# **STATE PROJECT NO. 9028-5528**

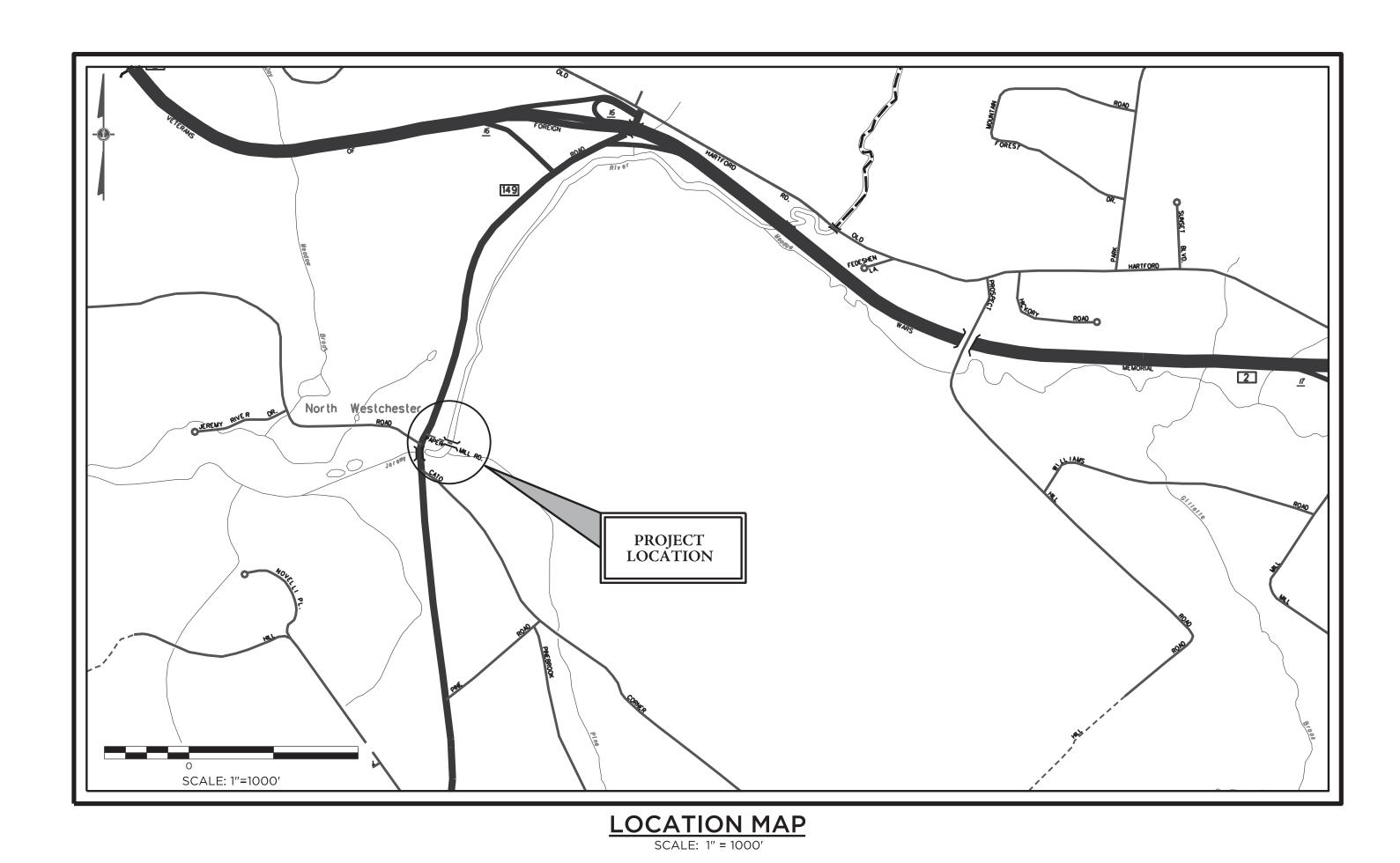
# REHABILITATION

OF

# PAPER MILL RD. BRIDGE NO. 05528 OVER JEREMY RIVER COLCHESTER, CT

PREPARED FOR

# TOWN OF COLCHESTER MARY BYLONE, FIRST SELECTMAN



# LIST OF SHEETS

DATE: 02/11/20 REVISED:

ROADWAY PLAN & PROFILE	1
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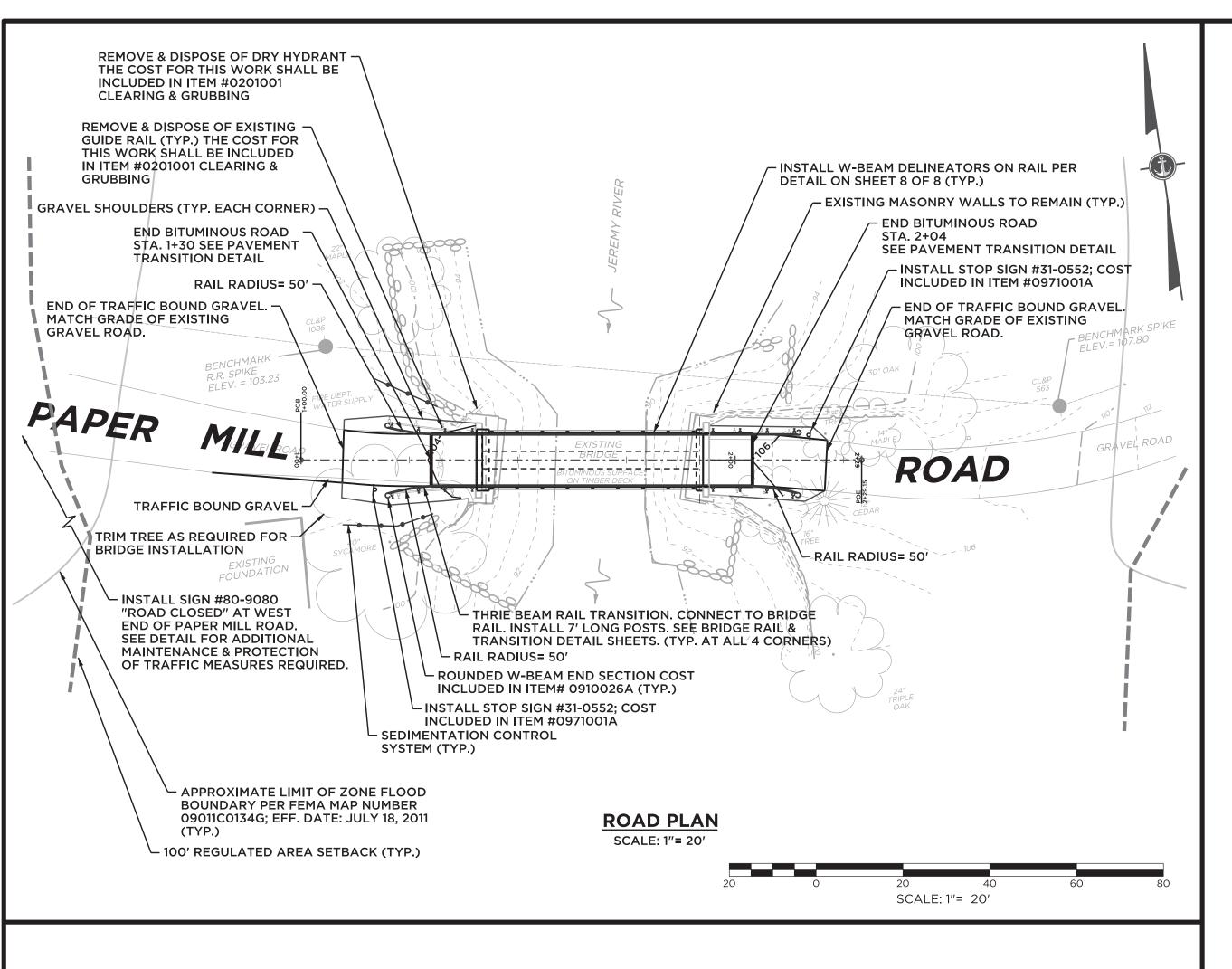
# LIST OF CT DOT STANDARD SHEETS

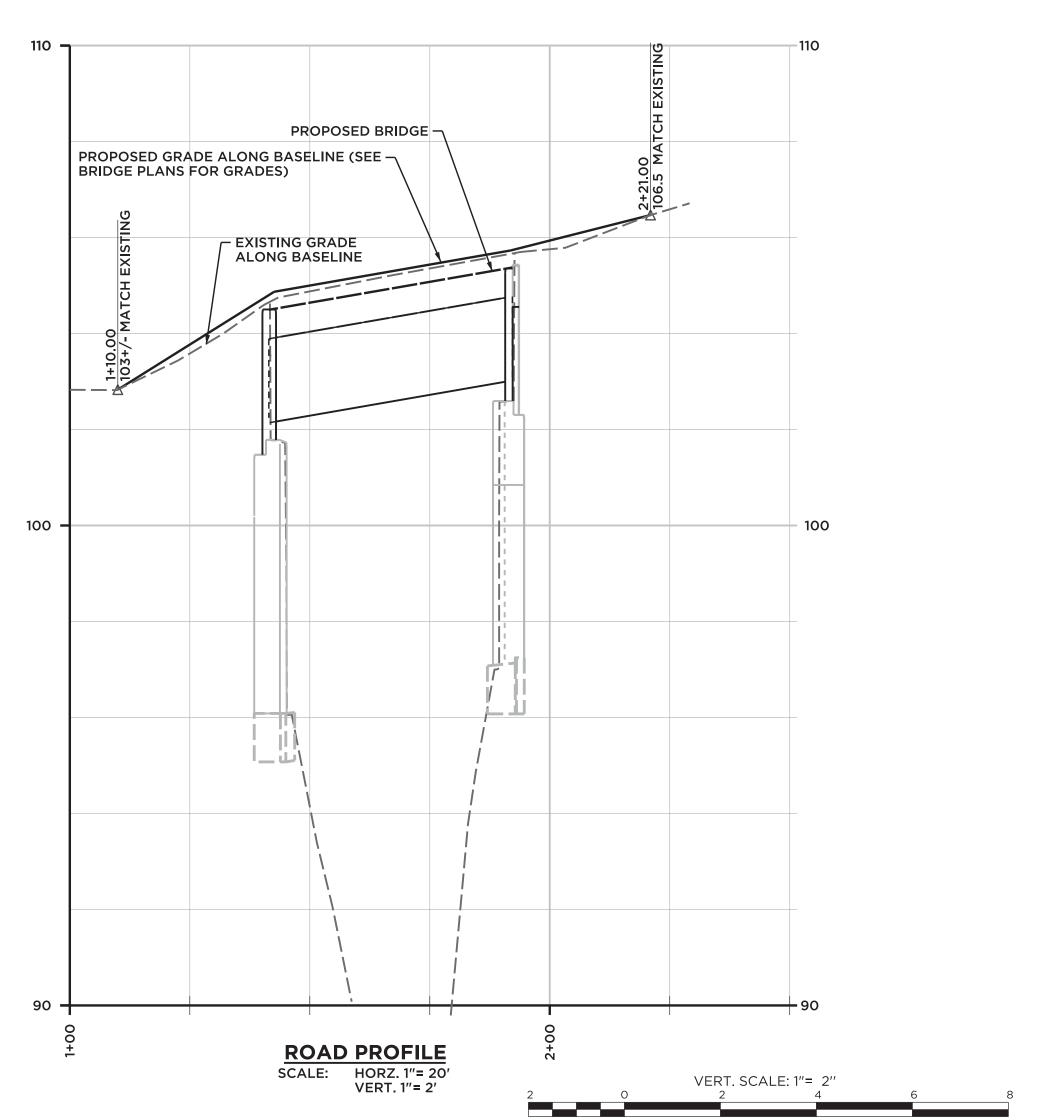
HW-822\_01 TEMPORARY PRECAST CONCRETE BARRIER CURB
TR-1220\_01 SIGNS FOR CONSTRUCTION AND PERMIT OPERATIONS
TR-1220\_02 CONSTRUCTION SIGN SUPPORTS AND CHANNELIZING DEVICES

