

LOW-PROFILE CONCRETE BARRIER END TREATMENT



SER03

SHEET NO.

DATE:

1 of 8

9/15/2011

INTENDED USE

Low-Profile Concrete Barrier End Treatment is intended for use with the Low-Profile Concrete Barrier System (SGR31). The Low-Profile Concrete Barrier End Treatment design is based on the full-scale vehicle crash testing on a NCHRP Report No. 350 TL-2 low-profile end treatment previously developed by TTI. Based on similarities between TTI's crash-tested TL-2 end treatment and the Low-Profile Concrete Barrier End Treatment, the Low-Profile Concrete Barrier End Treatment was not tested. However, the researchers believe that the Low-Profile Concrete Barrier End Treatment would meet the TL-2 criteria of NCHRP Report No. 350. Like TTI's end treatment, the Low-Profile Concrete Barrier End Treatment is not intended to redirect vehicles and length of need for the barrier system should be calculated beginning at the joint between the transition section and the beginning of the Low-Profile Concrete Barrier System (SGR31).

ACCEPTANCE

FHWA Acceptance Letter B116, March 27, 2003.

FHWA Acceptance Letter HNG-14, March 6, 1998.

REFERENCES

Polivka, K.A., Faller, R.K., Sicking, D.L., Rohde, J.R., Reid, J.D., and Holloway, J.C., *Development of a Low-Profile Bridge Rail for Test Level 2 Applications*, Final Report to the Midwest States' Regional Pooled Fund Program, Transportation Research Report No. TRP-03-109-02, Project No. SPR-3(017)-Year 11, Midwest Roadside Safety Facility, University of Nebraska-Lincoln, August 20, 2002.

CONTACT INFORMATION

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SER03



SHEET NO.

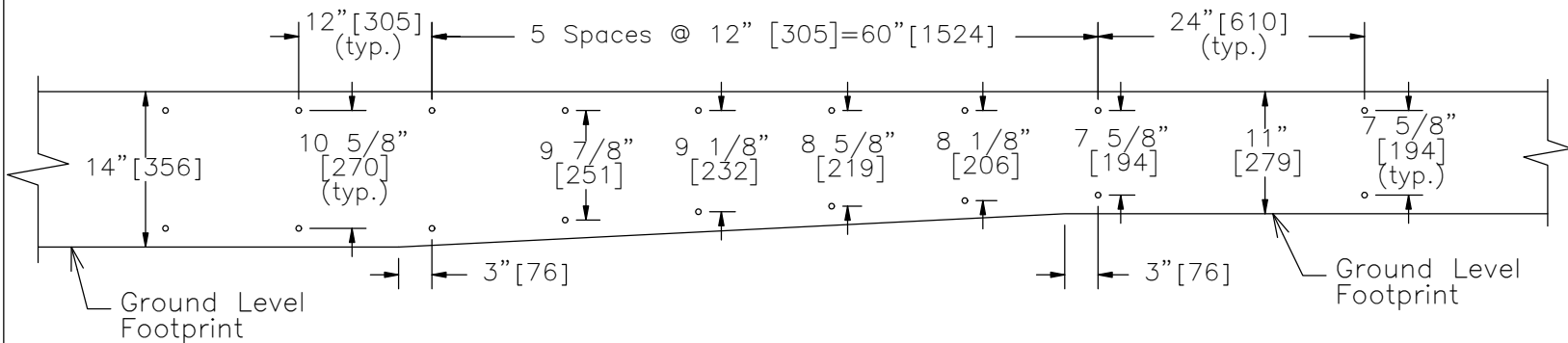
DATE:

2 of 8

9/15/2011



LOW-PROFILE CONCRETE BARRIER END TREATMENT



Plan View (Transition Dowel Detail)

NOTES:

- (1) Use Grade 60 reinforcement.
- (2) Use minimum concrete strength of $f'c=4,500$ psi (31.0 MPa).
- (3) Use $1\frac{1}{2}$ " [38] minimum cover.
- (4) Use $\frac{3}{4}$ " [19.1] chamfer on top corners.
- (5) Extra No. 3 bar placed along sloped H1 stirrup used for continuity near front face. (Position may be altered.)
- (6) Minimum lap length for longitudinal bars is 9" [229].

3 of 8

SHEET NO.

