PROJECT	DESIGNATION
1383332	1383486 & 1383487
CONTRACT	BRIDGE FILE
R-37053	I69-206-5313 DNBL/DSBL

INDEX				
STRUCTURE	TYPE	SPAN AND SKEW	OVER	STATION
I69-206-5313 DNBL/DSBL	TWIN CONTINUOUS R.C. SLAB BRIDGES	THREE SPANS: 27'-0", 36'-0", 27'-0" SKEW 30°00'00" RIGHT	SAND CREEK	394+85.00 "A"

KIN DESIGNATION NUMBERS		
DESIGNATION	DESCRIPTION	TYPE
1383332	I-69 ADDED TRAVEL LANES FROM 116TH ST. TO 0.56 MILE EAST OF CAMPUS PKWY/SOUTHEASTERN PKWY	ROADWAY
1383488	BROOKS SCHOOL RD OVER I-69	BRIDGE
1383489 & 1383490	CAMPUS PARKWAY INTERCHANGE	ROADWAY/BRIDGE
1383336	I-69 ADDED TRAVEL LANES FROM 0.56 MILE EAST OF CAMPUS PKWY/SOUTHEASTERN PKWY TO 0.42 MILE EAST OF S.R. 13	ROADWAY
1383509 & 1383510	I-69 OVER MUD CREEK	BRIDGE
1383512 & 1383513	I-69 OVER THORPE CREEK	BRIDGE
1383514 & 1383515	I-69 OVER S.R. 13	BRIDGE
1383337	I-69 ADDED TRAVEL LANES FROM 0.42 MILE EAST OF S.R. 13 TO LAPEL ROAD	ROADWAY
1383623	C.R. 650 W. OVER I-69	BRIDGE
1383624 & 1383625	I-69 OVER FOSTERS BRANCH	BRIDGE

R-37053
SET 5 OF 12

INDIANA DEPARTMENT
OF TRANSPORTATION

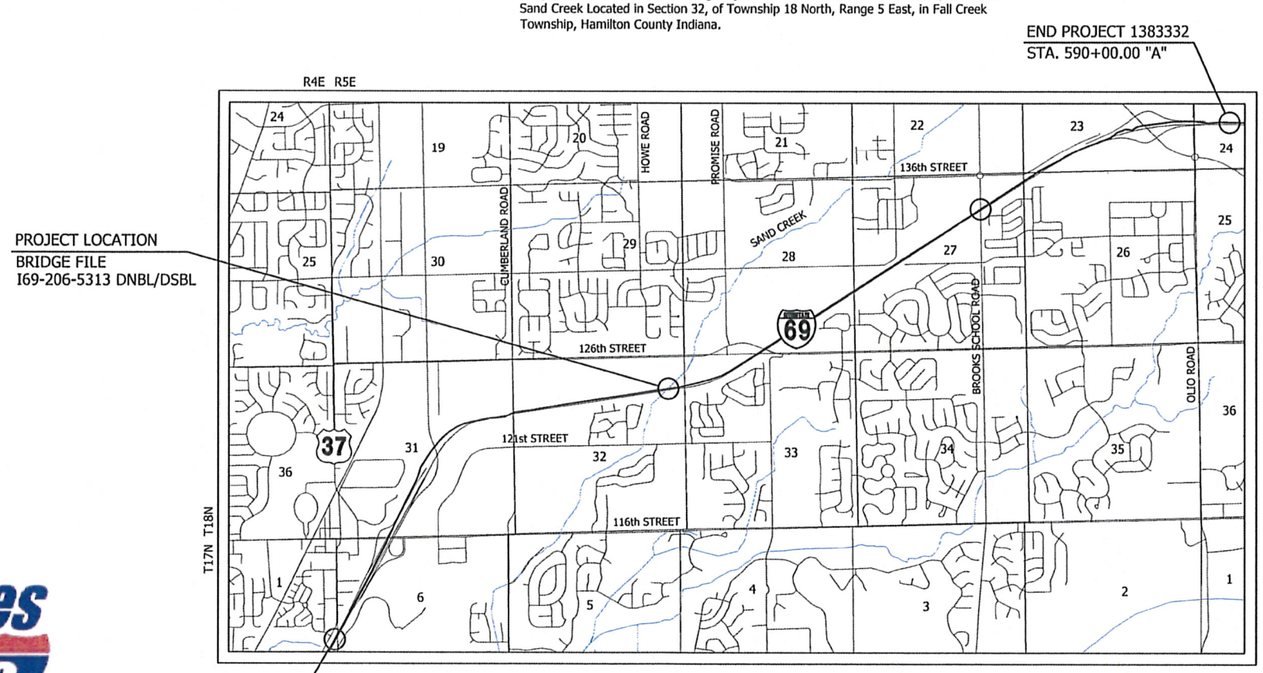
BRIDGE REHABILITATION PLANS

FOR SPANS OVER 20 FEET
I-69
OVER
SAND CREEK

PROJECT NO. 1383332 P.E.

RP 207+02

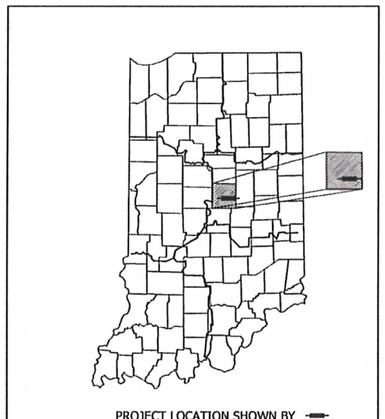
Bridge Rehabilitation and Widening Project on Structure I69-206-5313 DNBL/DSBL over Sand Creek Located in Section 32, of Township 18 North, Range 5 East, in Fall Creek Township, Hamilton County Indiana.



