Appendix M: Proposed Refinements Section 4(f) Coordination

Durham-Orange Light Rail Transit Project

GO Triangle

October 2018

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From: Kaitlin Hughes <[redacted]>
Sent: Thursday, October 18, 2018 12:49 PM
To: Maness, Shannon C CIV USARMY CESAW (US)
Cc: Hosey, Michael L II CIV USARMY CESAW (US); Matics, Dana L CIV USARMY CESAW (US); Mitchell, Stanley; Walker, Julia (FTA); Meghan Makoid; wbs; David Charters; Brubaker, Kerry R CIV USARMY CESAS (US)
Subject: DOLRT 0629 Durham-Orange Light Rail Project Section 4(f) Jordan Game Lands
Attachments: 0629_PRES_Section-4f-USACE-Mtg-Materials-181015.pdf; 0637B_LTR_USACE-Section-4f-Revised-181016.pdf

Good afternoon Mr. Maness,
Thank you to you and Mr. Hosey for meeting with GoTriangle on October 15, 2018 to review the refinements to the Durham-Orange Light Rail Project and the change in easements on the Jordan Game Lands, a Section 4(f) property. GoTriangle revised the concurrence letter and figures to address the action items from the meeting, including:

- Removed the stormwater basin and associated permanent and temporary easement
- Removed the compensatory storage and associated permanent easement that was shown on forested area. GoTriangle will continue to work with the USACE to determine a location for compensatory storage that is on disturbed, non-forested government property.
- After review, it was determined that the proposed drainage could be removed from under the existing pipeline on the west side of George King Road.
- Adjusted the temporary easement on the east side of George King Road to only show what was on government property (0.19 acres)
- Changed the labeling of the “drainage” easements to show them as permanent easements

Attached is the revised concurrence letter with updated figures and the 10/15/18 meeting materials. Please feel free to contact me if you have any additional questions.

Thank you,
Kaitlin Hughes
Environmental Planner
GoTriangle
[redacted]

Connecting all points of the Triangle

October 18, 2018

Mr. Shannon Maness
U.S. Army Corps of Engineers
Wilmington District
Email: [redacted]

RE: Durham-Orange Light Rail Transit (D-OLRT) Project
D-O LRT Project Proposed Refinements - Section 4(f) *De Minimis* Impacts Determination
USACE Properties – Jordan Game Lands

Dear Mr. Maness,

The Research Triangle Regional Public Transportation Authority d/b/a GoTriangle (GoTriangle), on behalf of the Federal Transit Administration (FTA), seeks the concurrence of the U.S. Army Corps of Engineers (USACE) as the official/entity with jurisdiction over the Jordan Game Lands with the updated impacts determinations made by the FTA, and based on Durham-Orange Light Rail Transit (D-O LRT) Project proposed refinements, for these public park properties pursuant to Section 4(f) of the U.S. Department of Transportation Act of 1966, codified at 23 U.S.C. § 138 and 49 U.S.C. § 303, (Section 4(f)) and implemented in 23 C.F.R. Part 774.

Durham-Orange Light Rail Transit Project

The D-O LRT Project is a 17.7-mile light rail transit service which would provide connections between UNC Hospitals; the UNC campus; the William and Ida Friday Center for Continuing Education; Patterson Place; the South Square area; Duke University; the Duke University and Durham Veterans Affairs Medical Centers; downtown and east Durham; and North Carolina Central University. Multimodal connections at the light rail stations would seamlessly connect transit passengers. Eighteen (18) stations are planned, with one additional proposed station, and up to 4,000 parking spaces would be provided along the D-O LRT Project alignment. In addition, a rail operations and maintenance facility would be constructed to accommodate the D-O LRT fleet.

D-O LRT Project Proposed Refinements

The Final Section 4(f) Evaluation published with the February 2016 Final Environmental Impact Statement (FEIS)/Record of Decision (ROD) presented the National Environmental Policy Act

(NEPA) Selected Alternative for the D-O LRT Project.

The D-O LRT Project and its relationship to the Jordan Game Lands were documented in the 2015 Draft EIS and 2016 FEIS/ROD and Final Section 4(f) Evaluation. The USACE indicated its concurrence with the *de minimis* use determination in a letter dated September 23, 2015. A Supplemental Environmental Assessment (EA) and Amended ROD were prepared in 2016 for extending the alignment to North Carolina Central University (NCCU). The Jordan Game Lands were not affected by the changes evaluated in the 2016 Supplemental EA.

GoTriangle and the FTA are currently preparing a second Supplemental EA to assess D-O LRT Project proposed refinements that have resulted from the advancement of engineering design (Proposed Refinements). These Proposed Refinements include changes to the D-O LRT Project on the Jordan Game Lands. The Proposed Refinements, including the anticipated Section 4(f) findings, are described below, and are illustrated in the attached Figures 1-3.

Summary of Changes to Section 4(f) Properties

The D-O LRT Project travels parallel to the south side of NC 54, within the existing NC 54 transportation easement that currently occupies the USACE-owned property, until it crosses over NC 54 on elevated structure to turn toward George King Road. The alignment then traverses within the existing George King Road transportation easement that currently occupies the USACE-owned Jordan Game Land property. NCDOT retains both of the existing transportation easements.

GoTriangle proposes to refine the design of the D-O LRT Project, including modifications to the stormwater design and increased right-of-way from the centerline of the track within the USACE-owned property. These changes would increase the permanent easement from 0.2 acres to 2.08 acres. Of the permanent easement required, 1.7 acres is within the existing NCDOT easement. In order to construct the light rail alignment and drainage facilities, the temporary easement would also increase from 1.4 acres to 1.96 acres. Of the temporary easement required, 0.30 acres are within existing NCDOT easement. The land within the temporary construction easements would be restored to their original condition upon completion of construction. Table 1 below shows the acreage calculations associated with the D-O LRT Project.

Table 1 Permanent and temporary easements on USACE property

Location	**Temporary Easements**	**Permanent Easements**
Within existing NCDOT easement	0.30 acre	1.70 acres
Easement on Jordan Game Lands	1.66 acres	0.38 acres
Totals	**1.96 acres**	**2.08 acres**

It is important to note that the changes resulting from the Proposed Refinements are similar to those documented in the 2016 FEIS/ROD and Final 4(f) Evaluation, and would not adversely affect the activities, features, or attributes qualifying the USACE property for protection under Section 4(f). As such, the impacts of the Proposed Refinements are *de minimis* for the Jordan Game Lands.

Concurrence with Updated *De Minimis* Determinations

Pursuant to 23 C.F.R. § 774.5, if the USACE concurs with the FTA's findings set forth herein, GoTriangle must receive concurrence from the USACE in writing in order for the FTA to approve the use of the Jordan Game Lands for the D-O LRT Project Proposed Refinements as discussed above. A concurrence clause is included at the end of this letter and may be used for that purpose. If, however, the USACE objects to the FTA's findings, or if USACE's comments raise new concerns about the proposed Section 4(f) use and *de minimis* impacts determination, the FTA may be required to conduct a formal Section 4(f) evaluation.

GoTriangle respectfully requests USACE's response to this Section 4(f) use and *de minimis* impacts determination by **November 16, 2018**. Should you have any questions or need additional information, please contact Stan Mitchell at the FTA Region IV office at 230 Peachtree Street, Suite 1400, Atlanta, Georgia 30303, by phone at [redacted], or by email at [redacted]. Concurrence regarding this matter should also be directed to GoTriangle via Thomas Henry at [redacted] RTP, NC 27709 or by email at [redacted]

We look forward to continuing to work with the USACE as the D-O LRT Project moves forward.

Sincerely,

David A. Charters, PE
Manager of Engineering and Design
GoTriangle

Attachments:

Figure 1: U.S. Army Corps of Engineers- Jordan Game Lands
Figure 2: Proposed Easements at Jordan Game Lands (1 of 2)
Figure 3: Proposed Easements at Jordan Game Lands (2 of 2)

cc: Stanley A. Mitchell, Environmental Protection Specialist, Region IV, FTA
Julia Walker, Environmental Protection Specialist, Region IV, FTA
Kerry Brubaker, US Army Corps of Engineers, Savannah District
Dana Matics, US Army Corps of Engineers, Wilmington District
Dave Charters, Manager of Engineering and Design, GoTriangle
Meghan Makoid, Senior Environmental Planner, GoTriangle
Thomas Henry, Assistant General Counsel, GoTriangle

As the official/entity with jurisdiction over the Jordan Game Lands, the U.S. Army Corps of Engineers concurs with the determination that the D-O LRT Project Proposed Refinements as described above in this letter and shown on the accompanying attachments would not adversely affect the activities, features, or attributes of these properties that make them eligible for protection under Section 4(f). Therefore, the U.S. Army Corps of Engineers agrees that the D-O LRT Project's Proposed Refinements' permanent use of portions of the Jordan Game Lands meet the criteria for *de minimis* impacts determinations under Section 4(f) of the USDOT Act of 1966 (23 U.S.C. § 138 and 49 U.S.C.§ 303 and implemented in 23 C.F.R. Part 774). The U.S. Army Corps of Engineers has been informed that, based on its concurrence, the Federal Transit Administration (FTA) intends to make these *de minimis* impacts determinations regarding the Jordan Game Lands, thus satisfying FTA's requirements under Section 4(f) with respect to those certain resources.

ON BEHALF OF THE U.S. ARMY CORPS OF ENGINEERS

Signature:_____
Name:_____
Title:_____
Date: _____

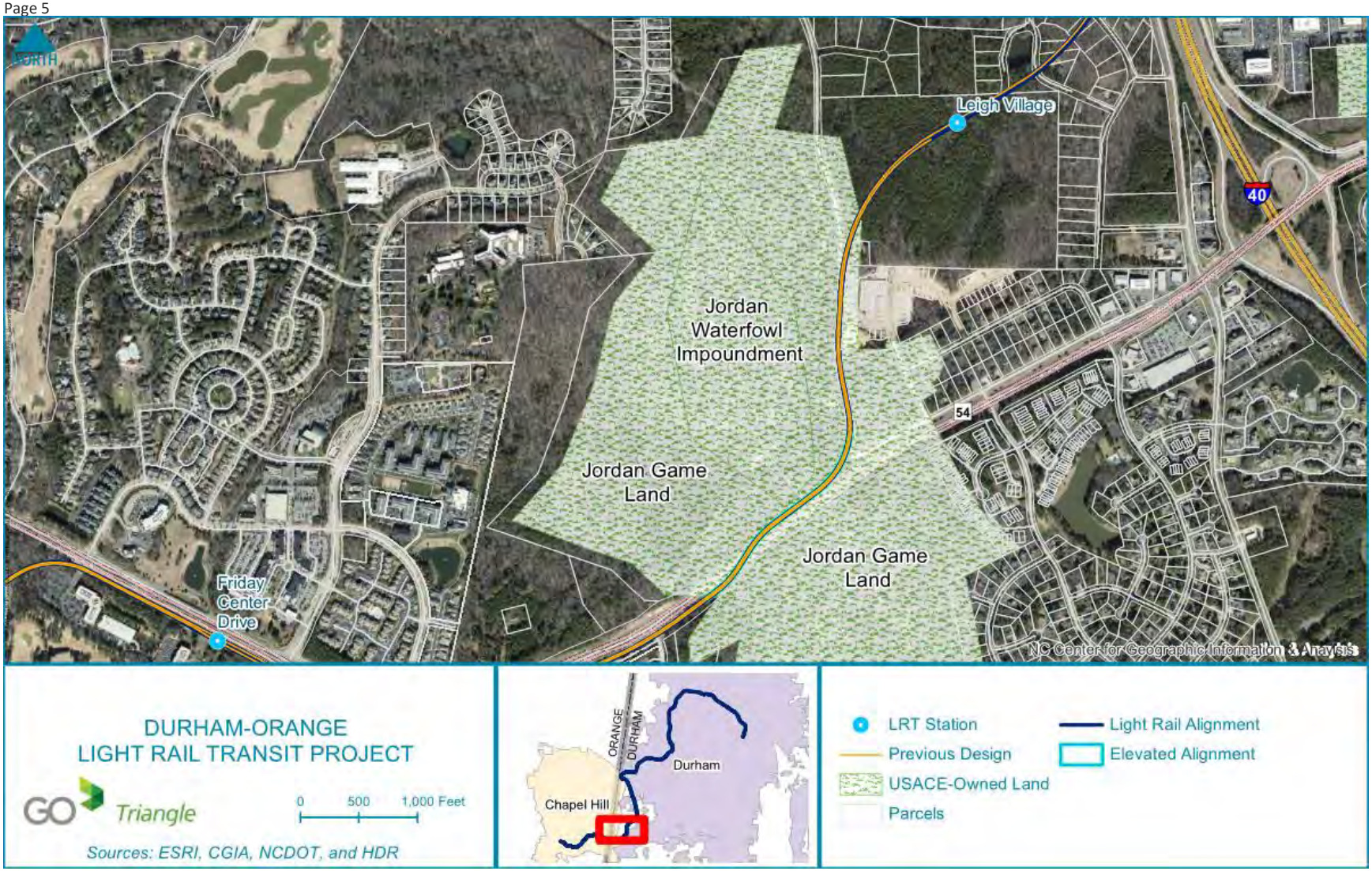


Figure 1: U.S. Army Corps of Engineers – Jordan Game Lands

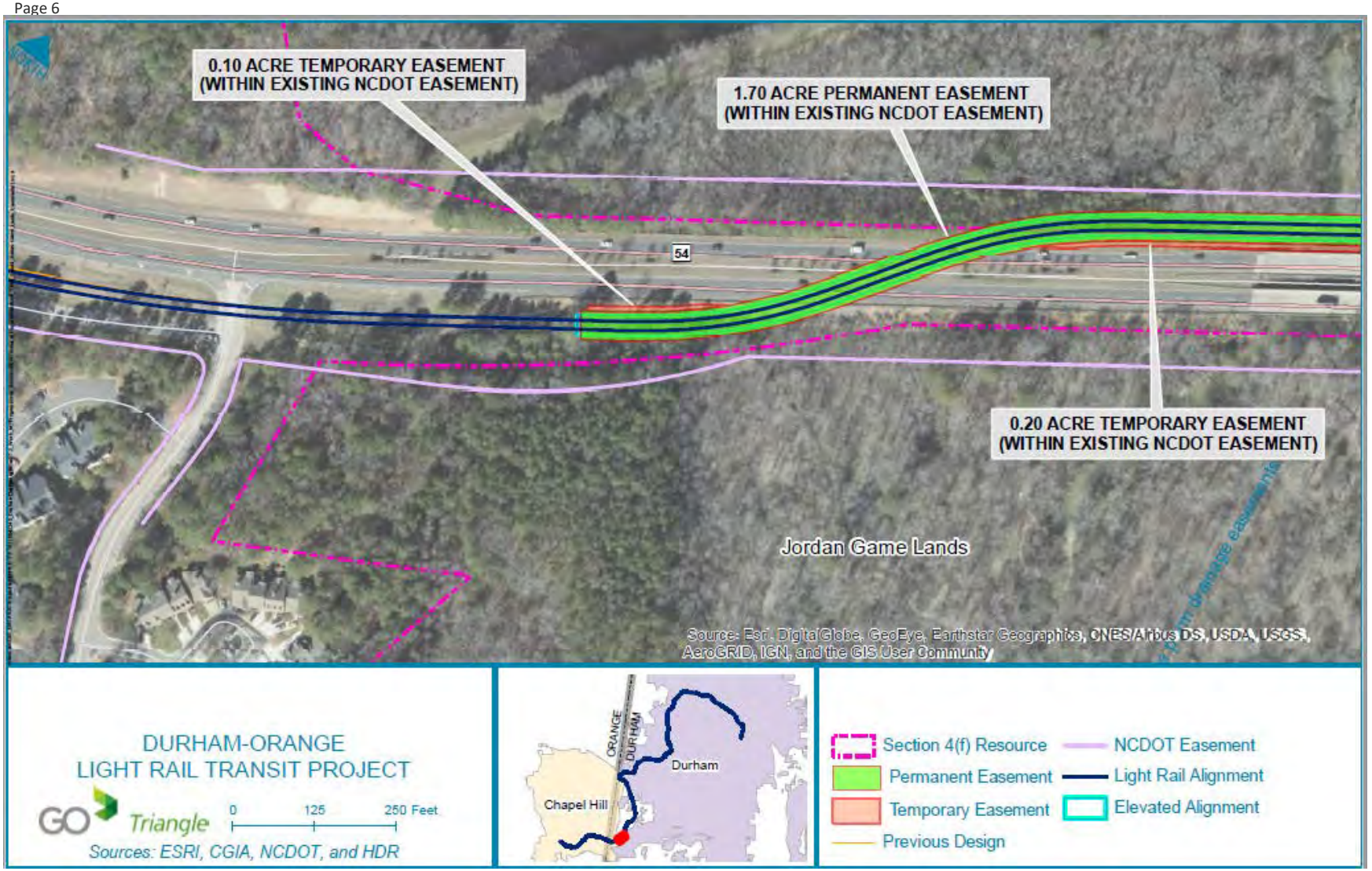


Figure 2: Proposed Easements at Jordan Game Lands (1 of 2)

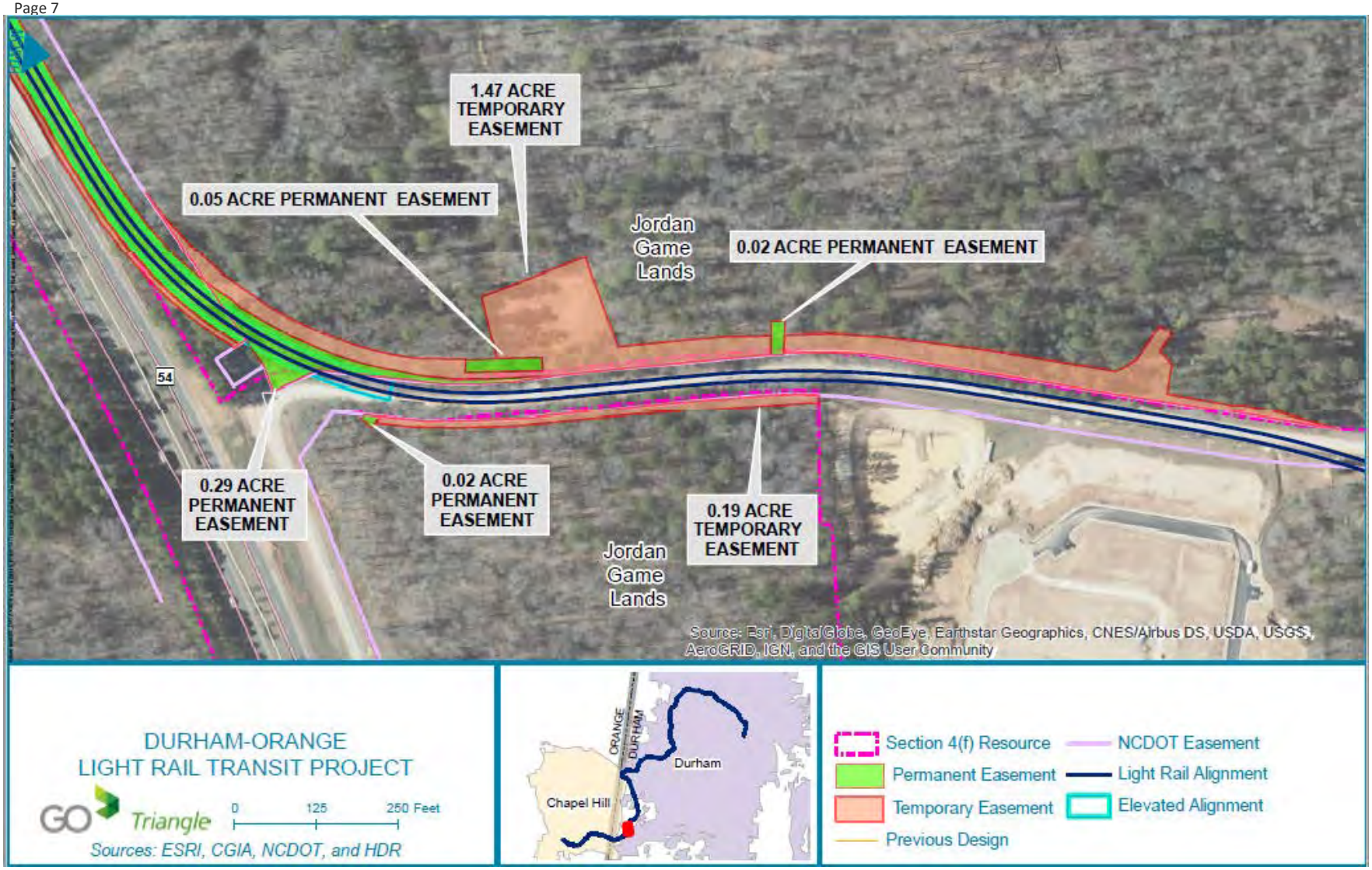


Figure 3: Proposed Easements at Jordan Game Lands (2 of 2)

MEETING SUMMARY

Connecting all points of the Triangle

October 15, 2018 10:30AM- 12:00PM

Subject: 0629 U.S. Army Corps of Engineers Section 4(f) Coordination
Location: Loblolly Conference Room- phone number: [redacted]
Attendees:

Agencies	GoTriangle	Consultants
Shannon Maness, USACE	Meghan Makoid	Beth Smyre, PMC
Michael Hosey, USACE	Kaitlin Hughes	Nate Larson, GEC
Stan Mitchell, FTA		Jordan Myers, GEC

GoTriangle presented an update on the status and scope of the proposed refinements to the previous design of the Durham-Orange Light Rail Transit (D-O LRT) Project. The purpose of this discussion was to review the potential impacts to the Jordan Game Lands (owned by the US Army Corps of Engineers [USACE]), a Section 4(f) resource.

Meeting Discussion

1. **Scope of Proposed Refinements**
   a. The proposed refinements represent advancements in the overall design since the Amended Record of Decision was issued in 2016. The changes proposed include drainage plans, improved pedestrian and bicycle connectivity to stations, a reduction in the number of traction powered substations (TPSS), and minor alignment shifts.
2. **Impacts to Jordan Game Lands**

   The GEC reviewed the proposed impacts as shown in the attached PowerPoint presentation.

   a. Site 1 (includes 0.17 acres of temporary construction easement [TCE]/0.26 acres of permanent easement): This area was included for a proposed stormwater basin, but it likely will not be needed. Once this is confirmed, this will be removed from the impact total.
   b. Site 2 (includes 1.47 acres of TCE/0.05 acres of PDE): This area includes an existing parking lot; it will be used for crane placement and temporary construction staging and access.
   c. Site 3 (includes multiple small PDE areas and 0.82 acres of PDE for compensatory storage): The current proposal is for this area to be designed as a level spreader, providing additional storage. Excavation is needed for the loss of flood storage at the reservoir. The USACE prefers that this compensatory storage be in another location (since this is an existing wooded area), preferably in an area already being impacted. At minimum, this storage should be provided at another area on government-owned property. The USACE recommended that GoTriangle coordinate with NCDOT on compensatory storage, as NCDOT will need to provide it for the proposed NC 54 widening project (U-5774). At this time, the USACE is satisfied if GoTriangle includes a commitment to work with the USACE on a suitable compensatory storage location.

d. The USACE noted that the areas needed within the existing NCDOT roadway easements are considered already within an easement (though the USACE remains the underlying fee owner). FTA will still consider this a *de minimis* finding under Section 4(f).

e. The USACE noted that a portion of the impacts on the south side of George King Road are not within the Jordan Game Lands and can be removed from the impact totals (the 0.21 acres of TCE noted in the PowerPoint presentation).

f. The USACE does not distinguish between right-of-way needed for drainage versus that needed for any other purpose. The real estate team will want to know the square footage of needed.

3. Next Steps

a. GoTriangle will send the USACE a revised Section 4(f) concurrence letter prior to the publication of the Supplemental Environmental Assessment. This letter will include:

i. Updated figures to remove the areas not included in the impact total (per discussion);

ii. The square footage of the right-of-way drainage area; and

iii. The commitment to work with the USACE on the compensatory storage location.

Attachments
Meeting Agenda
PowerPoint Presentation

MEETING AGENDA

Connecting all points of the Triangle

October 15, 2018 10:30AM- 12:00PM

Subject: 0629 U.S. Army Corps of Engineers Section 4(f) Coordination
Location: Loblolly Conference Room- phone number: [redacted]

Discussion Items

1. **Introductions**
2. **Recap of D-O LRT Project**
3. **Brief Review of Section 4(f)**
4. **Jordan Game Lands**
5. **Draft Section 4(f) Evaluation**
   a. Section 4(f) Resource- Jordan Game Lands
6. **Next Steps**
7. **Questions**

PO Box 13787
Research Triangle Park, NC 27709
P: 919.485.7510 | F: 919.485.7547

GO Triangle

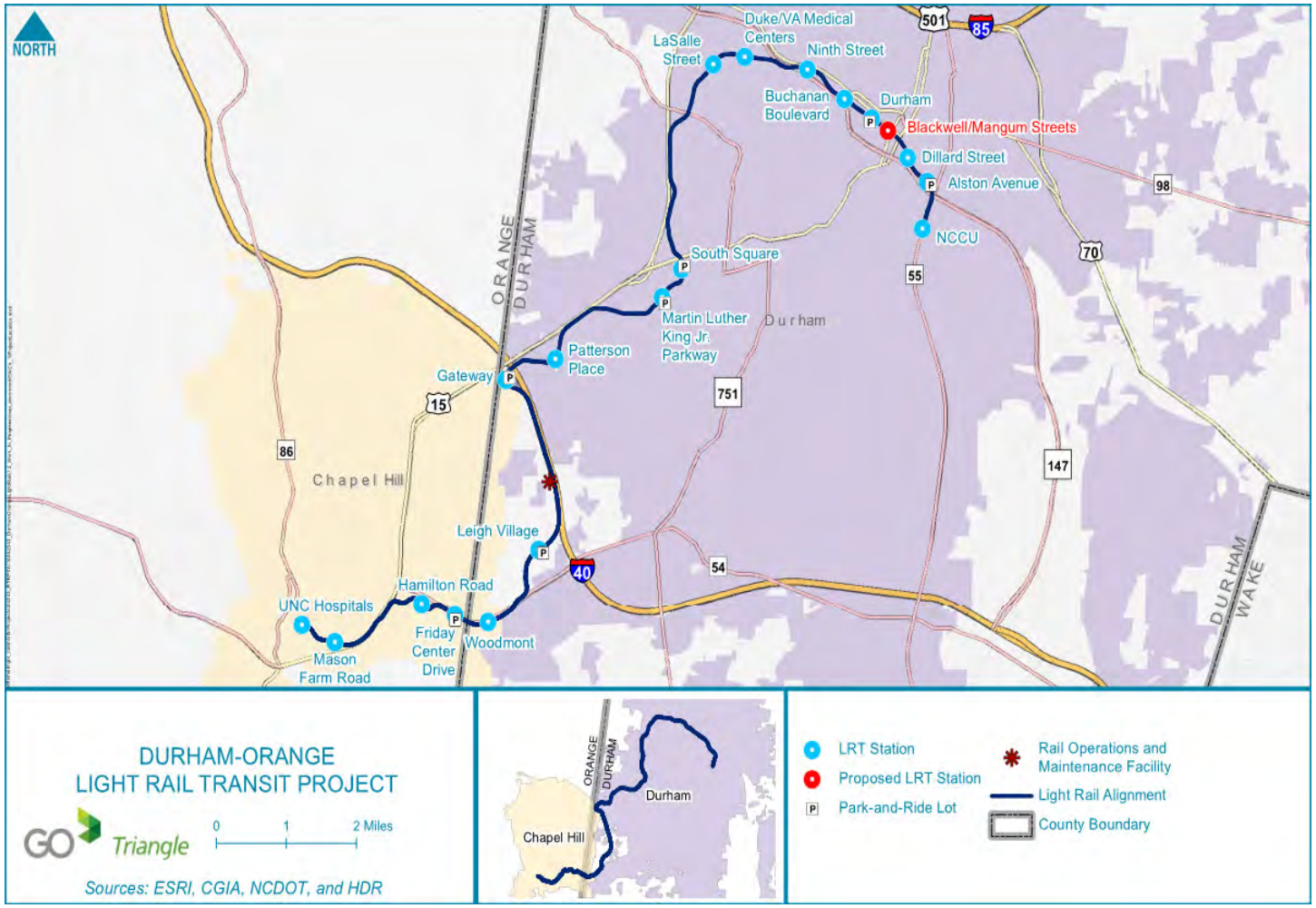
Section 4(f) Resource Meeting

FTA, GoTriangle, U.S. Army Corps of Engineers
October 15, 2018

Agenda

1. Agenda distribution and introductions
2. Recap of the D-O LRT Project
3. Brief Review of Section 4(f)
4. Section 4(f) Resource – Jordan Game Lands
5. Draft 4(f) Evaluation
6. Next Steps

Durham-Orange Light Rail Transit Project Update



- 17.7-mile project
- 18 stations, with 19th station proposed
- Supplemental EA and Combined FEIS/Amended ROD (2016) extended the light rail to NCCU Station

GO Triangle

Durham-Orange Light Rail Transit Project Update

- The USACE concurred with the DEIS Section 4(f) *de minimis* determination to the Jordan Game Lands in a letter dated 9/23/15. The letter was included in the FEIS/Amended ROD.
- Supplemental EA & Section 4(f) Evaluation for Proposed Refinements: publish end of October 2018
  - Re-evaluate effects determination for Section 4(f) resources
    - Conducting coordination and seeking USACE's comments
    - FTA will include draft Section 4(f) evaluation with the Supplemental EA

Brief Review of Section 4(f)

Section 4(f) of the Department of Transportation Act of 1966 (codified in 49 U.S.C. § 138 and implemented in 23 CFR 774)

- Applies to transportation projects that receive federal funding or require approval from the USDOT and its modal agencies (e.g., FTA)
- Requires consideration of Section 4(f) resources:
  - public parklands and recreational resources
  - wildlife and waterfowl refuges
  - historic resources
- Requires FTA to consult, coordinate, or receive concurrence with Officials with Jurisdiction over the Section 4(f) property, if the transportation project requires the use of land from a property protected by Section 4(f)

"Use" Under Section 4(f)

No Use	• Transportation project does not affect 4(f) resource
Permanent Incorporation	• Transportation project permanently incorporates 4(f) land • May result from partial or full acquisition, permanent easement or temporary easement
Constructive Use	• Proximity impacts substantially impair activities, features, or attributes that qualify it for protection under Section 4(f)
Temporary Occupancy	• Duration temporary • scope of work minor • No anticipated permanent adverse physical impacts, nor interference with activities, features, or attributes that qualify it for protection under Section 4(f) • 4(f) land fully restored

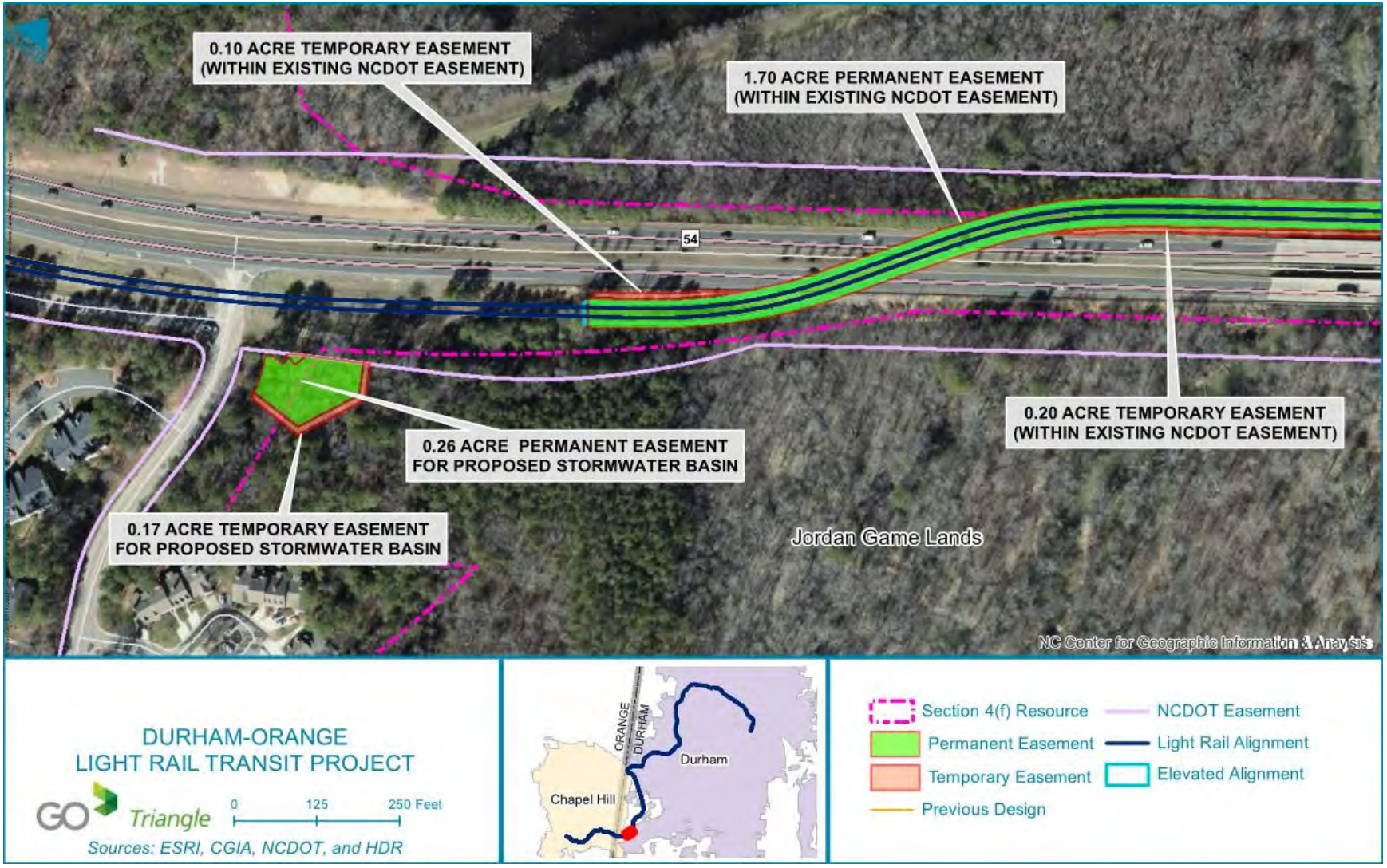
"Use" Under Section 4(f)

- Once a use has been determined, the intensity or magnitude of impact to the Section 4(f) property can be described either as "*de minimis*" or not "*de minimis.*"

- Before approving a project that "uses" Section 4(f) property, FTA must determine:
  1. No feasible and prudent alternative that avoids the Section 4(f) properties OR
  2. After incorporating mitigation measures to minimize harm and reduce impacts, the project result in a *de minimis* impact on the Section 4(f) property

E6

Jordan Game Lands- Proposed Impacts



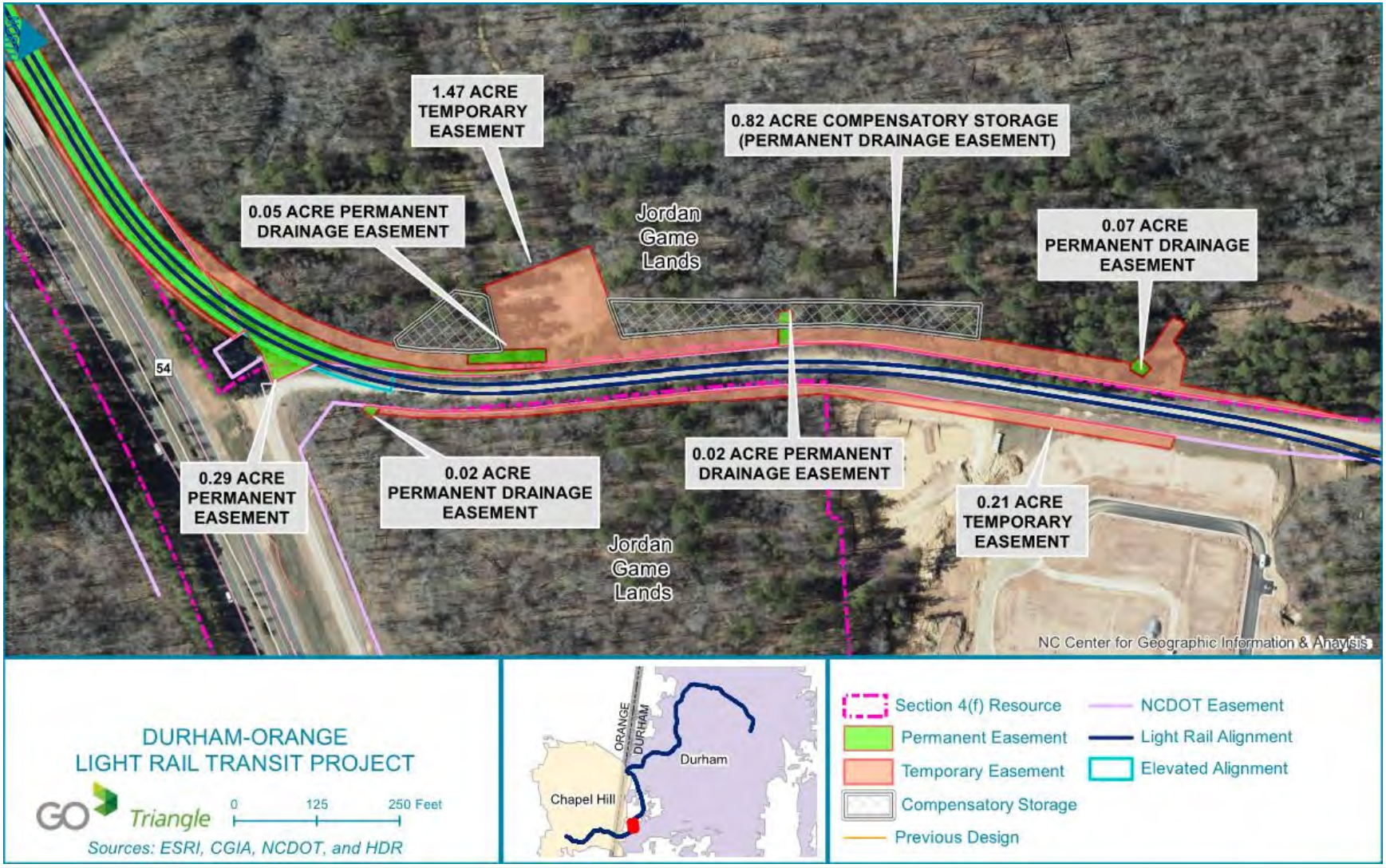
GO Triangle

Slide 8

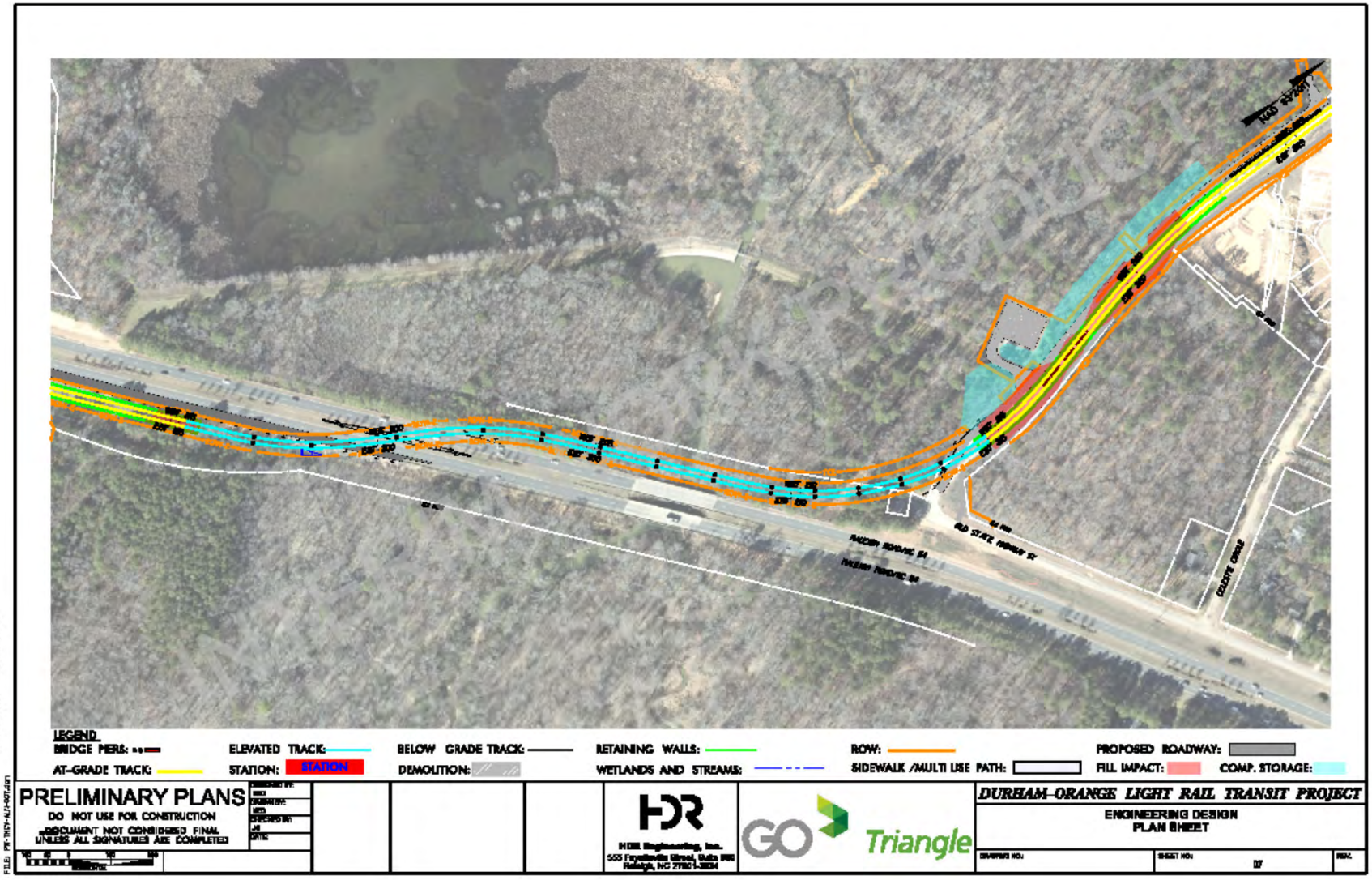
E4 I think the figures in this slide and slide 12 will be the most effective for discussion. Because we're showing impacts within the existing NCDOT easement that don't count to the overall total, recommend adding a new slide after 12 that summarizes the temporary easement and permanent easement (noting the purpose of each) to show how we arrived at the totals- based on the email chain, that seemed to be the main point of confusion/concern.
Elizabeth, 10/12/2018

E6 I think this could be addressed by revising slide 14, since part of summary already there.
Elizabeth, 10/12/2018