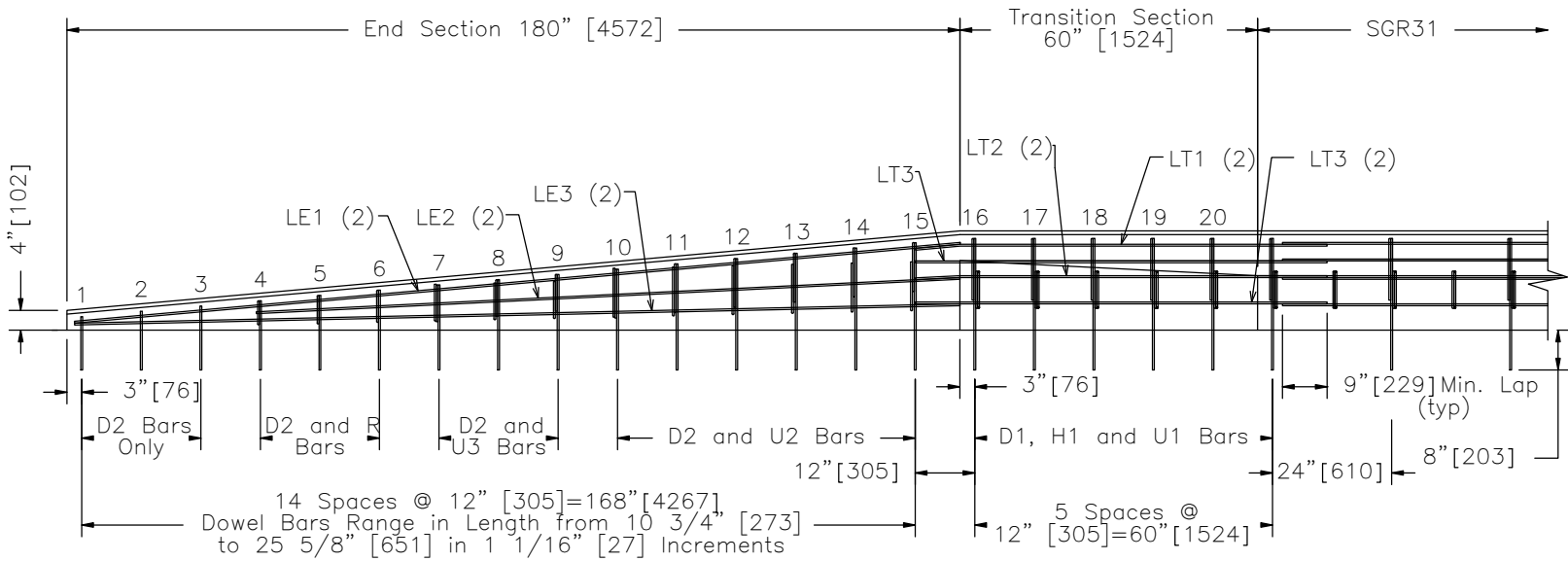
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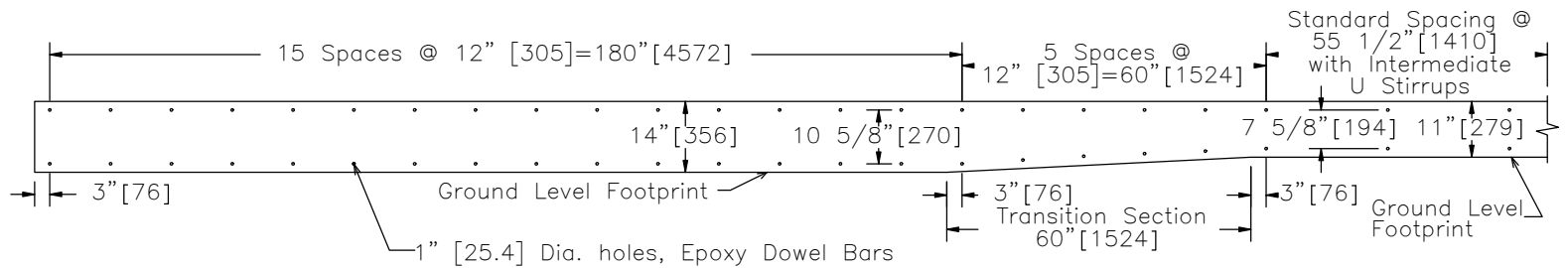
