




1300 S. Evergreen Park Drive SW
PO Box 47250
Olympia, WA 98504-7250
(360)664-1257 or (360)664-1100
Fax: (360)586-1150
Web: www.utc.wa.gov
E-mail: records@utc.wa.gov

**GRADE CROSSING PROTECTIVE FUND
2013 – 2015 GRANT APPLICATION
OPEN CALL FOR PROJECTS**

The Washington Utilities and Transportation Commission (Commission), through its Grade Crossing Protective Fund (GCPF), provides grants for projects that eliminate or mitigate public safety hazards at railroad crossings and along railroad rights-of-way in Washington State. Any public, private or non-profit entity may submit an application to the Commission for a GCPF grant.

To apply for a grant to eliminate or mitigate a public safety hazard at a railroad crossing or along a railroad right-of-way, complete the following information and submit it and any attachments to the Commission.

Applicant Information

Applicant Name: Patrick Sheehy, P.E., Associate Engineer
Signature: 
Organization: City of Puyallup, Washington
Address: 333 South Meridian, Puyallup, WA 98371
Phone: 253-841-5499
Email: psheehy@ci.puyallup.wa.us
Fax: 253-841-5484

Project Information

Attach additional sheets as necessary that provide the following:

1. A detailed summary of the hazard being addressed. Include any information about accidents or incidents at the site and photographs, drawings or other materials that support the application.

GCPF Application Form – Open Call for Projects

2. A detailed summary of the proposed project and how it will eliminate or mitigate the hazard. Include any drawings or construction plans for the proposed project.
3. A list of all other companies, organizations, state agencies or local governments that may be involved in implementing this proposal, and the contact name, address and phone number for each (if known).
4. A cost estimate, including:
 - a. An itemized list of the total costs of the project.
 - b. Names of parties contributing to the project, including the applicant, and the amount each is contributing.
5. The name of the party responsible for long-term maintenance, such as repair of fencing.
6. An estimated timeline of the project.
7. A description of how the project's success would be measured.
8. Any other information the applicant believes would be useful to the Commission in considering the project.

Railroad Commitment

If the applicant is not the railroad owning the crossing or the tracks, the applicant must submit the attached Railroad Commitment form completed by the railroad owning the crossing or tracks.

Submitting the Application

After completing the application, please send the original to:

Washington Utilities and Transportation Commission
Attention: Grade Crossing Protective Fund
1300 S. Evergreen Park Drive SW
PO Box 47250
Olympia, WA 98504-7250

A signed application may be filed electronically at records@utc.wa.gov. When filing electronically, please specify "Grade Crossing Protective Fund" in the subject line.

Assistance

For questions or assistance, please contact:

- Kathy Hunter at 360-664-1257 or by email at khunter@utc.wa.gov
- David Pratt at 360-664-1100 or by email at dpratt@utc.wa.gov

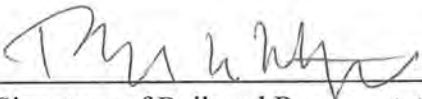
Railroad Commitment

The undersigned represents the Railroad Company in the accompanying GCPF application.

We have reviewed the application and are satisfied that the conditions are the same as described by the applicant in this matter. We agree to allow construction, modification or demolition on a railroad right-of-way as described in the application.

Richard W Wagner

Printed name of Railroad Representative



Signature of Railroad Representative

Manzanar Public Projects NW Division

Title

206.625.6152

Phone

Richard.Wagner@BNSF.COM

Email

Date: 10/17/2013



CITY OF PUYALLUP

Public Works Engineering

333 South Meridian
Puyallup WA 98371
253.841.5593 Fax 253.841.5484
www.cityofpuyallup.org

Washington Utilities and Transportation Commission
Attention: Grade Crossing Protective Fund
1300 S. Evergreen Park Drive SW
PO Box 47250
Olympia, WA 98504-7250

RE: Project Submittal for the Grade Crossing Protective Fund Grant

The City would like to present the 5th St NW Crossing Rehabilitation Project for consideration for a Grade Crossing Protective Fund Grant.

The City of Puyallup is working with Burlington Northern Santa Fe (BNSF) to rehabilitate and improve the at-grade railroad crossings in downtown Puyallup. The crossings at 12th St NW, 5th St NW, Meridian, 2nd St NE, 5th St SE and 15th St SE had deteriorated to the point where traffic was forced to slow significantly at the crossings due to the uneven and mounded pavement. The rough crossing conditions led to vehicles dwelling on the tracks and were resulting in significant complaints from motorists. The conditions were also delaying and restricting emergency response vehicles.

The City and BNSF began the rehabilitation effort in April with rehabilitation of the Meridian crossing. This project resulted in considerable positive feedback from both the public and emergency response agencies. Traffic flow has improved and vehicles are not required to slow and dwell on the tracks. Improvement to the sidewalks at the crossing have removed or mitigated pedestrian hazards. Since April, rehabilitation projects crossings at the 12th St NW, 2nd St NE, 5th St SE and 15th St SE crossings have been completed with similar results and accolades. The final crossing, 5th St NW, was arguably in the worst condition and remains a significant impediment to safe and effective traffic flow.

1. Hazard Being Addressed

The present condition of the 5th St NW crossing presents several hazards to motorists, rail traffic, pedestrians, and emergency response vehicles. The asphalt road surface approaching and between the two rail mains has heaved as the mains have settled creating a difference in elevation between the road surface and the precast crossing panels of three to five inches. This abrupt transition requires traffic to slow to a crawl while crossing the tracks resulting in severely reduced traffic speed and vehicles lingering on the tracks. Emergency vehicles experience slowed response times negotiating the crossing and are hindered by the slowing of traffic flow in front of them.



