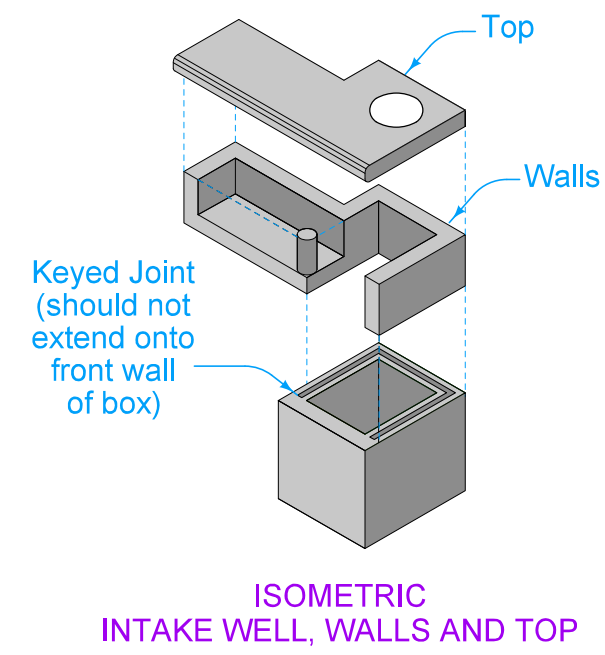


Extension unit may be used on either or both sides of intake. Details are similar when extension unit is on the opposite side. For joint details, refer to PV-101.

- ① Match gutter slope. Drain to well.
- ② Other lengths of opening may be constructed by varying the length of the extension and the rebar.
- ③ Includes 2 inches for 'ED' Joints.
- ④ 12 inch minimum wall height above all pipes.

| MAXIMUM PIPE DIAMETERS | |
|------------------------|-------------------------|
| Precast Structure | Cast-in-place Structure |
| 30" | 36" |



| TABLE OF DIMENSIONS | | | | | |
|---------------------|------------------------|--------|--------|---------|---------|
| (LO) | Length of Curb Opening | 12'-0" | 14'-0" | 16'-0" | 18'-0" |
| (EL) | Extension Length | 7'-10" | 9'-10" | 11'-10" | 13'-10" |
| (BL) | Minimum Boxout Length | 16'-0" | 18'-0" | 20'-0" | 22'-0" |

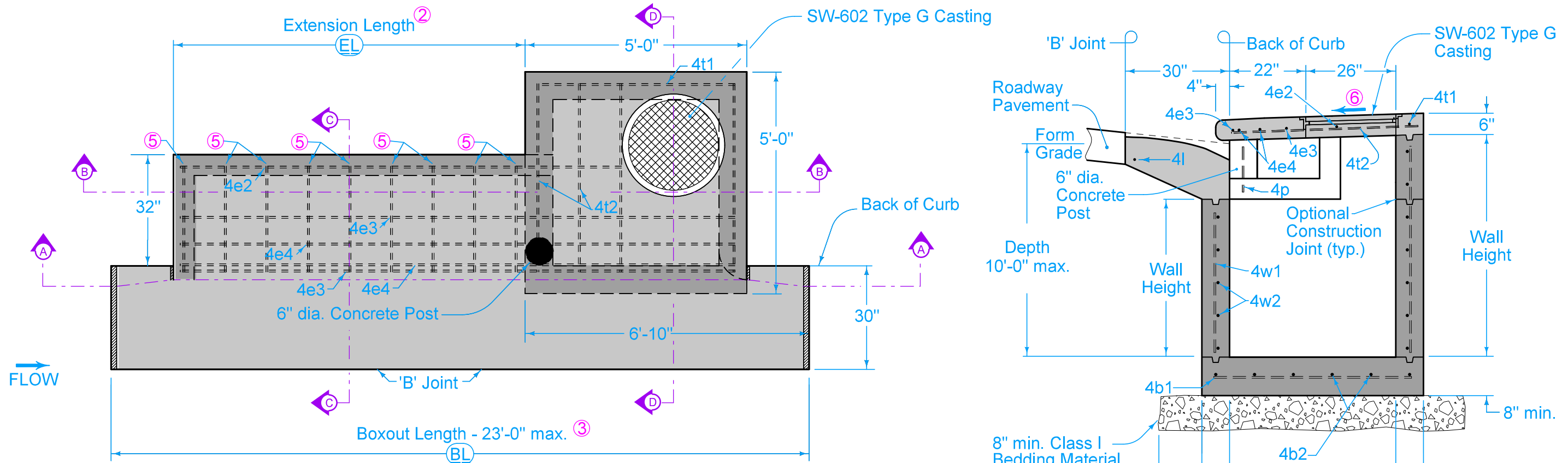
| | | |
|---|---------------------------------------|-------------------------------|
| SUDAS IOWA DOT | FIGURE 6010.545 STANDARD ROAD PLAN | REVISION |
| | | 6 04-19-22 |
| REVISIONS: Clarified labeling of rebar. | | SW-545 SHEET 1 of 4 |

