FRONT ELEVATION

VERT. CONST. JOINT - (COATED) LAP LENGTHS FOR HORIZONTAL BARS SHALL BE BASED ON A "CLASS C" TOP TENSION LAP

NOTE: #8 @ 1'-0" MIN.

VERT. CONSTRUCTION JOINT FORMED BY BEVELED 2" x 8" CLEAR BRG. SEAT BY 3". SEE DETAIL ON THIS SHEET.

Pile reaction equations are for preliminary pile layout purposes only. Pile spacing in abutment footing shall be 8'-0" maximum. Pile reactions are for preliminary pile layout purposes only.

Note: components 1'-0" and 1'-3" are not used in this design.

LEGEND

* = WHEN VERTICAL FACE PARAPET TYPE "NY5" IS USED.
** = WHEN VERTICAL FACE PARAPET TYPE "NY4" IS USED.

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SECTION B-B

FOR ALL FOOTING BARS NOT IDENTIFIED ARE #5 BARS

ADDITIONAL DETAILS

WRAPPED (6-INCH)

PIECEWORK UNDERDRAIN

EQUALY SPACED

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FILE REACTIONS PER FOOT IN KIPS

FRONT ROW — 0.002(15) + 0.001(15/3) = 0.0032
BACK ROW — 0.002(25) + 0.001(25/3) = 0.0052

PILE REACTIONS PER FOOT IN KIPS

FRONT ROW — 0.002(15) + 0.001(15/3) = 0.0032
BACK ROW — 0.002(25) + 0.001(25/3) = 0.0052

PILE MUST ALSO BE DESIGNED TO ACCOUNT FOR LATERAL LOADS.

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STANDARD 12.03

APPROVED

Bill Oliva

DATE: 1-20

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DESIGNER NOTES

PILE REACTIONS PER FOOT IN KIPS

FRONT ROW — 0.002(15) + 0.001(15/3) = 0.0032
BACK ROW — 0.002(25) + 0.001(25/3) = 0.0052

PILE REACTION EQUATIONS ARE FOR PRELIMINARY PILE LAYOUT PURPOSES ONLY.

---

FOR STRUCTURAL APPROACH DETAILS.

SEE STANDARDS 12.01 AND 13.01 FOR SLOPED BEAM SEAT CRITERIA AND DETAILS.

---

ABUTMENT TYPE A3

BUREAU OF STRUCTURES

---
PIER HEIGHT TO BE DESIGNED.

#4 BARS TO BE DESIGNED.

15° ANGLE SKEW.

PLAN OF PIER CAP

END VIEW

ELEVATION

SECTION P2

DESIGNER NOTES

STIRRUPS TO BE DESIGNED.

PIER TO BE DESIGNED.

LEVEL

REFERENCES

ROADWAY

BASEMENT LEVEL

16'-6" MIN.

STIRRUPS TO BE DESIGNED.

BEAMS TO BE DESIGNED.

#4 BARS @ 1'-0" SPA.

LEVEL

STIRRUPS TO BE DESIGNED.

BEAMS TO BE DESIGNED.

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BEAMS TO BE DESigned.

LEVEL
PILE ENCASED PIER (TYPES)

PIER

Pile encased pier types:
- Type 1 - cofferdam bid item not provided. Consider providing underwater inspection bid item.
- Type 2 - cofferdam and underwater inspection bid items required.
- Type 3 - cofferdam and seal bid items required.

FULL PIER ALTERNATIVES:
- Full wall as shown on this standard
- Full wall with seal around piers

PIER

DESIGNER NOTES

PIER

PILE ENCASED PIER (TYPES)

END VIEW
PILE ENCASED PIER - TYPE 1

END VIEW
PILE ENCASED PIER - TYPE 2

END VIEW
PILE ENCASED PIER - TYPE 3

END VIEW
SOLID WALL PIER

PIER

PIER

PIER

BILL OLIVA
DESIGNER

PILE ENCASED PIER (TYPES)

BUREAU OF STRUCTURES

APPROVED

D-20

STANDARD 13.09
TYPICAL SECTION
MSE WALL WITH CONCRETE PANEL FACING

TYPICAL SECTION
MSE WALL WITH MODULAR BLOCK FACING

DESIGNER NOTE
SEE STANDARD FOR ADDITIONAL INFORMATION

MSE WALL PANEL AND BLOCK FACING

BUREAU OF STRUCTURES

STANDARD 14.11

APPROVED: Bill Oliva
DATE: 1-20
**MEDIAN AND RAISED SIDEWALK DETAILS**

**PART TRANSVERSE SECTION AT ABUTMENT**

**TYPE A1 DIAPHRAGM WITH A RAISED SIDEWALK**

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**SECTION A-A**

**SECTION B-B**

---

**SECTION THRU SIDEWALK**

**CROSS SECTION THRU UNANCHORED MEDIAN**

- Anchor to deck not required for widths > 2'-0".

