

TYPICAL SECTIONS - GENERAL ITEMS:

G1. All work items on the typical cross sections are to be in capital letters. Use the MDOT_Mask or MDOT_NoMask text style. Existing levels have transparency assigned. Pay items on the typical sections are to match MDOT standard pay items or the pay items from an approved Special Provision.

G2. Whole words should be used when possible, but abbreviations are acceptable. The following are some standard abbreviations:

| | |
|------------------------------------|---------------------------|
| AGG - Aggregate | PG - Plan Grade |
| CONC - Concrete | POR - Point of Rotation |
| CP - Crown Point | PT - Point |
| EOS - Edge of Shoulder | REINF - Reinforced |
| EOT - Edge of Travelway | NONREINF - Non-Reinforced |
| OGDC - Open-Graded Drainage Course | SHLD - Shoulder |
| Pavt - Pavement | SWLK - Sidewalk |

G3. Label the existing and proposed lanes and shoulders. If the dimension is a whole number do not label with a decimal. Do not show grade differentials (-0.24') and or circles at break points. For horizontal dimensions use decimals not feet and inches. Vertical dimensions are typically in inches.

G4. Show existing and proposed plan grade, crown point and point of rotation locations.

G5. Typical sections are a general representation; the intent is not to show every scenario. Utilize miscellaneous details or side typical sections to illustrate unique construction locations.

G6. Label the typical sections with general varying widths for the station range of the typical. Exact station ranges and widths of tapers, transitions, gores, etc are to be shown on the construction sheets.

G7. Existing typical cross sections should be developed as complete as possible from old plans, pavement cores, soil borings and field inspections. All layers of all materials should be shown including subbase and aggregate if known. It is critical to identify the type and thickness of concrete pavement, HMA thickness, existing underdrains, or other items that can affect the bid price. Show existing parabolic crown if applicable.

G8. The following items may require separate half section typical or details and shall be used as needed:

| | |
|--------------------------|-----------------|
| Guardrail Sections | Turn lanes |
| Shoulder Sections | Lane widening |
| Crossroads | Ramps |
| Fill/Cut sections | Crossovers |
| Curb and gutter sections | Retaining walls |

G9. Government lines will not be shown on typical sections.

G10. Topsoil stripping will not be shown on typical sections.

TYPICAL SECTIONS:

1. Existing typical sections will be located before the proposed typical sections and will be grouped together. Existing and proposed typical sections will not be on the same sheet.

2. The removal type lines and the "GRADE TO THIS LINE" call will address how removal items are paid. The "GRADE TO THIS LINE" call is only shown on the existing typical section and should match the bottom line of the coinciding proposed typical section. Items that are not included in the removal type lines or the "GRADE TO THIS LINE" call will be tagged with the removal cell. For special cases, such as non-standard items, include a description of how the item will be paid.

3. Label all existing materials.

4. Removal items on the existing typical sections are not to be crosshatched.

5. Only show alignments (LEGAL ALI OR NON-LEGAL ALI) that are being used to construct the roadways. Alignment labels shall match the labels in the plan set.

6. Existing and proposed ROW is labeled from ROW line to ROW line, it is not tied to any of the alignments. Identify if it is limited access (LA) ROW.

7. Include station equations that are within the typical section station range. If multiple equations exist within the station range they should be shown in a separate box.

8. Multiple station ranges can be used on the same typical section.

9. Side slopes that vary through the station limits will be labeled as "SLOPE VARIES" or "SLOPES VARY" in the type line or "VARIES" with an arrow instead of specifying a slope. The specific slopes will typically be detailed on the profile sheets. If there are no profile sheets this information can be detailed on the typical.

10. When the pay item "SLOPE RESTORATION, TYPE _" is used, the type can be left blank.

11. The longitudinal pavement joint type labels will not be shown on the typical sections. Concrete pavement joints will only be shown as a vertical line along with a horizontal lane tie.


12. Proposed ditches that vary within the station range will be labeled as "DITCH SLOPES, BOTTOM WIDTH AND DEPTH VARY". The specific slopes, bottom width and depth will typically be detailed on the profile sheets. If there are no profile sheets this information can be detailed on the typical.

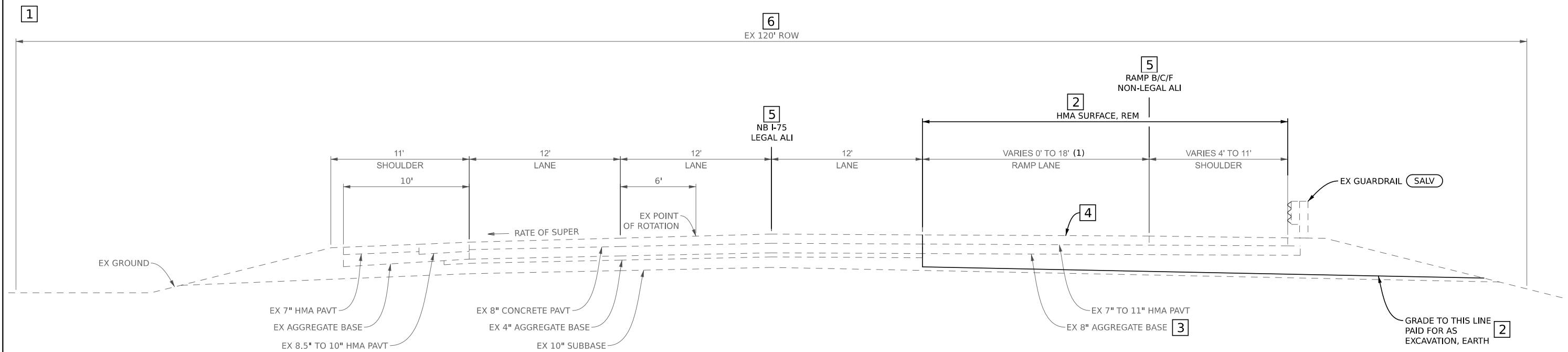
13. The pavement cross slope on a superelevated typical section will be labeled as "RATE OF SUPER" when the typical section includes the crown-runout and transition or if multiple curves are within the typical station ranges. If the superelevated typical section is in full super for the entire station range then the specific percent super can be shown.

