

VERTICAL CLEARANCE

20.75' EXIST. ACTUAL	22.63' PROP. ACTUAL	15.50' REQ'D
13.97' EXIST. ACTUAL	16.39' PROP. ACTUAL	15.50' REQ'D

HORIZONTAL CLEARANCE

11.70' ACTUAL	12.00' REQ'D
5.03' ACTUAL	12.00' REQ'D
4.93' ACTUAL	12.00' REQ'D
24.44' ACTUAL	12.00' REQ'D

IR-680
 EXISTING CURVE
 (RECORDED DATA)
 P.I. = Sta. 694+62.64
 Δ = 71° 25' 13" (LT)
 Dc = 1° 50' 00"
 R = 3125.22'
 Ls = 200.00'
 Os = 1° 50' 00"
 LT = 133.34'
 ST = 66.67'
 Lc = 3695.65'
 Ts = 2346.92'
 Es = 724.32'

TRAFFIC DATA:
 ADT (2004) 6930
 ADTT (2004) 139
 ADT (2024) 7200
 ADTT (2024) 144

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAMS (ASTM A36 STEEL) WITH REINFORCED CONCRETE DECK SLAB AND SUBSTRUCTURE

SPANS: 49'-8"±, 60'-3"±, 74'-11"±
C/C BEARINGS

ROADWAY: 30'-0"± FACE TO FACE CURBS, WITH 6'-0" SIDEWALK (LEFT AND RIGHT)

LOADING: HS20-44

SKEW: 6° 49' 20"± LF

ALIGNMENT: TANGENT

CROWN: 0.0156± FT/FT

WEARING COURSE: ASPHALT CONCRETE

APPROACH SLABS: 20'-0"± (AS-1-67)

DATE BUILT: 1973

SFN: 5007429

PROPOSED STRUCTURE

PROPOSED WORK: REMOVE EXISTING DECK SLAB. JACK AND PROVIDE TEMPORARY SUPPORT FOR EXISTING BEAMS. MODIFY EXISTING PIER CAPS TO RAISE BEAM SEATS. MODIFY EXISTING ABUTMENTS TO SEMI-INTEGRAL DESIGN. SET NEW BEARINGS. TRANSFER EXISTING BEAMS TO MODIFIED SUBSTRUCTURE UNITS. INSTALL SHEAR CONNECTORS. REPLACE DECK SLAB. MODIFY WINGWALLS. SPOT PAINT EXISTING STEEL, SEAL CONCRETE SURFACES.

TYPE: CONTINUOUS COMPOSITE STEEL BEAMS WITH REINFORCED CONCRETE DECK SLAB AND SUBSTRUCTURE (EXISTING BEAMS AND SUBSTRUCTURE UNITS SALVAGED)

SPANS: 49'-8"±, 60'-3"±, 74'-11"±
C/C BEARINGS

ROADWAY: 30'-0"± FACE TO FACE CURBS, WITH 6'-0" SIDEWALK (LEFT AND RIGHT)

LOADING: HS20-44 (CASE 11) AND ALTERNATE MILITARY LOADING. F.W.S. = 60 PSF.

SKEW: 6° 49' 20"± LF

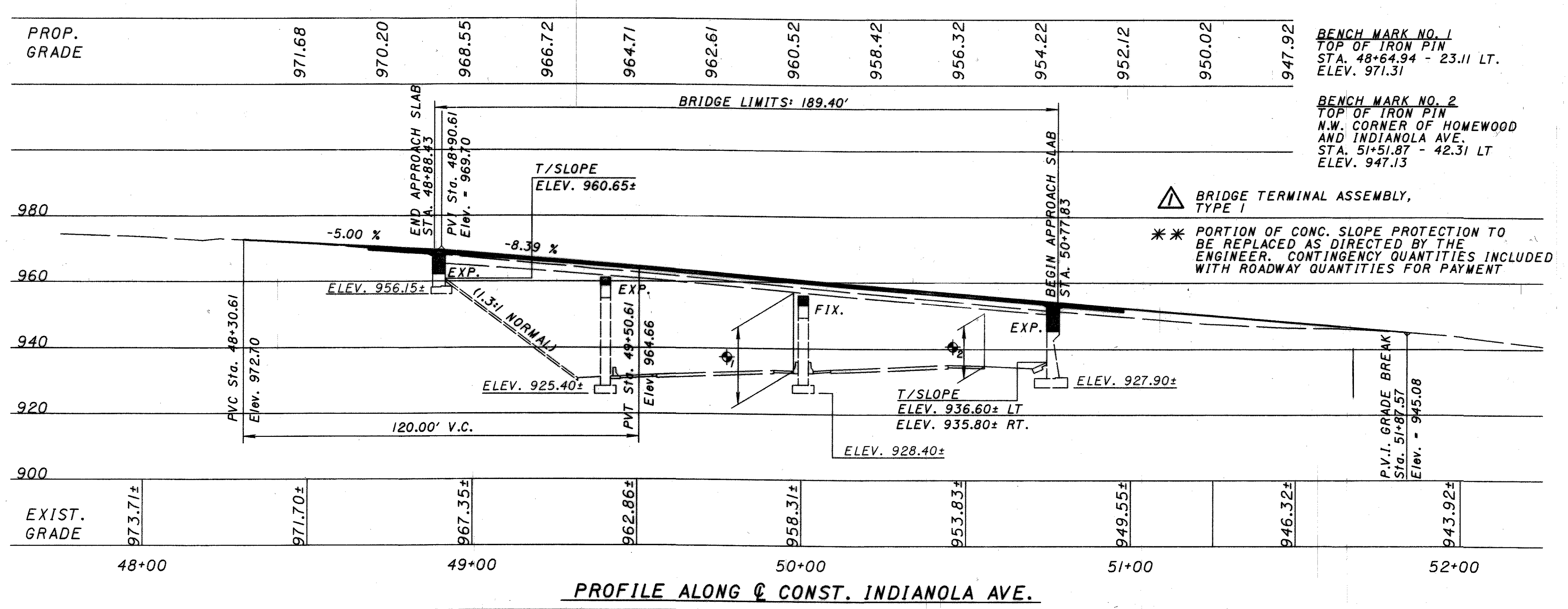
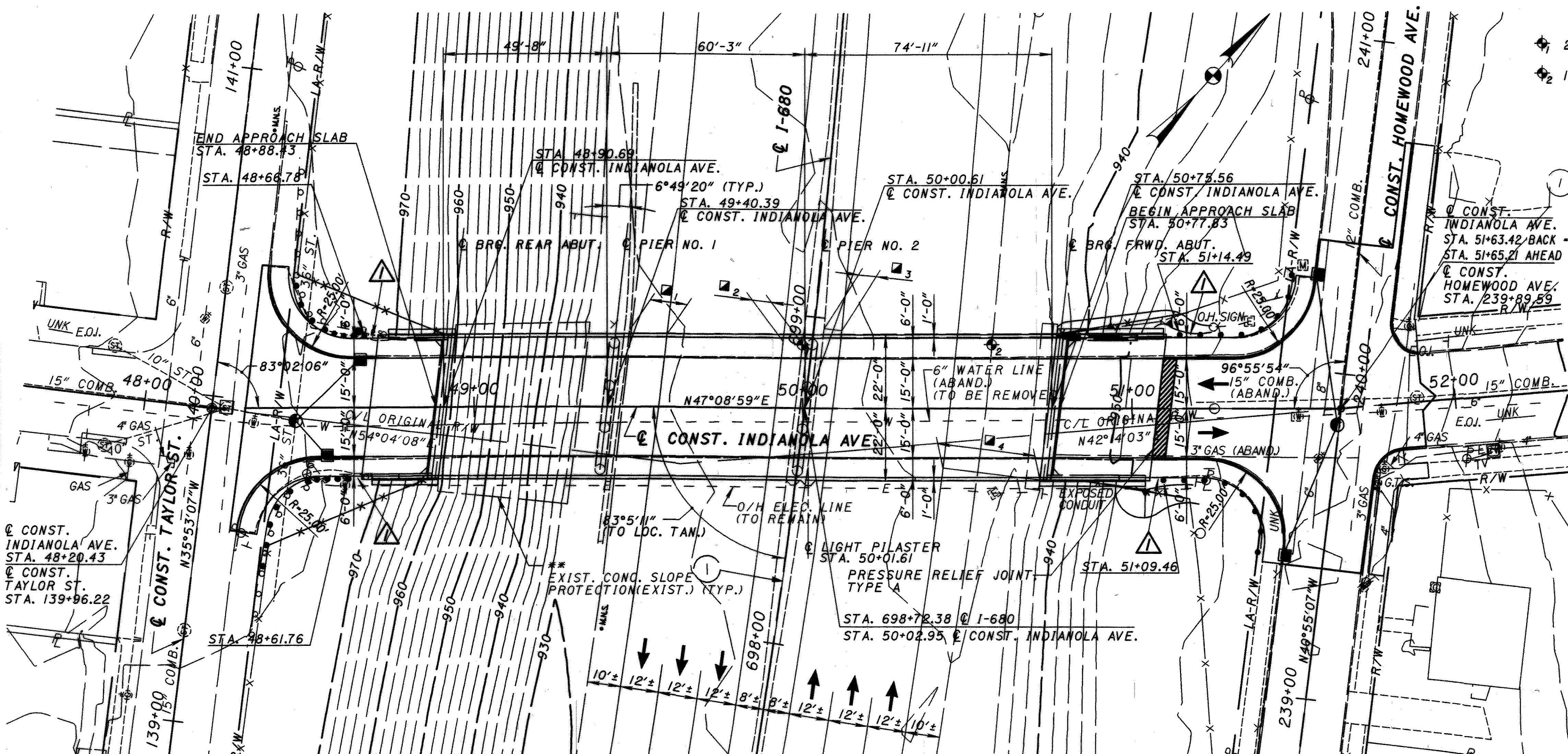
ALIGNMENT: TANGENT

CROWN: 0.0156 FT/FT

WEARING COURSE: MONOLITHIC CONCRETE

APPROACH SLAB: 20'-0" (AS-1-81 MODIFIED) R.A.
30'-0" (AS-1-81 MODIFIED) F.A.

STRUCTURE COORDINATES: LAT. N 41° 04' 33"
LONG. W 80° 37' 35"



DESIGN AGENCY: GPD ASSOCIATES
DATE: K.S.J. 12-10-02
REVIEWED: R.P.R.
STRUCTURE FILE NUMBER: 5007429
MAHONING COUNTY: STA. 48+88.43
STA. 50+77.83
SITE PLAN: BRIDGE NO. MAH - 680 - 0818
INDIANOLA AVE. OVER I-680
MAH-680-8.18
1/20
48/67

\\merrill\detroit\civil\2008\9\01\INDIANOLA AVE.dgn
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DESIGN SPECIFICATIONS

THE PROPOSED REHABILITATION WORK FOR THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002, AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN DATA

DESIGN LOADING: HS 20-44 (CASE II) AND THE ALTERNATE MILITARY LOADING FUTURE WEARING SURFACE (FWS) OF 60 PSF

HIGH PERFORMANCE CONCRETE HPC: COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

CONCRETE CLASS C: COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

REINFORCING STEEL: ASTM A615 OR A996 GRADE 60, MINIMUM YIELD STRENGTH, 60,000 PSI.

DECK PROTECTION METHOD: EPOXY COATED REINFORCING STEEL, 2 1/2" CONCRETE COVER, HIGH PERFORMANCE CONCRETE.

MONOLITHIC WEARING SURFACE: MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1" THICK

REFERENCES

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

- NO. AS-1-81 REVISED 07-19-02
- NO. HL-20.14 DATED 01-17-03
- NO. HL-30.32 DATED 04-19-02
- NO. SICD-1-96 REVISED 07-19-02
- NO. VPF-1-90 REVISED 07-19-02

AND TO SUPPLEMENTAL SPECIFICATIONS:

- 864 DATED 07-11-00
- 954 DATED 09-09-97

EXISTING STRUCTURE PLANS

THE EXISTING STRUCTURE PLANS (PROJECT NO. MAH-680-6.98) ARE ON FILE AND MAY BE REVIEWED IN THE OFFICE OF THE ODOT DISTRICT 4 DEPUTY DIRECTOR, 705 OAKWOOD ST., RAVENNA, OHIO 44266

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK LISTED IN THE GENERAL SUMMARY FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED AT THE ENGINEER'S DISCRETION SHALL BE MADE A MATTER OF RECORD BY INCORPORATION IN THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

UNDERGROUND UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS HAVE BEEN OBTAINED BY DILIGENT FIELD CHECKS AND AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE STATE OF OHIO DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS.

UTILITY LINES

THE UTILITIES SHALL BEAR ALL EXPENSE INVOLVED IN RELOCATING (INSTALLING) THE AFFECTED UTILITY LINES. THE CONTRACTOR AND UTILITIES ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

PROPOSED WORK

1. REMOVE ENTIRE EXISTING DECK ABOVE THE BEAMS, INCLUDING ASPHALT CONCRETE WEARING SURFACE, EXPANSION JOINTS, SCUPPERS AND LIGHTING POLE.
2. REMOVE EXISTING APPROACH SLABS.
3. REMOVE EXISTING ABUTMENT BACKWALLS AND PORTIONS OF WINGWALLS.
4. REMOVE EXISTING END CROSSFRAMES.
5. WELD SHEAR CONNECTORS TO EXISTING BEAMS.
6. RAISE EXISTING BEAMS, REMOVE BEARINGS AND CONSTRUCT ABUTMENT AND PIER BRIDGE SEAT CAPS.
7. FIELD DRILL HOLES IN BEAM ENDS AS PER PLAN.
8. SET NEW LAMINATED ELASTOMERIC BEARINGS WITH LOAD PLATE AND HP 10X42 STEEL SHAPE AT ABUTMENTS AND WITH LOAD PLATE AT PIERS, AND PLACE BEAMS ON BEARINGS.
9. CONSTRUCT DECK AS PER PLAN.
10. RECONSTRUCT ABUTMENT BACKWALLS AND PORTIONS OF WINGWALLS AS PER PLAN.
11. PATCH PORTIONS OF ABUTMENTS AND PIERS AS REQUIRED.
12. SEAL CONCRETE SURFACES AS PER PLAN.
13. CONSTRUCT APPROACH SLABS AS PER PLAN.
14. INSTALL VANDAL FENCE.
15. REPAIR CONCRETE SLOPE PROTECTION.
16. SPOT PAINT EXISTING AND NEW STEEL.

PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

DESCRIPTION: THIS WORK SHALL CONSIST OF THE REMOVAL OF CONCRETE DECK INCLUDING CURBS, PARAPETS, RAILINGS, LIGHT POLE, DECK JOINTS, SCUPPERS AND OTHER APPURTENANCES FROM STEEL SUPPORTING SYSTEMS (BEAMS, CROSS FRAMES, ETC.), END CROSSFRAMES AND PORTIONS OF THE ABUTMENTS AND WINGWALLS TO THE LIMITS INDICATED IN THE PLANS. CARE SHALL BE TAKEN DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND 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 PLANS FOR THE PROTECTION OF TRAFFIC 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 THE DECK. SMALL DIAMETER PILOT HOLES SHALL BE DRILLED 2 INCHES OUTSIDE THESE LINES TO CONFIRM THE LOCATION OF FLANGE EDGES. DECK CUTS OVER OR WITHIN 2 INCHES OF FLANGE EDGES SHALL NOT EXTEND LOWER THAN THE BOTTOM LAYER OF DECK SLAB REINFORCING STEEL. CUTS MADE OUTSIDE 2 INCHES 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 OVER STEEL BEAMS, A HAMMER HEAVIER THAN 35 POUNDS BUT NOT TO EXCEED 90 POUNDS MAY BE USED AT THE APPROVAL OF THE ENGINEER. REMOVAL METHODS OVER BRIDGE MEMBERS SHALL ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING OF THE PRIMARY STEEL MEMBERS.

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. STRINGERS DAMAGED BY THE CONTRACTOR'S REMOVAL OPERATIONS SHALL, AT NO COST TO THE PROJECT, BE REPLACED OR REPAIRED. PROPOSED REPAIRS, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER, SHALL BE SUBMITTED IN WRITING FOR REVIEW AND APPROVAL BY THE DIRECTOR.

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 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, HAMMERS NOT EXCEEDING 90 POUNDS, MAY BE USED UPON 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.

CUT LINE CONSTRUCTION JOINT PREPARATION: SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING 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, RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING CONCRETE SURFACES WHICH NEW CONCRETE WILL BE PLACED AGAINST SHALL BE WET, BUT WITHOUT FREE WATER, AT THE TIME OF CONCRETE PLACEMENT.

EXTRANEOUS MEMBERS: EXISTING EXTRANEOUS MEMBERS (I.E., FINISHING MACHINE AND FORM SUPPORTS AND THE SUPPORT FOR SCUPPERS 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 SUBJECT 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 AN OHIO 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.

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 PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.

SEALING OF CONCRETE SURFACES

EPOXY-URETHANE SHALL BE THE "LIGHT NEUTRAL" COLOR MEETING FEDERAL COLOR STANDARD NO. 17778 AS PER THE DETAILS IN THE PLANS.

ASBESTOS NOTIFICATION:

AN ASBESTOS SURVEY OF THE INDIANOLA AVE. BRIDGE OVER I-680 SCHEDULED FOR REHABILITATION WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON THE BRIDGE.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF THE DEMOLITION AND RENOVATION FORM, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO:

MAHONING-TRUMBULL AIR POLLUTION CONTROL
OAK HILL/RENAISSANCE PLACE
SECOND FLOOR, ROOM 25
345 OAK HILL AVENUE
YOUNGSTOWN, OHIO 44502
ROBERT RAMHOFF, DIRECTOR
(330)744-1928
FAX (330)744-1928

AT LEAST TEN (10) WORKING DAYS PRIOR TO START OF THE BRIDGE DEMOLITION WORK, THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER.

INFORMATION REQUIRED ON THE FORM WILL INCLUDE: THE CONTRACTOR'S NAME AND ADDRESS, THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL OR RENOVATION AND A DESCRIPTION OF THE PLANNED DEMOLITION OR RENOVATION WORK AND THE 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 20' SPAN, AS PER PLAN.

REQUIRED MINIMUM BAR LAP LENGTHS *

BAR SIZE	OTHER	TOP
#4	1'-11"	2'-9"
#5	2'-5"	3'-5"
#6	2'-11"	4'-1"
#7	3'-8"	5'-2"
#8	4'-11"	6'-10"
#9	6'-2"	8'-8"
#10	7'-10"	11'-0"
#11	9'-8"	13'-6"

* UNLESS NOTED OTHERWISE IN PLANS.

INSPECTION OF EXISTING STRUCTURAL STEEL

THE ENGINEER WILL VISUALLY INSPECT ALL EXISTING TOP FLANGE COVER PLATE FILLET WELDS TO ENSURE THE WELDS, PLATES AND BEAMS ARE FREE OF DEFECTS AND CRACKS. IF NECESSARY, REMOVE ALL DECK SLAB HAUNCH FORMS IMMEDIATELY ADJACENT TO SUCH WELDS THAT MAY INTERFERE WITH THE ENGINEER'S INSPECTION. THE INSPECTION WILL NOT TAKE PLACE UNTIL THE TOP FLANGES ARE CLEANED ACCORDING TO 511.10, BUT IT WILL BE DONE BEFORE THE DECK SLAB REINFORCEMENT IS INSTALLED. THE DEPARTMENT WILL PAY FOR THE COST ASSOCIATED WITH THIS INSPECTION WITH ITEM 511, SUPERSTRUCTURE CONCRETE. THE ENGINEER WILL REPORT ALL CRACKS FOUND TO THE OFFICE OF CONSTRUCTION ADMINISTRATION, BRIDGE CONSTRUCTION SPECIALIST, ALONG WITH SPECIFIC INFORMATION ON LOCATION OF THE CRACKS, LENGTH, AND DEPTH SO AN EVALUATION AND REPAIR OR REPLACEMENT RECOMMENDATION CAN BE MADE.

ABBREVIATIONS

B.S.	BOTH SIDES	U.N.	UNLESS NOTED
N.S.	NEAR SIDE	SPL.	SPLICE
F.S.	FAR SIDE	CLR.	CLEAR
SER.	SERIES	EA.	EACH
TYP.	TYPICAL	MIN.	MINIMUM
EQ.	EQUAL	EXIST.	EXISTING
DIM.	DIMENSION	BM.	BEAM
SPA.	SPACES	BOT.	BOTTOM
FRWD.	FORWARD	P.E.J.F.	PREFORMED EXPANSION
ABUT.	ABUTMENT		JOINT FILLER
REHAB.	REHABILITATION	PERF.	PERFORATED
VAR.	VARIES	C.P.P.	CORRUGATED PLASTIC
SIM.	SIMILAR		PIPE
OPP.	OPPOSITE		

DESIGN AGENCY
GPD ASSOCIATES
300 S. 10TH AVE., SUITE 100, COLUMBUS, OHIO 43201
TEL: (614) 292-1000 FAX: (614) 292-1001

DATE: 8-1-03
REVIEWED: K.S.J.
DRAWN: R.H.C.
DESIGNED: B.J.M.
CHECKED: P.J.W.