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Figure 1 Scrape Marks from Cars Bottoming Out

The restriction on traffic flow and the risk of a vehicle becoming hindered or disabled due to the current condition of the crossing represents a significant hazard to rail traffic as well. Rail traffic moves through Puyallup at speeds of up to 70 miles per hour and if a car is hindered from clearing a crossing or is disabled on the crossing the likelihood of a collision or impedance to rail traffic is elevated.



Figure 2 Heaved Asphalt and Uneven Sidewalk



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As a result of the mains settling and the pavement heaving, the condition of the sidewalks at the crossing has deteriorated. Adverse grades and tripping hazards impede pedestrians and present a hazard that a pedestrian may fall or be put off balance in direct proximity to high speed rail traffic.



Figure 3 Asphalt Heaved Above Crossing Panels

2. Summary of Project

Construction of this project will begin with BNSF crews removing the asphalt pavement and defective concrete sidewalk at the crossing (see attached plans for specific locations and dimensions). At this time, BNSF will also remove their precast concrete crossing panels. They will inspect the ties, rails, and ballast at and around the crossing and will repair or replace any defective materials. New ballast will be added as required and the main lines will be re-compacted twice to minimize future settling and consolidation. BNSF will place new precast concrete crossing panels and will prepare the road subgrade for placement of cement concrete pavement.

Following the work by BNSF, a contractor for the City of Puyallup will place high strength – early set cement concrete pavement to replace the asphalt road surface removed earlier. This concrete pavement is to be a minimum of 10” thick with reinforcing fibers. The ridged cement concrete will resist heaving and warping, minimizing the effects of any settling or consolidation of the rail lines. Additionally, the defective sidewalk removed earlier will be replaced to match the elevations of the new road and the new precast concrete crossing panels.



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Using concrete instead of asphalt for the pavement at the crossing has the added benefit of being more conducive to future track maintenance. If the rail lines experience settling and consolidation, an asphalt pavement surface will roll over and heave where it meets the precast crossing panels, requiring complete replacement of the damaged portion any time that track maintenance is conducted. A ridged concrete pavement will resist rolling over and heaving and will not need to be replaced as frequently for rail maintenance. This lowers the cost of rail maintenance and allows BNSF to be more responsive when the tracks do require maintenance.

3. Other Companies, Organizations, and Agencies

The City of Puyallup is working on this project in close cooperation with BNSF. BNSF has been responsible for railroad track maintenance as well as subgrade preparation for the concrete road surface. The primary contact for BNSF for the purpose of this proposal is;

Jason Winans
Roadmaster Tacoma WA
Northwest Division
BNSF Railway Company
605 Puyallup Ave.
Tacoma, WA 98421
253-591-2563

4. Cost Estimate

The City of Puyallup is responsible for paying for the cement concrete pavement being placed. The winning bid for this project was received from Quigg Brothers, Inc. and the breakdown of their bid is as follows;

1a	LS	1	5th St NW Mobilization	\$ 3,000.00	\$ 3,000.00
2a	CY	105	5th St NW Cement Concrete Pavement	\$ 445.00	\$ 46,725.00
3a	SY	75	5th St NW/Monolithic Cement Concrete Curb and Sidewalk	\$ 100.00	\$ 7,500.00
			5th St NW Total		\$ 57,225.00



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BNSF has agreed to pay for the removal of the existing asphalt and concrete and preparation of the pavement subgrade in addition to their costs for track maintenance. Their estimated costs are approximately \$25,000 based on previous crossings completed.

5. Party Responsible for Long-Term Maintenance

Per Chapter **81.53.090 Duty to maintain crossings.** of the Revised Code of Washington, the City of Puyallup will be responsible for the maintenance of the crossings from 1' outside of the rails. BNSF will be responsible for the maintenance of their track and the road surface between the 1' offsets from the outsides of the rails, including the precast concrete crossing panels.

6. Estimated Project Timeline

This project is scheduled to begin on October 24th, 2013 and be completed by October, 31st, 2013. This accelerated construction schedule will minimize impacts to the public as well as to emergency response agencies.

7. Description of How the Project's Success will be Measured

The success of this project will be measured by the reduction in citizen and agency complaints regarding the crossing. As the existing asphalt pavement has degraded at the crossing, formal and informal complaints have increased. Many citizens have voiced their opinions that the 5th NW Crossing is the "worst one". The public in Puyallup has been tremendously pleased with the crossing rehabilitations completed to date and are very anxious and excited to have this crossing completed as well.

In addition to using the lack of complaints as a measure of success, BNSF will continue to monitor the tracks at the crossing for settlement issues. If the tracks settle more than 1 ½" to 2" below the concrete road surface, BNSF will initiate maintenance to raise the tracks by repacking the ballast. By using concrete instead of asphalt, the roadway should not have to be replaced or fixed.



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Appendix A - Construction Drawings

