

Table of Structural Items and Construction Processes

Spec Item Numbers	Product	Submittal Required	Electronic Submittal & Final Set Accepted ?	Typically Reviewed By:	Approval Required (Y/N)	Contractor/ Fabricator P.E. Seal Required	Division Review Contact	Final Set Recipients	Notes	Abbreviations
7.16.1,2	Construction Load Analysis	Yes	Yes	E	Yes	Yes	CM	E, C	-	E: Engineer EOR: Engineer of Record C: Contractor F: Fabricator All: EOR District Shop Plan, TxDOT personnel, per District Contractor Fabricator Detailer (if applicable) RR or TollRd Ofc (if applicable) When AP or AX: + MTD Review Results: AP: Approved AX: Approved-Except as Noted RC: Returned for Corrections MTD: Materials & Tests Division BRG: Bridge Division CM: Const-Maint. Branch Des: Design Section Geo: Geotechnical Branch SDR: Shop Drawing Review TRF: Traffic Safety Division
400	Excavation & Backfill for Structures (cofferdams)	Yes	Yes	E	No	Yes	Geo	E, C	-	
403	Temporary Special Shoring	Yes	Yes	E	No	Yes	Geo	E, C	-	
407	Steel Piling	Note 2	Yes	E	Yes	Depends	CM / Geo	E, C	2	
420	Formwork / Falsework	Yes	Yes	E	No, See Note 7	Depends	CM	E, C	7, 8	
423	Retaining Walls, coping, any ancillary components (calculations required)	Yes	Yes	E, EOR	Yes	Yes	Geo	All	3, 4	
425	Optional Design Calculations (Prstrsd Bms)	Yes	Yes	EOR	Yes	Yes	SDR	EOR, F	-	
425	Prestressed Concrete Sheet Piling	Yes	Yes	EOR	Yes	No	Geo	All	-	
425	Prestressed Concrete Beams	Yes	Yes	EOR	Yes	No	SDR	All	3	
425	Prestressed Concrete Bent	Yes	Yes	EOR	Yes	No	SDR	All	3	
426	Post Tension Details	Yes	Yes	EOR	Yes	No	CM	All	-	
434	Elastomeric Bearing Pads (All)	Yes	Yes	EOR	Yes	No	SDR	All	-	
441	Misc Steel (various steel assemblies)	Yes	Yes	EOR	Yes	No	Des	All	-	
441	Steel Pedestals (bridge raising)	Yes	Yes	EOR	Yes	No	CM	All	-	
441	Steel Bearings	Yes	Yes	EOR	Yes	No	Des	All	-	
441	Steel Bent	Yes	Yes	EOR	Yes	No	Des	All	3	
441	Steel Diaphragms	Yes	Yes	EOR	Yes	No	Des	All	-	
441	Steel Finger Joint	Yes	Yes	EOR	Yes	No	Des	All	-	
441	Steel Plate Girder	Yes	Yes	EOR	Yes	No	Des	All	3	
441	Steel Tub-Girders	Yes	Yes	EOR	Yes	No	Des	All	3	
441	Erection Plans, including Falsework	Yes	Yes	E	No	Yes	CM	E	-	
449	Sign Bridge Anchor Bolts	Yes	Yes	EOR	Yes	No	SDR	All	-	
450	Railing	Per Design	No	EOR	Yes	No	SDR	All	10	
462	Concrete Box Culvert (Alternate Designs Only, calcs reqd)	Yes	Yes	E	Yes	Yes	Des	All	2, 3	

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464	Reinforced Concrete Pipe (Jack and Bore only; ONLY when requested)	Note 2	Yes	E	Yes	Yes	CM	All	2	E: Engineer EOR: Engineer of Record C: Contractor F: Fabricator All: EOR District Shop Plan, TxDOT personnel, per District Contractor Fabricator Detailer (if applicable) RR or TollRd Ofc (if applicable) When AP or AX: + MTD Review Results: AP: Approved AX: Approved-Except as Noted RC: Returned for Corrections MTD: Materials & Tests Division BRG: Bridge Division CM: Const-Maint. Branch Des: Design Section Geo: Geotechnical Branch SDR: Shop Drawing Review TRF: Traffic Safety Division
465	Pre-cast Junction Boxes, Inlets & Grates - Alternate Designs Only (calcs reqd for all)	Yes	Yes	E	Yes	Yes	Des	All	2	
495	Raising Existing Structures	Yes	Yes	E	Note 9	Yes	CM	Note 9	9	
610	Roadway Illumin Supports (Non-std only)	Yes	Yes	EOR	Yes	Yes	Des	All	-	
613	High Mast Illumination Poles (Non-standard only, calculations required)	Yes	Yes	EOR	Yes	Yes	Des	All	-	
614	High Mast Illumination Rings (Non-prequalified or alternate designs only)	Yes	Yes	EOR	Yes	Yes	Des	All	-	
627	Treated Timber Poles	Yes	Yes	E	No	No	TRF	E	1	
644	Small Roadside Sign Assemblies, non-standard	Yes	Yes	EOR	Yes	Yes	SDR	All	-	
647	Large Roadside Sign Supports and Assemblies, non-standard	Yes	Yes	EOR	Yes	Yes	SDR	All	-	
650	Cantilever Sign Bridge Supports - Alternate Design Calcs	Yes	Yes	EOR	Yes	Yes	Des	All	-	
650	Sign Bridge	Yes	Yes	EOR	Yes	No	SDR	All	-	
654	Sign Walkways, non-standard	Yes	Yes	EOR	Yes	No	Des	All	-	
685	Roadside Flashing Beacon Assemblies	Yes	Yes	E	No	No	TRF	E	5	
686	Traffic Signal Pole Assemblies (Steel), non-standard	Yes	Yes	EOR	Yes	Yes	Des	All	-	
784	Repairing Steel Bridge Members	Yes	Yes	E	Yes	No	CM	E, C	-	
SS 4306	Prestressed Concrete Crown Span	Yes	Yes	EOR	Yes	No	Des	All	3	
SS 4036	Sound Barrier Walls	Yes	Yes	EOR	Yes	No	Des	All	-	
SS 6071	ITS Camera Poles (Also SS 6611, 6941, etc)	Yes	Yes	EOR	Yes	Yes	Des	All	-	
SS 4007	Pedestrian Bridges (Calcs reqd)	Yes	Yes	EOR	Yes	Yes	Des	All	3	
SS	Segmental Bridges, Items ~ CPA,SEG	Yes	Yes	EOR	Yes	Notes 3, 6	Des	All	3, 6	
SS	Segmental Bridges ~ FED,GEOM,MAT,SCH	Yes	Yes	E	No	Note 6	Des	E	6	