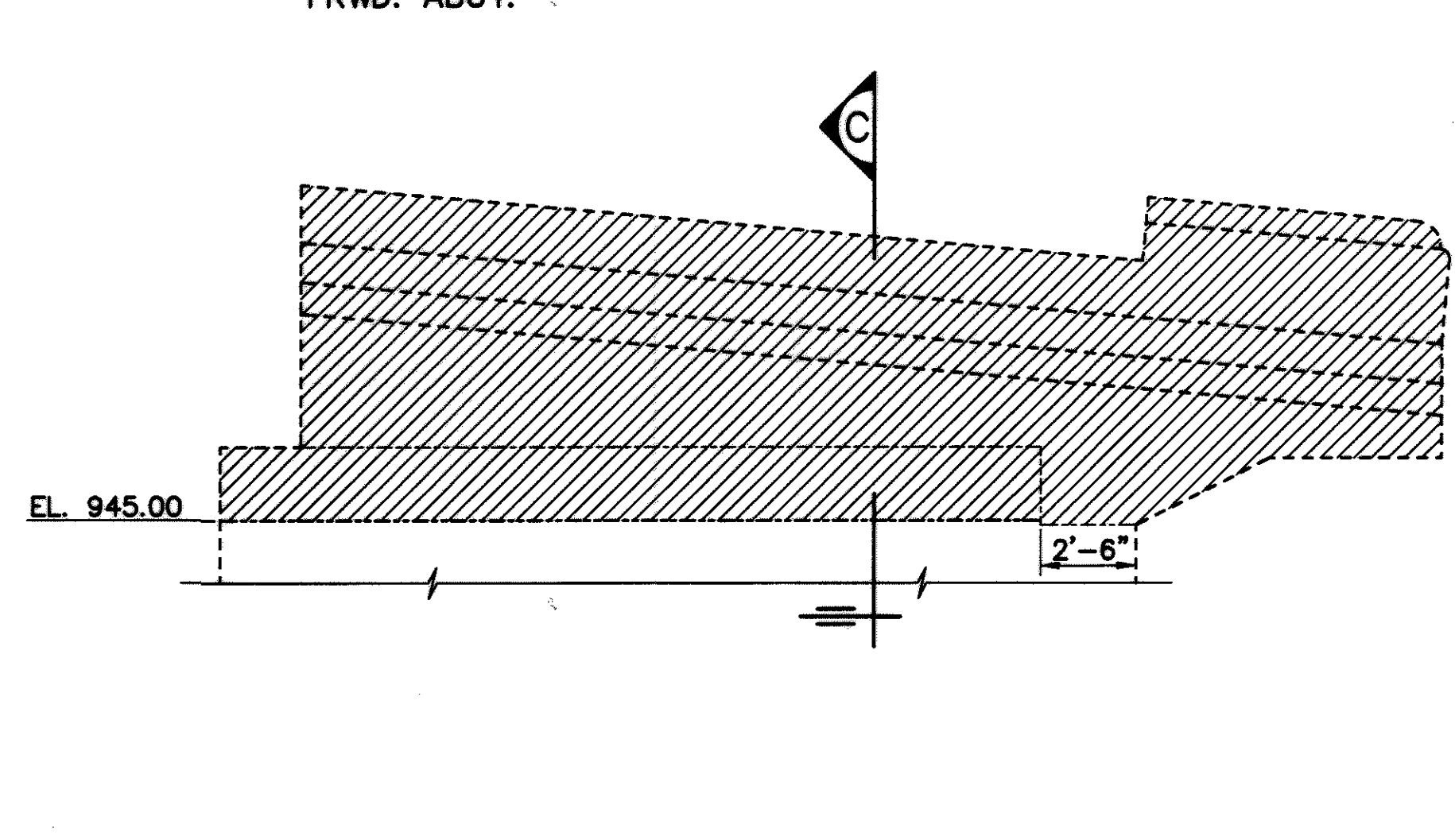
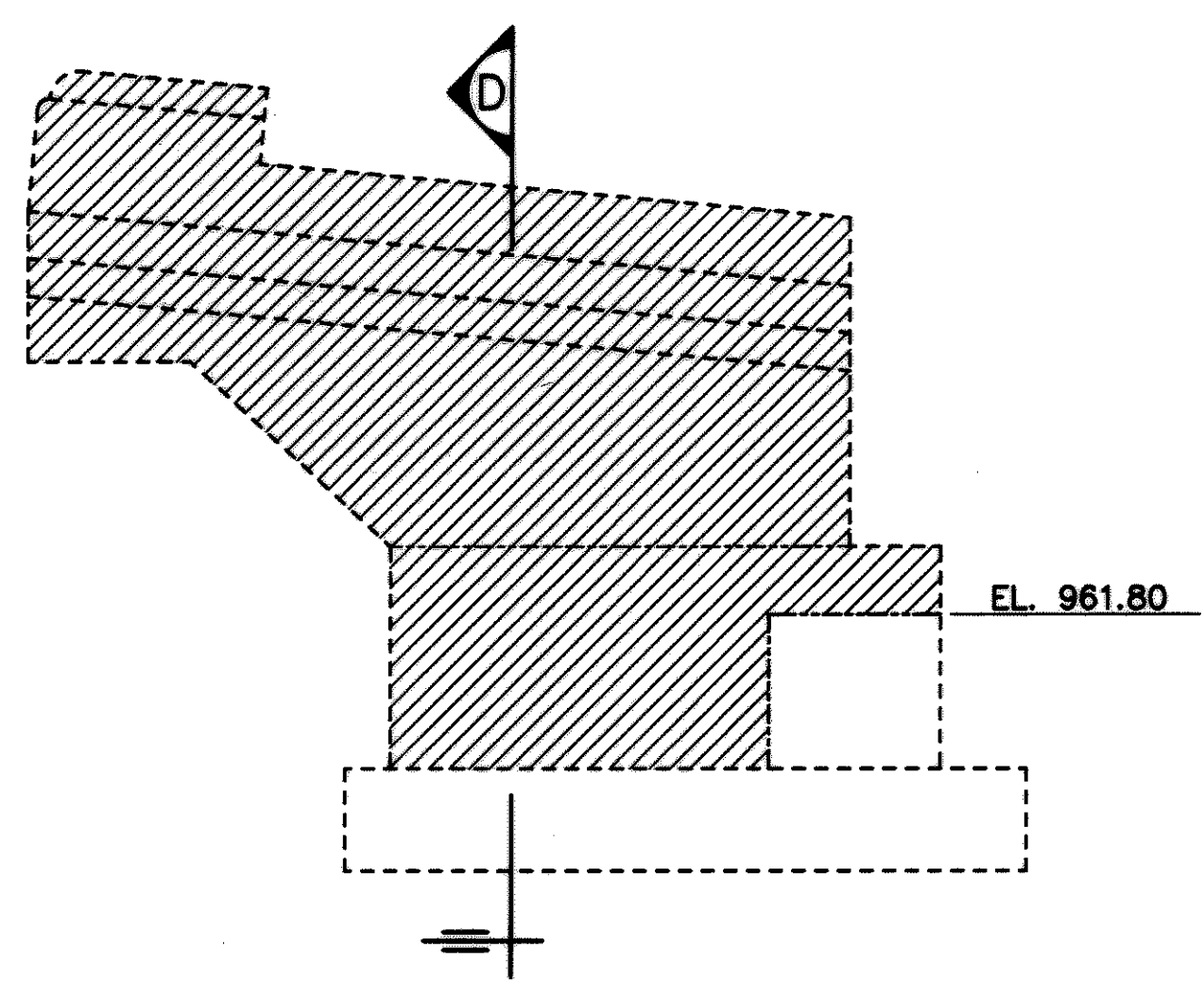
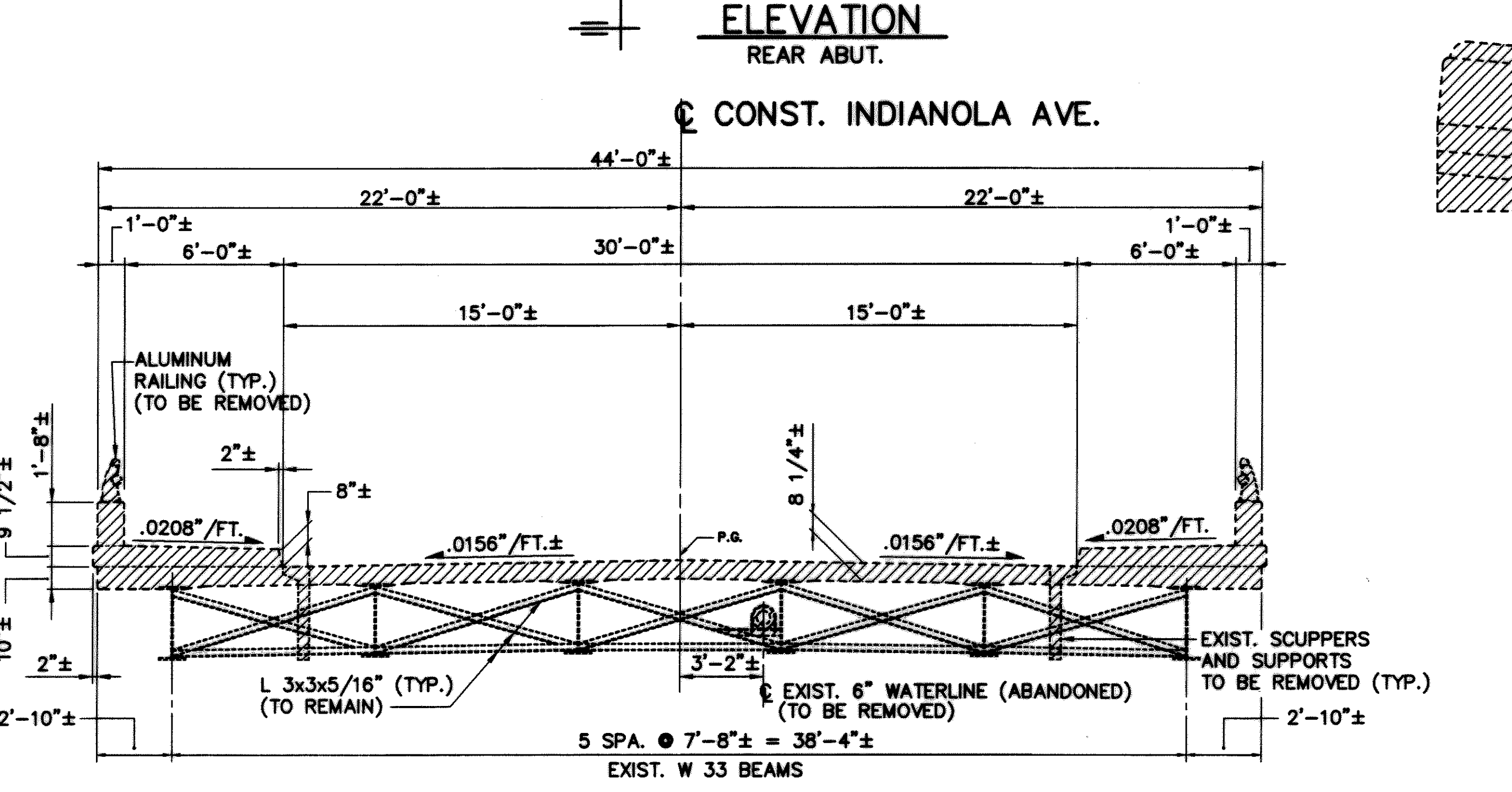
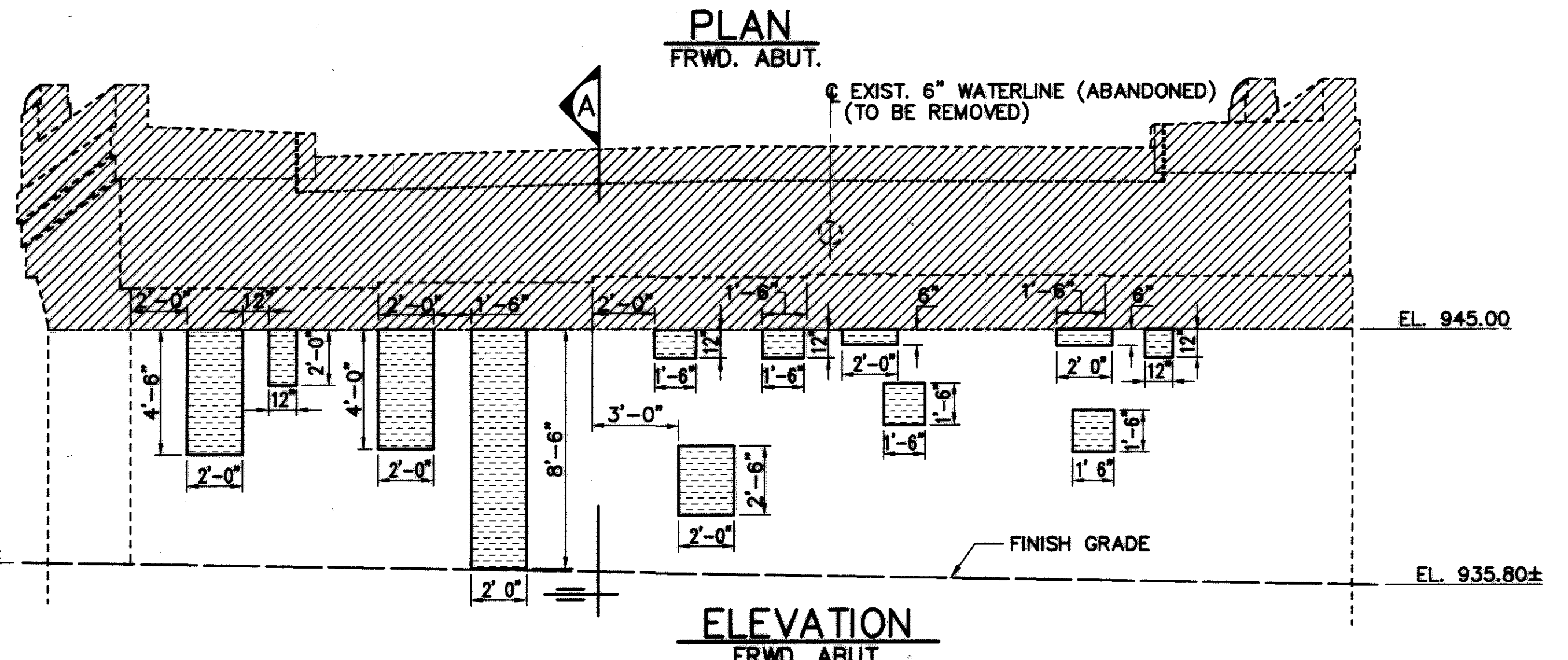
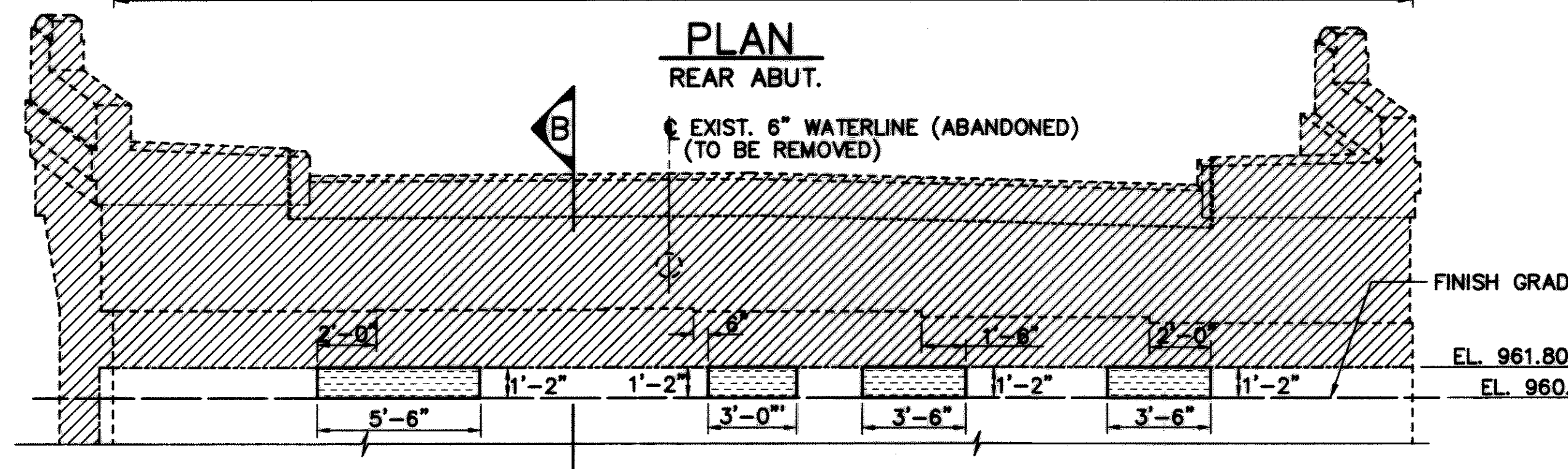
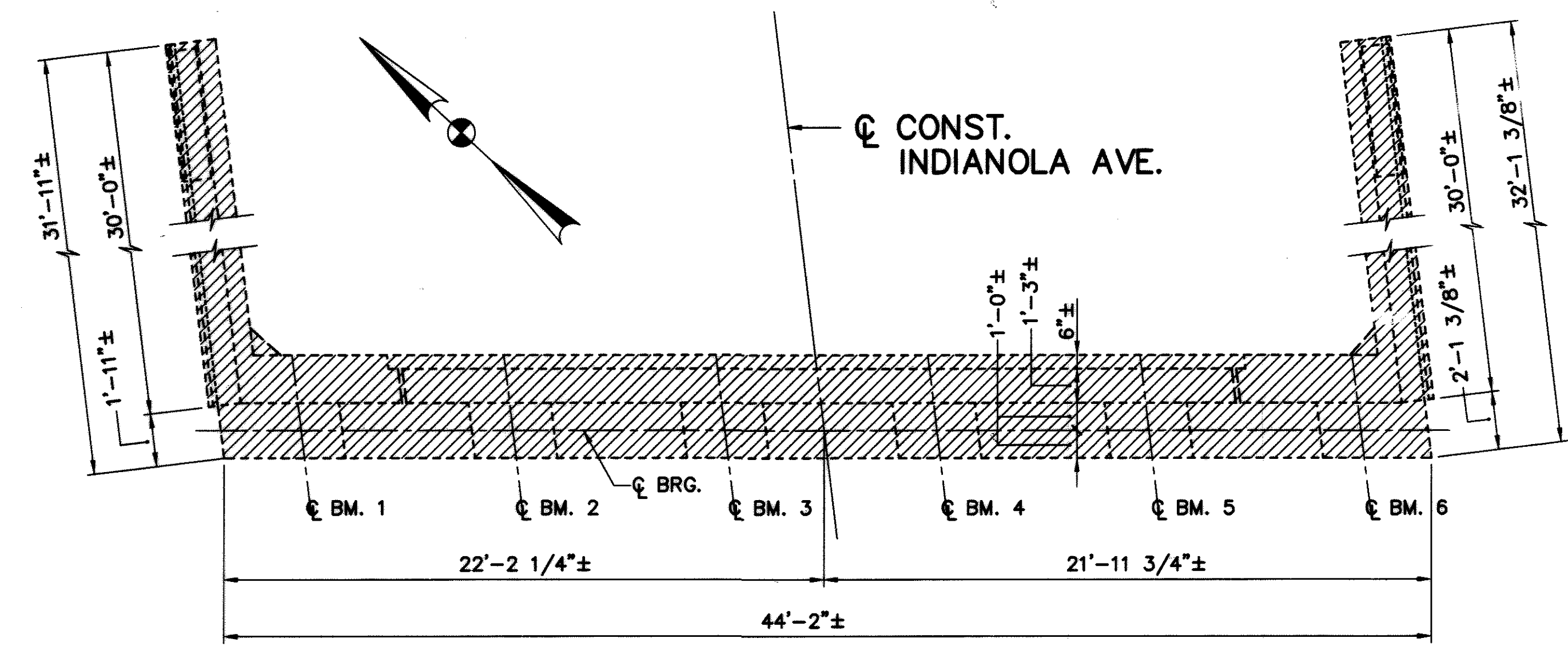
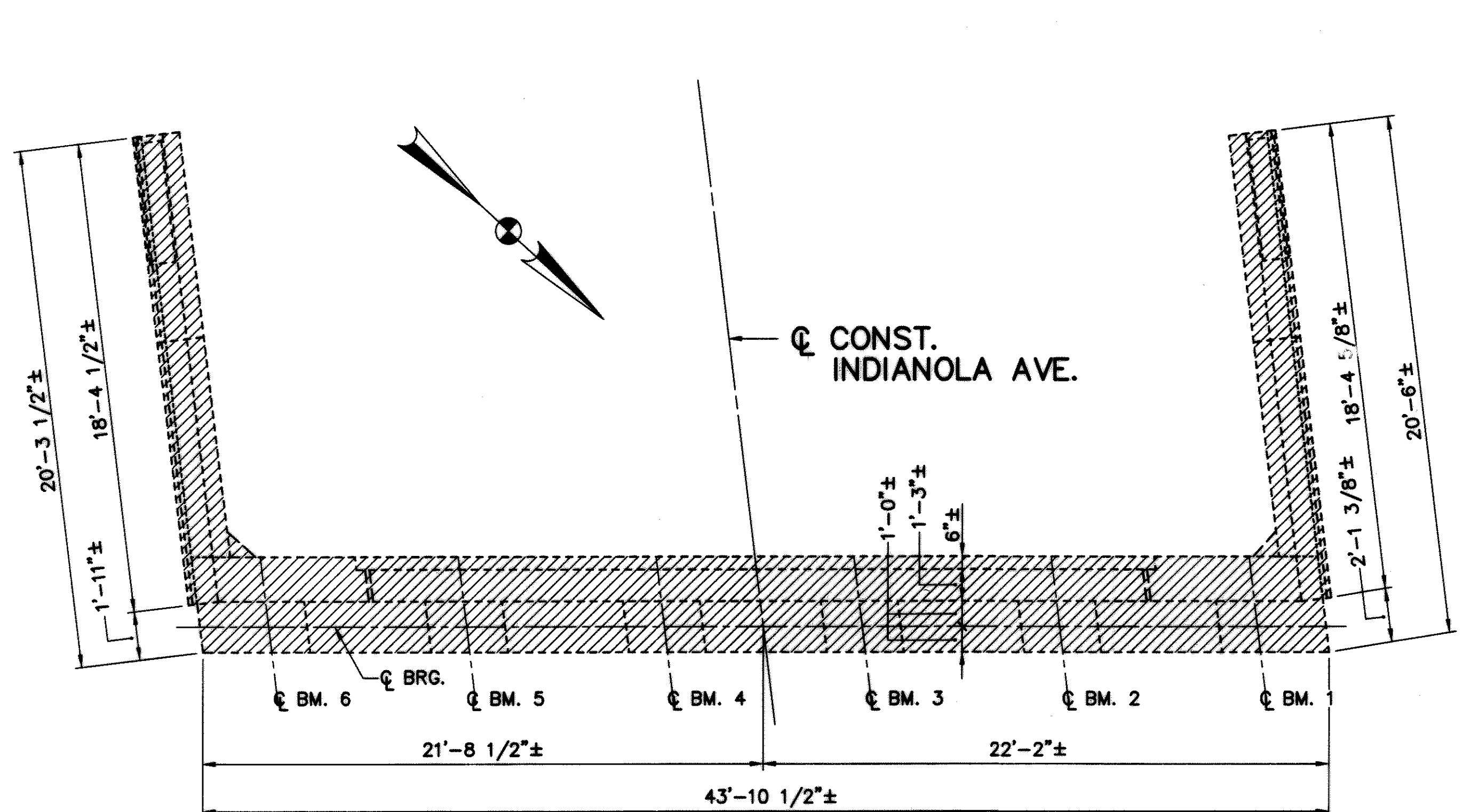
STRUCTURE FILE NUMBER: 5007429

STRUCTURE GENERAL NOTES
BRIDGE NO. MAH - 680 - 680 - 0818
INDIANOLA AVE. OVER I-680

MAH-680-8.18

2 / 20

49
67



EXISTING TRANSVERSE SECTION

ELEVATION-S.E. WINGWALL

ELEVATION-N.E. WINGWALL

S.W. WINGWALL SIM. BUT OPP. HAND
 NOTE: PIPE RAILING NOT SHOWN (TYP.)

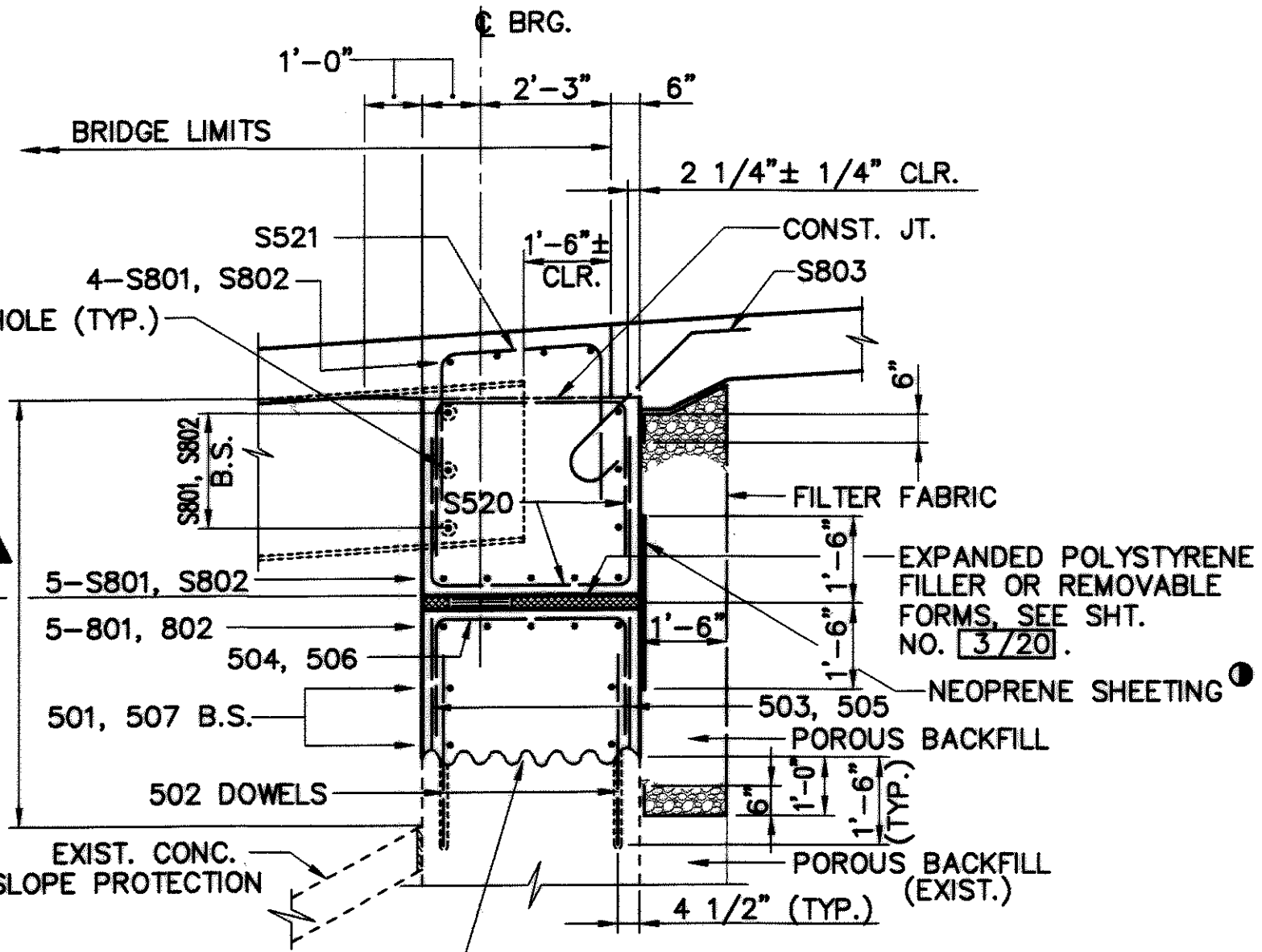
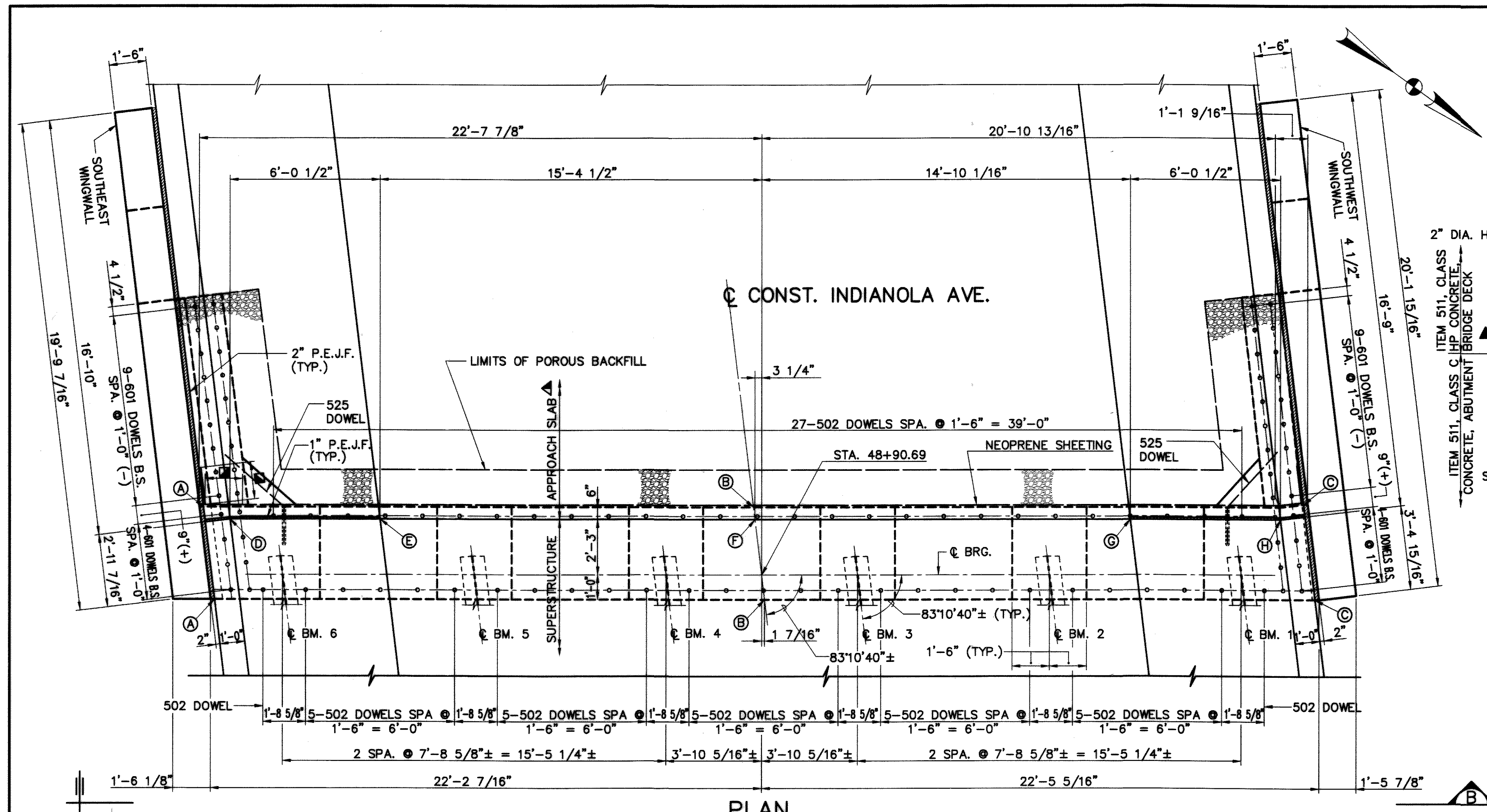
N.W. WINGWALL SIM. BUT OPP. HAND

STRUCTURE INSPECTION
 PERFORMED IN NOVEMBER, 2002.

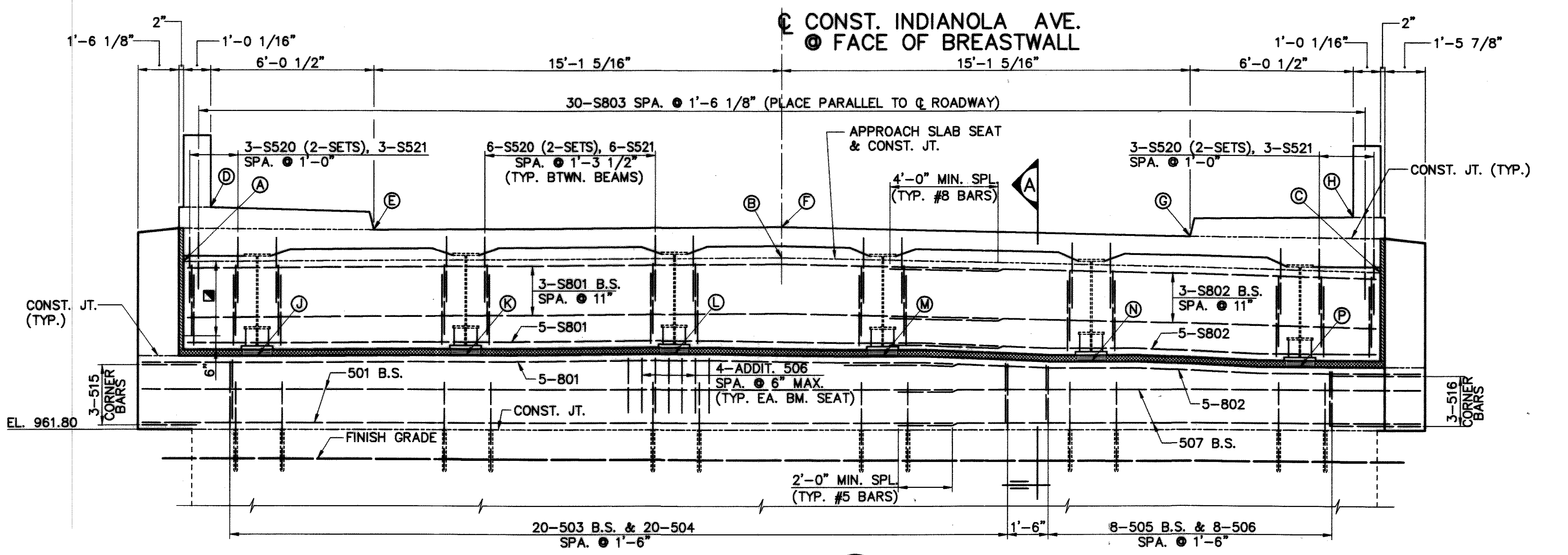
- NOTE**
- FOR PATCHING CONCRETE STRUCTURE
 NOTE, SEE SH. NO. [3/20].
 - FOR SECTIONS A, B, C & D, SEE SH. NO. [10/20].

- LEGEND**
- INDICATES REMOVAL LIMITS, ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FT. SPAN, AS PER PLAN
 - INDICATES AREA TO BE PATCHED PER ITEM 519, PATCHING CONCRETE STRUCTURE, AS PER PLAN

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 DATE: 01-26-04 TIME: 09:02 AM
 Technician: AELLERMAN



ELEVATIONS			
A	B	C	D
968.01	968.19	967.66	970.06
E	F	G	H
969.22	969.34	968.98	969.73
I	K	L	M
964.53	964.57	964.62	964.54
N	P		
964.34	964.15		



- NOTES:**
1. PREFIX "A" WILL BE ADDED TO ALL REBAR MARKS SHOWN FOR THE ABUTMENTS EXCEPT THOSE BARS PREFIXED WITH "S." SEE REINFORCING SCHEDULE.
 2. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
 3. MINIMUM CLEARANCE TO REBARS SHALL BE 2" UNLESS NOTED.
 4. ABUTMENT DIAPHRAGM CONCRETE, STEEL SUPERSTRUCTURE: PLACE THE CONCRETE ENCASING THE STRUCTURAL STEEL MEMBERS WITH THE DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE.
 5. FOR BEARING DETAILS, SEE SHT. NOS. [12/20] & [13/20]
 6. FOR SLAB DETAILS, SEE SHT. NO. [15/20]. FOR RAILING DETAILS, SEE SHT. NO. [17/20].
 7. FOR SOUTHEAST & SOUTHWEST WINGWALL DETAILS, SEE SHT. NO. [6/20].

- LEGEND:**
- ▲ LIMITS OF "ITEM 864- SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)"
 - NEOPRENE SHEETING, 3'-0" WIDE, TO EXTEND FULL LENGTH OF BRG. SEAT PLUS 1'-6" LAP ONTO WINGWALL EA. END.
 - ▲ FOR APPROACH SLAB DETAILS, SEE SHT. NOS. [18/20] & [19/20].
 - INDICATES LIMITS OF VERTICAL NEOPRENE SHEETING, 3'-0" WIDE, TYP. AT ALL WINGWALLS.

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 Date: 05/14/01
 Time: 11:52:41 AM

Technician: RRYMER

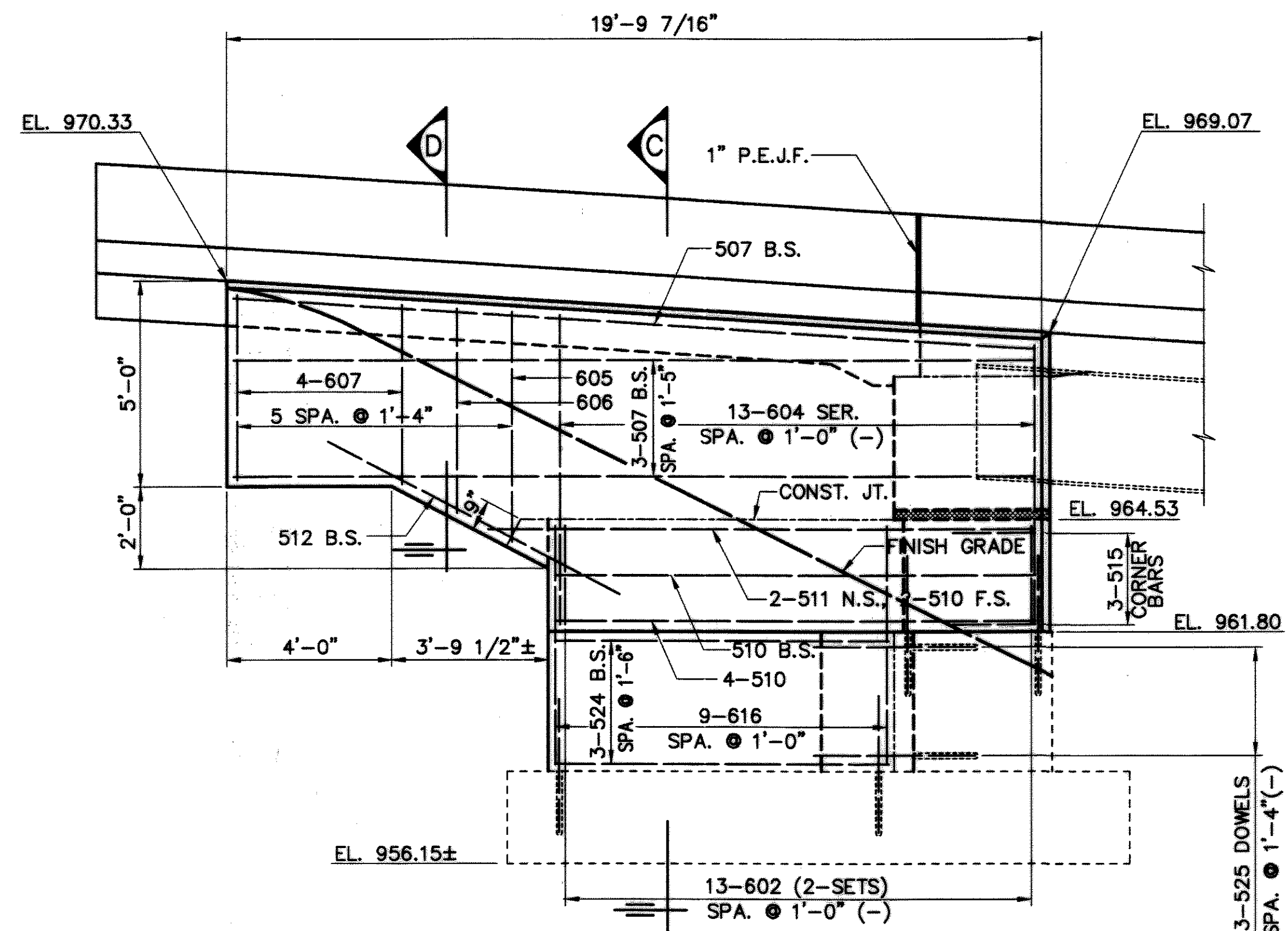
DESIGN AGENCY
 GPD ASSOCIATES
 300 W. GREEN ST. SUITE 400
 DALLAS, TEXAS 75201-3207

DESIGNED	R.H.C.	CHECKED	P.J.W.
DRAWN	R.P.R.	REVISION	
REVIEWED	K.S.J.	STRUCTURE FILE NUMBER	5007429
DATE	8-01-03		

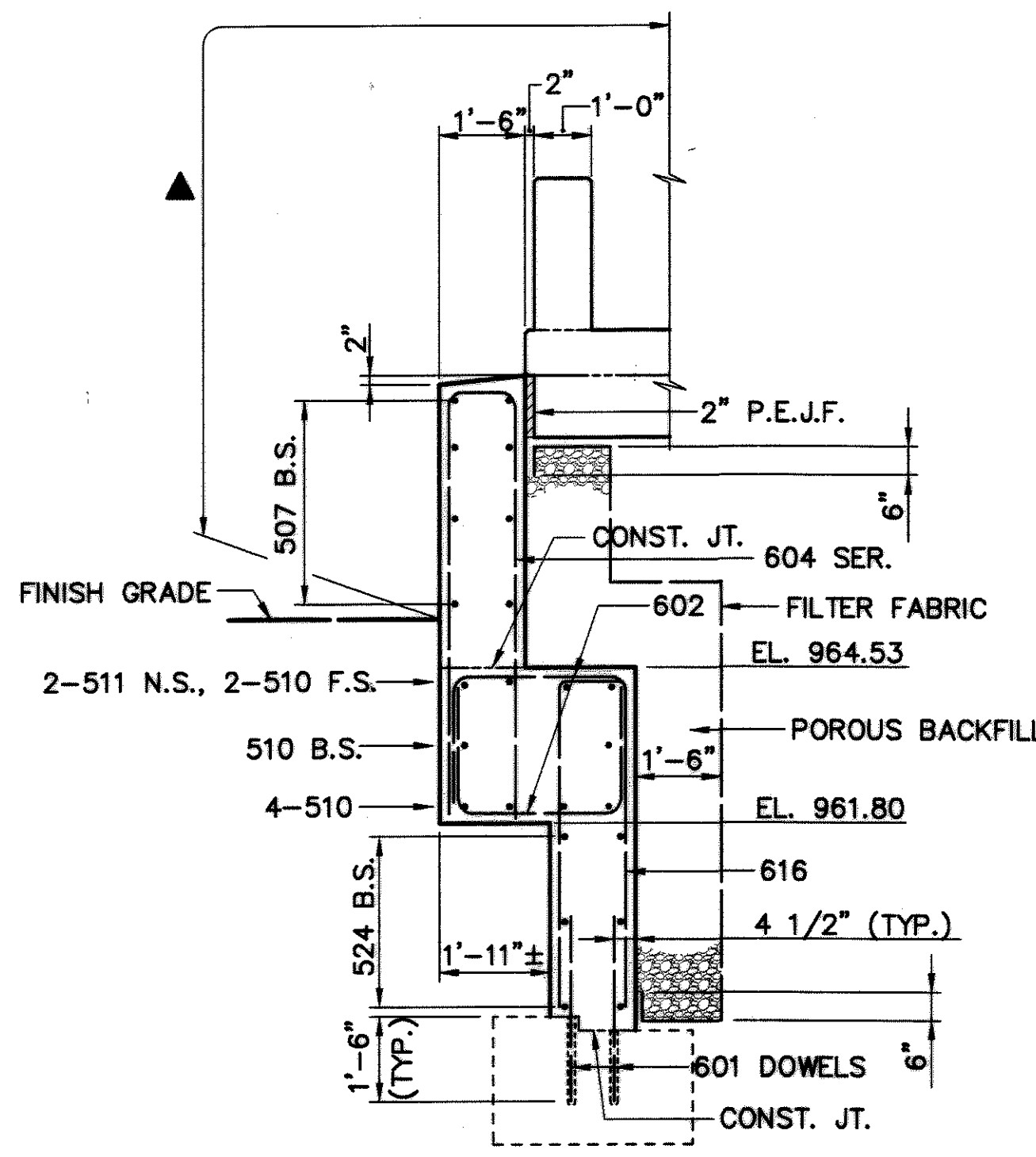
REAR ABUTMENT
 BRIDGE NO. MAH - 680 - 0818
 INDIANOLA AVE. OVER I-680