RAILROAD CROSSING REHABILITATION

5TH ST NW & 5TH ST SE

MAY 2013

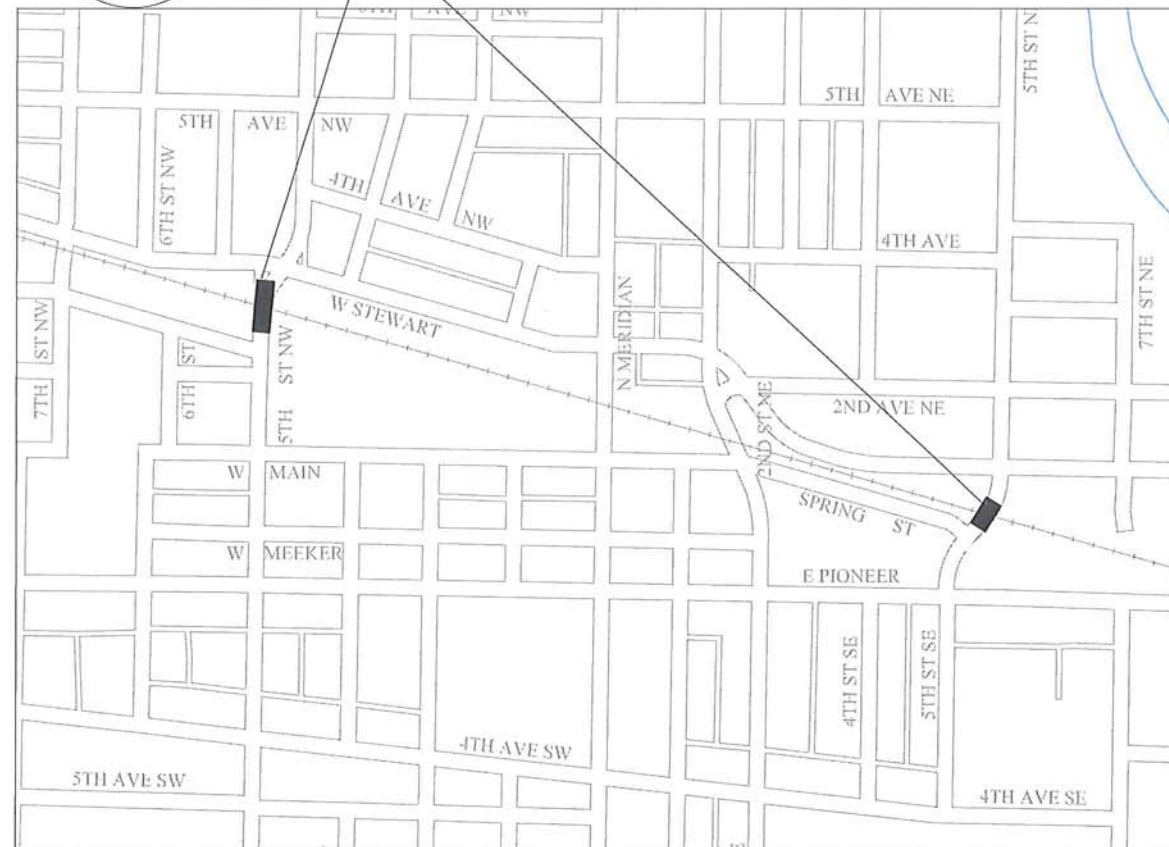


CITY OF PUYALLUP
PUBLIC WORKS
ENGINEERING



RAILROAD CROSSING
REHABILITATION
5TH ST NW & 5TH ST SE

PROJECT
LOCATIONS



LOCATION MAP
NO SCALE

SHEET INDEX:

SHEET	DESCRIPTION
1 of 9	COVER SHEET
2 of 9	5TH ST NW SITE PLAN
3 of 9	5TH ST NW CASING PLAN AND PROFILE
4 of 9	5TH ST NW ASPHALT REMOVAL PLAN
5 of 9	5TH ST NW CONCRETE PLAN
6 of 9	5TH ST SE SITE PLAN
7 of 9	5TH ST SE ASPHALT REMOVAL PLAN
8 of 9	5TH ST SE CONCRETE PLAN
8 of 9	STANDARD DETAILS

CALL TWO WORKING DAYS
BEFORE YOU DIG

1-800-424-5555
UTILITIES UNDERGROUND LOCATION CENTER



Designed By: PJS
Drawn By: PJS
Checked By: MP
Approved By: MP
Date: 5/7/13

Project Address:
5TH NW AND
5TH SE RAILROAD
CROSSINGS

COVER SHEET

Drawing No.:

1 of 9

5TH ST NW SITE PLAN



CITY OF PUYALLUP
PUBLIC WORKS
ENGINEERING

RAILROAD CROSSING REHABILITATION 5TH ST NW & 5TH ST SE



Designed By: PJS
Drawn By: PJS
Checked By: MP
Approved By: MP
Date: 5/7/13

Project Address:
5TH ST NW
RAILROAD
CROSSING

SITE PLAN

Drawing No.:

2 of 9

HORIZONTAL DATUM: NAD83/2011, DERIVED BY TIES TO WASHINGTON STATE REFERENCE NETWORK (WSRN) WITH GPS. WASHINGTON STATE PLANE COORDINATE SYSTEM, SOUTH ZONE.

VERTICAL DATUM: NAVD 88, DERIVED BY TIES TO WASHINGTON STATE REFERENCE NETWORK (WSRN) WITH GPS.

BASIS OF BEARING: HELD N31°32'11"E 82.19', BETWEEN TO LOCATED POINTS, SEE POINTS 9102 & 9105.

POINT #	NORTHING	EASTING	ELEV.	DESCRIPTION
9102	683352.22	1193157.46	48.50	SET MAG NAIL
9105	683422.27	1193200.45	49.45	SET MAG NAIL

