APPENDIX G – IMPACTS TO WATERS OF THE U.S., REV 1

I-64 Hampton Roads Bridge-Tunnel Expansion Project

Hampton Roads Connector Partners
240 Corporate Blvd. 4th floor
Norfolk, VA 23502

Hampton-Norfolk, Virginia
September 18, 2019

64 HDR | MOTT MACDONALD
Design Joint Venture

DOCUMENT HISTORY

Issue Date	Description	By	Revision
September 18, 2019	Revised Appendix G – Impact Tables	R. Wilk	1

ATTACHMENTS

Attachment G-1: Joint Permit Application Impact Plates
Attachment G-2: Joint Permit Application Impact Tables
Attachment G-3: Design Plans
- Attachment G-3A: Structural Design
- Attachment G-3B: Island Design
- Attachment G-3C: Roadway Sections

Attachment G-4: Preliminary Jusrisdictional Determination
- Attachment G-4A: PJD September 2017
- Attachment G-4B: Revised PJD October 2018

TABLE OF CONTENTS

G.1 Introduction 1
G.1.1.1 Impacts to WOUS 1
G.1.2 References 3

Tables

Table G-1: Impact Summary 43
Table G-2: Summary of Permanent Fill Impacts 44
Table G-3: Permanent Fill Impacts 44
Table G-4: Permanent Conversion Summary 47
Table G-5: Permanent Conversion Impacts 47
Table G-6: Shading Impact Summary 48
Table G-7: Shading Impacts 48
Table G-8: Pile Impact Summary 50
Table G-9: Pile Impacts 50
Table G-10: Dredge Impact Summary 51
Table G-11: Dredging Impacts 51
Table G-12: Extended Temporary Trestle (>6 months) Impact Summary 52
Table G-13: Extended Temporary Trestle (> 6 months) Impacts 52
Table G-14: Summary of Temporary (< 6 months) Impacts 56
Table G-15: Temporary (< 6 months) Impacts 56

G.1 INTRODUCTION

The Impact Plates in Attachment 1 graphically portray the Project's impacts to regulated Waters of the U.S. (WOUS). The Impact Plates display the WOUS type or classification, the type of impact, and the specific wetland or WOUS that is affected. Information provided on the Impact Plates includes the following:

G.1.1.1 IMPACTS TO WOUS

Impacts to WOUS are based on the Hampton Roads Bridge Tunnel (HRBT)_AqResource file provided by the Virginia Department of Transportation (VDOT) to the U.S. Army Corps of Engineers (USACE) Office of Regulatory Management (ORM) Jurisdictional Determination and Permit Decisions Database. These wetland boundaries were confirmed in two preliminary jurisdictional determinations (PJDs) NAO-1994-01166 dated September 19, 2017 and October 18, 2018. Minor adjustments to project design caused some areas within the Project's Limits of Disturbance (LOD) to be outside of the confirmed wetland delineation boundary. The affected WOUS outside the confirmed wetland delineation boundary were determined through photointerpretation as they are primarily in open water and visible in aerial photographs of the shoreline. Hampton Roads Connection Partners (HRCP) is currently performing a field delineation of these areas and a subsequent PJD request will be submitted to USACE. Following confirmation of the new boundaries by USACE, if the field delineation boundaries are different from the boundaries developed through photointerpretation, the impact areas will be adjusted accordingly. Additionally, boundaries for the WOUS type Estuarine Intertidal Rocky Shore around the tunnel islands were georeferenced from the Versar Baseline Benthic Survey since the detail extended into subtidal locations not captured during the PJD delineation (Wong et al. 2018).

- WOUS within the Project area include the following:
- E1OW = Estuarine Subtidal Open Water
- E2RF= Estuarine Intertidal Reef
- E2RS2= Estuarine Intertidal Rocky Shore
- E2US2= Estuarine Intertidal Unconsolidated Shore – Sand
- E2US3= Estuarine Intertidal Unconsolidated Shore – Mud
- E2EM= Estuarine Intertidal Emergent Wetland
- E2SS= Estuarine Intertidal Scrub/Shrub Wetland
- E2FO=Estuarine Intertidal Forested Wetland
- PUB= Palustrine Unconsolidated Bottom
- PEM= Palustrine Emergent Wetland
- PSS= Palustrine Scrub/Shrub Wetland
- PFO= Palustrine Forested Wetland
- R2=Riverine-Perennial
- R4=Riverine-Intermittent
- R6=Riverine-Ephemeral
- SAV= Submerged Aquatic Vegetation
    - SAV was separated out from E1OW into its own category.

E1OW were subdivided into habitat categories based on bathymetric data for the Project surveyed by Alpine in June 2019 to determine permanent impacts due to habitat conversion and support the Habitat Conditions Analysis (Appendix P, Attachment 1). E1OW were divided into the following categories based on depth from mean lower low water (MLLW):

- E1OW- Shallow (MLLW to 6.6 feet below MLLW)
    - 6.6 feet depth represents the limit of the photic zone for seagrass
- E1OW- Mid Depth (6.6 to 15 feet below MLLW)
- E1OW- Deep (15 to 30 feet below MLLW)
- E1OW- Deeper (30 to 45 feet below MLLW)
- E1OW- Deepest (>45 feet below MLLW)

WOUS impacts were calculated according to type and duration of projected impact. The impact areas were coded for Impact Type and Wetland ID (based on the ORM shapefile, or designated name during photointerpretation):

Impact Types were categorized as follows:

- P= Permanent Fill
- PC= Permanent Conversion
- PS= Permanent Shading
- ET= Extended Temporary Shading (> 6 months)
- WT= Work Trestle (> 6 months)
- MT= Maintenance of Traffic (MOT) Trestle (> 6 months)
- JT= Jump Trestle (<6 months)
- T= Temporary (< 6 months)
- D= Dredge

Each identified WOUS is assigned a unique identifier as follows:

- Numbers 108 thorough 279 are individual wetlands identified in the PJD
- VN and VS are Versar North and Versar South, respectively, and identify the E2RS2 around the North and South Island
- HU = impacts near Hampton University outside of the PJD
- WS = impacts around Willoughby Spit outside of the PJD

Descriptions are defined in Section 8 of the Joint Permit Application (JPA), but are also copied for reference here:

- F=fill
- EX=excavation
- S=Structure
- T=tidal

- NT=non-tidal
- TE=temporary
- PE=permanent
- PR=perennial
- IN=intermittent
- SB=subaqueous bottom
- DB=dune/beach
- IS=hydrologically isolated
- V=vegetated
- NV=non-vegetated
- MC=Mechanized Clearing of PFO
  (Example: F, NT, PE, V)

Permanent impacts are not counted as temporary impacts to avoid double counting. Similarly, temporary impacts which are later overlain by permanent trestle impacts are not counted. Permanent pile areas were calculated based on the 30 inch pile diameter or 6.25 square feet per pile. For the temporary jump, MOT, and work trestles, the platforms were calculated as opposed to the piles to allow for flexibility during construction.

Shading impacts were considered permanent for any shading of vegetated wetlands for a time period of greater than 6 months. Shading impacts were calculated in GIS based on DEQ's equation: $I=L_b (W_b-1.25H_b)$ Where: I= wetland impact, L_b=bridge length over wetlands, W_b=bridge width, and H_b=average bridge height over wetlands (DEQ 2018).

Mooring, anchoring, and bridge demolition areas were not included in the impact calculations due to the intermittent and temporary nature of the activity.

G.1.2 REFERENCES

Virginia Department of Environmental Quality (DEQ). 2018. Chapter 3: Joint Permit Application Review. Accessed on August 27, 2019 from https://www.deq.virginia.gov/Portals/0/DEQ/Water/WetlandsStreams/VWP%20Permit%20Manual/Ch%203.pdf?ver=2019-01-09-133313-883

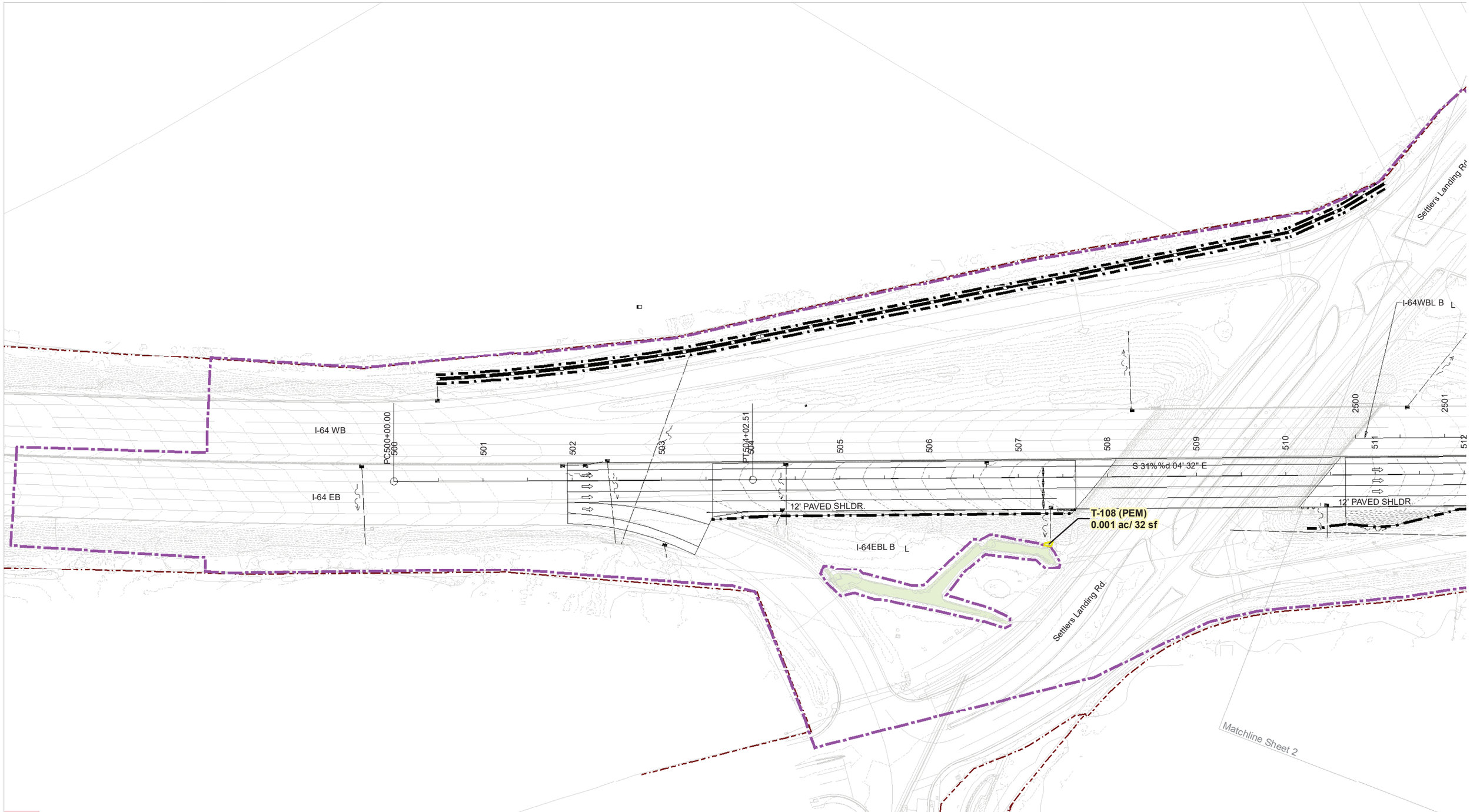
Wong, D, A.M. Bromilow and D. Zaveta. 2018. Hampton Roads Bridge-Tunnel Expansion - Baseline Benthic Survey. Prepared by Versar, Columbia, MD.

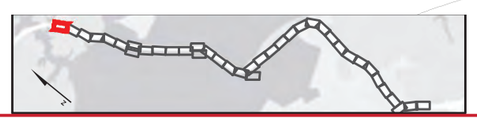
ATTACHMENT G-1: JOINT PERMIT APPLICATION IMPACT PLATES

HRBT EXPANSION

- Permanent Pile Impact
- Permanent Impact
- Permanent Conversion Impact
- Permanent Shading Impact
- Extended Shading Impact
- MOT Trestle Impact
- Work Trestle Impact
- Jump Trestle Impact
- Dredge Impact
- Temporary Impact
- Limit_of_Disturbance
- Jump Trestle Footprint
- MOT Trestle Footprint
- Work Trestle Footprint
- VDOT Right of Way
- Sound Wall
- Retaining Wall
- Proposed Roadway
- Grading Limit
- Proposed Drainage
- Proposed Contour
- Existing Roadway and Drainage
- Existing Contour
- SAV
- E1OW-Deepest
- E2OW-Deeper
- E1OW-Deep
- E1OW-Mid Depth
- E1OW-Shallow
- E2RF
- E2RS2
- E2US2
- E2US3
- E2EM
- E2SS
- E2FO
- PUB
- PEM
- PSS
- PFO
- R2
- R4
- R6
- Mean High Water (0.95 ft)
- Mean Low Water (-1.48 ft)
- Navigation Channel Limit

HAMPTON ROADS CONNECTOR PARTNERS





0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

64 HDR | MOTT MACDONALD Design Joint Venture

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

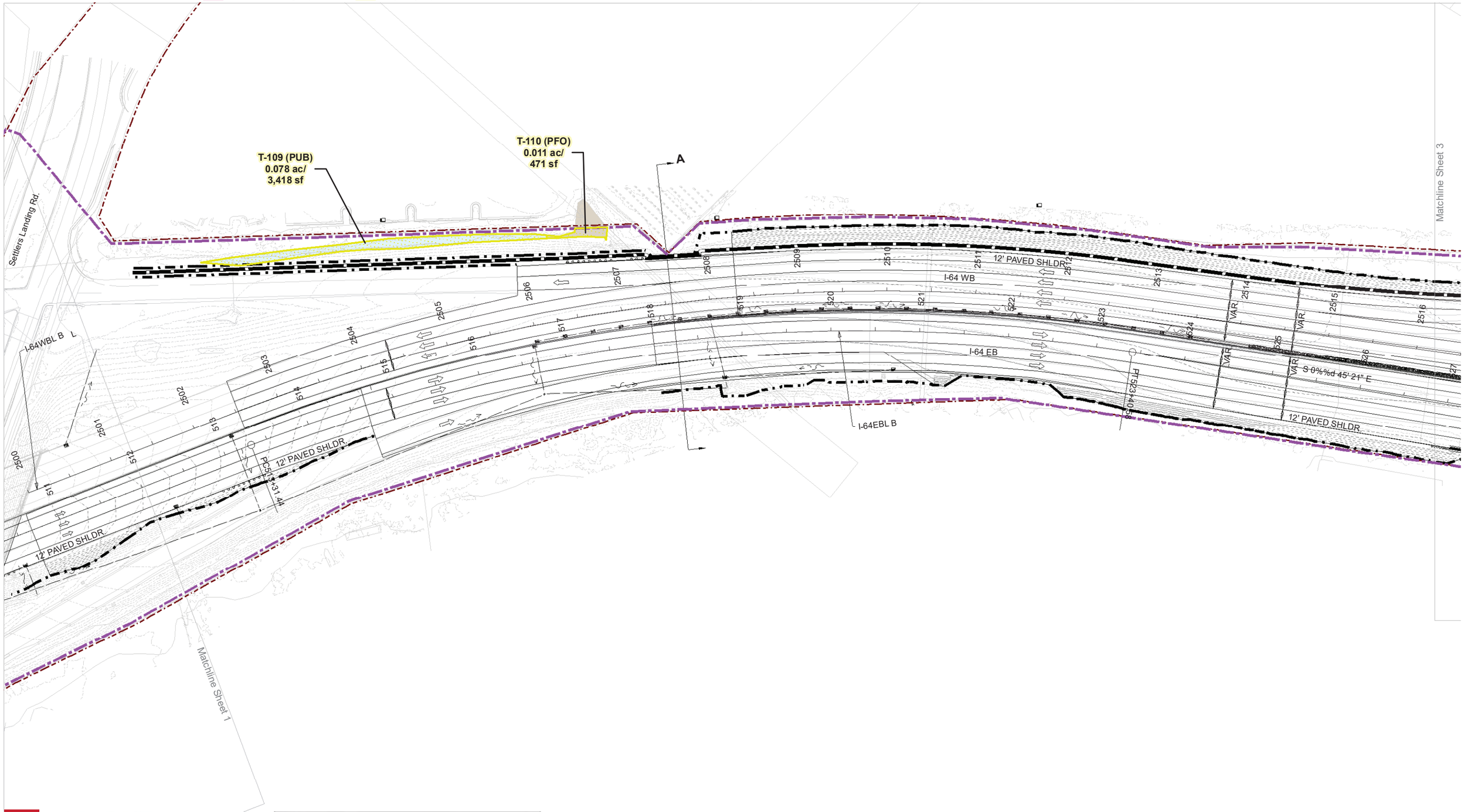
SHEET 1 OF 38

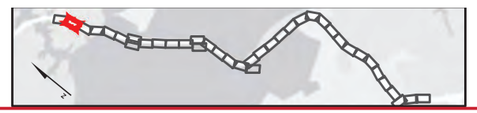
SEPTEMBER 11, 2019

HRBT EXPANSION

Permanent Pile Impact
Permanent Impact
Permanent Conversion Impact
Permanent Shading Impact
Extended Shading Impact
MOT Trestle Impact
Work Trestle Impact
Jump Trestle Impact
Dredge Impact
Temporary Impact
Limit_of_Disturbance
Jump Trestle Footprint
MOT Trestle Footprint
Work Trestle Footprint
VDOT Right of Way
Sound Wall
Retaining Wall
Proposed Roadway
Grading Limit
Proposed Drainage
Proposed Contour
Existing Roadway and Drainage
Existing Contour
SAV
E1OW-Deepest
E2OW-Deeper
E1OW-Deep
E1OW-Mid Depth
E1OW-Shallow
E2RF
E2RS2
E2US2
E2US3
E2EM
E2SS
E2FO
PUB
PEM
PSS
PFO
R2
R4
R6
Mean High Water (0.95 ft)
Mean Low Water (-1.48 ft)
Navigation Channel Limit

