

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE						
				STP -RURAL	STP -RURAL	STP -RURAL	STP -RURAL	STP -RURAL	STP -RURAL	STP -RURAL
				FED 80%/ STATE 20%	FED 80%/ STATE 20%	FED 80%/ STATE 20%	FED 80%/ STATE 20%	FED 80%/ STATE 20%	FED 80%/ STATE 20%	FED 80%/ STATE 20%
				ROADWAY	MINOR STRUCTURES	MINOR STRUCTURES	MINOR STRUCTURES	MINOR STRUCTURES	MINOR STRUCTURES	MINOR STRUCTURES
				0005	0004	0004	0004	0004	0004	0004
				RURAL	006 -2620	006 -2621	006 -2622	006 -2623	006 -2595	006 -2609
50104400	CONCRETE HEADWALL REMOVAL	EACH	2	2						
50105220	PIPE CULVERT REMOVAL	FOOT	66	66						
50200100	STRUCTURE EXCAVATION	CU YD	8210	721	1812	1510	1897	863	53	1354
50800105	REINFORCEMENT BARS	POUND	95680		16820	16330	13350	9160	4700	35320
50800205	REINFORCEMENT BARS , EPOXY COATED	POUND	470						470	
52200015	PERMANENT SHEET PILING	SQ FT	5146			477				4669
54003000	CONCRETE BOX CULVERTS	CU YD	577.5		104	77	67	53	65	212
54010303	PRECAST CONCRETE BOX CULVERTS 3' X 3'	FOOT	92	92						
542A1063	PIPE CULVERTS, CLASS A, TYPE 2 18"	FOOT	50	50						
542D0220	PIPE CULVERTS, CLASS D, TYPE 1 15"	FOOT	32	32						
54213663	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 18"	EACH	1	1						
54262715	METAL FLARED END SECTIONS 15"	EACH	2	2						
60236200	INLETS, TYPE A, TYPE 8 GRATE	EACH	1	1						
60500060	REMOVING INLETS	EACH	1	1						

* SPECIALTY ITEM

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	DRAWN - NV	REVISED -
PLOT SCALE =	CHECKED -	REVISED -
PLOT DATE =	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: SHEET 4 OF 7 SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1252	(R-4)ES	BUREAU	100	6
ILLINOIS FED. AID PROJECT			CONTRACT NO. 66F91	

REV. 4/11/22 REV 4/5/22 REV. 2/28/22

GENERAL NOTES

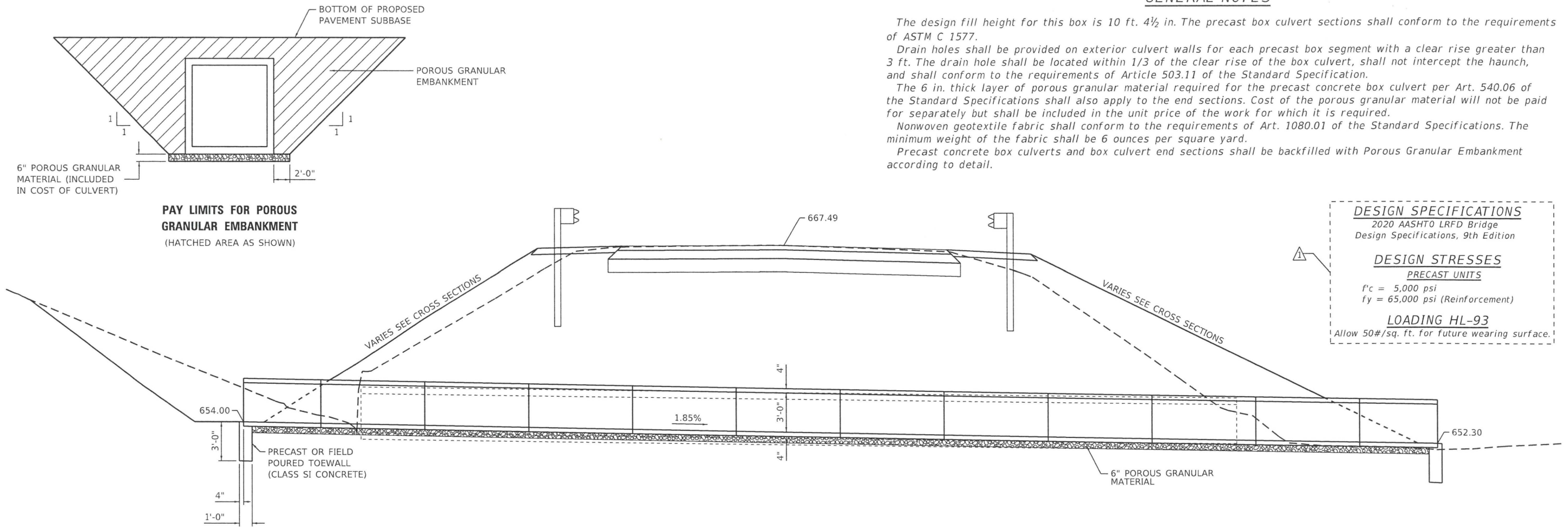
The design fill height for this box is 10 ft. 4 1/2 in. The precast box culvert sections shall conform to the requirements of ASTM C 1577.
 Drain holes shall be provided on exterior culvert walls for each precast box segment with a clear rise greater than 3 ft. The drain hole shall be located within 1/3 of the clear rise of the box culvert, shall not intercept the haunch, and shall conform to the requirements of Article 503.11 of the Standard Specification.
 The 6 in. thick layer of porous granular material required for the precast concrete box culvert per Art. 540.06 of the Standard Specifications shall also apply to the end sections. Cost of the porous granular material will not be paid for separately but shall be included in the unit price of the work for which it is required.
 Nonwoven geotextile fabric shall conform to the requirements of Art. 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.
 Precast concrete box culverts and box culvert end sections shall be backfilled with Porous Granular Embankment according to detail.

DESIGN SPECIFICATIONS
 2020 AASHTO LRFD Bridge Design Specifications, 9th Edition

DESIGN STRESSES
 PRECAST UNITS
 f'c = 5,000 psi
 fy = 65,000 psi (Reinforcement)

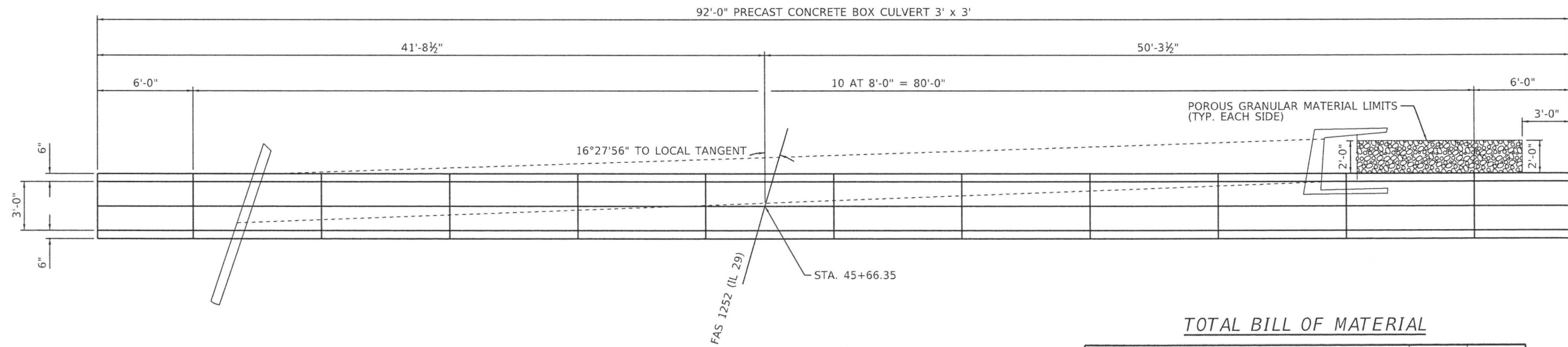
LOADING HL-93
 Allow 50#/sq. ft. for future wearing surface.