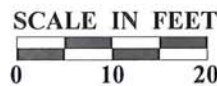
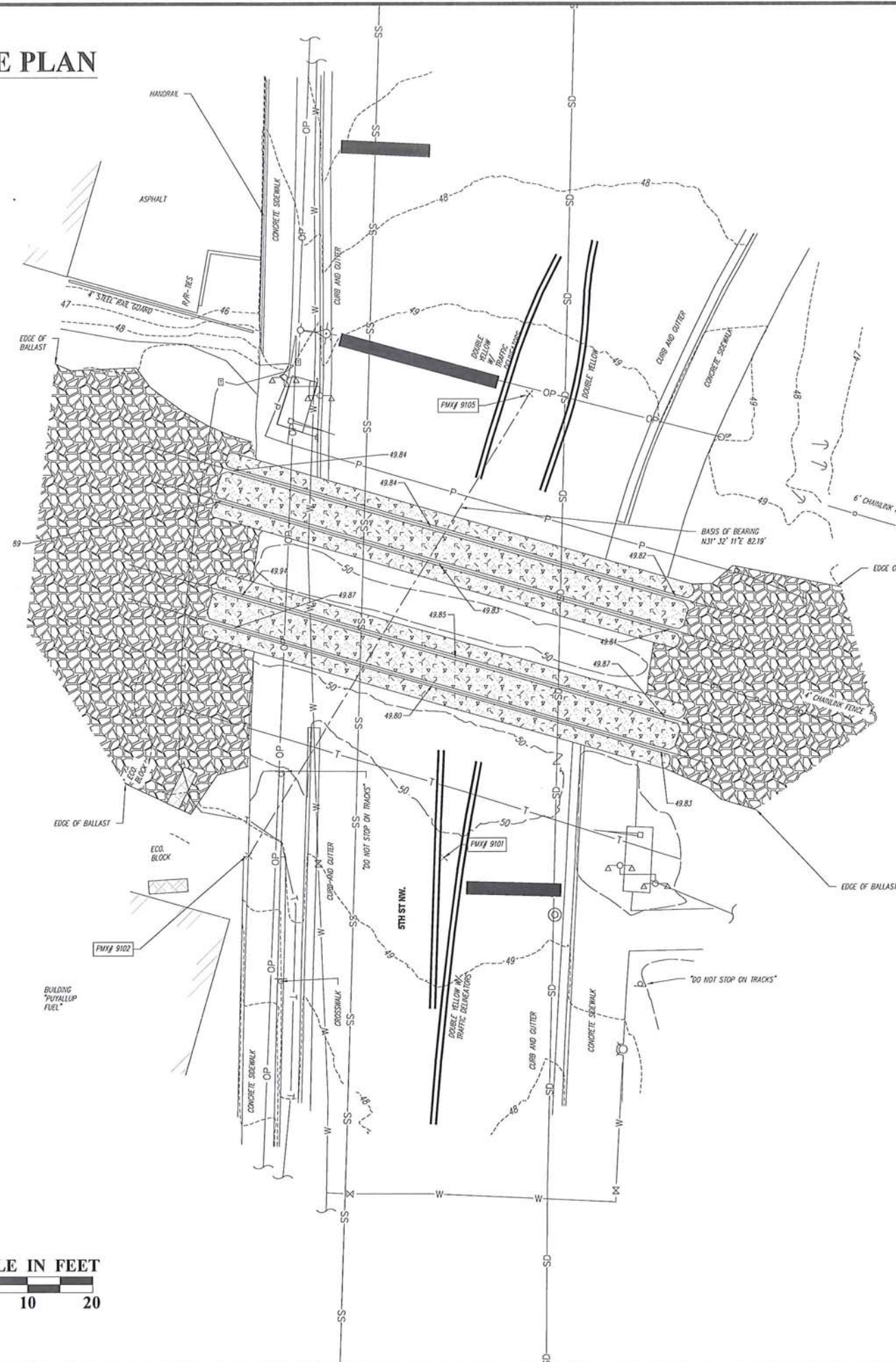
ADDITIONAL SITE CONTROL POINT #	NORTHING	EASTING	ELEV.	DESCRIPTION
9101	683351.92	1193187.34	49.90	SET MAG NAIL

LEGEND

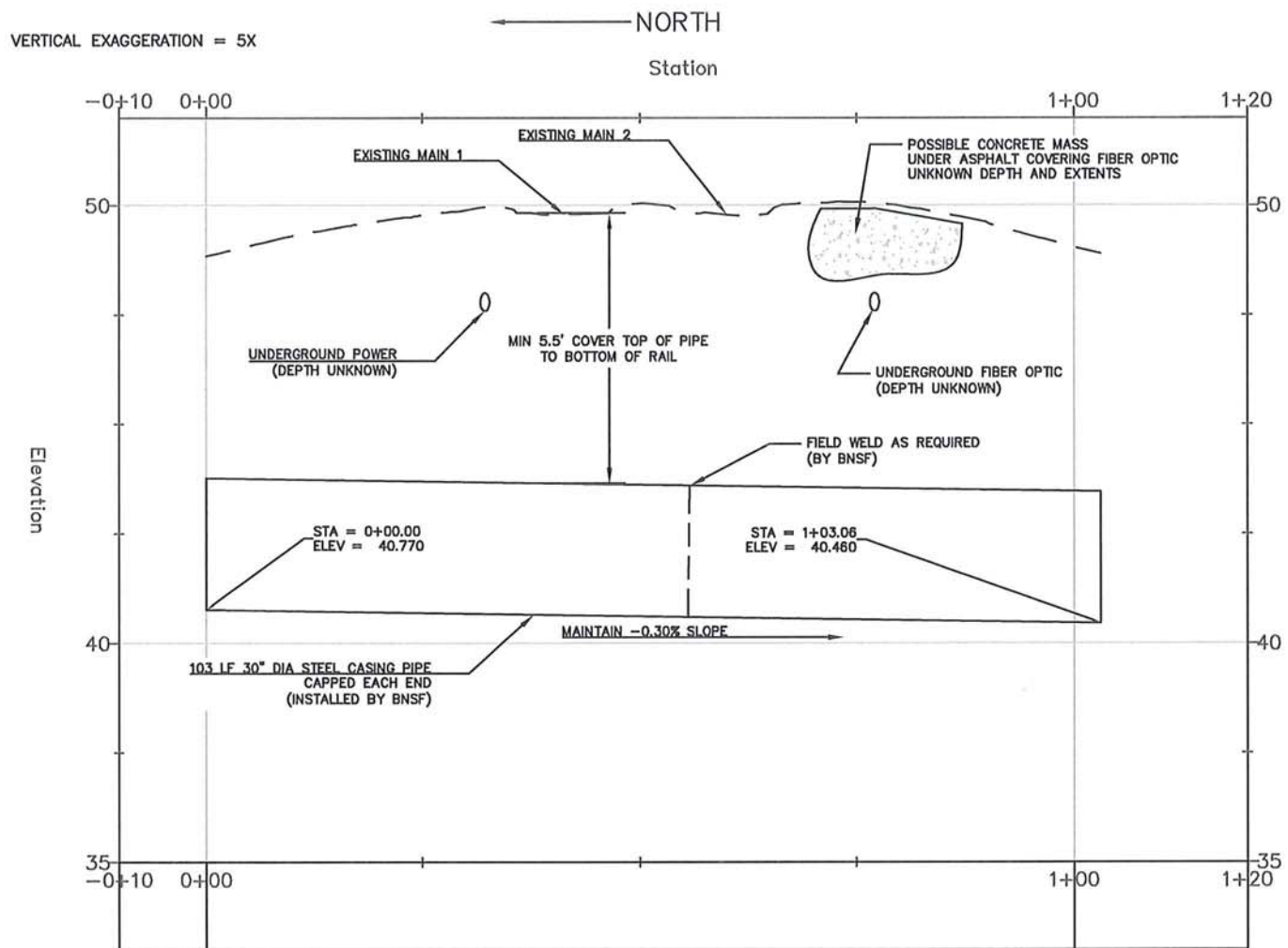
EDGE OF PAVEMENT	---
EDGE OF CONCRETE	----
BUILDING	▭
RAIL-CONC/STEEL PANELS	▨
CURB AND GUTTER	—○—
SKIP LINE (CHANNELIZATION)	—○—
GAS	G
POWER	P
OVERHEAD POWER	OP
WATER	W
FIBER/OPTIC	FO
UNDERGROUND TELEPHONE/COMMUNICATION	T
CHARLINK FENCE	—○—
ASPHALT	▨
RAIL BALLAST	▨
RAIL-CONC/STEEL PANELS	▨

