical panels shall be used to restore the travelway to ten feet or greater. No other application of vertical panels will be permitted.

c. CONES

- 1) DESIGN: All cones shall be a minimum of 28 inches in height regardless of application and shall meet the requirement of the MUTCD. Reflectorization may be deleted from all cones.

- 2) APPLICATION: For longitudinal channelizing only, cones will be permitted for daylight closures or minor shifts. (Drums are required for all tapers.) The use of cones for nighttime work will not be permitted. Cones shall not be stored or allowed to be visible on the worksite during nighttime hours.

d. BARRICADES

DESIGN: Type III barricades shall meet the minimum requirements of the MUTCD and shall be reflectorized as required in [Subsection 150.01.D](#). The Contractor has the option of choosing Type III barricades from the Qualified Products List or the Contractor may utilize generic barricades that are approved by the Federal Highway Administration (FHWA). When barricades have been specifically crash tested with signs attached, the contractor has the responsibility to attach the signs as per the manufacturer's recommendations to ensure crashworthiness. If signs are attached to generic barricades or to barricades from the Qualified Products List (QPL) that have not been crash tested with signs attached then the responsibility for crashworthiness and the liability for mounting these signs to the barricades are assumed by the Contractor and the Contractor shall certify that the barricades are crashworthy under FHWA workzone guidelines for NCHRP 350 crashworthy compliance. Any generic barricades used in the work shall be stamped or stenciled to show compliance with NCHRP 350. The use of Type I and Type II barricades will not be permitted.

- 1) APPLICATION: Type III barricades shall be placed as required by the plans, the Standards, and as directed by the Engineer. All signs mounted on barricades shall be mounted to comply with the requirements of the MUTCD and NCHRP 350 Test Level III. NCHRP 350 crashworthy compliance may require that rigid signs be mounted separate from the Type III barricade.

When a barricade is placed so that it is subject to side impact from a vehicle, a drum shall be placed at the side of the barricade to add target value to the barricade.

e. WARNING LIGHTS:

- 1) DESIGN: All warning lights shall meet the requirements of the MUTCD.

- 2) APPLICATION

- (a) Type A low-intensity flashing lights shall be used as shown in the Plans, the Standards, and as directed by the Engineer. Flashing lights are not required for advance warning signs in [Subsection 150.03.H](#).
- (b) Type C Steady-Burn lights shall be used as shown in the Plans, the Standards, and as directed by the Engineer. Steady-burn lights are not required on drums for merging tapers that exist into the night.

f. TEMPORARY BARRIERS

- 1) DESIGN: Temporary barriers shall meet the requirements of Sections 620.
- 2) APPLICATION: Temporary barriers shall be placed as required by the plans, standards, and as directed by the Engineer. When Temporary barrier is located 20 feet or less from a travel lane, yellow reflectors shall be fixed to the top of the barrier at intervals not greater than 40 feet in the longitudinal section and 20 feet in the taper section and shall be mounted approximately two inches above the barrier. If both lanes of a two-lane two-way roadway are within 20 feet or less of the barrier then the reflectors shall be installed for both directions of traffic.

The reflectors shall be 100 square inches (ASTM Type VII or VIII) reflective sheeting mounted on flat-sheet blanks. The reflectors shall be mounted approximately two inches above the top of the barrier. The reflectors shall be attached to the barrier with adhesive or by a drilled-in anchor type device. The reflectors shall not be attached to a post or board that is placed between the gap in the barrier sections.

Approach end of Temporary barrier shall be flared or protected by an impact attenuator (crash cushion) or other approved treatment in accordance with Construction Details/Standards and Standard Specifications.

On interstate or other controlled access highways where lane shifts or crossovers cause opposing traffic to be separated by less than 40 ft., portable barrier shall be used as a separator.

B. PORTABLE IMPACT ATTENUATORS:

1. DESCRIPTION

This work consists of the furnishing (including spare parts), installation, maintenance, relocation, reuse as required, and removal of Portable Impact Attenuator Units/Arrays.

2. MATERIALS

Materials used in the Attenuator shall meet the requirements of [Section 648](#) for Portable Impact Attenuators.

3. CONSTRUCTION

Portable Impact Attenuator Unit/Arrays installation shall conform to the requirements of [Section 648](#), Manufacturer's recommendations and Georgia Standard 4960 and shall be installed at locations designated by the Engineer, and/or as shown on the plans.

C. TEMPORARY GUARDRAIL ANCHORAGE- Type 12:

1. DESCRIPTION

This work consists of the furnishing, installation, maintenance and removal or Temporary Guardrail Anchorage- Type 12 used for Portable Barrier or temporary guardrail end treatment.

2. MATERIALS

Materials used in the Temporary Guardrail Anchorage- Type 12 shall meet the requirements of [Subsection 641.2](#) of the Specifications and current Georgia Standards and may be new or used. Materials salvaged from the Project which meet the requirements of Standards may be utilized if available. The use of any salvaged materials will require prior approval of the Engineer.

3. CONSTRUCTION

Installation of the Temporary Guardrail Anchorage- Type 12 shall conform to the requirements of the Plans, current Georgia Standards and [Subsection 641.3](#) of the Specifications. Installation shall also include sufficient additional guardrail and appurtenances to effect the transition and connection to Temporary Concrete Barrier as required by the details in Georgia Standard 4960.

150.06 DIFFERENCES IN ELEVATION BETWEEN TRAVEL LANES AND SHOULDERS (SEE [SUBSECTION 150.06.G](#) FOR PROJECTS CONSISTING PRIMARILY OF ASPHALTIC CONCRETE RESURFACING ITEMS)

Any type of work such as paving, grinding, trenching, or excavation that creates a difference in elevation between travel lanes or between the travelway and the shoulder shall not begin until the Contractor is prepared and able to continuously place the required typical section to within two inches (2") of the existing pavement elevation. For any areas that the two inches minimum difference in elevation cannot be accomplished the section shall be healed as shown in [Detail 150-E](#). If crushed stone materials are used to provide a healed section no separate payment will be made for the material used to heal any section. The Contractor may submit a plan to utilize existing pay items for crushed stone provided the plan clearly demonstrates that the materials used to heal an area will be incorporated into the work with minimal waste. Handling and hauling of any crushed stone used to heal shall be kept to a minimum. The Engineer shall determine if the crushed stone used to heal meets the specifications for gradation and quality when the material is placed in the final location.

A maximum of sixty (60) calendar days shall be allowed for conditions to exist that require any section or segment of the roadway or ramp to continue to require a healed section as described by [Detail 150-E](#). Failure to meet this requirement shall be considered as non-performance of Work under [Subsection 150.08](#).

When trenching or excavation for minor roadway or shoulder widening is required, all operations at one site shall be completed to the level of the existing pavement in the same work day.

Any channelization devices utilized in the work shall conform to the requirements of [Subsection 150.05](#) and to the placement and spacing requirements in [Details 150-B](#), [150-C](#), [150-D](#), and [150-E](#) shown in this section.

Any construction activity that reduces the width of a travel lane shall require the use of a W-20 sign with the legend "LEFT/RIGHT LANE NARROWS". Two 24" x 24" red or red/orange flags may be mounted above the W-20 sign. The W-20 sign shall be located on the side of the travelway that has been reduced in width just off the travelway edge of pavement. The W-20 sign shall be a minimum of 500 feet in advance of any channelization devices that encroach on the surface of travelway. A portable changeable message sign may be used in lieu of the W-20 sign.

GENERAL/TIME RESTRICTIONS:

A. STONE BASES, SOIL AGGREGATE BASE AND SOIL BASES

1. All Highways

Differences in elevation of more than two inches between surfaces carrying or adjacent to traffic will not be allowed for more than a 24-hour period. A single length of excavated area that does not exceed 1000 feet in total length may be left open as a start up area for periods not to exceed 48 hours provided the Contractor can demonstrate the ability to continuously excavate and backfill in a proficient manner. Prior approval of the Engineer shall be obtained before any startup area may be allowed.

2. LIMITED ACCESS HIGHWAY RAMPS (INTERSTATES):

On projects that include ramp rehabilitation work, one ramp at a time may be excavated for the entire length of the ramp from the gore point of the ramp with the interstate mainline to the intersection with the crossing highway. This single ramp may remain excavated with a vertical difference in elevation greater than two (2") inches for a maximum of fourteen (14) calendar days with drums spaced at twenty (20') feet intervals as shown in Detail 150-B and a buffer space accepted under Section 150.06.F. After fourteen (14) calendar days the section shall be healed as required for all other highways. This area will be allowed in addition to the 1000 feet allowed for all other highways.

B. ASPHALT BASES, BINDERS AND TOPPING

1. DIFFERENCES IN ELEVATION BETWEEN THE SURFACES OF ADJACENT TRAVELWAYS

Travel lanes shall be paved with a plan that minimizes any difference in elevation between adjacent travel lanes. The following limitations will be required on all work:

- a. Differences of two inches (2") or less may remain for a maximum period of fourteen (14) calendar days.
- b. Differences of greater than two inches (2") shall be permitted for continuous operations only.

EMERGENCY SITUATIONS: Inclement weather, traffic accidents, and other events beyond the control of the Contractor may prevent the work from being completed as required above. The Contractor shall notify the Engineer in writing stating the conditions and reasons that have prevented the Contractor from complying with the time limitations. The Contractor shall also outline a plan detailing immediate steps to complete the work. Failure to correct these conditions on the first calendar day that conditions will allow corrective work shall be considered as non-performance of Work under [Subsection 150.08](#).

2. Differences in Elevation Between Asphalt Travelway and Paved Shoulders

Differences in elevation between the asphalt travelway and asphalt paved shoulders shall not be allowed to exist beyond the maximum durations outlined below for the conditions shown in [Details 150-B](#), [150-C](#), [150-D](#), and [150-E](#):

Detail 150-B conditions shall not be allowed for more than 24 hours. A single length that does not exceed 1000 feet in total length may be left open for periods not to exceed 48 hours provided the Contractor can demonstrate the ability to continuously pave in a proficient manner. Prior approval of the Engineer shall be obtained before any section is allowed to exceed 24 hours. Any other disturbed shoulder areas shall be healed as in [Detail 150-E](#).

[Detail 150-C](#) conditions will not be allowed for more than 48 hours.

[Detail 150-D](#) conditions will not be allowed for more than 30 calendar days.

[Detail 150-E](#) conditions will not be allowed for more than 60 calendar days.

Failure to meet these requirements shall be considered as non-performance of Work under [Subsection 150.08](#).

C. PORTLAND CEMENT CONCRETE

Work adjacent to a Portland Cement Concrete traveled way which involves the following types of base and shoulders shall be accomplished according to the time restrictions outlined for each type of base or shoulder. Traffic control devices shall be in accordance with [Subsection 150.05](#).

1. Cement Stabilized Base

Work adjacent to the traveled way shall be healed as per [Detail 150-E](#) within forty-eight (48) hours after the seven (7) calendar day curing period is complete for each section placed. During the placement and curing period, traffic control shall be in accordance [Detail 150-B](#).

2. Asphaltic Concrete Base

When an asphaltic concrete base is utilized in lieu of a cement stabilized base the asphaltic concrete base shall be healed as per [Detail 150-E](#) within forty-eight (48) hours after the placement of each section of asphaltic concrete base. For the first forty eight hours traffic control shall be in compliance with [Detail 150-B](#).

3. Concrete Paved Shoulders

Concrete paved shoulders shall be placed within sixty (60) calendar days after the removal of each section of existing shoulder regardless of the type of base materials being placed on the shoulders. During the placement period, traffic control devices shall be in accordance with the appropriate detail based on the depth of the change in elevation. Differences in elevation of more than two inches between the travel way and the shoulder will not be allowed for more than a 24-hour period. A single length of excavated area that does not exceed 1000 feet in total length may be left open as a start up area for periods not to exceed 48 hours provided the Contractor can demonstrate the ability to continuously excavate and backfill in a proficient manner. Prior approval of the Engineer shall be obtained before any startup area may be allowed. Any other disturbed shoulder areas shall be healed as in [Detail 150-E](#).

4. Asphaltic Concrete Shoulders

A difference in elevation that meets the requirements of [Detail 150-B](#) shall not be allowed to exist for a period greater than forty-eight (48) hours. After the removal of the existing shoulder the section or segment of travelway may be healed with stone as per [Detail 150-E](#) for a maximum of fourteen (14) calendar days. Asphaltic concrete shoulders shall be placed within two (2") inches or less of the traveled way surface within fourteen (14) calendar days after the removal of the stone healed section or the removal of each section of the existing shoulder. The two (2") inches or less difference in elevation shall not remain in existence for a period that exceeds thirty (30) calendar days unless the paved shoulder is utilized as a detour for the traveled way. During the placement period, traffic control shall be in accordance with the appropriate detail based on the depth of the change in elevation.

The Contractor may propose an alternate plan based on [Subsection 150.06.F](#). Failure to meet the above requirements and time restrictions shall be considered as non-performance of Work under [Subsection 150.08](#).

D. MISCELLANEOUS ELEVATION DIFFERENTIALS FOR EXCAVATIONS ADJACENT TO THE TRAVELWAY

Drainage structures, utility facilities, or any other work which results in a difference in elevation adjacent to the travelway shall be planned and coordinated to be performed in such a manner to minimize the time traffic is exposed to this condition. The excavation should be back filled to the minimum requirements of [Detail 150-E](#) as soon as practical. Stage construction such as plating or backfilling the incomplete work may be required. The difference in elevation shall not be allowed to exist for more than five (5) calendar days under

any circumstances. Failure to correct this condition shall be considered as non-performance of Work under [Subsection 150.08](#).

E. CONDUIT INSTALLATION IN PAVED AND DIRT SHOULDERS

The installation of conduit and conduit systems along the shoulders of a traveled way shall be planned and installed in a manner to minimize the length of time that traffic is exposed to a difference in elevation condition. The following restrictions and limitations shall apply:

1. Differences in Elevation of Two (2") Inches or Less

The shoulder may remain open when workers are not present. When workers are present the shoulder shall be closed and the channelization devices shall meet the requirements of [Subsection 150.05](#). The difference in elevation on the shoulder shall remain for a maximum period of fourteen (14) calendar days.

2. Differences in Elevation Greater Than Two (2") Inches

The shoulder shall be closed. The shoulder closure shall not exceed twenty-four (24) hours in duration unless the Special Conditions in Subsection 150.11 modifies this restriction or the Engineer allows the work to be considered as a continuous operation.

Failure to meet these requirements shall be considered as non-performance of Work under [Subsection 150.08](#).

F. MODIFICATIONS TO TIME RESTRICTIONS

The Contractor may propose any alternate temporary traffic control plan that utilizes a portion of the travel lane as a "buffer space". This buffer space may allow for an enhanced work area that will allow for the placement of materials to proceed at a pace that could not be achieved with the time restriction requirements outlined in [Subsections 150.06.A](#), [150.06.B](#), and [150.06.C](#). The Contractor may propose modified time restrictions based on the use of the buffer space. Any proposed modifications in the time duration allowed for the differences in elevations to exist shall be reviewed by the Engineer as a component of the overall TTC plan. No modifications shall be made until the proposed plan is accepted by the Engineer. The Engineer shall have no obligation to consider any proposal which results in an increase in cost to the Department.

For the travel lane described in each of the [Details 150-B](#), [150-C](#), [150-D](#) and [150-E](#) it is presumed that the pavement marking edgeline (yellow or white solid stripe) is located at the very edge of the travel lane surface. A buffer space (temporary paved shoulder) that utilizes a portion of the travel lane should be six (6') feet in width desirable but shall not be less than four (4') feet in width. Any remaining travel lane(s) shall not be less than ten (10') feet in width. Modifications to drum spacing shown in the details above will not be allowed.

If the proposed shifting of the traffic to obtain a buffer space and maintain a minimum travel lane(s) of ten (10') feet requires the use of any existing paved shoulders then the cost of maintenance and repair of the existing paved shoulder(s) shall be the responsibility of the Contractor. The Contractor is responsible for the costs of maintenance and repairs even if the existing paved shoulder(s) is to be removed in a later stage of the work. Existing shoulders that have rumble strips shall have the rumble strips removed before the shoulder can be utilized as part of the travel lane. The cost of the removal of the rumble strips shall be done at no cost to the Department even if the shoulder is to be removed in a later stage of the work.

Any modifications to the staging and time restrictions that are approved as part of the TTC plan shall be agreed to in writing. Failure to meet these modifications shall be considered as non-performance of the Work under [Subsection 150.08](#).

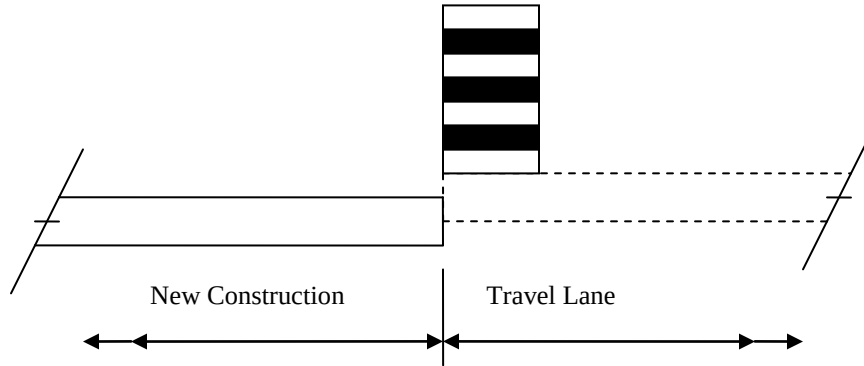
G. ASPHALTIC CONCRETE RESURFACING PROJECTS

SHOULDER CONSTRUCTION INCLUDED AS A PART OF THE CONTRACT: When the placement of asphaltic concrete materials creates a difference in elevation greater than two (2") inches between the earth shoulder (grassed or un-grassed) and the edge of travelway or between the earth shoulder and a paved shoulder that is less than four (4') feet in width, the Contractor shall place and maintain drums in accordance with the requirements of [Subsection 150.05A.1.a.4](#)). When the edge of the paved surface is tapered with a 30-45 degree wedge, drums may be spaced at 2.0 times the speed limit in MPH. Drums shall remain in place and be maintained until the difference in elevation has been eliminated by the placement of the appropriate shoulder materials.

SHOULDER CONSTRUCTION NOT INCLUDED AS A PART OF THE CONTRACT: When the placement of asphaltic concrete materials creates a difference in elevation greater than two (2") inches between the earth shoulder (grassed or un-grassed) and the edge of travelway or between the earth shoulder and a paved shoulder that is less than four (4') feet in width, the Contractor shall notify the Engineer, in writing, when the resurfacing work including all punchlist items has been completed.

See [Subsection 150.03.L](#) for the requirements for "LOW/SOFT SHOULDERS" and "SHOULDER DROP-OFF" signage.

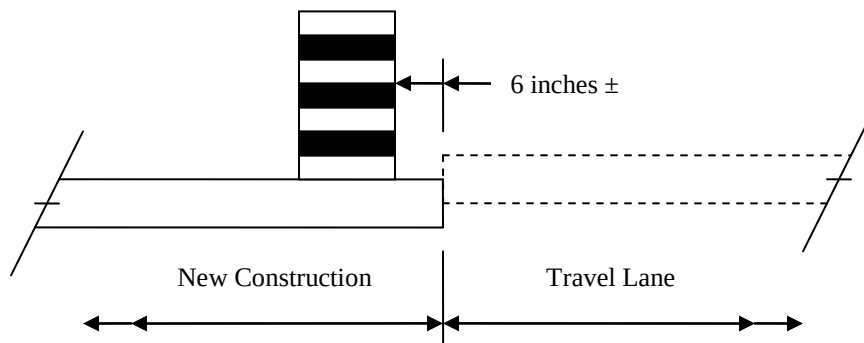
Location of drums when Elevation Difference exceeds 4 inches. Drums spaced at 20 foot intervals. Note: If the travel way width is reduced to less than 10 feet by the use of drums, vertical panels shall be used in lieu of drums.	
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ELEVATION DIFFERENCE GREATER THAN 4 INCHES

DETAIL 150-B

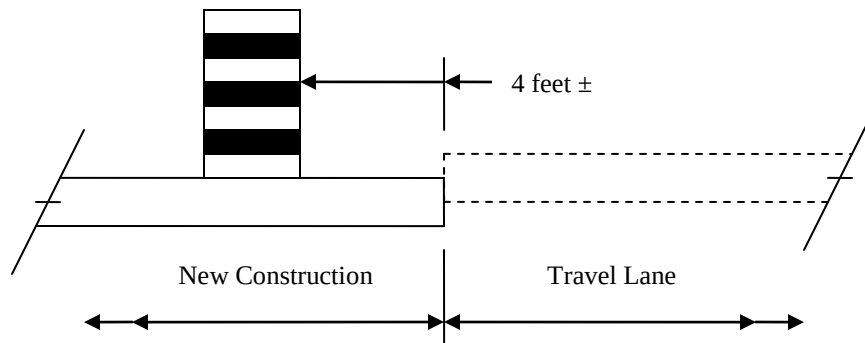
Drums spaced at 40 foot intervals.	Location of drums when Elevation Difference is 2+ inches to 4 inches.
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ELEVATION DIFFERENCE 2+ to 4 inches

DETAIL 150-C

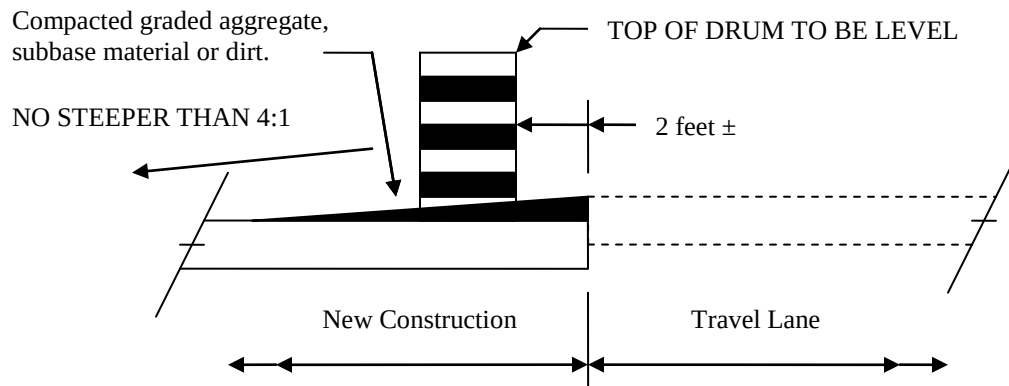
Drums spaced at 80 foot intervals.	Location of drums when Elevation Difference is 2 inches or less.
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ELEVATION DIFFERENCE OF 2 INCHES OR LESS

DETAIL 150-D

	Location of drums immediately after completion of healed sections spaced at 40 foot intervals.
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HEALED SECTION

DETAIL 150-E

150.07 FLAGGING AND PILOT CARS:

A. FLAGGERS

Flaggers shall be provided as required to handle traffic, as specified in the Plans or Special Provisions, and as required by the Engineer.

B. FLAGGER CERTIFICATION

All flaggers shall meet the requirements of the MUTCD and shall have received training and a certificate upon completion of the training from one of the following organizations:

National Safety Council
Southern Safety Services
Construction Safety Consultants
Ivey Consultants
American Traffic Safety Services Association (ATSSA)

Certifications from other agencies will be accepted only if their training program has been approved by any one of the organizations listed above.

Failure to provide certified flaggers as required above shall be reason for the Engineer suspending work involving the flagger(s) until the Contractor provides the certified flagger(s). Flaggers shall have proof of certification and valid identification (photo I.D.) available any time they are performing flagger duties.

C. FLAGGER APPEARANCE AND EQUIPMENT

Flaggers shall wear high-visibility clothing in compliance with [Subsection 150.01.A](#). The apparel background (outer) material color shall be fluorescent orange-red, fluorescent yellow-green, or a combination of the two as defined in the ANSI standard. The retroreflective material shall be orange, yellow, white, silver, yellow-green, or a fluorescent version of these colors, and shall be visible at a minimum distance of one thousand (1000) feet. The retroreflective safety apparel shall be designed to clearly identify the wearer as a person. They shall use a Stop/Slow paddle meeting the requirements of the MUTCD for controlling traffic. The Stop/Slow paddles shall have a shaft length of seven (7) feet minimum. The Stop/Slow paddle shall be retro-reflectorized for both day and night usage. In addition to the Stop/Slow paddle, a flagger may use a flag as an additional device to attract attention. This flag shall meet the minimum requirements of the MUTCD. The flag shall, as a minimum, be 24" inches square and red or red/orange in color. For night work, the vest shall have reflectorized stripes which meet the requirements of the MUTCD.

D. FLAGGER WARNING SIGNS

Signs for flagger traffic control shall be placed in advance of the flagging operation in accordance with the MUTCD. In addition to the signs required by the MUTCD, signs at regular intervals, warning of the presence of the flagger shall be placed beyond

the point where traffic can reasonably be expected to stop under the most severe conditions for that day's work.

E. PILOT VEHICLE REQUIREMENTS

Pilot vehicles will be required during placement of bituminous surface treatment or asphaltic concrete on two-lane roadways unless otherwise specified. Pilot vehicles shall meet the requirements of the MUTCD.

F. PORTABLE TEMPORARY TRAFFIC CONTROL SIGNALS

The Contractor may request, in writing, the substitution of portable temporary traffic control signals for flaggers on two-lane two-way roadways provided the temporary signals meets the requirements of the MUTCD, [Section 647](#), and [Subsection 150.02.A.8](#). As a part of this request, the Contractor shall also submit an alternate temporary traffic control plan in the event of a failure of the signals. Any alternate plan that requires the use of flaggers shall include the use of certified flaggers. The Contractor shall obtain the approval of the Engineer before the use of any portable temporary traffic control signals will be permitted.

150.08 ENFORCEMENT

The safe passage of pedestrians and traffic through and around the temporary traffic control zone, while minimizing confusion and disruption to traffic flow, shall have priority over all other Contractor activities. Continued failure of the Contractor to comply with the requirements of Section 150 (TRAFFIC CONTROL) will result in non-refundable deductions of monies from the Contract as shown in this Subsection for non-performance of Work.

Failure of the Contractor to comply with this Specification shall be reason for the Engineer suspending all other work on the Project, except erosion control and traffic control, taking corrective action as specified in [Subsection 105.15](#), and/or withholding payment of monies due to the Contractor for any work on the Project until traffic control deficiencies are corrected. These other actions shall be in addition to the deductions for non-performance of traffic control.

SCHEDULE OF DEDUCTIONS FOR EACH CALENDAR DAY OF DEFICIENCIES OF TRAFFIC CONTROL INSTALLATION AND/OR MAINTENANCE		
ORIGINAL TOTAL CONTRACT AMOUNT		
From More Than	To and Including	Daily Charge
\$0	\$100,000	\$200
\$100,000	\$1,000,000	\$500
\$1,000,000	\$5,000,000	\$1,000
\$5,000,000	\$20,000,000	\$1,500
\$20,000,000	\$40,000,000	\$2,000
\$40,000,000	\$-----	\$3,000

150.09 MEASUREMENT

A. TRAFFIC CONTROL

When listed as a pay item in the Proposal, payment will be made at the Lump Sum price bid, which will include all traffic control not paid for separately, and will be paid as follows:

When the first Construction Report is submitted, a payment of 25 (twenty-five) percent of the Lump Sum price will be made. For each progress payment thereafter, the total of the Project percent complete shown on the last pay statement plus 25 (twenty-five) percent will be paid (less previous payments), not to exceed one hundred (100) percent.

When no payment item for *Traffic Control-Lump Sum* is shown in the Proposal, all of the requirements of Section 150 and the Temporary Traffic Control Plan shall be in full force and effect. The cost of complying with these requirements will not be paid for separately, but shall be included in the overall bid submittal.

B. SIGNS

When shown as a pay item in the contract, interim special guide signs will be paid for as listed below. All other regulatory, warning, and guide signs, as required by the Contract, will be paid for under Traffic Control Lump Sum or included in the overall bid submitted.

1. Interim ground mounted or interim overhead special guide signs will be measured for payment by the square foot. This payment shall be full compensation for furnishing the signs, including supports as required, erecting,

illuminating overhead signs, maintaining, removing, re-erecting, and final removal from the Project. Payment will be made only one time regardless of the number of moves required.

2. Remove and reset existing special guide signs, ground mount or overhead, complete, in place, will be measured for payment per each. Payment will be made only one time regardless of the number of moves required.
3. Modify special guide signs, ground mount or overhead, will be measured for payment by the square foot. The area measured shall include only that portion of the sign modified. Payment shall include materials, removal from posts or supports when necessary, and remounting as required.

C. TEMPORARY BARRIER

Temporary Barrier shall be measured as specified in [Section 622](#).

D. CHANGEABLE MESSAGE SIGN, PORTABLE

Changeable Message Sign, Portable will be measured as specified in [Section 632](#).

E. TEMPORARY GUARDRAIL ANCHORAGE, Type 12

Temporary Guardrail Anchorage- Type 12 will be measured by each assembly, complete in place and accepted according to the details shown in the plans, which shall also include the additional guardrail and appurtenances necessary for transition and connection to Temporary Concrete Barrier. Payment shall include all necessary materials, equipment, labor, site preparation, maintenance and removal.

F. TRAFFIC SIGNAL INSTALLATION- TEMPORARY

Traffic Signal Installation- Temporary will be measured as specified in [Section 647](#).

G. FLASHING BEACON ASSEMBLY

Flashing Beacon Assemblies will be measured as specified in [Section 647](#).

H. PORTABLE IMPACT ATTENUATORS

Each Portable Impact Attenuator will be measured by the unit/array which shall include all material components, hardware, incidentals, labor, site preparation, and maintenance, including spare parts recommended by the manufacturer for repairing accident damage. Each unit will be measured only once regardless of the number of locations installed, moves required, or number of repairs necessary because of traffic damage. Upon completion of the project, the units shall be removed and retained by the Contractor.

I. PAVEMENT MARKINGS

Pavement markings will be measured as specified in Section 150.

J. TEMPORARY WALKWAYS WITH DETECTABLE EDGING

Temporary walkways with detectable edging will be measured in linear feet (meters), complete in place and accepted, which shall include all necessary materials, equipment, labor, site preparation, temporary pipes, passing spaces, maintenance and removal. Excavation and backfill are not measured separately for payment. No payment will be made for temporary walkways where existing pavements or existing edging (that meets the requirements of MUTCD) are utilized for the temporary walkway. Payment for temporary detectable edging, including approved barriers and channelizing devices, installed on existing pavement shall be included in Traffic Control-Lump Sum.

K. TEMPORARY CURB CUT WHEELCHAIR RAMPS

Temporary curb cut wheelchair ramps are measured as the actual number formed and poured, complete and accepted, which shall include all necessary materials, equipment, labor, site preparation, maintenance and removal. No additional payment will be made for sawing existing sidewalk and removal and disposal of removed material for temporary wheelchair ramp construction. No additional payment will be made for constructing the detectable warning surface.

L. TEMPORARY AUDIBLE INFORMATION DEVICE

Temporary audible information devices are measured as the actual number furnished and installed in accordance with the manufacturer's recommendations, which shall include all necessary materials, equipment, labor, site preparation, maintenance and removal. Each temporary audible information device will be paid for only one time regardless of the number of times it's reused during the duration of The Work. These devices shall remain the property of the Contractor.

150.10 PAYMENT:

When shown in the Schedule of Items in the Proposal, the following items will be paid for separately.

Item No. 150. Traffic Control	Lump Sum
Item No. 150. Traffic Control, Solid Traffic Stripe _ Inch, (Color)....	per Linear Mile
Item No. 150. Traffic Control, Skip Traffic Stripe _ Inch, (Color)	per Linear mile
Item No. 150. Traffic Control, Solid Traffic Stripe, Thermoplastic ____ Inch, (Color)	per Linear Mile
Item No. 150. Traffic Control, Skip Traffic Stripe, Thermoplastic _____ Inch, (Color)	per Linear Mile
Item No. 150. Traffic Control, Pavement Arrow with Raised Reflectors	per Each
Item No. 150. Traffic Control, Raised Pavement Markers-All Types.	per Each

Item No. 150. Interim Ground Mounted Special Guide Signs Foot	per Square
Item No. 150. Interim Overhead Special Guide Signs Foot	per Square
Item No. 150. Remove & Reset Existing Special Guide Signs, Ground Mount, Complete in Place	per Each
Item No. 150. Remove & Reset, Existing Special Guide Signs, Overhead, Complete in Place	per Each
Item No. 150. Traffic Control, Portable Impact Attenuator.....	per Each
Item No. 150. Traffic Control, Pavement Markers, Words and Symbols	per Square
Foot	
Item No. 150. Traffic Control, Pavement Arrow (Painted) with Raised Reflectors	per Each
Item No. 150. Traffic Control, Workzone Law Enforcement.....	per Hour
Item No. 150. Modify Special Guide Sign, Ground Mount..... Foot	per Square
Item No. 150. Modify Special Guide Sign, Overhead..... Foot	per Square
Item No. 150. Temporary Walkways With Detectable Edging.....	per Linear foot
Item No. 150. Temporary Curb Cut Wheelchair Ramps.....	per Each
Item No. 150. Temporary Audible Information Device.....	per Each
Item No. 620. Temporary Barrier.....	per Linear Foot
Item No. 632. Changeable Message Sign, Portable	per Each
Item No. 641. Temporary Guardrail Anchorage, Type 12	per Each
Item No. 647. Traffic Signal Installation, Temp	Lump Sum
Item No. 647. Flashing Beacon Assembly, Structure Mounted	per Each
Item No. 647. Flashing Beacon Assembly, Cable Supported	per Each

24 HOUR EROSION CONTROL CONTACT:
NAME: PAMELA BUSH
COMPANY: CITY OF ALPHARETTA
ADDRESS: 1790 HEMBREE ROAD, ALPHARETTA, GA 30009
PHONE #: 678-297-6226
EMAIL: PBUSH@ALPHARETTA.GA.US

NOTE: THE PRIMARY PERMITTEE IS TO BE DESIGNATED AS THE EMERGENCY CONTACT AFTER CONTRACT IS AWARDED AND SHALL FILL IN THE 24 HOUR EROSION CONTROL CONTACT.

THIS PROJECT HAS BEEN PREPARED USING THE HORIZONTAL COORDINATE SYSTEM OF 1984 (NAD 1983)/94 WEST ZONE, AND THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988.

VICINITY MAP
NOT TO SCALE

END PROJECT
BIG CREEK GREENWAY
BOARDWALK REPLACEMENT
STA 18+52.99
N 1469213.71
E 2255457.57

BEGIN PROJECT
BIG CREEK GREENWAY
BOARDWALK REPLACEMENT
STA 10+00.00
N 1468503.50
E 2255042.14

PROJECT INFORMATION:

Total Site Area: 0.78 ACRES
Total Area of Disturbance: 0.78 ACRES
Total Existing Impervious Surface: 70 SF
Total Proposed Impervious Surface: 10,805 SF
Total Increase of Impervious Surface: 10,735 SF

THIS PROJECT IS SHOWN TO BE LOCATED WITHIN DESIGNATED FLOODPLAINS, AS PER FEMA MAP 13121C0066F EFFECTIVE 09/18/2013.

COORDINATES OF CONSTRUCTION EXIT:
EXIT 1 (MANSELL RD):
N: 1468913.41
E: 2255000.79
LAT. 34.0379
LONG. -84.3039
EXIT 2 (MANSELL RD):
N: 1468703.85
E: 2254927.43
LAT. 34.0374
LONG. -84.3042

NOTE: CONTRACTOR MAY VARY THE POSITION OF CONSTRUCTION EXITS FROM LOCATIONS SHOWN, HOWEVER, THEY MUST REMAIN WITHIN LIMITS OF DISTURBANCE AND ADHERE TO ALL REGULATORY CONSTRAINTS.

Big Creek Greenway
Boardwalk Replacement

CONSTRUCTION DRAWINGS ORIGINAL
DATE: AUGUST 26th, 2022

CITY OF ALPHARETTA DEPARTMENT OF PUBLIC WORKS
ALPHARETTA, GEORGIA 30009

THE CITY OF

ALPHARETTA

GEORGIA

LDP # D220013

GENERAL NOTES:

- ANY UNDERGROUND UTILITY THAT IS BROKEN OR DISRUPTED DUE TO CONSTRUCTION ACTIVITY SHALL BE REPAIRED AS QUICKLY AS POSSIBLE AT CONTRACTORS EXPENSE.
- CONTRACTOR SHALL TAKE ALL NECESSARY SAFETY PRECAUTIONS FOR THE PROTECTION OF THE PUBLIC, INCLUDING BUT NOT LIMITED TO THE INSTALLATION OF LIGHTS, BARRIERS, FLAGMEN, AND TEMPORARY DETOURS, ETC.

ENGINEER CERTIFICATION STATEMENTS:

"I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY SUPERVISION."

8/26/22

DATE

GSWCC LEVEL II DESIGN PROFESSIONAL
PATRICK PETERS
CERTIFICATION #0000064868 EXP. 06-01-2022

PRIMARY PERMITTEE

CITY OF ALPHARETTA
1790 HEMBREE ROAD
ALPHARETTA, GA, 30009
PHONE: 678-297-6226
EMAIL: PBUSH@ALPHARETTA.GA.US

GSWCC

GEORGIA SOIL AND WATER
CONSERVATION COMMISSION

PATRICK PETERS

Level II Certified Design Professional

CERTIFICATION NUMBER 0000064868

ISSUED 06/01/2019 EXPIRES 06/01/2022

FLOOD NOTE:
THE SITE IS PARTIALLY LOCATED WITHIN A ZONE AE AS DEFINED BY "FIRM" (FLOOD INSURANCE RATE MAP, DATED SEPTEMBER 18, 2013) COMMUNITY PANEL NUMBER 1300840066F FOR UNINCORPORATED FULTON COUNTY, GEORGIA.

THE CITY OF ALPHARETTA FUTURE FLOODPLAIN AND ALPHARETTA 100-YEAR FLOODPLAIN ARE NOT WITHIN THE EXTENTS OF THIS PROJECT.

PROJECT TEAM:

OWNER NAME:
ADDRESS:

CONTACT PERSON:
TEL. #:
EMAIL:

CITY OF ALPHARETTA
1790 HEMBREE ROAD
ALPHARETTA, GA 30009
PAMELA BUSH
678-297-6226
PBUSH@ALPHARETTA.GA.US

ENGINEER NAME:
ADDRESS:

CONTACT PERSON:
TEL. #:
EMAIL:

HEATH & LINEBACK ENGINEERS, INC.
2390 CANTON RD BLDG 200
MARIETTA, GA 30066
PATRICK PETERS
770-424-1668
PPETERS@HEATH-LINEBACK.COM

25' STATE BUFFER VARIANCE REQUIRED

H&L

Heath & Lineback Engineers
INCORPORATED
2390 CANTON ROAD • BUILDING 200
MARIETTA, GEORGIA 30066-3393
(770) 424-1668

PREPARED BY:

DESIGN DATA: BIG CREEK GREENWAY BOARDWALK REPLACEMENT
TRAIL DESIGN SPEED: 14 MPH

GEORGIA 811

Utilities Protection Center, Inc.

Know what's below.
Call before you dig.

UTILITIES DISCLAIMER
UTILITIES MAY EXIST WHICH ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES HAVING UTILITIES WITHIN OR ADJACENT TO THE WORK AREA. THE CONTRACTOR SHALL HAVE THE UTILITIES FIELD LOCATED AND COORDINATE WITH UTILITY COMPANIES TO HAVE THEM RELOCATED WHEN NECESSARY OR ADAPTED FOR TIE-INS.

PARCELS:

0 BIG CREEK
PARCEL NO. 12 251006360097
TAX DISTRICT: 10A
ZONING: N/A
CLASS: EXEMPT - PUBLIC PROPERTY

0 MANSELL ROAD
PARCEL NO. 250006560508
TAX DISTRICT: 10
ZONING: N/A
CLASS: EXEMPT - PUBLIC PROPERTY

0 MANSELL RD REAR
PARCEL NO. 262006560164
TAX DISTRICT: 10
ZONING: N/A
CLASS: EXEMPT - PUBLIC PROPERTY

7660 NORTH POINT PKWY
PARCEL NO. 12 250006550236
TAX DISTRICT: 10A
ZONING: N/A
CLASS: COMMERCIAL LARGE TRACTS

THE CITY OF

ALPHARETTA

GEORGIA

CITY OF ALPHARETTA
DEPARTMENT OF PUBLIC WORKS
1790 HEMBREE ROAD
ALPHARETTA, GA 30009

H&L

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Engineers
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(770) 424-1668

CIVIL DESIGN PLANS
FOR THE
BIG CREEK GREENWAY
BOARDWALK
REPLACEMENT

FINAL PLANS
AUGUST 26th, 2022

REVISION

No.	Date	Revision

SHEET NO.

G-001

COVER SHEET

GSWCC

Level II Certification # 0000064868

Designed by:	PFJ
Drawn by:	PFJ
Checked by:	WWD
File Name:	G-001.dwg

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CE101 TO CE102	INITIAL PHASE - BMP LOCATION DETAILS
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CE508 TO CE511	EROSION CONTROL DETAILS

QUANTITIES			
<i>Pay Item #</i>	<i>Item Description</i>	<i>Qty.</i>	<i>Unit</i>
	Trail		
150-1000	TRAFFIC CONTROL	1	LS
210-0100	GRADING COMPLETE	1	LS
310-5060	GR AGGR BASE CRS, 6 INCH, INCL MATL	36	SY
441-0106	CONC SIDEWALK, 6 IN	31	SY
	Erosion Control		
163-0232	TEMPORARY GRASSING	1	AC
163-0240	MULCH	31	TN
163-0300	CONSTRUCTION EXIT	2	EA
163-1930	CONSTRUCT AND REMOVE COMPOST FILTER SOCK, 18 IN	2404	LF
165-0010	MAINTENANCE OF TEMPORARY SILT FENCE, TP S	284	LF
165-0101	MAINTENANCE OF CONSTRUCTION EXIT	2	EA
165-1500	MAINTENANCE OF COMPOST FILTER SOCK (ALL SIZES)	2404	LF
171-0030	TEMPORARY SILT FENCE, TYPE S	284	LF
643-8200	BARRIER FENCE (ORANGE), 4 FT	3500	LF
700-6910	PERMANENT GRASSING	1	AC
700-7000	AGRICULTURAL LIME	3	TN
700-8000	FERTILIZER MIXED GRADE	1	TN
700-8100	FERTILIZER NIRTOGEN CONTENT	50	LB
	Signing & Marking		
	REGULATORY/SAFETY SIGNAGE WITH POST - 18" X 18"	2	EA
	Boardwalks		
540-1102	REMOVAL OF EXISTING BR, BOARDWALK 1 (BIG CREEK GREENWAY)	1	LS
	BOARDWALK 1 (BIG CREEK GREENWAY)	1	LS
	HELICAL PILE - BOARDWALK 1 (BIG CREEK GREENWAY)	99	EA
540-1102	REMOVAL OF EXISTING BR, BOARDWALK 2 (MANSELL ROAD SPUR)	1	LS
	BOARDWALK 2 (MANSELL ROAD SPUR)	1	LS
	HELICAL PILE - BOARDWALK 2 (MANSELL ROAD SPUR)	45	EA
	BOARDWALK ABUTMENTS	3	EA
	42" STEEL SAFETY RAILING	2117	LF
	Landscaping		
	<i>Slope Stabilization</i>		
	COIR MAT 900 EROSION BLANKET	4884	SF
	<i>Seed Mix for Grassing</i>		
700-9400	NATIVE RESTORATION AND RIPARIAN SEEDING	4884	SF
	<i>Trees</i>		
702-0247	DIOSPYROS VIRGINIANA (PERSIMMON), 7 GAL.	3	EA
702-0555	LIQUIDAMBAR STYRACIFLUE (SWEETGUM), 3" CAL.	4	EA
702-0575	LIRIODENDRON TULIPIFERA (TULIP POPLAR) 4" CAL.	3	EA
702-0059	ASIMINA TRILOBA (PAWPAW) 3" CAL.	4	EA
702-0106	CALLICARPA AMERICANA (AMERICAN BEAUTYBERRY) 3 GAL.	4	EA
702-1034	SAMBUCUS CANADENSIS (ELDERBERRY) 3 GAL.	5	EA

PROPOSED SYMBOLS LEGEND

	DEMOLISH AND REMOVE EXISTING BOARDWALK AND CONCRETE PAVEMENT
	LIMITS OF DISTURBANCE
	SPOT ELEVATION
	RAILING
	SILT FENCE
	TREE PROTECTION FENCE SIGN
	6" CONCRETE TRAIL
	BOARDWALK
	TREE TO BE REMOVED
	TREE PROTECTION WOOD SLATS DETAIL L-9 ON SHEET T-501

EXISTING SYMBOLS LEGEND

	CONTOUR
	STORMWATER PIPE
	STORMWATER PIPE
	SANITARY SEWER
	OVERHEAD UTILITY
	WATER LINE
	UNDERGROUND ELECTRICAL
	UNDERGROUND COMMUNICATIONS
	UNDERGROUND GAS
	TREES
	EXISTING CONCRETE
	LIGHT POLE
	WATER VALVE
	POWER POLE
	ELECTRICAL BOXES
	JUNCTION BOXES
	HEADWALL
	SANITARY SEWER MANHOLE
	UTILITY MANHOLE
	SIGN
	COMMUNICATIONS VAULT
	COMMUNICATIONS MARKER
	FIBER OPTIC MARKER
	CONCRETE MONUMENT
	FIRE HYDRANT

THE CITY OF

ALPHARETTA

GEORGIA

CITY OF ALPHARETTA

DEPARTMENT OF PUBLIC WORKS

1790 HEMBREE ROAD

ALPHARETTA, GA 30009

H&L

Heath & Linebeck

Engineers

INCORPORATED

2000 CANTON ROAD • BUILDING 200

MARKETTA, GEORGIA 30007-0000

(770) 414-1000

CIVIL DESIGN PLANS
FOR THE
BIG CREEK GREENWAY
BOARDWALK
REPLACEMENT

FINAL PLANS
AUGUST 26th, 2022

REVISION		
No.	Date	Revision

SHEET NO.

G-002

SHEET INDEX AND LEGEND

Level II Certification # 0000064868

Designed by:	PFJ
Drawn by:	PFJ
Checked by:	WWD
File Name:	G-002.dwg

GRID NORTH - GA. WEST ZONE



SITE PHOTOGRAPHS



1



2

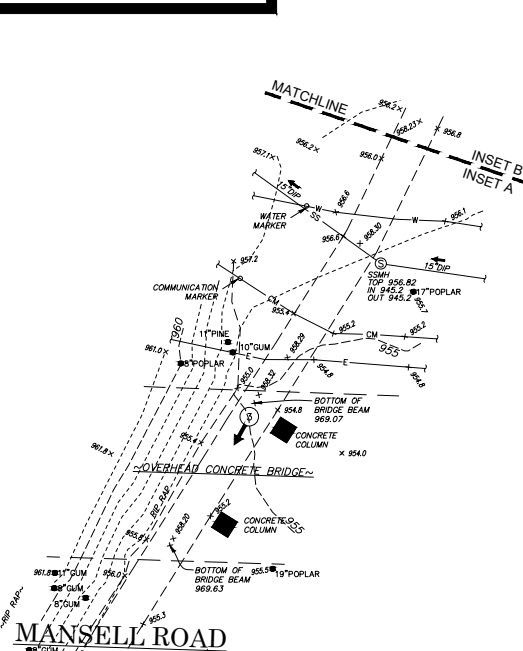


3

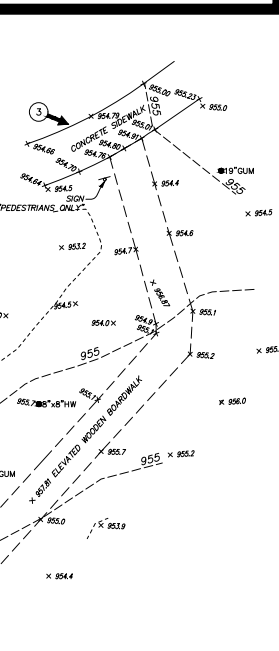


4

INSET A



INSET B



VICINITY MAP



GENERAL NOTES

THIS SURVEY HAS BEEN PREPARED FOR THE EXCLUSIVE USE OF THE PERSON OR ENTITIES NAMED HEREON. NO EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE INFORMATION SHOWN HEREON IS TO BE EXTENDED TO ANY PERSONS OR ENTITIES OTHER THAN THOSE SHOWN HEREON.

THIS SURVEY HAS BEEN PREPARED WITHOUT THE BENEFIT OF A CURRENT TITLE INSPECTION REPORT. EASEMENTS OR OTHER ENCUMBRANCES MAY EXIST ON PUBLIC RECORD BUT NOT BE SHOWN HEREON.

PLEASE NOTE: GEOSURVEY, LTD., ASSUMES NO LIABILITY REGARDING THE ACCURACY OR LOCATION OF PROPERTY LINES SHOWN HEREON. PROPERTY LINE INFORMATION IS SHOWN AS APPROXIMATE BASED ON SURVEY REFERENCE 1 AND MONUMENTS FOUND. NO BOUNDARY SURVEY WAS PERFORMED BY GEOSURVEY, LTD.

REVISIONS LISTED ON THIS SURVEY APPLY ONLY TO THE SPECIFIC CHANGES REFERENCED, AND DO NOT CONSTITUTE AN UPDATE OF OTHER DATA ON THIS SURVEY. THE "SURVEY DATE" SHOWN HEREON IS THE APPLICABLE DATE AS RELATED TO PROVISIONS OF STATUTES OF LIMITATION UNLESS SPECIFICALLY NOTED OTHERWISE.

THIS PROPERTY IS LOCATED IN A SPECIAL FLOOD HAZARD AREA BASED ON THE FLOOD INSURANCE RATE MAP FOR THIS AREA. THE MAP NUMBER FOR THIS AREA IS 13121C0066F, AND THE DATE OF SAID MAP IS SEPTEMBER 18, 2013. THIS DETERMINATION WAS MADE BY GRAPHICALLY DETERMINING THE POSITION OF THIS SITE ON SAID FIRM MAPS UNLESS OTHERWISE NOTED.

PLEASE NOTE: TREES 8-INCH DBH (DIAMETER AT BREAST HEIGHT) AND LARGER WERE LOCATED FOR THIS SURVEY.

THE DATUM FOR THIS SITE WAS ESTABLISHED UTILIZING GLOBAL POSITIONING SYSTEMS, AND BASED ON POSITIONAL VALUES FOR THE VIRTUAL REFERENCE STATION NETWORK DEVELOPED BY GPS SOLUTIONS. THE HORIZONTAL REFERENCE FRAME IS NORTH AMERICAN DATUM OF 1983(2011)-STATE PLANE COORDINATE SYSTEM OF GEORGIA-WEST ZONE. THE VERTICAL REFERENCE FRAME IS NORTH AMERICAN VERTICAL DATUM OF 1988. ANY DIRECTIONS OR DIMENSIONS SHOWN ARE A RECTANGULAR, GROUND LEVEL PROJECTION OF THE STATE PLANE COORDINATE SYSTEM.

PLEASE NOTE: ZONING AND SETBACKS SHOULD BE CONFIRMED AND VERIFIED BY PLANNING AND ZONING PRIOR TO DESIGN OR CONSTRUCTION ACTIVITIES.

SURVEY REFERENCES
1- SUBDIVISION PLAT OF RESURGENTS PARK, PREPARED BY ENGINEERING & INSPECTION SYSTEMS, INC., DATED OCTOBER 29, 2001, RECORDED IN PLAT BOOK 347, PAGE 23.

UTILITY NOTE

THE UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON LOCATION OF MARKINGS PROVIDED BY:

UTILITY MARKING, LLC
3042 GALA TRAIL
SNELLVILLE, GA 30036
(678) 357-1946

UTILITY MARKING, LLC UTILIZED SEVERAL TECHNIQUES INCLUDING, BUT NOT LIMITED TO, ELECTROMAGNETIC, MAGNETIC LOCATION FOR FERROUS METALS, ACOUSTIC AND PASSIVE FREQUENCIES TO DESIGNATE AND MARK BURIED UTILITIES ON THE SURFACE WITH PAINT AND FLAGS COVERING THE ENTIRE AREA OF THE PROJECT.

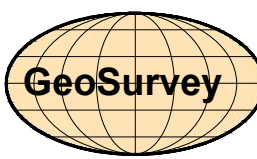
THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. UNDERGROUND UTILITIES NOT OBSERVED OR LOCATED UTILIZING THIS TECHNIQUE MAY EXIST ON THIS SITE BUT NOT BE SHOWN, AND MAY BE FOUND UPON EXCAVATION. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE.

INFORMATION REGARDING MATERIAL AND SIZE OF UTILITIES IS BASED ON RECORDS ACQUIRED FROM THE UTILITY OWNERS.

SHEET NO.

V-110

TOPO SURVEY & EXISTING CONDITIONS



Land Surveying • 3D Laser Scanning

1660 Barnes Mill Road
Marietta, Georgia 30062

Phone: (770) 795-9900
Fax: (770) 795-6880

www.geosurvey.com
EMAIL: info@geosurvey.com

Certificate of Authorization #LSF-000621

TOPOGRAPHIC SURVEY OF

Big Creek Greenway Boardwalk

FOR

The City of Alpharetta

GS JOB NO:	20217242	DRAWING SCALE:	1"= 20'	SURVEY DATE:	12-14-2021
FIELD WORK:	CC	CITY:	ALPHARETTA	REVISIONS (SEE GENERAL NOTES)	
PROJ MGR:	JTN	COUNTY:	FULTON	STATE:	GA
REVIEWED:	DLH	LAND LOT:	656 & 685	ADD spot elev's deck/bridge	
DWG FILE:	20217242-01.dwg	DISTRICT:	12TH	ADD r/w info south of Mansell Rd.	

LEGEND

STANDARD ABBREVIATIONS	STANDARD SYMBOLS
AC AIR CONDITIONER	POWER POLE
BH BORE HOLE	GUY WIRE
CBX COMMUNICATION BOX	POWER LINE
CI CURB INLET	LIGHT POLE
CMP CORRUGATED METAL PIPE	GAS VALVE
CMF CONCRETE MONUMENT FND	GAS METER
CO SANITARY CLEANOUT	WATER VALVE
CPED COMMUNICATION PEDESTAL	WATER METER
CTP CRIMPED TOP PIPE	FIRE HYDRANT
DI DROP INLET	UNDERGROUND ELECTRIC LINE
DIP DUCTILE IRON PIPE	UNDERGROUND GAS LINE
DWCB DOUBLE WING CATCH BASIN	UNDERGROUND COMMUNICATION LINE
EBX ELECTRIC BOX	UNDERGROUND WATER LINE
FND FOUND	PHOTO POSITION INDICATOR
GM GAS METER	REGULAR PARKING SPACE COUNT
INV INVERT	HANDICAP PARKING SPACE
JB JUNCTION BOX	TREE POSITION INDICATOR
MH MANHOLE	SPOT ELEVATION (WOODEN DECK)
OTC OUTLET CONTROL STRUCTURE	SPOT ELEVATION (GROUND)
OTP OPEN TOP PIPE	
PM POWER METER	
POB POINT OF BEGINNING	
POC POINT OF COMMENCEMENT	
RCP REINFORCED CONCRETE PIPE	
RFB IRON REINFORCING BAR	
RBS 5/8"RBR SET CAPPED LSF 621	
SS SANITARY SEWER	
SWCB SINGLE WING CATCH BASIN	
TRANS ELECTRIC TRANSFORMER	

CLOSURE STATEMENT

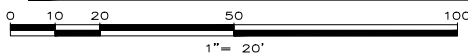
THE FIELD CLOSURE UPON WHICH THIS PLAT IS BASED HAS A CLOSURE PRECISION OF ONE FOOT IN .27158, AND WAS ADJUSTED USING THE LEAST SQUARES METHOD. A TRIMBLE S-6 TOTAL STATION AND TRIMBLE TSC-3 DATA COLLECTOR WERE USED TO COLLECT THIS FIELD DATA.

IF YOU DIG



Know what'sbelow.
Call before you dig.
Dial 811
Or Call 800-282-7411

GRAPHIC SCALE



1"= 20'

CIVIL GENERAL NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH ALL CITY OF ALPHARETTA AND STATE OF GEORGIA GUIDELINES AND REGULATIONS APPLICABLE TO CONSTRUCTION OF THIS SITE.
2. REFER TO INCLUDED SURVEY (V-SERIES) FOR EXISTING CONDITIONS.
3. CONTRACTOR SHALL INSPECT ALL SEDIMENT AND EROSION CONTROL MEASURES DAILY AND DURING PROLONGED PERIODS OF CONTINUOUS RAINFALL EVENTS TO ENSURE THAT ALL CONTROLS ARE FUNCTIONING PROPERLY. DAMAGED CONTROLS SHALL BE REPLACED BY THE END OF THE WORKDAY.
4. CONTRACTOR SHALL PROVIDE, INSTALL, AND MAINTAIN ALL REQUIRED SEDIMENT AND EROSION CONTROL MEASURES AS SHOWN ON THE DRAWINGS, DURING ALL PHASES OF CONSTRUCTION.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING A MARKED-UP SET OF DESIGN DRAWINGS SHOWING "AS-BUILT" CONDITIONS. THESE "RECORD DRAWINGS" SHALL BE MADE AVAILABLE TO THE OWNER UPON REQUEST. THE MARK-UPS SHALL BE AT THE SITE AT ALL TIMES AND SHALL BE UTILIZED TO DEVELOP FINAL RECORD DRAWINGS.
6. ALL INITIAL EROSION AND SEDIMENTATION CONTROL MEASURES AND DEVICES MUST BE IN PLACE PRIOR TO ANY LAND DISTURBANCE.
7. EXISTING CONDITIONS SHOWN ARE FROM A BOUNDARY AND TOPOGRAPHIC SURVEY OF BIG CREEK BOARDWALK REPLACEMENT FOR CITY OF ALPHARETTA, PREPARED BY: GEOSURVEY, DATED 12/14/2021, REVISED DATED: 01/12/2022
8. THERE ARE NO KNOWN PROPOSED ON-SITE BURY PITS.
9. THIS PROJECT IS SHOWN TO BE LOCATED WITHIN A DESIGNATED FLOODPLAIN, REFER CITY OF ALPHARETTA SITE NOTES.
10. CONTRACTOR TO ENSURE ALL EXISTING TOPS OF MANHOLES AND VALVE BOXES ARE RAISED OR LOWERED TO BE FLUSH WITH FINISHED GRADES, UNLESS NOTED OTHERWISE.
11. ALL NEW PAVEMENT AND SIDEWALKS SHALL BE CONSTRUCTED FLUSH WITH EXISTING, WITH NO PONDING OF STORMWATER.
12. CONTRACTOR SHALL GRADE ALL DISTURBED AREAS TO ENSURE POSITIVE DRAINAGE AWAY FROM TRAIL.
13. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS, COORDINATES, AND DIMENSIONAL INFORMATION PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BRING ALL DISCREPANCIES TO THE ATTENTION OF THE DESIGNER PRIOR TO STARTING CONSTRUCTION.
14. THE LOCATION OF ALL EXISTING UTILITIES AND STORM DRAINAGE SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR INACCURACY. PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE THE VARIOUS UTILITIES AND TO MAKE THE NECESSARY ARRANGEMENTS FOR ANY RELOCATION OF THESE UTILITIES WITH THE OWNER OF THE UTILITY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING UNDERGROUND UTILITIES, WHETHER SHOWN ON THE PLAN OR LOCATED BY THE UTILITY COMPANY. ALL UTILITIES WHICH INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGNER IMMEDIATELY. ANY FEES ASSOCIATED WITH UTILITY RELOCATIONS SHALL BE BORNE BY THE CONTRACTOR IN ACCORDANCE WITH RESPECTIVE UTILITY COMPANY STANDARDS. THE CONTRACTOR SHALL COORDINATE DISCONNECTION OF EXISTING UTILITIES WITH THE APPROPRIATE UTILITY PROVIDER.
15. ALL UTILITIES WHICH INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGNER IMMEDIATELY.
16. CONTRACTOR SHALL FURNISH AND MAINTAIN ANY AND ALL NECESSARY BARRICADES AROUND THE WORK.
17. CONTRACTOR TO MOVE ALL CONSTRUCTION DEBRIS OFF THE PROPERTY AND DISPOSE DEBRIS AT A LEGAL, PERMITTED LANDFILL CONSISTENT WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS.
18. NO PARKING, STORAGE OR OTHER CONSTRUCTION ACTIVITIES ARE TO OCCUR WITHIN TREE PROTECTION AREAS.
19. SLOPE STABILIZATION SHALL BE INSTALLED ON ALL SLOPES 3:1 AND STEEPER UNLESS PERMANENTLY STABILIZED WITH SOD.
20. THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS TO INSPECT THE INSTALLATION OF BMPS WITHIN 7 DAYS AFTER THE CONSTRUCTION ACTIVITY BEGINS. THE PROOF OF SITE VISIT SHALL BE KEPT ON SITE.
21. ANY CHANGES TO THE ES&PC PLAN WHICH HAVE SIGNIFICANT EFFECT ON THE BMPS WITH A HYDRAULIC OR DESIGN COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL AND MUST BE APPROVED BY THE CITY OF ALPHARETTA.

CIVIL GENERAL NOTES CONTINUED:

22. IF THE PRIMARY PERMITTEE CHANGES DURING THE COURSE OF A PROJECT, THE NEW PRIMARY PERMITTEE MUST SUBMIT COPIES OF THE NEW NOI TO THE CITY OF ALPHARETTA LAND DISTURBANCE INSPECTOR.
23. THE CONTRACTOR SHALL REPAIR THE EXISTING GREENWAY IF DAMAGED BY ACCESS USE.

GRADING AND EARTHWORK NOTES:

1. ELEVATIONS SHOWN ARE BASED ON N.A.V.D. 1988 THE CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING AND MAINTAINING A BENCHMARK FOR THE PROJECT, AND FOR ANY REQUIRED ELEVATION TRANSLATION.
2. NO GRADED SLOPE SHALL EXCEED 2H:1V.
3. TRAILS TO HAVE MAXIMUM CROSS SLOPE OF 2.0%
4. A GEOTECHNICAL REPORT FOR AREAS OF PROPOSED BOARDWALK WAS COMPLETED BY ECS AND IS DATED JANUARY 26, 2022.
5. WITHIN WETLANDS, 25-FOOT STREAM BUFFERS AND BOARDWALK CORRIDOR, CONTRACTOR SHALL FLUSH-CUT VEGETATION TO EXISTING SOIL SURFACE. THERE SHALL BE NO GRUBBING, GRADING, STUMP REMOVAL, DREDGING OF SOIL, OR DISCHARGE OF FILL MATERIAL.
6. WITHIN WETLANDS AND 25-FOOT STREAM BUFFERS, CONTRACTOR SHALL UTILIZE SUITABLE CONSTRUCTION MATTING FOR ALL EQUIPMENT ACCESS AND WORKSPACE IN ORDER TO AVOID SOIL DISTURBANCE AND RUTTING.

GENERAL SITE DEMOLITION NOTES:

1. EROSION AND SEDIMENTATION CONTROL MEASURES AND TEMPORARY CONSTRUCTION FENCING SHALL BE IN PLACE PRIOR TO COMMENCEMENT OR CONCURRENT WITH DEMOLITION. REFER TO CE-SERIES FOR NOTES, PLANS, AND DETAILS.
2. CONTRACTOR SHALL ESTABLISH SURVEY CONTROL NETWORK OUTSIDE LIMITS OF DEMOLITION PRIOR TO COMMENCEMENT OF WORK. THIS WORK MUST BE PERFORMED BY A GEORGIA LICENSED LAND SURVEYOR.
3. THE CONTRACTOR SHALL SUBMIT A DETAILED DEMOLITION PROCEDURE TO THE OWNER FOR APPROVAL AT LEAST 10 DAYS BEFORE DEMOLITION IS TO BEGIN. THE DEMOLITION PROCEDURE SHALL INCLUDE A DETAILED DESCRIPTION OF THE METHODS AND EQUIPMENT TO BE USED FOR EACH OPERATION AND THE SEQUENCE OF WORK.
4. THE CONTRACTOR SHALL DEMOLISH AND REMOVE ALL EXISTING PAVEMENT, UTILITIES, EQUIPMENT, ETC. NOTED TO BE REMOVED WITHIN THE DEMOLITION LIMITS AS SHOWN ON THE PLANS. "DEMOLISH" SHALL MEAN TO REMOVE AN OBJECT IN ITS ENTIRETY. RESTORE GRADES AND SURFACE IMPROVEMENTS TO MATCH EXISTING CONDITIONS OR PER REQUIREMENTS OF NEW WORK, WHICHEVER IS APPLICABLE.
5. CONTRACTOR TO PROVIDE AND MAINTAIN NECESSARY FENCES, BARRICADES, LIGHTS, SIGNS AND OTHER TRAFFIC CONTROL MEASURES AS REQUIRED FOR THE PROTECTION AND SAFETY OF THE PUBLIC THROUGHOUT THE DEMOLITION AND CONSTRUCTION ACTIVITIES ON THE SITE.
6. CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO THE START OF DEMOLITION ACTIVITIES.
7. CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY FOR THE RELOCATION OF ANY UTILITY TO REMAIN IN SERVICE. CONTRACTOR TO EXERCISE EXTREME CAUTION WHEN CONSTRUCTION OCCURS NEAR EXISTING UTILITIES.
8. CONTRACTOR SHALL SAWCUT TO FULL PAVEMENT, SIDEWALK AND CURB AND GUTTER DEPTH AT THE LIMIT OF DEMOLITION FOR REMOVAL OF PAVEMENT, SIDEWALK AND CURB AND GUTTER. CURB AND GUTTER DEMOLISHED AT NEAREST JOINT.
9. NO DEBRIS FROM SITE DEMOLITION SHALL BE BURIED ON SITE. ALL MATERIAL GENERATED FROM DEMOLITION OPERATION SHALL BE PROPERLY DISPOSED OF OFFSITE.
10. ANY UTILITY BOX OR VALVE IMPACTED BY TRAIL LIMITS OF DISTURBANCE IN FIELD, BUT NOT SHOWN ON SURVEY, TO BE ADJUSTED TO FINISHED GRADE AND BROUGHT TO THE ATTENTION OF THE DESIGN PROFESSIONAL.

CITY OF ALPHARETTA - SITE NOTES:

1. THE PROJECT LIMITS CONTAIN STATE WATERS. PORTIONS OF THIS PROJECT ARE WITHIN 200 LF OF STATE WATERS.
2. PORTIONS OF THIS PROJECT LIE WITHIN THE SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD, AS PER THE FEDERAL EMERGENCY MANAGEMENT AGENCY.
3. THERE ARE NO KNOWN EXISTING WELLS OR SEPTIC SYSTEMS WITHIN THE PROJECT LIMITS. NO NEW WELLS OR SEPTIC SYSTEMS ARE PROPOSED.
4. PROJECT RECEIVING WATERS: BIG CREEK
5. NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.
6. APPROVED PLANS MUST BE ON SITE AT ALL TIMES.
7. CONTRACTOR MUST ATTEND CITY OF ALPHARETTA PRE-CONSTRUCTION CLASS PRIOR TO SITE INITIATION.
8. THIS PROJECT DOES NOT DISCHARGE WATER WITHIN 1 LINEAR MILE UPSTREAM OF AND WITHIN THE SAME WATERSHED AS AN BIOTA IMPAIRED STREAM SEGMENT.
9. THE PROJECT WILL HAVE A MINIMAL IMPACT ON THE OVERALL STORM WATER RUN OFF FOR THE PROJECT BASIN.
10. A NOTICE OF INTENT (N.O.I) IS NOT REQUIRED FOR THE PROJECT.
11. A STREAM BUFFER VARIANCE IS REQUIRED FOR THE PROJECT.

CITY OF ALPHARETTA - COMMUNITY DEVELOPMENT NOTES:

1. PROPOSED USE: PROPOSED MULTI-USE TRAIL
2. PARKING REQUIRED: NOT APPLICABLE
3. HANDICAP SPACES REQUIRED: NOT APPLICABLE
4. OFF-STREET PARKING SHALL BE PROVIDED AND MAINTAINED THROUGHOUT CONSTRUCTION.
5. ALL REVISIONS TO THESE PLANS MUST BE SUBMITTED TO THE CITY OF ALPHARETTA COMMUNITY DEVELOPMENT DEPARTMENT PRIOR TO CONTINUING CONSTRUCTION.
6. ON-SITE BURIAL IS NOT ALLOWED.

