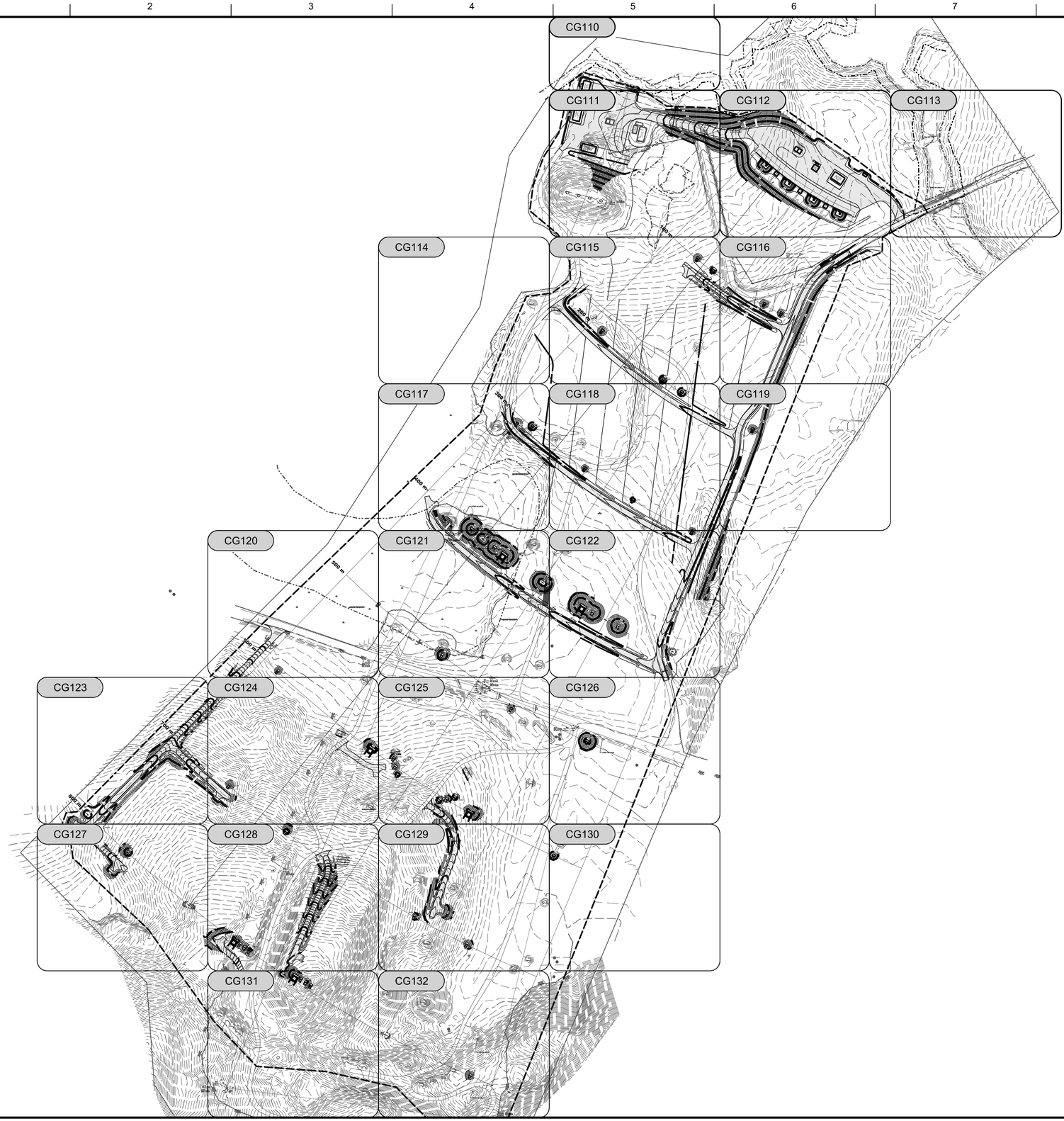


# GENERAL GRADING NOTES

1. ALL FIELDWORK SHALL BE PERFORMED IN ACCORDANCE WITH EP 75-1-1, AUGUST 2004, MUNITIONS AND EXPLOSIVES OF CONCERN (MEC) DURING HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW) AND CONSTRUCTION ACTIVITIES.
2. REFER TO SHEET CS601 FOR TARGET EMPLACEMENT SCHEDULE.
3. REFER TO SHEETS CG601 FOR DRAINAGE SCHEDULE.
4. THE CONTRACTOR SHALL MINIMIZE IMPACTS TO THE FLOODPLAIN AREA SHOWN ON THESE DRAWINGS.
5. NO SOIL MATERIAL SHALL LEAVE THE SITE. ANY EXCESS SHALL BE SPREAD EVENLY IN AREAS OUTSIDE THE FLOOD PLAIN WHERE APPROVED BY THE CONTRACTING OFFICER.
6. THE CONTRACTOR SHALL NOT WORK IN AREAS DELINEATED AS WETLANDS UNTIL 401/04 PERMITS AND PERMISSION FROM FORT DEVENS ENVIRONMENTAL PERSONNEL IS OBTAINED.

150' 75' 0 150' 300' 450'

GRAPHIC SCALE: 1"=150'-0"

N

**GEOGRAPHIC COORDINATE DATA**

HORIZONTAL DATUM: NAD83
MASSACHUSETTS STATE PLANE MAINLINE.

VERTICAL DATUM: NAD83.

UNITS OF MEASURE: U.S. SURVEY FEET.

COORDINATES SHOWN IN FORMAT OF EASTING, NORTHING AND ELEVATION.

US Army Corps of Engineers®

| MARK | DESCRIPTION | DATE |
|---|---|---|

| | |
|---|---|
| DESIGNED BY: S.CURRY | ISSUE DATE: MARCH 2020 |
| DRAWN BY: S.HAGGARD | SOLICITATION NO.: XXXXXX-XX-X-XXXX |
| CHECKED BY: M.MAYER | CONTRACT NO.: W912DY-15-D-0013 |
| SUBMITTED BY: C.LOVE | CATEGORY CODE XXX-XX-XX |
| SIZE ANSI D | FILENAME: DMP01_CG101.dgn |

U.S. ARMY CORPS OF ENGINEERS
600 DR MARTIN LUTHER KING JR PL
LOUISVILLE DISTRICT
LOUISVILLE, KENTUCKY

Mason&Hanger
Partnership Management Company

DEVENS, MASSACHUSETTS
AUTOMATED MULTIPURPOSE MACHINE GUN (MPMG) RANGE
FY21, PN: 088752
SITE

OVERALL
GRADE AND DRAIN PLAN

SHEET ID
CG101

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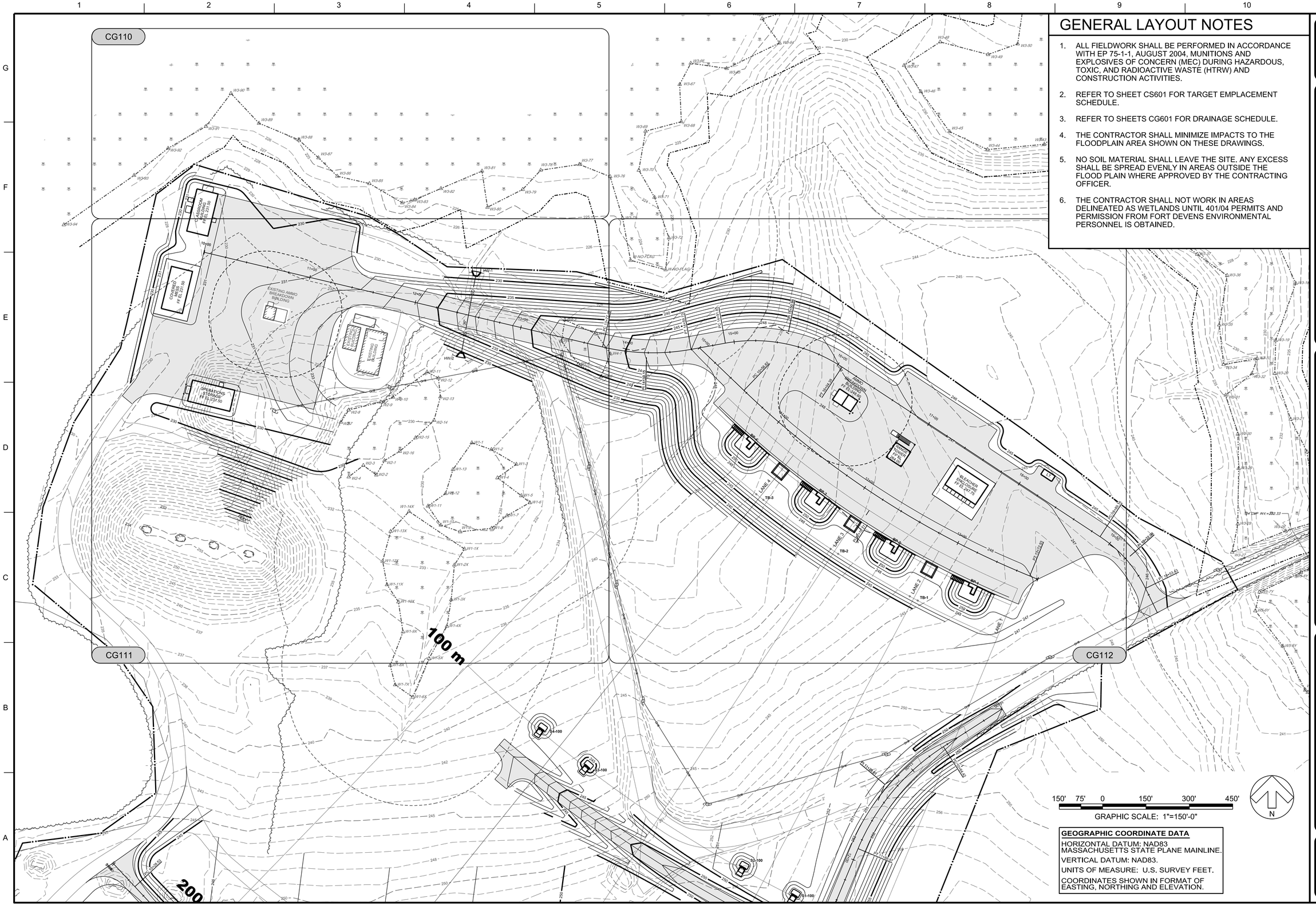
28-FEB-2020
07:19

65% SUBMITTAL




# GENERAL LAYOUT NOTES

1. ALL FIELDWORK SHALL BE PERFORMED IN ACCORDANCE WITH EP 75-1-1, AUGUST 2004, MUNITIONS AND EXPLOSIVES OF CONCERN (MEC) DURING HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW) AND CONSTRUCTION ACTIVITIES.
2. REFER TO SHEET CS601 FOR TARGET EMPLACEMENT SCHEDULE.
3. REFER TO SHEETS CG601 FOR DRAINAGE SCHEDULE.
4. THE CONTRACTOR SHALL MINIMIZE IMPACTS TO THE FLOODPLAIN AREA SHOWN ON THESE DRAWINGS.
5. NO SOIL MATERIAL SHALL LEAVE THE SITE. ANY EXCESS SHALL BE SPREAD EVENLY IN AREAS OUTSIDE THE FLOOD PLAIN WHERE APPROVED BY THE CONTRACTING OFFICER.
6. THE CONTRACTOR SHALL NOT WORK IN AREAS DELINEATED AS WETLANDS UNTIL 401/04 PERMITS AND PERMISSION FROM FORT DEVENS ENVIRONMENTAL PERSONNEL IS OBTAINED.

**GEOGRAPHIC COORDINATE DATA**

HORIZONTAL DATUM: NAD83
MASSACHUSETTS STATE PLANE MAINLINE.
VERTICAL DATUM: NAD83.
UNITS OF MEASURE: U.S. SURVEY FEET.
COORDINATES SHOWN IN FORMAT OF EASTING, NORTHING AND ELEVATION.

US Army Corps of Engineers®

| MARK | DESCRIPTION | DATE |
|---|---|---|

| | |
|---|---|
| ISSUE DATE: | MARCH 2020 |
| SOLICITATION NO.: | XXXXXX-XX-X-XXXX |
| CONTRACT NO.: | W912DY-15-D-0013 |
| CATEGORY CODE | XXX-XX-XX |
| FILENAME: | DMPR_CG102.dgn |

| | |
|---|---|
| DESIGNED BY: | S.CURRY |
| DRAWN BY: | S.HAGGARD |
| CHECKED BY: | M.MAYER |
| SUBMITTED BY: | C.LOVE |
| SIZE: | ANSI D |

U.S. ARMY CORPS OF ENGINEERS
600 DR MARTIN LUTHER KING JR PL
LOUISVILLE DISTRICT
LOUISVILLE, KENTUCKY

Mason&Hanger
Mason & Hanger-Silas Mason Co., Inc.

DEVENS, MASSACHUSETTS
AUTOMATED MULTIPURPOSE MACHINE GUN (MPMG) RANGE
FY21, PN: 088752
SITE

OVERALL
ROCA GRADE AND DRAIN PLAN

SHEET ID
CG102

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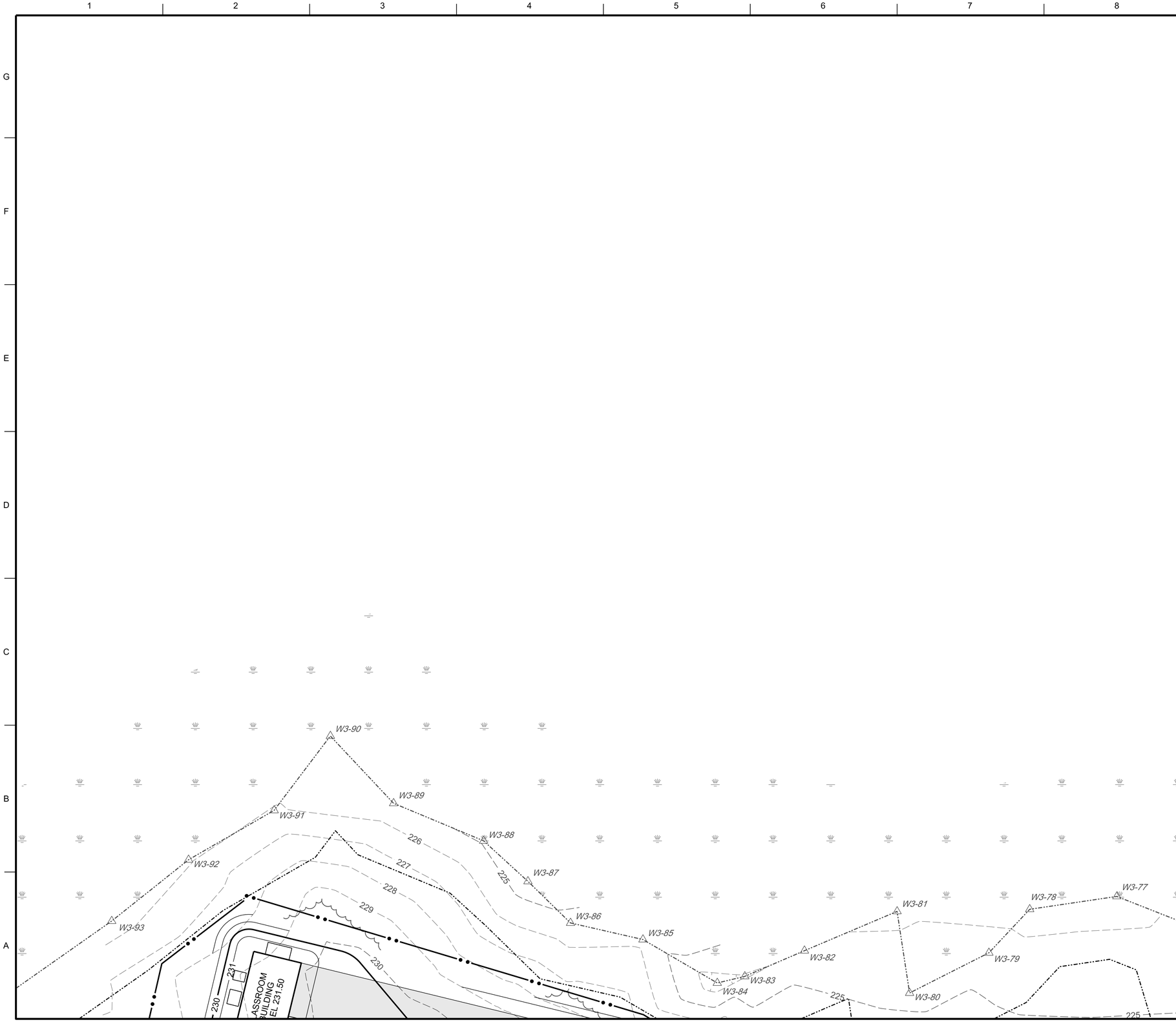
28-FEB-2020
07:33

65% SUBMITTAL

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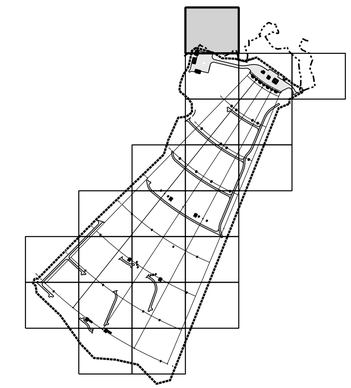

## SHEET KEYNOTES

## RANGE LEGEND

| | |
|---|---|
| V2-400 | STATIONARY ARMOR TARGET REFER TO DETAIL 1, SHEET CS532. |
| W2-400 | WIDENED STATIONARY INFANTRY TARGET REFER TO SHEET CS531. |
| S2-400 | STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| D2-400 | DOUBLE ARM STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| RLM-01 | RANGE LIMIT MARKER (RLM) REFER TO DETAIL 1, SHEET CS520. |
| LM-01 | INNER / OUTER LANE MARKER (LM) REFER TO DETAIL 2, SHEET CS520. |
| | CONSTRUCTION LIMITS |
| | AGGREGATE SURFACE |
| | CONCRETE SURFACE |

20' 10' 0 20' 40' 60'

GRAPHIC SCALE: 1"=20'-0"

N

**GEOGRAPHIC COORDINATE DATA**

HORIZONTAL DATUM: NAD83
MASSACHUSETTS STATE PLANE MAINLINE.

VERTICAL DATUM: NAD83.

UNITS OF MEASURE: U.S. SURVEY FEET.

COORDINATES SHOWN IN FORMAT OF EASTING, NORTHING AND ELEVATION.

