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CITY OF DETROIT
 IN CO-OPERATION WITH
MICHIGAN DEPARTMENT OF TRANSPORTATION
 &
FEDERAL HIGHWAY ADMINISTRATION
 PLAN & DETAIL OF PROPOSED
 REPLACEMENT OF THE
 CHESTNUT STREET BRIDGE
 OVER THE
 DEQUINDRE CUT GREENWAY
 STATE BRIDGE NO.: RO1 OF 82000
 JOB NO.: 132668A
 CONTROL SECTION NO.: BRO 82000

THE DESIGN OF THIS STRUCTURE IS BASED ON CURRENT AMERICAN ASSOCIATION OF THE STATE HIGHWAY AND TRANSPORTATION OFFICIALS, (AASHTO), FOR HIGHWAY BRIDGES HL 93 LOADING. LIVE LOAD PLUS IMPACT DEFLECTION DOES NOT EXCEED $\frac{1}{1000}$ OF THE SPAN LENGTH. THE LRFD METHOD OF DESIGN WAS USED FOR THIS STRUCTURE.

EXCEPT WHERE OTHERWISE INDICTED ON THESE PLANS, THE PROPOSAL AND SUPPLEMENTAL SPECIFICATIONS CONTAINED HEREIN, ALL MATERIALS AND WORKMANSHIP SHALL BE ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARDS SPECIFICATIONS FOR CONSTRUCTION 2012 EDITION.

ALL EXPOSED CONCRETE CORNERS SHOWN SQUARE ON THE PLANS SHALL BE BEVELED WITH $\frac{1}{2}$ " TRIANGULAR MOLDINGS EXCEPT AS OTHERWISE NOTED.

THE DESIGN OF THE STRUCTURAL MEMBERS IS BASED ON MATERIALS OF THE FOLLOWING GRADES AND STRESSES.

CONCRETE: GRADE S2 $f_c = 3,000$ PSI
 CONCRETE: GRADE D $f_c = 4,000$ PSI
 STEEL REINFORCEMENT: $f_y = 60,000$ PSI

ALL DIMENSIONS ON THESE PLANS ARE IN INCHES EXCEPT AS NOTED.

THE STATIONING AS SHOWN ON THESE PLANS FOR THE INTERSECTION OF THE CENTERLINE OF BRIDGE AND DEQUINDER PATHWAY CENTERLINE IS BELIEVING TO BE CORRECT. IT SHALL, BE CHECKED AT THE TIME OF STARTING CONSTRUCTION AND IF THE STATIONING SHOWN ON THE PLANS IS INCORRECT, IT SHALL BE REPORTED TO THE DESIGN OFFICE IN LANSING AND THE STRUCTURE SHALL BE STAKE OUT USING THE ACTUAL INTERSECTION OF THE CENTERLINE OF THE BRIDGE AND DEQUINDRE CENTERLINE AS THE CONTROL POINT.

BIDDERS WILL BE FURNISHED WITH SCANNED IMAGES OF PLAN SHEETS OF THE EXISTING STRUCTURES IF REQUESTED. [USE ON ALL PROJECTS WHERE EXISTING STRUCTURE PLANS ARE KNOWN TO EXIST] (I.U. 2-22-2006)

BRO 82000 - 132668A

JOB NUMBER

CONTROL SECTION

DATE:

CHECKED BY:

DATE:

CHECKED BY:

DATE: AUGUST 22, 2019

DRAWN BY: Sarmad Al Tameemi

FILE NAME: Chestnut - Title.dgn

CITY OF DETROIT STANDARD PLANS

WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON THE PLANS THEY ARE TO BE CONSTRUCTED ACCORDING TO THE STANDARDS PLAN GIVEN BELOW OPPOSITE EACH ITEM UNLESS OTHERWISE INDICATED AS INCLUDED IN THE PROPOSAL.

STANDARD CURB DETAILS	C-4380
DETAIL OF ALLEY RETURN AND DRIVE APPROACH	C-4384
STANDERD SEWER AND DROP MANHOLES	C-4387
MANHOLE FRAME AND COVER	C-4391
FLAT TYPE GRATE AND FRAME	C-4392
DOME GRATE AND FRAME	C-4394
STANDARD CATCH BASIN "A" AND FLAT GRATE AND FRAME	C-5028

MDOT STANDARD PLANS

WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON THE PLANS THEY ARE TO BE CONSTRUCTED ACCORDING TO THE STANDARD PLAN GIVEN BELOW OPPOSITE EACH ITEM UNLESS OTHERWISE INDICATED.

DRIVEWAY OPENING & APPROACHES AND CONCRETE SIDEWALK	R-29-I
INTEGRAL CURB AND INTEGRAL CURB & GUTTER	R-31-F
CHAIN LINK FENCE (USING TENSION WIRE)	R-98-B
MOLDING, BEVEL, LIGHT STANDARD ANCHOR BOLT	
ASSEMBLY AND NAME PLATE DETAILS	B-103-E

MDOT SPECIAL DETAILS

WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON THE PLANS THEY ARE TO BE CONSTRUCTED ACCORDING TO THE SPECIAL DETAIL GIVEN BELOW OPPOSITE EACH ITEM UNLESS OTHERWISE INDICATED.

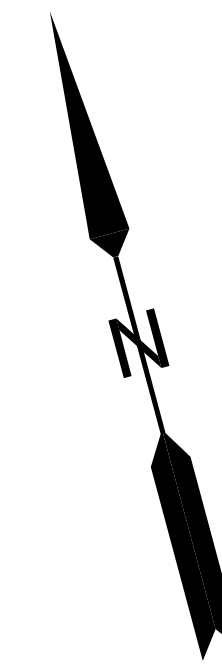
SIDEWALK RAMP DETAILS AND DETECTABLE WARNING DETAILS	R-28-J
PLACEMENT OF TAMPORARY CONCRETE BARRIER	R-126-I
BRIDGE RAILING, AESTHETIC PARAPET TUPE	B-25-F

*SEE WZO-125-D FOR TEMPORARY TRAFFIC CONTROL DEVICE DETAILS.

UTILITIES

CITY OF DETROIT, PUBLIC LIGHTING DEPT (PLD) 9449 GRINNELL DETROIT, MI 48213 ATTN.: ASHOK PINNAMANENI PHONE NO.: (313) 804-1772	ELECTRIC, LIGHTING	SIGMA NETWORK SERVICES (COMCAST) 27096 OAKMEAD DR. PERRYSBURG, OH 43551 ATTN.: MESAN SLIPHER PHONE NO.: (419) 874-9262	CABLE
CITY OF DETROIT, DETROIT WATER & SEWERAGE DEPT (DWSD) J MADISON BLDG 1420 WASHINGTON BLVD., SUITE 100 DETROIT, MI 48226 ATTN.: RODNEY BURLETT PHONE NO.: (313) 267-4863	WATER, SEWER	CITY OF DETROIT 1301 THIRD STREET DETROIT MI. 48226 ATTN.: ERIC JONES, FIRE CHIEF PHONE NO.: (313) 596-2900	FIRE
PUBLIC LIGHTING AUTHORITY 65 CADILLAC SQUARE, SUITE 3100 DETROIT, MI 48226 ATTN.: MUKESH PATEL PHONE NO.: (313) 324-8290	PUBLIC LIGHTING	DTE ENERGY MICHIGAN CONSOLIDATED GAS CO. (MCG) MAIN REPLACEMENT TEAM, 2ND FLOOR 3200 HOBSON DETROIT, MI 48201 ATTN.: LAURA FORRESTER PHONE NO.: (313) 389-7261	GAS
AT&T 2152 S. 114TH STREET WEST ALLIS, WI 53227 ATTN.: PHONE NO.:	FIBER OPTIC		

PROJECT LOCATION
R01 OF 82000



TRAFFIC DATA:	YEAR	YEAR
	2019	2039
ADT	660	806
DHV	73	89
COMMERCIAL %	5	5
DESIGN SPEED	30	30
POSTED SPEED	25	25

CONTRACT FOR STRUCTURE REPLACEMENT, RELATED APPROACH WORK, AND TRAFFIC IMPROVEMENTS FOR CHESTNUT STREET BRIDGE OVER THE DEQUINDRE CUT GREENWAY



LOCAL AUTHORITY APPROVAL
CITY OF DETROIT
CITY ENGINEERING DIVISION
DEPARTMENT OF PUBLIC WORKS

APPROVED BY _____ DATE _____

APPROVED BY _____ DATE _____

PREPARED UNDER THE SUPERVISION OF
LEVON ARAKELOV

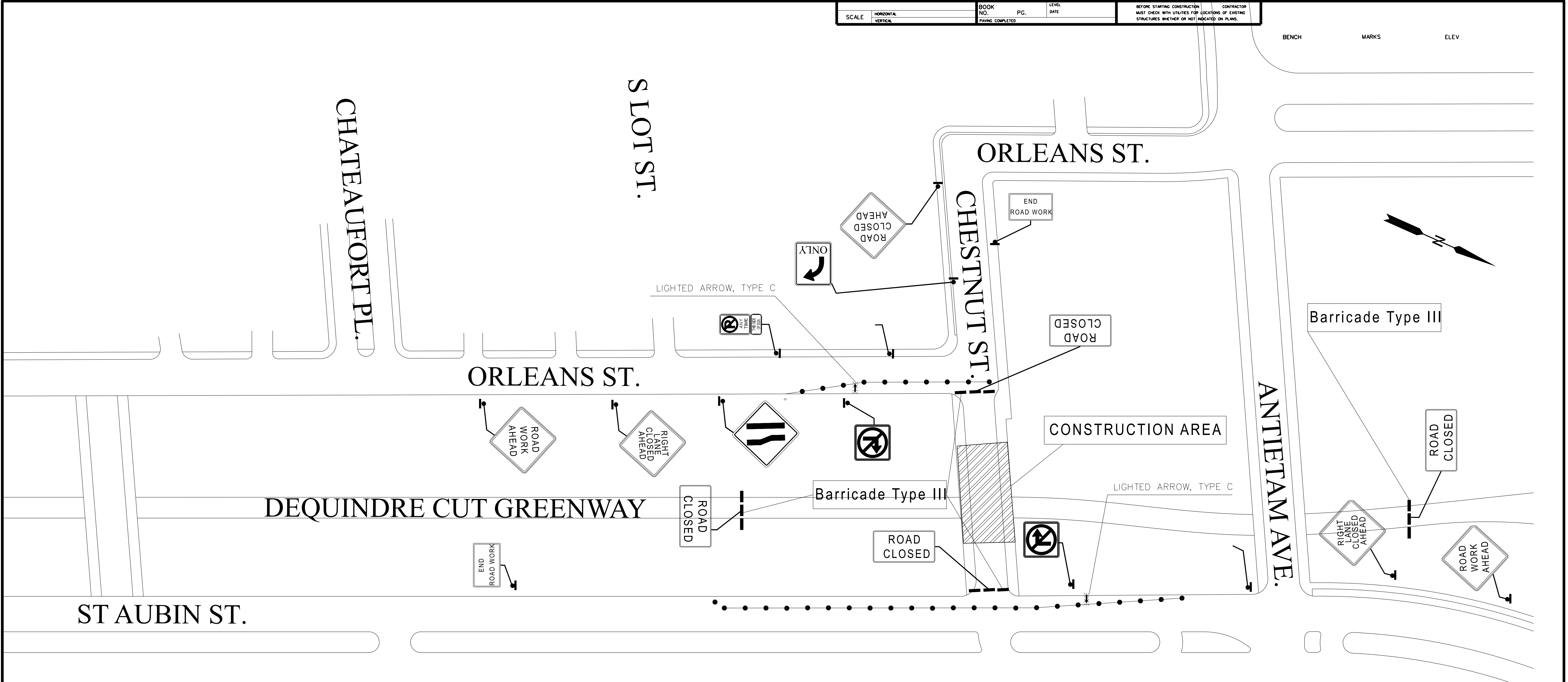
LEVON ARAKELOV
LICENSED PROFESSIONAL ENGINEER DATE _____

CITY OF DETROIT
ORGANIZATION

CITY ENGINEERING DIVISION, D.P.W.
2 WOODWARD AVE. SUITE 601 DETROIT MI 48216
ADDRESS



CONTROL SECTION	JOB NUMBER	FEDERAL NUMBERS PROJECT	ITEM	SHEET NO.
82000	132668A			1 OF 27



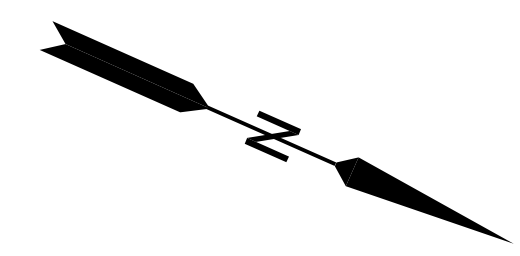
MISCELLANEOUS QUANTITIES		
QUANTITIES	UNITS	DESCRIPTION
30.00	Ea	Barricade, Type III, High Intensity, Double Sided, Lighted, Furn
30.00	Ea	Barricade, Type III, High Intensity, Double Sided, Lighted, Oper
60.00	Ft	Conc Barrier, Double Face, Type A
2.00	Ea	Lighted Arrow, Type C, Furn
2.00	Ea	Lighted Arrow, Type C, Oper
1.00	Ls	Minor Traf Devices
50.00	Ea	Plastic Drum, High Intensity, Furn
50.00	Ea	Plastic Drum, High Intensity, Oper
200.00	Sft	Sign, Type B, Temp, Prismatic, Furn
200.00	Sft	Sign, Type B, Temp, Prismatic, Oper
800.00	Ft	Pavt Mrkg, Sprayable Thermopl, 4 inch, Yellow

DESCRIPTION	OR MCK DAP VDATE	BY	CHECKED BY	APPROVED
PLAN				
GRADE				
ESTIMATE				
FINAL	****	****		

CITY OF DETROIT
 CITY ENGINEERING DIVISION - D.P.W.
 BUREAUS OF STREETS AND HIGHWAYS
 FOR

CHESTNUT STREET BRIDGE
MAINTENANCE OF TRAFFIC

SHEET 2 OF 27 SHEETS
JOB NUMBER 132668A
ASSIGNMENT NO.
DATE 08/22/2019



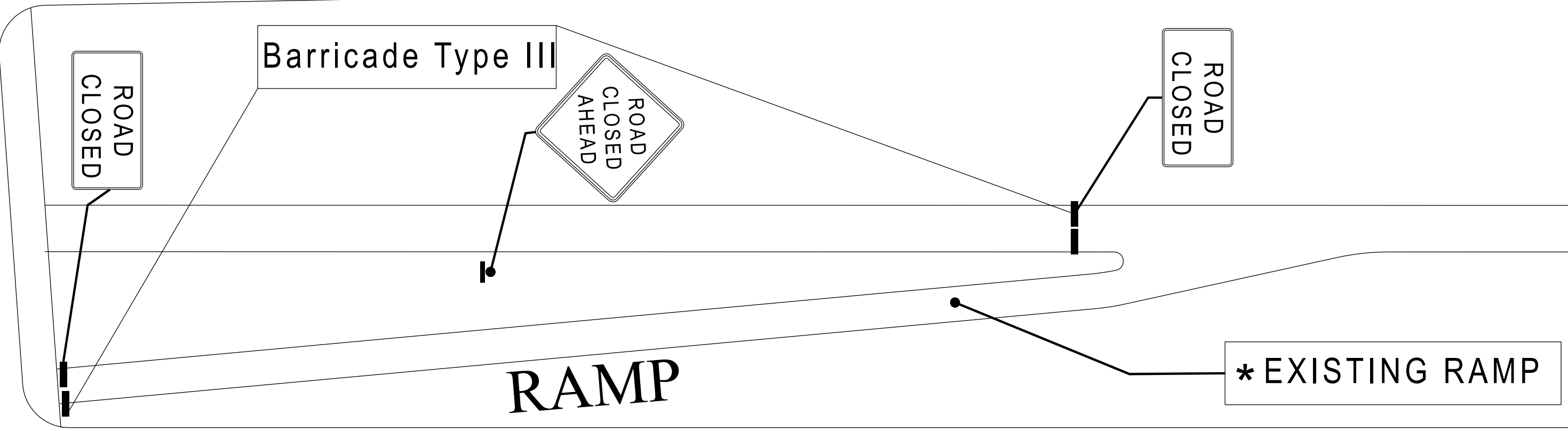
E. LAFAYETTE AVE.

DRIVEWAY

ORLEANS ST.

DEQUINDRE CUT GREENWAY

ST AUBIN ST.



NOTES

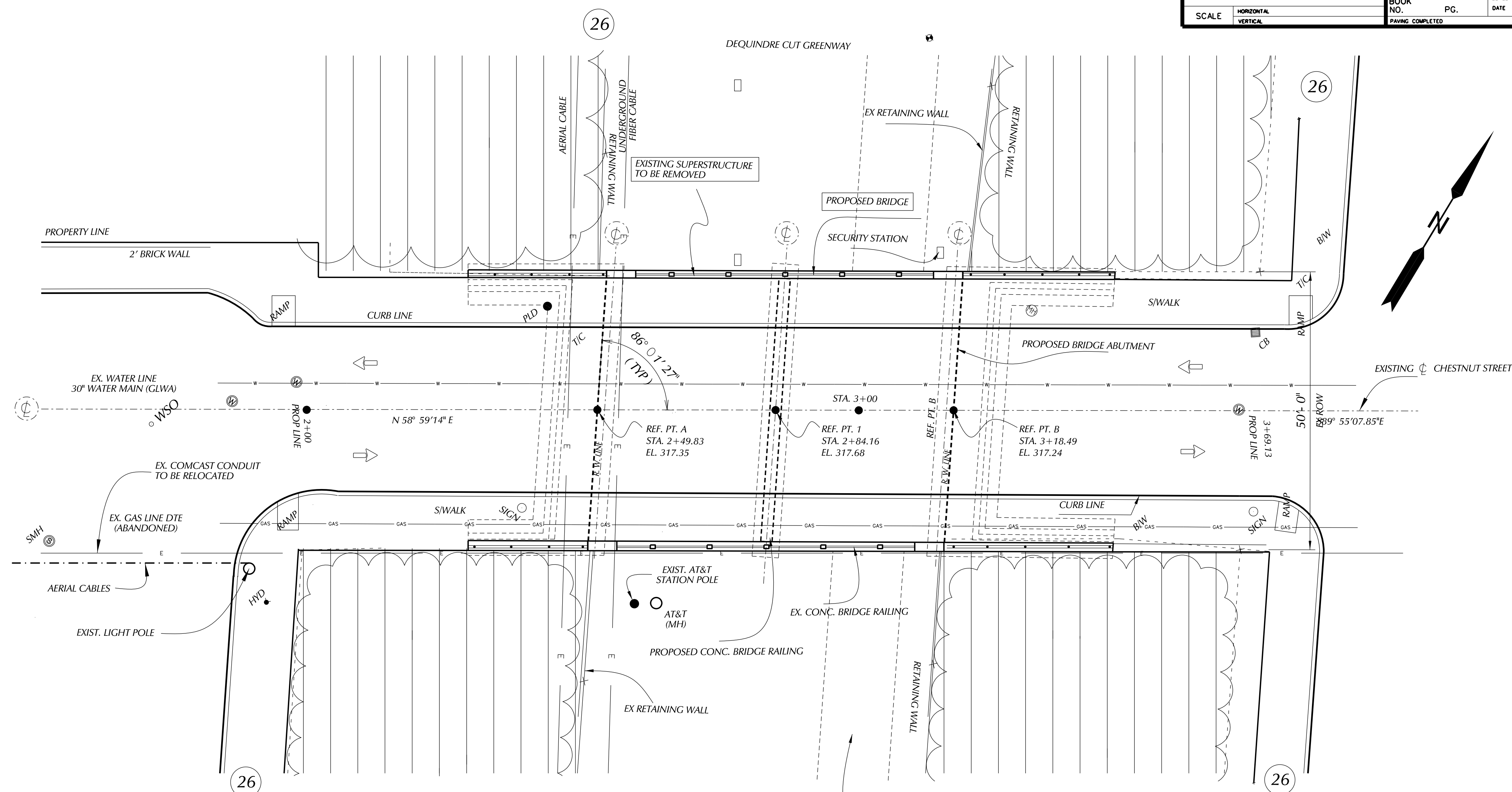
CONTRACTOR MAY USE THE EXISTING PAMP TO ACCESS THE CONTRUCTION SITE.
 FOR QUANTITIES TO RESTORE DAMAGED PAVEMENT, SEE SHEET NO. 27 OF 27.
 CONTRACTOR MAY CHOOSE ALTERNATIVE ACCESS TO CONSTRUCTION SITE AS APPROVED BY THE ENGINEER.

		BY	CHECKED BY	APPROVED:
PLAN				ENGINEER OF STREETS
GRADE				
ESTIMATE				
DESCRIPTION	OR NCK DAPV DATE	FINAL	****	****
REVISIONS				

CITY OF DETROIT
 CITY ENGINEERING DIVISION - D.P.W.
 BUREAUS OF STREETS AND HIGHWAYS
 FOR

CHESTNUT STREET BRIDGE
MAINTENANCE OF TRAFFIC

SHEET 3 OF 27 SHEETS
JOB NUMBER N O. 132668A
ASSIGNMENT
DATE 08/22/2019



PLAN OF SITE
CITY OF DETROIT

*** EROSION AND SEDIMENTATION CONTROL MEASURES**

KEY	QUANTITY	UNIT PER ITEM	KEY NO.
150 Ft.		EROSION CONTROL, SILT FENCE	26
200 Syd.		SLOPE RESTORATION, TYPE A.	3
4 Ea		EROSION CONTROL, INLET PROTECTION, FABRIC DROP.	39A
4 Ea		EROSION CONTROL, INLET PROTECTION, GEOTEXTILE AND STONE.	39B

* PLACE AS DIRECTED BY THE ENGINEER

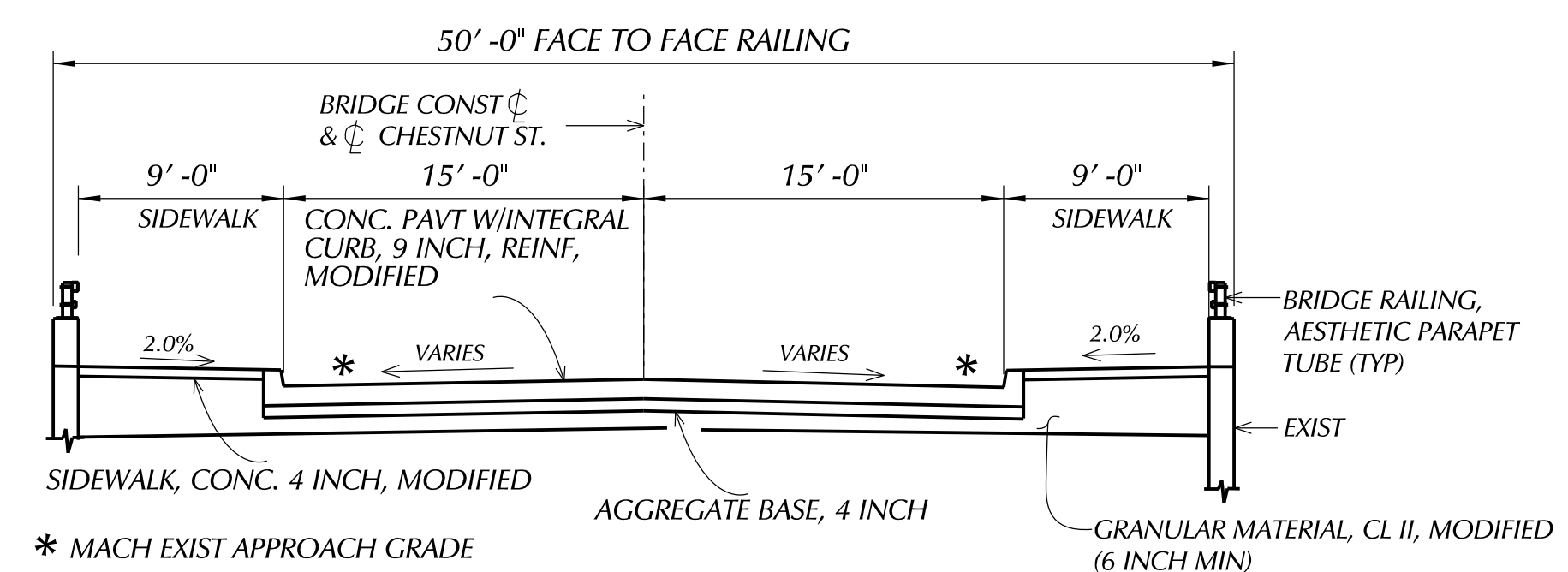
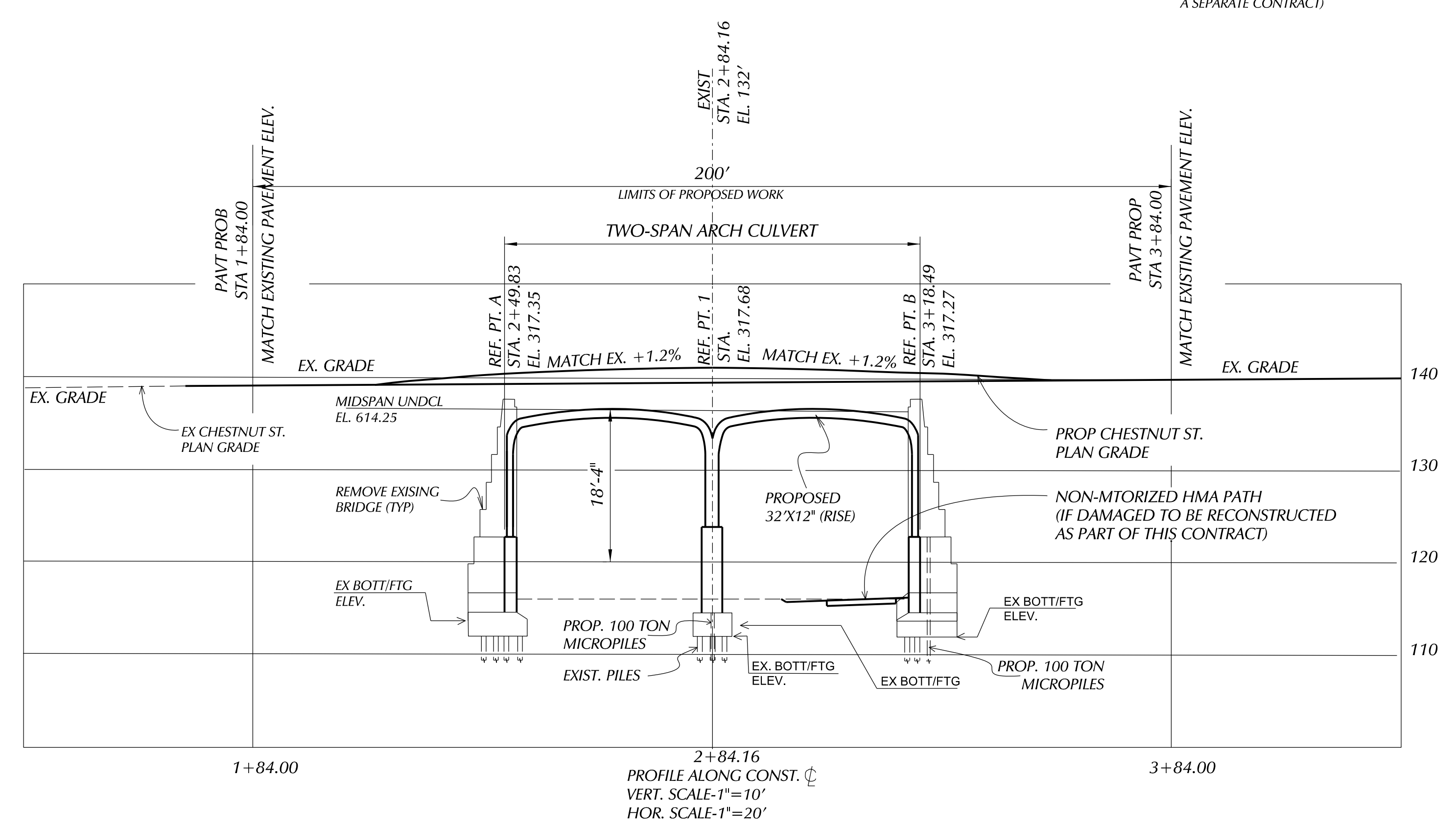
EXISTING STRUCTURE

STEEL I - BEAMS TWO SAMPLE SPAN ENCASED IN CONCRETE. BRIDGE BUILT IN 1929. EXISTING STRUCTURE DESIGNED FOR H15 LOADING.

BENCH MARK INFORMATION

ELEVATIONS ARE N.A.V.D. DATUM (1988)

	NORTHING	EASTING	ELEV
BM #1 PBM 39-257A PBM ON NW CORN OF ANTIETAM & CHENE	311825.14	13484871.64	619.10
BM #2 PBM 39-257 PBM ON NE CORN OF ANTIETAM & ST AUBIN	311060.87	13483601.13	617.64
CP #3 CHISEL MARK AT STA 0+21.31 ON S/WALK (S. SIDE)	310534.41	13483351.60	616.79
CP #4 CHISEL MARK AT STA 1+28.83 ON S/WALK (S. SIDE)	310590.55	13483443.30	616.67
CP #5 CHISEL MARK 78' SOUTH OF C/L ON S/WALK (W. SIDE)	310548.59	13483485.31	617.22
CP #6 PK NAIL AT STA 10+16.35 ON DEQ CUT BIKE PATH	310624.28	13483524.42	594.48
CP #7 PK NAIL AT STA 11+68.75 ON DEQ CUT BIKE PATH	310759.90	13483554.00	594.82



TYPICAL APPROACH SECTION
(FENCE NOT SHOWN)

NOTES

THE WORK COVERED BY THESE PLANS INCLUDES SUPERSTRUCTURE, SUBSTRUCTURE RECONSTRUCTION

THE CONTRACTOR SHALL LOCATE ALL ACTIVE UNDERGROUND UTILITIES PRIOR TO STARTING WORK AND SHALL CONDUCT HIS OPERATIONS IN SUCH A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.

CHESTNUT ST. TRAFFIC IS TO BE DETOURED OVER OTHER EXISTING ROADS.

PLAN ELEVATIONS REFER TO CITY OF DETROIT DATUM.

TOPOGRAPHY SHOWN HERE REPRESENTS CONDITIONS EXISTING AT THE TIME THE FILED SURVEY WAS MADE. HOWEVER THESE CONDITIONS MAY HAVE BEEN MATERIALLY ALTERED BY THE OPERATIONS OF OTHERS PRIOR TO THIS CONTRACT.

WITNESSES

WITNESSES TO CP #3	
S 55 E FENCE POST	37.57'
N 30 W BACK OF CURB	5.31'
N 30 E CORNER OF BRICK WALL	111.22'
WITNESSES TO CP #4	
S 55 W FENCE POST	41.58'
N 30 W BACK OF CURB	4.48'
N 65 E SEWER MANHOLE	25.00'
N 40 W CORNER OF BRICK WALL	51.42'
WITNESSES TO CP #5	
N 60 E BACK OF CURB	3.58'
N 20 W SEWER MANHOLE	55.51'
N 15 E FENCE POST	76.97'
S 60 W BACK OF WALK	2.27'
WITNESSES TO CP #6	
N 60 E FACE OF RETAINING WALL	8.44'
N 70 W CENTER AT&T MANHOLE	63.46'
N 50 W SE CORNER OF CENTER PILLAR	62.53'
N 20 W SE CORNER OF ABUT/WALL	61.01'
WITNESSES TO CP #7	
N 65 E FACE OF RETAINING WALL	12.12'
S 40 E NE CORNER OF ABUT/WALL	42.43'
S 00 E NE CORNER OF CENTER PILLAR	48.58'

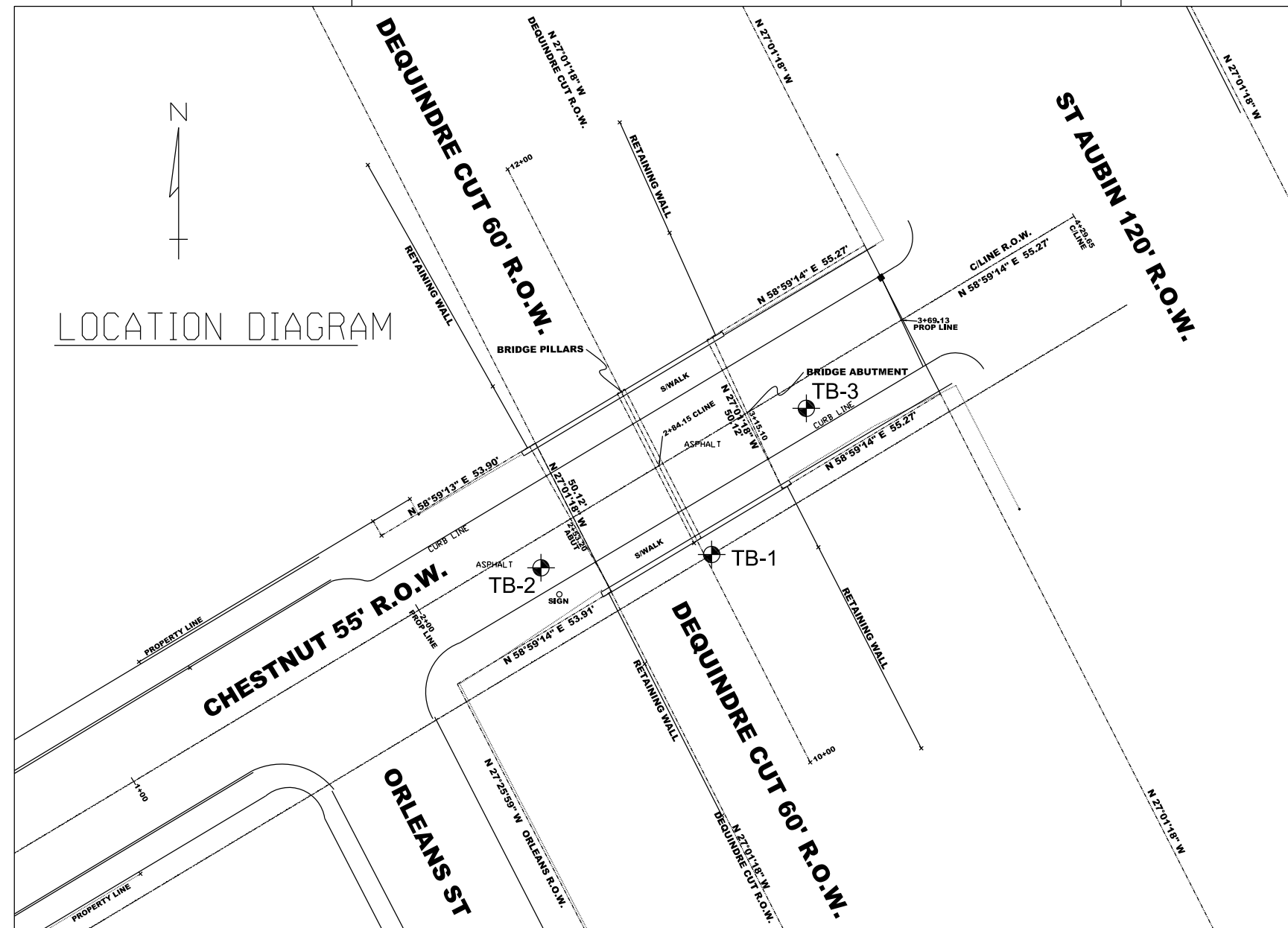
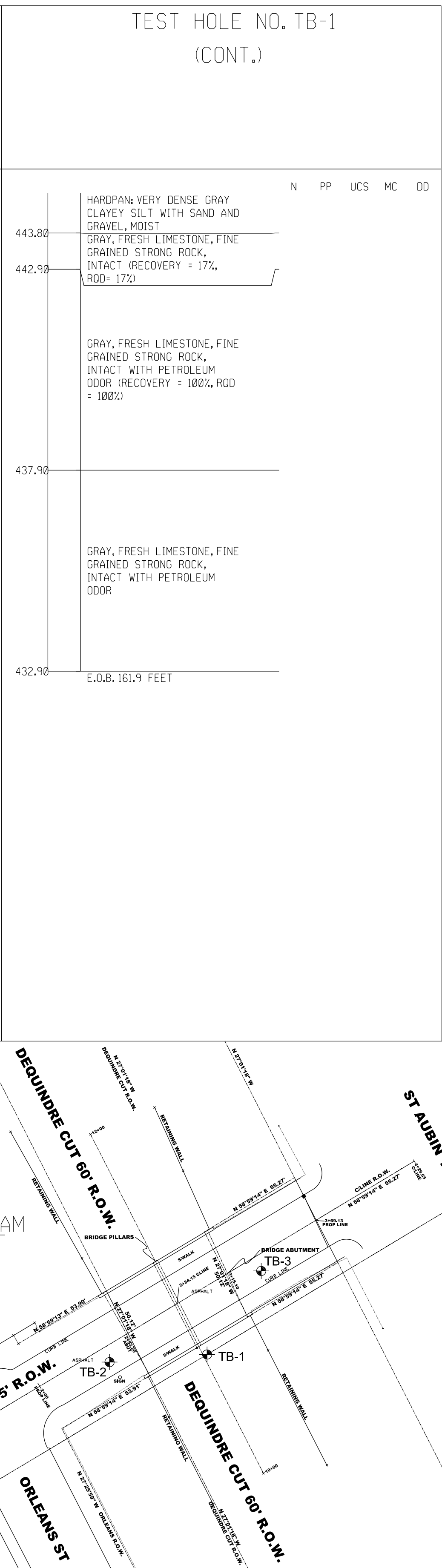
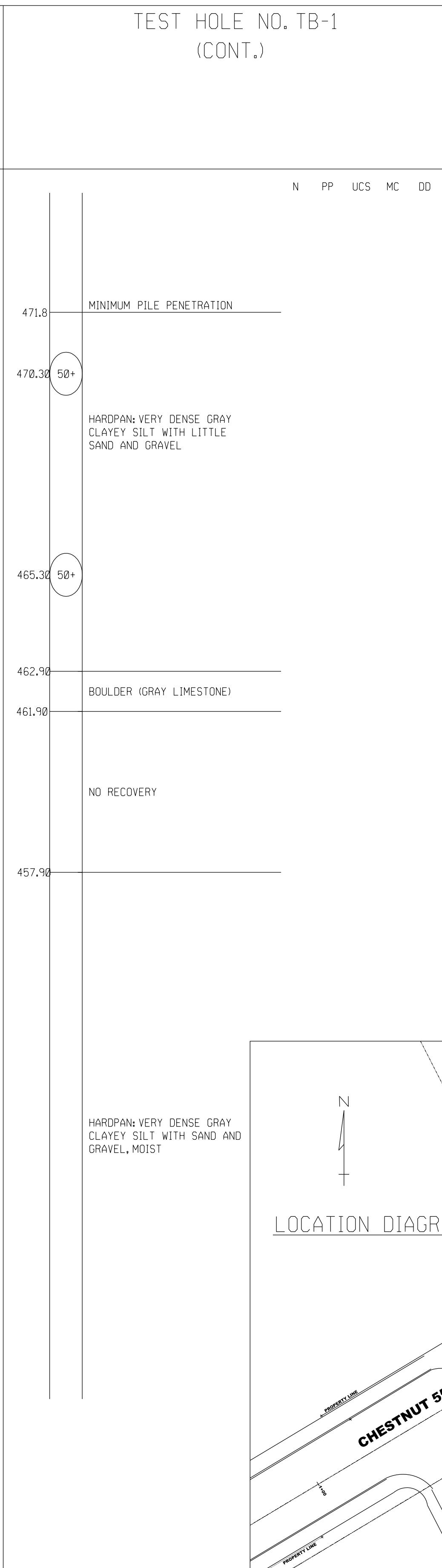
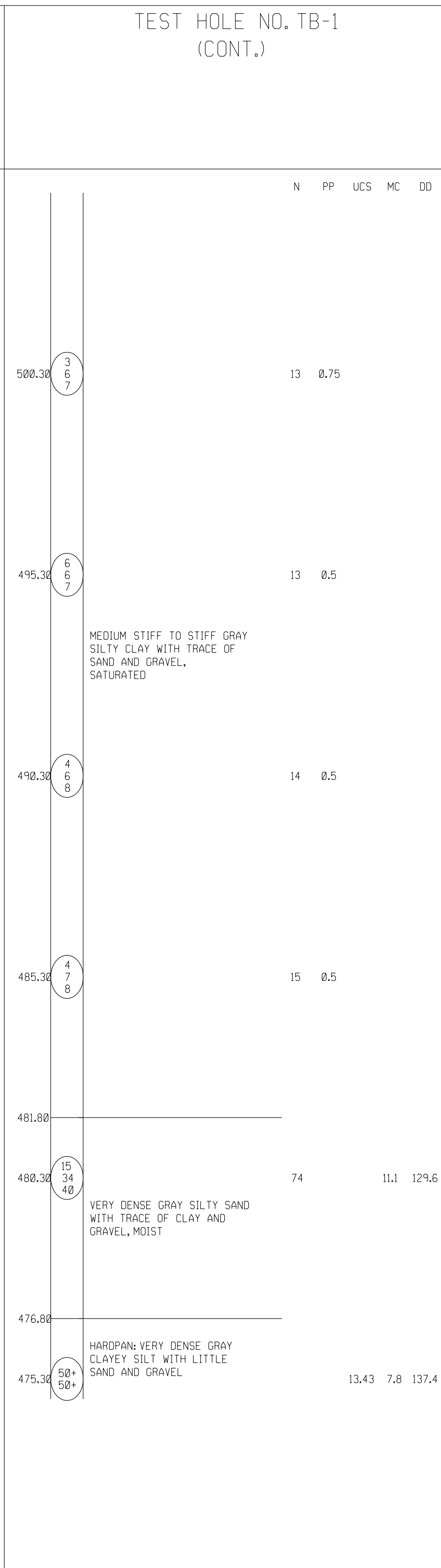
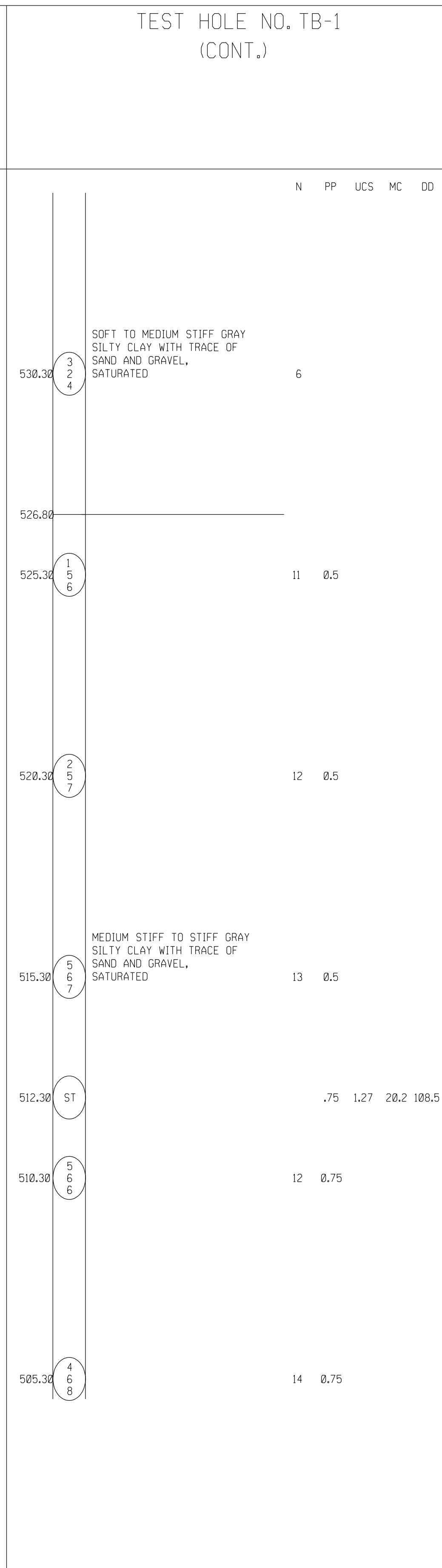
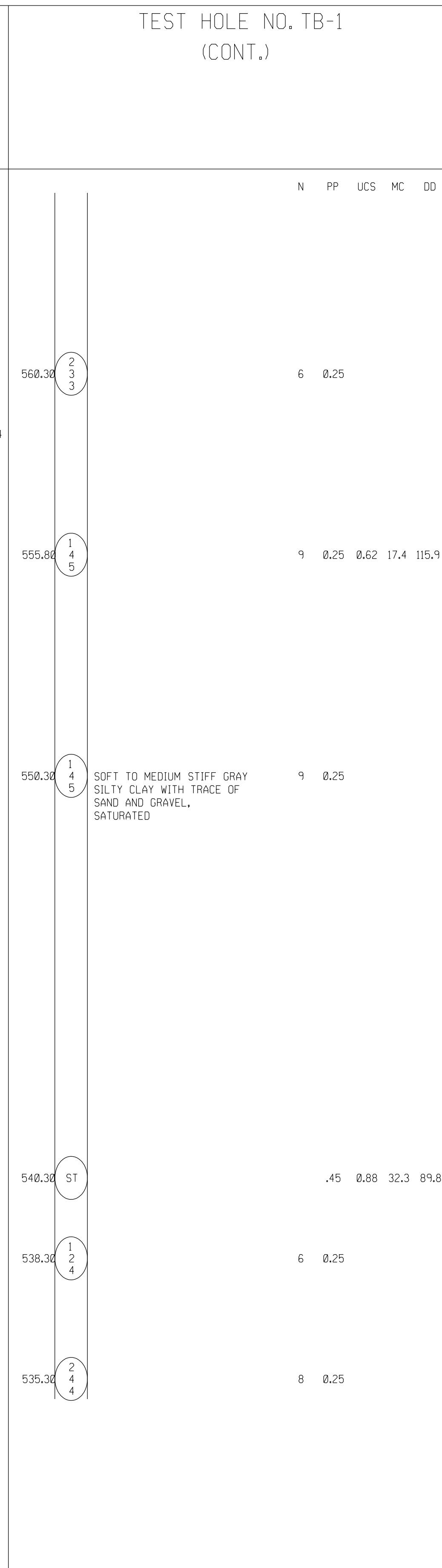
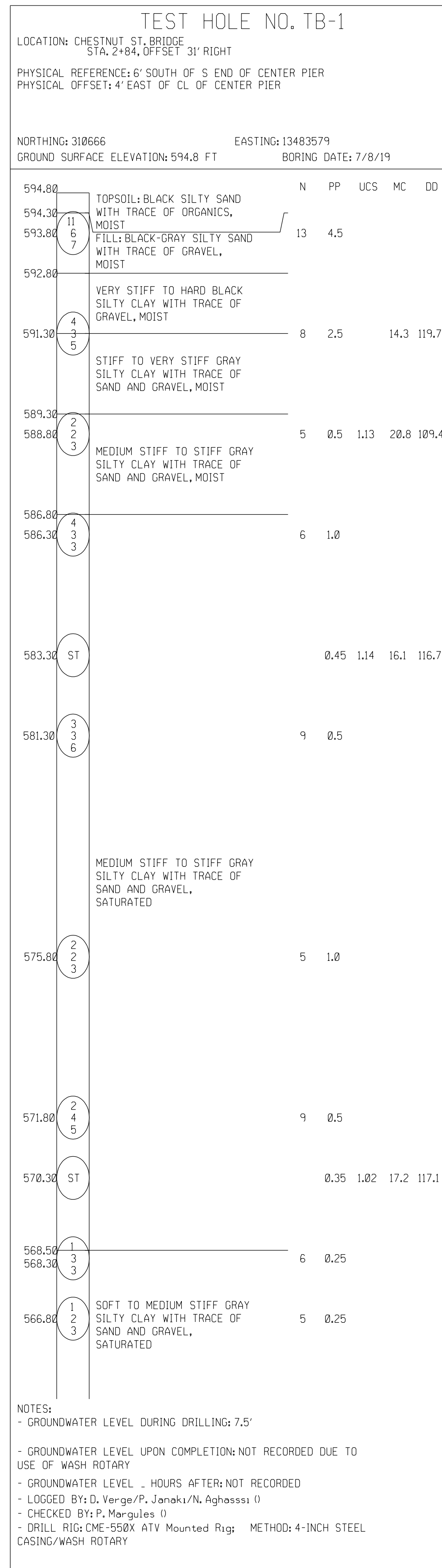
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GRADE				
ESTIMATE				
REVISIONS				

CITY OF DETROIT
CITY ENGINEERING DIVISION - D.P.W.
BUREAU OF STREETS AND HIGHWAYS
FOR

CHESTNUT STREET BRIDGE

GENERAL PLAN OF SITE

SHEET 4 OF 27 SHEETS
JOB NUMBER 132668A
ASSIGNMENT NO.
DATE 08/29/2019



NUMBERS IN CIRCLES DENOTE NUMBER OF BLOWS REQUIRED TO DRIVE A 2" O.D. X 1.5' I.D. SPLIT SPOON SAMPLER 3 SUCCESSIVE 6" INCREMENTS USING A 140 LB HAMMER FALLING 30".

