

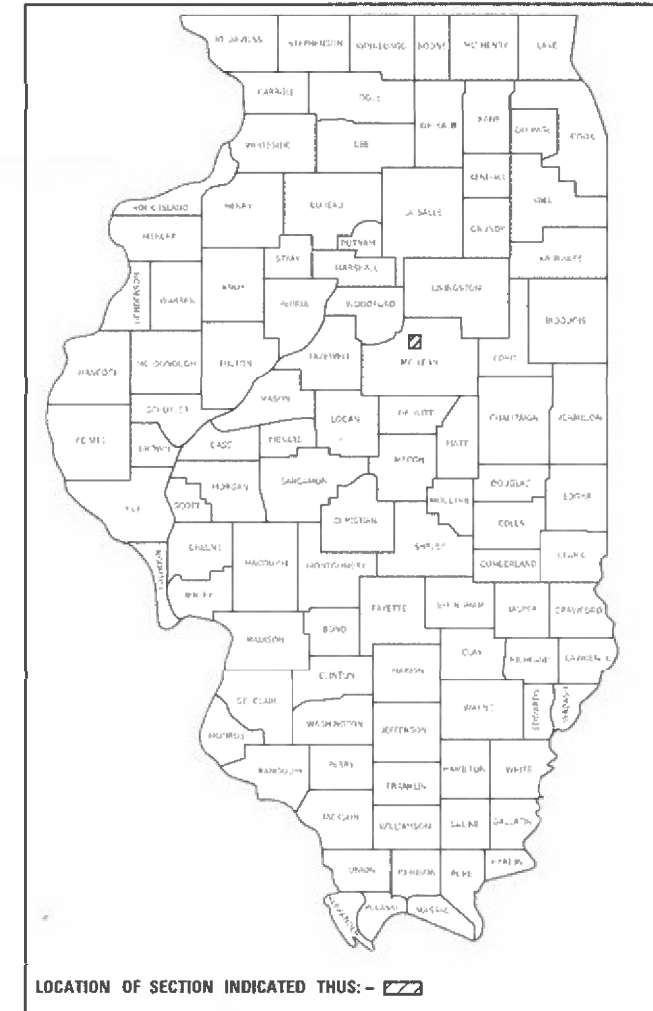
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

**PROPOSED
HIGHWAY PLANS**

**FAI ROUTE 39 (I-39)
MBPM 2022-1
PROJECT NO. NHPP-MQ6Y(810)
BRIDGE PRESERVATION - PIER REPAIR
MCLEAN COUNTY**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	MBPM 2022-1	MCLEAN	11	1
		ILLINOIS	CONTRACT NO. 70F34	

D-95-026-21

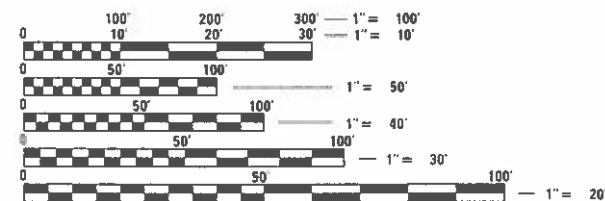


FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 3

CURRENT TRAFFIC DATA FOR F.A.I. 39
2019 ADT = 20,600
P.U. % 74.7
S.U. % 3.5
M.U. % 21.8

DESIGN DESIGNATION - N/A

C-95-044-21

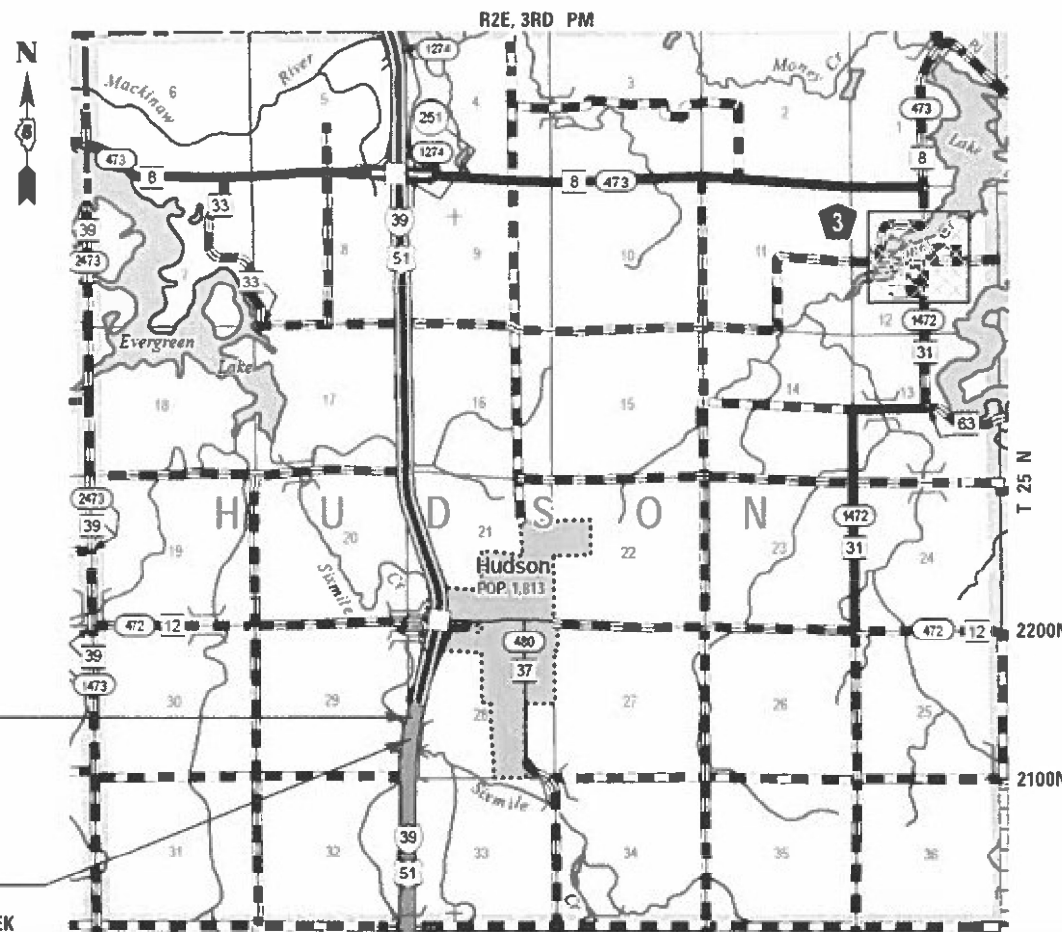


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS
1-800-892-0123
OR 811
HUDSON TOWNSHIP

STA 304+65.00 - PIER REPAIRS
SN 057-0208(SB) & 0209(NB)
OVER SIX MILE CREEK

STA 292+30.00 - PIER REPAIRS
SN 057-0210(SB) & 0211(NB)
OVER TRIBUTARY TO SIX MILE CREEK



LOCATION MAP



SCALE IN MILES
GROSS LENGTH = 0.0 FT. = 0.0 MILE
NET LENGTH = 0.0 FT. = 0.0 MILE

PROJECT ENGINEER: TIMOTHY J. BRANDENBURG
PROJECT MANAGER: S.A.A.
PHONE NUMBER: (217) 465-4181

CONTRACT NO. 70F34

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED 11/18 2022
Keril A. Barnett sen
REGIONAL ENGINEER

March 25 2022
[Signature]
ENGINEER OF DESIGN AND ENVIRONMENT

March 25 2022
[Signature]
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	INDEX OF SHEETS, GENERAL NOTES AND HIGHWAY STANDARDS
3	SUMMARY OF QUANTITIES
4	TYPICAL SECTIONS
5 - 6	PLAN SHEETS
7 - 10	STRUCTURE REPAIR DETAIL SHEETS
11 - 14	WIDTH RESTRICTION SIGNING DETAIL

GENERAL NOTES

G.N.-100
 ENGLISH UNITS OF MEASUREMENT SHALL GOVERN OVER AND SUPERSEDE ANY METRIC UNITS SHOWN IN THIS CONTRACT. WHERE INCLUDED, METRIC UNITS ARE FOR INFORMATION ONLY.

G.N.-100A
 ELECTRONIC FILES AND/OR ELECTRONIC SURVEY INFORMATION INCLUDING CADD FILES WILL NOT BE AVAILABLE TO THE CONTRACTOR.

NO COMMITMENTS

LIST OF HIGHWAY STANDARDS

STANDARD NO.	DESCRIPTION
0000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001006	DECIMAL OF AN INCH AND OF A FOOT
701101-05	OFF-ROAD OPERATIONS, MULTILANE, 15 FT TO 24 IN FROM PAVEMENT EDGE
701106-02	OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 15 FT AWAY
701400-11	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-13	LANE CLOSURE, FREEWAY/EXPRESSWAY
701901-08	TRAFFIC CONTROL DEVICES

MODEL: \\MODELS\MAR\F...
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USER NAME = brandenburgtj	DESIGNED - TJB	REVISED - TJB
DRAWN - _____	REVISIONS - _____	
PLOT SCALE = 40.0000' / in.	CHECKED - _____	REVISED - _____
PLOT DATE = 1/11/2022	DATE - 3/5/2021	REVISED - 1/11/2022

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**INDEX OF SHEETS, GENERAL NOTES
 & HIGHWAY STANDARDS**

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	MBPM 2022-1	MCLEAN	14	2
CONTRACT NO. 70F34				
ILLINOIS FED. AID PROJECT				

LOCATION OF WORK:	FAI 39	
	SECTION MBPM 2022-1	
	INTERSTATE - RURAL	
FUNDING BREAKOUT:	90% FEDERAL / 10% STATE	
	BRIDGE PRESERVATION	
CONSTRUCTION TYPE CODE:	0047	
	MCLEAN COUNTY	
	SN 057-0208 & 0209	SN 057-0210 & 0211

CODE NO	ITEM	UNIT	TOTAL QUANTITY	QUANTITY	QUANTITY
50200100	STRUCTURE EXCAVATION	CU YD	540.0	270.0	270.0
50300225	CONCRETE STRUCTURES	CU YD	47.0	22.0	25.0
50500505	STUD SHEAR CONNECTORS	EACH	544.0	256.0	288.0
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	5,290.0	2490.0	2800.0
59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	200.0	100.0	100.0
67100100	MOBILIZATION	L SUM	1.0	0.5	0.5
70100800	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	L SUM	1.0	0.5	0.5
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	28.0	14.0	14.0
X2810208	STONE RIPRAP, CLASS A4 (SPECIAL)	TONS	340.0	170.0	170.0
X7200201	WIDTH RESTRICTION SIGNING	L SUM	1.0	0.5	0.5
Z0001905	STRUCTURAL STEEL REPAIR	POUND	4,160.0	2080.0	2080.0
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1.0	1	
Z0010502	CLEANING AND PAINTING STEEL BRIDGE NO. 2	L SUM	1	1	
Z0010503	CLEANING AND PAINTING STEEL BRIDGE NO. 3	L SUM	1		1
Z0010504	CLEANING AND PAINTING STEEL BRIDGE NO.	L SUM	1		1

NO SPECIALTY ITEMS

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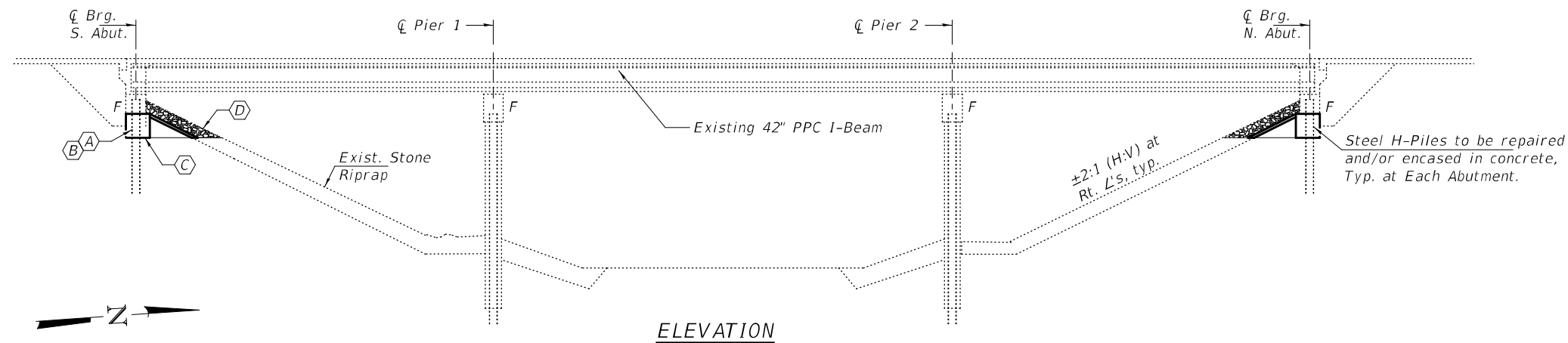
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DRAWN - _____	REVISED - _____	
PLOT SCALE = 40.0000' / in.	CHECKED - _____	REVISED - _____
PLOT DATE = 1/28/2022	DATE - 3/5/2021	REVISED - 1/27/2022

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

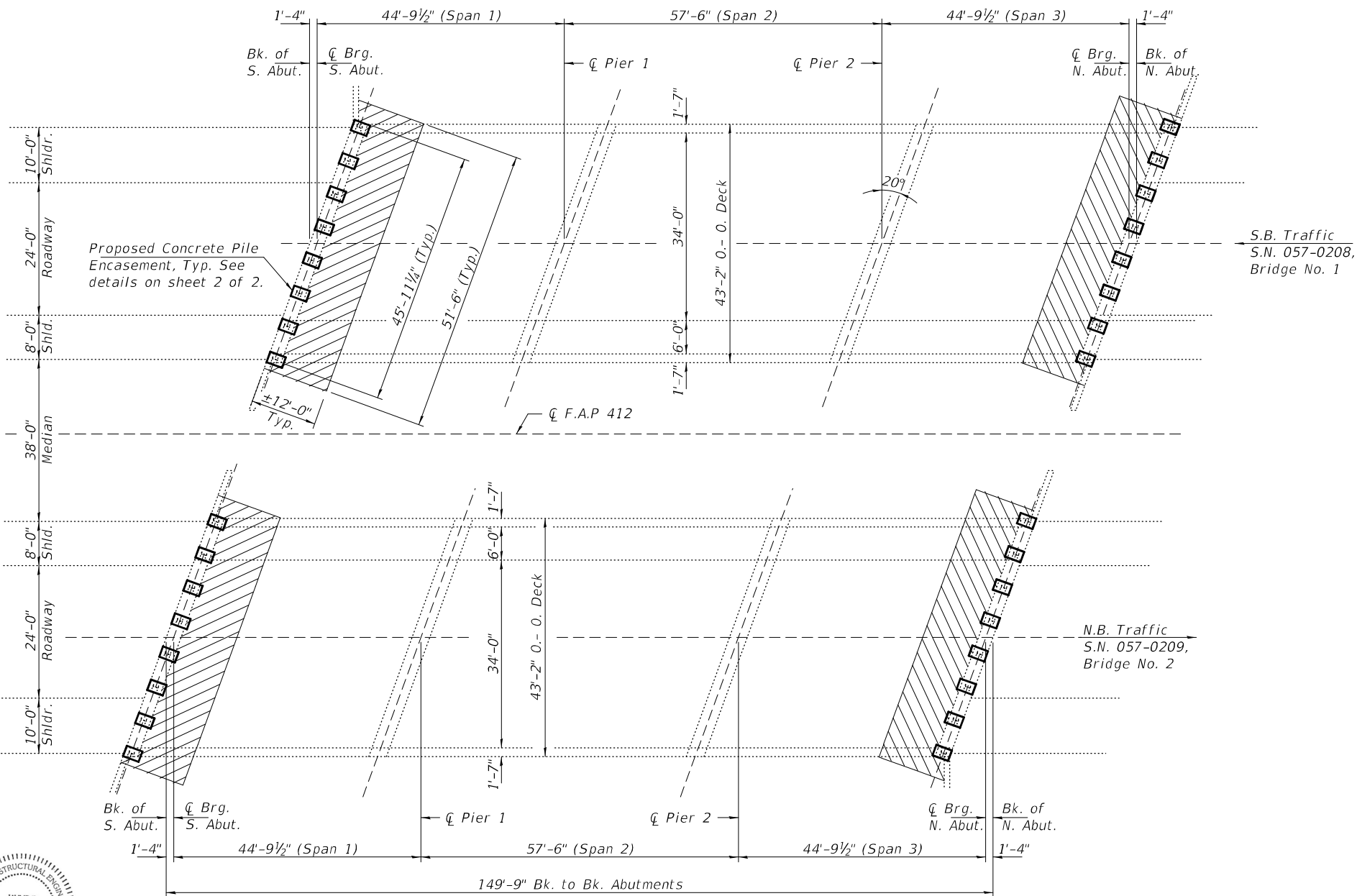
SUMMARY OF QUANTITIES

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	MBPM 2022-1	MCLEAN	14	3
			CONTRACT NO. 70F34	
ILLINOIS FED. AID PROJECT				



ELEVATION



PLAN

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.
 Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
 The structural steel shapes, plates, and adjusting shims for pile repair's shall conform to the requirements of AASHTO M 270 Grade 50, unless noted otherwise.
 No field welding is permitted, except as noted.
 High strength fasteners shall be ASTM A325 Type 3. Holes may be subpunched or subdrilled 16" dia. and reamed in the field to 16 dia. for dia. Bolts.
 All-thread rods shall be ASTM F1554, Grade 55.
 The Contractor shall field verify the required bolt length and length of threads necessary to install all bolts in accordance with the Standard Specification.
 Reinforcement bars designated (E) shall be epoxy coated.
 Layout of the slope protection system may be varied to suit specific site conditions in the field as directed by the Engineer.
 Contractor must exercise extreme care during construction operation as not to damage any of the overhead PPC I beams. Any damage done to the beams as a result of the contractor's operations will need to be repaired to the satisfaction of the Engineer at the contractor's expense.
 The quantity and limits shown herein for Stone Riprap, Class A4 (Special) are estimated. Actual quantities shall be determined and adjusted in field by the Engineer.
 Structural Steel Repair quantities are estimates based on initial investigations only. Exact pile locations needing repair will be determined by the Engineer after Structure Excavation and SSPC-SP10 Blast Cleaning by the Contractor. The Engineer shall obtain pile measurements after blast cleaning but before painting. The Contractor shall notify the Engineer in advance of pile blast cleaning to avoid pile inspection delays.

- (A) - Expose and clean all abutment piles as shown.
- (B) - Perform structural steel repairs to indicated abutment piles.
- (C) - Construct all abutment reinforced concrete pile encasements.
- (D) - Backfill excavation with controlled low-strength material and add new riprap slope protection.

LEGEND

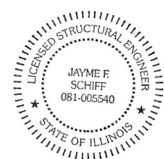
Limits of Structure Excavation. Backfill with controlled low-strength material (CLSM), mix 2. Top with filter fabric, bedding, and stone riprap. See details on sheet 2 of 2.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Stone Riprap, Class A4 (Special)	Ton	170
Structure Excavation	Cu. Yd.	270
Concrete Structures	Cu. Yd.	22
Stud Shear Connectors	Each	256
Reinforcement Bars, Epoxy Coated	Pound	2490
Controlled Low-Strength Material	Cu. Yd.	100
* Structural Steel Repair	Pound	2080
Cleaning and Painting Steel Bridge No. 1	L. Sum	1
Cleaning and Painting Steel Bridge No. 2	L. Sum	1

The quantity and limits shown herein for Stone Riprap, Class A4 (Special) are estimated. Actual quantities shall be determined and adjusted in the field by the Engineer.

* Structural Steel Repair quantity is assumed for 4 piles location on each abutment. Exact pile number and locations to be determined in the field by the Engineer. Locations must also be included in the AS BUILT plans.



EXPIRES 11-30-2022

DESIGNED - Chi-Cheung Chau
 CHECKED - Stephen M. Ryan
 DRAWN - Venkat Ramana Reddy
 CHECKED - CCC SMR

EXAMINED - *Tig A. Deak*
 ENGINEER OF STRUCTURAL SERVICES
 PASSED - *Jayme F. Schiff*
 ENGINEER OF BRIDGES AND STRUCTURES

DATE - MARCH 15, 2022
 REVISED -
 REVISED -

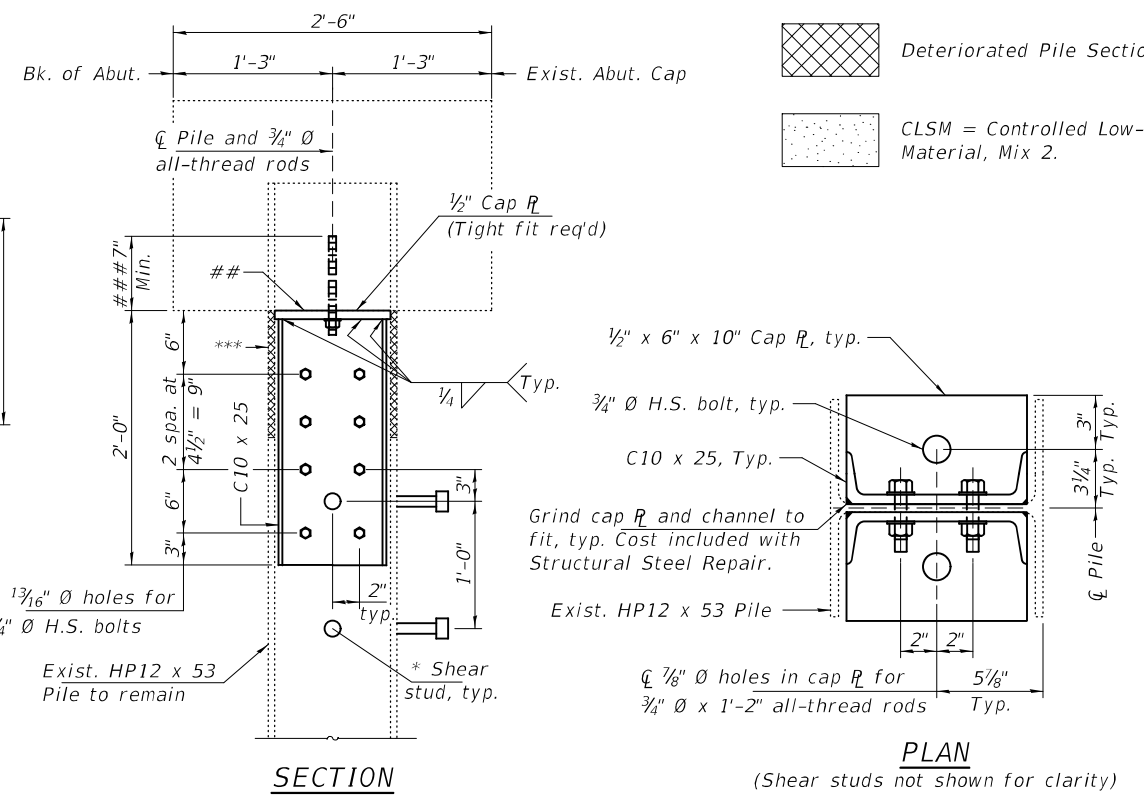
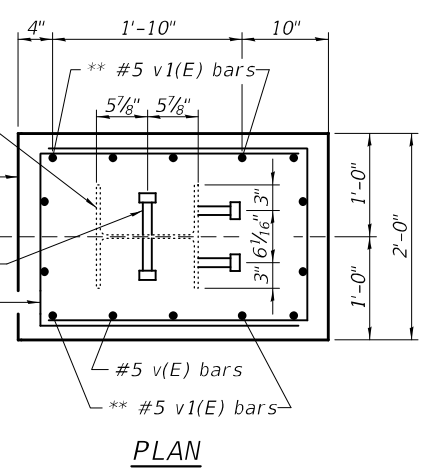
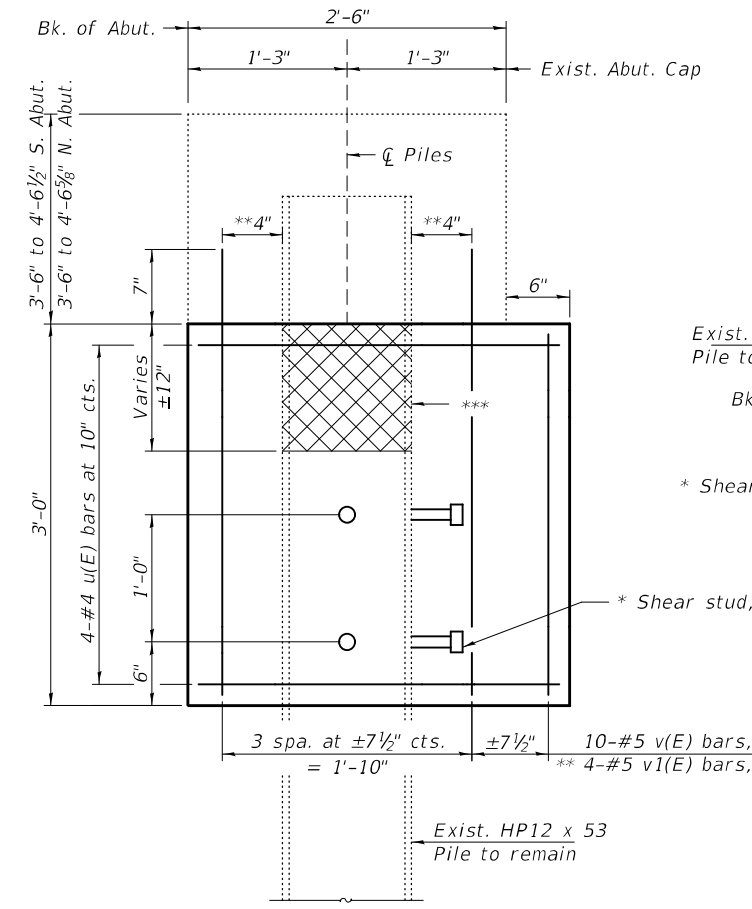
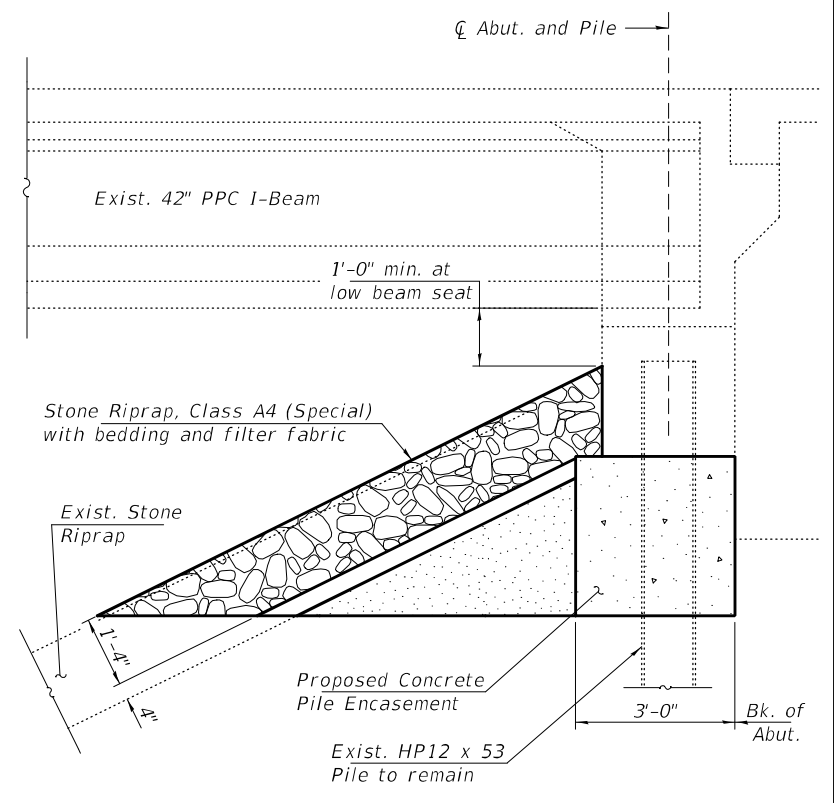
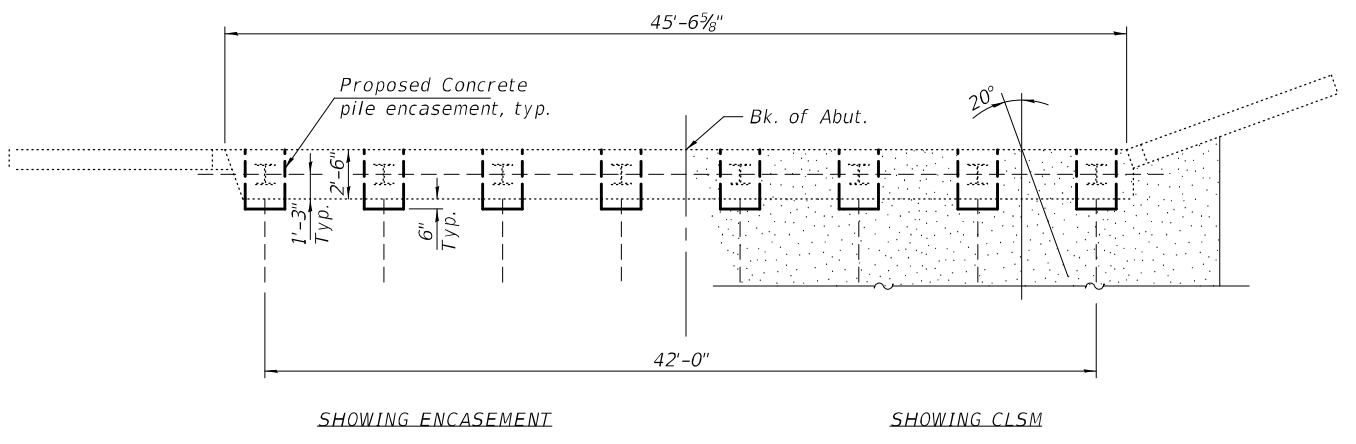
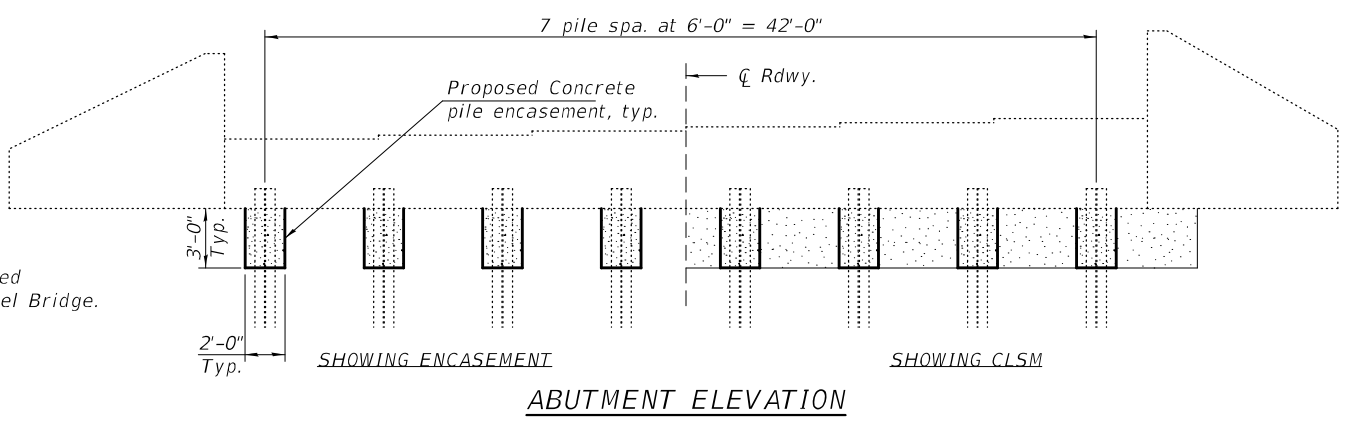
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
 FAI 039 OVER SIX MILE CREEK
 SN 057-0208 (SB) & 0209 (NB)

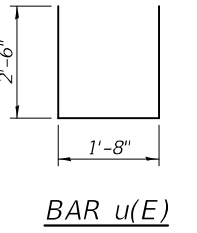
SHEET NO. 1 OF 2 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	MBPM 2022-1	MCLEAN	14	4
CONTRACT NO. 70F34				
ILLINOIS FED. AID PROJECT				

- # The Contractor shall clean the exposed pile and bottom of each abutment (within encasement limits) before installing the concrete pile encasement. Concrete surfaces shall be either power washed, blast cleaned, or wire wheel cleaned. Steel surfaces shall be prepared according to SSPC-SP3. Cost included with Cleaning and Painting Steel Bridge.
- ## Grind bottom of abutment cap to provide a level bearing surface for the cap R. Epoxy grout any voids to ensure uniform bearing. Cost included with Structural Steel Repair.
- ### Drill and set all-thread rods into 7" min. drilled holes into the bottom of the exist. abutment cap according to Article 521.06 of the Standard Specifications. Cost included with Structural Steel Repair.
- * 3/4" Ø x 4" headed studs end welded to the pile as shown. Contractor may either use the TIG or MIG welding process per Manufacturer's Specifications. (8 reqd. per concrete pile encasement)
- ** Drill and epoxy grout #5 bars into 7" min. drilled holes into the bottom of the exist. abutment cap according to Article 584 of the Standard Specifications. Cost included with Reinforcement Bars.
- *** The Structural Engineer shall be contacted for further disposition if pile deterioration extends greater than 12 below the bottom of the abutment cap. See Special Provisions.



- LEGEND**
- Deteriorated Pile Section
 - CLSM = Controlled Low-Strength Material, Mix 2.



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
u(E)	256	#4	6'-8"	
v(E)	320	#5	2'-8"	
v1(E)	128	#5	3'-5"	
Concrete Structures		Cu. Yd.	22	
Structural Steel Repair		Pound	2080	
Stud Shear Connectors		Each	256	
Reinforcement Bars, Epoxy Coated		Pound	2490	

DESIGNED - CCC	EXAMINED	DATE - MARCH 15, 2022
CHECKED - SMR	PASSED	REVISOR -
DRAWN - Venkat Ramana Reddy		REVISOR -
CHECKED - CCC SMR		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

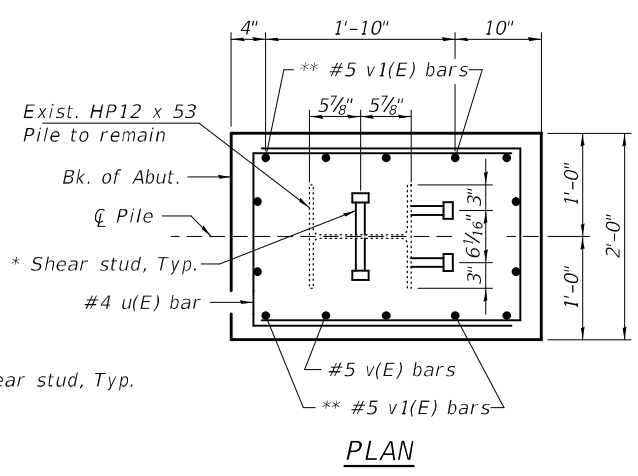
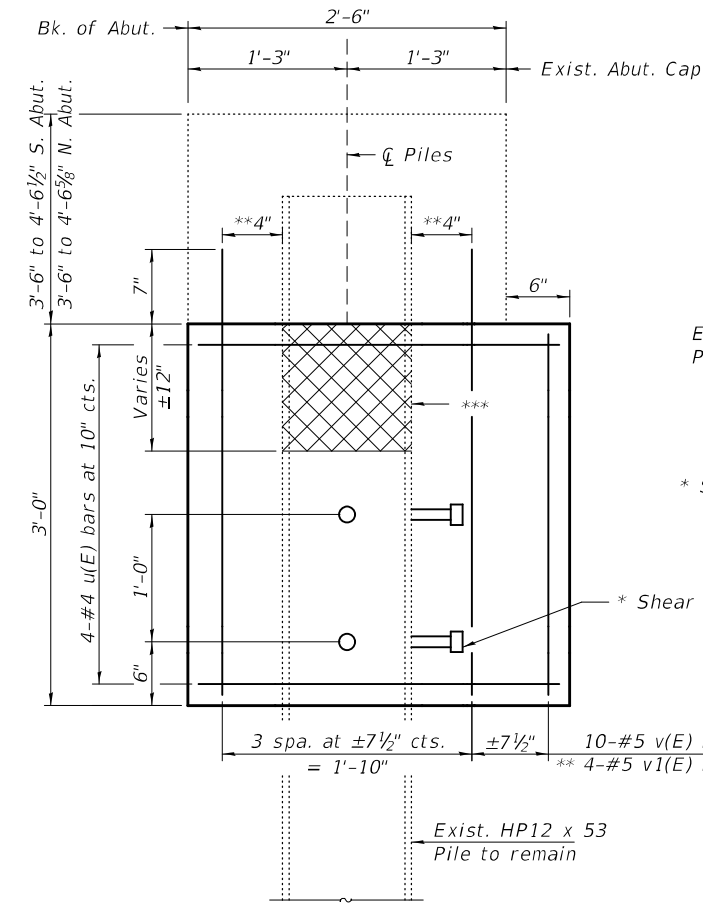
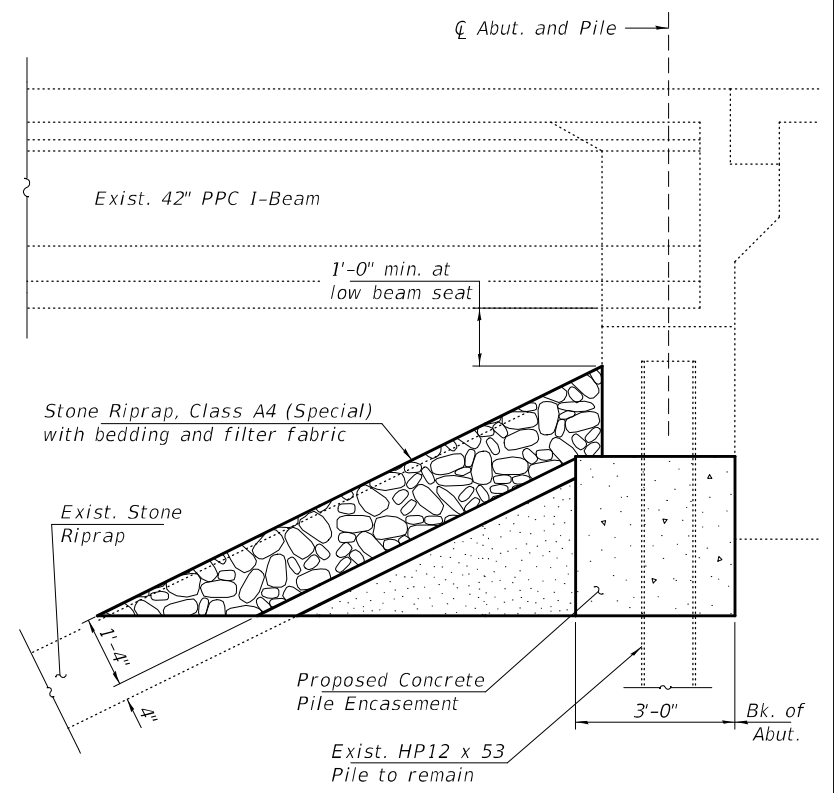
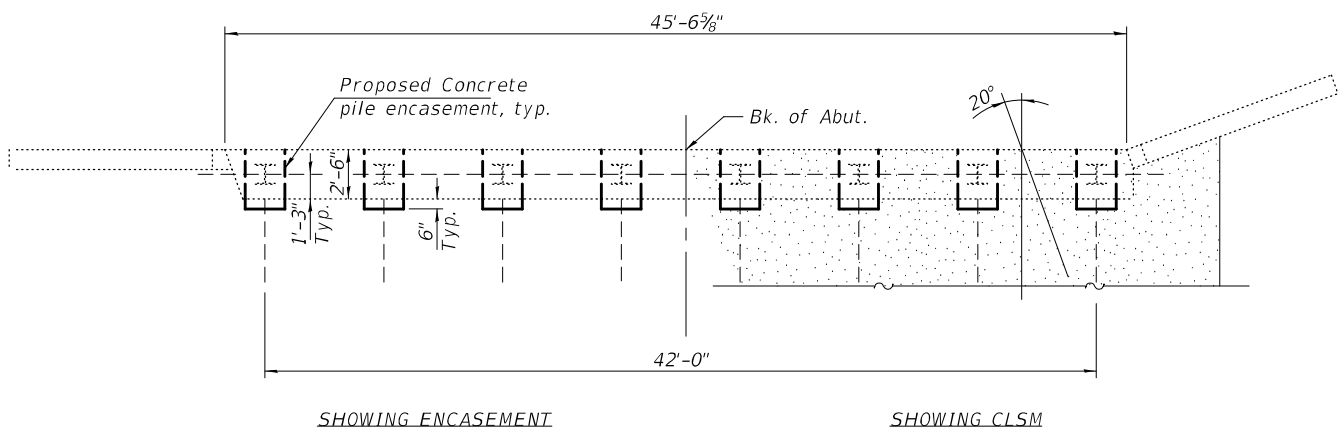
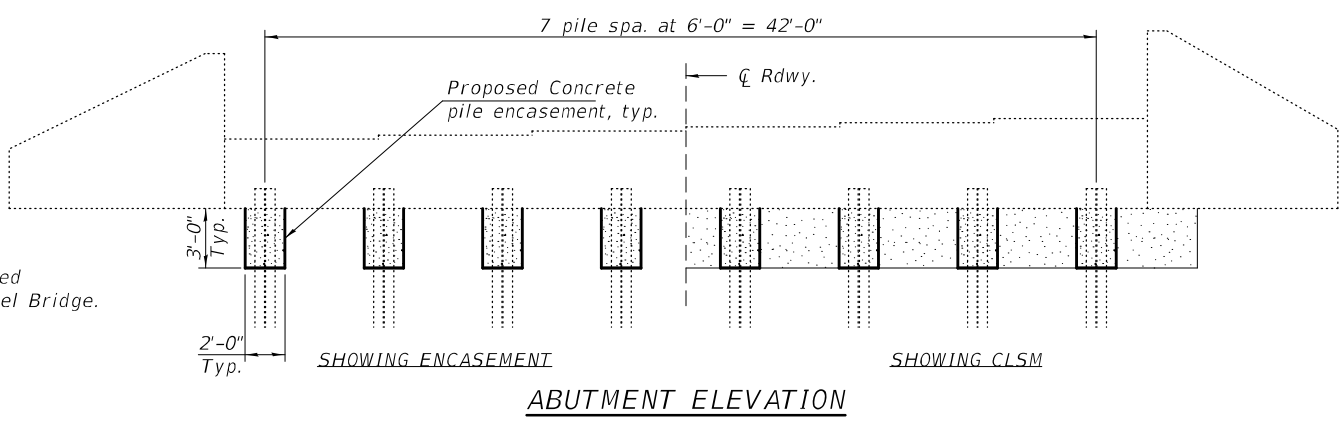
PILE REPAIR DETAILS
057-0209, N. Abutment, Pile 7 and 8
057-0208, N. Abutment, Pile 8

PILE REPAIR DETAILS
SN 057-0208 (SB) & 0209 (NB)

SHEET NO. 2 OF 2 SHEETS

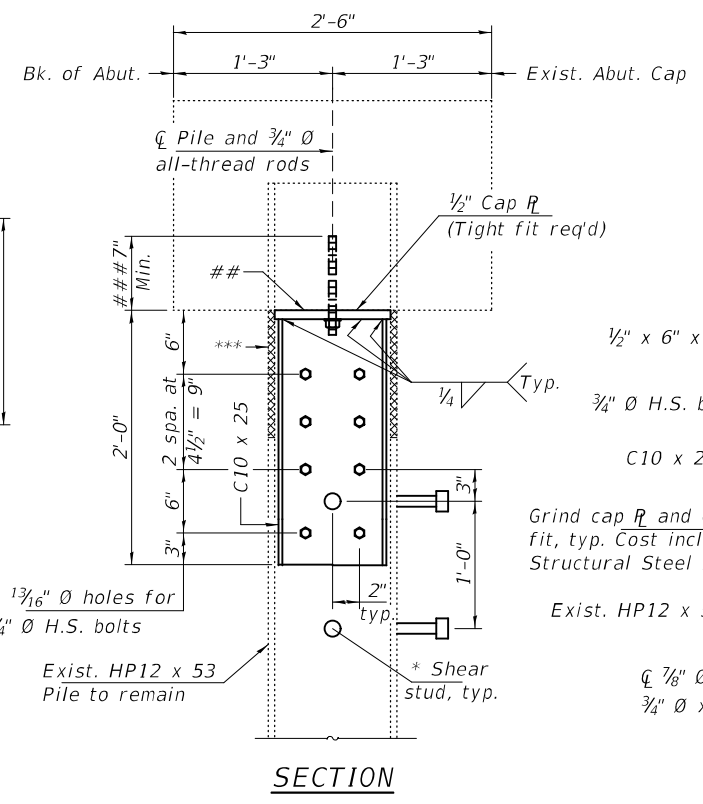
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	MBPM 2022-1	MCLEAN	14	5
CONTRACT NO. 70F34				
ILLINOIS FED. AID PROJECT				

- # The Contractor shall clean the exposed pile and bottom of each abutment (within encasement limits) before installing the concrete pile encasement. Concrete surfaces shall be either power washed, blast cleaned, or wire wheel cleaned. Steel surfaces shall be prepared according to SSPC-SP3. Cost included with Cleaning and Painting Steel Bridge.
- ## Grind bottom of abutment cap to provide a level bearing surface for the cap R. Epoxy grout any voids to ensure uniform bearing. Cost included with Structural Steel Repair.
- ### Drill and set all-thread rods into 7" min. drilled holes into the bottom of the exist. abutment cap according to Article 521.06 of the Standard Specifications. Cost included with Structural Steel Repair.
- * 3/4" Ø x 4" headed studs end welded to the pile as shown. Contractor may either use the TIG or MIG welding process per Manufacturer's Specifications. (8 reqd. per concrete pile encasement)
- ** Drill and epoxy grout #5 bars into 7" min. drilled holes into the bottom of the exist. abutment cap according to Article 584 of the Standard Specifications. Cost included with Reinforcement Bars.
- *** The Structural Engineer shall be contacted for further disposition if pile deterioration extends greater than 12 below the bottom of the abutment cap. See Special Provisions.



PILE ENCASEMENT DETAILS

ABUTMENT PLAN



PILE REPAIR DETAIL
(Shear studs not shown for clarity)

LEGEND

- Deteriorated Pile Section
- CLSM = Controlled Low-Strength Material, Mix 2.

BAR u(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
u(E)	256	#4	6'-8"		
v(E)	320	#5	2'-8"		
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Stud Shear Connectors				Each	256
Reinforcement Bars, Epoxy Coated				Pound	2490

PILE REPAIR DETAILS
057-0209, N. Abutment, Pile 7 and 8
057-0208, N. Abutment, Pile 8

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

The structural steel shapes, plates, and adjusting shims for pile repair's shall conform to the requirements of AASHTO M 270 Grade 50, unless noted otherwise. No field welding is permitted, except as noted.

High strength fasteners shall be ASTM A325 Type 3. Holes may be subpunched or subdrilled 16" dia. and reamed in the field to 16 dia. for dia. Bolts.

All-thread rods shall be ASTM F1554, Grade 55.

The Contractor shall field verify the required bolt length and length of threads necessary to install all bolts in accordance with the Standard Specification.

Reinforcement bars designated (E) shall be epoxy coated.

Layout of the slope protection system may be varied to suit specific site conditions in the field as directed by the Engineer.


Contractor must exercise extreme care during construction operation as not to damage any of the overhead PPC I beams. Any damage done to the beams as a result of the contractor's operations will need to be repaired to the satisfaction of the Engineer at the contractor's expense.

The quantity and limits shown herein for Stone Riprap, Class A4 (Special) are estimated. Actual quantities shall be determined and adjusted in field by the Engineer.

Structural Steel Repair quantities are estimates based on initial investigations only. Exact pile locations needing repair will be determined by the Engineer after Structure Excavation and SSPC-SP10 Blast Cleaning by the Contractor. The Engineer shall obtain pile measurements after blast cleaning but before painting. The Contractor shall notify the Engineer in advance of pile blast cleaning to avoid pile inspection delays.

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LEGEND

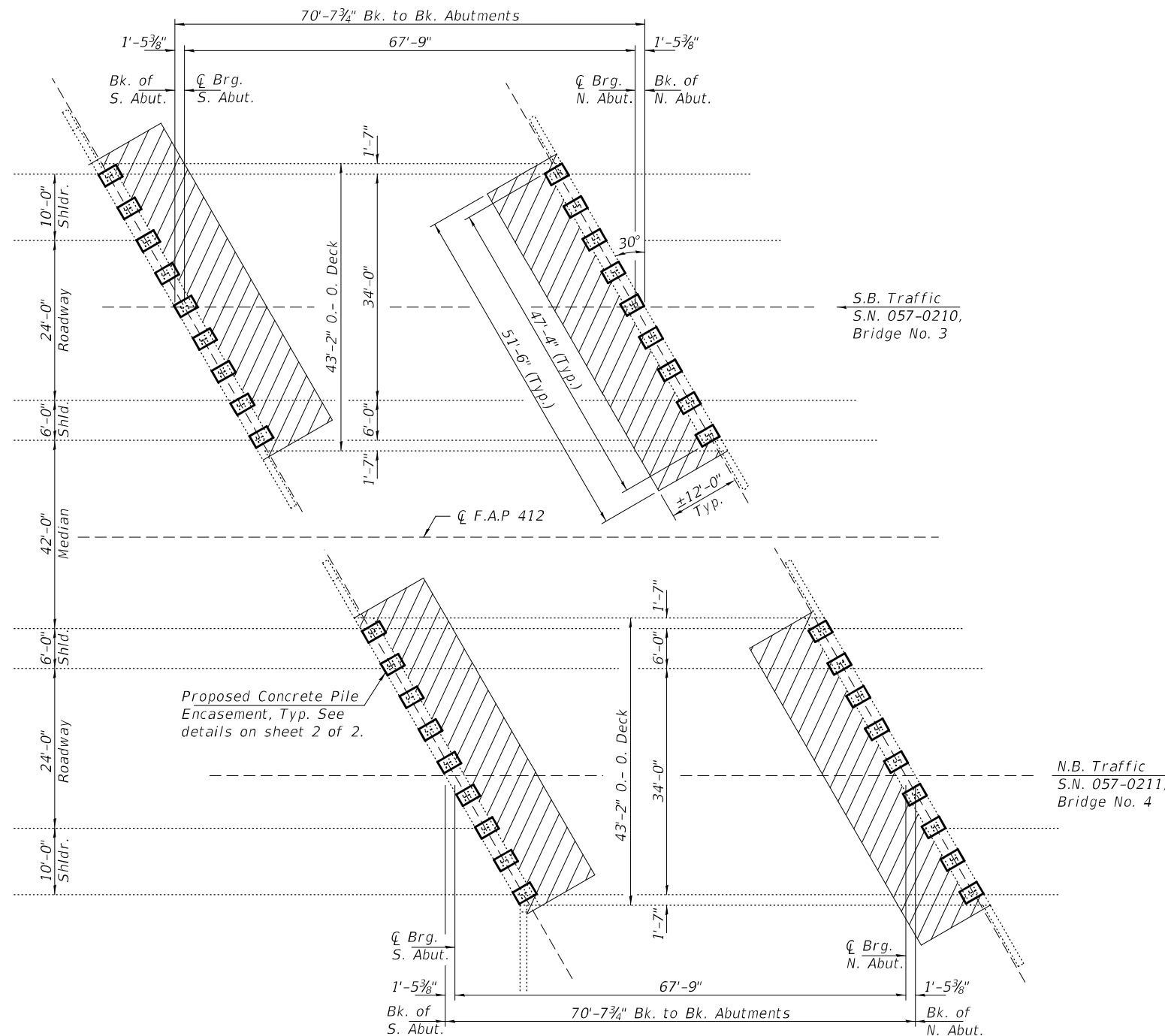
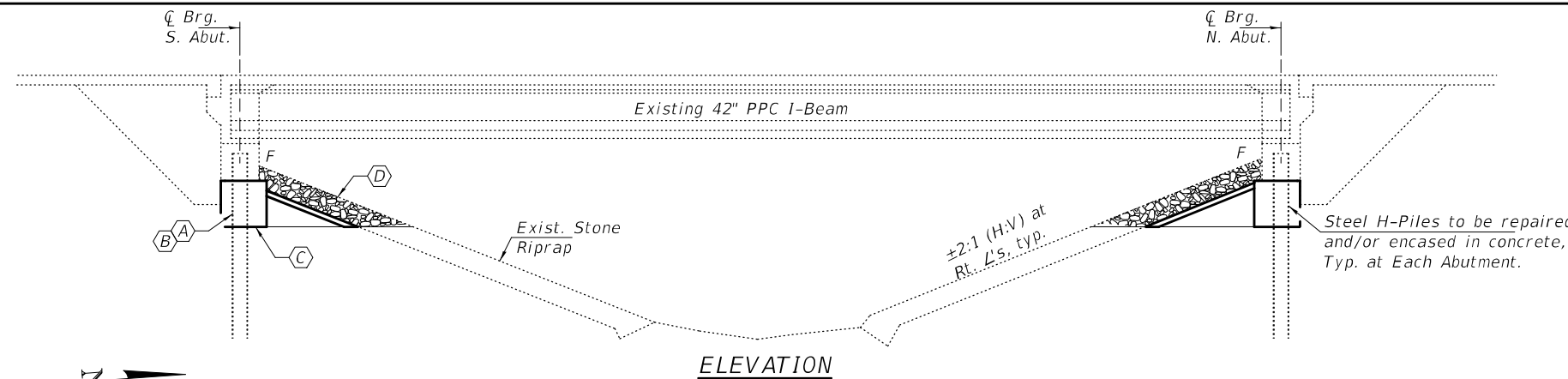
 Limits of Structure Excavation. Backfill with controlled low-strength material (CLSM), mix 2. Top with filter fabric, bedding, and stone riprap. See details on sheet 2 of 2.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Stone Riprap, Class A4 (Special)	Ton	170
Structure Excavation	Cu. Yd.	270
Concrete Structures	Cu. Yd.	25
Stud Shear Connectors	Each	288
Reinforcement Bars, Epoxy Coated	Pound	2800
Controlled Low-Strength Material	Cu. Yd.	100
* Structural Steel Repair	Pound	2080
Cleaning and Painting Steel Bridge No. 3	L. Sum	1
Cleaning and Painting Steel Bridge No. 4	L. Sum	1

The quantity and limits shown herein for Stone Riprap, Class A4 (Special) are estimated. Actual quantities shall be determined and adjusted in the field by the Engineer.

* Structural Steel Repair quantity is assumed for 4 piles location on each abutment. Exact pile number and locations to be determined in the field by the Engineer. Locations must also be included in the AS BUILT plans.



EXPIRES 11-30-2022

DESIGNED - Chi-Cheung Chau
 CHECKED - Stephen M. Ryan
 DRAWN - Venkat Ramana Reddy
 CHECKED - CCC SMR

EXAMINED
 PASSED
 ENGINEER OF STRUCTURAL SERVICES
 ENGINEER OF BRIDGES AND STRUCTURES

DATE - MARCH 15, 2022
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
 FAI 039 OVER TRIB SIX MILE CREEK
 SN 057 - 0210 (SB) & 0211 (NB)

SHEET NO. 1 OF 2 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	MBPM 2022-1	MCLEAN	14	6
CONTRACT NO. 70F34			ILLINOIS FED. AID PROJECT	

The Contractor shall clean the exposed pile and bottom of each abutment (within encasement limits) before installing the concrete pile encasement. Concrete surfaces shall be either power washed, blast cleaned, or wire wheel cleaned. Steel surfaces shall be prepared according to SSPC-SP3. Cost included with Cleaning and Painting Steel Bridge.

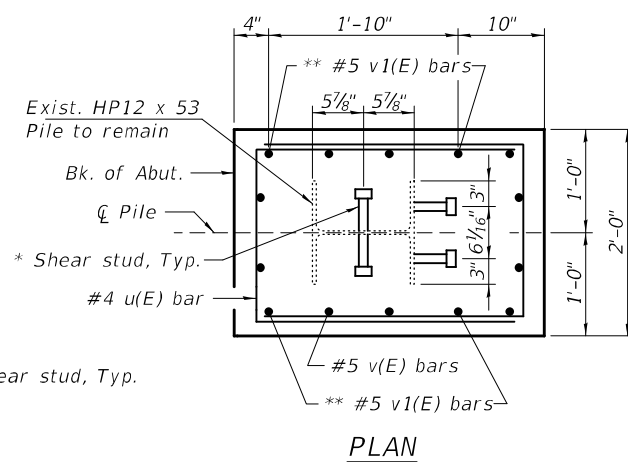
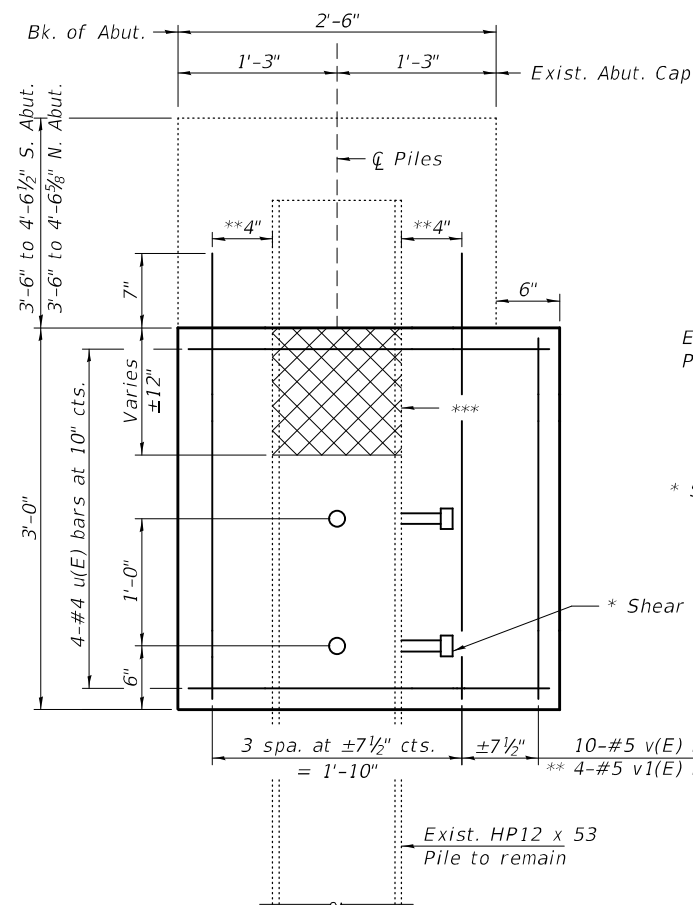
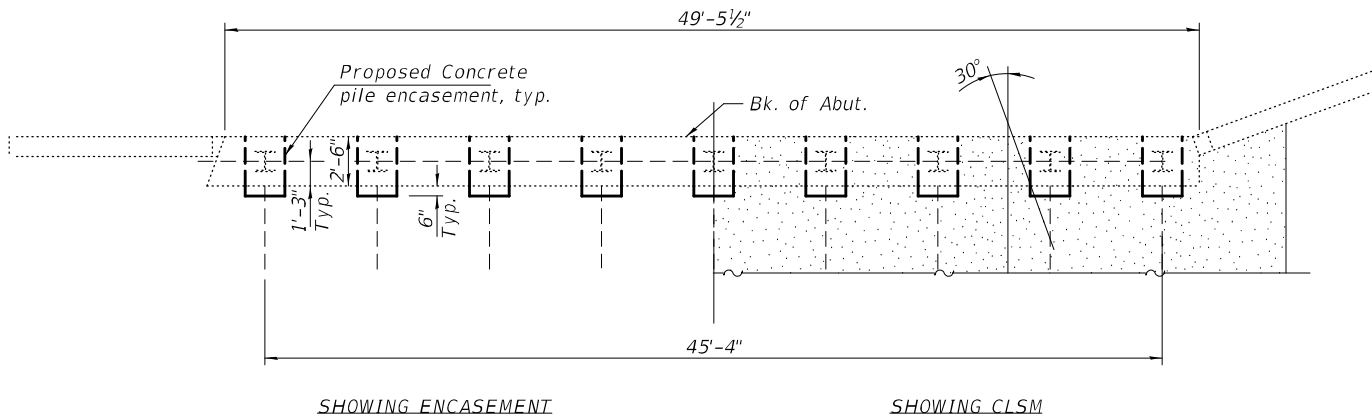
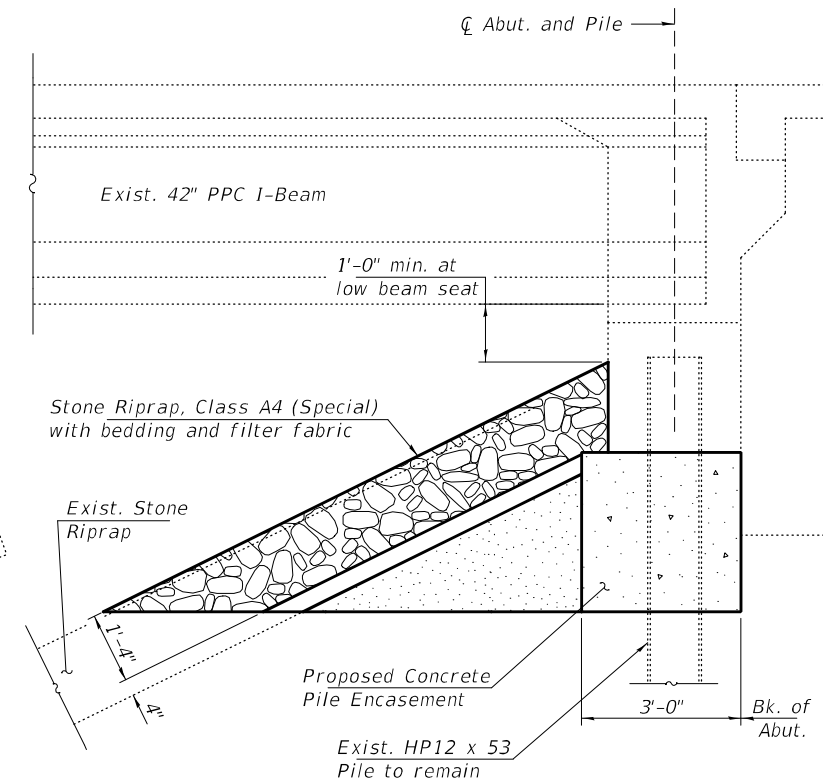
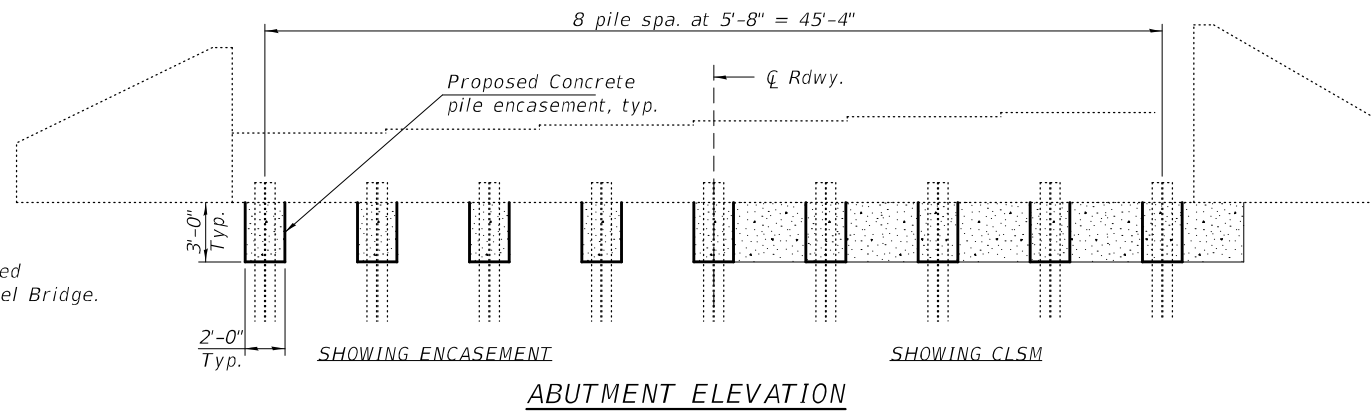
Grind bottom of abutment cap to provide a level bearing surface for the cap R's. Epoxy grout any voids to ensure uniform bearing. Cost included with Structural Steel Repair.

Drill and set all-thread rods into 7" min. drilled holes into the bottom of the exist. abutment cap according to Article 521.06 of the Standard Specifications. Cost included with Structural Steel Repair.

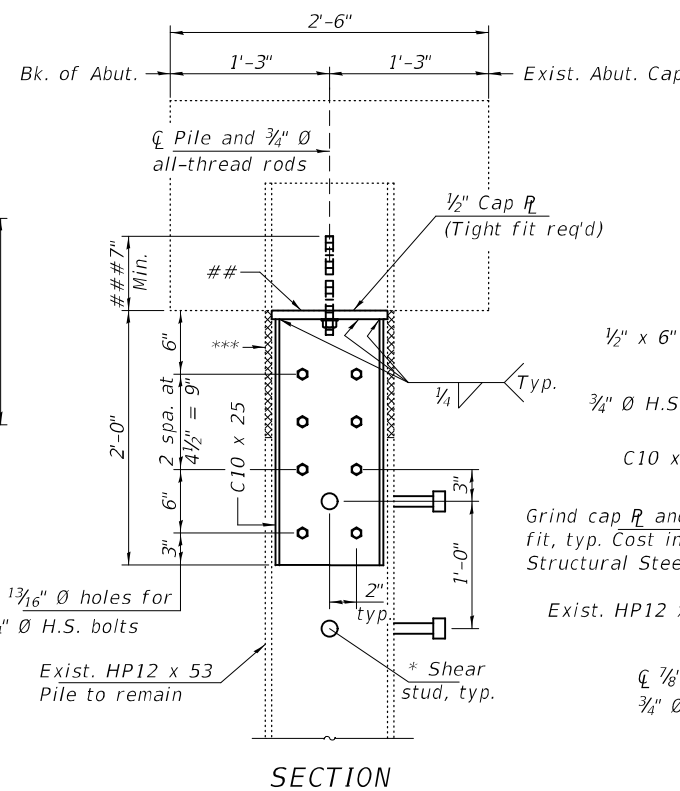
* $\frac{3}{4}$ " \emptyset x 4" headed studs end welded to the pile as shown. Contractor may either use the TIG or MIG welding process per Manufacturer's Specifications. (8 reqd. per concrete pile encasement)

** Drill and epoxy grout #5 bars into 7" min. drilled holes into the bottom of the exist. abutment cap according to Article 584 of the Standard Specifications. Cost included with Reinforcement Bars.

*** The Structural Engineer shall be contacted for further disposition if pile deterioration extends greater than 12 below the bottom of the abutment cap. See Special Provisions.



ABUTMENT PLAN



LEGEND

- Deteriorated Pile Section
- CLSM = Controlled Low-Strength Material, Mix 2.

BAR u(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
u(E)	288	#4	6'-8"	
v(E)	360	#5	2'-8"	
v1(E)	144	#5	3'-5"	
Concrete Structures		Cu. Yd.	25	
Structural Steel Repair		Pound	2080	
Stud Shear Connectors		Each	288	
Reinforcement Bars, Epoxy Coated		Pound	2800	

SECTION

PILE ENCASEMENT DETAILS

SECTION

PLAN

(Shear studs not shown for clarity)

PILE REPAIR DETAIL

057-0209, N. Abutment, Pile 7 and 8
057-0208, N. Abutment, Pile 8

DESIGNED - CCC
CHECKED - SMR
DRAWN - Venkat Ramana Reddy
CHECKED - CCC SMR

EXAMINED
PASSED

Timothy A. Smith
ENGINEER OF STRUCTURAL SERVICES
James F. Smith
ENGINEER OF BRIDGES AND STRUCTURES

DATE - MARCH 15, 2022

REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PILE REPAIR DETAILS
SN 057-0210 (SB) & 0211 (NB)

SHEET NO. 2 OF 2 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	MBPM 2022-1	MCLEAN	14	7
CONTRACT NO. 70F34				
ILLINOIS FED. AID PROJECT				

The Contractor shall clean the exposed pile and bottom of each abutment (within encasement limits) before installing the concrete pile encasement. Concrete surfaces shall be either power washed, blast cleaned, or wire wheel cleaned. Steel surfaces shall be prepared according to SSPC-SP3. Cost included with Cleaning and Painting Steel Bridge.

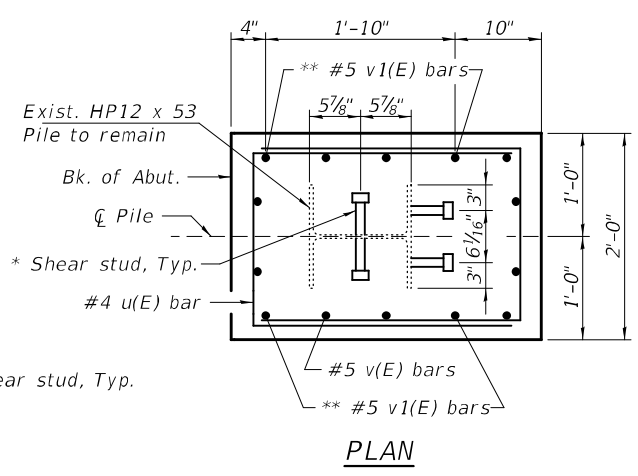
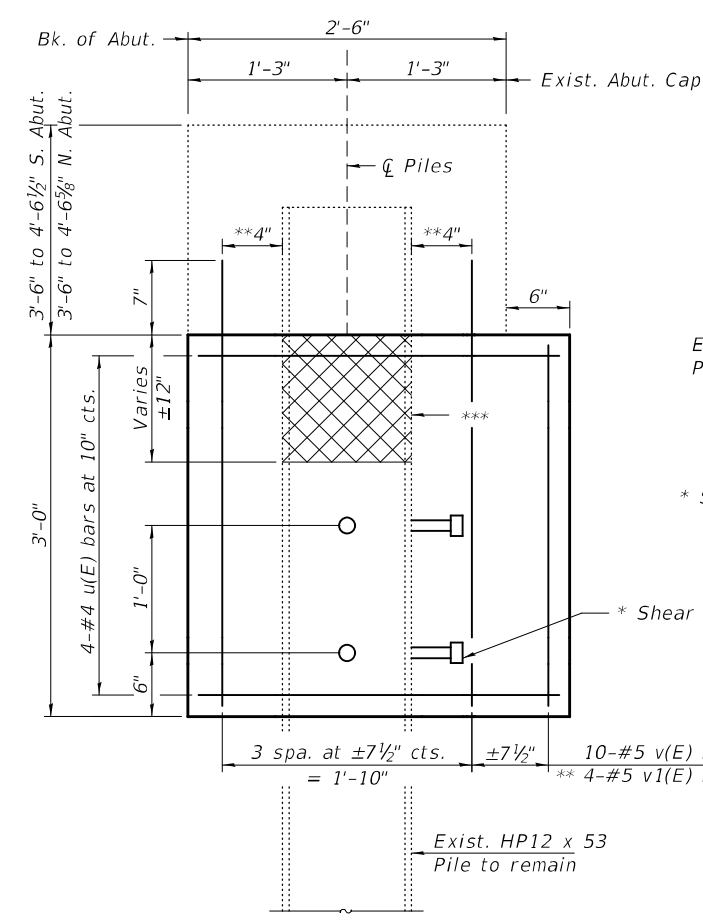
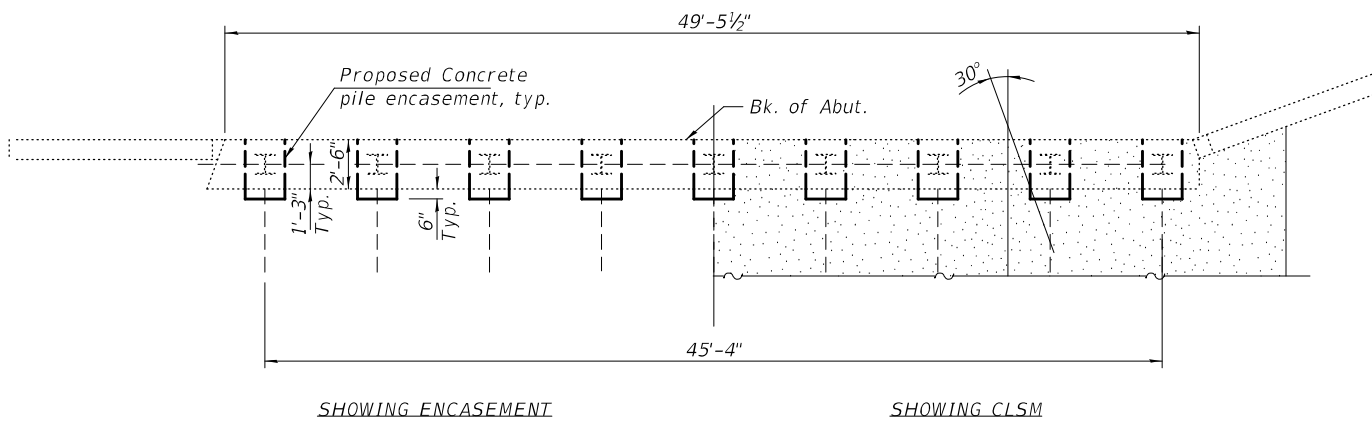
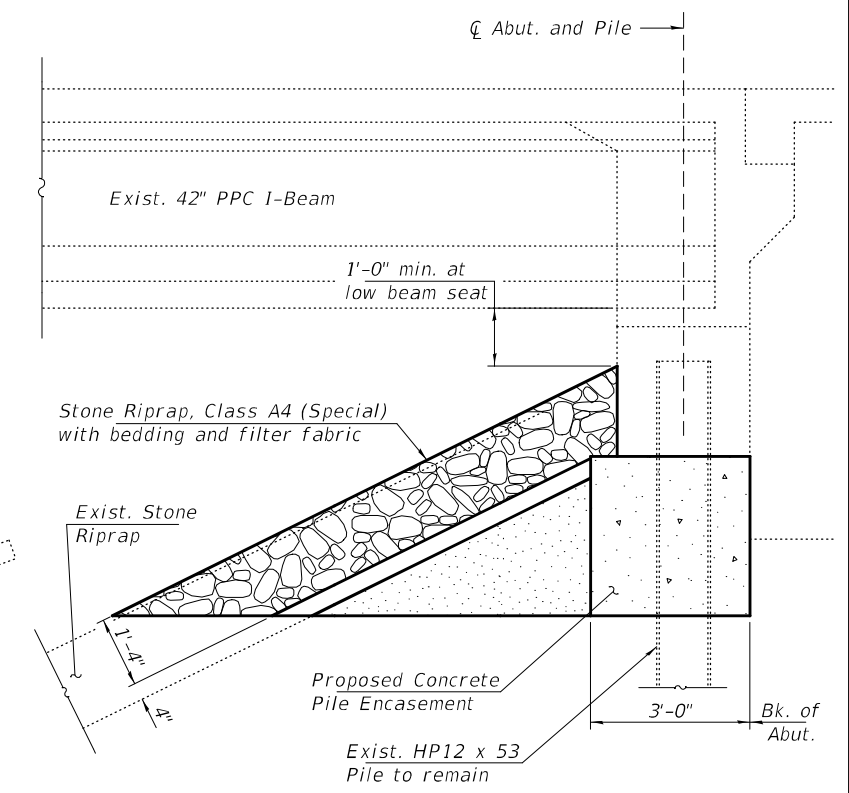
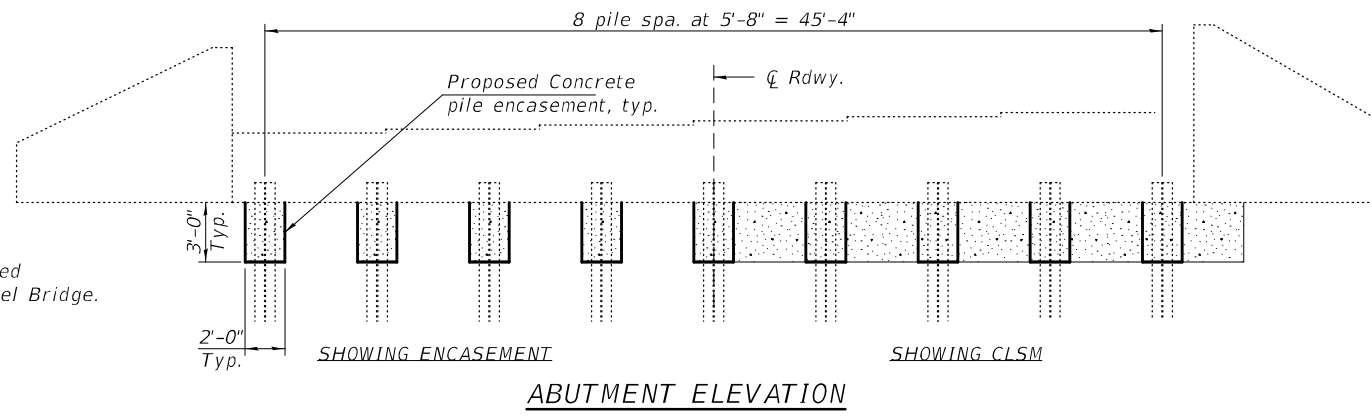
Grind bottom of abutment cap to provide a level bearing surface for the cap R's. Epoxy grout any voids to ensure uniform bearing. Cost included with Structural Steel Repair.

Drill and set all-thread rods into 7" min. drilled holes into the bottom of the exist. abutment cap according to Article 521.06 of the Standard Specifications. Cost included with Structural Steel Repair.

* 3/4" Ø x 4" headed studs end welded to the pile as shown. Contractor may either use the TIG or MIG welding process per Manufacturer's Specifications. (8 reqd. per concrete pile encasement)

** Drill and epoxy grout #5 bars into 7" min. drilled holes into the bottom of the exist. abutment cap according to Article 584 of the Standard Specifications. Cost included with Reinforcement Bars.

*** The Structural Engineer shall be contacted for further disposition if pile deterioration extends greater than 12 below the bottom of the abutment cap. See Special Provisions.



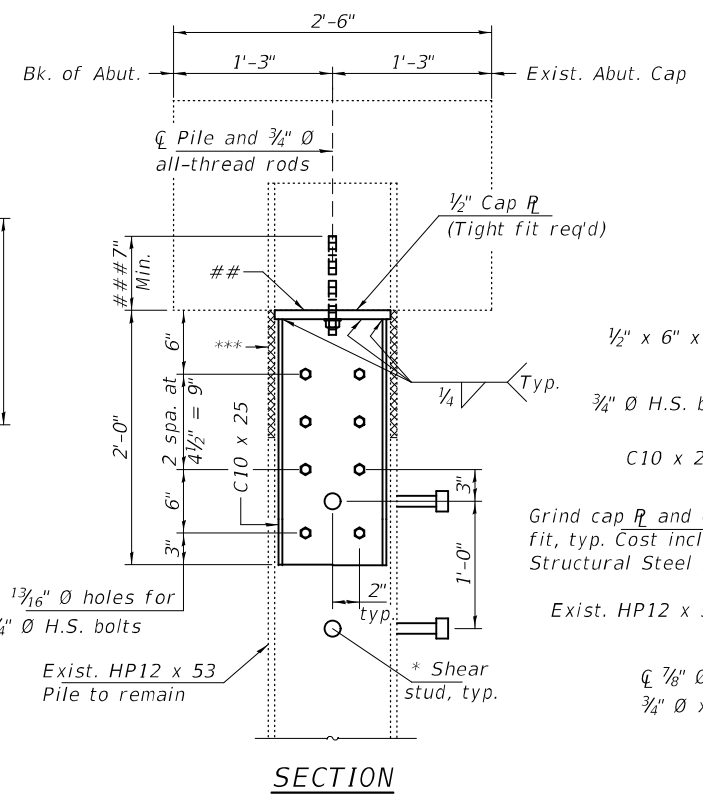
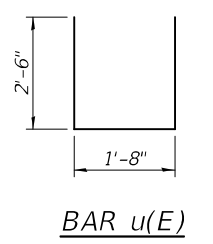
ABUTMENT PLAN

SECTION

PILE ENCASEMENT DETAILS

LEGEND

- Deteriorated Pile Section
- CLSM = Controlled Low-Strength Material, Mix 2.



PILE REPAIR DETAIL PLAN (Shear studs not shown for clarity)

PILE REPAIR DETAILS
057-0209, N. Abutment, Pile 7 and 8
057-0208, N. Abutment, Pile 8

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
u(E)	288	#4	6'-8"	
v(E)	360	#5	2'-8"	
v1(E)	144	#5	3'-5"	
Concrete Structures		Cu. Yd.	25	
Structural Steel Repair		Pound	2080	
Stud Shear Connectors		Each	288	
Reinforcement Bars, Epoxy Coated		Pound	2800	

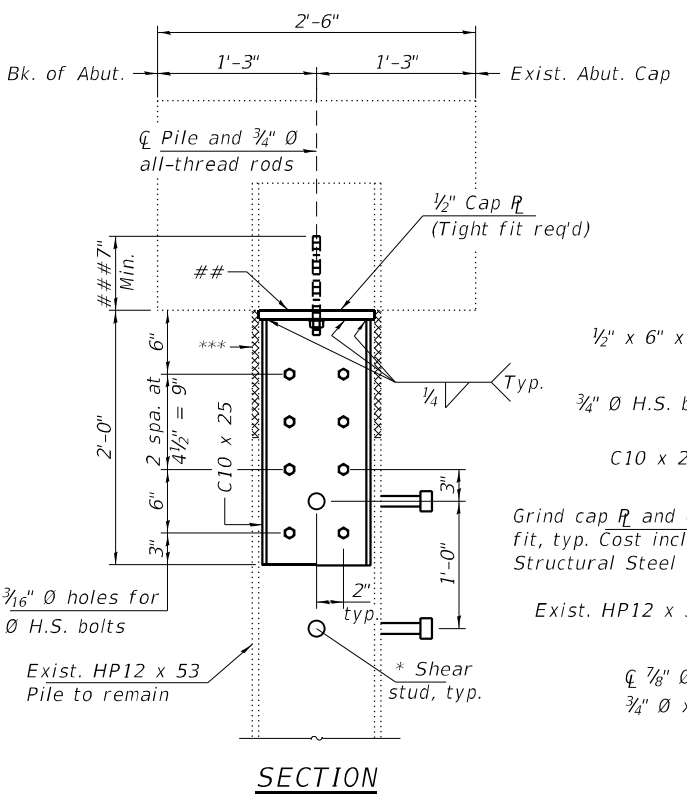
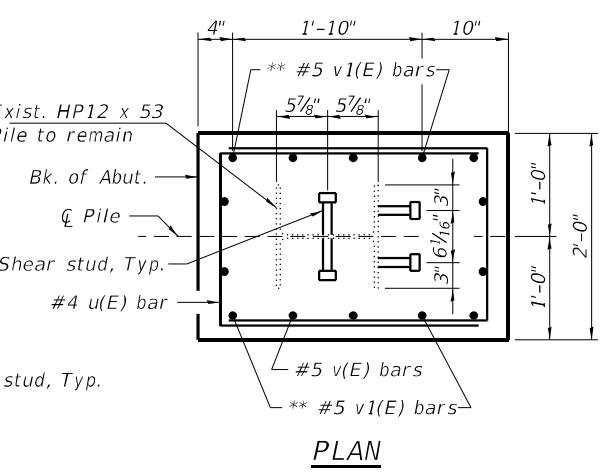
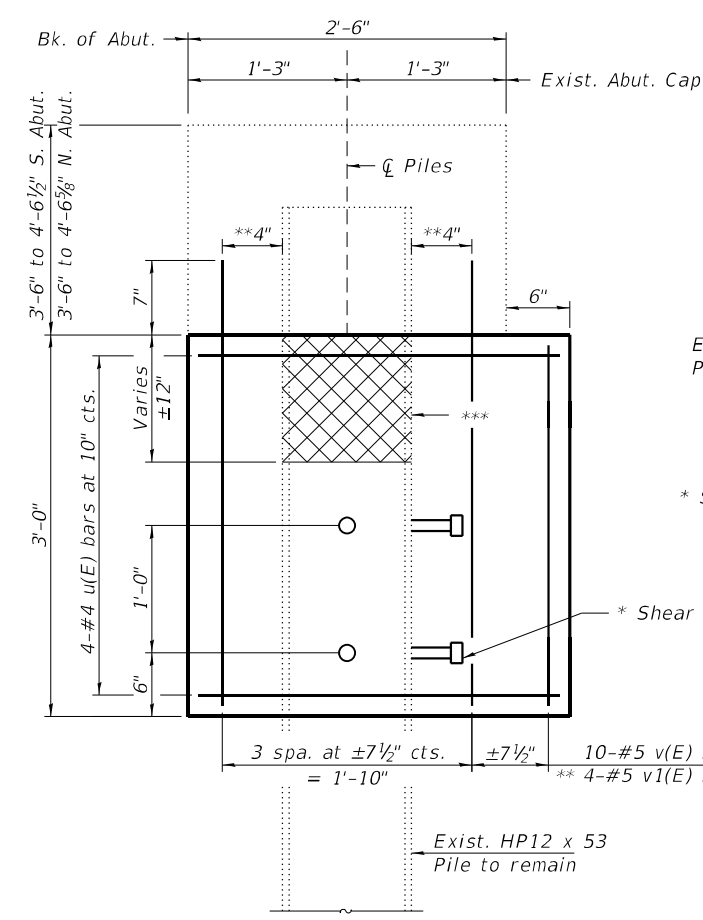
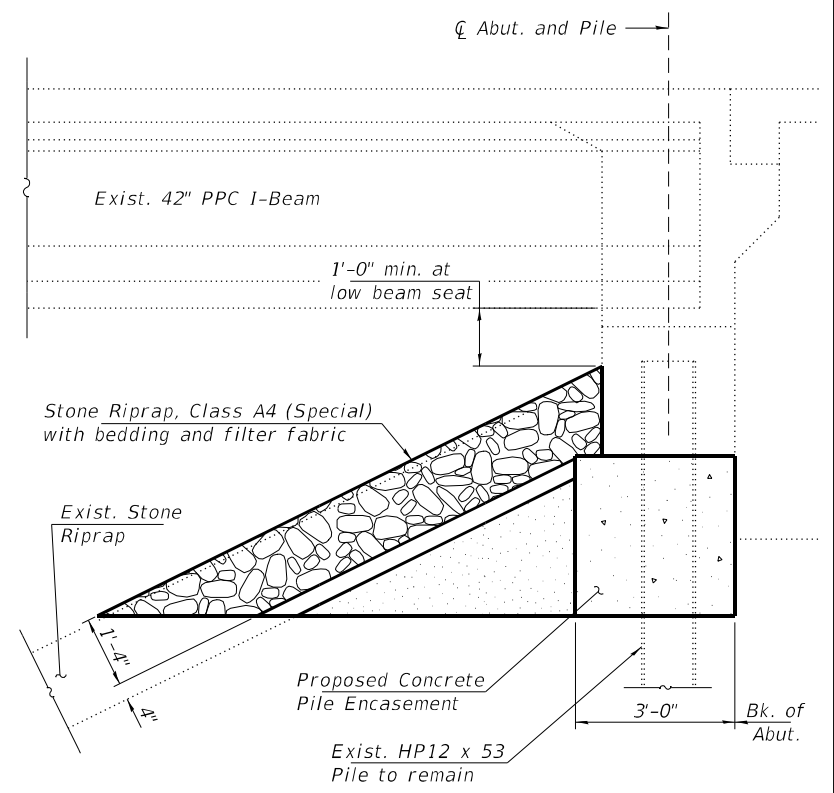
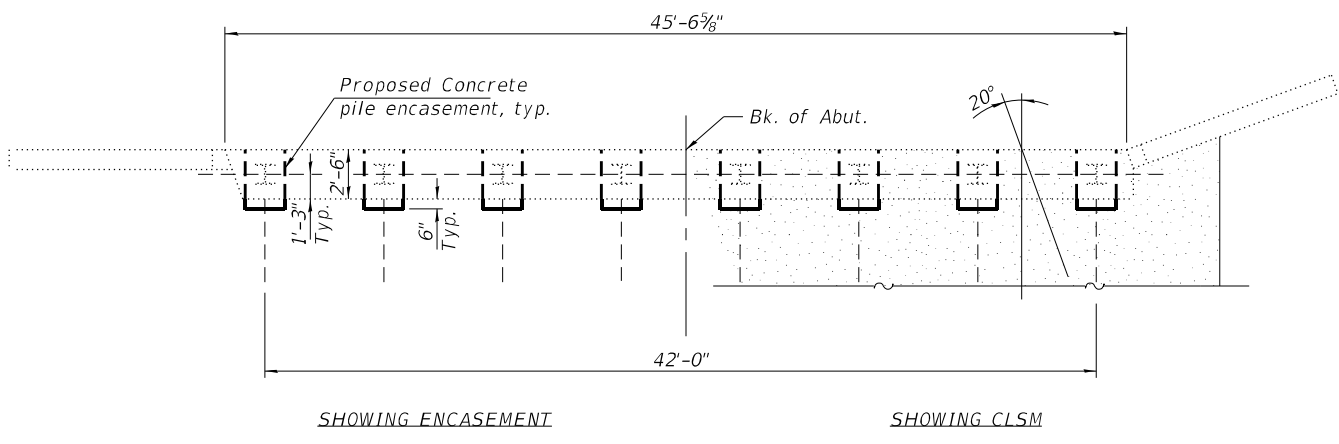
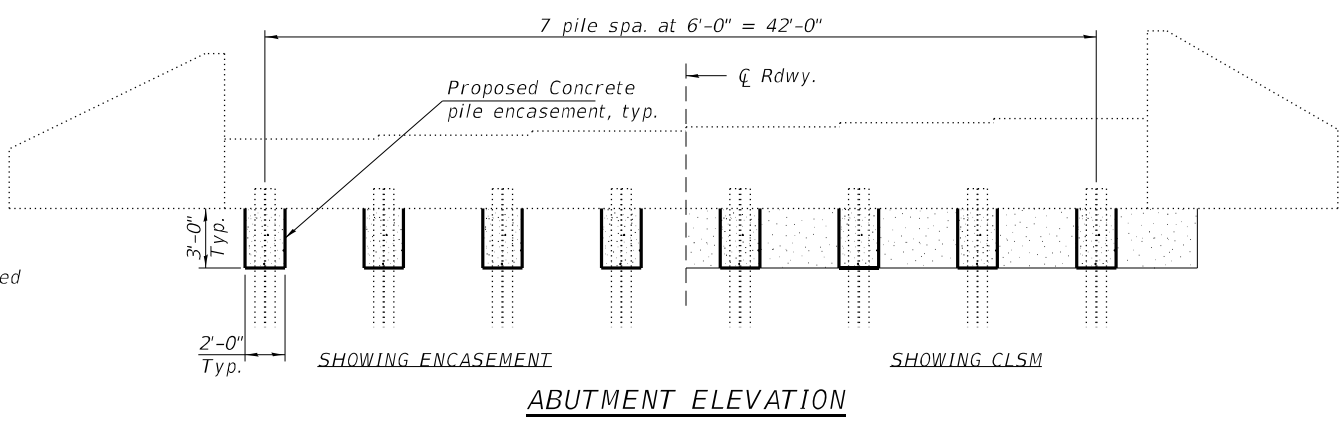
DESIGNED - CCC	EXAMINED	DATE - MARCH 11, 2022
CHECKED - SMR		
DRAWN - Venkat Ramana Reddy	PASSED	
CHECKED - CCC SMR		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

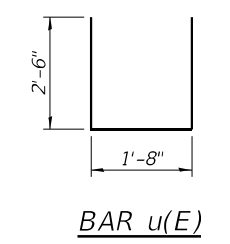
PILE REPAIR DETAILS
SN 057-0210 (SB) & 0211 (NB)

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	MBPM 2022-1	MCLEAN	14	7
CONTRACT NO. 70F34				
ILLINOIS FED. AID PROJECT				

- # The Contractor shall clean the exposed pile and bottom of each abutment (within encasement limits) before installing the concrete pile encasement. Concrete surfaces shall be either power washed, blast cleaned, or wire wheel cleaned. Steel surfaces shall be prepared according to SSPC-SP3. Cost included with Cleaning Structural Steel.
- ## Grind bottom of abutment cap to provide a level bearing surface for the cap Rs. Epoxy grout any voids to ensure uniform bearing. Cost included with Structural Steel Repair.
- ### Drill and set all-thread rods into 7" min. drilled holes into the bottom of the exist. abutment cap according to Article 521.06 of the Standard Specifications. Cost included with Structural Steel Repair.
- * 3/4" Ø x 4" headed studs end welded to the pile as shown. Contractor may either use the TIG or MIG welding process per Manufacturer's Specifications. (8 reqd. per concrete pile encasement)
- ** Drill and epoxy grout #5 bars into 7" min. drilled holes into the bottom of the exist. abutment cap according to Article 584 of the Standard Specifications. Cost included with Reinforcement Bars.
- *** The Structural Engineer shall be contacted for further disposition if pile deterioration extends greater than 12 below the bottom of the abutment cap. See Special Provisions.



- LEGEND**
- Deteriorated Pile Section
 - CLSM = Controlled Low-Strength Material, Mix 2.



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
u(E)	256	#4	6'-8"	
v(E)	320	#5	2'-8"	
v1(E)	128	#5	3'-5"	
Concrete Structures		Cu. Yd.		22
Structural Steel Repair		Pound		2000
Stud Shear Connectors		Each		256
Reinforcement Bars, Epoxy Coated		Pound		2490

PILE ENCASEMENT DETAILS

PreFinal
DATE: 01/27/2022

PILE REPAIR DETAILS
057-0209, N. Abutment, Pile 7 and 8
057-0208, N. Abutment, Pile 8

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

The structural steel shapes, plates, and adjusting shims for pile repair's shall conform to the requirements of AASHTO M 270 Grade 50, unless noted otherwise. No field welding is permitted, except as noted.

High strength fasteners shall be ASTM A325 Type 3. Holes may be subpunched or subdrilled 16" dia. and reamed in the field to 16 dia. for dia. Bolts.

All-thread rods shall be ASTM F1554, Grade 55.

The Contractor shall field verify the required bolt length and length of threads necessary to install all bolts in accordance with the Standard Specification.

Reinforcement bars designated (E) shall be epoxy coated.

Layout of the slope protection system may be varied to suit specific site conditions in the field as directed by the Engineer.


Contractor must exercise extreme care during construction operation as not to damage any of the overhead PPC I beams. Any damage done to the beams as a result of the contractor's operations will need to be repaired to the satisfaction of the Engineer at the contractor's expense.

The quantity and limits shown herein for Stone Riprap, Class A4 (Special) are estimated. Actual quantities shall be determined and adjusted in field by the Engineer.

Structural Steel Repair quantities are estimates based on initial investigations only. Exact pile locations needing repair will be determined by the Engineer after Structure Excavation and SSPC-SP10 Blast Cleaning by the Contractor. The Engineer shall obtain pile measurements after blast cleaning but before painting. The Contractor shall notify the Engineer in advance of pile blast cleaning to avoid pile inspection delays.

- (A) - Expose and clean all abutment piles as shown.
- (B) - Perform structural steel repairs to indicated abutment piles.
- (C) - Construct all abutment reinforced concrete pile encasements.
- (D) - Backfill excavation with controlled low-strength material and add new riprap slope protection.

LEGEND

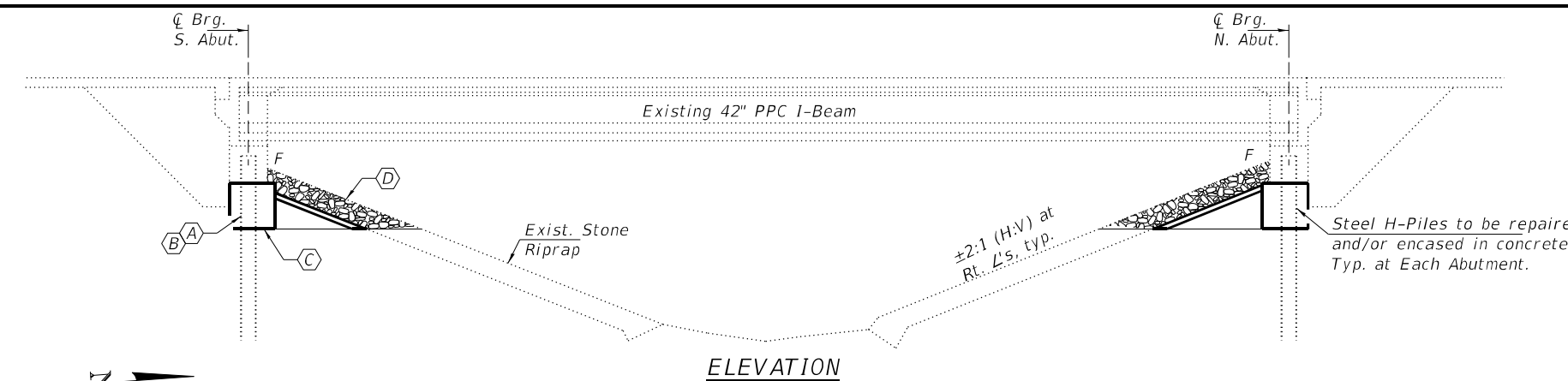
 Limits of Structure Excavation. Backfill with controlled low-strength material (CLSM), mix 2. Top with filter fabric, bedding, and stone riprap. See details on sheet 2 of 2.

TOTAL BILL OF MATERIAL

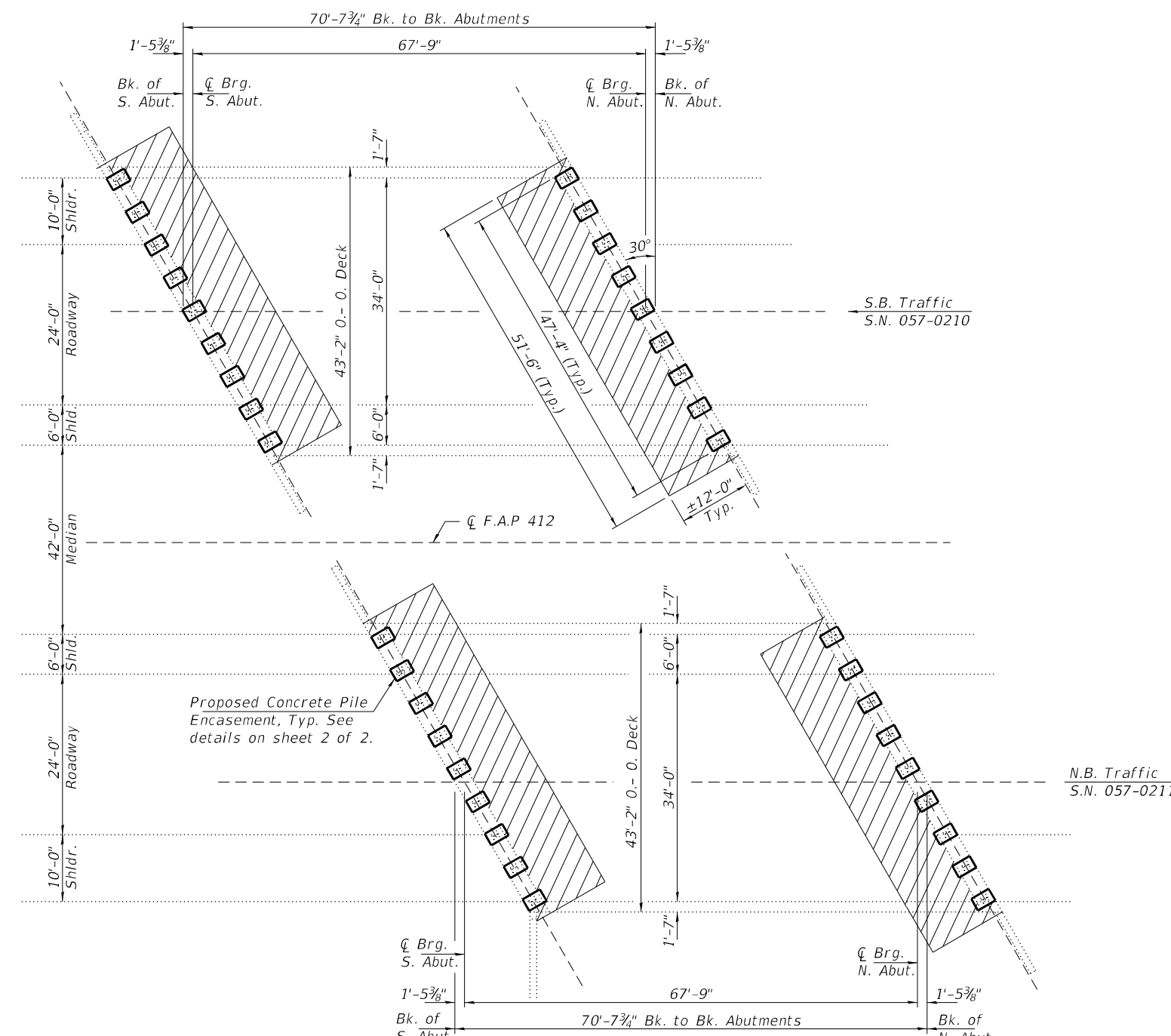
ITEM	UNIT	QUANTITY
Stone Riprap, Class A4 (Special)	Ton	170
Structure Excavation	Cu. Yd.	270
Concrete Structures	Cu. Yd.	25
Stud Shear Connectors	Each	288
Reinforcement Bars, Epoxy Coated	Pound	2800
Controlled Low-Strength Material	Cu. Yd.	100
* Structural Steel Repair	Pound	2080
Cleaning and Painting Steel Bridge No. 1	L. Sum	1

The quantity and limits shown herein for Stone Riprap, Class A4 (Special) are estimated. Actual quantities shall be determined and adjusted in the field by the Engineer.

* Structural Steel Repair quantity is assumed for 4 piles location on each abutment. Exact pile number and locations to be determined in the field by the Engineer. Locations must also be included in the AS BUILT plans.



ELEVATION



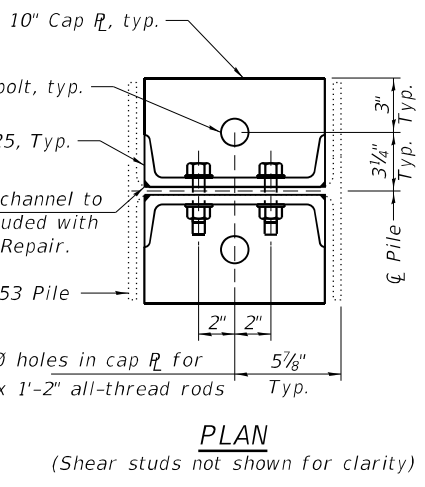
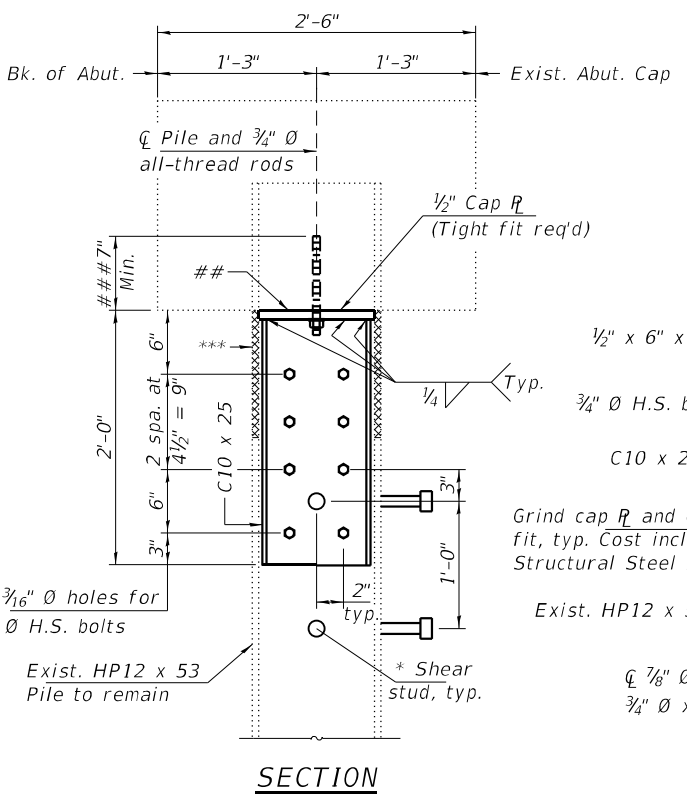
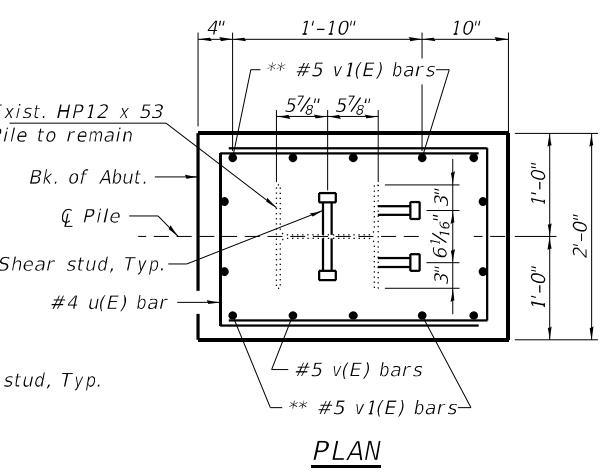
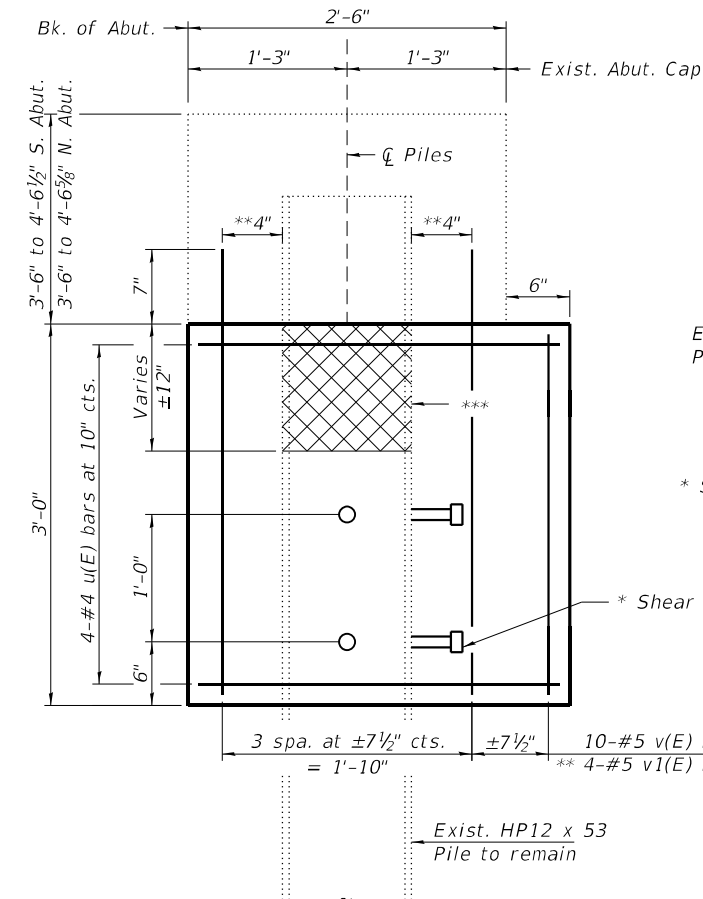
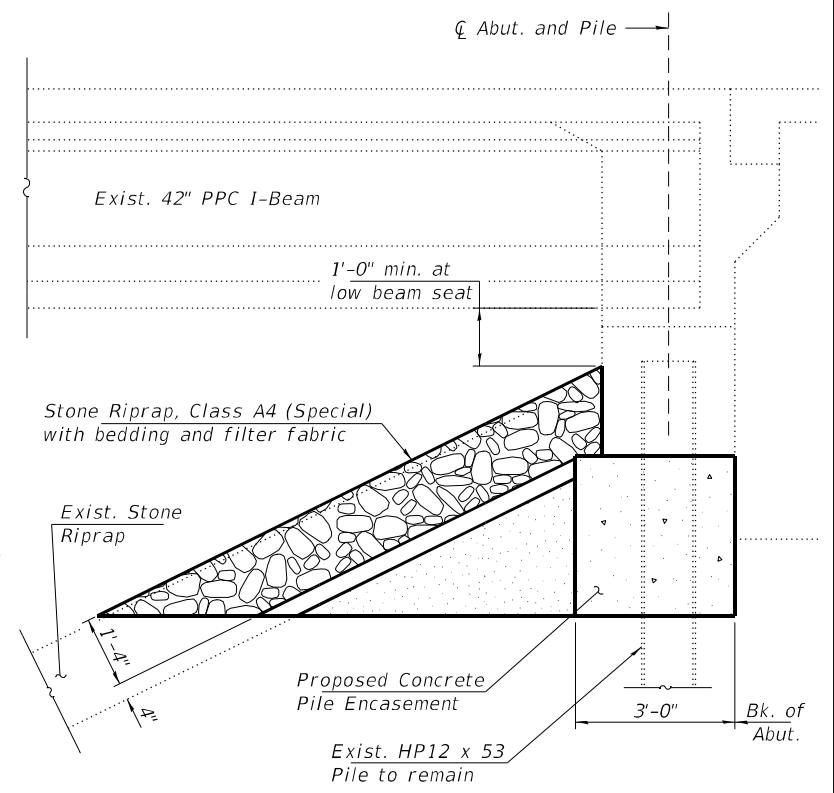
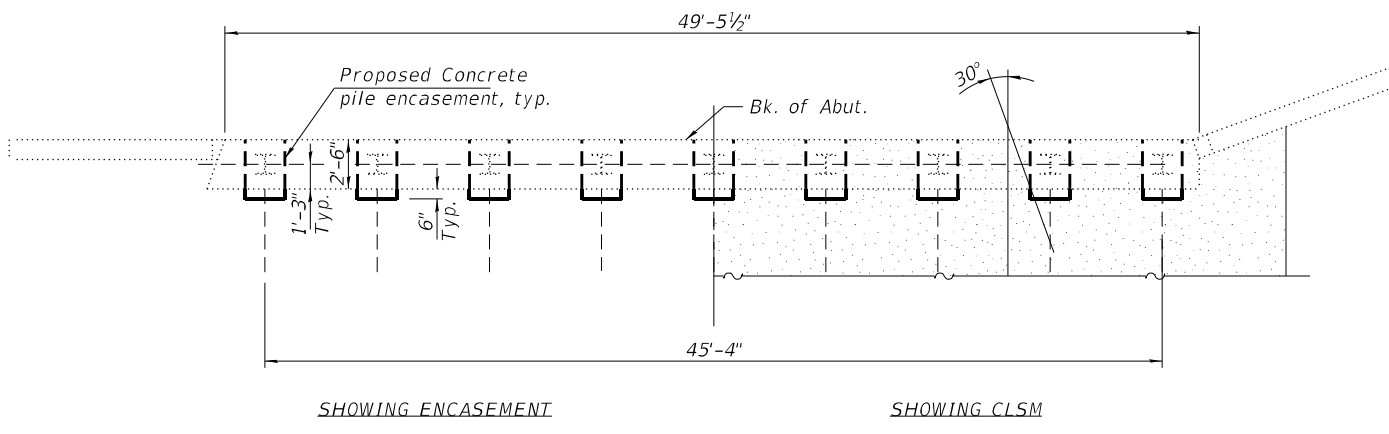
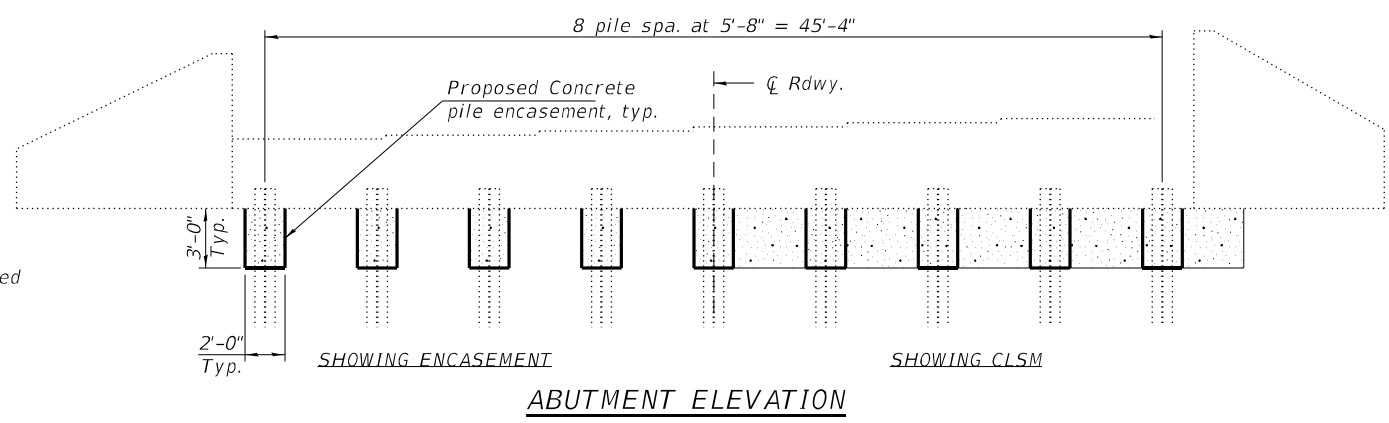
PLAN

PreFinal
DATE: 01/27/2022

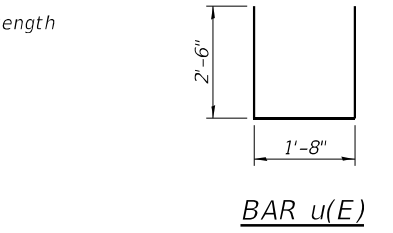
EXPIRES 11-30-2022

DESIGNED - Chi-Cheung Chau	EXAMINED	DATE - JANUARY 27, 2022	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN AND ELEVATION FAI 039 OVER TRIB SIX MILE CREEK SN 057 - 0210 (SB) & 0211 (NB)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
CHECKED - Stephen M. Ryan	ENGINEER OF STRUCTURAL SERVICES	REVISD -			39	-	MCLEAN	-	-	
DRAWN - Venkat Ramana Reddy	PASSED	REVISD -			CONTRACT NO. 70F34					
CHECKED - CCC SMR	ENGINEER OF BRIDGES AND STRUCTURES				ILLINOIS FED. AID PROJECT					

- # The Contractor shall clean the exposed pile and bottom of each abutment (within encasement limits) before installing the concrete pile encasement. Concrete surfaces shall be either power washed, blast cleaned, or wire wheel cleaned. Steel surfaces shall be prepared according to SSPC-SP3. Cost included with Cleaning Structural Steel.
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- LEGEND**
- Deteriorated Pile Section
 - CLSM = Controlled Low-Strength Material, Mix 2.



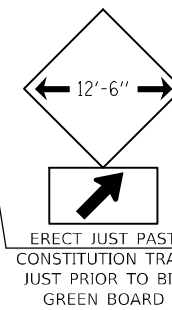
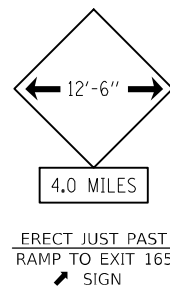
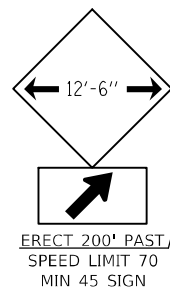
BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
u(E)	288	#4	6'-8"		
v(E)	360	#5	2'-8"		
v1(E)	144	#5	3'-5"		
Concrete Structures				Cu. Yd.	25
Structural Steel Repair				Pound	2080
Stud Shear Connectors				Each	288
Reinforcement Bars, Epoxy Coated				Pound	2800

PreFinal
DATE: 01/27/2022

PILE ENCASEMENT DETAILS

PILE REPAIR DETAILS
057-0209, N. Abutment, Pile 7 and 8
057-0208, N. Abutment, Pile 8



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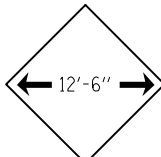
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PLOT DATE = 1/14/2022	DATE - 3/5/2021	REVISED - 1/14/2022

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

WIDTH RESTRICTION SIGNING DETAIL

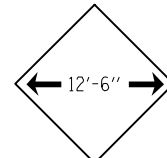
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	MBPM 2022-1	MCLEAN	14	11
CONTRACT NO. 70F34				
ILLINOIS FED. AID PROJECT				

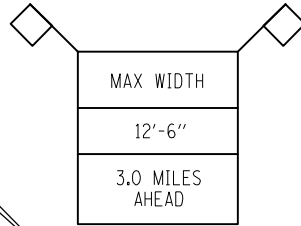


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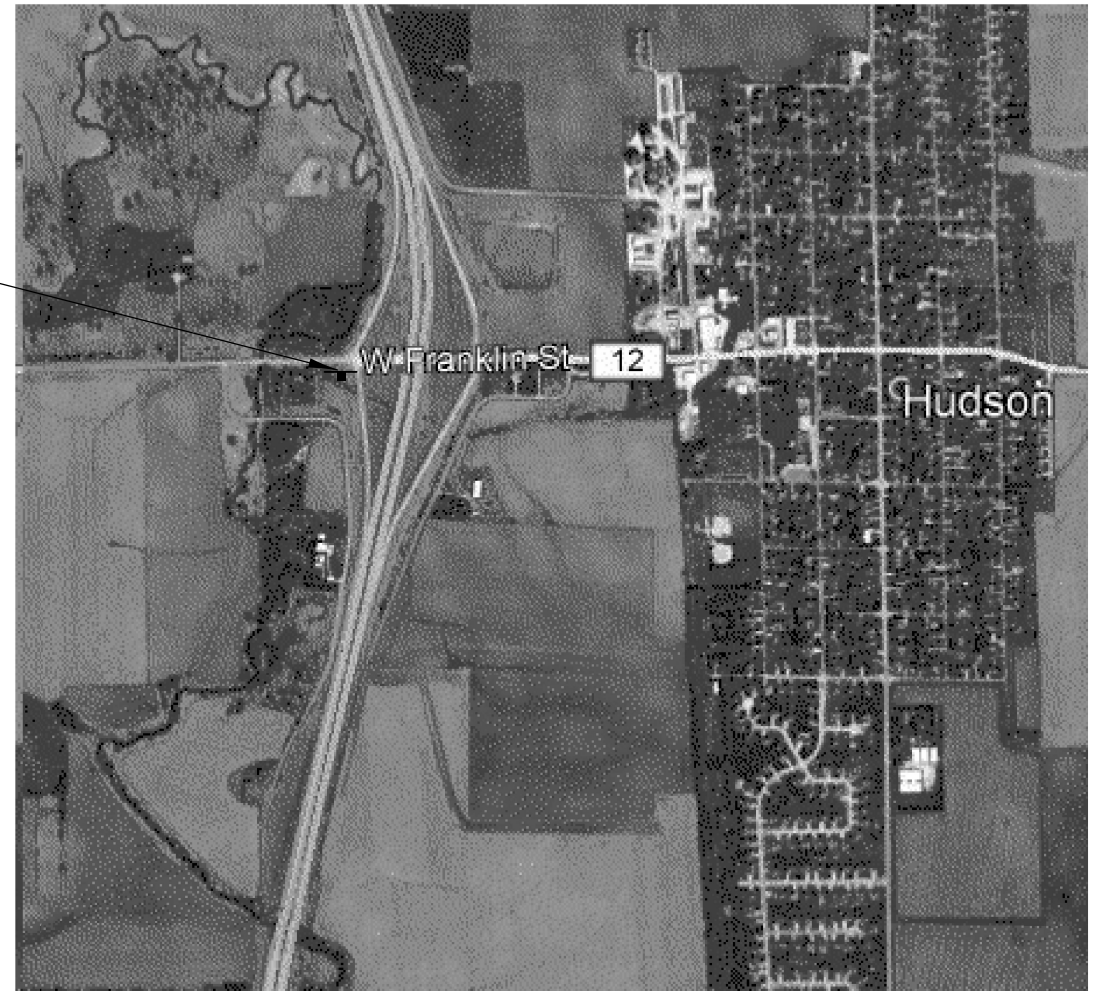
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BLOOMINGTON/NORMAL
1/2 MILE GREEN BOARD



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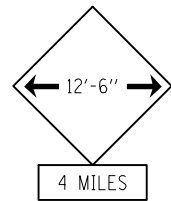
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PLOT DATE = 1/14/2022	DATE - 3/5/2021	REVISED - 1/14/2022

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

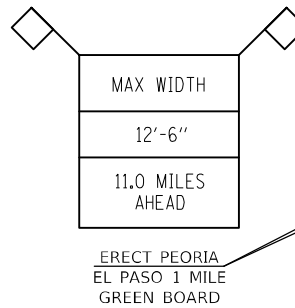
WIDTH RESTRICTION SIGNING DETAIL

SCALE: SHEET OF SHEETS STA. TO STA.

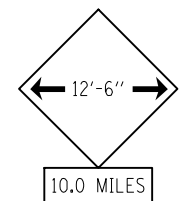
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	MBPM 2022-1	MCLEAN	14	12
CONTRACT NO. 70F34				
ILLINOIS FED. AID PROJECT				



ERECT BY USE
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ERECT PEORIA
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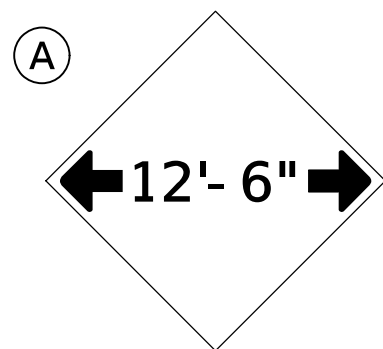
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PLOT DATE = 1/14/2022	DATE - 3/5/2021	REVISED - 1/14/2022

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

WIDTH RESTRICTION SIGNING DETAIL

SCALE: SHEET OF SHEETS STA. TO STA.

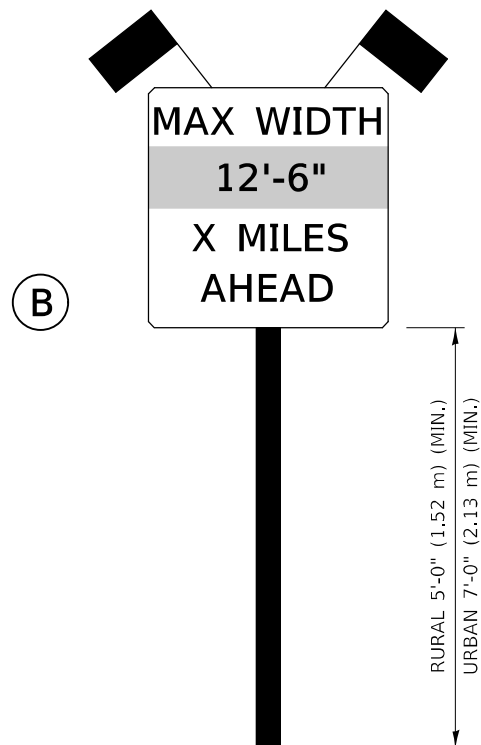
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	MBPM 2022-1	MCLEAN	14	13
CONTRACT NO. 70F34				
ILLINOIS FED. AID PROJECT				



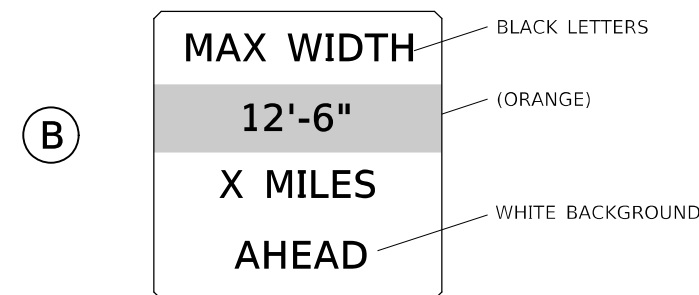
W12-2(O)-48"x48"(1200x1200)

SIGN (A) 2 SIGNS - W12-2(O)-48"x48"(1200x1200) ARE TO BE PLACED AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

SIGN (B) 2 SIGNS - (SIGN PANEL, TYPE II) AS SHOWN ARE TO BE PLACED AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.



SIGN PANEL, TYPE II



**W12-I103(O)-48"x48"(1200x1200)
"D" LETTERS/NUMBERS**

GENERAL NOTES

1. ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED AND MAINTAINED BY THE CONTRACTOR.
2. ALL (B) SIGNS SHALL HAVE FLAGS INSTALLED UNLESS OTHERWISE DIRECTED.
3. LOCATIONS OF TRAFFIC CONTROL DEVICES MAY BE ADJUSTED BY THE ENGINEER.
4. ALL TRAFFIC CONTROL SHOWN ON THIS SHEET SHALL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR WIDTH RESTRICTION SIGNING.
5. ALL SIGNS SHALL BE POST MOUNTED UNLESS OTHERWISE DIRECTED.
6. ALL SIGNS SHOWN ORANGE (O) SHALL BE FLUORESCENT ORANGE.
7. ALL SIGNS SHOWN SHALL CONSIST OF THE CURRENT RETROREFLECTIVE SHEETING REQUIREMENTS AS OUTLINED IN SECTION 1106.01 OF THE STANDARD SPECIFICATIONS BOOK.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

MODEL: \\MODEL\MAME FILE: \\MAILS_P\pub\ecpaw_bendley.com\FW\DOT\Documents\DOT_offices\Dir\dr... S:\Project\10570E34\CADD\Drawn\Hydraulics\10570E34-ent\10570E34.dgn

USER NAME = brandenburgj	DESIGNED - TJB	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 40,0000 * / in.	CHECKED -	REVISED -
PLOT DATE = 1/11/2022	DATE - 3/5/2021	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

WIDTH RESTRICTION SIGNING DETAIL

SCALE: SHEET OF SHEETS STA. TO STA.

DISTRICT 5 DETAIL NO. X7200201

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	MBPM 2022-1	MCLEAN	14	14
				CONTRACT NO. 70F34
		ILLINOIS	FED. AID PROJECT	