



Kitsap County Public Works  
An APWA Accredited Agency



Prepared for: Kitsap County Public Works

06.18.20

# Taylor Road Bridge – Alternate Project Request

# TAYLOR ROAD BRIDGE

## ALTERNATIVE MAJOR MAINTENANCE PROJECT REQUEST

Prepared for:

Kitsap County Public Works

June 2020



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## 1. INTRODUCTION

In the winter of 2019, WSDOT Local Programs advertised a Call for Bridge Projects to be funded by the Local Bridge Program. On April 23, 2019, Kitsap County submitted a request for a bridge painting project for the Taylor Road Bridge, Structure ID 08702700 (Appendix A). The County was notified that this project had been selected to receive funding in a letter from Local Programs dated December 30, 2019 (Appendix B).

Kitsap County requests approval for a change in the scope of maintenance for the project, but at no additional cost to the bridge program. As detailed below, the proposed scope change will result in an enhanced maintenance project that will return the following additional advantages:

- A more durable solution for the Local Bridge Program expenditure.
- A more environmentally friendly solution.
- The unique opportunity to realize benefits from provisions put in place nearly 20 years ago.

## 2. ALTERNATE MAJOR MAINTENANCE PROJECT REQUEST

Kitsap County has performed additional project analysis since proposing the paint project and has identified an alternate maintenance project that we believe will provide increased value for the bridge funding. The County's proposal will increase the longevity of the existing bridge while decreasing future costs of maintenance for nearly the same overall project cost. As a result, Kitsap County requests Local Program's consideration and approval to use the paint project funding to remove the existing temporary steel girders and replace them with permanent precast, prestressed concrete girders. This alternative project is possible because of some unique circumstances and provisions put in place during the emergency replacement of an earlier Taylor Road Bridge.

In the winter of 2002, Kitsap County was forced to perform an emergency replacement of the prior Taylor Road Bridge after it failed during a high-water event. The loss of this important bridge cut off the only access to seven homes, a church, a school, and a community support center. This unexpected and expensive undertaking was performed with County Road Funds making project cost and duration major concerns to the County. Obtaining the necessary girders for the replacement bridge was complicated by both those concerns when it was determined that procurement of prestressed concrete girders would come at a premium to shorten the lead time and would still take 6 to 8 weeks for delivery.

A less expensive and quicker solution was found in the use of temporary prefabricated steel flatcar girders which took only about a week to acquire. As a result, the replacement bridge was fitted with removable concrete plinths to accept these temporary girders. The plan was always to replace these temporary girders with permanent precast concrete girders in the future, so temporary girder seats were bolted to the abutment to allow for their easy removal and for the installation of permanent concrete girders (Appendix C).

The plans for replacement of the temporary girders were delayed when disaster struck again only five years later. A disaster in the form of a high-water event resulting from 7.5” of rain in 24 hours, 2” more than the projected 100-year storm event. The bridge design performed well during this event, but the approach roadway was washed away. In response, the County performed a national-award winning emergency repair paid for with both FEMA and County Road Funds. While the federal funds were helpful, most of the damage was outside the roadway right of way and therefore not eligible for FEMA participation. These unexpected costs played a role in delaying any possibility of replacing the temporary girders with the proper permanent ones. In the meantime, the paint applied to the temporary girders by the fabricator was failing badly.

Fast forward twelve years and there is almost no protection left on the temporary steel girders, necessitating the request for the paint project funding mentioned above. As detailed in the funding request submittal, the Taylor Road Bridge crosses a salmon bearing stream with a viewing area for the spawning salmon directly adjacent to the bridge. The extreme environmental sensitivity of the site, along with the complicated girder configuration, adds to the cost of painting these girders in place and caused Kitsap County to wonder how this cost might compare with girder replacement.

An independent estimate revealed that a maintenance project to replace the temporary girders on the existing substructure would come in at a construction cost of approximately \$93K more (Appendix D) than the paint project in the current bid environment. However, by preparing an overall project estimate using industry standard percentages for the project cost extensions, the overall project costs are within approximately \$6.5K of the approved funding level. Kitsap County has budgeted for the potential costs over the approved funding level to ensure successful completion if the proposed project is approved. For nearly the same overall cost the project gains several long-term advantages.

The existing temporary girders have been fabricated with many connected elements that result in nooks and crevices that are currently filled with rust and debris (see photos, Appendix A). It is difficult to adequately clean and paint these areas and any rust left behind may cause paint deterioration, leading to early failure and the need for more frequent future paint projects. The installation of permanent precast concrete girders will result in an environmentally friendly, almost maintenance-free structure that should not burden the Local Bridge program for many years to come. In addition, the construction project itself will be more environmentally friendly, as a girder swap will help limit onsite work at the environmentally sensitive bridge location.

The existing girders have also shown themselves to be sensitive to condition issues and the resulting condition codes used in capacity calculations. If the temporary girders deteriorate to the point of section loss, the bridge will have to be load restricted. Kitsap County also plans to keep the temporary girders in their maintenance yard ready for emergency use if the need should arise. Based on the County’s history of storm related bridge and roadway failures, this will provide valuable insurance for the Kitsap County traveling public.

### **3. CONCLUSION**

The alternate major maintenance project proposed by Kitsap County will provide the following advantages over the original paint project for nearly the same overall project cost:

- Permanent prestressed concrete girders.
- Durable girders to ensure long term legal load capacity.
- Minimal maintenance future costs eliminating the need future paint projects and resulting funding requests to the Local Bridge Program.
- More environmentally friendly construction.
- More environmentally friendly lifecycle effect.
- Existing temporary girders can be used as an emergency bridge if necessary.