EROSION, SEDIMENTATION, AND POLLUTION CONTROL NOTES:

1. REFER TO CE-SERIES FOR NOTES, PLANS, AND DETAILS.

CITY OF ALPHARETTA ARBORIST NOTES:

1. REFER TO THE TREE REPLACEMENT DETAILS, SHEET T-501, FOR NOTES.

THE FOLLOWING UTILITIES HAVE FACILITIES IN THE PROJECT AREA:

GAS	ATLANTA GAS LIGHT	(470) 456-8266
WATER	FULTON COUNTY WATER	(404) 612-4248
SEWER	FULTON COUNTY SEWER	(404) 612-4248
ELECTRIC	GEORGIA POWER	(404) 506-6539
TELECOMMUNICATION	AT&T DISTRIBUTION	(305) 409-1542
	CHARTER COMMUNICATIONS	(800) 778-9140
	COMCAST	(912) 402-8531
	FIBERLIGHT LLC	(800) 672-0181
	CENTURYLINK	(877) 366-8344
	LAMBERTS CABLE SPLICING	(678) 794-1598
	VERIZON BUSINESS (MCI FACILITIES)	(800) 624-9675
	ZAYO FIBER SOLUTIONS	(470) 249-5124
TRAFFIC & SIGNAL	CITY OF ALPHARETTA	(678) 297-6240



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CITY OF ALPHARETTA
DEPARTMENT OF PUBLIC WORKS
1790 HEMBREE ROAD
ALPHARETTA, GA 30009



CIVIL DESIGN PLANS
FOR THE
BIG CREEK GREENWAY
BOARDWALK
REPLACEMENT

FINAL PLANS
AUGUST 26th, 2022

REVISION		
No.	Date	Revision

SHEET NO.

C-001

GENERAL CIVIL NOTES



Level II Certification # 0000064868

Designed by:	PFJ
Drawn by:	PFJ
Checked by:	WWD
File Name:	C-001.dwg



Heath & Lineback Engineers, Inc.

2390 CANTON ROAD • BUILDING 200 • MARIETTA, GEORGIA 30066-5393
hle@heath-lineback.com • phone (770) 424-1668

Project: Big Creek Greenway Boardwalk Replacement

Subject: Boardwalk Reduction of Impact to Floodplain

Date: 07-01-2022

The Big Creek Greenway Boardwalk Replacement project demolishes and replaces an existing boardwalk for the City of Alpharetta.

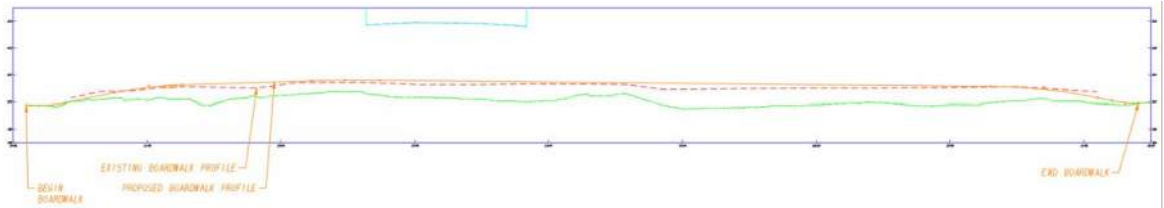
The proposed profile was raised higher than existing. As shown on page 2, the proposed profile is in average 6" higher than the existing boardwalk.

The cross-sectional area of the proposed boardwalk, approximately 17.0 SF, is less than the existing, approximately 23.5 SF. The existing boardwalk (pictured on page 2) utilizes a timber design with timber piles and the proposed boardwalk (pictured on page 2) is comprised of steel and concrete with helical piles. The helical piles and steel beams help reduce the cross-sectional area by approximately 28%.

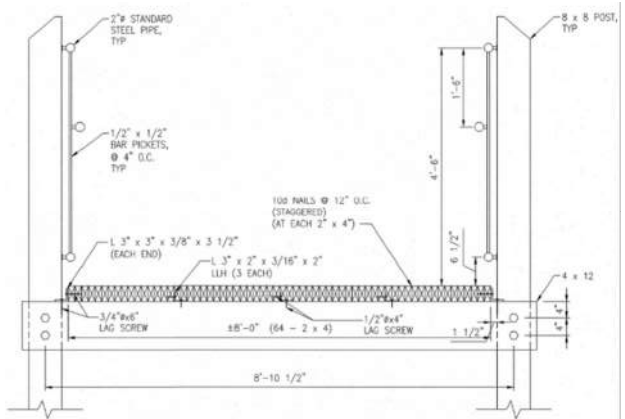
Based on the above, it is our opinion that the base flood elevations will not increase due to the boardwalk replacement and that the project satisfies a 'no-rise' condition.

Patrick Peters, PE
Project Manager

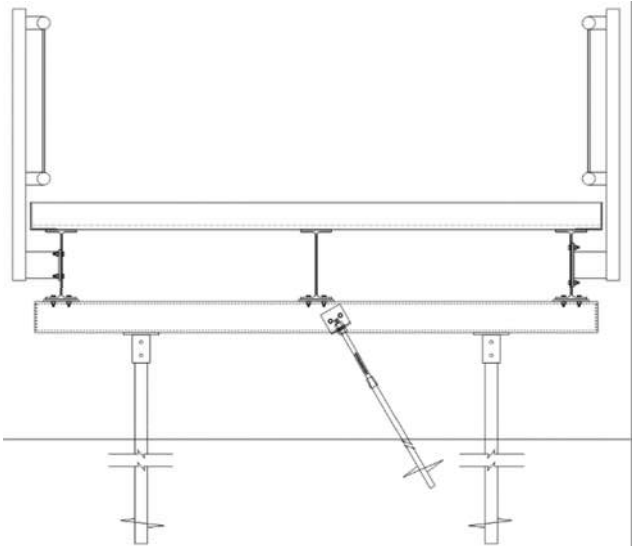
Heath & Lineback Engineers, Inc.



PROFILE



EXISTING BOARDWALK CROSS-SECTION



PROPOSED BOARDWALK CROSS-SECTION



CITY OF ALPHARETTA
DEPARTMENT OF PUBLIC WORKS
1790 HEMBREE ROAD
ALPHARETTA, GA 30009



Heath & Lineback
Engineers
INCORPORATED
2390 CANTON ROAD • BUILDING 200
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CIVIL DESIGN PLANS
FOR THE
BIG CREEK GREENWAY
BOARDWALK
REPLACEMENT

FINAL PLANS
AUGUST 26th, 2022

REVISION

No.	Date	Revision

SHEET NO.

C-002

GENERAL CIVIL
NOTES



Level II Certification # 0000064868

Designed by:	PFJ
Drawn by:	PFJ
Checked by:	WWD
File Name:	C-001.dwg

CITY ARBORIST NOTES:

1. TREE SAVE FENCE AND SIGNAGE FOR ENTIRE SITE MUST BE INSTALLED, INSPECTED, AND APPROVED PRIOR TO INSTALLATION OF EROSION CONTROL MEASURES. NO LAND DISTURBANCE OR DEMOLITION IS ALLOWED BEFORE THIS INSPECTION AND APPROVAL HAS OCCURRED.
2. THE CRZ OF SPECIMEN TREES PLUS ALL STREAM BUFFERS SHALL BE PROTECTED WITH WIRE-BACK TREE SAVE FENCING WITH METAL SUPPORT POSTS AND TREE SAVE SIGNAGE.
3. INSTALLATION OF THE TREE SAVE FENCE WILL INVOLVE NO TRENCHING.
4. ALL EXISTING TREES IDENTIFIED FOR PRESERVATION OR FOUND WITHIN TREE SAVE AREAS MUST BE FULLY PROTECTED DURING ALL PHASES OF THIS PROJECT.
5. ADDITIONAL TREES ALONG THE LIMITS OF DISTURBANCE WITH ENCROACHMENT INTO THE SRP AND DEEMED STRUCTURALLY UNSAFE BY THE CITY ARBORIST OR THE PROJECT ARBORIST MAY BE REQUIRED TO BE REMOVED.
6. ALL ROOTS ENCOUNTERED ½" OR GREATER DURING GRADING OR EXCAVATING OPERATION SHALL BE CLEAN CUT UNDER THE DIRECTION OF AN ISA CERTIFIED ARBORIST.
7. ANY LIMBS OVERHANGING THE LOD THAT MAY BE RIPPED, TORN, OR DAMAGED DURING CONSTRUCTION SHALL BE PROPERLY PRUNED UNDER THE DIRECTION OF AN ISA CERTIFIED ARBORIST.
8. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE VEGETATION AND REMOVE TRASH AND DEBRIS WITHIN AND AROUND THE PERIMETER OR THE PROJECT LIMITS, EVEN IF WITHIN THE PUBLIC ROW, IN ACCORDANCE WITH THE CITY OF ALPHARETTA PROPERTY MAINTENANCE CODES.
9. ALL APPROVED REVISIONS TO THE LOCATION OF THE TREE SAVE FENCE NEED TO BE COORDINATED WITH THE LAND DISTURBANCE INSPECTOR PRIOR TO RELOCATION.

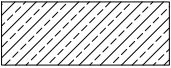
TREE PROTECTION GENERAL NOTES:

1. WHEN WORKING WITHIN THE CRITICAL ROOT ZONE (CRZ) OF A TREE (SPECIMEN OR NON-SPECIMEN) CHECKERS ALTURNAMAT (MODEL • AM48) GROUND PROTECTION MATTING SHALL BE USED APPROPRIATELY. THE COST OF THE MATTING SHALL BE INCLUDED IN COST OF GRADING COMPLETE. AN EQUIVALENT PRODUCT MAY BE USED, BUT MUST MEET OR EXCEED THE SPECIFICATIONS OF THE NOTED PRODUCT AND MUST BE APPROVED BY THE CITY OF ALPHARETTA ARBORIST.



TREE CARE PLAN FOR CONCRETE TRAIL/BOARDWALK INSTALLATION WITHIN A CRITICAL ROOT ZONE (CRZ) OF A NON-SPECIMEN TREE

1. PRIOR TO RELEASE OF RETAINAGE, CITY SHALL BE PROVIDED WITH RECEIPTS SHOWING THE REQUIRED TREE CARE PLAN HAS BEEN PRE-PAID AND SCHEDULED WITH A REPUTABLE TREE CARE COMPANY.
2. CLEAN CUT ALL ROOTS ½" IN DIAMETER OR GREATER.
3. AFTER CONSTRUCTION OF SIDEWALK/DRIVEWAY, BACKFILL AREA BETWEEN SIDEWALK/DRIVEWAY AND TREE WITH NATIVE TOPSOIL TO SPECIFIED GRADES THEN MULCH WITH HARDWOOD MULCH (OR MATCH EXISTING MULCH TYPE) TO A DEPTH OF 3"-4".
4. DURING THE FOLLOWING FALL, FERTILIZE CRZ WITHIN LIMITS OF DISTURBANCE WITH A TIME-RELEASE FERTILIZER THAT CONTAINS MACRONUTRIENTS AND MICRONUTRIENTS AS REQUIRED PER ON-SITE SOIL REPORT. COST OF SOIL REPORT SHALL BE BORNE BY CONTACTOR. SOIL REPORT SHALL BE SUBMITTED IN ACCORDANCE WITH SPECIFICATIONS SECTION 02900, I.03, B.
5. IF SHOWN ON PLANS, ROOT BARRIER IS REQUIRED ALONG SIDEWALK OR CURB & GUTTER CONSTRUCTED WITHIN 10' OF EXISTING TREES. A CITY APPROVED ROOT BARRIER MUST BE INSTALLED WHEN NEW TREES ARE INSTALLED WITHIN 10' OF CITY-MAINTAINED SIDEWALK OR CURB & GUTTER.
6. THE CITY OF ALPHARETTA MUST RECEIVE A WORK SCHEDULE AT LEAST 72 HOURS IN ADVANCE OF ANY WORK WITHIN THE CRZ OF TREES AND RESERVES THE RIGHT TO BE PRESENT AT ANY AND ALL TIMES DURING THE WORK PERFORMANCE.
7. PRIOR TO CONCRETE TRAIL/BOARDWALK CONSTRUCTION, CANOPIES OF EXISTING TREES MUST BE PRUNED TO PROVIDE A MINIMUM 8 FEET VERTICAL CLEARANCE OVER THE PROPOSED SIDEWALK AREA. EXISTING DEAD LIMBS/BRANCHES OVERHANGING THE PROPOSED SIDEWALK AREA MUST ALSO BE REMOVED. A WORK ORDER FOR THE REQUIRED PRUNING MUST BE PREPARED BY A CERTIFIED ARBORIST OR REGISTERED FORESTER AND ALL WORK MUST BE PERFORMED ACCORDING TO ANSI A300 STANDARDS.
8. ALL SILTFENCE TO BE INSTALLED WITHIN THE CRZ SHALL BE COMPOST FILTER SOCK TYPE B SEDIMENT BARRIERS. NO TRENCHING FOR SILT FENCE INSTALLATION ALLOWED.

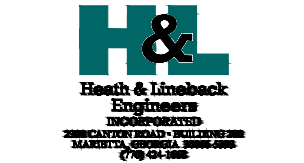


TREE CARE PLAN FOR CONCRETE TRAIL/BOARDWALK INSTALLATION WITHIN A CRITICAL ROOT ZONE (CRZ) OF A SPECIMEN TREE

1. PRIOR TO RELEASE OF RETAINAGE, CITY SHALL BE PROVIDED WITH RECEIPTS SHOWING THE REQUIRED TREE CARE PLAN HAS BEEN PRE-PAID AND SCHEDULED WITH A REPUTABLE TREE CARE COMPANY.
2. NO HEAVY EQUIPMENT IS ALLOWED WITHIN ANY CRITICAL ROOT ZONE (CRZ) OR STRUCTURAL ROOT PLATE (SRP) OF A SPECIMEN TREE, UNLESS OTHERWISE NOTED ON PLANS.
3. WITHIN LIMITS OF DISTURBANCE, EXCAVATE SOIL AROUND ROOTS IN THE CRZ/SRP BY HAND OR WITH AN AIRSPADE (OR SIMILAR TOOL) PRIOR TO BEGINNING WORK ON PROJECT. FOR AIRSPADE USE, USE PLYWOOD BARRIERS TO SEPARATE WORK ZONE FROM SURROUNDING AREAS.
4. AFTER SOIL EXCAVATION, CLEAN CUT ROOTS ½" IN DIAMETER OR GREATER, THEN COVER ENTIRELY WITH HARDWOOD MULCH.
5. AFTER CONSTRUCTION OF SIDEWALK/DRIVEWAY, REMOVE MULCH FROM CUT ROOTS AND BACKFILL THE EXCAVATED AREA WITH NATIVE SOIL TO SPECIFIED GRADES. ADD A 2" LAYER OF CITY-APPROVED ORGANIC COMPOST ON TOP OF NATIVE SOIL, ALONG WITH GRANULAR MYCORRHIZAL INOCULUM (PER LABEL INSTRUCTIONS) AND TILL INTO SOIL.
6. MULCH ENTIRE CRZ, WHERE ALLOWABLE, WITH HARDWOOD MULCH (OR MATCH EXISTING MULCH TYPE) TO A DEPTH OF 3"-4".
7. DURING THE FOLLOWING FALL, FERTILIZE CRZ WITHIN LIMITS OF DISTURBANCE WITH A TIME-RELEASE FERTILIZER THAT CONTAINS MACRONUTRIENTS AND MICRONUTRIENTS AS REQUIRED PER ON-SITE SOIL ANALYSIS REPORT. COST OF SOIL REPORT SHALL BE BORNE BY CONTACTOR. SOIL REPORT SHALL BE SUBMITTED IN ACCORDANCE WITH SPECIFICATIONS SECTION 02900, I.03, B.
8. ALL WORK WITHIN THE CRZ OF A SPECIMEN TREE MUST BE SUPERVISED OR PERFORMED BY AN ISA CERTIFIED ARBORIST, GA REGISTERED FORESTER, OR A.S.C.A. REGISTERED CONSULTING ARBORIST. DEPENDING ON FINDINGS AT TIME OF WORK, THE ARBORIST OR FORESTER RESERVE THE RIGHT TO REQUIRE ADDITIONAL TREE CARE, INCLUDING THE REMOVAL OF THE TREE, AS NEEDED. ALL ADDITIONAL PRESCRIBED ACTION MUST BE IN COMPLIANCE WITH CITY OF ALPHARETTA ORDINANCE AND REQUIRES CITY APPROVAL PRIOR TO WORK BEING PERFORMED.
9. THE CITY OF ALPHARETTA MUST RECEIVE A WORK SCHEDULE AT LEAST 72 HOURS IN ADVANCE OF ANY WORK WITHIN THE CRZ/SRP OF A SPECIMEN TREE AND RESERVES THE RIGHT TO BE PRESENT AT ANY AND ALL TIMES DURING THE WORK PERFORMANCE.
10. IF SHOWN ON PLANS, ROOT BARRIER IS REQUIRED ALONG SIDEWALK OR CURB & GUTTER CONSTRUCTED WITHIN 10' OF EXISTING TREES. A CITY APPROVED ROOT BARRIER MUST BE INSTALLED WHEN NEW TREES ARE INSTALLED WITHIN 10' OF CITY-MAINTAINED SIDEWALK OR CURB & GUTTER.
11. PRIOR TO CONCRETE TRAIL/BOARDWALK CONSTRUCTION, CANOPIES OF EXISTING TREES MUST BE PRUNED TO PROVIDE A MINIMUM 8 FEET VERTICAL CLEARANCE OVER THE PROPOSED SIDEWALK AREA. EXISTING DEAD LIMBS/BRANCHES OVERHANGING THE PROPOSED SIDEWALK AREA MUST ALSO BE REMOVED. A WORK ORDER FOR THE REQUIRED PRUNING MUST BE PREPARED BY A CERTIFIED ARBORIST OR REGISTERED FORESTER AND ALL WORK MUST BE PERFORMED ACCORDING TO ANSI A300 STANDARDS.
12. ALL SILT FENCE TO BE INSTALLED WITHIN THE CRZ SHALL BE COMPOST FILTER SOCK TYPE B SEDIMENT BARRIERS. NO TRENCHING FOR SILT FENCE INSTALLATION ALLOWED.



CITY OF ALPHARETTA
DEPARTMENT OF PUBLIC WORKS
1790 HEMBREE ROAD
ALPHARETTA, GA 30009



CIVIL DESIGN PLANS
FOR THE
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BOARDWALK
REPLACEMENT

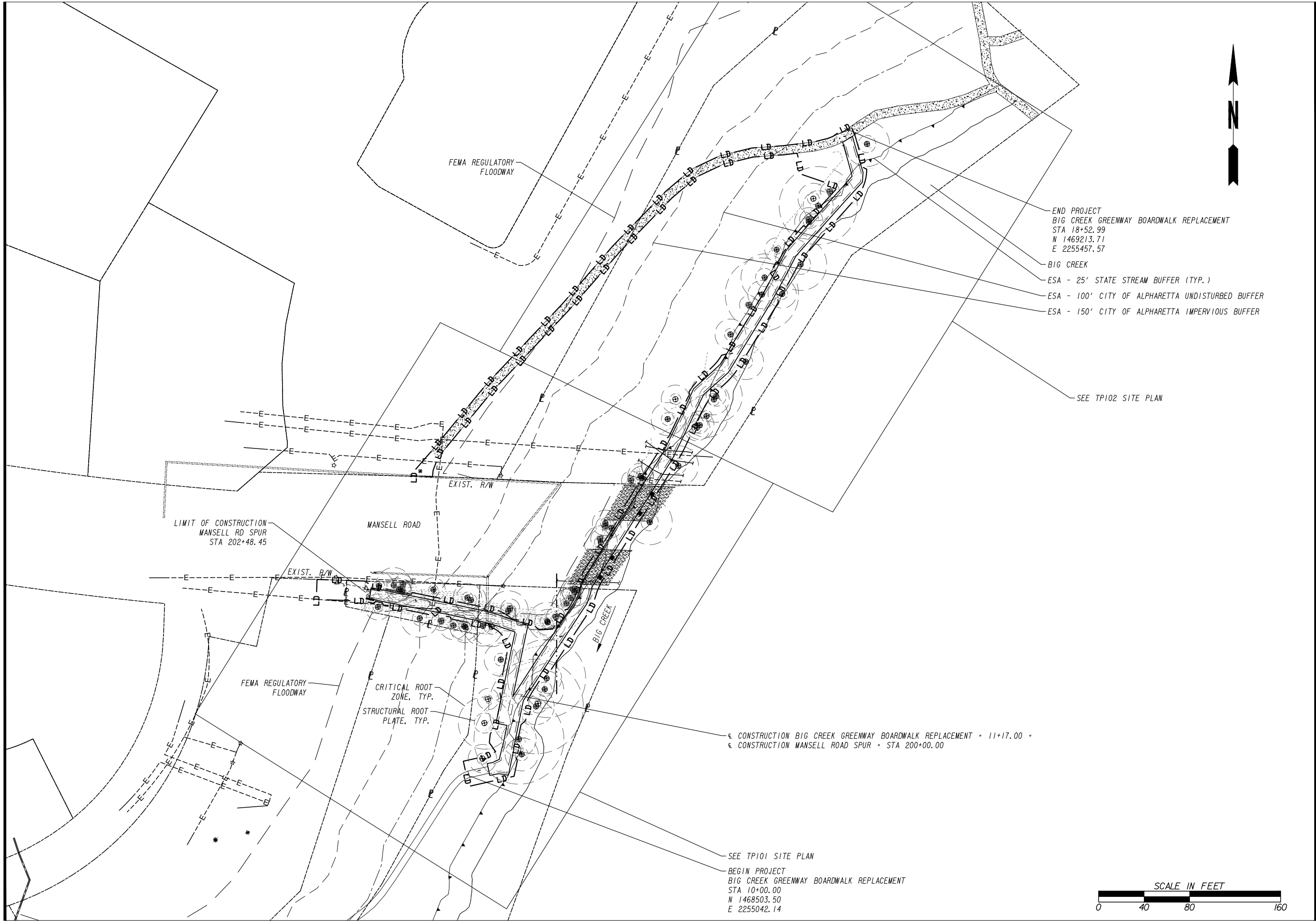
FINAL PLANS
AUGUST 26th, 2022

REVISION		
No.	Date	Revision

SHEET NO.
T-001

TREE PROTECTION
NOTES

Level II Certification # 0000064868	
Designed by:	PFJ
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CITY OF ALPHARETTA
DEPARTMENT OF PUBLIC WORKS
1790 HEMBREE ROAD
ALPHARETTA, GA 30009



CIVIL DESIGN PLANS
FOR THE
BIG CREEK GREENWAY
BOARDWALK
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FINAL PLANS
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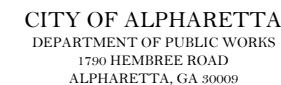
TP100

OVERALL TREE PROTECTION PLAN



Level II Certification # 0000064868

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FINAL PLANS
AUGUST 26th, 2022

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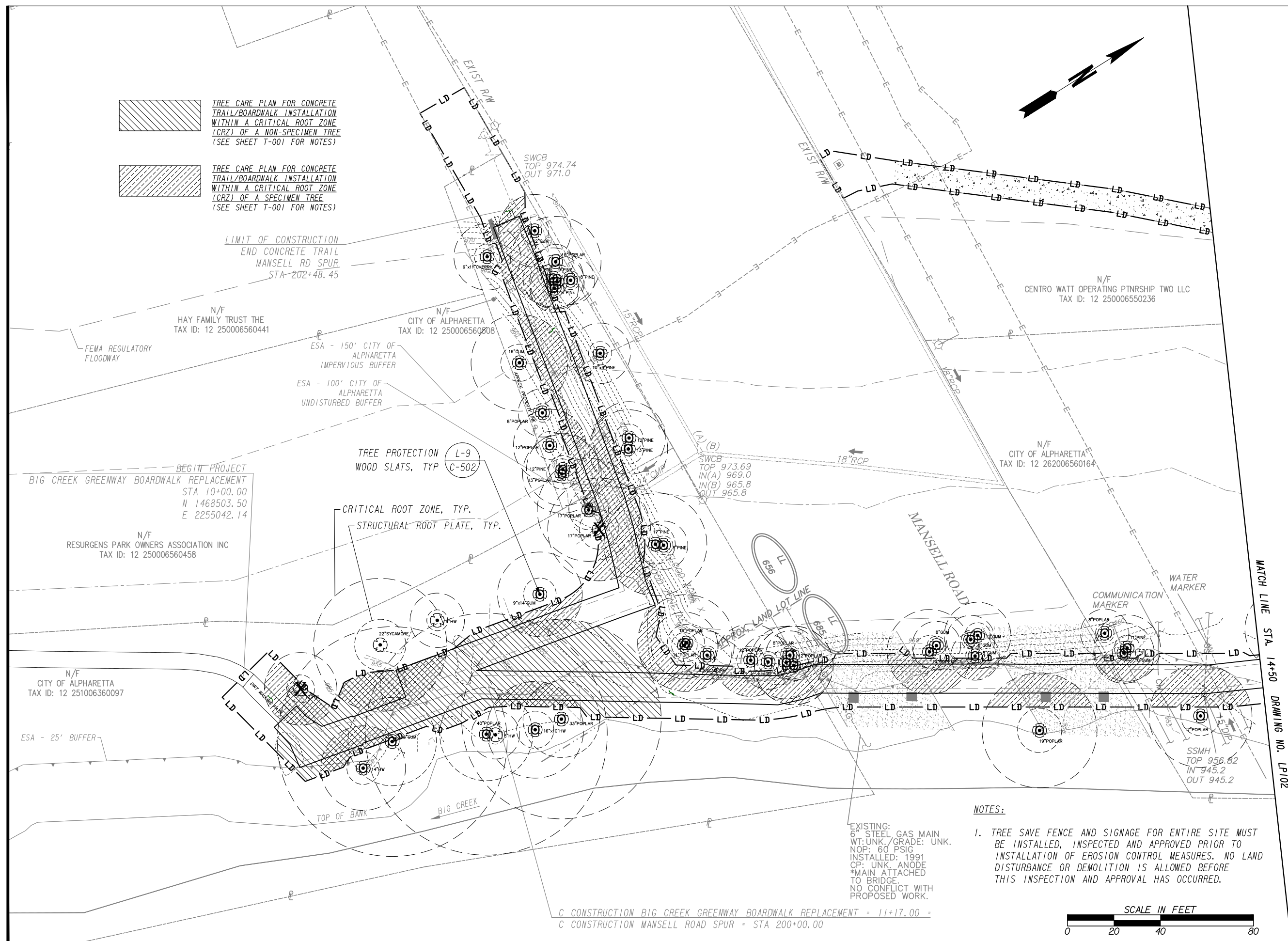
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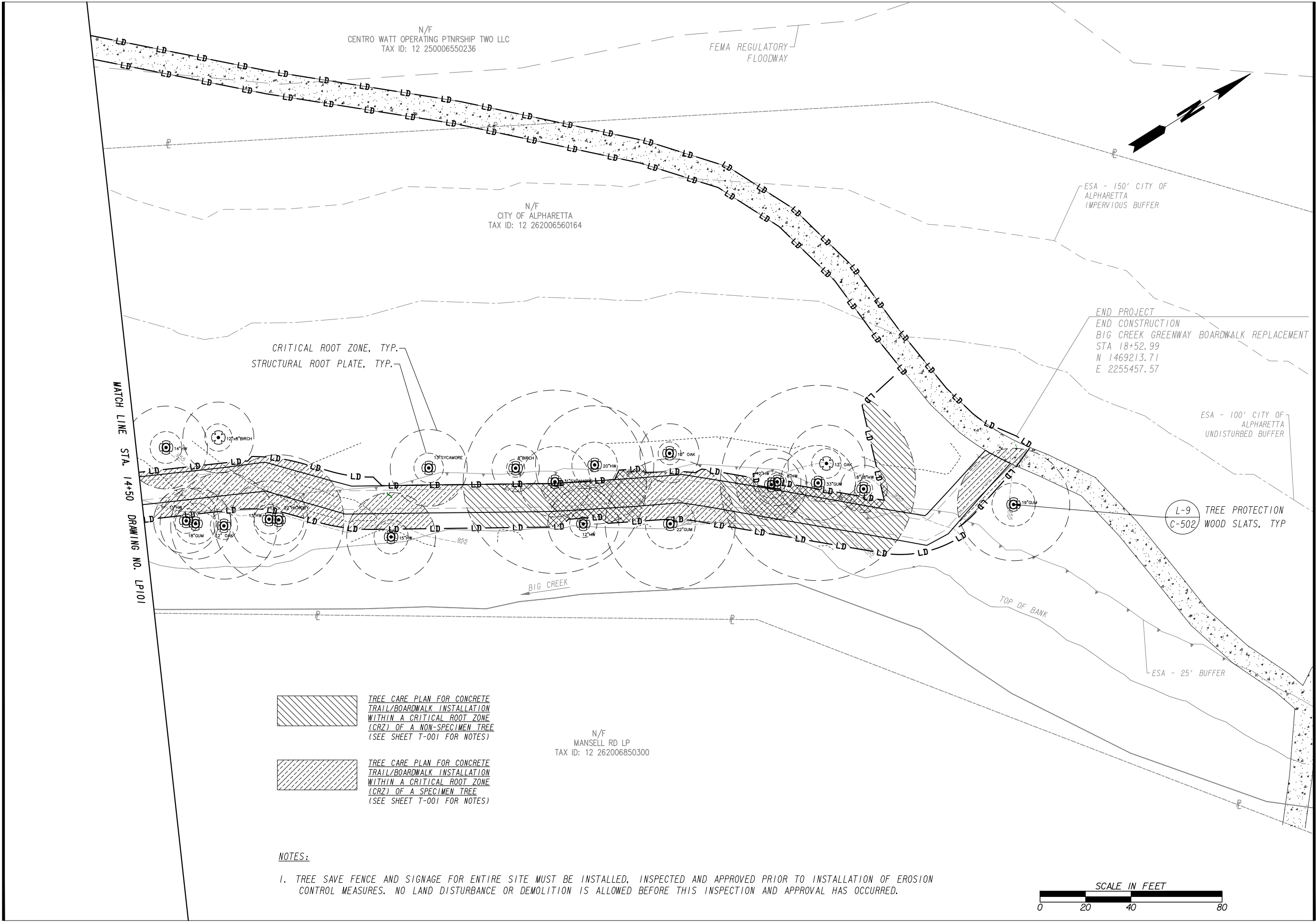
TP101

TREE PROTECTION PLAN

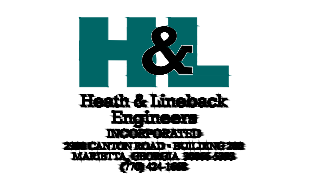
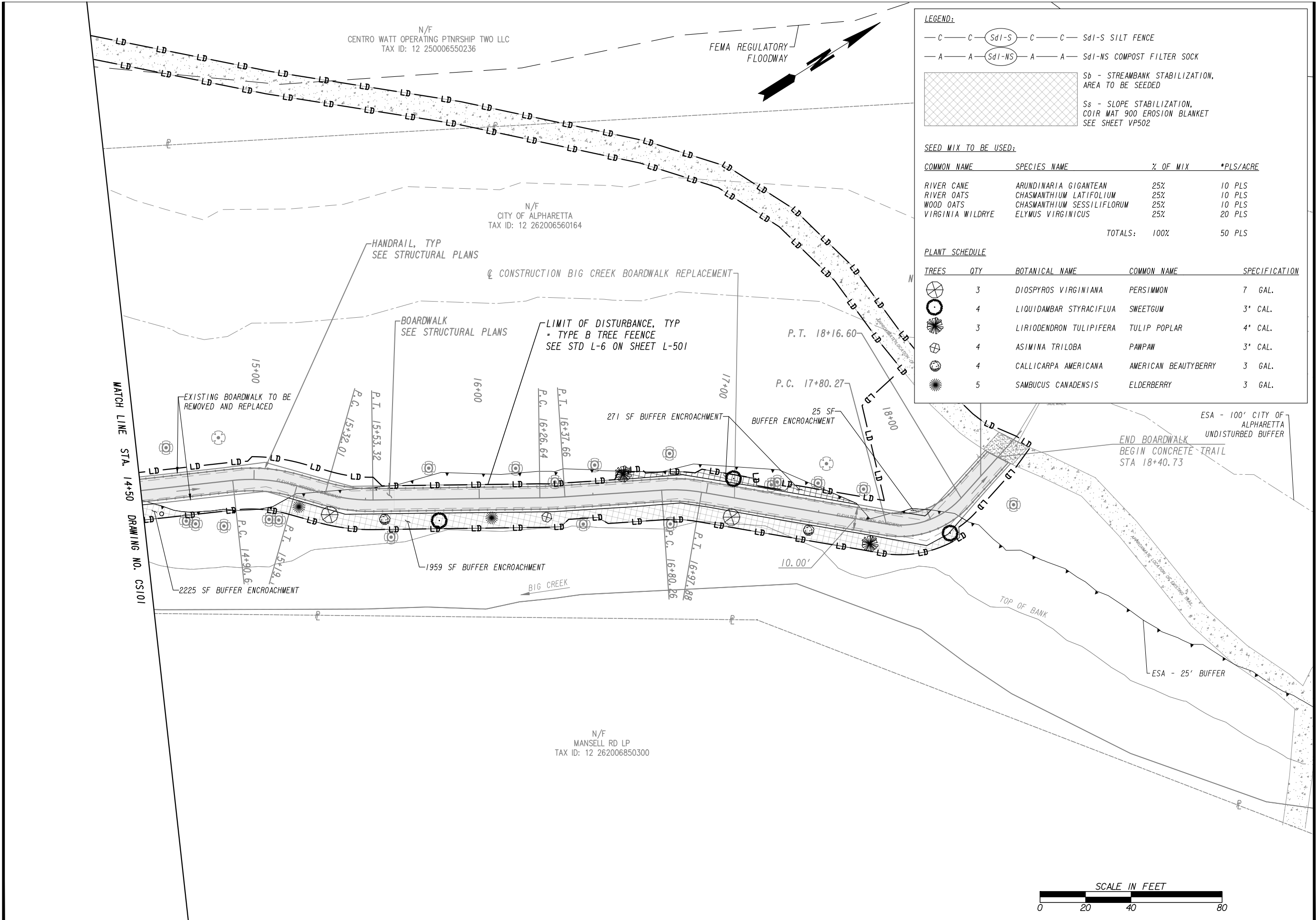


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No.	Date	Revision



CIVIL DESIGN PLANS
FOR THE
BIG CREEK GREENWAY
BOARDWALK
REPLACEMENT
FINAL PLANS
AUGUST 26th, 2022

REVISION		
No.	Date	Revision

SHEET NO.
VP102
VEGETATION PLAN

GENERAL PLANTING NOTES:

1. ALL PLANTS SHALL BE HEALTHY, VIGOROUS, FREE OF PESTS AND DISEASE.
2. ALL PLANTS SHALL BE CONTAINER-GROWN, OR BALLED AND BURLAPPED AS SPECIFIED.
3. CONTRACTOR'S PRICE SHALL INCLUDE ALL LABOR AND MATERIAL NECESSARY TO COMPLETE THE WORK, I.E. MULCH, PLANTING, SOIL MIX, STAKING MATERIAL, WATERING, MAINTENANCE DURING CONSTRUCTION, ETC.
4. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL MATERIAL QUANTITIES SHOWN ON THESE DRAWINGS BEFORE PRICING THE WORK, AND WILL BE RESPONSIBLE FOR INSTALLATION OF PLANT MATERIAL ACCORDING TO PLAN. THE PLANT SCHEDULE IS PROVIDED FOR CONTRACTOR'S CONVENIENCE ONLY.
5. PROVIDE PLANT MATERIALS TRUE TO SPECIES AND VARIETY COMPLYING WITH RECOMMENDATIONS OF "AMERICAN STANDARD FOR NURSERY STOCK" BY THE AMERICAN ASSOCIATION OF NURSERY MEN.
6. PLANTING PLANS INDICATE DIAGRAMMATIC LOCATIONS ONLY. SITE ADJUSTMENTS OF PLANTING DESIGN AND RELOCATION OF PLANT MATERIAL INSTALLED PRIOR TO DESIGN PROFESSIONAL OR OWNER'S REPRESENTATIVE'S APPROVAL SHALL BE DONE WITHOUT PENALTY OR ADDITIONAL COST TO OWNER. STAKE PLANT LOCATIONS AT SITE AND OBTAIN OWNER'S REPRESENTATIVE'S APPROVAL PRIOR TO PLANT INSTALLATION.
7. LOCATE AND VERIFY ALL UTILITY LOCATIONS AND EXISTING STRUCTURES IN AND AROUND THE SITE PRIOR TO WORK. BE FAMILIAR WITH UNDERGROUND UTILITIES BEFORE DIGGING. MAINTAIN EXISTING UTILITIES AND STRUCTURES AND PROTECT AGAINST DAMAGE DURING THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO EXISTING UTILITIES, STRUCTURES, PAVING AND/OR WORK OF OTHER TRADES RESULTING FROM LANDSCAPE CONSTRUCTION.
6. THE CONTRACTOR SHALL NOTIFY ALL NECESSARY UTILITY COMPANIES 72 HRS MINIMUM PRIOR TO DIGGING FOR FIELD VERIFICATION OF ALL UNDERGROUND UTILITIES, AND OTHER ELEMENTS, AND COORDINATE WITH THE DESIGN PROFESSIONAL PRIOR TO INITIATING OPERATIONS. THE CONTRACTOR SHALL AVOID DAMAGE TO ALL UTILITIES DURING THE COURSE OF WORK.
7. CONTRACTOR SHALL PROTECT ALL EXISTING PLANT MATERIALS INDICATED ON PLANS TO REMAIN. ALL PLANT MATERIAL INDICATED TO REMAIN THAT IS DAMAGED BY THE CONTRACTOR SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER WITH THE SAME SIZE, QUALITY, AND TYPE OF PLANT MATERIAL OR AS REQUIRED BY THE LOCAL REVIEWING AUTHORITY, WHICHEVER HAS A GREATER RECOMPENSE VALUE.
8. ANY PLANT MATERIAL WHICH DIES, TURNS BROWN OR DEFOLIATES (PRIOR TO DATE OF SUBSTANTIAL COMPLETION OF THE WORK) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, SIZE AND MEETING ALL THE PLANT LIST SPECIFICATIONS.
9. DESIGN PROFESSIONAL OR OWNER'S REPRESENTATIVE SHALL BE THE SOLE JUDGE OF THE QUALITY AND ACCEPTABILITY OF MATERIALS AND PLACEMENT.
10. PLANTS SHALL BE SPECIMEN QUALITY, WELL BRANCHED AND DENSELY FOLIATED WHEN IN LEAF. ALL PLANTS MUST BE HEALTHY, VIGOROUS MATERIAL, FREE OF DISEASES, INSECTS, EGGS, LARVAE, AND DEFECTS SUCH AS KNOTS, SUN-SCALD, INJURIES, ABRASIONS AND/OR DISFIGUREMENT.
11. HEIGHT AND SPREAD DIMENSIONS SPECIFIED REFER TO THE MAIN BODY OF THE PLANT AND NOT FROM BRANCH TIP TO TIP. IF A RANGE OF SIZE IS GIVEN, NO PLANT SHALL BE LESS THAN THE MINIMUM SIZE AND NOT LESS THAN 50 PERCENT OF THE PLANTS SHALL BE AS LARGE AS THE MAXIMUM SIZE SPECIFIED.
12. HARDWOOD TREES SHALL HAVE STRAIGHT TRUNKS WITH CENTRAL LEADERS, FULL HEADED, AND MEET ALL REQUIREMENTS SPECIFIED. DO NOT HANDLE PLANTS BY THE
13. PLACE PLANTS UPRIGHT AND TURNED SO THAT THE MOST ATTRACTIVE SIDE IS VIEWED.
14. AFTER BEING DUG AT THE NURSERY SOURCE, ALL TREES IN LEAF SHALL BE ACCLIMATED FOR TWO (2) WEEKS UNDER A MIST SYSTEM PRIOR TO INSTALLATION.
15. MULCH: PROVIDE 4" THICKNESS MULCH AT ALL PLANTS AND PLANTING BEDS. UTILIZE SHREDDDED, AGED HARDWOOD

MULCH.

16. LEAVES: MUST BE OF MEDIUM FOLIAGE, ALL GOOD LEAVES, MAXIMUM OF 10% CHLOROSIS ALLOWED, WITH NO EXTREME SUCCULENCE.
17. IF DRAINAGE IS NOT SUFFICIENT NOTIFY PROJECT OWNER'S REPRESENTATIVE IN WRITING BEFORE INSTALLING THE PLANTS, OTHERWISE CONTRACTOR SHALL BE TOTALLY RESPONSIBLE FOR THE GUARANTEE AND LIVABILITY OF THE PLANT.
18. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY SAFETY MEASURES DURING CONSTRUCTION OPERATIONS TO PROTECT THE PUBLIC ACCORDING TO ALL APPLICABLE CODES AND RECOGNIZED LOCAL PRACTICES
19. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DRAWINGS AND FIELD CONDITIONS TO THE DESIGN PROFESSIONAL PRIOR TO STARTING CONSTRUCTION. FOLLOW THE DESIGN PROFESSIONAL'S INSTRUCTIONS ON RESOLVING ANY DISCREPANCIES.
20. UNLESS OTHERWISE SPECIFIED DUE TO SOIL CONDITIONS, SET ROOT FLARE OF ROOTBALL LEVEL WITH SURROUNDING GRADE. ROOT SYSTEM SHALL BE AS SPECIFIED IN PLANT SCHEDULE:

A. BALLED AND BURLAPPED: ROOTS MUST BE STURDILY ESTABLISHED IN BALL THAT HAS BEEN TIGHTLY WRAPPED AND SECURELY TIED WITH TWINE OR WIRE, OR PINNED. WHERE WIRE BASKETS ARE USED ON TREES OR SHRUBS, CUT BURLAP AND WIRE BACK TO ¼ THE BASE OF ROOTBALL AND REMOVE FROM PLANTING HOLE. REMOVE ALL STRAPS, WIRE STRAP HANGERS, ETC. FROM ROOTBALL. DO NOT ALLOW REMAINING WIRE TO PROTRUDE INTO MULCH OR TOPSOIL AREAS.

B. CONTAINER GROWN: CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING DESIGN PROFESSIONAL OF ROOT BOUND SPECIMENS. REMOVE CONTAINER AND SCARIFY OR SHAVE ROOTBALL AS NEEDED TO REMEDIATE ROOT BOUND CONDITION. PULL SURFACE ROOTS AT TOP OF ROOTBALL OUT IN A DIRECTIONAL PATTERN TO DISCOURAGE CIRCLING ROOTS.
22. STAKING IS ONLY TO BE INSTALLED IN SPECIAL CIRCUMSTANCES AT THE DIRECTION OF THE DESIGN PROFESSIONAL. ANY STAKING MATERIAL MUST BE REMOVED AT THE END OF THE WARRANTY PERIOD.

PLANTING SOIL MIX NOTES:

1. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR PROCURING A LANDSCAPE SOIL REPORT FROM LOCAL EXTENSION SERVICE (AGRICULTURAL AND ENVIRONMENTAL SERVICES LABS: <http://aesl.ces.uga.edu/>), OR OTHER VENDOR.
2. THE LANDSCAPE CONTRACTOR SHALL FURNISH TOPSOIL; TOPSOIL MUST BE APPROVED BY THE LANDSCAPE ARCHITECT.
3. THE LANDSCAPE CONTRACTOR SHALL SUPPLY ALL PLANTING SOIL MIX.
4. THE PLANTING SOIL MIX MUST APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO ANY BACKFILLING.
5. THE TYPICAL PLANTING SOIL MIX FOR ON-GRADE PLANTINGS (TREES, SHRUBS & GROUND COVERS) SHALL CONSIST OF THE FOLLOWING:

A. 60% TOPSOIL (AS SPECIFIED), 40% MR. NATURAL CLM (COMPLETE LANDSCAPE MIX) BY ITS AULNATURAL,LLC, OR AS NOTED BELOW AS AN EQUIVALENT 40% OF PREPARED ADDITIVES (BY VOLUME AS FOLLOWS):

A.1. 2 PARTS HUMUS AND/OR PEAT, 1 PART STERILIZED COMPOSTED COW MANURE

A.2. 1 PART SHREDDDED PINE BARK (BARK PIECES BETWEEN 1/2 INCH AND 2 INCHES IN LENGTH)

B. COMMERCIAL FERTILIZER AS RECOMMENDED IN SOIL REPORT.

C. LIME AS RECOMMENDED IN SOIL REPORT (IF ANY).

WATERING/IRRIGATION NOTES:

1. WATERING AFTER INSTALLATION AND WATER TRANSPORTATION IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
2. USE OF TREE CAMEL, OOZE TUBES OR TREE GATOR BAGS FOR TREES ARE ACCEPTABLE.
3. MULCH SHOULD BE INSPECTED EVERY 3 MONTHS TO ENSURE A DEPTH OF 4-INCHES AND REPLENISHED WHERE NECESSARY.

4. INSTALLATION OF A PERMANENT IRRIGATION SYSTEM IS NOT PROPOSED. THE CONTRACTOR MAY CHOOSE TO INSTALL A TEMPORARY IRRIGATION SYSTEM IN ORDER TO ESTABLISH INSTALLED PLANT MATERIAL. SUBMIT A PLAN FOR A TEMPORARY SYSTEM TO THE OWNER'S REPRESENTATIVE FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION. THE SYSTEM SHALL BE DESIGNED TO PROVIDE FULL AND COMPLETE COVERAGE TO ALL LANDSCAPED AREAS OF THE SITE INDICATED ON THE LANDSCAPE PLAN.
5. ALL MATERIALS USED IN THE DESIGN OF THE TEMPORARY SYSTEM, INCLUDING SPRINKLER HEADS, VALVES, VALVE BOXES, CONTROLLERS, PUMPS, BACKFLOW PREVENTORS, RAIN AND FREEZE SENSORS, DRIP EQUIPMENT, WIRE, ELECTRICAL CONNECTIONS, AND PVC PIPE AND FITTINGS, SHALL MEET MINIMUM INDUSTRY STANDARDS. MANUFACTURER AND MODEL MUST BE SPECIFIED.
6. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY SYSTEM AFTER SUBSTANTIAL COMPLETION IS OBTAINED.
7. IF NO TEMPORARY SYSTEM IS PROPOSED, THE CONTRACTOR SHALL DEVELOP A SCHEDULE FOR MANUAL WATERING OF PLANTS. THIS SCHEDULE SHOULD BE INCLUDED IN ANY MAINTENANCE AGREEMENT AND/OR BONDING OF LANDSCAPE MATERIAL AND SHOULD INDICATE THE PARTY RESPONSIBLE FOR PERFORMING THE MANUAL WATERING. THE DURATION OF THE SCHEDULE OF MANUAL WATERING SHOULD BE EQUAL TO THE DURATION OF THE BOND PERIOD OR 12 MONTHS STARTING FROM THE INSTALLATION DATE, WHICHEVER IS GREATER. THE SCHEDULE SHOULD ALSO INDICATE THE AMOUNT OF WATER TO BE APPLIED PER WEEK. THE FOLLOWING IRRIGATION RATES ARE OFFERED AS A GUIDELINE; HOWEVER, THE SUPPLIER OF THE LANDSCAPE MATERIAL SHOULD BE CONSULTED FOR THEIR RECOMMENDATIONS.

· TREES: SHOULD BE WATERED DAILY FOR MONTH 1, EVERY OTHER DAY FOR MONTHS 2-4, AND WEEKLY FOR MONTHS 5-12. APPLY 8 GALLONS PER 4" CALIPER TREE PER APPLICATION. ADJUST RATE TO LOCAL RAINFALL AMOUNT. (ASSUME 30 GALLONS PER TREE FOR EVERY INCH OF RAINFALL).

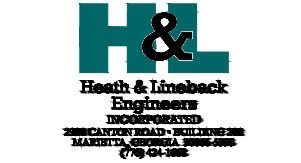
· SHRUBS: SHOULD BE WATERED DAILY FOR MONTH 1, EVERY OTHER DAY FOR MONTHS 2-4, AND WEEKLY FOR MONTHS 5-12. APPLY 1 GALLON PER SHRUB PER APPLICATION. ADJUST RATE TO LOCAL RAINFALL AMOUNT. (ASSUME 2 GALLONS PER SHRUB FOR EVERY INCH OF RAINFALL)

· TURF: SHOULD RECEIVE 1-INCH OF IRRIGATION PER WEEK APRIL THROUGH SEPTEMBER, 1/2-INCH OF IRRIGATION OCTOBER THROUGH MARCH. ADJUST RATE TO LOCAL RAINFALL AMOUNT.

· NATIVE GRASS BEDS: WATER EVERY OTHER DAY FOR THE FIRST MONTH. ONLY CONTINUE WATERING AFTER THAT ONLY DURING EXTENDED OR FORECASTED DRY PERIODS, AND THEN, ONLY ONCE PER WEEK.



CITY OF ALPHARETTA
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1790 HEMBREE ROAD
ALPHARETTA, GA 30009



CIVIL DESIGN PLANS
FOR THE
BIG CREEK GREENWAY
BOARDWALK
REPLACEMENT

FINAL PLANS
AUGUST 26th, 2022

REVISION		
No.	Date	Revision

SHEET NO.

VP501

VEGETATION PLAN
NOTES & DETAILS

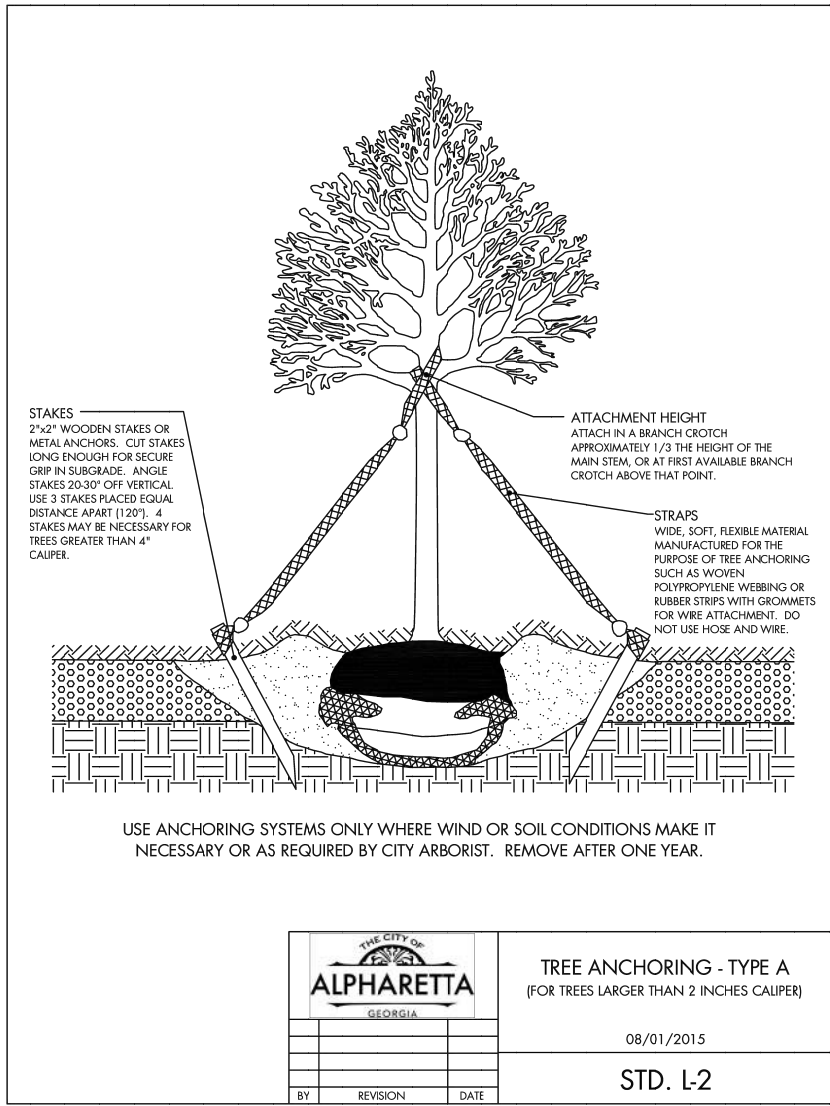
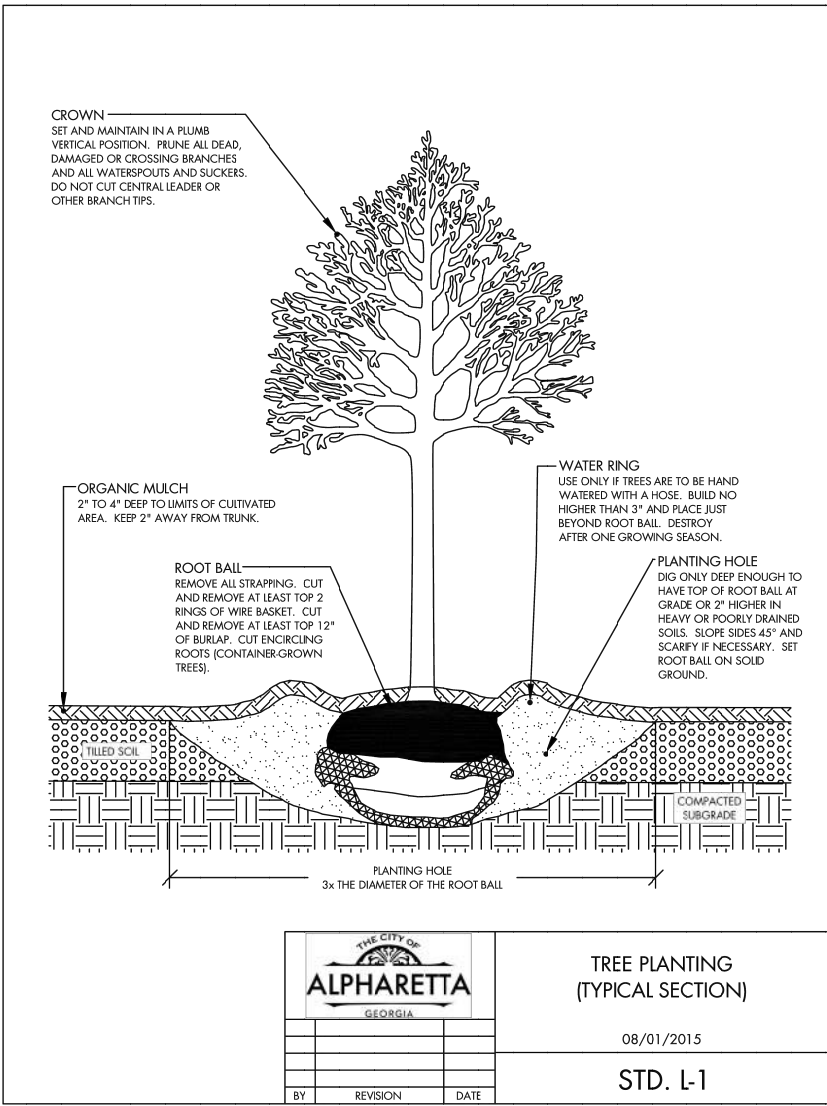
Level II Certification # 0000064868	
Designed by:	PFJ
Drawn by:	PFJ
Checked by:	WWD
File Name:	VP501.dwg

DX2 Geosyntex, Inc.

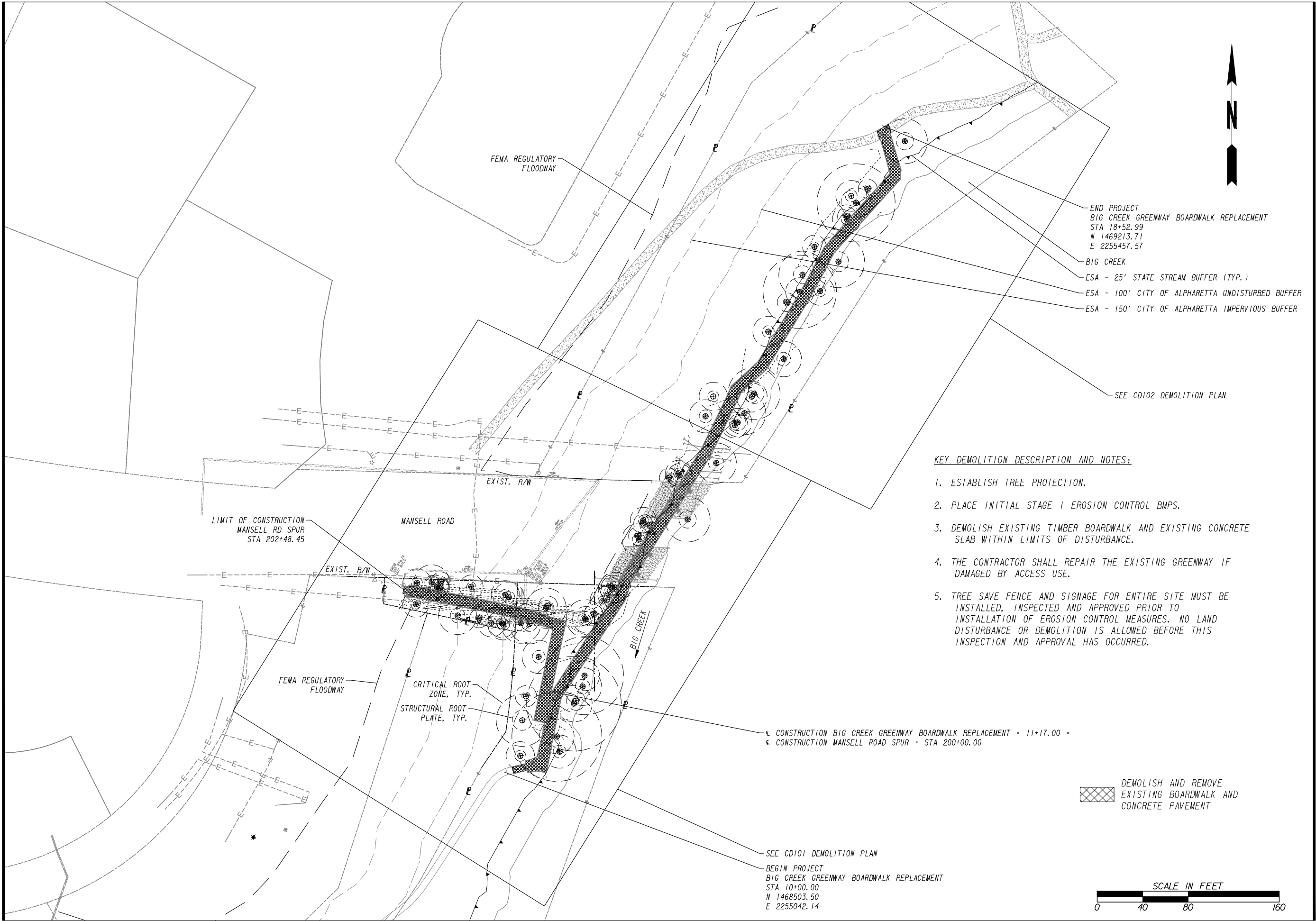
Coir Mat 900 Erosion Blanket

Coir Mat 900 is composed of a 100% hand spun coir yarns. This 100% biodegradable mat provides erosion resistance while supporting growth and development of vegetation. Coir Mat 900 blanket is intended for use in applications requiring protection for a period up to 6 years. Actual field longevity is dependent on soil and climatic conditions. Coir Mat 900 meets or exceeds the physical property values listed below:

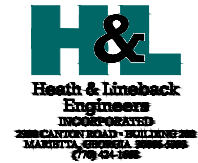
Property	Test Method	Unit	M.A.R.V
Weight (typical)	ASTM D 3776	oz/sy	29
Tensile Strength (Wet)	ASTM D 4595	lbs/ft	1776 (MD) 936 (XD)
Tensile Strength (Dry)	ASTM D 4595	lbs/ft	2024 (MD) 1160 (XD)
Elongation at Failure (Wet)	ASTM D 4595	%	52 (MD) 24 (XD)
Thickness	ASTM D 6525	in	0.35
Open Area (Calculated)	ASTM D 6567	%	38
Recommended Slope			1:1
Recommended flow		Feet per second	16
Recommended Shear Stress		lbs/sq ft	5
Functional Longevity		Years	4-6
"C" Factor			0.002
Minimum twine count per ft (MD x XD)			39 x 18



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CIVIL DESIGN PLANS
FOR THE
BIG CREEK GREENWAY
BOARDWALK
REPLACEMENT

FINAL PLANS
AUGUST 26th, 2022

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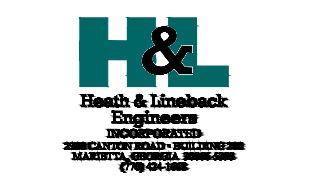
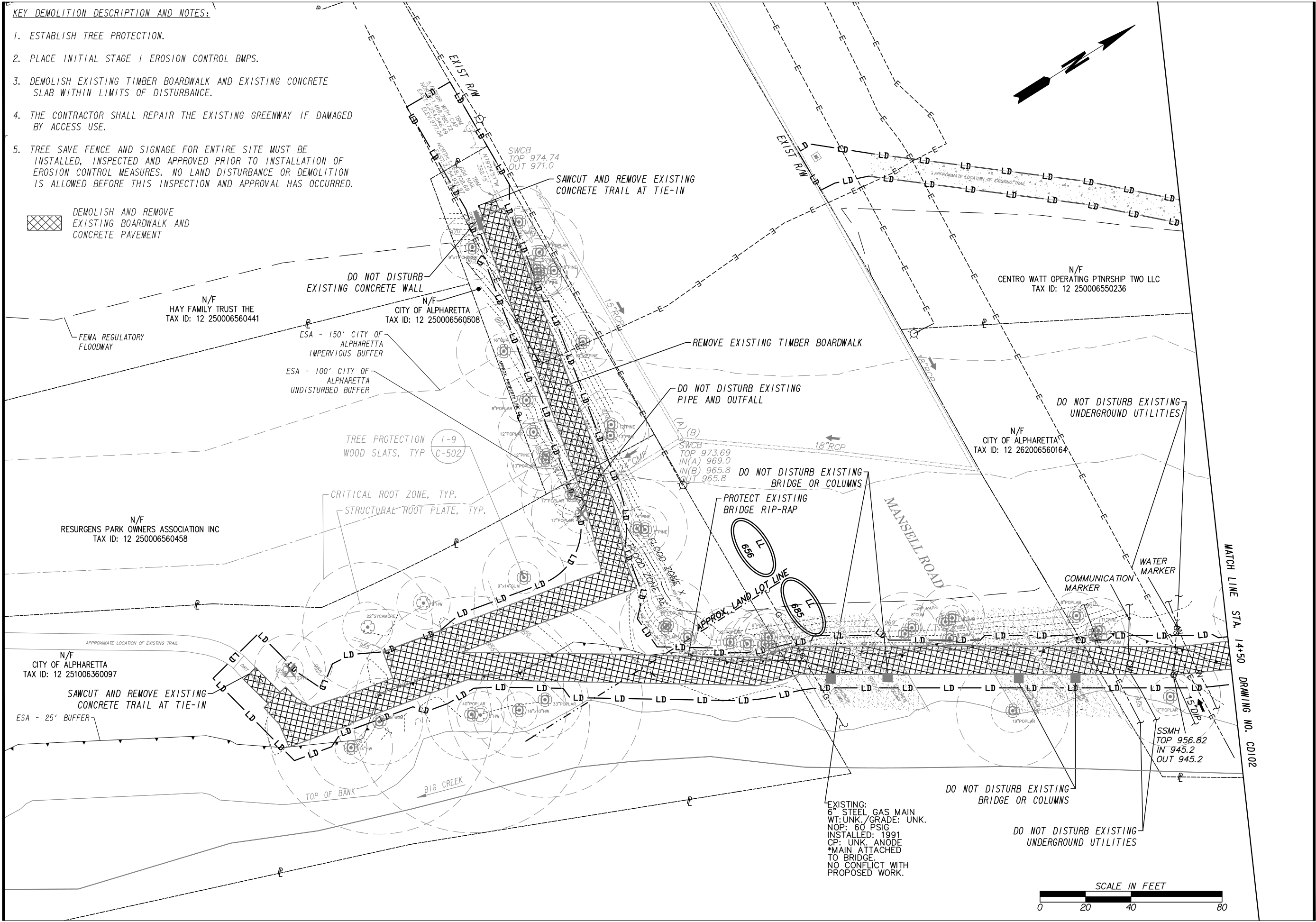
CD100

OVERALL DEMOLITION PLAN



Level II Certification # 0000064868

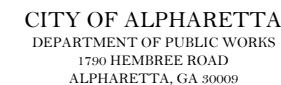
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File Name:	CD100.dwg



CIVIL DESIGN PLANS
FOR THE
BIG CREEK GREENWAY
BOARDWALK
REPLACEMENT
FINAL PLANS
AUGUST 26th, 2022

REVISION		
No.	Date	Revision

SHEET NO.
CD101
DEMOLITION PLAN



FINAL PLANS
AUGUST 26th, 2022

[illegible]

SHEET NO.

