

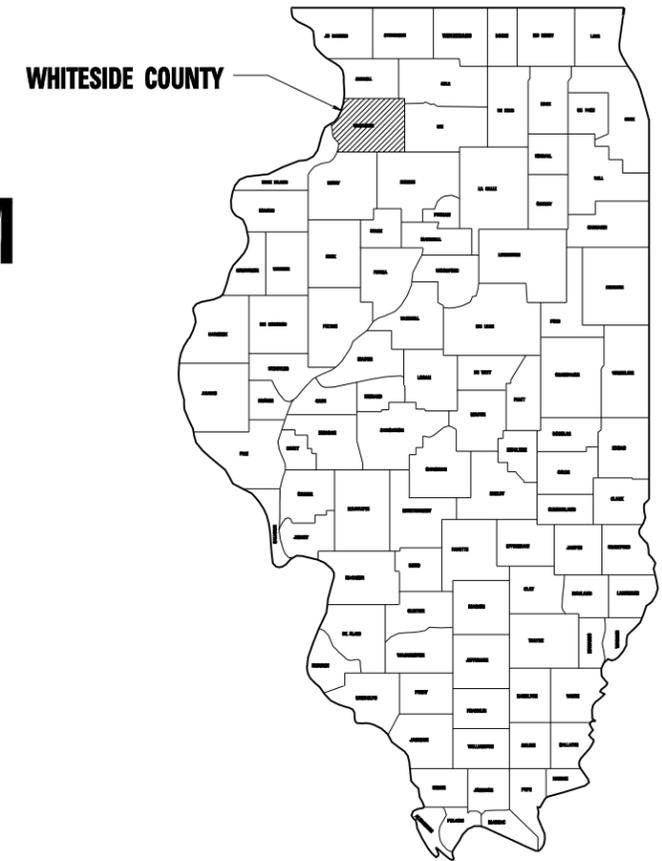
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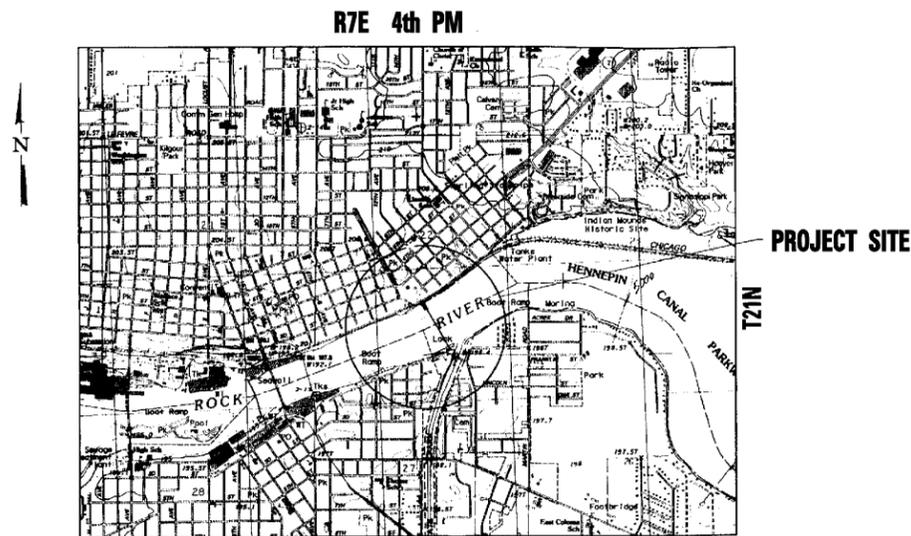
STANDARDS

420701	PAVEMENT FABRIC
424001	CURB RAMPS FOR SIDEWALKS
515001	NAME PLATE FOR BRIDGES
664001	CHAIN LINK FENCE

STATE OF ILLINOIS
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF WATER RESOURCES
PLANS FOR PROPOSED
PEDESTRIAN BRIDGE OVER SINNISSIPPI DAM
STERLING-ROCK FALLS, ILLINOIS
WHITESIDE COUNTY
2006
STEEL TRUSS BRIDGE
FEDERAL PROJECT NUMBER TE-00DC(45)
IDOT JOB NUMBER C-30-003-00
IDNR CONTRACT NUMBER FR-420



REGIONAL MAP



LOCATION MAP



Ted Montrey 3/22/06
ILLINOIS LICENSED STRUCTURAL ENGINEER NO. 081-006450
LICENSE EXPIRES 11/30/2006



Ted Montrey 3/22/06
ILLINOIS REGISTERED PROFESSIONAL ENGINEER NO. 082-049591
LICENSE EXPIRES 11/30/2007

SUBMITTED *William J. Schuck* DATE 3/22/06
APPROVED *Shay R. Clark* DATE 3/22/06

SUMMARY OF QUANTITIES			
CODE NO.	PAY ITEM	UNIT	QUANTITY
21101505	TOPSOIL EXCAVATION AND PLACEMENT	CU YD	158
28000400	PERIMETER EROSION BARRIER	FOOT	184
35101800	AGGREGATE BASE COURSE, TYPE B 6"	SQ YD	146
40300100	BITUMINOUS MATERIALS (PRIME COAT)	GAL	52
40600760	BITUMINOUS CONCRETE BINDER COURSE, MIXTURE B, CLASS I TYPE 2	TON	11
40600850	BITUMINOUS CONCRETE SURFACE COURSE, MIXTURE D, CLASS I TYPE 2	TON	11
*42001400	BRIDGE APPROACH PAVEMENT (SPECIAL)	SQ YD	11
48101500	AGGREGATE SHOULDERS, TYPE B 6"	SQ YD	51
50102400	CONCRETE REMOVAL	CU YD	0.5
50200500	COFFERDAMS	EACH	8
50300225	CONCRETE STRUCTURES	CU YD	11.1
50300310	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	8
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	1,240
51500100	NAME PLATES	EACH	1
58700200	BRIDGE SEAT SEALER	SQ FT	214
67100100	MOBILIZATION	L SUM	1
*Z0003900	BICYCLE RAILING	FOOT	181
*Z0032300	JACKING EXISTING SUPERSTRUCTURE	L SUM	1
*X0322508	PEDESTRIAN TRUSS SUPERSTRUCTURE	SQ FT	5,053
*X0323144	MODULAR SEGMENTAL BLOCK RETAINING WALL	SQ FT	1,070
*X0323146	COLLAPSIBLE VEHICLE STOP	EACH	1
*XX003949	CONSTRUCTION STAKING	L SUM	1
*	SEEDING, MULCHING AND FERTILIZING	ACRE	0.10
*	DAM SIGNAGE	L SUM	1
*	REMOVABLE ACCESS BRIDGE RAILING	FOOT	1,140
*	BRIDGE LIGHTING	L SUM	1
*	BRIDGE LIGHTING DECORATIVE FIXTURES/POLES	L SUM	1
*	FIBER OPTIC CONDUIT	FOOT	2,340

* SEE SPECIAL PROVISIONS

GENERAL NOTES

All elevations refer to N.A.V.D. (North American Vertical Datum) 1988.
The Contractor shall furnish, erect, and when directed by the Engineer, completely remove two construction signs (see Standard Sheet). The location of the signs shall be determined by the Engineer in the field.
All lateral drainage that exists prior to construction shall be restored as shown on the plans and as directed by the Engineer. Unless otherwise specified all costs of restoration shall be considered included in the Contract and no additional compensation will be allowed.
Prior to the beginning of work in the vicinity of utilities, the Contractor shall contact the respective owners as shown on the plans and schedule work so as not to interfere with required adjustments.
With the exception of those utilities designated on the plans to be adjusted by the Contractor, all existing utilities affected by the construction operations shall be adjusted by others. Utilities which do not require adjustments shall be protected and not disturbed. All cost of protection shall be incidental to the Contract, and no additional compensation will be allowed.
All construction operations shall be contained within the easement area or work limits as indicated on the plans. It shall be the full responsibility of the Contractor to secure all rights of ingress and egress to said Right - of - Way including the satisfactory protection and restoration of property as required in Art. 107.20 and 107.23 of the Standard Specifications.
The Contractor shall call J.U.L.I.E. (800-892-0123) for the location of existing utilities 48 hours prior to beginning construction.
Field welding of construction accessories will not be permitted to the bottom flange at floor beams or the bottom truss chords. Field welding in other areas will be permitted only when approved by the Engineer.
The main load carrying members subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the truss bottom chords and diagonals and the floor beam tension flanges and webs and all splice plate material except fill plates.
Reinforcement bars shall conform to the requirements of AASHTO M 31 or M 322 Grade 60.
Plan dimensions and details relative to existing structures have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
Bridge Seat Sealer shall be applied to the seat area of the abutment and piers 8, 9, 10, & 11.
All timber members shall meet the requirements of Section 1007 of the Standard Specifications.

UTILITY REFERENCE TABLE

J.U.L.I.E.	Call 48 hours prior to construction	(800) 892-0123
Rockfalls Water Electric	Debbie Fecht 603 W. 10th Street Rockfalls IL. 61071	(815) 622-1106
Telephone Ameritech	Handled by J.U.L.I.E.	(800) 244-4444
TCI Cable	Handled by J.U.L.I.E.	(815) 344-3202
Nicor Gas	Handled by J.U.L.I.E.	(888) 642-6748

△ Revised 4/17/2006, TMM

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 \$DATES

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 Drawn By JUF Checked By TMM
 SU00TH6.DGN

B.M. #1: Chiseled square in corner of sea wall.
Elev. 633.74 (NAVD 88)

B.M. #2: Chiseled square in top of northernmost pier.
Elev. 641.35 (NAVD 88)

CURVE DATA
P.I. # 1
PI STA. = 0+43.27
 $\Delta = 23^\circ 17' 08''$ (RT)
D = 27° 17' 02"
R = 210.00'
T = 43.27'
L = 85.35'
E = 4.41'
P.C. STA = 0+00.00
P.R.C. STA = 0+85.35

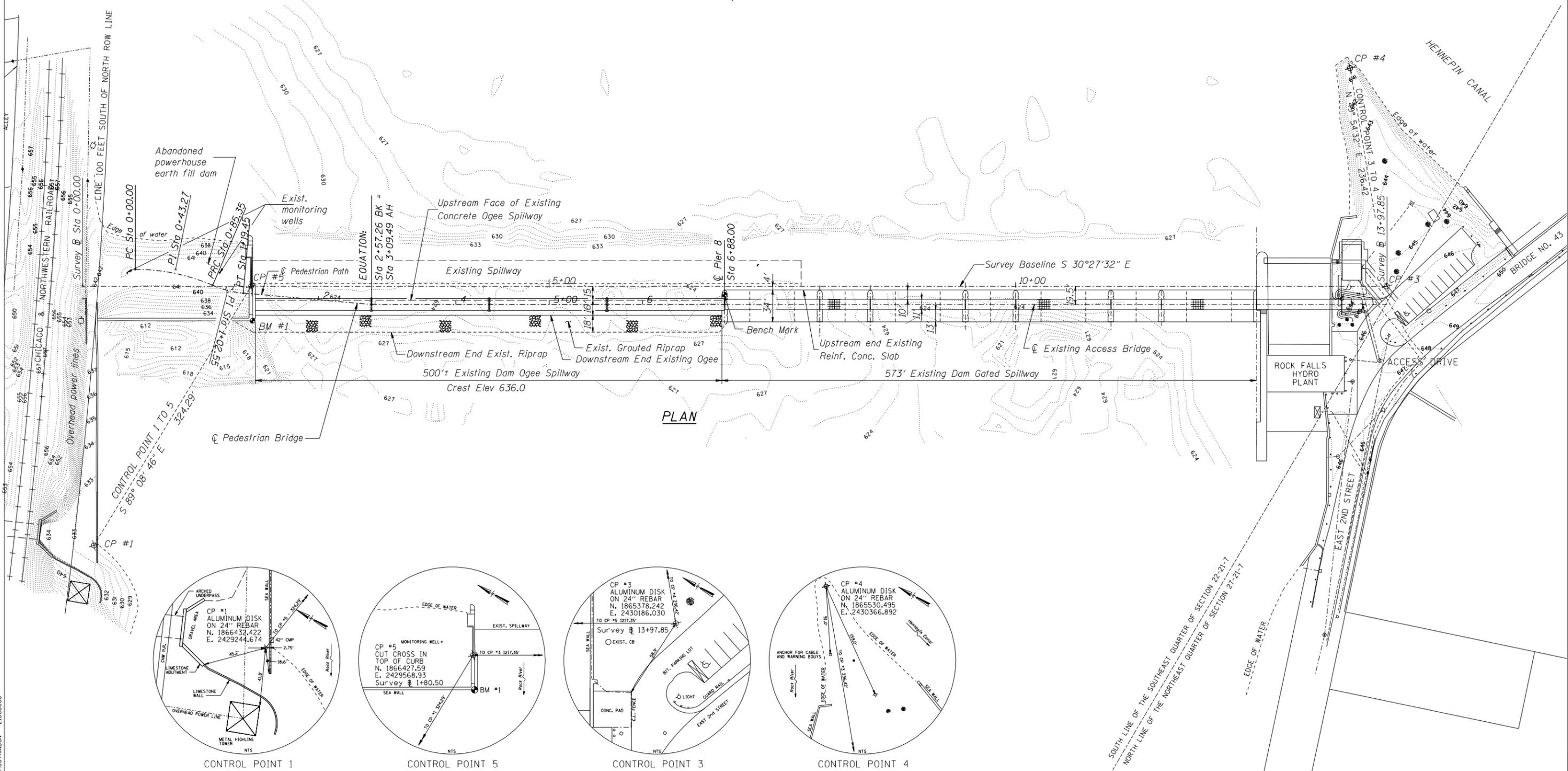
CURVE DATA
P.I. # 2
PI STA. = 1+02.55
 $\Delta = 18^\circ 14' 08''$ (LT)
D = 53° 27' 45"
R = 107.17'
T = 17.20'
L = 34.11'
E = 1.37'
P.R.C. STA = 0+85.35
P.T. STA = 1+19.45

RIGHT ANGLE OFFSETS FROM SURVEY BASELINE TO PEDESTRIAN PATH CENTERLINE

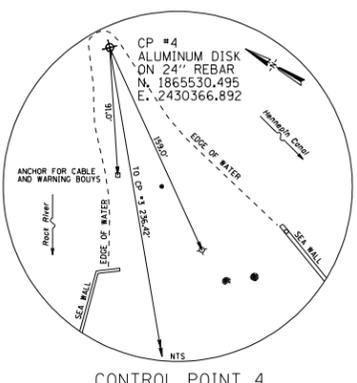
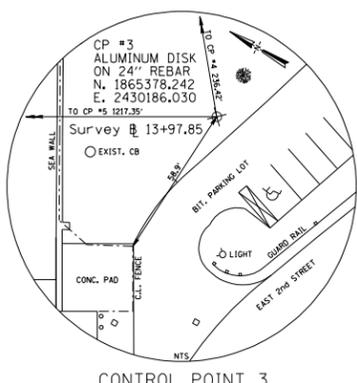
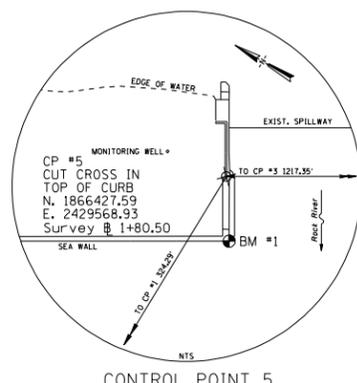
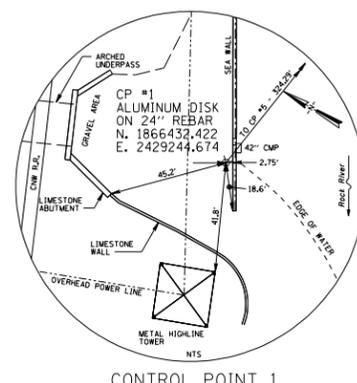
SURVEY STATION	0+56.27	0+99.54	1+55.08	3+09.49	6+88.00
PEDESTRIAN PATH STATION	0+00.00	0+43.27	1+02.55	2+57.26	6+88.00
OFFSETS	18.05' Lt	18.05' Lt	5.85' Rt	19.50' Rt	19.50' Rt

CURVE DATA

ROCK RIVER



PLAN



SOUTH LINE OF THE SOUTHEAST QUARTER OF SECTION 22-21-7
NORTH LINE OF THE NORTHEAST QUARTER OF SECTION 27-21-7

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SUR00THAD0N 2106000B

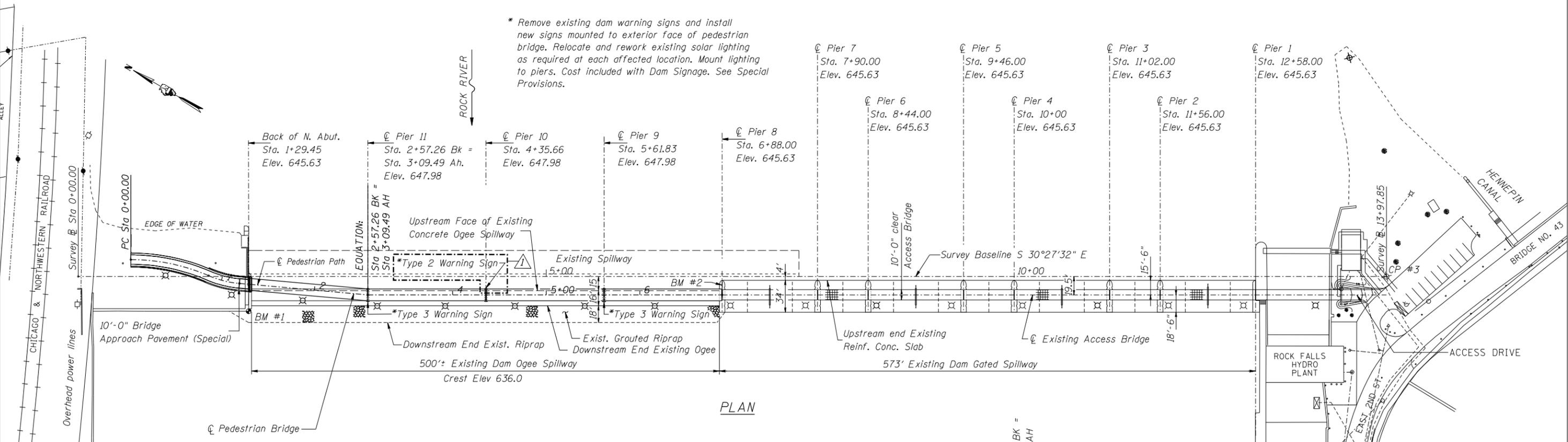
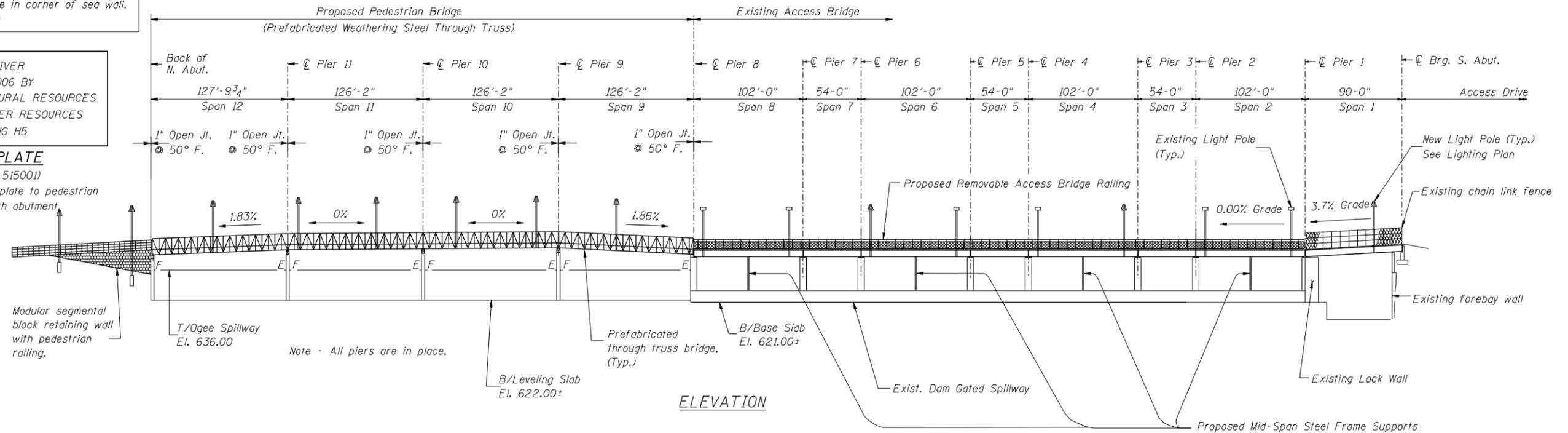
B.M. #1: Chiseled square in corner of sea wall.
Elev. 633.74 (NAVD 88)

ROCK RIVER
BUILT 2006 BY
IL. DEPT. OF NATURAL RESOURCES
OFFICE OF WATER RESOURCES
LOADING H5

NAME PLATE

(See Std. 515001)

Note: Attach name plate to pedestrian railing at north abutment



* Remove existing dam warning signs and install new signs mounted to exterior face of pedestrian bridge. Relocate and rework existing solar lighting as required at each affected location. Mount lighting to piers. Cost included with Dam Signage. See Special Provisions.