Jordan Game Lands- Proposed Impacts



Jordan Game Lands- Proposed Impacts

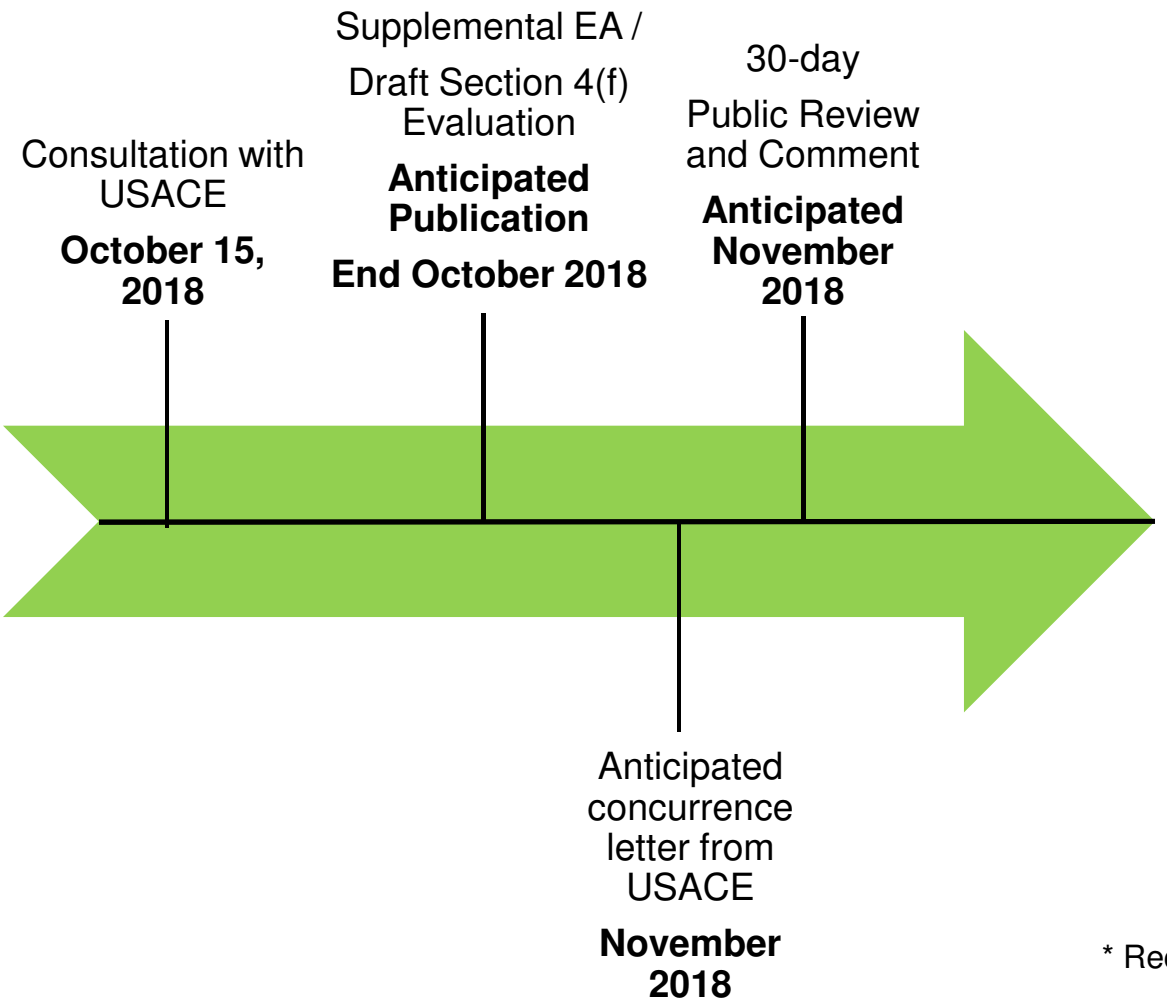


Jordan Game Lands- Proposed Impacts

Draft 4(f) Evaluation: Jordan Game Lands

Temporary Easements	Permanent Easements
0.17 acre proposed stormwater basin **To be eliminated**	0.26 acre proposed stormwater basin **To be eliminated**
0.30 acre (NCDOT easements)	1.70 acres (NCDOT easement)
1.68 acres new easements	0.16 acre drainage easements
	0.29 acre new easement
	0.82 acres compensatory storage

Section 4(f) Next Steps



Amended ROD*

&

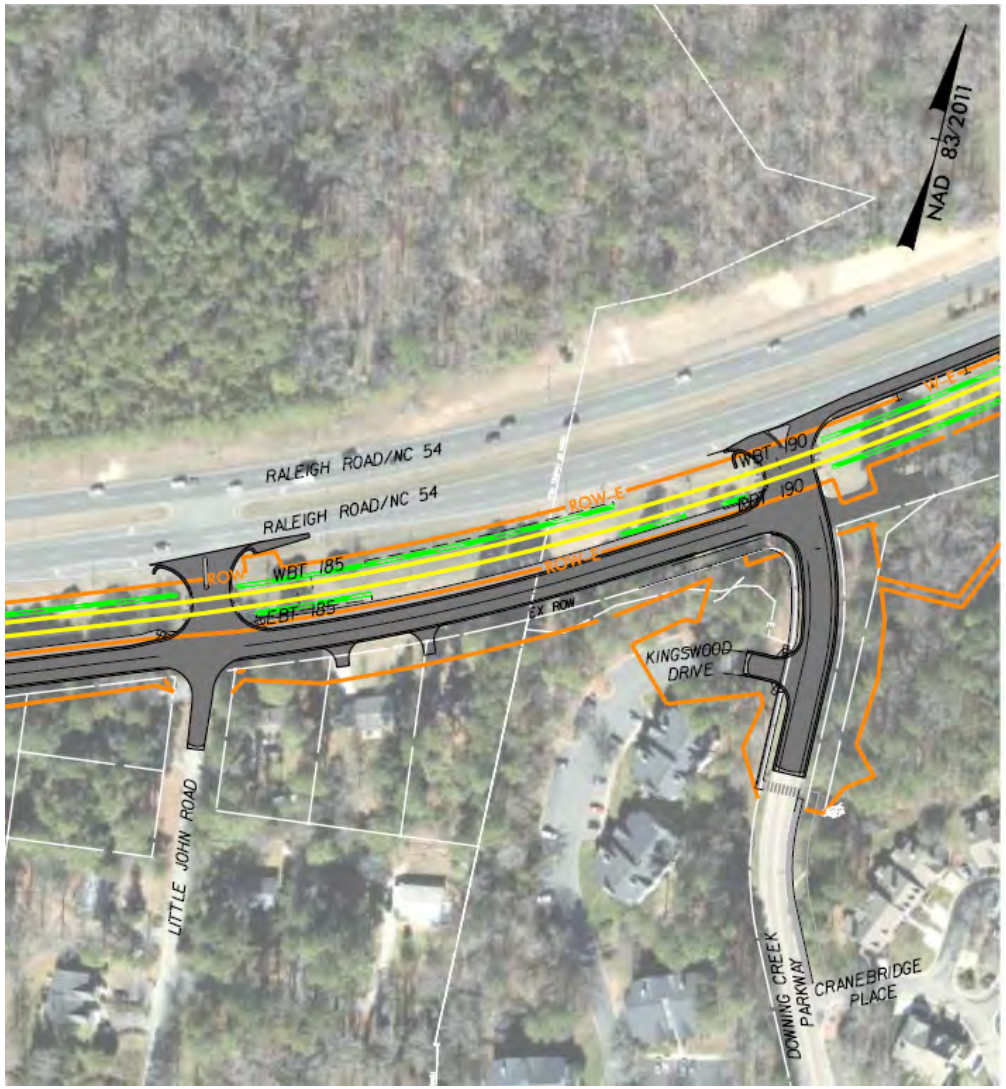
Final Section 4(f) evaluation

* Requires Finding of No Significant Impact

GO Triangle

Questions

Jordan Game Lands- Proposed Impacts



GO Triangle

Jordan Game Lands- Proposed Impacts

LEGEND

BRIDGE PIERS: ELEVATED TRACK: BELOW GRADE TRACK: RETAINING WALLS: ROW: PROPOSED ROADWAY:

AT-GRADE TRACK: STATION: STATION DEMOLITION: WETLANDS AND STREAMS: SIDEWALK /MULTI USE PATH: FILL IMPACT: COMP. STORAGE:

PRELIMINARY PLANS

DO NOT USE FOR CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES ARE COMPLETED

DESIGNED BY:	MCD
DRAWN BY:	MED
CHECKED BY:	JIG
DATE:	

100 50 0 100 200 HORIZONTAL

HDR Engineering, Inc.
555 Fayetteville Street, Suite 900
Raleigh, NC 27601-3034

GO Triangle

DURHAM-ORANGE LIGHT RAIL TRANSIT PROJECT

ENGINEERING DESIGN PLAN SHEET

DRAWING NO.:	SHEET NO.:	REV.
	07	

GO Triangle

Jordan Game Lands- Avoidance and Minimization

Connecting all points of the Triangle

September 13, 2018

Ms. Dana Matics
U.S. Army Corps of Engineers
Wilmington District
Email: [redacted]

RE: Durham-Orange Light Rail Transit (D-OLRT) Project
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USACE Properties – Jordan Game Lands

Dear Ms. Matics,

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GoTriangle proposes to refine the design of the D-O LRT Project, which would include improvements to the drainage design within the USACE-owned property. The Proposed Refinements would include a stormwater retention pond in the southeast quadrant, near the intersections of Downing Creek Parkway, Stancell Drive, and NC 54. In addition, the Proposed Refinements would add associated stormwater discharge along George King Road.

The improvements to stormwater design would require an additional 3.0 acres of permanent easement, bringing the total permanent easement to 3.2 acres. Of the permanent easement required, 1.7 acres is within the existing NCDOT easement. In order to construct the stormwater retention pond and associated drainage facilities, the temporary easement would also increase from 1.4 acres to 2.2 acres. Of the temporary easement required, 0.30 acres are within existing NCDOT easement. The land within the temporary construction easements would be restored to their original condition upon completion of construction. Figures 2 and 3 depict the acreage calculations associated with the D-O LRT Project.

It is important to note that the changes resulting from the Proposed Refinements are similar to those documented in the 2016 FEIS/ROD and Final 4(f) Evaluation, and would not adversely affect the activities, features, or attributes qualifying the USACE property for protection under Section 4(f). As such, the impacts of the Proposed Refinements are *de minimis* for the Jordan Game Lands.

Concurrence with Updated *De Minimis* Determinations

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GoTriangle respectfully requests USACE's response to this Section 4(f) use and *de minimis* impacts determination by **October 12, 2018**. Should you have any questions or need additional information, please contact Stan Mitchell at the FTA Region IV office at 230 Peachtree Street, Suite 1400, Atlanta, Georgia 30303, by phone at [redacted] by email at [redacted] Concurrence regarding this matter should also be directed to GoTriangle via Thomas Henry at [redacted] RTP, NC 27709 or by email at [redacted]

We look forward to continuing to work with the USACE as the D-O LRT Project moves forward.

Sincerely,

David A. Charters, PE
Manager of Engineering and Design
GoTriangle

Attachments:

Figure 1: U.S. Army Corps of Engineers- Jordan Game Lands
Figure 2: Proposed Easements at Jordan Game Lands (1 of 2)
Figure 3: Proposed Easements at Jordan Game Lands (2 of 2)

cc: Stanley A. Mitchell, Environmental Protection Specialist, Region IV, FTA
Kerry Brubaker, US Army Corps of Engineers, Savannah District
Dave Charters, Manager of Engineering and Design, GoTriangle
Meghan Makoid, Senior Environmental Planner, GoTriangle
Thomas Henry, Assistant General Counsel, GoTriangle

As the official/entity with jurisdiction over the Jordan Game Lands, the U.S. Army Corps of Engineers concurs with the determination that the D-O LRT Project Proposed Refinements as described above in this letter and shown on the accompanying attachments would not adversely affect the activities, features, or attributes of these properties that make them eligible for protection under Section 4(f). Therefore, the U.S. Army Corps of Engineers agrees that the D-O LRT Project's Proposed Refinements' permanent use of portions of the Jordan Game Lands meet the criteria for *de minimis* impacts determinations under Section 4(f) of the USDOT Act of 1966 (23 U.S.C. § 138 and 49 U.S.C.§ 303 and implemented in 23 C.F.R. Part 774). The U.S. Army Corps of Engineers has been informed that, based on its concurrence, the Federal Transit Administration (FTA) intends to make these *de minimis* impacts determinations regarding the Jordan Game Lands, thus satisfying FTA's requirements under Section 4(f) with respect to those certain resources.

ON BEHALF OF THE U.S. ARMY CORPS OF ENGINEERS

Signature:_____
Name:_____
Title:_____
Date: _____

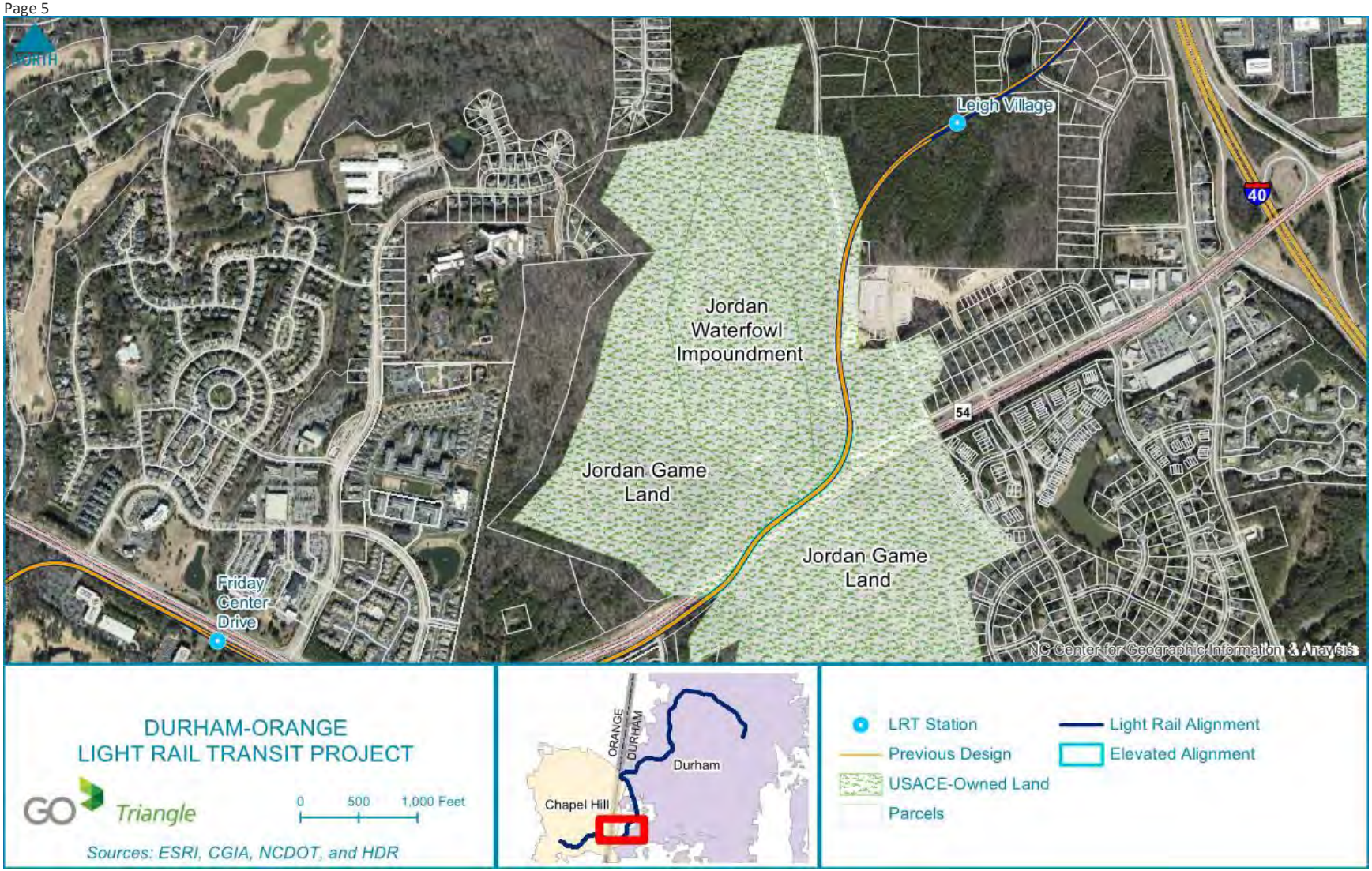

Figure 1: U.S. Army Corps of Engineers – Jordan Game Lands

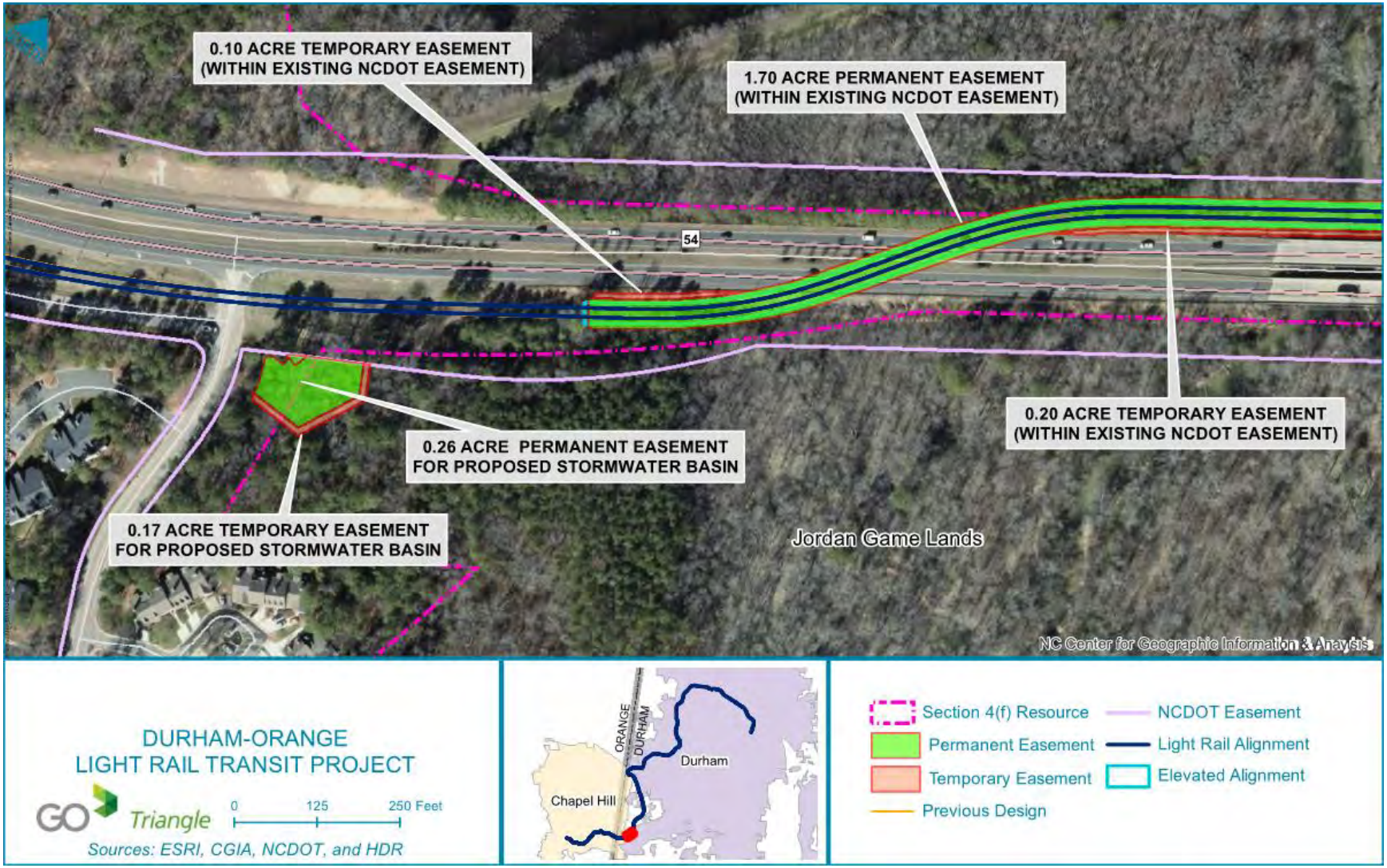

Figure 2: Proposed Easements at Jordan Game Lands (1 of 2)

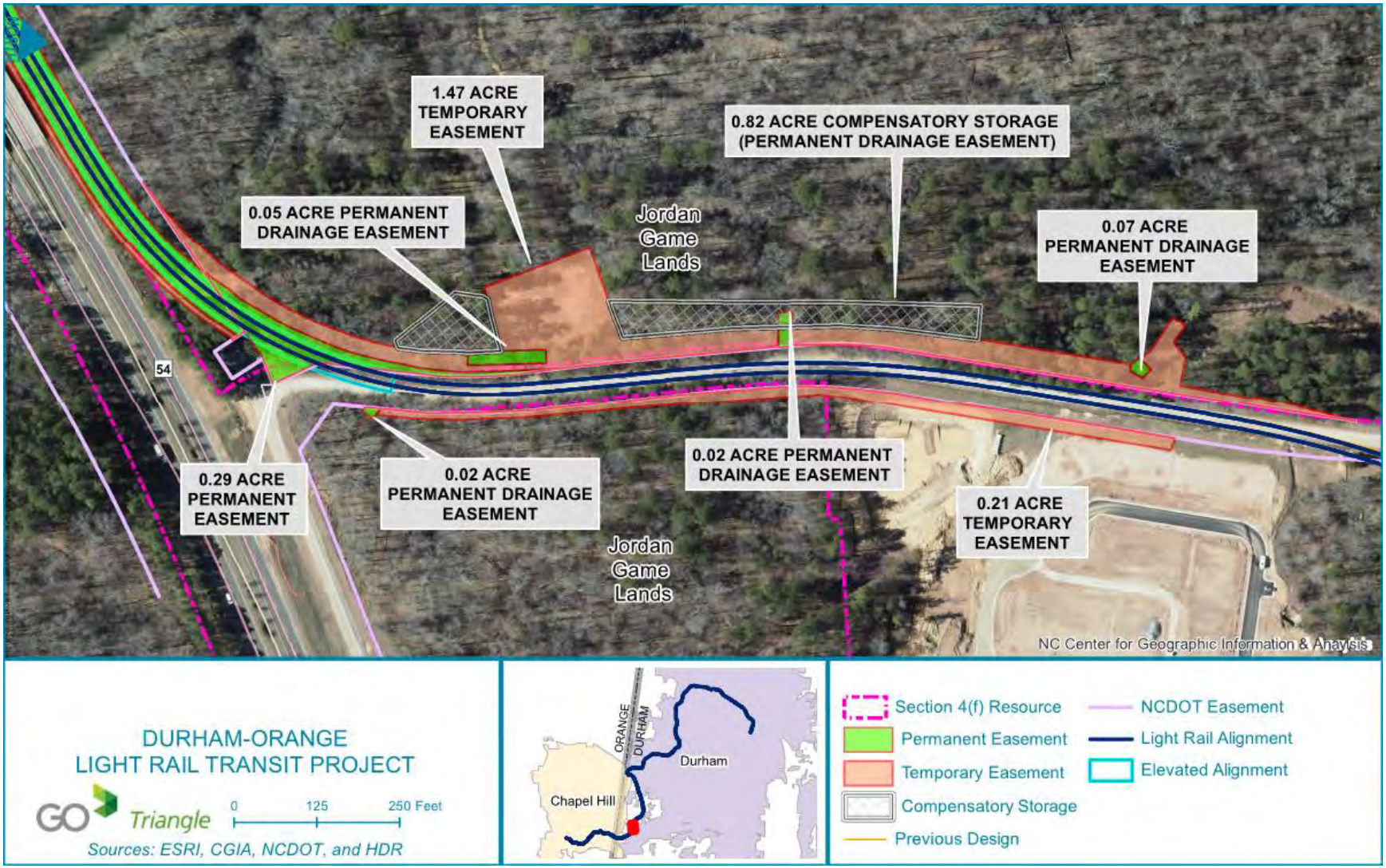

Figure 3: Proposed Easements at Jordan Game Lands (2 of 2)

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GO Triangle

Connecting all points of the Triangle

September 12, 2018

Mr. Wendell Davis, County Manager
Durham County
200 East Main Street 2nd Floor, Old Courthouse
Durham, NC 27701
Email: [redacted]

RE: Durham-Orange Light Rail Transit (D-OLRT) Project
D-O LRT Project Proposed Refinements - Section 4(f) *De Minimis* Impacts Determination
Durham County Properties – New Hope Creek Trail (Planned), New Hope Creek Preserve Trail (Existing), Durham Open Space

Dear Mr. Davis,

The Research Triangle Regional Public Transportation Authority d/b/a GoTriangle (GoTriangle), on behalf of the Federal Transit Administration (FTA), seeks the concurrence of Durham County as the official/entity with jurisdiction over New Hope Creek Trail (Planned), New Hope Creek Preserve Trail (Existing), Durham Open Space (Durham County Properties), with the updated impacts determinations made by the FTA, and based on Durham-Orange Light Rail Transit (D-O LRT) Project proposed refinements, for these public park properties pursuant to Section 4(f) of the U.S. Department of Transportation Act of 1966, codified at 23 U.S.C. § 138 and 49 U.S.C. § 303, (Section 4(f)) and implemented in 23 C.F.R. Part 774.

Durham-Orange Light Rail Transit Project

The D-O LRT Project is a 17.7-mile light rail transit service which will provide connections between UNC Hospitals; the UNC campus; the William and Ida Friday Center for Continuing Education; Patterson Place; the South Square area; Duke University; the Duke University and Durham Veterans Affairs Medical Centers; downtown and east Durham; and North Carolina Central University. Multimodal connections at the light rail stations will seamlessly connect transit passengers. Eighteen (18) stations are planned, with one additional proposed station, and up to 4,000 parking spaces will be provided along the D-O LRT Project alignment. In addition, a rail operations and maintenance facility will be constructed to accommodate the D-O LRT fleet.

D-O LRT Project Proposed Refinements

The Final Section 4(f) Evaluation published with the February 2016 Final Environmental

Impact Statement (FEIS)/Record of Decision (ROD) presented the National Environmental Policy Act (NEPA) Selected Alternative for the D-O LRT Project.

The D-O LRT Project and its relationship to the Durham County Properties were documented in the 2015 Draft EIS and 2016 FEIS/ROD and Final Section 4(f) Evaluation. Durham County indicated its concurrence with the *de minimis* use determination in a letter dated December 15, 2015. A Supplemental Environmental Assessment (EA) and Amended ROD were prepared in 2016 for extending the alignment to North Carolina Central University (NCCU). None of the Durham County Properties were affected by the changes evaluated in the 2016 Supplemental EA.

GoTriangle and the FTA are currently preparing a second Supplemental EA to assess D-O LRT Project proposed refinements that have resulted from the advancement of engineering design (Proposed Refinements). These Proposed Refinements include changes to the D-O LRT Project on and adjacent to the Durham County Properties. The Proposed Refinements, including the anticipated Section 4(f) findings, are described below, and are illustrated in the attached Figure 1.

Summary of Changes to Section 4(f) Properties

The Proposed Refinements would modify the light rail alignment from a double-track to a single-track alignment from SW Durham Drive, across New Hope Creek, Garrett Road, and Sandy Creek. This alignment would also allow for a single-track bridge structure across the New Hope Creek Trail (Planned) and would reduce permanent impacts to the New Hope Creek Bottomlands. The single-track bridge would be built using temporary work platforms adjacent to the bridge structure. These work platforms would be used to construct the pier footings and the single-track bridge. Once the work is complete, the work platforms would be removed and the land disturbed by construction would be restored to its original condition. The change to a single-track bridge would result in a minor decrease to the permanent easement required. The Previous Design required a permanent easement of approximately 0.1 acres; the proposed change would reduce the permanent easement to less than 0.1 acres. With the proposed changes, there would continue to be no impacts to the Durham Open Space or the New Hope Creek Preserve Trail (Existing). In addition, the single-track bridge design would avoid the need to relocate the City of Durham waterline adjacent to the light rail alignment, thereby avoiding an easement within the Durham Open Space.

It is important to note that the changes resulting from the Proposed Refinements are similar to those documented in the 2016 FEIS/ROD and Final 4(f) Evaluation, and would not adversely affect the activities, features, or attributes qualifying the Durham County Properties for protection under Section 4(f). As such, the impacts of the Proposed Refinements are *de minimis* for the New Hope Creek Trail (Planned) and no use of the Durham Open Space and New Hope Creek Preserve Trail.

Concurrence with Updated *De Minimis* Determinations

Pursuant to 23 C.F.R. § 774.5, if Durham County concurs with the FTA's findings set forth herein, GoTriangle must receive concurrence from Durham County in writing in order for the FTA to approve the use of Durham County Properties for the D-O LRT Project Proposed Refinements as discussed above. A concurrence clause is included at the end of this letter and may be used for that purpose. If, however, Durham County objects to the FTA's findings, or if Durham County's comments raise new concerns about the proposed Section 4(f) use and *de minimis* impacts determination, the FTA may be required to conduct a formal Section 4(f) evaluation.

GoTriangle respectfully requests Durham County's response to this Section 4(f) use and *de minimis* impacts determination by **October 12, 2018**. Should you have any questions or need additional information, please contact Stan Mitchell at the FTA Region IV office at 230 Peachtree Street, Suite 1400, Atlanta, Georgia 30303, by phone at [redacted] or by email at [redacted] Concurrence regarding this matter should also be directed to GoTriangle via Thomas Henry at [redacted] RTP, NC 27709 or by email a[redacted]

We look forward to continuing to work with Durham County as the D-O LRT Project moves forward.

Sincerely,

David A. Charters, PE
Manager of Engineering and Design
GoTriangle

Attachments:
Figure 1: Durham County Properties

cc: Jane Korest, Division Head, Durham County Open Space and Real Estate
Brendan Moore, Durham County Open Space Land Manager
Stanley A. Mitchell, Environmental Protection Specialist, Region IV, FTA
Dave Charters, Manager of Engineering and Design, GoTriangle
Meghan Makoid, Senior Environmental Planner, GoTriangle
Thomas Henry, Assistant General Counsel, GoTriangle

As the official/entity with jurisdiction over the New Hope Creek Trail (Planned), the New Hope Creek Preserve Trail (Existing), and the Durham Open Space (Durham County Properties), Durham County concurs with the determination that the D-O LRT Project Proposed Refinements as described above in this letter and shown on the accompanying attachments would not adversely affect the activities, features, or attributes of these properties that make them eligible for protection under Section 4(f). Therefore, Durham County agrees that the D-O LRT Project's Proposed Refinements' permanent use of portions of the Durham County Properties meet the criteria for *de minimis* impacts determinations under Section 4(f) of the USDOT Act of 1966 (23 U.S.C. § 138 and 49 U.S.C.§ 303 and implemented in 23 C.F.R. Part 774). Durham County has been informed that, based on its concurrence, the Federal Transit Administration (FTA) intends to make these *de minimis* impacts determinations regarding the Durham County Properties, thus satisfying FTA's requirements under Section 4(f) with respect to those certain resources.

ON BEHALF OF DURHAM COUNTY

Signature: _____
Name: Wendell M. Davis
Title: County Manager
Date: Oct 12, 2018

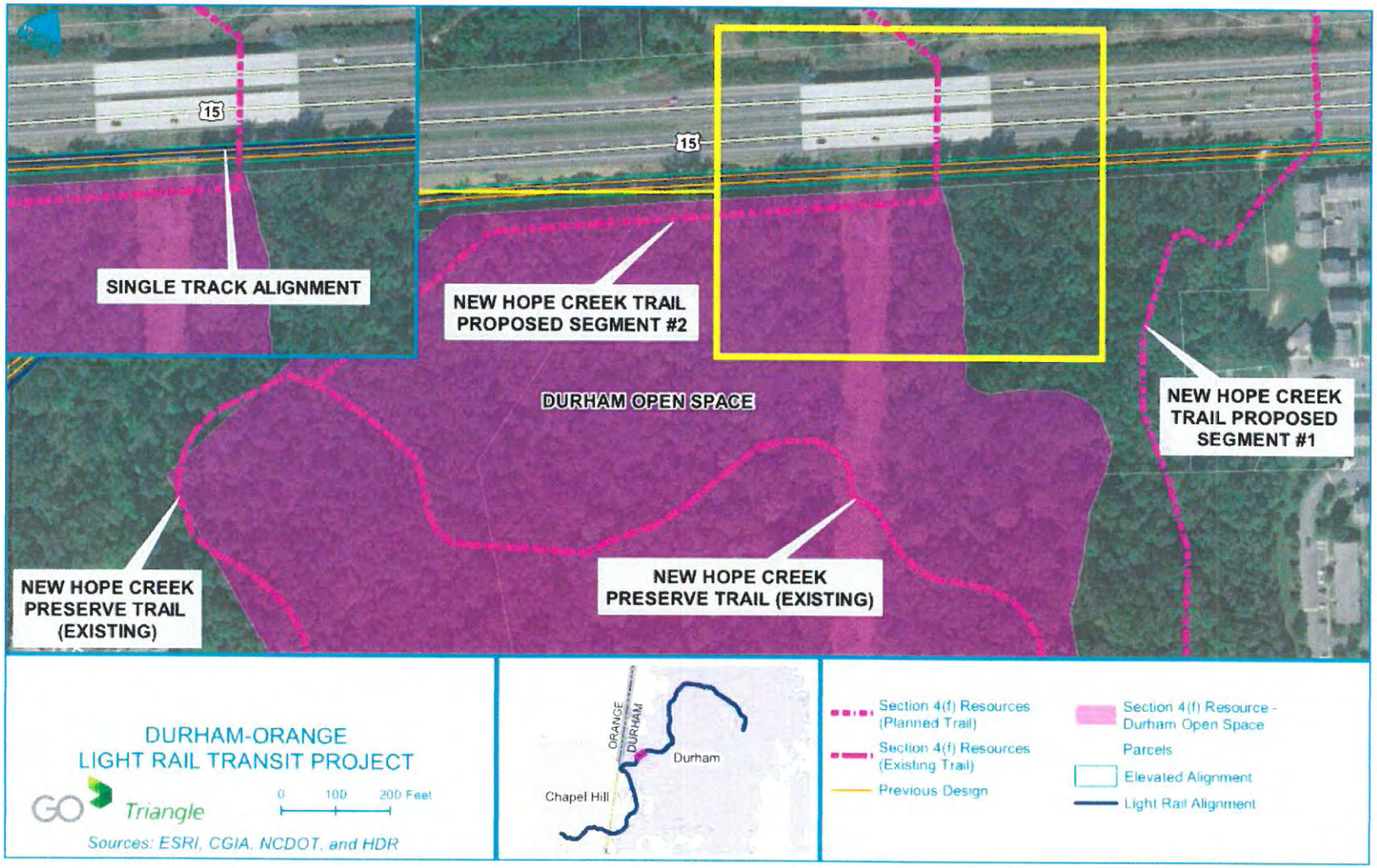

Figure 1: Durham County Properties

Connecting all points of the Triangle

September 12, 2018

Mr. Wendell Davis, County Manager
Durham County
200 East Main Street 2nd Floor, Old Courthouse
Durham, NC 27701
Email: [redacted]

RE: Durham-Orange Light Rail Transit (D-OLRT) Project
D-O LRT Project Proposed Refinements - Section 4(f) *De Minimis* Impacts Determination
Durham County Properties – New Hope Creek Trail (Planned), New Hope Creek Preserve Trail (Existing), Durham Open Space

Dear Mr. Davis,

The Research Triangle Regional Public Transportation Authority d/b/a GoTriangle (GoTriangle), on behalf of the Federal Transit Administration (FTA), seeks the concurrence of Durham County as the official/entity with jurisdiction over New Hope Creek Trail (Planned), New Hope Creek Preserve Trail (Existing), Durham Open Space (Durham County Properties), with the updated impacts determinations made by the FTA, and based on Durham-Orange Light Rail Transit (D-O LRT) Project proposed refinements, for these public park properties pursuant to Section 4(f) of the U.S. Department of Transportation Act of 1966, codified at 23 U.S.C. § 138 and 49 U.S.C. § 303, (Section 4(f)) and implemented in 23 C.F.R. Part 774.

Durham-Orange Light Rail Transit Project

The D-O LRT Project is a 17.7-mile light rail transit service which will provide connections between UNC Hospitals; the UNC campus; the William and Ida Friday Center for Continuing Education; Patterson Place; the South Square area; Duke University; the Duke University and Durham Veterans Affairs Medical Centers; downtown and east Durham; and North Carolina Central University. Multimodal connections at the light rail stations will seamlessly connect transit passengers. Eighteen (18) stations are planned, with one additional proposed station, and up to 4,000 parking spaces will be provided along the D-O LRT Project alignment. In addition, a rail operations and maintenance facility will be constructed to accommodate the D-O LRT fleet.

D-O LRT Project Proposed Refinements

The Final Section 4(f) Evaluation published with the February 2016 Final Environmental

Impact Statement (FEIS)/Record of Decision (ROD) presented the National Environmental Policy Act (NEPA) Selected Alternative for the D-O LRT Project.

The D-O LRT Project and its relationship to the Durham County Properties were documented in the 2015 Draft EIS and 2016 FEIS/ROD and Final Section 4(f) Evaluation. Durham County indicated its concurrence with the *de minimis* use determination in a letter dated December 15, 2015. A Supplemental Environmental Assessment (EA) and Amended ROD were prepared in 2016 for extending the alignment to North Carolina Central University (NCCU). None of the Durham County Properties were affected by the changes evaluated in the 2016 Supplemental EA.

GoTriangle and the FTA are currently preparing a second Supplemental EA to assess D-O LRT Project proposed refinements that have resulted from the advancement of engineering design (Proposed Refinements). These Proposed Refinements include changes to the D-O LRT Project on and adjacent to the Durham County Properties. The Proposed Refinements, including the anticipated Section 4(f) findings, are described below, and are illustrated in the attached Figure 1.

Summary of Changes to Section 4(f) Properties

The Proposed Refinements would modify the light rail alignment from a double-track to a single-track alignment from SW Durham Drive, across New Hope Creek, Garrett Road, and Sandy Creek. This alignment would also allow for a single-track bridge structure across the New Hope Creek Trail (Planned) and would reduce permanent impacts to the New Hope Creek Bottomlands. The single-track bridge would be built using temporary work platforms adjacent to the bridge structure. These work platforms would be used to construct the pier footings and the single-track bridge. Once the work is complete, the work platforms would be removed and the land disturbed by construction would be restored to its original condition. The change to a single-track bridge would result in a minor decrease to the permanent easement required. The Previous Design required a permanent easement of approximately 0.1 acres; the proposed change would reduce the permanent easement to less than 0.1 acres. With the proposed changes, there would continue to be no impacts to the Durham Open Space or the New Hope Creek Preserve Trail (Existing). In addition, the single-track bridge design would avoid the need to relocate the City of Durham waterline adjacent to the light rail alignment, thereby avoiding an easement within the Durham Open Space.

It is important to note that the changes resulting from the Proposed Refinements are similar to those documented in the 2016 FEIS/ROD and Final 4(f) Evaluation, and would not adversely affect the activities, features, or attributes qualifying the Durham County Properties for protection under Section 4(f). As such, the impacts of the Proposed Refinements are *de minimis* for the New Hope Creek Trail (Planned) and no use of the Durham Open Space and New Hope Creek Preserve Trail.

Concurrence with Updated *De Minimis* Determinations

Pursuant to 23 C.F.R. § 774.5, if Durham County concurs with the FTA's findings set forth herein, GoTriangle must receive concurrence from Durham County in writing in order for the FTA to approve the use of Durham County Properties for the D-O LRT Project Proposed Refinements as discussed above. A concurrence clause is included at the end of this letter and may be used for that purpose. If, however, Durham County objects to the FTA's findings, or if Durham County's comments raise new concerns about the proposed Section 4(f) use and *de minimis* impacts determination, the FTA may be required to conduct a formal Section 4(f) evaluation.

GoTriangle respectfully requests Durham County's response to this Section 4(f) use and *de minimis* impacts determination by **October 12, 2018**. Should you have any questions or need additional information, please contact Stan Mitchell at the FTA Region IV office at 230 Peachtree Street, Suite 1400, Atlanta, Georgia 30303, by phone at [redacted] or by email at [redacted] Concurrence regarding this matter should also be directed to GoTriangle via Thomas Henry at [redacted] RTP, NC 27709 or by email at [redacted]

We look forward to continuing to work with Durham County as the D-O LRT Project moves forward.

Sincerely,

David A. Charters, PE
Manager of Engineering and Design
GoTriangle

Attachments:
Figure 1: Durham County Properties

cc: Jane Korest, Division Head, Durham County Open Space and Real Estate
Brendan Moore, Durham County Open Space Land Manager
Stanley A. Mitchell, Environmental Protection Specialist, Region IV, FTA
Dave Charters, Manager of Engineering and Design, GoTriangle
Meghan Makoid, Senior Environmental Planner, GoTriangle
Thomas Henry, Assistant General Counsel, GoTriangle

As the official/entity with jurisdiction over the New Hope Creek Trail (Planned), the New Hope Creek Preserve Trail (Existing), and the Durham Open Space (Durham County Properties), Durham County concurs with the determination that the D-O LRT Project Proposed Refinements as described above in this letter and shown on the accompanying attachments would not adversely affect the activities, features, or attributes of these properties that make them eligible for protection under Section 4(f). Therefore, Durham County agrees that the D-O LRT Project's Proposed Refinements' permanent use of portions of the Durham County Properties meet the criteria for *de minimis* impacts determinations under Section 4(f) of the USDOT Act of 1966 (23 U.S.C. § 138 and 49 U.S.C.§ 303 and implemented in 23 C.F.R. Part 774). Durham County has been informed that, based on its concurrence, the Federal Transit Administration (FTA) intends to make these *de minimis* impacts determinations regarding the Durham County Properties, thus satisfying FTA's requirements under Section 4(f) with respect to those certain resources.

ON BEHALF OF DURHAM COUNTY

Signature: _____
Name: _____
Title: _____
Date: _____

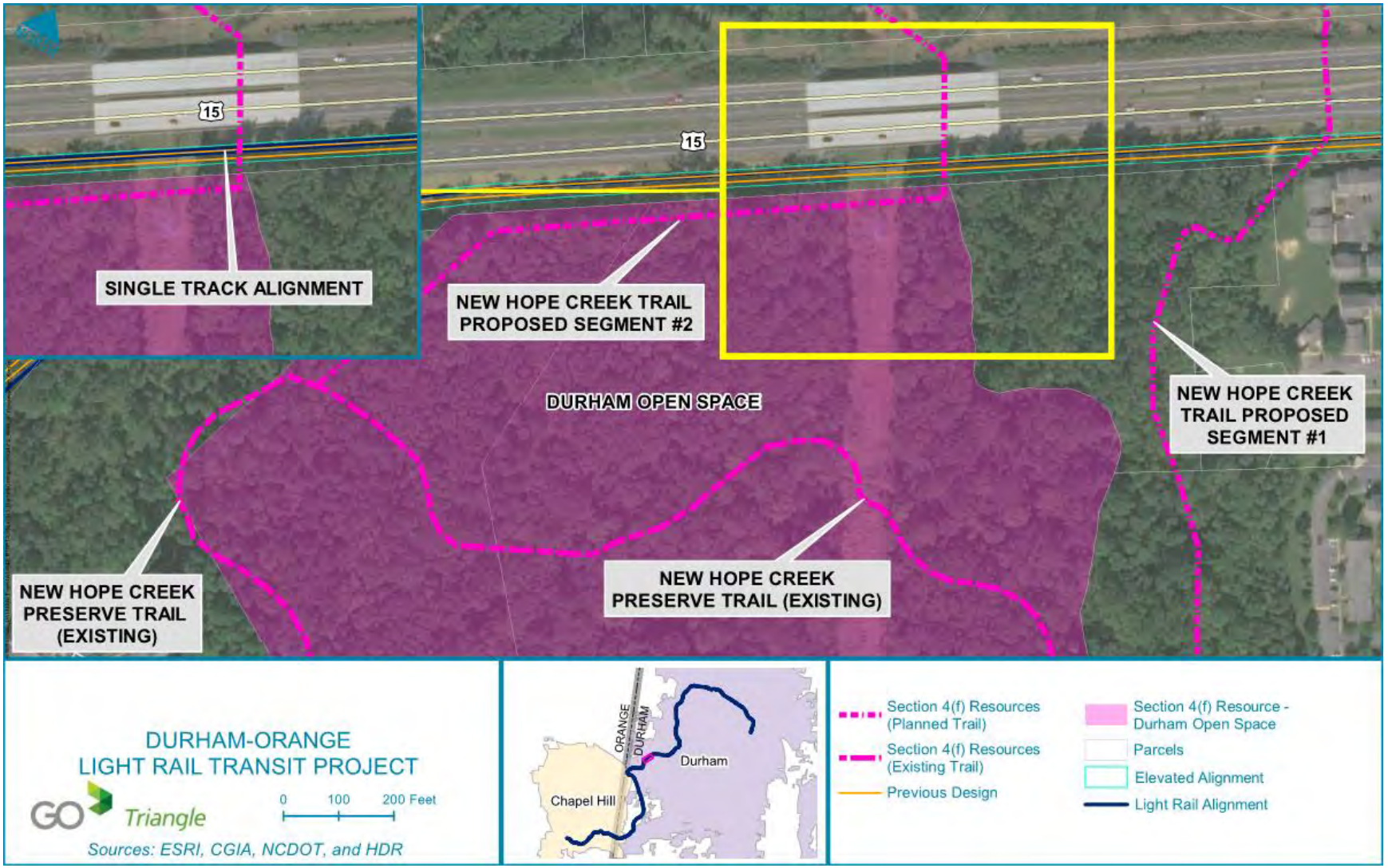

Figure 1: Durham County Properties

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Connecting all points of the Triangle

October 11, 2018

Thomas Dawson, Assistant Director
City of Durham, Planning, Maintenance and Athletics Division
101 City Hall Plaza
Durham, NC 27701
Email: [redacted]

Lindsay Smart, Senior Planner
City of Durham, Planning, Maintenance and Athletics Division
101 City Hall Plaza
Email: [redacted]

Re: Durham-Orange Light RailTransit (D-OLRT) Project
D-O LRT Project Proposed Refinements - Section 4(f) Temporary Occupancy Exception
Downtown Durham Trail

Dear Mr. Dawson,

The Research Triangle Regional Public Transportation Authority d/b/a/ GoTriangle (GoTriangle), on behalf of the Federal Transit Administration (FTA), seeks the concurrence of the City of Durham, as the official/entity with jurisdiction over the Downtown Durham Trail , with the temporary occupancy determination made by the FTA, and based on the Durham-Orange Light Rail Transit (D-O LRT) Project proposed refinements, for this public trail pursuant to Section 4(f) of the U.S. Department of Transportation Act of 1966, codified at 23 U.S.C. § 138 and 49 U.S.C. § 303, (Section 4(f)) and implemented in 23 C.F.R. Part 774.