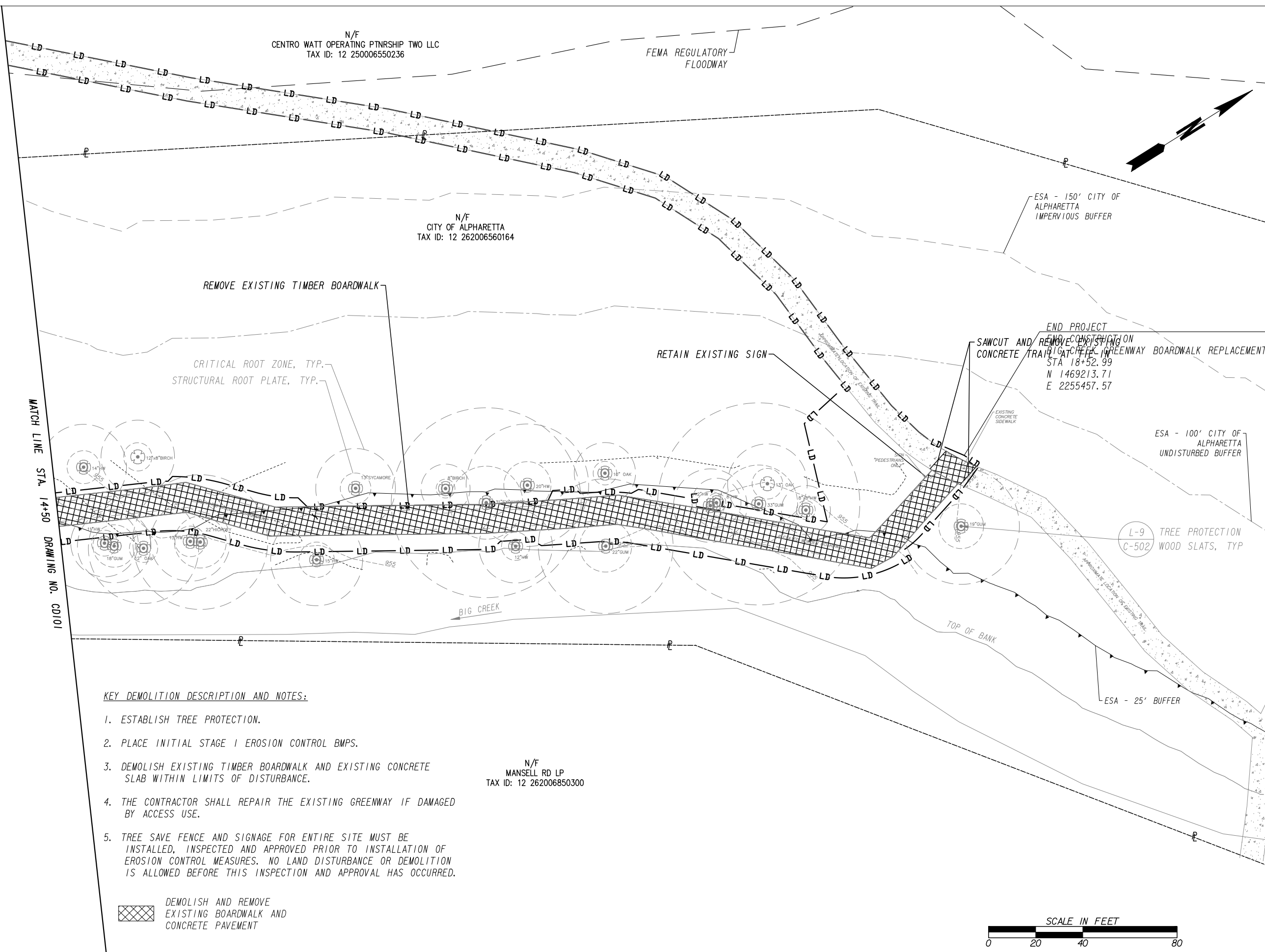
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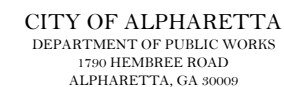
DEMOLITION PLAN



Level II Certification # 0000064868

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File Name:	CD102.dwg





FINAL PLANS
AUGUST 26th, 2022

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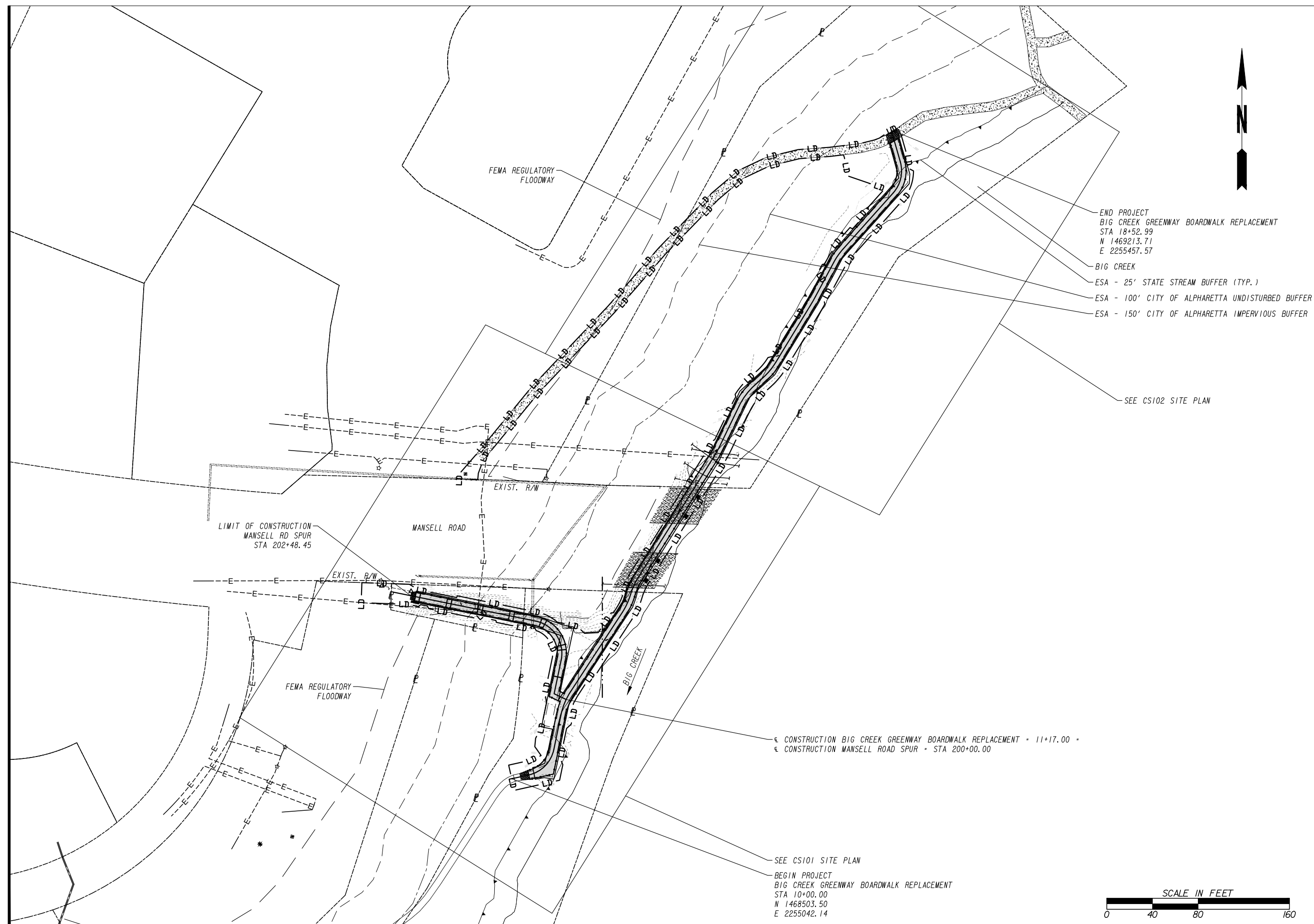
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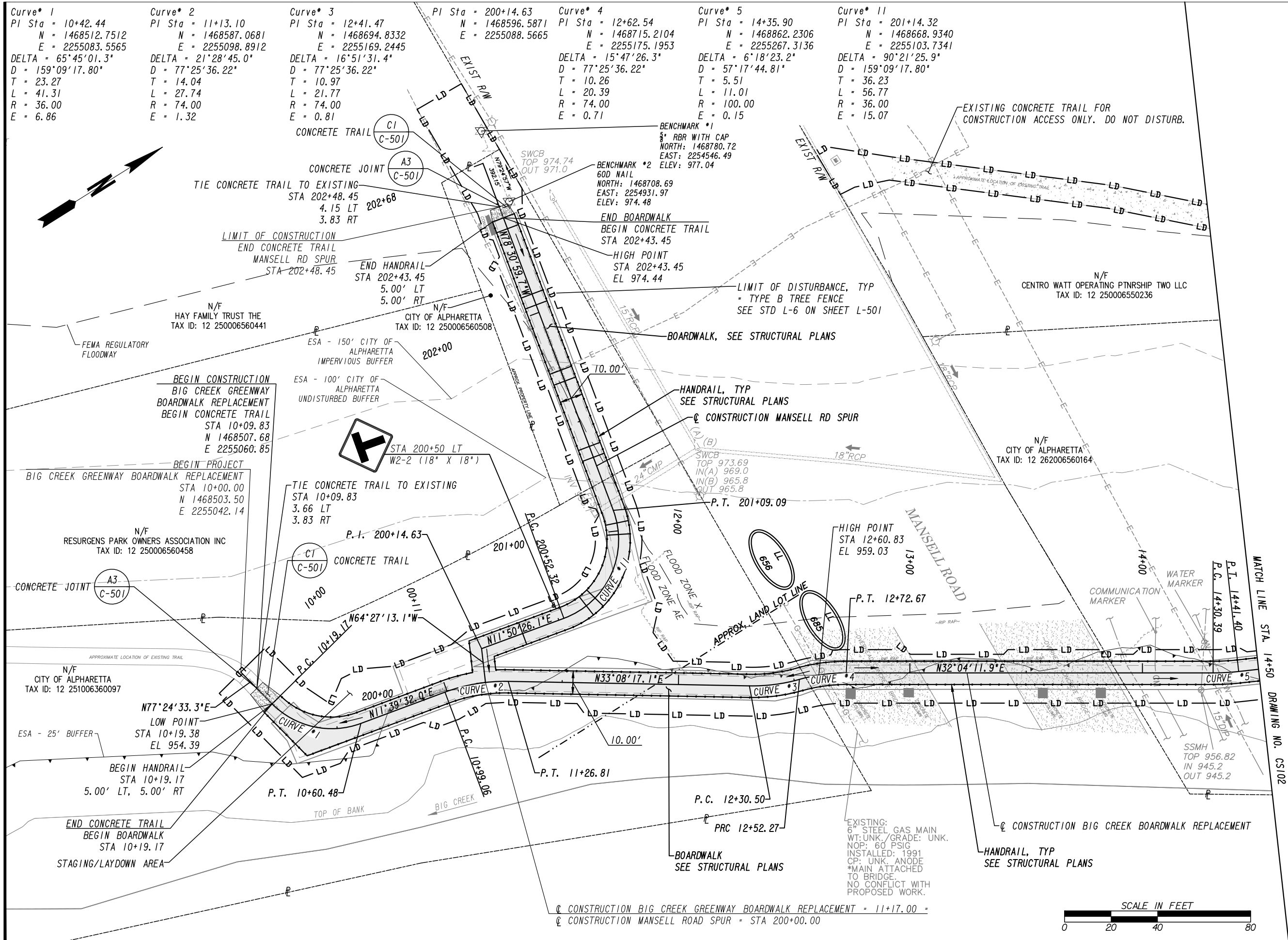
CS100

OVERALL SITE PLAN

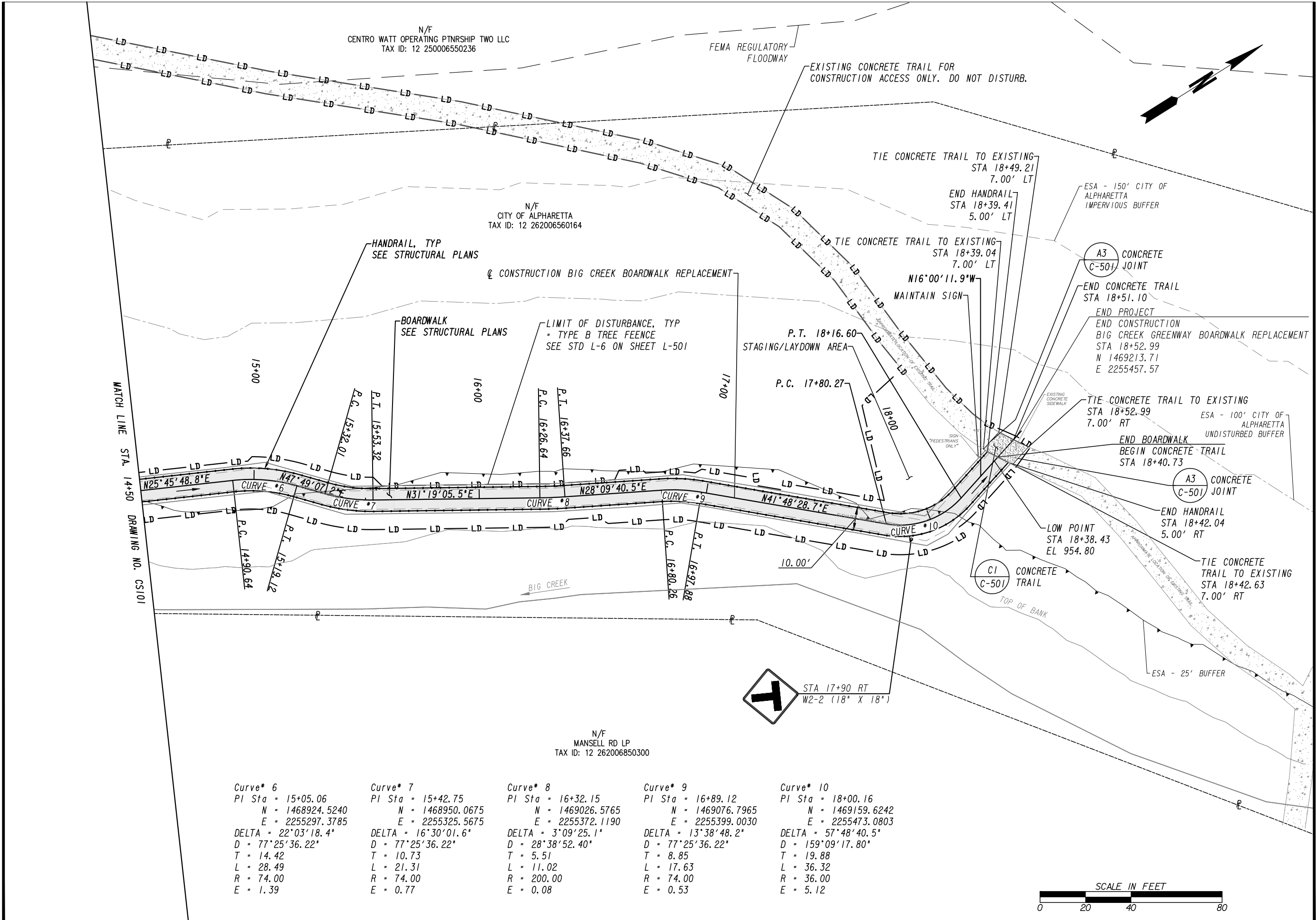


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File Name:	CS100.dwg





REVISION		
No.	Date	Revision



Curve* 6
PI Sta = 15+05.06
N = 1468924.5240
E = 2255297.3785
DELTA = 22°03'18.4"
D = 77°25'36.22"
T = 14.42
L = 28.49
R = 74.00
E = 1.39

Curve* 7
PI Sta = 15+42.75
N = 1468950.0675
E = 2255325.5675
DELTA = 16°30'01.6"
D = 77°25'36.22"
T = 10.73
L = 21.31
R = 74.00
E = 0.77

Curve* 8
PI Sta = 16+32.15
N = 1469026.5765
E = 2255372.1190
DELTA = 3°09'25.1"
D = 28°38'52.40"
T = 5.51
L = 11.02
R = 200.00
E = 0.08

Curve* 9
PI Sta = 16+89.12
N = 1469076.7965
E = 2255399.0030
DELTA = 13°38'48.2"
D = 77°25'36.22"
T = 8.85
L = 17.63
R = 74.00
E = 0.53

Curve* 10
PI Sta = 18+00.16
N = 1469159.6242
E = 2255473.0803
DELTA = 57°48'40.5"
D = 159°09'17.80"
T = 19.88
L = 36.32
R = 36.00
E = 5.12



CIVIL DESIGN PLANS
FOR THE
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BOARDWALK
REPLACEMENT
FINAL PLANS
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SHEET NO.
CS102

MAINLINE PLAN



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DEPARTMENT OF PUBLIC WORKS
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ALPHARETTA, GA 30009



CIVIL DESIGN PLANS
FOR THE
BIG CREEK GREENWAY
BOARDWALK
REPLACEMENT

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DE100 - BIG CREEK BOARDWALK REPLACEMENT MAINLINE							
No.	Type	Length	Radius	Direction (DMS)	Start Station	End Station	Chord length
L1	Line	19.172'		N77.243333E	10+00.00'	10+19.17'	
C1	Curve	41.312'	36.000'		10+19.17'	10+60.48'	39.082'
L2	Line	38.580'		N11.393204E	10+60.48'	10+99.06'	
C2	Curve	27.741'	74.000'		10+99.06'	11+26.81'	27.579'
L3	Line	103.695'		N33.081708E	11+26.81'	12+30.50'	
C3	Curve	21.774'	74.000'		12+30.50'	12+52.27'	21.695'
C4	Curve	20.394'	74.000'		12+52.27'	12+72.67'	20.330'
L4	Line	157.724'		N32.041193E	12+72.67'	14+30.39'	
C5	Curve	11.007'	100.000'		14+30.39'	14+41.40'	11.001'
L5	Line	49.239'		N25.454876E	14+41.40'	14+90.64'	
C6	Curve	28.485'	74.000'		14+90.64'	15+19.12'	28.310'
L6	Line	12.890'		N47.490718E	15+19.12'	15+32.01'	
C7	Curve	21.311'	74.000'		15+32.01'	15+53.32'	21.237'
L7	Line	73.317'		N31.190553E	15+53.32'	16+26.64'	
C8	Curve	11.020'	200.000'		16+26.64'	16+37.66'	11.018'
L8	Line	42.597'		N28.094046E	16+37.66'	16+80.26'	
C9	Curve	17.625'	74.000'		16+80.26'	16+97.88'	17.584'
L9	Line	82.389'		N41.482867E	16+97.88'	17+80.27'	
C10	Curve	36.324'	36.000'		17+80.27'	18+16.60'	34.803'
L10	Line	39.527'		N16.001186W	18+16.60'	18+56.12'	

DE200 - MANSELL RD 5PUR							
No.	Type	Length	Radius	Direction	Start Station	End Station	Chord length
L11	Line	14.626'		N64.271310W	200+00.00'	200+14.63'	
L12	Line	37.695'		N11.502613E	200+14.63'	200+52.32'	
C11	Curve	56.773'	36.000'		200+52.32'	201+09.09'	51.070'
L13	Line	159.354'		N78.305974W	201+09.09'	202+68.45'	

REVISION		
No.	Date	Revision

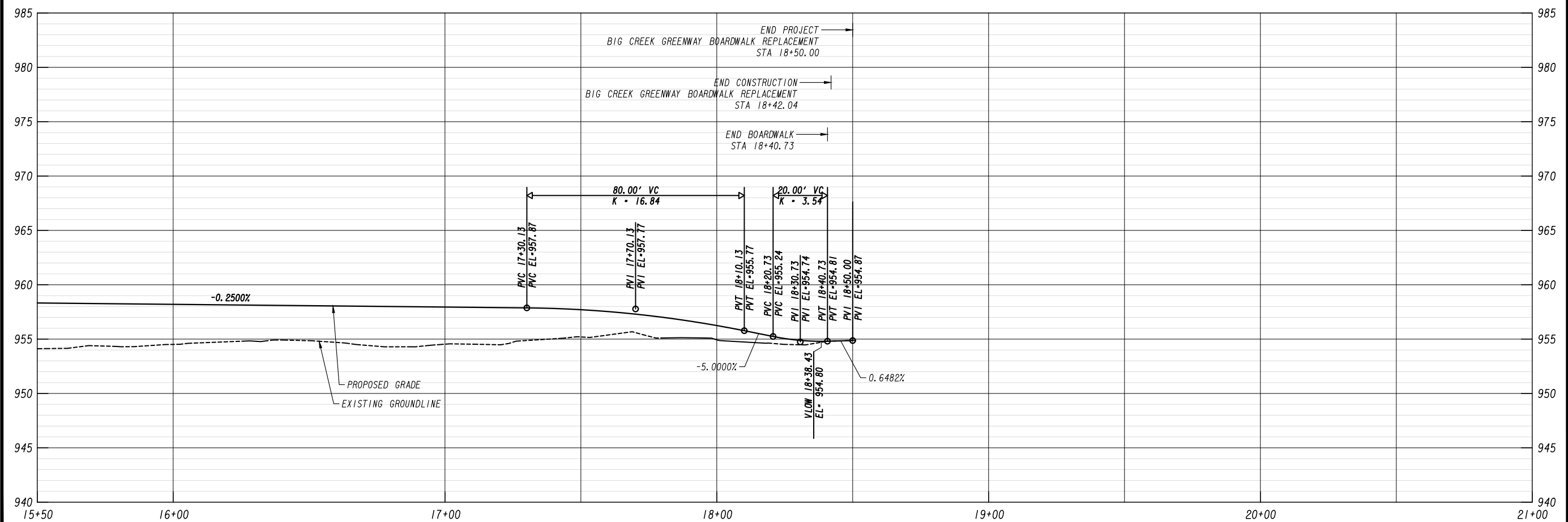
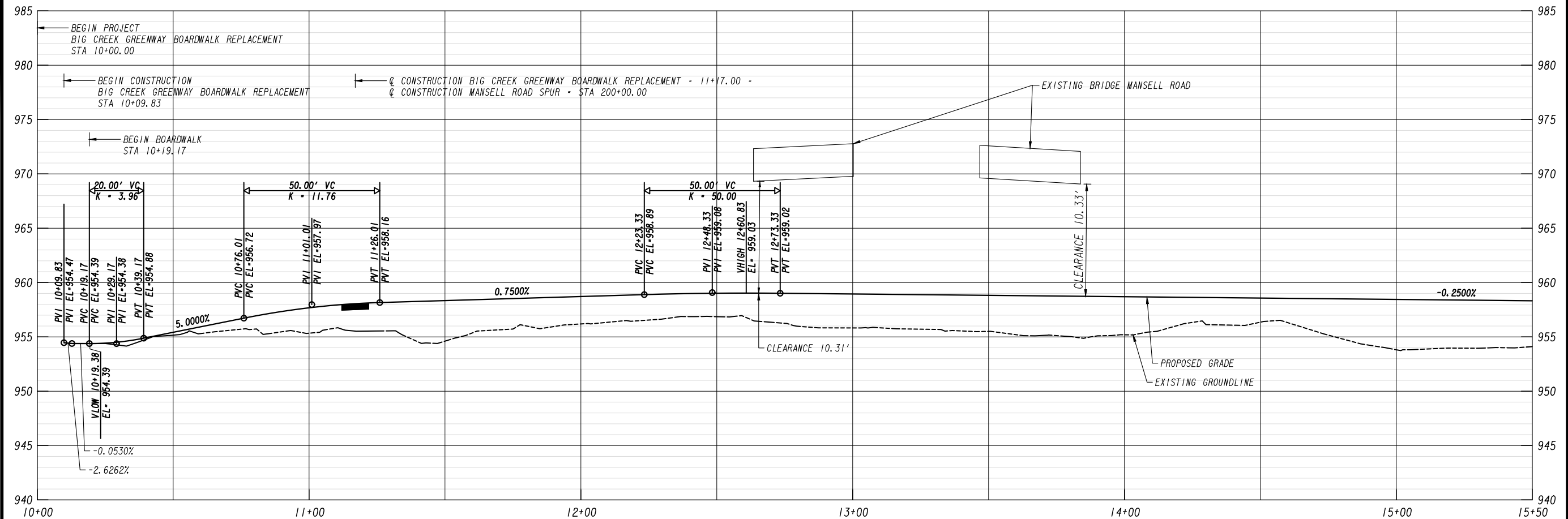
SHEET NO.
CS110

LINE - CURVE
TABLES



Level II Certification # 0000064868

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CITY OF ALPHARETTA
DEPARTMENT OF PUBLIC WORKS
1790 HEMBREE ROAD
ALPHARETTA, GA 30009



CIVIL DESIGN PLANS
FOR THE
BIG CREEK GREENWAY
BOARDWALK
REPLACEMENT

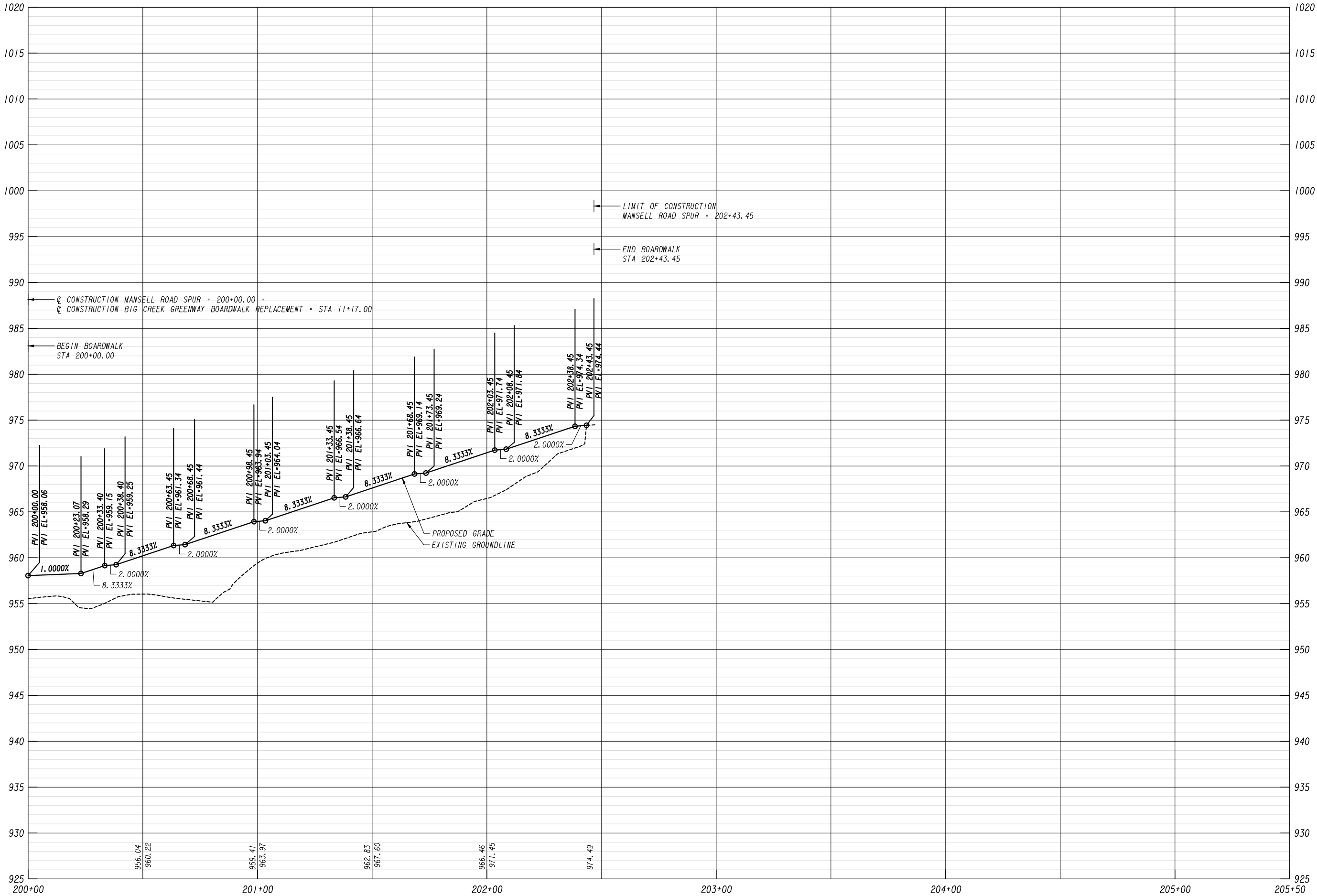
FINAL PLANS
AUGUST 26th, 2022

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No.	Date	Revision

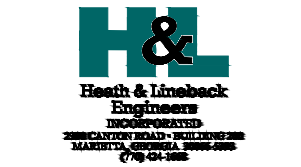
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CS201

**TRAIL PROFILE -
MAINLINE**
SCALE:
HORIZONTAL: 1" = 20'
VERTICAL: 1" = 5'

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CITY OF ALPHARETTA
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1790 HEMBREE ROAD
ALPHARETTA, GA 30009



CIVIL DESIGN PLANS
FOR THE
BIG CREEK GREENWAY
BOARDWALK
REPLACEMENT

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AUGUST 26th, 2022

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No.	Date	Revision

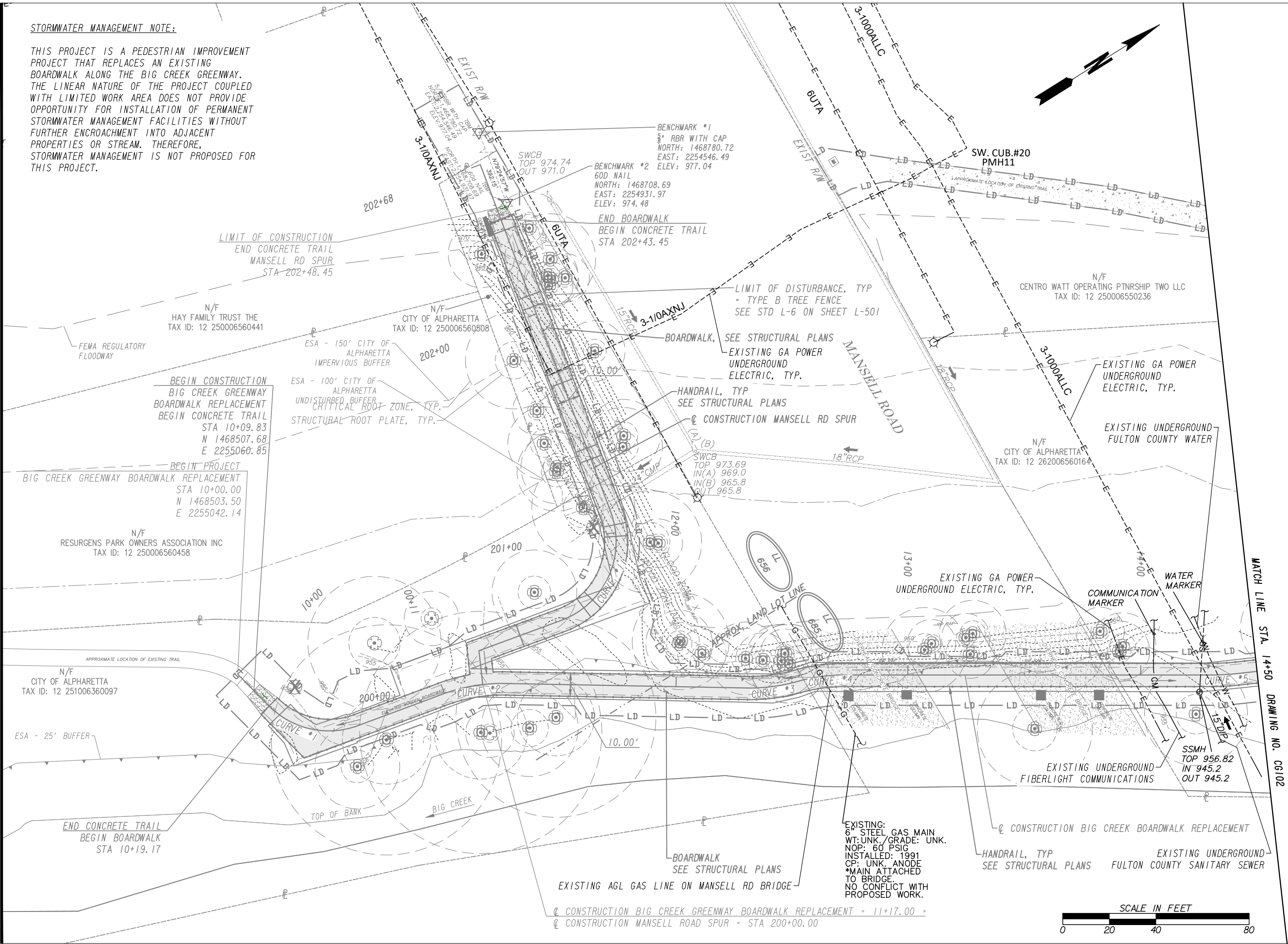
SHEET NO.
CS301

TRAIL PROFILE -
SPUR
SCALE:
HORIZONTAL: 1" = 20'
VERTICAL: 1" = 5'

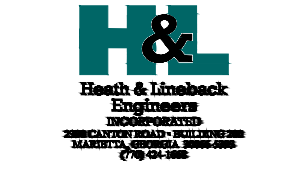
Level II Certification # 0000064868	
Designed by:	PFJ
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Checked by:	WWD
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STORMWATER MANAGEMENT NOTE:

THIS PROJECT IS A PEDESTRIAN IMPROVEMENT PROJECT THAT REPLACES AN EXISTING BOARDWALK ALONG THE BIG CREEK GREENWAY. THE LINEAR NATURE OF THE PROJECT COUPLED WITH LIMITED WORK AREA DOES NOT PROVIDE OPPORTUNITY FOR INSTALLATION OF PERMANENT STORMWATER MANAGEMENT FACILITIES WITHOUT FURTHER ENCROACHMENT INTO ADJACENT PROPERTIES OR STREAM. THEREFORE, STORMWATER MANAGEMENT IS NOT PROPOSED FOR THIS PROJECT.



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CIVIL DESIGN PLANS
FOR THE
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REPLACEMENT

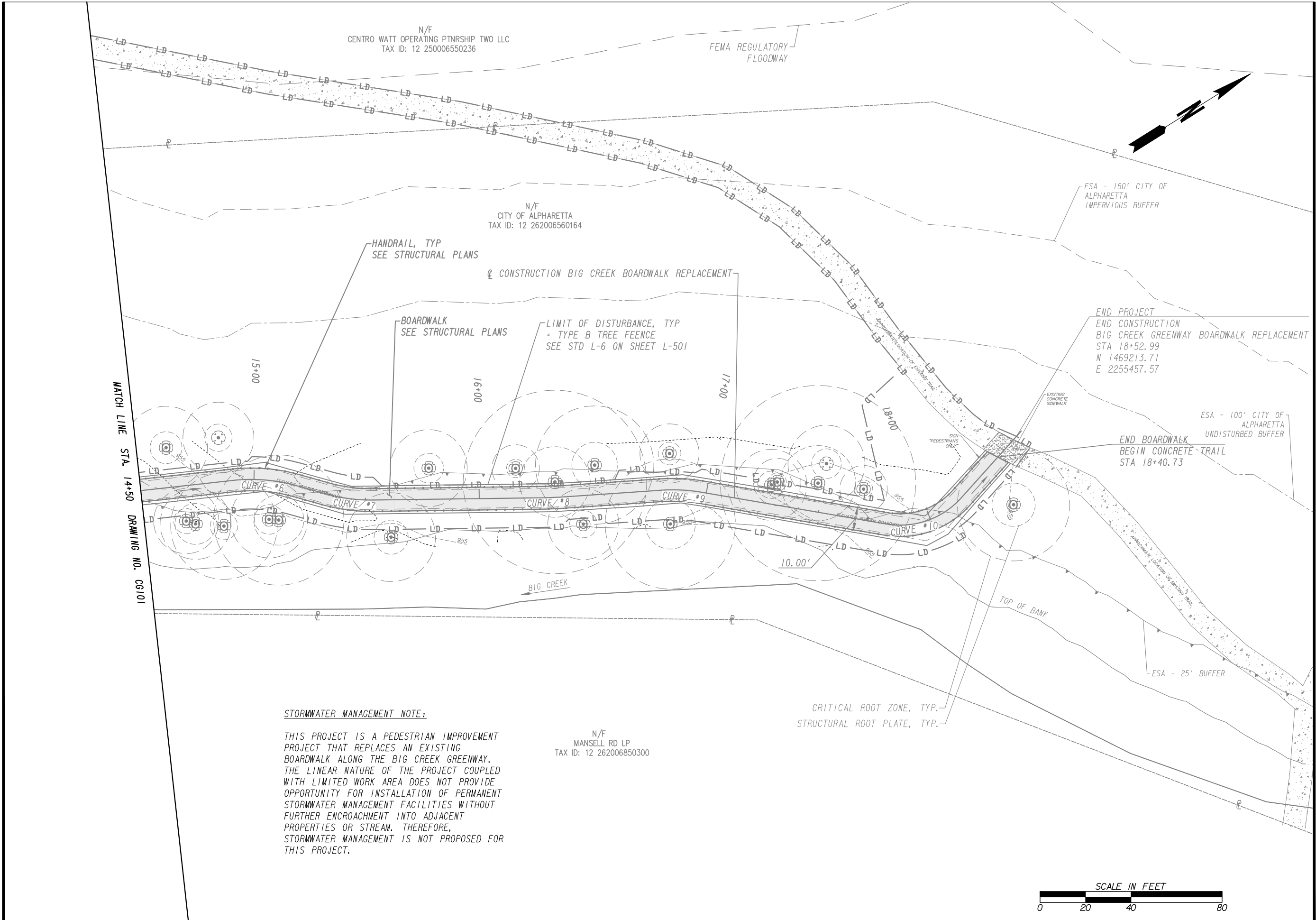
FINAL PLANS
AUGUST 26th, 2022

REVISION		
No.	Date	Revision

SHEET NO.
CG101

**GRADING AND
UTILITY PLAN**

Level II Certification # 0000064868	
Designed by:	PFJ
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File Name:	CG101.dwg



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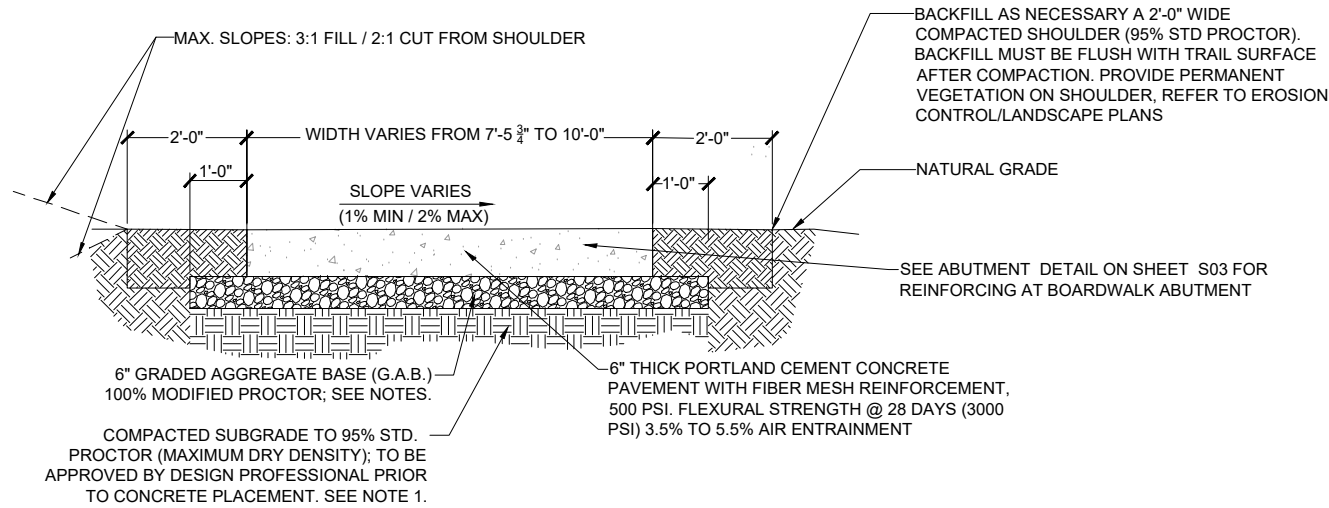
REVISION		
No.	Date	Revision

SHEET NO.

C-501

SITE DETAILS

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File Name:	C-501.dwg

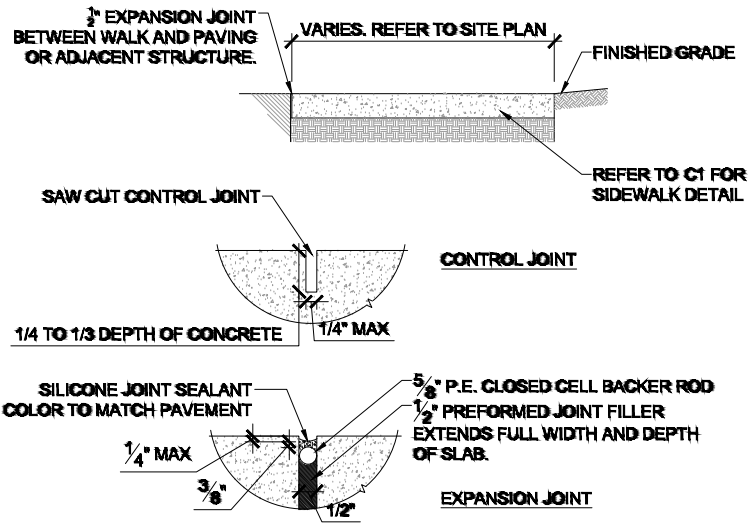


NOTES:

1. THE CONTRACTOR SHALL ENSURE THAT THE TRAIL SECTION DOES NOT EXCEED THE 2% MAXIMUM CROSS-SLOPE CRITERIA. IF EXISTING GRADES IN THE FIELD DICTATE A STEEPER CROSS-SLOPE, THEN THE LOWER SIDE OF TRAIL SECTION SHALL MATCH EXISTING GRADE, AND THE COMPACTED SUBGRADE SHOULDERS SHALL BE TRANSITIONED (3:1 MAX.) TO MAINTAIN THE 2% MAX. CROSS-SLOPE REQUIREMENT ACROSS TRAIL SECTION.
2. CONCRETE TRAIL TO HAVE SAW-CUT CONTROL JOINTS IN SQUARES EQUAL TO TRAIL WIDTH, BUT NOT TO EXCEED 12' SPACING BETWEEN JOINTS, OR AS DIRECTED.
3. PLACE EXPANSION JOINTS ALONG THE CONCRETE TRAIL AT REGULAR INTERVALS NOT MORE THAN 48' APART AS WELL AS BETWEEN ALL RIGID FIXED OBJECTS AND THE NEW CONCRETE TRAIL.

C1 CONCRETE TRAIL

SCALE: N.T.S.



CONTROL JOINT

NOTES:

1. CONTROL JOINTS SHALL BE CUT AT A FREQUENCY OF 12' UNLESS OTHERWISE SHOWN ON PLANS. SUBSTITUTE CONSTRUCTION JOINT AT CONTROL JOINT LOCATION WHERE REQUIRED
2. ALL SAWCUT JOINTS TO MAINTAIN EQUAL WIDTH FOR FULL EXTENT OF JOINT VARYING WIDTHS WILL BE REJECTED
3. ANY WALK SECTION REJECTED WILL REQUIRE REPLACEMENT FROM EXPANSION JOINT TO EXPANSION JOINT.
4. WALKS WITH WIDTHS SMALLER THAN 12' SHALL HAVE CONTROL JOINTS SPACED EQUAL TO THE WIDTH OF WALKWAY.

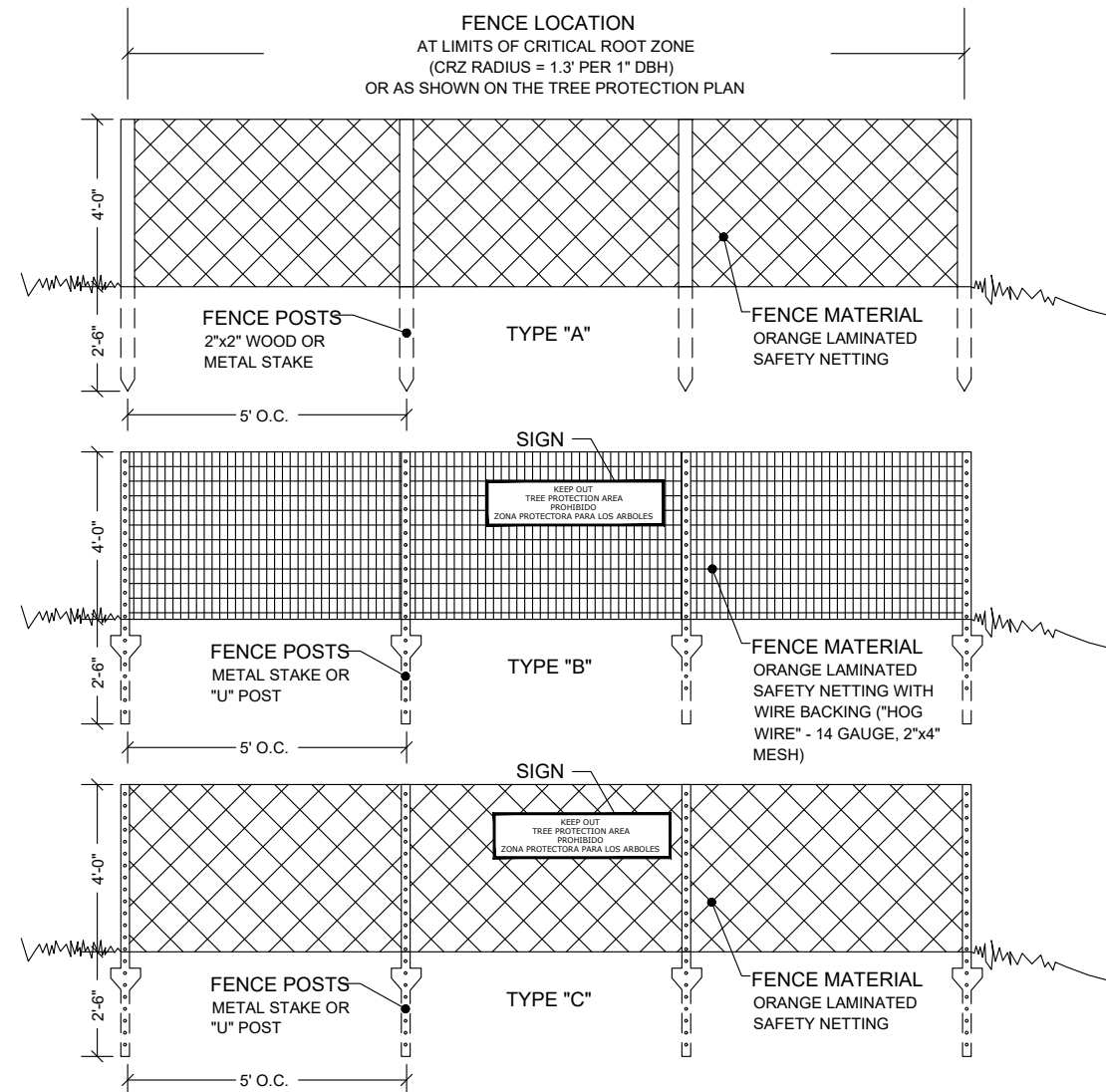
EXPANSION JOINT

NOTES:

1. LOCATE EXPANSION JOINTS EVERY 48' MAX. AND AT ALL SIDEWALK JUNCTIONS WITH CURBS, STRUCTURES, AND OTHER SIDEWALKS UNLESS OTHERWISE INDICATED BY LAYOUT

A3 CONCRETE JOINTS

SCALE: N.T.S.



NOTES:

- ALL TREE PROTECTION DEVICES ARE TO BE INSTALLED PRIOR TO THE START OF LAND DISTURBANCE AND MAINTAINED UNTIL FINAL LANDSCAPING IS INSTALLED. NO PARKING, STORAGE OR OTHER CONSTRUCTION SITE ACTIVITIES ARE TO OCCUR WITHIN THE TREE PROTECTION AREA.
- PROVIDE 4" DEEP WOOD CHIP MULCH OVER ANY UNPROTECTED ROOT ZONE.
- MAKE CLEAN CUTS ON ROOTS EXPOSED BY GRADING AND BACKFILL IMMEDIATELY.
- INSTALLATION SHALL INVOLVE NO TRENCHING.
- SIGNS TO BE PLACED AT 50' INTERVALS ALONG FENCING. SIGNS TO BE A MINIMUM OF 8 1/2" X 11". SIGNS TO READ:

KEEP OUT
TREE PROTECTION AREA
PROHIBIDO
ZONA PROTECTORA PARA LOS ARBOLES

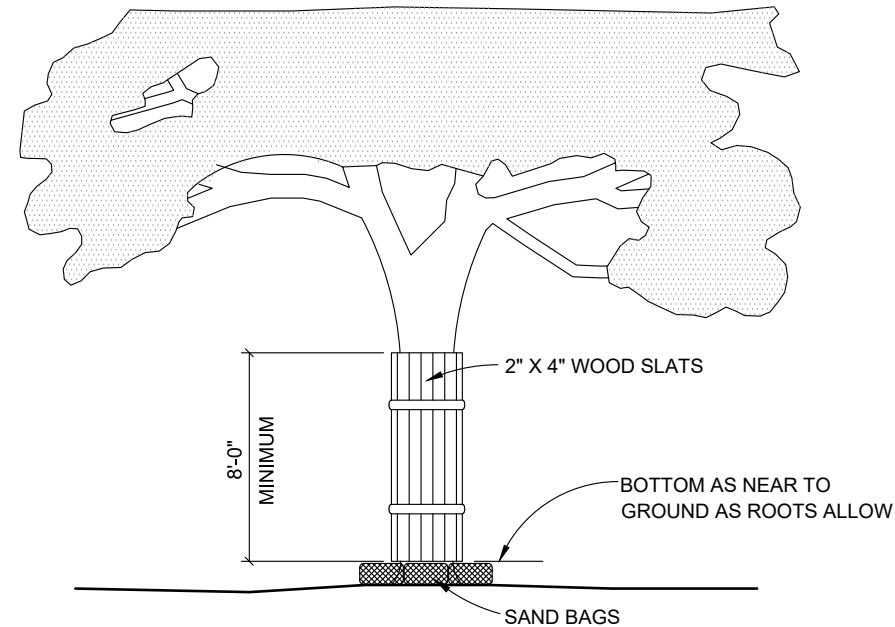


BY	REVISION	DATE

TREE PROTECTION / L.O.D.
FENCING

08/01/2015

STD. L-6



NOTES:

- WHERE ANY EXCEPTIONS RESULT IN A FENCE BEING CLOSER THAN TEN FEET (10'-0") TO A TREE TRUNK; PROTECT THE TRUNK WITH STRAPPED-ON-PLANKING TO A HEIGHT OF EIGHT FEET (8'-0"), OR TO THE LIMITS OF LOWER BRANCHING, IN ADDITION TO THE REQUIRED ORANGE LAMINATE FENCING.
- ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SOIL. BACKFILL ROOT AREAS WITH GOOD QUALITY TOP SOIL AS SOON AS POSSIBLE. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN TWO (2) DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE, AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
- PRIOR TO EXCAVATION OR GRADE CUTTING WITHIN TREE CRZ, MAKE A CLEAN CUT BETWEEN THE DISTURBED AND UNDISTURBED ROOT ZONES WITH A PRUNING SAW, DITCH WITCH OR SIMILAR EQUIPMENT, TO MINIMIZE DAMAGE TO REMAINING ROOTS.
- TREES MOST HEAVILY IMPACTED BY CONSTRUCTION ACTIVITIES SHALL BE WATERED DEEPLY ONCE A WEEK DURING PERIODS OF HOT, DRY WEATHER.
- SAND BAGS OR HAY BALES SHALL BE PLACED ON THE ROOT FLARES AND ANY EXPOSED STRUCTURAL ROOTS.
- ALL EXPOSED, RIPPED, AND TORN ROOTS GREATER THAN ONE-HALF INCH (1/2") SHALL BE CLEAN CUT.
- NO LANDSCAPE TOPSOIL DRESSING GREATER THE FOUR INCHES (4") SHALL BE PERMITTED WITHIN THE CRZ OF A TREE. NO SOIL IS PERMITTED ON THE ROOT FLARE OF ANY TREE.
- PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC AND EQUIPMENT SHALL TAKE PLACE BEFORE CONSTRUCTION BEGINS.
- COST OF TREE PROTECTION - WOOD SLATS SHALL BE INCLUDED IN THE COST FOR GRADING COMPLETE.



BY	REVISION	DATE

TREE PROTECTION -
WOOD SLATS

08/01/2015

STD. L-9

REVISION

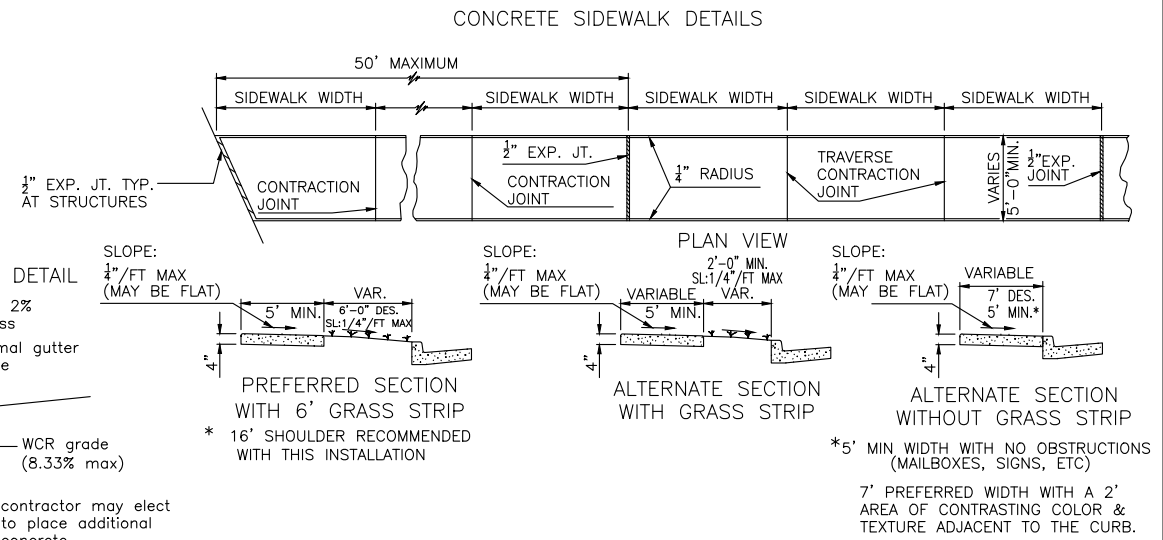
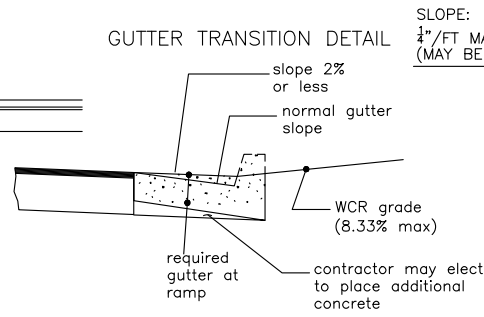
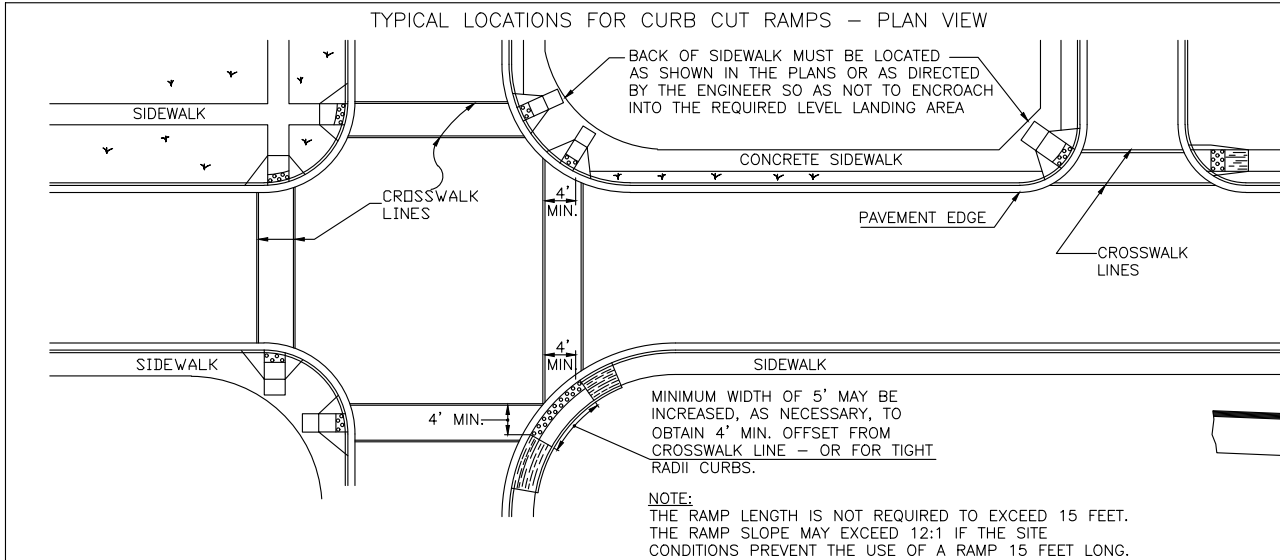
No.	Date	Revision

SHEET NO.

C-502

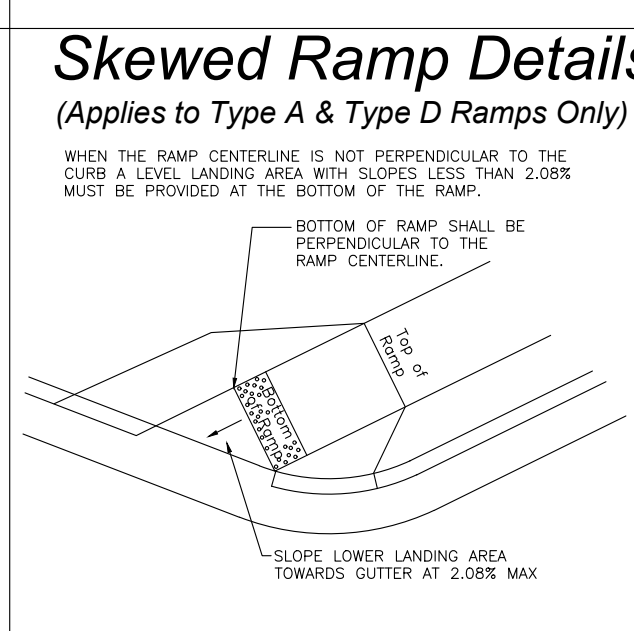
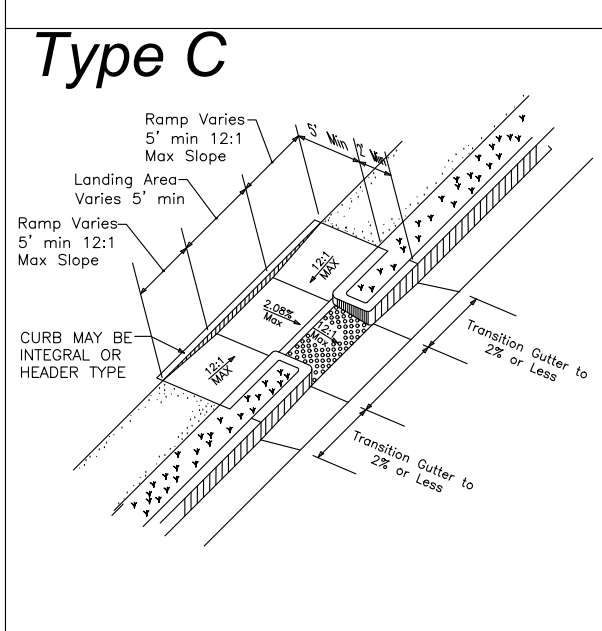
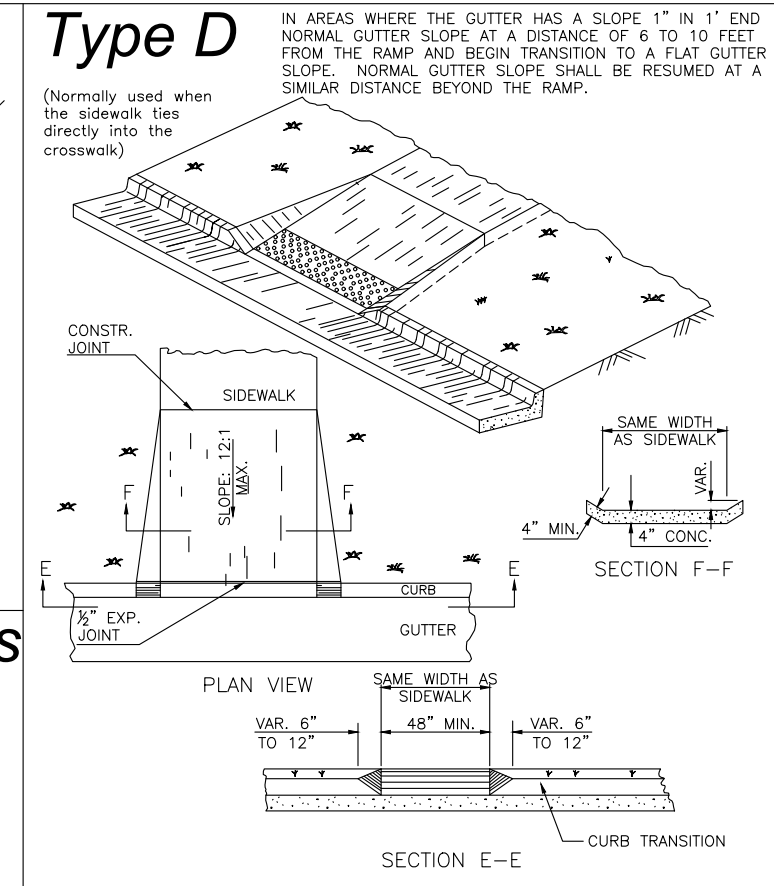
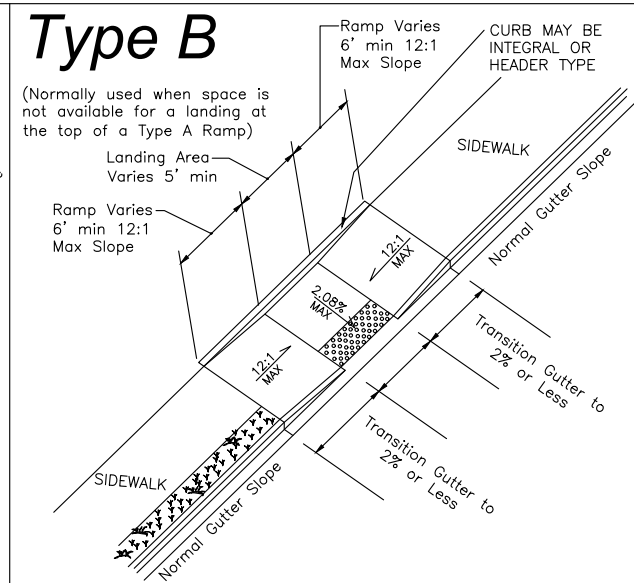
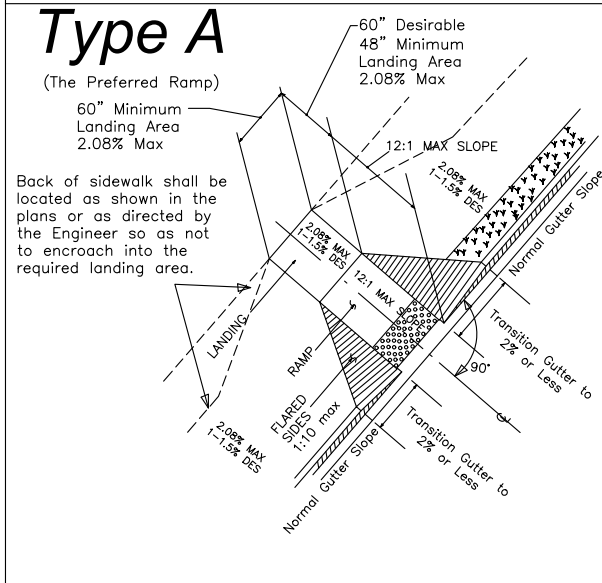
SITE DETAILS

Designed by:	PFJ
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File Name:	C-501.dwg



- NOTES FOR CONCRETE SIDEWALKS:
1. CONCRETE SHALL BE 3000 P.S.I. OR STRONGER.
 2. CONCRETE SHALL BE PLACED 4" THICK AND FINISHED WITH TAMPS, WOOD FLOATS AND STIFF-BRISTLE BROOMS.
 3. TRANSVERSE CONTRACTION JOINTS SHALL BE PLACED INTERVALS EQUAL TO THE WIDTH OF THE SIDEWALK. ALL EDGES TO BE ROUNDED TO 1/4" RADIUS.
 4. 1/2" EXPANSION JOINTS SHALL BE PLACED WHERE SIDEWALKS TIE INTO A STRUCTURE OR TERMINATE AT CURB, RAMPS OR DRIVEWAYS, POUR BREAKS AND AT 50' INTERVALS.
 5. ALL SIDEWALKS AND CURB CUT RAMPS WITHIN PUBLIC RIGHTS-OF-WAY MUST BE INSPECTED PRIOR TO ISSUANCE OF THE CERTIFICATE OF OCCUPANCY. CONTACT CITY INSPECTOR A MINIMUM OF 72 HOURS IN ADVANCE TO SCHEDULE AN INSPECTION AT 678-297-6200.

- NOTES FOR CURB CUT RAMPS:
1. CURB CUT RAMPS WILL BE LOCATED AS FOLLOWS UNLESS PLANS SPECIFY OTHERWISE.
 - a) AT ALL PEDESTRIAN CROSSWALKS WHERE CURB IS CONSTRUCTED OR REPLACED.
 - b) WHERE THE SIDEWALK, CONCRETE OR UNPAVED, IS INTERRUPTED BY THE CURB AT TURNOUTS OR AT INTERSECTIONS.
 - c) AT OTHER LOCATIONS SUCH AS HOSPITALS, NURSING HOMES, REST AREAS, ETC., WHERE THE CURB WOULD OTHERWISE BE AN OBSTRUCTION TO THE PHYSICALLY DISABLED.
 2. RAMPS WILL BE CONSTRUCTED FROM CONCRETE. SPECIFICATIONS FOR RAMP WILL BE THE SAME AS FOR CONCRETE SIDEWALK. RAMPS SHALL HAVE EITHER A ROUGH OR A TEXTURED FINISH.
 3. DROP INLETS ARE NOT TO BE LOCATED DIRECTLY IN FRONT OF RAMPS. CATCH BASINS SHOULD BE LOCATED AT LEAST 10 FT. FROM RAMPS WHEN FEASIBLE.
 4. WHERE RAMPS ARE LOCATED IN RADII, THE DIMENSIONS SHOWN FOR RAMP WIDTHS AND TAPERS ARE MEASURED PERPENDICULAR TO THE RAMP AND NOT ALONG THE CURVE.
 5. WHERE UTILITY STRUCTURES CONFLICT, WHERE SIDEWALK GEOMETRY VARIES, AT SKEWED INTERSECTIONS, OR IN OTHER SPECIAL CASES, THE RAMP DESIGNS MAY BE MODIFIED BY THE DESIGNER OR ENGINEER, PROVIDED THAT THE WIDTH REMAINS A MINIMUM OF 48 INCHES, AND NO SLOPE ON THE ACCESSIBLE PART OF THE RAMP IS STEEPER THAN 12:1.
 6. WHEN A CURB RAMP IS PLACED ON EXISTING PAVEMENT, THE PAVEMENT SHALL BE REMOVED TO PROVIDE A MINIMUM THICKNESS OF 3 INCHES OF CONCRETE AT ALL LOCATIONS.
 7. ALL CURB CUT RAMPS SHALL INCORPORATE DETECTABLE WARNING SURFACES PER GEORGIA DEPARTMENT OF TRANSPORTATION SPECIAL DETAIL A4.



THE CITY OF ALPHARETTA GEORGIA		
BY	REVISION	DATE

CONCRETE SIDEWALK DETAILS, CURB CUT RAMP DETAILS

08/01/2015

STD. 902

CIVIL DESIGN PLANS FOR THE BIG CREEK GREENWAY BOARDWALK REPLACEMENT

FINAL PLANS
AUGUST 26th, 2022

REVISION		
No.	Date	Revision

SHEET NO.

C-503

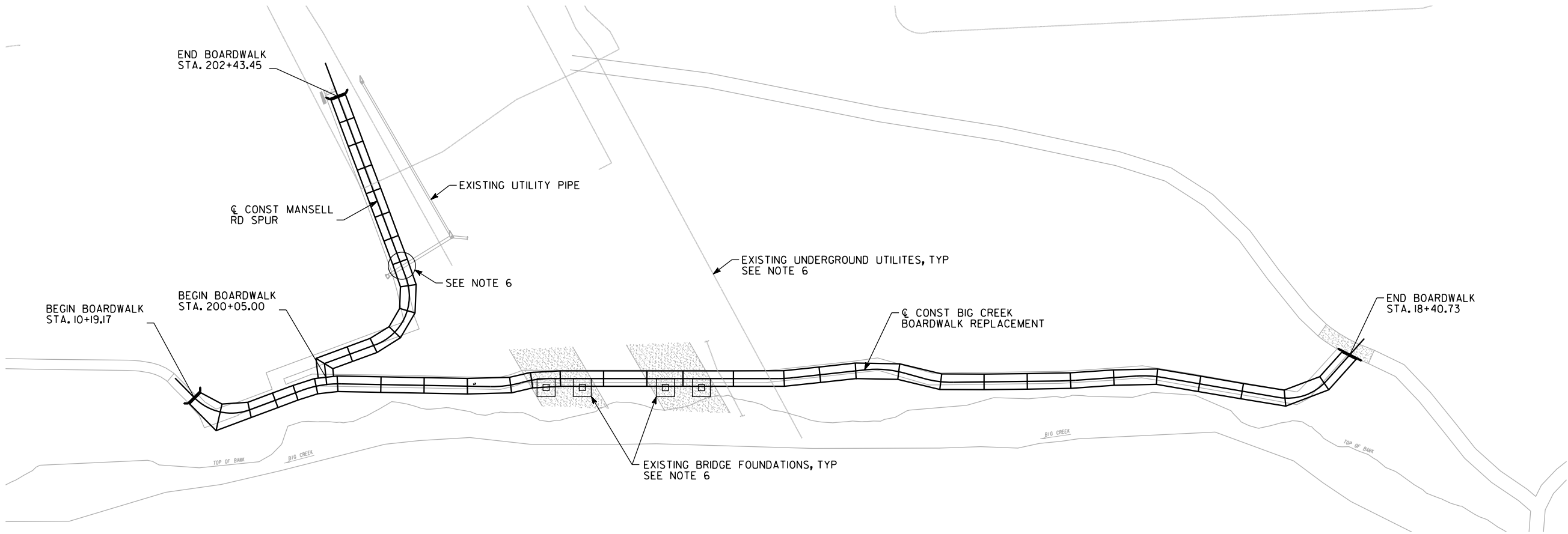
SITE DETAILS

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Checked by:	WWD
File Name:	C-501.dwg

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USER: adanand



GENERAL NOTES:

1. BOARDWALK IS DESIGNED IN ACCORDANCE WITH AASHTO LRFD PEDESTRIAN BRIDGE GUIDE SPECIFICATION, 2009 (WITH 2015 INTERIM REVISIONS).
2. BOARDWALK IS DESIGNED FOR THE FOLLOWING LOADS:
PEDESTRIAN LOADING: 90 PSF
VEHICULAR LOADING: H-5 TRUCK (NO IMPACT)
3. MAINTAIN 2" CLEARANCE ON ALL REINFORCEMENT UNLESS OTHERWISE NOTED.
4. ALL WELDING SHALL BE DONE IN ACCORDANCE WITH AWS D1.1:2015.
5. CHAMFER ALL EXPOSED CONCRETE EDGES 1/2" UNLESS OTHERWISE NOTED.
6. CONTRACTOR SHALL ENSURE THAT THERE ARE NO CONFLICTS WITH EXISTING UTILITIES OR EXISTING BRIDGE FOUNDATIONS WHEN INSTALLING PILES.
7. CONTRACTOR SHALL FIELD VERIFY AND ADJUST ALL DIMENSIONS OF STRUCTURAL STEEL TO ENSURE FIT-UP BEFORE ORDERING MATERIALS.
8. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR THE FORMWORK, STEEL BEAMS AND HANDRAIL FOR REVIEW AND APPROVAL BY THE ENGINEER.

