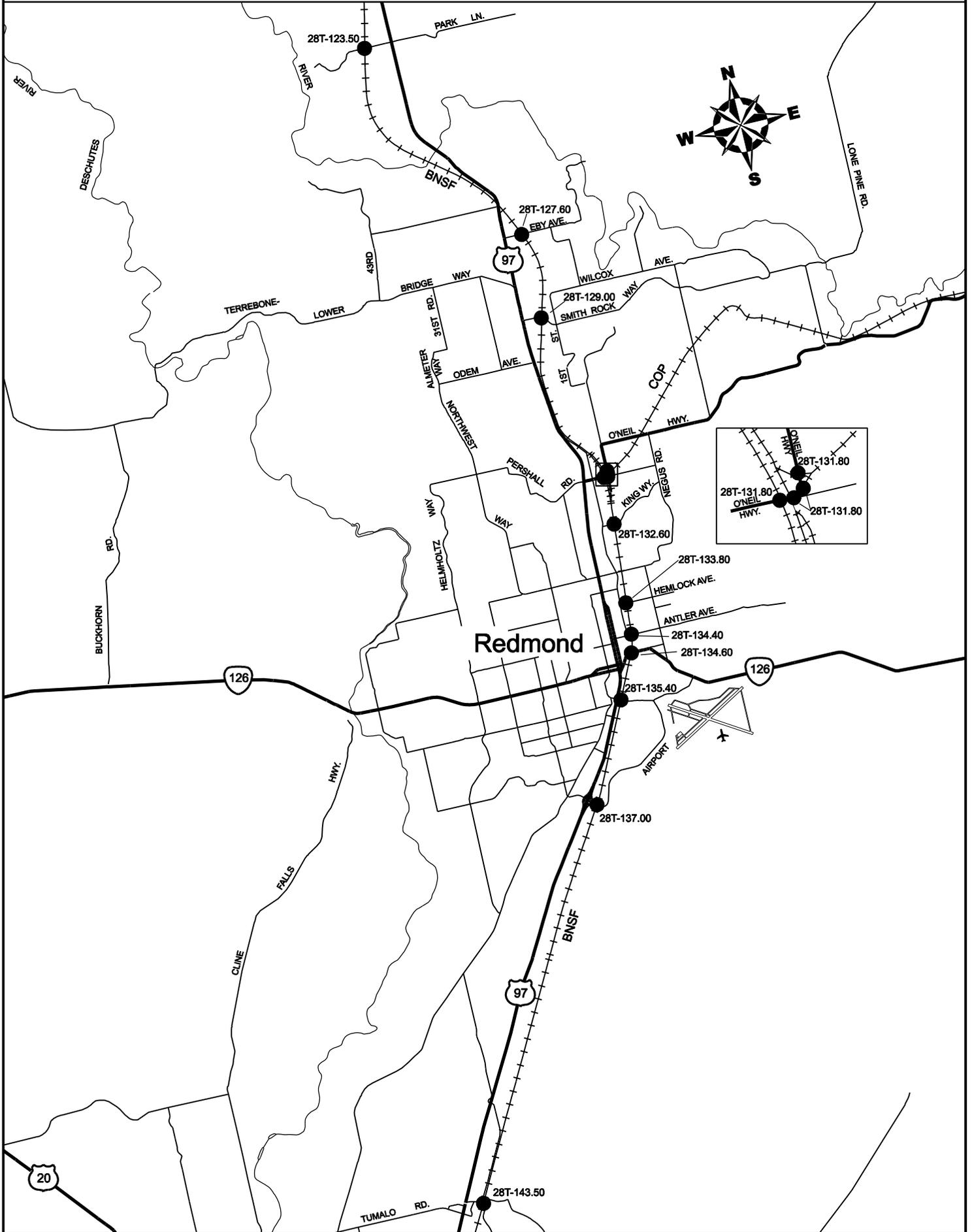


NORTHERN DESCHUTES COUNTY AT-GRADE RAIL CROSSINGS



Crossing 28T-123.50

Park Lane – Overcrossing

RATIONALE: This is a two-lane gravel road. There is a rise in grade at the track crossing. There is one home access points that would be affected by the overcrossing; in addition, farm access would need to be provided. This crossing is less than 0.5 miles west of Highway 97. Less than 1000 feet west of the track is a sharp turn to the south, which makes it appropriate to design this overcrossing for a speed less than 45 mph.

DAVID EVANS AND ASSOCIATES, INC.

SUMMARY COST ESTIMATE

PROJECT: ODOT0000630 Central Oregon Rail Plan		Engineer Name/Phone: Jim Dobrowski / 541.389.7614			
CROSSING NO: 23, ODOT 066769L		LOCATION: Park Lane, Jefferson County			
RAIL SEGMENT IDENTIFICATION: 28T-123.50		RAIL SEGMENT LENGTH:			
NO.	ITEM	UNIT	QUANTITY	UNIT COST	TOTAL
1	Mobilization	LS	1	\$350,000	\$350,000
2	Selective Demolition	LS	1	\$50,000	\$50,000
3	Lot access	LS	1	\$10,000	\$10,000
4	Bridge 130' x 40'	SF	5200	\$165	\$858,000
5	Embankment	CY	100000	\$15	\$1,500,000
6	Paving	SF	44400	\$10	\$444,000
SUBTOTAL					\$3,212,000

ADDITIONAL COSTS

Utility Allowance	\$100,000
Engineering/Surveying (10%)	\$321,200
Construction Engr./Contingency (50%)	\$1,606,000
Special Costs (Unique to crossing or segment)	
SUBTOTAL	\$2,027,200

TOTAL CONSTRUCTION COST

RIGHT-OF-WAY COSTS (Supplied by ODOT)	\$166,307
--	------------------

TOTAL CROSSING/SEGMENT COST **\$5,405,507**

Assumptions/Notes:

- Bridge span 130' x 40' wide over tracks
- No MSE walls, R/W required for all fill slopes
- Overhead power lines on north side of road
- Existing 2 lane gravel road, provide for 24 ft. of pavement



NORTH



LEGEND

- - - P - - - POWER LINE
- +++++ RAILROAD TRACKS

ONE LANE PRIVATE GRAVEL ROAD

NEW BRIDGE

LIMITS OF IMPROVEMENTS

S.W. PARK LN.

2 LANE GRAVEL ROAD

BNSF R.R.

P:\O\ODOT00000630\0400CAD\EC\SHEETS\023-ODOT-0630-Park Ln.dwg Dec 23,2008 - 9:39am wxs



DAVID EVANS AND ASSOCIATES INC.

320 SW Upper Terrace Drive, Suite 200
Bend, Oregon 97702 (541) 388-7814

CROSSING NO. 23
CROSSING ID 28T-123.50
USDOT NO. 066769L
N 44°25'10" W -121°12'26"
OPAL CITY
JEFFERSON COUNTY, OREGON

scale	T=400'	design	JJD
date	12.15.08	drawn	WXS
file			

Crossing 28T-127.60

NW Eby Avenue / 1st Street – Close

RATIONALE: There is a substantial rise in grade at the track crossing. The existing road grade on the east side of the tracks is 6%. An overcrossing would place the structure very high over the surrounding property and any road transition would extend a substantial distance in both directions from the tracks. 1st Street is approximately 650 feet to the east and would be impacted by an overcrossing. Since this crossing is near Smith Rock State Park, there would be concerns regarding visual impacts of a high overcrossing.