HAMPTON ROADS CONNECTOR PARTNERS





0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

HDR | MOTT MACDONALD
Design Joint Venture

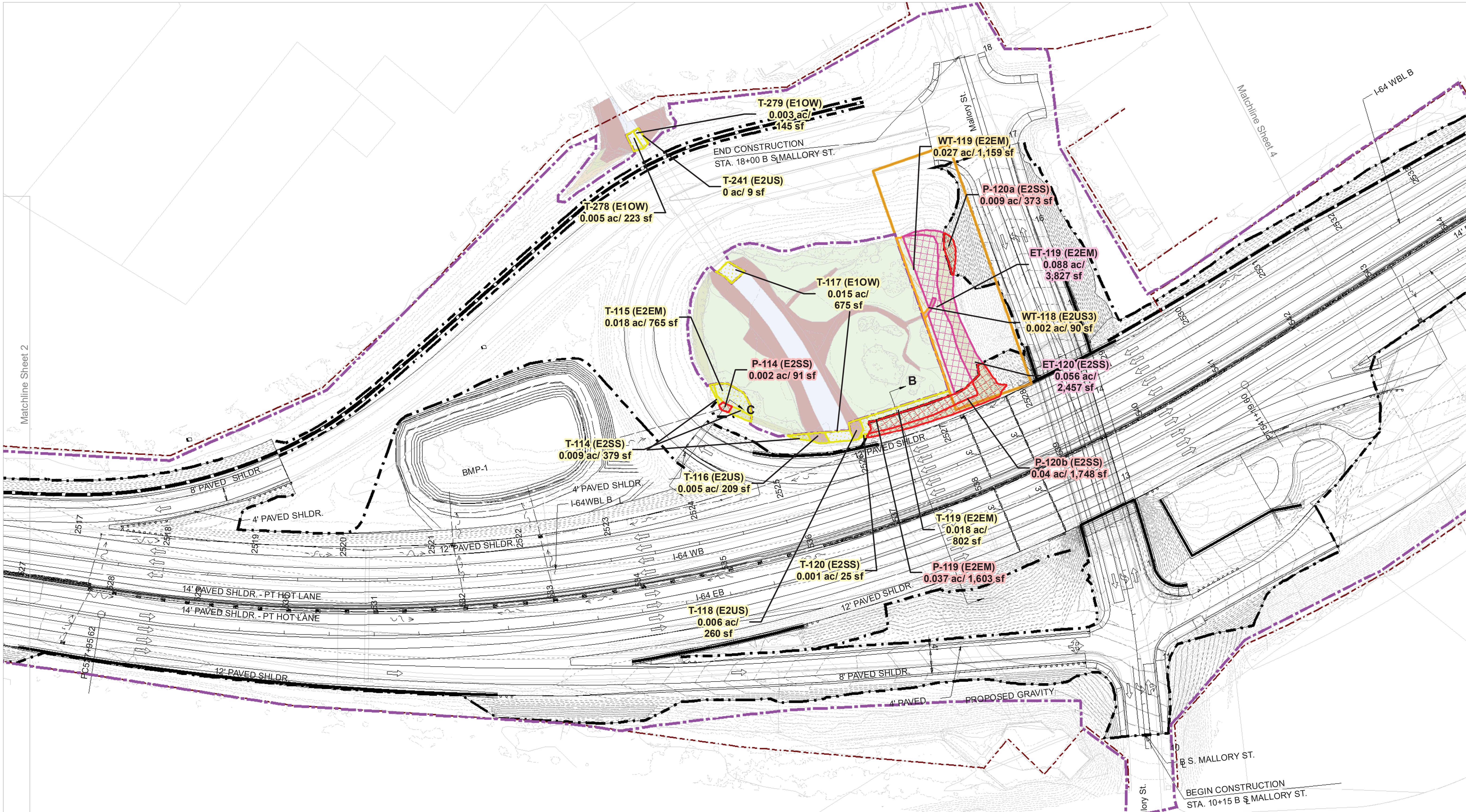
I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

HRBT EXPANSION

Permanent Pile Impact
Permanent Impact
Permanent Conversion Impact
Permanent Shading Impact
Extended Shading Impact
MOT Trestle Impact
Work Trestle Impact
Jump Trestle Impact
Dredge Impact
Temporary Impact
Limit_of_Disturbance
Jump Trestle Footprint
MOT Trestle Footprint
Work Trestle Footprint
VDOT Right of Way
Sound Wall
Retaining Wall
Proposed Roadway
Grading Limit
Proposed Drainage
Proposed Contour
Existing Roadway and Drainage
Existing Contour
SAV
E1OW-Deepest
E2OW-Deeper
E1OW-Deep
E1OW-Mid Depth
E1OW-Shallow
E2RF
E2RS2
E2US2
E2US3
E2EM
E2SS
E2FO
PUB
PEM
PSS
PFO
R2
R4
R6
Mean High Water (0.95 ft)
Mean Low Water (-1.48 ft)
Navigation Channel Limit

HAMPTON ROADS CONNECTOR PARTNERS



64 HDR | MOTT MACDONALD Design Joint Venture

0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

SHEET 3 OF 38

SEPTEMBER 11, 2019

Permanent Pile Impact
Permanent Impact
Permanent Conversion Impact
Permanent Shading Impact
Extended Shading Impact
MOT Trestle Impact
Work Trestle Impact
Jump Trestle Impact
Dredge Impact
Temporary Impact
Limit_of_Disturbance
Jump Trestle Footprint
MOT Trestle Footprint
Work Trestle Footprint
VDOT Right of Way
Sound Wall
Retaining Wall
Proposed Roadway
Grading Limit
Proposed Drainage
Proposed Contour
Existing Roadway and Drainage
Existing Contour
SAV
E1OW-Deepest
E2OW-Deeper
E1OW-Deep
E1OW-Mid Depth
E1OW-Shallow
E2RF
E2RS2
E2US2
E2US3
E2EM
E2SS
E2FO
PUB
PEM
PSS
PFO
R2
R4
R6
Mean High Water (0.95 ft)
Mean Low Water (-1.48 ft)
Navigation Channel Limit

Matchline Sheet 3
I-64 WBL B
12' PAVED SHLDR.
I-64 WB
14' PAVED SHLDR. - PT HOT LANE
S 41%%d 42' 58" E
I-64 EB
I-64 EBL B
L
P-121 (PEM)
0.104 ac/
4,530 sf
WT-HU1 (E2US2)
0.061 ac/ 2,638 sf
WT-HU2 (E1OW)
0.025 ac/ 1,092 sf
T-HU1 (E2US2)
0.035 ac/ 1,518 sf
Matchline Sheet 5

0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT
JOINT PERMIT APPLICATION IMPACT PLATES
SHEET 4 OF 38
SEPTEMBER 11, 2019

HRBT EXPANSION

Permanent Pile Impact
Permanent Impact
Permanent Conversion Impact
Permanent Shading Impact
Extended Shading Impact
MOT Trestle Impact
Work Trestle Impact
Jump Trestle Impact
Dredge Impact
Temporary Impact
Limit_of_Disturbance
Jump Trestle Footprint
MOT Trestle Footprint
Work Trestle Footprint
VDOT Right of Way
Sound Wall
Retaining Wall
Proposed Roadway
Grading Limit
Proposed Drainage
Proposed Contour
Existing Roadway and Drainage
Existing Contour
SAV
E1OW-Deepest
E2OW-Deeper
E1OW-Deep
E1OW-Mid Depth
E1OW-Shallow
E2RF
E2RS2
E2US2
E2US3
E2EM
E2SS
E2FO
PUB
PEM
PSS
PFO
R2
R4
R6
Mean High Water (0.95 ft)
Mean Low Water (-1.48 ft)
Navigation Channel Limit

HAMPTON ROADS CONNECTOR PARTNERS

REMOVE EXISTING STRUCTURE

T-SAVa (SAV)
0.035
ac/ 1,523 sf

T-122 (E2US2)
0.012 ac/ 531 sf

JT-122c (E2US2)
0.018 ac/ 771 sf

T-SAVa (SAV)
0.035
ac/ 1,523 sf

JT-124e (E1OW)
1.194 ac/ 52,000 sf

I-64WBL B

JT-124a (E1OW)
2.708 ac/ 117,947 sf

JT-122a (E2US2)
0.019 ac/ 841 sf

JT-122b (E2US2)
0.015 ac/ 671 sf

JT-124d (E1OW)
1.205 ac/
52,508 sf

WT-HU1 (E2US2)
0.061 ac/ 2,638 sf

WT-124b (E1OW)
0.118 ac/ 5,127 sf

WT-124a (E1OW)
0.026 ac/ 1,127 sf

T-SAVb (SAV)
0.035 ac/
1,518 sf

ET-SAV (SAV)
0.401 ac/ 17,462 sf

WT-124c (E1OW)
0.747 ac/
32,536 sf

I-64EBL B

WT-122 (E2US2)
0.023 ac/ 981 sf

WT-SAV (SAV)
0.146 ac/
6,347 sf

P-122 (E2US2)
0.006 ac/ 252 sf

T-SAVc (SAV)
0.307 ac/
13,364 sf

WT-HU2 (E1OW)
0.025 ac/ 1,092 sf

P-HU1 (E2RS2)
0.008 ac/ 356 sf

T-HU1 (E2US2)
0.035 ac/ 1,518 sf

HAMPTON ROADS HARBOR

HAMPTON ROADS HARBOR

Matchline Sheet 4

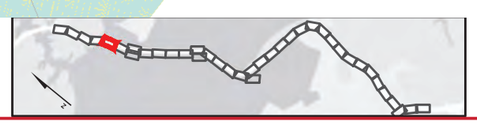
Matchline Sheet 6

16' SHLDR. - PT HOT LANE

12' SHLDR.

PT 561+83.21

Ebb Flow



0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

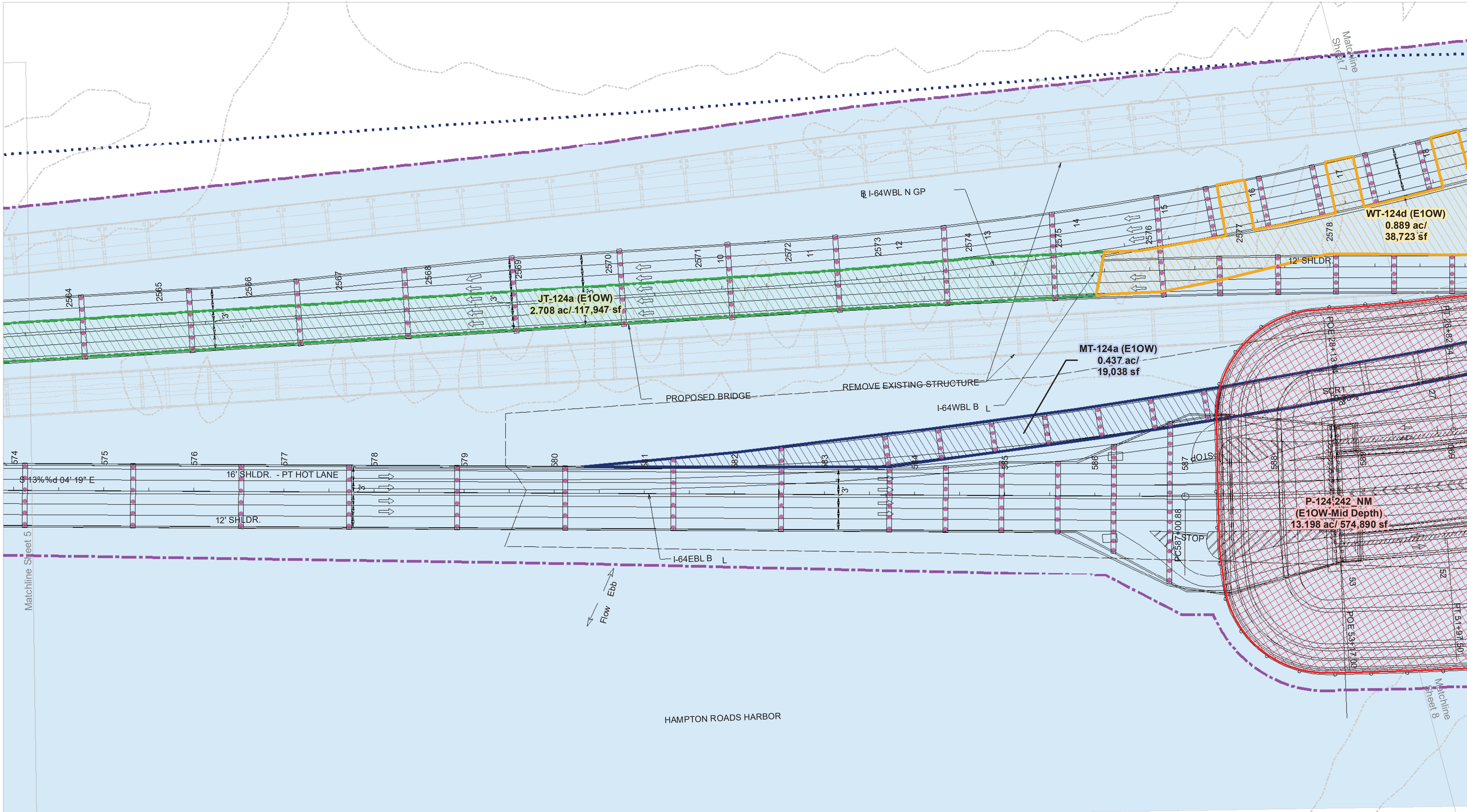
HDR | MOTT MACDONALD
Design Joint Venture

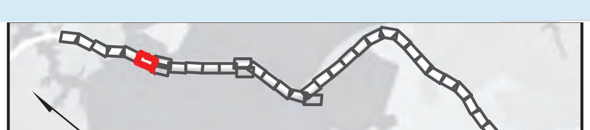
I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

SEPTEMBER 11, 2019

Permanent Pile Impact	MOT Trestle Impact	Limit_of_Disturbance	VDOT Right of Way	Grading Limit	SAV	E1OW-Shallow	E2EM	PSS	Mean High Water (0.95 ft)
Permanent Impact	Work Trestle Impact	Jump Trestle Footprint	Sound Wall	Proposed Drainage	E1OW-Deepest	E2RF	E2SS	PFO	Mean Low Water (-1.48 ft)
Permanent Conversion Impact	Jump Trestle Impact	MOT Trestle Footprint	Retaining Wall	Proposed Contour	E2OW-Deeper	E2RS2	E2FO	R2	Navigation Channel Limit
Permanent Shading Impact	Dredge Impact	Work Trestle Footprint	Proposed Roadway	Existing Roadway and Drainage	E1OW-Deep	E2US2	PUB	R4	
Extended Shading Impact	Temporary Impact			Existing Contour	E1OW-Mid Depth	E2US3	PEM	R6	