MAH-680-8.18

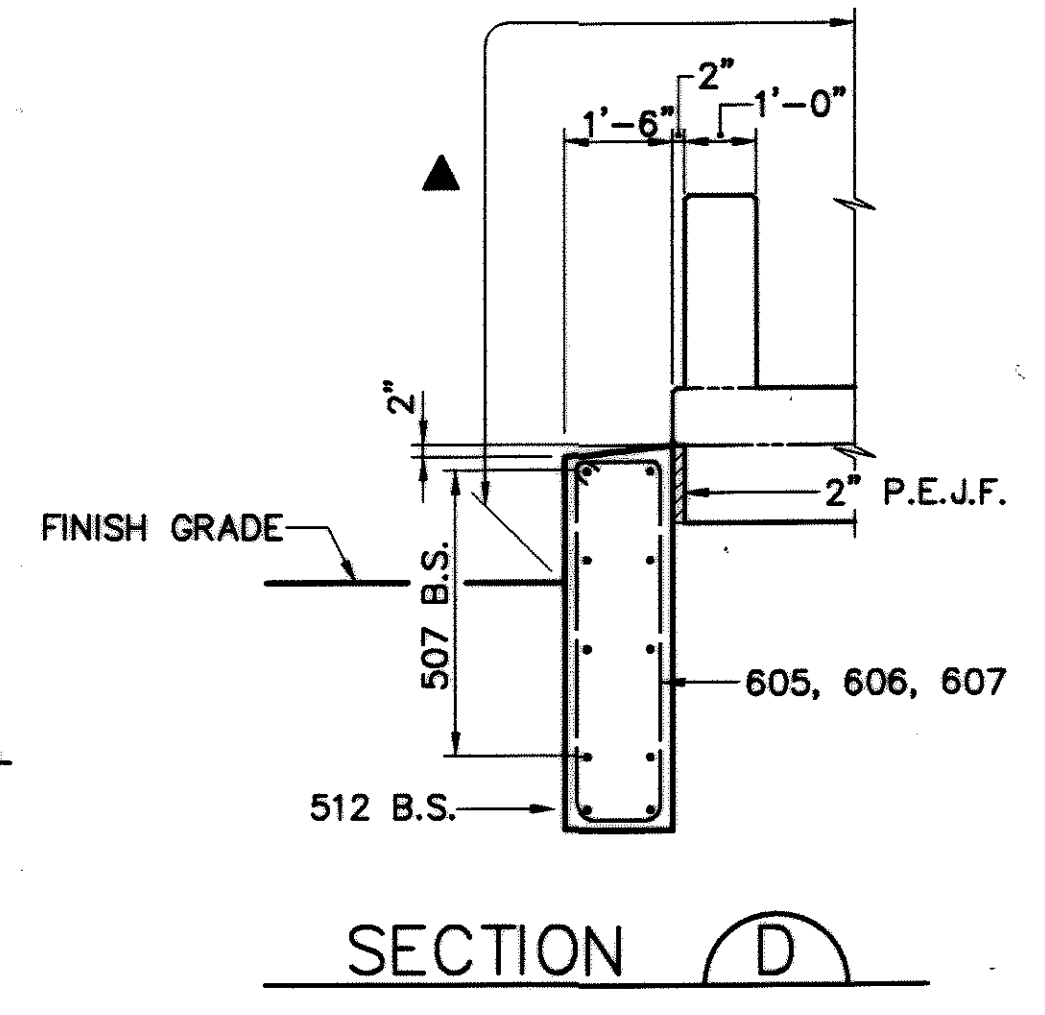
5 / 20
52
67



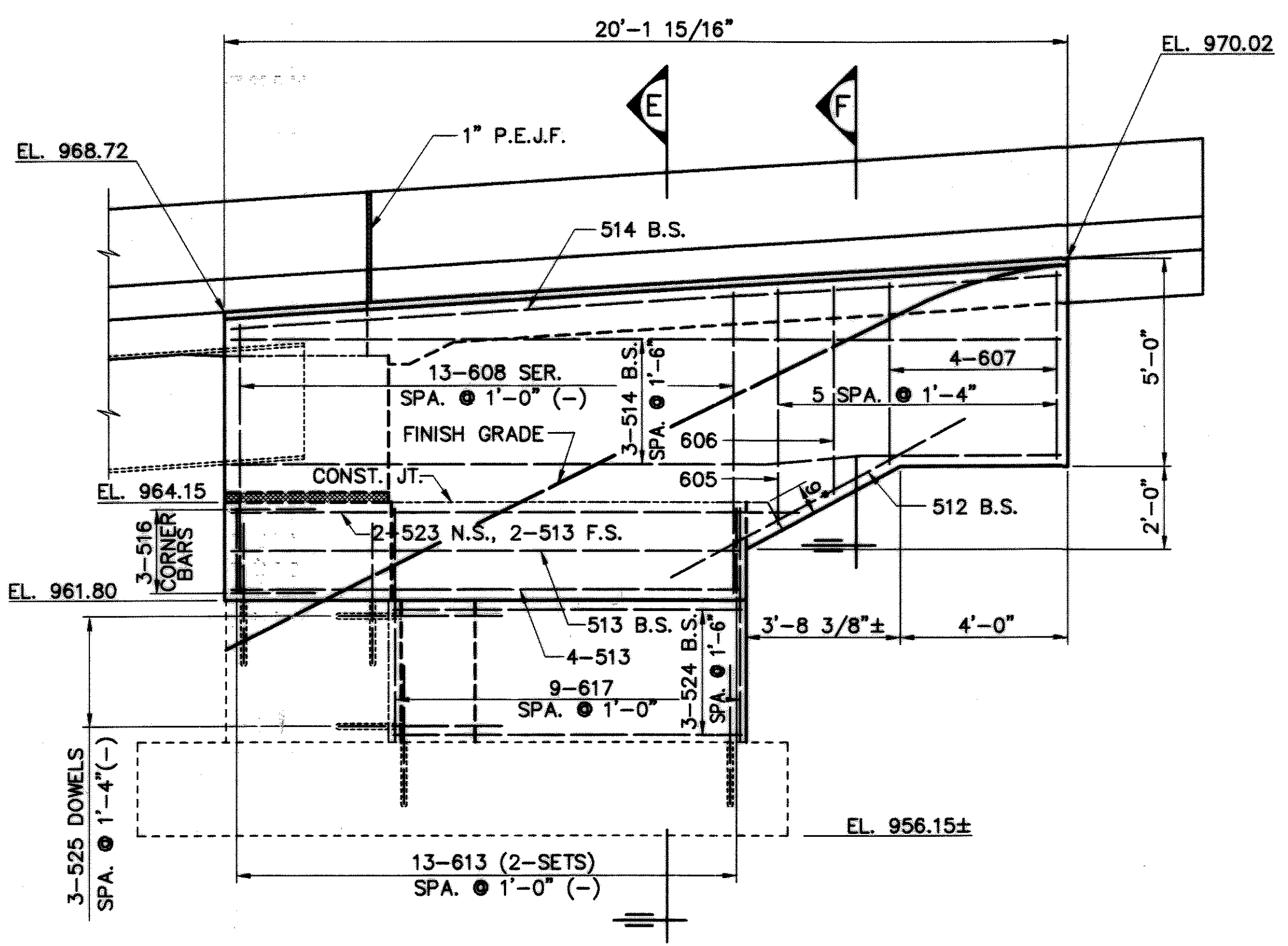
SOUTHEAST WINGWALL ELEVATION



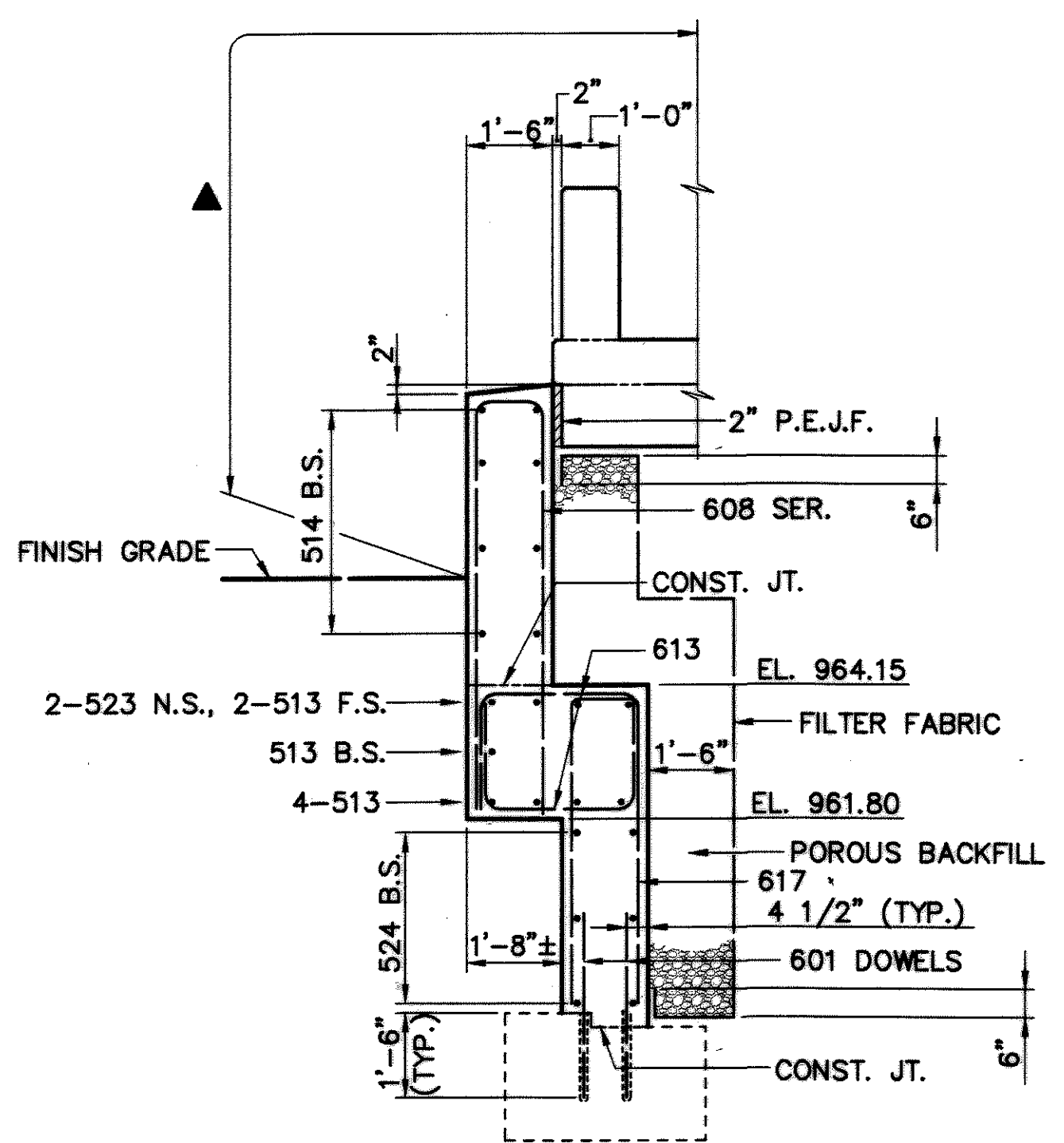
SECTION C



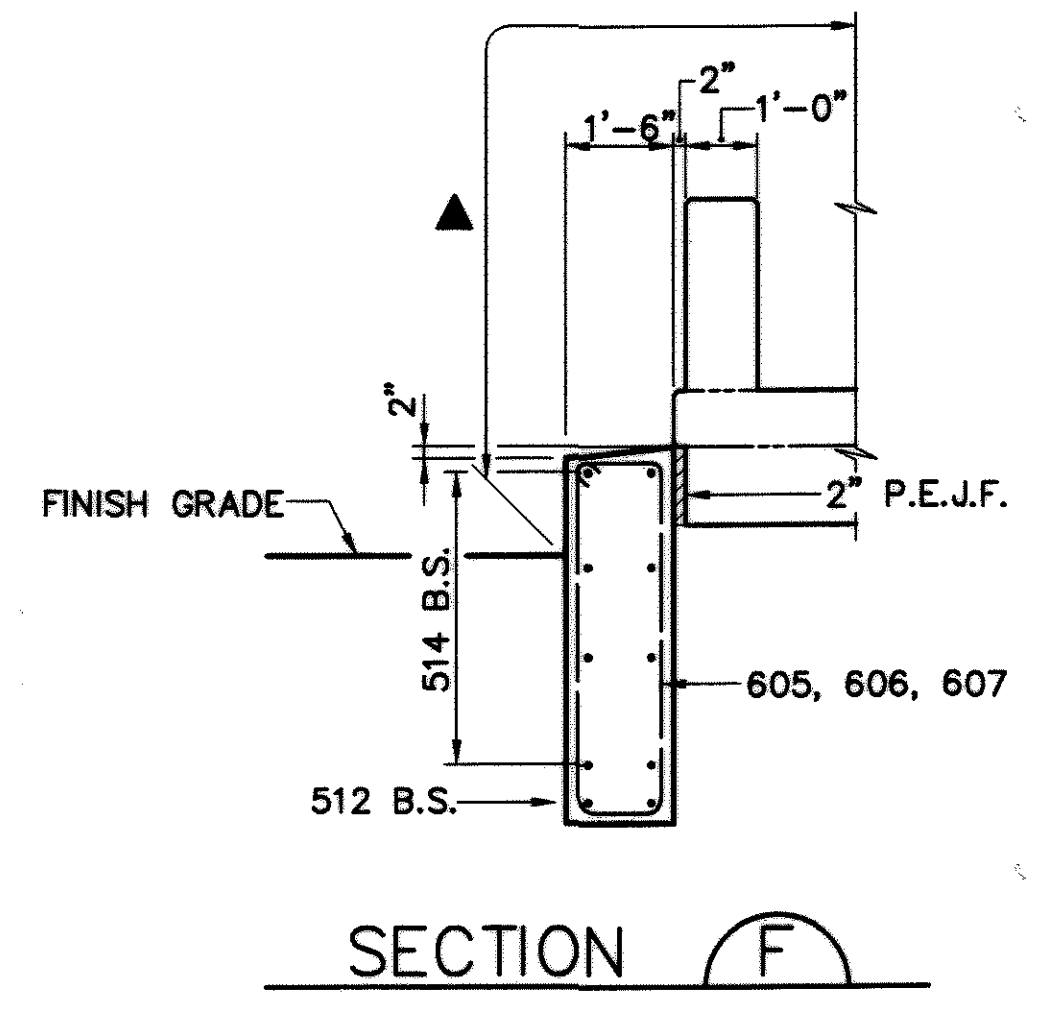
SECTION D



SOUTHWEST WINGWALL ELEVATION



SECTION E



SECTION F

- NOTES:
1. PREFIX "A" WILL BE ADDED TO ALL REBAR MARKS SHOWN FOR THE ABUTMENTS EXCEPT THOSE BARS PREFIXED WITH "S." SEE REINFORCING SCHEDULE.
 2. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
 3. FOR ADDITIONAL NOTES, SEE SHT. NO. [5/20].

- LEGEND:
- ▲ LIMITS OF "ITEM 864-SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)"

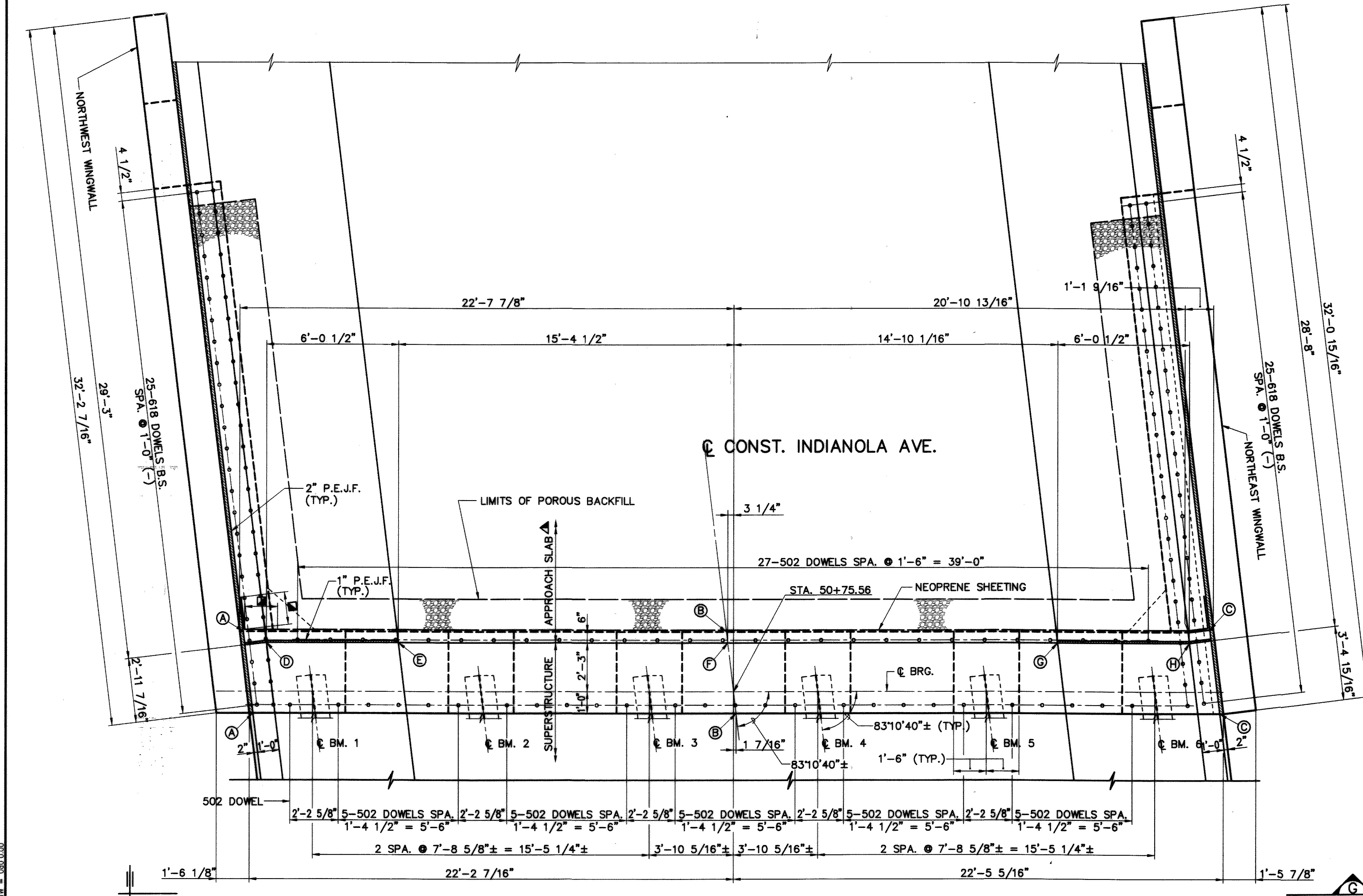
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 Date: 01-26-01 Time: 8:52 AM
 Technician: AELLERMAN

DESIGNED	DATE
R.H.C.	8-01-03
CHECKED	K.S.J.
P.J.W.	STRUCTURE FILE NUMBER
	5007429
DRAWN	REVIEWED
R.P.R.	
REVISED	

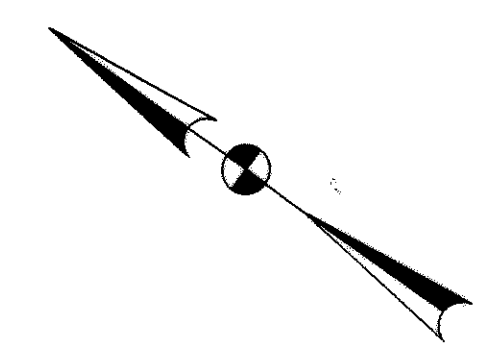
REAR ABUTMENT DETAILS
 BRIDGE NO. MAH - 680 - 0818
 INDIANOLA AVE. OVER I-680

MAH-680-8.18

Cad File: S:\CIVIL\2001\680\91\11\DWG\STRUCT\DWG\2001189_111ABUT.DWG
 Date: 01-26-04 Time: 8:52 AM
 DWG: 500 830



PLAN



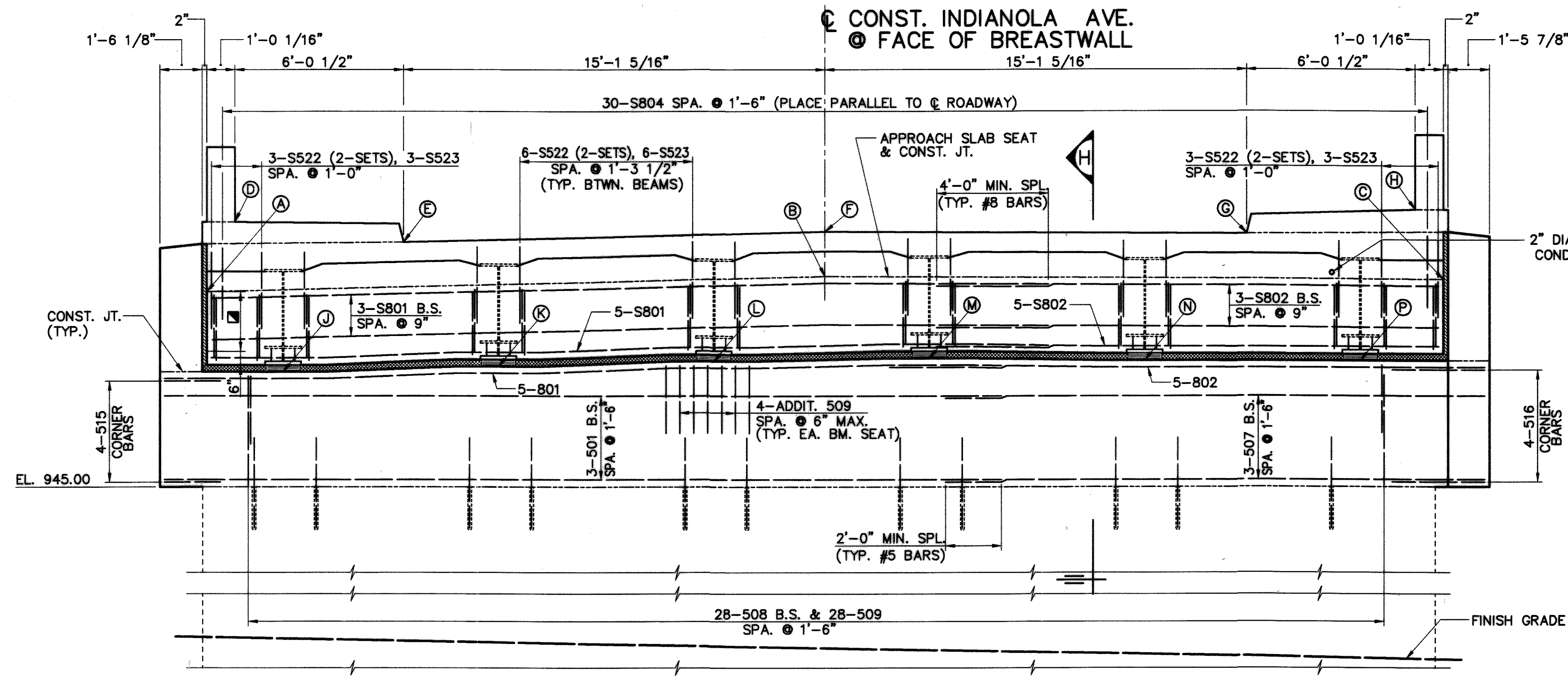
NOTES:

1. PREFIX "A" WILL BE ADDED TO ALL REBAR MARKS SHOWN FOR THE ABUTMENTS EXCEPT THOSE BARS PREFIXED WITH "S." SEE REINFORCING SCHEDULE.
2. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
3. FOR VIEW G AND ELEVATION TABLE, SEE SHT. NO. [9/20].
4. FOR NORTHWEST & NORTHEAST WINGWALL DETAILS, SEE SHT. NO. [9/20].
5. PRIOR TO PLACEMENT OF NEW CONCRETE, THE EXISTING CONCRETE SURFACE SHALL BE THOROUGHLY CLEANED BY SANDBLASTING AND/OR OTHER APPROVED METHODS SO THAT IT IS FREE OF LOOSE OR DISINTEGRATED CONCRETE, DUST, LAITANCE, GREASE, RUST AND OTHER FOREIGN MATTER. ALL EXISTING REBARS SHALL BE CLEANED BY WIRE BRUSH OR SANDBLASTING TO REMOVE ANY RUST. A BONDING GROUT SHALL BE USED BETWEEN OLD CONCRETE AND NEW CONCRETE. BONDING GROUT IS INCLUDED WITH ITEM 511, CLASS C CONCRETE, ABUTMENT FOR PAYMENT.
6. FOR BONDING GROUT NOTE, SEE SHT. NO. [3/20].
7. FOR ADDITIONAL NOTES, SEE SHT. NO. [5/20].

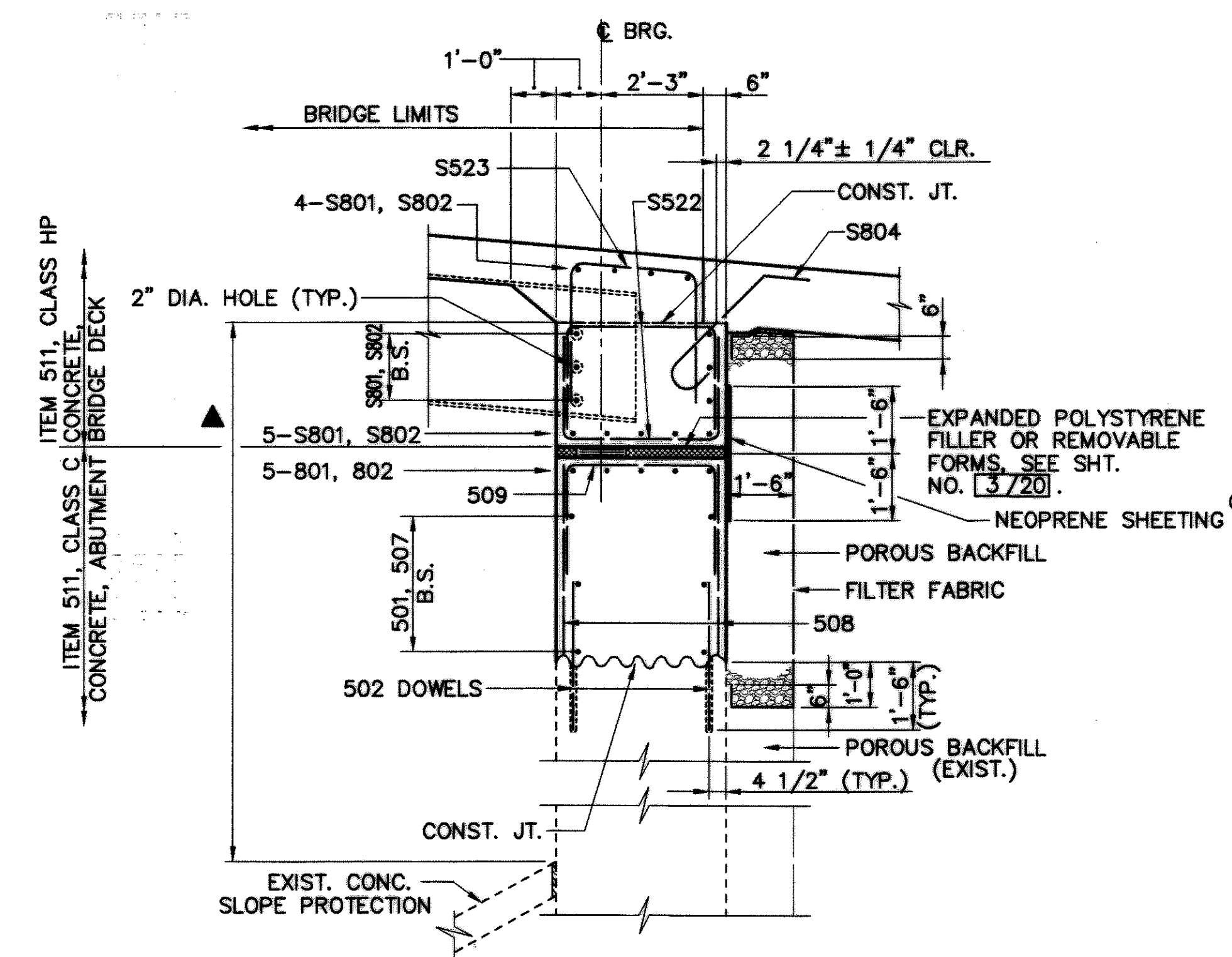
LEGEND:

- ▲ FOR APPROACH SLAB DETAILS, SEE SHT. NOS. [18/20] & [19/20].
- INDICATES LIMITS OF VERTICAL NEOPRENE SHEETING, 3'-0" WIDE, TYP. AT ALL WINGWALLS.

