

INVITATION TO BID

The City of Rochester, New Hampshire is accepting sealed bids for a sidewalk, curbing, and guardrail construction project necessary to replace existing infrastructure in the sidewalk approaches adjacent to the Route 125 pedestrian bridge over the Cocheco River. The project is located on the west side of NH Route 125, approximately 250' north of the Brock Street and NH Route 125 intersection, and the scope of work is as detailed herein. Bids must be submitted in a sealed envelope plainly marked:

Route 125 Pedestrian Bridge Approaches
Bid # 17-38
City of Rochester
31 Wakefield Street
Rochester, NH 03867
Attn: Purchasing Agent

All bids must be received no later than **"May 11, 2017"** at **2:15 PM**. Actual bid opening will be at Rochester City Hall, 31 Wakefield Street in Rochester NH, at **2:30 PM**. No late bids, faxed, emailed or telephone bids will be accepted. Bid proposals and specifications may be obtained by visiting www.rochesternh.net, or emailing purchasing@rochesternh.net, or by contacting the Purchasing Agent at City Hall, 31 Wakefield Street, Rochester, NH 03867, (603) 335-7602. All bid questions must be submitted in writing (email preferred) to the Purchasing Agent. Bidders are to monitor website for addendums, and postings of all bid questions and answers. All bid proposals must be made on the bid proposal forms supplied, and the bid proposal forms must be fully completed when submitted.

A mandatory site visit to review the requirements for the proposed sidewalk and guardrail improvements will be held on Wednesday, April 26 at 10:30 AM. Bidders will meet at the project site located at approximately 700 Columbus Ave, Rochester, NH 03867. All prospective Bidders must attend in order to submit a Bid.

Documents Comprising Bid # 17-38:

- Scope of Work
- Photos
- Bid Form & Instructions to Bidders
- Technical Specifications
- Plans (5 sheets)

SCOPE OF WORK

City of Rochester, NH Route 125 Pedestrian Bridge Approaches Bid #17-38

Existing Conditions:

In January 2016, the City of Rochester undertook an expedited project to replace the pedestrian bridge adjacent to the Route 125 roadway bridge over the Cocheco River (NHDOT Bridge No. 148/113). The emergency funding resolution for this work did not contain sufficient funds for installation of new approach railing at either end of the pedestrian bridge. Temporary timber rail was installed to transition from the replacement pedestrian bridge to the existing timber fence/rail system along the sidewalk approaches. The existing timber rail system is in poor condition and does not provide adequate protection for pedestrians or vehicles from the steep embankment separating the sidewalk from the Cocheco River on the west side of the bridge. Temporary curbing and pavement was also installed at both approaches to create transitions from the existing sidewalk to the replacement bridge.

Scope of Work:

- Work completed under this project shall be performed with vehicular traffic shifted to the east (against the northbound curblines) within the project limits to create a narrow (approximately 3' wide) work zone along the western (southbound) curblines. Two-lane, two-way traffic shall be maintained at all times, and the original traffic pattern will be restored when the work is completed. The City of Rochester shall be responsible for implementing and maintaining all traffic management measures necessary for the construction of the proposed work; there will be no cost to the Contractor for traffic management on this project.
- Remove existing timber approach rail, bituminous approach pavement, portion of south approach concrete sidewalk, portion of granite curb, and timber posts acting as curbing. The vehicular bridge guardrail shall remain.
- Reconstruct curb ramp on the south approach per plans and details.
- Install double granite curb on the east side (roadway side) of the approaches per plans and details.
- Install single granite curb on the west side of the approaches per plans and details.
- Construct concrete sidewalks within limits shown on the plans.
- Construct ADA compliant ramps per plans and details.
- Install pedestrian handrail between the sidewalk and existing vehicular bridge rail per plans and details.
- Install a modified T4 rail system on the west side of the approaches; the rail shall connect to the pedestrian bridge as detailed in the design plans.
- Install loam and seed and perform final restorations to disturbed areas

Photos

Route 125 Pedestrian Bridge Approaches Rochester, NH



South Approach Looking North



North Approach Looking South

Bid Form & Instructions to Bidders

Bidder will complete the Work in accordance with the Contract Documents for the following prices:

BID SCHEDULE

ITEM NO.	ITEM DESCRIPTION AND UNIT PRICE BID WRITTEN IN WORDS	UNIT	ESTIMATED QUANTITY	UNIT PRICE DOLLARS CTS	TOTAL PRICE DOLLARS CTS
203.1	Common Excavation, for the unit price per cubic yard of: _____ Dollars (words) and _____ Cents.	CY	43		
304.301	Crushed Gravel, for the unit price per cubic yard of: _____ Dollars (words) and _____ Cents.	CY	28		
403.12	Hot Bituminous Pavement, Hand Method, for the unit price per ton of: _____ Dollars (words) and _____ Cents.	TON	7		
563.244	Bridge Rail T4 Modified, for the unit price per linear foot of: _____ Dollars (words) and _____ Cents.	LF	100		
606.6201	Ramp Handrail, Steel, for the unit price per linear foot of: _____ Dollars (words) and _____ Cents.	LF	40		
608.26	6" Concrete Sidewalk (F), for the unit price per square yard of: _____ Dollars (words) and _____ Cents.	SY	82		

609.01	Straight Granite Curb, for the unit price per linear foot of: _____ Dollars (words) and _____ Cents.	LF	180		
609.02	Curved Granite Curb, for the unit price per linear foot of: _____ Dollars (words) and _____ Cents.	LF	28		
628.2	Sawed Bituminous Pavement, for the unit price per linear foot of: _____ Dollars (words) and _____ Cents.	LF	140		
646.51	Turf Establishment with Mulch, Tackifiers and Loam, for the unit price per square yard of: _____ Dollars (words) and _____ Cents.	SY	61		
699	Miscellaneous Temporary Erosion and Sediment Control, for the unit price per allowance of: _____ One Thousand _____ Dollars (words) and _____ Cents.	ALLOW	\$	\$1,000.00	\$1,000.00

TOTAL CONTRACT PRICE BASE BID:

_____ Dollars

(Cost in written words)

and _____ Cents.

(\$ _____)

(Cost in numbers)

Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

COMPANY NAME: _____

CONTACT PERSON: _____

ADDRESS: _____

TELEPHONE #: _____ FAX #: _____

EMAIL ADDRESS: _____

SIGNATURE: _____

Bid results will be posted after 48 hours on the City of Rochester's website: www.rochesternh.net or will be available by request via email at the following address: purchasing@rochesternh.net

INSTRUCTIONS TO BIDDERS

Preparation of Bid Proposal

1. The Bidder shall submit her/his proposal upon the form(s) furnished by the City (attached). The Bidder shall specify a unit price for each pay item. All figures shall be in ink or typed.
2. If a unit price or lump sum bid already entered by the Bidder on the proposal form is to be altered it should be crossed out with ink, the new unit price or lump sum bid entered above or below it, and initialed by the Bidder, also with ink. In case of discrepancy between the prices written in words and those written in figures, the prices written in words shall govern.
3. The Bidder's proposal must be signed with ink by the individual, by one or more members of the partnership, by one or more members or officers of each firm representing a joint venture, by one or more officers of a corporation, or by an agent of the Contractor legally qualified and acceptable to the Owner. If the proposal is made by an individual, his name and post office address must be shown, by a partnership the name and post office address of each partnership member must be shown; as a joint venture, the name and post office address of each must be shown; by a corporation, the name of the corporation and its business address must be shown, together with the name of the state in which it is incorporated, and the names, titles, and business addresses of the President, Secretary, and Treasurer.
4. All questions shall be submitted in writing to and received by the Purchasing Agent at the above address, a minimum of 7 days prior to the scheduled bid opening. The Purchasing Agent will then forward both the question and the City's response to the question to all known prospective Bidders.

Irregular Proposals

Bid proposals will be considered irregular and may be rejected for any of the following reasons:

1. If the proposal is on a form other than that furnished by the Owner or if the form is altered or any part thereof is detached.
2. If there are unauthorized additions, conditional or alternate bids, or irregularities of any kind which may tend to make the proposal incomplete, indefinite or ambiguous as to its meaning.
3. If the Bidder adds any provisions reserving the right to accept or reject an award, or to enter into a contract pursuant to an award.
4. If the proposal does not contain a unit price for each pay item listed, except in the case of authorized alternate pay items.

Delivery of Bid Proposals

When sent by mail, the sealed proposal shall be addressed to the City of Rochester, Purchasing Agent, 31 Wakefield Street, Rochester, NH 03867. All proposals shall be filed prior to the time and at the place specified in the invitation for bids. Proposals received after the time for opening of the bids will be returned to the Bidder, unopened. Emailed or faxed bid proposals are not acceptable.

Withdrawal of Bid Proposals

A Bidder will be permitted to withdraw his proposal unopened after it has been deposited if such request is received in writing prior to the time specified for opening the proposals.

Public Opening of Bid Proposals

Proposals will be opened and read publicly at the time and place indicated in the invitation for bids. Bidders, their authorized agents, and other interested parties are invited to be present.

Disqualification of Bidders

Either of the following reasons may be considered as being sufficient for the disqualification of a Bidder and the rejection of her/his bid proposal(s):

1. Evidence of collusion among Bidders.
2. Failure to supply complete information as requested by the bid specifications.

Consideration of Proposals

1. Bids will be made public at the time of opening and may be reviewed only after they have been properly recorded. In case of discrepancy between the prices written in words and those written in figures, the prices written in words shall govern. In case of a discrepancy between the total shown in the proposal and that obtained by adding the products of the quantities of items and unit bid prices, the latter shall govern.
2. The right is reserved to reject any or all proposals, to waive technicalities or to advertise for new proposals, if in the judgment of the City, the best interest of the City of Rochester will be promoted thereby.
3. Bid results will be available on the website at www.rochesternh.net within 48 hours of the bid opening.

