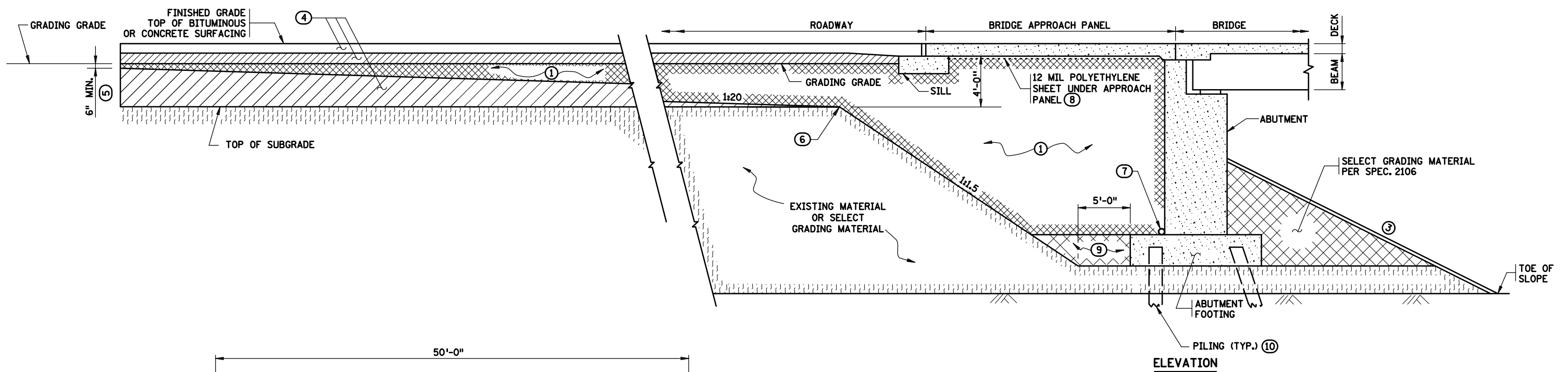
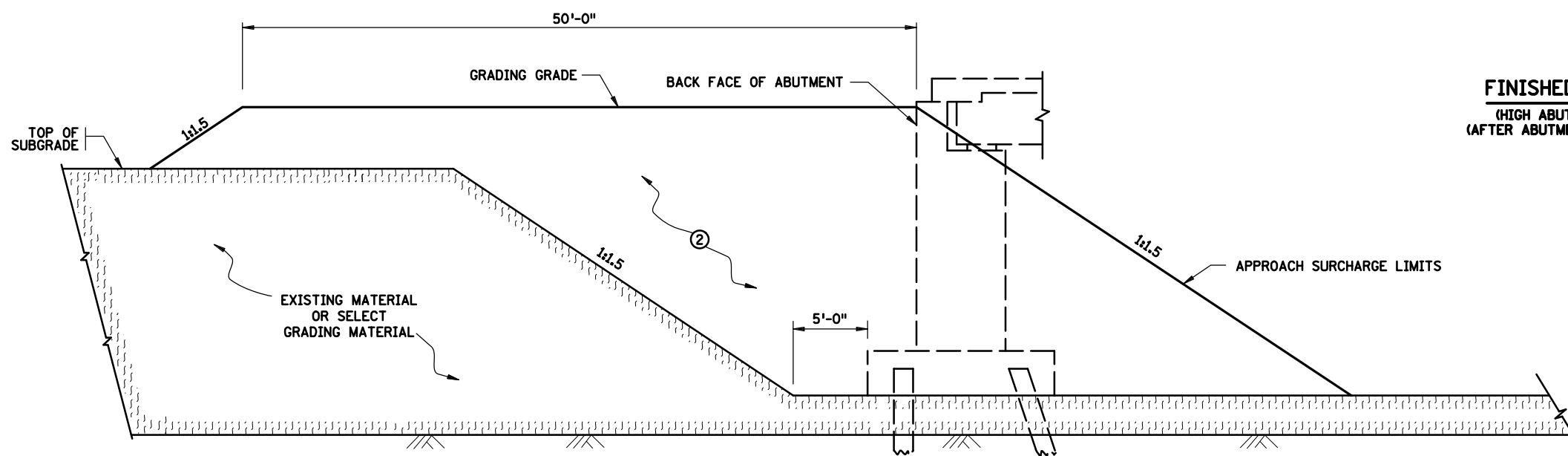


PLOTTED/REVISED: 27-AUG-2019

PLOT NAME: s233.1.spn
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FINISHED GRADING SECTION
 (HIGH ABUTMENT ON PILING SHOWN)
 (AFTER ABUTMENT HAS BEEN CONSTRUCTED)



ROUGH GRADING SECTION
 (PRIOR TO ABUTMENT CONSTRUCTION)