# APPENDIX A | Funding Request Submittal



# Federal Highway Bridge Program Project Application

Please send copies of the load ratings summary, accident data, any other pertinent information, and electronic photos (640 x 480 pixels minimum .JPG ) with this questionnaire by the due date specified in the cover letter.

<b>Agency Name:</b>	<b>Pick one of the following:</b>	
<b>Bridge Name:</b>	<b>Replacement Candidate</b>	<b>Bundled Project</b>
<b>Bridge Number:</b>	<b>Rehabilitation Candidate</b>	
<b>Contact Person:</b>	<b>Scour Mitigation</b>	
<b>Phone: ( ) -</b>	<b>Seismic Retrofit</b>	
<b>Sufficiency Rating:</b>	<b>Painting</b>	
<b>Structure ID:</b>	<b>Deck Repair</b>	

Brief Project Description (including bridge replacement type)

Proposed Length:                                      Width (Curb to Curb):                                      **Current Year:**

## Rehabilitation/Replacement/Seismic/Paint/Scour Projects

### PE Costs (approximately 25% of total)

(Soils, Environmental, Design Documents, Plans Preparation, etc.)

### Right of Way Costs

(Purchases, Relocation and Construction Easement)

### Construction Costs

(Environmental mitigation, approach costs (15%), structure costs, etc.)

Construction Engineering (18%)

Contingency (15%)

Mobilization (10%)

Inflation Factor (5% per year, based on projected Ad date below)

### Total Rehabilitation/Replacement/Preventative Maintenance Project Costs:\*

If a Rehabilitation, what would be the Replacement cost for that same structure (including PE, Right of Way, and Construction)?

Project Milestones	Scheduled		Scheduled	
Project Added to Local Agency TIP	M/Y	/	Right of Way Start	M/Y /
Project Added to Regional TIP	M/Y	/	Right of Way Complete	M/Y /
Project Added to STIP	M/Y	/	Geometric/30% Design Complete	M/Y /
Project Definition Begin PE	M/Y	/	General Plan/60% Design Complete	M/Y /
NEPA Kick Off	M/Y	/	Advertisement	M/Y /
Environmental Docs Approved	M/Y	/	Contract Awarded	M/Y /
<b>Provide comments below</b>			Open to Traffic	M/Y /



## Comments

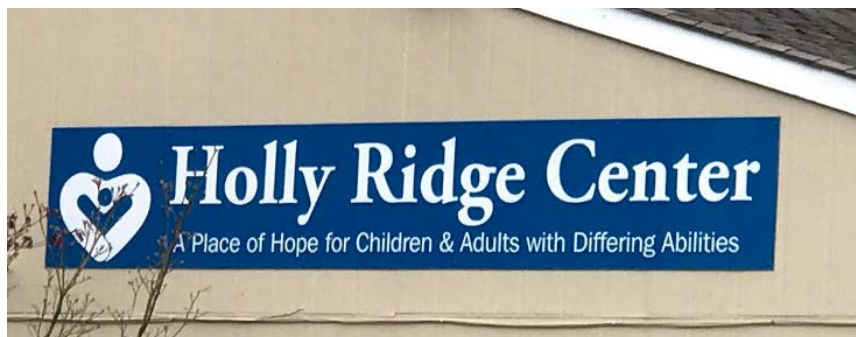


# Kitsap County

## Taylor Road Bridge

The Taylor Road Bridge provides the only access to:

- Seven (7) residents
- A church (Seventh Day Adventist Church)
- A school (Kitsap Adventist Christian School)
- Holly Ridge Center (Specialized programs for children and adults with differing abilities)



# BRIDGE INSPECTION REPORT

Status: Released  
 CD Guid: fc2a5425-6003-446d-a78b-8343e87970d3

Printed On: 4/22/2019  
 Release Date: 4/17/2019

Agency: Kitsap County  
 Program Mgr: Roman G. Peralta

<b>Br. No.</b> 25	<b>SID</b> 08702700	<b>Br. Name</b> TAYLOR ROAD BRIDGE
<b>Carrying</b> NW TAYLOR ROAD		<b>Route On</b> 19000 <b>Mile Post</b> 0.29
<b>Intersecting</b> CHICO CREEK		<b>Route Under</b> <b>Mile Post</b>

Inspector's Signature JMH      Cert # G1605      Cert Exp Date 5/18/2021      Co-Inspector's Signature PAD