0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

HDR | MOTT MACDONALD
Design Joint Venture

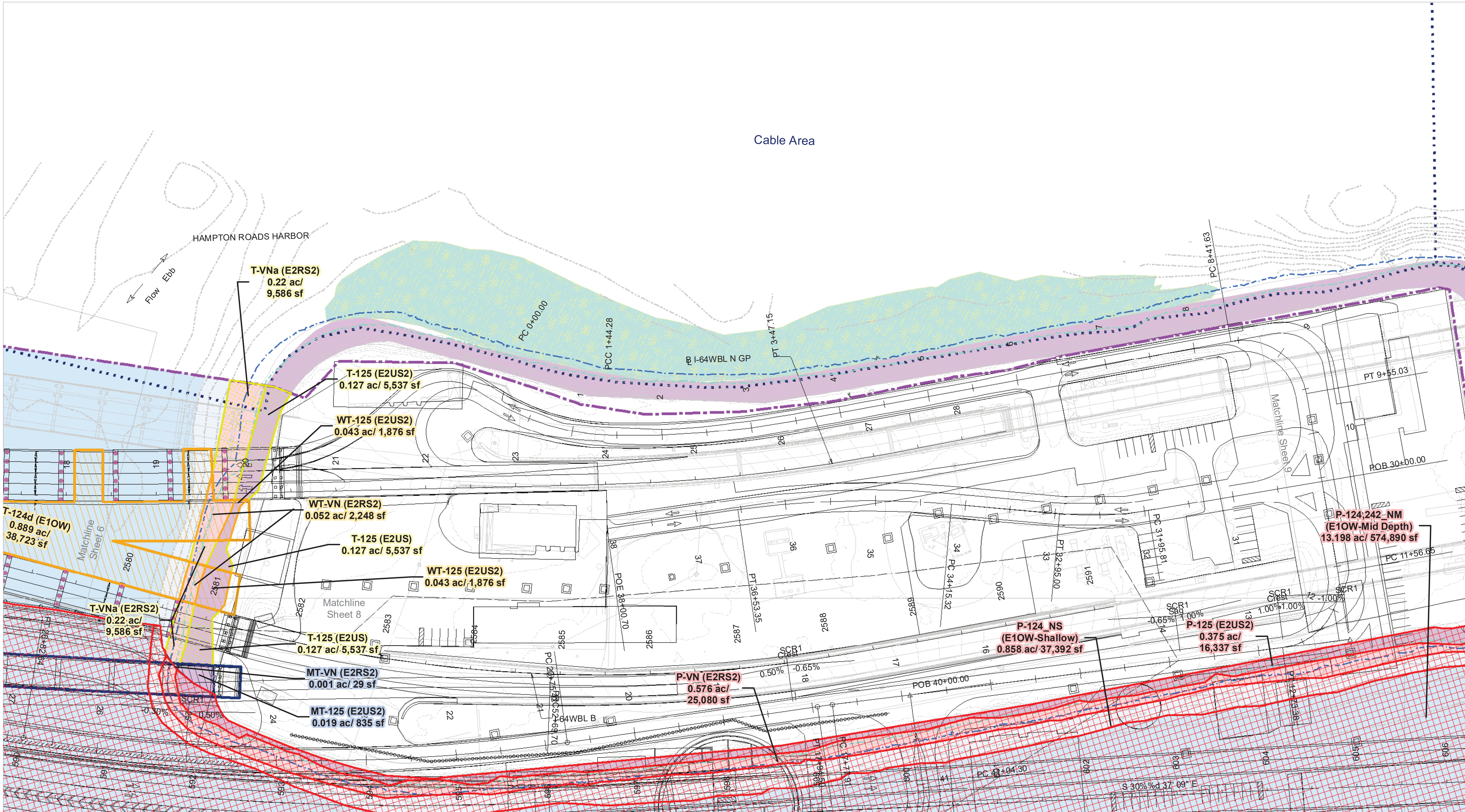
I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

SHEET 6 OF 38

SEPTEMBER 11, 2019

Permanent Pile Impact
Permanent Impact
Permanent Conversion Impact
Permanent Shading Impact
Extended Shading Impact
MOT Trestle Impact
Work Trestle Impact
Jump Trestle Impact
Dredge Impact
Temporary Impact
Limit_of_Disturbance
Jump Trestle Footprint
MOT Trestle Footprint
Work Trestle Footprint
VDOT Right of Way
Sound Wall
Retaining Wall
Proposed Roadway
Grading Limit
Proposed Drainage
Proposed Contour
Existing Roadway and Drainage
Existing Contour
SAV
E1OW-Deepest
E2OW-Deeper
E1OW-Deep
E1OW-Mid Depth
E1OW-Shallow
E2RF
E2RS2
E2US2
E2US3
E2EM
E2SS
E2FO
PUB
PEM
PSS
PFO
R2
R4
R6
Mean High Water (0.95 ft)
Mean Low Water (-1.48 ft)
Navigation Channel Limit



0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

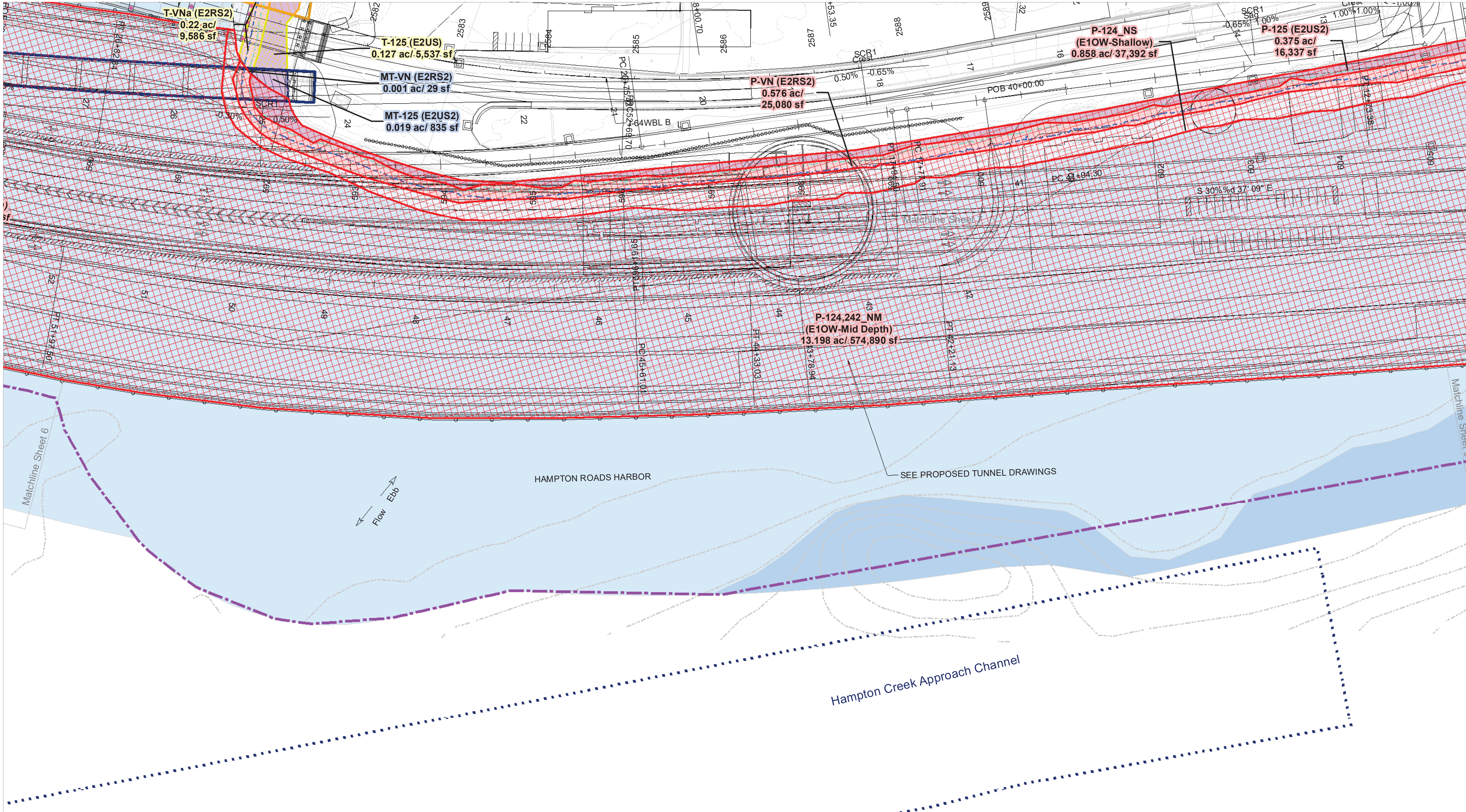
HDR | MOTT MACDONALD
Design Joint Venture

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

SEPTEMBER 11, 2019

Permanent Pile Impact
Permanent Impact
Permanent Conversion Impact
Permanent Shading Impact
Extended Shading Impact
MOT Trestle Impact
Work Trestle Impact
Jump Trestle Impact
Dredge Impact
Temporary Impact
Limit_of_Disturbance
Jump Trestle Footprint
MOT Trestle Footprint
Work Trestle Footprint
VDOT Right of Way
Sound Wall
Retaining Wall
Proposed Roadway
Grading Limit
Proposed Drainage
Proposed Contour
Existing Roadway and Drainage
Existing Contour
SAV
E1OW-Deepest
E2OW-Deeper
E1OW-Deep
E1OW-Mid Depth
E1OW-Shallow
E2RF
E2RS2
E2US2
E2US3
E2EM
E2SS
E2FO
PUB
PEM
PSS
PFO
R2
R4
R6
Mean High Water (0.95 ft)
Mean Low Water (-1.48 ft)
Navigation Channel Limit



0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

HDR | MOTT MACDONALD
Design Joint Venture

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

SEPTEMBER 11, 2019

HRBT EXPANSION

Permanent Pile Impact
Permanent Impact
Permanent Conversion Impact
Permanent Shading Impact
Extended Shading Impact
MOT Trestle Impact
Work Trestle Impact
Jump Trestle Impact
Dredge Impact
Temporary Impact
Limit_of_Disturbance
Jump Trestle Footprint
MOT Trestle Footprint
Work Trestle Footprint
VDOT Right of Way
Sound Wall
Retaining Wall
Proposed Roadway
Grading Limit
Proposed Drainage
Proposed Contour
Existing Roadway and Drainage
Existing Contour
SAV
E1OW-Deepest
E2OW-Deeper
E1OW-Deep
E1OW-Mid Depth
E1OW-Shallow
E2RF
E2RS2
E2US2
E2US3
E2EM
E2SS
E2FO
PUB
PEM
PSS
PFO
R2
R4
R6
Mean High Water (0.95 ft)
Mean Low Water (-1.48 ft)
Navigation Channel Limit

HAMPTON ROADS CONNECTOR PARTNERS

PT 9+55.03
POB 30+00.00
PC 11+56.65
SCR1
-1.00%
P-124;242_NM (E1OW-Mid Depth) 13.198 ac/ 574,890 sf
T-VNb (E2RS2) 0.082 ac/ 3,571 sf
T-125 (E2US) 0.127 ac/ 5,537 sf
P-124_NS (E1OW-Shallow) 0.858 ac/ 37,392 sf
P-125 (E2US2) 0.375 ac/ 16,337 sf
P-VN (E2RS2) 0.576 ac/ 25,080 sf
P-124_ND (E1OW-Deep) 0.775 ac/ 33,748 sf
POB 9+88.53
Waterline Structure
HAMPTON ROADS HARBOR
SEE PROPOSED TUNNEL DRAWINGS
Matchline Sheet 8
Matchline Sheet 10

HDR | MOTT MACDONALD
Design Joint Venture

0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

SHEET 9 OF 38

SEPTEMBER 11, 2019

Permanent Pile Impact
Permanent Impact
Permanent Conversion Impact
Permanent Shading Impact
Extended Shading Impact
MOT Trestle Impact
Work Trestle Impact
Jump Trestle Impact
Dredge Impact
Temporary Impact
Limit_of_Disturbance
Jump Trestle Footprint
MOT Trestle Footprint
Work Trestle Footprint
VDOT Right of Way
Sound Wall
Retaining Wall
Proposed Roadway
Grading Limit
Proposed Drainage
Proposed Contour
Existing Roadway and Drainage
Existing Contour
SAV
E1OW-Deepest
E2OW-Deeper
E1OW-Deep
E1OW-Mid Depth
E1OW-Shallow
E2RF
E2RS2
E2US2
E2US3
E2EM
E2SS
E2FO
PUB
PEM
PSS
PFO
R2
R4
R6
Mean High Water (0.95 ft)
Mean Low Water (-1.48 ft)
Navigation Channel Limit

F-1 Anchorage Approach

HAMPTON ROADS HARBOR

Flood Ebb

NAVIGABLE CHANNEL

SEE PROPOSED TUNNEL DRAWINGS

622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637

Matchline Sheet 11

Matchline Sheet 9

0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

SHEET 10 OF 38

SEPTEMBER 11, 2019

Permanent Pile Impact
Permanent Impact
Permanent Conversion Impact
Permanent Shading Impact
Extended Shading Impact
MOT Trestle Impact
Work Trestle Impact
Jump Trestle Impact
Dredge Impact
Temporary Impact
Limit_of_Disturbance
Jump Trestle Footprint
MOT Trestle Footprint
Work Trestle Footprint
VDOT Right of Way
Sound Wall
Retaining Wall
Proposed Roadway
Grading Limit
Proposed Drainage
Proposed Contour
Existing Roadway and Drainage
Existing Contour
SAV
E1OW-Deepest
E2OW-Deeper
E1OW-Deep
E1OW-Mid Depth
E1OW-Shallow
E2RF
E2RS2
E2US2
E2US3
E2EM
E2SS
E2FO
PUB
PEM
PSS
PFO
R2
R4
R6
Mean High Water (0.95 ft)
Mean Low Water (-1.48 ft)
Navigation Channel Limit

Matchline Sheet 10

Matchline Sheet 12

200' Buffer

Norfolk Harbor Entrance Reach

Flood Ebb

NAVIGABLE CHANNEL

HAMPTON ROADS HARBOR

SEE PROPOSED TUNNEL DRAWINGS

638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653

0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

SEPTEMBER 11, 2019

HRBT EXPANSION

Permanent Pile Impact
Permanent Impact
Permanent Conversion Impact
Permanent Shading Impact
Extended Shading Impact
MOT Trestle Impact
Work Trestle Impact
Jump Trestle Impact
Dredge Impact
Temporary Impact
Limit_of_Disturbance
Jump Trestle Footprint
MOT Trestle Footprint
Work Trestle Footprint
VDOT Right of Way
Sound Wall
Retaining Wall
Proposed Roadway
Grading Limit
Proposed Drainage
Proposed Contour
Existing Roadway and Drainage
Existing Contour
SAV
E1OW-Deepest
E2OW-Deeper
E1OW-Deep
E1OW-Mid Depth
E1OW-Shallow
E2RF
E2RS2
E2US2
E2US3
E2EM
E2SS
E2FO
PUB
PEM
PSS
PFO
R2
R4
R6
Mean High Water (0.95 ft)
Mean Low Water (-1.48 ft)
Navigation Channel Limit

HAMPTON ROADS CONNECTOR PARTNERS

Matchline Sheet 11

Matchline Sheet 13

SEE PROPOSED TUNNEL DRAWINGS

PT 659+74.44

East Ground Improvement Trestle

WT-124e (E1OW)
0.876 ac/
38,144 sf

S 44%%d 43' 18" E

654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670

WT-124f (E1OW)
0.904 ac/
39,374 sf

West Ground Improvement Trestle

Flood

Ebb

HAMPTON ROADS HARBOR

Matchline Sheet 14

64 HDR | MOTT MACDONALD
Design Joint Venture

0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

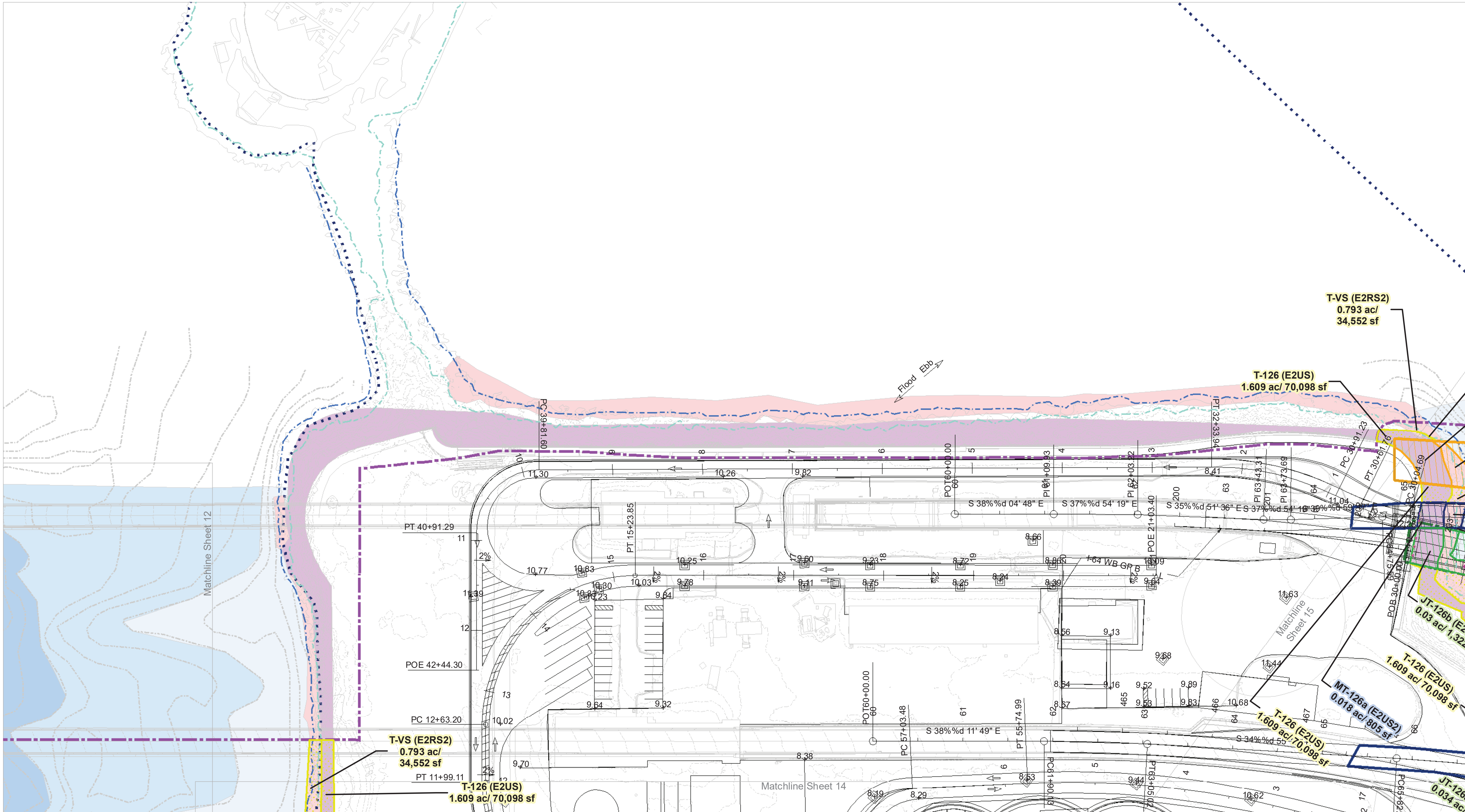
SHEET 12 OF 38

SEPTEMBER 11, 2019

HRBT EXPANSION

Permanent Pile Impact	MOT Trestle Impact	Limit_of_Disturbance	VDOT Right of Way	Grading Limit	SAV	E1OW-Shallow	E2EM	PSS	Mean High Water (0.95 ft)
Permanent Impact	Work Trestle Impact	Jump Trestle Footprint	Sound Wall	Proposed Drainage	E1OW-Deepest	E2RF	E2SS	PFO	Mean Low Water (-1.48 ft)
Permanent Conversion Impact	Jump Trestle Impact	MOT Trestle Footprint	Retaining Wall	Proposed Contour	E2OW-Deeper	E2RS2	E2FO	R2	Navigation Channel Limit
Permanent Shading Impact	Dredge Impact	Work Trestle Footprint	Proposed Roadway	Existing Roadway and Drainage	E1OW-Deep	E2US2	PUB	R4	
Extended Shading Impact	Temporary Impact			Existing Contour	E1OW-Mid Depth	E2US3	PEM	R6	