An undercrossing may avoid impacts to 1st Street and the visual impact of an overcrossing. However, a low area would be created with cost concerns regarding maintenance and drainage of an undercrossing in this area. There are gravel accesses to homes south of Eby Avenue on the west side of the tracks that are only 162 feet and 250 feet west of the tracks. There is a gravel access to the north of Eby Avenue on the east side of the tracks that is only 140 feet east of the tracks. These accesses would need to be addressed with either an undercrossing or overcrossing.

The AADT for this crossing is 248. Based on the relatively low use of the crossing and the concerns regarding an over- or undercrossing, closing the crossing is the recommended option. 9th Street is farther east and provides access to Crossing #27 (Smith Rock Road) to the south. Access to Crossing #27 (Smith Rock Road) along the west side of the tracks can be provided along Highway 97. The distance between the two crossings along Highway 97 is two miles.

DAVID EVANS AND ASSOCIATES, INC.

SUMMARY COST ESTIMATE

PROJECT: ODOT0000630 Central Oregon Rail Plan	Engineer Name/Phone: Jim Dobrowski / 541.389.7614
CROSSING NO: 26, ODOT 066773B	LOCATION: Eby Avenue, Deschutes County
RAIL SEGMENT IDENTIFICATION: 28T-127.60	RAIL SEGMENT LENGTH:

NO.	ITEM	UNIT	QUANTITY	UNIT COST	TOTAL
1	Mobilization	LS		\$165	
2	Selective Demolition	LS		\$15	
3	Clearing and Grubbing	LS		\$100	
4	RR Bridge 100' x 86'	SF		\$165	
5	Embankment	CY		\$15	
6	MSE Retaining Walls	SF		\$100	
7	Paving	SF		\$10	
8					
9					
10					
11					
SUBTOTAL					0

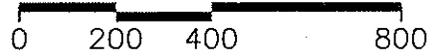
ADDITIONAL COSTS	
Utility Allowance	\$100,000
Design/Construction Engineering/Surveying (25%)	0
Special Costs (Unique to crossing or segment)	
Contingency %	
SUBTOTAL	\$100,000

TOTAL CONSTRUCTION COST	
RIGHT-OF-WAY COSTS (Supplied by ODOT)	
TOTAL CROSSING/SEGMENT COST	
	\$100,000

Assumptions/Notes:



NORTH



LEGEND

- P-----P----- POWER LINE
- +++++ RAILROAD TRACKS

HWY. 97

BNSF R.R.

STOP SIGN

STOP SIGN

21' PAVEMENT

N.W. EBY AVE.

2.3%

6%

NE 1ST ST

EXISTING AT GRADE CROSSING
TO BE CLOSED

P:\O\ODOT00000630\0400CAD\EC\SHEETS\026--ODOT-0630--Eby Ave.dwg Jan 26,2009 - 2:43pm jjd



DAVID EVANS
AND ASSOCIATES INC.

820 SW Upper Terrace Drive, Suite 200
Beav, Oregon 97002 (503) 800-7016

scale	T=400'	design	JJD
date	11.14.08	drawn	WXS
file			

CROSSING NO. 26
CROSSING ID 28T-127.60-B
USDOT NO. 066773B
N 44°22'14" W -121°10'23"
TERREBONNE
DESCHUTES COUNTY, OREGON

Crossing 28T-129.00

Smith Rock Way / B Avenue– Undercrossing

RATIONALE: Smith Rock Way slopes down substantially from the tracks to 1st Street approximately 1500 feet to the east of the tracks. This road slopes away from the track to the east with grades greater than 8%. Based on these conditions, an overpass is not an option.

To the east of the tracks there are two accesses that need to be maintained – 17th Street is approximately 300 feet east of the tracks, and access to the Assembly of God Church is across the street from 17th Street. There is an existing rock wall along the south side of the road east of the tracks. The height of this rock wall may need to be increased with an undercrossing. There are existing homes at the top of the rock wall. A retaining wall may be required on the north side of the road in this area if the road alignment is moved north.

There are a greater number of access points on the west side of the tracks. 16th Street access to Smith Rock Way could be closed with a cul-de-sac. There are 9 residential driveways on the west side that would need to be addressed. To the west of the tracks retaining walls on both sides of the depress Smith Rock Way are included in the cost estimate with frontage roads providing access to the adjacent lots. The cost of the retaining walls could be reduced with the purchase of the adjacent properties.

The residential lot southwest of the intersection of Smith Rock Way and 1st Street may also be purchased since the driveway is very close to the intersection. The driveway and parking lot for the Terrebonne Deport (a bar and restaurant) would also need to be revised. There are 15 paved parking spaces for the Terrebonne Deport that would need to be regraded and paved. If an acceptable alternative access can not be provided to this business, it may need to be purchased.

DAVID EVANS AND ASSOCIATES, INC.

SUMMARY COST ESTIMATE

PROJECT: ODOT0000630 Central Oregon Rail Plan	Engineer Name/Phone: Jim Dobrowski / 541.389.7614
CROSSING NO: 27, ODOT 066775P	LOCATION: Smith Rock Way, Terrebonne, Deschutes County
RAIL SEGMENT IDENTIFICATION: 28T-129.00	RAIL SEGMENT LENGTH:

NO.	ITEM	UNIT	QUANTITY	UNIT COST	TOTAL
1	Mobilization	LS	1	\$710,000	\$710,000
2	Selective Demolition	LS	1	\$150,000	\$150,000
3	Lot access	LS	1	\$150,000	\$150,000
4	RR Bridge 50' x 150'	SF	7500	\$165	\$1,237,500
5	Excavation	CY	40000	\$20	\$800,000
6	MSE Retaining Walls	SF	19200	\$100	\$1,920,000
7	Paving	SF	46800	\$10	\$468,000
8	Sidewalk	SF	15600	\$10	\$156,000
9	Curb	LF	2600	\$10	\$26,000
10	Cul de sac	EA	1	\$25,000	\$25,000
11	Frontage road	SF	16800	\$10	\$168,000
12	Repave parking lots	SF	80000	\$10	\$800,000
SUBTOTAL					\$6,610,500

ADDITIONAL COSTS	
Utility Allowance	\$300,000
Engineering/Surveying (10%)	\$661,050
Construction Engr./Contingency (50%)	\$3,305,250
Special Costs (Unique to crossing or segment)	
SUBTOTAL	\$4,266,300

TOTAL CONSTRUCTION COST	
RIGHT-OF-WAY COSTS (Supplied by ODOT)	\$1,435,310
TOTAL CROSSING/SEGMENT COST	
	\$12,312,110

Assumptions/Notes:

RR R/W is 300 ft. wide

Two existing track

RR bridge span 150', 50' wide

MSE wall on both sides of road, west of tracks

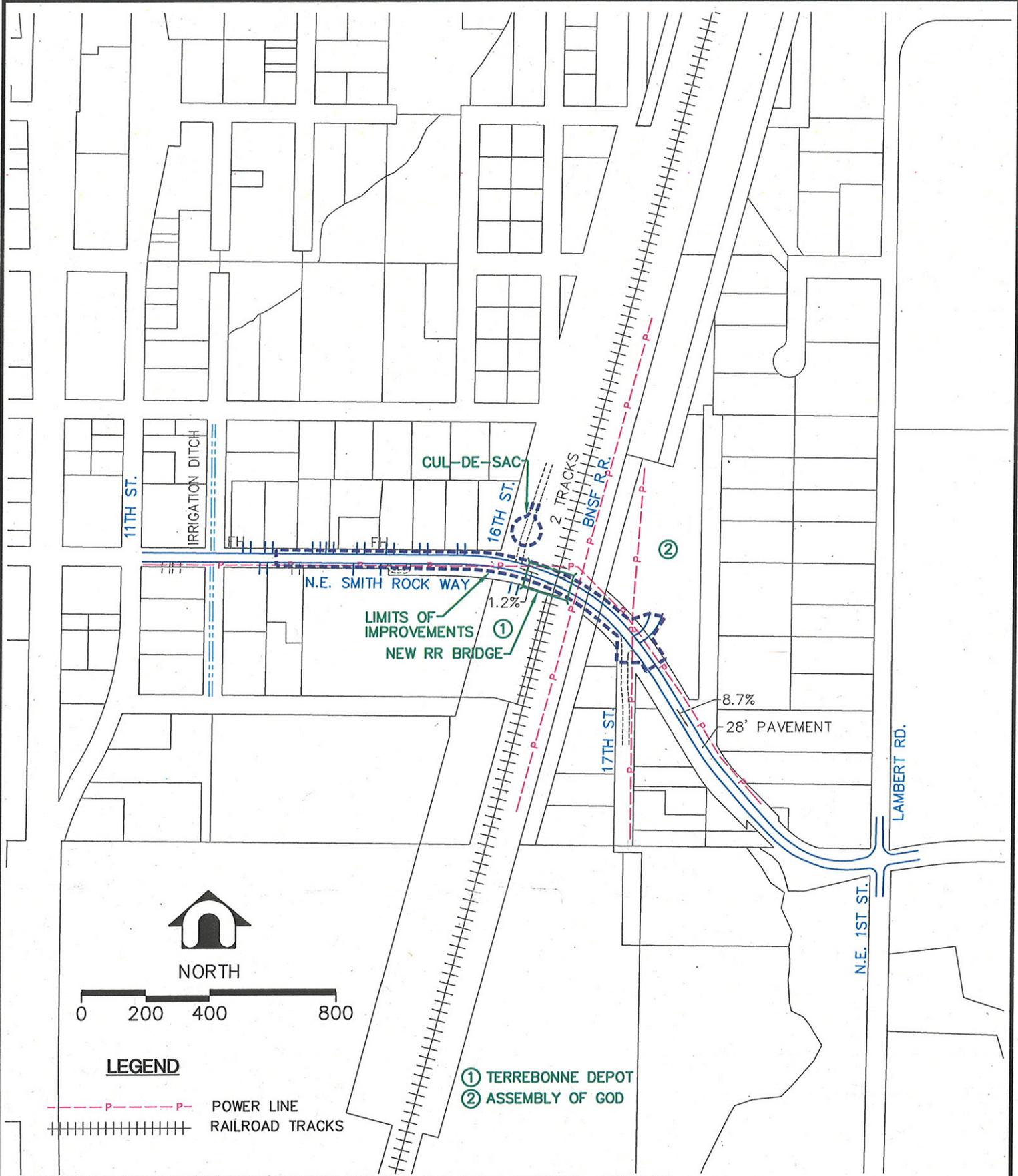
Multiple overhead power lines in the area

Existing 28 ft. wide pavement widened to 36 ft.

36 ft. wide pavement for road improvements with curb and 6 ft. sidewalk

All typical municipal services will require relocation

Will need road grades steeper than 4%



P:\O\ODOT00000630\0400CAD\EC\SHEETS\027-ODOT-0630-Smith Rock Rd.dwg Jan 26,2009 - 3:13pm jjd

scale T=400' design JJD
 date 11.14.08 drawn WXS
 file



**DAVID EVANS
 AND ASSOCIATES INC.**
 320 SW Upper Terrace Drive, Suite 200
 Bend, Oregon 97702 (541) 389-7614

CROSSING NO. 27
 CROSSING ID 28T-129.00
 USDOT NO. 066775P
 N 44°21'04" W -121°10'21"
 TERREBONNE
 DESCHUTES COUNTY, OREGON

Crossing 28T-131.80

NE O'Neil Way (HWY 370) – Overcrossing

RATIONALE: NE O'Neil Way presently crosses over five railroad tracks as it makes a 90 degree turn, with roadway speed signed for 20 mph. There are multiple rail crossings partly because the tracks form a three legged rail intersection. This area is relatively flat. Approximately 80% of rock used in Deschutes Co for road projects comes from Crook County via O'Neil Hwy. The County has been in discussions with ODOT about potential realignment of O'Neil Hwy.

A potential realignment shown on the exhibit for this site is to move the 90 degree turn near the railroad crossings in O'Neil Highway northwest. By moving the overcrossing northwest, the bridge spanning on the tracks is substantially reduced. NE Yucca Avenue could be cul-de-saced. Access to Redmond from the cul-de-sac would be provided by NE 17th Street located approximately 0.8 miles to the east which turns into Negus Road. Another option discuss with the County is to have NE O'Neil Way connect to NW Canal Boulevard approximately 0.5 miles north of NE Yucca Avenue. In this area there would be only one track to cross. Additional right-of-way would be required for either option. Both options would have a cul-de-sac at the end of NE Yucca Avenue.

DAVID EVANS AND ASSOCIATES, INC.

SUMMARY COST ESTIMATE

PROJECT: ODOT0000630 Central Oregon Rail Plan	Engineer Name/Phone: Jim Dobrowski / 541.389.7614
CROSSING NO: 28, ODOT 066780L	LOCATION: O'Neal Way / HWY 370, Deschutes County
RAIL SEGMENT IDENTIFICATION: 28T-131.80	RAIL SEGMENT LENGTH:

NO.	ITEM	UNIT	QUANTITY	UNIT COST	TOTAL
1	Mobilization	LS	1	\$760,000	\$760,000
2	Selective Demolition	LS	1	\$300,000	\$300,000
3	Lot access	LS	1	\$50,000	\$50,000
4	Bridge 225' x 50', tracks	SF	11250	\$165	\$1,856,250
5	Bridge 50' x 50', irrigation	SF	2500	\$165	\$412,500
6	Embankment	CY	120000	\$15	\$1,800,000
7	MSE Retaining Walls	SF	6600	\$100	\$660,000
8	Paving	SF	82800	\$10	\$828,000
9	Sidewalk	SF	27600	\$10	\$276,000
10	Curb	LF	4600	\$10	\$46,000
11	Cul de sac	EA	1	\$25,000	\$25,000
SUBTOTAL					\$7,013,750

ADDITIONAL COSTS	
Utility Allowance	\$300,000
Engineering/Surveying (10%)	\$701,375
Construction Engr./Contingency (50%)	\$3,506,875
Special Costs (Unique to crossing or segment)	
SUBTOTAL	\$4,508,250

