

NOTICE OF PUBLIC MEETING
SUDBURY CONSERVATION COMMISSION
Monday, Monday, August 12, 2024 at 7:00 PM
Virtual Meeting

The Sudbury Conservation Commission will hold a public meeting to review the Request for Determination of Applicability filing under the Wetlands Protection Act and the Sudbury Wetlands Administration Bylaw to replace a bridge parapet and guardrails within the 100-foot Buffer Zone, 200-foot Riverfront Area, and Bordering Land Subject to Flooding at Wayside Inn Road, in Sudbury, MA. Daniel Nason, Applicant. The meeting will be held on Monday, August 12, 2024 at 7:00 pm, via Zoom.

Copies of the application may be reviewed on the Conservation Department web page at:

<https://sudbury.ma.us/conservationcommission/meeting/conservation-commission-meeting-monday-August-12-2024/>

Please contact the Conservation Office with any questions at 978-440-5470.

SUDBURY CONSERVATION COMMISSION
7/29/2024

Via E-Mail

7/25/2024



David Henkels
Town of Sudbury Conservation Commission
275 Old Lancaster Road
Sudbury, MA 01776

Re: Wayside Bridge Repairs – RDA Filing

Dear Mr. Henkels:

On behalf of the Town of Sudbury, Woodard & Curran has prepared the following executive summary in support of the RDA application:

The bridge is located on Wayside Inn Road, just east of Dutton Road. The project is generally described as replacement of a bridge parapet and guardrails; erosion and sedimentation control; other surficial improvements as shown on the plans. The Work shown on the Drawings includes, but is not limited to, the following principal features:

- Installation and maintenance of erosion and sedimentation control measures.
- Removal and disposal of temporary bridge parapet repairs and existing guardrail. Work to be completed from the roadway surface.
- Replacement of bridge parapet as shown on the plans and as directed by the Engineer. Essentially, new guardrail/wall over the bridge structure.
- Furnish and install new guardrails along the edge of road, outside the limits of the bridge structure.
- Other surficial improvements – essentially, new line striping on the roadway surface.

Sincerely,

Woodard & Curran, Inc.

A handwritten signature in blue ink that reads "Scott Salvucci".

Scott Salvucci, P.E.
Senior Client Manager, Vice President



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

Sudbury

City/Town

WPA Form 1- Request for Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

A. General Information

Important:

When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



1. Applicant:

Daniel Nason

Name

nasond@sudbury.ma.us

E-Mail Address

275 Old Lancaster Road

Mailing Address

Sudbury

City/Town

MA

State

01776

Zip Code

978-443-2209

Phone Number

NA

Fax Number (if applicable)

2. Representative (if any):

Woodard & Curran

Firm

Scott Salvucci

Contact Name

ssalvucci@woodardcurran.com

E-Mail Address

250 Royall Street, Suite 200E

Mailing Address

Canton

City/Town

MA

State

02021

Zip Code

781-613-0311

Phone Number

NA

Fax Number (if applicable)

B. Determinations

1. I request the Sudbury make the following determination(s). Check any that apply:
Conservation Commission

- ☐ a. whether the **area** depicted on plan(s) and/or map(s) referenced below is an area subject to jurisdiction of the Wetlands Protection Act.
- ☐ b. whether the **boundaries** of resource area(s) depicted on plan(s) and/or map(s) referenced below are accurately delineated.
- ☒ c. whether the **work** depicted on plan(s) referenced below is subject to the Wetlands Protection Act.
- ☒ d. whether the area and/or work depicted on plan(s) referenced below is subject to the jurisdiction of any **municipal wetlands ordinance** or **bylaw** of:

Town of Sudbury

Name of Municipality

- ☐ e. whether the following **scope of alternatives** is adequate for work in the Riverfront Area as depicted on referenced plan(s).



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C. Project Description

1. a. Project Location (use maps and plans to identify the location of the area subject to this request):

Wayside Inn Road

Street Address

Sudbury

City/Town

Various-refer to Project Drawings

Assessors Map/Plat Number

Various

Parcel/Lot Number

- b. Area Description (use additional paper, if necessary):

Refer to Figure 1 - Site Location Map and Project Drawings. The proposed project includes replacement of a bridge parapet and guardrails along Wayside Inn Road.

- c. Plan and/or Map Reference(s):

Figure 1 - Site Location Map

Title

July 2024

Date

Wayside Bridge Repairs Drawings

Title

April 2024

Date

Title

Date

2. a. Work Description (use additional paper and/or provide plan(s) of work, if necessary):

The project is generally described as replacement of a bridge parapet and guardrails; erosion and sedimentation control; other surficial improvements as shown on the plans; and all materials and equipment, services and construction inherent to the Work, as specified and shown on the Drawings.



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C. Project Description (cont.)

b. Identify provisions of the Wetlands Protection Act or regulations which may exempt the applicant from having to file a Notice of Intent for all or part of the described work (use additional paper, if necessary).

No work is proposed to occur inside of areas specified in 310 CMR 10.02(1)(a-f) under this project. The extent of the work will be limited to the bridge parapet and guardrails. No work will be performed within the wetlands or stream bed.

3. a. If this application is a Request for Determination of Scope of Alternatives for work in the Riverfront Area, indicate the one classification below that best describes the project.

- ☐ Single family house on a lot recorded on or before 8/1/96
- ☐ Single family house on a lot recorded after 8/1/96
- ☐ Expansion of an existing structure on a lot recorded after 8/1/96
- ☐ Project, other than a single-family house or public project, where the applicant owned the lot before 8/7/96
- ☐ New agriculture or aquaculture project
- ☐ Public project where funds were appropriated prior to 8/7/96
- ☐ Project on a lot shown on an approved, definitive subdivision plan where there is a recorded deed restriction limiting total alteration of the Riverfront Area for the entire subdivision
- ☐ Residential subdivision; institutional, industrial, or commercial project
- ☐ Municipal project
- ☐ District, county, state, or federal government project
- ☐ Project required to evaluate off-site alternatives in more than one municipality in an Environmental Impact Report under MEPA or in an alternatives analysis pursuant to an application for a 404 permit from the U.S. Army Corps of Engineers or 401 Water Quality Certification from the Department of Environmental Protection.

b. Provide evidence (e.g., record of date subdivision lot was recorded) supporting the classification above (use additional paper and/or attach appropriate documents, if necessary.)



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D. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Request for Determination of Applicability and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge.

I further certify that the property owner, if different from the applicant, and the appropriate DEP Regional Office were sent a complete copy of this Request (including all appropriate documentation) simultaneously with the submittal of this Request to the Conservation Commission.

Failure by the applicant to send copies in a timely manner may result in dismissal of the Request for Determination of Applicability.

Name and address of the property owner:

Town of Sudbury Department of Public Works

Name

275 Old Lancaster Road

Mailing Address

Sudbury

City/Town

MA

State

01776

Zip Code

Signatures:

I also understand that notification of this Request will be placed in a local newspaper at my expense in accordance with Section 10.05(3)(b)(1) of the Wetlands Protection Act regulations.

Signature of Applicant

7/25/2024

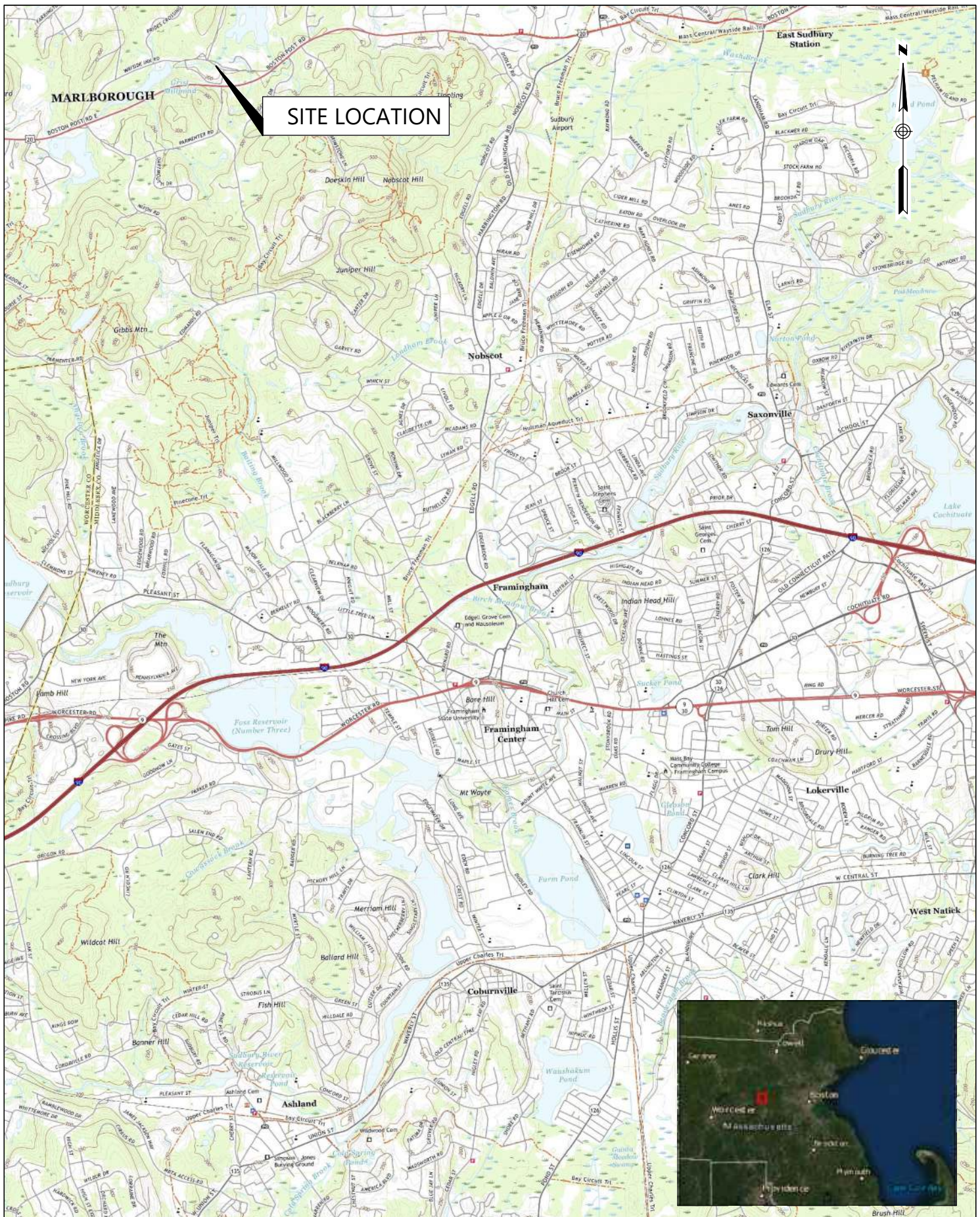
Date

Signature of Representative (if any)

7/24/2024

Date

\\woodardcurran.net\shared\projects\0227202.11 sudbury ma - wayside bridge final des\wip\permitting\figures\0233335-figure 1-site location map



Client Info:
TOWN OF SUDBURY
DEPT OF PUBLIC WORKS
275 OLD LANCASTER RD,
SUDBURY, MA 01776

Job No: 0233335
Date: ####
Scale: Not to Scale
Des by: ###
Drn by: ###
Chk by: ###

Drawing Title

WAYSIDE BRIDGE REPAIRS

Drawing Number

FIG-01

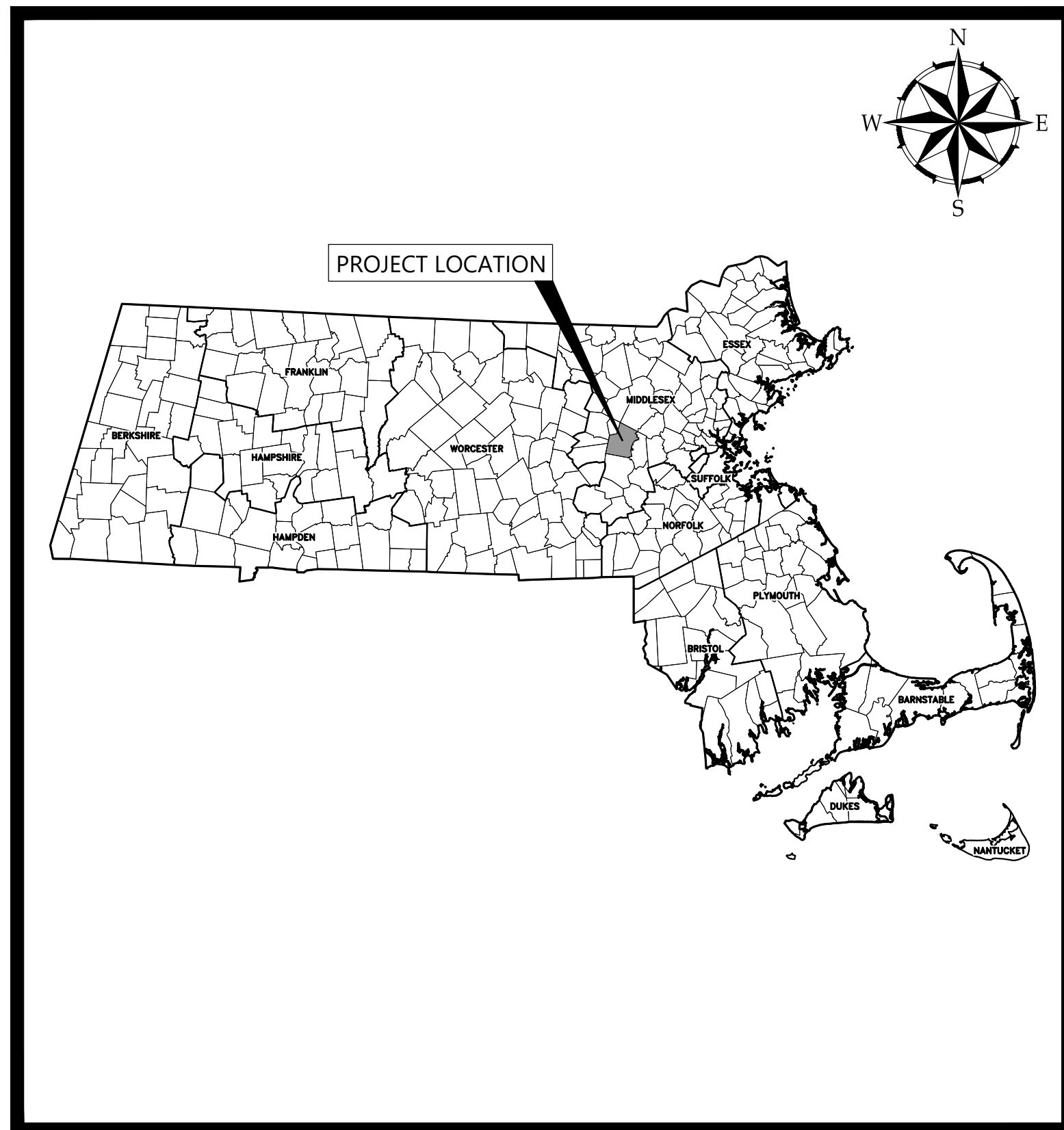
TOWN OF SUDBURY, MA

PUBLIC WORKS DEPARTMENT

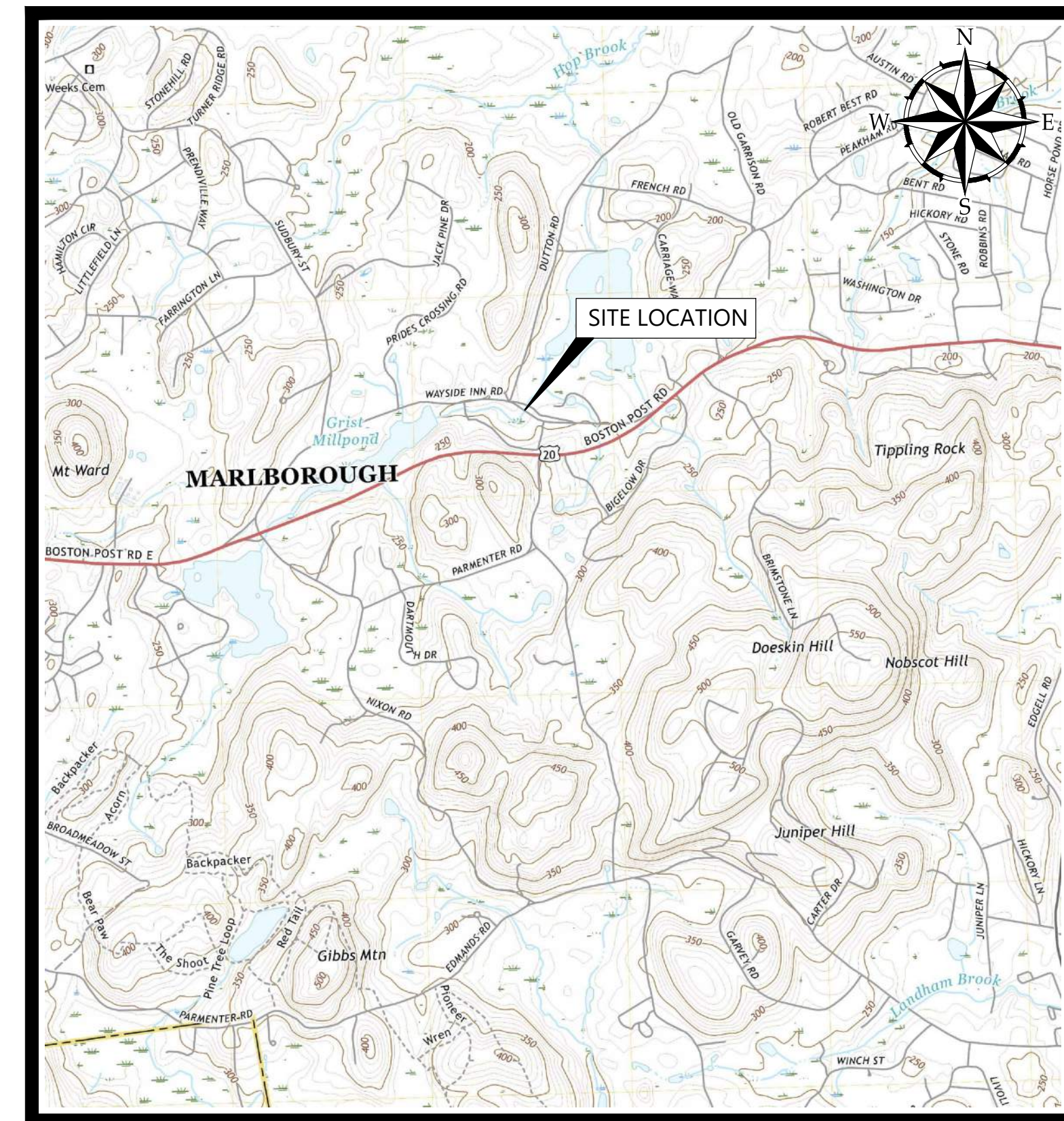
WAYSIDE BRIDGE REPAIRS

ISSUE FOR BID

APRIL 2024



PROJECT LOCATION MAP



SITE LOCATION MAP

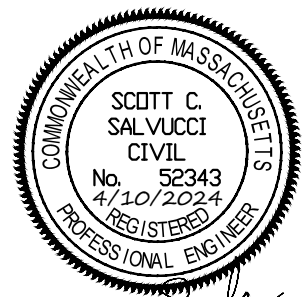
SOURCE: USGS TOPO QUADRANGLE



**Woodard
& Curran**

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Scott Salucci

ISSUE FOR BID

CLIENT INFO:

TOWN OF SUDBURY
MASSACHUSETTS

WAYSIDE BRIDGE REPAIRS

REV	MM/DD/YY	DESCRIPTION
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JOB NO:	0227202.11
DATE:	APRIL 2024
SCALE:	NONE
DESIGNED BY:	KD
DRAWN BY:	JBC
CHECKED BY:	DS
FILENAME:	0227202.08-G-000.dwg

DRAWING TITLE:
**GENERAL
COVER SHEET**

DRAWING NO:
G-000

\\woodardcurran.net\shared\Projects\0227202.08 Sudbury MA - Old Wayside Bridge Repair\wp\Drawings\General\0227202.08-G-001.dwg, Apr 10, 2024, 1:25pm VMAARTINS

GENERAL NOTES:

- EXISTING CONDITIONS ARE BASED ON A SURVEY PERFORMED BY CHAPPELL ENGINEERING ASSOCIATES, LLC, 201 BOSTON POST ROAD WEST – SUITE 101 MARLBOROUGH, MA 01752. PLAN TITLED, "EXISTING CONDITIONS SURVEY WAYSIDE INN ROAD, SUDBURY, MASSACHUSETTS.", DATED JULY 21, 2021.
- THE HORIZONTAL DATUM DEPICTED ON THE MAPS HEREON IS BASED ON THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM, MAINLAND ZONE, REFERENCED TO THE NORTH AMERICAN DATUM OF 1983. THE VERTICAL DATUM IS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
- ANY PROPERTY AND RIGHT OF WAY LOCATIONS THAT MAY BE SHOWN HEREIN ARE APPROXIMATE AND DO NOT REPRESENT A PROPERTY BOUNDARY SURVEY.
- WOODARD & CURRAN ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.
- COORDINATE CONSTRUCTION ACTIVITY WITH UTILITY COMPANIES, EMERGENCY SERVICES AND TOWN. CONTRACTOR SHALL NOTIFY ALL UTILITIES PRIOR TO COMMENCING WORK, ALLOWING SUFFICIENT TIME TO LOCATE AND MARK THE LOCATION OF BURIED UTILITIES. CONTRACTOR SHALL CONTACT "DIG SAFE", TELEPHONE 811, PRIOR TO EXCAVATION.
- RESTORE ALL AREAS DISTURBED BY CONTRACTOR'S OPERATIONS TO ORIGINAL FINISH (GRAVEL, PAVEMENT, GRASS, ETC.) UNLESS NOTED OTHERWISE ON THE PLANS. RESTORATION OF PAVED SURFACES, GRAVEL SURFACES, DRIVEWAYS, AND LAWNS DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE PERFORMED AT NO ADDITIONAL COST TO OWNER. ANY CURB DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE REPLACED IN KIND AND SHALL CONFORM TO TOWN OF SUDBURY AND MASSACHUSETTS DOT SPECIFICATIONS AT NO ADDITIONAL COST TO OWNER.
- PROPERLY PROTECT AND DO NOT DISTURB PROPERTY IRONS AND MONUMENTS. IF DISTURBED, THE PROPERTY MONUMENT SHALL BE RESET AT THE CONTRACTOR'S EXPENSE BY A LICENSED LAND SURVEYOR ACCEPTABLE TO THE TOWN.
- EXISTING FACILITIES (I.E. TREES, JERSEY BARRIERS, STONE, ETC.) SHALL BE REMOVED AND PROTECTED DURING CONSTRUCTION. THE TOWN RETAINS RIGHT TO KEEP ANY AND ALL REMOVED FACILITIES. CONTRACTOR SHALL DISPOSE OF ANY REMOVED FACILITY AT THE REQUEST OF THE TOWN AT NO ADDITIONAL COST TO OWNER.
- ALL TREES NOT NOTED TO BE REMOVED OR RELOCATED SHALL BE PROTECTED BY CONTRACTOR DURING CONSTRUCTION.
- DO NOT PARK, IMPEDE ACCESS TO, OR STORE EQUIPMENT BEYOND LIMIT OF WORK, UNLESS PERMISSION HAS BEEN GRANTED IN WRITING BY TOWN AND/OR LAND OWNER.
- RESTRICT ACCESS TO SITE THROUGH THE USE OF APPROPRIATE SIGNAGE, BARRIERS, FENCES, ETC. SITE SHALL BE LEFT WITH APPROPRIATE SAFETY MEASURES IN PLACE DURING NON-WORKING HOURS. SITE SAFETY IS THE RESPONSIBILITY OF CONTRACTOR, DURING BOTH WORKING AND NON-WORKING HOURS.
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY CONSTRUCTION PERMITS INCLUDING "PERMIT TO CONSTRUCT WITHIN A PUBLIC WAY" FROM THE TOWN. PERMIT APPLICATIONS SHALL BE SUBMITTED WITH ADEQUATE TIME SO AS NOT TO DELAY CONSTRUCTION.
- ALL WORK ASSOCIATED WITH THE PROJECT SHALL BE COMPLETED IN ACCORDANCE WITH THE TOWN OF SUDBURY BYLAW AND LOCAL REGULATIONS AND MASSACHUSETTS DOT STANDARD SPECIFICATIONS.
- UPON COMPLETION OF CONSTRUCTION, A COMPLETE SET OF "RECORD" DRAWINGS SHALL BE SUBMITTED TO THE TOWN ENGINEER. THESE DRAWINGS SHALL BE SUBMITTED IN BOTH DIGITAL AND HARD COPY FORMAT AS DEFINED IN THE SPECIFICATIONS PRIOR TO PAYMENT OF FINAL RETAINAGE.
- PROTECTION OF EXISTING UTILITIES DURING CONSTRUCTION SHALL BE PROVIDED AT NO ADDITIONAL COST.
- CONTRACTOR SHALL BE RESPONSIBLE FOR SWEEPING WAYSIDE INN ROAD EVERY FRIDAY AND AS NECESSARY DURING THE DURATION OF THE WORK.
- PRIOR TO CONSTRUCTION, CONTRACTOR SHALL ATTEND A PRE-CONSTRUCTION MEETING HELD AT THE PROJECT SITE WITH THE CONTRACTOR, ENGINEER, AND OWNER TO REVIEW THE CONSTRUCTION SCHEDULE AND SEQUENCING, STOCKPILE LOCATIONS AND CRITICAL ASPECTS OF THE PROJECT.
- ALL DISTURBED UPLAND AREAS SHALL BE BROUGHT TO FINAL GRADE AND SHALL BE PERMANENTLY STABILIZED WITHIN 30 DAYS AFTER DISTURBANCE. BARE GROUND AND DISTURBED AREAS THAT CANNOT BE PERMANENTLY VEGETATED WITHIN 30 DAYS SHALL BE TEMPORARY STABILIZED BY AN APPROVED METHOD.
- CONTRACTOR SHALL DEMARCAT CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE AREAS PRIOR TO CONSTRUCTION.
- THE CONSTRUCTION SITE SHALL BE MAINTAINED IN CLEAN CONDITIONS AT ALL TIMES AND CONSTRUCTION REFUSE AND DEBRIS SHALL BE DISPOSED OF PROMPTLY AND IN A LEGAL MANNER.
- STORING, SERVICING, OR CLEANING OF TRUCKS OR EQUIPMENT SHALL BE PERFORMED IN AN UPLAND AREA AT A HORIZONTAL DISTANCE GREATER THAN 100 FEET FROM THE WATERBURY AND ASSOCIATED RESOURCE AREAS.

