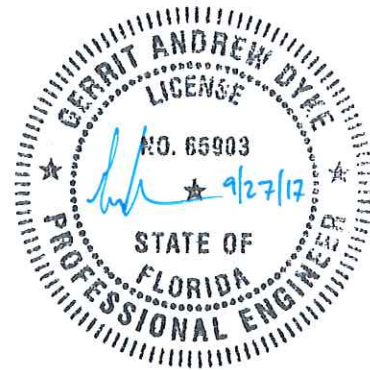


X-TENSION, FLARED, 31"

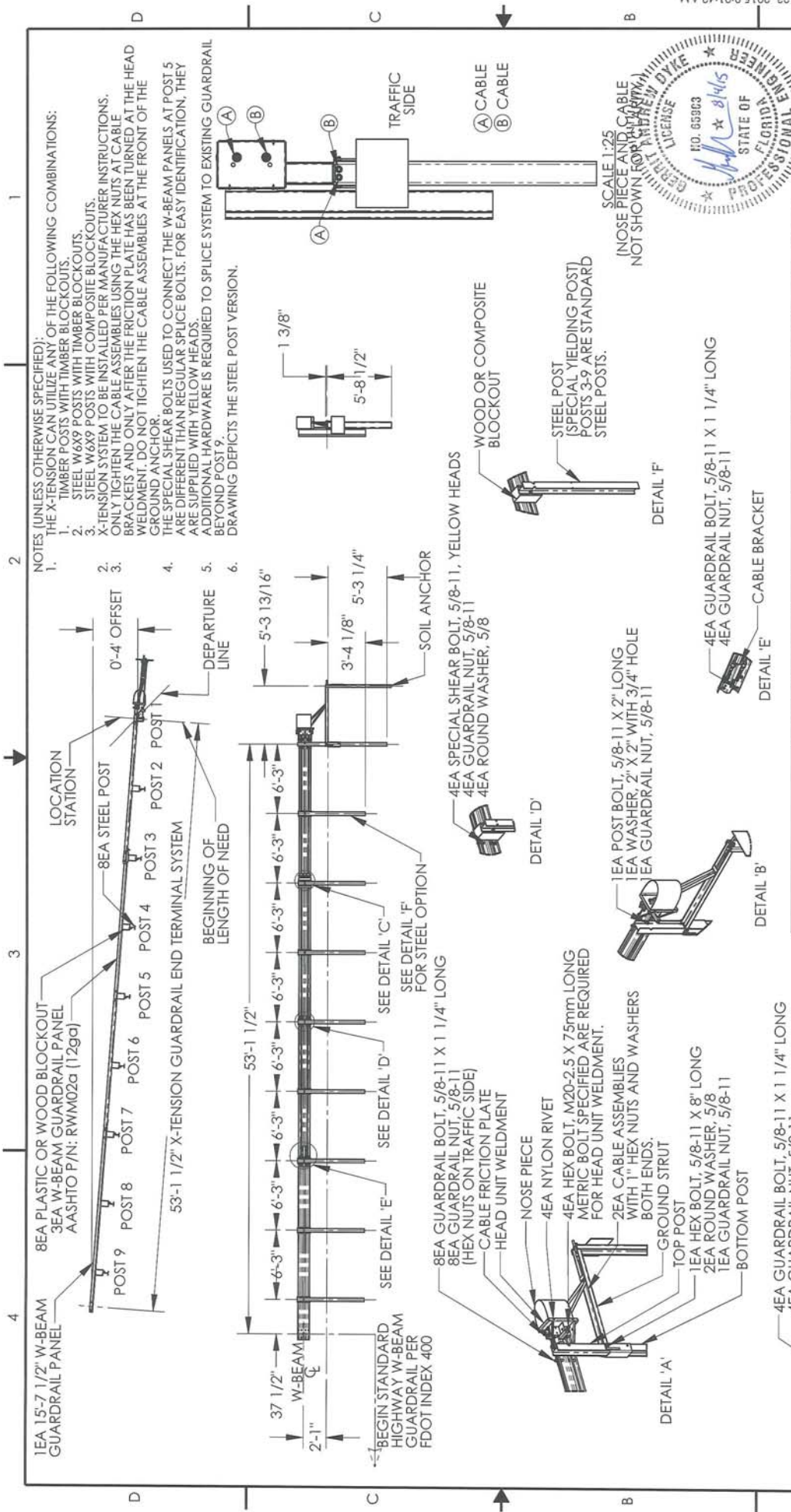
DRAWING INDEX

SHEET NO.	DESCRIPTION
1 OF 4	GENERAL NOTES
2 OF 4	X-TENSION GUARDRAIL END TERMINAL, FLARED SYSTEM LAYOUT
3 OF 4	X-TENSION GUARDRAIL END TERMINAL, FLARED SYSTEM DETAILS
4 OF 4	BILL OF MATERIALS

1. THE GUARDRAIL END ANCHORAGE SYSTEM REPRESENTED ON THIS APPROVED PRODUCT LIST (APL) IS A PROPRIETARY DESIGN BY BARRIER SYSTEMS, INC (BSI) AND MARKETED UNDER THE TRADE NAME X-TENSION.
2. THIS DRAWING IS SUFFICIENT FOR PLAN DETAILS FOR THE X-TENSION FLARED END TERMINAL WHEN INSTALLED IN CONNECTION WITH SHOULDER GUARDRAIL, AND PRECLUDES THE REQUIREMENT FOR SHOP DRAWING SUBMITTALS UNLESS THE PLANS OTHERWISE CALL FOR SUCH SUBMITTALS. THE X-TENSION FLARED END TERMINAL SHALL BE ASSEMBLED IN ACCORDANCE WITH THE MANUFACTURER'S DETAILED DRAWINGS, PROCEDURES, AND SPECIFICATIONS.
3. THE X-TENSION END TERMINAL IS AVILABLE IN TIMBER AND STEEL POST CONFIGURATIONS. FOR STEEL POST CONFIGURATIONS: POST 1 IS A SPECIAL 2 PART YIELDING POST; POST 2 IS A SPECIAL YIELDING POST; POSTS 3-9 ARE STANDARD STEEL POSTS. FOR TIMBER POST CONFIGURATIONS: POST 1 IS A SPECIAL 2 PART YIELDING POST; POST 2-9 ARE TIMBER CRT POSTS.