<p>DESIGN AGENCY <small>CLAUDE P. SCHNEIDER BLUMS & DEHAVEN, INC.</small> GPD ASSOCIATES <small>200 W. 10th St., Suite 200, Des Moines, IA 50319 319-279-2100, Fax 319-279-2101</small></p>	<p>DATE 8-01-03</p> <p>REVIEWED K.S.J.</p> <p>DRAWN R.P.R.</p> <p>DESIGNED R.H.C.</p>	<p>STRUCTURE FILE NUMBER 5007429</p> <p>REVIS</p> <p>CHECKED P.J.W.</p>	<p>FRWD. ABUTMENT BRIDGE NO. MAH - 680 - 0818 INDIANOLA AVE. OVER I-680</p>
<p>MAH-680-8.18</p>			
<p>7 / 20</p>			
<p>54 67</p>			



VIEW G

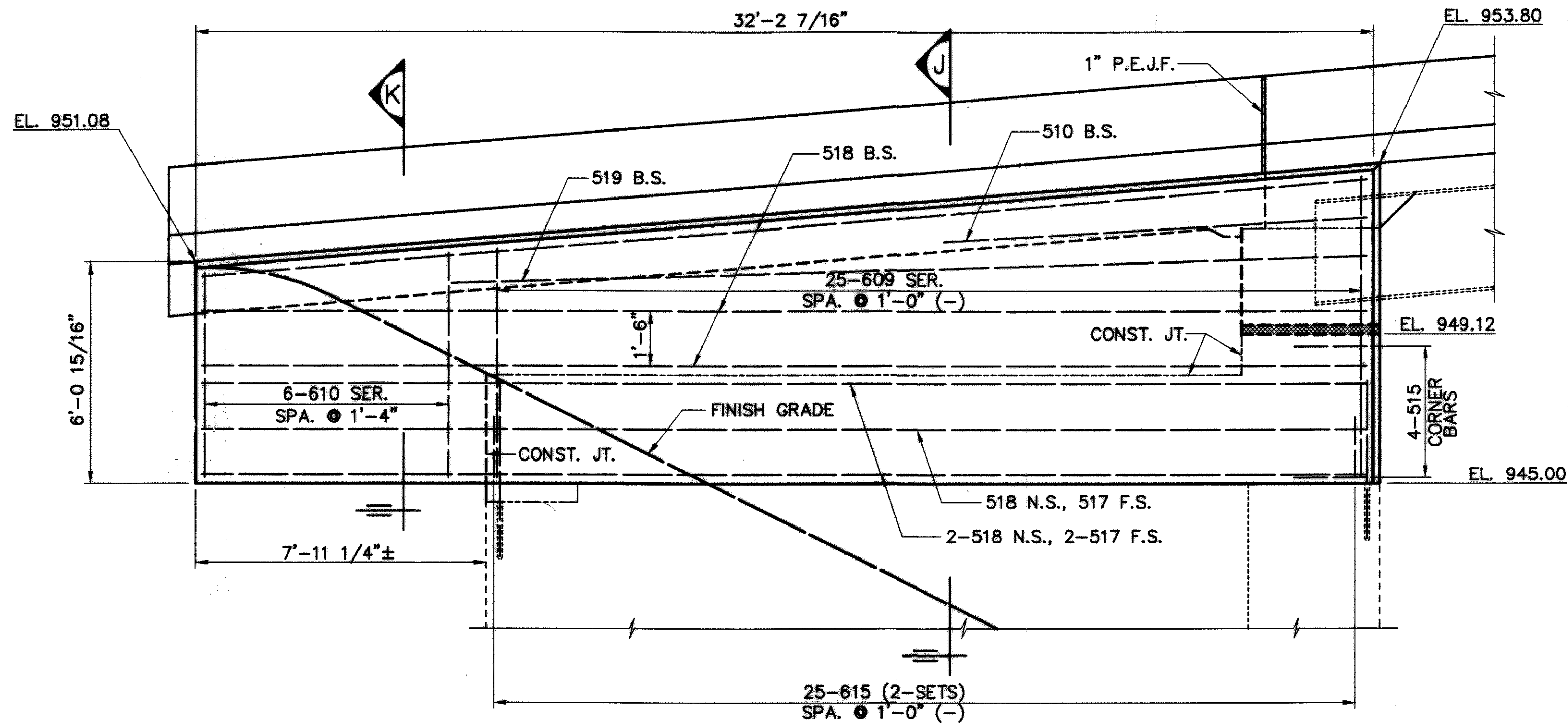


SECTION H

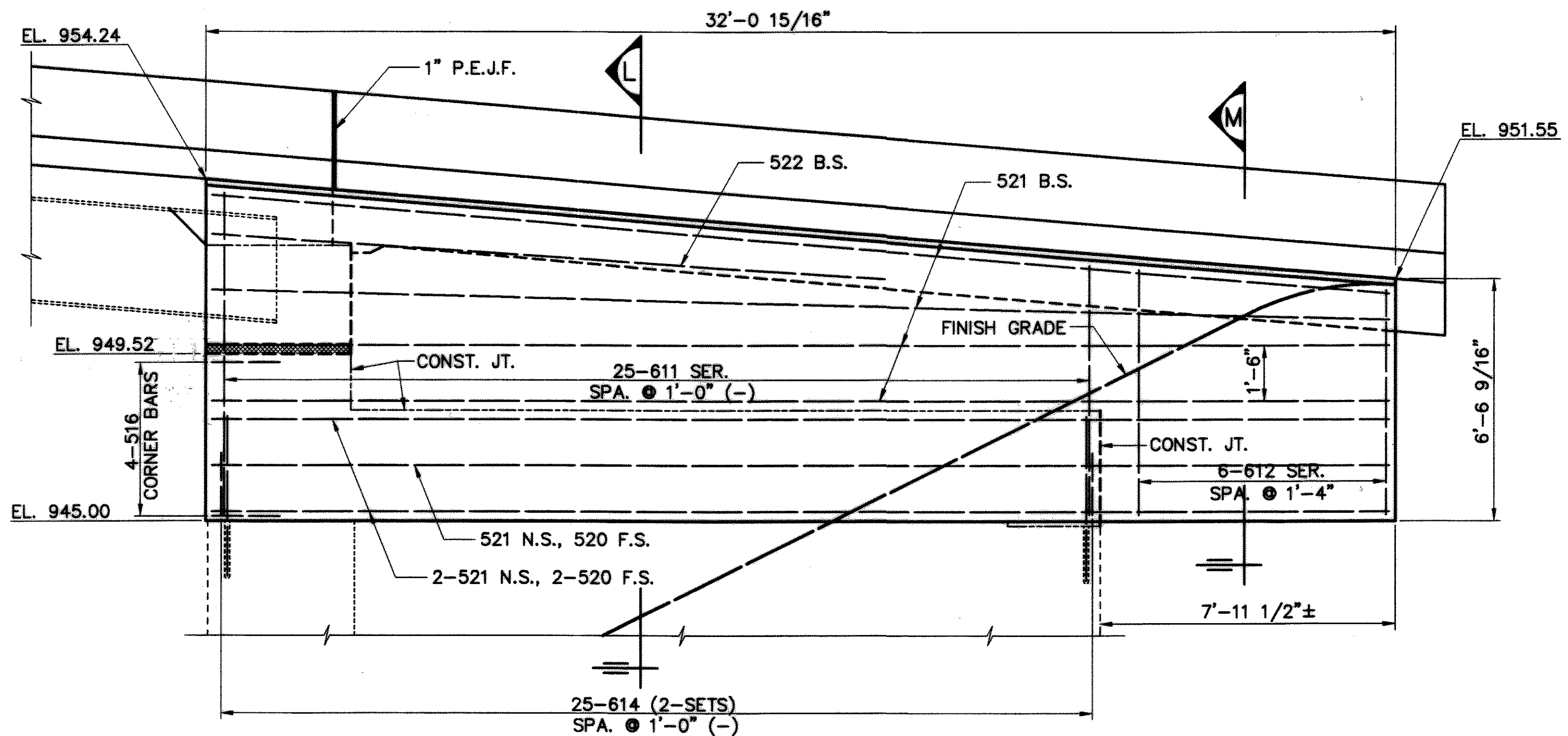
ELEVATIONS			
A	B	C	D
952.00	952.56	952.44	954.33
E	F	G	H
953.60	953.98	953.90	954.75
J	K	L	M
949.12	949.32	949.50	949.61
N	P		
949.53	949.52		

- NOTES:**
- PREFIX "A" WILL BE ADDED TO ALL REBAR MARKS SHOWN FOR THE ABUTMENTS EXCEPT THOSE BARS PREFIXED WITH "S." SEE REINFORCING SCHEDULE.
 - ALL REINFORCING STEEL SHALL BE EPOXY COATED.
 - FOR FRWD. ABUT. PLAN, SEE SH. NO. 7720.
 - FOR SLAB DETAILS, SEE SH. NO. 15720. FOR RAILING DETAILS, SEE SH. NO. 17720.
 - FOR ADDITIONAL NOTES, SEE SH. NO. 5720.

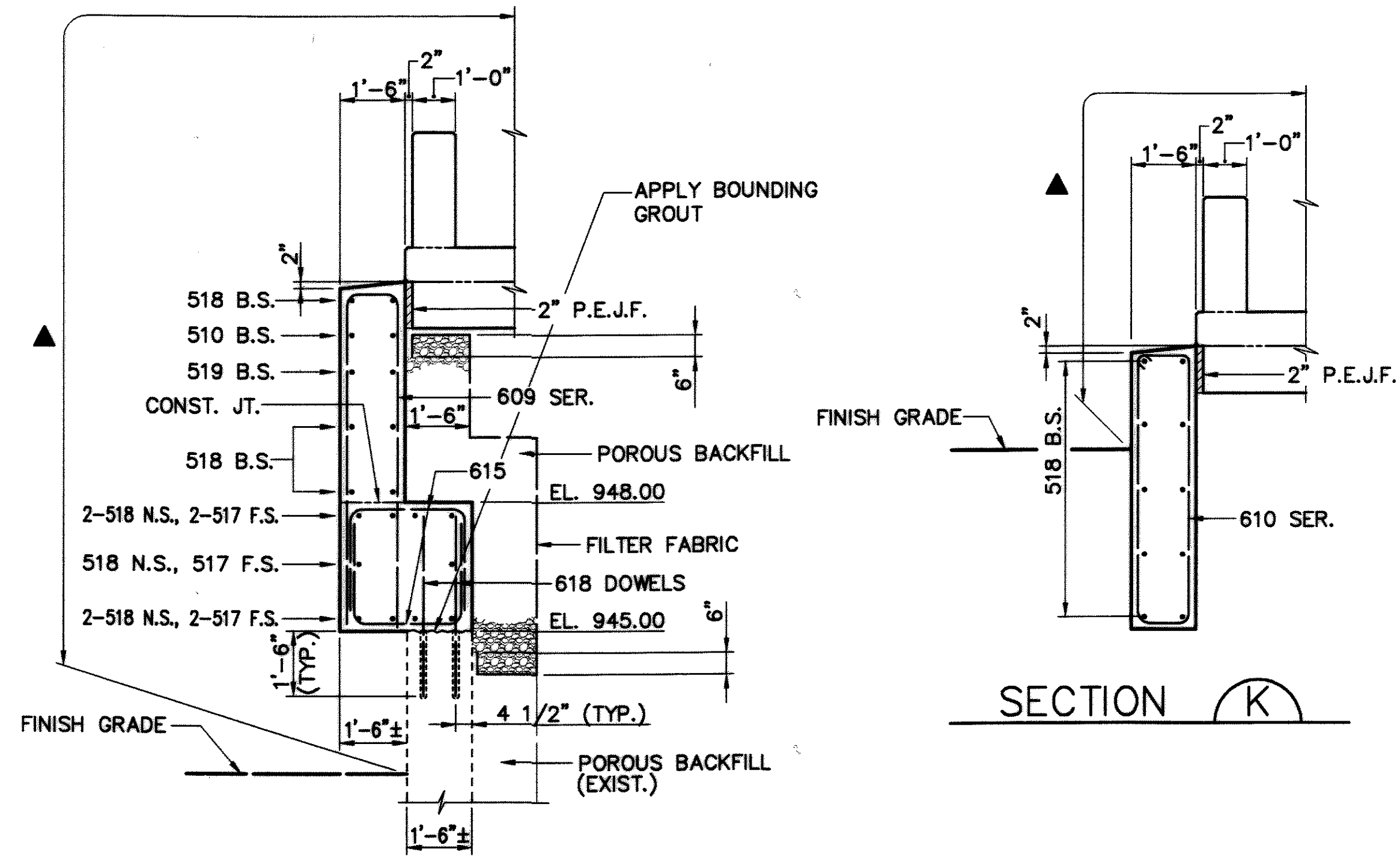
- LEGEND:**
- ▲ LIMITS OF ITEM 864-SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
 - ⊙ NEOPRENE SHEETING, 3'-0" WIDE, TO EXTEND FULL LENGTH OF BRG. SEAT PLUS 1'-6" LAP ONTO WINGWALL EA. END.
 - INDICATES LIMITS OF VERTICAL NEOPRENE SHEETING, 3'-0" WIDE, TYP. AT ALL WINGWALLS.
 - INCLUDED WITH LIGHTING QUANTITIES, SH. NO. 47/67



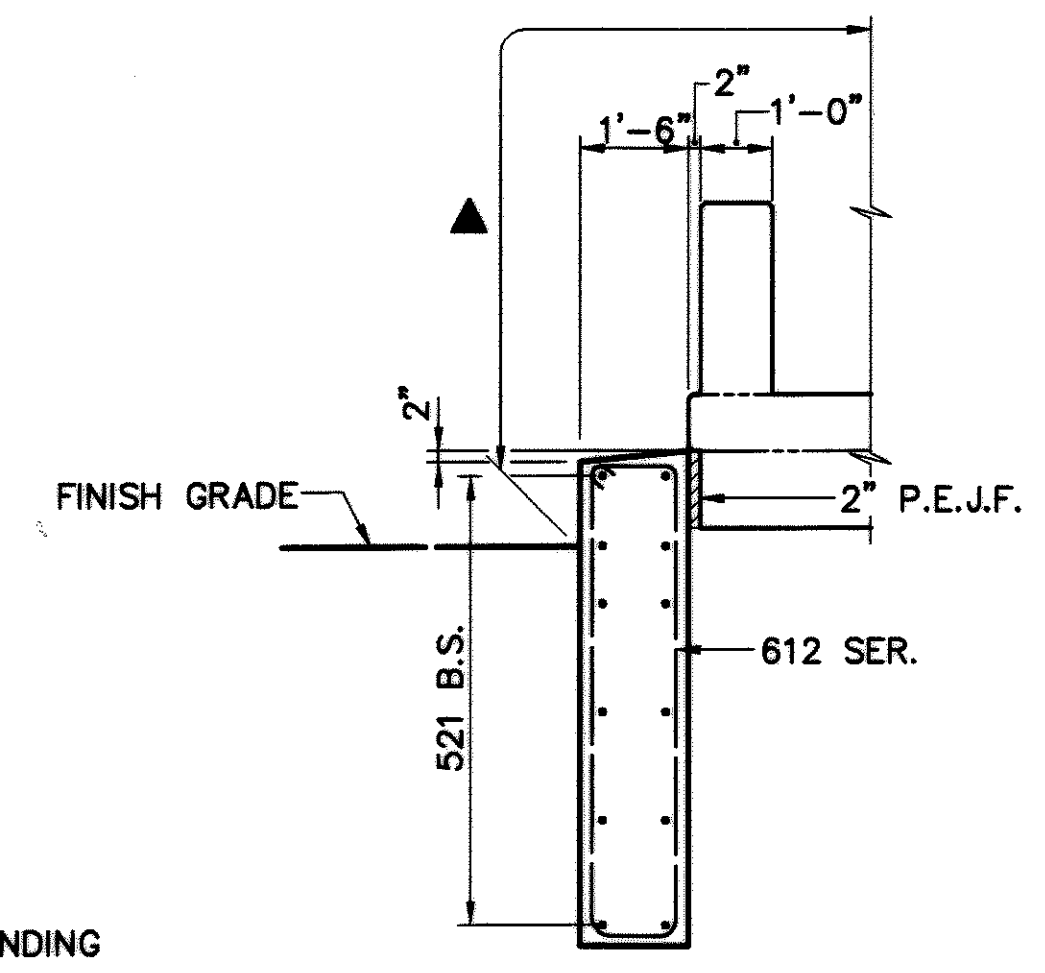
NORTHWEST WINGWALL ELEVATION



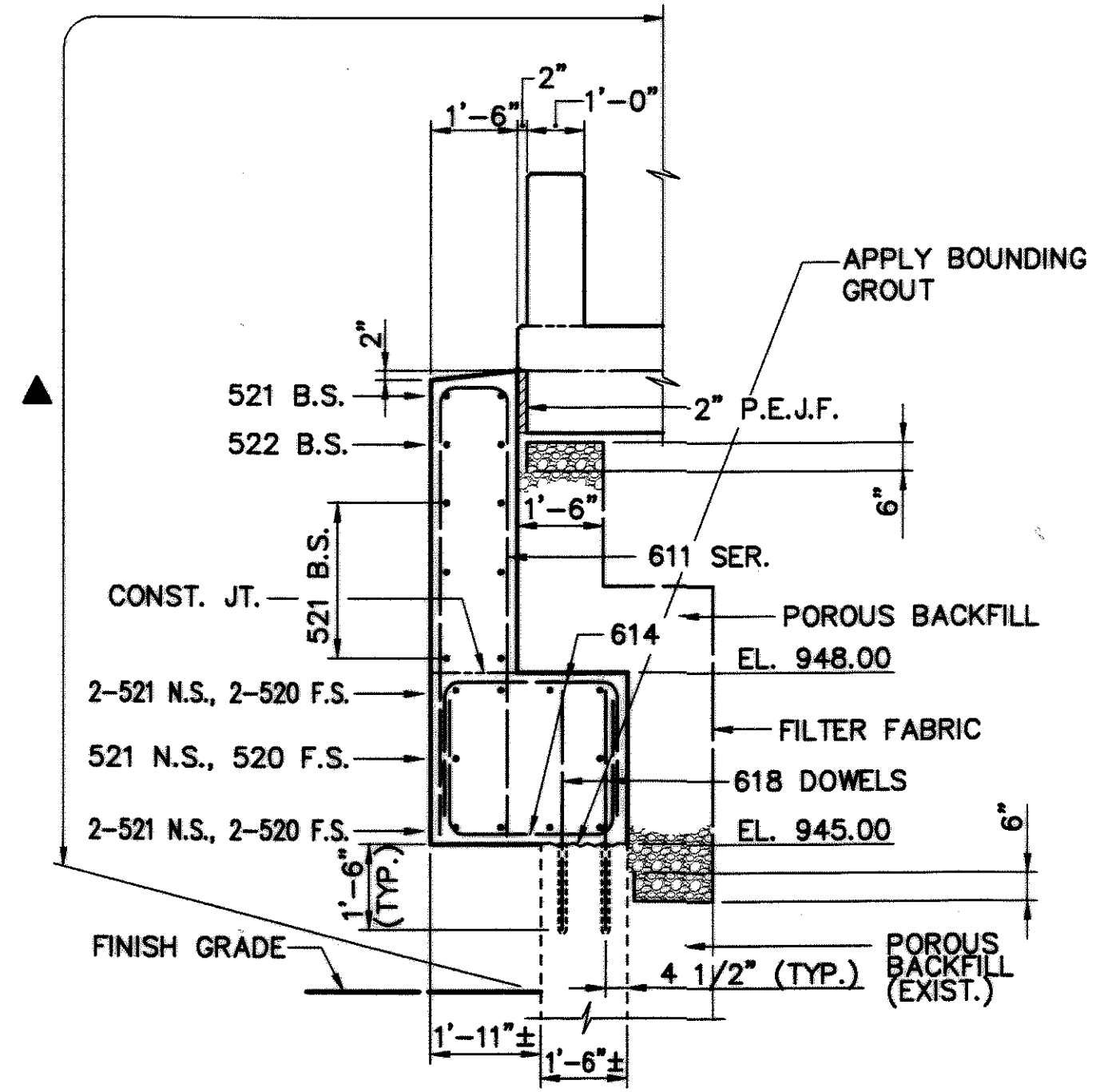
NORTHEAST WINGWALL ELEVATION



SECTION J



SECTION M



SECTION L

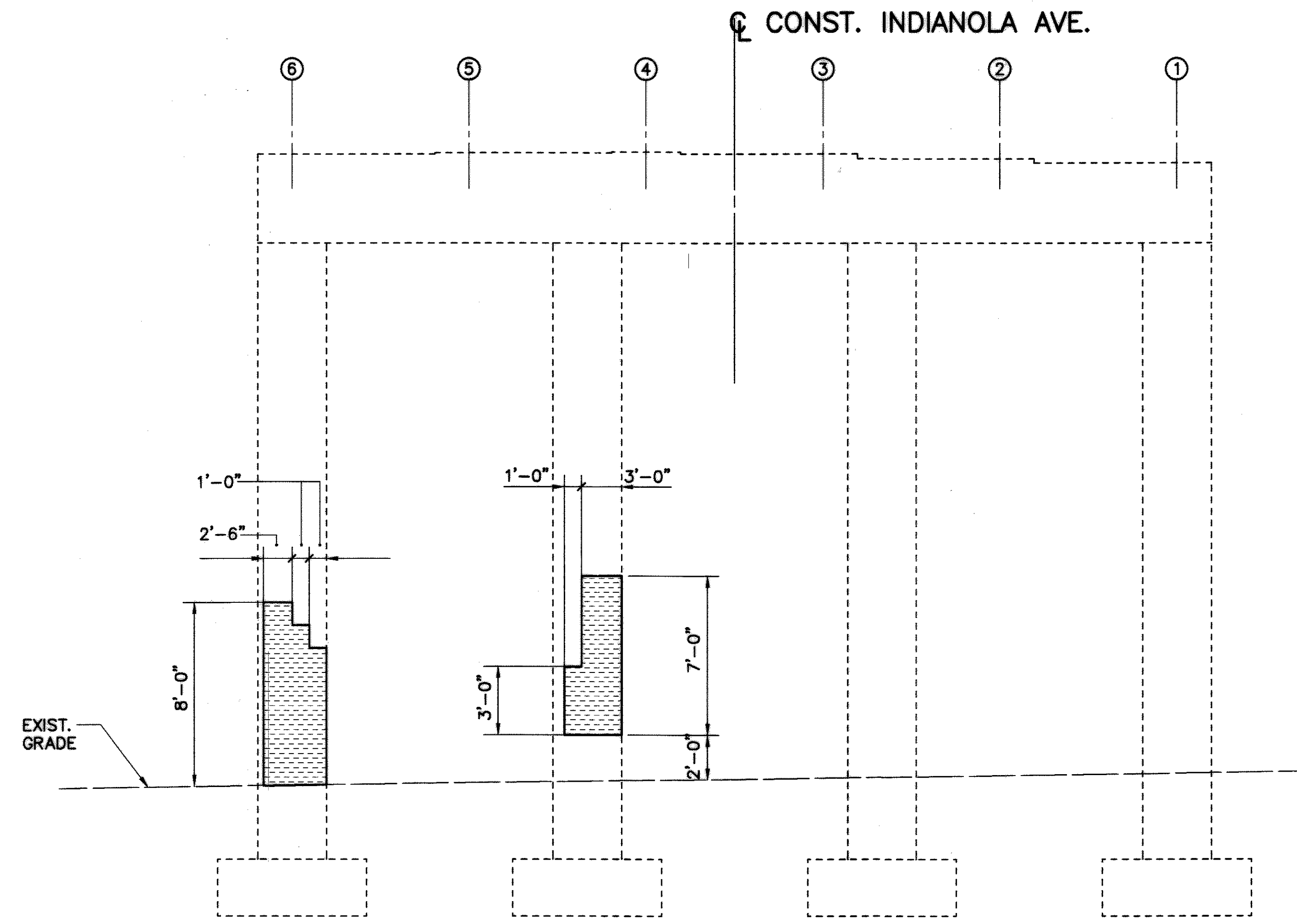
- NOTES:**
1. PREFIX "A" WILL BE ADDED TO ALL REBAR MARKS SHOWN FOR THE ABUTMENTS EXCEPT THOSE BARS PREFIXED WITH "S." SEE REINFORCING SCHEDULE.
 2. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
 3. FOR ADDITIONAL NOTES, SEE SHT. NO. 5720.

LEGEND:
 ▲ LIMITS OF "ITEM 864-SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)"

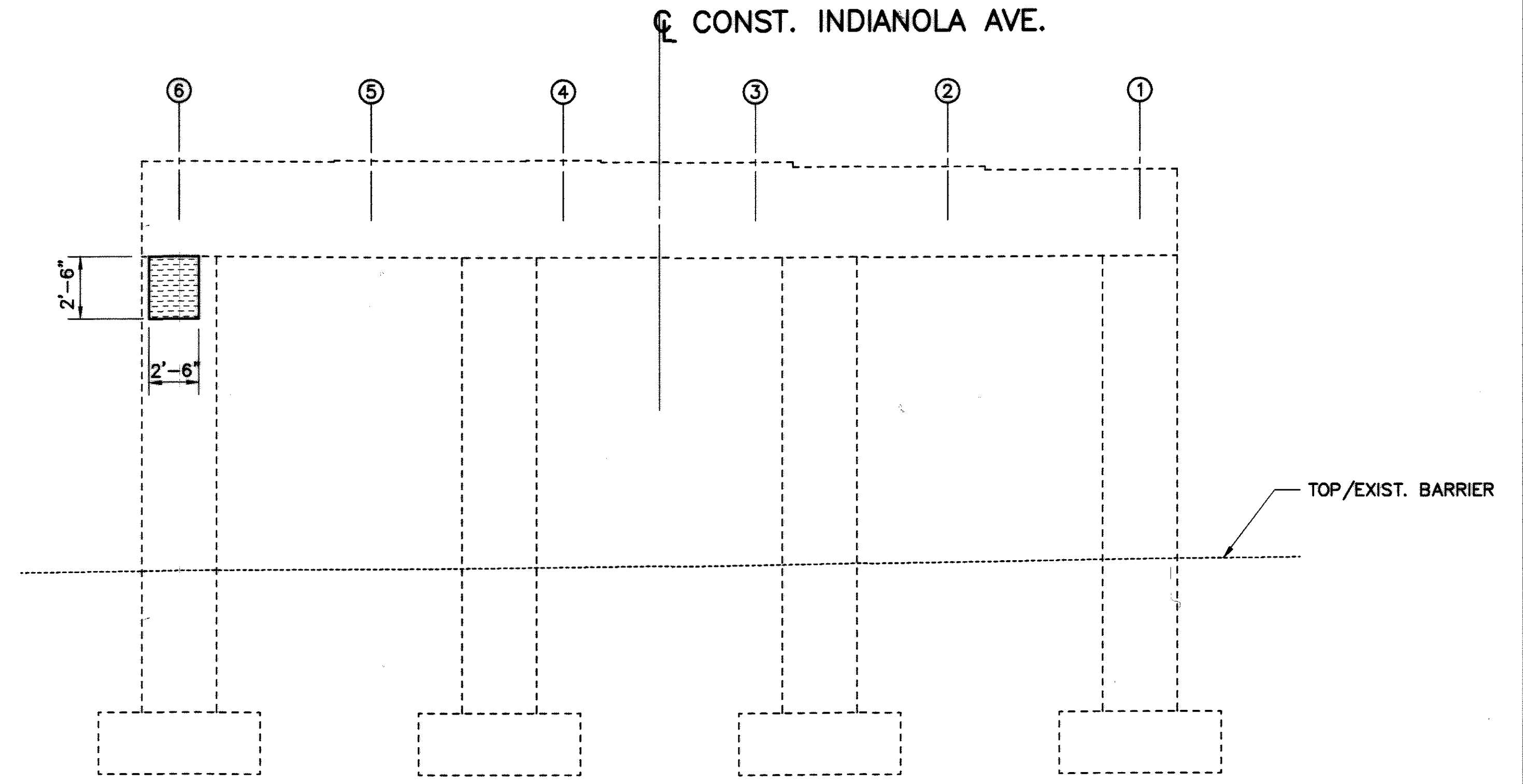
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 Technician: AELLERMAN

DESIGNED	DATE
R.H.C.	8-01-03
CHECKED	REVIEWED
P.J.W.	K.S.J.
DRAWN	STRUCTURE FILE NUMBER
R.P.R.	5007429
DESIGNED	REVIEWED
R.H.C.	K.S.J.
CHECKED	STRUCTURE FILE NUMBER
P.J.W.	5007429
FRWD. ABUTMENT DETAILS BRIDGE NO. MAH - 680 - 0818 INDIANOLA AVE. OVER I-680	
MAH-680-8.18	
9	20
56	67

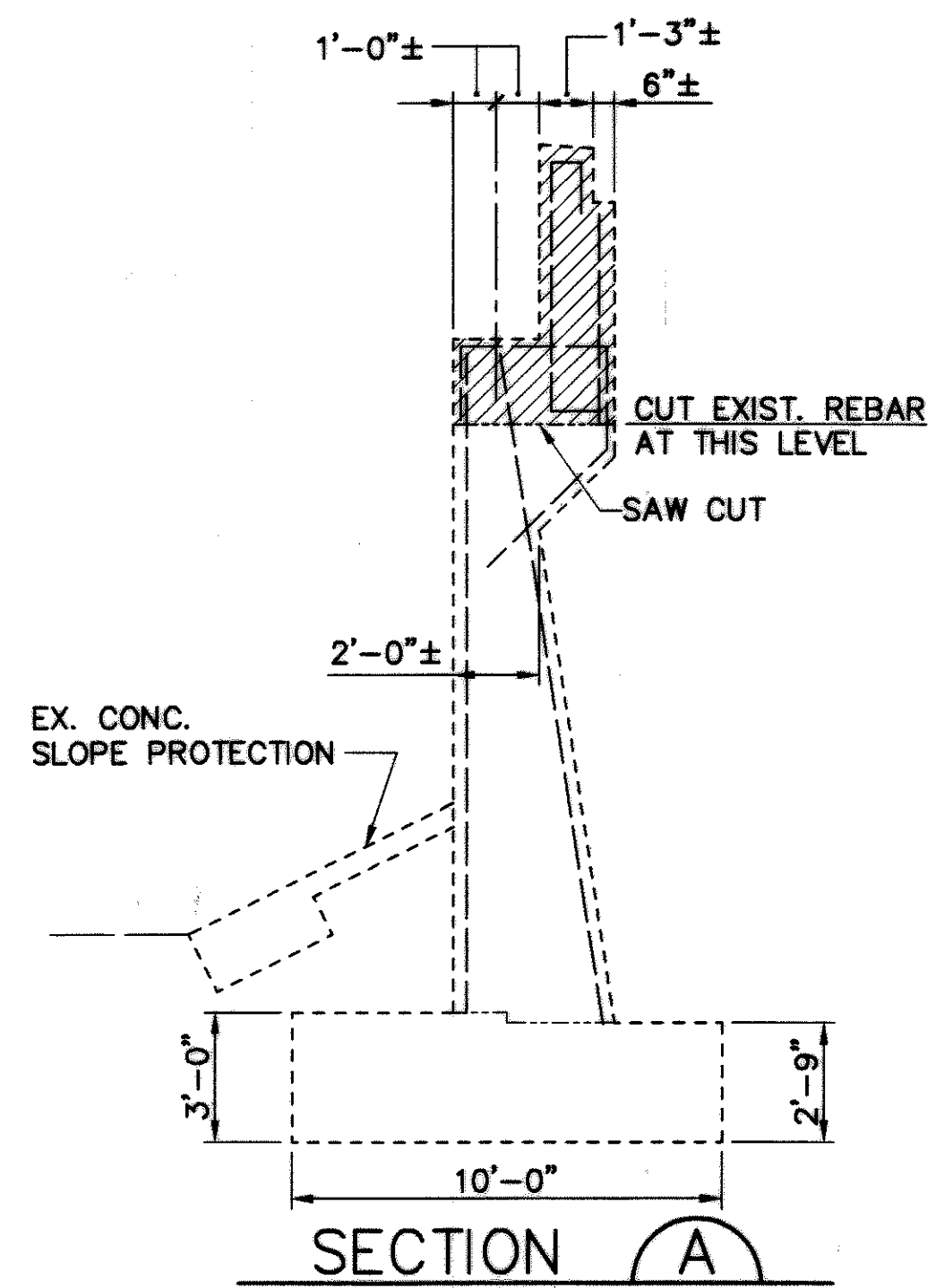
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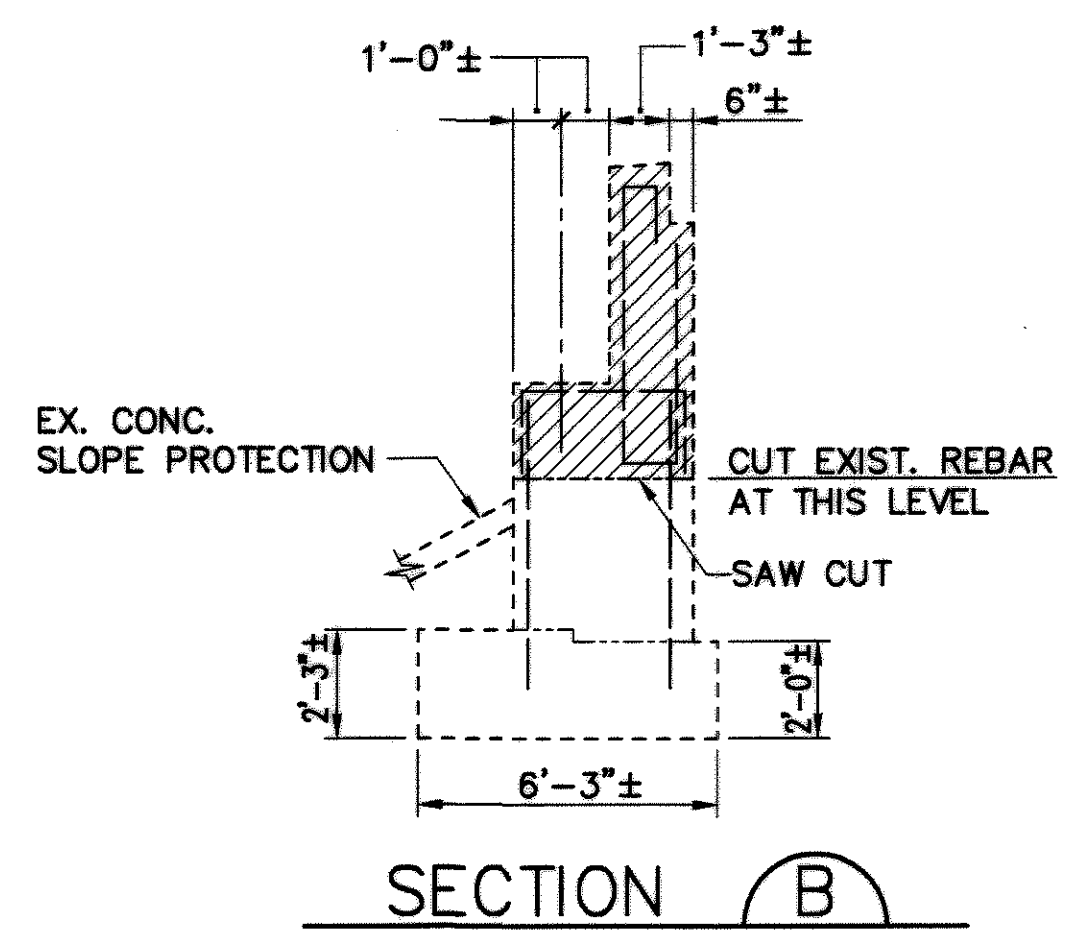
PIER NO. 1 - NORTH ELEV.



