DESIGNER NOTES

PILE DESIGN LOADS CAN BE USED IF PIERING HOLE IS LARGE ENOUGH TO AVOID PILE HAMMERING AND ALLOW TIGHT FITTING SELF.

SEE HORIZONTAL PILE IN PRECAST PILE MANUAL FOR REFERENCE ON HP-PILE.

SEE PRECAST PILE MANUAL FOR REFERENCE ON HP-PILE.

IF LESS THAN THE MINIMUM RESISTANCE IS REQUIRED BY DESIGN, ADD THE REQUIRED DESIGN RESISTANCE TO THE PLANS.

NOTES

CAST-IN-PLACE PILE SHELL MATERIAL SHALL BE IN ACCORDANCE WITH THE PRECAST PILE SHELL MATERIAL.

END PLATE DETAIL FOR CIP PILING

IN ARTESIAN CONDITIONS

(ONLY USE FOR ARTESIAN CONDITIONS)

SECTION THRU CONCRETE

CAST-IN-PLACE PILING

USED WHEN PILES ARE EXPOSED

OVER PILE HEADS OR THROUGH RECESSED ELEMENTS

PILE DETAILS

BUREAU OF STRUCTURES

APPROVED: Bill Oliva

STANDARD 1L01
DESIGNER NOTES

Provide 1 in. clear between anchor bolts and reinforcement.

For pier caps up to 36" x 36" provide at least one 1/2" N.C. clearance between reinforcing bars for concrete reinforcement by tying in and for reinforcing for caps greater than 36" x 36" provide at least two 1/2" N.C. clearances. No anchor locations on pier cap sheets.

LAYOUT REINFORCEMENT LAYOUT SIMILAR TO PIER CAP REINFORCEMENT DETAILS.

NOTE

Ensure transfer strip bars are placed to ensure 1 in. clear between anchor bolts and reinforcement.

PROVIDE REINFORCEMENT NECESSARY TO SUPPORT NURSE REINFORCEMENT.
PART GIRDER PLAN WITH SKEW

1. @ 6" = TRANSVERSE BARS NOT SHOWN FOR CLARITY

INTERIOR GIRDER DUCT PLAN

SHEAR KEY HOLE

EXTerior GIRDER DUCT PLAN

STRESS POCKET

LEGEND

1. BARS NOT REQUIRED WHEN USED ON GRS ABUTMENTS.
2. BARS PLACED PARALLEL TO DIRECTIONS, SPACING IS
   PERPENDICULAR TO THE E. OF THE DIRECTION.
3. WHEN STEEL IS PARALLEL TO EAVEMENT E. INTENDING TO ALLOW FOR EASE OF POST-TENSIONING
   OPERATION.
4. ** PLACE AT 9" MAX. SPACING UPWARD PERPENDICULAR TO THE E. OF THE DIRECTION.
5. *** PLACE ALONG SKEW PLUS OF PRESSURIZED BOX GIRDERS PEEL ALL END BLOCK BOTTOM STIRRUP BARS.
6. ISN' T PLACED.
7. DESIGNER NOTES
   FOR BAR END DETAILS, SEE STANDARD 2050 AND
   STANDARD 2051

PART GIRD ELEVATION SHOWING 0° SKEW

PLACE 6" TRANSVERSE BARS AS SHOWN ALONG SKEW

INTERIOR GIRD ELEVATION

SHEAR KEY HOLE

EXTerior GIRD ELEVATION

TABLE 1.15

STANDARD 19.52
STEEL EXPANDED ELASTOMERIC BEARING (DIMENSIONS 50 x 50)

SECTION THRU ELASTOMERIC BEARING

PLAN VIEW

END VIEW

AT SKewed PIER

CLEARANCE DIAGRAM

AT SKewed ABUTMENTS

DESIGNER NOTES

BEARINGS SHALL NOT BE PLACED AT A TEMPERATURE CLOSER THAN 8°F.

ALL MATERIAL USED FOR BEARINGS SHALL BE HEAT TREATED.