---

**NOTES**

1. Order structures and slab structures with a raised sidewalk should have a deflection joint in the median and pedestals over the deck for decks greater than 200'.
   - Detail the joint normal to the median and pedestrian walkway.
2. Order structures and slab structures without sidewalks should have no deflection joints at the parapets.

---

**DEFLECTION JOINT DETAIL**

- Order structures with a raised sidewalk should have a deflection joint in the median and pedestals over the deck for decks greater than 200'.
- Detail the joint normal to the median and pedestrian walkway.
- Order structures with a raised sidewalk should have no deflection joints at the parapets.

---

**DESIGNER NOTES**

- Order structures with a raised sidewalk should have a deflection joint in the median and pedestals over the deck for decks greater than 200'.
- Detail the joint normal to the median and pedestrian walkway.
- Order structures with a raised sidewalk should have no deflection joints at the parapets.
ALLOW FOR TIGHTENING FACE OF GIRDER WEB

BRACKET DETAIL

SECTION A2

FLOOR DRAIN TYPE 'GC'

NOTES

ALL MATERIAL FOR TYPE "GC" CASTING, EXCLUDING DOWNSPOUTS, SHALL BE GRAY IRON CONFORMING TO ASTM A48, CLASS 30.

MATERIAL FOR BRACKETS SHALL CONFORM TO ASTM A48.

ALL MATERIAL FOR FLOOR DRAINS TO BE INCLUDED IN THE BID ITEM "FLOOR DRAINS TYPE GC".

ALL MATERIAL FOR DOWNSPOUTS, DOWNSPOUT CONNECTIONS, AND BRACKETS TO BE INCLUDED IN THE BID ITEM "DOWNSPOUT 6-INCH".

ALTERNATIVE BRACKETS ARE NOT ALLOWED.

DESIGNER NOTE

ON THE PREVIOUS SHEET, SHOW LOCATION OF HOLES FOR BRACKET ANCORACTION FROM TOP/BOTTOM AND END OF GIRDER.
EXPANSION BEARING REPLACEMENT - STEEL GIRDERS

STEEL BEARINGS

SEE STANDARD 27.08 FOR BEARING DETAILS

EXPANSION BEARING REPLACEMENT - STEEL GIRDERS

ELASTOMERIC BEARINGS

SEE STANDARD 27.07 FOR BEARING DETAILS

EXPANSION BEARING REPLACEMENT - PRESTRESSED GIRDERS

ELASTOMERIC BEARINGS

SEE STANDARD 40.08 FOR ADDITIONAL INFORMATION.

NOTES & DESIGNER NOTES

EXPANSION BEARING REPLACEMENT - PRESTRESSED GIRDERS

EXPANSION BEARING REPLACEMENT - STEEL GIRDERS

PLATE 'E' DETAILS

SEE STD. 40.10 FOR CONCRETE BLOCK ALTERNATE

NOTES

ALL MATERIAL USED FOR BEARINGS SHALL BE PAID AT THE UNIT PRICE BID FOR BEARINGS PASS ELASTOMERIC LAMINATED.

CHECK 27.2.1 ELASTOMERIC BEARINGS IN THE BRIDGE MANUAL FOR REQUIREMENTS TO SEE IF THIS PLATE SHOULD BE TAPERED.

NOTE SHALL BE LOCATED ON THE PLANS:

"BEARING PADS ELASTOMERIC LAMINATED."

THE STEEL TOP PLATE THICKNESS MAY BE REDUCED (0.5" MIN.) TO MATCH THE OVERALL "WELDING PROCEDURES SHALL BE ESTABLISHED BY THE CONTRACTOR TO RESTRICT THE MAXIMUM TEMPERATURE REACHED BY SURFACES IN CONTACT WITH ELASTOMER TO 200°F (93°C). TEMPERATURES SHALL BE CONTROLLED BY TEMPERATURE MONITORING WAX PENCILS OR OTHER SUITABLE MEANS APPROVED BY THE ENGINEER.

TOP STEEL PLATE MAY NOT BE OMITTED.

SAVE ALL ELASTOMERIC BEARINGS IN THE BRIDGE MANUAL FOR REQUIREMENTS TO SEE IF THE PLATE SHOULD BE TAPERED.

DO NOT INCLUDE PRESTRESSED GIRDER SHINKAGE WHEN DESIGNING BEARINGS FOR SPECIFIC INFRUSTRUCTION PROJECTS

EXPANSION BEARING REPLACEMENT DETAILS

BUREAU OF STRUCTURES

STANDARD 40.08

EXPANSION BEARING REPLACEMENT DETAILS

EXPANSION BEARING REPLACEMENT - PRESTRESSED GIRDERS

EXPANSION BEARING REPLACEMENT - STEEL GIRDERS

EXPANSION BEARING REPLACEMENT - STEEL GIRDERS