XXX.XX DENOTES TOP OF SAMPLE ELEVATION.

PP = POCKET PENETROMETER, UNCONFINED COMPRESSIVE STRENGTH - TONS/SQ.FT (TSF)
 UCS = LAB DETERMINED UNCONFINED COMPRESSIVE STRENGTH - TONS/SQ.FT (TSF)
 TV = VANE SHEAR TEST, UNCONFINED COMPRESSIVE STRENGTH - TONS/SQ.FT (TSF)
 MC = MOISTURE CONTENT - (%)
 DD = DRY DENSITY - LBS/CU.FT (PCF)
 N = STANDARD PENETRATION RESISTANCE

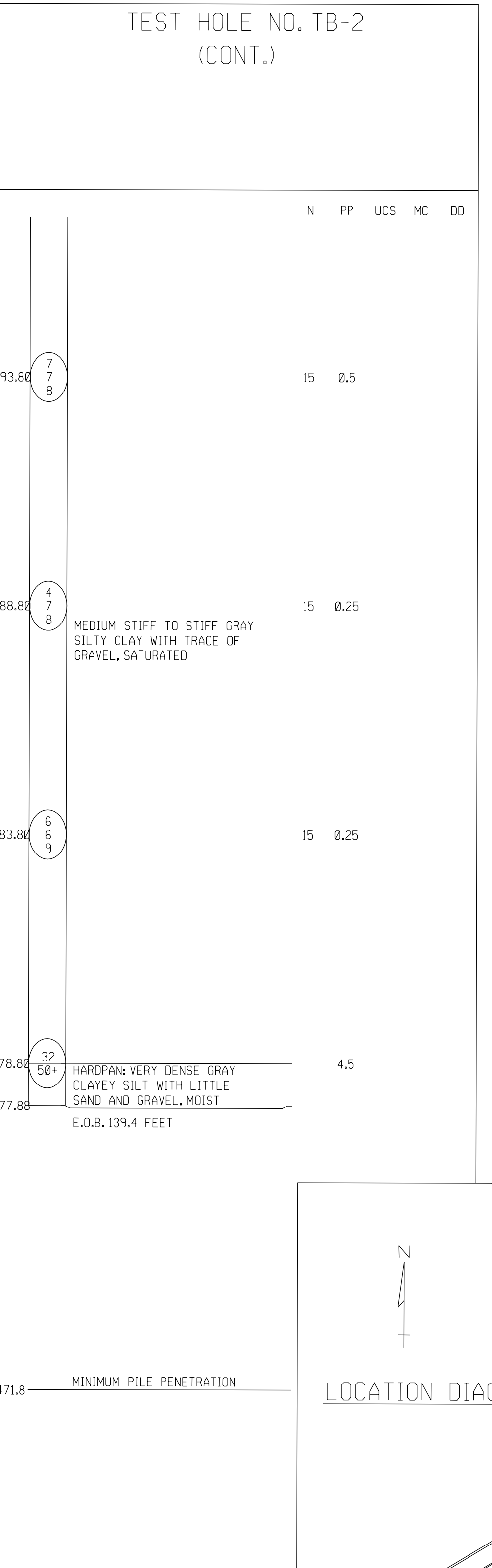
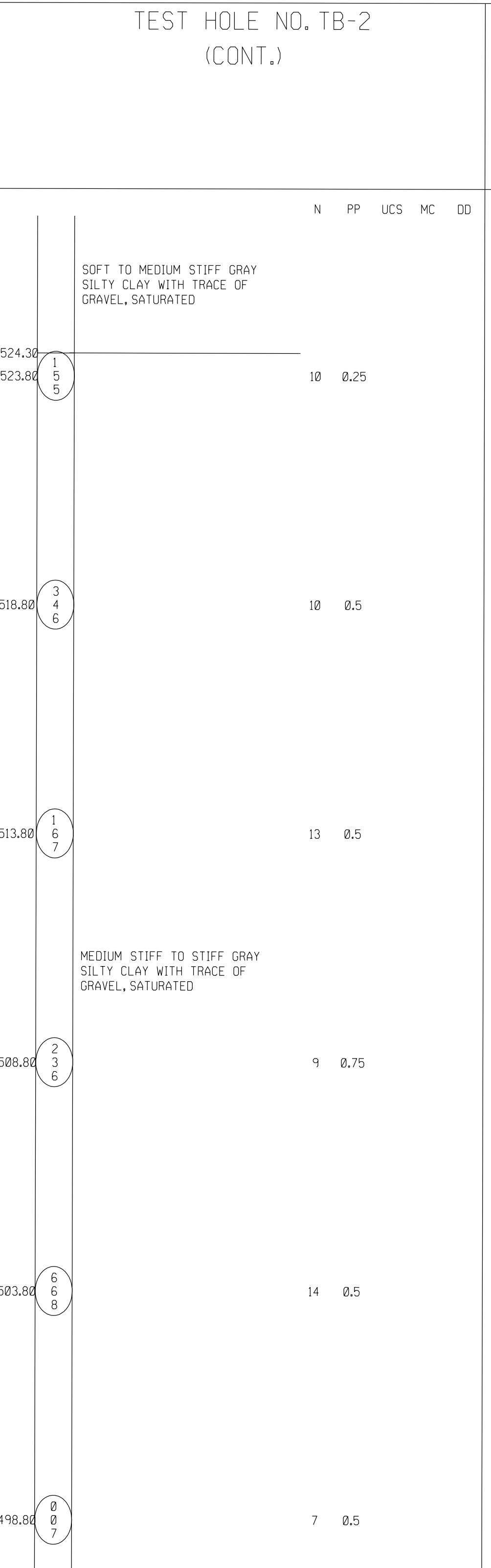
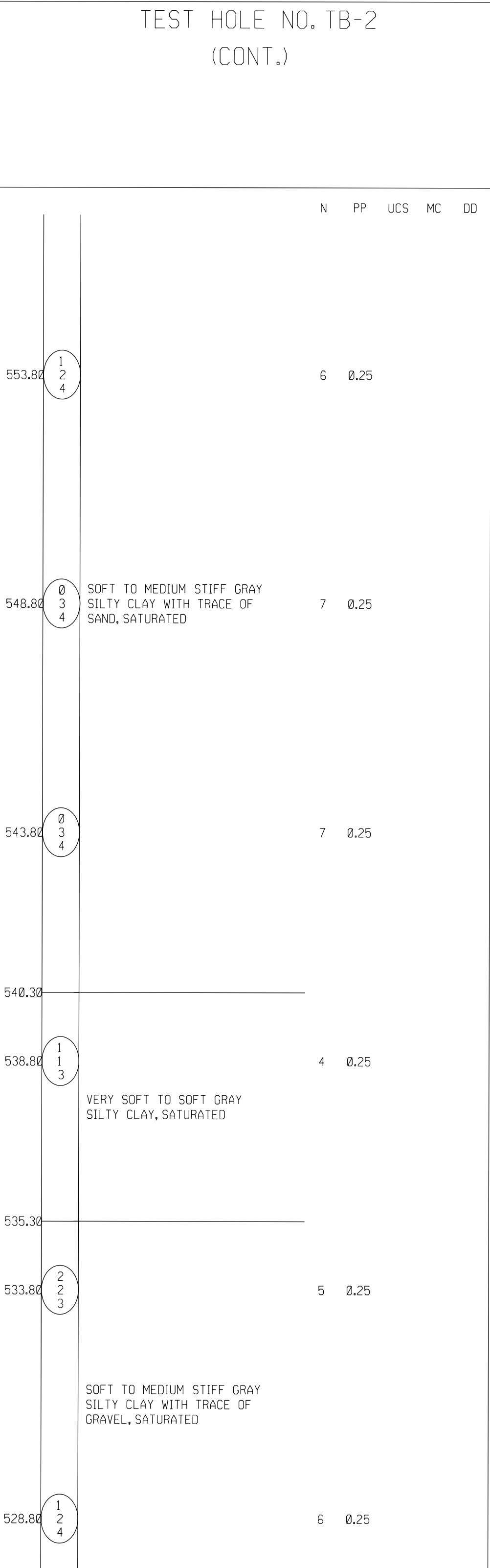
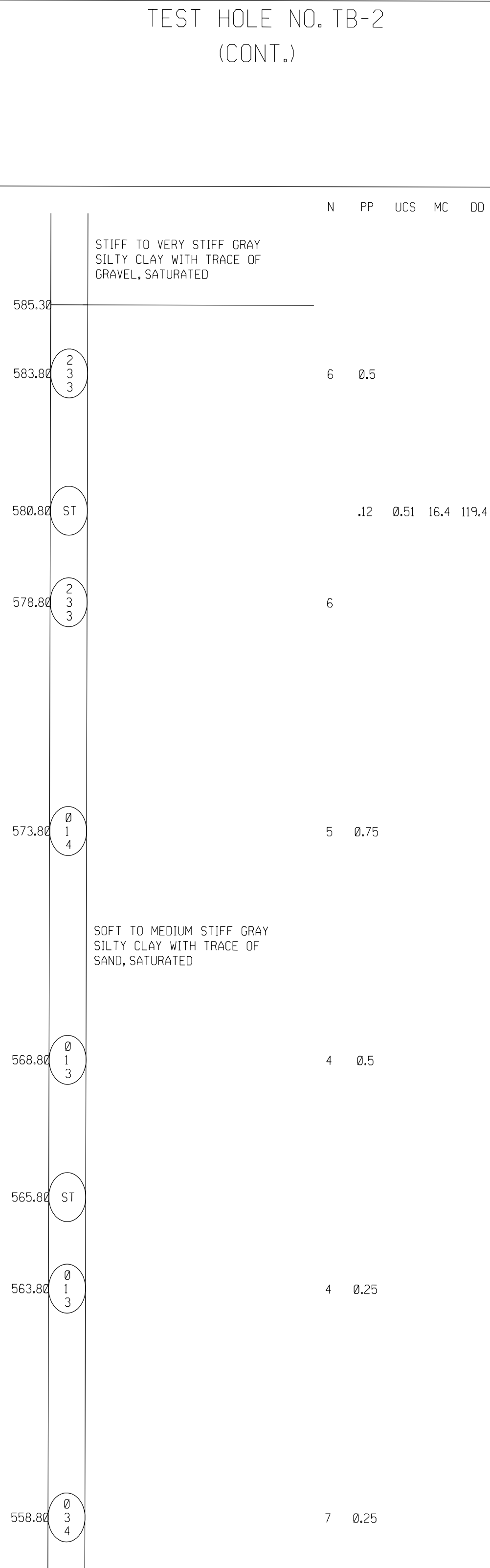
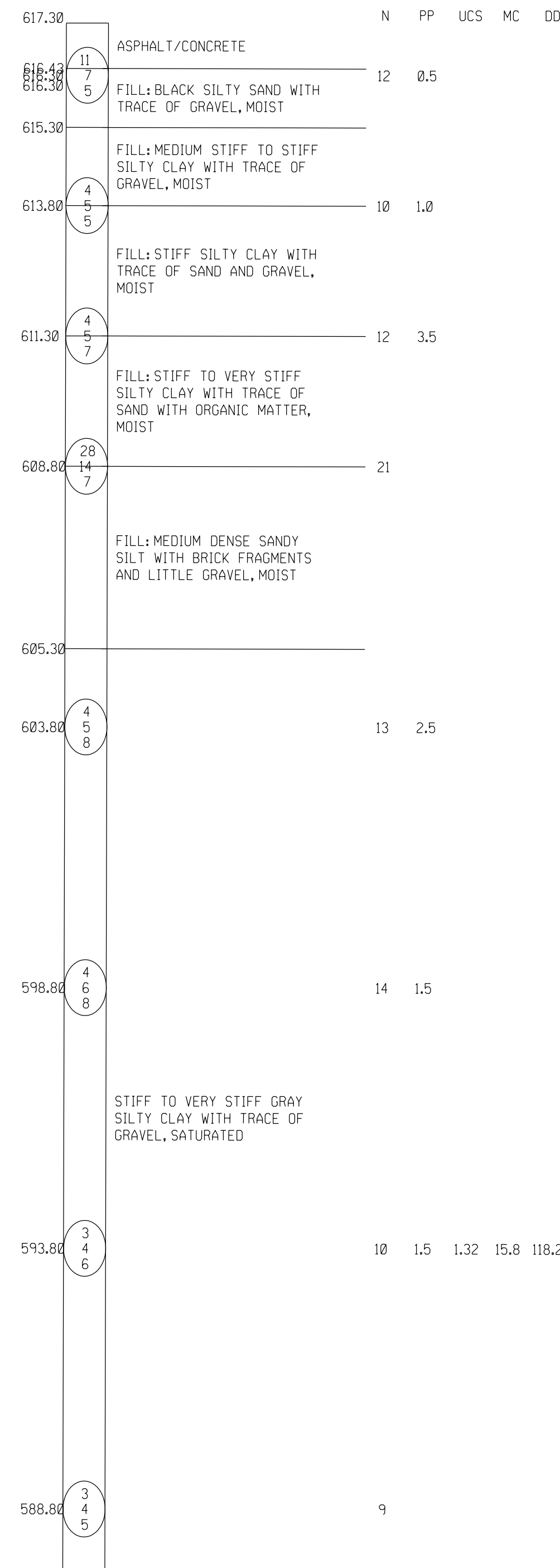
CONSISTENCY DETERMINED BY INSPECTION OF SAMPLES AND BY SOIL RESISTANCE TO PENETRATION BY ROD AND CASING OR AUGER.

GROUNDWATER LEVELS REPRESENT THE CONDITIONS AT THE TIME THE MEASUREMENTS WERE OBTAINED AND SHOULD BE ANTICIPATED TO FLUCTUATE THROUGHOUT THE YEAR.

THE SOIL BORING LOGS REPRESENT POINT INFORMATION. PRESENTATION OF THIS INFORMATION IN NO WAY IMPLIES THAT THE SUBSURFACE CONDITIONS ARE THE SAME AT LOCATIONS OTHER THAN THE EXACT LOCATION OF THE BORING.

REVISIONS DESCRIPTION OR CHECK DATE	BY	CHECKED BY	APPROVED
	PLAN		
	GRADE		
CITY OF DETROIT CITY ENGINEERING DIVISION - O.P.W. BUREAUS OF STREETS AND HIGHWAYS FOR			
CHESTNUT STREET BRIDGE SOIL BORING DATA			SHEET 5 OF 27 SHEETS JOB NUMBER 132668A ASSIGNMENT NO. DATE 08/22/2019

TEST HOLE NO. TB-2
 LOCATION: CHESTNUT ST. BRIDGE
 STA. 2+38, OFFSET 8' RIGHT
 PHYSICAL REFERENCE: 15' WEST OF W. ABUTMENT
 PHYSICAL OFFSET: 5' NORTH OF S CURB (IN EB LANE)
 NORTHING: 310658 EASTING: 13483530
 GROUND SURFACE ELEVATION: 617.3 FT BORING DATE: 7/12/19

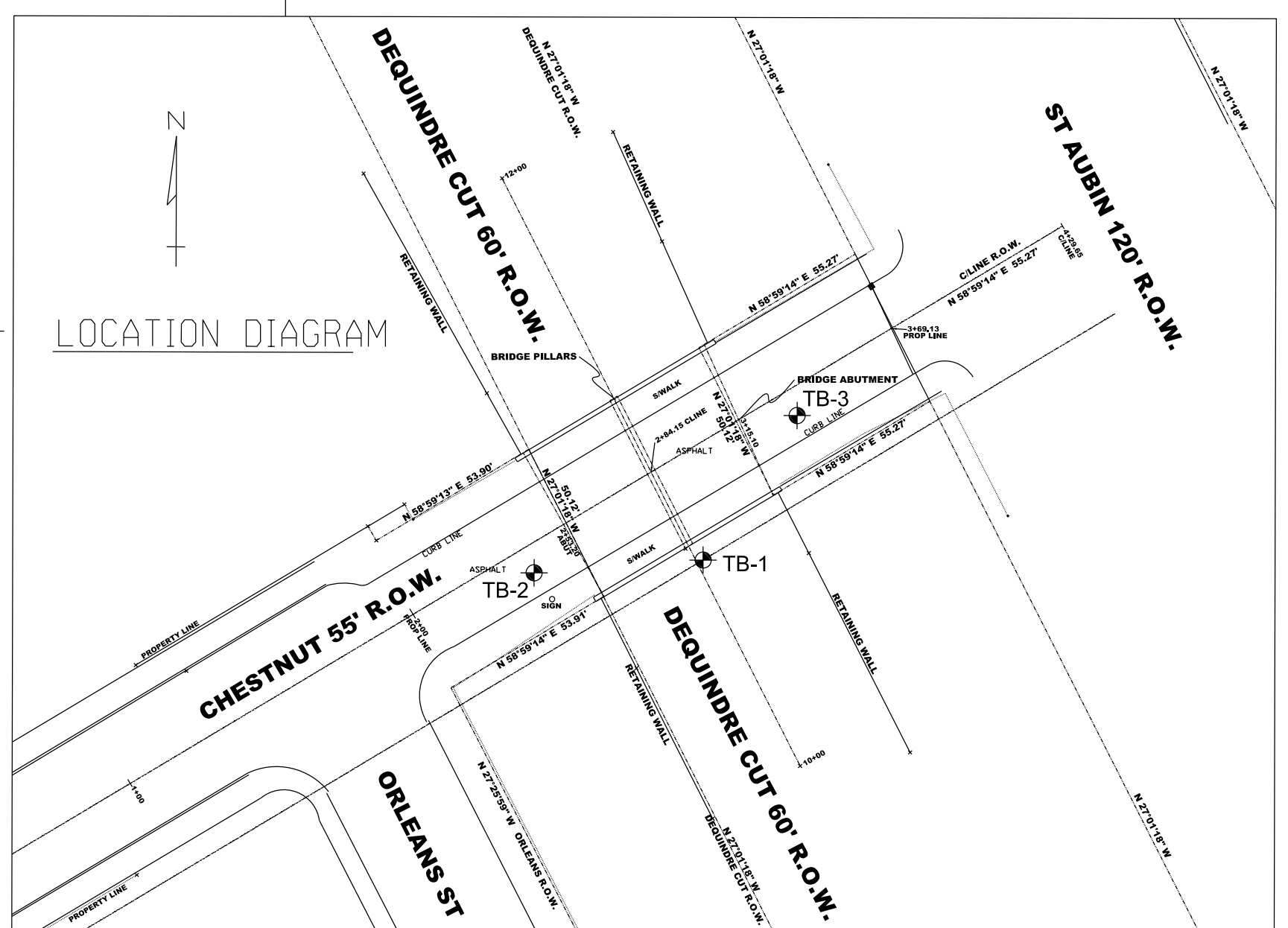


NOTES:
 - GROUNDWATER LEVEL DURING DRILLING: NOT ENCOUNTERED BEFORE THE USE OF WASH ROTARY
 - GROUNDWATER LEVEL UPON COMPLETION: NOT RECORDED DUE TO USE OF WASH ROTARY
 - GROUNDWATER LEVEL . . . HOURS AFTER: NOT RECORDED
 - LOGGED BY: P. Janaki II
 - CHECKED BY: P. Margulies II
 - DRILL RIG: CME-550X ATV Mounted Rig METHOD: 4-INCH STEEL CASING/WASH ROTARY

PP = POCKET PENETROMETER, UNCONFINED COMPRESSIVE STRENGTH - TONS/SQ.FT (TSF)
 UCS = LAB DETERMINED UNCONFINED COMPRESSIVE STRENGTH - TONS/SQ.FT (TSF)
 TV = VANE SHEAR TEST, UNCONFINED COMPRESSIVE STRENGTH - TONS/SQ.FT (TSF)
 MC = MOISTURE CONTENT - (%)
 DD = DRY DENSITY - LBS/CU.FT (PCF)
 N = STANDARD PENETRATION RESISTANCE

CONSISTENCY DETERMINED BY INSPECTION OF SAMPLES AND BY SOIL RESISTANCE TO PENETRATION BY ROD AND CASING OR AUGER.
 GROUNDWATER LEVELS REPRESENT THE CONDITIONS AT THE TIME THE MEASUREMENTS WERE OBTAINED AND SHOULD BE ANTICIPATED TO FLUCTUATE THROUGHOUT THE YEAR.

THE SOIL BORING LOGS REPRESENT POINT INFORMATION. PRESENTATION OF THIS INFORMATION IN NO WAY IMPLIES THAT THE SUBSURFACE CONDITIONS ARE THE SAME AT LOCATIONS OTHER THAN THE EXACT LOCATION OF THE BORING.



NUMBERS IN CIRCLES DENOTE NUMBER OF BLOWS REQUIRED TO DRIVE A 2" O.D. X 1.5" I.D. SPLIT SPOON SAMPLER 3 SUCCESSIVE 6" INCREMENTS USING A 140 LB HAMMER FALLING 30".
 XXX.XX DENOTES TOP OF SAMPLE ELEVATION.

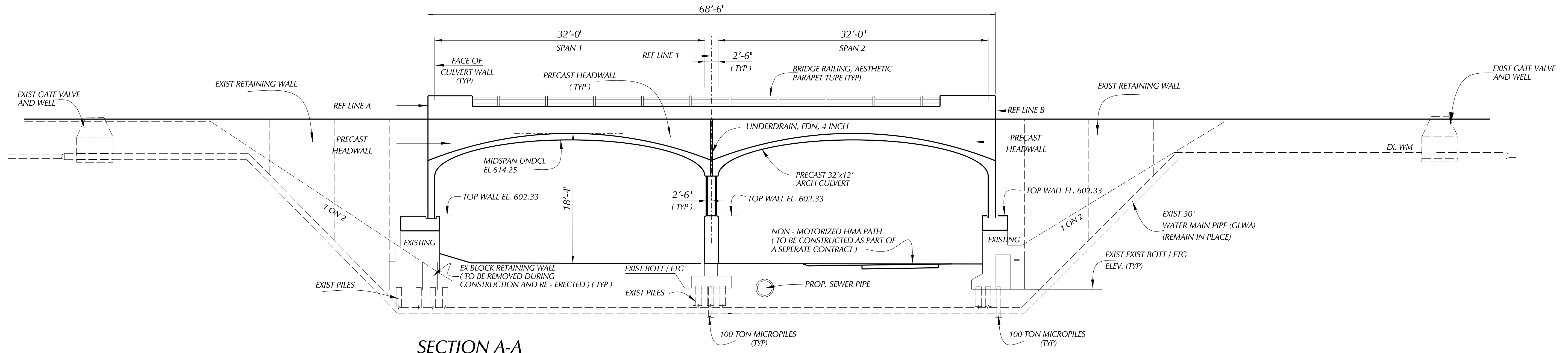
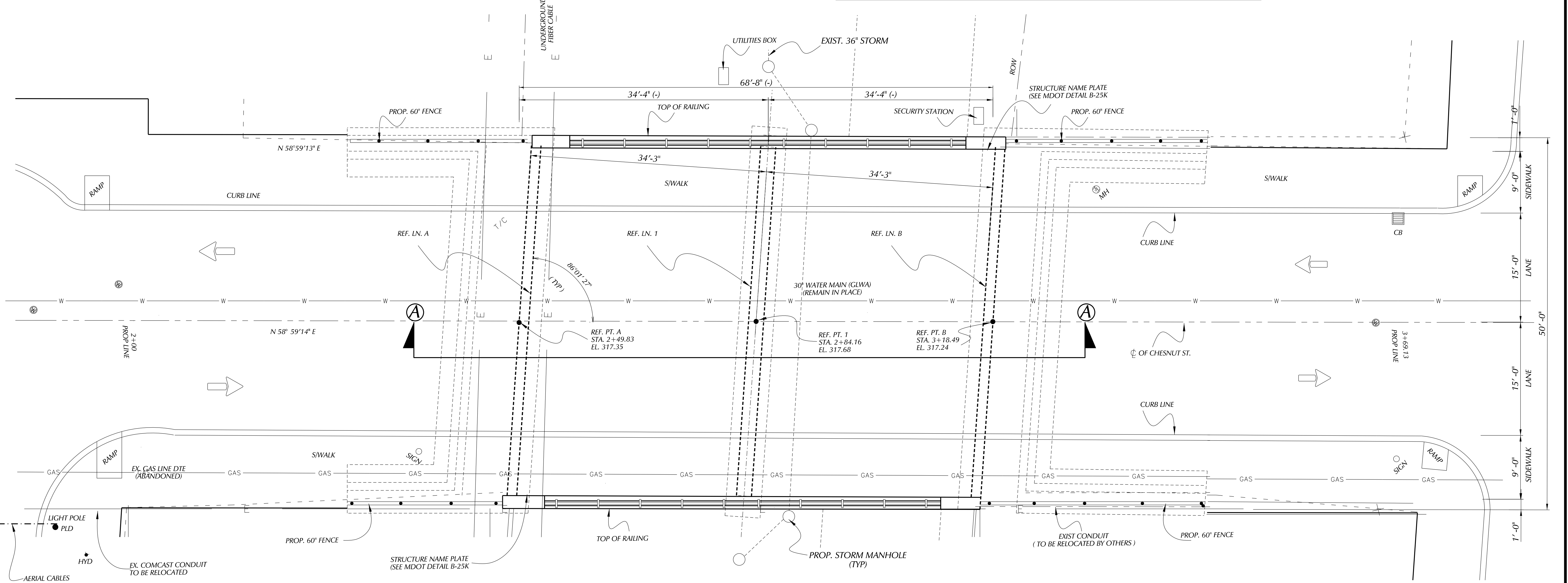
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REVISIONS			

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PLAN		
GRADE		
ESTIMATE		
FINAL		

CITY OF DETROIT
CITY ENGINEERING DIVISION - D.P.W.
BUREAU OF STREETS AND HIGHWAYS
FOR

CHESTNUT STREET BRIDGE
SOIL BORING DATA

SHEET 6 OF 27 SHEETS
 JOB NUMBER 132668A
 ASSIGNMENT NO.
 DATE 08/22/2019

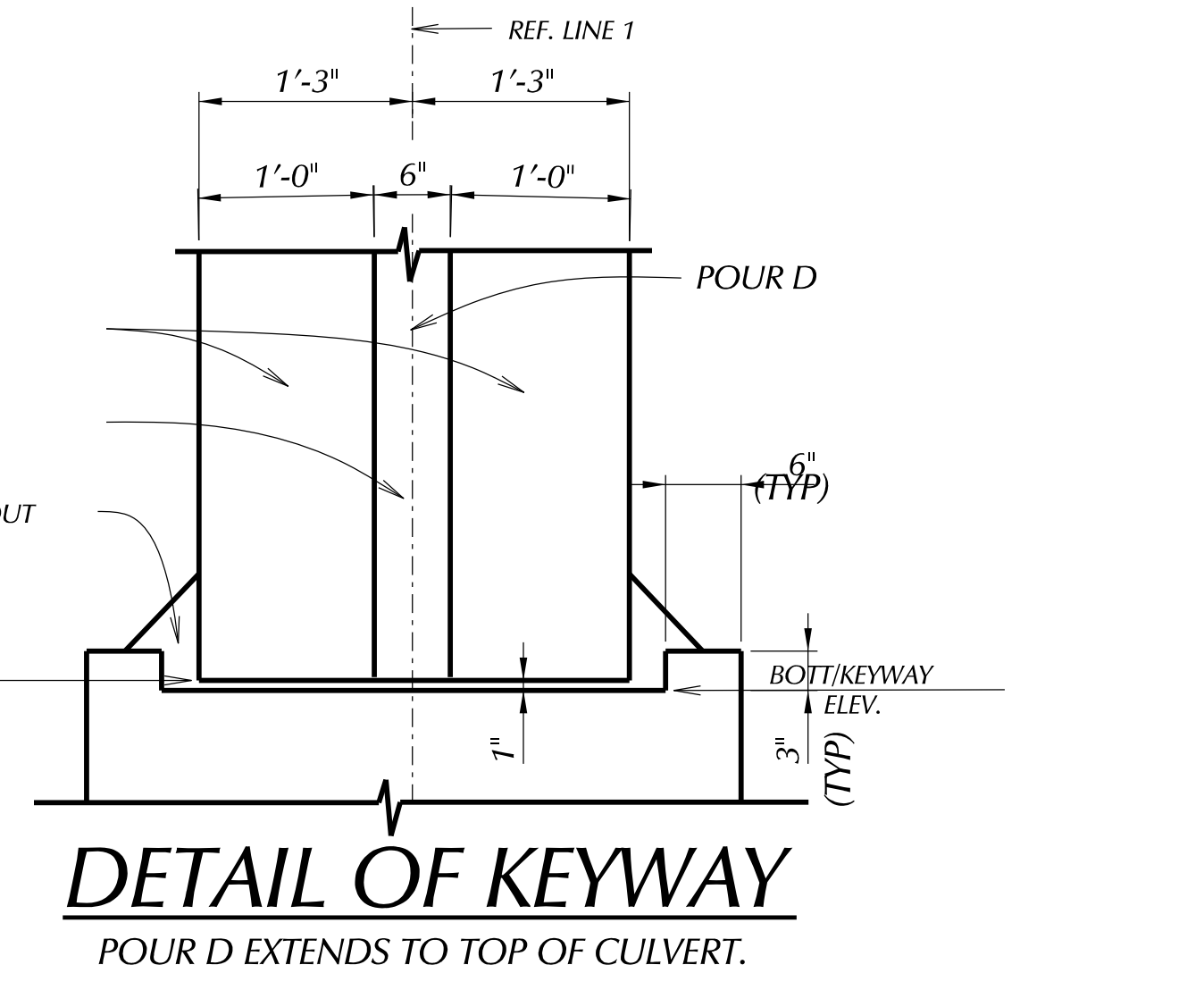
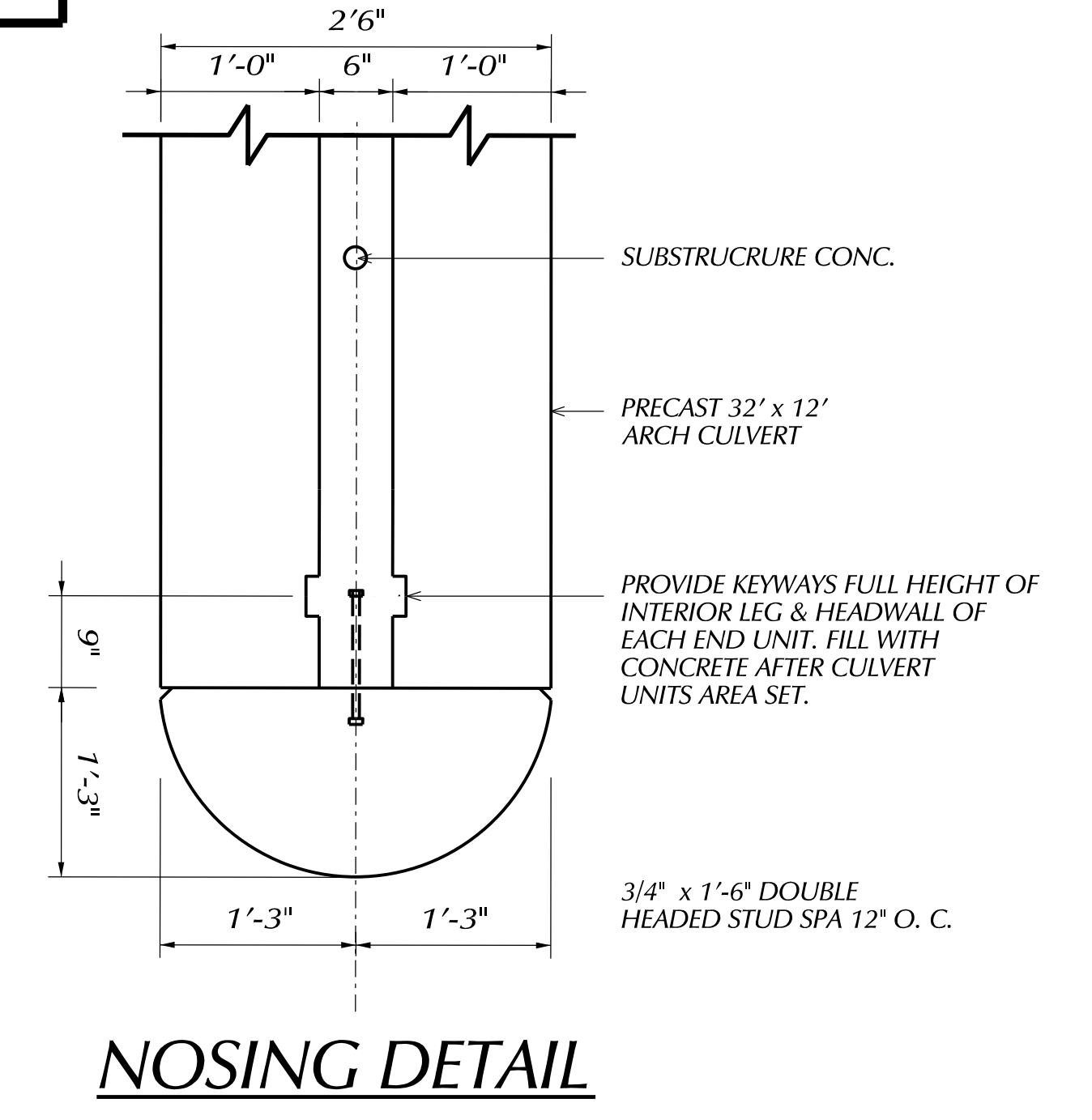
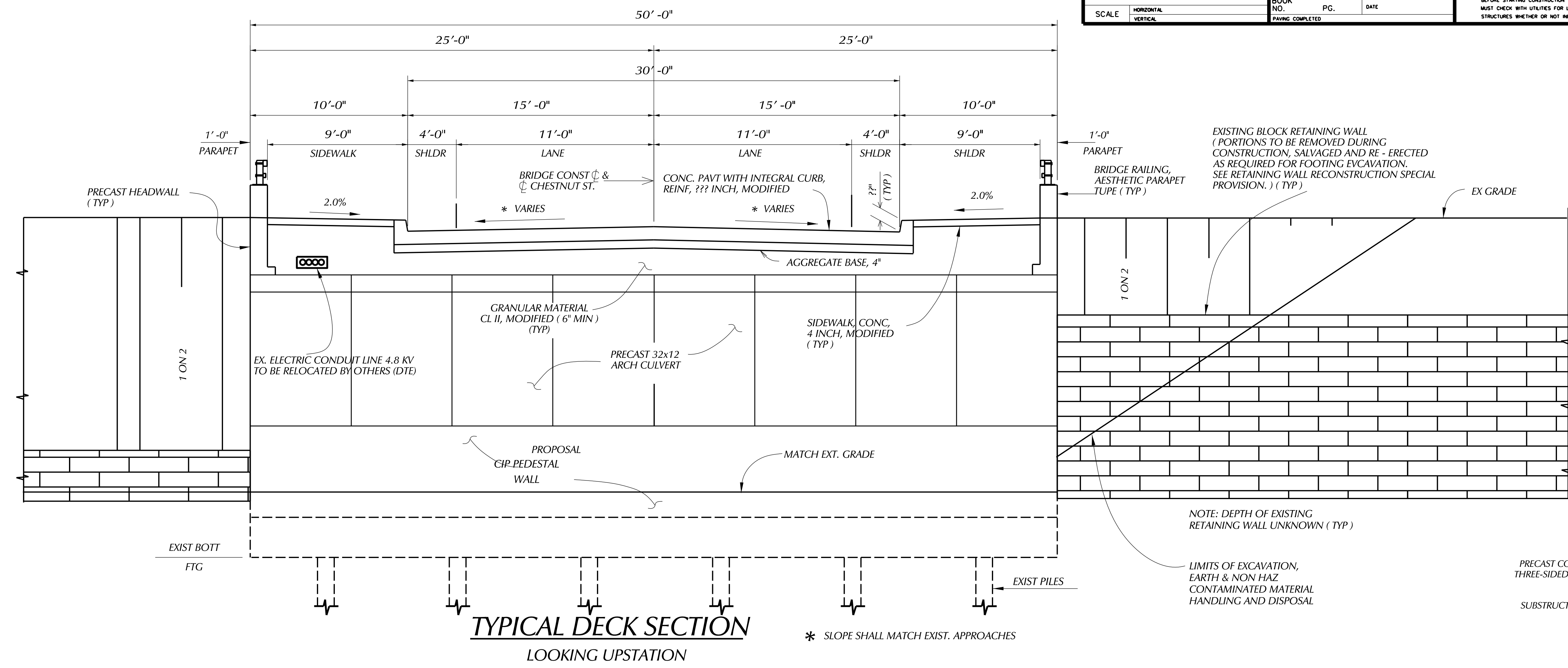


