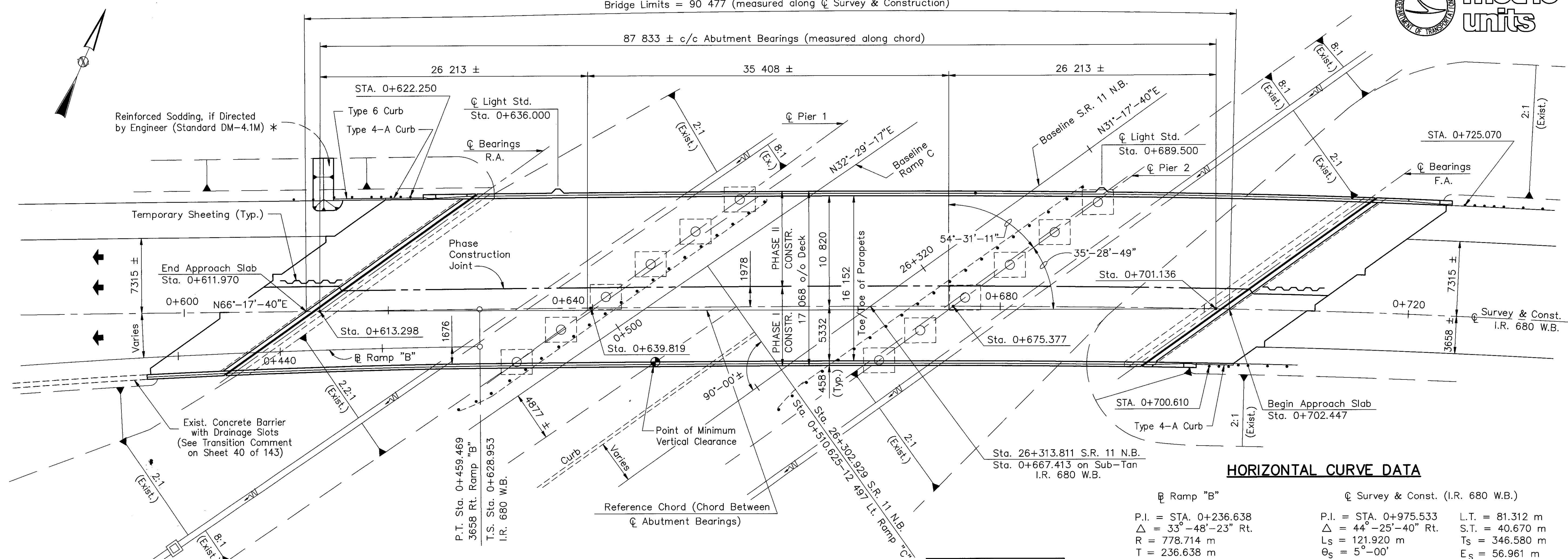


Bridge Limits = 90 477 (measured along ϕ Survey & Construction)

87 833 ± c/c Abutment Bearings (measured along chord)



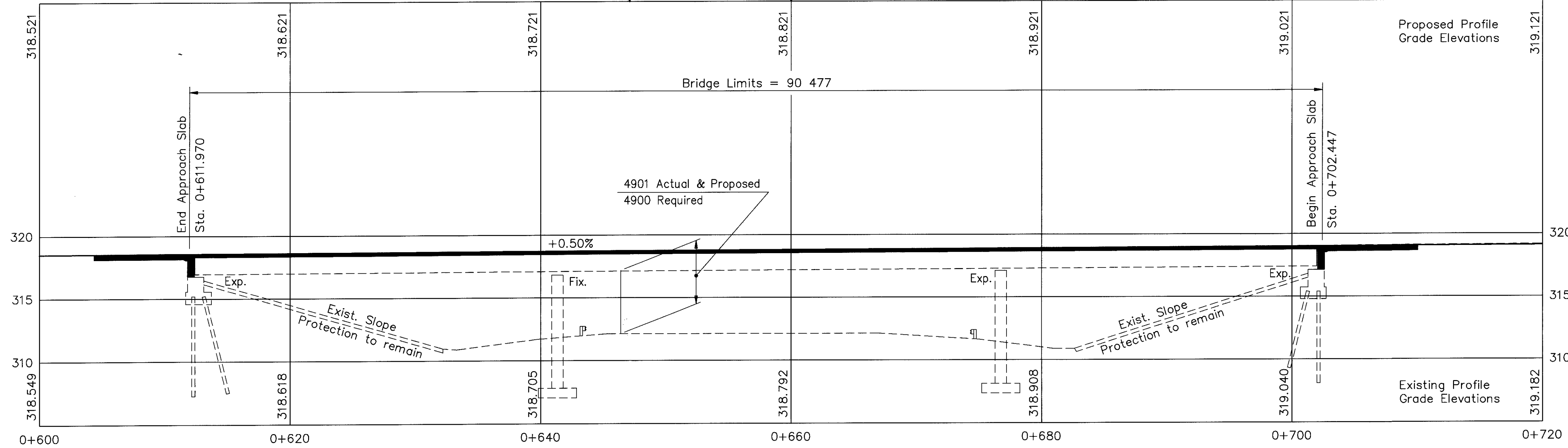
HORIZONTAL CURVE DATA

| Ramp "B" | | ϕ Survey & Const. (I.R. 680 W.B.) | |
|---------------------------------|-------------------------------|--|-------------------------------|
| P.I. = STA. 0+236.638 | L.T. = 81.312 m | P.I. = STA. 0+975.533 | L.T. = 81.312 m |
| $\Delta = 33^\circ-48'-23"$ Rt. | S.T. = 40.670 m | $\Delta = 44^\circ-25'-40"$ Rt. | S.T. = 40.670 m |
| R = 778.714 m | Ts = 346.580 m | Ls = 121.920 m | Ts = 346.580 m |
| T = 236.638 m | Es = 56.961 m | $\theta_s = 5^\circ-00'$ | Es = 56.961 m |
| L = 459.468 m | $\Delta_c = 34^\circ-25'-40"$ | p = 0.887 m | $\Delta_c = 34^\circ-25'-40"$ |
| E = 35.162 m | Lc = 419.744 m | k = 60.945 m | Lc = 419.744 m |
| P.C. = STA. 0+000.000 | Rc = 698.551 m | Xs = 121.829 m | Rc = 698.551 m |
| P.T. = STA. 0+459.469 | | ys = 3.545 m | |

BENCHMARK
 STA. 0+757.8, 2.7 m Rt.
 TOP 0.6 X 0.6 CONC.
 LIGHT POLE BASE
 EL. 319.531

All Dimensions are in Millimeters.
 All Elevations are in meters.

PLAN



PROFILE WESTBOUND LANES

| EXISTING STRUCTURE | |
|--|--|
| TYPE: Continuous Welded Plate Girders with Reinf. Concrete Deck and Substructure | |
| SPANS: 26 521 ±, 35 558 ±, 25 759 ± c/c Bearings | |
| ROADWAY: 16 459 ± f/f Parapets with 356 ± Curbs | |
| SKEW: 54°-31'-11" Left Forward (Measured from Reference Chord) | |
| ALIGNMENT: Tangent and Spiral to Right | |
| DESIGN LOADING: CF-2000 (57) & AASHTO Alt. Loading | |
| YEAR BUILT: 1965 | |
| STRUCTURE FILE NUMBER: 5006279 | |
| APPROACH SLABS: 7620 ± | |
| WEARING SURFACE: SDC & Latex Modified Concrete | |
| PROPOSED STRUCTURE | |
| PROPOSED WORK: Replace Deck, Replace Backwalls, Replace Sliding Bearings, Patch & Seal Substructures, Paint & Provide new Approach Slabs | |
| TYPE: Continuous Welded Plate Girder (ASTM A36) with Reinf. Conc. (Composite) Deck and Substructure | |
| SPANS: 26 521 ±, 35 558 ±, 25 759 ± c/c Bearings | |
| ROADWAY: 16 152 t/t parapets | |
| DESIGN LOADING: MS18 Case I & Alt. Military Loading | |
| SKEW: 54°-31'-11" Left Forward (Measured from Reference Chord) | |
| ALIGNMENT: Tangent and Spiral to Right | |
| WEARING SURFACE: Monolithic Concrete | |
| APPROACH SLABS: 7620 (AS-1-81M) | |
| SUPERELEVATION: Varies | |
| LATITUDE: N41°07'40" LONGITUDE: W80°44'45" | |
| AVG. DAILY TRAFFIC: (1996) 42,400 (2016) 53,450 ADTT 5345 | |

STRUCTURE GENERAL NOTES



REFERENCE shall be made to:

| Standard Drawings | | Supplemental Specifications | |
|-------------------|----------------|-----------------------------|---------------|
| AS-1-81M | DATED 10-25-94 | 815 | DATED 5-30-96 |
| BR-1M | DATED 12-15-94 | 910 | DATED 4-21-97 |
| EXJ-4-87M | DATED 2-18-97 | | |
| PCB-91M | DATED 3-20-95 | | |

DESIGN SPECIFICATIONS: This structure conforms to "Standard Specifications for Highway Bridges" adopted by the American Association of State Highway and Transportation Officials, 1996, and the ODOT Bridge Design Manual.

DESIGN LOADING: MS18, Case I and the Alternate Military Loading.

DESIGN DATA:

Concrete Class S - compressive strength 31.0 MPa (superstructure)

Concrete Class C - compressive strength 27.5 MPa (substructure)

Reinforcing steel - ASTM A615M, A616M or A617M
Grade 420, minimum yield strength 420 MPa

DECK PROTECTION METHOD:
Epoxy coated reinforcing steel.
65 mm concrete cover.

MONOLITHIC WEARING SURFACE is assumed, for design purposes, to be 25 mm thick.

PORTIONS OF STRUCTURE REMOVED, OVER 6 METER SPAN, AS PER PLAN

DESCRIPTION: This work shall consist of the removal, wholly or in part, and satisfactory disposal of portions of the existing structure as per 202 of the Construction and Material Specifications and as directed on the plans. This work shall also include any devices or structures necessary for the protection of traffic, preparation of plans for such structures, and any other work associated with removal of portions of the existing structure as described below. Care shall be taken to protect portions of the structure that are to remain and be incorporated into the proposed structure. In this respect, the use of explosives, headache balls and/or hoe ram type of equipment is prohibited.

PROTECTION OF TRAFFIC: Prior to demolition of any portions of the existing superstructure, the contractor shall submit his plans for the protection of traffic (vehicular, pedestrian, boat, etc.) adjacent to and/or under the structure to the Director for approval. These plans shall include provisions for any devices and structures that may be necessary to ensure such protection. Temporary vertical clearances specified on the plans or in the proposal shall be maintained at all times except as otherwise approved by the Director.

PROTECTION OF STEEL SUPPORT SYSTEMS: Before deck slab cutting is permitted, the outline of primary steel members in contact with the bottom of the deck shall be drawn on the surface of deck. Small diameter pilot holes shall be drilled 50 mm outside these lines to confirm the location of flange edges. Deck cuts over or within 50 mm of flange edges shall not extend lower than the bottom layer of deck slab reinforcing steel. Cuts made outside 50 mm of flange edges may extend the full depth of the deck. During cutting of the deck slab, care shall be taken not to damage steel members that are to be incorporated into the proposed structure.

REMOVAL METHODS: Concrete may be removed by cutting and by means of hand operated pneumatic hammers employing pointed or blunted chisel type tools. For removals above steel members, a hammer heavier than 16 kg but not to exceed 41 kg may be used at the approval of the Engineer, to ensure adequate depth control and to prevent nicking or gouging the primary steel members. Prior to proceeding with any removal, the Contractor shall submit the removal procedure to the Engineer for review and approval.

DECK REMOVALS: Due to the possible presence of welded attachments to existing structural steel (finishing machine, scupper and form supports, etc.), care shall be taken during deck removal to avoid damaging stringers which are to remain. When removing the existing scuppers, and other welded attachments, grind all welds smooth. Stringers damaged by the Contractor's removal operation shall, at no cost to the State, be replaced or repaired. Proposed repairs, developed by a registered professional engineer, shall be submitted in writing for review and approval by the Director.

EXTRANEIOUS MEMBERS: Existing extraneous members (i.e., finishing machine and form supports, etc., and the support for scuppers and bulb angles which are to be removed) attached by welded connections to portions of the top flanges designated "tension" shall be removed and the flange surfaces ground smooth. Grinding shall be carefully done and parallel to the flanges.

LOADING LIMITATIONS: No part of the structure shall be subjected to unit stresses that exceed 136.5% of the allowable unit stresses given in the AASHTO Standard Specifications for Highway Bridges due either to demolition, erection or construction methods, or to the use or movement of demolition or erection equipment on or across the structure. Structural analysis computations, by a registered professional engineer, showing the allowable stresses and the maximum stresses produced by the Contractor's methods or equipment shall be submitted to the Director for review and approval at least two weeks prior to the start of the work.

PAYMENT: This work will be paid for at the contract lump sum price bid, which price and payment shall be full compensation for all labor, equipment, materials and incidentals necessary to complete the work in conformance with these requirements, with pertinent provisions of 202, and to the satisfaction of the Engineer.

ASBESTOS NOTIFICATION

An asbestos survey of the bridges over IR 80 E.B. and bridges over the Mahoning Valley Sanitary District scheduled for rehabilitation was conducted by a certified asbestos hazard evaluation specialist. The survey determined that no asbestos is present on the bridges.

A copy of the Ohio Environmental Protection Agency (OEPA) Notification of Demolition and Renovation forms, partially completed and signed by the bridge owner, will be provided to the successful bidder. The Contractor shall complete the forms and submit to:

YOUNGSTOWN
MAHONING-TRUMBULL AIR POLLUTION CONTROL
9 West Front Street Room 107
Youngstown, Ohio 44503
Robert Ramhoff, Director
(330) 744-1928
Fax: (330) 744-1928

at least ten (10) working days prior to the start of the bridge demolition work. The Contractor shall provide a copy of the completed forms to the Engineer.

Information required on the forms will include:

- The Contractor's name and address
- The scheduled dates for the start and completion of the bridge removal or renovation
- A description of the planned demolition or renovation work and method(s) to be used

A copy of the OEPA form is available for inspection at the ODOT District 4 Office, 705 Oakwood Street, Ravenna, Ohio, 44266

Basis for Payment:

The Contractor shall furnish all fees, labor, and material necessary to complete and submit the OEPA Notification form. Payment for this work shall be included in Item 202: Portions of Structure Removed, over 6 meter, as per Plan.

CUT LINE CONSTRUCTION JOINT PREPARATION: Saw cut boundaries of proposed concrete removals 25 mm deep. Remove concrete to a rough surface. Where practicable, the existing reinforcing steel where required in the plans shall be left in place. Install dowel bars if specified. Prior to concrete placement abrasively clean joint surface and exposed reinforcement to remove loose and disintegrated concrete and loose rust. The joint surface and exposed reinforcement shall be thoroughly cleaned of all dirt, dust, or other foreign material by the use of water, air under pressure, or other methods that produce satisfactory results. Concrete bonding surfaces shall be wet without free water as concrete is placed.

SUBSTRUCTURE CONCRETE REMOVAL shall be by means of approved pneumatic hammers employing pointed and blunt chisel tools. Hydraulic hoe-ram type hammers will not be permitted. The weight of the hammer shall not be more than 16 kg for removal within 450 mm of portions to be preserved. Outside the 450 mm limit, a hammer heavier than 16 kg, but not to exceed 41 kg, may be used at the approval of the Engineer. Pneumatic hammers shall not be placed in direct contact with reinforcing steel that is to be retained in the rebuilt structure.

ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN: Unclassified excavation shall be in accordance with 503 except that the backfill material behind the abutments shall be 203 granular material placed in 150 mm lifts and compacted in accordance with 304.04.

EXISTING STRUCTURE VERIFICATION: Details and dimensions shown on these plans pertaining to the existing structure have been obtained from plans of the existing structure and from field observations and measurements. Consequently, they are indicative of the existing structure and the proposed work but they shall be considered tentative and approximate. The Contractor is referred to CMS Sections 102.05, 105.02 and 513.02.

Contract bid prices shall be based upon a recognition of the uncertainties described above and upon a prebid examination of the existing structure by the Contractor. However, all project work shall be based upon actual details and dimensions which have been verified by the Contractor in the field.

REPLACEMENT OF EXISTING REINFORCING STEEL: Any existing reinforcing bars which are to be incorporated into the new work and which are made unusable by concrete removal operations shall be replaced with new steel at the Contractor's cost. Any existing reinforcing bars deemed by the Engineer to be unusable because of corrosion shall be replaced with new steel. Payment shall be included with Item 511, Class C Concrete, Abutment.

EXISTING BRIDGE PLANS: The original construction plans of the existing bridge are available upon request at the District 4 Office of the OHIO DEPARTMENT OF TRANSPORTATION, Ravenna, Ohio.

CONCRETE PARAPETS: As soon as a concrete saw can be operated without damaging the freshly placed concrete, 25 mm deep control joints shall be sawed into the perimeter of the concrete parapet. The sawcut shall be made in the complete circumference of the parapet, starting and ending at the elevation of the concrete deck. The sawcuts shall be placed as shown on sheet 12/17. The use of an edge guide, fence or jig is required to insure that the cut joint is straight, true, and aligned on all faces of the parapet. The joint width shall be the width of the saw blade, a nominal width of 6 mm. The perimeter of the deflection control joint shall be sealed to a minimum depth of 25 mm with a caulking material conforming to Federal Specifications, TT-S-00227E.

COFFERDAMS, CRIBS AND SHEETING, AS PER PLAN: Temporary shoring shall be used to accomplish the proposed construction in stages. The design of the temporary shoring shall be the responsibility of the Contractor, be designed by a Registered Professional Engineer, and conform with 501.05. For approval, five copies of the drawings shall be submitted to the Director and concurrently, one copy to the Office of Structural Engineering. Construction of the shoring shall not begin until after written approval has been received from the Director. Portions of the temporary shoring composed of steel or concrete may be left in place at the discretion of the Engineer. Portions composed of other materials shall be removed prior to completion of the work.

STRUCTURE EXCAVATION in addition to that necessary to remove portions of the existing structure and all necessary backfill is included in the Lump Sum Bid Item, "Unclassified Excavation, as per plan" for Payment.

ITEM 863 STRUCTURAL STEEL MEMBERS, MISCELLANEOUS LEVEL FABRICATION, AS PER PLAN: The Contractor shall make necessary measurements and prepare sketches, drawings, tables, etc. The Engineer shall have authority and responsibility for ensuring that the fabricated steel is acceptable. Technical assistance will be provided on request by the Office of Structural Engineering. Mill test reports and shipping documents shall be submitted to the Engineer for review and approval prior to incorporating steel items into the work, as required by 501.07. Pay weights shall be computed in compliance with 513 of the Construction and Material Specifications and submitted to the Engineer for his review and approval. The fabricator shall furnish a 35 millimeter microfilm copy of each drawing, which shall be mounted on an aperture card as specified in 501.05.

Steel members included in this item include all end cross frames.

ITEM 815, FIELD PAINTING OF EXISTING STEEL, SYSTEM OZEU: The finish coat shall be blue (FS-5958-15450). In calculating the estimated quantity of square meters, an allowance of 15% is included for incidentals, including the bearing devices.

NOTE

- FOR ADDITIONAL STRUCTURE GENERAL NOTES, SEE SHEET 3 OF 17.