14. Varying shoulder slopes on super elevated typical sections will be labeled with an asterisk (*). Shoulder slopes that are in the same direction that the pavement is superelevated will include a slope arrow. Slopes on the high side that slope in the opposite direction of the pavement super will not have an arrow.

15. The HMA application table should appear only on the first proposed typical sheet that has an HMA pavement section and should be placed in the lower left corner of the sheet.

16. Include POB and POE label with station. Do not show stations with trailing zeros (i.e. 15+00, not 15+00.00).

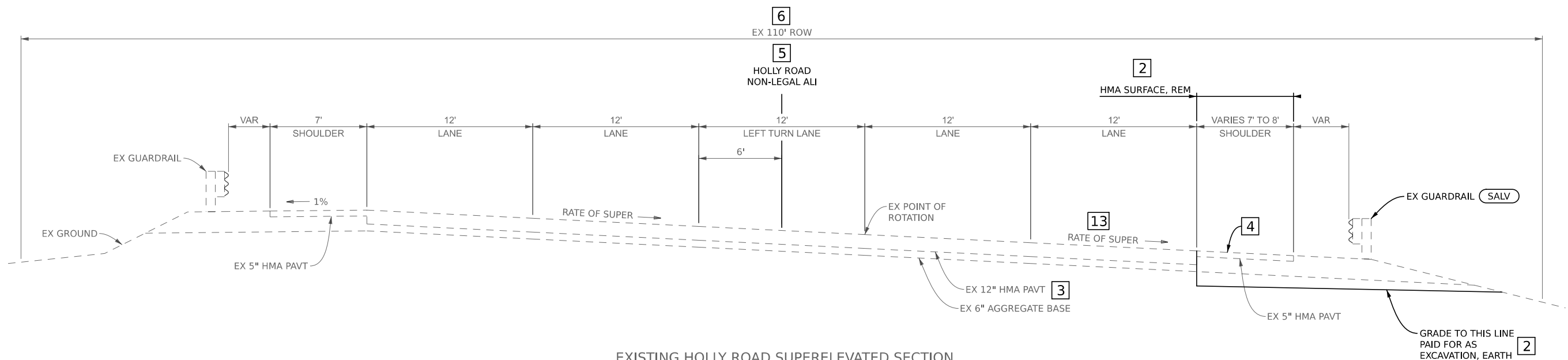
| FINAL ROW PLAN REVISIONS SUBMITTAL DATE: | | | | | | | |  | NO SCALE | PLAN GUIDELINES | DATE: 02/18/21 | CS: 55555, (55556, 55557) | Plan Guidelines - Sample Plans | | DRAWING | SHEET |
|--|------|------|-------------|-----|------|------|-------------|---|----------|--|--------------------------|---------------------------|--------------------------------|--|---------|--------|
| NO. | DATE | AUTH | DESCRIPTION | NO. | DATE | AUTH | DESCRIPTION | | | SAMPLE PLANS | DESIGN UNIT:IDS | JN: 123456 | TYPICAL CROSS SECTIONS | | M-123 | SECT 1 |
| | | | | | | | | | | FILE: Plan Guidelines - Typical Sections.dgn | TSC: ENGINEERING SUPPORT | 234567 | | | TYP | |
| | | | | | | | | | | | | | | | 1 | |



EXISTING NB I-75 SUPERELEVATED SECTION



8 SECTION APPLIES TO:
NB I-75 LEGAL ALI STA 951+47 TO STA 956+07
NB I-75 LEGAL ALI STA 964+59 TO STA 986+81

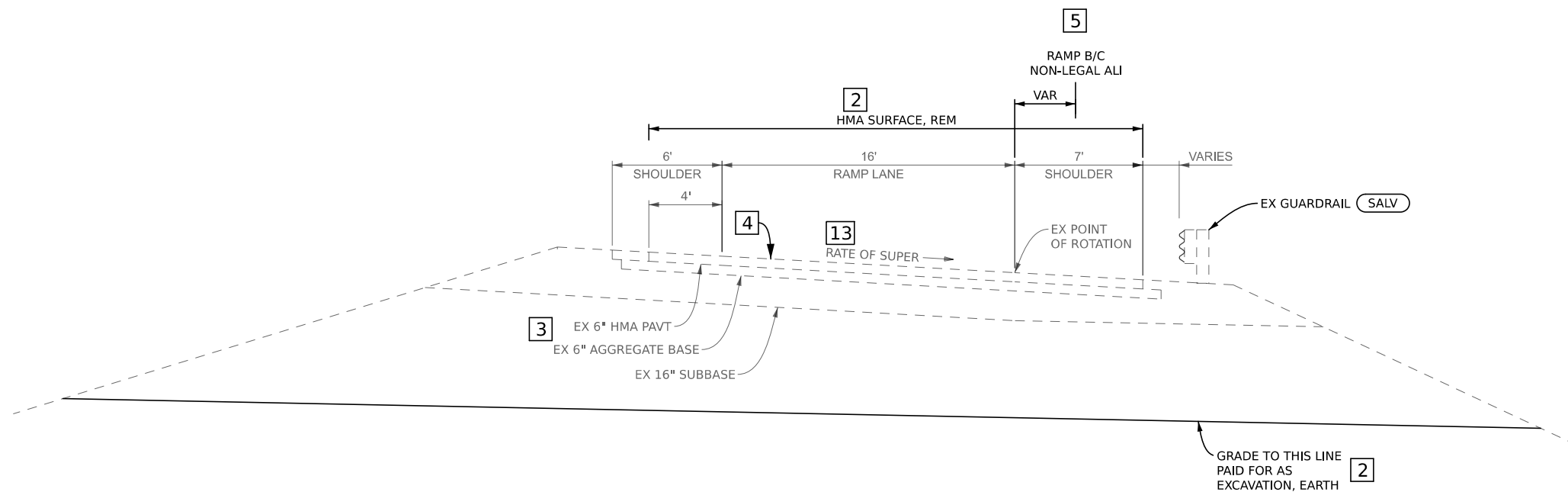
(1) APPLIES TO:
RAMP B NON-LEGAL ALI STA 100+03 TO STA 104+23
RAMP C NON-LEGAL ALI STA 208+67 TO STA 222+78