TOTAL CONSTRUCTION COST	
RIGHT-OF-WAY COSTS (Supplied by ODOT)	\$53,426
TOTAL CROSSING/SEGMENT COST	
\$11,575,426	

Assumptions/Notes:

Road R/W 60'

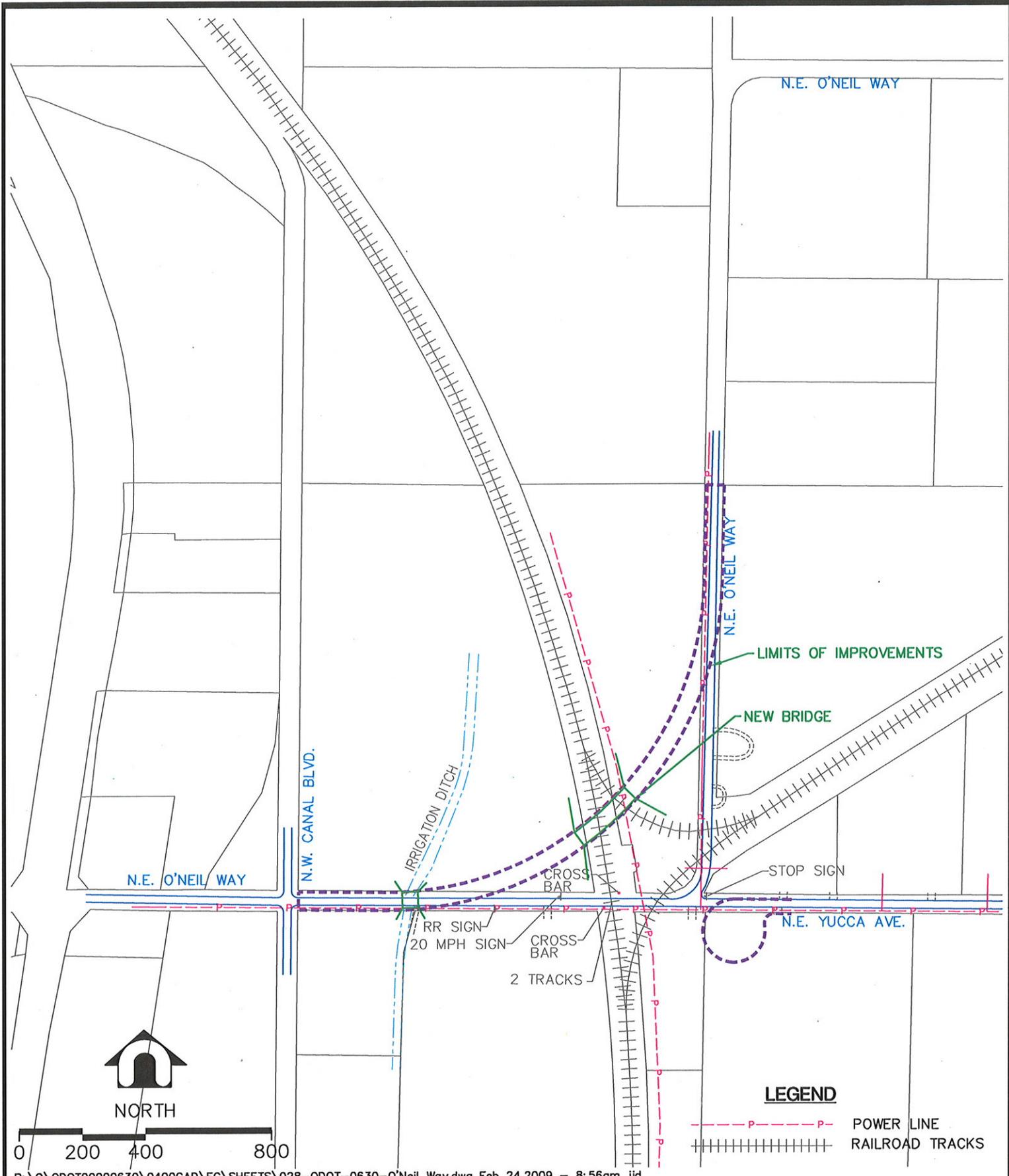
Bridge span 225', 50' wide, 2 travel lanes, 2 bike lanes, 2-6' sidewalks

MSE walls along tracks the remaining area based on fill slopes

Overhead power lines on south and west side of O'Neal Way

Existing speed limit of 20 mph could be increased to 45 mph

Additional R/W would be required



P:\o\ODOT00000630\0400CAD\EC\SHEETS\028-ODOT-0630-O'Neil Way.dwg Feb 24,2009 - 8:56am jjd



**DAVID EVANS
AND ASSOCIATES INC.**
320 SW Upper Terrace Drive, Suite 200
Bend, Oregon 97702 (541) 389-7614

CROSSING NO. 28
CROSSING ID 28T-131.00
USDOT NO. 066780L
N 44°18'46" W -121°09'53"
PRINEVILLE JUNCTON
DESCHUTES COUNTY, OREGON

scale	T=400'	design	JJD
date	11.14.08	drawn	WXS
file			

Crossing 28T-132.60

NE King Way, Redmond – To be closed

Rationale: A decision was made by City/ODOT to cul de sac NE King Way on each side of the RR. NE Upas Ave. will become the Major Collector in the area.

Crossing 28T-133.80

NE Hemlock Ave, Redmond – To be closed

RATIONALE: The Redmond Bypass parallels the RR at this location at approximately the same grade as the RR. The Redmond Bypass intersects Hemlock to the west of the RR. Hemlock has been made into a cul de sac on the west side of the Bypass. At first glance, an overcrossing appears to be the better solution at this site; however, the close proximity between the Bypass and RR would require the Bypass to be raised 30 ft.. and would require retaining walls along both sides of the Bypass to keep from encroaching onto the RR and adjacent properties to the west. Retaining walls along Hemlock would be needed to reduce impact to properties. The combination of the overcrossing approaches and the reconstruction of a significant length of the Bypass may make the RR undercrossing less costly. A decision was made by City/ODOT to cul de sac Hemlock at the RR on the east side in the future.

Crossing 28T-134.40

NE Antler Ave, Redmond -- Overcrossing

RATIONALE: The Redmond Bypass parallels the RR through this site at approximately the same grade as the RR, and intersects Antler to the west of the RR. Antler is to remain open, rather than cul de sac like Hemlock, but access to the Bypass is to be eliminated, per the 3/19/08 notes from meeting with City of Redmond. An overcrossing of both the RR and the Bypass appears to be the best solution at this site because it would eliminate the need to raise the Redmond Bypass or the costly approaches for the RR if an undercrossing were used. Retaining walls along Antler would be needed to reduce impact to properties. Access to side streets would be eliminated, unless they were raised to meet the approach grades. There is a very large pump building and water storage tank on the southeast quadrant of this intersection. It is assumed that retaining walls could be used to eliminate impact to that facility.

DAVID EVANS AND ASSOCIATES, INC.