PREPARED BY:

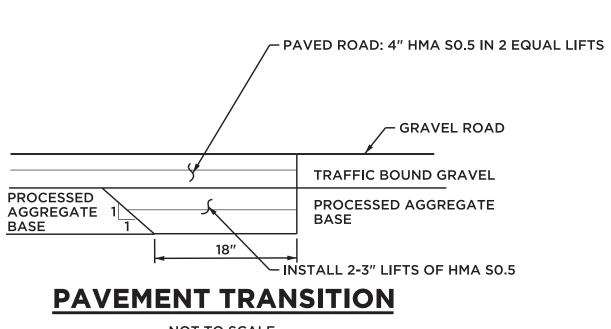


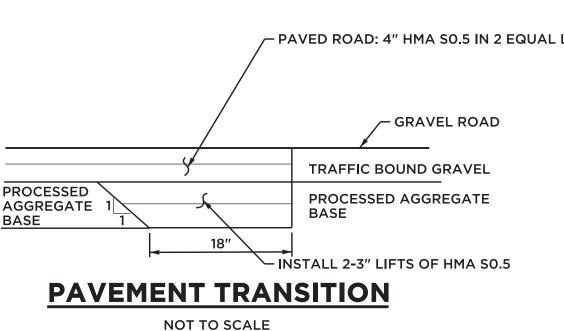






HORZ. SCALE: 1"= 20"





BRIDGE

MAINTENANCE AND PROTECTION

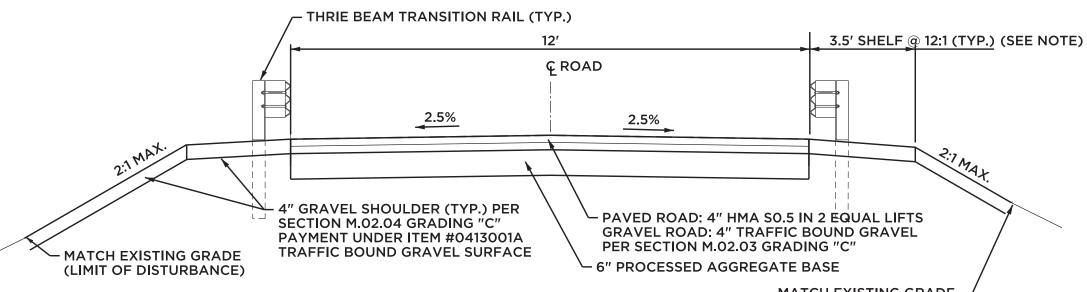
**OF TRAFFIC AT BRIDGE** 

NOT TO SCALE

**BRIDGE** 

OUT

R11-2 (80-9082)



MATCH EXISTING GRADE -(LIMIT OF DISTURBANCE) SHELF MAY BE REDUCED TO 2 FOOT MINIMUM TO BETTER MATCH EXISTING CONDITIONS

#### TYPICAL ROADWAY SECTION

**NOT TO SCALE** 

#### **GENERAL NOTES**

- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARDS AND SPECIFICATIONS OF THE STATE OF CONNECTICUT 2002 "GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL".
- EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AS SHOWN ON THE PLAN, PRIOR TO CLEARING AND GRUBBING
- RUNOFF SHALL BE CONTROLLED BY THE INTERCEPTION, DIVERSION AND SAFE DISPOSAL OF PRECIPITATION. SURROUND SOIL STOCKPILES WITH SILT FENCE THE BINDING OF SOIL PARTICLES TO MAKE THEM LESS SUSCEPTIBLE TO REMOVAL BY RAIN SPLASH, RUNOFF OR WIND IS SUGGESTED BY THE USE OF NATURAL AND PHYSICAL "BINDERS" SUCH AS MULCH AND FABRICS. HAY, EROSION CONTROL MATTING OR TEMPORARY SEEDING.
- 4. AFTER EACH STORM EVENT OR ONCE A WEEK, ALL SEDIMENT AND EROSION CONTROLS WILL BE INSPECTED BY THE ENGINEER. ANY CORRECTIVE ACTION TO MITIGATE ENVIRONMENTAL CONCERNS WILL BE ORDERED AT THAT TIME. SEDIMENT FROM THE EROSION CONTROL DEVICES SHALL BE REMOVED, WHEN IT REACHES ONE- HALF ITS HEIGHT. REMOVED SEDIMENT SHALL BE PROPERLY DISPOSED OF IN A MANNER WHICH IS CONSISTENT WITH THE INTENT OF THIS PLAN.
- 5. EROSION CONTROL MEASURES

AS POSSIBLE.

- A. EROSION CONTROL MEASURES ARE DEPICTED ON THE SITE PLAN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED MAINTENANCE DURING CONSTRUCTION.
- B. FINAL GRADING, SEEDING AND MULCHING SHALL BE DONE WITHIN THE SPECIFIED TIME FRAMES. INSPECTIONS SHALL BE PERFORMED AS SOON AS POSSIBLE FOLLOWING A HEAVY RAIN TO CHECK THE INTEGRITY OF THE BARRIERS, SW ALES, SEEDING AND MULCH. ANY REPAIRS OR ADDITIONAL SEED OR MULCH SHALL BE DONE AS SOON
- 6. APPROPRIATE EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED ON SITE PRIOR TO CONSTRUCTION TO MINIMIZE THE IMPACT OF THE DISTURBED AREAS ON THE WATERCOURSES.
- 7. CLEARED MATERIALS, SUCH AS BRUSH AND ROAD SPOILS SHALL BE REMOVED AND DISPOSED OF OFF SITE. AREAS TO BE CLEARED (LIMITS OF CLEARING) SHALL BE CONSIDERED THE AREAS ADJACENT TO THE ROADWAY WITHIN THE LIMITS OF CONSTRUCTION.
- 8. WHERE DEWATERING OF EXCAVATIONS IS REQUIRED THERE SHALL NOT BE A DIRECT DISCHARGE INTO WETLANDS OR WATERCOURSES. PROPER METHODS SHALL BE UTILIZED SUCH AS PUMPING WATER INTO A TEMPORARY SEDIMENTATION BASIN, FLOATING THE INTAKE OF THE PUMP, OR OTHER METHODS TO MINIMIZE AND RETAIN SUSPENSED SOLIDS.

#### **ANTICIPATED CONSTRUCTION SEQUENCE**

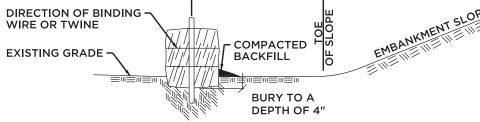
- CONSTRUCTION WILL COMMENCE IN THE SPRING OF 2020 AND WILL BE COMPLETED IN THE SUMMER OF 2020, WEATHER PERMITTING.
- COORDINATE AND COMPLETE A PRE- CONSTRUCTION MEETING WITH THE TOWN/TOWN'S AGENT AND ENGINEER. RESPONSIBLE PARTIES TO BE IDENTIFIED AND EMERGENCY PHONE NUMBERS
- CONTACT CALL BEFORE YOU DIG PRIOR TO ANY CONSTRUCTION ACTIVITIES.
  INSTALL MAINTENANCE & PROTECTION OF TRAFFIC MEASURES FOR ROADWAY DETOUR AND
- CLOSE THE BRIDGE TO TRAFFIC. INSTALL EROSION CONTROL MEASURES AT THE LOCATIONS INDICATED ON THE PLANS OR AS
- REQUIRED BY FIELD CONDITIONS. CLEAR & GRUB AS NECESSARY. REMOVE THE EXISTING SUPERSTRUCTURE (DECK, RAILINGS, STEEL BEAMS AND BEARINGS).
- CONSTRUCT NEW BRIDGE SEAT AT EACH EXISTING ABUTMENT.
- INSTALL PRESTRESSED DECK UNITS AND COMPLETE POST TENSIONING. INSTALL BACK WALL AND CHEEKWALLS.
- INSTALL MEMBRANE WATERPROOFING AND PAVE BRIDGE.
- CONSTRUCT NEW ROADWAY APPROACHES, CONSTRUCT JOINTS AND INSTALL GRAVEL SHOULDERS AND GRANULAR FILL ON SLOPES.
- INSTALL BRIDGE RAIL AND METAL BEAM RAIL (R-B MASH) GUIDERAIL WITH W-BEAM END SECTIONS. REMOVE EROSION AND SEDIMENTATION CONTROLS AFTER CONSTRUCTION.

# 2"x2"x3' LONG STAKES OR REBAR EACH BALE (2 STAKES PER BALE) **COMPACTED** BACKFILL

BALED HAY OR STRAW ~

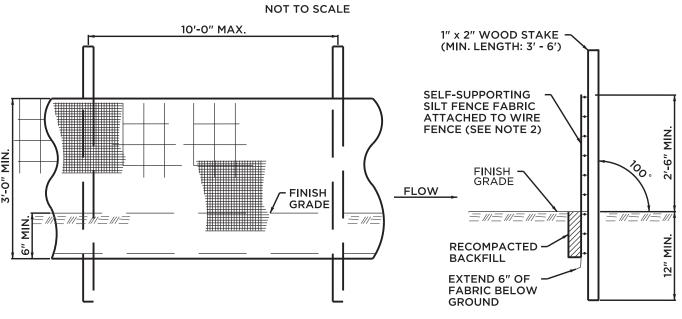
BALES BUTTED

WEDGE LOOSE STRAW BETWEEN BALES TO CREATE A CONTINUOUS



#### SECTION AT TOE OF SLOPE

#### **HAY BALES**



**SECTION** 

TYPE B HIGH INTENSITY-

WARNING LIGHT (TYP.)

TYPE III BARRICADE (TYP.) -

TEMPORARY PRECAST CONCRETE J

BARRIER CURB (TYP.)

