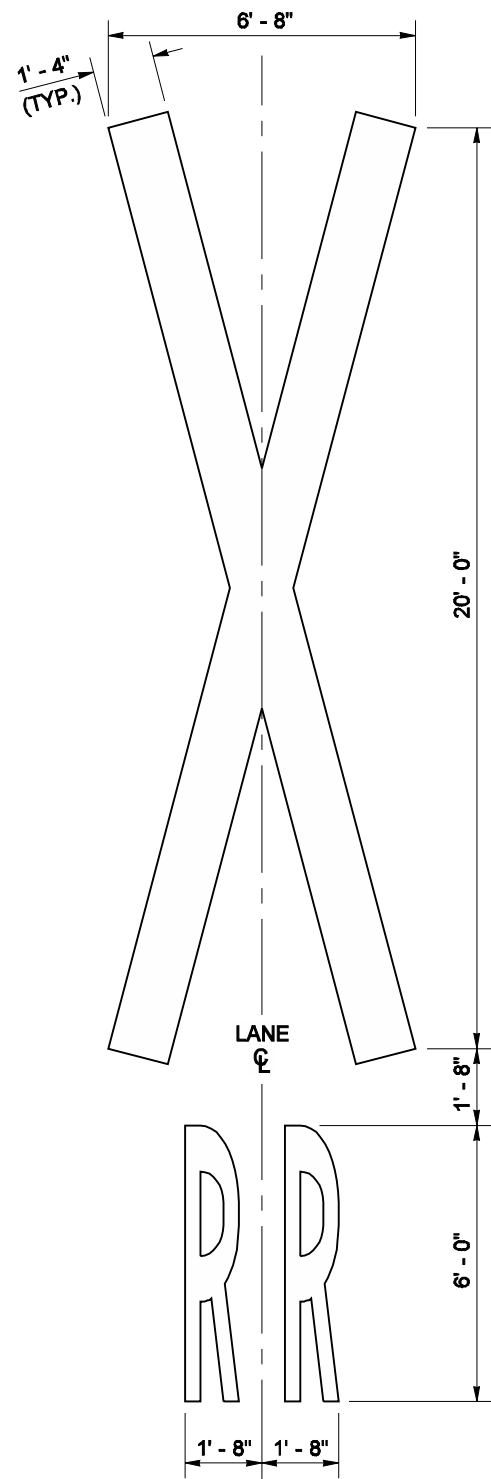


LAYOUT

① TOTAL MARKING AREA (PER 12' WIDE LANE) = 109.75 SQ.FT.

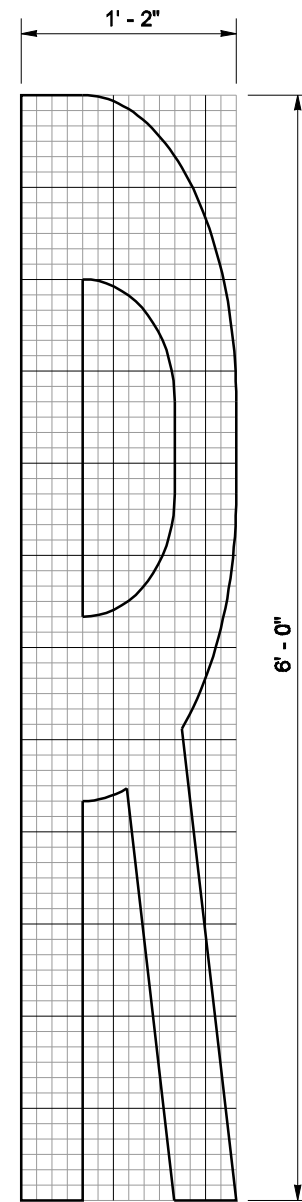
STANDARD SYMBOL



SYMBOL DETAIL

GENERAL NOTE

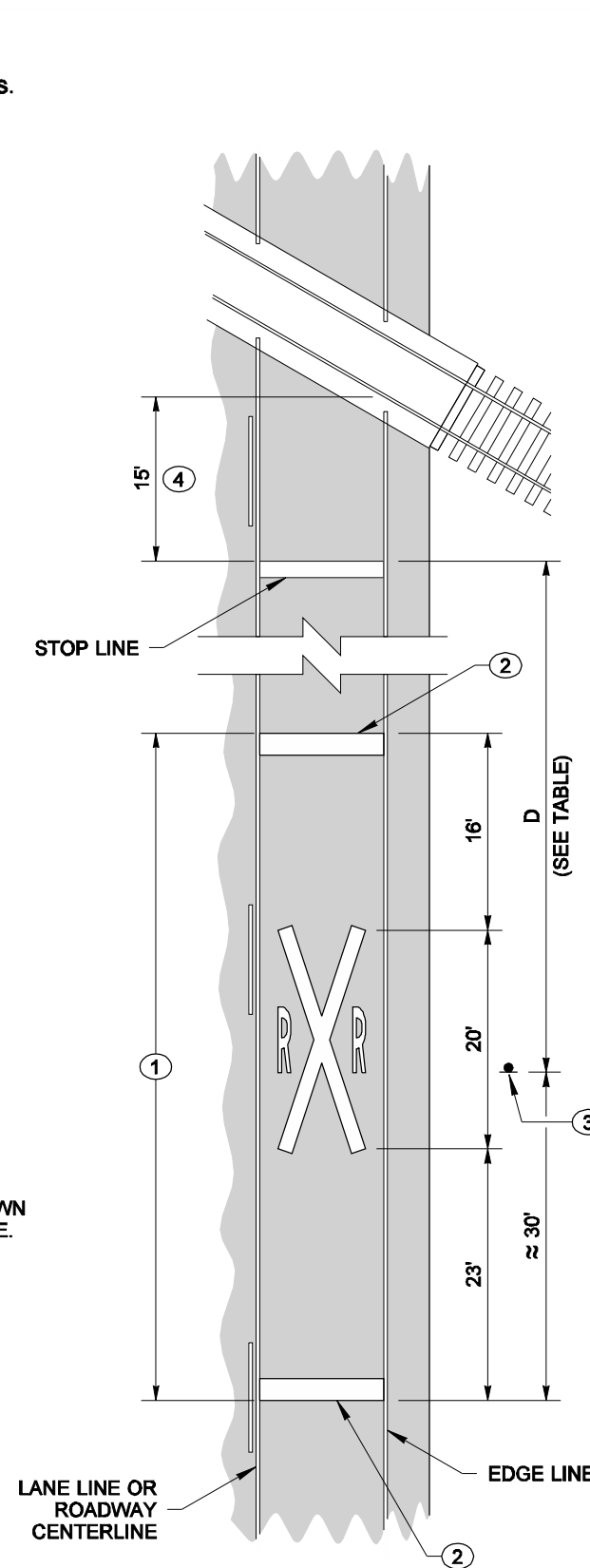
See contract for location and material requirements.