HAMPTON ROADS CONNECTOR PARTNERS



0 50 100
Feet

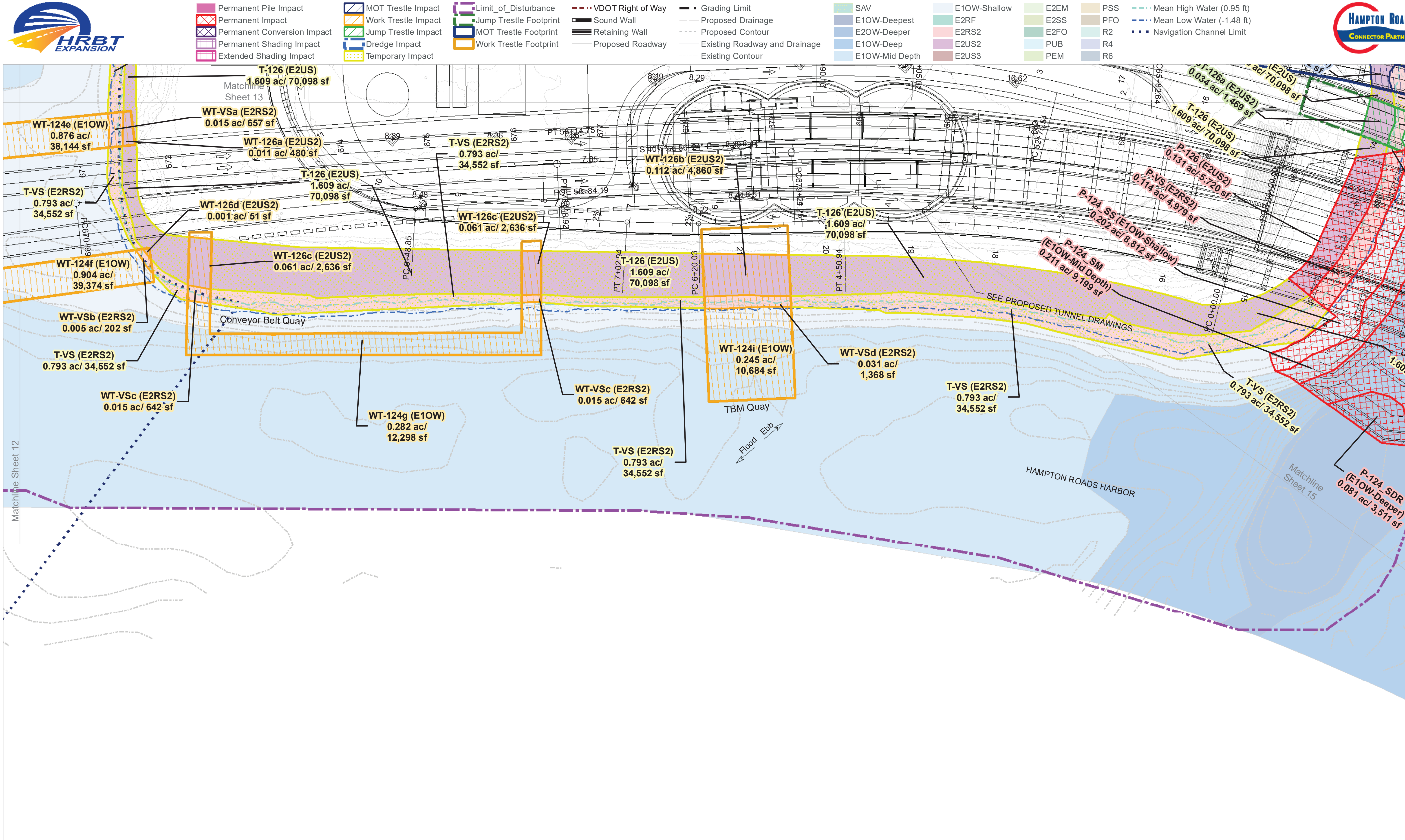
DATA SOURCE: VIMS, VDOT, FHWA

64 HDR | MOTT MACDONALD
Design Joint Venture

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

SEPTEMBER 11, 2019



Permanent Pile Impact
Permanent Impact
Permanent Conversion Impact
Permanent Shading Impact
Extended Shading Impact
MOT Trestle Impact
Work Trestle Impact
Jump Trestle Impact
Dredge Impact
Temporary Impact
Limit_of_Disturbance
Jump Trestle Footprint
MOT Trestle Footprint
Work Trestle Footprint
VDOT Right of Way
Sound Wall
Retaining Wall
Proposed Roadway
Grading Limit
Proposed Drainage
Proposed Contour
Existing Roadway and Drainage
Existing Contour
SAV
E1OW-Deepest
E2OW-Deeper
E1OW-Deep
E1OW-Mid Depth
E1OW-Shallow
E2RF
E2RS2
E2US2
E2US3
E2EM
E2SS
E2FO
PUB
PEM
PSS
PFO
R2
R4
R6
Mean High Water (0.95 ft)
Mean Low Water (-1.48 ft)
Navigation Channel Limit
Matchline Sheet 13
T-126 (E2US) 1.609 ac/ 70,098 sf
WT-VSa (E2RS2) 0.015 ac/ 657 sf
WT-124e (E1OW) 0.876 ac/ 38,144 sf
WT-126a (E2US2) 0.011 ac/ 480 sf
T-VS (E2RS2) 0.793 ac/ 34,552 sf
WT-126b (E2US2) 0.112 ac/ 4,860 sf
T-126 (E2US) 1.609 ac/ 70,098 sf
WT-126d (E2US2) 0.001 ac/ 51 sf
WT-126c (E2US2) 0.061 ac/ 2,636 sf
T-VS (E2RS2) 0.793 ac/ 34,552 sf
WT-124f (E1OW) 0.904 ac/ 39,374 sf
WT-126c (E2US2) 0.061 ac/ 2,636 sf
T-126 (E2US) 1.609 ac/ 70,098 sf
WT-VSb (E2RS2) 0.005 ac/ 202 sf
Conveyor Belt Quay
T-VS (E2RS2) 0.793 ac/ 34,552 sf
WT-VSc (E2RS2) 0.015 ac/ 642 sf
WT-124g (E1OW) 0.282 ac/ 12,298 sf
WT-VSc (E2RS2) 0.015 ac/ 642 sf
T-VS (E2RS2) 0.793 ac/ 34,552 sf
WT-124i (E1OW) 0.245 ac/ 10,684 sf
TBM Quay
Flood
Ebb
WT-VSd (E2RS2) 0.031 ac/ 1,368 sf
T-VS (E2RS2) 0.793 ac/ 34,552 sf
SEE PROPOSED TUNNEL DRAWINGS
HAMPTON ROADS HARBOR
T-126a (E2US2) 0.034 ac/ 1,469 sf
T-126 (E2US) 1.609 ac/ 70,098 sf
P-126 (E2US2) 0.131 ac/ 5,720 sf
P-VS (E2RS2) 0.114 ac/ 4,979 sf
P-124_SS (E1OW-Shallow) 0.202 ac/ 8,812 sf
P-124_SM (E1OW-Mid Depth) 0.211 ac/ 9,199 sf
T-VS (E2RS2) 0.793 ac/ 34,552 sf
P-124_SDR (E1OW-Deeper) 0.081 ac/ 3,511 sf
Matchline Sheet 15
Matchline Sheet 12

0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

HDR | MOTT MACDONALD
Design Joint Venture

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

SHEET 14 OF 38

SEPTEMBER 11, 2019

HRBT EXPANSION

Permanent Pile Impact
Permanent Impact
Permanent Conversion Impact
Permanent Shading Impact
Extended Shading Impact
MOT Trestle Impact
Work Trestle Impact
Jump Trestle Impact
Dredge Impact
Temporary Impact
Limit_of_Disturbance
Jump Trestle Footprint
MOT Trestle Footprint
Work Trestle Footprint
VDOT Right of Way
Sound Wall
Retaining Wall
Proposed Roadway
Grading Limit
Proposed Drainage
Proposed Contour
Existing Roadway and Drainage
Existing Contour
SAV
E1OW-Deepest
E2OW-Deeper
E1OW-Deep
E1OW-Mid Depth
E1OW-Shallow
E2RF
E2RS2
E2US2
E2US3
E2EM
E2SS
E2FO
PUB
PEM
PSS
PFO
R2
R4
R6
Mean High Water (0.95 ft)
Mean Low Water (-1.48 ft)
Navigation Channel Limit

HAMPTON ROADS CONNECTOR PARTNERS

Cable Area

T-VS (E2RS2)
0.793 ac/
34,552 sf

WT-126e (E2US2)
0.044 ac/ 1,936 sf

WT-VSe (E2RS2)
0.023 ac/ 988 sf

WT-124h (E1OW)
0.46 ac/ 20,050 sf

T-VS (E2RS2)
0.793 ac/ 34,552 sf

MT-VSa (E2RS2)
0.014 ac/ 597 sf

T-VS (E2RS2)
0.793 ac/ 34,552 sf

JT-VSb (E2RS2)
0.04 ac/ 1,730 sf

JT-126b (E2US2)
0.03 ac/ 1,322 sf

WT-126f (E2US2)
0.098 ac/ 4,255 sf

T-126 (E2US)
1.609 ac/ 70,098 sf

MT-126a (E2US2)
0.018 ac/ 805 sf

T-126 (E2US)
1.609 ac/ 70,098 sf

MT-126b (E2US2)
0.018 ac/ 772 sf

T-126 (E2US)
1.609 ac/ 70,098 sf

JT-126a (E2US2)
0.034 ac/ 1,469 sf

T-126 (E2US)
1.609 ac/ 70,098 sf

P-126 (E2US2)
0.131 ac/ 5,720 sf

P-VS (E2RS2)
0.114 ac/ 4,979 sf

P-124_SS (E1OW-Shallow)
0.202 ac/ 8,812 sf

P-124_SM
(E1OW-Mid Depth)
0.211 ac/ 9,199 sf

MT-124c (E1OW)
0.915 ac/ 39,874 sf

JT-124c (E1OW)
1.65 ac/ 71,885 sf

T-126 (E2US)
1.609 ac/ 70,098 sf

T-VS (E2RS2),
0.793 ac/ 34,552 sf

WT-124j (E1OW)
0.554 ac/ 24,118 sf

MT-VSb (E2RS2)
0.02 ac/ 856 sf

T-VS (E2RS2)
0.793 ac/ 34,552 sf

JT-VSa (E2RS2)
0.017 ac/ 740 sf

JT-124b (E1OW)
1.368 ac/ 59,597 sf

T-VS (E2RS2)
0.793 ac/ 34,552 sf

P-124_SD (E1OW-Deep)
3.212 ac/ 139,922 sf

T-126 (E2US)
1.609 ac/ 70,098 sf

P-124_SDR
(E1OW-Deeper)
0.081 ac/ 3,511 sf

MT-124b (E1OW)
1.246 ac/
54,295 sf

JT-124b (E1OW)
1.368 ac/ 59,597 sf

WB T TRST B
REMOVE EXISTING
EB T TRST B
Matchline Sheet 14
Matchline Sheet 16
Flood
Ebb

0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

64 HDR | MOTT MACDONALD
Design Joint Venture

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

HRBT EXPANSION

HAMPTON ROADS CONNECTOR PARTNERS

- Permanent Pile Impact
- Permanent Impact
- Permanent Conversion Impact
- Permanent Shading Impact
- Extended Shading Impact
- MOT Trestle Impact
- Work Trestle Impact
- Jump Trestle Impact
- Dredge Impact
- Temporary Impact
- Limit_of_Disturbance
- Jump Trestle Footprint
- MOT Trestle Footprint
- Work Trestle Footprint
- VDOT Right of Way
- Sound Wall
- Retaining Wall
- Proposed Roadway
- Grading Limit
- Proposed Drainage
- Proposed Contour
- Existing Roadway and Drainage
- Existing Contour
- SAV
- E1OW-Deepest
- E2OW-Deeper
- E1OW-Deep
- E1OW-Mid Depth
- E1OW-Shallow
- E2RF
- E2RS2
- E2US2
- E2US3
- E2EM
- E2SS
- E2FO
- PUB
- PEM
- PSS
- PFO
- R2
- R4
- R6
- Mean High Water (0.95 ft)
- Mean Low Water (-1.48 ft)
- Navigation Channel Limit

Cable Area

D-124a (E1OW)
4.75 ac/
206,922 sf

REMOVE EXISTING STRUCTURE

EB T TRST B

I-64 WB GP B

JT-124c (E1OW)
1.65 ac/ 71,885 sf

MT-124b (E1OW)
1.246 ac/
54,295 sf

JT-124b (E1OW)
1.368 ac/ 59,597 sf

D-124b (E1OW)
0.943 ac/
41,063 sf

I-64 CONSTR. B

HAMPTON ROADS HARBOR

Matchline Sheet 15

Matchline Sheet 17

0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

HDR | MOTT MACDONALD
Design Joint Venture

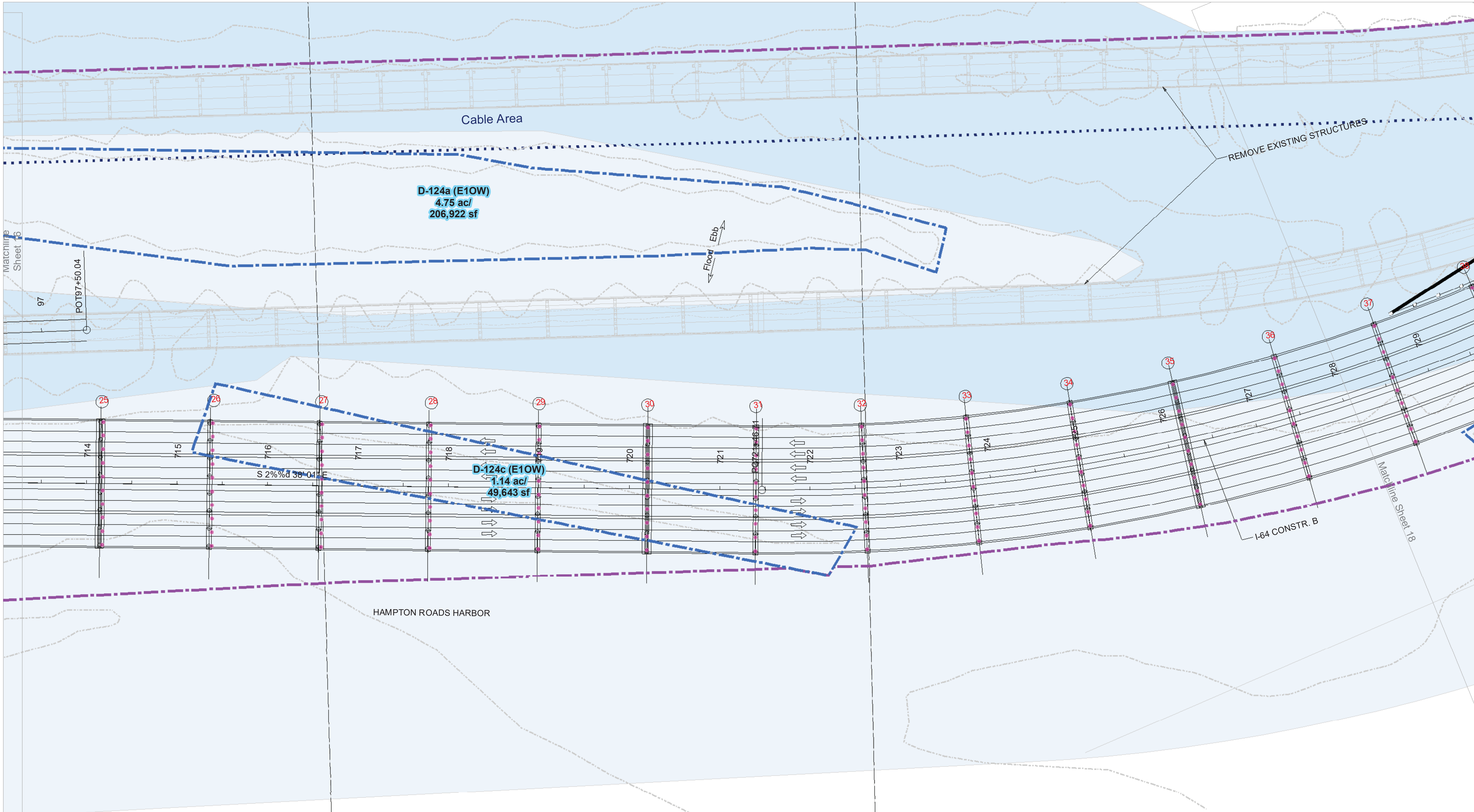
I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