EXISTING HOLLY ROAD SUPERELEVATED SECTION

SECTION APPLIES TO:
HOLLY ROAD NON-LEGAL ALI STA 201+17.28 TO STA 207+00

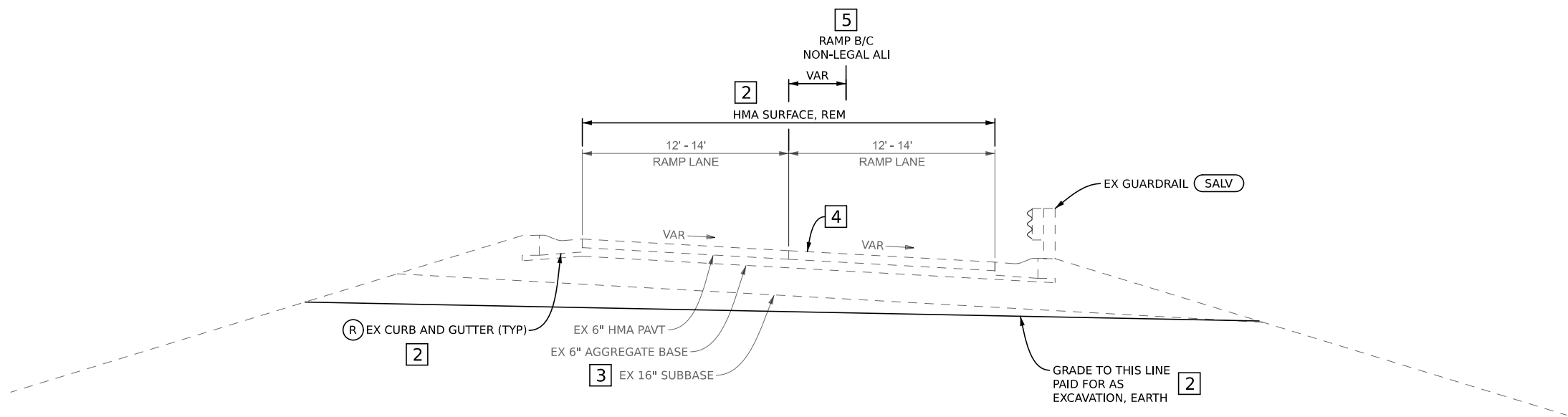
| FINAL ROW PLAN REVISIONS | | | | | | | | SUBMITTAL DATE: | | | | | | | |  Michigan Department of Transportation |  | PLAN GUIDELINES | | DATE: 02/18/21 | | CS: 55555 | | TYPICAL CROSS SECTIONS | | DRAWING | SHEET |
|--------------------------|------|------|-------------|-----|------|------|-------------|----------------------------|--|--------------------------|--|------------|--|------------|--|--|---|---------------------|--------|----------------|--|-----------|--|------------------------|--|---------|-------|
| NO. | DATE | AUTH | DESCRIPTION | NO. | DATE | AUTH | DESCRIPTION | SAMPLE PLANS | | DESIGN UNIT:IDS | | JN: 123456 | | NB I-75 | | | | NB I-75 TYP 1 | SECT 1 | | | | | | | | |
| | | | | | | | | FILE: 115832_ExTyp_001.dgn | | TSC: ENGINEERING SUPPORT | | 234567 | | HOLLY ROAD | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |



EXISTING RAMP SECTION

SECTION APPLIES TO:
RAMP B NON-LEGAL ALI STA 104+23 TO STA 115+51
RAMP C NON-LEGAL ALI STA 201+00 TO STA 208+67


8

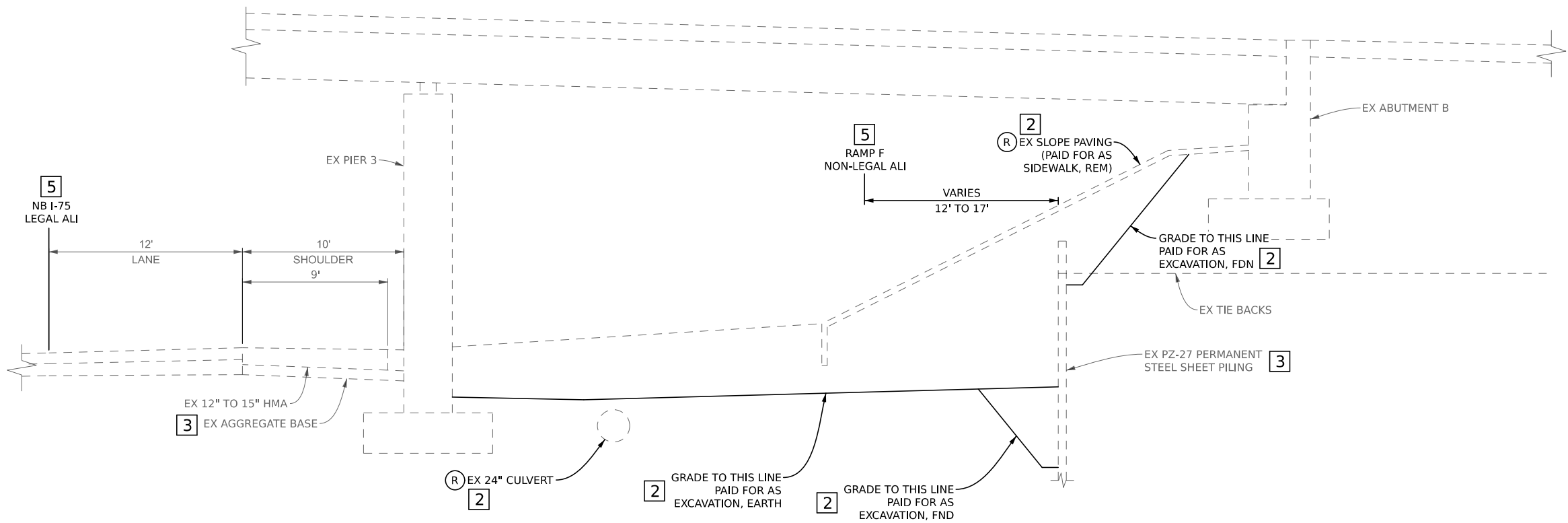


EXISTING RAMP SECTION

SECTION APPLIES TO:
RAMP B NON-LEGAL ALI STA 115+51 TO STA 116+45
RAMP C NON-LEGAL ALI STA 200+45 TO STA 201+00

8

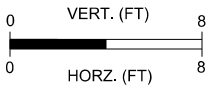
| FINAL ROW PLAN REVISIONS | | | | | | | | SUBMITTAL DATE: | | | |  Michigan Department of Transportation | <div>0<div>VERT. (FT)</div>8</div> <div>0<div>HORZ. (FT)</div>8</div> | PLAN GUIDELINES | | DATE: 02/18/21 | | CS: 55555 | | TYPICAL CROSS SECTIONS | | | | DRAWING | SHEET |
|--------------------------|------|------|-------------|-----|------|------|-------------|----------------------------|--|--------------------------|--|--|---|-----------------|--|----------------|--|-----------|--|------------------------|--------|--|--|---------|-------|
| NO. | DATE | AUTH | DESCRIPTION | NO. | DATE | AUTH | DESCRIPTION | SAMPLE PLANS | | DESIGN UNIT:IDS | | | | JN: 123456 | | RAMP B | | | | RAMP B TYP 2 | SECT 1 | | | | |
| | | | | | | | | FILE: 115832_ExTyp_002.dgn | | TSC: ENGINEERING SUPPORT | | | | 234567 | | RAMP C | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |



EXISTING RAMP F UNDER HOLLY ROAD SECTION

SECTION APPLIES TO:
RAMP F NON-LEGAL ALI STA 310+34 TO STA 311+32

| FINAL ROW PLAN REVISIONS | | | | SUBMITTAL DATE: | | | |
|--------------------------|------|------|-------------|-----------------|------|------|-------------|
| NO. | DATE | AUTH | DESCRIPTION | NO. | DATE | AUTH | DESCRIPTION |
| | | | | | | | |
| | | | | | | | |

