



Figure 11.1-6 Proposed Corridor Upgrade: UP Connection, Nevada. Location and Land Use.

### NWI LEGEND



#### Instructions for using the legend:

The NWI Inventory uses a hierarchy of alphabetical and numerical symbols to indicate wetland characteristics. The following example illustrates how the hierarchy works. For a hypothetical wetland type indicated as "L2AB3a" begin by finding the system type indicated by the first symbol; that is, "L" indicates "Lacustrine." The next symbol "2" indicates that the system type is "Littoral." The symbols "AB" indicate that the class is "Aquatic Bed." The symbol "3" indicates that the subclass is "Rooted Vascular." The last symbol "a" is explained in the Modifiers part of the system; the modifier indicates "acid."

4 Needle Leaved

Evergreen

6 Deciduous

7 Evergreen

5 Dead

Evergreen

6 Deciduous

7 Evergreen

5 Dead

#### **NWI LEGEND**



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The NWI Inventory uses a hierarchy of alphabetical and numerical symbols to indicate wetland characteristics. The following example illustrates how the hierarchy works. For a hypothetical wetland type indicated as "L2AB3a" begin by finding the system type indicated by the first symbol; that is, "L" indicates "Lacustrine" The next symbol "2" indicates that the system type is "Littoral." The symbols "AB" indicate that the class is "Aquatic Bed." The symbol "3" indicates that the subclass is "Rooted Vascular." The last symbol "a" is explained in the Modifiers part of the system; the modifier indicates "acid."

# FLOOD INSURANCE RATE MAP LEGEND EXPLANATION OF ZONE DESIGNATIONS

Flood Insurance Rate Maps (FIRMs) display the zone designations for communities according to areas of designated flood hazards. The zone designations used by the Federal Emergency Management Agency (FEMA) are:

Zone	Explanation
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
AO	Areas of 100-year shallow flooding; flood depth 1 to 3 feet; product of flood depth (feet) and velocity (feet per second) less than 15
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
AE A99	Areas of 100-year flood; base flood elevations determined (for Louisiana). Areas of 100-year flood to be protected by a flood protection system under construction; base flood elevations and flood hazard factors not determined
В	Areas between limits of 100-year flood and 500-year flood, areas of 100-year shallow flooding where depths less than 1 foot.
С	Areas outside 500-year flood.
Х	Areas of combined B and C zones (for Louisiana)
D	Areas of undetermined; but possible, flood hazards
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined
V1-V30	Areas of 100 year coastal flood with velocity (wave action); base flood elevation and flood hazerd factor determined.

#### Notes

Certain areas not in the special flood hazard areas (zones A and 7) may be protected by flood control structures.

FIRMs are for flood insurance rate purposes only; maps may not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.



Figure 11.2-1 Proposed Corridor Upgrade: Alazon, Nevada. Wetland Information.

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Figure 11.2-3 Proposed Corridor Upgrade: Beowawe, Nevada. | Wetland Information.



Figure 11.2-4 Proposed Corridor Upgrade: Elburz, Nevada. Wetland Information.



Figure 11.2-5 Proposed Corridor Upgrade: MP 440 (Mt Golconda), Nevada. Wetland Information.



Figure 11.2-6 Proposed Corridor Upgrade: UP Connection, Nevada. Wetland Information.

#### 12.0 NEW MEXICO

# 12.1 PROPOSED ACTIONS AND NO-ACTION ALTERNATIVES

The proposed action in New Mexico would involve the construction projects as described in this Part, which would be constructed generally as described in Section 2.0. In each case, the proposed construction is necessary to the efficiency of the merged operations and will result in the benefits discussed in Section 1 of this Part. The no-action alternative assumes that the projects would not be constructed. The projects are listed below and shown in Table 1-1.

Each of the following projects involves the construction of new sidings or extension of existing sidings on the existing SP mainline to add capacity and operating efficiency to the Topeka to El Paso Corridor. Essentially all of the construction would occur within the existing SP ROW.

> Arabella - Figure 12.1-4 Leoncito - Figure 12.1-10 Oscura - Figure 12.1-13 Palomas - Figure 12.1-14 Robsart - Figure 12.1-15 Tularosa - Figure 12.1-18

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Each of the following projects involves the construction of a second SP mainline track where no second track exists along the El Pasc to Los Angeles Corridor:

Aden - Figure 12.1-1 Afton - Figure 12.1-2 Akela - Figure 12.1-3 Carne - Figure 12.1-5 Deming - Figure 12.1-6 Dona - Figure 12.1-7 Gage - Figure 12.1-8 Lanark - Figure 12.1-9 Lordsburg to Ulmoris - Figure 12.1-12 Separ to Wilna - Figures 12.1-16a to 12.1-16d Strauss - Figure 12.1-17 Tunis - Figure 12.1-19 Lizard to Anapra - Figures 12.1-11a to 12.1-11b

### 12.2 DESCRIPTION OF EXISTING ENVIRONMENT AND POTENTIAL ENVIRONMENTAL IMPACTS OF PROPOSED ACTIONS

Existing land use information and potential impacts for proposed construction projects in New Mexico are included in Tables 12-1 and 12-2, and shown on Figures 12.1-1 to 12.1-19. Water resources and wetland information is summarized in Table 12-3 and shown on Figures 12.2-1 to 12.2-19. Existing biological resources information and potential impacts are presented in Tables 12-4 and 12-5. Information concerning historic and cultural resources information at proposed construction project sites is included in Table 12-6 and on Figures 12.1-6, 12.1-11b, 12.1-16a, and 12.1-18.

Suggested mitigation measures are described in Section 17. Such measures as are appropriate will be implemented before and during construction activities.

# 12.3 POTENTIAL ENVIRONMENTAL IMPACTS OF NO-ACTION ALTERNATIVES

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Under the no-action alternative, it is assumed that the proposed projects would not be constructed and land use and environmental conditions that currently exist at the proposed sites would remain unchanged. However, if the merger is approved and implemented, elimination of the projects would result in less efficient rail service causing capacity constraints, delays, and slower operating speeds which would result in additional fuel consumption and air emissions.

# 12.4 SUMMARY OF COMMENTS

To assist in assessing the potential environmental impacts of the proposed UP/SP merger, Dames & Moore sent letters requesting information to various federal, state, and local agencies. In these letters, information was requested for the areas of: air quality, noise, land use, biological and water resources, historic and cultural resources, transportation systems, energy, and public health and safety. Copies of all correspondence received and telephone conversation notes recorded in response to the requests for information are included in Part 6.

For the proposed construction projects in this state, the following agency responded: State of New Mexico Environment Department. A summary of comments received prior to November 10, 1995 for New Mexico is listed below.

 The Environment Department provided contacts for other agencies regarding protected species, parks and recreation, and permitting.

#### 12.5 REFERENCES

#### 12.5.1 Land Use

- Anderson, Tom, 1995. Personal communication with Hidalgo County from Bev Halwa, Dames & Moore.
- Baca, Manual, 1995. Personal communication with Guadalupe County from Bev Halwa, Dames & Moore.
- Browning, Stephani, 1995. Personal communication with Otero County from Bev Halwa, Dames & Moore.
- Chabra, Dorinda, 1995. Personal communication with Luna County from Bev Halwa, Dames & Moore.
- Dominquez, Dolores, 1995. Personal communication with Grant County from Bev Halwa, Dames & Moore.

- Gonzales, Margaret, 1995. Personal communication with City of Tularosa from Bev Halwa, Dames & Moore.
- Martinez, Patrick, 1995. Personal communication with City of Tucumcari from Bev Halwa, Dames & Moore.
- Prieto, Jesus, 1995. Personal communication with City of Sunland Park from Bev Halwa, Dames & Moore.
- Ricker, Deanne, 1995. Personal communication with Dona Ana County Planning Department from Bev Halwa, Dames & Moore.
- Rudloff, Mike, 1995. Personal communication with City of Deming from Bev Halwa, Dames & Moore.
- Smith, Mayor Clark, 1995. Personal communication with City of Lordsburg from Bev Halwa, Dames & Moore.
- U.S. Department of Agriculture, 1994. State soil geographic (STATSGO) data base.
- U.S. Geological Survey, various dates. Land use and land cover maps.

U.S. Geological Survey, various dates. 1:24,000-scale topographic maps.

# 12.5.2 Water Resources and Wetlands

- Federal Emergency Management Agency (FEMA), various dates. FEMA Flood Insurance Rate Maps (FIRM) for New Mexico, as available.
- U.S. Fish and Wildlife Service, various dates. National Wetland Inventory Maps. U.S. Geological Survey, various dates. 1:24,000-scale topographic maps.

# 12.5.3 Biological Resources

- Finelly, Robert, 1985 Personal communication with Julie Donsky, Dames & Moore, from New Mexico State Division of Parks and Recreation. October 31.
- Fowler-Probst, Jennifer, 1995. Letter to Julie Donsky, Dames & Moore, from U.S. Fish and Wildlife Service, New Mexico Ecological Services field office. October 25.
- Fowler-Probst, Jennifer, 1995. Letter to Michael Huff, Dames & Moore, from U.S. Fish and Wildlife, New Mexico Ecological Services field office. October 30.
- McBride, Tobias J., 1995. Letter and database information to Michael Huff, Dames & Moore, from New Mexico Natural Heritage Program. October 25.

# 12.5.4 Historic and Cultural Resources

McCullen, Robin, Dames & Moore, 1995. Record search from New Mexico State Historic Preservation Office.

#### 12.5.5 Air Quality

- 40 CFR Part 81 Designation of Areas for Air Quality Planning Purposes, Appendix A to Part 81.
- 40 CFR Part 91 Designation of Areas for Air Quality Planning Purposes, Sub Part C Section 107, Attainment Status Designation.

40 CFR Part 1105 - Procedures for Implementation of Environmental Laws.

#### 12.5.6 Noise

- Rathe, E.J., 1977. "Railway Noise Propagation," *Journal of Sound and Vibration*, vol. 51, no. 3, pp. 371-388.
- Saurenman, H.J., Nelson, J.T. and Wilson, G.P., 1982. "Handbook of Urban Rail Noise and Vibration Control," UMTA-MA-06-099-82-1.