LEGEND

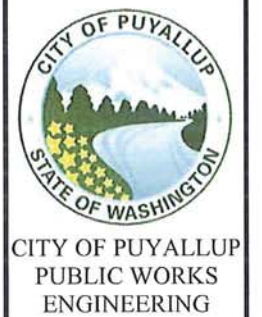
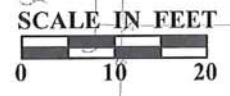
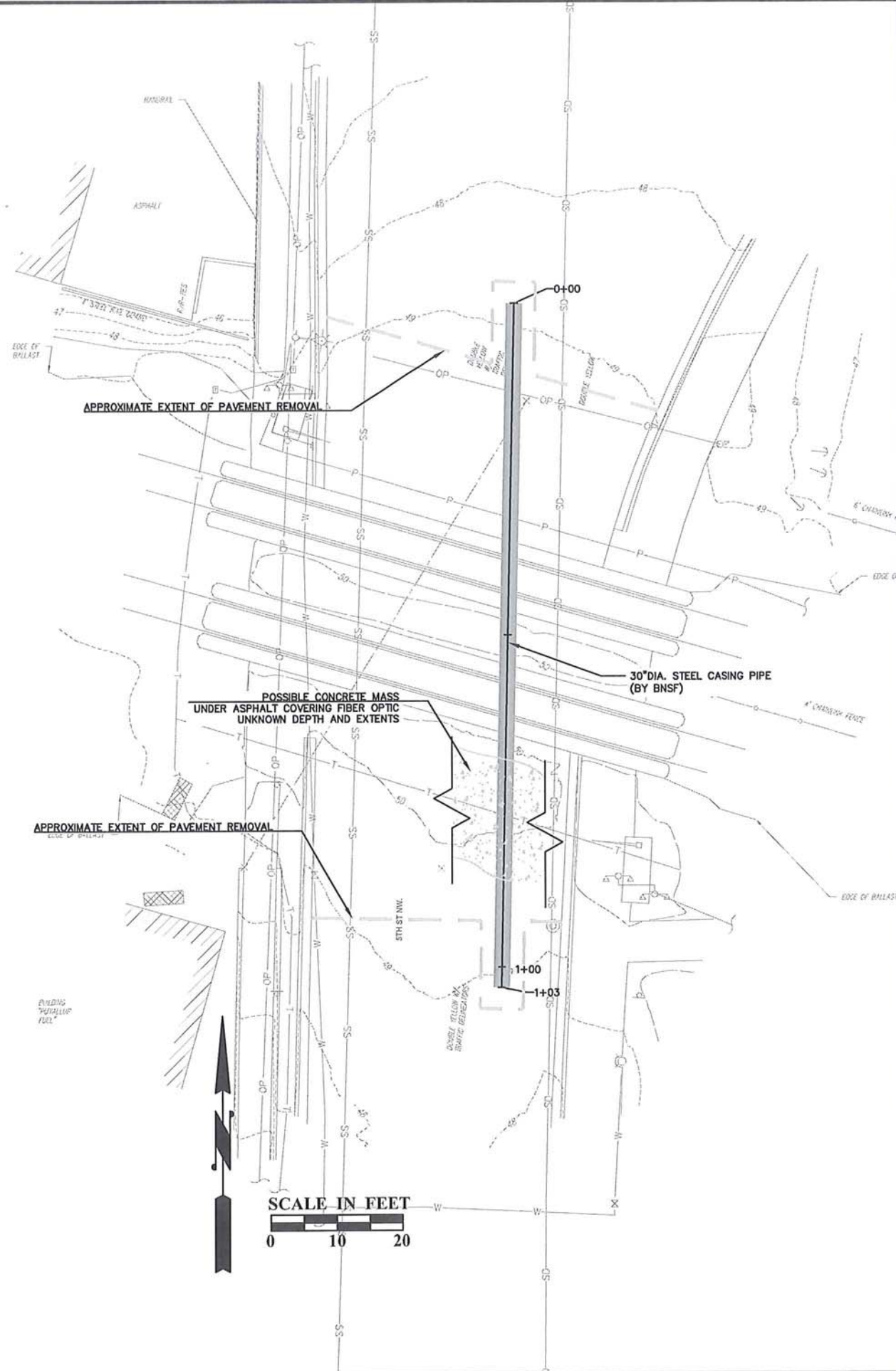
WATER METER	⊞	GAS METER	⊞
POWER J-BOX	⊞	STORM DRAIN MANHOLE	⊞
LIGHT	⊞	WATER MANHOLE	⊞
LIGHT POLE WITH EXT. ARM	⊞	CATCH BASIN	⊞
R/R CROSSING ARM	⊞	SEWER MANHOLE	⊞
R/R SIGNAL	⊞		
SIGN	⊞		
GAS VALVE	⊞		



5TH ST NW 30" SW CASING PLAN & PROFILE



NOTES:
 1) SEE CITY OF PUYALLUP STANDARD DETAIL 06.01.01 ON SHEET 9 FOR TRENCH DETAIL.