Paul D. Wrigand
 SUDAS DIRECTOR

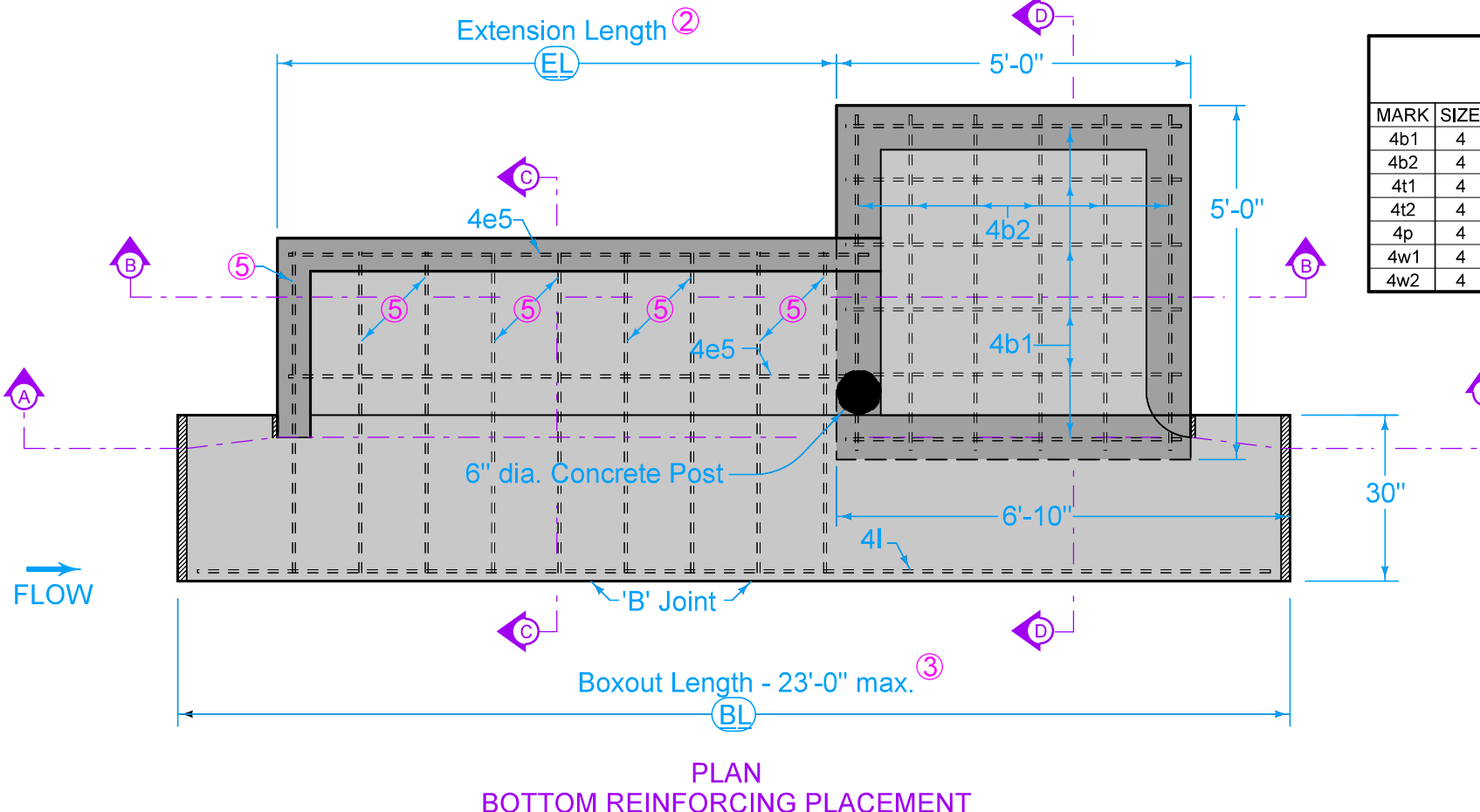
Stuart Miller
 DESIGN METHODS ENGINEER

SINGLE OPEN-THROAT CURB INTAKE WITH EXTENDED OPENING

FIGURE 6010.545 SHEET 1 OF 4



PLAN TOP REINFORCING PLACEMENT



PLAN BOTTOM REINFORCING PLACEMENT

| REINFORCING BAR LIST Intake Well | | | | | |
|-------------------------------------|------|----------|--------|----------------------|------------|
| MARK | SIZE | LOCATION | NO. | LENGTH | SPACING |
| 4b1 | 4 | Base | 6 | 4'-6" | 11" |
| 4b2 | 4 | Base | 6 | 4'-6" | 11" |
| 4t1 | 4 | Top | 1 | 4'-8" | 12" |
| 4t2 | 4 | Top | 4 | 4'-3" | See Detail |