GRID IS 1" SQUARE
"R" DETAIL

MPH	D*
25	50 Ft.
30	100 Ft.
35	150 Ft.
40	225 Ft.
45	300 Ft.
50	375 Ft.
55	450 Ft.
60	550 Ft.
65	650 Ft.

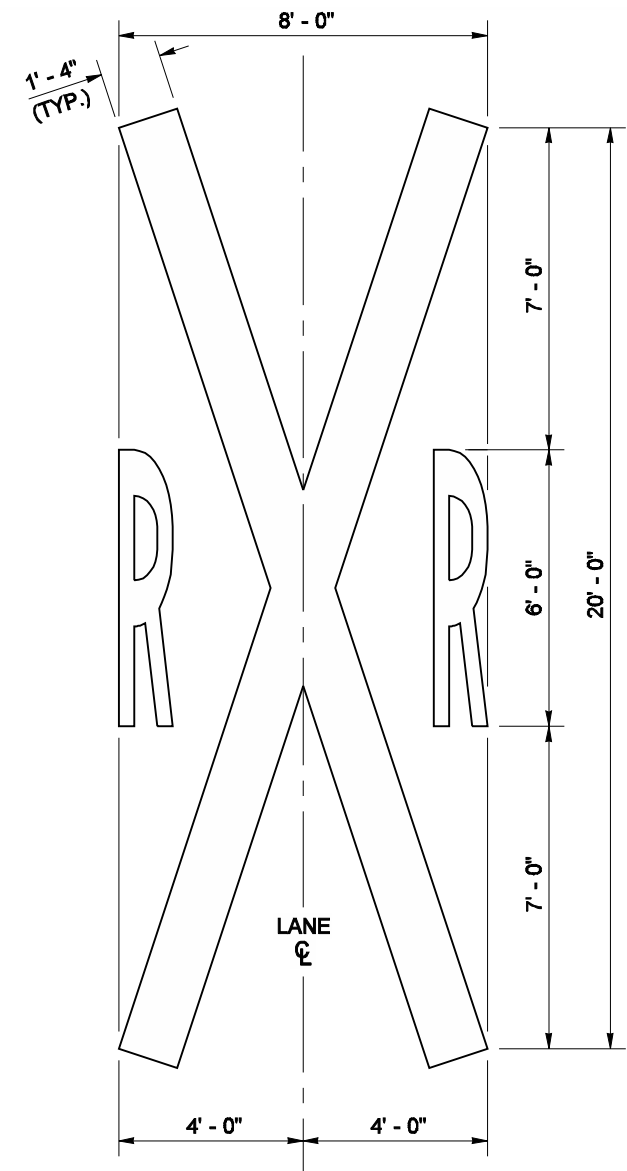
* DIMENSIONS SHOWN ARE APPROXIMATE. SEE CONTRACT.



LAYOUT

① TOTAL MARKING AREA (PER 12' WIDE LANE) = 111.59 SQ.FT.

ALTERNATIVE SYMBOL



SYMBOL DETAIL



EXPIRES AUGUST 9, 2007

NOTE: THIS PLAN IS NOT A LEGAL ENGINEERING DOCUMENT BUT AN ELECTRONIC OUTPUT. THE ORIGINAL, SIGNED BY THE ENGINEER AND APPROVED FOR PUBLICATION, IS KEPT ON FILE AT THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION. A COPY MAY BE OBTAINED UPON REQUEST.

KEY NOTES

- ① Bid Item "Railroad Crossing Symbol" includes "X" symbol, letters, and two 24" white transverse lines.
- ② 24" white transverse line
- ③ W10-1 Advance Warning Sign (not included in RR Crossing Symbol Bid Item)
- ④ Place Stop Line 15' from the nearest rail or approximately 8 feet from RR gate, if present.

RAILROAD CROSSING LAYOUT

STANDARD PLAN M-11.10-01

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Ken L. Smith
STATE DESIGN ENGINEER

01-30-07
DATE



PROJECT CONSTRUCTION NOTES

THIS PLAN SET IS A SUPPLEMENTARY PLAN SET FOR THE WHITMAN STREET IMPROVEMENT PROJECT TIB PROJECT NO. 6-E-916(004)-1. SEE PRIMARY PLAN SET (BY MD+A) FOR THE WHITMAN STREET IMPROVEMENT PROJECT FOR ADDITIONAL INFORMATION. (THIS PLAN SET REFERS TO THAT PLAN AS "STREET IMPROVEMENT PLANS").

CONSTRUCTION WILL BE IN STRICT ACCORDANCE WITH THE PROJECT RAILROAD SPECIAL PROVISIONS, THE BNSF DESIGN GUIDELINES FOR INDUSTRIAL TRACK PROJECTS (DGFITP) AND WITH THE 2015 AMERICAN RAILWAY ENGINEERING AND MAINTENANCE OF WAY ASSOCIATION (AREMA) MANUAL FOR RAILWAY ENGINEERING, IN THAT ORDER.

ANY EXISTING CONDITIONS FOUND TO BE A VARIANCE WITH THESE DRAWINGS MUST BE IMMEDIATELY REPORTED TO THE ENGINEER.

TRACK:
TRACK SHALL BE CONSTRUCTED TO THE ALIGNMENT AND GRADE SHOWN IN THESE PLANS.

SUBMITTALS:
SUBMITTALS ARE REQUIRED FOR ALL PERMANENT CONTRACTOR SUPPLIED MATERIALS TO BE INCORPORATED.