WATERWAY INFORMATION

Drainage Area = 8740 sq. mil. Low Grade Elev. = 627.0 @ Sta. = 10+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Created Head - Ft.		Headwater El.	
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Design	10	42,000	6635	6369	0	0.11	636.85	636.96
Base	30	51,000	7380	7088	0	0.15	637.80	637.95
Overtopping	100	60,800	8568	8247	0	0.15	638.88	639.03
Max. Calc.	500	72,200	9767	9417	0	0.16	639.97	640.13

DESIGN STRESSES

f'c = 3,500 psi
fy = 60,000 psi (reinforcement)
fy = 50,000 psi (M270, Grade 50W) Superstructure

LOADING

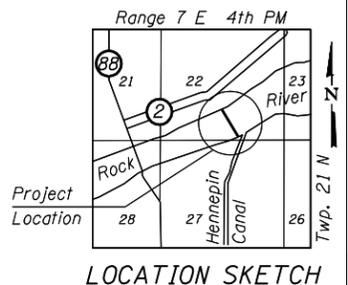
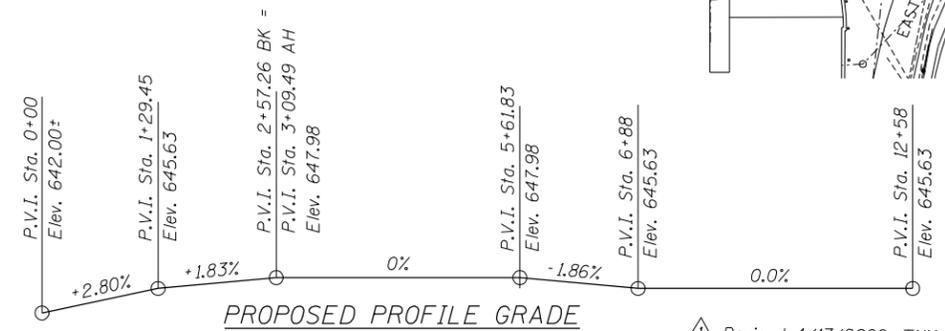
Pedestrian Live Load = 85 psf
Vehicle Live Load: H5 (10,000 lb. Truck) Ped. Bridge
Vehicle Live Load: H15 (30,000 lb. Truck) Access Bridge

DESIGN SPECIFICATIONS

2002 AASHTO Load Factor Design and Guide Specifications for design of Pedestrian Bridges Published by AASHTO, August 1997

SEISMIC DATA

SPC = A
A = 0.05g
Site Coefficient (S) = 1.0



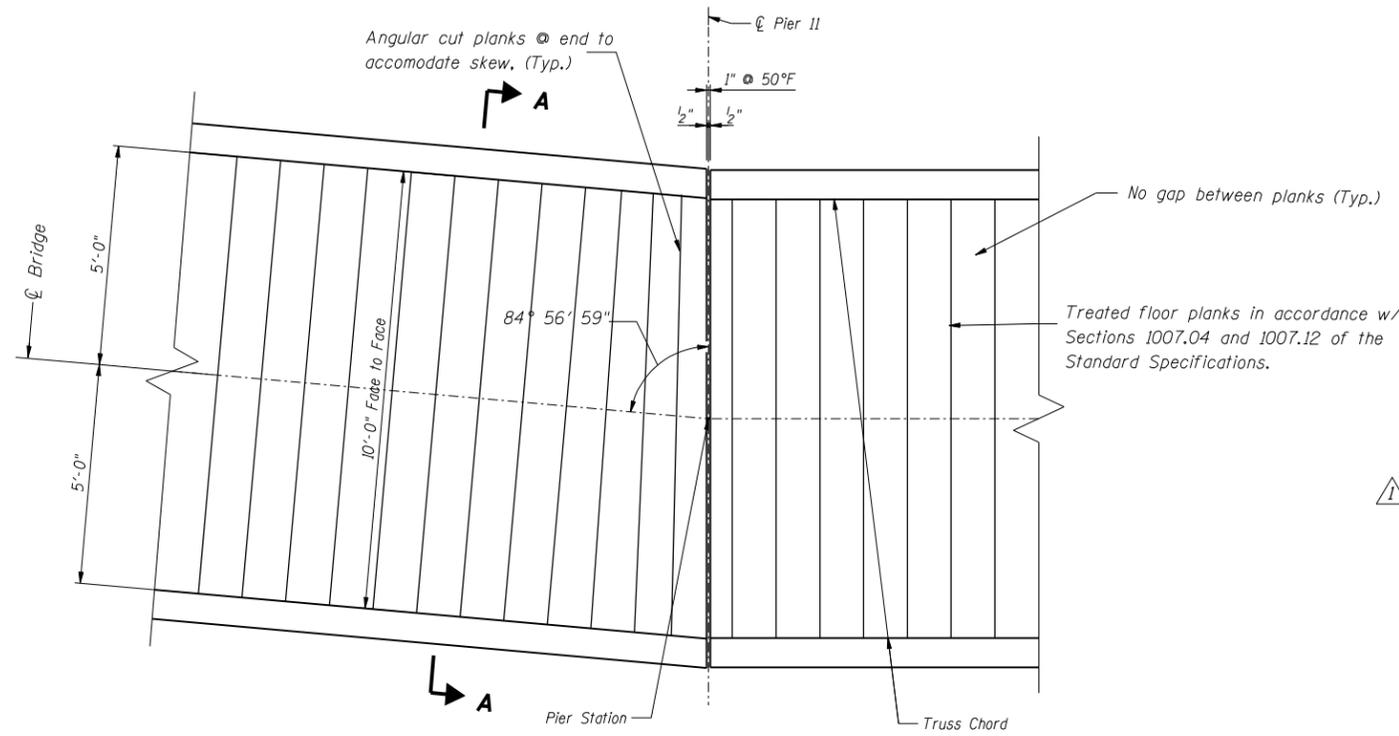
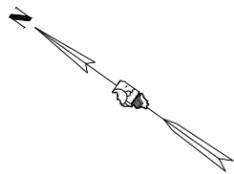
Revised 4/17/2006, TMM

ISSUED
REVISION LETTER
REVISED BY
DATE

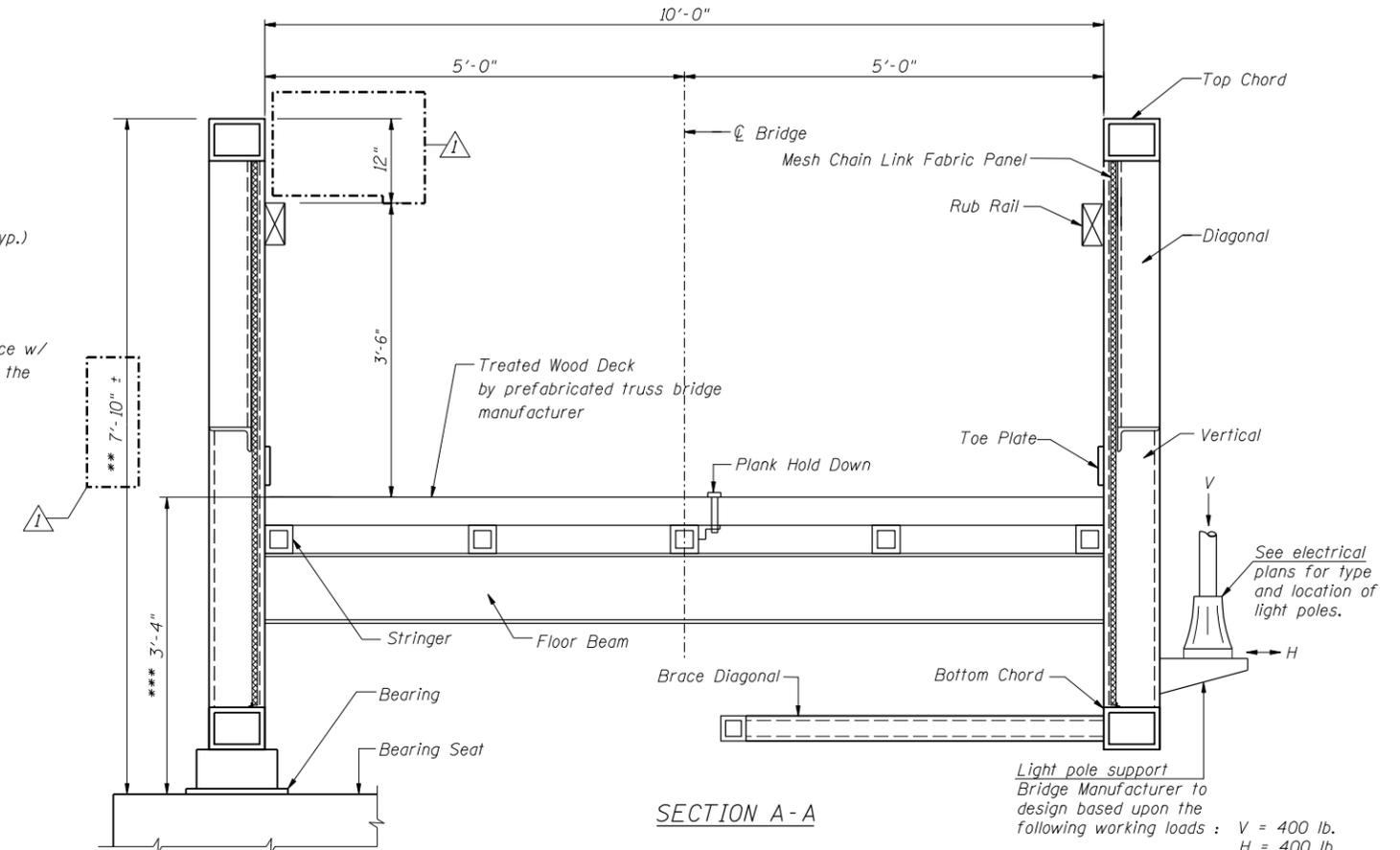
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CHECKED BY: TMM
DRAWN BY: JUF
CHECKED BY: TMM

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Drawn By: JUF
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PARTIAL DECK PLAN



SECTION A-A

Substructure elements were designed and prepared in accordance with AASHTO Standard Specifications For Highway Bridges together with the latest interim specifications. The bridge supporting substructure units have been designed for the following loads and load combinations presented below:

BRIDGE REACTIONS	+ Downward Load - Upward Load		
	P (Lbs)	H (Lbs)	L (Lbs)
Dead Load	18,000		
Uniform Live Load	27,165		
Vehicle Load	5,000		
Wind Uplift 20 PSF	-10,870		
Wind	±6,170	17,160	
Seismic	N/A	N/A	N/A
Thermal			2,700 *

"P" - vertical load each base plate (4 per bridge)
 "H" - horizontal load each footing (2 per bridge)
 "L" - longitudinal load at each base plate (4 per bridge)

Any dimensional design or quantity modifications to the bridge due to a variation of these loading conditions shall be the responsibility of the contractor. Necessary details and design computations for design revisions shall be submitted (in accordance with Article 105.4 of the Standard Specifications) to the Engineer for approval with the bridge shop drawings prior to initiating construction.

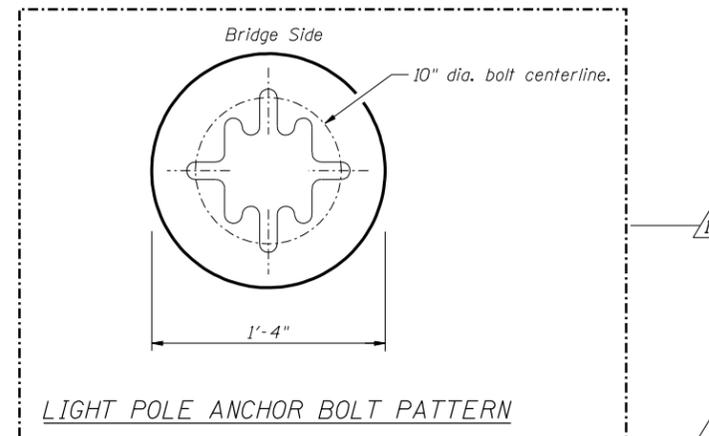
** Superstructure wind loads derived from this dimension. See Note 1.

*** Dimension shall be verified by the Contractor prior to ordering substructure concrete and reinforcement bars. Substructure quantities shall be adjusted accordingly.

Notes:

1. Member sizes and types as shown are schematic and may differ from those provided by prefabricated truss bridge manufacturer.
2. Bearings and anchor bolts shall be designed and furnished by the prefabricated truss bridge manufacturer.
3. The chain link fabric shall be 9 gauge wire, 2" mesh and shall be in accordance with the requirements set forth on sheet 13, except that it shall be given a brown vinyl coating instead of being galvanized.

Light pole support
 Bridge Manufacturer to design based upon the following working loads :
 V = 400 lb.
 H = 400 lb.
 Wind load = 35 psf



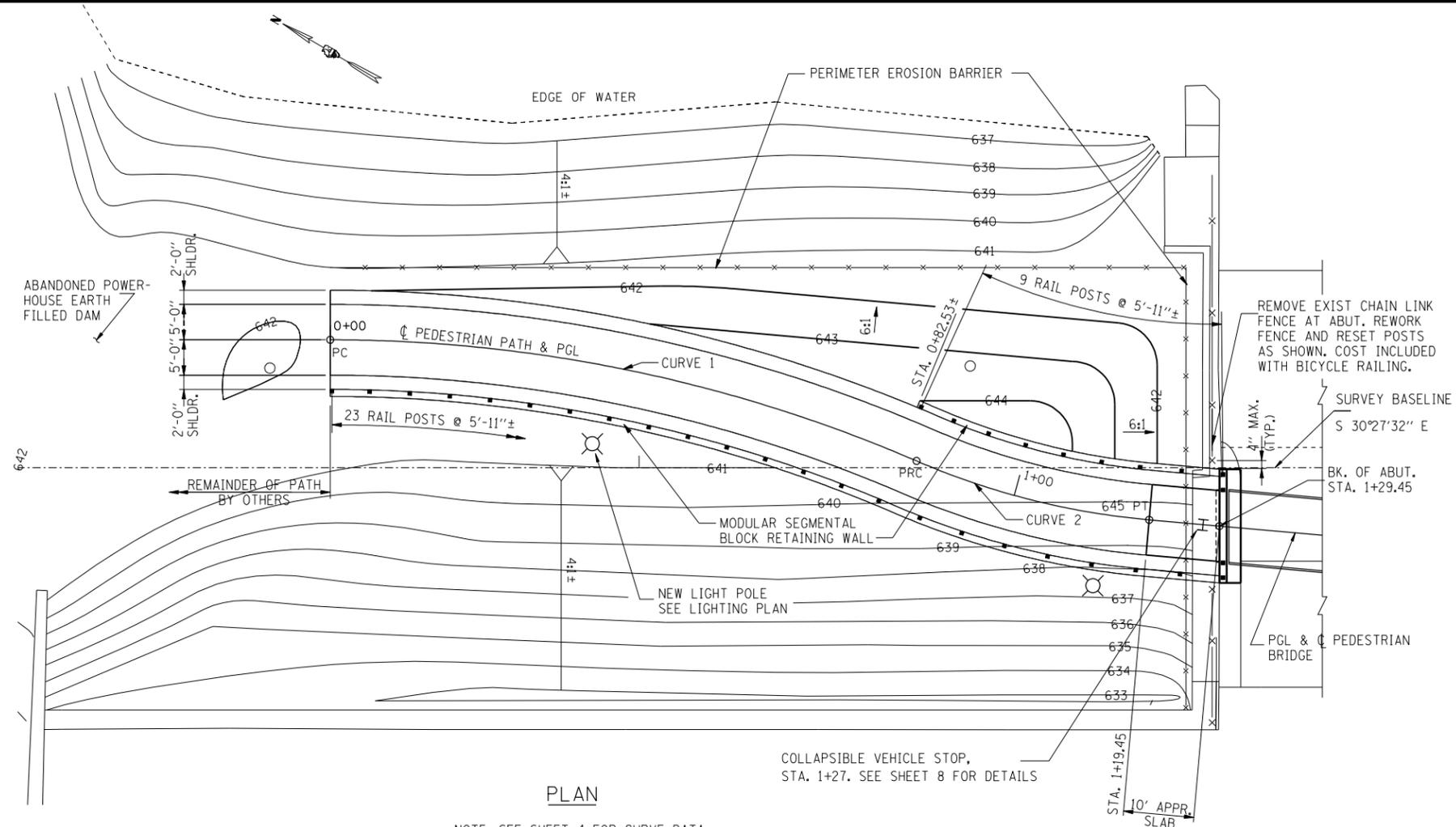
LIGHT POLE ANCHOR BOLT PATTERN

BILL OF MATERIAL

Item	Unit	Quantity
Pedestrian Truss Superstructure	Sq. Ft.	5,053

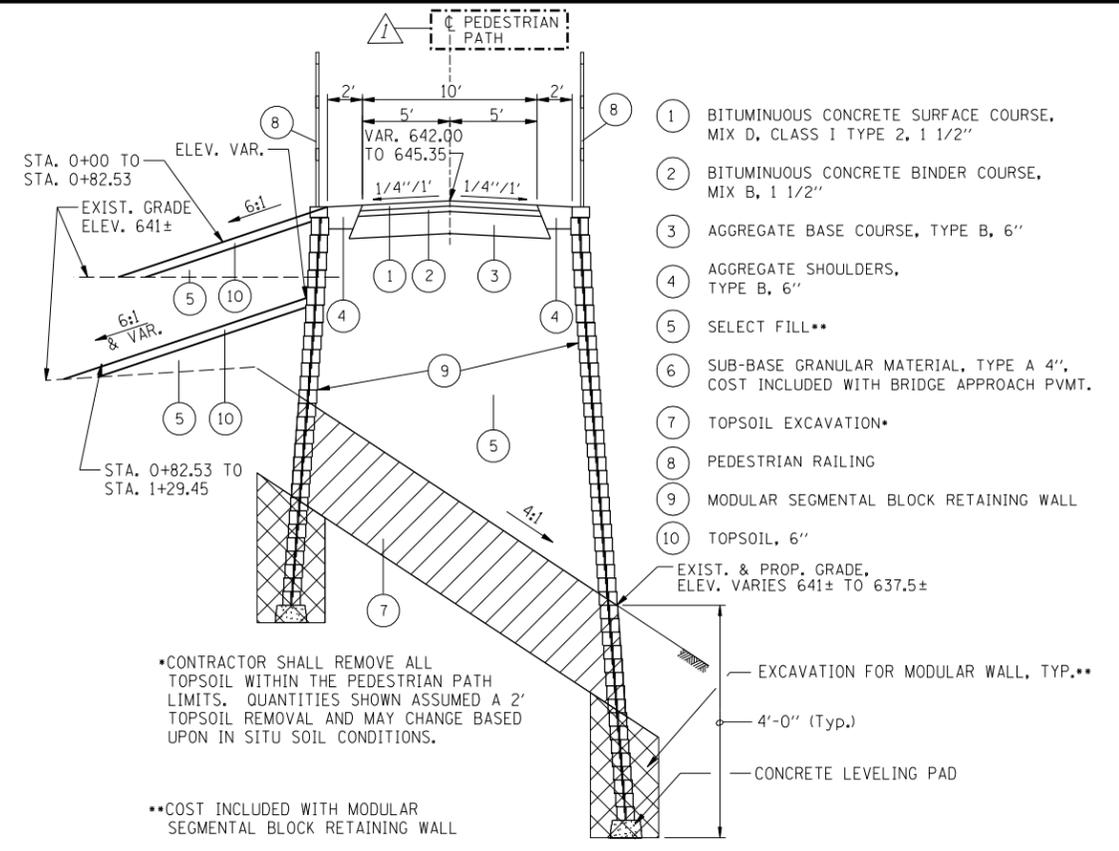
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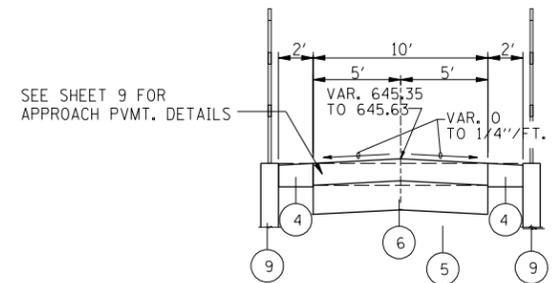
PLAN

NOTE: SEE SHEET 4 FOR CURVE DATA



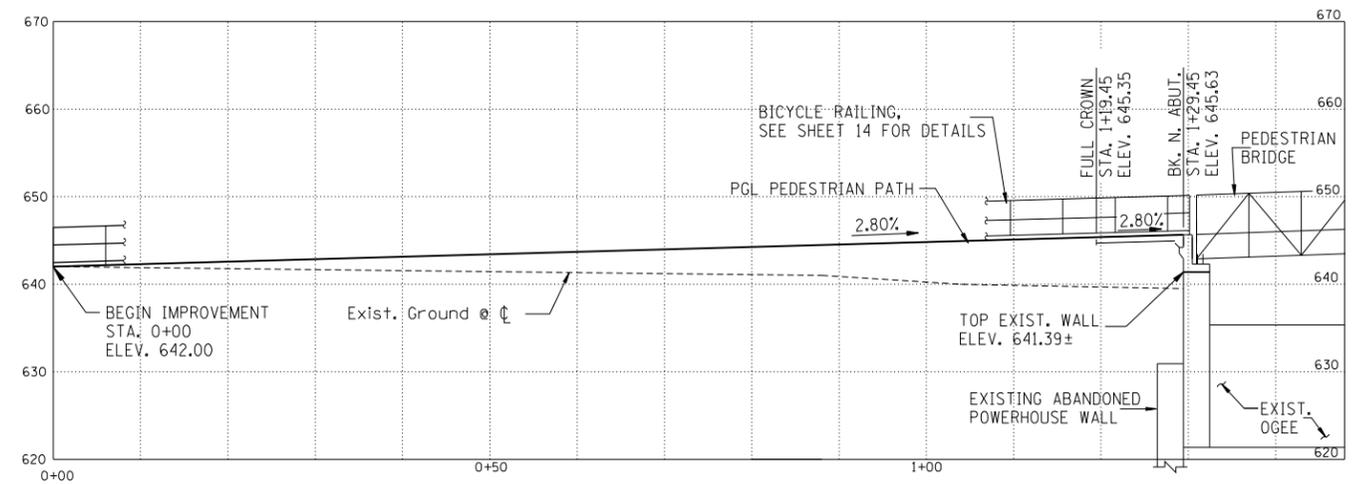
TYPICAL SECTION - PEDESTRIAN PATH

NOTE:
WALL CONSTRUCTION, SOIL REINFORCEMENT, AND WALL DRAINAGE SYSTEM PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR SHALL SUBMIT WALL DESIGN FOR APPROVAL.



SECTION THRU APPROACH SLAB

NOTE: TRANSITION APPROACH SLAB FROM FULL CROWN AT STA. 1+19.45 TO FLAT AT BK. OF ABUT.



PEDESTRIAN PATH PROFILE

(Refer to sheet 8 for elevations of Left & Right walls)

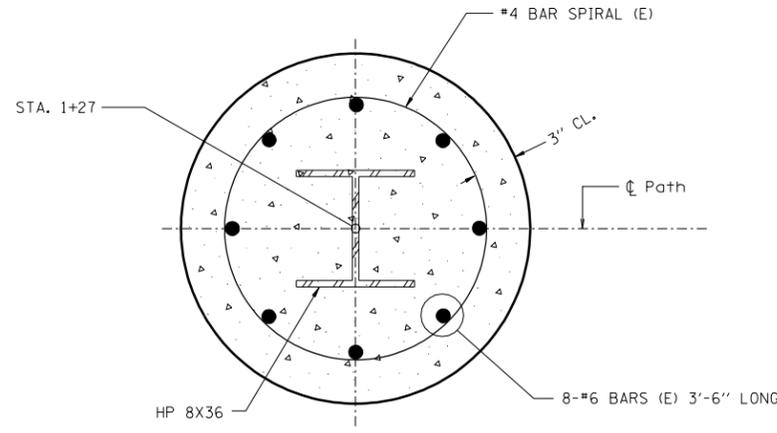
BILL OF MATERIAL

Item	Unit	Quantity
BITUMINOUS CONCRETE SURFACE COURSE, MIXTURE D, CLASS I TYPE 2	TON	11
BITUMINOUS CONCRETE BINDER COURSE, MIXTURE B, CLASS I TYPE 2	TON	11
BITUMINOUS MATERIALS (PRIME COAT)	GAL	52
AGGREGATE BASE COURSE, TYPE B 6"	SQ YD	146
AGGREGATE SHOULDERS, TYPE B 6"	SQ YD	51
BRIDGE APPROACH PAVEMENT (SPECIAL)	SQ YD	11
BICYCLE RAILING	FOOT	181
PERIMETER EROSION BARRIER	FOOT	184
COLLAPSIBLE VEHICLE STOP	EACH	1
MODULAR SEGMENTAL BLOCK RETAINING WALL	SQ FT	1,070
TOPSOIL EXCAVATION AND PLACEMENT	CU YD	158
SEEDING, MULCHING AND FERTILIZING	ACRE	0.1