| 4p | 4 | Post | 1 | 13" | See Detail |
| 4w1 | 4 | Walls | 16 | Wall Height minus 4" | 14" |
| 4w2 | 4 | Walls | Varies | 4'-8" | 12" |

- ② Other lengths of opening may be constructed by varying the length of the extension and the rebar.
- ③ Includes 2 inches for 'ED' Joints.
- ⑤ 4e1 or 4e6. See Sheets 3 and 4.
- ⑥ Slope of 1.5% or as specified in the contract documents.

FIGURE 6010.545 SHEET 2 OF 4

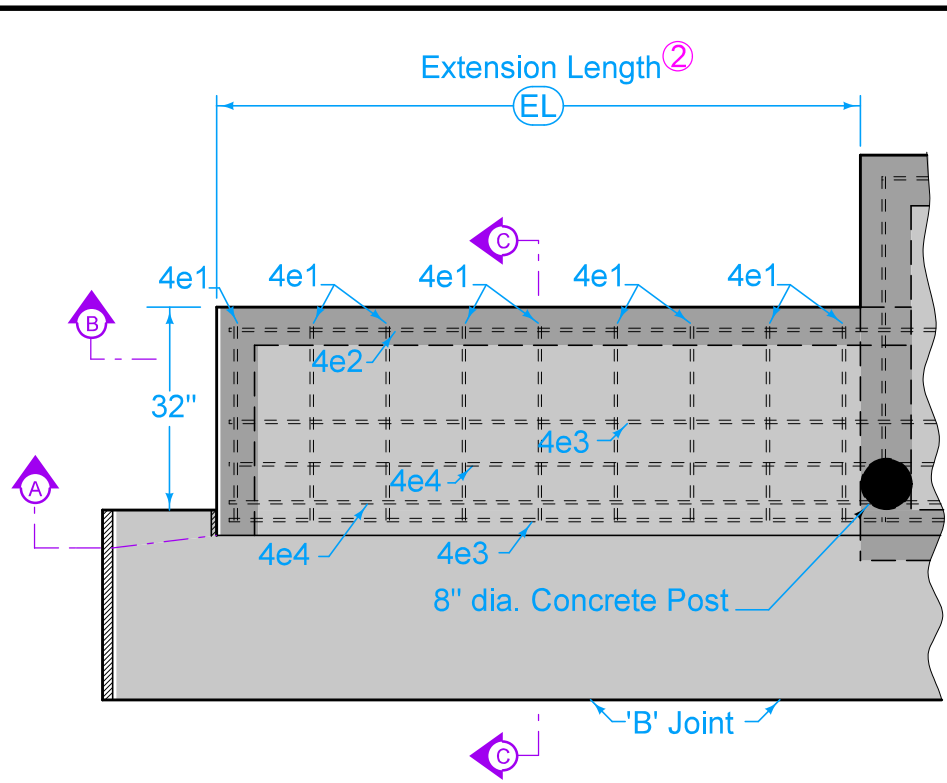
| | |
|-------------------|-------------------------------|
| SUDAS IOWA DOT | REVISION 6 04-19-22 |
| | SW-545 SHEET 2 of 4 |

REVISIONS: Clarified labeling of rebar.