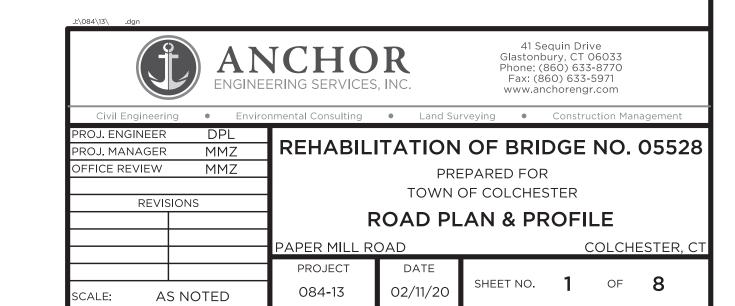
R11-2 -

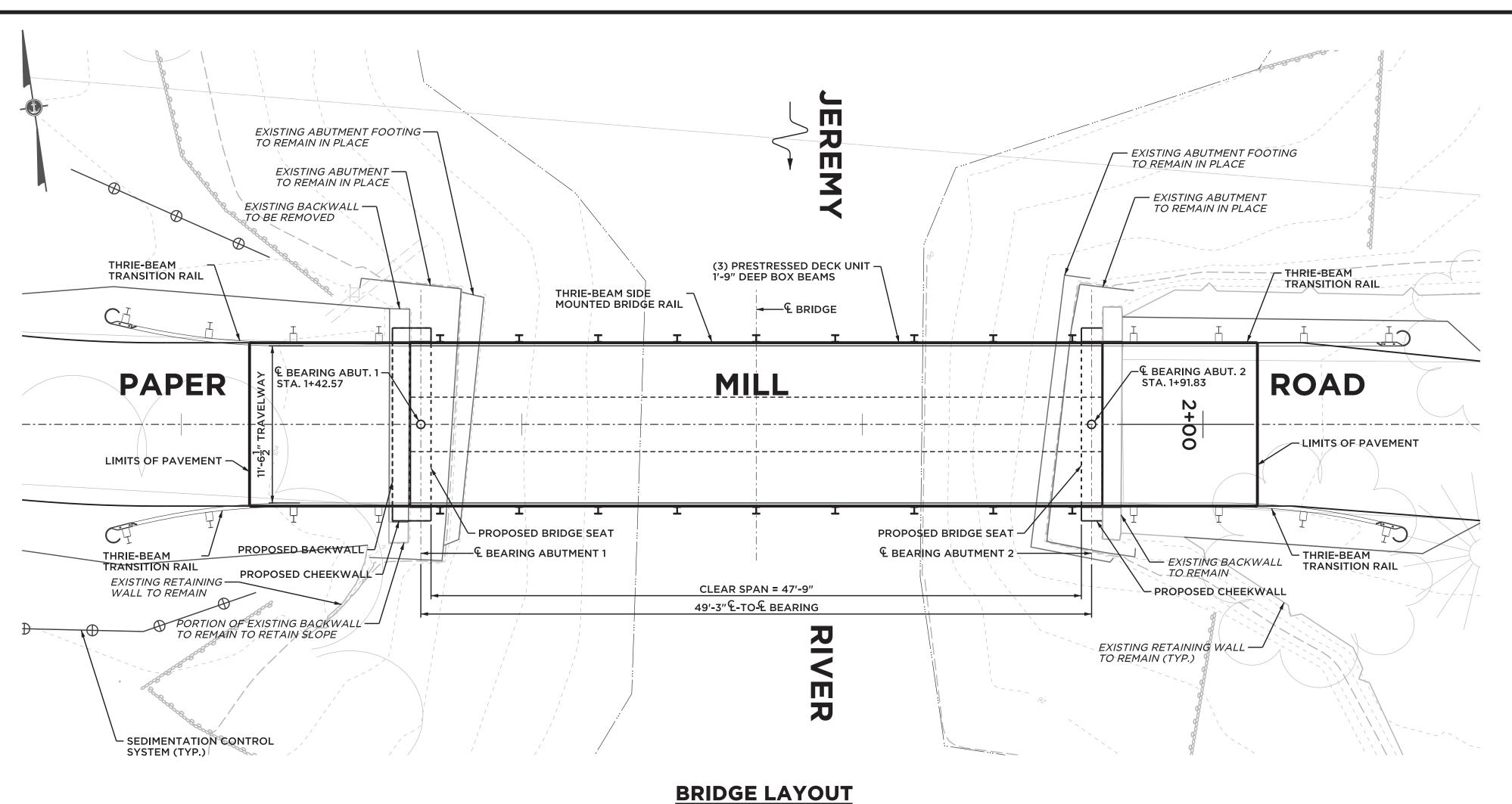
- NOTES: INSTALL SILT FENCE & WOOD STAKES AS RECOMMENDED BY MANUFACTURER.
   SILT FENCE SUBJECT TO HEAVY LOADS SHALL BE REINFORCED WITH FARM FENCING & STEEL
- POSTS (0.5 # STEEL/L.F.). THE MINIMUM POST LENGTH SHALL BE 5'-0". 3. SILT FENCE FABRIC SHALL BE A PERVIOUS SHEET OF WOVEN PROPYLENE, NYLON, POLYESTER OR POLYETHYLENE FILAMENTS AND SHALL BE CERTIFIED BY THE MANUFÁCTURER OR SUPPLIER.

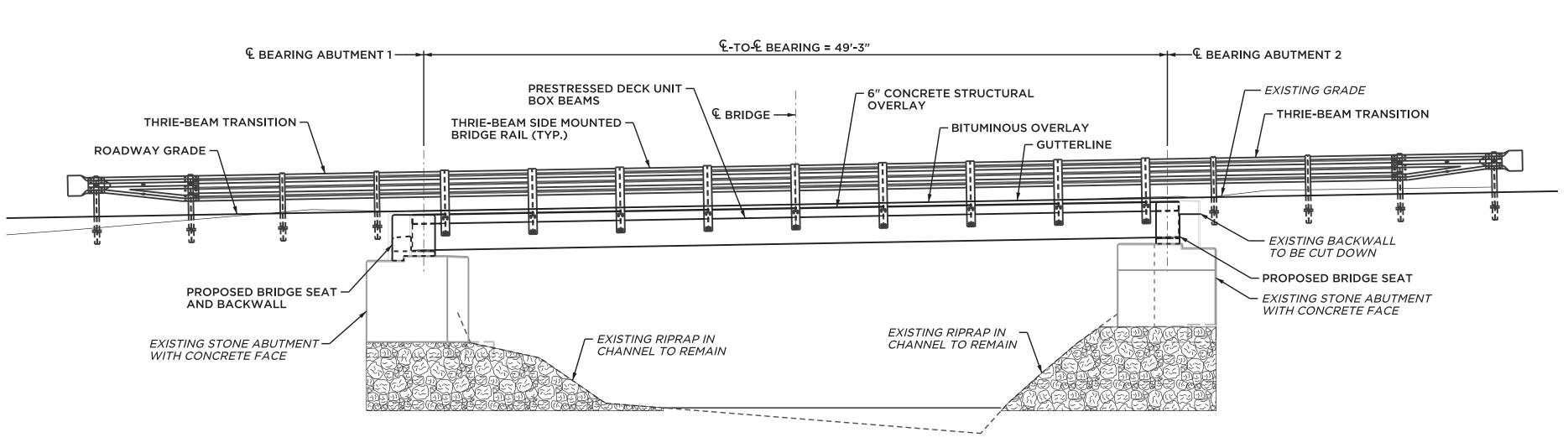
**ELEVATION** 

#### **SILT FENCE**

NOT TO SCALE







BRIDGE ELEVATION

SCALE: ¾6" = 1'-0"

#### **GENERAL NOTES**

**CONSTRUCTION SPECIFICATIONS:** CONNECTICUT DEPARTMENT OF TRANSPORTATION FORM 817 (2016), WITH SUPPLEMENTAL

SPECIFICATIONS DATED JULY 2019 AND SPECIAL PROVISIONS.

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS EIGHTH EDITION (AASHTO 2018) WITH THE INTERIM SPECIAL PROVISIONS UP TO AND INCLUDING 2019, AS SUPPLEMENTED BY THE CONNECTICUT DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL (2003), LATEST REVISION.

**DESIGN STRESSES:** CLASS "A" CONCRETE BASED ON

f'c = 3,000 PSI f'c = 4,000 PSICLASS "F" CONCRETE BASED ON PRECAST CONCRETE f'c = 6,500 PSI (MIN.)**REINFORCING BARS** fy = 60,000 PSIfy = 65,000 PSIWELDED WIRE FABRIC

**CONCRETE STRENGTH:** 

THE SPECIFIED CONCRETE STRENGTH USED IN DESIGN, F'C, OF THE CONCRETE COMPONENTS IS NOTED ABOVE. THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE IN THE CONSTRUCTED COMPONENTS SHALL CONFORM TO THE REQUIREMENTS OF "SECTION 6.01 CONCRETE FOR STRUCTURES."

LIVE LOAD:

**FUTURE PAVING ALLOWANCE:** 

**DESIGN SPECIFICATIONS:** 

**JOINT SEAL:** 

NONE CLASS "A" CONCRETE: CLASS "A" CONCRETE SHALL BE USED FOR THE ENTIRE SUBSTRUCTURE.

**CLASS "F" CONCRETE:** CLASS "F" CONCRETE SHALL BE USED FOR STRUCTURAL OVERLAY

HL-93

**EXPOSED EDGES:** EXPOSED EDGES OF CONCRETE SHALL BE BEVELED 1" X 1" UNLESS DIMENSIONED OTHERWISE.

REINFORCEMENT: ALL REINFORCEMENT SHALL BE ASTM A615 GRADE 60.

CONCRETE COVER:

ALL REINFORCEMENT SHALL HAVE 2" COVER UNLESS DIMENSIONED OTHERWISE. **GALVANIZED REINFORCING BARS:** 

ALL NON-PRESTRESSED STEEL, IN PRESTRESSED CONCRETE MEMBERS, INCLUDING REINFORCEMENT EXTENDING OUT OF THE UNITS, AND CAST-IN-PLACE REINFORCED MEMBERS, SHALL BE GALVANIZED

BAR REINFORCEMENT.

ALL NON-PRESTRESSED STEEL SHALL BE GALVANIZED AFTER FABRICATION TO THE REQUIREMENTS OF ASTM A767, CLASS 1, INCLUDING SUPPLEMENTAL REQUIREMENTS.

JOINT SEAL SHALL CONFIRM TO THE CONNECTICUT DEPARTMENT OF TRANSPORTATION FORM 817 (2016), WITH SUPPLEMENTAL SPECIFICATIONS DATED JULY 2017.

**CONSTRUCTION JOINTS:** CONSTRUCTION JOINTS, OTHER THAN THOSE SHOWN ON THE PLANS, WILL NOT BE PERMITTED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.

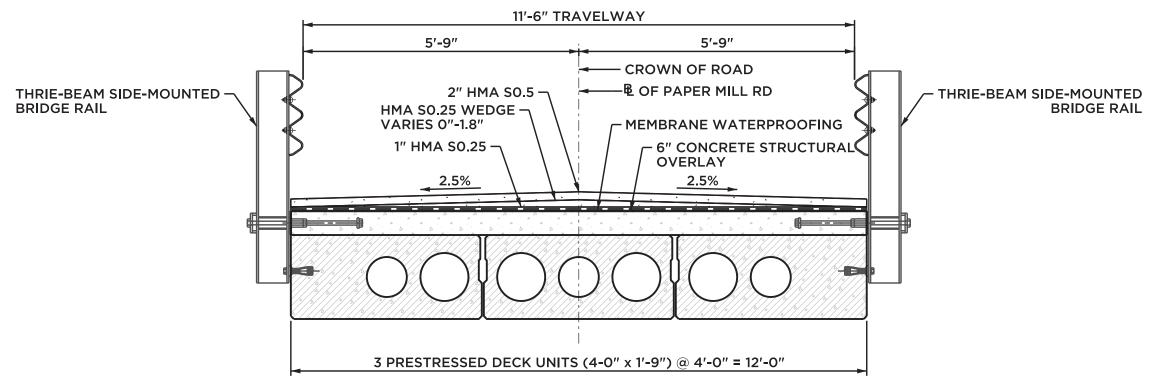
**EXISTING DIMENSIONS:** 

DIMENSIONS OF THE EXISTING STRUCTURE SHOWN ON THESE PLANS ARE FOR GENERAL REFERENCE ONLY. THEY ARE NOT GUARANTEED. THE CONTRACTOR SHALL TAKE ALL FIELD MEASUREMENTS NECESSARY TO ASSURE PROPER FIT OF THE FINISHED WORK AND SHALL ASSUME FULL RESPONSIBILITY FOR THEIR ACCURACY. WHEN SHOP DRAWINGS BASED ON FIELD MEASUREMENTS

ARE SUBMITTED FOR APPROVAL, THE FIELD MEASUREMENTS SHALL ALSO BE SUBMITTED FOR REFERENCE BY THE REVIEWER.