MATERIALS:

1. CONCRETE: CLASS AA $f'_c = 4000$ PSI AS PER GDOT SPECIFICATIONS SECTION 500
2. STEEL:
A. W-BEAMS: ASTM A992 GRADE 50
B. HSS SECTIONS: ASTM A500 GRADE C
C. STEEL PIPE: ASTM A53 GRADE B
D. CHANNEL, ANGLE, BAR & PLATE: ASTM A36
3. FASTENERS:
A. BOLTS: ASTM A307 GRADE A
B. ANCHOR RODS: ASTM F1554 GRADE 36
C. NUTS AND WASHERS: ASTM A563 & F844
4. REINFORCING STEEL: GRADE 60, $f_y = 60$ KSI
5. COATINGS:
A. BOLTS, NUTS, WASHERS: GALVANIZED ASTM A153.
B. STEEL SECTIONS: HOT DIP GALVANIZE ACCORDING TO ASTM A123.
C. CONCRETE DECK: PROVIDE A BROOM FINISH ON THE WALKING SURFACE.
D. HANDRAIL AND BASE PLATE WITH BOLTS SHALL BE POWDER COATED. COORDINATE WITH THE COUNTY FOR THE EXACT COLOR.

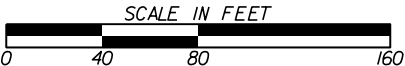
FOUNDATION NOTES:

1. FOUNDATION DESIGN IS BASED ON THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT PREPARED BY ECS SOUTHEAST, LL, REPORT NUMBER 10-11187, DATED JAN 26, 2022.
2. HELICAL PILES SHALL BE DESIGNED FOR A MINIMUM FACTOR OF SAFETY OF 2 BETWEEN ALLOWABLE PILE LOAD AND THE FOLLOWING SERVICE LOADS:

SERVICE AXIAL COMPRESSION LOAD PER PILE = 30 KIPS
SERVICE BRIDGE LONGITUNDINAL AND TRANSVERSE LOAD PER BENT = 2 KIPS
3. LOAD TEST REQUIREMENTS: A MINIMUM OF TWO LOAD TESTS SHALL BE CONDUCTED BY THE CONTRACTOR PRIOR TO INSTALLATION OF PRODUCTION PILES. PILES SHALL BE TESTED AS PER HELICAL PILE SPECIFICATION.
4. PILES SHALL BE DRIVEN A MINIMUM OF 7'-0" INTO THE GROUND.
5. ALL HELICAL PILE HARDWARE SHALL BE CANTSINK, AB CHANCE OR APPROVED EQUAL.
6. PILE SHAFT CAPACITY CALCULATIONS SHALL INCLUDE CONSIDERATION FOR WEAK SOIL LAYERS, IF ANY, AND LATERAL STABILITY REQUIREMENTS FOR THE SERVICE LATERAL LOADS.
7. HELICAL PILES AND PILE CAP SHALL BE HOT DIP GALVANIZED ACCORDING TO ASTM A123.
8. CONTRACTOR SHALL SUBMIT HELICAL PILE DESIGN AND HELICAL PILE CONTRACTOR QUALIFICATIONS TO ENGINEER FOR APPROVAL. DESIGN SHALL BE SEALED BY AN ENGINEER, REGISTERED IN THE STATE OF GEORGIA.



4/1/2022



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STRUCTURAL DESIGN
PLANS FOR THE
BIG CREEK GREENWAY
BOARDWALK
REPLACEMENT

100% PLANS

REVISION

No.	Date	Revision

SHEET NO.

S01

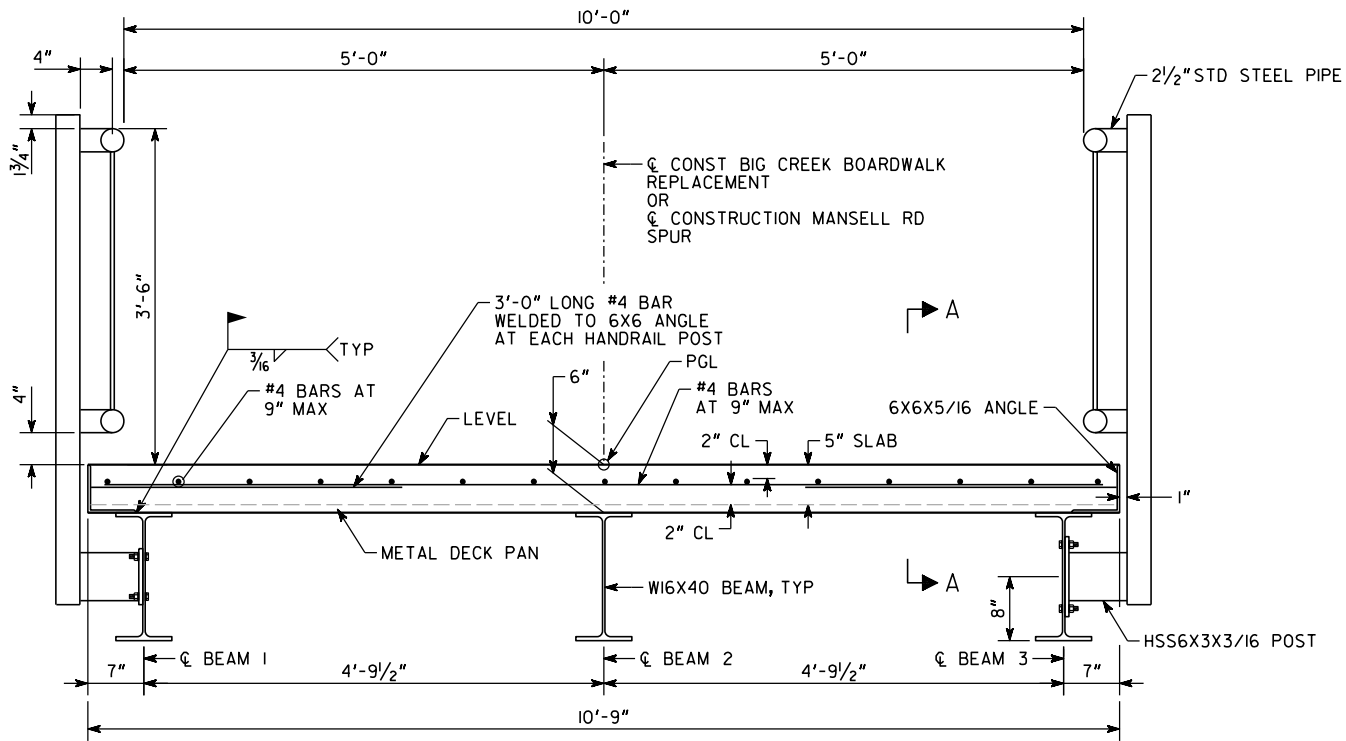
OVERVIEW &
GENERAL NOTES

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Checked by:	BRW/BKA
Date:	APRIL 2022

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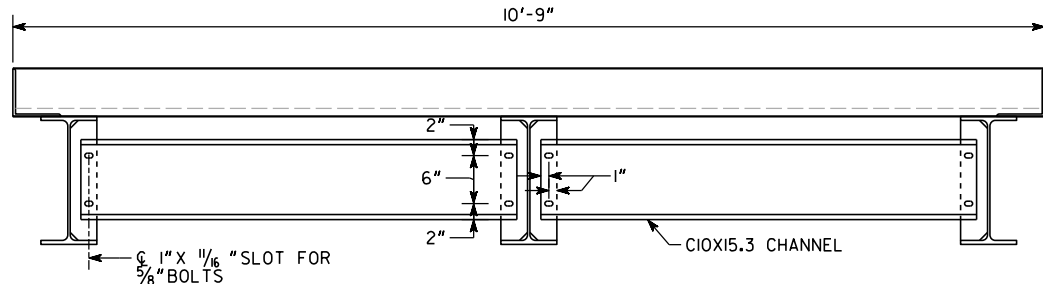
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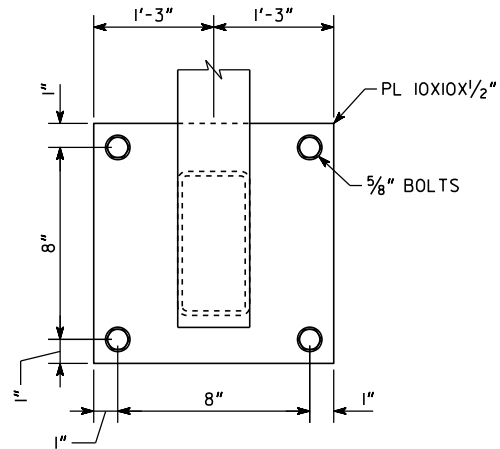
TYPICAL SECTION

SPANS 1 & 2 HAVE A LARGER WIDTH AND HAVE 4 BEAMS.
SEE DECK AND FRAMING PLAN SHEETS FOR DETAILS.



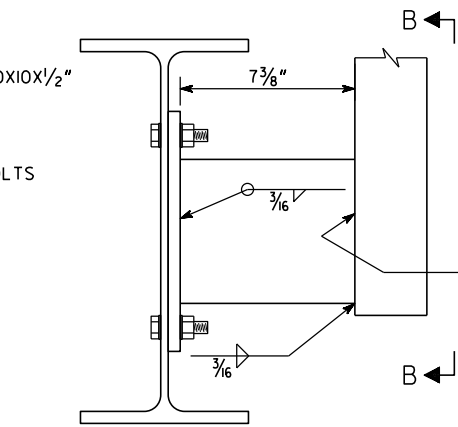
SECTION THROUGH DIAPHRAGM

SLAB REINFORCEMENT NOT SHOWN



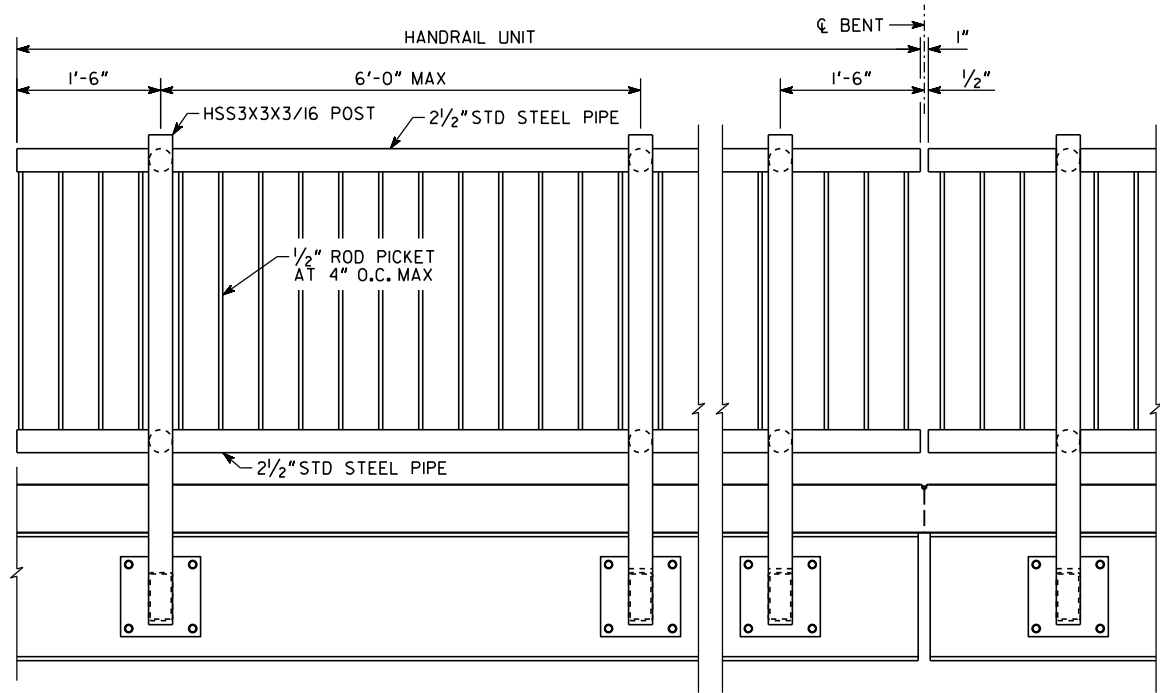
SECTION B-B

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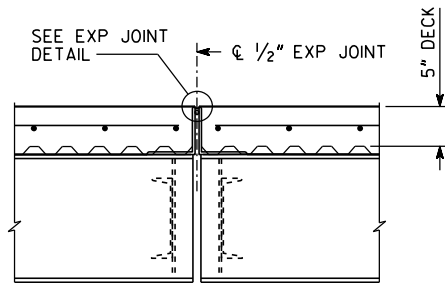


HANDRAIL CONNECTION DETAIL

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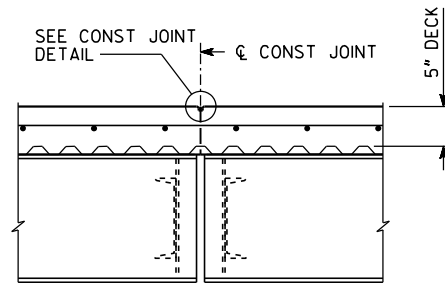


SECTION A-A



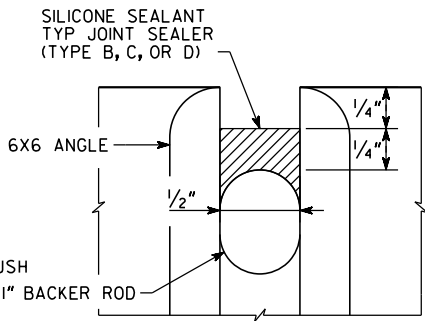
SECTION THRU EXPANSION JOINT AT BENT

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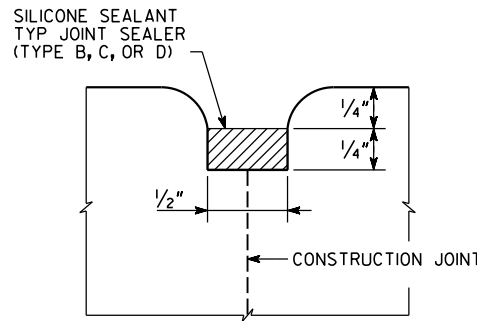
SECTION THRU CONSTRUCTION JOINT AT BENT

NO SCALE



EXPANSION JOINT DETAIL

NO SCALE



CONSTRUCTION JOINT DETAIL

NO SCALE



SUPERSTRUCTURE NOTES:

- ALL BOLTS FOR THE DIAPHRAGMS AND HANDRAILS SHALL BE FULLY TENSIONED.
- DIAPHRAGMS SHALL BE BOLTED UP PRIOR TO DECK BEING POURED.
- ENDS OF BEAMS SHALL BE VERTICAL
- ADJUST DECK FORMS TO ACCOUNT FOR DEAD LOAD DEFLECTION SHOWN ON SHEET S19.



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BOARDWALK
REPLACEMENT

100% PLANS

REVISION

No.	Date	Revision

SHEET NO.

S02

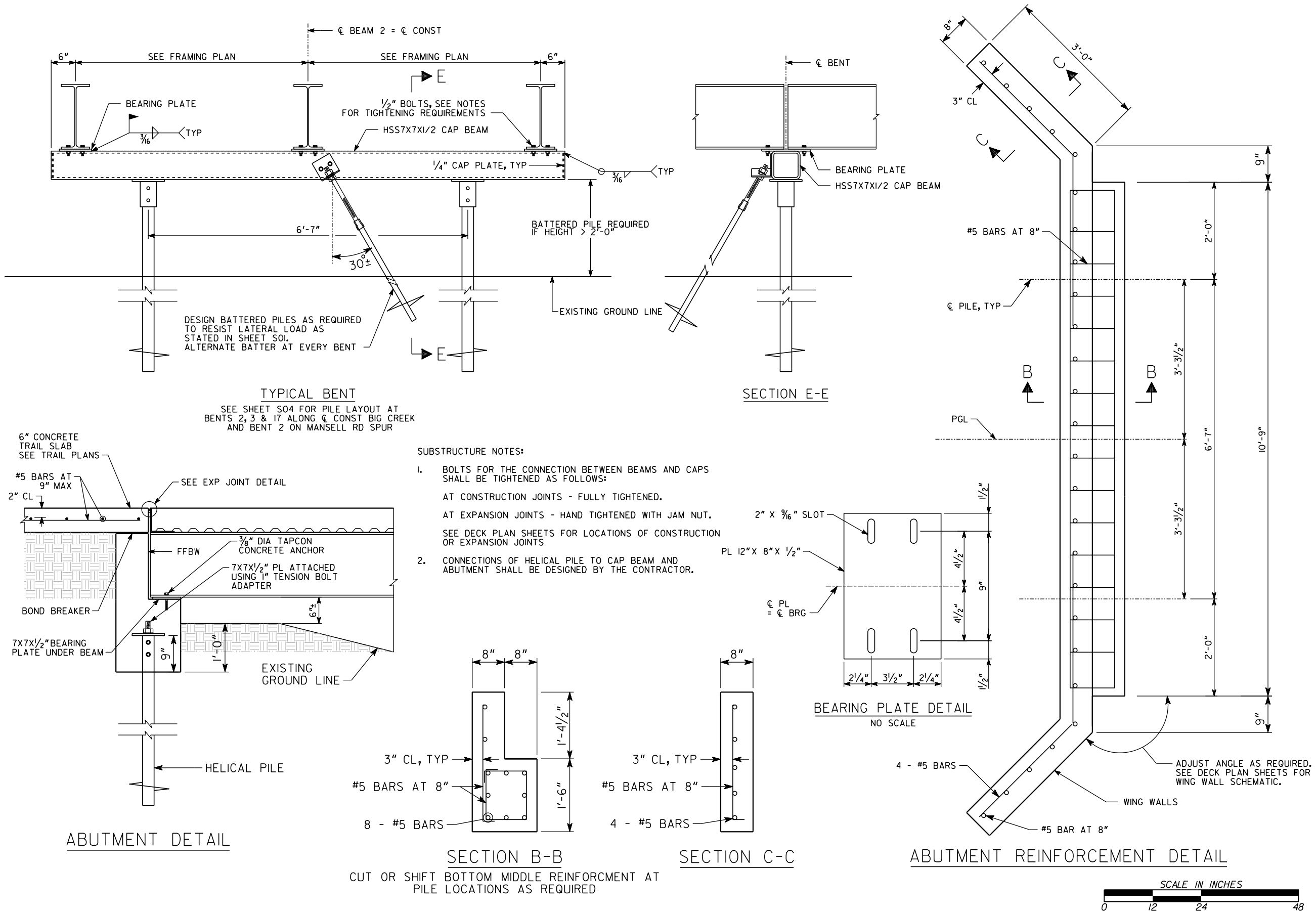
SUPERSTRUCTURE
DETAILS

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REVISION

No.	Date	Revision

SHEET NO.

S03

SUBSTRUCTURE
DETAILS

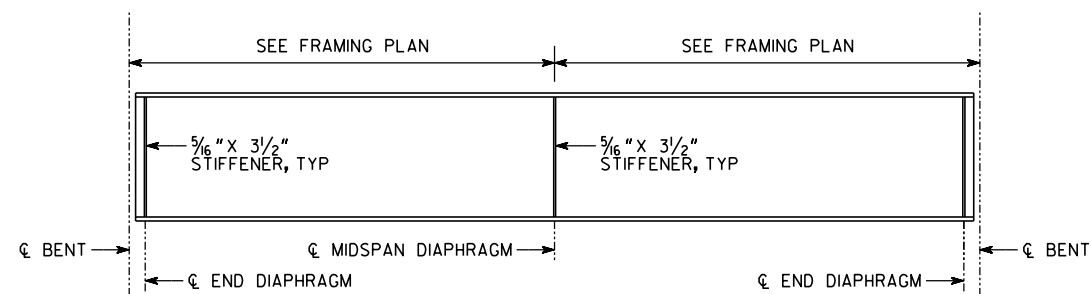
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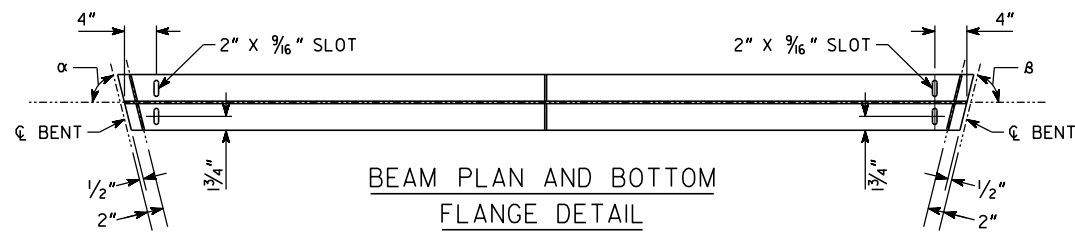
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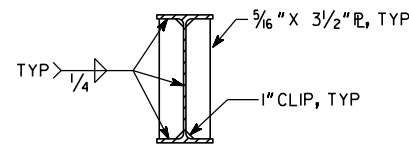


TYPICAL BEAM ELEVATION



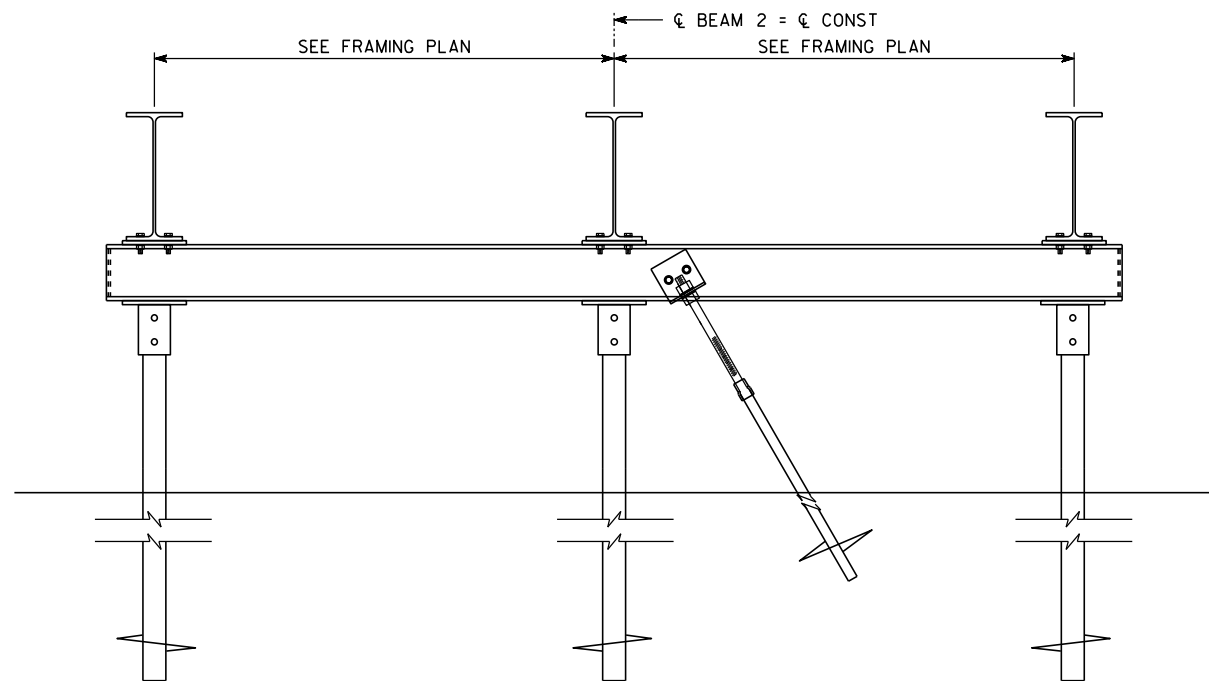
BEAM PLAN AND BOTTOM FLANGE DETAIL

SEE SHEET 19 FOR α AND β VALUES



BEAM STIFFENER DETAILS

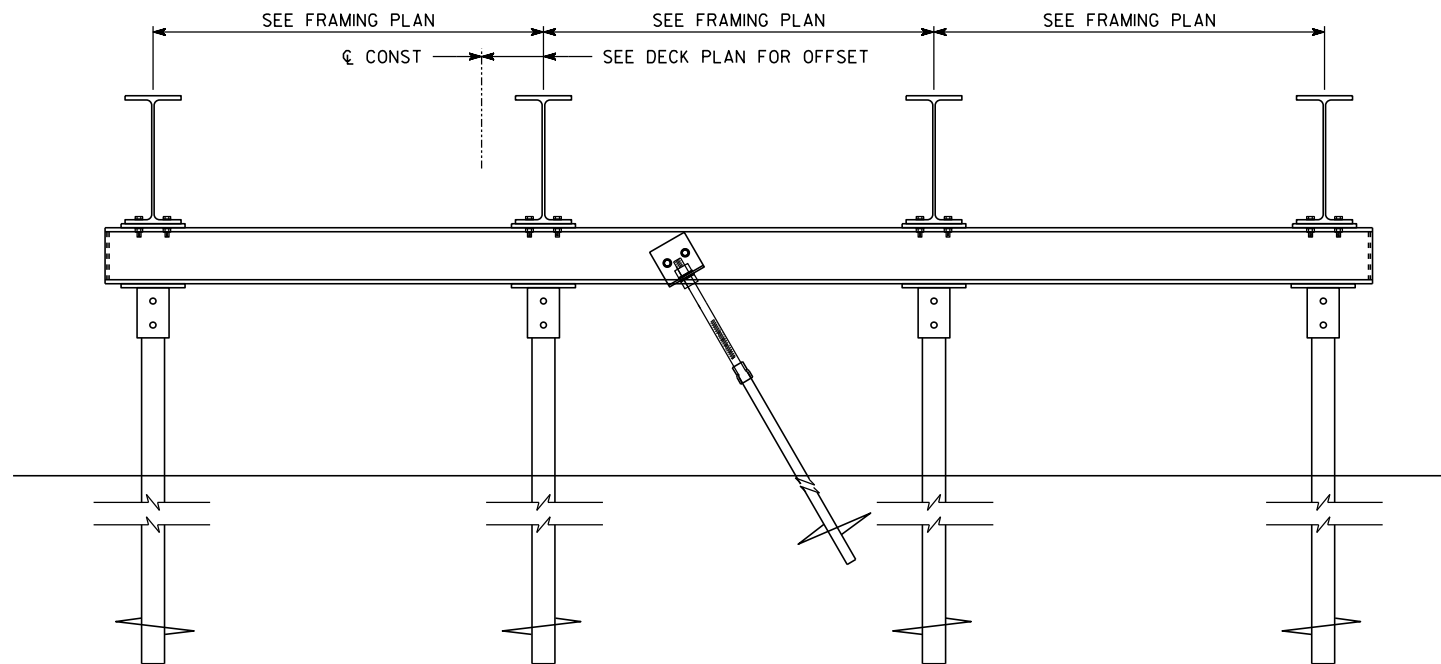
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PILE LAYOUT FOR BENT 17 ON CL CONST BIG CREEK

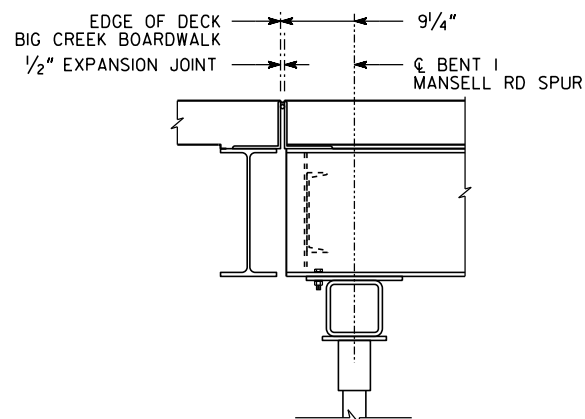
AND BENT 2 ON MANSELL RD SPUR

FOR DETAILS SEE TYPICAL BENT DETAIL ON SHEET S03



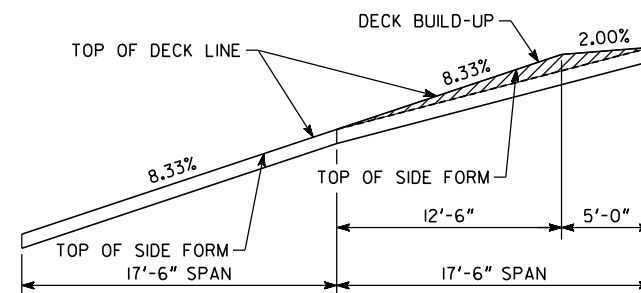
PILE LAYOUT FOR BENT 2 & 3 ON CL CONST BIG CREEK

FOR DETAILS SEE TYPICAL BENT DETAIL ON SHEET S03



FRAMING AT CONNECTION OF MANSELL

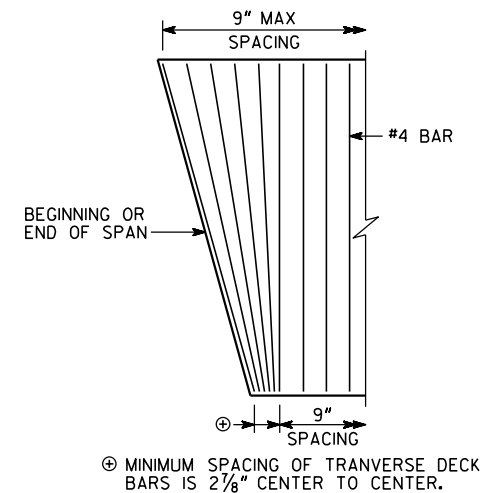
RD SPUR TO BIG CREEK TRAIL



DECK BUILD-UP DETAIL ON MANSELL RD SPUR

EXTEND THE SIDE FORM AS SHOWN TO ACCOMODATE THE DECK BUILD ON SPANS WITH VARYING GRADE

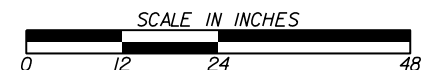
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TRANSVERSE DECK REINFORCEMENT

CORNER DETAIL

NO SCALE



REVISION

No.	Date	Revision

SHEET NO.

S04

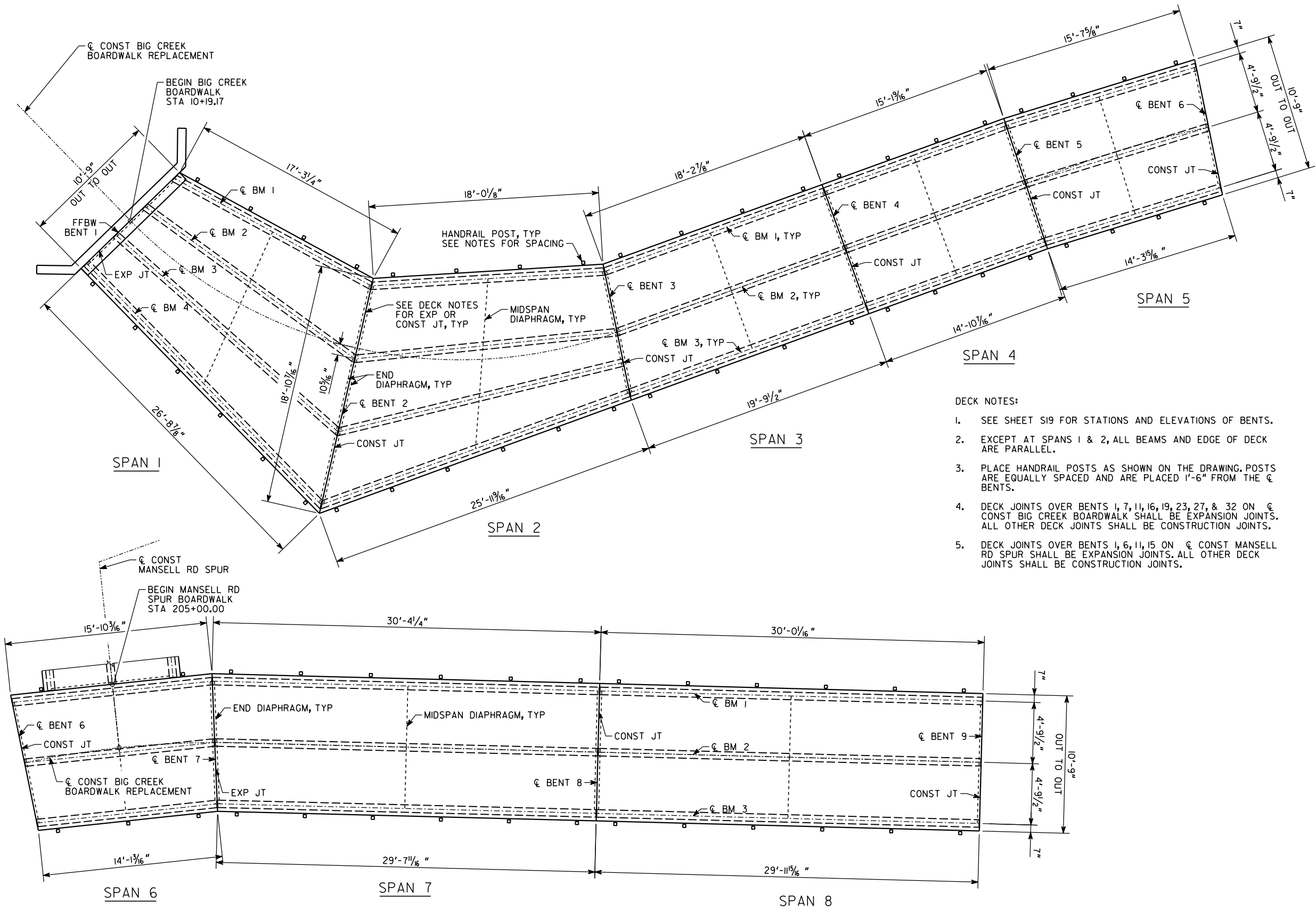
MISCELLANEOUS
DETAILS

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DECK NOTES:

1. SEE SHEET SI9 FOR STATIONS AND ELEVATIONS OF BENTS.
2. EXCEPT AT SPANS 1 & 2, ALL BEAMS AND EDGE OF DECK ARE PARALLEL.
3. PLACE HANDRAIL POSTS AS SHOWN ON THE DRAWING. POSTS ARE EQUALLY SPACED AND ARE PLACED 1'-6" FROM THE ϕ BENTS.
4. DECK JOINTS OVER BENTS 1, 7, 11, 16, 19, 23, 27, & 32 ON ϕ CONST BIG CREEK BOARDWALK SHALL BE EXPANSION JOINTS. ALL OTHER DECK JOINTS SHALL BE CONSTRUCTION JOINTS.
5. DECK JOINTS OVER BENTS 1, 6, 11, 15 ON ϕ CONST MANSELL RD SPUR SHALL BE EXPANSION JOINTS. ALL OTHER DECK JOINTS SHALL BE CONSTRUCTION JOINTS.



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STRUCTURAL DESIGN
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BOARDWALK
REPLACEMENT

100% PLANS

REVISION

No.	Date	Revision

SHEET NO.

S05

DECK PLAN

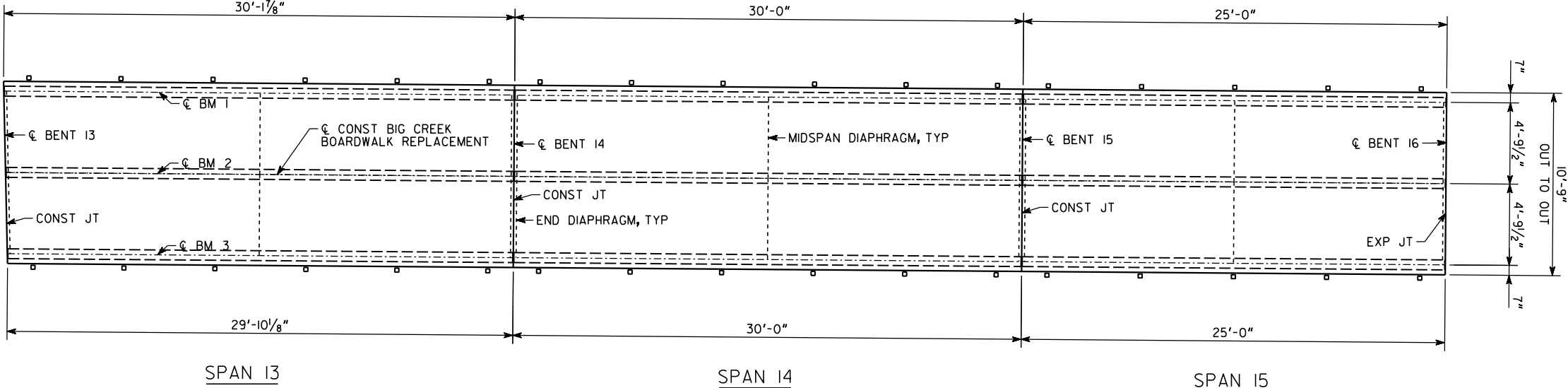
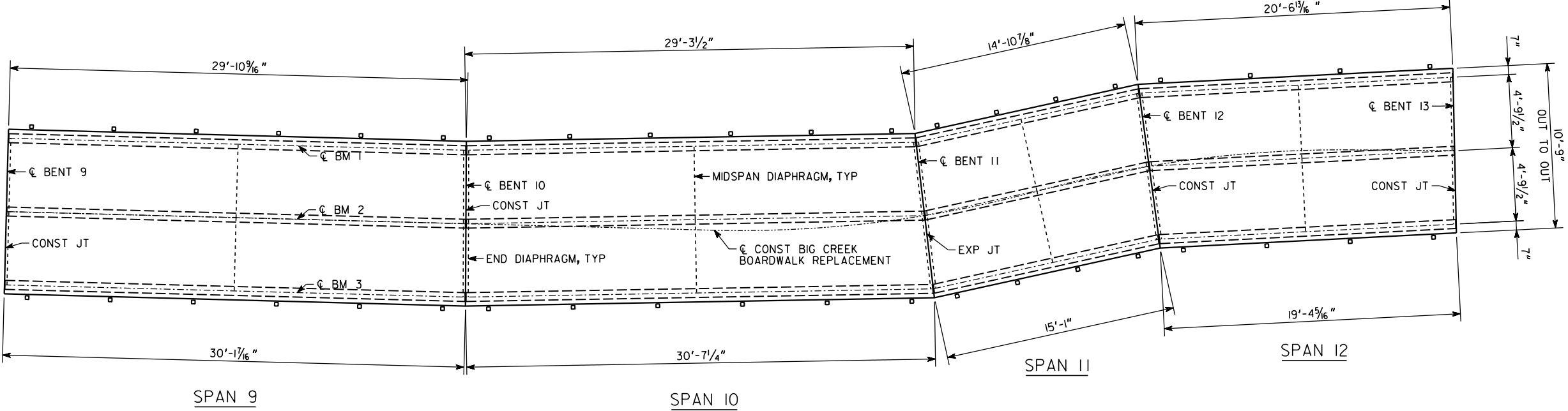
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STRUCTURAL DESIGN
PLANS FOR THE
BIG CREEK GREENWAY
BOARDWALK
REPLACEMENT

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REVISION

No.	Date	Revision

SHEET NO.

S06

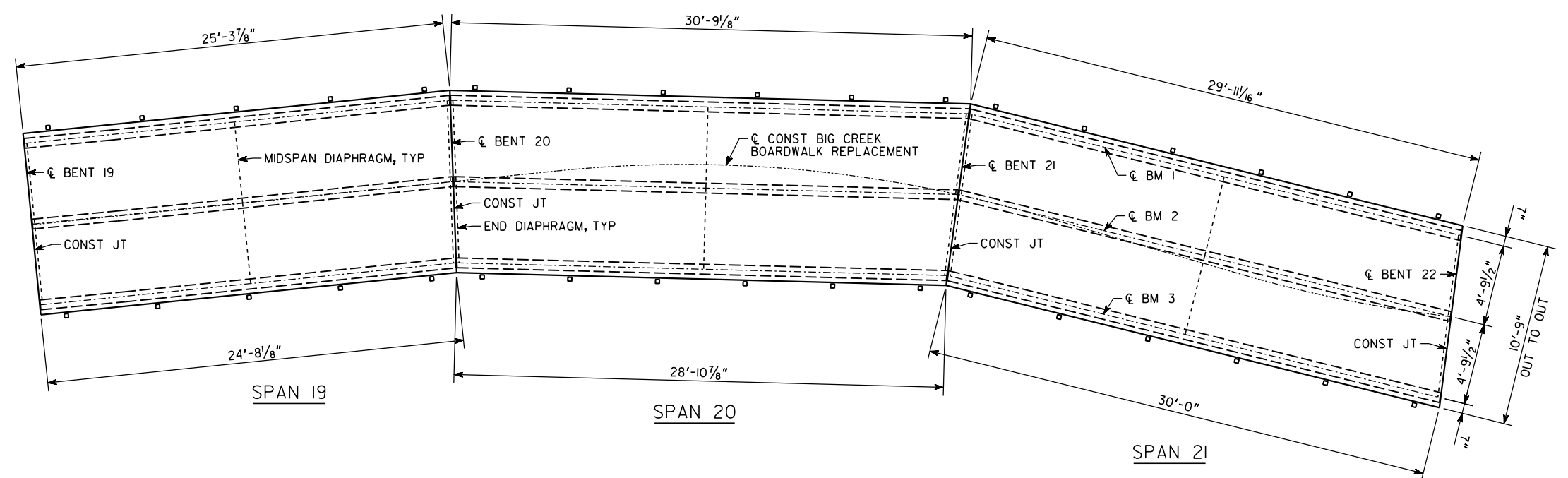
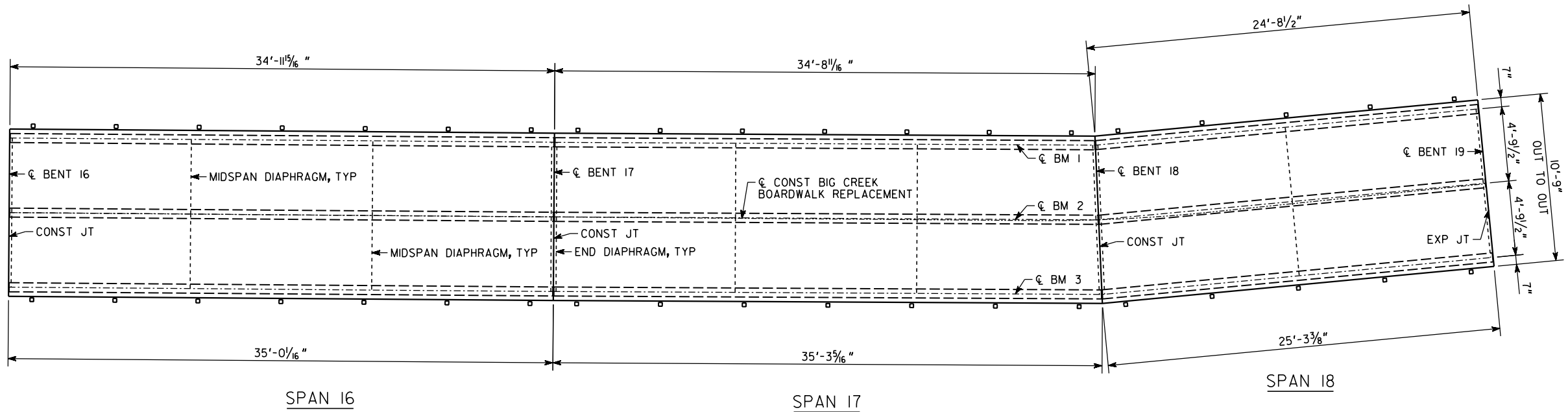
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BIG CREEK GREENWAY
BOARDWALK
REPLACEMENT

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REVISION

No.	Date	Revision

SHEET NO.

S07

DECK PLAN

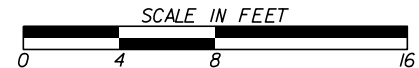
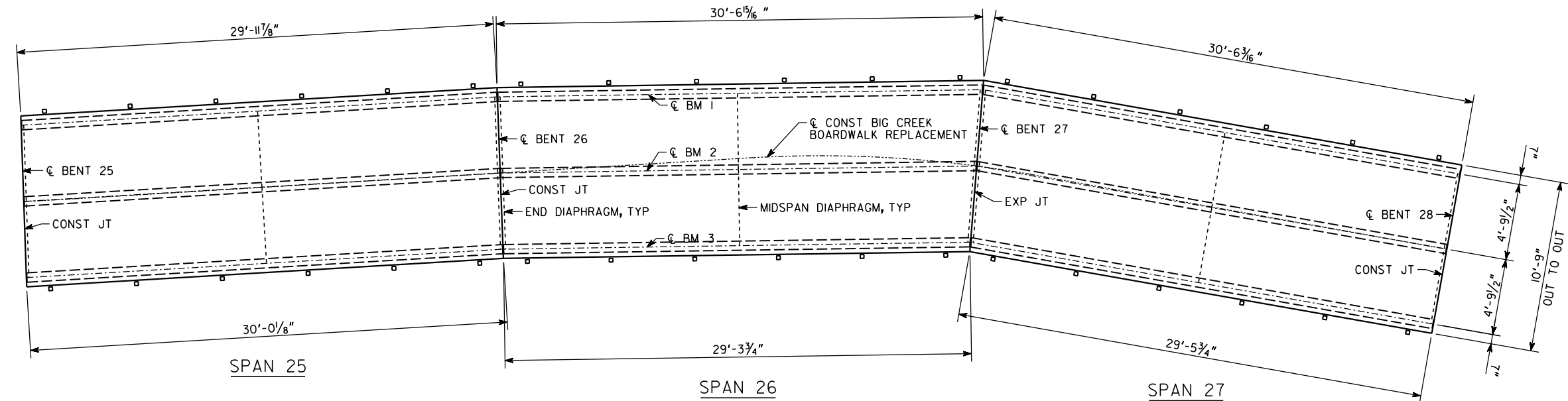
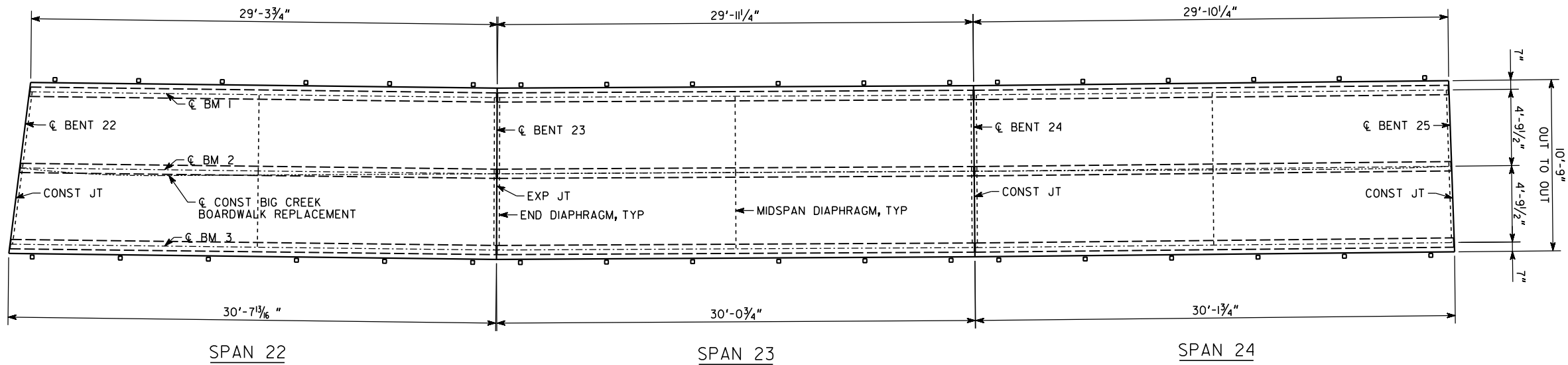
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STRUCTURAL DESIGN
PLANS FOR THE
BIG CREEK GREENWAY
BOARDWALK
REPLACEMENT

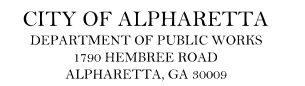
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REVISION		
No.	Date	Revision

SHEET NO.
S08

DECK PLAN

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REVISION

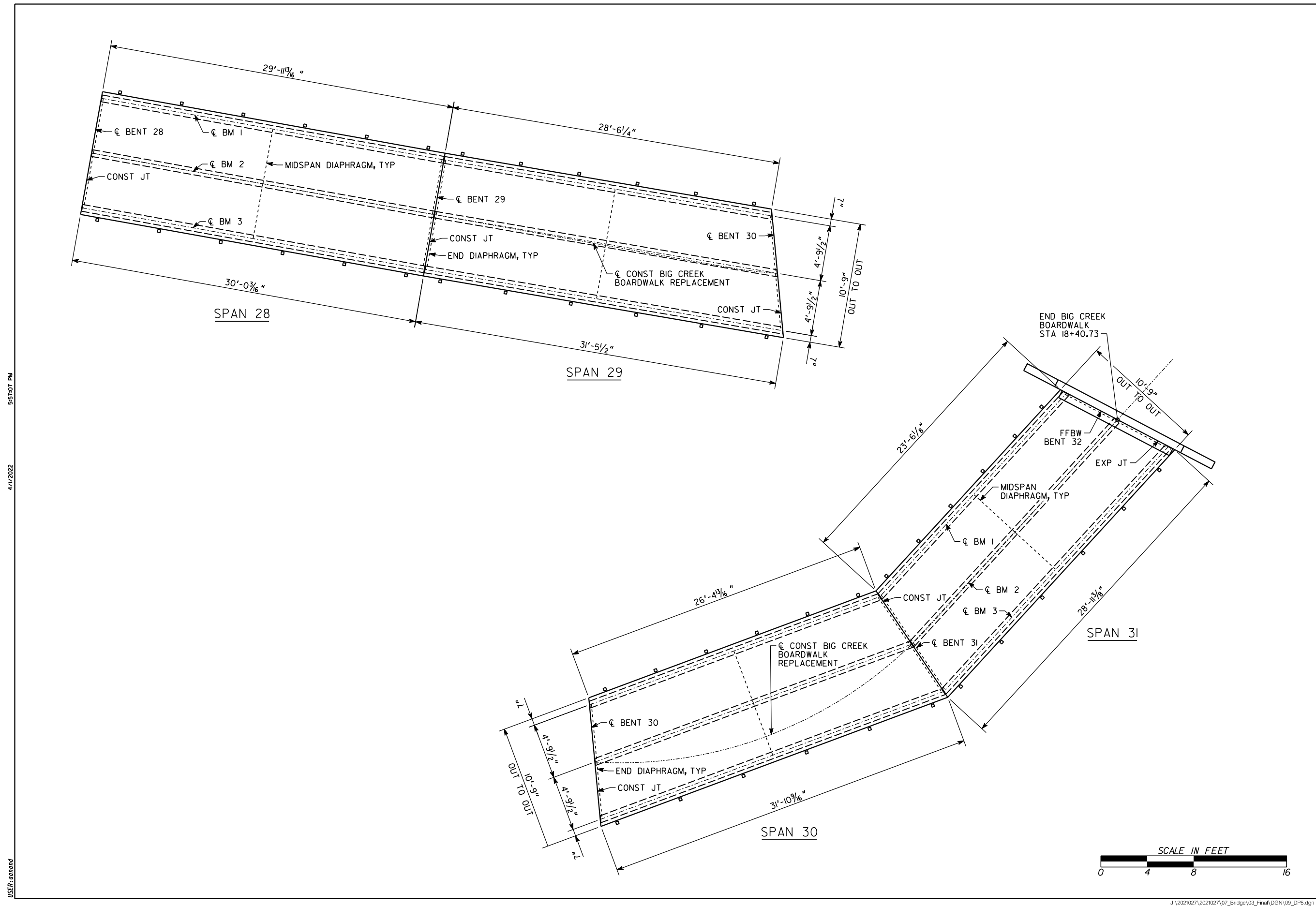
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S09

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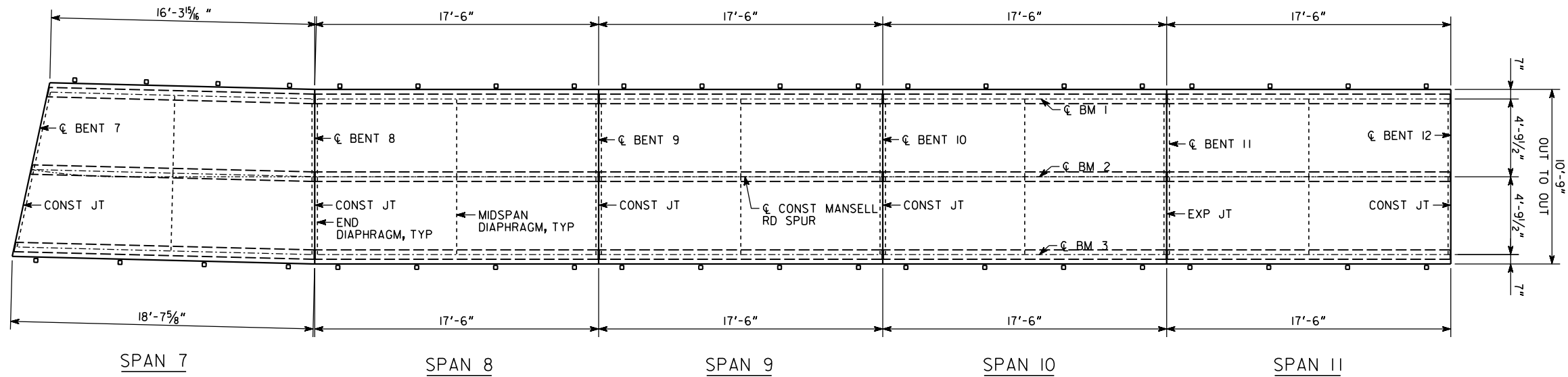
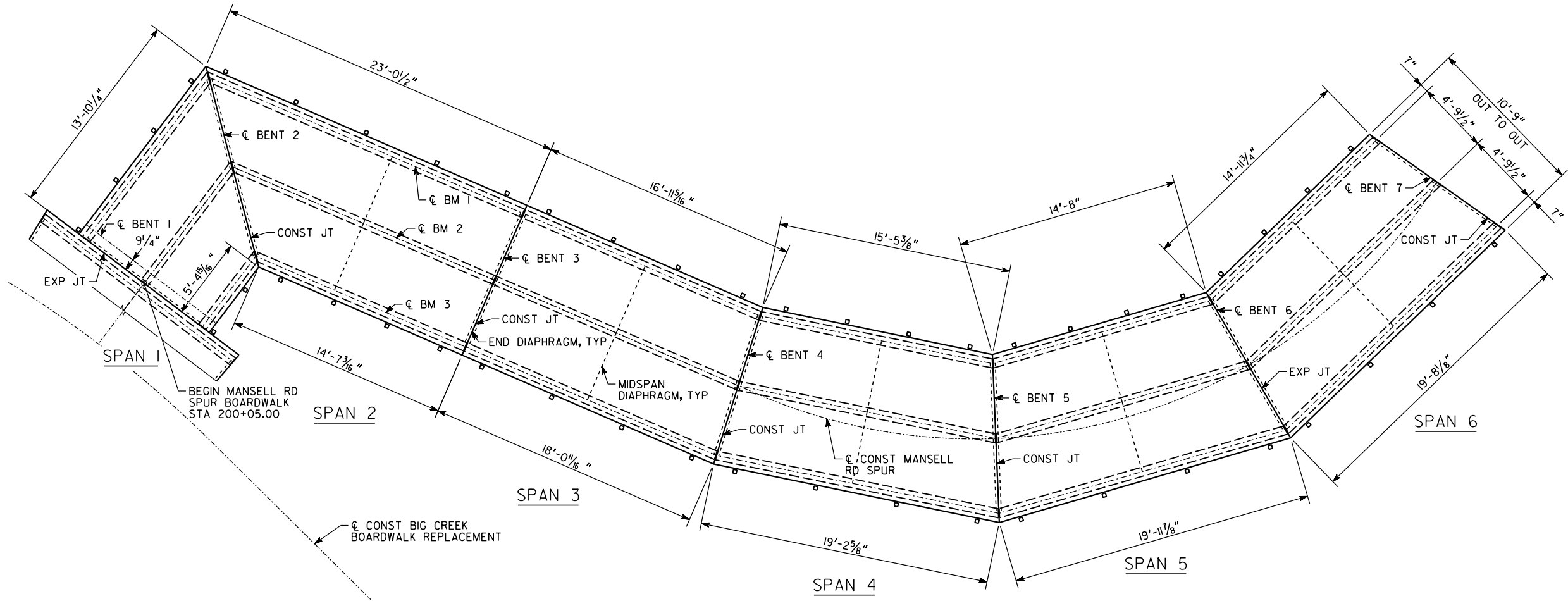
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STRUCTURAL DESIGN
PLANS FOR THE
BIG CREEK GREENWAY
BOARDWALK
REPLACEMENT

100% PLANS

REVISION

No.	Date	Revision

SHEET NO.

S10

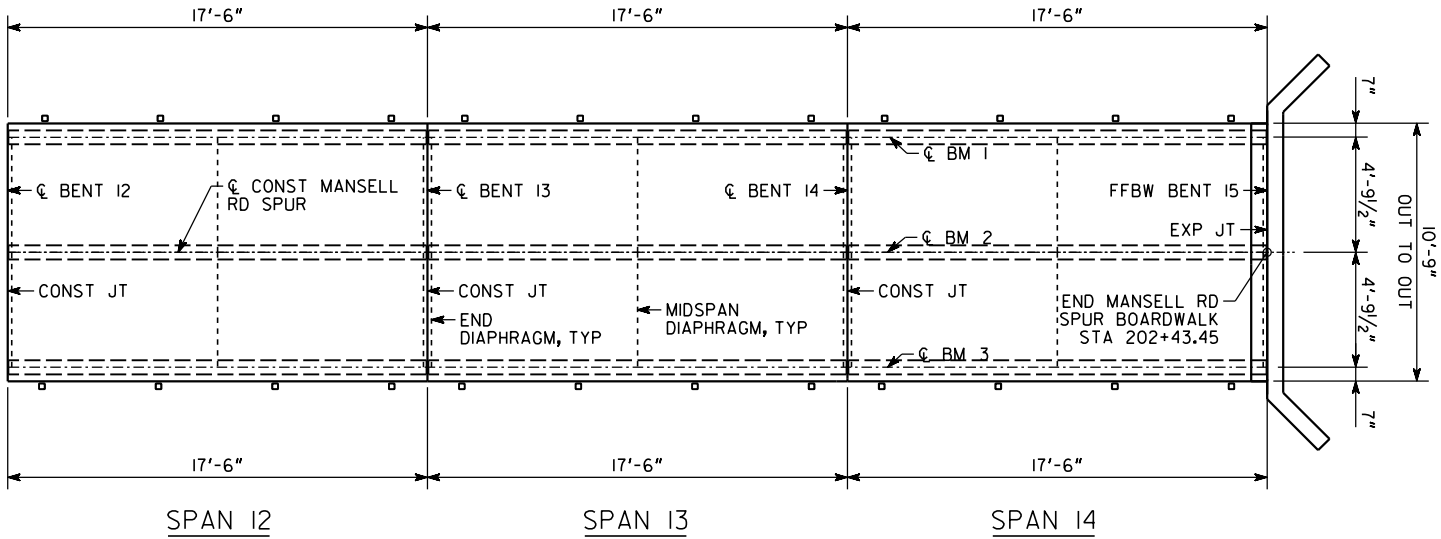
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MARIETTA, GEORGIA 30066-2393
(770) 424-1668

STRUCTURAL DESIGN
PLANS FOR THE
BIG CREEK GREENWAY
BOARDWALK
REPLACEMENT

100% PLANS

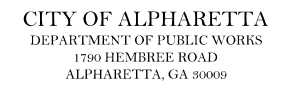
REVISION		
No.	Date	Revision

SHEET NO.

S11

DECK PLAN

Designed by:	TBS/AAM
Drawn by:	BW/AAM
Checked by:	BRW/BKA
Date:	APRIL 2022



NOTES:

1. ALL DIMENSIONS ARE SHOWN IN FEET.
2. EXCEPT SPANS 1 & 2, ALL BEAMS ARE PARALLEL TO CHORD OF $\mathcal{C}$ CONSTRUCTION BETWEEN BFBW AND $\mathcal{C}$ BENT OR $\mathcal{C}$ BENT AND $\mathcal{C}$ BENT.
3. EXCEPT SPANS 1 & 2, ALL MIDSPAN DIAPHRAGMS ARE PLACED PERPENDICULAR TO AND AT THE MIDPOINT OF BEAM 2.
4. ALL END DIAPHRAGMS ARE PARALLEL TO AND OFFSET 2" FROM THE $\mathcal{C}$ BENTS.
5. ALL DIMENSIONS ALONG BEAMS ARE FROM FFBW TO $\mathcal{C}$ DIAPHRAGM, $\mathcal{C}$ DIAPHRAGM TO $\mathcal{C}$ DIAPHRAGM OR $\mathcal{C}$ BENT TO $\mathcal{C}$ DIAPHRAGM.
6. ALL DIMENSIONS ALONG $\mathcal{C}$ DIAPHRAGMS ARE FROM $\mathcal{C}$ BEAM TO $\mathcal{C}$ BEAM.
7. TOC = TANGENT ON CURVE.
8. α = ACUTE SKEW ANGLE FORMED BY BEAM 2 AHEAD CENTERLINE AND BENT OR BFBW.
9. β = ACUTE SKEW ANGLE FORMED BY BEAM 2 BACK CENTERLINE AND BENT OR BFBW.
10. θ = SKEW ANGLE FORMED BY BENT OR BFBW AND TOC CENTERLINE CONSTRUCTION.
11. SEE SHEET S19 FOR α , β & θ VALUES.
12. PILES ARE NOT SHOWN.

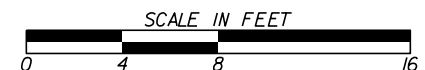
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SHEET NO.

S12

FRAMING PLAN

Designed by:	TBS/AAM
Drawn by:	BW/AAM
Checked by:	BRW/BKA
Date:	APRIL 2022



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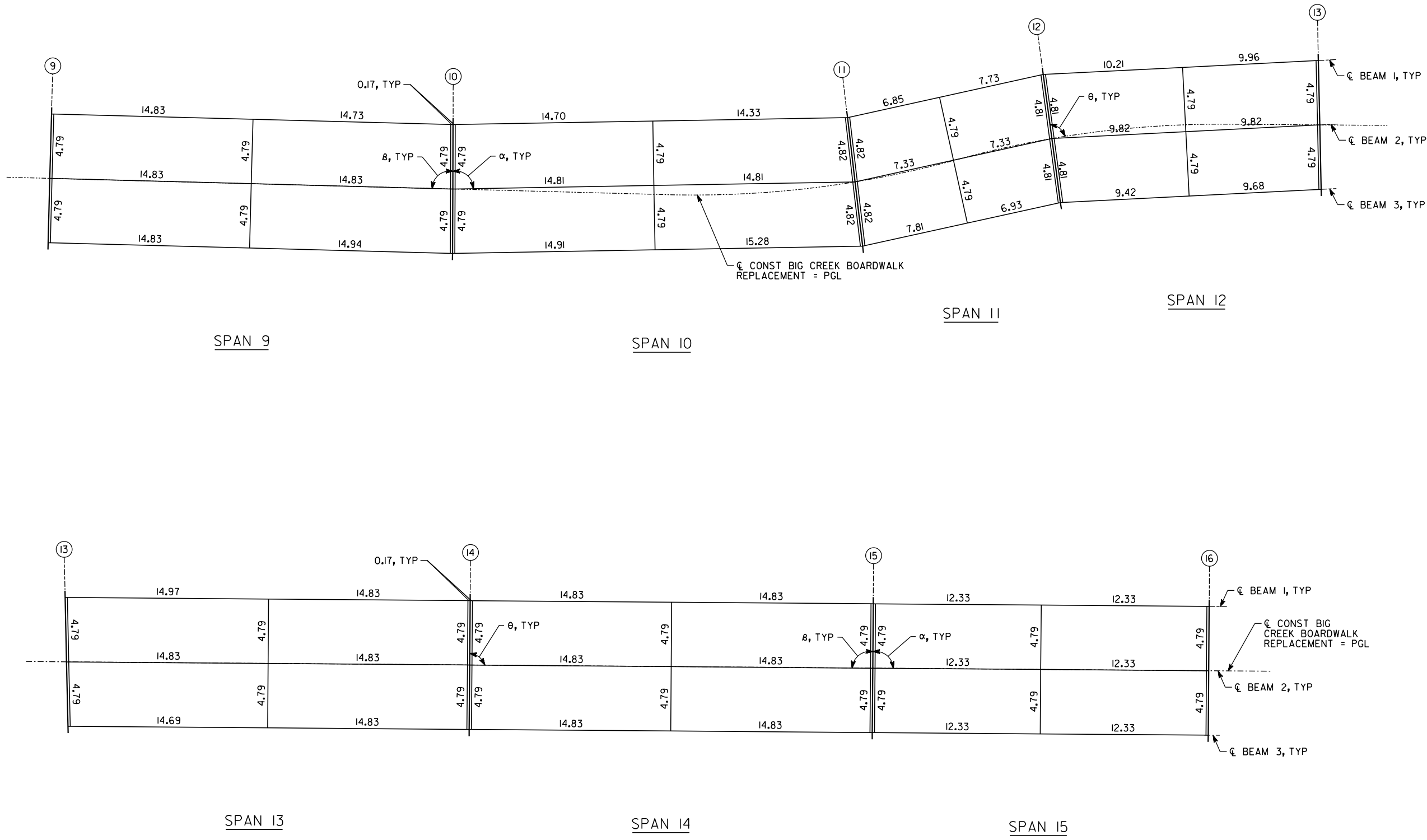
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4/1/2022

USER: adanad



CITY OF ALPHARETTA
DEPARTMENT OF PUBLIC WORKS
1790 HEMBREE ROAD
ALPHARETTA, GA 30009



STRUCTURAL DESIGN
PLANS FOR THE
BIG CREEK GREENWAY
BOARDWALK
REPLACEMENT

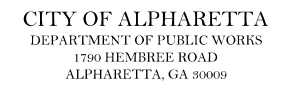
100% PLANS

REVISION		
No.	Date	Revision

SHEET NO.
S13

FRAMING PLAN

Designed by:	TBS/AAM
Drawn by:	BW/AAM
Checked by:	BRW/BKA
Date:	APRIL 2022



REVISION

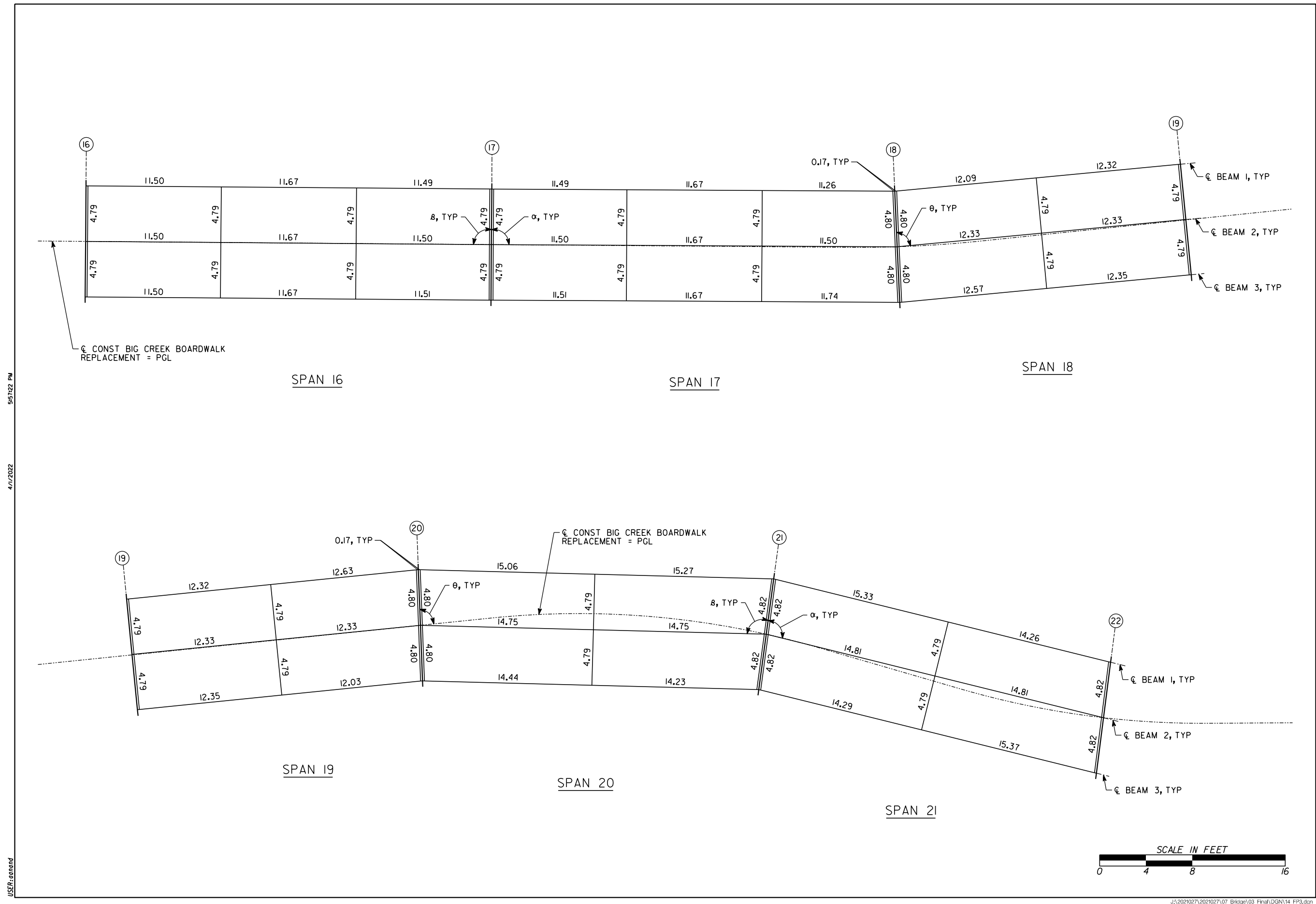
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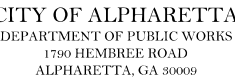
SHEET NO.