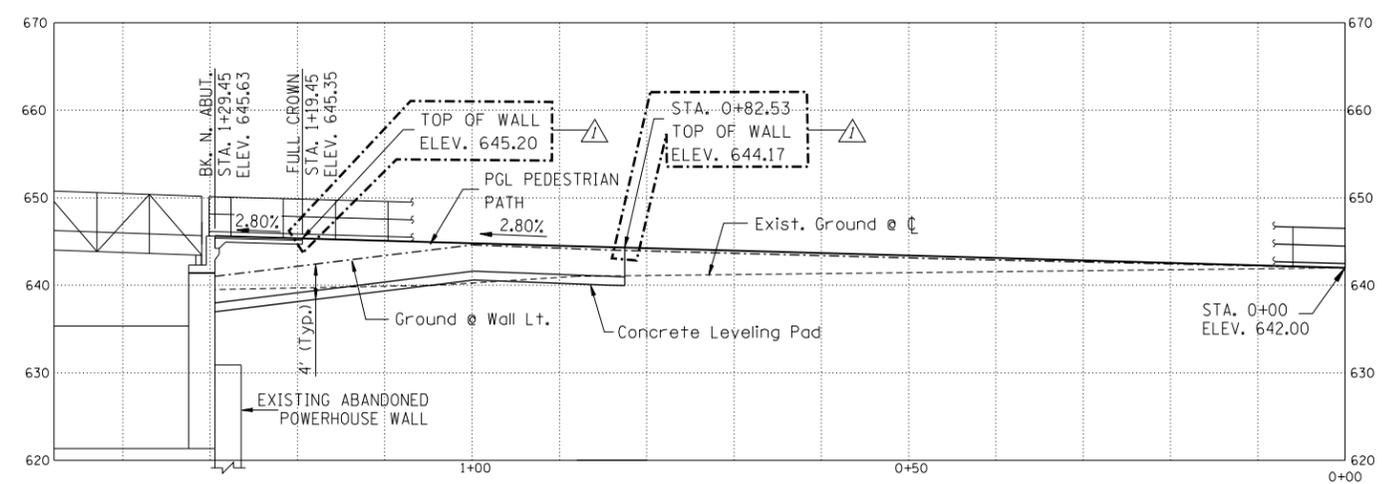
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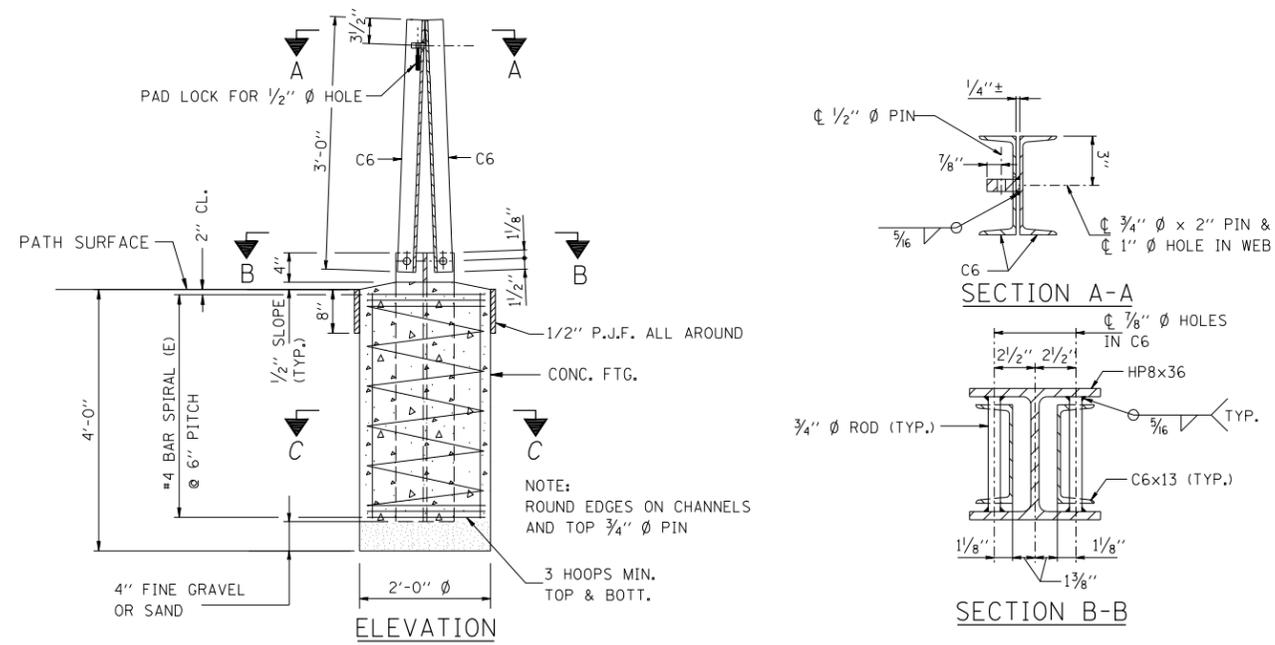
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SECTION C-C
(2'-0" Ø CAISSON)

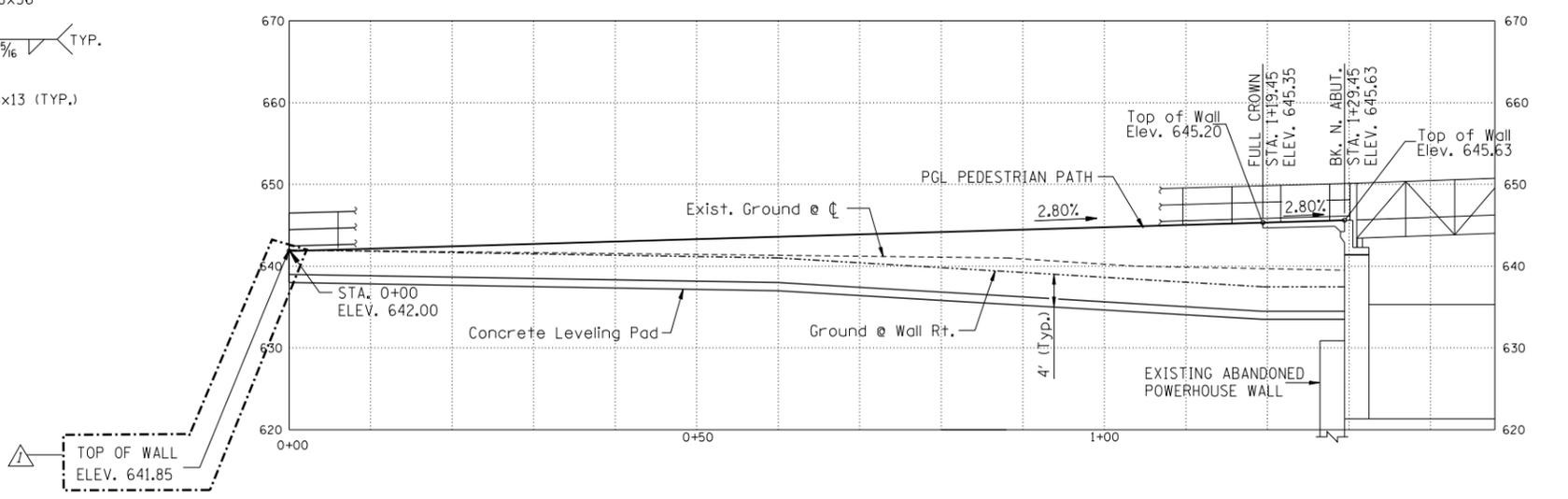


MODULAR SEGMENTAL BLOCK RETAINING WALL
LEFT WALL ELEVATION



COLLAPSIBLE VEHICLE STOP DETAILS

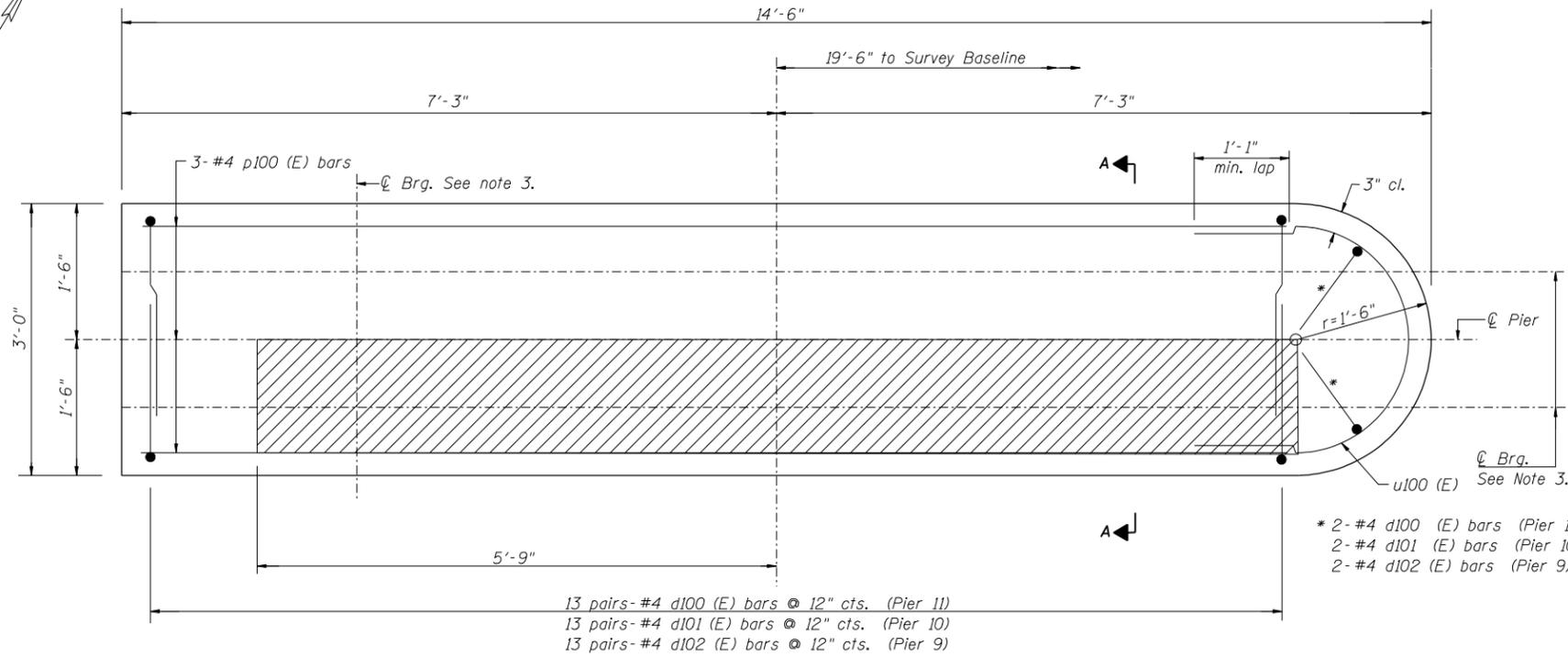
- COLLAPSIBLE VEHICLE STOP NOTES:
1. ALL STRUCTURAL STEEL SHAPES AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 270 GRADE 36 OR GRADE 50 AND SHALL BE GALVANIZED ACCORDING TO AASHTO M11 AND ASTM A385. ALL BOLTS, NUTS, WASHERS, AND ANCHOR RODS SHALL BE GALVANIZED ACCORDING TO AASHTO M232.
 2. REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
 3. EXCAVATION, REINFORCEMENT BARS, CONCRETE, P.J.F., STRUCTURAL STEEL, BOLTS, NUTS, WASHERS, AND ANCHOR RODS INCLUDED IN COST OF "COLLAPSIBLE VEHICLE STOP".



MODULAR SEGMENTAL BLOCK RETAINING WALL
RIGHT WALL ELEVATION

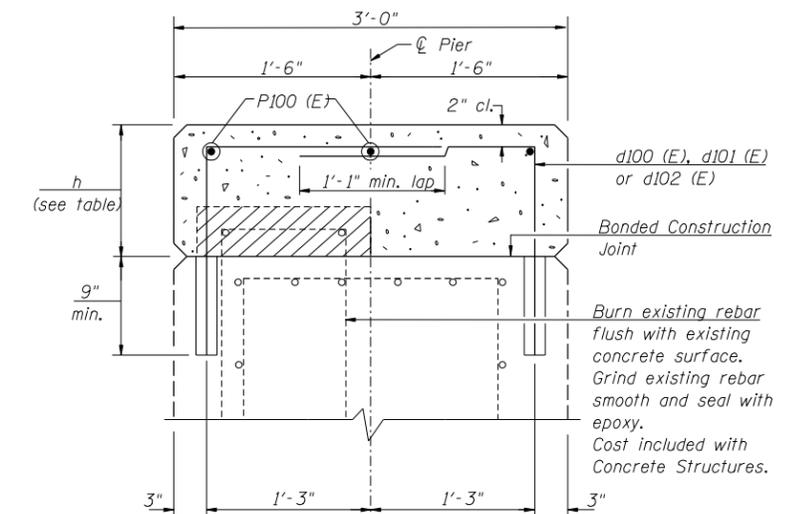
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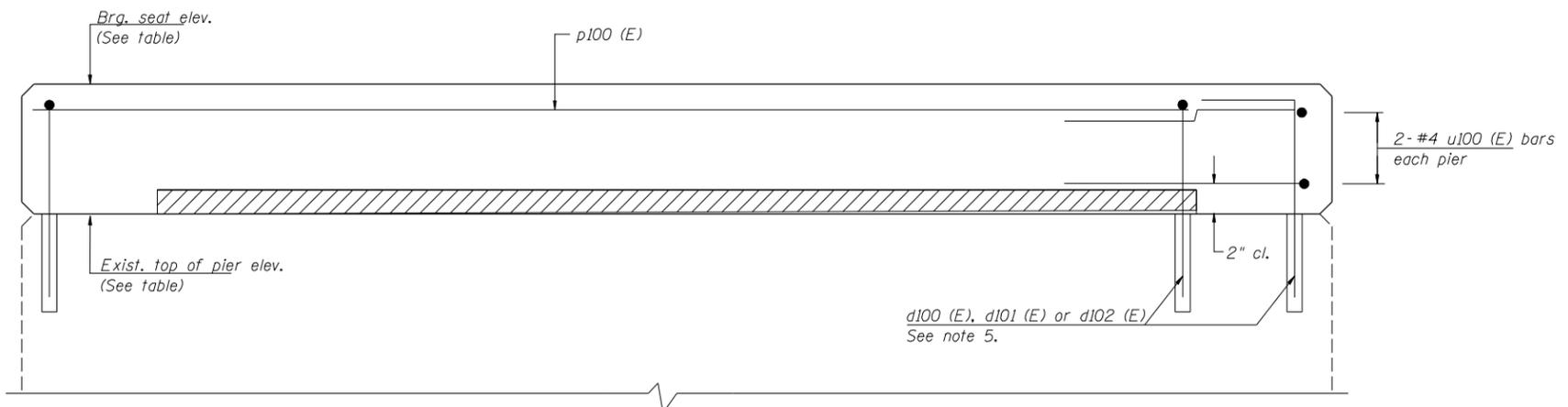


PLAN VIEW

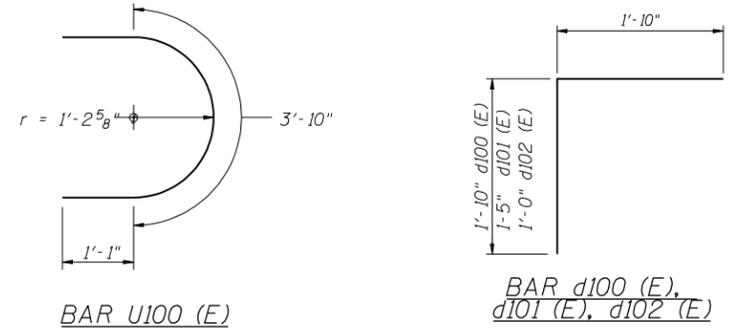
- Notes:
1. Space reinforcement to miss anchor bolts.
 2. All edges shall have a 3/4" chamfer unless otherwise noted.
 3. Location of bearings to be as required for the prefabricated truss bridge used. Prefabricated truss bridge manufacturer shall design bearings and anchor bolts to accommodate bearing seat dimensions provided with due consideration for required anchor bolt spacing and distances from anchor bolts to free edges of concrete.
 4. The quantities and reinforcement details shown were developed from the bearing seat elevations shown and may change based upon the final bearing seat elevations. Contractor shall adjust the bearing seat elevations accordingly to accommodate the prefabricated truss bridge used. Vertical lengths of d100 (E), d101 (E) and d102 (E) shall also be adjusted accordingly.
 5. Epoxy grouting of bars shall be done according to Section 584 of the Standard Specifications. The grout and method of application shall be approved by the engineer. Cost included with Reinforcement Bars, Epoxy Coated.
 6. Reinforcement bars designated (E) shall be epoxy coated



SECTION A-A



ELEVATION



*** BILL OF MATERIAL (PIERS 9-11)

Bar	No.	Size	Length	Shape
d100 (E)	28	#4	3'-8"	Γ
d101 (E)	28	#4	3'-3"	Γ
d102 (E)	28	#4	3'-10"	Γ
p100 (E)	9	#4	12'-10"	—
u100 (E)	6	#4	6'-0"	⊂
Concrete Structures			Cu. Yd.	3.9
Reinforcement Bars, Epoxy Coated			Pounds	310
Concrete Removal			Cu. Yd.	0.5
Bridge Seat Sealer			Sq. Ft.	138

PIERS 9-11 ELEVATION TABLE

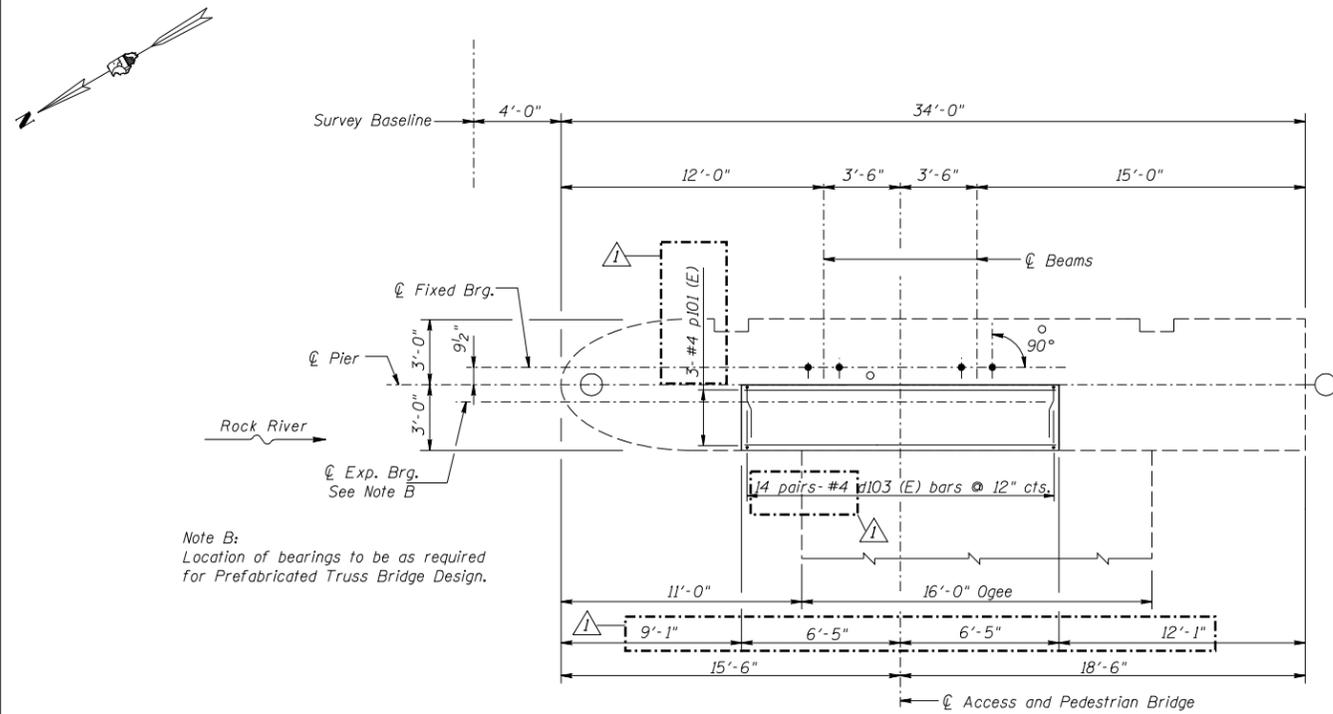
Pier	Exist. T/O Pier Elev.	Bearing Seat Elev.	h
9	644.21	644.65	5 1/4"
10	643.85	644.65	9 5/8"
11	643.42	644.65	1'-2 3/4"

Legend:
Concrete Removal

** See Note 4

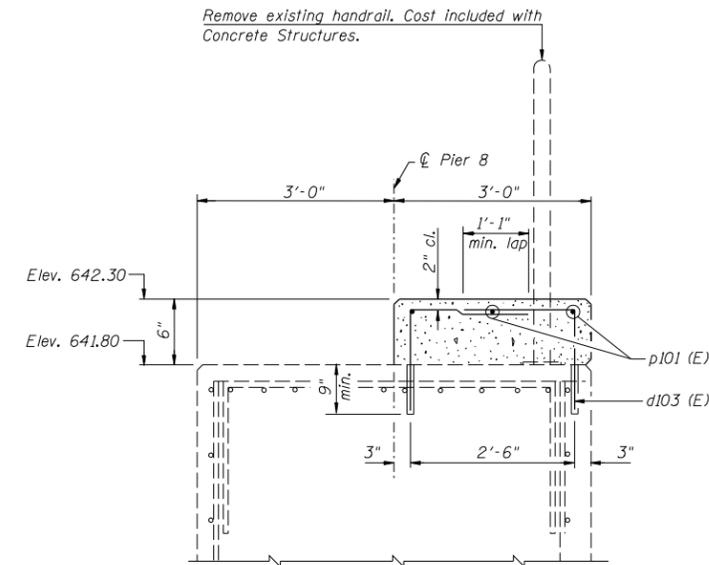
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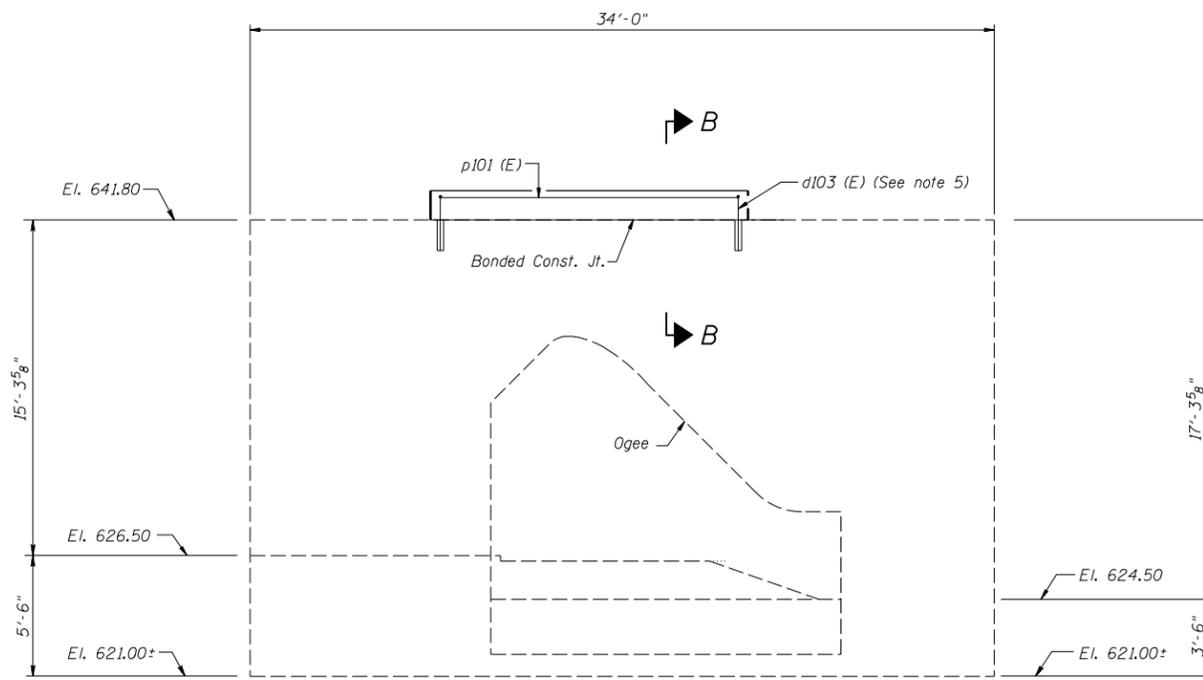
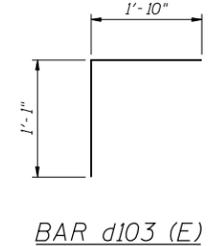


Note B:
Location of bearings to be as required for Prefabricated Truss Bridge Design.

