



## Structure Plans & Preliminary Construction Plan Submission to PUC

May 4, 2021

Cumberland County  
Lemoyne Borough  
SR 8513, SECTION 094 (Ramp X)  
DOT # 961507 X  
PUC No A-2021-3023835  
MPMS # 113754

Rosemary Chiavetta, Secretary  
Pennsylvania Public Utility Commission  
400 North Street  
Keystone Building  
Harrisburg, PA 17120

Dear Secretary Chiavetta:

Please find attached one copy of the preliminary Drawings for Construction which includes TS&L plans and Elevation View for State Route 8513, Section 094 in Cumberland County as part of the Department's project identified as I-83, Section 094, consisting of sheets 1 through 8 for a total of 8 sheets

The Department of Transportation hereby avers that a partial set of the aforesaid preliminary Drawings for Construction plans are being sent to the following parties of record for examination simultaneously with this submission to the Public Utility Commission:

Should you have any questions or concerns, please feel free to contact Ahmed Lasloudji at (717) 787 - 4732.

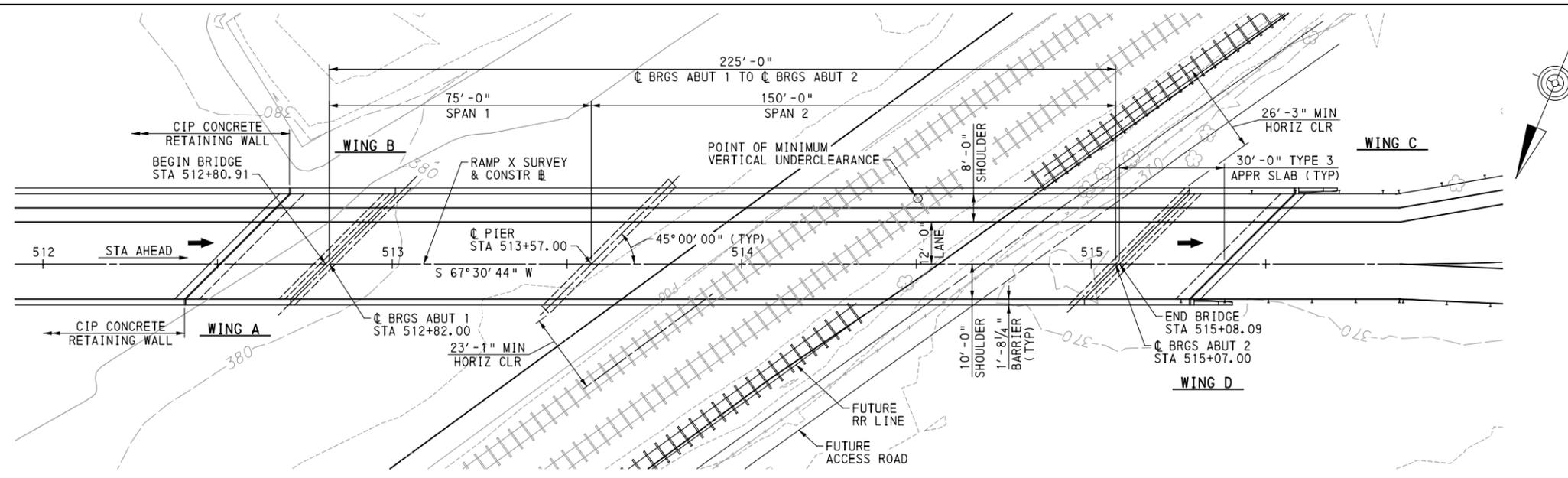
Sincerely

A handwritten signature in black ink, appearing to read "Ahmed Lasloudji". The signature is stylized and written over a faint, circular watermark or background.

Ahmed Lasloudji  
Engineering District 8-0  
Department of Transportation

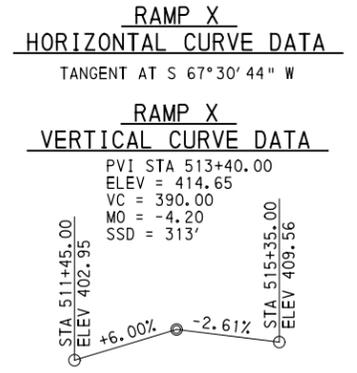
Attachment  
cc: Parties of Record

Remarks: \_\_\_\_\_  
 Date: 4/27/2021  
 Checked: \_\_\_\_\_  
 Revised: \_\_\_\_\_  
 Backchecked: \_\_\_\_\_