Durham-Orange Light Rail Transit Project

The D-O LRT Project is a 17.7-mile light rail transit service which will provide connections between UNC Hospitals; the UNC campus; the William and Ida Friday Center for Continuing Education; Patterson Place; the South Square area; Duke University; the Duke University and Durham Veterans Affairs Medical Centers; downtown and east Durham; and North Carolina Central University. Multimodal connections at the light rail stations will seamlessly connect transit passengers. Eighteen (18) stations are planned, with one additional proposed station, and up to 4,000 parking spaces will be provided along the D-O LRT Project alignment. In addition, a rail operations and maintenance facility will be constructed to accommodate the D-O LRT fleet.

D-O LRT Project Proposed Refinements

The Final Section 4(f) Evaluation published with the February 2016 Final Environmental Impact Statement (FEIS)/Record of Decision (ROD) presented the National Environmental Policy Act (NEPA) Selected Alternative for the D-O LRT Project.

The D-O LRT Project and its relationship to park and recreation properties were documented in the 2015 Draft EIS and 2016 FEIS/ROD and Final 4(f) Evaluation. A Supplemental Environmental Assessment (EA) and Amended ROD were prepared in 2016 for extending the alignment to North Carolina Central University (NCCU). Impacts to the Downtown Durham Trail were not included in those previous NEPA and Section 4(f) documents because the D-O LRT alignment did not impact the Downtown Durham Trail.

GoTriangle and FTA are currently preparing a second Supplemental EA to assess the D-O LRT Project proposed refinements that have resulted from advancement of engineering designs and responses to public comments collected on the previous NEPA documentation (Proposed Refinements). The Proposed Refinements include the addition of Blackwell/Mangum Street Station east of the Downtown Durham Trail and associated light rail alignment along Pettigrew Street. The refinements also include closing the Blackwell Street crossing between Ramseur Street and Pettigrew Street and creating a two-way system on Ramseur Street from Chapel Hill Street to Dillard Street. Pedestrian and bicycle access would be maintained by creating a pedestrian bridge, located between Blackwell Street and Mangum Street. The Proposed Refinements, including the anticipated Section 4(f) determination, are described below and illustrated in the attached Figures 1 and 2.

Summary of Changes to Section 4(f) Properties

Proposed Refinements would result in temporary construction impacts to approximately 0.12 miles of the Downtown Durham Trail during construction of the light rail alignment and the pedestrian bridge. During this time, the connectivity of the trail would be maintained by providing a marked, safe detour route. Potential temporary routes for pedestrian and bicycle access during construction were discussed in the October 2, 2018 meeting with the City of Durham. The City's preferred route included using Vivian Street and Mangum Street for north and southbound pedestrian and bicycle traffic. Additional routes would potentially use Jackie Robinson Drive and Willard Street to Chapel Hill Street. GoTriangle and the FTA commit to continuing to work with the City of Durham to determine the alternate route in advance of construction.

The area used for construction would be temporary in duration, and the attributes and features of the trail would be restored at the completion of the bridge construction. The pedestrian bridge would provide permanent connectivity for the trail. The Proposed Refinements would not adversely affect the activities, features, or attributes qualifying the trail for protection under Section 4(f). As such, the Proposed Refinements would be considered a temporary occupancy exception for the Downtown Durham Trail.

Concurrence with Temporary Occupancy Determination

Pursuant to 23 C.F.R. § 774.5, if the City of Durham concurs with FTA's findings set forth herein, GoTriangle must receive concurrence from City of Durham in writing in order for FTA to approve the use of the Downtown Durham Trail for the D-O LRT Project Proposed Refinements as discussed above. A concurrence clause is included at the end of this letter and may be used for that purpose. If, however, the City of Durham objects to FTA's findings, or if comments raise concerns about the proposed Section 4(f) use and temporary occupancy exception, the FTA may be required to conduct a formal Section 4(f)evaluation.

GoTriangle respectfully requests your reply to this letter by **November 9, 2018**. Should you have any questions or need additional information, please feel free to contact Stan Mitchell at the FTA Region IV office at 230 Peachtree Street, Suite 1400, Atlanta, Georgia 30303, by phone at (404) 865-5643, or by email at [redacted] Concurrence regarding this matter should also be directed to GoTriangle via Thomas Henry at [redacted] Research Triangle Park, North Carolina 27560 or [redacted]

We look forward to continuing to work with the City of Durham as the D-O LRT Project moves forward.

Sincerely,

David A. Charters, PE
Manager of Engineering and Design
GoTriangle

Attachments:

Figure 1: Downtown Durham Trail
Figure 2: Proposed Refinements- Blackwell/Mangum

cc: Stanley A. Mitchell, Environmental Protection Specialist, Region IV, FTA
Julia Walker, Environmental Protection Specialist, Region IV, FTA
Dave Charters, Manager of Engineering and Design, GoTriangle
Meghan A. Makoid, Senior Environmental Planner, GoTriangle
Thomas Henry, Assistant General Counsel, GoTriangle
Bill Judge, Assistant Director, City of Durham
Ellen Beckmann, Senior Transportation Planner, City of Durham

As the official/entity with jurisdiction over the Downtown Durham Trail, the City of Durham concurs in the determination that the proposed D-O LRT Proposed Project Refinements as described above in this letter and shown on the accompanying attachments would not adversely affect the activities, features, or attributes of the trail that make it eligible for protection under Section 4(f). Therefore, the City of Durham agrees that the D-O LRT Proposed Project Refinements' proposed temporary occupancy of portions of the Downtown Durham Trail meet the criteria for the temporary occupancy exception under Section 4(f) of the USDOT Act of 1966 (23 U.S.C. § 138 and 49 U.S.C. § 303 and implemented in 23 C.F.R. Part 774). The City of Durham has been informed that, based on its concurrence, the FTA intends to make the temporary occupancy exception regarding the Downtown Durham Trail, thus satisfying FTA's requirements under Section 4(f) with respect to that certain resource.

ON BEHALF OF CITY OF DURHAM

Signature: _____

Name: _____

Title: _____

Date: _____

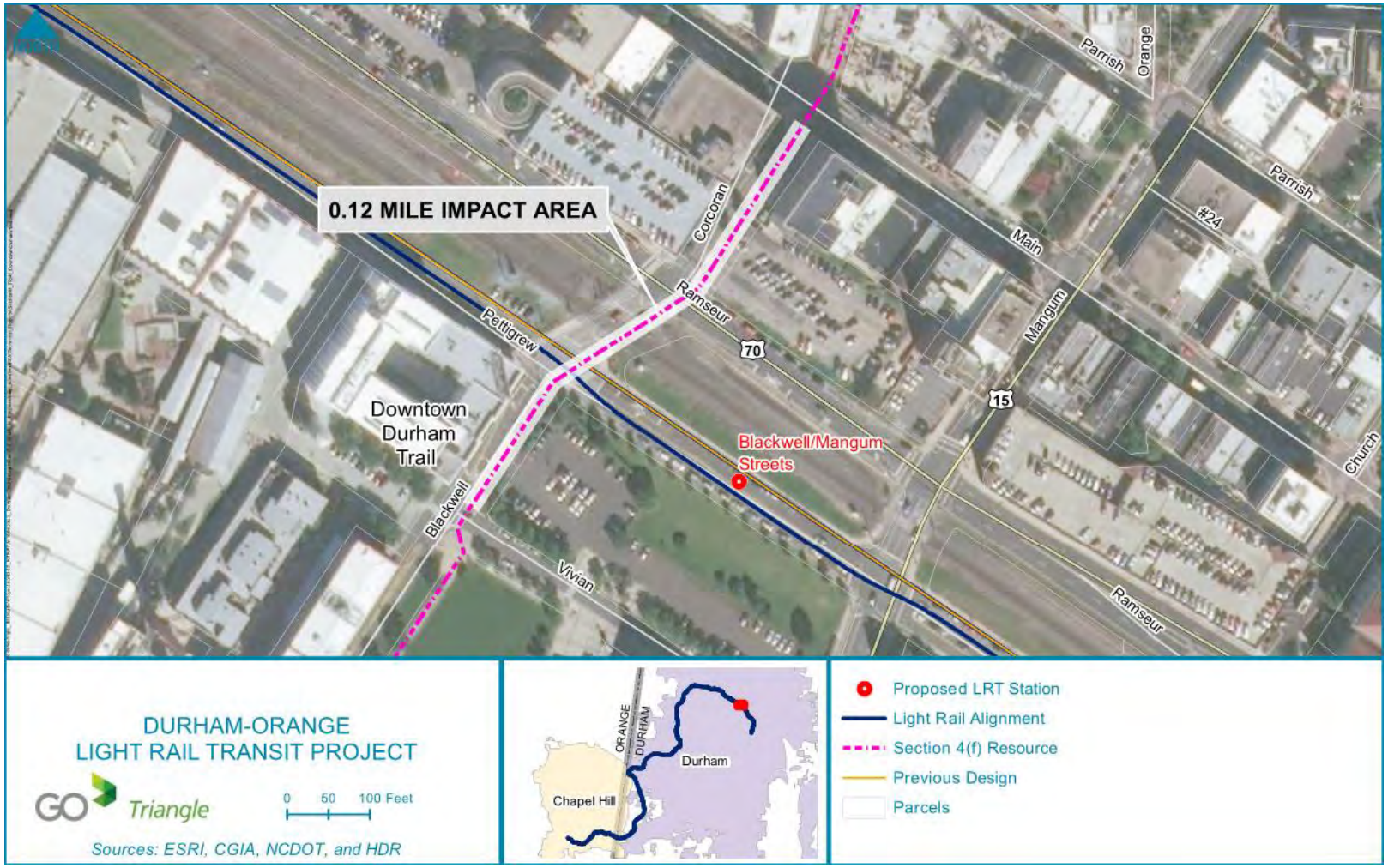


Figure 1: Downtown Durham Trail

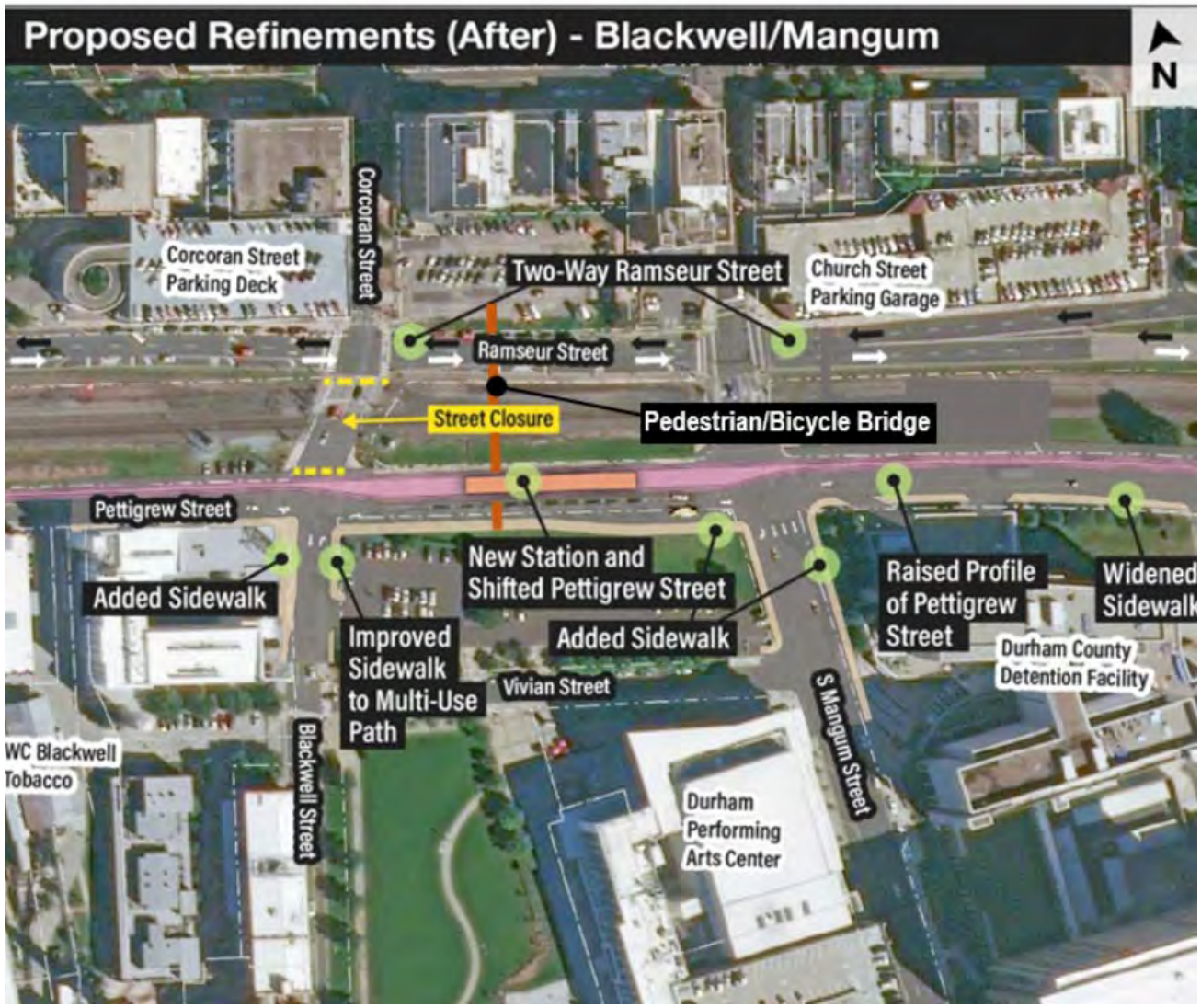


Figure 2: Proposed Refinements- Blackwell and Mangum streets

City of Durham Recreation Section 4(f) Resource Meeting

FTA, GoTriangle, City of Durham
October 2, 2018

Agenda

1. Agenda distribution and introductions
2. D-O LRT Project Update
3. Review of Project's Proposed Refinements
4. Brief Review of Section 4(f)
5. Section 4(f) Resource –Downtown Durham Trail
6. Potential Impacts/Mitigation
7. Next Steps
8. Proposed Bridge Design Milestones

Durham-Orange Light Rail Transit Project Update

- Supplemental EA & Section 4(f) Evaluation for Proposed Project Refinements: end of October 2018
  - GoTriangle and the City of Durham met May 24, 2018 to review the Proposed Refinements
  - Additional Proposed Refinements since the meeting would impact the Downtown Durham Trail
  - Re-evaluate effects determination for Section 4(f) resources
    - Conducting coordination and seeking City of Durham's comments
    - FTA will include draft Section 4(f) evaluation with the Supplemental EA

Design Constraints

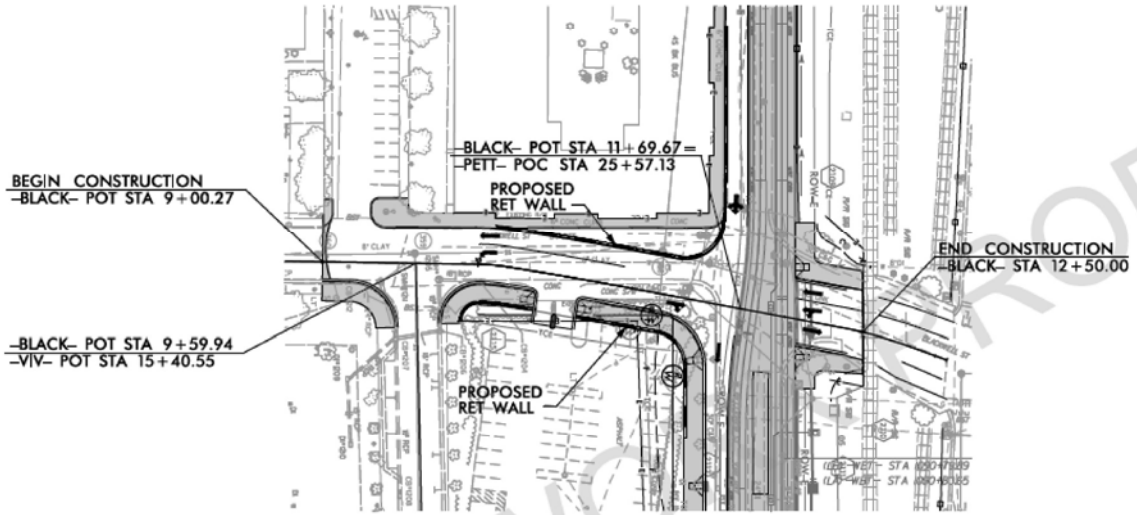
Advancements in engineering and comments received on the design identified two constraints in the alignment on Pettigrew Street.

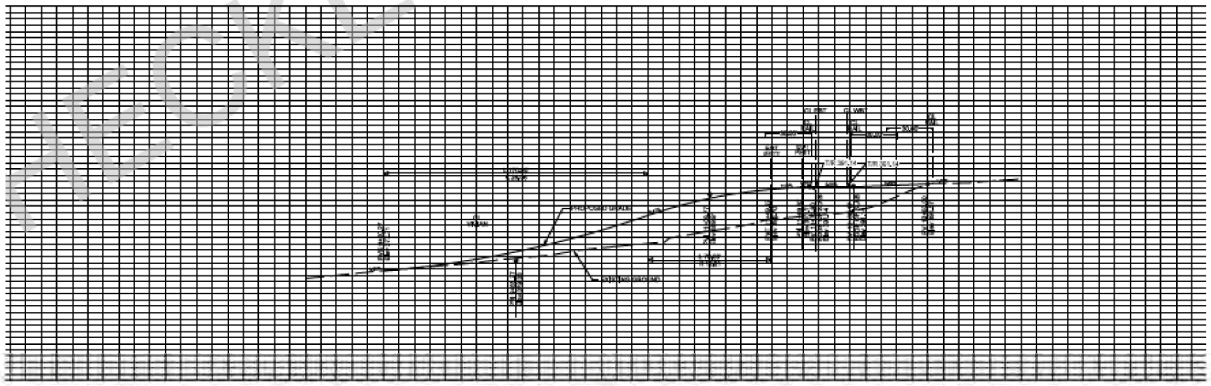
- The existing road profiles would prevent larger vehicles from crossing both sets of tracks;

- Analysis of gate operations revealed timing constraint at Blackwell Street and Dillard Street.

Additionally, the W.T. Blackwell & Co. Building is a National Historic Landmark. This property has special protections which GoTriangle and the FTA need to evaluate as part of the NEPA process.

Blackwell Street Road Profile





Alternatives Evaluated

- Aerial alignment along Pettigrew Street
  - Not cost effective & visual impact to the W.T. Blackwell & Co. Building

- Closure of Blackwell Street with at-grade streets connections
  - Vehicles re-routed to two-way Ramseur Street to alternative north/south roads
  - Pedestrians could be re-routed to one-way southbound Mangum Street; however volume is considered unsafe and no viable alternative for bicyclists heading north.
  - Pedestrians could still use Blackwell Street, however there is a concern about pedestrian safety given the number of trains through downtown Durham.

- Blackwell Street one-way southbound
  - Signal timing issue & 4'-8' retaining walls outside W.T. Blackwell & Co. Building

- Pedestrian/bicycle underpass
  - Undesirable length for pedestrian safety
  - Construction under the railroad
  - Potential foundation issues for historic buildings

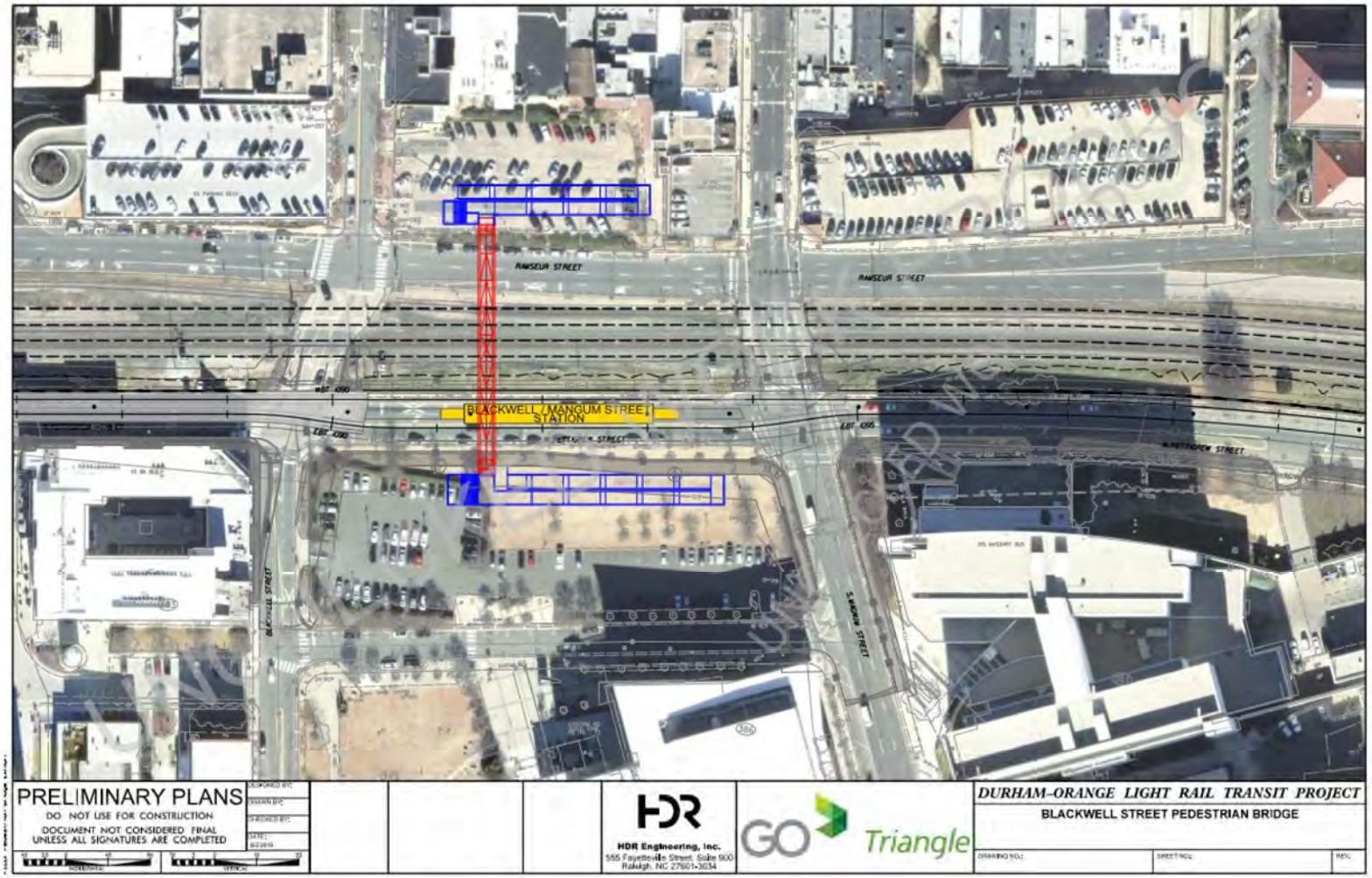
- Pedestrian/bicycle bridge
  - Visual aspect in proximity to the W.T. Blackwell & Co. Building

Additional Proposed Refinements

Additional Proposed Refinements to address the design constraints are:

- Close Blackwell Street crossing between Ramseur Street and Pettigrew Street;
- One-way southbound Dillard Street;
- Two-way Ramseur Street from Chapel Hill Street to Dillard Street; and
- Construct a pedestrian/bicycle bridge approximately mid-block between Blackwell Street and Mangum Street.

*Conceptual Pedestrian Bridge



*Conceptual bridge image used for State Historic Preservation Office consultation. Not representative of the proposed bridge design.

Brief Review of Section 4(f)

Section 4(f) of the Department of Transportation Act of 1966 (codified in 49 U.S.C. § 138 and implemented in 23 CFR 774)

- Applies to transportation projects that receive federal funding or require approval from the USDOT and its modal agencies (e.g., FTA)
- Requires consideration of Section 4(f) resources:
  - public parklands and recreational resources
  - wildlife and waterfowl refuges
  - historic resources
- Requires FTA to consult, coordinate, or receive concurrence with Officials with Jurisdiction over the Section 4(f) property, if the transportation project requires the use of land from a property protected by Section 4(f)

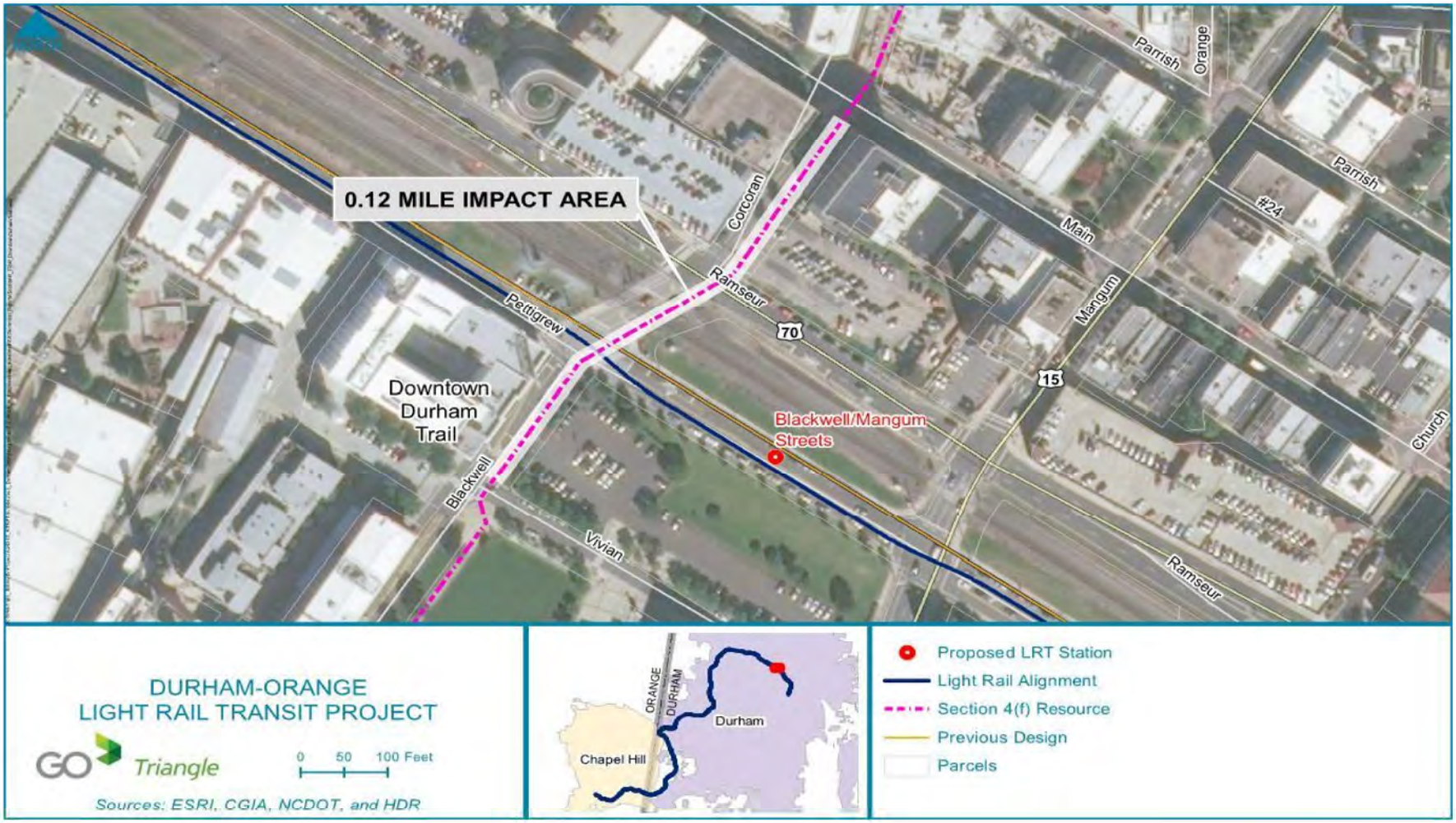
“Use” Under Section 4(f)

No Use	• Transportation project does not affect 4(f) resource
Permanent Incorporation	• Transportation project permanently incorporates 4(f) land • May result from partial or full acquisition, permanent easement or temporary easement
Constructive Use	• Proximity impacts substantially impair activities, features, or attributes that qualify it for protection under Section 4(f)
Temporary Occupancy	• Duration temporary • scope of work minor • No anticipated permanent adverse physical impacts, nor interference with activities, features, or attributes that qualify it for protection under Section 4(f) • 4(f) land fully restored

Section 4(f) Evaluation

- Transportation project must avoid use of Section 4(f) resources, *if possible*; OR
- Select an alternative with the least overall harm, if avoidance is not possible
- Take all measures to minimize harm of Section 4(f) resources

Draft 4(f) Evaluation: Downtown Durham Trail



Draft 4(f) Evaluation: Downtown Durham Trail

Access southbound:

- Via Mangum /Vivian Streets = 0.27 mile
- Via Mangum St/Jackie Robinson = 0.55 mile

Access northbound:

- Via Willard/Chapel Hill Streets = 0.77 mile

GO Triangle

Draft 4(f) Evaluation: Downtown Durham Trail

Potential Impacts

- Temporary detour of Downtown Durham Trail during construction
- Proposed pedestrian/bicycle bridge would improve the existing trail features

Proposed Mitigation

- Detour during construction would preserve trail connectivity
- Pedestrian crossing safety features

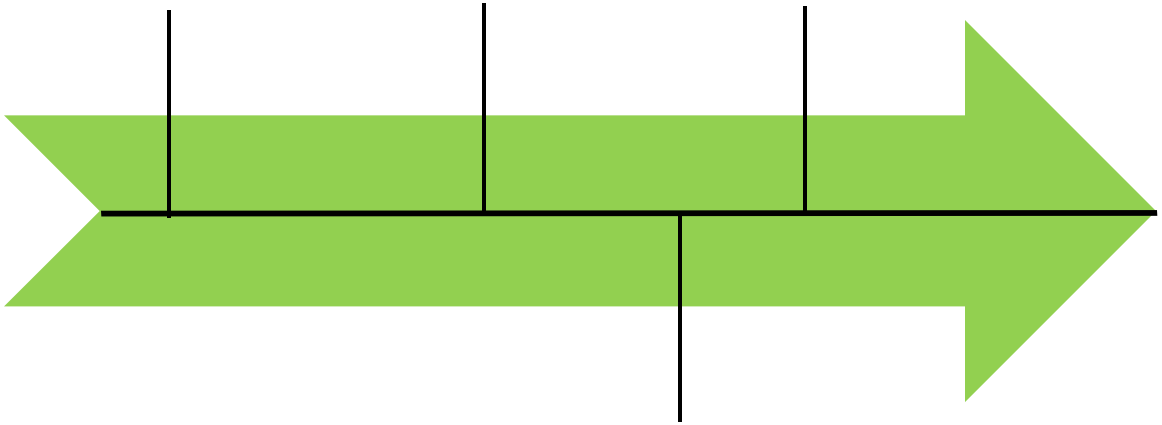
Draft Section 4(f) Determination

- Temporary Occupancy Exception of Downtown Durham Trail

Concurrence Letter

- City of Durham concurs with FTA draft Section 4(f) determination
  - Temporary occupancy of the Downtown Durham Trail
- Provides documented agreement that the D-O LRT Proposed Project Refinements:
  - Will require the temporary detour of the Downtown Durham Trail
  - Detour of the trail will be a short duration (during construction)
  - Will not result in a change in ownership of the land
  - Scope of the work is minor
  - With the temporary detour / proposed mitigation, there will be no temporary or permanent adverse changes to the activities, features, or attributes of the property
  - After construction, the land will be fully restored to a condition at least as good as before the project
  - Based on the above factors, City of Durham concurs with the FTA draft Section 4(f) determination: temporary occupancy

Section 4(f) Next Steps



Consultation with City of Durham
October 2, 2018

Anticipated concurrence letter from City of Durham
October/ November 2018

30-day Public Review and Comment
Anticipated November 2018

Supplemental EA / Draft Section 4(f) Evaluation
Anticipated Publication
End October 2018

Amended ROD*

&

Final Section 4(f) evaluation

* Requires Finding of No Significant Impact

Pedestrian Bridge Design Milestones

2018				2019							
Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May	Jun	July	Aug
	Bridge (0%)	Bridge (0%)	Bridge (10%)								

- Section 4(f) Consultation and Supplemental Environmental Assessment – October 2018
  - Develop advisory panel for bridge design project
  - **Publish Supplemental Environmental Assessment end of October**
- Listening Phase– November 2018 (0%)
  - Initial meeting with advisory panel to discuss expectations and recommendations for successful project
- Design Creation Phase– December 2018 (10%)
  - Second meeting with panel to include presentations of conceptual solutions
  - Origin/destination points should be established
  - Panel's recommendation on conceptual design will be recorded

Pedestrian Bridge Design Milestones

2018				2019							
Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May	Jun	July	Aug
	Bridge (0%)	Bridge (0%)	Bridge (10%)	Bridge (20%)	Bridge (30%)						FFGA (90%) Bridge (60%)

- Design Development– January 2019 (20%)
  - Third meeting will include 5-7 concepts with realistic constraints applied to the designs.
  - Options should be narrowed to 2-3 designs.
- Design Creation– February 2019 (30%)
  - Panel will review 2-3 primary concepts after engineering review.
  - Railings and materials should be applied.
- Construction Documentation – August 2019 (60%)
  - 1 bridge design
  - GEC to produce document package for submittal to FTA
  - Review with stakeholders

GO Triangle

Questions

GO Triangle

Connecting all points of the Triangle

July 12, 2018

Thomas Dawson, Assistant Director
City of Durham, Planning, Maintenance and Athletics Division
101 City Hall Plaza
Durham, NC 27701
Email: [redacted]

Lindsay Smart, Senior Planner
City of Durham, Planning, Maintenance and Athletics Division
101 City Hall Plaza
Email: [redacted]

Re: Durham-Orange Light RailTransit (D-OLRT) Project
D-O LRT Project Proposed Refinements - Section 4(f) Temporary Occupancy Determination
Downtown Durham Trail

Dear Mr. Dawson,

The Research Triangle Regional Public Transportation Authority d/b/a/ GoTriangle (GoTriangle), on behalf of the Federal Transit Administration (FTA), seeks the concurrence of the City of Durham, as the official/entity with jurisdiction over the Downtown Durham Trail , with the temporary occupancy determination made by the FTA, and based on the Durham-Orange Light Rail Transit (D-O LRT) Project proposed refinements, for this public trail pursuant to Section 4(f) of the U.S. Department of Transportation Act of 1966, codified at 23 U.S.C. § 138 and 49 U.S.C. § 303, (Section 4(f)) and implemented in 23 C.F.R. Part 774.

Durham-Orange Light Rail Transit Project

The D-O LRT Project is a 17.7-mile light rail transit service which will provide connections between UNC Hospitals; the UNC campus; the William and Ida Friday Center for Continuing Education; Patterson Place; the South Square area; Duke University; the Duke University and Durham Veterans Affairs Medical Centers; downtown and east Durham; and North Carolina Central University. Multimodal connections at the light rail stations will seamlessly connect transit passengers. Eighteen (18) stations are planned, with one additional proposed station, and up to 4,000 parking spaces will be provided along the D-O LRT Project alignment. In addition, a rail operations and maintenance facility will be constructed to accommodate the D-O LRT fleet.

PO Box 13787
Research Triangle Park, NC 27709
P: 919.485.7510 | F: 919.485.7547

www.gotriangle.org

D-O LRT Project Proposed Refinements

The Final Section 4(f) Evaluation published with the February 2016 Final Environmental Impact Statement (FEIS)/Record of Decision (ROD) presented the National Environmental Policy Act (NEPA) Selected Alternative for the D-O LRT Project.

The D-O LRT Project and its relationship to park and recreation properties were documented in the 2015 Draft EIS and 2016 FEIS/ROD and Final 4(f) Evaluation. A Supplemental Environmental Assessment (EA) and Amended ROD were prepared in 2016 for extending the alignment to North Carolina Central University (NCCU). Impacts to the Downtown Durham Trail were not included in those previous NEPA and Section 4(f) documents because the D-O LRT alignment did not impact the Downtown Durham Trail.

GoTriangle and FTA are currently preparing a second Supplemental EA to assess the D-O LRT Project proposed refinements that have resulted from advancement of engineering designs and responses to public comments collected on the previous NEPA documentation (Proposed Refinements). These Proposed Refinements would include the addition of Blackwell/Mangum Street Station east of the Downtown Durham Trail and associated light rail alignment along Pettigrew Street. The Proposed Refinements, including the anticipated Section 4(f) determination, are described below and illustrated in the attached Figure 1.

Summary of Changes to Section 4(f) Properties

Proposed Refinements would result in temporary construction impacts to the Downtown Durham Trail at the intersection of Pettigrew and Blackwell streets. The Proposed Refinements would improve the existing sidewalk and pedestrian crossings at Pettigrew Street. The connectivity of the trail would be maintained during construction by providing a marked, safe detour route. The Proposed Refinements would not adversely affect the activities, features, or attributes qualifying the trail for protection under Section 4(f). The area used during construction would be temporary in duration and would be restored at the completion of construction. As such, the Proposed Refinements would be considered temporary occupancy for the Downtown Durham Trail.

Concurrence with Temporary Occupancy Determination

Pursuant to 23 C.F.R. § 774.5, if the City of Durham concurs with FTA's findings set forth herein, GoTriangle must receive concurrence from City of Durham in writing in order for FTA to approve the use of the Downtown Durham Trail for the D-O LRT Project Proposed Refinements as discussed above. A concurrence clause is included at the end of this letter and may be used for that purpose. If, however, the City of Durham objects to FTA's findings, or if comments raise concerns about the proposed Section 4(f) use and temporary occupancy determination, FTA may be required to conduct a formal Section 4(f)evaluation.

GoTriangle respectfully requests your reply to this letter by **August 13, 2018**. Should you have any questions or need additional information, please feel free to contact Stan Mitchell at the FTA Region IV office at 230 Peachtree Street, Suite 1400, Atlanta, Georgia 30303, by phone at [redacted] or by email at [redacted]. Concurrence regarding this matter should also be directed to GoTriangle via Thomas Henry at [redacted] Research Triangle Park, North Carolina 27560 or [redacted]

We look forward to continuing to work with the City of Durham as the D-O LRT Project moves forward.

Sincerely,

David A. Charters, PE
Manager of Engineering and Design
GoTriangle

Attachments:

Figure 1: Downtown Durham Trail

cc: Yvette G. Taylor, Ph.D., Administrator, Region IV, FTA
Stanley A. Mitchell, Environmental Protection Specialist, Region IV, FTA
Jeffrey G. Mann, General Manager, GoTriangle
Meghan A. Makoid, Senior Environmental Planner, GoTriangle
Thomas Henry, Assistant General Counsel, GoTriangle
Bill Judge, Assistant Director, City of Durham
Ellen Beckmann, Senior Transportation Planner, City of Durham
Keith Chadwell, Deputy City Manager, City of Durham
Thomas Bonfield, City Manager, City of Durham
Lisa Miller, Senior Planner, City of Durham

As the official/entity with jurisdiction over the Downtown Durham Trail, the City of Durham concurs in the determination that the proposed D-O LRT Proposed Project Refinements as described above in this letter and shown on the accompanying attachments would not adversely affect the activities, features, or attributes of the trail that make it eligible for protection under Section 4(f). Therefore, the City of Durham agrees that the D-O LRT Proposed Project Refinements' proposed temporary occupancy of portions of the Downtown Durham Trail meet the criteria for temporary occupancy determination under Section 4(f) of the USDOT Act of 1966 (23 U.S.C. § 138 and 49 U.S.C. § 303 and implemented in 23 C.F.R. Part 774). The City of Durham has been informed that, based on its concurrence, the FTA intends to make the temporary occupancy determination regarding the Downtown Durham Trail, thus satisfying FTA's requirements under Section 4(f) with respect to that certain resource.