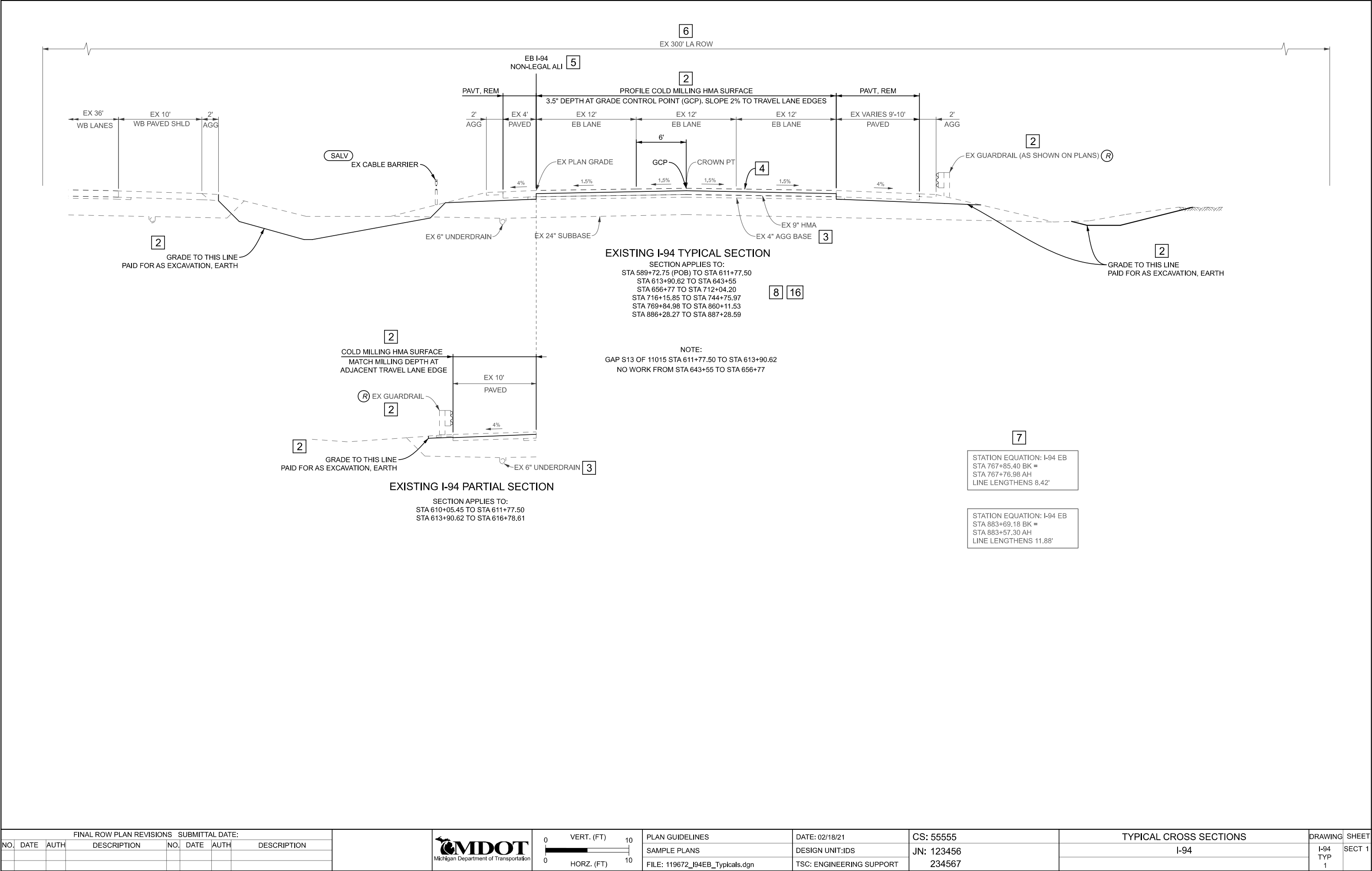


| |
|----------------------------|
| PLAN GUIDELINES |
| SAMPLE PLANS |
| FILE: 115832_ExTyp_003.dgn |

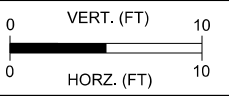
| |
|--------------------------|
| DATE: 02/18/21 |
| DESIGN UNIT:IDS |
| TSC: ENGINEERING SUPPORT |

| |
|------------|
| CS: 55555 |
| JN: 123456 |
| 234567 |

| TYPICAL CROSS SECTIONS | | DRAWING | SHEET |
|------------------------|--|--------------------|--------|
| RAMP F | | RAMP F TYP 3 | SECT 1 |



| FINAL ROW PLAN REVISIONS | | | | | | | SUBMITTAL DATE: | | |
|--------------------------|------|------|-------------|-----|------|------|-----------------|--|--|
| NO. | DATE | AUTH | DESCRIPTION | NO. | DATE | AUTH | DESCRIPTION | | |
| | | | | | | | | | |
| | | | | | | | | | |

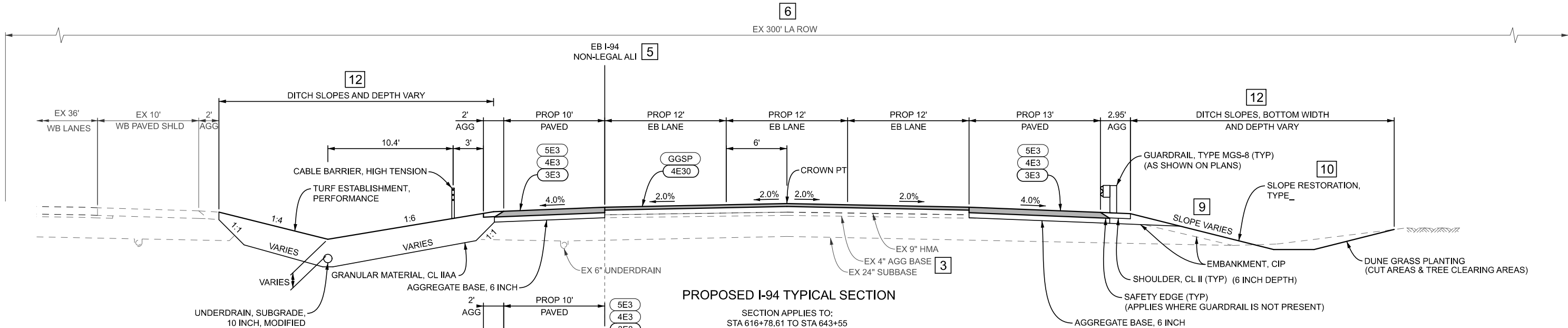


| |
|---------------------------------|
| PLAN GUIDELINES |
| SAMPLE PLANS |
| FILE: 119672_I94EB_Typicals.dgn |

| |
|--------------------------|
| DATE: 02/18/21 |
| DESIGN UNIT:IDS |
| TSC: ENGINEERING SUPPORT |

| |
|------------|
| CS: 55555 |
| JN: 123456 |
| 234567 |

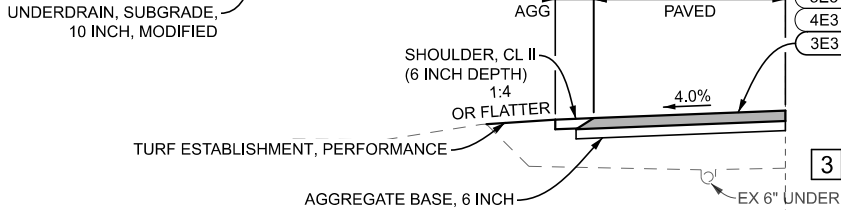
| TYPICAL CROSS SECTIONS | | DRAWING | SHEET |
|------------------------|--|------------|--------|
| I-94 | | I-94 TYP 1 | SECT 1 |



PROPOSED I-94 TYPICAL SECTION

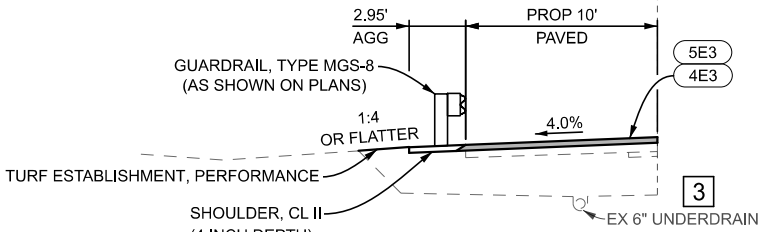
SECTION APPLIES TO:
STA 616+78.61 TO STA 643+55
STA 656+77 TO STA 712+04.20
STA 716+15.85 TO STA 744+75.97
STA 769+84.98 TO STA 860+11.53
STA 886+28.27 TO STA 887+28.59

