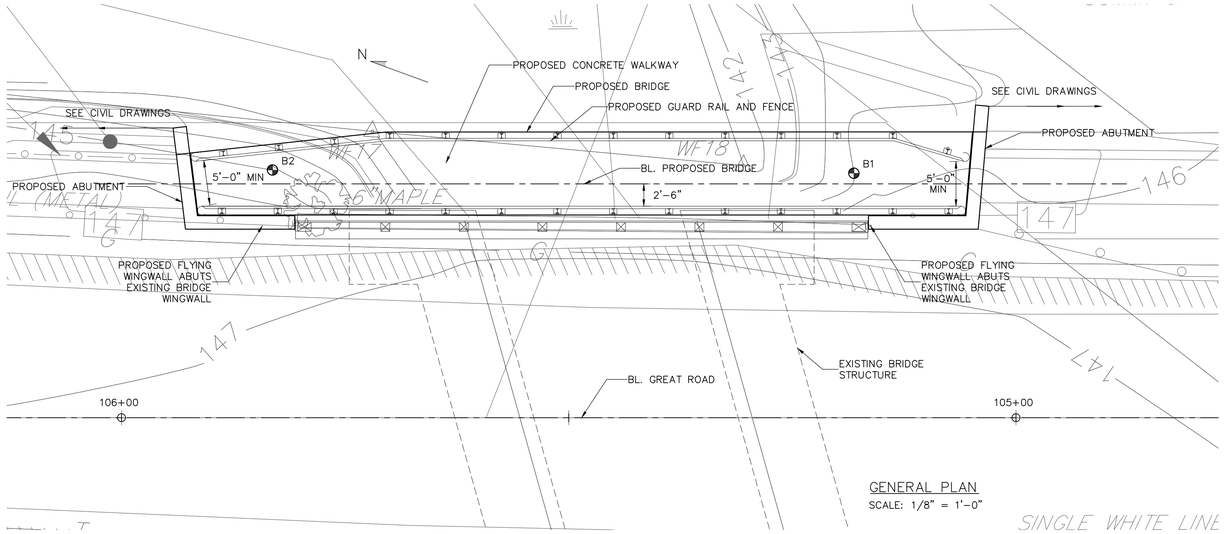
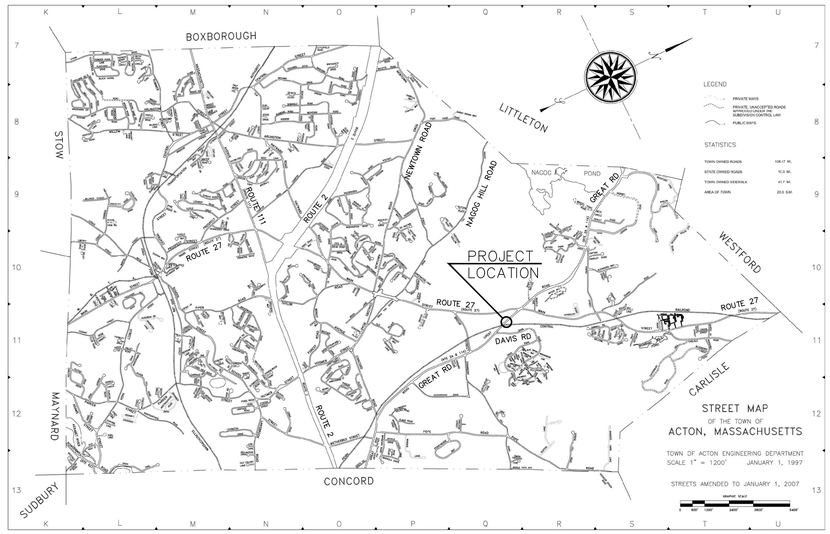


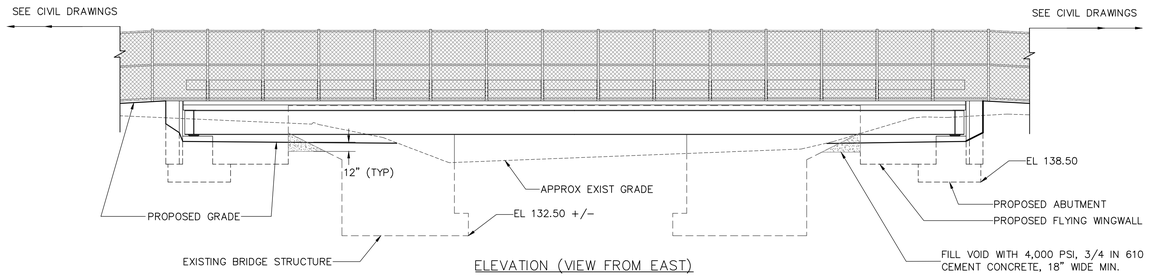
GENERAL PLAN

SCALE: 1/8" = 1'-0"



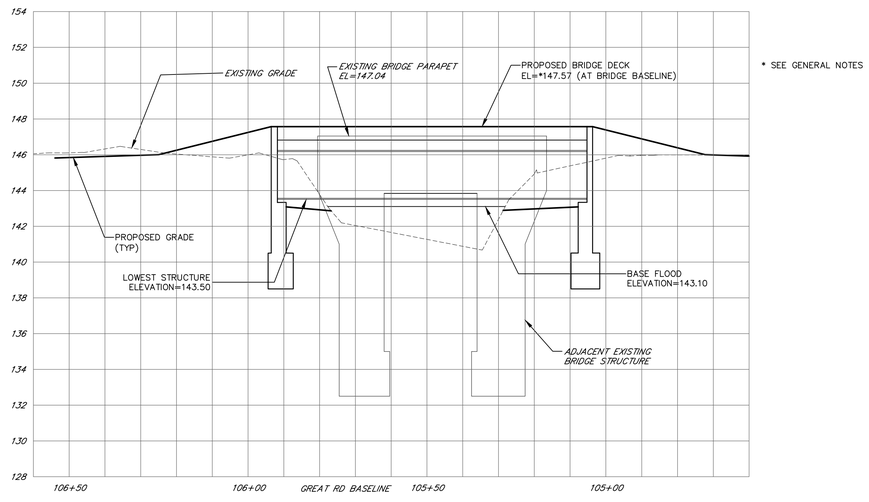
LOCATION PLAN

NOT TO SCALE



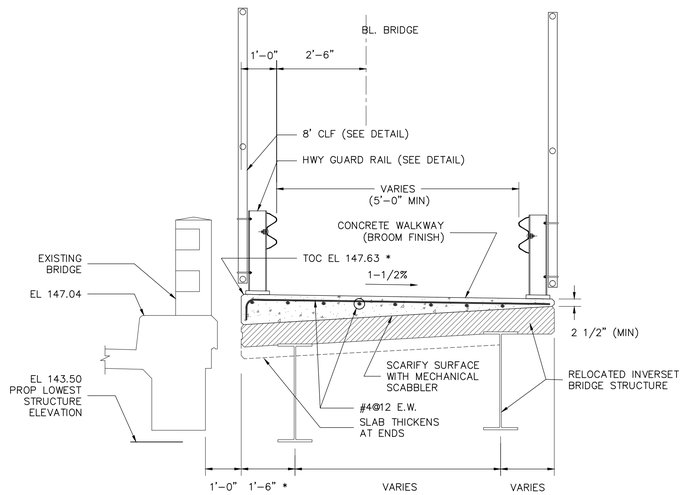
ELEVATION (VIEW FROM EAST)

SCALE: 1/8" = 1'-0"



PROFILE – PEDESTRIAN PATH

SCALES: HORIZONTAL 1" = 20'
VERTICAL 1" = 4'



TYPICAL SECTION

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

GENERAL NOTES

DESIGN

IN ACCORDANCE WITH THE 2010 AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS LRFD BRIDGE DESIGN SPECIFICATIONS WITH CURRENT INTERIM SPECIFICATIONS THROUGH 2013

FOUNDATIONS

FOUNDATIONS MAY BE ALTERED, IF NECESSARY, TO SUIT CONDITIONS ENCOUNTERED IN THE FIELD, WITH THE APPROVAL OF THE ENGINEER.

UNSUITABLE MATERIAL

ALL UNSUITABLE MATERIAL SHALL BE REMOVED WITHIN THE LIMITS OF THE FOUNDATIONS OF THE STRUCTURE, AS DIRECTED BY THE ENGINEER.

EXISTING CONDITIONS

DIMENSIONS RELATED TO THE EXISTING ROADWAY BRIDGE AND INVERSET ARE BASED ON REFERENCE DRAWINGS AND SUPPLEMENTAL SURVEY, AND SHALL BE FIELD VERIFIED PRIOR TO RELATED WORK. THE DETAILS PROVIDE SUGGESTED CRITICAL DIMENSIONS THAT NEED TO BE VERIFIED IN ORDER TO PROCEED WITH THE WORK (SHOWN THUS: " * "), AND DIMENSIONS THAT CAN BE FIELD ADJUSTED BASED ON THE IN-PLACE CONDITION (SHOWN THUS: " ** ").

PROPOSED SUPERSTRUCTURE

THE PROPOSED SUPERSTRUCTURE IS TO BE CONSTRUCTED UTILIZING THE PREFABRICATED INVERSET BRIDGE OWNED BY MASSDOT. SEE THE SPECIFICATIONS FOR DISCUSSION ON THE LOCATION OF THE BRIDGE, AND THE RESPONSIBILITIES OF THE CONTRACTOR FOR COLLECTION AND TRANSPORT.

SEE CIVIL DRAWINGS FOR EXTENSION OF FENCING BEYOND BRIDGE AND ADJUSTMENTS TO EXISTING GUARD RAILS.

REINFORCEMENT

REINFORCING STEEL SHALL CONFIRM TO THE REQUIREMENTS OF AASHTO M 31 GRADE 60. REINFORCEMENT IN THE SIDEWALK/DECK OVERLAY SHALL BE EPOXY COATED.

SCALES

SCALES NOTED ON THE PLANS ARE NOT APPLICABLE TO REDUCED SIZED PRINTS.

SPECIFICATIONS

ALL WORK SHALL BE IN IN COMFORMANCE WITH THE COMMONWEALTH OF MASSACHUSETTS, MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR BRIDGES (1988), SUPPLEMENTAL SPECIFICATIONS DATED JUNE 15, 2013, 2012 MASSDOT CONSTRUCTION STANDARD DETAILS, AND THE PROJECT SPECIAL PROVISIONS.

CONCRETE SCHEDULE

FOOTINGS AND ABUTMENT STEM	4000 PSI, 1-1/2 IN 565 CEMENT CONCRETE
ABUTMENT BACKWALL AND WING	4000 PSI, 3/4 IN 610 CEMENT CONCRETE
SIDEWALK OVERLAY	5000 PSI, 3/4 IN 685 HP CEMENT CONCRETE

No.	Revision/Issue	Date

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COMMONWEALTH OF MASSACHUSETTS
JOEL S. LUNGER
STRUCTURAL
No. 32309
REGISTERED
PROFESSIONAL ENGINEER

PEDESTRIAN BRIDGE
GREAT ROAD

ACTON, MA

Project	134-005
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APPROXIMATE BOTTOM OF EXISTING BRIDGE FOOTINGS

APPROXIMATE BOTTOM OF GRAVEL BORROW FOR BRIDGE FOUNDATIONS NORTH ABUT

BOTTOM OF FTG EL 138.50

TDS

Technical Drilling Services, Inc.
P.O. Box 10/2 Peter Drive, Sterling, MA 01564 TEL (978) 422-0005 FAX (978) 422-0006

DRILLER:		INSPECTOR:			
SITE LOCATION	CLIENT	START DATE	HOLE NO.	TOTAL DEPTH	WATER TABLE
Bridge	Stamski & McNary	9/28/12	B-1	24'	5'
Great Road	1000 Main Street	FINISH DATE	WELL TYPE	WELL DEPTH	HOLE TYPE
Acton, MA	Acton, MA	9/28/12	No Well	No Well	4 ¼" HSA
Sample Hammer 140 lb	Drop 30"	Drive Hammer 300 lb	Drop 24"		

Sample Number	Depth of Sample	Casing Blows	Depth in Feet From	To	Blows Per 6" on spoon with Hammer	Recovery	SOIL DESCRIPTION
			0				
S-1	0'-2'				3-3-4-5		Med. dense, dry, fine/coarse sand and gravel, trace organic silt, Fill
S-2	2'-4'				4-5-7-9		
				4'			
			4'				
S-3	4'-6'				3-1-1-1		Wet, very loose, organic silt
S-4	6'-8'				3-2-2-1		
				8'			
			8'				
S-5	8'-10'				3-5-5-7		Wet, loose to med/dense, fine sand, trace inorganic silt
S-6	10'-12'				2-2-2-1		
S-7	12'-14'				1-1-2-2		
S-8	14'-16'				3-5-6-7		
				16'			
			16				
S-9	16'-18'				6-7-9-11		Wet, med. dense, very fine sand and inorganic silt
S-10	18'-20'				3-3-5-9		
				19'			
			19'				
S-11	20'-22'				1-1-3-4		Loose, wet, fine sand and some inorganic silt
S-12	22'-24'				2-3-4-4		
				24'			
							End of B-1 at 24'
							No well installed
							Water at 5' upon completion

EL 145
EL 140
EL 135
EL 130

APPROXIMATE ELEVATION

PENETRATION RESISTANCE

140 LB. Wt.falling 30" on 2" O.D. Sampler

Cohesionless Density (Blows/ft.)		Cohesive Consistency (Blows/sft)	
very loose	0-4	very soft	0-2
loose	5-9	soft	2-4
medium dense	10-29	medium stiff	5-8
dense	30-49	stiff	9-15
very dense	59+	Very stiff	16-30
		Hard	31+

PROPORTIONS USED:

Trace:	0% to 10%
Little:	10% to 20%
Some:	20% to 35%
And:	35% to 50%

REMARKS:

- The stratification lines represent the approximate boundary between soil types and the transition may be gradual.
- Water level readings have been made in the drill holes of times and under conditions stated on the boring logs. Fluctuations in the level of the groundwater may occur due to other factors than those present at the time measurements were made.

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DRILLER:		INSPECTOR:			
SITE LOCATION	CLIENT	START DATE	HOLE NO.	TOTAL DEPTH	WATER TABLE
Bridge	Stamski & McNary	9/28/12	B-2	25'	5'
Great Road	1000 Main Street	FINISH DATE	WELL TYPE	WELL DEPTH	HOLE TYPE
Acton, MA	Acton, MA	9/28/12	No Well	No Well	TP66
Sample Hammer 140 lb	Drop 30"	Drive Hammer 300 lb	Drop 24"		

Sample Number	Depth of Sample	Casing Blows	Depth in Feet From	To	Blows Per 6" on spoon with Hammer	Recovery	SOIL DESCRIPTION
			0'				
S-1	0'-5'			8'			Dry, fine/coarse sand and gravel, trace inorganic silt, Fill
			8'				
S-2	5'-10'						Wet organic silt
				10'			
			10'				
S-3	10'-15'						Wet, fine/coarse sand, trace inorganic silt
S-4	15'-20'						
S-5	20'-25'						
				25'			
							End of B-2 at 25'
							No well installed
							Water at 5' upon completion

BOTTOM OF FTG EL 138.50

APPROXIMATE BOTTOM OF GRAVEL BORROW FOR BRIDGE FOUNDATIONS SOUTH ABUT

APPROXIMATE BOTTOM OF EXISTING BRIDGE FOOTINGS

PENETRATION RESISTANCE

140 LB. Wt.falling 30" on 2" O.D. Sampler

Cohesionless Density (Blows/ft.)		Cohesive Consistency (Blows/sft)	
very loose	0-4	very soft	0-2
loose	5-9	soft	2-4
medium dense	10-29	medium stiff	5-8
dense	30-49	stiff	9-15
very dense	59+	Very stiff	16-30
		Hard	31+

PROPORTIONS USED:

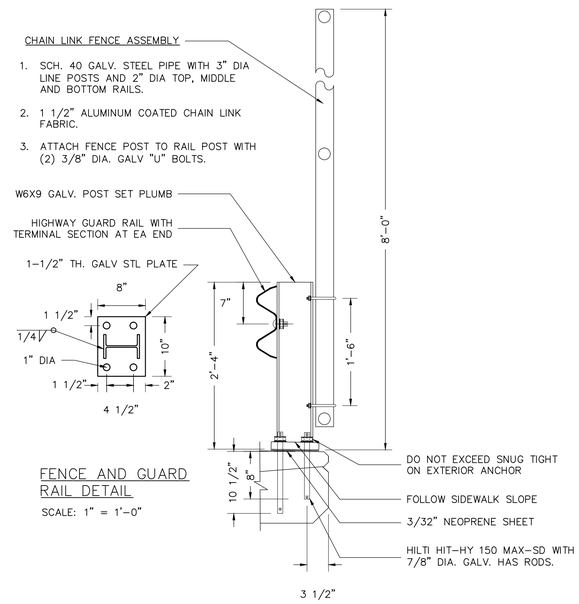
Trace:	0% to 10%
Little:	10% to 20%
Some:	20% to 35%
And:	35% to 50%

REMARKS:

- The stratification lines represent the approximate boundary between soil types and the transition may be gradual.
- Water level readings have been made in the drill holes of times and under conditions stated on the boring logs. Fluctuations in the level of the groundwater may occur due to other factors than those present at the time measurements were made.

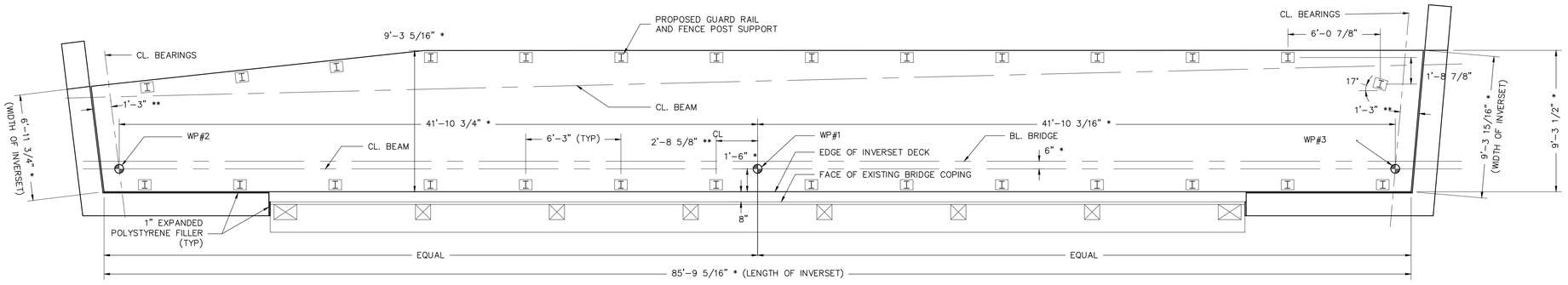
BORING NOTES:

1. BORINGS ARE LOCATED ON THE GENERAL PLAN AND SHOWN THUS: B2
2. BORINGS ARE TAKEN FOR THE PURPOSE OF DESIGN AND SHOW CONDITION AT BORING LOCATION ONLY, BUT DO NOT NECESSARILY SHOW THE NATURE OF THE MATERIALS TO BE ENCOUNTERED DURING CONSTRUCTION.
3. WATER LEVELS SHOWN IN THE BORING LOGS WERE OBSERVED AT THE TIME OF TAKING BORINGS AND DO NOT NECESSARILY SHOW THE TRUE GROUND WATER LEVEL.
4. ALL BORINGS WERE MADE IN SEPTEMBER 2012. AND TAKEN BY TECHNICAL DRILLING SERVICES, INC., STERLING, MA 01564.
5. ADDITION SOILS INFORMATION CAN BE FOUND IN THE BORINGS TAKEN FOR THE CONSTRUCTION OF THE VEHICULAR BRIDGE. THE ORIGINAL CONSTRUCTION DRAWINGS ARE INCLUDED IN THE REFERENCE DOCUMENTS.



FENCE AND GUARD RAIL DETAIL

SCALE: 1" = 1'-0"



DECK AND LAYOUT PLAN

SCALE: 1/4" = 1'-0"

ABUTMENT, FOUNDATION AND DECK LAYOUT PLAN NOTES:

CONSTRUCTION TO PROCEED BASED ON BASIC DIMENSIONS, AND ADJUSTMENTS ARE TO BE MADE ACCORDINGLY ON FINISH SURFACES AS FOLLOWS:

1. CONTRACTOR SHALL VERIFY BASIC DIMENSIONS SHOWN THUS "*". LAYOUT AND FOUNDATIONS CAN THEN PROCEED BASED ON THESE DIMENSIONS.
2. DIMENSIONS SHOWN THUS "**" MAY BE MODIFIED TO SUIT FINAL IN-PLACE CONDITIONS.

No.	Revision/Issue	Date

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PEDESTRIAN BRIDGE
GREAT ROAD

ACTON, MA

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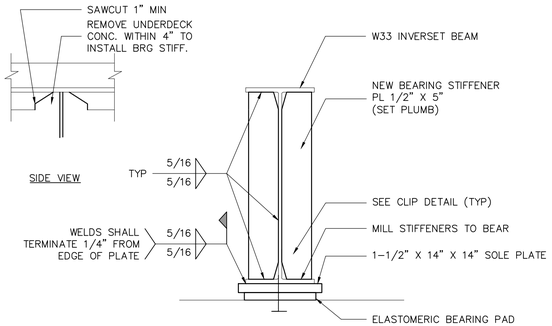
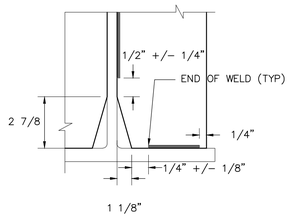
NOTES

1. REMOVE EXISTING SOLE AND BEARING PLATES. THESE ARE LOCATED APPROXIMATELY 2'–11" FROM SLAB ENDS.
2. BEARING STIFFENER PLATE SHALL CONFORM TO AASHTO M270 GRADE 50.
3. STEEL SOLE PLATE SHALL CONFORM TO AASHTO M 270 GRADE 36 AND SHALL BE HOT DIP GALVANIZED. BEVEL SOLE PLATE IF SLOPE IS REQUIRED TO BE GREATER THAN 1% BASED ON THE ROTATION OF THE STEEL ENDS AS THEY EXIST IN THE MASSDOT YARD. IF BEVELED THE SOLE PLATE AVERAGE THICKNESS SHALL BE MAINTAINED AS INDICATED.
4. CENTER THE ELASTOMERIC PAD UNDER THE SOLE PLATE DURING BEAM ERECTION.
5. INVERSET SHALL BE ERECTED WHEN THE AMBIENT TEMPERATURE IS BETWEEN 50 DEG. F AND 77 DEG. F. IF ERECTION IS AT OTHER AMBIENT TEMPERATURES, THE INVERSET WILL HAVE TO BE JACKED AND THE SOLE PLATE ASSEMBLY AND ELASTOMERIC BEARINGS RE–CENTERED WHEN THE TEMPERATURE RETURNS TO THAT RANGE.
6. AFTER THE SOLE PLATE ASSEMBLY IS IN ITS FINAL POSITION, WELD IT TO THE BEAM BOTTOM FLANGE.
7. TEMPERATURE OF THE STEEL ADJACENT TO ELASTOMER DURING FIELD WELDING SHALL BE KEPT BELOW 250 DEG. F.



TYPICAL BEARING DETAIL

SCALE: 1" = 1'–0"

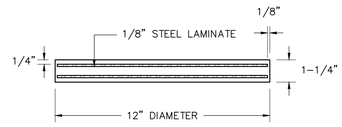


CLIP DETAIL

SCALE: N.T.S

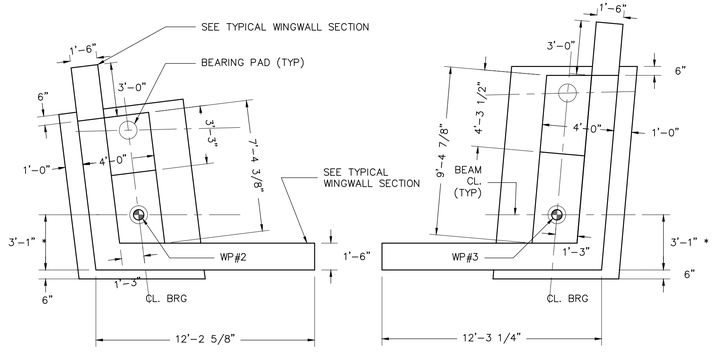
NOTES

1. ELASTOMER SHALL HAVE A HARDNESS OF 60 DUROMETER.
2. STEEL LAMINATES SHALL CONFORM TO ASTM A 1011 GRADE 36.
3. THE COMPRESSIVE DESIGN LOAD ON THE BEARING PAD IS 116 KIPS. THE COMPRESSIVE DESIGN STRESS IS THE RESULT OF DIVIDING THE COMPRESSIVE DESIGN LOAD BY THE AREA OF THE PAD AND IS EQUAL TO 1.02 KSI.
4. ELASTOMERIC BEARING PAD SHALL NOT BE VULCANIZED TO THE SOLE PLATE.



ELASTOMERIC BEARING PAD

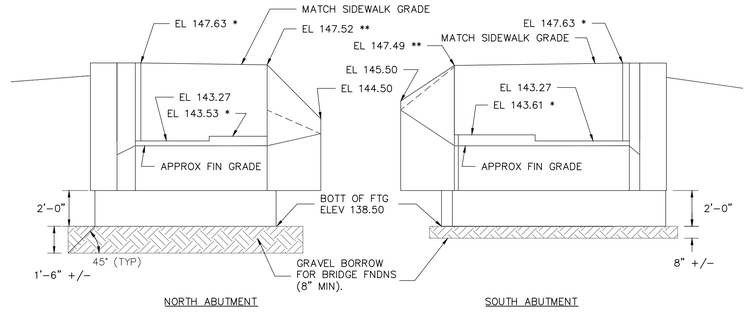
SCALE: 3" = 1'–0"



NORTH ABUTMENT SOUTH ABUTMENT

ABUTMENT LAYOUT PLAN

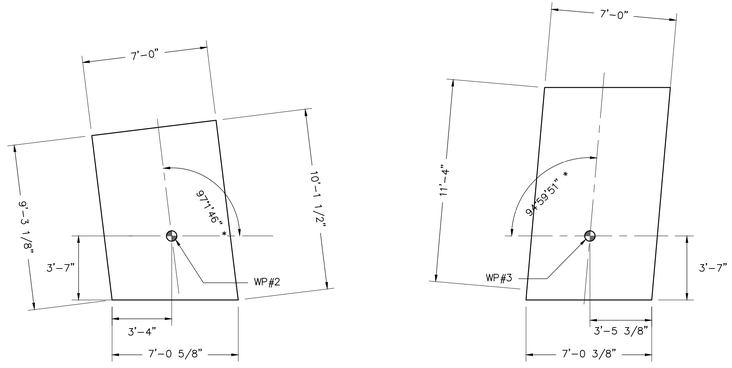
SCALE: 1/4" = 1'–0"



NORTH ABUTMENT SOUTH ABUTMENT

ABUTMENT ELEVATION

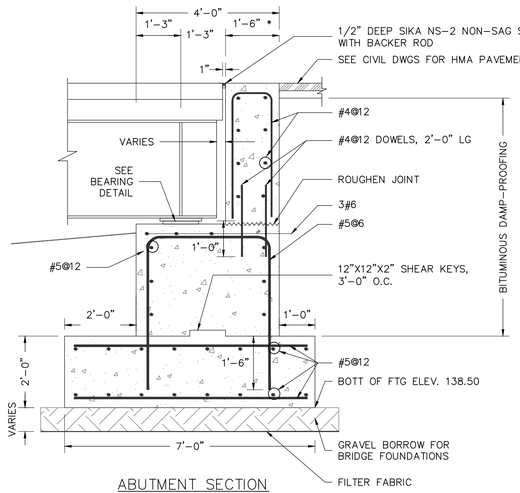
SCALE: 1/4" = 1'–0"



NORTH ABUTMENT SOUTH ABUTMENT

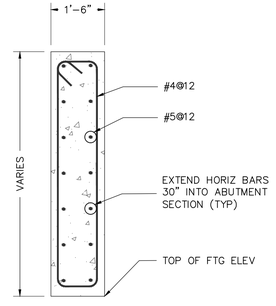
FOUNDATION LAYOUT PLAN

SCALE: 1/4" = 1'–0"



ABUTMENT SECTION

SCALE: 1/2" = 1'–0"



TYPICAL WINGWALL SECTION

SCALE: 1/2" = 1'–0"

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