Award of Contract

The City holds the right, in its judgment, to award the contract to the Bidder which it feels is in the best interest of the City. If a contract is to be awarded, the Contractor/Vendor selection shall be based in part on possession of the necessary experience, organization, technical and professional qualifications, skills and facilities, reference checks, project understanding, approach, ability to comply with proposed or required time to completion or performance, licensing or certification, in good standing with Federal, State and Local agencies, possession of satisfactory record of performance, cost, and to a responsible and qualified Bidder whose proposal complies with all the requirements prescribed as soon as practical after the bid opening. No bid shall be withdrawn for a period of (60) sixty days subsequent to the opening of bids without the consent of the City of Rochester. The successful Bidder will be notified, by the form mailed to the address on his proposal, that his bid has been accepted and that he has been awarded the contract.

Cancellation of Award

The City reserves the right to cancel the award of any contract at any time before the execution of such contract by all parties without any liability or other claim against the City.

Bid Evaluation

In addition to the bid amount, additional factors will be considered as an integral part of the bid evaluation process, including, but not limited to:

1. The Bidder's ability, capacity, and skill to perform within the specified time limits.
2. The Bidder's experience, reputation, efficiency, judgment, and integrity.
3. The quality, availability and adaptability of the supplies and materials sold.
4. The Bidder's past performance.
5. The sufficiency of Bidder's financial resources to fulfill the contract.
6. The Bidder's ability to provide future maintenance and/or services.
7. Any other applicable factors as the City determines necessary and appropriate (such as compatibility with existing equipment).

Conditions at Site

Bidders shall be responsible for having ascertained pertinent local conditions, such as: location, accessibility and general character of the site. The character and extent of existing work within or adjacent to the site and any other work being performed thereon at the time of the submission of her/his bid.

Laws, Permits and Regulations

1. The Contractor shall obtain and pay for all licenses and permits as may be required of him by law, and shall pay for all fees and charges for connection to outside services, and use of property other than the site of the work for storage of materials or other purposes.
2. The Contractor shall comply with all State and Local laws, ordinances, regulations and requirements applicable to work hereunder, including building code requirements. If the Contractor ascertains at any time that any requirement of this Contract is at variance with applicable laws, ordinances, regulations or building code requirements, she/he shall promptly notify the City of Rochester in writing.

Contractor's and Subcontractor's Insurance

1. The Contractor shall deliver with bid documents; certificates of all insurance required hereunder. The certificate shall state that the companies issuing insurance will endeavor to mail to the City of Rochester ten (10) days notice of cancellation, alteration or material change of any listed policies. The Contractor shall keep in force the insurance required herein for the period of the Contract. At the request of the City of Rochester, the Contractor shall promptly make available a copy of any and all listed insurance policies. The requested insurance must be written by a Company licensed to do business in New Hampshire at the time the policy is issued.

2. The City of Rochester, NH shall be listed as additional insured on all the Certificates of Insurance.
3. The Contractor shall require each Subcontractor employed on the Project to maintain the coverage listed below unless the Contractor's insurance covers activities of the Subcontractor on the Project.
4. No operations under this Contract shall commence until certificates of insurance attesting to the below listed requirements have been filed with and approved by the Department of Public Works, and the Contract approved by the City Manager.
 - a. Worker's Compensation Insurance
E.L. (Employer's Liability) each accident: \$500,000
E.L. disease – each employee: \$500,000
E.L. disease – policy limit: \$500,000
 - b. Commercial Automobile Liability
Combined Single Limit (bodily injury and property damage) – each accident: \$1,000,000
 - c. Commercial General Liability
Each occurrence: \$1,000,000
General Aggregate: \$2,000,000 with per project aggregate endorsement
Products/Completed Operations Aggregate: \$2,000,000
 - d. Commercial Umbrella/Excess Liability
Each occurrence: \$1,000,000
General Aggregate: \$1,000,000
Products/Completed Operations Aggregate: \$1,000,000
 - e. Owner's Liability – Named Insured: The City of Rochester
The City of Rochester shall be named as an additional insured for on-going and completed operations on a primary and noncontributory basis by way of certificate of insurance and amendatory endorsement on all liability insurance policies required above.
 - f. Contract Indemnification
The Contractor shall indemnify, defend, and save harmless the City of Rochester and its agents and employees from and against any suit, action or claim of loss or expenses because of bodily injury. Including death at any time resulting there from, sustained by any person or persons or on account of damage to property, including loss of use thereof, whether caused by or contributed to by said City of Rochester, its agents, employees or others.

Accident Protections

It is a condition of this Contract, and shall be made a condition of each subcontract entered into pursuant to the Contract. That a Contractor and any Subcontractors shall not require any laborer or mechanic employed in the performance of the Contract to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to health or safety, as determined by construction safety and health standards of the Occupational Safety and Health Administration, United States Department of Labor, which standards include, by reference, the established Federal Safety and Health regulations for Construction. These standards and regulations comprise Part 1910 and Part 1926 respectively of Title 29 of the Code of Federal Regulations and are set forth in the Federal Register. In the event any revisions in the Code of Federal Regulations are published, such revisions will be deemed to supersede the appropriate Part 1910 and Part 1926, and be effective as of the date set forth in the revised regulation.

Subcontracts

1. Nothing contained in the Specifications or Drawings shall be construed as creating any contractual relationship between any Subcontractor and the City of Rochester. The Division or Sections of the Specifications are not intended to control the Contractor in dividing the work among Subcontractors or to limit the work performed by any trade.
2. The Contractor shall be as fully responsible to the City of Rochester for the acts and omissions of Subcontractors and of persons employed by her/him, as she/he is responsible for the acts and omissions of persons directly employed by her/him.

Protection of Work and Property

The Contractor shall, at all times, safely guard the City's property from injury or loss in connection with this Contract. She/he shall, at all times, safely guard and protect her/his own work and that of adjacent property from damage. All passageways, guard fences, lights and other facilities required for protection by State or Municipal laws, regulations and local conditions must be provided and maintained.

Use of Premises and Removal of Debris

The Contractor expressly undertakes at his own expense:

1. To take every precaution against injuries to persons or damage to property;
2. To comply with the regulations governing the operations of premises which are occupied and to perform his Contract in such a manner as not to interrupt or interfere with the operation of the Institution;
3. To perform any work necessary to be performed after working hours or on Sunday or legal holidays without additional expense to the City, but only when requested to do so by the City;
4. To store his apparatus, materials, supplies and equipment in such orderly fashion at the site of the work as will not unduly interfere with the progress of his work or the work of any other Contractors;

5. Daily to clean up and legally dispose of (away from the site), all refuse, rubbish, scrap materials and debris caused by his operation. Including milk cartons, paper cups and food wrappings left by his employees, to the end that at all times the site of the work shall present a neat, orderly and workmanlike appearance;
6. All work shall be executed in a workmanlike manner by experienced mechanics in accordance with the most modern mechanical practice and shall represent a neat appearance when completed.

Materials and Workmanship

1. Unless otherwise specified, all materials and equipment incorporated into the work under the Contract shall be new. All workmanship shall be first class and by persons qualified in their respective trades.
2. Where the use of optional materials or construction method is approved, the requirements for workmanship, fabrication and installation indicated for the prime material or construction method shall apply wherever applicable. Required and necessary modifications and adjustments resulting from the substitution or use of an optional material or construction method shall be made at no additional cost to the City.

Standards

1. Materials specified by reference to the number, symbol or title of a specific standard, such as a Commercial Standard, a Federal Specification, Department's Standard Specifications, a trade association standard or other similar standard. Shall comply with requirements in the latest revision thereof and any amendment or supplement thereto in effect on the date of advertisement, except as limited to type, class or grade or modified in such reference.
2. Reference in the Specifications to any article, device, product, material, fixture, form or type of construction by name, make or catalog number shall be interpreted as establishing a standard of quality and shall not be construed as limiting competition. In such cases the Contractor may, at his option, use any articles, device, product, material fixture, form or type of construction that, in the judgment of the City expressed in writing to all Bidders before opening of bids as an addendum, is an acceptable substitute to the specified.
3. Substitution During Bid Time: Whenever any particular brand or make of material or apparatus is called for in the Specifications, a Bidder's Proposal must be based upon such material or apparatus, or upon a brand or make which has been specifically approved as a substitution in an Addendum issued to all Bidders during the bidding time.
4. The intent is that the brand or make of material or apparatus that is called for herein establishes a standard of excellence that, in the opinion of the Consultant and Engineer, is necessary for this particular Project.
5. Substitution After Bid Opening: No substitutions will be considered after bids have been opened unless necessary due to strikes, lockouts, bankruptcy or discontinuance of manufacture, etceteras. In such cases, the Contractor shall apply to the City, in writing within ten (10) days of his realizing his inability to furnish the article specified, describing completely the substitution he desires to make.

Extras

Except as otherwise herein provided, no charge for any extra work or material will be allowed unless the Director of Public Works has ordered the same, in writing.

Guarantee of Work

1. Except as otherwise specified, all work shall be guaranteed by the Contractor against defects resulting from the use of inferior materials, equipment or workmanship for one (1) year from the Date of Final Acceptance.
2. Make good any work or material, or the equipment and contents of said building or site disturbed in fulfilling any such guarantee.
3. In any case, wherein fulfilling the requirements of the Contract or of any guarantee, should the Contractor disturb any work guaranteed under another contract, the Contractor shall restore such disturbed work to a condition satisfactory to the Director of Public Works. And guarantee such restored work to the same extent as it was guaranteed under such other contracts.
4. If the Contractor, after notice, fails to proceed promptly to comply with the terms of the guarantee, the City of Rochester may have the defects corrected and the Contractor shall be liable for all expense incurred.
5. All special guarantees applicable to definite parts of the work that may be stipulated in the Specifications or other papers forming a part of the Contract shall be subject to the terms of this paragraph during the first year of the life of such special guarantee.

