

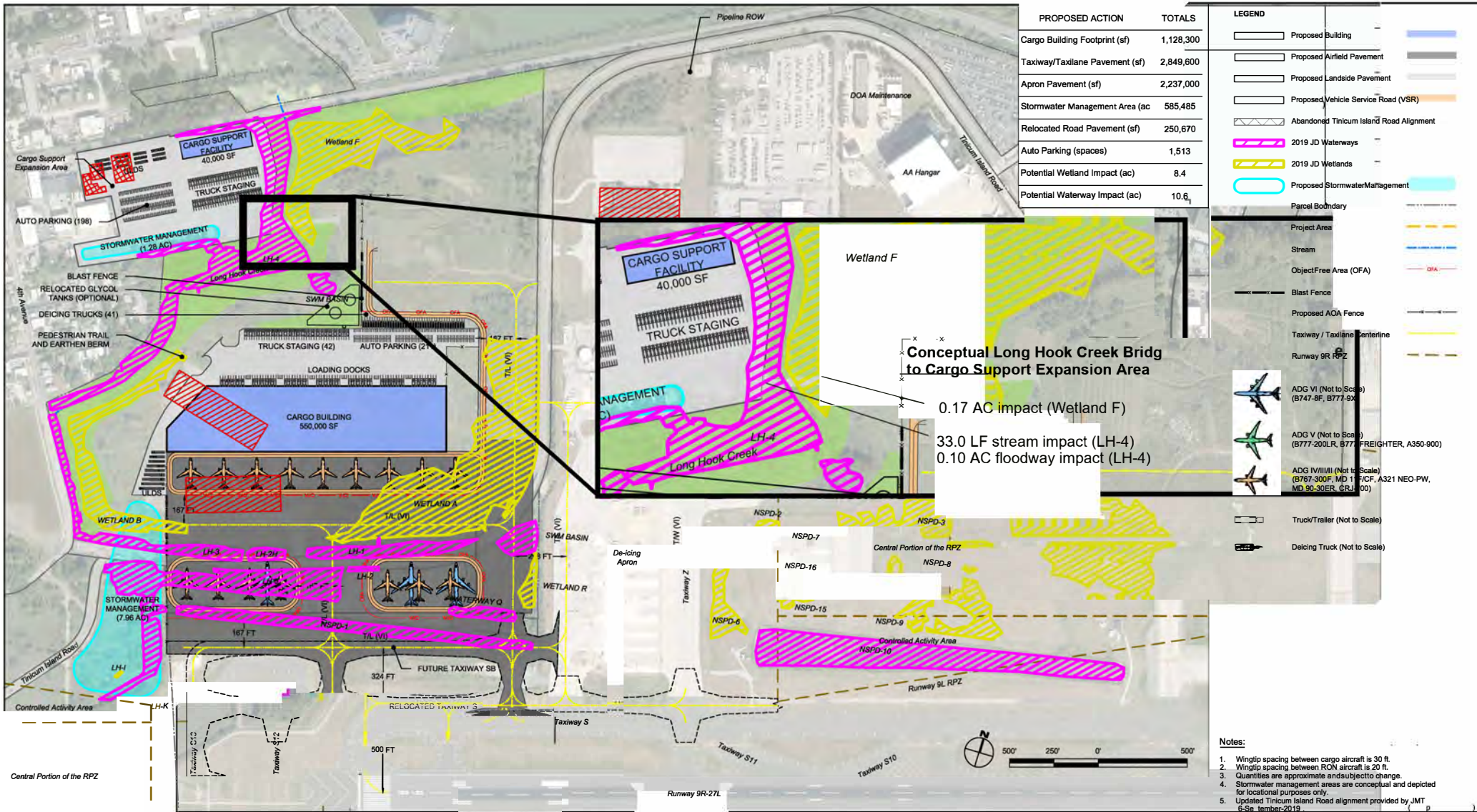
FDR PARK WETLAND
MITIGATION PROJECT

LIMIT OF WEST
CARGO PROJECT

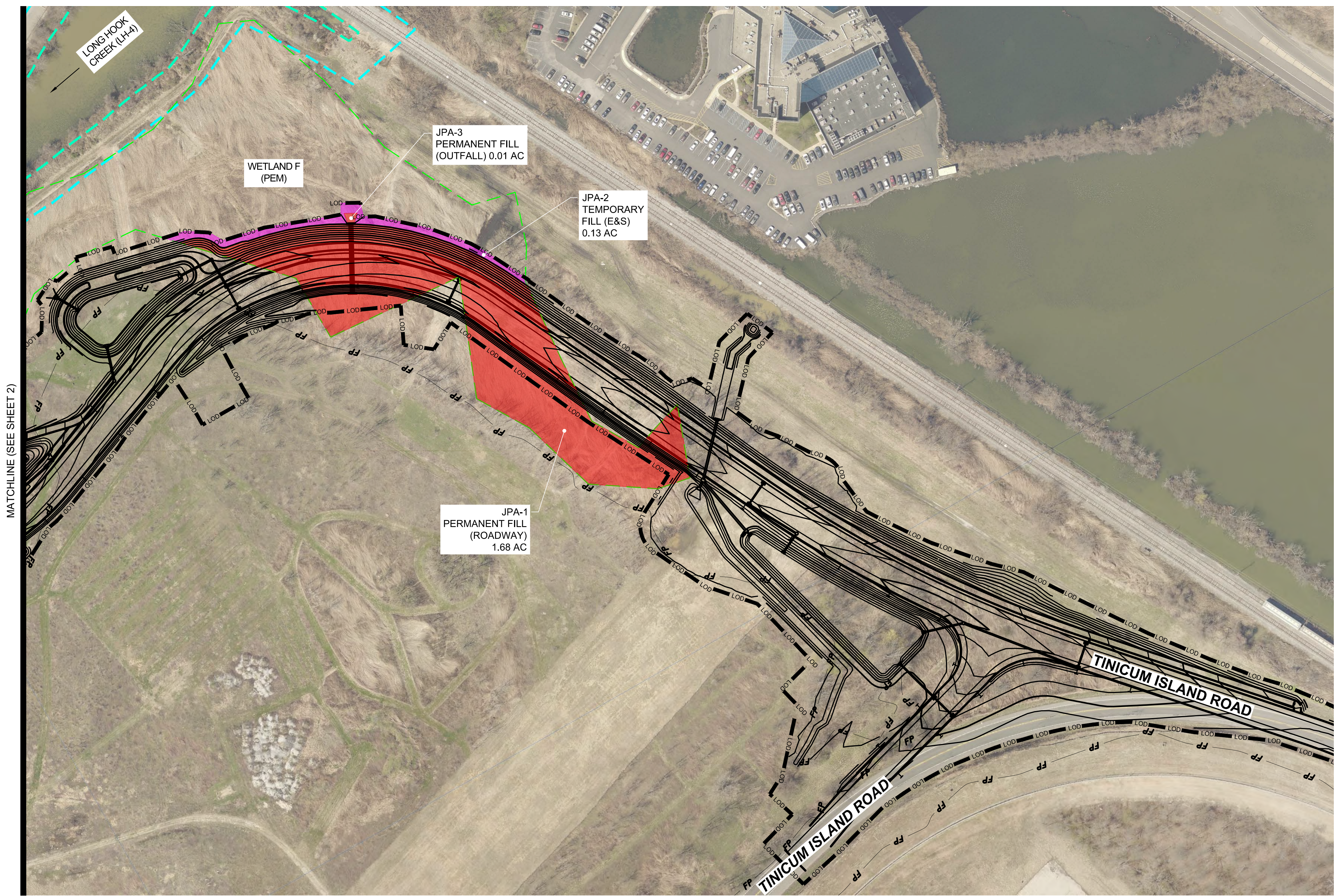


TINICUM ISLAND
ROAD RELOCATION
PROJECT

PHILADELPHIA
INTERNATIONAL
AIRPORT



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LEGEND

- EXISTING WETLAND BOUNDARY
- EXISTING WATERS OF THE US
- EXISTING 100-YR FLOODWAY
- EXISTING DRAINAGE AND DETENTION POND EASEMENT
- EXISTING 100-YR FLOODPLAIN (FEMA ZONE AE)
- LIMIT OF DISTURBANCE (27.96 AC)

LONG HOOK CREEK WATERCOURSE IMPACTS

- PERMANENT IMPACTS (0.19 AC)
- TEMPORARY IMPACTS (0.10 AC)

LONG HOOK CREEK FLOODWAY IMPACTS

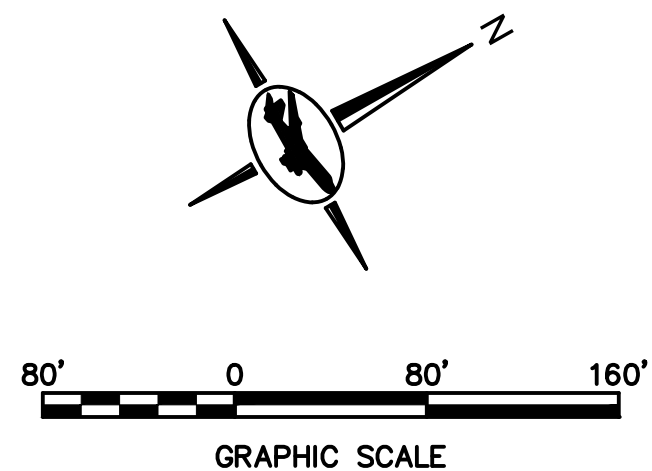
- PERMANENT IMPACTS (2.73 AC)
- TEMPORARY IMPACTS (0.42 AC)

WETLAND IMPACTS

- PERMANENT IMPACTS (2.09 AC)
- TEMPORARY IMPACTS (0.89 AC)

E-4

- NOTES:
- AERIAL PHOTOGRAPHY OBTAINED FROM THE PENNSYLVANIA SPATIAL DATA ACCESS (PASDA) WEBSITE.
 - WETLAND DELINEATION OBTAINED FROM "DELINEATION OF WETLANDS AND WATERWAYS OF THE PHILADELPHIA INTERNATIONAL AIRPORT" PREPARED BY PAQ, INC. DATED 6/5/2019.
 - DELINEATION OF WETLAND B HAS BEEN REVISED BASED UPON COORDINATION WITH TINICUM TOWNSHIP AND REVIEWING AGENCIES TO EXCLUDE EXISTING STORMWATER BASIN CONTAINED WITHIN DRAINAGE AND DETENTION POND EASEMENT AS SHOWN ON LOT 28-29 AIRPORT BUSINESS CENTER PLANS PREPARED BY HERBERT E. MACCOMBIE, JR., P.E. CONSULTING ENGINEERS AND SURVEYORS, DATED JUNE 4, 1986.
 - FEMA DETERMINED FLOODWAY DOES NOT EXIST FOR LONG HOOK CREEK; THEREFORE THE FLOODWAY WAS DELINEATED BY EXTENDING 50 FEET LANDWARD FROM THE TOP OF EACH STREAMBANK (ORDINARY HIGH WATER MARK).



APPROVED:

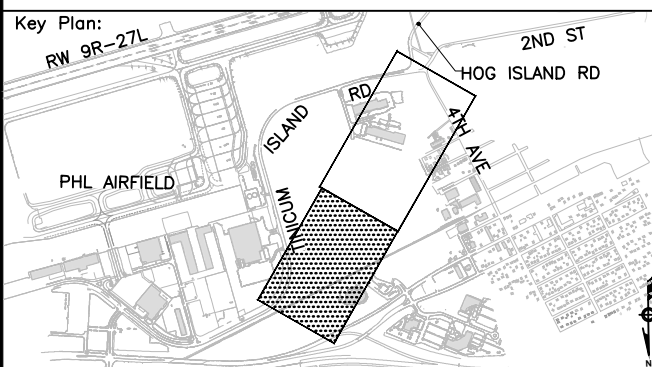
ARCHITECT/ENGINEER OF RECORD DATE

Designer:



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Seal:



REVISION	DESCRIPTION	DATE
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Project:
TINICUM ISLAND ROAD RELOCATION

AQUATIC RESOURCE IMPACT PLAN

Submission: **JOINT PERMIT APPLICATION**

DMA Project Manager: **ADAMO, VINCENT**

Consultant: **JMT**

Task No.:	Drawn By: MAF
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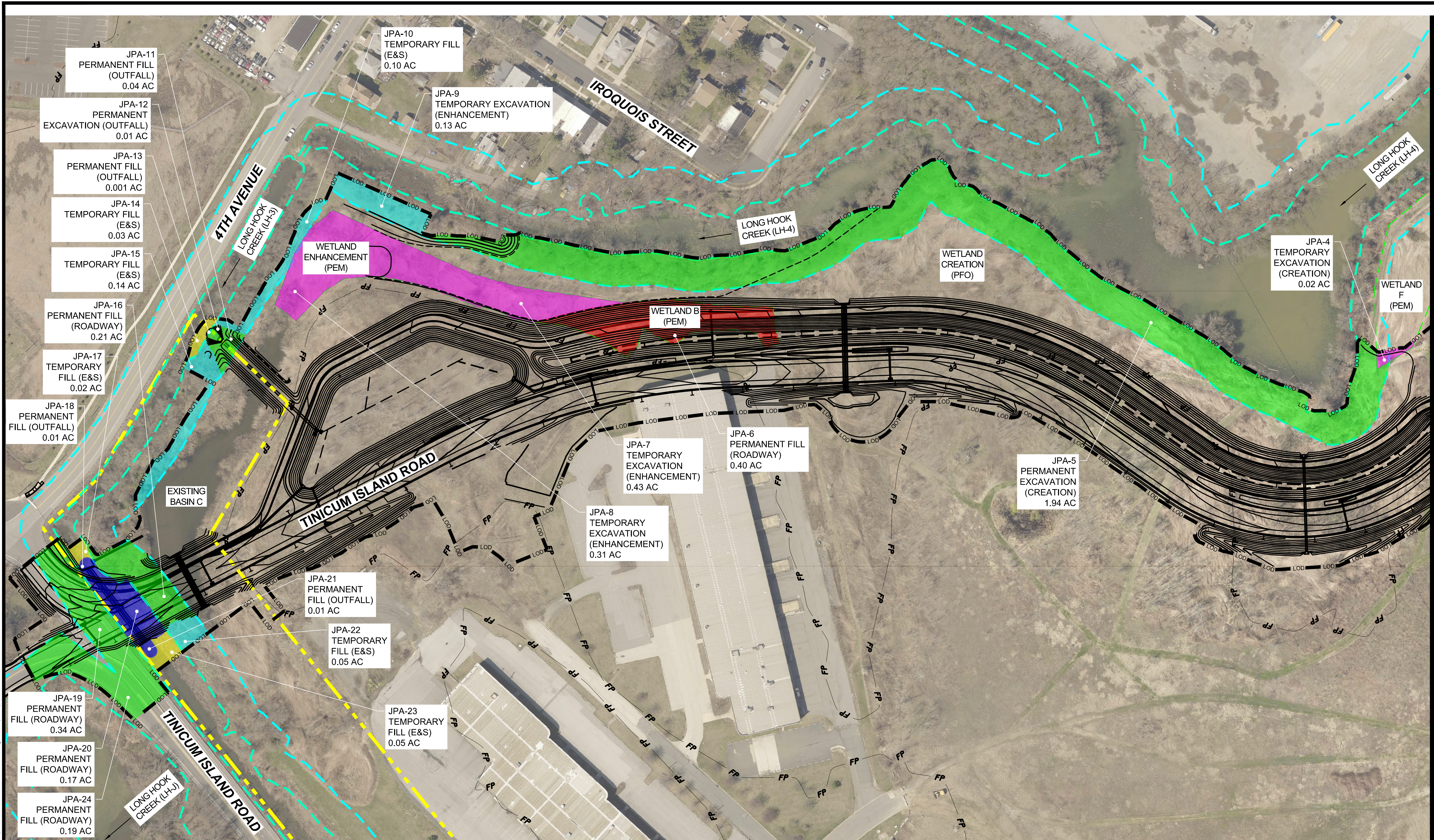
Date: 2021-05-04	Checked By: TJC
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Work No.:	Drawing No.:
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1