DESCRIPTION	DR	CHK	APP	DATE	BY	CHECKED BY	APPROVED:
REVISIONS							
PLAN							
GRADE							
ESTIMATE							
FINAL							

CITY OF DETROIT
CITY ENGINEERING DIVISION - D.P.W.
BUREAUS OF STREETS AND HIGHWAYS
FOR

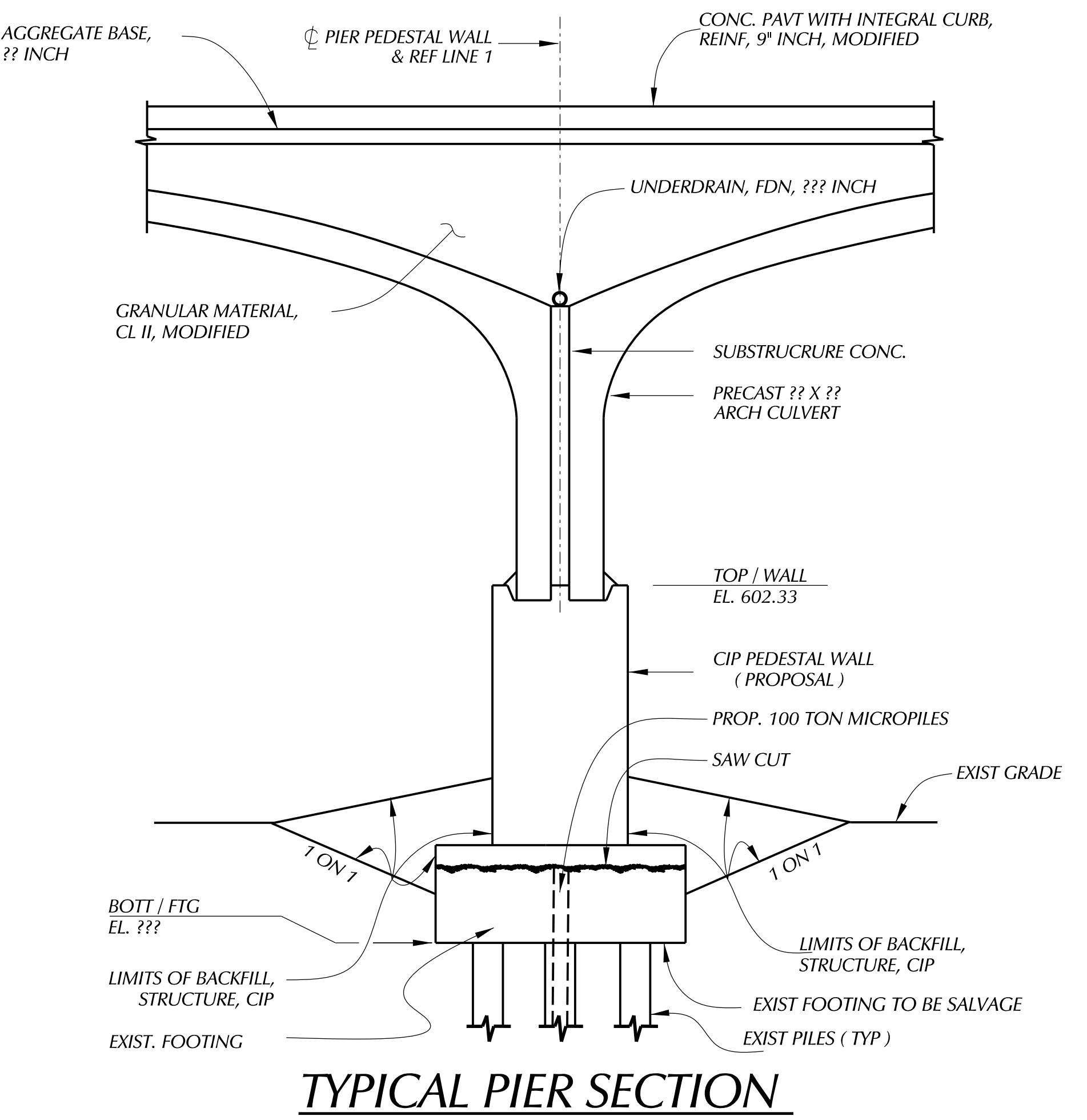
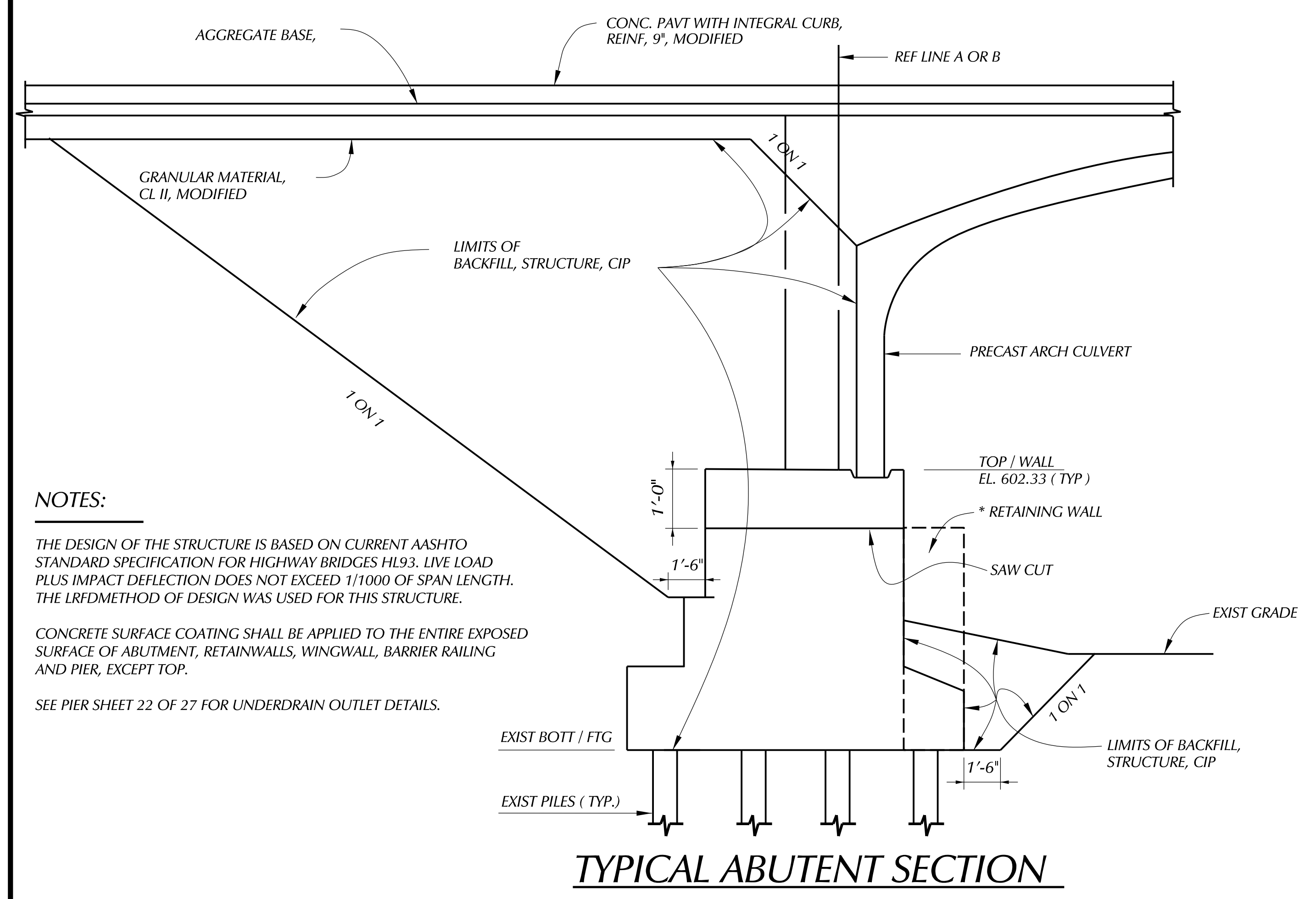
CHESTNUT STREET BRIDGE
GENERAL PLAN OF STRUCTURE

SHEET 8 OF 27 SHEETS
JOB NUMBER 132668A
ASSIGNMENT
DATE 08/22/2019



TYPICAL DECK SECTION
LOOKING UPSTATION

DETAIL OF KEYWAY
POUR D EXTENDS TO TOP OF CULVERT.



TYPICAL ABUTMENT SECTION

TYPICAL PIER SECTION

NOTES:
THE DESIGN OF THE STRUCTURE IS BASED ON CURRENT AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES HL93. LIVE LOAD PLUS IMPACT DEFLECTION DOES NOT EXCEED 1/1000 OF SPAN LENGTH. THE LRFD METHOD OF DESIGN WAS USED FOR THIS STRUCTURE.
CONCRETE SURFACE COATING SHALL BE APPLIED TO THE ENTIRE EXPOSED SURFACE OF ABUTMENT, RETAINWALLS, WINGWALL, BARRIER RAILING AND PIER, EXCEPT TOP.
SEE PIER SHEET 22 OF 27 FOR UNDERDRAIN OUTLET DETAILS.

MISCELLANEOUS QUANTITIES		
PARTICIPATING QUANTITY	UNITS	ITEM
1	Ls	Structures, Rem, Portion (R01 Of 82000)
1300	Cyd	Backfill, Structure, CIP
300	Cyd	Non Haz Contaminated Material Handling and Disposal
200	Ft	Retaining Wall Reconstruction
400	Ft	Culv, Precast Three sided or Arch, 32 foot by 12 foot, Modified
1236	Sft	Sidewalk, Conc. 4", Modified
365	Cyd	Embankment, Structure, CIP
1,215	Cyd	Excavation, Fan
10000	Dlr	Asbestos Material, Rem and Disposal.
138	Ft	Fence, Chain Link, 48 Inch.
140	Ft	Fence, Chain Link, 60 Inch.
550	Syd	Conc. Surface Coating.
8	Hrs	Staking Plan Errors And Extras, One Person
16	Hrs	Staking Plan Errors And Extras, Two Person
8	Hrs	Staking Plan Errors And Extras, Tree Person

* AS DIRECTED BY THE ENGINEER

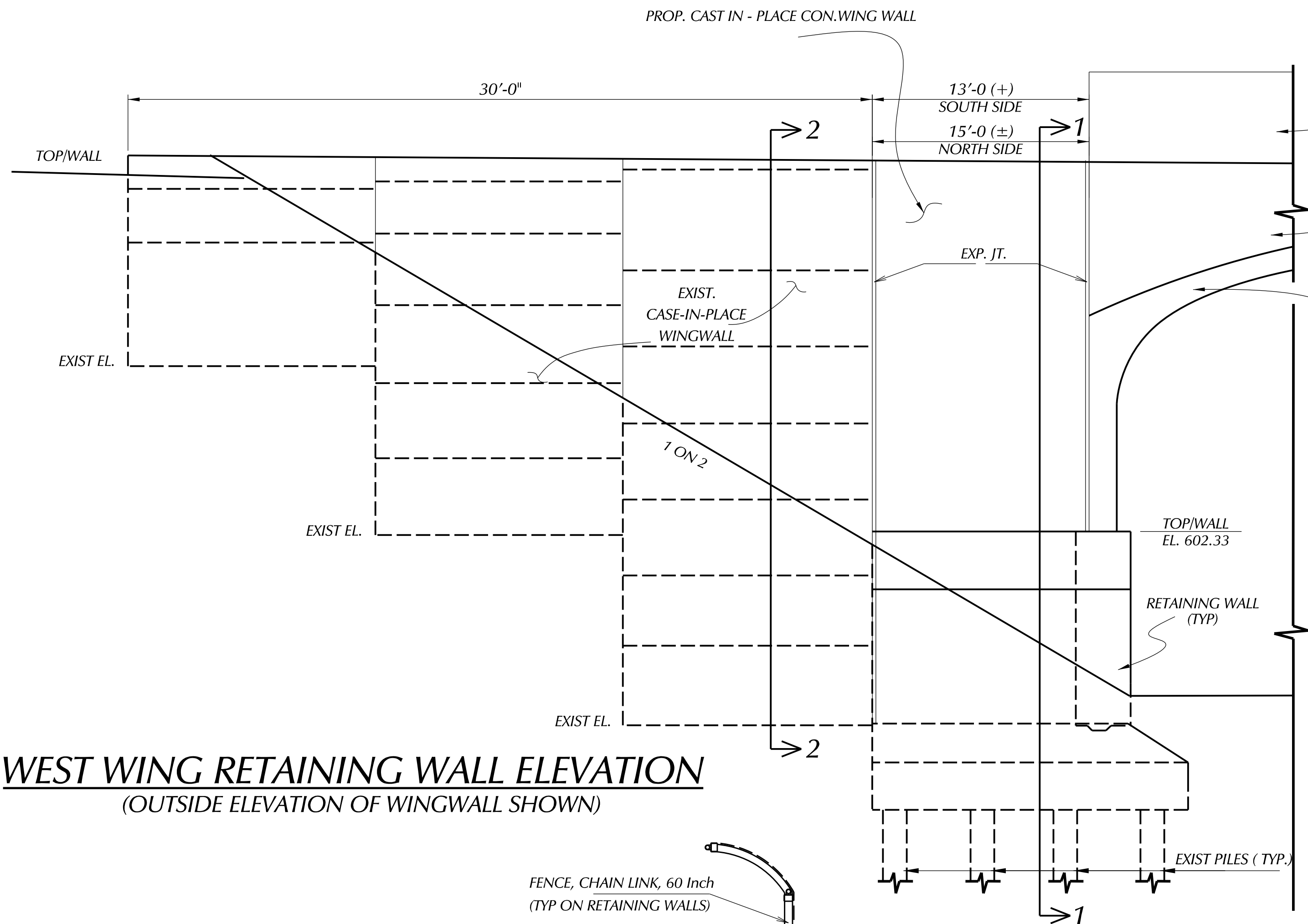
DESCRIPTION	DR	CHK	APP	DATE
REVISIONS				

PLAN	BY	CHECKED BY	APPROVED
GRADE			
ESTIMATE			
FINAL			

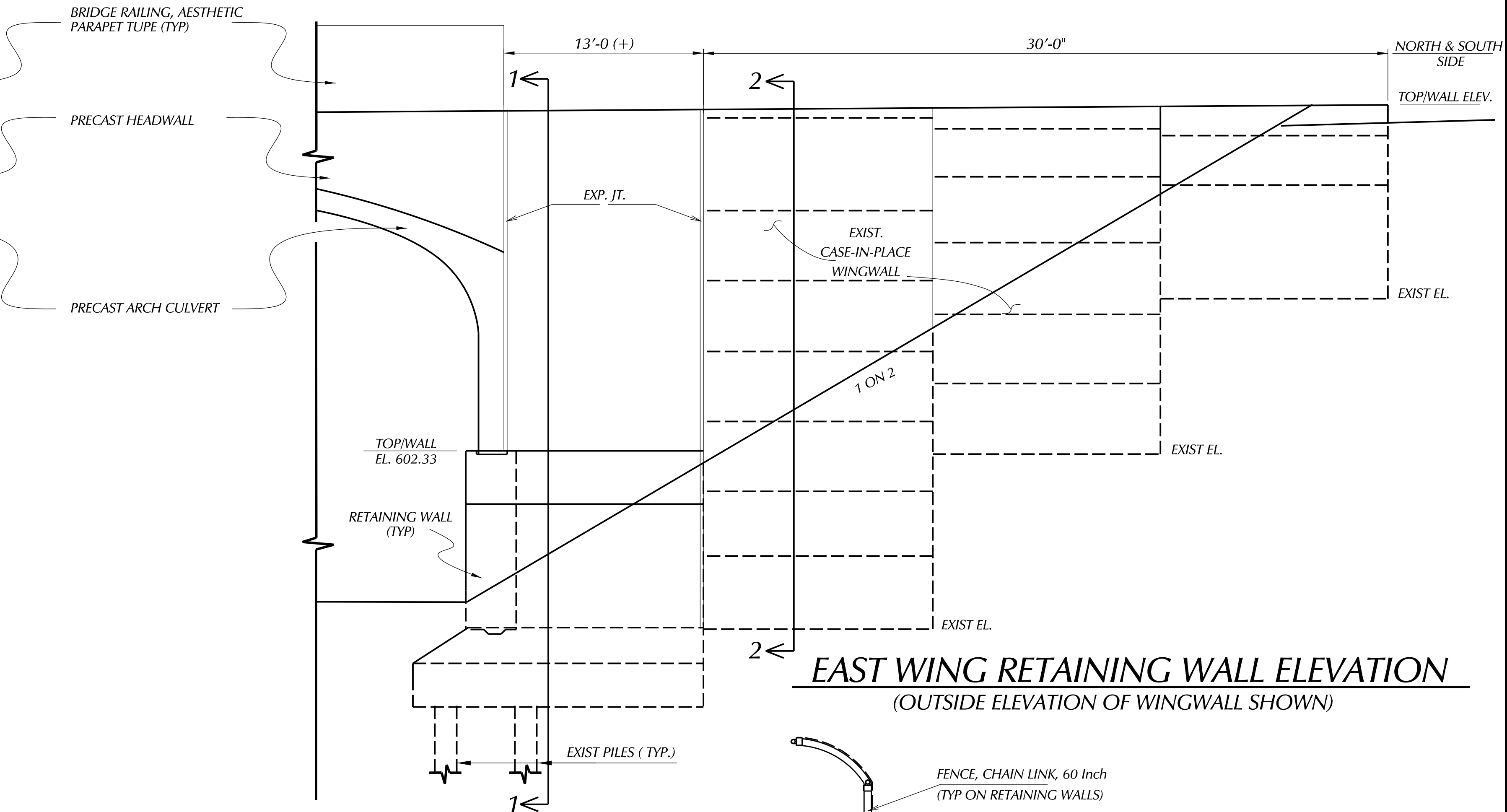
CITY OF DETROIT
CITY ENGINEERING DIVISION - D.P.W.
BUREAUS OF STREETS AND HIGHWAYS
FOR

CHESTNUT STREET BRIDGE
GENERAL PLAN OF STRUCTURE

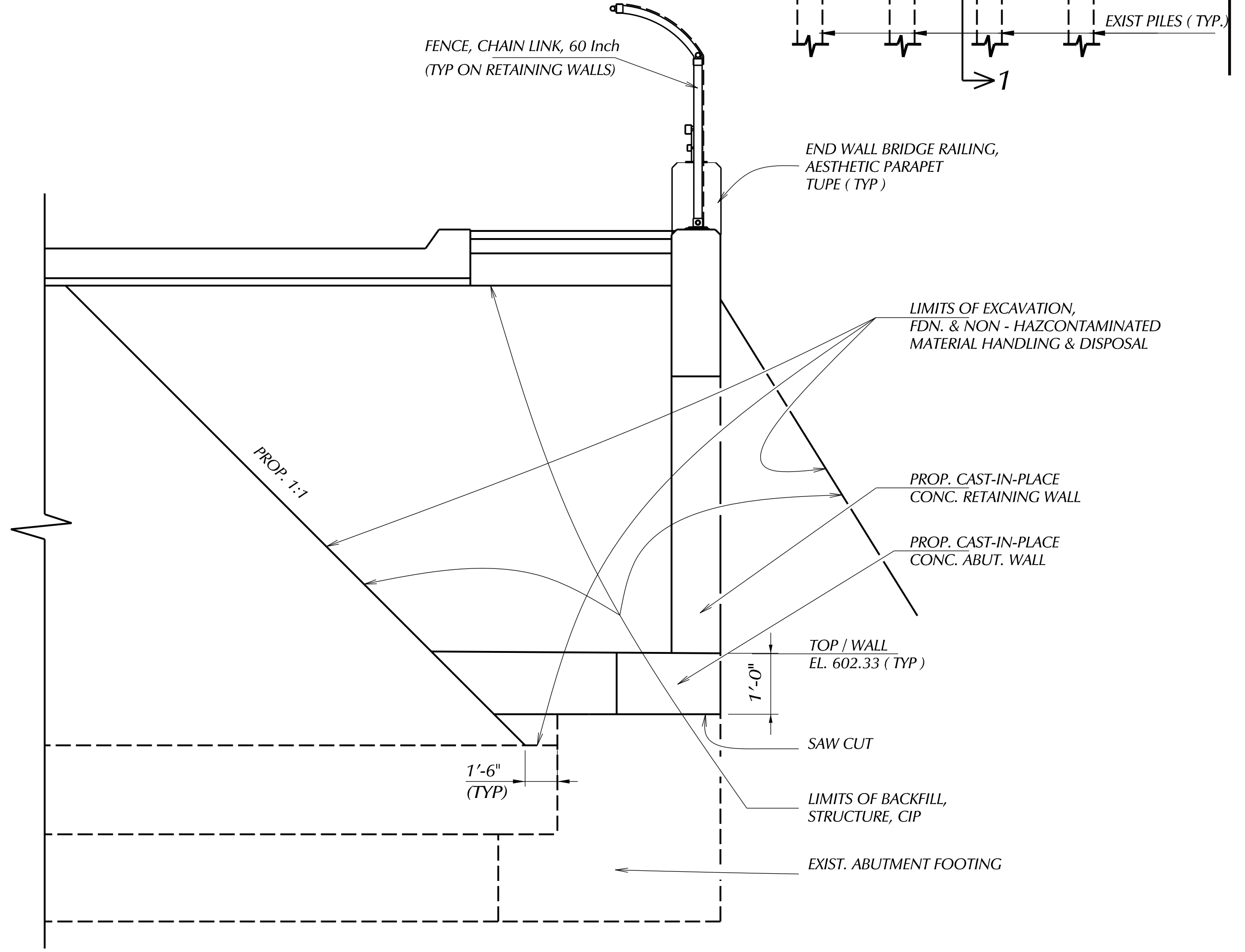
SHEET 9 of 27 SHEETS
JOB NUMBER 132668A
ASSIGNMENT NO.
DATE 08/22/2019



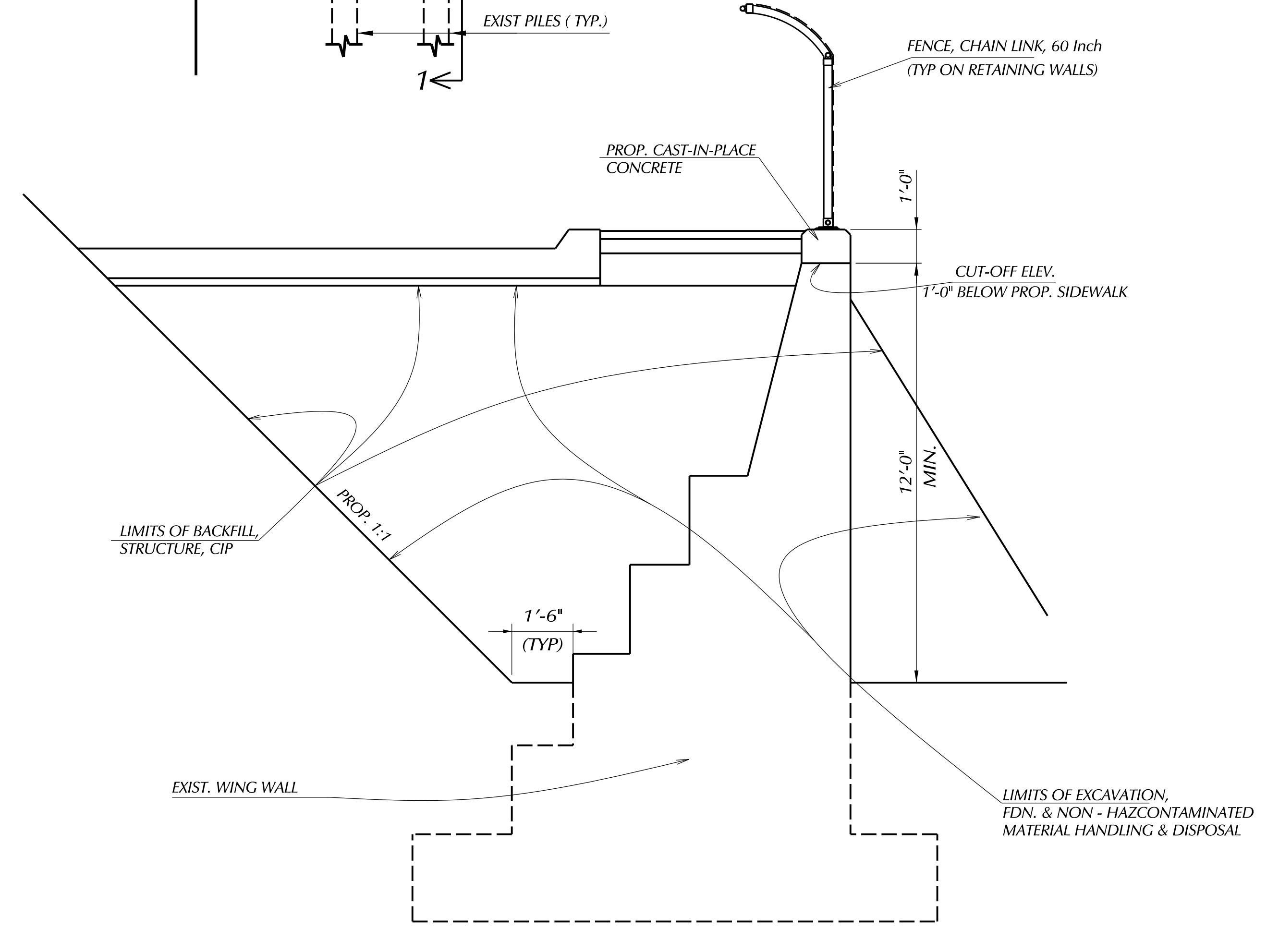
WEST WING RETAINING WALL ELEVATION
(OUTSIDE ELEVATION OF WINGWALL SHOWN)



EAST WING RETAINING WALL ELEVATION
(OUTSIDE ELEVATION OF WINGWALL SHOWN)



SECTION 1-1
(NE, NW, SE & SW)



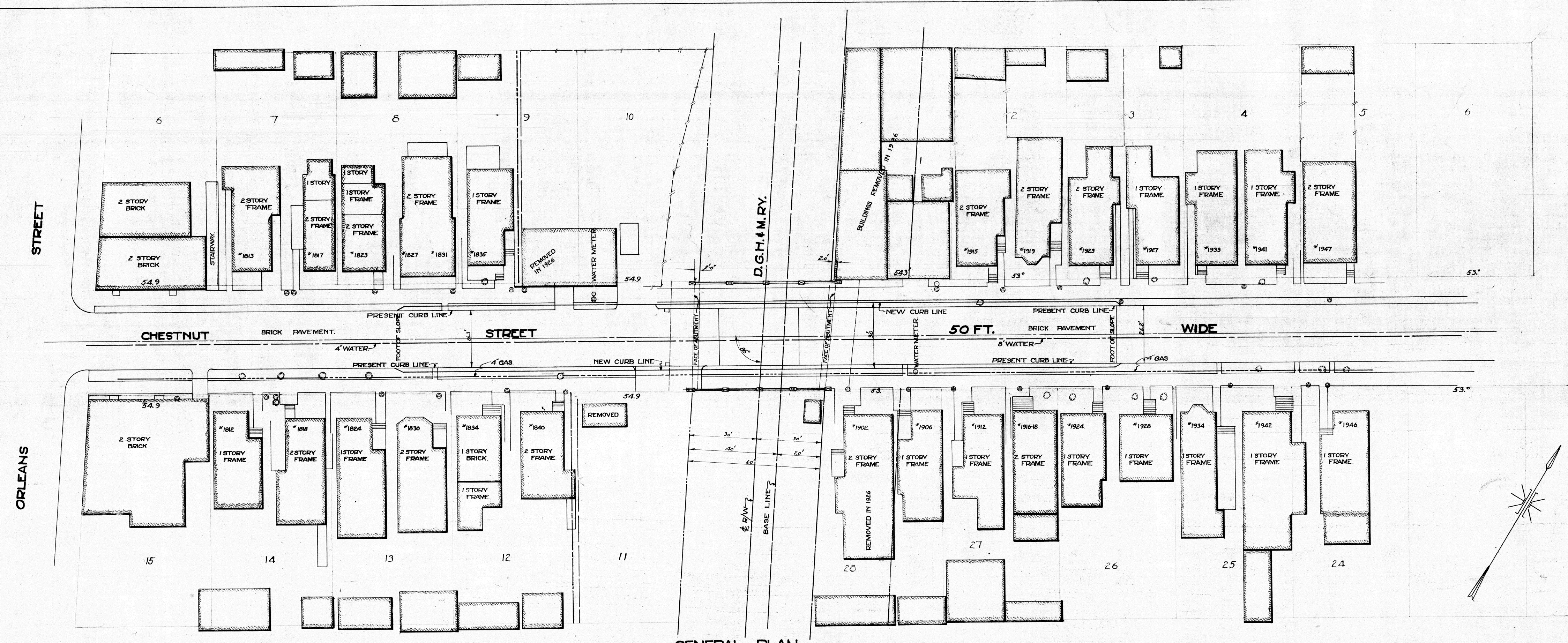
SECTION 2-2

PLAN	BY	CHECKED BY	APPROVED:
GRADE			ENGINEER OF STREETS
ESTIMATE			
DESCRIPTION	OR MCK DAP V DATE	FINAL	REVISIONS

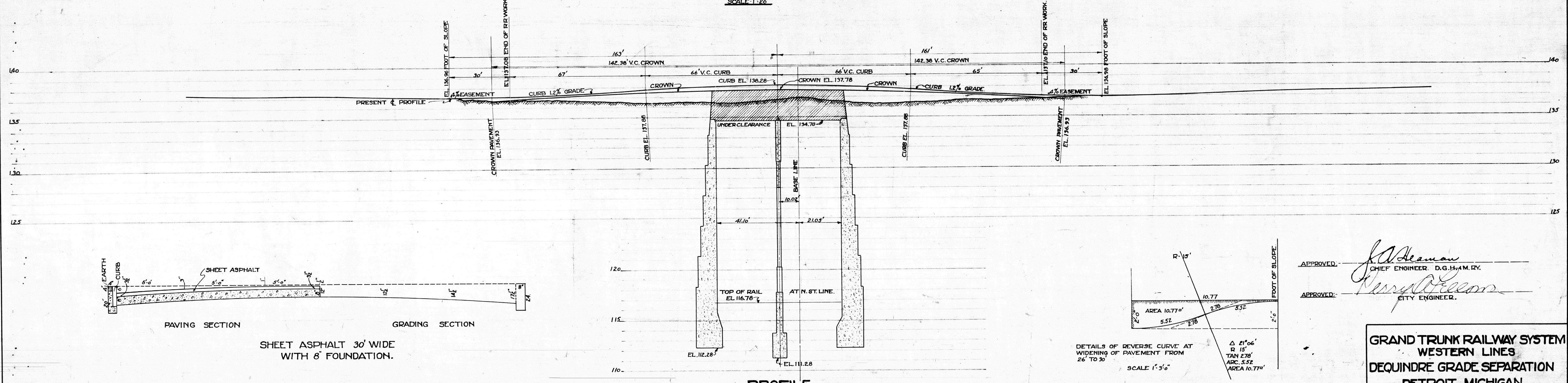
CITY OF DETROIT
 CITY ENGINEERING DIVISION - D.P.W.
 BUREAUS OF STREETS AND HIGHWAYS
 FOR

CHESTNUT STREET BRIDGE
 GENERAL PLAN OF STRUCTURE

SHEET 10 OF 27 SHEETS
JOB NUMBER 132668A
ASSIGNMENT NO.
DATE 08/29/2019



GENERAL PLAN
SCALE 1"=60'



PROFILE
SCALE HORIZ. 1"=60'
VERT. 1"=4'

APPROVED: *J. A. Heaman*
CHIEF ENGINEER, D.G.H.A.M.R.Y.

APPROVED: *Harold Wilson*
CITY ENGINEER.

**GRAND TRUNK RAILWAY SYSTEM
WESTERN LINES
DEQUINRE GRADE SEPARATION
DETROIT, MICHIGAN.
GENERAL PLAN & PROFILE - CHESTNUT ST**
SCALES AS NOTED.

D.L.S. TRWHF. CH. OFFICE OF CHIEF ENGINEER, DETROIT, MICHIGAN, JULY 1929. JOURNAL W-3175 FILE.

EXISTING

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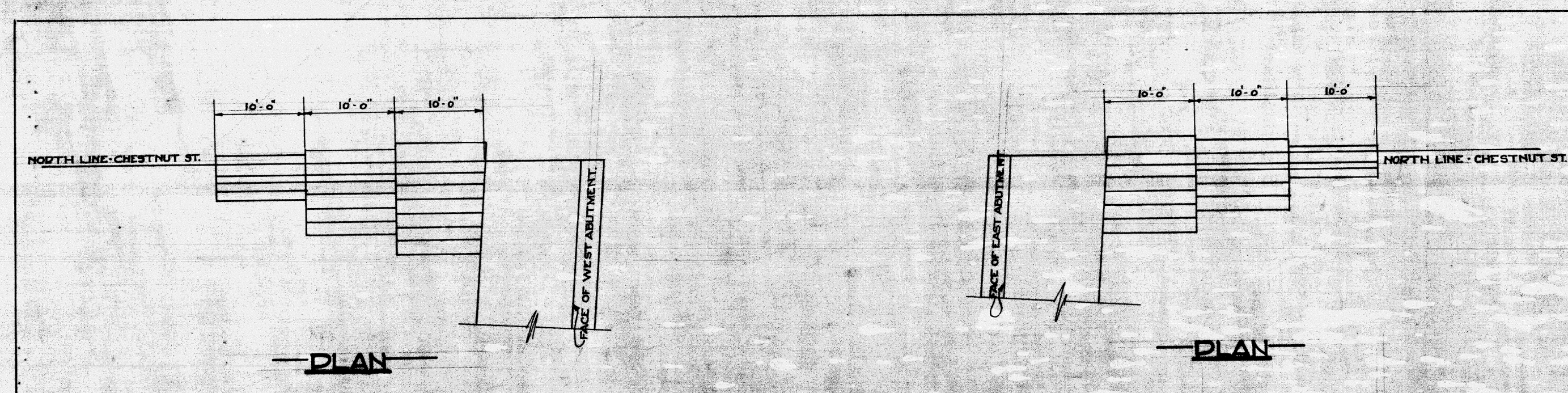
DESCRIPTION	OR CHECK DATE	BY	CHECKED BY	APPROVED
PLAN				ENGINEER OF STREETS
GRADE				
ESTIMATE				
REVISIONS				

**CITY OF DETROIT
CITY ENGINEERING DIVISION - D.P.W.
BUREAU OF STREETS AND HIGHWAYS
FOR**

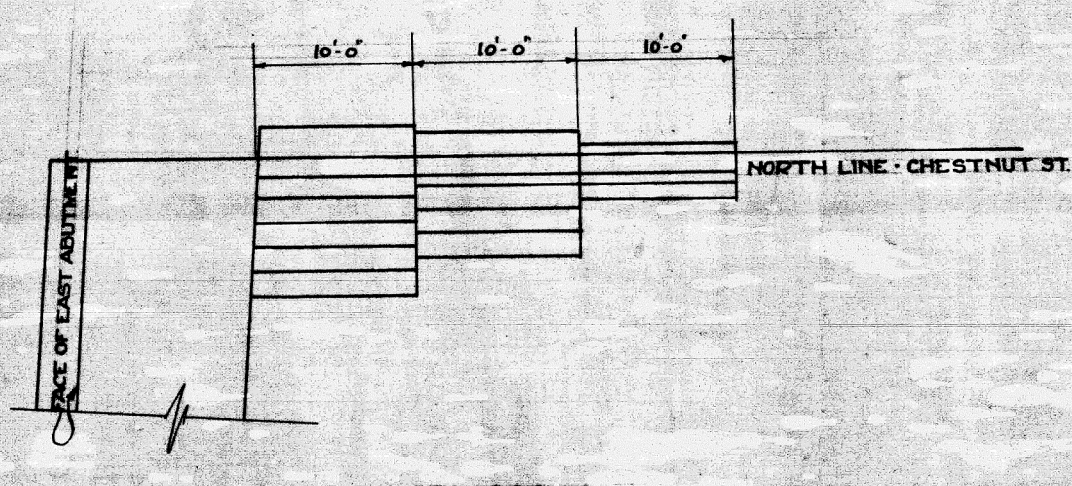
CHESTNUT STREET BRIDGE

EXISTING SHEET

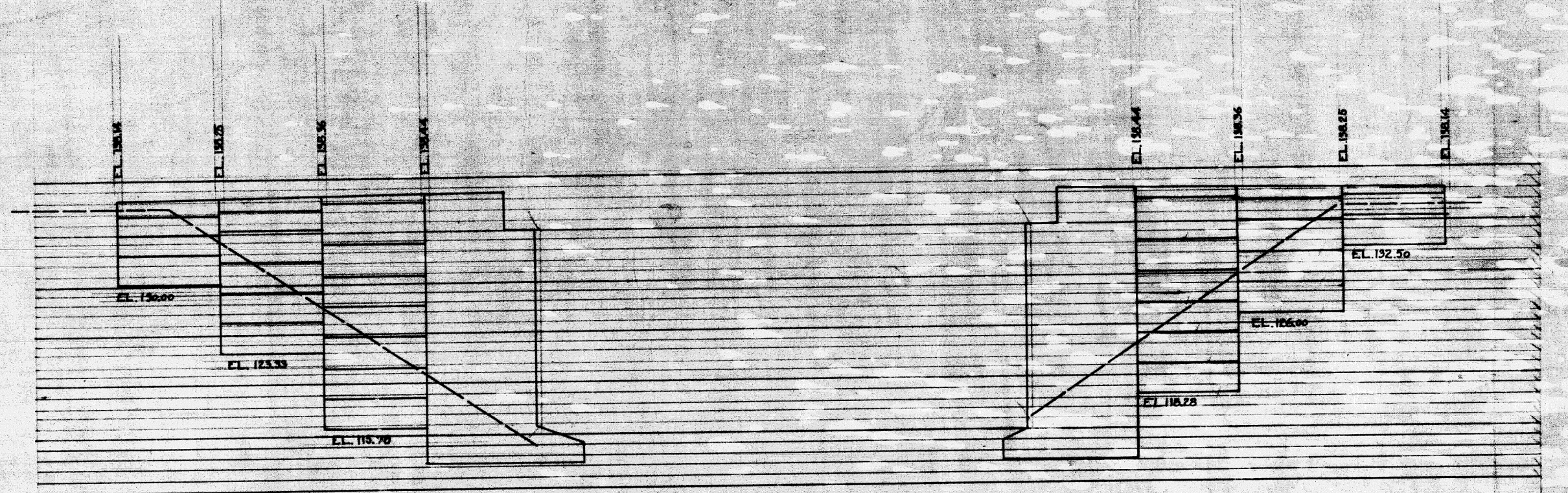
SHEET 11 OF 27 SHEETS
JOB NUMBER 132668A
ASSIGNMENT NO.
DATE 08/22/2019



PLAN

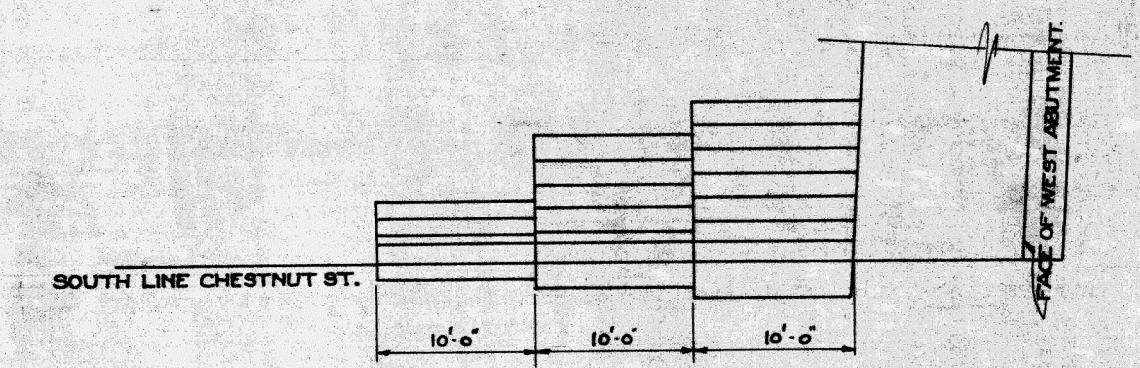


PLAN

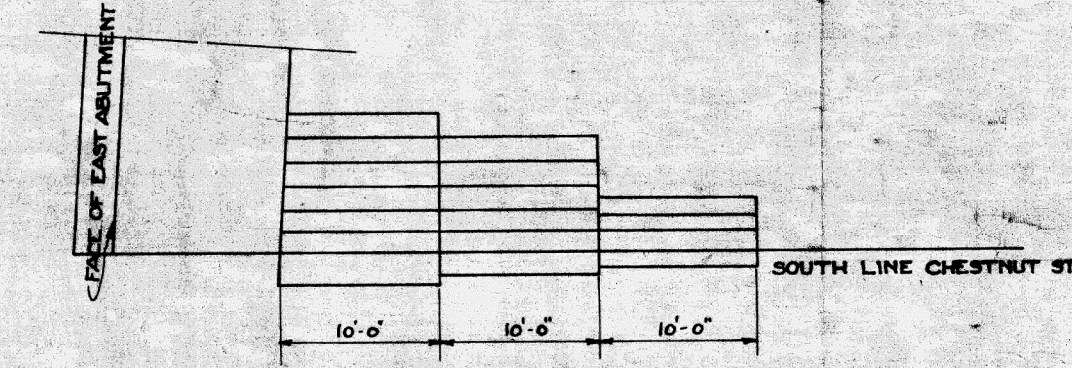


ELEVATION

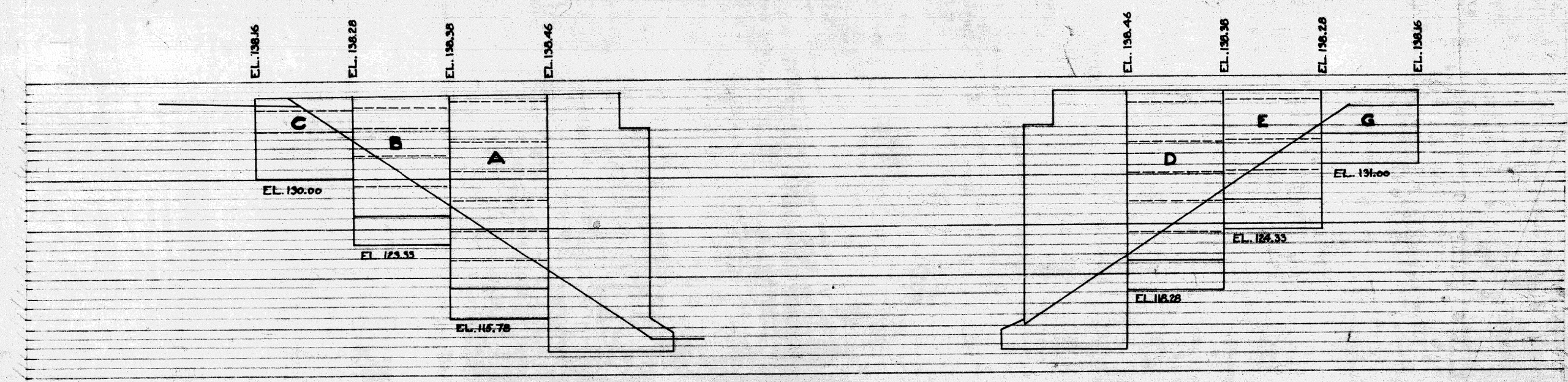
ELEVATION



PLAN



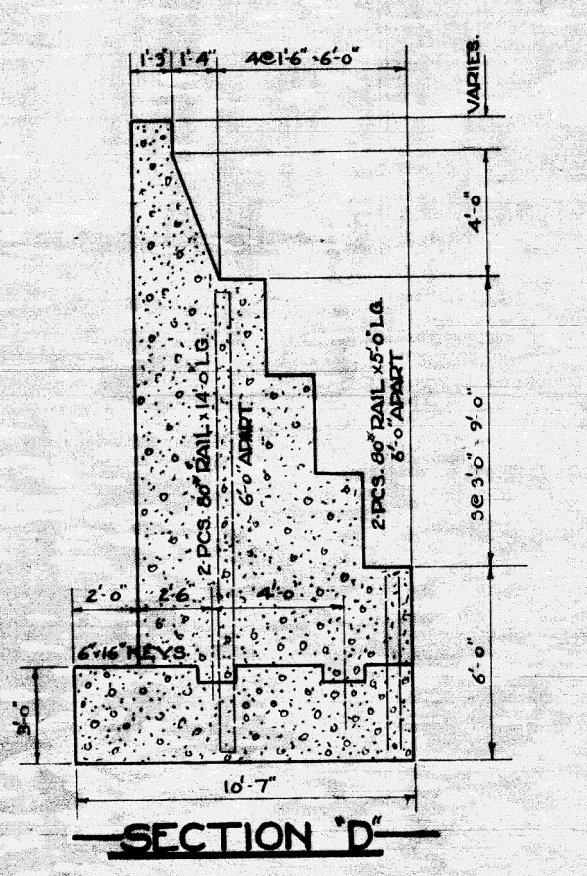
PLAN



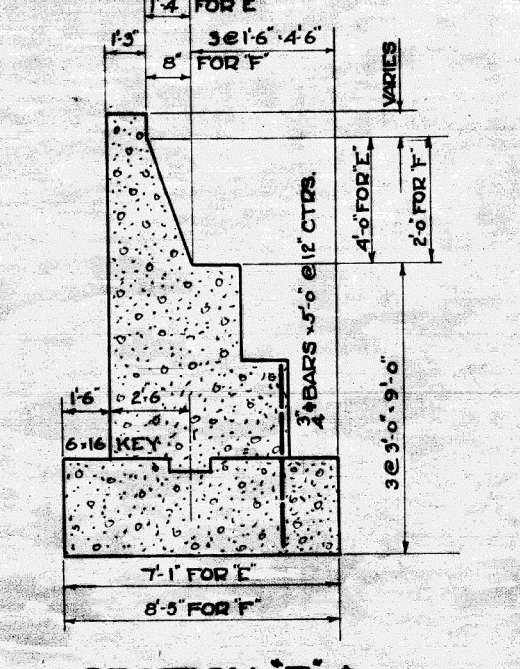
ELEVATION

ELEVATION

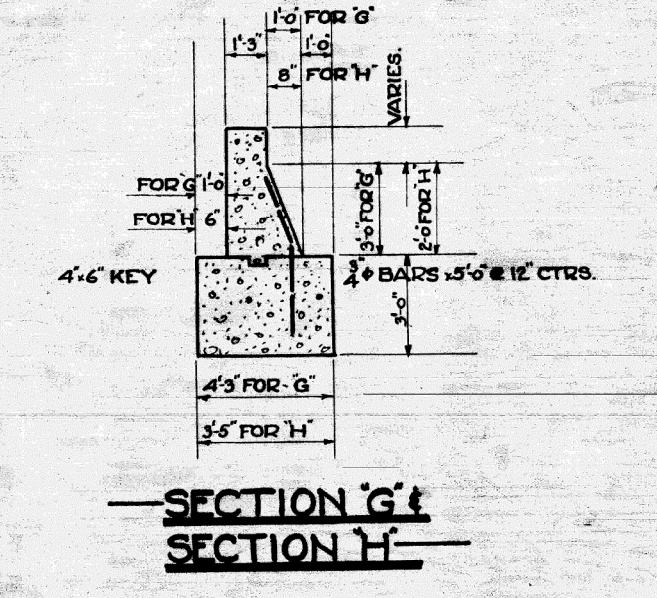
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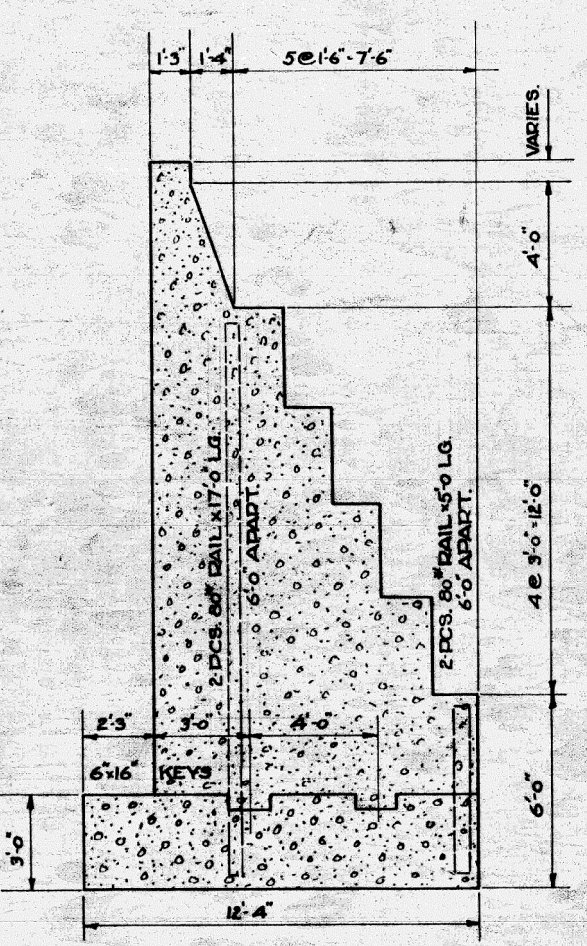
SECTION D