**DIMENSIONS:** WHEN DECIMAL DIMENSIONS ARE GIVEN TO LESS THAN THREE DECIMAL PLACES, THE OMITTED

DIGITS SHALL BE ASSUMED TO BE ZEROS.



#### **BRIDGE SECTION**

SCALE: ½" = 1'-0"

CONCRETE D	DISTR	<b>IBUTION</b>
SUPERSTRUCTURE	C.Y.	46
SUBSTRUCTURE	C.Y.	10
TOTAL	C.Y.	56

## **DISCLAIMER**

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS AND IS IN NO WAY WARRANTED TO INDICATE THE TRUE CONDITIONS OR ACTUAL QUANTITIES OR DISTRIBUTION OF QUANTITIES OF WORK WHICH WILL BE REQUIRED.

SHIPPING DATA					
MEMBER	SHIPPING LENGTH	SHIPPING HEIGHT	SHIPPING WIDTH	SHIPPING WEIGHT	
B1	50'-9"	1′-9″	4'-0"	45 KIPS	
B2	50'-9"	1′-9″	4'-0"	39.5 KIPS	
В3	50'-9"	1′-9″	4'-0"	45 KIPS	

#### **NOTICE TO BRIDGE INSPECTOR**

THE CONNECTICUT DOT'S BRIDGE SAFETY PROCEDURES REQUIRE THIS BRIDGE TO BE INSPECTED FOR, BUT NOT LIMITED TO, ALL APPROPRIATE COMPONENTS INDICATED IN THE GOVERNING MANUALS FOR BRIDGE INSPECTION. ATTENTION MUST BE GIVEN TO INSPECTING THE FOLLOWING SPECIAL COMPONENTS AND DETAILS. (THE LISTING FOR COMPONENTS FOR SPECIFIC ATTENTION SHALL NOT BE CONSTRUED TO REDUCE THE IMPORTANCE OF INSPECTION OF ANY OTHER COMPONENT OF THE STRUCTURE), THE FREQUENCY OF INSPECTION OF THIS STRUCTURE SHALL BE IN ACCORDANCE WITH THE GOVERNING MANUALS FOR BRIDGE INSPECTION, UNLESS OTHERWISE DIRECTED BY CONNECTICUT DOT'S MANAGER OF BRIDGE SAFETY AND EVALUATION.

**COMPONENT OR DETAIL** 

AS NOTED

STRUCTURE SHEET REFERENCE

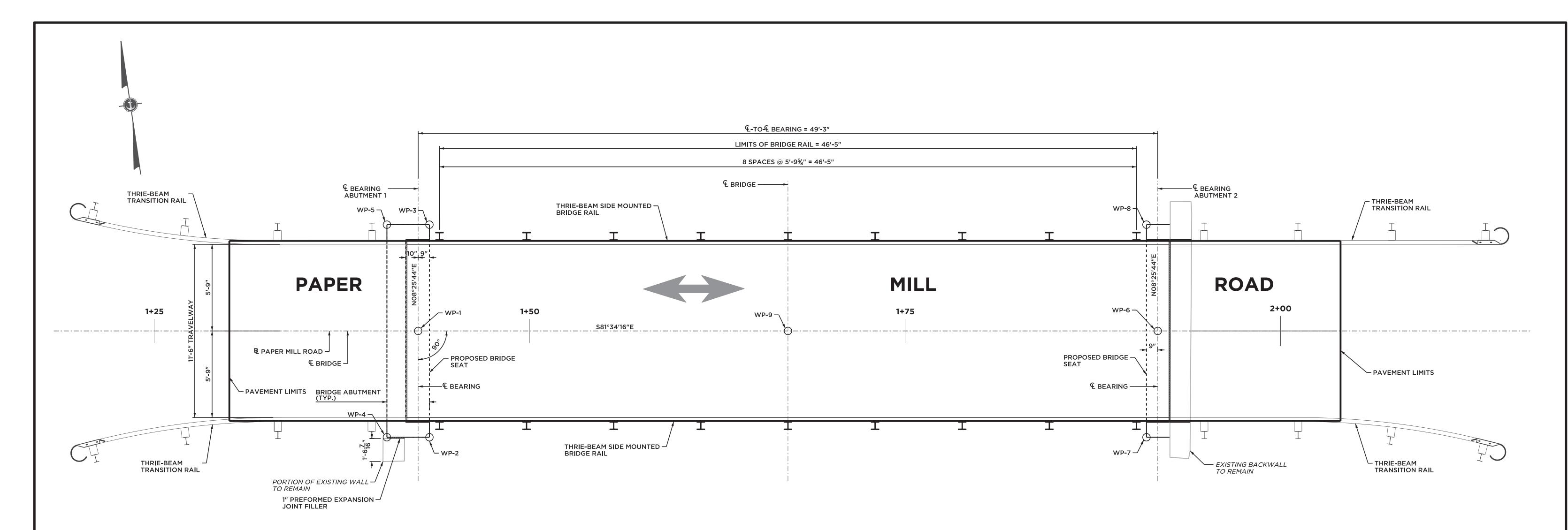


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REHABILITATION OF BRIDGE NO. 05528 MMZ FICE REVIEW PREPARED FOR TOWN OF COLCHESTER REVISIONS **GENERAL PLAN** 