Sheet No.: **1** of **2**

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LEGEND

- EXISTING WETLAND BOUNDARY
- EXISTING WATERS OF THE US
- EXISTING 100-YR FLOODWAY
- EXISTING DRAINAGE AND DETENTION POND EASEMENT
- EXISTING 100-YR FLOODPLAIN (FEMA ZONE AE)
- LIMIT OF DISTURBANCE (27.96 AC)

LONG HOOK CREEK WATERCOURSE IMPACTS

- PERMANENT IMPACTS (0.19 AC)
- TEMPORARY IMPACTS (0.10 AC)

LONG HOOK CREEK FLOODWAY IMPACTS

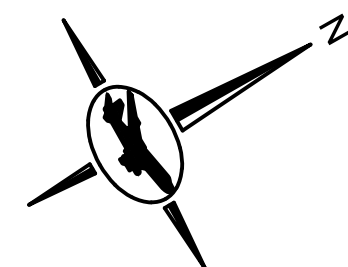
- PERMANENT IMPACTS (2.73 AC)
- TEMPORARY IMPACTS (0.42 AC)

WETLAND IMPACTS

- PERMANENT IMPACTS (2.09 AC)
- TEMPORARY IMPACTS (0.89 AC)

E-5

- NOTES:**
- AERIAL PHOTOGRAPHY OBTAINED FROM THE PENNSYLVANIA SPATIAL DATA ACCESS (PASDA) WEBSITE.
 - WETLAND DELINEATION OBTAINED FROM "DELINEATION OF WETLANDS AND WATERWAYS OF THE PHILADELPHIA INTERNATIONAL AIRPORT" PREPARED BY PAQ, INC. DATED 6/5/2019.
 - DELINEATION OF WETLAND B HAS BEEN REVISED BASED UPON COORDINATION WITH TINCUM TOWNSHIP AND REVIEWING AGENCIES TO EXCLUDE EXISTING STORMWATER BASIN CONTAINED WITHIN DRAINAGE AND DETENTION POND EASEMENT AS SHOWN ON LOT 28-29 AIRPORT BUSINESS CENTER PLANS PREPARED BY HERBERT E. MACCOMBIE, JR., P.E. CONSULTING ENGINEERS AND SURVEYORS, DATED JUNE 4, 1986.
 - FEMA DETERMINED FLOODWAY DOES NOT EXIST FOR LONG HOOK CREEK; THEREFORE THE FLOODWAY WAS DELINEATED BY EXTENDING 50 FEET LANDWARD FROM THE TOP OF EACH STREAMBANK (ORDINARY HIGH WATER MARK).



MATCHLINE (SEE SHEET 1)

PHL PHILADELPHIA INTERNATIONAL AIRPORT

APPROVED: _____

ARCHITECT/ENGINEER OF RECORD _____ DATE _____

Designer: _____

JMT

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Seal: _____

Key Plan:
RW 98-27L
2ND ST
HOG ISLAND RD
PHL AIRFIELD
TINCUM ISLAND

REVISION	DESCRIPTION	DATE

Project: **TINCUM ISLAND ROAD RELOCATION**

Sheet Title: **AQUATIC RESOURCE IMPACT PLAN**

Submission: **JOINT PERMIT APPLICATION**

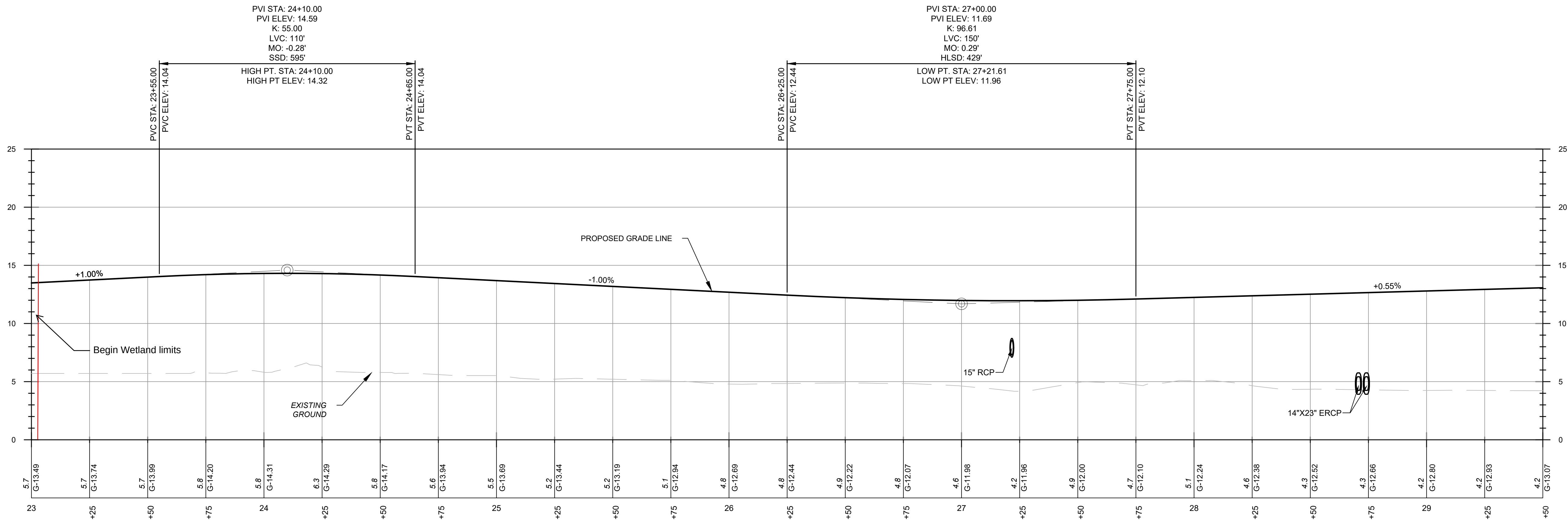
DMA Project Manager: **ADAMO, VINCENT**

Consultant: **JMT**

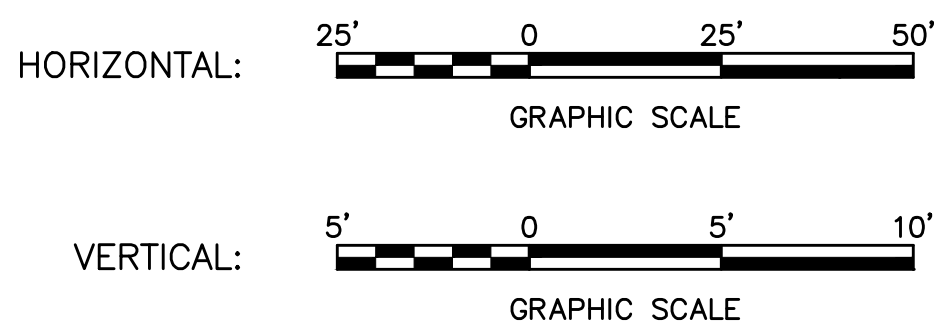
Task No.:	Drawn By: MAF
Date: 2021-05-04	Checked By: TJC
Work No.:	Drawing No.: 2

Sheet No.: **2** of **2**

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TINICUM ISLAND ROAD PROFILE - STA 23+00 TO 29+50



E-6

APPROVED:

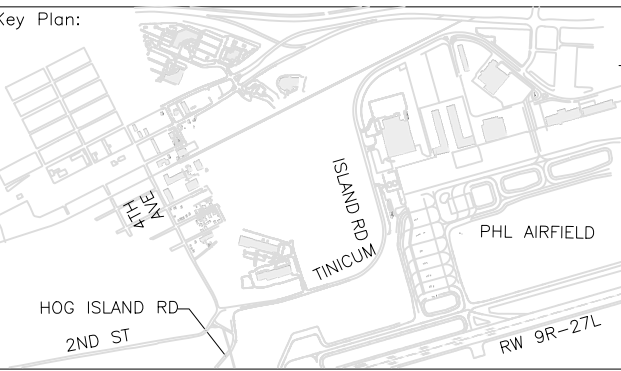
ARCHITECT/ENGINEER OF RECORD DATE

Designer:



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Seal:



REVISION	DESCRIPTION	DATE
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Project:

**TINICUM ISLAND
ROAD RELOCATION**

Sheet Title:

PROFILE - 3

Submission: **100% SUBMISSION**

DOA Project Manager: **ADAMO, VINCENT**

Consultant: **JMT**

Task No.: Drawn By: **CG**

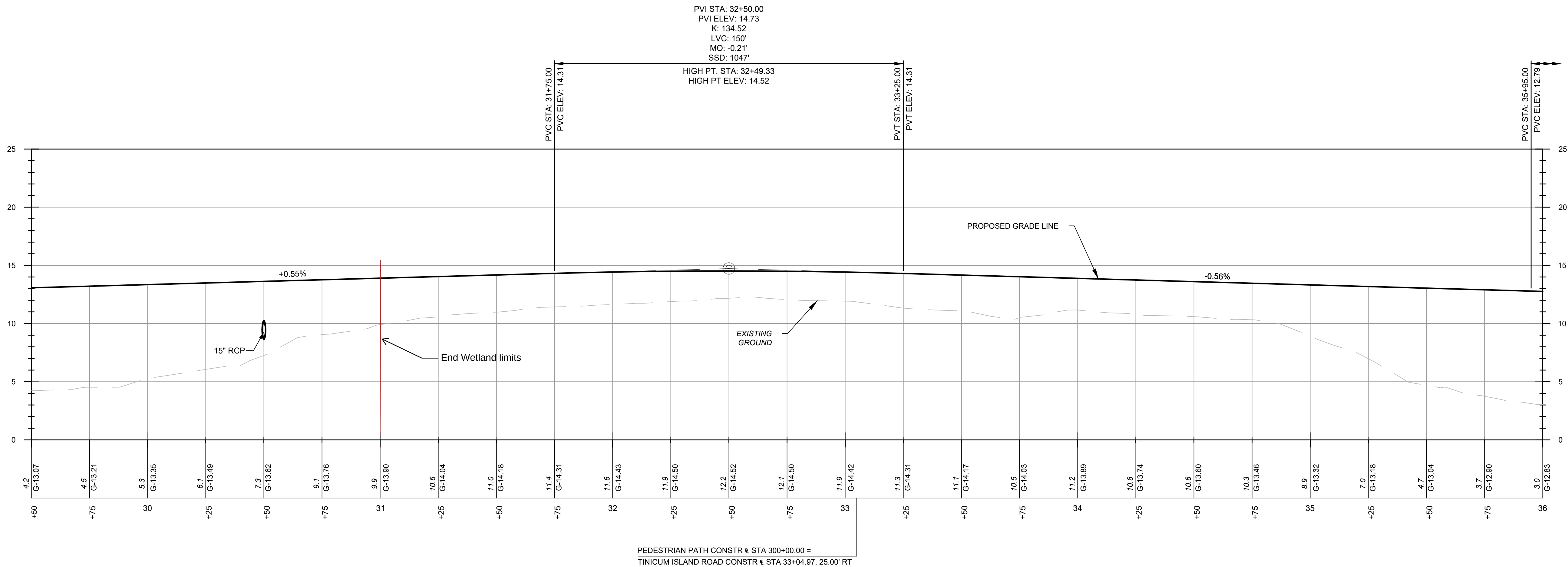
Date: **2021-09-17** Checked By: **AR**

Work No.: Drawing No.:

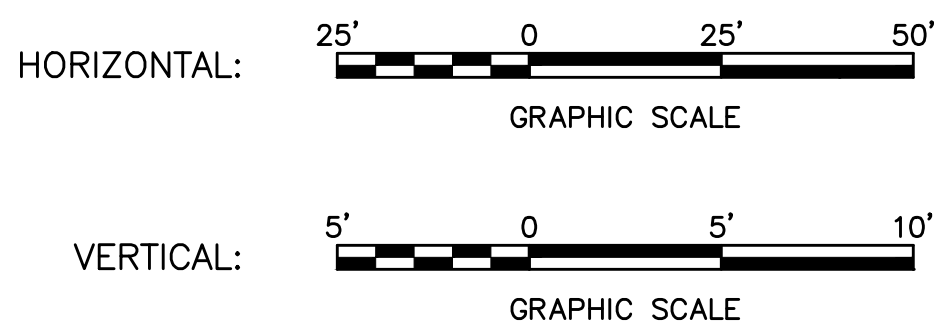
C-203

Sheet No.: **29** of **274**

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TINICUM ISLAND ROAD PROFILE - STA 29+50 TO 36+00



E-7

APPROVED:

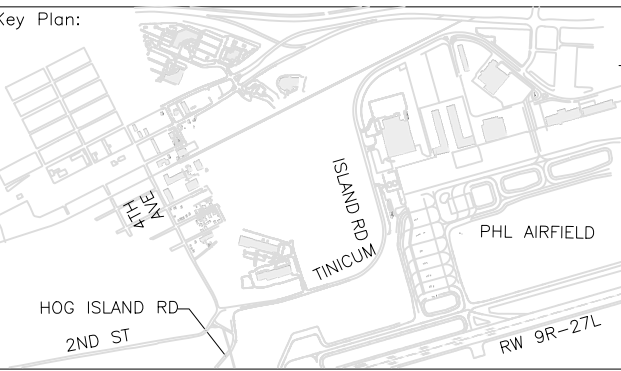
ARCHITECT/ENGINEER OF RECORD DATE

Designer:



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Seal:



REVISION	DESCRIPTION	DATE
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Project:

**TINICUM ISLAND
ROAD RELOCATION**

Sheet Title:

PROFILE - 4

Submission: **100% SUBMISSION**

DOA Project Manager: **ADAMO, VINCENT**

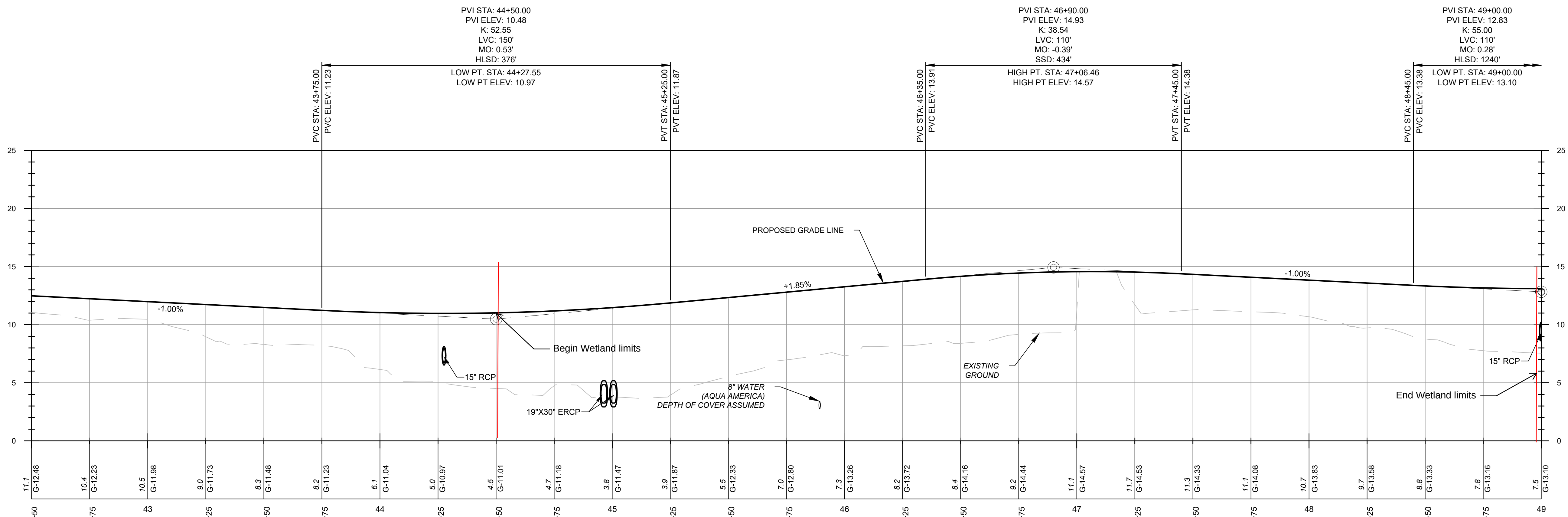
Consultant: **JMT**

Task No.:	Drawn By: CG
Date: 2021-09-17	Checked By: AR
Work No.:	Drawing No.:

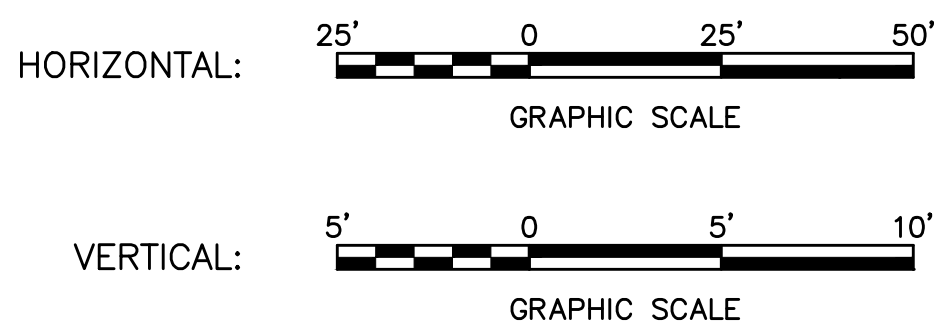
C-204

Sheet No.: **30** of **274**

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TINICUM ISLAND ROAD PROFILE - STA 42+50 TO 49+00



E-8

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REVISION DESCRIPTION DATE

Project:

TINICUM ISLAND
ROAD RELOCATION

Sheet Title:

PROFILE - 6

Submission: 100% SUBMISSION

DOA Project Manager: ADAMO, VINCENT

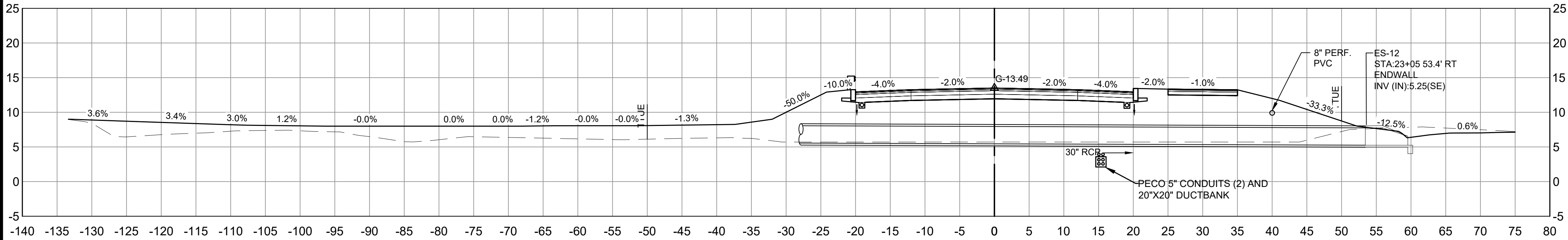
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Task No.: Drawn By: CG

Date: 2021-09-17 Checked By: AR

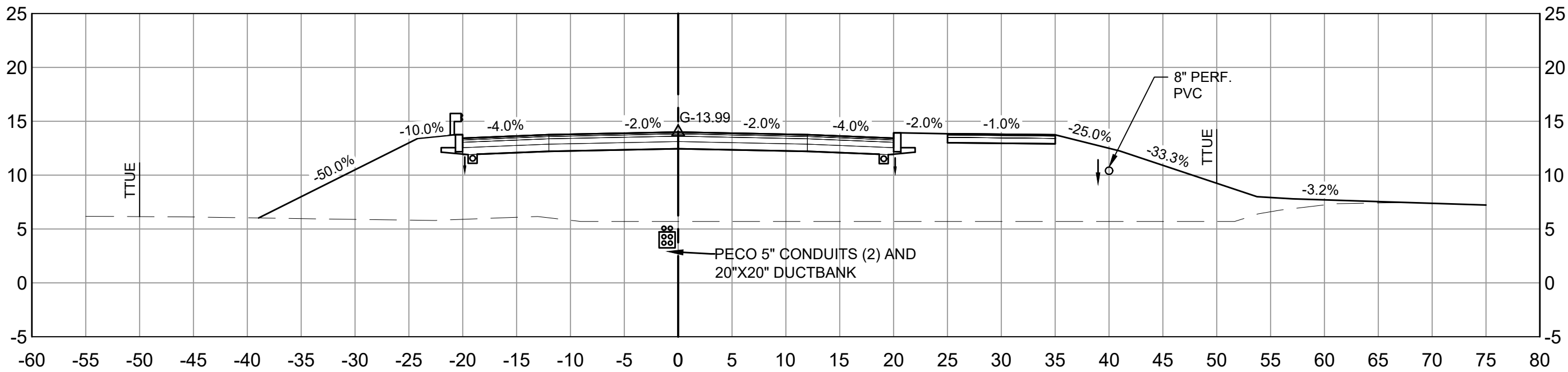
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Sheet No.: 32 of 274



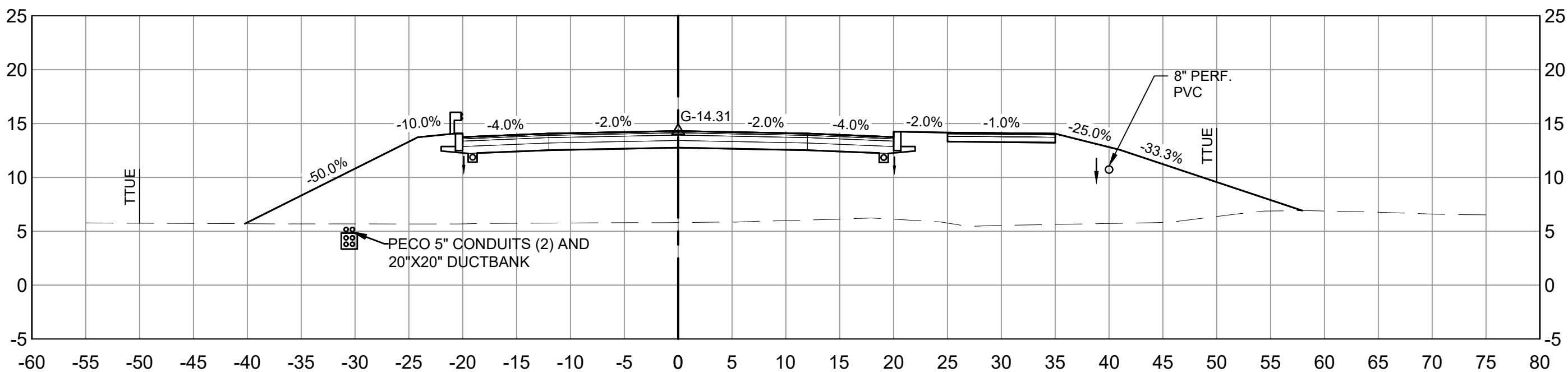
23+00

CUT/FILL AT STA 23+00.00	
C - 0 SF	F - 519 SF



23+50

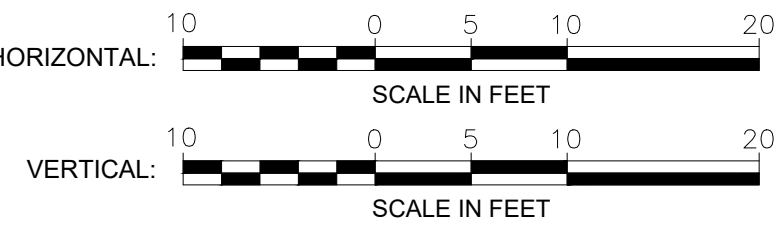
CUT/FILL AT STA 23+50.00	
C - 0 SF	F - 519 SF



24+00

CUT/FILL AT STA 24+00.00	
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E-9



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Key Plan:

REVISION	DESCRIPTION	DATE
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Project:

TINICUM ISLAND
ROAD RELOCATION

Sheet Title:

CROSS SECTIONS - 10

Submission: 100% SUBMISSION

DOA Project Manager: ADAMO, VINCENT

Consultant: JMT

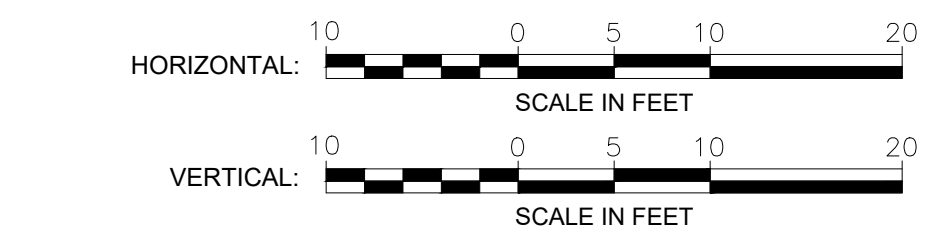
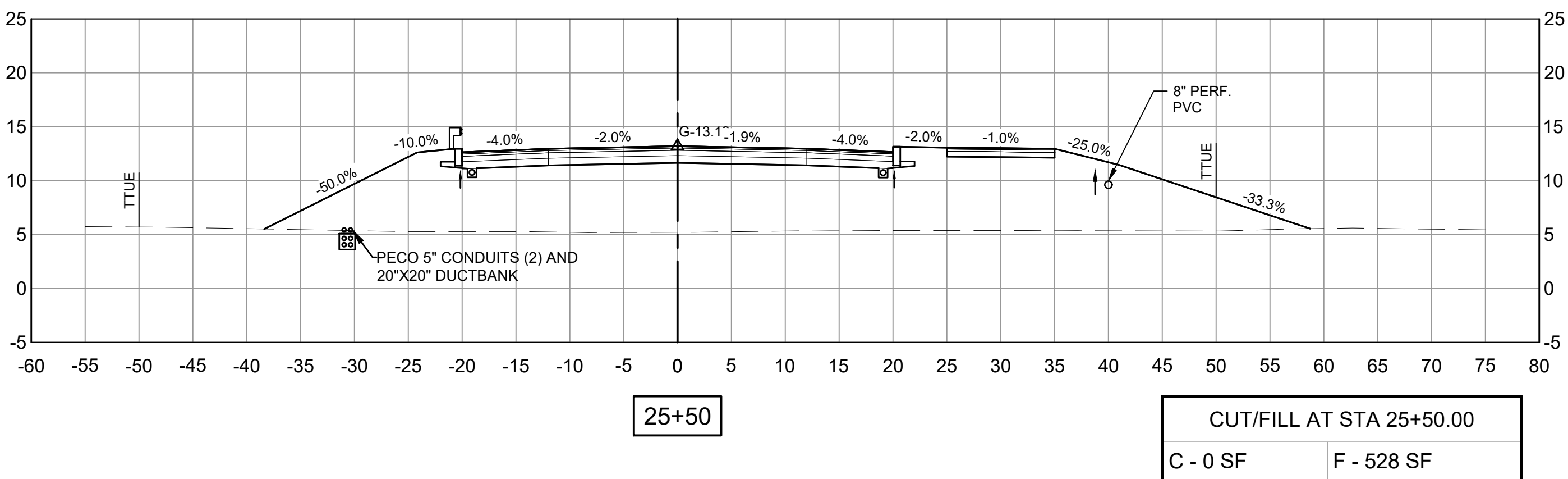
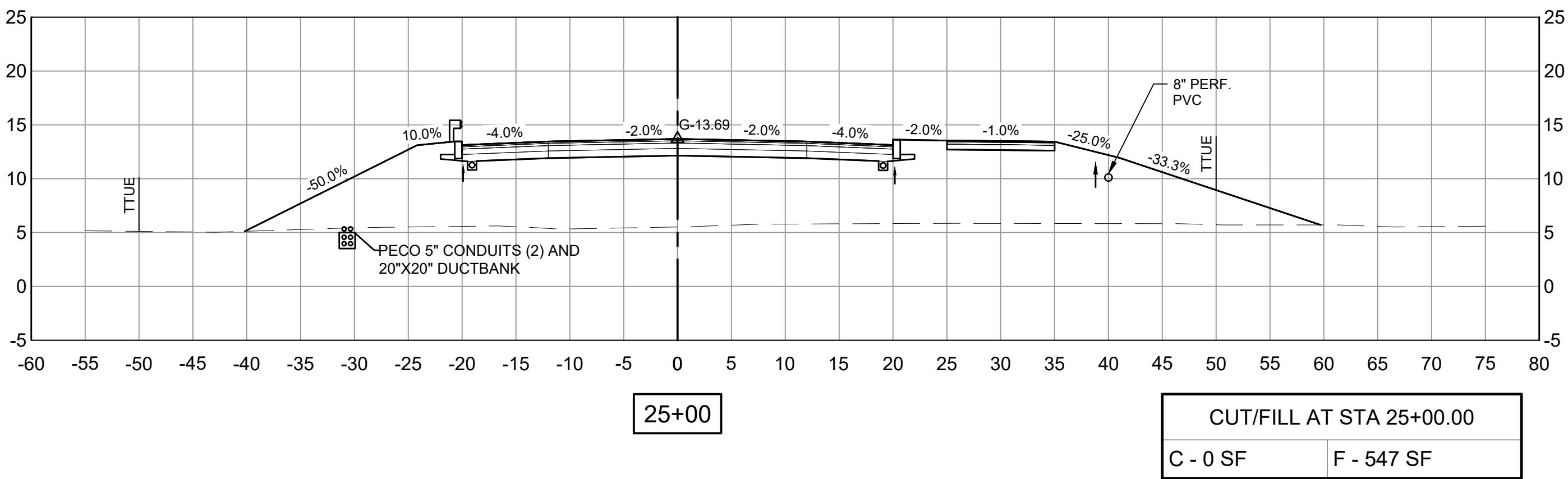
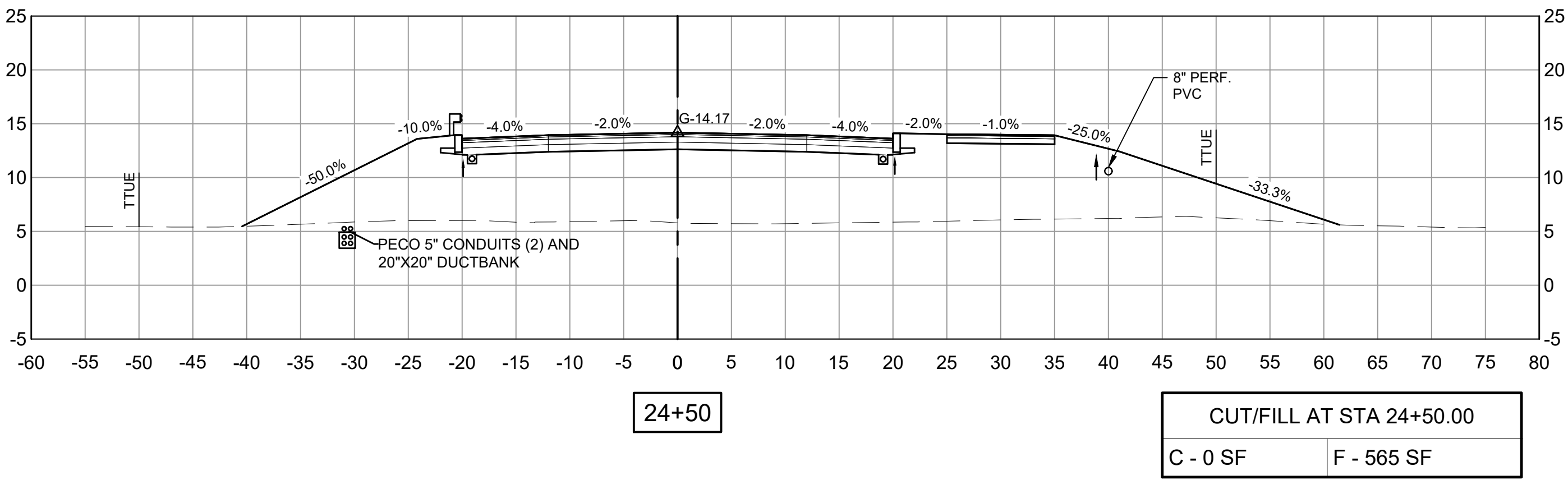
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Date: 2021-09-17 Checked By: AR