# EXISTING, LAND USE INFORMATION AT PROPOSED CONSTRUCTION LOCATIONS IN NEW MEXICO

				T		and the second	
				Structure	es Near Site	Occurre	nce Within
Location/Station	Existing Land Uses	General Plan Designation	Zoning Designation	Within 500 Feet	Length in Urbanized Areas (feet)	Prime Farmland	Coastal Zone
Aden	Site: Transportation Surrounding: Shrub and brush rangeland	No formal land use policies/controls exist		0	0	No	No
Afton	Site: Transportation Surrounding: Shrub and brush rangeland	No formal land use policies/controls exist		0	0	No	No
Akela	Site: Transportation Surrounding: Shrub and brush rangeland	No formal land use policies/controls exist		6	0	No	No
Arabella	Site: Transportation Surrounding: Mixed rangeland	No formai land use policies/controls exist		0	0	No	No
Carne	Site: Transportation Surrounding: Shrub and brush rangeland, mixed rangeland	No formal land use policies/controls exist		0	0	No	No
Deming	Site: Transportation Surrounding: Shrub and brush rangeland	No designation exists	Industrial Territorial Zone, Commercial (R-R development allowed)	3	0	No	No
Dona	Site: Transportation Surrounding: Mixed rangeland, shrub and brush rangeland	No formal land use policies/controls exist		0	0	No	No
Gage	Site: Transportation Surrounding: Mixed rangeland	No formal land use policies/controls exist		3	0	No	No

(continued)

				Structures Near Site		Occurrence Within	
Location/Station	Existing Land Uses	General Plan Designation	Zoning Designation	Within 500 Feet	Length in Urbanized Areas (feet)	Prime Farmland	Coastal Zone
Lanark	Site: Transportation Surrounding: Shrub and brush rangeland	No formal land use policies/controls exist		0	0	No	No
Leoncito	Site: Transportation Surrounding: Mixed rangeland	No formal land use policies/controls exist		0	0	No	No
Lizard to Anapra	Site: Transportation Surrounding: Shrub and brush rangeland, residential, transitional areas	No formal land use policies/controls exist		4	0	No	No
Lordsburg to Ulmoris	Site. Transportation Surrounding: Mixed rangeland, transportation	Open Space	Agricultural (R-R development allowed)	21	0	No	No
Oscura	Site: Transportation Surrounding: Evergreen forest land, mixed rangeland, shrub and brush rangeland	Agricultural (R-R development allowed)	No zoning designation exists	20	0	No	No
Palomas	Site: Transportation Surrounding: Mixed rangeland, evergreen forest land	No formal land use policies/controls exist		0	0	No	No
Robsart	Site: Transportation Surrounding: Mixed rangeland	Agricultural (R-R development allowed)	No zoning designation exists	0	0	No	No
Separ to Wilna	Site: Transportation Surrounding: Transportation, residential, mixed rangeland, forested wetland or non forested wetland, strip mines or quarries or gravel pits	No formal land use policies/controls exist		3	0	No	No



(concluded)

				Structures Near Site		Occurrence Within	
Location/Station	Existing Land Uses	General Plan Designation	Zoning Designation	Within 500 Feet	Length in Urbanized Areas (feet)	Prime Farmland	Coastal Zone
Strauss	Site: Transportation Surrounding: Shrub and brush rangeland, transportation	No formal land use policies/controls exist		0	0	No	No
Tularosa	Site: Transportation Surrounding: Shrub and brush rangeland	No formal land use policies/controls exist		1	0	No	No
Tunis	Site: Transportation Surrounding: Shrub and brush rangeland, cropland and pasture	No formal land use policies/controls exist		7	0	No	No

## POTENTIAL LAND USE IMPACTS AT PROPOSED CONSTRUCTION LOCATIONS IN NEW MEXICO

Location/Station	Compatible with Surrounding Land Uses	Consistent with General Plan/Zoning Designation	Potential Loss of Prime Farmland
Aden	Yes - Not significant	Not applicable - Not significant	No - Not significant
Afton	Yes - Not significant	Not applicable - Not significant	No - Not significant
Akela	Yes - Not significant	Not applicable - Not significant	No - Not significant
Arabella	Yes - Not significant	Not applicable - Not significant	No - Not significant
Carne	Yes - Not significant	Not applicable - Not significant	No - Not significant
Deming	Yes - Not significant	Yes - Not significant	No - Not significant
Dona	Yes - Not significant	Not applicable - Not significant	No - Not significant
Gage	rs - Not significant	Not applicable - Not significant	No - Not significant
Lanark	Yes - Not significant	Not applicable - Not significant	No - Not significant
Leoncito	Yes - Not significant	Not applicable - Not significant	No - Not significant
Lizard to Anapra	Yes - Not significant	Not applicable - Not significant	No - Not significant
Lordsburg to Ulmoris	Yes - Not significant	Yes - Not significant	No - Not significant
Oscura	Yes - Not significant	Yes - Not significant	No - Not significant
Palomas	Yes - Not significant	Not applicable - Not significant	No - Not significant
Robsart	Yes - Not significant	Yes - Not significant	No - Not significant
Separ to Wilna	Yes - Not significant	Not applicable - Not significant	No - Not significant
Strauss	Yes - Not significant	Not applicable - Not significant	No. Not significant

TABLE	12-2
(conclue	ded)

Location/Station	Compatible with Surrounding Land Uses	Consistent with General Plan/Zoning Designation	Potential Loss of Prime Farmland
Tularosa	Yes - Not significant	Not applicable - Not significant	No - Not significant
Tunis	Yes - Not significant	Not applicable - Not significant	No - Not significant

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# WATER RESOURCES AND WETLAND INFORMATION AT PROPOSED CONSTRUCTION LOCATIONS IN NEW MEXICO

	Water Resource Type <sup>1</sup>									
Location/Station	bls	wb	wl	cd	te	mí	55	sp		
Aden	-	-	-	-				T		
Afton	-	-	-	-	-					
Akela	-	1	-	-	-	1				
Arabella	4	-	-	-	-	-				
Carne	-	-	-	-	-			-		
Deming	-	-	-	-	-	-				
Dona	-	-	-	-	-	-				
Gage	2	-	-	1	-			-		
Lanark	-	-	-	-	-	_				
Leoncito	1	-	-	-	-					
Lizard to Anapra	1	-	-	-	-	-				
Lordsburg to Ulmoris	9				-					
Oscura	5	-	-	-	-	-				
Palomas	1	-	-	-	-	-				
Robsart	4	1	-	-	-					
Separ to Wilna	15	-	-	-	-					
Strauss	-	-	-	-	-					
Tularosa	7	-	-	-	-					

(concluded)

	Water Resource Type <sup>1</sup>								
Location/Station	bls	wb	wl	cd	tc	mf	\$\$	SD	
Tunis	-	-		-	-	-		-	
blue-line streams (bls) waterbodies (wb) canals, culverts,	=   =	permanent and int permanent and inte atchments, and be	ermittent wate ermittent bodie eaver ponds	rcourses, includi es of standing wa	ing creeks, stre ater including	eams, rivers, wa ponds, lakes, re	shes, and slo servoirs, baye	ughs ous,	
wetlands (wl) tidal channels (tc) mudflats (mf) sewage-treatment ponds, industrial waste ponds,	= a = t = p	human-made water conveyances areas depicted with the USGS wetland symbol, primarily including marshes and wet mea tidal channels including inlets, harbors, bays, and sloughs subject to tidal influences permanent to intermittently wet, non-vegetated, usually alkaline, mudflats							
salt evaporators, etc. (ss) springs (sp)	= a = a	reas used for publ reas depicted with	ic facilities or the USGS spi	commercial purp ring symbol	poses				

# BIOLOGICAL RESOURCES INFORMATION AT PROPOSED CONSTRUCTION LOCATIONS IN NEW MEXICO

Location	Veget	ation Type	Known and Potential	Parks, Forests, Refuges, or Sanctuaries within 5 Miles	
	At the Site	Adjacent	<ul> <li>Occurrence of Rare, Threatened, and Endangered Species in the Area</li> </ul>		
Aden	Ruderal Grasses and Shrubs	Desert Scrub Desert Grassland	Arctic Peregrine Falcon	None	
Afton	Ruderal Grasses and Shrubs	Desert Scrub Desert Grassland	Arctic Peregrine Falcon	None	
Akela	Ruderal Succulent and Am Grasses and Desert Scrub Arc Shrubs Sou		American Peregrine Falcon Arctic Peregrine Falcon Southwestern Willow Flycatcher	None	
Arabella	Ruderal Grassland Juniper Woodland	Grassland Conifer Woodland	American Peregrine Falcon Arctic Peregrine Falcon Southwestern Willow Flycatcher	None	
Carne	Ruderal Desert Scrub	Desert Scrub	American Peregrine Falcon Arctic Peregrine Falcon Southwestern Willow Flycatcher	None	
Deming	Ruderal Desert Grassland	Ruderal Desert Grassland	Arctic Peregrine Falcon Northern Aplomado Falcon	Deming City Parks	
Dona	Ruderal Grasses and Shrubs	Desert Grassland	Arctic Peregrine Falcon	None	
Gage	Ruderal Desert Grassland Riparian	Ruderal Desert Grassland Riparian	Arctic Peregrine Falcon Northern Aplomado Falcon	None	
Lanark	Ruderal Grasses and Shrubs	Desert Scrub Desert Grassland	Arctic Peregrine Falcon	None	
Leoncito	Ruderal Grassland Riparian	Ruderal Grassland Riparian	American Peregrine Falcon Arctic Peregrine Falcon	None	
Lizard to Anapra	Ruderal Desert Scrub Riparian	Ruderal Desert Scrub Riparian	Arctic Peregrine Falcon	El Paso City Parks	

# TABLE 12-4 (concluded)

Location	Vegeta	ation Type	Known and Potential	Parks, Forests,	
	At the Site	Adjacent	Threatened, and Endangered Species in the Area	Refuges, or Sanctuaries within 5 Miles	
Lordsburg to Ulmoris	Ruderal Non-native Grasses Ornamentals	Desert Scrub Desert Grassland Creosote and White Thorn Flats	American Peregrine Falcon Arctic Peregrine Falcon Mexican Gray Wolf	None	
Oscura	Ruderal Desert Grassland	Creosote Scrub Desert Grassland Kuezler's Hedgehog Cactus American Peregrine Falcon Arctic Peregrine Falcon Northern Aplomado Falcon Southwestern Willow Flycatcher		None	
Palomas	Ruderal Grassland Riparian	Ruderal Grassland Riparian	Mountain Plover American Peregrine Falcon Arctic Peregrine Falcon	None	
Robsart	Ruderal Grassland Conifer Woodland Riparian	Ruderal Grassland Conifer Woodland Riparian	Kuezler's Hedgehog Cactus American Peregrine Falcon Northern Aplomado Falcon Arctic Peregrine Falcon	I incoln National Forest	
Separ to Wilna	Ruderal Desert Grassland Riparian	Ruderal Desert Grassland Riparian	American Peregrine Falcon Northern Aplomado Falcon Mexican Gray Wolf	None	
Strauss	Ruderal Desert Scrub	Ruderal Desert Scrub	Arctic Peregrine Falcon	Santa Teresa City Parks	
Tularosa	Creosote Scrub Saltbush	Creosote and Bursage Scrub Desert Grassland	Kuezler's Hedgehog Cactus Sacramento Mountains Thistle American Peregrine Falcon Arctic Peregrine Falcon Northern Aplomado Falcon Southwestern Willow Flycatcher	None	
Tunis	Ruderal Desert Grassland	Ruderal Desert Grassland	Arctic Peregrine Falcon Northern Aplomado Falcon	None	

## POTENTIAL IMPACTS TO SENSITIVE BIOLOGICAL RESOURCES AT PROPOSED CONSTRUCTION LOCATIONS IN NEW MEXICO

Location	Potential Impacts To						
	Rare, Threatened, and Endangered Species	Critical Habitat	Parks, Forests, Refuges, Sanctuaries				
Aden	Not Significant	None - NS	None - NS				
Afton	Not Significant	None - NS	None - NS				
Akela	Not Significant	None - NS	None - NS				
Arabella	Not Significant	None - NS	None - NS				
Carne	Not Significant	None - NS	None - NS				
Deming	Not Significant	None - NS	Not Significant				
Dona	Not Significant	None - NS	None - NS				
Gage	Not Significant	None - NS	None - NS				
Lanark	Not Significant	None - NS	None - NS				
Leoncito	Not Significant	None - NS	Not Significant				
Lizard to Anapra	Not Significant	None - NS	Not Significant				
Lordsburg to Ulmoris	Not Significant	None - NS	None - NS				
Oscura	Kuezler's Hedgehog Cactus - PS	None - NS	None - NS				
Palomas	Not Significant	None - NS	None - NS				
Robsart	Not Significant	None - NS	Not Significant				
Separ to Wilna	Not Significant	None - NS	None - NS				
Strauss	Not Significant	None - NS	Not Significant				
Tularosa	Kuezler's Hedgehog Cactus - PS	None - NS	None - NS				
Tunis	Not Significant	None - NS	None - NS				