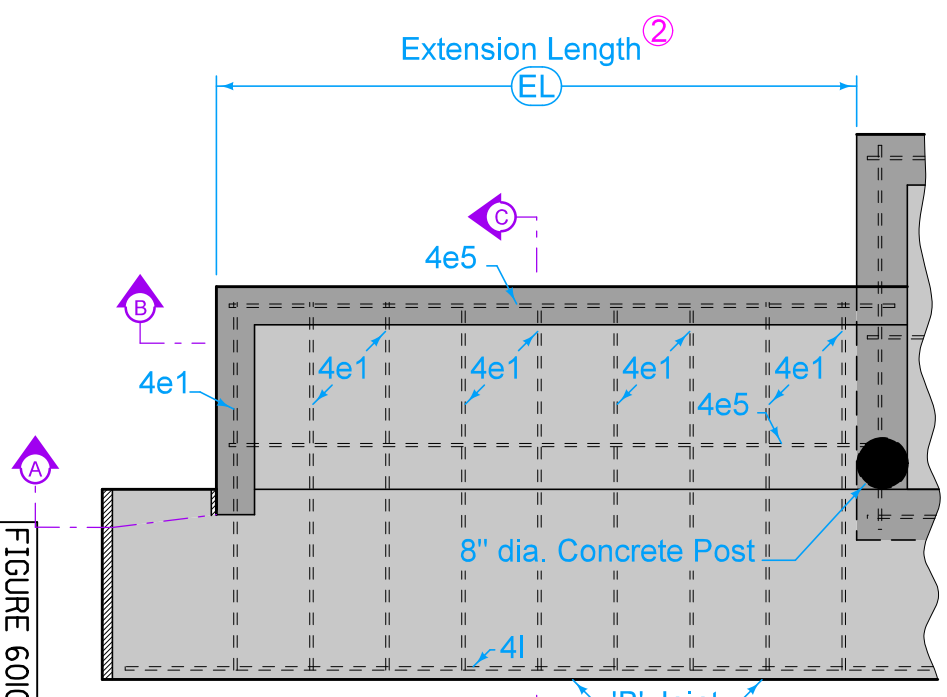
Paul D. Wrigand
 SUDAS DIRECTOR

Stuart Miller
 DESIGN METHODS ENGINEER

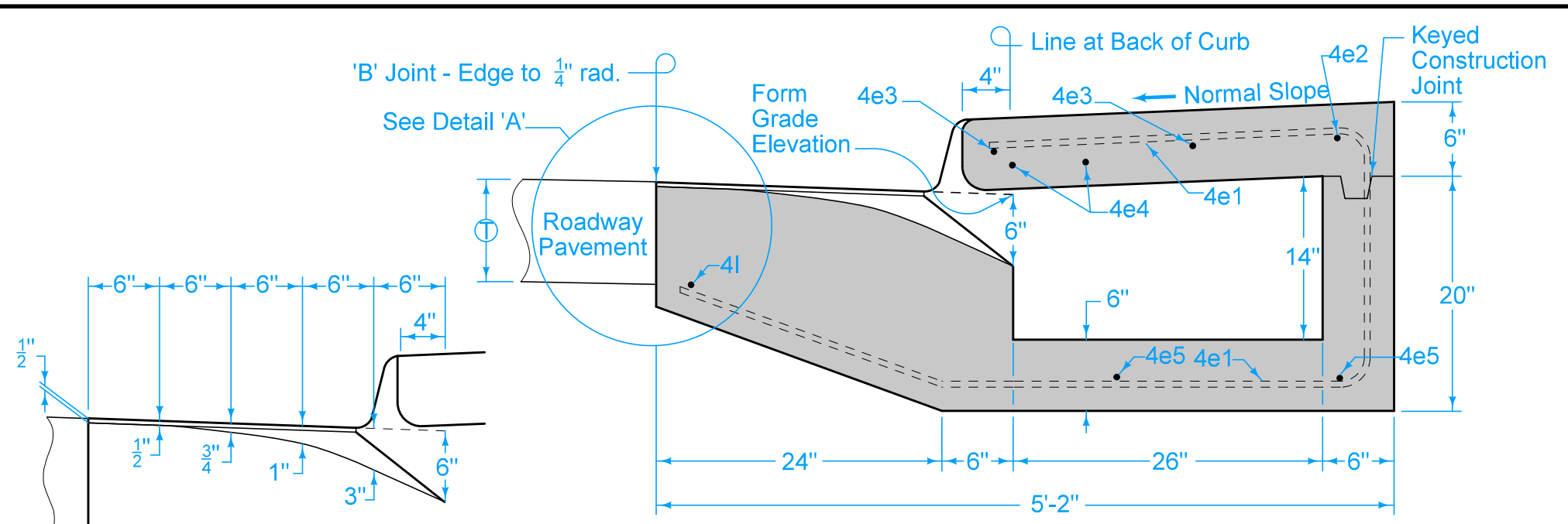
**SINGLE OPEN-THROAT
CURB INTAKE WITH
EXTENDED OPENING**



PLAN
TOP OF EXTENSION REINFORCING PLACEMENT



PLAN
BOTTOM OF EXTENSION REINFORCING PLACEMENT



INSERT DETAIL
(6 Inch Standard Curb)

SECTION C-C
(6 Inch Standard Curb)

REINFORCING BAR LIST (LO) = 12'-0"