TESTING:
REFER TO RAILROAD SPECIAL PROVISIONS FOR TESTING REQUIREMENTS.

CONSTRUCTION SURVEYING:
CONTRACTOR WILL PROVIDE VERTICAL AND HORIZONTAL CONTROL STAKES ON 25' INCREMENTS ON CURVES AND 50' ON TANGENTS. STAKING WILL ALSO BE PROVIDED FOR POINT OF CURVES AND TANGENTS, AND AT TIE-INS. STAKING SHOULD BE MAINTAINED UNTIL FINAL ACCEPTANCE.

CONSTRUCTION OF ROADBED:
SUB-BALLAST AND GRADE/PROFILE WILL BE PLACED WITHIN PLUS OR MINUS 1 INCH FROM DESIGN GRADE/ PROFILES. CONTINUOUS HIGH OR LOW SUB-BALLAST WILL NOT BE ACCEPTABLE.

DEVIATION FROM RAIL DESIGN ELEVATION WILL NOT BE ACCEPTABLE.

CONTRACTOR SHALL NOTIFY WSDOT FOR SUBBALLAST INSPECTION AT LEAST 1 WEEK PRIOR TO PLANNED INSTALLATION OF RAIL, TIES AND OTM. SUBBALLAST MUST BE APPROVED BY WSDOT PRIOR TO INSTALLATION OF RAIL, TIES AND OTM.

CONTRACTOR SHALL NOTIFY WSDOT FOR TRACK INSPECTION AT LEAST 1 WEEK PRIOR TO ANY BACKFILL AND/OR PAVING AROUND OR OVER TRACK OR BALLAST MATERIALS, RAIL, TIES AND OTM.

CONTRACTORS SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM THE RAIL BED THROUGHOUT THE CONSTRUCTION. CONTRACTOR SHALL COMPLY WITH TEMPORARY EROSION / SEDIMENTATION CONTROLS AS INDICATED IN STREET IMPROVEMENT PLANS.

CONSTRUCTION MUST BE APPROVED BY WSDOT AND W&I RAILROAD PRIOR TO PLACING TRACK IN SERVICE.

BEFORE CONSTRUCTION CAN BE CONSIDERED COMPLETE, WSDOT, W&I RAILROAD, AND THE CITY OF PALOUSE WILL PERFORM INSPECTIONS AND RECEIVE TESTING INFORMATION TO EVIDENCE THE CONSTRUCTION IS IN STRICT ACCORDANCE WITH THE PLANS AND OTHER CONTRACT DOCUMENTS.

HORIZONTAL AND VERTICAL CLEARANCE SHALL BE IN ACCORDANCE WITH BNSF DGFITP AND WAC CH. 296-860--WHICHEVER IS MOST CONSERVATIVE.

RAILROAD STATIONING FOR PROFILES AND ALIGNMENTS IS BASED ON 0+00 AT THE POINT OF SWITCH OF THE WIM LINE.

PROJECT BENCHMARK:
MD+A CONTROL POINT NEAR TRACK CENTERLINE AT THE WESTERLY EDGE OF DIVISION STREET. (IT WILL BE NECESSARY TO RELOCATE BENCHMARK PRIOR TO CONSTRUCTION)

DESIGN:
DISTANCE FROM TOP OF RAIL ELEVATION TO TOP OF SUBGRADE AT CENTERLINE OF TRACK IS 2.58' ON TANGENT TRACK FOR 115# RAIL BASED ON CONCRETE TIE TRACK SECTION.

1. TRACK DESIGN BASED ON THE BNSF DESIGN GUIDELINES FOR INDUSTRIAL TRACK PROJECTS, AREMA, PRIOR STREET IMPROVEMENT PROJECT, AND AS NOTED.
2. REFER TO TYPICAL SECTIONS, SHEET 3B FOR SECTIONS TO BE CONSTRUCTED.
3. DESIGN WAS PERFORMED ON TOPOGRAPHIC INFORMATION PROVIDED BY MD+A.

UTILITIES:
CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL UTILITY AGENCIES.

CONTRACTOR SHALL PROTECT IN PLACE (BY ANY MEANS NECESSARY) ALL EXISTING UTILITIES TO REMAIN UNLESS OTHERWISE SPECIFIED HEREIN, CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE REPAIR AT HIS EXPENSE, FOR ANY DAMAGE TO EXISTING UTILITIES, STRUCTURES, OR OTHER SITE FEATURES, AS A RESULT OF HIS WORK.

PRIOR TO PLACING CURBS, PAVEMENTS, BASE, SUBBASE, TRACK, ETC., ALL UNDERGROUND UTILITIES SHALL BE INSTALLED, BACKFILL COMPLETED, AND THE ENGINEER NOTIFIED BY EACH OF THE UTILITY COMPANIES HAVING FACILITIES WITHIN THE WORK AREA, THAT THE UTILITY INSTALLATION HAS SATISFACTORILY PASSED ACCEPTANCE TESTS

CONTRACTOR SHALL VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES WHETHER KNOWN OR UNKNOWN PRIOR TO BEGINNING CONSTRUCTION