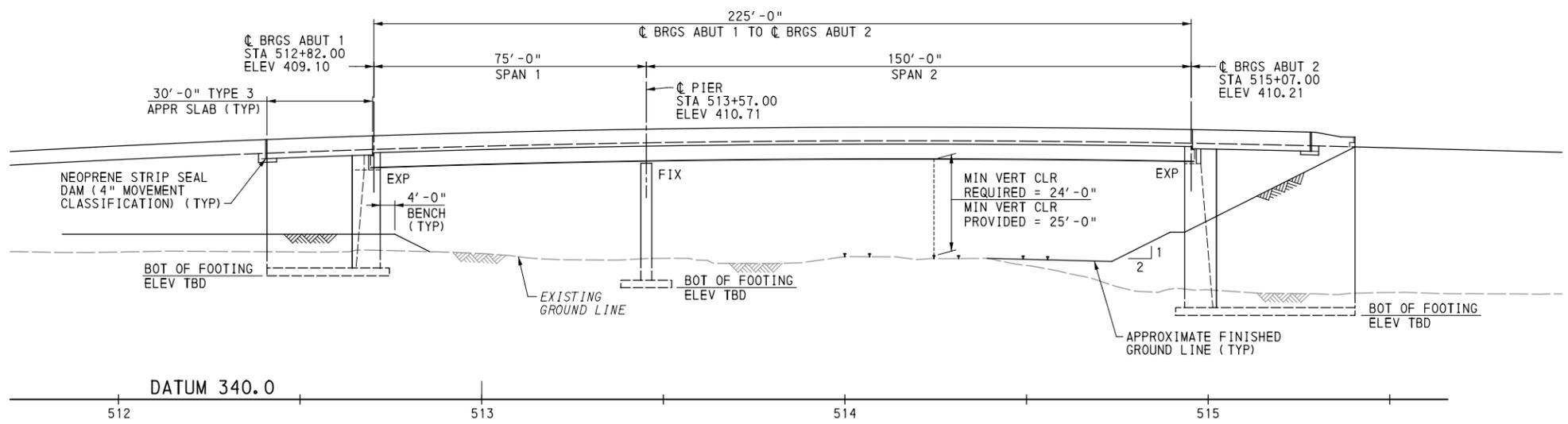


**PLAN**  
 20' 0 20'  
 SCALE : 1" = 20'-0"

WINGWALL LENGTHS	
WING	LENGTH
A	26'-0"
B	26'-0"
C	39'-0"
D	39'-0"



**EXISTING STRUCTURE DATA**  
 NEW ALIGNMENT



**ELEVATION**  
 20' 0 20'  
 SCALE : 1" = 20'-0"

**LEGEND**

- ➔ DIRECTION OF TRAFFIC
- 10 — PROPOSED CONTOURS
- - - 10 - - - EXISTING CONTOURS

**NOTES**

1. FOR GENERAL NOTES & TYPICAL SECTION, SEE SHEET 2.

Mark	Description	By	Chk' d.	Recm' d.	Date
REVISIONS					

NEW ALIGNMENT  
 BMS STR ID: 21-0083-0414-1595 MPMS/ECMS PROJ: 113754/E03757 BRKEY: 13718

**COMMONWEALTH OF PENNSYLVANIA**  
**DEPARTMENT OF TRANSPORTATION**

**CUMBERLAND COUNTY**  
 SR 8513 SECTION 094  
 SEGMENT TBD OFFSET TBD  
 SR 8513 (RAMP X) STA 415+32.00 OVER NSRR  
 2-SPAN PAINTED STEEL PLATE GIRDER BRIDGE  
 TYPE, SIZE & LOCATION - ALTERNATE 1

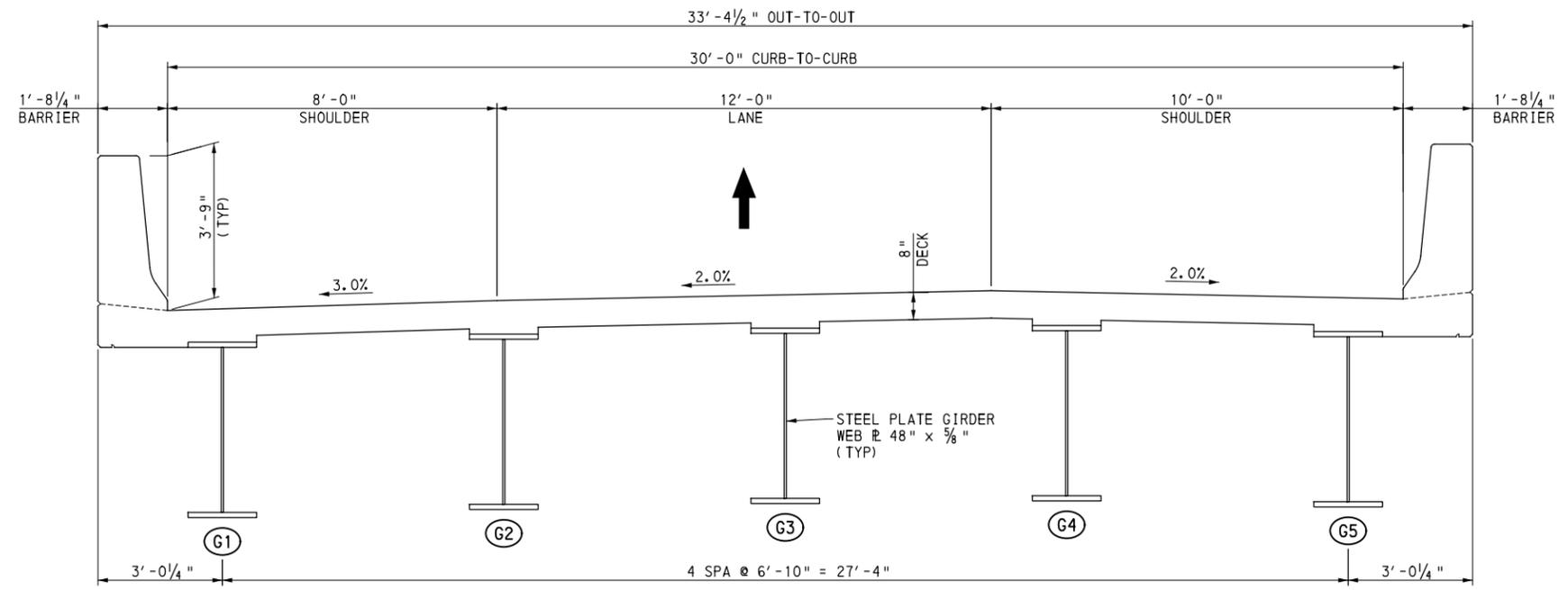
**PRELIMINARY**  
 NOT FOR  
 CONSTRUCTION