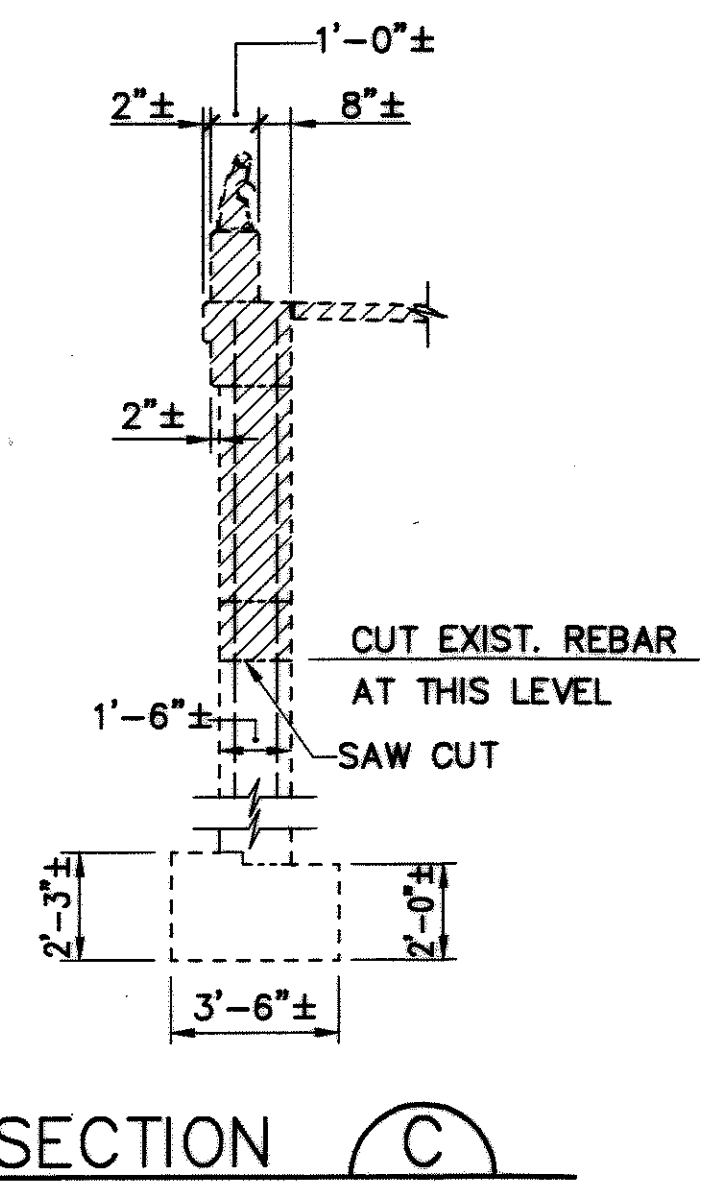
PIER NO. 2 - NORTH ELEV.



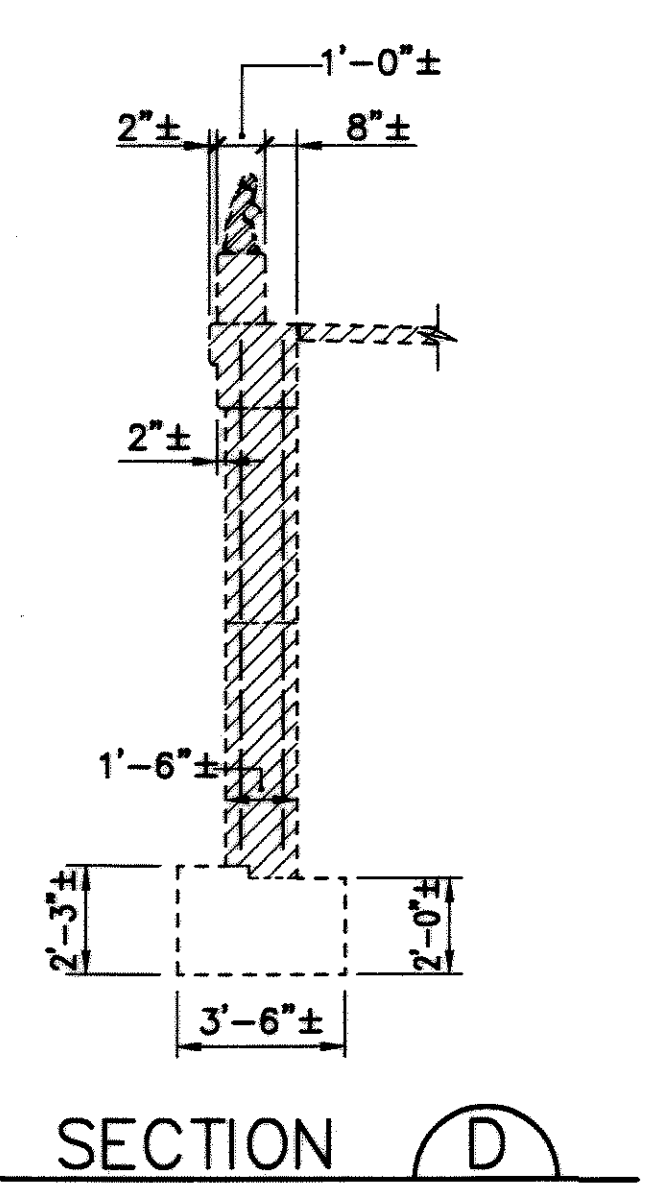
SECTION A



SECTION B



SECTION C

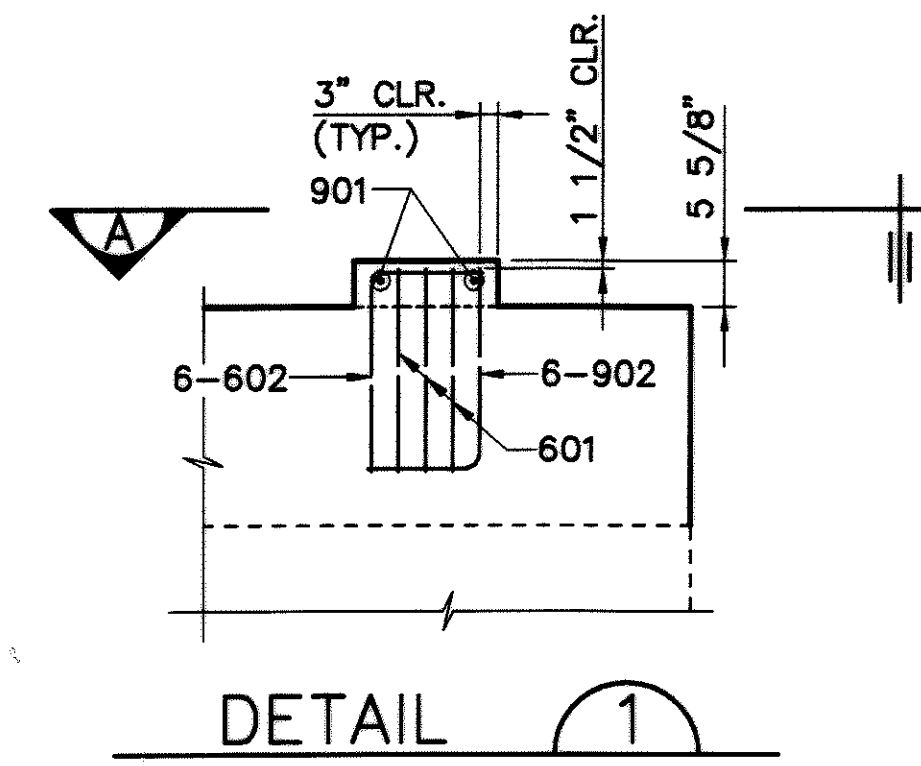
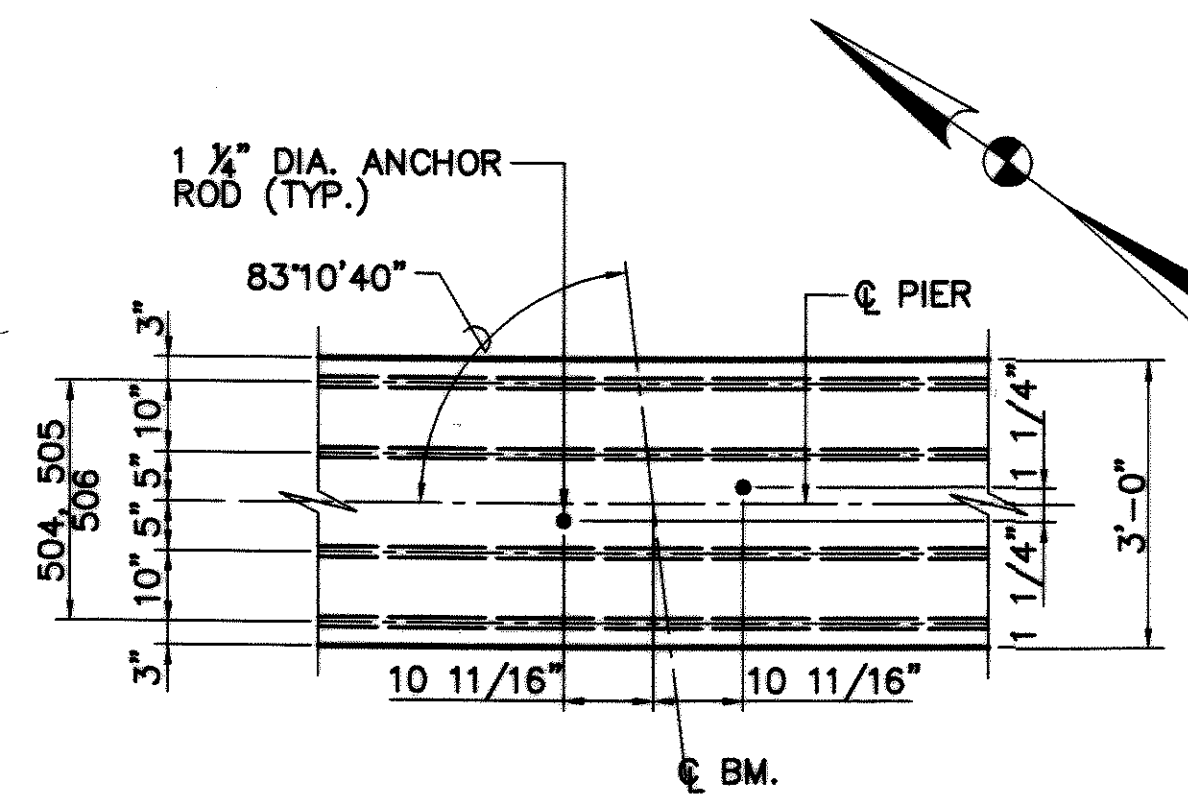
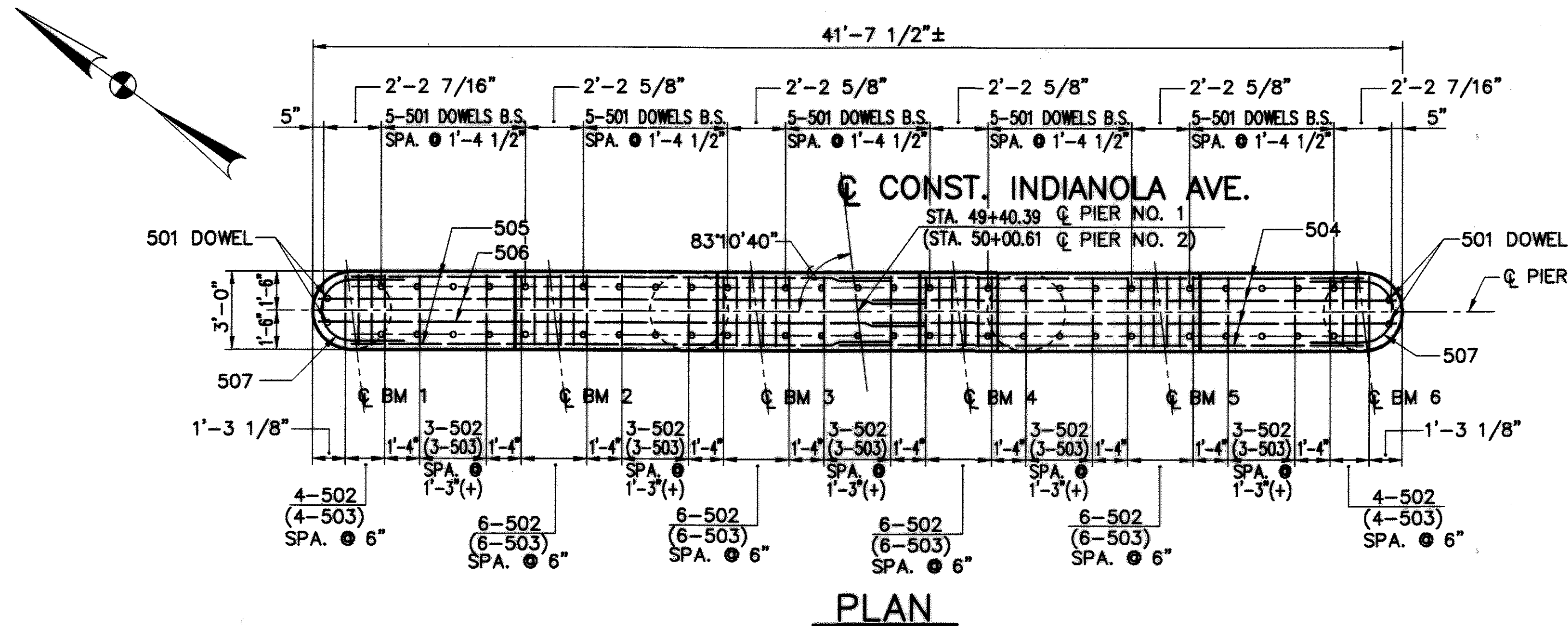


SECTION D

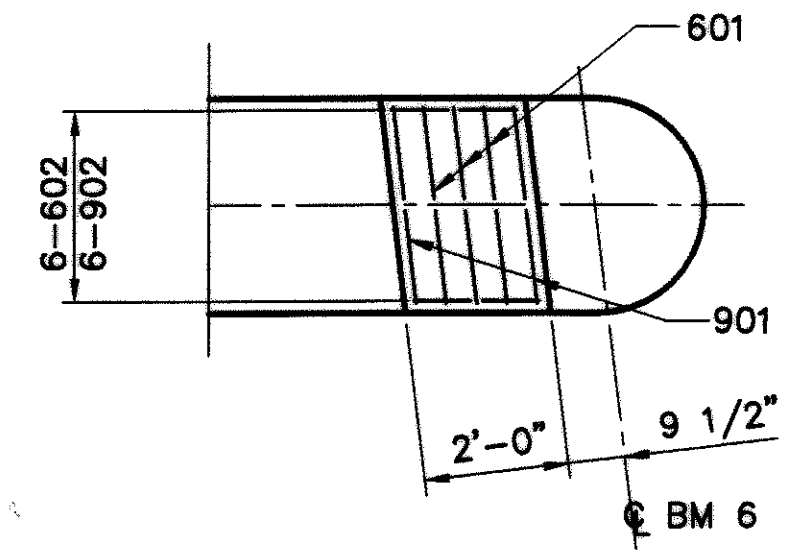
LEGEND
 INDICATES AREA TO BE PATCHED PER ITEM 519, PATCHING CONCRETE STRUCTURE, AS PER PLAN.

NOTE:
 FOR LOCATION OF SECTIONS A, B, C & D, SEE SHT. NO. 4/20.

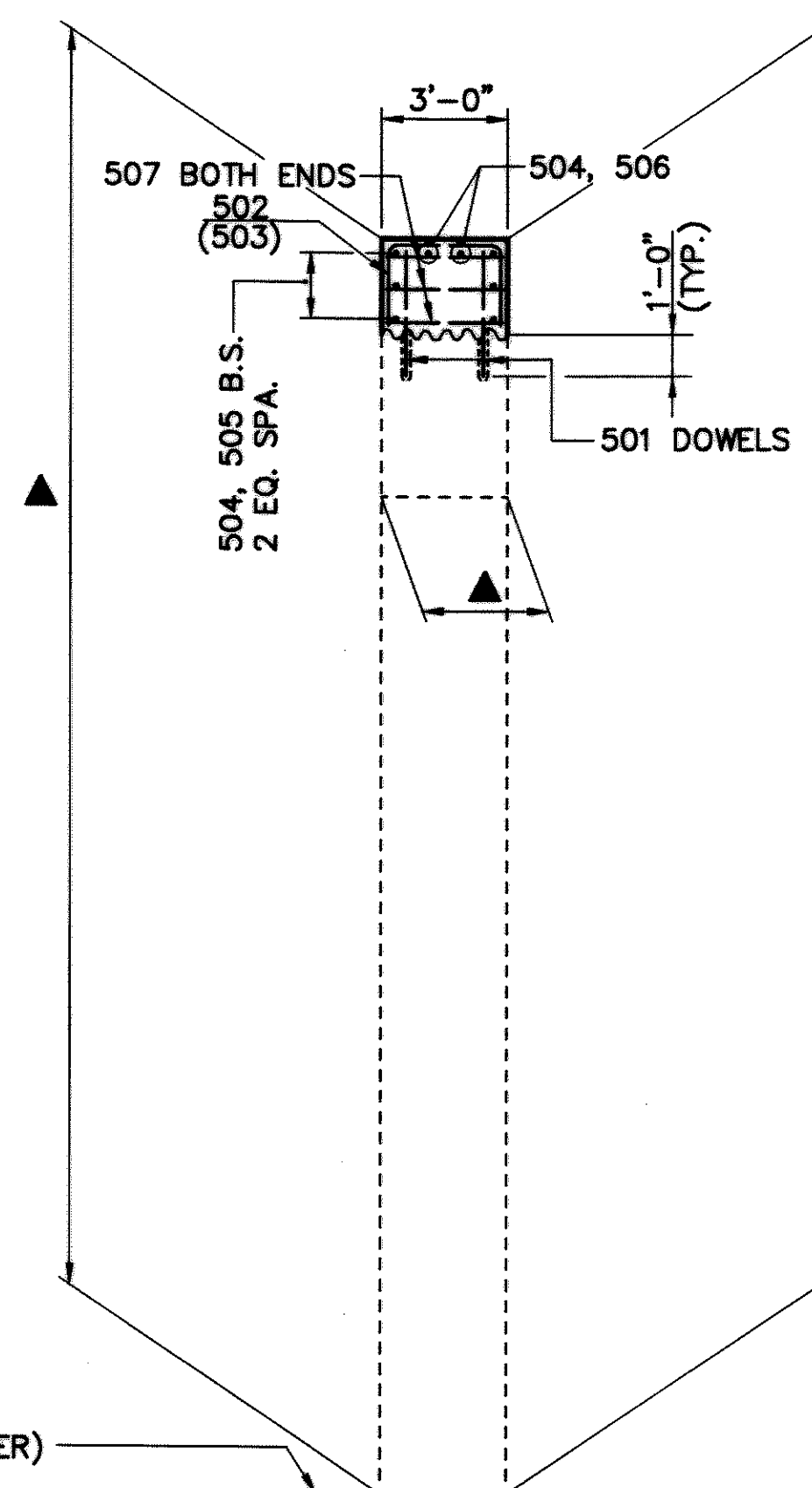
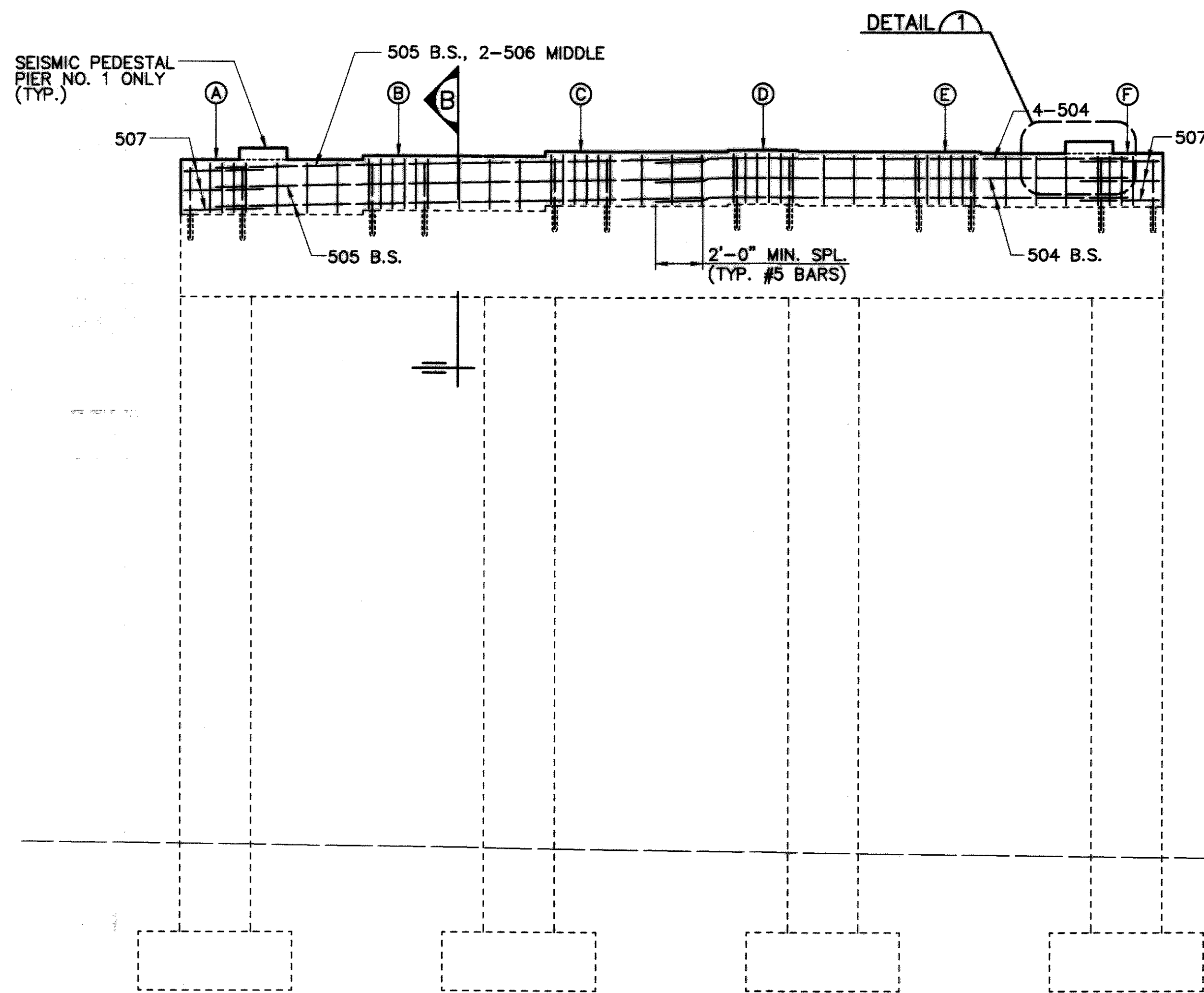
STRUCTURE INSPECTION PERFORMED IN NOVEMBER, 2002.



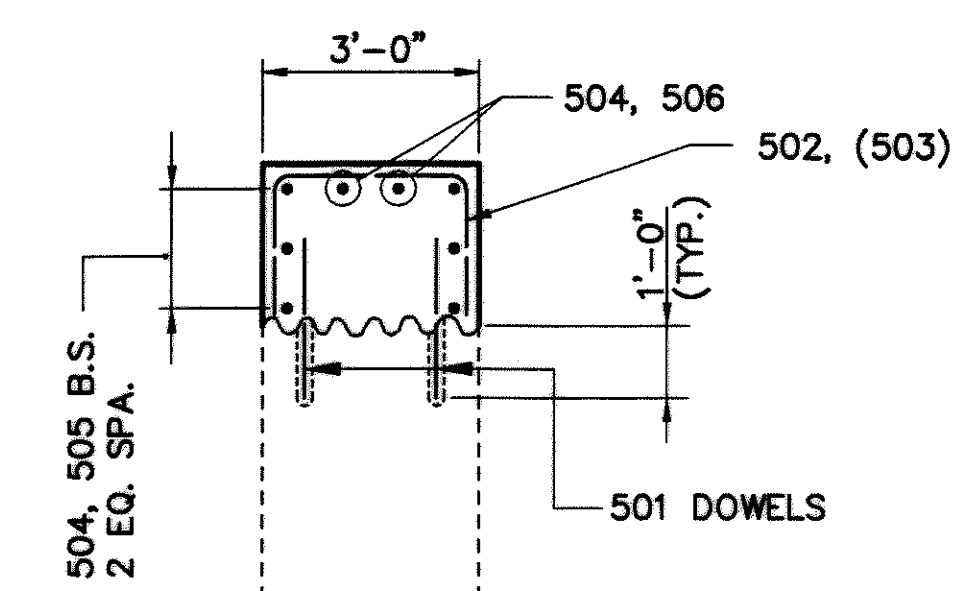
ANCHOR ROD LAYOUT
PIER NO. 2



VIEW A
PIER NO. 1 ONLY



END VIEW



SECTION B

PIER NO. 1 AS SHOWN, PIER NO. 2 SIMILAR AND AS NOTED IN ().

NOTES:

1. PREFIX "P" WILL BE ADDED TO ALL REBAR MARKS FOR THE PIERS. SEE REINFORCING SCHEDULE.
2. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
3. MINIMUM CLEARANCE TO REBARS SHALL BE 2" UNLESS NOTED OTHERWISE.
4. BRIDGE SEAT REINFORCING, SETTING ANCHORS (PIER NO. 2): ACCURATELY PLACE REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT TO AVOID INTERFERENCE WITH THE DRILLING OF THE BEARING ANCHOR HOLES OR THE PRE-SETTING OF BEARING ANCHORS.
5. FOR BEARING DETAILS, SEE SH. NOS. 12/20 & 13/20.

LEGEND:

▲ LIMITS OF "ITEM 864 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)."

ELEVATIONS						
	A	B	C	D	E	F
PIER NO. 1	960.72	960.90	961.11	961.18	961.12	961.06
PIER NO. 2	955.84	955.98	956.17	956.24	956.20	956.14

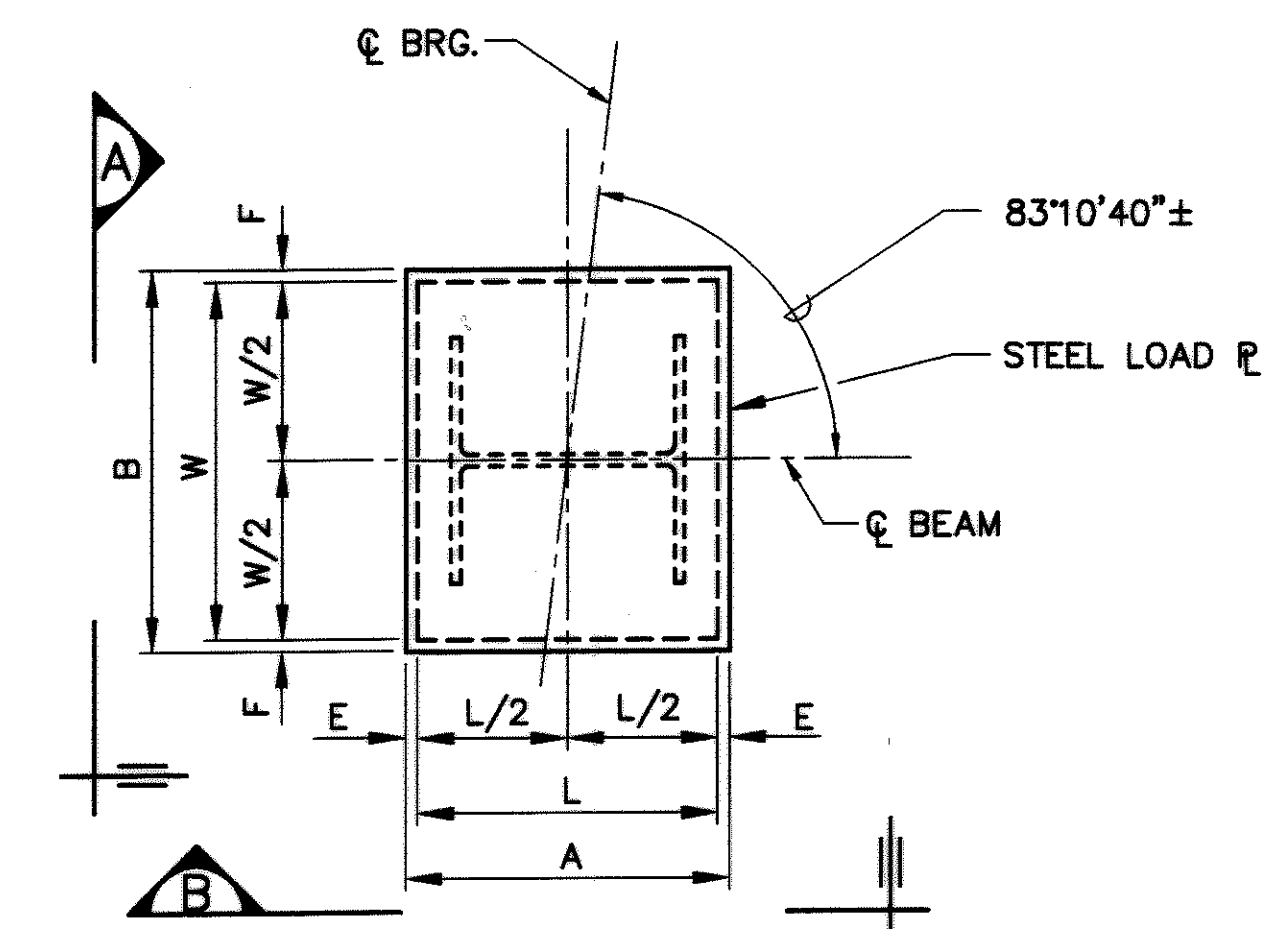
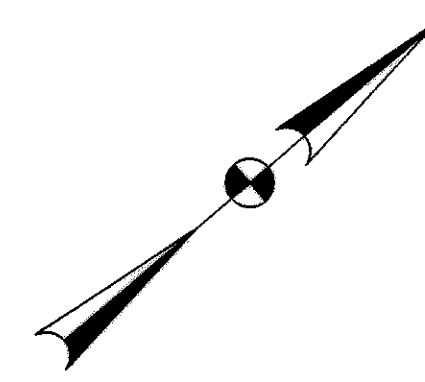
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 Date: 01-26-04
 Technician: AELLERMAN

DESIGN AGENCY: CPD ASSOCIATES
 DATE: 8-1-03
 REVIEWED: K.S.J.
 DRAWN: R.P.R.
 DESIGNED: B.J.M.
 CHECKED: P.J.W.
 STRUCTURE FILE NUMBER: 5007428
 PIER REHAB. DETAILS
 BRIDGE NO. MAH - 680 - 0818
 INDIANOLA AVE. OVER I-680
 MAH-680-8.18
 11/20
 58/67