**RAILROAD CROSSING
 REHABILITATION
 5TH ST NW & 5TH ST SE**



Designed By: PJS
 Drawn By: PJS
 Checked By: MP
 Approved By: MP
 Date: 5/7/13

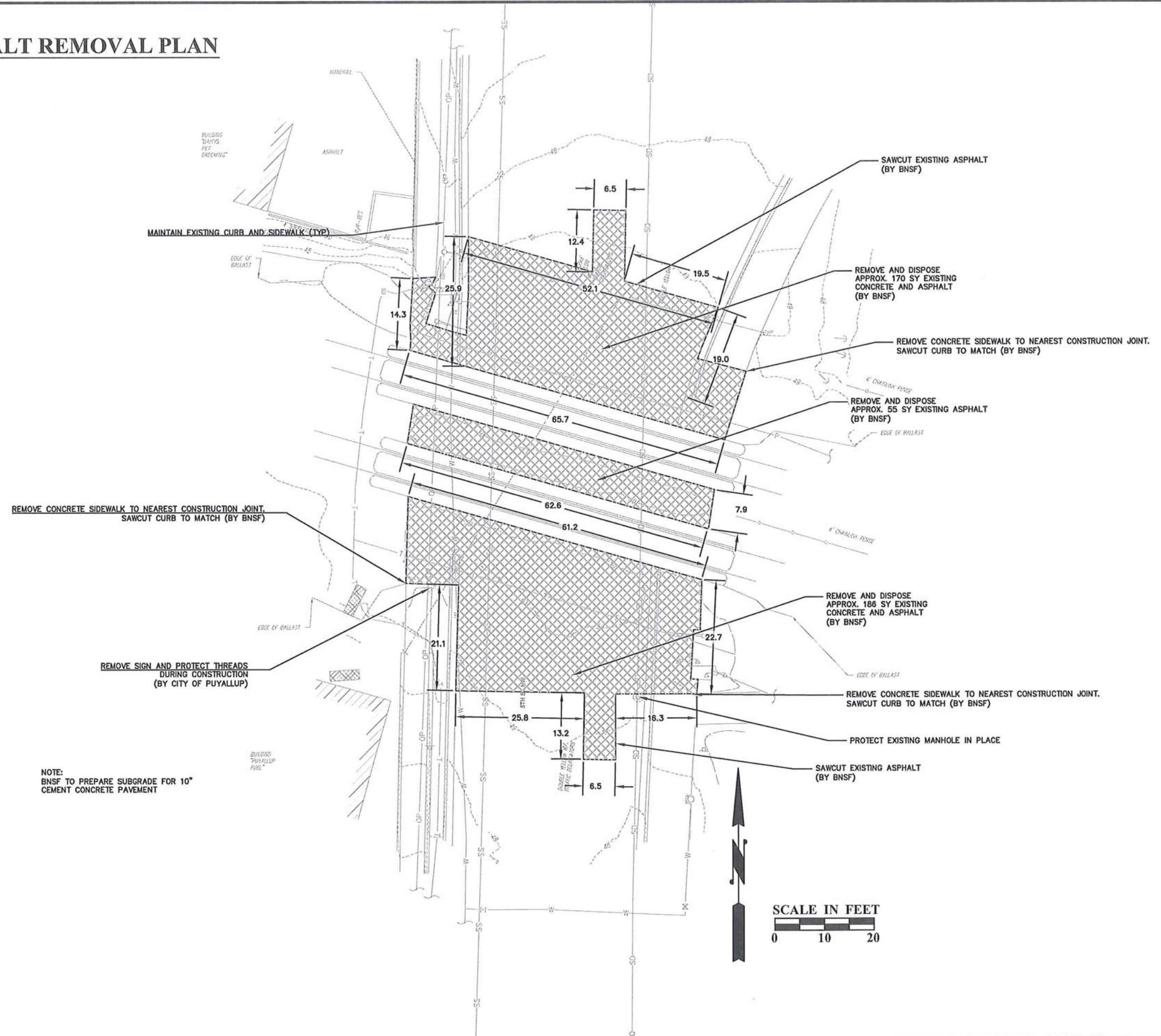
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 5TH ST NW
 RAILROAD
 CROSSING

30" CASING PLAN
 & PROFILE

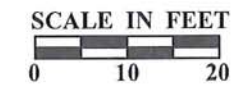
Drawing No.:
3 of 9

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5TH ST NW ASPHALT REMOVAL PLAN



NOTE:
BNSF TO PREPARE SUBGRADE FOR 10"
CEMENT CONCRETE PAVEMENT



CITY OF PUYALLUP
PUBLIC WORKS
ENGINEERING

RAILROAD CROSSING
REHABILITATION
5TH ST NW & 5TH ST SE



Designed By: PJS
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Project Address:
5TH ST NW
RAILROAD
CROSSING