Default and Termination of Contract**If the Contractor:**

1. Fails to begin work under Contract within the time specified in the notice to proceed; or
2. Fails to perform the work with sufficient workers and equipment, or with sufficient materials to assume prompt completion of said work; or
3. Performs the work unsuitably or neglects or refuses to remove materials or to perform anew such work as may be rejected as unacceptable and unsuitable; or
4. Discontinues the prosecution of the work; or
5. Fails to resume work, which has been discontinued, within the time frames included in specifications; or
6. Becomes insolvent or has declared bankruptcy, or commits any act of bankruptcy or insolvency; or
7. Makes an assignment for the benefit of creditors; or
8. For any other causes whatsoever, fails to carry on the work in an acceptable manner the City of Rochester will give notice, in writing, to the Contractor for such delay, neglect, and default.

If the Contractor does not proceed in accordance with the Notice, then the City of Rochester will have full power and authority without violating the Contract to take the prosecution of the work out of the hands of the Contractor. The City of Rochester may enter into an agreement for the completion of said Contract according to the terms and conditions thereof, or use such other methods as in the City's opinion will be required for the completion of said Contract in an acceptable manner.

All extra costs and charges incurred by the City of Rochester as a result of such delay, neglect or default, together with the cost of completing the work under the Contract will be deducted from any monies due or which may become due to said Contractor. If such expenses exceed the sum which would have been payable under the contract, then the Contractor shall be liable and shall pay to the City of Rochester the amount of such excess.

Obtaining Bid Results

Bid results will be available on the website at www.rochesternh.net within 48 hours of the bid opening.

Technical Specifications

TECHNICAL SPECIFICATIONS

All work shall be in accordance with State of New Hampshire, Department of Transportation NHDOT Standard Specifications for Road and Bridge Construction, approved and adopted in March 2016 (Standard Specifications).

The NHDOT specifications are hereby amended as follows:

1. Delete Division 100-General Provisions in its entirety, with the exception of the following changes:
 - Section 101-Definitions and Terms
 - **Retain** subsections 101.01,101.02, 101.06, 101.09, 101.10, 101.14 through 101.18, 101.21, 101.23, 101.35 through 101.37, 101.44, 101.46, 101.47, 101.51, 101.52, 101.54 through 101.56, 101.58, 101.59, 101.61, 101.66 through 101.69, 101.71 through 101.73, 101.77, 101.79, 101.82 through 101.88, 101.90 through 101.102, 101.104, 101.106 through 101.112, 101.115 through 101.117.
 - Section 104-Scope of Work
 - **Retain** subsection 104.03 only and:
 - **Replace** the reference to "105.02" with Standard General Condition Article 7.16 in the fourth sentence of the first paragraph.
 - **Delete** the third to last sentence and last sentence of the first paragraph.
 - **Delete** subsections B, C, and D.
 - **Replace** "Department" with "Owner" in subsection A.
 - Section 105-Control of the Work
 - **Retain** subsections 105.03 through 105.07 and 105.10 through 105.15 only.
 - **Delete** the second sentence in the second paragraph of 105.04 which references Section 104.02 in its entirety.
 - **Delete** "...104.03..." from the last sentence in 105.14.
 - **Replace** "...as provided for in 109.04." at the end of the second sentence of the second paragraph of 105.10 with "...in accordance with Article 13 of the Standard General Conditions of the of the Construction Contract."
 - **Replace** 105.02 with Section 01300 Submittals.
 - Section 106-Control of Material
 - **Retain** subsections 106.01, 106.02, 106.04 through 106.07, 106.09 through 106.10.
 - **Delete** the second sentence in 106.06.
 - Section 107-Legal Relations and Responsibility to Public
 - **Retain** subsections 107.01 through 107.10 and 107.15 through 107.17.
 - Section 108-Prosecution and Progress
 - **Replace** 108.07 with Standard General Conditions Articles 4.05 and 11.05.
 - **Replace** 108.07 with Standard General Conditions Articles 4.05 and 11.05.
 - Section 109-Measurement and Payment
 - **Retain** subsections 109.01 and 109.11 only.
 - **Delete** the 25th paragraph referencing "rental of equipment...." of 109.01.

- **Replace** 109.04 with Standard General Conditions Article 11.
2. Substitute "Hoyle, Tanner and Associates, Inc." for "Engineer", "Department", "State", "Bureau of Bridge Design", "Bureau of Materials and Research" or "NHDOT Compliance Review Officer" throughout the specifications.

All applicable portions of Sections 201 through 699 from the NHDOT Standard Specifications (English Units) apply to this Project, unless modified by Supplemental Specifications or Special Provisions in this document.

The NHDOT Specifications are periodically supplemented with updates posted on the NHDOT website at www.nh.gov./dot/org/projectdevelopment/highwaydesign/specifications/supplementals/index.htm. All applicable supplemental specifications for sections 201 through 699 available at the time that the bid is due will be considered part of this contract specification.

The following plans from NHDOT Standard Plans for Road and Bridge Construction are also considered a part of this contract:

	<u>Revision Date</u>
CR-1 Granite Curb Details	6/16/2010
HR-1 Ramp Handrail	6/16/2010

These lists are not all inclusive and do not relieve the Contractor from complying with any or all NHDOT specifications or plans referred to by the contract documents or referred to by sections of the NHDOT specifications that apply. It is the Contractor's responsibility to obtain copies of these specifications and plans. These plans may also be downloaded, free of charge, from the NHDOT website at

<http://www.nh.gov./dot/org/projectdevelopment/highwaydesign/standardplans/index.htm>

NHDOT Standard Specifications for Road and Bridge Construction and NHDOT Standard Plans for Road and Bridge Construction may be purchased from NHDOT, Records Section, 1 Hazen Drive, P.O. Box 483, Concord, NH 03302-0483, Phone No. 603-271-3514. These specifications may also be downloaded, free of charge, from the NHDOT website at <http://www.nh.gov./dot/org/projectdevelopment/highwaydesign/specifications/index.htm>

SPECIAL PROVISION
AMENDMENT TO SECTION 563 - BRIDGE RAILING
Item 563.244 – Bridge Rail T4 Modified

Add the following Pay items and units:

563.244	Bridge Rail T4 Modified	Linear Foot
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END OF SECTION

**SPECIAL PROVISION
AMENDMENT TO SECTION 304 – AGGREGATE BASE COURSE
ITEM 304.301 – CRUSHED GRAVEL**

Add to Method of Measurement

4.5 Crushed gravel for this project will be measured by the cubic yard of compacted materials placed within the limits shown on the plans.

Add to Basis of Payment

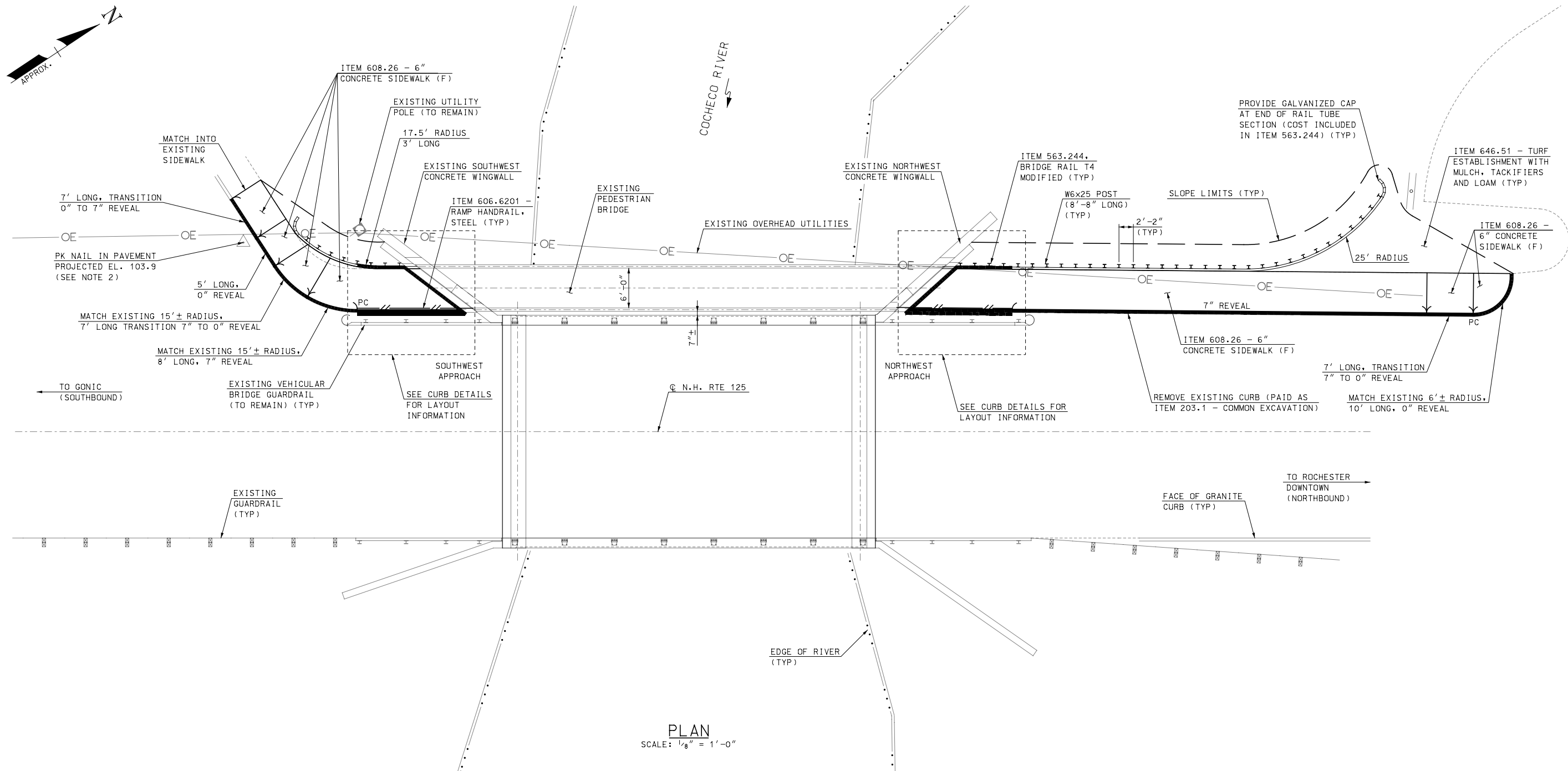
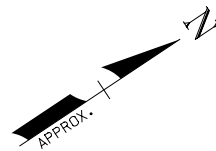
5.4 The accepted quantity of crushed gravel for this project will be paid for at the Contract unit price per cubic yard complete in place.