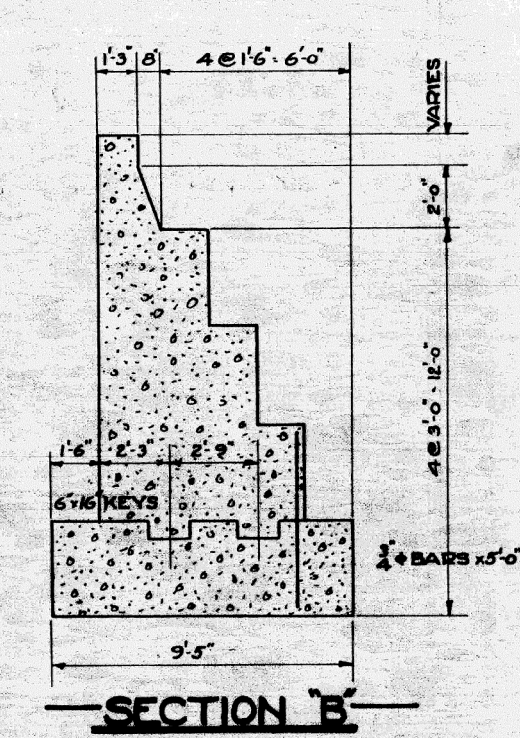
SECTION E & SECTION F



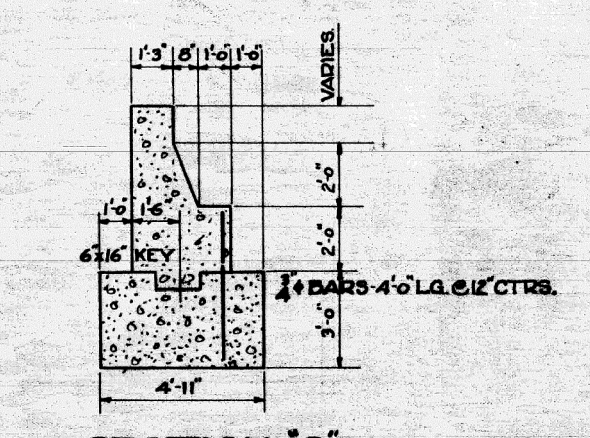
SECTION G & SECTION H



SECTION A



SECTION B



SECTION C

RETAINING WALL SECTIONS. SCALE: 1/4"=1'-0"

APPROVED: *J. A. ...* CHIEF ENGINEER D.G.H.M.R.Y.
 APPROVED: *R. ...* CITY ENGINEER

GRAND TRUNK RAILWAY SYSTEM
 WESTERN LINES
 DEQUINDRE GRADE SEPARATION
 DETROIT, MICH.
 RETAINING WALLS - CHESTNUT ST.
 SCALE: AS NOTED.
 DR. L. S. TR WHF CH. OFFICE OF CHIEF ENGINEER DETROIT, MICHIGAN. JULY 28 1929. JOURNAL NO. V-3179 FILE.

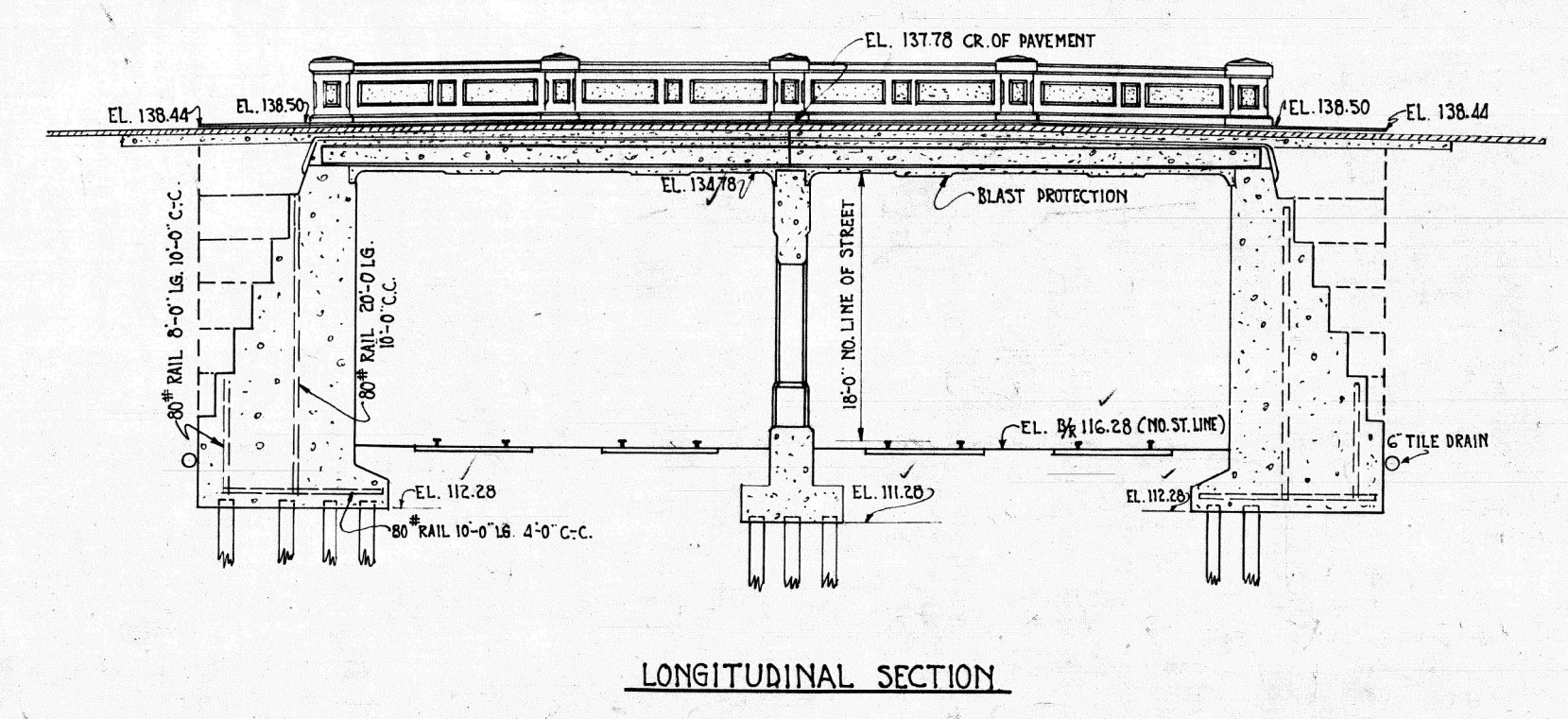
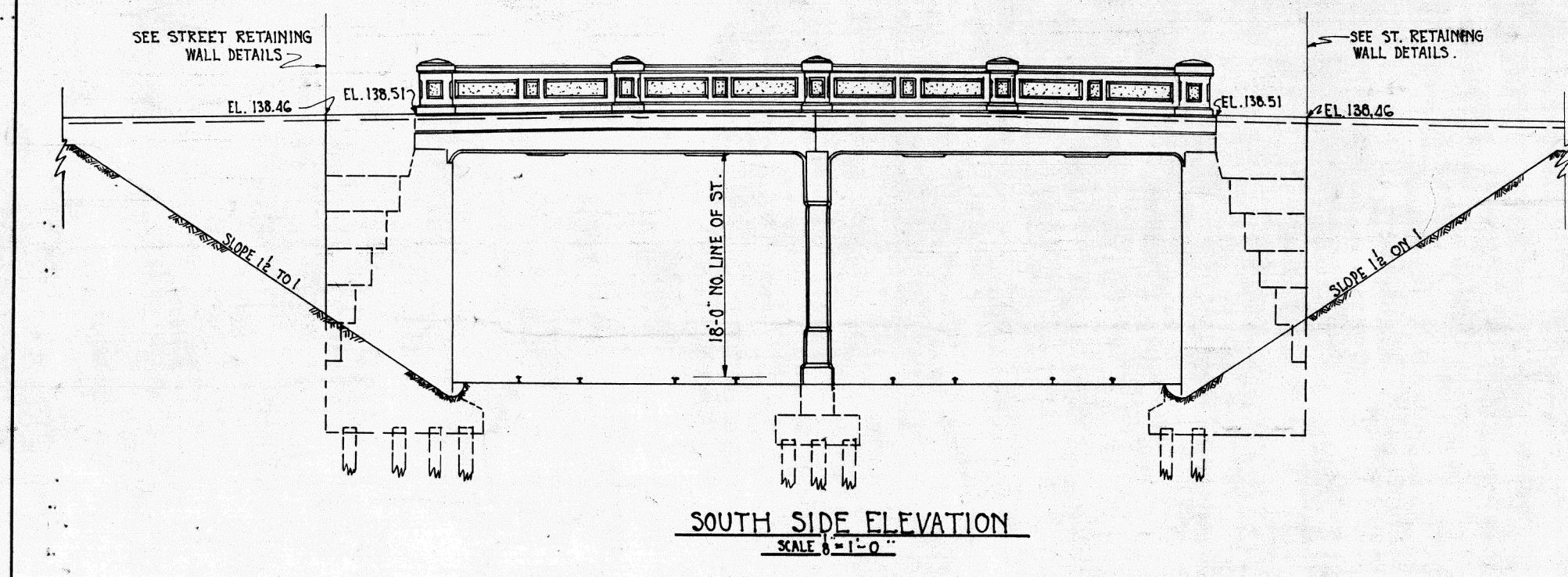
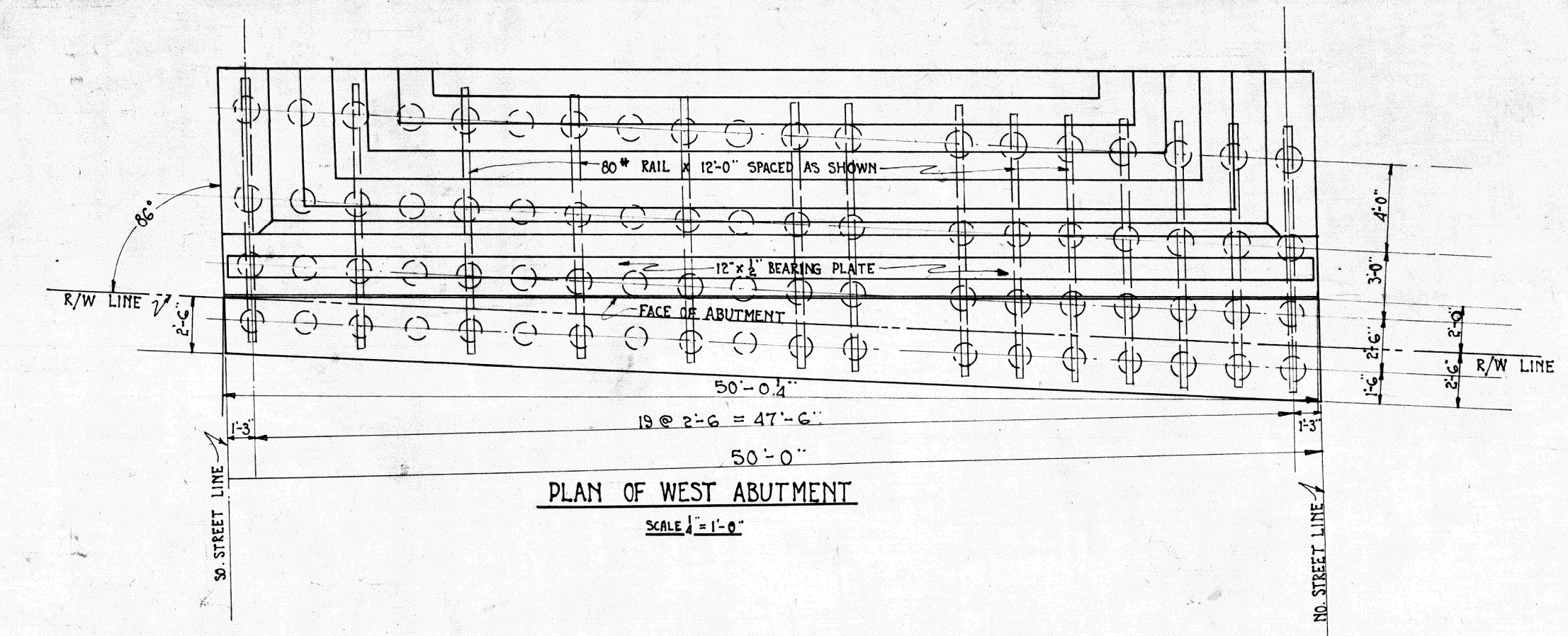
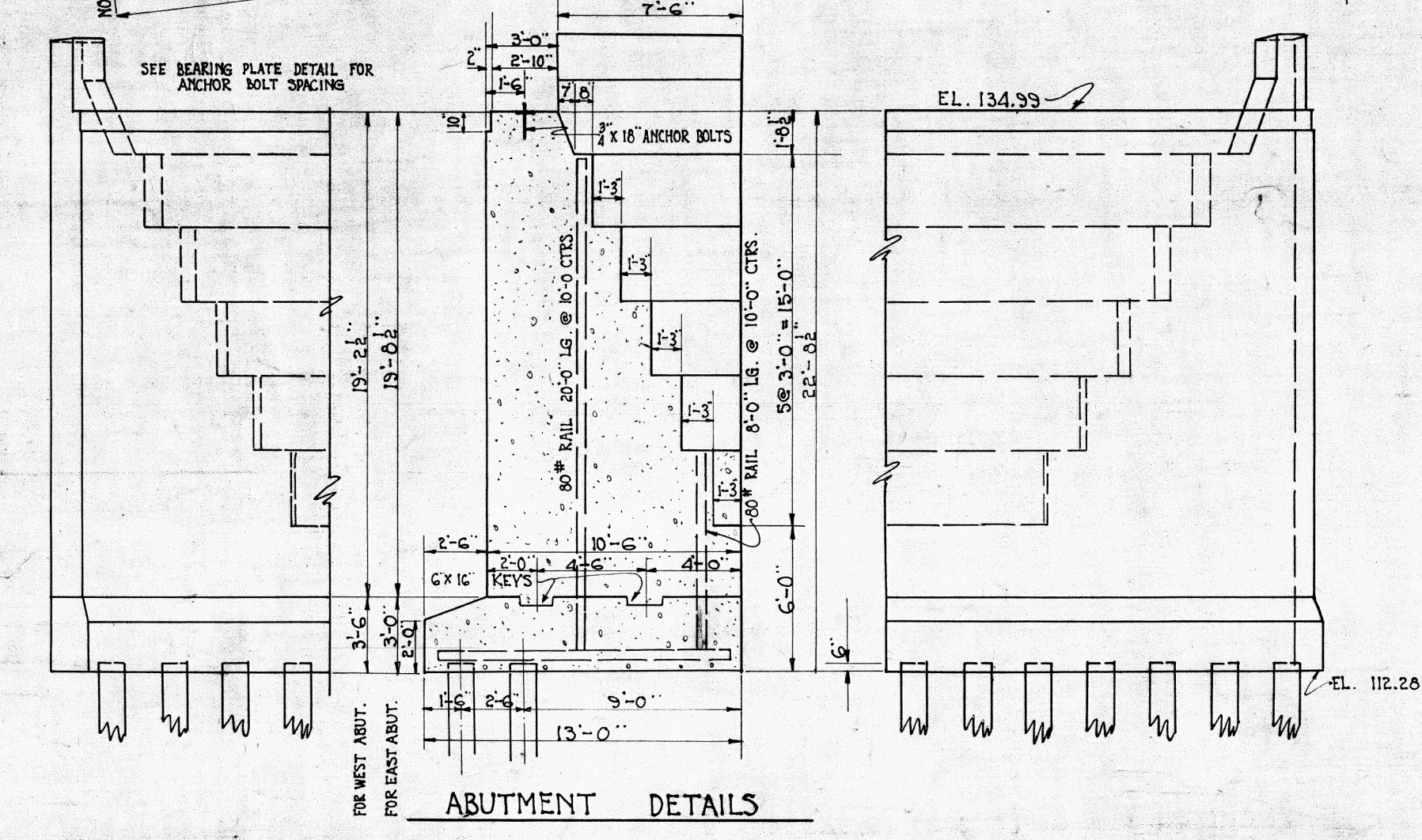
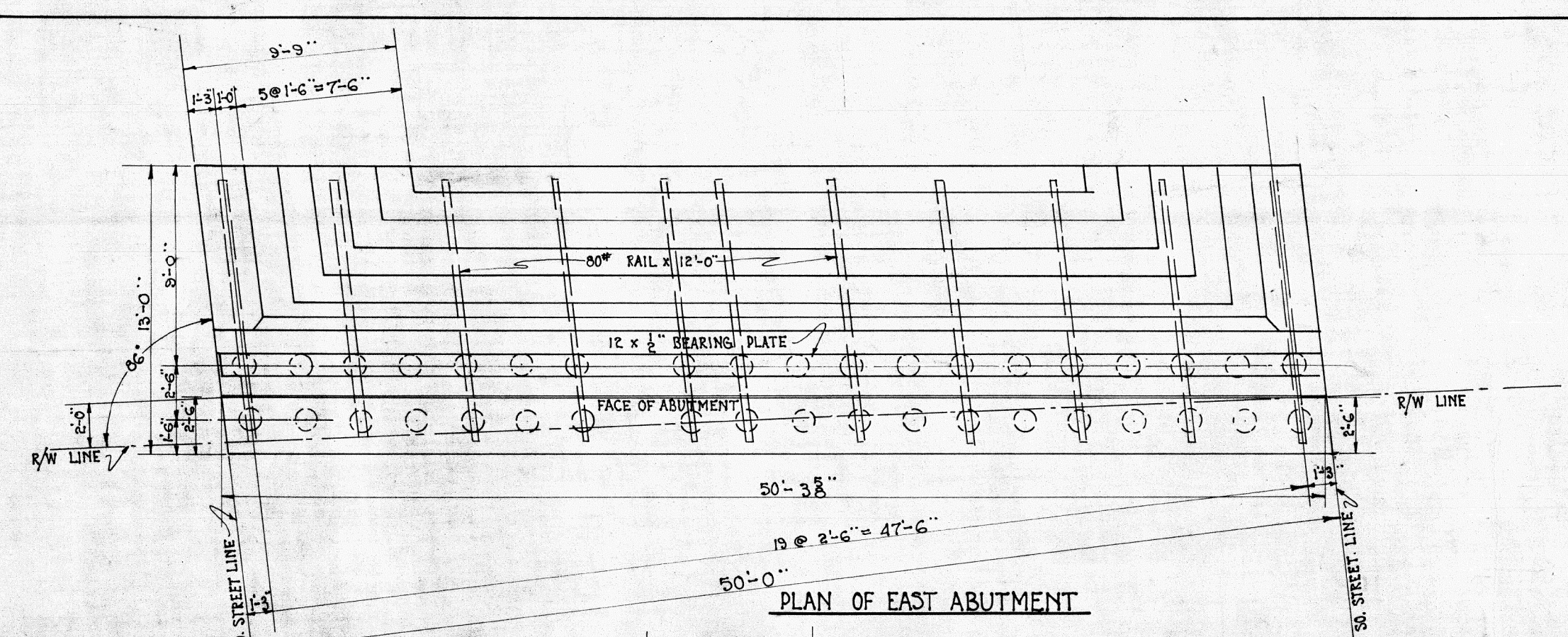
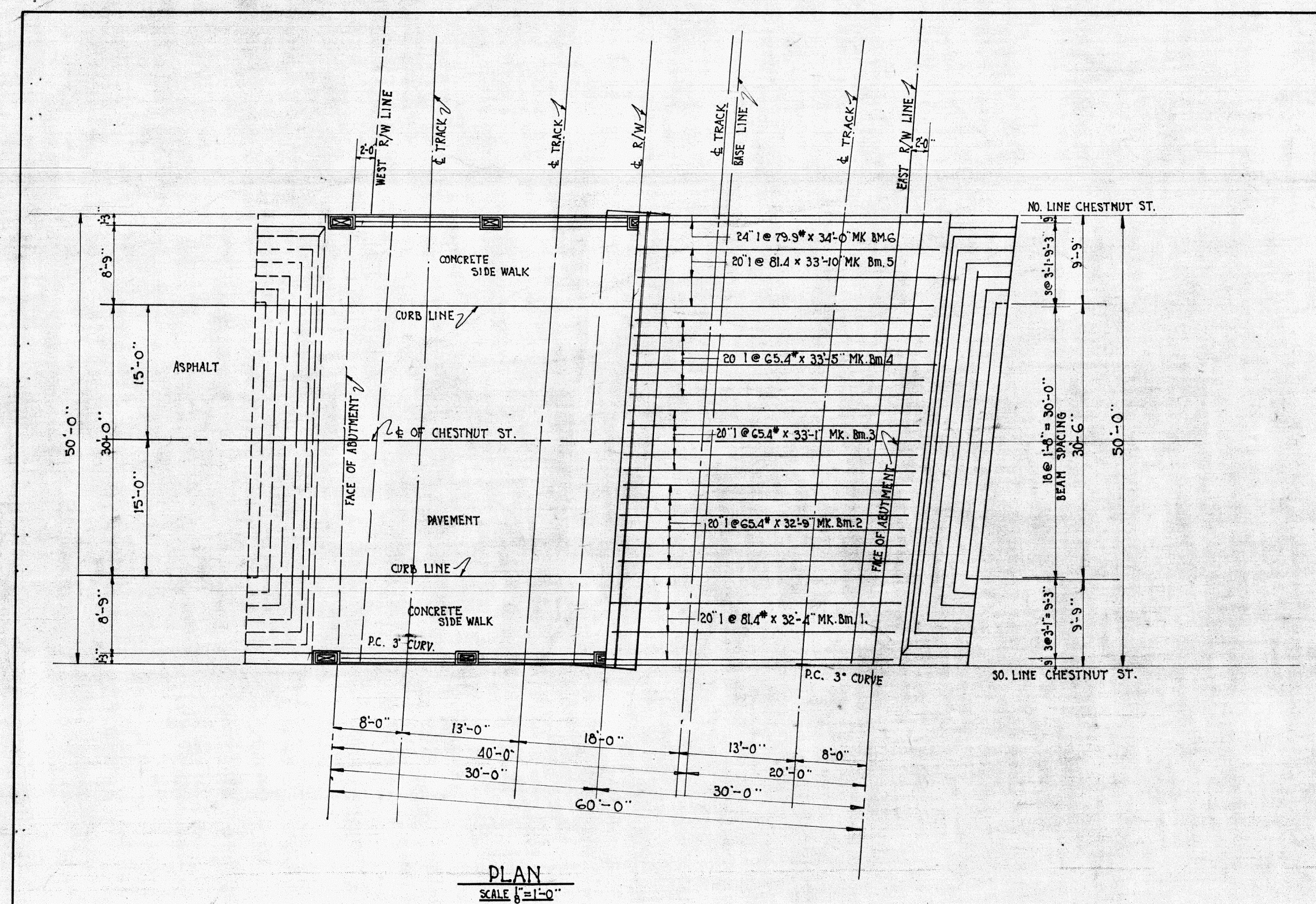
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DESCRIPTION	OR NCR APPROVATE	BY	CHECKED BY	APPROVED:
REVISIONS				ENGINEER OF STREETS
PLAN				
GRADE				
ESTIMATE				
FINAL				

CITY OF DETROIT
 CITY ENGINEERING DIVISION - D.P.W.
 BUREAUS OF STREETS AND HIGHWAYS
 FOR

CHESTNUT STREET BRIDGE
 EXISTING SHEET

SHEET 12 OF 27 SHEETS
JOB NUMBER 132668A
ASSIGNMENT NO.
DATE 08/22/2019



APPROVED: *J. J. [Signature]*
 CHIEF ENGINEER D.G.H.M.D.Y.

APPROVED: *[Signature]*
 CITY ENGINEER

GRAND TRUNK RAILWAY SYSTEM
 WESTERN LINES
 DEQUINDRE GRADE SEPARATION
 DETROIT, MICH.
 BRIDGE CHESTNUT STREET
 SCALE AS SHOWN

DR. L.S. TR. AMS CH. L.S.	OFFICE OF CHIEF ENGINEER DETROIT, MICHIGAN JULY 1929	JOURNAL NO. W-3176 FILE
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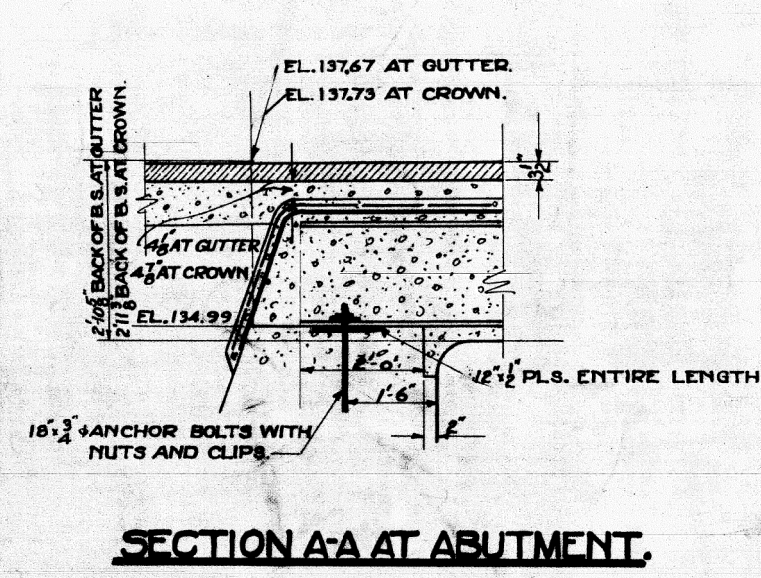
SHEET 1 OF 3 SHEETS

EXISTING

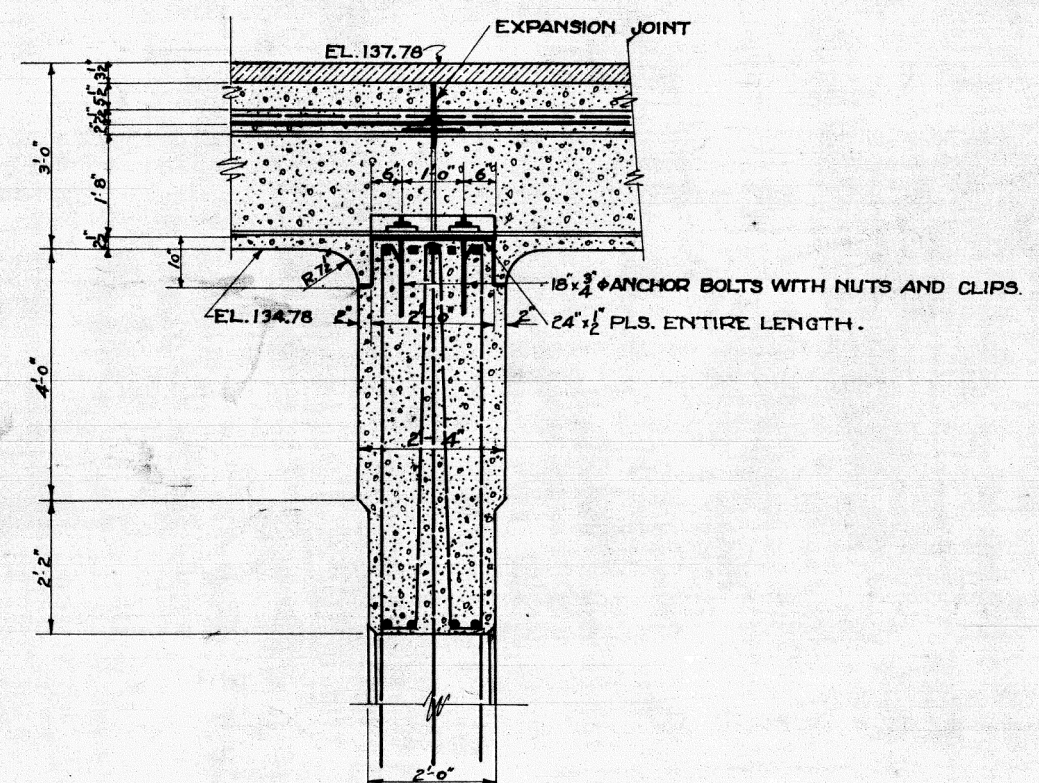
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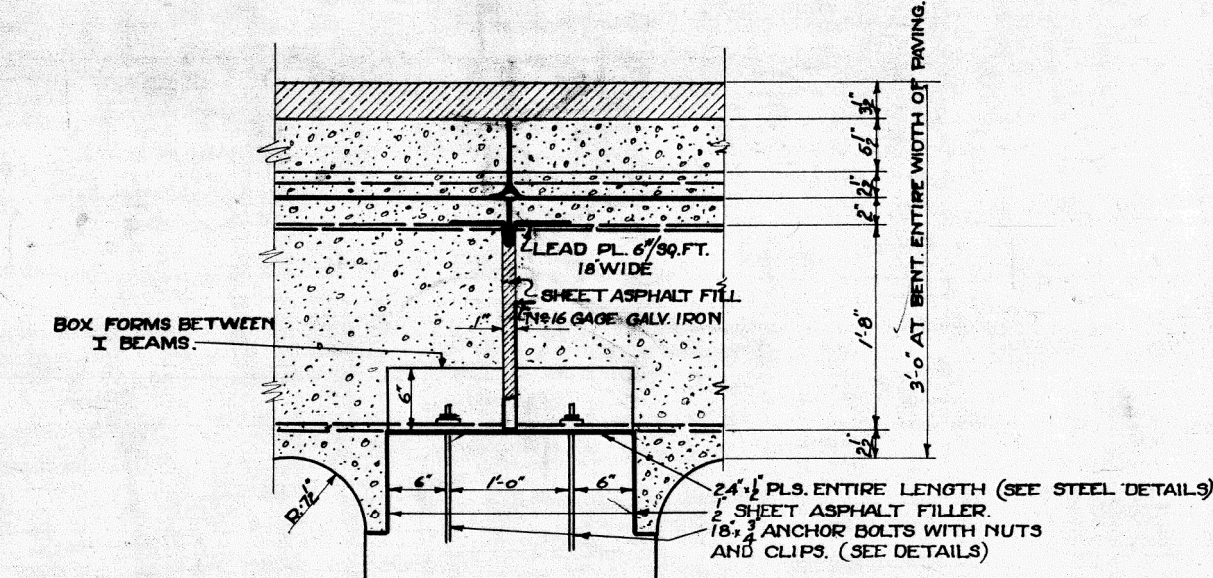
DESCRIPTION	PLAN	BY	CHECKED BY	APPROVED	CITY OF DETROIT CITY ENGINEERING DIVISION - D.P.W. BUREAUS OF STREETS AND HIGHWAYS FOR	CHESTNUT STREET BRIDGE	EXISTING SHEET	SHEET 13 OF 27 SHEETS JOB NUMBER 132668A
	GRADE	ESTIMATE	FINAL	OR MCK DAP VDA T				



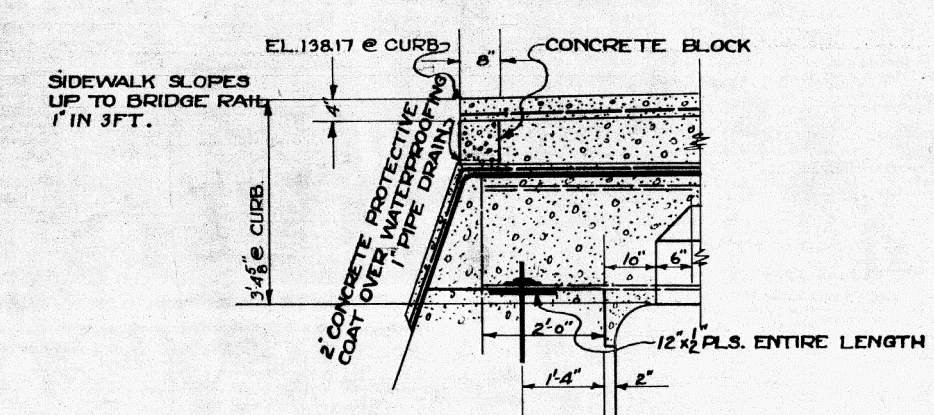
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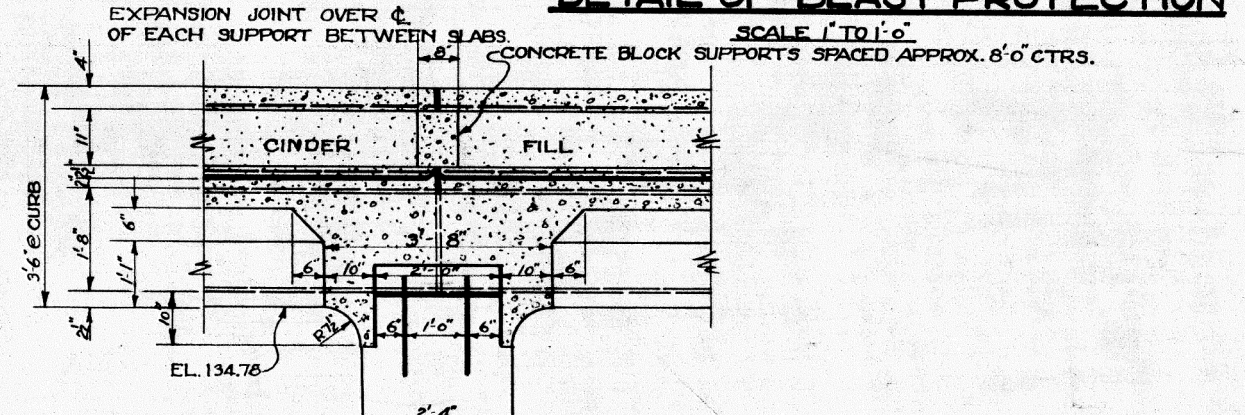
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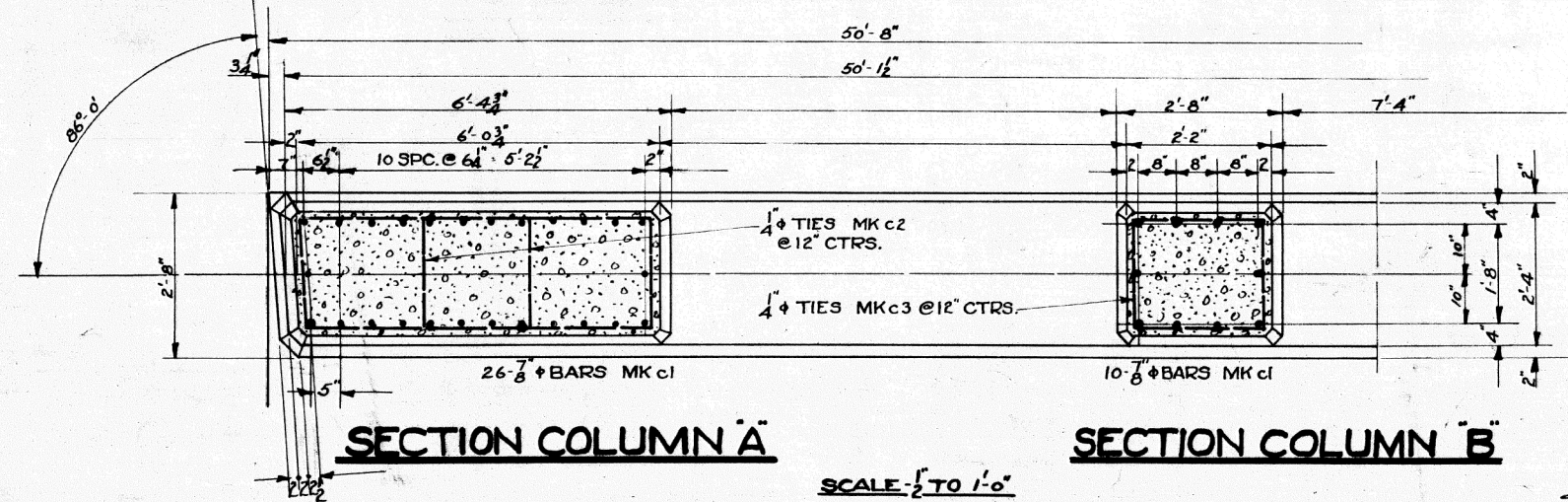
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SECTION B-B AT ABUTMENT.

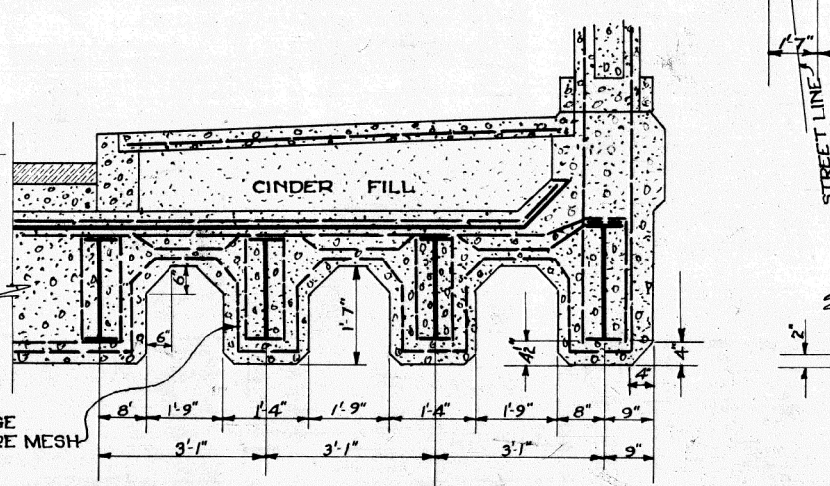


SECTION B-B AT BENT.