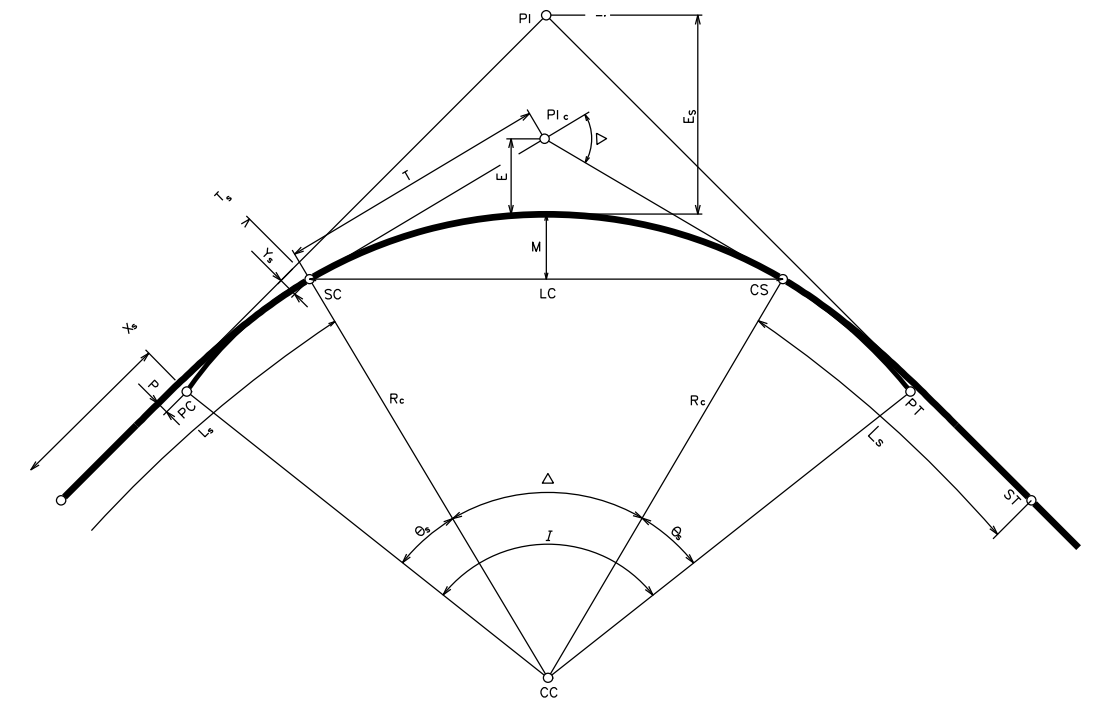
UTILITY LOCATION

WASHINGTON STATE LAW REQUIRES CONTRACTORS TO FOLLOW RULES ADOPTED BY THE WASHINGTON UTILITY AND TRANSPORTATION COMMISSION.

ABBREVIATIONS

APPROX. APPROXIMATE	NO NUMBER
BDY. BOUNDARY	NTS NOT TO SCALE
BVCE BEGIN VERTICAL CURVE ELEVATION	P.S., PSW POINT OF SWITCH
BVCS BEGIN VERTICAL CURVE STATION	P.I.T.O. POINT OF INTERSECTING TURNOUT
CP CLEAR POINT	PROP PROPOSED
CMP CORRUGATED METAL PIPE	P.O.T. POINT ON TANGENT
CNTL CONTROL	PT POINT OF TANGENT
CONC. CONCRETE	PVC POINT OF VERTICAL CURVE
C CURVE	PVI POINT OF VERTICAL INTERSECTION
EA EACH	PVT POINT OF VERTICAL TANGENCY
EL. ELEV ELEVATION	PI POINT OF HORIZONTAL INTERSECTION
EOT END OF TRACK	R RADIUS
ESMT EASEMENT	RD. ROAD
EVCE END VERTICAL CURVE ELEVATION	RR RAILROAD
EVCS END VERTICAL CURVE STATION	ROW RIGHT OF WAY
EXIST. EX EXISTING	RH RIGHT HAND
FT FEET	RT RIGHT
GR GRADE	SHT. SHEET
HORI HORIZONTAL	SHTS. SHEETS
HTTO HAND THROW TURNOUT	STA STATION
INV. INVERT	SW. SWITCH
L LENGTH	T TANGENT LENGTH
LH LEFT HAND	T.F. TRACK FOOT
LT LEFT	T.O. TURNOUT
MAX. MAXIMUM	T/R TOP OF RAIL
MIN. MINIMUM	TRK TRACK
	TYP. TYPICAL
	UPRR UNION PACIFIC RAILROAD
	UTIL UTILITY
	XNG GRADE CROSSING
	VERT VERTICAL

CC	CENTER OF CIRCULAR CURVE
CS	POINT OF CHANGE FROM CIRCULAR CURVE TO SPIRAL
D	DEGREE OF CURVE (CHORD DEFINITION)
E	EXTERNAL DISTANCE FROM PI
E _s	EXTERNAL DISTANCE FROM PI
I	INTERNAL ANGLE
K	DISTANCE FROM TS/ST TO PC/PT OF CIRCULAR CURVE MEASURED ALONG MAIN TANGENT
L	LENGTH OF SPIRAL ARC FROM TS TO ANY POINT ON SPIRAL
L _s	LENGTH OF SPIRAL ARC FROM TS/ST TO SC/CS
LC	LONG CHORD OF CIRCULAR CURVE
L _c	LENGTH OF CIRCULAR CURVE
LT _s	LENGTH OF LONG TANGENT OF SPIRAL
M	MID ORDINATE DISTANCE OF CIRCULAR CURVE
P	OFFSET OF PC/PT OF CIRCULAR CURVE MEASURED FROM MAIN TANGENTS
PC	POINT OF CIRCULAR CURVE
PI	POINT OF INTERSECTION OF MAIN TANGENTS
PI _c	POINT OF INTERSECTION OF CIRCULAR CURVE TANGENTS
PT	POINT OF TANGENT OF CIRCULAR CURVE
R _c	RADIUS OF CIRCULAR CURVE
SC	POINT OF CHANGE FROM SPIRAL TO CIRCULAR CURVE
SI	POINT OF INTERSECTION OF SPIRAL TANGENTS
ST	POINT OF CHANGE FROM SPIRAL TO TANGENT
ST _s	LENGTH OF SHORT TANGENT OF SPIRAL
T	TANGENT LENGTH OF CIRCULAR CURVE
TS	POINT OF CHANGE FROM TANGENT TO SPIRAL
T _s	TANGENT LENGTH FROM TS/ST TO PI
X	DISTANCE FROM TS/ST OF ANY POINT ON THE SPIRAL PROJECTED TO MAIN TANGENT
X _s	DISTANCE FROM TS/ST TO SC/CS PROJECTED TO MAIN TANGENT
Y	OFFSET OF ANY POINT ON SPIRAL MEASURED FROM MAIN TANGENT
Y _s	OFFSET OF SC/CS MEASURED FROM MAIN TANGENT
θ	CENTRAL ANGLE OF SPIRAL ARC L
θ _s	CENTRAL ANGLE OF SPIRAL ARC L _s
∅	DEFLECTION ANGLE OF A CHORD BETWEEN TS/ST AND ANY POINT ON THE SPIRAL