Work No.: Drawing No.:

C-310

Sheet No.: 50 of 274



E-10

APPROVED:

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Designer:



Seal:

Key Plan:

REVISION	DESCRIPTION	DATE

Project: **TINICUM ISLAND ROAD RELOCATION**

Sheet Title:

CROSS SECTIONS - 11

Submission: **100% SUBMISSION**

DOA Project Manager: **ADAMO, VINCENT**

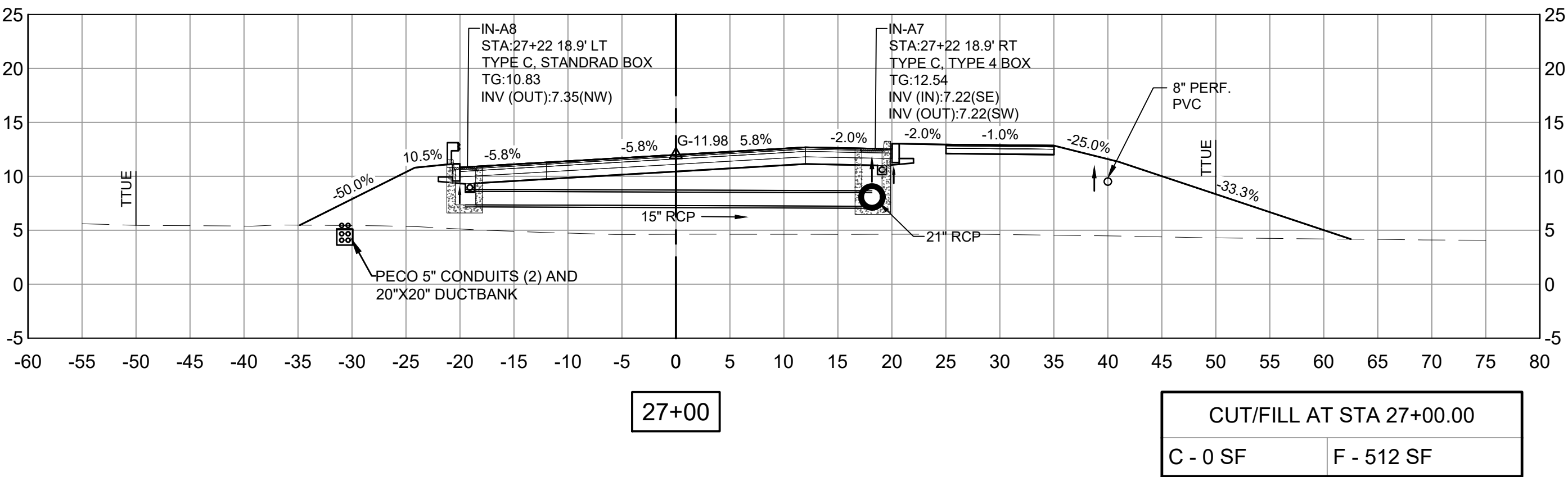
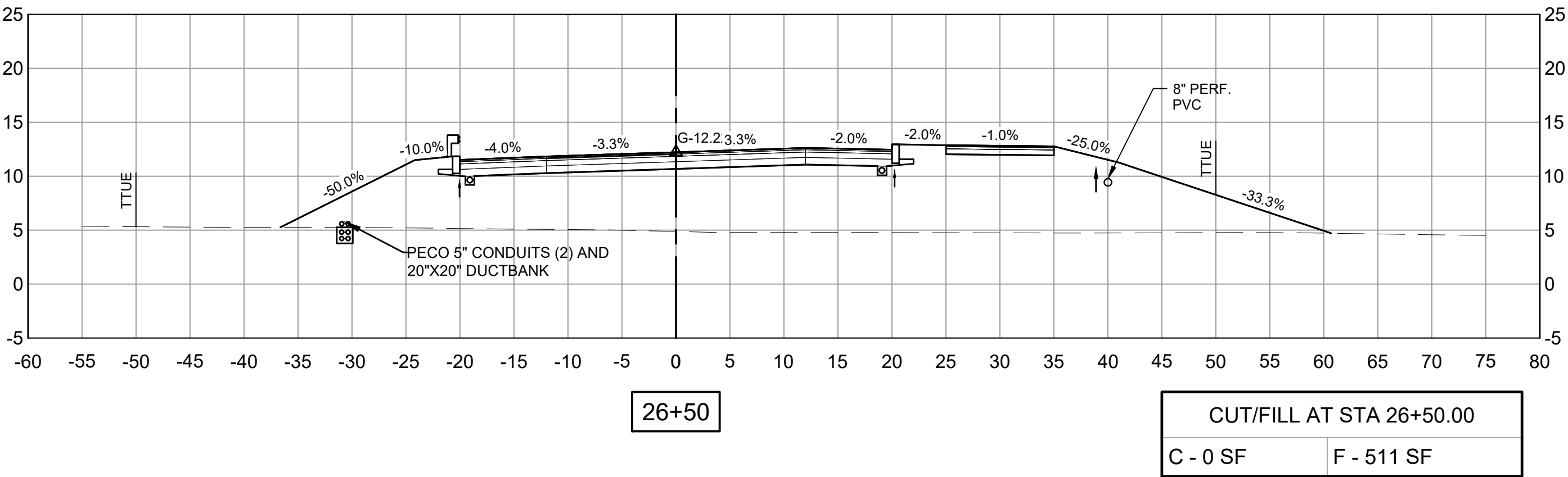
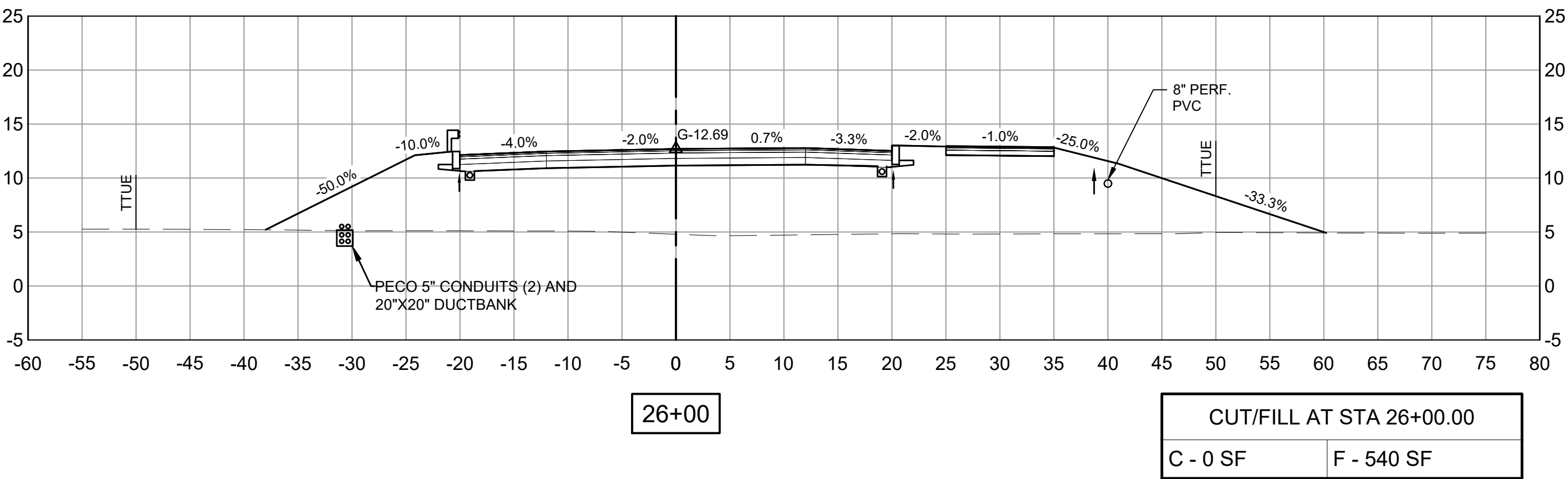
Consultant: **JMT**

Task No.: Drawn By: **CG**

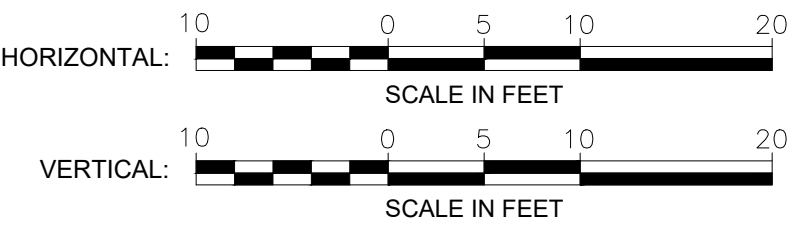
Date: **2021-09-17** Checked By: **AR**

Work No.: Drawing No.: **C-311**

Sheet No.: **51** of **274**



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Project:

TINICUM ISLAND
ROAD RELOCATION

Sheet Title:

CROSS SECTIONS - 12

Submission: 100% SUBMISSION

DOA Project Manager: ADAMO, VINCENT

Consultant: JMT

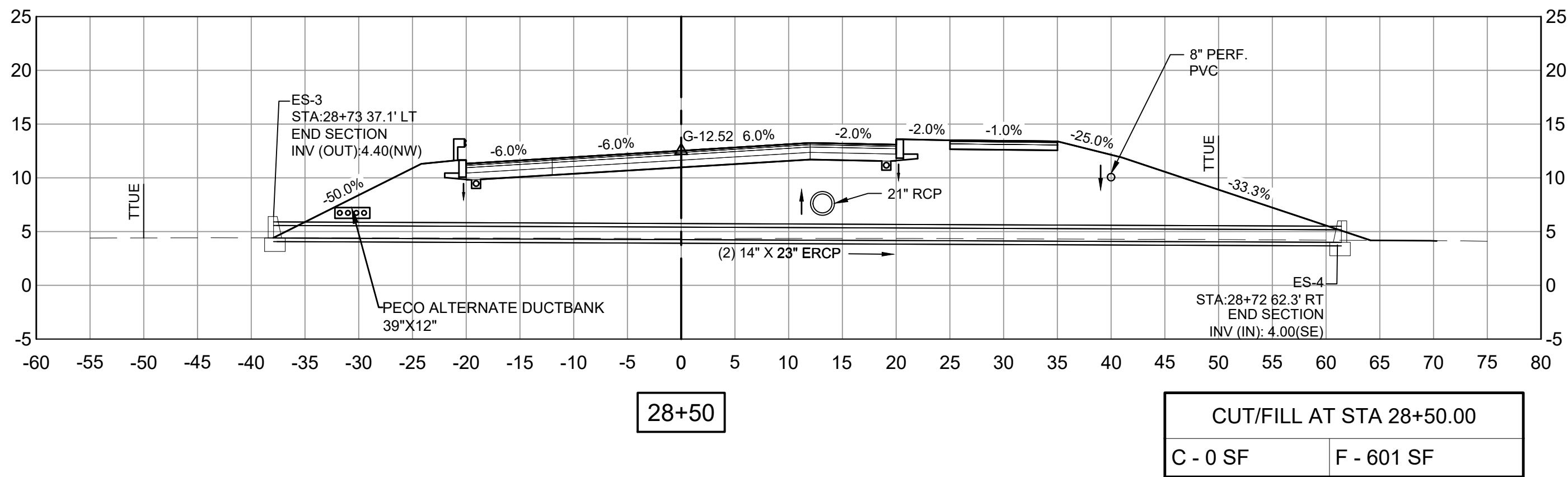
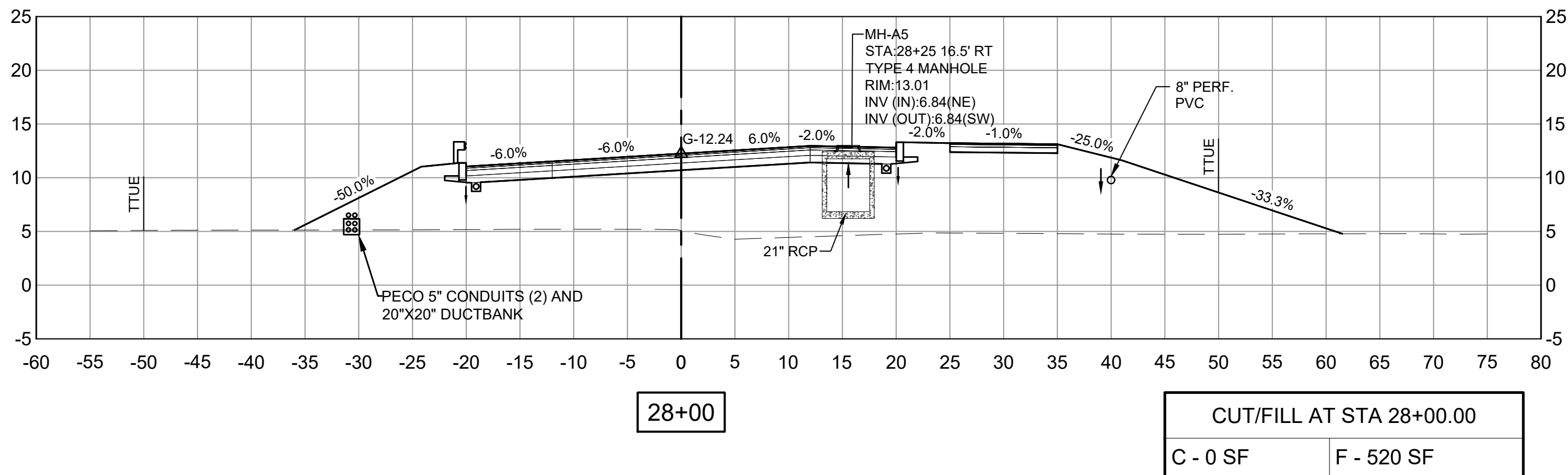
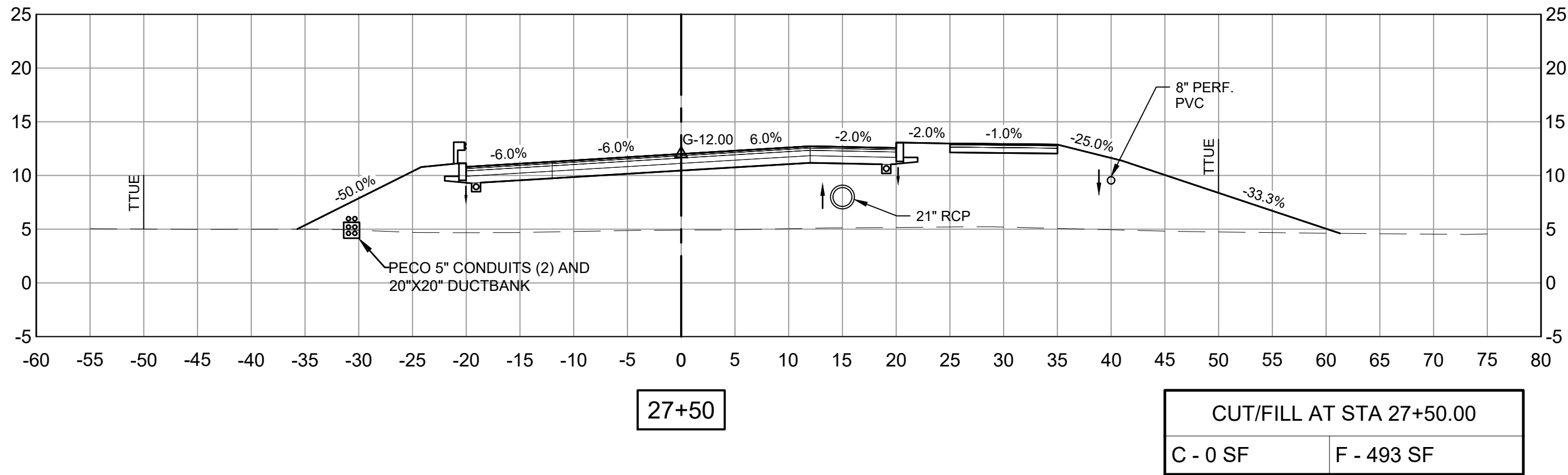
Task No.:	Drawn By: CG
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Date: 2021-09-17	Checked By: AR
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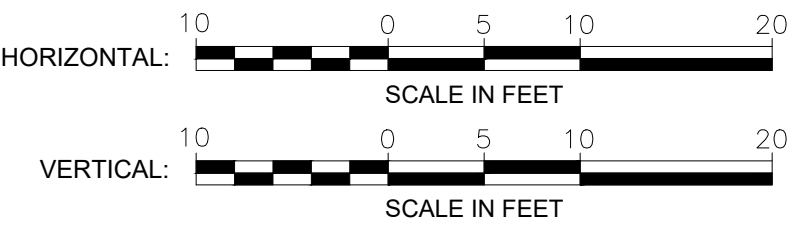
Work No.:	Drawing No.:
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C-312

Sheet No.: 52 of 274



E-12



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Key Plan:

REVISION	DESCRIPTION	DATE
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Project:

**TINICUM ISLAND
ROAD RELOCATION**

Sheet Title:

CROSS SECTIONS - 13

Submission: **100% SUBMISSION**

DOA Project Manager: **ADAMO, VINCENT**

Consultant: **JMT**

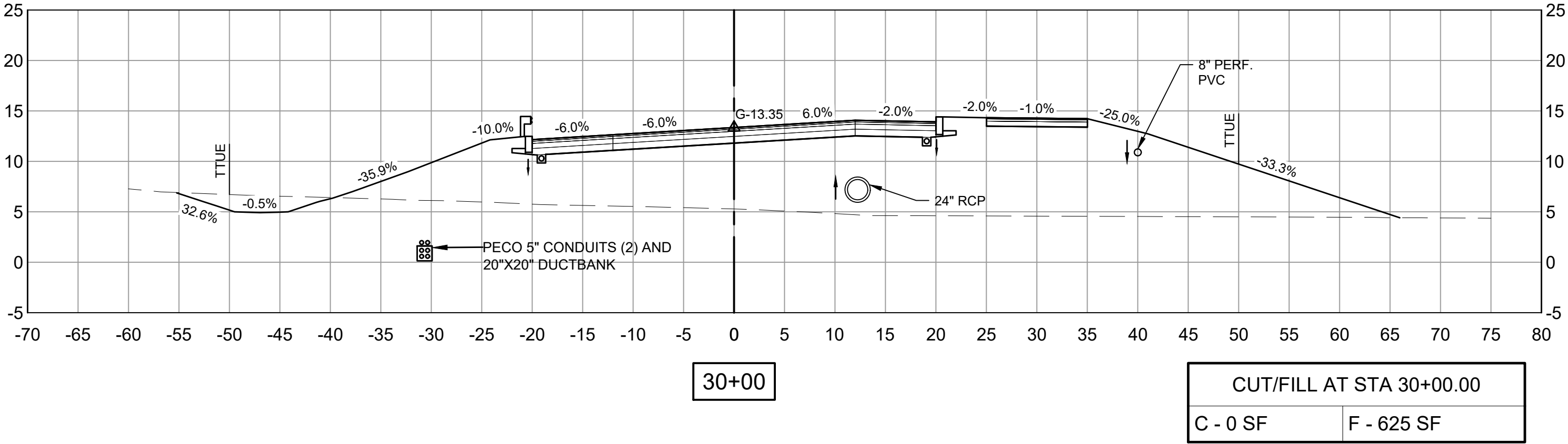
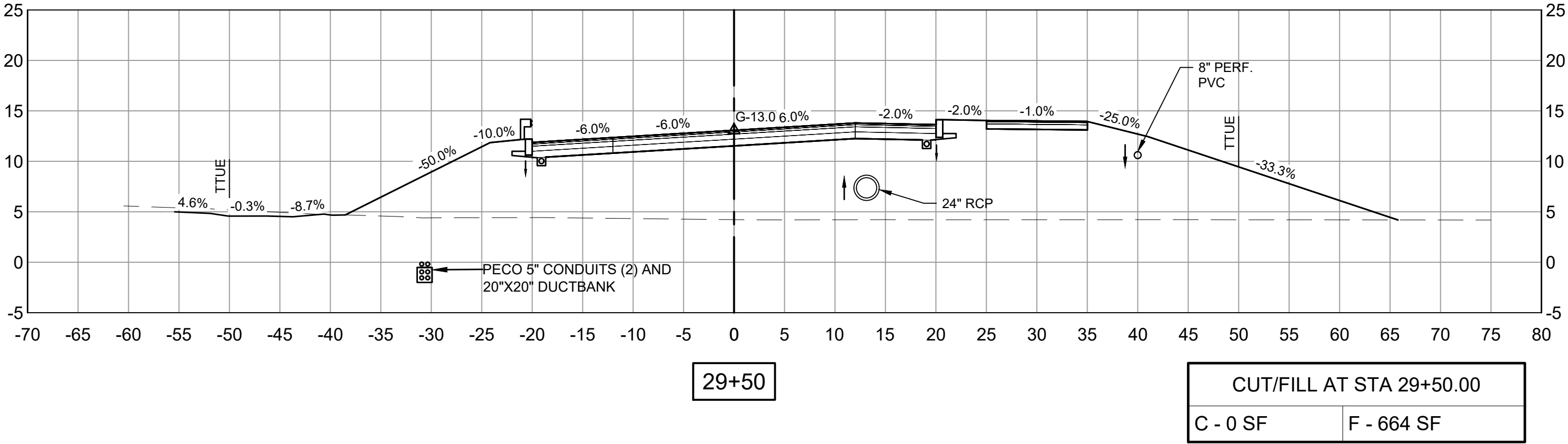
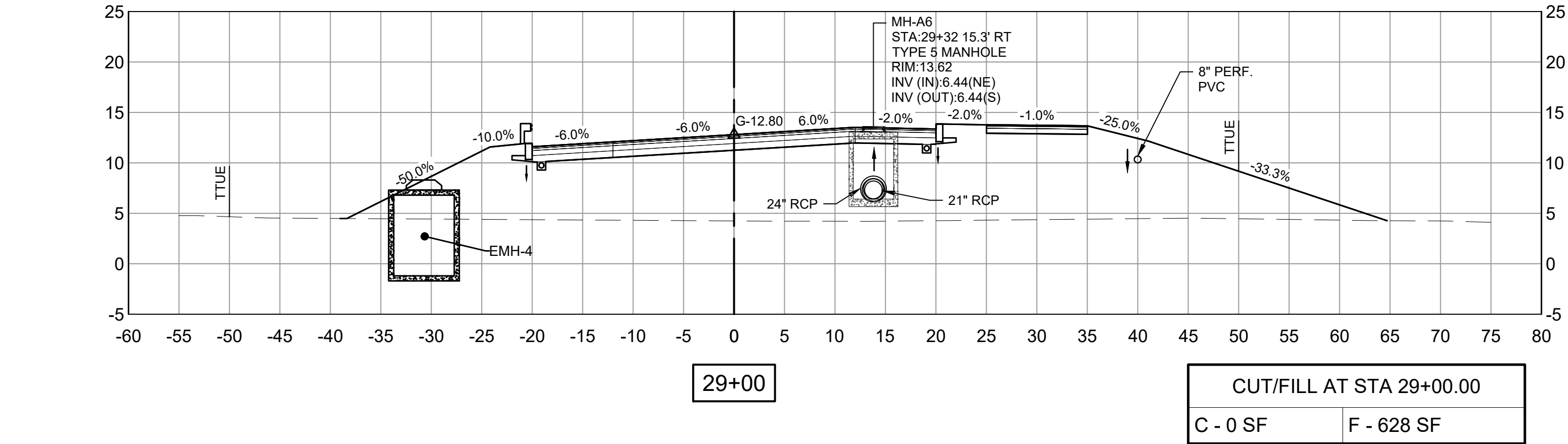
Task No.: Drawn By: **CG**

Date: **2021-09-17** Checked By: **AR**

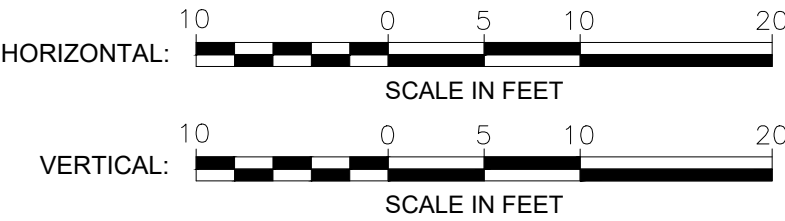
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C-313

Sheet No.: **53** of **274**



E-13



APPROVED:

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Designer:



Seal:

Key Plan:

REVISION DESCRIPTION DATE

Project:

**TINICUM ISLAND
ROAD RELOCATION**

Sheet Title:

CROSS SECTIONS - 14

Submission: **100% SUBMISSION**

DOA Project Manager: **ADAMO, VINCENT**

Consultant: **JMT**

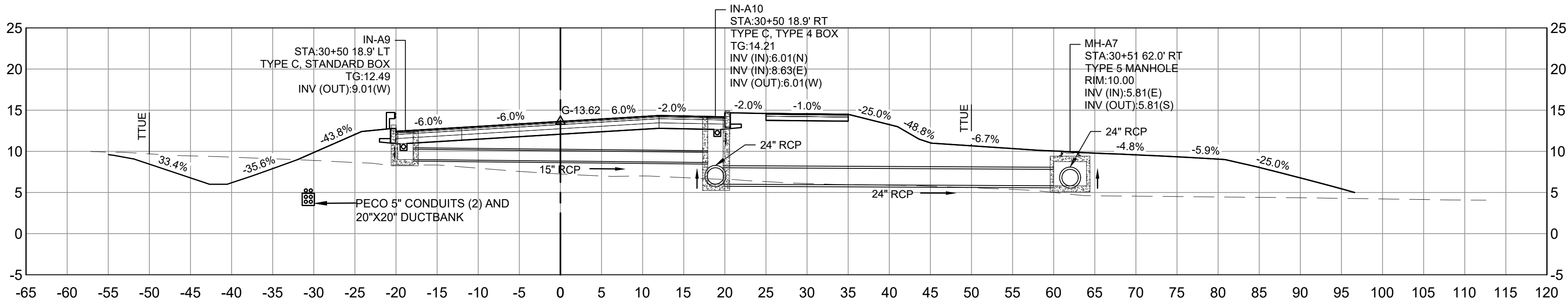
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Date: **2021-09-17** Checked By: **AR**

Work No.: Drawing No.:

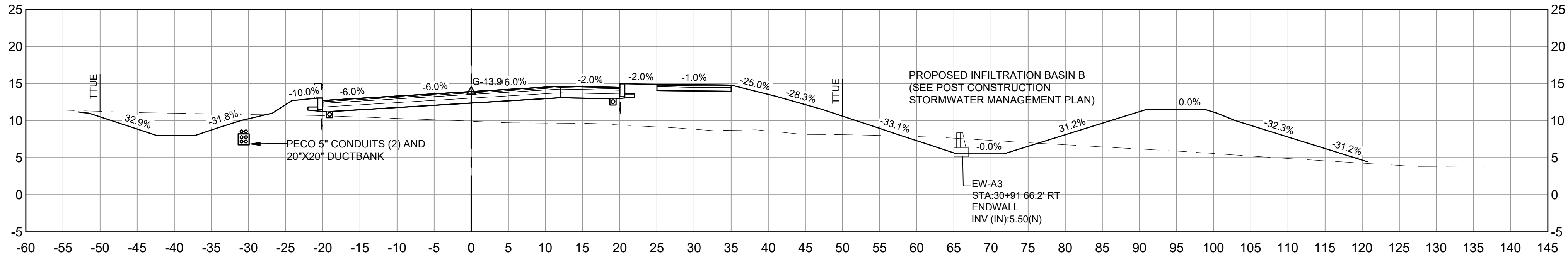
C-314

Sheet No.: **54** of **274**



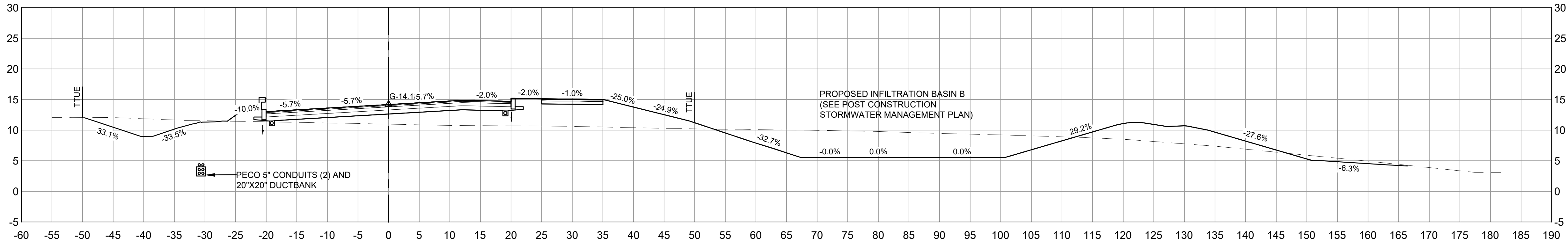
30+50

CUT/FILL AT STA 30+50.00
C - 0 SF F - 622 SF



31+00

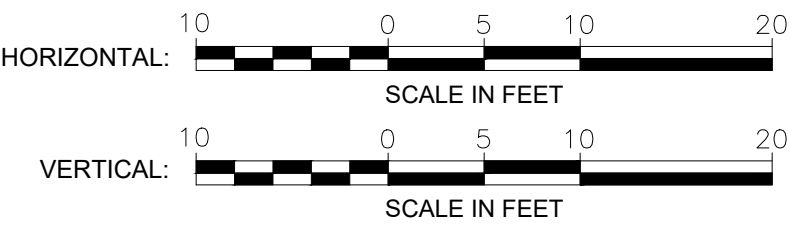
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C - 24 SF F - 405 SF



31+50

CUT/FILL AT STA 31+50.00
C - 200 SF F - 235 SF

E-14



APPROVED:

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Key Plan:

REVISION	DESCRIPTION	DATE
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Project:

**TINICUM ISLAND
ROAD RELOCATION**

Sheet Title:

CROSS SECTIONS - 15

Submission: **100% SUBMISSION**

DOA Project Manager: **ADAMO, VINCENT**

Consultant: **JMT**

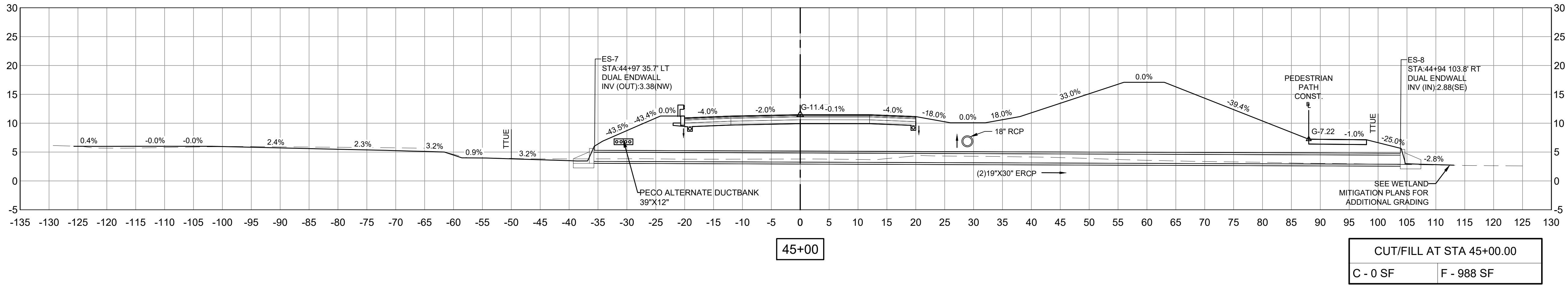
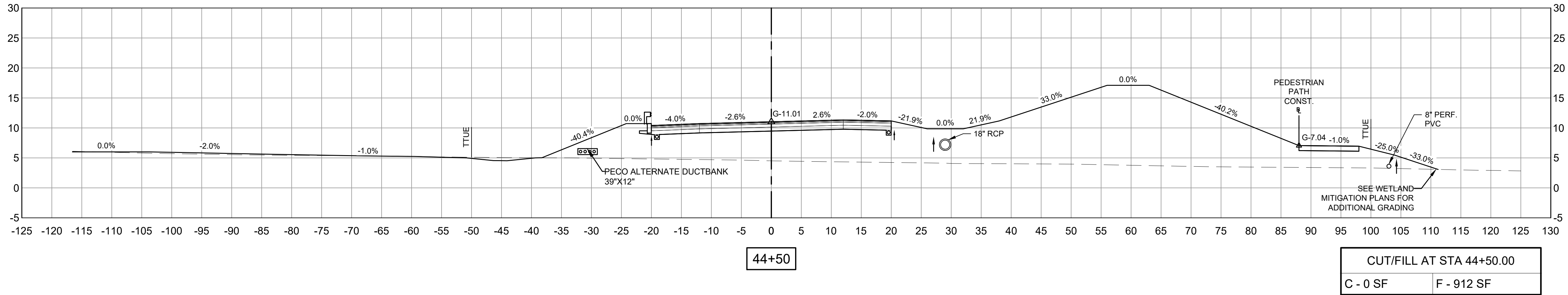
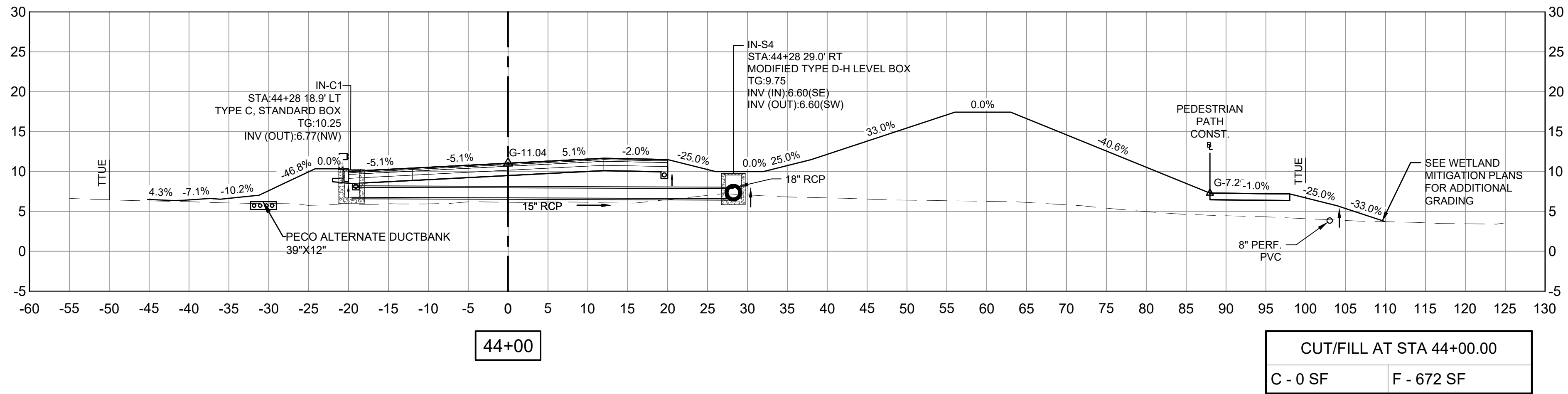
Task No.: Drawn By: **CG**

Date: **2021-09-17** Checked By: **AR**

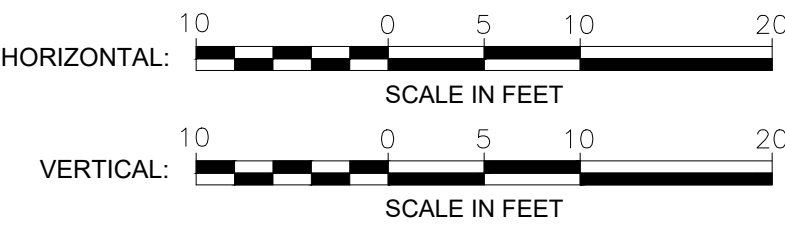
Work No.: Drawing No.:

C-315

Sheet No.: **55** of **274**



E-15



APPROVED:

ARCHITECT/ENGINEER OF RECORD DATE

Designer:



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Key Plan:

REVISION DESCRIPTION DATE

Project:

TINICUM ISLAND
ROAD RELOCATION

Sheet Title:

CROSS SECTIONS - 24

Submission: 100% SUBMISSION

DOA Project Manager: ADAMO, VINCENT

Consultant: JMT

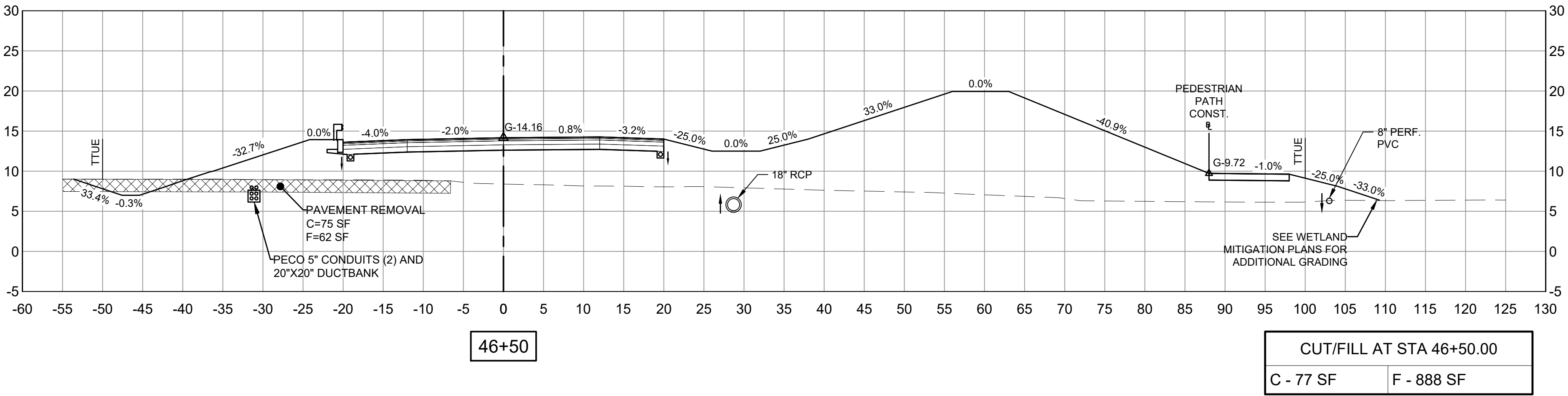
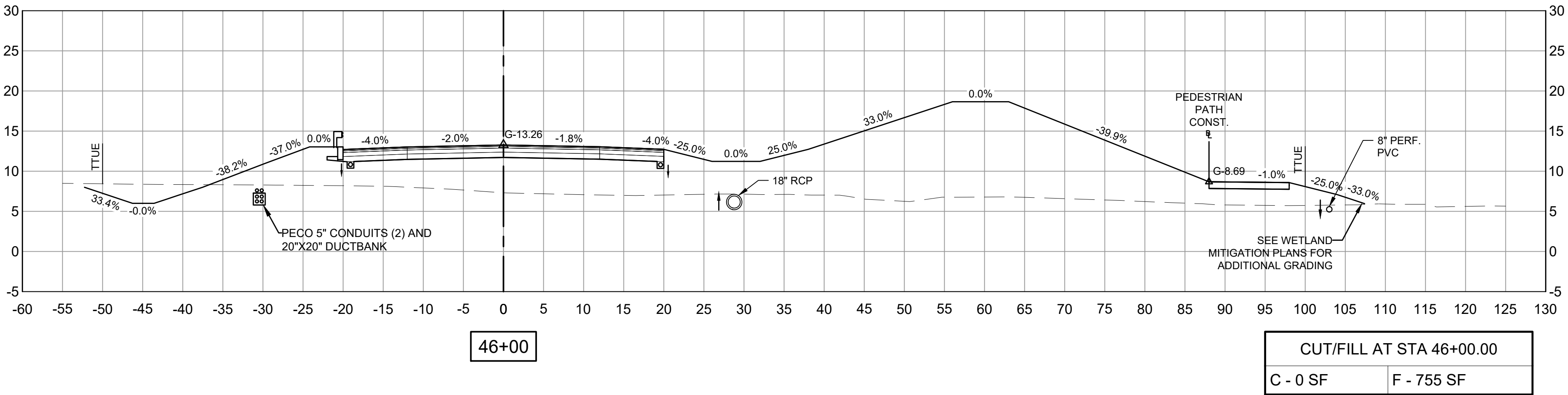
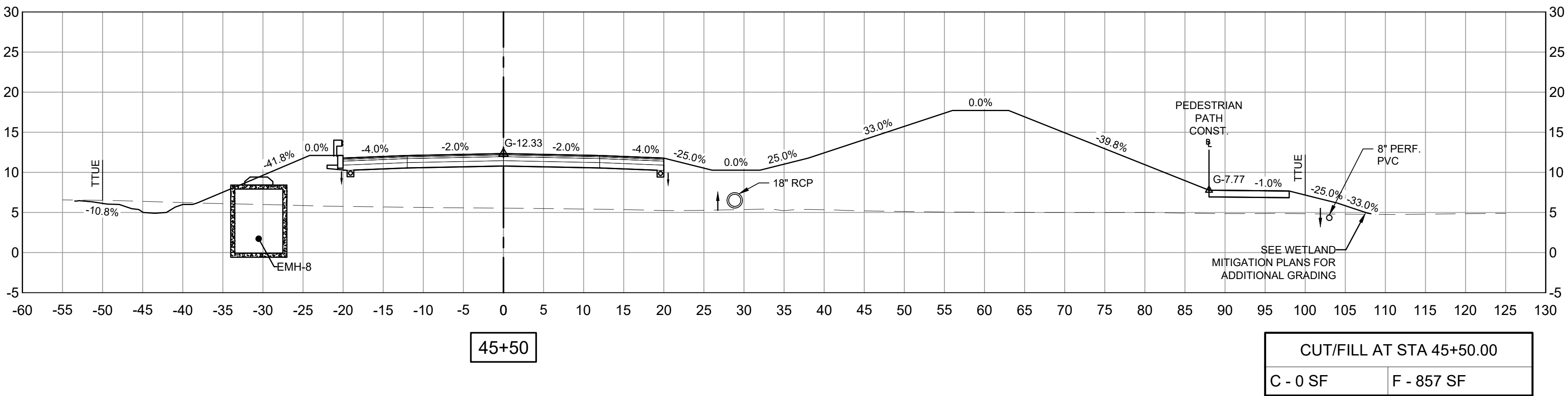
Task No.: Drawn By: CG