ON BEHALF OF CITY OF DURHAM

Signature: _____

Name: _____

Title: _____

Date: _____

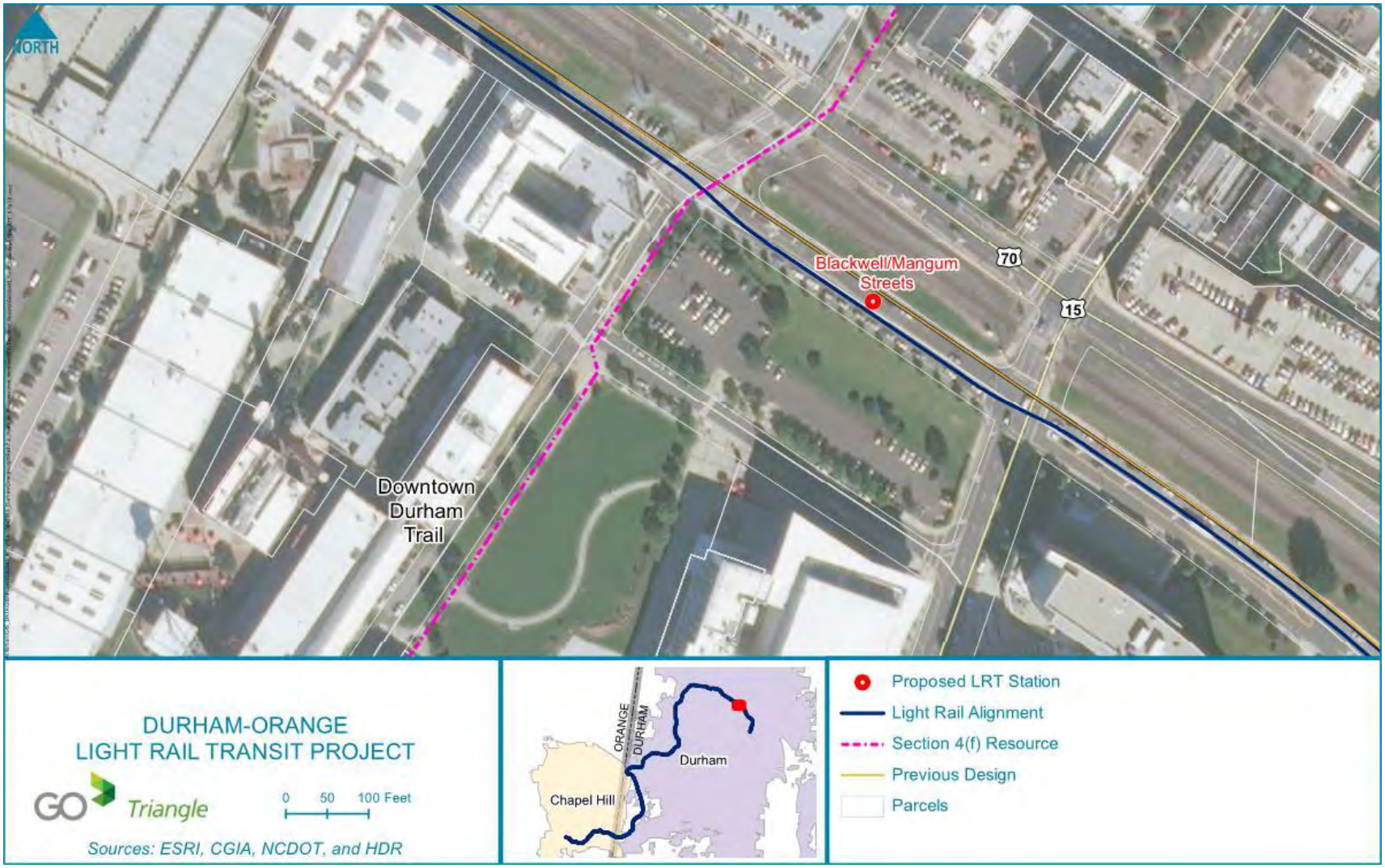


Figure 1: Downtown Durham Trail

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GO Triangle

Connecting all points of the Triangle

July 12, 2018

Mr. Than Austin, Associate Director
UNC Department of Transportation and Parking
CB 1600, Public Safety Building, 285 Manning Drive
Chapel Hill, North Carolina 27599-1600
Email: [redacted]

RE: Durham-Orange Light RailTransit (D-OLRT)Project
D-O LRT Project Proposed Refinements - Section 4(f) *De Minimis* Impacts Determination
University of North Carolina (UNC) Properties - UNC Coker Pinetum, UNC Finley Golf Course and Athletic Fields, UNC Open Space, and the planned UNC Central Park South

Dear Mr. Austin,

The Research Triangle Regional Public Transportation Authority d/b/a GoTriangle (GoTriangle), on behalf of the Federal Transit Administration (FTA), seeks the concurrence of UNC, as the official/entity with jurisdiction over the UNC Coker Pinetum, UNC Finley Golf Course and Athletic Fields, UNC Open Space, and the planned UNC Central Park South (UNC Properties), with the updated *de minimis* impacts determinations made by the FTA, and based on Durham-Orange Light Rail Transit (D-O LRT) Project proposed refinements, for these public park properties pursuant to Section 4(f) of the U.S. Department of Transportation Act of 1966, codified at 23 U.S.C. § 138 and 49 U.S.C. § 303, (Section 4(f)) and implemented in 23 C.F.R. Part 774.

Durham-Orange Light Rail Transit Project

The D-O LRT Project is a 17.7-mile light rail transit service which will provide connections between UNC Hospitals; the UNC campus; the William and Ida Friday Center for Continuing Education; Patterson Place; the South Square area; Duke University; the Duke University and Durham Veterans Affairs Medical Centers; downtown and east Durham; and North Carolina Central University. Multimodal connections at the light rail stations will seamlessly connect transit passengers. Eighteen (18) stations are planned, with one additional proposed station, and up to 4,000 parking spaces will be provided along the D-O LRT Project alignment. In addition, a rail operations and maintenance facility will be constructed to accommodate the D-O LRT fleet.

D-O LRT Project Proposed Refinements

The Final Section 4(f) Evaluation published with the February 2016 Final Environmental Impact Statement (FEIS)/Record of Decision (ROD) presented the National Environmental Policy Act

(NEPA) Selected Alternative for the D-O LRT Project.

The D-O LRT Project and its relationship to the UNC Properties were documented in the 2015 Draft EIS and 2016 FEIS/ROD and Final Section 4(f) Evaluation. UNC indicated its concurrence with the *de minimis* use determinations in a letter dated December 16, 2015. A Supplemental Environmental Assessment (EA) and Amended ROD were prepared in 2016 for extending the alignment to North Carolina Central University (NCCU). None of the UNC Properties were affected by the changes evaluated in the 2016 Supplemental EA.

GoTriangle and the FTA are currently preparing a second Supplemental EA to assess D-O LRT Project proposed refinements that have resulted from the advancement of engineering design (Proposed Refinements). These Proposed Refinements include minor changes to the D-O LRT Project on and/or adjacent to the UNC Properties. The Proposed Refinements, including the anticipated Section 4(f) findings, are described below, and are illustrated in the attached Figures 1-4.

UNC Central Park South (Planned)

The Proposed Refinements would elevate the light rail through much of the planned UNC Central Park South property (Figure 1). The estimated permanent easement would increase from 0.9 acre (as noted in the FEIS/ROD) to 1.9 acres and decrease the temporary easement from 1.1 acres to 0.5 acre. This change is due to road improvements at Hibbard Drive, which were previously a temporary easement but would now be permanent. There is also a slight increase in the permanent easement width from the track centerline. The increase in the total easement area would represent only 0.4 percent of the total 627-acre parcel and would not change UNC's planned recreational uses.

UNC Coker Pinetum

The Proposed Refinements in this area would increase the permanent easement area from 0.2 acre (as noted in the FEIS/ROD) to 0.4 acre at the intersection of Manning Drive and Fordham Boulevard (Figure 2). This change is due to the prior assessment conducted on less accurate parcel boundaries, as opposed to the updated property boundary survey information now available to GoTriangle. Due to improved survey information and updates to the boundaries required for future track maintenance, the additional 0.2 acre of permanent easement would be required. The Proposed Refinements would not change the D-O LRT alignment within UNC Coker Pinetum.

UNC Finley Golf Course and Athletic Fields

In this location, the Proposed Refinements would add a new sidewalk and a multi-use path, requested by UNC, near Hamilton Road Station (Figure 3). Additionally, GoTriangle conducted a more accurate property boundary survey since the previous design, and the updated boundaries adjusted the permanent easement area from 2.6 acres (FEIS/ROD) to 2.3 acres. In order to accommodate the newly proposed sidewalk and multi-use path, temporary easements would increase from 0.4 acre to 1.5 acres. The design changes would not otherwise change impacts to UNC Finley Golf Course and Athletic Fields.

UNC Open Space (Existing)

The Proposed Refinements would widen walkways, better define drainage improvements, and relocate the multi-use path in this area, resulting in an increase in the permanent easement area from 0.8 acre (FEIS/ROD) to 2.4 acres (Figure 4). The drainage improvements are a result of design

progression, and the additional multi-use path is part of a mitigation commitment to enhance bicycle and pedestrian connectivity and access near the light rail stations. The temporary easement to construct the drainage facilities and multi-use paths would decrease from 1.0 acre (FEIS/ROD) to 0.8 acre.

Summary of Changes to Section 4(f) Properties

The Proposed Refinements would result in changes to the permanent and temporary easements for the UNC Properties described above. It is important to note, however, that the changes resulting from the Proposed Refinements are similar to those documented in the in the 2016 FEIS/ROD and Final 4(f) Evaluation, and would not adversely affect the activities, features, or attributes qualifying the UNC Properties for protection under Section 4(f). As such, the impacts of the Proposed Refinements are *de minimis* for each of the UNC Properties affected.

Concurrence with Updated *De Minimis* Determinations

Pursuant to 23 C.F.R. § 774.5, if UNC concurs with the FTA's findings set forth herein, GoTriangle must receive concurrence from UNC in writing in order for the FTA to approve the use of UNC Properties for the D-O LRT Project Proposed Refinements as discussed above. A concurrence clause is included at the end of this letter and may be used for that purpose. If, however, UNC objects to the FTA's findings, or if UNC's comments raise new concerns about the proposed Section 4(f) use and *de minimis* impacts determination, the FTA may be required to conduct a formal Section 4(f) evaluation.

GoTriangle respectfully requests UNC's response to this Section 4(f) use and *de minimis* impacts determination by **August 13, 2018**. Should you have any questions or need additional information, please contact Stan Mitchell at the FTA Region IV office at 230 Peachtree Street, Suite 1400, Atlanta, Georgia 30303, by phone at [redacted], or by email at [redacted] Concurrence regarding this matter should also be directed to GoTriangle via Thomas Henry at [redacted] RTP, NC 27709 or by email at [redacted].

We look forward to continuing to work with UNC as the D-O LRT Project moves forward.

Sincerely,

David A. Charters, PE
Manager of Engineering and Design
GoTriangle

Attachments: Figures 1-4
- Figure 1: UNC Central Park South
- Figure 2: UNC Coker Pinetum
- Figure 3: UNC Finley Golf Course
- Figure 4: UNC Open Space

cc: Yvette G. Taylor, Ph.D., Administrator, Region IV, FTA
Stanley A. Mitchell, Environmental Protection Specialist, Region IV, FTA
Jeffrey G. Mann, General Manager, GoTriangle
Meghan A. Makoid, Environmental Planner, GoTriangle
Thomas Henry, Assistant General Counsel, GoTriangle

As the official/entity with jurisdiction over the UNC Coker Pinetum, UNC Finley Golf Course and Athletic Fields, UNC Open Space, and the planned UNC Central Park South (UNC Properties), the University of North Carolina at Chapel Hill concurs with the determination that the D-O LRT Project Proposed Refinements as described above in this letter and shown on the accompanying attachments would not adversely affect the activities, features, or attributes of these properties that make them eligible for protection under Section 4(f). Therefore, the University of North Carolina at Chapel Hill agrees that the D-O LRT Project's Proposed Refinements' permanent use of portions of the UNC Properties meet the criteria for *de minimis* impacts determinations under Section 4(f) of the USDOT Act of 1966 (23 U.S.C. § 138 and 49 U.S.C.§ 303 and implemented in 23 C.F.R. Part 774). The University of North Carolina at Chapel Hill has been informed that, based on its concurrence, the Federal Transit Administration (FTA) intends to make these *de minimis* impacts determinations regarding the UNC Properties, thus satisfying FTA's requirements under Section 4(f) with respect to those certain resources.

ON BEHALF OF THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

Signature: DocuSigned by: Jonathan Pruitt CB36F8232297470...
Name: Jonathan Pruitt
Title: Vice Chancellor for Finance and Operations
Date: 10/1/2018

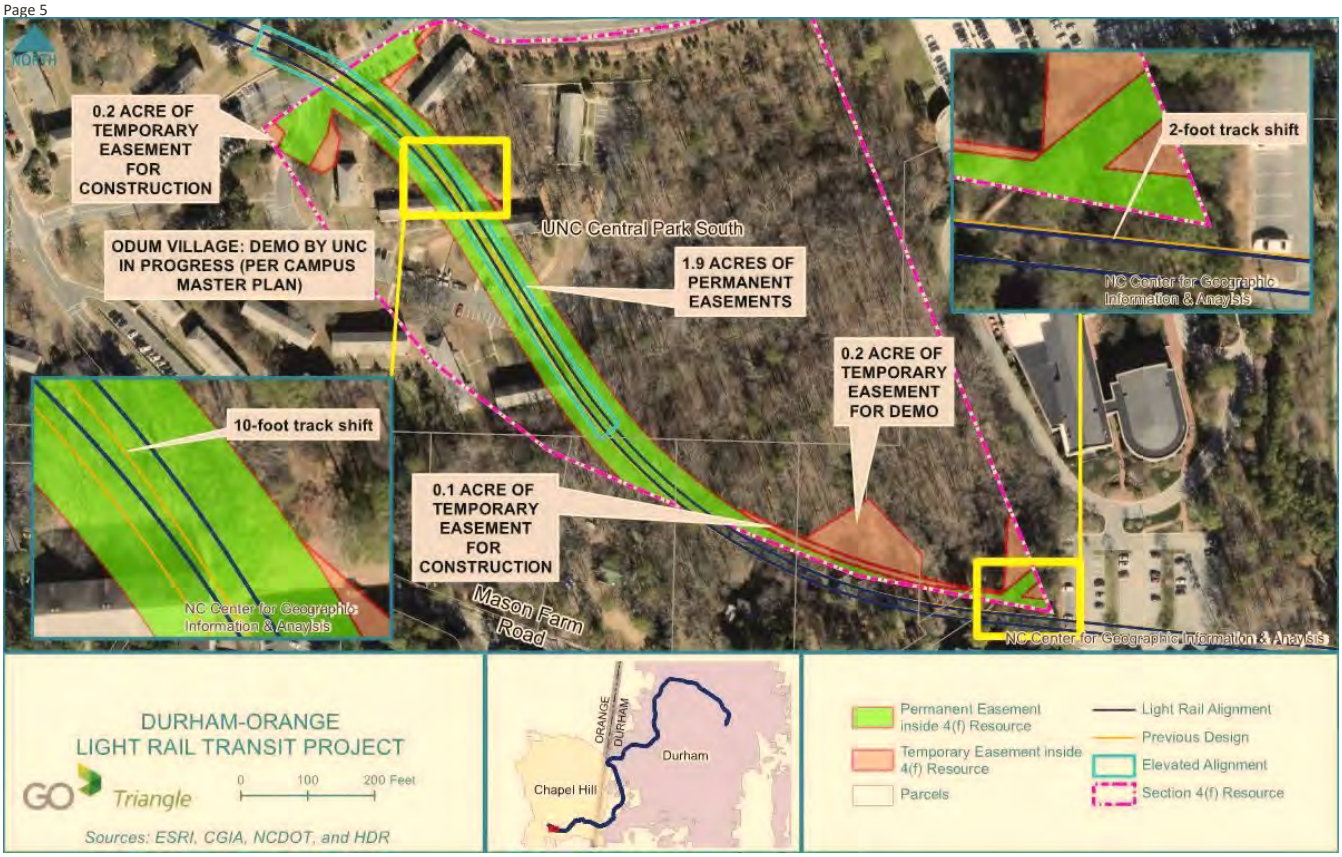

Figure 1: UNC Central Park South (Planned)

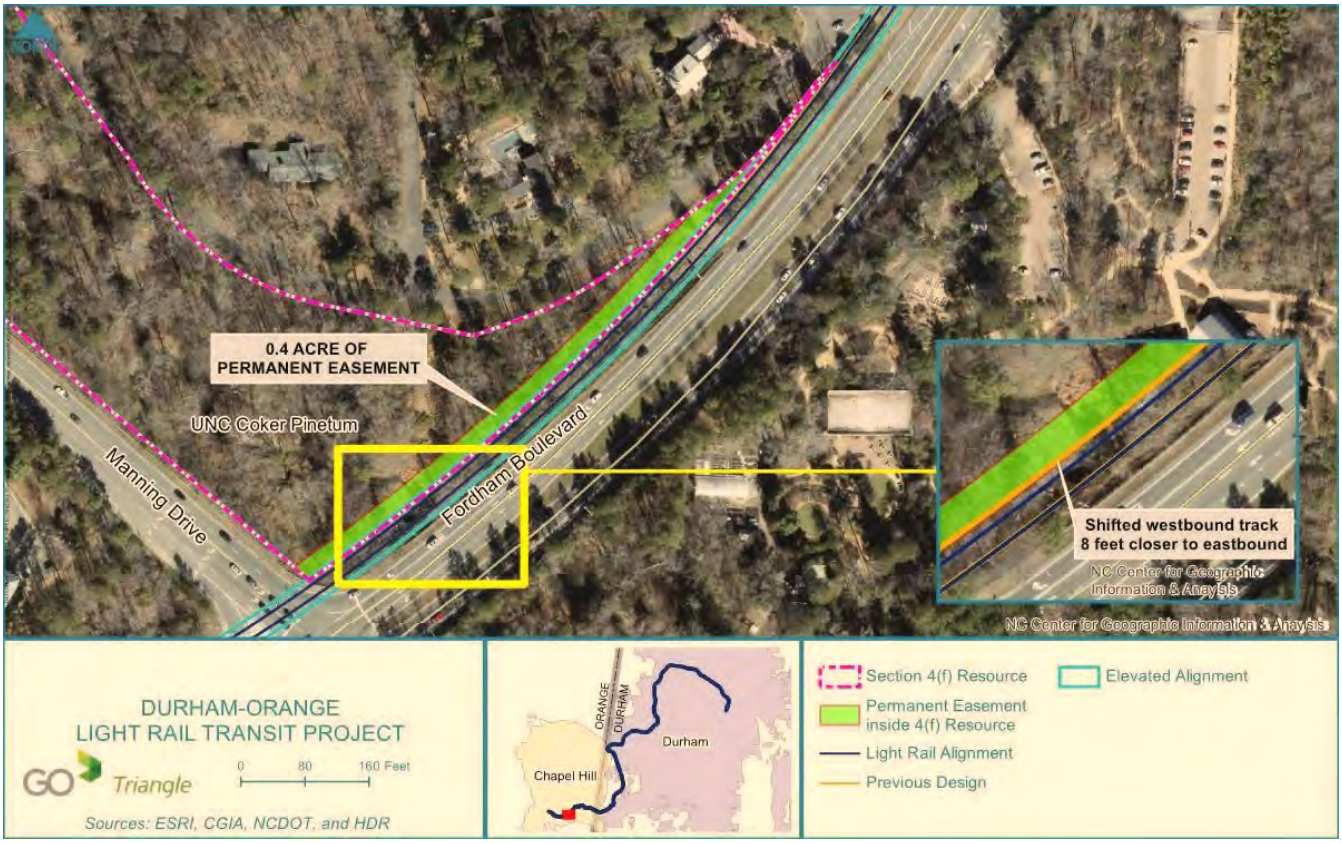

Figure 2: UNC Coker Pinetum

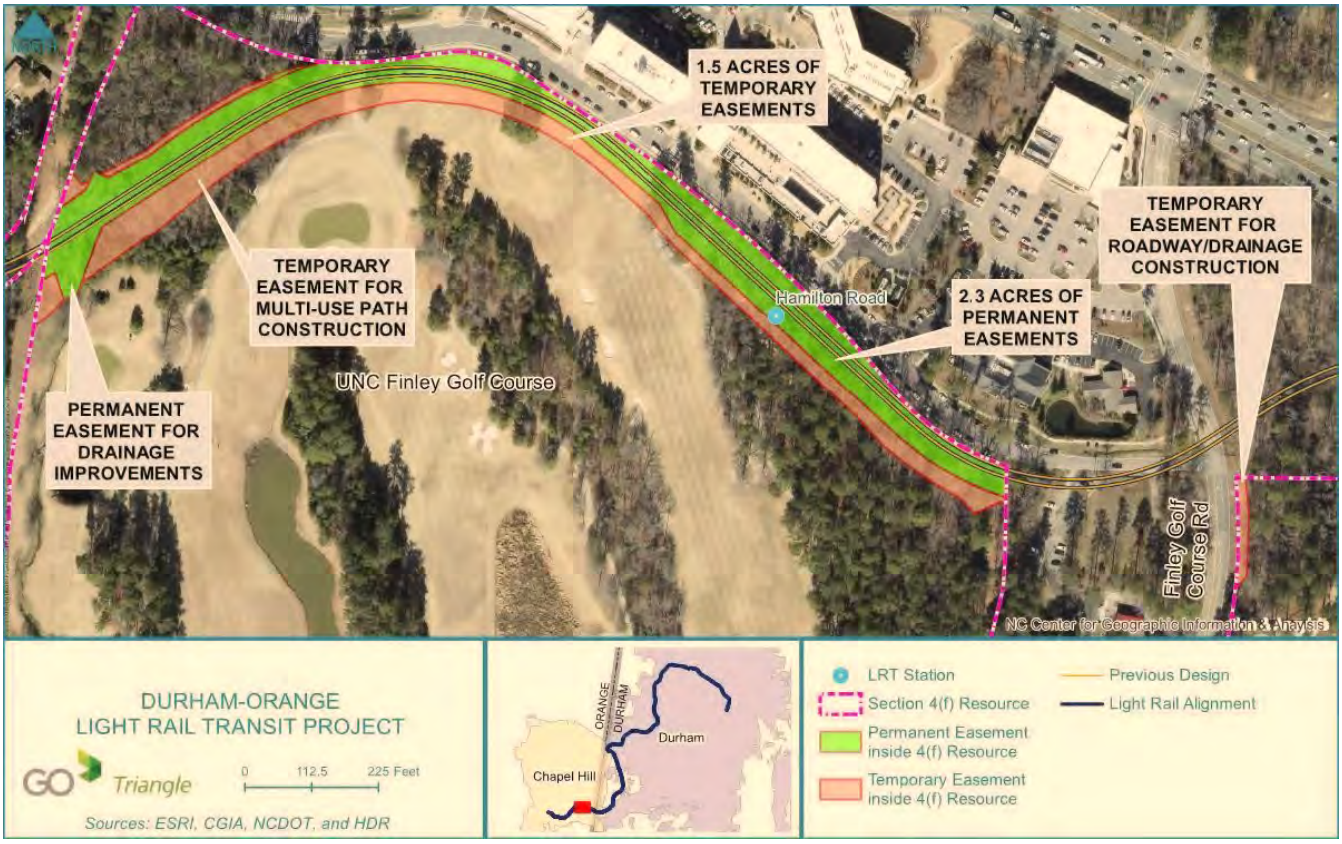

Figure 3: UNC Finley Golf Course and Athletic Fields

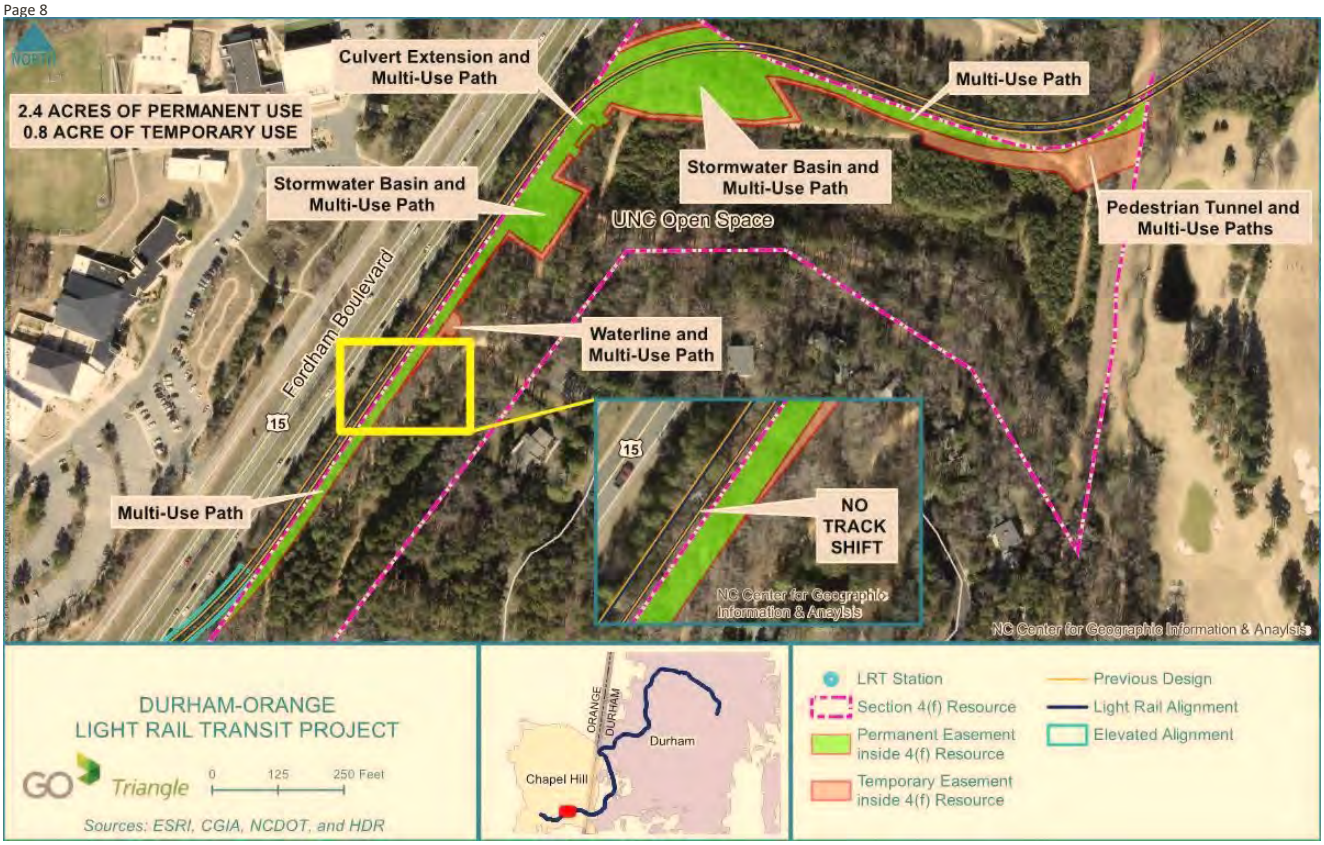

Figure 4: UNC Open Space (Existing)

GO Triangle

Connecting all points of the Triangle

July 12, 2018

Mr. Than Austin, Associate Director
UNC Department of Transportation and Parking
CB 1600, Public Safety Building, 285 Manning Drive
Chapel Hill, North Carolina 27599-1600
Email: [redacted]

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D-O LRT Project Proposed Refinements

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The D-O LRT Project and its relationship to the UNC Properties were documented in the 2015 Draft EIS and 2016 FEIS/ROD and Final Section 4(f) Evaluation. UNC indicated its concurrence with the *de minimis* use determinations in a letter dated December 16, 2015. A Supplemental Environmental Assessment (EA) and Amended ROD were prepared in 2016 for extending the alignment to North Carolina Central University (NCCU). None of the UNC Properties were affected by the changes evaluated in the 2016 Supplemental EA.

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UNC Central Park South (Planned)

The Proposed Refinements would elevate the light rail through much of the planned UNC Central Park South property (Figure 1). The estimated permanent easement would increase from 0.9 acre (as noted in the FEIS/ROD) to 1.9 acres and decrease the temporary easement from 1.1 acres to 0.5 acre. This change is due to road improvements at Hibbard Drive, which were previously a temporary easement but would now be permanent. There is also a slight increase in the permanent easement width from the track centerline. The increase in the total easement area would represent only 0.4 percent of the total 627-acre parcel and would not change UNC's planned recreational uses.

UNC Coker Pinetum

The Proposed Refinements in this area would increase the permanent easement area from 0.2 acre (as noted in the FEIS/ROD) to 0.4 acre at the intersection of Manning Drive and Fordham Boulevard (Figure 2). This change is due to the prior assessment conducted on less accurate parcel boundaries, as opposed to the updated property boundary survey information now available to GoTriangle. Due to improved survey information and updates to the boundaries required for future track maintenance, the additional 0.2 acre of permanent easement would be required. The Proposed Refinements would not change the D-O LRT alignment within UNC Coker Pinetum.

UNC Finley Golf Course and Athletic Fields

In this location, the Proposed Refinements would add a new sidewalk and a multi-use path, requested by UNC, near Hamilton Road Station (Figure 3). Additionally, GoTriangle conducted a more accurate property boundary survey since the previous design, and the updated boundaries adjusted the permanent easement area from 2.6 acres (FEIS/ROD) to 2.3 acres. In order to accommodate the newly proposed sidewalk and multi-use path, temporary easements would increase from 0.4 acre to 1.5 acres. The design changes would not otherwise change impacts to UNC Finley Golf Course and Athletic Fields.

UNC Open Space (Existing)

The Proposed Refinements would widen walkways, better define drainage improvements, and relocate the multi-use path in this area, resulting in an increase in the permanent easement area from 0.8 acre (FEIS/ROD) to 2.4 acres (Figure 4). The drainage improvements are a result of design

progression, and the additional multi-use path is part of a mitigation commitment to enhance bicycle and pedestrian connectivity and access near the light rail stations. The temporary easement to construct the drainage facilities and multi-use paths would decrease from 1.0 acre (FEIS/ROD) to 0.8 acre.

Summary of Changes to Section 4(f) Properties

The Proposed Refinements would result in changes to the permanent and temporary easements for the UNC Properties described above. It is important to note, however, that the changes resulting from the Proposed Refinements are similar to those documented in the in the 2016 FEIS/ROD and Final 4(f) Evaluation, and would not adversely affect the activities, features, or attributes qualifying the UNC Properties for protection under Section 4(f). As such, the impacts of the Proposed Refinements are *de minimis* for each of the UNC Properties affected.

Concurrence with Updated *De Minimis* Determinations

Pursuant to 23 C.F.R. § 774.5, if UNC concurs with the FTA's findings set forth herein, GoTriangle must receive concurrence from UNC in writing in order for the FTA to approve the use of UNC Properties for the D-O LRT Project Proposed Refinements as discussed above. A concurrence clause is included at the end of this letter and may be used for that purpose. If, however, UNC objects to the FTA's findings, or if UNC's comments raise new concerns about the proposed Section 4(f) use and *de minimis* impacts determination, the FTA may be required to conduct a formal Section 4(f) evaluation.

GoTriangle respectfully requests UNC's response to this Section 4(f) use and *de minimis* impacts determination by **August 13, 2018**. Should you have any questions or need additional information, please contact Stan Mitchell at the FTA Region IV office at 230 Peachtree Street, Suite 1400, Atlanta, Georgia 30303, by phone at [redacted], or by email at [redacted] Concurrence regarding this matter should also be directed to GoTriangle via Thomas Henry at [redacted] RTP, NC 27709 or by email at [redacted]

We look forward to continuing to work with UNC as the D-O LRT Project moves forward.

Sincerely,

David A. Charters, PE
Manager of Engineering and Design
GoTriangle

Attachments: Figures 1-4
- Figure 1: UNC Central Park South
- Figure 2: UNC Coker Pinetum
- Figure 3: UNC Finley Golf Course
- Figure 4: UNC Open Space

cc: Yvette G. Taylor, Ph.D., Administrator, Region IV, FTA
Stanley A. Mitchell, Environmental Protection Specialist, Region IV, FTA
Jeffrey G. Mann, General Manager, GoTriangle
Meghan A. Makoid, Environmental Planner, GoTriangle
Thomas Henry, Assistant General Counsel, GoTriangle

As the official/entity with jurisdiction over the UNC Coker Pinetum, UNC Finley Golf Course and Athletic Fields, UNC Open Space, and the planned UNC Central Park South (UNC Properties), the University of North Carolina at Chapel Hill concurs with the determination that the D-O LRT Project Proposed Refinements as described above in this letter and shown on the accompanying attachments would not adversely affect the activities, features, or attributes of these properties that make them eligible for protection under Section 4(f). Therefore, the University of North Carolina at Chapel Hill agrees that the D-O LRT Project's Proposed Refinements' permanent use of portions of the UNC Properties meet the criteria for *de minimis* impacts determinations under Section 4(f) of the USDOT Act of 1966 (23 U.S.C. § 138 and 49 U.S.C.§ 303 and implemented in 23 C.F.R. Part 774). The University of North Carolina at Chapel Hill has been informed that, based on its concurrence, the Federal Transit Administration (FTA) intends to make these *de minimis* impacts determinations regarding the UNC Properties, thus satisfying FTA's requirements under Section 4(f) with respect to those certain resources.

ON BEHALF OF THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

Signature:_____
Name:_____
Title:_____
Date: _____

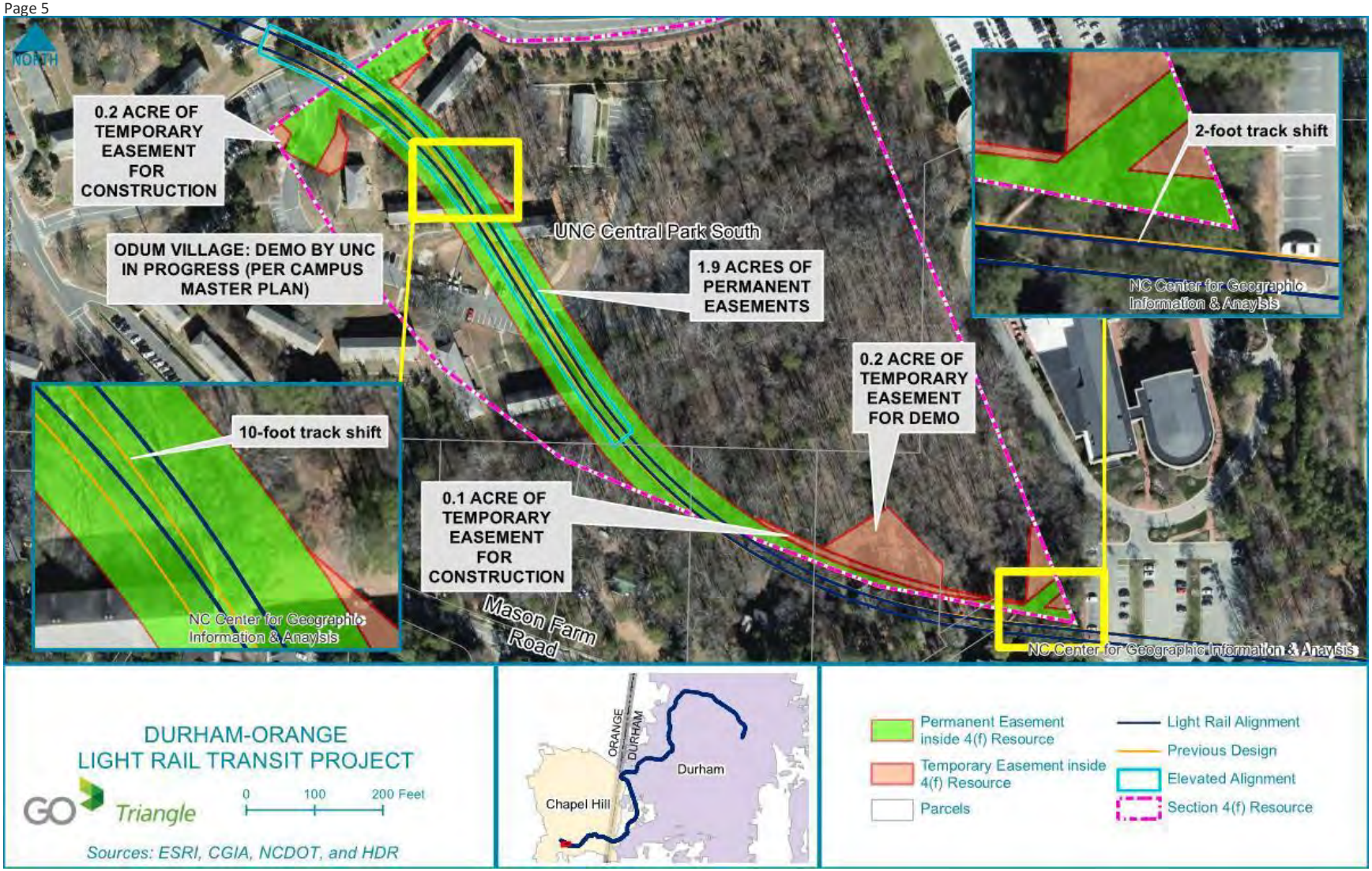

Figure 1: UNC Central Park South (Planned)

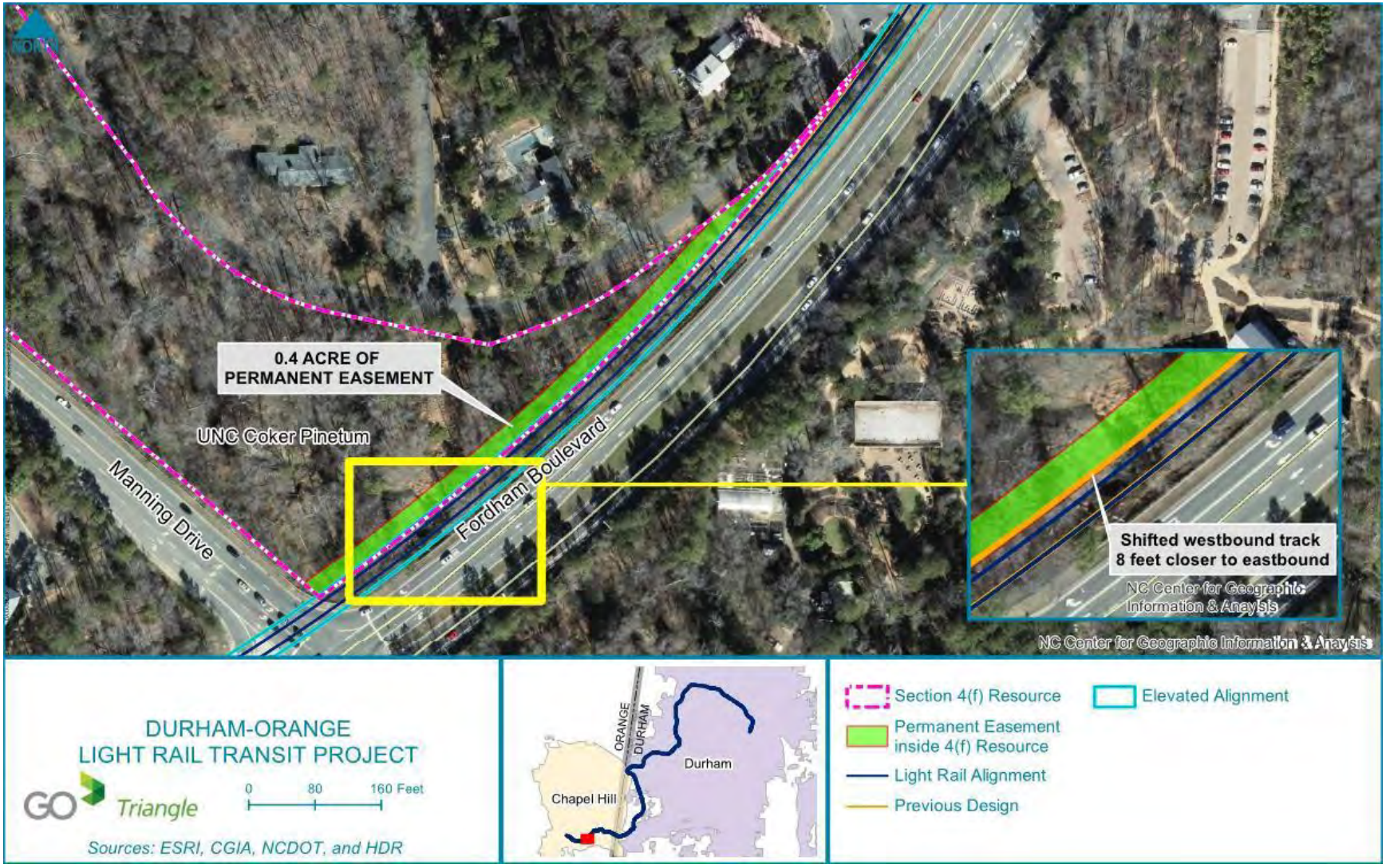

Figure 2: UNC Coker Pinetum

Figure 3: UNC Finley Golf Course and Athletic Fields

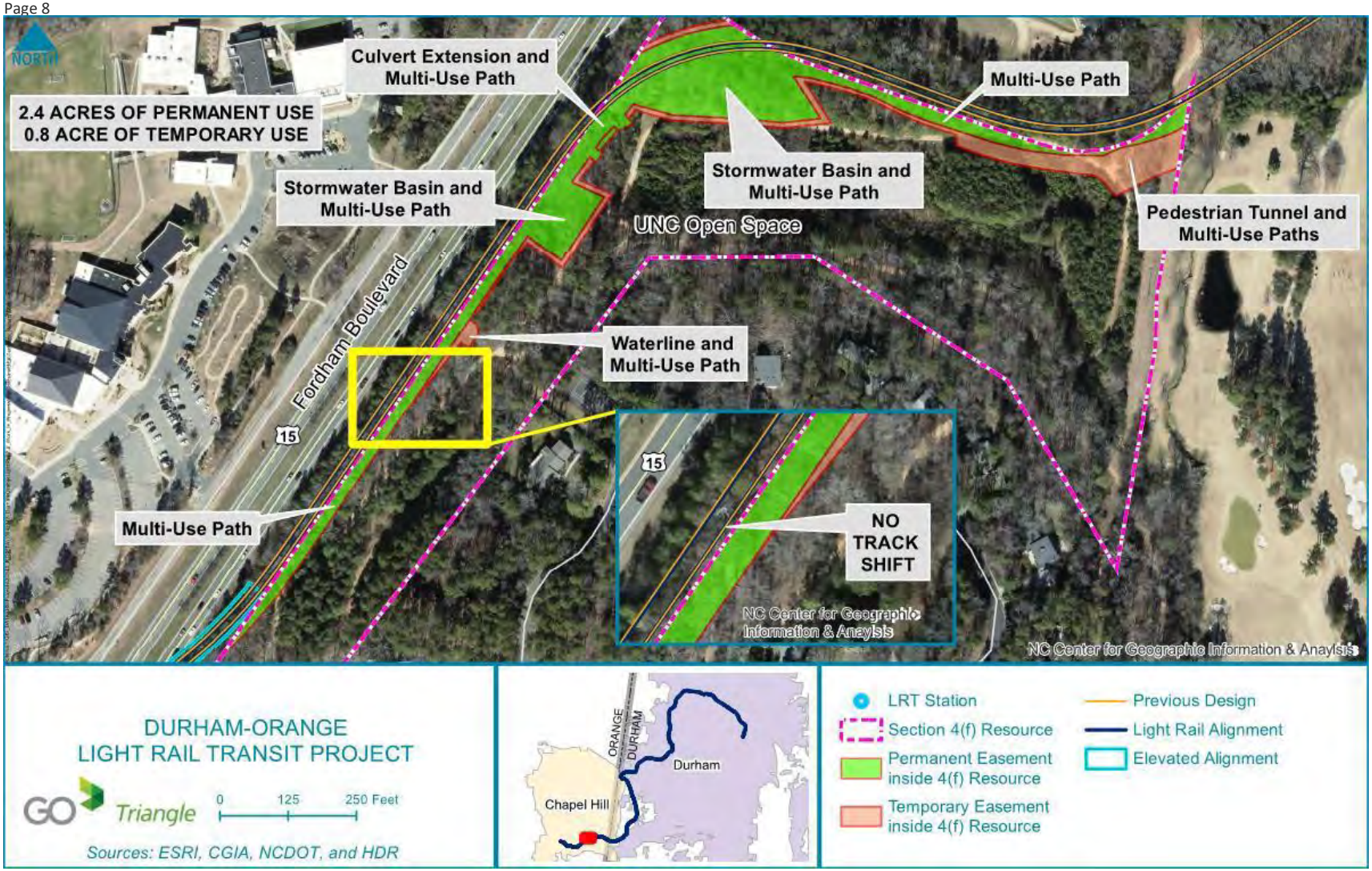

Figure 4: UNC Open Space (Existing)

MEETING AGENDA

Connecting all points of the Triangle

Date: May 24, 2018, 11:00 AM – 12:00 PM
Subject: D-O LRT 0637B Section 4(f) Resource Meeting with City of Durham
Location: Durham City Hall - 101 City Hall Plaza Durham, NC 27701 - Conference Room 3B (Public Works East)
Skype / Conference Call [redacted]

Invitees:

City of Durham	*FTA Region 4*	*GoTriangle*	*GoTriangle Consultants*
Lindsay Smart (Durham Parks & Recreation)	Stan Mitchell	Anne Conlon	Ashley Booth (HNTB)
Tom Dawson (Durham Parks & Recreation)		Meghan Makoid	John Jamison (HDR)
Ellen Beckmann (Durham DOT)			Beth Smyre (Dewberry)
Bill Judge (Durham DOT)			

1. Agenda distribution and introductions (5 minutes)

2. D-O LRT Project Update (5 minutes)

3. Overview of Section 4(f) (15 minutes)

4. Section 4(f) Resource – American Tobacco Trail / Downtown Durham Trail (15 minutes)

5. Discussion of Potential Impacts / Mitigation / Draft 4(f) Evaluation (15 minutes)

6. Concerns / Questions / Next Steps (5 minutes)

Action Items:

PO Box 13787
Research Triangle Park, NC 27709
P: 919.485.7510 | F: 919.485.7547

MEETING SUMMARY

Connecting all points of the Triangle

Date: May 24, 2018, 11:00 AM – 12:00 PM
Subject: D-O LRT 0637B Section 4(f) Resource Meeting with City of Durham
Location: Durham City Hall - 101 City Hall Plaza Durham, NC 27701 - Conference Room 3B (Public Works East)
Skype / Conference Call #[redacted]

Attendees:

City of Durham	*FTA Region 4*	*GoTriangle*	*GoTriangle Consultants*
Lindsay Smart (Durham Parks & Recreation)	Stan Mitchell	Anne Conlon	John Jamison (HDR)
Tom Dawson (Durham Parks & Recreation)		Meghan Makoid	Eanas Alia (HDR)
Ellen Beckmann (Durham DOT)		Hart Evans	Beth Smyre (Dewberry)
Bill Judge (Durham DOT)			

GoTriangle presented an update on the status and scope of proposed refinements to the previous design of the Durham-Orange Light Rail Transit (D-O LRT) Project. The previous design was presented in the December 2016 Amended Record of Decision. GoTriangle is evaluating the impacts of the proposed refinements and plans to issue a Supplemental Environmental Assessment in Summer 2018, as directed by FTA. The purpose of this discussion was to review impacts of the proposed refinements to the Downtown Durham Trail (owned and managed by the City of Durham), as required by Section 4(f) of the U.S. Department of Transportation Act of 1966.