NS = Not Significant

PS = Potentially Significant

# EXISTING CONDITIONS AND POTENTIAL IMPACTS FOR HISTORIC AND CULTURAL RESOURCES AT PROPOSED CONSTRUCTION LOCATIONS IN NEW MEXICO

Location	Historic Resources			Archaeological Resources			Potential Impacts
	L	E	U	L	E	U	]
Aden	0	0	0	0	0	0	None - NS
Afton	0	0	0	0	0	0	None - NS
Akela	0	0	0	0	0	0	None - NS
Arabella	0	0	0	0	0	0	None - NS
Carne	0	0	0	0	0	0	None - NS
Deming	0	2.	0	0	0	1	PS
Dona	0	0	0	0	0	0	None - NS
Gage	0	0	0	0	0	0	None - NS
Lanark	0	0	0	0	0	0	None - NS
Leoncito	0	0	0	0	0	0	None - NS
Lizard to Anapra	0	0	0	0	0	2	PS
Lordsburg to Ulmoris	0	0	0	0	0	0	None - NS
Oscura	0	0	0	0	U	0	None - NS
Palomas	0	0	0	0	0	0	None - NS
Robsart	0	0	0	0	0	0	None - NS
Separ to Wilna	0	0	0 -	0	1	0	PS
Strauss	0	0	0	0	0	0	None - NS
Tularosa	0	0	0	0	1	0	PS
Tunis	0	0	0	0	0	0	None NS

Note: L, listed on National Register of Historic Places (NRHP); E, determined or recommended eligible for NRHP; U, eligibility for NRHP is unknown; NS, not significant; PS, potentially significant. The numbers on table denote the number of known historic or archaeological resources within 100 feet of construction areas.

\* Include the Deming Chute and Deming Depot. Precise locations are unavailable.

### **KEY FOR LAND USE**

# URBAN OR BUILT-UP LAND

#### RANGELAND

- RE Residential
- C Commercial and services
- I Industrial
- Т Transportation, communications and utilities
- I/C Industrial and commercial complexes
- MU Mixed urban or build-up land
- Other urban or built-up land OU

## AGRICULTURAL LAND

- CP Cropland and pasture
- Orchards, groves, vineyards, CH nurseries, and ornamental horticultural areas
- CF Confined feeding operations
- CO Other agricultural land

#### WATER

- WS Streams and canals
- WL Lakes
- WR Reservoirs
- Bays and estuaries WB

#### WETLAND

WE Forested wetland, and/or nonforested wetland

# KEY FOR CULTURAL RESOURCES SITES

× Location of known historic or or archaeological site

#### Rh Herbaceous rangeland

- Rsb
- Shrub and brush rangeland
- Rm Mixed rangeland

### FOREST LAND

- FD Deciduous forest land
- FE Evergreen forest land
- FM Mixed forest land

#### BARREN LAND

- Bsf Dry salt flats
- Bb Beaches
- Sandy areas other than beaches Bs
- Br Bare exposed rocks
- Strip mines, quarries, and Bm gravel pits
- Transitional areas Bt
- B Mixed barren land



Figure 12.1-1 Proposed Corridor Upgrade: Aden, New Mexico. Location and Land Use.



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Figure 12.1-3 Proposed Corridor Upgrade: Akela, New Mexico. Location and Land Use.





Figure 12.1-5 Proposed Corridor Upgrade: Carne, New Mexico. Location and Land Use.



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Figure 12.1-6 Proposed Corridor Upgrade: Deming, New Mexico. Location and Land Use.



Figure 12.1-7 Proposed Corridor Upgrade: Dona, New Mexico. Location and Land Use.



Figure 12.1-8 Proposed Corridor Upgrade: Gage, New Mexico. Location and Land Use.






Figure 12.1-11a Proposed Corridor Upgrade: Lizard to Anapra, New Mexico. Location and Land Use.



Figure 12.1-11b Proposed Corridor Upgrade: Lizard to Anapra, New Mexico. Location and Land Use.



Figure 12.1-12 Proposed Corridor Upgrade: Lordsburg to Ulmoris, New Mexico. Location and Land Use.







Figure 12.1-14 Proposed Corridor Upgrade: Palomas, New Mexico. Location and Land Use.





Figure 12.1-15 Proposed Corridor Upgrade: Robsart, New Mexico. Location and Land Use.

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Figure 12.1-16a Proposed Corridor Upgrade: Separ - Wilna, New Mexico. Location and Land Use.



Figure 12.1-18b Proposed Corridor Upgrade: Separ - Wilna, New Mexico. Location and Land Use.



Figure 12.1-16c Proposed Corridor Upgrade: Separ - Wilna, New Mexico. Location and Land Use.





Figure 12.1-17 Proposed Corridor Upgrade: Strauss, New Mexico. Location and Land Use.

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Figure 12.1-18 Proposed Corridor Upgrade: Tularosa NE, New Mexico. Location and Land Use.



Figure 12.1-19 Proposed Corridor Upgrade: Tunis, New Mexico. Location and Land Use.

## **NWI LEGEND**



The NWI Inventory uses a hierarchy of alphabetical and numerical symbols to indicate wetland characteristics. The following example illustrates how the hierarchy works. For a hypothetical wetland type indicated as "L2AB3a" begin by finding the system type indicated by the first symbol; that is, "L" indicates "Lacustrine." The next symbol "2" indicates that the system type is "Littoral." The symbols "AB" indicate that the class is "Aquatic Bed." The symbol "3" indicates that the subclass is "Rooted Vascular." The last symbol "a" is explained in the Modifiers part of the system; the modifier indicates "acid."

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## Instructions for using the legend:

The NWI Inventory uses a hierarchy of alphabetical and numerical symbols to indicate wetland characteristics. The following example illustrates how the hierarchy works. For a hypothetical wetland type indicated as "L2AB3a" begin by finding the system type indicated by the first symbol; that is, "L" indicates "Lacustrine." The next symbol "2" indicates that the system type is "Littoral." The symbols "AB" indicate that the class is "Aquatic Bed." The symbol "3" indicates that the subclass is "Rooted Vascular." The last symbol "a" is explained in the Modifiers part of the system; the modifier indicates "acid."

# FLOOD INSURANCE RATE MAP LEGEND EXPLANATION OF ZONE DESIGNATIONS

Flood Insurance Rate Maps (FIRMs) display the zone designations for communities according to areas of designated flood hazards. The zone designations used by the Federal Emergency Management Agency (FEMA) are:

Zone	Explanation
А	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
AO	Areas of 100-year shallow flooding; flood depth 1 to 3 feet; product of flood depth (feet) and velocity (feet per second) less than 15.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
AE	Areas of 100-year flood; base flood elevations determined (for Louisiana).
A99	Areas of 100-year flood to be protected by a flood protection system under construction; base flood elevations and flood hazard factors not determined.
В	Areas between limits of 100-year flood and 500-year flood, areas of 100-year shallow flooding where depths less than 1 foot.
С	Areas outside 500-year flood.
Х	Areas of combined B and C zones (for Louisiana).
D	Areas of undetermined; but possible, flood hazards.
v	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevation and flood hazard factor determined.

#### Notes

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

FIRMs are for flood insurance rate purposes only; maps may not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.





Figure 12.2-1 Proposed Corridor Upgrade: Aden, New Mexico. Wetland Information.



Figure 12.2-2 Proposed Corridor Upgrade: Afton, New Mexico. Wetland Information.



Figure 12.2-3 Proposed Corridor Upgrade: Akela, New Mexico. Wetland Information.





Figure 12.2-4 Proposed Corridor Upgrade: Arabella, New Mexico. Wetland Information.



Figure 12.2-5 Proposed Corridor Upgrade: Carne, New Mexico. Wetland Information.



Figure 12.2-6 Proposed Corridor Upgrade: Deming, New Mexico. Wetland Information.



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Figure 12.2-7 Proposed Corridor Upgrade: Dona, New Mexico. Wetland Information.

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Base Map: USGS 7.5' Topographic Quadrangle: Cambray, New Mexico 1972

4000

5000

4220

7000 FEET

6000

1 MILE



Figure 12.2-8 Proposed Corridor Upgrade: Gage, New Ivexico. Wetland Information.



Figure 12.2-9 Proposed Corridor Upgrade: Lanark, New Mexico. Wetland Information.



Figure 12.2-10 Proposed Corridor Upgrade: Leoncito, New Mexico. Wetland Information.





Figure 12.2-11b Proposed Corridor Upgrade: Lizard to Anapra, New Mexico. Wetland Information.



Figure 12.2-12 Proposed Corridor Upgrade: Lordsburg to Ulmoris, New Mexico. Wetland Information.





Figure 12.2-14 Proposed Corridor Upgrade: Palomas, New Mexico. Wetland Information.







Figure 12.2-16a Proposed Corridor Upgrade: Separ - Wilna, New Mexico. Wetland Information.


Figure 12.2-16b Proposed Corridor Upgrade: Separ - Wilna, New Mexico. Wetland Information.



Figure 12.2-16c Proposed Corridor Upgrade: Separ - Wilna, New Mexico. Wetland Information.

Figure 12.2-16d Proposed Corridor Upgrade: Separ - Wilna, New Mexico. Wetland Information.





Figure 12.2-17 Proposed Corridor Upgrade: Strauss, New Mexico Wetland Information.



Figure 12.2-18 Proposed Corridor Upgrade: Tularosa NE, New Mexico. Wetland Information.



Figure 12.2-19 Proposed Corridor Upgrade: Tunis, New Mexico. Wetland Information.

#### 13.0 OKLAHOMA

# 13.1 PROPOSED ACTIONS AND NO-ACTION ALTERNATIVES

The proposed action in Oklahoma would involve the construction projects as described in this Part, which would be constructed generally as described in Section 2.0. In each case, the proposed construction is necessary to the efficiency of the merged operations and will result in the benefits discussed in Section 1 of this Part. The no-action alternative assumes that the projects would not be constructed.

The construction projects proposed in Oklahoma would occur on the UP's OKT subdivision between Herington and Fort Worth and involve the construction of new sidings or the extension of existing sidings at specified locations to provide improved capacity and operating efficiencies to handle increased traffic on this line. It is anticipated that most, if not all, of such construction would occur on existing ROW. The projects are listed below and shown in Table 1-1.

<u>Chickasha</u> - Construction of a 4,225-foot extension to an existing siding between MP 437 and MP 435 as shown on Figure 13.1-1.

<u>Concho</u> - Construction of a 1,425-foot extension to an existing siding between MP 397 and MP 395 as shown on Figure 13.1-2.

Enid - Construction of an 800-foot extension to an existing siding and installation of power-operated turnouts between MP 343 and MP 341, shown on Figure 13.1-3. Jacks - Construction of a 4,541-foot extension to an existing siding between MP 368 and MP 366 as shown on Figure 13.1-4.

Jefferson - Construction of a new 9,300-foot siding between MP 317 and MP 315 as shown on Figure 13.1-5.

Marlow - Construction of a new 9,300-foot siding between MP 458 and MP 460 as shown on Figure 13.1-6.

No. Enid - Construction of a 1,190-foot extension to an existing siding between MP 340 and MP 338 as shown on Figure 13.1-7.

Sunray - Construction of a new 9,300-foot siding between MP 481 and MP 483 as shown on Figure 13.1-8.