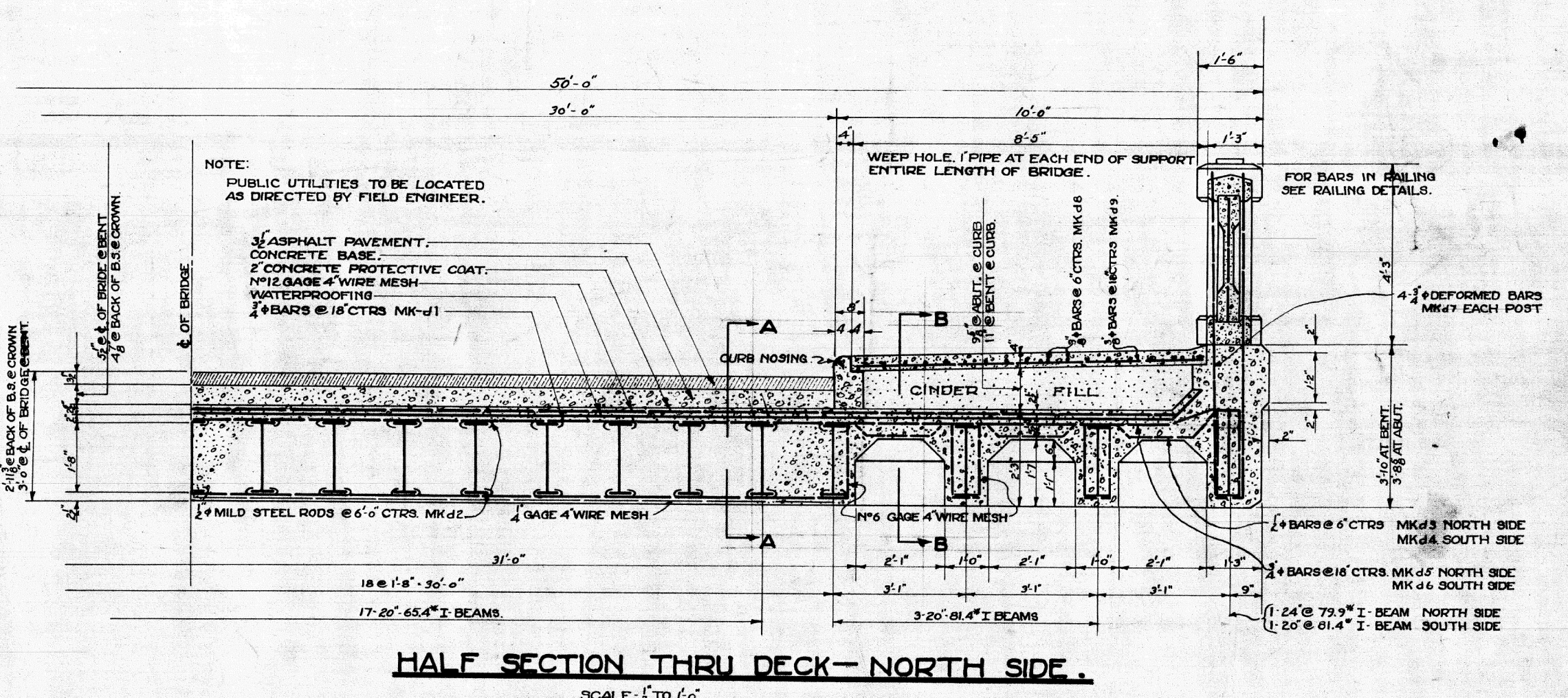


SECTION COLUMN A

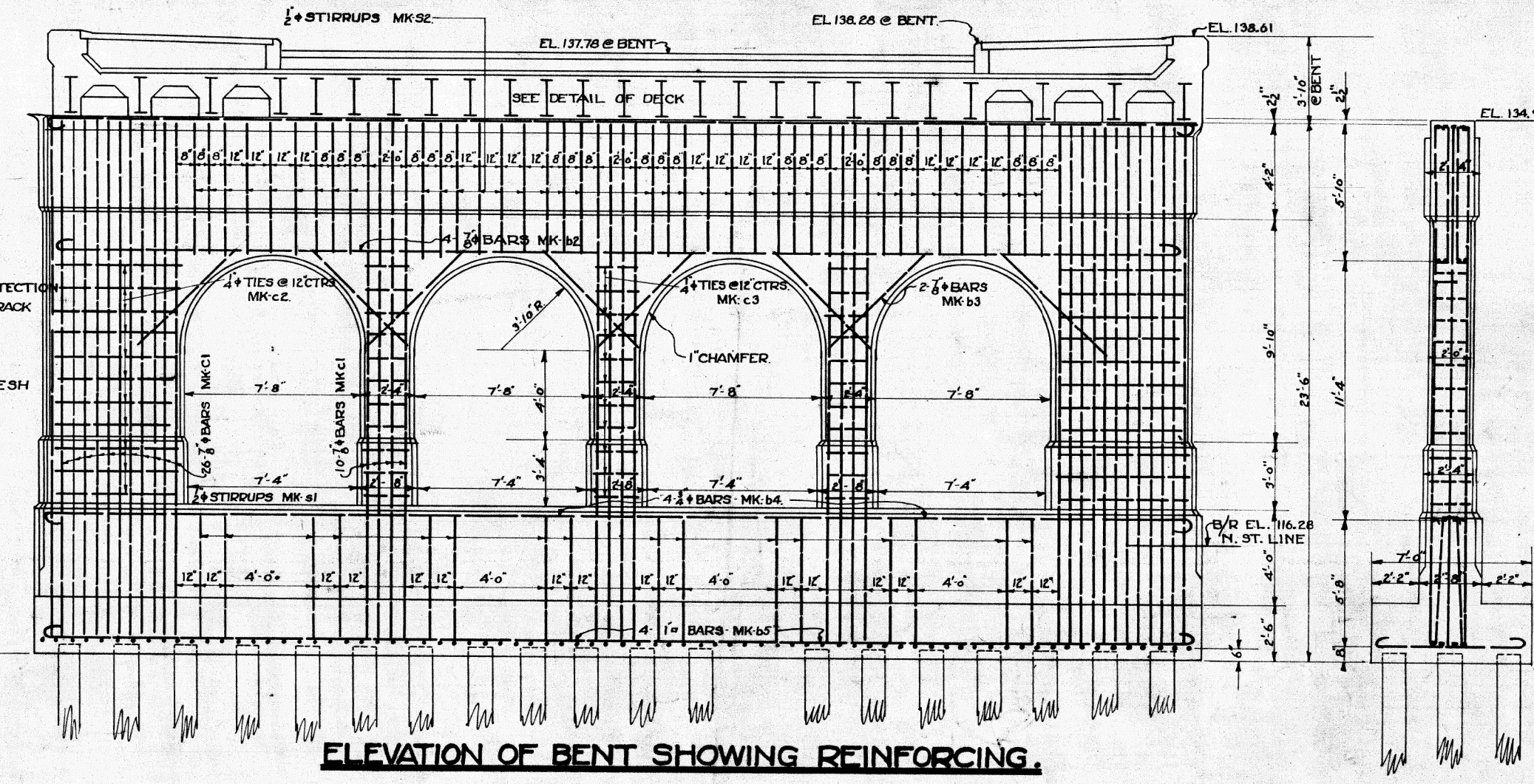
SECTION COLUMN B



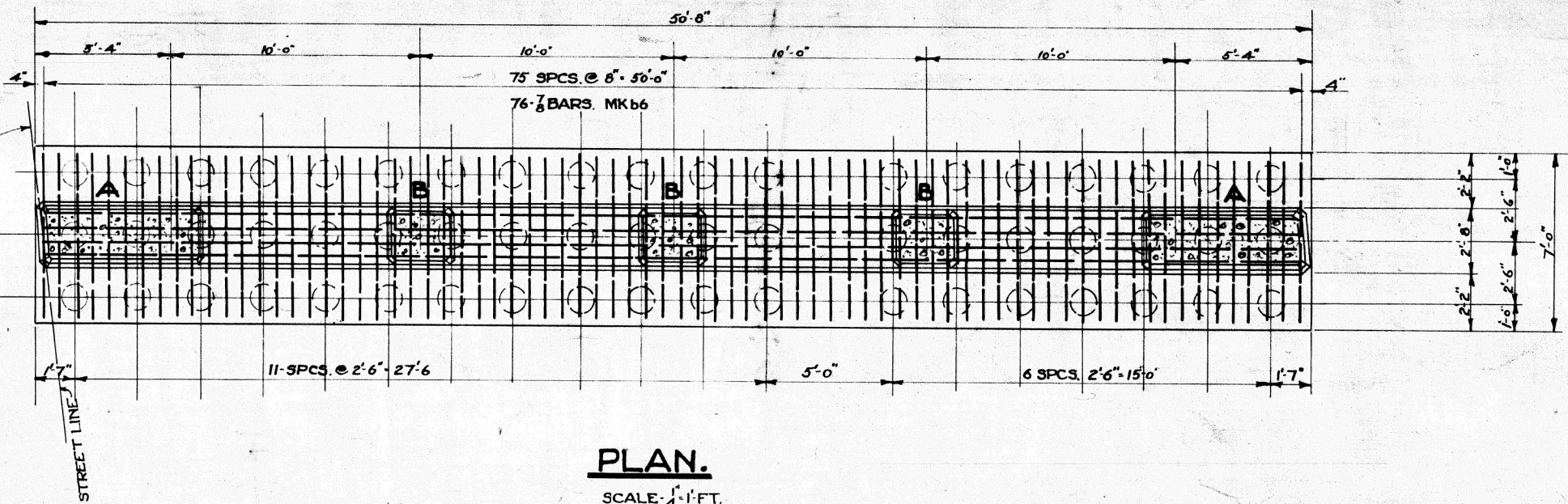
BLAST PROTECTION UNDER WALK.



HALF SECTION THRU DECK-NORTH SIDE.



ELEVATION OF BENT SHOWING REINFORCING.



PLAN.

APPROVED *J. Adamson*
CHIEF ENGINEER D.G.H. & M.R.V.
APPROVED *W. J. Williams*
CITY ENGINEER

GRAND TRUNK RAILWAY SYSTEM
WESTERN LINES
DEQUINDRE GRADE SEPARATION
DETROIT, MICH.
BRIDGE- CHESTNUT STREET
SCALE AS SHOWN.
DRAWN TO W.P. CH. L.S.
OFFICE OF CHIEF ENGINEER
DETROIT, MICHIGAN
JULY 1929
JOURNAL W-3177
FILE

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DESCRIPTION	REVISIONS	BY	CHECKED BY	APPROVED

CITY OF DETROIT
CITY ENGINEERING DIVISION - D.P.W.
BUREAUS OF STREETS AND HIGHWAYS
FOR

CHESTNUT STREET BRIDGE

EXISTING SHEET

SHEET 14 OF 27 SHEETS
JOB NUMBER 132668A
ASSIGNMENT NO.
DATE 08/22/2019

—BILL OF REINFORCING STEEL—

LOCATION	N ^o	MARK	SIZE	LENGTH	BENDING DIAGRAM
TOP BENT	10	b1	1 1/2"	30'-0"	
TOP BENT ABOVE ARCHES	8	b2	1 1/2"	28'-0"	
BENT OVER ARCHES	8	b3	1 1/2"	14'-0"	
TOP BENT FOOTING BEAMS	8	b4	1 1/2"	28'-0"	
BOTTOM BENT FOOTING BEAM	8	b5	1 1/2"	30'-0"	
BENT FOOTING	7	b6	1 1/2"	6'-6"	
BENT COLUMN	8	c1	1 1/2"	23'-0"	
BENT COLUMN TIES	2	c2	1 1/2"	23'-0"	
BENT COLUMN TIES	3	c3	1 1/2"	8'-6"	
BENT LOWER STIRRUPS	1	s1	1 1/2"	23'-0"	
BENT UPPER STIRRUPS	3	s2	1 1/2"	26'-0"	
DECK ROADWAY	8	d1	1 1/2"	17'-3"	
DECK ROADWAY	2	d2	1 1/2"	2'-8"	
DECK SIDEWALK NORTH SIDE	13	d3	1 1/2"	11'-8"	
DECK SIDEWALK SOUTH SIDE	13	d4	1 1/2"	11'-2"	
DECK SIDEWALK NORTH SIDE	4	d5	1 1/2"	11'-0"	
DECK SIDEWALK SOUTH SIDE	4	d6	1 1/2"	10'-9"	
POST DOWELS	4	d7	1 1/2"	7'-0"	
SIDEWALK SLAB	2	d8	1 1/2"	7'-10"	
SIDEWALK SLAB	8	d9	1 1/2"	8'-2"	
RAILING	4	d10	1 1/2"	3'-8"	
"	1	d11	1 1/2"	5'-4"	
"	2	d12	1 1/2"	4'-0"	
"	1	d13	1 1/2"	13'-10"	
"	1	d14	1 1/2"	12'-10"	
"	3	d15	1 1/2"	14'-8"	
"	3	d16	1 1/2"	13'-8"	
"	1	d17	1 1/2"	14'-8"	
"	1	d18	1 1/2"	13'-8"	

—BILL OF FLOOR BEAMS—

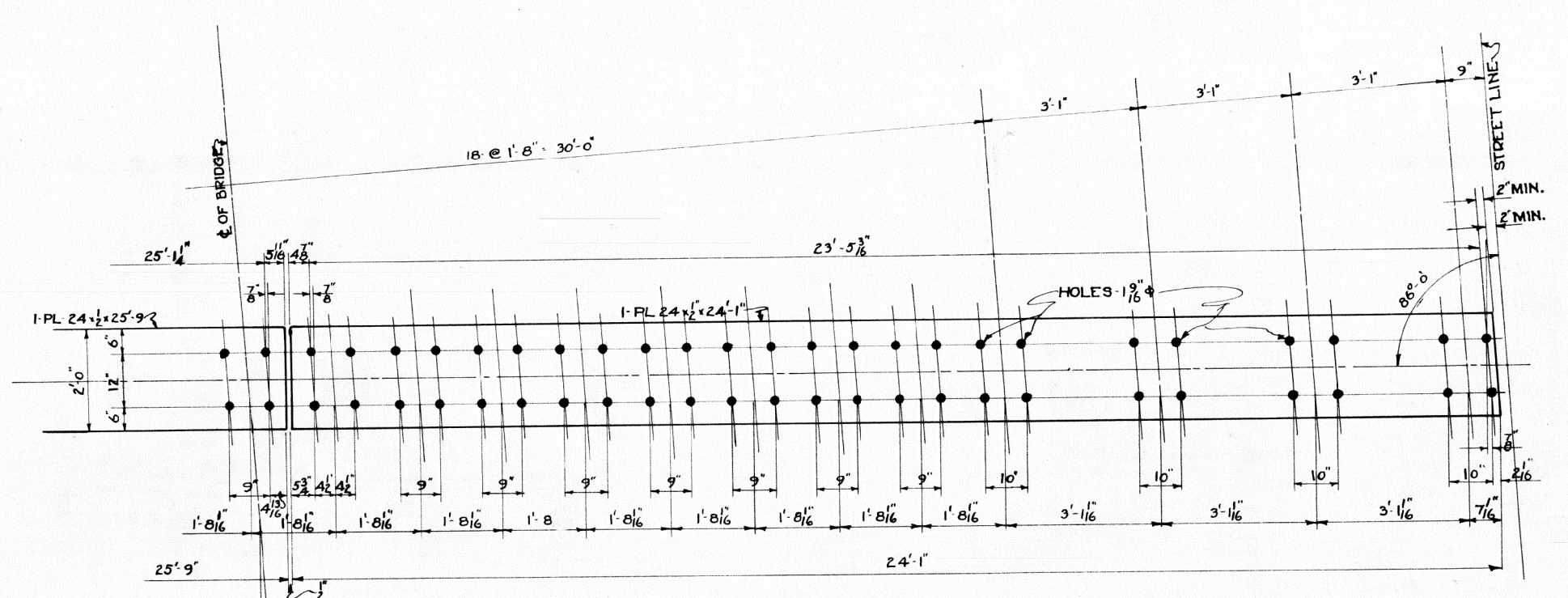
LOCATION	N ^o	MARK	SIZE	LENGTH	REMARKS
DECK SIDEWALK	8	Bm-1	20" x 8" x 4"	32'-4"	NO DRILLING
DECK ROADWAY	1	Bm-2	20" x 8" x 4"	32'-9"	"
DECK ROADWAY	1	Bm-3	20" x 8" x 4"	33'-1"	"
DECK SIDEWALK	6	Bm-5	20" x 8" x 4"	33'-5"	"
DECK SIDEWALK	2	Bm-6	20" x 8" x 4"	34'-0"	"

—MISCELLANEOUS MATERIALS—

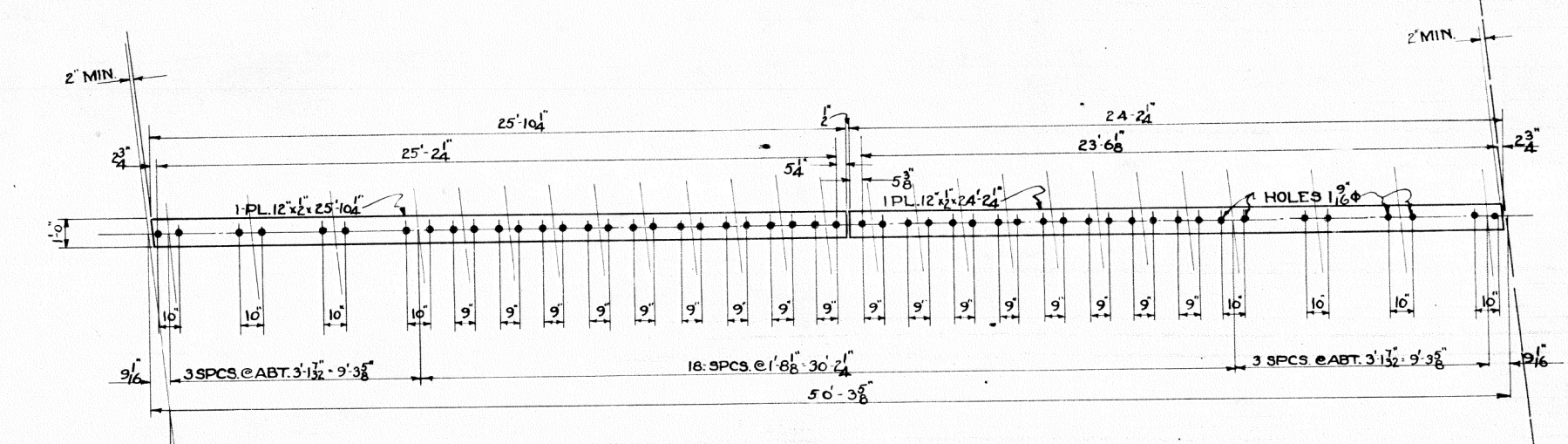
ITEMS	N ^o	SIZE	LENGTH	DESCRIPTION
BENT BEARING PLATES	1	1 PL	24" x 24"	25'-9"
EAST ABUTMENT BEARING PLATES	1	1 PL	12" x 24"	25'-10"
WEST ABUTMENT BEARING PLATES	1	1 PL	12" x 24"	25'-8"
ANCHOR BOLTS	200	2 1/2"	16"	SWEDGE BOLTS WITH HEX-NUTS AND WASHERS
CLIPS	136	1 PL	3" x 1/2"	SEE DETAIL

—BILL OF WIRE MESH—

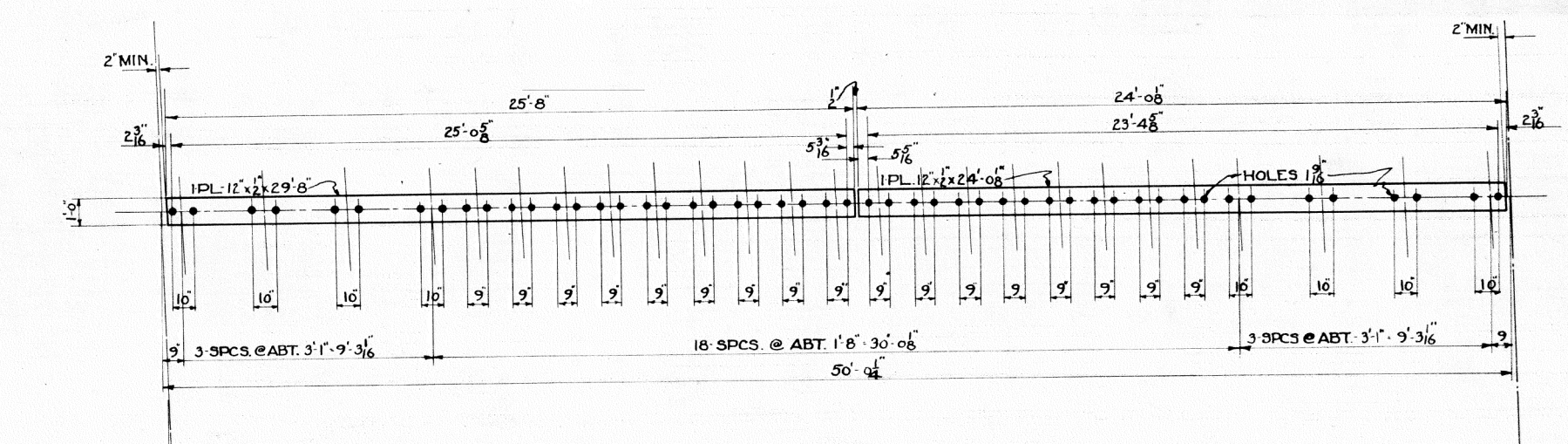
LOCATION	LN	FT	WIDTH	DESCRIPTION
BOTTOM OF DECK	525	4	6"	A. S. 4 W. Co. 1-1/4" IN - GAGE 4" WIRE MESH
SIDEWALK BEAMS	500	4	6"	A. S. 4 W. Co. 1-1/4" IN - GAGE 4" WIRE MESH
BLAST PROTECTION ROADWAY	200	4	6"	A. S. 4 W. Co. 1-1/4" IN - GAGE 4" WIRE MESH
BLAST PROTECTION SIDEWALK	160	3	2"	A. S. 4 W. Co. 1-1/4" IN - GAGE 4" WIRE MESH
PROTECTIVE COAT DECK	900	4	6"	A. S. 4 W. Co. 1-1/4" IN - GAGE 4" WIRE MESH



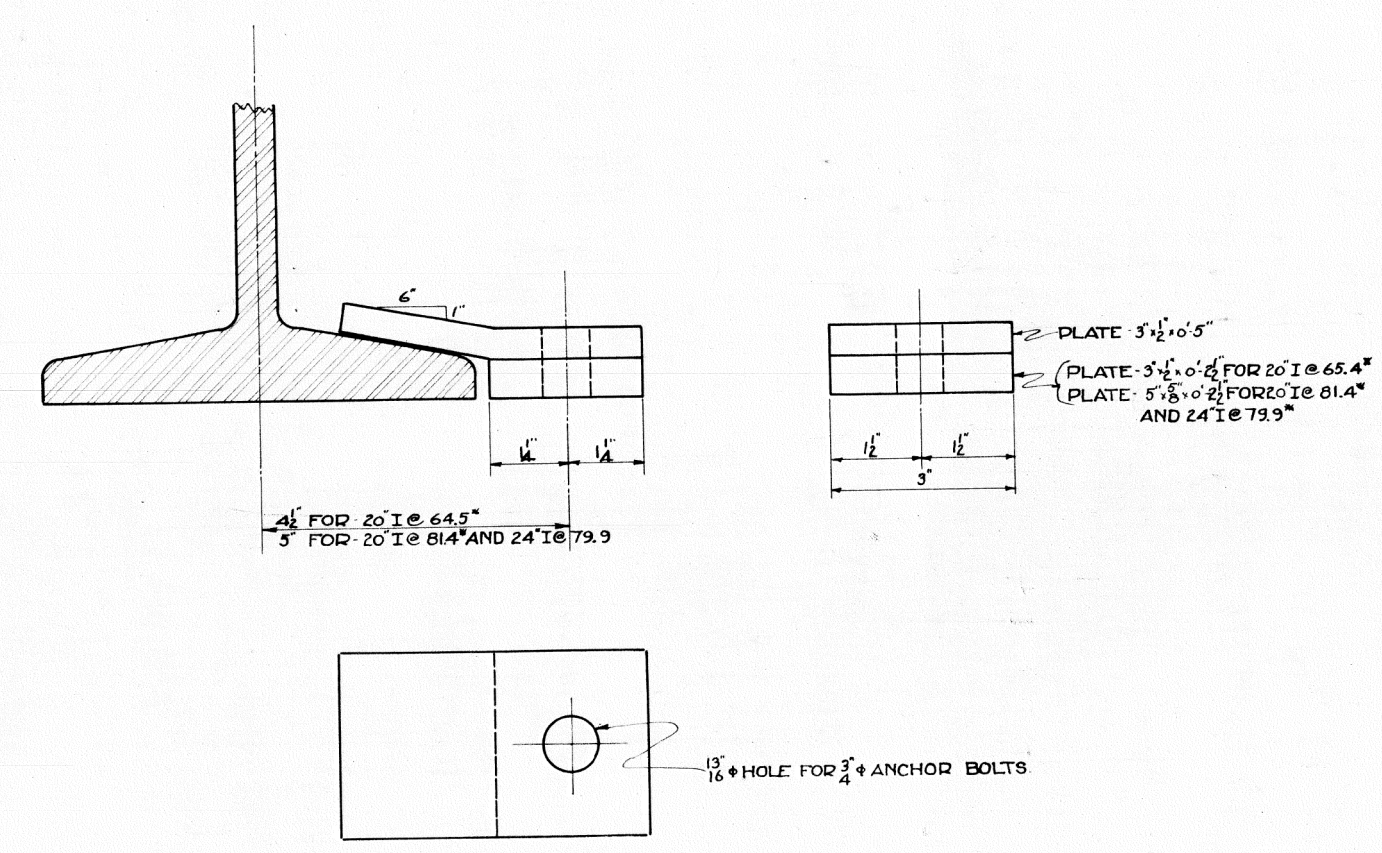
—DETAIL FOR BENT BEARING PLATES—
SCALE: 1/4" = 1'-0"



—DETAIL FOR EAST ABUTMENT BEARING PLATES—
SCALE: 1/4" = 1'-0"



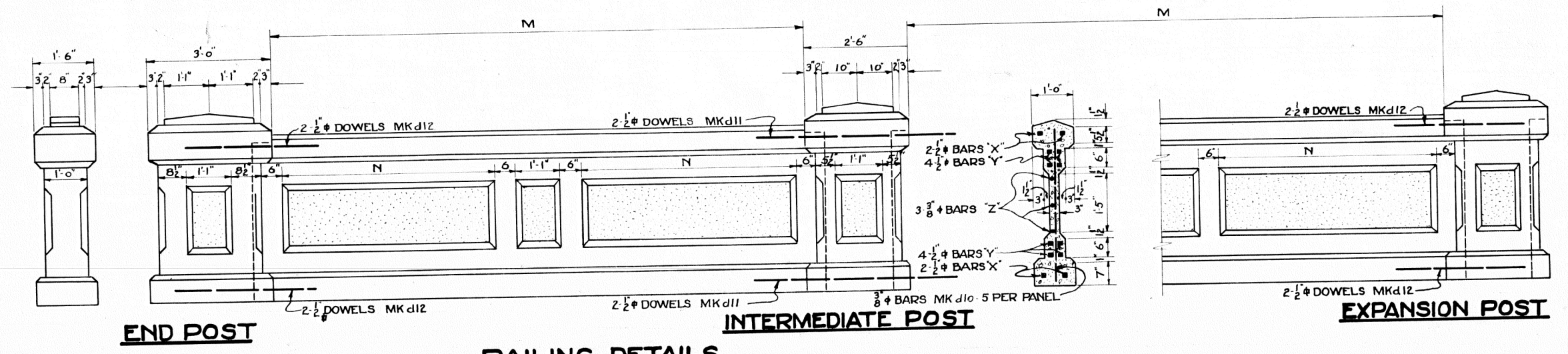
—DETAIL FOR WEST ABUTMENT BEARING PLATES—
SCALE: 1/4" = 1'-0"



—DETAIL OF I-BEAM CLIPS—
SCALE: 1/4" = 1'-0"

RAILING SCHEDULE

PANEL	M	N	1 1/2" BARS X	1 1/2" BARS Y	1 1/2" BARS Z
NORTH SIDE	14'-0"	5'-8"	Mk45 - 13'-10"	Mk45 - 14'-8"	Mk47 - 14'-8"
SOUTH SIDE	13'-0"	5'-2"	Mk46 - 12'-10"	Mk46 - 13'-6"	Mk48 - 13'-6"



RAILING DETAILS.
SCALE: 1/4" = 1'-0"

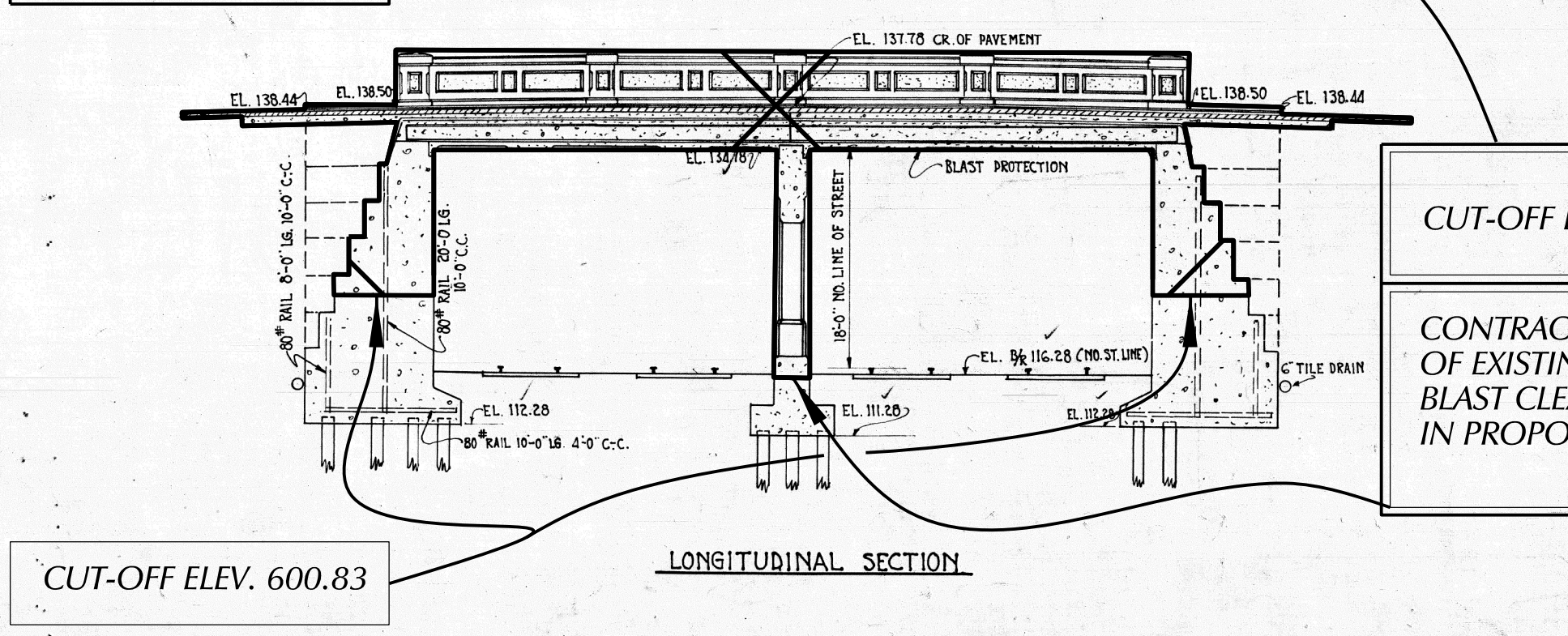
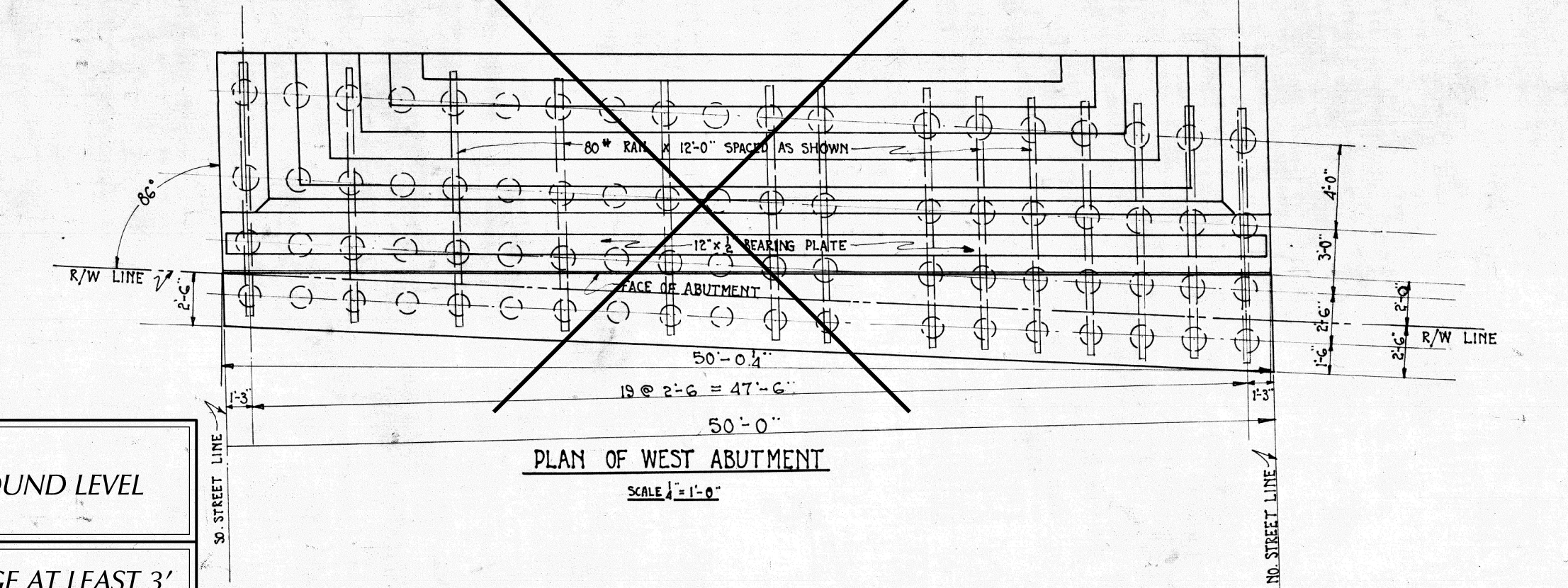
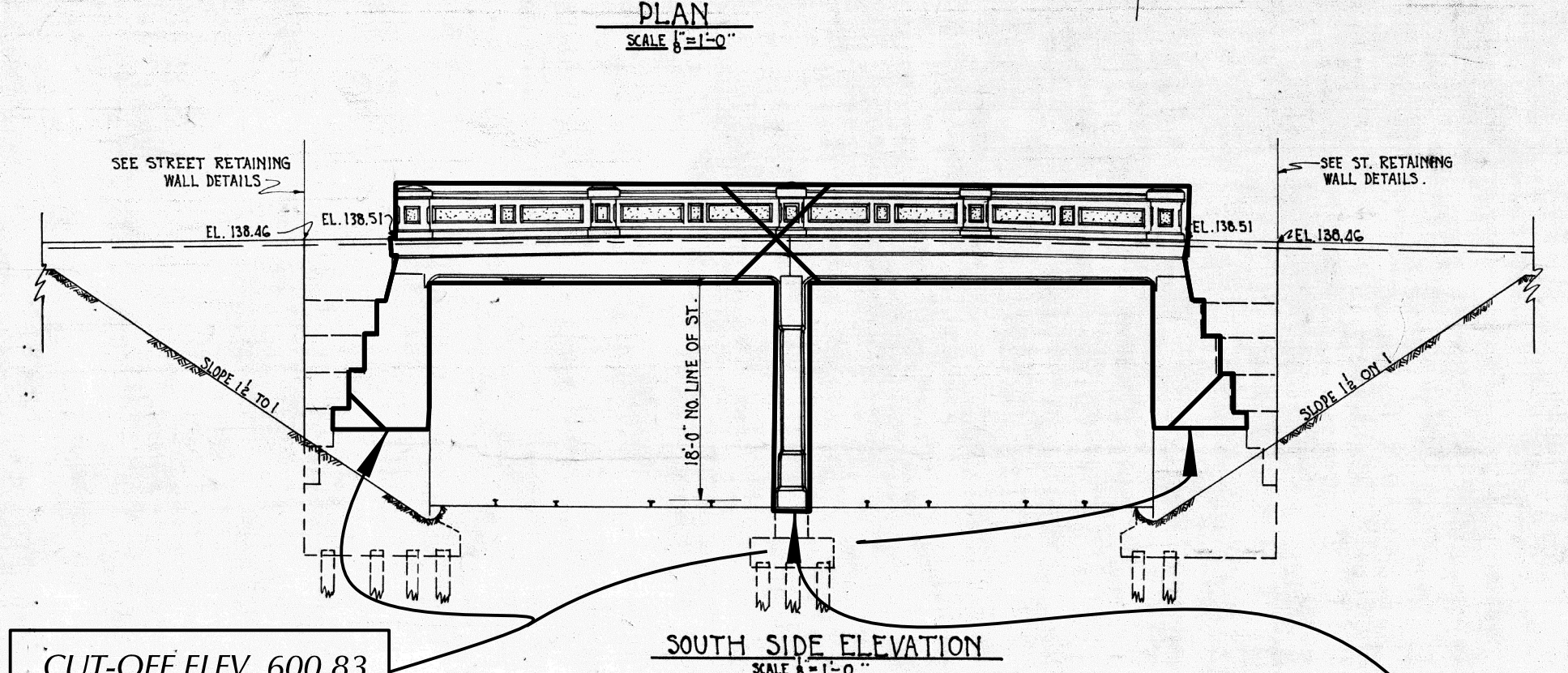
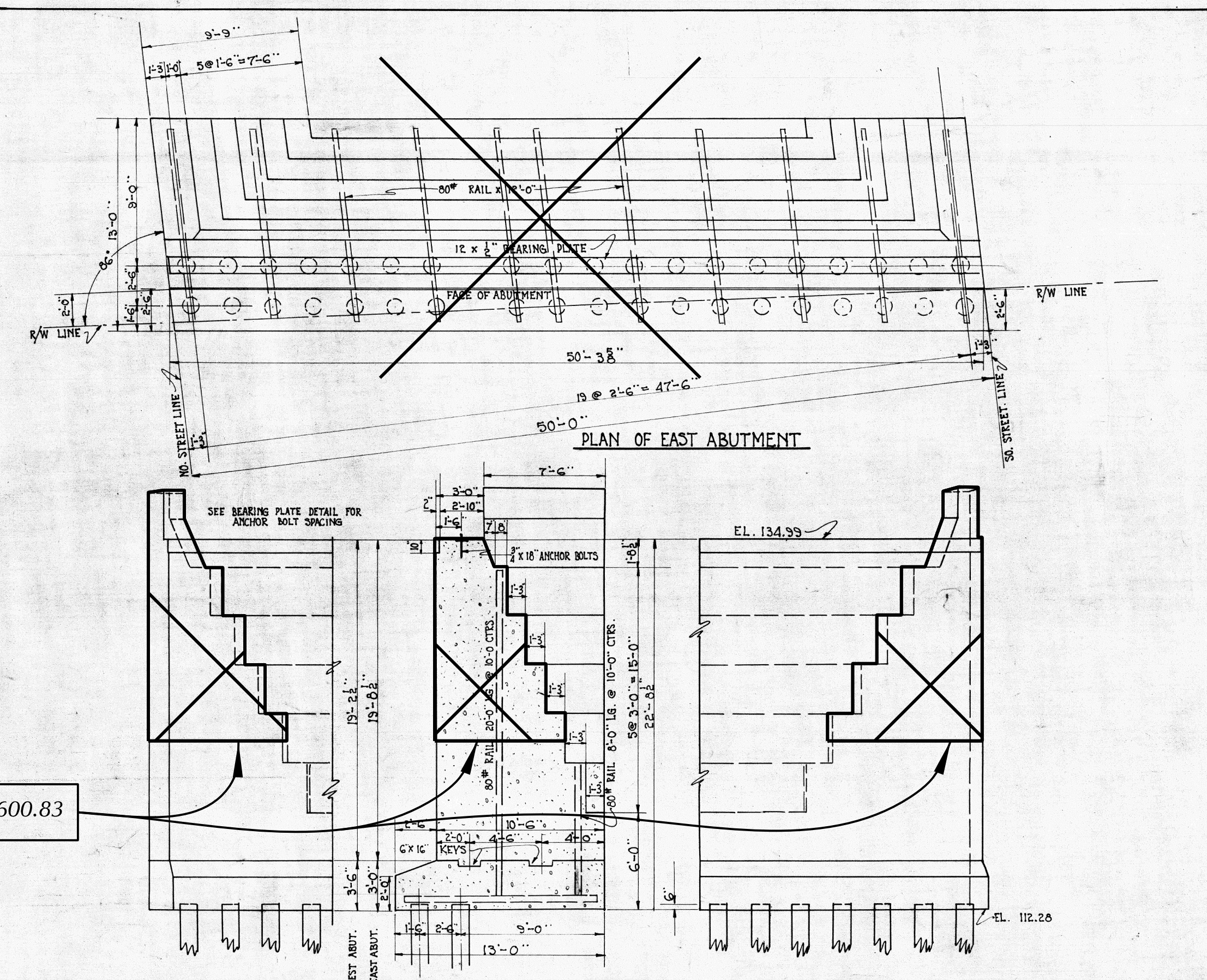
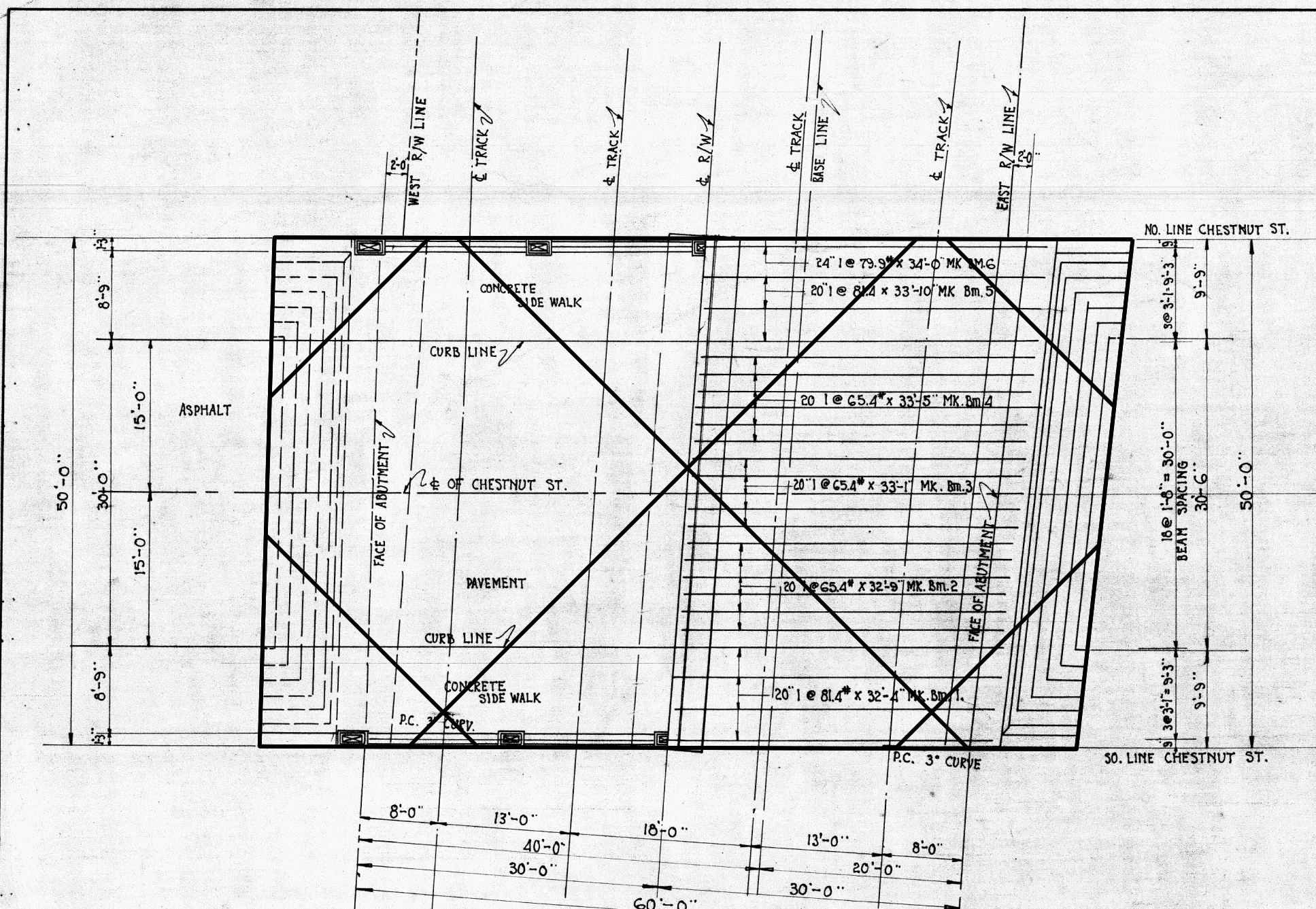
GRAND TRUNK RAILWAY SYSTEM
 WESTERN LINES
 DEQUINRE GRADE SEPARATION
 DETROIT, MICHIGAN.
 BRIDGE - CHESTNUT STREET
 SCALE AS SHOWN.