PREPARED BY :  
  
 KCI TECHNOLOGIES, INC  
 5001 LOUISE DRIVE,  
 SUITE 201  
 MECHANICSBURG, PA 17055  
 TEL: (717) 691-1340

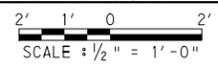
PROFESSIONAL ENGINEER \_\_\_\_\_ DATE 04/27/2021

RECOMMENDED \_\_\_\_\_ SHEET 1 OF 2  
 S-XXXXX

Remarks: \_\_\_\_\_  
 Date: 4/27/2021  
 Check print # \_\_\_\_\_  
 Checked: \_\_\_\_\_  
 Revised: \_\_\_\_\_  
 Backchecked: \_\_\_\_\_



**RAMP X TYPICAL SECTION - ALTERNATE 1**



**GENERAL NOTES**

**DESIGN SPECIFICATIONS**

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2017, AND AS SUPPLEMENTED BY DESIGN MANUAL, PART 4, DECEMBER 2019 EDITION.

LIVE LOAD DISTRIBUTION TO GIRDERS IS BASED UPON PENNDOT DESIGN MANUAL, PART 4, DISTRIBUTION FACTORS.

DESIGN IS IN ACCORDANCE WITH THE LRFD METHOD.

**DESIGN LIVE LOADS**

PHL-93 OR P-82 (204 KIP PERMIT LOAD).

FATIGUE DESIGN IS BASED ON ADTT 699 (DESIGN YEAR 2050).

**DEAD LOADS**

INCLUDES 30 LBS PER SQ FT FOR FUTURE WEARING SURFACE ON THE DECK SLAB.

Mark	Description	By	Chk' d.	Recm' d.	Date
REVISIONS					

NEW ALIGNMENT  
 BMS STR ID: 21-0083-0414-1595 MPMS/ECMS PROJ: 113754/E03757 BRKEY: 13718

**COMMONWEALTH OF PENNSYLVANIA**  
**DEPARTMENT OF TRANSPORTATION**

**CUMBERLAND COUNTY**  
 SR 8513 SECTION 094  
 SEGMENT TBD OFFSET TBD  
 SR 8513 (RAMP X) STA 415+32.00 OVER NSRR  
 2-SPAN PAINTED STEEL PLATE GIRDER BRIDGE  
 TYPICAL SECTION - ALTERNATE 1