CIRCULAR CURVE DEFINITIONS

FILE NAME				REGION NO.		STATE		FED. AID PROJ. NO.				WHITMAN STREET TRACK PALOUSE, WA	SHEET 0B
TIME	DATE	DESIGNED BY	ENTERED BY	10	WASH								
PLOTTED BY				JOB NUMBER							CONSTRUCTION NOTES AND ABBREVIATIONS		
CHECKED BY				CONTRACT NO.		LOCATION NO.							
PROJ. ENGR.													
REGIONAL ADM.		REVISION	DATE	BY									

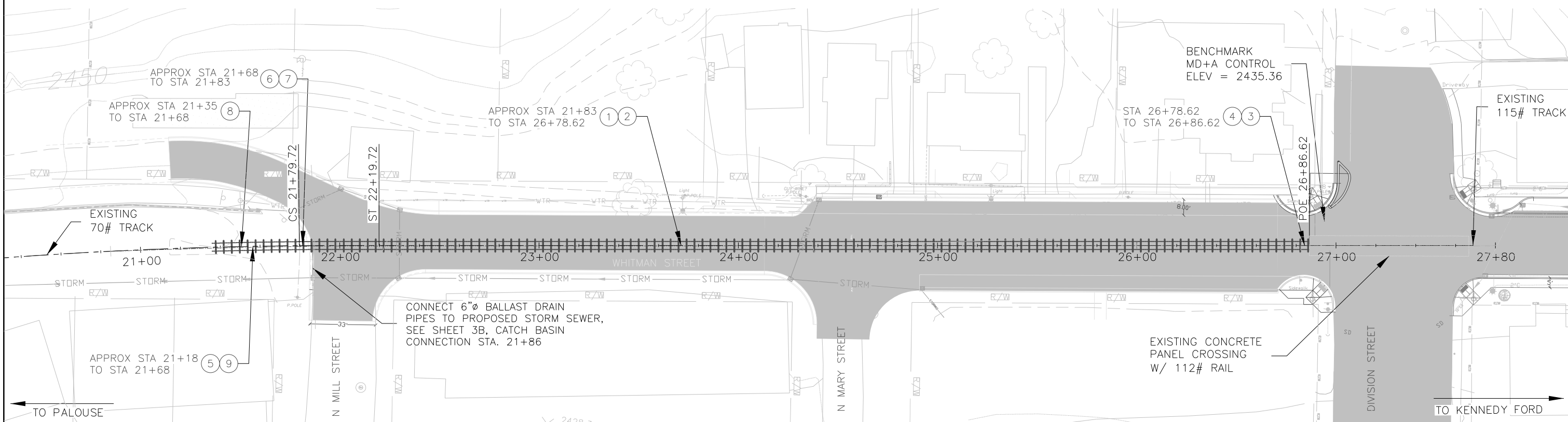
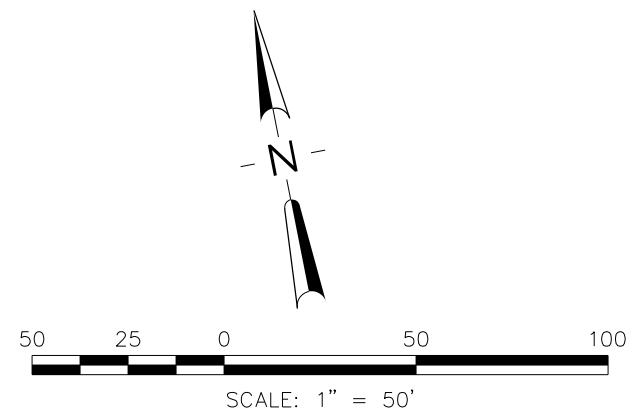
NEW TRACK CURVE DATA													
CURVE NO.	STATIONING	POINT	NORTHING	EASTING	BEARING	DISTANCE	TOTAL Δ	D	R	T	L	Δsp	Ls
C-0A	19+61.32	TS (BEGIN)	593682.35	2495397.61								0°30'00"	40.00'
	20+01.32	SC	593692.09	2495436.41									
	20+90.56	PI	593713.33	2495523.09		4°27'35"	2°30'00"	2292.01'	89.24	178.40			
	21+79.72	CS	593727.75	2495611.16									
	22+19.72	ST	593733.99	2495650.67								0°30'00"	40.00'
	26+86.62	POE	593805.36	2496112.08	N81°11'46.5"E	466.90							

LEGEND

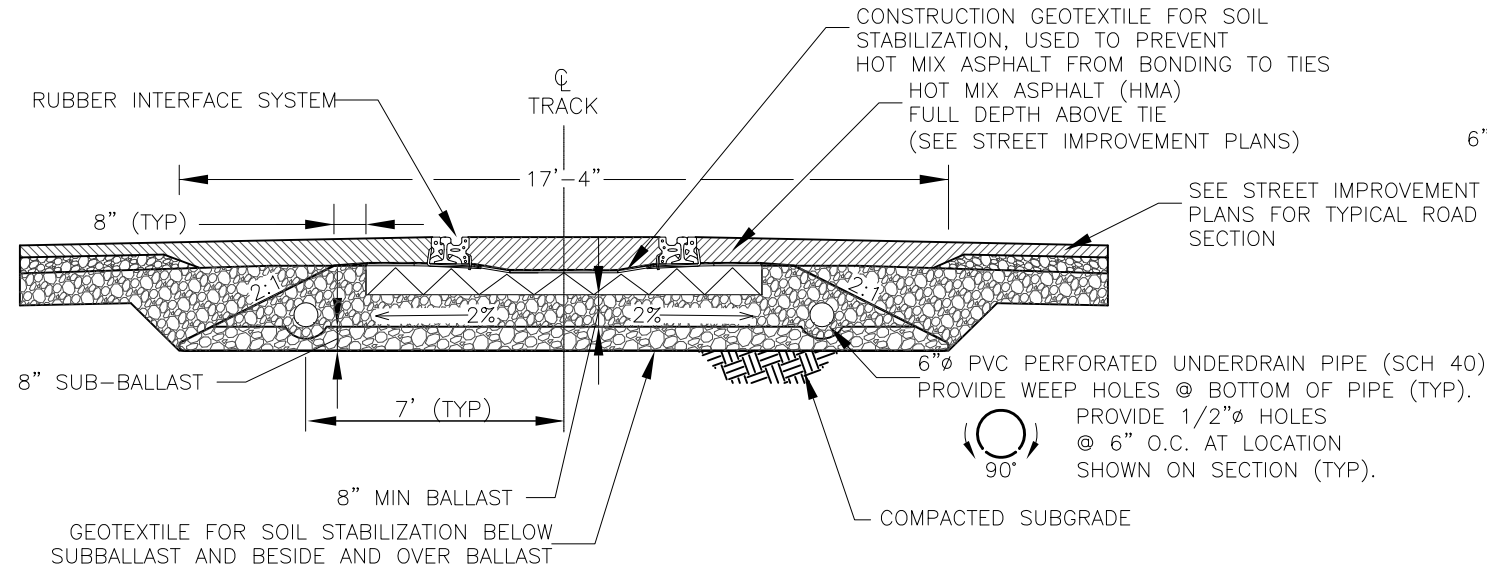
- EXISTING TRACK
- ||||| NEW TRACK
- PL — EXISTING PROPERTY LINE
- GAS — EXISTING GAS LINE
- SAN — EXISTING SANITARY SEWER
- WTR — EXISTING WATER
- (SD) — EXISTING STORM DRAIN
- STORM — PROPOSED STORM DRAIN – SEE CIVIL PLANS
- R/W — EXISTING RIGHT-OF-WAY
- ☐ & ○ PROPOSED & EXISTING CATCH BASIN
- EXISTING ASPHALT SURFACE