NOTES:

- ① QUANTITY OF STRUCTURAL BACKFILL (SPEC. 3149.2.D.2) IS BASED ON DIMENSIONS SHOWN, AND PAYMENT IS BASED ON THIS QUANTITY. SEE PLAN FOR QUANTITY. IF THE CONTRACTOR CHOOSES TO INCREASE DIMENSIONS IN ORDER TO FACILITATE CONSTRUCTION OPERATIONS, ANY QUANTITY INCREASES ARE CONSIDERED INCIDENTAL.
- ② PLACE ABUTMENT APPROACH SURCHARGE MATERIAL PRIOR TO ABUTMENT CONSTRUCTION. AFTER COMPLETION OF SURCHARGE WAITING PERIOD, REMOVE SURCHARGE AND EXISTING MATERIAL OR SELECT GRADING MATERIAL TO THE LIMITS SHOWN IN "ROUGH GRADING SECTION" ABOVE, PRIOR TO ABUTMENT CONSTRUCTION. SEE BRIDGE PLANS AND SPECIAL PROVISIONS FOR ABUTMENT APPROACH SURCHARGE REQUIREMENT AND PAYMENTS.
- ③ SEE BRIDGE PLAN FOR SLOPE AND SLOPE PROTECTION.
- ④ SEE PLAN FOR TYPE OF MATERIAL.
- ⑤ GRADING TO BE SQUARED OFF ON SKEWED BRIDGES.
- ⑥ TOP OF 1:1.5 SLOPE (FORMS A LINE PARALLEL TO END OF BRIDGE).
- ⑦ SUBSURFACE PIPE DRAIN. FURNISH AND INSTALL AT TOP OF BRIDGE FOOTING IF BRIDGE DETAIL B910 IS INCLUDED ON BRIDGE PLAN.
- ⑧ IF THE APPROACH PANEL IS TIED TO THE ABUTMENT WITH REINFORCEMENT BARS, PLACE 12 MIL POLYETHYLENE SHEETING (OR TWO LAYERS OF 6 MIL) UNDER THE LIMITS OF THE APPROACH PANEL TO ALLOW THE PANEL TO MOVE LONGITUDINALLY ON THE GRADE. SHEETING IS INCIDENTAL.
- ⑨ SELECT GRADING MATERIAL (SPEC. 2106) SHALL BE COMPACTED AND MEET THE MOISTURE REQUIREMENTS OF 2106. STRUCTURAL BACKFILL (SPEC. 3149.2.D.2) MAY BE USED IN LIEU OF SELECT GRADING MATERIAL PER SPEC. 2106.
- ⑩ FOR BRIDGES WITHOUT PILING, REFER TO BRIDGE PLANS FOR MATERIAL REQUIREMENTS BELOW ABUTMENT FOOTING.

REVISION:
 APPROVED: AUGUST 22, 2019

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 DIRECTOR, OFFICE OF MATERIALS AND ROAD RESEARCH

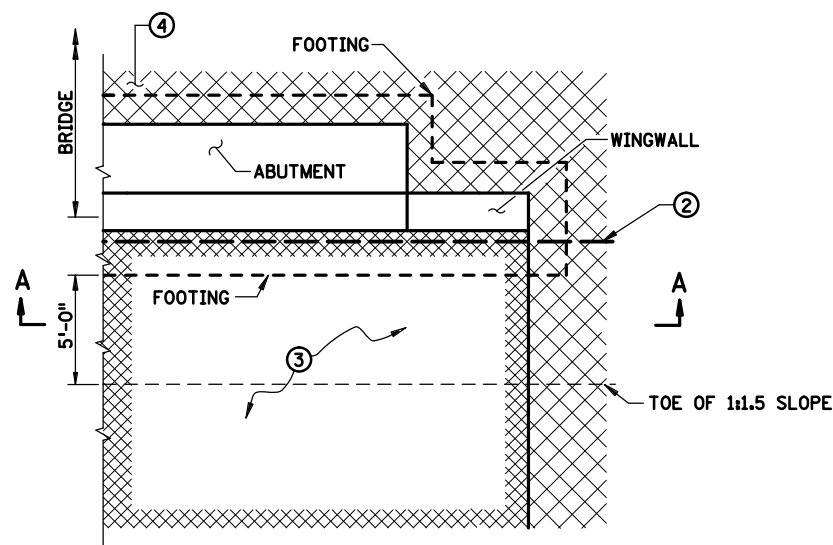


STANDARD PLAN 5-297.233 1 OF 2
 Peter A Harff
 DEPARTMENT OF TRANSPORTATION
 STATE DESIGN ENGINEER
 APPROVED: 08-22-2019
 REVISED:

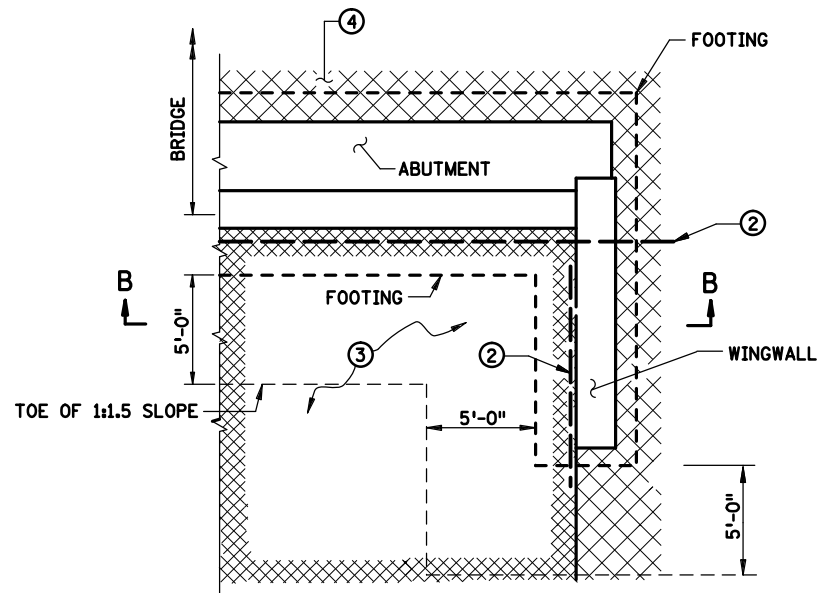
BRIDGE ABUTMENT APPROACH TREATMENT FOR
 PARAPET OR SEMI-INTEGRAL ABUTMENT ON FOOTING
 STATE PROJ. NO. (T.H.) SHEET NO. OF SHEETS

PLOTTED/REVISED: 27-AUG-2019

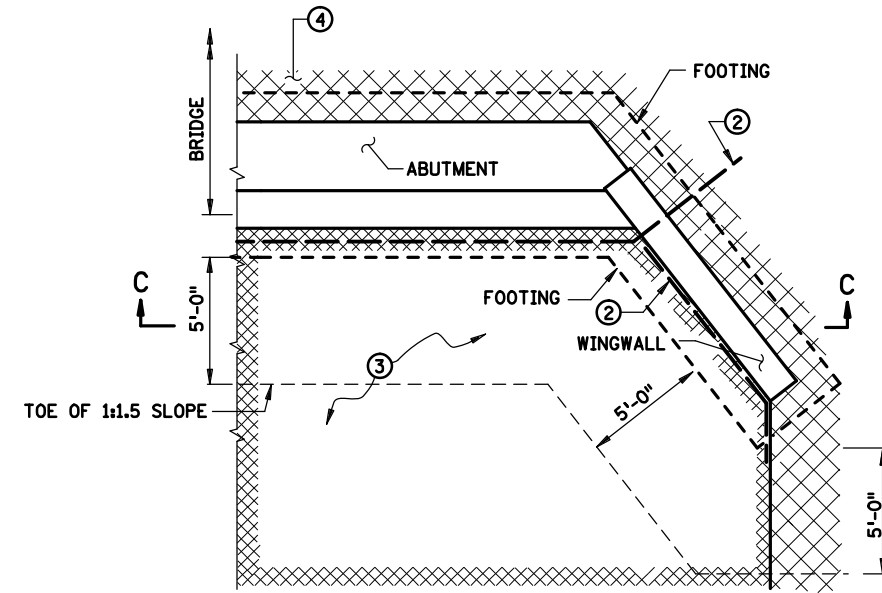
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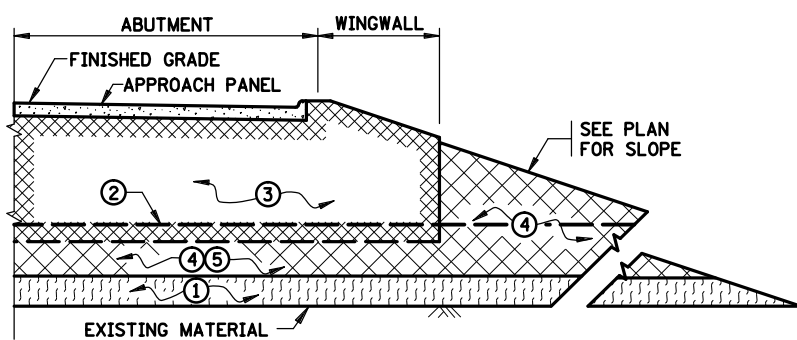
PARTIAL PLAN VIEW AT ABUTMENT
 (WINGWALL AT 180°) (FINISHED GRADING)