1. Downtown Durham Trail
    a. The section of the Downtown Durham Trail within the project area is located on existing public sidewalk. No permanent easement will be needed for construction of the project. However, the trail will need to be temporarily detoured during construction.
    b. Following construction of the project in the vicinity of the trail, the trail would be restored to its current location with improvements, including improved pedestrian crossing safety features and a 12-foot-wide path where possible.
    c. Given the temporary nature of the impact and the proposed mitigation, the project is expected to have a Temporary Occupancy and no permanent use of the Downtown Durham Trail.

2. Discussion
    a. Most of the Downtown Durham Trail occurs within public right-of-way and is maintained by the City Transportation Department rather than Parks and Recreation.
    b. The temporary trail detour would be marked with appropriate signage.
    c. Bill Judge noted the City ordinance that sidewalks cannot be closed for more than seven days, unless they are re-routed to the other side of the street. Otherwise, protection measures such as covered walkways must be used to keep the existing sidewalk open in place. The full traffic maintenance plan has not yet been developed, but trail connectivity would be preserved during construction. GoTriangle will work with the City on the temporary construction detour plan. The trail would need to be signed during construction.
    d. Tom Dawson noted that this section is part of a Smart Grant Corridor plan (including Blackwell, Corcoran, and Foster Streets) administered by the Durham Arts Council; the Council should be contacted with for any design guidance within the corridor. While state money was used for development of the trail, it isn't clear whether the general public views it as one. It was also recommended that GoTriangle review the Downtown Open Space Plan.
    e. The City Parks and Recreation Department could assist with any signage and public communication measures needed as part of the overall outreach to notify the community of the trail detour and construction impacts.

f. While the reconstructed trail would provide access to the Blackwell/Mangum Station platform, the project would not restrict use of the facility as a downtown trail; therefore, it is not considered a use of the trail under Section 4(f).
g. A follow up meeting with the City Transportation Department was recommended to discuss the proposed detours within the City limits and consistency with area plans. This meeting should include discussion of bicycle/pedestrian access to the Durham Station (Bus) Transportation Center during construction, as well as the proposed Durham Belt Line Trail project.

3. Next Steps/ Action Items
   a. The City agreed with the conditions pertaining to a temporary occupancy under Section 4(f), but requested that GoTriangle provide a draft letter for review and signature by Rhonda Parker (Parks and Recreation Director). The final letter may include additional information if deemed pertinent by the City.
   b. GoTriangle will schedule a meeting with the City Transportation Department regarding project-wide detours and area plans.

Attachments:
Meeting Agenda
Section 4(f) Handout
Presentation

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GO Triangle

City of Durham Recreation Resource Meeting

May 24, 2018

Agenda

1. Agenda distribution and introductions
2. D-O LRT Project Update
3. Overview of Section 4(f)
4. Section 4(f) Resource – American Tobacco Trail / Downtown Durham Trail
5. Potential Impacts/Mitigation
6. Next Steps

Durham-Orange Light Rail Transit Project Update

- DEIS & Section 4(f) Evaluation: August 2015
- Combined FEIS/ROD & Final 4(f) Determination: February 2016
- Supplemental EA & Section 4(f) Evaluation for NCCU Extension: November 2016
- Amended ROD & Final Section 4(f) Determination: December 2016
- 50% Design Plans
- Supplemental EA & Section 4(f) Evaluation for Proposed Project Refinements: underway
  - Re-evaluate effects disclosed in Amended ROD
  - Re-evaluate effects determination for Section 4(f) resources
    - Conducting coordination and seeking City of Durham's comments
    - FTA will include draft Section 4(f) evaluation with the Supplemental EA

What is Section 4(f)?

Section 4(f) of the Department of Transportation Act of 1966 (codified in 49 U.S.C. § 138 and implemented in 23 CFR 774)

- Applies to transportation projects that receive federal funding or require approval from the USDOT and its modal agencies (e.g., FTA)
- Requires consideration of Section 4(f) resources:
  - public parklands and recreational resources
  - wildlife and waterfowl refuges
  - historic resources
- Requires FTA to consult, coordinate, or receive concurrence with Officials with Jurisdiction over the Section 4(f) property, if the transportation project requires the use of land from a property protected by Section 4(f)

What is a use under Section 4(f)?

No Use	• Transportation project does not affect 4(f) resource
Permanent Incorporation	• Transportation project permanently incorporates 4(f) land • May result from partial or full acquisition, permanent easement or temporary easement
Constructive Use	• Proximity impacts substantially impair activities, features, or attributes that qualify it for protection under Section 4(f)
Temporary Occupancy	• Duration temporary • scope of work minor • No anticipated permanent adverse physical impacts, nor interference with activities, features, or attributes that qualify it for protection under Section 4(f) • 4(f) land fully restored

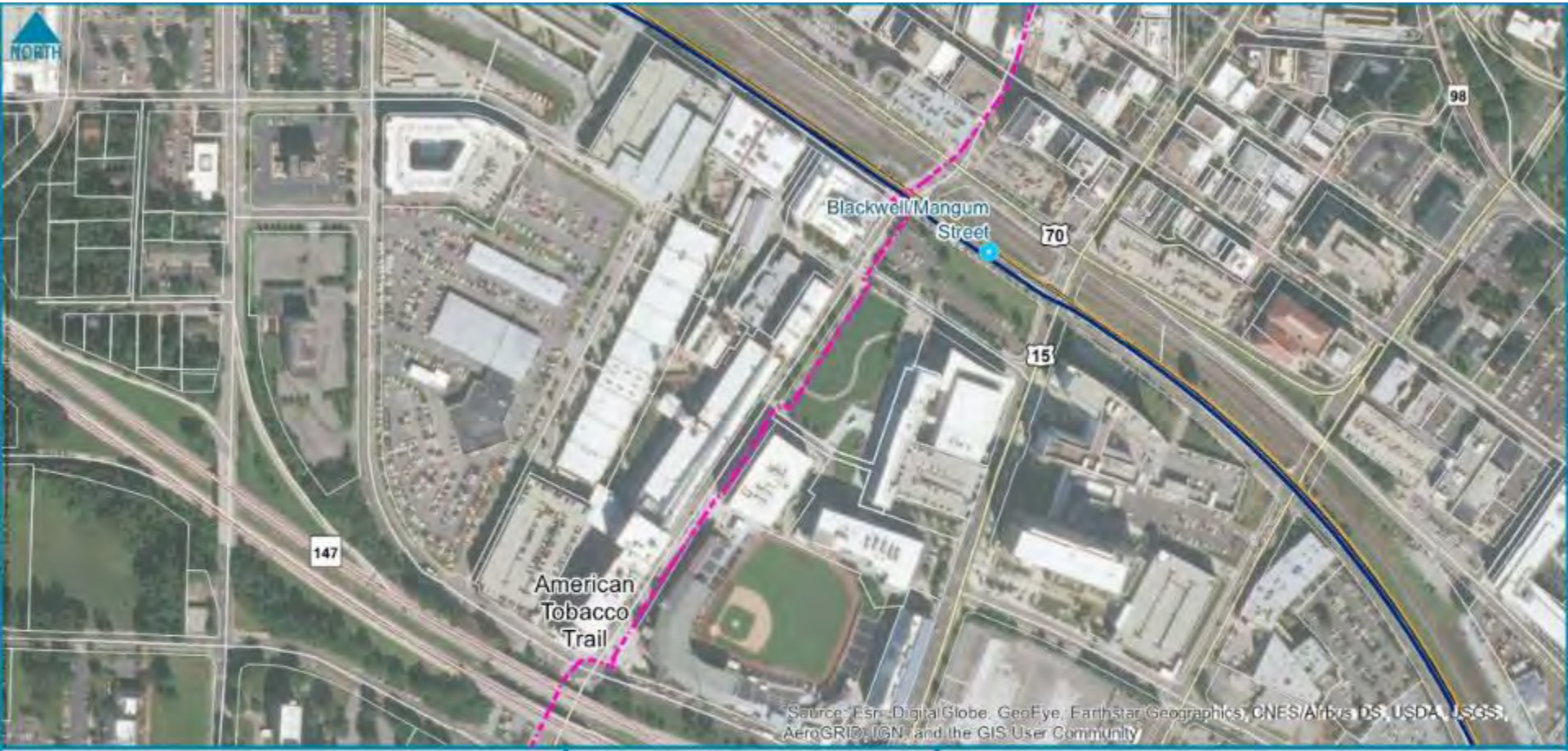
Section 4(f) Evaluation

- Transportation project must avoid use of Section 4(f) resources, if possible; OR
- Select an alternative with the least overall harm, if avoidance is not possible
- Take all measures to minimize harm of Section 4(f) resources

- Before approving a project that "uses" Section 4(f) property, FTA must determine:
  1. No feasible and prudent alternative that avoids the Section 4(f) properties OR
  2. After incorporating mitigation measures to minimize harm and reduce impacts, the project result in a *de minimis* impact on the Section 4(f) property

Draft Section 4(f) Evaluation

American Tobacco Trail / Downtown Durham Trail



American Tobacco Trail

DURHAM-ORANGE
LIGHT RAIL TRANSIT PROJECT

GO Triangle

0 200 400 Feet

Sources: ESRI, CGIA, NCDOT, and HDR

- LRT Station
- Previous Design
- Potential Section 4(f) Resource
- Parcels
- Proposed Light Rail Alignment
- Aerial Sections (Center Line)
- Aerial Sections (Polygon Areas)

Draft Section 4(f) Evaluation

American Tobacco Trail / Downtown Durham Trail

Easement Needs

- No permanent easement (trail is on existing public sidewalk)

Potential Impacts

- Temporary detour of ATT / Downtown Durham Trail during construction

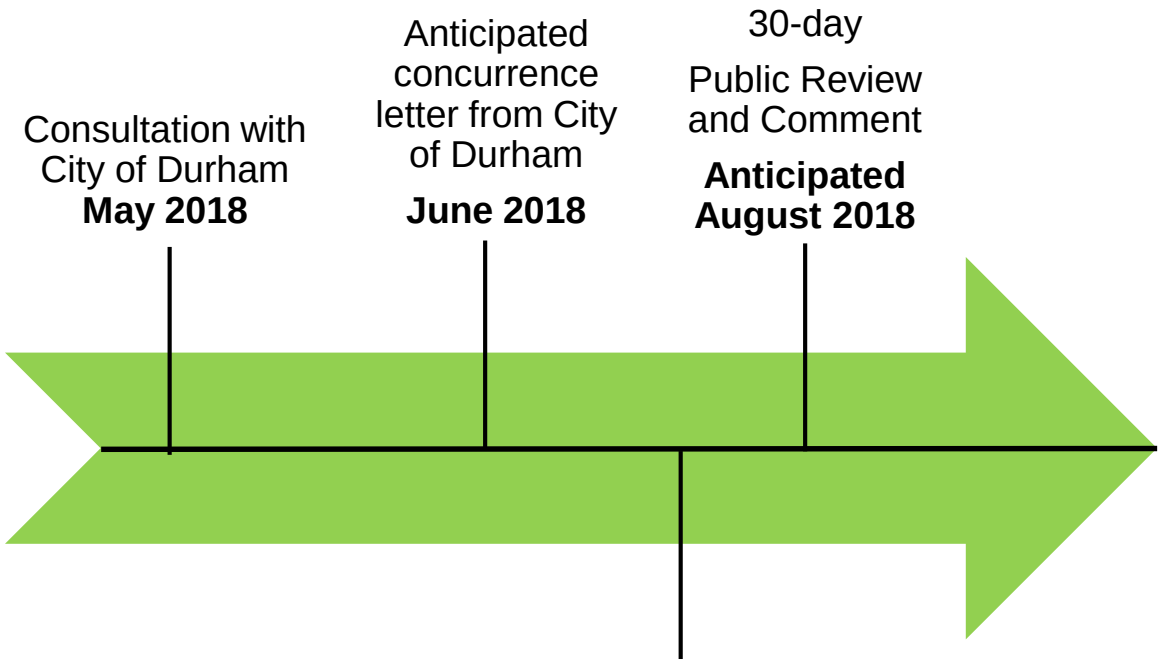
Proposed Mitigation

- Detour during construction would preserve trial connectivity
- Pedestrian crossing safety features
- Restore 12-foot wide path for trail users

Draft Section 4(f) Determination

- Temporary Occupancy / no permanent use of American Tobacco Trail

Next Steps



Amended ROD*

&

Final Section 4(f) evaluation

* Requires Finding of No Significant Impact

Concurrence Letter

- City of Durham concurs with FTA draft Section 4(f) determination
  - Temporary occupancy and no use of the American Tobacco Trail/Downtown Durham Trail
- Provides documented agreement that the D-O LRT Proposed Project Refinements:
  - Will require the temporary detour of the American Tobacco Trail / Downtown Durham Trail
  - Detour of the trail will be a short duration (during construction)
  - Will not result in a change in ownership of the land
  - Scope of the work is minor
  - With the temporary detour / proposed mitigation, there will be no temporary or permanent adverse changes to the activities, features, or attributes of the property
  - After construction, the land will be fully restored to a condition at least as good as before the project
  - Based on the above factors, City of Durham concurs with the FTA draft Section 4(f) determination: temporary occupancy and no use

GO Triangle

Questions

MEETING AGENDA

Connecting all points of the Triangle

October 2nd, 2018 2:00PM- 3:00PM

Subject: 0629 City of Durham Section 4(f) Coordination
Location: Magnolia Conference Room- phone number: [redacted]

Discussion Items

1. **Introductions**
2. **Review of Project's Proposed Refinements**
   a. Previous City of Durham meeting
   b. Additional Proposed Refinements
3. **Design Constraints**
4. **Alternatives Evaluated**
   a. Aerial alignment
   b. At-grade street connections
   c. One-way Blackwell Street
   d. Pedestrian underpass
   e. Pedestrian bridge
5. **Review of Section 4(f)**
   a. Section 4(f) Resource- Downtown Durham Trail
6. **Potential Impacts/Mitigation**
7. **Next Steps**
8. **Proposed Bridge Design Milestones**

PO Box 13787
Research Triangle Park, NC 27709
P: 919.485.7510 | F: 919.485.7547

MEETING SUMMARY

Connecting all points of the Triangle

October 2, 2018 2:00PM- 3:00PM

Subject: 0629 City of Durham Section 4(f) Coordination
Location: Magnolia Conference Room- phone number: [redacted]
Attendees:

GoTriangle	Agencies	Consultant Team
Meghan Makoid	Stan Mitchell, FTA	Beth Smyre, PMC
Kaitlin Hughes	Ellen Beckman, City of Durham	Nate Larson, GEC
Bryan Hammond	Lindsay Smart, City of Durham	Todd Case, GEC
	Tom Dawson, City of Durham	Michael Fitzpatrick, GEC

GoTriangle presented an update on the status and scope of the proposed refinements to the previous design of the Durham-Orange Light Rail Transit (D-O LRT) Project. The purpose of this discussion was to review options for maintaining bicycle and pedestrian access between Ramseur and Pettigrew Streets that would be affected by the proposed Blackwell Street closure and to discuss potential impacts to the Downtown Durham Trail, a Section 4(f) resource.

Meeting Discussion

1. **Proposed Refinements**
   a. A Supplemental Environmental Assessment (SEA) and Section 4(f) Evaluation is scheduled for publication in late October 2018. The SEA summarizes a series of proposed refinements along the entire D-O LRT Project. GoTriangle previously met with the City of Durham in May 2018 to discuss temporary construction impacts to the Downtown Durham Trail.
   b. The profile change between the proposed light rail track and Pettigrew Street to the south creates a safety issue for trucks crossing the track on Blackwell Street; in addition, the timing of gate closures that would be required for vehicles crossing the longer intersection creates additional safety concerns. To address these issues, GoTriangle proposes closing Blackwell Street between Ramseur Street and Pettigrew Street, which would impact the trail.
   c. GoTriangle recognizes the importance of this north-south crossing to bicycle and pedestrian traffic and wants to maintain the access connection, especially given the parking decks on the north side of Ramseur Street that feed pedestrian traffic to the DPAC and American Tobacco District south of Pettigrew Street.
   d. There are similar profile concerns at other downtown streets along the project, which requires those streets to be raised. Raising Pettigrew Street at Blackwell Street requires retaining walls in front of the W.T. Blackwell Building, a designated historic landmark. GoTriangle and the FTA are required to consider the impacts to this building under Section 106 of the National Historic Preservation Act.

2. Alternatives Evaluated

a. Aerial alignment- This option was the subject of the prior traffic separation study; it was determined not to be cost effective, and it would still have visual impacts to the W.T. Blackwell Building.

b. At-grade street connections for bicycles and pedestrians (on Mangum Street)- GoTriangle is still exploring this option at the request of the City. However, any at-grade connection for bicycles and pedestrians would have to account for future rail service, factoring in 140 D-O LRT trains per day as well as future passenger and freight rail service (including a proposed fourth rail line). This represents a safety concern for both GoTriangle and the NCRR.

c. One-way Blackwell Street- While this option would retain a bicycle and pedestrian connection, it would still not resolve the signal timing concern that would restrict users and generate similar safety concerns as an at-grade crossing on Mangum Street.

d. Pedestrian underpass- This option was eliminated due to concerns about construction feasibility and user safety following construction.

e. Pedestrian bridge- The bridge would cross approximately mid-block between Blackwell and Mangum Streets; while the exact location of the bridge still under discussion, the current drawing is intended to establish a representative location for SHPO and FTA consideration.

3. Potential Impacts/Mitigation Options

a. The City is concerned that the ramp configuration shown in the figure (conceptual only) is so long that pedestrians would choose to cross at Mangum Street instead. A 2001 plan proposed a large development bridge, while a 2014 plan included a smaller scale option that connected to a proposed building with first-floor retail development. The City recommended that GoTriangle think about how the bridge complements the DPAC.

b. The City recommended a thorough consideration of on-street bicycle/pedestrian connections, including the existing crossing at Mangum Street, and overall improving the pedestrian experience between downtown and the DPAC. This should include a pedestrian origin-destination study. GoTriangle should continue to work with the railroad and pursue other options; however, GoTriangle is concerned that the railroad won't agree to on-street crossing scenario. For now, the SEA will present the "worst-case" crossing situation (in terms of impacts), which will be available for public comment.

c. GoTriangle presented potential alternatives for bicyclists to use during construction. The City noted that the route marked in red (following Mangum Street) was more likely to be used, even if it meant bicyclists were traveling in the wrong direction (against vehicle traffic). It was noted that, if the two-way Ramseur Street conversion occurred early in the construction schedule, it would allow for an on-street bicycle/pedestrian detour.

d. The City would like to see larger traffic analysis in the context of downtown Durham loop corridor. There is a lot of support for the inclusion of bike lanes and sidewalks on a two-way Ramseur Street loop. In addition, the City requested that GoTriangle look at a two-way bicycle path on Mangum Street, with a separate space for a sidewalk, if possible. During construction, barriers can be used to guide bikes north and south on Mangum.

e. Regarding the Section 4(f) temporary occupancy exception, the City is concerned that the land wouldn't be in as good condition as before construction (i.e., would the number of crossings on the bridge be similar to the current number of at-grade crossings at Blackwell Street). It would help to know the total daily duration that the gates would be lowered in order to understand how much pedestrian delay it represents. FTA noted that Section 4(f) requires that the features and attributes of the resources are maintained in the new condition; in this case, the views from the trail and the connectivity should be maintained.

f. The City wanted more information on how the future planned Belt Line Trail, specifically how it provides a north-south connection, is considered in the overall analysis. The master plan for the Belt Line has been adopted, and the right-of-way was purchased in September 2018. It is currently moving into design. The master plan noted that this connection to the American Tobacco Trail was critical.

4. Next Steps

a. GoTriangle will send the City of Durham a letter explaining the proposed refinements (specific to the Blackwell Street closure) and the impacts to the Downtown Durham Trail. A response letter from the City was requested prior to the end of the SEA comment period. The letter will include a copy of the meeting PowerPoint and further details on the options considered.

b. Tom Dawson will provide GoTriangle a copy of the previous pedestrian bridge sketches.

5. Upcoming Project Milestones

a. GoTriangle anticipates having one pedestrian bridge design concept ready by January 2019, with a 30% design ready in February 2019. GoTriangle is currently developing an advisory panel of local designers that will include City representation.

b. SEA public meetings are tentatively set for the first week of November.

Attachments
Meeting Agenda
PowerPoint Presentation

City of Durham Recreation Section 4(f) Resource Meeting

FTA, GoTriangle, City of Durham
October 2, 2018

Agenda

1. Agenda distribution and introductions
2. D-O LRT Project Update
3. Review of Project's Proposed Refinements
4. Brief Review of Section 4(f)
5. Section 4(f) Resource –Downtown Durham Trail
6. Potential Impacts/Mitigation
7. Next Steps
8. Proposed Bridge Design Milestones

Durham-Orange Light Rail Transit Project Update

- Supplemental EA & Section 4(f) Evaluation for Proposed Project Refinements: end of October 2018
  - GoTriangle and the City of Durham met May 24, 2018 to review the Proposed Refinements
  - Additional Proposed Refinements since the meeting would impact the Downtown Durham Trail
  - Re-evaluate effects determination for Section 4(f) resources
    - Conducting coordination and seeking City of Durham's comments
    - FTA will include draft Section 4(f) evaluation with the Supplemental EA

Design Constraints

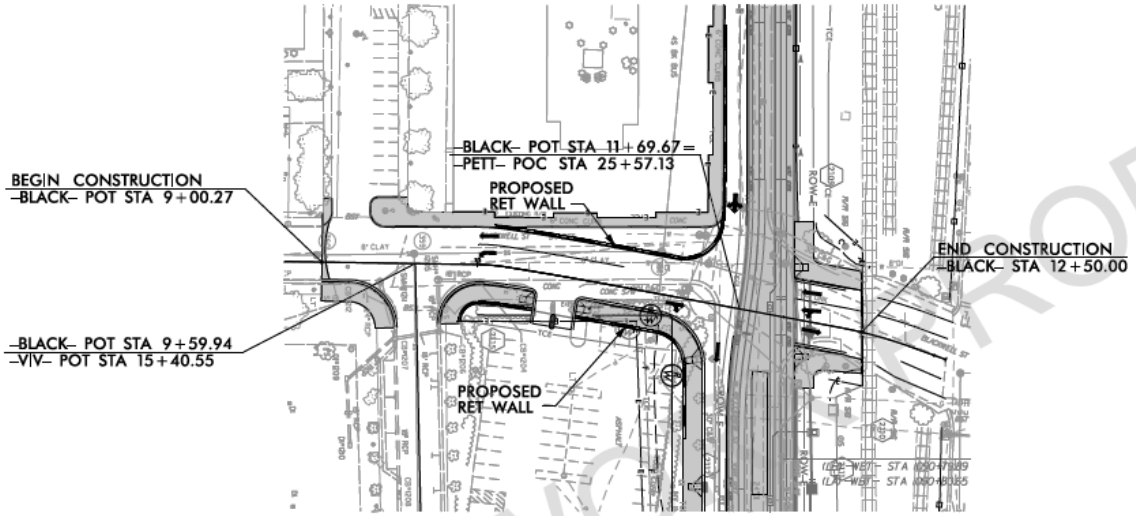
Advancements in engineering and comments received on the design identified two constraints in the alignment on Pettigrew Street.

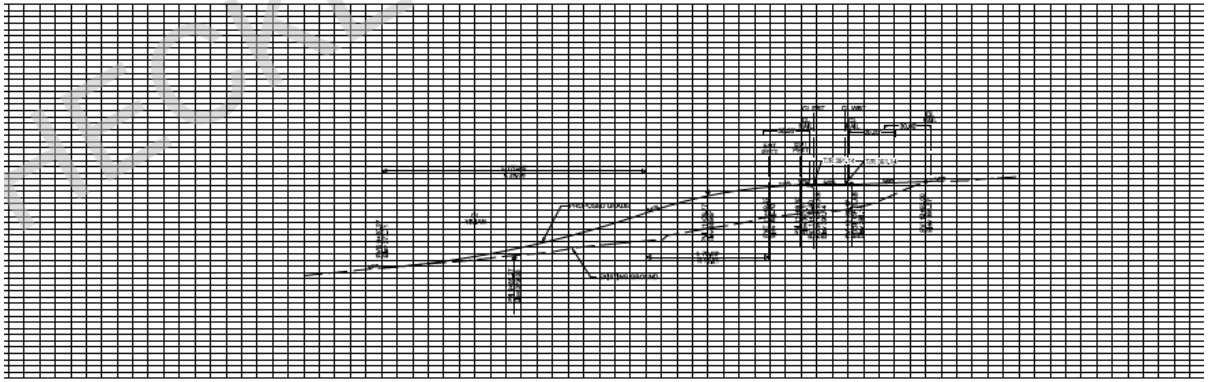
- The existing road profiles would prevent larger vehicles from crossing both sets of tracks;

- Analysis of gate operations revealed timing constraint at Blackwell Street and Dillard Street.

Additionally, the W.T. Blackwell & Co. Building is a National Historic Landmark. This property has special protections which GoTriangle and the FTA need to evaluate as part of the NEPA process.

Blackwell Street Road Profile





Alternatives Evaluated

- Aerial alignment along Pettigrew Street
  - Not cost effective & visual impact to the W.T. Blackwell & Co. Building

- Closure of Blackwell Street with at-grade streets connections
  - Vehicles re-routed to two-way Ramseur Street to alternative north/south roads
  - Pedestrians could be re-routed to one-way southbound Mangum Street; however volume is considered unsafe and no viable alternative for bicyclists heading north.
  - Pedestrians could still use Blackwell Street, however there is a concern about pedestrian safety given the number of trains through downtown Durham.

- Blackwell Street one-way southbound
  - Signal timing issue & 4'-8' retaining walls outside W.T. Blackwell & Co. Building

- Pedestrian/bicycle underpass
  - Undesirable length for pedestrian safety
  - Construction under the railroad
  - Potential foundation issues for historic buildings

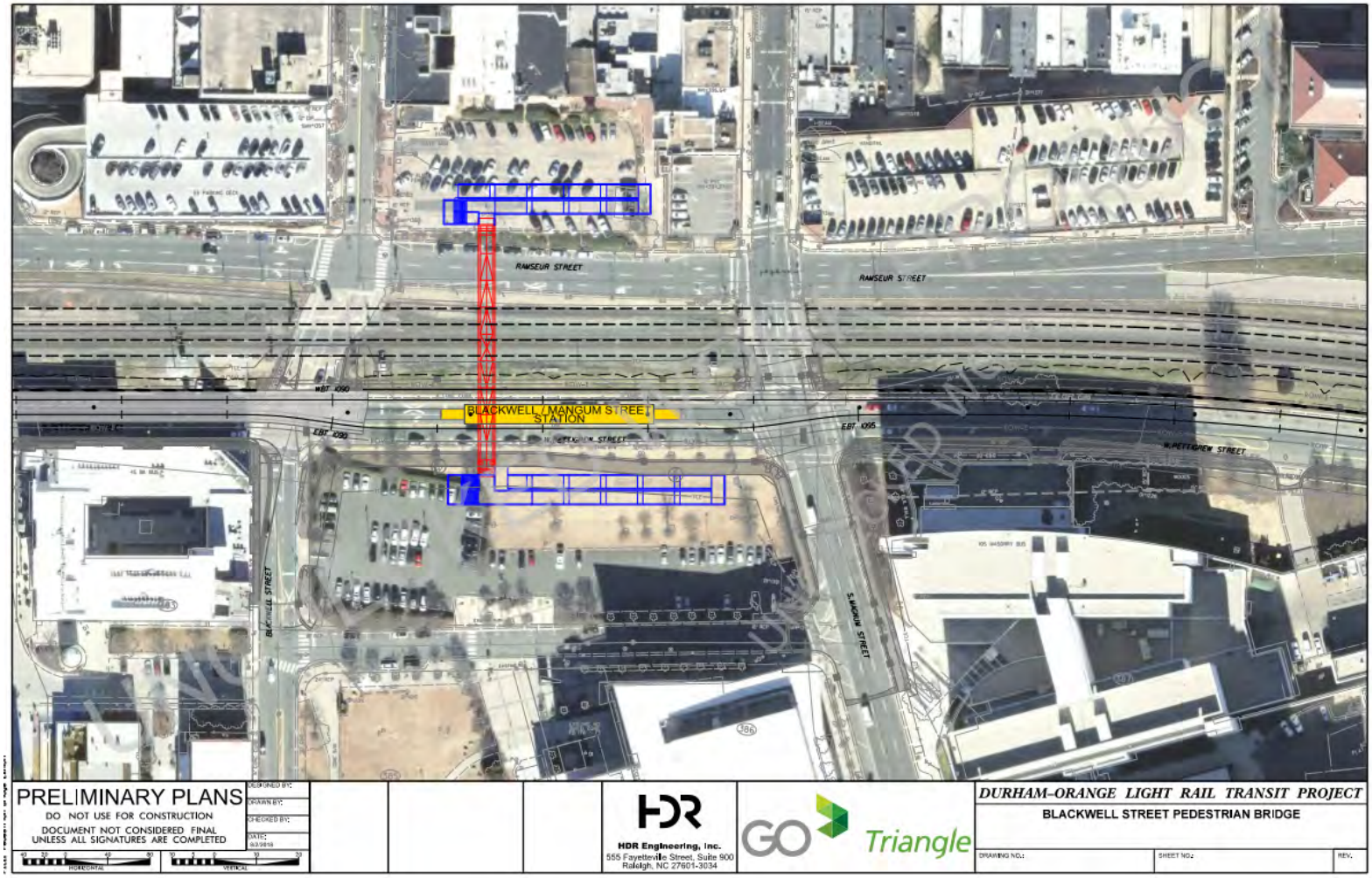
- Pedestrian/bicycle bridge
  - Visual aspect in proximity to the W.T. Blackwell & Co. Building

Additional Proposed Refinements

Additional Proposed Refinements to address the design constraints are:

- Close Blackwell Street crossing between Ramseur Street and Pettigrew Street;
- One-way southbound Dillard Street;
- Two-way Ramseur Street from Chapel Hill Street to Dillard Street; and
- Construct a pedestrian/bicycle bridge approximately mid-block between Blackwell Street and Mangum Street.

*Conceptual Pedestrian Bridge



*Conceptual bridge image used for State Historic Preservation Office consultation. Not representative of the proposed bridge design.

Brief Review of Section 4(f)

Section 4(f) of the Department of Transportation Act of 1966 (codified in 49 U.S.C. § 138 and implemented in 23 CFR 774)

- Applies to transportation projects that receive federal funding or require approval from the USDOT and its modal agencies (e.g., FTA)
- Requires consideration of Section 4(f) resources:
  - public parklands and recreational resources
  - wildlife and waterfowl refuges
  - historic resources
- Requires FTA to consult, coordinate, or receive concurrence with Officials with Jurisdiction over the Section 4(f) property, if the transportation project requires the use of land from a property protected by Section 4(f)

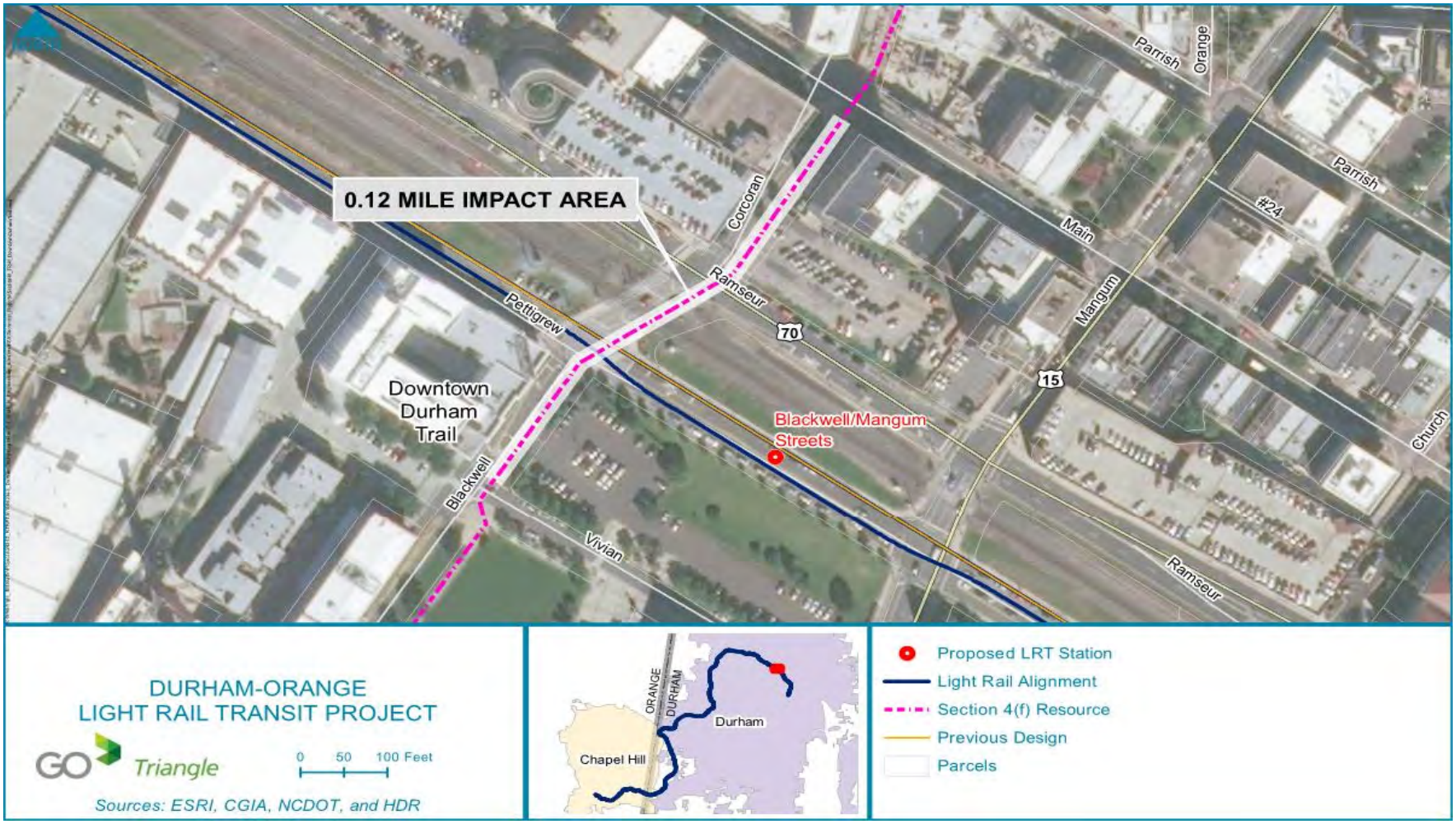
“Use” Under Section 4(f)

No Use	• Transportation project does not affect 4(f) resource
Permanent Incorporation	• Transportation project permanently incorporates 4(f) land • May result from partial or full acquisition, permanent easement or temporary easement
Constructive Use	• Proximity impacts substantially impair activities, features, or attributes that qualify it for protection under Section 4(f)
Temporary Occupancy	• Duration temporary • scope of work minor • No anticipated permanent adverse physical impacts, nor interference with activities, features, or attributes that qualify it for protection under Section 4(f) • 4(f) land fully restored

Section 4(f) Evaluation

- Transportation project must avoid use of Section 4(f) resources*, if possible*; OR
- Select an alternative with the least overall harm, if avoidance is not possible
- Take all measures to minimize harm of Section 4(f) resources

Draft 4(f) Evaluation: Downtown Durham Trail



Draft 4(f) Evaluation: Downtown Durham Trail

Access southbound:

- Via Mangum /Vivian Streets = 0.27 mile
- Via Mangum St/Jackie Robinson = 0.55 mile

Access northbound:

- Via Willard/Chapel Hill Streets = 0.77 mile

Draft 4(f) Evaluation: Downtown Durham Trail

Potential Impacts

- Temporary detour of Downtown Durham Trail during construction
- Proposed pedestrian/bicycle bridge would improve the existing trail features

Proposed Mitigation

- Detour during construction would preserve trail connectivity
- Pedestrian crossing safety features

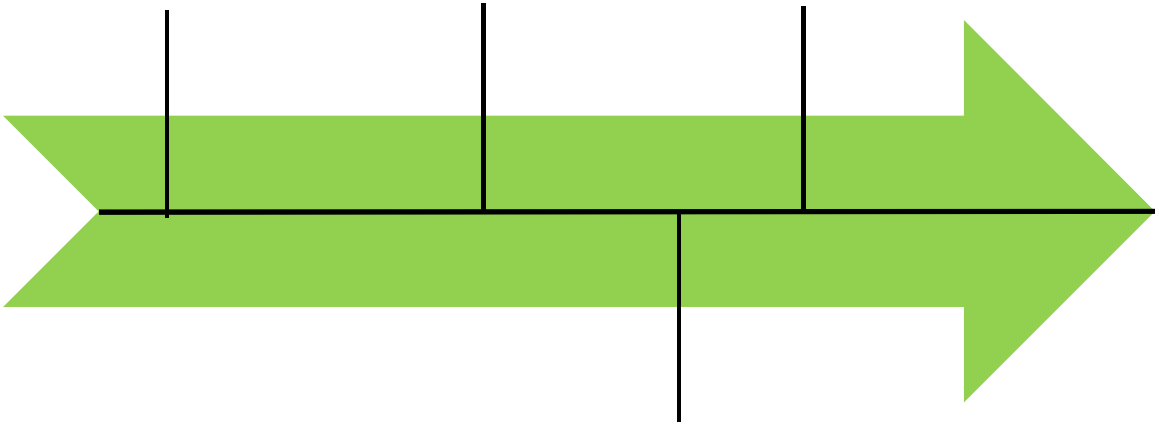
Draft Section 4(f) Determination

- Temporary Occupancy Exception of Downtown Durham Trail

Concurrence Letter

- City of Durham concurs with FTA draft Section 4(f) determination
  - Temporary occupancy of the Downtown Durham Trail
- Provides documented agreement that the D-O LRT Proposed Project Refinements:
  - Will require the temporary detour of the Downtown Durham Trail
  - Detour of the trail will be a short duration (during construction)
  - Will not result in a change in ownership of the land
  - Scope of the work is minor
  - With the temporary detour / proposed mitigation, there will be no temporary or permanent adverse changes to the activities, features, or attributes of the property
  - After construction, the land will be fully restored to a condition at least as good as before the project
  - Based on the above factors, City of Durham concurs with the FTA draft Section 4(f) determination: temporary occupancy

Section 4(f) Next Steps



Consultation with City of Durham
October 2, 2018

Anticipated concurrence letter from City of Durham
October/ November 2018

30-day Public Review and Comment
Anticipated November 2018

Supplemental EA / Draft Section 4(f) Evaluation
Anticipated Publication
End October 2018

Amended ROD*
&
Final Section 4(f) evaluation

* Requires Finding of No Significant Impact

Pedestrian Bridge Design Milestones

2018				2019							
Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May	Jun	July	Aug
	Bridge (0%)	Bridge (0%)	Bridge (10%)								

- Section 4(f) Consultation and Supplemental Environmental Assessment – October 2018
  - Develop advisory panel for bridge design project
  - **Publish Supplemental Environmental Assessment end of October**

- Listening Phase– November 2018 (0%)
  - Initial meeting with advisory panel to discuss expectations and recommendations for successful project

- Design Creation Phase– December 2018 (10%)
  - Second meeting with panel to include presentations of conceptual solutions
  - Origin/destination points should be established
  - Panel's recommendation on conceptual design will be recorded

Pedestrian Bridge Design Milestones

2018				2019							
Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May	Jun	July	Aug
	Bridge (0%)	Bridge (0%)	Bridge (10%)	Bridge (20%)	Bridge (30%)						FFGA (90%) Bridge (60%)

- Design Development– January 2019 (20%)
  - Third meeting will include 5-7 concepts with realistic constraints applied to the designs.
  - Options should be narrowed to 2-3 designs.
- Design Creation– February 2019 (30%)
  - Panel will review 2-3 primary concepts after engineering review.
  - Railings and materials should be applied.
- Construction Documentation – August 2019 (60%)
  - 1 bridge design
  - GEC to produce document package for submittal to FTA
  - Review with stakeholders

GO Triangle

Questions

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MEETING SUMMARY

Connecting all points of the Triangle

Date: May 8, 2018, 10:30 AM – 12:00 PM
Subject: D-O LRT 0637B GoTriangle/Durham County Recreation Resource Meeting - Section 4(f) Coordination
Location: Loblolly Conference Room, GoTriangle D-O LRT Project Office - 411 W. Chapel Hill Street, Durham, NC 27701 - 10th Floor
Attendees: Celeste Burns, Durham County
Jane Korest, Durham County
Brandan Moore, Durham County
Stan Mitchell, FTA
Dave Charters, GoTriangle
Meghan Makoid, GoTriangle
John Jamison, HDR (GEC)
Ashley Booth, HNTB (PMC)

GoTriangle presented an update on the status and scope of the proposed refinements to the previous design of the Durham-Orange Light Rail Transit (D-O LRT) Project documented in the December 2016 Amended Record of Decision and Final Section 4(f) Evaluation. GoTriangle is evaluating the impacts of the proposed refinements and plans to issue a Supplemental Environmental Assessment in Summer 2018, as directed by FTA. The purpose of this discussion was to review impacts of the proposed refinements to three Durham County-owned/planned resources, as required by Section 4(f) of the U.S. Department of Transportation Act of 1966.

1. New Hope Creek Trail (Planned)
    a. The prior Section 4(f) finding associated with the previous design determined that the project would have a *de minimis* impact on the New Hope Creek Trail. With the proposed project refinements, the amount of permanent easement required would stay the same at <0.1 acres. The amount of the temporary easements needed would also stay the same at 0.0 acres.

2. New Hope Preserve Trail (Existing)
    a. The prior Section 4(f) finding associated with the previous design determined that the project would have a No Use impact on the existing New Hope Preserve Trail. With the proposed project refinements, it is expected to have No Use impact on the existing New Hope Preserve Trail.

3. Durham County Open Space
    a. The prior Section 4(f) finding associated with the previous design determined that the project would have a No Use impact on the Durham County Open Space. With the proposed project refinements, it is expected to have No Use impact on the existing Durham County Open Space.
    b. GoTriangle described the potential to shift a watermain near the D-O LRT New Hope Creek bridge crossing, thus requiring potentially a greater easement area (10' additional) within the Durham County Open Space. Durham County representatives showed interest in minimizing the size of the permanent easement and to follow-up with the City of Durham (owner of the watermain) to determine the current planned approach is the best approach to minimizing impacts or determine if there is a better way to reduce the size of the permanent easement for the watermain relocation.

GoTriangle reviewed the current project schedule and requested that Durham County provide comments on the proposed impacts to the three properties in May/June 2018. Durham County requested that GoTriangle coordinate with the City of Durham to determine the best alternative to minimize the easement area in the Durham County Open Space for a watermain relocation. A joint meeting may be required with the City and County of Durham to finalize the approach to the watermain relocation. Durham County has a copy of the previous Section 4(f) concurrence letter associated with the project.