Add to Pay items and units:

304.301	Crushed Gravel	Cubic Yard
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END OF SECTION

Plans



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

DRAWING SIZES HAVE BEEN REDUCED
DO NOT SCALE, USE DIMENSIONS GIVEN

NOTES:

1. THE EXISTING TIMBER APPROACH RAIL SHALL BE REMOVED AND BECOME THE CONTRACTOR'S PROPERTY (DISPOSE OF UNDER ITEM 563.244).
2. DATUM FROM EXISTING 1982 STATE OF NH PUBLIC WORKS AND HIGHWAYS PLANS IS NOTED AS "BM #51 STA 51+ 5.0' CIR. OAK SPK & WASHERS. ELEV. 100.00 ASSUMED". THIS ASSUMED DATUM HAS BEEN MAINTAINED IN THESE DRAWINGS AND PROJECTED ONTO THE EXISTING PK NAIL IN PAVEMENT IN THE SOUTHWEST QUADRANT OF THE PROJECT, BASED ON FIELD MEASUREMENTS BY HOYLE, TANNER PERSONNEL TAKEN ON SEPTEMBER 9, 2015. ELEVATIONS SHOWN HEREIN SHOULD BE CONSIDERED APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR.

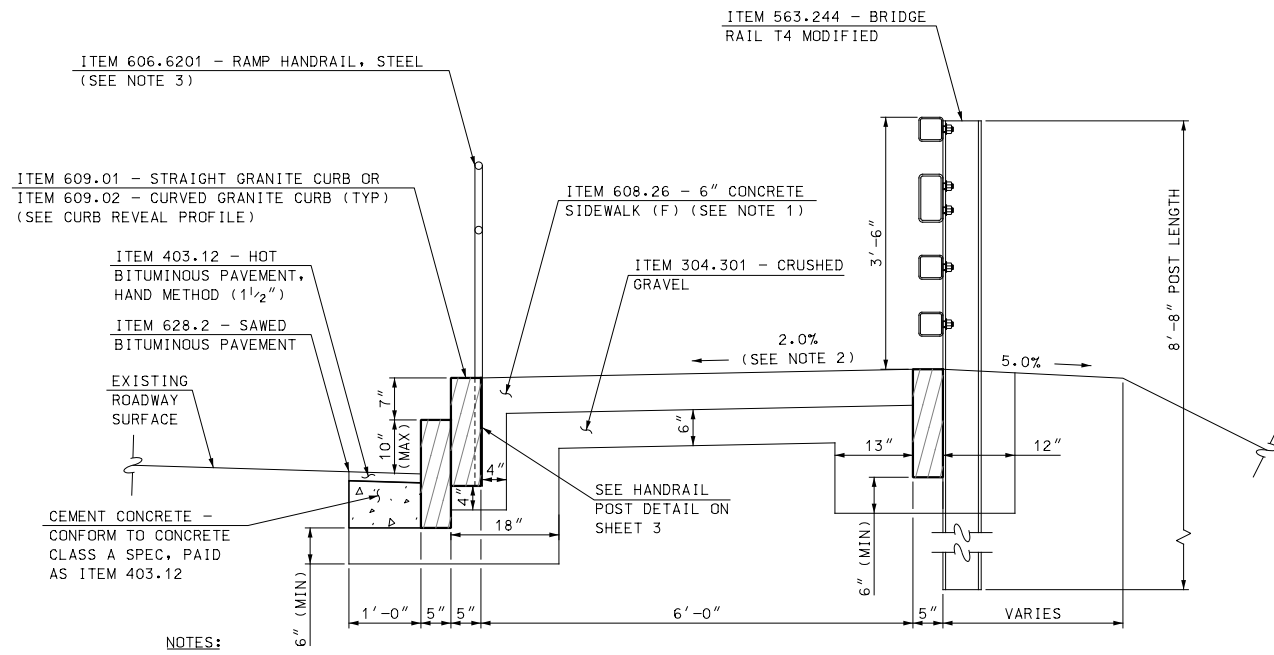
REV.	DESCRIPTION	DRW. CHG. BY	DATE
MARCH, 2017			

DESIGN BY: AGB/JAS
DRAWN BY: KDP
CHKD. BY: AMI/UMC
SCALE: AS SHOWN

Hoyle, Tanner & Associates, Inc.
150 Dow Street, Manchester, NH 03101-1227
Tel (603) 669-5555 • Fax (603) 669-4188
www.hoyletanner.com

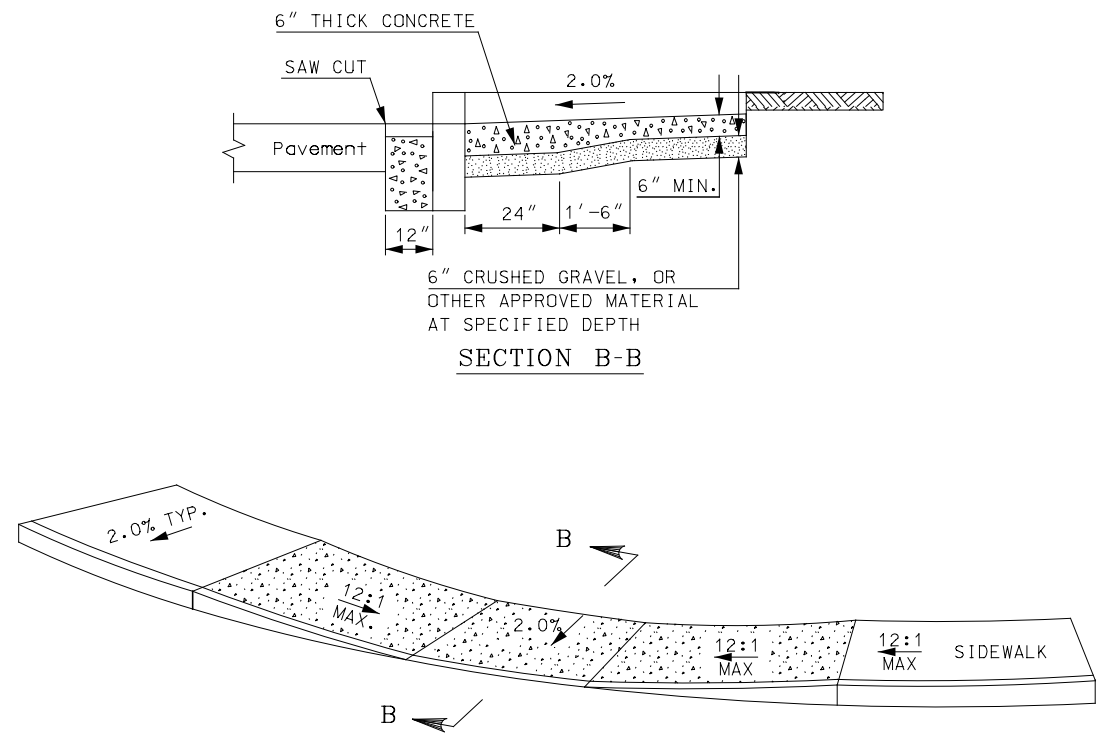
PROJECT NO.:	903908,07
FILE NAME:	903908Genplan
MODEL NAME:	903908Genplan
SHEET NO.	1
SHEET	1 OF 4

4/7/2017 9:27:47 AM K:\903908_07\2-CADD\BRC\Plan\903908Genplan.dgn

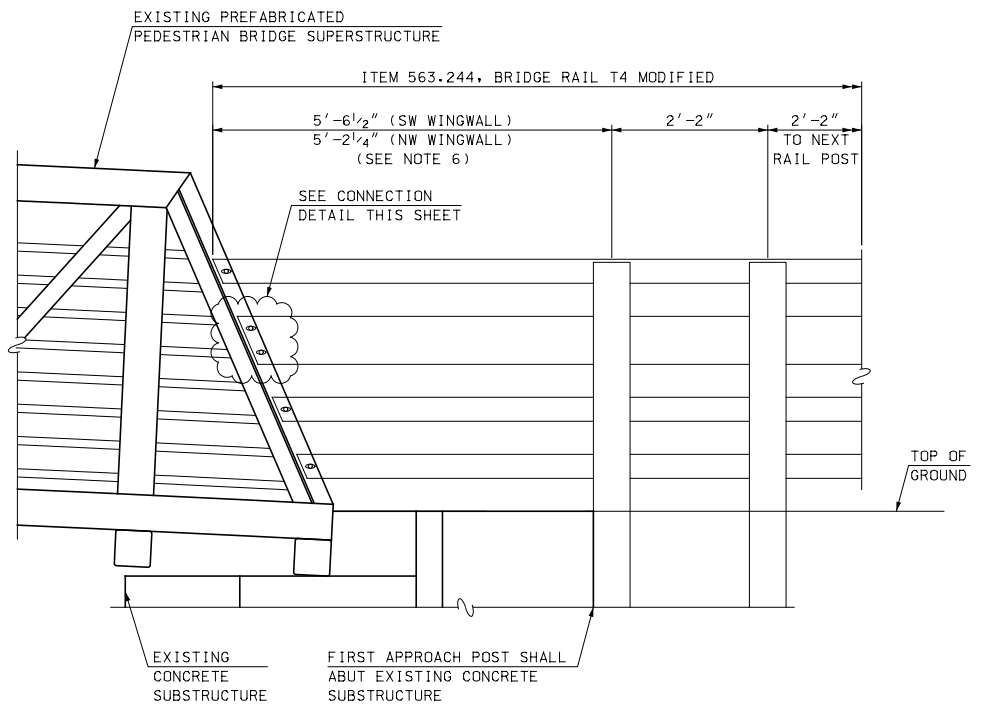


- NOTES:**
1. REMOVE EXISTING SIDEWALK WITHIN PROJECT LIMITS (PAID AS ITEM 203.1 - COMMON EXCAVATION) AND CONSTRUCT CONCRETE SIDEWALK.
 2. TRANSITION FROM 0% AT BRIDGE TO 2.0% OVER SKEW LENGTH.
 3. SEE NHDOT STANDARD DETAIL SHOWN ON STANDARD PLAN HR-1, PLATE 2. SEE CURB REVEAL PROFILE FOR ADDITIONAL INFORMATION.