NOTE:
GAP S13 OF 11015 STA 611+77.50 TO STA 613+90.62
NO WORK FROM STA 643+55 TO STA 656+77



PROPOSED I-94 PARTIAL SECTION

SECTION APPLIES TO:
STA 589+72.75 (POB) TO STA 610+05.45





PROPOSED I-94 PARTIAL SECTION

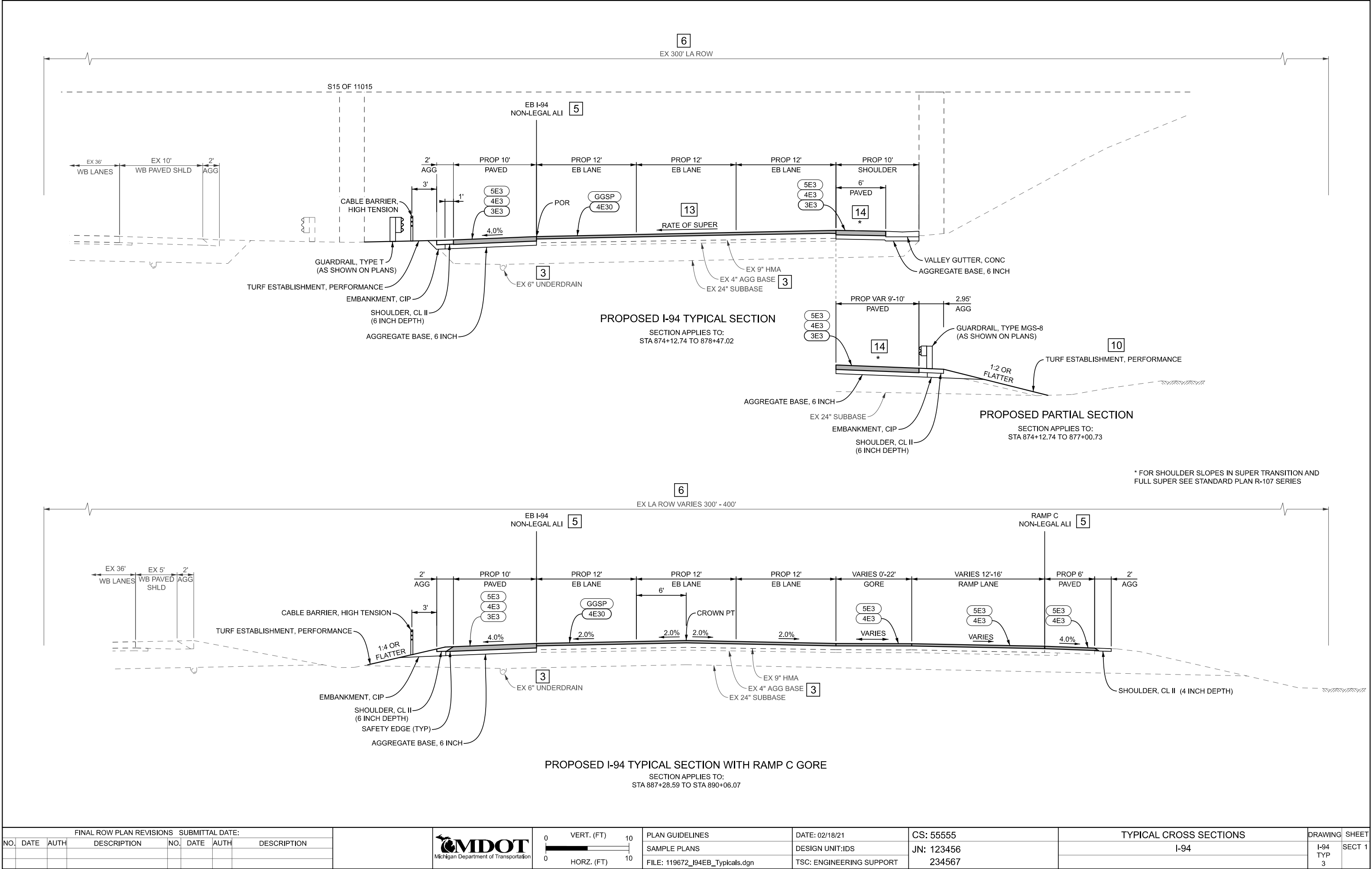
SECTION APPLIES TO:
STA 610+05.45 TO STA 611+77.50
STA 613+90.62 TO STA 616+78.61

HMA APPLICATION ESTIMATE

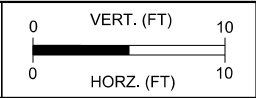
| IDENT NO. | ITEM | RATE LBS PER SYD | PERFORMANCE GRD | REMARKS |
|-----------|---------------------------|------------------|-----------------|--|
| GGSP | HMA, GAP GRADED SUPERPAVE | 165 | PG 70-28P | MAINLINE TOP COURSE - AWI 260 |
| 4E30 | HMA, 4E30 | 220 | PG 70-28P | MAINLINE LEVELING COURSE |
| WE30 | HMA, 5E30 | 82.5-220 | PG 64-22 | MAINLINE WEDGING |
| 5E3 | HMA, 5E3 | 165 | PG 64-22 | MAINLINE SHLD & RAMP TOP COURSE |
| 4E3 | HMA, 4E3 | 220 | PG 64-22 | MAINLINE SHLD AND RAMP LEVELING COURSE |
| 3E3 | HMA, 3E3 | 330 | PG 64-22 | MAINLINE SHLD & RAMP BASE COURSE |
| WE3 | HMA, 5E3 | 82.5-220 | PG 64-22 | MAINLINE SHOULDER WEDGING |
| HA-1 | HMA APPROACH | 165 | PG 64-22 | HMA 5E3 - GORE AND CROSSOVER TOP |
| HA-2 | HMA APPROACH | 220 | PG 64-22 | HMA, 4E3 - GORE AND CROSSOVER LEVELING |
| HA-3 | HMA APPROACH | 330 | PG 64-22 | HMA, 3E3 - GORE & CROSSOVER BASE |
| | * BOND COAT | 0.05-0.15 GAL | | |