S14

FRAMING PLAN

Designed by:	TBS/AAM
Drawn by:	BW/AAM
Checked by:	BRW/BKA
Date:	APRIL 2022





REVISION

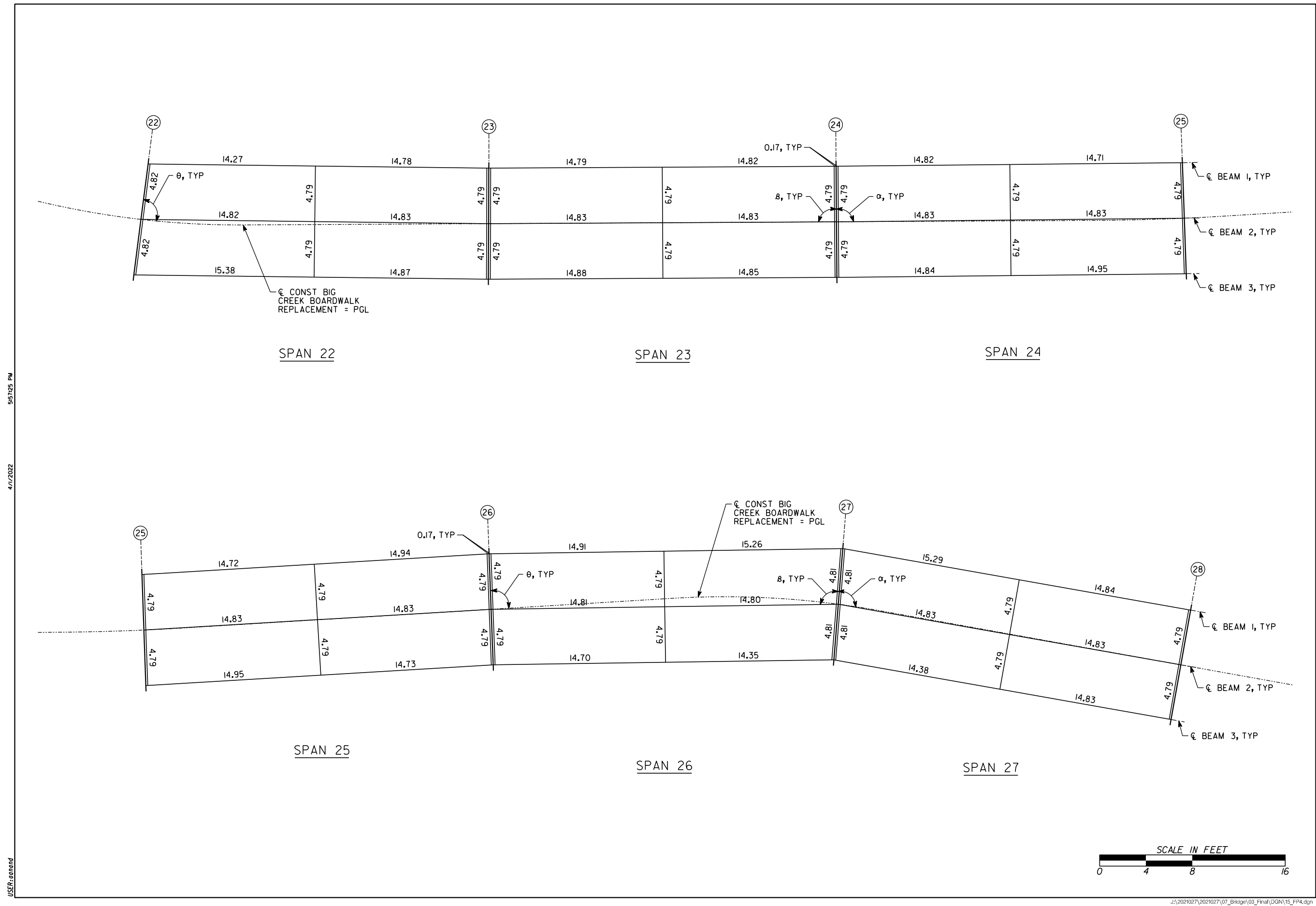
No.	Date	Revision

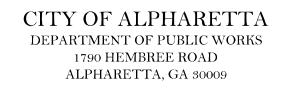
SHEET NO.

S15

FRAMING PLAN

Designed by:	TBS/AAM
Drawn by:	BW/AAM
Checked by:	BRW/BKA
Date:	APRIL 2022



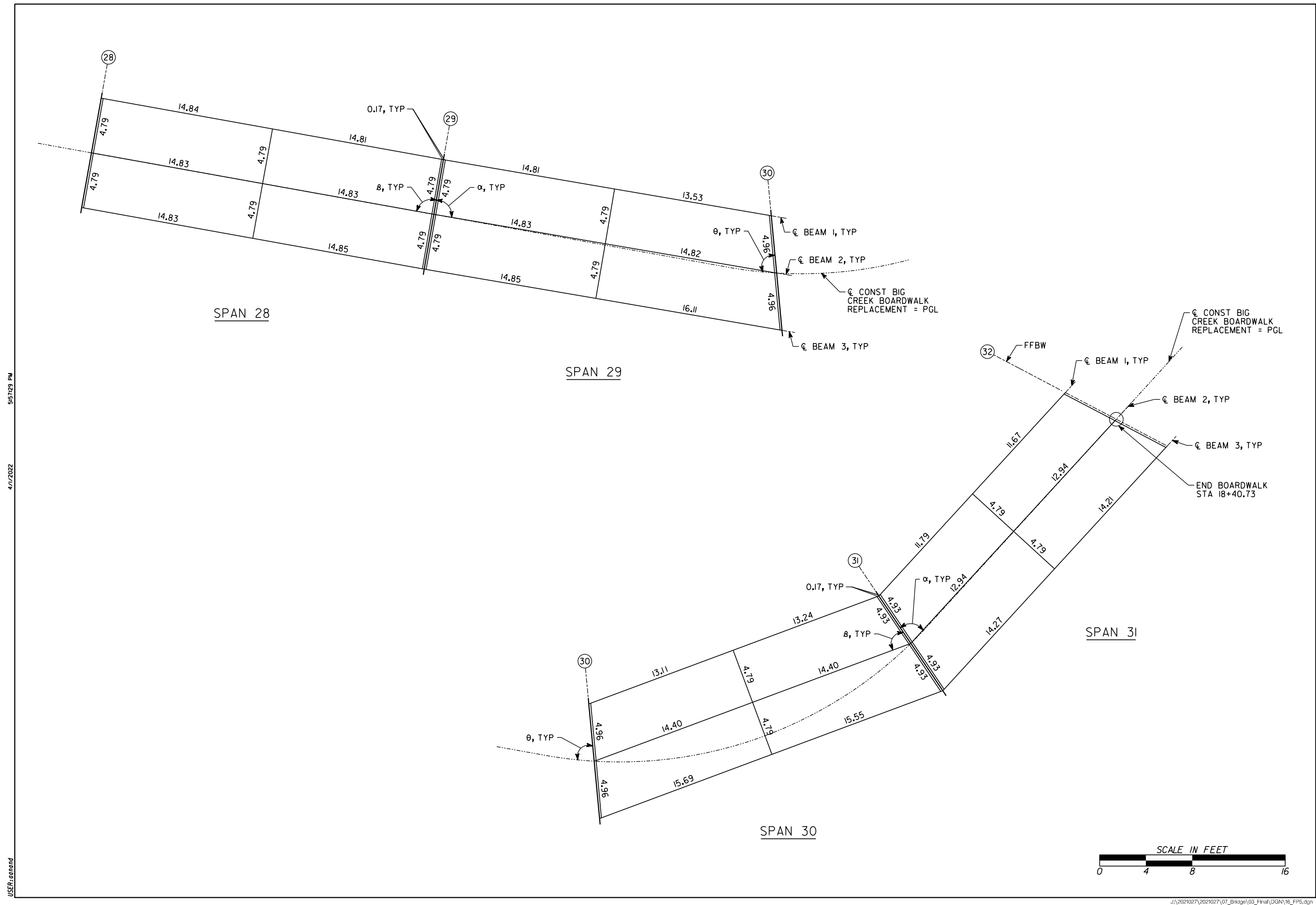


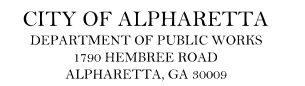
SHEET NO.

S16

FRAMING PLAN

Designed by:	TBS/AAM
Drawn by:	BW/AAM
Checked by:	BRW/BKA
Date:	APRIL 2022





REVISION

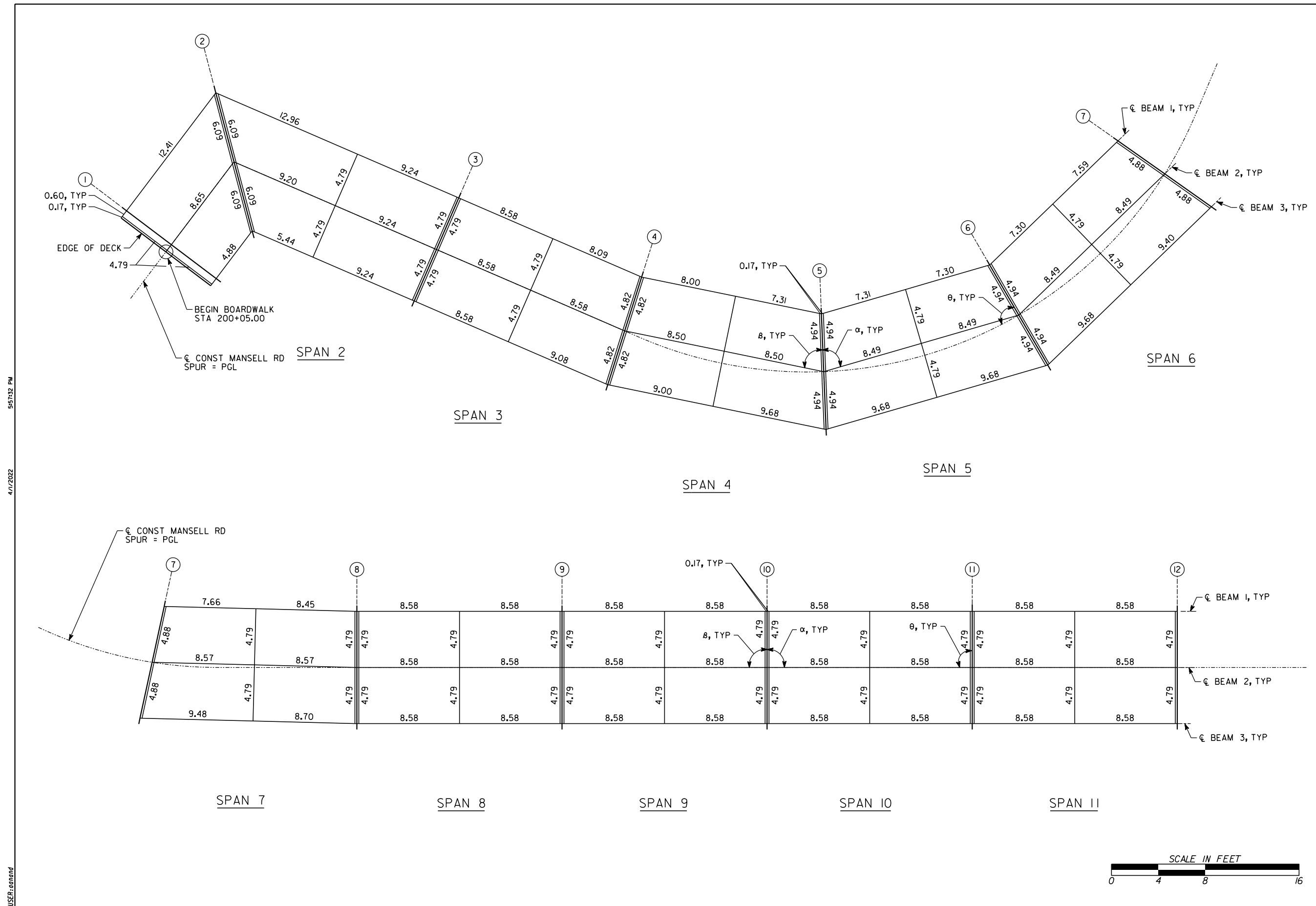
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SHEET NO.

S17

FRAMING PLAN

Designed by:	TBS/AAM
Drawn by:	BW/AAM
Checked by:	BRW/BKA
Date:	APRIL 2022

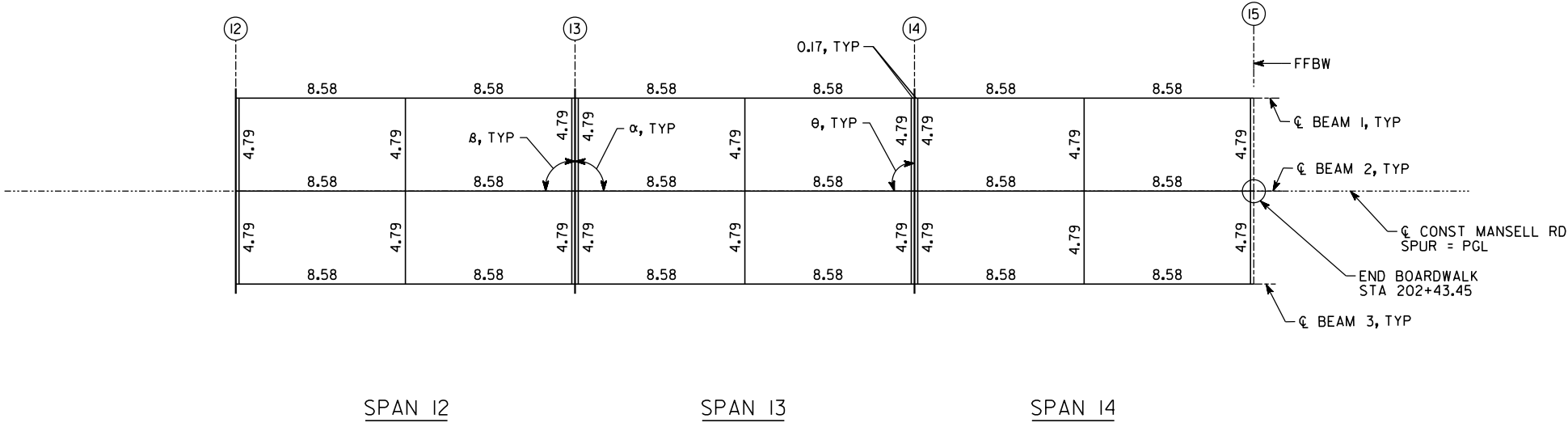


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4/1/2022

USER: adanand



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CITY OF ALPHARETTA
DEPARTMENT OF PUBLIC WORKS
1790 HEMBREE ROAD
ALPHARETTA, GA 30009



Heath & Lineback
Engineers
INCORPORATED
2390 CANTON ROAD • BUILDING 200
MARIETTA, GEORGIA 30066-2393
(770) 424-1668

STRUCTURAL DESIGN
PLANS FOR THE
BIG CREEK GREENWAY
BOARDWALK
REPLACEMENT

100% PLANS

REVISION

No.	Date	Revision

SHEET NO.

S18

FRAMING PLAN

Designed by:	TBS/AAM
Drawn by:	BW/AAM
Checked by:	BRW/BKA
Date:	APRIL 2022

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4/1/2022

USER: adanand

BIG CREEK GREENWAY TRAIL									
BENT	STATION	TOP OF DECK EL.	TOP OF CAP EL.	δ	α	θ	SPAN	SPAN LENGTH	DEAD LOAD DEFLECTION
1	10+19.17	954.39	952.52	-	-	90.00	1	20.66	$\frac{1}{16}$ "
2	10+39.83	954.91	953.04	-	-	90.00	2	20.66	$\frac{1}{16}$ "
3	10+60.48	955.95	954.07	-	81.78	81.78	3	19.02	$\frac{1}{16}$ "
4	10+79.50	956.89	955.01	90.00	90.00	90.00	4	15.00	0"
5	10+94.50	957.50	955.62	88.59	88.59	88.59	5	15.00	0"
6	11+09.50	957.92	956.04	84.46	84.46	89.73	6	15.00	0"
7	11+24.50	958.15	956.27	86.24	86.24	87.95	7	30.00	$\frac{3}{8}$ "
8	11+54.50	958.37	956.50	89.97	89.97	89.97	8	30.00	$\frac{3}{8}$ "
9	11+84.50	958.60	956.72	90.00	90.00	90.00	9	30.00	$\frac{3}{8}$ "
10	12+14.50	958.82	956.95	88.74	88.74	88.74	10	30.00	$\frac{3}{8}$ "
11	12+44.50	959.00	957.13	84.29	84.29	87.40	11	15.00	0"
12	12+59.50	959.03	957.16	85.24	85.24	87.92	12	20.00	$\frac{1}{16}$ "
13	12+79.50	959.00	957.13	88.32	88.32	88.32	13	30.00	$\frac{3}{8}$ "
14	13+09.50	958.93	957.05	90.00	90.00	90.00	14	30.00	$\frac{3}{8}$ "
15	13+39.50	958.85	956.98	90.00	90.00	90.00	15	25.00	$\frac{3}{16}$ "
16	13+64.50	958.79	956.92	90.00	90.00	90.00	16	35.00	$\frac{11}{16}$ "
17	14+04.50	958.70	956.83	89.93	89.93	89.93	17	35.00	$\frac{11}{16}$ "
18	14+44.50	958.62	956.74	87.14	87.14	89.36	18	25.00	$\frac{3}{16}$ "
19	14+64.50	958.55	956.68	89.82	89.82	89.73	19	25.00	$\frac{3}{16}$ "
20	14+84.50	958.49	956.62	86.37	86.37	86.28	20	30.00	$\frac{3}{8}$ "
21	15+14.50	958.42	956.54	83.79	83.79	85.08	21	30.00	$\frac{3}{8}$ "
22	15+44.50	958.34	956.47	83.40	83.40	89.22	22	30.00	$\frac{3}{8}$ "
23	15+74.50	958.27	956.39	89.50	89.50	89.50	23	30.00	$\frac{3}{8}$ "
24	16+04.50	958.19	956.32	89.85	89.85	89.85	24	30.00	$\frac{3}{8}$ "
25	16+34.50	958.12	956.24	88.59	88.59	89.45	25	30.00	$\frac{3}{8}$ "
26	16+64.50	958.04	956.17	88.72	88.72	88.67	26	30.00	$\frac{3}{8}$ "
27	16+94.50	957.97	956.09	84.56	84.56	87.03	27	30.00	$\frac{3}{8}$ "
28	17+24.50	957.89	956.02	89.93	89.93	89.93	28	30.00	$\frac{3}{8}$ "
29	17+54.50	957.63	955.76	89.76	89.76	89.76	29	30.00	$\frac{3}{8}$ "
30	17+84.50	956.86	954.98	74.94	74.94	81.19	30	30.00	$\frac{3}{8}$ "
31	18+14.50	955.55	953.68	76.46	76.46	79.67	31	26.23	$\frac{3}{16}$ "
32	18+40.73	954.80	952.93	75.16	-	75.16			

MANSELL ROAD SPUR TRAIL									
BENT	STATION	TOP OF DECK EL.	TOP OF CAP EL.	δ	α	θ	SPAN	SPAN LENGTH	DEAD LOAD DEFLECTION
1	200+05.77	958.12	956.24	90.00	90.00	90.00	1	8.86	0"
2	200+14.63	958.21	956.33	51.85	51.85	51.85	2	18.82	$\frac{1}{16}$ "
3	200+33.45	959.15	957.28	90.00	90.00	90.00	3	17.50	$\frac{1}{16}$ "
4	200+50.95	960.30	958.42	84.09	84.09	84.09	4	17.50	$\frac{1}{16}$ "
5	200+68.45	961.44	959.57	76.12	76.12	89.96	5	17.50	$\frac{1}{16}$ "
6	200+85.95	962.90	961.02	76.07	76.07	90.00	6	17.50	$\frac{1}{16}$ "
7	201+03.45	964.04	962.17	79.27	79.27	86.81	7	17.50	$\frac{1}{16}$ "
8	201+20.95	965.50	963.62	88.55	90.00	90.00	8	17.50	$\frac{1}{16}$ "
9	201+38.45	966.64	964.77	90.00	90.00	90.00	9	17.50	$\frac{1}{16}$ "
10	201+55.95	968.10	966.22	90.00	90.00	90.00	10	17.50	$\frac{1}{16}$ "
11	201+73.45	969.24	967.37	90.00	90.00	90.00	11	17.50	$\frac{1}{16}$ "
12	201+90.95	970.70	968.82	90.00	90.00	90.00	12	17.50	$\frac{1}{16}$ "
13	202+08.45	971.84	969.97	90.00	90.00	90.00	13	17.50	$\frac{1}{16}$ "
14	202+25.95	973.30	971.42	90.00	90.00	90.00	14	17.50	$\frac{1}{16}$ "
15	202+43.45	974.44	972.57	90.00	90.00	90.00			



CITY OF ALPHARETTA
DEPARTMENT OF PUBLIC WORKS
1790 HEMBREE ROAD
ALPHARETTA, GA 30009



STRUCTURAL DESIGN
PLANS FOR THE
BIG CREEK GREENWAY
BOARDWALK
REPLACEMENT

100% PLANS

REVISION		
No.	Date	Revision

SHEET NO.

S19

ELEVATIONS,
BEAM ANGLES &
DEFLECTIONS

Designed by:	TBS/AAM
Drawn by:	BW/AAM
Checked by:	BRW/BKA
Date:	APRIL 2022

SWCD:
Project Name:

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST

STAND ALONE CONSTRUCTION PROJECTS

Fulton County

Big Creek Greenway Boardwalk Replacement (D220013)

Plan
Page #

Included
Y/N

CE001

Y

G-001

Y

NA

G-001

Y

G-001

Y

G-001

Y

ALL

Y

CE002

Y

G-001

Y

CE004

Y

G-001

Y

NA

NA

CE002

Y

CE002

Y

CE003, #18

Y

CE002

Y

CE003, #7

Y

CE003, #8

Y

CE003, #11

Y

NA

NA

CE002

Y

CE002

Y

CE002

Y

CE003

Y

CE003

Y

TO BE SHOWN ON ES&PC PLAN

1 The applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Commission as of January 1 of the year in which the land-disturbing activity was permitted. (The completed Checklist must be submitted with the ES&PC Plan or the Plan will not be reviewed)

2 Level II certification number issued by the Commission, signature and seal of the certified design professional. (Signature, seal and level II number must be on each sheet pertaining to ES&PC Plan or the Plan will not be reviewed)

3 Limits of disturbance shall be no greater than 50 acres at any one time without prior written authorization from the GAEPD District Office. If GAEPD approves the request to disturb 50 acres or more at any one time, the Plan must include at least 4 of the BMPs listed in Appendix 1 of this checklist and the GAEPD approval letter. * (A copy of the written approval by GAEPD must be attached to the plan for the Plan to be reviewed.)

4 The name and phone number of the 24-hour contact responsible for erosion, sedimentation and pollution controls.

5 Provide the name, address, email address, and phone number of primary permittee.

6 Note total and disturbed acreages of the project or phase under construction.

7 Provide the GPS locations of the beginning and end of the Infrastructure project. Give the Latitude and Longitude in decimal degrees.

8 Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.

9 Descriptions of the nature of construction activity and existing site conditions.

10 Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.

11 Identify the project receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, marshlands, etc. which may be affected.

12 Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on **Part IV page 19** of the permit.

13 Design professional's certification statement and signature that the permittee's ES&PC Plan provides for an appropriate and comprehensive system of BMPs and sampling to meet permit requirements as stated on **Part IV page 19** of the permit. *

14 Clearly note the statement that "The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within 7 days after installation." in accordance with **Part IV.A.5 page 25** of the permit. *

15 Clearly note the statement that "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation or within 25-feet of the coastal marshland buffer as measured from the Jurisdictional Determination Line without first acquiring the necessary variances and permits."

16 Provide a description of any buffer encroachments and indicate whether a buffer variance is required.

17 Clearly note the statement that "Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional." *

18 Clearly note the statement that "Waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit." *

19 Clearly note statement that "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities."

20 Clearly note statement that "Erosion control measures will be maintained at all times. If full implementation of the approved plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source."

21 Clearly note the statement "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."

22 Any construction activity which discharges storm water into an Impaired Stream Segment, or within 1 linear mile upstream of and within the same watershed as, any portion of a Biota Impaired Stream Segment must comply with Part III. C. of the permit. Include the completed Appendix 1 listing all the BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment. *

23 If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in item 22 above) at least six months prior to submittal of NOI, the ES&PC Plan must address any site-specific conditions or requirements included in the TMDL Implementation Plan. *

24 BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the vehicles. Washout of the drum at the construction site is prohibited. *

25 Provide BMPs for the remediation of all petroleum spills and leaks.

26 Description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after construction operations have been completed. *

27 Description of practices to provide cover for building materials and building products on site. *

28 Description of the practices that will be used to reduce the pollutants in storm water discharges. *

Address:
City/County:
Date on Plans:
Name & email of person filling out checklist:

Under the Mansell Road bridges across Big Creek

Alpharetta, Fulton County

4/26/2022

Pamela Bush, pbush@alpharetta.ga.us

CE002

Y

NA

NA

NA

NA

CE101-302

Y

ALL

Y

CE101-302

Y

NA

ALL

Y

CE004

Y

NA

CE004

Y

NA

CE002

Y

CE101-CE302

Y

CE003

Y

CE101-302

Y

CE508-CE509

Y

CE510-CE511

Y

29 Description and chart or timeline of the intended sequence of major activities which disturb soils for the major portions of the site (i.e., initial perimeter and sediment storage BMPs, clearing and grubbing activities, excavation activities, utility activities, temporary and final stabilization).

30 Provide complete requirements of Inspections and record keeping by the primary permittee. *

31 Provide complete requirements of Sampling Frequency and Reporting of sampling results. *

32 Provide complete details for Retention of Records as per Part IV.F. of the permit. *

33 Description of analytical methods to be used to collect and analyze the samples from each location. *

34 Appendix B rationale for NTU values at all outfall sampling points where applicable. *

35 Delineate all sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged. *

36 A description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the Plan may combine all of the BMPs into a single phase. *

37 Graphic scale and North arrow.

38 Existing and proposed contour lines with contour lines drawn at intervals in accordance with the following:

Map Scale	Ground Slope	Contour Intervals, ft.
1 inch = 100ft or larger scale	Flat 0 - 2% Rolling 2 - 8% Steep 8% +	0.5 or 1 1 or 2 2, 5, or 10

39 Use of alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMPs as certified by a Design Professional (unless disapproved by GAEPD or the Georgia Soil and Water Consenation Commission). Please refer to the Alternative BMP Guidance Document found at www.gaswcc.georgia.gov.

40 Use of alternative BMP for application to the Equivalent BMP List. Please refer to Appendix A-2 of the Manual for Erosion & Sediment Control in Georgia 2016 Edition. *

41 Delineation of the applicable 25-foot or 50-foot undisturbed buffers adjacent to State waters and any additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact.

42 Delineation of on-site wetlands and all State waters located on and within 200 feet of the project site.

43 Delineation and acreage of contributing drainage basins on the project site.

44 Provide hydrology study and maps of drainage basins for both the pre- and post-developed conditions. *

45 An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed.

46 Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points.

47 Soil series for the project site and their delineation.

48 The limits of disturbance for each phase of construction.

49 Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, retrofitted detention pond, and/or excavated inlet sediment traps for each common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written justification explaining the decision to use equivalent controls when a sediment basin is not attainable must be included in the Plan for each common drainage location in which a sediment basin is not provided. A written justification as to why 67 cubic yards of storage is not attainable must also be given. Worksheets from the Manual must beincluded for structural BMPs and all calculations used by the design professional to obtain the required sediment storage when using equivalent controls. When discharging from sediment basins and impoundments, permittees are required to utilize outlet structures that withdraw water from the surface, unless infeasible. If outlet structures that withdraw water from the surface are not feasible, a written justification explaining this decision must be included in the Plan.

50 Location of Best Management Practices that are consistent with and no less stringent than the Manual for Erosion and Sediment Control in Georgia. Use uniform coding symbols from the Manual, Chapter 6, with legend.

51 Provide detailed drawings for all structural practices. Specifications must, at a minimum, meet the guidelines set forth in the Manual for Erosion and Sediment Control in Georgia.

52 Provide vegetative plan, noting all temporary and permanent vegetative practices. Include species, planting dates and seeding, fertilizer, lime and mulching rates. Vegetative plan shall be site specific for appropriate time of year that seeding will take place and for the appropriate geographic region of Georgia.

* If using this checklist for a project that is less than 1 acre and not part of a common development, but within 200 ft of a perennial stream, the * checklist items would be N/A.

Effective January 1, 2022

THE CITY OF

ALPHARETTA

GEORGIA

CITY OF ALPHARETTA

DEPARTMENT OF PUBLIC WORKS

1790 HEMBREE ROAD

ALPHARETTA, GA 30009

H&L

Heath & Linebeck

Engineers

INCORPORATED

200 CANYON ROAD • BUILDING 200

ALPHARETTA, GEORGIA 30009-0000

(770) 474-1000

CIVIL DESIGN PLANS

FOR THE

BIG CREEK GREENWAY

BOARDWALK

REPLACEMENT

FINAL PLANS

AUGUST 26th, 2022

REVISION

No.	Date	Revision

SHEET NO.

CE001

ESPCP GENERAL

NOTES

GSWCC

Level II Certification # 0000064868

Designed by:	PFJ
Drawn by:	PFJ
Checked by:	WWD
File Name:	CE001.dwg

ESPCP GENERAL NOTES

WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF STATE EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.

WASHOUT OF THE DRUM AT THE CONSTRUCTION SITE IS PROHIBITED.

APPROVED PLANS AND NPDES DAILY LOG MUST BE ON SITE AT ALL TIMES.

CONSTRUCTION SCHEDULE AND SEQUENCE OF MAJOR ACTIVITIES

THE CONTRACTOR IS RESPONSIBLE FOR DEVELOPING THE CONSTRUCTION SCHEDULE FOR THE PROJECT. A COPY OF THE CONSTRUCTION SCHEDULE SHALL BE MAINTAINED AT THE PROJECT SITE.

THE PROJECT BUDGET INCLUDES SUFFICIENT FUNDS FOR THE PAYMENT OF CONSTRUCTION EXITS. THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING AT LEAST ONE (1) CONSTRUCTION EXIT PER THE SPECIFICATIONS OF THE CONSTRUCTION EXIT DETAIL INCLUDED IN THIS ESPCP TO MINIMIZE OR ELIMINATE THE VEHICLE TRACKING OF DIRT, SOILS, AND SEDIMENTS OFF SITE. TO FACILITATE PROJECT LOGISTICS, THE CONTRACTOR IS ALSO RESPONSIBLE FOR SELECTING THE LOCATION(S) OF THE CONSTRUCTION EXIT(S).

- STAGE 1: WORK IN THIS STAGE INCLUDES INSTALLING INITIAL BMPs.
- A. INITIAL BMPs: INSTALL THE FOLLOWING BMPs PRIOR TO CONSTRUCTION.
 - 1. INSTALL ORANGE BARRIER FENCE PRIOR TO ANY CONSTRUCTION ACTIVITIES.
 - 2. INSTALL PERIMETER SILT FENCE (Sd1-S - 30" HEIGHT)(WOVEN WIRE SUPPORT).
 - 3. PLACE CONSTRUCTION EXITS.
 - B. INTERMEDIATE BMPs: N/A
 - C. FINAL BMPs: N/A

- STAGE 2: WORK IN THIS STAGE INCLUDES CLEARING, GRUBBING, AND PROJECT CONSTRUCTION.
- A. INITIAL BMPs: N/A
 - B. INTERMEDIATE BMPs: WHILE CLEARING, GRUBBING, AND EARTHWORK IS PROGRESSING, DO THE FOLLOWING:
 - 1. AS NEEDED, PLACE AND INSTALL TEMPORARY GRASSING AND MULCH AS SHOWN ON THE INTERMEDIATE PHASE PLANS.
 - C. FINAL BMPs: AS SOON AS FINAL GRADING HAS BEEN ESTABLISHED IN ANY AREA OF THE PROJECT, INSTALL THE FOLLOWING:
 - 1. PERMANENT GRASSING.
 - 2. CONTRACTOR TO REMOVE BMPs ONCE ESTABLISHED.

- STAGE 3:
- A. INITIAL BMPs: N/A
 - B. INTERMEDIATE BMPs: N/A
 - C. FINAL BMPs: AS SOON AS FINAL GRADING HAS BEEN ESTABLISHED IN ANY AREA OF THE PROJECT, INSTALL THE FOLLOWING:
 - 1. PERMANENT GRASSING.
 - 2. CONTRACTOR TO REMOVE BMPs ONCE FINAL STABILIZATION ESTABLISHED.

SITE STABILIZATION AND VEGETATION PLANTING SCHEDULE

THE EPD GENERAL NPDES GAR100002 PERMIT STATES THAT ANY DISTURBED AREA WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED SHALL BE STABILIZED WITHIN 14 DAYS OF SUCH CESSATION OR AS SOON AS PRACTICABLE IF PRECLUDED BY ADVERSE WEATHER CONDITIONS. HOWEVER IN SPECIAL CASES, THE PROJECT ENGINEER MAY REQUIRE THE CONTRACTOR TO PERFORM STABILIZATION MORE OFTEN THAN 14 DAYS.

DISTURBED AREAS SHALL BE STABILIZED WITH SUITABLE MATERIALS LISTED IN THE CURRENT EDITION OF THE DEPARTMENTS'S STANDARD SPECIFICATIONS (OR SPECIAL PROVISIONS) SECTION 161, 163, 700, 711 ON THE BASIS OF WHEN CONSTRUCTION ACTIVITIES ARE EXPECTED TO RESUME.

ALL TEMPORARY AND PERMANENT VEGETATIVE PRACTICES INCLUDING PLANT SPECIES, PLANTING DATES, SEEDING , FERTILIZING, LIMING, AND MULCHING RATES FOR THIS PROJECT CAN BE FOUND IN SECTION 700 OF THE CURRENT EDITION OF THE DEPARTMENT'S STANDARD SPECIFICATIONS (OR SPECIAL PROVISIONS) AND OTHER APPLICABLE CONTRACT DOCUMENTS OR LANDSCAPING PLANS.

Construction Schedule				
Month	1	4	9	
Install Temporary Erosion Control Measures				
Maintenance of Temporary Erosion Control Measures				
Perform Construction Activities				
Establish Permanent Vegetation				
Remove Temporary Erosion Control Measures				

PETROLEUM STORAGE, SPILLS AND LEAKS

THESE PLANS EXPRESSLY DELEGATE THE RESPONSIBILITY OF PROPER ON-SITE HAZARDOUS MATERIAL MANAGEMENT TO THE CONTRACTOR. THE CONTRACTOR SHALL AT A MINIMUM PROVIDE AN ACTION PLAN AND KEEP THE NECESSARY MATERIALS ON SITE FOR THE CAPTURE, CLEAN UP, AND DISPOSAL OF ANY PETROLEUM PRODUCT, OR OTHER HAZARDOUS MATERIAL, LEAKS OR SPILLS ASSOCIATED WITH THE SERVICING, REFUELING OR OPERATIONS OF ANY EQUIPMENT UTILIZED AT THE SITE. A COPY OF THE ACTION PLAN SHALL BE SUBMITTED TO THE PROJECT ENGINEER AND MAINTAINED ON THE PROJECT SITE. ALL PERSONNEL OPERATING OR SERVING EQUIPMENT SHALL BE FAMILIAR WITH THE ACTION PLAN. THE CONTRACTOR SHALL NOT PARK, REFUEL, OR MAINTAIN EQUIPMENT WITHIN STREAM BUFFERS.

IF THE CONTRACTOR ELECTS TO STORE PETROLEUM PRODUCTS ON SITE, THE CONTRACTOR SHALL PREPARE AN ESPCP ADDENDUM THAT ADDRESSES THE ADDITIONAL BMPs NEEDED FOR ONSITE STORAGE AND SPILL PREVENTION FOR PETROLEUM PRODUCTS. THIS PLAN SHALL BE PREPARED BY A CERTIFIED DESIGN PROFESSIONAL AS REQUIRED BY GAR100002 FOR INCLUSION WITH THESE PLANS. THE CONTRACTOR'S ATTENTION IS SPECIFICALLY DIRECTED TO STANDARD SPECIFICATION 107-LEGAL REGULATIONS AND RESPONSIBILITY TO THE PUBLIC FOR ADDITIONAL REQUIREMENTS.

NATURE OF CONSTRUCTION ACTIVITY

THE PROJECT CONSISTS OF THE DEMOLITION AND CONSTRUCTION OF A BOARDWALK UNDERNEATH MANSELL ROAD AND ALONG BIG CREEK.

TOTAL DISTURBED AREA: 0.78
TOTAL PROJECT AREA: 0.78

STATE-WATER BUFFER IMPACTS

STATE-WATER BUFFERS, AS DEFINED BY O.G.C.A. 12-7-1, ARE IMPACTED BY THIS PROJECT.

NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25-FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

THE CONTRACTOR IS NOT AUTHORIZED TO ENTER INTO STREAM BUFFERS, EXCEPT AS DESCRIBED IN THE TABLE BELOW:

State-Water ID# or Name	Location of Buffered Streams and State Waters**			Stream Type (Warm/Cold Water)*	Buffer Variance Required? (Yes/No)
	Roadway Alignment	Begin Station and Offset	End Station and Offset		
Big Creek	Big Creek Greenway Boardwalk Replacement	STA 10+00.00 51' RT	STA 18+14.00 14' RT	Warm	Yes

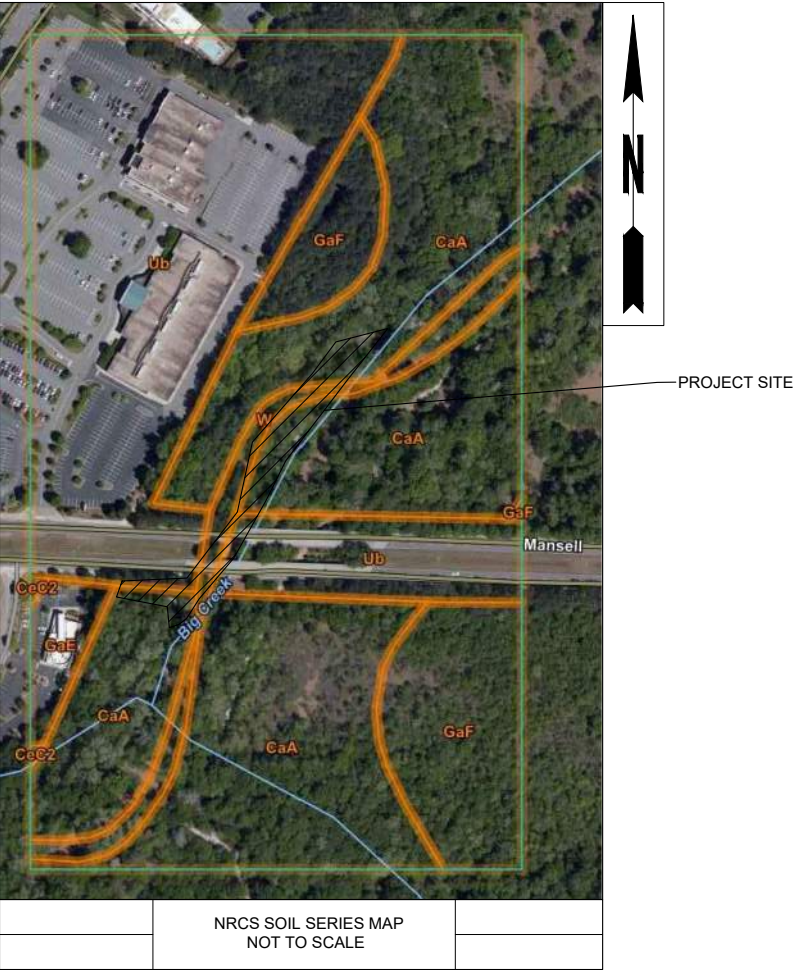
The contractor is allowed to install erosion control measures, remove existing boardwalk, and construct proposed boardwalk.

* WARM WATER STREAMS HAVE A 25-FOOT MINIMUM BUFFER AS MEASURED FROM THE WRESTED VEGETATION. COLD WATER STREAMS HAVE A 50-FOOT BUFFER AS MEASURED FROM THE WRESTED VEGETATION.

* * LOCATIONS ARE APPROXIMATE, A DETAILED LOCATION OF STREAM BUFFERS AND AUTHORIZED WORK AREAS ARE SHOWN ON THE INDIVIDUAL BMP SHEETS

SOIL SERIES INFORMATION

THE FOLLOWING IS A SUMMARY OF THE SOILS THAT ARE EXPECTED TO BE FOUND ON THE PROJECT SITE:



DUE TO THE SIZE AND SCOPE OF THIS PROJECT AND THE NATURE OF SOIL SERIES MAPS, IT IS NOT REASONABLY PRACTICAL TO DELINEATE THE PRECISE LOCATIONS OF THE ABOVE LISTED SOILS ON THE CONSTRUCTION PLANS. THE NRCS SOIL SURVEY AND SOIL SERIES MAPS FOR THE PROJECT SITE ARE ALSO AVAILABLE ONLINE AT [HTTP://WEBSOILSURVEY.SC.EGOV.USDA.GOV/APP/HOMEPAGE.HTM](http://websoilsurvey.sc.egov.usda.gov/app/homepage.htm).

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CaA	Cartecay-Toccoa complex, 0 to 2 percent slopes, occasionally flooded	19.9	45.2%
CeC2	Cecil sandy loam, 6 to 10 percent slopes, moderately eroded	0.1	0.1%
GaE	Grover-Mountain Park complex, 10 to 20 percent slopes, stony	0.9	1.9%
GaF	Grover-Mountain Park complex, 20 to 60 percent slopes, stony	5.0	11.4%
Ub	Urban land	16.5	37.5%
W	Water	1.7	3.8%
Totals for Area of Interest		44.0	100.0%

THE CITY OF
ALPHARETTA
GEORGIA

CITY OF ALPHARETTA
DEPARTMENT OF PUBLIC WORKS
1790 HEMBREE ROAD
ALPHARETTA, GA 30009

H&L
Heath & Linebeck
Engineers
INCORPORATED
2000 CANTON ROAD • BUILDING 200
MARIETTA, GEORGIA 30066-0000
(770) 941-1000

CIVIL DESIGN PLANS
FOR THE
BIG CREEK GREENWAY
BOARDWALK
REPLACEMENT

FINAL PLANS
AUGUST 26th, 2022

REVISION		
No.	Date	Revision

SHEET NO.
CE002

ESPCP GENERAL
NOTES

GSWCC

Level II Certification # 0000064868

Designed by:	PFJ
Drawn by:	PFJ
Checked by:	WWD
File Name:	CE002.dwg

SEDIMENT STORAGE

THE SITE HAS A TOTAL DISTURBED AREA OF 0.78 ACRES. THE FOLLOWING TABLE SUMMARIZES THE REQUIRED AND AVAILABLE SEDIMENT STORAGE FOR EVERY OUTFALL ON THIS PROJECT. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN THE STORAGE VOLUMES FOR THE BMP'S SPECIFIED IN THIS TABLE.

Location	Total Drainage Area (acres)	Disturbed Area (acres)	Required Sediment Storage Volume (yd ³)	Total Storage Volume Provided (yd ³)	Silt Fence/Filter Socks		J-Hooks	
					Length of Fence (ft)	Total Volume (yd ³)	# of Devices	Total Volume (yd ³)
BASIN 1	11.48	0.37	769.16	229.85	1194.00	200.00	11.94	29.85
BASIN 2	22.70	0.41	1520.90	262.38	1363.00	228.30	13.63	34.08

BASINS 1 & 2: THE TOTAL SEDIMENT STORAGE VOLUME PROVIDED IN IS LESS THAN THE REQUIRED 67 CY OF SEDIMENT STORAGE PER ACRE DUE TO THE LARGE UNDISTURBED LAND UPSTREAM. THE DISTURBED AREA WITHIN THE BASIN WILL BE TREATED WITH GRASSING AND MULCH AS NEEDED TO CONTROL SEDIMENT RUNOFF. THE DISTURBED AREA REPRESENTS LESS THAN 1% OF THE TOTAL DRAINAGE BASIN AT THE OUTFALL.

SEDIMENT STORAGE VOLUME MUST BE IN PLACE PRIOR TO AND DURING ALL LAND DISTURBING ACTIVITIES UNTIL FINAL STABILIZATION OF THE SITE HAS BEEN ACHIEVED.

TEMPORARY SEDIMENT BASIN DETAILS

ALL OUTFALLS: SEDIMENT BASINS ARE NOT USED AT THESE LOCATIONS. LAND DISTURBANCE ACTIVITIES ASSOCIATED WITH CONSTRUCTING AND REMOVING SEDIMENT BASINS AT THESE LOCATIONS WOULD CAUSE ADDITIONAL ADVERSE IMPACTS ON EXISTING PHYSICAL CONSTRAINTS.

CITY OF ALPHARETTA EROSION CONTROL NOTES:

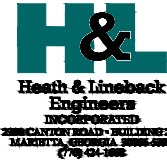
1. ALL AREAS TO RECEIVE STRUCTURAL FILL TO BE CLEARED, STRIPPED AND FREE OF TOPSOIL, ROOTS, STUMPS, AND ALL OTHER DELETERIOUS MATERIAL. STRUCTURAL FILL TO BE CLEAN FROM ORGANICS AND ALL OTHER DELETERIOUS MATERIAL. FILL TO BE PLACED IN MAXIMUM 8" LIFTS AND COMPACTED TO AT LEAST 95% STANDARD PROCTOR MAXIMUM DENSITY AND TO WITHIN 3%+ OF THE OPTIMUM MOISTURE CONTENT, UNLESS OTHERWISE SPECIFIED IN THE PROJECT GEOTECHNICAL REPORT OR BY THE PROJECT GEOTECHNICAL ENGINEER. ALL FILL SOILS TO BE PLACED UNDER THE OBSERVATION OF THE PROJECT GEOTECHNICAL ENGINEER. DOCUMENTATION OF COMPACTION TESTING SHALL BE PROVIDED TO LAND DISTURBANCE ACTIVITY INSPECTOR FOR ALL ROADWAY CONSTRUCTION IN RIGHT-OF-WAY. (INCLUDING DECELERATION LANE) CONTACT LAND DISTURBANCE ACTIVITY INSPECTOR PRIOR TO CONSTRUCTION FOR FURTHER TESTING REQUIREMENTS.
2. FAILURE OF THE CONTRACTOR TO PERFORM THE PRESCRIBED EROSION CONTROL PRACTICES SHALL RESULT IN THE IMMEDIATE ISSUANCE OF A STOP-WORK ORDER FOR HE PROJECT SITE, PURSUANT TO UDC 3.1.1.F.2.D.
3. MAINTENANCE OF ALL SOIL EROSION AND SEDIMENTATION CONTROL PRACTICES, WHETHER TEMPORARY OR PERMANENT, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. ALL DISTURBED AREAS MUST BE VEGETATED WITHIN 14 DAYS OF FINAL GRADE.
5. ALL FILL SLOPES SHALL HAVE SILT FENCE AT THE TOE OF THE SLOPE.
6. THIS SITE DOES CONTAIN STATE WATERS OR WETLANDS.
7. **THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES.**
8. **EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.**
9. THE CONTRACTOR SHALL REMOVE SEDIMENT ONCE IT HAS ACCUMULATED TO ONE-HALF THE ORIGINAL HEIGHT OF THE SILT FENCE USED FOR EROSION CONTROL.
10. MAXIMUM CUT OR FILL SLOPES ARE 2 HORIZONTAL: 1 VERTICAL.
11. **ANY DISTURBED AREA LEFT EXPOSED FOR 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.**
12. ALL SILT FENCEE SHOULD BE FOR SENSITIVE AREAS (SD1-S) EXCEPT WITHIN THE CRZ OF TREES TO REMAIN. COMPOST FILTER SOCKS (SD1-NS) SHOULD BE UTILIZED.
13. THE CONSTRUCTION EXIT SHALL BE MAINTAINED IN A CONDITION, WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH STONE, AS CONDITIONS DEMAND. (ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLE OR SITE ONTO ROADWAY OR INTO STORM DRAIN SYSTEM MUST BE REMOVED IMMEDIATELY BY SWEEPING.)
14. ALL STORM DRAINS AND DROP INLETS WILL HAVE 4" PERMANENT POLLUTION PREVENTION MARKERS INSTALLED PRIOR TO INSPECTION. MARKERS ARE AVAILABLE AT CITY OF ALPHARETTA COMMUNITY DEVELOPMENT DEPARTMENT 678-297-6070.
15. THE CONTRACTOR WILL MAINTAIN STORM WATER RUNOFF CONTROLS AT ALL TIMES. ADDITIONAL CONTROLS WILL BE INSTALLED IF DETERMINED NECESSARY BY CITY INSPECTION.
16. IRRIGATION SYSTEMS ARE NOT ALLOWED WITHIN THE PUBLIC RIGHT-OF-WAY.
17. AT LEAST ONE PERSON ON A PROJECT OR SITE MUST HAVE COMPLETED THE LEVEL 1A EROSION EDUCATION & TRAINING COURSE AND BE CERTIFIED BY GSWCC.
18. SUBCONTRACTORS MUST COMPLETE EITHER LEVEL 1A EROSION EDUCATION & TRAINING COURSE OR ATTEND SUBCONTRACTOR AWARENESS SEMINAR.

EROSION, SEDIMENTATION AND POLLUTION CONTROL NOTES:

1. THE PRIMARY PERMITTEE IS THE CITY OF ALPHARETTA.
2. THE PROJECT INCLUDES SIDEWALK IMPROVEMENTS ALONG THE SOUTH SIDE OF MANSELL ROAD AT MANSELL ROAD OVER BIG CREEK AND BIG CREEK GREENWAY AND INVOLVES PUBLIC ACCESS IMPROVEMENTS WITHIN THE RIGHT-OF-WAY. THE DOWNSTREAM PROPERTIES ARE ZONED N/A AND ARE DEVELOPED AS EXEMPT - PUBLIC PROPERTY AND COMMERCIAL LARGE TRACTS. NO ADVERSE IMPACTS ARE ANTICIPATED AS A RESULT OF THIS PROJECT.
3. TOTAL PROJECT ACREAGE: 0.78 ACRES TOTAL DISTURBED ACREAGE: 0.78 ACRES.
4. THE PROJECT LIMITS DO CONTAIN STATE WATERS AND/OR WETLANDS. THE PROJECTS LIMITS ARE WITHIN 200 LF OF STATE WATERS.
5. A PORTION OF THIS PROJECT LIES WITHIN THE SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD, AS PER THE FEDERAL EMERGENCY MANAGEMENT AGENCY, AND SHOWN ON COMMUNITY-PANELS #1300840066F, LAST REVISED SEPTEMBER 18, 2013.
6. NO PORTION OF THIS PROJECT LIES WITHIN THE SPECIAL FLOOD HAZARD AREAS (SFHAs), AREAS OF 1% ANNUAL CHANCE FLOOD WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE, AS SHOWN ON THE CITY OF ALPHARETTA EXPANDED FLOODPLAIN MAPS. NO PORTION OF THIS PROJECT LIES WITHIN THE FUTURE FLOODPLAIN FOR THE CITY OF ALPHARETTA.
7. MAINTENANCE OF ALL SOIL EROSION AND SEDIMENTATION CONTROL PRACTICES, WHETHER TEMPORARY OR PERMANENT, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
8. INDICATED SOIL SERIES DELINEATIONS BASED ON THE CURRENT USDA SOIL SURVEY FOR FULTON COUNTY GEORGIA.
9. PROJECT RECEIVING WATERS: BIG CREEK
10. NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS. A BUFFER ENCROACHMENT IS PROPOSED. A STREAM BUFFER VARIANCES IS REQUIRED.
11. SEDIMENT STORAGE VOLUME MUST BE IN PLACE PRIOR TO, AND DURING, ALL LAND DISTURBING ACTIVITIES UNTIL FINAL STABILIZATION OF THE SITE HAS BEEN ACHIEVED.
12. 67 CY/AC SEDIMENT STORAGE SUBSTANTIALLY HANDLED BY SILT FENCING AND COMPOST FILTER SOCKS. THE LINEAR NATURE OF THE PROJECT COUPLED WITH LIMITED WORK AREA DOES NOT PROVIDE OPPORTUNITY FOR INSTALLATION OF PERMANENT BMPS TO PREVENT POLLUTANTS FROM DISCHARGING FROM THE SITE WITHOUT FURTHER ENCROACHMENT INTO ADJACENT PROPERTIES OR ROADWAY. DURING CONSTRUCTION, SILT FENCING, COMPOST FILTER SOCKS, TEMPORARY GRASSING, AND MULCH WILL BE USED TO PREVENT POLLUTANTS FROM DISCHARGING FROM THE SITE. AFTER CONSTRUCTION IS COMPLETE, ALL AREAS WILL BE STABILIZED WITH PERMANENT GRASSING.
13. CRITICAL AREAS: STATE WATERS ARE PRESENT ON SITE AND SHALL BE ROTECTED AT ALL TIMES THROUGHOUT DURATION OF CONSTRUCTION.
14. ROLLED EROSION CONTROL PRODUCTS (Ss-RECP) SHALL BE INSTALLED ON ALL SLOPES STEEPER THAN 3:1.
15. APPROVED PLANS MUST BE ON SITE AT ALL TIMES.
16. CONTRACTOR MUST ATTEND CITY OF ALPHARETTA PRE-CONSTRUCTION CLASS PRIOR TO SITE INITIATION.
17. THIS PROJECT DOES NOT DISCHARGE WATER INTO AN IMPAIRED STREAM SEGMENT, OR WITHIN 1 LINEAR MILE UPSTREAM OF AND WITHIN THE SAME WATERSHED AS, ANY PORTION OF AN BIOTA IMPAIRED STREAM SEGMENT.
18. AMENDMENTS/REVISIONS TO THE ES&PC PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMPS WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL WHO PREPARED THE PLAN. ALL CHANGES MUST BE APPROVED BY CITY OF ALPHARETTA.
19. THE PROJECT WILL HAVE A MINIMAL IMPACT ON THE OVERALL STORM WATER RUN OFF FOR THE PROJECT BASIN.
20. CONCRETE WASHDOWN IS NOT ALLOWED.
21. WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.
22. THE ES&PC PLAN IS IN COMPLIANCE WITH WASTE DISPOSAL, SANITARY SEWER, AND SEPTIC TANK REGULATIONS.
23. IN ORDER TO PREVENT AND CONTROL POTENTIAL LEAKS AND/OR SPILLS OF PETROLEUM PRODUCTS SUCH AS FUELS AND LUBRICATING MATERIALS, AND OTHER POTENTIALLY HAZARDOUS MATERIALS, THE FOLLOWING BEST MANAGEMENT PRACTICES SHALL BE UTILIZED:
 - a. ESTABLISH SECURED STORAGE AREAS FOR FUELS AND CHEMICALS.
 - b. UTILIZE COVERED MATERIAL STORAGE.
 - c. UTILIZE MATERIAL STORAGE CONTAINMENT, SUCH AS BERMS, LINED SURFACES, SECONDARY CONTAINMENT DEVICES.
 - d. PERFORM REGULAR INSPECTIONS OF EQUIPMENT FOR LEAKS.
 - e. UTILIZE DRIP PANS, WHERE APPROPRIATE.
 - f. PROVIDE SUFFICIENT SPILL CLEANUP MATERIALS ON-SITE IN ORDER TO RESPOND TO ACCIDENTAL SPILLS.



CITY OF ALPHARETTA
DEPARTMENT OF PUBLIC WORKS
1790 HEMBREE ROAD
ALPHARETTA, GA 30009



CIVIL DESIGN PLANS
FOR THE
BIG CREEK GREENWAY
BOARDWALK
REPLACEMENT

FINAL PLANS
AUGUST 26th, 2022

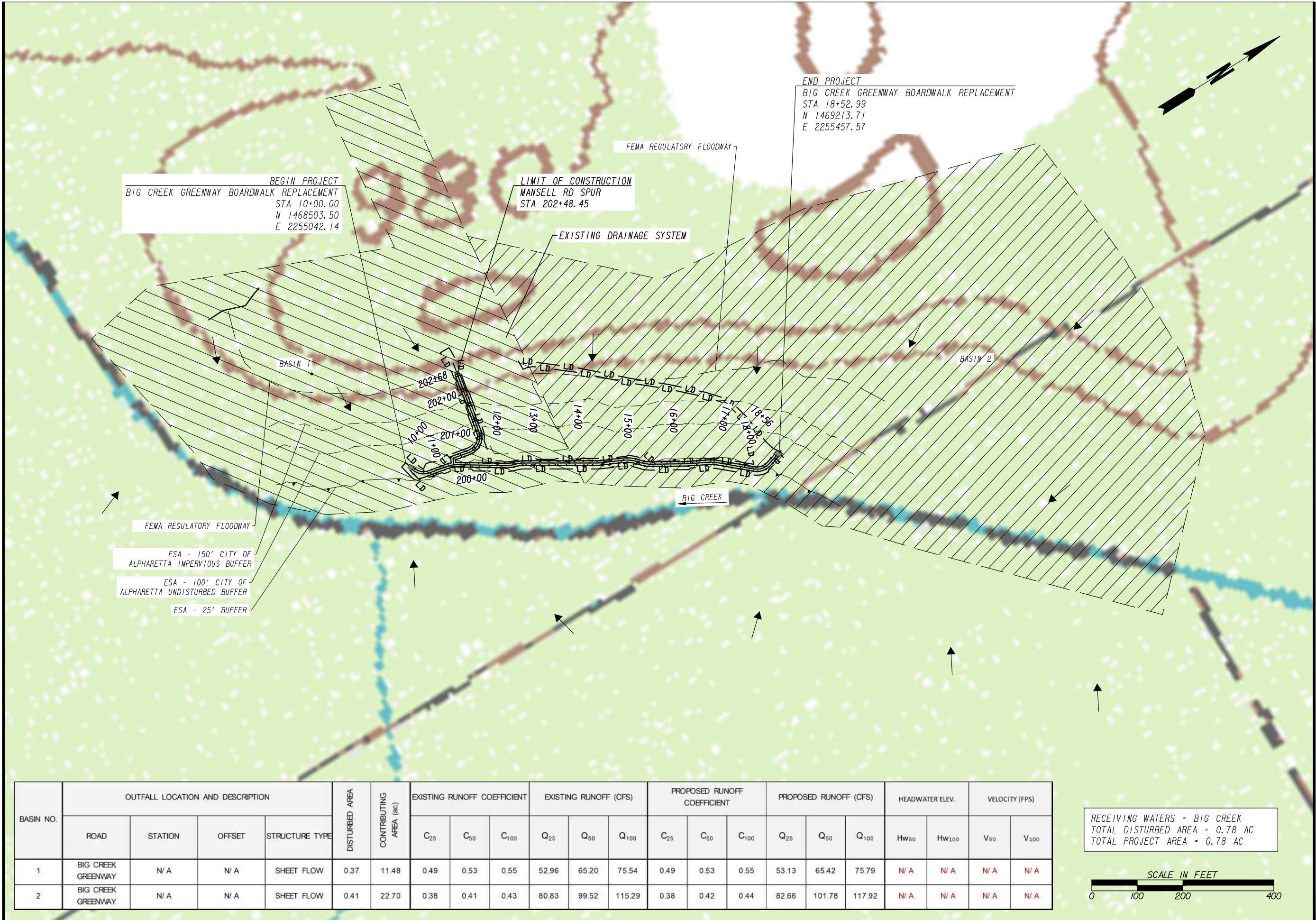
REVISION		
No.	Date	Revision

SHEET NO.
CE003

ESPCP GENERAL
NOTES

Level II Certification # 0000064868

Designed by:	PFJ
Drawn by:	PFJ
Checked by:	WWD
File Name:	CE003.dwg



BEGIN PROJECT
BIG CREEK GREENWAY BOARDWALK REPLACEMENT
STA 10+00.00
N 1468503.50
E 2255042.14

LIMIT OF CONSTRUCTION
MANSELL RD SPUR
STA 202+48.45

END PROJECT
BIG CREEK GREENWAY BOARDWALK REPLACEMENT
STA 18+52.99
N 1469213.71
E 2255457.57

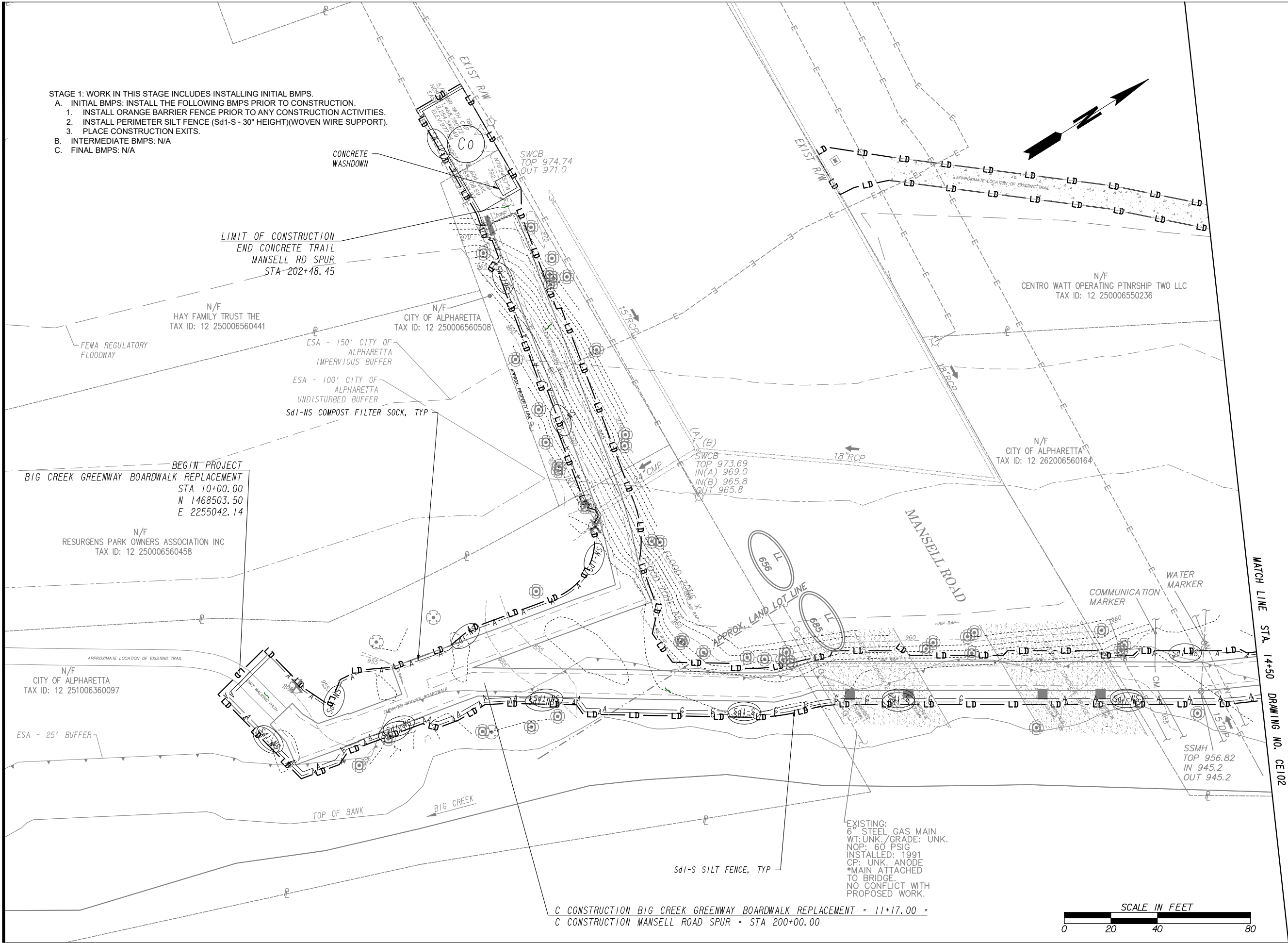
ESA - 150' CITY OF ALPHARETTA IMPERVIOUS BUFFER
ESA - 100' CITY OF ALPHARETTA UNDISTURBED BUFFER
ESA - 25' BUFFER

RECEIVING WATERS = BIG CREEK
TOTAL DISTURBED AREA = 0.78 AC
TOTAL PROJECT AREA = 0.78 AC



BASIN NO.	OUTFALL LOCATION AND DESCRIPTION				DISTURBED AREA	CONTRIBUTING AREA (ac)	EXISTING RUNOFF COEFFICIENT			EXISTING RUNOFF (CFS)			PROPOSED RUNOFF COEFFICIENT			PROPOSED RUNOFF (CFS)			HEADWATER ELEV.		VELOCITY (FPS)	
	ROAD	STATION	OFFSET	STRUCTURE TYPE			C ₂₅	C ₅₀	C ₁₀₀	Q ₂₅	Q ₅₀	Q ₁₀₀	C ₂₅	C ₅₀	C ₁₀₀	Q ₂₅	Q ₅₀	Q ₁₀₀	HW ₅₀	HW ₁₀₀	V ₅₀	V ₁₀₀
1	BIG CREEK GREENWAY	N/A	N/A	SHEET FLOW	0.37	11.48	0.49	0.53	0.55	52.96	65.20	75.54	0.49	0.53	0.55	53.13	65.42	75.79	N/A	N/A	N/A	N/A
2	BIG CREEK GREENWAY	N/A	N/A	SHEET FLOW	0.41	22.70	0.38	0.41	0.43	80.83	99.52	115.29	0.38	0.42	0.44	82.66	101.78	117.92	N/A	N/A	N/A	N/A

REVISION		
No.	Date	Revision



CITY OF ALPHARETTA
DEPARTMENT OF PUBLIC WORKS
1790 HEMBREE ROAD
ALPHARETTA, GA 30009



CIVIL DESIGN PLANS
FOR THE
BIG CREEK GREENWAY
BOARDWALK
REPLACEMENT

FINAL PLANS
AUGUST 26th, 2022

REVISION

No.	Date	Revision

SHEET NO.