Date: 2021-09-17 Checked By: AR

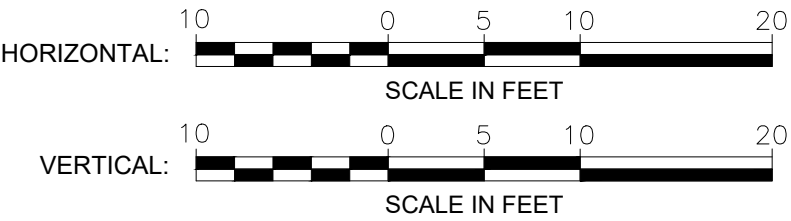
Work No.: Drawing No.:

C-324

Sheet No.: 64 of 274



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APPROVED:

ARCHITECT/ENGINEER OF RECORD DATE

Designer:



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Seal:

Key Plan:

REVISION DESCRIPTION DATE

Project:

**TINICUM ISLAND
ROAD RELOCATION**

Sheet Title:

CROSS SECTIONS - 25

Submission: **100% SUBMISSION**

DOA Project Manager: **ADAMO, VINCENT**

Consultant: **JMT**

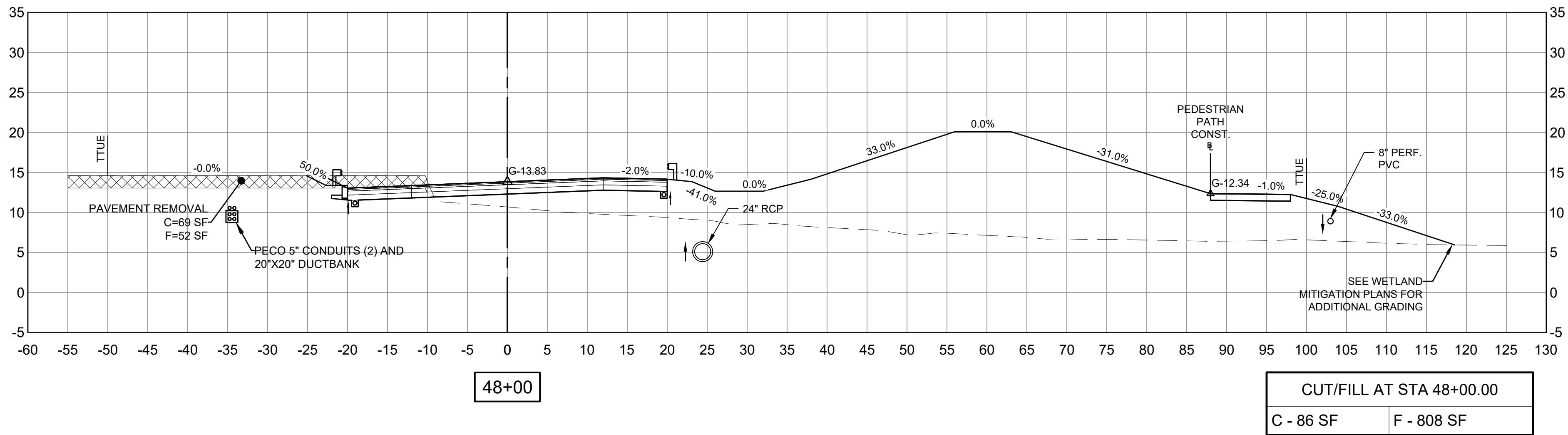
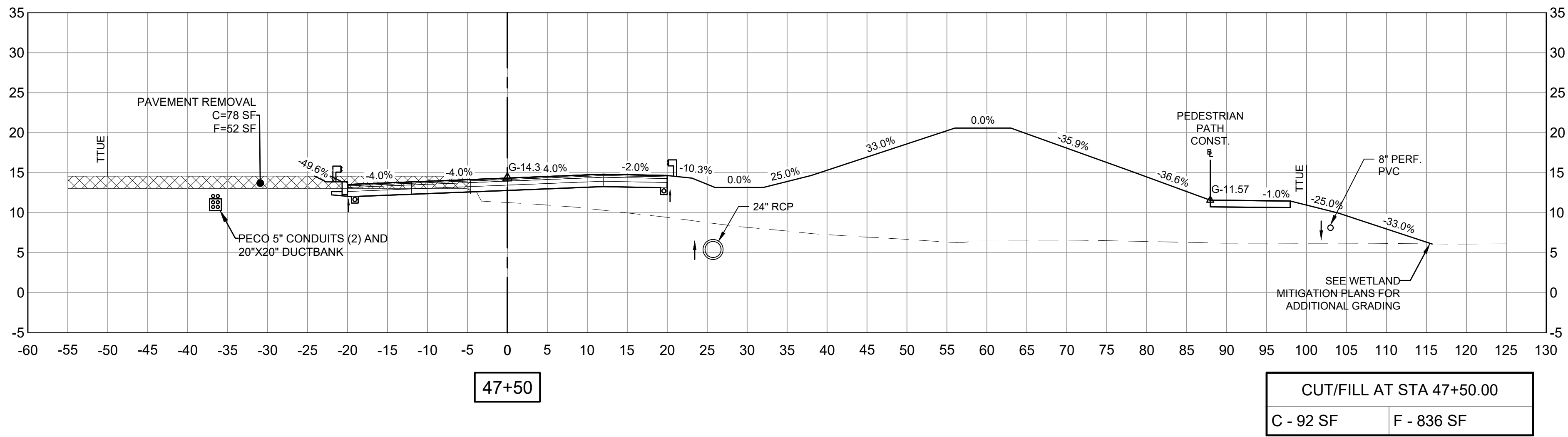
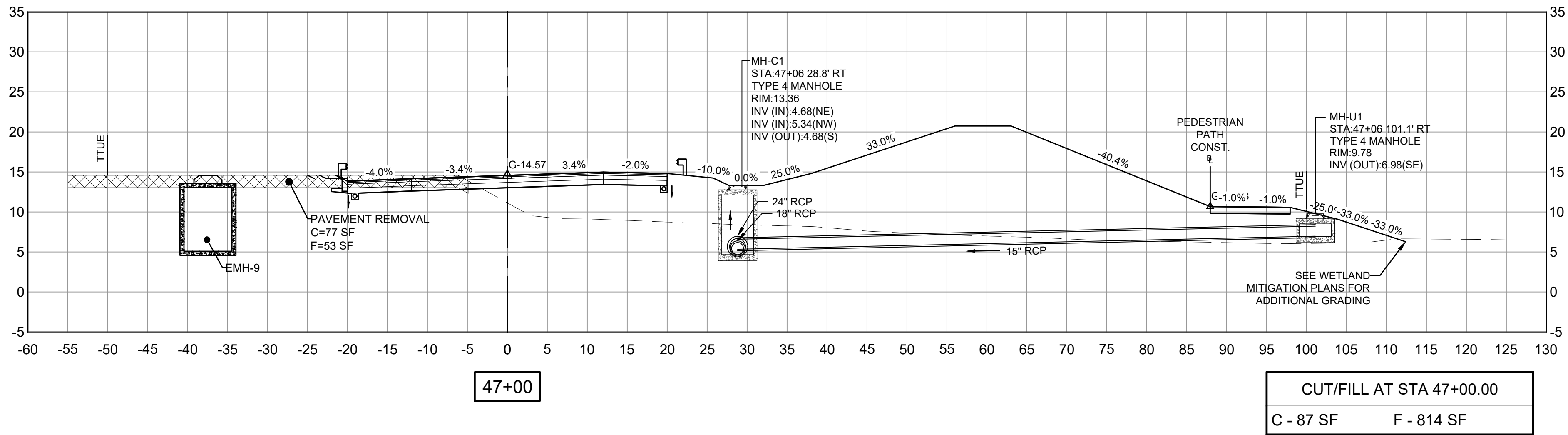
Task No.: Drawn By: **CG**

Date: **2021-09-17** Checked By: **AR**

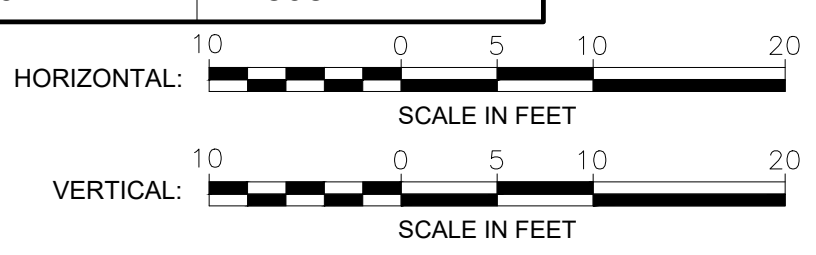
Work No.: Drawing No.:

C-325

Sheet No.: **65** of **274**



E-17



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ARCHITECT/ENGINEER OF RECORD DATE

Designer:

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Seal:

Key Plan:

REVISION	DESCRIPTION	DATE

Project:

TINICUM ISLAND ROAD RELOCATION

Sheet Title:

CROSS SECTIONS - 26

Submission: 100% SUBMISSION

DOA Project Manager: ADAMO, VINCENT

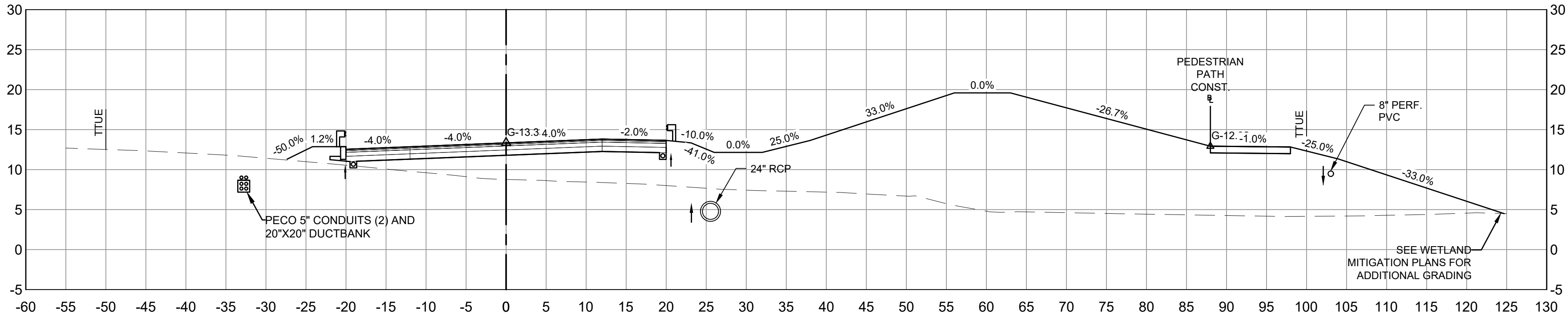
Consultant: JMT

Task No.: Drawn By: CG

Date: 2021-09-17 Checked By: AR

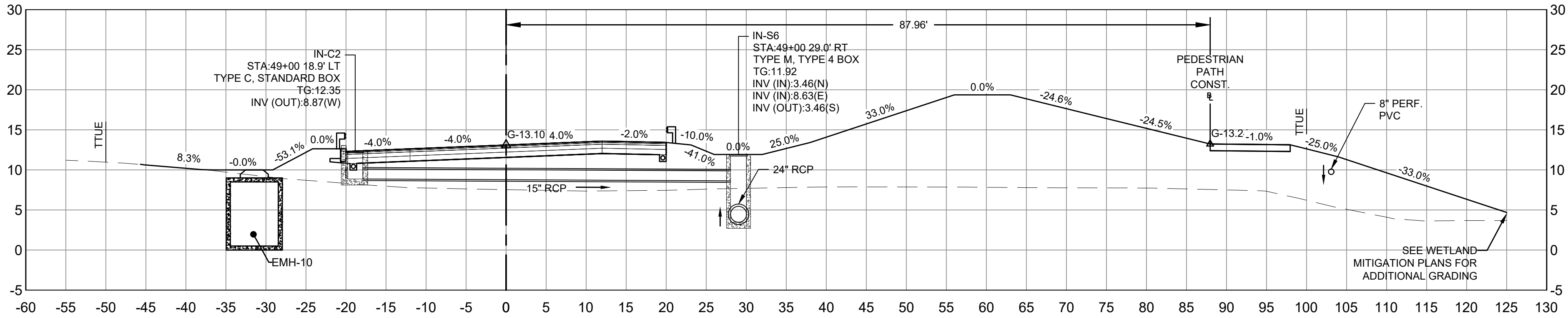
Work No.: Drawing No.: C-326

Sheet No.: 66 of 274



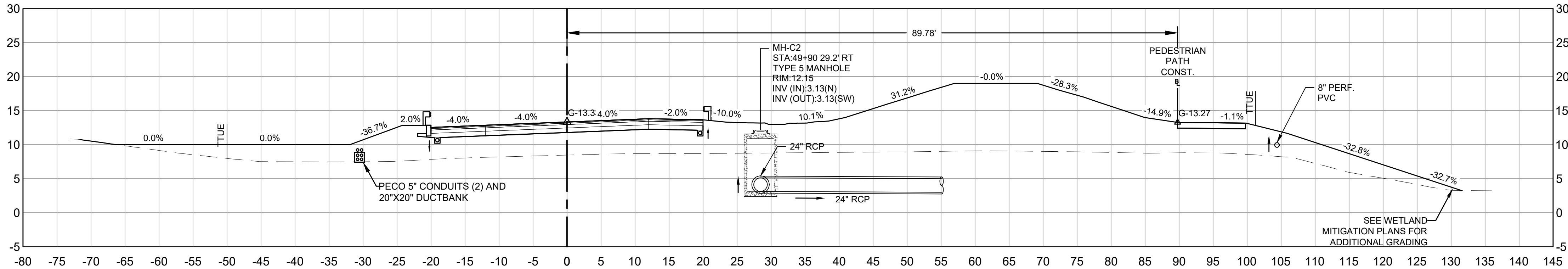
48+50

CUT/FILL AT STA 48+50.00
C - 1 SF F - 985 SF



49+00

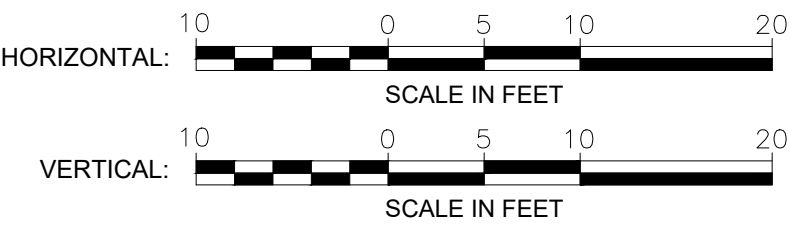
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49+50