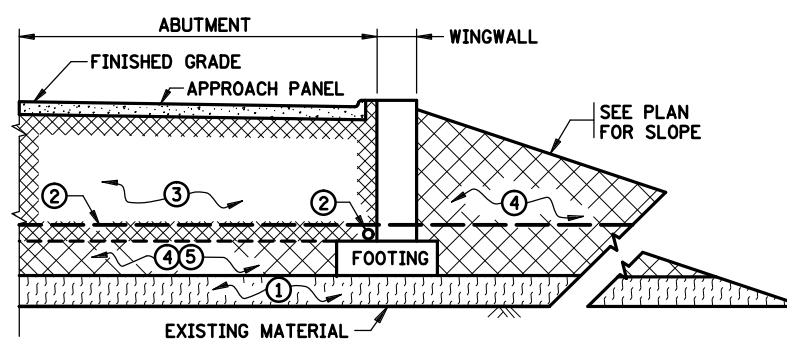
PARTIAL PLAN VIEW AT ABUTMENT
 (WINGWALL AT 90°) (FINISHED GRADING)



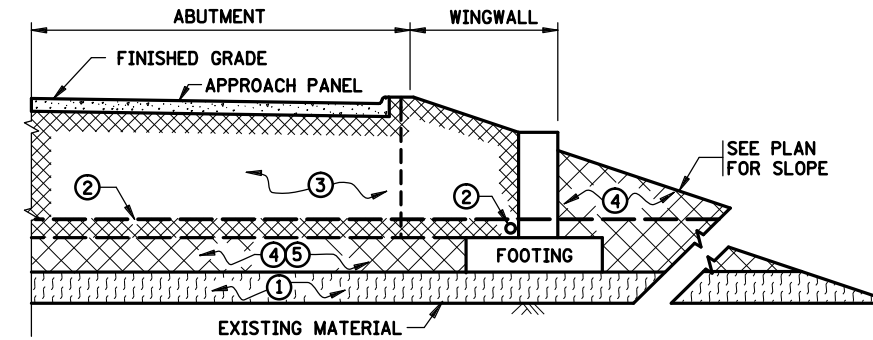
PARTIAL PLAN VIEW AT ABUTMENT
 (WINGWALL AT ANY OTHER ANGLE) (FINISHED GRADING)



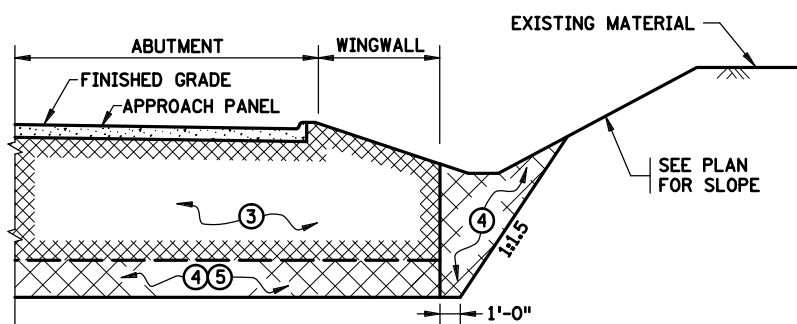
FINISHED GRADING SECTION A-A
 (FILL SECTION)



FINISHED GRADING SECTION B-B
 (FILL SECTION)



FINISHED GRADING SECTION C-C
 (FILL SECTION)



FINISHED GRADING SECTION A-A
 (CUT SECTION)
 (BRIDGE DETAIL B910 DRAIN NOT SHOWN)

NOTES:

- ① EXISTING MATERIAL OR SELECT GRADING MATERIAL (SPEC. 2106).
- ② SUBSURFACE PIPE DRAIN, FURNISH AND INSTALL AT TOP OF BRIDGE FOOTING IF BRIDGE DETAIL B910 IS INCLUDED ON BRIDGE PLAN.
- ③ QUANTITY OF STRUCTURAL BACKFILL (SPEC. 3149.2.D.2) IS BASED ON DIMENSIONS SHOWN, AND PAYMENT IS BASED ON THIS QUANTITY. SEE PLAN FOR QUANTITY. IF THE CONTRACTOR CHOOSES TO INCREASE DIMENSIONS IN ORDER TO FACILITATE CONSTRUCTION OPERATIONS, ANY QUANTITY INCREASES ARE CONSIDERED INCIDENTAL.
- ④ SELECT GRADING MATERIAL (SPEC. 2106).
- ⑤ MATERIAL SHALL MEET THE COMPACTION AND MOISTURE CONTENT REQUIRMENTS OF SPEC. 2106. STRUCTURAL BACKFILL (SPEC. 3149.2.D.2) MAY BE USED IN LIEU OF SELECT GRADING MATERIAL (SPEC. 2106).