**PRELIMINARY**  
 NOT FOR  
 CONSTRUCTION

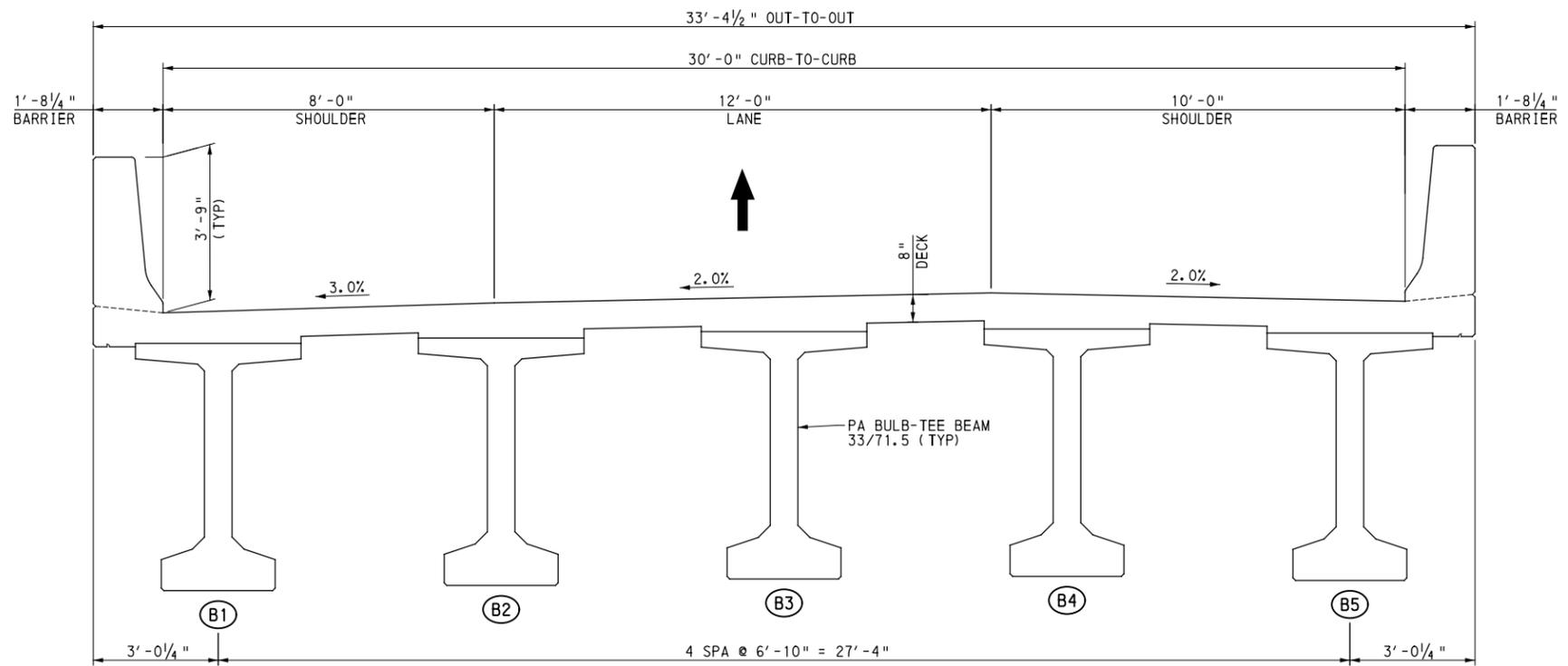
PREPARED BY  
 KCI TECHNOLOGIES

RECOMMENDED _____	SHEET <u>2</u> OF <u>2</u>
	S-XXXXX

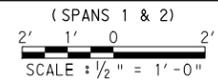
4/27/2021 c:\vms\kci-projects\_02\scott.grey\dms38623\Ramp\_X\_T5&L-Alt\_1.dgn



Remarks: \_\_\_\_\_  
 Date: 4/27/2021  
 Check print # \_\_\_\_\_  
 Checked: \_\_\_\_\_  
 Revised: \_\_\_\_\_  
 Backchecked: \_\_\_\_\_



**RAMP X TYPICAL SECTION - ALTERNATE 2**



**GENERAL NOTES**

**DESIGN SPECIFICATIONS**

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2017, AND AS SUPPLEMENTED BY DESIGN MANUAL, PART 4, DECEMBER 2019 EDITION.  
 LIVE LOAD DISTRIBUTION TO GIRDERS IS BASED UPON PENNDOT DESIGN MANUAL, PART 4, DISTRIBUTION FACTORS.  
 DESIGN IS IN ACCORDANCE WITH THE LRFD METHOD.

**DESIGN LIVE LOADS**

PHL-93, P-82 AND P2016-13 (204 KIP PERMIT LOAD).

**DEAD LOADS**

INCLUDES 30 LBS PER SQ FT FOR FUTURE WEARING SURFACE ON THE DECK SLAB.

Mark	Description	By	Chk' d.	Recm' d.	Date
REVISIONS					

NEW ALIGNMENT  
 BMS STR ID: 21-0083-0414-1595 MPMS/ECMS PROJ: 113754/E03757 BRKEY: 13718

**COMMONWEALTH OF PENNSYLVANIA**  
**DEPARTMENT OF TRANSPORTATION**

CUMBERLAND COUNTY  
 SR 8513 SECTION 094  
 SEGMENT TBD OFFSET TBD  
 SR 8513 (RAMP X) STA 415+32.00 OVER NSRR  
 2-SPAN P/S CONCRETE BULB-TEE BEAM BRIDGE  
 TYPICAL SECTION - ALTERNATE 2