4. THE X-TENSION IS A RE-DIRECTIVE, NON-GATING END TERMINAL INTENDED FOR USE AS AN APPROACH END TREATMENT FOR SHOULDER GUARDRAIL. THE LENGTH OF NEED POINT IS LOCATED AT THE FIRST POST (SEE DRAWING). THE EFFECTIVE LENGTH OF THE X-TENSION IS 53'-1 1/2". THE X-TENSION FLARED CAN BE OFFSET UP TO 4'.
5. FOR DETAILS ON SHOULDER GRADING AROUND END TREATMENTS, MISCELLANEOUS ASPHALT PAVEMENT AND PAY LIMITS, SEE INDEX 400.
6. THE X-TENSION SHALL BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR GUARDRAIL, END ANCHORAGE ASSEMBLY (FLARED), EA .
7. SITE CONDITIONS: IF THE FRONT OF A SIDEWALK OR SHARED USE PATH IS LOCATED 4' OR LESS FROM BEHIND THE BACK OF THE X-TENSION POSTS, ONLY THE WOOD POST SYSTEM MAY BE USED.
8. REGARDING THE ORIENTATION OF PANEL LAP SPLICES, INSTALL THE X-TENSION SYSTEM AS SHOWN IN THE DRAWINGS, REGARDLESS OF THE DIRECTION OF TRAFFIC IN THE ADJACENT LANES (I.E. PANEL LAPPING MAY NOT BE IN THE DIRECTION OF TRAFFIC UNDER SOME CONDITIONS).
9. FOR THE X-TENSION SYSTEM TO FUNCTION PROPERLY, I.E. TELESCOPE TO ABSORB ENERGY, THE GUARDRAIL PANELS WITHIN THE END TERMINAL MUST BE PROPERLY LAPPED STARTING FROM THE TERMINAL HEAD; FIRST PANEL IS LAPPED ON TOP OF START OF SECOND PANEL, SECOND PANEL IS LAPPED OVER TOP OF THIRD PANEL.