REVISION:

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STANDARD PLAN 5-297.233

2 OF 2

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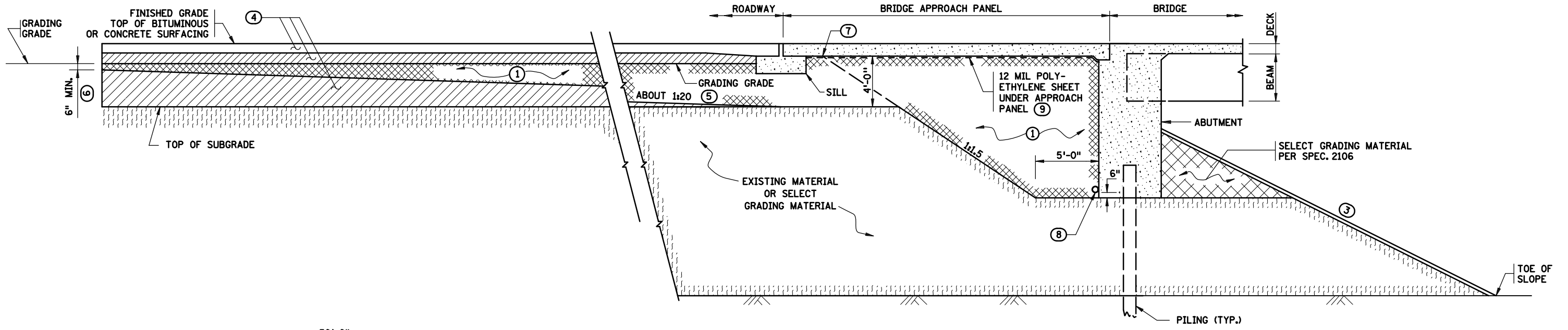
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**BRIDGE ABUTMENT APPROACH TREATMENT FOR
 PARAPET OR SEMI-INTEGRAL ABUTMENT ON FOOTING**

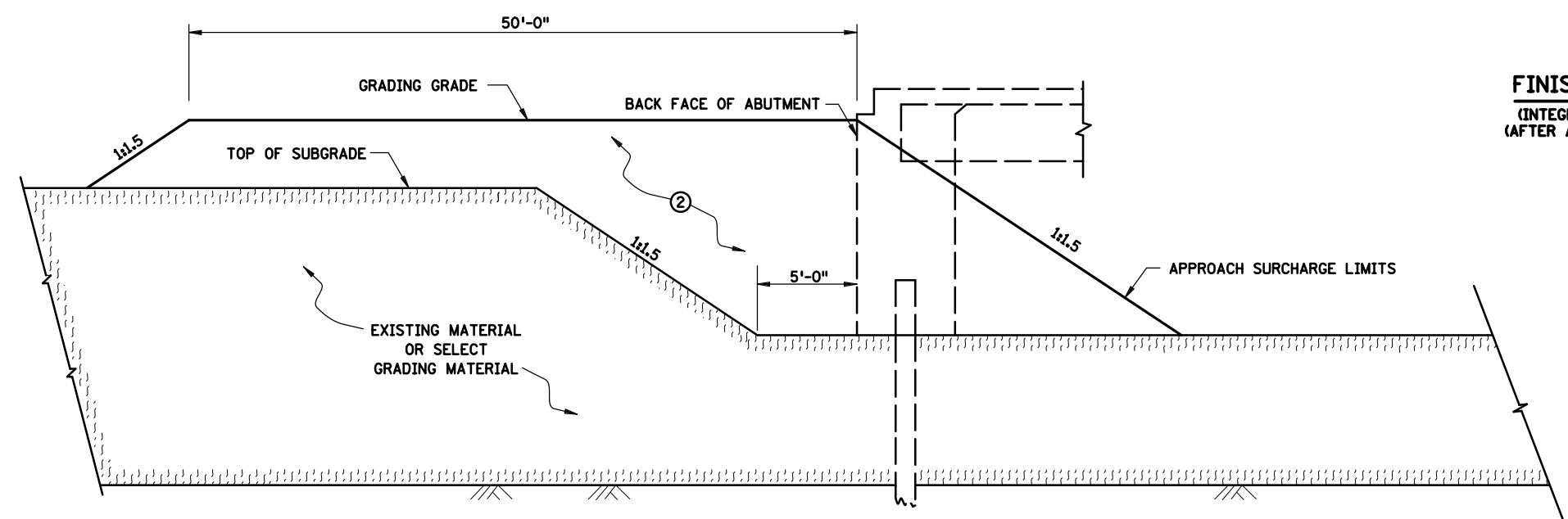
(T.H.) SHEET NO. OF SHEETS

PLOTTED/REVISED: 27-AUG-2019

PLOT NAME: s234.1.spr
 PATH & FILENAME: OTS\DesignStandards\Development\StandardPlans\DEV\200_Series\s234.1.spr.dgn