TOP PLAN



SECTION B-B



ELEVATION

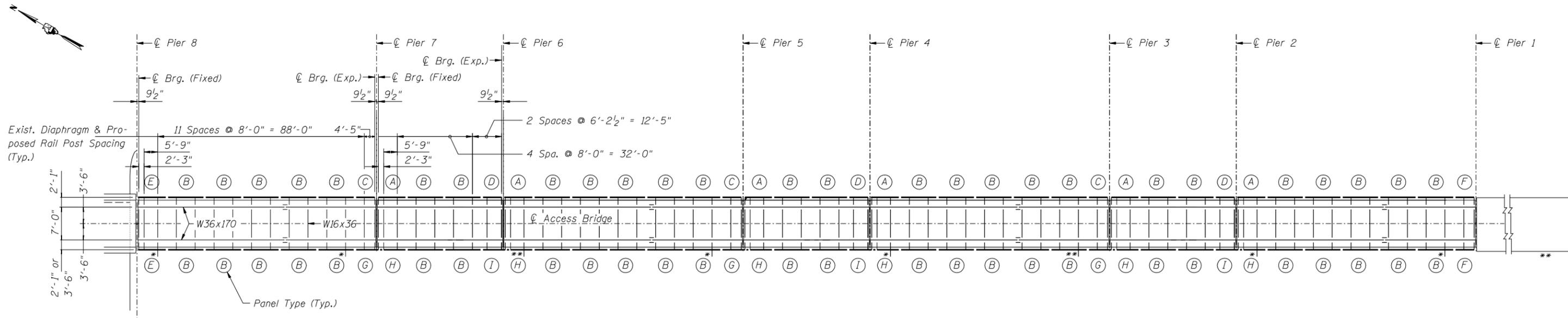
- Notes:
1. Space reinforcement to miss anchor bolts.
 2. All edges shall have a 3/4" chamfer unless otherwise noted.
 3. Location of bearings to be as required for the prefabricated truss bridge used. Prefabricated truss bridge manufacturer shall design bearings and anchor bolts to accommodate bearing seat dimensions provided with due consideration for required anchor bolt spacing and distances from anchor bolts to free edges of concrete.
 4. The quantities and reinforcement details shown were developed from the bearing seat elevations shown and may change based upon the final bearing seat elevations. Contractor shall adjust the bearing seat elevations accordingly to accommodate the prefabricated truss bridge used. Vertical lengths of d103 (E) bars shall also be adjusted accordingly.
 5. Epoxy grouting of bars shall be done according to Section 584 of the Standard Specifications. The grout and method of application shall be approved by the engineer. Cost included with Reinforcement Bars, Epoxy Coated.
 6. Reinforcement bars designated (E) shall be epoxy coated.

** BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d103 (E)	28	#4	2'-11"	L
p101 (E)	3	#4	12'-6"	—
Concrete Structures			Cu. Yd.	0.8
Reinforcement Bars, Epoxy Coated			Pounds	180
Bridge Seat Sealer			Sq. Ft.	44

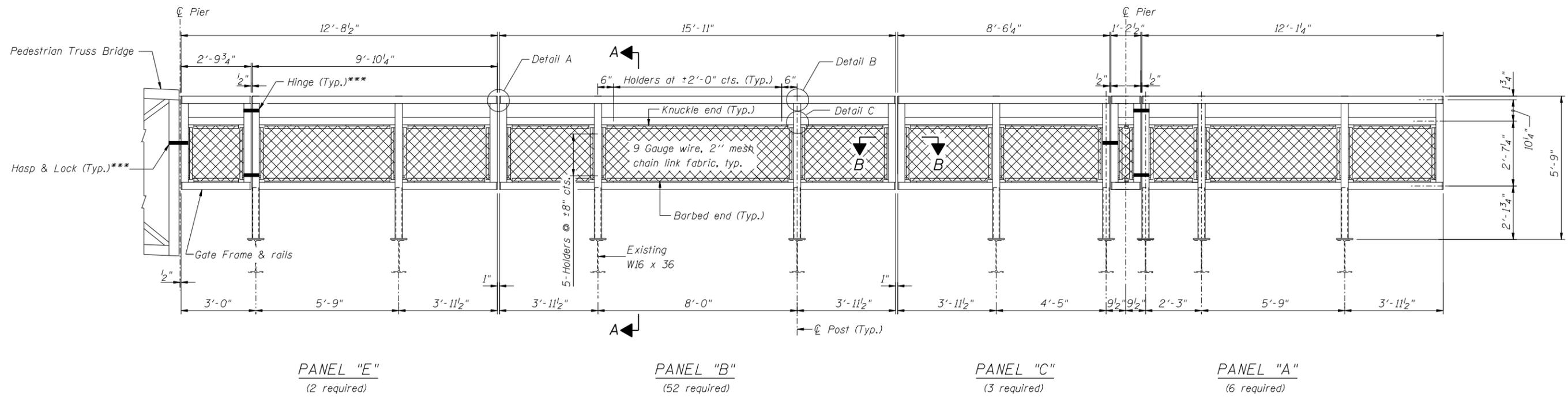
Revised 4/17/2006, TMM

** See Note 4



* Location of existing light poles
** Location of new light poles, see sheet 19B for mounting details.

ACCESS BRIDGE RAILING PLAN



RAILING ELEVATION
(Inside Face - Upstream Side
Mirror Downstream Side)

***Number and type of hinges, type of hasp & lock as per manufacturer's recommendations.

Note:
Contractor shall verify location of all existing posts prior to ordering bridge railing panels. Adjustments shall be approved by the Engineer.

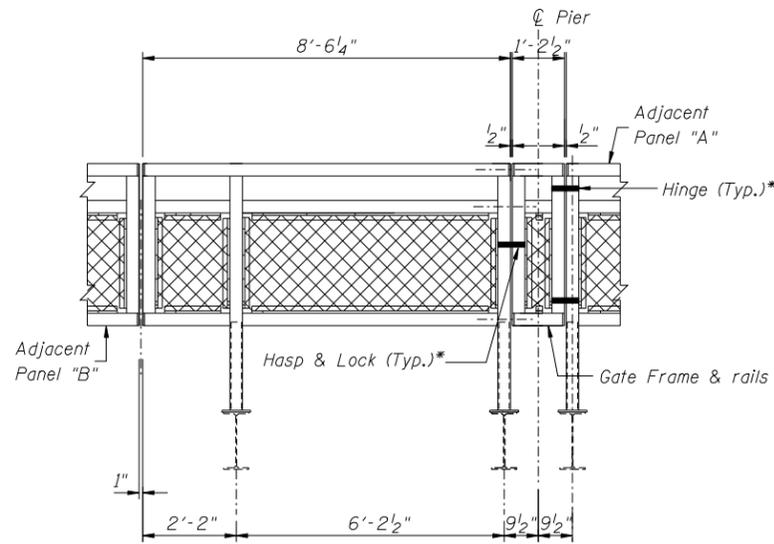
Note: Sections A-A and B-B shown on sheet 13

Entire Sheet Revised 4/17/2006, TMM

DESIGNED BY TMM CHECKED BY RLP
DRAWN BY JUF CHECKED BY TMM

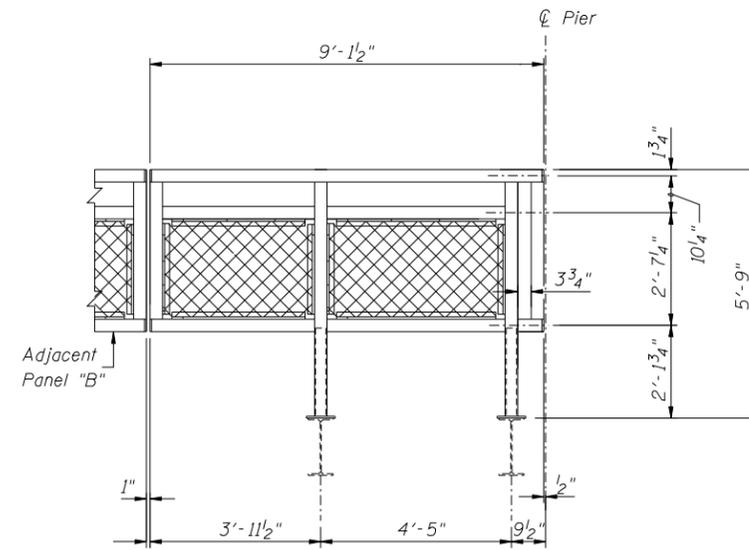
*Number and type of hinges, type of hasp & lock as per manufacturer's recommendations.

Note:
Contractor shall verify location of all existing posts prior to ordering bridge railing panels. Adjustments shall be approved by the Engineer.



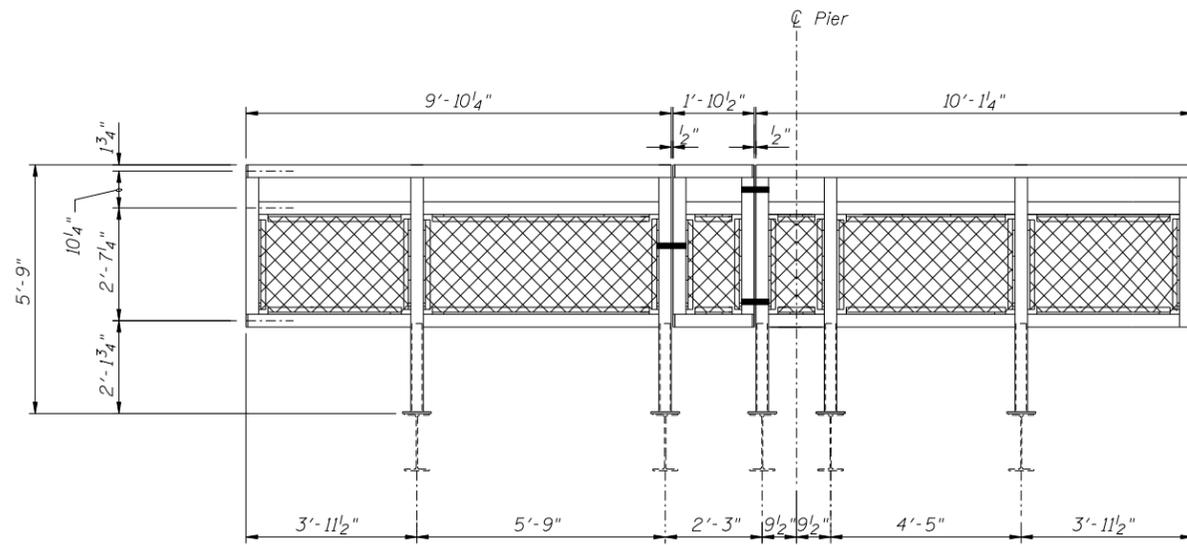
PANEL "D"
(3 required)

RAILING ELEVATION
(Inside Face - Upstream Side)



PANEL "F"
(2 required)

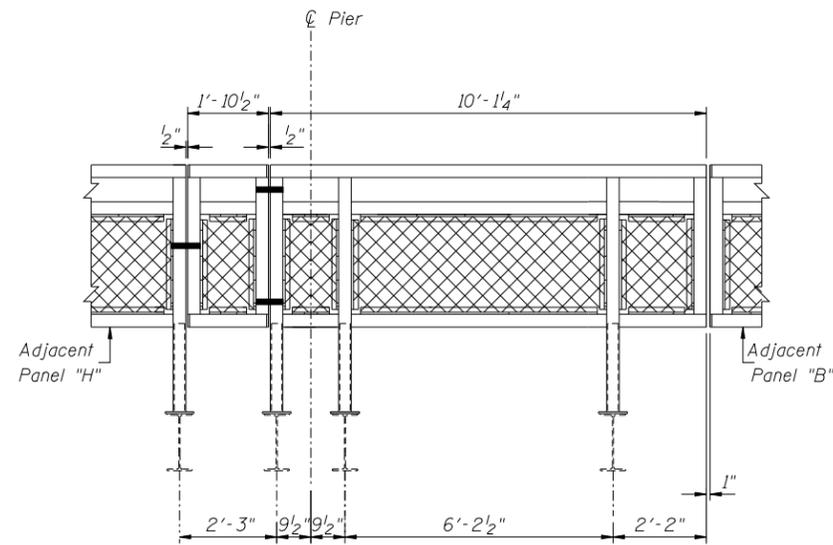
RAILING ELEVATION
(Inside Face - Upstream Side
Mirror Downstream Side)



PANEL "H"
(6 required)

PANEL "G"
(3 required)

RAILING ELEVATION
(Inside Face - Downstream Side)



PANEL "I"
(3 required)

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\$FILES
\$TIMES
\$DATES

Added Sheet 4/17/2006, TMM

NOTES

Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the Contract Unit Price per foot for Removable Access Bridge Railing.

The 9 gauge fabric ties shall be according to Article 1006.27 (d) of the Standard Specifications.

Installation of the chain link fabric shall be according to Section 664 of the Standard Specifications.

Hollow structural sections shall conform to the requirements of ASTM designation A 500, Grade B, structural steel tubing.

All other steel shapes and plates shall conform to the requirements of AASHTO M 270 Grade 36.

The chain link fabric shall be placed along Pedestrian/Bicycle side as shown on Section B-B.

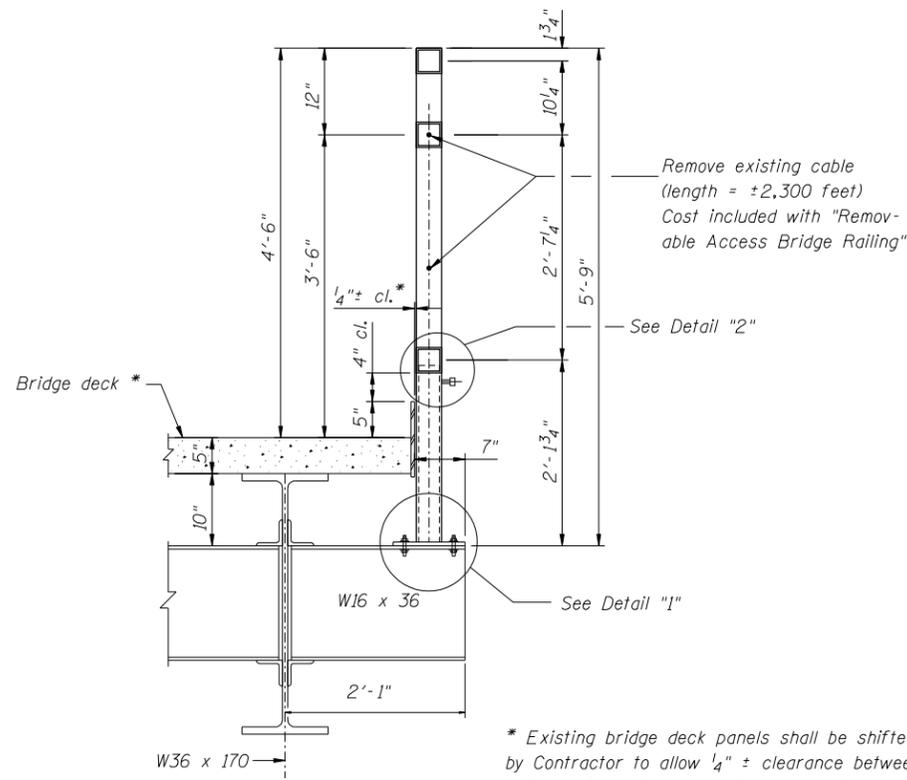
Stretcher bars shall be used at all four sides of each panel.

All posts, railing, splices, anchor devices, and bent plates shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. All bolts, nuts, washers, and anchor rods shall be galvanized according to AASHTO M 232 except stainless steel bolts as noted.

Vent holes for galvanizing shall be placed in the posts and rails at locations that will not allow the accumulation of moisture in the members.

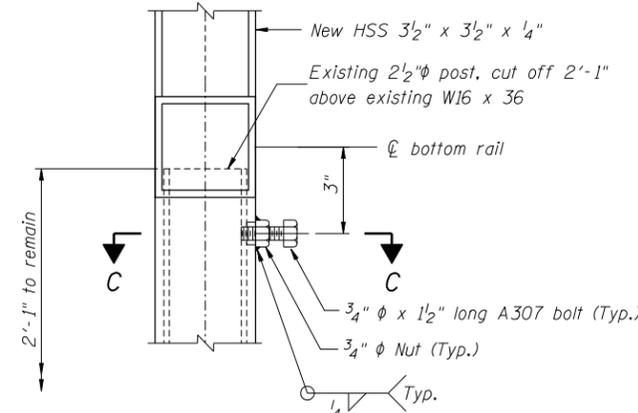
The chain link fabric shall conform to the requirements of Article 1006.27(a)(1)a, b or c of the Standard Specifications.

Contractor shall verify location of all existing posts prior to ordering Bridge Railing Panels. Adjustments shall be approved by the Engineer.

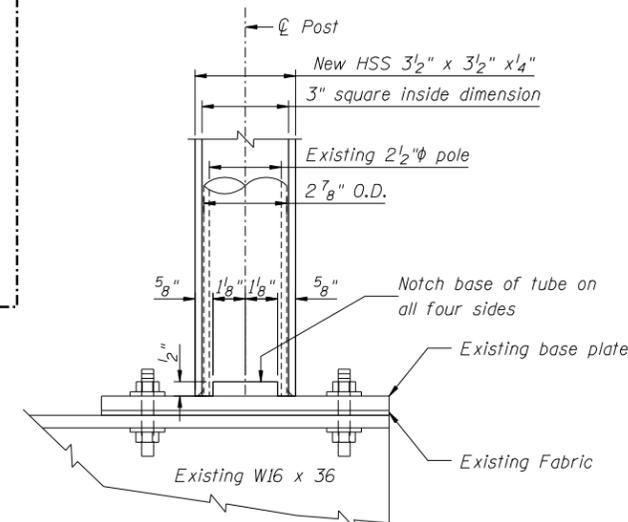


* Existing bridge deck panels shall be shifted/adjusted laterally by Contractor to allow 1/4" ± clearance between toe plate and bridge railing. Contractor has the option of reaming/slotting the existing holes in the top flange of the existing W16x36 and shifting existing posts to proper position in lieu of shifting bridge deck panels. Cost included with Removable Access Bridge Railing.

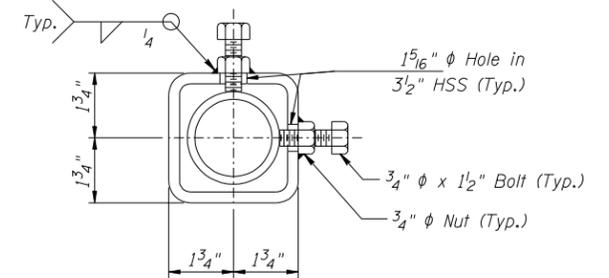
SECTION A-A



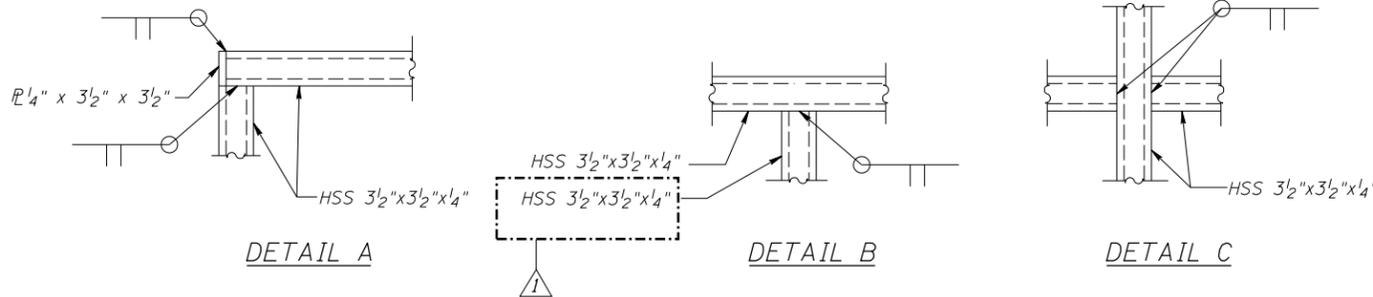
DETAIL "2"



DETAIL "1"