				Inspections Performed:				
				Freq	Hrs	Date	Rep Type	
6	<input type="checkbox"/>	Structural Eval (1657)	39	<input type="checkbox"/>	Operating Tons (1552)	2	<input type="checkbox"/>	No Utilities (2675)
5	<input type="checkbox"/>	Deck Geometry (1658)	1.09	<input type="checkbox"/>	Op RF (1553)	1	<input type="checkbox"/>	Bridge Rails (1684)
9	<input type="checkbox"/>	Underclearance (1659)	24	<input type="checkbox"/>	Inventory Tons (1555)	1	<input type="checkbox"/>	Transition (1685)
6	<input type="checkbox"/>	Alignment (1661)	0.65	<input type="checkbox"/>	Inv RF (1556)	1	<input type="checkbox"/>	Guardrails (1686)
6	<input type="checkbox"/>	Deck Overall (1663)	5	<input type="checkbox"/>	Operating Level (1660)	0	<input type="checkbox"/>	Terminals (1687)
6	<input type="checkbox"/>	Superstructure (1671)	A	<input type="checkbox"/>	Open/Closed (1293)	2.00	<input type="checkbox"/>	Asphalt Depth (2610)
7	<input type="checkbox"/>	Substructure (1676)	8	<input type="checkbox"/>	Waterway (1662)	3.80	<input type="checkbox"/>	Design Curb Ht (2611)
9	<input type="checkbox"/>	Culvert (1678)	8	<input type="checkbox"/>	Scour (1680)	36.2	<input type="checkbox"/>	Bridge Rail Ht (2612)
7	<input type="checkbox"/>	Chan/Protection (1677)		<input type="checkbox"/>	Soundings Flag (2693)	2002	<input type="checkbox"/>	Year Built (1332)
N	<input type="checkbox"/>	Pier/Abut/Prot (1679)		<input type="checkbox"/>	Revise Rating (2688)	0	<input type="checkbox"/>	Year Rebuilt (1336)
6	<input type="checkbox"/>	Drain Cond (7664)		<input type="checkbox"/>	Photos Flag (2691)	Y	<input type="checkbox"/>	Subj to NBIS (2614)
1	<input type="checkbox"/>	Drain Status (7665)		<input type="checkbox"/>	Measure Clrnc (2694)			
N	<input type="checkbox"/>	Deck Scaling (7666)	9	<input type="checkbox"/>	Sdwk Cond (7673)			
0	<input type="checkbox"/>	Scaling Pct (7667)	9	<input type="checkbox"/>	Paint Cond (7674)			
0	<input type="checkbox"/>	Deck Rutting (7669)	6	<input type="checkbox"/>	Approach Cond (7681)			
0	<input type="checkbox"/>	Exposed Rebar (7670)	9	<input type="checkbox"/>	Retaining Wall (7682)			
8	<input type="checkbox"/>	Curb Cond (7672)	9	<input type="checkbox"/>	Pier Prot (7683)			
				Alpha Span Type: <input style="width: 100%;" type="text"/>				
				Sufficiency Rating 74.48				
				Low Risk				

Freq	Hrs	Date	Rep Type
24	1.5	3/4/2019	Routine
			Fract Crit
			UW
			Special
			Interim
			UWI
			Damage
			PRM Safety
			SEC Safety
			Condition
			Short Span
			In Depth
			Geometric

BMS Elements							
Element	Element Description	Total	Units	State 1	State 2	State 3	State 4
27	Steel Orthotropic Deck	2,137	SF	2,137	0	0	0
92	Steel Welded Girder	2,460	LF	2,460	0	0	0
215	Concrete Abutment	73	LF	73	0	0	0
310	Elastomeric Bearing	3	EA	3	0	0	0
313	Fixed Bearing	3	EA	3	0	0	0
322	Bridge Impact	2	EA	1	0	1	0
330	Metal Bridge Railing	164	LF	164	0	0	0
402	Open Concrete Joint	53	LF	53	0	0	0
800	Asphaltic Concrete (AC) Overlay	2,173	SF	2,149	24	0	0
901	Red Lead Alkyd Paint System	19,000	SF	0	0	3,800	15,200

Notes
3 Superstructure is noted as a Railcar Retrofit in the as-built plans. Consists of three rail car girders retrofit to a T-section configuration. See attached plans.

**BRIDGE INSPECTION REPORT**

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Agency: Kitsap County  
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<b>Br. No.</b> 25	<b>SID</b> 08702700	<b>Br. Name</b> TAYLOR ROAD BRIDGE
<b>Carrying</b> NW TAYLOR ROAD		<b>Route On</b> 19000 <b>Mile Post</b> 0.29
<b>Intersecting</b> CHICO CREEK		<b>Route Under</b> <b>Mile Post</b>

**Notes (Continued)**

27	Could not visually inspect deck due 2" overlay. Surface rust [minor] is evident at deck soffet with some surface flaking starting to appear throughout. There is a pothole and asphalt deterioration in the westbound lane but no indication of causes noted in the Soffet.  The deck was previously coded as Corrugated or Other Steel System. The as-built plans show steel plate deck stiffened with longitudinal steel stringers. No previous repairs notes and none currently called for.
92	3 - steel welded girder system, 1 girder per each railroad car. Surface rust showing throughout superstructure and is accelerating due to overall paint failure. No repairs, pitting, or cracking evident, no measurable section loss noted. The deterioration is limited to the coating system at this time therefore the entire quantity for girders has been upgraded to CS 1.
215	Good condition - no cracking found. West pile cap was repaired after the 12-3-2007 flooding that washed out under the cap exposing the piles. Bottom side of west cap was formed and 32 c.y. of commercial concrete was poured with additional rebar added. See file for pictures of repair. Rock armor beginning to slough East side (minor) under bridge.
310	Good condition - no squashing or rotation movement found.
313	Good condition - no vertical or horizontal movement found. Some hairline cracking in the grout pads at east pile cap is evident.
322	Settlement starting to show at west bridge joint [less than 1/2"].
330	Good condition - painted steel, no traffic damage.
402	Fair condition. West joint needs to be re-sealed.
800	Fair condition - no wheel rutting. Pothole in Westbound lane needs to be addressed. Pothole upgraded to CS 2 for asphalt patch.
901	Girder steel was previously noted as weathering steel because of the lack of paint. There appears to be a paint system that is failing overall. The original plans required a paint system of Red Oxide shop primer and a Alkyd Enamel topcoat. The paint is either missing or failing and peeling over the majority of the girders and steel deck soffit. Most paint is missing altogether with a small percentage that does exists is in distress.
1671	<b>SUPERSTRUCTURE CONDITION:</b> The Superstructure Condition code was raised from 5 to 6 based on Table 2-C-46 of the WSBIM. There is no measureable section loss but there is minor deterioration due to protective coating failure.
1680	After the 12-3-2007 flood event the west pile cap was reinforced with additional concrete and upstream channel was reconstructed with a designed plan from KCM Tetra Tech. Need to moniotor stream flows during high flow events.