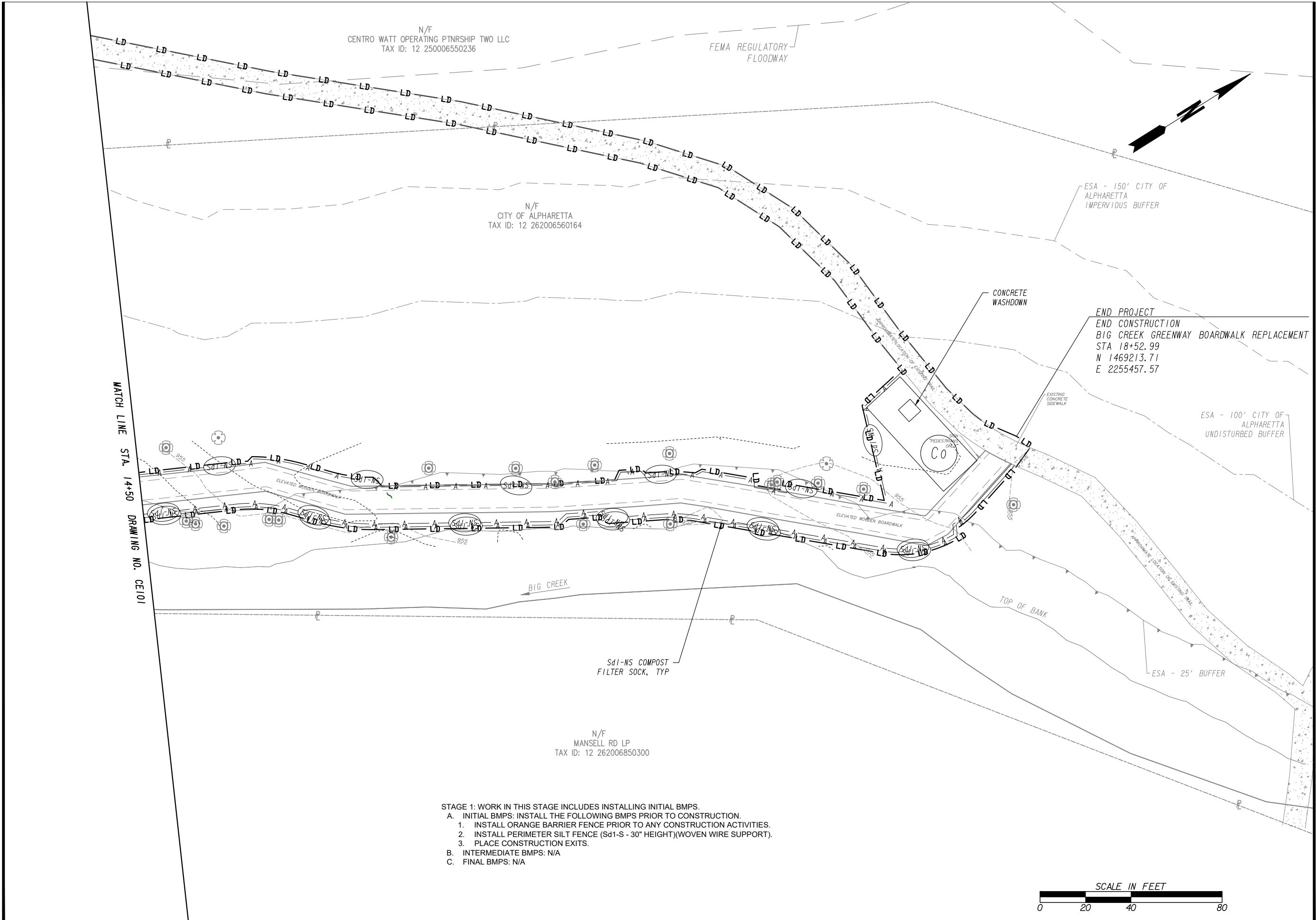
CE101

INITIAL PHASE -
BMP LOCATION
DETAILS



Level II Certification # 0000064868

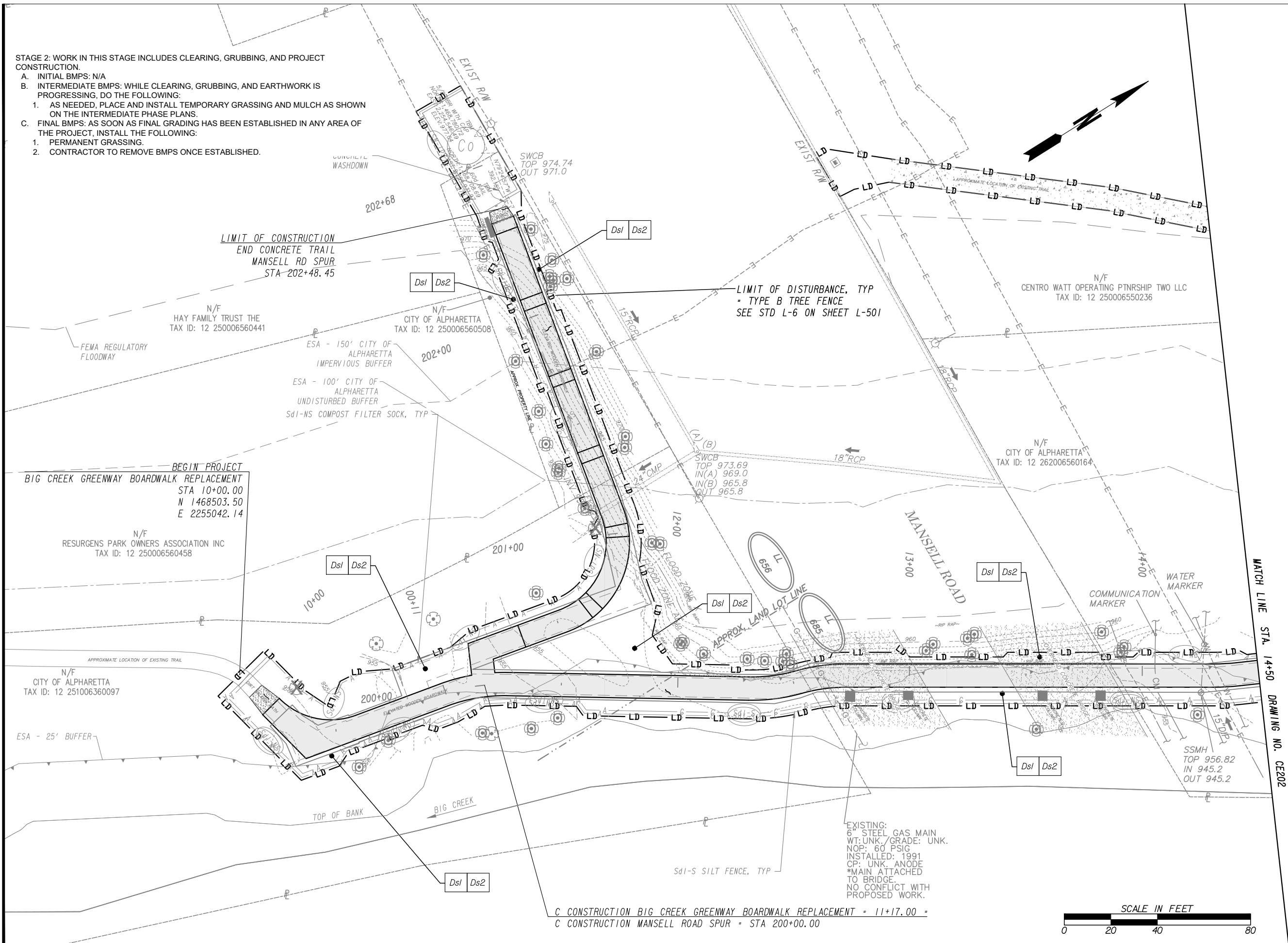
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Drawn by:	PFJ
Checked by:	WWD
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REVISION		
No.	Date	Revision

- STAGE 1: WORK IN THIS STAGE INCLUDES INSTALLING INITIAL BMPS.
- A. INITIAL BMPS: INSTALL THE FOLLOWING BMPS PRIOR TO CONSTRUCTION.
 - 1. INSTALL ORANGE BARRIER FENCE PRIOR TO ANY CONSTRUCTION ACTIVITIES.
 - 2. INSTALL PERIMETER SILT FENCE (Sd1-S - 30" HEIGHT)(WOVEN WIRE SUPPORT).
 - 3. PLACE CONSTRUCTION EXITS.
 - B. INTERMEDIATE BMPS: N/A
 - C. FINAL BMPS: N/A

- STAGE 2: WORK IN THIS STAGE INCLUDES CLEARING, GRUBBING, AND PROJECT CONSTRUCTION.
- A. INITIAL BMPS: N/A
- B. INTERMEDIATE BMPS: WHILE CLEARING, GRUBBING, AND EARTHWORK IS PROGRESSING, DO THE FOLLOWING:
1. AS NEEDED, PLACE AND INSTALL TEMPORARY GRASSING AND MULCH AS SHOWN ON THE INTERMEDIATE PHASE PLANS.
- C. FINAL BMPS: AS SOON AS FINAL GRADING HAS BEEN ESTABLISHED IN ANY AREA OF THE PROJECT, INSTALL THE FOLLOWING:
1. PERMANENT GRASSING.
 2. CONTRACTOR TO REMOVE BMPS ONCE ESTABLISHED.



CITY OF ALPHARETTA
DEPARTMENT OF PUBLIC WORKS
1790 HEMBREE ROAD
ALPHARETTA, GA 30009



CIVIL DESIGN PLANS
FOR THE
BIG CREEK GREENWAY
BOARDWALK
REPLACEMENT

FINAL PLANS
AUGUST 26th, 2022

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SHEET NO.

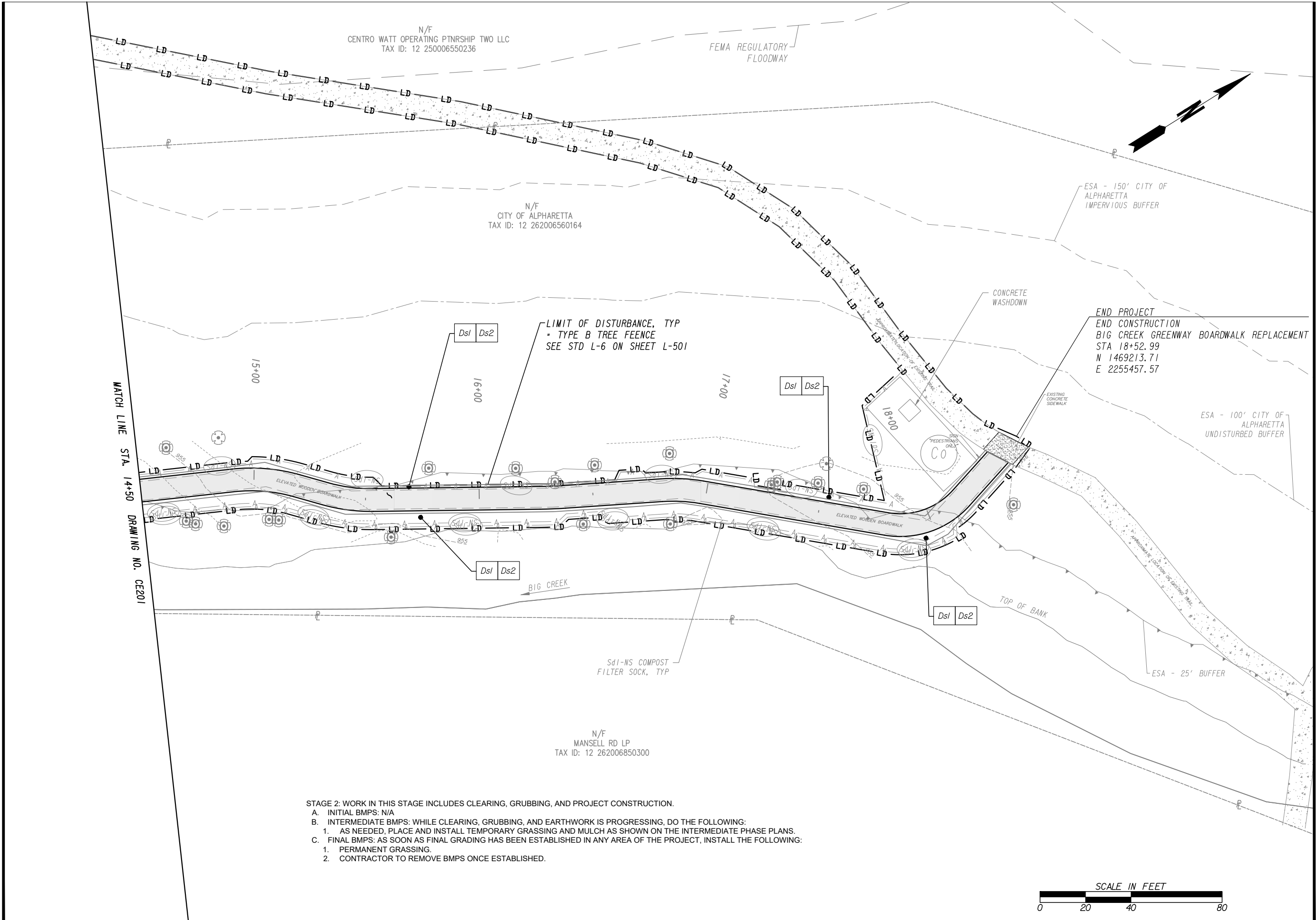
CE201

INTERMEDIATE
PHASE - BMP
LOCATION DETAILS

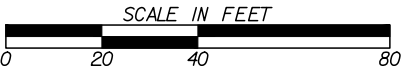


Level II Certification # 0000064868

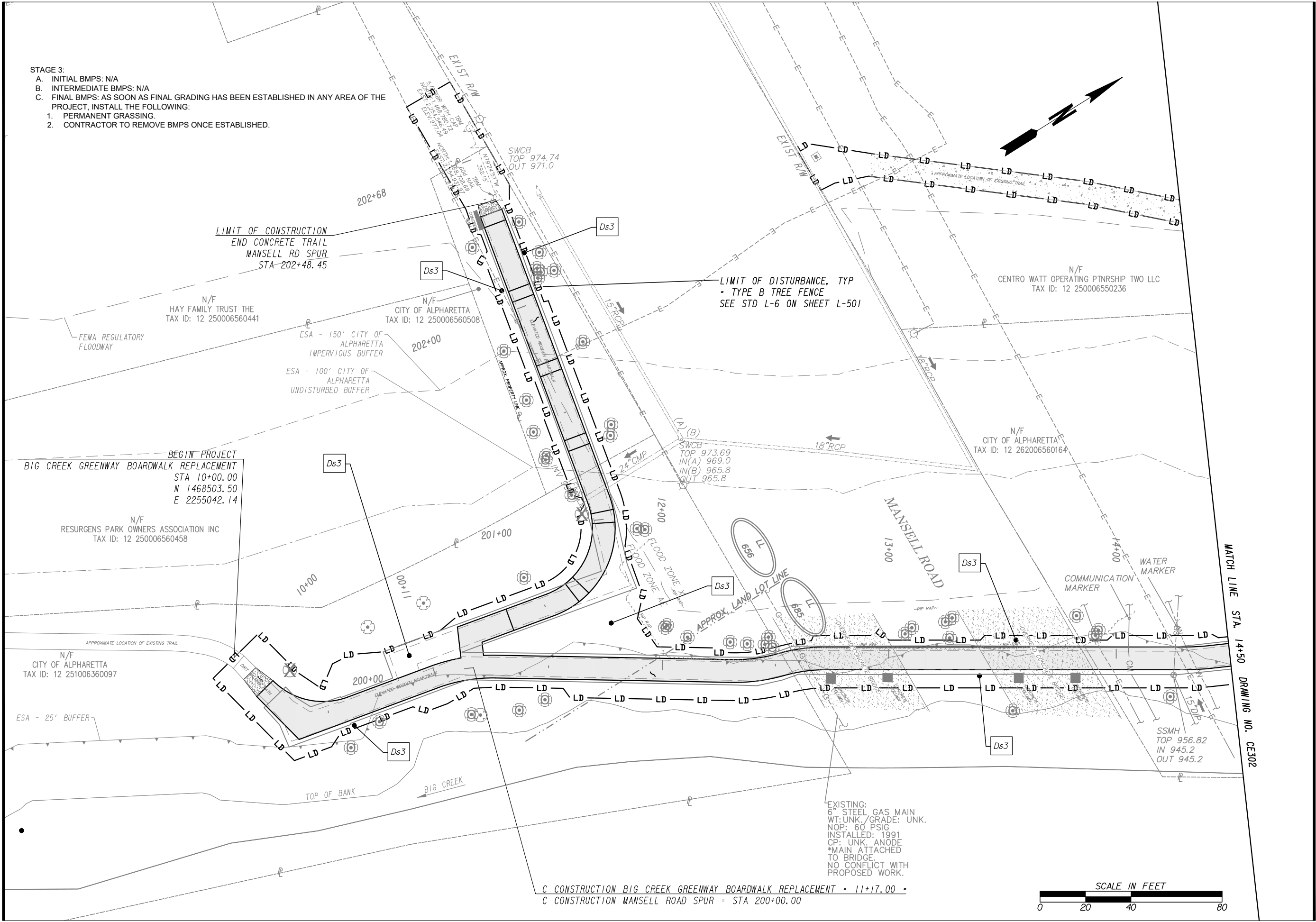
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Checked by:	WWD
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- STAGE 2: WORK IN THIS STAGE INCLUDES CLEARING, GRUBBING, AND PROJECT CONSTRUCTION.
- A. INITIAL BMPs: N/A
 - B. INTERMEDIATE BMPs: WHILE CLEARING, GRUBBING, AND EARTHWORK IS PROGRESSING, DO THE FOLLOWING:
 - 1. AS NEEDED, PLACE AND INSTALL TEMPORARY GRASSING AND MULCH AS SHOWN ON THE INTERMEDIATE PHASE PLANS.
 - C. FINAL BMPs: AS SOON AS FINAL GRADING HAS BEEN ESTABLISHED IN ANY AREA OF THE PROJECT, INSTALL THE FOLLOWING:
 - 1. PERMANENT GRASSING.
 - 2. CONTRACTOR TO REMOVE BMPs ONCE ESTABLISHED.



REVISION		
No.	Date	Revision



STAGE 3:
A. INITIAL BMPs: N/A
B. INTERMEDIATE BMPs: N/A
C. FINAL BMPs: AS SOON AS FINAL GRADING HAS BEEN ESTABLISHED IN ANY AREA OF THE PROJECT, INSTALL THE FOLLOWING:
1. PERMANENT GRASSING.
2. CONTRACTOR TO REMOVE BMPs ONCE ESTABLISHED.

LIMIT OF CONSTRUCTION
END CONCRETE TRAIL
MANSELL RD SPUR
STA 202+48.45

LIMIT OF DISTURBANCE, TYP
- TYPE B TREE FENCE
SEE STD L-6 ON SHEET L-501

BEGIN PROJECT
BIG CREEK GREENWAY BOARDWALK REPLACEMENT
STA 10+00.00
N 1468503.50
E 2255042.14

N/F
RESURGENS PARK OWNERS ASSOCIATION INC
TAX ID: 12 250006560458

N/F
CITY OF ALPHARETTA
TAX ID: 12 251006360097

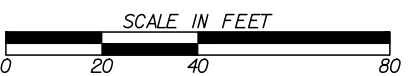
ESA - 25' BUFFER

TOP OF BANK

BIG CREEK

C CONSTRUCTION BIG CREEK GREENWAY BOARDWALK REPLACEMENT = 11+17.00 =
C CONSTRUCTION MANSELL ROAD SPUR = STA 200+00.00

EXISTING:
6" STEEL GAS MAIN
WT: UNK. GRADE: UNK.
NOP: 60 PSIG
INSTALLED: 1991
CP: UNK. ANODE
*MAIN ATTACHED
TO BRIDGE
NO CONFLICT WITH
PROPOSED WORK.



CITY OF ALPHARETTA
DEPARTMENT OF PUBLIC WORKS
1790 HEMBREE ROAD
ALPHARETTA, GA 30009



CIVIL DESIGN PLANS
FOR THE
BIG CREEK GREENWAY
BOARDWALK
REPLACEMENT

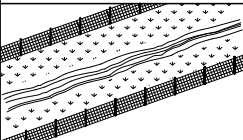
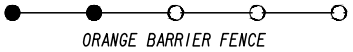
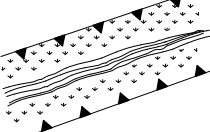
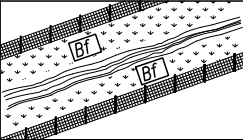
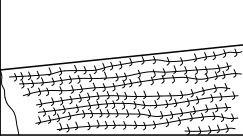
FINAL PLANS
AUGUST 26th, 2022

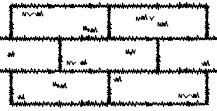
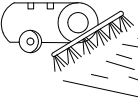
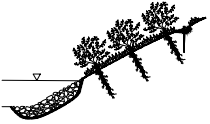
REVISION		
No.	Date	Revision

SHEET NO.
CE301

FINAL PHASE - BMP
LOCATION DETAILS

Level II Certification # 0000064868	
Designed by:	PFJ
Drawn by:	PFJ
Checked by:	WWD
File Name:	CE301.dwg

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
	ORANGE BARRIER FENCE		ORANGE BARRIER FENCE DELINEATES ENVIRONMENTALLY SENSITIVE AREAS WHERE THE CONTRACTOR SHALL NOT CLEAR, GRUB, OR PLACE CONSTRUCTION MATERIALS OR EQUIPMENT WITHIN THIS AREA.
	LINE CODE	 ORANGE BARRIER FENCE	
ESA	ENVIRONMENTALLY SENSITIVE AREA		AN ENVIRONMENTALLY SENSITIVE AREA (ESA) CONTAINS RESOURCES THAT ARE ENVIRONMENTALLY, CULTURALLY, OR HISTORICALLY SENSITIVE. ESAs INCLUDE, BUT ARE NOT LIMITED TO: STATE WATER BUFFERS, HISTORIC SITES, ARCHAEOLOGICAL SITES, AND PROTECTED ANIMAL AND PLANT SPECIES HABITATS. IF WORK IS AUTHORIZED IN THIS AREA, THE WORK MUST BE PERFORMED IN ACCORDANCE WITH SECTION 107 AND ANY OTHER APPLICABLE SPECIAL PROVISIONS AND APPLICABLE PLAN NOTES.
	LINE CODE	 ESA-25' (OR 50') STREAM BUFFER, ETC.	
Bf	BUFFER ZONE		A STRIP OF UNDISTURBED ORIGINAL VEGETATION, ENHANCED OR RESTORED EXISTING VEGETATION, OR THE RE-ESTABLISHMENT OF VEGETATION SURROUNDING AN AREA OF DISTURBANCE OR BORDERING STREAMS, PONDS, WETLANDS, LAKES, AND COASTAL WATERS. WHEN NECESSARY, BUFFER ZONES ARE TO BE PROTECTED BY ORANGE BARRIER FENCE.
	SYMBOL		
Ds1	MULCH SECTION 163		THIS IS AN APPLICATION OF STRAW MULCH USED TO REDUCE SOIL EROSION AND STABILIZE THE SOIL. IT IS USED TO CONTROL EROSION IN AREAS WHERE PERMANENT VEGETATION IS OUT OF SEASON OR TO TEMPORARILY STABILIZE AREAS PRIOR TO FINAL GRADING. MULCHING REQUIREMENTS ARE ADDRESSED BY STANDARD SPECIFICATIONS AND/OR THE PROJECT ENGINEER. THE BMP SYMBOL FOR APPLICABLE AREAS AND/OR A NOTE SHALL BE INCLUDED ON APPLICABLE SHEETS IN SECTION 54.
	SYMBOL		
Ds2	TEMPORARY GRASSING SECTION 163,700		THE SOWING OF A QUICK GROWING SPECIES OF GRASS SUITABLE TO THE AREA AND SEASON. IT IS TYPICALLY USED TO CONTROL EROSION IN AREAS LONGER THAN MULCHING IS EXPECTED TO LAST. TEMPORARY GRASSING SHOULD BE USED ON ALL PROJECTS ACCORDING TO THE STANDARD SPECIFICATIONS. THE BMP SYMBOL FOR APPLICABLE AREAS AND/OR A NOTE SHALL BE INCLUDED ON APPLICABLE SHEETS IN SECTION 54.
	SYMBOL		

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Ds3	PERMANENT GRASSING SECTION 700		THE SOWING OF PERMANENT VEGETATION, SUCH AS GRASS, SUITABLE TO THE AREA AND SEASON. PERMANENT VEGETATION SHALL BE USED ON ALL PROJECTS ACCORDING TO THE STANDARD SPECIFICATION. THE BMP SYMBOL FOR APPLICABLE AREAS AND/OR A NOTE SHALL BE INCLUDED ON APPLICABLE SHEETS IN SECTION 54.
	SYMBOL		
Ds4	SODDING CONSTRUCTION DETAIL D-54 SECTION 700, 890		THE INSTALLATION OF A SPECIES OF GRASS SODDING SUITABLE TO THE AREA AND SEASON TO PROVIDE IMMEDIATE PERMANENT VEGETATION. SODDING MAY BE SHOWN FOR HIGHLY SENSITIVE AREAS, TO IMPROVE AESTHETICS, OR FOR SPECIAL PLANTING REQUIREMENTS ON THE BASIS OF ENVIRONMENTAL COMMITMENTS OR LANDSCAPING REQUIREMENTS. THE BMP PATTERN FOR APPLICABLE AREAS AND/OR A NOTE SHALL BE INCLUDED ON APPLICABLE SHEETS IN SECTION 54.
	PATTERN		
FI-Co	FLOCCULANTS COAGULANTS SECTION 163,700, 895		FLOCCULANTS AND COAGULANTS ARE USED TO SETTLE SUSPENDED SEDIMENT, HEAVY METALS, AND HYDROCARBONS (TSS) IN SLOW MOVING RUNOFF FROM CONSTRUCTION SITES FOR WATER CLARIFICATION. ANIONIC POLYACRYLAMIDES (PAM) MAY BE USED IN CONJUNCTION WITH BMPs WITHIN CHANNELS UPSTREAM OF A POST-CONSTRUCTION POND, TEMPORARY SEDIMENT BASIN, OR TEMPORARY SEDIMENT TRAP. FLOCCULANTS SHALL NOT BE USED DOWNSTREAM OF AFOREMENTIONED BMPs! FLOCCULANTS/COAGULANTS ARE TO BE SHOWN ON PLANS WITH APPLICABLE BMP IF NEEDED. PAYMENT FOR PAM AS A FLOCCULANT WILL BE INCLUDED IN THE PRICE FOR THE INSTALLATION AND/OR MAINTENANCE OF THE BMP IT IS USED IN CONJUNCTION WITH. NO SEPARATE PAYMENT WILL BE MADE.
	SYMBOL	 POLYACRYLAMIDE	
Sb	STREAMBANK STABILIZATION SECTION 702		STREAMBANK STABILIZATION IS THE USE OF READILY AVAILABLE NATIVE PLANT MATERIALS TO MAINTAIN AND ENHANCE STREAMBANKS, OR TO PREVENT, OR RESTORE AND REPAIR SMALL STREAMBANK EROSION PROBLEMS. STREAMBANK STABILIZATION AREAS SHOULD BE SHOWN ON THE PLANS WHEN APPLICABLE TO THE PROJECT. REFER TO THE PROJECT'S STREAM AND STREAM BUFFER MITIGATION PLANS FOR PLANT SPECIES, LOCATIONS, AND OTHER PLANTING DETAILS.
	PATTERN		

NOTE:

- DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
- FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs), REFER TO THE LATEST EDITION OF THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION'S, "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".



CITY OF ALPHARETTA
DEPARTMENT OF PUBLIC WORKS
1790 HEMBREE ROAD
ALPHARETTA, GA 30009



CIVIL DESIGN PLANS
FOR THE
BIG CREEK GREENWAY
BOARDWALK
REPLACEMENT

FINAL PLANS
AUGUST 26th, 2022

REVISION		
No.	Date	Revision

SHEET NO.
CE501

EROSION CONTROL
LEGEND - UNIFORM
CODE SHEET 1



Level II Certification # 0000064868

Designed by:	PFJ
Drawn by:	PFJ
Checked by:	WWD
File Name:	CE501.dwg

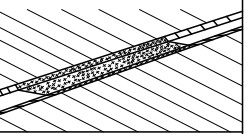
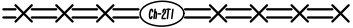
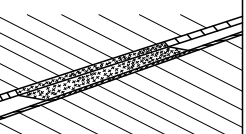
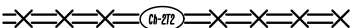
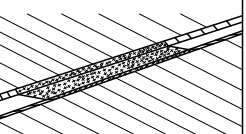
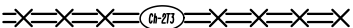
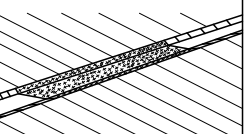
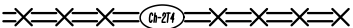
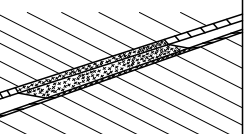
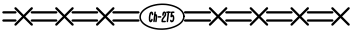
REVISION		
No.	Date	Revision

CODE	PRAC/ICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Ss	SLOPE STABILIZATION CONSTRUCTION DETAIL D-35 SECTION 716		SLOPE STABILIZATION (EROSION CONTROL MATTING) IS A PROTECTIVE COVERING USED TO PREVENT EROSION AND ESTABLISH TEMPORARY OR PERMANENT VEGETATION ON STEEP SLOPES, SHORE LINES, OR CHANNELS. SLOPE STABILIZATION MAY BE A ROLLED EROSION CONTROL PRODUCT (RECP) OR A HYDRAULIC EROSION CONTROL PRODUCT (HECP).
		PATTERN 	SLOPE STABILIZATION SHALL BE USED ON ALL CUT OR FILL SLOPES OF 2.5:1 OR STEEPER AND WITHIN 50 FEET OF ALL CROSS DRAINS AND CULVERTS. NOTE: ONLY COCONUT FIBER BLANKET OR WOOD FIBER BLANKET SHALL BE USED AS SLOPE STABILIZATION WITHIN BUFFERED AREAS.
Tac	TACKIFIERS SECTION 163, 700, 895		TACKIFIERS HYDRATE IN WATER AND READILY BLEND WITH OTHER SLURRY MATERIALS AND ARE USED TO TIE-DOWN FOR SOIL, COMPOST, SEED, STRAW, HAY OR MULCH. TACKIFIERS REQUIREMENTS, SUCH AS ANIONIC POLYACRYLAMIDES (PAM) ARE ADDRESSED BY STANDARD SPECIFICATIONS AND ARE NOT TYPICALLY SHOWN ON THE PLANS. PAM IS TYPICALLY USED BY THE CONTRACTOR FOR TEMPORARY OR PERMANENT GRASSING.
		SYMBOL  POLYACRYLAMIDE	REFER TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR CRITERIA.
Cd-F	FABRIC CHECK DAM CONSTRUCTION DETAIL D-24D SECTION 171		A CHECK DAM COMPOSED OF SYNTHETIC FIBER FABRIC, WIRE REINFORCED, POST, OVERFLOW WEIR, AND TURF REINFORCEMENT MATTING (TRM) SPLASHPAD PLACED IN DITCHES IN A SPECIAL CONFIGURATION WHICH CONTROLS ENERGY DISSIPATION AND FILTRATION OF STORM WATER. SEE CONSTRUCTION DETAIL D-24D FOR ADDITIONAL INFORMATION AND SPACING REQUIREMENTS. THIS ITEM IS SUITABLE FOR USE IN ROADSIDE DITCHES THAT ARE PART OF INFRASTRUCTURE CONSTRUCTION PROJECTS AND WITHIN THE CLEAR ZONE.
		SYMBOL 	IF THIS ITEM IS USED IN AN AREA WITH FLOWS GREATER THAN 2.0-CFS OR WITHOUT A SEDIMENT BASIN, A MINIMUM OF ONE ROCK FILTER DAM SHALL BE USED AT THE DOWNSTREAM DISCHARGE POINT.
Cd-Fs	COMPOST FILTER SOCK CHECK DAM CONSTRUCTION DETAIL D-52 SECTION 163		A COMPOST FILTER SOCK CHECK DAM IS COMPOSED OF A PHOTODEGRADABLE OR BIODEGRADABLE KNITTED MESH MATERIAL CONTAINING A WEED FREE FILLER MATERIAL DERIVED FROM A WELL-DECOMPOSED SOURCE OF ORGANIC MATTER. THEY SHALL BE PROPERLY STAKED FOR DITCH APPLICATIONS. REFER TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR MATERIAL SPECIFICATIONS.
		SYMBOL 	IF THIS ITEM IS USED IN AN AREA WITH FLOWS GREATER THAN 2.0-CFS OR WITHOUT A SEDIMENT BASIN, A MINIMUM OF ONE ROCK FILTER DAM SHALL BE USED AT THE DOWNSTREAM DISCHARGE POINT.
Cd-Hb	BALED STRAW CHECK DAM CONSTRUCTION DETAIL D-52 SECTION 163		A BALE STRAW CHECK DAM IS COMPOSED OF BALES PREFERABLY BOUND WITH WIRE OR NYLON INSTEAD OF TWINE. BALES SHOULD BE PLACED IN ROWS WITH BALE ENDS TIGHTLY ABUTTING ADJACENT BALES. THE DOWNSTREAM ROW OF BALES SHALL BE PLACED IN A TRENCH TO ALLOW THE TOP OF THE BALE'S LONG, WIDE SIDE TO BE LEVEL WITH THE GROUND AS A NON-ERODIBLE SPLASH PAD. PROPER STAKING IS ALSO REQUIRED FOR DITCH APPLICATIONS.
		SYMBOL 	IF THIS ITEM IS USED IN AN AREA WITH FLOWS GREATER THAN 2.0-CFS OR WITHOUT A SEDIMENT BASIN, A MINIMUM OF ONE ROCK FILTER DAM SHALL BE USED AT THE DOWNSTREAM DISCHARGE POINT.

CODE	PRAC/ICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Cd-S	STONE CHECK DAM OR SANDBAG CHECK DAM CONSTRUCTION DETAIL D-56 SECTION 163, 603		STONE CHECK DAMS ARE CONSTRUCTED OF TYPE-3 RIP-RAP WITH GEOTEXTILE UNDERLINER. STONE CHECK DAMS ARE PREFERRED IN ROADWAY DITCHES OUTSIDE THE CLEAR ZONE. CONSIDERATION SHOULD BE GIVEN TO USING OTHER APPROPRIATE CHECK DAMS AND/OR BMPs WITHIN THE CLEAR ZONE. SANDBAG CHECK DAMS ARE RECOMMENDED IN CONCRETE LINED CHANNELS FOR TEMPORARY VELOCITY CONTROL ONLY. ENSURE DISCHARGE POINT IS PROPERLY STABILIZED AND INCLUDE APPROPRIATE BMPs FOR SEDIMENT STORAGE UPSTREAM AND/OR DOWNSTREAM OF CONCRETE LINED CHANNELS.
		SYMBOL 	IF THIS ITEM IS USED IN AN AREA WITH FLOWS GREATER THAN 2.0-CFS OR WITHOUT A SEDIMENT BASIN, A MINIMUM OF ONE ROCK FILTER DAM SHALL BE USED AT THE DOWNSTREAM DISCHARGE POINT.
Ch-1	VEGETATED CHANNEL STABILIZATION SECTION 700		A NEW OR EXISTING CHANNEL MAY BE LINED WITH PERMANENT VEGETATION ONLY FOR VELOCITIES UP TO 5.0 fps. THIS MEASURE SHALL BE DESIGNED IN ACCORDANCE WITH THE GDOT CHANNEL LINING DESIGN PROGRAM. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED. TYPICALLY NOT SHOWN IN PLANS.
		LINE CODE 	
Ch-2R1	CHANNEL STABILIZATION RIP-RAP, TYPE 1 CONSTRUCTION DETAIL D-49 SECTION 603		THIS ITEM CONSISTS OF LINING A CHANNEL WITH TYPE 1 RIP-RAP 24" THICK (UNLESS SPECIFIED OTHERWISE) PLACED ON TOP OF A GEOTEXTILE UNDERLINER. THE RIP-RAP SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED.
		LINE CODE 	"Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
Ch-2R3	CHANNEL STABILIZATION RIP-RAP, TYPE 3 CONSTRUCTION DETAIL D-49 SECTION 603		THIS ITEM CONSISTS OF LINING A CHANNEL WITH TYPE 3 RIP-RAP 24" THICK (UNLESS SPECIFIED OTHERWISE) PLACED ON TOP OF A GEOTEXTILE UNDERLINER. THE RIP-RAP SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED.
		LINE CODE 	"Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

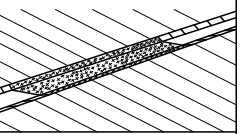
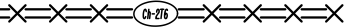
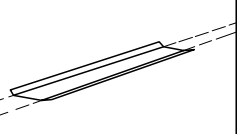
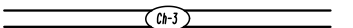
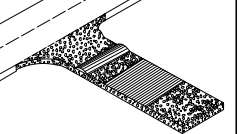
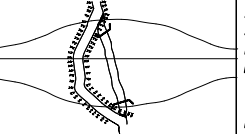
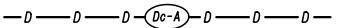
NOTE:

- DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
- FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs), REFER TO THE LATEST EDITION OF THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION'S, "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Ch-2T1	TURF REINFORCEMENT MAT (TRM) CONSTRUCTION DETAIL D-35 SECTION 711		THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN CONJUNCTION WITH PERMANENT VEGETATION IN CHANNELS TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-2 psf. THE TRM SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM.
		LINE CODE 	"Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
Ch-2T2	TURF REINFORCEMENT MAT (TRM) CONSTRUCTION DETAIL D-35 SECTION 711		THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN CONJUNCTION WITH PERMANENT VEGETATION IN CHANNELS TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-4 psf. THE TRM SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM.
		LINE CODE 	"Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
Ch-2T3	TURF REINFORCEMENT MAT (TRM) CONSTRUCTION DETAIL D-35 SECTION 711		THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN CONJUNCTION WITH PERMANENT VEGETATION IN CHANNELS TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-6 psf. THE TRM SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM.
		LINE CODE 	"Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
Ch-2T4	TURF REINFORCEMENT MAT (TRM) CONSTRUCTION DETAIL D-35 SECTION 711		THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN CONJUNCTION WITH PERMANENT VEGETATION IN CHANNELS TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-8 psf. THE TRM SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM.
		LINE CODE 	"Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
Ch-2T5	TURF REINFORCEMENT MAT (TRM) CONSTRUCTION DETAIL D-35 SECTION 711		THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN CONJUNCTION WITH PERMANENT VEGETATION IN CHANNELS TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-10 psf. THE TRM SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM.
		LINE CODE 	"Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

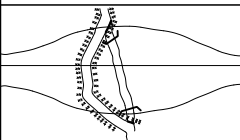
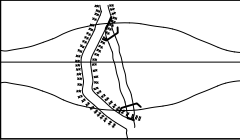
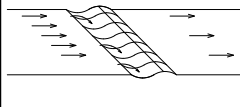
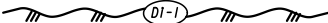
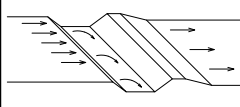
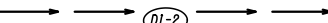
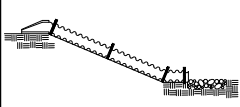
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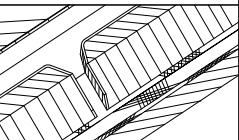
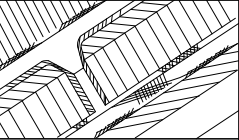
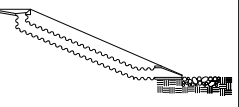
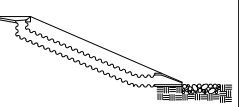
- DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
- FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs), REFER TO THE LATEST EDITION OF THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION'S, "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Ch-2T6	TURF REINFORCEMENT MAT (TRM) CONSTRUCTION DETAIL D-35 SECTION 711		THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN CONJUNCTION WITH PERMANENT VEGETATION IN CHANNELS TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-12 psf. THE TRM SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM.
		LINE CODE 	"Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
Ch-3	CONCRETE CHANNEL STABILIZATION CONSTRUCTION DETAIL D-10, D-49 SECTION 441		CHANNELS ARE LINED WITH CONCRETE FOR VELOCITIES >+ 10 fps. THIS ITEM CONSISTS OF CONSTRUCTING A 4" THICK CONCRETE CHANNEL. THE CONCRETE SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM.
		LINE CODE 	"Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN. RIP-RAP SHOULD BE USED TO DISSIPATE ENERGY DOWNSTREAM OF CONCRETE LINED CHANNELS.
Co	CONSTRUCTION EXIT CONSTRUCTION DETAIL D-41 SECTION 163, 800		A CONSTRUCTION EXIT IS A STONE STABILIZED PAD THAT REDUCES OR ELIMINATES THE TRANSPORT OF MUD FROM CONSTRUCTION AREAS ONTO PUBLIC ROADS BY EQUIPMENT OR RUNOFF. BEST USED AT ACCESS POINTS, I.e. NEW LOCATION PROJECTS, BORROW PITS, WASTE PITS, ACCESS ROADS, ETC. SHOULD BE MINIMUM 20' WIDE, 50' LONG, 6" THICK, AND REQUIRES A GEOTEXTILE UNDERLINER. ON SITES WHERE THE GRADE TOWARD A PAVED AREA IS GREATER THAN 2%, A FULL WIDTH DIVERSION RIDGE 6" TO 8" HIGH WITH 3:1 SLOPES SHALL BE CONSTRUCTED APPROXIMATELY 15' UPSTREAM OF PAVED AREA. A TIRE WASHING AREA TO REMOVE MUD MAY ALSO BE REQUIRED PRIOR TO ENTRANCE ONTO PUBLIC ROADWAYS.
		SYMBOL 	ALL CONSTRUCTION EXIT REQUIREMENTS ARE INCLUDED IN THE PRICE OF THE CONSTRUCTION EXIT.
Dc-A	STREAM DIVERSION CHANNEL GEOTEXTILE, POLYETHYLENE FILM SECTION 163		A TEMPORARY CHANNEL CONSTRUCTED TO CONVEY FLOW AROUND A CONSTRUCTION SITE WHILE A PERMANENT DRAINAGE STRUCTURE IS BEING CONSTRUCTED IN A NATURAL STREAM. THIS IS A MEASURE USED TO PROTECT STREAM BEDS FROM EROSION. LINE THE CHANNEL WITH GEOTEXTILE OR POLYETHYLENE FILM. INSTALL TWO ROWS OF Sd1-S PARALLEL TO THE CHANNEL TO PREVENT SEDIMENT LADEN RUNOFF FROM ENTERING THE STREAM. THE SIZE OF THE CHANNEL WILL DEPEND ON THE DISCHARGE, CHANNEL GEOMETRY, CHANNEL SLOPE AND ROUGHNESS. IT IS ACCEPTABLE FOR VELOCITIES BETWEEN 0 - 2.5 fps.
		LINE CODE 	THE DRAINAGE AREA SHALL BE NOT GREATER THAN 1 SQUARE MILE. CONSTRUCTION OF THE DIVERSION CHANNEL IS INCLUDED IN THE COST OF THE STRUCTURE.

REVISION		
No.	Date	Revision

Designed by:	PFJ
Drawn by:	PFJ
Checked by:	WWD
File Name:	CE501.dwg

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Dc-B	STREAM DIVERSION CHANNEL GEOTEXTILE ONLY SECTION 163		A TEMPORARY CHANNEL CONSTRUCTED TO CONVEY FLOW AROUND A CONSTRUCTION SITE WHILE A PERMANENT DRAINAGE STRUCTURE IS BEING CONSTRUCTED IN A NATURAL STREAM. THIS IS A MEASURE USED TO PROTECT STREAM BEDS FROM EROSION. LINE THE CHANNEL WITH GEOTEXTILE ONLY. INSTALL TWO ROWS OF Sd1-S PARALLEL TO THE CHANNEL TO PREVENT SEDIMENT LADEN RUNOFF FROM ENTERING THE STREAM. THE SIZE OF THE CHANNEL WILL DEPEND ON THE DISCHARGE, CHANNEL GEOMETRY, CHANNEL SLOPE AND ROUGHNESS. IT IS ACCEPTABLE FOR VELOCITIES BETWEEN 2.5 - 9.0 fps.
	LINE CODE — D — D — D — (Dc-B) — D — D — D —		THE DRAINAGE AREA SHALL BE NOT GREATER THAN 1 SQUARE MILE. CONSTRUCTION OF THE DIVERSION CHANNEL IS INCLUDED IN THE COST OF THE STRUCTURE.
Dc-C	STREAM DIVERSION CHANNEL RIP-RAP & GEOTEXTILE SECTION 163		A TEMPORARY CHANNEL CONSTRUCTED TO CONVEY FLOW AROUND A CONSTRUCTION SITE WHILE A PERMANENT DRAINAGE STRUCTURE IS BEING CONSTRUCTED IN A NATURAL STREAM. THIS IS A MEASURE USED TO PROTECT STREAM BEDS FROM EROSION. LINE THE CHANNEL WITH RIP-RAP AND GEOTEXTILE. INSTALL TWO ROWS OF Sd1-S PARALLEL TO THE CHANNEL TO PREVENT SEDIMENT LADEN RUNOFF FROM ENTERING THE STREAM. THE SIZE OF THE CHANNEL WILL DEPEND ON THE DISCHARGE, CHANNEL GEOMETRY, CHANNEL SLOPE AND ROUGHNESS. IT IS ACCEPTABLE FOR VELOCITIES BETWEEN 9.0 - 13.0 fps.
	LINE CODE — D — D — D — (Dc-C) — D — D — D —		THE DRAINAGE AREA SHALL BE NOT GREATER THAN 1 SQUARE MILE. CONSTRUCTION OF THE DIVERSION CHANNEL IS INCLUDED IN THE COST OF THE STRUCTURE.
D1-1	DIVERSION BERM CONSTRUCTION DETAIL D-47 SECTION 205		A NON-DESIGNED TEMPORARY EARTHEN BERM WITH A COMPACTED SUPPORTING RIDGE ON THE LOWER SIDE TO BE USED AT THE EDGE OF EMBANKMENT DURING THE GRADING OPERATION. THE BERMS ARE ALSO CONSTRUCTED ABOVE, ACROSS OR BELOW A SLOPE TO REDUCE THE LENGTH OF A SLOPE. THEY ARE USED TO INTERCEPT RUNOFF, PREVENTING SLOPE EROSION AND TO DIRECT THE RUNOFF TO A STABLE OUTLET, DOWN DRAINS "Dn1" OR CATCHMENT AREAS AND ON ALL GRADING PROJECTS.
	LINE CODE 		
D1-2	DIVERSION CHANNEL SECTION 205		A DESIGNED TEMPORARY OR PERMANENT CHANNEL WITH A COMPACTED SUPPORTING RIDGE ON THE LOWER SIDE TO DIVERT OFFSITE RUNOFF AWAY FROM DISTURBED AREAS WITHIN THE PROJECT AREA. CHANNEL FOR OFFSITE RUNOFF SHALL BE STABILIZED WITH APPROPRIATE CHANNEL STABILIZATION.
	LINE CODE 		REFER TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR DESIGN CRITERIA. A DIVERSION CHANNEL DETAIL MUST ALSO BE PROVIDED IN THE ESPCP. RUNOFF FROM DISTURBED AREAS WITHIN THE PROJECT AREA SHALL NOT BE ALLOWED TO CONVERGE WITH OFFSITE RUNOFF WITHIN THIS DIVERSION.
Dn1	TEMPORARY DOWNDRAIN STRUCTURE FLEXIBLE CONSTRUCTION DETAIL D-19 SECTION 163		A TEMPORARY PIPE SLOPE DRAIN IS A PLASTIC FLEXIBLE PIPE TO CARRY WATER FROM THE WORK AREA TO A LOWER ELEVATION. TEMPORARY SLOPE DRAINS SHOULD BE PLACED AT INTERVALS OF 350 FEET ON 0% - 2% GRADES, 200 FEET ON STEEPER GRADES AND MORE FREQUENTLY AS DICTATED BY FIELD CONDITIONS. THE TYPICAL PIPE SIZE IS A CORRUGATED 10". THE PIPE WILL BE ANCHORED WITH STAKES AT INTERVALS NOT TO EXCEED 10'.
	LINE CODE — T — T — T — (Dn1) — T — T — T —		THE OUTLET AREA SHALL BE STABILIZED FOR VELOCITY DISSIPATION AND EROSION CONTROL.

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Dn2-A	PERMANENT DOWNDRAIN STRUCTURE CONCRETE CONSTRUCTION DETAIL D-9 SECTION 441		A CONCRETE FLUME TYPE "A" IS USED TO DIRECT SURFACE RUNOFF DOWN A ROADWAY SLOPE INTO ANOTHER FORM OF CONTROL. IT IS USED IN ALL DEPRESSED AREAS WHERE WATER WILL FLOW DOWN THE SLOPE. IT IS DESIGNED FOR A 25-YEAR STORM AND MUST HAVE SOME FORM OF OUTLET PROTECTION. ADDITIONAL LABELING IS NOT REQUIRED IF SHOWN AS A PERMANENT DRAINAGE STRUCTURE ON THE CONSTRUCTION PLANS. INLETS SHALL BE SPACED ACCORDING TO GDOT GUIDELINES (REGARDING GUTTER SPREAD AND OTHER CRITERIA).
	LINE CODE 		
Dn2-B	PERMANENT DOWNDRAIN STRUCTURE CONCRETE CONSTRUCTION DETAIL D-9 SECTION 441		A CONCRETE FLUME TYPE "B" IS USED TO DIRECT SURFACE DITCH RUNOFF DOWN A BACK SLOPE INTO ANOTHER FORM OF CONTROL. IT IS USED IN DEPRESSED AREAS WHERE CONCENTRATED OFFSITE WATER REACHES THE CUT SLOPE. IT IS DESIGNED TO SAFELY CONVEY WATER DOWN THE CUT SLOPE. IT IS DESIGNED FOR A 25-YEAR STORM AND MUST HAVE SOME FORM OF OUTLET PROTECTION. ADDITIONAL LABELING IS NOT REQUIRED IF SHOWN AS A PERMANENT DRAINAGE STRUCTURE ON THE CONSTRUCTION PLANS. INLETS SHALL BE SPACED ACCORDING TO GDOT GUIDELINES (REGARDING GUTTER SPREAD AND OR OTHER CRITERIA).
	LINE CODE 		
Dn2-1	PERMANENT DOWNDRAIN STRUCTURE GA. STD 9013 TP1, 9017J TP1, DETAIL D-26 TP1 SECTION 576, 577		CONCRETE DRAIN INLET WITH METAL PIPE IS USED TO DRAIN CURBS, ON A GRADE, DOWN TO A LOWER ELEVATION. THIS IS A PERMANENT STRUCTURE, REQUIRING OUTLET PROTECTION, TEMPORARY AND PERMANENT. INLETS SHALL BE SPACED ACCORDING TO GDOT GUIDELINES (REGARDING GUTTER SPREAD AND OR OTHER CRITERIA).
	LINE CODE 		
Dn2-2	PERMANENT DOWNDRAIN STRUCTURE GA. STD 9013 TP2, 9017J TP2, DETAIL D-26 TP2 SECTION 576, 577		CONCRETE DRAIN INLET AND METAL PIPE IS USED TO DRAIN CURB, IN A SAG, DOWN TO A LOWER ELEVATION. THIS IS A PERMANENT STRUCTURE, REQUIRING OUTLET PROTECTION, TEMPORARY AND PERMANENT. INLETS SHALL BE SPACED ACCORDING TO GDOT GUIDELINES (REGARDING GUTTER SPREAD AND OR OTHER CRITERIA).
	LINE CODE 		

NOTE:

1. DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
2. FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs), REFER TO THE LATEST EDITION OF THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION'S, "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".

REVISION		
No.	Date	Revision

Designed by:	PFJ
Drawn by:	PFJ
Checked by:	WWD
File Name:	CE501.dwg

REVISION

No.	Date	Revision

SHEET NO.

CE505

**EROSION CONTROL
LEGEND - UNIFORM
CODE SHEET 5**

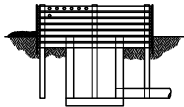
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CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Fr	FILTER RING CONSTRUCTION DETAIL D-46 SECTION 163		A TEMPORARY STONE BARRIER CONSTRUCTED AT DRAINAGE STRUCTURE INLETS AND POST-CONSTRUCTION POND OUTLETS. IT REDUCES RUNOFF VELOCITY AND HELPS PREVENT SEDIMENT FROM LEAVING SITE PRIOR TO PERMANENT STABILIZATION OF THE DISTURBED AREA. REFER TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR ADDITIONAL INFORMATION ON USAGE.
	SYMBOL 		
Rd	ROCK FILTER DAM CONSTRUCTION DETAIL D-43 SECTION 163, 603		ROCK FILTER DAMS ARE CONSTRUCTED OF TYPE 3 STONE RIP-RAP FACED WITH #57 STONE ON THE UPSTREAM SIDE. THEY ARE PLACED ACROSS DRAINAGEWAYS WHICH DRAIN 50 ACRES OR LESS. GEOTEXTILE UNDERLINER SHALL BE USED WHEN PLACING ROCK FILTER DAMS. THE DAM SHOULD NOT BE HIGHER THAN THE CHANNEL BANKS.
	SYMBOL 		ROCK FILTER DAMS SHOULD BE USED IN DITCHES PRIOR TO DISCHARGING INTO STREAMS, WETLANDS, OPEN-WATERS, OR OTHER ESAs.
Rd-B	STONE FILTER BERM CONSTRUCTION DETAIL D-50 SECTION 163, 603		STONE FILTER BERMS ARE CONSTRUCTED SIMILAR TO ROCK FILTER DAMS FOR A LINEAR APPLICATION. THEY ARE CONSTRUCTED OF TYPE-3 STONE RIP-RAP FACED WITH #57 STONE ON THE UPSTREAM SIDE. GEOTEXTILE UNDERLINER SHALL BE USED WHEN PLACING STONE FILTER BERMS. STONE FILTER BERMS ARE IDEAL ALONG THE PERIMETER FOR SHEET FLOW AND/OR SHALLOW CONCENTRATED FLOW TO A COMMON LOW AREA WHERE PERIMETER SILT FENCE ALONE MAY BE INSUFFICIENT. THERE IS NO WELL-DEFINED CHANNEL FOR A STANDARD ROCK FILTER DAM, AND/OR CONSTRUCTING A ROCK OUTLET TEMPORARY SEDIMENT TRAP IS NOT APPLICABLE.
	LINE CODE 		
Rp	RIP-RAP SECTION 603		RIP-RAP IS A FLEXIBLE PERMANENT BLANKET FOR PROTECTION OF FILL SLOPES AND BRIDGE END ROLLS. RIP-RAP TYPE-I SHOULD BE PLACED ON TOP OF A GEOTEXTILE UNDERLINER AT A MINIMUM 24" THICKNESS OR AS INDICATED ON THE PLANS. RIP-RAP MAY ALSO BE USED AT DRAINAGE STRUCTURE OUTLETS WITHIN THE RIGHT-OF-WAY. HOWEVER, APPROPRIATE OUTLET PROTECTION SHOULD BE PROVIDED AT OUTFALLS. REFER TO STORM DRAIN OUTLET PROTECTION FOR ADDITIONAL INFORMATION ON USING RIP-RAP AT OUTFALLS.
	PATTERN 		
Rt-P	RETROFITTING PERFORATED HALF-ROUND PIPE CONSTRUCTION DETAIL D-44 SECTION 163		A PERFORATED HALF-ROUND PIPE WITH STONE FILTER PLACED IN FRONT OF A PERMANENT STORMWATER DETENTION POND OUTLET STRUCTURE TO SERVE AS A TEMPORARY SEDIMENT FILTER. SHOULD BE USED ONLY IN DETENTION PONDS WITH LESS THAN 30 ACRES TOTAL DRAINAGE AREA. SHALL ONLY BE USED IN DETENTION BASINS LARGE ENOUGH TO STORE 67 CUBIC YARDS OF SEDIMENT PER ACRE OF DISTURBED AREA. REFER TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR DESIGN CRITERIA.
	SYMBOL 		

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Rt-B	RETROFITTING SLOTTED BOARD DAM CONSTRUCTION DETAIL D-45 SECTION 163		A SLOTTED BOARD DAM CONSISTS OF STONE AND/OR FILTER FABRIC AND BOARDS WITH 0.5' - 1.0' SPACING TO SERVE AS A TEMPORARY SEDIMENT FILTER. PERMANENT STORMWATER DETENTION POND OUTLET: -DRAINAGE AREA UP TO 100 ACRES -DETENTION BASINS LARGE ENOUGH TO STORE 67 CUBIC YARDS OF SEDIMENT PER ACRE OF DISTURBED AREA ROADWAY DRAINAGE STRUCTURE: -OPEN END PIPES, WINGED HEADWALLS, OR CONCRETE WEIR OUTLETS WITH DRAINAGE AREA LESS THAN 30 ACRES REFER TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR DESIGN CRITERIA.
	SYMBOL 		
Rt-Sg1	RETROFITTING SILT CONTROL GATES CONSTRUCTION DETAIL D-20 SECTION 163		A SILT CONTROL GATE CONSISTS OF BOARDS WITHOUT SPACING AND FILTER FABRIC TO BE USED FOR TEMPORARY SEDIMENT STORAGE ON ROADWAY PROJECTS AT THE INLET OF STRUCTURES WITH A DRAINAGE AREA UP TO 50 ACRES. THE DISTURBED AREA WITHIN THE DRAINAGE AREA SHALL NOT EXCEED 5 ACRES. SILT CONTROL GATES SHOULD NOT BE USED ALONE, BUT WITH ANOTHER BMP DOWNSTREAM PRIOR TO DISCHARGE LEAVING PROJECT AREA. DO NOT USE SILT GATES IN STATE WATERS. Rt-Sg1-TYPE 1: USED ON BOX CULVERTS Rt-Sg2-TYPE 2: USED ON STRAIGHT HEADWALLS Rt-Sg3-TYPE 3: USED ON FLARED END SECTIONS AND TAPERED HEADWALLS
SdI-NS	SEDIMENT BARRIER (NON-SENSITIVE) SILT FENCE TYPE A CONSTRUCTION DETAIL D-24 SECTION 171		SEDIMENT BARRIERS MINIMIZE AND PREVENT SEDIMENT CARRIED BY SHEET FLOW FROM LEAVING THE PROJECT AREA BY CAUSING DEPOSITION AND/OR FILTRATION OF SEDIMENT. SILT FENCE USED AS PERIMETER CONTROL SHALL NOT BE INSTALLED ACROSS CONCENTRATED FLOW. TYPE-A SILT FENCE IS TYPICALLY USED IN NON-ENVIRONMENTALLY SENSITIVE AREAS (ESAs) OR IN AREAS WITH FILLS LESS THAN 10'. IT SHOULD BE PLACED A MINIMUM OF 10' FROM CONSTRUCTION LIMITS OR ALONG THE RIGHT-OF-WAY LINE.
SdI-S	SEDIMENT BARRIER (SENSITIVE) SILT FENCE TYPE C CONSTRUCTION DETAIL D-24 SECTION 171		SEDIMENT BARRIERS MINIMIZE AND PREVENT SEDIMENT CARRIED BY SHEET FLOW FROM LEAVING THE PROJECT AREA BY CAUSING DEPOSITION AND/OR FILTRATION OF SEDIMENT. SILT FENCE USED AS PERIMETER CONTROL SHALL NOT BE INSTALLED ACROSS CONCENTRATED FLOW. TYPE-C SILT FENCE IS TYPICALLY USED IN ENVIRONMENTALLY SENSITIVE AREAS (ESAs) OR IN AREAS WITH FILLS 10' AND GREATER. ALL ENVIRONMENTALLY SENSITIVE AREAS (ESAs) SHALL BE PROTECTED WITH A DOUBLE-ROW OF TYPE-C SILT FENCE REGARDLESS OF FILL HEIGHT. A SINGLE-ROW MAY BE USED FOR OTHER APPLICATIONS. IT SHOULD BE PLACED A MINIMUM OF 10' FROM CONSTRUCTION LIMITS OR ALONG THE RIGHT-OF-WAY LINE.

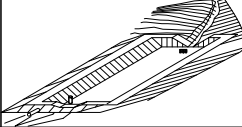
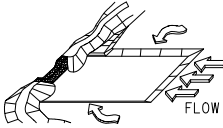
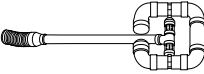
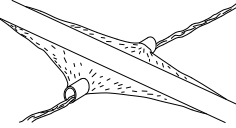
NOTE:

- DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
- FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs), REFER TO THE LATEST EDITION OF THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION'S, "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Sd1-BB	SEDIMENT BARRIER BRUSH BARRIER CONSTRUCTION DETAIL D-24B SECTION 201		THIS ITEM CONSISTS OF INTERMINGLED BRUSH, LOGS, ETC. SO AS NOT TO FORM A SOLID DAM. CONSTRUCTED AT THE TOE OF FILL SLOPES ONLY DURING THE CLEARING AND GRUBBING OPERATION. THE BARRIER SHOULD BE USED AT THE TOE OF FILL SLOPES ON GRADING PROJECTS IN RURAL AREAS WHERE SUFFICIENT RIGHT OF WAY OR EASEMENT IS AVAILABLE (10 FEET OR MORE). THE BARRIER SHOULD RUN ROUGHLY PERPENDICULAR TO THE FLOW OF WATER WHERE THIS DOES NOT CONFLICT WITH RIGHT-OF-WAY OR EASEMENT LIMITS. THEY WILL NOT BE PLACED IN WETLANDS.
	LINE CODE * * * Sd1-BB * * *		TYPICALLY NOT SHOWN ON PLANS. PAYMENT FOR THIS ITEM IS INCLUDED IN THE CLEARING AND GRUBBING COST. NO SEPARATE PAYMENT SHALL BE MADE.
Sd2-B	INLET SEDIMENT TRAP (BAFFLE BOX) CONSTRUCTION DETAIL D-42 SECTION 163		BAFFLE BOX INLET SEDIMENT TRAP USED FOR INLETS RECEIVING HIGH FLOW RATE AND/OR VELOCITY. A GUIDE FOR USE WILL BE FOR AN INLET RECEIVING FLOW RATES 7 cfs AND GREATER.
	SYMBOL Sd2-B		
Sd2-Bg	INLET SEDIMENT TRAP (BLOCK & GRAVEL) CONSTRUCTION DETAIL D-42 SECTION 163		BLOCK AND GRAVEL DROP INLET PROTECTION USED FOR WHERE HEAVY FLOWS ARE EXPECTED AND WHERE OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND THE STRUCTURE. CAN BE USED AT CULVERT INLETS. A GUIDE FOR USE WILL BE FOR AN INLET RECEIVING FLOW RATES THAT RANGE FROM 5 - 7 cfs.
	SYMBOL Sd2-Bg		
Sd2-F	INLET SEDIMENT TRAP (FILTER FABRIC) CONSTRUCTION DETAIL D-24C SECTION 163	 OR  OR  (a) (b) (c)	(a) A SEDIMENT BARRIER CONSISTING OF A PREFABRICATED FRAME WITH FILTER FABRIC USED AROUND A DROP INLET OR CATCH BASIN. (b) A SEDIMENT BARRIER CONSISTING OF A PERFORATED METAL STAND PIPE WITH FILTER FABRIC USED AROUND A DROP INLET OR CATCH BASIN. (c) TYPE C SILT FENCE WITH SUPPORTING FRAME CAN BE USED AS AN ALTERNATE TO INLET SEDIMENT TRAP FOR AREAS WITH SLOPES < 5%.
	SYMBOL Sd2-F		THIS ITEM IS USED TO PREVENT SILT FROM ENTERING THE PIPE SYSTEM. SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS. RECOMMENDED FOR INLET RECEIVING FLOW RATES THAT RANGE FROM 0 - 4 cfs.
Sd2-G	INLET SEDIMENT TRAP (GRAVEL) CONSTRUCTION DETAIL D42 SECTION 163		GRAVEL DROP INLET PROTECTION USED WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED. STONE AND GRAVEL ARE USED TO TRAP SEDIMENT. THE SLOPE TOWARD THE INLET SHALL BE NO MORE THAN 3:1. A GUIDE FOR USE WILL BE FOR AN INLET RECEIVING FLOW RATES THAT RANGE FROM 3 - 5 cfs.
	SYMBOL Sd2-G		

NOTE:

- DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
- FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs), REFER TO THE LATEST EDITION OF THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION'S, "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Sd3	TEMPORARY SEDIMENT BASIN CONSTRUCTION DETAIL D-22A, D-22B SECTION 163		A BASIN CREATED BY EXCAVATING AN AREA, DAMMING CONCENTRATED FLOW, OR A COMBINATION OF BOTH. THE BASIN IS DESIGNED TO STORE 67 CUBIC YARDS OF SEDIMENT PER ACRE OF DRAINAGE AREA. THE DRAINAGE AREA SHOULD NOT EXCEED 150 ACRES. BASINS TYPICALLY CONSISTS OF A DAM, PRINCIPAL SPILLWAY, AND AN EMERGENCY SPILLWAY. A FLOATING SURFACE SKIMMER SHALL BE REQUIRED AS PART OF THE PRINCIPAL SPILLWAY UNLESS INFEASIBLE. SUFFICIENT RIGHT-OF-WAY OR EASEMENT IS NEEDED FOR BASIN CONSTRUCTION AND MAINTENANCE ACCESS.
	SYMBOL Sd3		SEDIMENT BASINS SHALL BE CONSIDERED ON ALL PROJECTS, BUT MAY NOT BE PRACTICAL. BASINS SHOULD BE LOCATED TO MINIMIZE INTERFERENCE WITH CONSTRUCTION ACTIVITIES AND UTILITIES. REFER TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR DESIGN CRITERIA.
Sd4-C	ROCK OUTLET TEMPORARY SEDIMENT TRAP CONSTRUCTION DETAIL D-53 SECTION 163		TEMPORARY POND WITH ROCK OUTLET DESIGNED TO STORE 67 CUBIC YARDS OF SEDIMENT PER DRAINAGE AREA. DRAINAGE AREA SHALL NOT EXCEED 5 ACRES. DISTINGUISHED FROM TEMPORARY SEDIMENT BASIN BY LACK OF PRINCIPAL SPILLWAY. MAXIMUM POND DEPTH FROM BOTTOM OF POND TO EMERGENCY SPILLWAY IS 4 FEET.
	SYMBOL Sd4-C		A TEMPORARY SEDIMENT BASIN SHALL BE EVALUATED PRIOR TO CONSIDERING A TEMPORARY SEDIMENT TRAP. A TEMPORARY SEDIMENT TRAP IS IDEAL FOR SMALL AREAS WITH NO UNUSUAL DRAINAGE FEATURES AND EFFECTIVE AGAINST COARSE SEDIMENT, BUT NOT AGAINST SILT OR CLAY PARTICLES THAT REMAIN SUSPENDED. REFER TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR DESIGN CRITERIA.
Sk	FLOATING SURFACE SKIMMER CONSTRUCTION DETAIL D-22A, D-22B SECTION 163		A BUOYANT DEVICE THAT DRAINS WATER FROM THE SURFACE OF A TEMPORARY SEDIMENT BASIN AT A CONTROLLED FLOW RATE. THE INLET/ORIFICE SIZE IS DESIGNED TO DRAIN THE BASIN WITHIN 24 - 48 HOURS. THE SKIMMER INFORMATION SHALL BE PROVIDED IN CONJUNCTION WITH THE SEDIMENT BASIN INFORMATION IN PLANS. IF A SKIMMER IS INFEASIBLE, THE DESIGNER SHALL PROVIDE A WRITTEN JUSTIFICATION IN THE PLANS.
	SYMBOL Sk		SKIMMERS ARE ATTACHED TO A RISER WITHOUT PERFORATIONS AND ACTS AS THE PRIMARY SPILLWAY. THE SKIMMER BMP SYMBOL SHALL BE SHOWN IN CONJUNCTION WITH THE TEMPORARY SEDIMENT BASIN BMP SYMBOL WHEN APPLICABLE. REFER TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR ADDITIONAL INFORMATION.
Sr	TEMPORARY STREAM CROSSING SECTION 107		A TEMPORARY STRUCTURE INSTALLED ACROSS A FLOWING STREAM OR WATERCOURSE FOR USE BY CONSTRUCTION EQUIPMENT. THIS BMP PROVIDES A MEANS TO CROSS STREAMS OR WATERCOURSES WITHOUT MOVING SEDIMENT INTO STREAMS, DAMAGING THE STREAM BED OR CHANNEL, OR CAUSING FLOODING. THIS BMP SHOULD NOT BE USED ON STREAMS WITH DRAINAGE AREAS GREATER THAN ONE SQUARE MILE, UNLESS SPECIFICALLY DESIGNED TO ACCOMMODATE THE ADDITIONAL DRAINAGE AREA BY THE DESIGN PROFESSIONAL. A CERTIFICATION STATEMENT AND SIGNATURE SHALL ACCOMPANY THE DESIGN.
	SYMBOL Sr		THIS BMP SHALL BE DESIGNED ACCORDING TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA". FOR CONTRACTOR'S USE ONLY!