**ELEVATION
 FINISHED GRADING SECTION**
 (INTEGRAL ABUTMENT ON PILING SHOWN)
 (AFTER ABUTMENT HAS BEEN CONSTRUCTED)



**ELEVATION
 ROUGH GRADING SECTION**
 (PRIOR TO ABUTMENT CONSTRUCTION)

NOTES:

- ① QUANTITY OF STRUCTURAL BACKFILL (SPEC. 3149.2.D.2) IS BASED ON DIMENSIONS SHOWN, AND PAYMENT IS BASED ON THIS QUANTITY. IF THE CONTRACTOR CHOOSES TO INCREASE DIMENSIONS IN ORDER TO FACILITATE CONSTRUCTION OPERATIONS, ANY QUANTITY INCREASES ARE CONSIDERED INCIDENTAL.
- ② PLACE ABUTMENT APPROACH SURCHARGE MATERIAL PRIOR TO ABUTMENT CONSTRUCTION. AFTER COMPLETION OF SURCHARGE WAITING PERIOD, REMOVE SURCHARGE AND EXISTING MATERIAL OR SELECT GRADING MATERIAL TO THE LIMITS SHOWN IN "ROUGH GRADING SECTION" ABOVE, PRIOR TO ABUTMENT CONSTRUCTION. SEE BRIDGE PLANS AND SPECIAL PROVISIONS FOR ABUTMENT APPROACH SURCHARGE REQUIREMENT AND PAYMENTS.
- ③ SEE BRIDGE PLAN FOR SLOPE AND SLOPE PROTECTION.
- ④ SEE PLAN FOR TYPE OF MATERIAL.
- ⑤ START 1:20 TAPER AT END OF APPROACH PANEL. 1:20 VARIES WHEN APPROACH PANEL IS SKEWED.
- ⑥ GRADING TO BE SQUARED OFF ON SKEWED BRIDGES.
- ⑦ TOP OF 1:1.5 SLOPE (FORMS A LINE PARALLEL TO END OF BRIDGE).
- ⑧ SUBSURFACE PIPE DRAIN. SEE BRIDGE PLAN FOR STANDARD DETAIL B910 FOR DETAILS.
- ⑨ PLACE 12 MIL POLYETHYLENE SHEETING (OR TWO LAYERS OF 6 MIL) UNDER THE LIMITS OF THE APPROACH PANEL TO ALLOW THE PANEL TO MOVE LONGITUDINALLY ON THE GRADE. SHEETING IS INCIDENTAL.

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 APPROVED: AUGUST 22, 2019

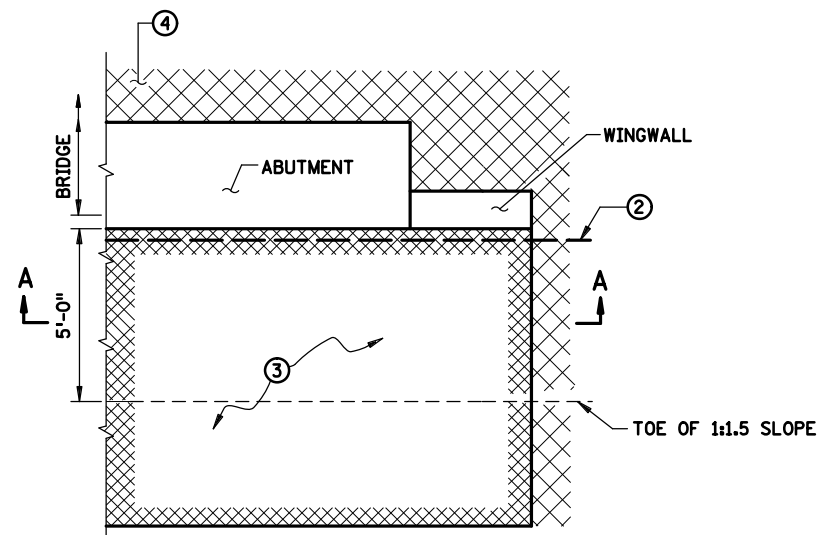
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STANDARD PLAN 5-297.234 1 OF 2
 Peter A Harff
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 APPROVED: 08-22-2019
 REVISED:

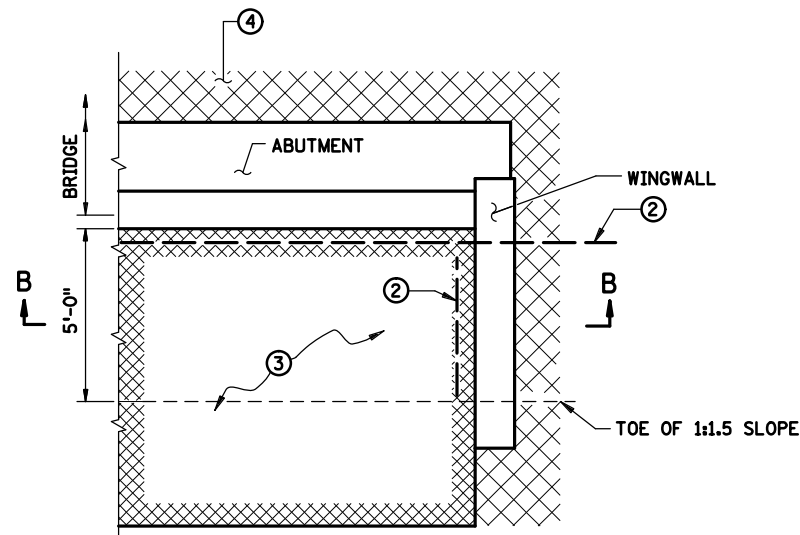
**BRIDGE ABUTMENT APPROACH TREATMENT
 FOR INTEGRAL ABUTMENTS**
 STATE PROJ. NO. (T.H.) SHEET NO. OF SHEETS

PLOTTED/REVISED: 27-AUG-2019

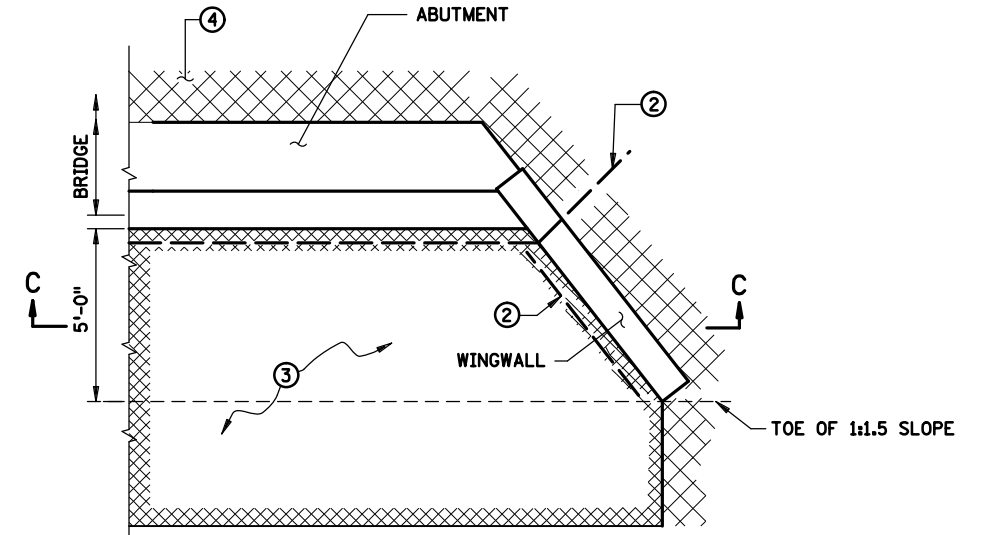
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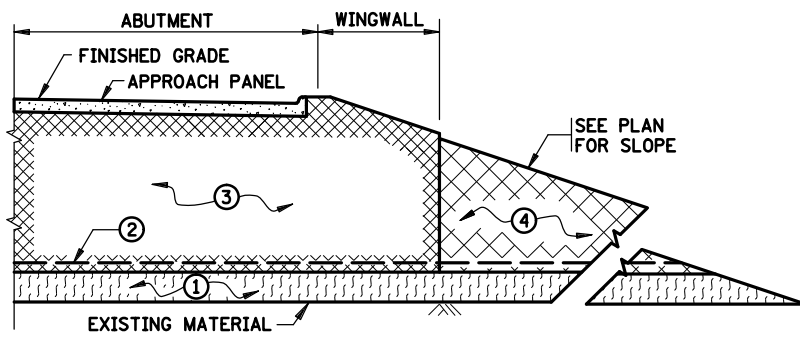
PARTIAL PLAN VIEW AT ABUTMENT
 (WINGWALL AT 180°) (FINISHED GRADING)