APPROVED: *[Signature]*
 CHIEF ENGINEER D.G.H. AM. CIV.

APPROVED: *[Signature]*
 CITY ENGINEER

DR. H.S.F. TR. WHF. CH. OFFICE OF CHIEF ENGINEER DETROIT, MICHIGAN JULY 16 1929 JOURNAL NO. W. 3176 FILE SHEET 3 OF 3

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CUT-OFF ELEV. 600.83

CUT-OFF ELEVATION AT GROUND LEVEL

CONTRACTOR SHALL SALVAGE AT LEAST 3' OF EXISTING VERTICAL RE-BARS, BLAST CLEANED AND RE-EMBEDDED IN PROPOSED NEW CONCRETE WALL

APPROVED: [Signature] CHIEF ENGINEER D.G.H. M.D.Y.
APPROVED: [Signature] CITY ENGINEER

GRAND TRUNK RAILWAY SYSTEM
WESTERN LINES
DEQUINDRE GRADE SEPARATION
DETROIT, MICH.
BRIDGE CHESTNUT STREET
SCALE AS SHOWN

DR. L.S. TR. AMS CH. L.S.
OFFICE OF CHIEF ENGINEER
DETROIT, MICHIGAN.
JULY 1929
JOURNAL NO. W-3176
FILE

JOB NO. : 132668A

THE ONLY ITEMS OF WORK TO BE DONE FROM THIS SHEET ARE IDENTIFIED BY THE LEGEND BOX BELOW, LABELED WITH THIS PROJECT'S JOB NUMBER.

PROPOSED WORK
DENOTES REMOVAL PORTIONS

BY	CHECKED BY	APPROVED
PLAN		
GRADE		
ESTIMATE		
FINAL	****	****
DESCRIPTION	DR. NCR. DATE	
REVISIONS		

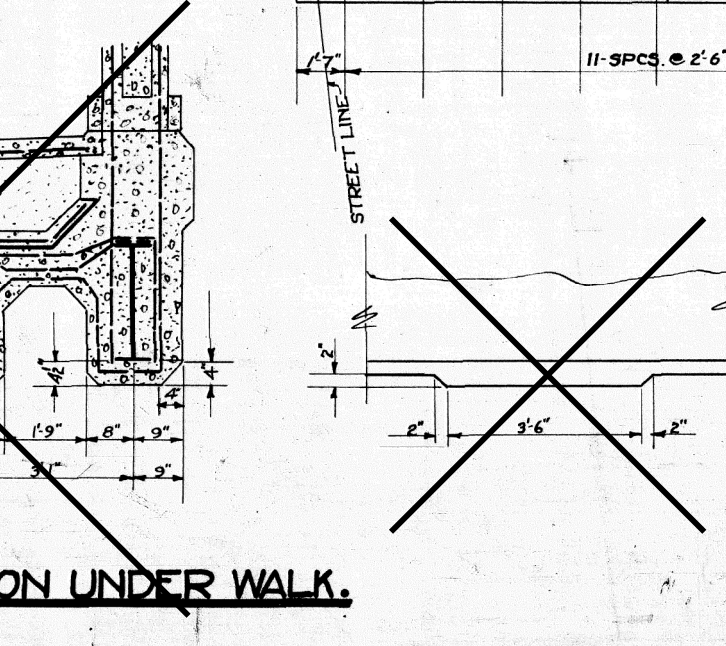
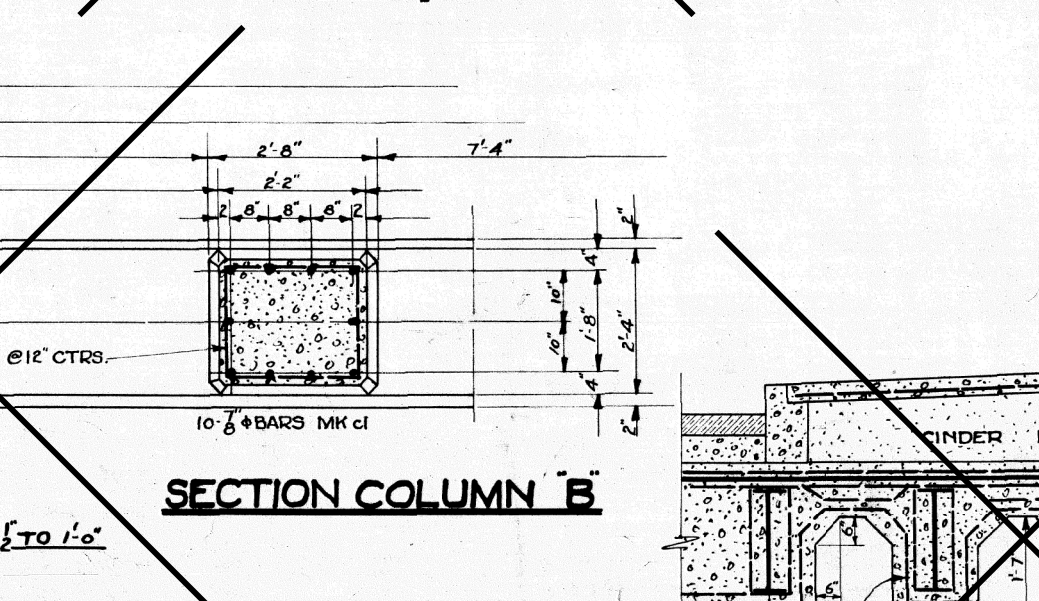
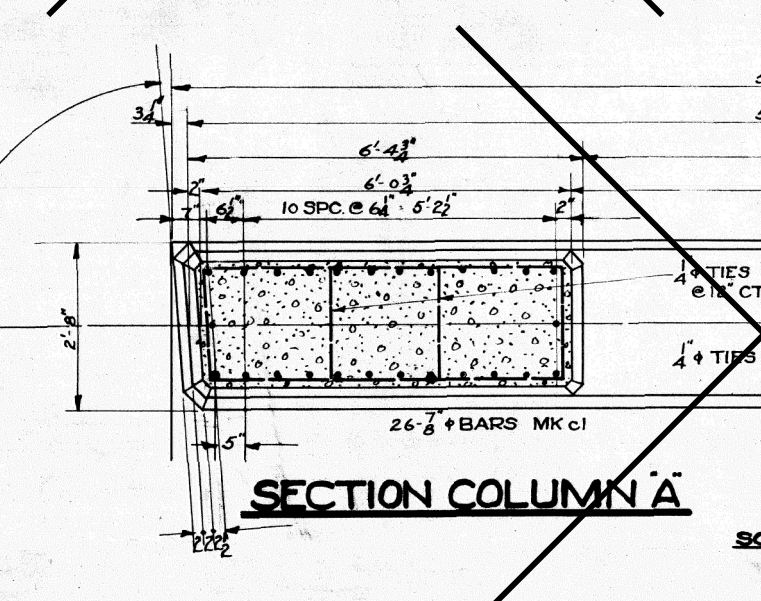
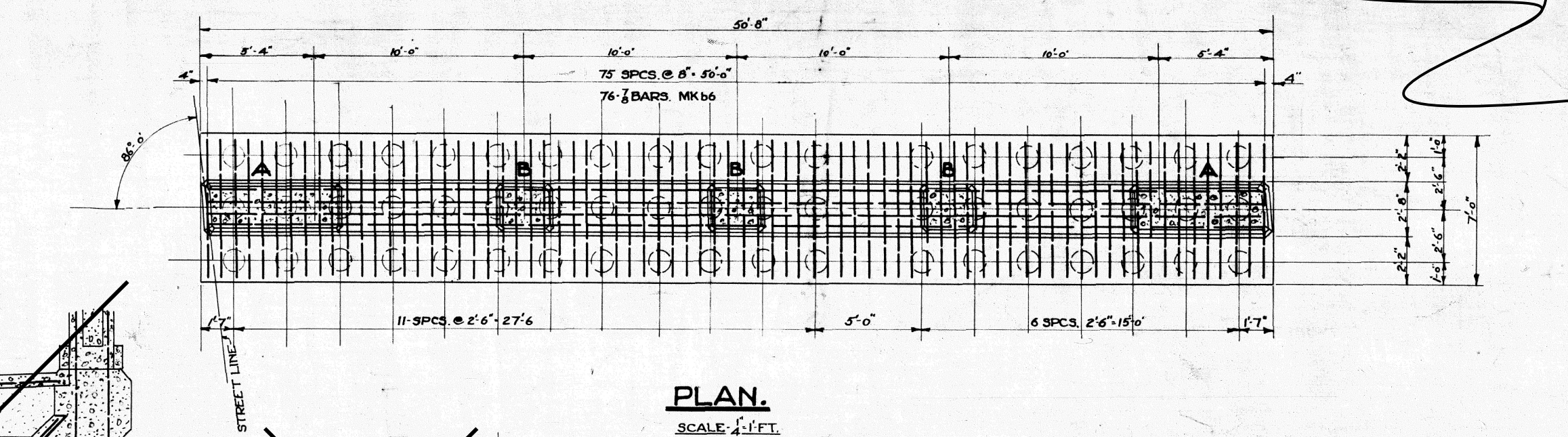
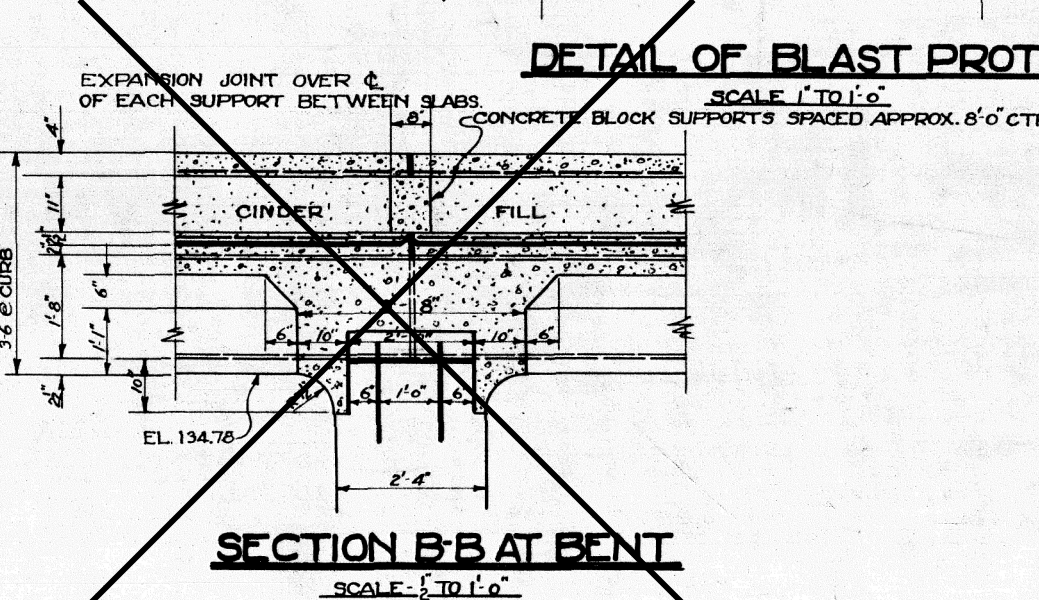
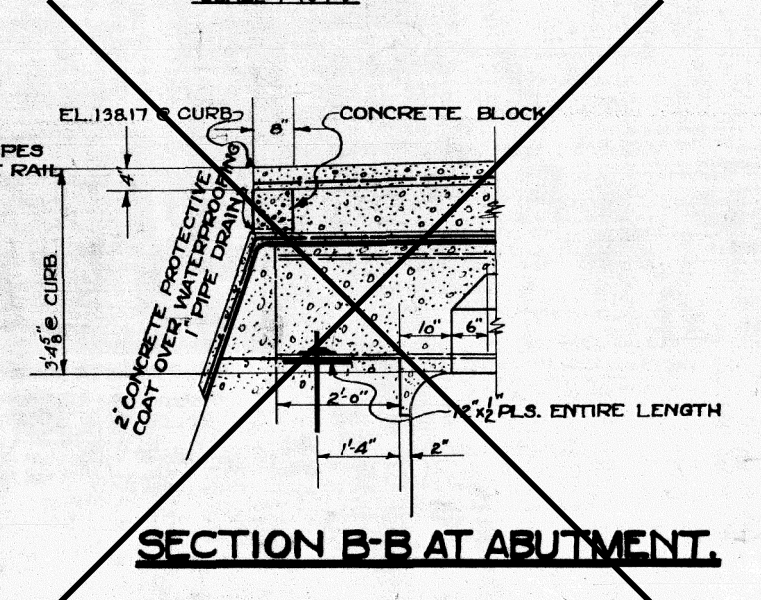
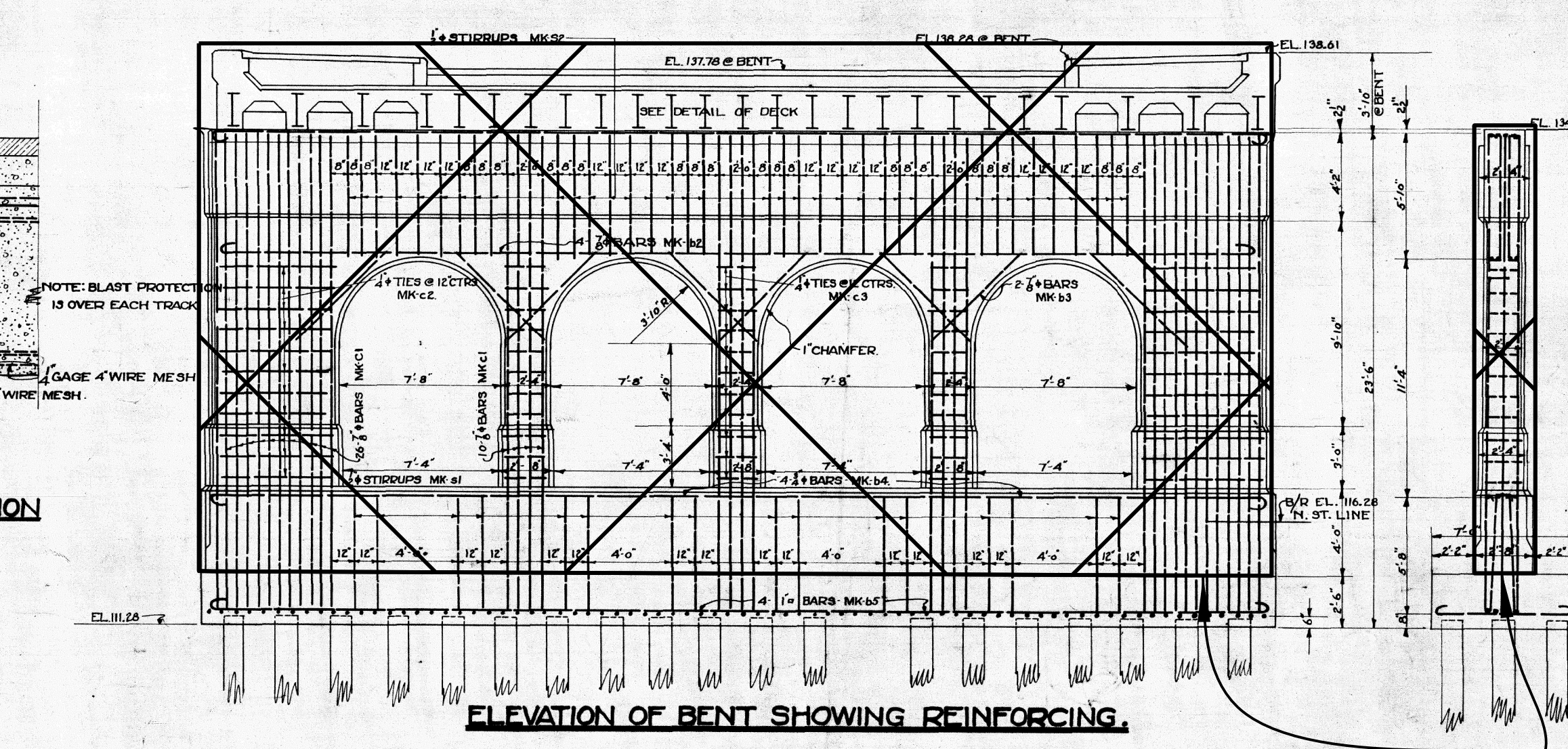
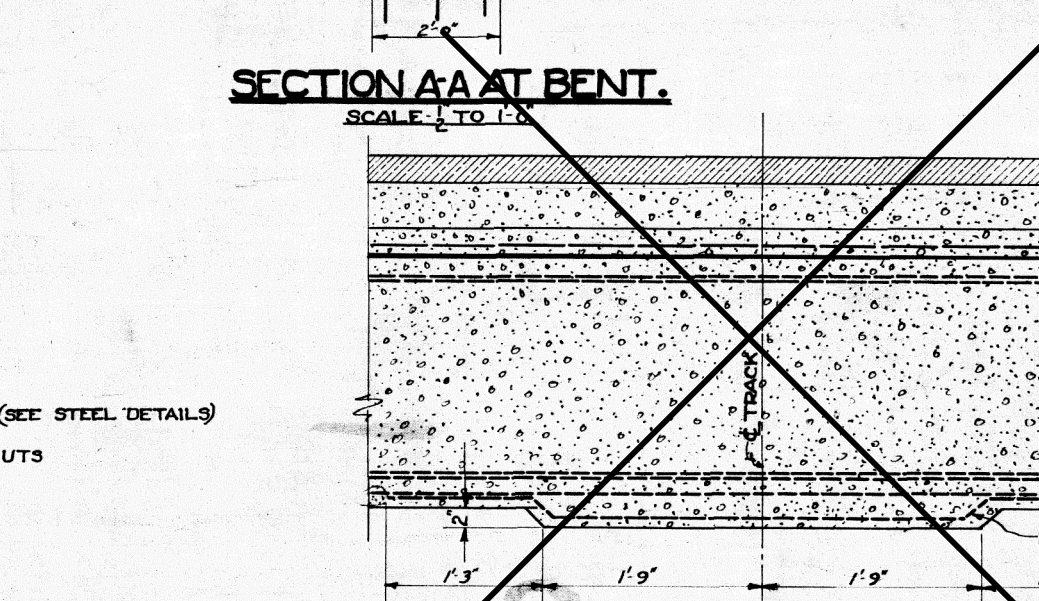
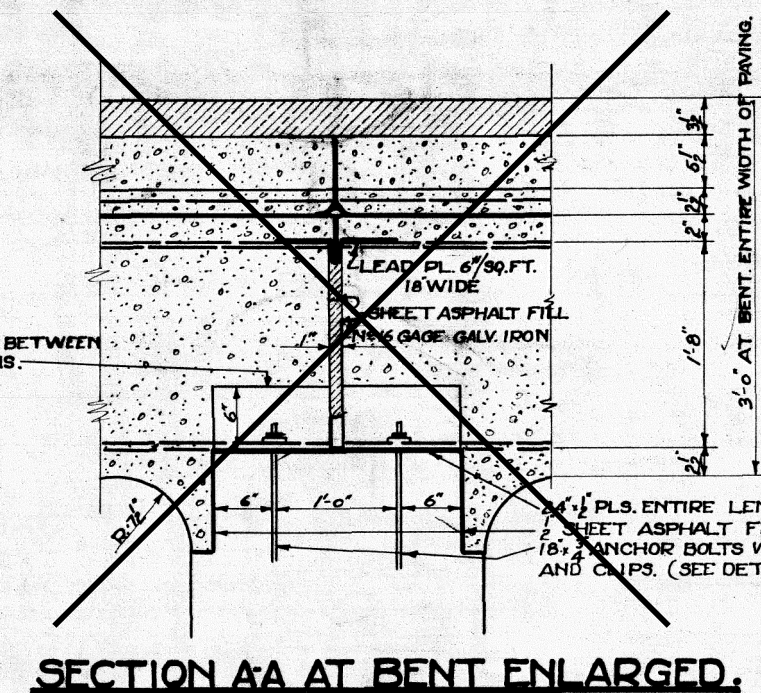
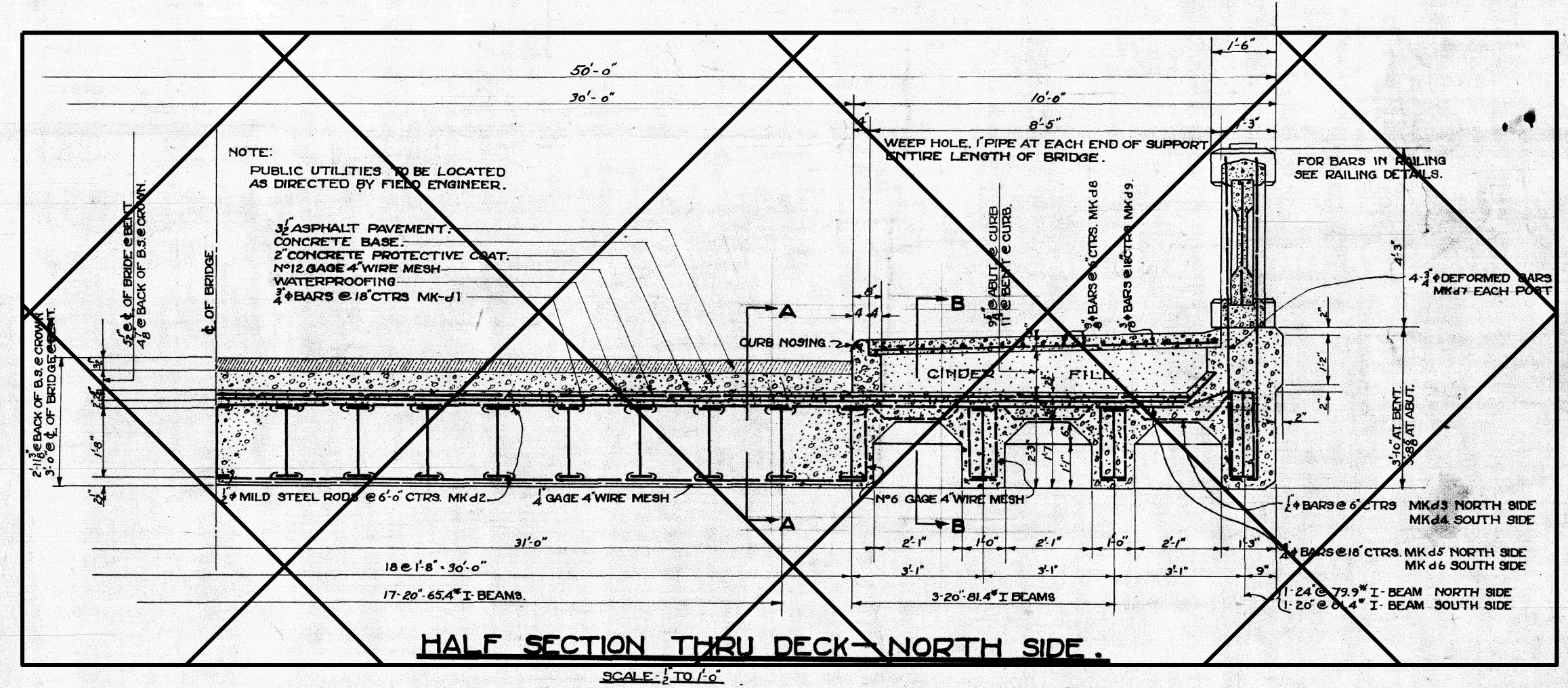
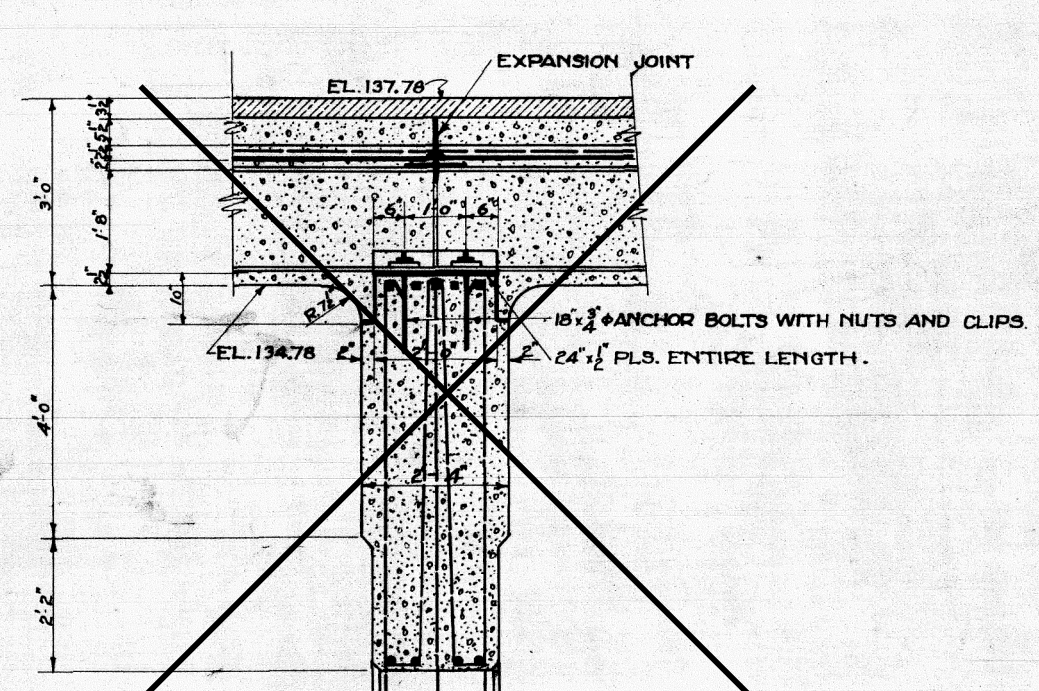
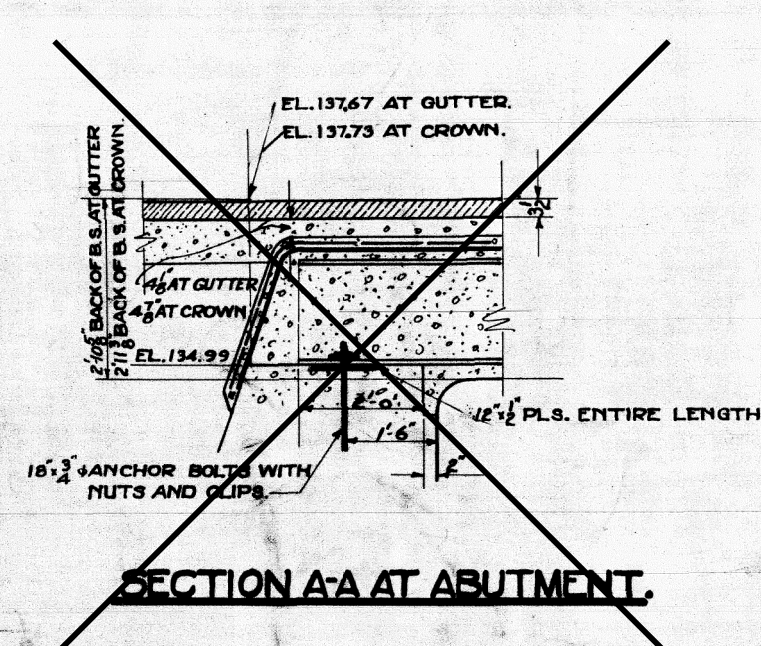
CITY OF DETROIT
CITY ENGINEERING DIVISION - D.P.W.
BUREAUS OF STREETS AND HIGHWAYS
FOR

CHESTNUT STREET BRIDGE

REMOVAL SHEET

SHEET 16 OF 27 SHEETS
JOB NUMBER
132668A
ASSIGNMENT NO.
DATE 08/22/2019

BEFORE STARTING CONSTRUCTION CONTRACTOR MUST CHECK WITH UTILITIES FOR LOCATIONS OF EXISTING STRUCTURES WHETHER OR NOT INDICATED ON PLANS.



APPROVED *J. Adams*
CHIEF ENGINEER D.G.H. & M.P.Y.

APPROVED *W. Adams*
CITY ENGINEER

GRAND TRUNK RAILWAY SYSTEM
WESTERN LINES
DEQUINDRE GRADE SEPARATION
DETROIT, MICH.
BRIDGE - CHESTNUT STREET
SCALE AS SHOWN.

DR. B.A.W.
TR. W.P.P.
CH. L.S.

OFFICE OF CHIEF ENGINEER
DETROIT, MICHIGAN
JULY 1969

JOURNAL
W-3177
FILE

SHEET 17 OF 27

CUT-OFF ELEVATION AT GROUND LEVEL

CONTRACTOR SHALL SALVAGE AT LEAST 3' OF EXISTING VERTICAL RE-BARS, BLAST CLEANED AND RE-EMBEDDED IN PROPOSED NEW CONCRETE WALL

JOB NO. : 132668A

THE ONLY ITEMS OF WORK TO BE DONE FROM THIS SHEET ARE IDENTIFIED BY THE LEGEND BOX BELOW, LABELED WITH THIS PROJECT'S JOB NUMBER.

PROPOSED WORK

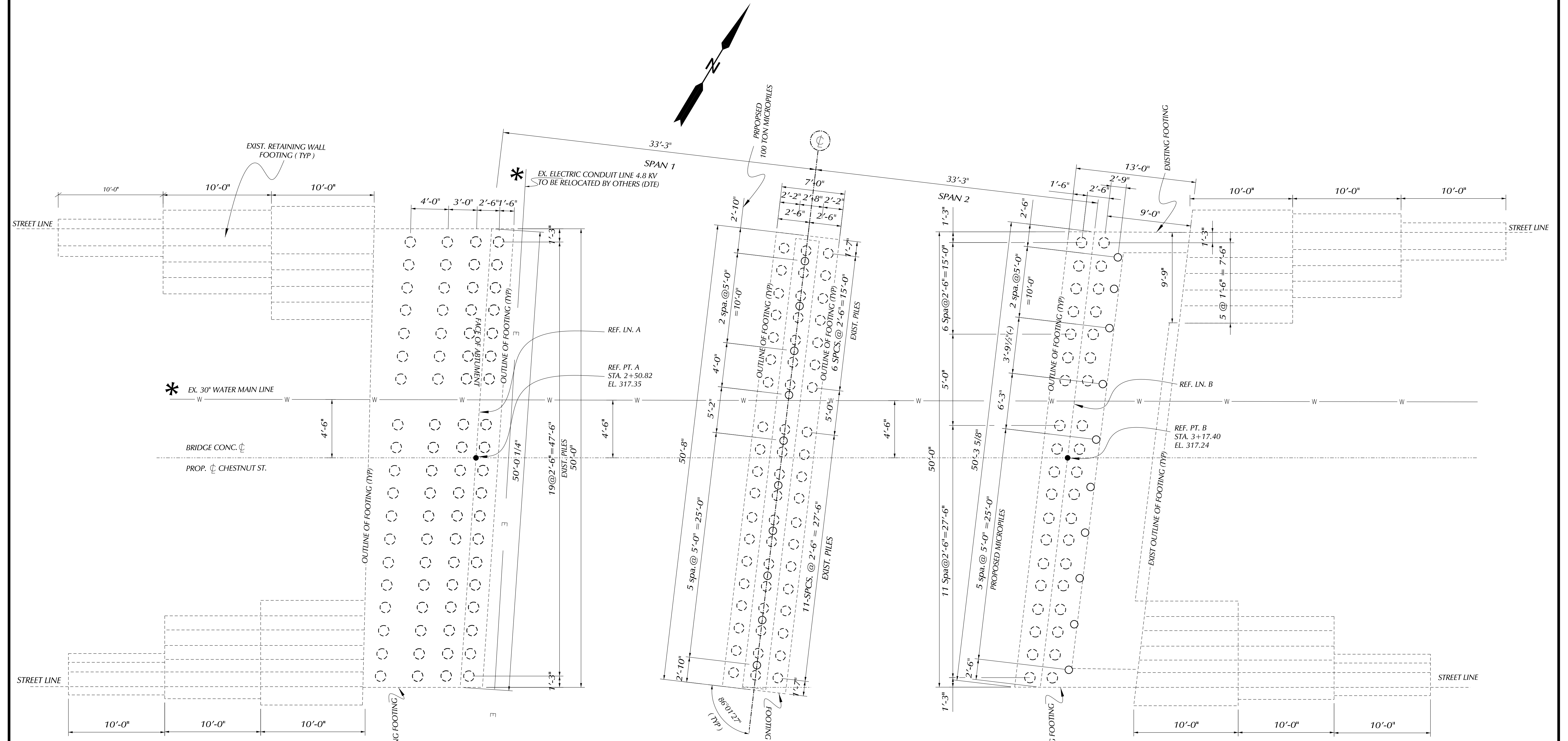
DENOTES REMOVAL PORTIONS

DESCRIPTION	REVISIONS	DR	CHK	APP	DATE

CITY OF DETROIT
CITY ENGINEERING DIVISION - D.P.W.
BUREAUS OF STREETS AND HIGHWAYS
FOR

CHESTNUT STREET BRIDGE
REMOVAL SHEET

SHEET 17 OF 27 SHEETS
JOB NUMBER 132668A
ASSIGNMENT NO.
DATE 08/22/2019



PLAN OF PILE

* DIMENSION SHALL VERIFY BY CONTRACTOR IN THE FIELD

PILE NOTES

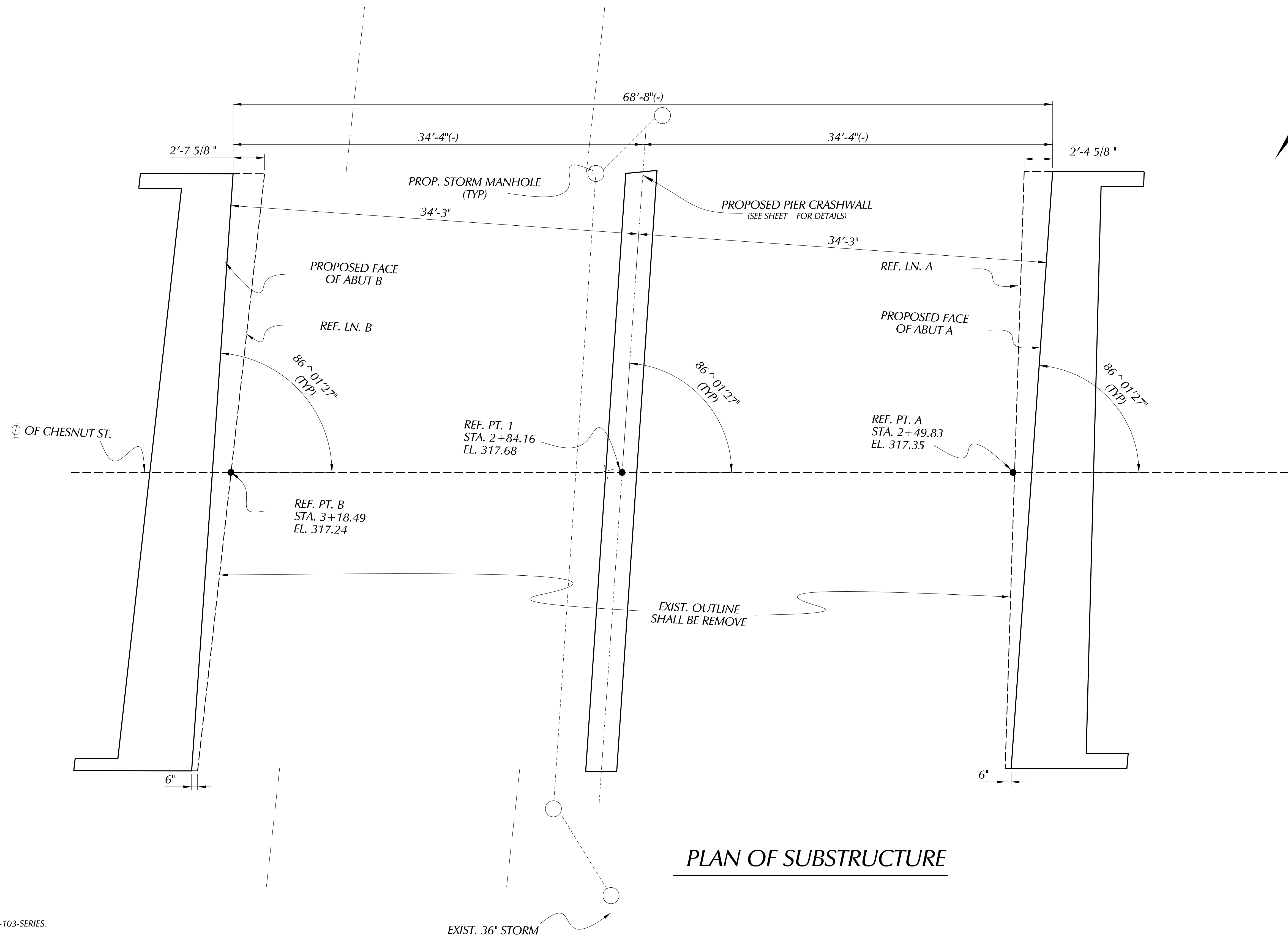
ALL PILES SHALL BE BORED TO A MINIMUM BEARING CAPACITY OF 100 TONS.
 MICROPILES ARE TO BE BORED TO SUCH ACCURACY THAT THE ENDS OF THE PILES TO BE EMBEDDED IN THE CONCRETE ARE WITHIN 3" OF THE LOCATION SHOWN ON THE PLANS. CONTRACTOR SHALL TAKE EXTRA CAUTION WHEN DRILL OR LOOR AROUND EXITING UTILITIES. SEE SPECIAL PROVISION FOR DETAILS.

MISCELLANEOUS QUANTITIES		
PARTICIPATING QUANTITY	UNITS	ITEM
1	LS	MICROPILE EQUIPMENT, L.R.F.D (R01 OR 82000)
20	Ea	MICROPILE, TYPE A, INSTALL, L.R.F.D
2	Ea	MICROPILE, LOAD TEST, L.R.F.D
2	Ea	MICROPILE LOAD TEST, VERIFICATION, L.R.F.D

DESCRIPTION	OR CHECK APPROVDATE	FINAL	****	****
REVISIONS				

CITY OF DETROIT
 CITY ENGINEERING DIVISION - D.P.W.
 BUREAUS OF STREETS AND HIGHWAYS
 FOR

CHESTNUT STREET BRIDGE
PILE DETAILS



NOTES

NS DENOTES NEAR SIDE.
 FS DENOTES FAR SIDE.
 ES DENOTES EACH SIDE.

FOR BEVEL AND MOLDING DETAILS, SEE STANDARD PLAN B-103-SERIES.

LOW TEMPERATURE PROTECTION OF CONCRETE SHALL BE APPLIED ACCORDING TO SECTION 706.03 J. OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.
 LOW TEMPERATURE PROTECTION OF CONCRETE WILL NOT BE PAID FOR SEPARATELY, BUT WILL BE INCLUDED IN THE BID ITEM "SUBSTRUCTURE CONC". 12-5-2005.

CONCRETE SURFACE COATING SHALL BE APPLIED TO THE ENTIRE EXPOSED SURFACE OF ABUTMENT, RETERNWALL AND WINGWALL.