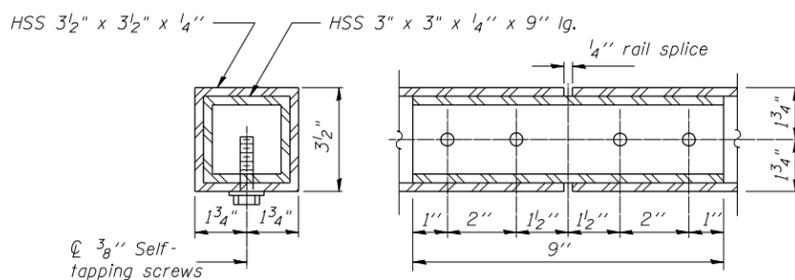
SECTION C-C



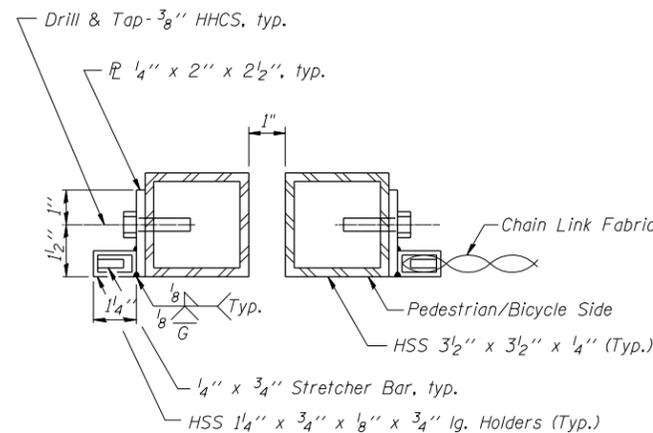
DETAIL A

DETAIL B

DETAIL C



RAIL SPLICE



SECTION B-B

BILL OF MATERIAL

Item	Unit	Quantity
Removable Access Bridge Railing	Foot	1,140

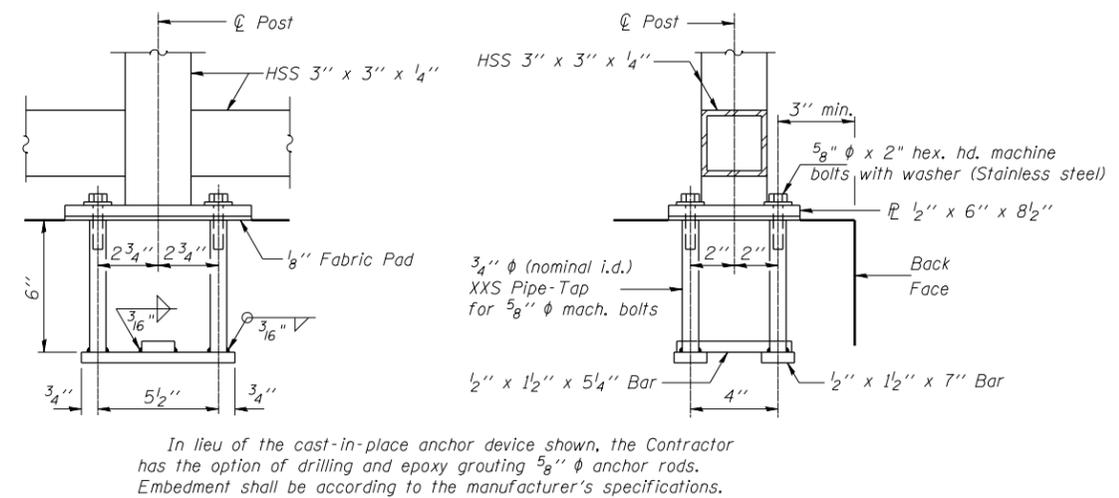
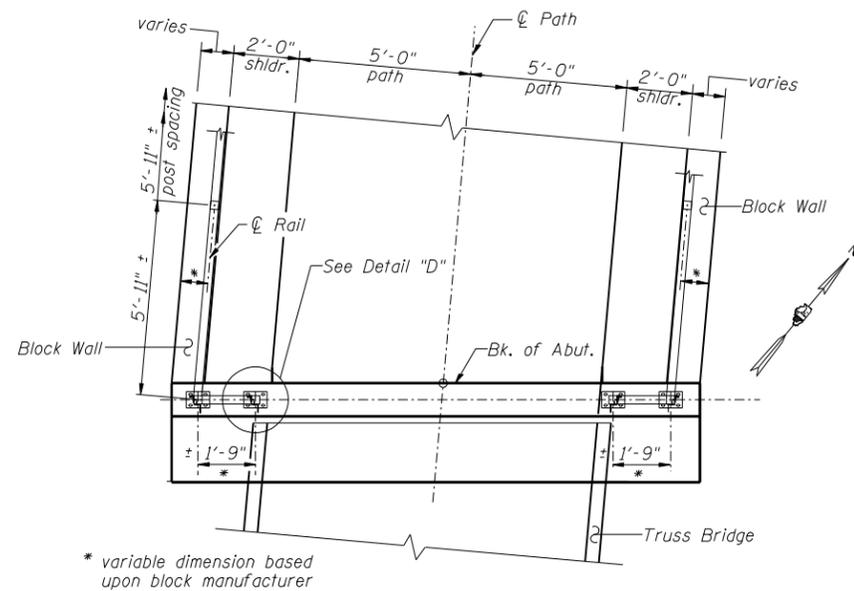
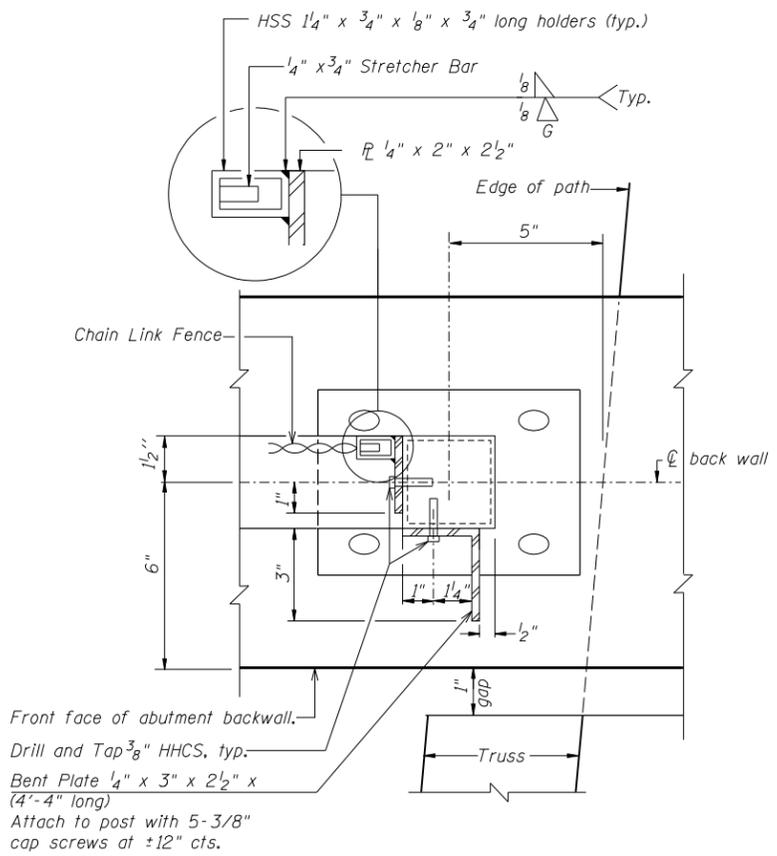
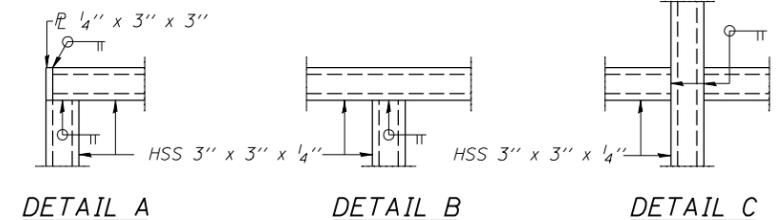
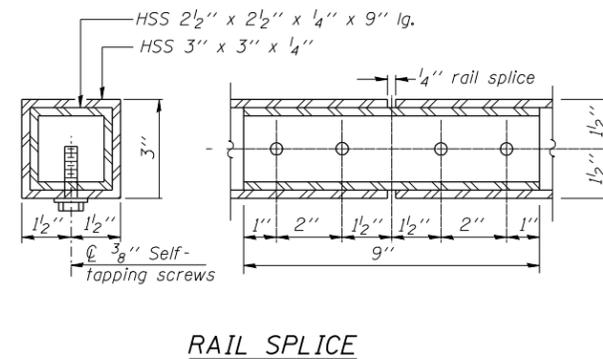
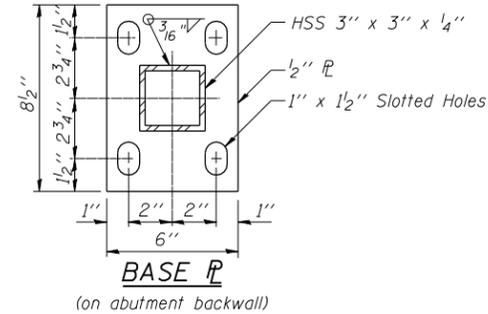
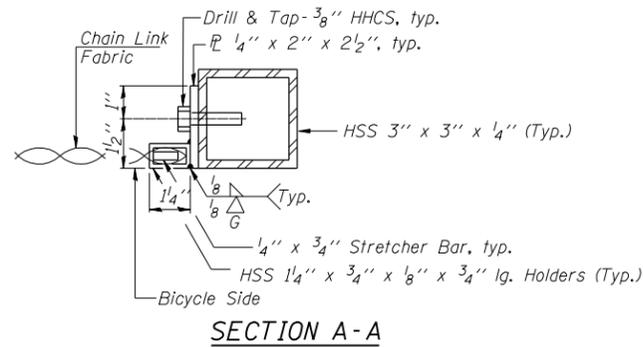
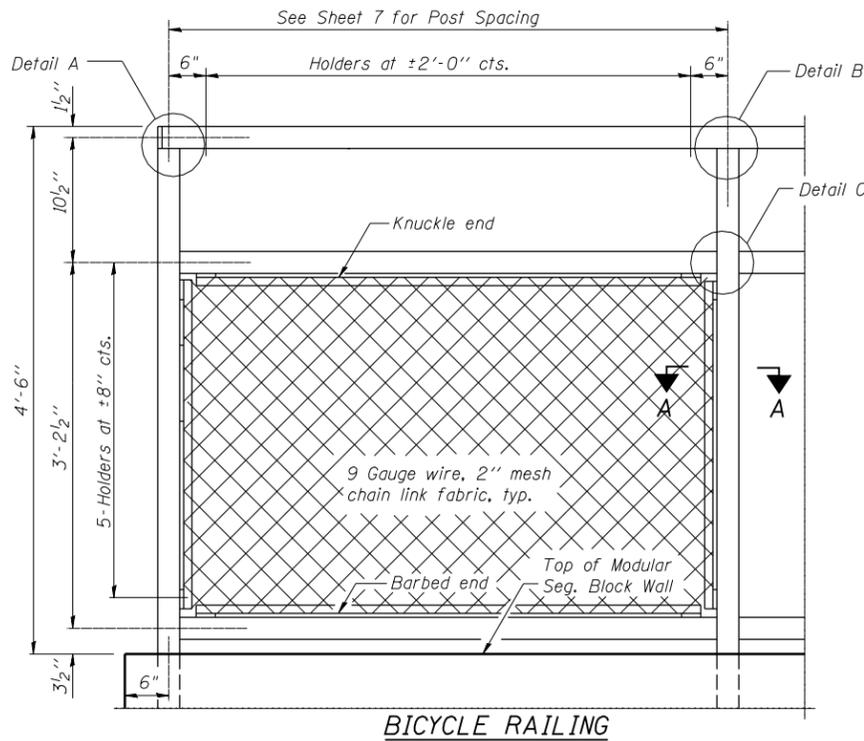
Revised 4/17/2006, TMM

Designed by TMM Checked by RLP
 Drawn by JJF Checked by TMM

SIZES
 DIMENSIONS
 UNITS

NOTES

Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the Contract Unit Price per foot for Bicycle Railing.
The 9 gauge fabric ties shall be according to Article 1006.27 (d) of the Standard Specifications.
Installation of the chain link fabric shall be according to Section 664 of the Standard Specifications.
Hollow structural sections shall conform to the requirements of ASTM designation A 500, Grade B, structural steel tubing.
All other steel shapes and plates shall conform to the requirements of AASHTO M 270 Grade 36.
The chain link fabric shall be placed along Bicycle Side as shown on Section A-A.
Stretcher bars shall be used at all four sides of each panel.
If the option of drilling and epoxy grouting the anchor rods is chosen, the Contractor shall use the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures. The capsule or the adhesive cartridge shall be sealed with pre-measured amounts of the adhesive chemical.
Space reinforcement to miss anchor rods.
All posts, railing, splices, anchor devices, and bent plates shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. All bolts, nuts, washers, and anchor rods shall be galvanized according to AASHTO M 232 except stainless steel bolts as noted.
Vent holes for galvanizing shall be placed in the posts and rails at locations that will not allow the accumulation of moisture in the members.
The chain link fabric shall conform to the requirements of Article 1006.27(a)(1)a, b or c of the Standard Specifications.



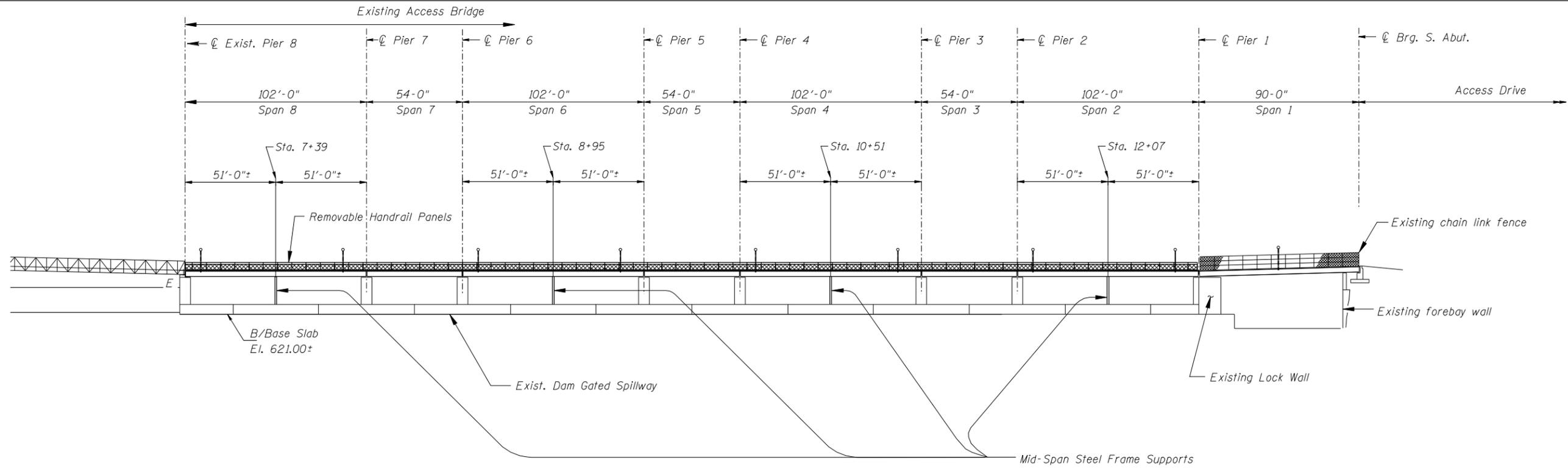
DETAIL "D"
(West corner shown - east corner similar)

RAILING PLAN AT NORTH ABUTMENT

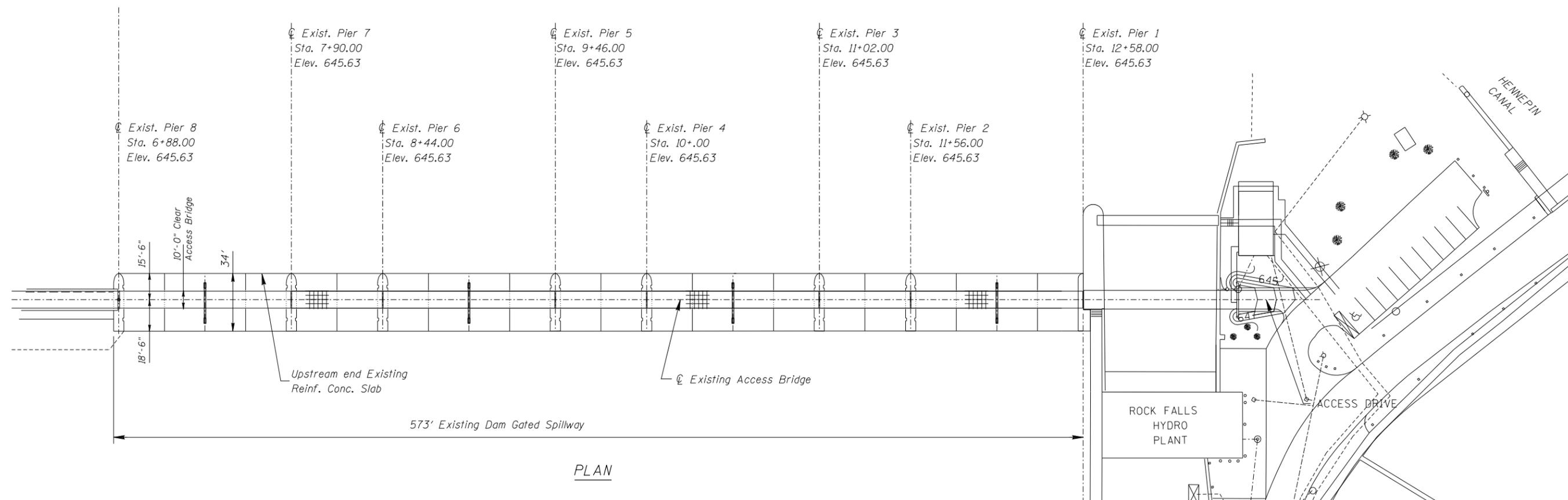
ANCHOR BOLT DETAILS
(along abutment backwall)

BICYCLE RAILING
(Billed on sheet 7)

Designed By: RLP
Checked By: TIM
Drawn By: RLM
Checked By: TIM
REVISED DATES
REVISED DATES
REVISED DATES



ELEVATION



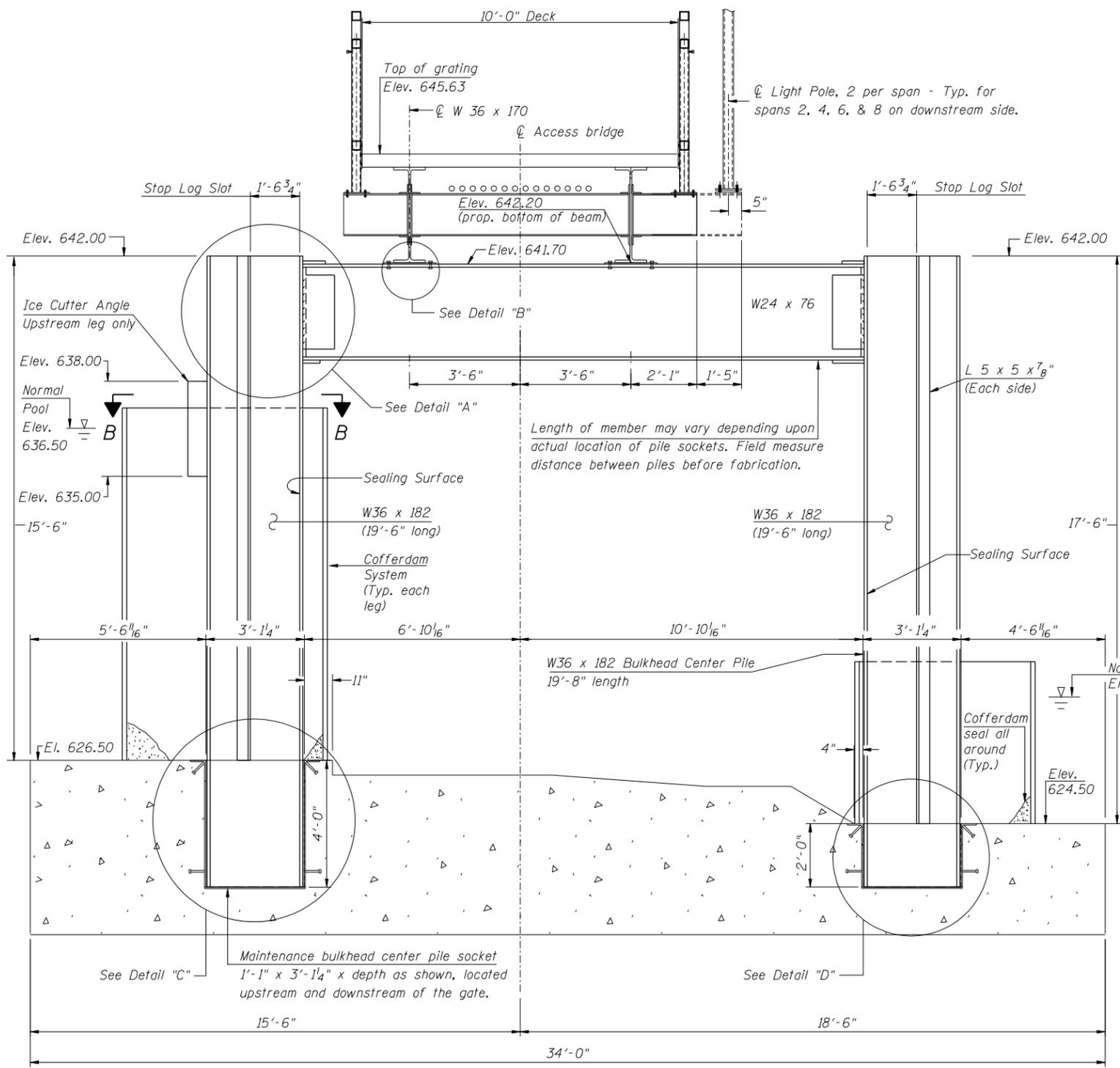
PLAN

Designed By TMM Checked By RLP
Drawn By JUF Checked By TMM

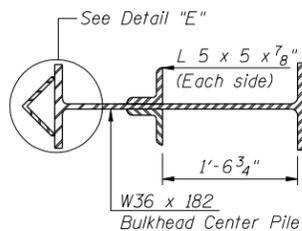
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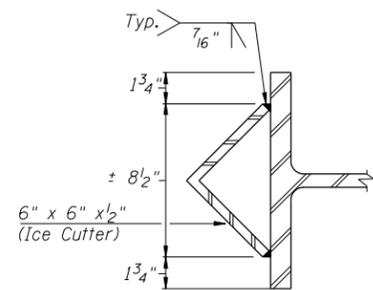
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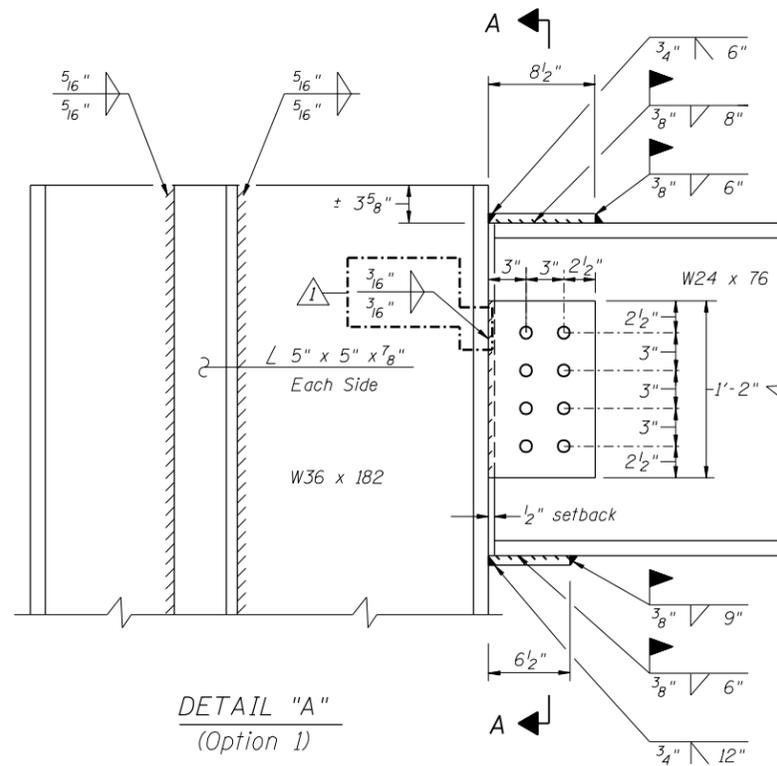
MID-SPAN STEEL FRAME SUPPORTS (4 required)
(Looking South)



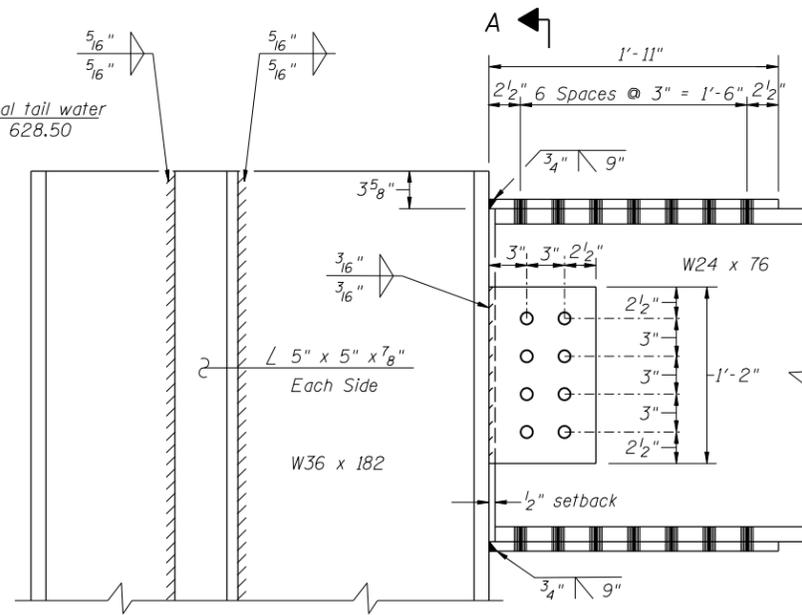
SECTION B-B



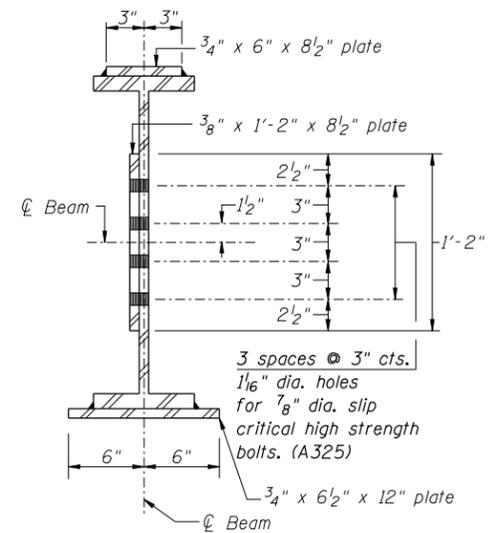
DETAIL "E"



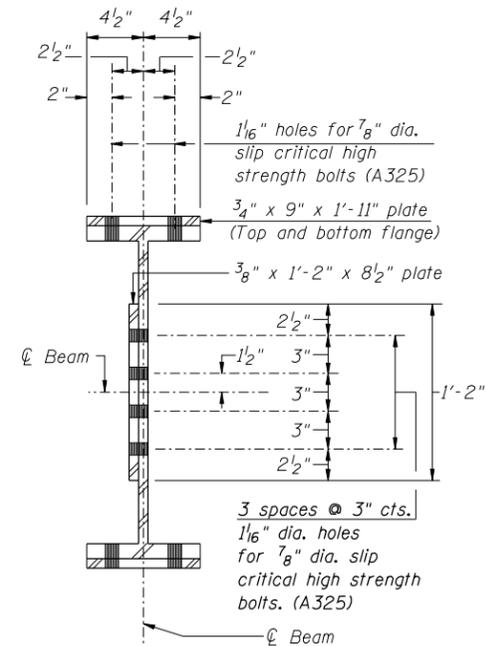
DETAIL "A"
(Option 1)



DETAIL "A"
(Option 2)



SECTION A-A
(Option 1)

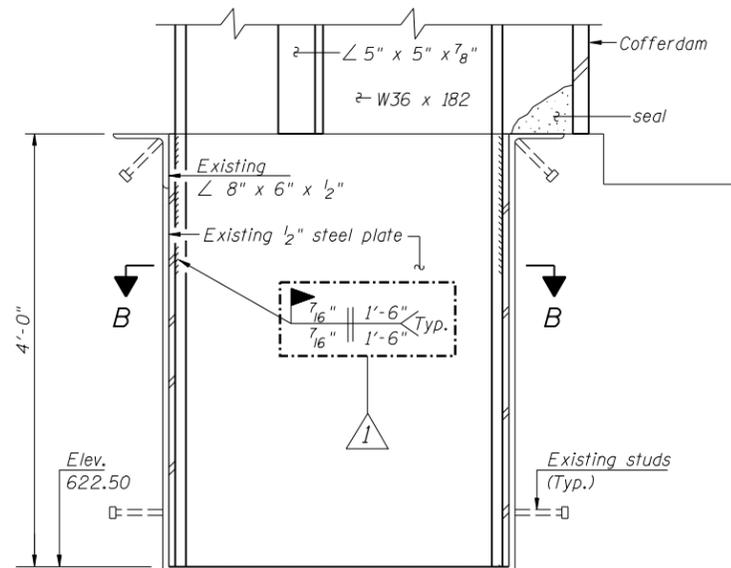


SECTION A-A
(Option 2)

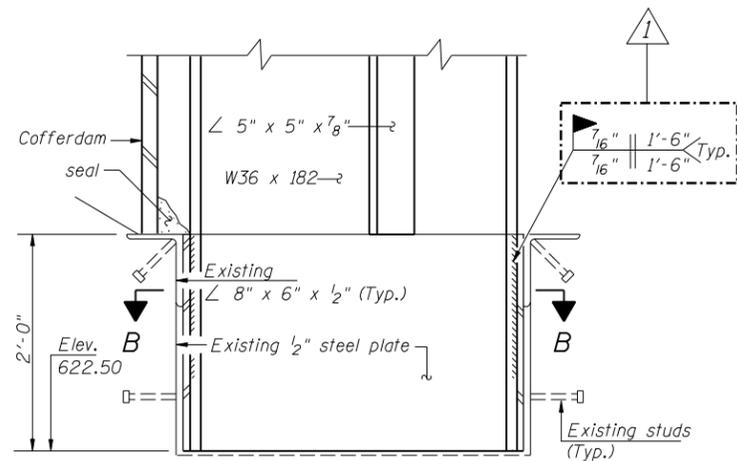
Notes:

1. The Contractor shall have the option of using either Option 1 or Option 2 in Detail "A".
2. The calculated weight of structural steel which is based upon the use of Option 2 = 43,710 pounds.
3. All structural steel shall be AASHTO M270, Grade 50W.
4. All structural steel shall conform to the supplemental requirements for Notch Toughness Zone 2.
5. The cofferdam shall be designed and constructed according to the requirements of Article 502.06 of the Standard Specifications.
6. All costs to dewater the cofferdam shall be considered as included with "Cofferdams".