Table of Structural Items and Construction Processes - Elaboration

The [Spec Book](#) calls for the electronic submission of Shop Drawings/Shop Plans for the fabrication of structural items, which are digitally acceptable by all Districts. Contact the [District](#) associated with the project for direction on Submittals. Submittals need to be formatted as documented in the "[Guide to Shop Drawing Submittals](#)".

Submittal = Set of Shop Drawings or Shop Plans detailing the Structural Items or set of Working Drawings for construction processes to be reviewed for approval.

E = The Engineer is usually the Area Engineer for the project. The Engineer typically reviews the items in this table that require a Submittal. Also considered TxDOT's executive director authorized representative.

EOR = The Engineer of Record, also known as the Design Engineer (sealed and signed on Design Plans), from [Bridge Division](#) (BRG), District, or Consultant, who may review these items.

C = The prime Contractor selected to work on the project.

F = The Fabricator proposing to make structural items. Fabricator may use another entity, the Detailer, to draw the details for producing the required structural items. Origin of Submittal may come from the Detailer on behalf of the Fabricator (included in the email's CC:).

Typically Reviewed By: = Send required submittals to this individual or as directed by the District, at or before the preconstruction meeting.

Only when the **E**, and the **EOR** are not able to review the Submittal, then Bridge Division would acquire the designated Reviewer within [Bridge Division](#), (See Below: Cst, Des, Geo or Sup) or sourced out to [Traffic Division](#) (TRF).

Bridge Division (BRG) Review Contacts

CM	BRG/Field Ops/Const-Maint.	Seth Cole	}
Des	BRG/Design Section	Robert Owens	
Geo	BRG/Field Ops/Geotechnical	Worku Mergia	
SDR	BRG/Design/Standards/SDR	BRG SDR	
TRF	TRF/TE-Policy & Standards	Rafael Riojas	

Fabricators: Only when directed by the District, Submittals to be reviewed by any of these Bridge Division contacts are sent to [BRG_ShopPlanReview](#).

Emailing the Submittal

Format electronic Submittals as documented in the "[Guide to Shop Drawing Submittals](#)" or may be rejected.

From: The Fabricator of Structural Items (or their Detailer); or the Contractor (only for construction processes)

To: The designated Reviewer of the Submittal. Insert no more than **ONE** recipient to prevent duplicate reviews.

CC: [District Dedicated Shop Drawing Address](#) *,
Area Engineer,
TxDOT personnel, (as directed by the District),
Contractor, and
Fabricator (and include the Detailer).

*[District Dedicated Shop Drawing Addresses](#) are to be used for Submittals, not general correspondence. Use your identifying closing signatures and one's TxDOT email address instead.

Final Set Recipients = (Post Review) Same as the previous addressees. Only when Reviews are (**AP**) "Approved" or (**AX**) "Approved, Except as Noted"; then include [Materials & Tests Division](#) (MTD).

Notes:

1. Submit pole treatment certificate.
2. Usually submitted to and reviewed by the Engineer; [Bridge Division](#) will review the submittal at the Engineer's request.
3. District Offices are responsible for archiving "As-built" plan sets (approved shop drawings) at the completion of the construction project. (Do not include casting drawings and design calculations with retaining wall "As-builts").
4. Send retaining wall shop drawings to the District. The District will route them through the offices necessary to perform all facets of the review. (i.e., ~ for geometry, structural, ancillary component reviews).
5. Sign supports must be manufactured and placed in accordance with manufacturer's application and installation requirements.
6. Special specification number varies from project to project. See "[Guide to Shop Drawing Submittals](#)". See "Segmental Bridges" for descriptions of these abbreviated submittal items. See project Special Specification for sealing requirements.
7. Bridges, Retaining Wall, and other Major Structures: Requires Professional Engineer seal and signature, unless otherwise shown on the Design Plans. The Engineer may require that the Contractor have a Professional Engineer certify it is constructed according to seal drawings.
8. Minor Structures: Does not require Professional Engineer seal, unless otherwise shown on the Design Plans.
9. Approval is required if traffic will be above jacking/support devices. The Engineer reserves the right to reject if the proposed system may damage existing structures.
10. Erection/Layout drawings will require Field Verification and Approval by the Area/Project Engineer. See General Notes in TxDOT Standards.