ASPHALT
REMOVAL PLAN

Drawing No.:
4 of 9

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CITY OF PUYALLUP
PUBLIC WORKS
ENGINEERING

**RAILROAD CROSSING
REHABILITATION
5TH ST NW & 5TH ST SE**



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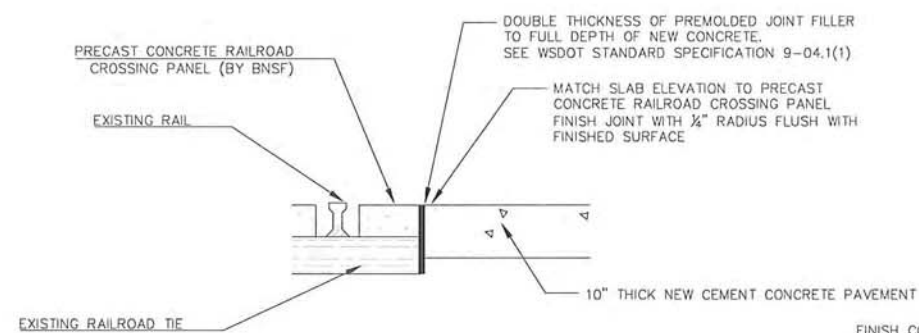
Project Address:
**5TH ST NW
RAILROAD
CROSSING**

CONCRETE PLAN

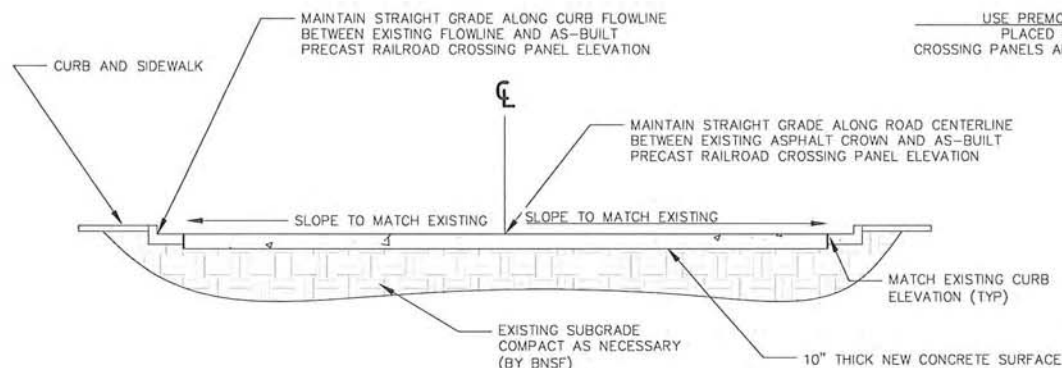
Drawing No.:

5 of 9

5TH ST NW CONCRETE PLAN



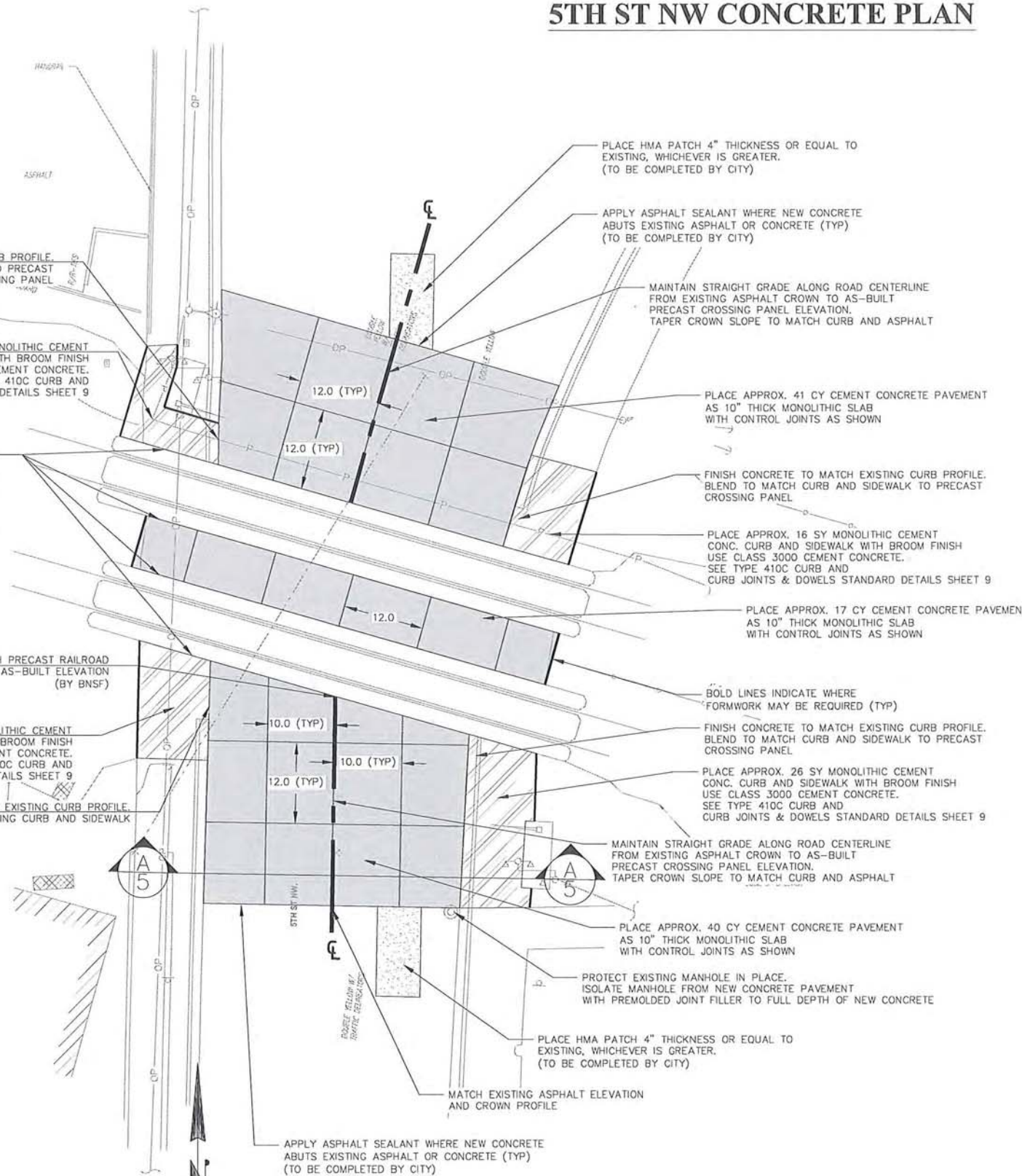
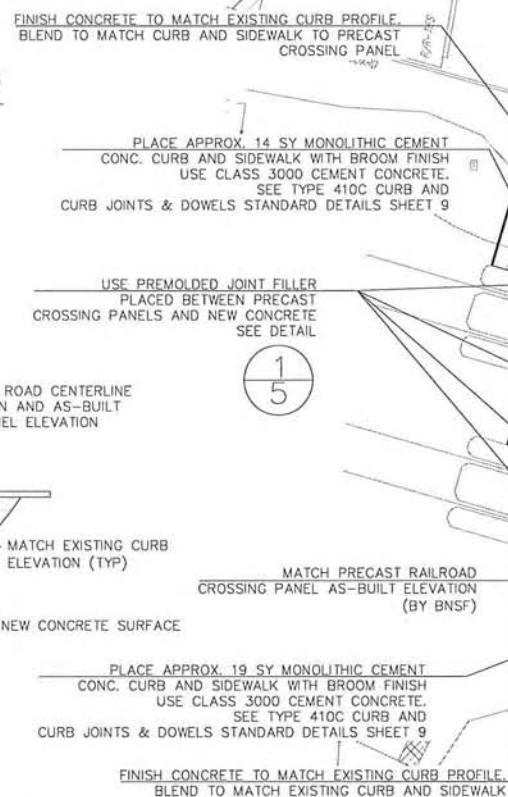
1/5 PRECAST CONCRETE RAILROAD CROSSING PANEL JOINT
NOT TO SCALE