US Army Corps of Engineers®

| MARK | DESCRIPTION | DATE |
|---|---|---|

U.S. ARMY CORPS OF ENGINEERS
600 DR MARTIN LUTHER KING JR PL
LOUISVILLE DISTRICT
LOUISVILLE, KENTUCKY

Mason&Hanger
Partners in Government Services

| | |
|---|---|
| DESIGNED BY: S.CURRY | ISSUE DATE: MARCH 2020 |
| DRAWN BY: S.HAGGARD | SOLICITATION NO.: XXXXXX-XX-X-XXXX |
| CHECKED BY: M.MAYER | CONTRACT NO.: W912DY-15-D-0013 |
| SUBMITTED BY: C. LOWE | CATEGORY CODE XXX-XX-XX |
| SIZE: ANSI D | FILENAME: DMP0_CG110.dgn |

DEVENS, MASSACHUSETTS
AUTOMATED MULTIPURPOSE MACHINE GUN (MPMG) RANGE
FY21, PN: 088752
SITE

ROCA AREA
GRADE AND DRAIN PLAN

SHEET ID
CG110

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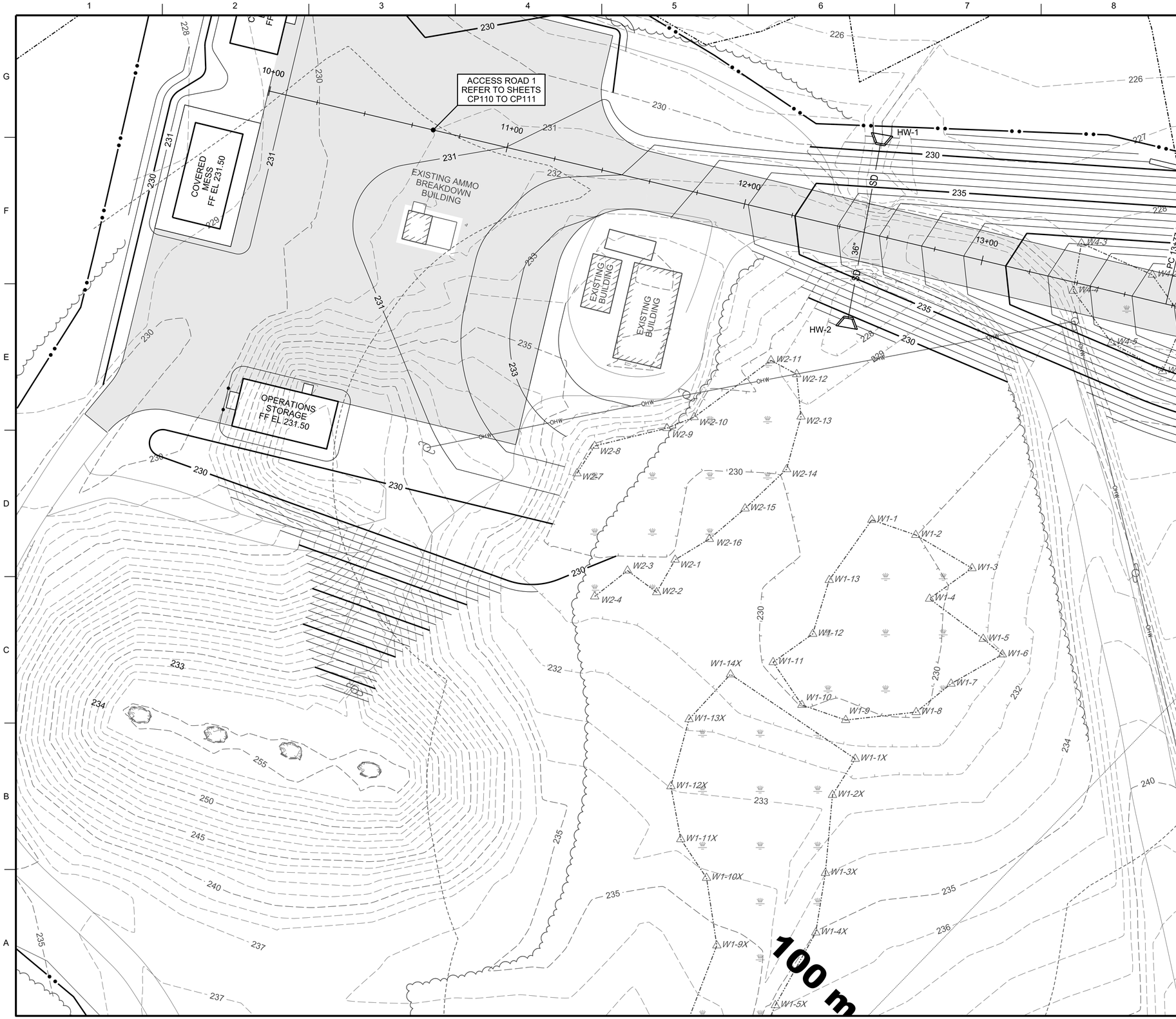
28-FEB-2020
07:20

65% SUBMITTAL

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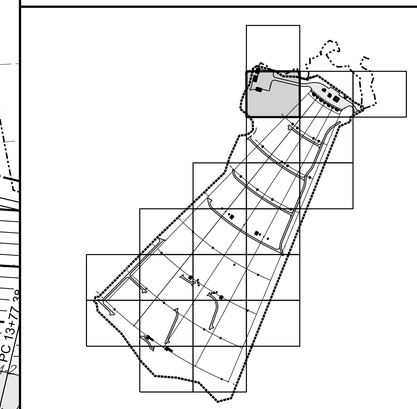

## RANGE LEGEND

| | |
|---|---|
| V2-400 | STATIONARY ARMOR TARGET REFER TO DETAIL 1, SHEET CS532. |
| W2-400 | WIDENED STATIONARY INFANTRY TARGET REFER TO SHEET CS531. |
| S2-400 | STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| D2-400 | DOUBLE ARM STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| RLM-01 | RANGE LIMIT MARKER (RLM) REFER TO DETAIL 1, SHEET CS520. |
| LM-01 | INNER / OUTER LANE MARKER (LM) REFER TO DETAIL 2, SHEET CS520. |
| | CONSTRUCTION LIMITS |
| | AGGREGATE SURFACE |
| | CONCRETE SURFACE |

20' 10' 0 20' 40' 60'

GRAPHIC SCALE: 1"=20'-0"

N

**GEOGRAPHIC COORDINATE DATA**

HORIZONTAL DATUM: NAD83
MASSACHUSETTS STATE PLANE MAINLINE.

VERTICAL DATUM: NAD83.

UNITS OF MEASURE: U.S. SURVEY FEET.

COORDINATES SHOWN IN FORMAT OF EASTING, NORTHING AND ELEVATION.

US Army Corps of Engineers®

| MARK | DESCRIPTION | DATE |
|---|---|---|

| | |
|---|---|
| DESIGNED BY: S.CURRY | ISSUE DATE: MARCH 2020 |
| DRAWN BY: S.HAGGARD | SOLICITATION NO.: XXXXXX-XX-X-XXXX |
| CHECKED BY: M.MAYER | CONTRACT NO.: W912DY-15-D-0013 |
| SUBMITTED BY: C.LOWE | CATEGORY CODE XXX-XX-XX |
| SIZE: ANSI D | FILENAME: DMPO_CG111.dgn |

U.S. ARMY CORPS OF ENGINEERS
600 DR MARTIN LUTHER KING JR PL
LOUISVILLE DISTRICT
LOUISVILLE, KENTUCKY

Mason&Hanger
Integrated Environmental Services

DEVENS, MASSACHUSETTS
AUTOMATED MULTIPURPOSE MACHINE GUN (MPMG) RANGE
FY21, PN: 088752
SITE
ROCA AREA
GRADE AND DRAIN PLAN

SHEET ID
CG111

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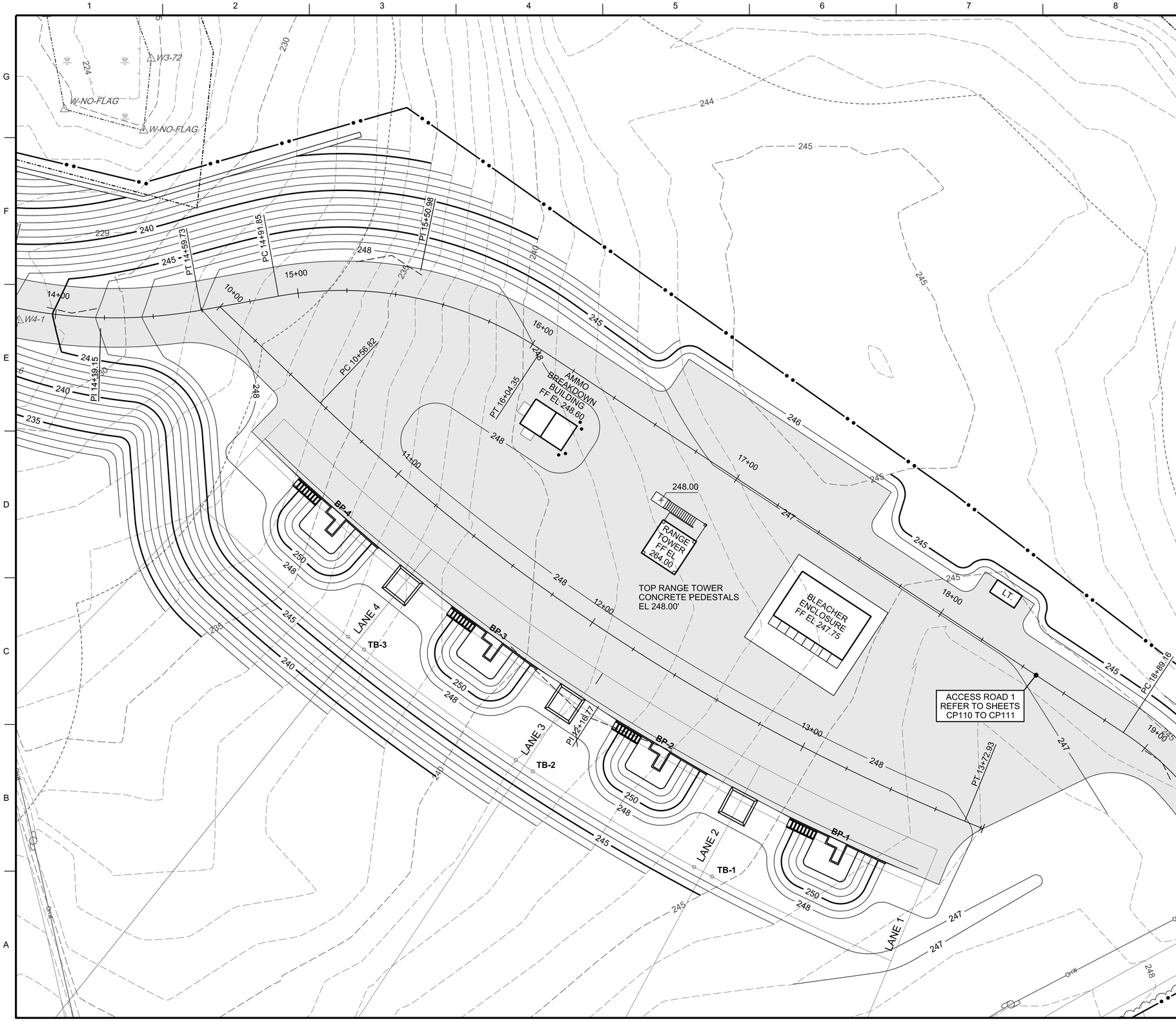
28-FEB-2020
07:20

65% SUBMITTAL

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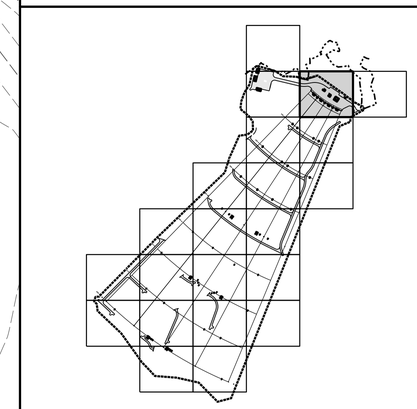

## RANGE LEGEND

| | |
|---|---|
| V2-400 | STATIONARY ARMOR TARGET REFER TO DETAIL 1, SHEET CS532. |
| W2-400 | WIDENED STATIONARY INFANTRY TARGET REFER TO SHEET CS531. |
| S2-400 | STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| D2-400 | DOUBLE ARM STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| RLM-01 | RANGE LIMIT MARKER (RLM) REFER TO DETAIL 1, SHEET CS520. |
| LM-01 | INNER / OUTER LANE MARKER (LM) REFER TO DETAIL 2, SHEET CS520. |
| | CONSTRUCTION LIMITS |
| | AGGREGATE SURFACE |
| | CONCRETE SURFACE |

20' 10' 0 20' 40' 60'

GRAPHIC SCALE: 1"=20'-0"

N

**GEOGRAPHIC COORDINATE DATA**

HORIZONTAL DATUM: NAD83
MASSACHUSETTS STATE PLANE MAINLINE.

VERTICAL DATUM: NAD83.

UNITS OF MEASURE: U.S. SURVEY FEET.

COORDINATES SHOWN IN FORMAT OF EASTING, NORTHING AND ELEVATION.

US Army Corps of Engineers®

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: MARCH 2020
SOLICITATION NO.: XXXXXX-XX-X-XXXX
CONTRACT NO.: W912DY-15-D-0013
CATEGORY CODE XXX-XX-XX

DESIGNED BY: S.CURRY
DRAWN BY: S.HAGGARD
CHECKED BY: M.MAYER
SUBMITTED BY: C. LOWE
SIZE ANSI D
FILENAME: DMPI_CG112.dgn

U.S. ARMY CORPS OF ENGINEERS
600 DR MARTIN LUTHER KING JR PL
LOUISVILLE DISTRICT
LOUISVILLE, KENTUCKY

Mason&Hanger
SILAS MASON CORPORATION

DEVENS, MASSACHUSETTS
AUTOMATED MULTIPURPOSE MACHINE GUN (MPMG) RANGE
FY21 PN: 088752
SITE
ROCA AREA
GRADE AND DRAIN PLAN

SHEET ID
CG112

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28-FEB-2020
07:20

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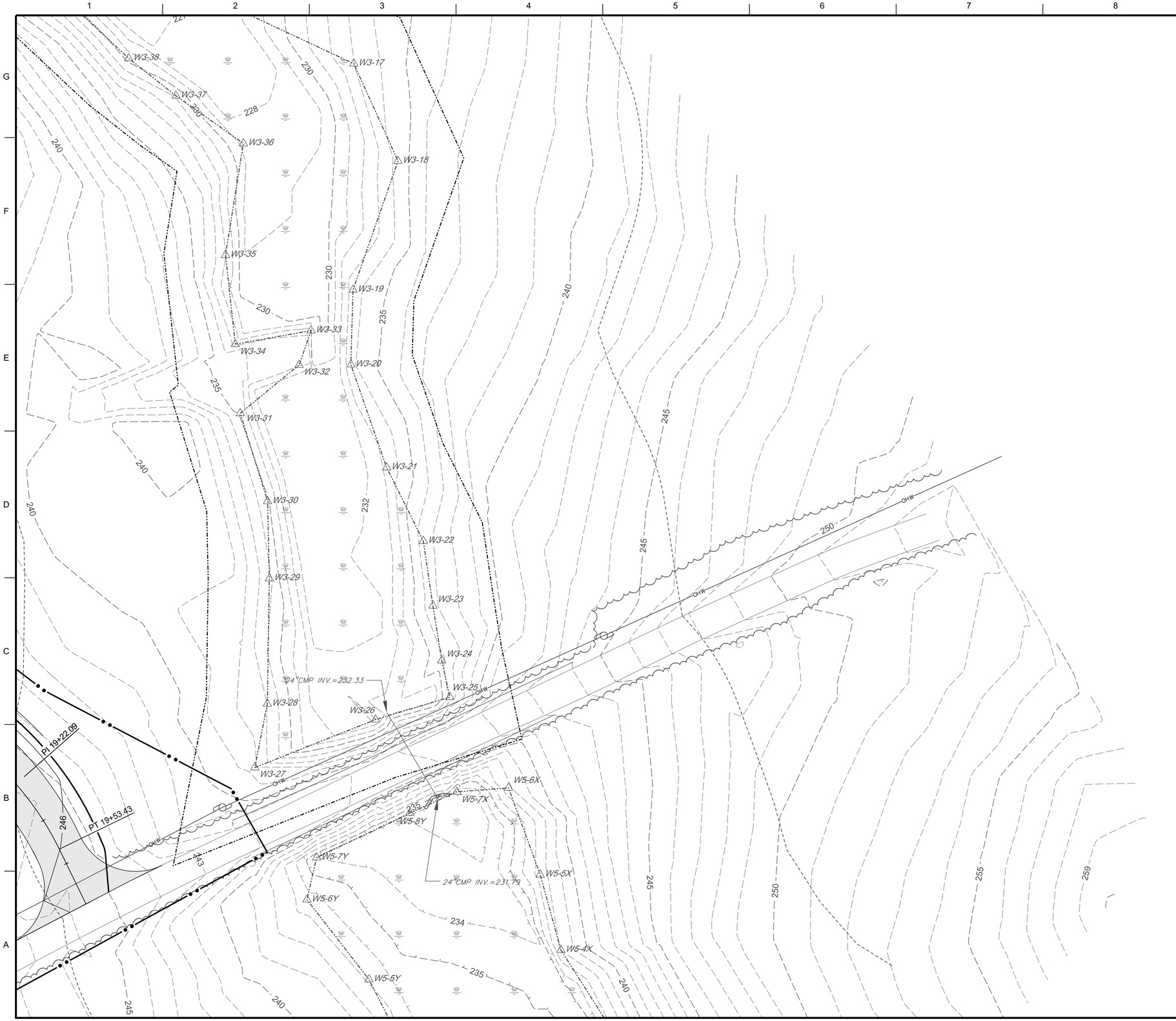


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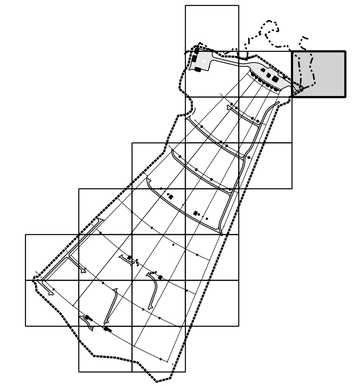

## RANGE LEGEND

| | |
|---|---|
| V2-400 | STATIONARY ARMOR TARGET<br>REFER TO DETAIL 1, SHEET CS532. |
| W2-400 | WIDENED STATIONARY INFANTRY TARGET<br>REFER TO SHEET CS531. |
| S2-400 | STATIONARY INFANTRY TARGET.<br>REFER TO SHEET CS530. |
| D2-400 | DOUBLE ARM STATIONARY INFANTRY<br>TARGET. REFER TO SHEET CS530. |
| RLM-01 | RANGE LIMIT MARKER (RLM)<br>REFER TO DETAIL 1, SHEET CS520. |
| LM-01 | INNER / OUTER LANE MARKER (LM)<br>REFER TO DETAIL 2, SHEET CS520. |
| | CONSTRUCTION LIMITS |
| | AGGREGATE SURFACE |
| | CONCRETE SURFACE |

20' 10' 0 20' 40' 60'

GRAPHIC SCALE: 1"=20'-0"

N

**GEOGRAPHIC COORDINATE DATA**

HORIZONTAL DATUM: NAD83
MASSACHUSETTS STATE PLANE MAINLINE.

VERTICAL DATUM: NAD83.

UNITS OF MEASURE: U.S. SURVEY FEET.

COORDINATES SHOWN IN FORMAT OF EASTING, NORTHING AND ELEVATION.