DESIGN AGENCY: THOMAS FOK & ASSOC., LTD. CONSULTING ENGINEERS, SURVEYORS, & PLANNERS 3886 MAHONING AVE., YOUNGSTOWN, OHIO
 DATE: 2-98
 STRUCTURE FILE NUMBER: 5006279
 REVIEWED: TF
 DRAWN: KFM
 DESIGNED: SUR
 CHECKED: JDV
 GENERAL NOTES
 BRIDGE NO. MAH-680-00322 L
 OVER I.R. 80 EASTBOUND, S.R. 11 NORTHBOUND
 MAH-680-00.00
 2 / 17
 70
 143

ESTIMATED QUANTITIES

| ESTIMATED QUANTITIES | | | | | | | | AS PER PLAN | |
|----------------------|-----------|-------|-----------|--|-----------------------------|-------|-------|-------------|-----------|
| ITEM | ITEM EXT. | TOTAL | UNIT | DESCRIPTION | SUPER. | ABUT. | PIERS | GEN'L | SHEET NO. |
| 202 | 11203 | LUMP | | PORTIONS OF STRUCTURE REMOVED, OVER 6 METER SPAN, AS PER PLAN | | | | LUMP | 2/17 |
| 503 | 11101 | LUMP | | COFFERDAMS, CRIBS AND SHEETING, AS PER PLAN | | | | LUMP | 2/17 |
| 503 | 21301 | LUMP | | UNCLASSIFIED EXCAVATION, AS PER PLAN | | LUMP | | | 2/17 |
| 511 | 31502 | 440.7 | CU. METER | CLASS S CONCRETE, SUPERSTRUCTURE | 440.7 | | | | |
| 511 | 45700 | 65.7 | CU. METER | CLASS C CONCRETE, ABUTMENT | | 65.7 | | | |
| 512 | 33000 | 3.7 | SQ. METER | TYPE 2 WATERPROOFING | | 3.7 | | | |
| SPECIAL | 51267502 | 1000 | SQ. METER | SEALING OF CONCRETE SURFACES (EPOXY) * | 561 | 267 | 172 | | |
| 516 | 11210 | 58.9 | METER | STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL | 58.9 | | | | |
| 516 | 44001 | 6 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES (44.5 x 380 x 236) AND LOAD PLATE (76 X 490 X 270) (NEOPRENE), AS PER PLAN * | | 6 | | | 16/17 |
| 516 | 44101 | 6 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES (57 x 640 x 376) AND LOAD PLATE (76 x 670 x 410) (NEOPRENE), AS PER PLAN * | | | 6 | | 16/17 |
| 516 | 44101 | 6 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES (87 x 370 x 260) AND LOAD PLATE (38 x 490 x 290) (NEOPRENE), AS PER PLAN * | | 6 | | | 16/17 |
| 516 | 45305 | 6 | EACH | REFURBISH BEARING DEVICE, AS PER PLAN | | 6 | | | 16/17 |
| 516 | 47001 | LUMP | | JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN | LUMP | | | | 3/17 |
| 518 | 21201 | 71 | CU. METER | POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN | | 71 | | | 9/17 |
| 1 | 519 | 11100 | 2 | SQ. METER | PATCHING CONCRETE STRUCTURE | | 2 | | |
| 815 | 00050 | 2639 | SQ. METER | SURFACE PREPARATION OF EXISTING STEEL, SYSTEM OZEU | 2639 | | | | |
| 815 | 00056 | 2639 | SQ. METER | FIELD PAINTING OF EXISTING STEEL, PRIME COAT, SYSTEM OZEU | 2639 | | | | |
| 815 | 00060 | 2639 | SQ. METER | FIELD PAINTING OF EXISTING STEEL, INTERMEDIATE COAT, SYSTEM OZEU | 2639 | | | | |
| 815 | 00066 | 2639 | SQ. METER | FIELD PAINTING OF EXISTING STEEL, FINISH COAT, SYSTEM OZEU | 2639 | | | | |
| 815 | 00504 | 60 | MAN HOUR | GRINDING FINS, TEARS, SLIVERS | 60 | | | | |
| 815 | 00508 | 852 | METER | GRINDING FLANGE EDGES | 852 | | | | |
| 846 | 73000 | 62 | SQ. METER | TREATING CONCRETE BRIDGE DECKS WITH HMWM RESIN | 53 | | | 9** | |
| 863 | 10201 | 2400 | KILOGRAM | STRUCTURAL STEEL MEMBERS, MISC., LEVEL FABRICATION, AS PER PLAN | 2400 | | | | 2/17 |
| 863 | 20000 | 5814 | EACH | WELDED STUD SHEAR CONNECTOR | 5814 | | | | |

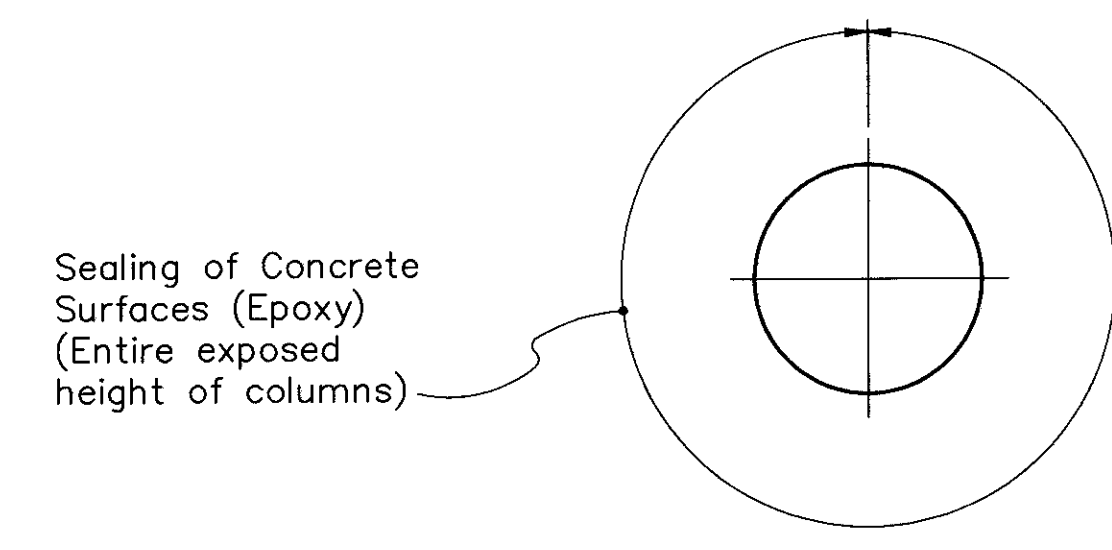
Calculated by S.J.R. Date 4-24-97

Checked by J.D.V. Date 7-7-97

***** PROPOSED WORK:**

1. PLACE TEMPORARY BARRIERS FOR PHASE CONSTRUCTION & PLACE FALSWORK.
2. REMOVE PORTIONS OF EXISTING DECK, RAILS, CURBS AND END CROSSFRAMES, AS NOTED ON THE PLANS.
3. PLACE TEMPORARY SHEETING AND REMOVE PORTIONS OF ABUTMENT BACKWALLS AND WINGWALLS, AND APPROACH SLABS.
4. JACK PORTION OF EXISTING FRAMING AND REMOVE SLIDING BEARINGS AS SHOWN ON THE PLANS. REPLACE SLIDING BEARINGS WITH ELASTOMERIC BEARING PADS AND RESET FRAMING, AS PER PLAN.
5. INSTALL SHEAR STUDS, THEN PLACE NEW DECK AND SAFETY SHAPE PARAPETS.
6. REBUILD ABUTMENT BACKWALLS AND PORTIONS OF WINGWALLS, CONSTRUCT NEW APPROACH SLABS, AND CONSTRUCT NEW PARAPETS ON ABUTMENTS, AS PER PLAN.
7. SEAL LONGITUDINAL JOINT W/HMWM.
8. PATCH ABUTMENTS AND SEAL PORTIONS OF CONCRETE SURFACES AS NOTED ON THE PLANS.
9. PAINT EXISTING STRUCTURAL STEEL.
10. AFTER PHASE WORK IS COMPLETE, REMOVE TRAFFIC CONTROL DEVICES AND OPEN STRUCTURE TO TRAFFIC.

*** THE WORK NOTED ABOVE DOES NOT NEED TO BE DONE IN THE ORDER LISTED.



SEALING OF CONCRETE SURFACES - PIERS

* SEE PROPOSAL NOTE
 [1] THIS QUANTITY INCLUDES A CONTINGENCY OF 50% OF THE ACTUAL AREA.

** QUANTITY TO BE APPLIED TO APPROACH SLABS

STRUCTURE GENERAL NOTES

ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN
 This item shall consist of furnishing all necessary labor, materials, and equipment to raise or reposition any existing structures to the dimensions and requirements defined in the project plans.

The contractor shall be responsible for the design, installation and operation of an adequate jacking system, including any temporary or permanent supports necessary to perform the work described in the project plans. Three (3) sets of jacking plans, which include the information described in this note, shall be submitted to the Director for approval at least (30) days before actual work is to begin. The plans shall be prepared and stamped by a registered professional engineer.

Jacking submittals shall include at least the following:

1. The signature and number, or professional seal, of the registered professional engineer who prepared the submittal.
2. Calculations and analysis of the structure to determine and define the actual loading applied at the contractor's selection jacking points.
3. A drawing showing the physical and dimensional position of the jacks with respect to the structure including clearances and center of lift.
4. A schematic layout of jacks, check valves, pumps with 3 way retractor valve, pressure gages, flow control valves, etc. in accordance with manufacturer's recommendations. All jacks for each abutment or pier shall be connected together. All jacks at each abutment or pier shall be the same size.
5. Analysis and calculations of the stresses induced or created in the structure and any temporary or permanent supports. Design calculations for any temporary or permanent supports.

6. Physical dimensions, materials, and fabrication details of any temporary or permanent supports. Horizontal and vertical movement restraint shall be provided.
7. A step by step procedure detailing all steps in the jacking operation.
8. Method of attachment to structural members. Welding to tension areas will not be permitted.

The entire system including jacks shall have 20% more capacity than required based on calculated loads.

For lifts greater than 25 mm, jacks shall have locking nuts to positively lock and support the structure during the lift.

Jacks shall have a swivel load cap, a domed piston head or some other device to protect against the effects of side load on the jack.

Jacks alone shall not be used to support loads except during the actual jacking operation. Temporary supports, blocking or other methods approved by the Director shall be used.

Single acting rams with no over-travel protection system shall not be used.

Spare equipment shall be available on site for the required structure raising to proceed in the event of breakdown. A list of spare equipment shall be provided by the engineer.

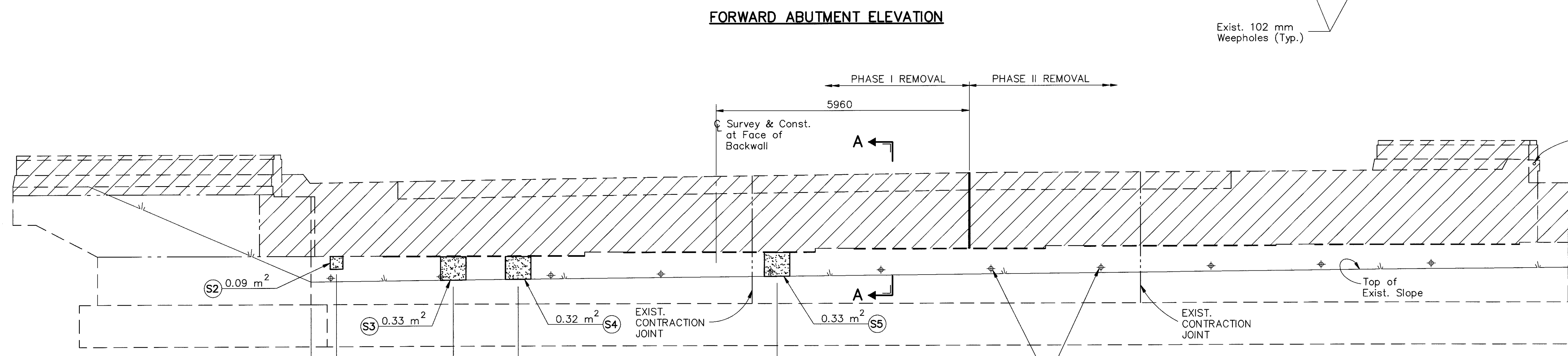
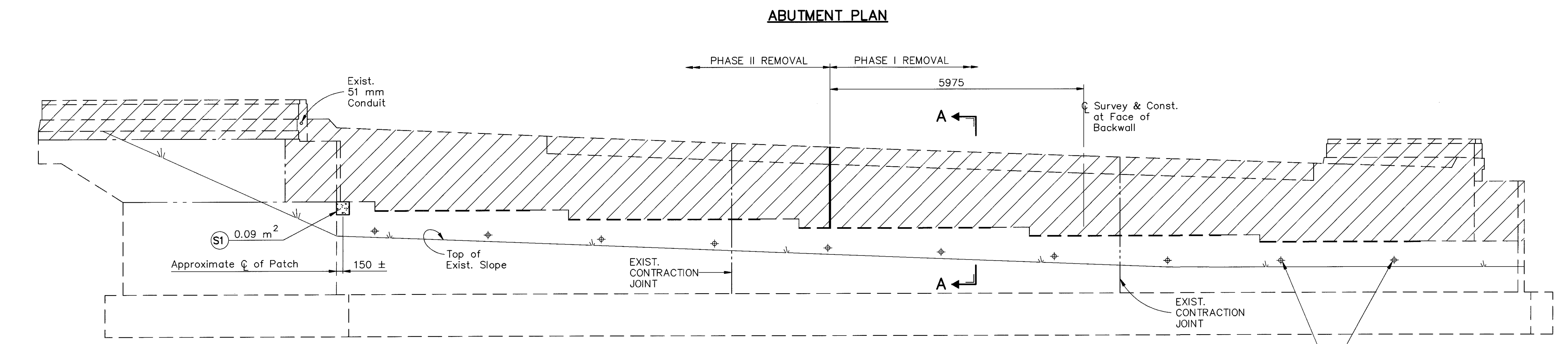
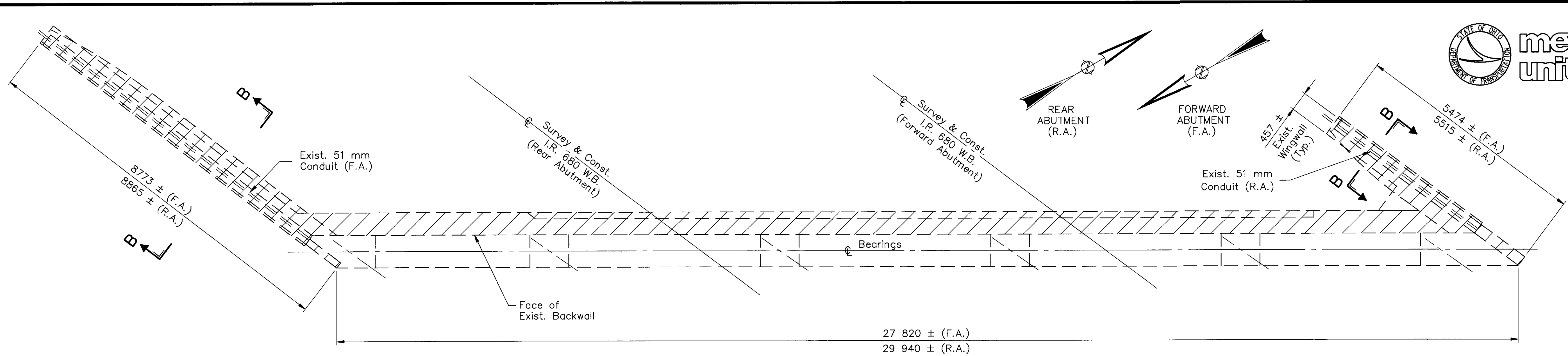
At a minimum, a jacking operation shall lift all beams at any one abutment or pier simultaneously. The only exception is the situation where the work involves replacing or rehabilitating individual bearings; no permanent shimming is required and the height of the lift shall not exceed 6 mm.

Maximum differential jacking height between any adjacent abutments or piers shall be 25 mm or less.

The Contractor shall demonstrate to the Engineer that the bridge bearings are fully seated between all contact areas. If full seating is not attained, suitable means of repair, subject to the approval of the Engineer, will be required at the Contractor's expense.

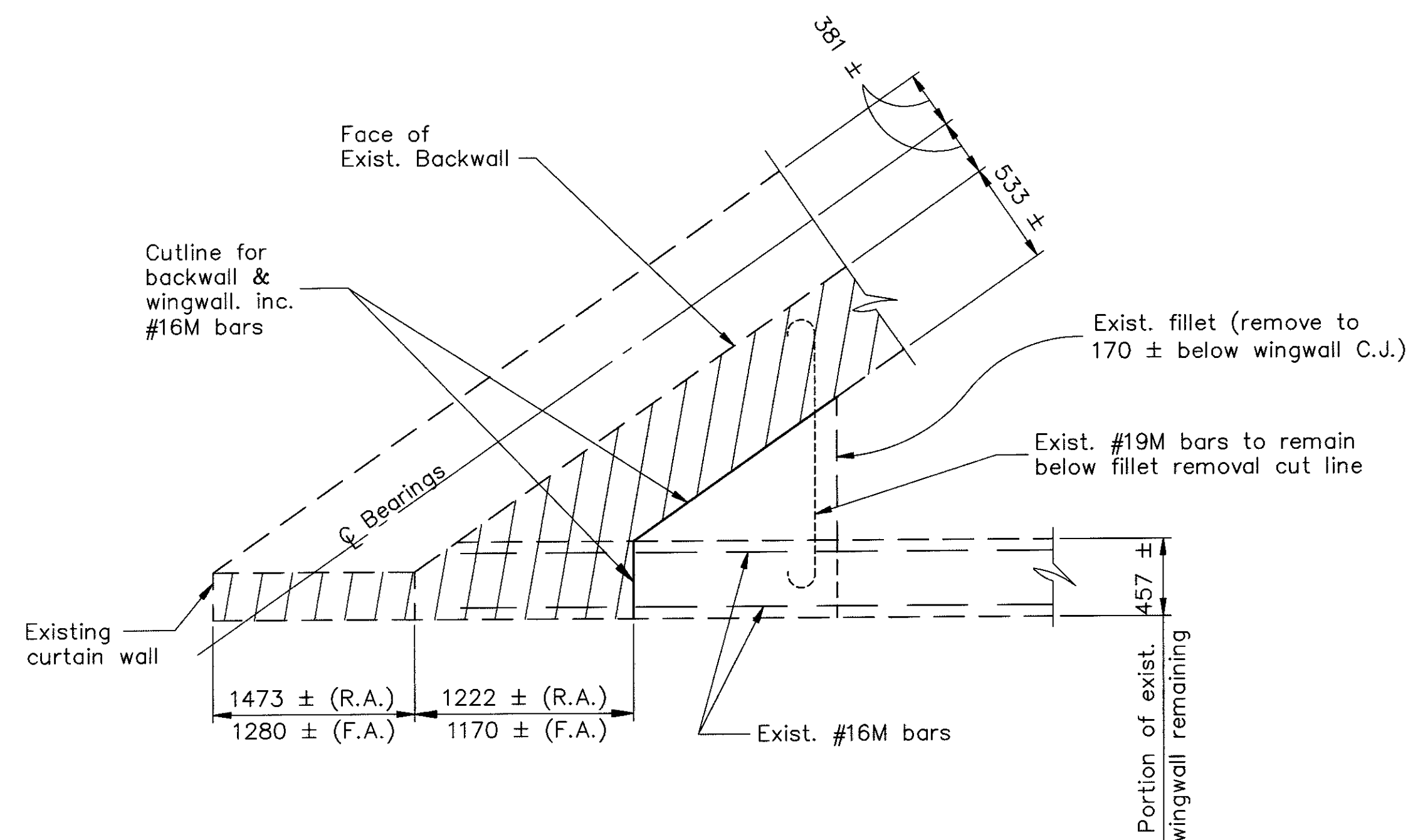
The jacking operation shall be directed by a Professional Engineer employed by the Contractor. Failure to have a Professional Engineer present shall be cause for ceasing jacking operations.

Payment shall be made at the lump sum price bid for Item 516, Jacking and Temporary Support of Superstructures, As Per Plan and shall include all necessary tools, labor, equipment and materials necessary to complete this item of work.

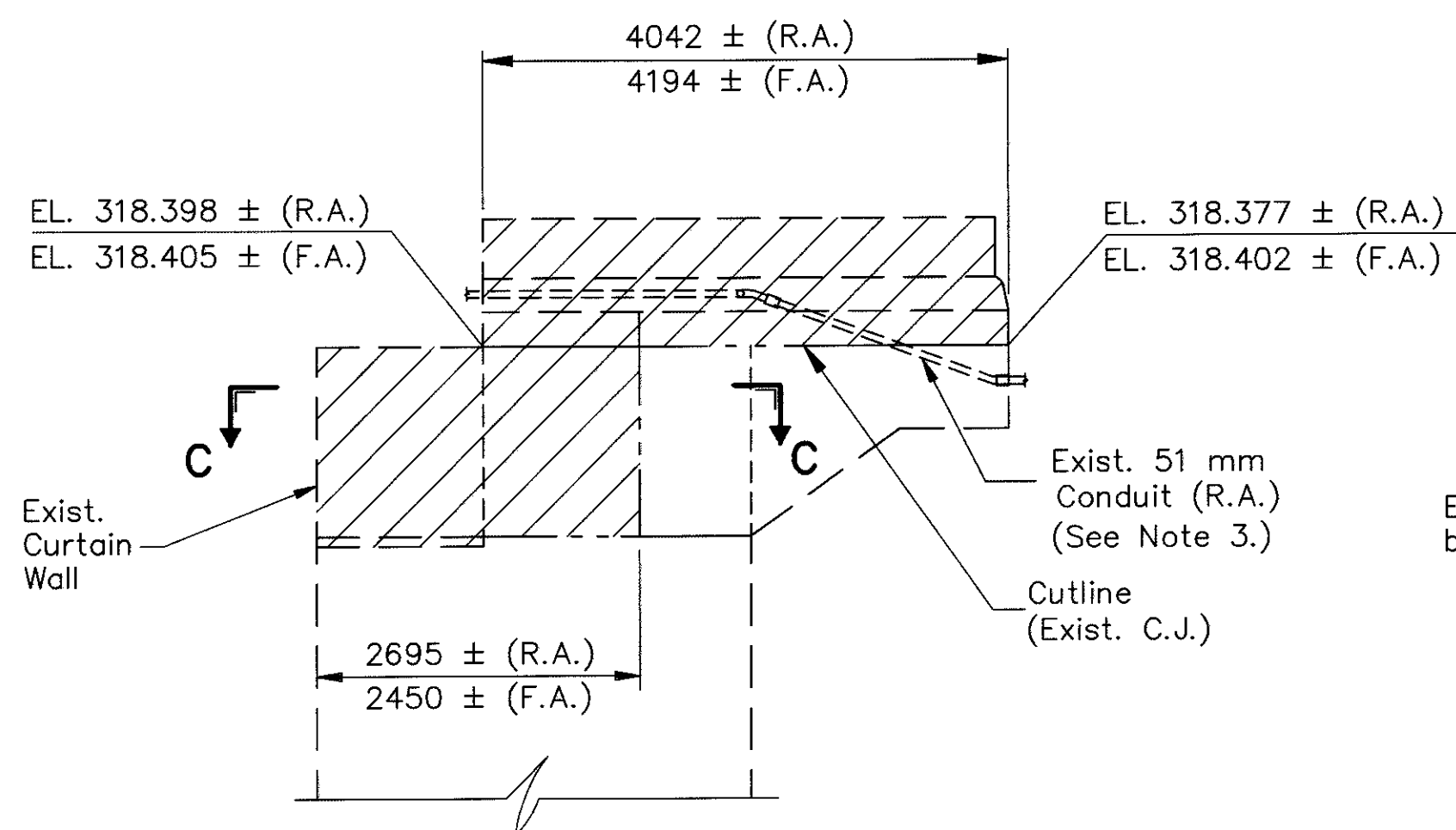


NOTE:
 1. FOR SECTION A-A, B-B, LEGEND AND NOTES, SEE SHEET 5 OF 17.