Waurika - Construction of a siding extension between MP 501 and MP 503 as shown on Figure 13.1-9.

# 13.2 DESCRIPTION OF EXISTING ENVIRONMENT AND POTENTIAL ENVIRONMENTAL IMPACTS OF PROPOSED ACTIONS

Existing land use information and potential impacts for proposed construction projects in Oklahoma are included in Tables 13-1 and 13-2, and shown on Figures 13.1-1 to 13.1-9. Water resources and wetland information is summarized in Table 13-3 and shown on Figures 13.2-1 to 13.2-9. Existing biological resources information and potential impacts are presented in Tables 13-4 and 13.5. Information concerning historic and cultural resources information at proposed construction projects sites is included in Table 13-6.

Suggested mitigation measures are described in Section 17. Such measures as are appropriate will be implemented before and during construction activities.

# 13.3 POTENTIAL ENVIRONMENTAL IMPACTS OF NO-ACTION ALTERNATIVES

Under the no-action alternative, it is assumed that the proposed projects would not be constructed and land use and environmental conditions that currently exist at the proposed sites would remain unchanged. However, if the merger is approved and implemented, elimination of the projects would result in less efficient rail service causing capacity constraints, delays, and slower operating speeds which would result in additional fuel consumption and air emissions.

### 13.4 SUMMARY OF COMMENTS

To assist in assessing the potential environmental impacts of the proposed UP/SP merger, Dames & Moore sent letters requesting information to various federal, state, and local agencies. In these letters, information was requested for the areas of: air quality, noise, land use, biological and water resources, historic and cultural resources,

transportation systems, energy, and public health and safety. Copies of all correspondence received and a record of telephone conversation notes in response to the requests for information are included in Part 6.

For the proposed construction projects in this state, the following agencies responded: Department of Transportation, Grady County Office of County Commissioners, and Natural Resources and Conservation Service. A summary of comments received prior to November 10, 1995 for Oklahoma is listed below.

- The Department of Transportation provided a list of agencies overseeing the resource areas of concern for the proposed projects. The Department also forwarded the information concerning the proposed projects to the Rail Planning Branch and the Traffic Engineering Division.
- The Grady County Office of County Commissioners expressed concern regarding the crossings in the proposed project. The list of parks in proximity to the proposed project included Shannon Springs Park in Chickasha, Davis Park in Rush Springs, Minco Park in Minco, and Lake Taylor.
- The Natural Resources Conservation Service expressed concern for prime farmland that is present in the proposed project areas and communicated a need for the evaluation of alternatives in order to minimize adverse impacts on these lands.
- The Oklahoma Historical Society provided a current copy of Oklahoma's National Register Handbook; however, a record search of their files is not possible until after December.

### **13.5 REFERENCES**

### 13.5.1 Land Use

Bast, Barbara, 1995. Personal communication with Canadian County from D. Lowrey, Dames & Moore.

- Combs, G.R., 1995. Letter to Julie Donsky, Dames & Moore, from Oklahoma Corporation Commission.
- County Clerk, 1995. Personal communication with Grady County from D. Lowrey, Dames & Moore.

County Clerk, 1995. Personal communication with Grant County from D. Lowrey.

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- County Clerk, 1995. Personal communication with Kingfisher County from D. Lowrey, Dames & Moore.
- Ford, Jimmy G., 1995. Letter to Julie Donsky, Dames & Moore, from Natural Resources Conservation District, Oklahoma State office.

Hancock, D.L., 1995. Letter to Julie Donsky, Dames & Moore, from Natural Resources Conservation Services, Enid field office.

Henderson, Chris, 1995. Personal communication with Garfield County from D. Lowrey, Dames & Moore.

- Klippel, Elmer R., 1995. Letter to Julie Donsky, Dames & Moore, from office of Grady County Commissioner.
- Klippel, Elmer, 1995. Personal communication with Grady County Commissioner from D. Lowrey, Dames & Moore.
- Ledford, Gary, 1995. Personal communication with Stephens County Commissioner from D. Lowrey, Dames & Moore.
- Schultz, Bill, 1995. Personal communication with Grant County Assessor from D. Lowrey, Dames & Moore.
- Shimavek, Jim, 1995. Personal communication with Kingfisher County Commissioner from D. Lowrey.
- Spivey, Don, 1995. Personal communication with Stephens County Commissioner from D. Lowrey, Dames & Moore.
- Streber, Troy, 1995. Personal communication with Grady County Commissioner from D. Lowrey.

Talon, Teresa, 1995. Personal communication with Jefferson County from D. Lowrey.

Wallace, Stanley, 1995. Personal communication with Canadian County Commissioner from D. Lowrey, Dames & Moore.

- U.S. Department of Agriculture, 1994. State soil geographic (STATSGO) data base.
- U.S. Geological Survey, various dates. Land use and land cover maps.
- U.S. Geological Survey, various dates. 1:24,000-scale topographic maps.

### 13.5.2 Water Resources and Wetlands

- Federal Emergency Management Agency (FEMA), various dates. FEMA Flood Insurance. Rate Maps (FIRM) for Oklahoma.
- U.S. Fish and Wildlife Service, various dates. National Wetland Inventory Maps. U.S. Geological Survey, various dates. 1:24,000-scale topographic maps.

### 13.5.3 Biological Resources

#### 13.5.4 Historic and Cultural Resources

- Collier, L.W., 1995. Letter to Julie Donsky, Dames & Moore, from Bureau of Indian Affairs, Andarko Area office. October 25.
- Gettys, J. Marshall (Oklahoma Historical Society), 1995. Letter to Julie Donsky, Dames & Moore, November 1 and telephone conversation with Denise Bradley, Dames & Moore, November 8.

#### 13.5.5 Air Quality

- 40 CFR Part 81 Designation of Areas for Air Quality Planning Purposes, Appendix A to Part 81.
- 40 CFR Part 81 Designation of Areas for Air Quality Planning Purposes, Sub Part C Section 107, Attainment Status Designation.
- 40 CFR Part 1105 Procedures for Implementation of Environmental Laws.

### 13.5.6 Noise

- Rathe, E.J., 1977. "Railway Noise Propagation," Journal of Sound and Vibration, vol. 51, no. 3, pp. 371-388.
- Saurenman, H.J., Nelson, J.T. and Wilson, G.P., 1982. "Handbook of Urban Rail Noise and Vibration Control," UMTA-MA-06-099-82-1.

# EXISTING LAND USE INFORMATION AT PROPOSED CONSTRUCTION LOCATIONS IN OKLAHOMA

				Structure	s Near Site	Occurre	nce Within
Location/Station	Existing Land Uses	General Plan Designation	Zoning Designation	Within 500 Feet	Length in Urbanized Areas (feet)	Prime Farmland	Coastal Zone
Chickasha	Site: Transportation Surrounding: Transportation, other urban or built-up land, residential, cropland and pasture, industrial, mixed urban or other built- up land	No formal land use policies/controls exist		0 <sup>1</sup>	8,000	Yes	No
Concho	Site: Transportation Surrounding: Cropland and pasture, deciduous forest land, residential, mixed urban or other built-up land	No formal land use policies/controls exist		2	0	Yes	No
Enid	Site: Transportation Surrounding: Commercial, residential, cropland and pasture, industrial	Light Industrial, Commercial	Light Industrial (R-R development allowed)	31	7,000	Yes	No
Jacks	Site: Transportation Surrounding: Cropland and pasture	No formal land use policies/controls exist		3	0	Yes	No
Jefferson	Site: Transportation Surrounding: Cropland and pasture	No formal land use policies/controls exist		0	0	No	No
Marlow	Site: Transportation Surrounding: Cropland and pasture	No formal land use policies/controls exist		7	0	No	No
No. Enid	Site: Transportation Surrounding: Cropland and pasture, residential, commercial, transportation, other urban or built-up land	Light Industrial, Commercial	Light Industrial, Commercial (R-R development allowed)	43 <sup>1</sup>	3,000	Yes	No

TABLE 13-	1	
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(concluded)

				Structures	Near Site	Occurre	nce Within
Location/Station	Existing Land Uses	General Plan Designation	Zoning Designation	Within 500 Feet	Length in Urbanized Areas (feet)	Prime Farmland	Coastal Zone
Sunray	Site: Transportation Surrounding: Industrial, cropland and pasture. commercial	No formal land use policies/controls exist		41	0	No	No
Waurika	Site: Transportation Surrounding: Cropland and pasture, streams and canals	No formal land use policies/controls exist		0	0	No	No

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Sensitive Receptors = Some structures occur within approximately 200 feet of construction activities.

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### POTENTIAL LAND USE IMPACTS AT PROPOSED CONSTRUCTION LOCATIONS IN OKLAHOMA

Location/Station	Compatible with Surrounding Land Uses	Consistent with General Plan/Zoning Designation	Potential Loss of Prime Farmland	
Chickasha	Yes - Not significant	Not applicable - Not significant	Not expected - Not significant <sup>1</sup>	
Concho	Yes - Not significant	Not applicable - Not significant	Not expected - Not significant	
Enid	Yes - Not significant	Yes - Not significant	Not expected - Not significant	
Jacks	Yes - Not significant	Not applicable - Not significant	Not expected - Not significant	
Jefferson	Yes - Not significant	Not applicable - Not significant	No - Not significant	
Marlow	Yes - Not significant	Not applicable - Not significant	No - Not significant	
No. Enid	Yes - Not significant	Yes - Not significant	Not expected - Not significant <sup>1</sup>	
Sunray	Yes - Not significant	Not applicable - Not significant	No - Not significant	
Waurika	Yes - Not significant	Not applicable - Not significant	No - Not significant	

Construction is anticipated to be largely within existing right-of-way and no prime farmland is expected to be affected.

### WATER RESOURCES AND WETLAND INFORMATION AT PROPOSED CONSTRUCTION LOCATIONS IN OKLAHOMA

	Water Resource Type <sup>1</sup>							
Location/Station	bls	wb	wi	cd	tc	mf	55	sp
Chickasha	2	-	-	1	-		-	-
Concho	1	-	-	-	-	-	-	-
Enid	2	-	-	-	-	-	-	-
Jacks	-	1	-	-	-	-	-	
Jefferson	4	2	-	-	-	-	-	-
Marlow	2	2	-	-	-	-	-	-
No. Enid	1	-	-	-	-	-	-	-
Sunray	3	1	-	-	-	-	6	-
Waurika	1	5	-	1	-	-	-	-

blue-line streams (bls) waterbodies (wb)	= =	permanent and intermittent watercourses, including creeks, streams, rivers, washes, and sloughs permanent and intermittent bodies of standing water including ponds, lakes, reservoirs, bayous, catchments, and because pends.
wetlands (wl) canals, culverts,	=	areas depicted with the USGS wetland symbol, primarily including marshes and wet meadows
ditches (cd)	=	human-made water conveyances
tidal channels (tc)	=	tidal channels including inlets, harbors, bays, and sloughs subject to tidal influences
mudflats (mf) sewage-treatment ponds,	=	permanent to intermittently wet, non-vegetated, usually alkaline, mudflats
industrial waste ponds,		
salt evaporators, etc. (ss)	=	areas used for public facilities or commercial purposes
springs (sp)	=	areas depicted with the USGS spring symbol

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### BIOLOGICAL RESOURCES INFORMATION AT PROPOSED CONSTRUCTION LOCATIONS IN OKLAHOMA

Location	Vegetat	tion Type	Known and Potential	Parks, Forests, Refuges, or Sanctuaries within 5 Miles	
	At the Site	Adjacent	Threatened, and Endangered Species in the Ares		
Chickasha	Ruderal grassland	Mowed ruderal grasslands, low- lying grasslands, tall grasslands, and scattered elms; riparian habitat along drainage	None	None	
Concho	Mixed-grass prairie	Mixed grassland prairie, small hillside wetlands/ seeps, woodlands	Texas Horned Lizard, Western Snowy Plover, White-faced Ibis, Ferruginous Hawk, Long-billed Curlew, Bald Eagle, Black- capped Vireo, Interior Least Tern, Piping Plover, Whooping Crane, Peregrine Falcon, Arkansas River Shiner, Arkansas River Speckled Chub	Adams Park, Darlington State Game Farm	
Enid	Mixed-grass prairie, ruderal	Elm/cottonwood woodlands; ruderal fields with scattered elms; riparian/wetland	None	None	
Jacks	Mixed-grass prairie	Mixed grass prairie, agricultural fields, salt grass/ <i>Cyperus</i> sp. wetland	Bald Eagle Flathead Chub Arkar.sas River Speckled Chub Whooping Crane Least Tern Piping Plover Peregrine Falcon	None	
Jefferson	Tall-grass prairie	Tallgrass prairie; oxbow wetlands; agricultural fields; marsh wetland/ drainages	Arkansas River Speckled Chub Bald Eagle	None	
Marlow	CI	CI	None	None	
No. Enid	Ruderal, grasslands	Ruderal grasslands; mixed grass prairie; wooded drainage	None	None	
Sunray	CI	CI	None	None	
Waurika	CI	CI	None	None	

### (concluded)

CI = Initial agency contact completed. Information regarding sensitive biological resources has not been received from agencies.