EROSION CONTROL NOTES

- EROSION CONTROL DEVICES SHALL REMAIN IN PLACE, UNTIL ALL DISTURBED SURFACES HAVE BEEN STABILIZED WITH FINAL VEGETATION COVER OR THE OWNER HAS AUTHORIZED THEIR REMOVAL.
- EROSION CONTROL MEASURES AND BARRIERS SHALL BE MONITORED DAILY AND MAINTAINED, OR REINFORCED AS NECESSARY TO ENSURE AND PREVENT EROSION AND SILTATION OF SOILS TO WETLAND RESOURCE AREAS. ADDITIONAL FILTER FABRIC AND STRAW WATTLES SHALL BE STORED ON SITE FOR EMERGENCY USE.
- AN ADEQUATE STOCKPILE OF EROSION AND SEDIMENTATION CONTROL MATERIALS SHALL BE ON SITE AT ALL TIMES FOR EMERGENCY OR ROUTINE REPLACEMENT.
- DURING ALL PHASES OF CONSTRUCTION, ALL DISTURBED OR EXPOSED AREAS OUTSIDE THE ROADWAY SHALL BE BROUGHT TO FINISHED GRADE AND EITHER A) LOAMED AND SEEDED FOR PERMANENT STABILIZATION, IN ACCORDANCE WITH U.S. SOIL CONSERVATION SERVICE PROCEDURES, OR B) STABILIZED IN ANOTHER WAY APPROVED BY THE COMMISSION. AREAS THAT CANNOT BE PERMANENTLY STABILIZED WITHIN 30 DAYS OF DISTURBANCE SHALL BE STABILIZED WITH HAY, STRAW, MULCH OR ANY OTHER PROTECTIVE COVERING AND/OR METHOD APPROVED BY THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE OR BY OTHER TEMPORARY MEASURES ACCEPTABLE TO THE COMMISSION.
- ANY DAMAGE CAUSED AS A DIRECT RESULT OF CONSTRUCTION TO THE RESOURCE AREAS SHALL BE REPAIRED, RESTORED AND/OR REPLACED. SEDIMENTATION OR EROSION SHALL BE CONSIDERED DAMAGE TO THE RESOURCE AREAS. IF SEDIMENTATION REACHES THESE AREAS, THE CONSERVATION COMMISSION SHALL BE CONTACTED AND A PLAN FOR THE PROPOSED RESTORATION SHALL BE SUBMITTED FOR APPROVAL.
- THE SILT FENCE AND STRAW BALES MUST BE INSPECTED PRIOR TO THE START OF ANY WORK OR A \$100 PER DAY FINE WILL BE LEVIED ON THE CONTRACTOR.

ABBREVIATIONS

& A.G.	AND ABOVE GROUND
BIT B/W BVW	BITUMINOUS BETWEEN BORDERING VEGETATED WETLAND
CB CI CMP CONC	CATCH BASIN CAST IRON CORRUGATED METAL PIPE CONCRETE
D DI DIA. DMH DOT DTL DYL	STORM DRAIN DUCTILE IRON DIAMETER DRAIN MANHOLE DEPARTMENT OF TRANSPORTATION DETAIL DOUBLE YELLOW LINE
E EL E.O.P. EXIST.	UNDERGROUND ELECTRICAL ELEVATION EDGE OF PAVEMENT EXISTING
FF FT	FINISH FLOOR FOOT/FEET
G GS GALV. GRAN.	GAS MAIN GAS SERVICE GALVANIZED GRANITE
HDPE HDPP HYD	HIGH DENSITY POLYETHYLENE HIGH DENSITY POLYPROPYLENE HYDRANT
INV.	INVERT
LF	LINEAR FEET
MASSDEP	MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION
MADOT	MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
MAX. MIN. MON	MAXIMUM MINIMUM MONUMENT
N.I.C. NO. NR N.T.S.	NOT IN CONTRACT NUMBER NO REFUSAL NOT TO SCALE
OE OH	OVERHEAD ELECTRIC OVERHEAD
± LLS PROP. PT. PVC	PLUS OR MINUS LICENSED LAND SURVEYOR PROPOSED POINT POLYVINYL CHLORIDE
R.O.W. RCP REINF. REQ'D RPP	RIGHT-OF-WAY REINFORCED CONCRETE PIPE REINFORCED REQUIRED RIBBED PLASTIC PIPE
S S SMH SCH STA. SWL	SLOPE (FT./FT.) SEWER SEWER MANHOLE SCHEDULE STATION SINGLE WHITE LINE
TOWN TYP.	TOWN OF SUDBURY TYPICAL
UNO UP	UNLESS NOTED OTHERWISE UTILITY POLE
VC	VITRIFIED CLAY
W W/	WEST WITH

SYMBOLS

DESCRIPTION	EXISTING	PROPOSED
PK NAIL		
UTILITY POLE		
TREE/STUMP		
SIGN		
STEEL POST		
CONCRETE ANCHOR		
BRIDGE PARAPIT		
STEEL BACKED TIMBER GAURDRAIL		
TEMPORARY BARRIER		

SHEET INDEX	
GENERAL	
G-000	COVER SHEET
G-001	GENERAL NOTES, LEGEND, AND ABBREVIATIONS
CIVIL	
C-100	EXISTING CONDITIONS
C-200	SITE PLAN
C-300	CIVIL DETAILS - 1
C-301	CIVIL DETAILS - 2
STRUCTURAL	
S-101	WAYSIDE INN BRIDGE REPAIRS SITE PLAN, NOTES, EXISTING CONDITIONS, AND DEMOLITION PLAN
S-102	WAYSIDE INN BRIDGE REPAIRS PROPOSED PLAN AND SECTION
S-103	WAYSIDE INN BRIDGE REPAIR PLAN & SECTION

RESOURCE AREA LEGEND

BORDERING LAND SUBJECT TO FLOODING
(100 YEAR FLOOD ZONE, DEFINED BY FEMA)

NOTE:
A RESOURCE AREA DELINEATION WAS NOT CONDUCTED AS PART OF THIS PROJECT.

LINE TYPES & HATCHES

DESCRIPTION	EXISTING	PROPOSED
CONTOUR (1' INTERVAL)		
CONTOUR (INDEX)		
EDGE OF PAVEMENT		
OVERHEAD ELECTRIC		
UNDERGROUND GAS		
RIGHT OF WAY/ PROPERTY LINE		
GUARDRAIL		
LIMIT OF WORK		
SEDIMENT BARRIER		
SAWCUT		
STONE WALL		
DOUBLE YELLOW LINE		
SINGLE WHITE LINE		
CENTERLINE		



Woodard
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PE SEAL:



ISSUE FOR BID

CLIENT INFO:

TOWN OF SUDBURY
MASSACHUSETTS

WAYSIDE BRIDGE REPAIRS

REV	MM/DD/YY	DESCRIPTION
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JOB NO: 0227202.11

DATE: APRIL 2024

SCALE: NONE

DESIGNED BY: KD

DRAWN BY: JBC

CHECKED BY: DS

FILENAME: 0227202.08-G-001.dwg

DRAWING TITLE:

GENERAL
GENERAL NOTES, LEGEND,
AND ABBREVIATIONS

DRAWING NO:

G-001

NOTE:

TOPOGRAPHIC SURVEY INFORMATION FROM FIELD SURVEY PREPARED BY
CHAPPELL ENGINEERING, INC, DATED JULY 21, 2021.



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& Curran**

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PE SEAL:



ISSUE FOR BID

CLIENT INFO:

TOWN OF SUDBURY
MASSACHUSETTS
WAYSIDE BRIDGE REPAIRS

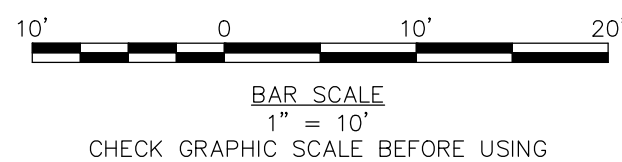
REV	MM/DD/YY	DESCRIPTION
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JOB NO:	0227202.11
DATE:	APRIL 2024
SCALE:	1" = 10'
DESIGNED BY:	KD
DRAWN BY:	JBC
CHECKED BY:	DS
FILENAME:	0227202.08-C-100.dwg

DRAWING TITLE:
**CIVIL
EXISTING CONDITIONS**

DRAWING NO:

C-100



\\woodardcurran.net\shared\Projects\0227202.08 Sudbury MA - Old Wayside Bridge Repair\wp\Drawings\Civil\0227202.08-C-100.dwg, Apr 10, 2024 - 1:25pm VJAMARTINS

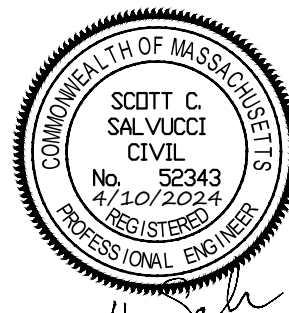


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PE SEAL:



ISSUE FOR BID

CLIENT INFO:

TOWN OF SUDBURY
MASSACHUSETTS

WAYSIDE BRIDGE REPAIRS

REV	MM/DD/YY	DESCRIPTION
-----	----------	-------------

JOB NO:	0227202.11
DATE:	APRIL 2024
SCALE:	AS NOTED
DESIGNED BY:	KD
DRAWN BY:	JBC
CHECKED BY:	DS
FILENAME:	0227202.08-C-200.dwg

DRAWING TITLE:

**CIVIL
SITE PLAN**

DRAWING NO:

C-200

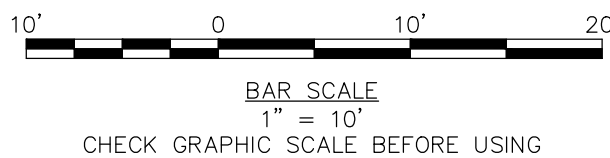
1
N: 2955381.514'
E: 664222.847'
EL: 189.536'
SPIKE

72 WAYSIDE INN ROAD
N/F
WAYSIDE INN CORP
BK. 6916 PG. 361
MAP 3 LOT 2

131 WAYSIDE INN ROAD
N/F
WAYSIDE INN
BK. 6916 PG. 361
MAP 3 LOT 1

NOTES:

- STEEL DEEP POSTS TO BE USED IN LOCATIONS WHERE SLOPE BEHIND GUARD RAIL IS GREATER THAN 10:1.
- NOTIFY OWNER AND ENGINEER IMMEDIATELY IF PROPOSED GUARDRAIL LOCATION AND FLARE RATES RESULT IN CONFLICTS WITH EXISTING SURFACE FEATURES.



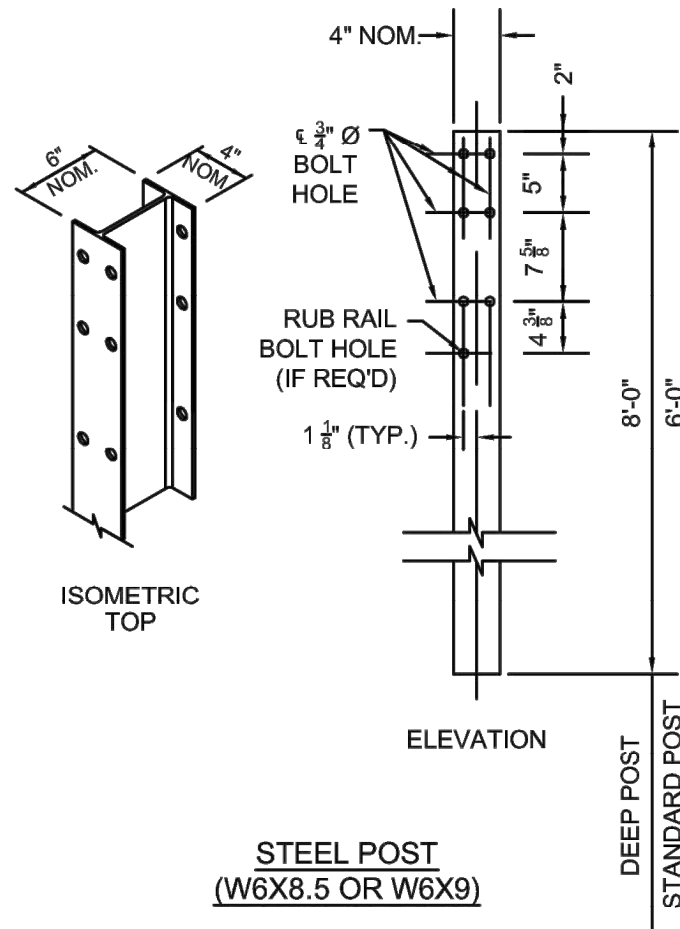
\\woodardcurran.net\shared\Projects\0227202.08-Sudbury MA - Old Wayside Bridge Repair\wp\Drawings\Civil\0227202.08-C-300.dwg, Apr 10, 2024 - 1:27pm VJMASTINS



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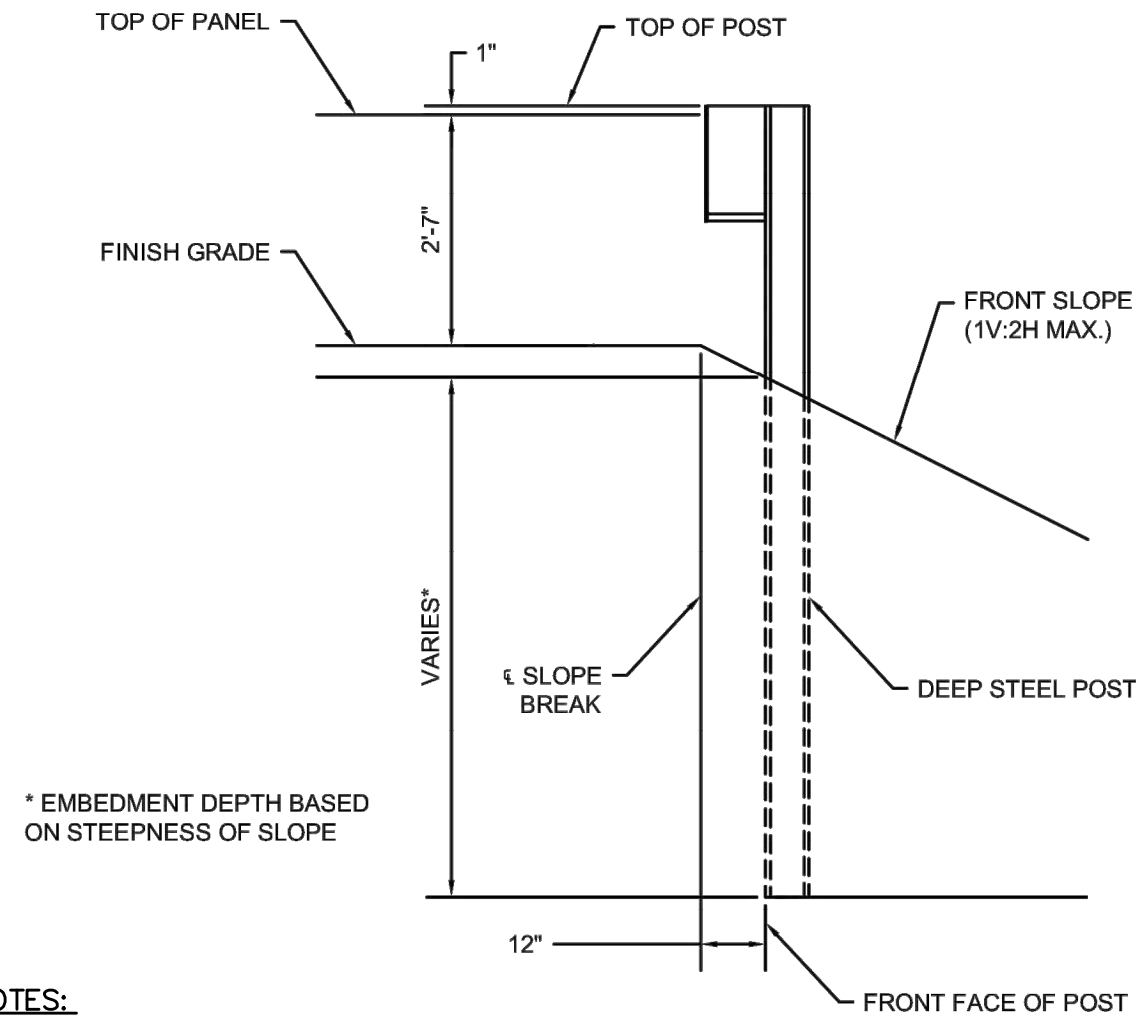


NOTES:

1. DETAIL PER MASSDOT CONSTRUCTION STANDARD DETAILS DRAWING NUMBER 400.1.4.
2. DEEP STEEL POSTS SHALL ONLY BE USED WHERE INDICATED ON THE PLANS.
3. GUARDRAIL POSTS SHALL BE POWDER COATED BROWN. OWNER TO APPROVE OF COLOR PRIOR TO ORDERING POSTS.

STEEL POST DETAIL

N.T.S.

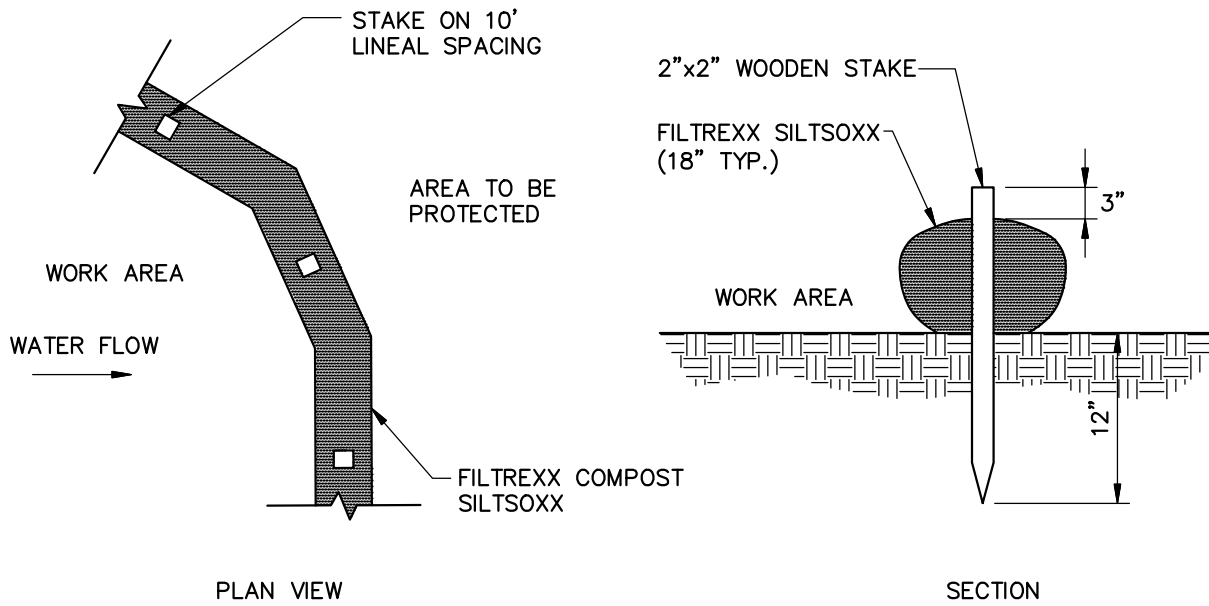


NOTES:

1. DETAIL PER MASSDOT CONSTRUCTION DETAILS DRAWING NUMBER 400.1.5.
2. DEEP STEEL POSTS SHALL ONLY BE USED WHERE INDICATED ON THE PLANS.

SLOPE BREAK CONDITION STEEL DEEP POST DETAIL

N.T.S.



SEDIMENT BARRIER - SILTSOXX

N.T.S.

EROSION AND SEDIMENT CONTROL NOTES

Temporary Erosion Control

Measure	Dates For Use	Timing, Activity, and Location
Sedimentation Barrier	ALL	Before soil disturbance, install downhill of areas to be disturbed and around material stockpiles.
Up-slope Diversion	ALL	Before soil disturbance, install uphill of areas to be disturbed and around material stockpiles.
Catch Basin Protection	ALL	Before soil or pavement disturbance, install ACF Environmental, Inc. High Flow Siltsock, Silt saver Inlet Filter, or equal, installed per manufacturer's requirements.
Dust Control	ALL	During dry weather, apply water and calcium chloride to control dust.
Temporary Seeding	April 15 to Oct. 15	Soil stockpiles that are not covered and disturbed areas that will not be disturbed again within 14 days. If grass growth provides less than 95% soil coverage by Nov. 1, apply mulch and anchor with erosion control blanket.
Mulch	April 15 to Sept. 15	On all areas of exposed soil prior to rain events apply 100-150 lbs (2.5 bales) per 1,000 sq. ft. by mechanical blower.
Winter Mulch	Sept. 16 to Oct. 31	On all areas of exposed soil prior to precipitation apply 150 to 170 lbs. mulch (4 bales) per 1,000 sq. ft. by mechanical blower. Erosion control blanket may be used as a substitute for winter mulch.
	Nov. 1 to April 14	On all areas of exposed soil, apply 150 to 170 lbs. mulch (4 bales) per 1,000 sq. ft. and anchor with netting at the end of each working day. Erosion control blanket may be used as a substitute for winter mulch.
Inspections	Until site is permanently stabilized	Inspect the erosion and sedimentation control measures daily, and after rainfall of half inch or greater in a 24-hour period, and maintain and repair as necessary.

Permanent Erosion Control:

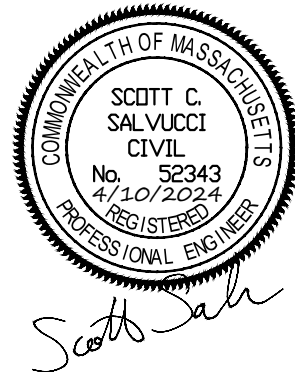
Measure	Dates For Use	Timing, Activity, and Location
Pavement - Base Course - Final Course	When no frost is in ground	Install only in areas shown on the plan, shortly after pavement base is brought to final grade. Install near completion of project.
Permanent Seeding	April 15 to Sept. 15	On final grade areas, within 7 days of grade preparation, prepare topsoil, followed by seed and mulch application.
Dormant Seeding	Sept. 16 to April 15	On final grade areas, with prepared topsoil. Apply seed at double the specified rate on bare soil, and follow with an application of winter mulch.
Ground Cover, Trees, Shrubs	April 15 to Nov. 1	Install with final landscaping.
Permanent Mulch	ALL	Install with final landscaping.

Inspections:

Regular inspections of all erosion and sedimentation controls shall be made at least weekly and prior to and following storm events. Minimum inspections shall be made as listed in the table below.

Inspected Item	Look For
Mulched Surfaces	Thin mulch or inadequate application. Wind movement.
Seeded Surfaces	Poor seed germination. Loss of mulch. Development of rivulets.
Sediment Barrier	Sediment build-up to one half the height of the barrier. Undermining of the barrier. Supporting stakes loose, toppled, or unmarked. Breaks in barrier.
Perimeter Diversion	Discharge is to stabilized area. Erosion or breaks in barrier. Supporting stakes loose, toppled or unmarked.
Catch Basin Protection	Sediment build-up and structure blockages. Slow flow/Ponding water. Breaks in fabric or voids in barrier.
Dewatering Filter	Breaks in fabric or supporting structure. Slow flow, indicating high sediment build-up.
Construction Entrance	Sedimentation of roadways. Off-site dust complaints.

PE SEAL:



ISSUE FOR BID

CLIENT INFO:

**TOWN OF SUDBURY
MASSACHUSETTS**

WAYSIDE BRIDGE REPAIRS

REV MM/DD/YY DESCRIPTION

JOB NO: 0227202.11
DATE: APRIL 2024
SCALE: AS NOTED
DESIGNED BY: KD
DRAWN BY: JBC
CHECKED BY: DS
FILENAME: 0227202.08-C-300.dwg

DRAWING TITLE:
**CIVIL
CIVIL DETAILS - 1**

DRAWING NO:

C-300



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ISSUE FOR BID

CLIENT INFO:

TOWN OF SUDBURY
MASSACHUSETTS
WAYSIDE BRIDGE REPAIRS

REV	MM/DD/YY	DESCRIPTION
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JOB NO:	0227202.11
DATE:	APRIL 2024
SCALE:	AS NOTED
DESIGNED BY:	JBC
DRAWN BY:	DS
CHECKED BY:	KD
FILENAME:	0227202.08-C-300.dwg

DRAWING TITLE:
**CIVIL
CIVIL DETAILS - 2**

DRAWING NO:

C-301

STATE	PROJECT	SHEET NUMBER

NOTE:

1. Use the Type A, blocked-out, system or the Type B, non-blocked-out, system as specified in the plans.
2. Use weathering steel for all structural steel and fastener hardware as specified.
3. Place a terminal section (See Standards 617-61 and 617-62) on both approach and trailing ends of barrier installations.