Action Items:

PO Box 13787
Research Triangle Park, NC 27709
P: 919.485.7510 | F: 919.485.7547

- **GoTriangle to follow-up with City and County of Durham on watermain relocation approach to minimize enlarging a permanent easement area located in the Durham County Open Space.**

Attachments

Meeting Presentation (0637B_PRES_Durham-County-Section-4f-180504)

GO Triangle

Durham County Recreation Resource Meeting

May 8, 2018

Agenda

1. Agenda distribution and introductions
2. D-O LRT Update
3. Section 4(f) Resources
4. Resource Impacts/Mitigation
5. Proposed Refinements Impacts/Mitigation
6. Questions/Concerns

Durham-Orange Light Rail Transit Project – Update

- **DEIS & Section 4(f) Evaluation: August 2015**
- **Combined FEIS/ROD & Final 4(f) Determination: February 2016**
- **Supplemental EA & Section 4(f) Evaluation for NCCU Extension: November 2016**
- **Amended ROD & Final Section 4(f) Determination: December 2016**
- **50% Design Plans**
- **Supplemental EA & Section 4(f) Evaluation for Proposed Project Refinements:** *underway*
  - Re-evaluate effects disclosed in Amended ROD
  - Re-evaluate effects determination for Section 4(f) resources
    - Conducting coordination and seeking Durham County's comments
    - FTA will include draft Section 4(f) evaluation with the Supplemental EA

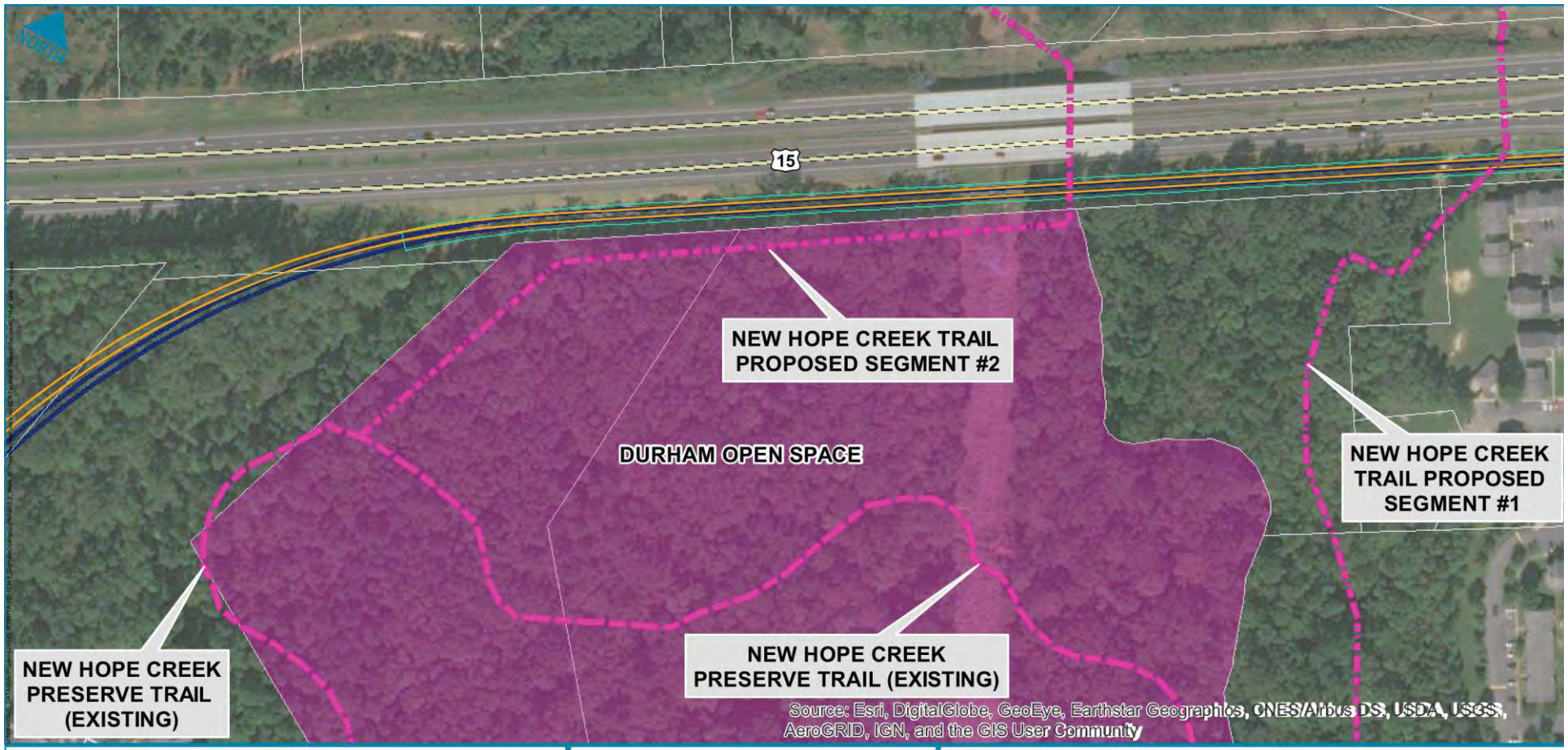
What is Section 4(f)?

- Section 4(f) of the Department of Transportation Act of 1966
- Requires the consideration of public parklands and recreational resources, wildlife and waterfowl refuges, and historic resources
- Prior determinations concluded No Use of the Durham County operated 4(f) resources and a ***de minimis*** use of the Durham County planned 4(f) resources
  - Impacts generally minor in nature
  - After taking into account avoidance, minimization, mitigation and enhancement measures, the project has only *de minimis* impacts to the activities, features, or attributes qualifying a park, recreation area, or refuge for protection under Section 4(f)

Previous Final Section 4(f) Evaluation

Durham County 4(f) Resources	Prior Section 4(f) Determination
New Hope Creek Trail (Planned)	*De Minimis* impact
New Hope Preserve Trail (Existing)	No Use
Durham Open Space	No Use

Durham County
New Hope Creek Section 4(f) Resources



County of Durham
4(f) Properties
DURHAM-ORANGE
LIGHT RAIL TRANSIT PROJECT

GO Triangle

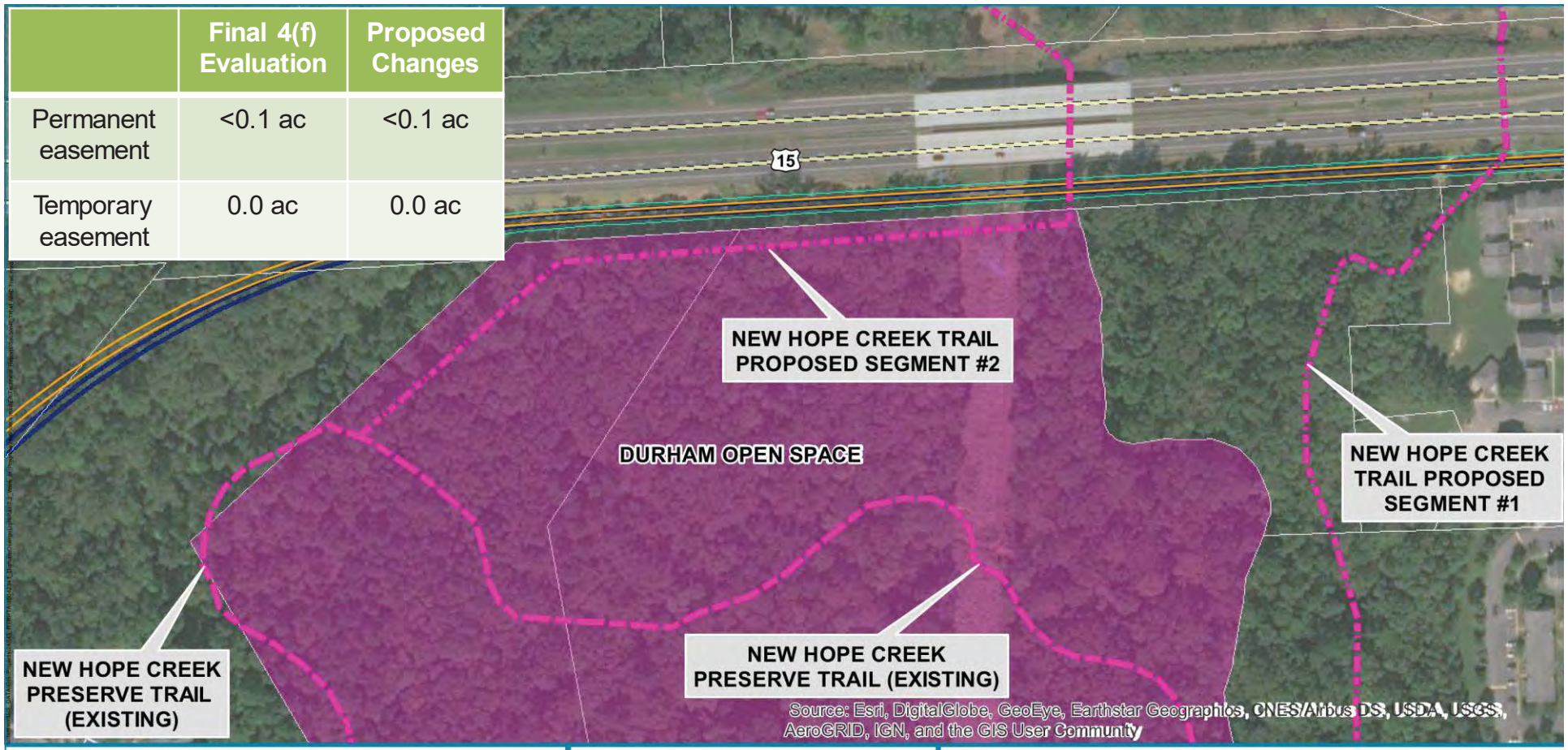
0 100 200 Feet

Sources: ESRI, CGIA, NCDOT, and HDR

- Section 4(f) Resources (Planned Trail)
- Section 4(f) Resources (Existing Trail)
- Previous Design
- Section 4(f) Resource - Durham Open Space
- Parcels
- Elevated Sections
- Proposed Light Rail Alignment

Durham County
New Hope Creek Section 4(f) Resources

	Final 4(f) Evaluation	Proposed Changes
Permanent easement	<0.1 ac	<0.1 ac
Temporary easement	0.0 ac	0.0 ac



County of Durham
4(f) Properties
DURHAM-ORANGE
LIGHT RAIL TRANSIT PROJECT

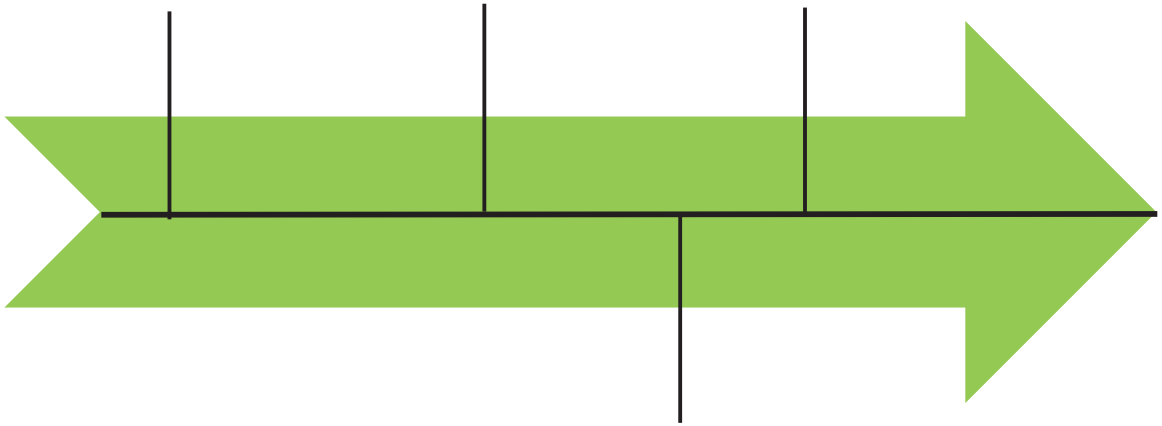
GO Triangle

0 100 200 Feet

Sources: ESRI, CGIA, NCDOT, and HDR

- Section 4(f) Resources (Planned Trail)
- Section 4(f) Resources (Existing Trail)
- Previous Design
- Section 4(f) Resource - Durham Open Space
- Parcels
- Elevated Sections
- Proposed Light Rail Alignment

Next Steps



Re-evaluate *de minimis* finding; consultation with Durham County

April/May 2018

Anticipated concurrence letter from Durham County

May 2018

Public Review and Comment

Anticipated August 2018

Supplemental EA / Draft Section 4(f) Evaluation

Anticipated July 2018

Amended ROD*

&

Final Section 4(f) evaluation

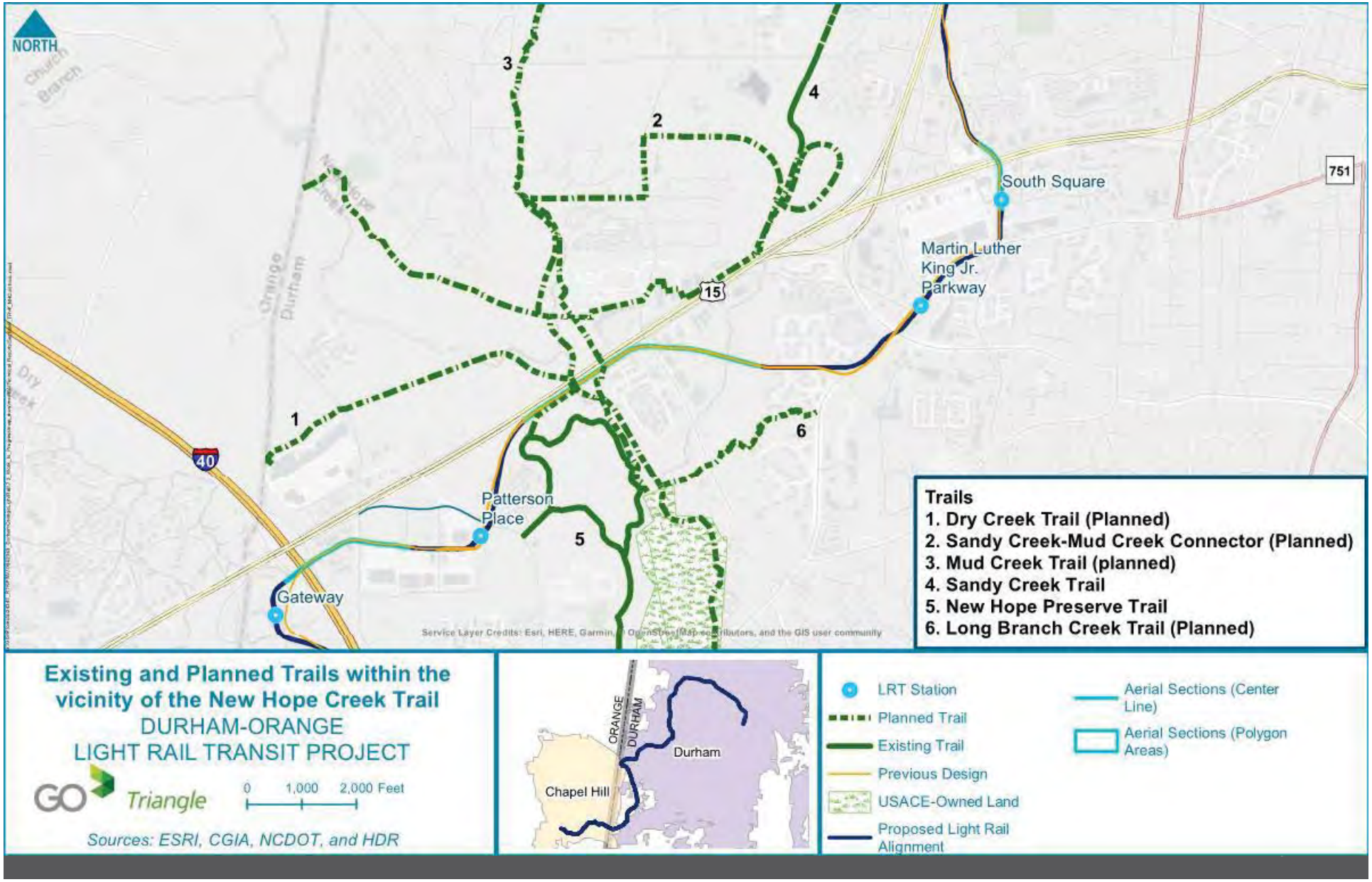
* Requires Finding of No Significant Impact

GO Triangle

GO Triangle

Questions

Nearby Trails



MEETING SUMMARY

Connecting all points of the Triangle

Date: April 13, 2018, 11:00 AM – 12:00 PM
Subject: D-O LRT 0637B GoTriangle/UNC Section 4(f) Coordination (part of Monthly Coordination Meeting)
Location: Magnolia Conference Room, UNC Giles Horney Building
Attendees:

UNC	**GoTriangle**
Than Austin	Dave Charters
Brad Ives	Juanita Shearer-Swink
Evan Yassky	Willie Noble
Bruce Warrington	Patrick McDonough
Micah Malouf	Tammy Bouchelle
Elizabeth Josephs	Gary Tober
	Meghan Makoid
	Jay Heikes
	Racheal Baker
	John Jamison, HDR (GEC)
	Beth Smyre, Dewberry (PMC)

As part of the monthly GoTriangle/UNC Monthly Coordination Meeting, GoTriangle presented an update on the status and scope of the proposed refinements to the previous design of the Durham-Orange Light Rail Transit (D-O LRT) Project documented in the December 2016 Amended Record of Decision and Final Section 4(f) Evaluation. GoTriangle is evaluating the impacts of the proposed refinements and plans to issue a Supplemental Environmental Assessment in Summer 2018, as directed by FTA. The purpose of this discussion was to review impacts of the proposed refinements to four UNC-owned/planned properties, as required by Section 4(f) of the U.S. Department of Transportation Act of 1966.

1. UNC Central Park South (planned)
    a. The prior Section 4(f) finding associated with the previous design determined that the project would have a *de minimis* impact on the UNC Central Park South property. With the refinements, the amount of permanent easement required would increase from 0.9 acres to 1.9 acres; temporary easements needed would decrease from 1.1 acres to 0.5 acres.
    b. UNC representatives asked about the extent of permanent easement needed in the northwest corner of the property. The track alignment in this section transitions between at-grade and aerial, impacting parking spaces on Hibbard Drive; the changes in this area are associated with replacement parking provisions and minor roadway design changes.
    c. The impacted area is labeled as permanent and temporary easement, as needed, for the purposes of the Section 4(f) impact analysis. The final determination of easement status will be made during the right-of-way acquisition phase, in coordination with UNC. UNC prefers that parking areas be considered temporary construction easement, so that they revert back to UNC once project construction is complete. As the design process progresses, GoTriangle will look at ways to minimize further impacts to Central Park South and other Section 4(f) properties, as required by Section 4(f). UNC requested that GoTriangle clarify the purpose of each easement within the property.
    d. A UNC representative inquired about the use of the name “Central Park South.” The name “Central Park South” was taken from current adopted UNC-CH Campus Master Plan.

2. Coker Pinetum
    a. The prior Section 4(f) finding associated with the previous design determined that the project would have a *de minimis* impact on the Coker Pinetum property. With the refinements, the amount of permanent easement would increase from 0.2 acres to 0.4 acres; there are no temporary easements proposed within this property.
    b. GoTriangle clarified that the changes in this area involved shifting the eastbound track closer to the westbound track (which remains the same). There is no change in the impact to the NC Botanical Garden property on the south side.
    c. GoTriangle will follow up with representatives of the Botanical Garden to review the impacts to the Coker Pinetum property.

3. UNC Open Space

    a. The prior Section 4(f) finding associated with the previous design determined that the project would have a *de minimis* impact on the UNC Open Space property. With the refinements, the amount of permanent easement would increase from 0.8 acres to 3.6 acres; there would be no change in the extent of temporary easement needed (1.0 acre).
    b. The proposed changes within this property are due to the addition of stormwater treatment areas, multi-use paths, and sidewalks.

4. UNC Finley Golf Course

    a. The prior Section 4(f) finding associated with the previous design determined that the project would have a *de minimis* impact on the UNC Finley Golf Course property. With the refinements, the amount of permanent easement would decrease from 2.6 acres to 2.3 acres; temporary easements would increase from 0.4 acres to 1.5 acres.
    b. Proposed changes within this property include the addition of a sidewalk and an asphalt multi-use path parallel to the track that UNC had previously requested as part of the mitigation for impacts to the UNC Finley Golf Course. An additional temporary easement on the east side of Finley Golf Course Road is now included as a drainage easement.

GoTriangle reviewed the current project schedule and requested that UNC provide comments on the proposed impacts to the four properties in April 2018. UNC requested that GoTriangle provide further detail on the Section 4(f) process, as well as a clear before/after picture showing the changes in impacts to each property and why the changes are proposed. This information will aid in educating UNC staff new to the project and the Section 4(f) process. UNC has a copy of the previous Section 4(f) concurrence letter associated with the project. GoTriangle requested notification of any additional staff (specifically, UNC Athletics) who should be involved in this process (outside of the botanical garden staff mentioned previously); UNC indicated that as long as the work remains consistent with the limits proposed, no additional 4(f) consultation meetings with UNC Athletics staff would be necessary.

Action Items:

- **GoTriangle will provide UNC with further detail on the Section 4(f) coordination process, the before/after impacts to each property, the purpose of each proposed easement area and associated design changes, and an outline of what information is needed from UNC to develop the final Section 4(f) determination.**
- **GoTriangle will reach out to representatives of the UNC Botanical Gardens to discuss the impacts to the Coker Pinetum property.**

Attachments

Meeting Presentation (0637B_PRES_UNC-4f-LRT-180328)
Handouts (0637B_FIG_UNC-Open-Space-Fig3-4f-180411)
(0637B_FIG_UNC-Finley-Golf-Course-Fig4-4f-180411)
(0637B_FIG_UNC-Coker-Pinetum-Fig2-4f-180411)
(0637B_FIG_UNC-Central-Park-South-Fig1-4f-180409)

Updated Summary of Anticipated Use Determinations for 2018 DOLRT Project Refinements at UNC

Section 4(f) Property	Permanent Use, Not *De Minimis*	Permanent Use, *De Minimis*	No Use	FEIS/ROD Temporary Easement (Acres)	FEIS/ROD Permanent Easement (Acres)	PROPOSED REFINEMENT Temporary Easement (Acres)	PROPOSED REFINEMENT Permanent Easement (Acres)
Central Park South (Planned)		●		1.1	0.9	0.5	1.9
Coker Pinetum		●		0.0	0.21	0.0	0.4
UNC Open Space		●		1.0	0.8	0.8	2.4
UNC Finley Golf Course and athletic fields		●		0.4	2.6	1.5	2.6

UNC CENTRAL PARK SOUTH (PLANNED)

Figure 6.3-8: UNC Central Park South (Planned)

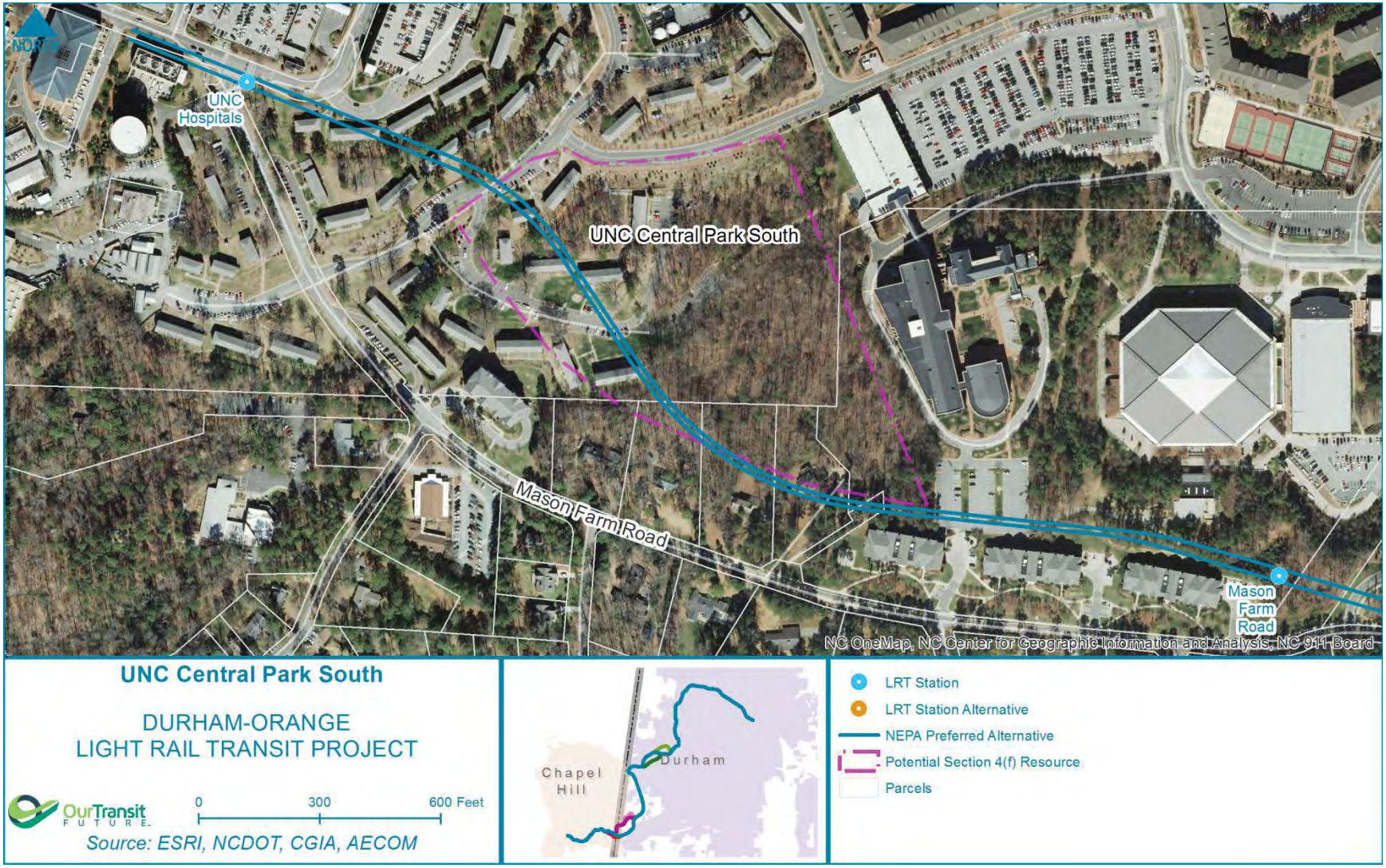
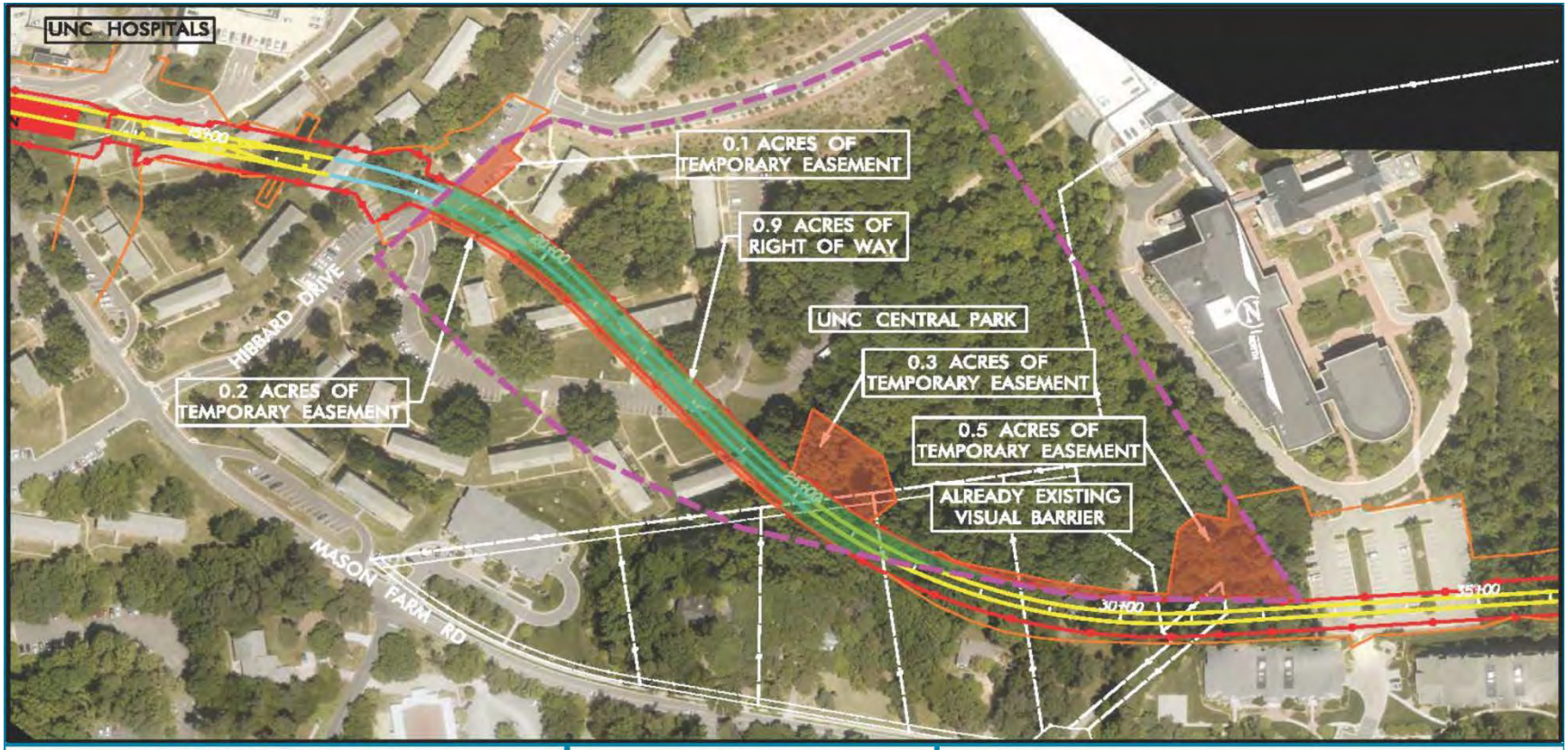


Figure 6.3-9: Proposed Easements at UNC Central Park South



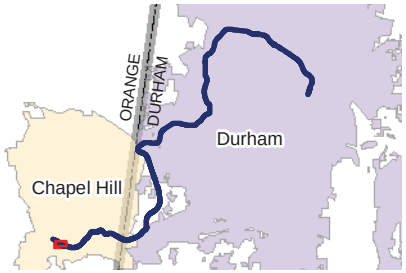
Proposed Easements:
UNC Central Park South (Planned)

DURHAM-ORANGE
LIGHT RAIL TRANSIT PROJECT

GO Triangle

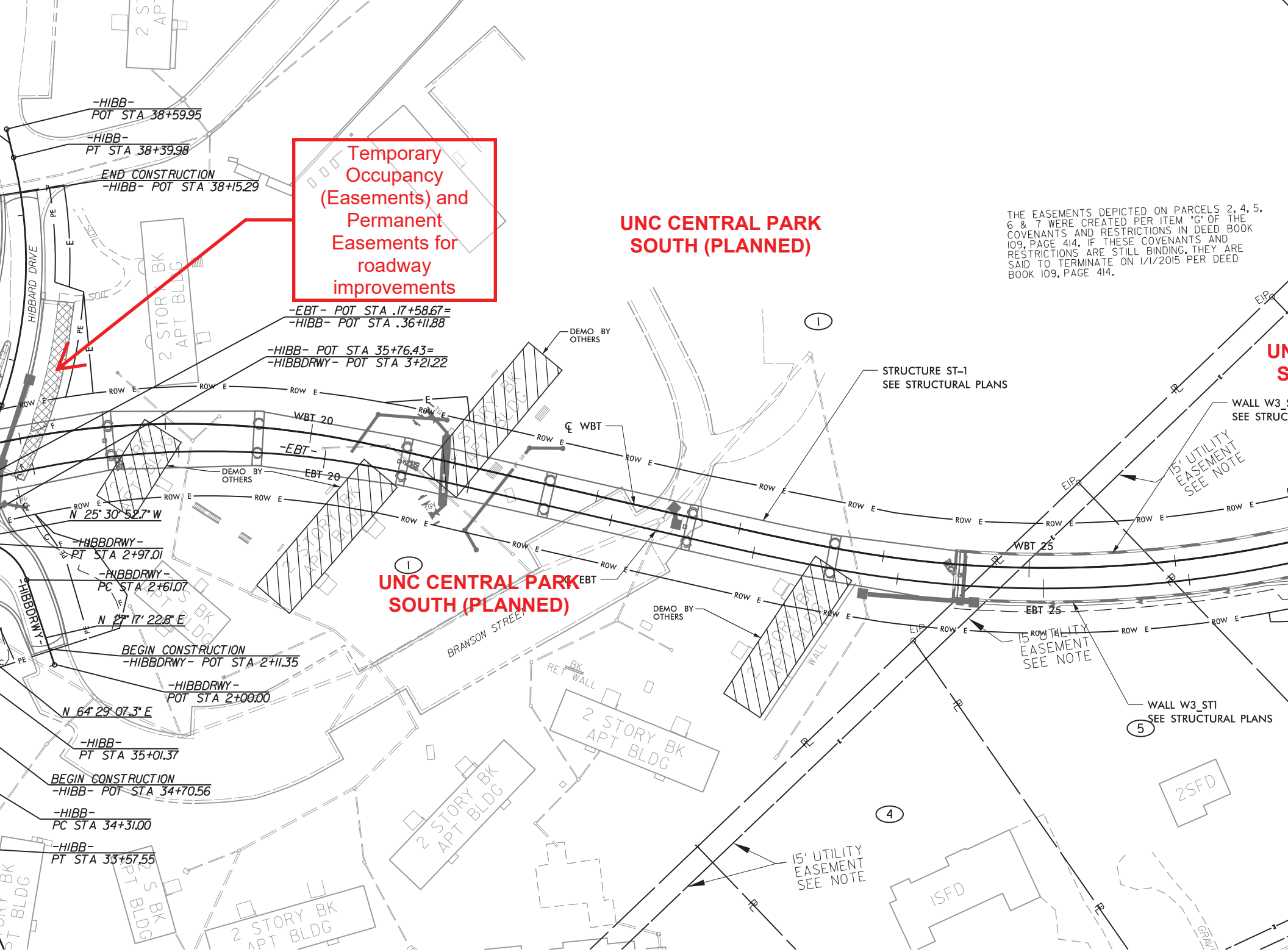
0 100 200 Feet

Sources: ESRI, CGIA, NCDOT, and HDR



2018 Update

- Permanent Easement inside 4(f) Resource
- Temporary Easement inside 4(f) Resource
- Parcels
- Proposed Light Rail Alignment
- Previous Design
- Aerial Sections
- Section 4(f) Resource



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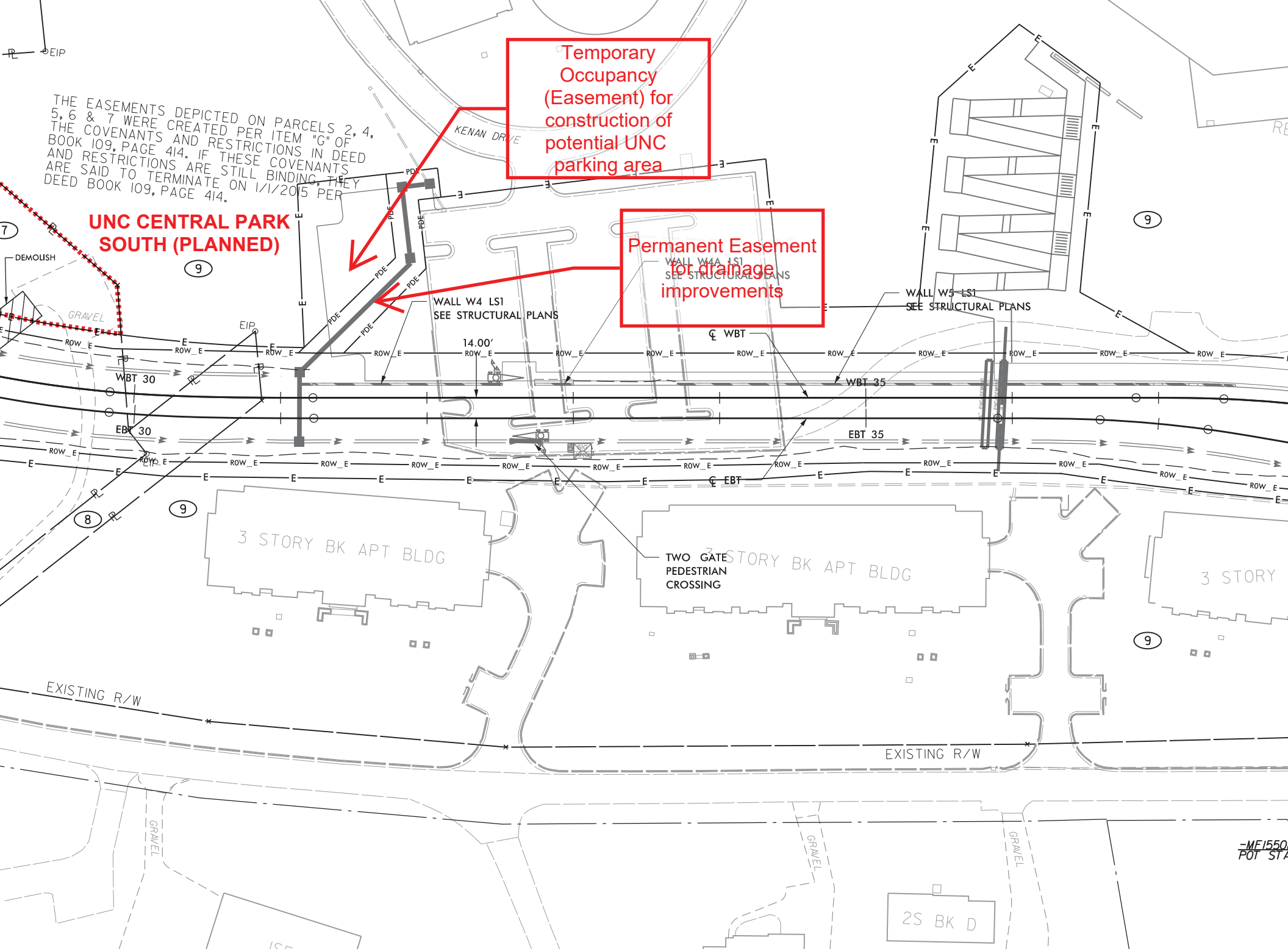
DURHAM-ORANGE L


Temporary Occupancy (Easement) for construction of potential UNC parking area
Permanent Easement for drainage improvements
THE EASEMENTS DEPICTED ON PARCELS 2, 4, 5, 6 & 7 WERE CREATED PER ITEM "G" OF THE COVENANTS AND RESTRICTIONS IN DEED BOOK 109, PAGE 414. IF THESE COVENANTS AND RESTRICTIONS ARE STILL BINDING, THEY ARE SAID TO TERMINATE ON 1/1/2015 PER DEED BOOK 109, PAGE 414.
UNC CENTRAL PARK SOUTH (PLANNED)
KENAN DRIVE
DEMOLISH
GRAVEL
EIP
WALL W4 LS1
SEE STRUCTURAL PLANS
WALL W4A LS1
SEE STRUCTURAL PLANS
WALL W5 LS1
SEE STRUCTURAL PLANS
14.00'
℄ WBT
WBT 30
WBT 35
EBT 30
EBT 35
℄ EBT
TWO GATE PEDESTRIAN CROSSING
3 STORY BK APT BLDG
3 STORY BK APT BLDG
3 STORY
EXISTING R/W
EXISTING R/W
GRAVEL
GRAVEL
GRAVEL
2S BK D
DESIGNED BY:
DURHAM-ORANGE

UNC COKER PINETUM

Figure 6.3-10: UNC Coker Pinetum (Existing)