SHEET 16 OF 38

SEPTEMBER 11, 2019

Permanent Pile Impact
Permanent Impact
Permanent Conversion Impact
Permanent Shading Impact
Extended Shading Impact
MOT Trestle Impact
Work Trestle Impact
Jump Trestle Impact
Dredge Impact
Temporary Impact
Limit_of_Disturbance
Jump Trestle Footprint
MOT Trestle Footprint
Work Trestle Footprint
VDOT Right of Way
Sound Wall
Retaining Wall
Proposed Roadway
Grading Limit
Proposed Drainage
Proposed Contour
Existing Roadway and Drainage
Existing Contour
SAV
E1OW-Deepest
E2OW-Deeper
E1OW-Deep
E1OW-Mid Depth
E1OW-Shallow
E2RF
E2RS2
E2US2
E2US3
E2EM
E2SS
E2FO
PUB
PEM
PSS
PFO
R2
R4
R6
Mean High Water (0.95 ft)
Mean Low Water (-1.48 ft)
Navigation Channel Limit



0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

SEPTEMBER 11, 2019

HRBT EXPANSION

Permanent Pile Impact
Permanent Impact
Permanent Conversion Impact
Permanent Shading Impact
Extended Shading Impact
MOT Trestle Impact
Work Trestle Impact
Jump Trestle Impact
Dredge Impact
Temporary Impact
Limit_of_Disturbance
Jump Trestle Footprint
MOT Trestle Footprint
Work Trestle Footprint
VDOT Right of Way
Sound Wall
Retaining Wall
Proposed Roadway
Grading Limit
Proposed Drainage
Proposed Contour
Existing Roadway and Drainage
Existing Contour
SAV
E1OW-Deepest
E2OW-Deeper
E1OW-Deep
E1OW-Mid Depth
E1OW-Shallow
E2RF
E2RS2
E2US2
E2US3
E2EM
E2SS
E2FO
PUB
PEM
PSS
PFO
R2
R4
R6
Mean High Water (0.95 ft)
Mean Low Water (-1.48 ft)
Navigation Channel Limit

HAMPTON ROADS CONNECTOR PARTNERS

OVE EXISTING STRUCTURES

Cable Area

WT-124l (E1OW)
0.48 ac/ 20,913 sf

WT-124k (E1OW)
0.672 ac/ 29,283 sf

D-124e (E1OW)
0.893 ac/
38,880 sf

D-124d (E1OW)
0.171 ac/ 7,434 sf

I-64 CONST. B

HAMPTON ROADS HARBOR

Matchline Sheet 19

Matchline Sheet 17

37 38 39 40 41 42 43 44 45 46 47 48

729 730 731 732 733 734 735 736 737 738 739 740 741 742

PROP

64 HDR | MOTT MACDONALD
Design Joint Venture

0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

SHEET 18 OF 38

SEPTEMBER 11, 2019

HRBT EXPANSION

Permanent Pile Impact
Permanent Impact
Permanent Conversion Impact
Permanent Shading Impact
Extended Shading Impact
MOT Trestle Impact
Work Trestle Impact
Jump Trestle Impact
Dredge Impact
Temporary Impact
Limit_of_Disturbance
Jump Trestle Footprint
MOT Trestle Footprint
Work Trestle Footprint
VDOT Right of Way
Sound Wall
Retaining Wall
Proposed Roadway
Grading Limit
Proposed Drainage
Proposed Contour
Existing Roadway and Drainage
Existing Contour
SAV
E1OW-Deepest
E2OW-Deeper
E1OW-Deep
E1OW-Mid Depth
E1OW-Shallow
E2RF
E2RS2
E2US2
E2US3
E2EM
E2SS
E2FO
PUB
PEM
PSS
PFO
R2
R4
R6
Mean High Water (0.95 ft)
Mean Low Water (-1.48 ft)
Navigation Channel Limit

HAMPTON ROADS CONNECTOR PARTNERS

P-268 (E2EM) 0.037 ac/ 1,600 sf
P-273 (E2US2) 0.03 ac/ 1,293 sf
P-267 (E2SS) 0.032 ac/ 1,387 sf
P-272 (E2US2) 0.009 ac/ 373 sf
P-276 (E2EM) 0.017 ac/ 728 sf
P-275 (E2US2) 0.058 ac/ 2,533 sf
P-277 (E2EM) 0.026 ac/ 1,138 sf
P-274 (E2SS) 0.029 ac/ 1,254 sf
P-269 (E2EM) 0.008 ac/ 331 sf
WT-WS3c (E1OW) 0.018 ac/ 795 sf
WT-WS3b (E1OW) 0.024 ac/ 1,062 sf
WT-WS3a (E1OW) 0.025 ac/ 1,110 sf
P-270 (E2EM) 0.026 ac/ 1,117 sf
P-271 (E2US2) 0.079 ac/ 3,451 sf
WT-247 (E2US2) 0.016 ac/ 702 sf
T-247 (E2US) 0.288 ac/ 12,529 sf
WT-WS2a (E1OW) 0.394 ac/ 17,168 sf
WT-248 (E1OW) 0.396 ac/ 17,260 sf
WT-WS2b (E1OW) 0.096 ac/ 4,163 sf

Matchline Sheet 20
Matchline Sheet 18

0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

64 HDR | MOTT MACDONALD Design Joint Venture

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

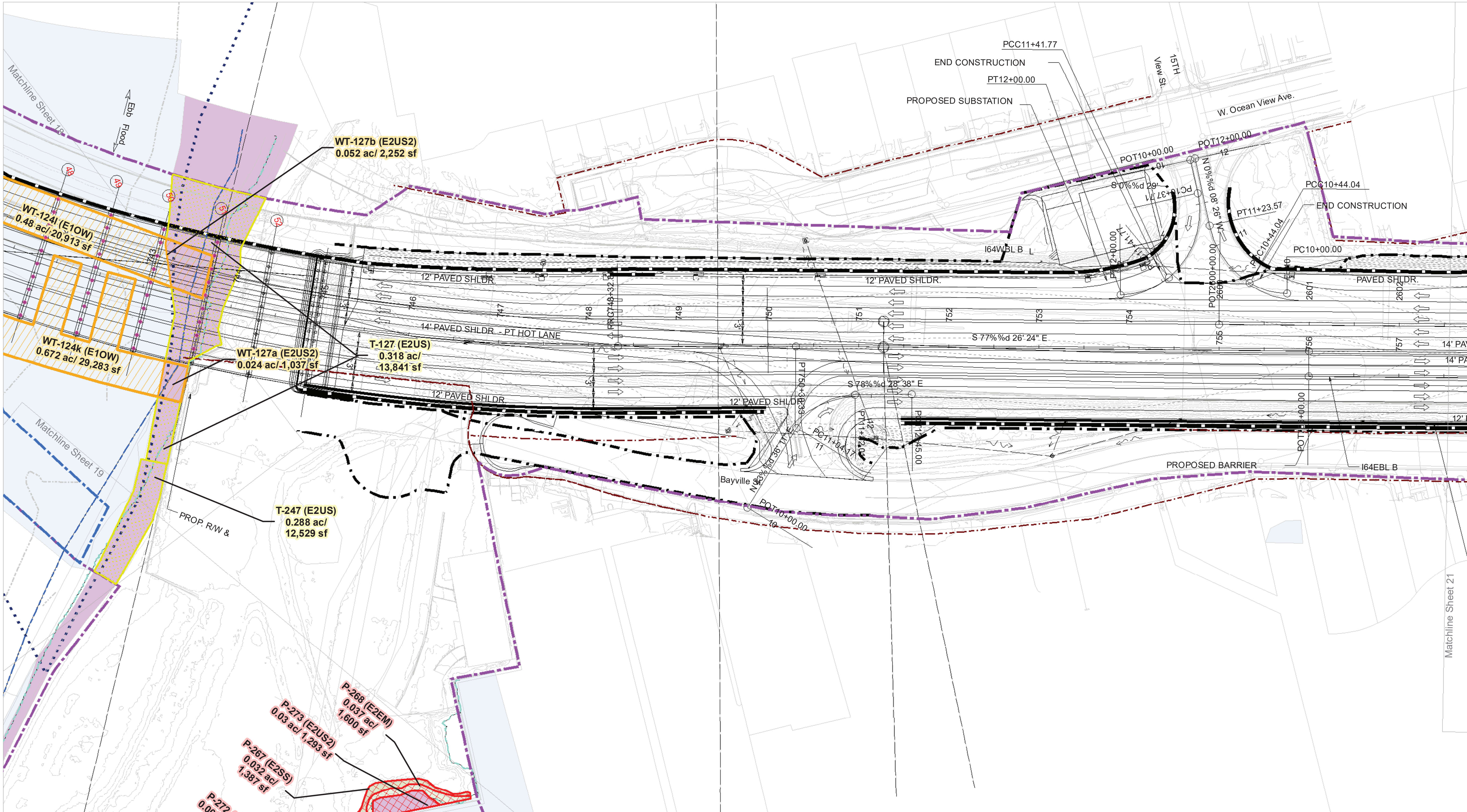
SEPTEMBER 11, 2019

HRBT EXPANSION

Permanent Pile Impact	MOT Trestle Impact	Limit_of_Disturbance	VDOT Right of Way	Grading Limit	SAV	E1OW-Shallow	E2EM
Permanent Impact	Work Trestle Impact	Jump Trestle Footprint	Sound Wall	Proposed Drainage	E1OW-Deepest	E2RF	E2SS
Permanent Conversion Impact	Jump Trestle Impact	MOT Trestle Footprint	Retaining Wall	Proposed Contour	E2OW-Deeper	E2RS2	E2FO
Permanent Shading Impact	Dredge Impact	Work Trestle Footprint	Proposed Roadway	Existing Roadway and Drainage	E1OW-Deep	E2US2	PUB
Extended Shading Impact	Temporary Impact			Existing Contour	E1OW-Mid Depth	E2US3	PEM

PSS		Mean High Water (0.95 ft)
PFO		Mean Low Water (-1.48 ft)
R2		Navigation Channel Limit
R4		
R6		

HAMPTON ROADS CONNECTOR PARTNERS



0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

64 HDR | MOTT MACDONALD
Design Joint Venture

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

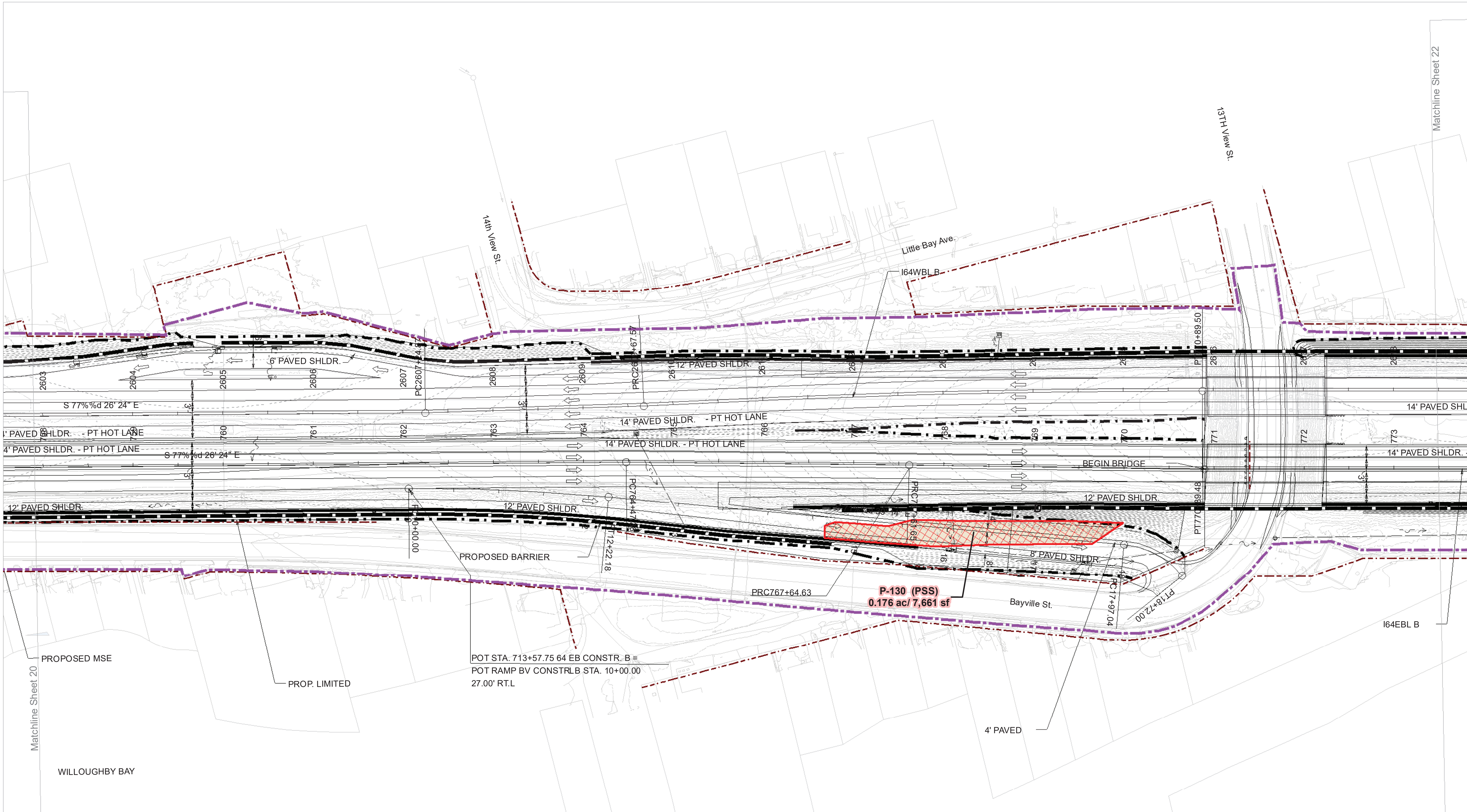
SHEET 20 OF 38

SEPTEMBER 11, 2019

HRBT EXPANSION

Permanent Pile Impact
Permanent Impact
Permanent Conversion Impact
Permanent Shading Impact
Extended Shading Impact
MOT Trestle Impact
Work Trestle Impact
Jump Trestle Impact
Dredge Impact
Temporary Impact
Limit_of_Disturbance
Jump Trestle Footprint
MOT Trestle Footprint
Work Trestle Footprint
VDOT Right of Way
Sound Wall
Retaining Wall
Proposed Roadway
Grading Limit
Proposed Drainage
Proposed Contour
Existing Roadway and Drainage
Existing Contour
SAV
E1OW-Deepest
E2OW-Deeper
E1OW-Deep
E1OW-Mid Depth
E1OW-Shallow
E2RF
E2RS2
E2US2
E2US3
E2EM
E2SS
E2FO
PUB
PEM
PSS
PFO
R2
R4
R6
Mean High Water (0.95 ft)
Mean Low Water (-1.48 ft)
Navigation Channel Limit

HAMPTON ROADS CONNECTOR PARTNERS



64 HDR | MOTT MACDONALD Design Joint Venture

0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

SEPTEMBER 11, 2019

HRBT EXPANSION

Permanent Pile Impact
Permanent Impact
Permanent Conversion Impact
Permanent Shading Impact
Extended Shading Impact
MOT Trestle Impact
Work Trestle Impact
Jump Trestle Impact
Dredge Impact
Temporary Impact
Limit_of_Disturbance
Jump Trestle Footprint
MOT Trestle Footprint
Work Trestle Footprint
VDOT Right of Way
Sound Wall
Retaining Wall
Proposed Roadway
Grading Limit
Proposed Drainage
Proposed Contour
Existing Roadway and Drainage
Existing Contour
SAV
E1OW-Deepest
E2OW-Deeper
E1OW-Deep
E1OW-Mid Depth
E1OW-Shallow
E2RF
E2RS2
E2US2
E2US3
E2EM
E2SS
E2FO
PUB
PEM
PSS
PFO
R2
R4
R6
Mean High Water (0.95 ft)
Mean Low Water (-1.48 ft)
Navigation Channel Limit