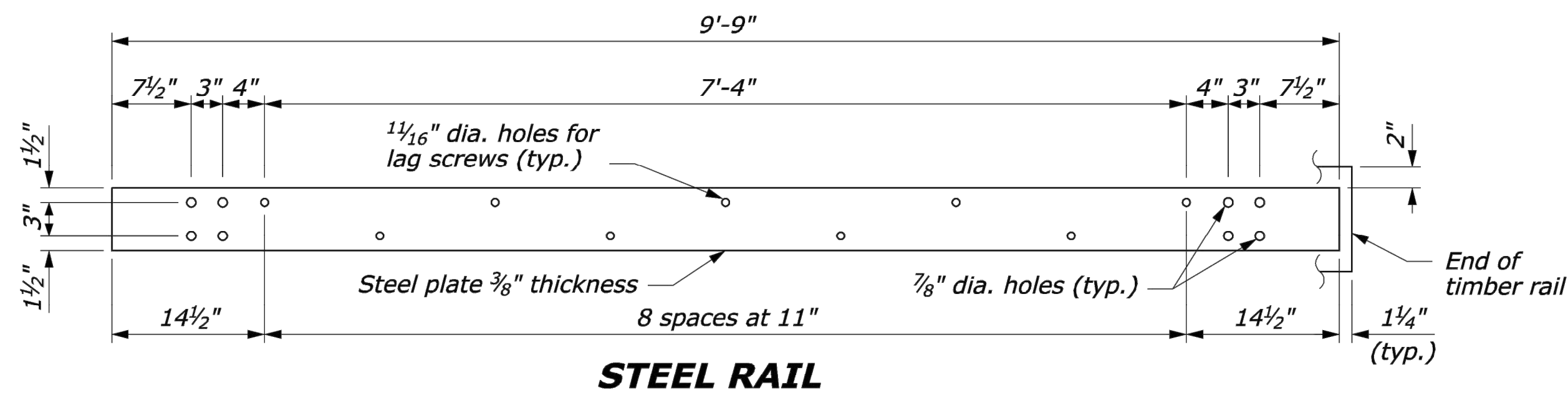
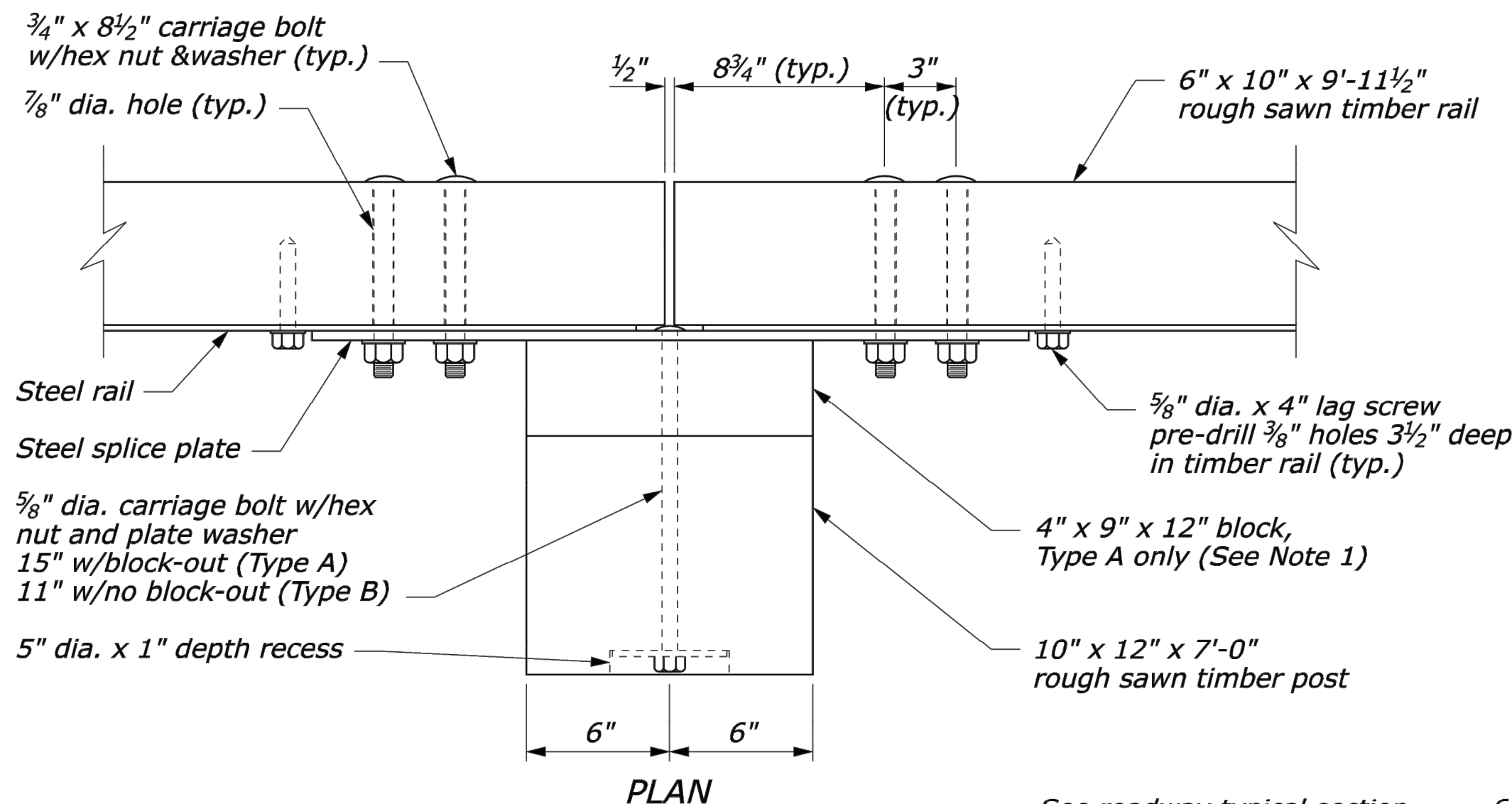
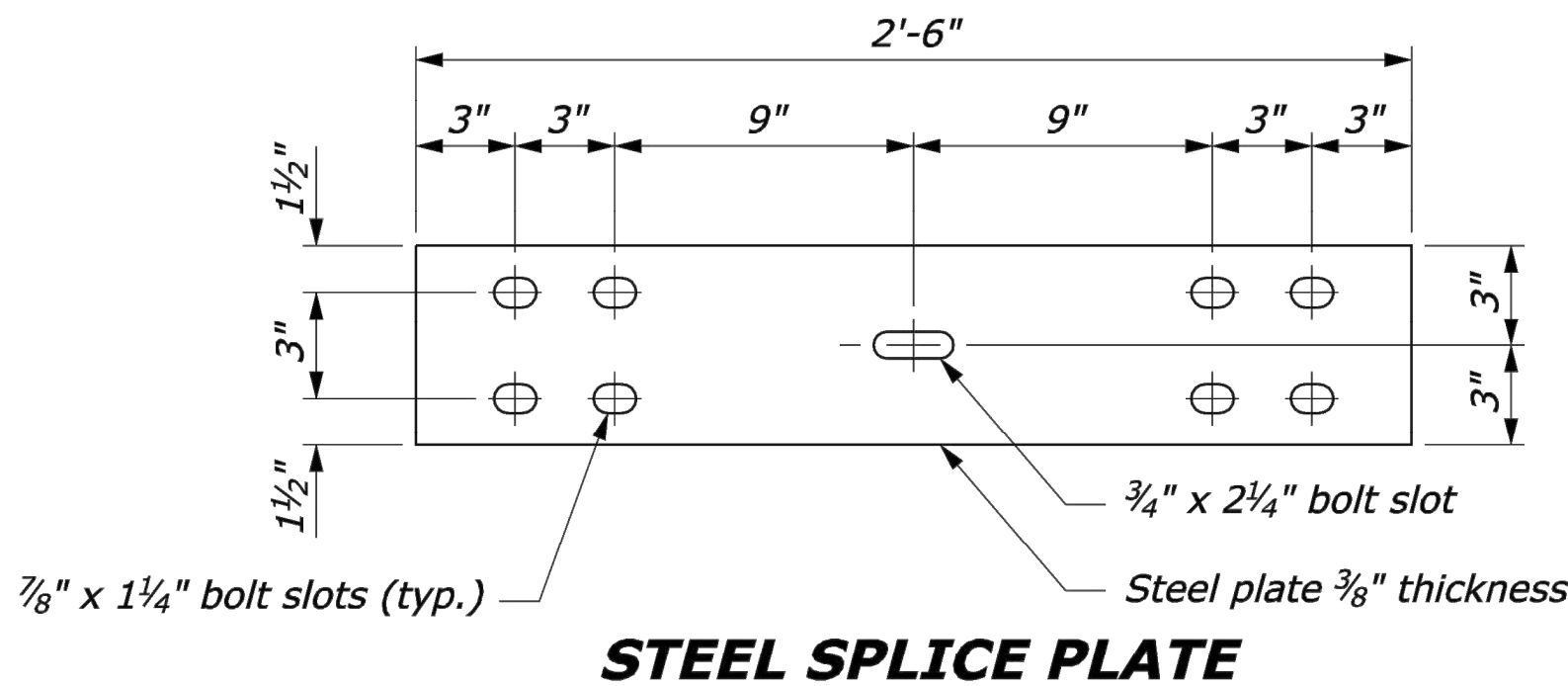


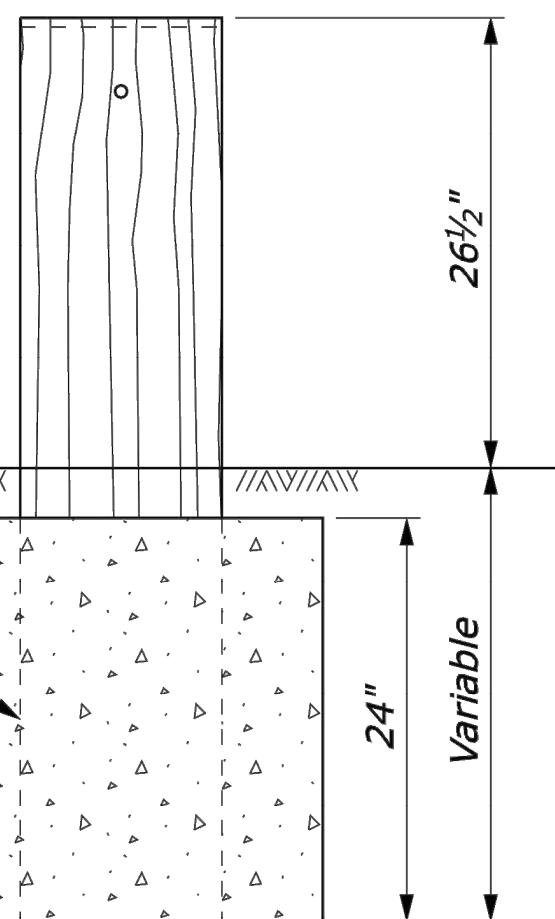
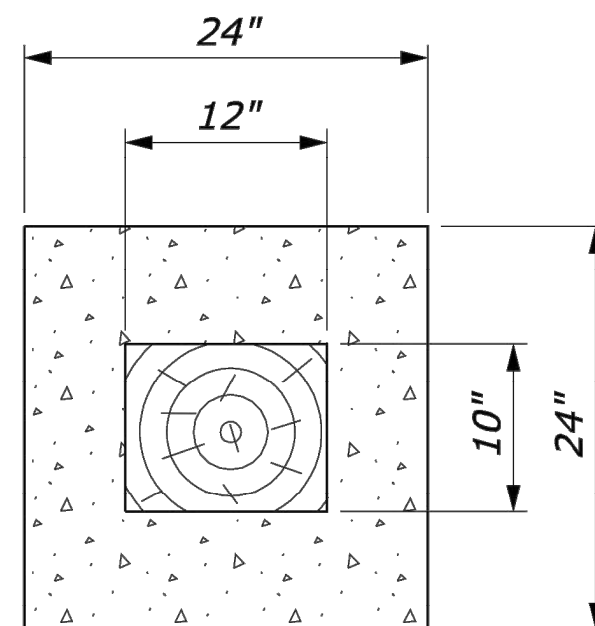
PLATE WASHER



PLAN

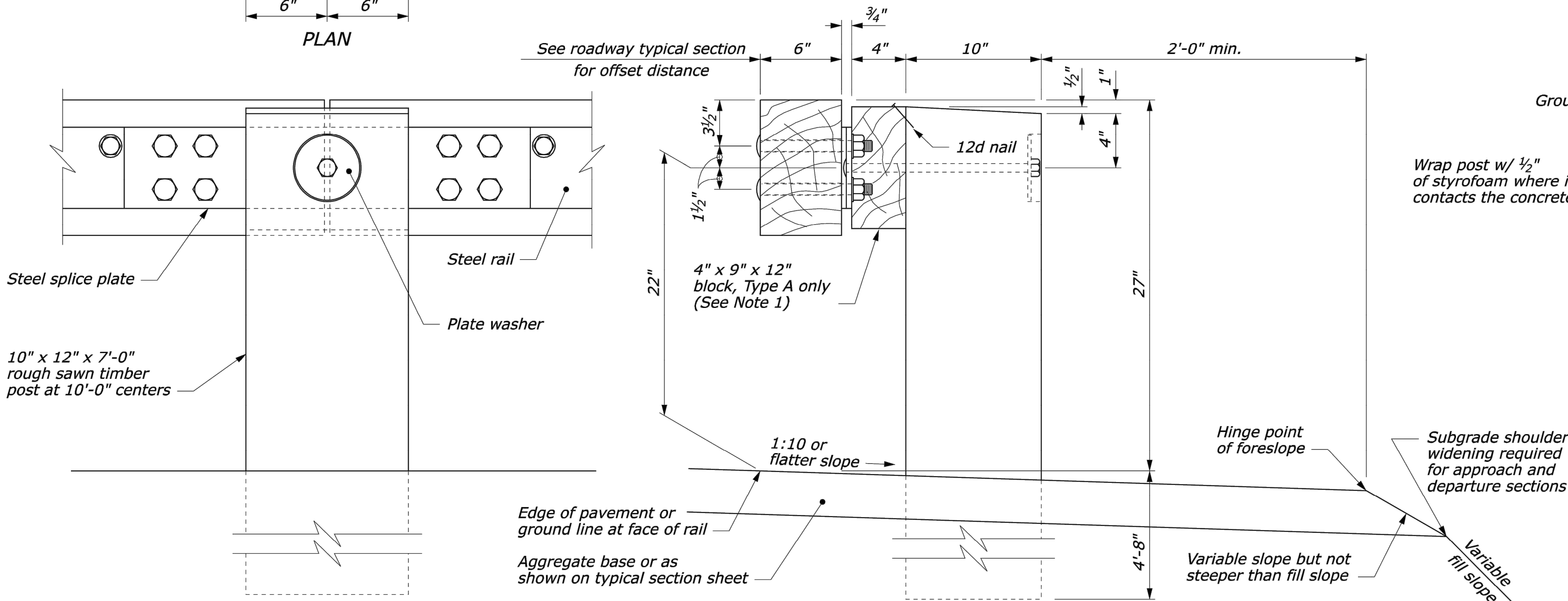


STEEL SPLICE PLATE



24" dia. round anchor is an acceptable alternative.
Reduced size acceptable in solid rock.

**CONCRETE ANCHOR FOR
SHORT GUARDRAIL POST**



**ELEVATION
POST CONNECTION**

TYPICAL GUARDRAIL CROSS SECTION

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION FEDERAL LANDS HIGHWAY	
U.S. CUSTOMARY STANDARD	
STEEL-BACKED TIMBER GUARDRAIL TYPE A & TYPE B	
STANDARD APPROVED FOR USE 3/1990 REVISED: 4/1994 6/2005	STANDARD 617-60

GENERAL NOTES

- GOVERNING CODES
 - MASS STATE BUILDING CODE 780 CMR NINTH EDITION
 - MASSDOT LRFD BRIDGE MANUAL 2013
 - ACI 318-14
- DESIGN LOADS AND CRITERIA
 - BASIC DESIGN PARAMETERS
PROJECT ADDRESS: SUDBURY, MA
PROJECT LOCATION: LAT 42.357°
LONG -71.470°
GENERAL ELEVATION 188-FT
 - DEAD LOADS
ACTUAL
 - LIVE LOADS
IMPACT LOAD 10,000 LBS
- DEMO OR DEMOLISH SHALL MEAN TO REMOVE AND LEGALLY DISPOSE OF ITEM(S) INDICATED.

MATERIAL NOTES SPECIFICATIONS

- CONCRETE: CURB
 - CONCRETE
PORTLAND CEMENT ASTM C150, TYPE I OR II
FLY ASH ASTM C618 C OR F, 20% MIN BY WEIGHT
WATER / CEMENTITIOUS RATIO 0.40 MAX
COMPRESSIVE STRENGTH $f'_c = 5000$ PSI
ENTRAINED AIR 6% \pm 1.5%
SLUMP 4 IN \pm 1 IN
 - USE ONE BRAND OF CEMENT THROUGHOUT PROJECT, UNLESS OTHERWISE ACCEPTABLE TO THE ENGINEER OF RECORD.
 - WATER SHALL BE CLEAN AND FREE FROM DELETERIOUS AMOUNTS OF OIL, ACIDS, ALKALIS, ORGANIC MATERIAL, AND OTHER FOREIGN MATTER AND SHALL CONFORM TO ASTM C94
 - CONCRETE MIX SHALL MEET MASS DOT STANDARDS FOR INTENDED SERVICE.
- EPOXIED REINFORCING:
DEFORMED BAR ASTM A615, GRADE 60
EPOXY COATING ASTM A775
- CONCRETE ANCHORS
 - POST INSTALLED - ADHESIVE
ANCHOR DEFORMED BAR ASTM A615, GR 60
ADHESIVE HILTI HIT-RE 500 V3
EXG CONC STRENGTH 3,000 PSI, CRACKED (ASSUMED)

ALTERATION OF EXISTING STRUCTURES

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY TEMPORARY MODIFICATIONS AND REPLACEMENT TO EXISTING BRIDGE COMPONENTS AS REQUIRED FOR THE INSTALLATION OF THE NEW PARAPET.
- CONTRACTOR SHALL PROVIDE WRITTEN PLANS DETAILING THE SEQUENCE, PROCEDURE, AND PROPOSED EQUIPMENT FOR REVIEW BY THE ENGINEER OF RECORD PRIOR TO BEGINNING THE WORK.

CONCRETE NOTES

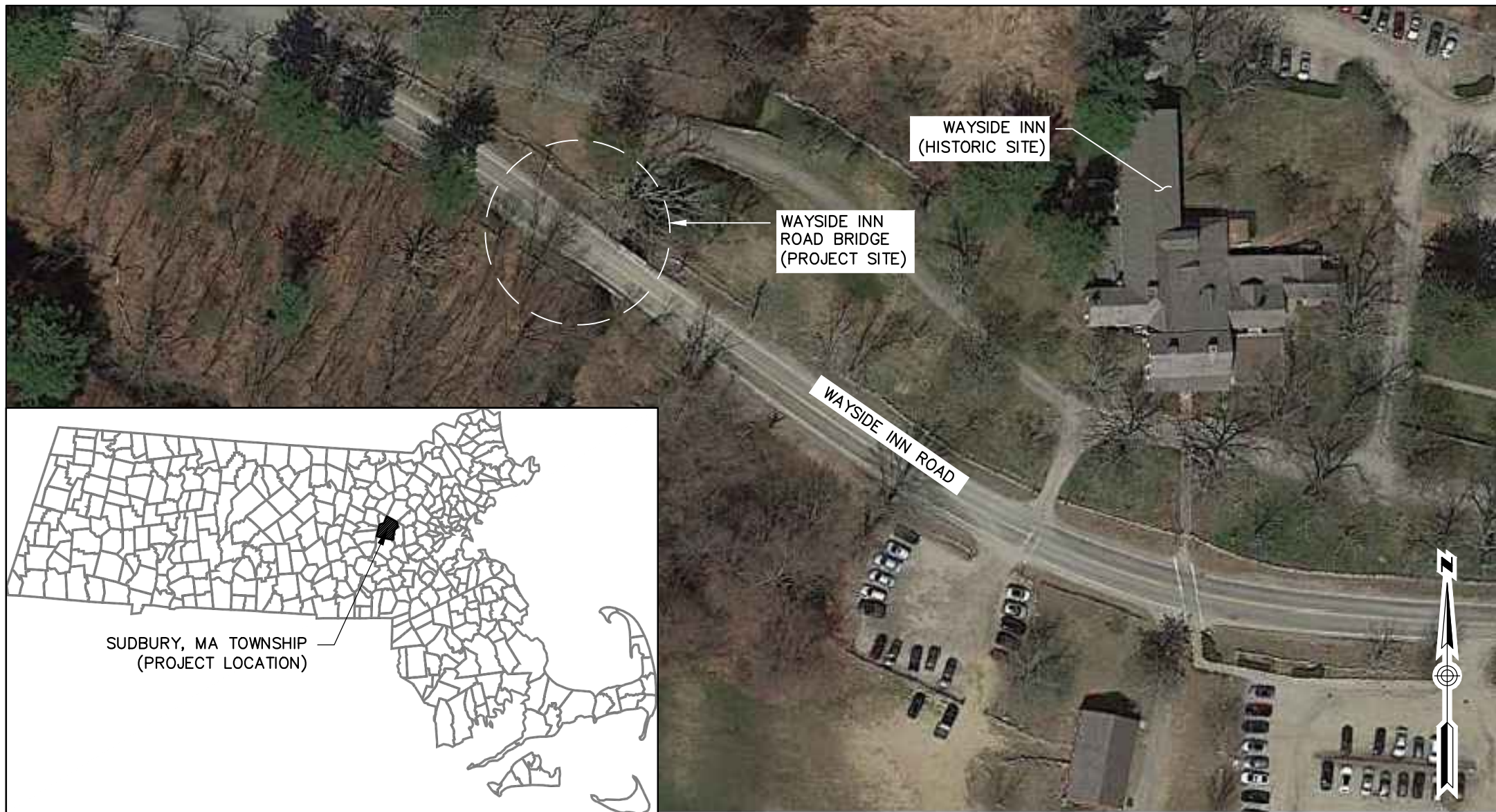
- CONCRETE REINFORCEMENT FABRICATION
 - REINFORCEMENT DETAILING SHALL BE DONE IN CONFORMANCE WITH ACI SP-06, CURRENT EDITION.
 - FABRICATOR SHALL TAG ALL REINFORCEMENT FOR PROPER PLACEMENT IF SHOP FABRICATED. REINFORCING SHALL BE BENT PER CRSI 10 MANUAL OF STANDARD PRACTICE.
- CONCRETE AND REINFORCEMENT PLACEMENT
 - PERFORM CONCRETE WORK IN ACCORDANCE WITH CURRENT ACI 301 "STANDARD SPECIFICATION FOR STRUCTURAL CONCRETE" UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED.
 - CONCRETE SHALL BE FORMED AND LOCATED AS PER ACI 117 "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS AND COMMENTARY."
 - FORMS SHALL BE COATED WITH A FORM RELEASE AGENT. FORM RELEASE AGENT SHALL NOT RAISE FORM GRAIN OR STAIN CONCRETE SURFACE.
 - MECHANICALLY VIBRATE ALL CONCRETE PLACEMENTS, BUT VIBRATION SHALL NOT BE UTILIZED TO CONVEY MATERIAL.
 - WELDING OF REINFORCING BARS IS NOT PERMITTED WITHOUT A PROCEDURE APPROVED BY THE ENGINEER OF RECORD.
 - SECURE ALL REINFORCING IN POSITION WITH CHAIRS BEFORE CONCRETE PLACEMENT. REINFORCING SHALL BE INSPECTED FOR PROPER PLACEMENT.
- CONCRETE FINISHING
 - CHAMFER ALL EXPOSED EDGES 3/4" (TYPICAL UNLESS NOTIFIED OTHERWISE). CHAMFER VIA GRINDING IS PROHIBITED.
- CONCRETE TESTING AND INSPECTION
 - ALL CONCRETE SHALL BE FIELD TESTED BY AN INDEPENDENT TESTING LABORATORY AS PER ASTM SPECIFICATIONS (PAID FOR BY CONTRACTOR). FOR EACH PLACEMENT, ONE SET OF 5 STANDARD COMPRESSION TEST CYLINDERS SHALL BE TAKEN AND TESTED IN ACCORDANCE WITH ASTM C39: 1 SPECIMEN TESTED AT 7 DAYS; 3 SPECIMENS TESTED AT 28 DAYS; AND 1 SPECIMEN RETAINED IN RESERVE FOR LATER TESTING IF REQUIRED.

EPOXY-COATED REINFORCEMENT NOTES

- REINFORCEMENT
 - ALL REINFORCING BARS SHALL BE DEFORMED AND SHALL CONFORM TO ASTM A 615
 - EPOXY-COATED REINFORCING BARS SHALL CONFORM TO ASTM A 775
 - WHEN REQUIRED, DAMAGES TO EPOXY COATING SHALL BE REPAIRED WITH PATCHING MATERIAL CONFORMING TO ASTM A775. REPAIR SHALL BE DONE IN ACCORDANCE WITH THE PATCHING MATERIAL MANUFACTURER'S RECOMMENDATIONS.
- FABRICATION
 - ALL REINFORCEMENT SHALL BE BENT COLD UNLESS OTHERWISE PERMITTED BY THE ENGINEER.
- PLACING (FIELD INSTALLATION)
 - EPOXY-COATED REINFORCING BARS SUPPORTED FROM FORMWORK SHALL REST ON COATED WIRE BAR SUPPORTS, OR ON BAR SUPPORTS MADE OF DIELECTRIC MATERIAL OR OTHER ACCEPTABLE MATERIALS. REINFORCING BARS USED AS SUPPORT BARS SHALL BE EPOXY-COATED.
 - EPOXY-COATED REINFORCING BARS SHALL BE FASTENED WITH NYLON-, EPOXY-, OR PLASTIC-COATED TIE WIRE OR OTHER ACCEPTABLE MATERIALS.
 - SPLICES OF REINFORCING BARS SHALL BE MADE ONLY AS AUTHORIZED BY THE ENGINEER
 - REINFORCING BARS PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT EXCEPT WHERE SHOWN ON THE DRAWINGS. WHERE REINFORCING BARS ARE FIELD BENT, COATING DAMAGE SHALL BE REPAIRED PER THESE NOTES.
 - UNLESS PERMITTED BY THE ENGINEER, REINFORCING BARS SHALL BE NOT BE FIELD CUT. WHEN EPOXY-COATED REINFORCING BARS ARE CUT IN THE FIELD, THE ENDS OF THE BARS SHALL BE COATED WITH THE SAME MATERIAL USED FOR REPAIR OF COATING DAMAGE PER THESE NOTES.
 - EQUIPMENT FOR HANDLING EPOXY-COATED BARS SHALL HAVE PROTECTED CONTACT AREAS. BUNDLES OF COATED BARS SHALL BE LIFTED AT MULTIPLE PICK-UP POINTS TO MINIMIZE BAR-TO-BAR ABRASION FROM SAGS IN THE BUNDLES. COATED BARS OR BUNDLES OF COATED BARS SHALL NOT BE DROPPED OR DRAGGED. COATED BARS SHALL BE STORED ON PROTECTIVE CRIBBING. FADING OF THE COLOR OF THE COATING SHALL NOT BE CAUSE FOR REJECTION OF EPOXY-COATED REINFORCING BARS. COATING DAMAGE DUE TO HANDLING, SHIPMENT, AND PLACING NEED NOT BE REPAIRED IN CASES WHERE THE DAMAGED AREA IS 0.1 SQUARE INCH OR SMALLER. DAMAGED AREAS LARGER THAN 0.1 SQUARE INCH SHALL BE REPAIRED PER THESE NOTES. THE MAXIMUM AMOUNT OF DAMAGE INCLUDING REPAIRED AND UNREPAIRED AREAS SHALL NOT EXCEED 2 PERCENT OF THE SURFACE AREA OF EACH BAR.

ABBREVIATIONS

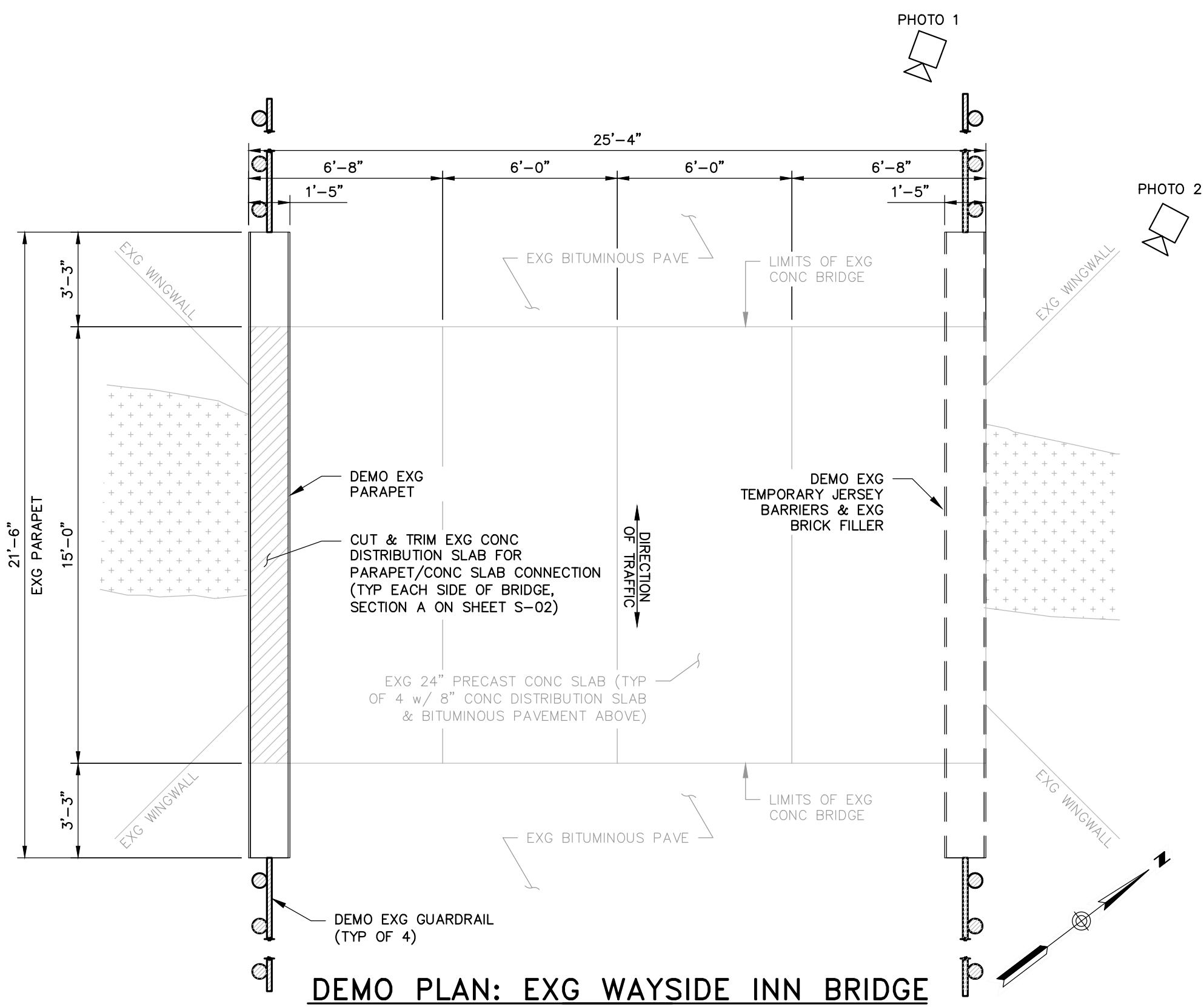
&	AND
@	AT
%	PERCENT(AGE)
\pm	PLUS OR MINUS
ACI	AMERICAN CONCRETE INSTITUTE
ASTM	AMERICAN SOCIETY OF TESTING MATERIALS
BOT	BOTTOM
CLR	CLEAR
CONC	CONCRETE
CONT	CONTINUOUS
DEMO	DEMOLISH
EF	EACH FACE
EXG	EXISTING
EMB	EMBEDMENT
FT	FOOT / FEET
FV	FIELD VERIFY
IN	INCH(E)S
LB	POUND
MAX	MAXIMUM
MIN	MINIMUM
OC	ON CENTER
OCF	ON CENTER EACH FACE
REF	REFERENCE
TYP	TYPICAL