SUMMARY COST ESTIMATE

PROJECT: ODOT0000608 Central Oregon Rail Plan		Terry Shike/503-361-8635			
CROSSING NO: 101		Antler Avenue			
RAIL SEGMENT IDENTIFICATION: Reroute		RAIL SEGMENT LENGTH:			
NO.	ITEM	UNIT	QUANTITY	UNIT COST	TOTAL
	Bridge 86' x 115'	ft2	9890	\$165	\$1,631,850
	MSE Retaining Walls	ft2	73000	\$100	\$7,300,000
	Embankment	yd3	64000	\$15	\$960,000
	Paving	ft2	171000	\$10	\$1,710,000
	Sidewalks	ft2	27000	\$10	\$270,000
SUBTOTAL					\$11,871,850

ADDITIONAL COSTS	
Utility Allowance	\$100,000
Design/Surveying (10%)	\$1,187,185
Constr. Engr./Contingency (50%)	\$5,935,925
Special Costs (Unique to crossing or segment)	
SUBTOTAL	\$7,223,110
TOTAL CONSTRUCTION COST	
RIGHT-OF-WAY COSTS (Supplied by ODOT)	
TOTAL CROSSING/SEGMENT COST	
	\$19,094,960

Assumptions/Notes:

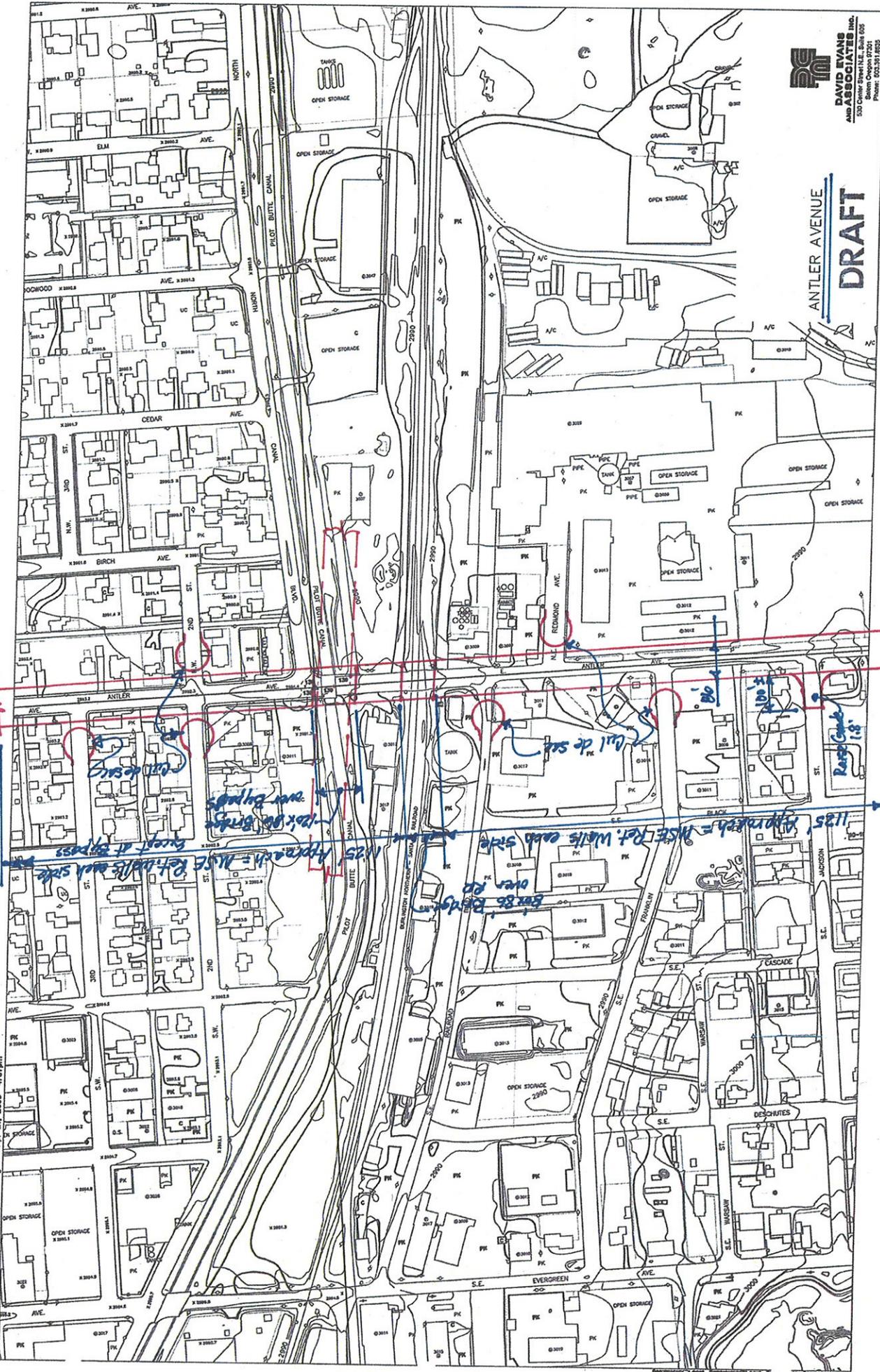
Four lanes, median, with 6 ft bike/shoulder and 6 ft sidewalks.

Retaining walls each side to reduce ROW costs.

Bridge on 30 degree skew

No connection to Redmond Bypass. (Interchange at Evergreen)

X:\VCO\Central Oregon Rail\Redmond\Antler.dwg Apr 21, 2008 4:07pm



DAVID EVANS
AND ASSOCIATES, INC.
350 Center Street N.E., Suite 500
Redmond, Oregon 97701
Phone: 503.251.8225

ANTLER AVENUE

DRAFT

Crossing 28T-134.60

NE Evergreen Ave, Redmond -- Overcrossing

RATIONALE: The Redmond Bypass parallels the RR through this site at approximately the same grade as the RR and intersects Evergreen to the west of the RR. Evergreen is to remain open and include an interchange with the Bypass, per 3/19/08 notes from meeting with City of Redmond. An over crossing appears to be the better solution, however, the close proximity between the Bypass and the RR would require the Bypass to be raised 30 ft.. and would require retaining walls along both sides of the Bypass to keep from encroaching onto the RR right of way and adjacent properties.

Retaining walls along Evergreen would be needed to reduce impact to properties. Access to side streets would be cut off and each street would end with a cul de sac.

An undercrossing of the RR was also considered. An undercrossing would also require very long lengths of retaining walls along both sides of the RR and these walls would be much more expensive than those along the Bypass. The 24 ft.. raise in grade would impact the RR negatively and there is a siding track at this location that would be impacted. There is a large transmission power line located on the east side of the RR that would also be affected with either crossing alternative. Because of the negative impacts to the RR, the overcrossing alternative appears the most feasible.

DAVID EVANS AND ASSOCIATES, INC.