CONSTRUCTION NOTES

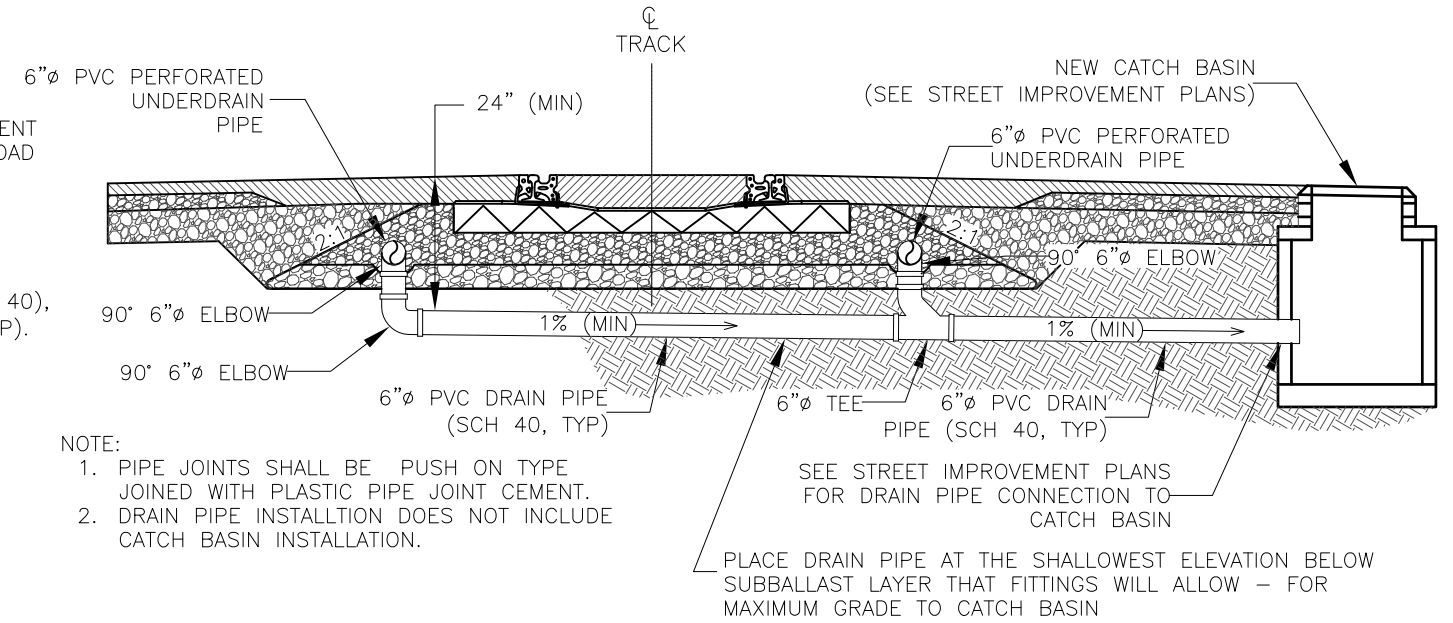
- ① REMOVE TRACK (WITHIN EXISTING STREET LIMITS)
- ② FURNISH AND INSTALL RUBBER INTERFACE CROSSING
- ③ REMOVING ASPHALT CONCRETE PAVEMENT OVER EXISTING TRACK
- ④ FURNISH AND INSTALL RUBBER INTERFACE ON EXISTING RAIL
- ⑤ SURFACE LINE AND DRESS TRACK
- ⑥ REMOVE TRACK
- ⑦ FURNISH AND INSTALL TRACK
- ⑧ FURNISH AND INSTALL COMPROMISE ARRANGEMENT
- ⑨ REPLACE CROSSTIES