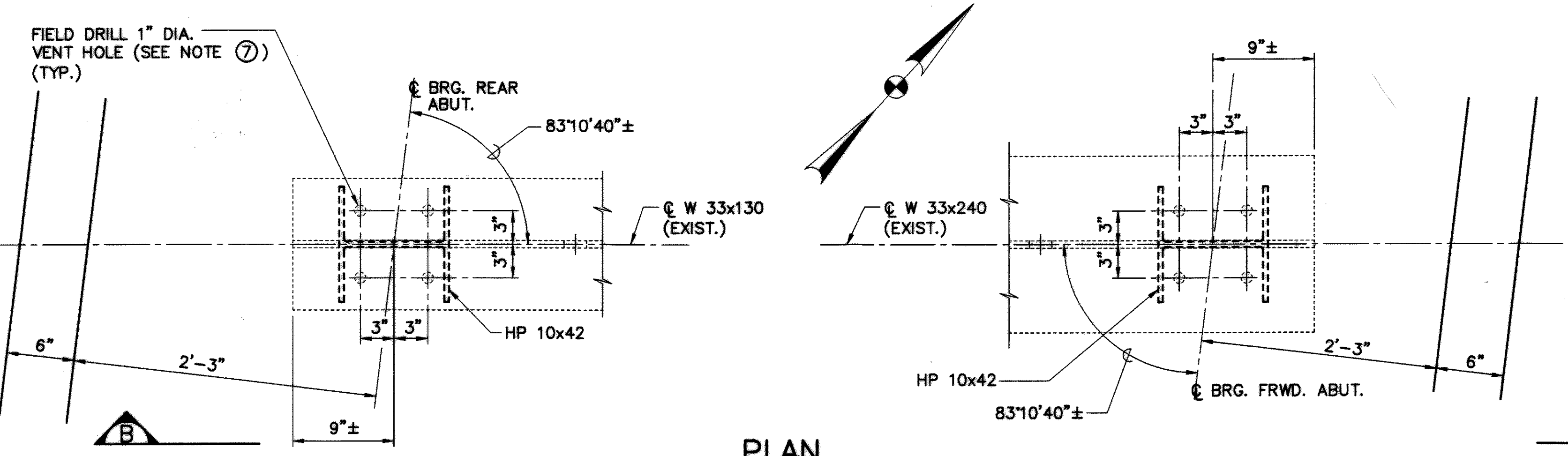
* W/O IMPACT

BEARING SCHEDULE

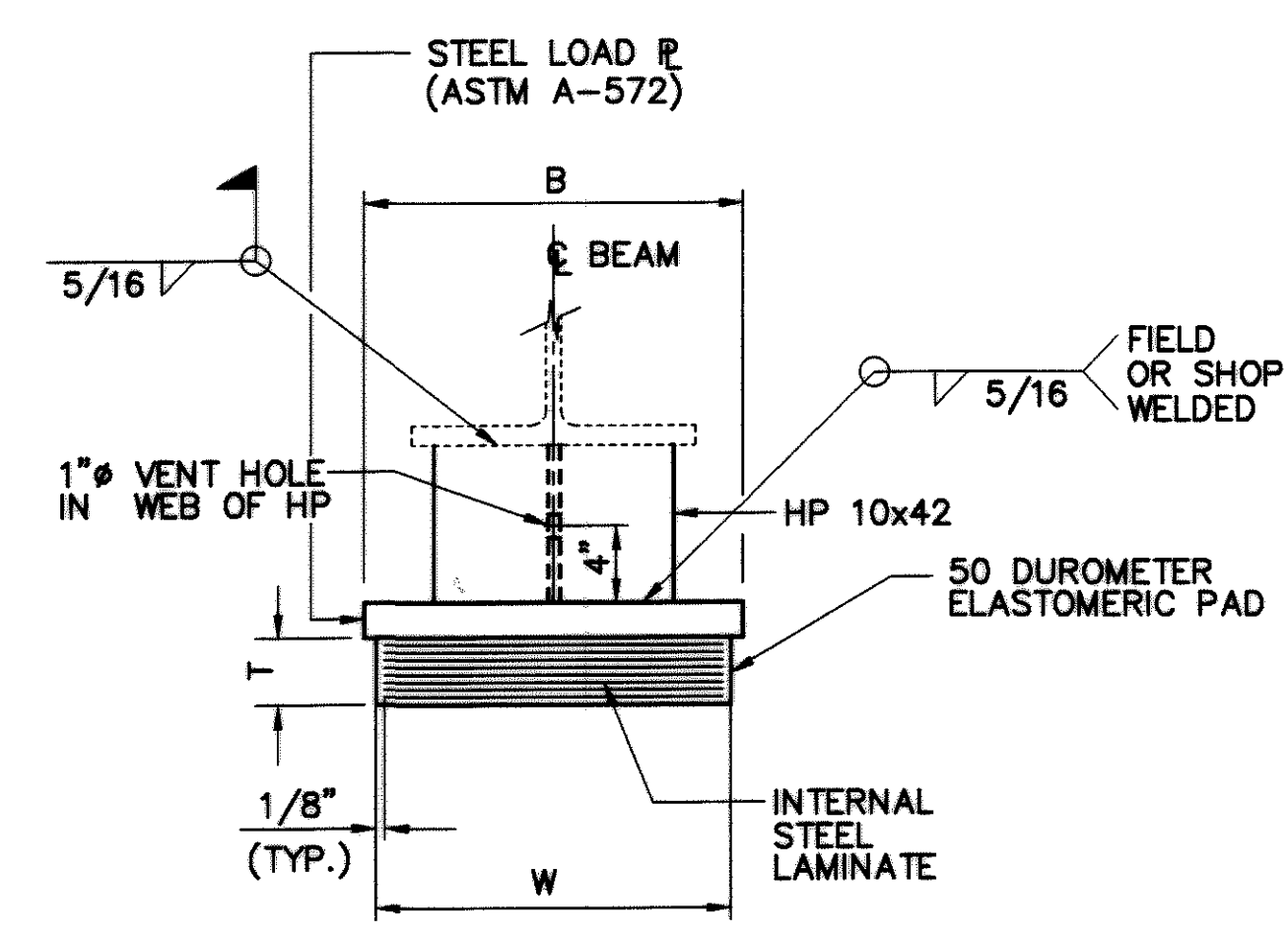
SUB-STRUCTURE	STEEL LOAD PLATE						ELASTOMERIC PAD						STEEL LAMINATES		TYPE	MIN. DEAD LOAD (K)	MAX. DEAD LOAD (K)	LIVE * LOAD (K)	TOTAL LOAD (K)
	A	B	E	F	G	H	L	W	T	NO. OF INTER. LAYERS	ti	te	NO.	THICK.					
REAR ABUT.	10 1/2"	1'-2"	3/4"	1/2"	1 1/2"	-	9"	1'-1"	2.78"	7	0.26"	0.18"	8	0.0747"	EXP.	40.8	47.0	60.5	107.5
PIER NO. 1	11"	1'-5"	1/2"	1/2"	1 7/8"	2 3/4"	10"	1'-4"	2.30"	5	0.29"	0.20"	6	0.0747"	EXP.	68.7	86.0	69.7	155.7
PIER NO. 2	11 1/2"	2'-1 1/2"	1/2"	3 3/4"	2"	2 15/16"	10 1/2"	1'-6"	1.99"	4	0.30"	0.21"	5	0.0747"	FIX.	107.3	132.1	74.6	206.7
FRWD. ABUT.	10 1/2"	1'-3 1/2"	1/2"	1/2"	1 1/2"	-	9 1/2"	1'-2 1/2"	2.94"	7	0.28"	0.19"	8	0.0747"	EXP.	57.4	67.0	64.9	131.9



PLAN
EXPANSION BEARING DETAIL
ABUTMENTS



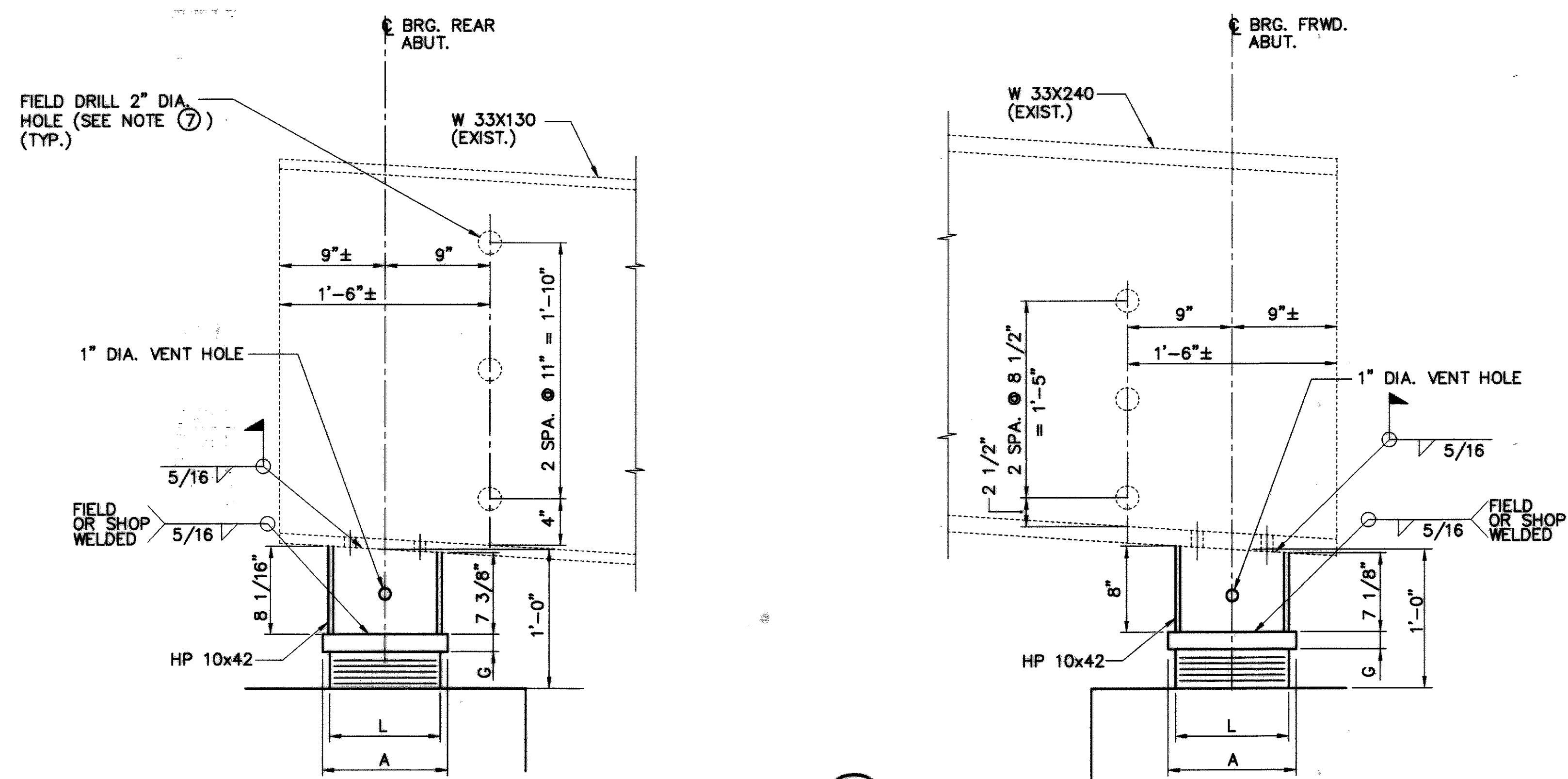
PLAN



VIEW A

NOTES:

- ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION I, SECTION 14.6.6 (METHOD A) OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.
- WELDING: CONTROL WELDING SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300°F AS DETERMINED BY USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.
- THE STEEL LOAD PLATE AND HP SHAPE FOR BEARINGS SHALL BE ASTM A572 STEEL, GRADE 50, PAINTED.
- THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.
- FOR EXPANSION AND FIXED BEARING DETAILS AT PIERS, SEE SHT. NO. 13/20.
- ANCHOR RODS SHALL BE GALVANIZED AS PER C&MS 711.02. ANCHOR RODS SHALL EXTEND 1" ABOVE THE LOAD PLATE (PIER NO. 2 BEARINGS).
- FIELD DRILLING OF HOLES IN BEAM ENDS AND THE COST OF FURNISHING AND INSTALLING HP 10X42 STEEL SHAPES AT THE ABUTMENT BEARINGS ARE INCLUDED WITH "ITEM 516-ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN," FOR PAYMENT.
- BEARING REPOSITIONING: IF THE STEEL IS ERECTED AT AN AMBIENT TEMPERATURE HIGHER THAN 80°F OR LOWER THAN 40°F AND THE BEARING SHEAR DEFLECTION EXCEEDS 1/6 OF THE BEARING HEIGHT AT 60°F (±) 10°F, RAISE THE BEAMS OR GIRDERS TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60°F (±) 10°F.



VIEW B
BEAM END DETAIL

Conf. File: S:\CIVIL\2001\680\11\1\WORK\STRUCTURE\DWG\2001168_111.BRG.DWG
 Date: 01-26-04 10:02 AM
 Technician: AELLERMAN

DESIGN AGENCY: GPD ASSOCIATES
 330 South Main Street, Suite 201, Akron, Ohio 44311
 330-972-2100, Fax 330-972-2101

DATE: 8-1-03
 REVIEWED: K.S.J.
 DRAWN: R.P.R.
 DESIGNED: R.H.C.
 CHECKED: P.J.W.

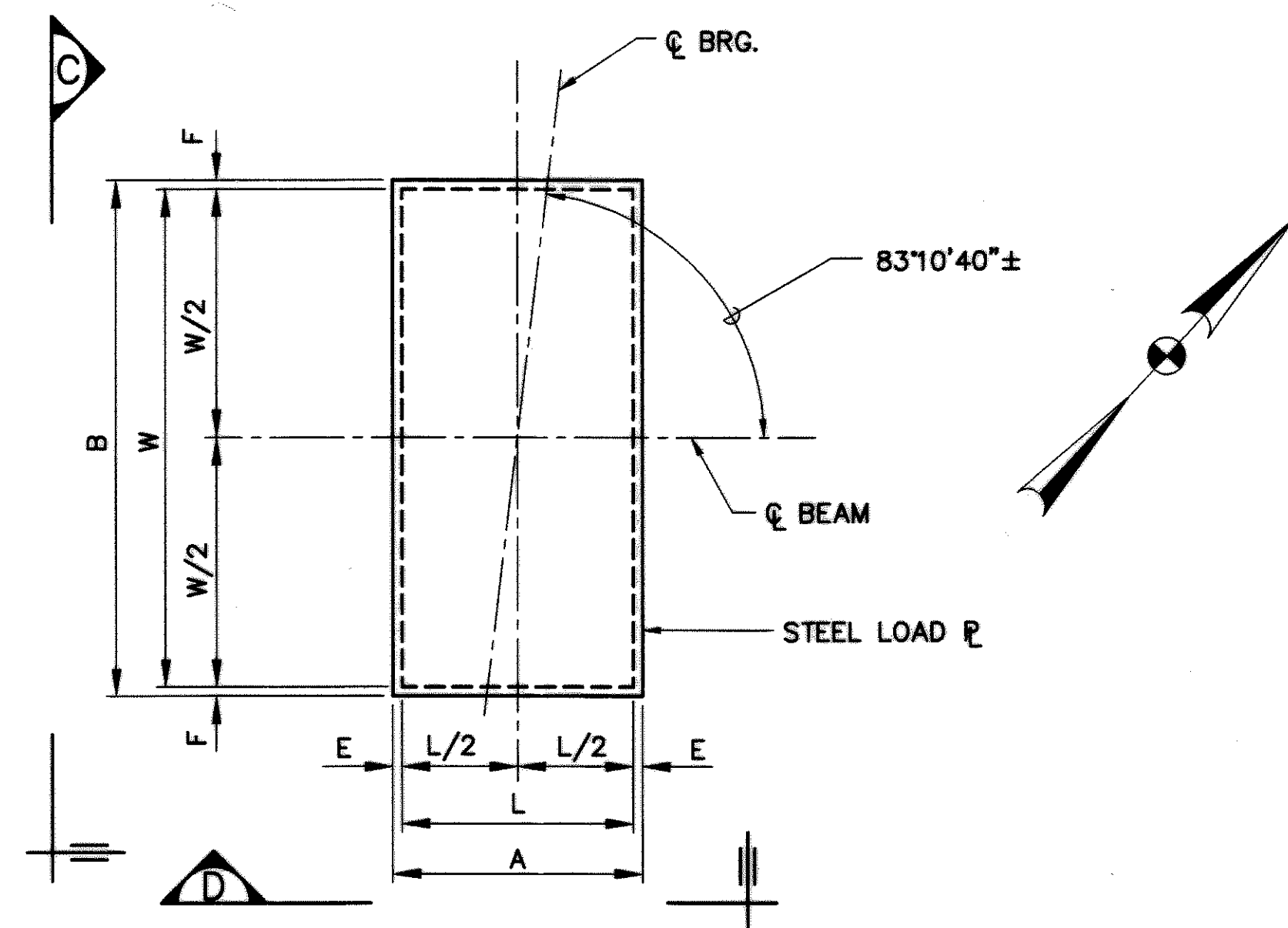
STRUCTURE FILE NUMBER: 5007429

LAMINATED ELASTOMERIC BEARINGS
 BRIDGE NO. MAH - 680 - 0818
 INDIANOLA AVE. OVER I-680

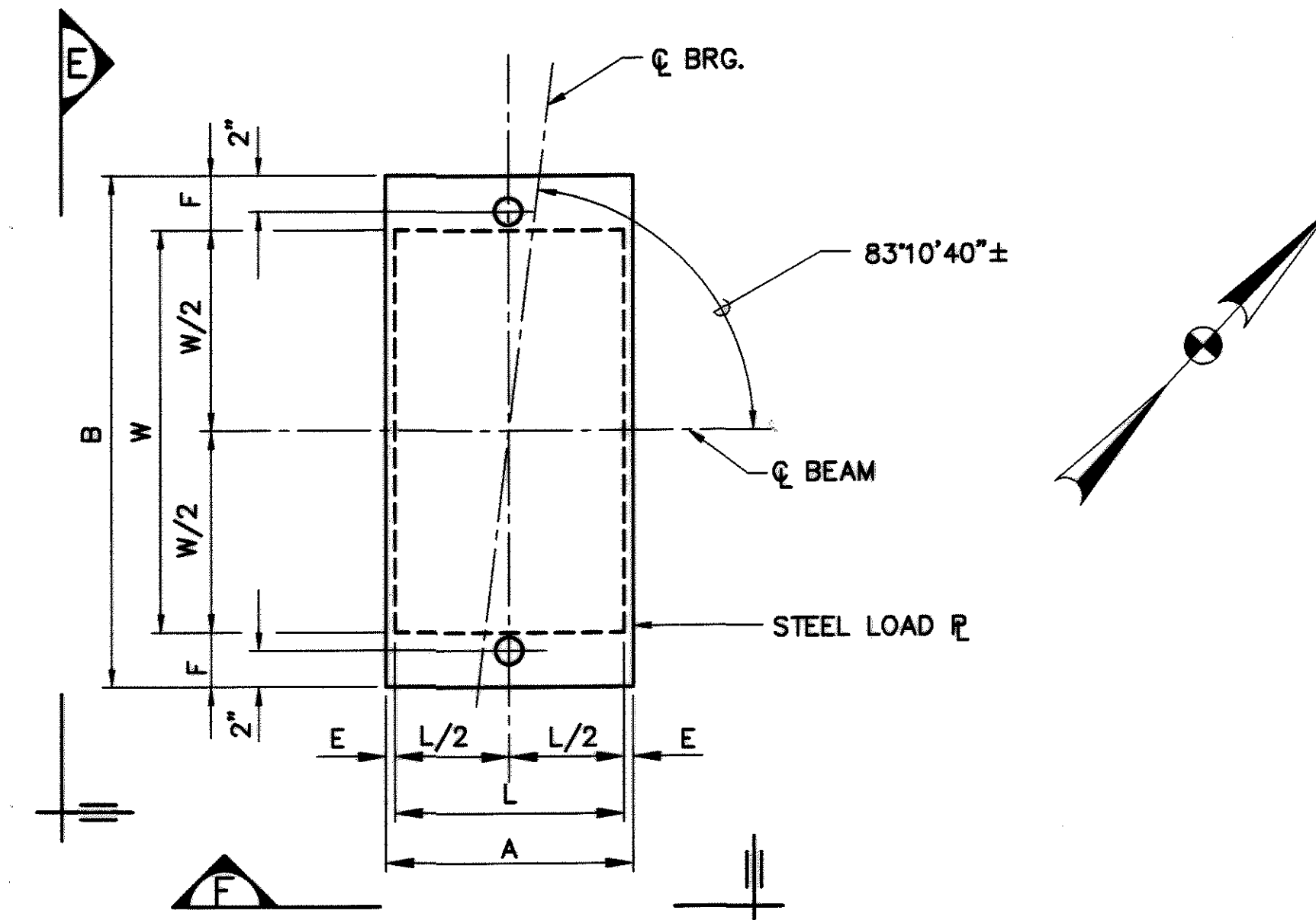
MAH-680-8.18

12/20

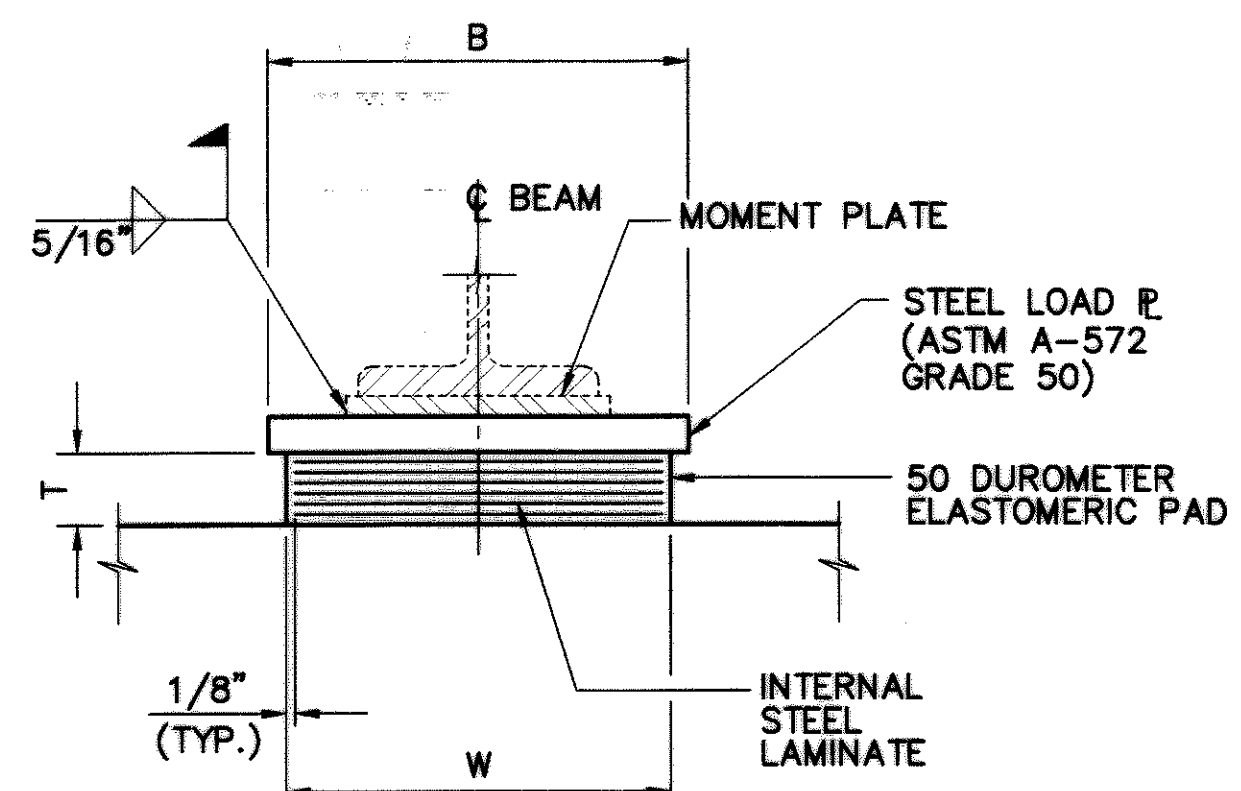
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67



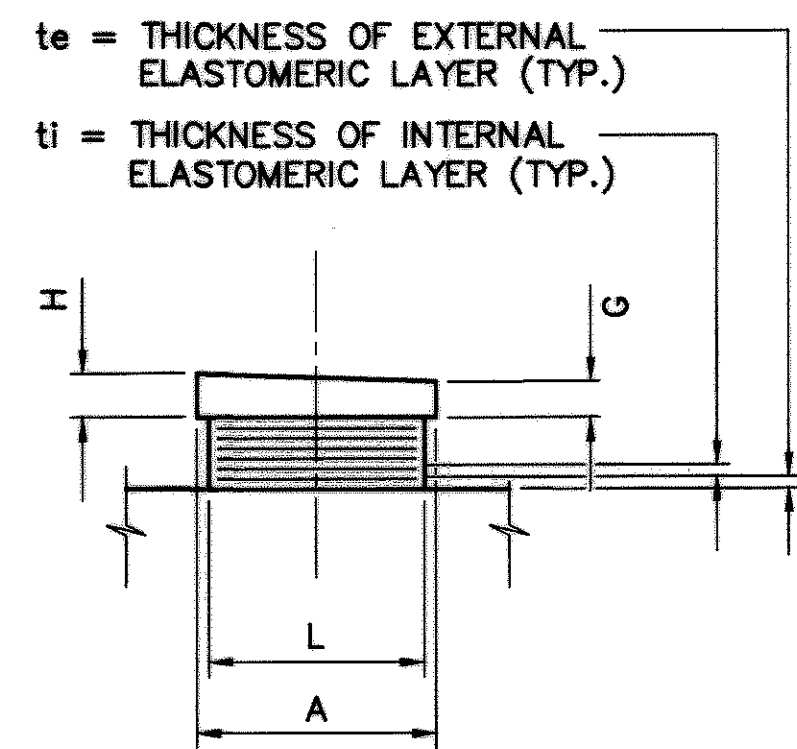
PLAN



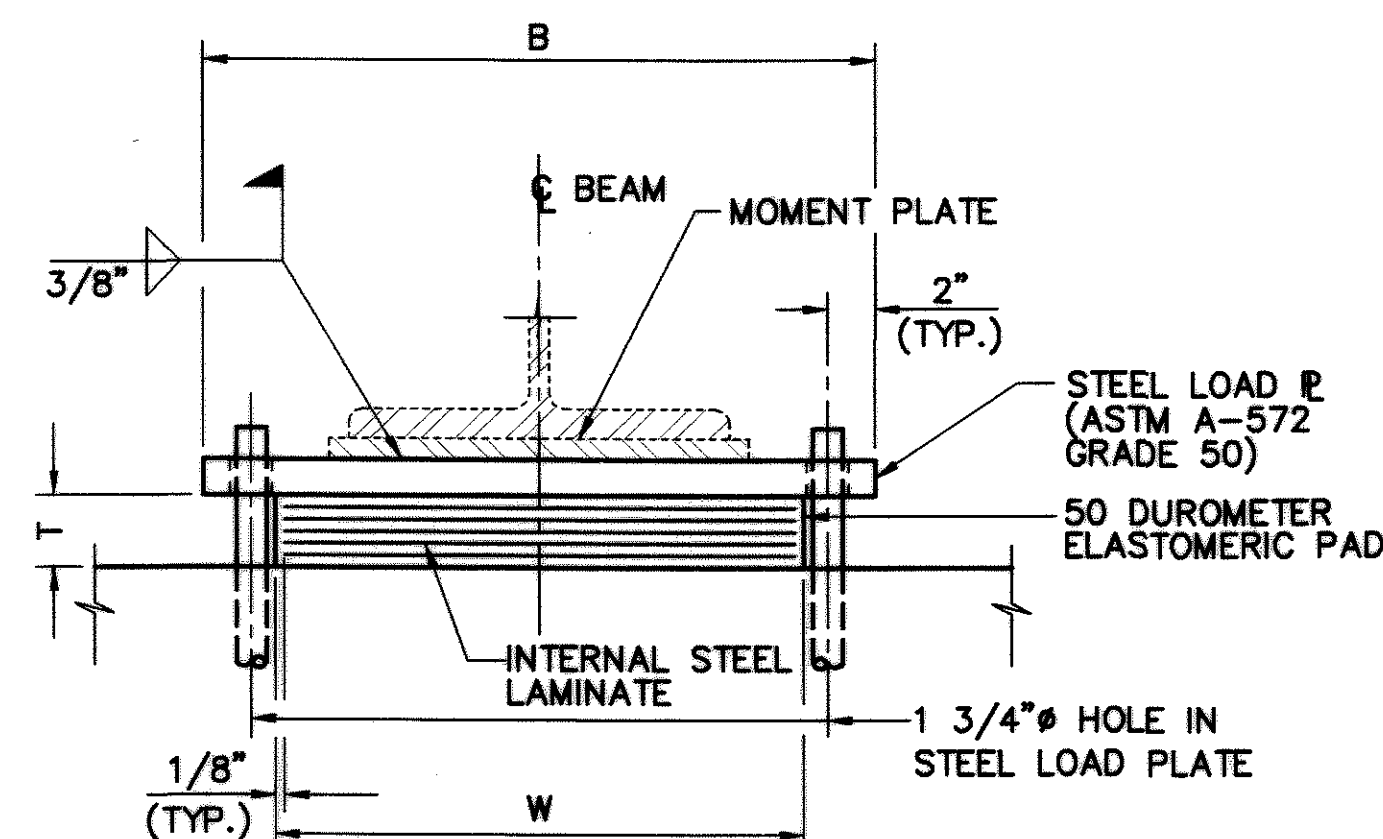
PLAN



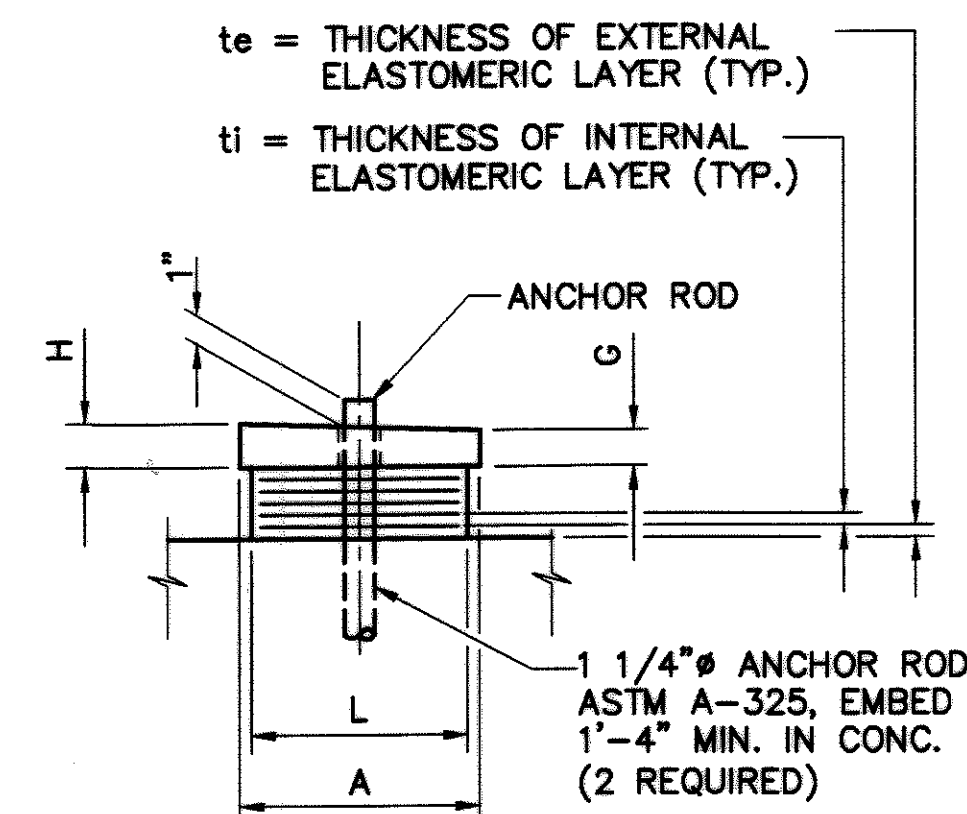
VIEW C



VIEW D



VIEW E



VIEW F

EXPANSION BEARING DETAIL

PIER NO. 1

FIXED BEARING DETAIL

PIER NO. 2

NOTES:

- FOR NOTES AND ADDITIONAL BEARING DETAILS, SEE SHT. NO. 12/20.