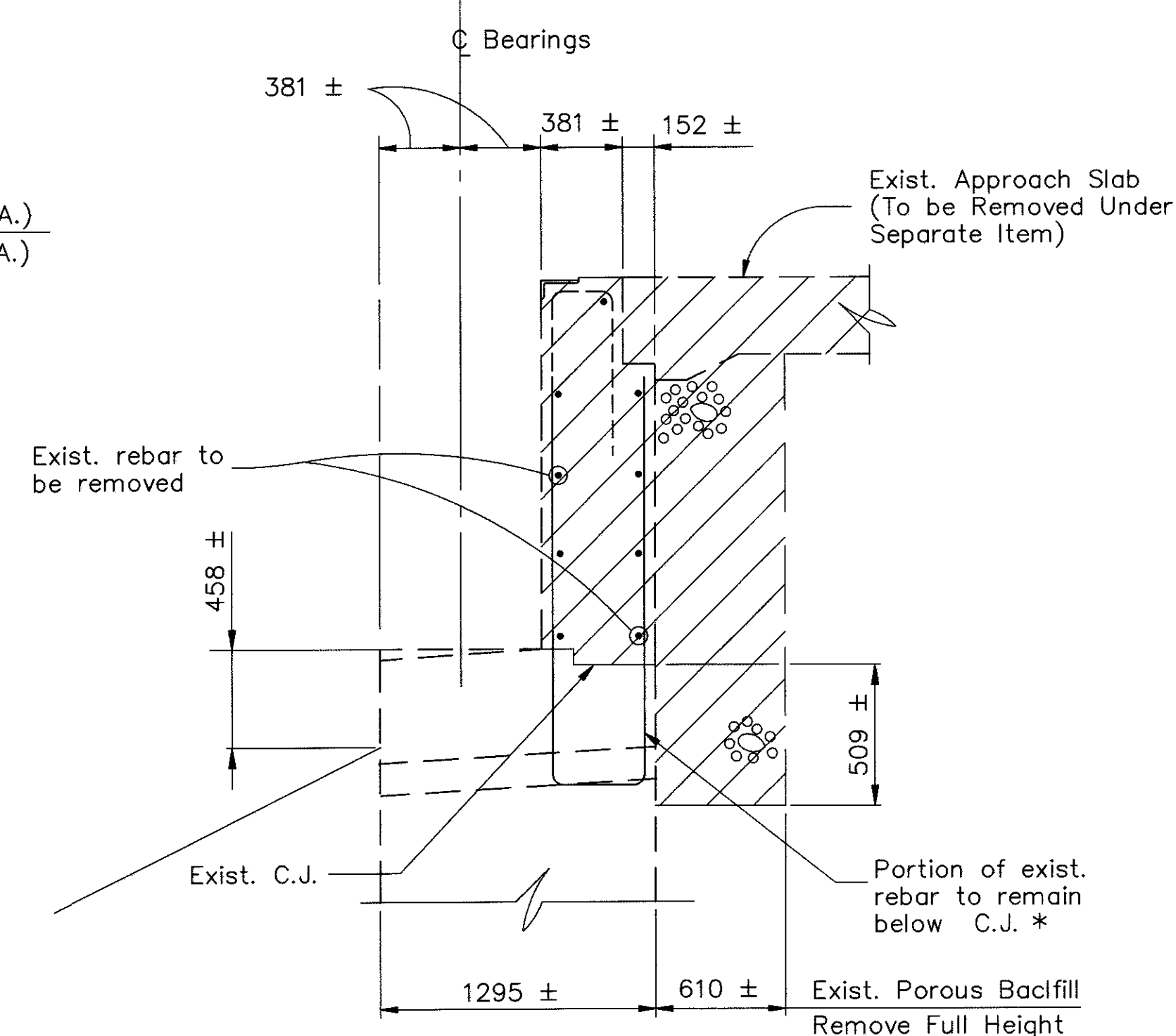
All Dimensions are in Millimeters.



SECTION C-C

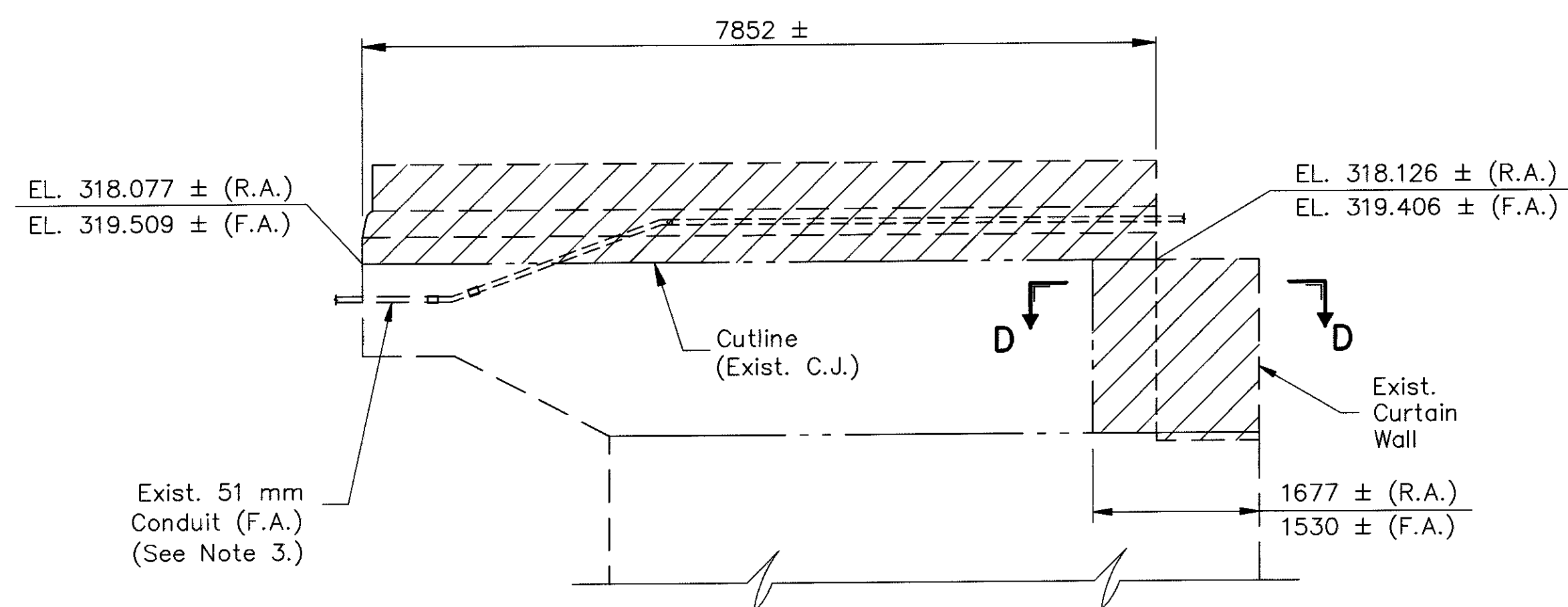


ELEVATION - LEFT REAR WINGWALL
ELEVATION - RIGHT FORWARD WINGWALL

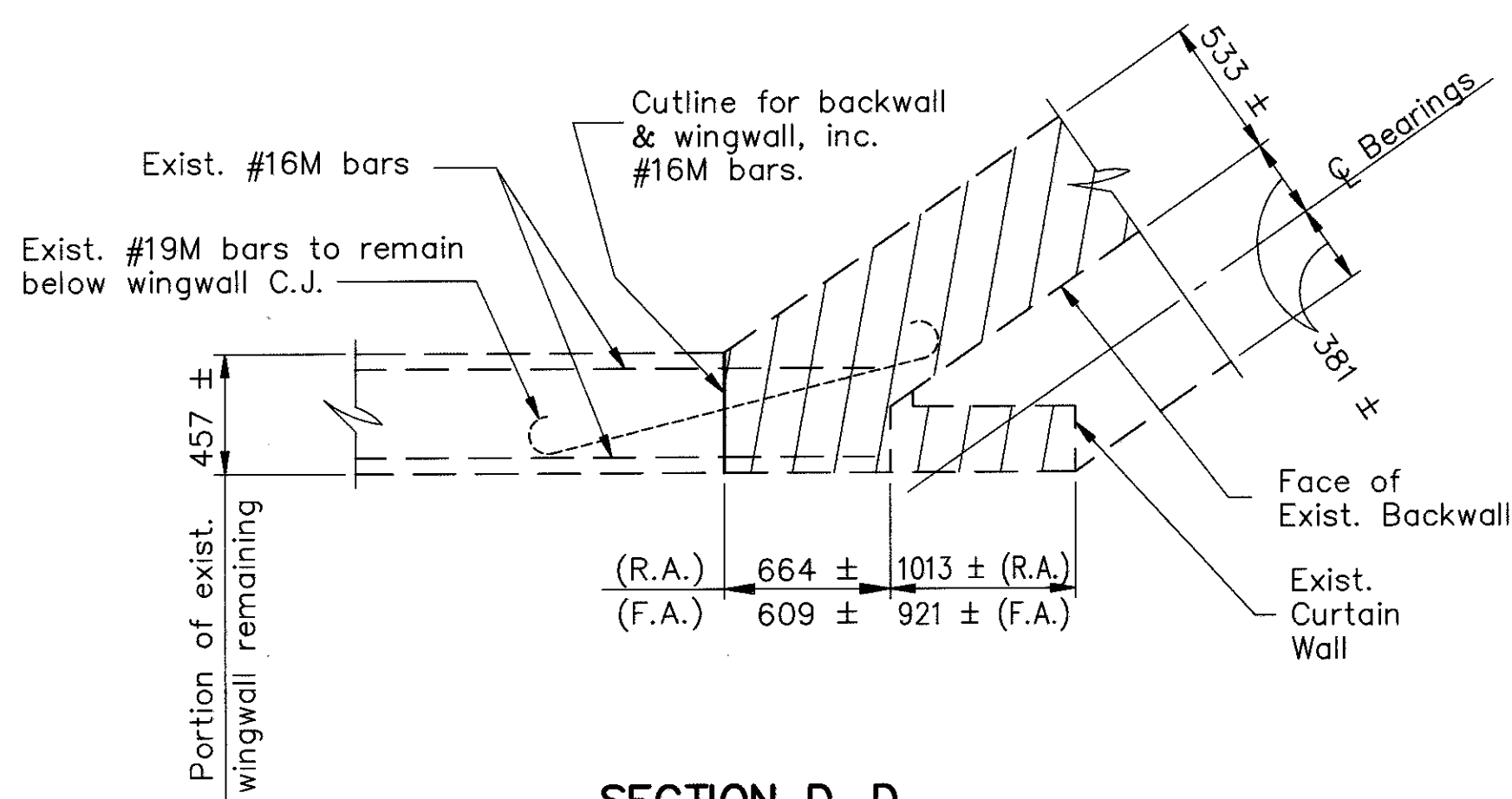
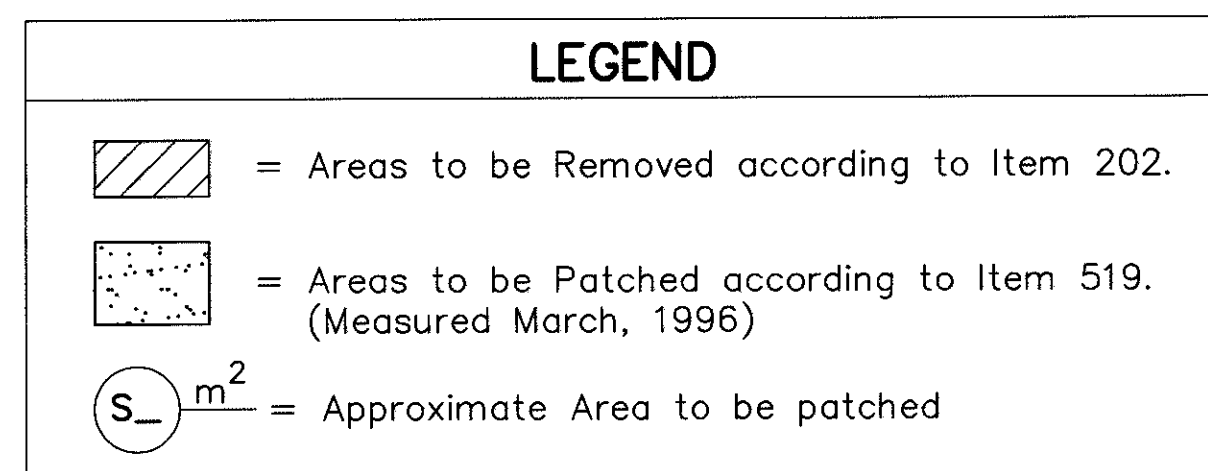


SECTION A-A

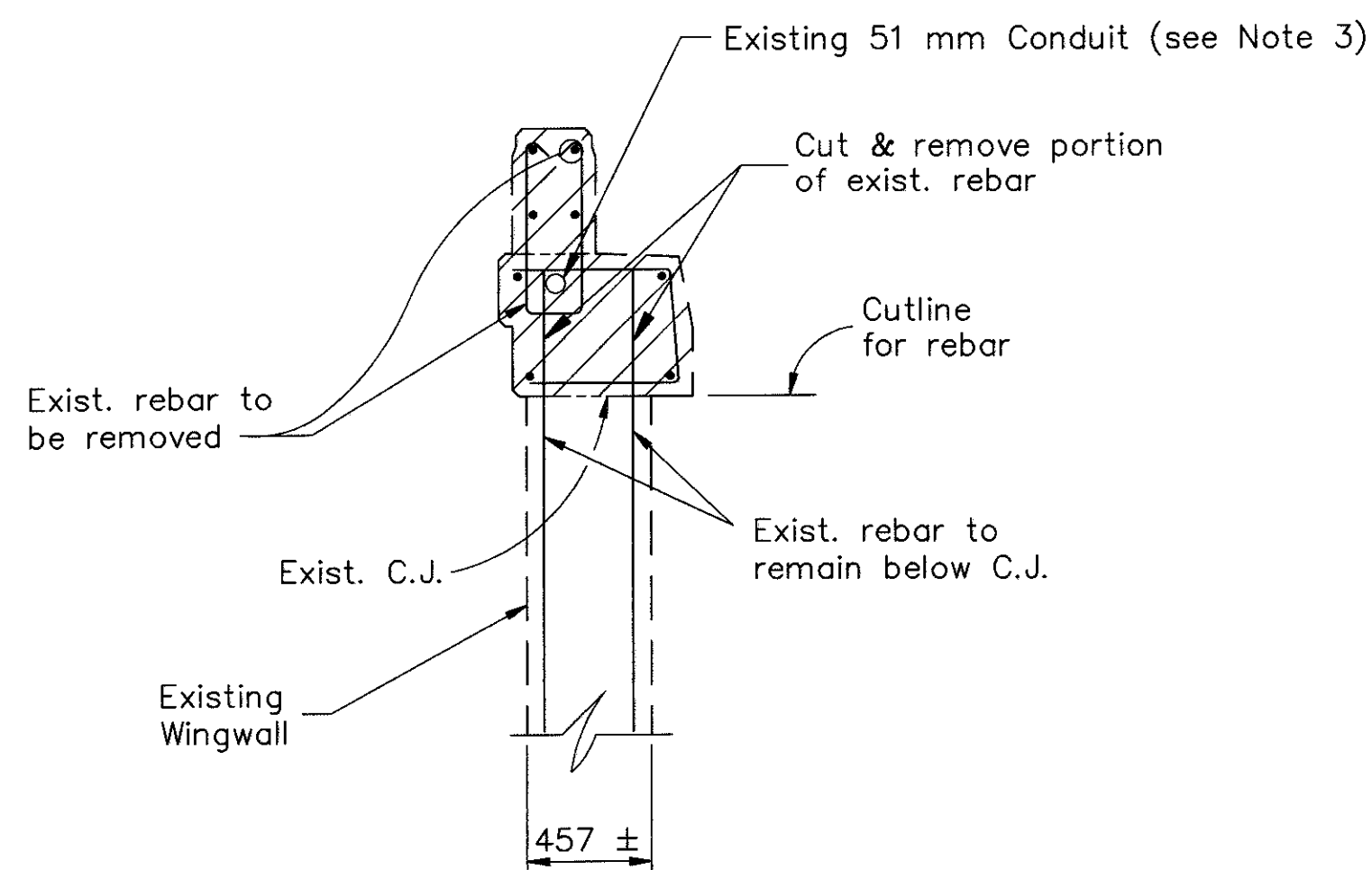
NOTE: GIRDERS AND BEARINGS NOT SHOWN.
 * THIS IS NOT APPLICABLE TO PORTIONS OF WINGWALLS REMOVED WITH BACKWALL.



ELEVATION - RIGHT REAR WINGWALL
ELEVATION - LEFT FORWARD WINGWALL



SECTION D-D



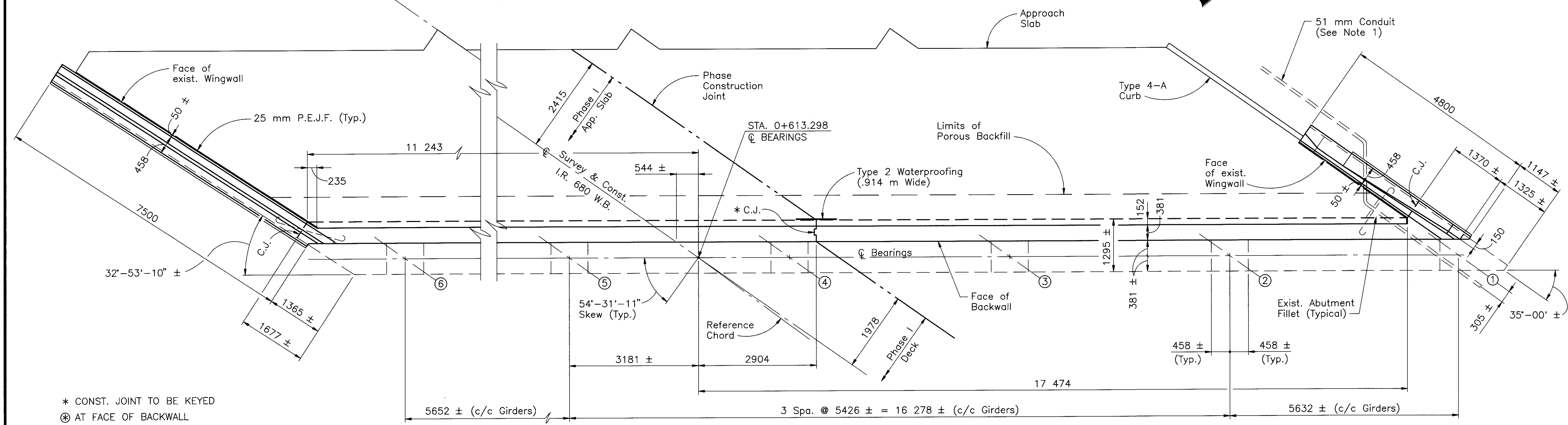
SECTION B-B

NOTES:

- FOR REMOVAL NOTES, SEE SHEET 2/17.
- THE BOTTOM AREAS WHERE THE EXISTING CURTAIN WALLS ARE REMOVED AND OTHER AREAS INDICATED ON THE PLANS SHALL BE REPAIRED IN ACCORDANCE WITH ITEM 519, PATCHING CONCRETE STRUCTURES. IN ADDITION, ANY AREAS NOT SHOWN IN THE PLANS DEEMED REPAIRABLE BY THE ENGINEER SHALL BE REPAIRED IN ACCORDANCE WITH THIS SPECIFICATION. THE PLAN PIER AREAS ARE 2.6 SQ. M ON COL. 1 & 1.4 SQ. M ON COL. 5 OF PIER #1.

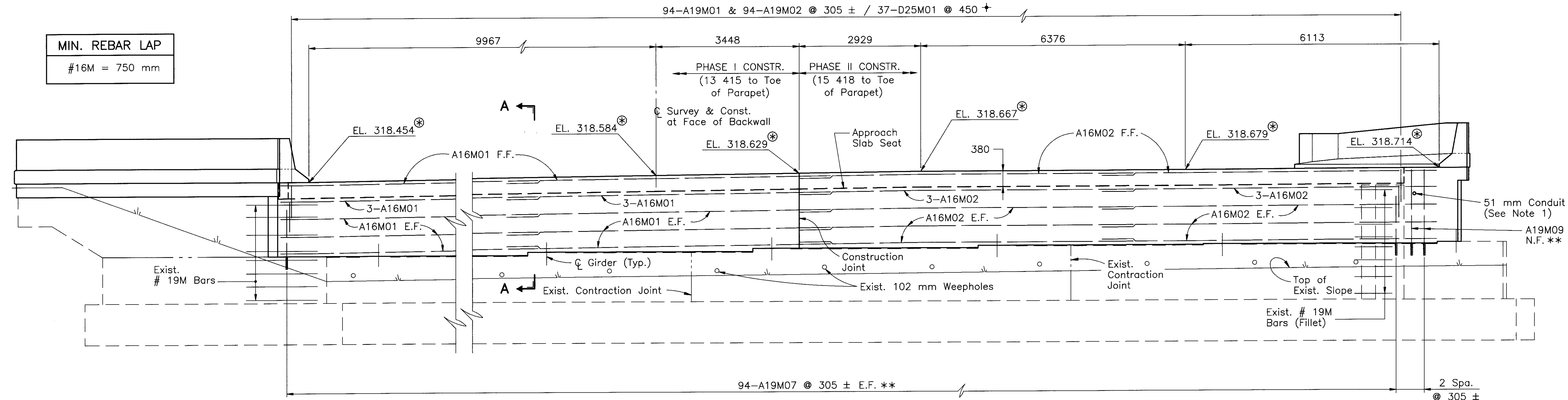
PAYMENT WILL BE MADE AT THE CONTRACT PRICE BID PER SQUARE METER FOR:
ITEM 519, PATCHING CONCRETE STRUCTURE
- A PORTION OF THE EXISTING 51 mm CONDUITS SHALL BE REMOVED WITH THE CONCRETE TO THE EXISTING C.J. AND PLUGGED. PAYMENT FOR PARTIAL REMOVAL AND PLUGGING SHALL BE INCLUDED WITH ITEM 202, PORTIONS OF STRUCTURES REMOVED, OVER 6 m SPAN, AS PER PLAN.