**Repairs**

Repair No	Pr	R	Repair Descriptions	Noted	Maint	Verified
526	3	J	800 - Reseal West bridge Joint.	3/4/2015		
527	2	J	Repair pothole in Westbound lane.	3/7/2017		
528	3	J	Clean drain at NE corner.	3/7/2017		

**Inspections Performed and Resources Required**

Report Type	Date	Freq	Hrs	Insp	CertNo	Coinsp	Note
Routine	3/4/2019	24	1.5	JMH	G1605	PAD	Routine inspection 2019.
Feature	8/1/2018		0.5	GDG	G0014		A field inspection was made to check the BMS Condition State quantities for the steel girders because of the effect on an ongoing load rating update.
Informational	3/24/2019			GDG	G0014		Updated Feature Intersected.

Bridge ID	1001 Structure ID	2009 Bridge Number	2132 Bridge Name	1019 Owner	1286 Cust	1021 County	2023 City	1156 Location	2181 Section	2183 Township	2185 Range	1188 Latitude	1196 Longitude
	08702700	25	TAYLOR ROAD BRIDGE	02	02	18	0000	0.29W NORTHLAKE WAY NW	08	24	01E	47° 35' 09.70"	122° 42' 59.20"

Facilities	1232 Feature Intersected	1256 Facilities Carried	Region	1274 Leg1	7281 Leg2	7283 FIPS	1276 Toll	1285 Para	1288 Temp	1289 OPC	1293 NRHP	1292 HAER	2295 LRHP	7296 LRHP	Printed Date	Sufficiency Rating:	Item 2710 SR	Item 2711 SD/FO
	WILDCAT CREEK	NW TAYLOR ROAD	OL	35	0	22118	3	N		A	4				4/22/2019	74.48		
	CHICO CREEK															Low Risk		

Layout	1332 Year Built	1336 Year Rebuilt	1340 Bridge Length	2346 NBIS Length	1348 Maximum Span Length	1352 Lanes On	1356 Curb to Curb Deck Width	1360 Out to Out Deck Width	1364 Sidewalk Left	1367 Sidewalk Right	1310 Skew	1312 Flared	1370 Min Vert Over Deck	1374 Min Vert Under	1378 Vert Code	1379 Min Lat Under Right	1382 Lat Code	1383 Min Lat Under Left	1386 Nav Ctl Code	1387 Nav Vert Clear	1390 Nav Horiz Clear	1394 Nav Vert Lift Clear	1291 Median	1397 Appr Rdwy
	2002	0	82		79	2	26.5	27.3	0.0	0.0	0	N	99' 99"	00' 00"	N	0.0	N	0.0	0	0	0		0	25

Crossing	1432 On Under	1433 Hwy Class	1434 Service Level	1435 Route Number	2440 Milepost	1445 ADT	1451 Truck %	1453 Year of ADT	1457 Future ADT	1463 Future ADT Year	1467 Linear Referencing System	1477 LRS Sub	1469 LRS Milepost	2410 NBI Bridge	7479 Fed Aid Route #	1483 NHS	1484 BHS	1485 STRAH	1486 FLH	1487 Funct. Class	1489 NTN	1490 Lane Use Direction	1354 Lanes Under	1491 Horizontal Clearance Route Dir	1495 Horizontal Clearance Reverse Dir	1499 Max Vert Clearance Route	1413 Detour	2441 Speed Limit
	1	4	1	19000	0.29	375	6	2017	413	2037				Y	0000	0	0	0	0	09	N	2	0	29' 03"			99	25

Design	1532 Main Span Material	1533 Main Span Design	1535 Appr Span Material	1536 Appr Span Design	1538 Number Main Spans	1541 Number Appr Spans	1544 Service On	1545 Service Under	1546 Deck Type	1547 Wearing Surface	1548 Membrane	1549 Deck Protect	1550 Design Load Code	1551 Oper Rating Method	1552 Oper Rating Tons	1553 Oper Rating Factor	1554 Inv Rating Method	1555 Inv Rating Tons	1556 Inv Rating Factor	1585 Border State Cd	1588 Border Pct	1590 Border Structure ID	7565 Fed Aid Project No	7557 Design Exemption
	3	07	0	00	1	0	1	5	5	6	0	0	5	6	39	1.09	6	24	0.65					

Load Rating	2587 Type 3	2588 Type 3S2	2589 Type 3-3	2590 NRL	2591 SHV 4	2592 SHV 5	2593 SHV 6	2594 SHV 7	2597 EV 2	2598 EV 3	2595 OL 1	2596 OL 2
	1.52	1.25	1.23	0.99	1.39	1.24	1.14	1.06	1.30	0.88	1.00	0.66

Waterway/ Prop Imp	7832 Water Type	7833 Pin Inrt	7834 Flood Control	7835 Flood Hist	7836 Scour Matrl	7837 Stmbd Stablr	7838 Substr Stablr	7839 Wtrwy Obstr	7840 Stmbd Stablr	7841 Stmbd Anabrn	1844 Piers In Watr	1846 Type Work	1846 Meth	1847 Stru Imp Length	2853 Roadway Width	2860 Cost Per SF	1867 Struct Cost	1873 Rdwy Cost	2870 Engr Cost	1861 Total Cost	1879 Estmt Year	2883 Prop Imp Cost Calc
	F	A	N	H	3	3	N	D	N	0	38	1	82	27	400	443	89	354	886	2014	Y	

Inspection Report Types	2920 Inspection	1990 Date	2646 Inspector	2649 Cert No	2654 Co-Inspector
Routine		3/4/2019	JMH	G1605	PAD
Fracture Critical					
Special Feature					
Underwater					
UW Interim					

Inspection	Date	Inspector	Cert No	Co-Inspector
Interim				
In Depth				
Damage				
PRM Safety				
SEC Safety				

Inspection	Date	Inspector	Cert No	Co-Inspector
Condition				
Short Span				
Geometric				
Info	3/24/2019	GDG	G0014	
Inventory				