SUMMARY COST ESTIMATE

PROJECT: ODOT0000608 Central Oregon Rail Plan	Terry Shike/503-361-8635				
CROSSING NO:	Evergreen Avenue, Oxing of BNSF				
RAIL SEGMENT IDENTIFICATION:	RAIL SEGMENT LENGTH:				
NO.	ITEM	UNIT	QUANTITY	UNIT COST	TOTAL
	Bridge over RR 70' x 86'	ft2	6,020	\$635	\$3,822,700
	MSE Retaining Walls	ft2	140,700	\$100	\$14,070,000
	Embankment	yd3	128,200	\$15	\$1,923,000
	Paving	ft2	328,000	\$10	\$3,280,000
	Sidewalks	ft2	22,500	\$10	\$225,000
	Cul de sacs	each	5	\$25,000	\$125,000
SUBTOTAL					\$23,445,700

ADDITIONAL COSTS	
Utility Allowance	\$100,000
Design/Surveying (10%)	\$2,344,570
Constr.Engr./Contingency (50%)	\$11,722,850
Special Costs (Unique to crossing or segment)	
SUBTOTAL	\$14,167,420
TOTAL CONSTRUCTION COST	
RIGHT-OF-WAY COSTS (Supplied by ODOT)	
TOTAL CROSSING/SEGMENT COST	
	\$37,613,120

Assumptions/Notes:

- Four lanes, median with 6 ft bike/shoulder and 6 ft sidewalks along Evergreen.
- Interchange with Bypass, so raise Bypass to meet Evergreen profile.
- Retaining walls each side Evergreen and Bypass to reduce ROW costs.
- Raise 5th St. 1.0 ft both sides of Evergreen - 50 ft width.
- Raise Warsaw St. 1.8 ft east side of Evergreen - 40 ft width.
- Cul de sac 3rd & 4th Sts., Railroad Blvd., and Franklin Ave.
- Access to multiple businesses/residences will be cut off due to raising grade of Evergreen.

Crossing 28T-135.40

Veterans Way, Redmond -- Overcrossing

RATIONALE: Veterans Way intersects existing US 97 about 350 ft. to the west of the RR, Pilot Butte Canal is about 500 ft.. to the west of the RR, and N. Canal Blvd. is about 900 ft.. to the west of the RR. It also intersects a local access road about 700 ft.. to the east and Lake St. about 1,200 ft... to the east. The grades fall away from the RR grade significantly in both directions, making an undercrossing of RR desirable. However, Pilot Butte Canal is 500 ft.. to the west, and it is not feasible to go under the RR and over the canal in that length, nor is it feasible to go under the canal. Therefore, an over crossing of the RR was pursued. Due to the existing profile, which falls away from the RR, the approaches are longer than normal.

DAVID EVANS AND ASSOCIATES, INC.

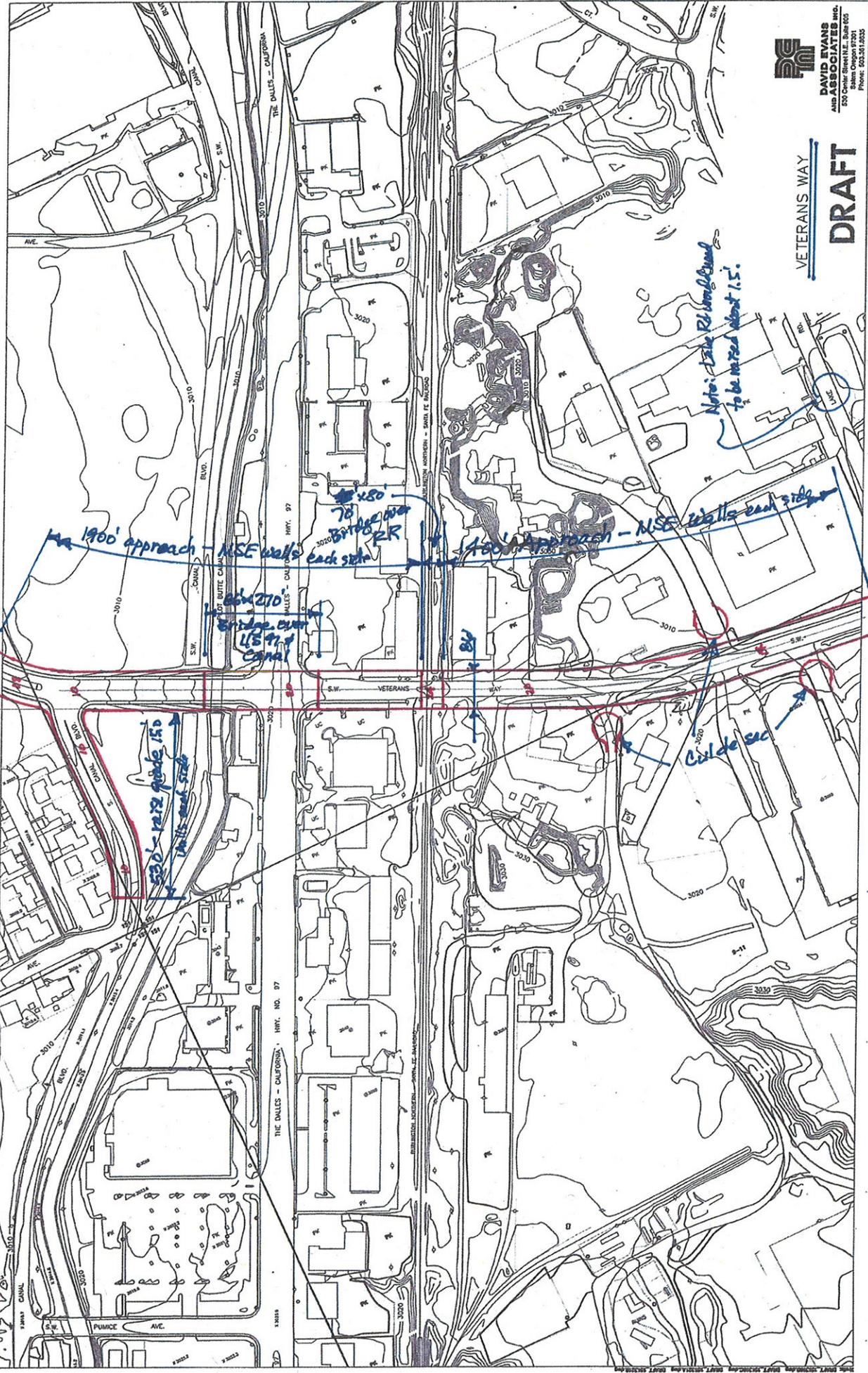
SUMMARY COST ESTIMATE

PROJECT: ODOT0000608 Central Oregon Rail Plan		Terry Shike/503-361-8635			
CROSSING NO:		Veterans Way, Oxing of BNSF			
RAIL SEGMENT IDENTIFICATION:		RAIL SEGMENT LENGTH:			
NO.	ITEM	UNIT	QUANTITY	UNIT COST	TOTAL
	RR Bridge 70' x 86'	ft2	6020	\$165	\$993,300
	US97/Canal Bridge, 270' x 86'	ft2	23220	\$165	\$3,831,300
	MSE Retaining Walls	ft2	104000	\$100	\$10,400,000
	Embankment	yd3	100000	\$15	\$1,500,000
	Paving	ft2	371000	\$10	\$3,710,000
	Sidewalks	ft2	38350	\$10	\$383,500
	Cul de sacs	each	3	\$25,000	\$75,000
SUBTOTAL					\$20,893,100

ADDITIONAL COSTS	
Utility Allowance	\$100,000
Design/Surveying (10%)	\$2,089,310
Constr.Engr./Contingency (50%)	\$10,446,550
Special Costs (Unique to crossing or segment)	
SUBTOTAL	\$12,635,860
TOTAL CONSTRUCTION COST	
RIGHT-OF-WAY COSTS (Supplied by ODOT)	
TOTAL CROSSING/SEGMENT COST	
	\$33,528,960

Assumptions/Notes:

- Four lanes, median with 6 ft bike/shoulder and 6 ft sidewalks.
- Retaining walls each side to reduce ROW costs.
- Span across RR with one bridge and US97 and Canal with second bridge.
- Raise N. Canal Blvd.. 15 ft south side of Veterans Way - 64 ft width.
- Cul de sac business access roads on east side
- Raise Lake Rd. 1.5 ft north side of Veterans Way - 40 ft width
- Access to multiple businesses/residences will be cut off due to raising grade of Veterans Way.