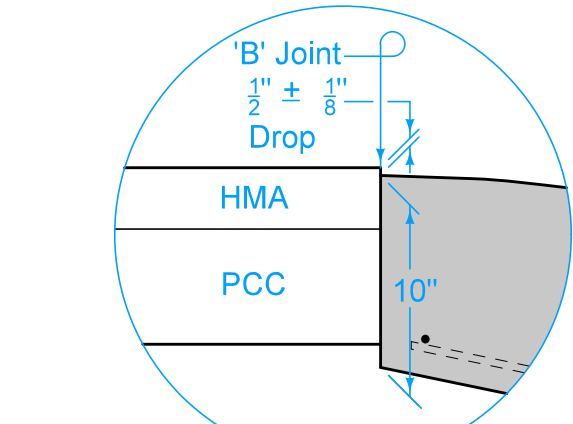
| MARK | SIZE | LOCATION | NO. | LENGTH | WEIGHT | SPACING |
|-----------------------|------|----------|-----|-----------|------------|---------|
| 4e1 | 4 | Top/Base | 9 | 9'-5 1/2" | 56.9 | 12" |
| 4e2 | 4 | Top | 1 | 10'-0" | 6.7 | |
| 4e3 | 4 | Top | 2 | 12'-9" | 17.0 | 15 1/2" |
| 4e4 | 4 | Top | 2 | 12'-9" | 17.0 | 6" |
| 4e5 | 4 | Base | 2 | 8'-2" | 10.9 | 22" |
| 4I* | 4 | Insert | 1 | 15'-10" | 10.6 | |
| * With 16'-6" Boxout. | | | | Total | 119.1 lbs. | |

REINFORCING BAR LIST (LO) = 14'-0"

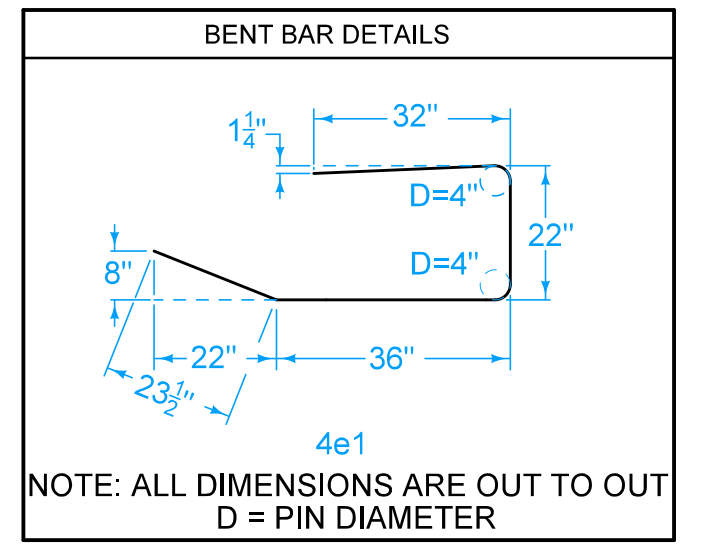
| MARK | SIZE | LOCATION | NO. | LENGTH | WEIGHT | SPACING |
|-----------------------|------|----------|-----|-----------|------------|---------|
| 4e1 | 4 | Top/Base | 11 | 9'-5 1/2" | 69.5 | 12" |
| 4e2 | 4 | Top | 1 | 12'-0" | 8.0 | |
| 4e3 | 4 | Top | 2 | 14'-9" | 19.7 | 15 1/2" |
| 4e4 | 4 | Top | 2 | 14'-9" | 19.7 | 6" |
| 4e5 | 4 | Base | 2 | 10'-2" | 13.6 | 22" |
| 4I* | 4 | Insert | 1 | 17'-10" | 11.9 | |
| * With 18'-6" Boxout. | | | | Total | 142.4 lbs. | |

REINFORCING BAR LIST (LO) = 16'-0"

| MARK | SIZE | LOCATION | NO. | LENGTH | WEIGHT | SPACING |
|-----------------------|------|----------|-----|-----------|------------|---------|
| 4e1 | 4 | Top/Base | 13 | 9'-5 1/2" | 82.1 | 12" |
| 4e2 | 4 | Top | 1 | 14'-0" | 9.3 | |
| 4e3 | 4 | Top | 2 | 16'-9" | 22.4 | 15 1/2" |
| 4e4 | 4 | Top | 2 | 16'-9" | 22.4 | 6" |
| 4e5 | 4 | Base | 2 | 12'-2" | 16.2 | 22" |
| 4I* | 4 | Insert | 1 | 19'-10" | 13.2 | |
| * With 20'-6" Boxout. | | | | Total | 165.6 lbs. | |



DETAIL 'A'
Use when adjacent pavement
is HMA or composite.