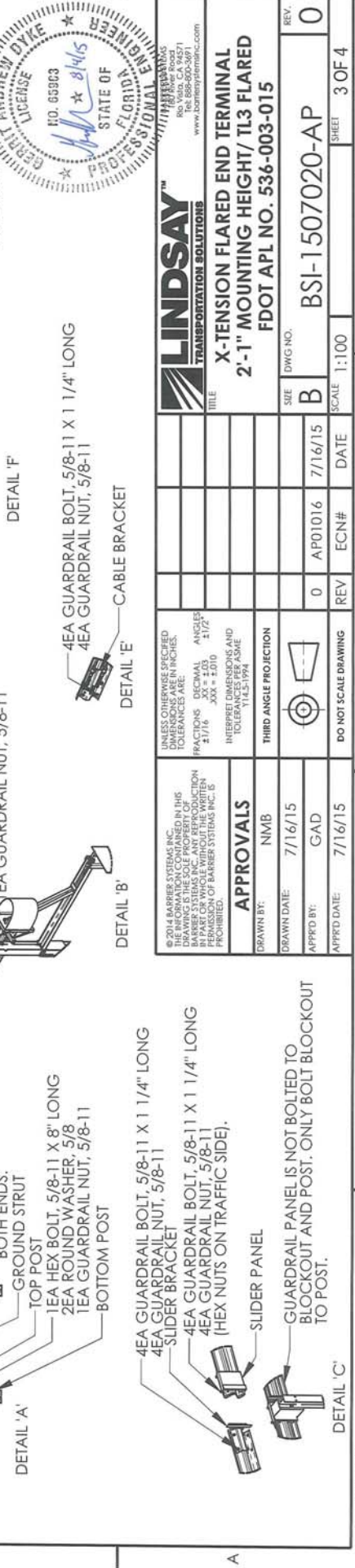


<small>© 2014 BARRIER SYSTEMS INC. THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BARRIER SYSTEMS INC. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF BARRIER SYSTEMS INC. IS PROHIBITED.</small>		<small>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS DECIMAL ANGLES ±1/16 .XX = ±.03 ±1/2° .XXX = ±.010</small>				<small>BARRIER SYSTEMS 180 River Road Rio Vista, CA 94571 Tel: 888-800-3691 www.barriersystemsinc.com</small>	
APPROVALS		<small>INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5-1994</small>		TITLE X-TENSION FLARED END TERMINAL 2'-1" MOUNTING HEIGHT/ TL3 FLARED FDOT APL NO. 536-003-015		REV. 2	
DRAWN BY: NMB DRAWN DATE: 7/16/15 APPR'D BY: GAD APPR'D DATE: 7/16/15	THIRD ANGLE PROJECTION 	2 1 0	ADDED NOTES 8&9 ADD NOTE TO SHT 4 AP01016	9/26/17 9/24/15 7/16/15	SIZE B	DWG NO. BSI-1507020-AP	SCALE NTS
DO NOT SCALE DRAWING		REV ECN#	DATE	SHEET 1 OF 4			



LINDSAY TRANSPORTATION SOLUTIONS 1301 University Road Tallahassee, FL 32304 Tel: 850-900-3471 www.lindsaytrans.com			TITLE X-TENSION FLARED END TERMINAL 2'-1" MOUNTING HEIGHT/ TL3 FLARED FDOT APL NO. 536-003-015	
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. FRACTIONS: 3/8" ON, 1/2" ON, 5/16" DECIMALS: .0000, .0005, .0010 TOLERANCES PER ASME Y14.5-1994	APPROVALS DRAWN BY: NMB DRAWN DATE: 7/16/15 APP'D BY: GAD APP'D DATE: 7/16/15	DO NOT SCALE DRAWING REV: 0 ECN#: APO1016 DATE: 7/16/15	SIZE: B DWG NO.: BSI-1507020-AP SCALE: 1:100 SHEET: 3 OF 4	REV: 0