# BRIDGE INSPECTION REPORT

Status: Work  
CD Guid: 2831d7ab-b00c-44c8-8da7-9a73ac1020cd

Printed On: 4/3/2019  
Release Date:

Agency: Kitsap County  
Program Mgr: Roman G. Peralta

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<b>Intersecting</b> CHICO CREEK		<b>Route Under</b>	<b>Mile Post</b>	

### Deck View

Funding  
Photo Type: (none)  
Orientation:  
Date: 3/24/2019  
Repairs:  
Deck View



### Elevation View

Funding  
Photo Type: (none)  
Orientation: SE  
Date: 3/24/2019  
Repairs:  
Elevation View



# BRIDGE INSPECTION REPORT

Status: Work  
CD Guid: 2831d7ab-b00c-44c8-8da7-9a73ac1020cd

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<b>Intersecting</b> CHICO CREEK				

**Paint Failure on Girder/Deck Soffit**

Funding  
Photo Type: (none)  
Orientation: E  
Date: 3/24/2019  
Repairs:  
Paint Failure on Girder/Deck Soffit



**Superstructure View**

Funding  
Photo Type: (none)  
Orientation: UP  
Date: 3/24/2019  
Repairs:  
Superstructure View



**BRIDGE INSPECTION REPORT**

Status: Work  
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**Br. No. 25**                      **SID 08702700**

**Br. Name TAYLOR ROAD BRIDGE**

**Carrying**    NW TAYLOR ROAD

**Route On**    19000

**Mile Post** 0.29

**Intersecting**    CHICO CREEK

**Route Under**

**Mile Post**

**Close Up Paint Failure with Early Stage Section Loss**

Funding  
Photo Type: (none)  
Orientation:  
Date: 3/24/2019  
Repairs:  
Close Up Paint Failure with Early Stage Section Loss



**Close Up Paint Failure**

Funding  
Photo Type: (none)  
Orientation: UP  
Date: 3/24/2019  
Repairs:  
Close Up Paint Failure





## BRIDGE RATING SUMMARY

Bridge Name: TAYLOR ROAD BRIDGE  
 Bridge Number: 25  
 SID Number: 08702700  
 Span Types: 1 Span Built-up Steel Girder  
 Bridge Length: 82'-0"  
 Design Load: HS20  
 Rated By: VP  
 Checked By: KM  
 Date: 8/21/2018



EXPIRES 5/18/19

Inspection Report Date	8/1/2018	Superstructure Condition	5
Overlay Thickness	2.0" ACP	Substructure Condition	7
Rating Method	LFR by rating factor	Deck Condition	6

Truck	RF (INV)	RF (OPR)	Controlling Point
AASHTO-1	<u>0.91</u>	<u>1.52</u>	Shear at Girder Support
AASHTO-2	<u>0.75</u>	<u>1.25</u>	Shear at Girder Support
AASHTO-3	<u>0.74</u>	<u>1.23</u>	Shear at Girder Support
NRL	<u>0.59</u>	<u>0.99</u>	Shear at Girder Support
EV2	<u>0.78</u>	<u>1.30</u>	Shear at Girder Support
EV3	<u>0.53</u>	<u>0.88</u>	Shear at Girder Support
OL-1	<u>0.60</u>	<u>1.00</u>	Shear at Girder Support
OL-2	<u>0.40</u>	<u>0.66</u>	Shear at Girder Support

NBI Rating	RF	Tons (US)	Controlling Point
Inventory (HS-20)	<u>0.65</u>	<u>23.51</u>	Shear at Girder Support
Operating (HS-20)	<u>1.09</u>	<u>39.24</u>	Shear at Girder Support

SHV Rating	RF	Tons (US)	Controlling Point
SU4 (GVW = 54K)	<u>1.39</u>	<u>37.53</u>	Shear at Girder Support
SU5 (GVW = 62K)	<u>1.24</u>	<u>38.44</u>	Shear at Girder Support
SU6 (GVW = 69.5K)	<u>1.14</u>	<u>39.62</u>	Shear at Girder Support
SU7 (GVW = 77.5K)	<u>1.06</u>	<u>41.08</u>	Shear at Girder Support

**Remarks:** Bridge does not require posting.



### TAYLOR BRIDGE PAINTING COST ESTIMATE

STD. ITEM	ITEM DESCRIPTION	MEAS. UNIT	QUANTITY	UNIT PRICE	COST
4468	CLEANING AND PAINTING BRIDGE	L.S.	1	379,988	\$ 379,988
4469	CONTAINMENT OF ABRASIVES	L.S.	1	94,997	\$ 94,997
4470	TESTING AND DISPOSAL OF CONTAINMENT WASTE	EST.	1	20,000	\$ 20,000
4487	CLEANING, SEALING AND CAULKING PACK RUST	L.F.	1000	15	\$ 15,000
6490	EROSION WATER POLLUTION CONTROL	EST.	1	10,000	\$ 10,000
6630	HIGH VISIBILITY FENCE	L.F.	1000	2	\$ 2,000
7480	ROADSIDE CLEANUP	EST.	1	10,000	\$ 10,000
7500	FIELD OFFICE BUILDING	L.S.	1	10,000	\$ 10,000
7570	HEALTH AND SAFETY PLAN	L.S.	1	5,000	\$ 5,000
7736	SPCC PLAN	L.S.	1	5,000	\$ 5,000
	WILDLIFE MANAGEMENT	L.S.	1	5,000	\$ 5,000
	SUBTOTAL				\$ 556,985
	MOBILIZATION	L.S.	1	\$ 55,699	\$ 55,699
	<b>TOTAL</b>				<b>\$ 556,985</b>