All Dimensions are in Millimeters.
 All Elevations are in Meters.



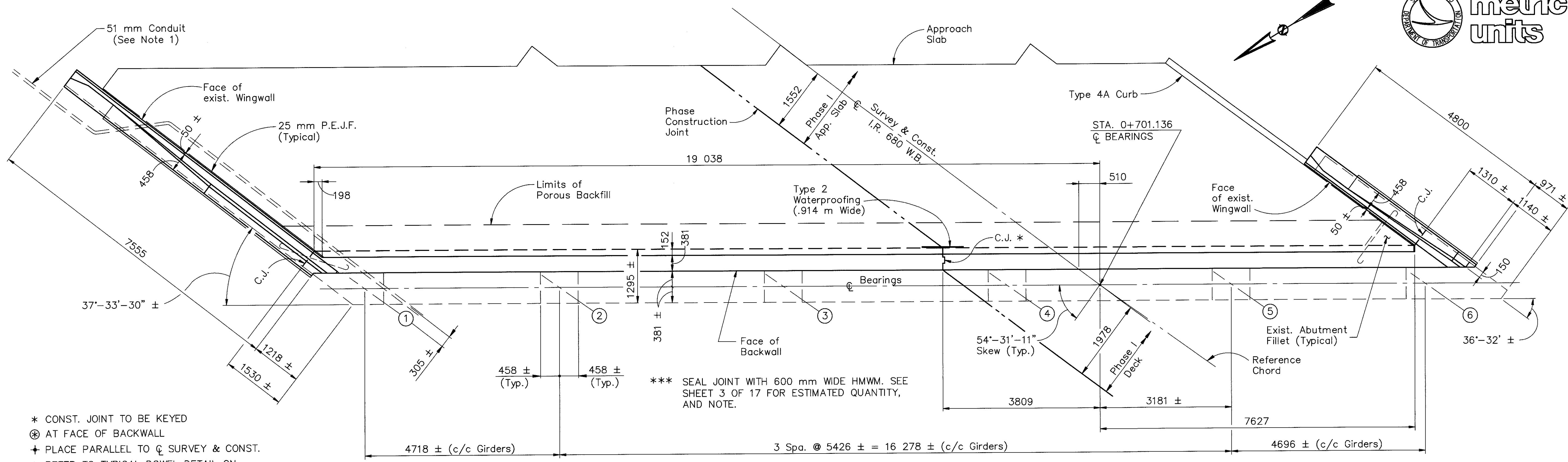
* CONST. JOINT TO BE KEYED
 ⊕ AT FACE OF BACKWALL
 † PLACE PARALLEL TO C SURVEY & CONST.
 ** REFER TO TYPICAL DOWEL DETAIL ON SHEET 9 OF 17.

MIN. REBAR LAP
 #16M = 750 mm



- NOTES**
- FOR STRUCTURE CONDUIT DETAILS, SEE STANDARD DRAWING HL-30.31M. FIELD BEND AS REQUIRED TO CLEAR END CROSS FRAMES.
 - FOR WINGWALL ELEVATIONS, SEE SHEET 8 OF 17.
 - FOR SECTION A-A, ABUTMENT NOTES AND ABBREVIATIONS, SEE SHEET 9 OF 17.

All Dimensions are in Millimeters.
 All Elevations are in Meters.

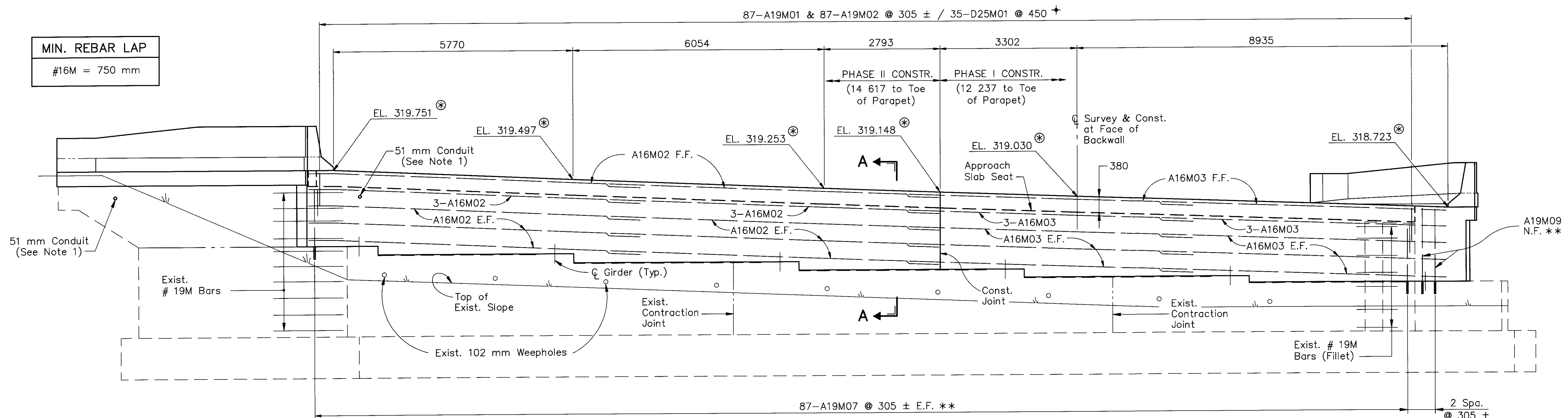


PLAN

* CONST. JOINT TO BE KEYED
 ⊕ AT FACE OF BACKWALL
 † PLACE PARALLEL TO C SURVEY & CONST.
 ** REFER TO TYPICAL DOWEL DETAIL ON SHEET 9 OF 17.

*** SEAL JOINT WITH 600 mm WIDE HMWM. SEE SHEET 3 OF 17 FOR ESTIMATED QUANTITY, AND NOTE.

MIN. REBAR LAP
 #16M = 750 mm

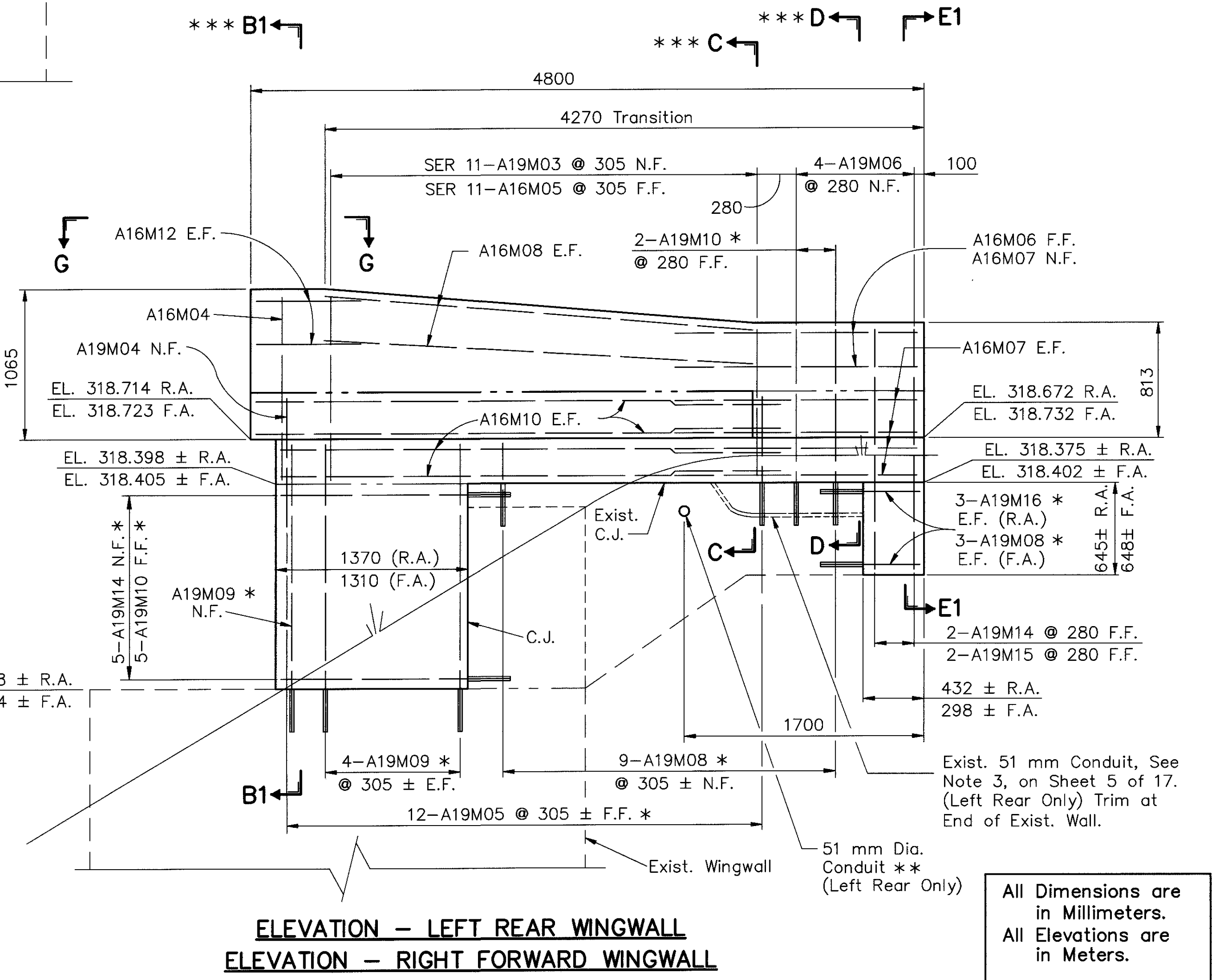
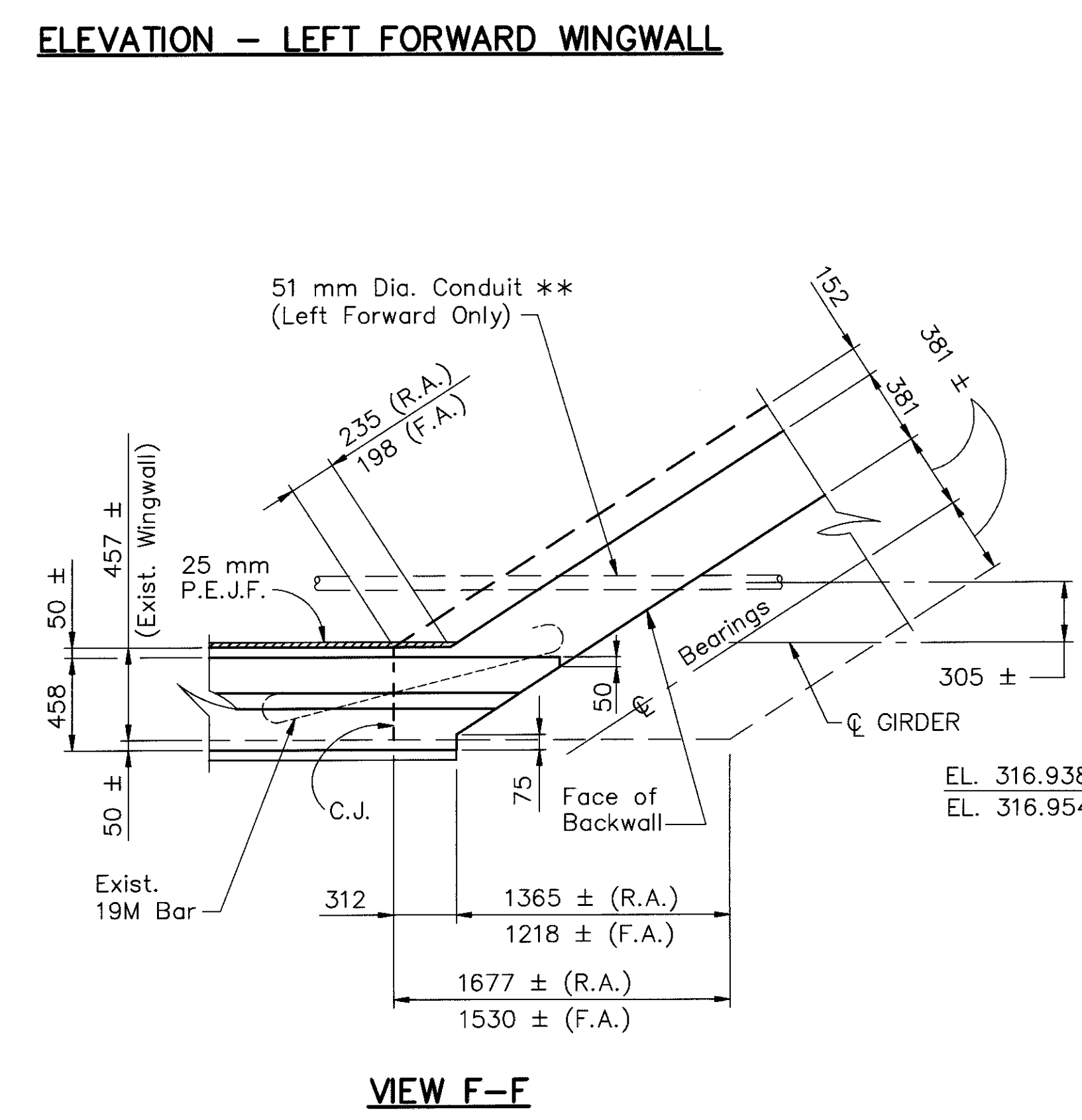
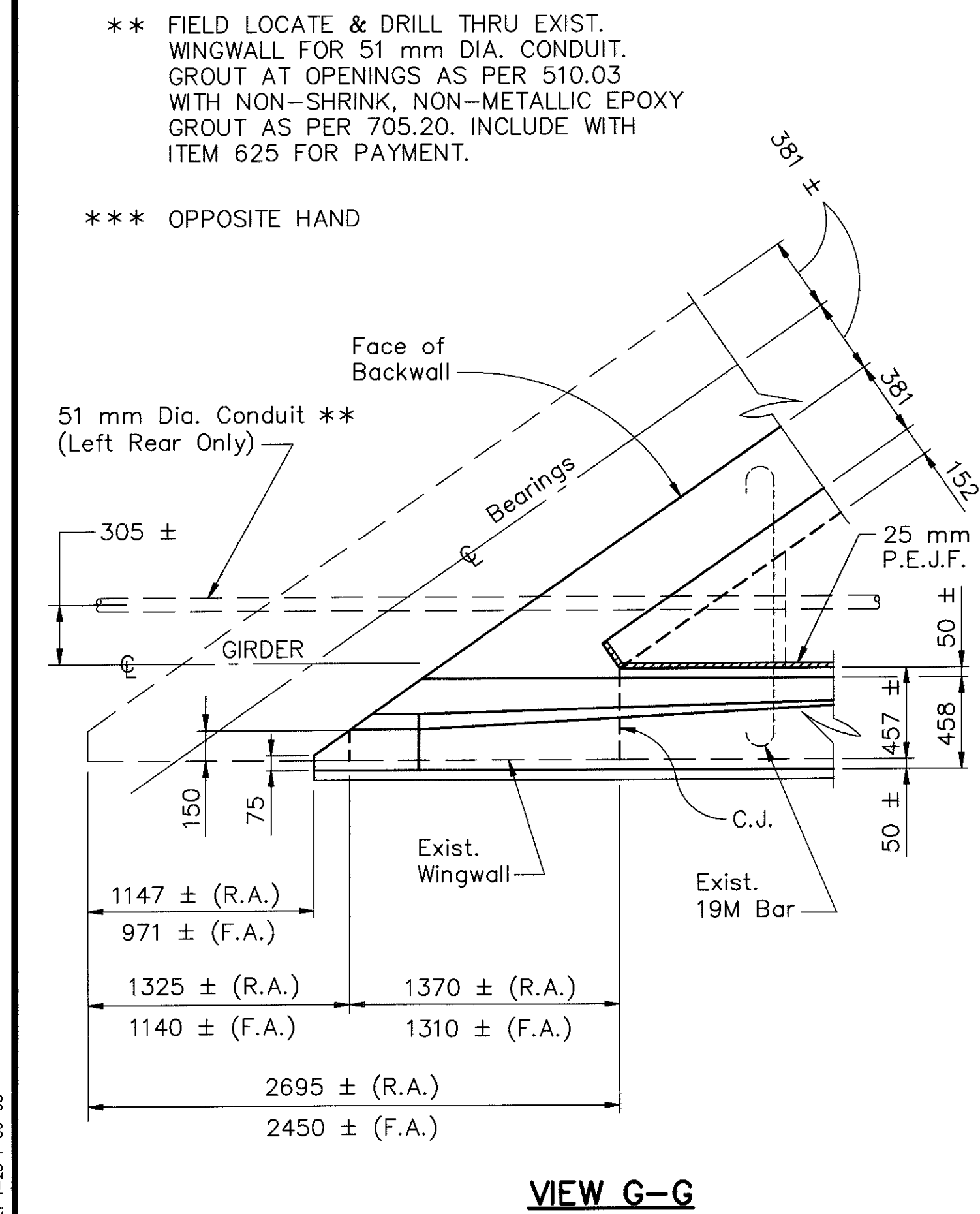
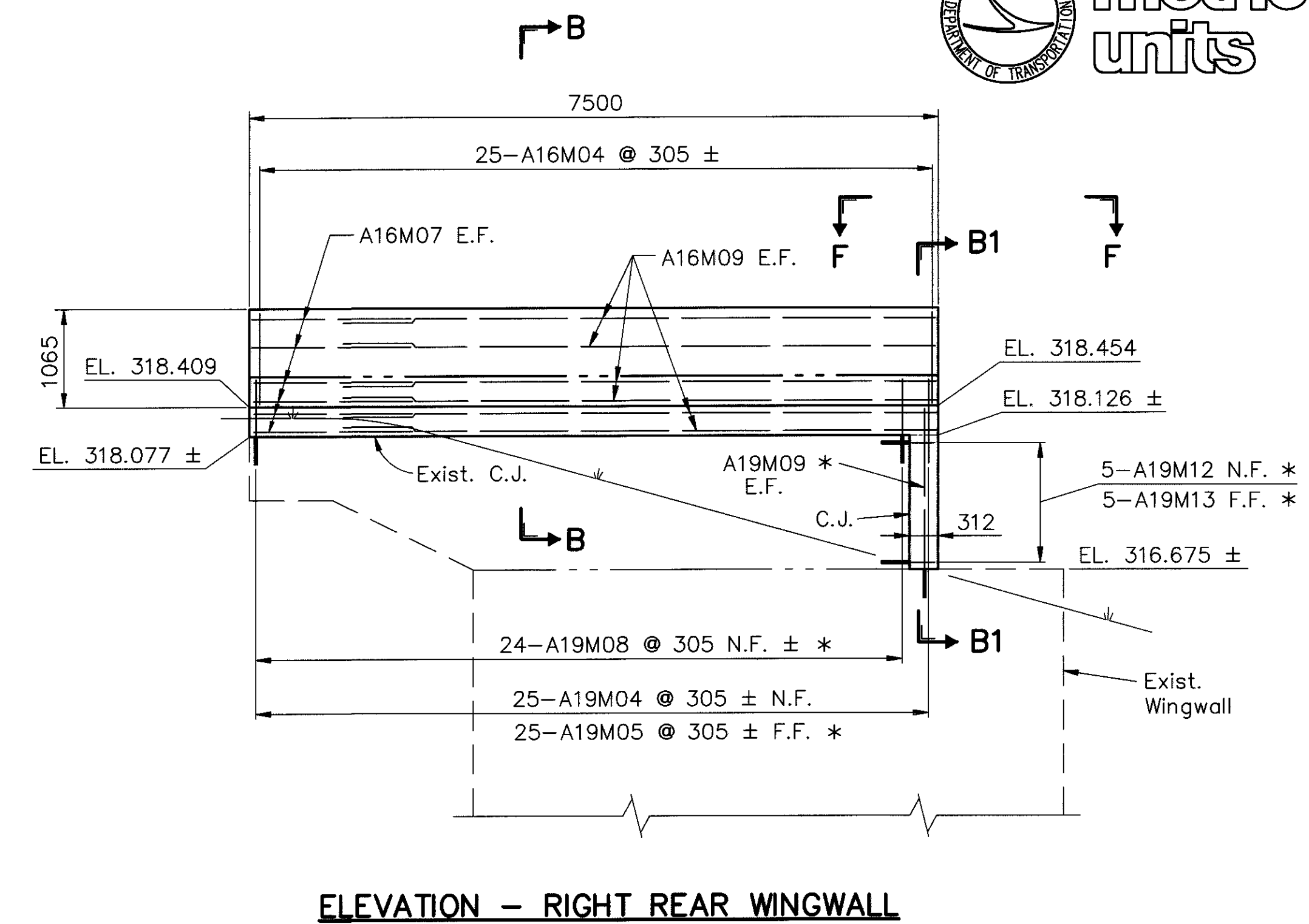
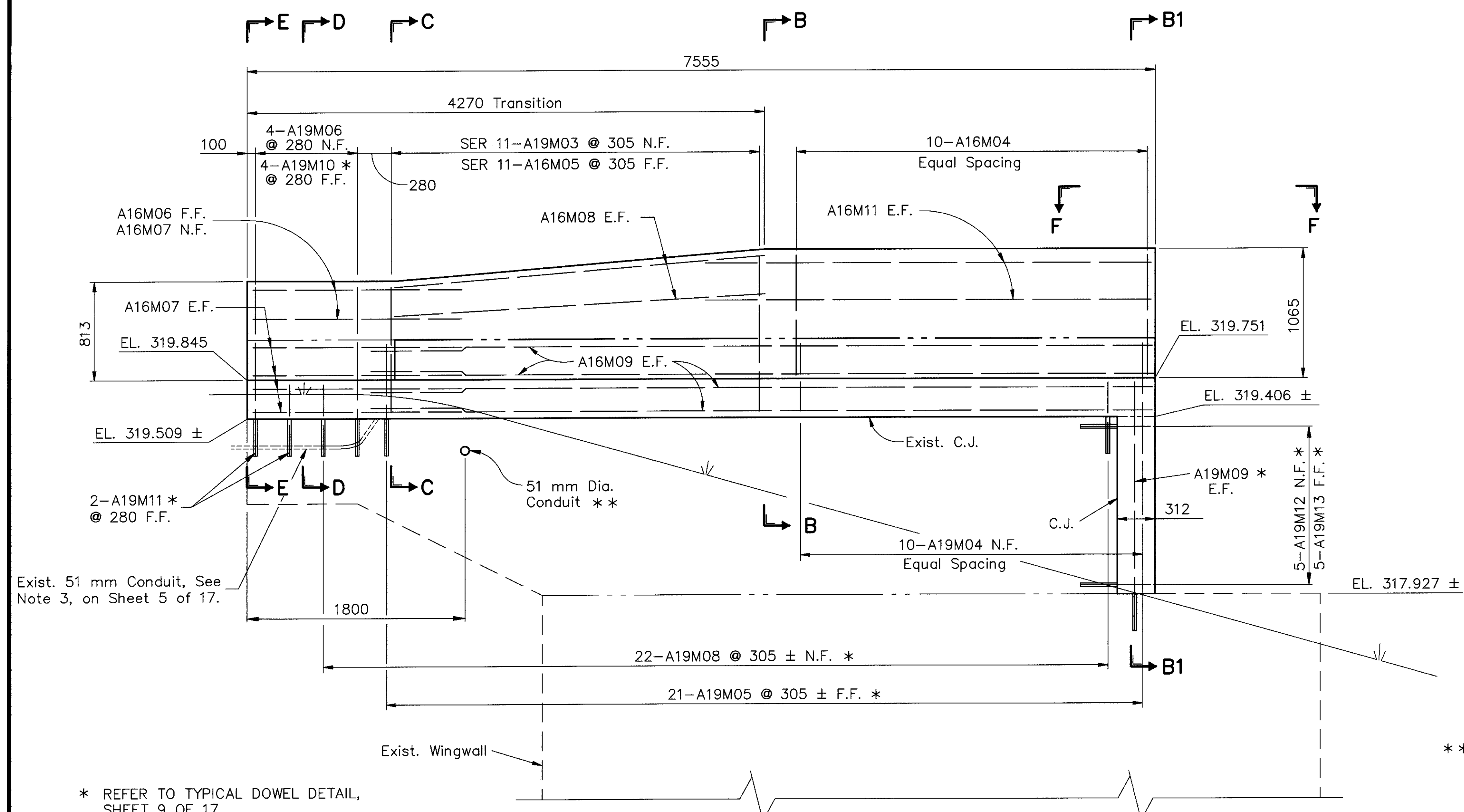