**PRELIMINARY**  
 NOT FOR  
 CONSTRUCTION

PREPARED BY  
 KCI TECHNOLOGIES

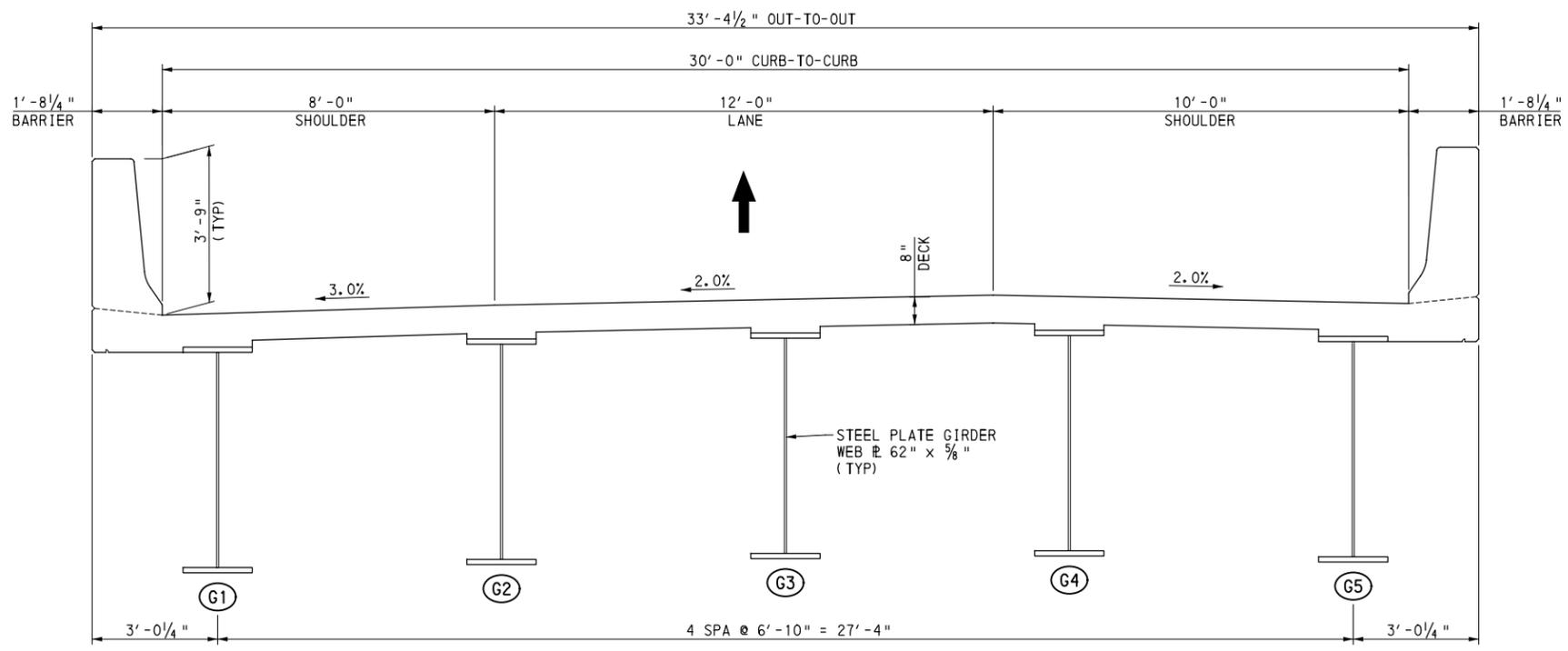
RECOMMENDED \_\_\_\_\_

SHEET 2 OF 2

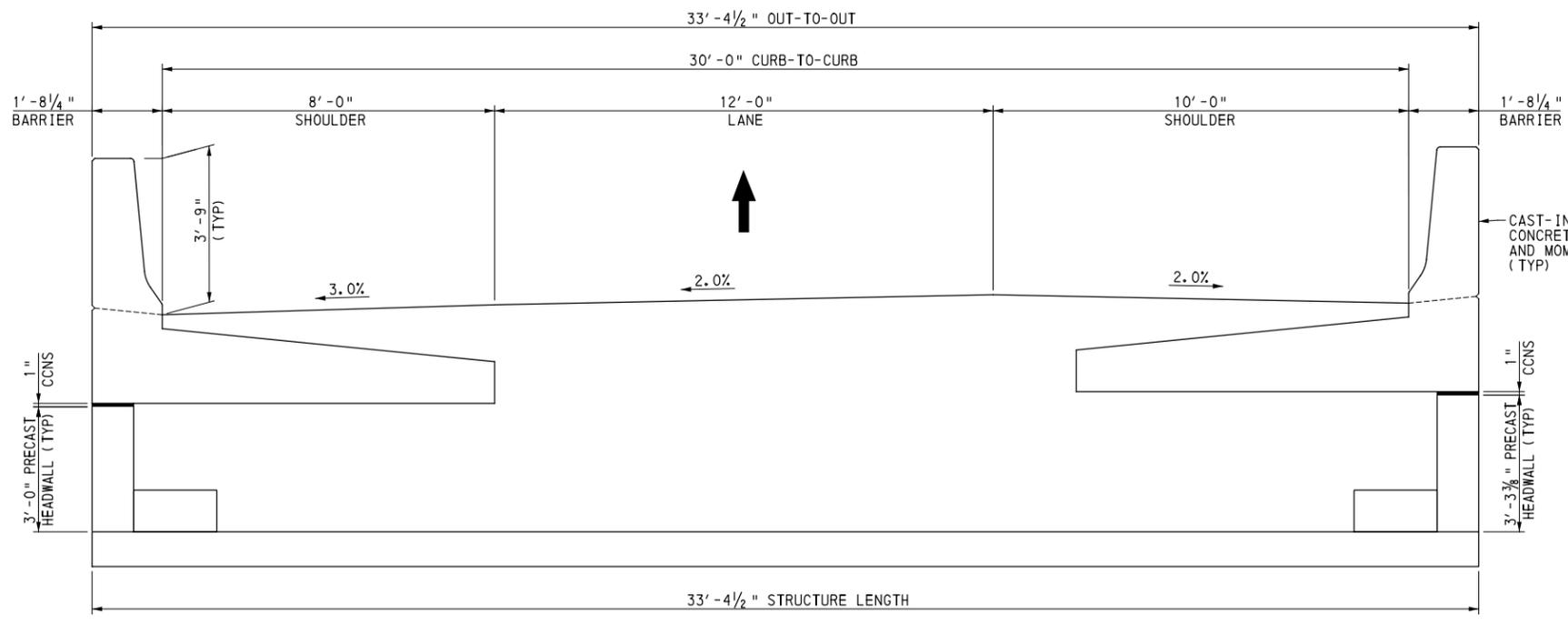
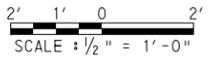
S-XXXXX



Remarks: \_\_\_\_\_  
 Date: 4/27/2021  
 Check print # \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Revised: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Backchecked: \_\_\_\_\_  
 Date: \_\_\_\_\_



**RAMP X TYPICAL SECTION ACROSS BRIDGE - ALTERNATE 3**



**RAMP X TYPICAL SECTION ACROSS CONSPAN ARCH - ALTERNATE 3**



NOTE: MOMENT SLAB OVER THE CONSPAN ARCH WILL HAVE TO BE DESIGNED FOR A 45" BARRIER.

**GENERAL NOTES**

**DESIGN SPECIFICATIONS**

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2017, AND AS SUPPLEMENTED BY DESIGN MANUAL, PART 4, DECEMBER 2019 EDITION.  
 LIVE LOAD DISTRIBUTION TO GIRDERS IS BASED UPON PENNDOT DESIGN MANUAL, PART 4, DISTRIBUTION FACTORS.  
 DESIGN IS IN ACCORDANCE WITH THE LRFD METHOD.

**DESIGN LIVE LOADS**

PHL-93, P-82 AND P2016-13 (204 KIP PERMIT LOAD).  
 FATIGUE DESIGN IS BASED ON ADTT 1013 (DESIGN YEAR 2050).

**DEAD LOADS**

INCLUDES 30 LBS PER SQ FT FOR FUTURE WEARING SURFACE ON THE DECK SLAB.