ALL STRUCTURAL STEEL PLATES SHALL BE FLAT.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE PLANE.

NOTES

FOR BEARINGS USED FOR BEARING REPLACEMENT PROJECTS, THE STEEL TOP PLATE THICKNESS MAY BE DECREased TO A MINIMUM OF 0.05 TO MATCH THE ORIGINAL DISTANCE BEARING PLATE. THE FOLLOWING NOTE SHALL BE LOCATED ON THE PLATES:

"BEARING PLATES SHALL BE SUBJECTED TO THE CONTRACTOR TO BE USED. ANY MATERIAL USED FOR BEARINGS SHALL BE ANALYZED FOR TEMPERATURE."
**NOTES**

For Steel Expansion Bearings, use temperature setting table rather than centering bearings beneath bearing surfaces for all temperatures.

For prestressed steel bearings, place bearings as shown on the structure plan. Provide adjustment for subsequent thermal expansion, plate each joint covered between its open bearings.

**DESIGNER NOTES**

The setting should only be used for steel bearings. Use plate to the steel spring bearings to be designed to account for thermal movement and construction tolerances. The spreader at the bottom of the spring should be designed to accommodate these conditions.

**Bearing Offset Table**

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**Steel Expansion Bearing Details**

[Signature]  
Bill Oliva  
Date: 1/19

**STANDARD 27.10**
**Ruptured Void Repair**

**Section Thru Parapet on Wing**

**Section at End of Slab**

**Designer Notes**

- Using pavement edge preparation means not required for concrete overlays.
- Use concrete Masonry edge preparation means for deck repairs where pavement, asphalt, or rolled rubber asphalt overlays, use concrete Masonry edge preparation means for deck repairs where overlays.

**Overlay Details**

[Signature: Bill Oliva]

DATE: 1/19

STANDARD 40.03
SECTION THRU JOINT
STEEL GIRDER WITHOUT END DIAPHRAGM

SECTION THRU PROPOSED JOINT
STEEL GIRDER WITH END DIAPHRAGM
CONCRETE OVERLAY

SECTION THRU PROPOSED JOINT
STEEL GIRDER WITH END DIAPHRAGM
ASPHALTC OVERLAY

TOTAL ESTIMATED QUANTITIES

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<td>Porous Pave</td>
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JOINT REPAIR-Removal
STEEL GIRDER

SECTION THRU JOINT-PRESTRESSED GIRDER

strip Seals & Diaph, Details for Overlays

Bureau of Structures

Approved: Bill Oliva

Standard 40.04
### PRE-TENSION

- $a = 560$ sq. in.
- $r = 223.91$ in.
- $y_p = 24,750$ psi
- $K_p = 0.202$ ft
- $S_p = 4.96$ in.
- $I_p = 583$ ft

### COMPRESSION IS POSSIBLE

### STANDARD PATTERNS FOR UNDRAPED STRANDS

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### ARRANGEMENT AT 8% SPAN - FOR ORDERS WITH DRAPED 0.5” DIA. AND 0.6” DIA. STRANDS

- 0.5” or 0.6” strands only

### 45° PRESTRESSED ORDER DESIGN DATA

**Bureau of Structures**

**Date:** 10-18

**Signed:** Bill Oliver

**Standard:** 40.18
DESIGNER NOTES

REHABILITATION OVERLAY

TOTAL ESTIMATED QUANTITIES

TOTAL ESTIMATED QUANTITIES

PREVENTATIVE OVERLAY

TOTAL ESTIMATED QUANTITIES

POLYMER OVERLAY

BUREAU OF STRUCTURES

APPORVED: Bill Oliva

STANDARD 40.32
DESIGNER NOTES

TOTAL ESTIMATED QUANTITIES

TOTAL ESTIMATED QUANTITIES

NOTES

DESIGN DATA

ASPHALTIC OVERLAY

POLYMER MODIFIED ASPHALTIC AND ASPHALTIC OVERLAYS

BUREAU OF STRUCTURES

APPROVED: Bill Oliva

DATE:

STANDARD 40.33