HAMPTON ROADS CONNECTOR PARTNERS

PROP. LIMITED ACCESS LINE
I-64 WB OVER WILLOUGHBY BAY
PROP. BARRIER
Matchline Sheet 23
BEGIN BRIDGE
T-131 (E2US)
0.039 ac/
1,695 sf
JT-131 (E2US2)
0.047 ac/
2,053 sf
JT-133 (E2EM)
0.003 ac/ 114 sf
I64WBL B L
JT-134,253 (E1OW)
3.062 ac/
133,378 sf
12'PAVED SHLDR.
ED SHLDR. - PT HOT LANE
JT-132 (E2EM)
0.004 ac/ 174 sf
T-131 (E2US)
0.039 ac/
1;695 sf
HLDR. - PT HOT LANE
S 76%%d 57' 30" E
P-134 (E1OW-Shallow)
0.031 ac/ 1;349 sf
12'PAVED SHLDR
WT-134,252a (E1OW)
0.434 ac/ 18,899 sf
Ebb Flood
PROP. BARRIER
PROP. LIMITED ACCESS LINE
WILLOUGHBY BAY
I64EBL B
I-64 EB OVER WILLOUGHBY BAY
Matchline Sheet 21
Matchline Sheet 22

0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

64 HDR | MOTT MACDONALD Design Joint Venture

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

SEPTEMBER 11, 2019

HRBT EXPANSION

Permanent Pile Impact
Permanent Impact
Permanent Conversion Impact
Permanent Shading Impact
Extended Shading Impact
MOT Trestle Impact
Work Trestle Impact
Jump Trestle Impact
Dredge Impact
Temporary Impact
Limit_of_Disturbance
Jump Trestle Footprint
MOT Trestle Footprint
Work Trestle Footprint
VDOT Right of Way
Sound Wall
Retaining Wall
Proposed Roadway
Grading Limit
Proposed Drainage
Proposed Contour
Existing Roadway and Drainage
Existing Contour
SAV
E1OW-Deepest
E2OW-Deeper
E1OW-Deep
E1OW-Mid Depth
E1OW-Shallow
E2RF
E2RS2
E2US2
E2US3
E2EM
E2SS
E2FO
PUB
PEM
PSS
PFO
R2
R4
R6
Mean High Water (0.95 ft)
Mean Low Water (-1.48 ft)
Navigation Channel Limit

HAMPTON ROADS CONNECTOR PARTNERS

Matchline Sheet 22

I-64 WB OVER WILLOUGHBY BAY

PT 794+58.08

JT-134,253 (E1OW)
3.062 ac/
133,378 sf

Matchline Sheet 24

790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805

PT 795+60.09

Ebb Flood

I-64 EB OVER WILLOUGHBY BAY

PROP. LIMITED ACCESS LINE

WILLOUGHBY BAY

HDR | MOTT MACDONALD
Design Joint Venture

0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

Permanent Pile Impact
Permanent Impact
Permanent Conversion Impact
Permanent Shading Impact
Extended Shading Impact
MOT Trestle Impact
Work Trestle Impact
Jump Trestle Impact
Dredge Impact
Temporary Impact
Limit_of_Disturbance
Jump Trestle Footprint
MOT Trestle Footprint
Work Trestle Footprint
VDOT Right of Way
Sound Wall
Retaining Wall
Proposed Roadway
Grading Limit
Proposed Drainage
Proposed Contour
Existing Roadway and Drainage
Existing Contour
SAV
E1OW-Deepest
E2OW-Deeper
E1OW-Deep
E1OW-Mid Depth
E1OW-Shallow
E2RF
E2RS2
E2US2
E2US3
E2EM
E2SS
E2FO
PUB
PEM
PSS
PFO
R2
R4
R6
Mean High Water (0.95 ft)
Mean Low Water (-1.48 ft)
Navigation Channel Limit

I-64 WB OVER WILLOUGHBY BAY

Matchline Sheet 23

JT-134,253 (E1OW)
3.062 ac/
133,378 sf

S 82°%d 07' 46" E

Ex Limited Access Line

WT-134,252b (E1OW)
0.417 ac/ 18,181 sf

Ebb Flood

Ebb Flood

PROP. LIMITED ACCESS LINE

I-64 EB OVER WILLOUGHBY BAY

WILLOUGHBY BAY

PROP. LIMITED ACCESS LINE

Matchline Sheet 25

0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

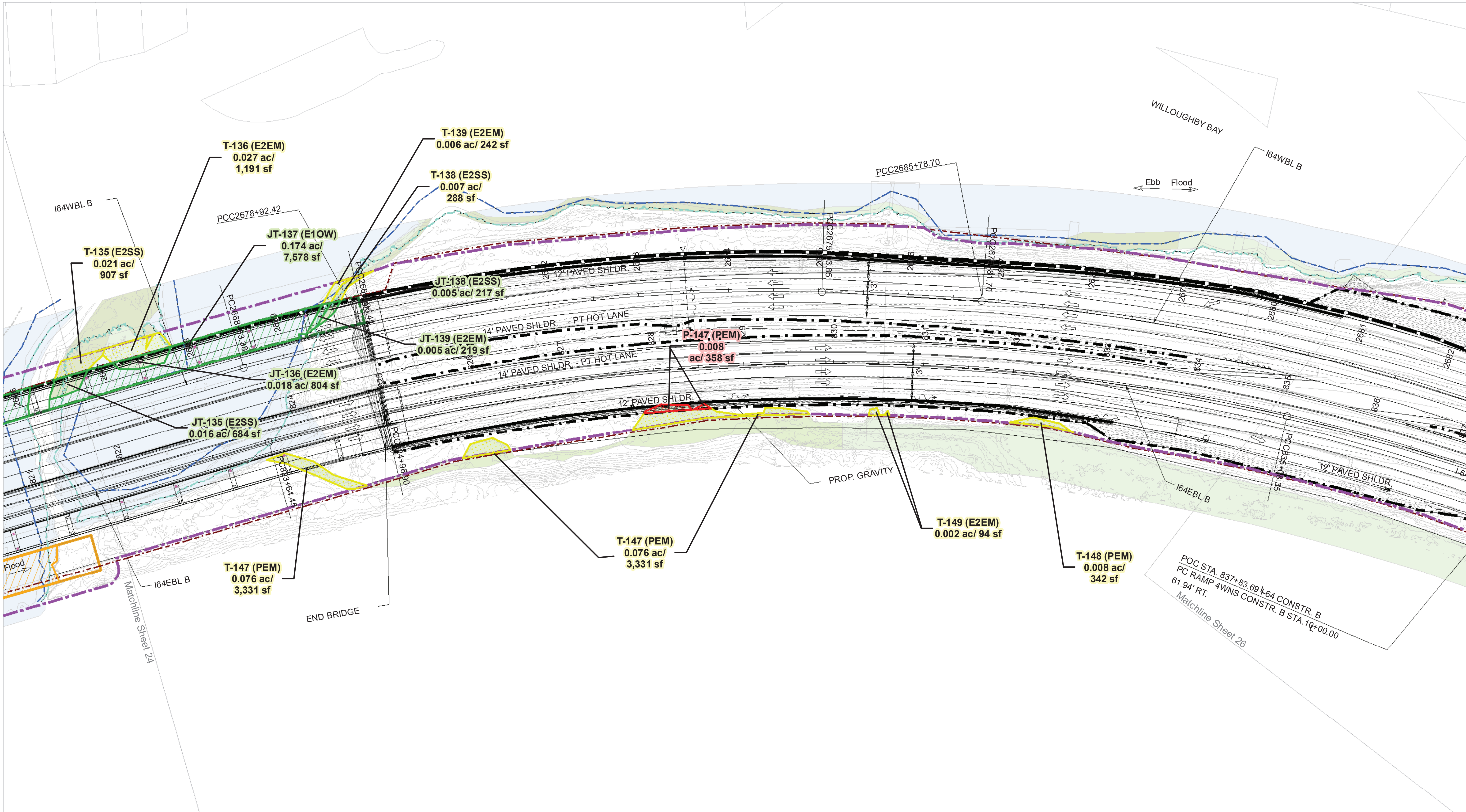
SHEET 24 OF 38

SEPTEMBER 11, 2019

HRBT EXPANSION

Permanent Pile Impact
Permanent Impact
Permanent Conversion Impact
Permanent Shading Impact
Extended Shading Impact
MOT Trestle Impact
Work Trestle Impact
Jump Trestle Impact
Dredge Impact
Temporary Impact
Limit_of_Disturbance
Jump Trestle Footprint
MOT Trestle Footprint
Work Trestle Footprint
VDOT Right of Way
Sound Wall
Retaining Wall
Proposed Roadway
Grading Limit
Proposed Drainage
Proposed Contour
Existing Roadway and Drainage
Existing Contour
SAV
E1OW-Deepest
E2OW-Deeper
E1OW-Deep
E1OW-Mid Depth
E1OW-Shallow
E2RF
E2RS2
E2US2
E2US3
E2EM
E2SS
E2FO
PUB
PEM
PSS
PFO
R2
R4
R6
Mean High Water (0.95 ft)
Mean Low Water (-1.48 ft)
Navigation Channel Limit

HAMPTON ROADS CONNECTOR PARTNERS



64 HDR | MOTT MACDONALD
Design Joint Venture

0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

SEPTEMBER 11, 2019

HRBT EXPANSION

Permanent Pile Impact
Permanent Impact
Permanent Conversion Impact
Permanent Shading Impact
Extended Shading Impact
MOT Trestle Impact
Work Trestle Impact
Jump Trestle Impact
Dredge Impact
Temporary Impact
Limit_of_Disturbance
Jump Trestle Footprint
MOT Trestle Footprint
Work Trestle Footprint
VDOT Right of Way
Sound Wall
Retaining Wall
Proposed Roadway
Grading Limit
Proposed Drainage
Proposed Contour
Existing Roadway and Drainage
Existing Contour
SAV
E1OW-Deepest
E2OW-Deeper
E1OW-Deep
E1OW-Mid Depth
E1OW-Shallow
E2RF
E2RS2
E2US2
E2US3
E2EM
E2SS
E2FO
PUB
PEM
PSS
PFO
R2
R4
R6
Mean High Water (0.95 ft)
Mean Low Water (-1.48 ft)
Navigation Channel Limit

HAMPTON ROADS CONNECTOR PARTNERS

T-155 (PEM)
0.089 ac/
3,880 sf

P-155 (PEM)
0.09 ac/
3,935 sf

T-150 (E1OW)
0.007 ac/ 290 sf

P-150
(E1OW-Shallow)
0.004 ac/ 166 sf

8' PAVED SHLDR.
4' PAVED SHLDR.
12' PAVED SHLDR.
14' PAVED SHLDR. - PT HOT LANE
I-64 WB
I-64 EB
I64EBL B L
I64WBL B L
4' PAVED
BEGIN BRIDGE
BMP-2
PRC 12+40.04
POT10+00.00
POT20+00.00
N 29°%d 17' 09" W
S 10°%d 14' 07" E
4TH View Ave.
Matchline Sheet 25
Matchline Sheet 26
Matchline Sheet 27
END CONSTRUCTION
POC STA. 837+83.69 I-64 CONSTR. B
PC RAMP 4WNS CONSTR. B STA.10+00.00
61.94' RT.

0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

HDR | MOTT MACDONALD
Design Joint Venture

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

SEPTEMBER 11, 2019

HRBT EXPANSION

Permanent Pile Impact
Permanent Impact
Permanent Conversion Impact
Permanent Shading Impact
Extended Shading Impact
MOT Trestle Impact
Work Trestle Impact
Jump Trestle Impact
Dredge Impact
Temporary Impact
Limit_of_Disturbance
Jump Trestle Footprint
MOT Trestle Footprint
Work Trestle Footprint
VDOT Right of Way
Sound Wall
Retaining Wall
Proposed Roadway
Grading Limit
Proposed Drainage
Proposed Contour
Existing Roadway and Drainage
Existing Contour
SAV
E1OW-Deepest
E2OW-Deeper
E1OW-Deep
E1OW-Mid Depth
E1OW-Shallow
E2RF
E2RS2
E2US2
E2US3
E2EM
E2SS
E2FO
PUB
PEM
PSS
PFO
R2
R4
R6
Mean High Water (0.95 ft)
Mean Low Water (-1.48 ft)
Navigation Channel Limit

HAMPTON ROADS CONNECTOR PARTNERS

T-161 (PSS)
0.015 ac/ 634 sf

T-159 (PUB)
0.002 ac/ 79 sf

T-160 (PUB)
0.002 ac/ 75 sf

T-161 (PSS)
0.015 ac/ 634 sf

P-161 (PSS)
0.004 ac/ 177 sf

PC-166 (PFO)
0.008 ac/
360 sf

T-166 (PFO)
0.01 ac/ 442 sf

T-166 (PFO)
0.01 ac/ 442 sf

P-169 (PEM)
0.019 ac/
808 sf

T-170 (PEM)
0.13 ac/
5,678 sf

P-170 (PEM)
0.002 ac/ 106 sf

P-171 (PFO)
0.082 ac/ 3,586 sf

4TH View Ave.
END BRIDGE
12' PAVED SHLDR.
14' PAVED SHLDR. - PT HOT LANE
8' PAVED SHLDR.
I-64 WB
I-64 EB
I64WBL B
118 - PROPOSED MSE
BMP-4B
END CONSTRUCTION
O'Conner Cres
4th View St.
PT17+72.00
PRC14+82.93
PT2714+64.39
PCC858+82.82
PT860+52.48
PT14+68.55
POT15+00.00
N 9%%d 30' 24" E
S 13%%d 00' 53" E
S 9%%d 30' 24" W
Matchline Sheet 26
Matchline Sheet 28

0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

64 HDR | MOTT MACDONALD
Design Joint Venture

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

HRBT EXPANSION

Permanent Pile Impact
Permanent Impact
Permanent Conversion Impact
Permanent Shading Impact
Extended Shading Impact
MOT Trestle Impact
Work Trestle Impact
Jump Trestle Impact
Dredge Impact
Temporary Impact
Limit_of_Disturbance
Jump Trestle Footprint
MOT Trestle Footprint
Work Trestle Footprint
VDOT Right of Way
Sound Wall
Retaining Wall
Proposed Roadway
Grading Limit
Proposed Drainage
Proposed Contour
Existing Roadway and Drainage
Existing Contour
SAV
E1OW-Deepest
E2OW-Deeper
E1OW-Deep
E1OW-Mid Depth
E1OW-Shallow
E2RF
E2RS2
E2US2
E2US3
E2EM
E2SS
E2FO
PUB
PEM
PSS
PFO
R2
R4
R6
Mean High Water (0.95 ft)
Mean Low Water (-1.48 ft)
Navigation Channel Limit

HAMPTON ROADS CONNECTOR PARTNERS

PC-172 (PFO)
0.001 ac/ 49 sf

T-173 (R2)
27 lf

T-174
(PFO)
0 ac/ 6 sf

T-172 (PFO)
0.003 ac/ 119 sf

I64WBL B

Mason Creek Rd.

END BRIDGE

30-6
30-5
15"

12' PAVED SHLDR.

I-64 WB

14' PAVED SHLDR. - PT HOT LANE

12' PAVED SHLDR.

I-64 EB

I64EBL B

Matchline Sheet 27

Matchline Sheet 29

Mason Creek Rd.