Mark	Description	By	Chk' d.	Recm' d.	Date
REVISIONS					

NEW ALIGNMENT  
 BMS STR ID: 21-0083-0414-1595 MPMS/ECMS PROJ: 113754/E03757 BRKEY: 13718

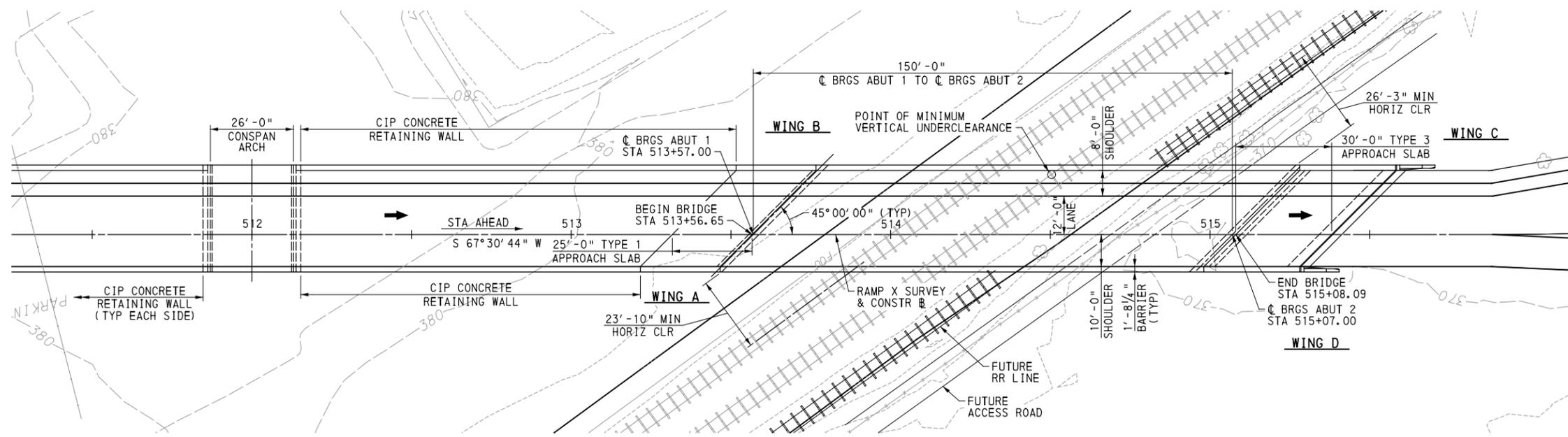
**COMMONWEALTH OF PENNSYLVANIA**  
**DEPARTMENT OF TRANSPORTATION**

CUMBERLAND COUNTY  
 SR 8513 SECTION 094  
 SEGMENT TBD OFFSET TBD  
 SR 8513 (RAMP X) STA 415+32.00 OVER NSRR  
 SINGLE SPAN PAINTED STEEL PLATE GIRDER BRIDGE  
 TYPICAL SECTION - ALTERNATE 3

**PRELIMINARY**  
 NOT FOR  
 CONSTRUCTION

PREPARED BY  
 KCI TECHNOLOGIES

4/27/2021 c:\vms\cd-projects\_02\scott.grey\dms38423\Ramp\_X\_T58L-Alt\_3.dgn



**PLAN**  
 20' 0 20'  
 SCALE: 1" = 20'-0"

**RAMP X**  
**HORIZONTAL CURVE DATA**  
 TANGENT AT S 67°30'44" W

**RAMP X**  
**VERTICAL CURVE DATA**  
 PVI STA 513+40.00  
 ELEV = 414.65  
 VC = 390.00  
 MO = -4.20  
 SSD = 313'

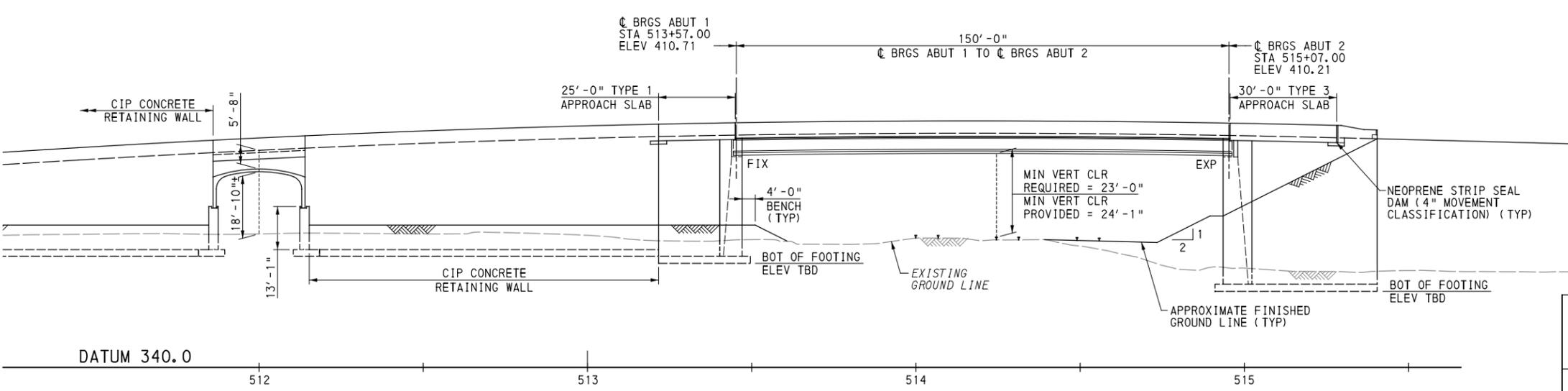
STA 511+45.00 ELEV 402.95  
 +6.00%  
 -2.61%  
 STA 515+35.00 ELEV 409.56