ELEVATION

NOTES

1. FOR STRUCTURE CONDUIT DETAILS, SEE STANDARD DRAWING HL-30.31M. FIELD BEND AS REQUIRED TO CLEAR END CROSS FRAMES.
2. FOR WINGWALL ELEVATIONS, SEE SHEET 8 OF 17.
3. FOR SECTION A-A, ABUTMENT NOTES AND ABBREVIATIONS, SEE SHEET 9 OF 17.
4. SEE STANDARD DRAWING AS-1-81M FOR FORWARD APPROACH SLAB DETAILS.

All Dimensions are in Millimeters.
 All Elevations are in Meters.



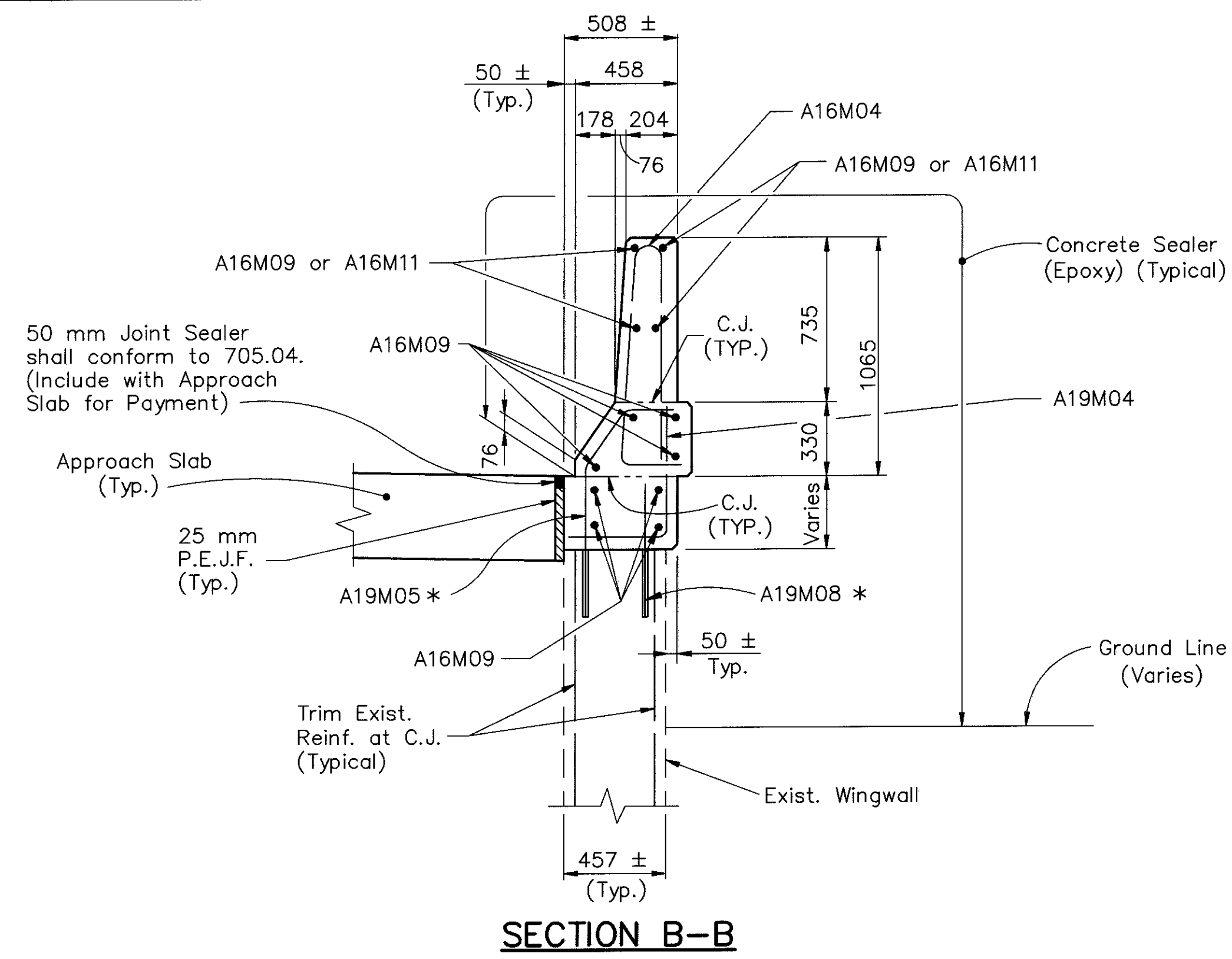
* REFER TO TYPICAL DOWEL DETAIL, SHEET 9 OF 17.

** FIELD LOCATE & DRILL THRU EXIST. WINGWALL FOR 51 mm DIA. CONDUIT. GROUT AT OPENINGS AS PER 510.03 WITH NON-SHRINK, NON-METALLIC EPOXY GROUT AS PER 705.20. INCLUDE WITH ITEM 625 FOR PAYMENT.

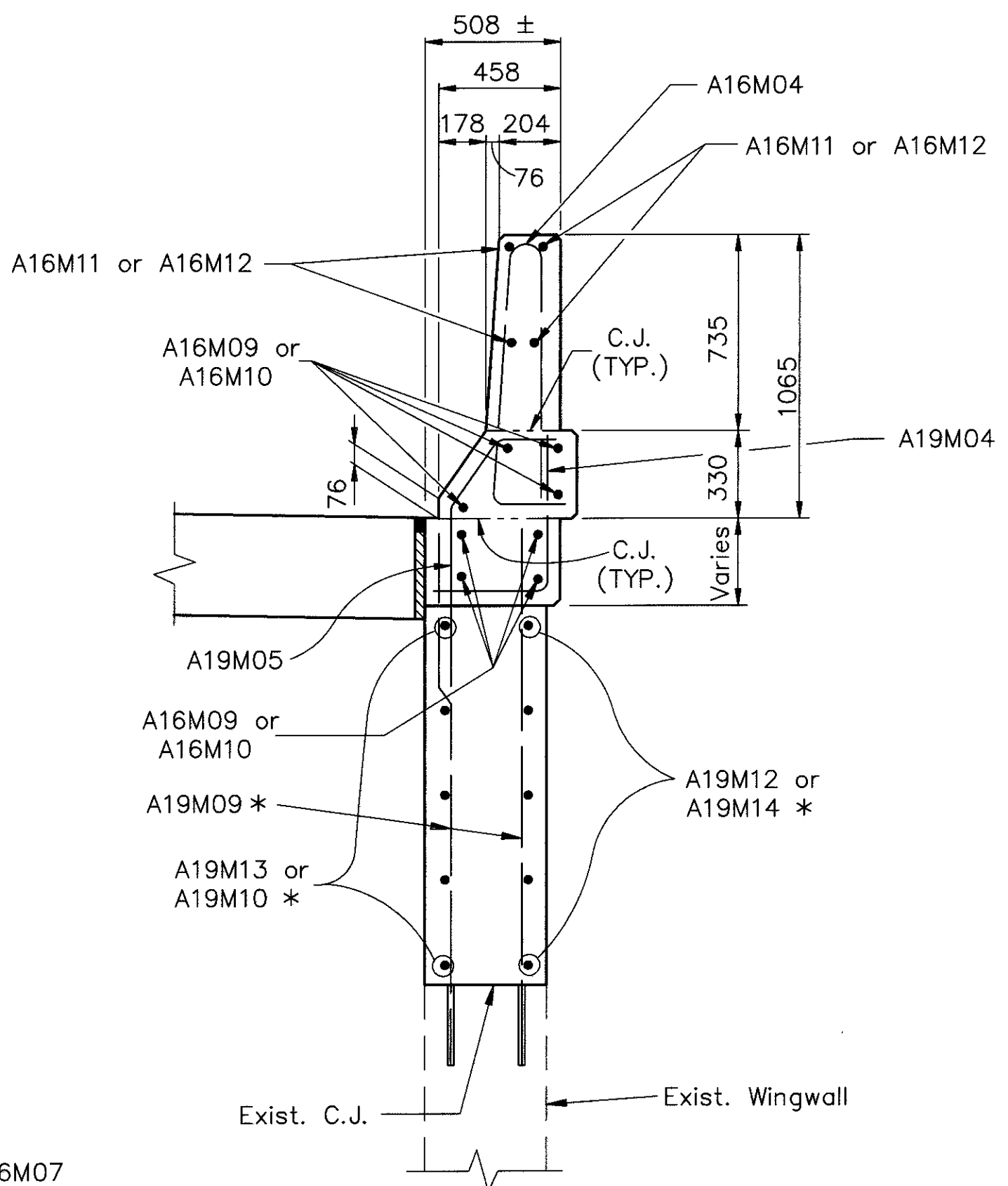
*** OPPOSITE HAND

All Dimensions are in Millimeters.
 All Elevations are in Meters.