PAPER MILL ROAD COLCHESTER, C

SHEET NO. 2 OF 8 084-13



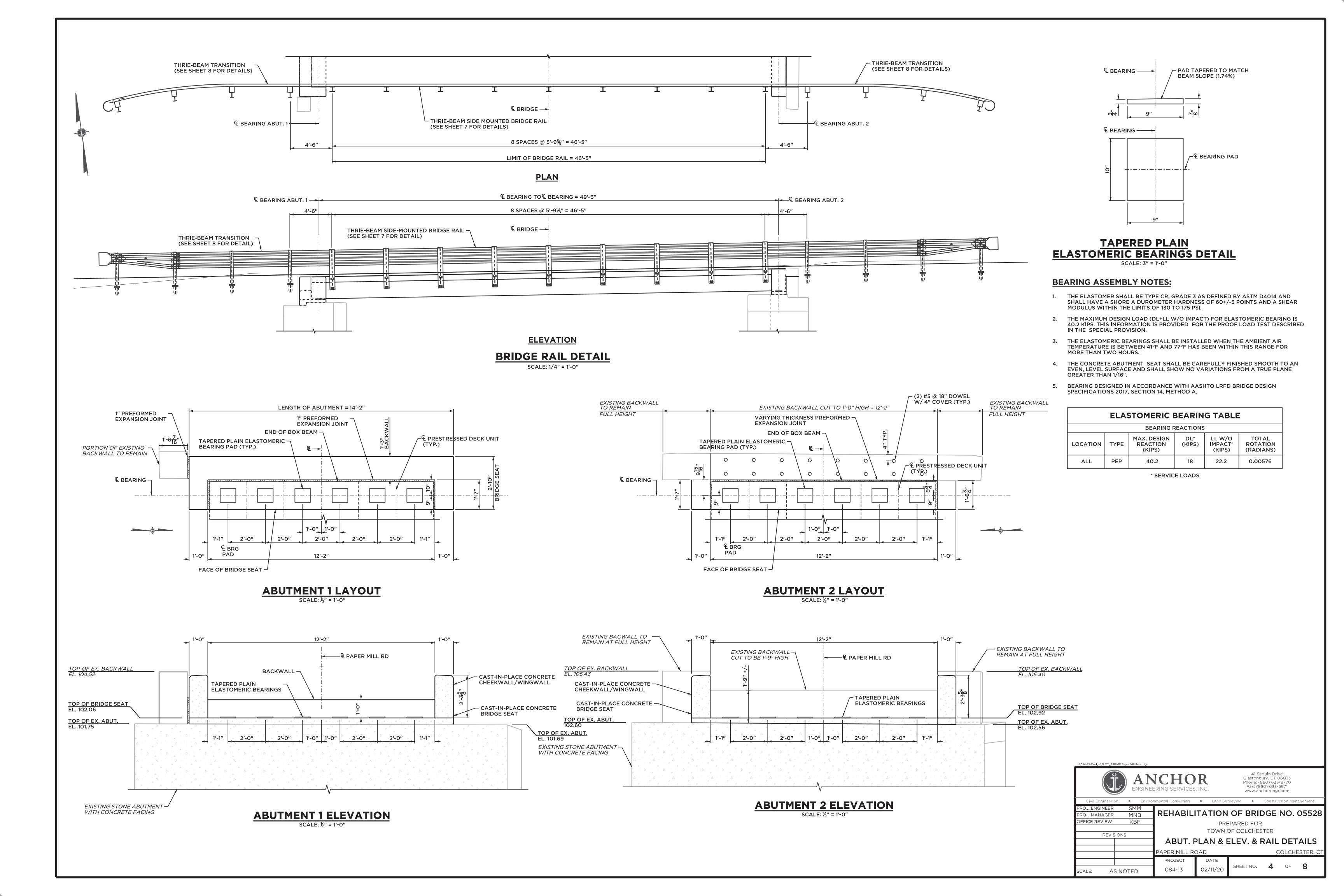
### **BRIDGE LAYOUT**

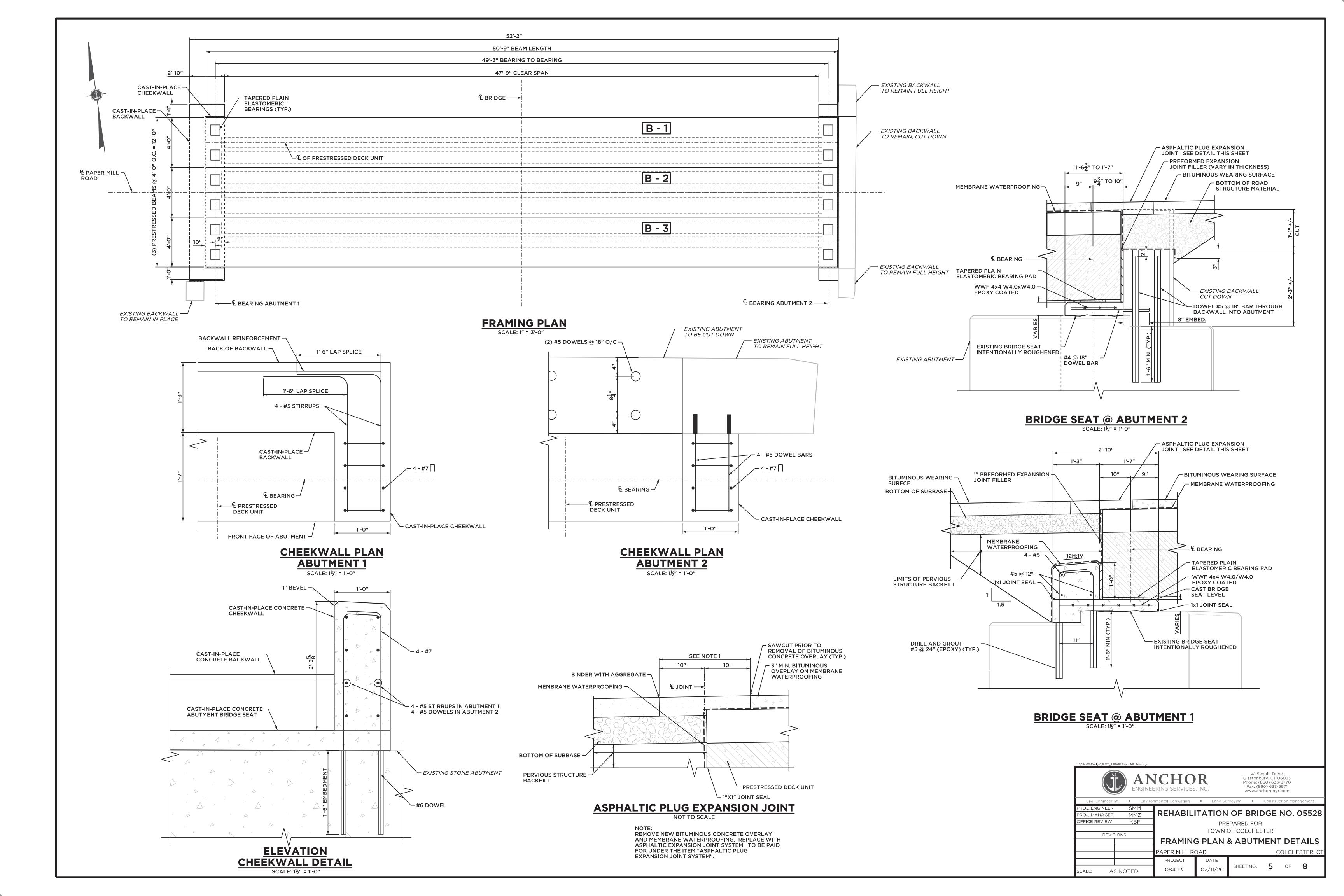
WORKING POINTS AND COORDINATES					
WP NO.	DESCRIPTION	NORTHING	EASTING	STATION	OFFSET
1	BASELINE & CENTERLINE OF BEARING ABUTMENT 1	772453.36	1095538.89	1+42.58	0.00
2	SOUTHWEST OUTSIDE CORNER OF CHEEKWALL @ FRONT OF BRIDGE SEAT	772446.25	1095538.60	1+43.33	7.08
3	NORTHWEST OUTSIDE CORNER OF CHEEKWALL @ FRONT OF BRIDGE SEAT	772460.26	1095540.67	1+43.33	7.08
4	SOUTHWEST OUTSIDE CORNER OF CHEEKWALL @ BACK OF ABUTMENT	772446.66	1095535.79	1+40.49	7.08
5	NORTHWEST OUTSIDE CORNER OF CHEEKWALL @ BACK OF ABUTMENT	772460.68	1095537.87	1+40.49	7.08
6	BASELINE & CENTERLINE OF BEARING ABUTMENT 2	772446.14	1095587.61	1+91.83	0.00
7	SOUTHEAST OUTSIDE CORNER OF CHEEKWALL @ FRONT OF ABUTMENT	772439.25	1095585.83	1+91.08	7.08
8	NORTHEAST OUTSIDE CORNER OF CHEEKWALL @ FRONT OF ABUTMENT	772453.26	1095587.91	1+91.08	7.08
9	CENTERLINE OF BASELINE @ CENTERLINE OF BRIDGE	772449.75	1095563.25	1+67.20	0.00

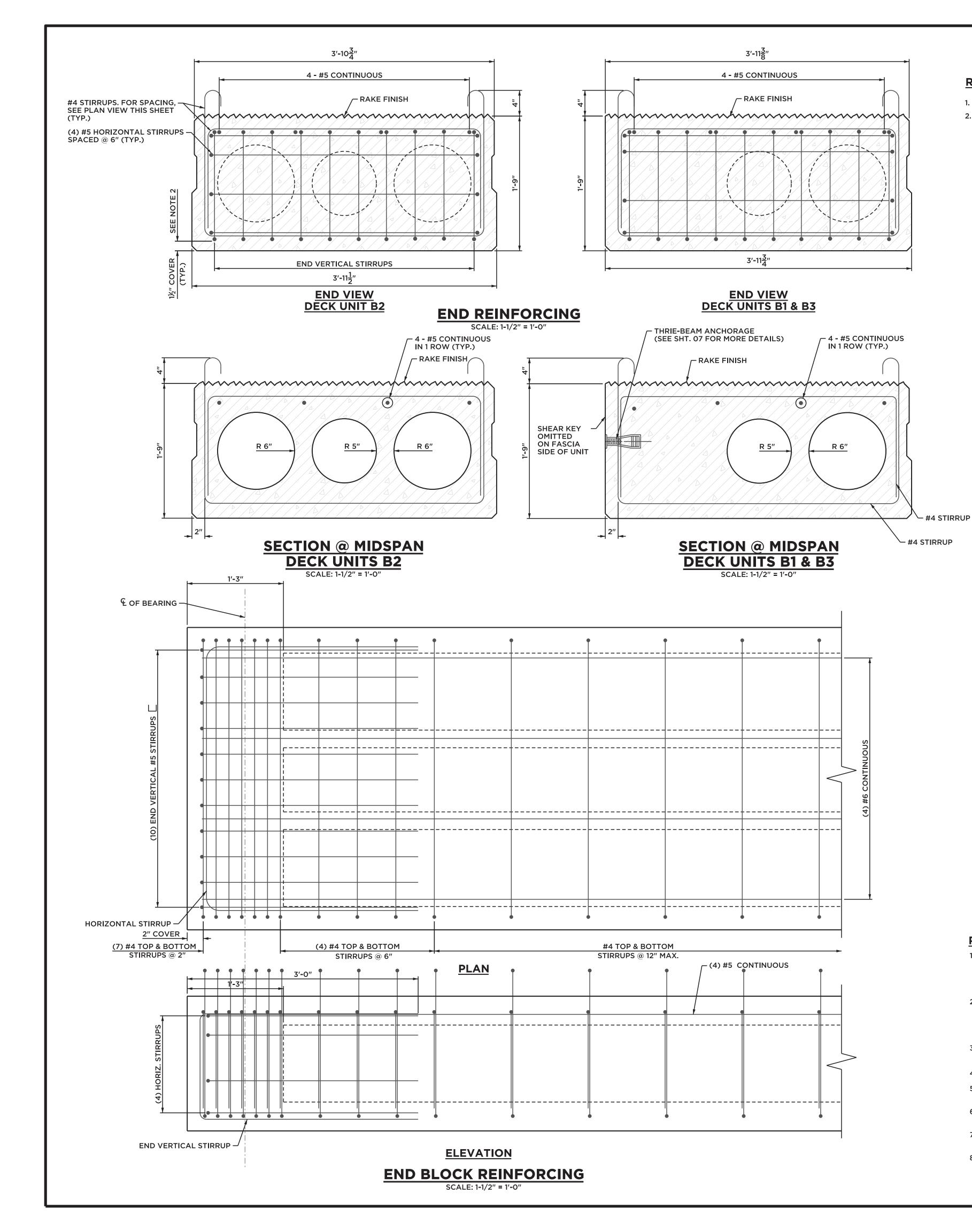
FINISHED ELEVATIONS (AT TOP OF WEARING SURFACE)						
CT A TION	DESCRIPTION	LEFT GUT	TTER LINE	B <u>.</u>	RIGHT GU	TTER LINE
STATION	DESCRIPTION	ELEVATION	OFFSET	ELEVATION	ELEVATION	OFFSET
1+42.58	CENTERLINE ABUTMENT 1	104.72	6.00	104.87	104.72	6.00
1+67.20	CENTERLINE BRIDGE	105.15	6.00	105.30	105.15	6.00
1+91.83	CENTERLINE ABUTMENT 2	105.58	6.00	105.73	105.58	6.00

FINISHED ELEVATIONS (AT TOP OF STRUCTURAL SLAB)						
CTATION	DESCRIPTION	LEFT GUTTER LINE		₽£	RIGHT GU	TTER LINE
STATION	DESCRIPTION	ELEVATION	OFFSET	ELEVATION	ELEVATION	OFFSET
1+42.58	CENTERLINE ABUTMENT 1	104.47	6.00	104.47	104.47	6.00
1+67.20	CENTERLINE BRIDGE	104.90	6.00	104.90	104.90	6.00
1+91.83	CENTERLINE ABUTMENT 2	105.33	6.00	105.33	105.33	6.00







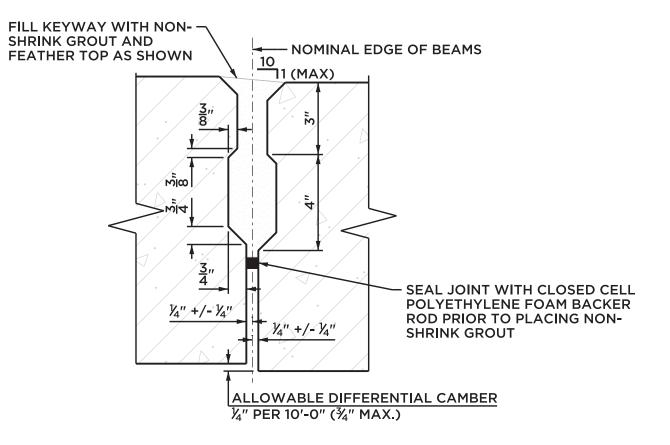


#### **REINFORCEMENT NOTES:**

- . SPLAY STIRRUPS TO AVOID CONFLICTS WITH TRANSVERSE TIE STRAND HOLES.
- 2. THIS COVER IS REQUIRED TO FACILITATE THE PLACEMENT OF THE BOTTOM PRESTRESSING STRANDS. THE FABRICATOR MAY MODIFY COVER (1½" MIN.) IF NO CONFLICTS EXIST WITH THE PRESTRESSING STRANDS.

STRAND DATA					
MEMBER NUMBER	NUMBER OF STRANS	C.G. OF S	STRANDS		
MEMBER NUMBER	NUMBER OF STRAINS	END (A)	MIDSPAN (A)		
B1	26	5.818"	5.231"		
B2	26	5.538"	6.182"		
В3	26	5.818"	5.231"		

PARTIAL STRAND DEBONDING SCHEDULE					
MEMBER NUMBER DEBOND LENGTH FROM END OF BEAM		NUMBER OF DEBONDED STRANDS			
B1, B2, B3	7'-6"	4			

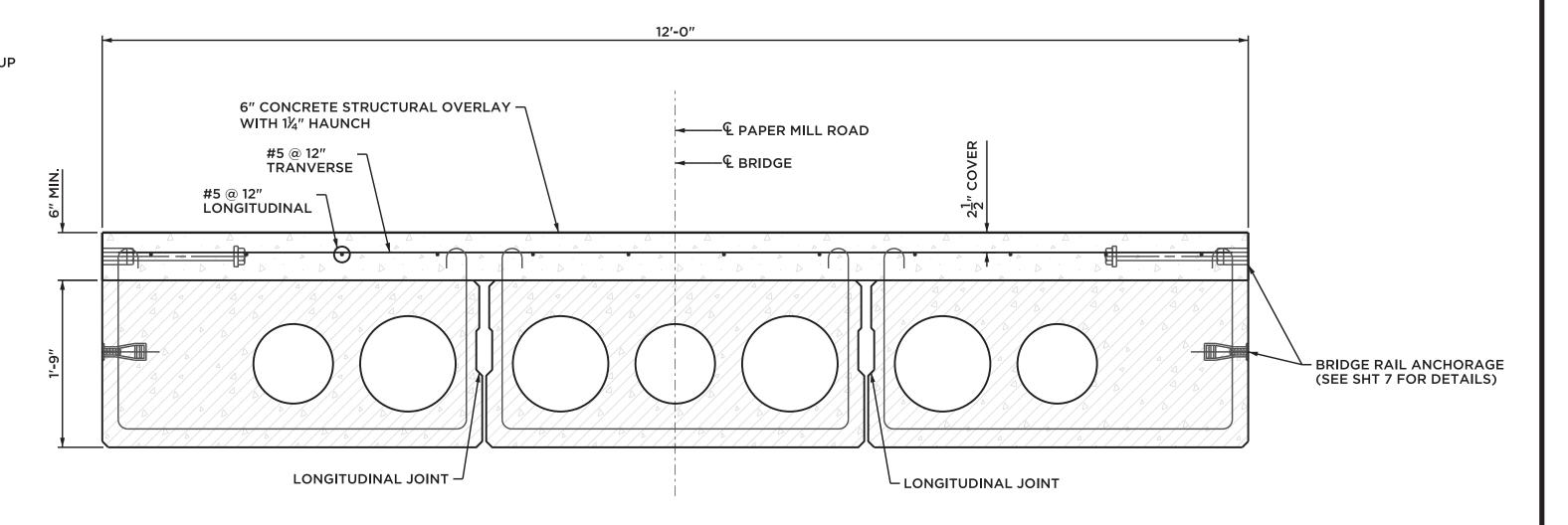


#### TYPICAL LONGITUDINAL JOINT

#### NOTES:

- THE DECK UNITS SHALL BE PLACED AT THE NOMINAL SPACING SHOWN ON THE PLAN WITH A GAP BETWEEN THE UNITS. THE WIDTH OF THE GAPS WILL
- VARY DUE TO THE SWEEP OF THE UNITS.