US Army Corps of Engineers®

| MARK | DESCRIPTION | DATE |
|---|---|---|

| | |
|---|---|
| ISSUE DATE: | MARCH 2020 |
| SOLICITATION NO.: | XXXXXX-XX-X-XXXX |
| CONTRACT NO.: | W912DY-15-D-0013 |
| CATEGORY CODE | XXX-XX-XX |
| FILENAME: | DMP0_CG113.dgn |

| | |
|---|---|
| DESIGNED BY: | S.CURRY |
| DRAWN BY: | S.HAGGARD |
| CHECKED BY: | M.MAYER |
| SUBMITTED BY: | C. LOWE |
| SIZE: | ANSI D |

U.S. ARMY CORPS OF ENGINEERS
600 DR MARTIN LUTHER KING JR PL
LOUISVILLE DISTRICT
LOUISVILLE, KENTUCKY

Mason&Hanger
Life Cycle Commitment Integrity

DEVENS, MASSACHUSETTS
AUTOMATED MULTIPURPOSE MACHINE GUN (MPMG) RANGE
FY21, PN: 068752
SITE
ROCA AREA
GRADE AND DRAIN PLAN

SHEET ID
CG113

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28-FEB-2020
07:20

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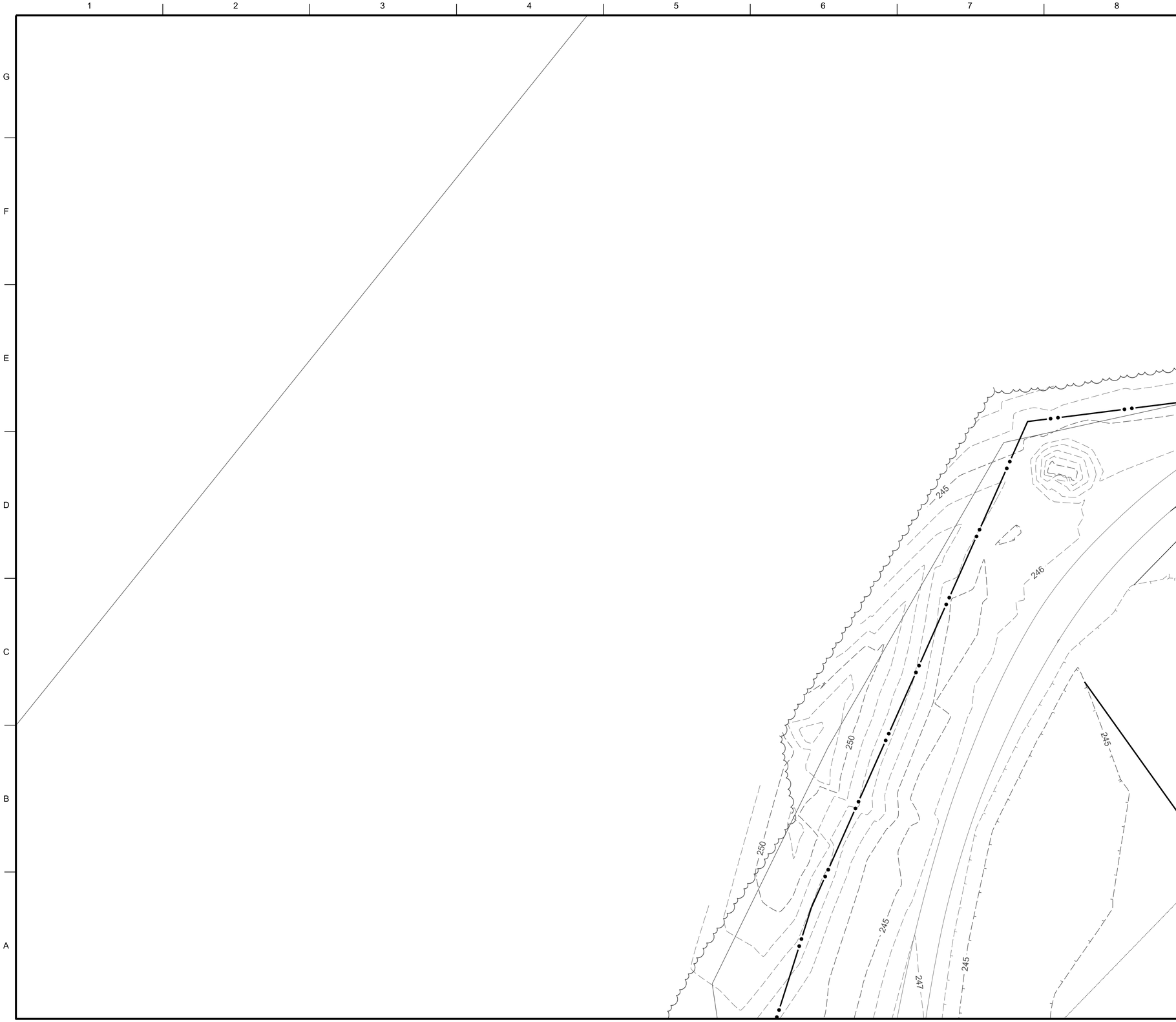


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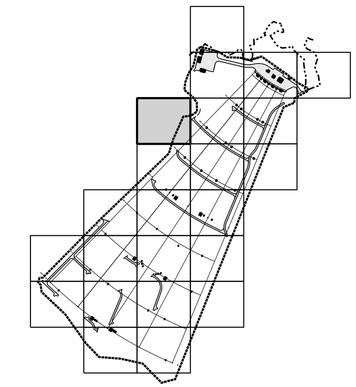

## RANGE LEGEND

| | |
|---|---|
| V2-400 | STATIONARY ARMOR TARGET<br>REFER TO DETAIL 1, SHEET CS532. |
| W2-400 | WIDENED STATIONARY INFANTRY TARGET<br>REFER TO SHEET CS531. |
| S2-400 | STATIONARY INFANTRY TARGET.<br>REFER TO SHEET CS530. |
| D2-400 | DOUBLE ARM STATIONARY INFANTRY<br>TARGET. REFER TO SHEET CS530. |
| RLM-01 | RANGE LIMIT MARKER (RLM)<br>REFER TO DETAIL 1, SHEET CS520. |
| LM-01 | INNER / OUTER LANE MARKER (LM)<br>REFER TO DETAIL 2, SHEET CS520. |
| | CONSTRUCTION LIMITS |
| | AGGREGATE SURFACE |
| | CONCRETE SURFACE |

20' 10' 0 20' 40' 60'

GRAPHIC SCALE: 1"=20'-0"

N

**GEOGRAPHIC COORDINATE DATA**

HORIZONTAL DATUM: NAD83
MASSACHUSETTS STATE PLANE MAINLINE.

VERTICAL DATUM: NAD83.

UNITS OF MEASURE: U.S. SURVEY FEET.

COORDINATES SHOWN IN FORMAT OF EASTING, NORTHING AND ELEVATION.

US Army Corps of Engineers®

| MARK | DESCRIPTION | DATE |
|---|---|---|

| | |
|---|---|
| DESIGNED BY: S.CURRY | ISSUE DATE: MARCH 2020 |
| DRAWN BY: S.HAGGARD | SOLICITATION NO.: XXXXXX-XX-X-XXXX |
| CHECKED BY: M.MAYER | CONTRACT NO.: W912DY-15-D-0013 |
| SUBMITTED BY: C. LOWE | CATEGORY CODE XXX-XX-XX |
| SIZE: ANSI D | FILENAME: DMP0_CG114.dgn |

U.S. ARMY CORPS OF ENGINEERS
600 DR MARTIN LUTHER KING JR PL
LOUISVILLE DISTRICT
LOUISVILLE, KENTUCKY

Mason&Hanger
A Member of Amentum Company

DEVENS, MASSACHUSETTS
AUTOMATED MULTIPURPOSE MACHINE GUN (MPM/G) RANGE
FY21, PN: 068752
SITE

GRADE AND DRAIN PLAN

SHEET ID
CG114

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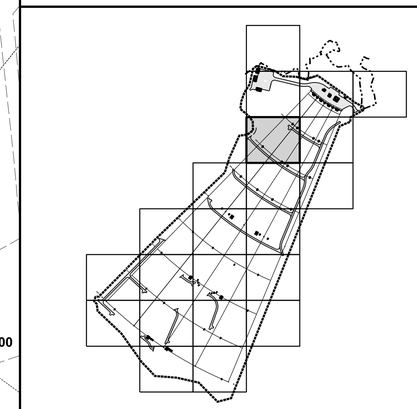
28-FEB-2020
07:20

65% SUBMITTAL

## KEYMAP



## SHEET KEYNOTES

1. PROVIDE STATIONARY INFANTRY TARGET EMPLACEMENT. REFER TO SHEET CS530.

## RANGE LEGEND

| | |
|---|---|
| V2-400 | STATIONARY ARMOR TARGET REFER TO DETAIL 1, SHEET CS532. |
| W2-400 | WIDENED STATIONARY INFANTRY TARGET REFER TO SHEET CS531. |
| S2-400 | STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| D2-400 | DOUBLE ARM STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| RLM-01 | RANGE LIMIT MARKER (RLM) REFER TO DETAIL 1, SHEET CS520. |
| LM-01 | INNER / OUTER LANE MARKER (LM) REFER TO DETAIL 2, SHEET CS520. |
| | CONSTRUCTION LIMITS |
| | AGGREGATE SURFACE |
| | CONCRETE SURFACE |

20' 10' 0 20' 40' 60'

GRAPHIC SCALE: 1"=20'-0"

N

**GEOGRAPHIC COORDINATE DATA**

HORIZONTAL DATUM: NAD83
MASSACHUSETTS STATE PLANE MAINLINE.

VERTICAL DATUM: NAD83.

UNITS OF MEASURE: U.S. SURVEY FEET.

COORDINATES SHOWN IN FORMAT OF EASTING, NORTHING AND ELEVATION.

US Army Corps of Engineers®

| MARK | DESCRIPTION | DATE |
|---|---|---|

| | |
|---|---|
| DESIGNED BY: S.CURRY | ISSUE DATE: MARCH 2020 |
| DRAWN BY: S.HAGGARD | SOLICITATION NO.: XXXXXX-XX-X-XXXX |
| CHECKED BY: M.MAYER | CONTRACT NO.: W912DY-15-D-0013 |
| SUBMITTED BY: C.LOWE | CATEGORY CODE XXX-XX-XX |
| SCALE: ANSI D | FILENAME: DMP01_CG115.dgn |

U.S. ARMY CORPS OF ENGINEERS
600 DR MARTIN LUTHER KING JR PL
LOUISVILLE DISTRICT
LOUISVILLE, KENTUCKY

Mason&Hanger

DEVENS, MASSACHUSETTS
AUTOMATED MULTIPURPOSE MACHINE GUN (MPMG) RANGE
FY21, PN: 088752
SITE

GRADE AND DRAIN PLAN

SHEET ID
CG115

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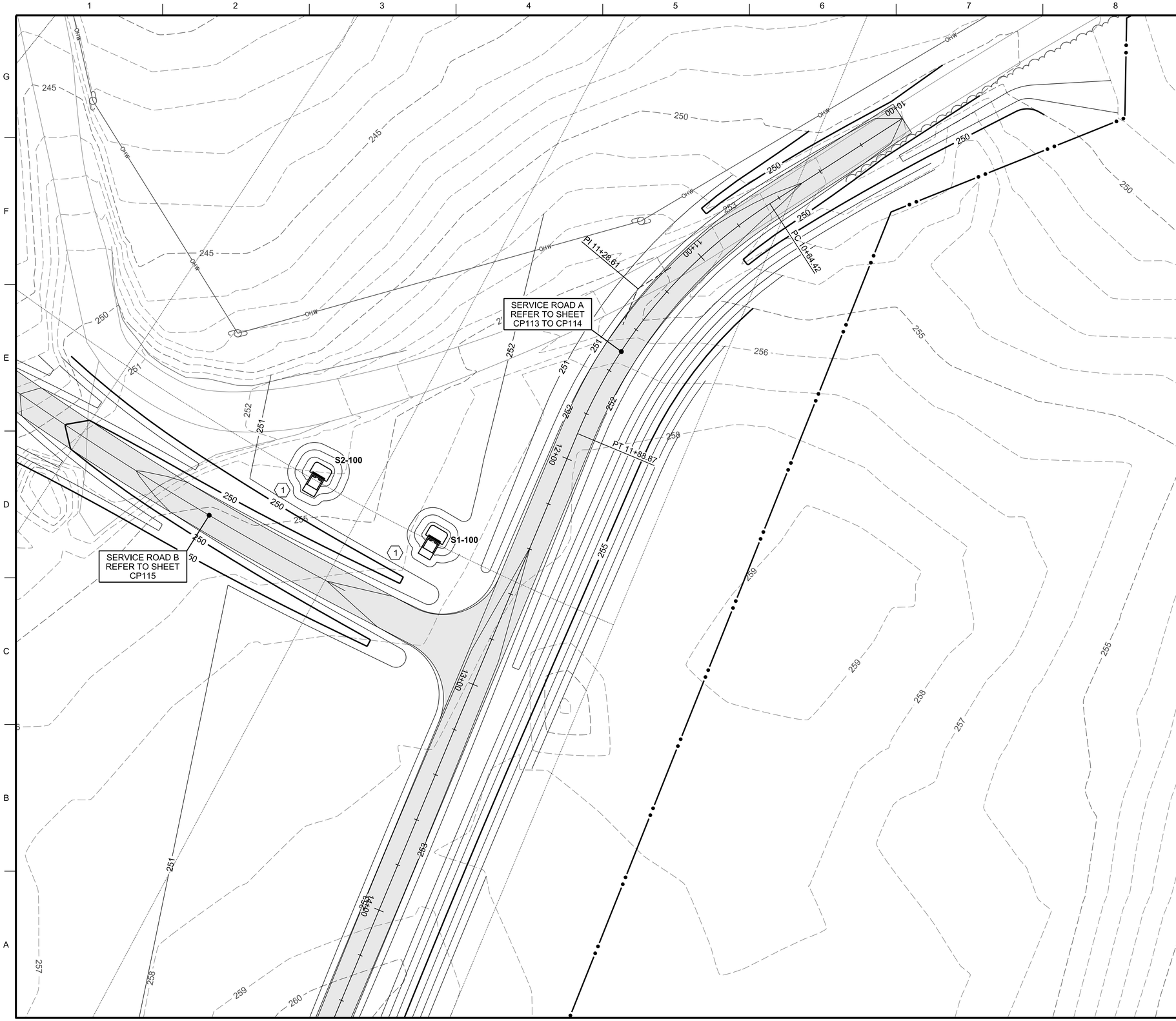
28-FEB-2020
07:20

65% SUBMITTAL

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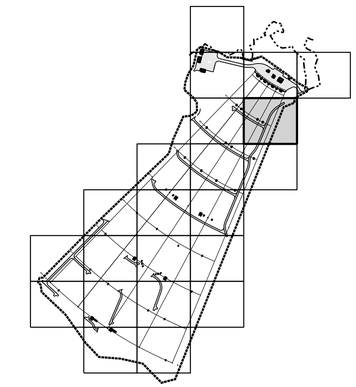

## SHEET KEYNOTES

1. PROVIDE STATIONARY INFANTRY TARGET EMPLACEMENT. REFER TO SHEET CS530.

## RANGE LEGEND

| | |
|---|---|
| V2-400 | STATIONARY ARMOR TARGET REFER TO DETAIL 1, SHEET CS532. |
| W2-400 | WIDENED STATIONARY INFANTRY TARGET REFER TO SHEET CS531. |
| S2-400 | STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| D2-400 | DOUBLE ARM STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| RLM-01 | RANGE LIMIT MARKER (RLM) REFER TO DETAIL 1, SHEET CS520. |
| LM-01 | INNER / OUTER LANE MARKER (LM) REFER TO DETAIL 2, SHEET CS520. |
| | CONSTRUCTION LIMITS |
| | AGGREGATE SURFACE |
| | CONCRETE SURFACE |

20' 10' 0 20' 40' 60'

GRAPHIC SCALE: 1"=20'-0"

N

**GEOGRAPHIC COORDINATE DATA**

HORIZONTAL DATUM: NAD83
MASSACHUSETTS STATE PLANE MAINLINE.

VERTICAL DATUM: NAD83.

UNITS OF MEASURE: U.S. SURVEY FEET.

COORDINATES SHOWN IN FORMAT OF EASTING, NORTHING AND ELEVATION.

US Army Corps of Engineers®

| MARK | DESCRIPTION | DATE |
|---|---|---|

| | |
|---|---|
| DESIGNED BY: S.CURRY | ISSUE DATE: MARCH 2020 |
| DRAWN BY: S.HAGGARD | SOLICITATION NO.: XXXXXX-XX-X-XXXX |
| CHECKED BY: M.MAYER | CONTRACT NO.: W912DY-15-D-0013 |
| SUBMITTED BY: C. LOWE | CATEGORY CODE XXX-XX-XX |
| SIZE: ANSI D | FILENAME: DMP0_CG116.dgn |

U.S. ARMY CORPS OF ENGINEERS
600 DR MARTIN LUTHER KING JR PL
LOUISVILLE DISTRICT
LOUISVILLE, KENTUCKY

Mason&Hanger
Mason & Hanger-Silas Mason Co., Inc. Operating Company

DEVENS, MASSACHUSETTS
AUTOMATED MULTIPURPOSE MACHINE GUN (MPMG) RANGE
FY21 PN: 088752
SITE

GRADE AND DRAIN PLAN

SHEET ID
CG116

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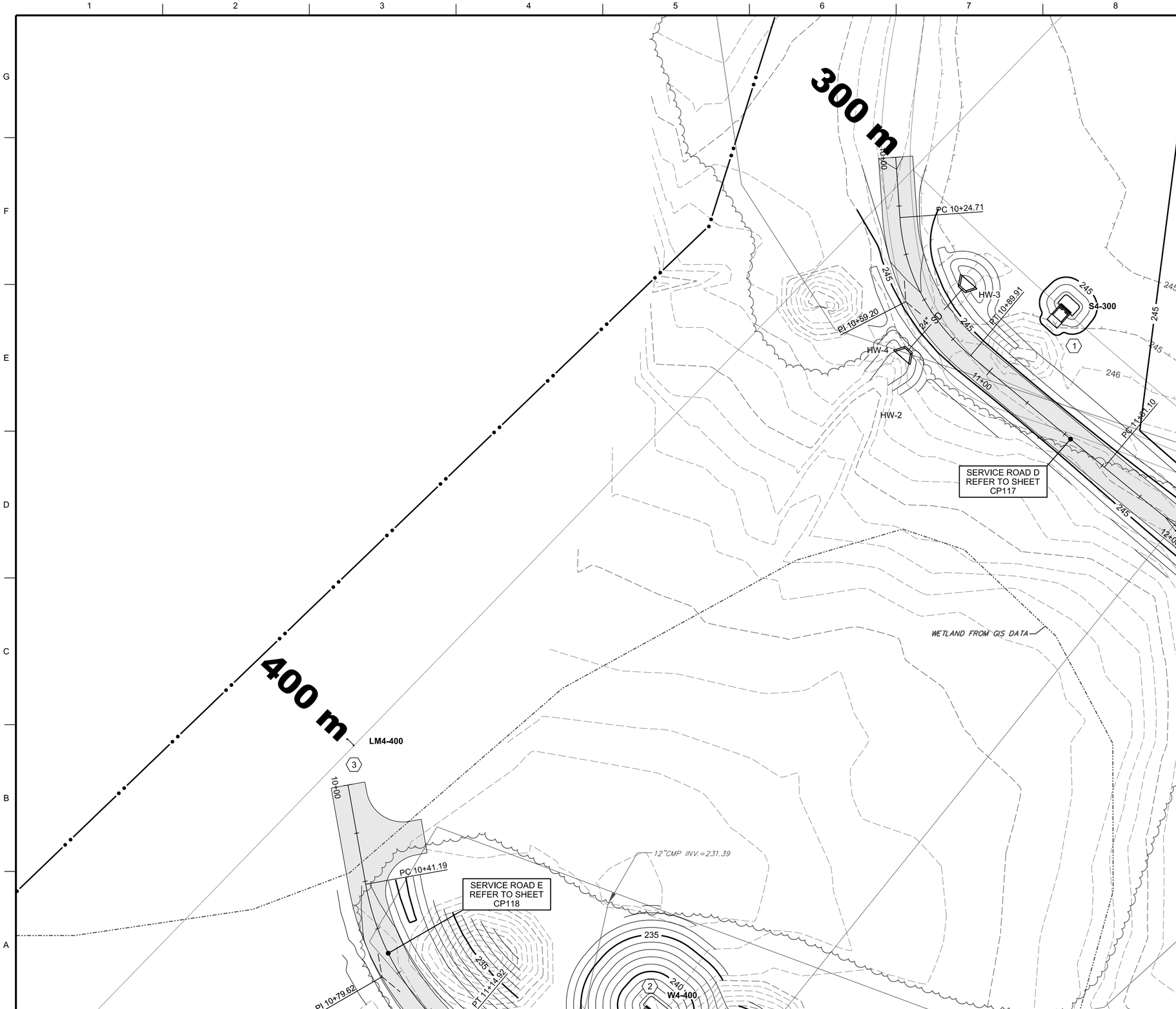
28-FEB-2020
07:20

65% SUBMITTAL

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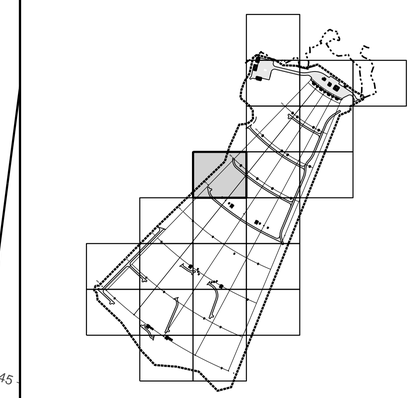

## SHEET KEYNOTES

1. PROVIDE STATIONARY INFANTRY TARGET EMPLACEMENT. REFER TO SHEET CS530.
2. PROVIDE WIDENED STATIONARY INFANTRY TARGET EMPLACEMENT. REFER TO SHEET CS531
3. PROVIDE OUTER LANE MARKER. REFER TO DETAIL 2, SHEET CS520.