PAY LIMITS FOR POROUS GRANULAR EMBANKMENT
 (HATCHED AREA AS SHOWN)



ELEVATION ALONG BOX CENTERLINE

BORING #2
 STA 45+86.52
 13.1' RT



PLAN

EXIST. STRUCTURE: BUILT AS PROJECT 7, SECTION R-4 IN 1924.
 STRUCTURE CONSISTS OF A 3'X3' REINFORCED CONCRETE BOX CULVERT 67' LONG.

BORING #1
 STA 45+38.37
 13.2' RT

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Precast Concrete Box Culverts, 3' x 3'	Foot	92
Stone Riprap, Class A4	Sq. Yd.	16
Filter Fabric	Sq. Yd.	16
Porous Granular Embankment	Cu. Yd.	721
Structure Excavation	Cu. Yd.	721

4/8/22
 date

JAMES K. CLINARD
 LICENSED STRUCTURAL ENGINEER
 NO. 081-004655
 STATE OF ILLINOIS
 expires 11-30-2022

signature

PROFESSIONAL DESIGN FIRM
 LICENSE NO. 184-001717

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PLOT DATE =	CHECKED - JKC	REVISED -
	DATE -	REVISED -

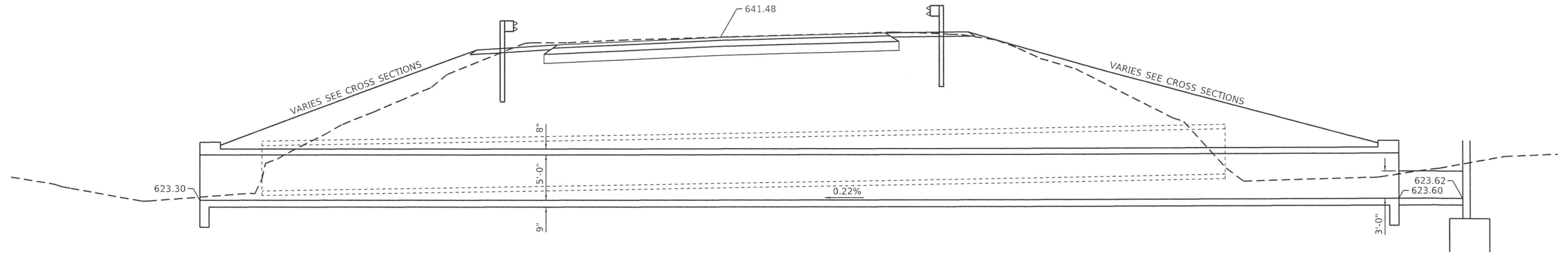
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PRECAST CONCRETE BOX CULVERT 3' x 3'
STA. 45 + 66.35

F.A.S. RTE. 1252	SECTION (R-4)CR	COUNTY BUREAU	TOTAL SHEETS 100	SHEET NO. 28
SCALE: SHEET 2 OF 3 SHEETS STA. TO STA.		CONTRACT NO. 66F91		
ILLINOIS FED. AID PROJECT				

REV. 4/11/22

EXIST. STRUCTURE: SN 006-2620 BUILT AS PROJECT 7, SECTION R-4 IN 1924.
 STRUCTURE CONSISTS OF A 5'X4' REINFORCED
 CONCRETE BOX CULVERT 104' LONG.



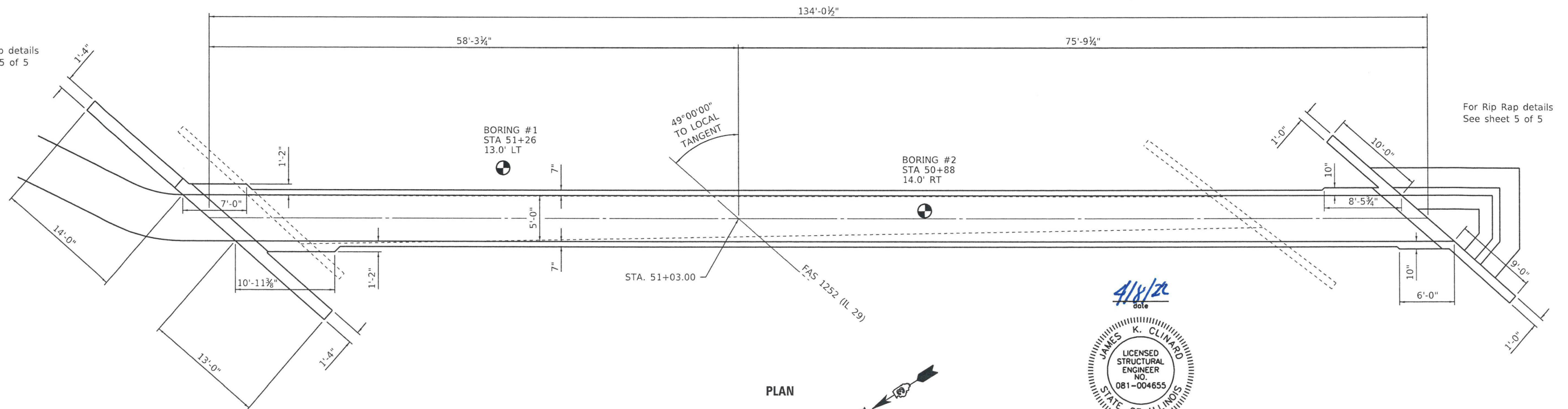
ELEVATION ALONG BOX CENTERLINE

DESIGN SPECIFICATIONS
 2020 AASHTO LRFD Bridge
 Design Specifications, 9th Edition

DESIGN STRESSES
 FIELD UNITS
 $f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

LOADING HL-93
 Allow 50#/sq. ft. for future wearing surface.

For Rip Rap details
 See sheet 5 of 5



PLAN

For Rip Rap details
 See sheet 5 of 5

4/18/22
 date
 JAMES K. CLINARD
 LICENSED STRUCTURAL ENGINEER
 NO. 081-004655
 STATE OF ILLINOIS
 expires 11-30-2022
 signature
 PROFESSIONAL DESIGN FIRM
 LICENSE NO. 184-001717

See Sheets 2 - 4 of 5 for
 Details and Sections.

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PLOT DATE =	CHECKED - JKC	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SN 006-2620
 STA. 51 + 03.00

SCALE: SHEET 1 OF 6 SHEETS STA. TO STA.

F.A.S. RTE. 1252	SECTION (R-4)CR	COUNTY BUREAU	TOTAL SHEETS 100	SHEET NO. 31
CONTRACT NO. 66F91				
ILLINOIS FED. AID PROJECT				

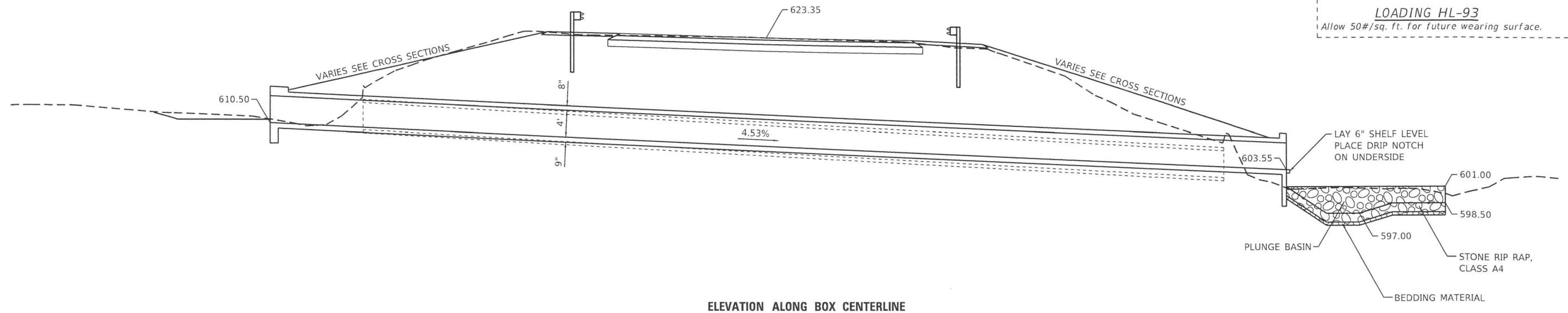
REV. 4/11/22

EXIST. STRUCTURE: SN 006-2621 BUILT AS PROJECT 7, SECTION R-4 IN 1924.
 STRUCTURE CONSISTS OF A 5'X4' REINFORCED
 CONCRETE BOX CULVERT 135' LONG.