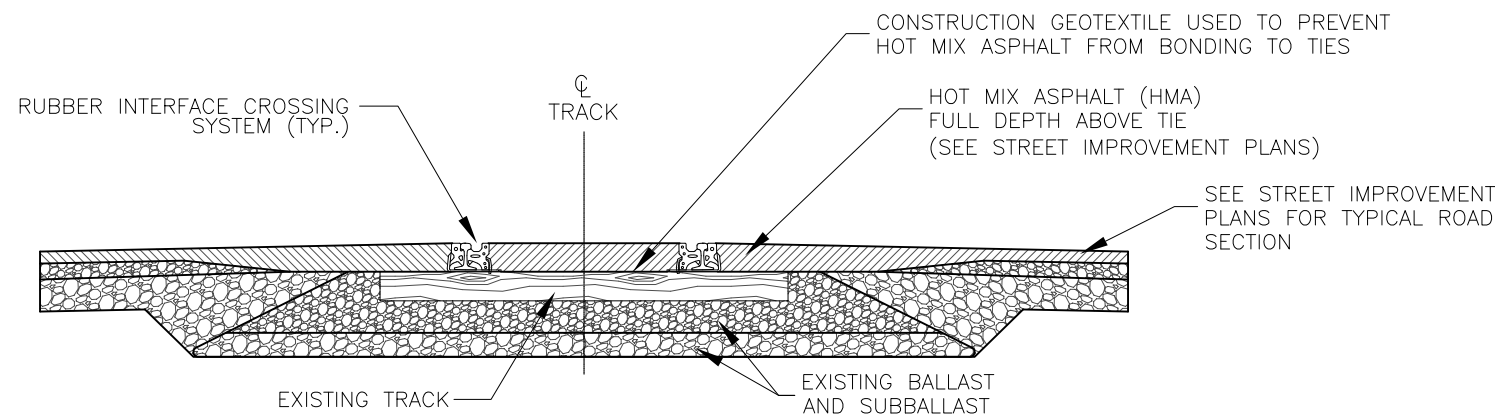
FILE NAME		REGION NO.		STATE		FED.AID PROJ.NO.				WHITMAN STREET TRACK PALOUSE, WA TRACK PLAN	SHEET 1B
TIME	DATE	10	WASH								
DESIGNED BY	ENTERED BY	JOB NUMBER		CONTRACT NO.		LOCATION NO.					
CHECKED BY	PROJ. ENGR.										
REGIONAL ADM.	REVISION	DATE	BY								



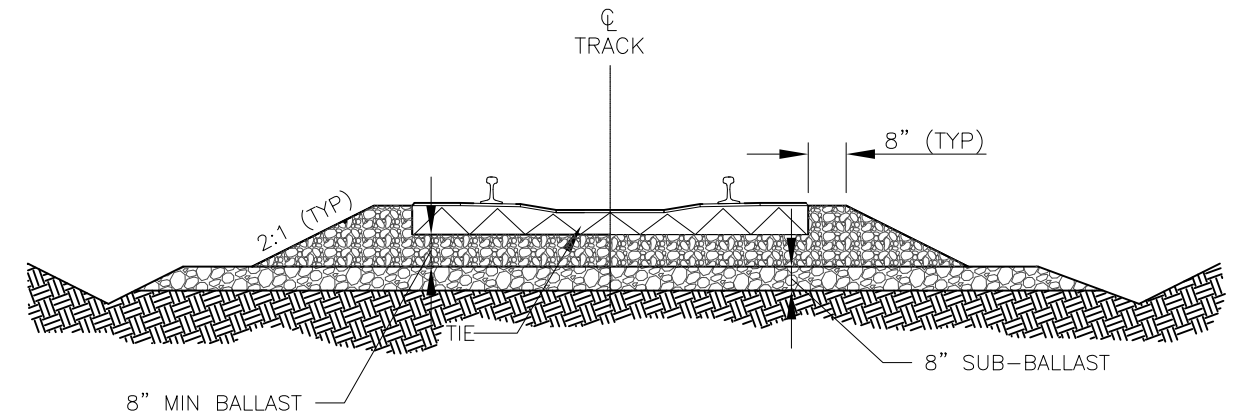
TYPICAL TRACK SECTION – W/ RUBBER INTERFACE CROSSING STA 21+83 TO 26+78.62
SCALE: NTS