### POTENTIAL IMPACTS TO SENSITIVE BIOLOGICAL RESOURCES AT PROPOSED CONSTRUCTION LOCATIONS IN OKLAHOMA

Location	Potential Impacts To					
	Rare, Threatened, and Endangered Species	Critical Habitat	Parks, Forests, Refuges, Sanctuaries			
Chickasha	None - NS	None - NS	None - NS			
Concho	Not significant	None - NS	Adams Park*			
Enid	None - NS	None - NS	None - NS			
Jacks	Not significant	None - NS	None - NS			
Jefferson	Not significant	None - NS	None - NS			
Marlowe	None - NS	None - NS	None - NS			
No. Enid	None - NS	None - NS	None - NS			
Sunray	*	None - NS	None - NS			
Waurika		None - NS	None - NS			

\* Potential impacts may exist for these sites/species as visual confirmation has not been completed. NS = Not Significant

### EXISTING CONDITIONS AND POTENTIAL IMPACTS FOR HISTORIC AND CULTURAL RESOURCES AT PROPOSED CONSTRUCTION LOCATIONS IN OKLAHOMA

Location	Historic Resources		Archaeological Resources			Potential Impacts	
	L	E	U	L	E	U	
Chickasha	CI	CI	CI	CI	CI	CI	ND
Concho	L_CI	CI	CI	CI	CI	CI	ND
Enid	CI	CI	CI	CI	Cl	CI	ND
Jacks	CI	CI	CI	CI	CI	CI	ND
Jefferson	CI	Cl	CI	CI	CI	CI	ND
Marlow	CI	CI	CI	CI	CI	CI	ND
No. Enid	CI	CI	CI	CI	CI	CI	ND
Sunray	CI	CI	CI	Cl	CI	CI	ND
Waurika	CI	CI	CI	CI	CI	CI	ND

Note: L, listed on National Register of Historic Places (NRHP); E, determined or recommended eligible for NRHP; U, eligibility for NRHP is unknown; CI, consultation with SHPO and/or data repository has been initiated but not completed at time of report submittal; ND, not determined. The numbers on table denote the number of known historic or architelological resources within 100 feet of construction areas.

### KEY FOR LAND USE

#### URBAN OR BUILT-UP LAND

### RANGELAND

- RE Residential
- C Commercial and services
- I Industrial
- T Transportation, communications and utilities
- I/C Industrial and commercial complexes
- MU Mixed urban or build-up land
- OU Other urban or built-up land

### AGRICULTURAL LAND

- CP Cropland and pasture
- CH Orchards, groves, vineyards, nurseries, and ornamental horticultural areas
- CF Confined feeding operations
- CO Other agricultural land

#### WATER

- WS Streams and canals
- WL Lakes
- WR Reservoirs
- WB Bays and estuaries

#### WETLAND

WE Forested wetland, and/or nonforested wetland

### **KEY FOR CULTURAL RESOURCES SITES**

\* Location of known historic or or archaeological site

- Rh Herbaceous rangeland
- Rsb Shrub and brush rangeland
- Rm Mixed rangeland

### FOREST LAND

- Deciduous forest land FD
- FE Evergreen forest land
- Mixed forest land FM

### BARREN LAND

- Dry salt flats Bsf
- Bb Beaches
- Sandy areas other than beaches Bs
- Bare exposed rocks Br
- Strip mines, quarries, and Bm gravel pits
- Transitional areas Bt
- Mixed barren land B



Figure 13.1-1 Proposed Corridor Upgrade: Chickasha, Oklahoma. Location and Land Use.



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Figure 13.1-2 Proposed Corridor Upgrade: Concho, Oklahoma. Location and Land Use.



Figure 13.1-3 Proposed Corridor Upgrade: Enid, Oklahoma. Location and Land Use.

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Figure 13.1-4 Proposed Corridor Upgrade: Jacks, Oklahoma. Location and Land Use.



Figure 13.1-5 Proposed Corridor Upgrade: Jefferson, Oklahoma. Location and Land Use.







Figure 13.1-7 - Proposed Corridor Upgrade: North Enid, Oklahoma. Location and Land Use.





Figure 13.1-8 Proposed Corridor Upgrade: Sunray, Oklahoma. Location and Land Use.





#### NWI LEGEND



#### Instructions for using the legend;

The NWI Inventory uses a hierarchy of alphabetical and numerical symbols to indicate wetland characteristics. The following example illustrates now the interarchy works. For a hypothetical wetland type indicated as "L2AB3a" begin by finding the system type indicated by the first symbol; that is, "L" indicates "Lacustrine." The next symbol "2" indicates that the system type is "Littoral." The symbols "AB" indicate that the class is "Aquatic Bed." The symbol "3" indicates that the subclass is "Rooted Vascular." The last symbol "a" is explained in the Modifiers part of the system; the modifier indicates "acid."

Evergreen

6 Deciduous

7 Evergreen

5 Dead

Evergreen

6 Deciduous

7 Evergreen

5 Dead

### **NWI LEGEND**



#### Instructions for using the legend:

The NWI Inventory uses a hierarchy of alphabetical and numerical symbols to indicate wetland characteristics. The following example illustrates how the hierarchy works. For a hypothetical wetland type indicated as "L2AB3a" begin by finding the system type indicated by the first symbol; that is, "L" indicates "Lacustrine." The next symbol "2" indicates that the system type is "Littoral." The symbols "AB" indicate that the class is "Aquatic Bed." The symbol "3" indicates that the subclass is "Rooted Vascular." The last symbol "a" is explained in the Modifiers part of the system; the modifier indicates "acid."

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### FLOOD INSURANCE RATE MAP LEGEND EXPLANATION OF ZONE DESIGNATIONS

Flood Insurance Rate Maps (FIRMs) display the zone designations for communities according to areas of designated flood hazards. The zone designations used by the Federal Emergency Management Agency (FEMA) are:

Zone	Explanation
А	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
AO	Areas of 100-year shallow flooding; flood depth 1 to 3 feet; product of flood depth (feet) and velocity (feet per second) less than 15
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
AE	Areas of 100-year flood; base flood elevations determined (for Louisiana)
A99	Areas of 100-year flood to be protected by a flood protection system under construction; base flood elevations and flood hazard factors not determined
В	Areas between limits of 100-year flood and 500-year flood, areas of 100-year shallow flooding where depths less than 1 foot
С	Areas outside 500-year flood.
Х	Areas of combined B and C zones (for Louisiana)
D	Areas of undetermined: but possible flood hazards
v	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevation and flood hazard factor determined.

#### Notes

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

FIRMs are for flood insurance rate purposes only; maps may not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.



Figure 13.2-1 Proposed Corridor Upgrade: Chickasha, Oklahoma. Wetland Information.



Figure 13.2-2 Proposed Corridor Upgrade: Concho, Oklahoma. Wetland Information.



Figure 13.2-3 Proposed Corridor Upgrade: Enid, Oklahoma. Wetland Information.

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Figure 13.2-4 Proposed Corridor Upgrade: Jacks, Oklahoma. Wetland Information.






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Figure 13.2-6 Proposed Corridor Upgrade: Marlow, Oklahoma. Wetland Information.



Figure 13.2-7 Proposed Corridor Upgrade: North Enid, Oklahoma. Wetland Information.



Figure 13.2-8 Proposed Corridor Upgrade: Sunray, Oklahoma. Wetland Information.



Figure 13.2-9 Proposed Corridor Upgrade: Waurika, Oklahoma. Location and Land Use.

#### 14.0 OREGON

### 14.1 PROPOSED ACTIONS AND NO-ACTION ALTERNATIVES

The proposed action in Oregon would involve the construction projects as described in this Part, which would be constructed generally as described in Section 2.0. In each case, the proposed construction is necessary to the efficiency of the merged operations and will result in the benefits discussed in Section 1 of this Part. The no-action alternative assumes that the projects would not be constructed.

The construction projects proposed in Oregon would involve the construction of connections increasing clearance in tunnels, and expansions of two rail yards. The projects are listed below and shown in Table 1-1.

<u>Barnes</u> - Additional manifest yard capacity in the Barnes terminal area of Portland, Oregon (Figure 14.1-1) will be required to manage the displacement of manifest traffic from the existing UP Albina manifest yard due to the expansion of intermodal facilities at that location. This expansion in the Barnes area will place the manifest capacity closer to the industrial base served. The construction includes the extension of four tracks (5,800 feet) in the Barnes yard and requires a grade separation of the Portland City Landfill road. Additional construction includes two yard tracks (4,700 feet) at the nearby Bonneville industrial yard and two yard tracks (5,000 feet) at the nearby Rivergate industrial yard.

<u>Cascade Tunnels</u> - This project involves increasing clearances (heights) on 23 tunnels on SP's Cascade and Black Butte subdivision in Northern California and Southern Oregon, to accomodate double stack intermodal cars (Figures 14.1-2 to 14.1-10). The construction planned would require crown mining, i.e., the removal of a portion of the stone or concrete from the ceiling of the tunnel and disposal of the removed material. Construction would be essentially confined to the interior of the tunnels.



Kenton Line 1 and 2 - These projects involve the construction of a 1,414-foot extension to an existing siding at Champ, MP 9.3 to MP 11.3, Figure 14.1-, and the construction of a 3,000-foot extension to an existing siding at Hemlock, MP 15.5 to MP 17.3, Figure 14.1-12.

<u>OT Jct.</u> - This project involves the construction of a siding between MP 90.8 and MP 92.6 on UP's Portland subdivision as shown on Figure 14.1-13.

<u>Portland</u> - The operation of the merged systems anticipates the consolidation of intermodal traffic from SP's existing facility into UP's Albina yard intermodal facility (Figure 14-14), which will require the expansion of existing facilities, including parking and yard trackage to handle the increased volume.