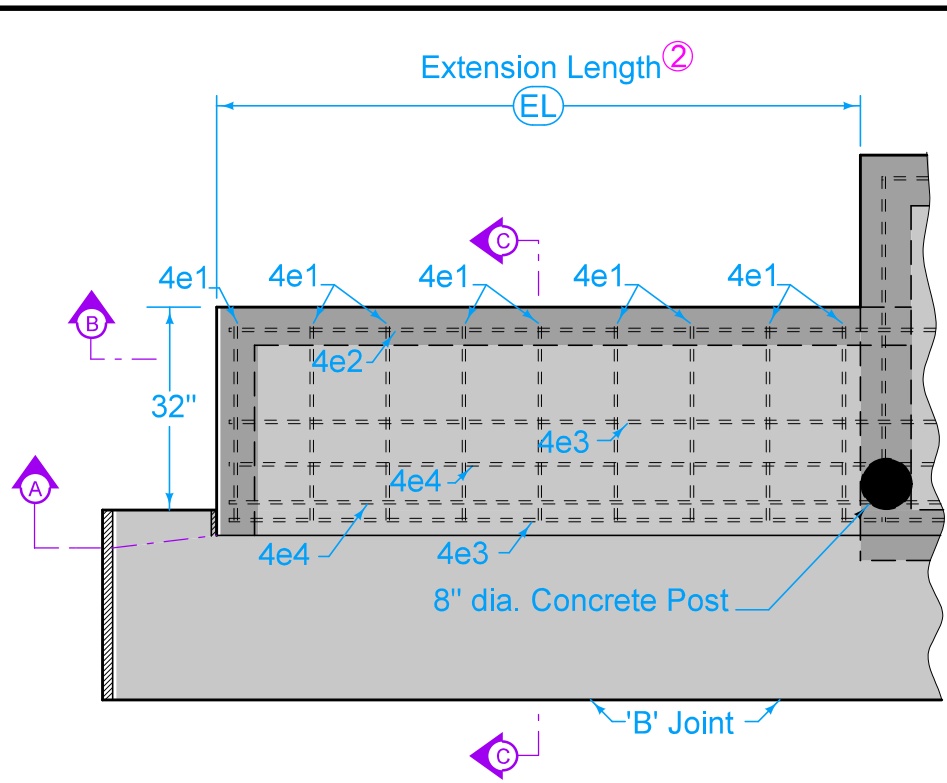
NOTE: ALL DIMENSIONS ARE OUT TO OUT
D = PIN DIAMETER

② Other lengths of opening may be constructed by varying the length of the extension and the rebar.