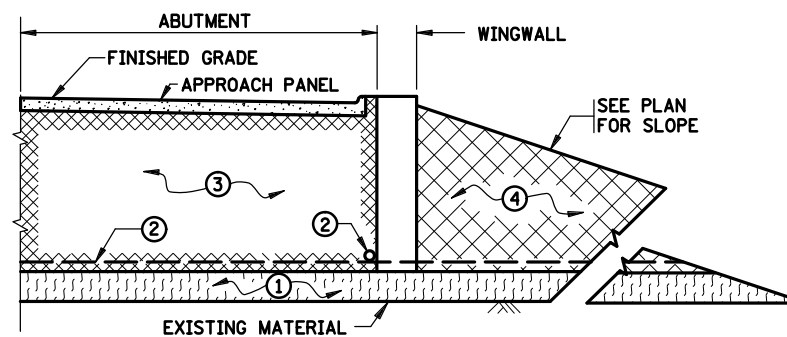
PARTIAL PLAN VIEW AT ABUTMENT
 (WINGWALL AT 90°) (FINISHED GRADING)



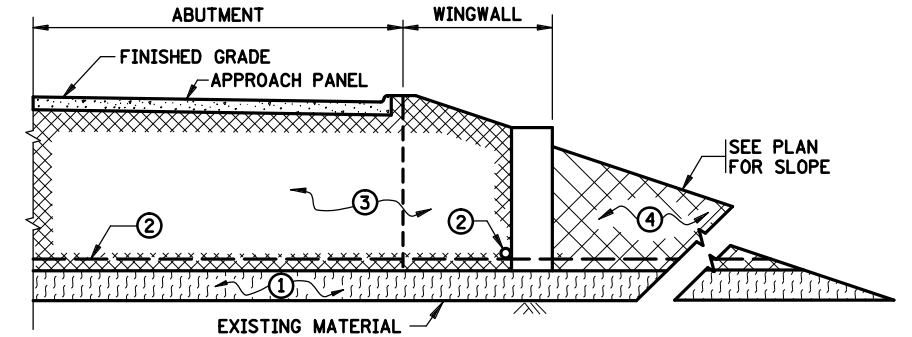
PARTIAL PLAN VIEW AT ABUTMENT
 (WINGWALL AT ANY OTHER ANGLE) (FINISHED GRADING)



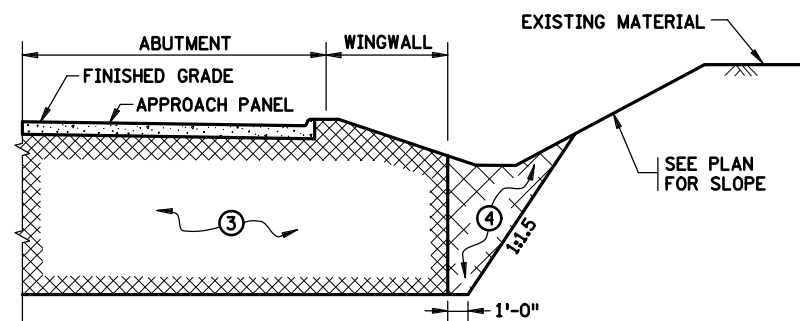
FINISHED GRADING SECTION A-A
 (FILL SECTION)



FINISHED GRADING SECTION B-B
 (FILL SECTION)



FINISHED GRADING SECTION C-C
 (FILL SECTION)



FINISHED GRADING SECTION A-A
 (CUT SECTION)
 (BRIDGE DETAIL B910 DRAIN NOT SHOWN)

NOTES:

- ① EXISTING MATERIAL OR SELECT GRADING MATERIAL (SPEC. 2106).
- ② SUBSURFACE PIPE DRAIN. SEE BRIDGE PLAN FOR STANDARD DETAIL B910 FOR DETAILS.
- ③ QUANTITY OF STRUCTURAL BACKFILL (SPEC. 3149.2.D.2) IS BASED ON DIMENSIONS SHOWN, AND PAYMENT IS BASED ON THIS QUANTITY. SEE PLAN FOR QUANTITY. IF THE CONTRACTOR CHOOSES TO INCREASE DIMENSIONS IN ORDER TO FACILITATE CONSTRUCTION OPERATIONS, ANY QUANTITY INCREASES ARE CONSIDERED INCIDENTAL.
- ④ SELECT GRADING MATERIAL (SPEC. 2106).

REVISION:

APPROVED: AUGUST 22, 2019

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 DIRECTOR, OFFICE OF MATERIALS AND ROAD RESEARCH



STANDARD PLAN 5-297.234 2 OF 2
 Peter A Harff
 DEPARTMENT OF TRANSPORTATION
 STATE DESIGN ENGINEER
 APPROVED: 08-22-2019
 REVISED:

BRIDGE ABUTMENT APPROACH TREATMENT FOR INTEGRAL ABUTMENTS

STATE PROJ. NO. (T.H.) SHEET NO. OF SHEETS