**EXISTING STRUCTURE DATA**  
 NEW ALIGNMENT

**WINGWALL LENGTHS**

WING	LENGTH
A	23'-0"
B	23'-0"
C	39'-0"
D	39'-0"

Remarks: \_\_\_\_\_  
 Date: 4/27/2021  
 Check print # \_\_\_\_\_  
 Checked: \_\_\_\_\_  
 Revised: \_\_\_\_\_  
 Backchecked: \_\_\_\_\_



**ELEVATION**  
 20' 0 20'  
 SCALE: 1" = 20'-0"

**LEGEND**

- ➔ DIRECTION OF TRAFFIC
- 10 — PROPOSED CONTOURS
- - - 10 - - - EXISTING CONTOURS

**NOTES**

1. FOR GENERAL NOTES & TYPICAL SECTION, SEE SHEET 2.

Mark	Description	By	Chk' d.	Recm' d.	Date
REVISIONS					

NEW ALIGNMENT  
 BMS STR ID: 21-0083-0414-1595 MPMS/ECMS PROJ: 113754/E03757 BRKEY: 13718

**COMMONWEALTH OF PENNSYLVANIA**  
**DEPARTMENT OF TRANSPORTATION**

**CUMBERLAND COUNTY**  
 SR 8513 SECTION 094  
 SEGMENT TBD OFFSET TBD  
 SR 8513 (RAMP X) STA 415+32.00 OVER NSRR  
 SINGLE SPAN P/S CONC BULB-TEE BEAM BRIDGE  
 TYPE, SIZE & LOCATION - ALTERNATE 4

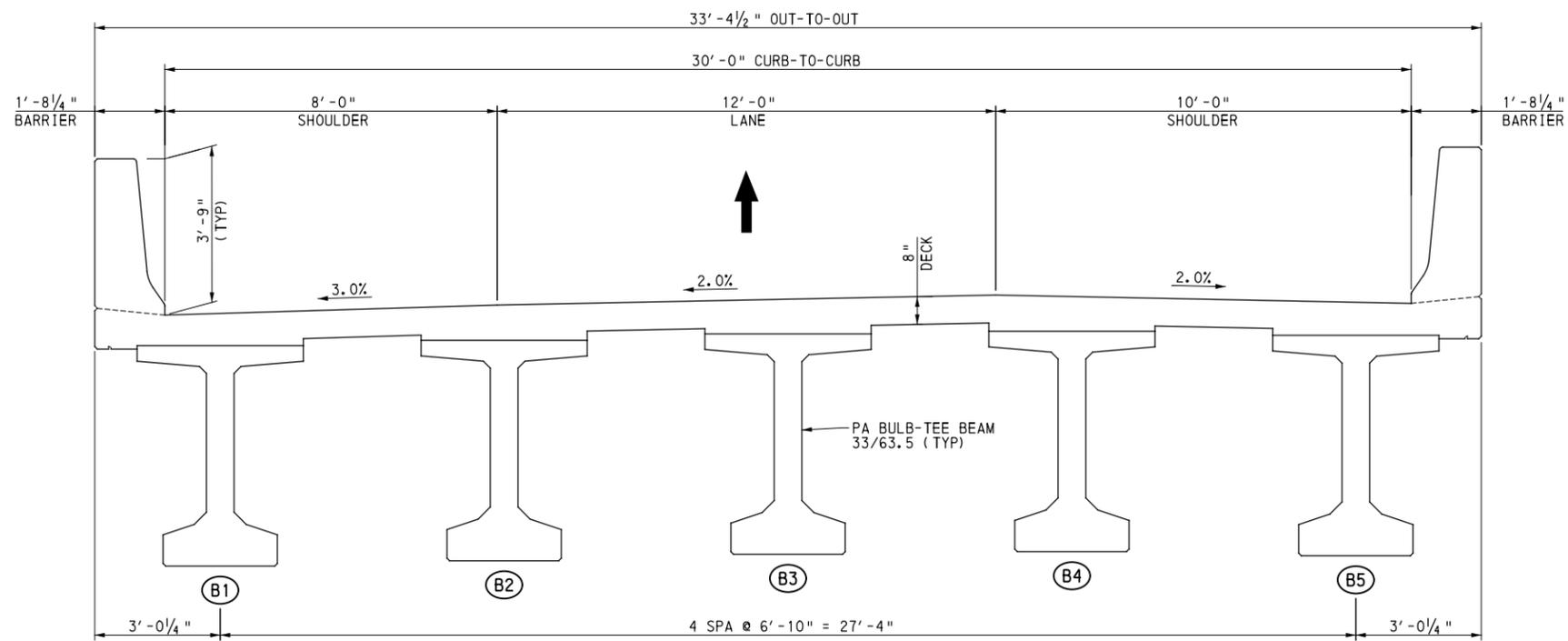
**PRELIMINARY**  
 NOT FOR CONSTRUCTION

PREPARED BY:  
  