## RANGE LEGEND

| | |
|---|---|
| V2-400 | STATIONARY ARMOR TARGET REFER TO DETAIL 1, SHEET CS532. |
| W2-400 | WIDENED STATIONARY INFANTRY TARGET REFER TO SHEET CS531. |
| S2-400 | STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| D2-400 | DOUBLE ARM STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| RLM-01 | RANGE LIMIT MARKER (RLM) REFER TO DETAIL 1, SHEET CS520. |
| LM-01 | INNER / OUTER LANE MARKER (LM) REFER TO DETAIL 2, SHEET CS520. |
| | CONSTRUCTION LIMITS |
| | AGGREGATE SURFACE |
| | CONCRETE SURFACE |

20' 10' 0 20' 40' 60'

GRAPHIC SCALE: 1"=20'-0"

N

**GEOGRAPHIC COORDINATE DATA**

HORIZONTAL DATUM: NAD83
MASSACHUSETTS STATE PLANE MAINLINE.

VERTICAL DATUM: NAD83.

UNITS OF MEASURE: U.S. SURVEY FEET.

COORDINATES SHOWN IN FORMAT OF EASTING, NORTHING AND ELEVATION.

US Army Corps of Engineers®

| MARK | DESCRIPTION | DATE |
|---|---|---|

| | |
|---|---|
| DESIGNED BY: S.CURRY | ISSUE DATE: MARCH 2020 |
| DRAWN BY: S.HAGGARD | SOLICITATION NO.: XXXXXX-XX-X-XXXX |
| CHECKED BY: M.MAYER | CONTRACT NO.: W912DY-15-D-0013 |
| SUBMITTED BY: C. LOWE | CATEGORY CODE XXX-XX-XX |
| SIZE: ANSI D | FILENAME: DMP0_CG117.dgn |

U.S. ARMY CORPS OF ENGINEERS
600 DR MARTIN LUTHER KING JR PL
LOUISVILLE DISTRICT
LOUISVILLE, KENTUCKY

Mason&Hanger
Partnership of Excellence

DEVENS, MASSACHUSETTS
AUTOMATED MULTIPURPOSE MACHINE GUN (MPM/G) RANGE
FY21, PN: 068752
SITE

GRADE AND DRAIN PLAN

SHEET ID
CG117

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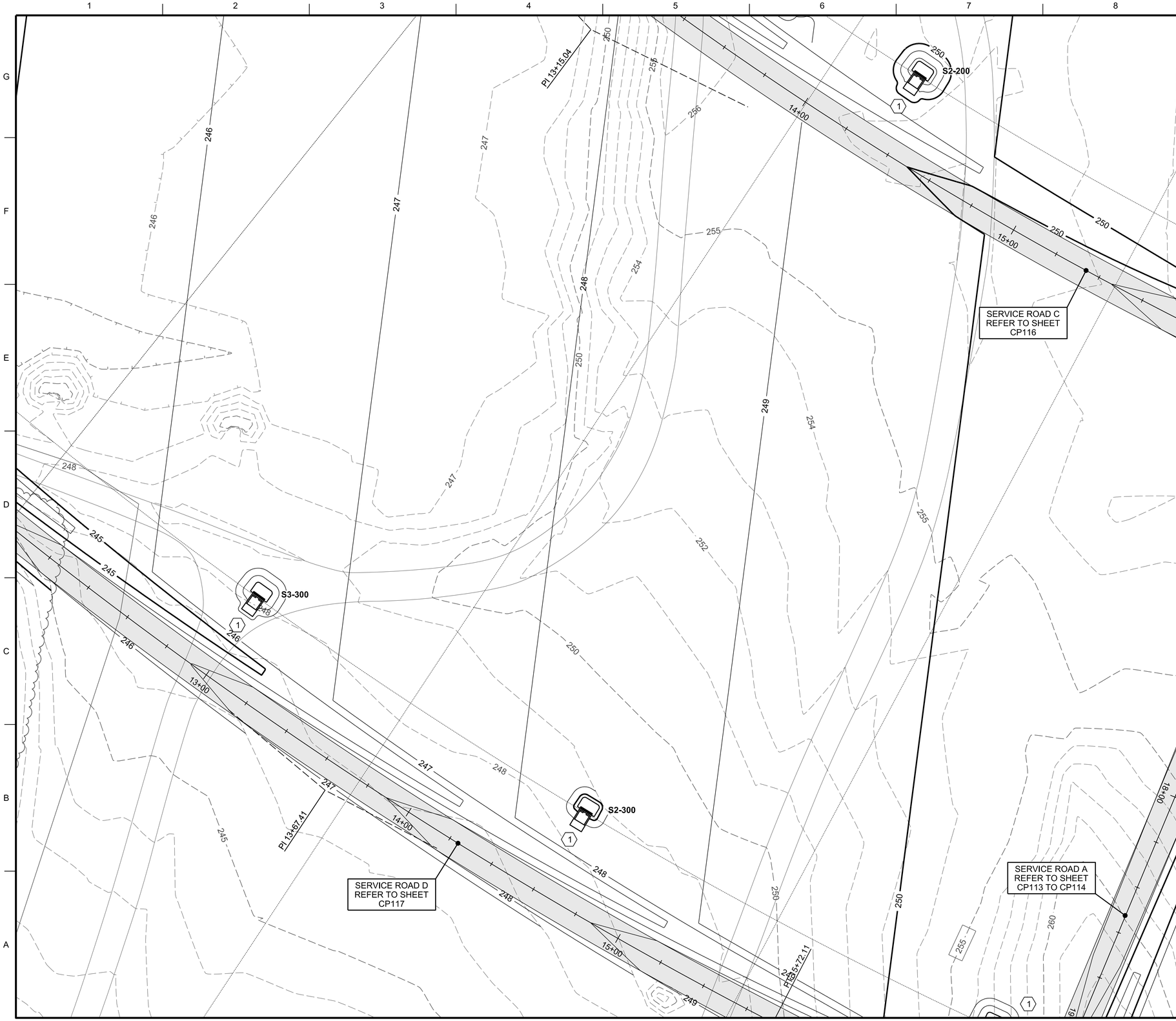
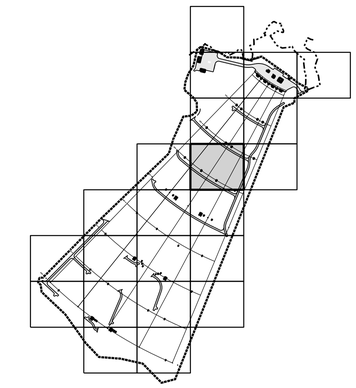
28-FEB-2020
07:20

65% SUBMITTAL




## KEYMAP



## SHEET KEYNOTES

1. PROVIDE STATIONARY INFANTRY TARGET EMPLACEMENT. REFER TO SHEET CS530.

## RANGE LEGEND

| | |
|---|---|
| V2-400 | STATIONARY ARMOR TARGET REFER TO DETAIL 1, SHEET CS532. |
| W2-400 | WIDENED STATIONARY INFANTRY TARGET REFER TO SHEET CS531. |
| S2-400 | STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| D2-400 | DOUBLE ARM STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| RLM-01 | RANGE LIMIT MARKER (RLM) REFER TO DETAIL 1, SHEET CS520. |
| LM-01 | INNER / OUTER LANE MARKER (LM) REFER TO DETAIL 2, SHEET CS520. |
| | CONSTRUCTION LIMITS |
| | AGGREGATE SURFACE |
| | CONCRETE SURFACE |

20' 10' 0 20' 40' 60'

GRAPHIC SCALE: 1"=20'-0"

N

**GEOGRAPHIC COORDINATE DATA**

HORIZONTAL DATUM: NAD83
MASSACHUSETTS STATE PLANE MAINLINE.

VERTICAL DATUM: NAD83.

UNITS OF MEASURE: U.S. SURVEY FEET.

COORDINATES SHOWN IN FORMAT OF EASTING, NORTHING AND ELEVATION.

US Army Corps of Engineers®

| MARK | DESCRIPTION | DATE |
|---|---|---|

| | |
|---|---|
| DESIGNED BY: S.CURRY | ISSUE DATE: MARCH 2020 |
| DRAWN BY: S.HAGGARD | SOLICITATION NO.: XXXXXX-XX-X-XXXX |
| CHECKED BY: M.MAYER | CONTRACT NO.: W912DY-15-D-0013 |
| SUBMITTED BY: C.LOVE | CATEGORY CODE XXX-XX-XX |
| SIZE ANSI D | FILENAME: DMP\ CG118.dgn |

U.S. ARMY CORPS OF ENGINEERS
600 DR MARTIN LUTHER KING JR PL
LOUISVILLE DISTRICT
LOUISVILLE, KENTUCKY

Mason&Hanger
A Subsidiary of Amentum Company

DEVENS, MASSACHUSETTS
AUTOMATED MULTIPURPOSE MACHINE GUN (MPMG) RANGE
FY21, PN: 088752
SITE

GRADE AND DRAIN PLAN

SHEET ID
CG118

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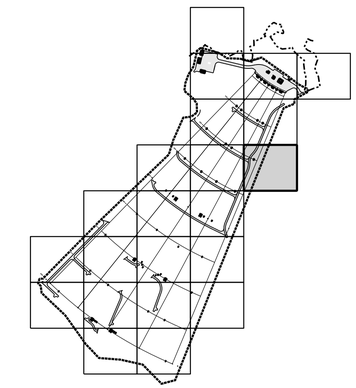
28-FEB-2020
07:20

65% SUBMITTAL

## KEYMAP



## SHEET KEYNOTES

1. PROVIDE STATIONARY INFANTRY TARGET EMPLACEMENT. REFER TO SHEET CS530.

## RANGE LEGEND

| | |
|---|---|
| V2-400 | STATIONARY ARMOR TARGET REFER TO DETAIL 1, SHEET CS532. |
| W2-400 | WIDENED STATIONARY INFANTRY TARGET REFER TO SHEET CS531. |
| S2-400 | STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| D2-400 | DOUBLE ARM STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| RLM-01 | RANGE LIMIT MARKER (RLM) REFER TO DETAIL 1, SHEET CS520. |
| LM-01 | INNER / OUTER LANE MARKER (LM) REFER TO DETAIL 2, SHEET CS520. |
| | CONSTRUCTION LIMITS |
| | AGGREGATE SURFACE |
| | CONCRETE SURFACE |

20' 10' 0 20' 40' 60'

GRAPHIC SCALE: 1"=20'-0"

N

**GEOGRAPHIC COORDINATE DATA**

HORIZONTAL DATUM: NAD83
MASSACHUSETTS STATE PLANE MAINLINE.

VERTICAL DATUM: NAD83.

UNITS OF MEASURE: U.S. SURVEY FEET.

COORDINATES SHOWN IN FORMAT OF EASTING, NORTHING AND ELEVATION.

US Army Corps of Engineers®

| MARK | DESCRIPTION | DATE |
|---|---|---|

| | |
|---|---|
| DESIGNED BY: S.CURRY | ISSUE DATE: MARCH 2020 |
| DRAWN BY: S.HAGGARD | SOLICITATION NO.: XXXXXX-XX-X-XXXX |
| CHECKED BY: M.MAYER | CONTRACT NO.: W912DY-15-D-0013 |
| SUBMITTED BY: C. LOWE | CATEGORY CODE XXX-XX-XX |
| SIZE: ANSI D | FILENAME: DMPG_CG119.dgn |

U.S. ARMY CORPS OF ENGINEERS
600 DR MARTIN LUTHER KING JR PL
LOUISVILLE DISTRICT
LOUISVILLE, KENTUCKY

Mason&Hanger
Integrated Solutions for Complex Projects

DEVENS, MASSACHUSETTS
AUTOMATED MULTIPURPOSE MACHINE GUN (MPMG) RANGE
FY21, PN: 068752
SITE

GRADE AND DRAIN PLAN

SHEET ID
CG119

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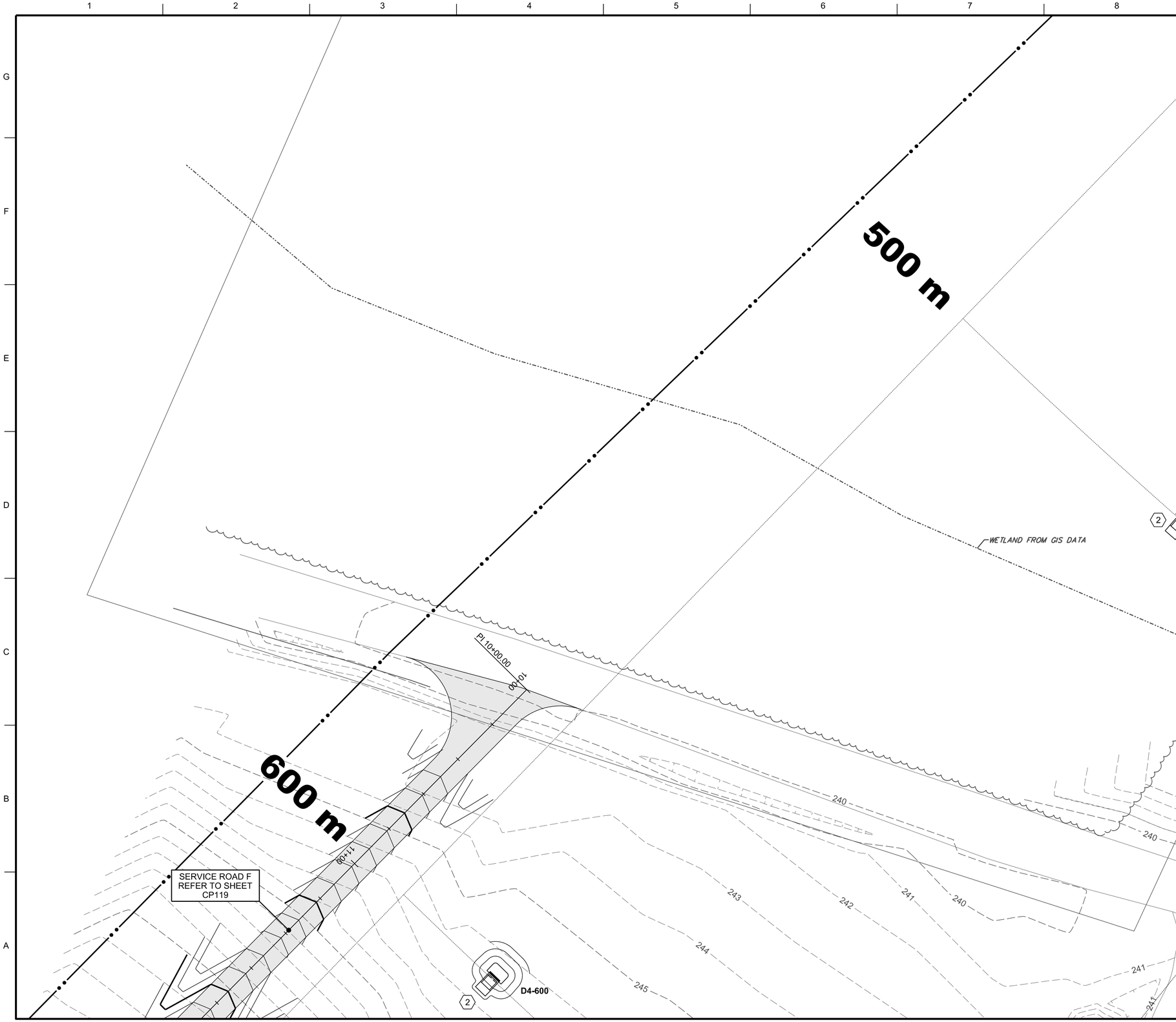
28-FEB-2020
07:20

65% SUBMITTAL

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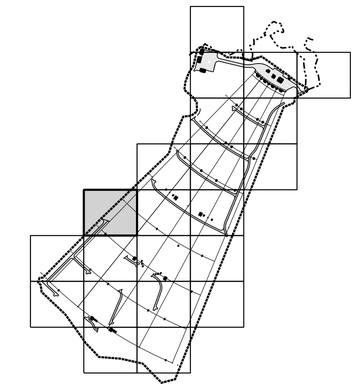

## SHEET KEYNOTES

1. PROVIDE STATIONARY INFANTRY TARGET EMPLACEMENT. REFER TO SHEET CS530.
2. PROVIDE DOUBLE ARM STATIONARY INFANTRY TARGET EMPLACEMENT. REFER TO SHEET CS530.

## RANGE LEGEND

| | |
|---|---|
| V2-400 | STATIONARY ARMOR TARGET REFER TO DETAIL 1, SHEET CS532. |
| W2-400 | WIDENED STATIONARY INFANTRY TARGET REFER TO SHEET CS531. |
| S2-400 | STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| D2-400 | DOUBLE ARM STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| RLM-01 | RANGE LIMIT MARKER (RLM) REFER TO DETAIL 1, SHEET CS520. |
| LM-01 | INNER / OUTER LANE MARKER (LM) REFER TO DETAIL 2, SHEET CS520. |
| | CONSTRUCTION LIMITS |
| | AGGREGATE SURFACE |
| | CONCRETE SURFACE |

20' 10' 0 20' 40' 60'

GRAPHIC SCALE: 1"=20'-0"

N

**GEOGRAPHIC COORDINATE DATA**

HORIZONTAL DATUM: NAD83
MASSACHUSETTS STATE PLANE MAINLINE.

VERTICAL DATUM: NAD83.

UNITS OF MEASURE: U.S. SURVEY FEET.

COORDINATES SHOWN IN FORMAT OF EASTING, NORTHING AND ELEVATION.