HDR | MOTT MACDONALD
Design Joint Venture

0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

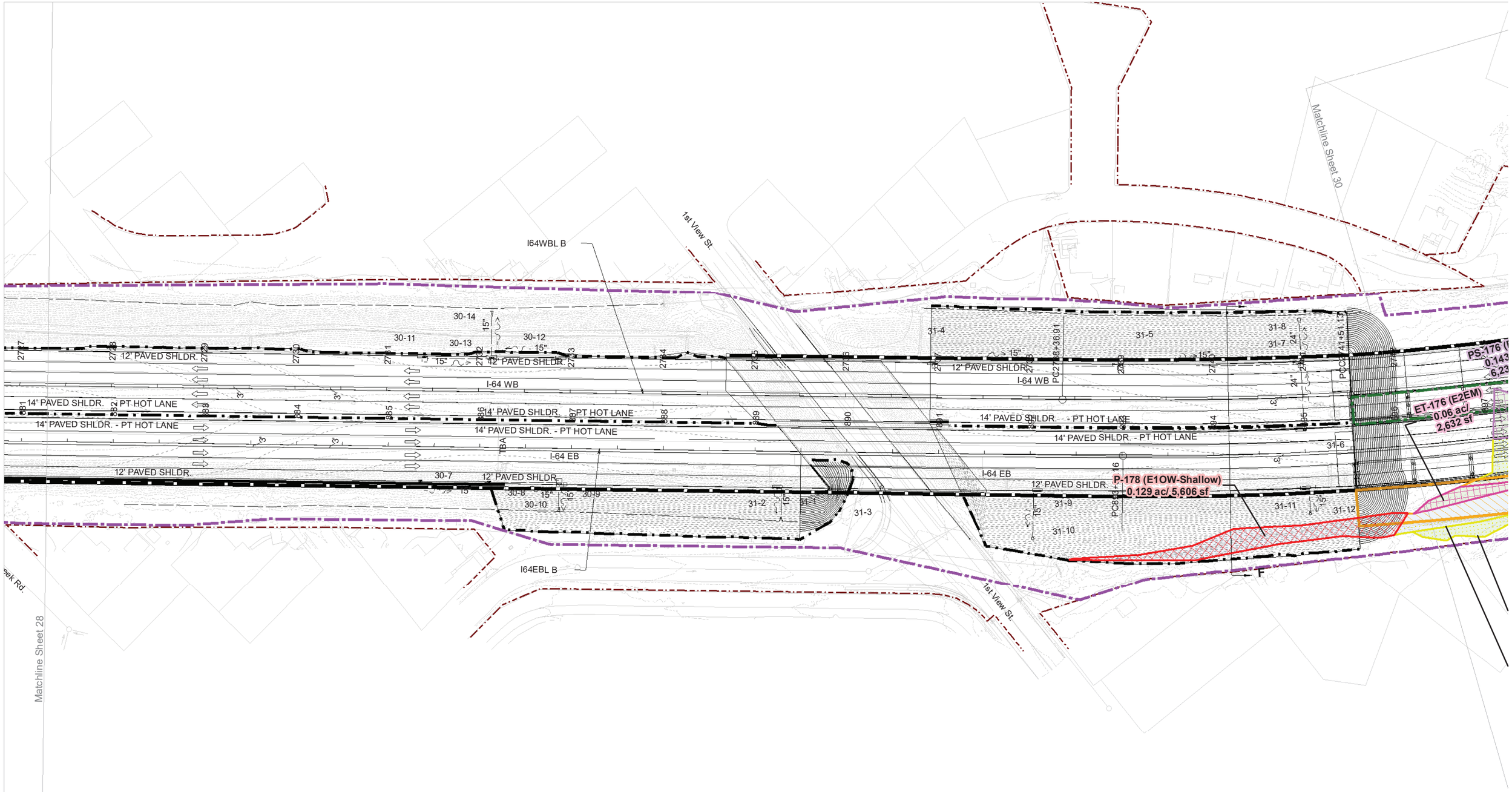
I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

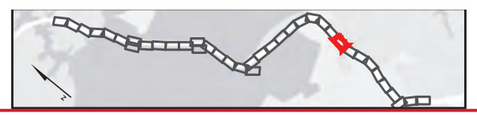
JOINT PERMIT APPLICATION IMPACT PLATES

HRBT EXPANSION

Permanent Pile Impact
Permanent Impact
Permanent Conversion Impact
Permanent Shading Impact
Extended Shading Impact
MOT Trestle Impact
Work Trestle Impact
Jump Trestle Impact
Dredge Impact
Temporary Impact
Limit_of_Disturbance
Jump Trestle Footprint
MOT Trestle Footprint
Work Trestle Footprint
VDOT Right of Way
Sound Wall
Retaining Wall
Proposed Roadway
Grading Limit
Proposed Drainage
Proposed Contour
Existing Roadway and Drainage
Existing Contour
SAV
E1OW-Deepest
E2OW-Deeper
E1OW-Deep
E1OW-Mid Depth
E1OW-Shallow
E2RF
E2RS2
E2US2
E2US3
E2EM
E2SS
E2FO
PUB
PEM
PSS
PFO
R2
R4
R6
Mean High Water (0.95 ft)
Mean Low Water (-1.48 ft)
Navigation Channel Limit

HAMPTON ROADS CONNECTOR PARTNERS





0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

HDR | MOTT MACDONALD
Design Joint Venture

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

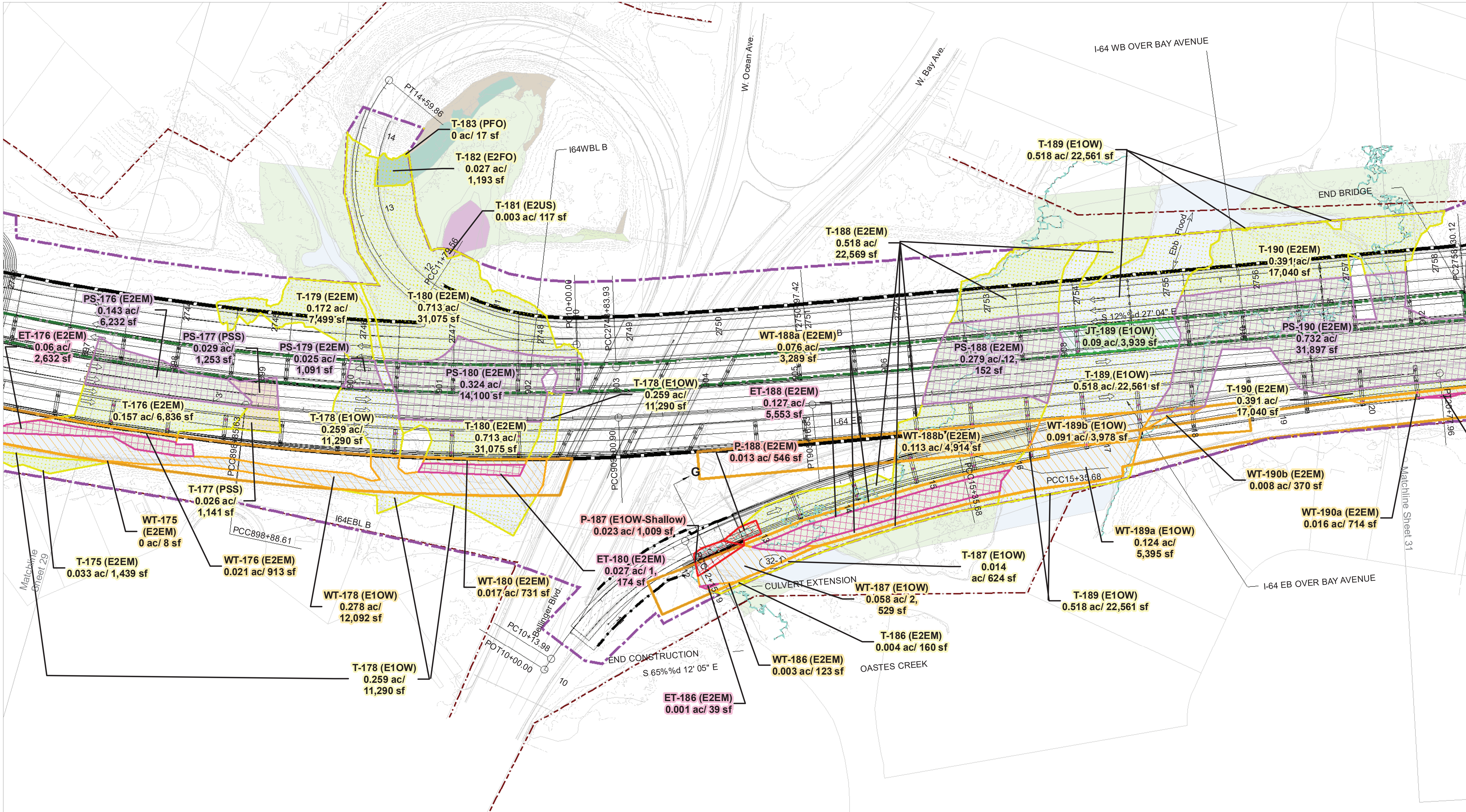
JOINT PERMIT APPLICATION IMPACT PLATES

SEPTEMBER 11, 2019

HRBT EXPANSION

Permanent Pile Impact
Permanent Impact
Permanent Conversion Impact
Permanent Shading Impact
Extended Shading Impact
MOT Trestle Impact
Work Trestle Impact
Jump Trestle Impact
Dredge Impact
Temporary Impact
Limit_of_Disturbance
Jump Trestle Footprint
MOT Trestle Footprint
Work Trestle Footprint
VDOT Right of Way
Sound Wall
Retaining Wall
Proposed Roadway
Grading Limit
Proposed Drainage
Proposed Contour
Existing Roadway and Drainage
Existing Contour
SAV
E1OW-Deepest
E2OW-Deeper
E1OW-Deep
E1OW-Mid Depth
E1OW-Shallow
E2RF
E2RS2
E2US2
E2US3
E2EM
E2SS
E2FO
PUB
PEM
PSS
PFO
R2
R4
R6
Mean High Water (0.95 ft)
Mean Low Water (-1.48 ft)
Navigation Channel Limit

HAMPTON ROADS CONNECTOR PARTNERS



I-64 WB OVER BAY AVENUE
W. Ocean Ave.
W. Bay Ave.
PT14+59.86
T-183 (PFO)
0 ac/ 17 sf
T-182 (E2FO)
0.027 ac/
1,193 sf
I64WBL B
T-181 (E2US)
0.003 ac/ 117 sf
T-189 (E1OW)
0.518 ac/ 22,561 sf
END BRIDGE
T-188 (E2EM)
0.518 ac/
22,569 sf
T-190 (E2EM)
0.391 ac/
17,040 sf
PS-176 (E2EM)
0.143 ac/
6,232 sf
T-179 (E2EM)
0.172 ac/
7,499 sf
T-180 (E2EM)
0.713 ac/
31,075 sf
ET-176 (E2EM)
0.06 ac/
2,632 sf
PS-177 (PSS)
0.029 ac/
1,253 sf
PS-179 (E2EM)
0.025 ac/
1,091 sf
WT-188a (E2EM)
0.076 ac/
3,289 sf
PS-188 (E2EM)
0.279 ac/ 12,
152 sf
JT-189 (E1OW)
0.09 ac/ 3,939 sf
PS-190 (E2EM)
0.732 ac/
31,897 sf
PS-180 (E2EM)
0.324 ac/
14,100 sf
T-178 (E1OW)
0.259 ac/
11,290 sf
ET-188 (E2EM)
0.127 ac/
5,553 sf
T-189 (E1OW)
0.518 ac/ 22,561 sf
T-190 (E2EM)
0.391 ac/
17,040 sf
T-176 (E2EM)
0.157 ac/ 6,836 sf
T-178 (E1OW)
0.259 ac/
11,290 sf
T-180 (E2EM)
0.713 ac/
31,075 sf
P-188 (E2EM)
0.013 ac/ 546 sf
WT-188b (E2EM)
0.113 ac/ 4,914 sf
WT-189b (E1OW)
0.091 ac/ 3,978 sf
PCC15+35.68
WT-190b (E2EM)
0.008 ac/ 370 sf
T-177 (PSS)
0.026 ac/
1,141 sf
WT-175
(E2EM)
0 ac/ 8 sf
I64EBL B
PCC898+88.61
P-187 (E1OW-Shallow)
0.023 ac/ 1,009 sf
WT-189a (E1OW)
0.124 ac/
5,395 sf
WT-190a (E2EM)
0.016 ac/ 714 sf
Matchline Sheet 31
T-175 (E2EM)
0.033 ac/ 1,439 sf
WT-176 (E2EM)
0.021 ac/ 913 sf
Matchline Sheet 29
ET-180 (E2EM)
0.027 ac/ 1,
174 sf
T-187 (E1OW)
0.014
ac/ 624 sf
CULVERT EXTENSION
WT-187 (E1OW)
0.058 ac/ 2,
529 sf
I-64 EB OVER BAY AVENUE
WT-180 (E2EM)
0.017 ac/ 731 sf
WT-178 (E1OW)
0.278 ac/
12,092 sf
Ballinger Blvd.
T-189 (E1OW)
0.518 ac/ 22,561 sf
T-186 (E2EM)
0.004 ac/ 160 sf
PC10+13.98
POT10+00.00
END CONSTRUCTION
S 65%%d 12' 05" E
WT-186 (E2EM)
0.003 ac/ 123 sf
OASTES CREEK
T-178 (E1OW)
0.259 ac/
11,290 sf
ET-186 (E2EM)
0.001 ac/ 39 sf

64 HDR | MOTT MACDONALD Design Joint Venture

0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

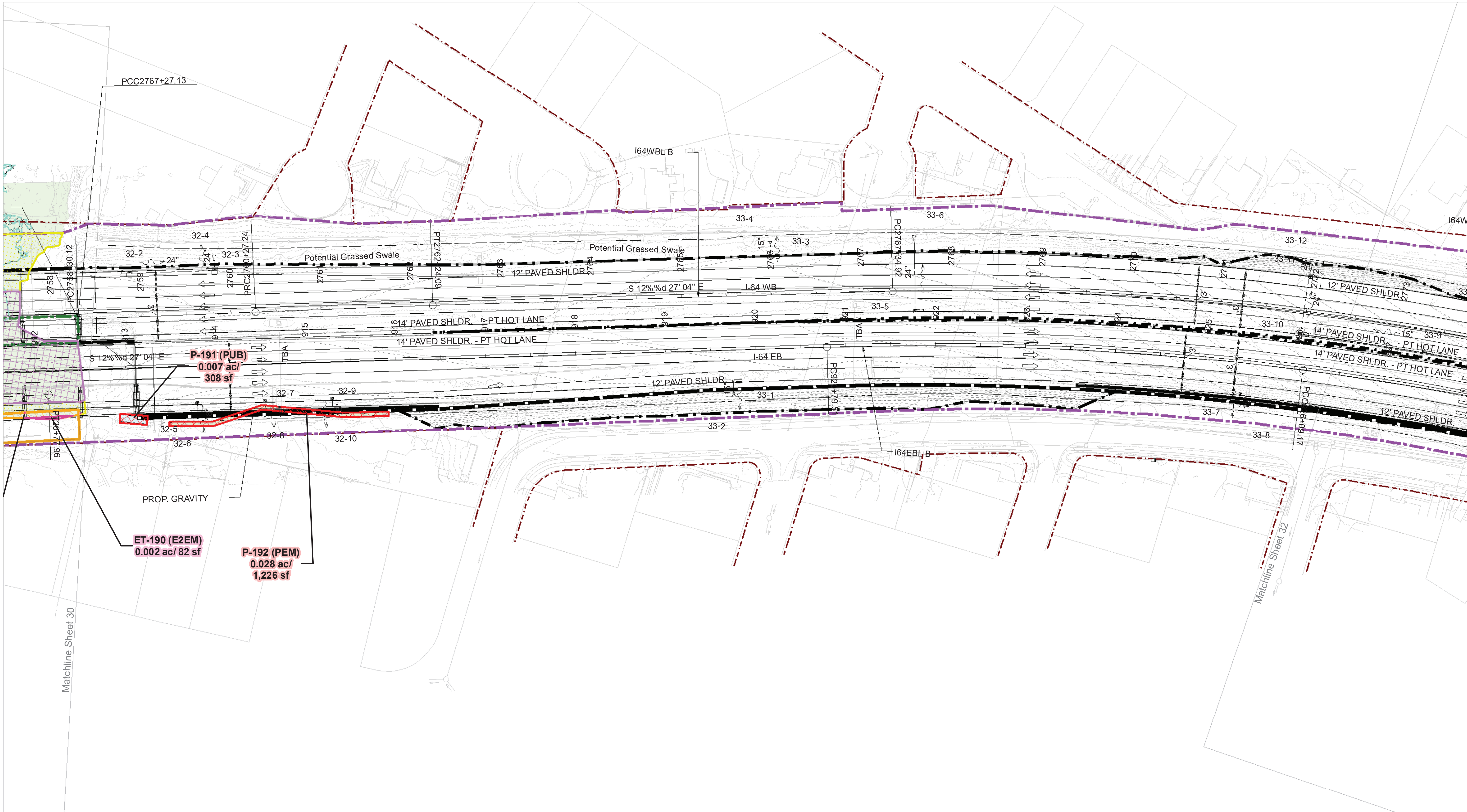
JOINT PERMIT APPLICATION IMPACT PLATES

SEPTEMBER 11, 2019

HRBT EXPANSION

HAMPTON ROADS CONNECTOR PARTNERS

- Permanent Pile Impact
- Permanent Impact
- Permanent Conversion Impact
- Permanent Shading Impact
- Extended Shading Impact
- MOT Trestle Impact
- Work Trestle Impact
- Jump Trestle Impact
- Dredge Impact
- Temporary Impact
- Limit_of_Disturbance
- Jump Trestle Footprint
- MOT Trestle Footprint
- Work Trestle Footprint
- VDOT Right of Way
- Sound Wall
- Retaining Wall
- Proposed Roadway
- Grading Limit
- Proposed Drainage
- Proposed Contour
- Existing Roadway and Drainage
- Existing Contour
- SAV
- E1OW-Deepest
- E2OW-Deeper
- E1OW-Deep
- E1OW-Mid Depth
- E1OW-Shallow
- E2RF
- E2RS2
- E2US2
- E2US3
- E2EM
- E2SS
- E2FO
- PUB
- PEM
- PSS
- PFO
- R2
- R4
- R6
- Mean High Water (0.95 ft)
- Mean Low Water (-1.48 ft)
- Navigation Channel Limit