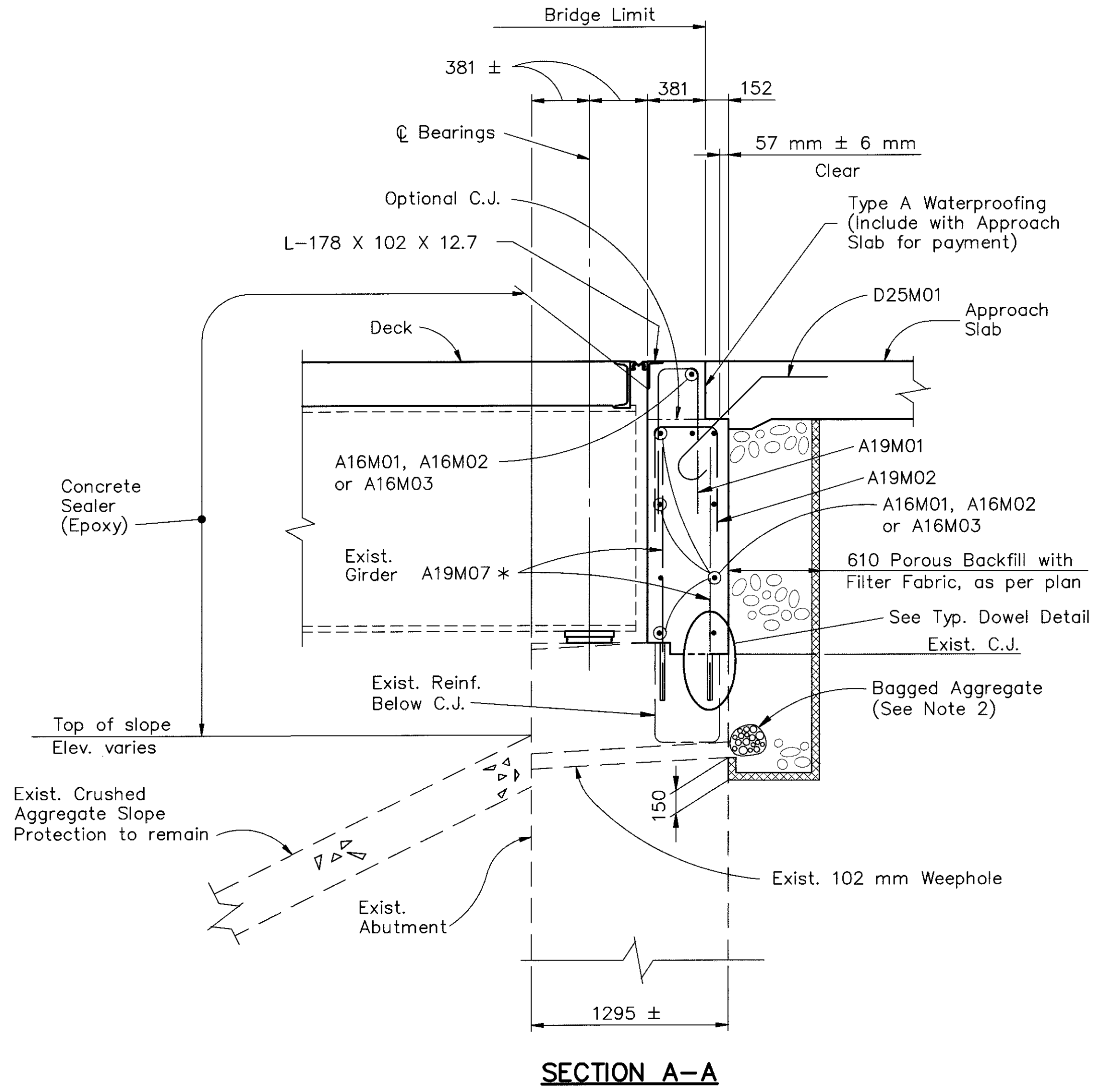
ADDETAIL 1=25 1-30-98



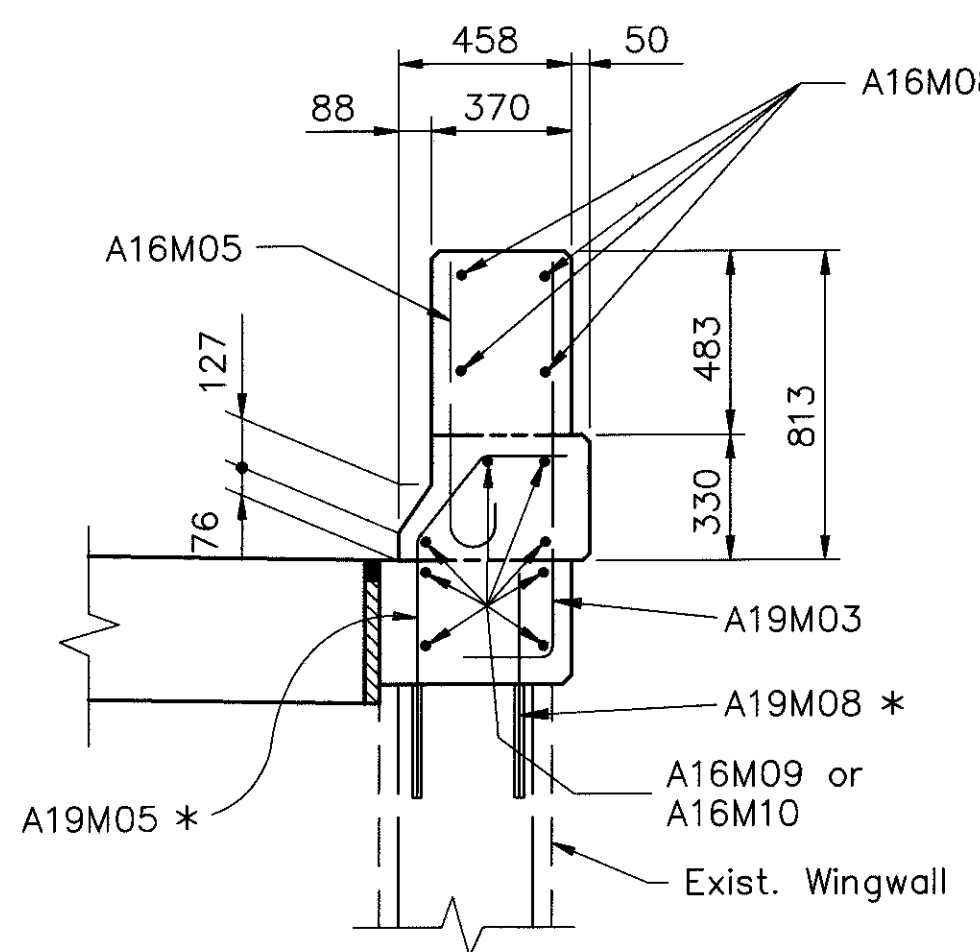
SECTION B-B



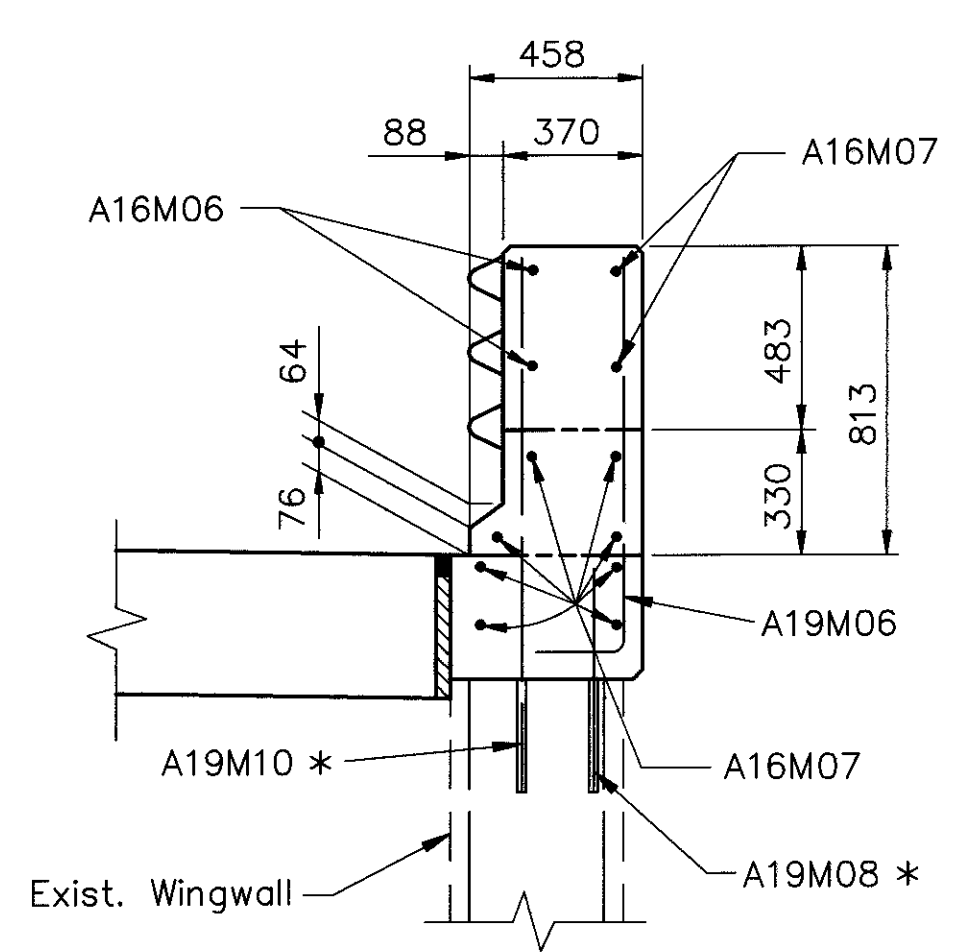
SECTION B1-B1



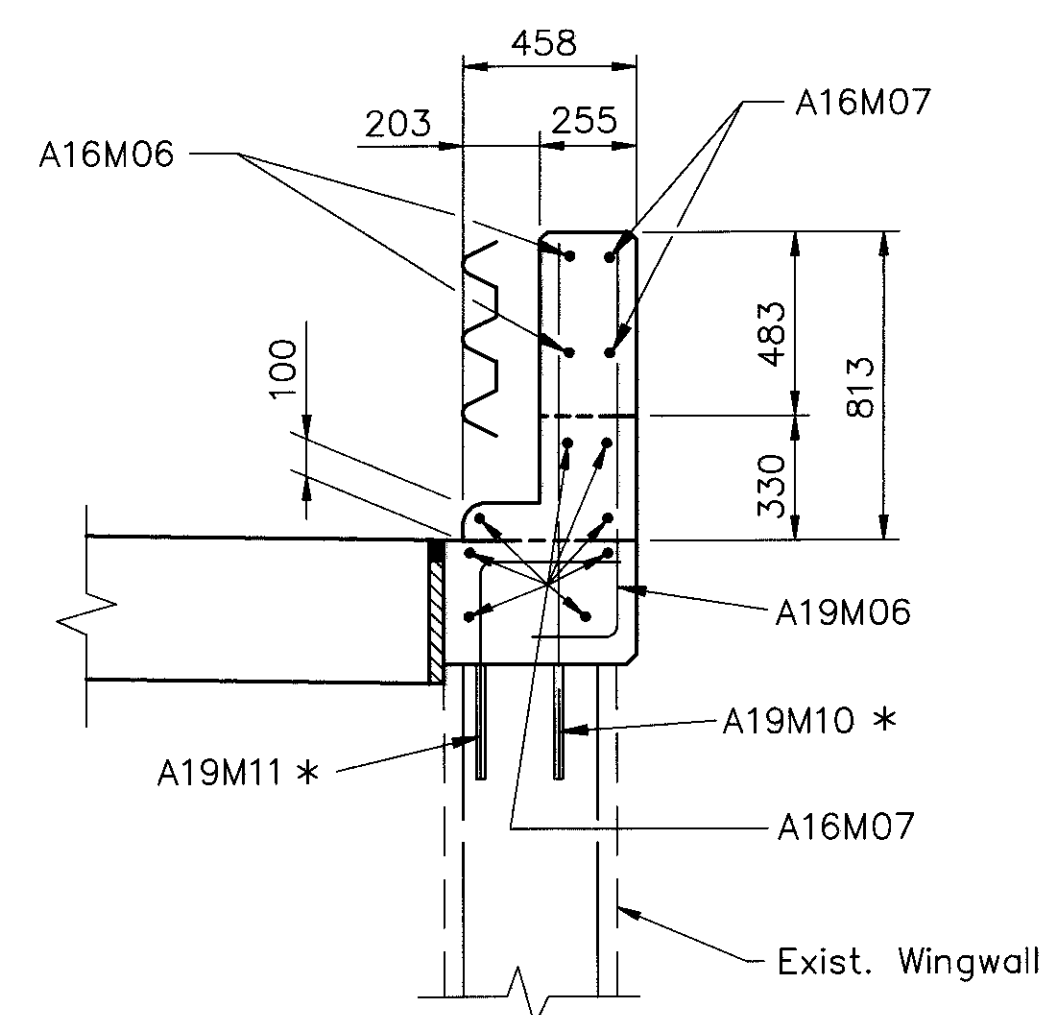
SECTION A-A



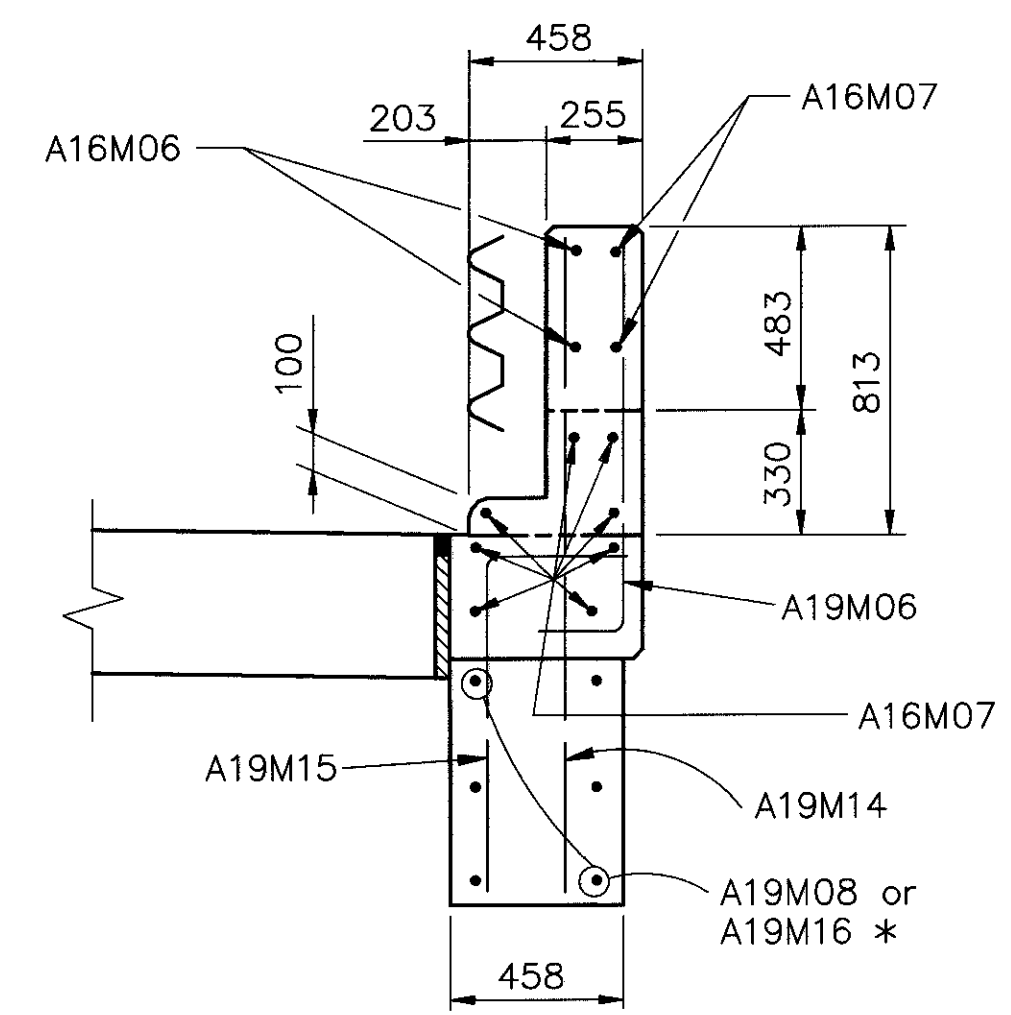
SECTION C-C



SECTION D-D

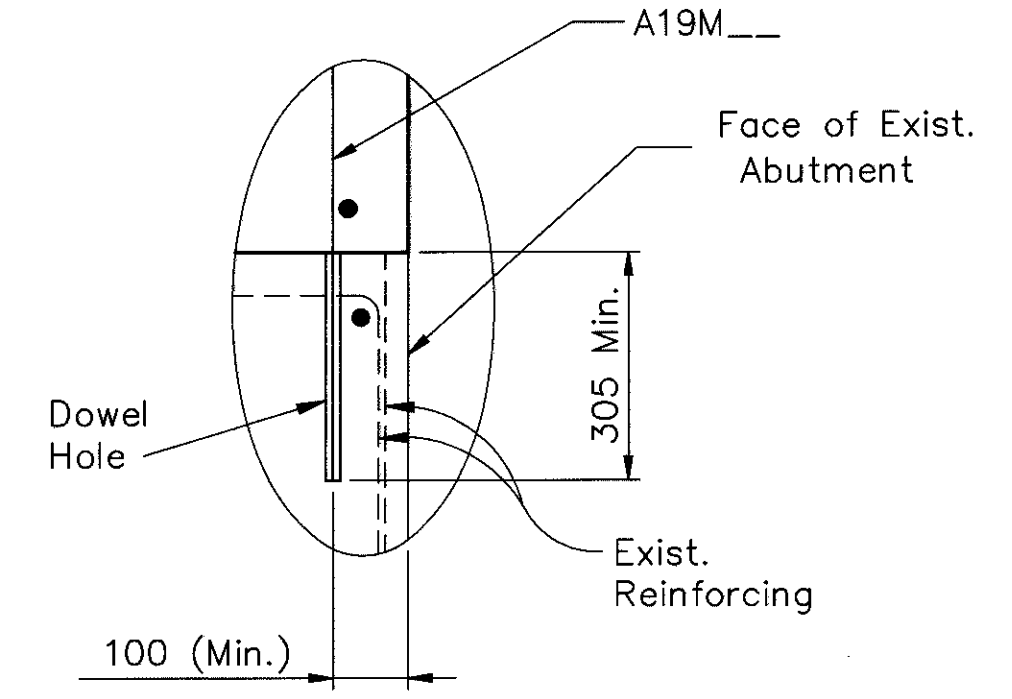


SECTION E-E



SECTION E1-E1

* REFER TO TYPICAL DOWEL DETAIL



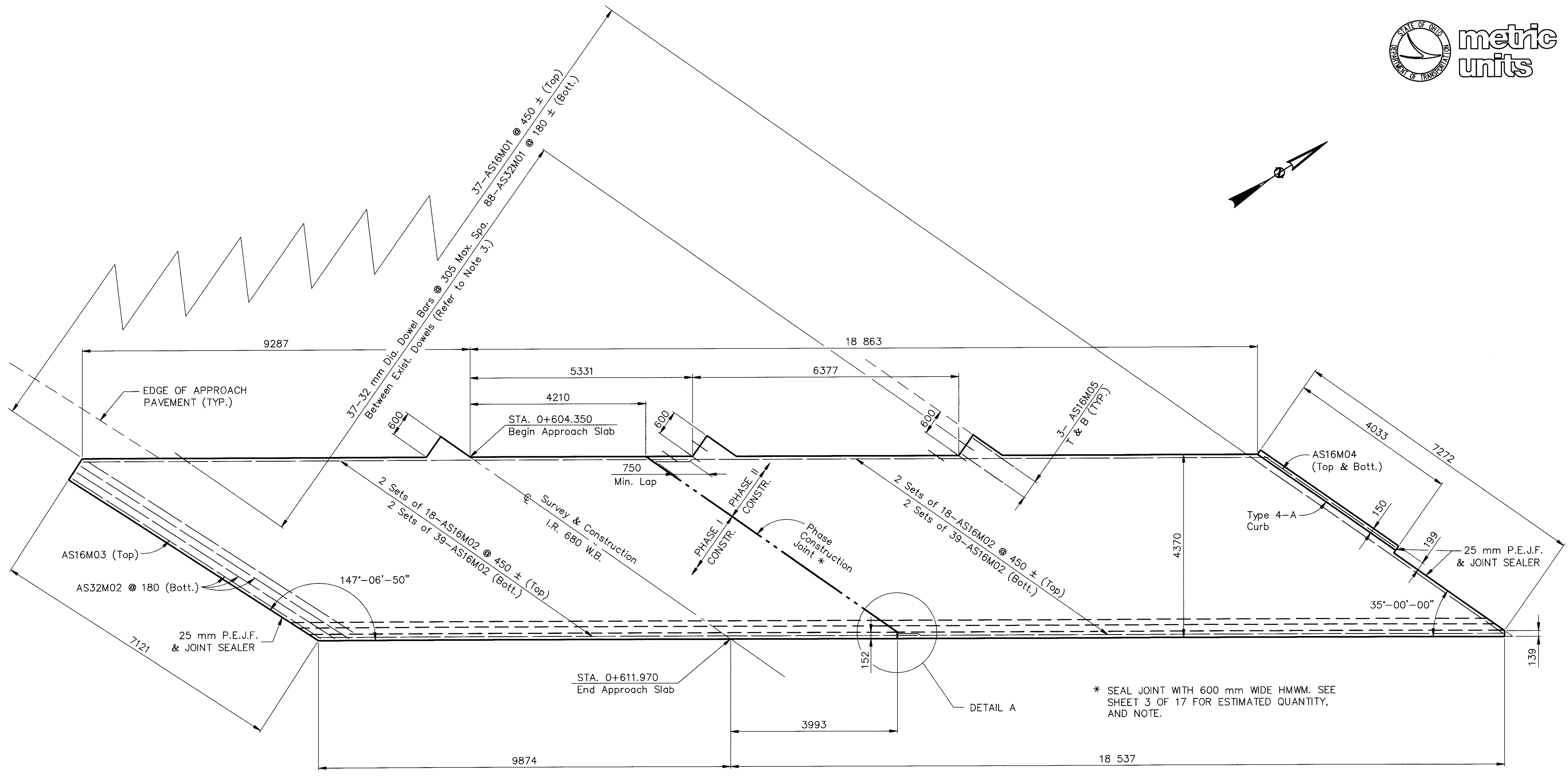
TYPICAL DOWEL DETAIL
 (SEE NOTE 9)

NOTES

- BACKWALL CONCRETE: IN ADDITION TO THE PROVISIONS OF 511.08, BACKWALL CONCRETE ABOVE THE OPTIONAL CONSTRUCTION JOINT AT THE APPROACH SLAB SEAT SHALL NOT BE PLACED UNTIL AFTER THE DECK CONCRETE IN THE SPAN ADJACENT TO THE ABUTMENT HAS BEEN PLACED.
- POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN, 610 mm THICK, SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE AND Laterally TO THE INSIDE FACE OF WINGWALLS. 0.06 kg/m³ OF BAGGED No. 3 AGGREGATE SHALL BE PLACED AT EACH WEEPHOLE. BAGGED AGGREGATE IS INCLUDED WITH POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN, FOR PAYMENT.
- FOR REINFORCEMENT SCHEDULE, SEE SHEET 17 OF 17.
- THE FOLLOWING ABBREVIATIONS ARE USED:

| | |
|---------------------------|-------------------------|
| N.F. - NEAR FACE | EL. - ELEVATION |
| F.F. - FAR FACE | R.A. - REAR ABUTMENT |
| E.F. - EACH FACE | F.A. - FORWARD ABUTMENT |
| C.J. - CONSTRUCTION JOINT | TYP. - TYPICAL |
- FOR ADDITIONAL PARAPET DETAILS, REFER TO STANDARD DRAWING BR-1M, SHEET 2 OF 2.
- FOR REAR APPROACH SLAB DETAIL, SEE SHEET 10 OF 17.
- FOR STRUCTURE CONDUIT DETAILS, SEE STANDARD DRAWING HL-30.31M AND SHEETS 53, 53A AND 53B OF 143 FOR LIGHTING QUANTITIES AND DETAILS.
- TOE OF PARAPET ON DECK WILL LINE UP WITH TOE OF PARAPET ON WINGWALLS.
- ALL DOWELS SHALL USE 705.20 NON-SHRINK, NON-METALLIC EPOXY GROUT.

All Dimensions are in Millimeters.

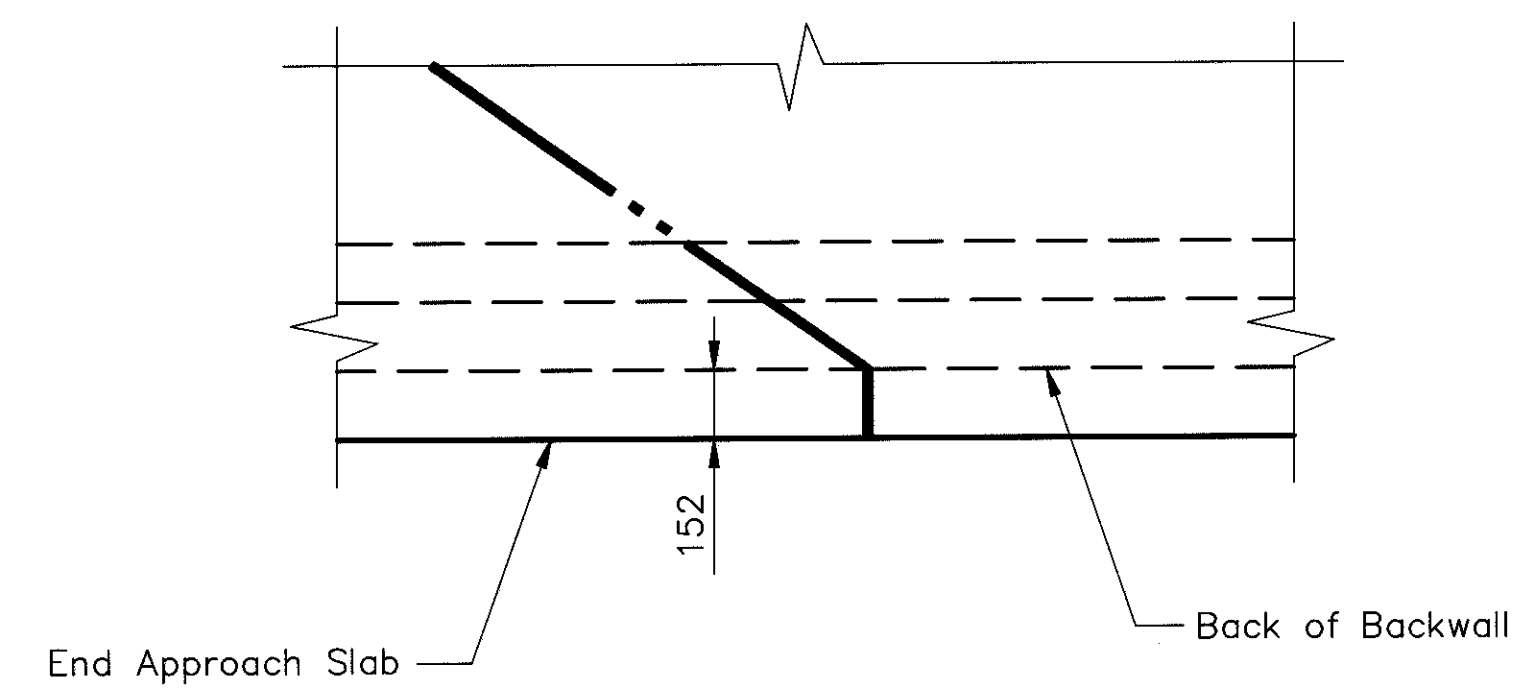


* SEAL JOINT WITH 600 mm WIDE HMWM. SEE SHEET 3 OF 17 FOR ESTIMATED QUANTITY, AND NOTE.

REAR APPROACH SLAB PLAN

NOTES

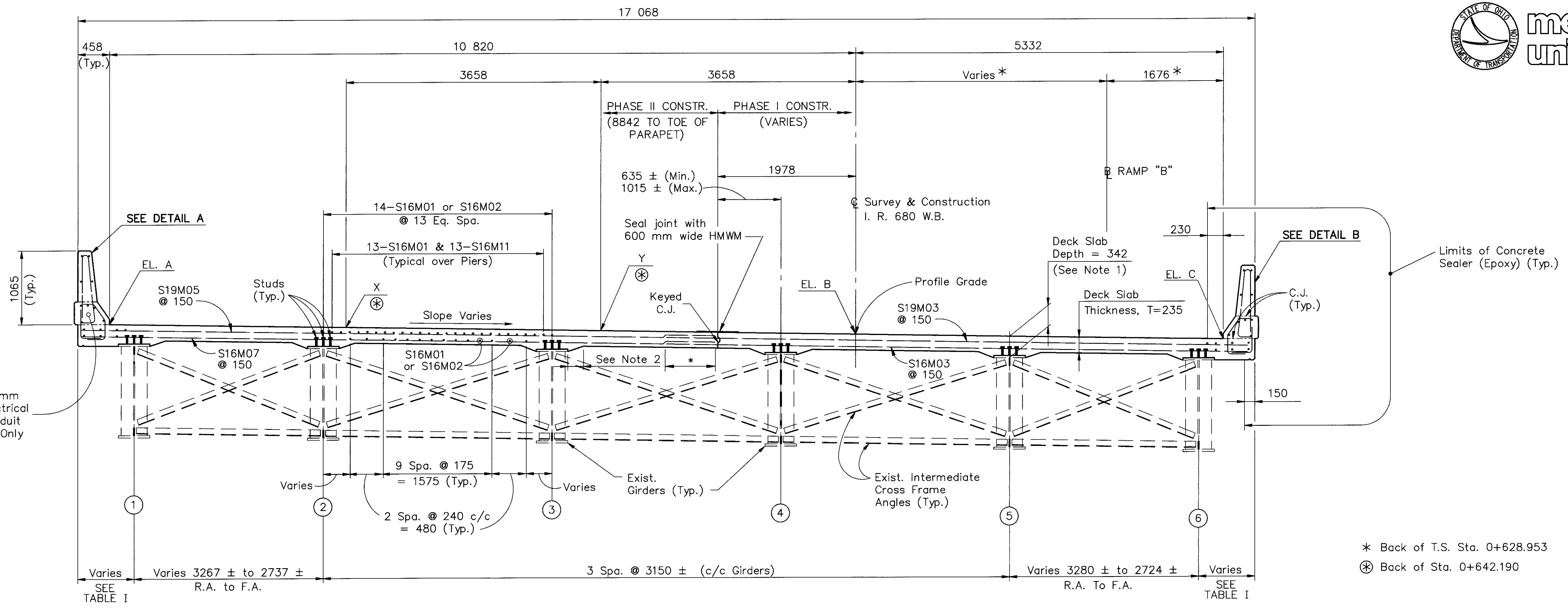
- FOR ADDITIONAL APPROACH SLAB DETAILS, REFER TO STANDARD DRAWING AS-1-81M.
- FOR REINFORCEMENT SCHEDULE, SEE SHEET 17 OF 17.
- FOR DOWEL DETAIL REFER TO BP-2.2M. (DOWELS ARE TO BE INCLUDED WITH APPROACH SLAB FOR PAYMENT.) DOWEL DETAILS FOR THE FORWARD ABUTMENT ARE SIMILAR.
- FOR APPROACH SLAB QUANTITIES SEE ROADWAY GENERAL SUMMARY SHEET 26 OF 143.
- SEE SHEET 14 OF 143 FOR APPROACH SLAB TYPICAL SECTIONS.
- REFER TO GENERAL PLAN SHEET 1 OF 17 FOR HORIZONTAL CURVE DATA.