PLAN OF SUBSTRUCTURE

		BY	CHECKED BY	APPROVED:
PLAN				
GRADE				
ESTIMATE				
DESCRIPTION	DR	CHK	APPV	DATE
REVISIONS				

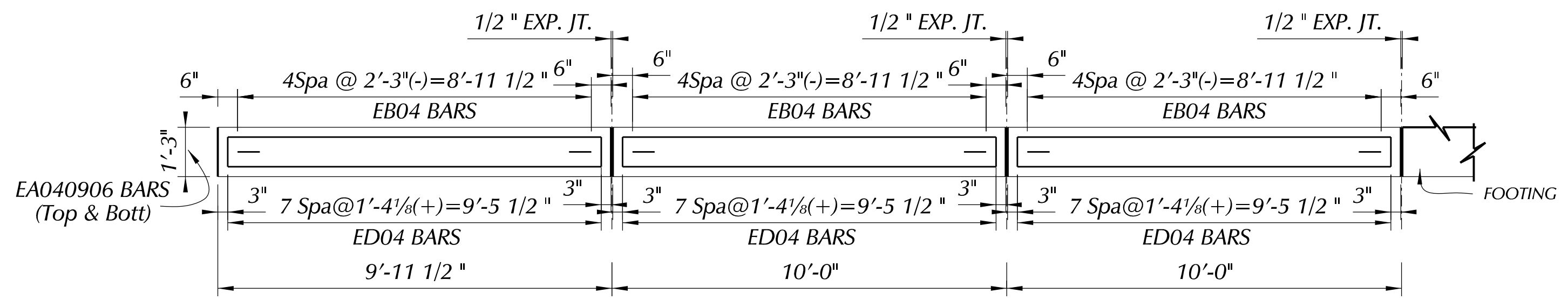
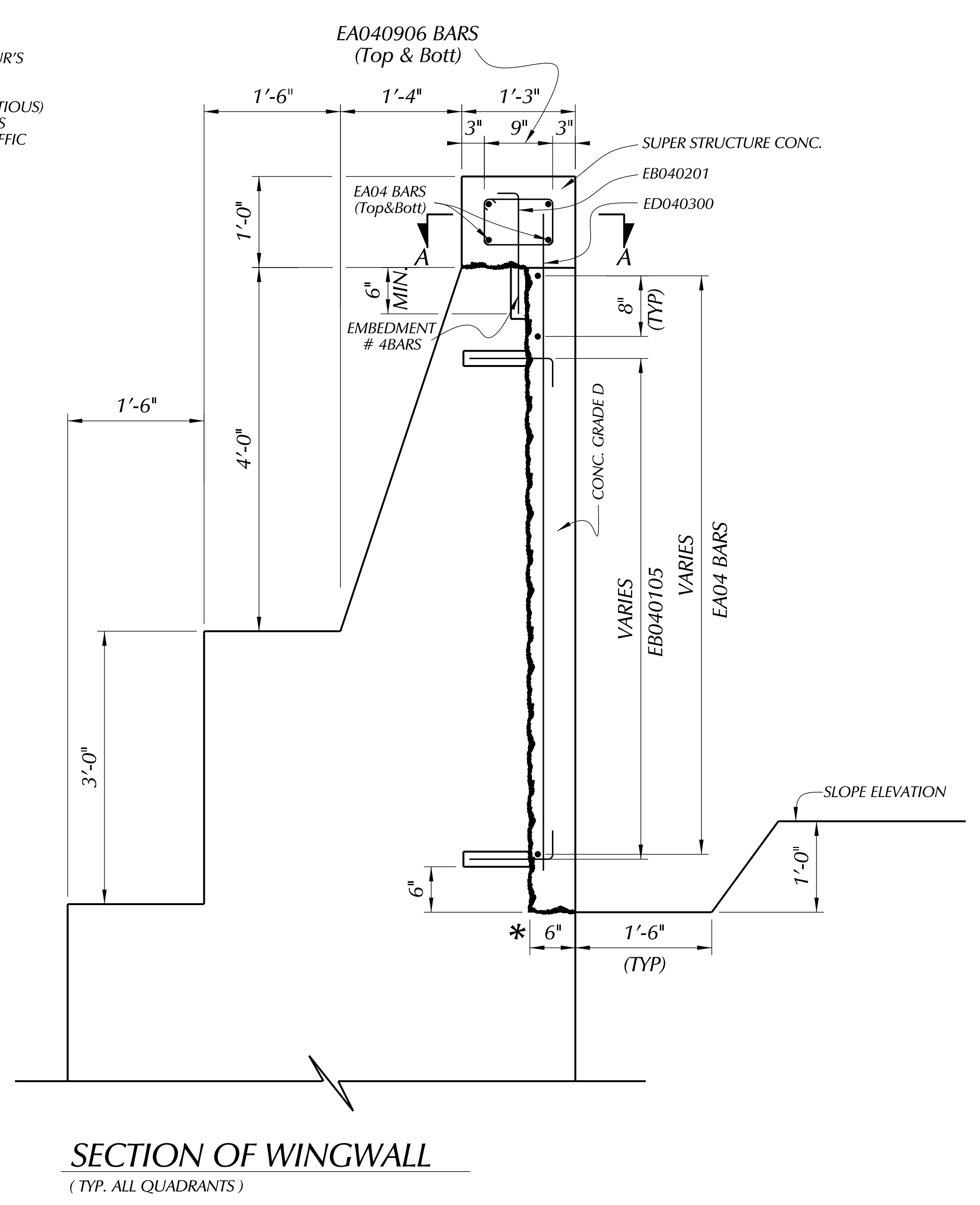
CITY OF DETROIT
 CITY ENGINEERING DIVISION - D.P.W.
 BUREAUS OF STREETS AND HIGHWAYS
 FOR

CHESTNUT STREET BRIDGE
PLAN OF SUBSTRUCTURE

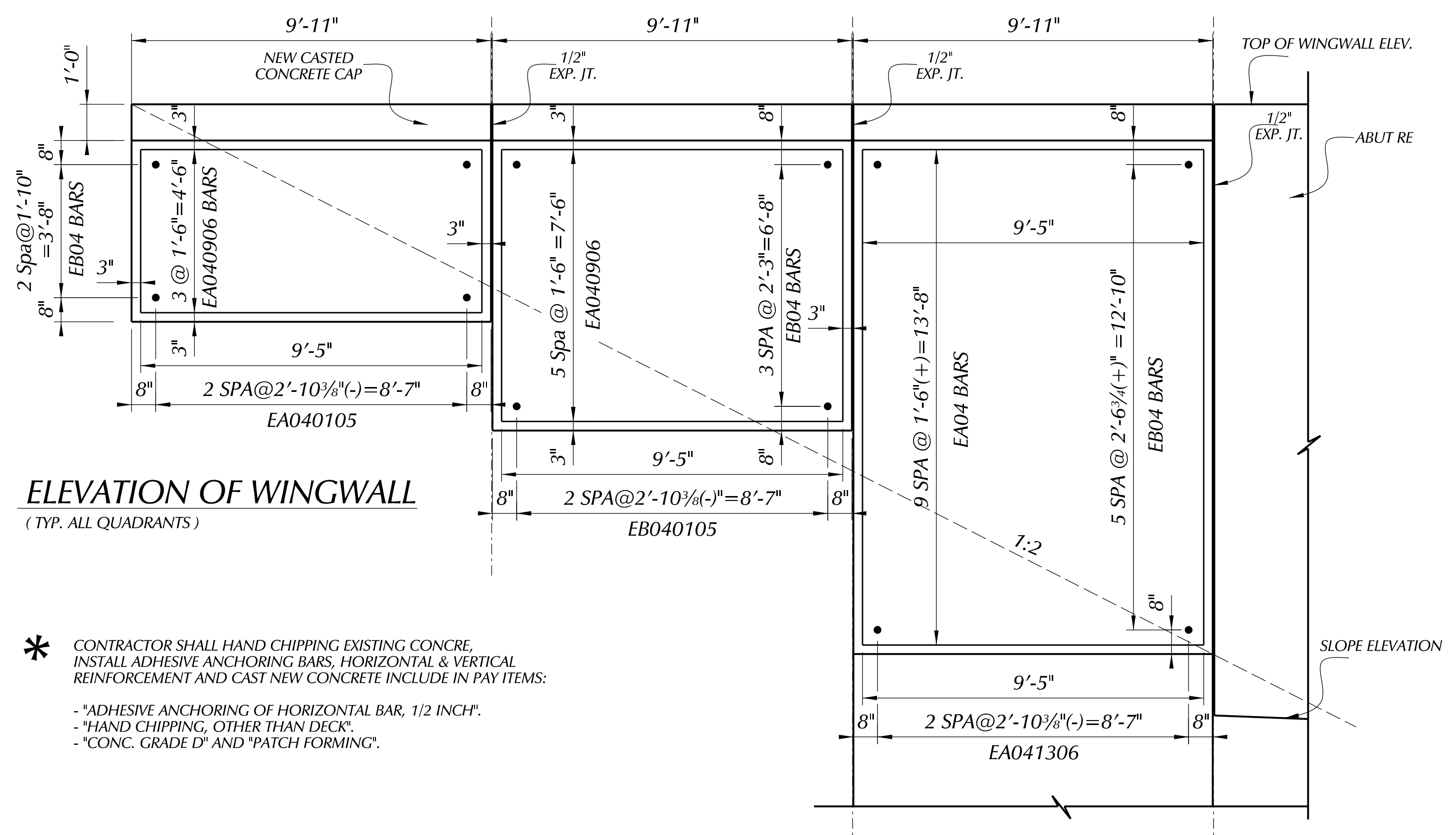
SHEET 19 of 27 SHEETS
JOB NUMBER 132668A
ASSIGNMENT NO.
DATE 08/22/2019

NOTES:

NS DENOTES NEAR SIDE.
 FS DENOTES FAR SIDE.
 ES DENOTES EACH SIDE.
 SYSTEM FOR ANCHORING HORIZONTAL OR VERTICAL REINFORCEMENT IN EXISTING CONCRETE SHALL BE CHOSEN FROM THE QUALIFIED PRODUCTS LIST IN THE CURRENT MDOT MATERIALS SOURCE GUIDE (12-5-2005).
 ALL CONCRETE ANCHORS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS, EXPECT AS MODIFIED IN THESE PLANS. (5-1-2000).
 ADHESIVE ANCHORS SHALL USE A NON-SHRINK GROUT (WHICH IS CEMENTITIOUS) LISTED IN MDOT'S QUALIFIED PRODUCTS LIST. (USE FOR ADHESIVE ANCHORS IN SUSTAINED, TENSILE-LOAD-ONLY OVERHEAD APPLICATIONS SUCH AS TRAFFIC SIGNALS/SIGN SUPPORTS.) (8-20-2009).

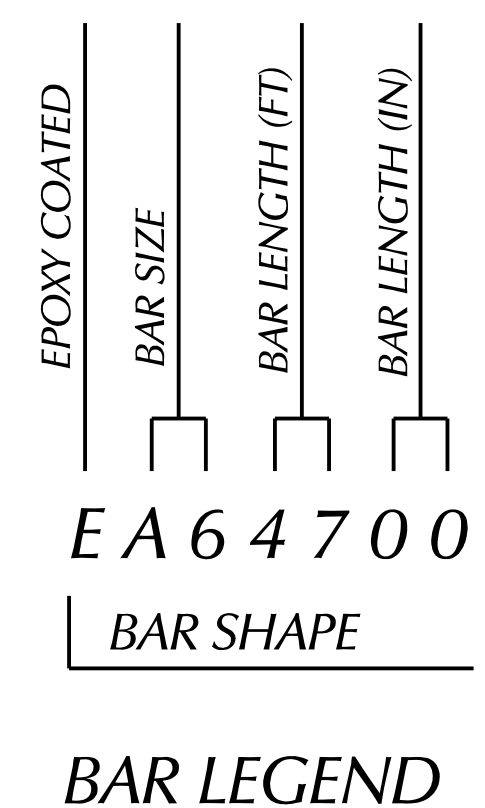
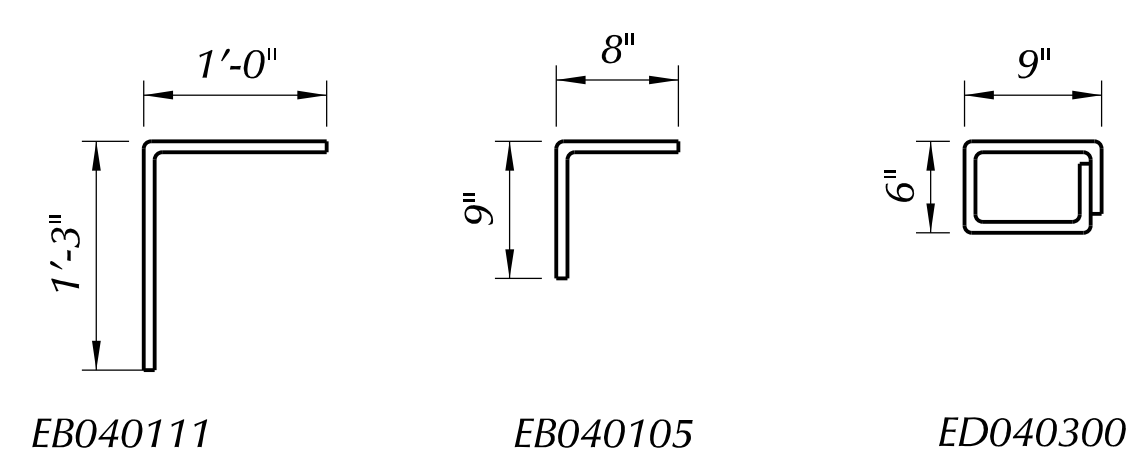


PLAN OF WINGWALL



ELEVATION OF WINGWALL
(TYP. ALL QUADRANTS)

* CONTRACTOR SHALL HAND CHIPPING EXISTING CONCR., INSTALL ADHESIVE ANCHORING BARS, HORIZONTAL & VERTICAL REINFORCEMENT AND CAST NEW CONCRETE INCLUDE IN PAY ITEMS:
 - *ADHESIVE ANCHORING OF HORIZONTAL BAR, 1/2 INCH.
 - *HAND CHIPPING, OTHER THAN DECK.
 - *CONC. GRADE D³ AND "PATCH FORMING".



EPOXY COATED STEEL REINFORCEMENT		
BAR	NO. REQ' D	TOTAL WT
EB040105	144	137.0
EB04011	60	197.0
ED040300	96	192.0
EA040906	128	812.0
EA040500	32	107.0
EA040800	32	171.0
EA041402	32	303.0
OVER RUN		192
TOTAL		2111.0

MISCELLANEOUS QUANTITIES		
PARTICIPATING QUANTITY	UNITS	ITEM
6.0	Cyd	SUPERSTRUCTURE CONC.
2111	Lbs	REINFORCEMENT, STEEL EPOXY COATED.
60	Ea	ADHESIVE ANCHORING VERTICAL BARS, 1/2 INCH.
156	Ea	ADHESIVE ANCHORING HORIZONTAL BARS, 1/2 INCH.
20	Cyd	CONC. GRADE D.
1080	Sft	PATCH FORMING.
* 2800	Cft	HAND CHIPPING, OTHER THAN DECK.

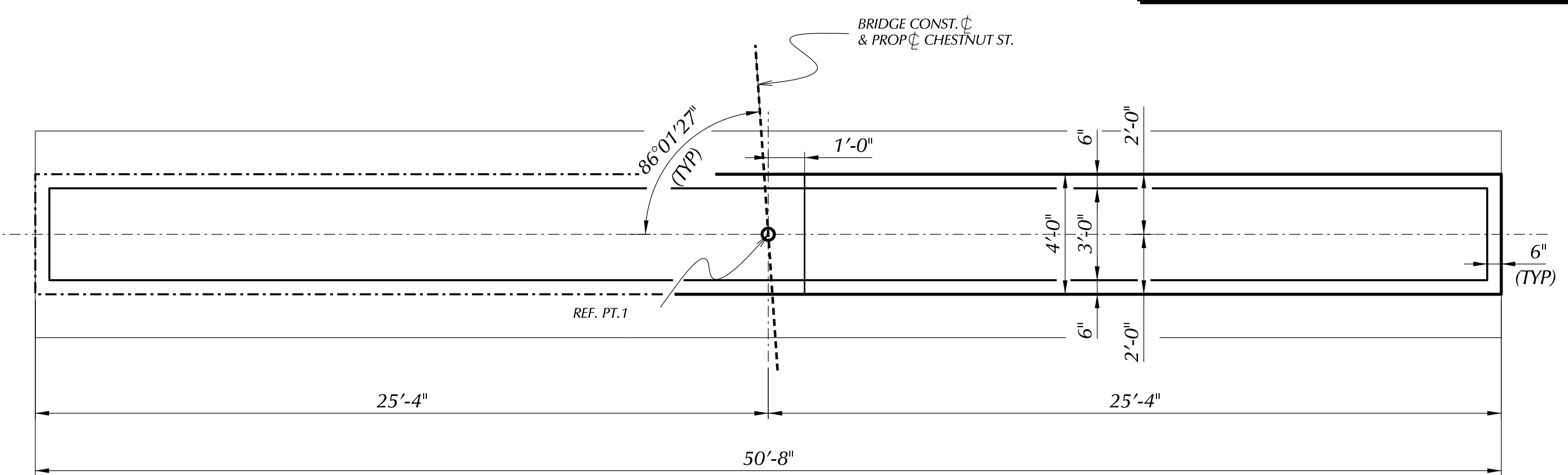
* THIS QUANTITY IS FOR HAND CHIPPING ABUTMENT WALLS, PIER, WING WALLS AND RETAINING WALLS.

DESCRIPTION	OR	CHK	DATE	BY	CHECKED BY	APPROVED
PLAN						
GRADE						
ESTIMATE						
FINAL						
REVISIONS						

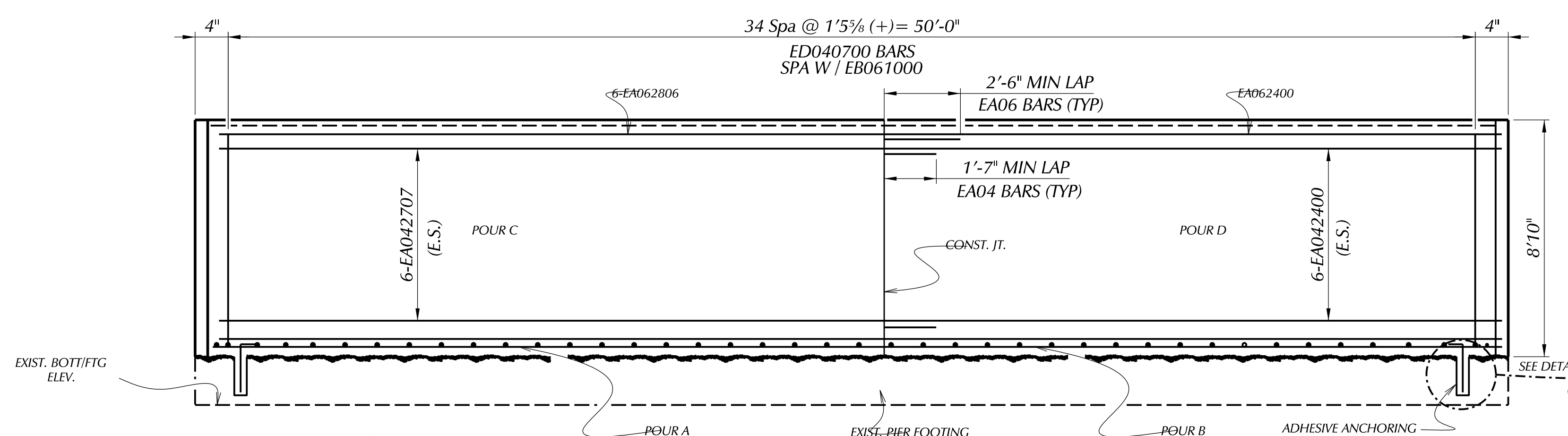
CITY OF DETROIT
 CITY ENGINEERING DIVISION - D.P.W.
 BUREAUS OF STREETS AND HIGHWAYS
 FOR

CHESTNUT STREET BRIDGE
WING WALL DETAILS

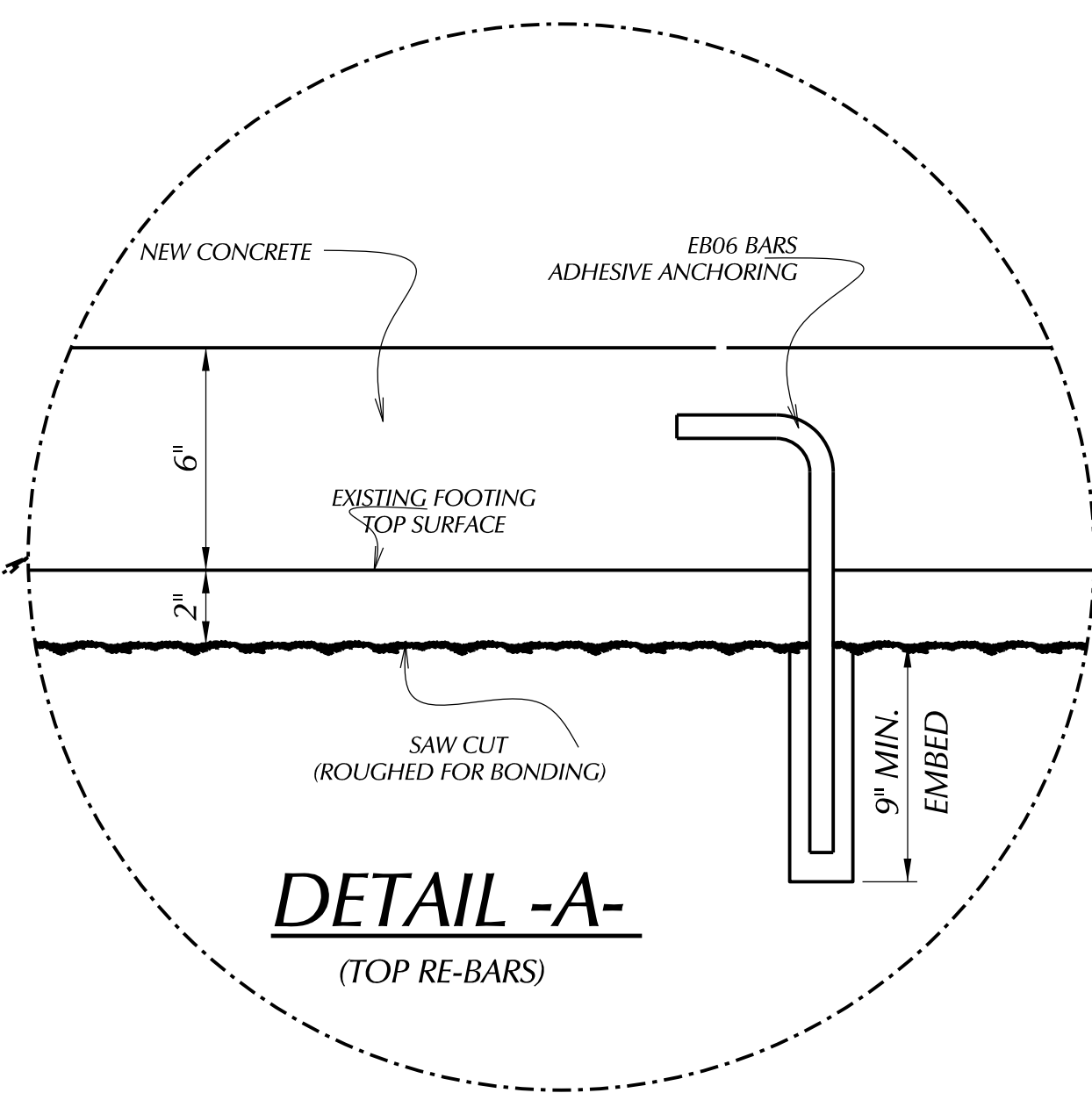
SHEET 21 OF 27 SHEETS
 JOB NUMBER 132668A
 ASSIGNMENT NO.
 DATE 08/29/2019



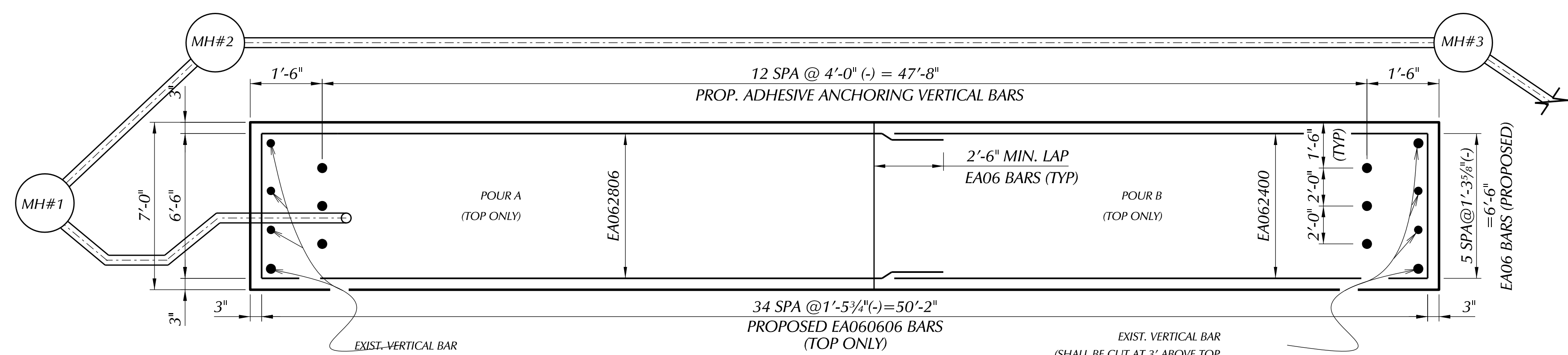
PLAN OF TOP



ELEVATION



**DETAIL -A-
(TOP RE-BARS)**



PLAN OF FOOTING

NOTES:
 ES DENOTES EACH SIDE.
 FS DENOTES FAR SIDE.
 NS DENOTES NEAR SIDE.
 FOR BEVEL AND MOLDING DETAILS, SEE STANDARD PLAN
 FOR PILE QUANTITIES, LAYOUT AND NOTES, SEE SHEET NO. 18 OF 27
 LOW TEMPERATURE PROTECTION OF CONCRETE SHALL BE APPLIED ACCORDING TO SECTION 706.03J, OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.
 LOW TEMPERATURE PROTECTION OF CONCRETE WILL NOT BE PAID FOR SEPARATELY, BUT WILL BE INCLUDED IN THE BID ITEM "Substructure Conc."

MISCELLANEOUS QUANTITIES		
QUANTITY	UNITS	ITEM
86	Ft	UNDERDRAIN, FDN, 4"
1	Ea	SEWER TAP, 4"
79	Cyd	SUBSTRUCTURE CONC.
3350	Lbs	REINFORCEMENT, STEEL, EPOXY COATED.
39	Ea	ADHESIVE ANCHORING OF VERTICAL BARS, 3/4 INCH.

SUBSTRUCTURE CONC. QUANTITIES	
POUR	CYD
A	4.5
B	4.0
C	38.5
D	32.0
TOTAL	79.0

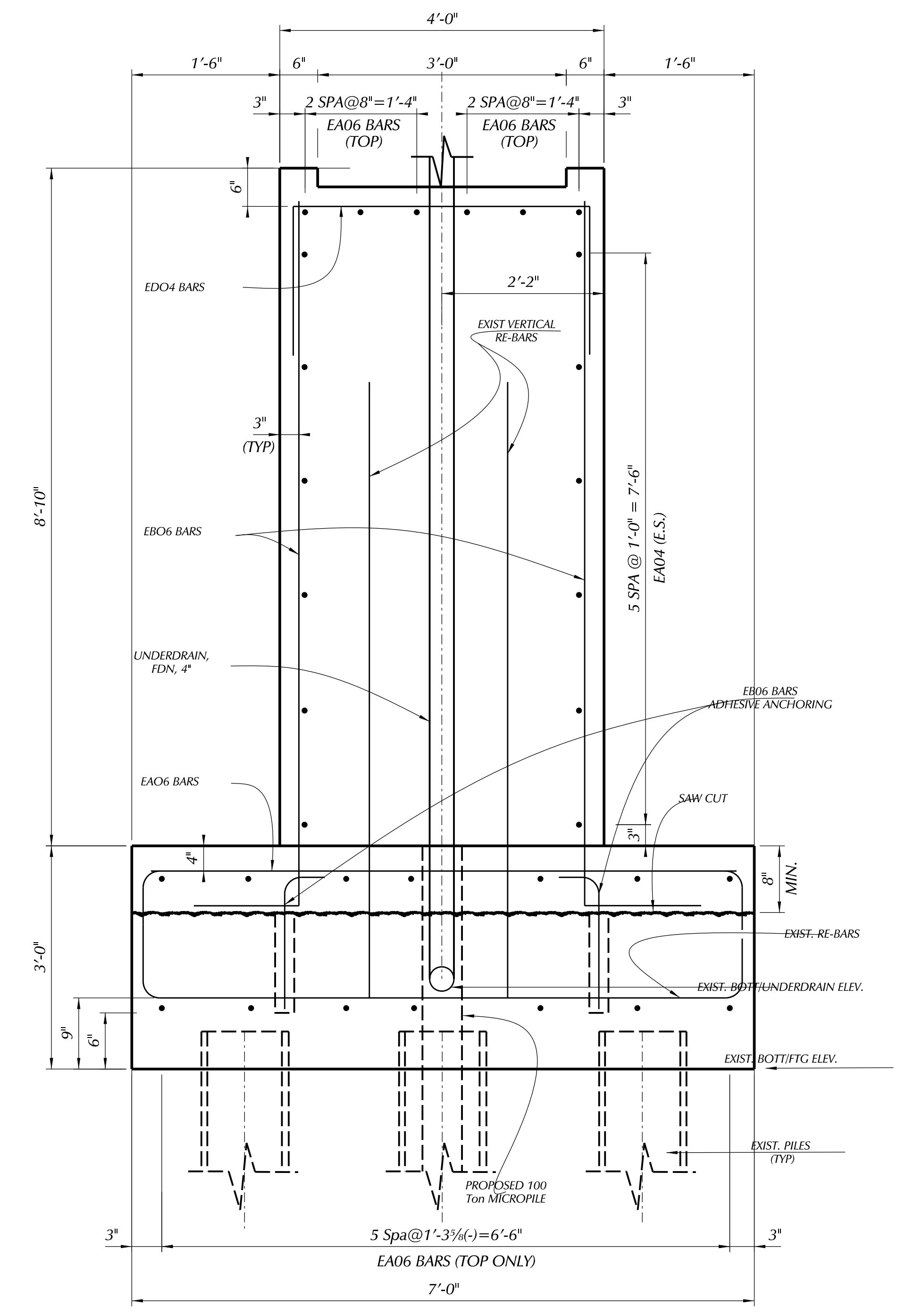
DESCRIPTION	OR CHECK DATE	BY	CHECKED BY	APPROVED:
PLAN				
GRADE				
ESTIMATE				
FINAL				

CITY OF DETROIT
 CITY ENGINEERING DIVISION - D.P.W.
 BUREAUS OF STREETS AND HIGHWAYS
 FOR

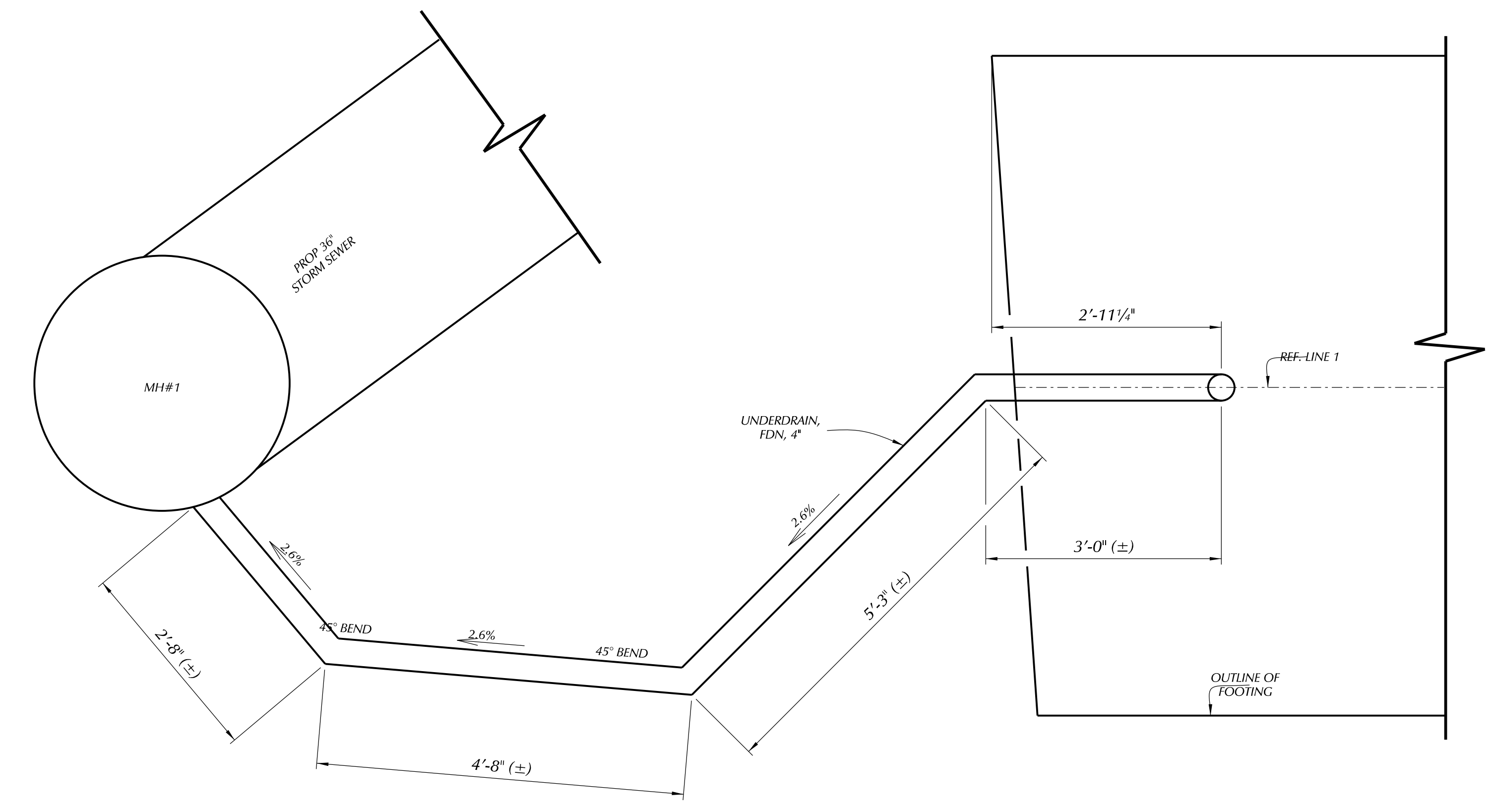
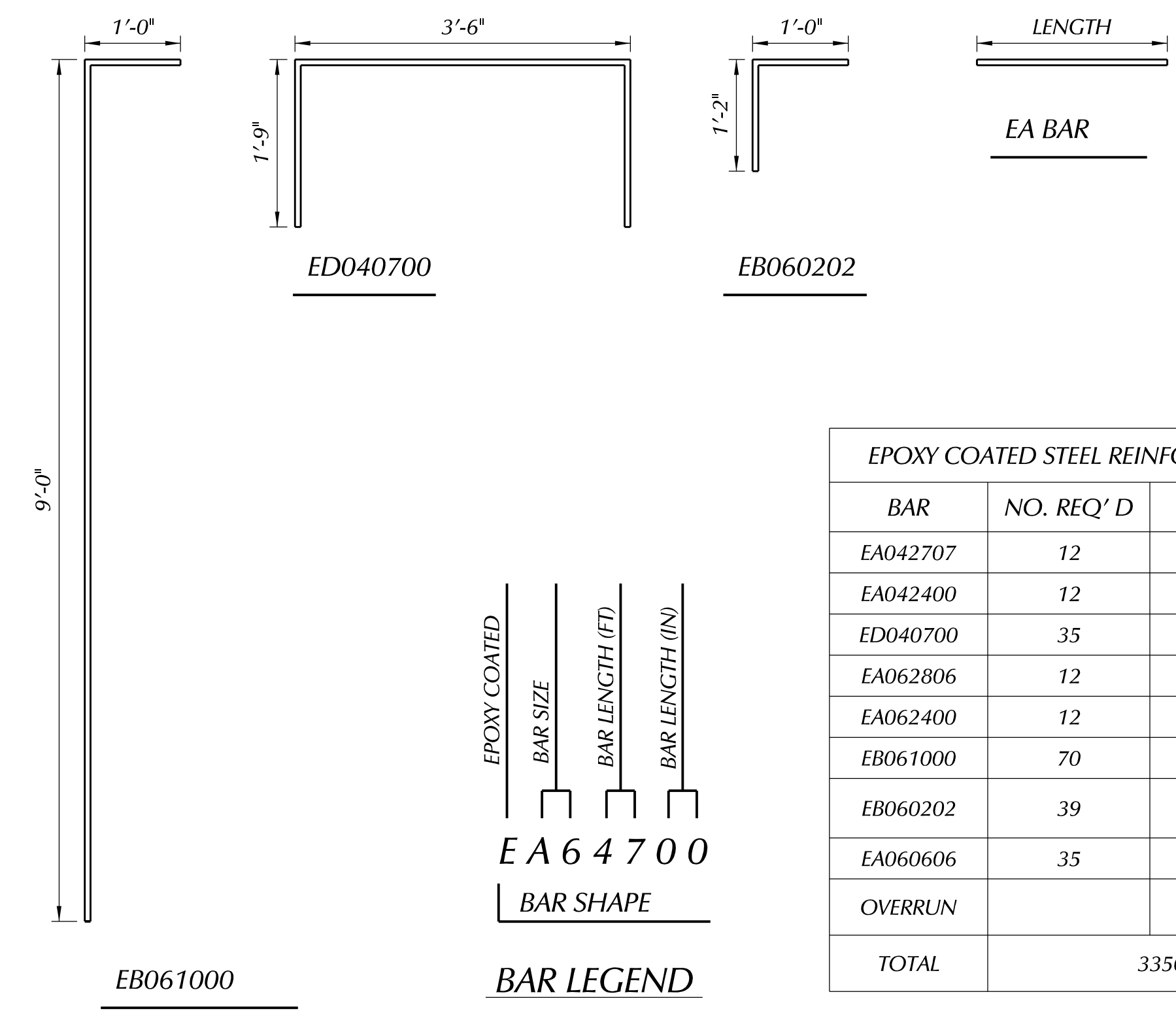
CHESTNUT STREET BRIDGE

PIER DETAILS

SHEET 22 OF 27 SHEETS
 JOB NUMBER 132668A
 ASSIGNMENT NO.
 DATE 08/22/2019



SECTION A-A



UNDERDRAIN DETAIL

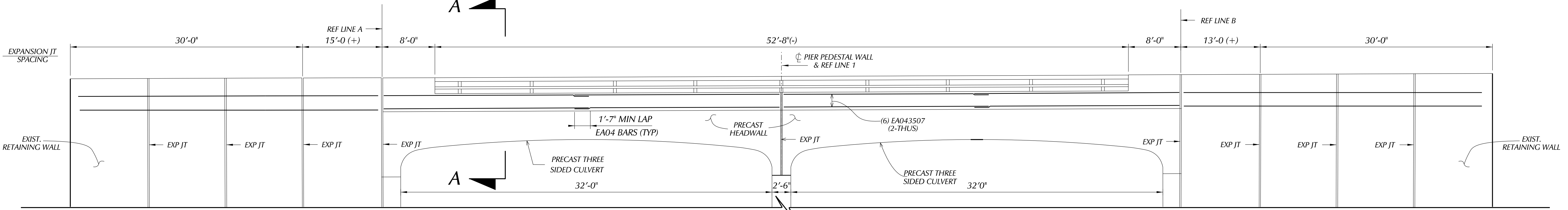
DESCRIPTION	OR	CHK	DATE	BY	CHECKED BY	APPROVED:
REVISIONS						
PLAN						
GRADE						
ESTIMATE						
FINAL						

CITY OF DETROIT
 CITY ENGINEERING DIVISION - D.P.W.
 BUREAUS OF STREETS AND HIGHWAYS
 FOR

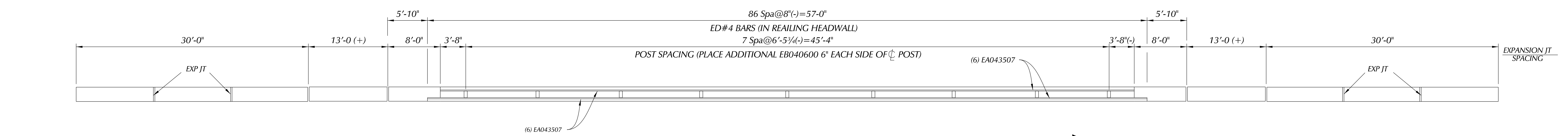
CHESTNUT STREET BRIDGE
PIER DETAIL



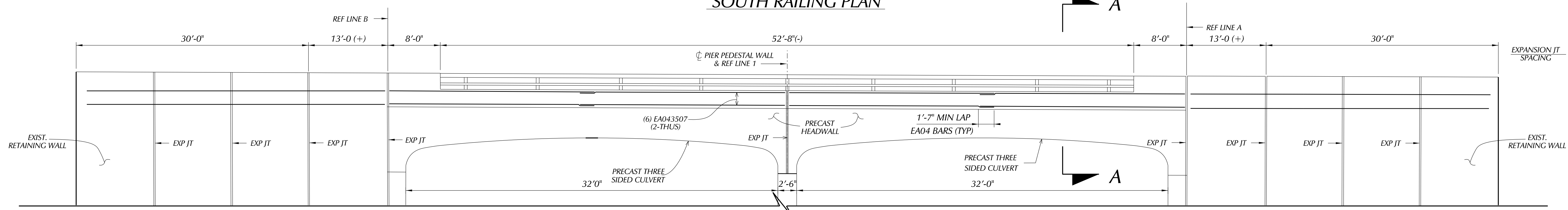
NORTH RAILING PLAN



NORTH RAILING ELEVATION
INSIDE FACE SHOWN



SOUTH RAILING PLAN



SOUTH RAILING ELEVATION
OUTSIDE FACE SHOWN

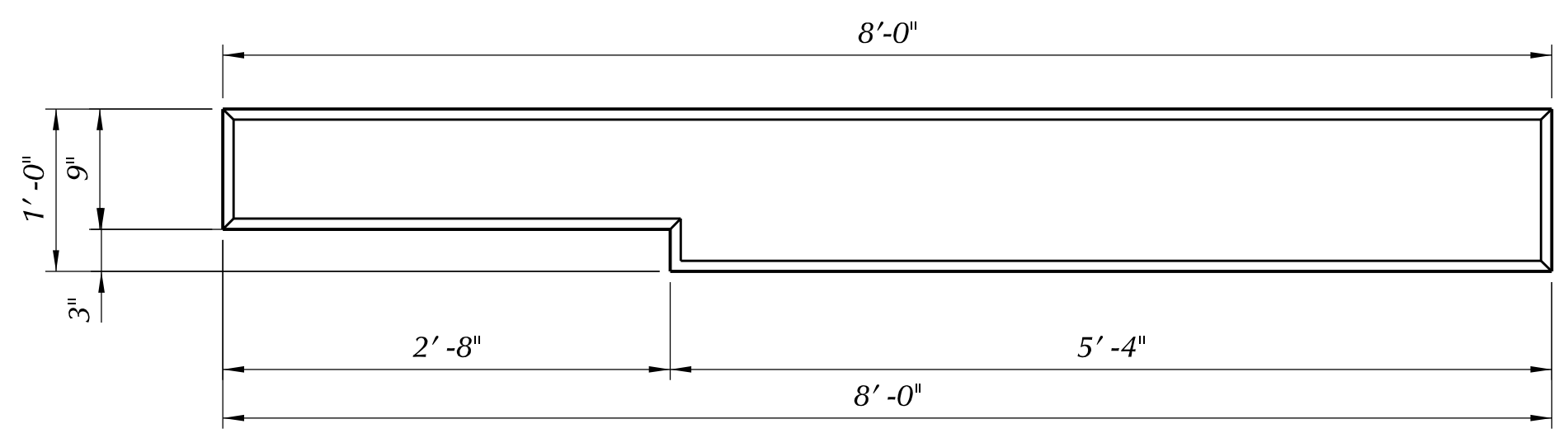
PLAN	BY	CHECKED BY	APPROVED
GRADE			CHIEF OF STREETS
ESTIMATE			
FINAL			
DESCRIPTION	OR	CHK	DATE
REVISIONS			

CITY OF DETROIT
 CITY ENGINEERING DIVISION - D.P.W.
 BUREAUS OF STREETS AND HIGHWAYS
 FOR

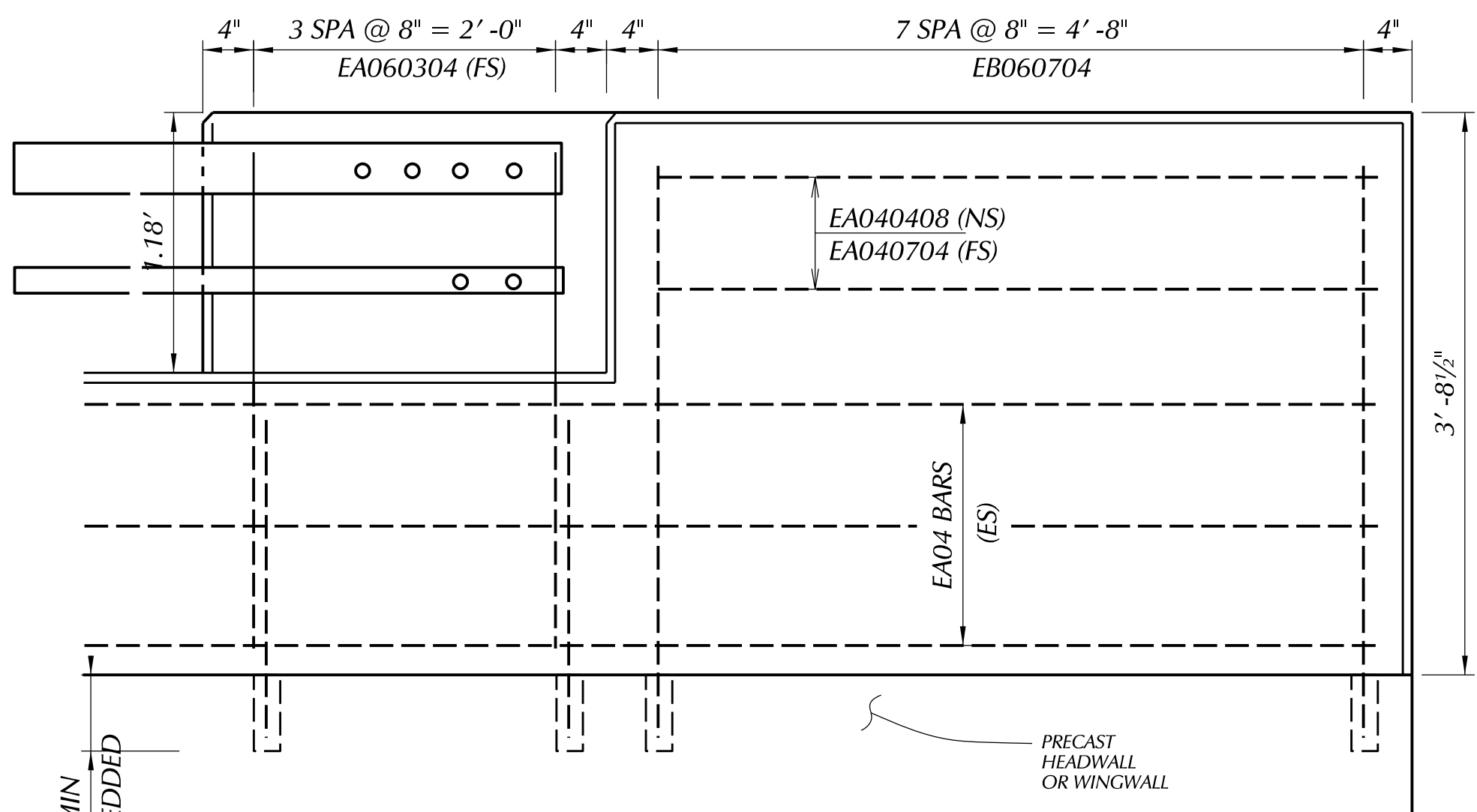
CHESTNUT STREET BRIDGE
BARRIER RAILING DETAILS

SHEET 24 OF 27 SHEETS
JOB NUMBER 132668A
ASSIGNMENT NO.
DATE 08/29/2019

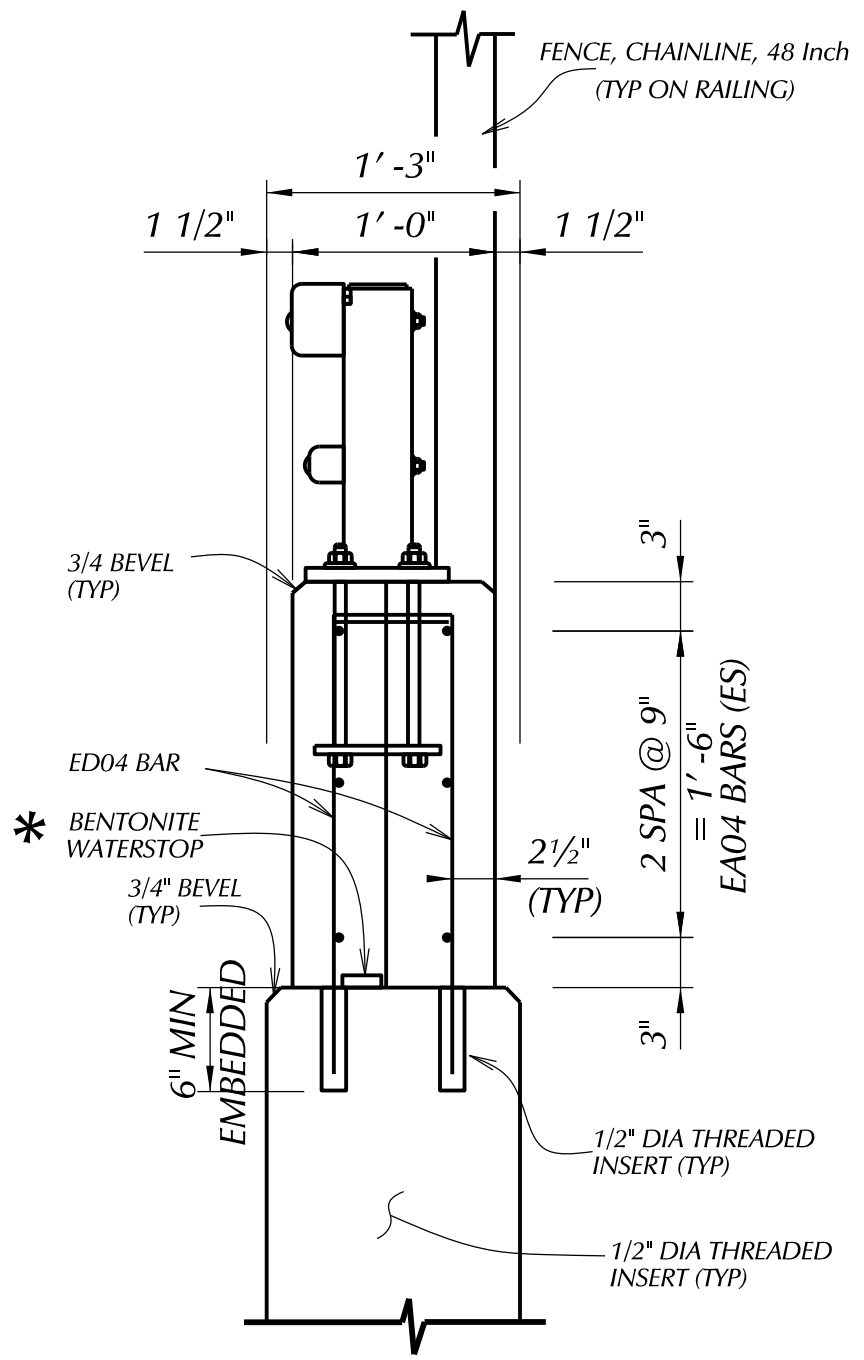
NOTES:
 NS DENOTES NEAR SIDE.
 FS DENOTES FAR SIDE.
 ES DENOTES EACH SIDE.