CUT/FILL AT STA 49+50.00
C - 0 SF F - 795 SF

E-18



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Designer:



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Seal:

Key Plan:

REVISION	DESCRIPTION	DATE
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Project:

TINICUM ISLAND
ROAD RELOCATION

Sheet Title:

CROSS SECTIONS - 27

Submission: 100% SUBMISSION

DOA Project Manager: ADAMO, VINCENT

Consultant: JMT

Task No.: Drawn By: CG

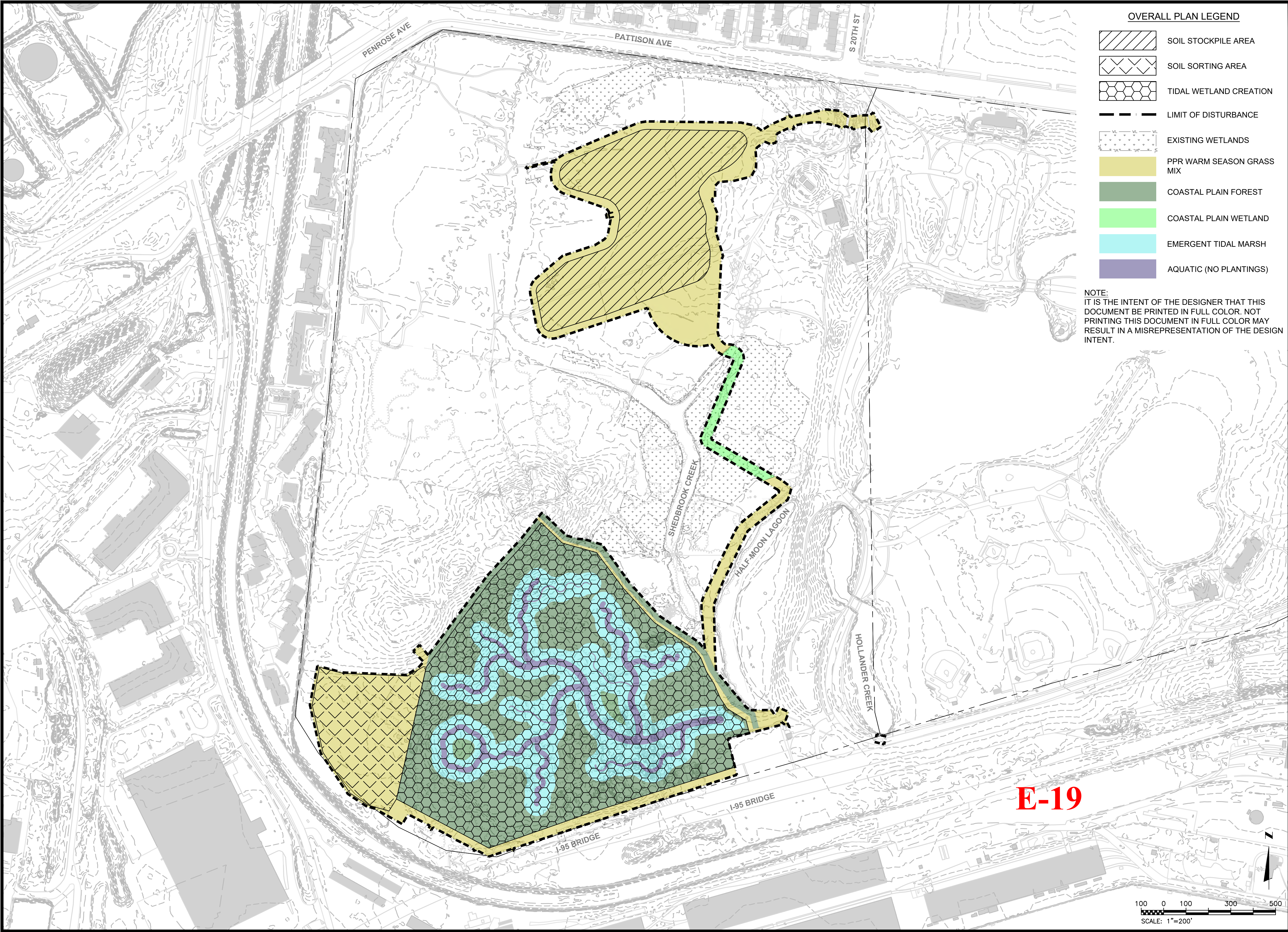
Date: 2021-09-17 Checked By: AR

Work No.: Drawing No.:

C-327

Sheet No.: 67 of 274

I:\Projects\19036.01 FDR Park Wetland Mitigation\CAD Support\20210301 PHL-L-CV00.dwg 02/02/2022



- OVERALL PLAN LEGEND**
- SOIL STOCKPILE AREA
 - SOIL SORTING AREA
 - TIDAL WETLAND CREATION
 - LIMIT OF DISTURBANCE
 - EXISTING WETLANDS
 - PPR WARM SEASON GRASS MIX
 - COASTAL PLAIN FOREST
 - COASTAL PLAIN WETLAND
 - EMERGENT TIDAL MARSH
 - AQUATIC (NO PLANTINGS)

NOTE:
IT IS THE INTENT OF THE DESIGNER THAT THIS DOCUMENT BE PRINTED IN FULL COLOR. NOT PRINTING THIS DOCUMENT IN FULL COLOR MAY RESULT IN A MISREPRESENTATION OF THE DESIGN INTENT.



APPROVED:

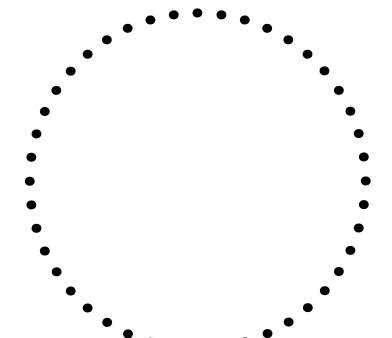
ARCHITECT/ENGINEER OF RECORD DATE

Designer:



The Stables Building 2081 Clipper Park Road
Baltimore, MD 21211 / ph: 410.554.0156
fx: 410.554.0168 / www.biohabitats.com
Restore the Earth & Inspire Ecological Stewardship

Seal:



Key Plan:



REVISION	DESCRIPTION	DATE

Project:

PHL WETLAND MITIGATION AT FDR PARK

Sheet Title:

SITE PLAN AND VEGETATION SCHEME

Submission: **90% SUBMISSION**

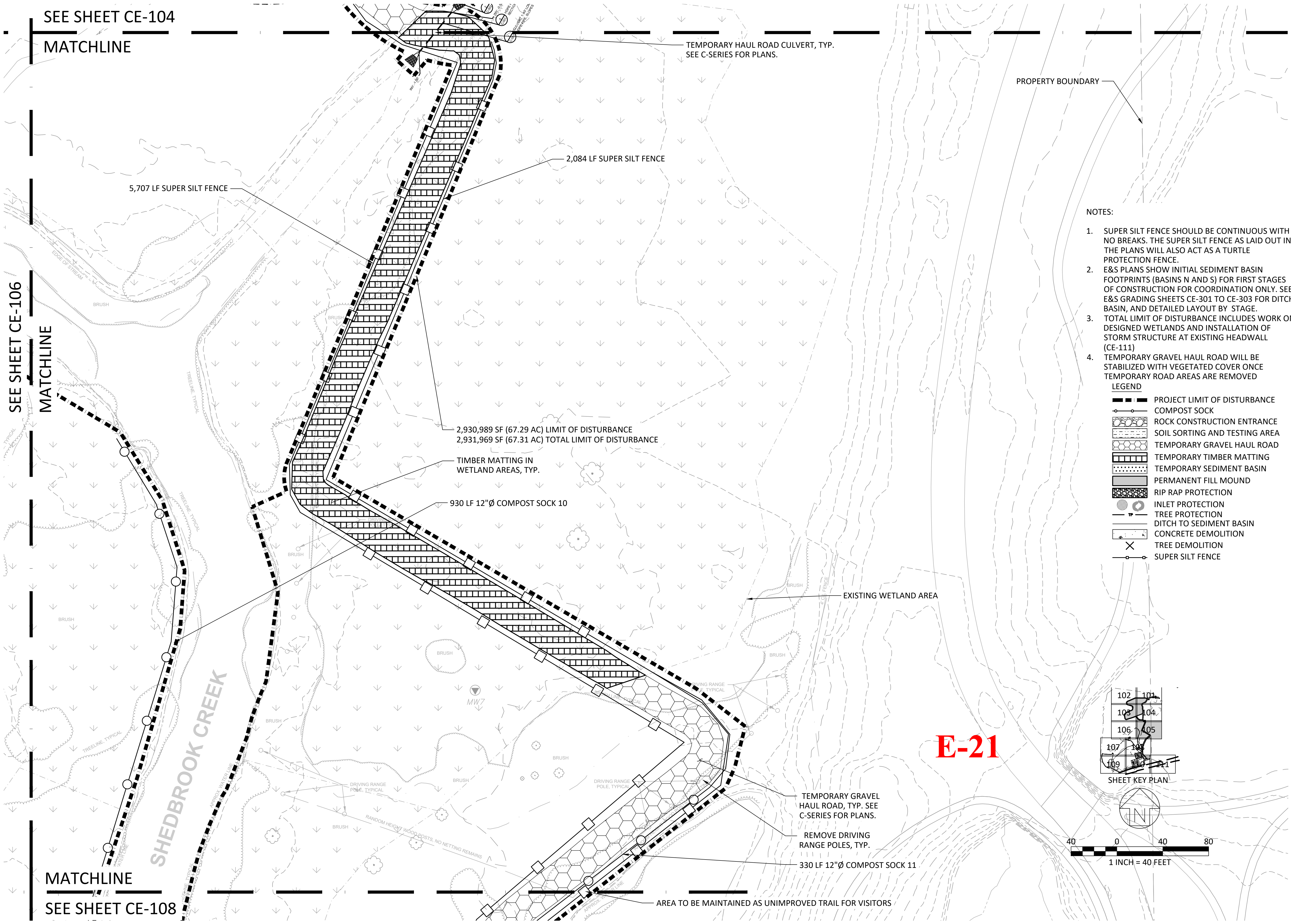
DOA Project Manager: **NISULA, DAVE**

Consultant: **BIOHABITATS, INC.**

Task No.: PHL-1776	Drawn By: TBB
Date: 2021-06-04	Checked By: BVL/MDT
Work No.: PHL-1776.09	Drawing No.: C-101

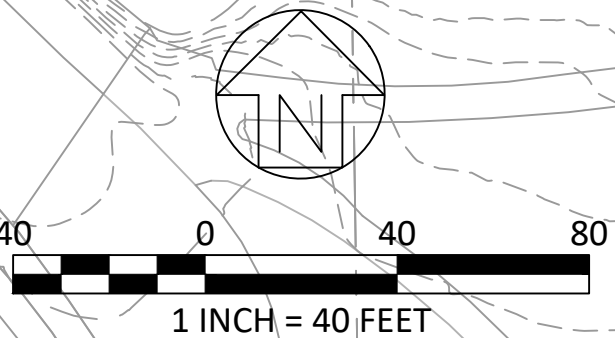
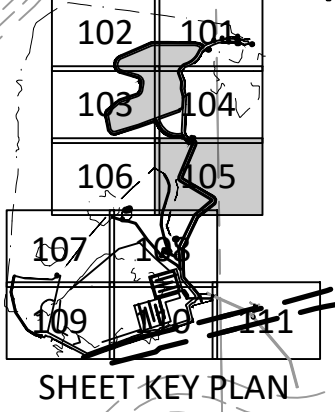
Sheet No.: **N/A** of **89**

J:\2019\19068 - FDR PHL Wetlands\CAD\Sheet Files\19068-EROSION AND SEDIMENTATION PLAN.dwg 06/04/2021



- NOTES:
1. SUPER SILT FENCE SHOULD BE CONTINUOUS WITH NO BREAKS. THE SUPER SILT FENCE AS LAID OUT IN THE PLANS WILL ALSO ACT AS A TURTLE PROTECTION FENCE.
 2. E&S PLANS SHOW INITIAL SEDIMENT BASIN FOOTPRINTS (BASINS N AND S) FOR FIRST STAGES OF CONSTRUCTION FOR COORDINATION ONLY. SEE E&S GRADING SHEETS CE-301 TO CE-303 FOR DITCH, BASIN, AND DETAILED LAYOUT BY STAGE.
 3. TOTAL LIMIT OF DISTURBANCE INCLUDES WORK ON DESIGNED WETLANDS AND INSTALLATION OF STORM STRUCTURE AT EXISTING HEADWALL (CE-111)
 4. TEMPORARY GRAVEL HAUL ROAD WILL BE STABILIZED WITH VEGETATED COVER ONCE TEMPORARY ROAD AREAS ARE REMOVED

- LEGEND
- PROJECT LIMIT OF DISTURBANCE
 - COMPOST SOCK
 - ROCK CONSTRUCTION ENTRANCE
 - SOIL SORTING AND TESTING AREA
 - TEMPORARY GRAVEL HAUL ROAD
 - TEMPORARY TIMBER MATTING
 - TEMPORARY SEDIMENT BASIN
 - PERMANENT FILL MOUND
 - RIP RAP PROTECTION
 - INLET PROTECTION
 - TREE PROTECTION
 - DITCH TO SEDIMENT BASIN
 - CONCRETE DEMOLITION
 - TREE DEMOLITION
 - SUPER SILT FENCE



APPROVED:

ARCHITECT/ENGINEER OF RECORD DATE

Designer:

meliora
Civil, Water Resources, and Structural Engineering
299 Morgan St., Phoenixville, PA 19460
P: 610.933.0123 | www.melioradesign.com

Seal:

Key Plan:



REVISION DESCRIPTION DATE

Project:

**PHL WETLAND
MITIGATION AT FDR PARK**

Sheet Title:

**EROSION AND SEDIMENT
CONTROL PLAN
- SHEET 5**

Submission: **90% SUBMISSION**

DOA Project Manager: **NISULA, DAVE**

Consultant: **MELIORA DESIGN**

Task No.: **PHL-1776**

Drawn By: **MKT**

Date: **2021-03-31**

Checked By: **MBH**

Work No.: **PHL-1776.09**

Drawing No.:

CE-105

Sheet No.: **72** of **89**