REVISION		
No.	Date	Revision

Designed by:	PFJ
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Checked by:	WWD
File Name:	CE501.dwg



CIVIL DESIGN PLANS
FOR THE
BIG CREEK GREENWAY
BOARDWALK
REPLACEMENT

FINAL PLANS
AUGUST 26th, 2022

REVISION

No.	Date	Revision

SHEET NO.

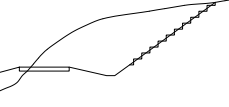
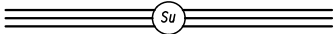
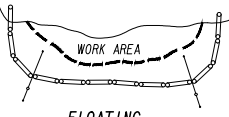
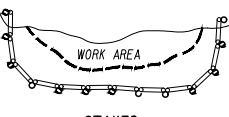
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EROSION CONTROL
LEGEND - UNIFORM
CODE SHEET 7



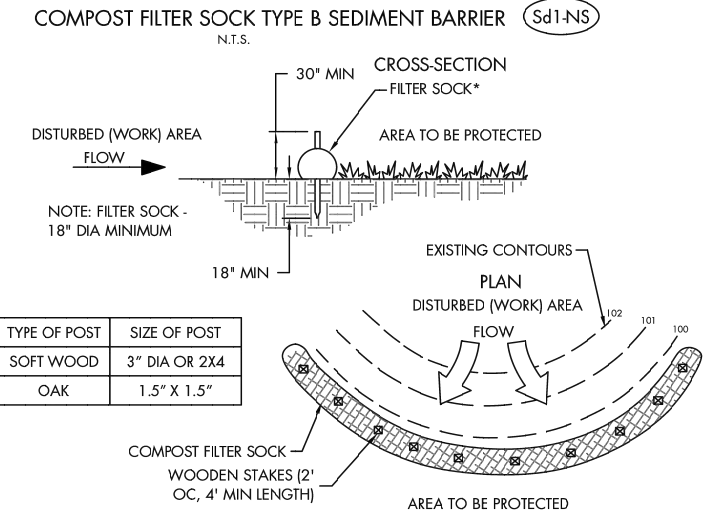
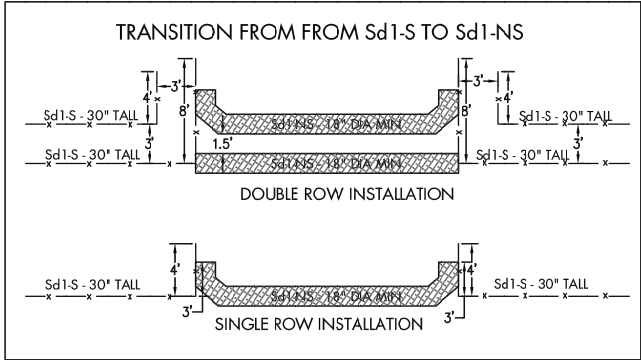
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CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
St	STORM DRAIN OUTLET PROTECTION GA. STD. 1125 & 2332		A PIPE OR BOX CULVERT OUTLET HEADWALL WITH AN APRON AND DISSIPATOR BLOCKS IS USED TO REDUCE VELOCITY AT THE OUTLET OF A PIPE PRIOR TO ENTERING AN EXISTING STREAM OR PUBLICLY MAINTAINED DRAINAGE SYSTEM. IT IS USED ON THE OUTLET OF ALL BOX CULVERTS AND ON 48" AND LARGER PIPES. MAY BE USED ON INLET FOR FLOWING STREAMS. USE ON SMALL PIPES WHEN OUTLET VELOCITY OF THE 25-YEAR STORM IS 12 fps AND GREATER.
	SYMBOL 		
St-Rp	STORM DRAIN OUTLET PROTECTION (RIP-RAP) CONSTRUCTION DETAIL D-55 SECTION 603		RIP-RAP OUTLET PROTECTION IS USED TO REDUCE VELOCITY AT THE OUTLET OF A PIPE, CHANNEL, OR STRUCTURE PRIOR TO ENTERING AN EXISTING STREAM OR PUBLICLY MAINTAINED DRAINAGE SYSTEM. THE MINIMUM DESIGN OF RIP-RAP OUTLET PROTECTION SHALL BE THE 25-YEAR STORM PEAK FLOW, BUT LARGER STORMS ARE RECOMMENDED. TYPE-1 RIP-RAP AT A DEPTH OF 36" AND PLACED ON FILTER FABRIC IS PREFERRED FOR ALL d50 < /+ 1.2 FEET. TYPE-3 RIP-RAP AT A DEPTH OF 18" AND PLACED ON FILTER FABRIC MAY BE USED FOR d50 < /+ 0.7 FEET. REFER TO THE LATEST EDITION OF THE 'MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA' FOR REQUIRED DESIGN DIMENSIONS AND OTHER INFORMATION TO BE INCLUDED IN THE PLANS.
	PATTERN 		
Su	SURFACE ROUGHENING SERRATED SLOPES CONSTRUCTION DETAIL S-7 SECTION 205		PROVIDING A ROUGH SOIL SURFACE WITH HORIZONTAL DEPRESSIONS, BY OPERATING A CLEATED DOZER ON THE SLOPE IN A VERTICAL DIRECTION. CREATING SERRATED SLOPES IN THE GRADING PROCESS TO CONSTRUCT BENCHES WILL REDUCE RUNOFF VELOCITY AND INCREASE INFILTRATION OF WATER. IN MOST CASES THIS BMP IS NOT REQUIRED TO BE SHOWN ON THE PLANS, BUT REQUIRED TO BE COMPLETED BY THE CONTRACTOR UNDER ALL PROJECTS. IF SERRATED SLOPES ARE SPECIFIED BY THE SOIL SURVEY, THEN THIS BMP SHALL BE SHOWN ON THE PLANS WHERE SERRATED SLOPES ARE TO BE USED.
	LINE CODE 		
Tc-F	TURBIDITY CURTAIN FLOATING CONSTRUCTION DETAIL D-51 SECTION 170		A FLOATING TURBIDITY CURTAIN IS USED TO PREVENT SEDIMENT FROM MOVING IN WATER BY ALLOWING IT TO DROP OUT OF SUSPENSION AND REMAIN WITHIN THE CONSTRUCTION AREA. IT IS TYPICALLY USED WHERE CONSTRUCTION IS REQUIRED IN A LARGE BODY OF WATER SUCH AS LAKES AND RIVERS. IT SHOULD BE USED AS DIRECTED BY THE ENGINEER. THIS BMP IS ONLY TO BE USED WHEN PERMITTED FILL IS BEING PLACED INTO A STATE WATER, OR AS A SUPPLEMENT TO ADEQUATELY PLACED PERIMETER BMPs. IT MAY ALSO BE REFERRED TO AS A FLOATING BOOM, SILT BARRIER, OR SILT CURTAIN.
	LINE CODE 		
Tc-S	TURBIDITY CURTAIN STAKED CONSTRUCTION DETAIL D-51 SECTION 170		A STAKED TURBIDITY CURTAIN IS USED TO PREVENT SEDIMENT FROM MOVING IN WATER BY ALLOWING IT TO DROP OUT OF SUSPENSION AND REMAIN WITHIN THE CONSTRUCTION AREA. IT IS TYPICALLY USED IN SHALLOW INUNDATED AREAS. IT MAY BE USED TO PROTECT A SMALL STREAM BEING REALIGNED OR RESTORED. IN THIS CASE, CURTAIN SHOULD EXTEND TO BOTTOM OF STREAMBED. THE HEIGHT SHOULD BE LIMITED TO 5 FEET UNLESS DIRECTED AND EXTEND 2 FEET ABOVE NORMAL WATER ELEVATION. IT SHOULD BE USED AS DIRECTED BY THE ENGINEER. THIS BMP IS ONLY TO BE USED WHEN PERMITTED FILL IS BEING PLACED INTO A STATE WATER, OR AS A SUPPLEMENT TO ADEQUATELY PLACED PERIMETER BMPs. IT MAY BE REFERRED TO AS A SILT BARRIER OR SILT CURTAIN.
	LINE CODE 		

NOTE:

- DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
- FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs), REFER TO THE LATEST EDITION OF THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION'S, "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".



- *HEIGHT IS TO BE SHOWN ON THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN
- MATERIALS**
- COMPOST FILTER MEDIA USED FOR SEDIMENT BARRIER FILLER MATERIAL SHALL BE WEED FREE AND DERIVED FROM A WELL-DECOMPOSED SOURCE OF ORGANIC MATTER. FILTER MEDIA SOCK IS CLASSIFIED AS A TYPE B, NON-SENSITIVE APPLICATION.
 - THE COMPOST SHALL BE PRODUCED USING AN AEROBIC COMPOSTING PROCESS MEETING CFR 503 REGULATIONS INCLUDING TIME AND TEMPERATURE DATA.
 - THE COMPOST SHALL BE FREE OF ANY REFUSE, CONTAMINANTS OR OTHER MATERIALS TOXIC TO PLANT GROWTH. NON-COMPOSTED PRODUCTS WILL NOT BE ACCEPTED WITHOUT APPLICABLE WATER QUALITY TEST RESULTS.
 - TEST METHODS FOR THE ITEMS BELOW SHOULD FOLLOW US COMPOSTING COUNCIL TEST METHODS FOR THE EXAMINATION OF COMPOSTING AND COMPOST GUIDELINES FOR LABORATORY PROCEDURES:
 - PH - 5.0-8.0 IN ACCORDANCE WITH TMECC 04.11-A, "ELECTROMETRIC PH DETERMINATIONS FOR COMPOST"
 - PARTICLE SIZE - 99% PASSING A 2 INCH (50MM) SIEVE AND A MAXIMUM OF 40% PASSING A 3/8 INCH (9.5MM) SIEVE, IN ACCORDANCE WITH TMECC 02.02-B, "SAMPLE SIEVING FOR AGGREGATE SIZE CLASSIFICATION". (NOTE: IN THE FIELD, PRODUCT COMMONLY IS BETWEEN 1/2 IN/12.5MM AND 2 IN/50 MM IN PARTICLE SIZE.)
 - MOISTURE CONTENT OF LESS THAN 60% IN ACCORDANCE WITH STANDARDIZED TEST METHODS FOR MOISTURE DETERMINATION.
 - MATERIAL SHALL BE RELATIVELY FREE (<1% BY DRY WEIGHT) OF INERT OR FOREIGN MANMADE MATERIALS.
 - SOCK CONTAINMENT SYSTEM FOR COMPOST FILTER MEDIA SHALL BE A PHOTO-DEGRADABLE OR BIODEGRADABLE KNITTED MESH MATERIAL AND SHOULD HAVE 1/8 IN TO 3/8 IN OPENINGS.

INSTALLATION

SEDIMENT BARRIERS SHOULD BE INSTALLED ALONG THE CONTOUR.

TEMPORARY SEDIMENT BARRIERS SHALL BE INSTALLED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE DESIGN PROFESSIONAL.

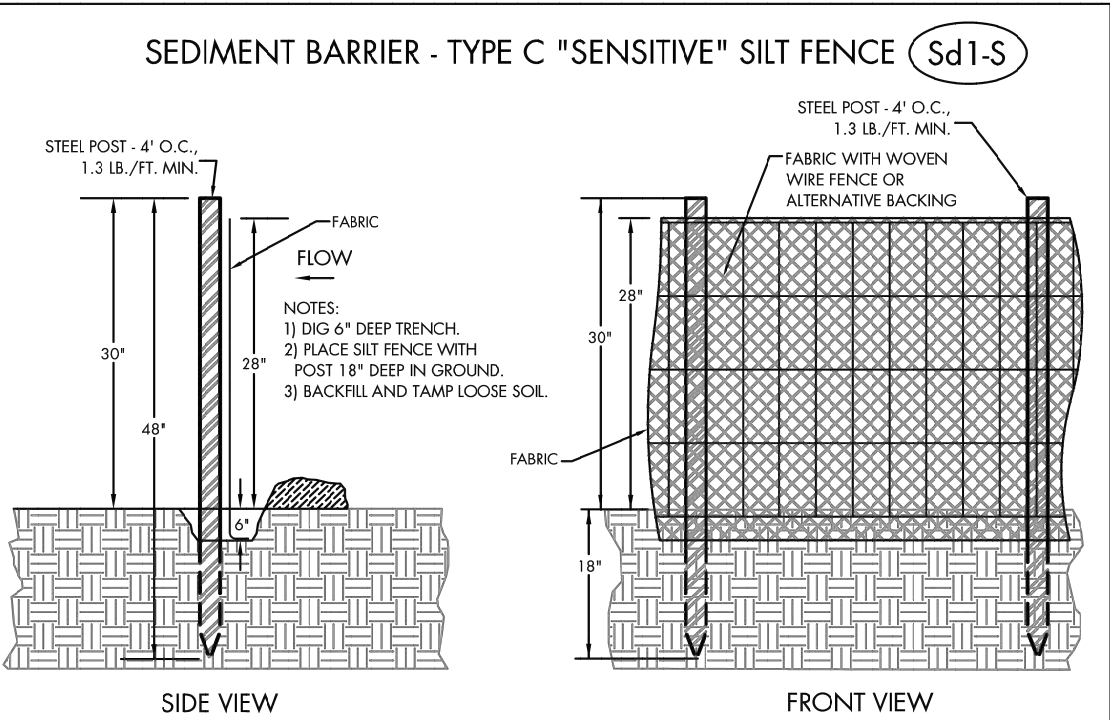
POST INSTALLATION SHALL START AT THE CENTER OF A LOW POINT (IF APPLICABLE) WITH THE REMAINING POSTS SPACED NO GREATER THAN 2 FEET APART. FOR POST SIZE REQUIREMENTS, SEE CHART.

MAINTENANCE

SEDIMENT SHALL BE REMOVED ONCE IT HAS ACCUMULATED TO ONE-HALF THE ORIGINAL HEIGHT OF THE BARRIER.

SEDIMENT BARRIERS SHALL BE REPLACED WHENEVER THEY HAVE DETERIORATED TO SUCH AN EXTENT THAT THE EFFECTIVENESS OF THE PRODUCT IS REDUCED (APPROXIMATELY SIX MONTHS) OR THE HEIGHT OF THE PRODUCT IS NOT MAINTAINING 80% OF ITS PROPERLY INSTALLED HEIGHT.

TEMPORARY SEDIMENT BARRIERS SHALL REMAIN IN PLACE UNTIL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED. ALL SEDIMENT ACCUMULATED AT THE BARRIER SHALL BE REMOVED AND PROPERLY DISPOSED OF BEFORE THE BARRIER IS REMOVED.



- NOTES:**
- SILT CONTROL SHALL BE IN EFFECT PRIOR TO ANY GRADING OR CONSTRUCTION.
 - USE TYPE 'C' SILT FENCE. SEE FABRIC SPECS BELOW.
 - SPLICED JOINTS SHALL OVERLAP 18", WITH MATCHING POST.
 - DRIVE 4' (48") MIN. POSTS 12"-18" INTO SOIL.
 - DIG DITCH 12" WIDE, 6" DEEP. LAY FABRIC 6"-8" DEEP, THEN BACKFILL.

MAINTENANCE

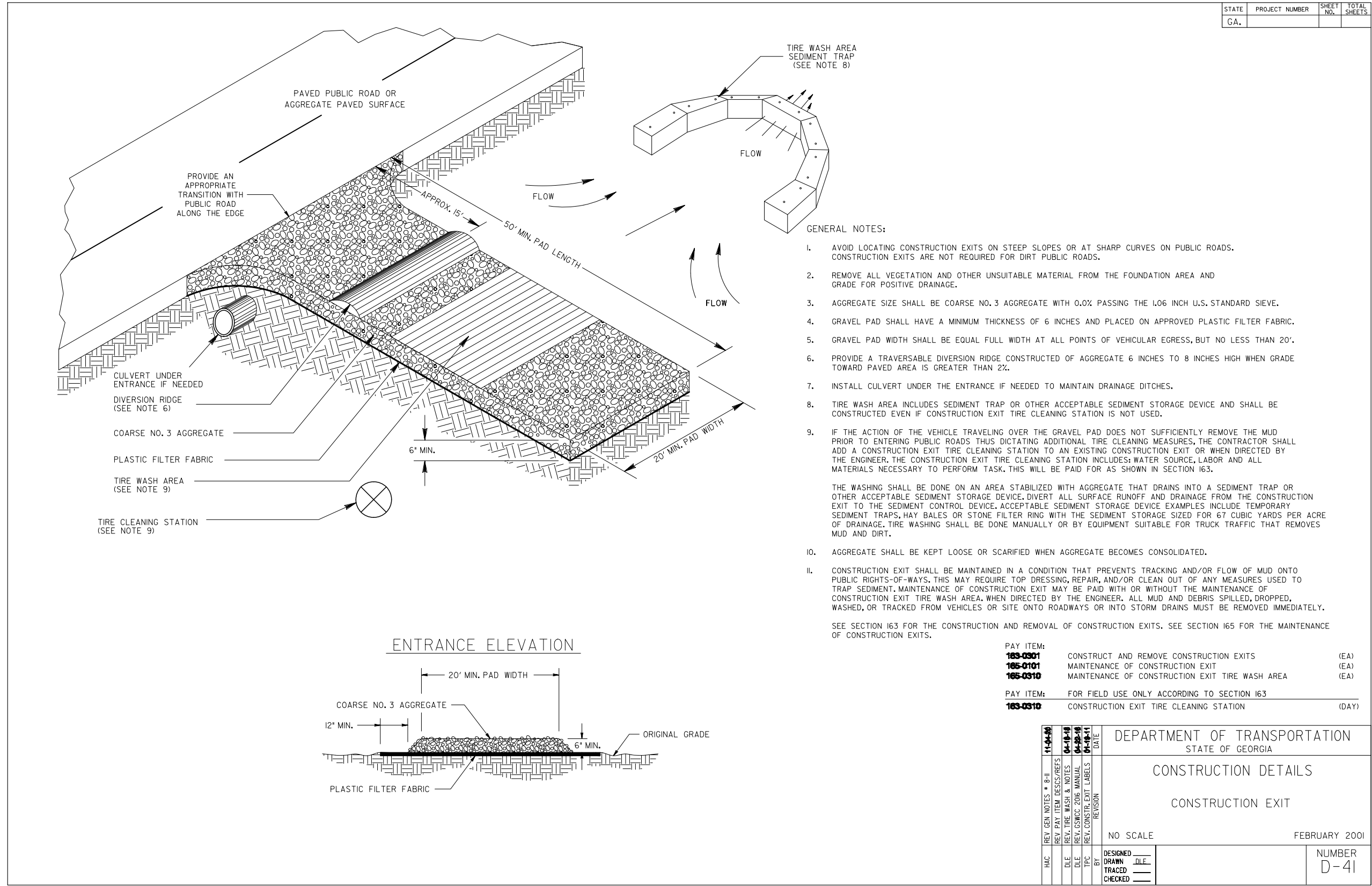
SEDIMENT SHALL BE REMOVED ONCE IT HAS ACCUMULATED TO ONE-HALF THE ORIGINAL HEIGHT OF THE BARRIER. FILTER FABRIC SHALL BE REPLACED WHENEVER IT HAS DETERIORATED TO SUCH AN EXTENT THAT THE EFFECTIVENESS OF THE PRODUCT IS REDUCED (APPROXIMATELY SIX MONTHS). TEMPORARY SEDIMENT BARRIERS SHALL REMAIN IN PLACE UNTIL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED. ALL SEDIMENT ACCUMULATED AT THE BARRIER SHALL BE REMOVED AND PROPERLY DISPOSED OF BEFORE THE BARRIER IS REMOVED.

FABRIC SPECIFICATIONS - MUST BE GDOT APPROVED	C
TENSILE STRENGTH (LBS. MIN.) (1) - (ASTM D-4632)	WARP - 260
	FILL - 180
ELONGATION (% MAX.) - (ASTM D-4632)	40
AOS (APPARENT OPENING SIZE) - (MAX. SIEVE SIZE) (ASTM D-4751)	#30
FLOW RATE (GAL/MIN/SQ. FT.) (GDT-87)	70
ULTRAVIOLET STABILITY (2) - (ASTM D-4632 AFTER 300 HOURS WEATHERING IN ACCORDANCE WITH ASTM D-4355)	80
BURSTING STRENGTH (PSI MIN.) - (ASTM D-3786 DIAPHRAGM BURSTING STRENGTH TESTER)	175
MINIMUM FABRIC WIDTH (INCHES)	36

- (1) MINIMUM ROLL AVERAGE OF FIVE SPECIMENS.
(2) PERCENT OF REQUIRED INITIAL MINIMUM TENSILE STRENGTH.

REVISION		
No.	Date	Revision

Designed by:	PFJ
Drawn by:	PFJ
Checked by:	WWD
File Name:	CE508.dwg



REVISION

No.	Date	Revision

SHEET NO.

CE509

EROSION CONTROL
DETAILS

Designed by:	PFJ
Drawn by:	PFJ
Checked by:	WWD
File Name:	CE508.dwg

DEFINITION

Applying plant residues or other suitable materials, produced on the site if possible, to the soil surface.

CONDITIONS

Mulch or temporary grassing shall be applied to all exposed areas within 14 days of disturbance. Mulch can be used as a singular erosion control device for up to six months, but it shall be applied at the appropriate depth, depending on the material used, anchored, and have a continuous 90% cover or greater of the soil surface. Maintenance shall be required to maintain appropriate depth and 90% cover. Temporary vegetation may be employed instead of mulch if the area will remain undisturbed for less than six months. If an area will remain undisturbed for greater than six months, permanent vegetative techniques shall be employed.

SPECIFICATIONS

MULCHING WITHOUT SEEDING

This standard applies to grades or cleared areas where seedings may not have a suitable growing season to produce an erosion retardant cover, but can be stabilized with a mulch cover.

Site Preparation

- 1. Grade to permit the use of equipment for applying and anchoring mulch.
- 2. Install needed erosion control measures as required such as dikes, diversions, berms, terraces and sediment barriers.
- 3. Loosen compact soil to a minimum depth of 3 inches.

Mulching Materials

Select one of the following materials and apply at the depth indicated:

- 1. Dry straw or hay shall be applied at a depth of 2 to 4 inches providing complete soil coverage. One advantage of this material is easy application.

- 2. Wood waste (chips, sawdust or bark) shall be applied at a depth of 2 to 3 inches. Organic material from the clearing stage of development should remain on site, be chipped, and applied as mulch. This method of mulching can greatly reduce erosion control costs.
- 3. Cutback asphalt (slow curing) shall be applied at 1200 gallons per acre (or 1/4 gallon per sq.yd.).
- 4. Polyethylene film shall be secured over banks or stockpiled soil material for temporary protection. This material can be salvaged and reused.

Applying Mulch

- When mulch is used without seeding, mulch shall be applied to provide full coverage of the exposed area.
- 1. Dry straw or hay mulch and wood chips shall be applied uniformly by hand or by mechanical equipment.
 - 2. If the area will eventually be covered with perennial vegetation, 20-30 pounds of nitrogen per acre in addition to the normal amount shall be applied to offset the uptake of nitrogen caused by the decomposition of the organic mulches.
 - 3. Cutback asphalt shall be applied uniformly. Care should be taken in areas of pedestrian traffic due to problems of 'tracking in" or damage to shoes, clothing, etc.
 - 4. Apply polyethylene film on exposed areas.

Anchoring Mulch

- 1. Straw or hay mulch can be pressed into the soil with a disk harrow with the disk set straight or with a special "packer disk." Disks may be smooth or serrated and should be 20 inches or more in diameter and 8 to 12 inches apart. The edges of the disk should be dull enough not to cut the mulch but to press it into the soil leaving much of it in an erect position. Straw or hay mulch shall be anchored immediately after application. Straw or hay mulch spread with special blower-type equipment may be anchored with emulsified asphalt (Grade AE-5 or SS-1). The asphalt emulsion shall be sprayed onto the mulch as it is ejected from the machine. Use 100 gallons of emulsified asphalt and 100 gallons of water per ton of mulch. Tackifiers and binders can be substituted for emulsified asphalt. Please refer to specification Tb -Tackifiers and Binders. Plastic mesh or netting with mesh no larger than one inch by one inch shall be installed according to manufacturer's specifications.
- 2. Netting of the appropriate size shall be used to anchor wood waste. Openings of the netting shall not be larger than the average size of the wood waste chips.
- 3. Polyethylene film shall be anchor trenched at the top as well as incrementally as necessary.

DEFINITION

The establishment of temporary vegetative cover with fast growing seedings for seasonal protection on disturbed or denuded areas.

CONDITIONS

Temporary grassing, instead of mulch, can be applied to rough graded areas that will be exposed for less than six months. Temporary vegetative measures should be coordinated with permanent measures to assure economical and effective stabilization. Most types of temporary vegetation are ideal to use as companion crops until the permanent vegetation is established. eeded.

SEEDING RATES FOR TEMPORARY SEEDING

SPECIES	RATE Per 1,000 sq.ft.	RATE Per Acre *	PLANTING DATES **
Rye	3.9 pounds	3 bu.	9/1-3/1
Ryegrass	0.9 pound	40 lbs.	8/15-4/1
Annual Lespedeza	0.9 pound	40 lbs.	1/15-3/15
Weeping Lovegrass	0.1 pound	4 lbs.	2/15-6/15
Sudangrass	1.4 pounds	60 lbs.	3/1-8/1
Browntop Millet	0.9 pound	40 lbs.	4/1-7/15
Wheat	4.1 pounds	3 bu.	9/15-2/1

- * Unusual site conditions may require heavier seeding rates
- ** Seeding dates may need to be altered to fit temperture variations and conditions.

Ds2DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)

SPECIFICATIONS

Grading and Shaping

Excessive water run-off shall be reduced by properly designed and installed erosion control practices such as closed drains, ditches, dikes, diversions, sediment barriers and others.

No shaping or grading is required if slopes can be stabilized by hand-seeded vegetation or if hydraulic seeding equipment is to be used.

Seedbed Preparation

When a hydraulic seeder is used, seedbed preparation is not required. When using conventional or handseeding, seedbed preparation is not required if the soil material is loose and not sealed by rainfall.

When soil has been sealed by rainfall or consists of smooth cut slopes, the soil shall be pitted, trenched or otherwise scarified to provide a place for seed to lodge and germinate.

Lime and Fertilizer

Agricultural lime is required unless soil tests indicate otherwise. Apply agricultural lime at a rate of one ton per acre. Graded areas require lime application. Soils can be tested to determine if fertilizer is needed. On reasonably fertile soils or soil material, fertilizer is not required. For soils with very low fertility, 500 to 700 pounds of 10-10-10 fertilizer or the equivalent per acre (12-16 lbs./1,000 sq. ft.) shall be applied. Fertilizer should be applied before land preparation and incorporated with a disk, ripper or chisel.

Seeding

Select a grass or grass-legume mixture suitable to the area and season of the year. Seed shall be applied uniformly by hand, cyclone seeder, drill, cultipacker seeder, or hydraulic seeder (slurry including seed and fertilizer). Drill or cultipacker seeders should normally place seed one-quarter to one-half inch deep. Appropriate depth of planting is ten times the seed diameter. Soil should be "raked" lightly to cover seed with soil if seeded by hand.

Mulching

Temporary vegetation can, in most cases, be established without the use of mulch. Mulch without seeding should be considered for short term protection. Refer to Ds1 - Disturbed Area Stabilization (With Mulching Only).

Irrigation

During times of drought, water shall be applied at a rate not causing runoff and erosion. The soil shall be thoroughly wetted to a depth that will insure germination of the seed. Subsequent applications should be made when needed.



CITY OF ALPHARETTA
DEPARTMENT OF PUBLIC WORKS
1790 HEMBREE ROAD
ALPHARETTA, GA 30009



CIVIL DESIGN PLANS
FOR THE
BIG CREEK GREENWAY
BOARDWALK
REPLACEMENT

FINAL PLANS
AUGUST 26th, 2022

REVISION		
No.	Date	Revision

SHEET NO.
CE510

EROSION CONTROL DETAILS

Level II Certification # 0000064868	
Designed by:	PFJ
Drawn by:	PFJ
Checked by:	WWD
File Name:	CE508.dwg

DEFINITION

The planting of perennial vegetation such as trees, shrubs, vines, grasses, or legumes on exposed areas for final permanent stabilization. Permanent perennial vegetation shall be used to achieve final stabilization..

CONDITIONS

Permanent perennial vegetation is used to provide a protective cover for exposed areas including cuts, fills, dams, and other denuded areas.

SPECIFICATIONS

Grading and Shaping

Grading and shaping may not be required where hydraulic seeding and fertilizing equipment is to be used. Vertical banks shall be sloped to enable plant establishment.

When conventional seeding and fertilizing are to be done, grade and shape where feasible and practical, so that equipment can be used safely and efficiently during seedbed preparation, seeding, mulching and maintenance of the vegetation.

oncentrations of water that will cause excessive soil erosion shall be diverted to a safe outlet. Diversions and other treatment practices shall conform with the appropriate standards and specifications.

Seedbed Preparation

Seedbed preparation may not be required where hydraulic seeding and fertilizing equipment is to be used. When conventional seeding is to be used, seedbed preparation will be done as follows:

Broadcast plantings

- 1. Tillage at a minimum, shall adequately loosen the soil to a depth of 4 to 6 inches; alleviate compaction; incorporate lime and fertilizer; smooth and firm the soil; allow for the proper placement of seed, sprigs, or plants; and allow for the anchoring of straw or hay mulch if a disk is to be used.
- 2. Tillage may be done with any suitable equipment.
- 3. Tillage should be done on the contour where feasible.

Ds3

**DISTURBED AREA STABILIZATION
(WITH PERMANENT VEGETATION)**

4. On slopes too steep for the safe operation of tillage equipment, the soil surface shall be pitted or trenched across the slope with appropriate hand tools to provide two places 6 to 8 inches apart in which seed may lodge and germinate. Hydraulic seeding may also be used.

Individual Plants

- 1. Where individual plants are to be set, the soil shall be prepared by excavating holes, opening furrows, or dibble planting.
- 2. For nursery stock plants, holes shall be large enough to accommodate roots without crowding.
- 3. Where pine seedlings are to be planted, subsoil under the row 36 inches deep on the contour four to six months prior to planting. Subsoiling should be done when the soil is dry, preferably in August or September.

Planting

Hydraulic Seeding

Mix the seed (innoculated if needed), fertilizer, and wood cellulose or wood pulp fiber mulch with water and apply in a slurry uniformly over the area to be treated. Apply within one hour after the mixture is made.

Conventional Seeding

Seeding will be done on a freshly prepared and firmed seedbed. For broadcast planting, use a cultipacker seeder, drill, rotary seeder, other mechanical seeder, or hand seeding to distribute the seed uniformly over the area to be treated. Cover the seed lightly with 1/8 to 1/4 inch of soil for small seed and 1/2 to 1 inch for large seed when using a cultipacker or other suitable equipment.

No-Till Seeding

No-till seeding is permissible into annual cover crops when planting is done following maturity of the cover crop or if the temporary cover stand is sparse enough to allow adequate growth of the permanent (perennial) species. No-till seeding shall be done with appropriate no-till seeding equipment. The seed must be uniformly distributed and planted at the proper depth.

Individual Plants

Shrubs, vines and sprigs may be planted with appropriate planters or hand tools. Pine trees shall be planted manually in the subsoil furrow. Each plant shall be set in a manner that will avoid crowding the roots. Nursery stock plants shall be planted at the same depth or slightly deeper than they grew at the nursery. The tips of vines and sprigs must be at or slightly above the ground surface. Where individual holes are dug, fertilizer shall be placed in the bottom of the hole, two inches of soil shall be added and the plant shall be set in the hole.

Mulching

Mulch is required for all permanent vegetation applications. Mulch applied to seeded areas shall achieve 75% soil cover. Select the mulching material from the following and apply as indicated:

- 1. Dry straw or dry hay of good quality and free of weed seeds can be used. Dry straw shall be applied at the rate of 2 tons per acre. Dry hay shall be applied at a rate of 2 1/2 tons per acre.
- 2. Wood cellulose mulch or wood pulp fiber shall be used with hydraulic seeding. It shall be applied at the rate of 500 pounds per acre. Drystraw or dry hay shall be applied (at the rate indicated above) after hydraulic seeding.
- 3. One thousand pounds of wood cellulose or wood pulp fiber, which includes a tackifier, shall be used with hydraulic seeding on slopes 3/4:1 or steeper.
- 4. Sericea lespedeza hay containing mature seed shall be applied at a rate of three tons per acre.
- 5. Pine straw or pine bark shall be applied at a thickness of 3 inches for bedding purposes. Other suitable materials in sufficient quantity may be used where ornamentals or other ground covers are planted. This is not appropriate for seeded areas.
- 6. When using temporary erosion control blankets or block sod, mulch is not required.
- 7. Bituminous treated roving may be applied on planted areas on slopes, in ditches or dry waterways to prevent erosion. Bituminous treated roving shall be applied within 24 hours after an area has been planted. Application rates and materials must meet Georgia Department of Transportation specifications.

Wood cellulose and wood pulp fibers shall not contain germination or growth inhibiting factors. They shall be evenly dispersed when agitated in water. The fibers shall contain a dye to allow visual metering and aid in uniform application during seeding.

Applying Mulch

Straw or hay mulch will be spread uniformly within 24 hours after seeding and/or planting. The mulch may be spread by blower-type spreading equipment, other spreading equipment or by hand. Mulch shall be applied to cover 75% of the soil surface.

Wood cellulose or wood fiber mulch shall be applied uniformly with hydraulic seeding equipment.

Anchoring Mulch

Anchor straw or hay mulch immediately after application by one of the following methods:
1. Emulsified asphalt can be (a) sprayed uniformly onto the mulch as it is ejected from the blower machine or (b) sprayed on the mulch immediately following mulch application when straw or hay is spread by methods other than special blower equipment.

The combination of asphalt emulsion and water shall consist of a homogeneous mixture satisfactory for spraying. The mixture shall consist of 100 gallons of grade SS-1h or CSS-1h emulsified asphalt and 100 gallons of water per ton of mulch.
Care shall be taken at all times to protect state waters, the public, adjacent property, pavements, curbs, sidewalks, and all other structures from asphalt discoloration.
2. Hay and straw mulch shall be pressed into the soil immediately after the mulch is spread. A special "packer disk" or disk harrow with the disks set straight may be used. The disks may be smooth or serrated and should be 20 inches or more in diameter and 8 to 12 inches apart. The edges of the disks shall be dull enough to press the mulch into the ground without cutting it, leaving much of it in an erect position. Mulch shall not be plowed into the soil.
3. Synthetic tackifiers or binders approved by GDOT shall be applied in conjunction with or immediately after the mulch is spread. Synthetic tackifiers shall be mixed and applied according to manufacturer's specifications. Refer to Tb - Tackifiers and Binders.
4. Rye or wheat can be included with Fall and Winter plantings to stabilize the mulch. They shall be applied at a rate of one-quarter to one half bushel per acre.
5. Plastic mesh or netting with mesh no larger than one inch by one inch may be needed to anchor straw or hay mulch on unstable soils and concentrated flow areas. These materials shall be installed and anchored according to manufacturer's specifications.

Irrigation

Irrigation shall be applied at a rate that will not cause runoff.

SEEDING RATES FOR
PERMANENT SEEDING

SPECIES	RATE Per 1,000 sq.ft.	RATE Per Acre *	PLANTING DATES **
BAHIA	1.4 POUNDS	60 LBS.	1/1-12/31
BERMUDA	0.2 POUND	10 LBS.	2/15-7/1
CENTPEDE	BLOCK SOD ONLY	BLOCK SOD ONLY	4/1-7/1
LESPEDEZA	1.7 POUNDS	75 LBS.	1/1-12/31
WEeping LOVE GRASS	0.1 POUND	4 LBS.	2/1-6/15
SWITCH GRASS	0.9 POUND	40 LBS.	3/15-6/1

* Unusual site conditions may require heavier seeding rates
** Seeding dates may need to be altered to fit temperature variations and conditions.

THE CITY OF

ALPHARETTA

GEORGIA

CITY OF ALPHARETTA

DEPARTMENT OF PUBLIC WORKS

1790 HEMBREE ROAD

ALPHARETTA, GA 30009

H&L

Heath & Linebeck

Engineers

INCORPORATED

200 CANTON ROAD • BUILDING 200

MARKETTA, GEORGIA 30007-0000

(770) 641-1000

CIVIL DESIGN PLANS
FOR THE
BIG CREEK GREENWAY
BOARDWALK
REPLACEMENT

FINAL PLANS
AUGUST 26th, 2022

REVISION		
No.	Date	Revision

SHEET NO.

CE511

EROSION CONTROL
DETAILS

GSWCC

Level II Certification # 0000064868

Designed by:	PFJ
Drawn by:	PFJ
Checked by:	WWD
File Name:	CE508.dwg

CITY OF ALPHARETTA INVITATION TO BID (ITB)

ITB Number: 23-004

ITB Title: Big Creek Greenway Boardwalk Replacement

ITB Addendum Posting Date: November 9, 2022



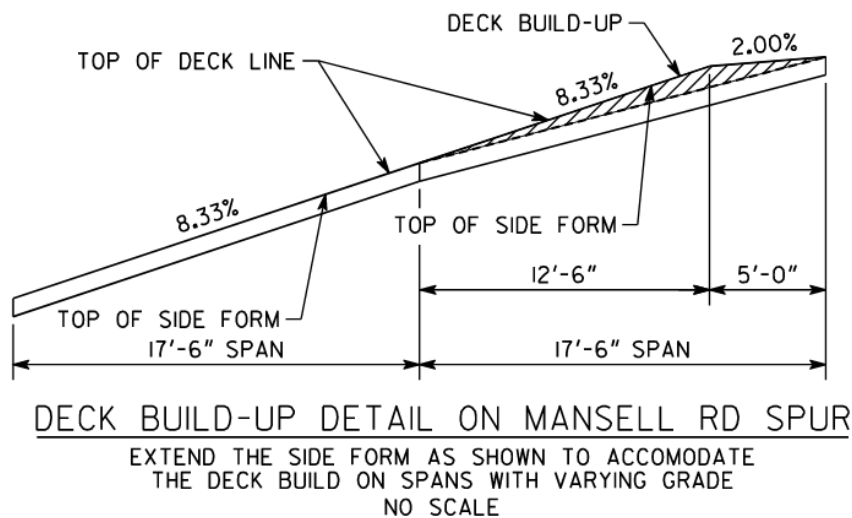
ADDENDUM # 1

TO ALL BIDDERS:

1. The information included in this addendum is made part of the ITB noted above and part of any contract that may be awarded as a result of response to this ITB.
2. The purpose of this addendum is to supply additional information or documents, or revised information or documents.
3. If a conflict between any previously provided information and the information contained in this addendum, the information contained in this addendum will prevail.
4. Bidders must acknowledge receipt of this addendum when submitting bid.
5. Remainder of this page intentionally blank. See addendum information beginning on the next page.

The invitation to bid documents are hereby modified in the following respects:

- Q1 There appears to be a discrepancy between the civil plans (sheets CS101 and CS 301) and the structural plans (Sheets S10, S11, S17 and S18) regarding the foundations and framing. The civil sheets indicate ADA landings along the length of the Mansell Rd Spur. The structural framing sheets do not show the framing, or piers for the landings. Additional foundations and framing may be required for the landings. Can you confirm?
- A. The structural framing sheets and civil plan profile are correct as provided. Sheet S04 provides a detail for deck build up to achieve the required ADA landings along the length of the Mansell Road Spur – see below.



- Q2 Is there a Geotech report? Even the old one from the boardwalk would be helpful.
- A. The Geotech report has been posted online as a separate file at the Bonfire site for this ITB, <https://cityofalpharetta.bonfirehub.com/>
- Q3 The specification manual includes a section for a precast concrete boardwalk with PermaTrak being the basis of the alternate. The section states that it is a deductive alternate to the base bid design included in the plans. It is specification section 034800.
- A. The City has not issued this ITB with the alternate referenced in this question. Remove the 034800 spec from the bid docs.
- B. The plans provided should suffice along with the helical pile spec.
- C. The plans reference GDOT standard specs that apply, which are available to all online.
- D. Schedule of Items bid form is not changed. It remains as originally issued and found online.

END ADDENDUM



November 17, 2022

Procurement Department
City of Alpharetta
2 Park Plaza
Alpharetta, Georgia 30009

RE: **ITB Number: 23-004**
 ITB Title: Big Creek Boardwalk Replacement
 City of Alpharetta

Dear Procurement Department:

Excellere Construction, LLC is very pleased to submit proposal in response to your invitation to bid *ITB#23-004 Big Creek Boardwalk Replacement project*. The uploaded documents to your Bonfire Project Web Page outline our proposed approach to the project and addresses the information requirements that were outline in the ITB.

With over 7 years of experience, Excellere Construction has the in-depth knowledge and experience to undertake this project on behalf of the City of Alpharetta and to complete it effectively: on time and on budget. We believe Excellere Construction is your right choice for the project, its Company Profile/Overview/Executive Summary is enclosed with this letter. Excellere Construction is very familiar with the project and the area as it is currently in contract, with Forsyth County, for the rehabilitation, restoration, and renewal of the Big Creek Greenway, Phase 2, from Union Hill Road to Fowler Park, approximately 0.859 miles. This project includes the replacement of 4 boardwalks. The boardwalks will have a steel frame with wooden decking supported on helical piles.

With its high-quality services, commitment and expertise, Excellere Construction, LLC is very confident that it can meet its contractual obligations for the project. Excellere has received exceptional feedback from its clients in past projects for outstanding services rendered to them.

We would be pleased to answer any questions you might have regarding our proposal.

Thank you for your time and attention.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Luigi H. Hernandez', with a stylized flourish at the end.

Luigi H. Hernandez, PE
President
(678) 447-4435
luigih@excellere-ga.com

Enclosures: Company Profile/Overview/Executive Summary
 Business License
 Contractor License
 GDOT Prequalification Certificate



STATEMENT OF QUALIFICATIONS

Home Office & Mailing Address:
4343 Shallowford Road, Suite 161
Marietta, GA 30062

Company relevant information:
Main Phone: 770-676-5727 Fax: N/A
Established – July 15th, 2015

Officers
Martha L. Herrera, Vice President
Email: Marthah@Excellere-GA.com
Cell: 678-525-1754

Luigi H. Hernandez, President
Email: Luigih@Excellere-GA.com Cell: 678-447-4435

Excellere Construction LLC, Excellere, was founded in July 2015 by Luigi H. Hernandez and Martha L. Herrera, who are highly educated Professional Engineers with extensive experience in Civil & Construction Engineering. Both work closely with Project Owners, crews and administration staff to uphold Excellere's high standards and ensure the best possible workmanship and satisfaction.

Excellere Construction specializes in the construction of road improvements, trails, pedestrian bridges, path-way, and streetscape municipal projects, such work is defined by: the construction of concrete sidewalks and trails, boardwalks, curb and gutter, storm drainage, ADA ramps, driveways, road widening, intersection improvements, pedestrian bridges, parking lots, asphalt paving, paver installation, irrigation systems, landscaping, pedestrian lights, striping, and management and installation of erosion control devices.

Excellere Construction is a GA licensed General Contractor, GA DOT Prequalified Contractor and a certified DBE. (GDOT Vendor ID: 13984, approved for a capacity rating of 34,800,000.00).

Excellere has executed projects for multiple cities and counties in and around the Metro Atlanta area. Up to end of August 2022, Excellere Construction had executed contracts for over 41 million dollars (One prime example is the successful completion of the \$4,420,242.05, Big Creek Trail/Replacement, Phase1 project for Forsyth County). Furthermore, Excellere has several contracts on hand ranging from \$143,000 to \$6,963,000.00.

Since the company's date of foundation, Excellere has not failed to complete a project nor has it been involved in liquidated damages or served the Owner with a claim for additional compensation prepared by an attorney or a claims consultant excluding routing change order requests. Excellere has not been involved in litigation as a plaintiff or defendant against the Owner or any Engineering Firms.

Excellere has invested around 3.8 million dollars on company vehicles, heavy equipment, tools and attachments. Excellere owns over 32 pieces of heavy equipment, 2 Kenworth Tandem Dump Trucks and 18 vehicles (Ford F-250's, F-350's and SUV's), including dozens of equipment attachments, power tools and trailers. May Excellere need any additional rental equipment, the list of accounts it has with several major heavy equipment rental companies is vast. See Attached Own Equipment List.

Excellere's staff as Estimators and Project Managers are: Luigi Hernandez, Martha Herrera, Renato Espinel, Monét Taylor, and Antonio Valdivieso. All Project Managers and Estimators currently hold a Bachelor's degree of Science in Civil Engineering, with in-depth field knowledge. Estimators and Project Managers also spend many hours in the field working closely with Superintendents, subcontractors, crew members and clients. Excellere's Superintendents are: Darrel Chambers, JB Mayo, Bernabe Gallegos, Alvaro Acosta and Jose Badillo. They have over 80 years of combined experience. All Excellere's Superintendents are well qualified and have exceptional knowledge and skills to successfully complete the scope of work for any given project.

Mr. Hernandez has a Bachelor's degree of Science in Civil Engineering, a Specialist's degree in Highway Engineering, and a Master's degree in Transportation. He is a registered Professional Engineer and a General Contractor Qualified Agent in Georgia, amongst other professional certifications. Mr. Hernandez has over 24 years of professional experience. For over 19 years, he has been estimating and managing the construction of road improvements, multi-use trails, parks, and streetscape projects. He has managed the construction of several boardwalks. Mr. Hernandez is well-known by government officials in most cities and counties in/around the Metro Atlanta area, where he has been involved in hundreds of projects working as a Chief Estimator, Project Manager, and Field Superintendent. See Attached Resume.

Ms. Herrera has a Bachelor's degree of Science in Civil Engineering, a Master's degree of Science in Civil Engineering, and a Specialist's degree in Roadway Geotechnical Engineering and Pavements. She is a Georgia registered Professional Engineer. Ms. Herrera has over 19 years of Engineering experience in conventional and specialized geotechnical projects and managing construction projects. See Attached Resume.

Excellere Construction has the ability to obtain construction bonds up to Ten Million dollars (\$10M) for a single project and twenty Million dollars (\$20M) aggregate through North American Specialty Insurance Company, who is listed on the US Treasury Department Circular 570 as an approved

surety on Federal projects. Furthermore, Yates Insurance Agency has issued Excellere several policies of insurance including worker's compensation insurance, commercial general liability insurance, Umbrella Liability, installation floater, lease / rented equipment, and automobile liability insurance.

In summary, Excellere Construction, LLC is very confident that it can meet its contractual obligations. This is thanks to the owners' education, knowledge, and experience; educated Project Managers, experienced Superintendents and staff, the support of highly rated bonding, insurance companies and the financial resources it needs to successfully meet goals, expectations, deadlines, and workmanship for a project to be successful.

Federal I.D. Number: 47-4545625

Dun & Bradstreet Data Universal Numbering System (DUNS) Number: 09-099-3141

Bank Reference

Name: Ameris / Fidelity Bank

Address: 1220 Cobb Pkwy N, Marietta, GA 30062

Phone Number: 404-553-2439

Contractor's Licenses

Business License

License Type: Cobb County

License Number: CON000564

General Contractor License

License Type: General Contractors

License Number: GCCO004851

Luigi Hernandez

License Type: Professional Engineer, PE

License Number: PE037910, Georgia Board of Professional Engineers

License Number: 68264, Florida Board of Professional Engineers

License Type: Level II Certified Design Professional

License Number: 0000024744

Martha L. Herrera

License Type: Professional Engineer, PE

License Number: PE69858, Georgia Board of Professional Engineers

Antonio Valdivieso

License Type: Engineer In Training, EIT

License Number: EIT 026274

Upon request, Excellere Construction, LLC will fill out a detailed financial statement and furnish any other information that may be required by Owner.

REFERENCES

Project	Description	Client	Contact	Phone	Email	Date Completed	Contract Dollar Amount
Silver Comet Trail	Project consisted on reparation of two Silver Comet Trail bridges, one over Nickajack Creek and the other over Noses Creek. Repairs to Bridge 1 - Nickajack Creek Bridge included bridge railing replacement and repair of an undermined footing in Nickajack Creek. Repairs to Bridge 2 -Noses Creek Bridge consisted of replacement of the asphalt bridge deck with a concrete bridge deck, installation of a bridge deck drainage system, pile encasements and wooden pile replacements.	Cobb County	Project Manager: Jesse Jenkins Engineer: Jeffrey Neiswender	404-931-8012 770-528-3654	Jesse.jenkins@cobbcounty.org Jeffrey.Neiswender@cobbcounty.org	30-May-2020	\$573,500.00
Murphey Candler Park - North Boardwalk	The North Boardwalk project was a design/build project for the Murphey Candler Park. The project included top-down construction of over 530 ft of boardwalks, observation decks and event decks crossing the lake to connect two sides of the Murphey Candler Lake. The boardwalk consisted of wooden frame and deck supported on helical piles.	City of Alpharetta	Construction Manager: Lee Croy Engineer: Mack Cain	678-576 9846 678-318-1241	lee.croy@brookhavenga.gov mcain@cplteam.com	September 2022	\$868,243.46
Big Creek Greenway, Phase 2	Rehabilitation, restoration, and renewal of the Big Creek Greenway, Phase 2, from Union Hill Road to Fowler Park, approximately 0.859 miles. The project includes the replacement of 4 boardwalks. The boardwalks will have a steel frame with wooden decking supported on helical piles.	Forsyth County	Project Manager: Jordan Wallace Engineer: Patrick T. Peters, PE	404-393-8566 770-424-1668 Ext: 146	jwallace@forsythco.com ppeters@health-lineback.com	In Progress Estimated Completion Date: End of March 2022	\$4,341,700.00

RESUME: Luigi H. Hernandez, PE

HIGHLIGHTS OF QUALIFICATIONS

- Over 24 years of experience estimating and managing the construction of roadway improvements, multi-use trails (concrete trails, boardwalks and pedestrian bridges), parks, and streetscape projects; designing highways, intersections, and interchanges; and preparing traffic and transportation studies.
- Bachelor's degree in Civil Engineering
- Specialist's degree in Highway Engineering
- Master's degree in Transportation
- Professional Engineer, P.E. in Georgia (PE037910) and Florida
- Georgia General Contractor Qualified Agent - License # GCQA004848
- Level II Certified Design Professional No. 0000024744 by Georgia Soil and Water Conservation Commission.
- Extensive experience in AutoCAD; Eagle Point - RoadCalc, a roadway design software; TransCAD, HCS, SYNCHRO, TRANSYT-7, SIDRA, and other design tools.

EXPERIENCE

President / General Manager / Field Superintendent at Excellere Construction LLC.

August 2015 – Present (7 years 3 months)

Chief Estimator / Project Manager / Field Superintendent at Lewallen Construction. December 2005 – August 2015 (9 years 8 months)

- Planned, directed, and coordinated construction activities related to roadway improvements, Multi-Use trails, parks, pedestrian and vehicular bridge rehabilitation and streetscape projects. Projects involved earthwork, demolitions, clearing, installation of erosion control measures, storm drainage, water main lines, electrical conduits, light poles, traffic signals, handrails, concrete sidewalks, concrete driveways, curb and gutters, asphalt and concrete trails, milling, asphalt (overlays and full depth pavement structures), retaining walls, box culverts, driving H Piles, helical piers, bridge abutments, pedestrian bridges, boardwalks, landscaping, pavilions, striping and signage.
- Managed and oversaw the installation of dozens of pedestrian bridges ranging from 30 ft to 200 ft long. These bridges required the installation of H piles, driving wood piles, design and installation of helical piers, construction of concrete columns, abutments and pile caps. Installed bridges consisted of concrete and wood decks.
- Reviewed constructability of civil construction projects, and prepared Value Engineering reports to improve design performance and/or reduce construction project cost.
- Oversaw quality of job being constructed, its organization, and implementation.
- Designed temporary shoring and temporary support structures.
- Managed design-build pedestrian bridges and Multi-Use trails.
- Designed temporary traffic control plans including temporary lane closure, temporary road closure, and temporary detours.
- Reviewed proposal specifications and drawings, performed quantity take-off's and prepared cost analysis and estimates.

Transportation Engineer at INGETEC S.A. April 2000 - December 2002 (2 years 9 months)

- Performed the geometric design of freeways, urban highways, interchanges, roundabouts, intersections, and multi-use paths.
- Processed and analyzed field traffic data and counts and analyzed historic traffic data.
- Determined traffic forecast, analyzed traffic operations, traffic impacts, and level-of-services of a rural roadway.
- Reviewed and oversaw technical aspects as part of the supervision contract of a concession toll road during its operational phase involving 156 miles and four toll roads.
- Performed traffic assignment for an urban highway using TransCad
- Determined the level-of-service of a proposed toll urban highway considering different number of travel lanes and years of operation.

Civil Engineer at ETA S.A. January 1996 - January 1998 (2 years 1 month) and December 1998 - March 2000 (1 year 3 months).

- Supervised surveying crews during the design of rural roadways and urban highways and processed and reviewed surveying data.
- Determined the most appropriate re-alignment corridor of existing rural roadways to improve their capacity, traffic operation, pedestrian and driver safety, and level-of-service.
- Designed roadway alignments, prepared geometric design reports including conclusion and recommendations, and prepared striping and signing drawings.
- Prepared traffic impact reports.
- Designed the pavement structure of an urban highway.
- Prepared a traffic signal timing plan for a signalized intersection
- Oversaw field traffic data collection, processed and analyzed field traffic data and counts, analyzed historic traffic data of existing rural roadways to be improved and rehabilitated.
- Determined and analyzed traffic operations, traffic impacts, and level-of-services of rural roads.
- Determined traffic forecast for rural roadways, urban highways, and intersections.
- Determined and analyzed traffic operations, traffic impacts, and level-of-services of urban highways and intersections
- Prepared traffic impact reports including conclusion and recommendations.
- Prepared detail engineering design of storm drainage system.

EDUCATION

- **Industrial University of Santander**
Bachelor's Degree, Civil Engineering, 1989 - 1995
- **Cauca University**
Specialist's Degree, Highway Engineering, 1998 – 1998
- **National University of Colombia**
Master's Degree, Transportation, 2001 – 2003

CERTIFICATIONS

Professional Engineer, PE

- Georgia Board of Professional Engineers License PE037910 since April 2013.
- Florida Board of Professional Engineers License 68264 since July 2008

General Contractor Qualifying Agent

- Georgia Board of Residential & General Contractors License GCQA004848 since March 2010

Level II Certified Design Professional

- GSWCC License 0000024744

RESUME: Martha L. Herrera, PE

HIGHLIGHTS OF QUALIFICATIONS

- Over 19 years of experience in conventional and specialized geotechnical projects, and managing the construction of roadway improvements, multi-use trails (concrete trails and boardwalks), parks, and streetscape projects.
- Capabilities include shallow and deep foundation design, bearing capacity and settlement analysis, slope stability analysis, seepage analysis, designs of excavations and temporary slope protections for dams, pavement design, and drilled shaft and augered cast-in-place pile inspection,
- Extensive experience in Geo-Slope, Slide, Lpile, Plaxis and other design tools.
- Bachelor's degree in Civil Engineering
- Master's degree in Civil Engineering, Roadway Infrastructure and Transportation.
- Specialist's degree in Roadway Geotechnical Engineering and Pavements
- Professional Engineer - Civil and Geotechnical, in Georgia (PE037142) and Florida (PE69858).

EXPERIENCE

Vice President / Project Manager / Estimator at Excellere Construction LLC.

March 2018 – Present (4 years 6 months)

- Managed and coordinated construction activities related to roadway improvements, streetscape projects, and boardwalk projects. Projects involved earthwork, demolitions, clearing, installation of erosion control devices, storm drainage, water main lines, electrical conduits, light poles, traffic signals, handrails, concrete sidewalks, concrete driveways, curb and gutters, boardwalks, milling, asphalt (overlays and full depth pavement structures), retaining walls, landscaping, pavilions, striping and signage.
- Oversaw quality of job being constructed, its organization, and implementation.
- Designed temporary traffic control plans including temporary lane closure, temporary road closure, and temporary detours.
- Reviewed proposal specifications and drawings performed quantity take-off's and prepared cost analysis and estimates.

Senior Engineer at AMEC Foster Wheeler.

April 2006 – March 2018 (11 years 11 months)

- Processed and analyzed geotechnical field and laboratory data in order to characterize the project site and determine their engineering properties including how conditions will interact with the proposed development.
- Prepared geotechnical reports for mid-rise commercial structures and large manufacturing facilities that address the usual geotechnical considerations as well as the unique subsurface conditions that require special design or construction methods to develop the site cost effectively.
- Evaluated shallow and deep foundations for all building and structure types that included analysis for bearing capacity and settlement.
- Performed analyses related to axial, lateral and uplift capacities, slope stability, subgrade improvement, settlement, and pavement design.

- Performed External stability analyses, including global stability, to evaluate the stability of walls against sliding, overturning, and deep shear failure.
- Supervised and analyzed compression load and tension load tests of augered cast-in-place piles.
- Observed and recorded installation of micropiles and augered cast-in-place piles.
- Inspected drilled shafts evaluating of bearing surface and rock sockets and observed concrete placement
- Performed site reconnaissance assessing risks posed by site conditions.
- Coordinated and supervised geotechnical investigations of existing subsurface conditions and materials in the project site. Reviewed field reports, provided guidance to field personnel, organized field work and assigned tasks to staff specialists and technicians.
- Acted as support resource for the management and execution of the assigned project task delegated for a nuclear project.
- Provided quality assurance support to projects in the nuclear area.
- Prepared proposals for geotechnical work and estimated project budgets.

Geotechnical Engineer – Designer at INGETEC S.A.

April 2000 - May 2003 (3 years 2 months)

- Designed both highway pavements and rehabilitation pavements including flexible and concrete pavements. Thirty-five miles in two roads.
- Participated in geotechnical investigations of roadway projects, three dam projects, and two landfill projects.
- Participated in slope stability analysis, seepage analysis and stress strain behavior of two rockfill dams with concrete face, a rockfill dam with central core and a RCC dam.
- Participated in the excavation and temporary reinforcement designs of a rockfill dam with concrete face and a rockfill dam with central core.
- Participated in pavement designs in the industrial sector. Detailed engineering for the complete power supply system of coal mines.
- Participated in slope stability analysis for control systems of a flooded river 12.5 miles in length.
- Participated as a coordinator of the monitoring of geotechnical instrumentation of civil works of the Chingaza embankment and San Rafael embankment.
- Participated in cost estimates of highway projects and dam projects.

EDUCATION

- **Universidad de Los Andes**

Bachelor of Science in Civil Engineering, 1993 – 1998

- **Universidad de Los Andes**

Master of Science in Civil Engineering, Roadway Infrastructure and Transportation, 1998 – 1999

- **Pontificia Universidad Javeriana**

Specialist's degree in Roadway Geotechnical Engineering and Pavements, 2002 - 2003

CERTIFICATION

Professional Engineer, PE

- Georgia State Board of Registration for Professional Engineers & Land Surveyors. License PE037142. Since June 2012
- Florida Board of Professional Engineers License PE69858. Since June 2009
Specialist's degree in Roadway Geotechnical Engineering and Pavements, 2002 - 2003



PROFESSIONAL LICENSING

GEORGIA SECRETARY OF STATE BRAD RAFFENSPERGER

CORPORATIONS • ELECTIONS • LICENSING • CHARITIES

Licensee Details

Licensee Information

Name: Luigi Hilario Hernandez

Address:

Marietta GA 30062

Primary Source License Information

Lic #: GCQA004848	Profession: Residential/General Contractor	Type: General Contractor Qualifying Agent
Secondary:	Method: Application/Prior Approval	Status: Active
Issued: 9/17/2015	Expires: 6/30/2024	Last Renewal Date: 5/31/2022

Associated Licenses

Relationship: Supervisor

Licensee: Excellere Construction LLC

License Type: General Contractor Company

License #: GCCO004851

License Status: Active

Established: 9/17/2015

Association Date: 9/14/2015

Expiry:

Type: Prerequisite

Public Board Orders

Please see Documents section below for any Public Board Orders

Other Documents

No Other Documents

Data current as of: October 12, 2022 11:9:54

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Russell R. McMurry, P.E., Commissioner
One Georgia Center
600 West Peachtree Street, NW
Atlanta, GA 30308
(404) 631-1000 Main Office

July 5, 2022

CERTIFICATE OF QUALIFICATION
Vendor ID: 13984

Excellere Construction, LLC
4343 Shallowford Road, Ste 161
Marietta, GA 30062

In accordance with The Rules and Regulations governing the Prequalification of Prospective Bidders, the Georgia Department of Transportation has assigned the following Rating. This Certificate of Qualification is effective on the date of issue stated above and cancels and supersedes all Certificates previously issued:

MAXIMUM CAPACITY RATING: \$34,800,000.00

CERTIFICATE EXPIRES: May 31, 2024

PRIMARY WORK CLASS/CODE: 441

SECONDARY WORK CLASS(ES)/CODE(S): 163, 500, 500A, 502, 550, 626, 668 and 700.

The total amount of incomplete work, regardless of its location and with whom it is contracted, whether in progress or awarded but not yet begun, shall not exceed the Maximum Capacity Rating. If dissatisfied with the Rating, we direct you to the Appeals Procedures in §672-5-.08 (1) & (2) and §672-1-.05, Rules of the State Department of Transportation.

A Prequalified Contractor may request an extension of its current prequalification **prior** to the expiration date of the prequalification by providing the Department with the following information: the amount of time requested for the extension (either 30, 60 or 90 days), the reason for the extension request and the original expiration date of the prequalification. The Department in its discretion will determine whether the extension should be granted and will notify the Contractor of its determination.

Allowing approved prequalification to lapse will leave the Contractors without the ability to bid work until such time as the standing returns to an approved status. If you desire to apply at some intermediate period before the expiration date, your Rating will be reviewed based on the new application.

This Prequalification Certificate is issued for contractors to be eligible for work with the Georgia Department of Transportation (GDOT) only. GDOT does not certify contractors as eligible to do business with entities other than GDOT. *Work class codes are for reference only and do not represent a certification to be provided in support of contractor ability or NAICS code determinations. NAICS Codes are assigned by the office of Equal Employment Opportunity.*

Sincerely,

Marc Mastronardi, P.E.

Marc Mastronardi, P.E.
Chairman, Prequalification Committee/Contractors

Digitally signed by Marc Mastronardi, P.E.
DN: C=US, E=mmastronardi@dot.ga.gov,
O=Georgia Department of Transportation,
OU=Division of Construction - Director,
CN="Marc Mastronardi, P.E."
Date: 2022.07.07 11:39:29-04'00'

MM:TKA

TECHNICAL BID INFORMATION

Excellere Construction has extensive experience constructing boardwalks and incorporating solutions into the boardwalk design and construction. Excellere has reconstructed over 14,000 ft of wooden timber boardwalks for the Big Creek Greenway trail (from McFarland Rd to Fowler Park), some of them with wooden post, a combination of steel and wooden frame and wooden deck, and others with helical piles, steel frame with wooden deck. Excellere has also constructed a 96 ft boardwalk with helical piles, steel frame and concrete decking for the Big Creek Greenway trail at Webb Bridge Rd.

Excellere best interest is to offer construction options to project Owners that can provide project savings and/or improvements. Excellere innovative Top-Down construction method facilitates to build boardwalks in wetlands and other sensitive areas with minimal impact to the environment. The construction of the North Boardwalk at Murphey Candler Park in Brookhaven, GA, and the reconstruction of the boardwalks for the Big Creek Greenway are examples of how boardwalks design to fit in natural settings are installed in a manner to preserve wetlands and sensitive areas.

Key Projects:

- Webb Bridge Road TSPLOST Improvement, Phase 1 project for the City of Alpharetta, GA

The project included the construction of a 96 ft long boardwalk consisting of helical piers, steel beams, steel girders, and concrete decking. This project also included the installation of a storm drainage pipe, manholes, catch basing, concrete header curb, 10 lf concrete trail, communication conduit, electrical poles, milling and overlay, striping, design and construction of a Modular Block Retaining wall,

- Murphey Candler Park - North Boardwalk project for the City of Brookhaven, GA

The North Boardwalk project was a design/build project for the Murphey Candler Park. The project included top-down construction of over 530 ft of boardwalks, observation decks and event decks crossing the lake to connect two sides of the Murphey Candler Lake. The boardwalk consisted of wooden frame and deck supported on helical piles.

-
- Big Creek Greenway / Big Creek Trail Repair, Phase 1 project for Forsyth County, GA

This project was the replacement of approximately 10,000 ft of boardwalk of the Big Creek Greenway, from McFarland Rd Trailhead to Union Hill. The project includes the replacement of 6 boardwalks, construction of 2 new boardwalks and replacement of a concrete trail sections. The boardwalk frames consist of combination of steel beams and wood, and only wood structures.

- Big Creek Greenway, Phase 2 project for Forsyth County, GA

The project is the rehabilitation, restoration, and renewal of the Big Creek Greenway, Phase 2, from Union Hill Road to Fowler Park, approximately 0.859 miles. The project includes the replacement of 4 boardwalks. The boardwalks have a steel frame with wooden decking supported on helical piles.

- Silver Comet Trail project for Cobb County, GA

Project consisted on reparation of two Silver Comet Trail bridges, one over Nickajack Creek and the other over Noses Creek. Repairs to Bridge 1 - Nickajack Creek Bridge included bridge railing replacement and repair of an undermined footing in Nickajack Creek. Repairs to Bridge 2 -Noses Creek Bridge consisted of replacement of the asphalt bridge deck with a concrete bridge deck, installation of a bridge deck drainage system, pile encasements and wooden pile replacements

Timeline:

With its high-quality services, commitment and expertise, Excellere Construction, LLC is very confident that it can meet its contractual obligations for the project within the construction time indicated for the project.

**AFFIDAVIT VERIFYING CONTRACTOR PARTICIPATION IN
FEDERAL WORK AUTHORIZATION PROGRAM (E-Verify)**

The undersigned contractor ("Contractor") executes this Affidavit to comply with O.C.G.A. § 13-10-91 related to any contract to which Contractor is a party that is subject to O.C.G.A. § 13-10-91 and hereby verifies its compliance with O.C.G.A. § 13-10-91, attesting as follows:

- a) The Contractor has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program;
- b) The Contractor will continue to use the federal work authorization program throughout the contract period, including any renewal or extension thereof;
- c) The Contractor will notify the City of Alpharetta in the event the Contractor ceases to utilize the federal work authorization program during the contract period, including renewals or extensions thereof;
- d) The Contractor understands that ceasing to utilize the federal work authorization program constitutes a material breach of Contract;
- e) The Contractor will contract for the performance of services in satisfaction of such contract only with subcontractors who present an affidavit to the Contractor with the information required by O.C.G.A. § 13-10-91(a), (b), and (c);
- f) The Contractor acknowledges and agrees that this Affidavit shall be incorporated into any contract(s) subject to the provisions of O.C.G.A. § 13-10-91 for the project listed below to which Contractor is a party after the date hereof without further action or consent by Contractor; and
- g) The Contractor acknowledges its responsibility to submit copies of any affidavits, drivers' licenses, and identification cards required pursuant to O.C.G.A. § 13-10-91 to the City of Alpharetta within five business days of receipt.

911027

Federal Work Authorization User Identification Number

EXCELLERE CONSTRUCTION, LLC

Name of Contractor

09/20/2015

Date of Authorization

Big Creek Greenway Boardwalk Replacement

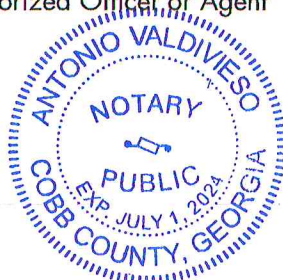
Name of Project

I hereby declare under penalty of perjury that the foregoing is true and correct.Executed date **11/16/2022** in **MARIETTA** (city), **GA** (state).

Signature of Authorized Officer or Agent

LUIGI HERNANDEZ

Printed Name and Title of Authorized Officer or Agent



SUBSCRIBED AND SWORN BEFORE ME

ON THIS THE **16** DAY OF **NOVEMBER**, 20**22**.

NOTARY PUBLIC

My Commission Expires: **07/01/2024**

**BID BOND**

(Five Percent (5%) of Bid)

Bid Bond # None

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned

Excellere Construction, LLC

, as CONTRACTOR, and

Swiss Re Corporate Solutions America Insurance Corporation

, as SURETY, a corporation duly organized

under the laws of the State of Missouri, are hereby held and firmly bound unto

CITY OF ALPHARETTA, GEORGIA

2 PARK PLAZA

ALPHARETTA, GA 30009 as CITY and hereafter called OBLIGEE, in the penal sum of

One Hundred Twelve Thousand Dollars (\$ 112,000), or FIVE Percent

(5 %) of the bid amount, whichever is less, for the payment of which sum well and truly to be made, the said CONTRACTOR and the said SURETY, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

Signed this 17th day of November, 2022.