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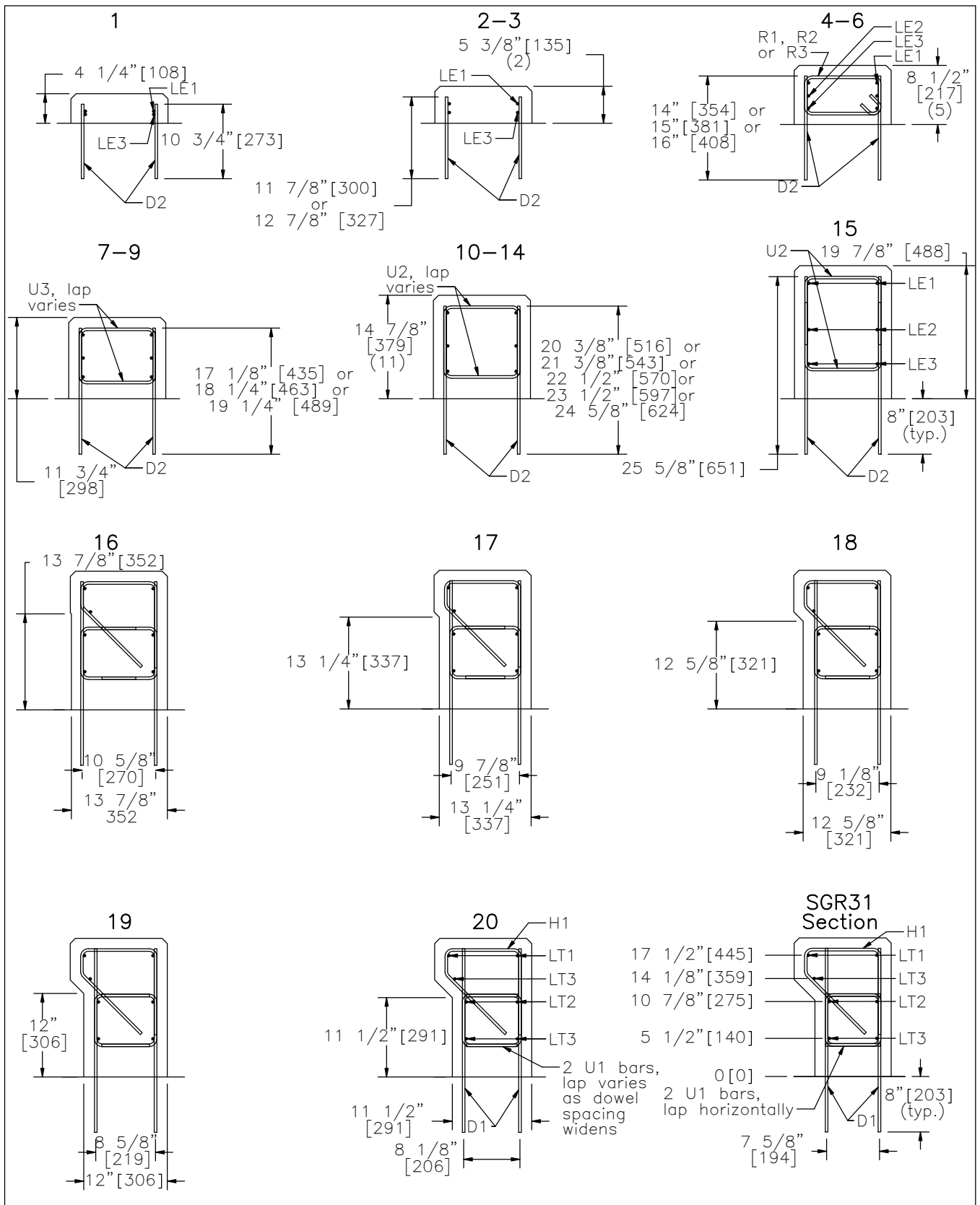
LOW-PROFILE CONCRETE BARRIER END TREATMENT