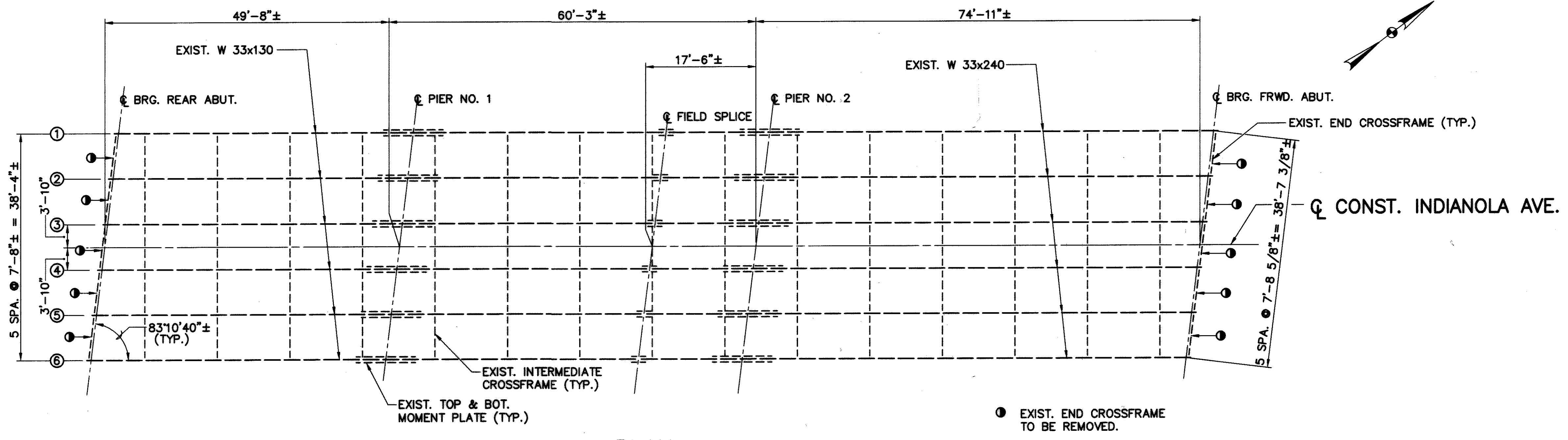
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 Date: 01-28-04 11:32 AM
 Technician: AELLERMAN

DESIGN AGENCY
 GPD ASSOCIATES
 330 South Main Street, Suite 201
 Akron, Ohio 44311
 330.572.100 / Fax 330.572.101

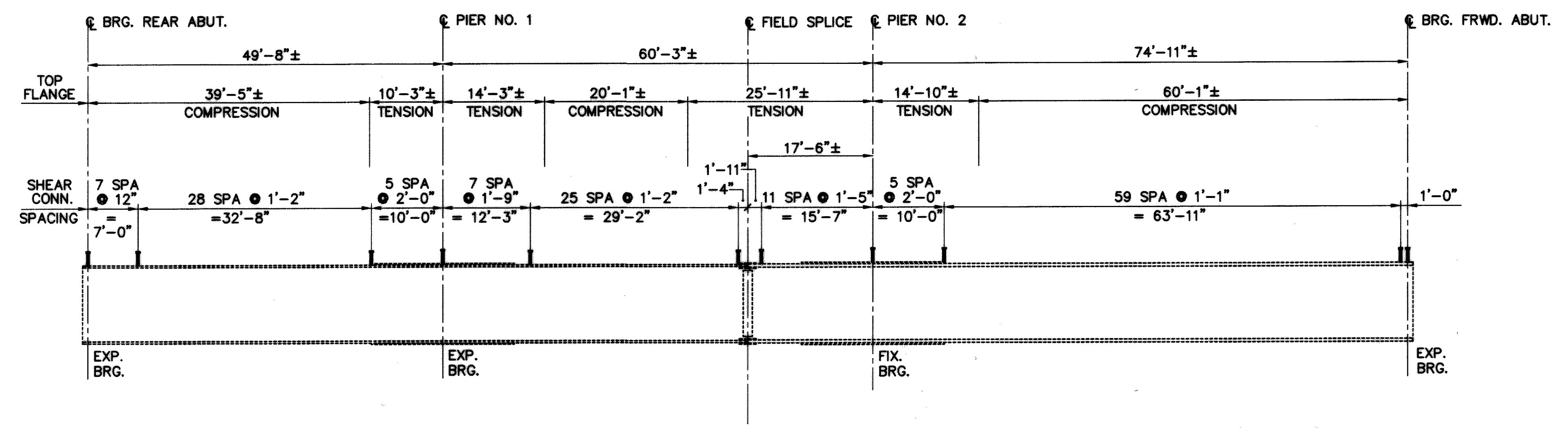
DESIGNED	R.H.C.	CHECKED	P.J.W.
DRAWN	R.P.R.	REVISED	
REVIEWED	K.S.J.	STRUCTURE FILE NUMBER	9007429
DATE	B-1-03		

LAMINATED ELASTOMERIC BEARINGS
 BRIDGE NO. MAH - 680 - 0818
 INDIANOLA AVE. OVER I-680

MAH-680-8.18



PLAN



ELEVATION

EX. BMS. 1 THRU. 6

NOTES:

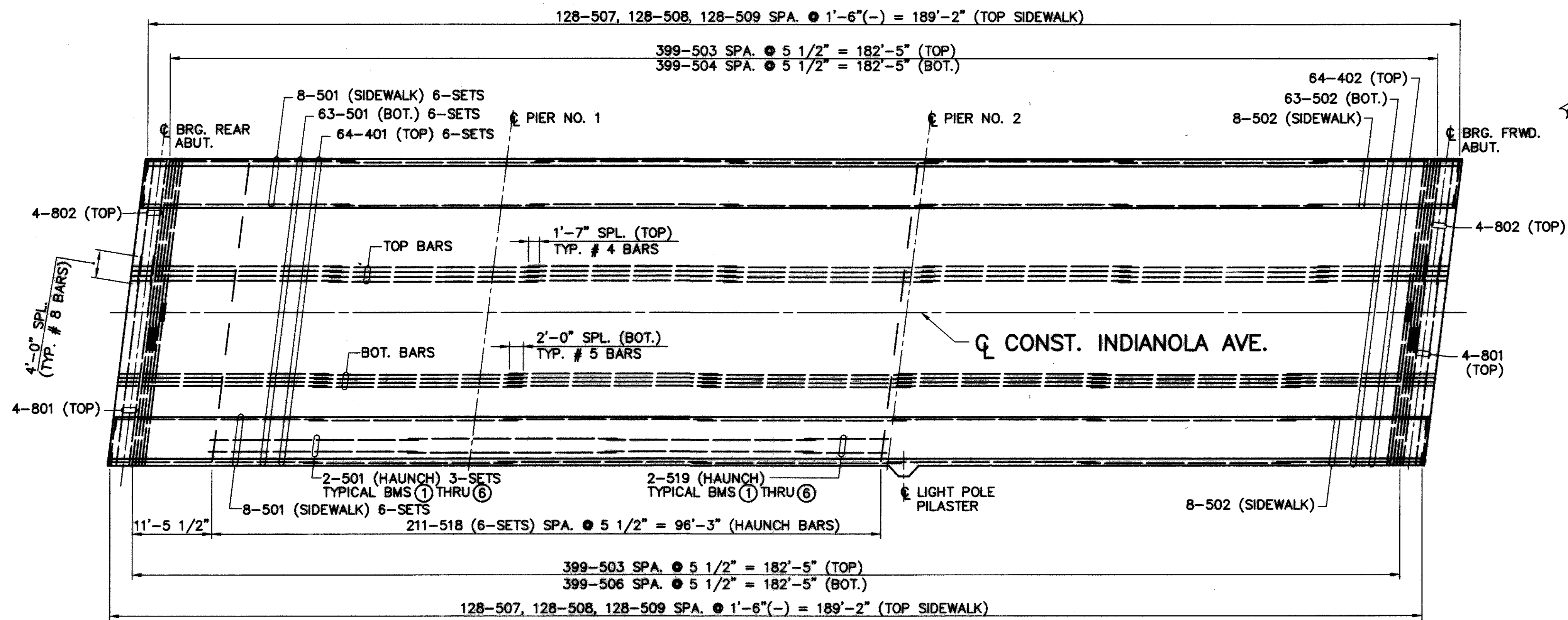
1. WELD ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". DO NOT WELD ATTACHMENTS TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE AT LEAST 1" FROM EDGE OF FLANGE, BE AT LEAST 2" LONG, AND AT LEAST 1/4" FOR THICKNESSES UP TO 3/4" THICK OR 5/16" FOR GREATER THAN 3/4" THICK.
2. FOR BEARING DETAILS, SEE SHT. NOS. [12/20] & [13/20].

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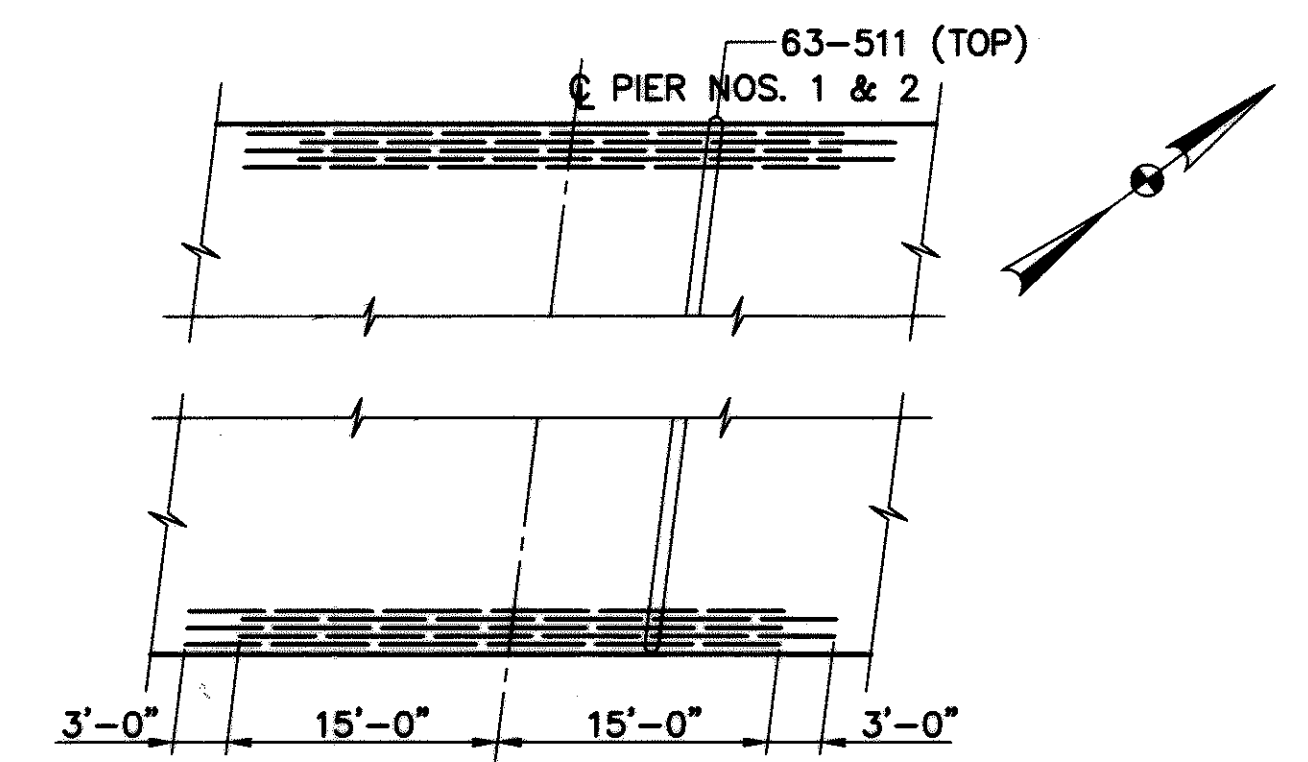
DESIGNED	B.J.M.	CHECKED	P.J.W.
DRAWN	R.H.C.	REVISED	
REVIEWED	K.S.J.	STRUCTURE FILE NUMBER	5007429
DATE	8-1-03		

FRAMING PLAN
 BRIDGE NO. MAH - 680 - 0818
 INDIANOLA AVE. OVER I-680

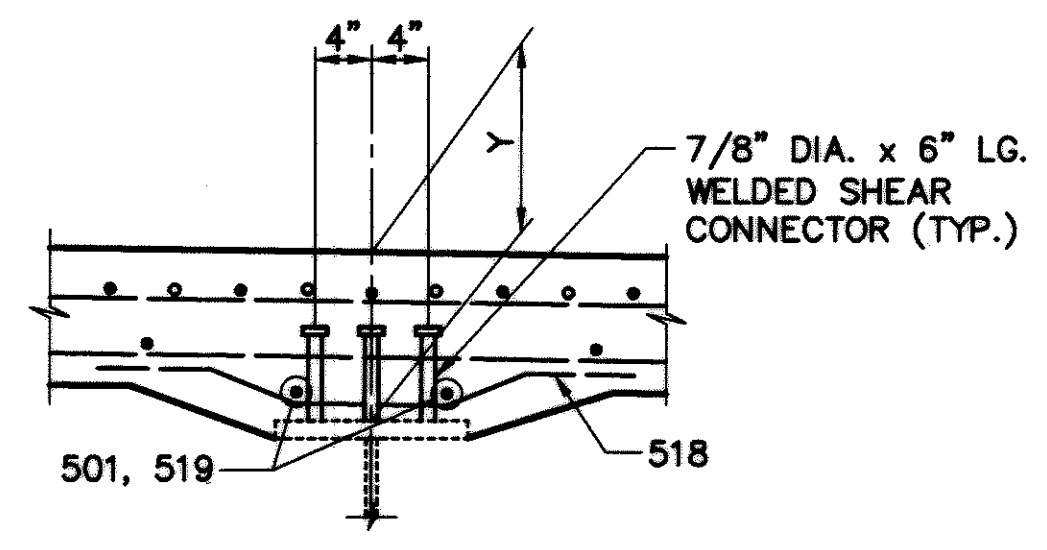
MAH-680-8.18



SLAB PLAN



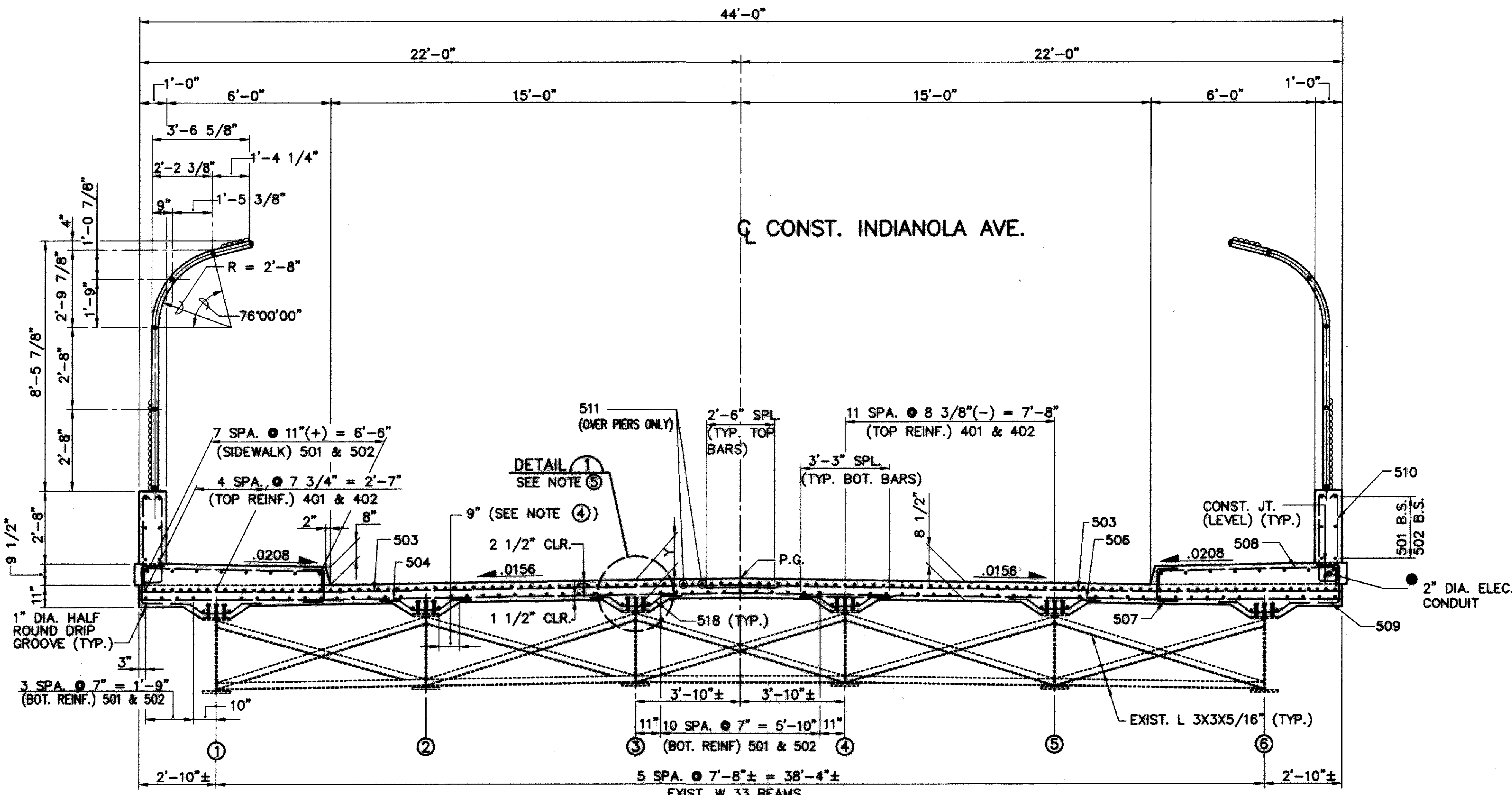
ADDITIONAL REINFORCING OVER PIERS



DETAIL 1

DEPTH OF SLAB OVER BEAM, Y				
LOCATION	REAR ABUT.	PIER NO. 1	PIER NO. 2	FRWD. ABUT.
BM. 1	11 1/16"	1'-3 15/16"	1'-1 1/4"	10 3/8"
BM. 2	10 7/8"	1'-4 1/16"	1'-1 5/16"	10 1/2"
BM. 3	10 11/16"	1'-4 1/4"	1'-1 5/16"	10 9/16"
BM. 4	10 1/2"	1'-4 3/8"	1'-1 3/8"	10 5/8"
BM. 5	10 5/16"	1'-4 7/16"	1'-1 7/16"	10 5/8"
BM. 6	10 1/16"	1'-4 7/16"	1'-1 7/16"	10 5/8"

- NOTES:
- PREFIX "S" WILL BE ADDED TO ALL REBARS SHOWN FOR DECK SLAB. SEE REINFORCING SCHEDULE.
 - ALL REINFORCING STEEL SHALL BE EPOXY COATED.
 - MINIMUM CLEARANCE TO REBARS SHALL BE 2" UNLESS NOTED OTHERWISE.
 - DECK SLAB CONCRETE QUANTITY: THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH BEAM HAUNCH. THE ESTIMATE ASSUMES A CONSTANT HAUNCH THICKNESS OF 4.6 INCHES AND A CONSTANT HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM FLANGE OF 9 INCHES. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE. THE ALLOWABLE TOLERANCE FOR THE HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM FLANGE IS ± 3 INCHES.
 - DECK SLAB DEPTH (Y): FOR TABULATION OF "Y", SEE DETAIL 1.
 - FOR SCREEN ELEVATIONS AND SEALING OF CONCRETE SURFACES, SEE SHT. NO. 16/20.
 - QUANTITY OF CONCRETE FOR SIDEWALK IS INCLUDED WITH ITEM 511, CLASS HP CONCRETE, BRIDGE DECK, AS PER PLAN FOR PAYMENT.
 - QUANTITY OF CONCRETE FOR RAILING IS INCLUDED WITH ITEM 511, CLASS HP CONCRETE, BRIDGE DECK (PARAPET), FOR PAYMENT.
 - FOR RAILING AND PILASTER DETAILS AND POST SPACINGS, SEE SHT. 17/20.
 - FOR CHAIN LINK FENCE DETAILS, SEE STD. DWG. NO. VPF-1-90.
 - FOR ADDITIONAL ELEC. CONDUIT DETAILS, SEE STD DWG. NO. HL-30.32.

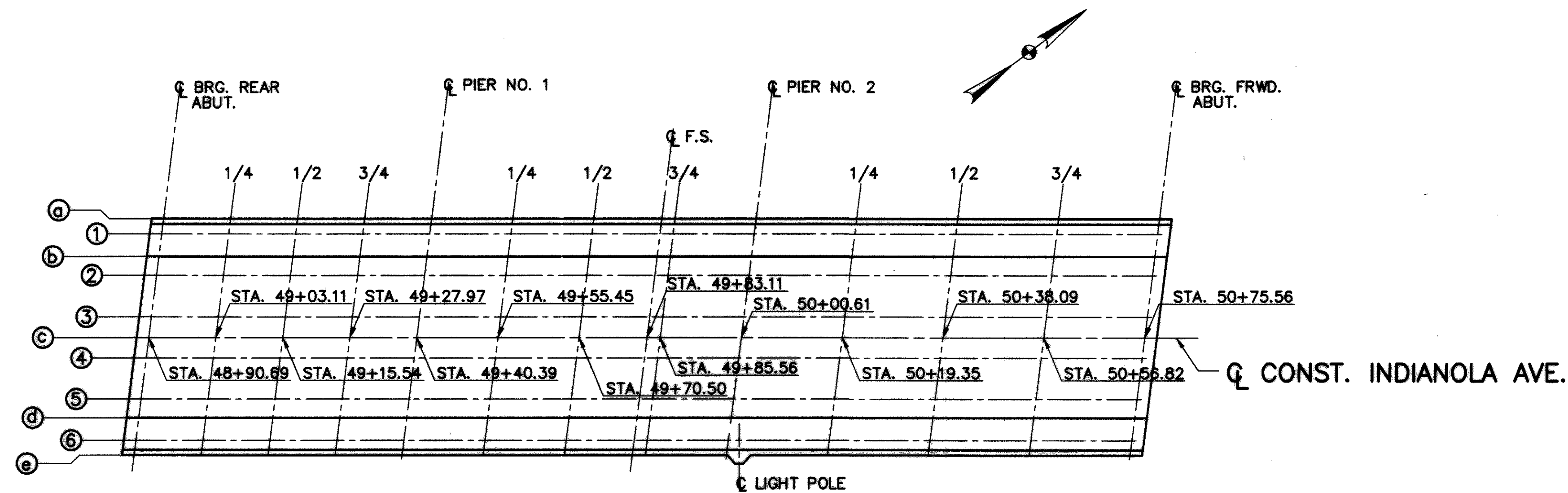


TRANSVERSE SECTION

● INCLUDED WITH LIGHTING QUANTITIES, SHT. NO. 47/67

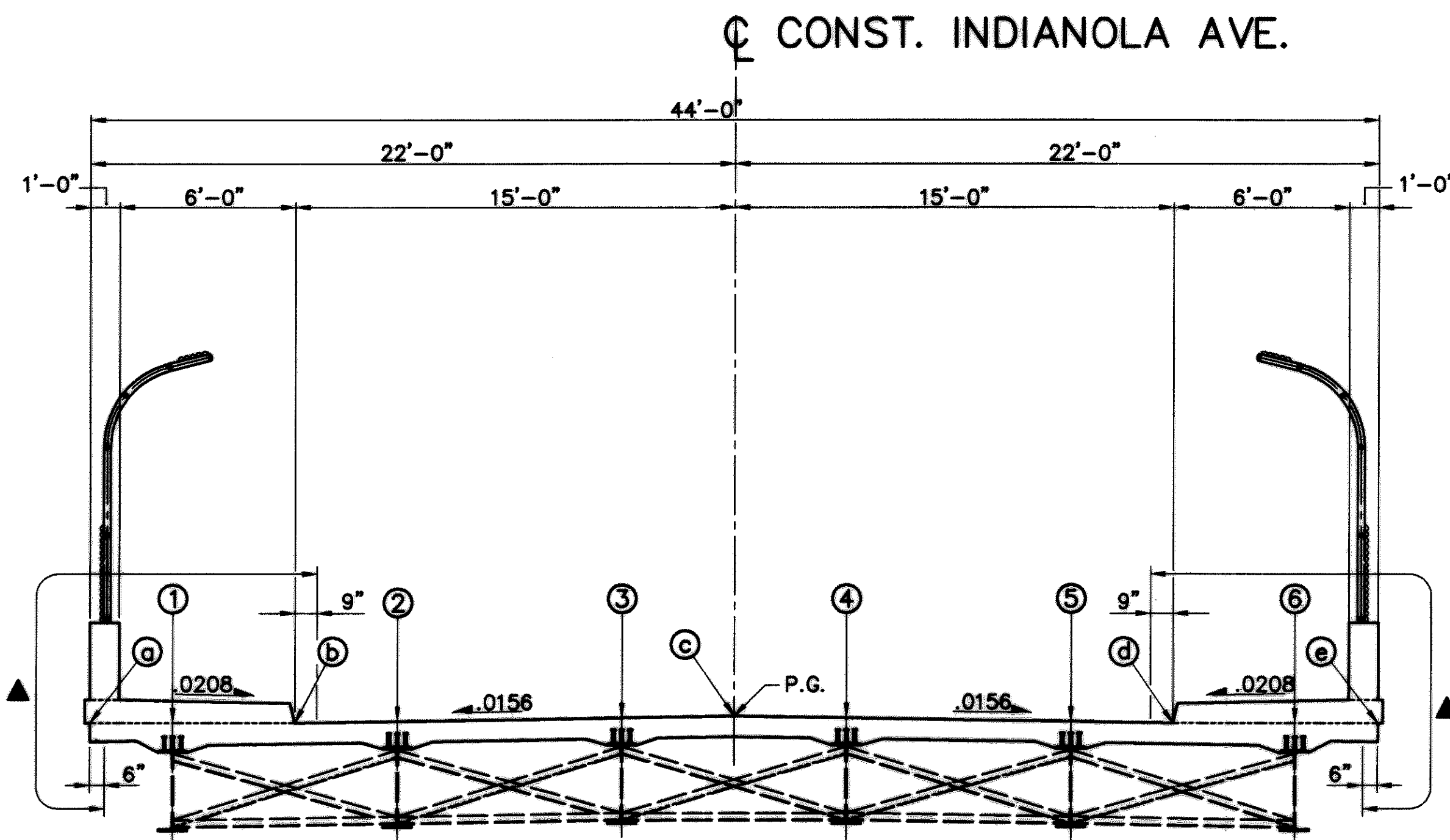
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DESIGN AGENCY: GPD ASSOCIATES
 DATE: 8-1-03
 REVIEWED: K.S.J.
 DRAWN: R.H.C.
 DESIGNED: R.H.C.
 CHECKED: P.J.W.
 STRUCTURE FILE NUMBER: 5007429
 SLAB PLAN
 BRIDGE NO. MAH - 680 - 0818
 INDIANOLA AVE. OVER I-680
 MAH-680-8-18
 15/20
 62/67



PLAN
SCREED ELEVATIONS

LOCATION	REAR ABUT.	DECK SCREED ELEVATION TABLE												
		SPAN NO. 1			Q PIER NO. 1	SPAN NO. 2				Q PIER NO. 2	SPAN NO. 3			FRWD. ABUT.
		1/4	1/2	3/4		1/4	1/2	F.S.	3/4		1/4	1/2	3/4	
Q	968.66	967.83	966.93	965.96	964.95	963.69	962.42	961.36	961.15	959.89	958.37	956.84	955.25	953.60
1	968.73	967.89	966.99	966.03	965.02	963.76	962.49	961.43	961.22	959.97	958.44	956.91	955.32	953.67
b	968.83	967.99	967.10	966.14	965.12	963.87	962.60	961.53	961.33	960.07	958.55	957.02	955.42	953.78
2	968.91	968.08	967.18	966.22	965.21	963.96	962.69	961.62	961.42	960.16	958.64	957.11	955.51	953.87
3	969.09	968.26	967.37	966.41	965.41	964.15	962.89	961.82	961.62	960.36	958.84	957.30	955.71	954.07
C	969.18	968.36	967.46	966.51	965.51	964.25	962.99	961.92	961.71	960.46	958.94	957.40	955.81	954.17
4	969.15	968.33	967.44	966.48	965.48	964.23	962.96	961.90	961.69	960.44	958.91	957.38	955.79	954.14
5	969.10	968.27	967.39	966.44	965.44	964.19	962.92	961.86	961.65	960.40	958.87	957.34	955.75	954.10
d	969.07	968.25	967.36	966.41	965.42	964.17	962.90	961.84	961.63	960.38	958.85	957.32	955.73	954.08
6	969.04	968.22	967.33	966.39	965.39	964.15	962.88	961.81	961.61	960.35	958.83	957.30	955.70	954.06
e	969.02	968.20	967.32	966.37	965.37	964.13	962.86	961.80	961.59	960.34	958.81	957.28	955.69	954.04



TRANSVERSE SECTION

NOTE:

SCREED ELEVATIONS SHOWN ARE FOR THE DECK SLAB SURFACE PRIOR TO CONCRETE PLACEMENT. ALLOWANCE HAS BEEN MADE FOR ANTICIPATED DEAD LOAD DEFLECTIONS.

▲ LIMITS OF ITEM 864, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

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 Technician: AELLERMAN

DESIGN AGENCY
 CLAUDE PYLE SCHWABER BURNS & DEWAIN, INC.
GPD ASSOCIATES
 520 N. W. 10th St., Ft. Lauderdale, FL 33304-2210

DATE
 8-1-03

REVIEWED
 K.S.J.
STRUCTURE FILE NUMBER
 5007429

DRAWN
 R.P.R.
REVISED

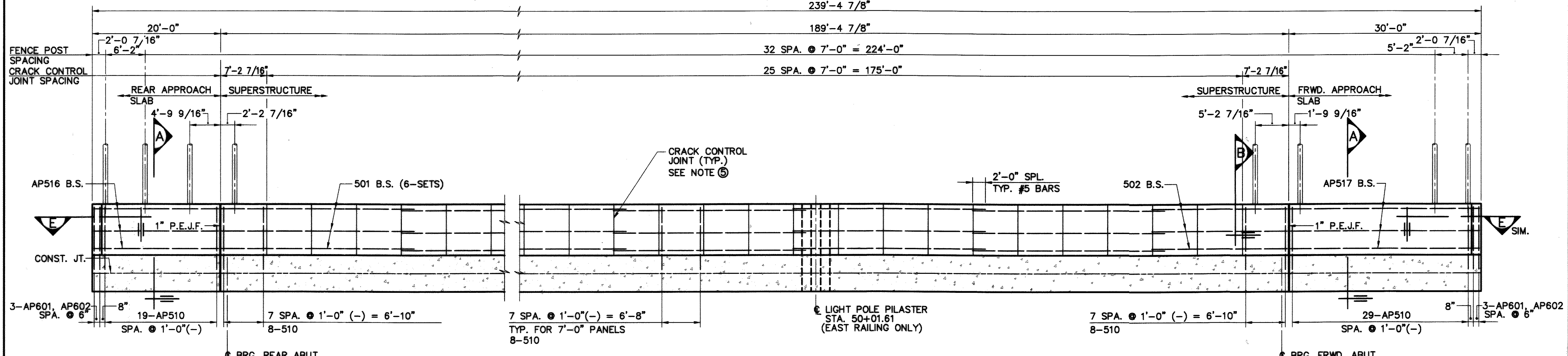
DESIGNED
 R.H.C.
CHECKED
 P.J.W.