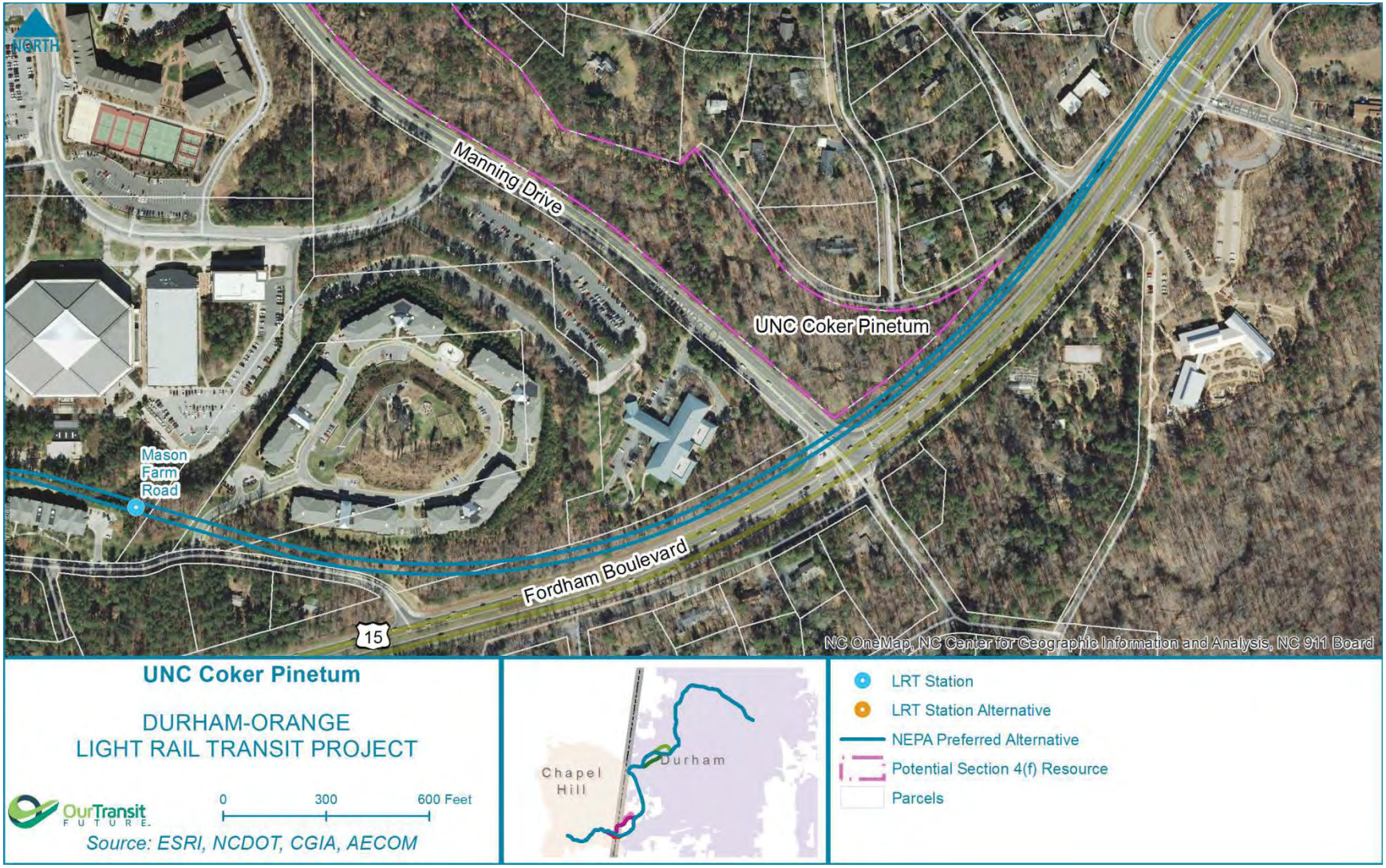


Figure 6.3-11: Proposed Easements at UNC Coker Pinetum

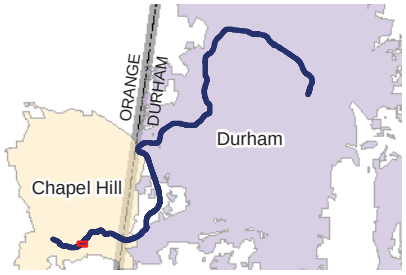
Proposed Easements: UNC Coker Pinetum

DURHAM-ORANGE
LIGHT RAIL TRANSIT PROJECT

GO Triangle

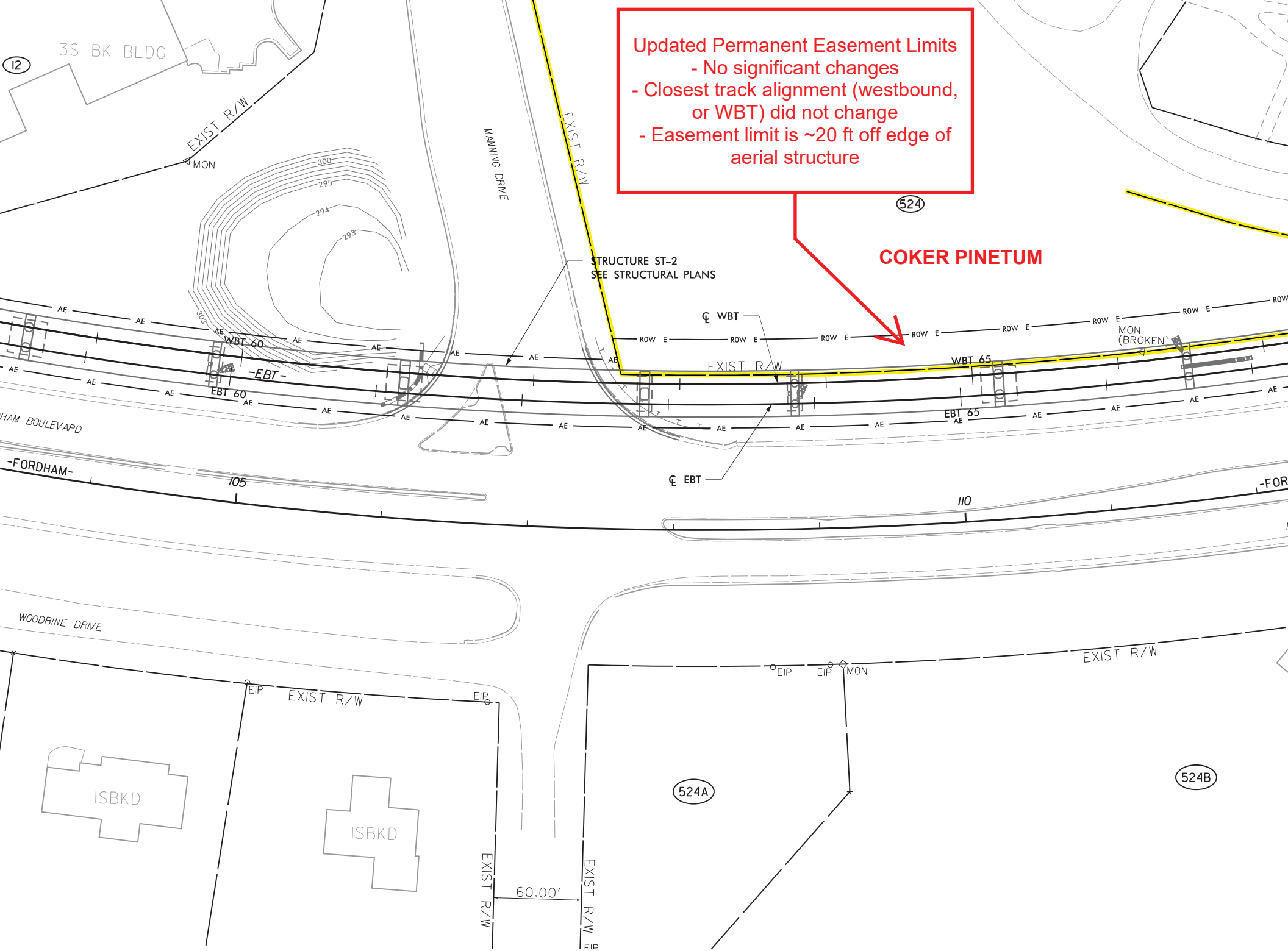
0 80 160 Feet

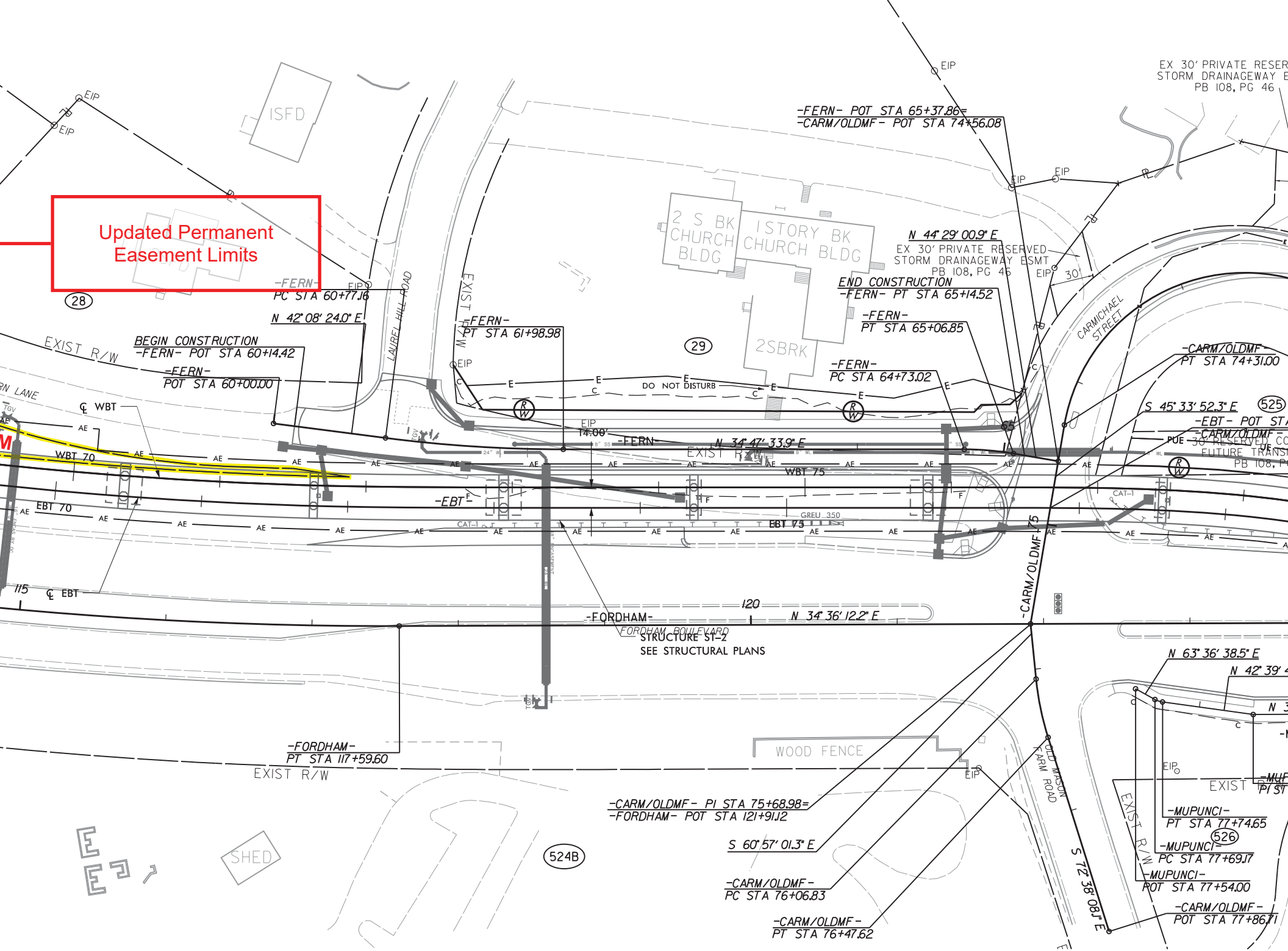
Sources: ESRI, CGIA, NCDOT, and HDR



2018 Update

- Section 4(f) Resource
- Permanent Easement inside 4(f) Resource
- Proposed Light Rail Alignment
- Previous Design
- Aerial Sections


Updated Permanent Easement Limits
- No significant changes
- Closest track alignment (westbound, or WBT) did not change
- Easement limit is ~20 ft off edge of aerial structure
COKER PINETUM
STRUCTURE ST-2
SEE STRUCTURAL PLANS
℄ WBT
℄ EBT
WBT 60
EBT 60
WBT 65
EBT 65
EXIST R/W
MON
MON (BROKEN)
MANNING DRIVE
FORDHAM BOULEVARD
WOODBINE DRIVE
105
110
524
524A
524B
12
3S BK BLDG
ISBKD
ISBKD
EIP
60.00'
DESIGNED BY:
PAR



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PAR

DURHAM-ORANGE L

UNC OPEN SPACE

Figure 6.3-15: UNC Open Space (Existing)

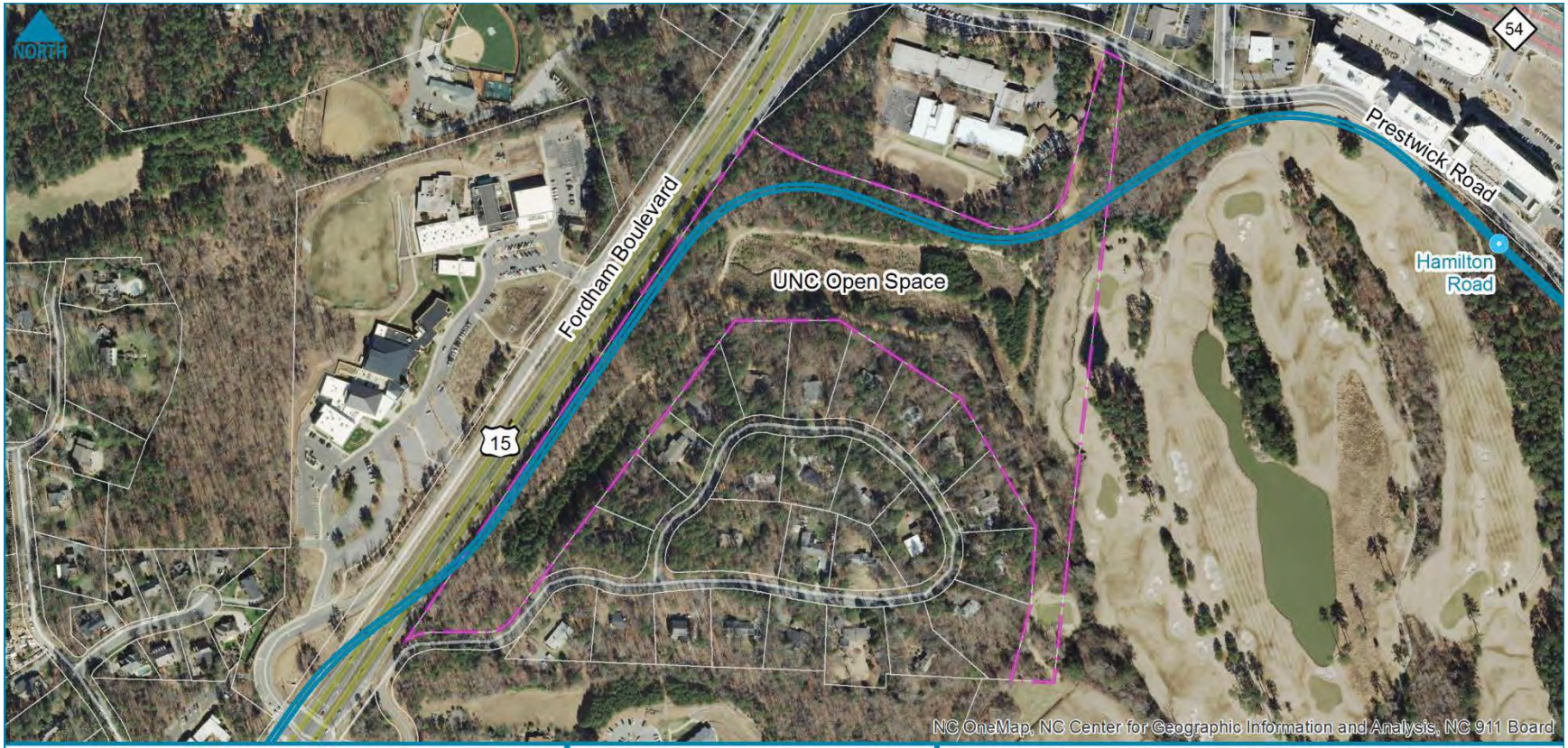
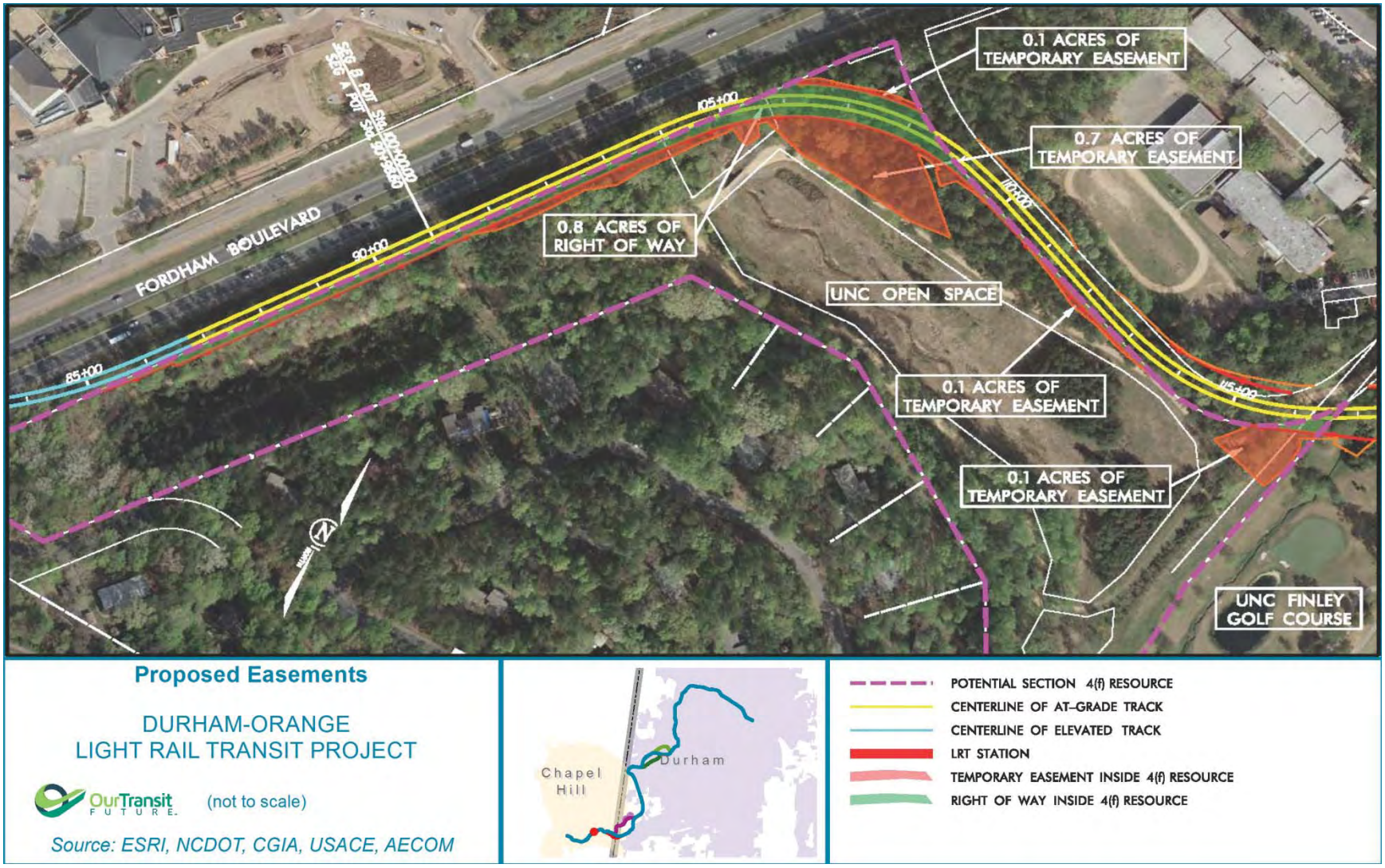


Figure 6.3-16: Proposed Easements at UNC Open Space



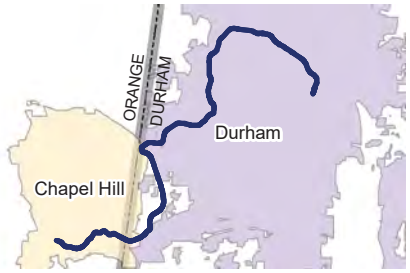
UNC Open Space

DURHAM-ORANGE
LIGHT RAIL TRANSIT PROJECT

GO Triangle

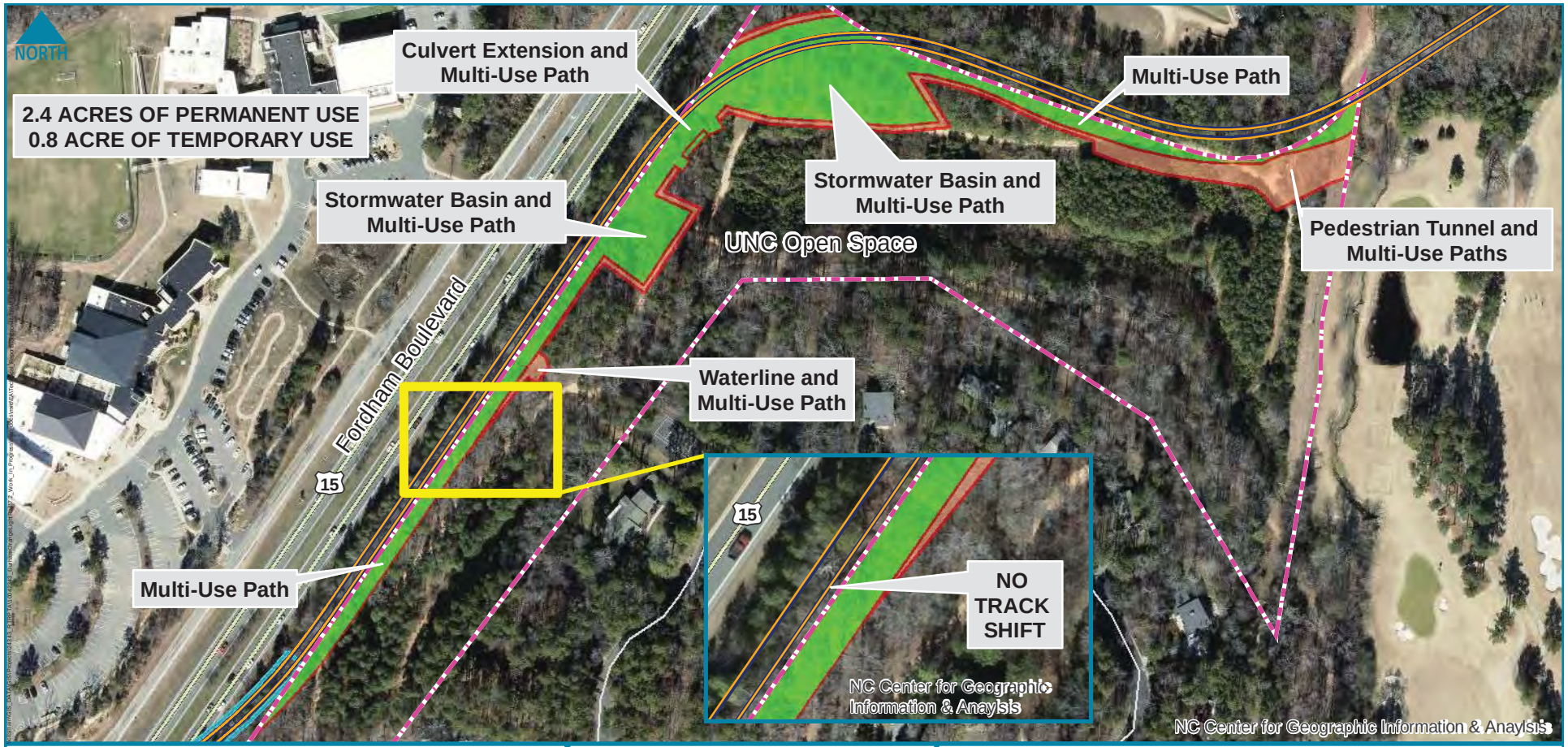
0 400 800 Feet

Sources: ESRI, CGIA, NCDOT, and HDR



- LRT Station
- Existing Light Rail
- Potential Section 4(f) Resource
- Parcels
- Proposed Light Rail Alternative
- Aerial Sections (Center Line)
- Aerial Sections (Polygon Areas)

2018 Update



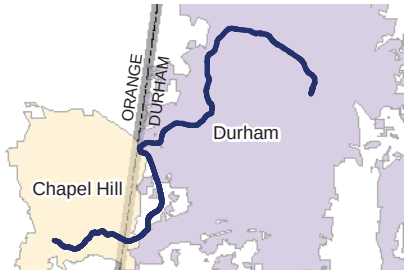
Proposed Easements: UNC Open Space

DURHAM-ORANGE
LIGHT RAIL TRANSIT PROJECT

GO Triangle

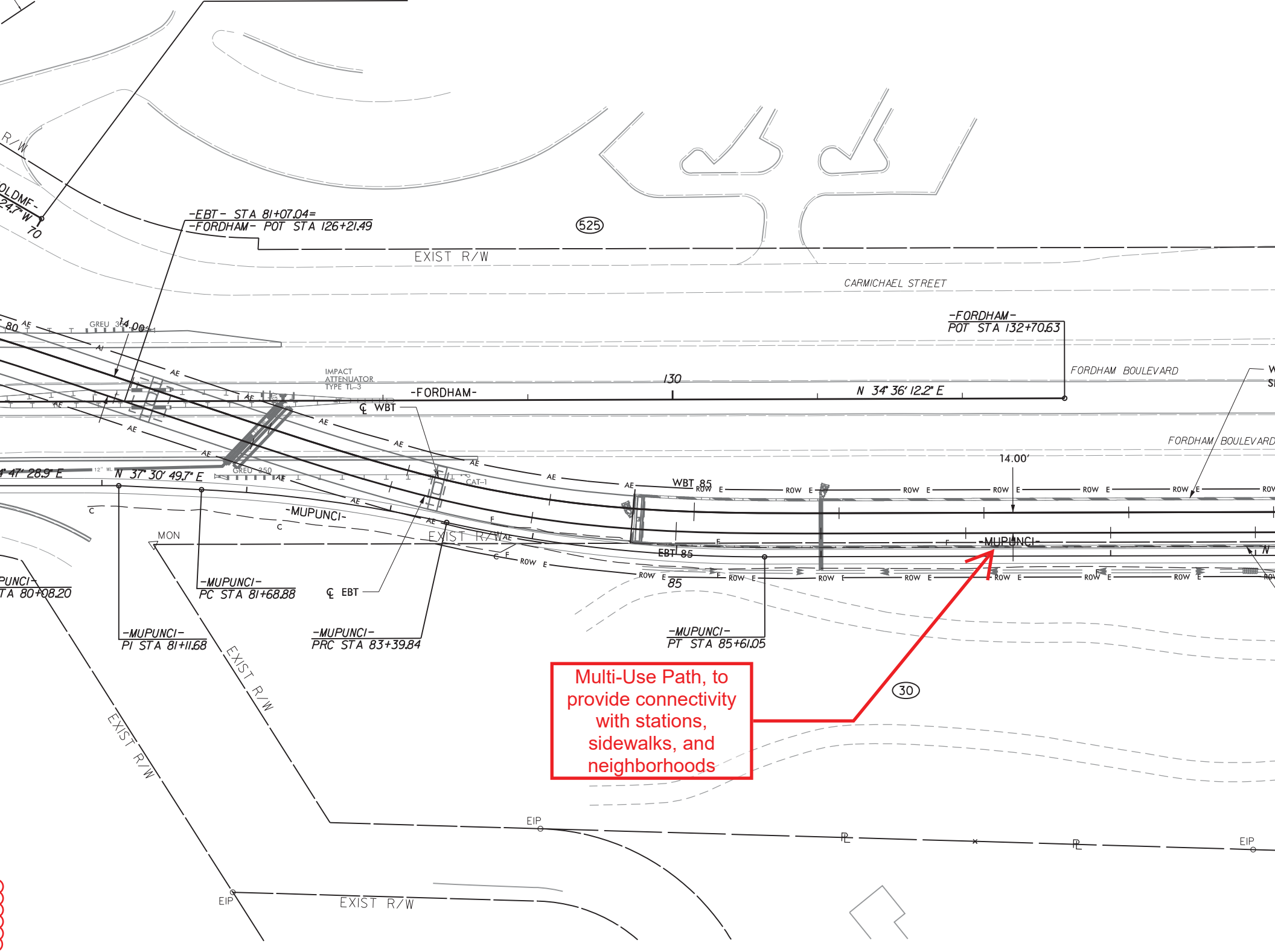
0 125 250 Feet

Sources: ESRI, CGIA, NCDOT, and HDR



- LRT Station
- Section 4(f) Resource
- Permanent Easement inside 4(f) Resource
- Temporary Easement inside 4(f) Resource
- Previous Design
- Proposed Light Rail Alignment
- Aerial Sections

2018 Update

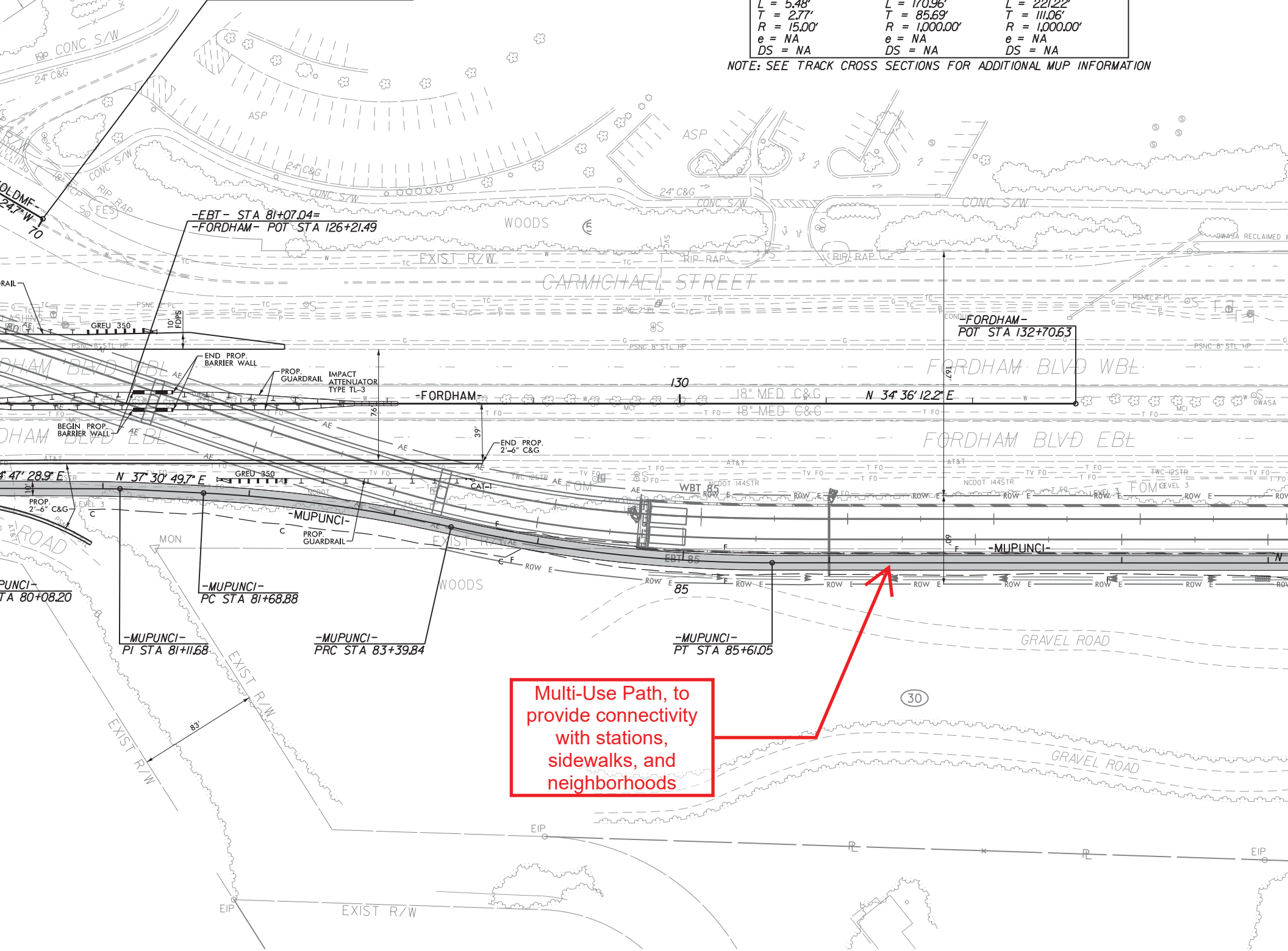


DESIGNED BY:

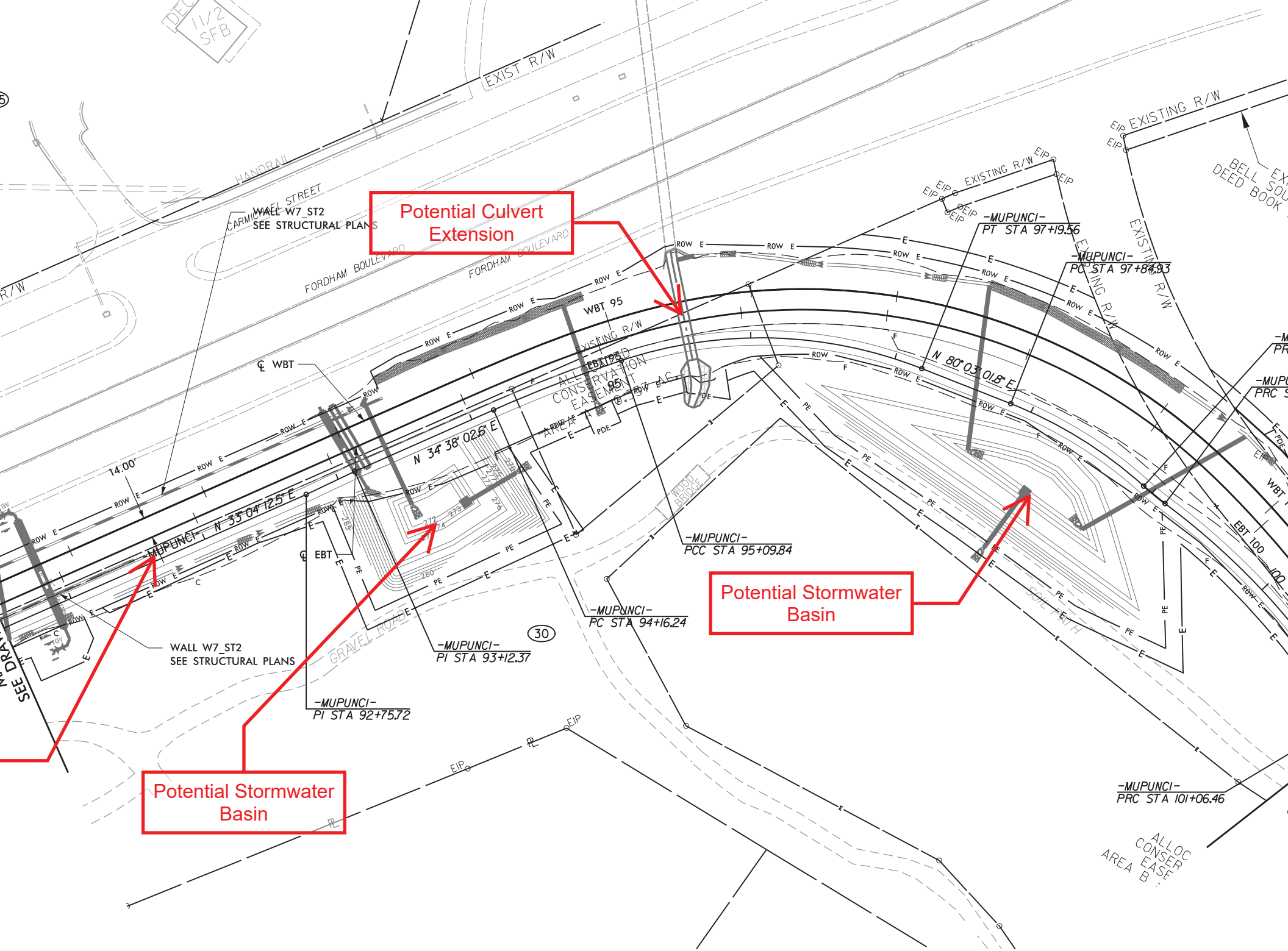
DURHAM-ORANGE L

L = 5.48'	L = 170.96'	L = 221.22'
T = 2.77'	T = 85.69'	T = 111.06'
R = 15.00'	R = 1,000.00'	R = 1,000.00'
e = NA	e = NA	e = NA
DS = NA	DS = NA	DS = NA

NOTE: SEE TRACK CROSS SECTIONS FOR ADDITIONAL MUP INFORMATION

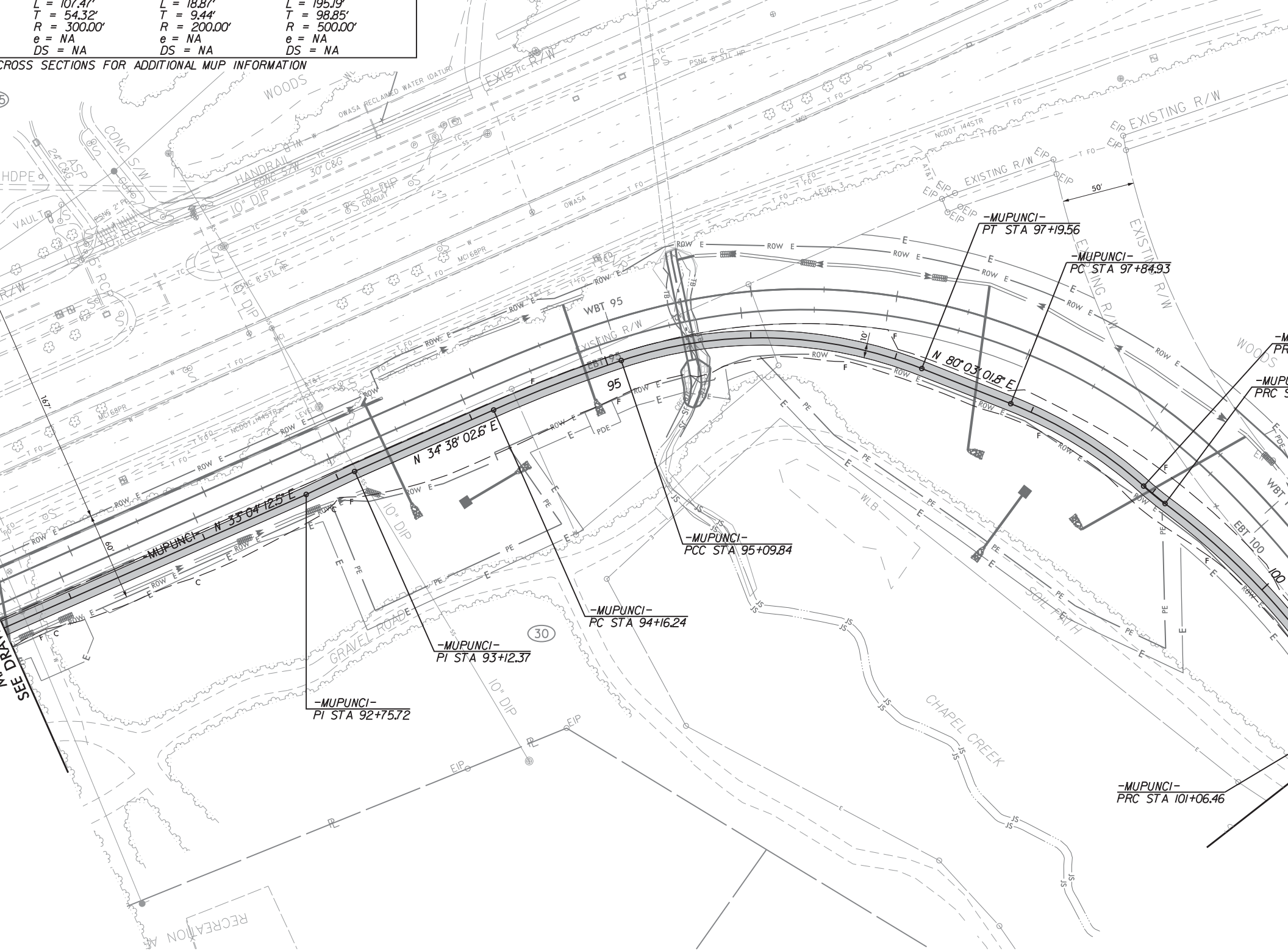


DESIGNED BY: PAR


Potential Culvert Extension
Potential Stormwater Basin
Potential Stormwater Basin
EXIST R/W
HANDRAIL
CARMICHAEL STREET
WALL W7_ST2
SEE STRUCTURAL PLANS
FORDHAM BOULEVARD
FORDHAM BOULEVARD
WBT 95
EXISTING R/W
ALLOC CONSERVATION EASEMENT
℄ WBT
14.00'
N 34° 38' 02.6" E
-MUPUNCI-
PT STA 97+19.56
-MUPUNCI-
PC STA 97+84.93
N 80° 03' 01.8" E
-MUPUNCI-
PCC STA 95+09.84
-MUPUNCI-
PC STA 94+16.24
-MUPUNCI-
PI STA 93+12.37
-MUPUNCI-
PI STA 92+75.72
-MUPUNCI-
PRC STA 101+06.46
-MUPUNCI- N 33° 04' 12.5" E
℄ EBT
EBT 100
WALL W7_ST2
SEE STRUCTURAL PLANS
GRAVEL ROAD
WOOD BRIDGE
SOIL PATH
ALLOC CONSER EASE AREA B
EIP EXISTING R/W
BELL SOU DEED BOOK
30
DESIGNED BY:
PAR

L = 107.47'	L = 18.87'	L = 195.19'
T = 54.32'	T = 9.44'	T = 98.85'
R = 300.00'	R = 200.00'	R = 500.00'
e = NA	e = NA	e = NA
DS = NA	DS = NA	DS = NA

CROSS SECTIONS FOR ADDITIONAL MUP INFORMATION



DESIGNED BY:
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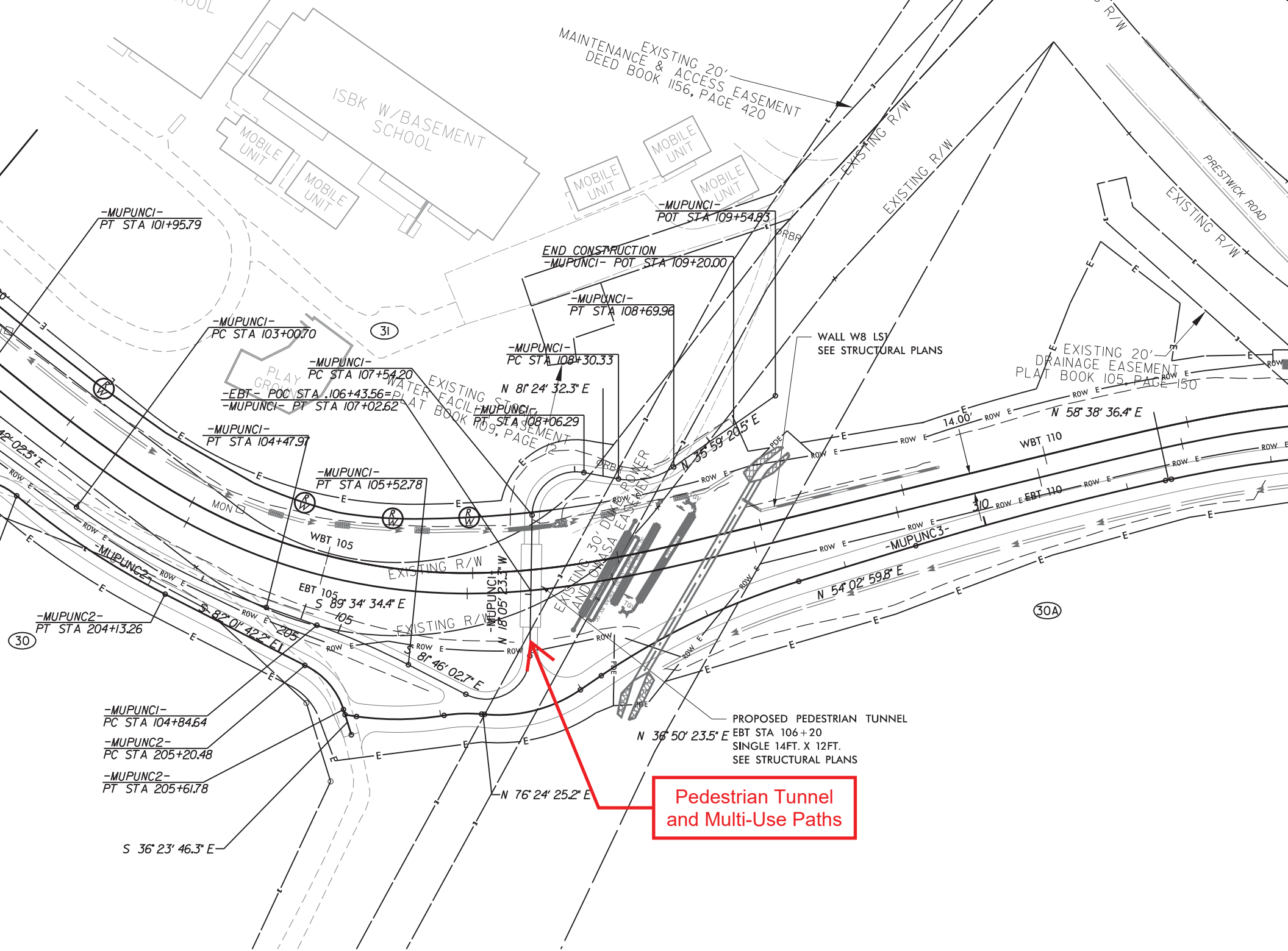

ISBK W/BASEMENT SCHOOL
MOBILE UNIT
MOBILE UNIT
MOBILE UNIT
MOBILE UNIT
MOBILE UNIT
EXISTING 20' MAINTENANCE & ACCESS EASEMENT DEED BOOK 1156, PAGE 420
EXISTING R/W
EXISTING R/W
EXISTING R/W
PRESTWICK ROAD
-MUPUNCI-
PT STA 101+95.79
-MUPUNCI-
PC STA 103+00.70
-MUPUNCI-
PC STA 107+54.20
-EBT- POC STA 106+43.56=
-MUPUNCI- PT STA 107+02.62
-MUPUNCI-
PT STA 104+47.97
-MUPUNCI-
PT STA 105+52.78
-MUPUNCI-
POT STA 109+54.83
END CONSTRUCTION
-MUPUNCI- POT STA 109+20.00
-MUPUNCI-
PT STA 108+69.96
-MUPUNCI-
PC STA 108+30.33
-MUPUNCI-
PT STA 108+06.29
N 81° 24' 32.3" E
N 35° 59' 20.5" E
WALL W8 LS1
SEE STRUCTURAL PLANS
EXISTING 20' DRAINAGE EASEMENT PLAT BOOK 105, PAGE 150
N 58° 38' 36.4" E
14.00'
WBT 110
EBT 110
WBT 105
EBT 105
-MUPUNC2-
PT STA 204+13.26
S 89° 34' 34.4" E
S 82° 01' 42.2" E
S 81° 46' 02.7" E
N 18° 05' 23.3" W
-MUPUNC3-
N 54° 02' 59.8" E
-MUPUNCI-
PC STA 104+84.64
-MUPUNC2-
PC STA 205+20.48
-MUPUNC2-
PT STA 205+61.78
S 36° 23' 46.3" E
N 76° 24' 25.2" E
N 36° 50' 23.5" E
PROPOSED PEDESTRIAN TUNNEL
EBT STA 106+20
SINGLE 14FT. X 12FT.
SEE STRUCTURAL PLANS
Pedestrian Tunnel and Multi-Use Paths
EXISTING 30' DUKE POWER AND CHASA EASEMENT
PLAY GROUND
WATER FACILITIES EASEMENT PLAT BOOK 109, PAGE 12
MON
30
30A
31
DESIGNED BY:
PAR