**ASSUMPTIONS:**

AREA OF PAINTED STEEL ASSUMED IS 19,000 SF  
 NO FUTURE COST ESCALATION DUE TO INFLATION IS ASSUMED



## APPENDIX B | Funding Approval Letter





December 30, 2019

Mr. Andrew B. Nelson  
Public Works Director  
Kitsap County  
614 Division Street, MS 26  
Port Orchard, Washington 98366

RECEIVED

JAN 07 2020

KITSAP COUNTY PUBLIC WORKS  
ADMINISTRATION

**Taylor Road Nelson Bridge  
FFY 2019 Local Bridge Program Selections  
Federal Funding**

Dear Mr. Nelson:

WSDOT is pleased to advise you that the above mentioned bridge project was recently selected to receive funding through the Local Bridge Program. The federal funding is limited to the amount shown below:

**Taylor Road Nelson Bridge**

**\$1,001,440**

**Scope: Paint**

*NOTE: This project requires 13.5 percent local match. If construction is authorized by December 2022, the project is eligible for 100 percent federal funding for eligible costs. Preventative maintenance projects are limited to a maximum \$3 million.*

In order to meet state and federal requirements, the following are required:

- Project expenditures incurred before receiving notice from Local Programs of federal fund authorization are not eligible for reimbursement.
- Please refer to the Local Programs web page for detailed information, including: (<http://www.wsdot.wa.gov/localprograms/>)
  - ✓ Local Agency Guidelines (LAG) manual for the requirements regarding programming, authorization, reimbursement, etc.;
  - ✓ Projects utilizing federal funds must be included in your current Transportation Improvement Program (TIP) as a complete programmed project. Once your TIP amendment is approved, WSDOT will amend the Statewide Transportation Improvement Program (STIP);
  - ✓ Funding and billing forms;
  - ✓ Quarterly Project Reporting is required to be completed by the end of March, June, September, and December each year. To access the database you will need an account name and password. Your account name is **Kitsap Co.** and your password is **KitCo252**. The password is case sensitive.
- If the project is not actively pursued, or becomes inactive (23 CFR 630), the project is at risk of being cancelled, funds repaid and reprogrammed.
- FHWA requires that all projects are ADA compliant upon completion or the federal funds must be repaid.

Andrew B. Nelson  
Public Works Director  
Kitsap County  
Taylor Road Nelson Bridge  
December 30, 2019

As a reminder, Local Programs requires all agencies to submit monthly progress billings to ensure timely reimbursement of eligible federal expenditures. Also, it is critical that your agency adhere to the project schedule previously provided to ensure the delivery of the local federal program.

For assistance please Bryan Dias, your Region Local Programs Engineer, at 360.357.2631.

Sincerely,



Kathleen B. Davis  
Director  
Local Programs

KBD:st:sas

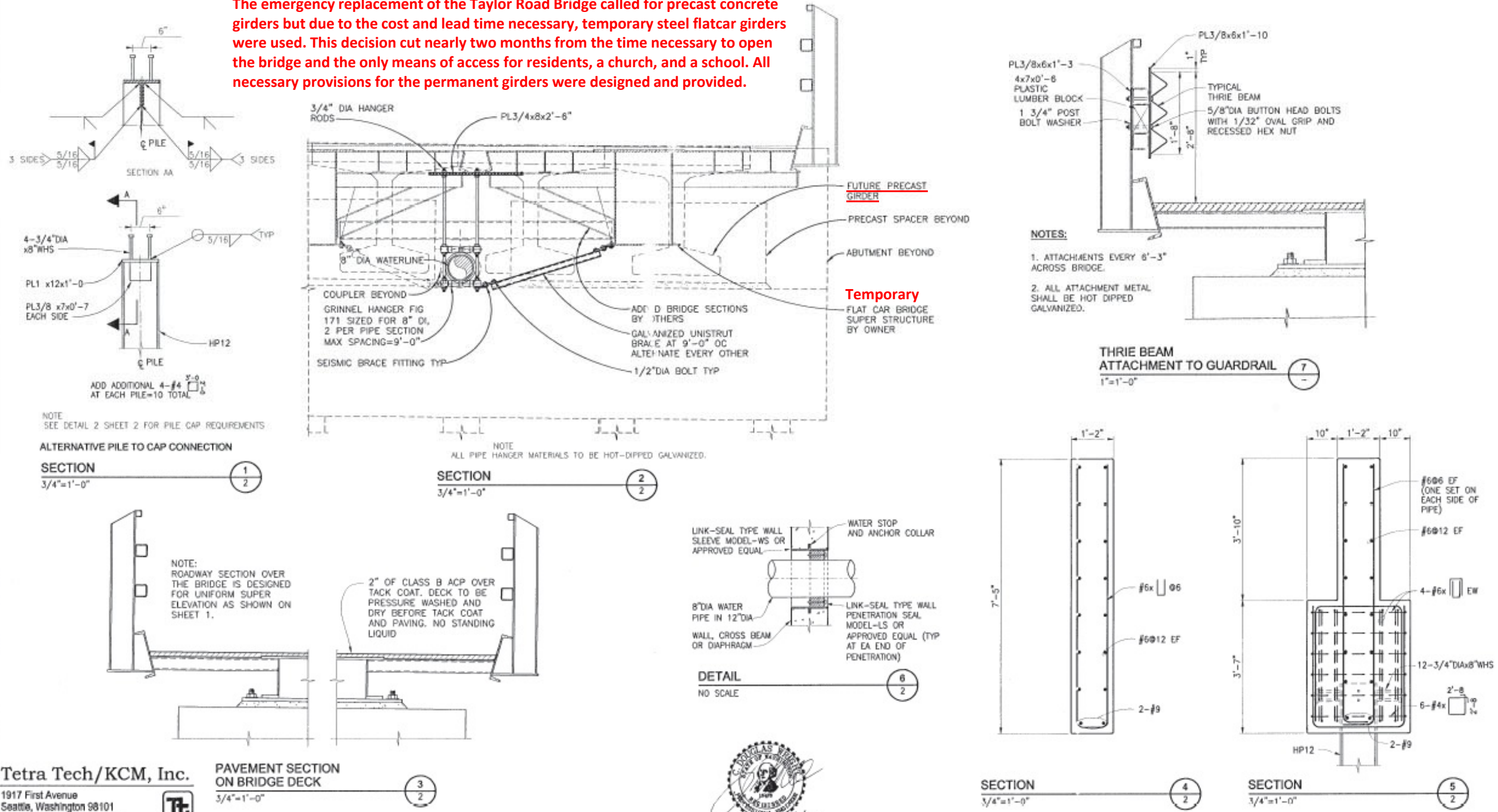
cc: Kelly McGourty, Transportation Director, PSRC  
Bryan Dias, Olympic Region Local Programs Engineer, MS 47440