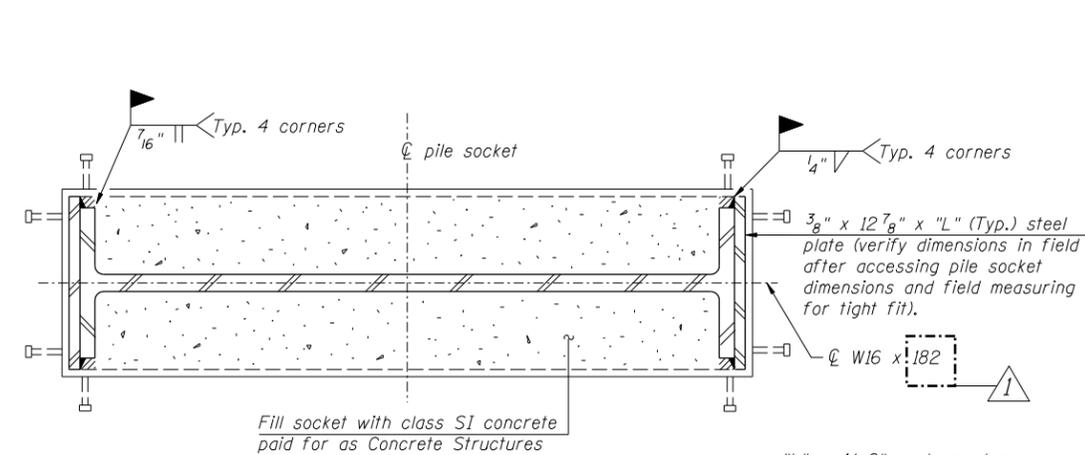
Revised 4/17/2006, TMM



DETAIL "C"

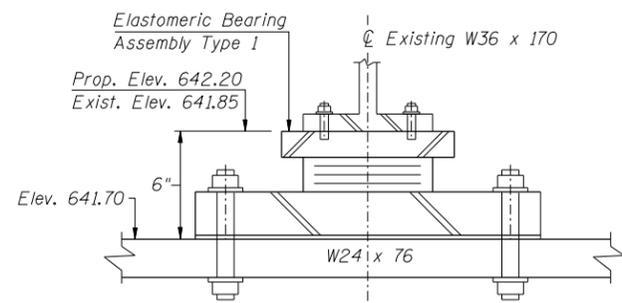


DETAIL "D"



SECTION B-B

"L" = 4'-0" upstream leg
2'-0" downstream leg



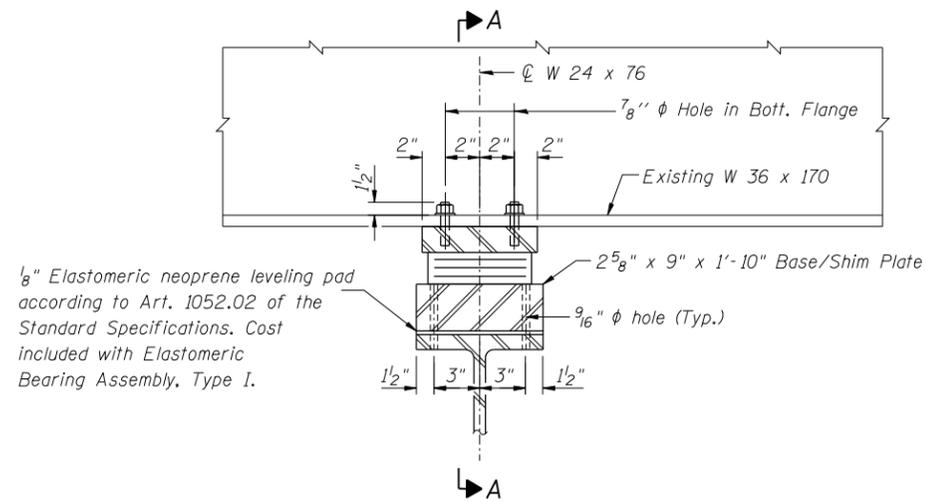
DETAIL "B"

BILL OF MATERIAL

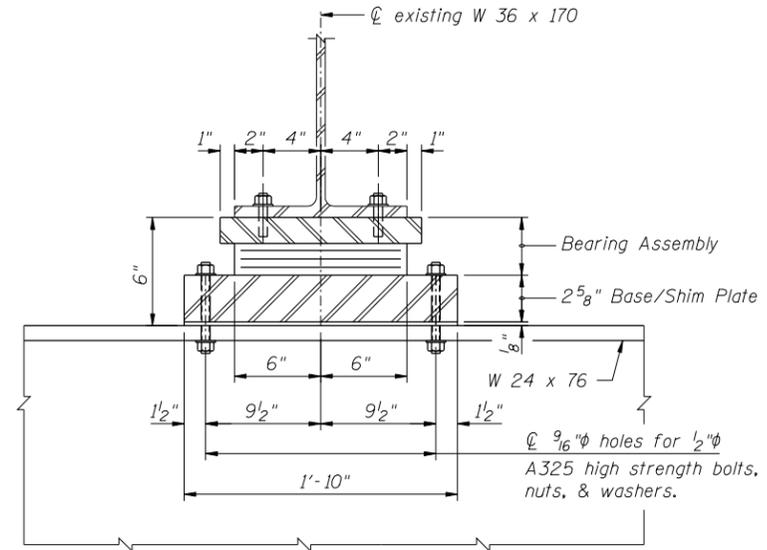
Item	Unit	Quantity
Concrete Structures	Cu Yd	2.6
Furnishing and Erecting Structural Steel	L Sum	1
Cofferdams	Each	8

1 Revised 4/17/2006, TMM

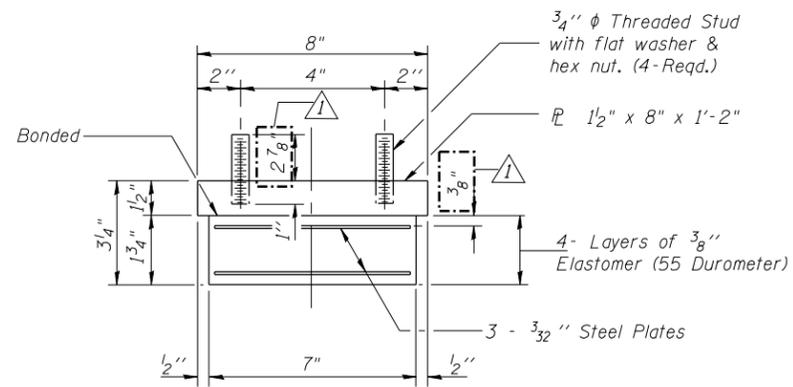
Designed By TMM Checked By RLP
 Drawn By RM Checked By TMM
 SIZES
 DIMS
 UNITS



ELEVATION AT MID-SPAN SUPPORT



SECTION A-A



BEARING ASSEMBLY

TYPE I ELASTOMERIC EXPANSION BEARING DETAILS

Notes:

All steel plates shall conform to AASHTO M270 Grade 50W.

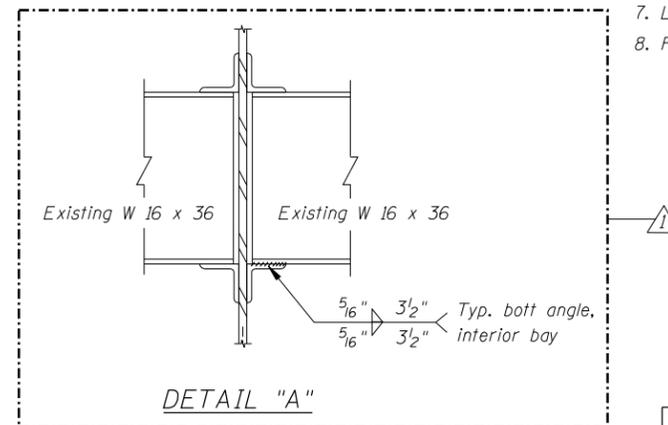
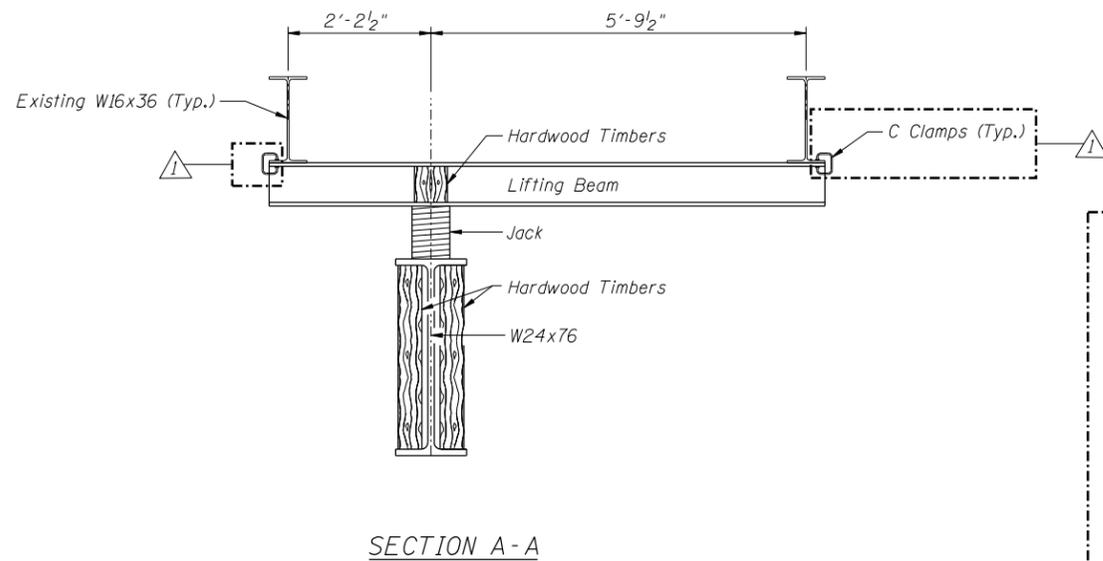
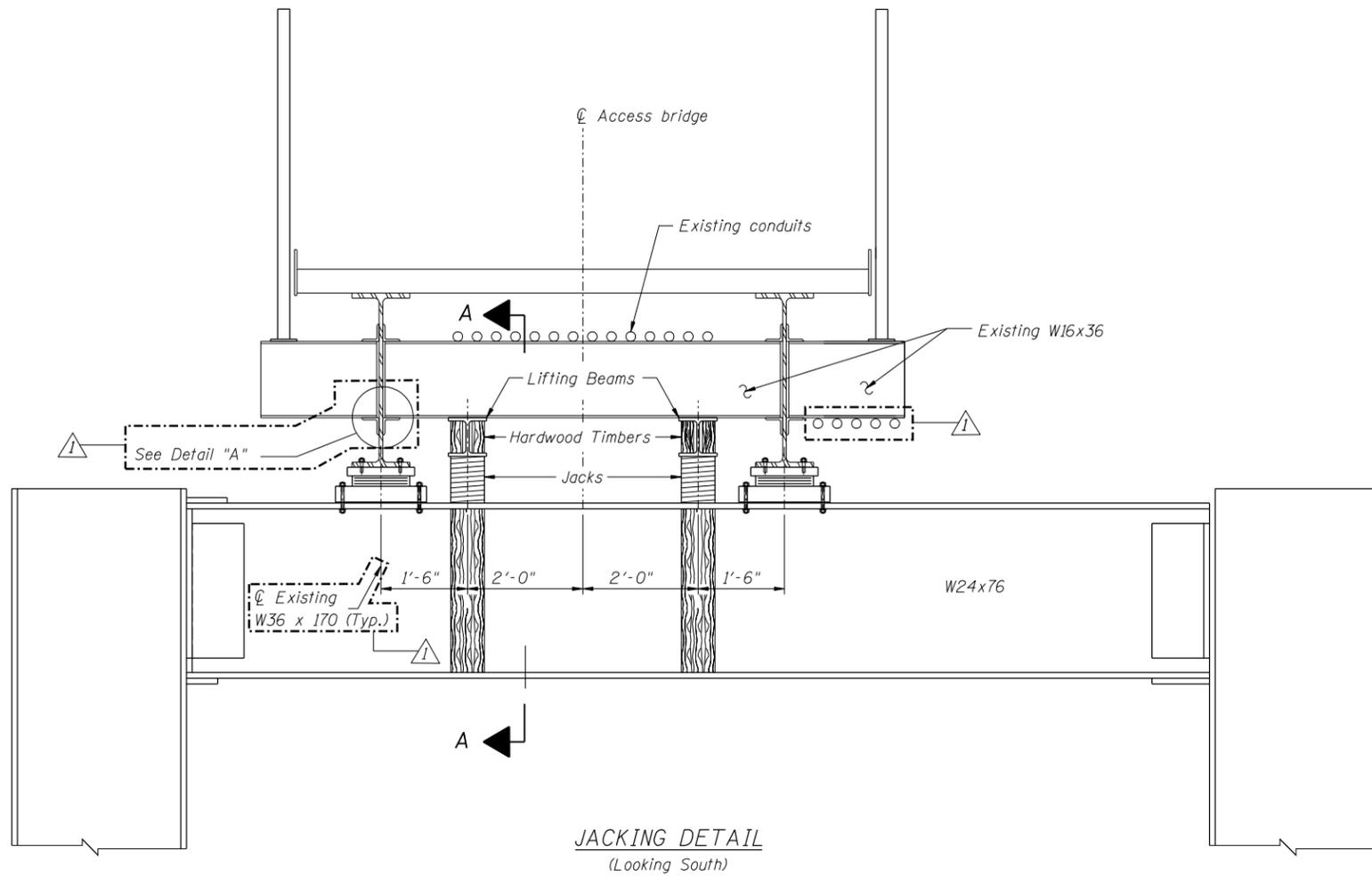
Calculated weight of structural steel (Plates, bolts, nuts and washers) is 1,220 pounds.

BILL OF MATERIAL

Item	Unit	Quantity
Elastomeric Bearing Assembly, Type I	Each	8

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 DRAWN BY JUF CHECKED BY TMM
 \$FILES
 \$TIMES
 \$DATES



Notes:

1. The jack capacity provided shall be between 50% to 100% greater than the maximum expected working load.
2. The jack shall be centered directly over the web of the W24x76 beam of the mid-span steel frame supports.
3. Hardwood timbers shall be installed tightly between the top and bottom flanges of each beam that is directly under or over a jack.
4. Contractor shall not allow the main W36x170 beams to rotate out of plane when jacking/cribbing.
5. Jacking system shall be paid for as indicated in the special provision for "Jacking Existing Superstructure".
6. The jacking system shown is for bidding purposes only. The Contractor shall be responsible for the design and safety of the structure.
7. The Contractor shall use caution during construction so as to avoid damaging the existing utility conduits mounted beneath the bridge deck. The Contractor shall repair damage at his/her expense to the satisfaction of the Engineer.

Suggesting Jacking Sequence

1. Build mid-span steel frame support.
2. Set up jacks and lifting beams. See Special Provision entitled "Jacking Existing Superstructure".
3. Use synchronized jacks to lift bridge with deck in place.
 - Estimated required working jack load = 35 kips (for bid purposes only).
 - Estimated lifting beam size = W8x24 (for bid purposes only).
4. Place base/shim plate. Fully tighten 1/2" ϕ bolts.
5. Drill 7/8" ϕ holes in bottom flange of main W36x170 beams.
6. Set bearing assembly in proper position.
7. Lower W36x170 beams onto bearing assembly.
8. Place washers and nuts over threaded studs and fully tighten.