SUPERSTRUCTURE DETAILS
 BRIDGE NO. MAH - 680 - 0818
 INDIANOLA AVE. OVER I-680

MAH-680-8.18

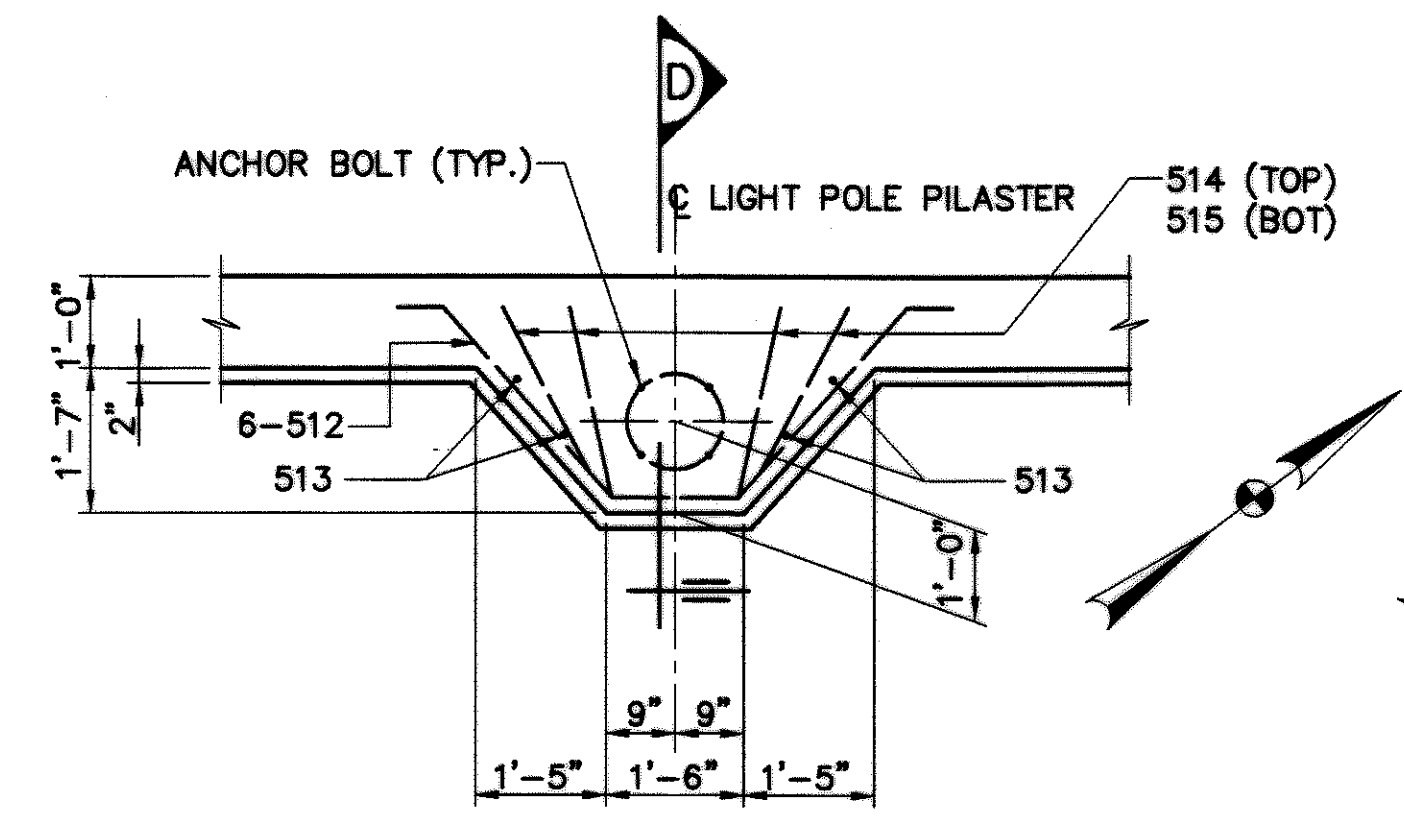
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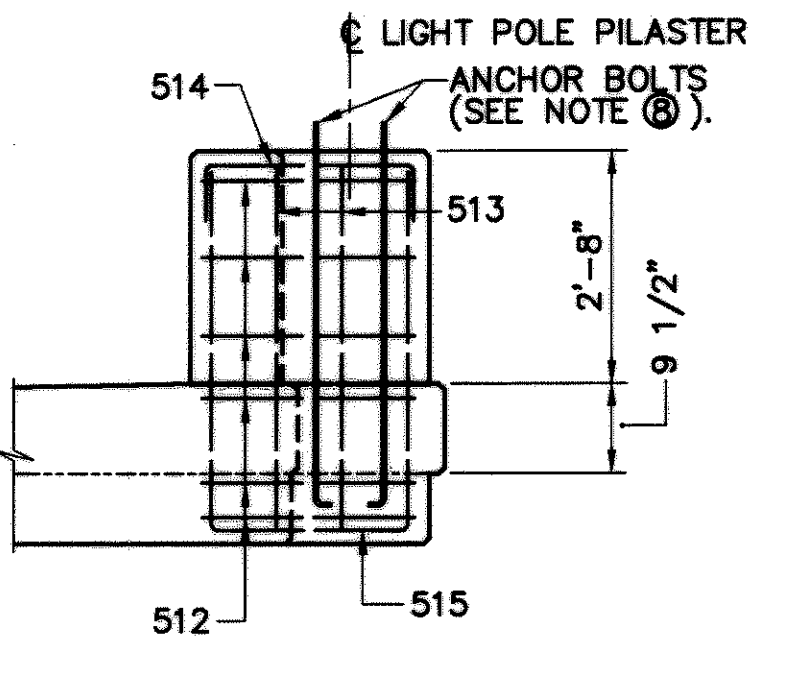
RAILING ELEVATION

WEST RAILING SHOWN
EAST RAILING SIMILAR

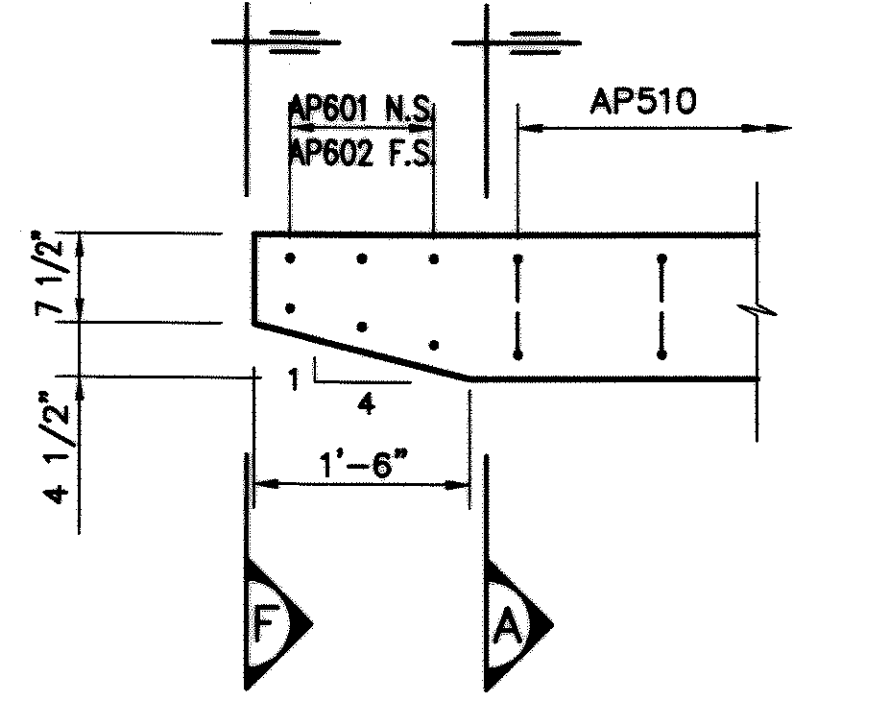


LIGHT POLE PILASTER DETAIL

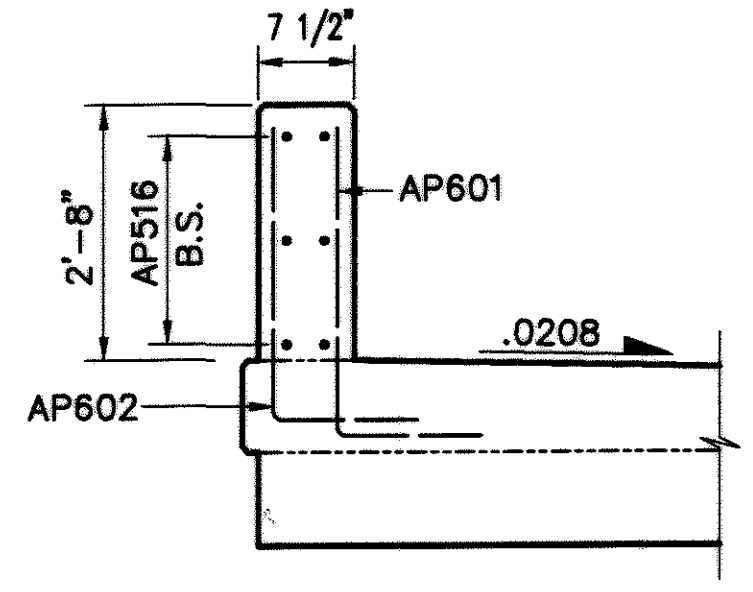
(PARAPET REINFORCING NOT SHOWN)
(SEE NOTE ③)



SECTION D



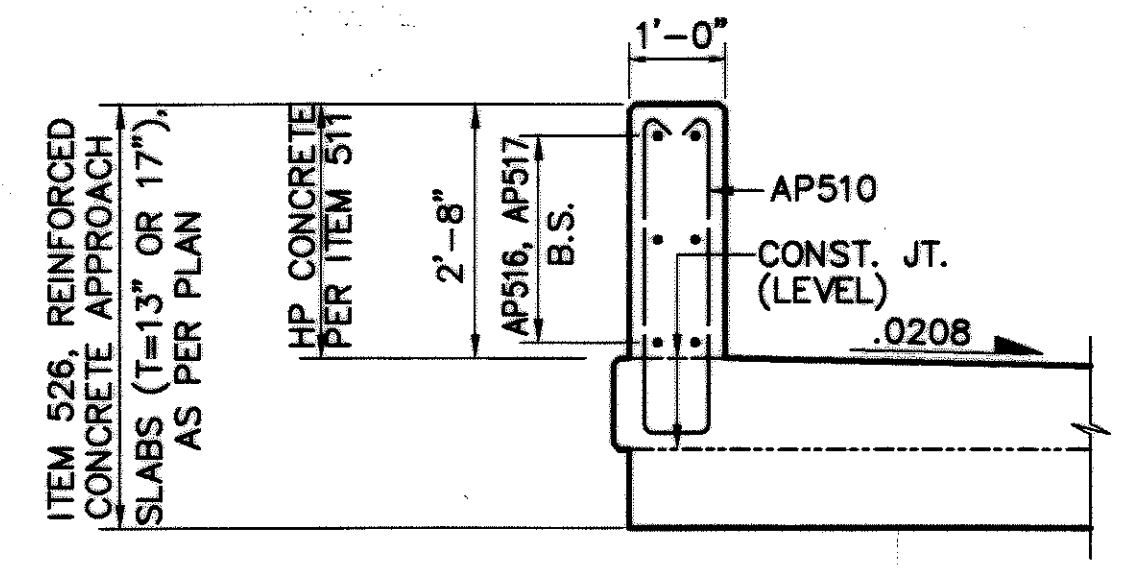
SECTION E



SECTION F

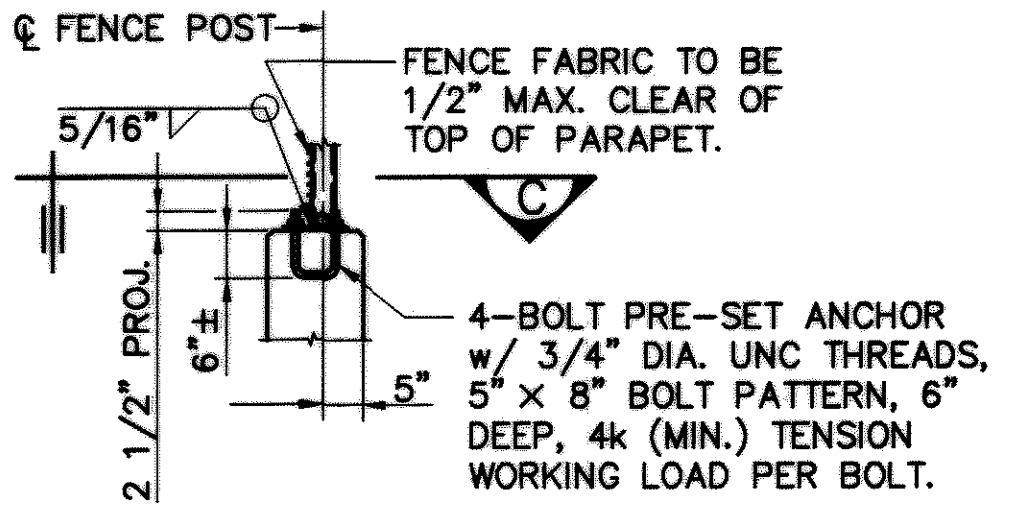
NOTES:

1. PREFIX "S" WILL BE ADDED TO ALL REBAR MARKS SHOWN FOR THE DECK SLAB EXCEPT THOSE BARS PREFIXED WITH "AP". SEE REINFORCING SCHEDULE.
2. MINIMUM CLEARANCE TO ALL REBARS SHALL BE 2" UNLESS NOTED OTHERWISE.
3. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
4. QUANTITY OF CONCRETE FOR RAILING IS INCLUDED WITH ITEM 511-CLASS HP CONCRETE, BRIDGE DECK (PARAPET), FOR PAYMENT.
5. FOR CONCRETE PARAPET NOTE, SEE SHT. NO. 3/20.
6. FOR CHAIN LINK FENCE DETAILS, SEE STD. DWG. NO. VPF-1-90.
7. FOR LIGHT POLE PILASTER DETAILS NOT SHOWN, SEE STD. DWG. NO. HL-20.14.
8. ANCHOR BOLTS ARE INCLUDED WITH ITEM 625, LIGHT POLE ANCHOR BOLTS ON STRUCTURE, SEE SHT. NO. 47/87.

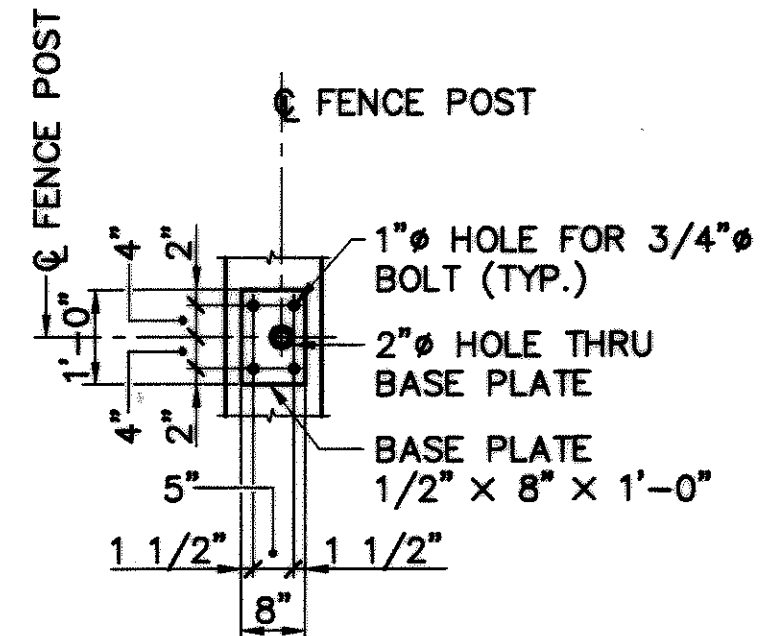


SECTION A

APPROACH SLAB AND SIDEWALK BARS NOT SHOWN



SECTION B



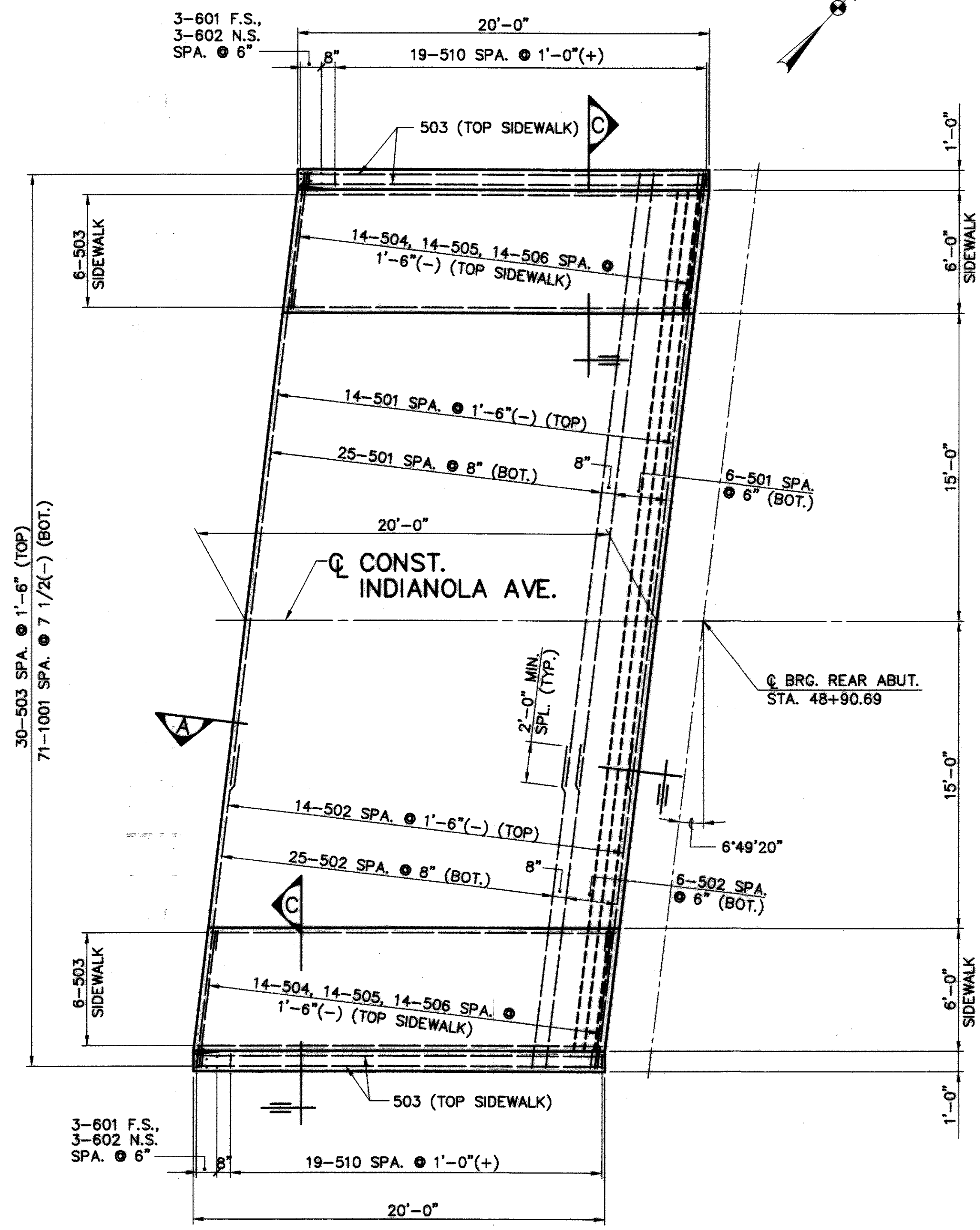
SECTION C

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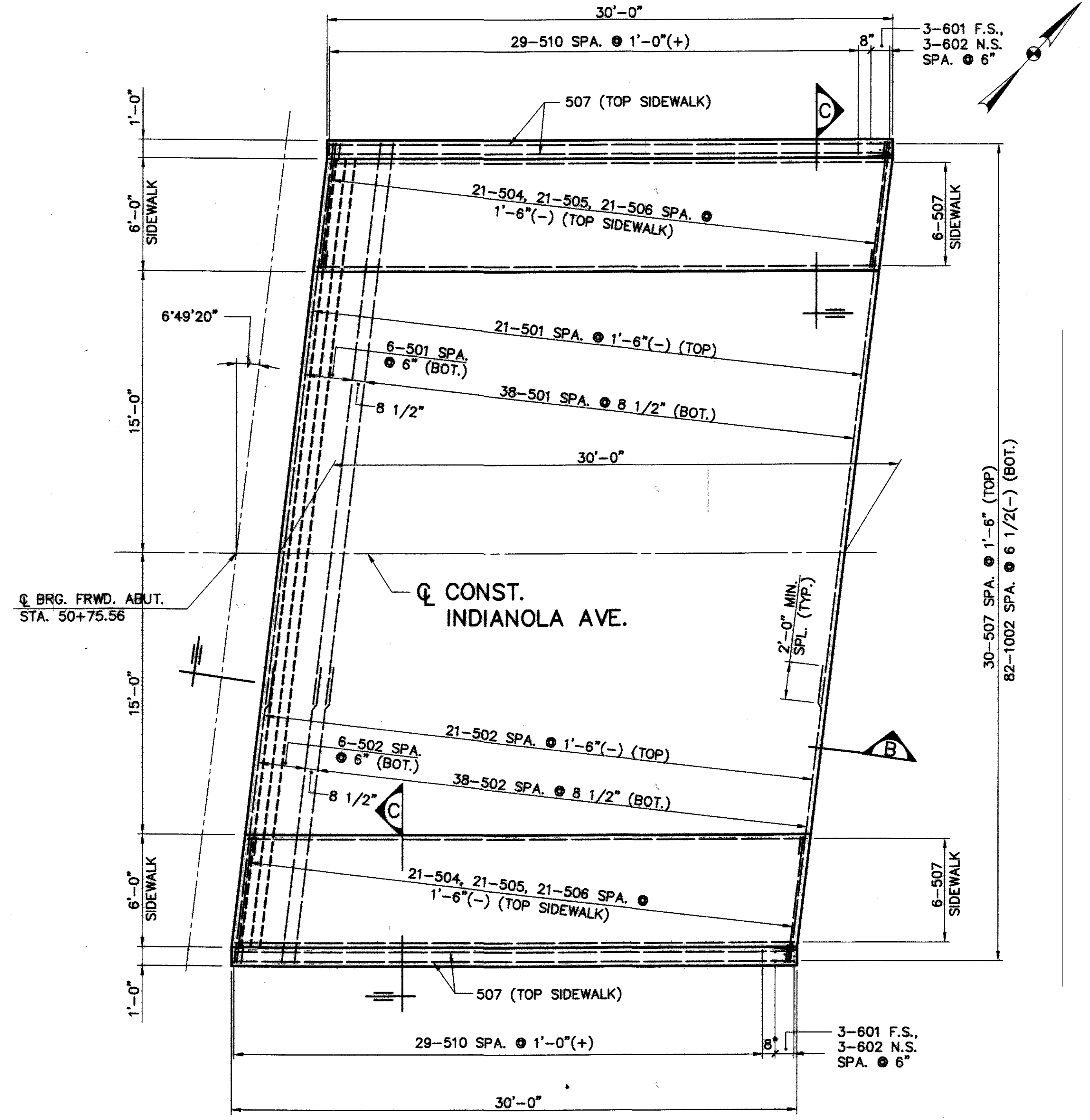
Technician: AELLERMAN

DESIGNED	R.H.C.	CHECKED	P.J.W.
DRAWN	R.P.R.	REVIEWED	K.S.J.
DATE	8-1-03	STRUCTURE FILE NUMBER	5007429

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 Technician: AELLERMAN



PLAN
 REAR APPROACH SLAB



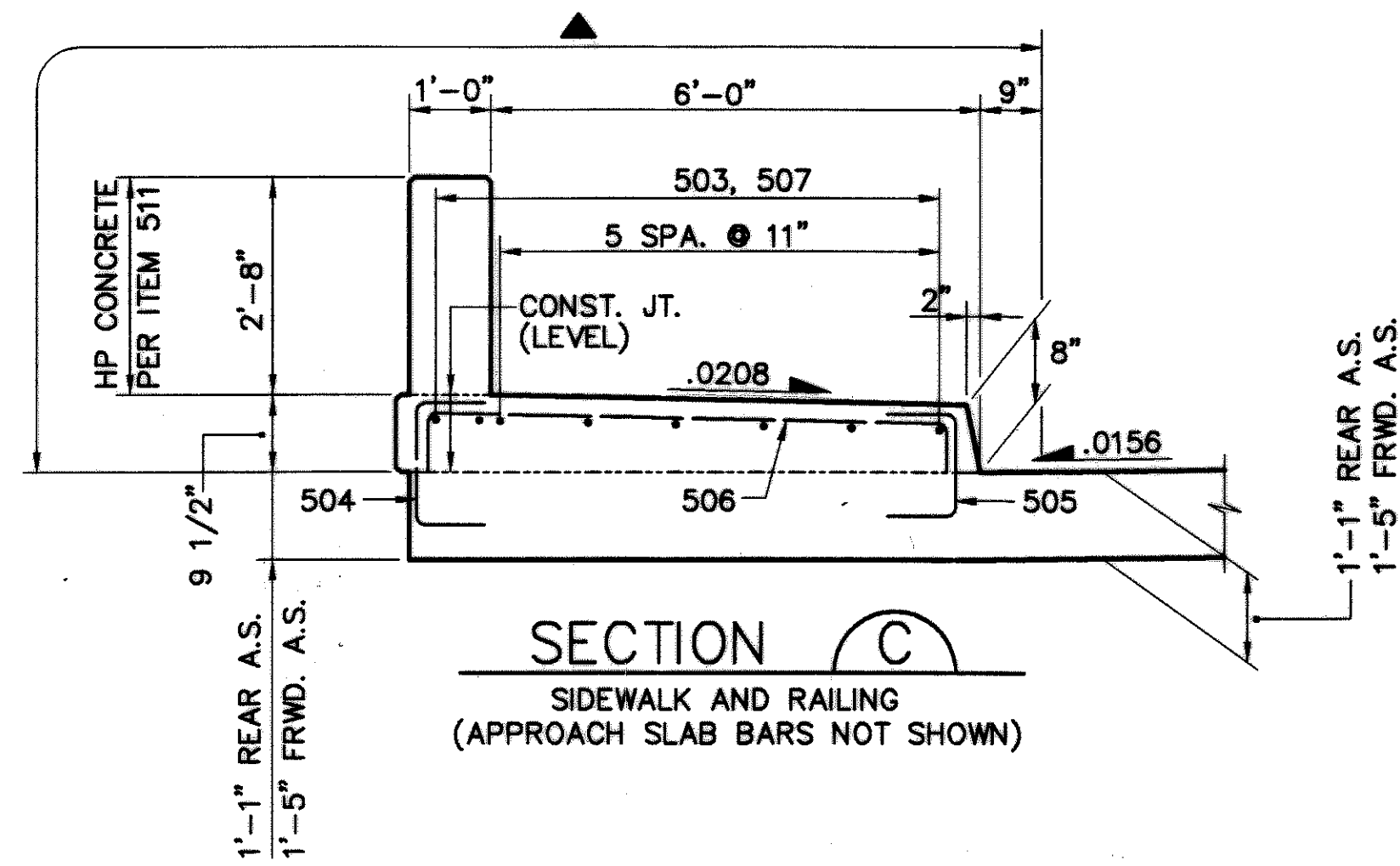
PLAN
 FRWD. APPROACH SLAB

- NOTES:**
1. PREFIX "AP" WILL BE ADDED TO ALL REBAR MARKS SHOWN FOR THE APPROACH SLABS.
 2. MINIMUM CLEARANCE TO REBARS SHALL BE 2" UNLESS NOTED.
 3. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
 4. FOR SECTIONS A, B, AND C, SEE SH. NO. 19/20.
 5. FOR DETAILS NOT SHOWN, SEE STD. DWG. NO. AS-1-81.

DATE	8-1-03
REVIEWED	K.S.J.
DRAWN	R.P.R.
DESIGNED	B.J.M.
CHECKED	P.J.W.
STRUCTURE FILE NUMBER	5007429

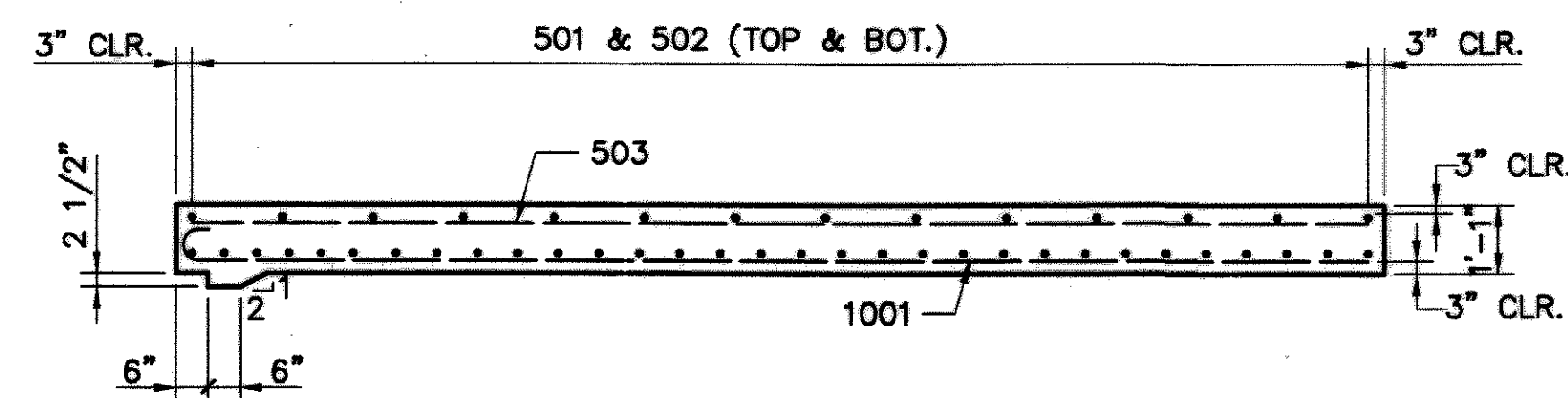
APPROACH SLABS
 BRIDGE NO. MAH - 680 - 0818
 INDIANOLA AVE. OVER I-680

MAH-680-8.18

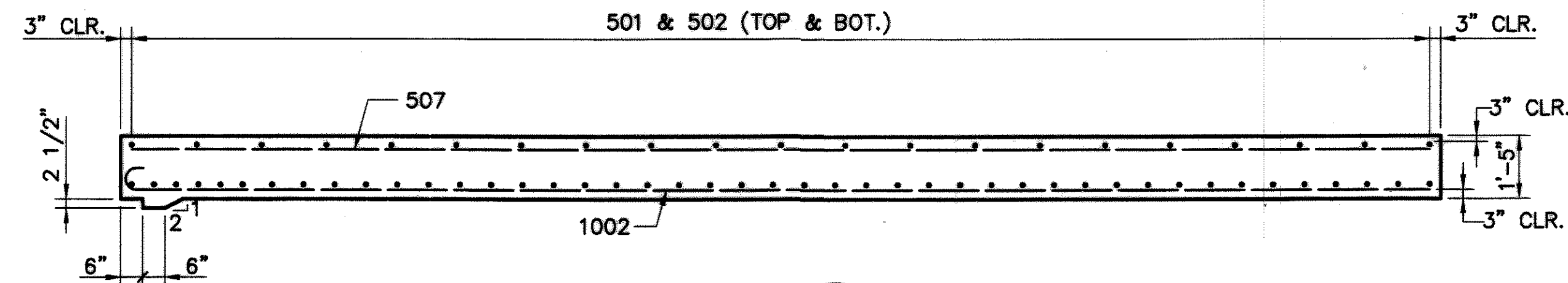


SECTION C
SIDEWALK AND RAILING
(APPROACH SLAB BARS NOT SHOWN)

▲ LIMITS OF ITEM 864 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)



SECTION A



SECTION B

NOTES:

1. PREFIX "AP" WILL BE ADDED TO ALL REBAR MARKS SHOWN FOR THE APPROACH SLABS.
2. FOR APPROACH SLAB RAILING AND FENCE DETAILS, SEE SHT. NO. 17720.
3. FOR DETAILS NOT SHOWN, SEE STD. DWG. NO. AS-1-81.
4. ITEM 526, REINFORCED CONCRETE APPROACH SLAB, AS PER PLAN RAILING ON APPROACH SLAB SHALL BE HIGH PERFORMANCE CONCRETE AS PER ITEM 511. APPROACH SLAB RAILING CONCRETE, REINFORCING STEEL, AND SEALING IS INCLUDED WITH ITEM 526, REINFORCED CONCRETE APPROACH SLAB, AS PER PLAN FOR PAYMENT.
5. FOR LOCATIONS OF SECTIONS A, B & C, SEE SHT. NO. 18720.