DETAIL A

REFER TO SECTION A-A, SHEET 9 OF 17.

All Dimensions are in Millimeters.



* Back of T.S. Sta. 0+628.953
 ⊗ Back of Sta. 0+642.190

TRANSVERSE SECTION
 (AHEAD OF STA. 0+642.190)

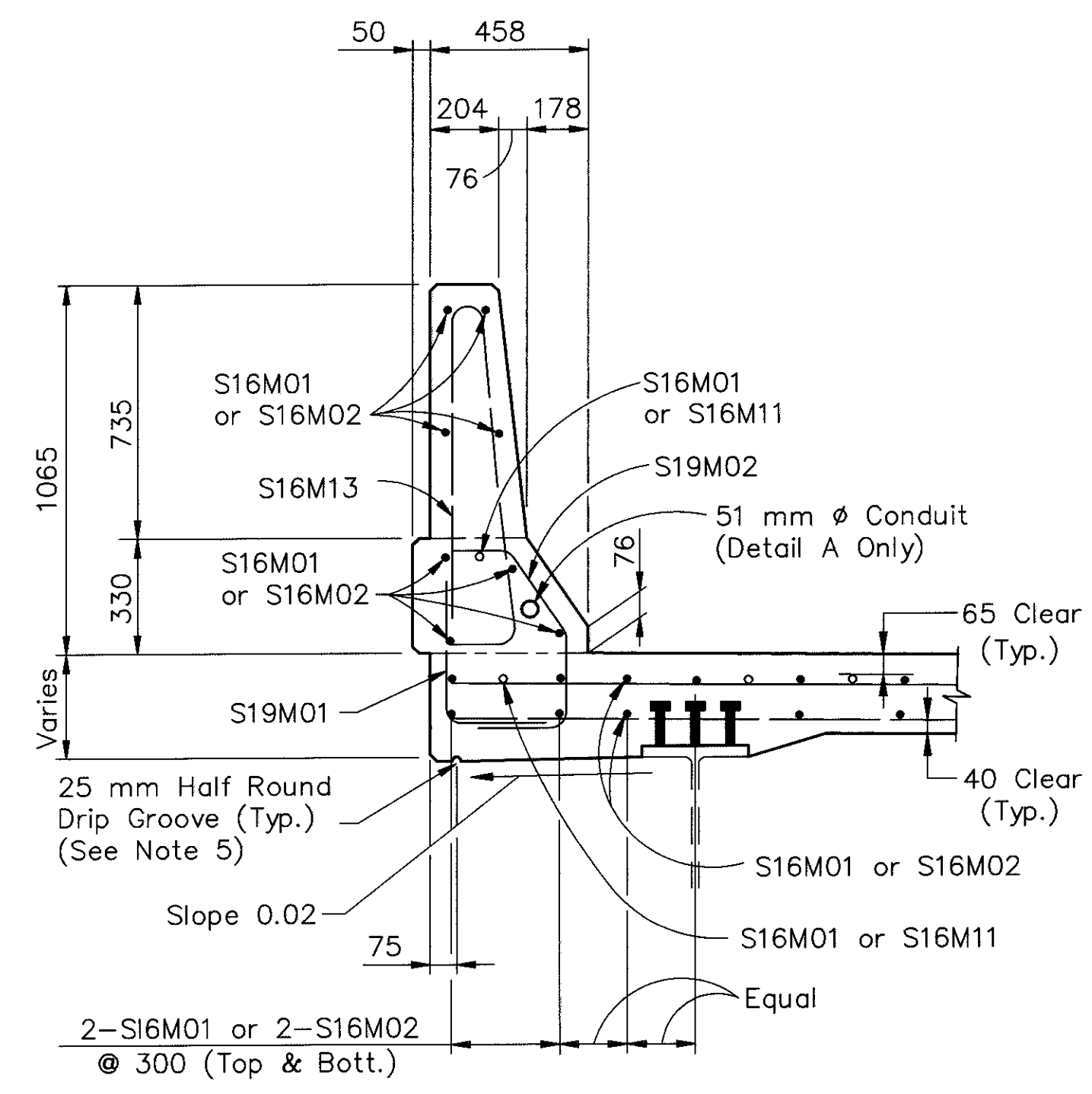
* = SEE NOTE 3

NOTES:

- DECK SLAB DEPTH: THE DISTANCE SHOWN FROM TOP OF DECK SLAB TO BOTTOM OF THE TOP FLANGE IS THE THEORETICAL DESIGN DIMENSION INCLUDING THE DESIGN HAUNCH THICKNESS OF 50 MILLIMETERS. THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED ON THIS DIMENSION, MINUS THE DESIGN HAUNCH THICKNESS, EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE GIRDER MAY NOT HAVE THE EXACT CAMBER OR CONFORMATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE. DEDUCTION SHALL BE MADE FOR VOLUME OF ENCASED STEEL PLATES AS PER 511.18.
- AFTER COMPLETE REMOVAL OF THE EXISTING DECK SLAB, THE CONTRACTOR SHALL DETERMINE, AT VARIOUS LOCATIONS ALONG THE SPANS, ACTUAL TOP OF GIRDER ELEVATIONS. THESE SHOULD BE DEDUCTED FROM THE SCREED ELEVATIONS FOR THE SAME LOCATIONS TO OBTAIN ACTUAL SLAB DEPTHS.
- A HAUNCH WIDTH OF 225 mm SHALL BE USED FOR COMPUTING THE QUANTITY OF CONCRETE. HOWEVER THE HAUNCH WIDTH MAY VARY BETWEEN 150 mm AND 300 mm.
- FOR DECK SLAB PLAN AND MINIMUM REBAR LAP TABLE, SEE SHEET 12 OF 17.
- FOR PARAPET DETAILS, REFER TO ODOT STANDARD BR-1M, DATED 12-15-94.
- DRIP GROOVES SHALL TERMINATE 600 mm FROM THE FACE OF THE ABUTMENTS.
- FOR SUPERELEVATION TRANSITION DIAGRAM AND DECK SCREED ELEVATIONS, SEE SHEET 13 OF 17.

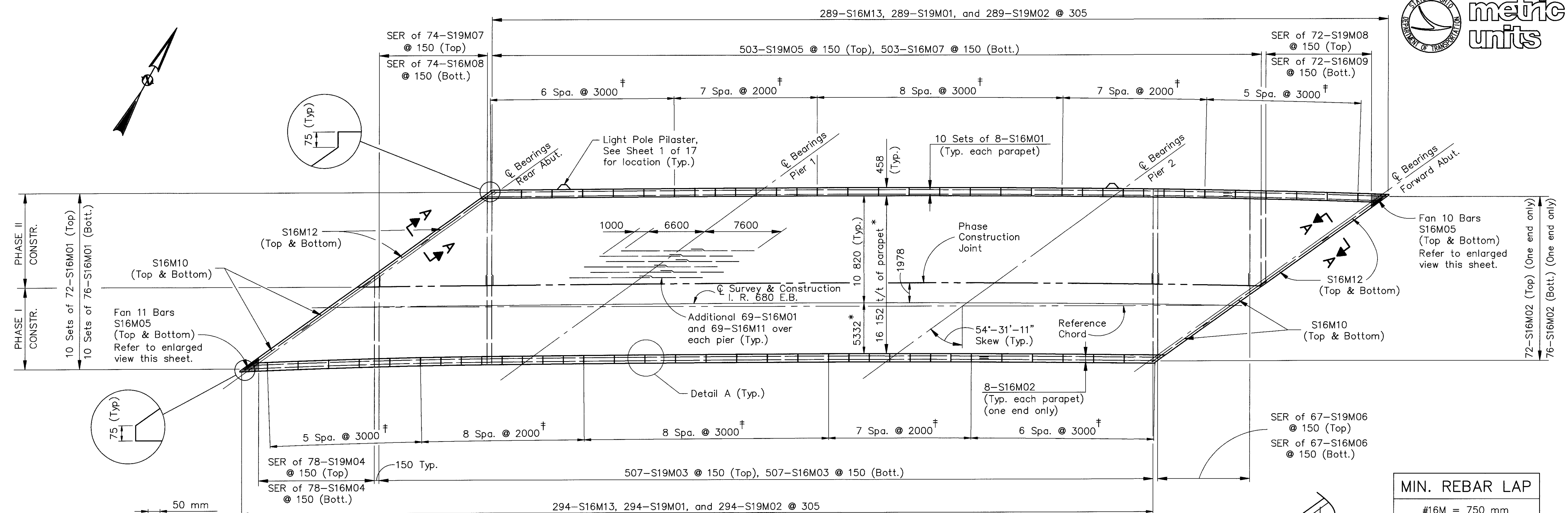
TABLE I

| RADIAL OFFSETS (in mm) FROM CENTERLINE OF EXTERIOR GIRDERS TO FASCIA OF SLAB | | | | | | | |
|--|---------------------|-----------|-----------------|-----------|-----------------|-----------|---------------------|
| GIRDER | CL BRGS. REAR ABUT. | CL SPAN 1 | CL BRGS. PIER 1 | CL SPAN 2 | CL BRGS. PIER 2 | CL SPAN 3 | CL BRGS. FWD. ABUT. |
| 1 | 535 | 719 | 878 | 1007 | 982 | 828 | 527 |
| 6 | 1060 | 756 | 668 | 649 | 711 | 846 | 1093 |

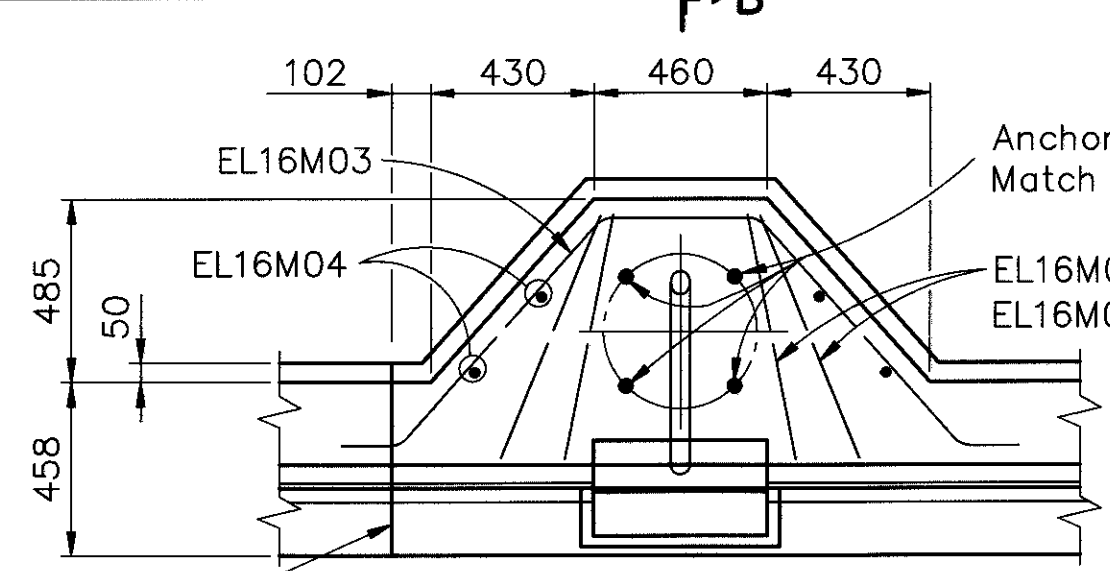


DETAIL A (As Shown)
DETAIL B (Opposite Hand)

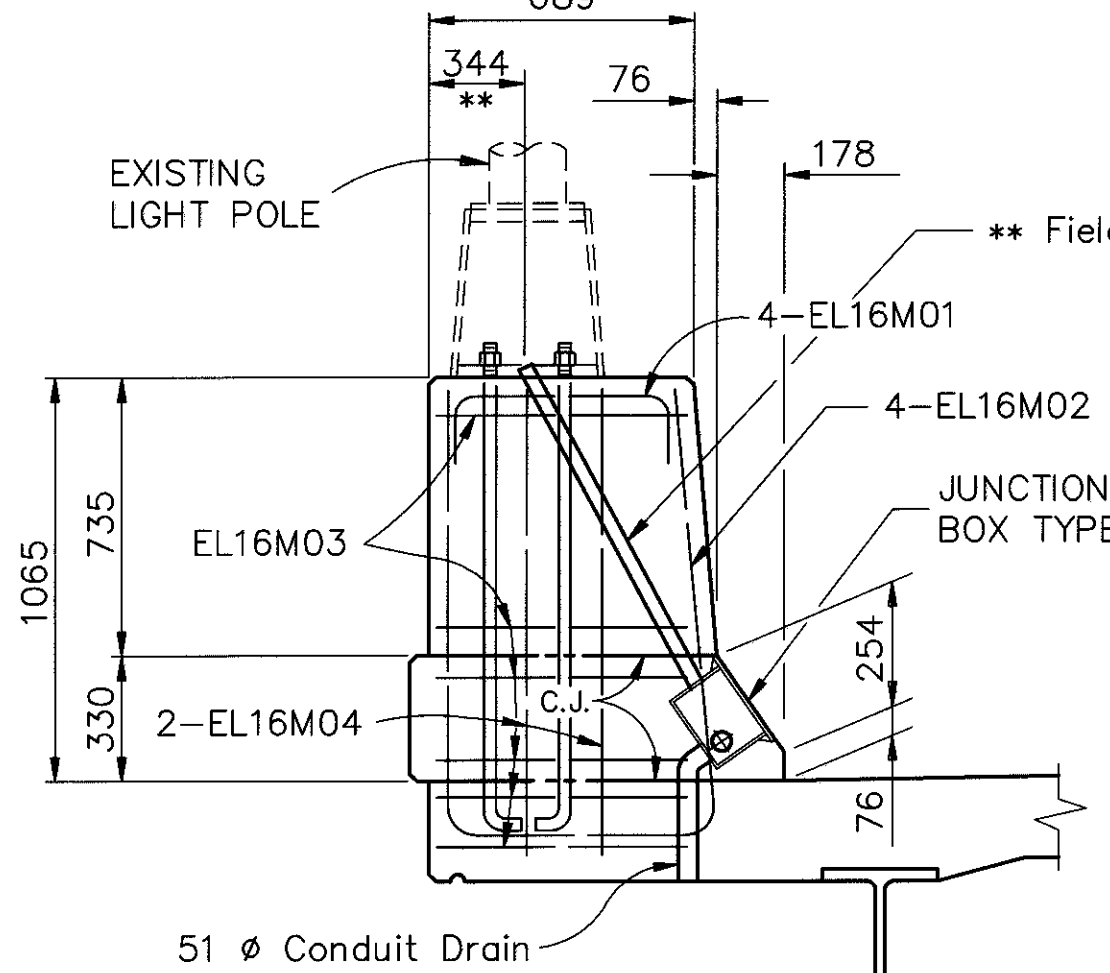
All Dimensions are in Millimeters.



DECK PLAN



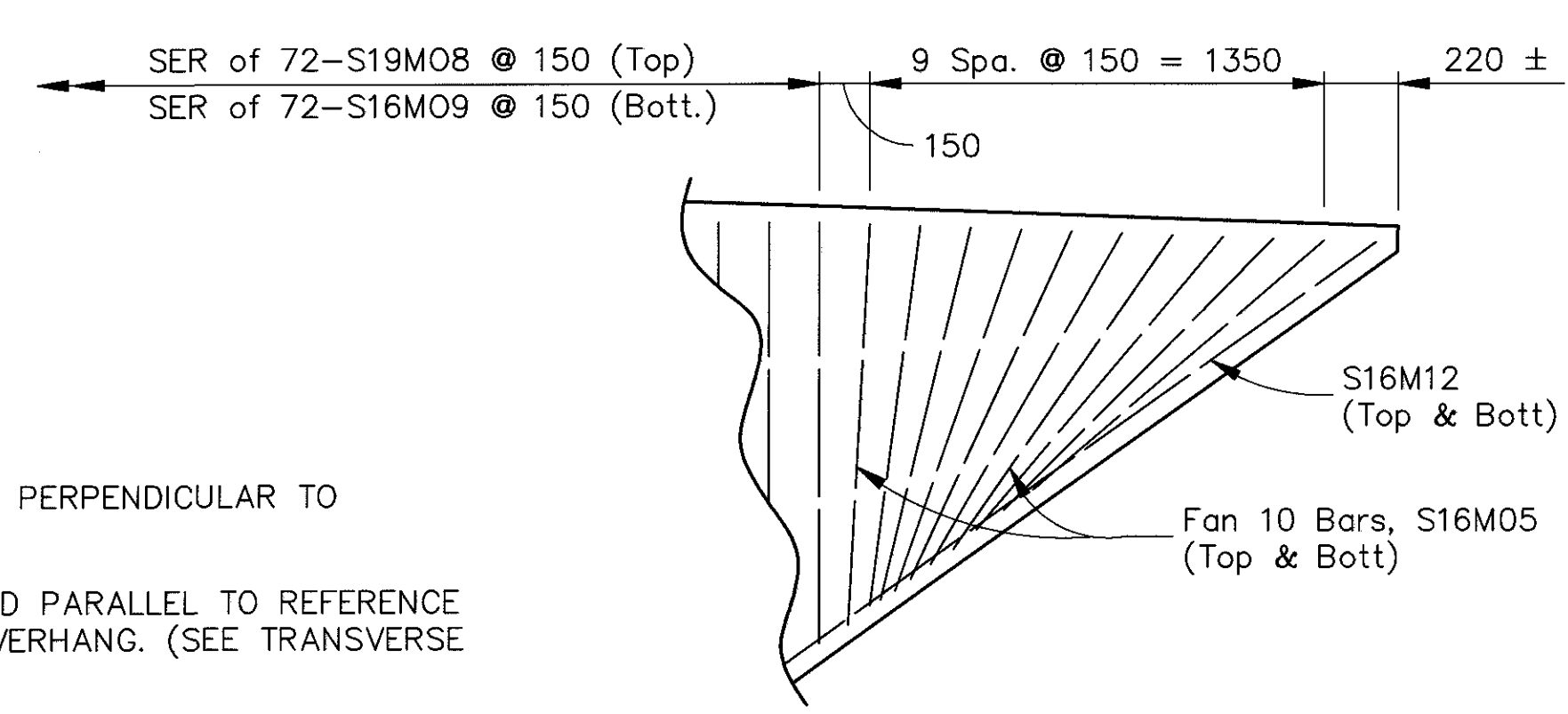
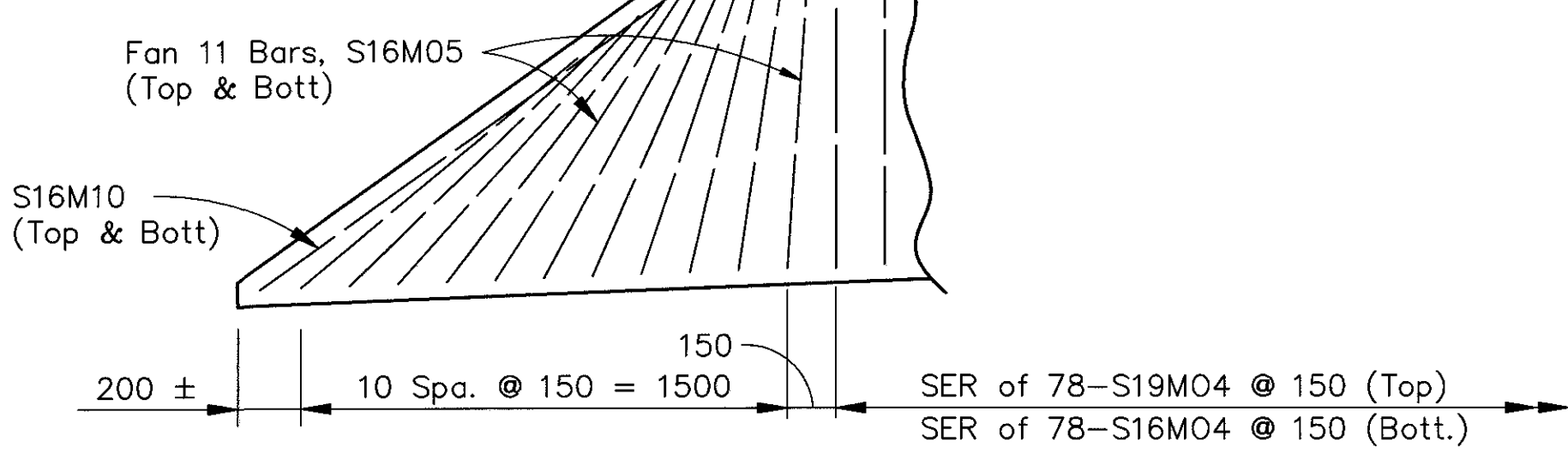
FOR ADDITIONAL STRUCTURE LIGHTING DETAILS, SEE ODOT STANDARD CONSTRUCTION DRAWINGS HL-20.14M. 689



- NOTES:**
1. TRANSVERSE BARS TO BE PLACED PERPENDICULAR TO REFERENCE CHORD.
 2. LONGITUDINAL BARS TO BE PLACED PARALLEL TO REFERENCE CHORD, EXCEPT BARS IN DECK OVERHANG. (SEE TRANSVERSE SECTION, SHEET 11 OF 17).
 3. FOR REINFORCEMENT SCHEDULE, SEE SHEET 17 OF 17.
 4. PAYMENT FOR CONCRETE AND REINFORCEMENT FOR LIGHT POLE PILASTER ARE INCLUDED IN THE STRUCTURE ESTIMATED QUANTITIES. SEE SHEETS 53 & 53A OF 143 FOR STRUCTURE LIGHTING QUANTITIES. FOR STRUCTURE GROUNDING, REFER TO STRUCTURE LIGHTING PLAN, SHEET 53B OF 143, AND ODOT STANDARD DRAWING HL-50.21M.