# APPENDIX C | As-built Plan Sheets



The emergency replacement of the Taylor Road Bridge called for precast concrete girders but due to the cost and lead time necessary, temporary steel flatcar girders were used. This decision cut nearly two months from the time necessary to open the bridge and the only means of access for residents, a church, and a school. All necessary provisions for the permanent girders were designed and provided.



**Tetra Tech/KCM, Inc.**  
1917 First Avenue  
Seattle, Washington 98101  
206-443-5300 Fax: 206-443-5372

**PAVEMENT SECTION ON BRIDGE DECK**  
3/4"=1'-0"

Revisions			
Number	Description	Date	Initials

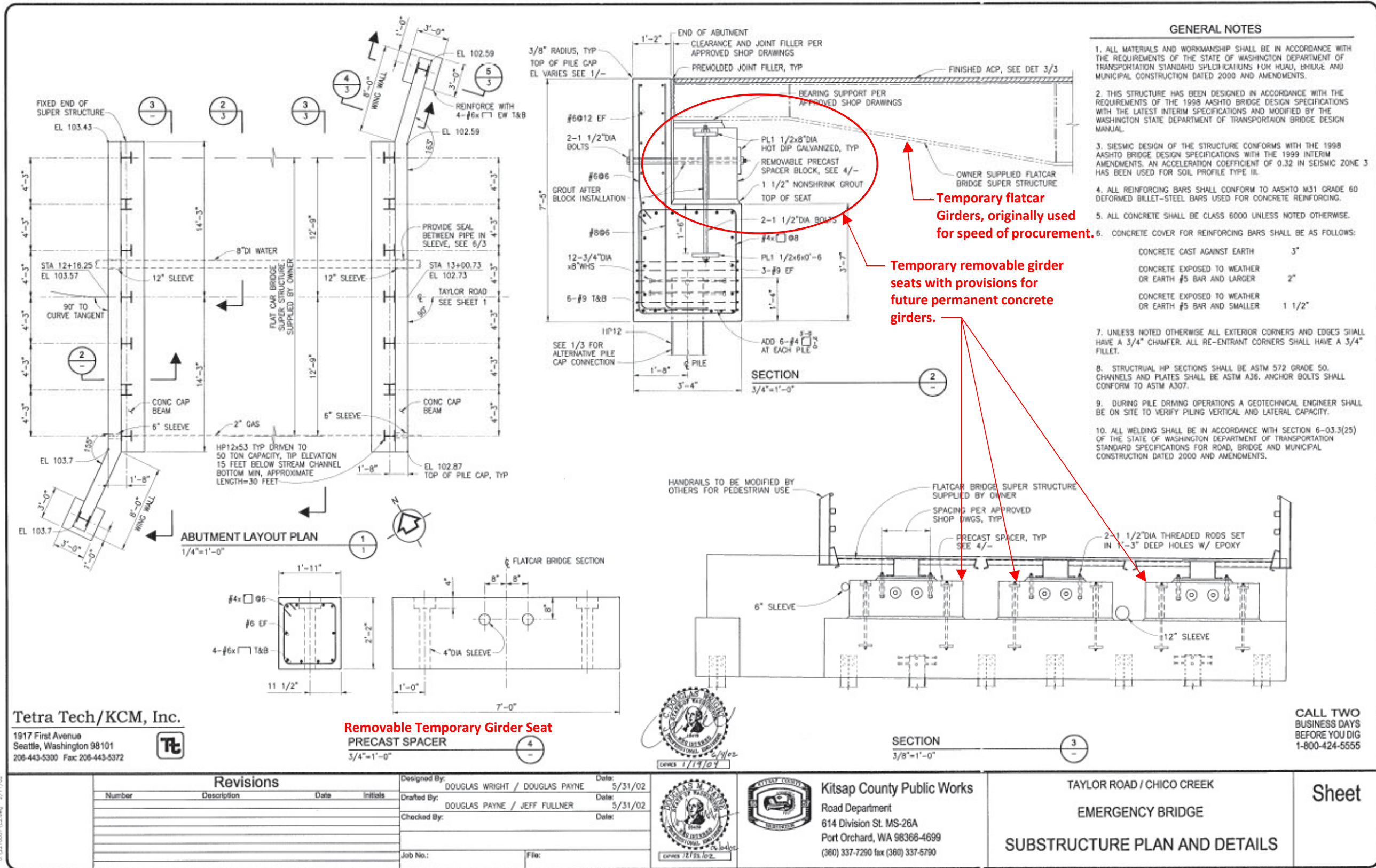
Designed By: DOUGLAS WRIGHT / DOUGLAS PAYNE Date: 5/31/02  
 Drafted By: DOUGLAS PAYNE / JEFF FULLNER Date: 5/31/02  
 Checked By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Job No.: \_\_\_\_\_ File: \_\_\_\_\_