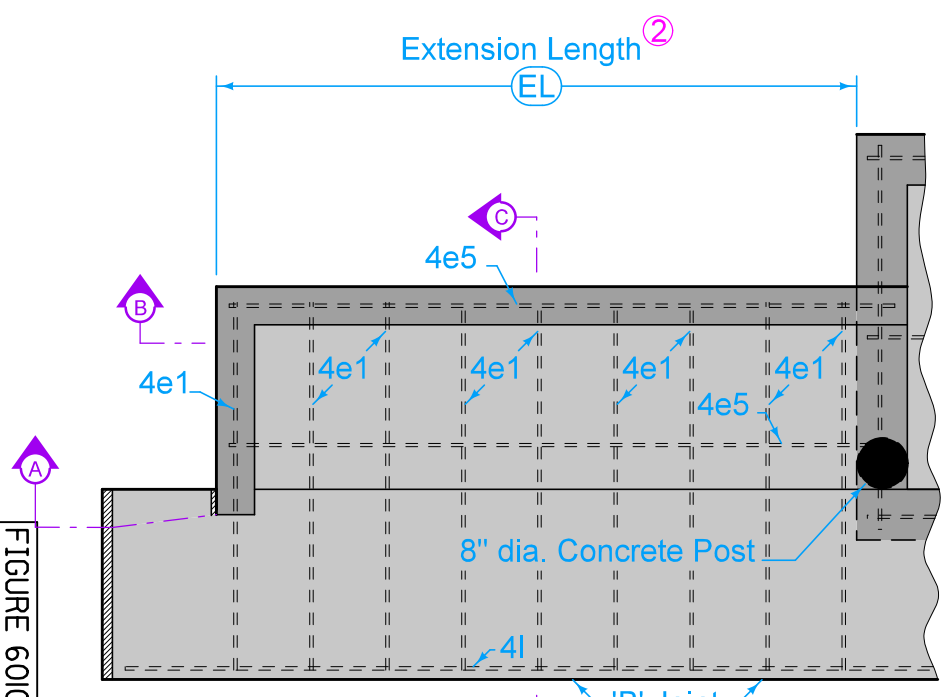
FIGURE 6010.545 SHEET 3 OF 4

6 INCH STANDARD CURB

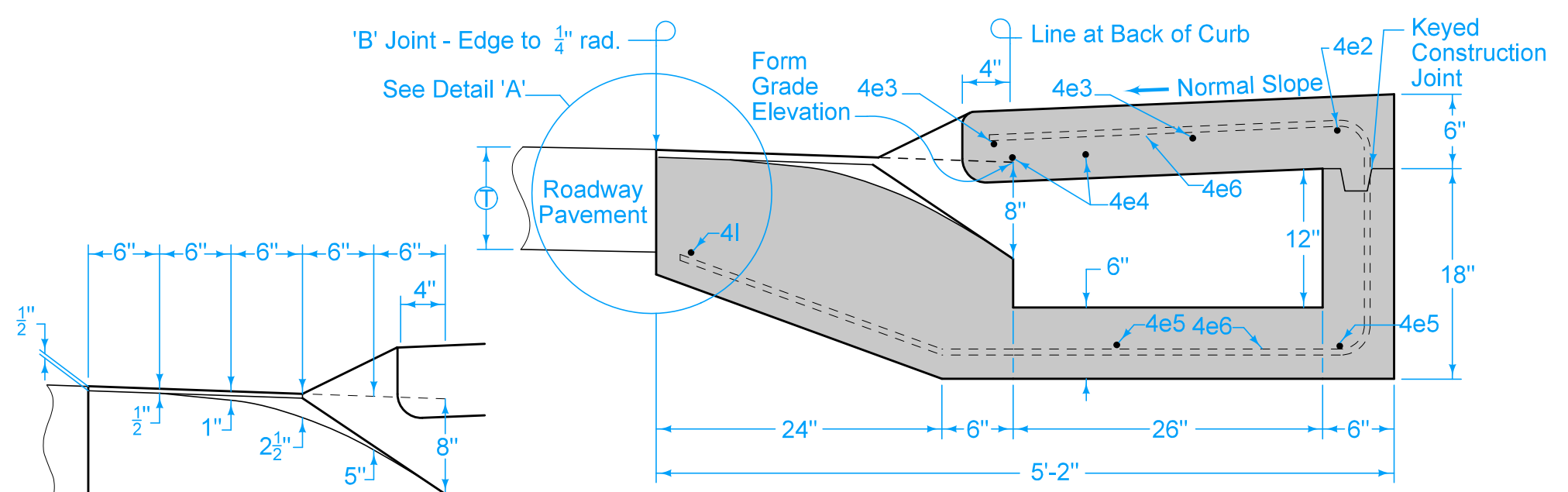
| | |
|---|---|
| SUDAS IOWA DOT FIGURE 6010.545 STANDARD ROAD PLAN | REVISION 6 04-19-22 |
| | SW-545 SHEET 3 of 4 |
| REVISIONS: Clarified labeling of rebar. | |
| <i>Paul D. Wrigand</i> SUDAS DIRECTOR | <i>Stuart Miller</i> DESIGN METHODS ENGINEER |
| SINGLE OPEN-THROAT CURB INTAKE WITH EXTENDED OPENING | |



PLAN
TOP OF EXTENSION REINFORCING PLACEMENT



PLAN
BOTTOM OF EXTENSION REINFORCING PLACEMENT



SECTION C-C
(4 Inch Sloped Curb)



INSERT DETAIL
(4 Inch Sloped Curb)

REINFORCING BAR LIST (LO) = 12'-0"

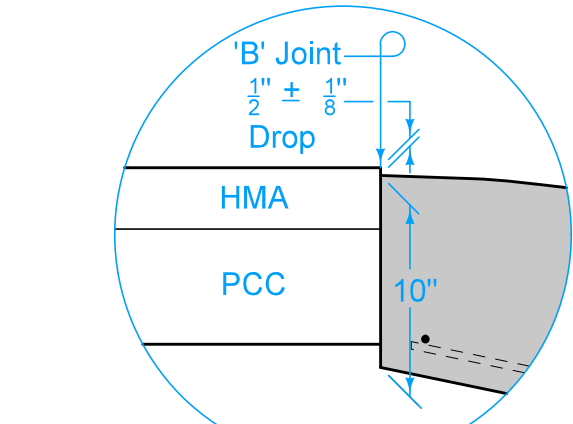
| MARK | SIZE | LOCATION | NO. | LENGTH | WEIGHT | SPACING |
|-----------------------|------|----------|-----|-----------|------------|---------|
| 4e2 | 4 | Top | 1 | 10'-0" | 6.7 | |
| 4e3 | 4 | Top | 2 | 12'-9" | 17.0 | 15 1/2" |
| 4e4 | 4 | Top | 2 | 12'-9" | 17.0 | 6" |
| 4e5 | 4 | Base | 2 | 8'-2" | 10.9 | 22" |
| 4e6 | 4 | Top/Base | 9 | 9'-3 1/2" | 56.9 | 12" |
| 4I* | 4 | Insert | 1 | 15'-10" | 10.6 | |
| * With 16'-6" Boxout. | | | | Total | 119.0 lbs. | |