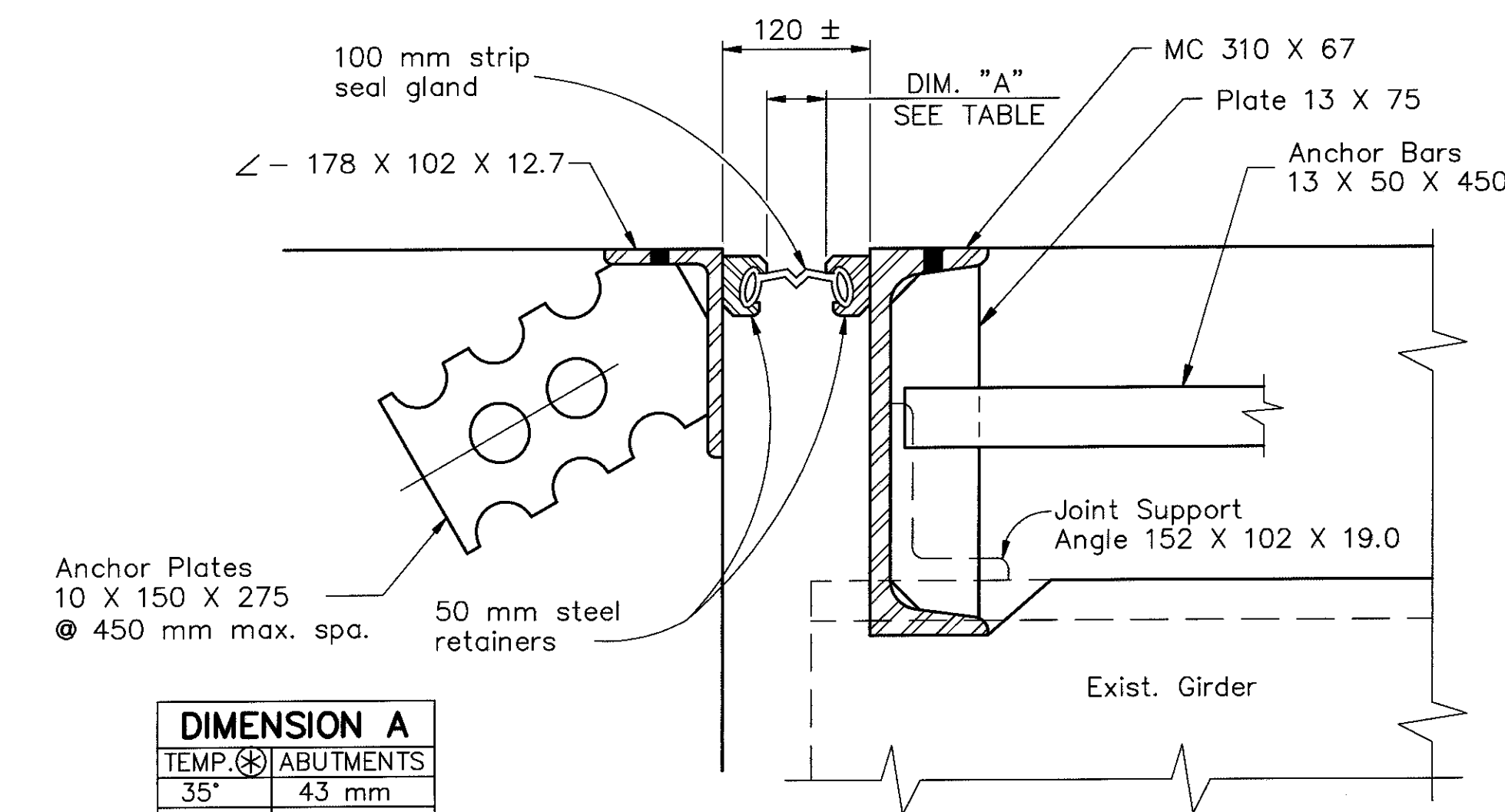
MIN. REBAR LAP

| |
|---------------|
| #16M = 750 mm |
| #19M = 900 mm |



All Dimensions are in Millimeters.

SECTION A-A
 STRIP SEAL EXPANSION JOINT DETAIL



DIMENSION A

| TEMP. (°) ABUTMENTS | TEMP. (°) ABUTMENTS |
|---------------------|---------------------|
| 35° | 43 mm |
| 30° | 46 mm |
| 25° | 48 mm |
| 20° | 50 mm |
| 15° | 53 mm |
| 10° | 55 mm |
| 5° | 57 mm |
| 0° | 60 mm |

NOTE: FOR ADDITIONAL STRIP SEAL EXPANSION JOINT DETAILS, SEE STANDARD DRAWINGS EXJ-4-87M.

⊗ AMBIENT AIR TEMPERATURE (°C) AT TIME OF JOINT INSTALLATION

| DECK SCREED ELEVATIONS (See Note 1) | | | | | | | | | | | | | | |
|-------------------------------------|-------------|----------|----------|----------|-----------------|---------|----------|---------|-----------------|----------|----------|----------|-------------|---------|
| LOCATION | SPAN 1 | | | | SPAN 2 | | | | SPAN 3 | | | | | |
| | Q BRG. R.A. | 1/4 SPAN | 1/2 SPAN | 3/4 SPAN | Q BRG. PIER P-1 | SPLICE | 1/2 SPAN | SPLICE | Q BRG. PIER P-2 | 1/4 SPAN | 1/2 SPAN | 3/4 SPAN | Q BRG. F.A. | |
| GIRDERS # | 1 | 318.720 | 318.817 | 318.903 | 318.969 | 319.035 | 319.121 | 319.246 | 319.351 | 319.424 | 319.503 | 319.587 | 319.666 | 319.738 |
| | 2 | 318.685 | 318.749 | 318.812 | 318.866 | 318.922 | 318.997 | 319.105 | 319.194 | 319.256 | 319.325 | 319.399 | 319.468 | 319.532 |
| | 3 | 318.671 | 318.719 | 318.756 | 318.786 | 318.825 | 318.886 | 318.974 | 319.043 | 319.090 | 319.146 | 319.207 | 319.261 | 319.309 |
| | 4 | 318.617 | 318.621 | 318.692 | 318.718 | 318.745 | 318.792 | 318.860 | 318.908 | 318.941 | 318.983 | 319.031 | 319.072 | 319.106 |
| | 5 | 318.546 | 318.589 | 318.622 | 318.646 | 318.665 | 318.699 | 318.750 | 318.778 | 318.798 | 318.829 | 318.864 | 318.892 | 318.913 |
| | 6 | 318.472 | 318.516 | 318.550 | 318.576 | 318.594 | 318.618 | 318.653 | 318.666 | 318.676 | 318.698 | 318.724 | 318.744 | 318.756 |
| POINTS # | A | 318.721 | 318.821 | 318.912 | 318.981 | 319.052 | 319.142 | 319.273 | 319.382 | 319.454 | 319.532 | 319.611 | 319.683 | 319.744 |
| | B | 318.588 | 318.632 | 318.666 | 318.692 | 318.720 | 318.764 | 318.828 | 318.870 | 318.898 | 318.935 | 318.974 | 319.006 | 319.027 |
| | C | 318.458 | 318.506 | 318.543 | 318.571 | 318.590 | 318.613 | 318.647 | 318.659 | 318.666 | 318.685 | 318.706 | 318.719 | 318.722 |
| | X | 318.684 | 318.747 | 318.810 | 318.865 | | | | | | | | | |
| | Y | 318.671 | 318.715 | 318.749 | 318.775 | | | | | | | | | |

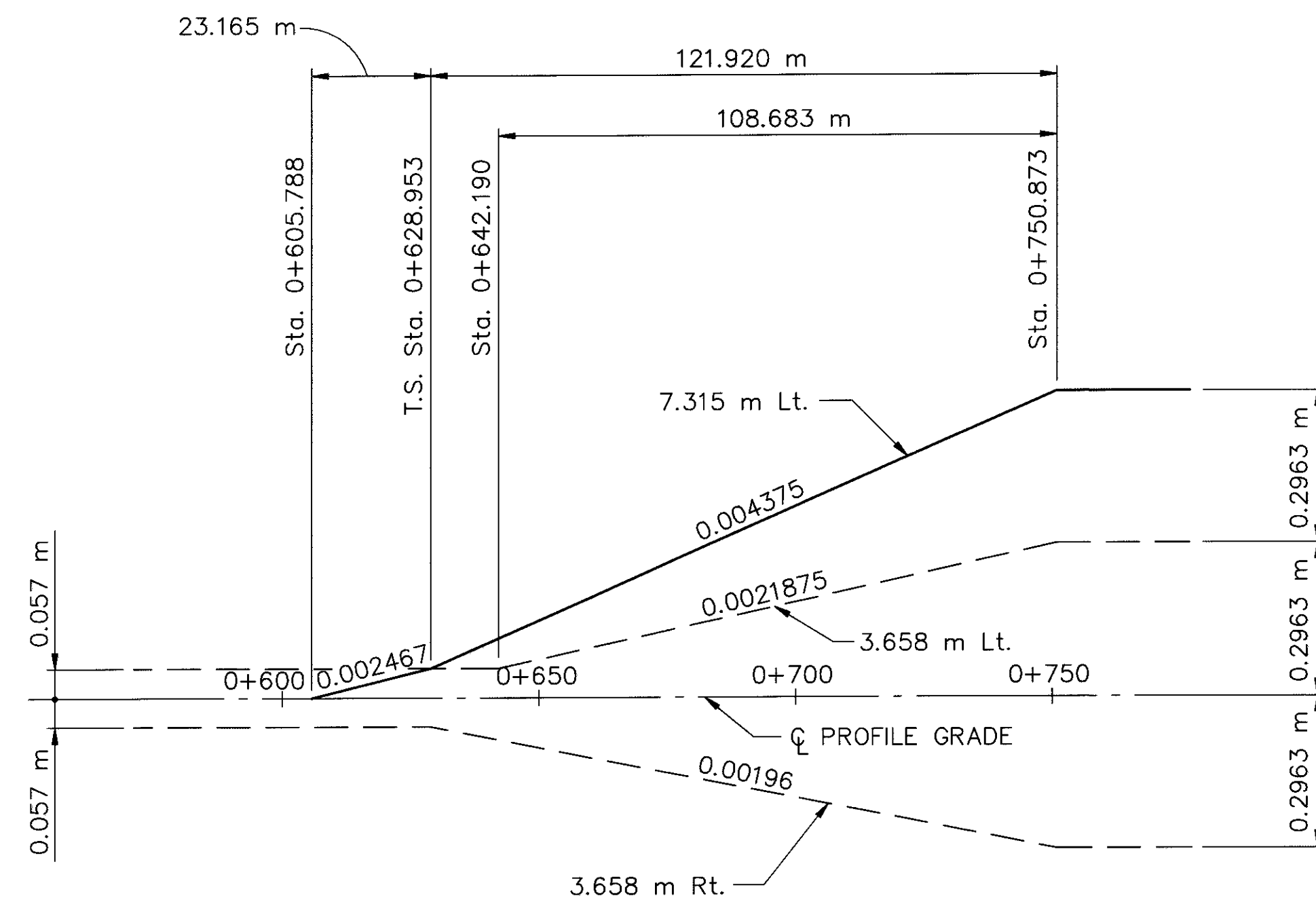
† See Transverse Section, Sheet 11 of 17.

| DEAD LOAD DEFLECTIONS (mm) | | | | | | | | |
|----------------------------|----------|----------|--------|----------|--------|----------|----------|----------|
| SPAN 1 | | | SPAN 2 | | | SPAN 3 | | |
| 1/4 SPAN | 1/2 SPAN | 3/4 SPAN | SPLICE | 1/2 SPAN | SPLICE | 1/4 SPAN | 1/2 SPAN | 3/4 SPAN |
| 11 | 12 | 5 | 8 | 19 | 8 | 5 | 12 | 11 |

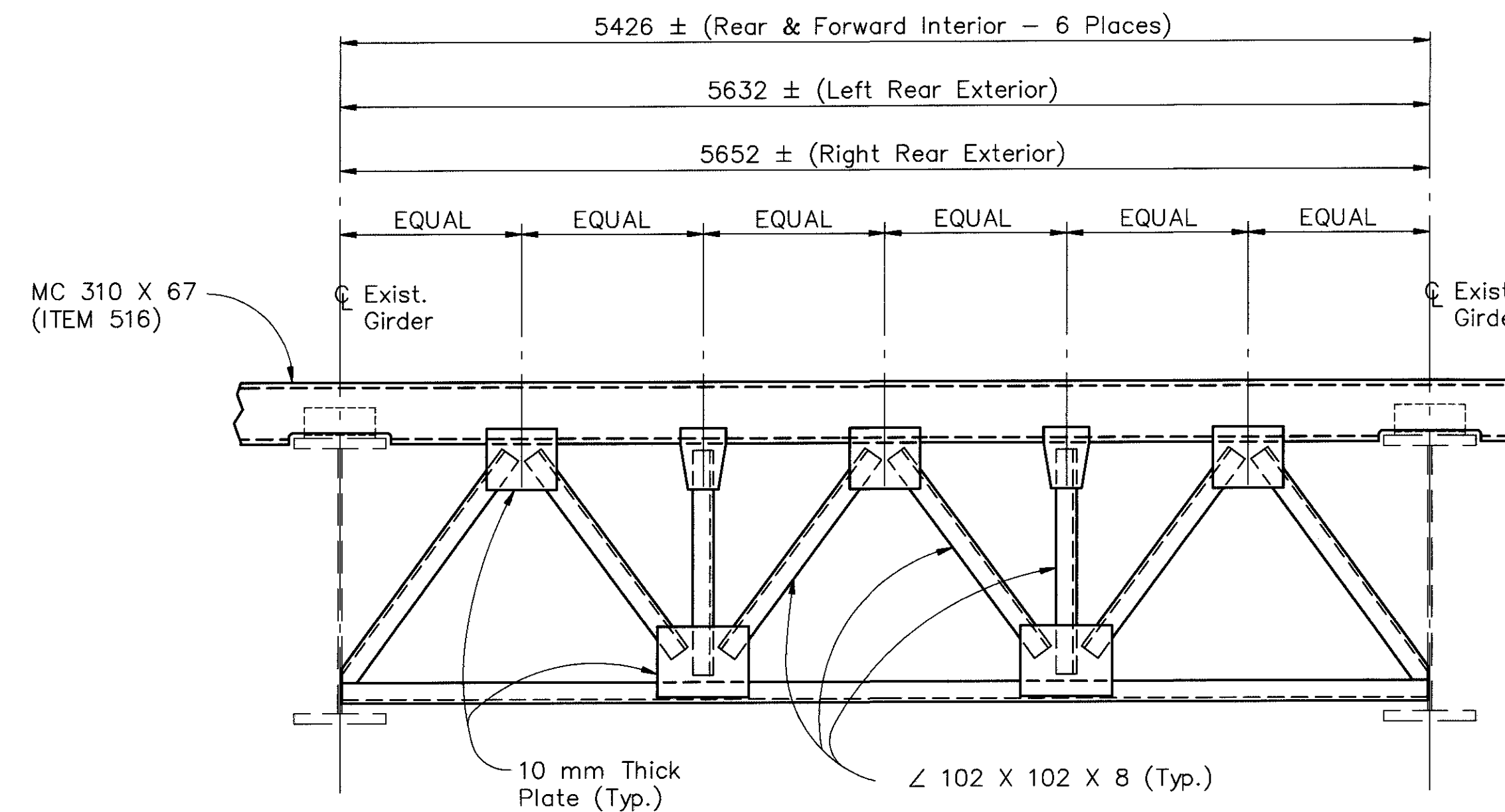
NOTE: Dead load deflections shown are considered the same for all girders and deck screed elevations.

NOTE

1. Screed elevations shown are for the deck slab surface prior to concrete placement. Allowance has been made for anticipated calculated dead load deflections.

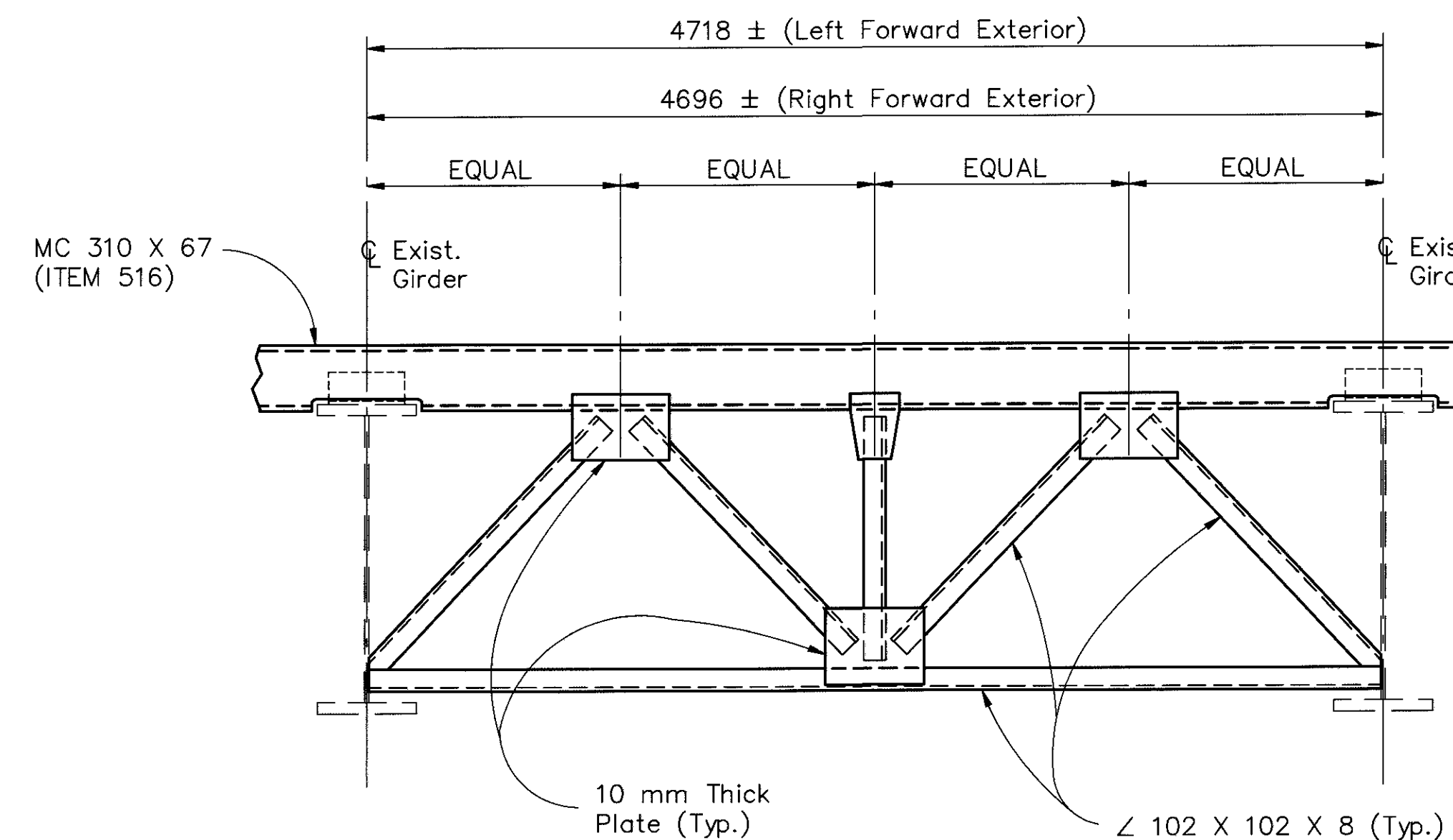


SUPERELEVATION TRANSITION DIAGRAM



END CROSSFRAME DETAIL

NOTE: For additional end crossframe detail, see Standard Drawing EXJ 4-87M



END CROSSFRAME DETAIL

NOTE: For additional end crossframe detail, see Standard Drawing EXJ 4-87M

All Dimensions are in Millimeters.
 All Elevations are in Meters.