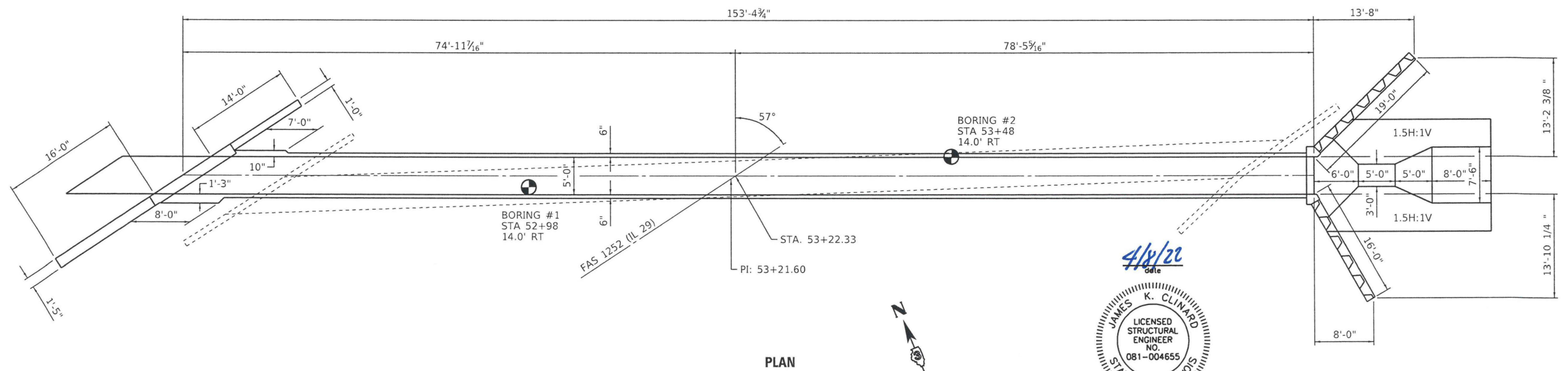
DESIGN SPECIFICATIONS
 2020 AASHTO LRFD Bridge
 Design Specifications, 9th Edition

DESIGN STRESSES
 FIELD UNITS
 $f'_c = 3,500 \text{ psi}$
 $f_y = 60,000 \text{ psi}$ (Reinforcement)
 $f_y = 50,000 \text{ psi}$ (M270 Grade 50 - Sheet Piling)

LOADING HL-93
 Allow 50#/sq. ft. for future wearing surface.



— SHEET PILE
 WING WALLS
 SEE SHEET 4 OF 5



4/8/22
 date

JAMES K. CLINARD
 LICENSED STRUCTURAL ENGINEER
 NO. 081-004655
 STATE OF ILLINOIS

expires 11-30-2022

signature

PROFESSIONAL DESIGN FIRM
 LICENSE NO. 184-001717

See Sheets 2 - 4 of 5 for
 Details and Sections.

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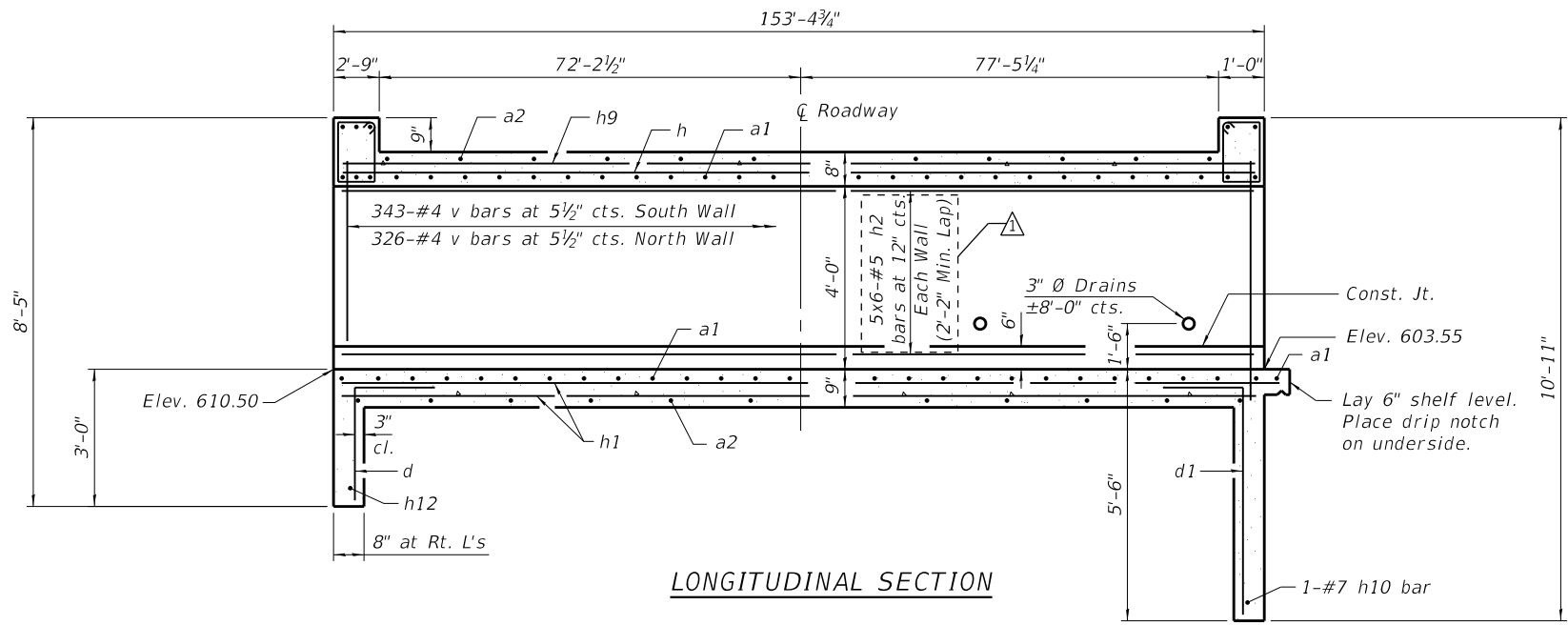
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SN 006-2621
 STA. 53 + 22.33