A/5 TYPICAL SECTION A-A
NOT TO SCALE

NOTES:

- 1) CEMENT CONCRETE PAVEMENT TO BE TYPE 1 OR TYPE 2 HIGH-STRENGTH, EARLY-SET CAPABLE OF ACHIEVING 2500 PSI WITHIN THE TIME LIMITS OF THE WORK EXCEPT WHERE NOTED.
- 2) CEMENT CONCRETE PAVEMENT MIX WILL CONTAIN MIN. 1 1/2 LB/CY REINFORCING FIBER BASF M70 OR APPROVED EQUAL.
- 3) CEMENT CONCRETE PAVEMENT MIX WILL BE SUBJECT TO ENGINEER APPROVAL.
- 4) CEMENT CONCRETE PAVEMENT SURFACE WILL BE A LONGITUDINAL OR TRANSVERSE TINE FINISH PER WSDOT STANDARD SPECIFICATION 5-05.3(11)
- 5) ONCE PLACED, CONCRETE WILL BE COVERED WITH INSULATING BLANKETS AS SOON AS POSSIBLE.
- 6) CONTRACTOR MUST BE PREPARED TO PLACE AND FINISH CONCRETE IN INCLEMENT WEATHER CONDITIONS.
- 7) WORK WILL BE PERFORMED AT NIGHT. CONTRACTOR WILL MAKE ALL NECESSARY PREPARATIONS TO COORDINATE NIGHT WORK WITH SUPPLIERS, BNSF AND OTHER CONTRACTORS IN THE WORK AREA.
- 8) WORK WILL BE CONDUCTED IN CLOSE PROXIMITY TO LIVE RAILROAD TRACKS. CONTRACTOR WILL BE RESPONSIBLE FOR COORDINATING WORK WITH BNSF AND WILL BE SUBJECT TO BNSF SAFETY REQUIREMENTS AND DIRECTION.
- 9) ALL CONTROL JOINTS WILL BE A MINIMUM OF 1" IN DEPTH FROM THE FINISHED SURFACE OF THE CONCRETE.
- 10) PREMOLDED JOINT FILLER TO BE INSTALLED PER WSDOT STANDARD SPECIFICATION 6-01.14.
- 11) SAWCUTTING OF PAVEMENT SHALL BE PERFORMED WET AND A VACUUM OR OTHER EQUIVALENT BMP SHALL BE USED TO CONTROL AND COLLECT DEBRIS, CUTTINGS, AND WATER.
- 12) ALL ELEVATIONS FOR PLACEMENT WILL BE TAKEN FROM EXISTING OR AS-BUILT FEATURES IN THE FIELD.
- 13) ALL WORK TO BE COMPLETED BY CONTRACTOR (EXCEPT AS INDICATED).
- 14) CEMENT CONCRETE PAVEMENT PAY ITEM INCLUDES ALL WORK AND MATERIALS NECESSARY TO FORM, PLACE, AND FINISH CEMENT CONCRETE PAVEMENT.
- 15) CONTRACTOR WILL BE RESPONSIBLE FOR CLEARING ALL DIRT AND DEBRIS FROM THE ROAD SURFACE AND WORK AREA UPON COMPLETION OF THE WORK.
- 16) LIGHTS FOR NIGHT WORK WILL BE PROVIDED AND OPERATED BY BNSF.
- 17) ALL WORK WITHIN PROJECT AREA WILL BE CONDUCTED DURING BNSF APPROVED WORK TIMES.
- 18) CEMENT CONCRETE PAVEMENT MUST ACHIEVE VERIFIED 2500 PSI STRENGTH PRIOR TO END OF DESIGNATED WORK TIME AS SPECIFIED IN THE CONTRACT. THE CITY WILL CONDUCT VERIFICATION TESTING.



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