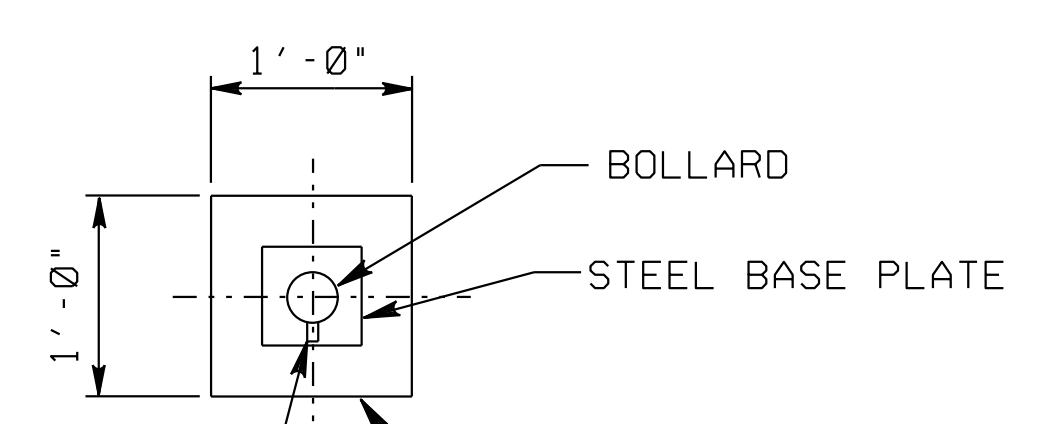


NOTES

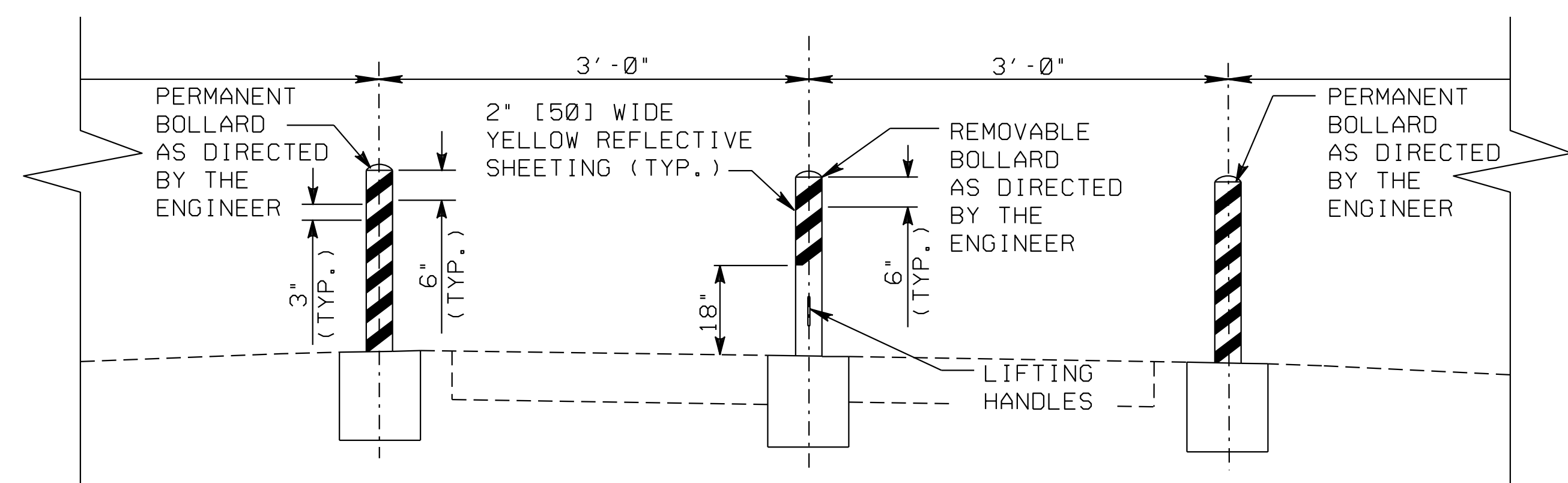
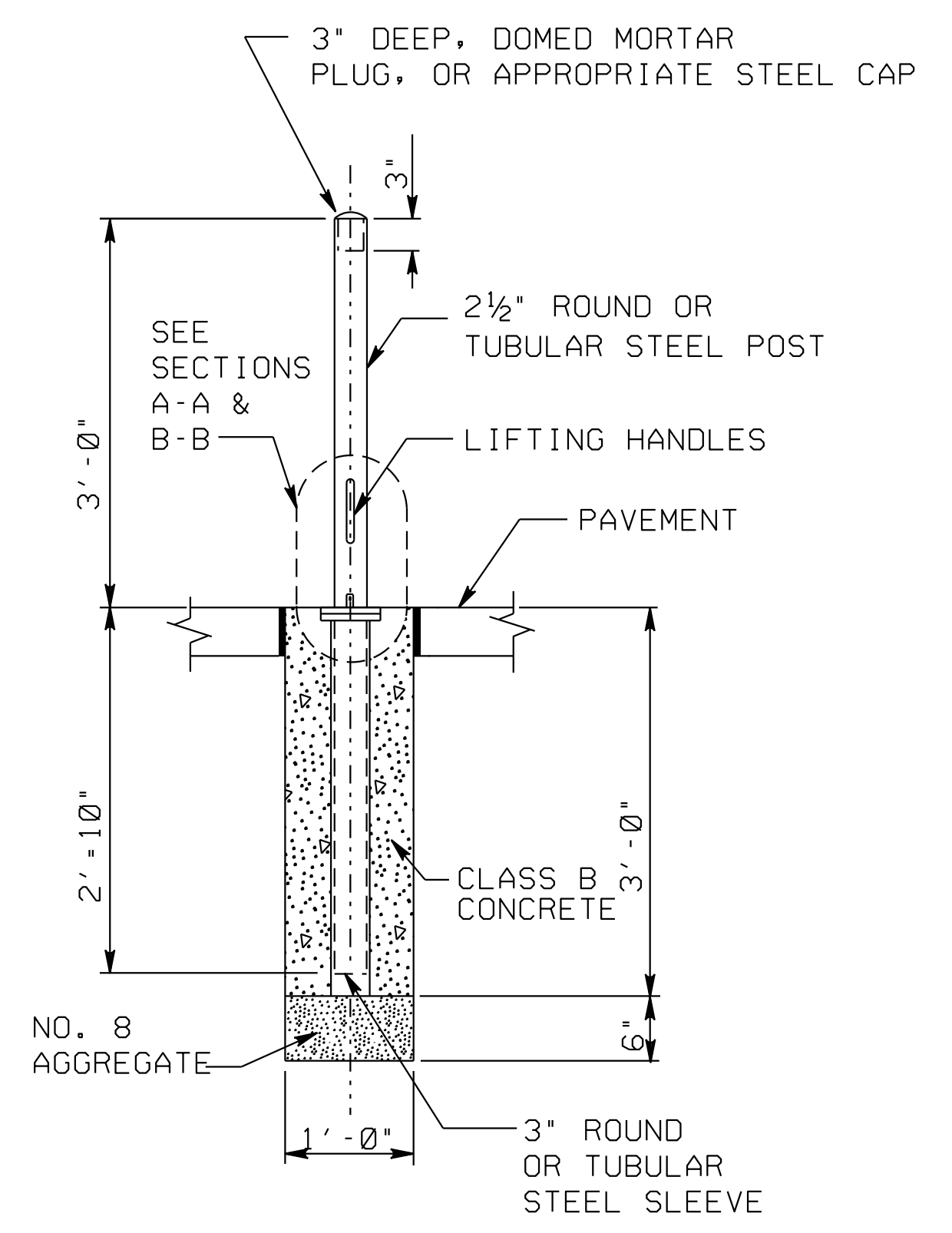
- GENERAL: MOUNT ALL BOLLARD SLEEVES FLUSH WITH THE PAVEMENT.
- CONCRETE ENCASEMENT: SLEEVE ENCASEMENT SHALL BE SQUARE AS SHOWN, IN CONCRETE PAVEMENT, BUT MAY BE SQUARE OR ROUND IN FLEXIBLE PAVEMENT. ROUND ENCASEMENT SHOULD BE 1'-0" DIAMETER.
- PREFORMED EXPANSION JOINT FILLER: IS REQUIRED WHEN BOLLARDS ARE SET IN CONCRETE PAVEMENT.
- STEEL PIPE: ASTM A 53 SCHEDULE 40.,
- CONCRETE: USE CLASS B CONCRETE.
- GALVANIZING: AFTER FABRICATING, HOT-DIP GALVANIZE ALL STEEL PARTS, INCLUDING STEEL PIPE, AS SPECIFIED IN ASTM A 123.
- ALUMINUM: ALL STEEL COMPONENTS MAY BE REPLACED BY ALUMINUM COMPONENTS MEETING THE FOLLOWING ASTM SPECIFICATIONS: B 209 (PLATE), B 210 OR B 241 (DRAWN SEAMLESS TUBES & PLATES), B 211 (RODS), AND F 901 (BOLTS).