**Kitsap County Public Works**  
Road Department  
614 Division St. MS-26A  
Port Orchard, WA 98366-4699  
(360) 337-7290 fax (360) 337-5790

TAYLOR ROAD / CHICO CREEK  
EMERGENCY BRIDGE  
SECTIONS AND DETAILS

Sheet



Tetra Tech/KCM, Inc.  
 1917 First Avenue  
 Seattle, Washington 98101  
 206-443-5300 Fax: 206-443-5372

**Removable Temporary Girder Seat  
 PRECAST SPACER**  
 3/4"=1'-0"

CALL TWO BUSINESS DAYS BEFORE YOU DIG  
 1-800-424-5555

Revisions			
Number	Description	Date	Initials

Designed By: DOUGLAS WRIGHT / DOUGLAS PAYNE Date: 5/31/02  
 Drafted By: DOUGLAS PAYNE / JEFF FULLNER Date: 5/31/02  
 Checked By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Job No.: \_\_\_\_\_ File: \_\_\_\_\_

**Kitsap County Public Works**  
 Road Department  
 614 Division St. MS-26A  
 Port Orchard, WA 98366-4699  
 (360) 337-7290 fax (360) 337-5790

TAYLOR ROAD / CHICO CREEK  
 EMERGENCY BRIDGE  
 SUBSTRUCTURE PLAN AND DETAILS

Sheet

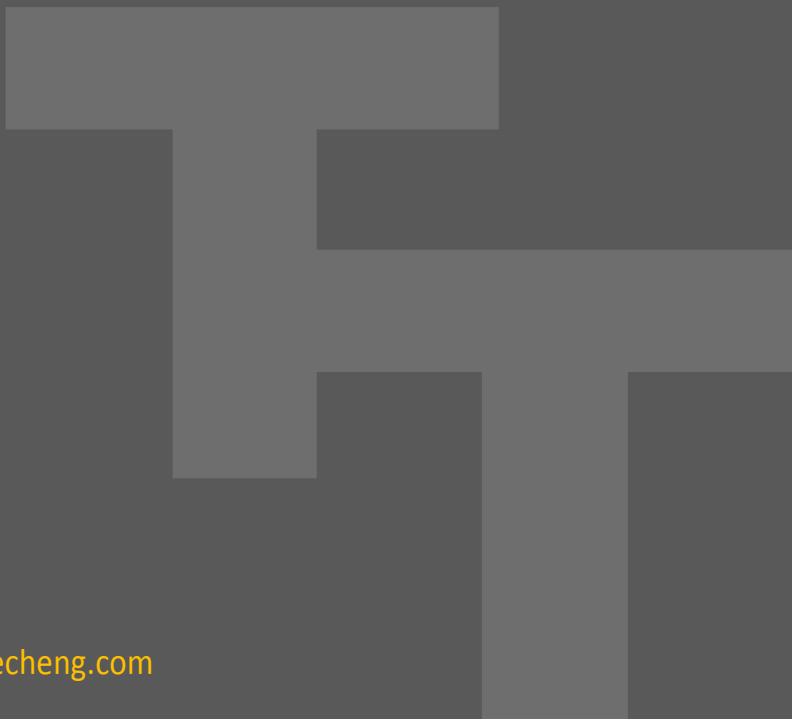


APPENDIX D | PS Concrete Girder Estimate



## TAYLOR DECK BULB-T SUPERSTRUCTURE COST ESTIMATE

STD. ITEM	ITEM DESCRIPTION	MEAS. UNIT	QUANTITY	UNIT PRICE	COST
	DEMO SUPERSTRUCTURE	LS	1	126,280	\$ 126,280
	DECK BULB-T GIRDERS	LF	492	500	\$ 246,000
	HMA OVERLAY	TON	100	350	\$ 35,000
	CONCRETE TRAFFIC BARRIERS	LF	170	200	\$ 34,000
	TRAFFIC CONTROL	LS	1	25,000	\$ 25,000
6490	EROSION WATER POLLUTION CONTROL	EST.	1	5,000	\$ 5,000
6630	HIGH VISIBILITY FENCE	L.F.	1000	4	\$ 4,000
6806	PAINT LINE	L.F.	1000	2	\$ 2,000
6913	PORTABLE CHANGEABLE MESSAGE SIGN	L.S.	2000	8	\$ 16,000
6971	PROJECT TEMPORARY TRAFFIC CONTROL	L.S.	1	15,000	\$ 15,000
7003	TYPE B PROGRESS SCHEDULE	L.S.	1	5,000	\$ 5,000
7400	TRAINING	HR	500	20	\$ 10,000
7480	ROADSIDE CLEANUP	EST.	1	10,000	\$ 10,000
7500	FIELD OFFICE BUILDING	L.S.	1	25,000	\$ 25,000
7569	NO TRASSPASSING SIGN	EA	2	1,000	\$ 2,000
7570	HEALTH AND SAFETY PLAN	L.S.	1	5,000	\$ 5,000
7736	SPCC PLAN	L.S.	1	5,000	\$ 5,000
	WILDLIFE MANAGEMENT	L.S.	1	5,000	\$ 5,000
4306	ELASTOMERIC BEARING PAD - SUPERSTR.	EACH	14	3,000	\$ 42,000
4322	CONC. CLASS 4000 FOR BRIDGE (GIRDER STOPS AND END DIAPHRAGMS)	C.Y.	15.0	2,200	\$ 33,000
	SUBTOTAL				\$ 650,280
	MOBILIZATION	LS	1	65,028	\$ 65,028
	<b>TOTAL</b>				<b>\$ 715,308</b>



[www.trantecheng.com](http://www.trantecheng.com)