LOCATION MAP
HAMILTON COUNTY

Scale 1" = 2000'

TRAFFIC DATA	I-69
A.D.T. (2015)	63,440 V.P.D.
A.D.T. (2035)	83,850 V.P.D.
D.H.V. (2035)	5,870 V.P.H.
DIRECTIONAL DISTRIBUTION	53% NB/47% SB
TRUCKS	20% A.A.D.T.
	14% D.H.V.
DESIGN DATA	I-69
DESIGN SPEED	70 M.P.H.
PROJECT DESIGN CRITERIA	PARTIAL RECONSTRUCTION (4R) (FREEWAY)
FUNCTIONAL CLASSIFICATION	INTERSTATE
RURAL/URBAN	URBAN (INTERMEDIATE)
TERRAIN	LEVEL
ACCESS CONTROL	FULL



LATITUDE: 39°58'10"N LONGITUDE: 85°58'33"W

BRIDGE LENGTH :	0.017 MI.
ROADWAY LENGTH :	SEE ROAD PLANS
TOTAL LENGTH :	SEE ROAD PLANS
MAX GRADE :	-1.50%

MajorMoves 2020

CERTIFIED TRUE COPY
SET 6 of 6

[INDIANA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS DATED 2016 TO BE USED WITH THESE PLANS]

UNITED Consulting
1625 N. Post Road
Indianapolis, Indiana 46219
Phone: 317-895-2585
Fax: 317-895-2596 Web: www.ucindy.com

PLANS PREPARED BY: UNITED CONSULTING (317) 895-2585 PHONE NUMBER
CERTIFIED BY: Michael Rowe 9.17.15 DATE
APPROVED FOR LETTING: INDIANA DEPARTMENT OF TRANSPORTATION DATE

MICHAEL A. ROWE REGISTERED No. 10001062 STATE OF INDIANA PROFESSIONAL ENGINEER

	BRIDGE FILE
	I69-206-5313 DNBL/DSBL
	DESIGNATION
	1383486 & 1383487
SURVEY BOOK	SHEETS
	1 of 9
CONTRACT	PROJECT
R-37053	1383332

UTILITIES

Sanitary Sewer

Hamilton Southeastern Utilities
11901 Lakeside Dr.
Fishers, IN 46038
Tom Kallio 317-690-1573
tkallio@samcoinc.us

Gas

Vectren Energy
16000 Allisonville Road - PO Box 1700
Noblesville, IN 46204
Brian Harger 317-776-5534
bharger@vectren.com

Petroleum

Marathon Pipe Line, LLC
539 South Main Street, RM 7642
Findlay, OH 45840
Dave Wisner 419-421-2211
dswisner@marathonpetroleum.com

Lighting

INDOT Lighting
Prakash Patel 317-233-3702
prpatel@indot.in.gov

Water

Citizens Energy Group
1220 Waterway Boulevard
Indianapolis, IN 46206
Scott Ritter
sritter@citizensenergygroup.com

Electric

Duke Energy Indiana, Inc.
1619 W. Deffenbaugh St.
Kokomo, IN 46902
Connie Maus 765-454-6180
connie.maus@duke-energy.com

Telephone

AT&T - LNS
300 North Point Pkwy
Alpharetta, GA 30005
Joel McKinney 770-335-9816
jcmckinney@att.com

Miscellaneous

ITS Technology Deployment Division
Konstantin Veygman 317-899-8606
kveygman@indot.in.gov

Traffic Structures

HERE
425 West Randolph
Chicago, IL 60606
Alexandra Archer 773-747-4247
Alexandra.Archer@HERE.com

REVISIONS

SHEET No.	DATE	REVISION

INDEX

SHEET NO.	DESCRIPTION
1	TITLE
2	INDEX
3	MAINTENANCE OF TRAFFIC
4	LAYOUT
5-7	GENERAL PLAN
8	BENT DETAILS
9	PIER DETAILS

Know what's **below. Call** before you dig.
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www.ucindy.com

JAY N. RIDENS
REGISTERED
No. 10403475
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 9/17/15 DATE

DESIGNED: NJK DRAWN: RSJ
CHECKED: JNR CHECKED: NJK

INDIANA
DEPARTMENT OF TRANSPORTATION

INDEX
I-69 OVER SAND CREEK

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I69-206-5313 DNBL/DSBL
VERTICAL SCALE	DESIGNATION
AS NOTED	1383486 & 1383487
SURVEY BOOK	SHEETS
-	2 of 9
CONTRACT	PROJECT
R-37053	1383332

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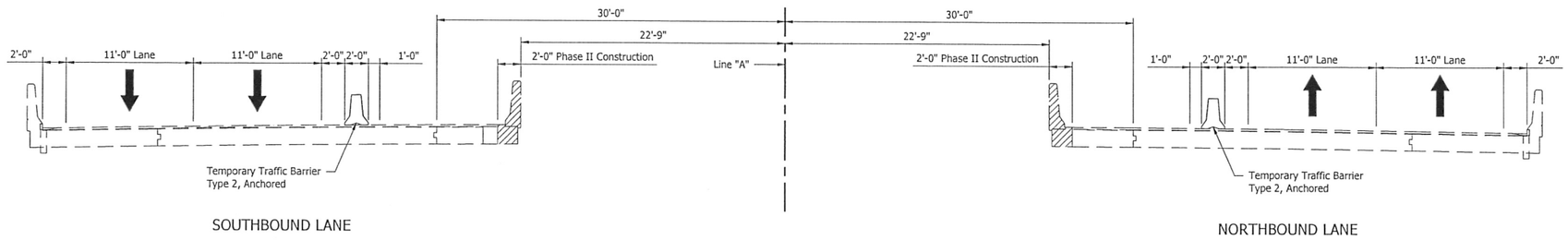
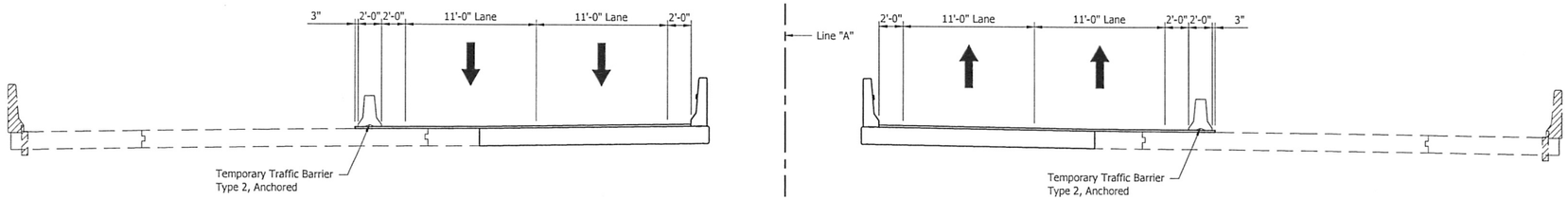