*FOR INFORMATION ONLY

| FINAL ROW PLAN REVISIONS | | | | | | | | SUBMITTAL DATE: | |  |  | PLAN GUIDELINES | DATE: 02/18/21 | CS: 55555 | TYPICAL CROSS SECTIONS | | DRAWING | SHEET |
|--------------------------|------|------|-------------|-----|------|------|-------------|------------------|--------|---|---|-----------------|----------------|-----------|------------------------|--|---------|-------|
| NO. | DATE | AUTH | DESCRIPTION | NO. | DATE | AUTH | DESCRIPTION | I-94 TYP 2 | SECT 1 | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |



| FINAL ROW PLAN REVISIONS | | | | | | |
|--------------------------|------|------|-------------|-----|------|------|
| SUBMITTAL DATE: | | | | | | |
| NO. | DATE | AUTH | DESCRIPTION | NO. | DATE | AUTH |
| | | | | | | |
| | | | | | | |

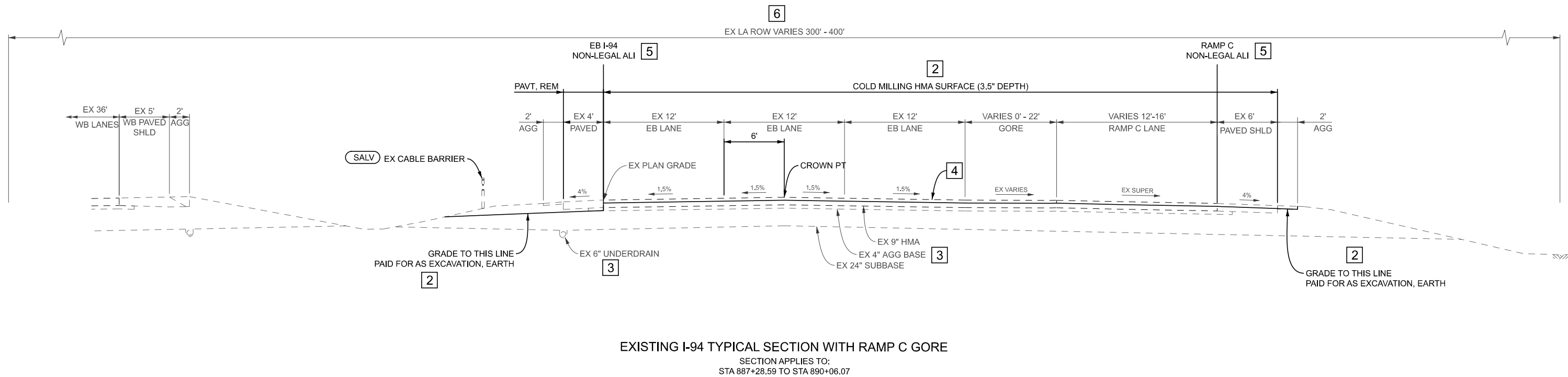




| |
|---------------------------------|
| PLAN GUIDELINES |
| SAMPLE PLANS |
| FILE: 119672_I94EB_Typicals.dgn |

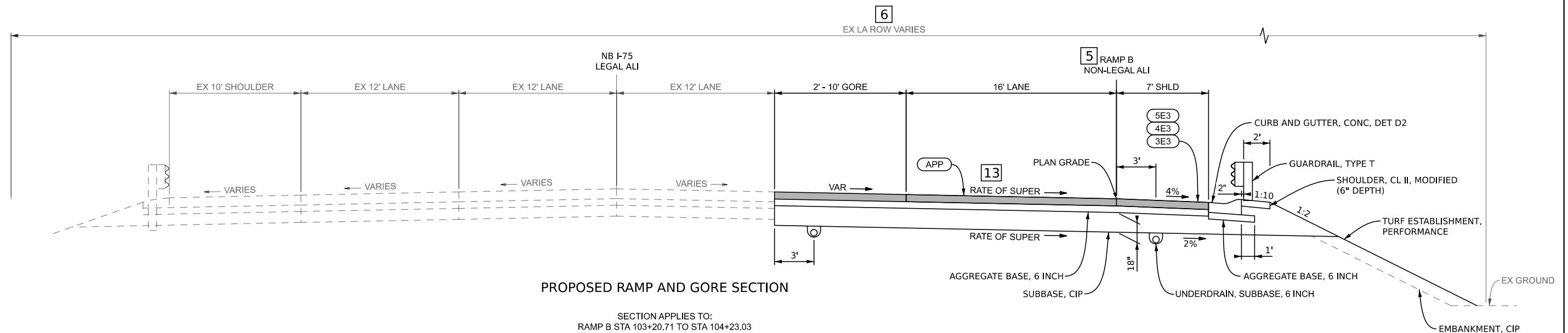
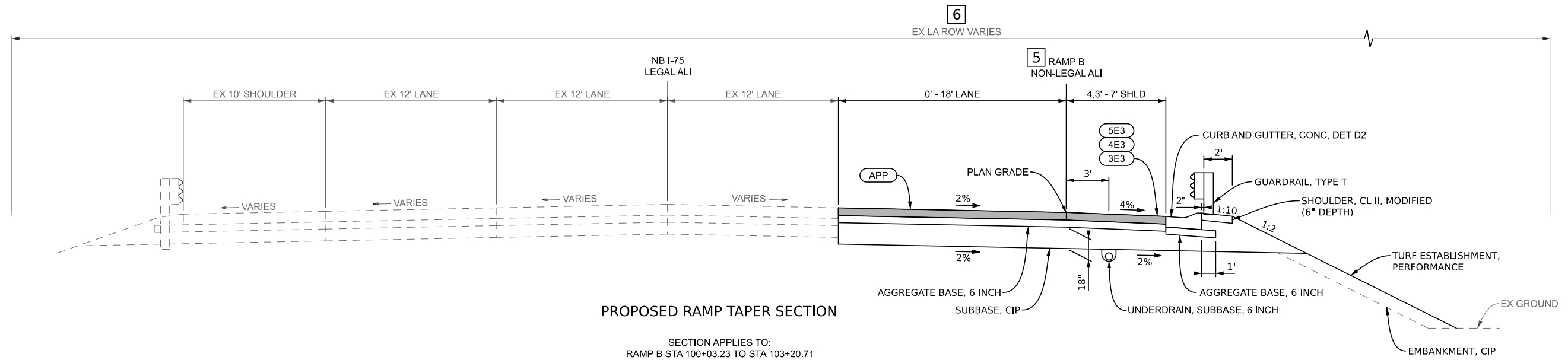
| |
|--------------------------|
| DATE: 02/18/21 |
| DESIGN UNIT:IDS |
| TSC: ENGINEERING SUPPORT |