Note: Take RL from ground to be raised about 1.5'

70' bridge over RR

140' approach - MSE walls each side

150' bridge over US 97 canal

530' raise grade 150' on the west side

Cul-de-sac

Crossing 28T-137.00

Airport Way, Redmond -- Undercrossing

RATIONALE: This street is named Yew Avenue to the west of US97 and Airport Way to the east. The street intersects US97 about 850 ft. to the west of the RR, 21st St about 300 to the west of the RR, and S. 19th St. about 500 ft. to the east of the RR. Mountain Way is about 750 feet to the east of the RR. Airport Way crosses under US97 with a bridge, and the grade under the bridge is 30 ft. + below the grade of the RR. It appears that an undercrossing of the RR would be the best fit at this location, by lowering Airport Way, but not raising the RR grade. S. 21St., S. 19th St. and Mountain Way will all need to be lowered to meet the new profile for Airport Way. The off and on ramps to US97 will not be affected significantly. Adjacent businesses would have steeper cuts and would be impacted by this the undercrossing side slopes.

DAVID EVANS AND ASSOCIATES, INC.

SUMMARY COST ESTIMATE

PROJECT: ODOT0000608 Central Oregon Rail Plan		Terry Shike/503-361-8635			
CROSSING NO:		Airport Way - Uxing RR by lowering road			
RAIL SEGMENT IDENTIFICATION:		RAIL SEGMENT LENGTH:			
NO.	ITEM	UNIT	QUANTITY	UNIT COST	TOTAL
	Bridge 45' x 100'	ft2	6000	\$635	\$3,810,000
	Excavation	yd3	84700	\$20	\$1,694,000
	Paving	ft2	142,200	\$10	\$1,422,000
	Sidewalks	ft2	29400	\$10	\$294,000
	Cul de sacs	each	0	\$25,000	\$0
SUBTOTAL					\$7,220,000

ADDITIONAL COSTS	
Utility Allowance	\$100,000
Design/Surveying (10%)	\$722,000
Constr.Engr./Contingency (50%)	\$3,610,000
Special Costs (Unique to crossing or segment)	
SUBTOTAL	\$4,432,000
TOTAL CONSTRUCTION COST	
RIGHT-OF-WAY COSTS (Supplied by ODOT)	
TOTAL CROSSING/SEGMENT COST	
	\$11,652,000

Assumptions/Notes:

- Four lanes, median, with 6 ft bike/shoulder and 6 ft sidewalks.
- Single existing track, so proposed bridge will be 2 track bridge - no access road.
- Rock is close to surface, so retaining walls not needed. Assume drill and blast rock excavation.
- Lower 21st Place 11.6 ft, Lower 19th St 13.2 ft, Lower Mountain Way 4.0 ft.
- There will be significant disruption to businesses due to lowering Airport Way.

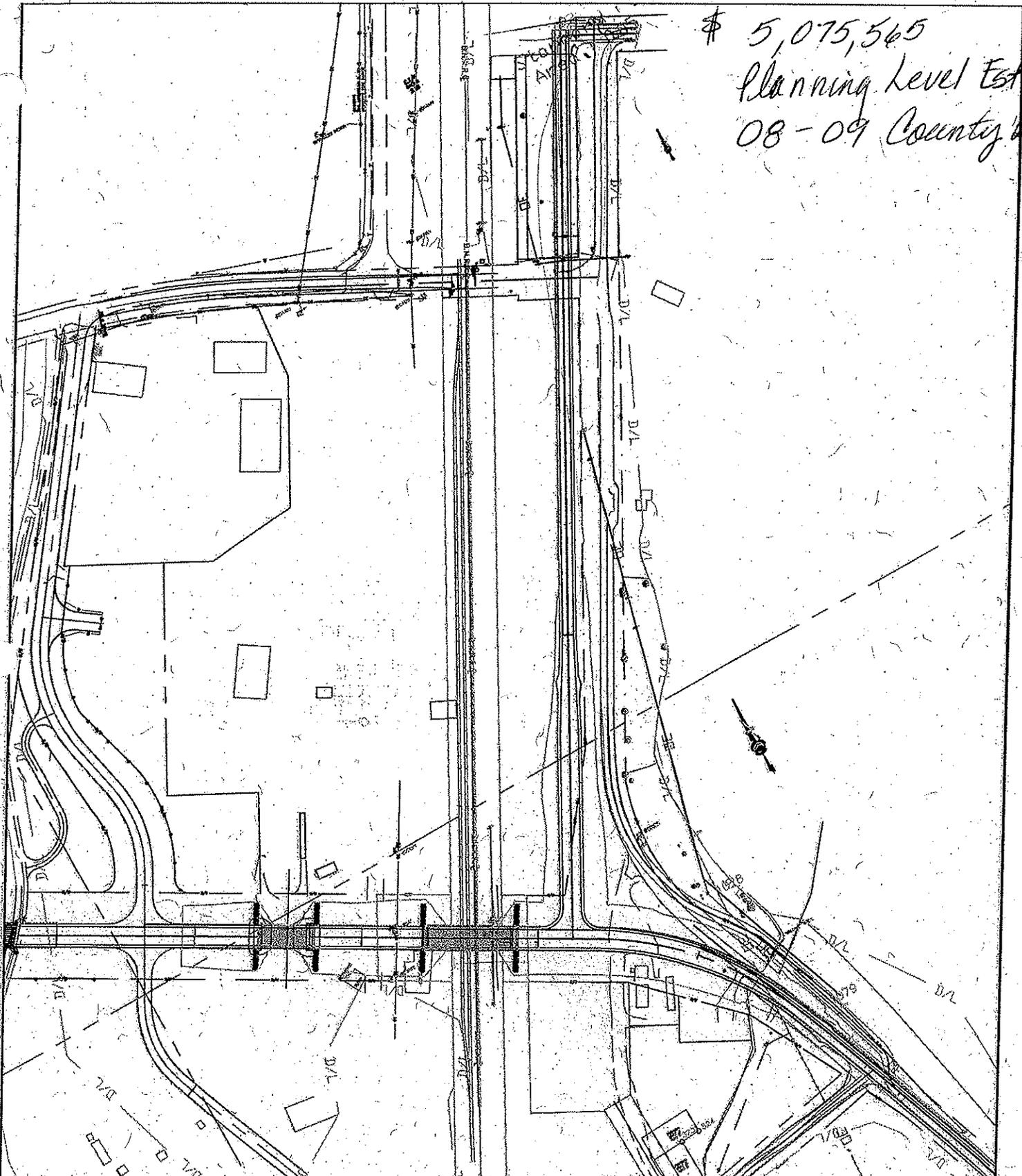
Crossing 28T-143.50

Deschutes Market Rd., Bend -- Overcrossing

RATIONALE: Deschutes Market Rd intersects a street about 100 ft. to the west of the RR and another street about 300 feet to the east of the RR. These streets will need to be raised to meet the profile of the overcrossing. Deschutes County is estimating the cost and impacts of a crossing at the location.