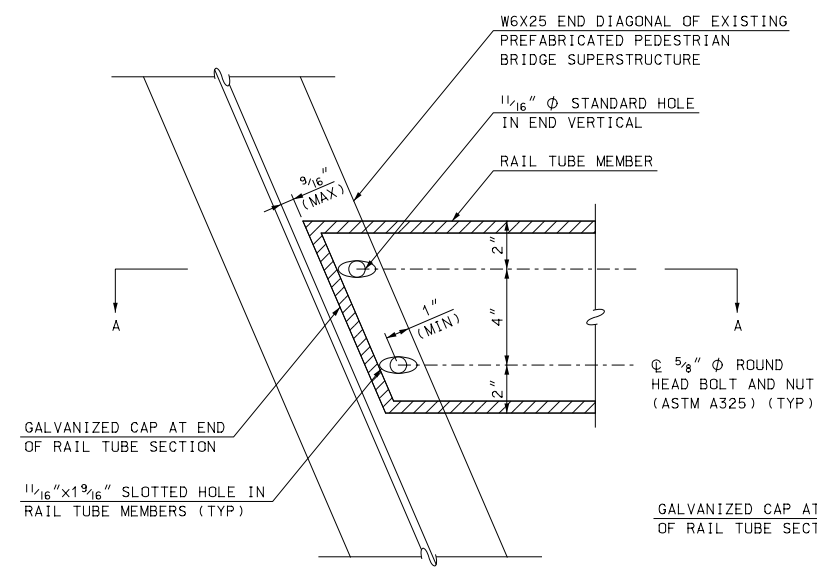
TYPICAL SIDEWALK CROSS SECTION AT BRIDGE
SCALE: 3/4" = 1'-0"



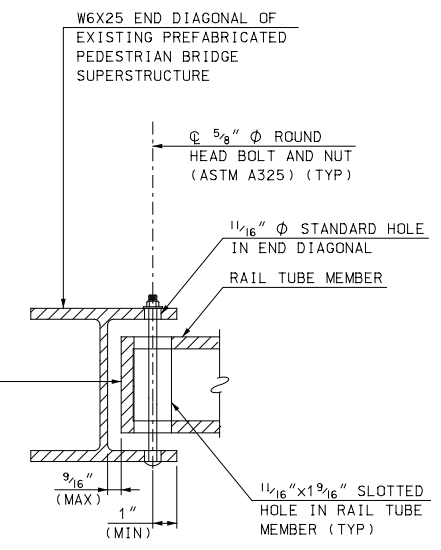
PARALLEL CURB RAMP DETAIL



APPROACH RAIL DETAIL AT BRIDGE
SCALE: 3/4" = 1'-0"
(SOUTHWEST WINGWALL SHOWN, NORTHWEST WINGWALL SIMILAR)



CONNECTION DETAIL
SCALE: 3" = 1'-0"
(HSS 8x4 RAIL TUBE MEMBER SHOWN, HSS 4x4 RAIL TUBE MEMBERS SIMILAR)



SECTION A-A
SCALE: 3" = 1'-0"

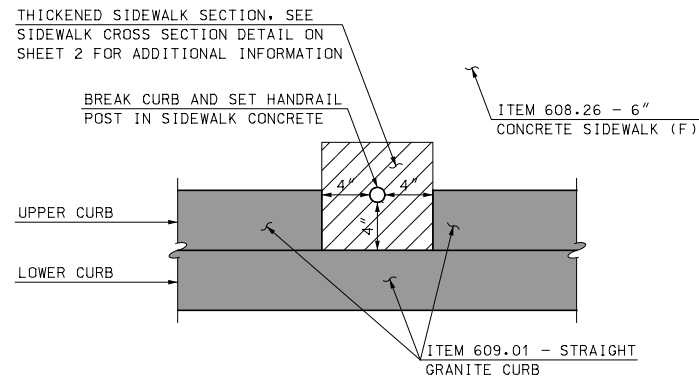
- APPROACH RAIL NOTES:**
1. ITEM 563.244, BRIDGE RAIL T4 MODIFIED, SHALL INCLUDE BUT IS NOT LIMITED TO, POSTS, RAIL ASSEMBLY BOLTS, NUTS, WASHERS, STUDS, STRUCTURAL TUBING, SPLICE BARS, PIPE SPACERS, ALL APPURTENANCES, GALVANIZING, AND ANY MATERIALS AND LABOR REQUIRED FOR THE CONNECTION TO THE END DIAGONAL OF THE PREFABRICATED BRIDGE SUPERSTRUCTURE.
 2. NHDOT STANDARD DETAIL SHEET, T4 STEEL BRIDGE RAIL, SHALL APPLY WHERE APPLICABLE.
 3. THE FIELD DRILLED HOLES IN THE GALVANIZED END DIAGONAL OF THE EXISTING PREFABRICATED BRIDGE SUPERSTRUCTURE SHALL BE THOROUGHLY CLEANED, PRETREATED, AND PAINTED WITH TWO COATS OF ORGANIC ZINC-RICH GALVANIZING REPAIR PAINT, HAVING A MINIMUM 92% ZINC BY WEIGHT, TO A THICKNESS EQUAL TO THE ORIGINAL COATING, ACCORDING TO SECTION 550.2.9.1 AND ASTM A780.
 4. NUTS FOR 5/8" ϕ ROUND HEAD BOLTS CONNECTING THE RAIL TUBES TO THE END DIAGONAL OF THE EXISTING PREFABRICATED BRIDGE SUPERSTRUCTURE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL 2/3 TURN, IN ACCORDANCE WITH SECTION 550.3.11.1.4.
 5. WASHERS SHALL BE USED BETWEEN THE RAIL TUBES AND END DIAGONAL TO PROVIDE A SNUG FIT.
 6. CONTRACTOR SHALL FIELD VERIFY RAIL DIMENSION FROM FIRST APPROACH POST TO THE END DIAGONAL.

REV.	DESCRIPTION	DATE
MARCH, 2017	DESIGN BY: AGB/JAS	
	DRAWN BY: KDP	
	CHKD. BY: AML/TMC	
	SCALE: AS SHOWN	

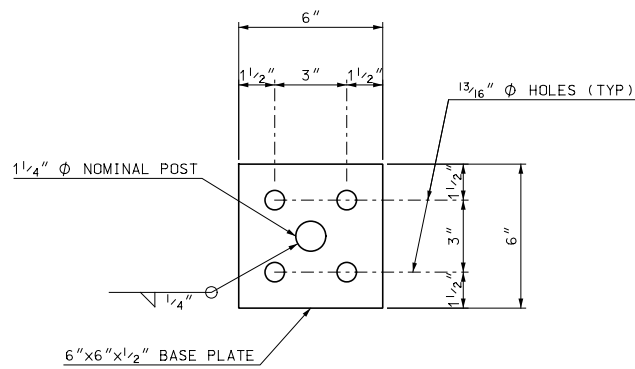
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150 Dow Street, Manchester, NH 03101-1227
Tel (603) 669-5555 • Fax (603) 669-4188
www.hoyletanner.com

CITY OF ROCHESTER	PROJECT NO.: 903908,07
ROCHESTER, NEW HAMPSHIRE	FILE NAME: 903908Ped-Dits
ROUTE 125 PEDESTRIAN BRIDGE APPROACHES	MODEL NAME: 903908PedDit1
APPROACH RAIL AND SIDEWALK DETAILS	SHEET NO.
	2
	SHEET 2 OF 4

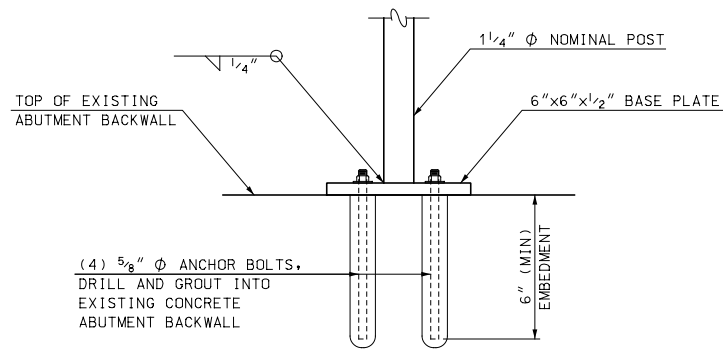
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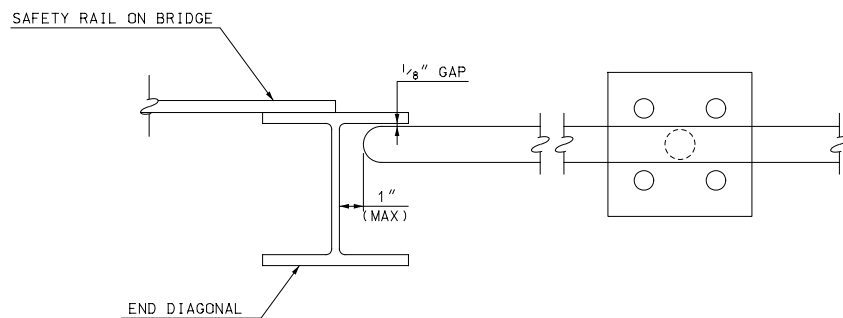
HANDRAIL POST DETAIL
SCALE: 1/2" = 1'-0"