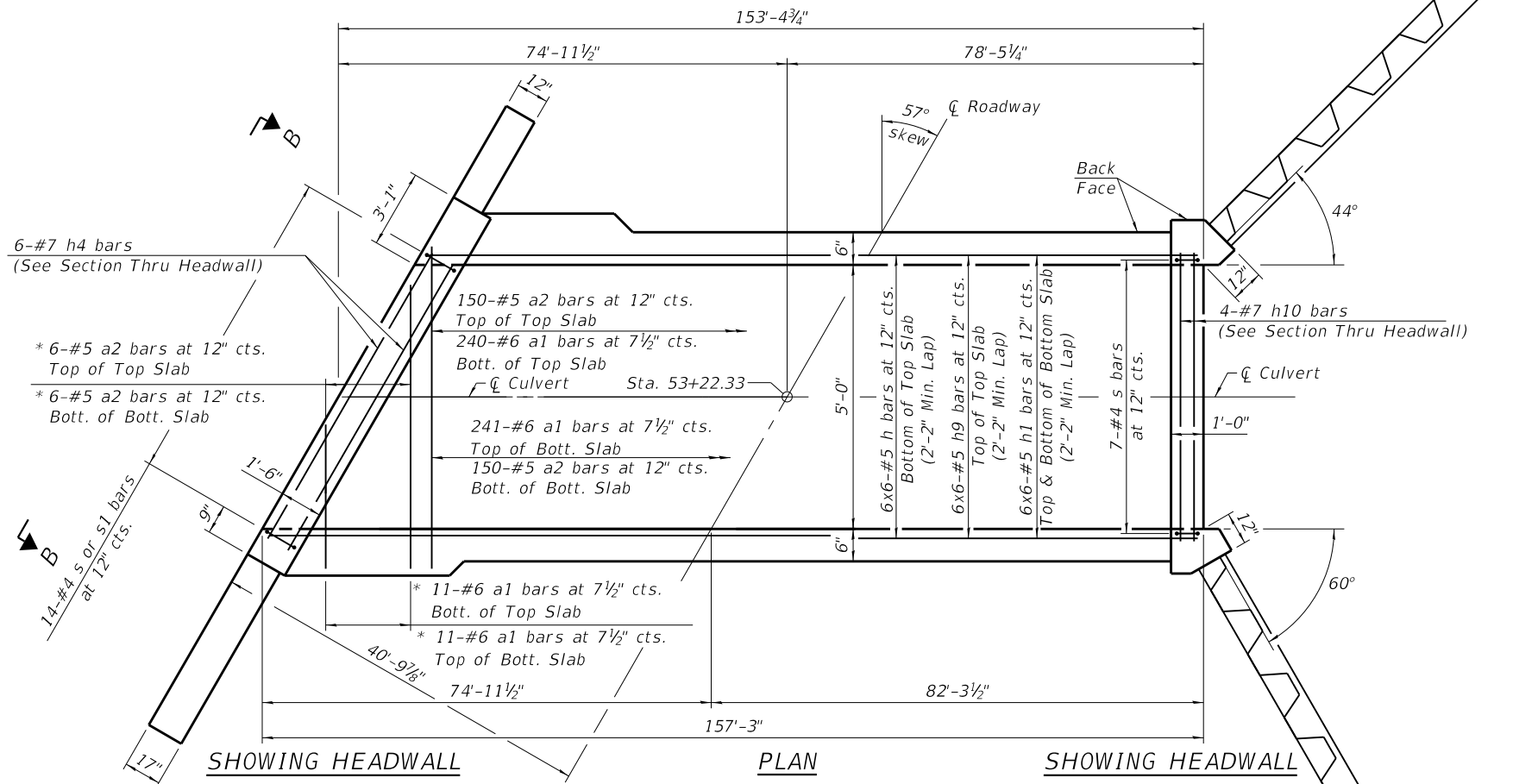
SCALE: SHEET 1 OF 6 SHEETS STA. TO STA.

F.A.S. RTE. 1252	SECTION (R-4)CR	COUNTY BUREAU	TOTAL SHEETS 100	SHEET NO. 37
CONTRACT NO. 66F91				
ILLINOIS FED. AID PROJECT				

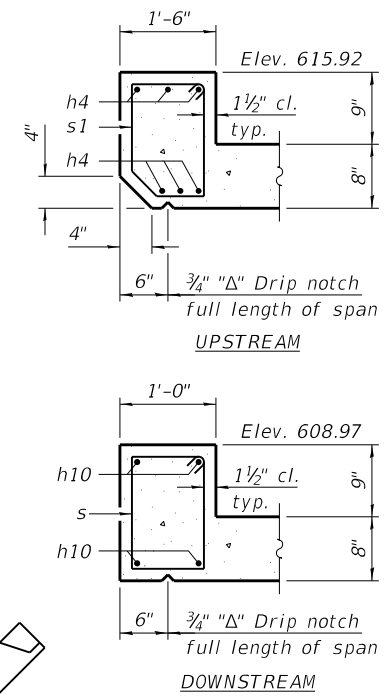
REV. 4/11/22



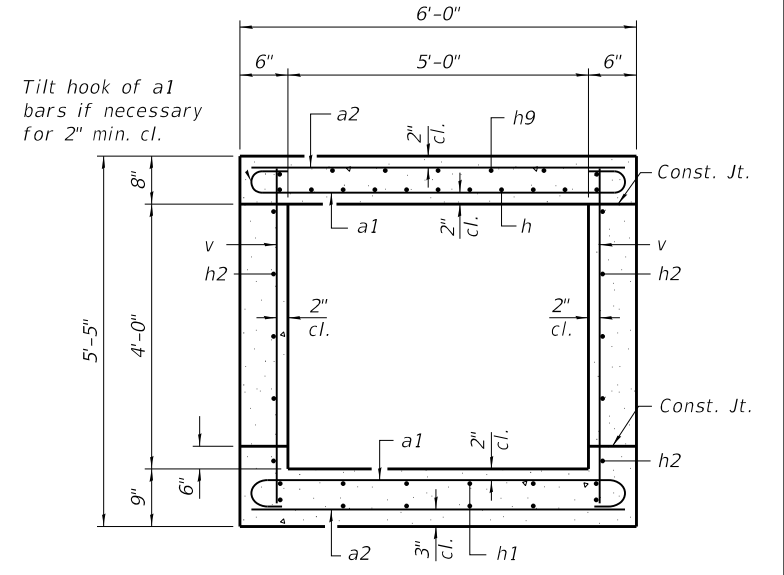
* a bars in skew portion of slab shall be ordered full length and cut to fit.



Notes:
A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.
Bars indicated thus 12 x 4-#5 etc. indicates 12 lines of bars with 4 lengths per line.



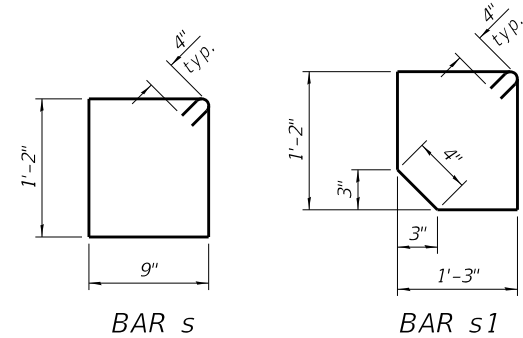
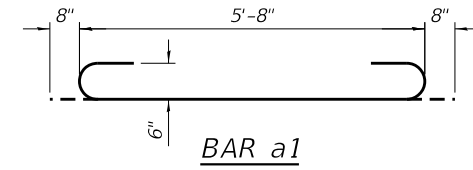
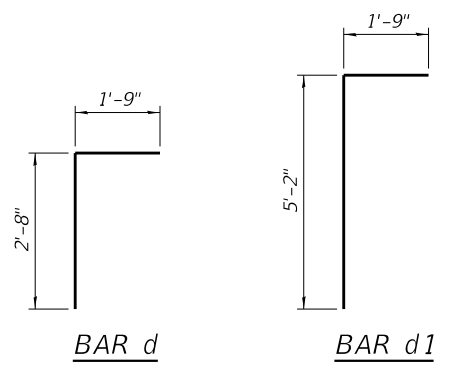
SECTION THRU HEADWALL