Deschutes Market Rd

\$ 5,075,565
Planning Level Est
08-09 County Bu



DESCHUTES JCT PHASE II

PLAN

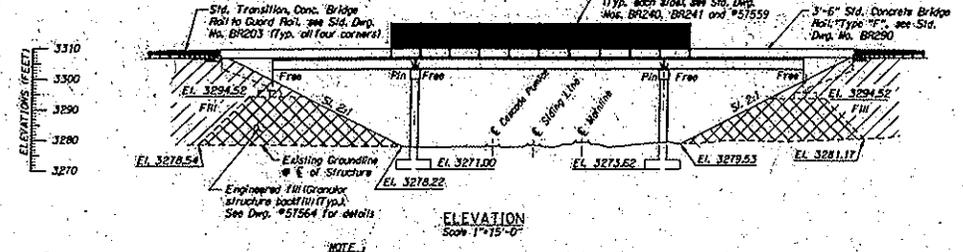
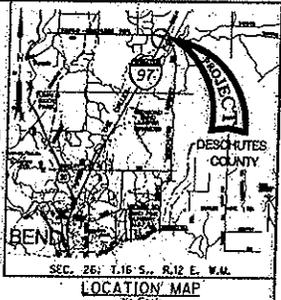
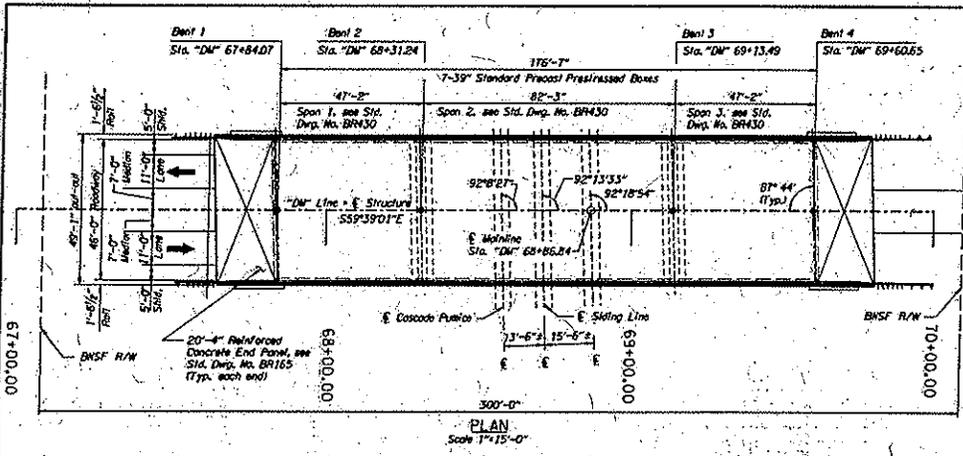


DESCHUTES COUNTY ROAD DEPARTMENT
61150 S.E. 27TH STREET, BEND, OR. 97702

SCALE: 1"=100' DRAWN BY: T.G.W.
FILE: DSGN-IMPER.dwg

DATE: 12/10/07

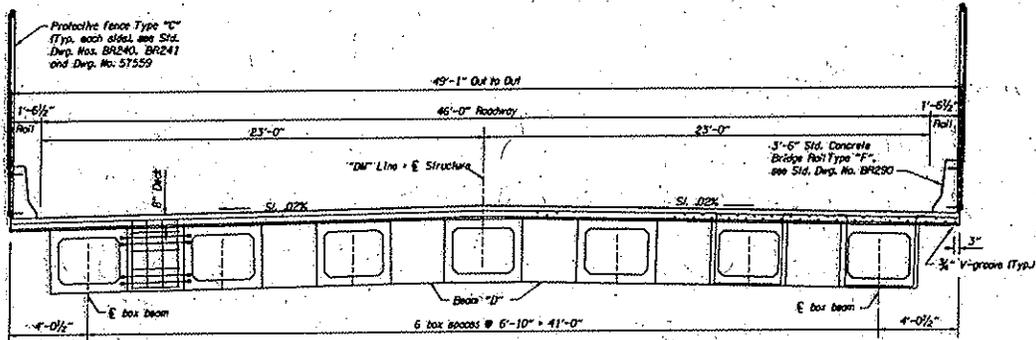
SHEET
1 OF 1



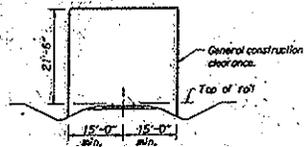
NOTE:
See Div. Steel 2 for railroad clearance diagram.

NOTE:
Elevations are based on National Geodetic Vertical Datum, M.S.L. + 0.00.

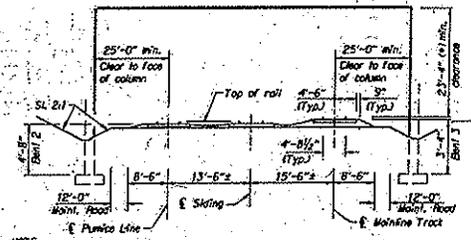
DATE: _____	REVISION: _____	BY: Tony Johnson	STRUCTURE NO. 78434	BNSF O'XING DESCHUTES MARKET ROAD O'XING, PH.2 SEC. THE DALLES-CALIFORNIA HWY. (M.P. 130.36) DESCHUTES COUNTY	SHEET 2 OF 2
DATE: _____	REVISION: _____	DESIGN: Howard Atkinson	DATE: February, 2008		
ACCOMPANIED BY DWGS. SP00175-2			REGION 1 BRIDGE ENGINEERING 123 W. FLAMING STREET PORTLAND, OR 97209 503.782.8222	CALC. BOOK: 0000	DRAWING NO. TSL



TYPICAL DECK SECTION
No Scale



GENERAL RAIL ROAD
CONSTRUCTION CLEARANCES
No Scale



GENERAL RAIL ROAD CLEARANCES
No Scale

DATE	REVISION	BY	DESIGNER	TONY JOHNSON	STRUCTURE NO.	18494	BNSF O'XING DESCHUTES MARKET ROAD O'XING, PH.2 SEC. THE DALLES-CALIFORNIA HWY. (M.P. 130.36) DESCHUTES COUNTY	SHEET
			DESIGNER	HOWARD ARDSON	DATE	FEBRUARY 2, 2009		2
ACCOMPANIED BY DWGS. SEE SHEET 1			DESIGNER	ALBERT KATO	CALC. BOOK	18494	FOOTING PLAN and RAILROAD CLEARANCES	DRAWING NO.
			REVIEWER	ANTHONY P. STROELS				TSL-2