SITE PLAN: WAYSIDE INN ROAD BRIDGE SITE



PHOTO 1: EXISTING CONDITIONS - WAYSIDE BRIDGE LOOKING SOUTH



DEMO PLAN: EXG WAYSIDE INN BRIDGE

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

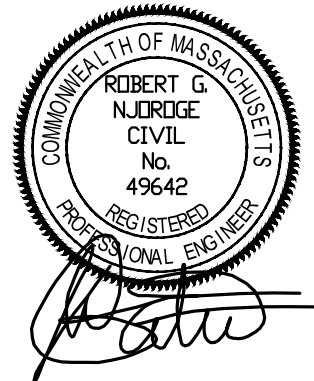


PHOTO 2: EXISTING CONDITIONS - MISSING PARAPET



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CLIENT INFO:

TOWN OF SUDBURY
MASSACHUSETTS

WAYSIDE BRIDGE REPAIRS

REV MM/DD/YY DESCRIPTION

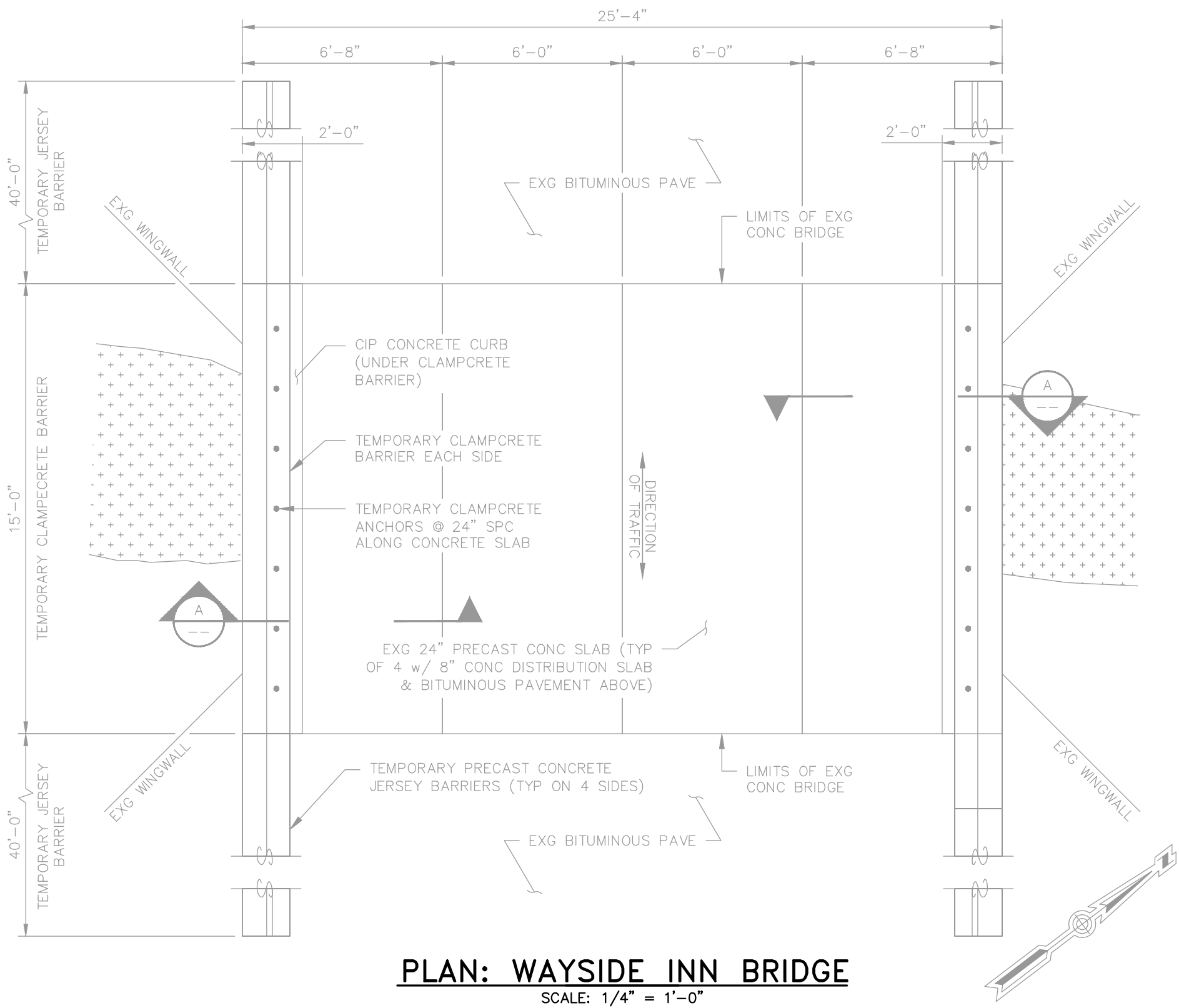
JOB NO: 0227202.11
DATE: APRIL 2024
SCALE: AS NOTED
DESIGNED BY: CSB
DRAWN BY: CSB
CHECKED BY: TJS/JPS
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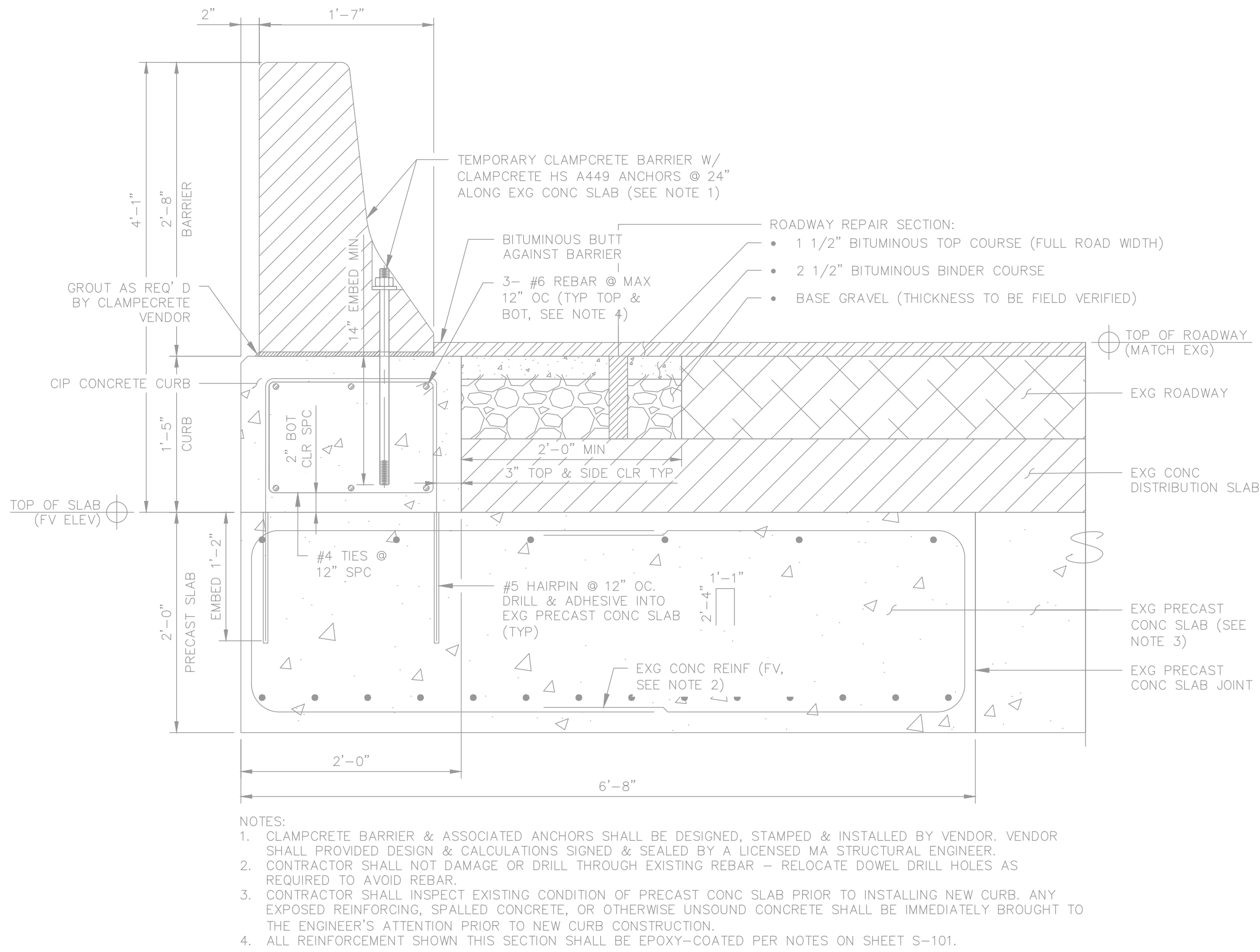
STRUCTURAL
WAYSIDE INN BRIDGE REPAIRS
SITE PLAN, NOTES,
EXISTING CONDITIONS,
AND DEMOLITION PLAN

DRAWING NO:

S-101



PLAN: WAYSIDE INN BRIDGE
SCALE: 1/4" = 1'-0"



SECTION: TEMPORARY BRIDGE PARAPET
SCALE: 1" = 1'-0"

NOTE:
1. NOT FOR CONSTRUCTION EXISTING CONDITIONS SHEET IS FOR INFORMATION ONLY.

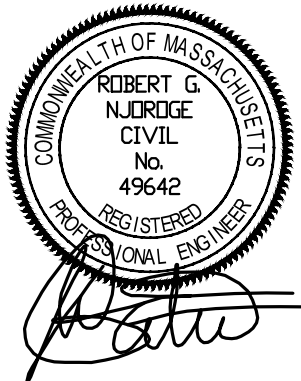
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WAYSIDE BRIDGE REPAIRS

REV MM/DD/YY DESCRIPTION

JOB NO: 0227202.11
DATE: APRIL 2024
SCALE: AS NOTED
DESIGNED BY: CSB
DRAWN BY: CSB
CHECKED BY: TJS/JPS
FILENAME: 0227202_08_S-102.dwg

DRAWING TITLE:
**STRUCTURAL
WAYSIDE INN BRIDGE REPAIRS
PROPOSED PLAN AND SECTION**

DRAWING NO:

S-102

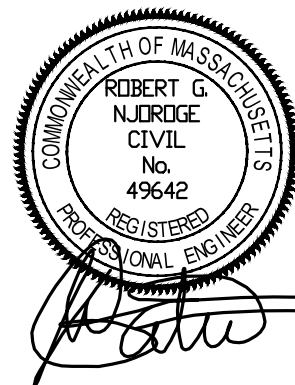


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MASSACHUSETTS

WAYSIDE BRIDGE REPAIRS

REV	MM/DD/YY	DESCRIPTION
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JOB NO: 0227202.11

DATE: APRIL 2024

SCALE: AS NOTED

DESIGNED BY: CSB

DRAWN BY: CSB

CHECKED BY: TJS/JPS

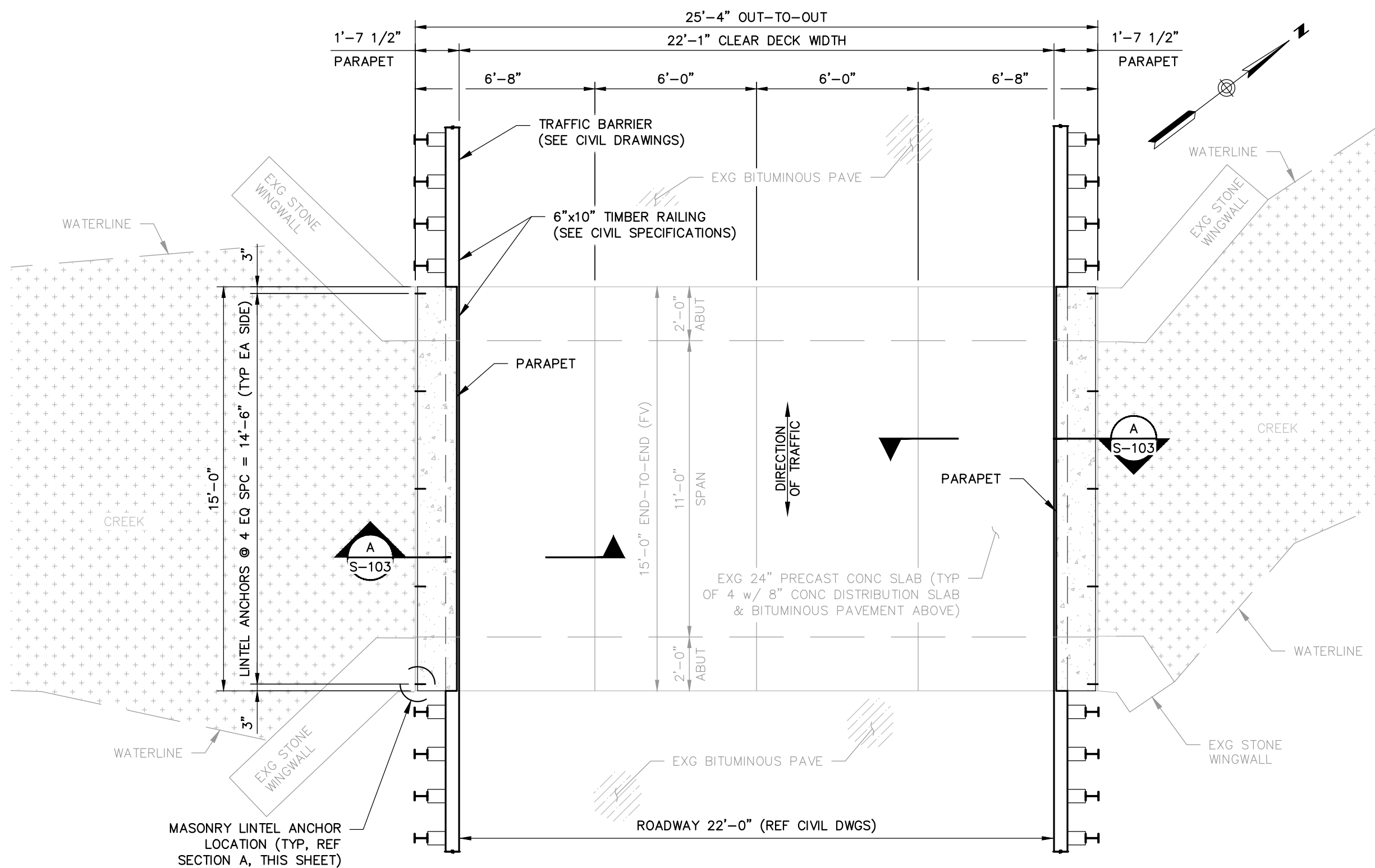
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DRAWING TITLE:

**STRUCTURAL
WAYSIDE INN BRIDGE REPAIR
PLAN & SECTION**

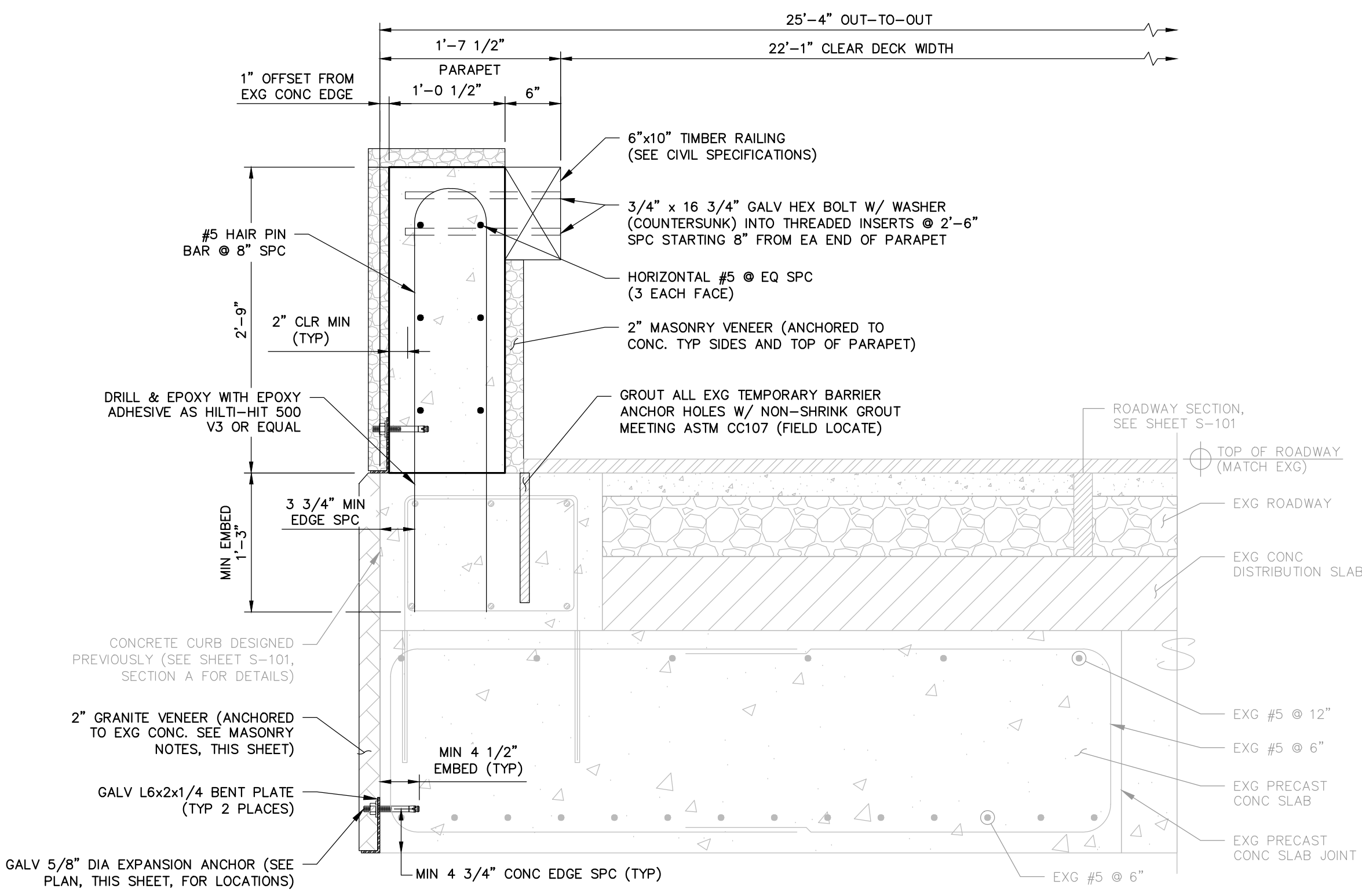
DRAWING NO:

S-103



WAYSIDE INN BRIDGE PLAN

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



PERMANENT BRIDGE PARAPET

SCALE: 1" = 1'-0"

NOTES:

- CONTRACTOR SHALL NOT DAMAGE OR DRILL THROUGH EXISTING REBAR. RELOCATE DOWELING AS REQUIRED TO AVOID REBAR.
- EXISTING CONCRETE ASSUMED IN GOOD CONDITION. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VERIFY CONDITION OF EXISTING CONCRETE WHERE VENEER WILL BE LOCATED. ANY EXPOSED REINFORCING, SPALLED CONCRETE, OR OTHERWISE UNSOUND CONCRETE SHALL BE IMMEDIATELY BROUGHT TO THE ENGINEER'S ATTENTION BEFORE STARTING CONSTRUCTION.

GENERAL NOTES

A. GENERAL STRUCTURAL NOTES:

- THESE NOTES SHALL APPLY TO ALL WORK THIS SHEET, EXCEPT AS NOTED OTHERWISE. SEE SHEETS S-01 & S-02 FOR WORK PREVIOUSLY PERFORMED.
- GOVERNING CODES**
 - MASS STATE BUILDING CODE 780 CMR NINTH EDITION
 - MASSDOT LRFD BRIDGE MANUAL 2013
 - AISC STEEL CONSTRUCTION MANUAL, 14TH ED.
 - ACI 318-14 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
- DESIGN LOADS AND CRITERIA**
 - BASIC DESIGN PARAMETERS**

PROJECT ADDRESS:	SUDBURY, MA
PROJECT LOCATION:	42.357° LONG
GENERAL ELEVATION	-71.470' 188 FT
 - DEAD LOADS**

ACTUAL STONE FACADE	30 PSF (EQUIVALENT TO 2" GRANITE @ 180 PCF)
---------------------	---
 - LIVE LOADS**

IMPACT LOAD	10,000 LBS
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B. REINFORCED CONCRETE:

- PROVIDE 4,500 PSI COMPRESSIVE STRENGTH AT 28 DAYS; 3/4" NOMINAL MAXIMUM AGGREGATE SIZE; AIR CONTENT 6% ± 1.5%; W/C RATIO 0.45 MAXIMUM; SLUMP 5" MAXIMUM W/ NO REDUCER, 6" MAXIMUM W/ MID-RANGE WATER REDUCER, OR 8" MAXIMUM W/ HIGH-RANGE WATER REDUCER AFTER ALL WATER HAS BEEN ADDED. SUBMIT TEST RESULTS TO THE ENGINEER.
- PRIOR TO ORDERING A CONCRETE MIX, SUBMIT A CONCRETE MIX DESIGN TO BE REVIEWED AND APPROVED BY THE ENGINEER. MIX DESIGN SHALL INCLUDE TARGET COMPRESSIVE STRENGTH, TARGET SLUMP, TARGET AIR CONTENT, SIEVE ANALYSIS, WATER REDUCER PRODUCTS (MEETING ASTM C494), AIR ADMIXTURE PRODUCTS (MEETING ASTM C260), AND A CEMENT MILL REPORT NOT OLDER THAN 90 DAYS. CEMENT SHALL BE PER ASTM C150, TYPE II AND SHALL CONTAIN LESS THAN 0.60% EQUIVALENT ALKALIS. IF THE CEMENT CONTAINS 0.60% OR GREATER EQUIVALENT ALKALIS, PROVIDE AGGREGATE ALKALI REACTIVITY TESTING PER ASTM C1260, C1293, OR C1567.
- ALL DESIGN IN ACCORDANCE WITH ACI 318-14 CONCRETE BUILDING CODE. ALL CONCRETE SHALL BE PROVIDED, PLACED, AND MOIST CURED (MIN 7 DAYS) AS PER ALL APPLICABLE SECTIONS OF ACI, AS APPROVED BY THE ENGINEER.
- ALL CONCRETE SHALL BE FIELD TESTED BY AN INDEPENDENT TESTING LABORATORY AS PER ASTM SPECIFICATIONS (PAID FOR BY THE CONTRACTOR). FOR EACH PLACEMENT, ONE SET OF FOUR 4" DIAMETER X 8" TALL STANDARD COMPRESSION TEST CYLINDERS SHALL BE TAKEN AND TESTED IN ACCORDANCE WITH ASTM C39: 1 SPECIMEN TESTED AT 7 DAYS; 2 SPECIMENS TESTED AT 28 DAYS; AND 1 SPECIMEN RETAINED IN RESERVE FOR LATER TESTING IF REQUIRED.
- PRIOR TO INSTALLING STONE VENEER, ALL EXPOSED CONCRETE SURFACES SHALL RECEIVE A GROUT-CLEANED RUBBED FINISH AND SHALL HAVE A SMOOTH AND EVEN SURFACE, FREE OF BUG HOLES, WHEN COMPLETED. FILL MORTAR SHALL CONSIST OF ONE PART CEMENT TO 1 1/2 PARTS SAND MEETING ASTM C144 OR C404. WORK IN DIRECT HOT SUNLIGHT SHALL BE AVOIDED.

6. CONCRETE ANCHORS

THE FOLLOWING ANCHORS SHALL BE USED WHERE CALLED FOR IN THESE DRAWINGS.

EPOXY ADHESIVE:
ANCHOR SYSTEM HILTI HIT-HY 500-A W/ REBAR DOWELING
MECHANICAL ANCHORS:
ANCHOR HILTI SS304 KWIK BOLT TZ2-CS W/WASHER

D. CONCRETE REINFORCEMENT (EPOXY-COATED)

- REINFORCEMENT: ASTM A615 GRADE 60 & EPOXY-COATED PER ASTM A775 - ALL SPLICES CLASS B (UNO). REINFORCEMENT SHALL BE DETAILED, FABRICATED, AND PLACED AS PER ACI 315 DETAILING MANUAL.
- ALL REINFORCEMENT SHALL BE BENT COLD UNLESS OTHERWISE PERMITTED BY THE ENGINEER.
- PLACING (FIELD INSTALLATION)**
 - EPOXY-COATED REINFORCING BARS SUPPORTED FROM FORMWORK SHALL REST ON COATED WIRE BAR SUPPORTS, OR ON BAR SUPPORTS MADE OF DIELECTRIC MATERIAL OR OTHER ACCEPTABLE MATERIALS. REINFORCING BARS USED AS SUPPORT BARS SHALL BE EPOXY-COATED.
 - EPOXY-COATED REINFORCING BARS SHALL BE FASTENED WITH NYLON-, EPOXY-, OR PLASTIC-COATED TIE WIRE OR OTHER ACCEPTABLE MATERIALS.
 - SPLICES OF REINFORCING BARS SHALL BE MADE ONLY AS AUTHORIZED BY THE ENGINEER
 - REINFORCING BARS PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT EXCEPT WHERE SHOWN ON THE DRAWINGS. WHERE REINFORCING BARS ARE FIELD BENT, COATING DAMAGE SHALL BE REPAIRED PER THESE NOTES.
 - UNLESS PERMITTED BY THE ENGINEER, REINFORCING BARS SHALL BE NOT BE FIELD CUT. WHEN EPOXY-COATED REINFORCING BARS ARE CUT IN THE FIELD, THE ENDS OF THE BARS SHALL BE COATED WITH THE SAME MATERIAL USED FOR REPAIR OF COATING DAMAGE PER THESE NOTES.
 - EQUIPMENT FOR HANDLING EPOXY-COATED BARS SHALL HAVE PROTECTED CONTACT AREAS. BUNDLES OF COATED BARS SHALL BE LIFTED AT MULTIPLE PICK-UP POINTS TO MINIMIZE BAR-TO-BAR ABRASION FROM SAGS IN THE BUNDLES. COATED BARS OR BUNDLES OF COATED BARS SHALL NOT BE DROPPED OR DRAGGED. COATED BARS SHALL BE STORED ON PROTECTIVE CRIBBING. FADING OF THE COLOR OF THE COATING SHALL NOT BE CAUSE FOR REJECTION OF EPOXY-COATED REINFORCING BARS.
 - COATING DAMAGE DUE TO HANDLING, SHIPMENT, AND PLACING NEED NOT BE REPAIRED IN CASES WHERE THE DAMAGED AREA IS 0.1 SQUARE INCH OR SMALLER. DAMAGED AREAS LARGER THAN 0.1 SQUARE INCH SHALL BE REPAIRED PER THESE NOTES. THE MAXIMUM AMOUNT OF DAMAGE INCLUDING REPAIRED AND UNREPAIRED AREAS SHALL NOT EXCEED 2 PERCENT OF THE SURFACE AREA OF EACH B
 - WHEN REQUIRED, DAMAGES EPOXY COATING SHALL BE REPAIRED WITH PATCHING MATERIAL CONFORMING TO ASTM A775. REPAIR SHALL BE DONE IN ACCORDANCE WITH THE PATCHING MATERIAL MANUFACTURER'S RECOMMENDATIONS.
 - COATING DAMAGE DUE TO HANDLING, SHIPMENT, AND PLACING NEED NOT BE REPAIRED IN CASES WHERE THE DAMAGED AREA IS 0.1 SQUARE INCH OR SMALLER. DAMAGED AREAS LARGER THAN 0.1 SQUARE INCH SHALL BE REPAIRED PER THESE NOTES. THE MAXIMUM AMOUNT OF DAMAGE INCLUDING REPAIRED AND UNREPAIRED AREAS SHALL NOT EXCEED 2 PERCENT OF THE SURFACE AREA OF EACH BAR.