**KCI TECHNOLOGIES, INC**  
 5001 LOUISE DRIVE,  
 SUITE 201  
 MECHANICSBURG, PA 17055  
 TEL: (717) 691-1340

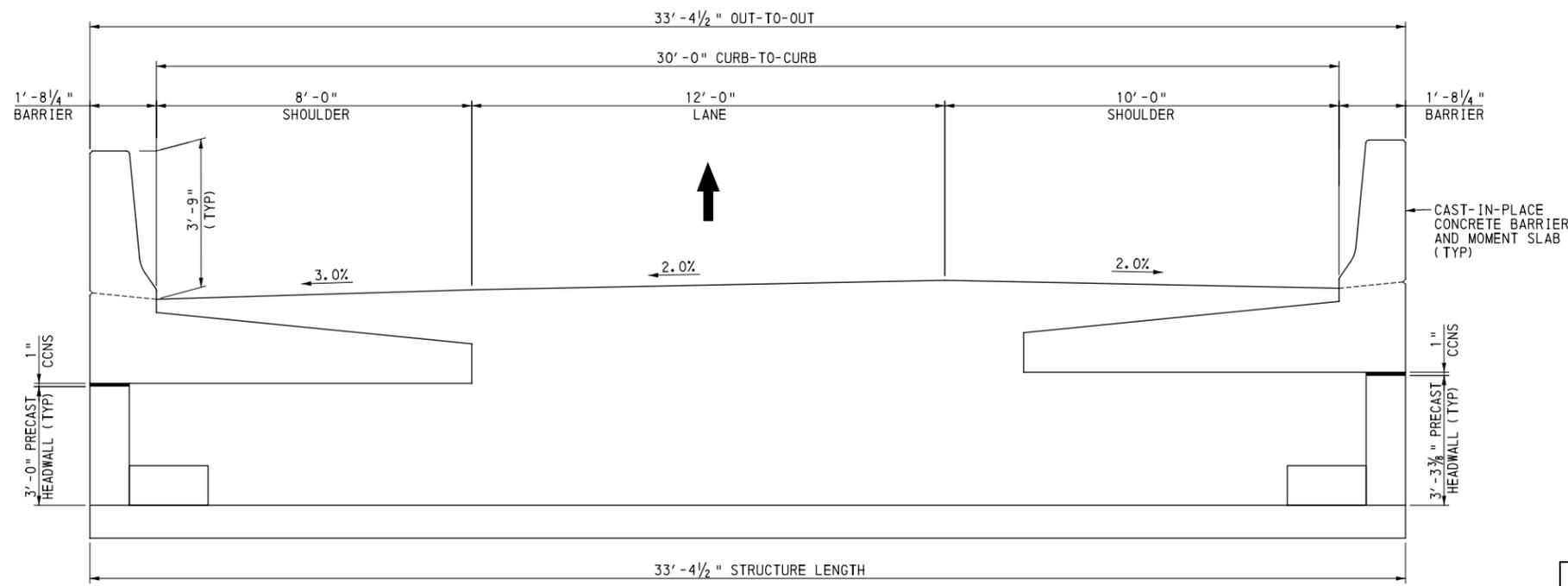
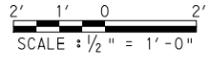
PROFESSIONAL ENGINEER \_\_\_\_\_ DATE 03/31/2021

RECOMMENDED \_\_\_\_\_ SHEET 1 OF 2  
 S-XXXXX

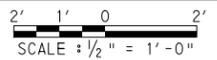
Remarks: \_\_\_\_\_  
 Date: 4/27/2021  
 Check print # \_\_\_\_\_  
 Checked: \_\_\_\_\_  
 Revised: \_\_\_\_\_  
 Backchecked: \_\_\_\_\_



**RAMP X TYPICAL SECTION ACROSS BRIDGE - ALTERNATE 4**



**RAMP X TYPICAL SECTION ACROSS CONSPAN ARCH - ALTERNATE 4**



NOTE: MOMENT SLAB OVER THE CONSPAN ARCH WILL HAVE TO BE DESIGNED FOR A 45" BARRIER.

**GENERAL NOTES**

**DESIGN SPECIFICATIONS**

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2017, AND AS SUPPLEMENTED BY DESIGN MANUAL, PART 4, DECEMBER 2019 EDITION.  
 LIVE LOAD DISTRIBUTION TO GIRDERS IS BASED UPON PENNDOT DESIGN MANUAL, PART 4, DISTRIBUTION FACTORS.  
 DESIGN IS IN ACCORDANCE WITH THE LRFD METHOD.

**DESIGN LIVE LOADS**

PHL-93, P-82 AND P2016-13 (204 KIP PERMIT LOAD).

**DEAD LOADS**

INCLUDES 30 LBS PER SQ FT FOR FUTURE WEARING SURFACE ON THE DECK SLAB.

Mark	Description	By	Chk' d.	Recm' d.	Date
REVISIONS					

NEW ALIGNMENT  
 BMS STR ID: 21-0083-0414-1595 MPMS/ECMS PROJ: 113754/E03757 BRKEY: 13718

**COMMONWEALTH OF PENNSYLVANIA**  
**DEPARTMENT OF TRANSPORTATION**

CUMBERLAND COUNTY  
 SR 8513 SECTION 094  
 SEGMENT TBD OFFSET TBD  
 SR 8513 (RAMP X) STA 415+32.00 OVER NSRR  
 SINGLE SPAN P/S CONC BULB-TEE BEAM BRIDGE  
 TYPICAL SECTION - ALTERNATE 4

**PRELIMINARY**  
 NOT FOR  
 CONSTRUCTION

PREPARED BY  
 KCI TECHNOLOGIES

4/27/2021 c:\vms\kci-projects\_02\scott.grey\dms38423\Ramp\_X\_T5&L-alt\_4.dgn