64 HDR | MOTT MACDONALD Design Joint Venture

Matchline Sheet 31

0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

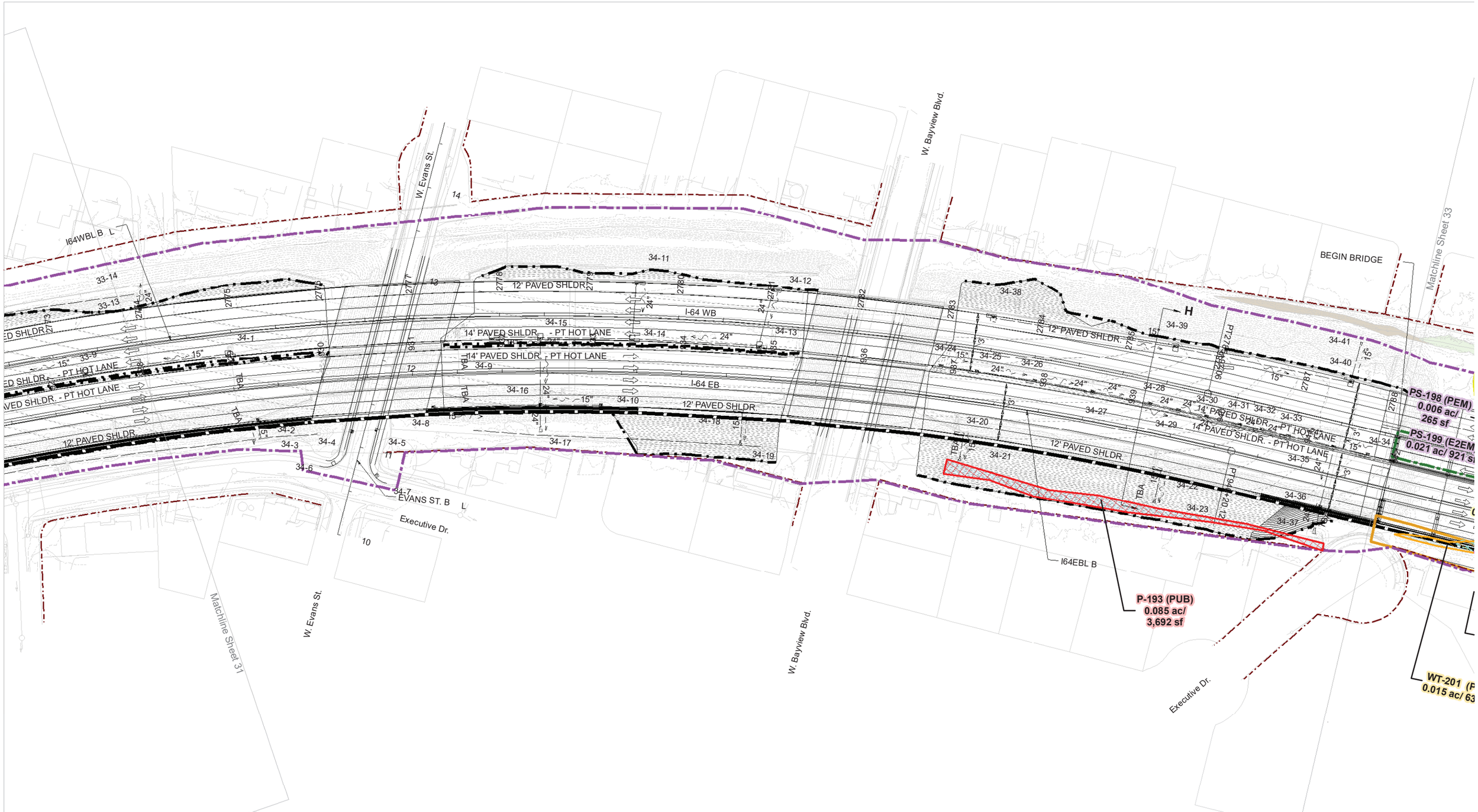
SHEET 31 OF 38

SEPTEMBER 11, 2019

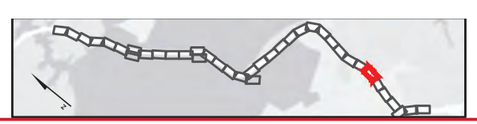
HRBT EXPANSION

Permanent Pile Impact
Permanent Impact
Permanent Conversion Impact
Permanent Shading Impact
Extended Shading Impact
MOT Trestle Impact
Work Trestle Impact
Jump Trestle Impact
Dredge Impact
Temporary Impact
Limit_of_Disturbance
Jump Trestle Footprint
MOT Trestle Footprint
Work Trestle Footprint
VDOT Right of Way
Sound Wall
Retaining Wall
Proposed Roadway
Grading Limit
Proposed Drainage
Proposed Contour
Existing Roadway and Drainage
Existing Contour
SAV
E1OW-Deepest
E2OW-Deeper
E1OW-Deep
E1OW-Mid Depth
E1OW-Shallow
E2RF
E2RS2
E2US2
E2US3
E2EM
E2SS
E2FO
PUB
PEM
PSS
PFO
R2
R4
R6
Mean High Water (0.95 ft)
Mean Low Water (-1.48 ft)
Navigation Channel Limit

HAMPTON ROADS CONNECTOR PARTNERS



64 HDR | MOTT MACDONALD
Design Joint Venture



0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

SEPTEMBER 11, 2019

HRBT EXPANSION

Permanent Pile Impact
Permanent Impact
Permanent Conversion Impact
Permanent Shading Impact
Extended Shading Impact
MOT Trestle Impact
Work Trestle Impact
Jump Trestle Impact
Dredge Impact
Temporary Impact
Limit_of_Disturbance
Jump Trestle Footprint
MOT Trestle Footprint
Work Trestle Footprint
VDOT Right of Way
Sound Wall
Retaining Wall
Proposed Roadway
Grading Limit
Proposed Drainage
Proposed Contour
Existing Roadway and Drainage
Existing Contour
SAV
E1OW-Deepest
E2OW-Deeper
E1OW-Deep
E1OW-Mid Depth
E1OW-Shallow
E2RF
E2RS2
E2US2
E2US3
E2EM
E2SS
E2FO
PUB
PEM
PSS
PFO
R2
R4
R6
Mean High Water (0.95 ft)
Mean Low Water (-1.48 ft)
Navigation Channel Limit

HAMPTON ROADS CONNECTOR PARTNERS

Matchline Sheet 34

T-196 (PEM) 0.031 ac/ 1,335 sf
T-195 (E2EM) 0.034 ac/ 1,474 sf
T-197 (E2US) 0.027 ac/ 1,190 sf
T-204 (E2EM) 0.021 ac/ 909 sf
T-214 (PUB) 0.013 ac/ 547 sf
PS-198 (PEM) 0.006 ac/ 265 sf
PS-199 (E2EM) 0.021 ac/ 921 sf
T-203 (E1OW) 2.103 ac/ 91,598 sf
PS-211 (PSS) 0.083 ac/ 3,608 sf
T-209 (E2US) 0.021 ac/ 915 sf
P-211 (PSS) 0.047 ac/ 2,027 sf
T-212 (E2US) 0.224 ac/ 9,741 sf
WT-215 (PFO) 0.001 ac/ 22 sf
JT-203 (E1OW) 0.339 ac/ 14,748 sf
T-200 (E2US) 0.016 ac/ 686 sf
PS-202 (E2EM) 0.002 ac/ 105 sf
T-203 (E1OW) 2.103 ac/ 91,598 sf
PS-210 (E2EM) 0.006 ac/ 271 sf
WT-213 (E2EM) 0.057 ac/ 2,491 sf
P-215 (PFO) 0.041 ac/ 1,793 sf
P-219 (PUB) 0.003 ac/ 146 sf
PS-213 (E2EM) 0.018 ac/ 765 sf
WT-203 (E1OW) 0.579 ac/ 25,232 sf
ET-213 (E2EM) 0.103 ac/ 4,468 sf
WT-202 (E2EM) 0.009 ac/ 374 sf
T-202 (E2EM) 0.032 ac/ 1,378 sf
ET-202 (E2EM) 0.041 ac/ 1,769 sf
T-213 (E2EM) 0.221 ac/ 9,605 sf
T-203 (E1OW) 2.103 ac/ 91,598 sf
T-219 (PUB) 0.023 ac/ 981 sf
T-218 (PSS) 0.001 ac/ 45 sf
P-218 (PSS) 0.025 ac/ 1,110 sf
WT-201 (PUB) 0.015 ac/ 637 sf
T-216 (E2SS) 0.011 ac/ 496 sf
P-216 (E2SS) 0.023 ac/ 1,000 sf
WT-216 (E2SS) 0.003 ac/ 111 sf

I64WBL B
I64EBL B
I-64 EB OVER MASON
END BRIDGE
MASON CREEK
Matchline Sheet 32
12' PAVED SHLDR.
14' PAVED SHLDR. - PT HOT LANE
Flood
Ebb

0 50 100 Feet

DATA SOURCE: VIMS, VDOT, FHWA

64 HDR | MOTT MACDONALD Design Joint Venture

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

SEPTEMBER 11, 2019

HRBT EXPANSION

Permanent Pile Impact
Permanent Impact
Permanent Conversion Impact
Permanent Shading Impact
Extended Shading Impact
MOT Trestle Impact
Work Trestle Impact
Jump Trestle Impact
Dredge Impact
Temporary Impact
Limit_of_Disturbance
Jump Trestle Footprint
MOT Trestle Footprint
Work Trestle Footprint
VDOT Right of Way
Sound Wall
Retaining Wall
Proposed Roadway
Grading Limit
Proposed Drainage
Proposed Contour
Existing Roadway and Drainage
Existing Contour
SAV
E1OW-Deepest
E2OW-Deeper
E1OW-Deep
E1OW-Mid Depth
E1OW-Shallow
E2RF
E2RS2
E2US2
E2US3
E2EM
E2SS
E2FO
PUB
PEM
PSS
PFO
R2
R4
R6
Mean High Water (0.95 ft)
Mean Low Water (-1.48 ft)
Navigation Channel Limit

HAMPTON ROADS CONNECTOR PARTNERS

Matchline Sheet 33

Patrol Road

P-221 (PUB)
0.015 ac/
654 sf

T-221 (PUB)
0.042 ac/
1,837 sf

T-222 (PEM)
0.017 ac/
721 sf

I64WBL B

12' PAVED SHLDR.

14' PAVED SHLDR. - PT HOT LANE BEGINS

14' PAVED SHLDR. - PT HOT LANE ENDS

14' PAVED SHLDR.

12' PAVED SHLDR.

VAR. WIDTH PAVED SHLDR.

S 6%%d 26' 32" W

S 12%%d 58' 53" W

PT281+56.41

PT965+30.76

PT971+35.00

PQT10+00.00

PT965+33.73

PC11+67.03

I64EBL B

Matchline Sheet 35

36-1
36-2
36-3
36-4

2804 2805 2806 2807 2808 2809 2810 2811 2812 2813 2814 2815 2816 2817 2818 2819 2820

958 959 960 961 962 963 964 965 966 969 970 971 972 973 974

HDR | MOTT MACDONALD
Design Joint Venture

0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

HRBT EXPANSION

Permanent Pile Impact
Permanent Impact
Permanent Conversion Impact
Permanent Shading Impact
Extended Shading Impact
MOT Trestle Impact
Work Trestle Impact
Jump Trestle Impact
Dredge Impact
Temporary Impact
Limit_of_Disturbance
Jump Trestle Footprint
MOT Trestle Footprint
Work Trestle Footprint
VDOT Right of Way
Sound Wall
Retaining Wall
Proposed Roadway
Grading Limit
Proposed Drainage
Proposed Contour
Existing Roadway and Drainage
Existing Contour
SAV
E1OW-Deepest
E2OW-Deeper
E1OW-Deep
E1OW-Mid Depth
E1OW-Shallow
E2RF
E2RS2
E2US2
E2US3
E2EM
E2SS
E2FO
PUB
PEM
PSS
PFO
R2
R4
R6
Mean High Water (0.95 ft)
Mean Low Water (-1.48 ft)
Navigation Channel Limit

HAMPTON ROADS CONNECTOR PARTNERS

Matchline Sheet 34

GRANBY ST.

T-266 (PEM)
0.028 ac/
1,239 sf

P-266 (PEM)
0.008 ac/
360 sf

PT2841+08.81

RTE 460

RTE 460

PT2832+11.8

PC10+74.54

6' PAVED SHLDR.

I64WBL B

12' PAVED SHLDR.

14' PAVED SHLDR.

14' PAVED SHLDR.

14' PAVED SHLDR.

PC2824+61.12

S 12%%d 28' 11" W

PC9776+75.44

PT9776+78.18

12' PAVED SHLDR.

TIE TO EXIST.

8' PAVED SHLDR.

T-261 (PEM)
0.001 ac/ 52 sf

12' PAVED SHLDR.

PC10+00.00

S 4%%d 26' 36" W

PC12+50.05

PRC12+50.05

S 9%%d 26' 36" W

12' PAVED SHLDR.

PC11+32.62

PC10+00.00

PT15+23.36

PT14+20.70

8' PAVED SHLDR.

S 7%%d 14' 52" W

Patrol Rd.

I64EBL B

Matchline Sheet 38

64 HDR | MOTT MACDONALD
Design Joint Venture

0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

HRBT EXPANSION

Permanent Pile Impact
Permanent Impact
Permanent Conversion Impact
Permanent Shading Impact
Extended Shading Impact
MOT Trestle Impact
Work Trestle Impact
Jump Trestle Impact
Dredge Impact
Temporary Impact
Limit_of_Disturbance
Jump Trestle Footprint
MOT Trestle Footprint
Work Trestle Footprint
VDOT Right of Way
Sound Wall
Retaining Wall
Proposed Roadway
Grading Limit
Proposed Drainage
Proposed Contour
Existing Roadway and Drainage
Existing Contour
SAV
E1OW-Deepest
E2OW-Deeper
E1OW-Deep
E1OW-Mid Depth
E1OW-Shallow
E2RF
E2RS2
E2US2
E2US3
E2EM
E2SS
E2FO
PUB
PEM
PSS
PFO
R2
R4
R6
Mean High Water (0.95 ft)
Mean Low Water (-1.48 ft)
Navigation Channel Limit

HAMPTON ROADS CONNECTOR PARTNERS

Matchline Sheet 35
T-264 (PEM)
0.001 ac/ 59 sf
T-258 (PUB)
0.051 ac/
2,232 sf
T-265 (PUB)
0.029 ac/
1,280 sf
6' PAVED SHLDR
12' PAVED SHLDR
8' PAVED SHLDR
PROPOSED MSE
RTE 460
I-64 EB L
I-564 W.B.L
I-564 E.B.L
I-564 WB Ramp
TIE TO EXIST
Matchline Sheet 37
S 75%%d 15' 50" E
PT14+85.00
PT22+18.43
POT10+00.00
PC10+96.18
PT1000+18.87
990
991
992
993
994
995
996
997
998
999
1000
14
16
18
19
20
21
22
12

0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

64 HDR | MOTT MACDONALD
Design Joint Venture

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

SEPTEMBER 11, 2019

HRBT EXPANSION

Permanent Pile Impact
Permanent Impact
Permanent Conversion Impact
Permanent Shading Impact
Extended Shading Impact
MOT Trestle Impact
Work Trestle Impact
Jump Trestle Impact
Dredge Impact
Temporary Impact
Limit_of_Disturbance
Jump Trestle Footprint
MOT Trestle Footprint
Work Trestle Footprint
VDOT Right of Way
Sound Wall
Retaining Wall
Proposed Roadway
Grading Limit
Proposed Drainage
Proposed Contour
Existing Roadway and Drainage
Existing Contour
SAV
E1OW-Deepest
E2OW-Deeper
E1OW-Deep
E1OW-Mid Depth
E1OW-Shallow
E2RF
E2RS2
E2US2
E2US3
E2EM
E2SS
E2FO
PUB
PEM
PSS
PFO
R2
R4
R6
Mean High Water (0.95 ft)
Mean Low Water (-1.48 ft)
Navigation Channel Limit

HAMPTON ROADS CONNECTOR PARTNERS

T-265 (PUB)
0.029 ac/
1,280 sf

Matchline Sheet 36

Little Creek Rd.

I64EBL B

998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014

PT 1000+18.87

6'

S 45%%d 08' 56" E

12' PAVED SHLDR.

8' PAVED SHLDR.

12' PAVED SHLDR.

PT 1+65.00

PC 1007+99.24

PC 1012+12.19

PC 1012+60.04

12' PAVED SHLDR.

S 48%%d 44' 25" E

PC 0+00.00

PT 0+51.36

PC 1+84.35

PC 1+87.01

E Admiral Taussig Blvd

Little Creek Rd.

Matchline Sheet 38

Matchline Sheet 37

0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

64 HDR | MOTT MACDONALD
Design Joint Venture

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT

JOINT PERMIT APPLICATION IMPACT PLATES

SEPTEMBER 11, 2019

Permanent Pile Impact
Permanent Impact
Permanent Conversion Impact
Permanent Shading Impact
Extended Shading Impact
MOT Trestle Impact
Work Trestle Impact
Jump Trestle Impact
Dredge Impact
Temporary Impact
Limit_of_Disturbance
Jump Trestle Footprint
MOT Trestle Footprint
Work Trestle Footprint
VDOT Right of Way
Sound Wall
Retaining Wall
Proposed Roadway
Grading Limit
Proposed Drainage
Proposed Contour
Existing Roadway and Drainage
Existing Contour
SAV
E1OW-Deepest
E2OW-Deeper
E1OW-Deep
E1OW-Mid Depth
E1OW-Shallow
E2RF
E2RS2
E2US2
E2US3
E2EM
E2SS
E2FO
PUB
PEM
PSS
PFO
R2
R4
R6
Mean High Water (0.95 ft)
Mean Low Water (-1.48 ft)
Navigation Channel Limit

END CONSTRUCTION / END PROJECT
0064-M06-028.P101
STA.1022+12.11,64 CONSTR. B

1013
1014
1015
1016
1017
1018
12' PAVED SHLDR.
PT 1018+14.21
12' PAVED SHLDR.
PT 19+10.00
1915
1816
1717
RC 15+84.35
I64EBL B
Matchline Sheet 37

0 50 100
Feet

DATA SOURCE: VIMS, VDOT, FHWA

I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION PROJECT
JOINT PERMIT APPLICATION IMPACT PLATES