E. MASONRY:

- VENEER: BY STONEYARD, INC OR APPROVED EQUAL. COLOR AND STYLE OF MASONRY & GRANITE VENEER SHALL BE SELECTED BY THE CLIENT. ANCHORAGE OF VENEER SHALL BE ANCHORED PER MANUFACTURERS RECOMMENDATIONS.
- ALL STONE FINISHES SHALL HAVE AN AGED FINISH TO BE REVIEWED AND APPROVED BY THE HISTORIC DISTRICTS COMMISSION AT A FUTURE MEETING.
- MORTAR FOR VENEER SHALL CONFORM TO ASTM C270, TYPE N, AND SHALL CONSIST OF THE FOLLOWING PROPORTIONS BY VOLUME: 1 PART TYPE N MORTAR CEMENT 2-1/4 TO 3 PARTS AGGREGATE; OR 1 PART PORTLAND CEMENT, 1/2 TO 1-1/4 PARTS HYDRATED LIME, 2-1/4 TO 3 TIMES THE SUM OF THE CEMENT AND LIME VOLUMES, PARTS AGGREGATE
- MORTAR PIGMENT: MORTAR SHALL BE CHEMICALLY PURE INORGANIC OXIDES IN COMPOUNDS SUITABLY PREPARED FOR USE IN MASONRY MORTAR. COLORS SHALL BE SELECTED BY THE CLIENT.

F. STRUCTURAL STEEL:

- STEEL SHALL COMPLY WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION AISC 360-10 SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, AISC 303-10 CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES AND THE 14TH EDITION OF STEEL CONSTRUCTION MANUAL. ALL STEEL MEMBERS, BOLTS, AND CONNECTIONS SHALL BE DESIGNED TO LOAD AND RESISTANCE FACTOR DESIGN (LRFD).
- STEEL SHALL CONFORM TO ASTM A36 FOR ROLLED SHAPES & PLATES.
- POST-INSTALLED ANCHORS: EXPANSIONS BOLTS ARE PERMITTED WHERE SPECIFICALLY INDICATED ON DRAWINGS AND IN COMPLIANCE WITH PROJECT SPECIFICATION.
- FIELD CUTTING OR DRILLING IN STRUCTURAL MEMBERS IS PROHIBITED, UNLESS PREVIOUSLY APPROVED BY THE STRUCTURAL STRUCTURAL ENGINEER-OF-RECORD.
- STRUCTURAL STEEL GALVANIZING**
 - ALL STRUCTURAL STEEL, INCLUDING BOLTS AND CONNECTION ITEMS, SHALL BE GALVANIZED.
 - ALL ITEMS SPECIFIED AS GALVANIZED SHALL BE COATED BY THE HOT-DIP PROCESS IN ACCORDANCE WITH ASTM A123 OR ASTM A153, IN MOLTEN ZINC, PRODUCING A CONTINUOUS COATING OF UNIFORM THICKNESS OF WEIGHT REQUIRED BY THE REFERENCED SPECIFICATIONS.
 - GALVANIZING PROCESS SHALL INCLUDE NOT LESS THAN FOUR IMMERSIONS IN COPPER SULFATE IN CONFORMANCE WITH ASTM A239. MINIMUM ACCEPTABLE WEIGHT OF COATING SHALL BE 1.25 OUNCES PER SQUARE FOOT OF SURFACE AS PER ASTM A90
 - GALVANIZED ITEMS SHALL BE TAGGED TO INCLUDE THE NAME OF GALVANIZER, THE WEIGHT OF THE COATING, AND APPLICABLE ASTM COMPLIANCE.
 - AT LOCATIONS WHERE GALVANIZED STEEL IS FIELD CUT AND AT OTHER LOCATIONS WHERE GALVANIZED COATING IS REMOVED, THE STEEL SURFACE SHALL BE TOUCHED UP WITH A ZINC RICH PAINT MEETING ASTM A780 AND CONTAINING A MINIMUM OF 65% ZINC. THE MINIMUM ACCEPTABLE WEIGHT OF COATING SHALL BE 1.25 OUNCES PER SQUARE FOOT OF SURFACE AS PER ASTM A90.
 - IF GALVANIZED STEEL IS TO BE PAINTED, THE GALVANIZED STEEL SHALL NOT BE QUENCHED. IT SHALL BE PHOSPHATIZED, AND PREPARED FOR PAINTING PER ASTM D6386. IT SHALL BE PRIME PAINTED, COMPATIBLE WITH THE FINISH PAINTS SPECIFIED.

ABBREVIATIONS

&	AND	MAX	MAXIMUM
@	AT	MECH	MECHANICAL
%	PERCENT(AGE)	MIN	MINIMUM
±	PLUS OR MINUS		
ACI	AMERICAN CONCRETE INSTITUTE	OC	ON CENTER
ASTM	AMERICAN SOCIETY OF TESTING MATERIALS	OCEW	OUTSIDE DIAMETER
BOT	BOTTOM	PL	PLATE
CIP	CAST-IN-PLACE	PLF	POUND(S) PER LINEAR FOOT
CLR	CLEAR	PSF	POUND(S) PER SQUARE FOOT
CONC	CONCRETE	PSI	POUND(S) PER SQUARE INCH
DIA	DIAMETER	REF	REFERENCE
DWGS	DRAWINGS	SEOR	STRUCTURAL ENGINEER OF RECORD
EL	ELEVATION	SS	STAINLESS STEEL
EMBED	EMBEDMENT	T&B	TOP AND BOTTOM
EXG	EXISTING	TYP	TYPICAL
FT	FOOT / FEET	UNO	UNLESS NOTIFIED OTHERWISE
FV	FIELD VERIFY		
FL	FIELD LOCATE	W/	WITH
IN	INCH(ES)		

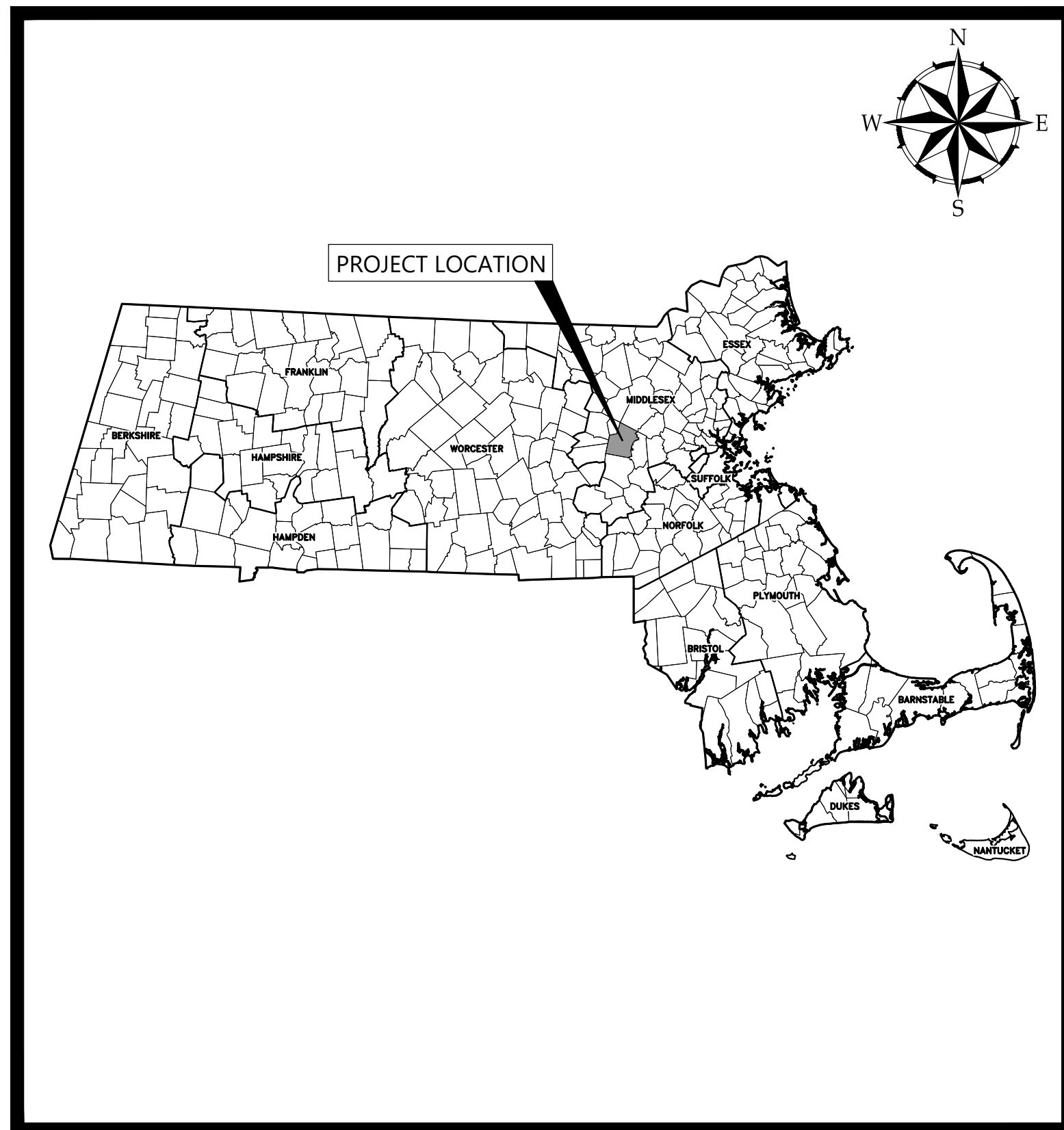
TOWN OF SUDBURY, MA

PUBLIC WORKS DEPARTMENT

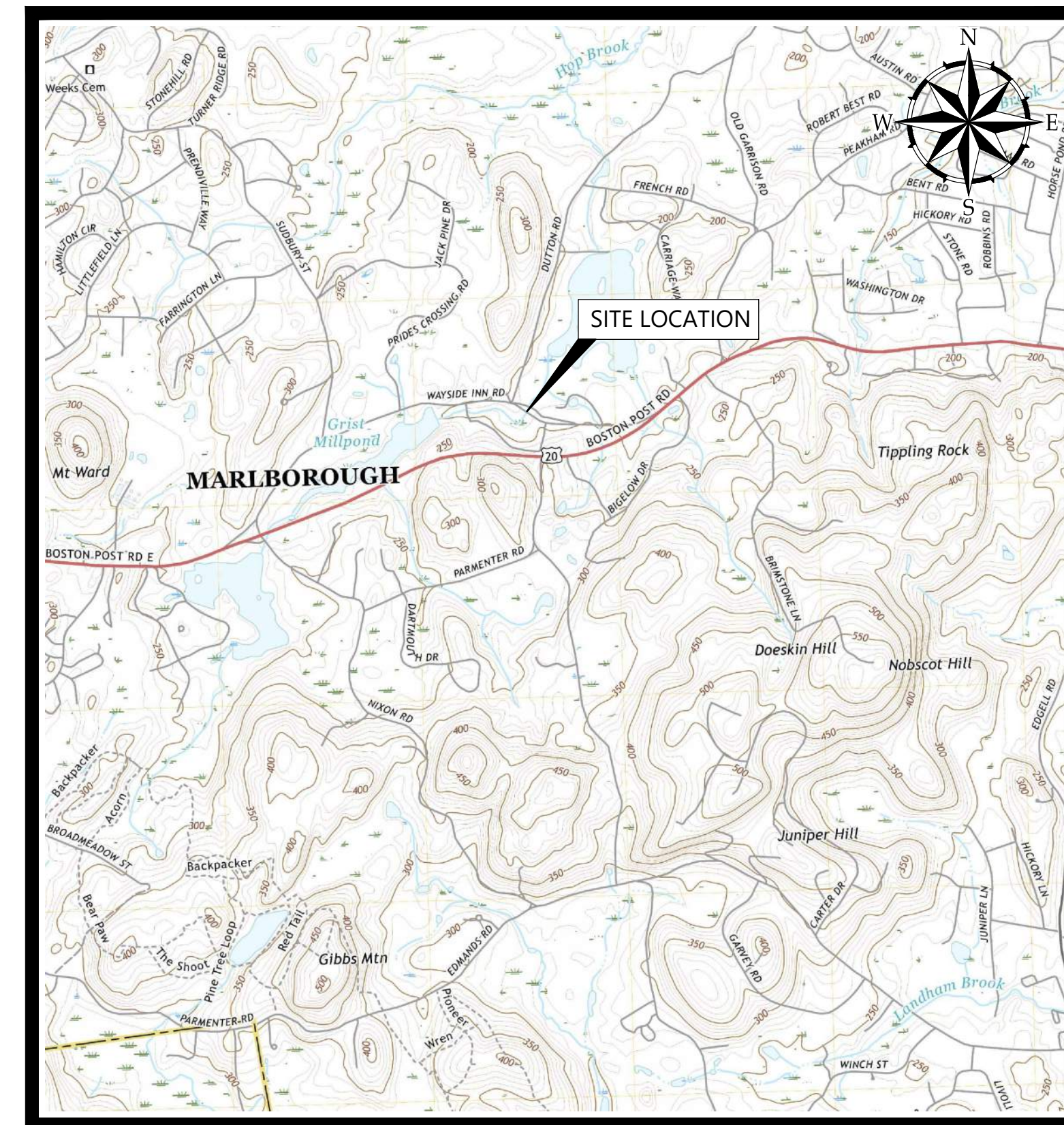
WAYSIDE BRIDGE REPAIRS

ISSUE FOR BID

APRIL 2024



PROJECT LOCATION MAP



SITE LOCATION MAP

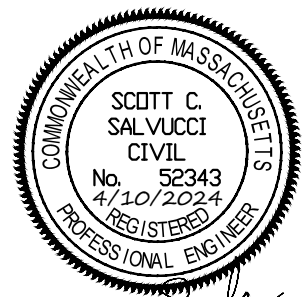
SOURCE: USGS TOPO QUADRANGLE



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Scott Salucci

ISSUE FOR BID

CLIENT INFO:

TOWN OF SUDBURY
MASSACHUSETTS

WAYSIDE BRIDGE REPAIRS

REV	MM/DD/YY	DESCRIPTION
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JOB NO:	0227202.11
DATE:	APRIL 2024
SCALE:	NONE
DESIGNED BY:	KD
DRAWN BY:	JBC
CHECKED BY:	DS
FILENAME:	0227202.08-G-000.dwg

DRAWING TITLE:
**GENERAL
COVER SHEET**

DRAWING NO:
G-000

\\woodardcurran.net\shared\Projects\0227202.08 Sudbury MA - Old Wayside Bridge Repair\wp\Drawings\General\0227202.08-G-001.dwg, Apr 10, 2024, 1:25pm VMARTINS

GENERAL NOTES:

- EXISTING CONDITIONS ARE BASED ON A SURVEY PERFORMED BY CHAPPELL ENGINEERING ASSOCIATES, LLC, 201 BOSTON POST ROAD WEST – SUITE 101 MARLBOROUGH, MA 01752. PLAN TITLED, "EXISTING CONDITIONS SURVEY WAYSIDE INN ROAD, SUDBURY, MASSACHUSETTS.", DATED JULY 21, 2021.
- THE HORIZONTAL DATUM DEPICTED ON THE MAPS HEREON IS BASED ON THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM, MAINLAND ZONE, REFERENCED TO THE NORTH AMERICAN DATUM OF 1983. THE VERTICAL DATUM IS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
- ANY PROPERTY AND RIGHT OF WAY LOCATIONS THAT MAY BE SHOWN HEREIN ARE APPROXIMATE AND DO NOT REPRESENT A PROPERTY BOUNDARY SURVEY.
- WOODARD & CURRAN ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.
- COORDINATE CONSTRUCTION ACTIVITY WITH UTILITY COMPANIES, EMERGENCY SERVICES AND TOWN. CONTRACTOR SHALL NOTIFY ALL UTILITIES PRIOR TO COMMENCING WORK, ALLOWING SUFFICIENT TIME TO LOCATE AND MARK THE LOCATION OF BURIED UTILITIES. CONTRACTOR SHALL CONTACT "DIG SAFE", TELEPHONE 811, PRIOR TO EXCAVATION.
- RESTORE ALL AREAS DISTURBED BY CONTRACTOR'S OPERATIONS TO ORIGINAL FINISH (GRAVEL, PAVEMENT, GRASS, ETC.) UNLESS NOTED OTHERWISE ON THE PLANS. RESTORATION OF PAVED SURFACES, GRAVEL SURFACES, DRIVEWAYS, AND LAWNS DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE PERFORMED AT NO ADDITIONAL COST TO OWNER. ANY CURB DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE REPLACED IN KIND AND SHALL CONFORM TO TOWN OF SUDBURY AND MASSACHUSETTS DOT SPECIFICATIONS AT NO ADDITIONAL COST TO OWNER.
- PROPERLY PROTECT AND DO NOT DISTURB PROPERTY IRONS AND MONUMENTS. IF DISTURBED, THE PROPERTY MONUMENT SHALL BE RESET AT THE CONTRACTOR'S EXPENSE BY A LICENSED LAND SURVEYOR ACCEPTABLE TO THE TOWN.
- EXISTING FACILITIES (I.E. TREES, JERSEY BARRIERS, STONE, ETC.) SHALL BE REMOVED AND PROTECTED DURING CONSTRUCTION. THE TOWN RETAINS RIGHT TO KEEP ANY AND ALL REMOVED FACILITIES. CONTRACTOR SHALL DISPOSE OF ANY REMOVED FACILITY AT THE REQUEST OF THE TOWN AT NO ADDITIONAL COST TO OWNER.
- ALL TREES NOT NOTED TO BE REMOVED OR RELOCATED SHALL BE PROTECTED BY CONTRACTOR DURING CONSTRUCTION.
- DO NOT PARK, IMPEDE ACCESS TO, OR STORE EQUIPMENT BEYOND LIMIT OF WORK, UNLESS PERMISSION HAS BEEN GRANTED IN WRITING BY TOWN AND/OR LAND OWNER.
- RESTRICT ACCESS TO SITE THROUGH THE USE OF APPROPRIATE SIGNAGE, BARRIERS, FENCES, ETC. SITE SHALL BE LEFT WITH APPROPRIATE SAFETY MEASURES IN PLACE DURING NON-WORKING HOURS. SITE SAFETY IS THE RESPONSIBILITY OF CONTRACTOR, DURING BOTH WORKING AND NON-WORKING HOURS.
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY CONSTRUCTION PERMITS INCLUDING "PERMIT TO CONSTRUCT WITHIN A PUBLIC WAY" FROM THE TOWN. PERMIT APPLICATIONS SHALL BE SUBMITTED WITH ADEQUATE TIME SO AS NOT TO DELAY CONSTRUCTION.
- ALL WORK ASSOCIATED WITH THE PROJECT SHALL BE COMPLETED IN ACCORDANCE WITH THE TOWN OF SUDBURY BYLAW AND LOCAL REGULATIONS AND MASSACHUSETTS DOT STANDARD SPECIFICATIONS.
- UPON COMPLETION OF CONSTRUCTION, A COMPLETE SET OF "RECORD" DRAWINGS SHALL BE SUBMITTED TO THE TOWN ENGINEER. THESE DRAWINGS SHALL BE SUBMITTED IN BOTH DIGITAL AND HARD COPY FORMAT AS DEFINED IN THE SPECIFICATIONS PRIOR TO PAYMENT OF FINAL RETAINAGE.
- PROTECTION OF EXISTING UTILITIES DURING CONSTRUCTION SHALL BE PROVIDED AT NO ADDITIONAL COST.
- CONTRACTOR SHALL BE RESPONSIBLE FOR SWEEPING WAYSIDE INN ROAD EVERY FRIDAY AND AS NECESSARY DURING THE DURATION OF THE WORK.
- PRIOR TO CONSTRUCTION, CONTRACTOR SHALL ATTEND A PRE-CONSTRUCTION MEETING HELD AT THE PROJECT SITE WITH THE CONTRACTOR, ENGINEER, AND OWNER TO REVIEW THE CONSTRUCTION SCHEDULE AND SEQUENCING, STOCKPILE LOCATIONS AND CRITICAL ASPECTS OF THE PROJECT.
- ALL DISTURBED UPLAND AREAS SHALL BE BROUGHT TO FINAL GRADE AND SHALL BE PERMANENTLY STABILIZED WITHIN 30 DAYS AFTER DISTURBANCE. BARE GROUND AND DISTURBED AREAS THAT CANNOT BE PERMANENTLY VEGETATED WITHIN 30 DAYS SHALL BE TEMPORARY STABILIZED BY AN APPROVED METHOD.
- CONTRACTOR SHALL DEMARCAT CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE AREAS PRIOR TO CONSTRUCTION.
- THE CONSTRUCTION SITE SHALL BE MAINTAINED IN CLEAN CONDITIONS AT ALL TIMES AND CONSTRUCTION REFUSE AND DEBRIS SHALL BE DISPOSED OF PROMPTLY AND IN A LEGAL MANNER.
- STORING, SERVICING, OR CLEANING OF TRUCKS OR EQUIPMENT SHALL BE PERFORMED IN AN UPLAND AREA AT A HORIZONTAL DISTANCE GREATER THAN 100 FEET FROM THE WATERBURY AND ASSOCIATED RESOURCE AREAS.

EROSION CONTROL NOTES

- EROSION CONTROL DEVICES SHALL REMAIN IN PLACE, UNTIL ALL DISTURBED SURFACES HAVE BEEN STABILIZED WITH FINAL VEGETATION COVER OR THE OWNER HAS AUTHORIZED THEIR REMOVAL.
- EROSION CONTROL MEASURES AND BARRIERS SHALL BE MONITORED DAILY AND MAINTAINED, OR REINFORCED AS NECESSARY TO ENSURE AND PREVENT EROSION AND SILTATION OF SOILS TO WETLAND RESOURCE AREAS. ADDITIONAL FILTER FABRIC AND STRAW WATTLES SHALL BE STORED ON SITE FOR EMERGENCY USE.
- AN ADEQUATE STOCKPILE OF EROSION AND SEDIMENTATION CONTROL MATERIALS SHALL BE ON SITE AT ALL TIMES FOR EMERGENCY OR ROUTINE REPLACEMENT.
- DURING ALL PHASES OF CONSTRUCTION, ALL DISTURBED OR EXPOSED AREAS OUTSIDE THE ROADWAY SHALL BE BROUGHT TO FINISHED GRADE AND EITHER A) LOAMED AND SEEDED FOR PERMANENT STABILIZATION, IN ACCORDANCE WITH U.S. SOIL CONSERVATION SERVICE PROCEDURES, OR B) STABILIZED IN ANOTHER WAY APPROVED BY THE COMMISSION. AREAS THAT CANNOT BE PERMANENTLY STABILIZED WITHIN 30 DAYS OF DISTURBANCE SHALL BE STABILIZED WITH HAY, STRAW, MULCH OR ANY OTHER PROTECTIVE COVERING AND/OR METHOD APPROVED BY THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE OR BY OTHER TEMPORARY MEASURES ACCEPTABLE TO THE COMMISSION.
- ANY DAMAGE CAUSED AS A DIRECT RESULT OF CONSTRUCTION TO THE RESOURCE AREAS SHALL BE REPAIRED, RESTORED AND/OR REPLACED. SEDIMENTATION OR EROSION SHALL BE CONSIDERED DAMAGE TO THE RESOURCE AREAS. IF SEDIMENTATION REACHES THESE AREAS, THE CONSERVATION COMMISSION SHALL BE CONTACTED AND A PLAN FOR THE PROPOSED RESTORATION SHALL BE SUBMITTED FOR APPROVAL.
- THE SILT FENCE AND STRAW BALES MUST BE INSPECTED PRIOR TO THE START OF ANY WORK OR A \$100 PER DAY FINE WILL BE LEVIED ON THE CONTRACTOR.

ABBREVIATIONS

& A.G.	AND ABOVE GROUND
BIT B/W BVW	BITUMINOUS BETWEEN BORDERING VEGETATED WETLAND
CB CI CMP CONC	CATCH BASIN CAST IRON CORRUGATED METAL PIPE CONCRETE
D DI DIA. DMH DOT DTL DYL	STORM DRAIN DUCTILE IRON DIAMETER DRAIN MANHOLE DEPARTMENT OF TRANSPORTATION DETAIL DOUBLE YELLOW LINE
E EL E.O.P. EXIST.	UNDERGROUND ELECTRICAL ELEVATION EDGE OF PAVEMENT EXISTING
FF FT	FINISH FLOOR FOOT/FEET
G GS GALV. GRAN.	GAS MAIN GAS SERVICE GALVANIZED GRANITE
HDPE HDPP HYD	HIGH DENSITY POLYETHYLENE HIGH DENSITY POLYPROPYLENE HYDRANT
INV.	INVERT
LF	LINEAR FEET
MASSDEP	MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION
MADOT	MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
MAX. MIN. MON	MAXIMUM MINIMUM MONUMENT
N.I.C. NO. NR N.T.S.	NOT IN CONTRACT NUMBER NO REFUSAL NOT TO SCALE
OE OH	OVERHEAD ELECTRIC OVERHEAD
± LLS PROP. PT. PVC	PLUS OR MINUS LICENSED LAND SURVEYOR PROPOSED POINT POLYVINYL CHLORIDE
R.O.W. RCP REINF. REQ'D RPP	RIGHT-OF-WAY REINFORCED CONCRETE PIPE REINFORCED REQUIRED RIBBED PLASTIC PIPE
S S SMH SCH STA. SWL	SLOPE (FT./FT.) SEWER SEWER MANHOLE SCHEDULE STATION SINGLE WHITE LINE
TOWN TYP.	TOWN OF SUDBURY TYPICAL
UNO UP	UNLESS NOTED OTHERWISE UTILITY POLE
VC	VITRIFIED CLAY
W W/	WEST WITH

SYMBOLS

DESCRIPTION	EXISTING	PROPOSED
PK NAIL		
UTILITY POLE		
TREE/STUMP		
SIGN		
STEEL POST		
CONCRETE ANCHOR		
BRIDGE PARAPET		
STEEL BACKED TIMBER GAURDRAIL		
TEMPORARY BARRIER		

SHEET INDEX	
GENERAL	
G-000	COVER SHEET
G-001	GENERAL NOTES, LEGEND, AND ABBREVIATIONS
CIVIL	
C-100	EXISTING CONDITIONS
C-200	SITE PLAN
C-300	CIVIL DETAILS - 1
C-301	CIVIL DETAILS - 2
STRUCTURAL	
S-101	WAYSIDE INN BRIDGE REPAIRS SITE PLAN, NOTES, EXISTING CONDITIONS, AND DEMOLITION PLAN
S-102	WAYSIDE INN BRIDGE REPAIRS PROPOSED PLAN AND SECTION
S-103	WAYSIDE INN BRIDGE REPAIR PLAN & SECTION

RESOURCE AREA LEGEND

BORDERING LAND SUBJECT TO FLOODING
(100 YEAR FLOOD ZONE, DEFINED BY FEMA)

NOTE:
A RESOURCE AREA DELINEATION WAS NOT CONDUCTED AS PART OF THIS PROJECT.

LINE TYPES & HATCHES

DESCRIPTION	EXISTING	PROPOSED
CONTOUR (1' INTERVAL)		
CONTOUR (INDEX)		
EDGE OF PAVEMENT		
OVERHEAD ELECTRIC		
UNDERGROUND GAS		
RIGHT OF WAY/ PROPERTY LINE		
GUARDRAIL		
LIMIT OF WORK		
SEDIMENT BARRIER		
SAWCUT		
STONE WALL		
DOUBLE YELLOW LINE		
SINGLE WHITE LINE		
CENTERLINE		



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ISSUE FOR BID

CLIENT INFO:

TOWN OF SUDBURY
MASSACHUSETTS

WAYSIDE BRIDGE REPAIRS

REV	MM/DD/YY	DESCRIPTION
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JOB NO:	0227202.11
DATE:	APRIL 2024
SCALE:	NONE
DESIGNED BY:	KD
DRAWN BY:	JBC
CHECKED BY:	DS
FILENAME:	0227202.08-G-001.dwg

DRAWING TITLE:
**GENERAL
GENERAL NOTES, LEGEND,
AND ABBREVIATIONS**

DRAWING NO:

G-001

NOTE:

TOPOGRAPHIC SURVEY INFORMATION FROM FIELD SURVEY PREPARED BY
CHAPPELL ENGINEERING, INC, DATED JULY 21, 2021.