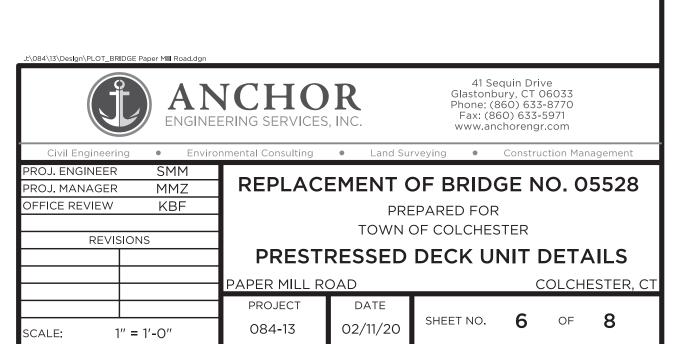
  2. GROUT FOR SHEAR KEYS SHALL BE RODDED OR VIBRATED TO ENSURE THAT ALL VOIDS IN THE SHEAR KEY ARE FILLED.

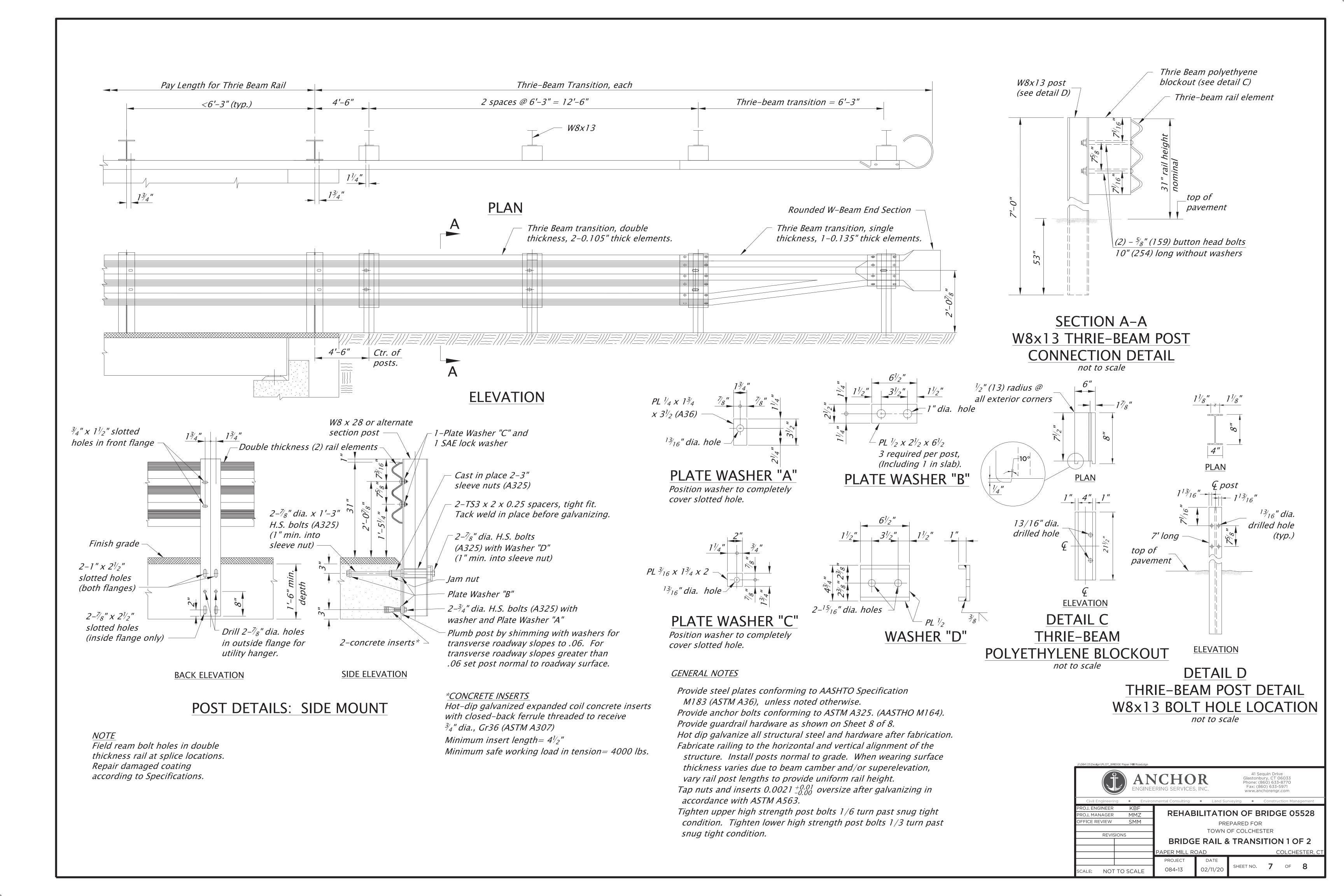


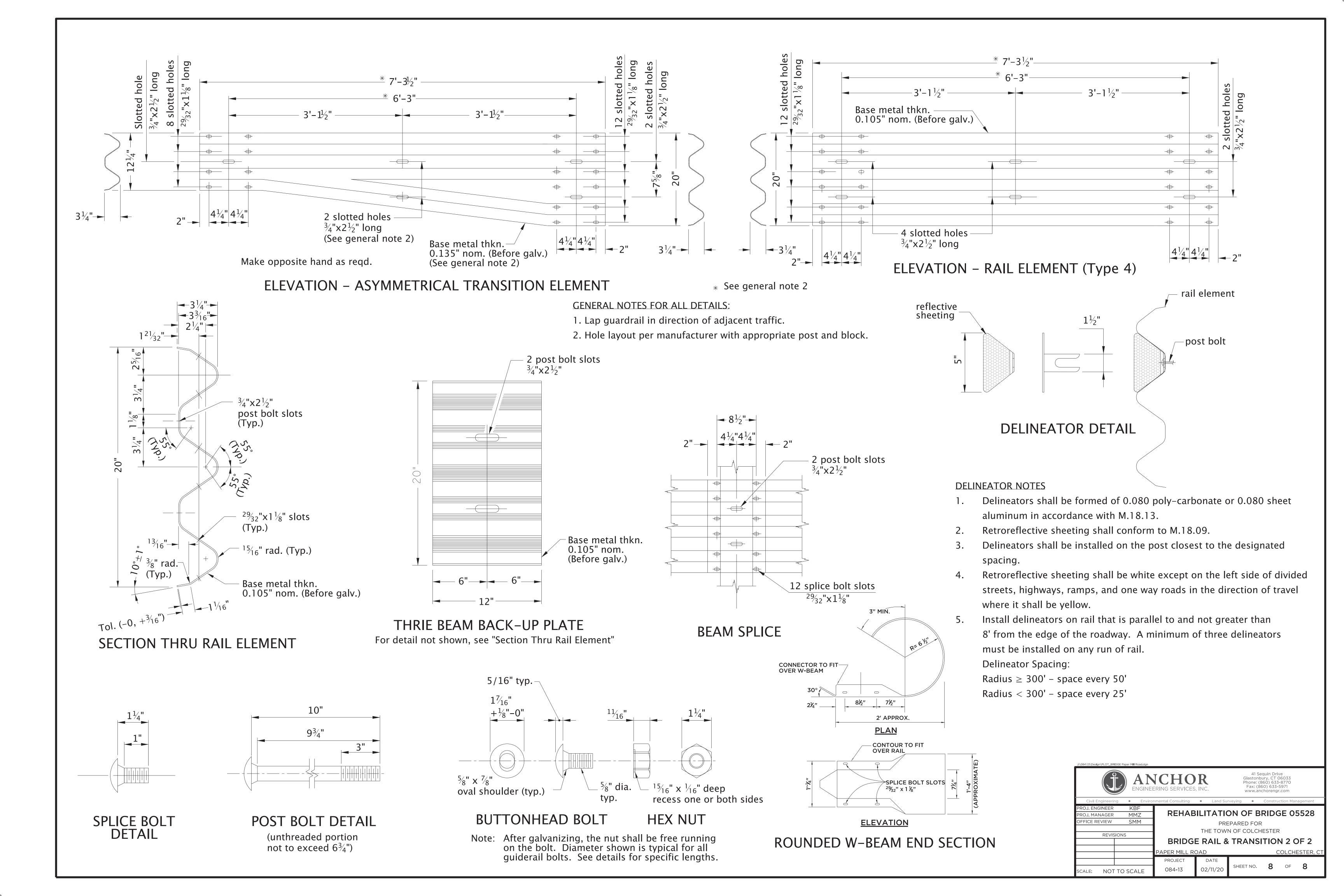
#### STRUCTURAL OVERLAY DETAIL

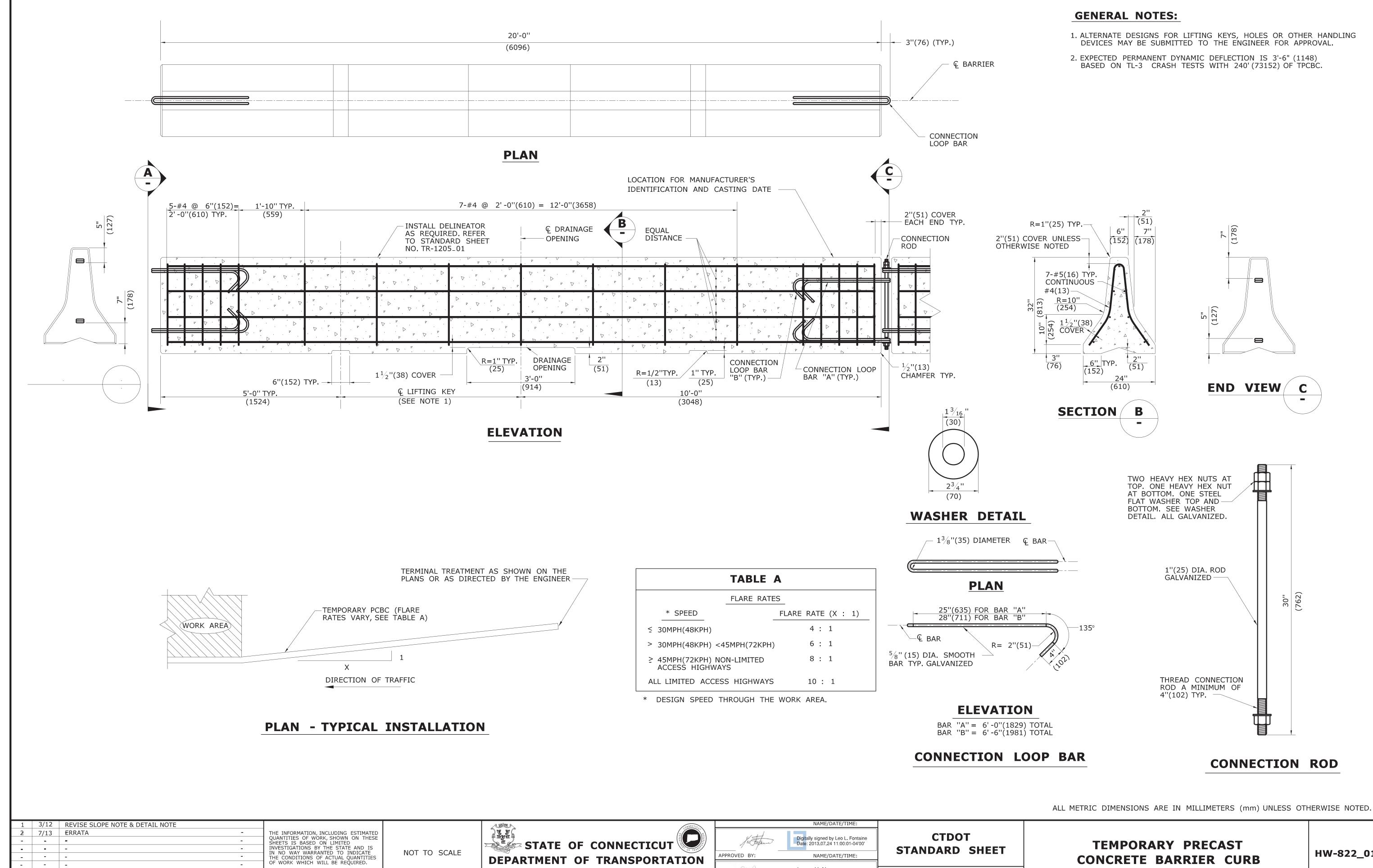
#### PRESTRESSED DECK UNITS NOTES

- 1. CONCRETE DESIGN STRENGTH FOR PRECAST DECK UNITS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
  - FINAL COMPRESSIVE STRENGTH f'c = 6,500 PSI INITIAL COMPRESSIVE STRENGTH f'ci = 5,500 PSI DECK COMPRESSIVE STRENGTH f'c = 4,000 PSI
- PRESTRESSING STRANDS SHALL BE 0.6" DIAMETER UNCOATED LOW RELAXATION STRANDS, AND SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
- ULTIMATE TENSILE STRENGTH Fs = 270,000 PSI
- JACKING FORCE PER STRAND (fp) = 43,943 LBS
- 3. PRESTRESSING STRANDS SHALL BE PLACED 2 INCHES (MINIMUM) ON CENTER AND SHALL HAVE A MINIMUM COVER OF 1½".
- 4. ENDS OF PRESTRESSED DECK UNITS SHALL BE VERTICAL AFTER APPLICATION OF FULL DEAD LOADS.
- 5. DRILLING OF HOLES OR USE OF POWER ACTUATED TOOLS ON PRESTRESSED DECK UNITS WILL NOT BE
- PERMITTED.