US Army Corps of Engineers®

| MARK | DESCRIPTION | DATE |
|---|---|---|

| | |
|---|---|
| DESIGNED BY: S.CURRY | ISSUE DATE: MARCH 2020 |
| DRAWN BY: S.HAGGARD | SOLICITATION NO.: XXXXXX-XX-X-XXXX |
| CHECKED BY: M.MAYER | CONTRACT NO.: W912DY-15-D-0013 |
| SUBMITTED BY: C. LOWE | CATEGORY CODE XXX-XX-XX |
| SIZE: ANSI D | FILENAME: DMPO_CG120.dgn |

U.S. ARMY CORPS OF ENGINEERS
600 DR MARTIN LUTHER KING JR PL
LOUISVILLE DISTRICT
LOUISVILLE, KENTUCKY

Mason&Hanger
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DEVENS, MASSACHUSETTS
AUTOMATED MULTIPURPOSE MACHINE GUN (MPM/G) RANGE
FY21, PN: 088752
SITE

GRADE AND DRAIN PLAN

SHEET ID
CG120

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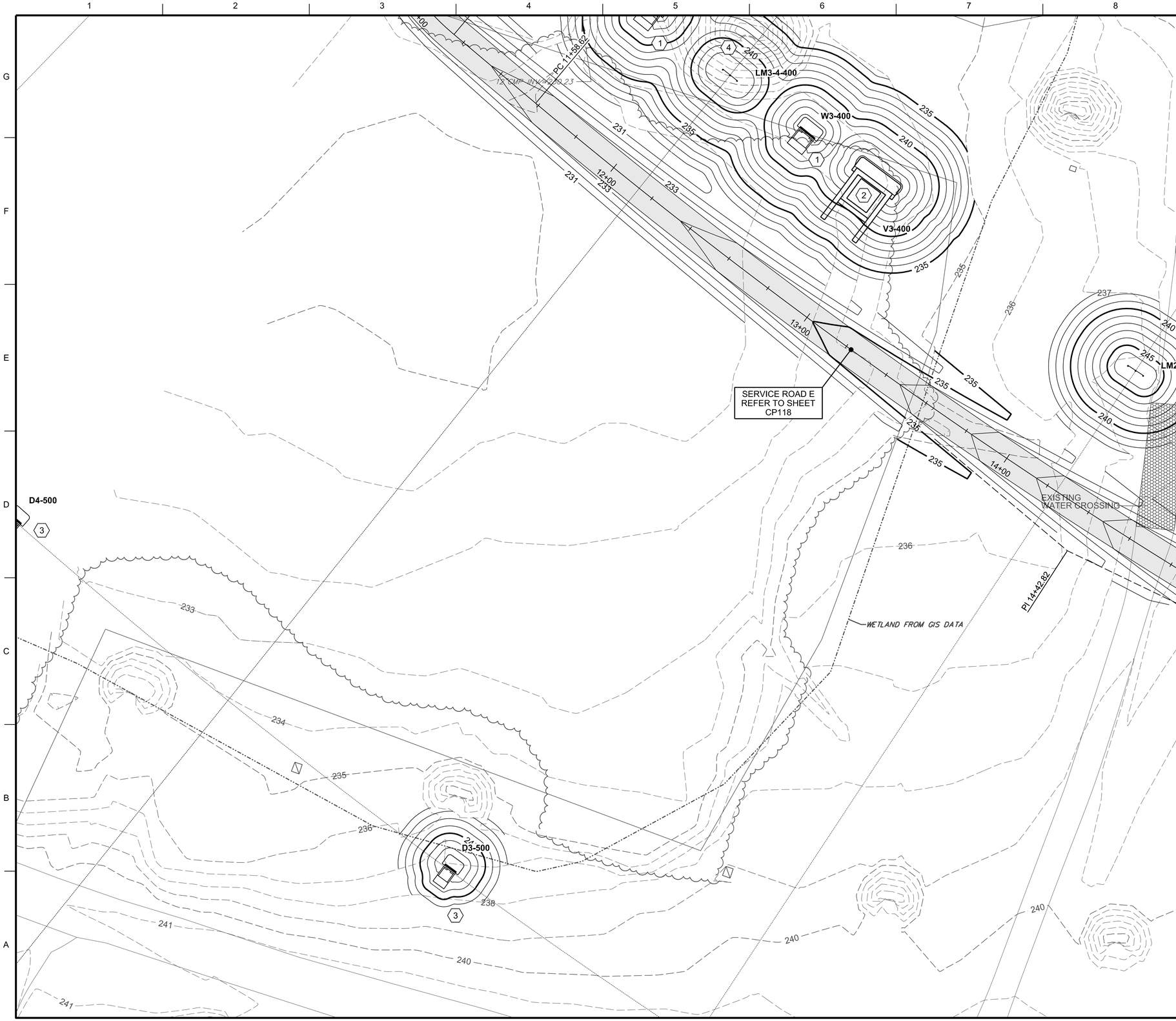
28-FEB-2020
07:20

65% SUBMITTAL

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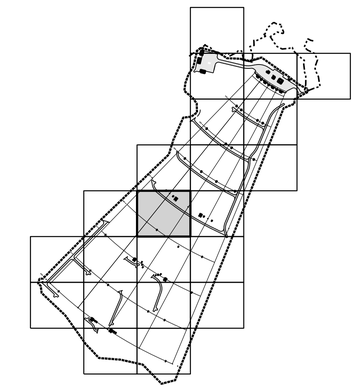

## SHEET KEYNOTES

1. PROVIDE WIDENED STATIONARY INFANTRY TARGET EMPLACEMENT. REFER TO SHEET CS531.
2. PROVIDE STATIONARY ARMOR TARGET EMPLACEMENT. REFER TO SHEET CS532.
3. PROVIDE DOUBLE ARM STATIONARY INFANTRY TARGET EMPLACEMENT. REFER TO SHEET CS530.
4. PROVIDE INNER LANE MARKER. REFER TO DETAIL 2, SHEET CS520.

## RANGE LEGEND

| | |
|---|---|
| V2-400 | STATIONARY ARMOR TARGET REFER TO DETAIL 1, SHEET CS532. |
| W2-400 | WIDENED STATIONARY INFANTRY TARGET REFER TO SHEET CS531. |
| S2-400 | STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| D2-400 | DOUBLE ARM STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| RLM-01 | RANGE LIMIT MARKER (RLM) REFER TO DETAIL 1, SHEET CS520. |
| LM-01 | INNER / OUTER LANE MARKER (LM) REFER TO DETAIL 2, SHEET CS520. |
| | CONSTRUCTION LIMITS |
| | AGGREGATE SURFACE |
| | CONCRETE SURFACE |

20' 10' 0 20' 40' 60'

GRAPHIC SCALE: 1"=20'-0"

N

**GEOGRAPHIC COORDINATE DATA**

HORIZONTAL DATUM: NAD83
MASSACHUSETTS STATE PLANE MAINLINE.

VERTICAL DATUM: NAD83.

UNITS OF MEASURE: U.S. SURVEY FEET.

COORDINATES SHOWN IN FORMAT OF EASTING, NORTHING AND ELEVATION.

US Army Corps of Engineers®

| MARK | DESCRIPTION | DATE |
|---|---|---|

| | |
|---|---|
| DESIGNED BY: S.CURRY | ISSUE DATE: MARCH 2020 |
| DRAWN BY: S.HAGGARD | SOLICITATION NO.: XXXXXX-XX-X-XXXX |
| CHECKED BY: M.MAYER | CONTRACT NO.: W912DY-15-D-0013 |
| SUBMITTED BY: C. LOWE | CATEGORY CODE XXX-XX-XX |
| SIZE: ANSI D | FILENAME: DMP0_CG121.dgn |

U.S. ARMY CORPS OF ENGINEERS
600 DR MARTIN LUTHER KING JR PL
LOUISVILLE DISTRICT
LOUISVILLE, KENTUCKY

Mason&Hanger
A Fluor Government Group Company

DEVENS, MASSACHUSETTS
AUTOMATED MULTIPURPOSE MACHINE GUN (MPMG) RANGE
FY21, PN: 088752
SITE

GRADE AND DRAIN PLAN

SHEET ID
CG121

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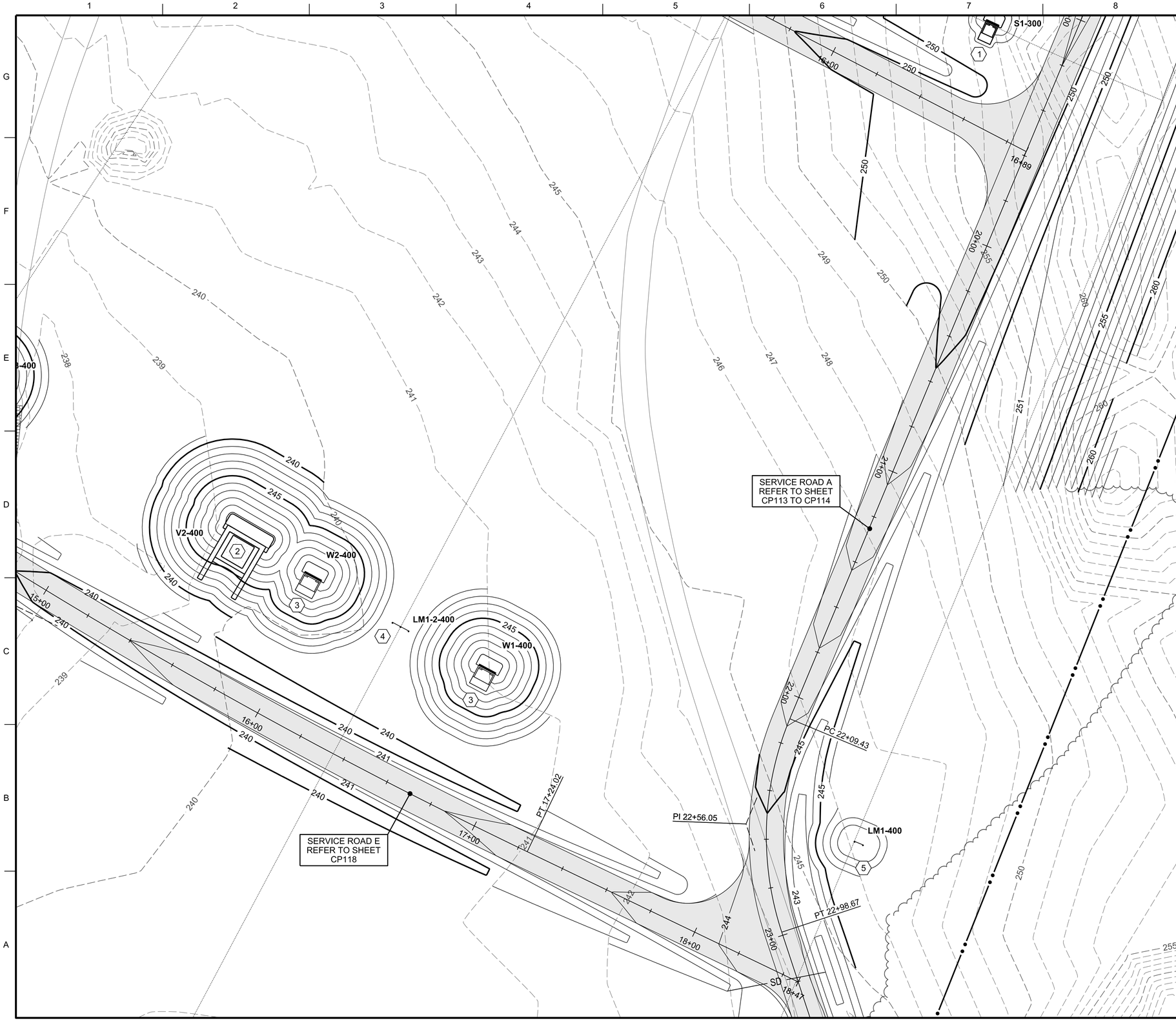
28-FEB-2020
07:20

65% SUBMITTAL

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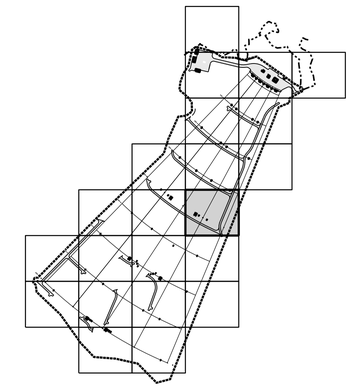

## SHEET KEYNOTES

1. PROVIDE STATIONARY INFANTRY TARGET EMPLACEMENT. REFER TO SHEET CS530.
2. PROVIDE STATIONARY ARMOR TARGET EMPLACEMENT. REFER TO SHEET CS532.
3. PROVIDE WIDENED STATIONARY INFANTRY TARGET EMPLACEMENT. REFER TO SHEET CS531.
4. PROVIDE INNER LANE MARKER. REFER TO DETAIL 2, SHEET CS520.
5. PROVIDE OUTER LANE MARKER. REFER TO DETAIL 2, SHEET CS520.

## RANGE LEGEND

| | |
|---|---|
| V2-400 | STATIONARY ARMOR TARGET REFER TO DETAIL 1, SHEET CS532. |
| W2-400 | WIDENED STATIONARY INFANTRY TARGET REFER TO SHEET CS531. |
| S2-400 | STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| D2-400 | DOUBLE ARM STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| RLM-01 | RANGE LIMIT MARKER (RLM) REFER TO DETAIL 1, SHEET CS520. |
| LM-01 | INNER / OUTER LANE MARKER (LM) REFER TO DETAIL 2, SHEET CS520. |
| | CONSTRUCTION LIMITS |
| | AGGREGATE SURFACE |
| | CONCRETE SURFACE |

20' 10' 0 20' 40' 60'

GRAPHIC SCALE: 1"=20'-0"

N

**GEOGRAPHIC COORDINATE DATA**

HORIZONTAL DATUM: NAD83
MASSACHUSETTS STATE PLANE MAINLINE.

VERTICAL DATUM: NAD83.

UNITS OF MEASURE: U.S. SURVEY FEET.

COORDINATES SHOWN IN FORMAT OF EASTING, NORTHING AND ELEVATION.

US Army Corps of Engineers®

| MARK | DESCRIPTION | DATE |
|---|---|---|
| | | |

DESIGNED BY: S.CURRY
DRAWN BY: S.HAGGARD
CHECKED BY: M.MAYER
SUBMITTED BY: S.LOWE
SIZE: ANSI D
ISSUE DATE: MARCH 2020
SOLICITATION NO.: XXXXXX-XX-X-XXXX
CONTRACT NO.: W912DY-15-D-0013
CATEGORY CODE: XXX-XX-XX
FILENAME: DMP01_CG122.dgn

U.S. ARMY CORPS OF ENGINEERS
600 DR MARTIN LUTHER KING JR PL
LOUISVILLE DISTRICT
LOUISVILLE, KENTUCKY

Mason&Hanger
Professional Services, Inc.

DEVENS, MASSACHUSETTS
AUTOMATED MULTIPURPOSE MACHINE GUN (MPMG) RANGE
FY21, PN: 088752
SITE

GRADE AND DRAIN PLAN

SHEET ID
CG122

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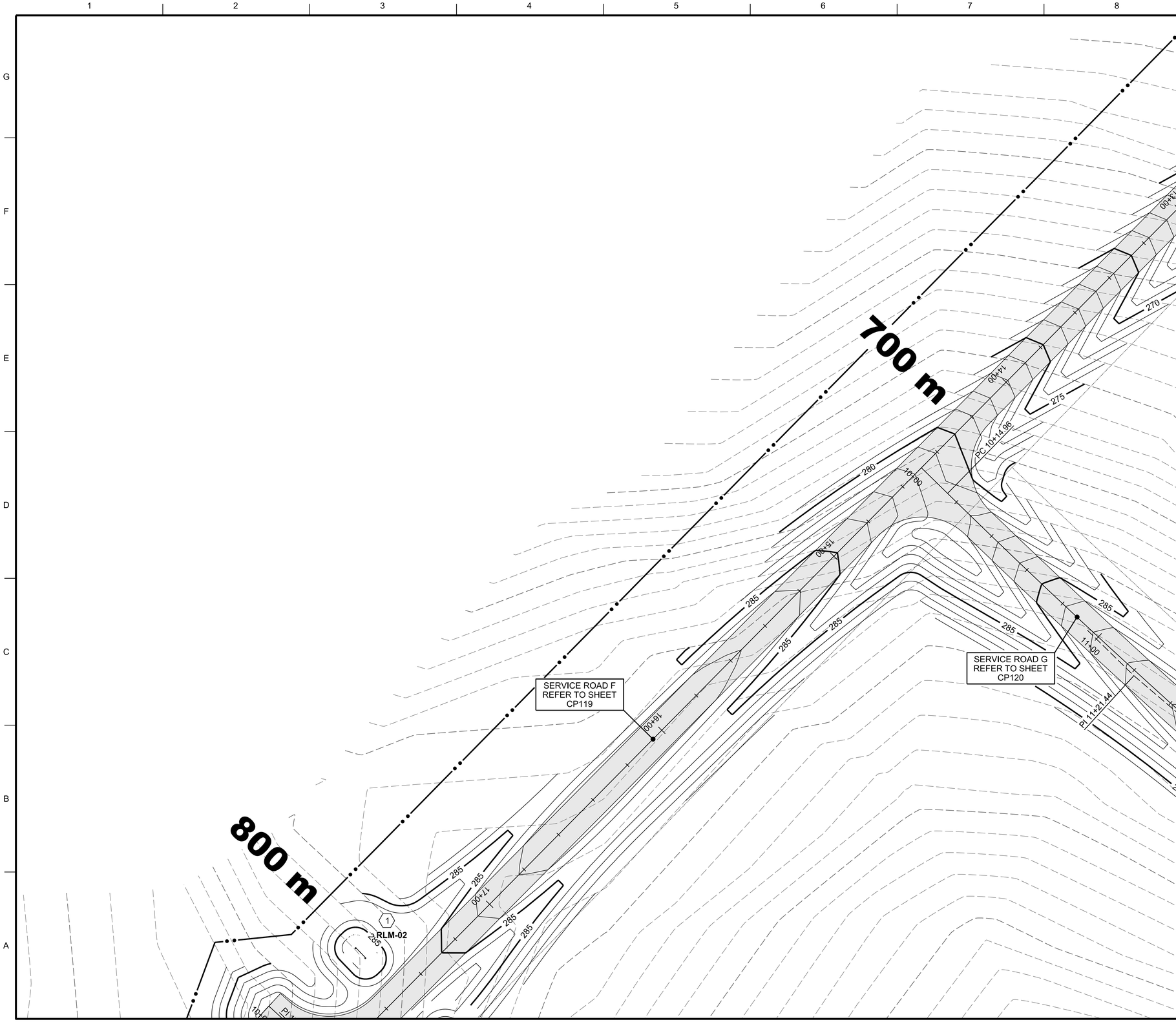
28-FEB-2020
07:20

65% SUBMITTAL

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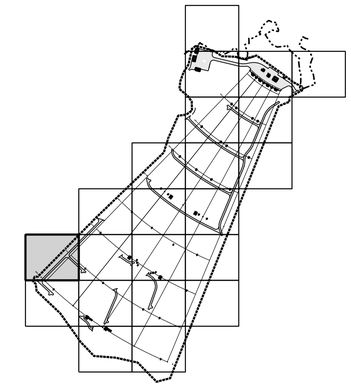

## SHEET KEYNOTES

1. PROVIDE RANGE LIMIT MARKER. REFER TO DETAIL 1, SHEET CS520.

## RANGE LEGEND

| | |
|---|---|
| V2-400 | STATIONARY ARMOR TARGET REFER TO DETAIL 1, SHEET CS532. |
| W2-400 | WIDENED STATIONARY INFANTRY TARGET REFER TO SHEET CS531. |
| S2-400 | STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| D2-400 | DOUBLE ARM STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| RLM-01 | RANGE LIMIT MARKER (RLM) REFER TO DETAIL 1, SHEET CS520. |
| LM-01 | INNER / OUTER LANE MARKER (LM) REFER TO DETAIL 2, SHEET CS520. |
| | CONSTRUCTION LIMITS |
| | AGGREGATE SURFACE |
| | CONCRETE SURFACE |

20' 10' 0 20' 40' 60'

GRAPHIC SCALE: 1"=20'-0"

N

**GEOGRAPHIC COORDINATE DATA**

HORIZONTAL DATUM: NAD83
MASSACHUSETTS STATE PLANE MAINLINE.

VERTICAL DATUM: NAD83.

UNITS OF MEASURE: U.S. SURVEY FEET.

COORDINATES SHOWN IN FORMAT OF EASTING, NORTHING AND ELEVATION.