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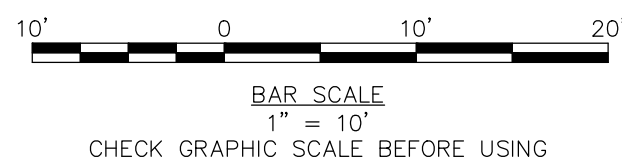
JOB NO:	0227202.11
DATE:	APRIL 2024
SCALE:	1" = 10'
DESIGNED BY:	KD
DRAWN BY:	JBC
CHECKED BY:	DS
FILENAME:	0227202.08-C-100.dwg

DRAWING TITLE:

**CIVIL
EXISTING CONDITIONS**

DRAWING NO:

C-100



1
N: 2955381.514'
E: 664222.847'
EL: 189.536'
SPIKE

2
N: 2955299.624'
E: 664176.017'
EL: 191.676'
MAGNAIL

72 WAYSIDE INN ROAD
N/F
WAYSIDE INN CORP
BK. 6916 PG. 361
MAP 3 LOT 2

WAYSIDE INN ROAD

131 WAYSIDE INN ROAD
N/F
WAYSIDE INN
BK. 6916 PG. 361
MAP 3 LOT 1

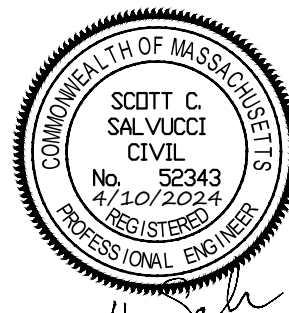


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MASSACHUSETTS

WAYSIDE BRIDGE REPAIRS

REV	MM/DD/YY	DESCRIPTION
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JOB NO:	0227202.11
DATE:	APRIL 2024
SCALE:	AS NOTED
DESIGNED BY:	KD
DRAWN BY:	JBC
CHECKED BY:	DS
FILENAME:	0227202.08-C-200.dwg

DRAWING TITLE:

**CIVIL
SITE PLAN**

DRAWING NO:

C-200

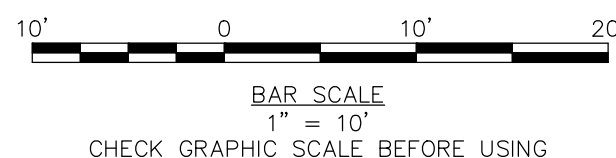
1
N: 2955381.514'
E: 664222.847'
EL: 189.536'
SPIKE

72 WAYSIDE INN ROAD
N/F
WAYSIDE INN CORP
BK. 6916 PG. 361
MAP 3 LOT 2

131 WAYSIDE INN ROAD
N/F
WAYSIDE INN
BK. 6916 PG. 361
MAP 3 LOT 1

NOTES:

- STEEL DEEP POSTS TO BE USED IN LOCATIONS WHERE SLOPE BEHIND GUARD RAIL IS GREATER THAN 10:1.
- NOTIFY OWNER AND ENGINEER IMMEDIATELY IF PROPOSED GUARDRAIL LOCATION AND FLARE RATES RESULT IN CONFLICTS WITH EXISTING SURFACE FEATURES.



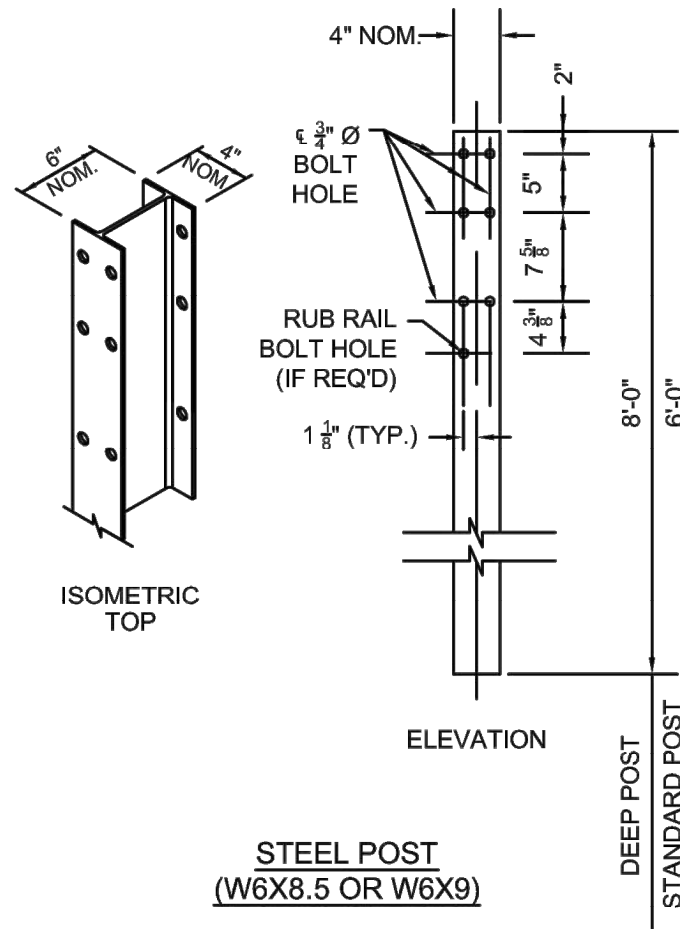
\\woodardcurran.net\shared\Projects\0227202.08-Sudbury MA - Old Wayside Bridge Repair\wp\Drawings\Civil\0227202.08-C-300.dwg, Apr 10, 2024 - 1:27pm VMAESTINS



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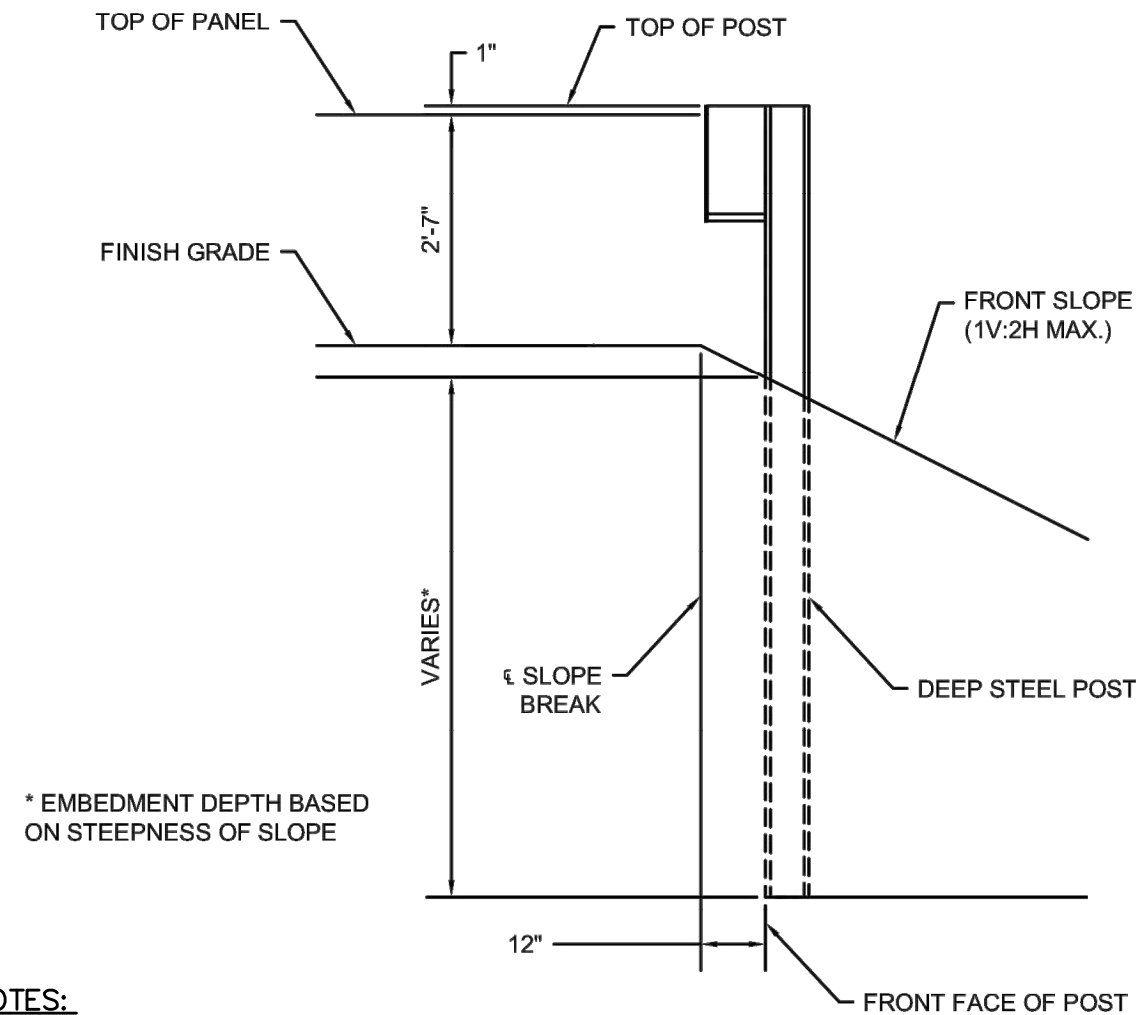


NOTES:

1. DETAIL PER MASSDOT CONSTRUCTION STANDARD DETAILS DRAWING NUMBER 400.1.4.
2. DEEP STEEL POSTS SHALL ONLY BE USED WHERE INDICATED ON THE PLANS.
3. GUARDRAIL POSTS SHALL BE POWDER COATED BROWN. OWNER TO APPROVE OF COLOR PRIOR TO ORDERING POSTS.

STEEL POST DETAIL

N.T.S.

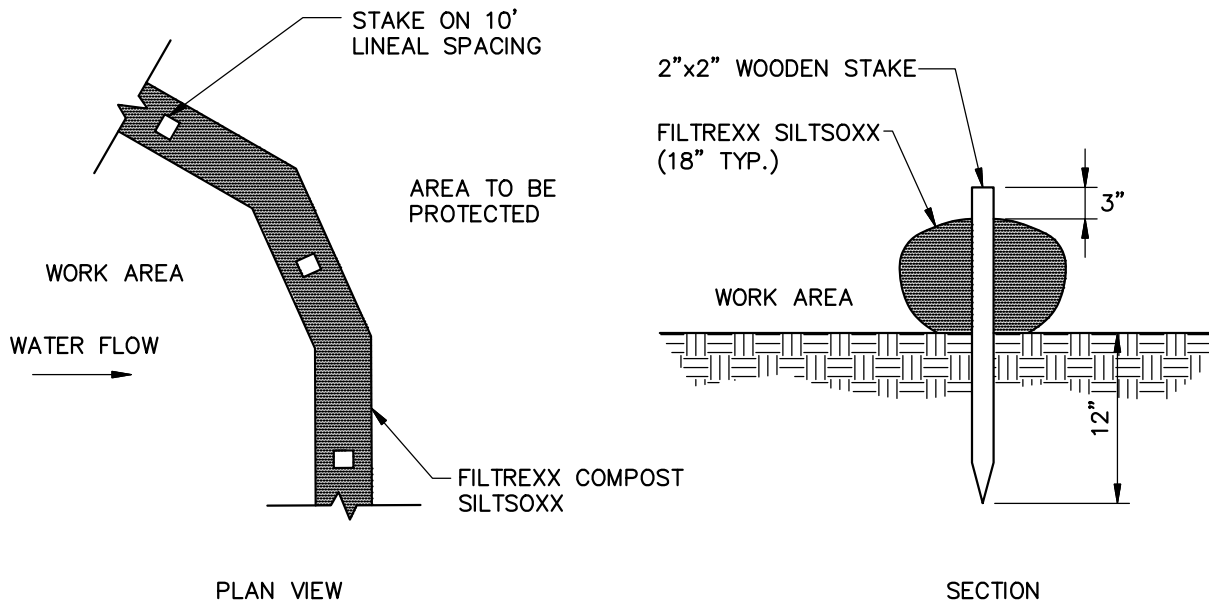


NOTES:

1. DETAIL PER MASSDOT CONSTRUCTION DETAILS DRAWING NUMBER 400.1.5.
2. DEEP STEEL POSTS SHALL ONLY BE USED WHERE INDICATED ON THE PLANS.

SLOPE BREAK CONDITION STEEL DEEP POST DETAIL

N.T.S.



SEDIMENT BARRIER - SILTSOXX

N.T.S.

EROSION AND SEDIMENT CONTROL NOTES

Temporary Erosion Control

Measure	Dates For Use	Timing, Activity, and Location
Sedimentation Barrier	ALL	Before soil disturbance, install downhill of areas to be disturbed and around material stockpiles.
Up-slope Diversion	ALL	Before soil disturbance, install uphill of areas to be disturbed and around material stockpiles.
Catch Basin Protection	ALL	Before soil or pavement disturbance, install ACF Environmental, Inc. High Flow Siltsock, Silt saver Inlet Filter, or equal, installed per manufacturer's requirements.
Dust Control	ALL	During dry weather, apply water and calcium chloride to control dust.
Temporary Seeding	April 15 to Oct. 15	Soil stockpiles that are not covered and disturbed areas that will not be disturbed again within 14 days. If grass growth provides less than 95% soil coverage by Nov. 1, apply mulch and anchor with erosion control blanket.
Mulch	April 15 to Sept. 15	On all areas of exposed soil prior to rain events apply 100-150 lbs (2.5 bales) per 1,000 sq. ft. by mechanical blower.
Winter Mulch	Sept. 16 to Oct. 31	On all areas of exposed soil prior to precipitation apply 150 to 170 lbs. mulch (4 bales) per 1,000 sq. ft. by mechanical blower. Erosion control blanket may be used as a substitute for winter mulch.
	Nov. 1 to April 14	On all areas of exposed soil, apply 150 to 170 lbs. mulch (4 bales) per 1,000 sq. ft. and anchor with netting at the end of each working day. Erosion control blanket may be used as a substitute for winter mulch.
Inspections	Until site is permanently stabilized	Inspect the erosion and sedimentation control measures daily, and after rainfall of half inch or greater in a 24-hour period, and maintain and repair as necessary.

Permanent Erosion Control:

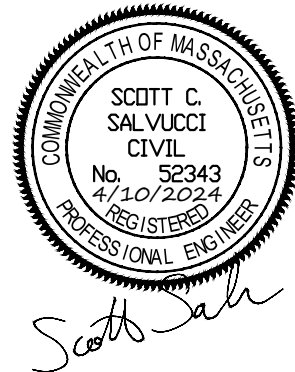
Measure	Dates For Use	Timing, Activity, and Location
Pavement - Base Course - Final Course	When no frost is in ground	Install only in areas shown on the plan, shortly after pavement base is brought to final grade. Install near completion of project.
Permanent Seeding	April 15 to Sept. 15	On final grade areas, within 7 days of grade preparation, prepare topsoil, followed by seed and mulch application.
Dormant Seeding	Sept. 16 to April 15	On final grade areas, with prepared topsoil. Apply seed at double the specified rate on bare soil, and follow with an application of winter mulch.
Ground Cover, Trees, Shrubs	April 15 to Nov. 1	Install with final landscaping.
Permanent Mulch	ALL	Install with final landscaping.

Inspections:

Regular inspections of all erosion and sedimentation controls shall be made at least weekly and prior to and following storm events. Minimum inspections shall be made as listed in the table below.

Inspected Item	Look For
Mulched Surfaces	Thin mulch or inadequate application. Wind movement.
Seeded Surfaces	Poor seed germination. Loss of mulch. Development of rivulets.
Sediment Barrier	Sediment build-up to one half the height of the barrier. Undermining of the barrier. Supporting stakes loose, toppled, or unmarked. Breaks in barrier.
Perimeter Diversion	Discharge is to stabilized area. Erosion or breaks in barrier. Supporting stakes loose, toppled or unmarked.
Catch Basin Protection	Sediment build-up and structure blockages. Slow flow/Ponding water. Breaks in fabric or voids in barrier.
Dewatering Filter	Breaks in fabric or supporting structure. Slow flow, indicating high sediment build-up.
Construction Entrance	Sedimentation of roadways. Off-site dust complaints.

PE SEAL:



ISSUE FOR BID

CLIENT INFO:

**TOWN OF SUDBURY
MASSACHUSETTS**

WAYSIDE BRIDGE REPAIRS

REV MM/DD/YY DESCRIPTION

JOB NO: 0227202.11
DATE: APRIL 2024
SCALE: AS NOTED
DESIGNED BY: KD
DRAWN BY: JBC
CHECKED BY: DS
FILENAME: 0227202.08-C-300.dwg

DRAWING TITLE:
**CIVIL
CIVIL DETAILS - 1**

DRAWING NO:

C-300



**Woodard
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ISSUE FOR BID

CLIENT INFO:

TOWN OF SUDBURY
MASSACHUSETTS

WAYSIDE BRIDGE REPAIRS

REV	MM/DD/YY	DESCRIPTION
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JOB NO:	0227202.11
DATE:	APRIL 2024
SCALE:	AS NOTED
DESIGNED BY:	JBC
DRAWN BY:	DS
CHECKED BY:	KD
FILENAME:	0227202.08-C-300.dwg

DRAWING TITLE:
**CIVIL
CIVIL DETAILS - 2**

DRAWING NO:

C-301

STATE	PROJECT	SHEET NUMBER

NOTE:

1. Use the Type A, blocked-out, system or the Type B, non-blocked-out, system as specified in the plans.
2. Use weathering steel for all structural steel and fastener hardware as specified.
3. Place a terminal section (See Standards 617-61 and 617-62) on both approach and trailing ends of barrier installations.

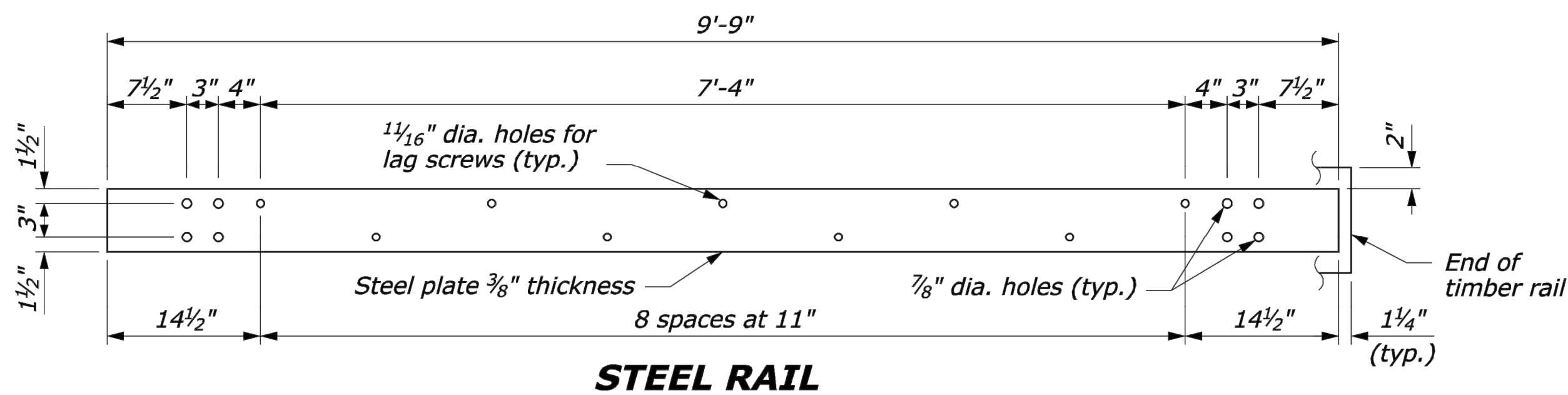
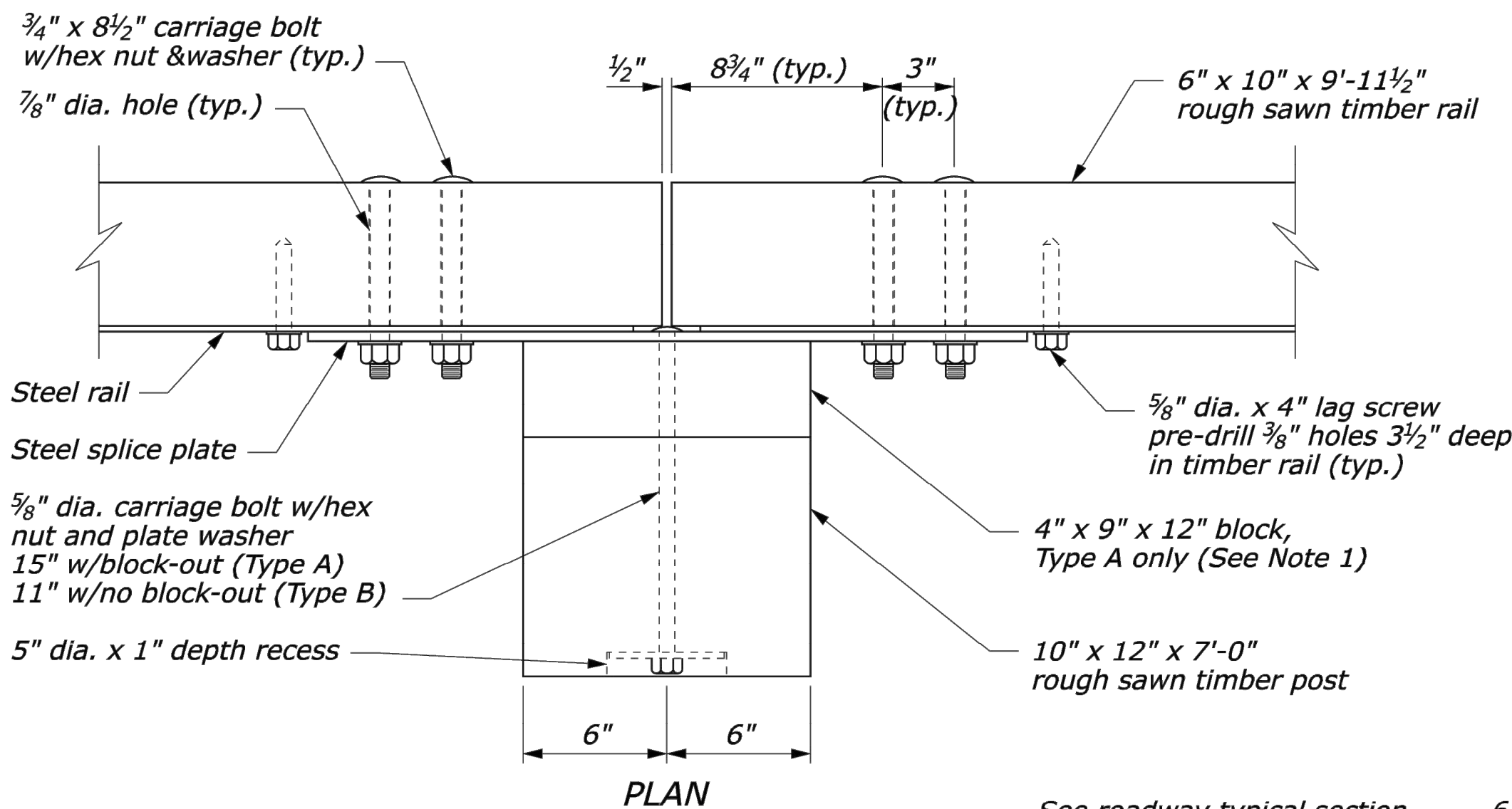
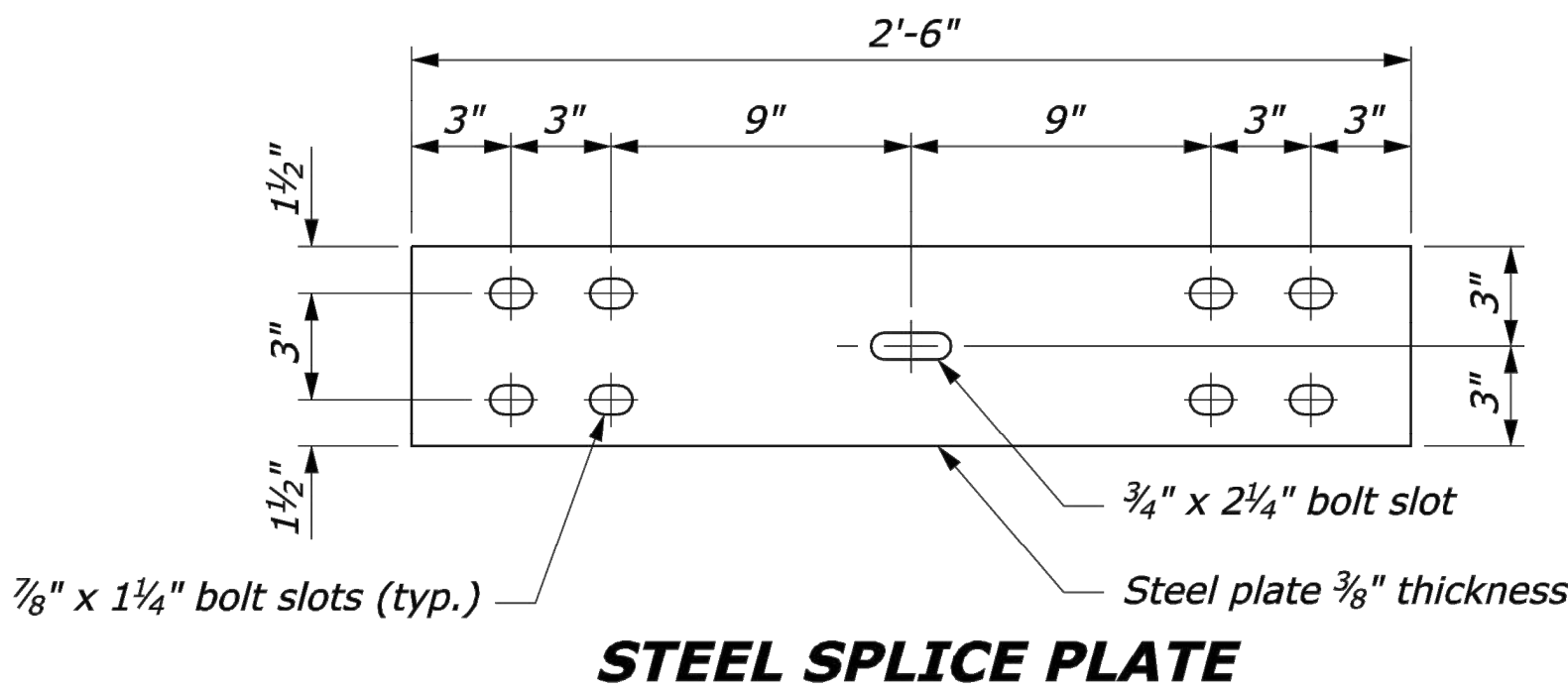