### 14.2 DESCRIPTION OF EXISTING ENVIRONMENT AND POTENTIAL ENVIRONMENTAL IMPACTS OF PROPOSED ACTIONS

Existing land use information and potential impacts for proposed construction projects in Oregon are included in Tables 14-1 and 14-2, and shown on Figures 14.1-1 to 14.1-14. Water resources and wetland information is summarized in Table 14-3 and shown on Figures 14.2-1 to 14.2-14. Existing biological resources information and potential impacts are presented in Tables 14-4 and 14-5. Information concerning historic and cultural resources information at proposed construction project sites is included\_in. Table 14-6.

Suggested mitigation measures are described in Section 17. Such measures as are appropriate will be implemented before and during construction activities.

#### 14.3 POTENTIAL ENVIRONMENTAL IMPACTS OF NO-ACTION ALTERNATIVES

Under the no-action alternative, it is assumed that the proposed projects would not be constructed and land use and environmental conditions that currently exist at the proposed sites would remain unchanged. However, if the merger is approved and implemented, elimination of the projects would result in less efficient rail service causing capacity constraints, delays, and slower operating speeds which would result in additional fuel consumption and air emissions.

#### 14.4 SUMMARY OF COMMENTS

To assist in assessing the potential environmental impacts of the proposed UP/SP merger, Dames & Moore sent letters requesting information to various federal, state, and local agencies. In these letters, information was requested for the areas of: air quality, noise, land use, biological and water resources, historic and cultural resources, transportation systems, energy, and public health and safety. Copies of all correspondence received and a record of telephone conversation notes in response to the requests for information are included in Part 6.

As of November 10, 1995, no responses have been received regarding these proposed projects.

#### 14.5 REFERENCES

#### 14.5.1 Land Use

- DeVaney, Dotty, 1995. Personal communication with Wasco County Planning Office from Irene Merrifield, Darnes & Moore.
- Knowles, David, 1995. Personal communication with City of Portland Planning Department from D. Lowery, Dames & Moore.
- Schuele, Barb, 1995. Personal communication with City of Portland Planning from Eev Halwa, Dames & Moore.

U.S. Department of Agriculture, 1994. State soil geographic (STATSGO) data base.

- U.S. Geological Survey, various dates. Land use and land cover maps.
- U.S. Geological Survey, various dates. 1:24,000-scale topographic maps.

#### 14.5.2 Water Resources and Wetlands

Federal Emergency Management Agency (FEMA), various dates. FEMA Flood Insurance Rate Maps (FIRM) for Oregon, as available.

U.S. Fish and Wildlife Service, various dates. National Wetland Inventory Maps. U.S. Geological Survey, various dates. 1:24,000-scale topographic maps.

### 14.5.3 Biological Resources

Hunt, Eric, 1995. Personal communication, U. S. Fish and Wildlife Service, Portland, Oregon.

Pittmon's Map of Portland and Vicinity. Undated. Review of Parks in the Portland Area.

# 14.5.4 Historic and Cultural Resources

Killy, Michael, Dames & Moore, 1995. Record search and information from Oregon Office of Historic Preservation.

#### 14.5.5 Safety

Fegler, Howard, 1995. Letter to Julie Donsky, Dames & Moore, from Oregon Public Utility Commission. October 27.

#### 14.5.6 Air Quality

- 40 CFR Part 81 Designation of Areas for Air Quality Planning Purposes, Appendix A to Part 81.
- 40 CFR Part 81 Designation of Areas for Air Quality Planning Purposes, Sub Part C Section 107, Attainment Status Designation.
- 40 CFR Part 1105 Procedures for Implementation of Environmental Laws.

#### 14.5.7 Noise

- Rathe, E.J., 1977. "Railway Noise Propagation," Journal of Sound and Vibration, vol. 51, no. 3, pp. 371-388.
- Saurenman, H.J., Nelson, J.T. and Wilson, G.P., 1982. "Handbook of Urban Rail Noise and Vibration Control," UMTA-MA-06-099-82-1.

# EXISTING LAND USE INFORMATION AT PROPOSED CONSTRUCTION LOCATIONS IN OREGON

				Structure	es Near Site	Occurrer	nce Within
Location/Station	Existing Land Uses	General Plan Designation	Zoning Designation	Within 500 Feet	Leagth in Urbanized Areas (feet)	Prime Farmland	Coastal Zone
Barnes	Site: Transportation Surrounding: Other urban or built-up land, industrial, residential	Heavy Industrial	Industrial G-2 (R-R development allowed)	15	0	No	No
Cascade Tunnels	Site: Transportation Surrounding: Streams and canals, evergreen forest land, strip mines or quarries or gravel pits, residential, lakes, other urban or built-up land, mixed urban or built-up land, transportation or communications or utilities	CI <sup>2</sup>	CI <sup>2</sup>	18	0	No	No
Kenton Line-1	Site: Transportation Surrounding: Mixed urban or other built-up land, residential	Cl <sup>2</sup>	CI <sup>2</sup>	0 <sup>1</sup>	9,000	No	No
Kenton Line-2	Site: Transportation Surrounding: Industrial, cropland and pasture, commercial, forested wetland or non forested wetland	Industrial	General Industrial (R-R development allowed)	70 <sup>1</sup>	0	No	No
OT Jet.	Site: Transportation Surrounding: Reservoirs, other urban or built-up land, mixed rangeland	Large Scale Agricultural	Agricultural (R-R development allowed)	0	0	Yes	No

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(concluded)

				Structure	s Near Site	Occurren	nce Within
Location/Station	Existing Land Uses	General Plan Designation	Zoning Designation	Within 500 Feet	Length in Urbanized Areas (feet)	Prime Farmland	Coastal Zone
Portland	Site: Transportation Surrounding: Industrial, transportation, streams and canals, other urban or built-up land, commercial, residential, mixed urban or built-up land	C1 <sup>2</sup>	Cl <sup>2</sup>	20 <sup>1</sup>	0	Yes	No

Sensitive Receptors = Some structures occur within approximately 200 feet of construction activities. CI = Ini ial contact made with agencies but information not received by time of report submittal.

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### POTENTIAL LAND USE IMPACTS AT PROPOSED CONSTRUCTION LOCATIONS IN OREGON

Location/Station Compatible with Surround Land Uses		Consistent with General Plan/Zoning Designation	Potential Loss of Prime Farmland		
Barnes	Yes - Not significant	Yes - Not significant	No - Not significant		
Cascade Tunnels	Yes - Not significant	CI <sup>2</sup>	No - Not significant		
Kenton Line-1	Yes - Not significant	CI <sup>2</sup>	No - Not significant		
Kenton Line-2	Yes - Not significant	Yes - Not significant	No - Not significant		
OT Jet.	Yes - Not significant	Yes - Not significant	Not expected - Not significant		
Portland	Yes - Not significant	ci <sup>2</sup>	Not expected - Not significant <sup>1</sup>		

Construction is anticipated to be largely within existing right-of-way and no prime farmland is expected to be affected.

CI = Initial contact made with agencies but information not received by time of report submittal.

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### WATER RESOURCES AND WETLAND INFORMATION AT PROPOSED CONSTRUCTION LOCATIONS IN OREGON

		Water Resource Type <sup>1</sup>									
Location/Station	bis	wb	wl	ed	tc	mf	55	sp			
Barnes	1	4	-	-	-	-	-	-			
Cascade Tunnels	22	-	-	-	-	-	-	1			
Kenton Line-1		-	-	-		-	-	-			
Kentor Line-2		-	-	1	-	-	-	-			
OT Jet.		7	-	_	-	-	-	-			
Portland	1	-	-	-	-	-	-	-			

blue-line streams (bls) waterbodies (wb)	н 11	permanent and intermittent watercourses, including creeks, streams, rivers, washes, and sloughs permanent and intermittent bodies of standing water including ponds, lakes, reservoirs, bayous, catchments, and heaver rooms.
wetlands (wl) canals, culverts,	=	areas depicted with the USGS wetland symbol, primarily including marshes and wet meadows
ditches (cd)	=	human-made water conveyances
tidal channels (tc)	=	tidal channels including inlets, harbors, bays, and sloughs subject to tidal influences
mudflats (mf) sewage-treatment ponds,	=	permanent to intermittently wet, non-vegetated, usually alkaline, mudflats
salt evaporators etc. (ss)	=	areas used for public facilities or commercial purposes
springs (sp)	=	areas depicted with the USGS spring symbol

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### BIOLOGICAL RESOURCES INFORMATION AT PROPOSED CONSTRUCTION LOCATIONS IN OREGON

Location	Vegeta	ation Type	Known and Potential	Parks, Forests,	
	At the Site Adjacent		Threatened, and Endangered Species in the Area	Refuges, or Sanctuaries within 5 Miles	
Barnes	Ruderal	Wetland, Forest Scrub	28 species, as listed in Part 6	31 Parks, as listed in Part 6	
Cascade Tunnels	Ruderal	Forest Scrub, Wetland at Tunnel 24 only	28 species, as listed in Part 6	6 Parks, as listed in Part 6	
Kenton Line-1	Ruderal	Wetland, Agricultural	28 species, as listed in Part 6	66 Parks, as listed in Part 6	
Kenton Line-2	Ruderal	Wetland, Agricultural, Forest Scrub	28 species, as listed in Part 6	34 Parks, as listed in Part 6	
OT Jct.	Ruderal, Riparian, Wetland	Wetland, Agricultural, Forest Scrub	28 species, as listed in Part 6	Horsethief Lake State Park Avery Recreation Area	
Portland	Ruderal, Industrial	Commercial, Industrial	None	None	

### POTENTIAL IMPACTS TO SENSITIVE BIOLOGICAL RESOURCES AT PROPOSED CONSTRUCTION LOCATIONS IN OREGON

Location		Potential Impacts To							
	Rare, Threatened, and Endangered Species	Critical Habitat	Parks, Forests, Refuges, Sanctuaries						
Barnes	Not Significant	None - NS	None - NS						
Kenton Line-1	Not Significant	None - NS	None - NS						
Kenton Line-2	Not Significant	None - NS	None - NS						
OT Jet.	Not Significant	None - NS	None - NS						
Portland	None - NS	None - NS	None - NS						

Location	Hist	Historic Resources			ological Re	Potential Impacts	
Locale	L	E	U	L	E	U	
Rames	CI	CI	CI	0	0	0	ND
Cascade Tunnels	CI	CI	CI	CI	CI	CI	ND
Kenton Line-1	Cl	CI	CI	0	0	0	ND
Kenton Line-2	CI	CI	CI	0	0	0	ND
OT let	CI	CI	CI	0	0	0	ND
Dortland	CI	CI	CI	0	0	0	ND

# EXISTING CONDITIONS AND POTENTIAL IMPACTS FOR HISTORIC AND CULTURAL RESOURCES AT PROPOSED CONSTRUCTION LOCATIONS IN OREGON

Note: L, listed on National Register of Historic Places (NRHP); E, determined or recommended eligible for NRHP; U, eligibility for NRHP is unknown; CI, consultation with SHPO and/or data repository has been initiated but not completed at time of report submittal; NS, not significant; ND, not determined. The numbers on table denote the number of known historic or archaeological resources within 100 f. et of construction areas.