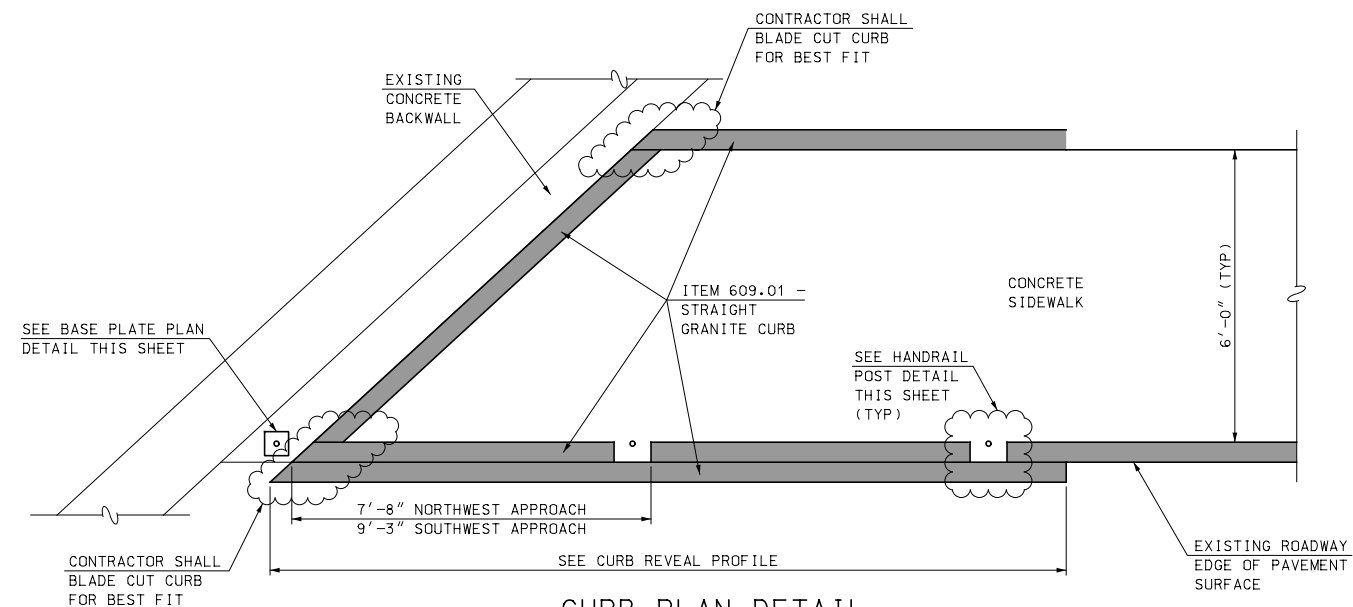
BASE PLATE PLAN DETAIL
SCALE: 3" = 1'-0"



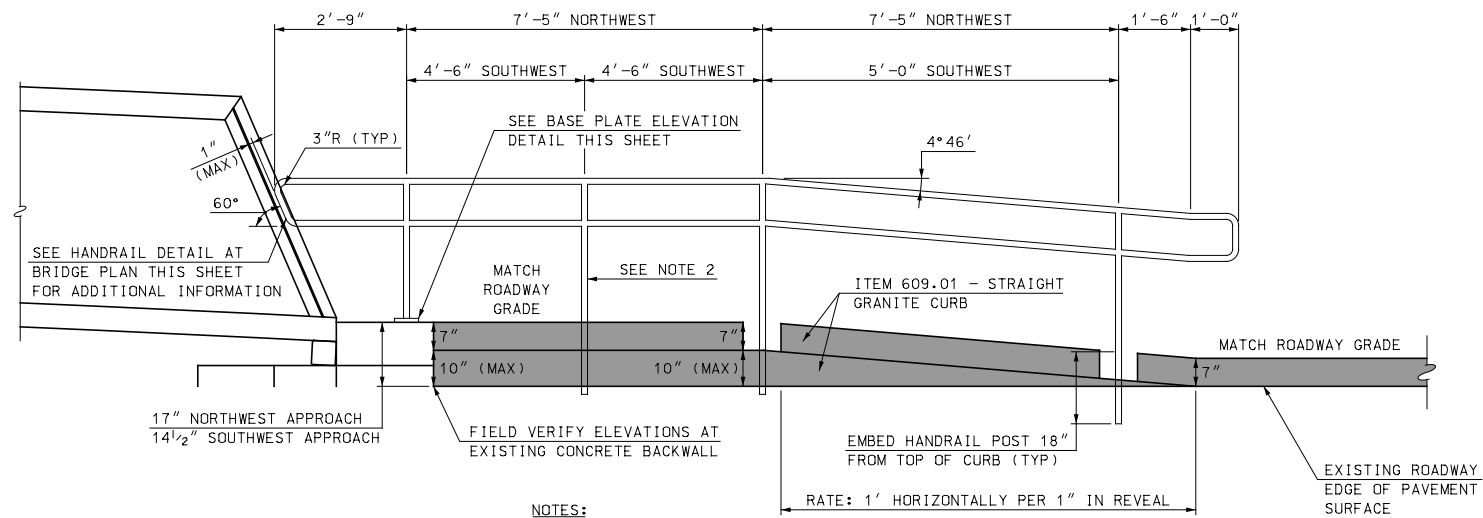
BASE PLATE ELEVATION DETAIL
SCALE: 3" = 1'-0"



HANDRAIL DETAIL AT BRIDGE PLAN
SCALE: 3" = 1'-0"



CURB PLAN DETAIL
SCALE: 1/2" = 1'-0"
(NORTHWEST APPROACH SHOWN, SOUTHWEST APPROACH SIMILAR)



NOTES:

1. SEE TYPICAL SIDEWALK CROSS SECTION AT BRIDGE NOTE 3 ON SHEET 2, AND NHDOT STANDARD DETAIL SHOWN ON STANDARD PLAN HR-1, PLATE 2, FOR ADDITIONAL INFORMATION FOR THE HANDRAIL.
2. ADDITIONAL POST REQUIRED FOR SOUTHWEST APPROACH ONLY. BREAK CURB AS NEEDED, SEE HANDRAIL POST DETAIL THIS SHEET FOR ADDITIONAL INFORMATION.
3. CURB LENGTH IN DOUBLE CURB AREAS IS PAID FOR AS ACTUAL CURB LENGTH INSTALLED FOR BOTH UPPER AND LOWER CURB.

CURB REVEAL PROFILE

SCALE: 1/2" = 1'-0"
(NORTHWEST APPROACH SHOWN, SOUTHWEST APPROACH SIMILAR)

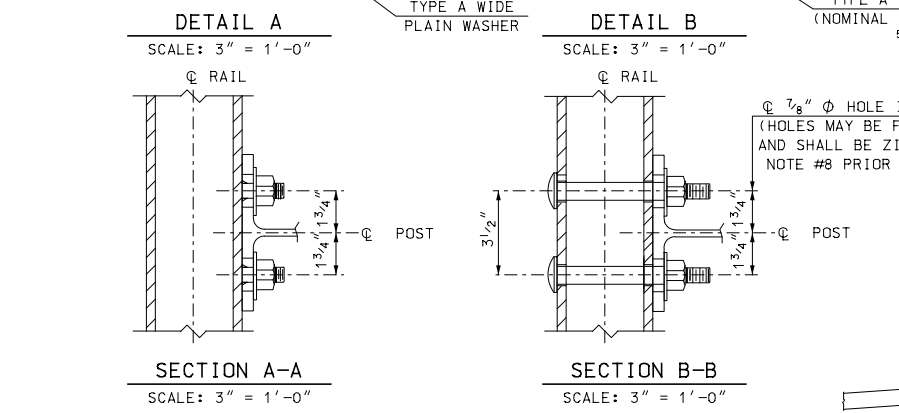
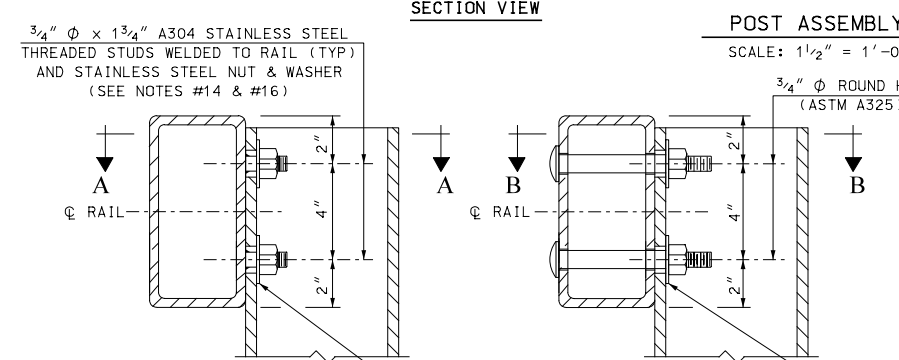
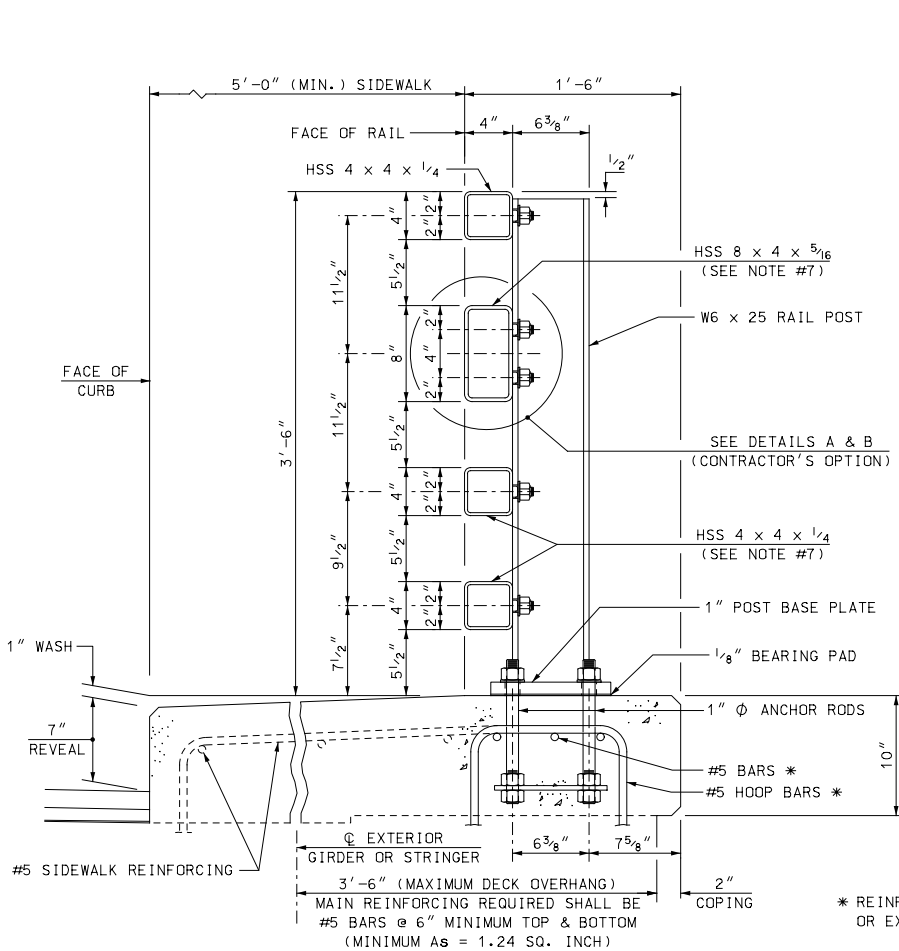
REV.	DESCRIPTION	DATE
MARCH, 2017	DESIGN BY: AGB/JAS	
	DRAWN BY: KDP	
	CHKD. BY: AML/TMC	
	SCALE: AS SHOWN	