- NOTES (UNLESS OTHERWISE SPECIFIED):
- THE X-TENSION CAN UTILIZE ANY OF THE FOLLOWING COMBINATIONS:
 - TIMBER POSTS WITH TIMBER BLOCKOUTS
 - STEEL W&X9 POSTS WITH TIMBER BLOCKOUTS
 - STEEL W&X9 POSTS WITH COMPOSITE BLOCKOUTS
 - X-TENSION SYSTEM TO BE INSTALLED PER MANUFACTURER INSTRUCTIONS. ONLY TIGHTEN THE CABLE ASSEMBLIES USING THE HEX NUTS AT CABLE BRACKETS AND ONLY AFTER THE FRICTION PLATE HAS BEEN TURNED AT THE HEAD WELDMENT. DO NOT TIGHTEN THE CABLE ASSEMBLIES AT THE FRONT OF THE GROUND ANCHOR.
 - THE SPECIAL SHEAR BOLTS USED TO CONNECT THE W-BEAM PANELS AT POST 5 ARE DIFFERENT THAN REGULAR SPICE BOLTS. FOR EASY IDENTIFICATION, THEY ARE SUPPLIED WITH YELLOW HEADS.
 - ADDITIONAL HARDWARE IS REQUIRED TO SPICE SYSTEM TO EXISTING GUARDRAIL BEYOND POST 9.
 - DRAWING DEPICTS THE STEEL POST VERSION.