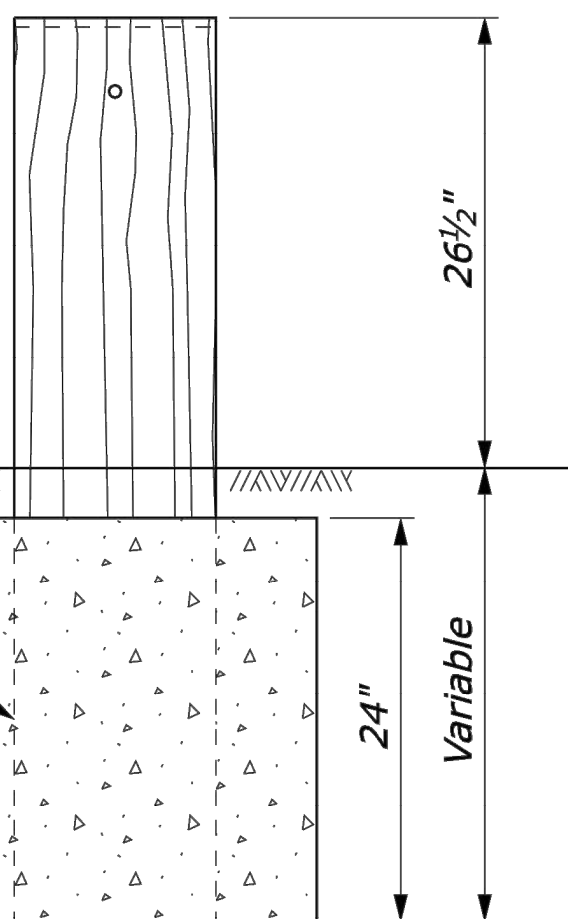
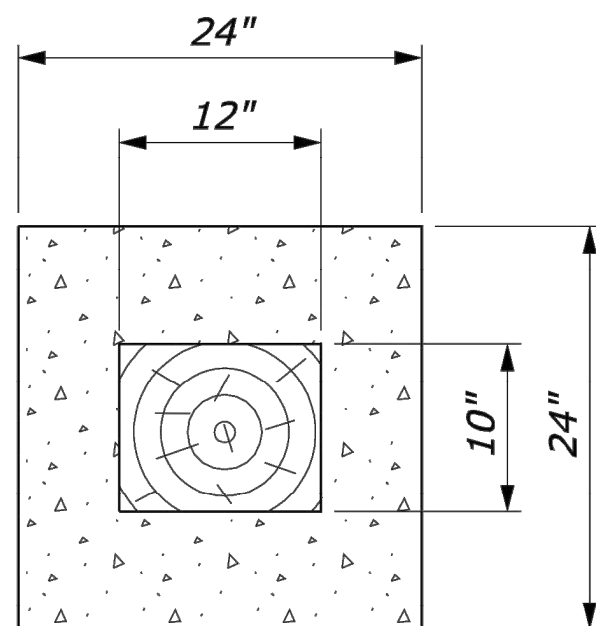
PLATE WASHER



PLAN

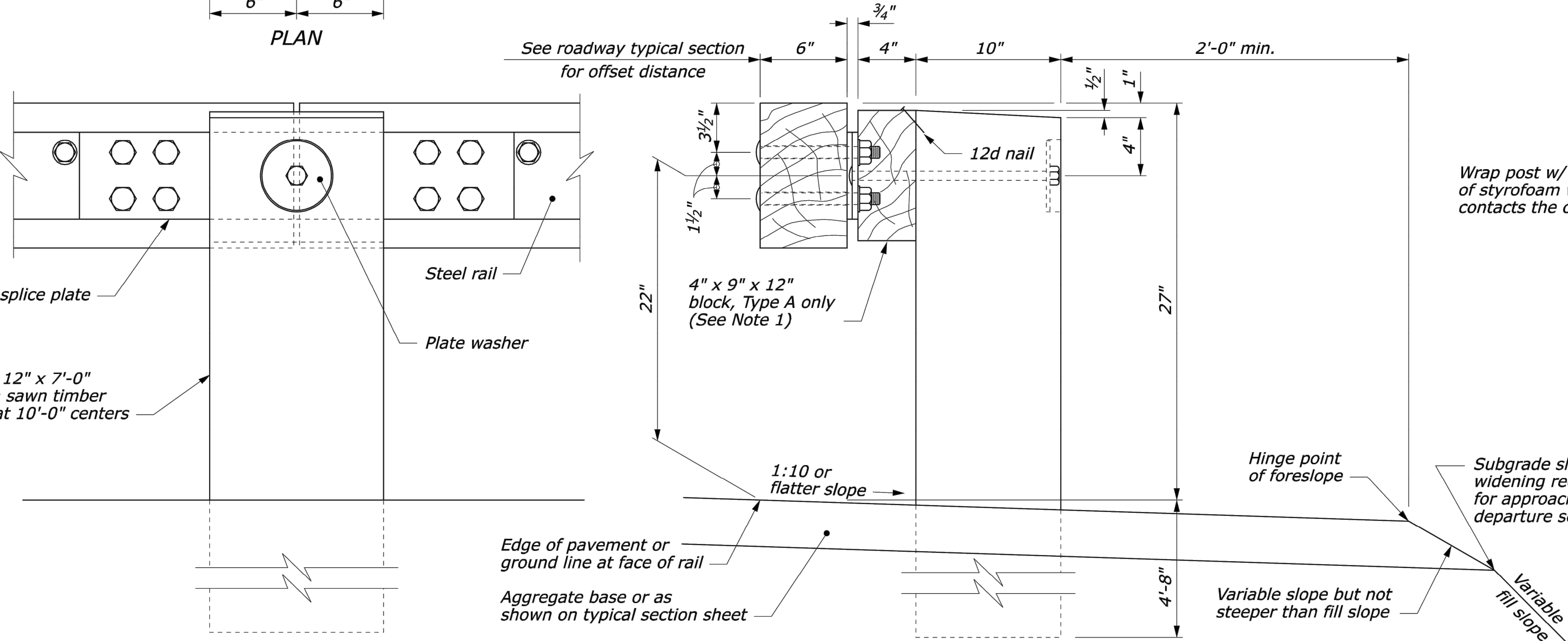


STEEL SPLICE PLATE



24" dia. round anchor is an acceptable alternative.
Reduced size acceptable in solid rock.

**CONCRETE ANCHOR FOR
SHORT GUARDRAIL POST**



TYPICAL GUARDRAIL CROSS SECTION

**ELEVATION
POST CONNECTION**

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION FEDERAL LANDS HIGHWAY	
U.S. CUSTOMARY STANDARD	
STEEL-BACKED TIMBER GUARDRAIL TYPE A & TYPE B	
STANDARD APPROVED FOR USE 3/1990 REVISED: 4/1994 6/2005	STANDARD 617-60

GENERAL NOTES

- GOVERNING CODES
 - MASS STATE BUILDING CODE 780 CMR NINTH EDITION
 - MASSDOT LRFD BRIDGE MANUAL 2013
 - ACI 318-14
- DESIGN LOADS AND CRITERIA
 - BASIC DESIGN PARAMETERS
PROJECT ADDRESS: SUDBURY, MA
PROJECT LOCATION: LAT 42.357°
LONG -71.470°
GENERAL ELEVATION 188-FT
 - DEAD LOADS
ACTUAL
 - LIVE LOADS
IMPACT LOAD 10,000 LBS
- DEMO OR DEMOLISH SHALL MEAN TO REMOVE AND LEGALLY DISPOSE OF ITEM(S) INDICATED.

MATERIAL NOTES SPECIFICATIONS

- CONCRETE: CURB
 - CONCRETE
PORTLAND CEMENT ASTM C150, TYPE I OR II
FLY ASH ASTM C618 C OR F, 20% MIN BY WEIGHT
WATER / CEMENTITIOUS RATIO 0.40 MAX
COMPRESSIVE STRENGTH $f'_c = 5000$ PSI
ENTRAINED AIR 6% \pm 1.5%
SLUMP 4 IN \pm 1 IN
 - USE ONE BRAND OF CEMENT THROUGHOUT PROJECT, UNLESS OTHERWISE ACCEPTABLE TO THE ENGINEER OF RECORD.
 - WATER SHALL BE CLEAN AND FREE FROM DELETERIOUS AMOUNTS OF OIL, ACIDS, ALKALIS, ORGANIC MATERIAL, AND OTHER FOREIGN MATTER AND SHALL CONFORM TO ASTM C94
 - CONCRETE MIX SHALL MEET MASS DOT STANDARDS FOR INTENDED SERVICE.
- EPOXIED REINFORCING:
DEFORMED BAR ASTM A615, GRADE 60
EPOXY COATING ASTM A775
- CONCRETE ANCHORS
 - POST INSTALLED - ADHESIVE
ANCHOR DEFORMED BAR ASTM A615, GR 60
ADHESIVE HILTI HIT-RE 500 V3
EXG CONC STRENGTH 3,000 PSI, CRACKED (ASSUMED)

ALTERATION OF EXISTING STRUCTURES

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY TEMPORARY MODIFICATIONS AND REPLACEMENT TO EXISTING BRIDGE COMPONENTS AS REQUIRED FOR THE INSTALLATION OF THE NEW PARAPET.
- CONTRACTOR SHALL PROVIDE WRITTEN PLANS DETAILING THE SEQUENCE, PROCEDURE, AND PROPOSED EQUIPMENT FOR REVIEW BY THE ENGINEER OF RECORD PRIOR TO BEGINNING THE WORK.

CONCRETE NOTES

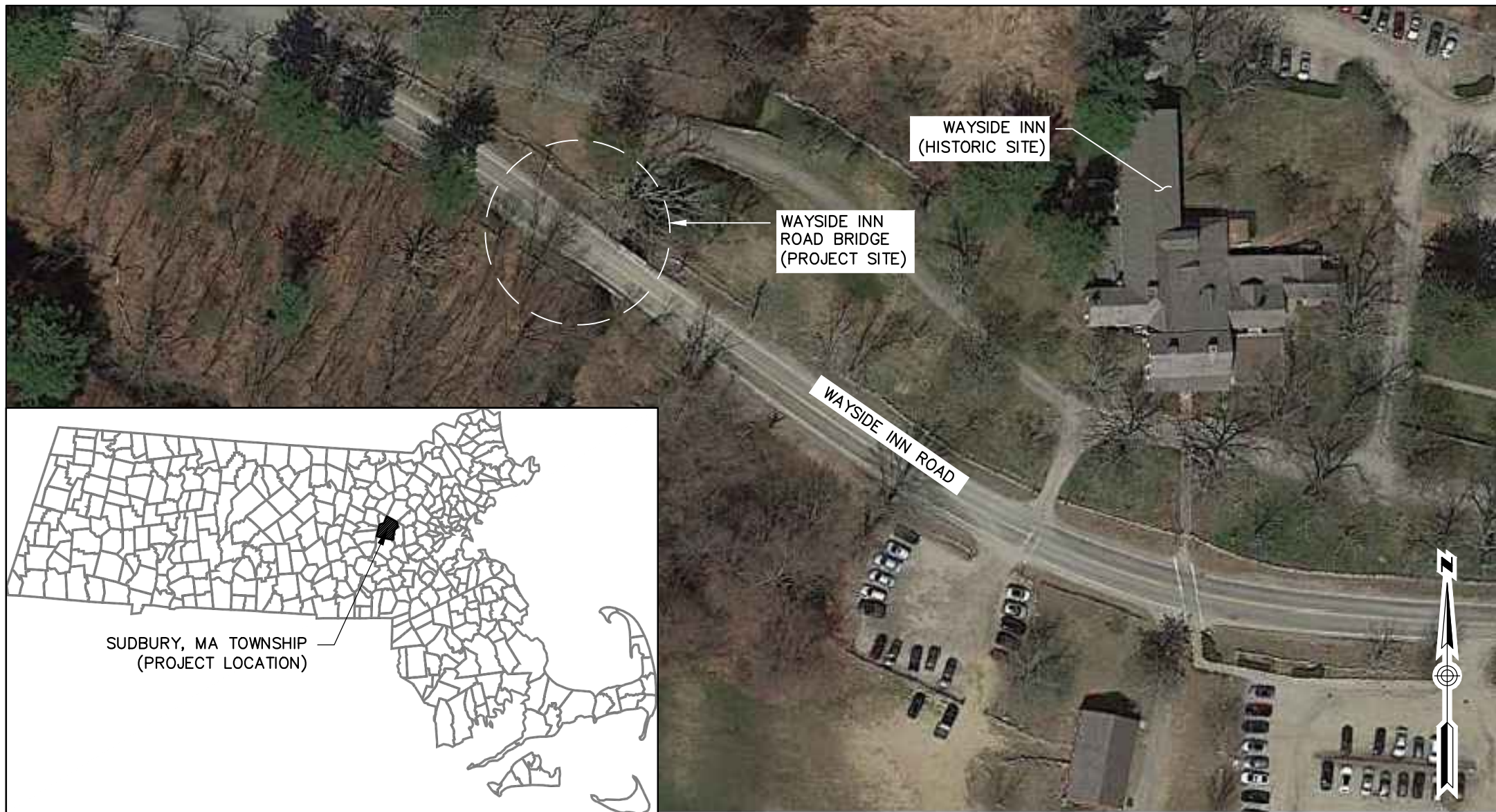
- CONCRETE REINFORCEMENT FABRICATION
 - REINFORCEMENT DETAILING SHALL BE DONE IN CONFORMANCE WITH ACI SP-06, CURRENT EDITION.
 - FABRICATOR SHALL TAG ALL REINFORCEMENT FOR PROPER PLACEMENT IF SHOP FABRICATED. REINFORCING SHALL BE BENT PER CRSI 10 MANUAL OF STANDARD PRACTICE.
- CONCRETE AND REINFORCEMENT PLACEMENT
 - PERFORM CONCRETE WORK IN ACCORDANCE WITH CURRENT ACI 301 "STANDARD SPECIFICATION FOR STRUCTURAL CONCRETE" UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED.
 - CONCRETE SHALL BE FORMED AND LOCATED AS PER ACI 117 "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS AND COMMENTARY."
 - FORMS SHALL BE COATED WITH A FORM RELEASE AGENT. FORM RELEASE AGENT SHALL NOT RAISE FORM GRAIN OR STAIN CONCRETE SURFACE.
 - MECHANICALLY VIBRATE ALL CONCRETE PLACEMENTS, BUT VIBRATION SHALL NOT BE UTILIZED TO CONVEY MATERIAL.
 - WELDING OF REINFORCING BARS IS NOT PERMITTED WITHOUT A PROCEDURE APPROVED BY THE ENGINEER OF RECORD.
 - SECURE ALL REINFORCING IN POSITION WITH CHAIRS BEFORE CONCRETE PLACEMENT. REINFORCING SHALL BE INSPECTED FOR PROPER PLACEMENT.
- CONCRETE FINISHING
 - CHAMFER ALL EXPOSED EDGES 3/4" (TYPICAL UNLESS NOTIFIED OTHERWISE). CHAMFER VIA GRINDING IS PROHIBITED.
- CONCRETE TESTING AND INSPECTION
 - ALL CONCRETE SHALL BE FIELD TESTED BY AN INDEPENDENT TESTING LABORATORY AS PER ASTM SPECIFICATIONS (PAID FOR BY CONTRACTOR). FOR EACH PLACEMENT, ONE SET OF 5 STANDARD COMPRESSION TEST CYLINDERS SHALL BE TAKEN AND TESTED IN ACCORDANCE WITH ASTM C39: 1 SPECIMEN TESTED AT 7 DAYS; 3 SPECIMENS TESTED AT 28 DAYS; AND 1 SPECIMEN RETAINED IN RESERVE FOR LATER TESTING IF REQUIRED.

EPOXY-COATED REINFORCEMENT NOTES

- REINFORCEMENT
 - ALL REINFORCING BARS SHALL BE DEFORMED AND SHALL CONFORM TO ASTM A 615
 - EPOXY-COATED REINFORCING BARS SHALL CONFORM TO ASTM A 775
 - WHEN REQUIRED, DAMAGES TO EPOXY COATING SHALL BE REPAIRED WITH PATCHING MATERIAL CONFORMING TO ASTM A775. REPAIR SHALL BE DONE IN ACCORDANCE WITH THE PATCHING MATERIAL MANUFACTURER'S RECOMMENDATIONS.
- FABRICATION
 - ALL REINFORCEMENT SHALL BE BENT COLD UNLESS OTHERWISE PERMITTED BY THE ENGINEER.
- PLACING (FIELD INSTALLATION)
 - EPOXY-COATED REINFORCING BARS SUPPORTED FROM FORMWORK SHALL REST ON COATED WIRE BAR SUPPORTS, OR ON BAR SUPPORTS MADE OF DIELECTRIC MATERIAL OR OTHER ACCEPTABLE MATERIALS. REINFORCING BARS USED AS SUPPORT BARS SHALL BE EPOXY-COATED.
 - EPOXY-COATED REINFORCING BARS SHALL BE FASTENED WITH NYLON-, EPOXY-, OR PLASTIC-COATED TIE WIRE OR OTHER ACCEPTABLE MATERIALS.
 - SPLICES OF REINFORCING BARS SHALL BE MADE ONLY AS AUTHORIZED BY THE ENGINEER
 - REINFORCING BARS PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT EXCEPT WHERE SHOWN ON THE DRAWINGS. WHERE REINFORCING BARS ARE FIELD BENT, COATING DAMAGE SHALL BE REPAIRED PER THESE NOTES.
 - UNLESS PERMITTED BY THE ENGINEER, REINFORCING BARS SHALL BE NOT BE FIELD CUT. WHEN EPOXY-COATED REINFORCING BARS ARE CUT IN THE FIELD, THE ENDS OF THE BARS SHALL BE COATED WITH THE SAME MATERIAL USED FOR REPAIR OF COATING DAMAGE PER THESE NOTES.
 - EQUIPMENT FOR HANDLING EPOXY-COATED BARS SHALL HAVE PROTECTED CONTACT AREAS. BUNDLES OF COATED BARS SHALL BE LIFTED AT MULTIPLE PICK-UP POINTS TO MINIMIZE BAR-TO-BAR ABRASION FROM SAGS IN THE BUNDLES. COATED BARS OR BUNDLES OF COATED BARS SHALL NOT BE DROPPED OR DRAGGED. COATED BARS SHALL BE STORED ON PROTECTIVE CRIBBING. FADING OF THE COLOR OF THE COATING SHALL NOT BE CAUSE FOR REJECTION OF EPOXY-COATED REINFORCING BARS. COATING DAMAGE DUE TO HANDLING, SHIPMENT, AND PLACING NEED NOT BE REPAIRED IN CASES WHERE THE DAMAGED AREA IS 0.1 SQUARE INCH OR SMALLER. DAMAGED AREAS LARGER THAN 0.1 SQUARE INCH SHALL BE REPAIRED PER THESE NOTES. THE MAXIMUM AMOUNT OF DAMAGE INCLUDING REPAIRED AND UNREPAIRED AREAS SHALL NOT EXCEED 2 PERCENT OF THE SURFACE AREA OF EACH BAR.

ABBREVIATIONS

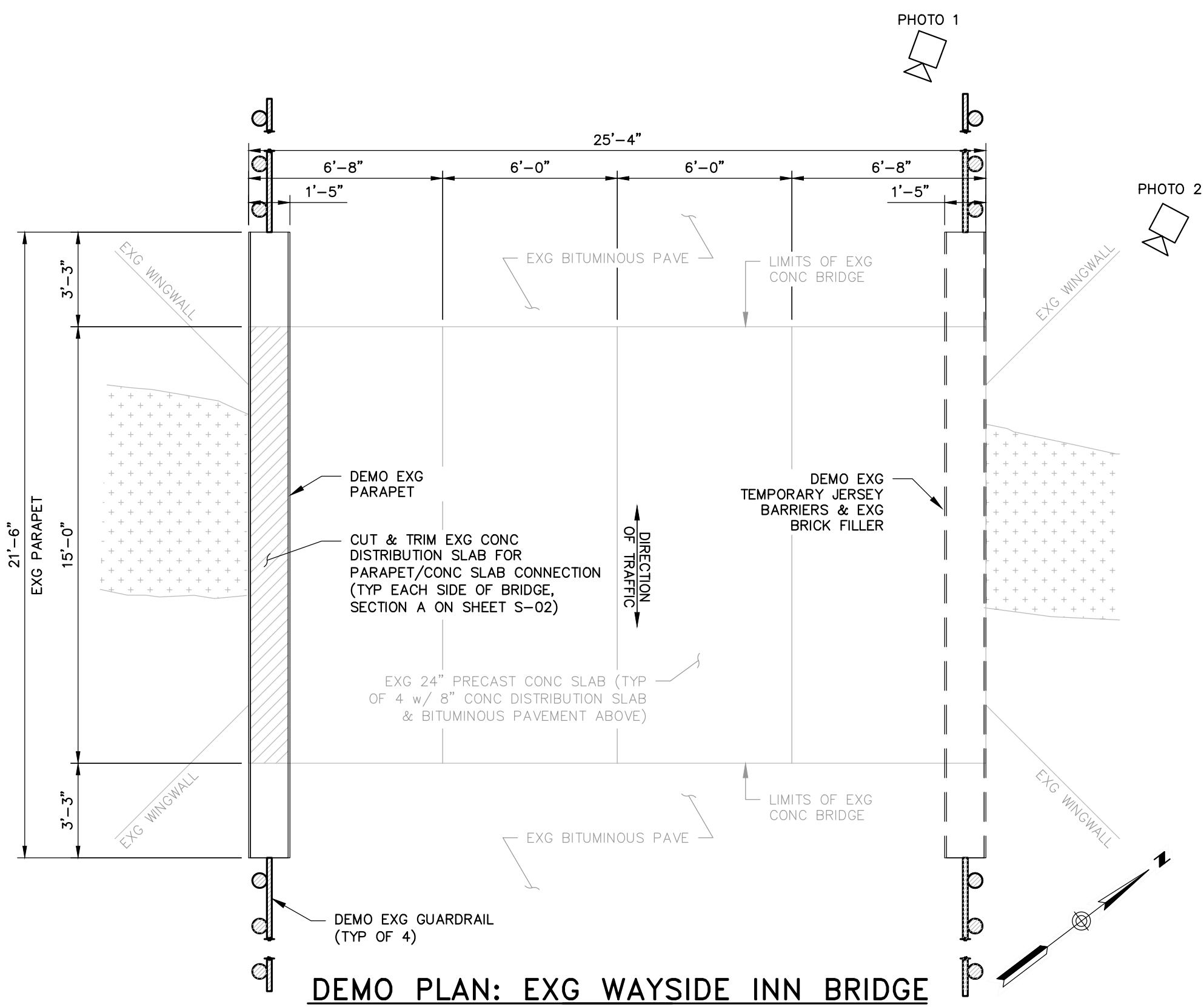
&	AND
@	AT
%	PERCENT(AGE)
\pm	PLUS OR MINUS
ACI	AMERICAN CONCRETE INSTITUTE
ASTM	AMERICAN SOCIETY OF TESTING MATERIALS
BOT	BOTTOM
CLR	CLEAR
CONC	CONCRETE
CONT	CONTINUOUS
DEMO	DEMOLISH
EF	EACH FACE
EXG	EXISTING
EMB	EMBEDMENT
FT	FOOT / FEET
FV	FIELD VERIFY
IN	INCH(E)S
LB	POUND
MAX	MAXIMUM
MIN	MINIMUM
OC	ON CENTER
OCF	ON CENTER EACH FACE
REF	REFERENCE
TYP	TYPICAL



SITE PLAN: WAYSIDE INN ROAD BRIDGE SITE



PHOTO 1: EXISTING CONDITIONS - WAYSIDE BRIDGE LOOKING SOUTH



DEMO PLAN: EXG WAYSIDE INN BRIDGE

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

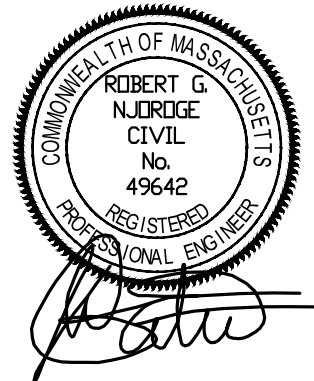


PHOTO 2: EXISTING CONDITIONS - MISSING PARAPET



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PE SEAL:



ISSUE FOR BID

CLIENT INFO:

TOWN OF SUDBURY
MASSACHUSETTS

WAYSIDE BRIDGE REPAIRS

REV MM/DD/YY DESCRIPTION

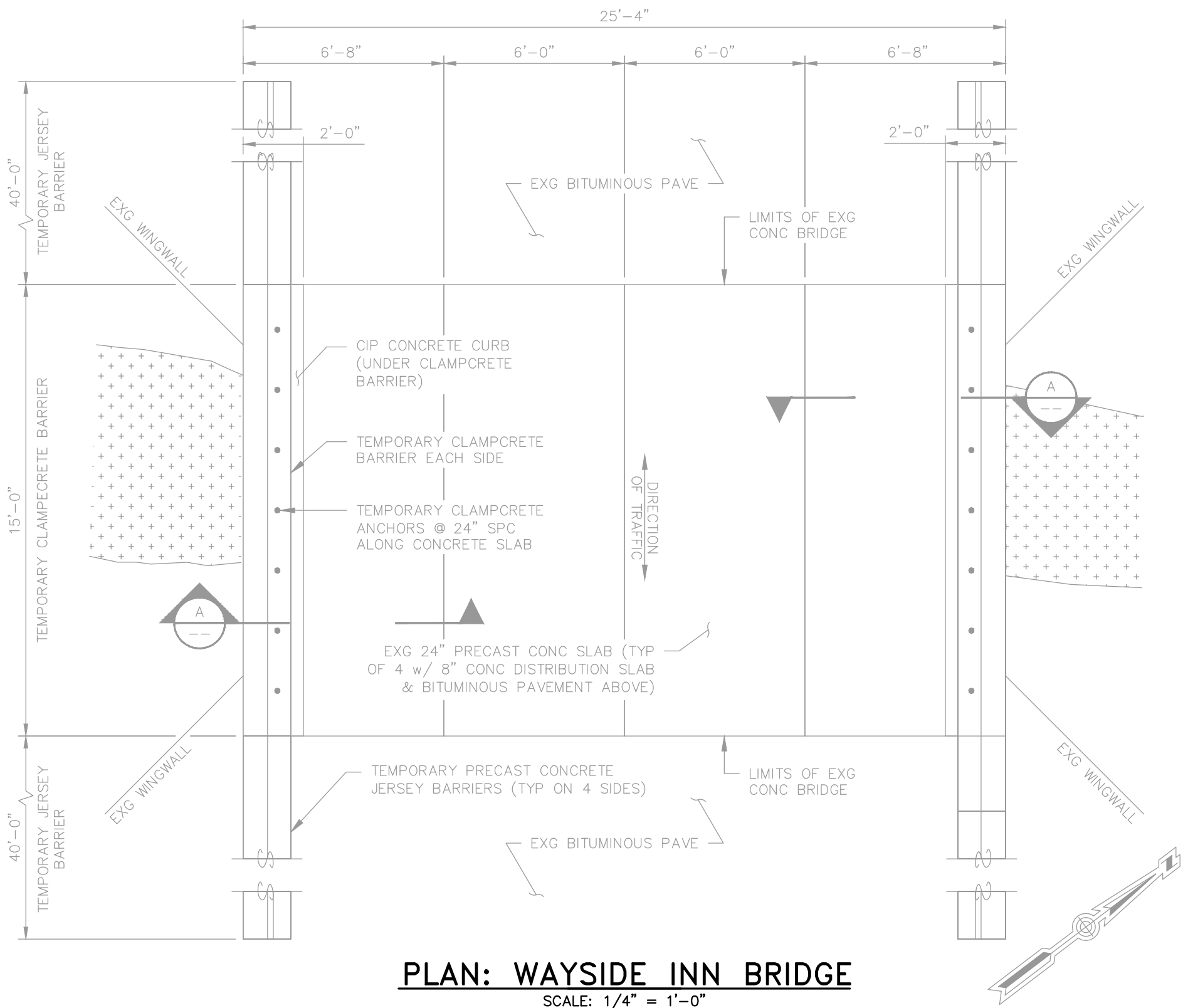
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DATE: APRIL 2024
SCALE: AS NOTED
DESIGNED BY: CSB
DRAWN BY: CSB
CHECKED BY: TJS/JPS
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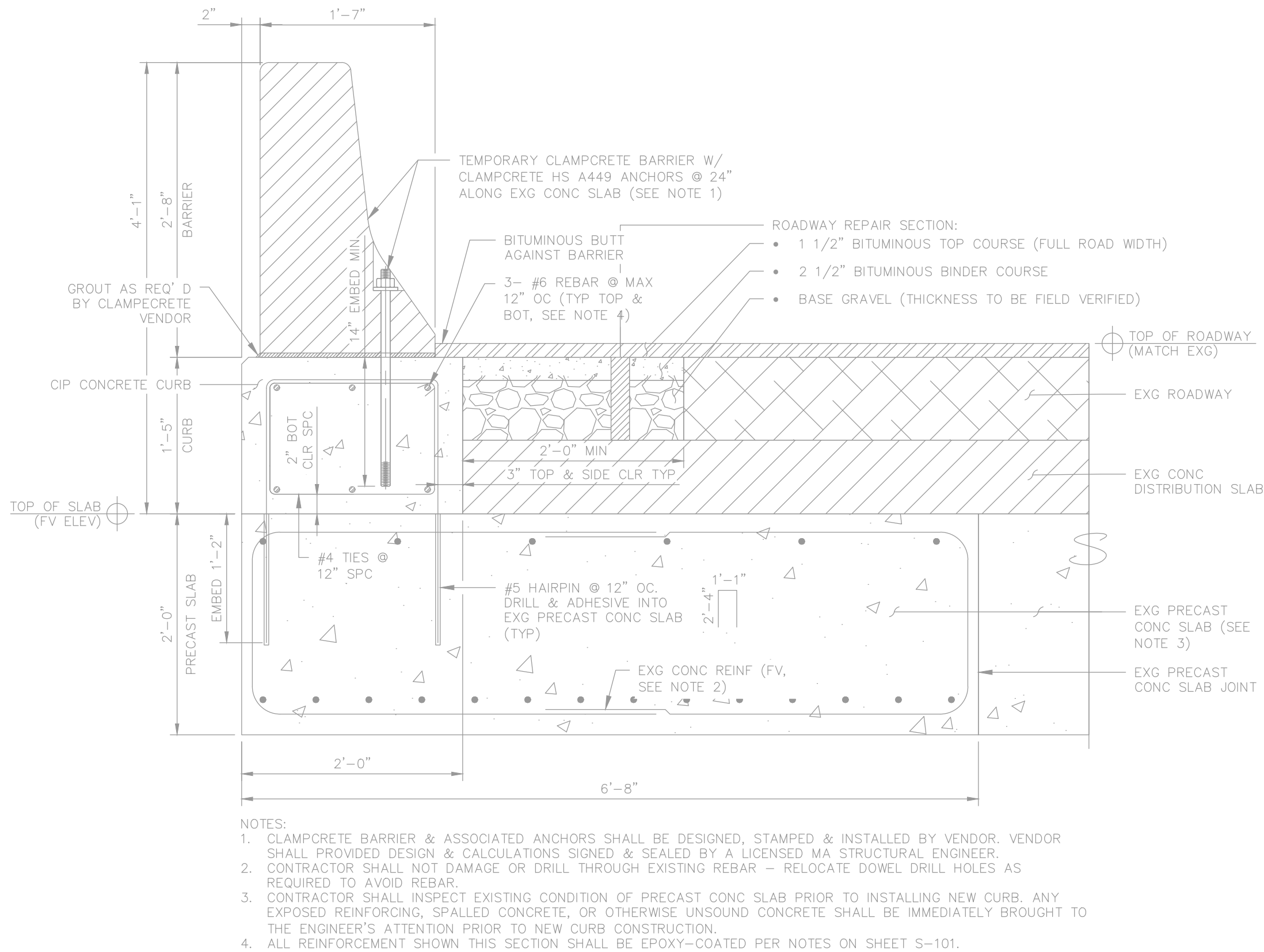
STRUCTURAL
WAYSIDE INN BRIDGE REPAIRS
SITE PLAN, NOTES,
EXISTING CONDITIONS,
AND DEMOLITION PLAN

DRAWING NO:

S-101



PLAN: **WAYSIDE INN BRIDGE**
SCALE: 1/4" = 1'-0"



SECTION: **TEMPORARY BRIDGE PARAPET** **A**
SCALE: 1" = 1'-0"

NOTE:
1. NOT FOR CONSTRUCTION EXISTING CONDITIONS SHEET IS FOR INFORMATION ONLY.