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CITY OF ROCHESTER
ROCHESTER, NEW HAMPSHIRE
ROUTE 125 PEDESTRIAN BRIDGE APPROACHES
CURB AND HANDRAIL DETAILS

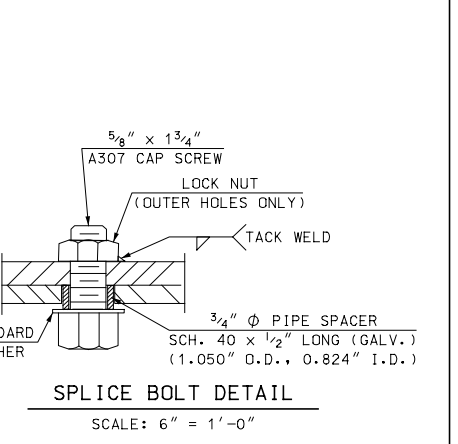
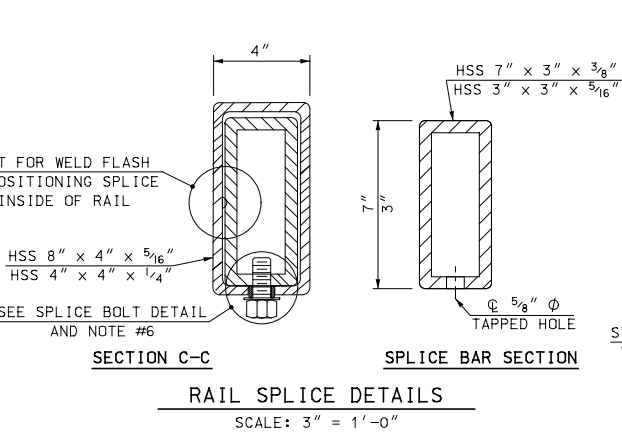
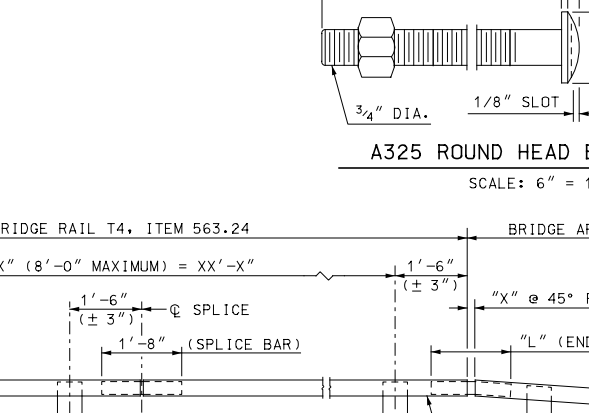
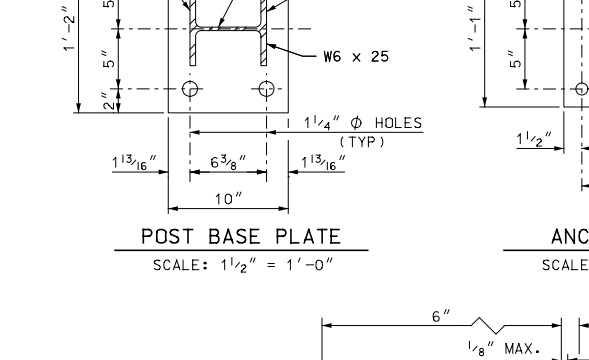
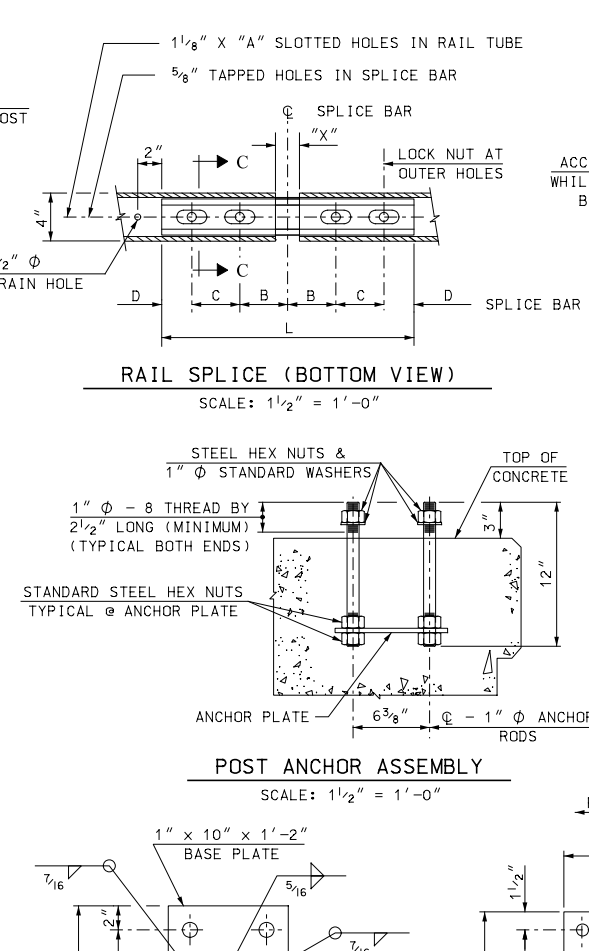
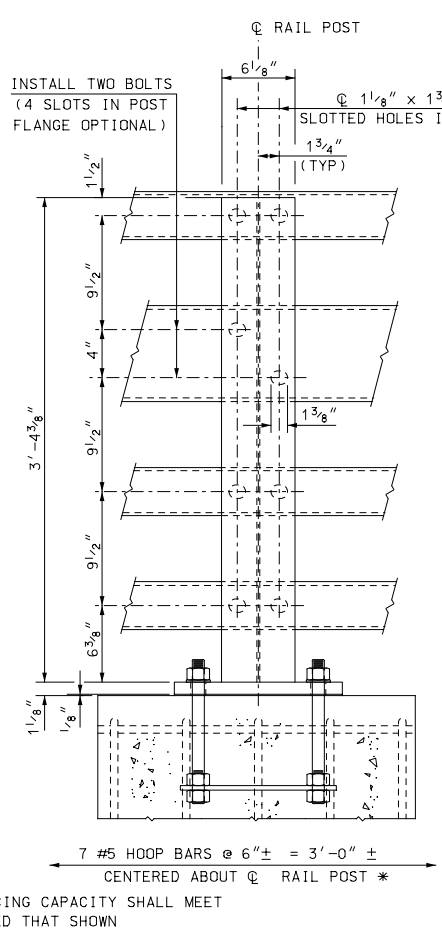
PROJECT NO.:	903908,07
FILE NAME:	903908Ped-Dtls
MODEL NAME:	903908PedDtl2

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SPLICE BAR DIMENSION TABLE						
T	A	B	C	D	X	L
INTERIOR	2 1/2"	4"	4"	2"	3/4"	1'-8"
** ≤ 3 1/4"	2 1/2"	4"	4"	2"	2"	1'-8"
** 3 1/4" < T ≤ 5 1/4"	3 1/2"	5"	5"	2 1/2"	3"	2'-1"