### KEY FOR LAND USE

# URBAN OR BUILT-UP LAND

#### RANGELAND

- RE Residential
- C Commercial and services
- I Industrial
- T Transportation, communications and utilities
- I/C Industrial and commercial complexes
- MU Mixed urban or build-up land
- OU Other urban or built-up land

### AGRICULTURAL LAND

- CP Cropland and pasture
- CH Orchards, groves, vineyards, nurseries, and ornamental horticultural areas
- CF Confined feeding operations
- CO Other agricultural land

#### WATER

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- WS Streams and canals
- WL Lakes
- WR Reservoirs
- WB Bays and estuaries

### WETLAND

WE Forested wetland, and/or nonforested wetland

# KEY FOR CULTURAL RESOURCES SITES

 Location of known historic or or archaeological site

- Rh Herbaceous rangeland
- Rsb Shrub and brush rangeland
- Rm Mixed rangeland

### FOREST LAND

- FD Deciduous forest land
- FE Evergreen forest land
- FM Mixed forest land

#### BARREN LAND

- Bsf Dry salt flats
- Bb Beaches
- Bs Sandy areas other than beaches
- Br Bare exposed rocks
- Bm Strip mines, quarries, and gravel pits
- Bt Transitional areas
- B Mixed barren land



Figure 14.1-1 Proposed Construction at Rail Yard: Barnes, Oregon. Location and Land Use.



Base Map: USGS 7.5' Topographic Quadrangles: Hamaker Mtn., Oregon – California (Provisional Edition 1986); Dorris, California (Provisional Edition 1985)



Figure 14.1-3 Proposed Corridor Upgrade: Cascade Tunnels, Oregon. Location and Land Use.







Figure 14.1-5 Proposed Corridor Upgrades: Cascade Tunnels, Oregon. Location and Land Use.

Base Map: USGS 7.5' Topographic Quadrangles: Mt David Douglas, Oregon (Provisional Edition 1986); Diamond Peak, Oregon (Provisional Edition 1986)



Figure 14.1-6 Proposed Corridor Upgrades: Cascade Tunnels, Oregon. Location and Land Use.





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Figure 14.1-8 Proposed Corridor Upgrade: Cascade Tunnels, Oregon. Location and Land Use.







Figure 14.1-10 Proposed Corridor Upgrade: Cascade Tunnels, Oregon. Location and Land Use.



Figure 14.1-11 Proposed Corridor Upgrade: Kenton Line, Oregon. Location and Land Use.

and 1977); Mount Tabor, Oregon - Washington 1961 (Photorevised 1970 and 1978)

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Figure 14.1-12 Proposed Corridor Upgrade: Kenton Line, Oregon. Location and Land Use.





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#### **NWI LEGEND**

SYSTEM					M - MARINE				
SUBSYSTEM		1 - SUBTID	AL	•			2 - INTERT	IDAL	
CLASS	RB ROCK BOTTOM	UB UNCONSOLIDATED	AB AQUATIC BED	RF REEF	OW OPEN WATE	AB AQUATIC BE	D RF - REEF	RS - ROCKY SHORE	US - UNCONSOLIDATED
Subclass	1 Bedrock 2 Rubble	1 Cobble Gravel 2 Sand 3 Mud 4 Organic	1 Algal 3 Rooted Vascular 5 Unknown Submergent	1 Coral 3 Worm		1 Algal 3 Rooted Vascular 5 Unknown Submer	i Coral 3 Worm rgent	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic
SYSTEM					R - RIV	ERINE			
SUBSYSTEM	1 - TIDA	L 2	LOWER PER	ENNIAL	3 UPI	PER PERENNIAL	4 - INTE	RMITTENT 5	- UNKNOWN PERENNIA
CLASS	HB ROCK BOTTO	US UNCONSOLIDA M BOTTOM	TED 'SB STREAM	BED AB	AQUATIC BED R	S ROCKY US UN SHORE SH	CONSOLIDATED	**EM - EMERGEN	TOW - OPEN WATER/
Subclass	1 Bedrock 2 Rubble	1 Cobble Gravet 2 Sand 3 Mud 4 Organic	1 Bedruck 2 Rubble 3 Cobble Gravel 4 Sand 5 Mud 6 Organic	1 Alg 2 Ag 3 Ro 4 Flo 5 Un 6 Un	al 1 uatic Moss 2 oted Vascular ating Vascular known Submergent known Surface	Bedrock 1 Cobble Rubble 2 Sand 3 Mud 4 Organic 5 Vegetat	Gravel c red	2 Nonpersistent	

\*STREAMBED is limited to TIDAL and INTERMITTENT SUBSYSTEMS, and comprises the only CLASS in the INTERMITTENT SUBSYSTEM \*\*EMERGENT is limited to TIDAL and LOWER PERENNIAL SUBSYSTEMS

SYSTEM				P - PALU	STRINE				
CLASS	RB - ROCK BOTTOM	UB UNCONSOLIDATED BOTTOM	AB - AQUATIC BED	US - UNCONSOLIDATED SHORE	ML - MOSS	EM - EMERGENT	SS - SCRUB-SHRUB	FO - FORESTED ON	V – OPEN WATER/ Joknown Bottom
Subclass	1 Bedrock 2 Rubble	1 Cobble Gravel 2 Sand 3 Mud 4 Organic	1 Algai 2 Aquatic Moss 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface	1 Cobble Gravel 2 Sand 3 Mud 4 Organic 5 Vegetated	1 Moss 2 Lichen	1 Persistent 2 Nonpersistent	1 Broad Leaved Deciduous 2 Niecole Leaved Deciduous 3 Broad Leaved Evergreen 4 Needie Leaved Evergreen 5 Deed	1 Broad-Leaved Deciduous 2 Needie-Leaved Deciduous 3 Broad-Leaved Evergreen 4 Needie-Leaved Evergreen 5 Dead	
		Instructions for	or using the le	aend.			6 Deciduous 7 Evergreen	6 Deciduous 7 Evergreen	

#### Instructions for using the legend:

The NWI Inventory uses a hierarchy of alphabetical and numerical symbols to indicate wetland characteristics. The following example illustrates how the hierarchy works. For a hypothetical wetland type indicated as "L2AB3a" begin by finding the system type indicated by the first symbol; that is, "L" indicates "Lacustrine." The next symbol "2" indicates that the system type is "Littoral." The symbols "AB" indicate that the class is "Aquatic Bed." The symbol "3" indicates that the subclass is "Rooted Vascular." The last symbol "a" is explained in the Modifiers part of the system; the modifier indicates "acid."

#### **NWI LEGEND**



Instructions for using the legend:

The NWI Inventory uses a hierarchy of alphabetical and numerical symbols to indicate wetland characteristics. The following example illustrates how the hierarchy works. For a hypothetical wetland type indicated as "L2AB3a" begin by finding the system type indicated by the first symbol; that is, "L" indicates "Lacustrine." The next symbol "2" indicates that the system type is "Littoral." The symbols "AB" indicate that the class is "Aquatic Bed." The symbol "3" indicates that the subclass is "Rooted Vascular." The last symbol "a" is explained in the Modifiers part of the system; the modifier indicates "acid."

#### FLOOD INSURANCE RATE MAP LEGEND EXPLANATION OF ZONE DESIGNATIONS

Flood Insurance Rate Maps (FIRMs) display the zone designations for communities according to areas of designated flood hazards. The zone designations used by the Federal Emergency Management Agency (FEMA) are:

Zone	Explanation
А	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
AO	Areas of 100-year shallow flooding; flood depth 1 to 3 feet; product of flood depth (feet) and velocity (feet per second) less than 15.
АН	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
AE	Areas of 100-year flood; base flood elevations determined (for Louisiana)
A99	Areas of 100-year flood to be protected by a flood protection system under construction; base flood elevations and flood hazard factors not determined
В	Areas between limits of 100-year flood and 500-year flood, areas of 100-year shallow flooding where depths less than 1 foot
С	Areas outside 500-year flood.
Х	Areas of combined B and C zones (for Louisiana)
D	Areas of undetermined; but possible, flood hazards.
v	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevation and flood hazard factor determined.

#### Notes

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

FIRMs are for flood insurance rate purposes only; maps may not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.



Figure 14.2-1 Proposed Terminal Expansion: Barnes, Oregon. Wetland Information.


Figure 14.2-2 Proposed Corridor Upgrades: Cascade Tunnels, Oregon. Wetland Information.

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Figure 14.2-3 Proposed Corridor Upgrade: Cascade Tunnels, Oregon. Wetland Information.



Figure 14.2-4 Proposed Corridor Upgrades: Cascade Tunnels, Oregon. Wetland Information.

Base Map: USGS 7.5' Topographic Quadrangles: Mt David Douglas, Oregon (Provisional Edition 1986); Diamond Peak, Oregon (Provisional Edition 1986)

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Figure 14.2-5 Proposed Corridor Upgrades: Cascade Tunnels, Oregon. Wetland Information.

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Figure 14.2-6 Proposed Corridor Upgrades: Cascade Tunnels, Oregon. Wetland Information.

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Figure 14.2-7 Proposed Corridor Upgrades: Cascade Tunnels, Oregon. Wetland Information.





Figure 14.2-8 Proposed Corridor Upgrade: Cascade Tunnels, Oregon. Wetland Information.



Figure 14.2-9 Proposed Corridor Upgrade: Cascade Tunnels, Oregon. Wetland Information.







Figure 14.2-11 Proposed Corridor Upgrade: Kenton Line, Oregon. Wetland Information.

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Figure 14.2-12 Proposed Corridor Upgrade: Kenton Line, Oregon. Wetland Information.

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Figure 14.2-13 Proposed Corridor Upgrade: OT Junction, Oregon. Wetland Information.

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Figure 14.2-14 Proposed Construction at Intermodal Facility: Portland, Oregon. Wetland Information.

### 15.0 TEXAS

# 15.1 PROPOSED ACTION AND NO-ACTION ALTERNATIVES

The proposed action in Texas would involve the construction projects as described in this Part, which would be constructed generally as described in Section 2.0. In each case, the proposed construction is necessary to the efficiency of the merged operations and will result in the benefits discussed in Section 1 of this Part. The no-action alternative assumes that the projects would not be constructed. The projects are listed below and shown in Table 1-1.

The following projects would involve the construction of new sidings or the extension of existing sidings at specified locations on UP's OKT subdivision between Herington and Fort Worth to provide improved capacity and operating efficiencies to handle increased traffic on this line. It is anticipated that most, if not all, of such construction would occur on existing ROW.

Boyd - Construction of a new 9,300-foot siding between MP 584 and MP 582 as shown on Figure 15.1-3.

<u>Chico</u> - Construction of a 7,924-foot extension to an existing siding between MP 563 and 561 as shown on Figure 15.1-9.

Hicks - Construction of a 3,801-foot extension to an existing siding between MP 599 and MP 597 as shown on Figure 15.1-21.

Saginaw - Construction of a 3,642-foot extension of an existing siding between MP 604 and MP 602 as shown on Figure 15.1-39.

Stony burg - Construction of a 5,949-foot extension to an existing siding between MP 537 and MP 535 as shown on Figure 15.1-43.

Each of the following projects would involve the construction of double track, universal cross-overs, new sidings or extensions of existing sidings at specified locations on UP's Dallas Subdivision between Big Sandy and Fort Worth to provide improved capacity and operating efficiencies to handle increased trainic on this line. It is anticipated that most, if not all, of such construction would occur on existing ROW.

<u>Big Sandy-1</u> - Construction of an extension to an existing siding between MP 113 and MP 117 as shown on Figures 15.1-1a and 15.1-1b.

Big Sandy-2 - Construction of a new siding as shown on Figure 15.1-2.

<u>Grand Prairie</u> - Construction of a universal cross-over at MP 225 as shown on Figure 15.1-17.

<u>Grand Saline</u> - Construction of a 1,008-foot extension to an existing siding between MP 149 and MP 151 as shown on Figure 15.1-18.

Lawrence - Construction of a 1,325-foot extension to an existing siding between MP 186 and MP 188 as shown on Figure 15.1-28.