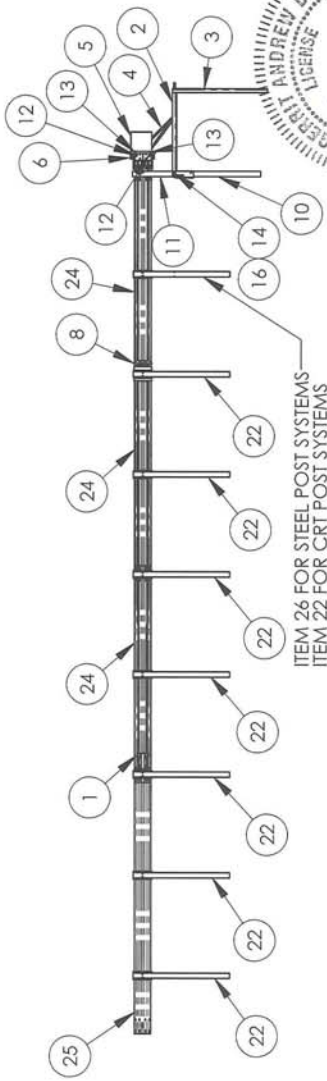
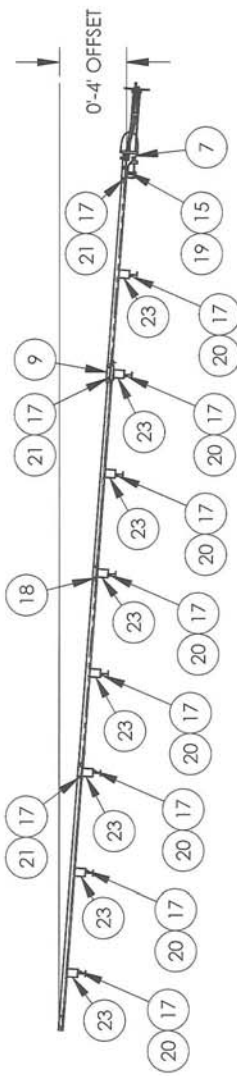
1EA 15-7 1/2" W-BEAM GUARDRAIL PANEL
 8EA PLASTIC OR WOOD BLOCKOUT
 3EA W-BEAM GUARDRAIL PANEL
 AASHTO P/N: RWM02a (12ga)
 LOCATION STATION
 POST 1 POST 2 POST 3 POST 4 POST 5 POST 6 POST 7 POST 8 POST 9
 0'-4" OFFSET
 53'-1 1/2" X-TENSION GUARDRAIL END TERMINAL SYSTEM
 BEGINNING OF LENGTH OF NEED
 37 1/2" W-BEAM
 2'-1"
 BEGIN STANDARD HIGHWAY W-BEAM GUARDRAIL PER FDOT INDEX 400
 6'-3" 6'-3" 6'-3" 6'-3" 6'-3" 6'-3" 6'-3" 6'-3" 6'-3"
 5'-3 13/16"
 3'-4 1/8"
 5'-3 1/4"
 SOIL ANCHOR
 4EA SPECIAL SHEAR BOLT, 5/8-11, YELLOW HEADS
 4EA GUARDRAIL NUT, 5/8-11
 4EA ROUND WASHER, 5/8
 WOOD OR COMPOSITE BLOCKOUT
 STEEL POST (SPECIAL YIELDING POST)
 POSTS 3-9 ARE STANDARD STEEL POSTS.
 SCALE 1:25
 (NOSE PIECE AND CABLE NOT SHOWN FOR CLARITY)
 SCALE 1:25
 TRAFFIC SIDE
 (A) CABLE
 (B) CABLE
 1EA POST BOLT, 5/8-11 X 2" LONG
 1EA WASHER, 2" X 2" WITH 3/4" HOLE
 1EA GUARDRAIL NUT, 5/8-11
 4EA GUARDRAIL BOLT, 5/8-11 X 1 1/4" LONG
 4EA GUARDRAIL NUT, 5/8-11
 CABLE BRACKET
 4EA GUARDRAIL BOLT, 5/8-11 X 1 1/4" LONG
 4EA GUARDRAIL NUT, 5/8-11
 SLIDER BRACKET
 4EA GUARDRAIL BOLT, 5/8-11 X 1 1/4" LONG
 4EA GUARDRAIL NUT, 5/8-11
 (HEX NUTS ON TRAFFIC SIDE)
 SLIDER PANEL
 GUARDRAIL PANEL IS NOT BOLTED TO BLOCKOUT AND POST. ONLY BOLT BLOCKOUT TO POST.
 DO NOT SCALE DRAWING
 REV: 0
 ECN#: APO1016
 DATE: 7/16/15
 DRAWN BY: NMB
 DRAWN DATE: 7/16/15
 APP'D BY: GAD
 APP'D DATE: 7/16/15
 UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES.
 FRACTIONS: 3/8" ON, 1/2" ON, 5/16"
 DECIMALS: .0000, .0005, .0010
 TOLERANCES PER ASME Y14.5-1994
 APPROVALS
 DRAWN BY: NMB
 DRAWN DATE: 7/16/15
 APP'D BY: GAD
 APP'D DATE: 7/16/15
 DO NOT SCALE DRAWING
 REV: 0
 ECN#: APO1016
 DATE: 7/16/15
 SIZE: B
 DWG NO.: BSI-1507020-AP
 SCALE: 1:100
 SHEET: 3 OF 4
 REV: 0

XTGTSS4-MGS50: STEEL POST WITH TIMBER BLOCKOUTS

Item	Part No.	Description	Spec
1	B061083	Cable Bracket Weldment	X-TENSION
2	B061094	Ground Strut Weldment	X-TENSION
3	B061104	Soil Anchor Weldment	X-TENSION
4	B061109	Cable Assembly	X-TENSION
5	B071001	Nose Piece	X-TENSION
6	B061058	Cable Friction Plate, Head Unit	X-TENSION
7	B061072	Head Unit Weldment	X-TENSION
8	B061079	SLIDER BRACKET WELDMENT	X-TENSION
9	B061088	Slider Panel Weldment, W-Beam	X-TENSION
10	B061098	Bottom Post Weldment	X-TENSION
11	B061094-00	I-Beam Post, Top, Post #1	X-TENSION
12	2001615	Hex Bolt, M20-2.5x75mm	X-TENSION
13	4002305	Nylon Rivet	X-TENSION
14	2001717	Hex Bolt, 5/8-11 x 8"	FDOT
15	2000302	Bolt, 5/8-11 x 2", Mgal	FDOT
16	2001636	Washer, 5/8	FDOT
17	4001116	Guardrail Nut, 5/8-11	FDOT
18	K080123	Special Shear Bolt w/ nut & washer	X-TENSION
19	B061102027-00	Washer, 2" x 2" w/ 3/4" hole	FDOT
20	2001635	Bolt, 5/8-11 x 10", Mgal	FDOT
21	4001115	Splice Bolt, 5/8-11 x 1 1/4"	FDOT
22	B0610278-00	Wide Flange Guardrail Post	FDOT
23	4002337	W-Beam Timber Blockout	FDOT
24	4000443	W-Beam Guardrail	FDOT
25	B06110067-00	Panel, 15ft 7.5 in. Galv, X-Tension	X-TENSION
26	B061100	I-Beam Post, Middle	X-TENSION