SECTION THRU BARREL

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1	503	#6	7'-0"	U
a2	312	#5	5'-8"	—
d	6	#4	4'-5"	L
d1	6	#4	6'-11"	L
h	36	#5	28'-0"	—
h1	72	#5	28'-0"	—
h2	60	#5	28'-0"	—
h3	8	#7	8'-0"	—
h4	8	#7	12'-8"	—
h6	10	#7	20'-3"	—
h7	8	#7	8'-0"	—
h8	10	#7	15'-1"	—
h9	36	#5	28'-0"	—
h10	7	#7	5'-8"	—
h11	22	#4	1'-6"	L
h12	5	#7	38'-10"	—
s	7	#4	4'-6"	□
s1	14	#4	5'-4"	□
v	671	#4	5'-2"	—
v3	8	#4	8'-0"	—
v4	6	#5	10'-6"	—
Concrete Box Culverts	Cu. Yd.		77.1	
Reinforcement Bars	Pound		16,330	
Stone Riprap, Class A4	Sq. Yd.		147	
Filter Fabric	Sq. Yd.		147	
Porous Granular Embankment	Cu. Yd.		1,483	
Structure Excavation	Cu. Yd.		1,510	
Permanent Sheet Piling	Sq. Ft.		477	



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	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

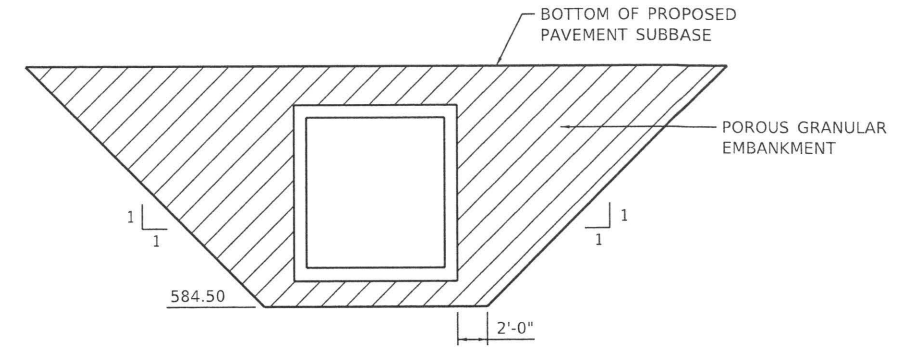
CULVERT DETAILS
SN 006-2621 STA. 53 + 22.33

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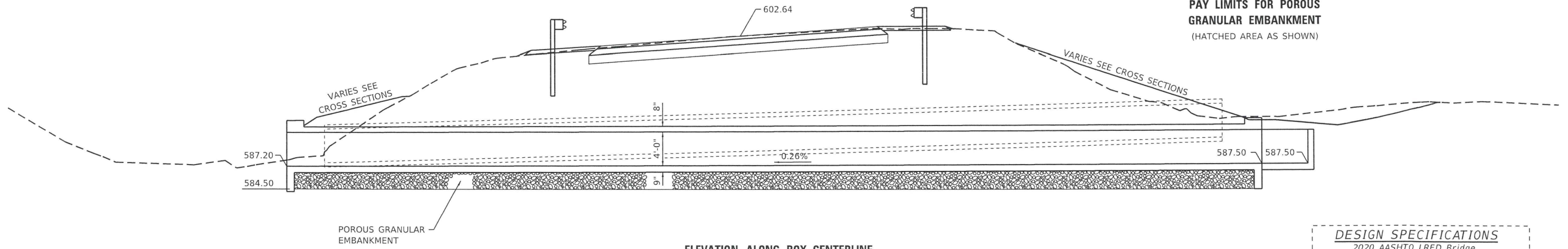
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1252	(R-4)CR	BUREAU	100	38
				CONTRACT NO. 66F91
		ILLINOIS	FED. AID PROJECT	

REV. 4/11/22

EXIST. STRUCTURE: SN 006-2622 BUILT AS PROJECT 7, SECTION R-4 IN 1924.
 STRUCTURE CONSISTS OF A 5'X4' REINFORCED
 CONCRETE BOX CULVERT 110' LONG.



PAY LIMITS FOR POROUS GRANULAR EMBANKMENT
 (HATCHED AREA AS SHOWN)

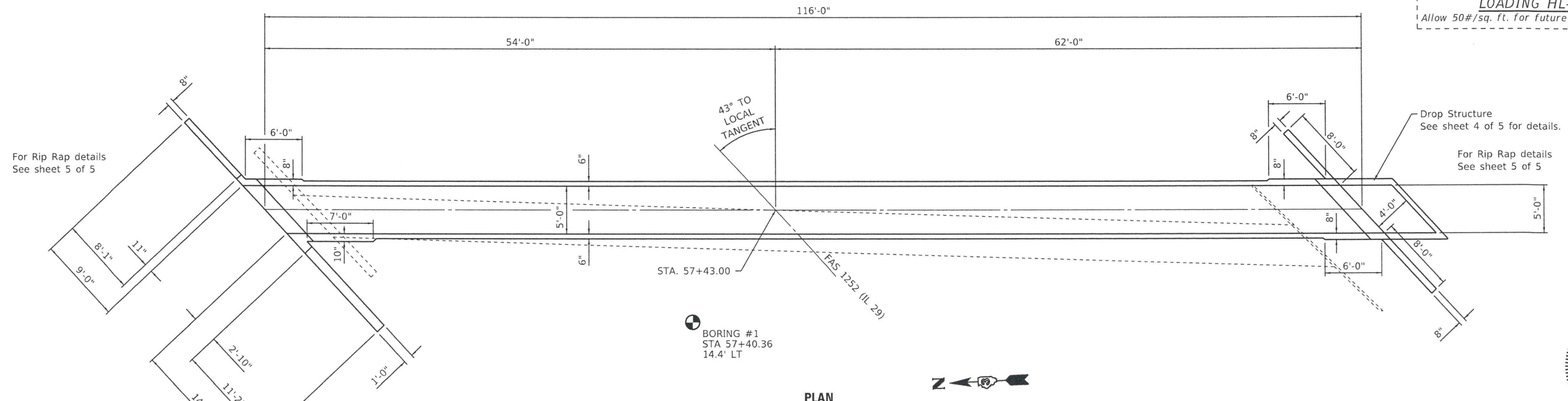


ELEVATION ALONG BOX CENTERLINE

DESIGN SPECIFICATIONS
 2020 AASHTO LRFD Bridge
 Design Specifications, 9th Edition

DESIGN STRESSES
 FIELD UNITS
 $f'_c = 3,500 \text{ psi}$
 $f_y = 60,000 \text{ psi}$ (Reinforcement)

LOADING HL-93
 Allow 50#/sq. ft. for future wearing surface.



PLAN

BORING #1
 STA 57+40.36
 14.4' LT

BORING #2
 STA 56+86.42
 14.0' RT

4/8/22
 date

JAMES K. CLINARD
 LICENSED STRUCTURAL ENGINEER
 NO. 081-004655
 STATE OF ILLINOIS

expires 11-30-2022

signature

PROFESSIONAL DESIGN FIRM
 LICENSE NO. 184-001717

See Sheets 2 - 4 of 5 for
 Details and Sections.

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	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

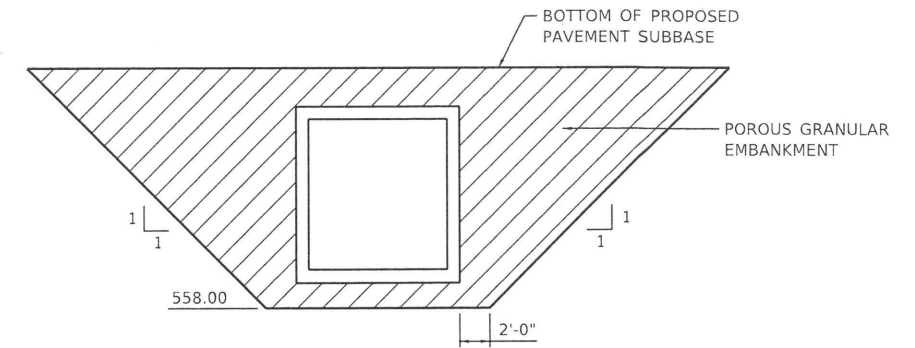
**SN 006-2622
 STA. 57 + 43.00**

SCALE: SHEET 1 OF 6 SHEETS STA. TO STA.

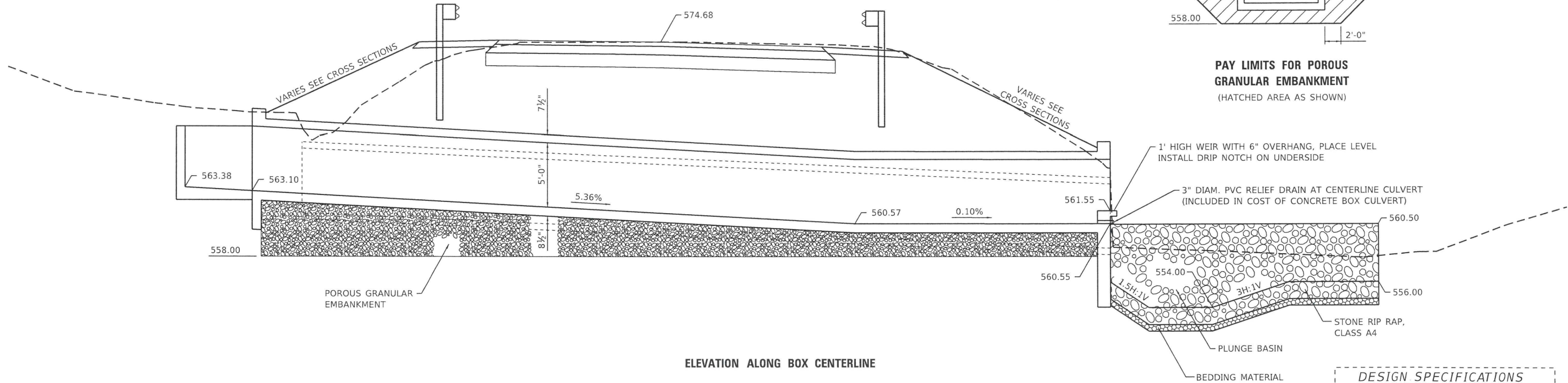
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1252	(R-4)CR	BUREAU	100	43
CONTRACT NO. 66F91				

REV 4/11/22

EXIST. STRUCTURE: SN 006-2623 BUILT AS PROJECT 7, SECTION R-4 IN 1924.
STRUCTURE CONSISTS OF A 5'X4' REINFORCED
CONCRETE BOX CULVERT 63' LONG.



PAY LIMITS FOR POROUS GRANULAR EMBANKMENT
(HATCHED AREA AS SHOWN)



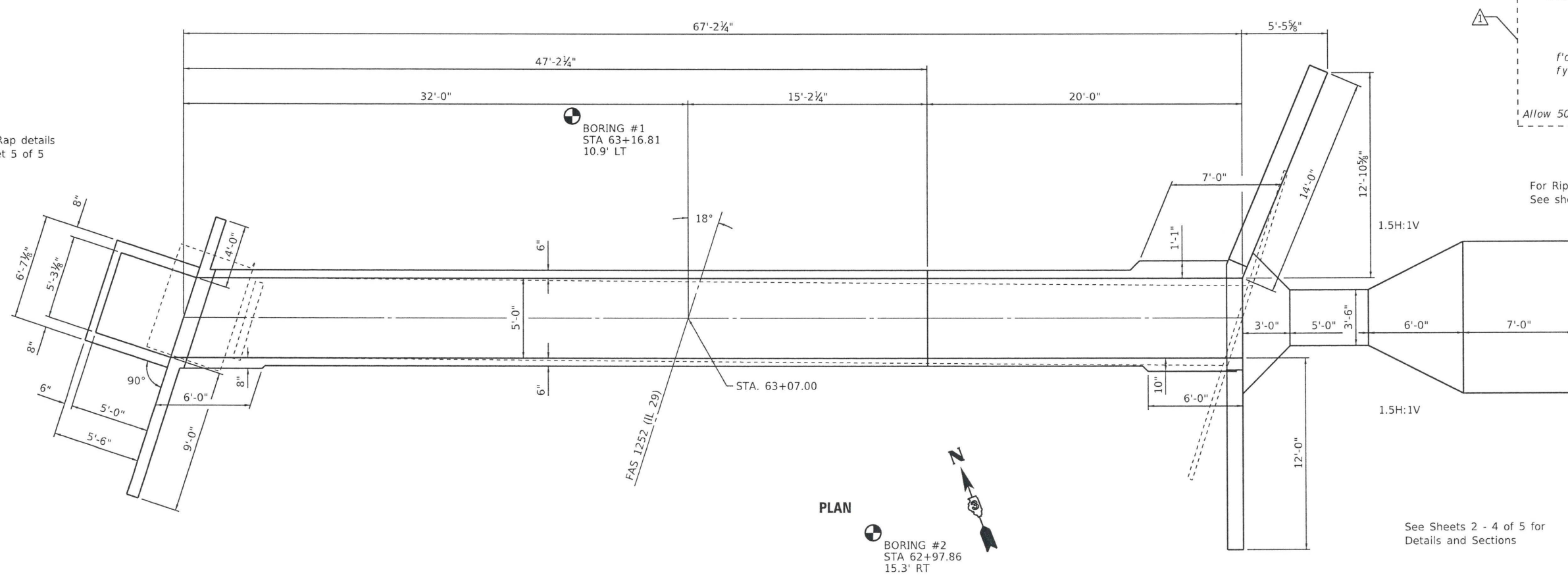
DESIGN SPECIFICATIONS
2020 AASHTO LRFD Bridge
Design Specifications, 9th Edition

DESIGN STRESSES
FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

LOADING HL-93
Allow 50#/sq. ft. for future wearing surface.

For Rip Rap details
See sheet 5 of 5

For Rip Rap details
See sheet 5 of 5



See Sheets 2 - 4 of 5 for
Details and Sections

4/8/22
Date

JAMES K. CLINARD
LICENSED STRUCTURAL ENGINEER
NO. 081-004655
STATE OF ILLINOIS

expires 11-30-2022

Signature
signature
PROFESSIONAL DESIGN FIRM
LICENSE NO. 184-001717

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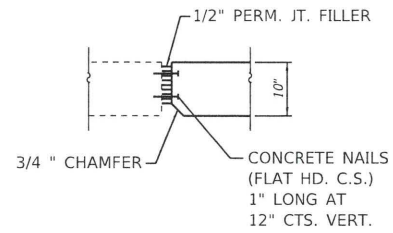
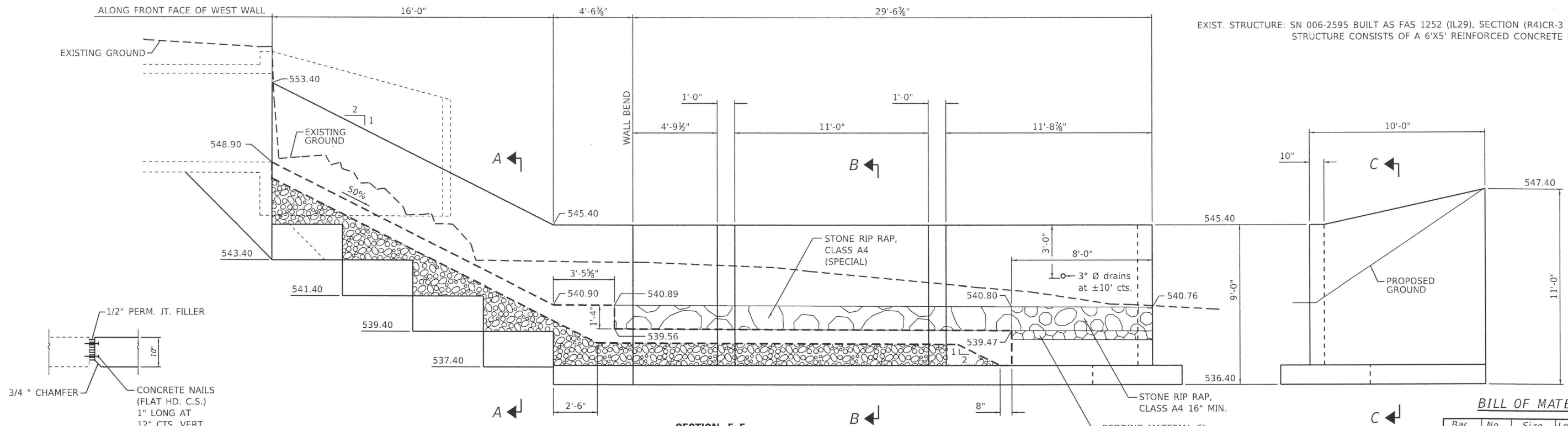


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DRAWN - LAG	CHECKED - JKC	DATE -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SCALE: SHEET 1 OF 6 SHEETS STA. TO STA.	SN 006-2623 STA. 63+07.00	F.A.S. RTE. 1252	SECTION (R-4)CR	COUNTY BUREAU	TOTAL SHEETS 100	SHEET NO. 49
					CONTRACT NO. 66F91	ILLINOIS FED. AID PROJECT

EXIST. STRUCTURE: SN 006-2595 BUILT AS FAS 1252 (IL29), SECTION (R4)CR-3 IN 2016.
STRUCTURE CONSISTS OF A 6'X5' REINFORCED CONCRETE BOX CULVERT.



BILL OF MATERIAL

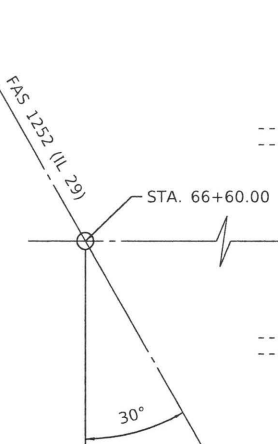
Bar	No.	Size	Length	Shape
a	26	#6	5'-9"	—
b	3	#6	21'-6"	—
b1	6	#6	6'-0"	—
b2	3	#6	24'-5"	—
d	4	#6	2'-3"	—
d1	3	#6	2'-3"	—
h	12	#4	29'-3"	—
h1	24	#4	4'-0"	—
h2	24	#4	4'-0"	—
h3	12	#4	9'-9"	—
h4	2	#4	2'-11"	—
h5	2	#4	9'-4"	—
h6	4	#4	4'-3"	—
h7	4	#4	8'-3"	—
h8	4	#4	12'-3"	—
h9	4	#4	16'-3"	—
h10	4	#4	15'-1"	—
h11	4	#4	12'-1"	—
h12	4	#4	9'-1"	—
h13	4	#4	6'-1"	—
h14	4	#4	3'-1"	—
h15	4	#4	17'-8"	—
h16	2	#4	6'-1"	—
h17	2	#4	12'-9"	—
h18	2	#4	3'-4"	—
h19	2	#4	7'-11"	—
h20	12	#4	12'-9"	—
h21	12	#4	20'-2"	—
h22	4	#4	3'-2"	—
h23	4	#4	7'-2"	—
h24	4	#4	11'-2"	—
h25	4	#4	15'-2"	—
h26	2	#4	5'-0"	—
n(E)	48	#4	4'-10"	—
n1(E)	120	#4	3'-11"	—
u	18	#4	4'-8"	—
t	222	#4	4'-10"	—
v	48	#4	13'-9"	—
v1	139	#4	7'-9"	—
v2	21	#4	9'-8"	—
v3	27	#4	11'-7"	—
w	80	#4	3'-9"	—
w1	10	#4	4'-1"	—
w2	20	#4	5'-0"	—
w3	10	#4	30'-9"	—
w4	10	#4	6'-4"	—
w5	10	#4	2'-10"	—
w6	10	#4	21'-5"	—
w7	10	#4	9'-4"	—
Reinforcement Bars		Pound	4700	
Reinforcement Bars, Epoxy Coated		Pound	470	
Concrete Removal		Cu Yd	5	

BILL OF MATERIAL

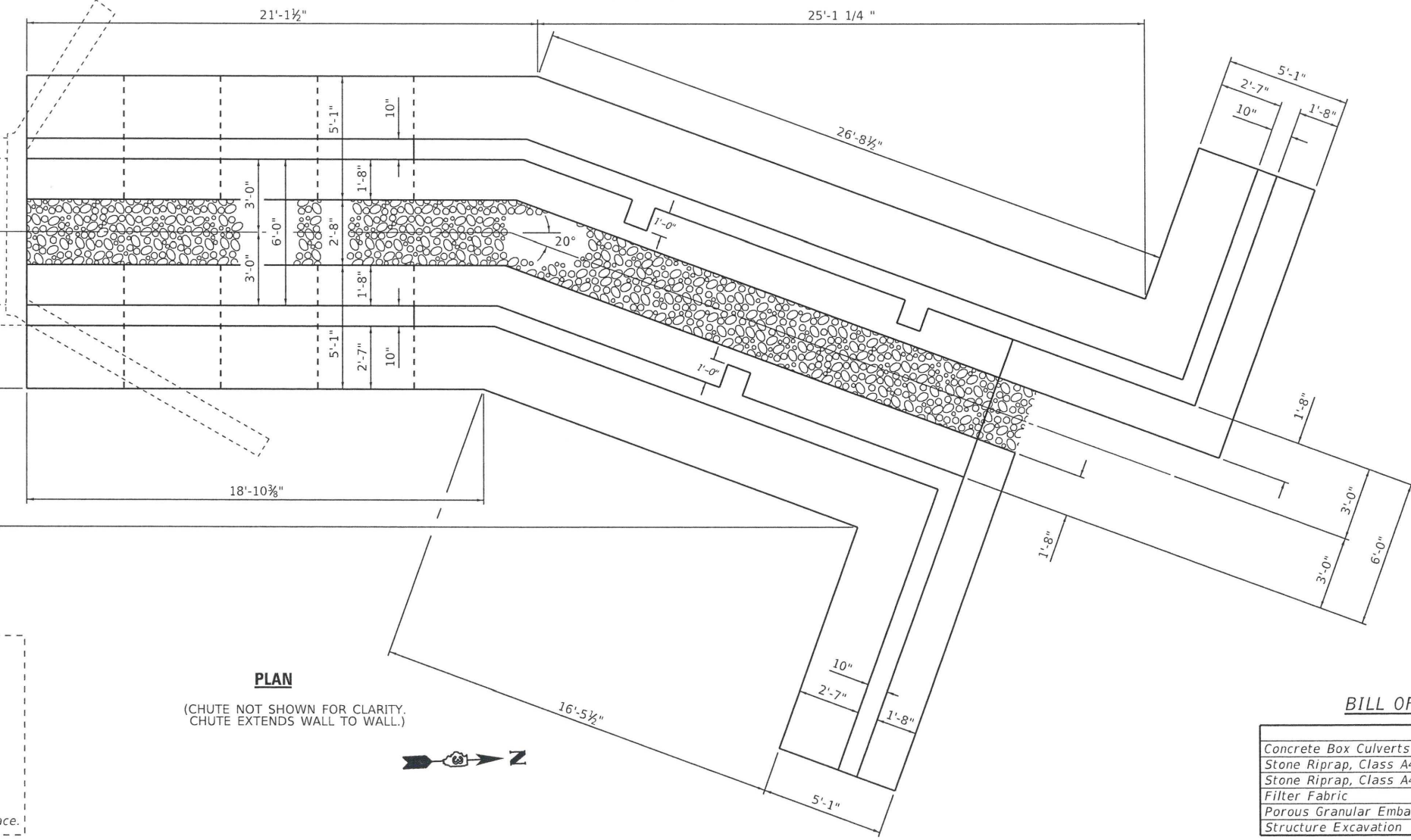
Concrete Box Culverts	Cu. Yd.	64.7
Stone Riprap, Class A4	Sq. Yd.	46
Stone Riprap, Class A4 (Special)	Sq. Yd.	13
Filter Fabric	Sq. Yd.	46
Porous Granular Embankment	Cu. Yd.	20
Structure Excavation	Cu. Yd.	53



CORNER DETAIL



SECTION F-F



PLAN
(CHUTE NOT SHOWN FOR CLARITY. CHUTE EXTENDS WALL TO WALL.)

DESIGN SPECIFICATIONS

2020 AASHTO LRFD Bridge Design Specifications, 9th Edition

DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

MODEL: Default FILE NAME: G:\Users\6166358-06\DOT\IL 29 DePue Culverts\Survey D366F91\Consultant Data\Chamlin 2021\CAD Sheets\0366F91-silt-culvert-SN006-2595.dgn



USER NAME = CHAMLIN	DESIGNED - JKC	REVISED - 04/07/2022 NV
PLOT SCALE =	DRAWN - LAG	REVISED -
PLOT DATE =	CHECKED - JKC	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 006-2595
STA. 66 + 60.00

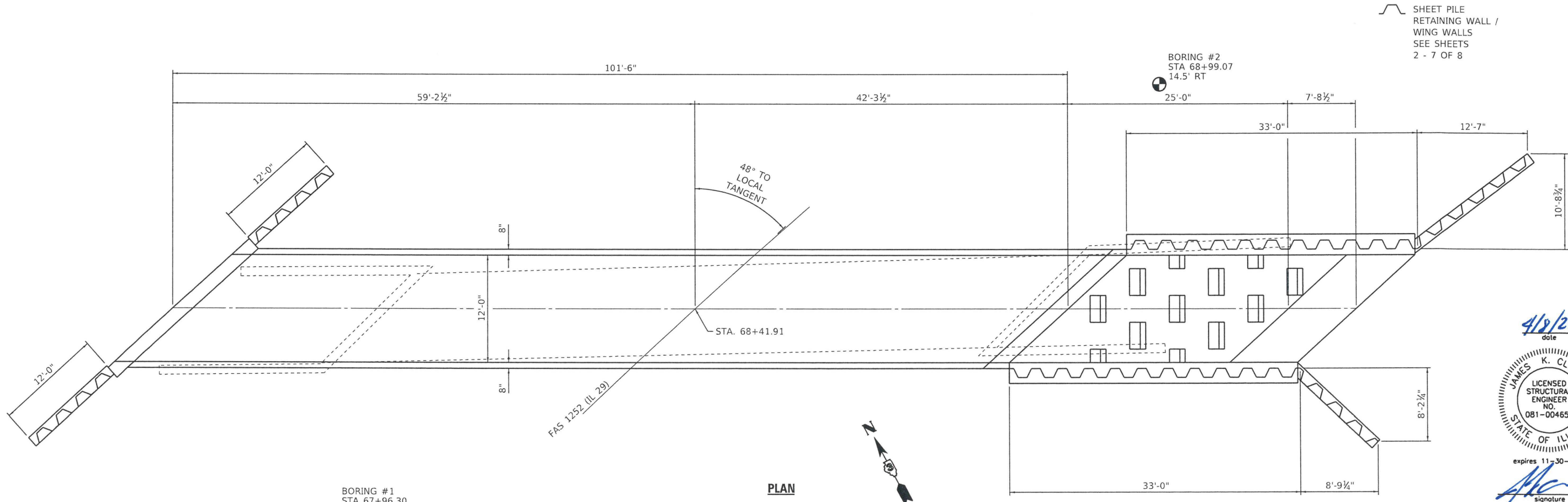
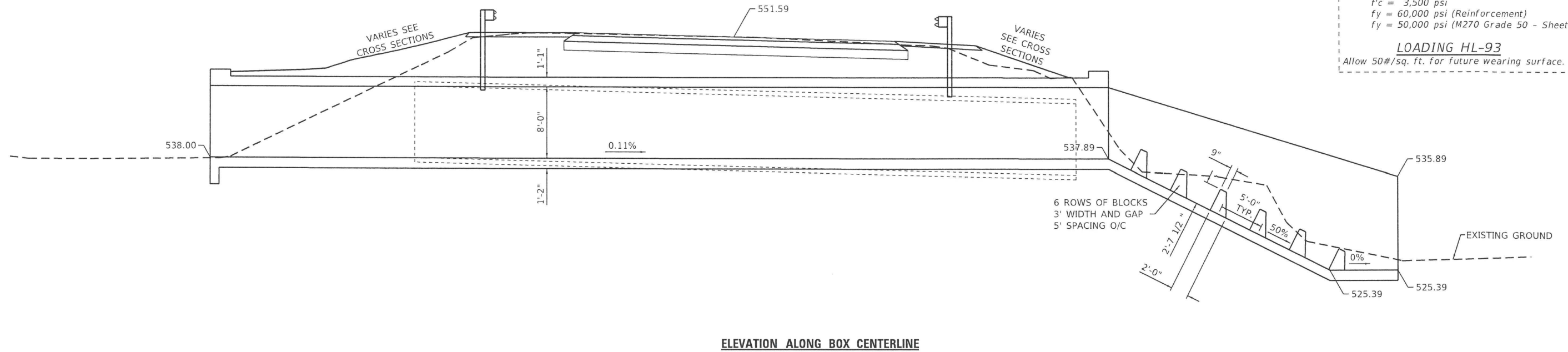
F.A.S. RTE. 1252	SECTION (R-4)CR	COUNTY BUREAU	TOTAL SHEETS 100	SHEET NO. 55
SCALE: SHEET 1 OF 7 SHEETS	STA. TO STA.	CONTRACT NO. 66F91		
ILLINOIS FED. AID PROJECT				

EXIST. STRUCTURE: SN 006-2609 BUILT AS PROJECT 7, SECTION R-4 IN 1924.
 STRUCTURE CONSISTS OF A 10'X8' REINFORCED
 CONCRETE BOX CULVERT 76' LONG.

DESIGN SPECIFICATIONS
 2020 AASHTO LRFD Bridge
 Design Specifications, 9th Edition

DESIGN STRESSES
 FIELD UNITS
 $f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 50,000$ psi (M270 Grade 50 - Sheet Piling)

LOADING HL-93
 Allow 50#/sq. ft. for future wearing surface.



MODEL: Default
 FILE NAME: G:\Users\G166358-06\OneDrive\Projects\Illinois\DOT\IL 29 DeFue Culverts\Survey_D366F91\Consultant_Data\Chamlin_2021\CAD_Sheets\366F91-shi-culvert-SN006-2609.dgn



USER NAME = CHAMLIN	DESIGNED - JKC	REVISED - 04/07/2022 NV
PLOT SCALE =	DRAWN - LAG	REVISED -
PLOT DATE =	CHECKED - JKC	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

SCALE:	SHEET 1 OF 9 SHEETS	STA. TO STA.
SN 006-2609 STA. 68 + 41.91		

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1252	(R-4)CR	BUREAU	100	62
CONTRACT NO. 66F91				
ILLINOIS FED. AID PROJECT				

4/8/22
 date

JAMES K. CLINARD
 LICENSED STRUCTURAL ENGINEER
 NO. 081-004655
 STATE OF ILLINOIS

expires 11-30-2022

signature

PROFESSIONAL DESIGN FIRM
 LICENSE NO. 184-001717

See Sheets 2 - 8 for
 Details and Sections