Profile View (Dowel Bar Layout)



Plan View (Dowel Bar Layout)



LOW-PROFILE CONCRETE BARRIER END TREATMENT



SER03

SHEET NO.

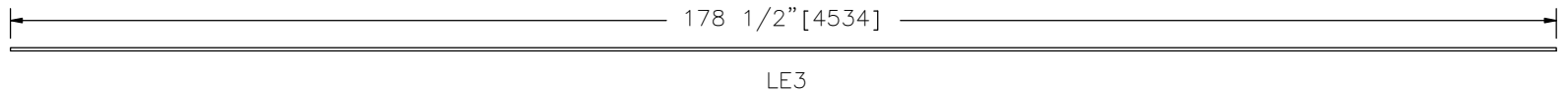
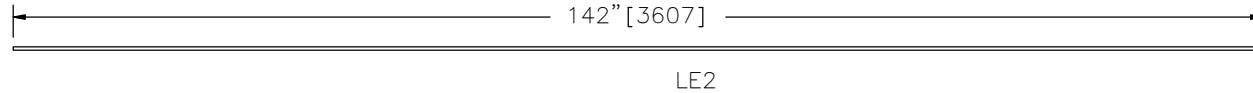
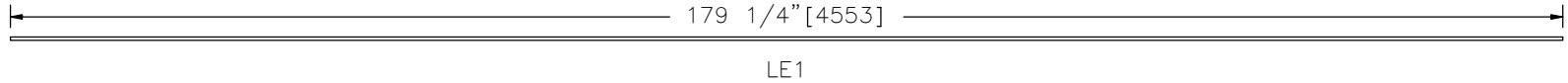
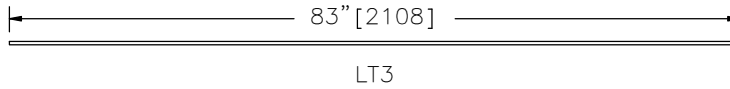
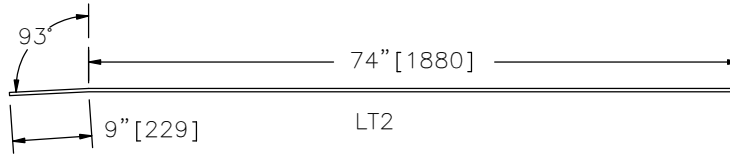
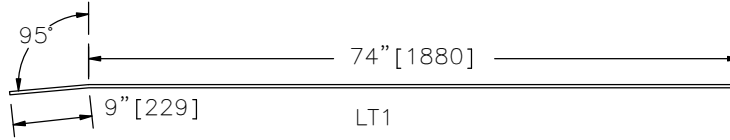
DATE:

5 of 8

9/15/2011

Bill of Bars (page 2)

	#	Size	Description	Total Length
LT1	2	No. 3	Long. Transition bar	83" [2108] (bent)
LT2	2	No. 3	Long. Transition bar	83" [2108] (bent)
LT3	3	No. 3	Long. Transition bar	83" [2108]
LE1	2	No. 3	Longitudinal End bar	179 1/4" [4553]
LE2	2	No. 3	Longitudinal End bar	142" [3607]
LE3	2	No. 3	Longitudinal End bar	178 1/2" [4534]



LOW-PROFILE CONCRETE BARRIER END TREATMENT

SER03

SHEET NO.

6 of 8

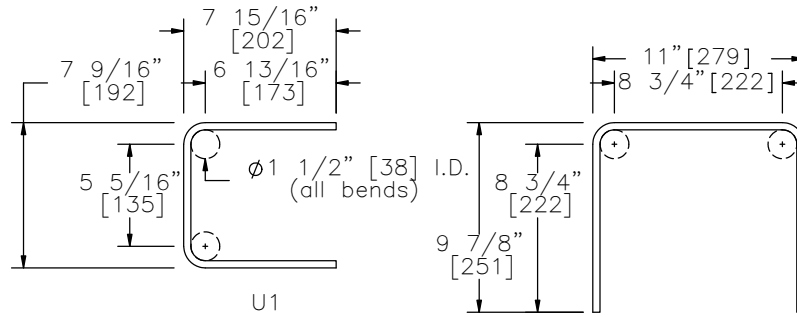
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9/15/2011