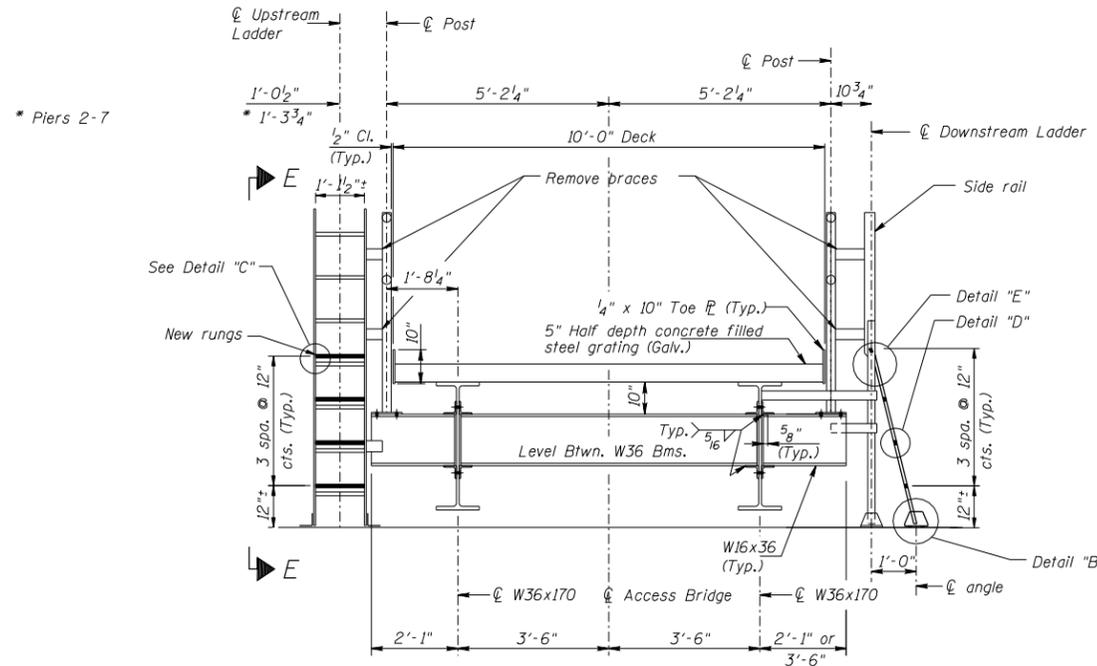
BILL OF MATERIAL

Item	Unit	Quantity
Jacking Existing Superstructure	L Sum	1

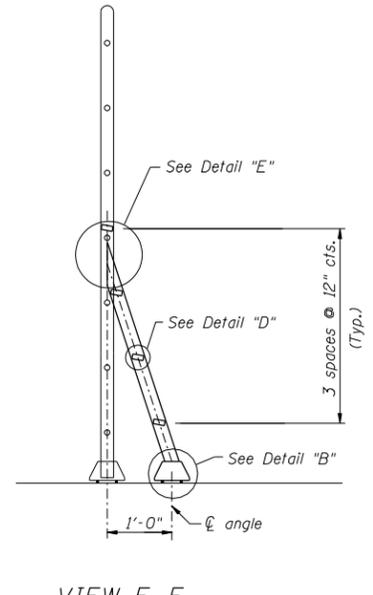
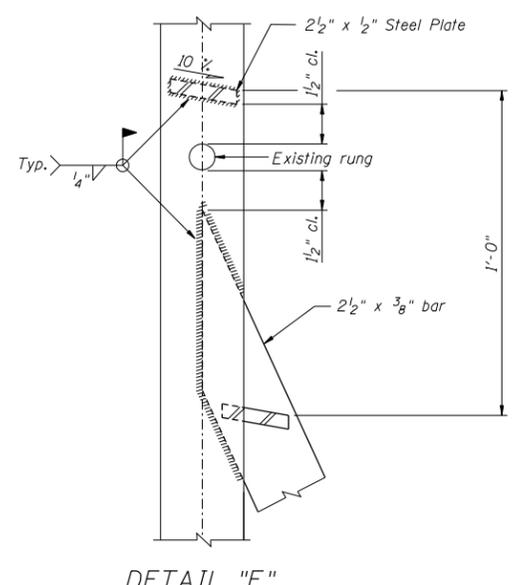
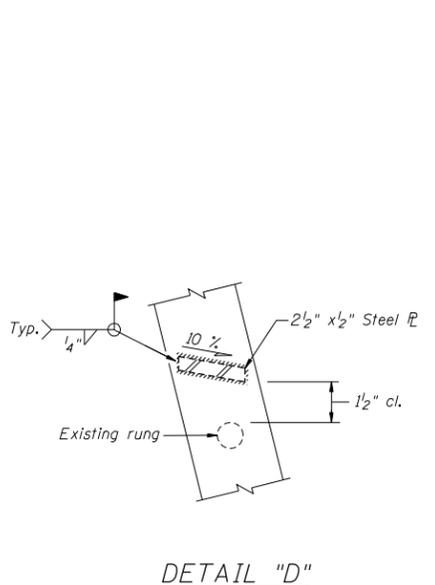
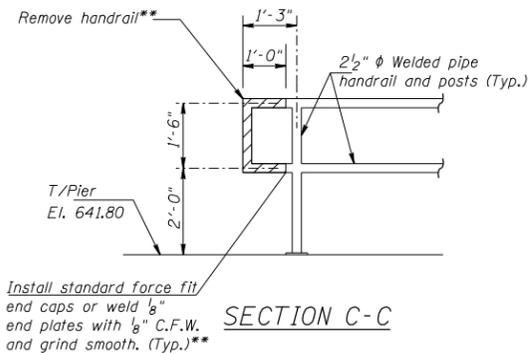
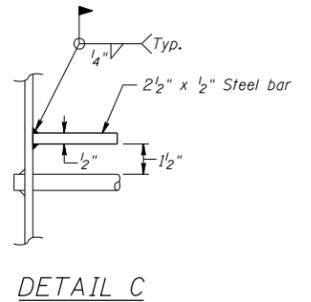
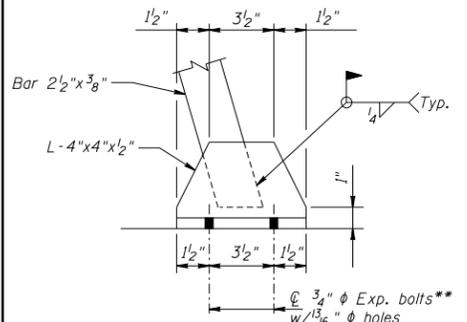
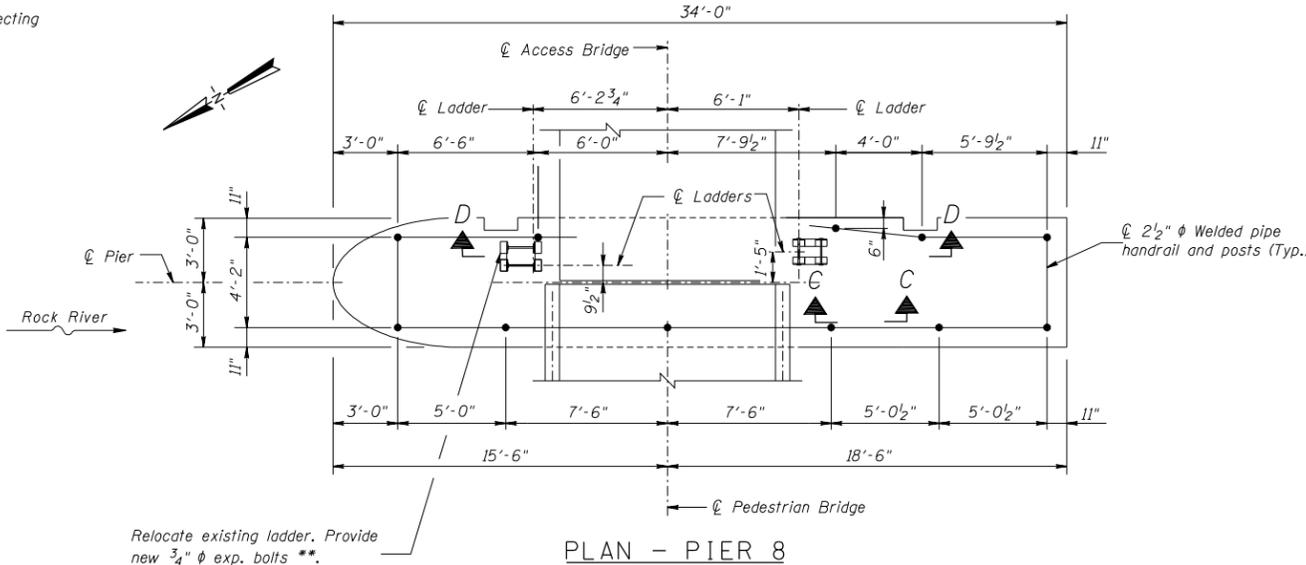
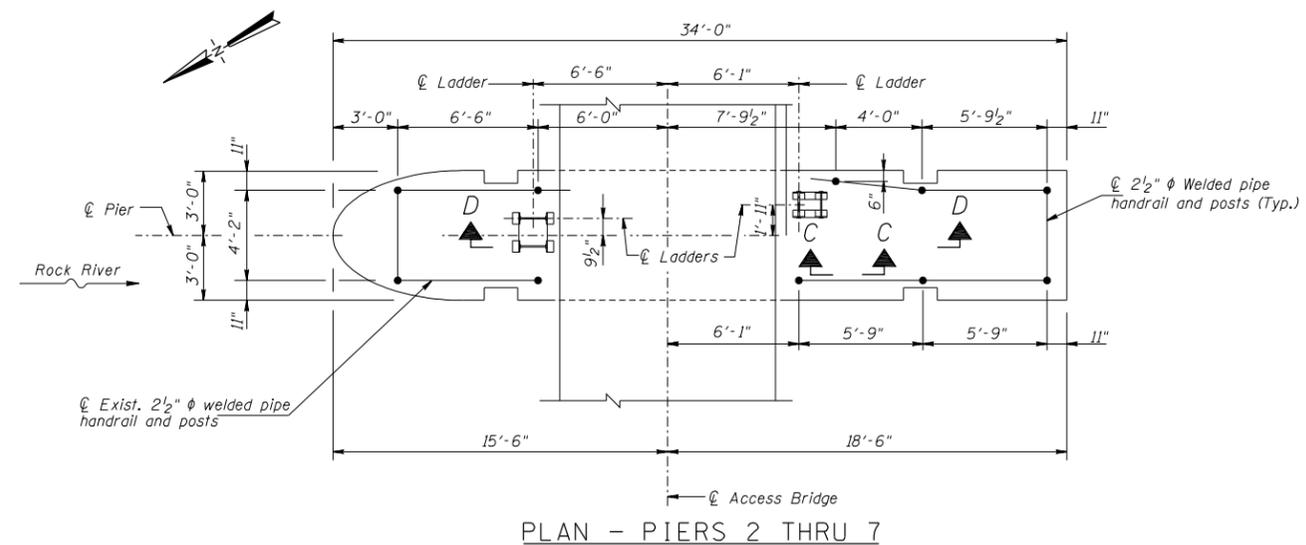
Designed By TMM Checked By RLP
 Drawn By JVF Checked By TMM

SEALS
 STAMPS
 SIGNATURES

Revised 4/17/2006, TMM



**Cost included with Furnishing and Erecting Structural Steel.

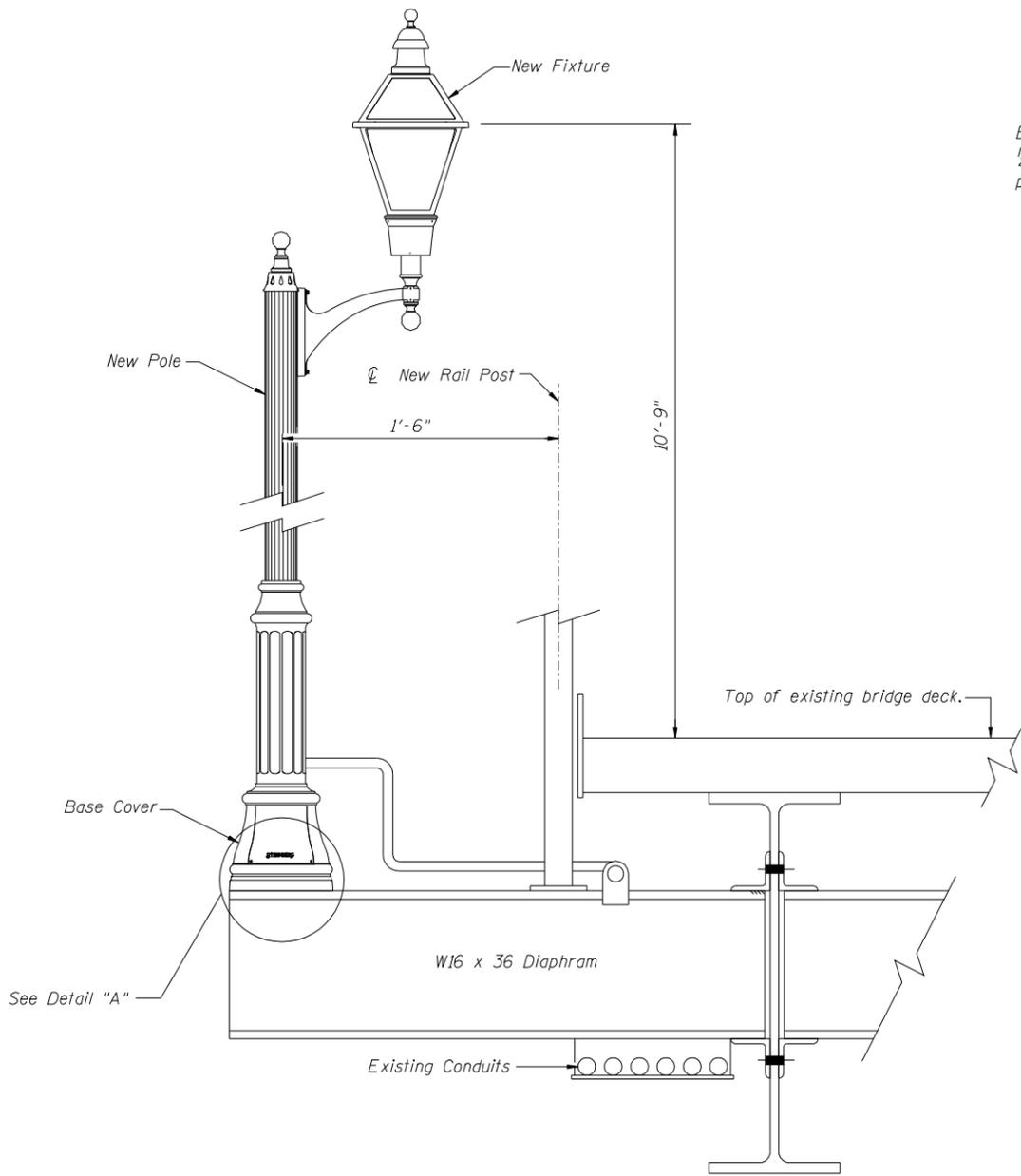


Notes:

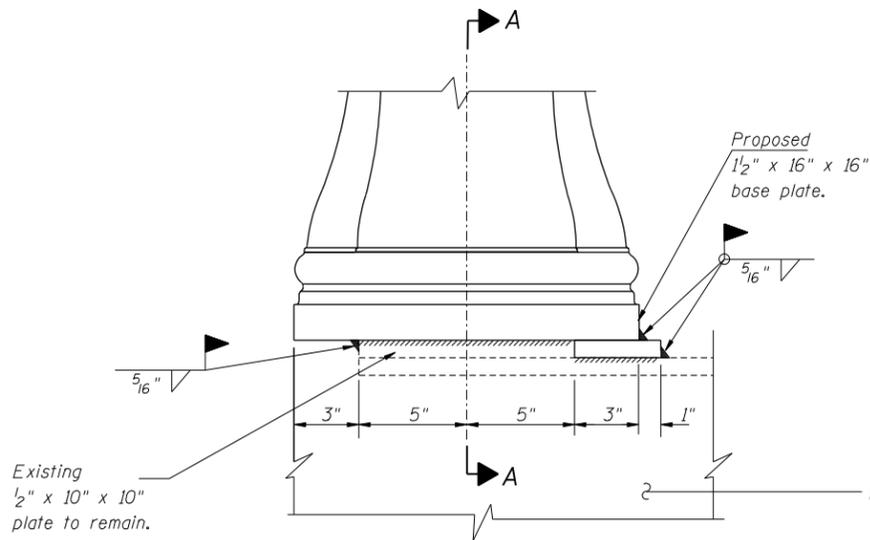
- All structural steel shapes and plates shown on this sheet shall conform to the requirements of AASHTO M-270, Grade 36, and shall be galvanized after shop fabrication in accordance with AASHTO M111 and ASTM A-385. All bolts, nuts, and washers shall be galvanized in accordance with AASHTO M232.
- The calculated weight of structural steel (Grade 36) = 840 pounds.
- The Contractor shall verify location of ladders and handrail prior to commencing work. Conflicts shall be resolved prior to ordering materials. Any required adjustments shall be approved by the Engineer.

Added Sheet 4/17/2006, TMM

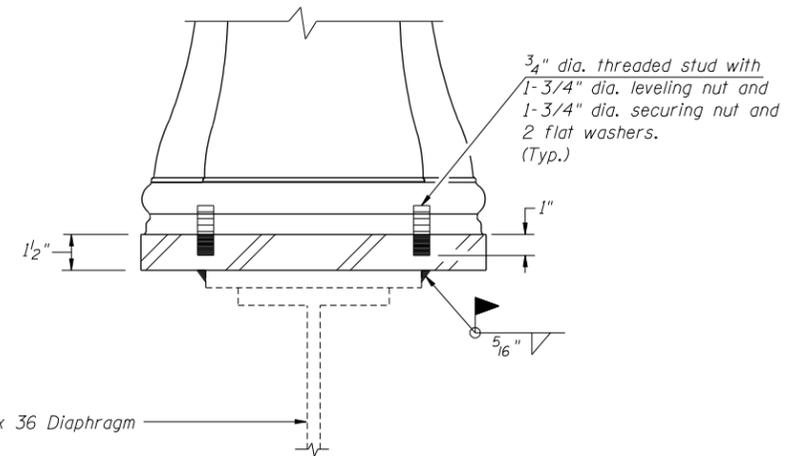
Designed By TMM Checked By RLP
Drawn By RJM Checked By TMM



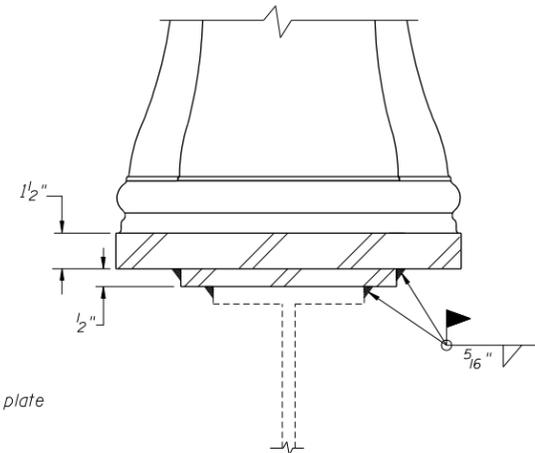
PARTIAL BRIDGE DECK CROSS SECTION
(Looking South)



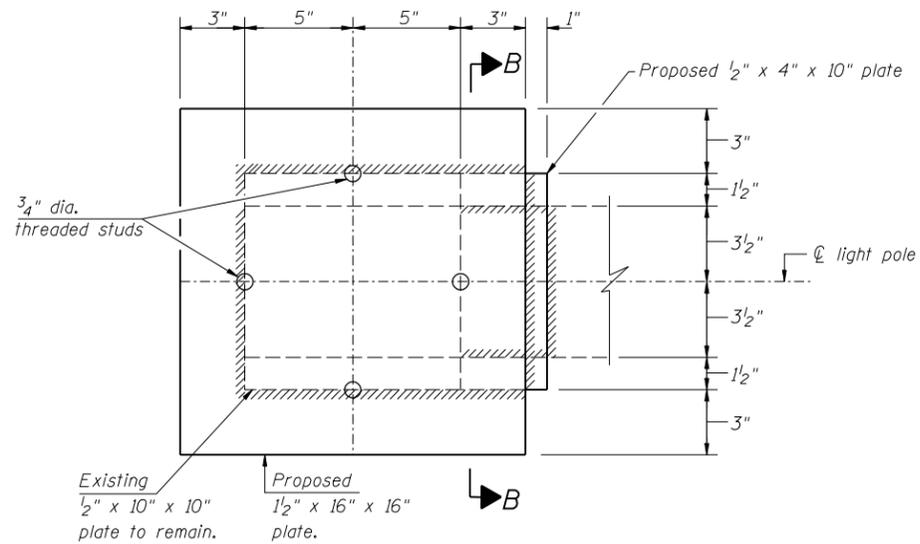
DETAIL "A"



SECTION A-A



SECTION B-B



PLAN
Light Pole Base Plate

See Notes on sheet 19A.

Designed by TMM Checked by RLP
Drawn by RJM Checked by TMM

ISSUED	REVISION LETTER	REVISION BY	DATE

8:02:28 AM

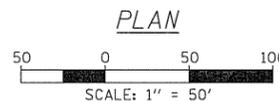
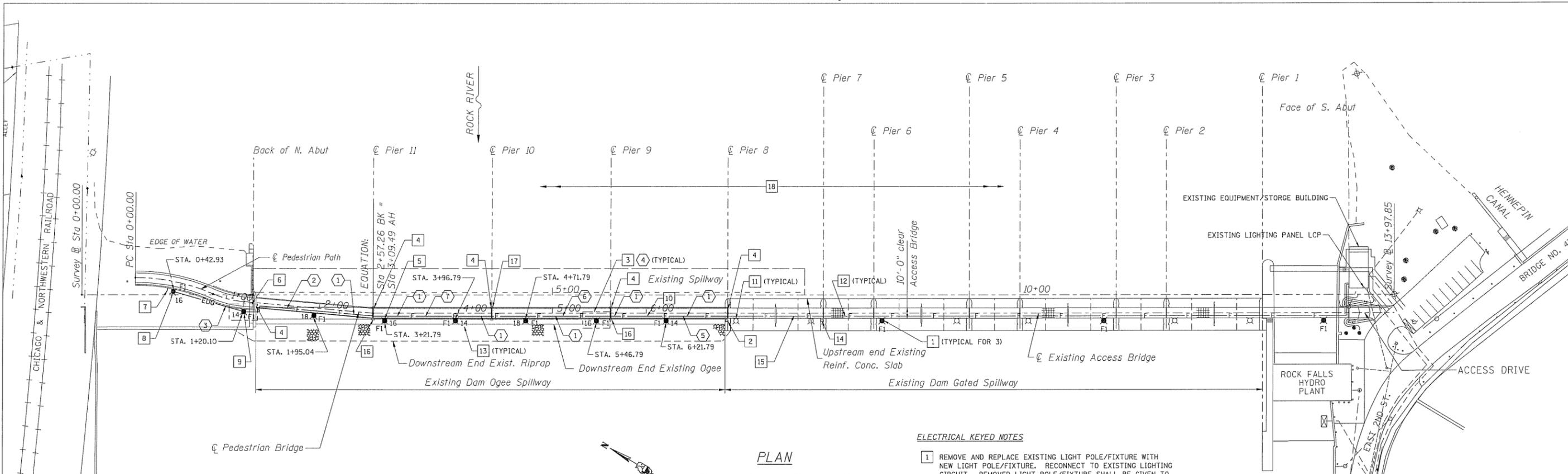
04/17/2006, 08:02 AM

I:\06JOBS\06S1718\Elec\Sheet\Lighting Plan.dgn

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Designed By: RDN
Checked By: PJT
Drawn By: ANC
Checked By: PJT

GPEC018B.DGN



LIGHTING FIXTURE SCHEDULE						
FIXT. TYPE	DESCRIPTION	MANUFACTURER & CAT. NO.	LAMPS/WATTS	VOLTS	MOUNTING	REMARKS
F1	TRADITIONAL HID COLONIAL STYLE POLE MOUNTED LIGHTING FIXTURE, 18 INCH WIDE, 31 INCH TALL WITH A CLEAR SEEDED ACRYLIC LENSE, CAST ALUMINUM FITTER, CAST ALUMINUM POLE BRACKET, CAST BALLAST HOUSING ASSEMBLY, HPF -20 DEG. F. CWA BALLAST, 4KV RATED PORCELAIN SOCKET, TYPE 3 OPTICS, BLACK POLYESTER POWDER COAT FINISH.	STERNBERG; 1843/480PM/70WHP5120/RE3G/CSA/BK	1-70W HPS, ANST CODE NO. S62, 95 TOTAL INPUT WATTS	120	MOUNTED ON A 10'-0" x 5" DIA. ROUND STRAIGHT FLUTED CAST-ALUMINUM POLE WITH DECORATIVE BASE AND POLE CAP. *	*NOTE: POLE AT STA. 1+20.10 SHALL BE 16'-0" OVERALL LENGTH
F2	4FT. 1-LAMP FLUORESCENT SIGN LIGHT FIXTURE, EXTRUDED ALUMINUM HOUSING, STAINLESS STEEL HARDWARE, ADJUSTABLE END SPlice BOXES WITH 3/4"C., CLEAR ACRYLIC DIFFUSER, HPF BALLAST COLD WEATHER RATING TO -20 DEG. F., REMOTE BALLAST HOUSING, UL LISTED FOR WET LOCATIONS.	SECURITY LIGHTING; 5L904CA/WPR481LH NU LITE 41-148-HO	1-F48HO-T12 800MA, 60W, 5400 DEG. K., SIGN WHITE, 79 TOTAL INPUT WATTS	120	SURFACE MOUNT ON CONCRETE PIER	AIM FIXTURE TO FOCUS ON WARNING SIGN. LOCATE BALLAST ENCLOSURE ON BRIDGE TRUSS CHORD.

BILL OF MATERIAL		
PAY ITEM	UNIT	QUANTITY
BRIDGE LIGHTING	L. SUM	1
BRIDGE LIGHTING DECORATIVE FIXTURES/POLES	L. SUM	1
FIBER OPTIC CONDUIT	FOOT	2340

ELECTRICAL KEYED NOTES

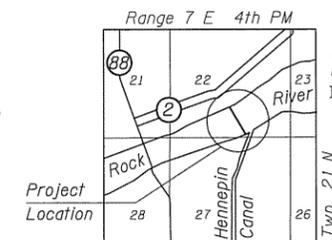
- 1 REMOVE AND REPLACE EXISTING LIGHT POLE/FIXTURE WITH NEW LIGHT POLE/FIXTURE. RECONNECT TO EXISTING LIGHTING CIRCUIT. REMOVED LIGHT POLE/FIXTURE SHALL BE GIVEN TO ENGINEER FOR REUSE BY DEPARTMENT. REFER TO DETAIL 3/21 FOR REVISED POLE SUPPORT.
- 2 EXISTING BRIDGE CABINET BCB. EXTEND EXISTING CONDUIT AND WIRE FROM BCB TO NEW POLE/FIXTURES.
- 3 SEE DETAIL 1/21 FOR JUNCTION BOX LIGHTING AND LIGHTING CIRCUIT CONNECTION TO FIXTURE.
- 4 PROVIDE FLEXIBLE CONDUIT AT ALL EXPANSION JOINTS, SEE DETAIL 6/21.
- 5 LIGHT POLE SUPPORT PROVIDED BY BRIDGE SUPPLIER, SEE SHEET 6. COORDINATE FINAL LOCATION WITH RESIDENT ENGINEER.
- 6 SEE SHEET 20A FOR JUNCTION BOX AND CONDUIT FROM BRIDGE TO GRADE.
- 7 STUB OUT 1/4" CONDUIT 3'-0" AND CAP FOR FUTURE.
- 8 SEE DETAIL 2/21 FOR LIGHT POLE FOUNDATION.
- 9 LIGHT POLE LENGTH 16'-0" (THIS UNIT ONLY).
- 10 ROUTE CONDUIT ON FLOOR BEAM OF BRIDGE.
- 11 EXISTING LIGHT POLE/FIXTURE.
- 12 EXISTING LIGHTING CIRCUITS 4#6, #6G., 1/4"C. (CIRCUITS LCP-14, 16, 18). BETWEEN BCB AND PANEL LCP.
- 13 CIRCUIT NUMBERS.
- 14 EXISTING BRIDGE CABINET BCB.
- 15 EXISTING 1"C. WITH 3#10, #10G. BETWEEN BCB AND BCB. PROVIDE ADDITIONAL 4#8, #8G. IN EXISTING 1"C. AND CONNECT TO CIRCUITS LCP-1, LCP-3 AND LCP-5 FOR NEW SIGN LIGHT FIXTURES AT PIERS 9, 10 AND 11.
- 16 PROVIDE SIGN LIGHT FIXTURES (F2) FOR TYPE 3 WARNING SIGN - SEE DETAIL 5 ON SHEET 21. CONNECT TO CIRCUITS LCP-1 (P9) AND LCP-5 (P11).
- 17 PROVIDE SIGN LIGHT FIXTURES (F2) FOR TYPE 2 WARNING SIGN - SEE DETAIL 5 ON SHEET 21. CONNECT TO CIRCUIT LCP-3.
- 18 PROVIDE 2-2"C. (RGS) FROM NORTH ABUTMENT TO SOUTH ABUTMENT FOR FUTURE FIBER OPTIC CABLES. FOLLOW ROUTING OF BRIDGE LIGHTING CONDUITS. PROVIDE TWO PULLBOXES SPACED A MAXIMUM OF 400 FT. APART. PULLBOXES SHALL BE S.S. 20"L x 12"W x 6"D, NEMA 4. LOCATION OF PULLBOXES SHLL BE COORDINATED WITH ENGINEER.