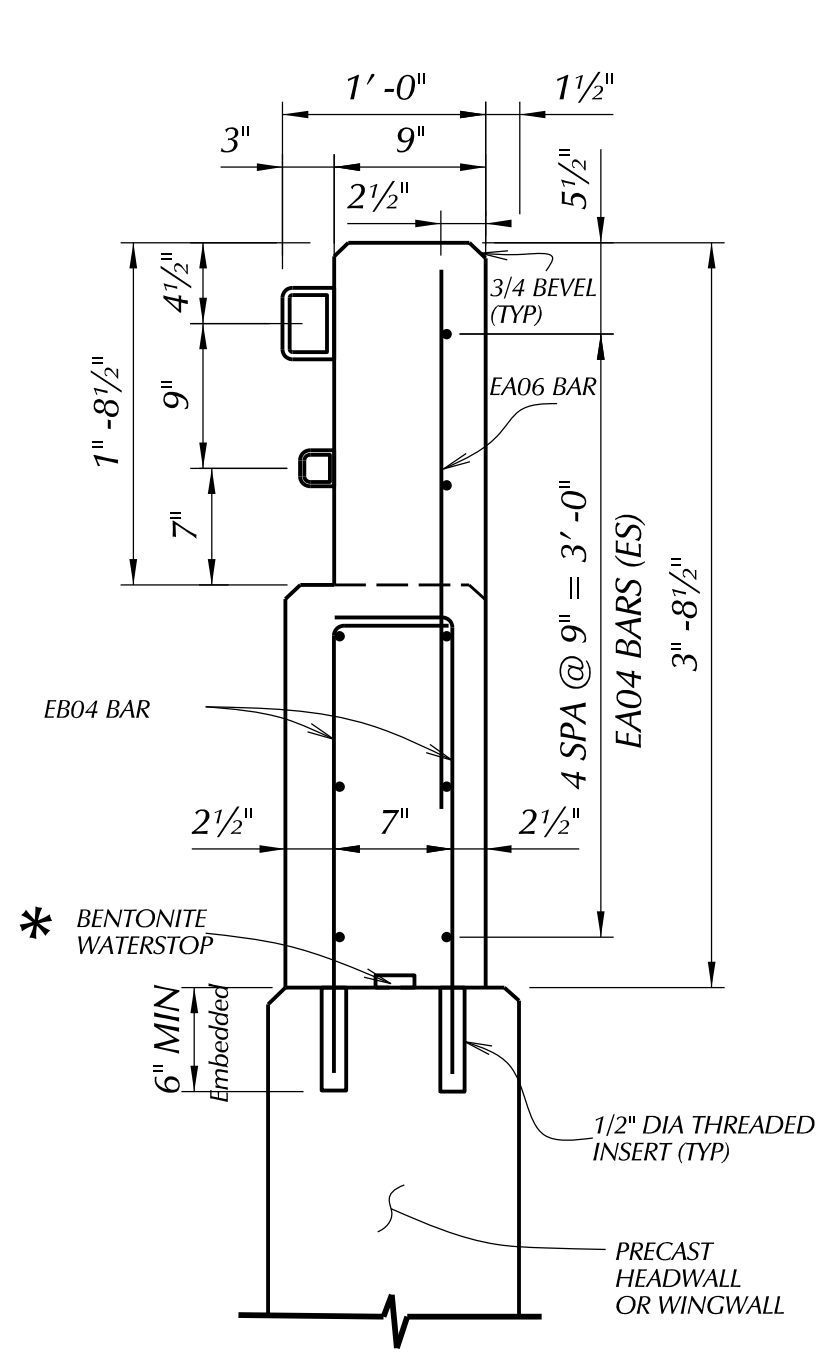
PLAN - END WALL
AESTHETIC PARAPET TUPE



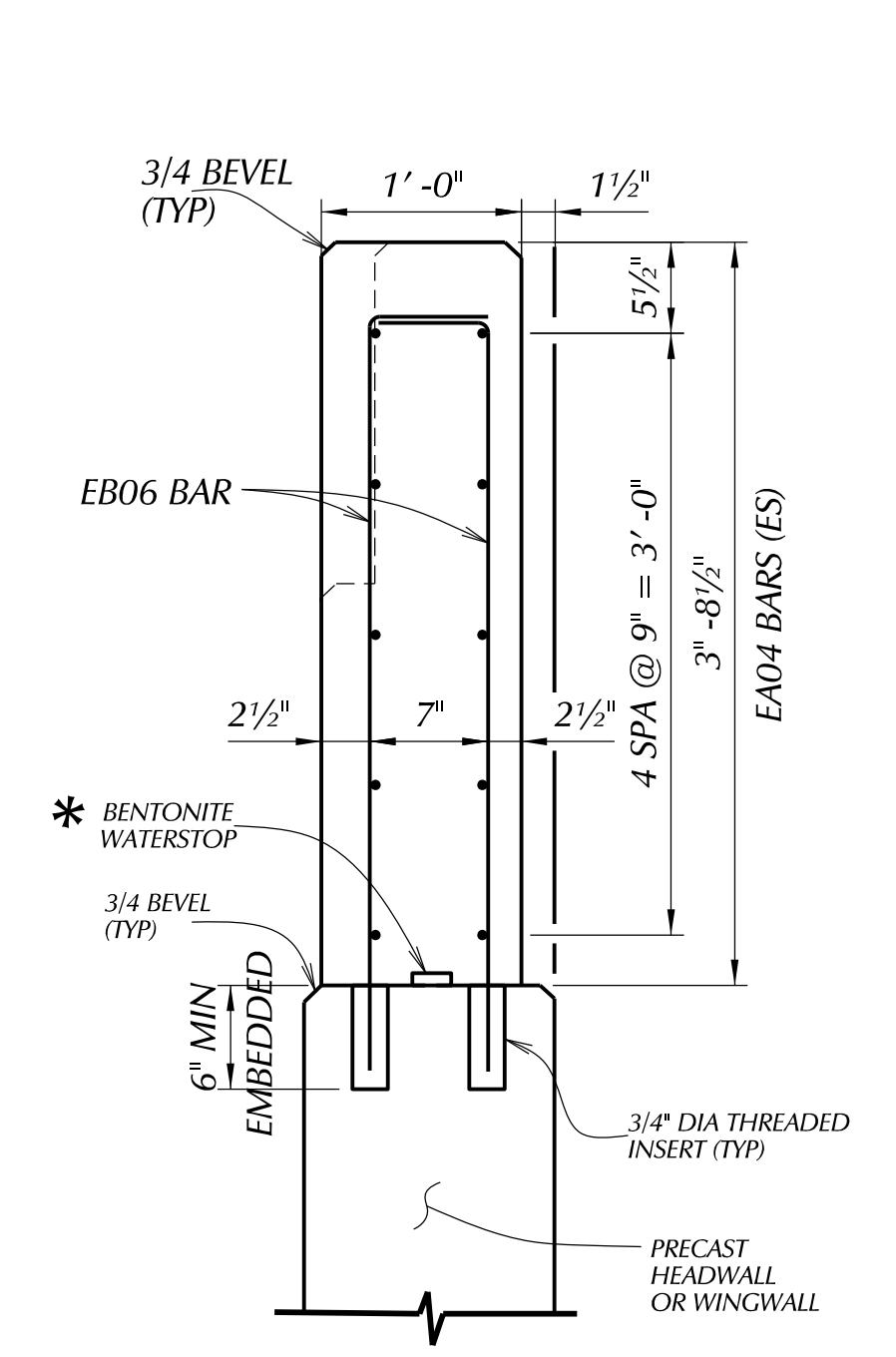
END WALL DETAIL
AESTHETIC PARAPET TUPE



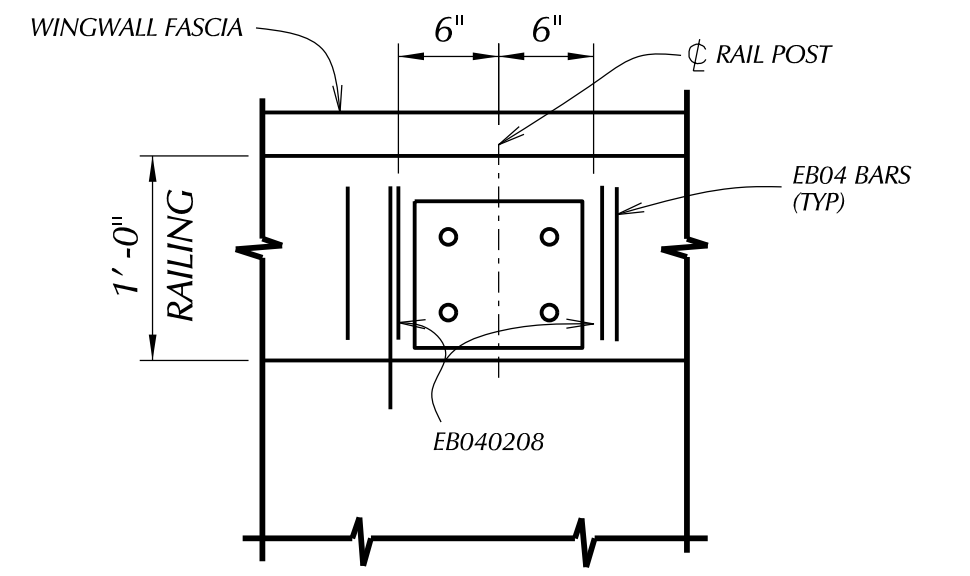
SECTION A-A
(TUBE CONNECTION AREA)



SECTION AT END WALL
(FULL CONCRETE AREA)

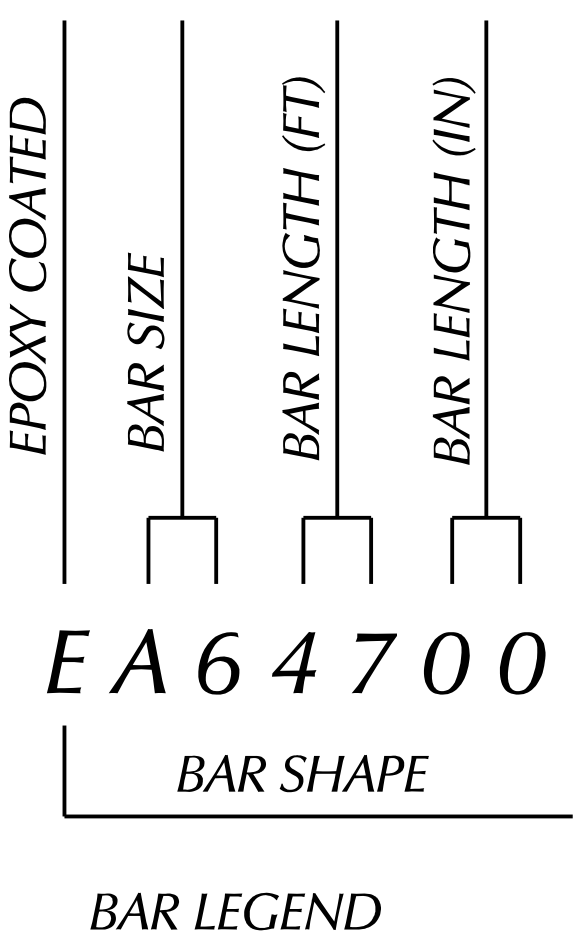
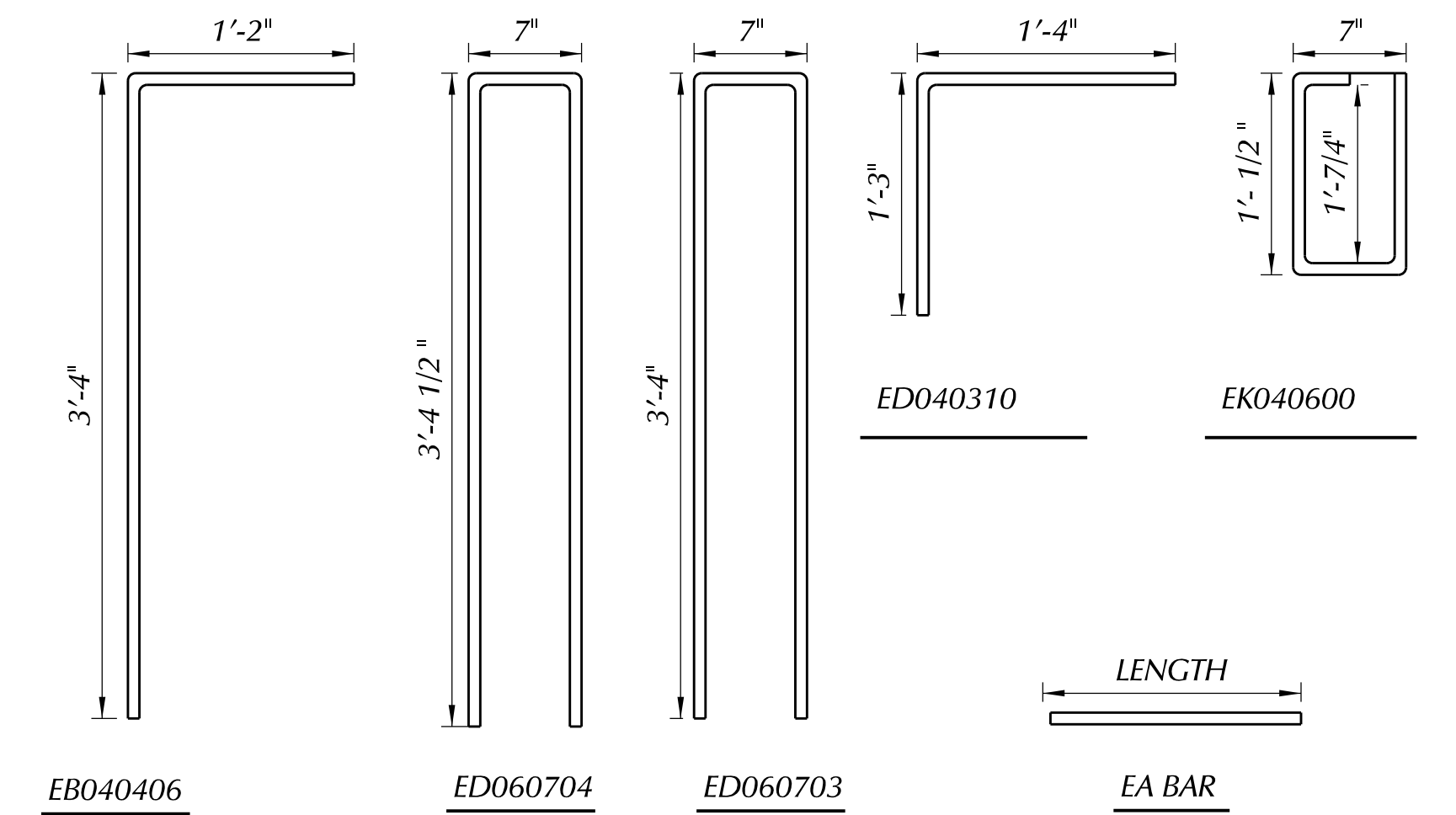


SECTION AT END WALL
(FULL CONCRETE AREA)



RAIL POST DETAIL
(TYP 38 POSTS)

* SHALL INCLUDE IN PAY ITEM "BRIDGE RAILING, AESTHETIC, PARAPET TUPE"



EPOXY COATED STEEL REINFORCEMENT		
BAR	NO. REQ'D	TOTAL WT
EA040408	8	25
EA040704	8	39
EA043507	24	570
EB040406	8	24
ED040310	164	420
ED040703	164	794
ED060704	16	176
EK040600	32	128
TOTAL		2176

MISCELLANEOUS QUANTITIES		
PARTICIPATING QUANTITY	UNITS	ITEM
138	Ft	BRIDGE RAILING, AESTHETIC, PARAPET TUPE
5	Cyd	SUPER STRUCTURE CONC.
1	LS	SUPER STRUCTURE CONC., FORM, FINISH AND CURE (R01 OF 82000)
2176	lbs	REINFORCEMENT, STEEL AND EPOXY COATED

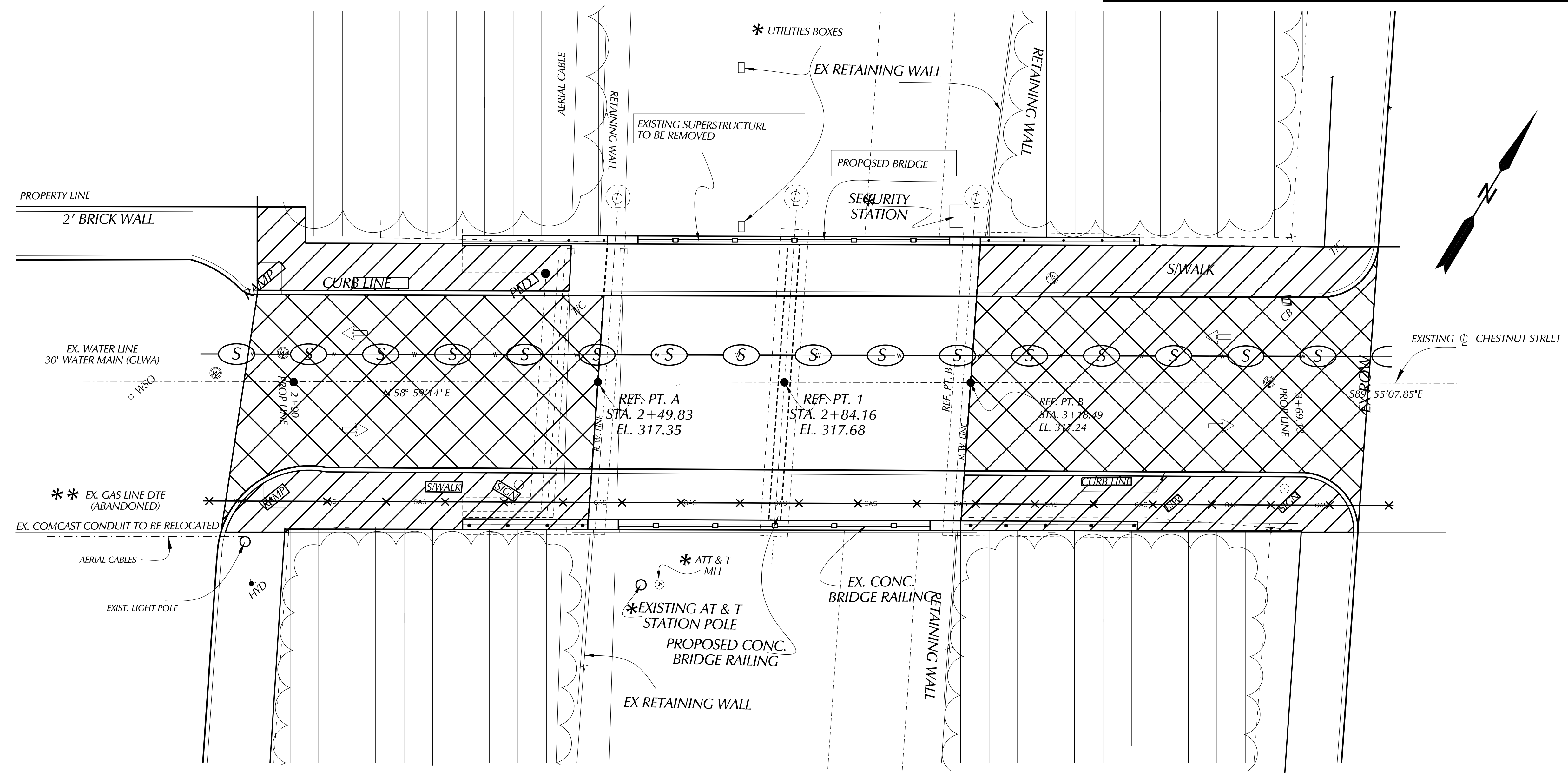
MISCELLANEOUS NOTES:

FOR NAME PLATE LOCATION, SEE GENERAL PLAN OF STRUCTURE SHEET ().
 FOR BRIDGE RAILING, ANCHORAGE FOR GUARDRAIL AND NAME PLATE MOUNTING DETAILS, SEE STANDARD PLAN B-25-SERIES. FOR DETAILS OF NAME PLATE, MOLDINGS AND BEVELS, SEE STANDARD PLAN B-103-SERIES.
 A RUBBED SURFACE FINISH ON THE VERTICAL AND TOP CONCRETE SURFACES OF THE PARAPET RAILING IS REQUIRED ON THIS STRUCTURE.
 "EDGE" OR "GROOVE" DENOTES EDGING OR GROOVING WITH AN APPROVED TOOL.
 LOW TEMPERATURE PROTECTION OF CONCRETE SHALL BE APPLIED ACCORDING TO SECTION 706.03 J. OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.
 THE UTILITY COMPANY SHALL BE NOTIFIED 10 WORKING DAYS IN ADVANCE FOR REMOVAL OF EXISTING LIGHT STANDARDS AND 10 WORKING DAYS IN ADVANCE OF THE TIME OF INSTALLATION OF THE PROPOSED DUCTS IN THE SIDEWALK.

		BY	CHECKED BY	APPROVED
PLAN				
GRADE				
ESTIMATE				
DESCRIPTION	OR NEW OR REVISE	DATE	DATE	
REVISIONS				

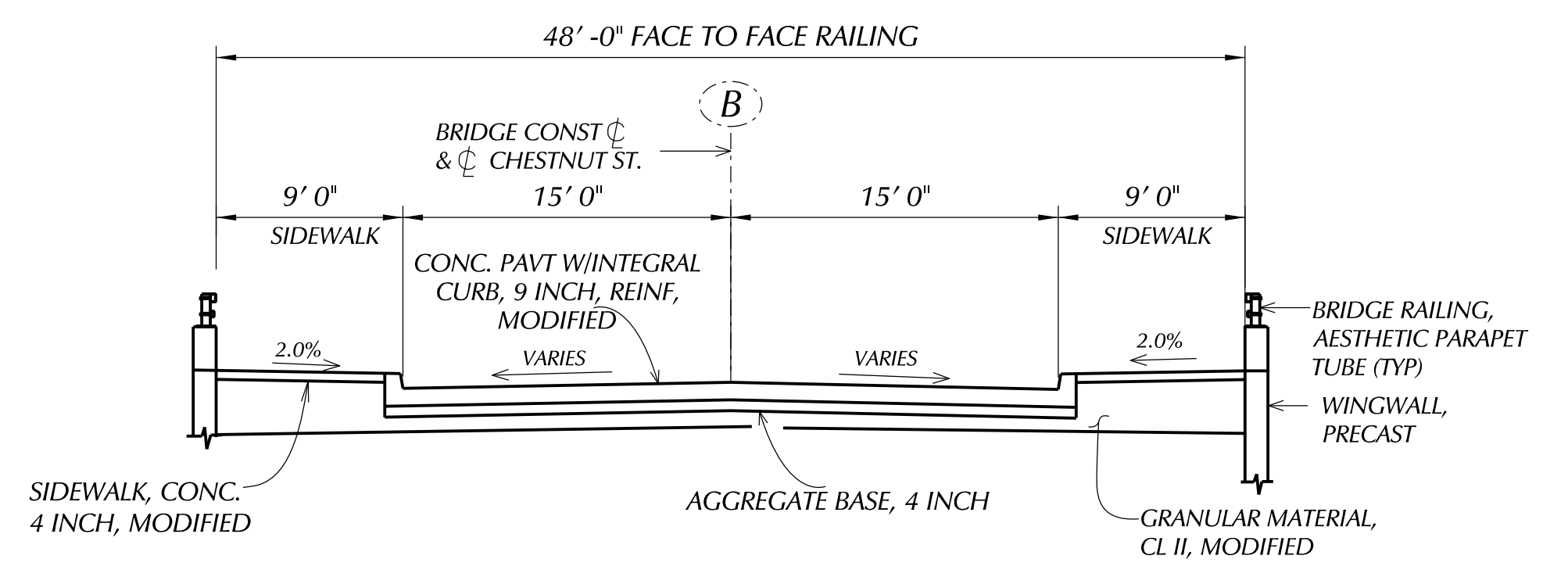
CITY OF DETROIT
 CITY ENGINEERING DIVISION - D.P.W.
 BUREAUS OF STREETS AND HIGHWAYS
 FOR

CHESTNUT STREET BRIDGE
 BARRIER RAILING DETAILS



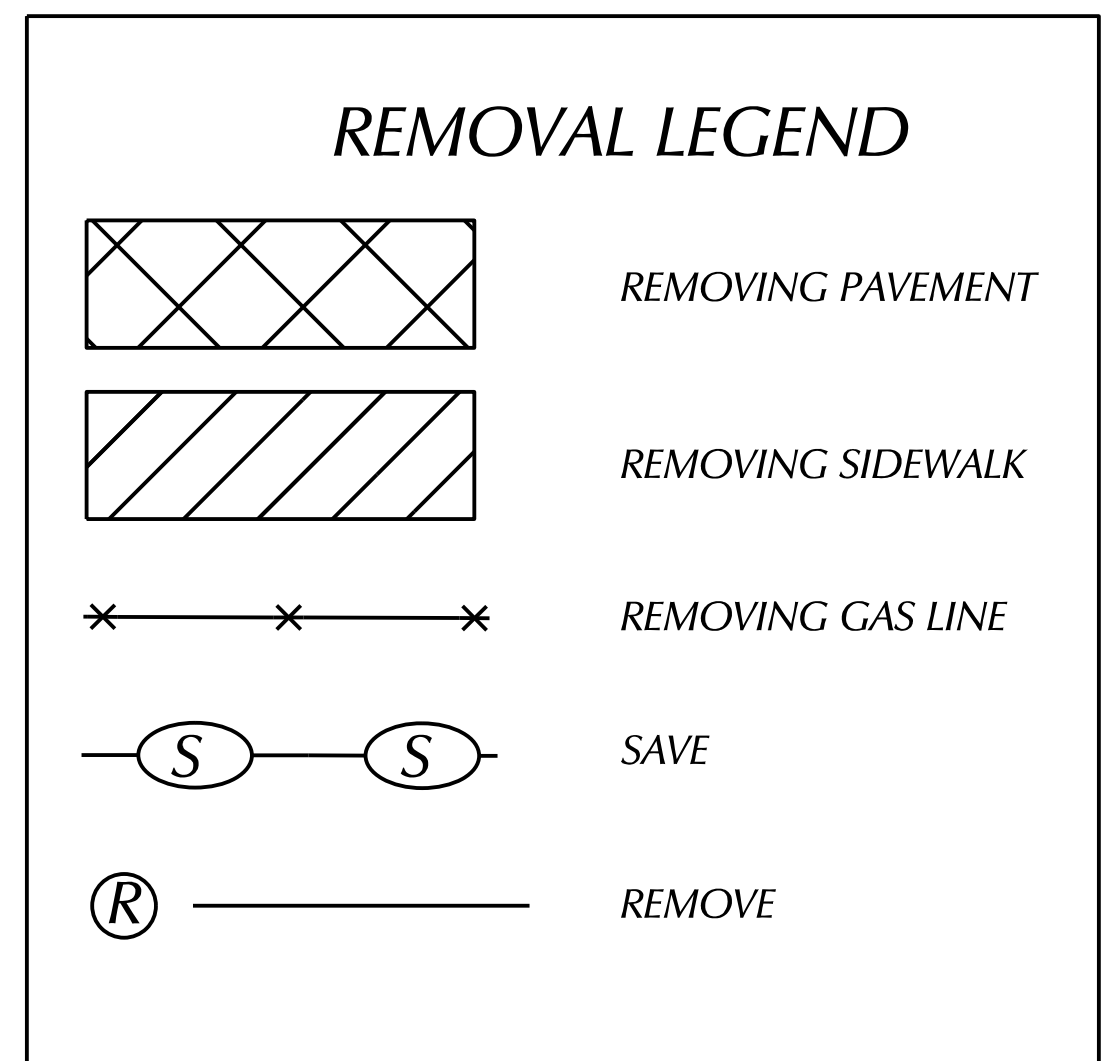
PLAN OF APPROACH

- * UTILITIES WILL BE REALLOCATED BY OTHERS
- ** CONTRACTOR SHALL REMOVE ABANDONED GASS MAIN WITHIN LIMITS OF THE PROJECT INCLUDED IN PAY ITEM "STRUCTURE, REM, PORTION"



EXISTING APPROACH SECTION

(LOOKING EAST)
EX PAVEMENT CONTAINS LAYERS OF CONCRETE, GRAVEL AND HMA
SEE LOG OF BORING SHEET FOR FURTHER INFORMATION

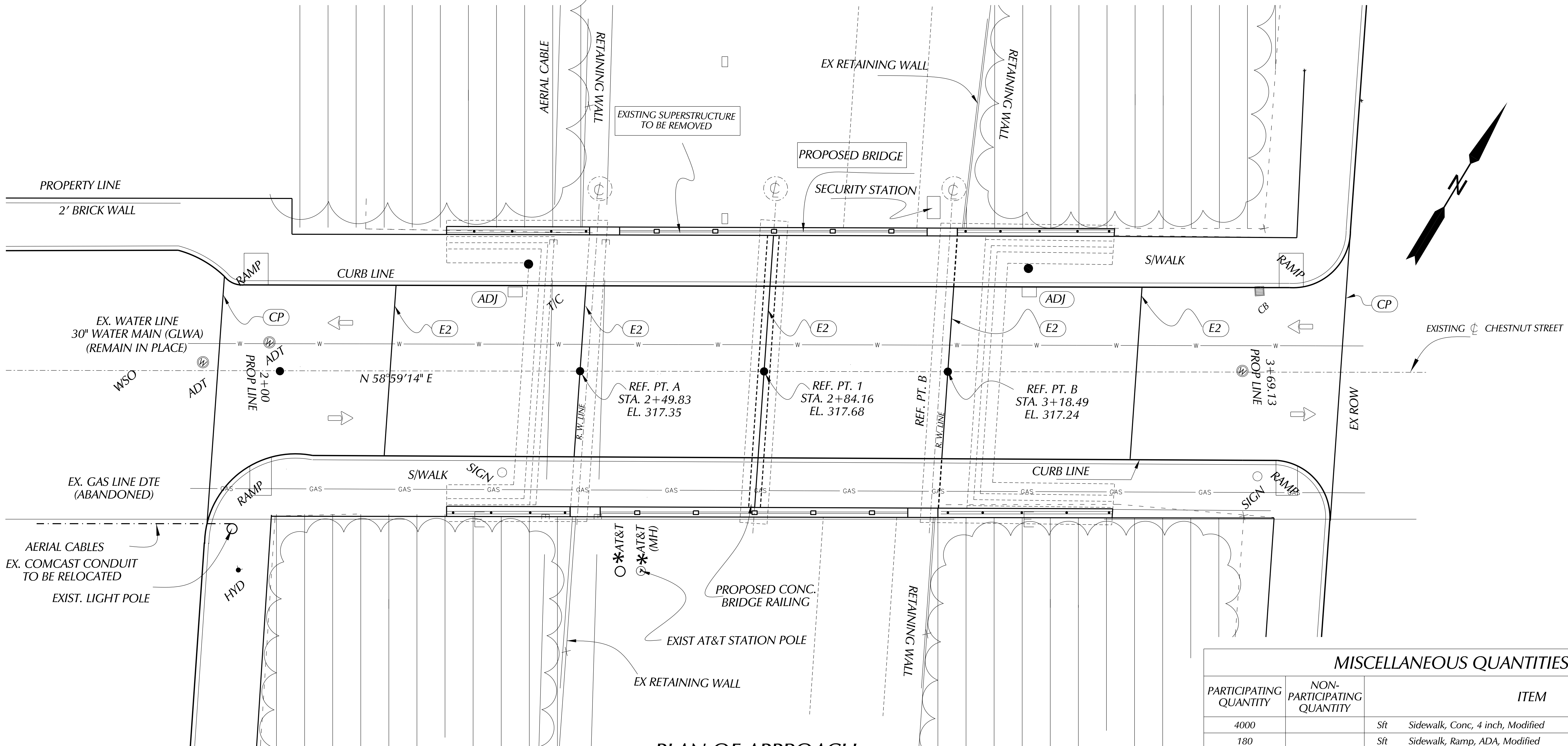


PARTICIPATING QUANTITY	NON-PARTICIPATING QUANTITY	ITEM
0.2		Acre Cleaning
1		Ea Dr Structure, Rem
148		Ft Fence, Rem
250		Syd Sidewalk, Rem
80		Ft Sewer, Rem, Less than 24 inch
40		Ft Sewer, Rem, 24 inch to 48 inch
460		Syd Pavt, Rem, Modified

PLAN	BY	CHECKED BY	APPROVED
GRADE			ENGINEER BY STREETS
ESTIMATE			
FINAL			

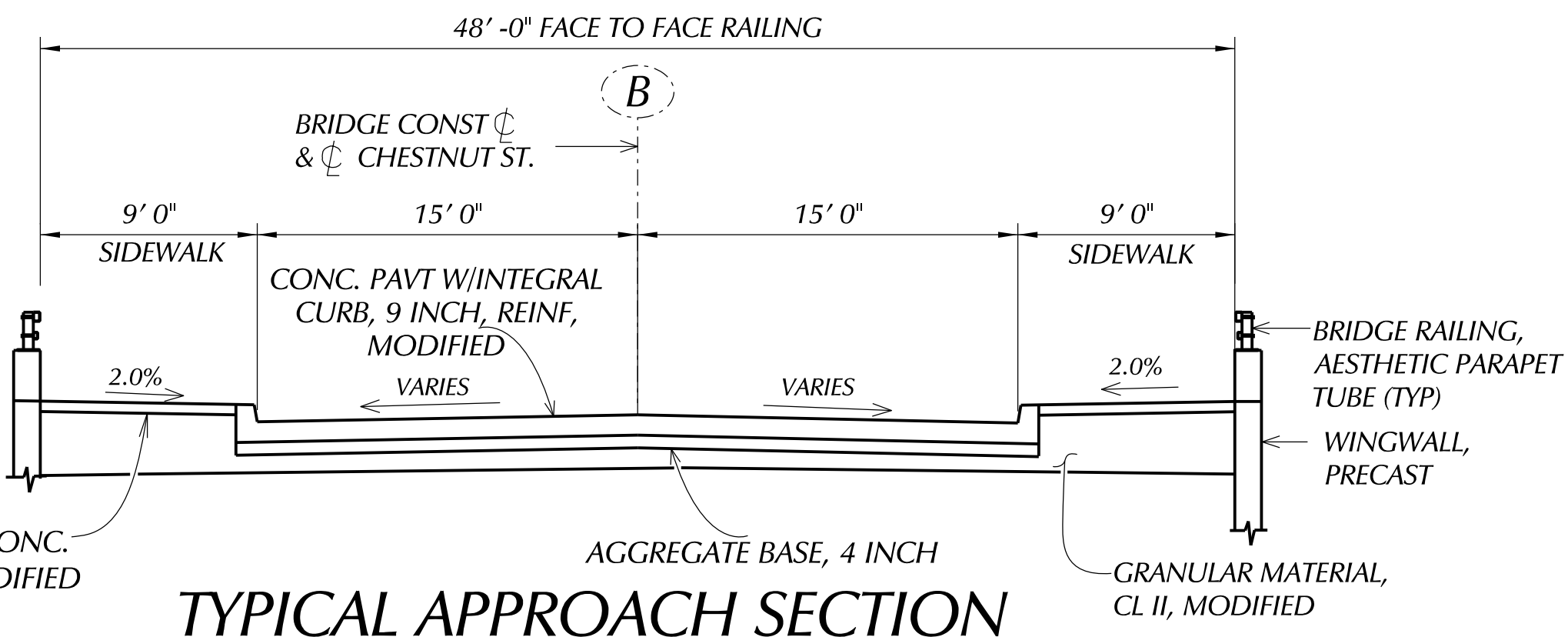
CITY OF DETROIT
CITY ENGINEERING DIVISION - D.P.W.
BUREAUS OF STREETS AND HIGHWAYS
FOR

CHESTNUT STREET BRIDGE
APPROACH REMOVAL DETAILS



PLAN OF APPROACH
* TO BE REALLOCATED BY OTHERS

MISCELLANEOUS QUANTITIES		
PARTICIPATING QUANTITY	NON-PARTICIPATING QUANTITY	ITEM
4000		Sft Sidewalk, Conc, 4 inch, Modified
180		Sft Sidewalk, Ramp, ADA, Modified
660	1100	Syd Aggregate Base, 4 inch
1050		Syd Con Pavt With Integral Curb, Reinf, 9 Inch Modified
180		Ft Joint, Expansion, E2
100		Ft Joint, Contraction, Cp
1		Ea Catch Basin A, Modified
2		Ea Catch Basin B with Trap, Modified
1		Ea Dr Structure Cleaning, Modified
1		Ea Dr Structure Cover, Adj, Case 2, Modified
1		ft Sewer Cleanout, Modified
2		Ea Water Shutoff, Adj, Modified
2		Ea Sewer Tap, 12 inch
	810	Ton HMA, 4E3
	456	Ton HMA, SE3
500		Syd Sodding
700		Syd Mulch Blanket
10		Unit Water, Sodding / Seeding
1		LS Project Cleanup
825		Lbs Dr Structure Cover, Modified



LEGEND	
ADJUST DR STR RIM	(ADJ)
JOINT, EXPANSION, E3	(E3)
JOINT, EXPANSION, E2	(E2)
JOINT, PLAN OF WEKNESS	(D1)
LONGITUDINAL BULKHEAD JOINT	(B)
JOINT, CONTRACTION, CP	(Cp)

NOTES:
CB#1 SHALL BE "Catch Basin A, modified".
CB#2 SHALL BE "Catch Basin B with trap, Modified".
FOR BRIDGE RAILING DETAILS AND QUANTITIES, SEE SHEET.
SEE SPECIAL PROVISION FOR SIDEWALK CONC, -- INCH, MODIFIED FOR LOCATIONS OF 4 INCH.
NON-PARTICIPATING QUANTITIES ARE FOR RECONSTRUCTION PAVEMENT OF DAMAGED RAMP DURING CONSTRUCTION.

DESCRIPTION	OR MCK DARY DATE	REVISIONS
PLAN	BY	CHECKED BY
GRADE		APPROVED:
ESTIMATE		ENGINEER OF STREETS
FINAL	****	****

CITY OF DETROIT
CITY ENGINEERING DIVISION - D.P.W.
BUREAUS OF STREETS AND HIGHWAYS
FOR

CHESTNUT STREET BRIDGE
APPROACH CONSTRUCTION DETAILS

SHEET 27 OF 27 SHEETS
JOB NUMBER 132668A
ASSIGNMENT NO.
DATE 08/29/2019