US Army Corps of Engineers®

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: MARCH 2020
SOLICITATION NO.: XXXXXX-XX-X-XXXX
CONTRACT NO.: W912DY-15-D-0013
CATEGORY CODE XXX-XX-XX

DESIGNED BY: S.CURRY
DRAWN BY: S.HAGGARD
CHECKED BY: M.MAYER
SUBMITTED BY: C.LOWE
SIZE: ANSI D
FILENAME: DMP0_CG123.dgn

U.S. ARMY CORPS OF ENGINEERS
600 DR MARTIN LUTHER KING JR PL
LOUISVILLE DISTRICT
LOUISVILLE, KENTUCKY

Mason&Hanger
Implementation Partners

DEVENS, MASSACHUSETTS
AUTOMATED MULTIPURPOSE MACHINE GUN (MPMG) RANGE
FY21, PN: 088752
SITE

GRADE AND DRAIN PLAN

SHEET ID
CG123

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28-FEB-2020
07:20

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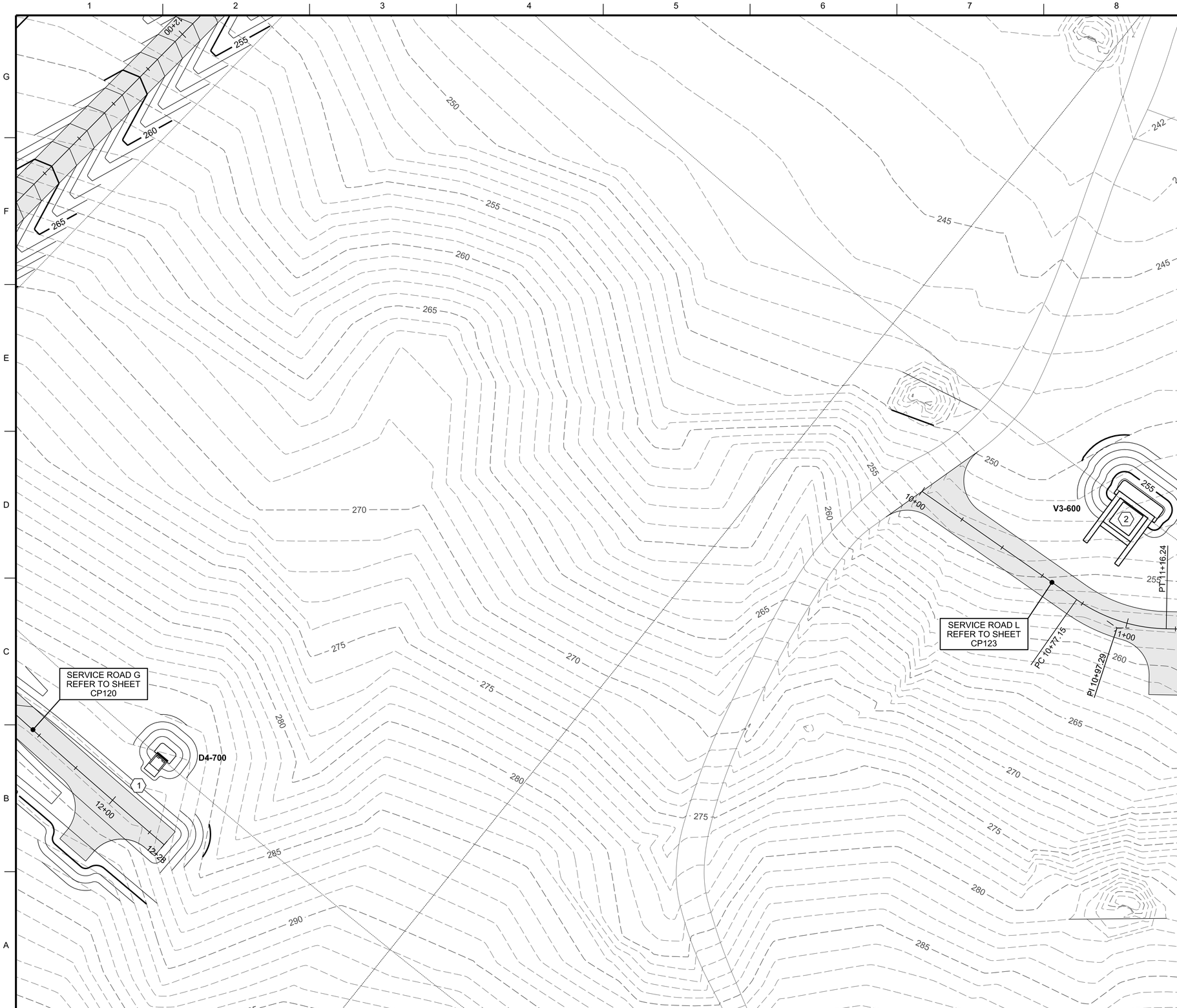


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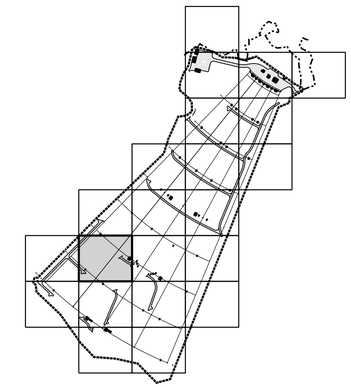

## SHEET KEYNOTES

1. PROVIDE DOUBLE ARM STATIONARY INFANTRY TARGET EMPLACEMENT. REFER TO SHEET CS530.
2. PROVIDE STATIONARY ARMOR TARGET EMPLACEMENT. REFER TO SHEET CS532.

## RANGE LEGEND

| | |
|---|---|
| V2-400 | STATIONARY ARMOR TARGET REFER TO DETAIL 1, SHEET CS532. |
| W2-400 | WIDENED STATIONARY INFANTRY TARGET REFER TO SHEET CS531. |
| S2-400 | STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| D2-400 | DOUBLE ARM STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| RLM-01 | RANGE LIMIT MARKER (RLM) REFER TO DETAIL 1, SHEET CS520. |
| LM-01 | INNER / OUTER LANE MARKER (LM) REFER TO DETAIL 2, SHEET CS520. |
| | CONSTRUCTION LIMITS |
| | AGGREGATE SURFACE |
| | CONCRETE SURFACE |

20' 10' 0 20' 40' 60'

GRAPHIC SCALE: 1"=20'-0"

N

**GEOGRAPHIC COORDINATE DATA**

HORIZONTAL DATUM: NAD83
MASSACHUSETTS STATE PLANE MAINLINE.

VERTICAL DATUM: NAD83.

UNITS OF MEASURE: U.S. SURVEY FEET.

COORDINATES SHOWN IN FORMAT OF EASTING, NORTHING AND ELEVATION.

US Army Corps of Engineers®

| MARK | DESCRIPTION | DATE |
|---|---|---|

| | |
|---|---|
| DESIGNED BY: S.CURRY | ISSUE DATE: MARCH 2020 |
| DRAWN BY: S.HAGGARD | SOLICITATION NO.: XXXXXX-XX-X-XXXX |
| CHECKED BY: M.MAYER | CONTRACT NO.: W912DY-15-D-0013 |
| SUBMITTED BY: C. LOWE | CATEGORY CODE XXX-XX-XX |
| SCALE: ANSI D | FILENAME: DMP01_CG124.dgn |

U.S. ARMY CORPS OF ENGINEERS
600 DR MARTIN LUTHER KING JR PL
LOUISVILLE DISTRICT
LOUISVILLE, KENTUCKY

Mason&Hanger
Integrity Commitment Quality

DEVENS, MASSACHUSETTS
AUTOMATED MULTIPURPOSE MACHINE GUN (MPMG) RANGE
FY21, PN: 088752
SITE

GRADE AND DRAIN PLAN

SHEET ID
CG124

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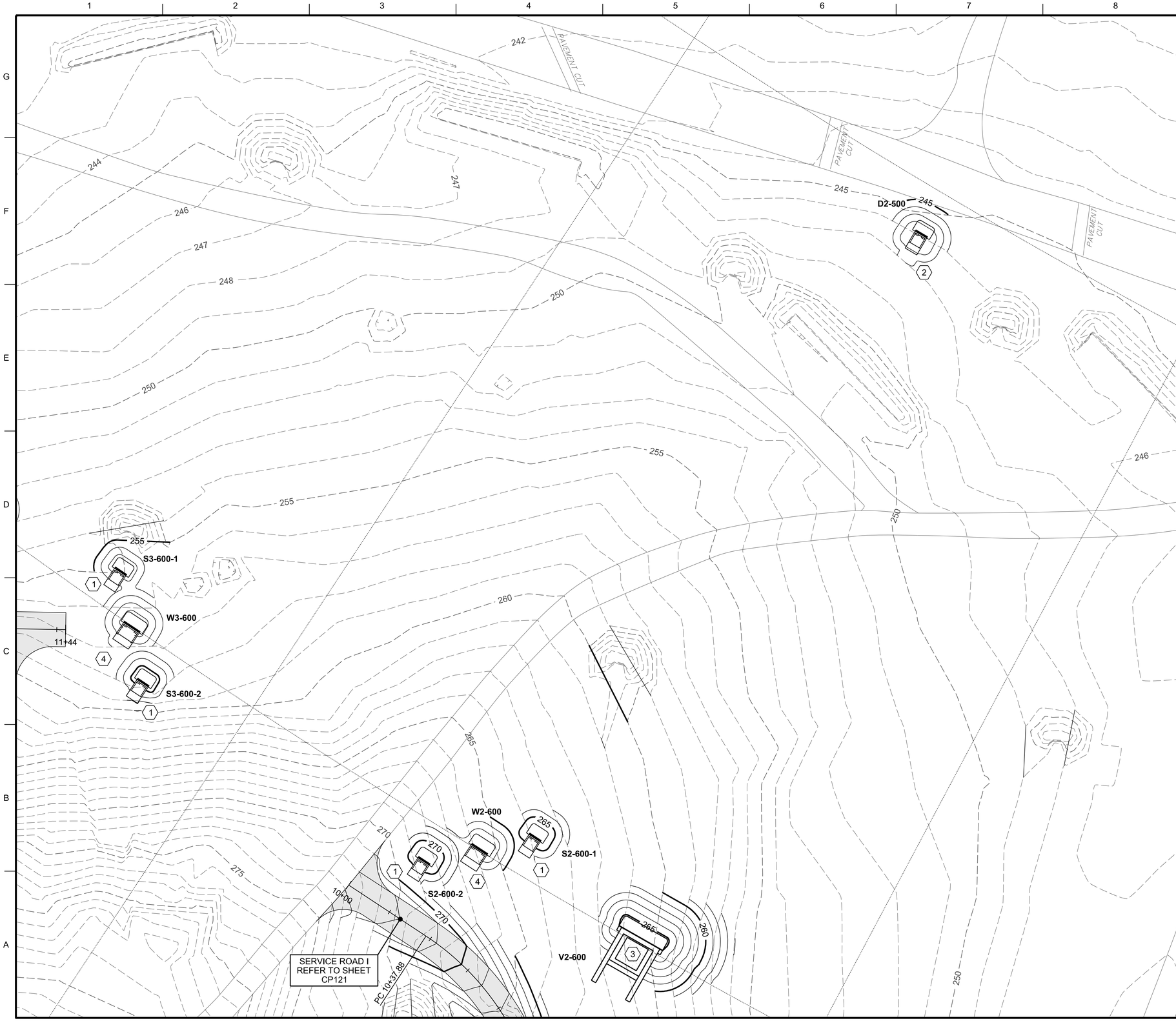
28-FEB-2020
07:20

65% SUBMITTAL

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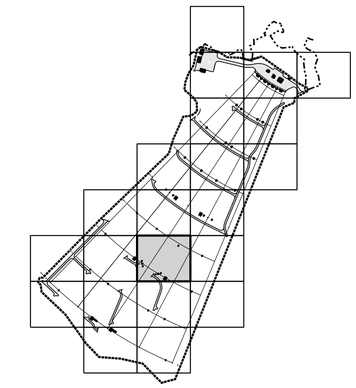

## SHEET KEYNOTES

1. PROVIDE STATIONARY INFANTRY TARGET EMPLACEMENT. REFER TO SHEET CS530.
2. PROVIDE DOUBLE ARM STATIONARY INFANTRY TARGET EMPLACEMENT. REFER TO SHEET CS530..
3. PROVIDE STATIONARY ARMOR TARGET EMPLACEMENT. REFER TO SHEET CS532.
4. PROVIDE DOUBLE ARM WIDENED STATIONARY INFANTRY TARGET EMPLACEMENT. REFER TO SHEET CS531..

## RANGE LEGEND

| | |
|---|---|
| V2-400 | STATIONARY ARMOR TARGET REFER TO DETAIL 1, SHEET CS532. |
| W2-400 | WIDENED STATIONARY INFANTRY TARGET REFER TO SHEET CS531. |
| S2-400 | STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| D2-400 | DOUBLE ARM STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| RLM-01 | RANGE LIMIT MARKER (RLM) REFER TO DETAIL 1, SHEET CS520. |
| LM-01 | INNER / OUTER LANE MARKER (LM) REFER TO DETAIL 2, SHEET CS520. |
| | CONSTRUCTION LIMITS |
| | AGGREGATE SURFACE |
| | CONCRETE SURFACE |

20' 10' 0 20' 40' 60'

GRAPHIC SCALE: 1"=20'-0"

N

**GEOGRAPHIC COORDINATE DATA**

HORIZONTAL DATUM: NAD83
MASSACHUSETTS STATE PLANE MAINLINE.

VERTICAL DATUM: NAD83.

UNITS OF MEASURE: U.S. SURVEY FEET.

COORDINATES SHOWN IN FORMAT OF EASTING, NORTHING AND ELEVATION.

US Army Corps of Engineers®

| MARK | DESCRIPTION | DATE |
|---|---|---|

| | |
|---|---|
| DESIGNED BY: S.CURRY | ISSUE DATE: MARCH 2020 |
| DRAWN BY: S.HAGGARD | SOLICITATION NO.: XXXXXX-XX-X-XXXX |
| CHECKED BY: M.MAYER | CONTRACT NO.: W912DY-15-D-0013 |
| SUBMITTED BY: C. LOWE | CATEGORY CODE XXX-XX-XX |
| SIZE: ANSI D | FILENAME: DMP01_CG125.dgn |

U.S. ARMY CORPS OF ENGINEERS
600 DR MARTIN LUTHER KING JR PL
LOUISVILLE DISTRICT
LOUISVILLE, KENTUCKY

Mason&Hanger
Partners in Environmental Engineering

DEVENS, MASSACHUSETTS
AUTOMATED MULTIPURPOSE MACHINE GUN (MPMG) RANGE
FY21, PN: 088752
SITE

GRADE AND DRAIN PLAN

SHEET ID
CG125

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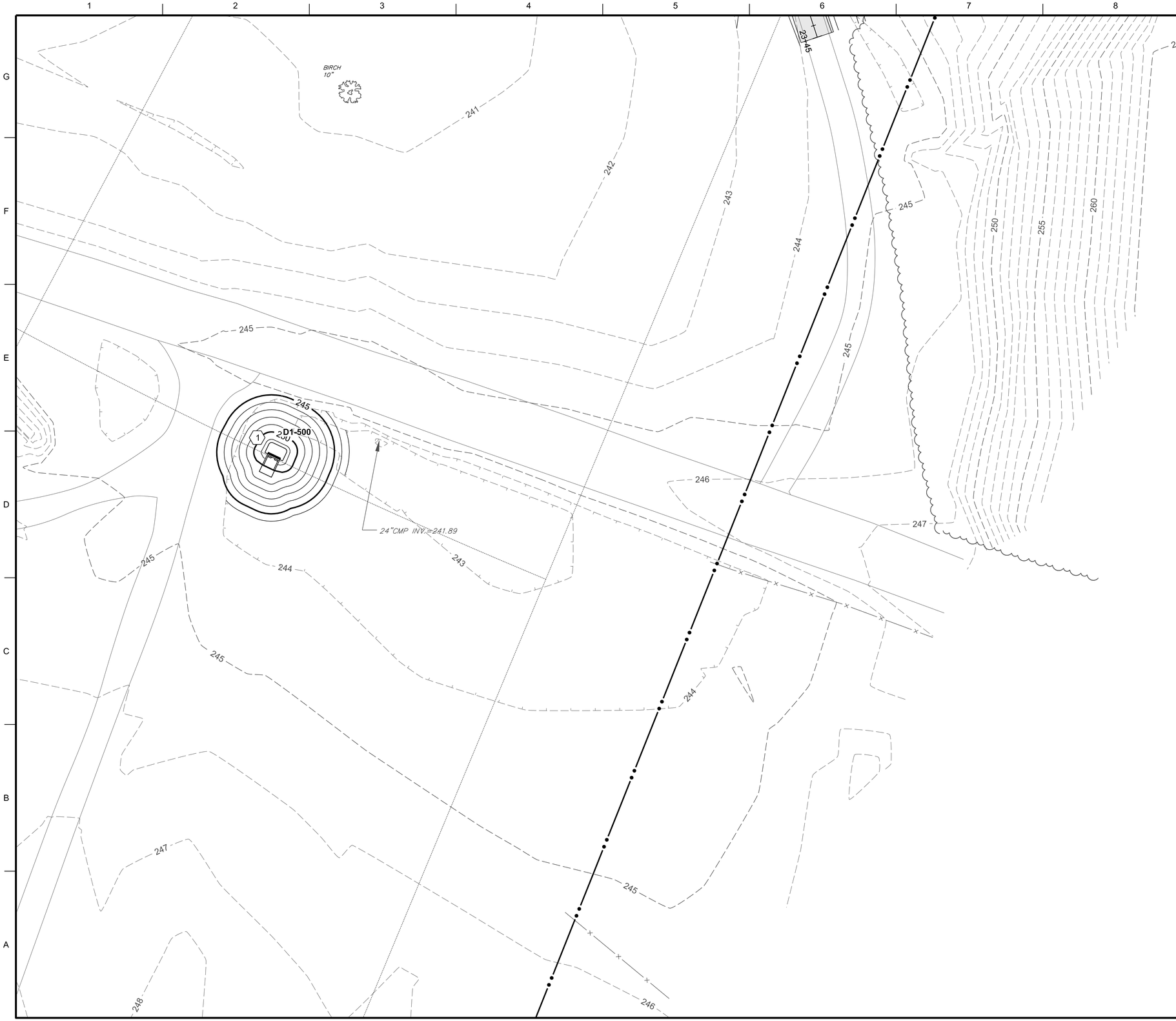
28-FEB-2020
07:21

65% SUBMITTAL

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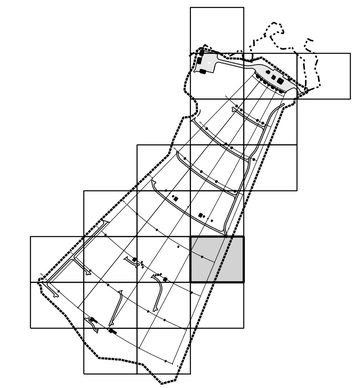

## SHEET KEYNOTES

1. PROVIDE DOUBLE ARM STATIONARY INFANTRY TARGET EMPLACEMENT. REFER TO SHEET CS530.

## RANGE LEGEND

| | |
|---|---|
| V2-400 | STATIONARY ARMOR TARGET REFER TO DETAIL 1, SHEET CS532. |
| W2-400 | WIDENED STATIONARY INFANTRY TARGET REFER TO SHEET CS531. |
| S2-400 | STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| D2-400 | DOUBLE ARM STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| RLM-01 | RANGE LIMIT MARKER (RLM) REFER TO DETAIL 1, SHEET CS520. |
| LM-01 | INNER / OUTER LANE MARKER (LM) REFER TO DETAIL 2, SHEET CS520. |
| | CONSTRUCTION LIMITS |
| | AGGREGATE SURFACE |
| | CONCRETE SURFACE |

20' 10' 0 20' 40' 60'

GRAPHIC SCALE: 1"=20'-0"

N

**GEOGRAPHIC COORDINATE DATA**

HORIZONTAL DATUM: NAD83
MASSACHUSETTS STATE PLANE MAINLINE.

VERTICAL DATUM: NAD83.

UNITS OF MEASURE: U.S. SURVEY FEET.

COORDINATES SHOWN IN FORMAT OF EASTING, NORTHING AND ELEVATION.