REINFORCING BAR LIST (LO) = 14'-0"

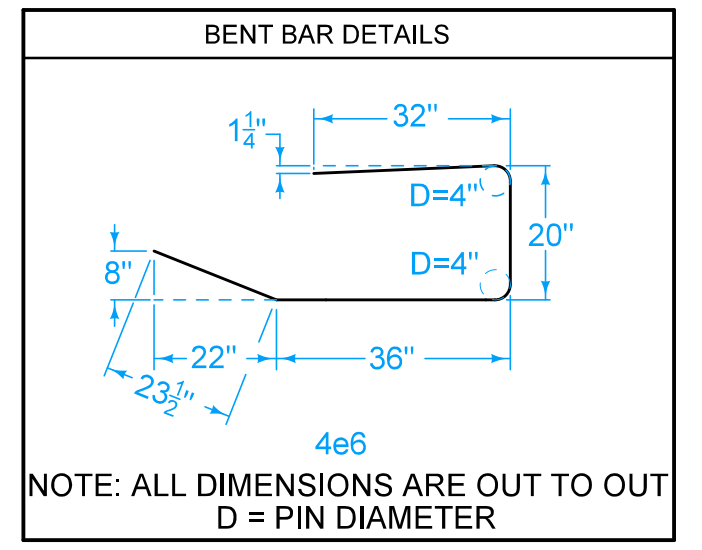
| MARK | SIZE | LOCATION | NO. | LENGTH | WEIGHT | SPACING |
|-----------------------|------|----------|-----|-----------|------------|---------|
| 4e2 | 4 | Top | 1 | 12'-0" | 8.0 | |
| 4e3 | 4 | Top | 2 | 14'-9" | 19.7 | 15 1/2" |
| 4e4 | 4 | Top | 2 | 14'-9" | 19.7 | 6" |
| 4e5 | 4 | Base | 2 | 10'-2" | 13.6 | 22" |
| 4e6 | 4 | Top/Base | 11 | 9'-3 1/2" | 69.5 | 12" |
| 4I* | 4 | Insert | 1 | 17'-10" | 11.9 | |
| * With 18'-6" Boxout. | | | | Total | 142.3 lbs. | |

REINFORCING BAR LIST (LO) = 16'-0"

| MARK | SIZE | LOCATION | NO. | LENGTH | WEIGHT | SPACING |
|-----------------------|------|----------|-----|-----------|------------|---------|
| 4e2 | 4 | Top | 1 | 14'-0" | 9.3 | |
| 4e3 | 4 | Top | 2 | 16'-9" | 22.4 | 15 1/2" |
| 4e4 | 4 | Top | 2 | 16'-9" | 22.4 | 6" |
| 4e5 | 4 | Base | 2 | 12'-2" | 16.2 | 22" |
| 4e6 | 4 | Top/Base | 13 | 9'-3 1/2" | 82.1 | 12" |
| 4I* | 4 | Insert | 1 | 19'-10" | 13.2 | |
| * With 20'-6" Boxout. | | | | Total | 165.5 lbs. | |



DETAIL 'A'
Use when adjacent pavement
is HMA or composite.



NOTE: ALL DIMENSIONS ARE OUT TO OUT
D = PIN DIAMETER

② Other lengths of opening may be constructed by varying the length of the extension and the rebar.

FIGURE 6010.545 SHEET 4 OF 4

4 INCH SLOPED CURB

| | |
|--|--|
| SUDAS IOWA DOT FIGURE 6010.545 STANDARD ROAD PLAN | REVISION 6 04-19-22 SW-545 SHEET 4 of 4 |
| | REVISIONS: Clarified labeling of rebar. Paul D. Wrigand SUDAS DIRECTOR Stuart Miller DESIGN METHODS ENGINEER |
| SINGLE OPEN-THROAT CURB INTAKE WITH EXTENDED OPENING | |