- NO SUPERIMPOSED DEAD OR LIVE LOADS SHALL BE APPLIED TO THE BUTTED DECK UNITS UNTIL THE GROUT IN THE LONGITUDINAL SHEAR KEYS HAS REACHED A SEVEN-DAY COMPRESSIVE STRENGTH OF 4,500 PSI.
- 7. ALL BAR REINFORCEMENT IN THE DECK UNITS SHALL BE GALVANIZED AFTER FABRICATION TO THE REQUIREMENTS OF ASTM A767, CLASS 1, INCLUDING SUPPLEMENTAL REQUIREMENTS.
- 8. THE DE-BONDED STRANDS SHALL BE WELL DISTRIBUTED ACROSS THE MEMBER CROSS SECTION. NO TWO ADJACENT STRANDS (EITHER HORIZONTALLY OR VERTICALLY) SHALL BE DE-BONDED, ALTHOUGH DIAGONALLY ADJACENT STRANDS MAY BE DE-BONDED. THE OUTER MOST STRANDS OF EACH LAYER SHALL NOT BE DE-BONDED.









PPROVED BY:

**DEPARTMENT OF TRANSPORTATION** 

NAME/DATE/TIME:

2013.07.24 14:48:34-04'00'

James H. Norman

NOT TO SCALE

- - -

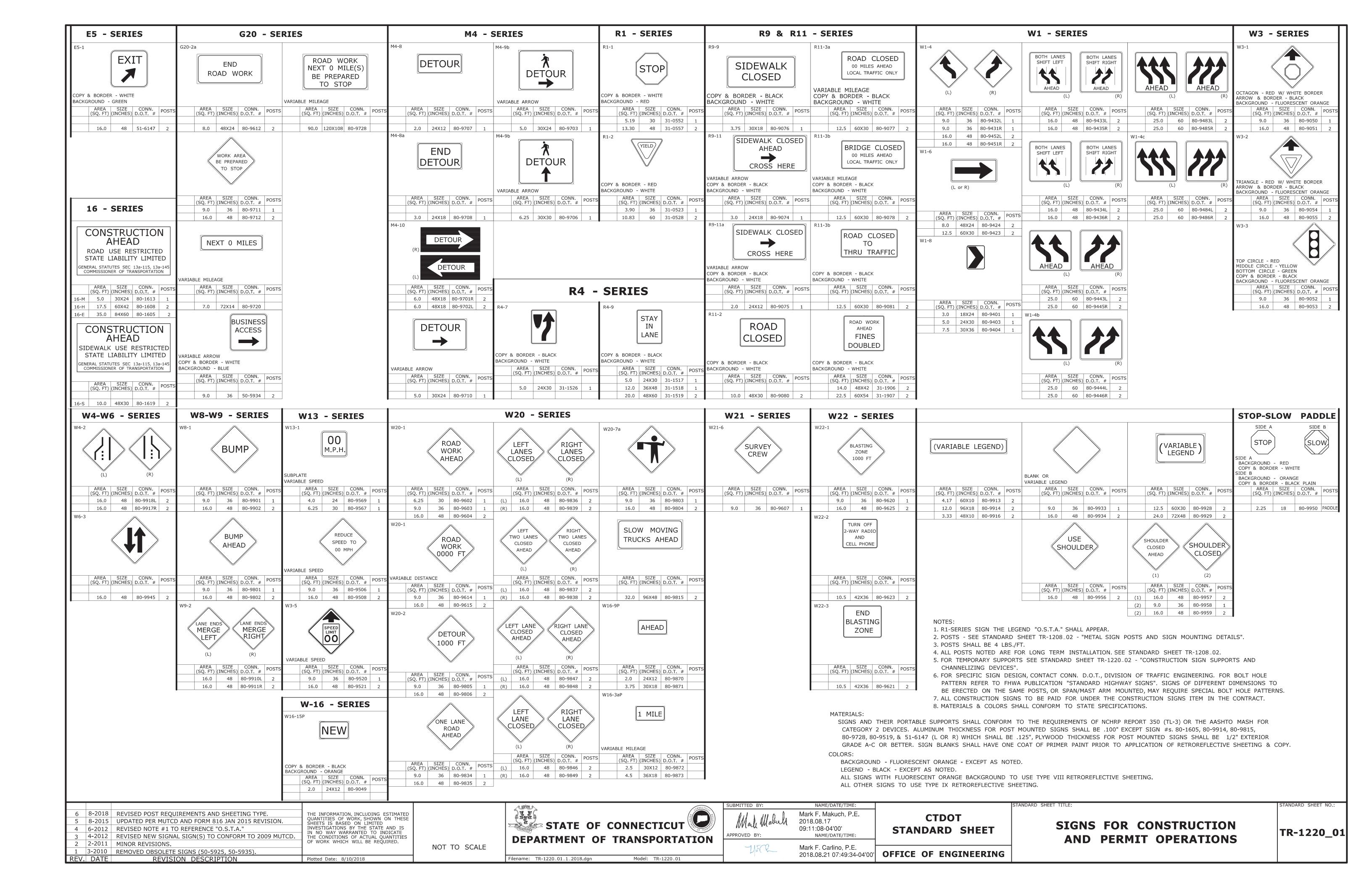
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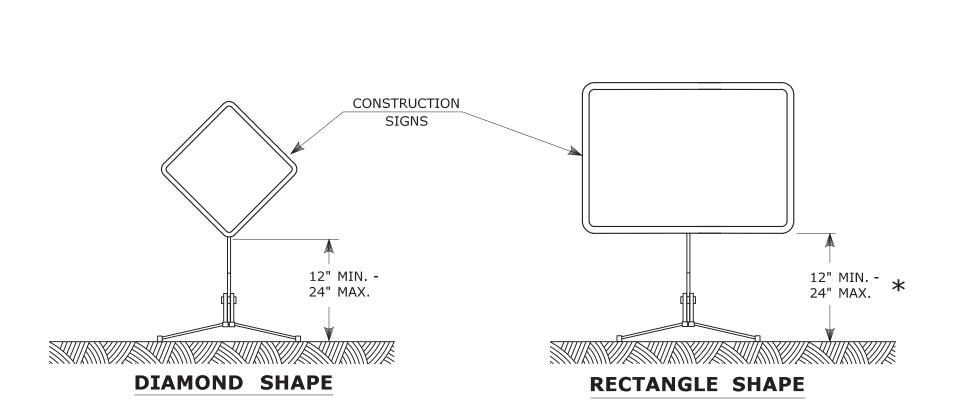
- - -

HW-822\_01 **CONCRETE BARRIER CURB** 

STANDARD SHEET

OFFICE OF ENGINEERING



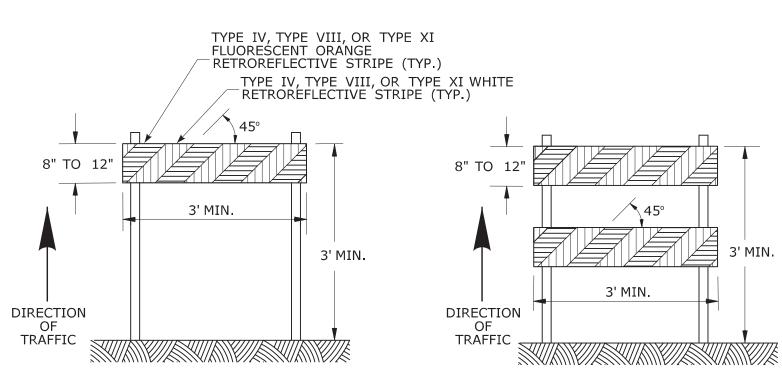


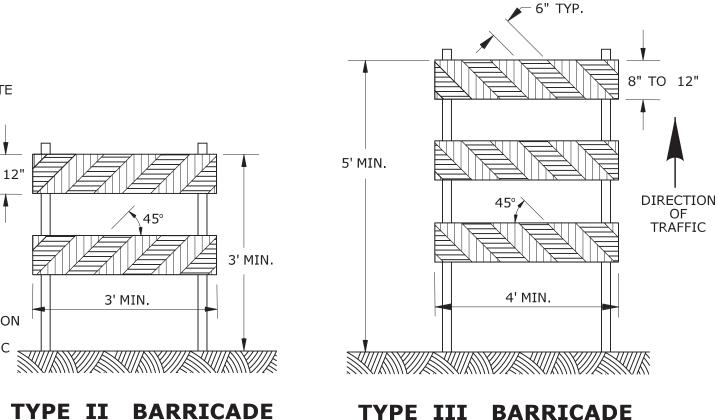
## PORTABLE CONSTRUCTION SIGNS

NOTES FOR PORTABLE SIGN SUPPORTS:

- 1. SIGNS AND THEIR PORTABLE SUPPORTS SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 2 DEVICES AND THE LATEST EDITION OF THE MUTCD.
- 2. MOUNTING HEIGHT OF SIGNS SHALL BE A MINIMUM OF 12" AND A MAXIMUM OF 24". SIGNS SHALL BE MOUNTED HIGHER AS NEEDED TO MEET FIELD CONDITIONS OR AS DIRECTED BY THE ENGINEER.
- 3. THE ENGINEER RESERVES THE RIGHT TO REJECT ANY SUPPORT DEEMED UNSUITABLE FOR THE PURPOSE INTENDED.
- 4. PORTABLE SIGN SUPPORTS SHALL BE STABILIZED IN A MANNER THAT WILL NOT AFFECT THEIR COMPLIANCE WITH NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 2 DEVICES.
- 5. PORTABLE CONSTRUCTION SIGN SUPPORTS SHOULD NOT BE USED FOR DURATION OF MORE THAN 3 DAYS EXCEPT FOR R9-8 THROUGH R9-11a SERIES, R11 SERIES, W1-6 THROUGH W1-8 SERIES, M4-10, AND E5-1. SEE STANDARD SHEET TR-1220\_01 - "SIGNS FOR CONSTRUCTION AND PERMIT OPERATIONS" FOR SIGN DETAILS.
- \* FOR E5-1 (EXIT SIGNS) USE MIN 48".

TYPE I BARRICADE



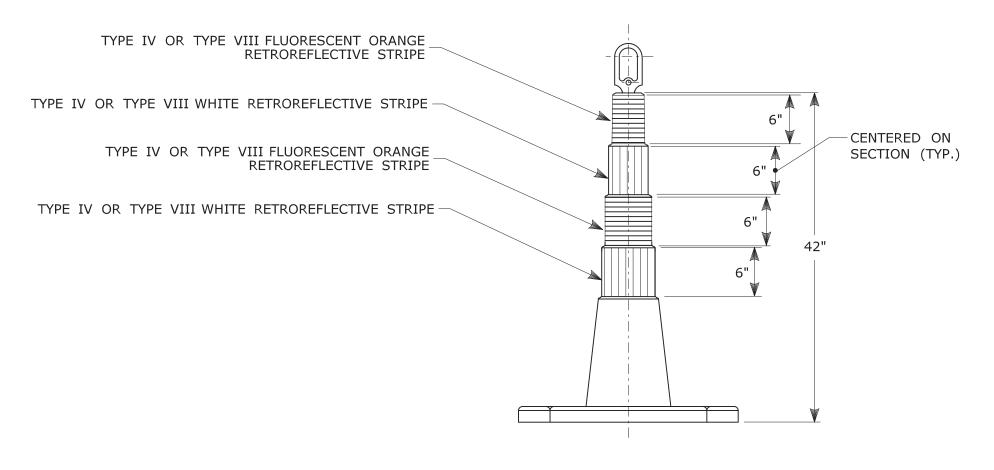


NOT TO SCALE

#### CONSTRUCTION BARRICADES

#### NOTES:

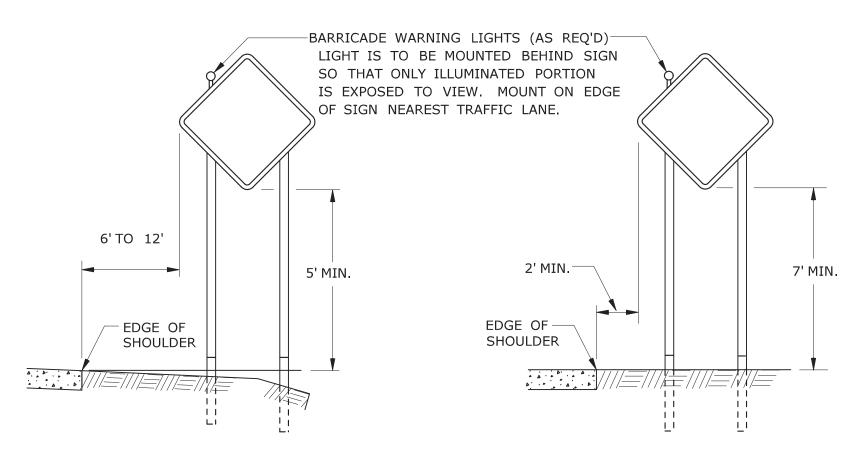
- 1. CONSTRUCTION BARRICADES SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH AND THE LATEST EDITION OF THE MUTCD.
- 2. MARKINGS FOR BARRICADE RAILS SHALL BE ALTERNATE FLUORESCENT ORANGE AND WHITE STRIPES SLOPING DOWNWARD IN THE DIRECTION TRAFFIC IS TO PASS. 6" WIDE STRIPES SHALL BE USED.
- 3. THE ENTIRE AREA OF FLUORESCENT ORANGE AND WHITE STRIPES SHALL BE RETROREFLECTIVE SHEETING AS REQUIRED IN THE SPECIFICATIONS. THE SIDES OF BARRICADES FACING TRAFFIC SHALL HAVE RETROREFLECTIVE RAIL FACES.
- 4. THE ENGINEER RESERVES THE RIGHT TO REJECT ANY BARRICADE DEEMED UNSUITABLE FOR THE PURPOSE INTENDED.
- 5. CORNERS OF BARRICADE RAILS SHALL BE ROUNDED.
- 6. SIGNS MAY ONLY BE INSTALLED ON TYPE III BARRICADES AND SHALL BE PLACED SO AS TO COVER NO MORE THAN ONE BARRICADE RAIL.



#### **42" TRAFFIC CONE**

#### NOTES:

- 1. TRAFFIC CONES SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 1 DEVICES AND THE LATEST EDITION OF THE MUTCD.
- 2. IF RUBBER CONES ARE USED, THEY SHALL HAVE INTERIOR RIBS FOR RIGIDITY.
- 3. IF PLASTIC CONES ARE USED, THEY SHALL BE COLOR IMPREGNATED.
- 4. THE ENGINEER RESERVES THE RIGHT TO REJECT ANY CONE DEEMED UNSUITABLE FOR THE PURPOSE INTENDED.
- 5. THE ENTIRE AREA OF FLUORESCENT ORANGE AND WHITE STRIPES SHALL BE RETROREFLECTIVE SHEETING AS REQUIRED IN THE SPECIFICATIONS.
- 6. THE SECTIONS OF CONES NOT COVERED WITH RETROREFLECTIVE STRIPES SHALL BE ORANGE.



#### RURAL AREA

# **URBAN AREA**

#### PLACEMENT OF CONSTRUCTION SIGNS TYPICAL LONG TERM INSTALLATION

#### NOTES:

SUPPORTS SHALL BE METAL SIGN POSTS AND HAVE BREAK-AWAY FEATURES.

REFER TO STANDARD SHEETS: TR-1208\_01 - "SIGN PLACEMENT AND RETROREFLECTIVE STRIP DETAILS."

TR-1208\_02 - "METAL SIGN POSTS AND SIGN MOUNTING DETAILS."

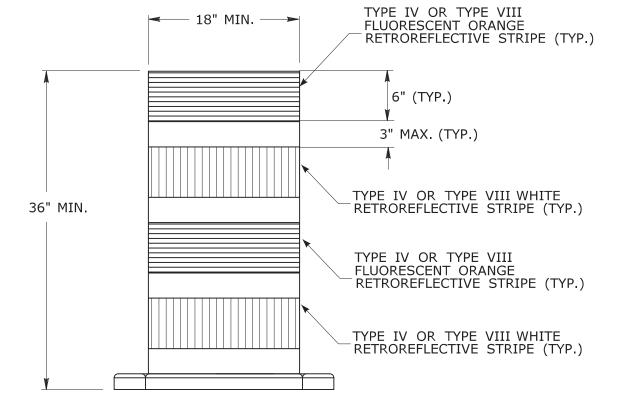
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# WHITE RETROREFLECTIVE STRIPE TYPE VI WHITE RETROREFLECTIVE STRIPE 28" MIN.

#### TRAFFIC CONE

#### NOTES:

- 1. TRAFFIC CONES SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 1 DEVICES AND THE LATEST EDITION OF THE MUTCD.
- 2. IF RUBBER CONES ARE USED, THEY SHALL HAVE INTERIOR RIBS FOR RIGIDITY.
- 3. IF PLASTIC CONES ARE USED, THEY SHALL BE COLOR IMPREGNATED.
- 4. THE ENGINEER RESERVES THE RIGHT TO REJECT ANY CONE DEEMED UNSUITABLE FOR THE PURPOSE INTENDED.
- 5. THE ENTIRE AREA OF WHITE STRIPES SHALL BE RETROREFLECTIVE SHEETING AS REQUIRED IN THE SPECIFICATIONS.
- 6. TRAFFIC CONES NOT USED AT NIGHT MAY UTILIZE TYPE III SHEETING.
- 7. THE SECTIONS OF CONES NOT COVERED WITH RETROREFLECTIVE STRIPES SHALL BE ORANGE.



#### TRAFFIC DRUM **FRONT VIEW**

#### NOTES:

- 1. TRAFFIC DRUM SHALL CONFORM TO THE REQUIREMENTS OF NCHRP REPORT 350 (TL-3) OR THE AASHTO MASH FOR CATEGORY 1 DEVICES AND THE LATEST EDITION OF THE MUTCD.
- 2. THE ENGINEER RESERVES THE RIGHT TO REJECT ANY DRUM DEEMED UNSUITABLE FOR THE PURPOSE INTENDED.
- 3. THE ENTIRE AREA OF FLUORESCENT ORANGE AND WHITE STRIPES SHALL BE RETROREFLECTIVE SHEETING AS REQUIRED IN THE SPECIFICATIONS.
- 4. THE SECTIONS OF DRUMS NOT COVERED WITH RETROREFLECTIVE STRIPES SHALL BE ORANGE.

HE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE 8-2018 UPDATED SHEETING TYPE AND COLOR THE CONDITIONS OF ACTUAL QUANTITIES OF WORK WHICH WILL BE REQUIRED. 8-2015 UPDATED PER MUTCD AND FORM 816 JAN 2015 REVISION. 1 2-2011 MINOR REVISIONS REVISION DESCRIPTION REV. DATE Plotted Date: 8/10/2018

STATE OF CONNECTICUT **DEPARTMENT OF TRANSPORTATION** Filename: TR-1220\_02\_3\_2018.dgn Model: TR-1220\_02

NAME/DATE/TIME: Mark F. Makuch, P.E. 2018.08.17 09:12:43-04'00' PPROVED BY: NAME/DATE/TIME: Mark F. Carlino, P.E.

**CTDOT** STANDARD SHEET

OFFICE OF ENGINEERING

**CONSTRUCTION SIGN SUPPORTS** AND CHANNELIZING DEVICES

TR-1220\_02