ELECTRICAL LEGEND

- ⊗ EXISTING POLE MOUNT LIGHT FIXTURE
- ⊗ PROPOSED POLE MOUNT LIGHT FIXTURE
- E— EXPOSED CONDUIT ON BRIDGE
- EUG— UNDERGROUND CONDUIT

CONDUIT LEGEND

- ① 4#6, #6G., 1/4"C. (RGS) - BRIDGE LIGHTING
- ② 3#6, #6G., 1/4"C. (RGS) - BRIDGE LIGHTING
- ③ 2#6, #6G., 1"C. (PVC) - BRIDGE LIGHTING
- ④ 2#10, #10G., 3/4"C. (FLEX) - BRIDGE LIGHTING
- ⑤ 4#8, #8G., 1"C. (RGS) - SIGN LIGHTING
- ⑥ 3#8, #8G., 1"C. (RGS) - SIGN LIGHTING
- ⑦ 2#8, #8G., 3/4"C. (RGS) - SIGN LIGHTING



ENTIRE SHEET, 4/17/06, PJT

ISSUED	REVISION LETTER	REVISED BY	DATE

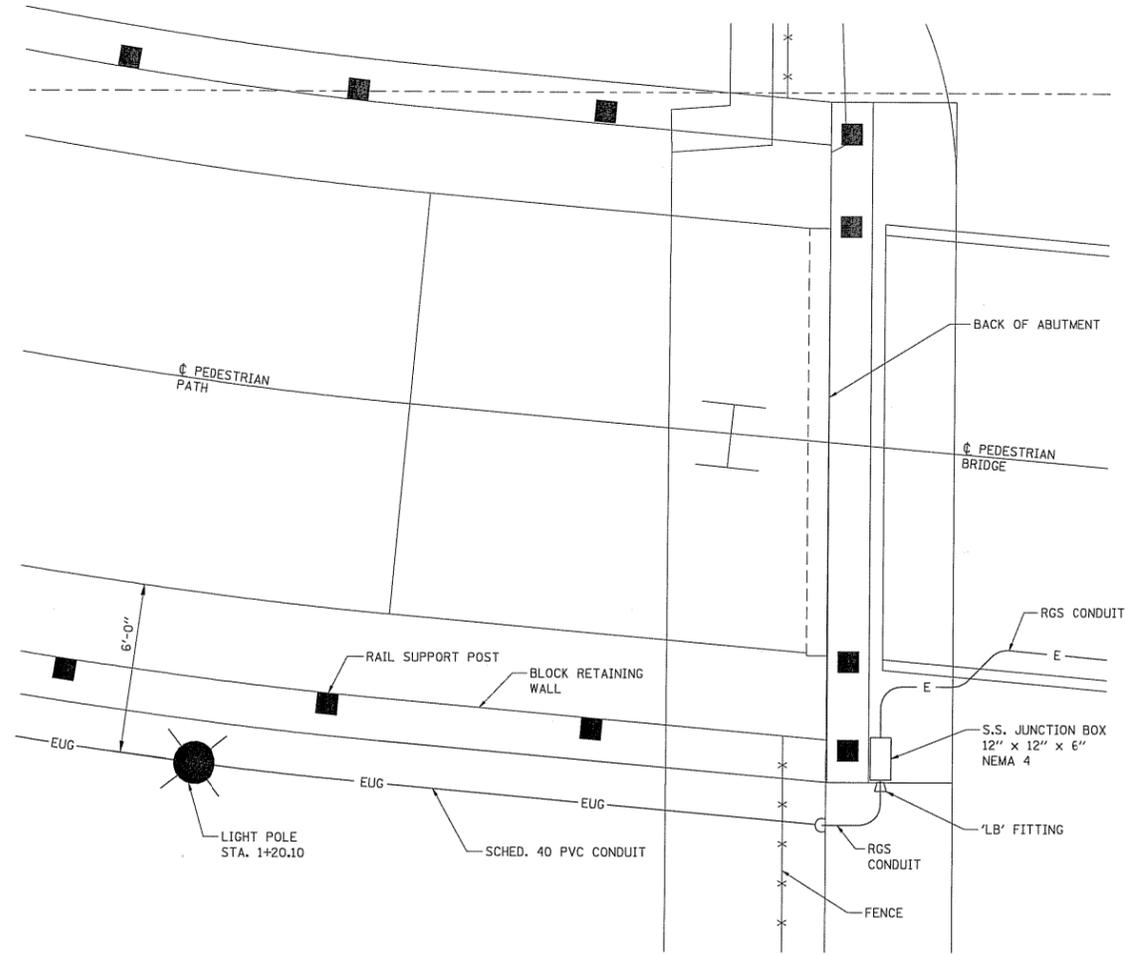
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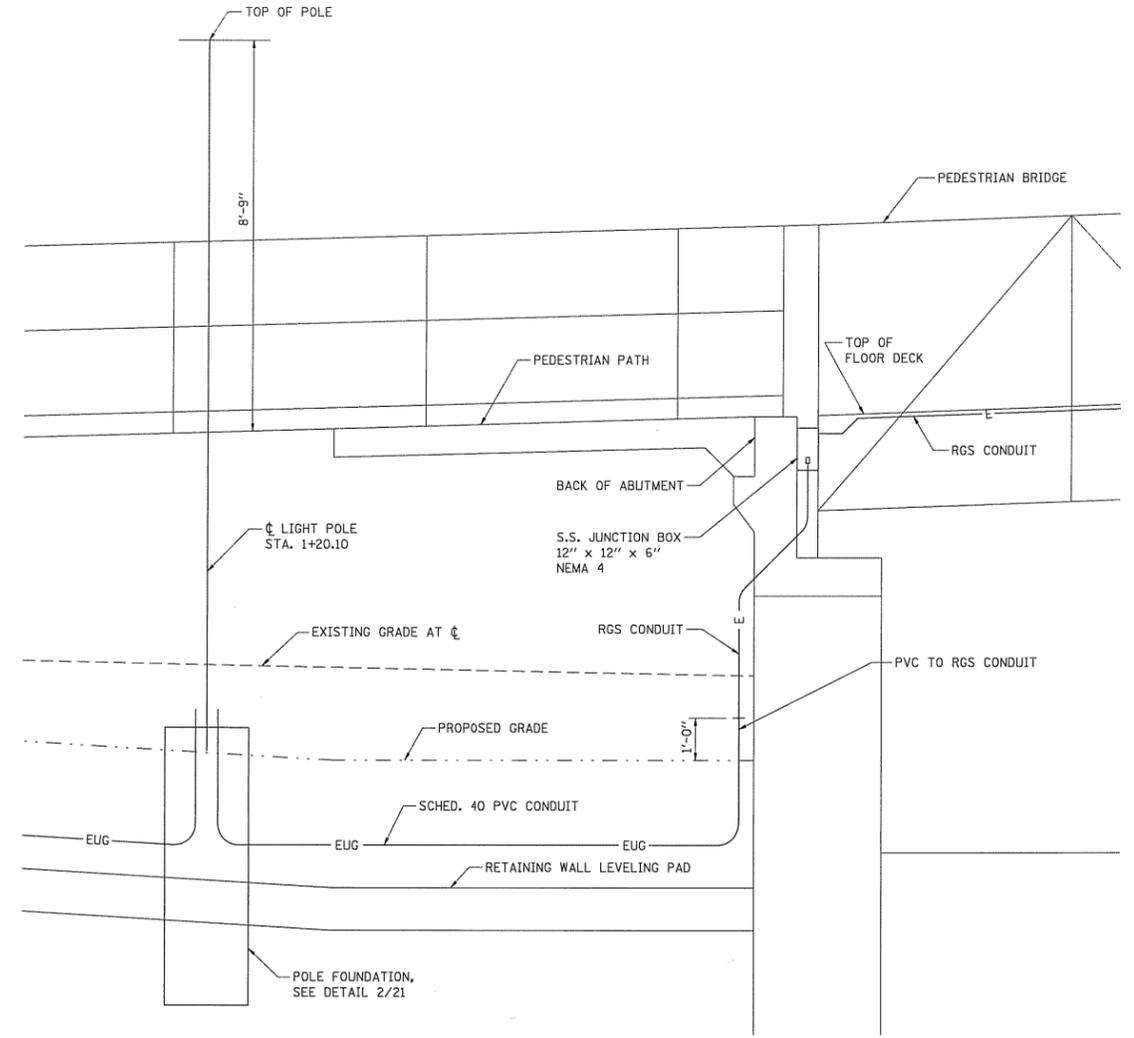
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Designed By: PJT
Checked By: RDN
Drawn By: ANC
Checked By: PJT

CPED07HLDGN



PEDESTRIAN PATH
BRIDGE ABUTMENT PLAN
SCALE: NONE



PEDESTRIAN PATH BRIDGE
ABUTMENT ELEVATION
SCALE: NONE



⚠️ ADDED SHEET, 4/17/06, PJT

ISSUED	REVISION LETTER	REVISED BY	DATE

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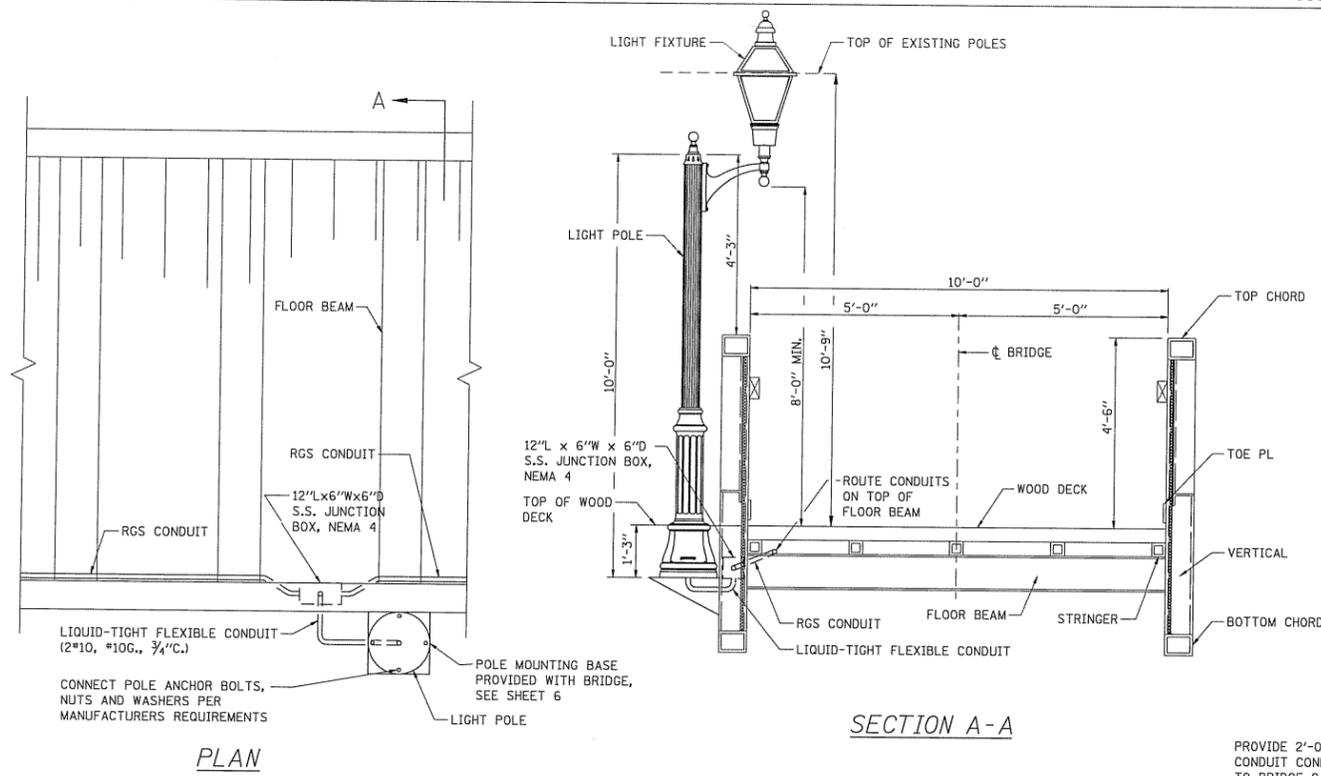
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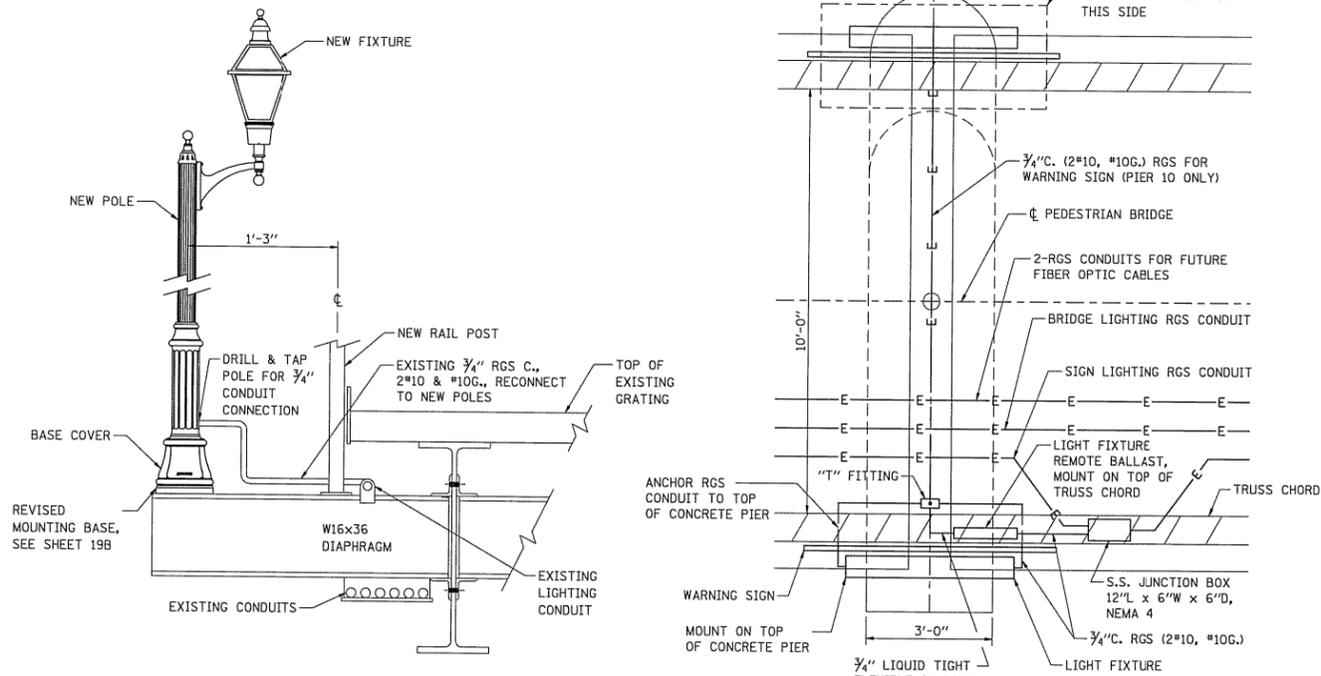
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Checked By: PJT
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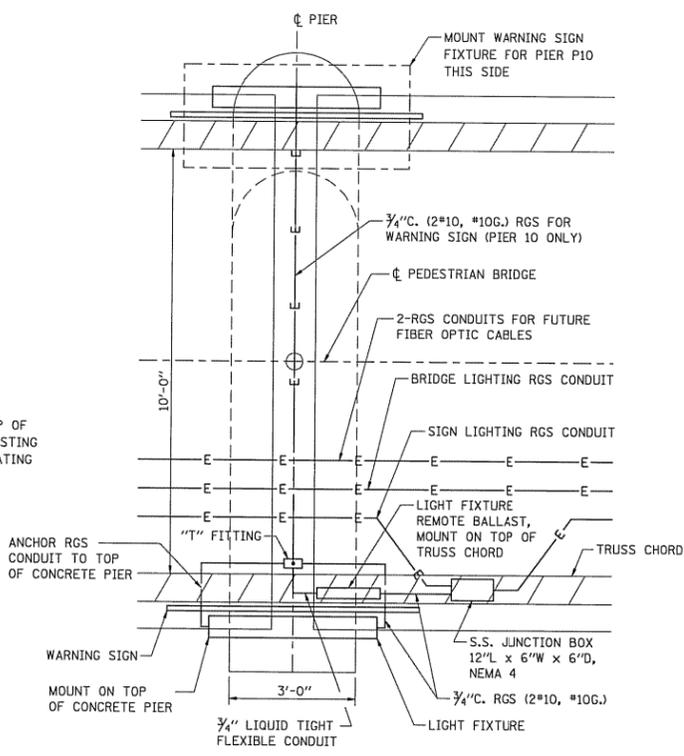


PLAN

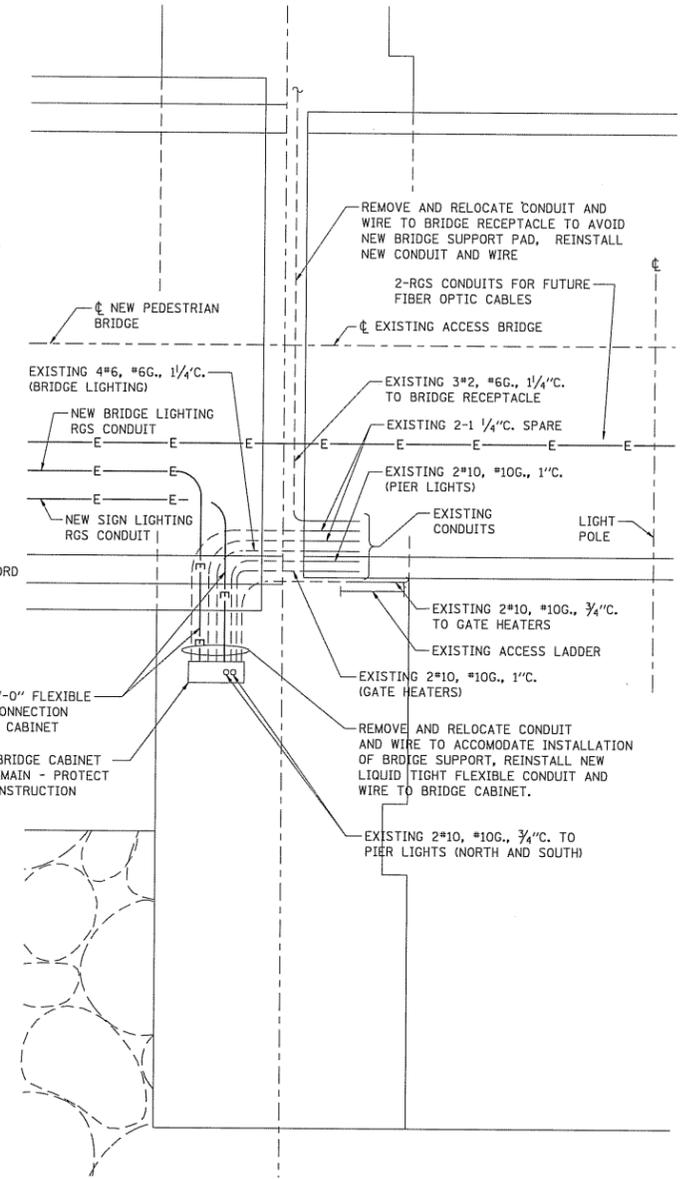
1
21 PEDESTRIAN BRIDGE
LIGHT FIXTURE MOUNTING DETAIL
SCALE: NONE



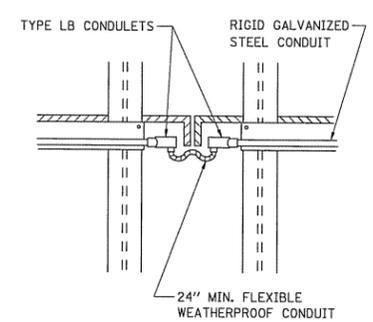
3
21 ACCESS BRIDGE
FIXTURE MOUNTING DETAIL
SCALE: NONE



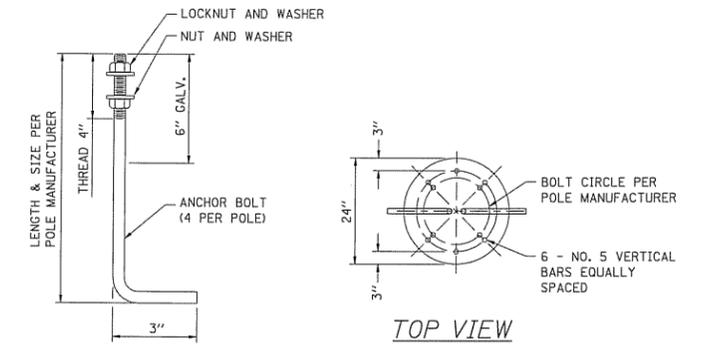
5
21 OGEE PIER PLAN (P9, P10, P11)
SCALE: NONE



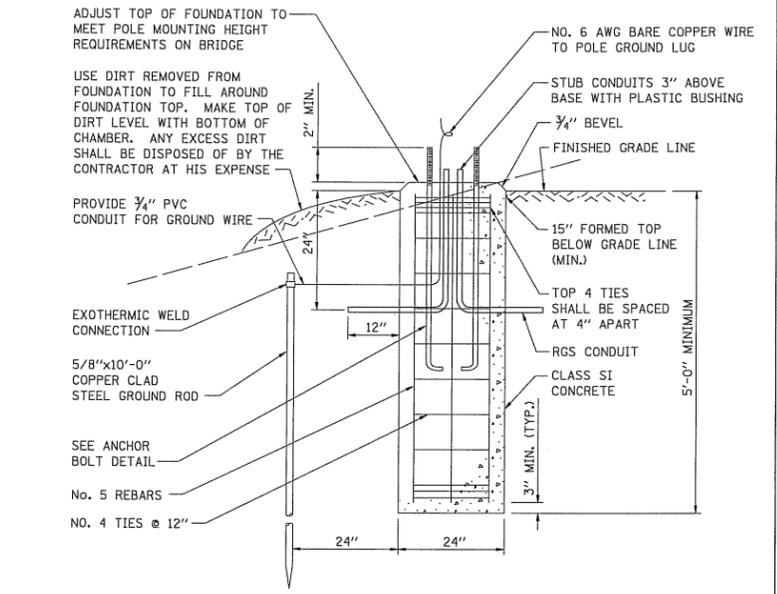
4
21 PLAN - PIER 8
SCALE: NONE



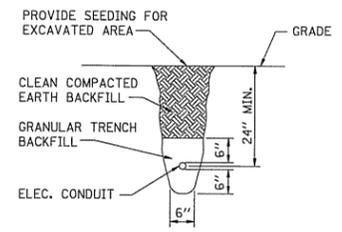
6
21 EXPANSION JOINT DETAIL
SCALE: NONE



ANCHOR BOLT



2
21 LIGHT POLE FOUNDATION DETAIL
SCALE: NONE



7
21 TRENCH DETAIL
SCALE: NONE

PAUL J. TURCZYK
LICENSED PROFESSIONAL ENGINEER
062-42185
11/30/07

ENTIRE SHEET, 4/17/06, PJT