T = TOTAL MOVEMENT OF BRIDGE
** = END SPLICE BAR

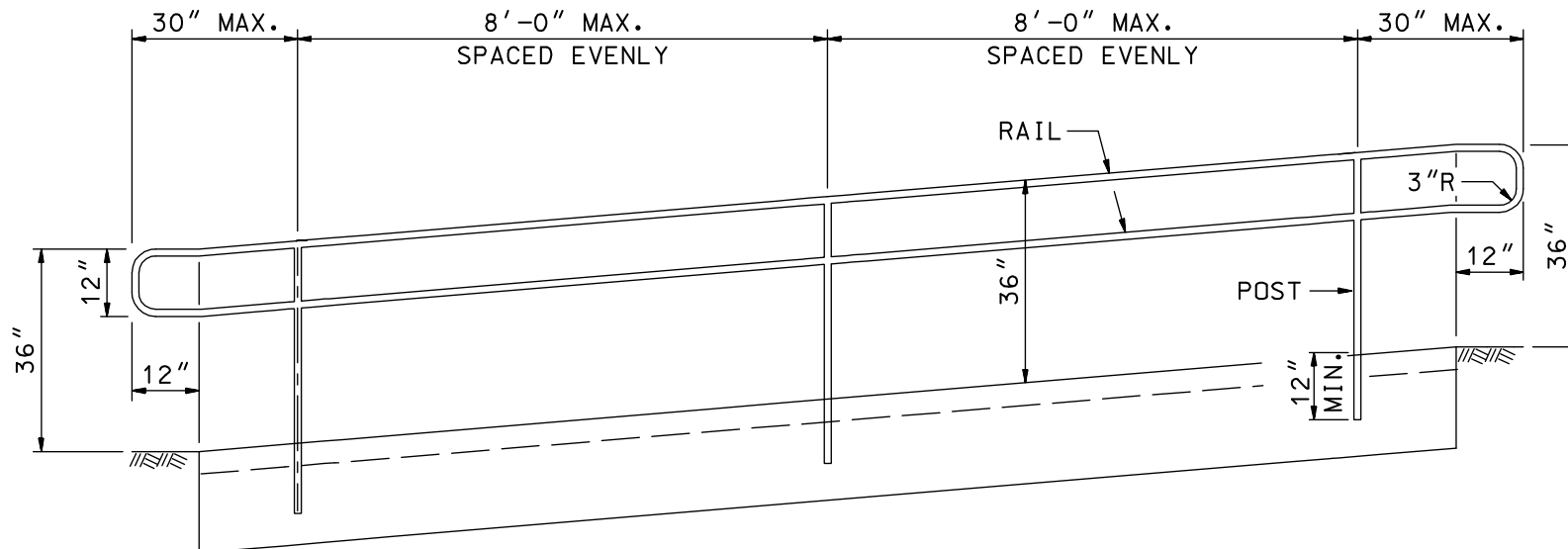


- RAIL NOTES**
- ITEM 563.24, BRIDGE RAIL T4, SHALL INCLUDE POSTS, BASE PLATES, ANCHOR PLATES, ANCHOR RODS, PREFORMED PADS, RAIL ASSEMBLY BOLTS, NUTS, WASHERS, STUDS, STRUCTURAL TUBING, SPLICE BARS, PIPE SPACERS, ALL APPURTENANCES, AND GALVANIZING.
 - BRIDGE RAIL POSTS SHALL BE SET NORMAL (90 DEGREES) TO THE PROFILE GRADE, EXCEPT ON GRADES OVER 5% WHERE POSTS SHALL BE SET VERTICAL.
 - ENDS OF RAIL TUBE SECTIONS SHALL BE SAWED OR MILLED AND SHALL BE TRUE AND SMOOTH. ALL CUT EDGES OF ALL MATERIAL SHALL BE GROUND SMOOTH.
 - EACH PIECE OF RAIL TUBING SHALL BE ATTACHED TO A MINIMUM OF THREE (3) POSTS.
 - BOLT HOLES SHALL BE DRILLED OR PUNCHED. FLAME CUTTING MAY BE USED TO FINISH SLOTTED HOLES IF MECHANICALLY GUIDED.
 - AT INTERIOR SPLICES, PIPE SPACERS SHALL BE USED ON ONLY ONE SIDE OF THE SPLICE TO ALLOW MOVEMENT ON THAT SIDE. ALL RAILS IN A SPLICE SHALL RECEIVE THE SAME TREATMENT. AT END SPLICES PIPE SPACERS SHALL BE USED ON BOTH SIDES OF THE SPLICE TO ALLOW MOVEMENT ON EACH SIDE.
 - MILL OR SHOP TRANSVERSE WELDS SHALL NOT BE PERMITTED ON ANY RAIL ELEMENT. RAIL ELEMENTS USED ON CURVES SHALL USE 3/8" WALL TUBES AND SHALL BE SHOP FORMED TO THE REQUIRED CURVATURE (SEE SECTION 563.3.2.1).
 - NO PUNCHING, DRILLING, CUTTING OR WELDING SHALL BE PERMITTED AFTER GALVANIZING, EXCEPT AS ALLOWED IN DETAILS A AND B. DAMAGED AREAS OF GALVANIZING SHALL BE THOROUGHLY CLEANED, PRETREATED, AND PAINTED WITH TWO COATS OF ORGANIC ZINC-RICH GALVANIZING REPAIR PAINT, HAVING A MINIMUM 92% ZINC BY WEIGHT, TO A THICKNESS EQUAL TO THE ORIGINAL COATING, ACCORDING TO SECTION 550.2.9.1 AND ASTM A780.
 - NUTS FOR 1" φ THREADED ANCHOR RODS CONNECTING THE BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL 1/8 TURN.
 - THREADS FOR ANCHOR RODS MAY BE ROLLED OR CUT. IF CUT THREADS ARE USED, BOLT DIAMETER SHALL NOT BE LESS THAN NOMINAL DIAMETER. IF ROLLED THREADS ARE USED, ROD DIAMETER SHALL NOT BE LESS THAN ROOT DIAMETER OF THREADS.
 - THIS BRIDGE RAIL SYSTEM WAS SUCCESSFULLY CRASH TESTED FOR AASHTO PL2 IN 1994 BY THE NEW ENGLAND TRANSPORTATION CONSORTIUM AND ACCEPTED AS NCHRP 350 TL-4 PER FHWA LETTER HMHS-B50, MARCH 11, 1999.

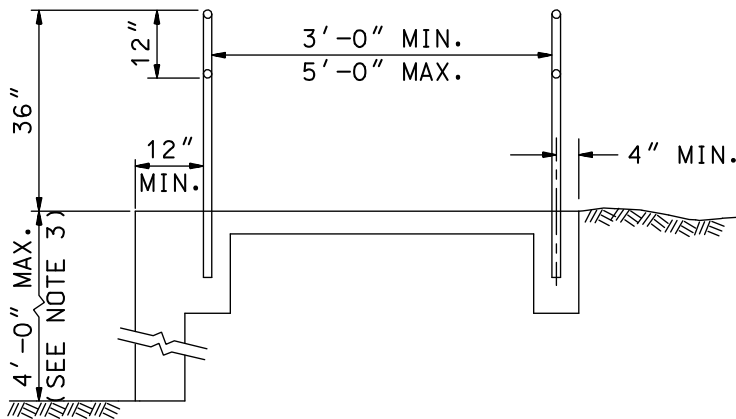
- MATERIAL NOTES**
- STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500, GRADE B, STRUCTURAL STEEL TUBING. RAIL TUBING SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH REQUIREMENTS OF 15 FT. LBS. AT 0°F. FOR ASTM A500, GRADE B, THE TEST SAMPLES SHALL BE TAKEN AFTER FORMING THE TUBES. CHARPY V-NOTCH IS NOT REQUIRED FOR SPLICE TUBES.
 - RAIL POSTS AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A572 GR 50, EXCEPT ANCHOR PLATES MAY BE ASTM A36.
 - THREADED STUDS AND MATCHING NUTS FOR RAIL-TO-POST ATTACHMENT (DETAIL A) SHALL CONFORM TO ASTM A276 TYPE 304, STAINLESS STEEL, AND SHALL BE TORQUE TESTED PER AWS D1.5, 7.7.1. DETAIL B BOLTS SHALL BE ASTM A325 OR A449. ALL OTHER BOLTS AND NUTS SHALL CONFORM TO ASTM A307 AND ASTM 563 GRADE A RESPECTIVELY OR BETTER, EXCEPT THAT ASTM A307 NUTS MAY BE USED ON THE BOTTOM OF ANCHOR ASSEMBLY. WASHERS SHALL BE HARDENED STEEL COMMERCIAL TYPE A PLAIN WIDE WASHERS AND SHALL MEET THE DIMENSIONAL REQUIREMENTS OF A.N.S.I. B18.22. ANCHOR RODS SHALL CONFORM TO ASTM A449.
 - ALL STEEL COMPONENTS (EXCEPT STAINLESS) SHALL BE GALVANIZED AFTER FABRICATION IN COMPLIANCE WITH AASHTO M232 (ASTM A153) AND AASHTO M111 (ASTM A123). THE GALVANIZING KETTLE SHALL HAVE 0.05 TO 0.09 PERCENT NICKEL. GALVANIZED SURFACES SHALL HAVE A UNIFORM APPEARANCE AND GALVANIZED MATERIAL SHALL BE PROPERLY STORED. IF PAINTING IS REQUIRED SEE SPECIAL PROVISIONS FOR 708.
 - DETAIL A STUDS SHALL BE WELDED ON AFTER TUBES ARE GALVANIZED BY SPOT GRINDING OFF GALVANIZING, WELDING ON STUDS, THEN TOUCH UP GALVANIZING PER NOTE #8 ABOVE.
 - PREFORMED BEARING PADS (1/8" THICK) SHALL CONFORM TO AASHTO M251.

STATE OF NEW HAMPSHIRE						
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN						
TOWN	BRIDGE NO.		STATE PROJECT			
LOCATION						
T4 STEEL BRIDGE RAIL						BRIDGE SHEET
REVISIONS AFTER PROPOSAL						OF
DESIGNED	NETC/JSZ	3/02	CHECKED	NHDOT	FILE NUMBER	
DRAWN	PPP	10/05	CHECKED	JSZ	10/05	
QUANTITIES						
ISSUE DATE	11/15/05	FEDERAL PROJECT NO.	SHEET NO.		TOTAL SHEETS	
REV. DATE	11/1/16		4		4	

SUBDIRECTORY	DGN LOCATOR	SHEET SCALE
English/BR-RAIL	T4_BR-RAIL	AS NOTED



ELEVATION



CROSS-SECTION

GENERAL NOTES

1. RAIL SHALL BE 1 $\frac{1}{4}$ " TO 1 $\frac{1}{2}$ " O.D.
2. POSTS SHALL BE 1 $\frac{1}{4}$ " NOMINAL.
3. WHEN THIS DIMENSION EXCEEDS 4'-0" A GUARD IS REQUIRED (SEE PLATE 3).
4. ITEM 606.620X - RAMP HANDRAIL, (MATERIAL).

NHDOT STANDARD PLANS
RAMP HANDRAIL

REV. DATE		PLATE
06-16-2010		2
		STANDARD
		HR-1