BALLAST DRAIN PIPE TO CATCH BASIN CONNECTION STA 21+86
SCALE: NTS



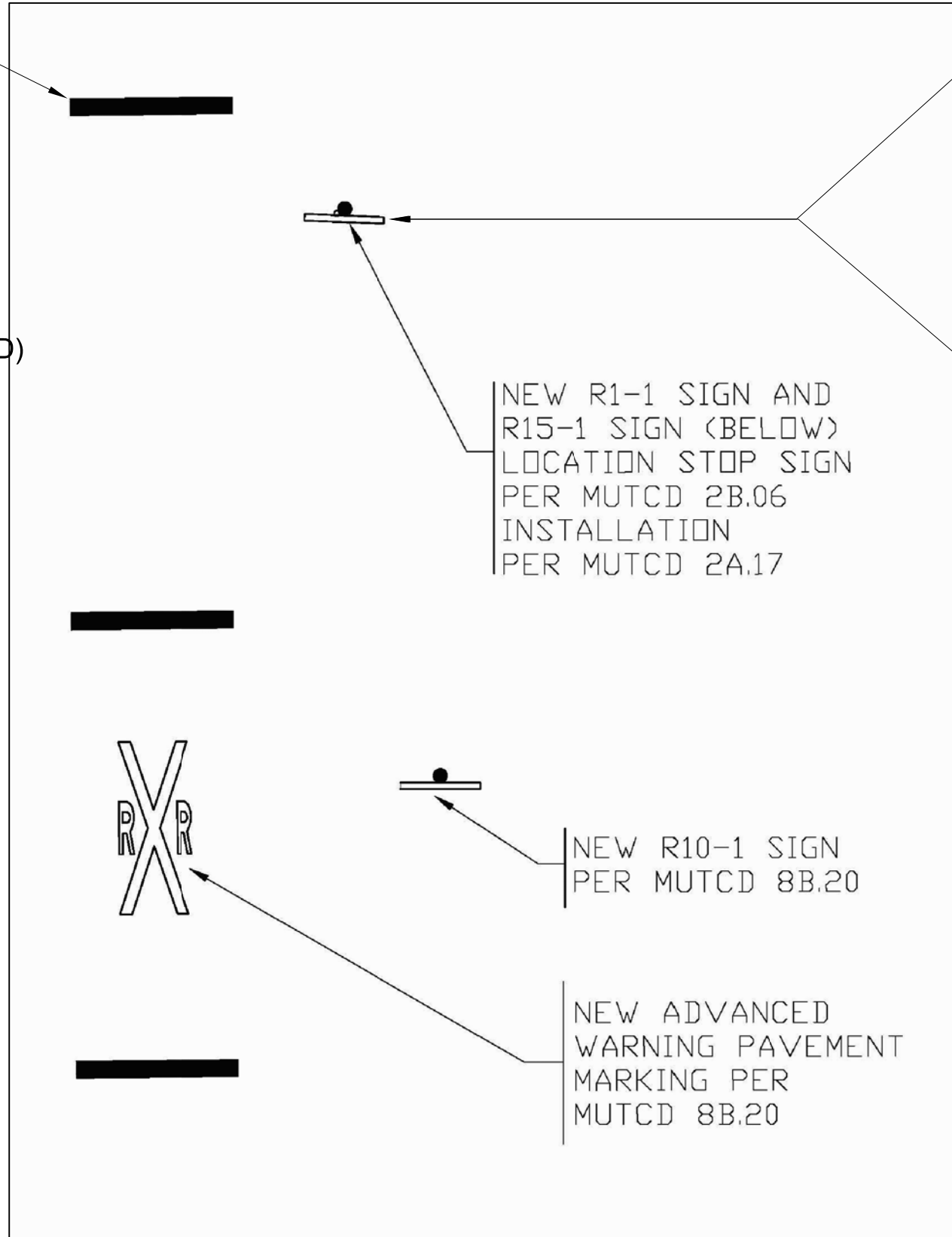
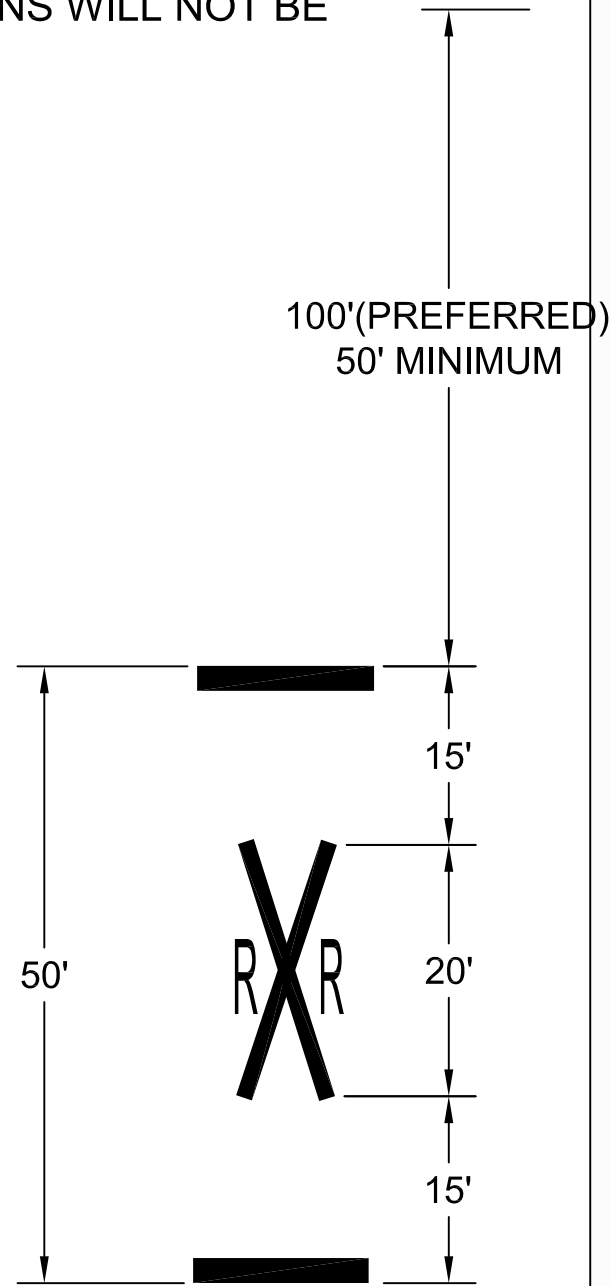
TYPICAL EXISTING TRACK SECTION – ASPHALT W/ RUBBER INTERFACE SEAL STA 26+78.62 TO 26+86.62
SCALE: NTS



TYPICAL TRACK SECTION STA 21+18 TO 21+83
SCALE: NTS

FILE NAME		REGION NO.		STATE	FED.AID PROJ.NO.			WHITMAN STREET TRACK PALOUSE, WA	SHEET
TIME		10	WASH						
DATE		JOB NUMBER				DATE			
PLOTTED BY		CONTRACT NO.			LOCATION NO.	DATE			
DESIGNED BY		REVISION				DATE			
ENTERED BY		BY				DATE			
CHECKED BY									
PROJ. ENGR.									
REGIONAL ADM.									

STOP LINE AND PAVEMENT MARKINGS PER SECTION 8B-28 AND FIGURE 8B-6. (ADVANCE TRAFFIC CONTROL SIGNS (SECTION 2C-36) AND 'NO PASSING ZONE' SIGNS WILL NOT BE USED.)



NEW R1-1 SIGN AND R15-1 SIGN (BELOW) LOCATION STOP SIGN PER MUTCD 2B.06 INSTALLATION PER MUTCD 2A.17

NEW R10-1 SIGN PER MUTCD 8B.20

NEW ADVANCED WARNING PAVEMENT MARKING PER MUTCD 8B.20

R15-1 SIGN AND R1-1 SIGN (BELOW)--INCLUDING REFLECTIVE STRIP--PER MUTCD SECTIONS 8B.02, 8B.03, AND 8B.04 AND FIGURE 8B-2. (EMERGENCY NOTIFICATION SIGN (I-13) SHALL BE FURNISHED AND INSTALLED BY WSDOT).

(STOP-1 LOCATION)

R15-1 SIGN AND R1-2 SIGN (BELOW)--INCLUDING REFLECTIVE STRIP--PER MUTCD SECTIONS 8B.02, 8B.03, AND 8B.04 AND FIGURE 8B-2. (EMERGENCY NOTIFICATION SIGN (I-13) SHALL BE FURNISHED AND INSTALLED BY WSDOT).

(YIELD-4 LOCATIONS)

W10-1 SIGN PER MUTCD 8B.06

ADVANCED WARNING PAVEMENT MARKING PER MUTCD SECTION 8B.06, 8B.27, AND FIGURE 8B-7A