- PERMANENT BOLLARDS: PERMANENT BOLLARDS SHALL BE THE SAME AS REMOVABLE BOLLARDS, EXCEPT THAT THE STEEL PLATES, SLEEVES AND LIFTING HANDLES SHALL BE OMITTED. ENCASE POSTS DIRECTLY IN CONCRETE.



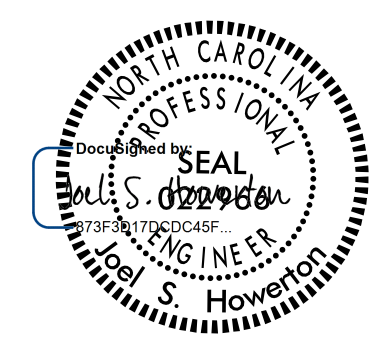
NOTE: PLACE PADLOCK ON THE SIDE FACING AWAY FROM INTERSECTION.

EXPANSION JOINT MATERIAL (ALL FOUR SIDES), REQUIRED IN RIGID PAVEMENT ONLY.

LIFTING HANDLES NOT SHOWN FOR CLARITY



BOLLARD PLACEMENT - ELEVATION VIEW



4/7/2021

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACT STANDARDS & DEVELOPMENT UNIT
STANDARDS AND SPECIAL DESIGN
Office 919-707-6950 FAX 919-250-4119

STEEL BOLLARDS

ORIGINAL BY: _____	DATE: _____
MODIFIED BY: _____	DATE: _____
CHECKED BY: _____	DATE: _____
FILE SPEC.: <u>nbritt/english/misc/bollards steel.dgn</u>	

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