The condition of the above obligation is such that whereas the CONTRACTOR has submitted to the OBLIGEE a certain bid attached hereto and hereby made a part hereof to enter into a contract in writing for the construction of

BIG CREEK GREENWAY BOARDWALK REPLACEMENT: provide all materials, labor, and equipment for complete construction. The project scope includes, but is not limited to, demolition of existing boardwalk, installation of concrete boardwalk, installation of landscape materials, and related work. The location of the work is Mansell Road bridge over Big Creek --- within the City of Alpharetta, Georgia.

NOW, THEREFORE, if the OBLIGEE shall accept the bid of the CONTRACTOR and the CONTRACTOR shall enter into a Contract with the OBLIGEE in accordance with the terms of such bid and give such bonds or bond as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the CONTRACTOR to enter such Contract and give such bond or bonds, if the CONTRACTOR shall pay to the OBLIGEE the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the OBLIGEE may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

BID BOND

Page 2 of 2

The SURETY, for value received, hereby stipulates and agrees that the obligations of said SURETY and its bond shall be in no way impaired or affected by any extension of the time within which the OBLIGEE may accept such bids, and said SURETY does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the CONTRACTOR and the SURETY corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

Excellere Construction, LLC

CONTRACTOR

By: _____



Swiss Re Corporate Solutions America Insurance Corporation

SURETY

By: _____

Sean Tidwell
Georgia Representative and Attorney-In-Fact**Surety Contact Information:**

Address: 2800 Century Pkwy, NE, Suite 300, Atlanta, GA 30345

Phone: (404) 633-4321

Fax: (404) 248-0444

Email: STidwell@yatesins.com

Surety companies executing bonds must appear on the Treasury Department's most current list (Circular 570, as amended) and be authorized to conduct business in the State of Georgia.

SWISS RE CORPORATE SOLUTIONS

SWISS RE CORPORATE SOLUTIONS AMERICA INSURANCE CORPORATION ("SRCSAIC")
SWISS RE CORPORATE SOLUTIONS PREMIER INSURANCE CORPORATION ("SRCSPIC")
WESTPORT INSURANCE CORPORATION ("WIC")

GENERAL POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, THAT SRCSAIC, a corporation duly organized and existing under laws of the State of Missouri, and having its principal office in the City of Kansas City, Missouri, and SRCSPIC, a corporation organized and existing under the laws of the State of Missouri and having its principal office in the City of Kansas City, Missouri, and WIC, organized under the laws of the State of Missouri, and having its principal office in the City of Kansas City, Missouri, each does hereby make, constitute and appoint:

P.D. YATES III, DANIEL YATES, ALAN R. YATES, KEVIN M. NEIDERT, MICHAEL DAWSON, BETSY J. HOLMES,
BRIAN K. HUGHES, DANA D. RUTLEDGE, TINA MARSH, SEAN TIDWELL, and SANDRA LAWRENCE

JOINTLY OR SEVERALLY

Its true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver, for and on its behalf and as its act and deed, bonds or other writings obligatory in the nature of a bond on behalf of each of said Companies, as surety, on contracts of suretyship as are or may be required or permitted by law, regulation, contract or otherwise, provided that no bond or undertaking or contract or suretyship executed under this authority shall exceed the amount of:

TWO HUNDRED MILLION (\$200,000,000.00) DOLLARS

This Power of Attorney is granted and is signed by facsimile under and by the authority of the following Resolutions adopted by the Boards of Directors of both SRCSAIC and SRCSPIC at meetings duly called and held on the 18th of November 2021 and WIC by written consent of its Executive Committee dated July 18, 2011.

"RESOLVED, that any two of the President, any Managing Director, any Senior Vice President, any Vice President, the Secretary or any Assistant Secretary be, and each or any of them hereby is, authorized to execute a Power of Attorney qualifying the attorney named in the given Power of Attorney to execute on behalf of the Corporation bonds, undertakings and all contracts of surety, and that each or any of them hereby is authorized to attest to the execution of any such Power of Attorney and to attach therein the seal of the Corporation; and it is

FURTHER RESOLVED, that the signature of such officers and the seal of the Corporation may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signatures or facsimile seal shall be binding upon the Corporation when so affixed and in the future with regard to any bond, undertaking or contract of surety to which it is attached."



By

Erik Janssens, Senior Vice President of SRCSAIC & Senior Vice President of SRCSPIC & Senior Vice President of WIC

By

Gerald Jagrowski, Vice President of SRCSAIC & Vice President of SRCSPIC & Vice President of WIC



IN WITNESS WHEREOF, SRCSAIC, SRCSPIC, and WIC have caused their official seals to be hereunto affixed, and these presents to be signed by their authorized officers

this 10 day of NOVEMBER, 20 22

State of Illinois
County of Cook



Swiss Re Corporate Solutions America Insurance Corporation
Swiss Re Corporate Solutions Premier Insurance Corporation
Westport Insurance Corporation

On this 10 day of NOVEMBER, 20 22, before me, a Notary Public personally appeared Erik Janssens, Senior Vice President of SRCSAIC and Senior Vice President of SRCSPIC and Senior Vice President of WIC and Gerald Jagrowski, Vice President of SRCSAIC and Vice President of SRCSPIC and Vice President of WIC, personally known to me, who being by me duly sworn, acknowledged that they signed the above Power of Attorney as officers of and acknowledged said instrument to be the voluntary act and deed of their respective companies.



Christina Manisco, Notary

I, Jeffrey Goldberg, the duly elected Senior Vice President and Assistant Secretary of SRCSAIC and SRCSPIC and WIC, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney given by said SRCSAIC and SRCSPIC and WIC, which is still in full force and effect. IN WITNESS WHEREOF, I have set my hand and affixed the seals of the Companies this 17th day of November, 20 22.

Jeffrey Goldberg, Senior Vice President &
Assistant Secretary of SRCSAIC and
SRCSPIC and WIC



BIDDER'S DISCLOSURES AND CERTIFICATIONS

PROCUREMENT NUMBER & TITLE: ITB 23-004, Big Creek Greenway Boardwalk Replacement

DISCLOSURE FORM AND CERTIFICATION OF NON-COLLUSION			
Bidder must disclose any possible conflict of interest and/or any relationship that exists between any principal or employee of your corporation/firm/team/organization and with any City elected official and/or employee. Relationship may be financial, personal, or family or may be in the form of campaign contributions to elected officials. State whether Relationship DOES or DOES NOT exist. Failure to disclose or to submit this completed form may result in response being declared non-responsive and will not be considered further.			
Check applicable box. Use additional forms if needed:	No known relationship exists ☒	Yes, Relationship does exist ☐	If this box checked, include the name and position of the City Official to whom a campaign contribution was made or official/employee relationship. Use a separate form for each official to whom a contribution has been made within the past two (2) years or for additional official/employee relationships.
City Elected Official and/or Employee Name and position			
Contribution Amount/Value (if any)		Contribution Date and Description	
List other Relationship if not contribution			

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS
The Contractor certifies to the best of its knowledge and belief that neither it nor any of its principals: - are presently debarred, suspended, proposed for debarment, or declared ineligible from submitting bids or proposals by any federal, state or local entity, department or agency; - have within a three-year period preceding this bid/offer, been convicted or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performance of a public (Federal, state or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statement, tax evasion, or receiving stolen property; - are presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in paragraph 2 of this certification; - have within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal, state or local public agency.

By signing this form, I certify that:

- As an officer of this firm, or per the attached letter of authorization, I am duly authorized to certify the information provided herein is accurate and true; and my firm shall comply with all State and Federal Equal Opportunity and Non-Discrimination requirements and conditions of employment.
- That the firm's response is made without prior understanding, agreement, or connection with any corporation, firm, team, organization, or person submitting a response for the same materials, supplies, equipment, opportunity, or services and is in all respects fair and without collusion or fraud. My firm understands and agrees that bid/proposal collusion is a violation of state and federal law and can result in fines, prison sentences, and civil damage awards;
- Employees of this company or employees of any company supplying material or subcontracting to do work on this Contract will not engage in business ventures with employees of the CITY or Consulting Engineers nor shall they provide gifts, gratuities, favors, entertainment, loans or other items of value to employees of this Department, and
- That the provisions of the Official Code of Georgia Annotated, Sections 45-10-20 et seq. have not been violated and will not be violated in any respect. O.C.G.A. 45-10-20 through 45-10-28 provide that it is unlawful for a City elected official or employee to transact business with the City by which that person is employed for himself, on behalf of a business in which the employee or his/her spouse or dependents has a substantial interest, or on behalf of anyone as agent, broker, dealer, or representative.

EXCELLERE CONSTRUCTION, LLC

Company Name

Signature of Authorized Officer or Agent

11/16/2022

Date

Luigi Hernandez, President

Printed Name & Title of Authorized Officer or Agent

4343 SHALLOWFORD RD, SUITE 161, MARIETTA, GA 30062

Company Address

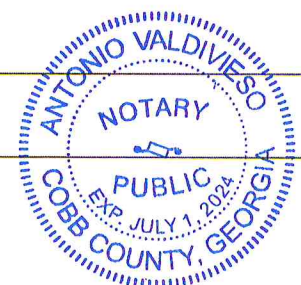
Subscribed and sworn before me on this the

16 day of NOVEMBER, 2022

Notary Public

07/01/2024

My Commission Expires



SCHEDULE OF ITEMS
BIG CREEK GREENWAY BOARDWALK REPLACEMENT
ITB 23-004

Ener Bidder
Name: Excellere

Pay Item #	Item Description	Qty.	Unit	Unit Price	Total
Trail					
1	TRAFFIC CONTROL	1	LS	\$ 679.26	\$ 679.26
2	GRADING COMPLETE	1	LS	\$ 703,185.95	\$ 703,185.95
3	GR AGGR BASE CRS, 6 INCH, INCL MATL	36	SY	\$ 15.61	\$ 561.96
4	CONC SIDEWALK, 6 IN	31	SY	\$ 77.50	\$ 2,402.50
Erosion Control					
5	TEMPORARY GRASSING	1	AC	\$ 0.01	\$ 0.01
6	MULCH	31	TN	\$ 0.01	\$ 0.31
7	CONSTRUCTION EXIT	2	EA	\$ 821.44	\$ 1,642.88
8	CONSTRUCT AND REMOVE COMPOST FILTER SOCK, 18 IN (Sd1-NS)	2,404	LF	\$ 11.82	\$ 28,415.28
9	MAINTENANCE OF TEMPORARY SILT FENCE, TP S (Sd1-S)	284	LF	\$ 0.01	\$ 2.84
10	MAINTENANCE OF CONSTRUCTION EXIT	2	EA	\$ 0.01	\$ 0.02
11	MAINTENANCE OF COMPOST FILTER SOCK, 18 IN (Sd1-NS)	2,404	LF	\$ 0.01	\$ 24.04
12	TEMPORARY SILT FENCE, TYPE S (Sd1-S)	284	LF	\$ 9.22	\$ 2,618.48
13	BARRIER FENCE (ORANGE), 4 FT (COA STD L-9, Type B)	3,500	LF	\$ 3.30	\$ 11,550.00
14	PERMANENT GRASSING	1	AC	\$ 0.01	\$ 0.01
15	AGRICULTURAL LIME	3	TN	\$ 0.01	\$ 0.03
16	FERTILIZER MIXED GRADE	1	TN	\$ 0.01	\$ 0.01
17	FERTILIZER NITROGEN CONTENT	50	LB	\$ 0.01	\$ 0.50
Signing & Marking					
18	REGULATORY/SAFETY SIGNAGE WITH POST - 18" X 18"	2	EA	\$ 136.13	\$ 272.26
Boardwalks					
19	REMOVAL OF EXISTING BR, BOARDWALK 1 (BIG CREEK GREENWAY)	1	LS	\$ 26,244.12	\$ 26,244.12
20	BOARDWALK 1 (BIG CREEK GREENWAY)	1	LS	\$ 561,415.98	\$ 561,415.98
21	HELICAL PILE - BOARDWALK 1 (BIG CREEK GREENWAY)	99	EA	\$ 768.28	\$ 76,059.72
22	REMOVAL OF EXISTING BR, BOARDWALK 2 (MANSELL ROAD SPUR)	1	LS	\$ 8,245.40	\$ 8,245.40
23	BOARDWALK 2 (MANSELL ROAD SPUR)	1	LS	\$ 151,277.49	\$ 151,277.49
24	HELICAL PILE - BOARDWALK 2 (MANSELL ROAD SPUR)	45	EA	\$ 1,154.26	\$ 51,941.70
25	BOARDWALK ABUTMENTS	3	EA	\$ 3,495.22	\$ 10,485.66
26	42" STEEL SAFETY RAILING	2,117	LF	\$ 212.47	\$ 449,798.99
Landscaping					
	<i>Slope Stabilization</i>				
27	COIR MAT 900 EROSION BLANKET	4,884	SF	\$ 0.63	\$ 3,076.92
	<i>Seed Mix for Grassing</i>				
28	NATIVE RESTORATION AND RIPARIAN SEEDING	4,884	SF	\$ 0.02	\$ 97.68
Miscellaneous					
29	MISCELLANEOUS CONSTRUCTION	1.00	LS	\$ 150,000.00	\$ 150,000.00
				GRAND TOTAL: \$ 2,240,000.00	

Question Set 1: Acknowledgements

#	Question	Response	Comment
1.0.1	Addenda Acknowledgement, enter the number of addenda received: Response Type: Select 0, 1, 2, etc.	1	1 ADDENDA RECEIVED
1.0.2	Insurance Requirement Acknowledgement, Response Type: Yes, No entry.	Yes	YES
1.0.3	Acknowledgment Payment and Performance Bond/ Retainage, Response Type: Yes, No entry.	Yes	YES
1.0.4	Acknowledgement of Contract and T&C review, Response Type: Yes, No entry	Yes	YES
1.0.5	Note any Exceptions to Contract T&Cs, Response Type: text entry.	-	NO EXCEPTIONS
5 Questions		100.00% Complete	

Question Set 2: Requested Information

#	Question	Response	Comment
2.0.1	Authorized signer for contract execution in DocuSign: Name, business title, email address, Response Type: Response Type: text entry.	LUIGI HERNANDEZ PRESIDENT LUIGIH@EXCELLERE- GA.COM	
2.0.2	Legal notices contact needed for contracting: Business name and mailing address, contact name, Response Type: text entry.	EXCELLERE CONSTRUCTION, LLC 4343 SHALLOWFORD RD, 161, MARIETTA, GA 30062 LUIGI HERNANDEZ	
2.0.3	Unique Entity ID / identifier used at SAM.gov, Response Type: alphanumeric entry	7xjr7	
2.0.4	Corporate secretary for contract execution in DocuSign: Name, business title, email address, Response Type: Response Type: text entry.	-	N/A. EXCELLERE IS NOT A CORPORATION
2.0.5	Note the employee-number category for your company (all locations). Select either 500 or more employees, 100 or more employees, or less than 100 employees.	less than 100 employees	LESS THAN 100 EMPLOYEES
5 Questions		100.00% Complete	

Request for Taxpayer Identification Number and Certification

Give Form to the
requester. Do not
send to the IRS.

Print or type
See Specific Instructions on page 2.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.

Luigi H. Hernandez

2 Business name/disregarded entity name, if different from above

Excellere Construction LLC

3 Check appropriate box for federal tax classification; check only **one** of the following seven boxes:

☐ Individual/sole proprietor or single-member LLC ☐ C Corporation ☐ S Corporation ☐ Partnership ☐ Trust/estate

☒ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶ **P**

Note. For a single-member LLC that is disregarded, do not check LLC; check the appropriate box in the line above for the tax classification of the single-member owner.

☐ Other (see instructions) ▶

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any) _____

Exemption from FATCA reporting code (if any) _____

(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.)

3442 Orange Wood Court

6 City, state, and ZIP code

Marietta, GA 30062

Requester's name and address (optional)

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

Note. If the account is in more than one name, see the instructions for line 1 and the chart on page 4 for guidelines on whose number to enter.

Social security number

____ - ____ - ____

or

Employer identification number

4 7 - 4 5 4 5 6 2 5

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 3.

Sign
Here

Signature of
U.S. person ▶



Date ▶ 11/16/2022

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. Information about developments affecting Form W-9 (such as legislation enacted after we release it) is at www.irs.gov/fw9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following:

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)

• Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)

• Form 1099-C (canceled debt)

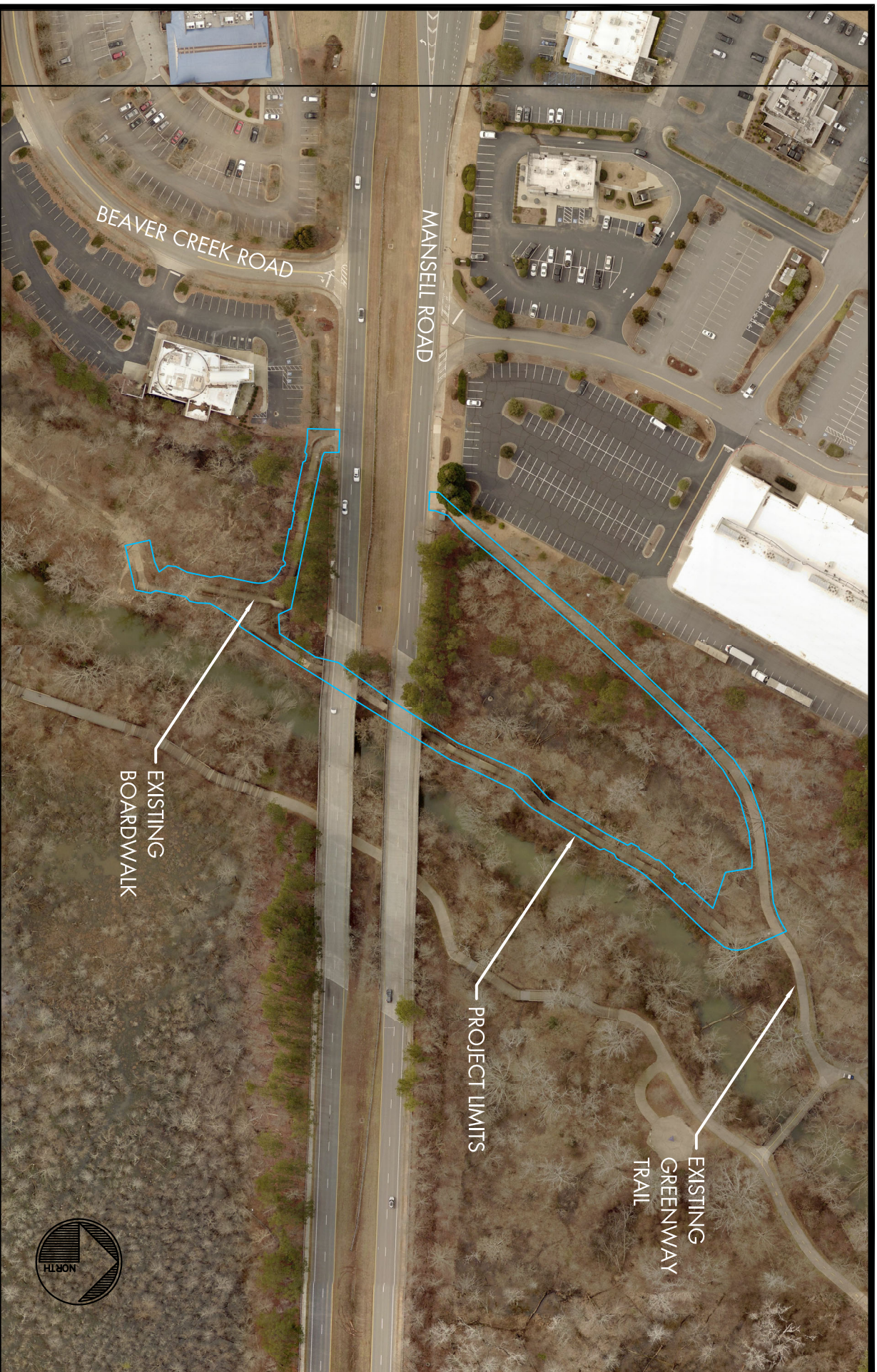
• Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See *What is backup withholding?* on page 2.

By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting?* on page 2 for further information.



ALPHARETTA
PUBLIC WORKS

BIG CREEK GREENWAY AT MANSELL ROAD
BOARDWALK REPLACEMENT

DECEMBER 15, 2022



STAFF REPORT

Submitting Department: Public Safety
Submitted By: Lauren Shapiro
Sponsored By:
Meeting Date: January 3, 2023

I. AGENDA ITEM TITLE: INTERGOVERNMENTAL AGREEMENT: ALPHARETTA JAIL

APPROVAL OF AN INTERGOVERNMENTAL AGREEMENT BY AND BETWEEN THE CITY OF ALPHARETTA, GEORGIA, THE CITY OF MILTON, GEORGIA, THE FULTON COUNTY SHERIFF'S OFFICE, AND FULTON COUNTY, GEORGIA, TO BOARD AND PROVIDE FOR THE HOUSING OF INMATES AT THE ALPHARETTA JAIL.

II. RECOMMENDATION:

Approve the Intergovernmental Agreement by and between the City of Alpharetta, Georgia, the City of Milton, Georgia, the Fulton County Sheriff's Office, and Fulton County, Georgia, to Board and Provide for the Housing of Inmates at the Alpharetta Jail and authorize the Mayor to execute all related and necessary documents.

III. BUDGET IMPLICATIONS:

BUDGETED ITEM: NO

FISCAL IMPACT: NO

INCLUDED IN CURRENT FY CPTL BUDGET: NO

INCLUDED IN CURRENT FY OPRT. BUDGET: NO

TOTAL PROJECT COST:

APPROPRIATIONS:

<u>ACCOUNT TITLE/NUMBER</u>	<u>DOLLAR AMOUNT</u>
-----------------------------	----------------------

EXTERNAL FUNDING SOURCES:

<u>ACCOUNT TITLE/NUMBER</u>	<u>DOLLAR AMOUNT</u>
-----------------------------	----------------------

IV. REPORT IN BRIEF:

BACKGROUND

In early 2022, the City of Alpharetta entered into discussions with the Fulton County Sheriff on the topic of the reopening of the Alpharetta jail facility located on Old Milton Parkway. Discussions centered on the City making the jail available for use under the operation of the Sheriff, an arrangement that existed for many years until operation of the facility was abandoned during the COVID pandemic. The City of Alpharetta reopened the Alpharetta jail facility early in November 2022.

AGREEMENT OVERVIEW

If approved, the City will grant the City of Milton the right to use and occupy the Alpharetta Jail for the purposes of processing/booking, detaining, and housing/boarding City of Milton pre-trial detainees and inmates, and for other purposes.

V. ALTERNATIVES:

Do not approve the Intergovernmental Agreement and do not authorize the City of Milton to use the Alpharetta Jail.

VI. ATTACHMENTS:

IGA with Milton for Alpharetta Jail

INTERGOVERNMENTAL AGREEMENT BY AND BETWEEN THE CITY OF ALPHARETTA, GEORGIA, THE CITY OF MILTON, GEORGIA, THE FULTON COUNTY SHERIFF'S OFFICE, AND FULTON COUNTY, GEORGIA, TO BOARD AND PROVIDE FOR THE HOUSING OF INMATES AT THE ALPHARETTA JAIL

This Intergovernmental Agreement ("Agreement") is made and entered by and between the City of Alpharetta, Georgia ("Alpharetta"), a municipal corporation of the State of Georgia, the City of Milton, Georgia ("Milton"), a municipal corporation of the State of Georgia, the Fulton County Sheriff ("Sheriff"), a constitutional officer pursuant to the Georgia Constitution, and Fulton County, Georgia ("County"), a political subdivision of the State of Georgia.

WHEREAS, Alpharetta, Milton and County are governmental units located within the State of Georgia authorized by law to enter into intergovernmental agreements pursuant to Article 9, Section 3, Paragraph 1 of the Georgia Constitution; and

WHEREAS, Alpharetta, Milton, Sheriff and County share a common interest to form a law enforcement partnership to successfully address issues involving the care and custody of inmates; and

WHEREAS, Alpharetta owns a jail facility located at 2555 Old Milton Parkway, Alpharetta, Georgia ("Alpharetta Jail Facility"); and

WHEREAS, Alpharetta, Milton, Sheriff and County desire to cooperate in the operation of the Alpharetta Jail Facility.

NOW THEREFORE, Alpharetta, Milton, Sheriff and County, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, do hereby agree as follows:

Section 1. Purpose.

The purpose of this Agreement is to establish a formal binding relationship between Alpharetta, Milton, Sheriff, and County for the occupancy, use, operation and supervision of the Alpharetta Jail Facility by the Sheriff and County for the detention of persons charged with or convicted of violating federal, state, or local law or held as a material witness at the Alpharetta Jail Facility. Alpharetta will provide the Sheriff and County the right to use and occupy the Alpharetta Jail Facility for the purpose of processing/booking, detaining, and housing/boarding Fulton County pre-trial detainees and inmates, and for other purposes, at no cost. In consideration of same, the County through the Sheriff will manage, operate and supervise the Alpharetta Jail Facility and process/book, detain and house/board at the Alpharetta Jail Facility, persons who are charged with or convicted of a municipal offense of the City of Alpharetta, the City of Milton or other offense over which the Municipal Court of the City of Milton has jurisdiction ("Milton Inmate"), as further provided for herein.

Section 2. Statement of Alpharetta's Obligations.

Subject to the terms and conditions stated herein, Alpharetta agrees to:

- a. grant the right to possess, occupy and use the entire first floor of the Alpharetta Jail Facility to the County for use and occupancy by the Sheriff for the term set forth herein;
- b. not remove any furniture, fixtures, equipment or supplies related to jail operations in the Alpharetta Jail Facility;
- c. provide 24-hour access to the Intoxilyzer® machine in the Alpharetta Jail Facility;
- d. provide parking spaces for the Sheriff's staff; and
- e. provide for the payment or reimbursement of Alpharetta-approved building systems maintenance, including mechanical, electrical, plumbing and roofing systems.

Section 3. Statement of Milton's Obligations.

Subject to the terms and conditions stated herein, Milton agrees to:

- a. pay or reimburse Alpharetta pro rata share of utility costs for the Alpharetta Jail Facility while in use by the Sheriff, pro rata share means division of the utility cost per billing period, as invoiced by Alpharetta, by the number of municipalities housing inmates at the Alpharetta Jail Facility;
- b. transport Milton Inmates to Municipal Court and, as further provided herein, local healthcare facilities;
- c. be responsible for all offsite medical expenses incurred by Milton Inmates, as further provided herein;
- d. pay to Fulton County within 45 calendar days of receipt of an invoice, an inmate processing fee of \$60 for each Milton Inmate booked into the Alpharetta Jail Facility; and
- e. pay to Fulton County within 45 calendar days of receipt of an invoice, an inmate holding fee of \$60 per inmate for each calendar day a Milton Inmate remains detained in the Alpharetta Jail Facility. Partial days detained shall be counted as full days under this agreement. Milton will not incur an inmate holding fee unless and until a booked inmate remains housed in the Alpharetta Jail Facility for at least four (4) hours.

Section 4. Statement of Sheriff and County Obligations.

Subject to the terms and conditions stated herein, the County and Sheriff agree to:

- a. maintain general sanitation and cleanliness of the Alpharetta Jail Facility and provide housing, safekeeping, and normal inmate maintenance services to all inmates detained at the Alpharetta Jail Facility consistent with all applicable laws, standards, policies and procedures applicable to such services and duties and the operations of the Alpharetta Jail Facility;
- b. add equipment as needed to the Alpharetta Jail Facility and retain ownership of

- said equipment;
- c. provide medical care for all prisoners housed in the Alpharetta Jail Facility, as further set forth herein;
- d. continue booking and identification of arrestees admitted in the Alpharetta Jail Facility;
- e. book, house, and provide normal inmate maintenance services for up to twelve (12) Milton Inmates concurrently, at all times;
- f. transport arrestees to Rice Street Jail when transfer of such arrestees is desired or required, as determined by the Sheriff;
- g. provide adequately trained staff to operate the Alpharetta Jail Facility;
- h. maintain and store property of all arrestees/inmates;
- i. as further set forth herein, arrange or provide transportation to and from local healthcare facilities (i.e., off-site medical facilities) in emergency situations, as determined by the Sheriff, ensure inmates get to a hospital via ambulance; however, Milton agrees to provide security for Milton Inmates while hospitalized; and
- j. for the purpose of facilitating building systems maintenance, coordinate and oversee all access to the Alpharetta Jail Facility, with the Sheriff and the Sheriff's staff having sole discretion in determining the time and manner of access to the Alpharetta Jail Facility.

Section 5. Term.

This Agreement shall be for a term of ten (10) years, as further provided for herein. This Agreement is effective November 1, 2022, and shall continue in effect until October 31, 2023 (the "initial term"). Thereafter, this Agreement shall be automatically renewed for up to nine (9) successive one (1) year terms (each one-year term occurring after the initial term shall be referred to as a "renewal term"), unless any party to the agreement provides written notice to all other parties of its/their intent not to renew this Agreement not less than ninety (90) days prior to the expiration of the initial term; provided that in the 10th year of the Agreement, the Agreement will end on September 30th. At the expiration of each renewal term, this Agreement shall be automatically renewed for an additional one (1) year term, unless any party to the agreement provides written notice of its/their intent not to renew this Agreement to all other parties not less than ninety (90) days prior to the expiration of such renewal term. Notwithstanding the foregoing, this Agreement may be terminated earlier in accordance with Section 5 hereof.

Section 6. Termination.

Alpharetta and/or Milton may terminate this Agreement upon ninety (90) days' written notice to the County and Sheriff. The Sheriff or County may terminate this Agreement upon ninety (90) days' written notice to Alpharetta and Milton. Any such notice from the Sheriff shall set forth the specific plans for accommodation and/or transfer of the affected jail population. Notwithstanding this termination provision, the County may terminate this agreement upon 30 days written notice for the failure to timely or fully pay a valid invoice.

Section 7. Supervision; Receiving, Detention and Discharge.

Except as otherwise expressly provided for herein, all persons accepted and booked into the Alpharetta Jail Facility by the Sheriff or otherwise detained in the Alpharetta Jail Facility shall be under the supervision, control and physical custody of the Sheriff, and the Sheriff agrees to provide housing, safekeeping, and normal inmate maintenance services to all inmates detained at the Alpharetta Jail Facility consistent with all applicable laws, standards, policies and procedures applicable to such services or duties and the jail facility. The "housing" of inmates shall be defined by the Sheriff to include, but not be limited to, the provision of an appropriate physical space within the jail facility and those necessary related facilities and services such as public utilities, heat, air conditioning, recreational facilities, etc., needed to appropriately support the housing of prisoners. Notwithstanding the foregoing, Alpharetta shall be responsible for the payment of or reimbursement of Alpharetta-approved building systems maintenance, including mechanical, electrical, plumbing and roofing systems, and paying the costs of public utilities provided to the Alpharetta Jail Facility. As used herein, "normal inmate maintenance services" means the ordinary and relatively routine human needs common to all prisoners as defined by the Sheriff and as required under applicable law, including, but not limited to, the provision of food, clothing and medical care. The Sheriff shall provide adequately trained detention officers twenty-four (24) hours a day to supervise all inmates at the Alpharetta Jail Facility.

Further, the Sheriff and County, through the Sheriff, agree to provide housing, safekeeping, and normal inmate maintenance services at the Alpharetta Jail Facility, subject to the other terms of this Agreement, including, but not limited to, the provisions set forth in Section 8 hereof. The Sheriff agrees to accept, process, and book Milton Inmates through the Sheriff's normal booking procedures, including fingerprinting and photographing. Further, the Sheriff agrees to maintain and securely store the property of all inmates housed at the Alpharetta Jail Facility. The Sheriff agrees to provide sufficient and adequately trained detention officers and other staff in order to perform the foregoing duties and supervise all inmates at the Alpharetta Jail Facility.

The Live Scan hardware in place at the Alpharetta Jail Facility is the property of Alpharetta and as such Alpharetta will agree to train up to two (2) Fulton County users to operate the system.

The Sheriff agrees to release Milton Inmates upon lawful request by law enforcement officers of Milton to law enforcement officers of Milton or upon the posting of appropriate bail or upon the order of a court of competent jurisdiction. Prior to the release of a Milton Inmate from custody, the Sheriff shall request/initiate a GCIC/NCIC warrant check by Milton police agency, and the GCIC/NCIC warrant check must be completed by Milton police agency before any such release. The Sheriff reserves the right, to the extent allowable by law, to utilize electronic monitoring on any and all repeat offenders released from the Alpharetta Jail.

The Sheriff and County further agree to allow Milton to use sufficient space within Alpharetta Jail Facility for bond and first appearance hearings, inmate interviews and other similar purposes. The parties agree to cooperate with each other regarding the scheduling of the use of these spaces. Milton shall be responsible for the transportation of Milton Inmates to Municipal Court and will ensure that first appearance hearings are provided to Milton Inmates in accordance with state and federal law.

In executing this Agreement, the Sheriff and County do not assume any liability or responsibility for, or in any way release Milton from any liability arising out of or related to the legality of the arrest of Milton Inmates or the legality or enforceability of any Milton ordinance. Under no circumstances shall any employee, official or agent of the County or Sheriff be deemed to be an employee of Milton for any purposes and nothing contained within this Agreement shall be deemed to create any such employee-employer relationship.

Notwithstanding this provision or any other provision within this agreement, the Sheriff may, in his sole discretion, refuse to accept an inmate at the Alpharetta Jail Facility. Upon such occurrence, the Sheriff shall notify Milton within 24 hours of the refusal and the reason or reasons for the refusal.

Section 8. Medical Care and Expenses of Milton Inmates.

The County, through the Sheriff, will provide routine on-site medical care and treatment, including medical supplies, to Milton Inmates in the same manner that such services are provided to County inmates at the Alpharetta Jail Facility without any additional cost to the Milton. When in the determination of the Sheriff off-site medical care or treatment, including emergency medical care or treatment, is required for a Milton Inmate, the Sheriff will notify Milton of same as soon as reasonably possible, so that Milton may arrange for the provision of such medical care or treatment and provide transportation to and from local healthcare facilities (i.e., off-site medical facilities); provided, however, when immediate emergency transport of a Milton Inmate to local healthcare facilities is required for emergency medical care/treatment, as determined at the sole discretion of the Sheriff, the Sheriff will provide emergency medical transport to local healthcare facilities. Security for Milton Inmates while at local healthcare facilities will be the responsibility of Milton; provided, however, when emergency transport has been provided at the discretion of the Sheriff, security will be provided by the Sheriff's detention officers until Milton is able to provide law enforcement officers to relieve such detention officers. The Sheriff shall notify Milton as soon as possible of all emergency medical cases requiring the Sheriff's emergency medical transport and removal of a Milton Inmate from the Alpharetta Jail Facility, and Milton agrees to provide security for any such inmates within one (1) hour after being contacted and provided the necessary information.

As between the parties to this Agreement, to the extent that any off-site medical care or treatment is provided to a Milton Inmate, Milton agrees to be responsible for the costs of such off-site medical care or treatment; provided, however, Milton does not assume any liability or responsibility for, or in any way release the Sheriff and/or County from any cost or liability arising out of or related to any negligent or willful act or omission of the County or Sheriff, or any of their respective officers, deputies, employees, or agents. Nothing set forth in this Agreement shall be construed so as to limit or remove responsibility for payment of such off-site medical care or treatment by a Milton Inmate or a provider of insurance that is otherwise responsible for payment of part or all of such services or to limit the Milton's right to reimbursements for the costs incurred for such medical care or treatment from a Milton Inmate or a provider of insurance when insurance coverage is available for payment for such services. The County and Sheriff agree to cooperate with Milton in Milton's seeking reimbursement for the costs of medical care or treatment incurred by Milton for a Milton Inmate.

Section 9. Transition from Milton Inmate Status.

It is understood and agreed that a person booked and detained at the Alpharetta Jail Facility by reason of being charged with a municipal offense of the City of Milton or other offense over which the Municipal Courts of the City of Milton (the "Municipal Court") has jurisdiction shall be considered a Milton Inmate unless or until such person, whether exclusively on or in combination with other charges, is charged with any County, State¹ or Federal offense or is being held or detained by reason of an investigation of any County, State or Federal offense. It is further understood and agreed that a person detained or confined at the Alpharetta Jail Facility by reason of being convicted of a municipal offense of the City of Milton or other offense over which the Municipal Court has jurisdiction shall be considered a Milton Inmate unless or until such person is: (i) booked, held, or detained by reason of being convicted of any County, State or Federal offense; (ii) convicted of any County, State or Federal offense which provides for a sentence confining such person for any period of time that runs concurrently with the sentence of the Municipal Court; (iii) held, detained or confined beyond the period of confinement to which sentenced by the Municipal Court; or (iv) being held, detained or confined at the Alpharetta Jail Facility following the issuance of an order of a court of competent jurisdiction or contrary to any law providing for such person's release or transfer to another detention facility. Furthermore, it is understood and agreed that any person booked, held, detained or confined at the Alpharetta Jail Facility by reason of being charged with or convicted of a municipal offense of the City of Milton or other offense over which the Municipal Court has jurisdiction shall cease to be considered a Milton Inmate upon his or her release or transfer from the Alpharetta Jail Facility.

Section 10. Costs of Other Inmates.

The Sheriff and County shall be liable and responsible for all costs associated with or related to any and all pre-trial detainees and inmates detained at the Alpharetta Jail Facility who are not Milton Inmates.

Section 11. Coordination and Administration.

The parties agree to work together to coordinate the use of the Alpharetta Jail Facility and the activities contemplated under this Agreement. It is agreed that for the purpose of liaison and administration, the Milton City Manager shall be the City's primary representative and point of contact and the Sheriff of Fulton County or the Chief Jailor of the Sheriff, as designated, shall be the Sheriff's primary representative and point of contact. The Milton City Manager may appoint a designee(s) as Milton's representative(s) to whom all communications from the Sheriff with respect to the day-to-day operations performed under this Agreement may be addressed, and the Sheriff of Fulton County or the Chief Jailor of the Sheriff, as applicable, may appoint a designee(s) as the Sheriff representative(s) to whom all communications from Milton with respect to the day-to-day operations performed under this Agreement may be addressed. Each party shall provide the other party with the names and contact information of such designees.

¹ Other than State offenses for which the Municipal Court maintains jurisdiction (i.e., a State offense over which the Municipal Court has jurisdiction which is not bound over to the State Court of Fulton County).

Section 12. Insurance.

Each party to this Agreement shall procure and maintain such insurance as is required by applicable federal and state law and as may be appropriate and reasonable to cover its personnel, equipment, vehicles, property, and obligations hereunder, including but not limited to liability insurance, workers' compensation insurance, automobile liability insurance and property insurance. The County shall retain the right to self-fund for any and all of the aforementioned insurance coverages.

Section 13. Records; Audit; Billing.

The Sheriff and County agree upon request to furnish Milton all records pertaining to the housing and maintenance of Milton Inmates. Milton shall have the right to audit all financial data pertaining to any fees or expenses for which Milton is responsible under this Agreement, which right shall survive the term of this Agreement. The Sheriff shall maintain a record of each Milton Inmate, which shall include the duration of confinement. The Sheriff shall submit invoices to Milton every 30 days for the processing and holding fees for 30 days prior. The failure to timely submit an invoice shall not forgive payment by Milton. Milton agrees to pay said invoices to the County within 45 calendar days of receipt of an invoice.

Section 14. Notices.

All official notices or other communications required to be given in writing under this Agreement shall be deemed to have been duly given when delivered personally in hand, or when mailed by certified or registered mail, return receipt requested with proper postage prepaid, addressed to the appropriate party at the following address or such other address as may be given in writing to the parties:

For County:

Office of the County Manager
Fulton County Government Center
141 Pryor Street, S.W.
Atlanta, Georgia 30303
Attn: County Manager

For Sheriff:

Patrick "Pat" Labat, Sheriff
Fulton County Sheriff's Office
185 Central Avenue
Atlanta, Georgia 30303

For City of Alpharetta:

Chris Lagerbloom City
Administrator
2 Park Plaza
Alpharetta, Georgia 30009

With Copies to:

John Robison
Director of Public Safety
City of Alpharetta, Georgia
2565 Old Milton Parkway
Alpharetta, Georgia 30009

For City of Milton:

Steven Krokoff
City Administrator
2006 Heritage Walk
Milton, Georgia 30004

With Copies to:

George "Rich" Austin
Chief of Police
City of Milton, Georgia
13690 Highway 9
Milton, Georgia 30004

Section 15. Entire Agreement; Modification.

The terms of this Agreement represent the entire agreement between the parties and supersedes all prior written or oral statements and any preexisting agreements relating to the use of the Alpharetta Jail Facility by the County and Sheriff. No modification of this Agreement shall be binding upon the parties unless evidenced by a subsequent written Agreement approved and signed by the appropriate authorities or representatives of each party to this Agreement.

Section 16. Severability.

The provisions of this Agreement shall be deemed independent and severable. In the event any one or more of the provisions contained herein shall, for any reason, be held invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provision of the Agreement.

Section 17. Time of Performance.

Time is of the essence in the performance of this Agreement.

Section 18. Governing Law.

This Agreement shall be governed in all respects as to the validity, construction, capacity performance, or otherwise by the laws of the State of Georgia.

Section 19. No Waiver of Immunity.

Nothing contained in this Agreement shall be constructed to be a waiver of either party's sovereign immunity, any individual's qualified immunity, or any other immunity or exemption from liability provided for by law.

Section 20. No Third Party Beneficiaries.

This Agreement shall not be constructed as, or deemed to be, an agreement for the benefit of any third party or parties, and no third party or parties shall have any right of action hereunder for any cause whatsoever.

Section 21. Survival.

Any and all provisions of this Agreement creating obligations extending beyond the term of this Agreement shall survive the expiration or termination of this Agreement, regardless of the reason for such termination.

{SIGNATURES ON NEXT PAGE}

IN WITNESS WHEREOF, the parties have hereunto set their hands and affixed their seals the day and year first above written.

CITY OF ALPHARETTA, GEORGIA

By: _____
Jim Gilvin, Mayor

Date: _____

ATTEST:

By: _____
Lauren Shapiro, City Clerk

Date: _____

APPROVED AS TO FORM:

By: _____
City Attorney

Date: _____

CITY OF MILTON, GEORGIA

By: _____
Peyton Jamison, Mayor

Date: 12/05/2022

ATTEST:

By: _____
Tammy Lowit, City Clerk

Date: 12/05/2022

APPROVED AS TO FORM:

By: _____
City Attorney

Date: 12-19-22

FULTON COUNTY SHERIFF'S OFFICE

By: _____
Patrick "Pat" Labat
Sheriff, Fulton County, Georgia

Date: _____

FULTON COUNTY, GEORGIA

By: _____
Robert L. Pitts, Chairman
Fulton County Board of Commissioners

Date: _____

ATTEST:

By: _____
Tonya Grier
Clerk to the Commission

Date: _____

APPROVED AS TO FORM:

By: _____
County Attorney's Office

Date



STAFF REPORT

Submitting Department: Public Works

Submitted By: Arash Moradkhani

Sponsored By:

Meeting Date: January 3, 2023

I. AGENDA ITEM TITLE: ALPHA LOOP TUNNEL UNDER HAYNES BRIDGE ROAD

DISCUSSION OF OPTIONS IN CONSTRUCTING A TUNNEL UNDER HAYNES BRIDGE ROAD FOR THE ALPHA LOOP.

II. RECOMMENDATION:

Staff is requesting general feedback from Mayor and Council regarding moving forward with the tunnel under Haynes Bridge Road associated with the extension of the Alpha Loop.

III. REPORT IN BRIEF:

Background

On November 30, 2020, City Council adopted the North Point Area and Alpha Loop Trail Connectivity and Feasibility Study. The study outlined alternatives to connect the Big Creek Greenway (via Encore Parkway) to the current terminus of the Alpha Loop (Haynes Bridge Road at GA 400). This connection is commonly referred to as the Alpha Link.

The attached exhibit, "Alpha Link Alternatives", depicts alternatives for connecting the two trails. The preferred alternative is to construct a tunnel. The City currently has two tunnels for the Big Creek Greenway and is currently constructing a tunnel under Westside Parkway in association with the Alpha Loop.

Earlier this year, the North Fulton Community Improvement District (NFCID) and the City executed a Memorandum of Understanding (MOU) regarding the design and construction of a tunnel under Haynes Bridge Road to further extend the Alpha Loop southward towards Encore Parkway. The MOU stated the NFCID would allocate funds to design the tunnel (\$800,000), and the City would allocate \$7.5M (Parks Bond allocation towards the Alpha Loop) to construct the tunnel. The NFCID went through their procurement process and this summer NFCID hired KCI to design the project.

Overview

The first phase of the project was to develop a concept plan and cost estimate to design a tunnel that met American Disabilities Act (ADA) standards.

During the last few months, the design team obtained field run surveys, location and depth of existing utilities, and plans from the adjacent developers to develop a detailed concept plan. This work showed that numerous utilities conflict with the proposed tunnel. However, the design team determined the utilities could be relocated to make room for the tunnel. This was a big step; the project was still feasible.

The biggest challenge with a tunnel at this location, when compared to the tunnels under Westside Parkway, Windward Parkway, and Webb Bridge Road, is that the existing topography adjacent to Haynes Bridge Road is only favorable on the south side. Whereas, the existing tunnels throughout the City, including the tunnel currently under contract along Westside (part of the Alpha Loop project from Old Milton to Northwinds) had favorable topography; the grade adjacent to the road was much lower than the elevation of the road. The Haynes Bridge Road tunnel (as currently designed) will require retaining walls in excess of 14' in height to be constructed.

The design team created an initial plan which incorporated ramp access to the tunnel. However, with that plan, the cost to construct and relocate utilities exceeded the \$7.5 million budget. The cost to relocate utilities using the plan with the ramp is \$750,000.

The design team developed an alternative plan that does not include an access ramp, so the only access to the tunnel is by a staircase. This option came in under the \$7.5 million budget. The cost to relocate utilities

using the plan without the ramp is \$350,000.

Both cost estimates include a contingency of \$900,000 and require purchasing right of way and/or obtaining construction easements, which is estimated at \$100,000.

Referring to the "Alpha Link Alternatives" exhibit, the adopted plan depicts utilizing the intersection of Haynes Bridge Road and Lakeview Road as an alternative route to access the Alpha Link. This crossing would require adding several new enhancements to the area:

- Extending a 12' sidewalk along Haynes Bridge Road from Summit Place to Northwinds Parkway.
- Eliminating the right turn lane from westbound Haynes Bridge Road onto northbound Northwinds. This provides a safer crossing for pedestrians.
- Enhancing the intersection of Haynes Bridge and Northwinds/Lakeview to accommodate a median refuge for pedestrians.
- Adding Alpha Loop treatments to the crosswalk. This will inform individuals that they are on the Alpha Loop.
- Adding Alpha Loop amenities along Haynes Bridge Road, plantings, bollard lighting, beaches, etc.

Representatives from Community Development, Recreation, Parks and Cultural Services, and Public Works discussed the benefits of the alternative route versus the tunnel. Individuals agreed the tunnel provides a safer connection, but the cost exceeds the City's budget for this project. Department Directors and Staff agreed the alternative route is a nice interim option, and the tunnel could be pursued through alternative funding options.

Public Works is looking for direction from the Mayor and Council regarding if the City would like to continue moving forward with the NFCID in designing the tunnel (with or without a ramp) or if there is a desire to pursue an alternative route. Note, the alternative route is not in the scope of work for the NFCID's consultant.

IV. ALTERNATIVES:

V. ATTACHMENTS:

AlphaLoopTunnel_Alternatives_NFCID, Alpha Link Alternatives

November 29, 2022 – Concept Value Engineering Alternatives

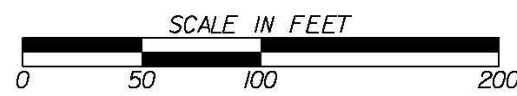


ALPHA LOOP TUNNEL CROSSING
UNDER HAYNES BRIDGE ROAD

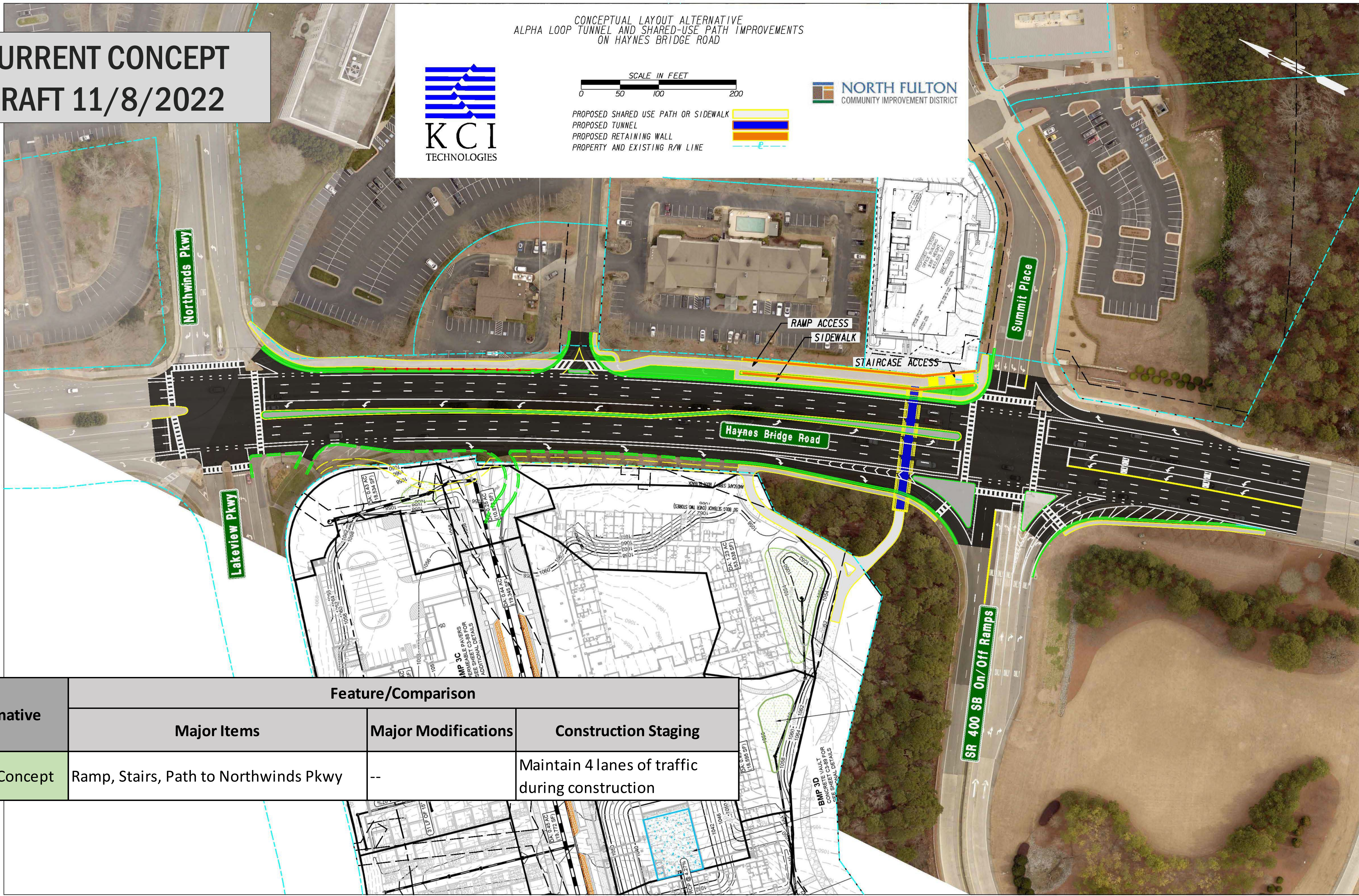
CURRENT CONCEPT
DRAFT 11/8/2022



CONCEPTUAL LAYOUT ALTERNATIVE
ALPHA LOOP TUNNEL AND SHARED-USE PATH IMPROVEMENTS
ON HAYNES BRIDGE ROAD

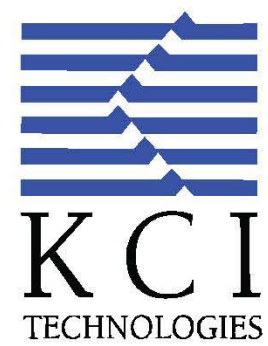


PROPOSED SHARED USE PATH OR SIDEWALK
PROPOSED TUNNEL
PROPOSED RETAINING WALL
PROPERTY AND EXISTING R/W LINE

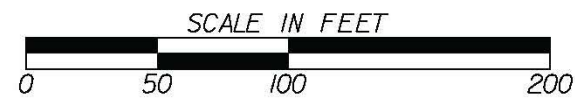


Alternative	Feature/Comparison		
	Major Items	Major Modifications	Construction Staging
Current Concept	Ramp, Stairs, Path to Northwinds Pkwy	--	Maintain 4 lanes of traffic during construction

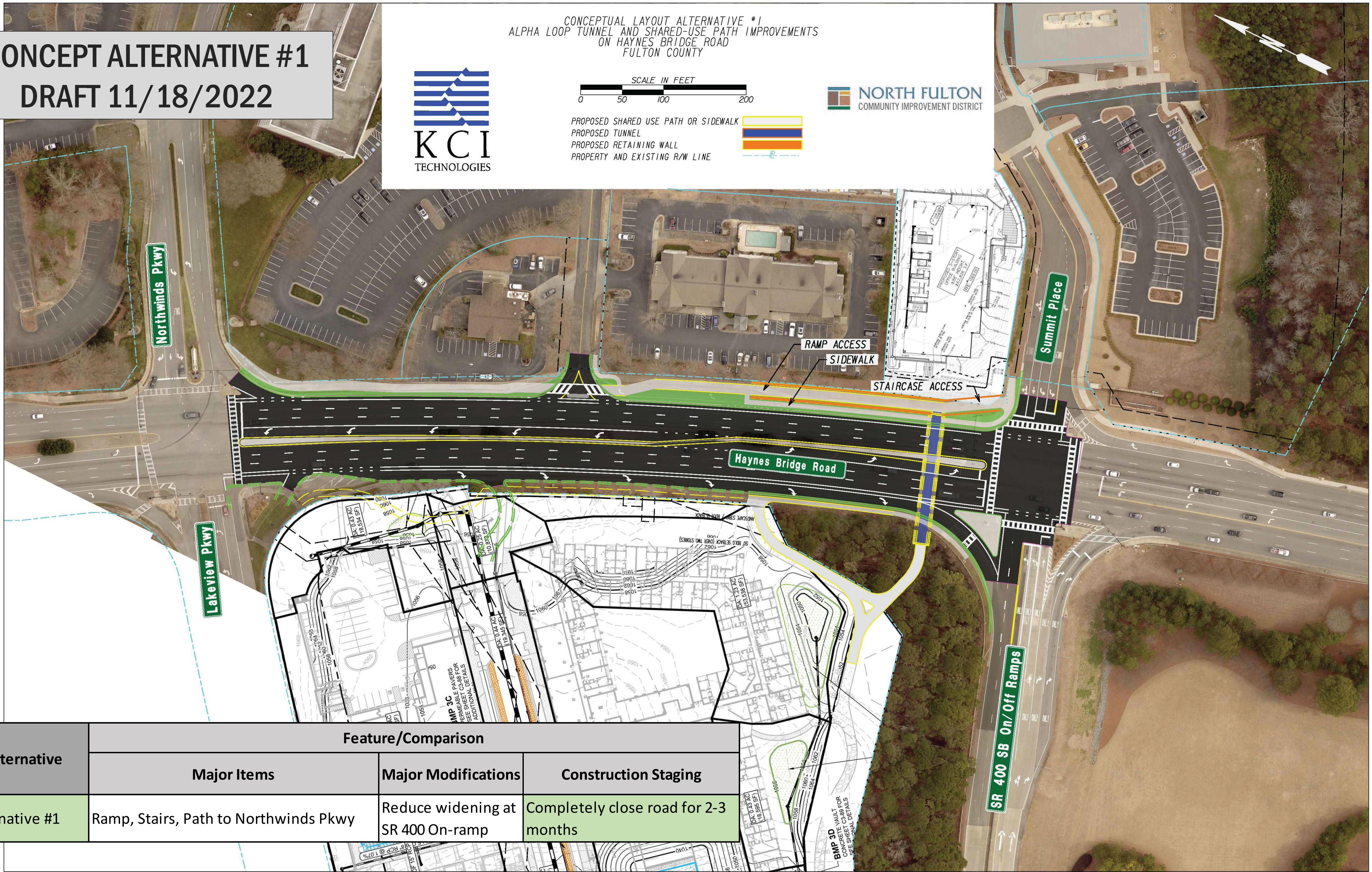
CONCEPT ALTERNATIVE #1
DRAFT 11/18/2022



CONCEPTUAL LAYOUT ALTERNATIVE #1
ALPHA LOOP TUNNEL AND SHARED-USE PATH IMPROVEMENTS
ON HAYNES BRIDGE ROAD
FULTON COUNTY

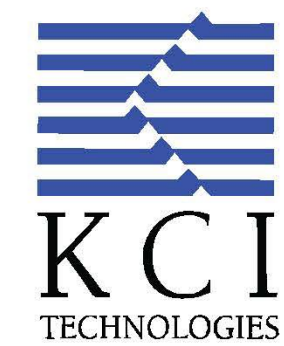


- PROPOSED SHARED USE PATH OR SIDEWALK
- PROPOSED TUNNEL
- PROPOSED RETAINING WALL
- PROPERTY AND EXISTING R/W LINE

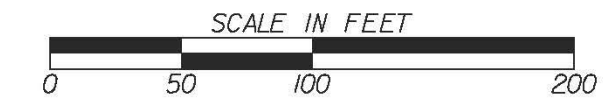


Alternative	Feature/Comparison		
	Major Items	Major Modifications	Construction Staging
Alternative #1	Ramp, Stairs, Path to Northwinds Pkwy	Reduce widening at SR 400 On-ramp	Completely close road for 2-3 months

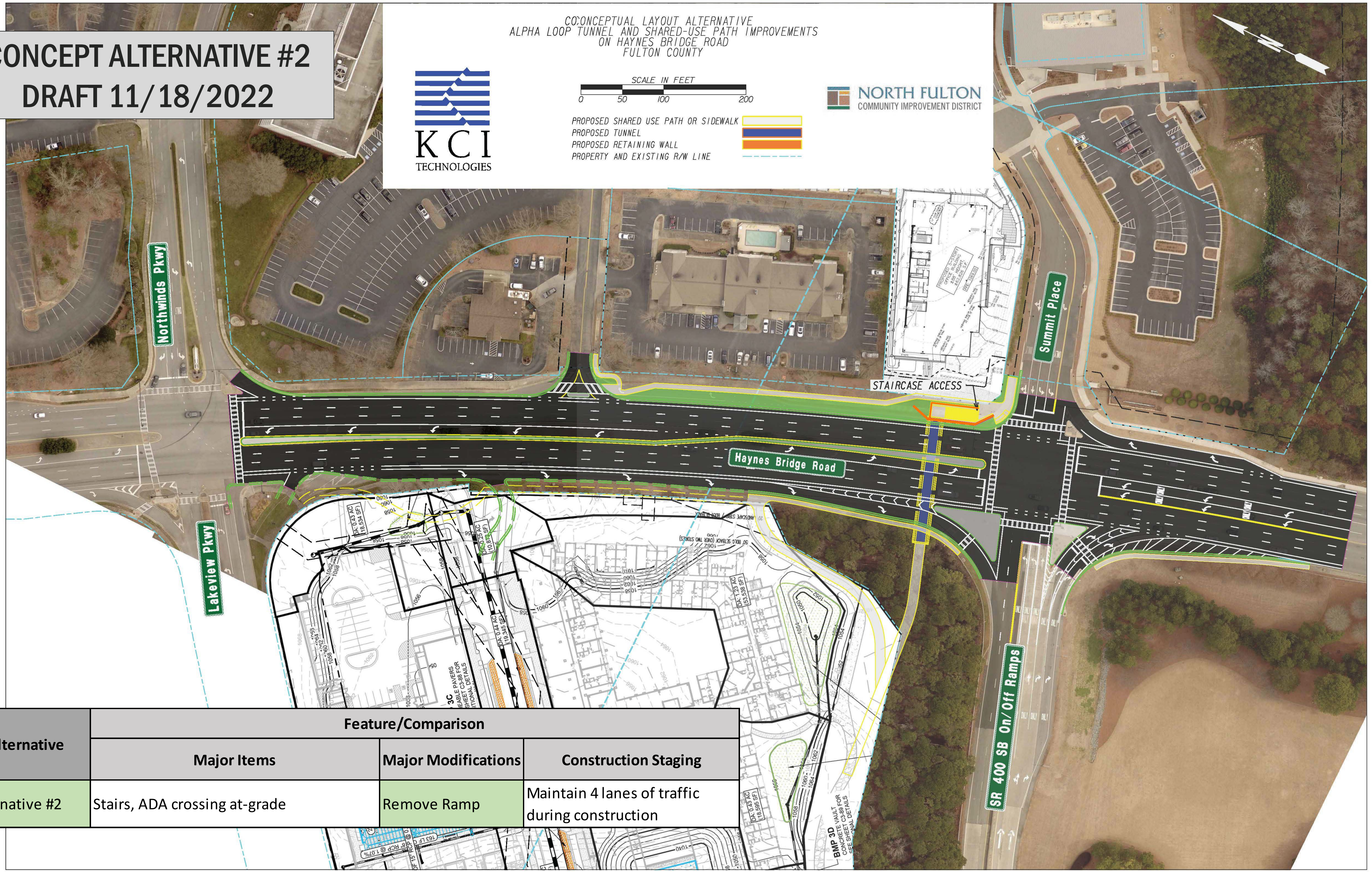
CONCEPT ALTERNATIVE #2
DRAFT 11/18/2022



CONCEPTUAL LAYOUT ALTERNATIVE
ALPHA LOOP TUNNEL AND SHARED-USE PATH IMPROVEMENTS
ON HAYNES BRIDGE ROAD
FULTON COUNTY



- PROPOSED SHARED USE PATH OR SIDEWALK
- PROPOSED TUNNEL
- PROPOSED RETAINING WALL
- PROPERTY AND EXISTING R/W LINE

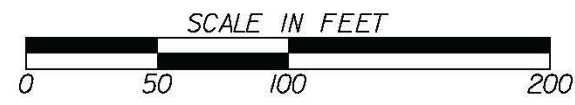


Alternative	Feature/Comparison		
	Major Items	Major Modifications	Construction Staging
Alternative #2	Stairs, ADA crossing at-grade	Remove Ramp	Maintain 4 lanes of traffic during construction

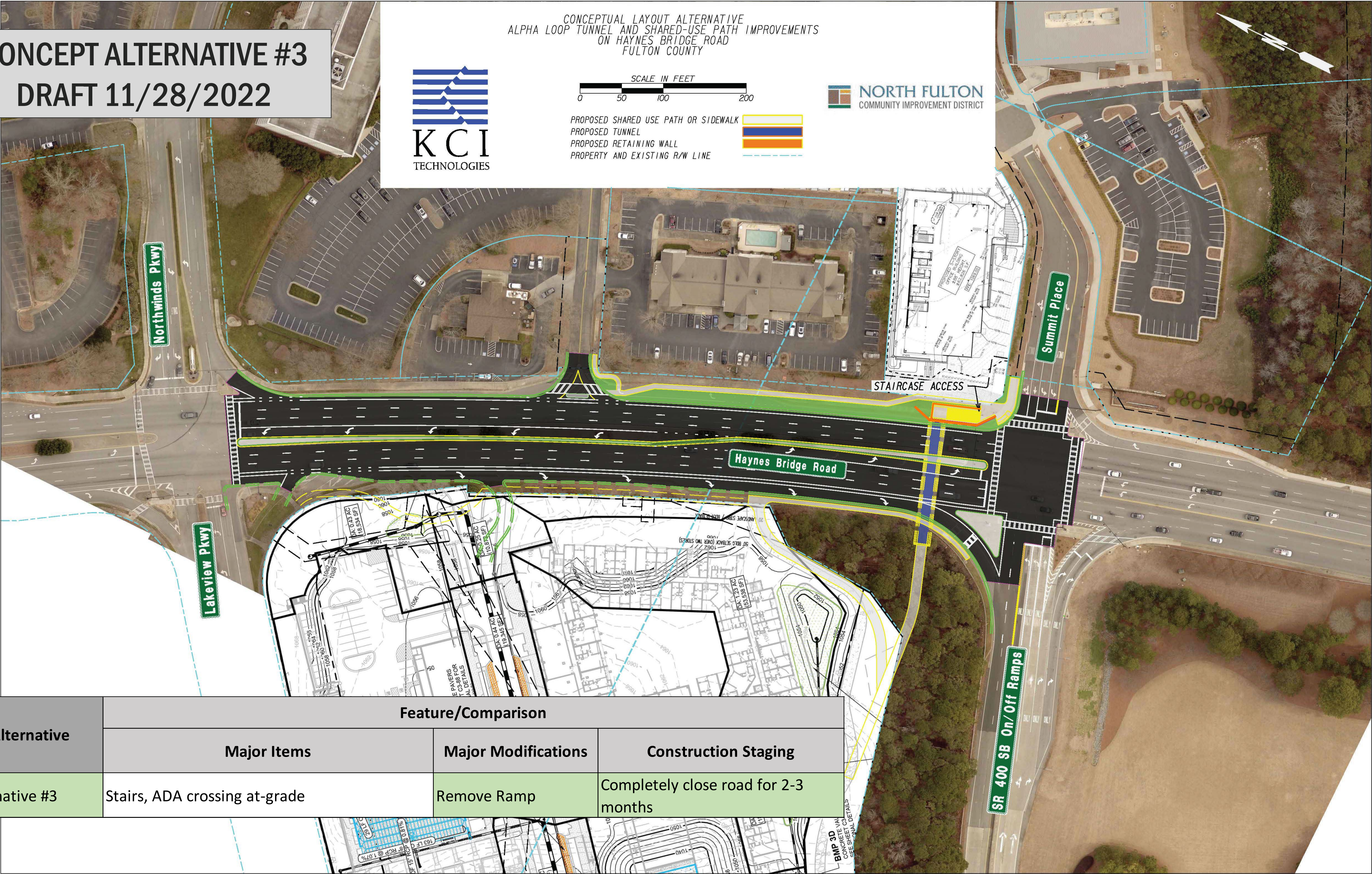
CONCEPT ALTERNATIVE #3
DRAFT 11/28/2022



CONCEPTUAL LAYOUT ALTERNATIVE
ALPHA LOOP TUNNEL AND SHARED-USE PATH IMPROVEMENTS
ON HAYNES BRIDGE ROAD
FULTON COUNTY



- PROPOSED SHARED USE PATH OR SIDEWALK
- PROPOSED TUNNEL
- PROPOSED RETAINING WALL
- PROPERTY AND EXISTING R/W LINE



Alternative	Feature/Comparison		
	Major Items	Major Modifications	Construction Staging
Alternative #3	Stairs, ADA crossing at-grade	Remove Ramp	Completely close road for 2-3 months

CONCEPT COMPARISON

Alpha Loop Tunnel Crossing Under Haynes Bridge Road

11/28/2022

Alternative	Feature/Comparison			Project Cost			
	Major Items	Major Modifications	Construction Staging	CST Cost	Utility Relocation Cost	ROW Cost	Total Project Cost Estimate
Current Concept	Ramp, Stairs, Path to Northwinds Pkwy	--	Maintain 4 lanes of traffic during construction	\$8.6 million	\$750,000	\$150,000	\$9.5 million
Alternative #1	Ramp, Stairs, Path to Northwinds Pkwy	Reduce widening at SR 400 On-ramp	Completely close road for 2-3 months	\$6.9 million	\$750,000	\$150,000	\$7.8 million
Alternative #2	Stairs, ADA crossing at-grade	Remove Ramp	Maintain 4 lanes of traffic during construction	\$6.8 million	\$350,000	\$95,000	\$7.25 million
Alternative #3	Stairs, ADA crossing at-grade	Remove Ramp	Completely close road for 2-3 months	\$6.1 million	\$350,000	\$95,000	\$6.55 million

*Notes:

- Construction (CST) Cost includes ~\$900,000 contingency/escalation
- Utility relocation cost includes:
 - AGL Gas line relocation - \$150k for ALT #1, \$100k for ALT #2 & #3
 - Fulton Co water line relocation (currently undetermined if cost to City or not) - \$500k for ALT #1, \$150k for ALT #2 & #3

Trail Alignment