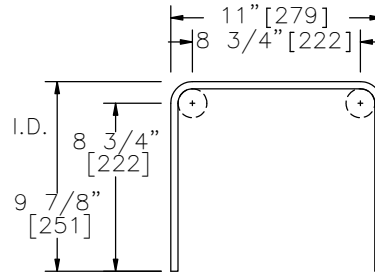




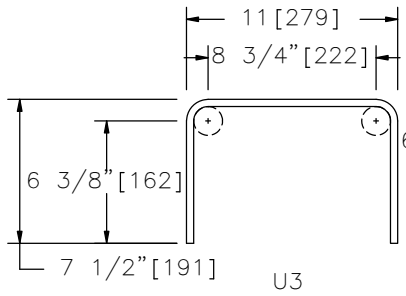
LOW-PROFILE CONCRETE BARRIER END TREATMENT



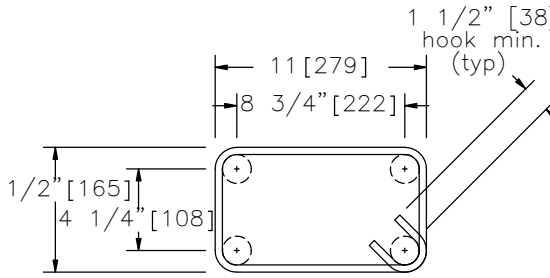
U1



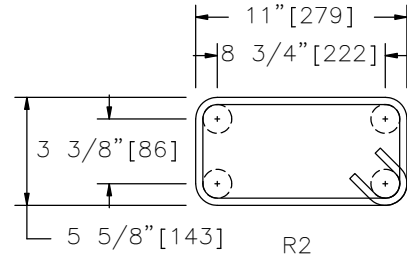
U2



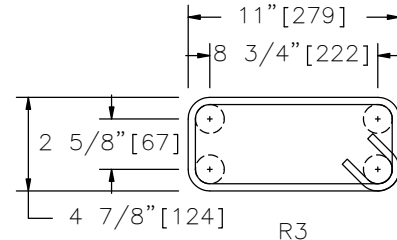
U3



R1

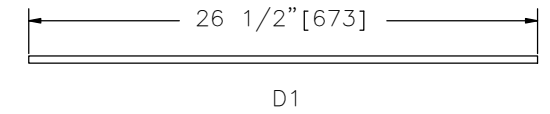


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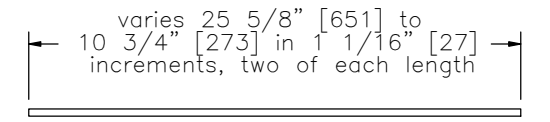


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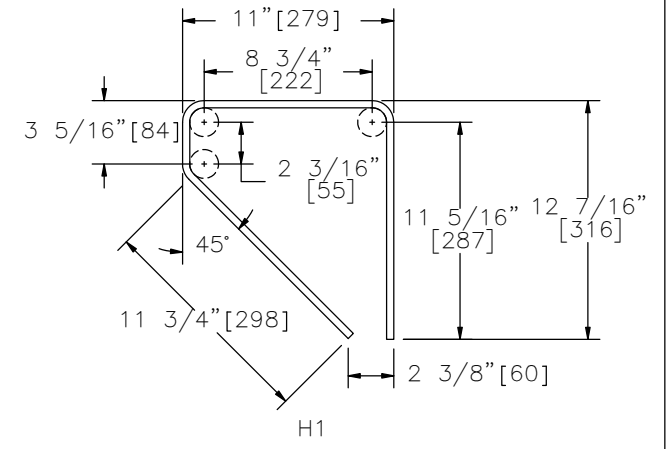
Bill of Bars				
	#	Size	Description	Total Length
D1	20	No. 3	Vert. Trans. Dowel	26 1/2" [673]
D2	30	No. 3	Vert. End Dowel	(see dimension)
H1	10	No. 3	Vertical Hoop Bar	37 5/8" [956]
U1	20	No. 3	Vertical Trans. U	21 7/8" [556]
U2	12	No. 3	Vertical End U	29 1/4" [743]
U3	6	No. 3	Vertical End U	24 1/2" [622]
R1	1	No. 3	Vert. End Rectangular	37 7/8" [962]
R2	1	No. 3	Vert. End Rectangular	36 1/8" [918]
R3	1	No. 3	Vert. End Rectangular	34 5/8" [879]



D1



D2



H1

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LOW-PROFILE CONCRETE BARRIER END TREATMENT

SER03



SHEET NO.

DATE:

8 of 8

9/15/2011