XTGTSS6-MGS50: TIMBER POST WITH TIMBER BLOCKOUTS

Item	Part No.	Description	Spec
1	B061083	Cable Bracket Weldment	X-TENSION
2	B061094	Ground Strut Weldment	X-TENSION
3	B061104	Soil Anchor Weldment	X-TENSION
4	B061109	Cable Assembly	X-TENSION
5	B071001	Nose Piece	X-TENSION
6	B061058	Cable Friction Plate, Head Unit	X-TENSION
7	B061072	Head Unit Weldment	X-TENSION
8	B061079	Slider Bracket Weldment	X-TENSION
9	B061088	Slider Panel Weldment	X-TENSION
10	B061098	Bottom Post Weldment	X-TENSION
11	B061094-00	I-Beam Post, Top, Post #1	X-TENSION
12	2001615	Hex Bolt, M20-2.5x75mm	X-TENSION
13	4002305	Nylon Rivet	X-TENSION
14	2001717	Hex Bolt, 5/8-11 x 8"	FDOT
15	2000302	Bolt, 5/8-11 x 2", Mgal	FDOT
16	2001636	Washer, 5/8	FDOT
17	4001116	Guardrail Nut, 5/8-11	FDOT
18	K080123	Special Shear Bolt w/ nut & washer	X-TENSION
19	B061102027-00	Washer, 2" x 2" w/ 3/4" hole	FDOT
20	2001636	Post Bolt, 5/8-11 x 18"	FDOT
21	4001115	Splice Bolt, 5/8-11 x 1 1/4"	FDOT
22	4002335	CRT Timber Post PDE09	FDOT
23	4002336	W-Beam Timber Blockout PD801a	FDOT
24	4000443	W-Beam Guardrail	FDOT
25	B06110067-00	Panel, 15ft 7.5 in. Galv, X-Tension	X-TENSION
26	4002056	Washer, 5/8	FDOT



- NOTES:
- ALL GUARDRAIL POSTS, PANELS, BLOCKOUTS AND ASSOCIATED HARDWARE SHALL BE IN ACCORDANCE WITH FDOT STANDARD SPECIFICATION 536 & DESIGN STANDARDS INDEX 400 FOR CONNECTIONS TO THREE-BEAM GUARDRAIL. SEE INDEX 400.
 - IN LIEU OF TIMBER OFFSET BLOCKS, COMPOSITE OFFSET BLOCKS MEETING THE REQUIREMENTS OF SPECIFICATION SECTION 536 MAY BE USED. XTGTSS5-MGS50 IS THE STEEL POST WITH COMPOSITE OFFSET BLOCKS CONFIGURATION FOR X-TENSION.

		BARRIER SYSTEMS 800 North Road Tallahassee, FL 32304 Tel: 850-850-3671 www.bonnytematic.com	
TITLE X-TENSION FLARED END TERMINAL 2'-1" MOUNTING HEIGHT/ TL3 FLARED FDOT APL NO. 536-003-015		REV. 0	
APPROVALS DRAWN BY: NMB 7/16/15 APP'D BY: GAD 7/16/15		SIZE: DWG NO. BSI-1507020-AP SCALE: NTS SHEET: 4 OF 4	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS DECIMALS ANGLES 3/16 1/32 1/16 1/32 1/2		DO NOT SCALE DRAWING	
REVISIONS 0 AP01016 7/16/15		ECN# DATE	