US Army Corps of Engineers®

| MARK | DESCRIPTION | DATE |
|---|---|---|

| | |
|---|---|
| DESIGNED BY: S.CURRY | ISSUE DATE: MARCH 2020 |
| DRAWN BY: S.HAGGARD | SOLICITATION NO.: XXXXXX-XX-X-XXXX |
| CHECKED BY: M.MAYER | CONTRACT NO.: W912DY-15-D-0013 |
| SUBMITTED BY: C.LOWE | CATEGORY CODE XXX-XX-XX |
| SIZE: ANSI D | FILENAME: DMP0_CG126.dgn |

U.S. ARMY CORPS OF ENGINEERS
600 DR MARTIN LUTHER KING JR PL
LOUISVILLE DISTRICT
LOUISVILLE, KENTUCKY

Mason&Hanger
Integrity Commitment Quality

DEVENS, MASSACHUSETTS
AUTOMATED MULTIPURPOSE MACHINE GUN (MPMG) RANGE
FY21, PN: 088752
SITE

GRADE AND DRAIN PLAN

SHEET ID
CG126

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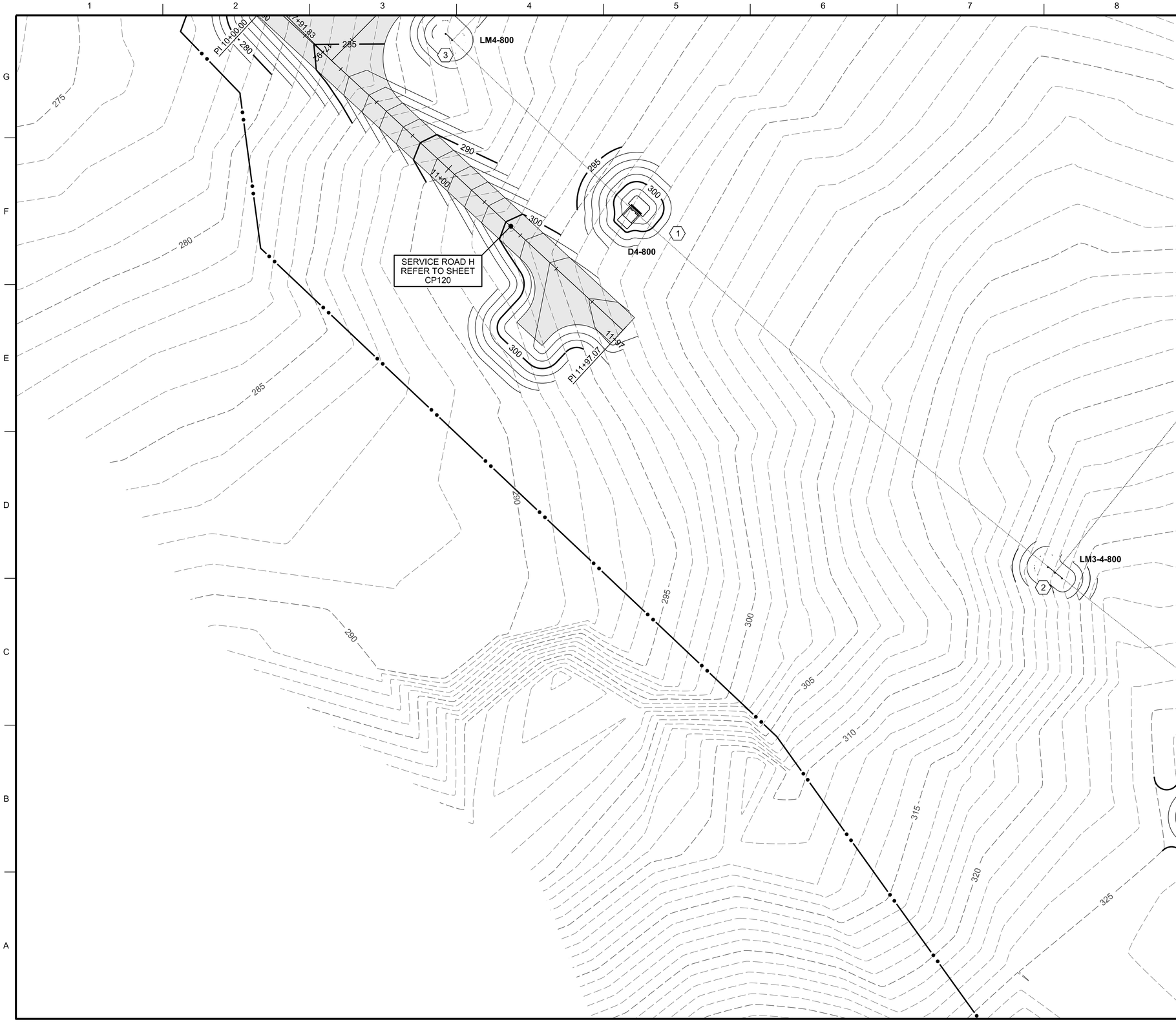
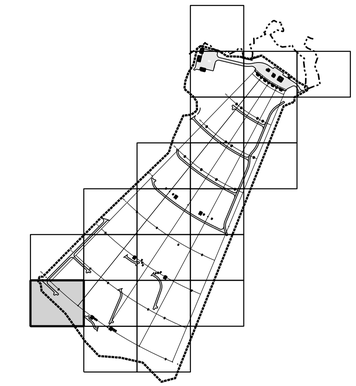
28-FEB-2020
07:21

65% SUBMITTAL




## KEYMAP



## SHEET KEYNOTES

1. PROVIDE DOUBLE ARM STATIONARY INFANTRY TARGET EMPLACEMENT. REFER TO SHEET CS530.
2. PROVIDE INNER LANE MARKER. REFER TO DETAIL 2, SHEET CS520.
3. PROVIDE OUTER LANE MARKER. REFER TO DETAIL 2, SHEET CS520.

## RANGE LEGEND

| | |
|---|---|
| V2-400 | STATIONARY ARMOR TARGET REFER TO DETAIL 1, SHEET CS532. |
| W2-400 | WIDENED STATIONARY INFANTRY TARGET REFER TO SHEET CS531. |
| S2-400 | STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| D2-400 | DOUBLE ARM STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| RLM-01 | RANGE LIMIT MARKER (RLM) REFER TO DETAIL 1, SHEET CS520. |
| LM-01 | INNER / OUTER LANE MARKER (LM) REFER TO DETAIL 2, SHEET CS520. |
| | CONSTRUCTION LIMITS |
| | AGGREGATE SURFACE |
| | CONCRETE SURFACE |

20' 10' 0 20' 40' 60'

GRAPHIC SCALE: 1"=20'-0"

N

**GEOGRAPHIC COORDINATE DATA**

HORIZONTAL DATUM: NAD83
MASSACHUSETTS STATE PLANE MAINLINE.

VERTICAL DATUM: NAD83.

UNITS OF MEASURE: U.S. SURVEY FEET.

COORDINATES SHOWN IN FORMAT OF EASTING, NORTHING AND ELEVATION.

US Army Corps of Engineers®

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: MARCH 2020
SOLICITATION NO.: XXXXXX-XX-X-XXXX
CONTRACT NO.: W912DY-15-D-0013
CATEGORY CODE XXX-XX-XX

DESIGNED BY: S.CURRY
DRAWN BY: S.HAGGARD
CHECKED BY: M.MAYER
SUBMITTED BY: C.LOWE
SIZE: ANSI D
FILENAME: DMP0_CG127.dgn

U.S. ARMY CORPS OF ENGINEERS
600 DR MARTIN LUTHER KING JR PL
LOUISVILLE DISTRICT
LOUISVILLE, KENTUCKY

Mason&Hanger
A Fluor Government Group Company

DEVENS, MASSACHUSETTS
AUTOMATED MULTIPURPOSE MACHINE GUN (MPMG) RANGE
FY21, PN: 088752
SITE

GRADE AND DRAIN PLAN

SHEET ID
CG127

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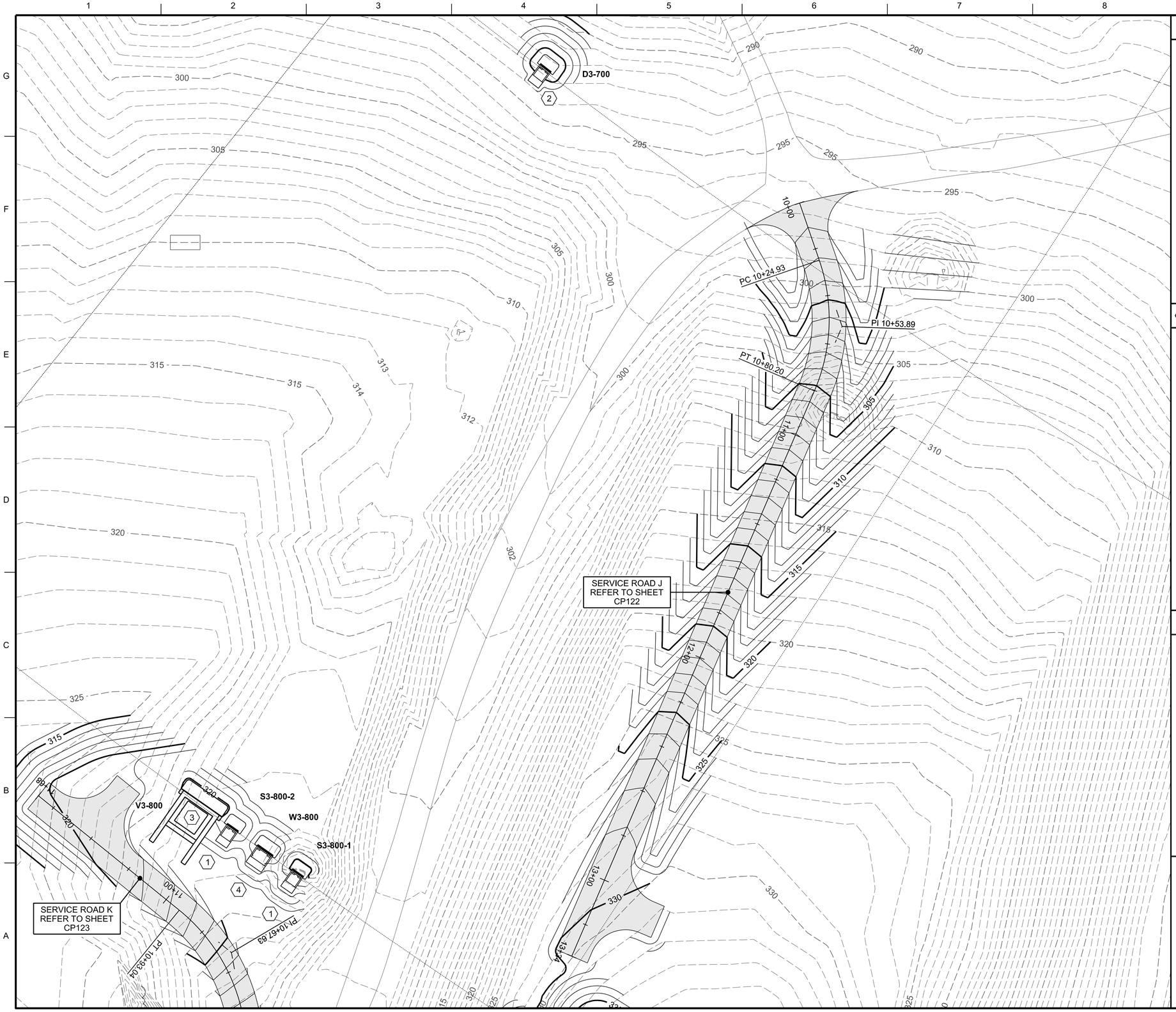
28-FEB-2020
07:21

65% SUBMITTAL

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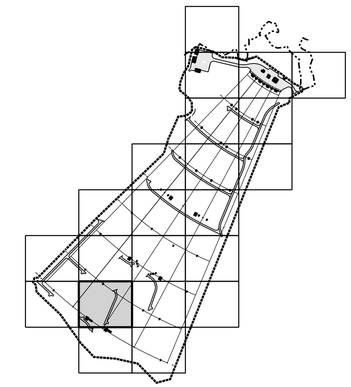

## SHEET KEYNOTES

1. PROVIDE STATIONARY INFANTRY TARGET EMPLACEMENT. REFER TO SHEET CS530.
2. PROVIDE DOUBLE ARM STATIONARY INFANTRY TARGET EMPLACEMENT. REFER TO SHEET CS530.
3. PROVIDE STATIONARY ARMOR TARGET EMPLACEMENT. REFER TO SHEET CS532.
4. PROVIDE DOUBLE ARM WIDENED STATIONARY INFANTRY TARGET EMPLACEMENT. REFER TO SHEET CS531.

## RANGE LEGEND

| | |
|---|---|
| V2-400 | STATIONARY ARMOR TARGET REFER TO DETAIL 1, SHEET CS532. |
| W2-400 | WIDENED STATIONARY INFANTRY TARGET REFER TO SHEET CS531. |
| S2-400 | STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| D2-400 | DOUBLE ARM STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| RLM-01 | RANGE LIMIT MARKER (RLM) REFER TO DETAIL 1, SHEET CS520. |
| LM-01 | INNER / OUTER LANE MARKER (LM) REFER TO DETAIL 2, SHEET CS520. |
| | CONSTRUCTION LIMITS |
| | AGGREGATE SURFACE |
| | CONCRETE SURFACE |

20' 10' 0 20' 40' 60'

GRAPHIC SCALE: 1"=20'-0"

N

**GEOGRAPHIC COORDINATE DATA**

HORIZONTAL DATUM: NAD83
MASSACHUSETTS STATE PLANE MAINLINE.

VERTICAL DATUM: NAD83.

UNITS OF MEASURE: U.S. SURVEY FEET.

COORDINATES SHOWN IN FORMAT OF EASTING, NORTHING AND ELEVATION.

US Army Corps of Engineers®

| MARK | DESCRIPTION | DATE |
|---|---|---|

| | |
|---|---|
| DESIGNED BY: S.CURRY | ISSUE DATE: MARCH 2020 |
| DRAWN BY: S.HAGGARD | SOLICITATION NO.: XXXXXX-XX-X-XXXX |
| CHECKED BY: M.MAYER | CONTRACT NO.: W912DY-15-D-0013 |
| SUBMITTED BY: C.LOVE | CATEGORY CODE XXX-XX-XX |
| SIZE ANSI D | FILENAME: DMP0_CG128.dgn |

U.S. ARMY CORPS OF ENGINEERS
600 DR MARTIN LUTHER KING JR PL
LOUISVILLE DISTRICT
LOUISVILLE, KENTUCKY

Mason&Hanger
Professional Services Company

DEVENS, MASSACHUSETTS
AUTOMATED MULTIPURPOSE MACHINE GUN (MPMG) RANGE
FY21, PN: 088752
SITE

GRADE AND DRAIN PLAN

SHEET ID
CG128

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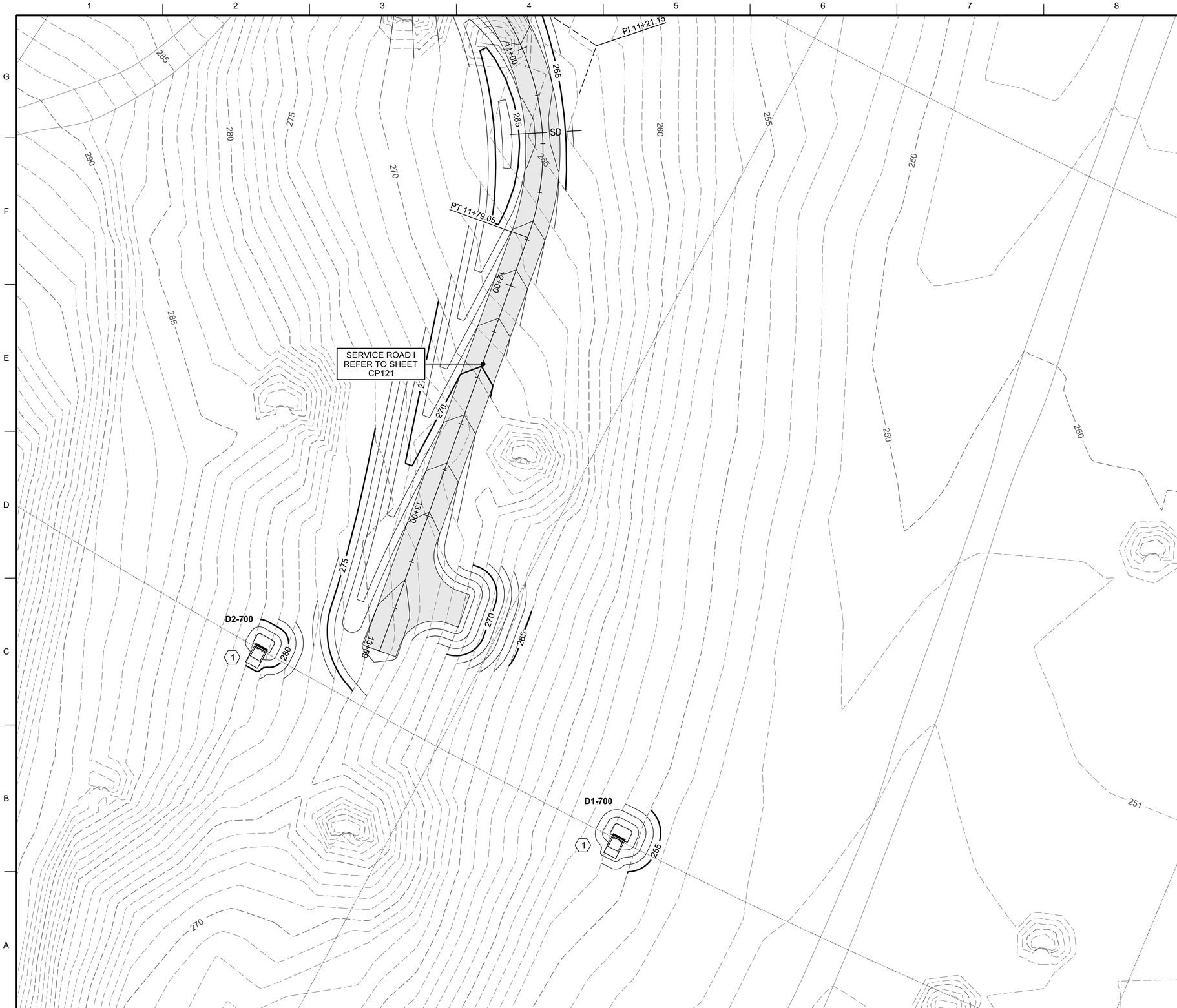
28-FEB-2020
07:21

65% SUBMITTAL

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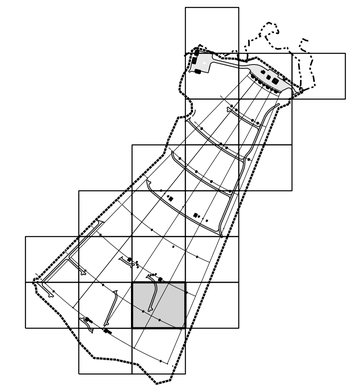

## SHEET KEYNOTES

1. PROVIDE DOUBLE ARM STATIONARY INFANTRY TARGET EMPLACEMENT. REFER TO SHEET CS530.

## RANGE LEGEND

| | |
|---|---|
| V2-400 | STATIONARY ARMOR TARGET REFER TO DETAIL 1, SHEET CS532. |
| W2-400 | WIDENED STATIONARY INFANTRY TARGET REFER TO SHEET CS531. |
| S2-400 | STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| D2-400 | DOUBLE ARM STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| RLM-01 | RANGE LIMIT MARKER (RLM) REFER TO DETAIL 1, SHEET CS520. |
| LM-01 | INNER / OUTER LANE MARKER (LM) REFER TO DETAIL 2, SHEET CS520. |
| | CONSTRUCTION LIMITS |
| | AGGREGATE SURFACE |
| | CONCRETE SURFACE |

20' 10' 0 20' 40' 60'

GRAPHIC SCALE: 1"=20'-0"

N

**GEOGRAPHIC COORDINATE DATA**

HORIZONTAL DATUM: NAD83
MASSACHUSETTS STATE PLANE MAINLINE.

VERTICAL DATUM: NAD83.

UNITS OF MEASURE: U.S. SURVEY FEET.

COORDINATES SHOWN IN FORMAT OF EASTING, NORTHING AND ELEVATION.