L = 89.33' T = 44.79' R = 500.00' e = NA DS = NA	L = 147.27' T = 74.17' R = 500.00' e = NA DS = NA	L = 68.14' T = 34.13' R = 500.00' e = NA DS = NA	L = 60.91' T = 48.31' R = 30.00' e = NA DS = NA	L = 52.10' T = 35.44' R = 30.00' e = NA DS = NA	L = 39.64' T = 20.93' R = 50.00' e = NA DS = NA

L = 16.88' T = 8.52' R = 50.00' e = NA DS = NA	L = 121.97' T = 61.26' R = 532.00' e = NA DS = NA

NOTE: SEE TRACK CROSS SECTIONS FOR ADDITIONAL MUP INFORMATION

-MUPUNC1-
PT STA 101+95.79

-MUPUNC1-
PC STA 103+00.70

-MUPUNC1-
PC STA 107+54.20

-EBT- POC STA .106+43.56=
-MUPUNC1- PT STA 107+02.62

-MUPUNC1-
PT STA 104+47.97

-MUPUNC1-
PT STA 105+52.78

-MUPUNC1-
PC STA 104+84.64

-MUPUNC2-
PT STA 204+13.26

-MUPUNC2-
PC STA 205+20.48

-MUPUNC2-
PT STA 205+61.78

-MUPUNC2- POT STA 205+65.35=
-MUPUNC3- PC STA 305+34.35

S 36° 23' 46.3" E

END CONSTRUCTION
-MUPUNC2- POT STA 205+79.78

BEGIN CONSTRUCTION
-MUPUNC3- POT STA 305+42.35

-MUPUNC3-
PRC STA 306+02.39

-MUPUNC1-
PC STA 105+96.92

-MUPUNC3-
PT STA 306+28.09

N 76° 24' 25.2" E

-MUPUNC3-
PC STA 306+30.06

-MUPUNC3-
PT STA 306+99.12

N 36° 50' 23.5" E

-MUPUNC3-
PC STA 307+16.34

-MUPUNC3-
PT STA 308+66.52

-MUPUNC3-
PC STA 309+50.10

N 54° 02' 59.8" E

-MUPUNC3-
PT STA 311+26.48

-MUPUNC3-
PC STA 311+30.7

N 58° 38' 36.4" E

-MUPUNC1-
PT STA 106+57.83

-MUPUNC1-
18" 05' 23.3" W
14'X10' PED. TUNNEL

S 89° 34' 34.4" E

S 81° 46' 02.7" E

S 82° 01' 42.2" E

N 35° 59' 29.5" E

END PROP. SDWK

-MUPUNC1-
POT STA 109+54.83

END CONSTRUCTION
-MUPUNC1- POT STA 109+20.00

-MUPUNC1-
PT STA 108+69.96

-MUPUNC1-
PC STA 108+30.33

N 81° 24' 32.3" E

-MUPUNC1-
PT STA 108+06.29

-MUPUNC3-

PI STA 305+68.70 Δ = 19° 29' 28.3" (LT) D = 28° 38' 52.4" L = 68.04' T = 34.35' R = 200.00' e = NA DS = NA	PI STA 306+15.31 Δ = 14° 43' 36.4" (RT) D = 57° 17' 44.8" L = 25.70' T = 12.92' R = 100.00' e = NA DS = NA	PI STA 306+66.03 Δ = 39° 34' 01.7" (LT) D = 57° 17' 44.8" L = 69.06' T = 35.97' R = 100.00' e = NA DS = NA	PI STA 307+92.00 Δ = 17° 12' 36.3" (RT) D = 11° 27' 33.0" L = 150.19' T = 75.66' R = 500.00' e = NA DS = NA	PI STA 310+38.34 Δ = 4° 35' 36.6" (RT) D = 2° 36' 15.7" L = 176.38' T = 88.24' R = 2,200.00' e = NA DS = NA	PI STA 312 Δ = 12° 27 D = 7° 09 L = 173.85 T = 87.27 R = 800.0 e = NA DS = NA

DESIGNED BY:
PAR

DURHAM-ORANGE L

UNC FINLEY GOLF COURSE

Figure 6.3-13: UNC Finley Golf Course (Existing)

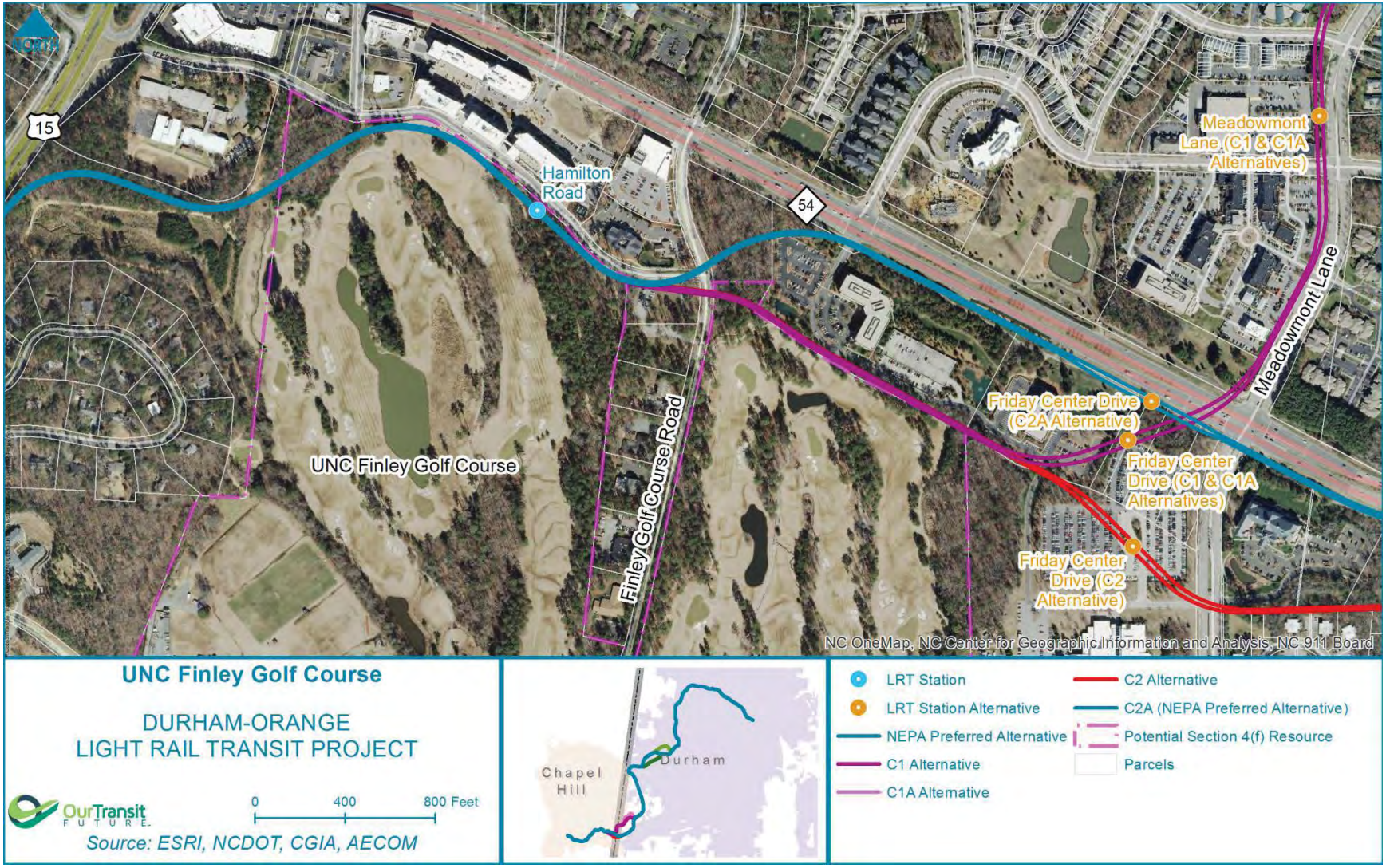
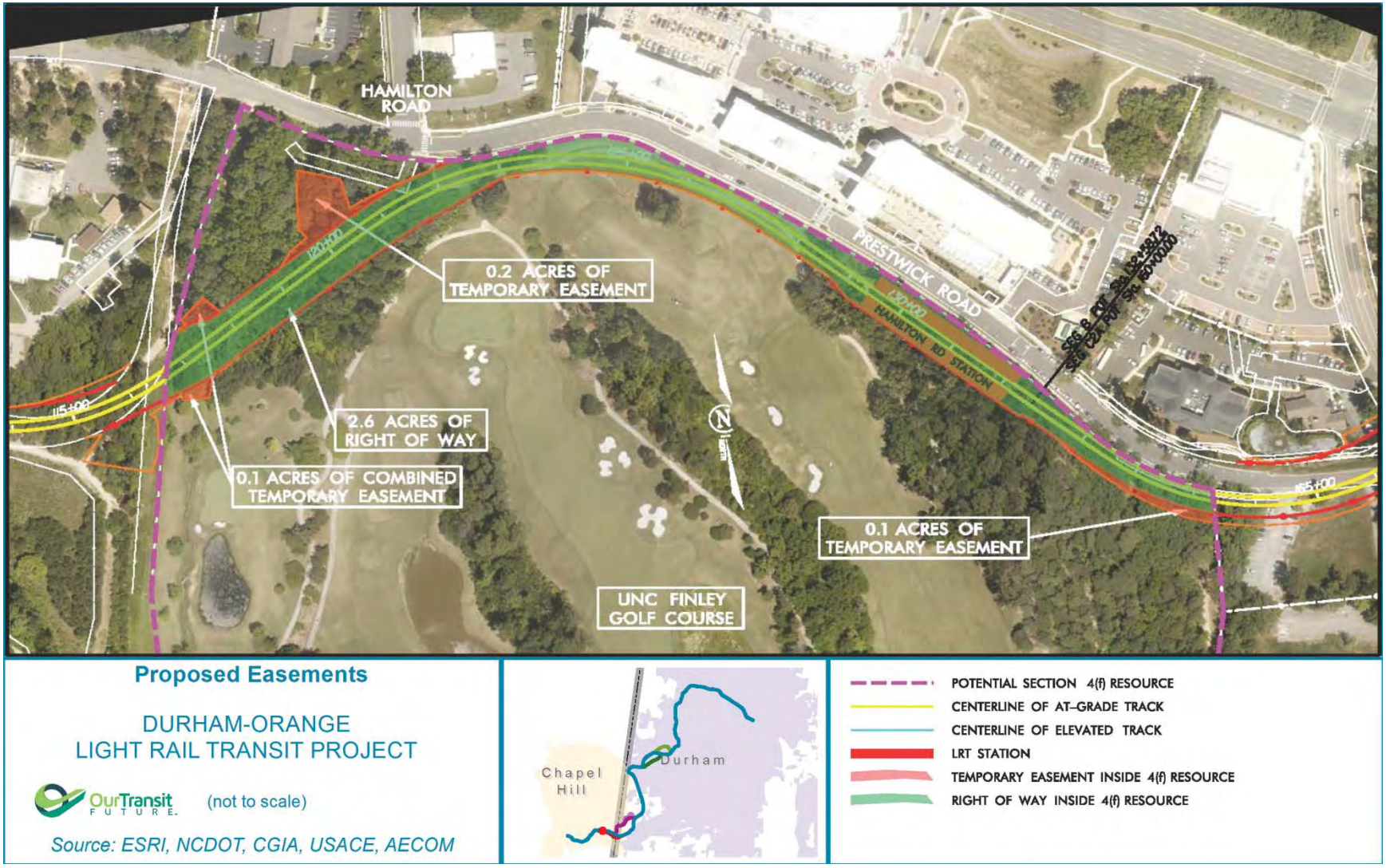


Figure 6.3-14: Proposed Easements at UNC Finley Golf Course



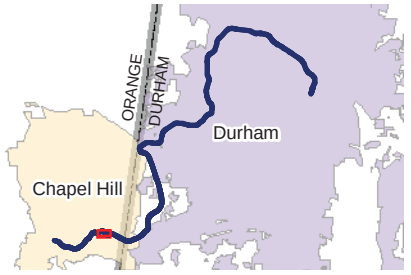
Proposed Easements: UNC Finley Golf Course

DURHAM-ORANGE
LIGHT RAIL TRANSIT PROJECT

GO Triangle

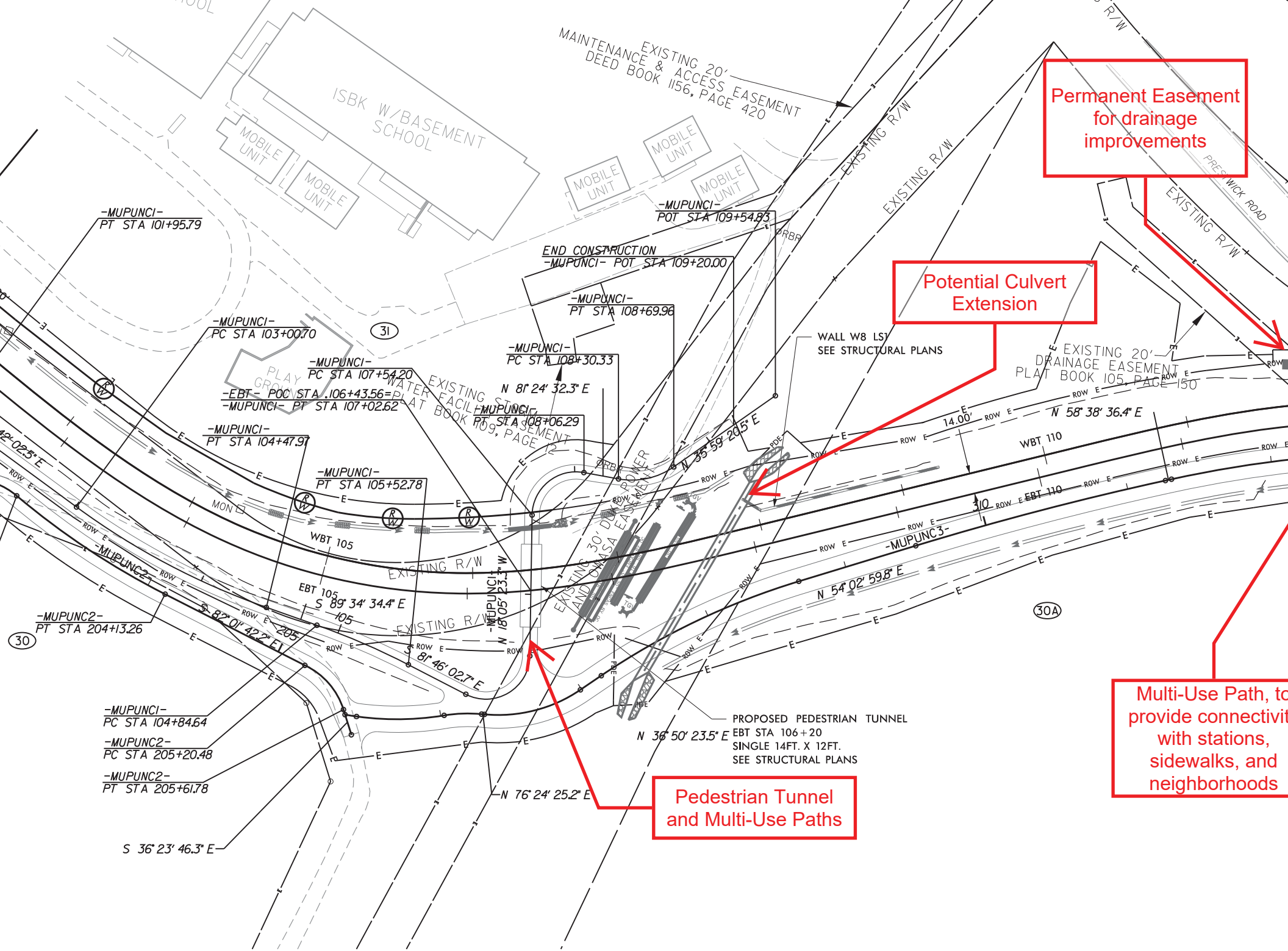
0 112.5 225 Feet

Sources: ESRI, CGIA, NCDOT, and HDR



- LRT Station
- Section 4(f) Resource
- Permanent Easement inside 4(f) Resource
- Temporary Easement inside 4(f) Resource
- Previous Design
- Proposed Light Rail Alignment

2018 Update


Permanent Easement for drainage improvements
Potential Culvert Extension
Multi-Use Path, to provide connectivit with stations, sidewalks, and neighborhoods
Pedestrian Tunnel and Multi-Use Paths
PROPOSED PEDESTRIAN TUNNEL
EBT STA 106+20
SINGLE 14FT. X 12FT.
SEE STRUCTURAL PLANS
WALL W8 LS1
SEE STRUCTURAL PLANS
ISBK W/BASEMENT SCHOOL
MOBILE UNIT
EXISTING 20' MAINTENANCE & ACCESS EASEMENT DEED BOOK 1156, PAGE 420
EXISTING R/W
PRESSWICK ROAD
EXISTING 20' DRAINAGE EASEMENT PLAT BOOK 105, PAGE 150
EXISTING 30' DUKE POWER AND CHASA EASEMENT
EXISTING STORM WATER FACILITY EASEMENT PLAT BOOK 109, PAGE 12
PLAY GROUND
-MUPUNC1- PT STA 101+95.79
-MUPUNC1- PC STA 103+00.70
-MUPUNC1- PC STA 107+54.20
-EBT- POC STA 106+43.56=
-MUPUNC1- PT STA 107+02.62
-MUPUNC1- PT STA 104+47.97
-MUPUNC1- PT STA 105+52.78
-MUPUNC1- PC STA 104+84.64
-MUPUNC2- PC STA 205+20.48
-MUPUNC2- PT STA 205+61.78
-MUPUNC2- PT STA 204+13.26
-MUPUNC1- POT STA 109+54.83
END CONSTRUCTION
-MUPUNC1- POT STA 109+20.00
-MUPUNC1- PT STA 108+69.96
-MUPUNC1- PC STA 108+30.33
-MUPUNC1- PT STA 108+06.29
-MUPUNC3-
WBT 105
WBT 110
EBT 105
EBT 110
N 81° 24' 32.3" E
N 35° 59' 20.5" E
N 58° 38' 36.4" E
N 54° 02' 59.8" E
N 18° 05' 23.3" W
N 36° 50' 23.5" E
N 76° 24' 25.2" E
S 89° 34' 34.4" E
S 82° 01' 42.2" E
S 81° 46' 02.7" E
S 36° 23' 46.3" E
14.00'
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30A
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DESIGNED BY:
PAR

L = 89.33' T = 44.79' R = 500.00' e = NA DS = NA	L = 147.27' T = 74.17' R = 500.00' e = NA DS = NA	L = 68.14' T = 34.13' R = 500.00' e = NA DS = NA	L = 60.91' T = 48.31' R = 30.00' e = NA DS = NA	L = 52.10' T = 35.44' R = 30.00' e = NA DS = NA	L = 39.64' T = 20.93' R = 50.00' e = NA DS = NA

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NOTE: SEE TRACK CROSS SECTIONS FOR ADDITIONAL MUP INFORMATION

-MUPUNC1-
PT STA 101+95.79

-MUPUNC1-
PC STA 103+00.70

-MUPUNC1-
PC STA 107+54.20

-EBT- POC STA .106+43.56=
-MUPUNC1- PT STA 107+02.62

-MUPUNC1-
PT STA 104+47.97

-MUPUNC1-
PT STA 105+52.78

-MUPUNC1-
PC STA 104+84.64

-MUPUNC2-
PT STA 204+13.26

-MUPUNC2-
PC STA 205+20.48

-MUPUNC2-
PT STA 205+61.78

-MUPUNC2- POT STA 205+65.35=
-MUPUNC3- PC STA 305+34.35

S 36° 23' 46.3" E

END CONSTRUCTION
-MUPUNC2- POT STA 205+79.78

BEGIN CONSTRUCTION
-MUPUNC3- POT STA 305+42.35

-MUPUNC3-
PRC STA 306+02.39

-MUPUNC1-
PC STA 105+96.92

-MUPUNC3-
PT STA 306+28.09

N 76° 24' 25.2" E

-MUPUNC3-
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-MUPUNC3-
PT STA 306+99.12

N 36° 50' 23.5" E

-MUPUNC3-
PC STA 307+16.34

-MUPUNC3-
PT STA 308+66.52

-MUPUNC3-
PC STA 309+50.10

N 54° 02' 59.8" E

-MUPUNC3-
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-MUPUNC3-
PC STA 311+30.7

N 58° 38' 36.4" E

-MUPUNC1-
POT STA 109+54.83

END CONSTRUCTION
-MUPUNC1- POT STA 109+20.00

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PT STA 108+69.96

-MUPUNC1-
PC STA 108+30.33

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N 35° 59' 29.5" E

END PROP. SDWK

-MUPUNC1-
PT STA 106+57.83

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14'X10' PED. TUNNEL

S 89° 34' 34.4" E

S 81° 01' 42.2" E

S 81° 46' 02.7" E

-MUPUNC3-

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Multi-U
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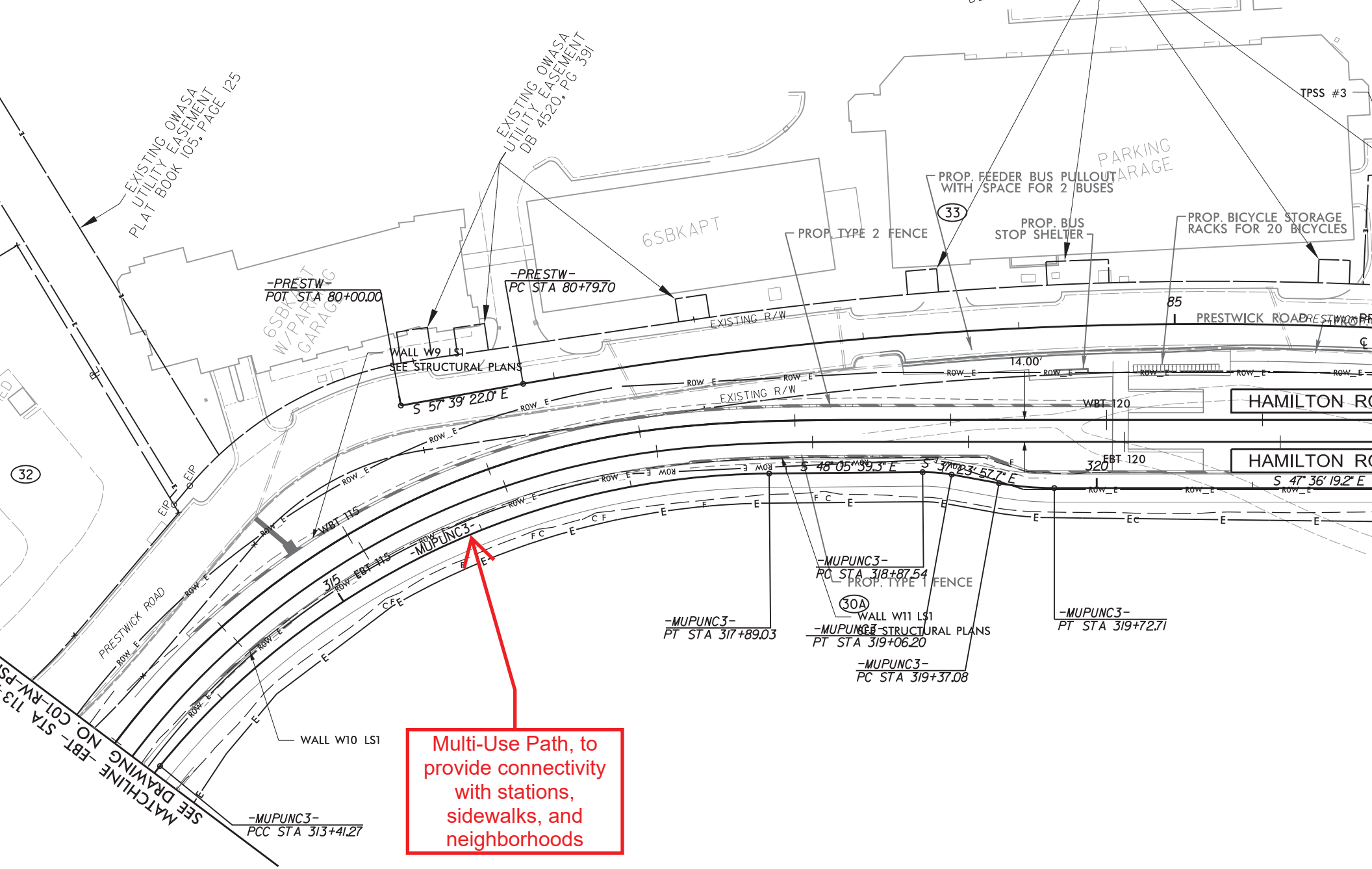
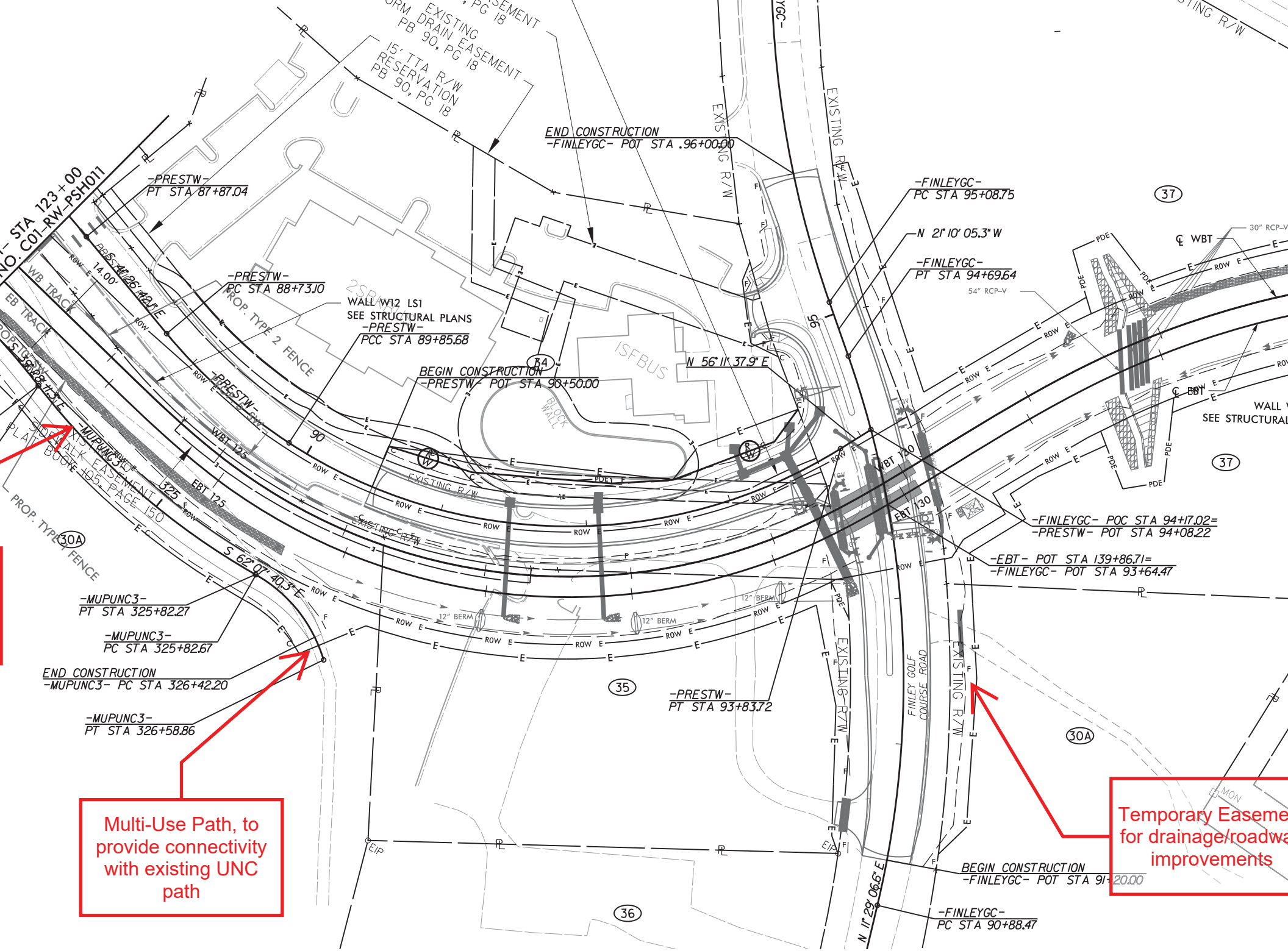
DESIGNED BY:
PAR

DURHAM-ORANGE L



DESIGNED BY:
PAB

DURHAM-ORANGE L



DESIGNED BY:
PAR

GO Triangle

Section 4(f) Recreation Resource Meeting

April 13, 2018
UNC Chapel Hill

Agenda

1. Agenda distribution and introductions
2. D-O LRT Update
3. Section 4(f) Resources
4. Resource Impacts/Mitigation
5. Proposed Refinements Impacts/Mitigation
6. Questions/Concerns

Durham-Orange Light Rail Transit Project – Update

- **DEIS & Section 4(f) Evaluation:** August 2015
- **Combined FEIS/ROD & Final 4(f) Determination:** February 2016
- **Supplemental EA & Section 4(f) Evaluation for NCCU Extension:** November 2016
- **Amended ROD & Final Section 4(f) Determination:** December 2016
- **50% Design Plans**
- **Supplemental EA & Section 4(f) Evaluation for Proposed Project Refinements:** *underway*
  - Re-evaluate effects disclosed in Amended ROD
  - Re-evaluate effects determination for Section 4(f) resources
    - Conducting coordination and seeking UNC's comments
    - FTA will include draft Section 4(f) evaluation with the Supplemental EA

What is Section 4(f)?

- Section 4(f) of the Department of Transportation Act of 1966
- Requires the consideration of public parklands and recreational resources, wildlife and waterfowl refuges, and historic resources
- Prior determinations concluded a ***de minimis*** impact for the UNC operated / planned 4(f) resources
  - Impacts generally minor in nature
  - After taking into account avoidance, minimization, mitigation and enhancement measures, the project has only *de minimis* impacts to the activities, features, or attributes qualifying a park, recreation area, or refuge for protection under Section 4(f)

Final Section 4(f) Determination

UNC Section 4(f) Resources	Prior Section 4(f) Determination
UNC Central Park (planned)	*de minimis* impact
UNC Coker Pinetum	*de minimis* impact
UNC Open Space	*de minimis* impact
UNC Finely Golf Course and Athletic Fields	*de minimis* impact

Central Park South (planned)

	4(f) Evaluation (2016)	Proposed Changes (2018)
Permanent easement	0.9 ac	1.9 ac
Temporary easement	1.1 ac	0.5 ac

Central Park South (planned)

Proposed Easements:
UNC Central Park South (Planned)

DURHAM-ORANGE
LIGHT RAIL TRANSIT PROJECT

GO Triangle

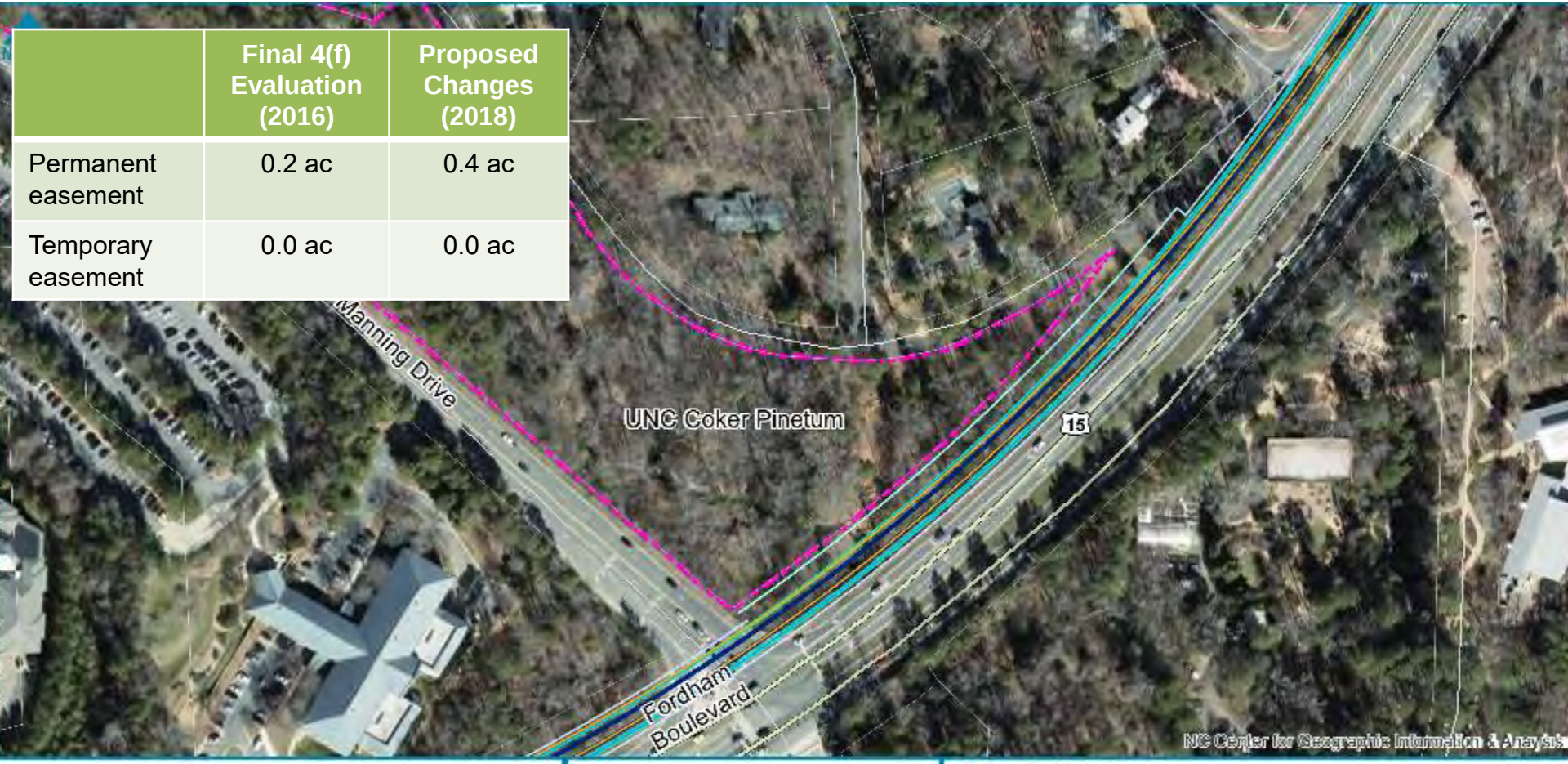
0 100 200 Feet

Sources: ESRI, CGIA, NCDOT, and HDR

- Permanent Easement inside 4(f) Resource
- Temporary Easement inside 4(f) Resource
- Parcels
- Proposed Light Rail Alignment
- Previous Design
- Aerial Sections
- Section 4(f) Resource

Coker Pinetum

	Final 4(f) Evaluation (2016)	Proposed Changes (2018)
Permanent easement	0.2 ac	0.4 ac
Temporary easement	0.0 ac	0.0 ac



Coker Pinetum

Proposed Easements: UNC Coker Pinetum

DURHAM-ORANGE
LIGHT RAIL TRANSIT PROJECT

GO Triangle

0 80 160 Feet

Sources: ESRI, CGIA, NCDOT, and HDR

Section 4(f) Resource

Permanent Easement inside 4(f) Resource

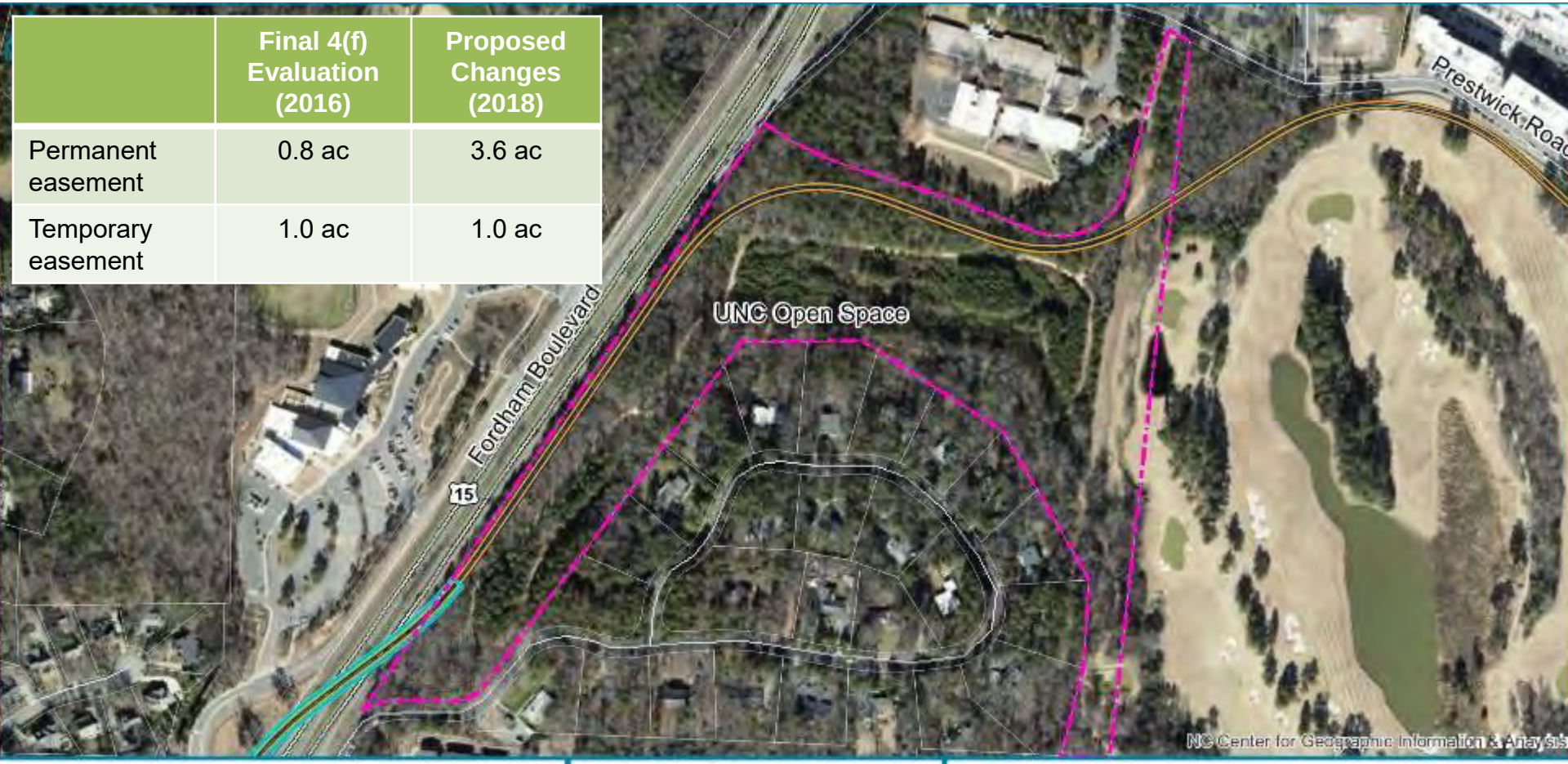
Proposed Light Rail Alignment

Previous Design

Aerial Sections

UNC Open Space

	Final 4(f) Evaluation (2016)	Proposed Changes (2018)
Permanent easement	0.8 ac	3.6 ac
Temporary easement	1.0 ac	1.0 ac



UNC Open Space

DURHAM-ORANGE LIGHT RAIL TRANSIT PROJECT

GO Triangle

0 200 400 Feet

Sources: ESRI, CGIA, NCDOT, and HDR

LRT Station
Previous Design
Section 4(f) Resource
Parcels
Proposed Light Rail Alignment
Aerial Sections

UNC Open Space

Proposed Easements: UNC Open Space

DURHAM-ORANGE
LIGHT RAIL TRANSIT PROJECT

GO Triangle

0 125 250 Feet

Sources: ESRI, CGIA, NCDOT, and HDR

- LRT Station
- Section 4(f) Resource
- Permanent Easement inside 4(f) Resource
- Temporary Easement inside 4(f) Resource
- Previous Design
- Proposed Light Rail Alignment
- Aerial Sections

UNC Finley Golf Course

	Final 4(f) Evaluation (2016)	Proposed Changes (2018)
Permanent easement	2.6 ac	2.3 ac
Temporary easement	0.4 ac	1.5 ac

UNC Finley Golf Course

DURHAM-ORANGE
LIGHT RAIL TRANSIT PROJECT

GO Triangle

0 200 400 Feet

Sources: ESRI, CGIA, NCDOT, and HDR

LRT Station
Previous Design
Section 4(f) Resource
Parcels
Proposed Light Rail Alignment

UNC Finley Golf Course

Proposed Easements: UNC Finley Golf Course

DURHAM-ORANGE
LIGHT RAIL TRANSIT PROJECT

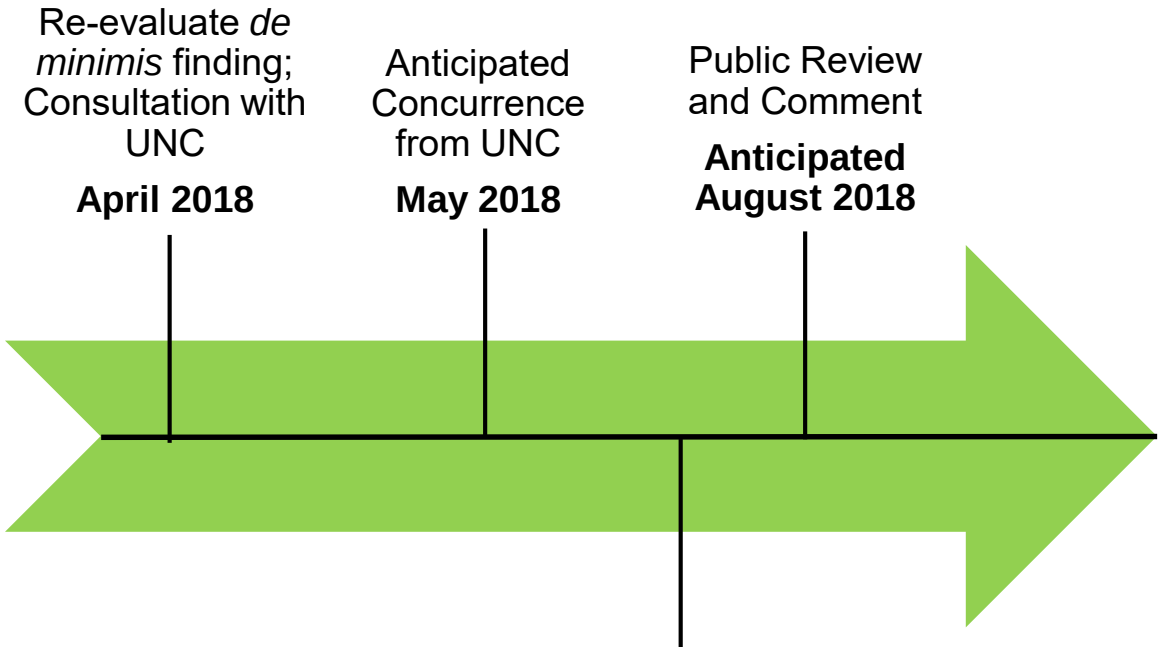
GO Triangle

0 100 200 Feet

Sources: ESRI, CGIA, NCDOT, and HDR

- LRT Station
- Section 4(f) Resource
- Permanent Easement inside 4(f) Resource
- Temporary Easement inside 4(f) Resource
- Previous Design
- Proposed Light Rail Alignment

Next Steps



* Requires Finding of No Significant Impact

GO Triangle

Questions