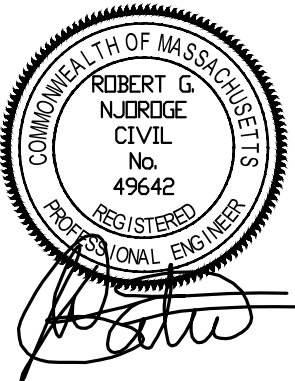
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WAYSIDE BRIDGE REPAIRS

REV MM/DD/YY DESCRIPTION

JOB NO: 0227202.11
DATE: APRIL 2024
SCALE: AS NOTED
DESIGNED BY: CSB
DRAWN BY: CSB
CHECKED BY: TJS/JPS
FILENAME: 0227202_08_S-102.dwg

DRAWING TITLE:
**STRUCTURAL
WAYSIDE INN BRIDGE REPAIRS
PROPOSED PLAN AND SECTION**

DRAWING NO:

S-102

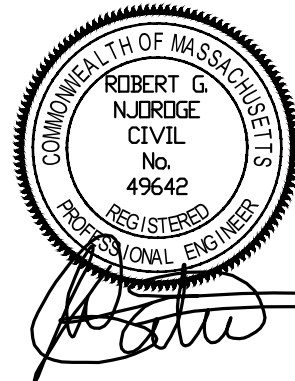


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MASSACHUSETTS

WAYSIDE BRIDGE REPAIRS

REV	MM/DD/YY	DESCRIPTION
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JOB NO: 0227202.11

DATE: APRIL 2024

SCALE: AS NOTED

DESIGNED BY: CSB

DRAWN BY: CSB

CHECKED BY: TJS/JPS

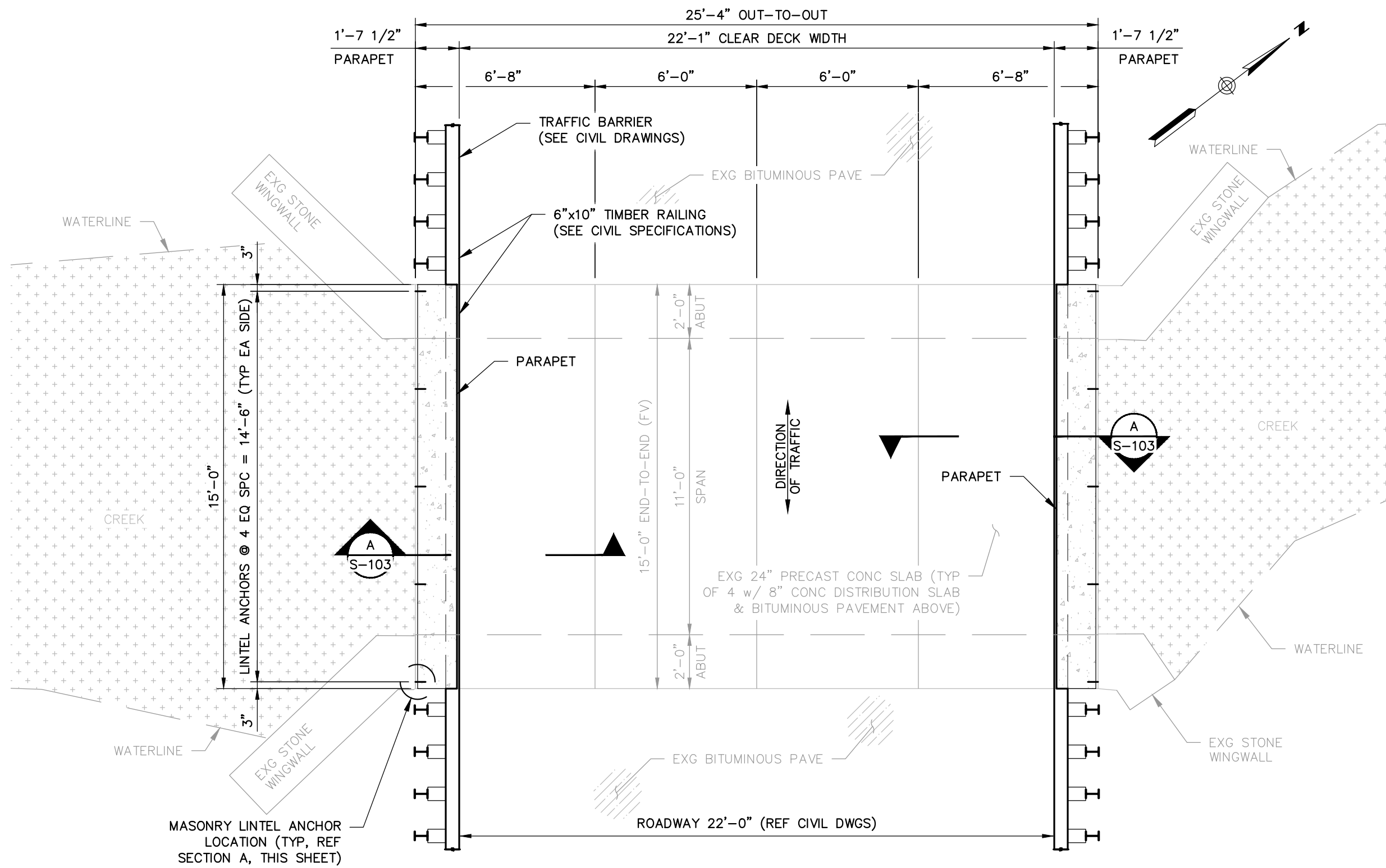
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DRAWING TITLE:

**STRUCTURAL
WAYSIDE INN BRIDGE REPAIR
PLAN & SECTION**

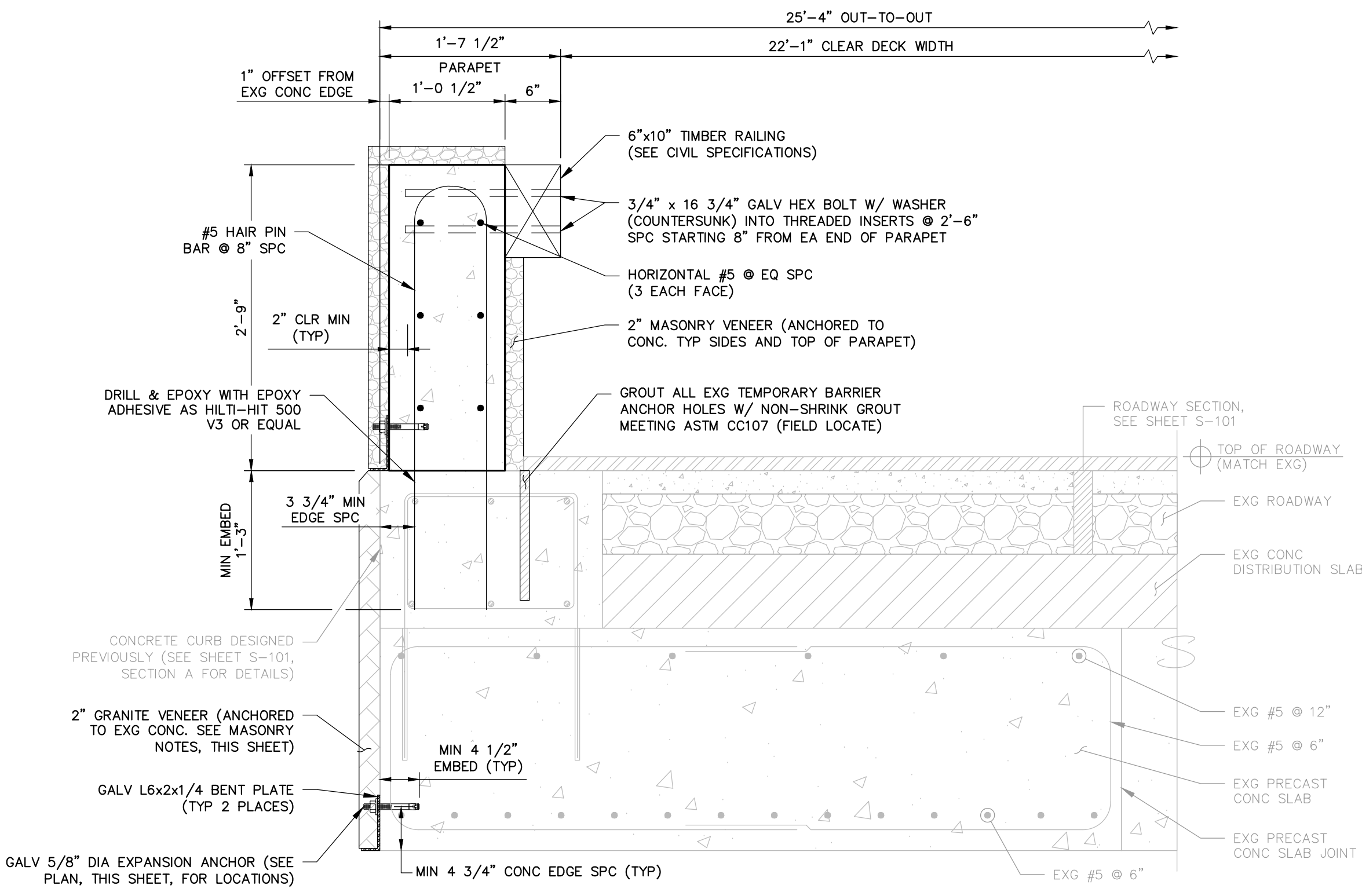
DRAWING NO:

S-103



WAYSIDE INN BRIDGE PLAN

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



PERMANENT BRIDGE PARAPET

SCALE: 1" = 1'-0"

NOTES:

- CONTRACTOR SHALL NOT DAMAGE OR DRILL THROUGH EXISTING REBAR. RELOCATE DOWELING AS REQUIRED TO AVOID REBAR.
- EXISTING CONCRETE ASSUMED IN GOOD CONDITION. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VERIFY CONDITION OF EXISTING CONCRETE WHERE VENEER WILL BE LOCATED. ANY EXPOSED REINFORCING, SPALLED CONCRETE, OR OTHERWISE UNSOUND CONCRETE SHALL BE IMMEDIATELY BROUGHT TO THE ENGINEER'S ATTENTION BEFORE STARTING CONSTRUCTION.

GENERAL NOTES

A. GENERAL STRUCTURAL NOTES:

- THESE NOTES SHALL APPLY TO ALL WORK THIS SHEET, EXCEPT AS NOTED OTHERWISE. SEE SHEETS S-01 & S-02 FOR WORK PREVIOUSLY PERFORMED.
- GOVERNING CODES**
 - MASS STATE BUILDING CODE 780 CMR NINTH EDITION
 - MASSDOT LRFD BRIDGE MANUAL 2013
 - AISC STEEL CONSTRUCTION MANUAL, 14TH ED.
 - ACI 318-14 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
- DESIGN LOADS AND CRITERIA**
 - BASIC DESIGN PARAMETERS**

PROJECT ADDRESS:	SUDBURY, MA
PROJECT LOCATION:	42.357° LONG
GENERAL ELEVATION	-71.470' 188 FT
 - DEAD LOADS**

ACTUAL STONE FACADE	30 PSF (EQUIVALENT TO 2" GRANITE @ 180 PCF)
---------------------	---
 - LIVE LOADS**

IMPACT LOAD	10,000 LBS
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B. REINFORCED CONCRETE:

- PROVIDE 4,500 PSI COMPRESSIVE STRENGTH AT 28 DAYS; 3/4" NOMINAL MAXIMUM AGGREGATE SIZE; AIR CONTENT 6% ± 1.5%; W/C RATIO 0.45 MAXIMUM; SLUMP 5" MAXIMUM W/ NO REDUCER, 6" MAXIMUM W/ MID-RANGE WATER REDUCER, OR 8" MAXIMUM W/ HIGH-RANGE WATER REDUCER AFTER ALL WATER HAS BEEN ADDED. SUBMIT TEST RESULTS TO THE ENGINEER.
- PRIOR TO ORDERING A CONCRETE MIX, SUBMIT A CONCRETE MIX DESIGN TO BE REVIEWED AND APPROVED BY THE ENGINEER. MIX DESIGN SHALL INCLUDE TARGET COMPRESSIVE STRENGTH, TARGET SLUMP, TARGET AIR CONTENT, SIEVE ANALYSIS, WATER REDUCER PRODUCTS (MEETING ASTM C494), AIR ADMIXTURE PRODUCTS (MEETING ASTM C260), AND A CEMENT MILL REPORT NOT OLDER THAN 90 DAYS. CEMENT SHALL BE PER ASTM C150, TYPE II AND SHALL CONTAIN LESS THAN 0.60% EQUIVALENT ALKALIS. IF THE CEMENT CONTAINS 0.60% OR GREATER EQUIVALENT ALKALIS, PROVIDE AGGREGATE ALKALI REACTIVITY TESTING PER ASTM C1260, C1293, OR C1567.
- ALL DESIGN IN ACCORDANCE WITH ACI 318-14 CONCRETE BUILDING CODE. ALL CONCRETE SHALL BE PROVIDED, PLACED, AND MOIST CURED (MIN 7 DAYS) AS PER ALL APPLICABLE SECTIONS OF ACI, AS APPROVED BY THE ENGINEER.
- ALL CONCRETE SHALL BE FIELD TESTED BY AN INDEPENDENT TESTING LABORATORY AS PER ASTM SPECIFICATIONS (PAID FOR BY THE CONTRACTOR). FOR EACH PLACEMENT, ONE SET OF FOUR 4" DIAMETER X 8" TALL STANDARD COMPRESSION TEST CYLINDERS SHALL BE TAKEN AND TESTED IN ACCORDANCE WITH ASTM C39: 1 SPECIMEN TESTED AT 7 DAYS; 2 SPECIMENS TESTED AT 28 DAYS; AND 1 SPECIMEN RETAINED IN RESERVE FOR LATER TESTING IF REQUIRED.
- PRIOR TO INSTALLING STONE VENEER, ALL EXPOSED CONCRETE SURFACES SHALL RECEIVE A GROUT-CLEANED RUBBED FINISH AND SHALL HAVE A SMOOTH AND EVEN SURFACE, FREE OF BUG HOLES, WHEN COMPLETED. FILL MORTAR SHALL CONSIST OF ONE PART CEMENT TO 1 1/2 PARTS SAND MEETING ASTM C144 OR C404. WORK IN DIRECT HOT SUNLIGHT SHALL BE AVOIDED.

6. CONCRETE ANCHORS

THE FOLLOWING ANCHORS SHALL BE USED WHERE CALLED FOR IN THESE DRAWINGS.

EPOXY ADHESIVE: ANCHOR SYSTEM HILTI HIT-HY 500-A W/ REBAR DOWELING

MECHANICAL ANCHORS: ANCHOR HILTI SS304 KWK BOLT TZ2-CS W/WASHER

D. CONCRETE REINFORCEMENT (EPOXY-COATED)

- REINFORCEMENT: ASTM A615 GRADE 60 & EPOXY-COATED PER ASTM A775 - ALL SPLICES CLASS B (UNO). REINFORCEMENT SHALL BE DETAILED, FABRICATED, AND PLACED AS PER ACI 315 DETAILING MANUAL.
- ALL REINFORCEMENT SHALL BE BENT COLD UNLESS OTHERWISE PERMITTED BY THE ENGINEER.
- PLACING (FIELD INSTALLATION)**
 - EPOXY-COATED REINFORCING BARS SUPPORTED FROM FORMWORK SHALL REST ON COATED WIRE BAR SUPPORTS, OR ON BAR SUPPORTS MADE OF DIELECTRIC MATERIAL OR OTHER ACCEPTABLE MATERIALS. REINFORCING BARS USED AS SUPPORT BARS SHALL BE EPOXY-COATED.
 - EPOXY-COATED REINFORCING BARS SHALL BE FASTENED WITH NYLON-, EPOXY-, OR PLASTIC-COATED TIE WIRE OR OTHER ACCEPTABLE MATERIALS.
 - SPLICES OF REINFORCING BARS SHALL BE MADE ONLY AS AUTHORIZED BY THE ENGINEER
 - REINFORCING BARS PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT EXCEPT WHERE SHOWN ON THE DRAWINGS. WHERE REINFORCING BARS ARE FIELD BENT, COATING DAMAGE SHALL BE REPAIRED PER THESE NOTES.
 - UNLESS PERMITTED BY THE ENGINEER, REINFORCING BARS SHALL BE NOT BE FIELD CUT. WHEN EPOXY-COATED REINFORCING BARS ARE CUT IN THE FIELD, THE ENDS OF THE BARS SHALL BE COATED WITH THE SAME MATERIAL USED FOR REPAIR OF COATING DAMAGE PER THESE NOTES.
 - EQUIPMENT FOR HANDLING EPOXY-COATED BARS SHALL HAVE PROTECTED CONTACT AREAS. BUNDLES OF COATED BARS SHALL BE LIFTED AT MULTIPLE PICK-UP POINTS TO MINIMIZE BAR-TO-BAR ABRASION FROM SAGS IN THE BUNDLES. COATED BARS OR BUNDLES OF COATED BARS SHALL NOT BE DROPPED OR DRAGGED. COATED BARS SHALL BE STORED ON PROTECTIVE CRIBBING. FADING OF THE COLOR OF THE COATING SHALL NOT BE CAUSE FOR REJECTION OF EPOXY-COATED REINFORCING BARS.
 - COATING DAMAGE DUE TO HANDLING, SHIPMENT, AND PLACING NEED NOT BE REPAIRED IN CASES WHERE THE DAMAGED AREA IS 0.1 SQUARE INCH OR SMALLER. DAMAGED AREAS LARGER THAN 0.1 SQUARE INCH SHALL BE REPAIRED PER THESE NOTES. THE MAXIMUM AMOUNT OF DAMAGE INCLUDING REPAIRED AND UNREPAIRED AREAS SHALL NOT EXCEED 2 PERCENT OF THE SURFACE AREA OF EACH B
 - WHEN REQUIRED, DAMAGES EPOXY COATING SHALL BE REPAIRED WITH PATCHING MATERIAL CONFORMING TO ASTM A775. REPAIR SHALL BE DONE IN ACCORDANCE WITH THE PATCHING MATERIAL MANUFACTURER'S RECOMMENDATIONS.
 - COATING DAMAGE DUE TO HANDLING, SHIPMENT, AND PLACING NEED NOT BE REPAIRED IN CASES WHERE THE DAMAGED AREA IS 0.1 SQUARE INCH OR SMALLER. DAMAGED AREAS LARGER THAN 0.1 SQUARE INCH SHALL BE REPAIRED PER THESE NOTES. THE MAXIMUM AMOUNT OF DAMAGE INCLUDING REPAIRED AND UNREPAIRED AREAS SHALL NOT EXCEED 2 PERCENT OF THE SURFACE AREA OF EACH BAR.

E. MASONRY:

- VENEER: BY STONEYARD, INC OR APPROVED EQUAL. COLOR AND STYLE OF MASONRY & GRANITE VENEER SHALL BE SELECTED BY THE CLIENT. ANCHORAGE OF VENEER SHALL BE ANCHORED PER MANUFACTURERS RECOMMENDATIONS.
- ALL STONE FINISHES SHALL HAVE AN AGED FINISH TO BE REVIEWED AND APPROVED BY THE HISTORIC DISTRICTS COMMISSION AT A FUTURE MEETING.
- MORTAR FOR VENEER SHALL CONFORM TO ASTM C270, TYPE N, AND SHALL CONSIST OF THE FOLLOWING PROPORTIONS BY VOLUME: 1 PART TYPE N MORTAR CEMENT 2-1/4 TO 3 PARTS AGGREGATE; OR 1 PART PORTLAND CEMENT, 1/2 TO 1-1/4 PARTS HYDRATED LIME, 2-1/4 TO 3 TIMES THE SUM OF THE CEMENT AND LIME VOLUMES, PARTS AGGREGATE
- MORTAR PIGMENT: MORTAR SHALL BE CHEMICALLY PURE INORGANIC OXIDES IN COMPOUNDS SUITABLY PREPARED FOR USE IN MASONRY MORTAR. COLORS SHALL BE SELECTED BY THE CLIENT.

F. STRUCTURAL STEEL:

- STEEL SHALL COMPLY WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION AISC 360-10 SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, AISC 303-10 CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES AND THE 14TH EDITION OF STEEL CONSTRUCTION MANUAL. ALL STEEL MEMBERS, BOLTS, AND CONNECTIONS SHALL BE DESIGNED TO LOAD AND RESISTANCE FACTOR DESIGN (LRFD).
- STEEL SHALL CONFORM TO ASTM A36 FOR ROLLED SHAPES & PLATES.
- POST-INSTALLED ANCHORS: EXPANSIONS BOLTS ARE PERMITTED WHERE SPECIFICALLY INDICATED ON DRAWINGS AND IN COMPLIANCE WITH PROJECT SPECIFICATION.
- FIELD CUTTING OR DRILLING IN STRUCTURAL MEMBERS IS PROHIBITED, UNLESS PREVIOUSLY APPROVED BY THE STRUCTURAL STRUCTURAL ENGINEER-OF-RECORD.
- STRUCTURAL STEEL GALVANIZING**
 - ALL STRUCTURAL STEEL, INCLUDING BOLTS AND CONNECTION ITEMS, SHALL BE GALVANIZED.
 - ALL ITEMS SPECIFIED AS GALVANIZED SHALL BE COATED BY THE HOT-DIP PROCESS IN ACCORDANCE WITH ASTM A123 OR ASTM A153, IN MOLTEN ZINC, PRODUCING A CONTINUOUS COATING OF UNIFORM THICKNESS OF WEIGHT REQUIRED BY THE REFERENCED SPECIFICATIONS.
 - GALVANIZING PROCESS SHALL INCLUDE NOT LESS THAN FOUR IMMERSIONS IN COPPER SULFATE IN CONFORMANCE WITH ASTM A239. MINIMUM ACCEPTABLE WEIGHT OF COATING SHALL BE 1.25 OUNCES PER SQUARE FOOT OF SURFACE AS PER ASTM A90
 - GALVANIZED ITEMS SHALL BE TAGGED TO INCLUDE THE NAME OF GALVANIZER, THE WEIGHT OF THE COATING, AND APPLICABLE ASTM COMPLIANCE.
 - AT LOCATIONS WHERE GALVANIZED STEEL IS FIELD CUT AND AT OTHER LOCATIONS WHERE GALVANIZED COATING IS REMOVED, THE STEEL SURFACE SHALL BE TOUCHED UP WITH A ZINC RICH PAINT MEETING ASTM A780 AND CONTAINING A MINIMUM OF 65% ZINC. THE MINIMUM ACCEPTABLE WEIGHT OF COATING SHALL BE 1.25 OUNCES PER SQUARE FOOT OF SURFACE AS PER ASTM A90.
 - IF GALVANIZED STEEL IS TO BE PAINTED, THE GALVANIZED STEEL SHALL NOT BE QUENCHED. IT SHALL BE PHOSPHATIZED, AND PREPARED FOR PAINTING PER ASTM D6386. IT SHALL BE PRIME PAINTED, COMPATIBLE WITH THE FINISH PAINTS SPECIFIED.

ABBREVIATIONS

&	AND	MAX	MAXIMUM
@	AT	MECH	MECHANICAL
%	PERCENT(AGE)	MIN	MINIMUM
±	PLUS OR MINUS		
ACI	AMERICAN CONCRETE INSTITUTE	OC	ON CENTER
ASTM	AMERICAN SOCIETY OF TESTING MATERIALS	OCEW	OUTSIDE DIAMETER
BOT	BOTTOM	PL	PLATE
CIP	CAST-IN-PLACE	PLF	POUND(S) PER LINEAR FOOT
CLR	CLEAR	PSF	POUND(S) PER SQUARE FOOT
CONC	CONCRETE	PSI	POUND(S) PER SQUARE INCH
DIA	DIAMETER	REF	REFERENCE
DWGS	DRAWINGS	SEOR	STRUCTURAL ENGINEER OF RECORD
EL	ELEVATION	SS	STAINLESS STEEL
EMBED	EMBEDMENT	T&B	TOP AND BOTTOM
EXG	EXISTING	TYP	TYPICAL
FT	FOOT / FEET	UNO	UNLESS NOTIFIED OTHERWISE
FV	FIELD VERIFY		
FL	FIELD LOCATE	W/	WITH
IN	INCH(ES)		