US Army Corps of Engineers®

| MARK | DESCRIPTION | DATE |
|---|---|---|

| | |
|---|---|
| DESIGNED BY: S.CURRY | ISSUE DATE: MARCH 2020 |
| DRAWN BY: S.HAGGARD | SOLICITATION NO.: XXXXXX-XX-X-XXXX |
| CHECKED BY: M.MAYER | CONTRACT NO.: W912DY-15-D-0013 |
| SUBMITTED BY: C. LOWE | CATEGORY CODE XXX-XX-XX |
| SIZE: ANSI D | FILENAME: DMPO_CG129.dgn |

U.S. ARMY CORPS OF ENGINEERS
600 DR MARTIN LUTHER KING JR PL
LOUISVILLE DISTRICT
LOUISVILLE, KENTUCKY

Mason&Hanger

DEVENS, MASSACHUSETTS
AUTOMATED MULTIPURPOSE MACHINE GUN (MPMG) RANGE
FY21; PN: 088752
SITE

GRADE AND DRAIN PLAN

SHEET ID
CG129

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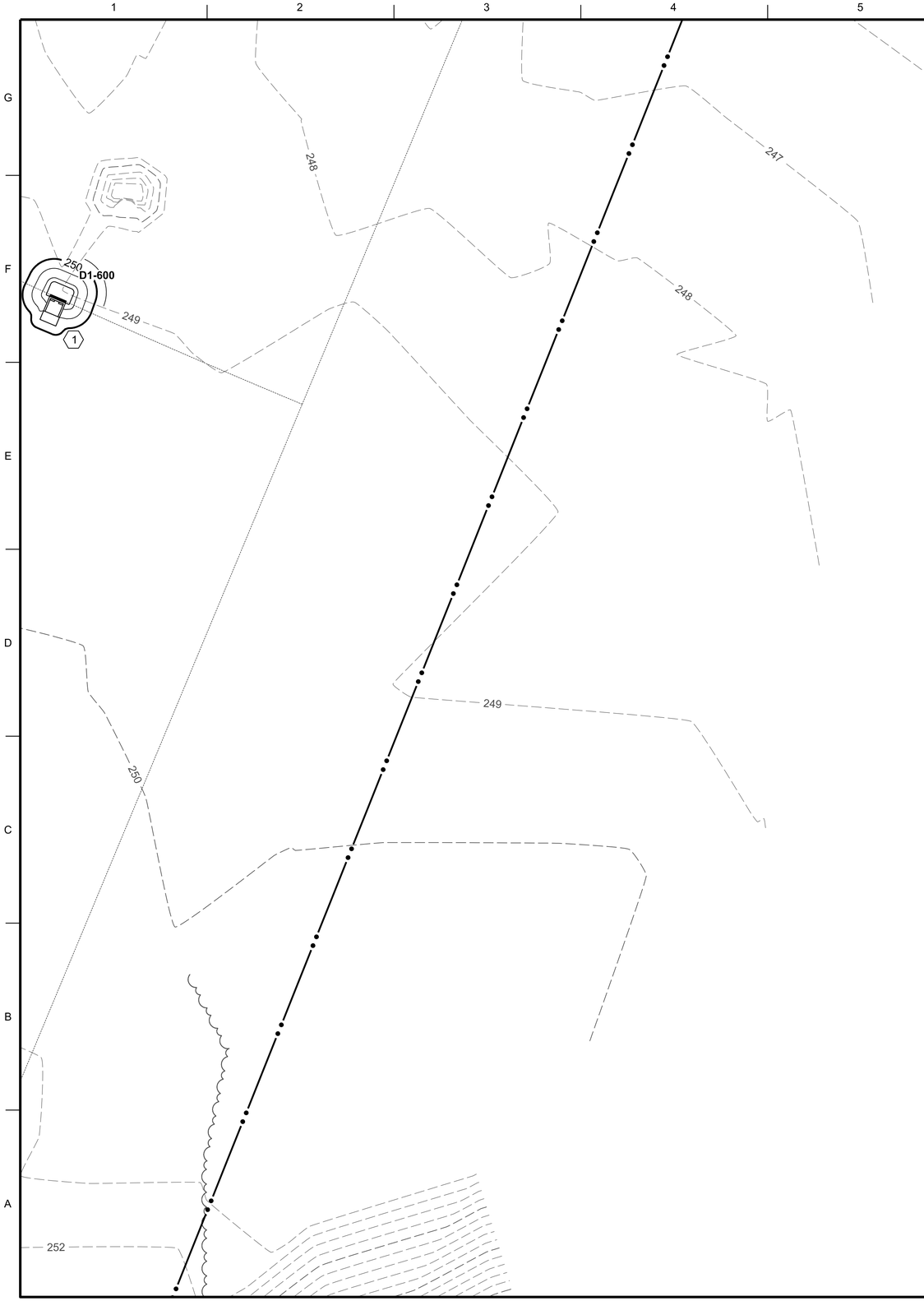
28-FEB-2020
07:21

65% SUBMITTAL

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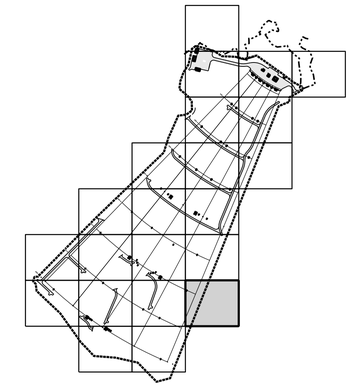

## SHEET KEYNOTES

1. PROVIDE DOUBLE ARM STATIONARY INFANTRY TARGET EMPLACEMENT. REFER TO SHEET CS530.

## RANGE LEGEND

| | |
|---|---|
| V2-400 | STATIONARY ARMOR TARGET<br>REFER TO DETAIL 1, SHEET CS532. |
| W2-400 | WIDENED STATIONARY INFANTRY TARGET<br>REFER TO SHEET CS531. |
| S2-400 | STATIONARY INFANTRY TARGET.<br>REFER TO SHEET CS530. |
| D2-400 | DOUBLE ARM STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| RLM-01 | RANGE LIMIT MARKER (RLM)<br>REFER TO DETAIL 1, SHEET CS520. |
| LM-01 | INNER / OUTER LANE MARKER (LM)<br>REFER TO DETAIL 2, SHEET CS520. |
| | CONSTRUCTION LIMITS |
| | AGGREGATE SURFACE |
| | CONCRETE SURFACE |

20' 10' 0 20' 40' 60'

GRAPHIC SCALE: 1"=20'-0"

N

**GEOGRAPHIC COORDINATE DATA**

HORIZONTAL DATUM: NAD83
MASSACHUSETTS STATE PLANE MAINLINE.

VERTICAL DATUM: NAD83.

UNITS OF MEASURE: U.S. SURVEY FEET.

COORDINATES SHOWN IN FORMAT OF EASTING, NORTHING AND ELEVATION.

US Army Corps of Engineers®

| MARK | DESCRIPTION | DATE |
|---|---|---|

ISSUE DATE: MARCH 2020
SOLICITATION NO.: XXXXXX-XX-X-XXXX
CONTRACT NO.: W912DY-15-D-0013
CATEGORY CODE XXX-XX-XX

DESIGNED BY: S.CURRY
DRAWN BY: S.HAGGARD
CHECKED BY: M.MAYER
SUBMITTED BY: C. LOWE
SIZE ANSI D
FILENAME: DMPG_CG130.dgn

U.S. ARMY CORPS OF ENGINEERS
600 DR MARTIN LUTHER KING JR PL
LOUISVILLE DISTRICT
LOUISVILLE, KENTUCKY

Mason&Hanger
Silas Mason Company, Inc.

DEVENS, MASSACHUSETTS
AUTOMATED MULTIPURPOSE MACHINE GUN (MPMG) RANGE
FY21 PN: 088752
SITE

GRADE AND DRAIN PLAN

SHEET ID
CG130

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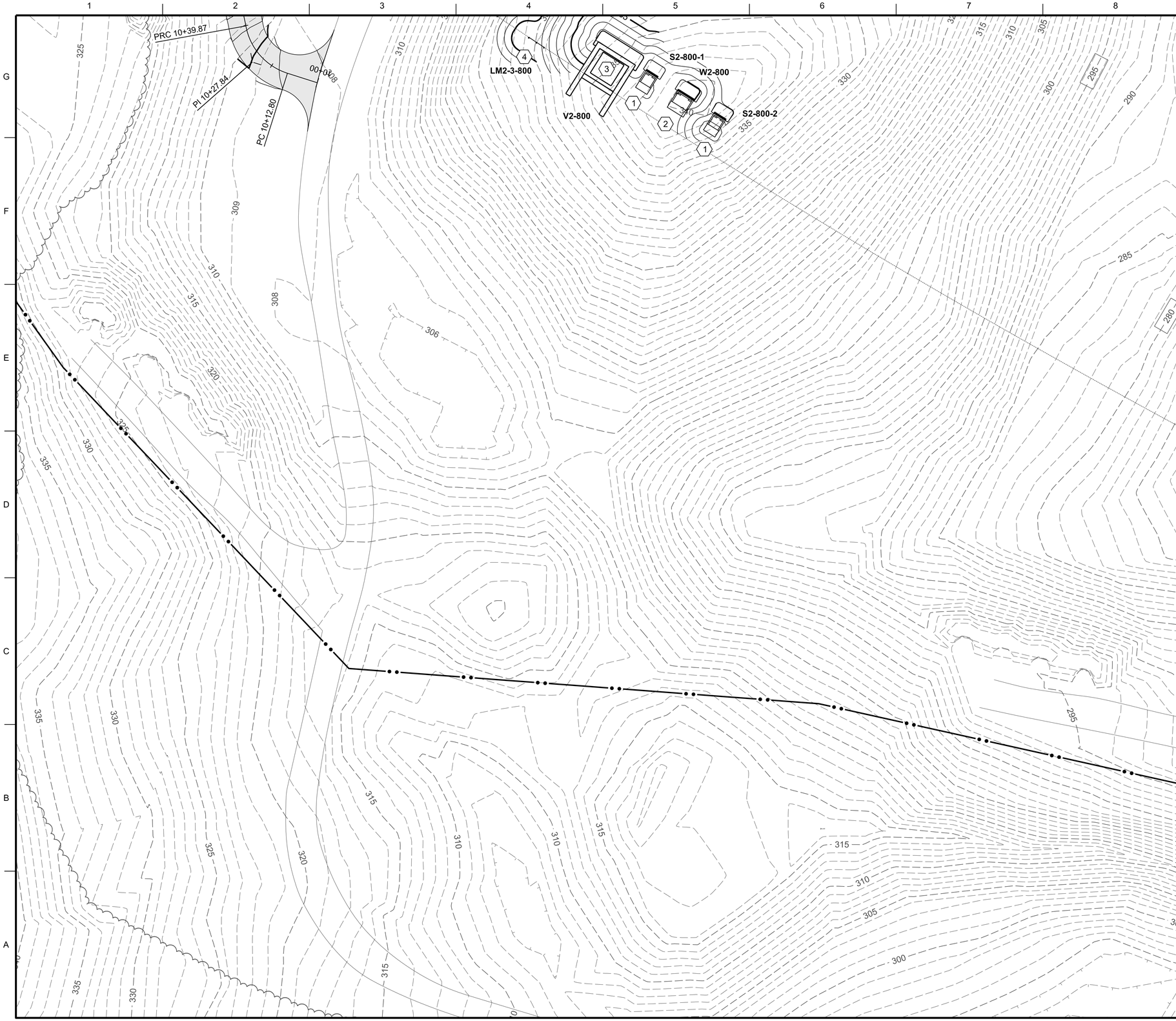
28-FEB-2020
07:21

65% SUBMITTAL

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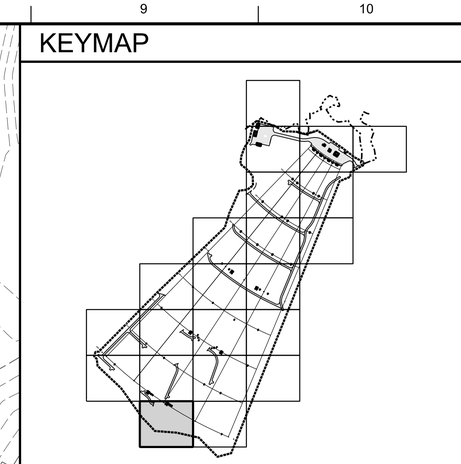

## SHEET KEYNOTES

1. PROVIDE STATIONARY INFANTRY TARGET EMPLACEMENT. REFER TO SHEET CS530.
2. PROVIDE DOUBLE ARM WIDENED STATIONARY INFANTRY TARGET EMPLACEMENT. REFER TO SHEET CS531.
3. PROVIDE STATIONARY ARMOR TARGET EMPLACEMENT. REFER TO SHEET CS532.
4. PROVIDE INNER LANE MARKER. REFER TO DETAIL 2, SHEET CS520.

## RANGE LEGEND

| | |
|---|---|
| V2-400 | STATIONARY ARMOR TARGET REFER TO DETAIL 1, SHEET CS532. |
| W2-400 | WIDENED STATIONARY INFANTRY TARGET REFER TO SHEET CS531. |
| S2-400 | STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| D2-400 | DOUBLE ARM STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| RLM-01 | RANGE LIMIT MARKER (RLM) REFER TO DETAIL 1, SHEET CS520. |
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| | CONSTRUCTION LIMITS |
| | AGGREGATE SURFACE |
| | CONCRETE SURFACE |

20' 10' 0 20' 40' 60'

GRAPHIC SCALE: 1"=20'-0"

N

**GEOGRAPHIC COORDINATE DATA**

HORIZONTAL DATUM: NAD83
MASSACHUSETTS STATE PLANE MAINLINE.

VERTICAL DATUM: NAD83.

UNITS OF MEASURE: U.S. SURVEY FEET.

COORDINATES SHOWN IN FORMAT OF EASTING, NORTHING AND ELEVATION.

US Army Corps of Engineers®

| MARK | DESCRIPTION | DATE |
|---|---|---|

DESIGNED BY: S.CURRY
DRAWN BY: S.HAGGARD
CHECKED BY: M.MAYER
SUBMITTED BY: C.LOVE
SIZE: ANSI D
FILENAME: DMP0_CG131.dgn
ISSUE DATE: MARCH 2020
SOLICITATION NO.: XXXXXX-XX-X-XXXX
CONTRACT NO.: W912DY-15-D-0013
CATEGORY CODE: XXX-XX-XX

U.S. ARMY CORPS OF ENGINEERS
600 DR MARTIN LUTHER KING JR PL
LOUISVILLE DISTRICT
LOUISVILLE, KENTUCKY

Mason&Hanger
Professional Services Group, Inc.

DEVENS, MASSACHUSETTS
AUTOMATED MULTIPURPOSE MACHINE GUN (MPMG) RANGE
FY21, PN: 088752
SITE

GRADE AND DRAIN PLAN

SHEET ID
CG131

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07:21

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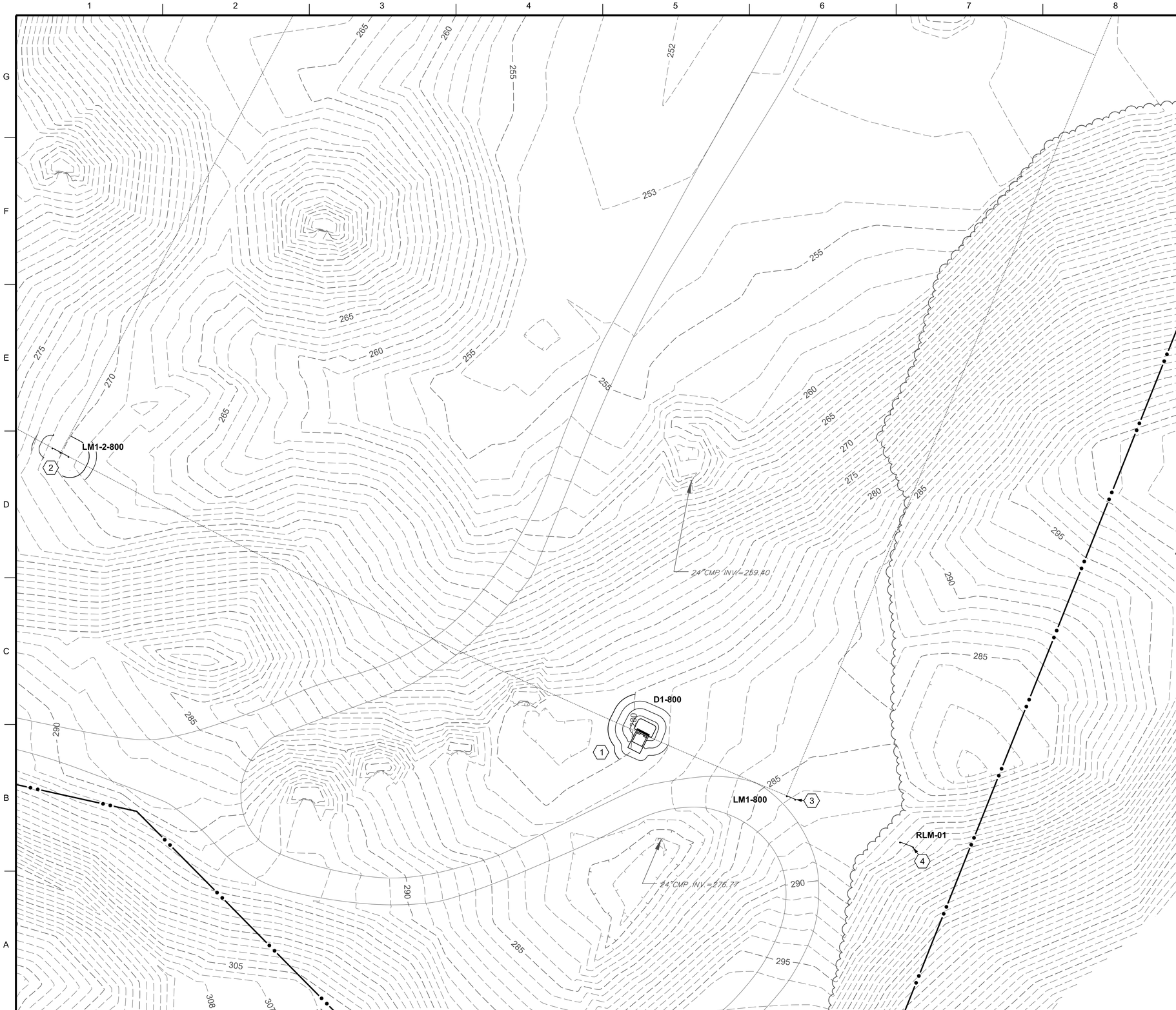
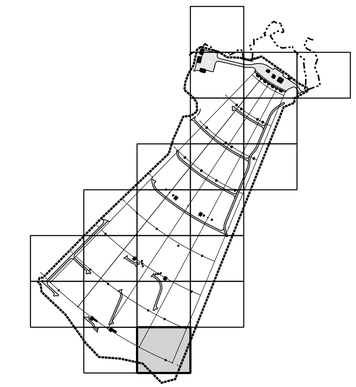



## KEYMAP



## SHEET KEYNOTES

1. PROVIDE DOUBLE ARM STATIONARY INFANTRY TARGET EMPLACEMENT. REFER TO SHEET CS530.
2. PROVIDE INNER LANE MARKER. REFER TO DETAIL 2, SHEET CS520.
3. PROVIDE OUTER LANE MARKER. REFER TO DETAIL 2, SHEET CS520.
4. PROVIDE RANGE LIMIT MARKER. REFER TO DETAIL 1, SHEET CS520.

## RANGE LEGEND

| | |
|---|---|
| V2-400 | STATIONARY ARMOR TARGET REFER TO DETAIL 1, SHEET CS532. |
| W2-400 | WIDENED STATIONARY INFANTRY TARGET REFER TO SHEET CS531. |
| S2-400 | STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| D2-400 | DOUBLE ARM STATIONARY INFANTRY TARGET. REFER TO SHEET CS530. |
| RLM-01 | RANGE LIMIT MARKER (RLM) REFER TO DETAIL 1, SHEET CS520. |
| LM-01 | INNER / OUTER LANE MARKER (LM) REFER TO DETAIL 2, SHEET CS520. |
| | CONSTRUCTION LIMITS |
| | AGGREGATE SURFACE |
| | CONCRETE SURFACE |

20' 10' 0 20' 40' 60'

GRAPHIC SCALE: 1"=20'-0"

N

**GEOGRAPHIC COORDINATE DATA**

HORIZONTAL DATUM: NAD83
MASSACHUSETTS STATE PLANE MAINLINE.

VERTICAL DATUM: NAD83.

UNITS OF MEASURE: U.S. SURVEY FEET.

COORDINATES SHOWN IN FORMAT OF EASTING, NORTHING AND ELEVATION.

US Army Corps of Engineers®

| MARK | DESCRIPTION | DATE |
|---|---|---|

| | |
|---|---|
| DESIGNED BY: S.CURRY | ISSUE DATE: MARCH 2020 |
| DRAWN BY: S.HAGGARD | SOLICITATION NO.: XXXXXX-XX-X-XXXX |
| CHECKED BY: M.MAYER | CONTRACT NO.: W912DY-15-D-0013 |
| SUBMITTED BY: C. LOWE | CATEGORY CODE XXX-XX-XX |
| SIZE: ANSI D | FILENAME: DMP01_CG132.dgn |

U.S. ARMY CORPS OF ENGINEERS
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