TRAFFIC MAINTENANCE SECTION - PHASE II

SCALE: 3/16" = 1'-0"



TRAFFIC MAINTENANCE SECTION - PHASE III

SCALE: 3/16" = 1'-0"

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JAY N. RIDENS — REGISTERED — No. 10403475 — STATE OF INDIANA — PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — DATE 9/17/15

DESIGNED: NJK | DRAWN: RSJ | CHECKED: JNR | CHECKED: NJK

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
I-69 OVER SAND CREEK

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I69-206-5313 DNBL/DSBL
VERTICAL SCALE	DESIGNATION
AS NOTED	1383486 & 1383487
SURVEY BOOK	SHEETS
-	3 of 9
CONTRACT	PROJECT
R-37053	1383332

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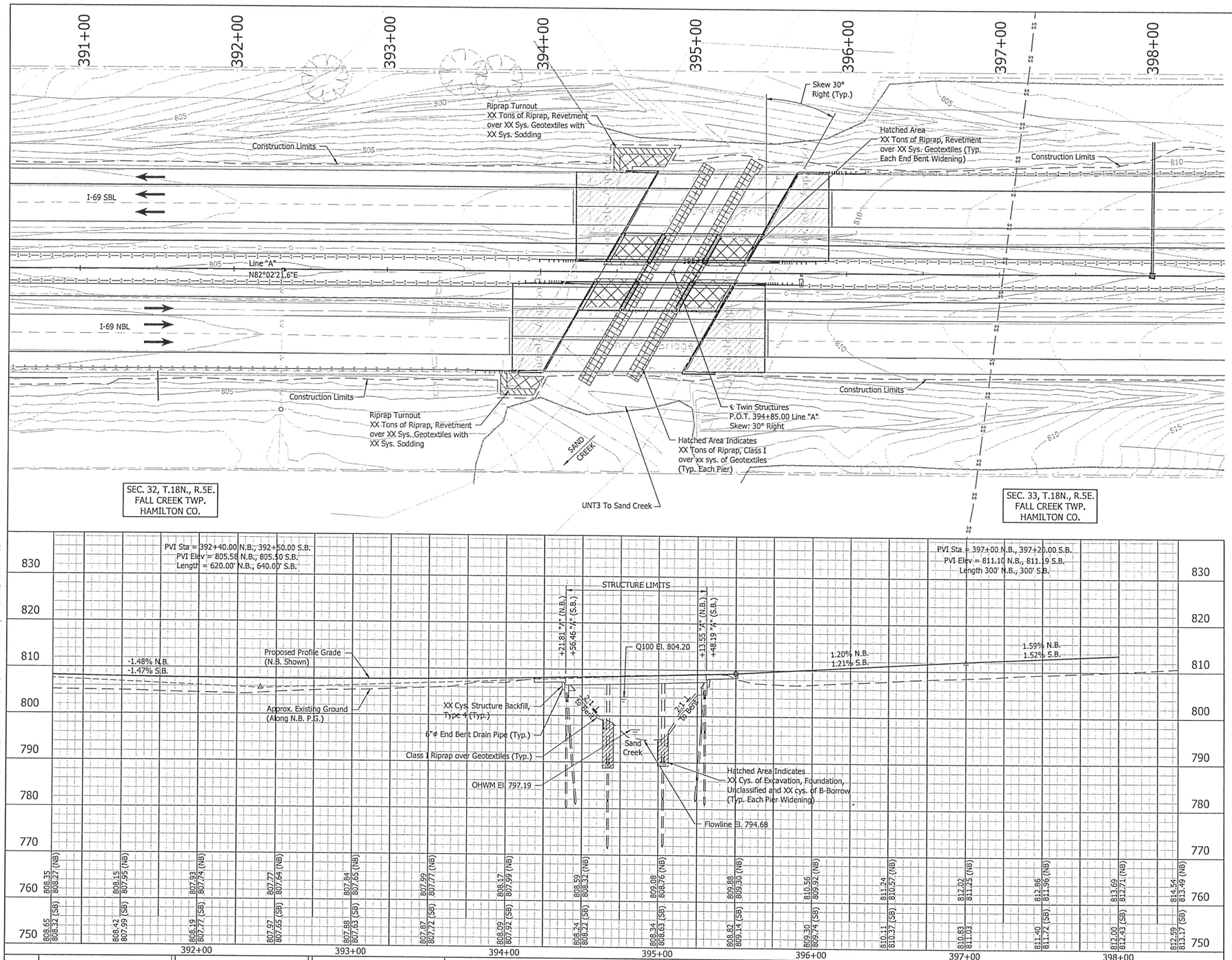
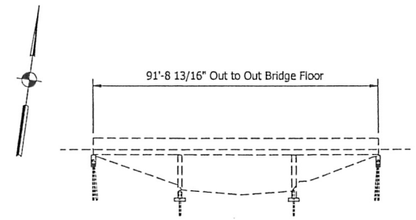
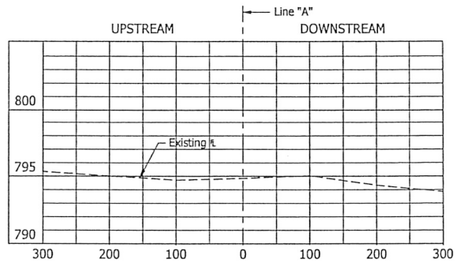




Existing Clear Roadway = 39'-10"
Portions of Existing Bridge Deck, End Bents, & Piers To Be Removed

EXISTING STRUCTURE

No Scale



EXISTING STREAM PROFILE

SCALES: 1" = 100' HORIZONTAL, 1" = 5' VERTICAL

HYDRAULIC DATA (NAVD 1988 DATUM)

Drainage Area = 9.46 Sq. Mi.
Discharge (Q100) = 1670 Cfs.
Q100 Elev. = 804.20 Ft.
Velocity @ Q100 = 6.68 Ft./Sec.
Existing Gross Waterway Opening = 361 Sft. (Below Q100)
Proposed Waterway Opening = 361 Sft. (Below Q100)
Q100 Contraction Scour = 7.02 Ft.
Q100 Scour Elevation = 782.86 Ft.
Q100 Total Scour = 11.82 Ft.
Min. Low Structure Elevation = 806.02 Ft.

NOTES:

For R/W, Earthwork Summary and Additional information see Roadway Plans, Des. No. 1383332.

For Utility Contacts, see Index Sheet No. 2.

I-69 OVER SAND CREEK
CONTINUOUS R.C. SLAB BRIDGE
3 SPANS: 27'-0", 36'-0", 27'-0"
SKEW: 30°00'00" RT
57'-3" CLEAR ROADWAY
HAMILTON COUNTY

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JAY N. RIDENS REGISTERED No. 10403475 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 9/17/15 DATE

DESIGNED: NJK DRAWN: RSJ
CHECKED: JNR CHECKED: NJK

INDIANA DEPARTMENT OF TRANSPORTATION

LAYOUT
I-69 OVER SAND CREEK

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	I69-206-5313 DNBL/DSBL
VERTICAL SCALE	DESIGNATION
1" = 5'	1383486 & 1383487
SURVEY BOOK	SHEETS
-	4 of 9
CONTRACT	PROJECT
R-37053	1383332

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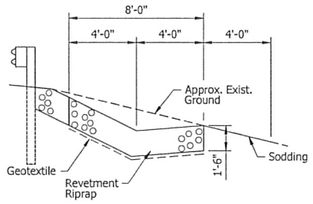
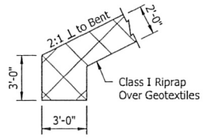
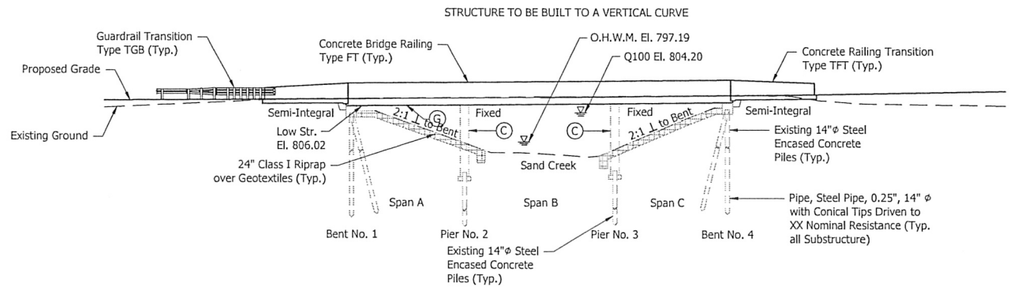


RIPRAP DRAINAGE TURNOUT
SECTION A-A
NO SCALE

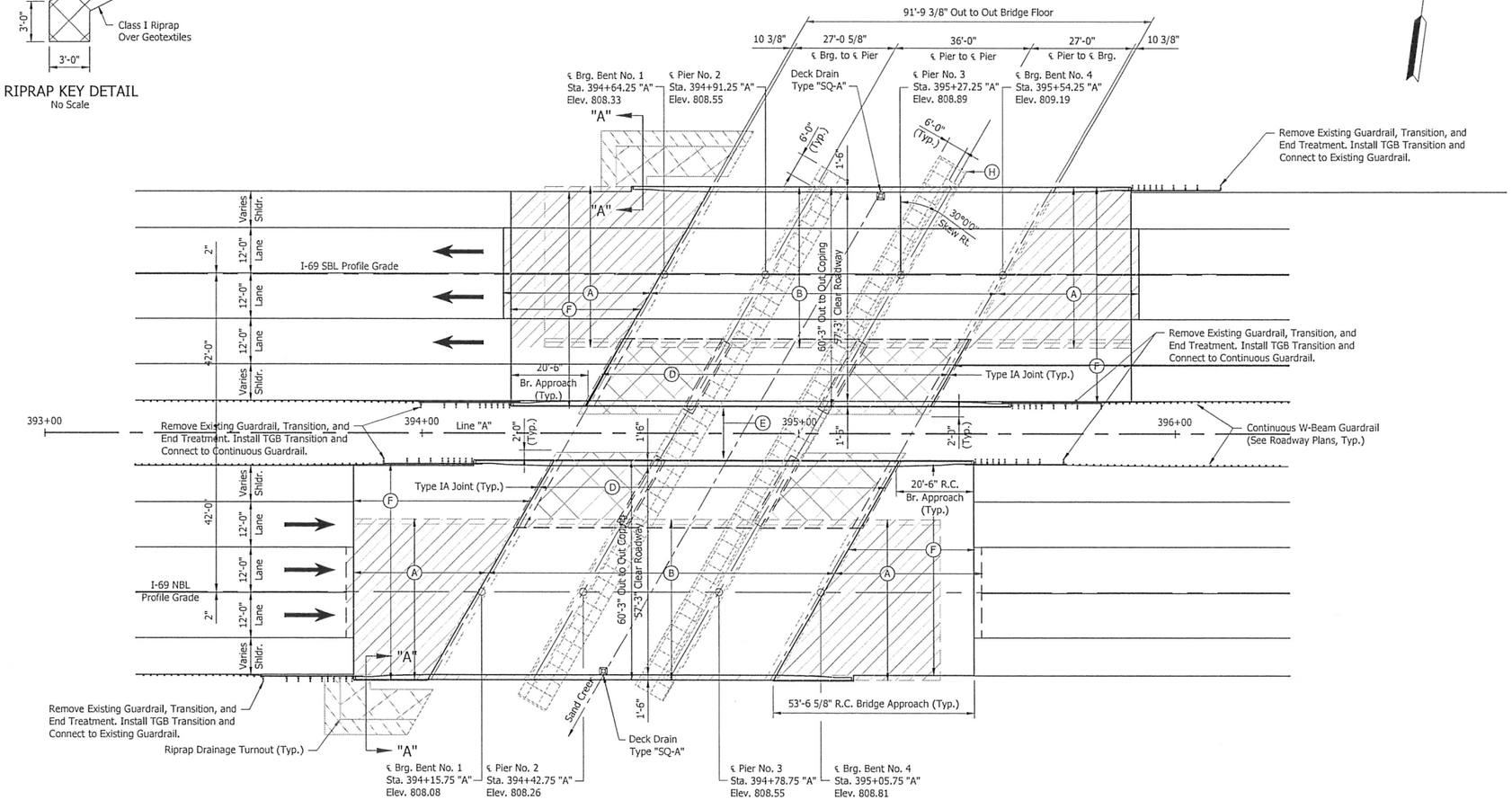


RIPRAP KEY DETAIL
No Scale

STRUCTURE TO BE BUILT TO A VERTICAL CURVE



ELEVATION
Scale: 1/16" = 1'-0"



PLAN
Scale: 1/16" = 1'-0"

GENERAL NOTES

Reinforcing steel covering shall be 2½" in Top and 1" minimum in bottom of floor slabs, 3" in footing except bottom steel which shall be 4", and 2" in all other parts, unless noted.

All New Reinforcement Shall be Epoxy Coated.

Surface Seal Shall be Applied to the Approach Slabs, All Exposed Surfaces of Concrete Railings and Railing Transitions, Deck Copings & Bridge Concrete. (Estimated Quantity = xx,xxx Per Bridge)

Plans for the Existing Structure are on file in the Central Office, Indiana Dept. of Transportation as Bridge File No.'s I69-6-5313, I69-6-5313A, I69-6-5313B, I69-6-5313C and are available upon request.

DESIGN DATA

Superstructure & Substructure Designed for HS-20 Loading in accordance with AASHTO Standard Specifications Seventeenth Edition, 2002, and subsequent interims. Designed for actual dead load plus 35 psf. of future wearing surface.

SEISMIC DESIGN DATA

Seismic Performance Zone = Zone 1
Acceleration Coefficient (S_{D1}) = 0.114
Seismic Soil Profile Type = Site Class D

DESIGN STRENGTHS

Class "A" Concrete	f'c = 3,500 p.s.i.
Class "B" Concrete	f'c = 3,000 p.s.i.
Class "C" Concrete	f'c = 4,000 p.s.i.
Reinforcing Steel (Grade 60)	fy = 60,000 p.s.i.

LEGEND

(A) Remove Existing Roadway Pavement, Bridge Approach Railings, Approach Slabs, Joint material, Terminal Joints, Portions of Existing Deck Coping and both Railings.

(B) Perform Variable Depth Deck scarification and Hydraulic Demolition.

(C) Remove Median Side Pier Noses to Facilitate Widening.

(D) Construct Lengthened Piers and End Bents as Well as Full Depth Concrete Slab, to Accomodate New Clear Roadway Width.

(E) Install New Modified Type FT Concrete Bridge Railings.

(F) Construct New R.C. Bridge Approach Slabs, Slab Extensions, Bridge Railing Transitions and Terminal Joints.

(G) Remove Unsound Concrete and Place Pneumatically Placed Mortar on Underside of Decks. (Approx. 80 sft.)

(H) Place Pneumatically Placed Mortar on Spall at Northern Pier Nose.

Limits of Removal

Limits of Additional Class I Riprap

Limits of Class I Riprap for Scour Protection (3'-0" Deep)

Limits of Sodding

I-69 OVER SAND CREEK
CONTINUOUS R.C. SLAB BRIDGE
3 SPANS: 27'-0", 36'-0", 27'-0"
SKEW: 30°00'00" RT
57'-3" CLEAR ROADWAY

NOTES:
See Typical Sections and Substructure Details, for Additional Information.

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JAY N. RIDENS REGISTERED No. 10403475 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — DATE 9/17/15

DESIGNED: NJK | DRAWN: RSJ | CHECKED: JNR | CHECKED: NJK

INDIANA DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
I-69 OVER SAND CREEK

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I69-206-5313 DNBL/DSBL
VERTICAL SCALE	DESIGNATION
AS NOTED	1383486 & 1383487
SURVEY BOOK	SHEETS
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CONTRACT	PROJECT
R-37053	1383332

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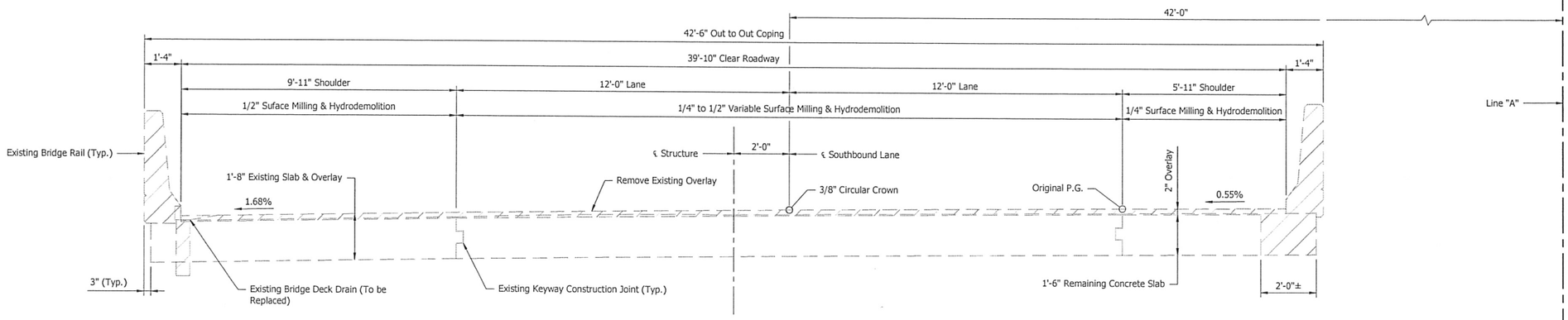
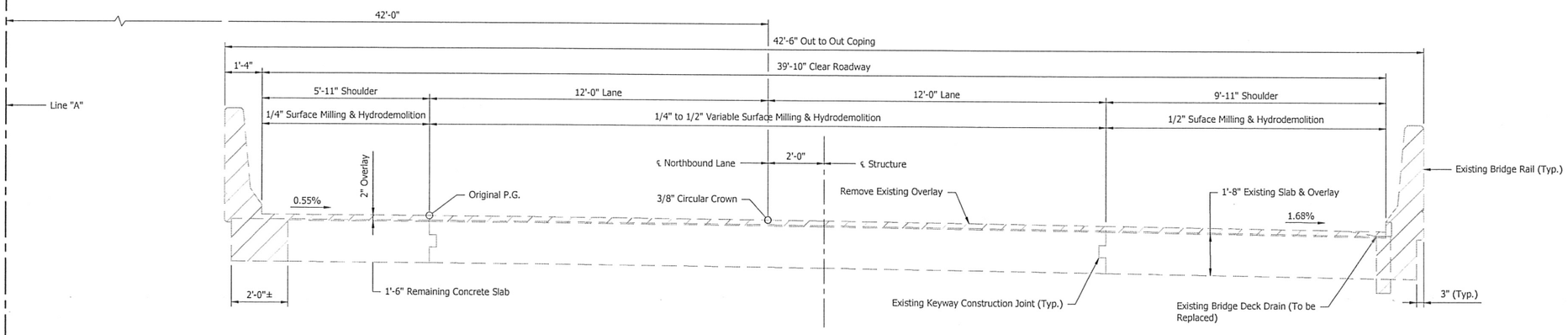


EXISTING SB TYPICAL SECTION

Scale: 1/2" = 1'-0"

LEGEND

Limits of Removal



EXISTING NB TYPICAL SECTION

Scale: 1/2" = 1'-0"

I-69 OVER SAND CREEK
CONTINUOUS R.C. SLAB BRIDGE
3 SPANS: 27'-0", 36'-0", 27'-0"
SKEW: 30°00'00" RT
57'-3" CLEAR ROADWAY
HAMILTON COUNTY

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JAY N. RIDENS REGISTERED No. 10403475 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ Design Engineer — DATE 9/17/15

DESIGNED: NJK | DRAWN: RSJ

CHECKED: JNR | CHECKED: NJK

INDIANA DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
I-69 OVER SAND CREEK

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I69-206-5313 DNBL/DSBL
VERTICAL SCALE	DESIGNATION
AS NOTED	1383486 & 1383487
SURVEY BOOK	SHEETS
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CONTRACT	PROJECT
R-37053	1383332

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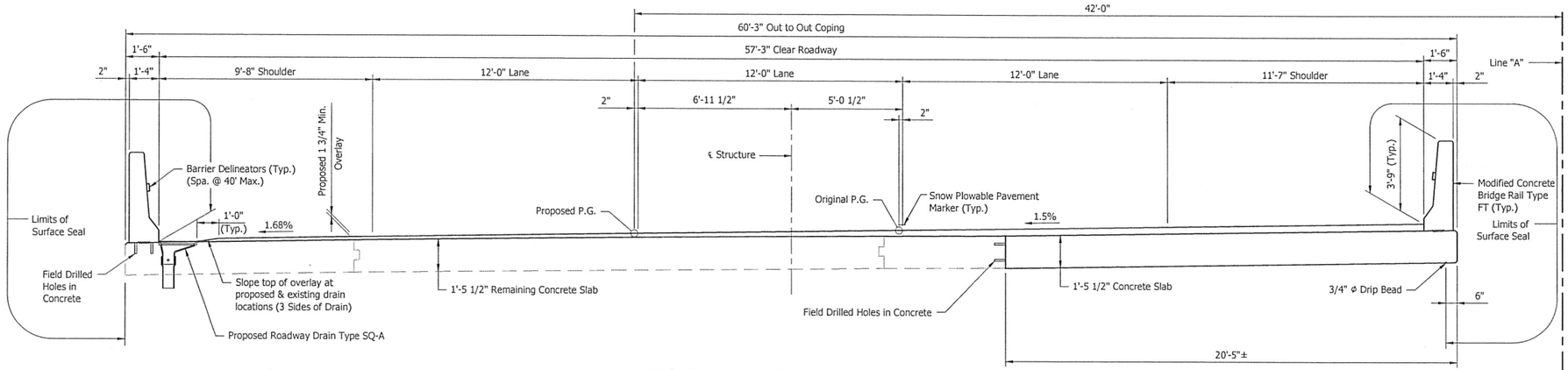
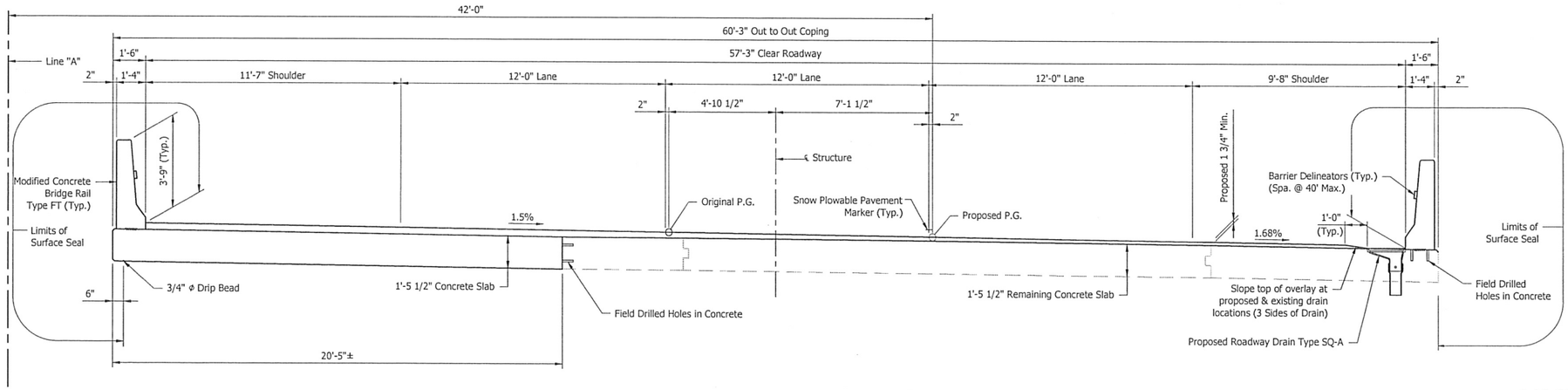


PROPOSED SB TYPICAL SECTION

Scale: 3/8" = 1'-0"



PROPOSED NB TYPICAL SECTION

Scale: 3/8" = 1'-0"

I-69 OVER SAND CREEK
CONTINUOUS R.C. SLAB BRIDGE
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DESIGNED: NJK | DRAWN: RSJ

CHECKED: JNR | CHECKED: NJK

INDIANA
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
I-69 OVER SAND CREEK

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I69-206-5313 DNBL/DSBL
VERTICAL SCALE	DESIGNATION
AS NOTED	1383486 & 1383487

SURVEY BOOK	SHEETS
-	7 of 9
CONTRACT	PROJECT
R-37053	1383332

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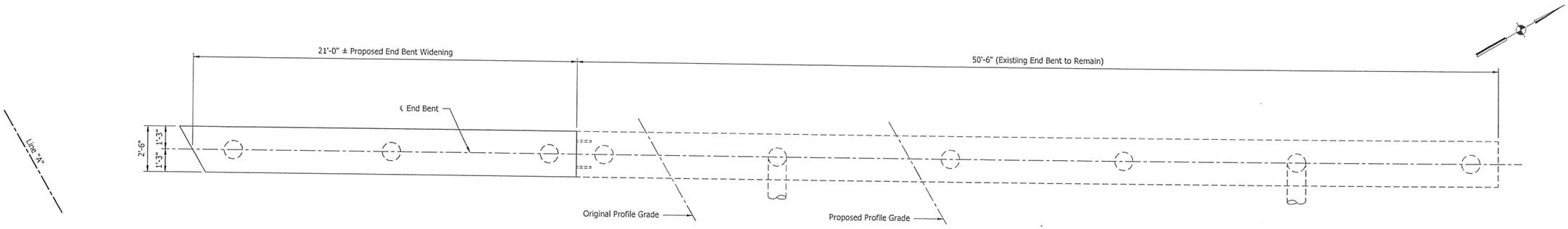
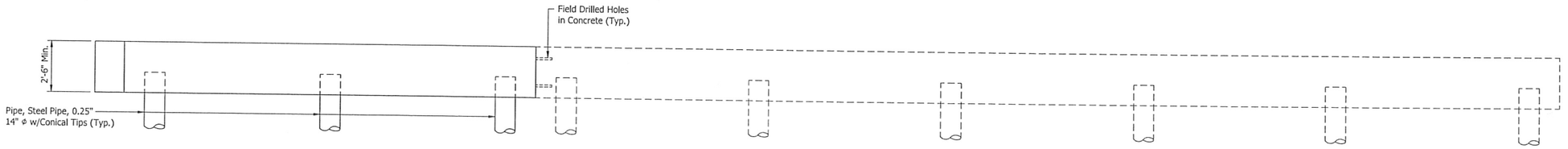
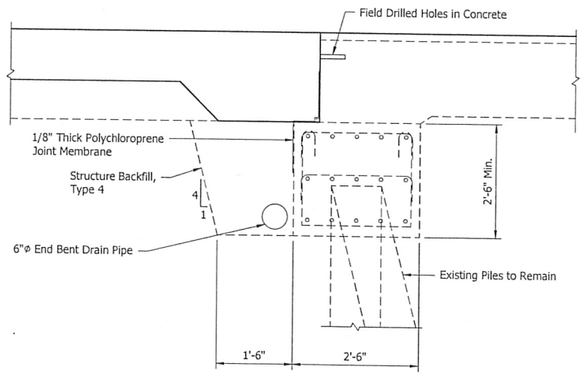


PLAN - TYPICAL BENT WIDENING
(SOUTHBOUND END BENT NO. 1 SHOWN)
Scale: 3/8" = 1'-0"



ELEVATION - TYPICAL BENT WIDENING
(SOUTHBOUND END BENT NO. 1 SHOWN)
Scale: 3/8" = 1'-0"



TYPICAL SECTION - EXISTING END BENT TO REMAIN
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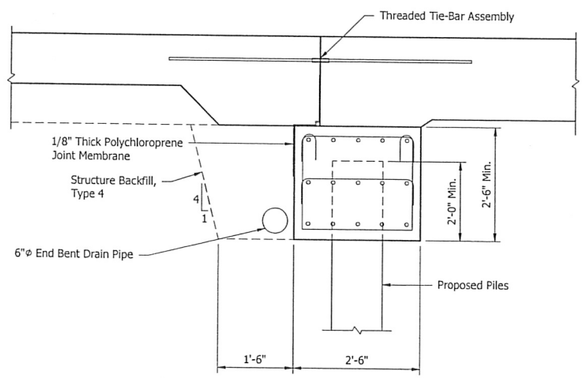

TYPICAL SECTION - PROPOSED END BENT WIDENING
Scale: 3/4" = 1'-0"

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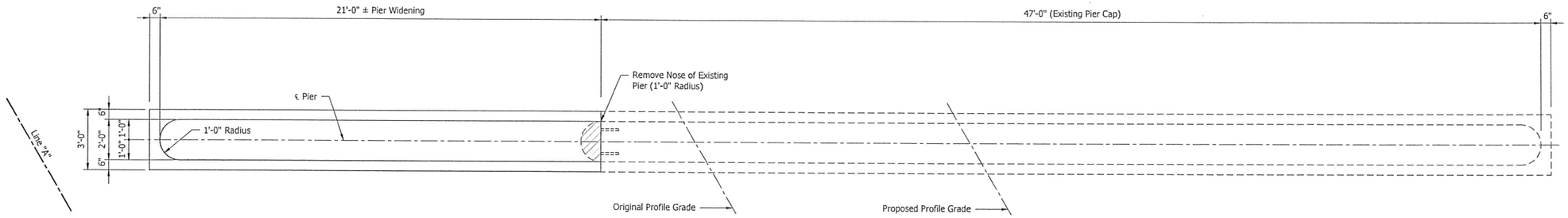
CHECKED: JNR | CHECKED: NJK

INDIANA
DEPARTMENT OF TRANSPORTATION

BENT DETAILS
I-69 OVER SAND CREEK

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I69-206-5313 DNBL/DSBL
VERTICAL SCALE	DESIGNATION
AS NOTED	1383486 & 1383487
SURVEY BOOK	SHEETS
-	8 of 9
CONTRACT	PROJECT
R-37053	1383332

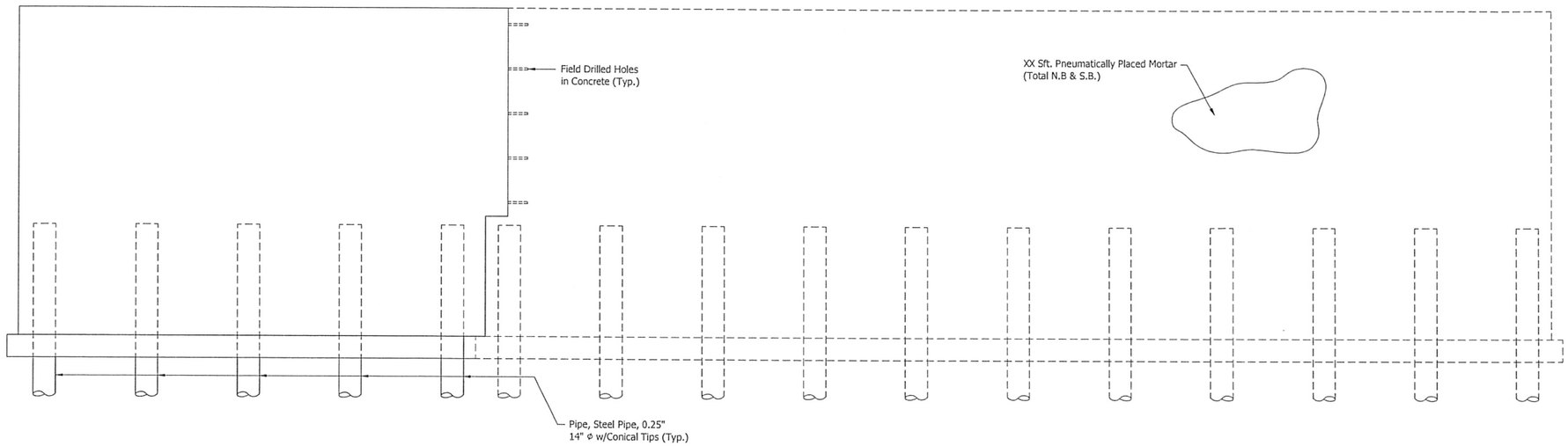
File Name: p:\C3D\MK15-469\Bridge\I-69 over sand creek\Dwg\Plans\Substructure.dwg Plot Date: 9/17/2015 Plotted By: Moffatt, Andrew J.



PLAN - TYPICAL PIER WIDENING

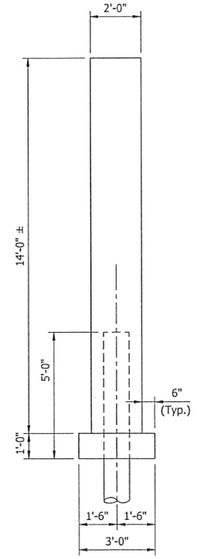
(NORTHBOUND PIER NO. 2 SHOWN)
Scale: 3/8" = 1'-0"

Indicates Limits of Removal



ELEVATION - TYPICAL PIER WIDENING

(NORTHBOUND PIER NO. 2 SHOWN)
Scale: 3/8" = 1'-0"



TYPICAL SECTION

Scale: 3/8" = 1'-0"

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JAY N. RIDENS
REGISTERED
No. 10403475
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — DATE 9/17/15

DESIGNED: NJK | DRAWN: RSJ | CHECKED: JNR | CHECKED: NJK

INDIANA
DEPARTMENT OF TRANSPORTATION

PIER DETAILS
I-69 OVER SAND CREEK

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I69-206-5313 DNBL/DSBL
VERTICAL SCALE	DESIGNATION
AS NOTED	1383486 & 1383487
SURVEY BOOK	SHEETS
-	9 of 9
CONTRACT	PROJECT
R-37053	1383332

File Name: p:\CDJMK-15-469\Bridge\I-69 over sand creek\Dwg\Plans\Substructure.dwg Plot Date: 9/17/2015 Plotted By: Moffatt, Andrew J.