| |
|------------|
| CS: 55555 |
| JN: 123456 |
| 234567 |

| TYPICAL CROSS SECTIONS | | DRAWING | SHEET |
|------------------------|--|------------|--------|
| I-94 | | I-94 TYP 3 | SECT 1 |




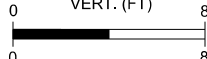
| FINAL ROW PLAN REVISIONS | | | | | | | | SUBMITTAL DATE: | | | | | | | |  | |  | | PLAN GUIDELINES | | DATE: 02/18/21 | | CS: 55555 | | TYPICAL CROSS SECTIONS | | | | DRAWING SHEET | |
|--------------------------|------|------|-------------|--|--|--|-----|-----------------|------|-------------|--|--|--|---------------------------------|--|---|--|---|--|--------------------------|--|----------------|--|-----------|--|------------------------|--|--|--|---------------|--|
| NO. | DATE | AUTH | DESCRIPTION | | | | NO. | DATE | AUTH | DESCRIPTION | | | | SAMPLE PLANS | | | | | | DESIGN UNIT:IDS | | JN: 123456 | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | 234567 | | | | | | | | | |
| | | | | | | | | | | | | | | FILE: 119672_I94EB_Typicals.dgn | | | | | | TSC: ENGINEERING SUPPORT | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | I-94 | | | | I-94 TYP 4 | | SECT 1 | | | | | | | | | |




15

| IDENT NO | ITEM | RATE (LBS PER SYD) | PERFORMANCE GRADE | REMARKS |
|----------|--------------|--------------------|-------------------|---|
| 5E3 | HMA, 5E3 | 165 | 64-28 | TOP COURSE, AWI=260 |
| 4E3 | HMA, 4E3 | 220 | 64-28 | LEVELING COURSE |
| 3E3 | HMA, 3E3 | 330 | 58-22 | BASE COURSE |
| APP | HMA APPROACH | 165 | 64-28 | INTERSECTIONS, TAPERS, AND GORES, HMA, 5E3 (TOP COURSE, AWI=260) |
| | | 220 | 64-28 | INTERSECTIONS, TAPERS, AND GORES, HMA, 4E3 (LEVELING COURSE) |
| | | 330 | 58-22 | INTERSECTIONS, TAPERS, AND GORES, HMA, 3E3 (BASE COURSE) |
| APP-2 | HMA APPROACH | 165 | 64-28 | SHOULDERS FOR MAINTAINING TRAFFIC, HMA, 5E3 (TOP COURSE, AWI=260) |
| | * BOND COAT | 0.05-0.15 GAL | | |

* FOR INFORMATION ONLY

| FINAL ROW PLAN REVISIONS | | | | | | | | SUBMITTAL DATE: | | | | | | | |  Michigan Department of Transportation |  0 VERT. (FT) 8 0 HORZ. (FT) 8 | PLAN GUIDELINES | DATE: 02/18/21 | CS: 55555 | TYPICAL CROSS SECTIONS | | DRAWING | SHEET |
|--------------------------|------|------|-------------|--|--|--|-----|-----------------|------|-------------|--|--|--|--------|--|---|---|-----------------|----------------|-----------|------------------------|--------|---------|-------|
| NO. | DATE | AUTH | DESCRIPTION | | | | NO. | DATE | AUTH | DESCRIPTION | | | | RAMP B | | | | | | | RAMP B TYP 1 | SECT 1 | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |

| FINAL ROW PLAN REVISIONS | | | | | | | | SUBMITTAL DATE: | | <div> Michigan Department of Transportation</div> <div><div>0</div><div>VERT. (FT)</div><div>8</div><div><div></div></div><div>0</div><div>HORZ. (FT)</div><div>8</div></div> | PLAN GUIDELINES | | DATE: 02/18/21 | | CS: 55555 | | TYPICAL CROSS SECTIONS | | DRAWING | SHEET |
|--------------------------|------|------|-------------|-----|------|------|-------------|----------------------------|--|--|--------------------------|--|----------------|--|-----------|--|------------------------|--------|---------|-------|
| NO. | DATE | AUTH | DESCRIPTION | NO. | DATE | AUTH | DESCRIPTION | SAMPLE PLANS | | | DESIGN UNIT:IDS | | JN: 123456 | | RAMP F | | RAMP F | SECT 1 | | |
| | | | | | | | | FILE: 115832_PrTyp_006.dgn | | | TSC: ENGINEERING SUPPORT | | 234567 | | | | TYP | 6 | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |