



Paul R. LePage
GOVERNOR

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0016

David Bernhardt
COMMISSIONER

December 20, 2012
Subject: **Auburn**
Federal Project No: STP-1159(910)X
State WIN: 011599.10
Amendment No. 2

Dear Sir/Ms.:

Make the following changes to the Bid Documents:

In the Plans **REMOVE** the following plan sheets and **REPLACE** with the attached new plan sheets;

Sheet Number	Title
4 of 19	SIGN DETAILS
6 of 19	SIGN DETAILS (<u>Replaced in Amendment #1</u>)
7 of 19	SIGN DETAILS (<u>Replaced in Amendment #1</u>)
8 of 19	SIGN DETAILS (<u>Replaced in Amendment #1</u>)

Plan sheets will be FedExed/mailed to plan holders who purchased plans in the size and quantity purchased.

Consider this change and information prior to submitting your bid on January 3, 2013.

Sincerely,

George M. A. Macdougall P.E.
Contracts & Specifications Engineer



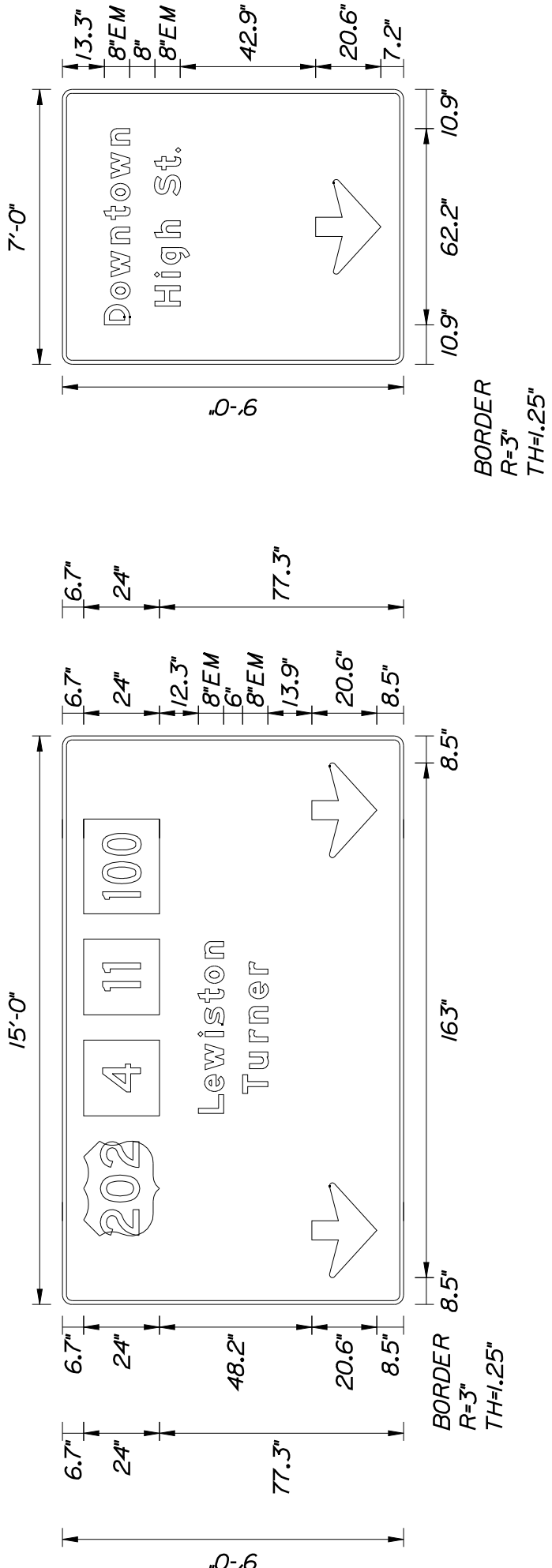
PRINTED ON RECYCLED PAPER

DATE	OCTOBER 8, 2012	P.E. NUMBER	4226	SIGNATURE
BY	JLE	DATE	7-12	10-12
PROJ. MANAGER PAUL MACDONALD		CHECKED-REVIEWED	ALC	ALC
		DESIGN-DETAILED	ALC	ALC
		DESIGN2-DETAILED2	JLE	
		DESIGN3-DETAILED3		
SIGN TILES - 1,2,4,4b	12-12	SIGN 2 & 3 LOCATIONS	10-12	
REVISIONS 2		REVISIONS 1		
REVISIONS 3		REVISIONS 4		
FIELD CHANGES				

AUBURN

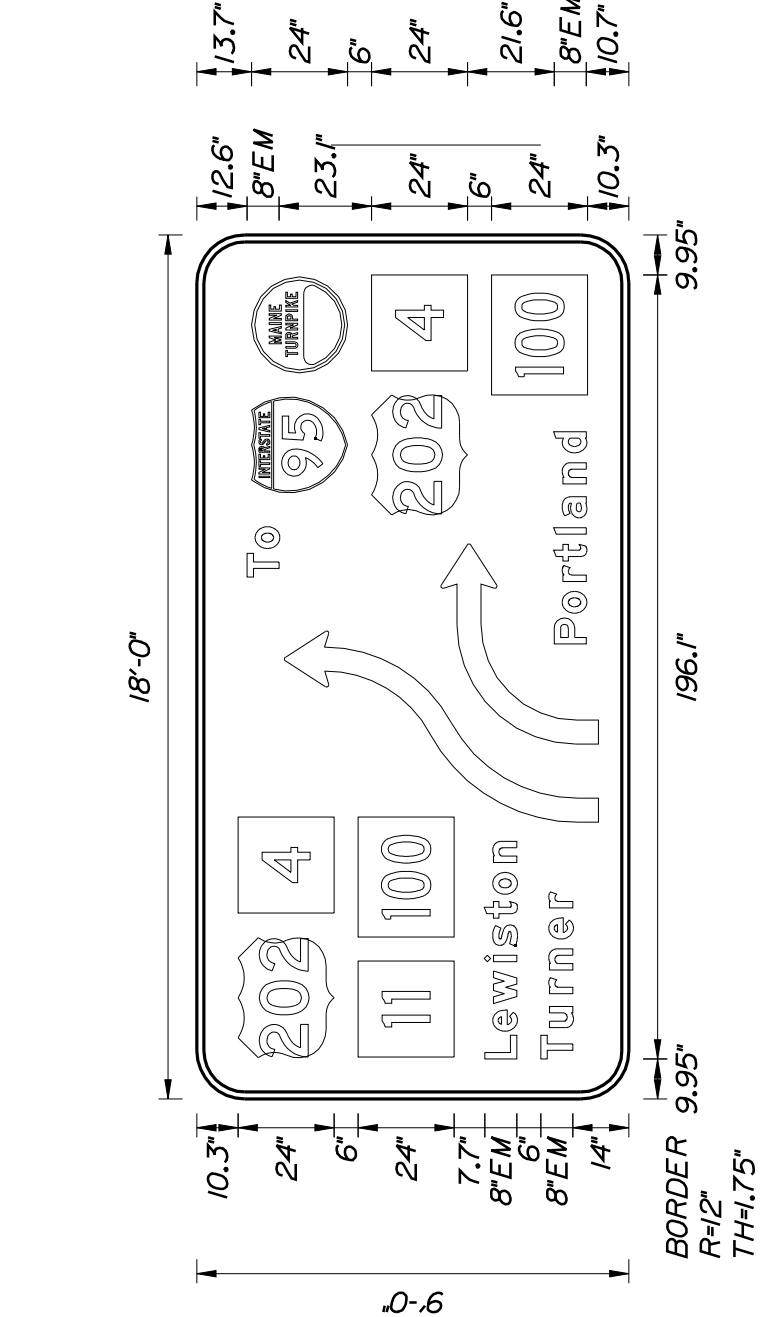
WASHINGTON ST & MINOT AVE

SIGN DETAILS



GUIDE SIGN #2
WASHINGTON STREET NORTH
OVERHEAD

STA. 203+52.5 LT./RT.
TYPE I SIGN

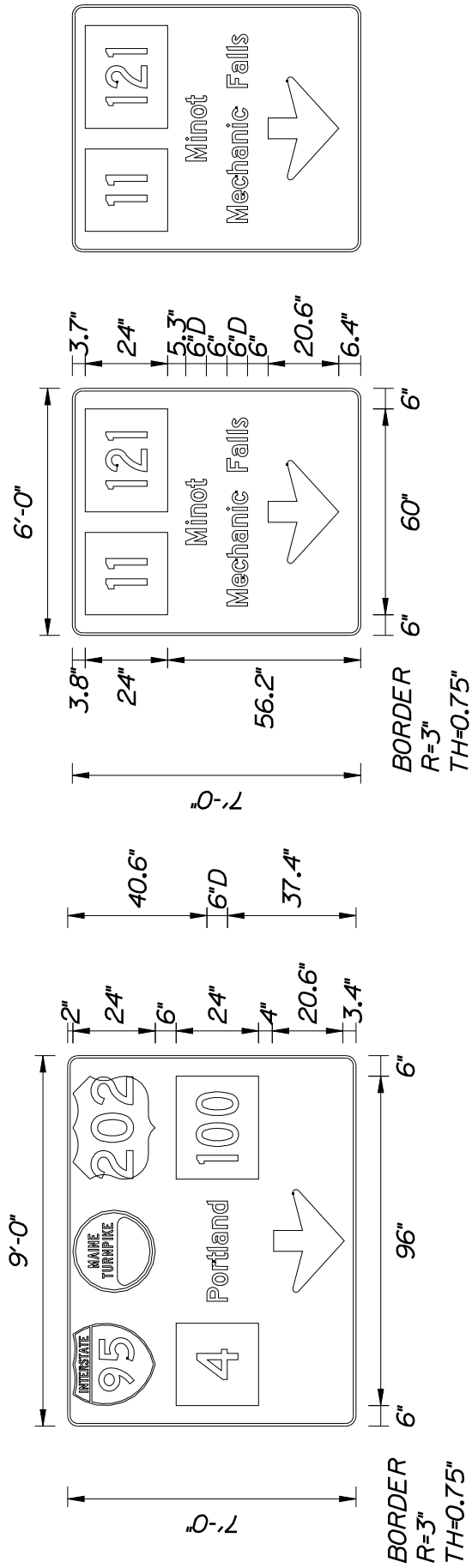


GUIDE SIGN #1
MINOT AVENUE

STA. 126+80.0 36.5' LT.
EASTBOUND APPROACH

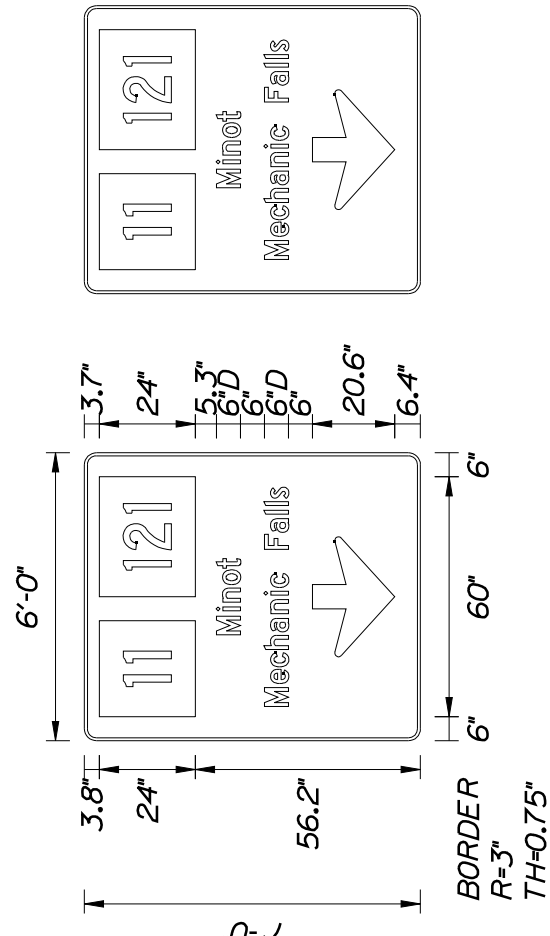
DOUBLE W10X22 POSTS
24" FOUNDATIONS

TRANSPO BREAK-SAFE MODEL B650
WITH TYPE B ANCHORS
TYPE I SIGN



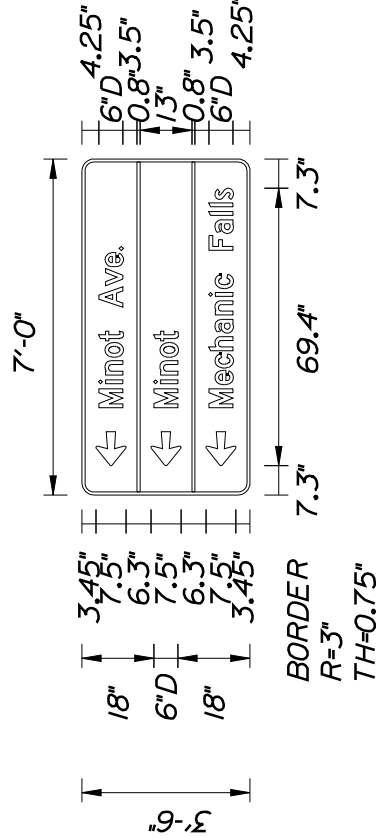
GUIDE SIGN #4A
MINOT AVENUE WESTBOUND
CANTILEVER SIGN

STA. 110+70.0, 29.5' LT.
TYPE I SIGN



GUIDE SIGN #4B
MINOT AVENUE WESTBOUND
CANTILEVER SIGN

STA. 111+14.0, 30.0' RT.
TYPE I SIGN

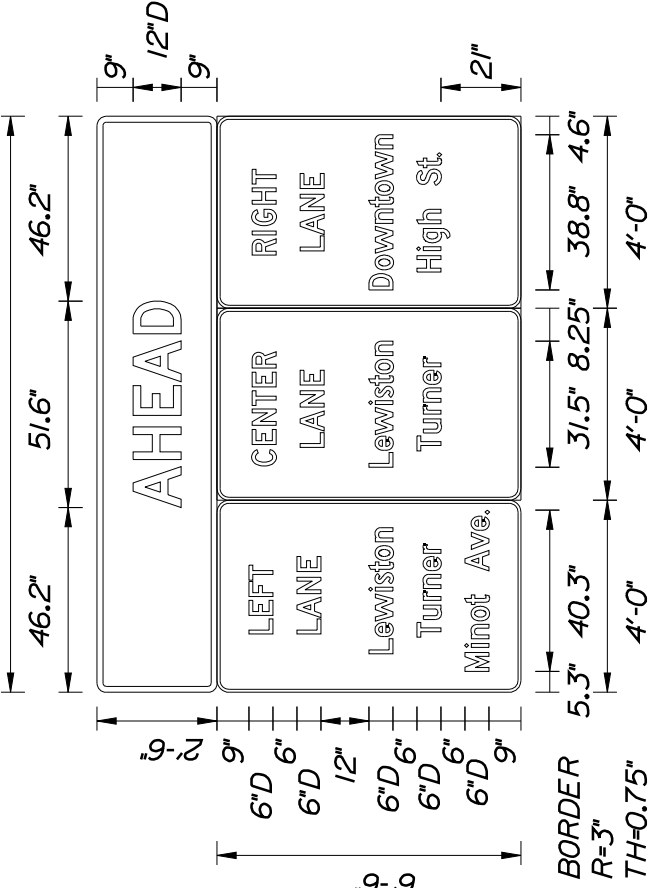


INCLUDE "JCT" & ROUTE "12" SIGNS
MOUNTED BELOW

GUIDE SIGN #3
WASHINGTON STREET NORTH

STA. 204+12.5, 24.0' RT.
NORTHBOUND APPROACH

DOUBLE 4" X 6" WOOD POSTS
TYPE II SIGN

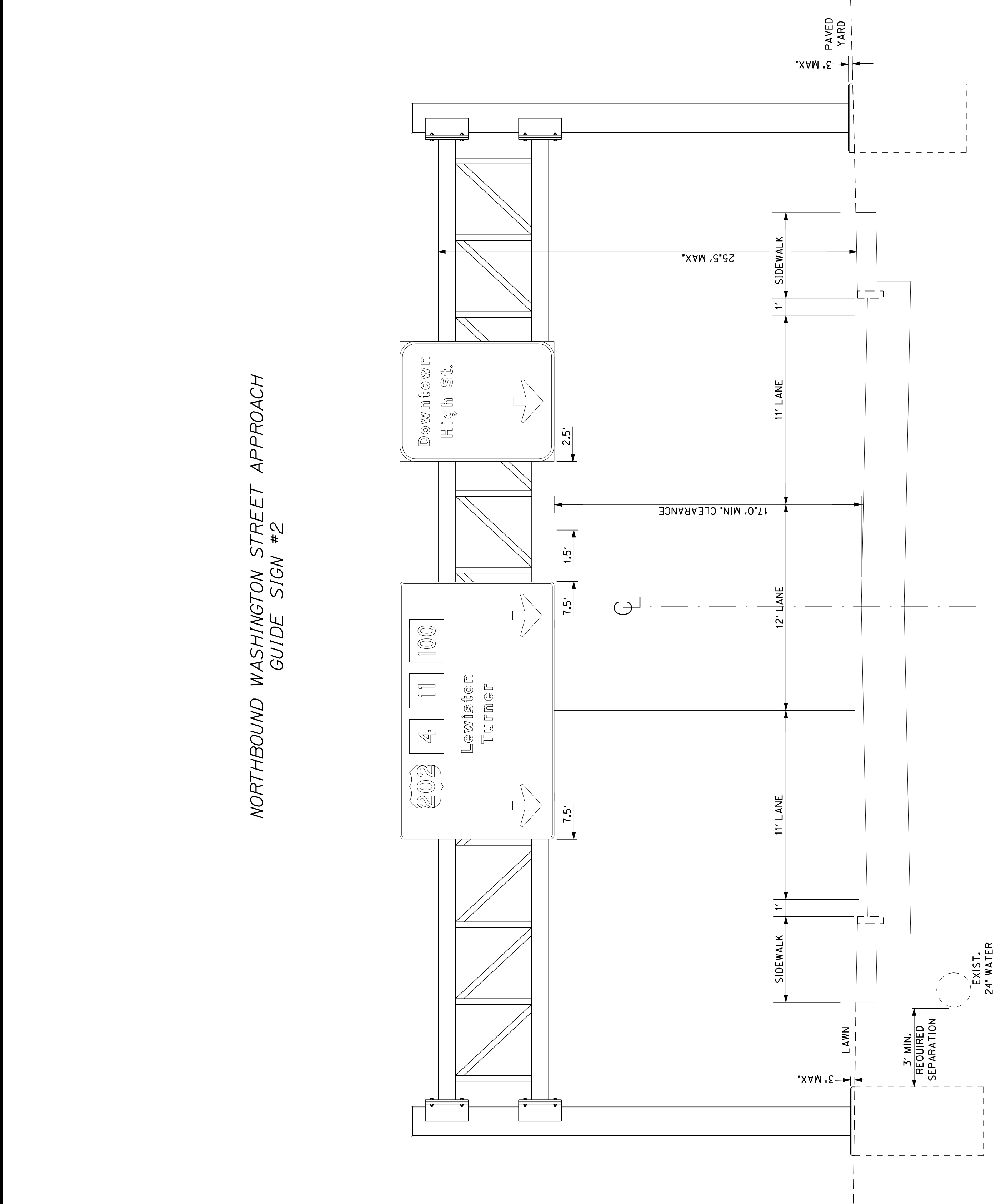


GUIDE SIGN #2A
WASHINGTON STREET

STA. 214+06.0, 26.0' LT.
NORTHBOUND APPROACH

DOUBLE W8X18 POSTS
24" FOUNDATIONS
TYPE I SIGN

- NOTES:
1. ALL UNITS ARE IN INCHES.
 2. TYPE I GUIDE SIGNS ARE WHITE ON GREEN BACKGROUND.
 3. ROUTE MARKERS BLACK ON WHITE BACKGROUND.
 4. SHEETING SHALL BE ASTM TYPE III "HIGH INTENSITY PRISMATIC" RETROREFLECTIVITY OR BETTER.
 5. SIGN POSTS WITHIN SAFETY CLEAR ZONE SHALL INCLUDE THE BREAKAWAY SUPPORT SYSTEM DESIGNATED FOR THE APPLICABLE SIGN.



NORTHBOUND WASHINGTON STREET APPROACH
GUIDE SIGN #2

OVERHEAD SIGNING
CONSTRUCTION NOTES - GUIDE SIGN #2

- The Contractor shall be responsible for final design of the non-cantilevered support structure, attachment of signs to the monotube or truss arms, and foundation reinforcing for overhead signing. All design shall be prepared and stamped by a licensed Professional Engineer. Design computations, including design loads (overturning moment, torsion, shear and axial) at the top of the foundations, and shop drawings shall be submitted for approval by the Department. No materials shall be ordered or fabricated until the design has been approved.
- The location of the proposed overhead signage along the roadway will be as shown on the plans. Support foundations are intended to be constructed behind existing sidewalks. Existing right of way width at the sign location is 3 rods (49.5'). All construction must be completed within the limits of existing right of way and acquired easements.
- The locations of the existing gas and water mains shall be confirmed before commencing any excavation for the foundations.
- Aerial utility conductors over the proposed truss span overhead sign structure will require vertical adjustment to provide adequate separation from the sign support structure. Adjustment of the utility conductors will be performed by the utilities. Design of the sign support structure shall be based on the top truss arm not exceeding 25.5' height above the easterly sidewalk. Operation of equipment for construction of foundations or the sign structure shall not exceed this vertical limit within 10' horizontally from aerial electric conductors.
- A test boring was drilled in the general vicinity of Guide Sign #2. Subsurface conditions encountered between about 6 and 17 feet consisted of brown, wet, very loose to loose, silty fine to medium SAND (phi=28 deg, unit weight=120 pcf). Medium dense Sandy TILL was encountered at about 17 feet; boring was terminated at 26 feet without refusal. Based upon these subsurface conditions and reasonable estimates of design loads, each leg of Guide Sign #2 shall be supported by one drilled shaft having the following dimensions: 3.0 ft. diameter, by 14.0 ft. long below the lowest adjacent grade. Alternatively a 3.5 ft. dia. by 15.0 ft. long drilled shaft may be used. Actual design loads at the top of the foundation that are provided by the contractor as part of their submittal will be used by the Department to check the specified size of the drilled shafts. The contractor shall determine the requirements for reinforcing. Drilled shafts shall not be permanently cased, except for the top 3 feet; concrete shall be cast directly against the surrounding soil. If soil conditions differ materially from those described above, the contractor shall stop work on that foundation and contact the Resident Engineer.
- All design, materials and fabrication of signs, sign support structures and foundation reinforcing shall meet the requirements of the latest edition of the AASHTO "Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals" and Interim specifications thereto, the "State of Maine Department of Transportation Standard Specifications, Revision of December 2002" and supplemental specifications thereto, and the "State of Maine Department of Transportation Standard Details, Revision of December 2002" and latest revisions.
- Total area of signs for Guide Sign Location #2 = 198 s.f.
- Basic wind speed for calculation of wind loads shall use the 50-year mean recurrence interval 3-second gust speed Isotach map of the AASHTO specifications.
- Minimum fatigue design default values for the non-cantilevered sign support structure shall be classified as Fatigue Category I with Fatigue Importance Factors (If) of 1.0 for Natural Wind Gusts and 1.0 for Truck-Induced Gusts.
- Additional theoretical sign load shall be computed by increasing the sign widths of the multiple sign installation by 25% toward the outside sign edges. The height for purposes of load calculations shall be increased by 25% without changing the bottom edge elevation of the signs.
- The specified minimum vertical clearance of signs and support structure applies to the maximum deflected position over the roadway.
- Concrete for the overhead sign structure foundations shall be Class LP.
- Signs shall meet the requirements for Type I Guide Signs.
- Reflective sheeting for overhead signs shall be High Intensity Prismatic grade.
- Any damage to slopes or pavement resulting from installation of overhead sign structures and foundations shall be repaired by the Contractor as directed by the Resident. Costs of repairs shall be incidental to payment under Section 645.
- Payment for overhead signing at this location will be made under Pay Item 645.12, Overhead Guide Sign: Sign, 204+12.5, Lump Sum, and will be full compensation for all labor, equipment and materials for the accepted complete sign installation including, but not limited to, overhead guide signs, sign support structure and foundations, excavation, excavation stabilization, backfill, replacement of subbase gravel, replacement or repair of highway and sidewalk pavement, slope regrading, and placement of rock, seed and mulch on disturbed slopes. Payment for construction traffic control will be made under applicable pay items of Section 652.

6		OF 19	
SHEET NUMBER		NOT TO SCALE	
AUBURN WASHINGTON ST & MINOT AVE		SIGN DETAILS	
PROJ. MANAGER PAUL MACDONALD	BY JLE	DATE 7-12	ALC
CHECKED-REVIEWED JLE	DATE 10-12	SIGNATURE	4226
DESIGN-DETAILS JLE	DATE 7-12	P.E. NUMBER	OCTOBER 8, 2012
DESIGN-DETAILS JLE	DATE 7-12	DATE	
REVISIONS 1 FOUNDATION DETAIL	DATE 10-12		
REVISIONS 2 NOTES, SIGN FACE	DATE 12-12		
REVISIONS 3			
REVISIONS 4 FIELD CHANGES			

STATE OF MAINE	DEPARTMENT OF TRANSPORTATION	STP-1159(910)X	WIN 11599.10	HIGHWAY PLANS
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STATE OF MAINE

DEPARTMENT OF TRANSPORTATION

STP-1159(910)X

WIN 11599.10

HIGHWAY PLANS

8

OF 19

SHEET NUMBER

AUBURN

WASHINGTON ST & MINOT AVE

SIGN DETAILS

PROJ. MANAGER PAUL MACDONALD

BY JLE

DATE 7-12

ALC

DESIGN-DETAILS 10-12

CHECKED-REVIEWED JLE

DESIGN-DETAILS 7-12

DESIGN-DETAILS 7-12

DESIGN-DETAILS 7-12

REVISIONS 1

REVISIONS 2

REVISIONS 3

REVISIONS 4

FIELD CHANGES

P.E. NUMBER 4226

SIGNATURE

DATE OCTOBER 8, 2012

WESTBOUND MINOT AVENUE APPROACH

GUIDE SIGN 4B

OVERHEAD SIGNING

CONSTRUCTION NOTES - GUIDE SIGN #4B

1. The Contractor shall be responsible for final design of the cantilever support structure, attachment of signs to the cantilever arms, and foundation reinforcing for overhead signing. All design shall be prepared and stamped by a licensed Professional Engineer. Design computations, including the actual loads (overturning moment, torsion, shear and axial) at the top of the foundation, and shop drawings shall be submitted for approval by the Department. No materials shall be ordered or fabricated until the design has been approved.

2. The location of the proposed overhead signage along the roadway will be as shown on the plans. The support foundation is intended to be constructed behind the existing sidewalk and not to disturb the existing adjacent binwall retaining wall. All construction must be completed within the limits of existing right of way and acquired easements. Right of way offset distance from the highway baseline in the area of the proposed overhead signage is approximately 25.5'. Total right of way width is 4 rods (66').

3. A test boring was drilled in the general vicinity of Guide Sign #4B. Subsurface conditions encountered between 7 and 14 feet consisted of gray-brown, wet, loose, fine to medium SAND, little silt (phi=28 deg, unit weight=120 pcf). Very hard, Silty TILL was encountered at 14 feet; boring was terminated at 22 feet without refusal. Based upon these subsurface conditions and reasonable estimates of design loads, Guide Sign #4B shall be supported by one drilled shaft having the following dimensions: 3.5 ft. diameter by 19.0 ft. long below the lowest adjacent grade. Alternatively a 4.0 ft. dia. by 16.0 ft. long drilled shaft may be used. Actual design loads at the top of the foundation that are provided by the contractor as part of their submittal will be used by the Department to check the specified size of the drilled shafts. The contractor shall determine the requirements for reinforcing. Drilled shafts shall not be permanently cased, except for the top 3 feet; concrete shall be cast directly against the surrounding soil. If soil conditions differ materially from those described above, the contractor shall stop work on that foundation and contact the Resident Engineer.

4. All design, materials and fabrication of signs, sign support structures and foundation reinforcing shall meet the requirements of the latest edition of the AASHTO "Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals" and interim specifications thereto, the "State of Maine Department of Transportation Standard Specifications, Revision of December 2002 and Supplemental specifications thereto, and the "State of Maine Department of Transportation Standard Details, Revision of December 2002" and latest revisions.

5. Total sign area for Guide Sign Location #4B = 84 s.f.

6. Basic wind speed for calculation of wind loads shall use the 50-year mean recurrence interval 3-second gust speed isotherm map of The AASHTO specifications.

7. Minimum fatigue design default values for the cantilever sign support structure shall be classified as Fatigue Category I with Fatigue Importance Factors (If) of 1.0 for Galloping, 1.0 for Natural Wind Gusts and 1.0 for Truck-Induced Gusts.

8. Additional theoretical sign load shall be computed by increasing the sign widths of the multiple sign installation by 25% toward the outside sign edges. The height for purposes of load calculations shall be increased by 25% without changing the bottom edge elevation of the signs.

9. The specified minimum vertical clearance of signs and support structure applies to the maximum deflected position over the roadway.

10. Concrete for the overhead sign structure foundation shall be Class LP.

11. Signs shall meet the requirements for Type I Guide Signs.

12. Reflective sheeting for overhead signs shall be High Intensity Prismatic grade.

13. Any damage to slopes or pavement resulting from construction shall be repaired by the Contractor as directed by the Resident. Costs of repairs shall be incidental to payment under Section 645.

14. Payment for overhead signing at this location will be made under Pay Item 645J5, Cantilever Guide Sign; Sta. 11+14.0, Lump Sum, and will be full compensation for all labor, equipment and materials for the accepted complete sign installation including, but not limited to, overhead guide signs, sign support structure and foundation, excavation, stabilization, backfill, replacement of subbase gravel, replacement or repair of highway and sidewalk pavement, slope regrading, and placement of loam, seed and mulch on disturbed slopes. Payment for construction traffic control will be made under applicable pay items of Section 652.

12' LANE

12' LANE

SHOULDER

SIDEWALK

3' MAX.

17.0' MIN. CLEARANCE

3.0'

3.0'

11 121 Minot Mechanic Falls

11 121 Minot Mechanic Falls

Filename: ...MST\A\008_SIGN_DETAILS_05.dgn

Division: HIGHWAY

Username: jeason

Date:12/19/2012