Miller - Construction of double track between MP 203 and MP 209 as shown on Figure 15.1-31.

<u>Mineola</u> - Construction of a new siding, extension of an existing siding and installation of a cross-over between MP 136 and MP 140 as shown on Figure 15.1-32.

Wills Point - Construction of a 1,795-foot extension to an existing siding between MP 166 and MP 168 as shown on Figure 15.1-55.

The following projects would involve the construction of new sidings, extension of existing sidings and/or construction of cross-overs at specified locations on UP's Baird subdivision between Dallas-Fort Worth and El Paso to improve capacity and efficiency to handle increased traffic on this line. It is anticipated that most, if not all, construction would occur within the existing ROW.

Brazos - Construction of a 1,848-foot extension to an existing siding between MP 300 and MP 302 as shown on Figure 15.1-4.

<u>latan</u> - Construction of a 1,478-foot extension to an existing siding between MP 490 and MP 492 as shown on Figure 15.1-25.

<u>Iona</u> - Construction of a 1,056-foot extension to an existing siding between MP 259 and MP 261 as shown on Figure 15.1-26.

Jayell - Construction of a 1,848-foot extension to an existing siding between MP 381 and MP 383 as shown on Figure 15.1-27.

Loraine - Construction of a new 9,300-foot siding between MP 467 and MP 469 as shown on Figure 15.1-29.

Merkel - Construction of a 1,162-foot extension to an existing siding between MP 423 and MP 425 as shown on Figure 15.1-30.

Monahans - Construction of a 1,425-foot extension to an existing siding between MP 607 and MP 609 as shown on Figure 15.1-33.

Morita - Construction of a 1,236-foot extension to an existing siding between MP 522 and MP 524 as shown on Figure 15.1-34.

Pecos - Construction of a new 9,300-foot siding between MP 651 and MP 653 as shown on Figure 15.1-35.

Pegasus - Construction of a 2,060-foot extension to an existing siding between MP 562 and MP 564 as shown on Figure 15.1-36.

<u>Preble</u> - Construction of a 1,954-foot extension to an existing siding between MP 286 and MP 288 as shown on Figure 15.1-38.

<u>Strawn</u> - Construction of a 4,435-foot extension to an existing siding between MP 326 and MP 328 as shown on Figure 15.1-45.

<u>Sweetwater</u> - Construction of a 5,861-foot extension to an existing siding and installation of a cross-over between MP 444 and MP 448 as shown on Figure 15.1-46.

Tiffin - Construction of a 2,270-foot extension to an existing siding between MP 337 and MP 339 as shown on Figure 15.1-48.

<u>Toyah</u> - Construction of an extension to an existing siding and installation of a cross-over between MP 662 and MP 667 as shown on Figure 15.1-49.

San Martine - Construction of a new 9,300-foot siding between MP 686 and MP 688 as shown on Figure 15.1-42.

Wild Horse - Construction of a 5,544-foot extension to an existing siding between MP 725 and MP 727 as shown on Figure 15.1-54

The following project involves construction of double track and a cross-over on SP's Valentine subdivision to improve capacity and operating efficiencies.

Buford-Alfalfa - Construction of a double track between MP 813.6 and MP 815.3 and installation of a universal cross-over at MP 817.2 as shown on Figures 15.1-6 and 15.1-7.

The following project involves construction of double track on SP's Carrizozo Subdivision to improve capacity and operating efficiencies.

El Paso - Construction of double track between MP 1297.7 and MP 1302.2, north of El Paso, as shown on Figures 15.1-12a and 15.1-12b.

The remaining projects involve construction of new connections, upgrades to existing connections, construction within yards, bridge rebuilds, and expansion and/or construction of intermodal facilities.

<u>Bryan</u> - The rail crossing of the UP Fort Worth subdivision and SP Hearne subdivision at Bryan, Texas just north of Bryan Junction (Figure 15.1-5), would be realigned directly into the SP line south of the crossing. Construction would include the construction of 650 feet of new track, shifting of 450 feet of track, and installation of two power-operated mainline turnouts. Acquisition of additional right-of-way is not expected.

<u>Carrollton</u> - Construction of additional yard tracks at the SP Carrollton, Texas yard on the SP Commerce subdivision just east of the connection with the UP/Dart Denton branch as shown on Figures 15.1-8, is proposed to manage the consolidated handling of UP and SP local traffic in the area. Construction will

include 3,100 feet of new track for 60 cars of capacity in one track extension and two new tracks. Some additional right-of-way will be required.

Dallas Jct. - The construction of a new connection between the DART-owned DFW Subdivision and Denton Branch at Dallas Jct., Dallas, Texas as shown on Figures 15.1-10 will be used to move consolidated UP/SP traffic volumes north from Dallas to the Carollton area. This connection entails the installation of a new crossover between the two lines on existing right-of-way.

<u>Dayton</u> - Extension of two yard tracks in the SP yard on the Lafayette subdivision in Dayton, Texas is proposed to handle additional block volumes that will move traffic between the Baytown/Mont Belvieu area to Livonia and east without moving through the Houston terminal (Figures 15.1-11). Construction will include 7,900 feet of new track without requiring any additional right-of-way.

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Eort Worth - Two new connections between the UP Fort Worth Subdivision mainline and the SP Ennis Subdivision Fort Worth branch at Fort Worth, Texas are proposed as shown on Figures 15.1-16. The first connection will be in the northeast quadrant of the existing rail crossing and permit movements between the UP mainline and yard north of the crossing and the SP branch line running south to Ennis, Texas. This connection will be primarily used by mainline trains operating north from Hearne, Texas to the Fort Worth area and beyond. Construction of the 5 degree, 10 MPH connection will require installation of two power-operated turnouts, 570 feet of new track and some additional property acquisition. The second connection will be in the southwest quadrant of the existing rail crossing and permit movements between the SP branch line north of the crossing and the UP mainline running south to Waco, Texas. This connection will be primarily used by southbound trains which bypass the UP Ney yard by using the SP branch line north of the crossing. Construction of this 30 MPH, 3 degree 30 minute connection will include the installation of two power-operated turnouts, 650 feet of new track, and some additional property acquisition.

Hearne - Trains running northbound through Hearne, Texas will use an upgraded connection between the UP Austin subdivision and SP Ennis Subdivision. The existing connection in the northwest quadrant of the rail crossing will be upgraded with the installation of higher speed power-operated turnouts and replacement of 1,500 feet of track as shown on Figures 15.1-20. No additional right-of-way acquisition is expected for this work.

Houston - Construction of a new connection in the northwest quadrant of the SP / HB&T rail crossing at Tower 26 in Houston, Texas (Figures 15.1-22). This connection will be used by trains moving on the UP and HB&T mainlines to bypass Englewood yard on east-west movements. it will replace an existing lower-speed connection just west of Tower 26. The construction of the 9 degree 30 minute connection will require the installation of two new power-operated turnouts and acquisition of certain commercial property in the new alignment.

A new connection between the SP and HB&T mainlines at Tower 87 in Houston, Texas is required to facilitate the movement of power between SP and UP yards in the combined operating plan (Figures 15.1-23). This 12 degree 30 minute connection in the northwest quadrant of Tower 87 will be used to make movements of power between the SP Englewcod yard and the UP Settegast yard located immediately to the north. The connection will require the installation of two poweroperated turnouts, 800 feet of new track and the acquisition of additional right-ofway.

Construction of a new connection is proposed in the northeast quadrant of the SP / HB&T rail crossing in Houston, Texas (Figures 15.1-24). The connection will be used by trains running southbound on the SP Lufkin subdivision destined to the UP Settegast yard. Construction of this 10 MPH 1/2 degree 30 minute connection will

require the installation of two power-operated turnouts, 1,400 feet of new track, and the acquisition of some adjacent right-of-way which is largely residential.

Saginaw - Construction of a new connection between the UP OKT subdivision and BN/Santa Fe mainlines at Saginaw, Texas is required for trains operating between points north on the UP OKT subdivision and points Fort Worth and south (Figures 15.1-39). The current UP alignment south of Saginaw does not provide favorable operating characteristics for most of the mainline trains intended to run south into Fort Worth and beyond. Construction will include the installation of two power-operated turnouts, 700 feet of new track, and no additional right-of-way.

San Antonio - Construction of a new connection between the UP Austin subdivision and SP Del Rio subdivision just south and west of the yards in San Antonio, Texas is proposed. The consolidation of southbound Mexican manifest business classification at UP's South San Antonio yard will require additional capacity to manage the makeup of this traffic while also permitting movement of northbound volumes. The construction plans include the extension of a running track 9,400 feet south from the UP yard, installation of four switches, and no acquisition of additional right-of-way. A new connection between the UP and SP mainlines is proposed at Withers, just south of the existing connection between the mainlines (Figures 15.1-40). This new connection will permit movements of north-south Laredo traffic on the SP around the UP south San Antonio yard. Construction will include the installation of three power-operated turnouts, 2,300 feet of new track and 1,900 feet of shifted track. Also included is the installation of a set of universal cross-overs approx. 10,000 feet north of Withers on the SP double main track across from the UP yard (Figures 15.1-40). No additional right-of-way is required for this construction.

<u>Strang</u> - Construction of additional yard capacity is proposed for the SP Strang yard located on the SP Houston Terminal subdivision Galveston line (Figures 15.1-44).

Two tracks will be extended 8,000 track feet in order to provide capacity for the breakup and makeup of trains classified at the Strang yard. These trains now frequently occupy main tracks north of the yard. Some additional right-of-way will be required for this construction.

Tatsie/Mumford - Construction of a new connection between and realignment of the UP Fort Worth subdivision and the SP Ennis subdivision Flatonia line between Tatsie and Mumford, Texas will permit trains to operate between the various combinations of UP and SP lines north (Hearne, Valley Jct. and north) and south (Flatonia, Houston) of the existing rail crossing (Figures 15.1-47). Construction will include the installation of five power-operated turnouts and 4,500 feet of new track with no additional right-of-way.

<u>Valley Jct.</u> - Upgrade of the existing connection between the UP Fort Worth and Austin subdivisions at Valley Jct., Texas is proposed for trains operating between the UP at this location and the SP northbound at Hearne (Figures 15.1-50). Construction will include the installation of two new power-operated turnouts and 3,600 feet of new track.in the southeast quadrant of the existing rail crossing. No additional right-of-way is required for this connection.

<u>Waco 1 and 2</u> - Construction of an additional yard track in the UP Bellmead yard at Waco, Texas is proposed in order to facilitate the combined handling of the UP and SP local industrial traffic (Figures 15.1-51). Construction in the yard located on the UP Houston subdivision will include the reinstallation of a 3,650 foot track, two turnouts and no additional right-of-way. In order to also facilitate the combined traffic handling, the plan proposes the construction of a new connection between the UP Fort Worth subdivision Bass siding and the SP Ennis subdivision Gatesville Branch (Figures 15.1-52). Construction of this new connection will include installation of two turnouts, 625 feet of new track, and no additional right-of-way. Westpoint - Construction of a new connection between the UP Houston subdivision mainline and the SP Ennis subdivision Flatonia line is proposed at Westpoint, Texas (Figures 15.1-53). This connection will be used by mainline trains operating between Hearne and Houston or Halsted. Construction of the 30 MPH, 6 degree connection will include installation of two power-operated turnouts, 1,500 feet of new track and acquisition of some adjacent right-of-way.

Flatonia-Victoria - This project involves the rebuilding of three timber pile trestles at approximately MP 15.80, MP 119.56 and MP 128.67 on SP's Victoria subdivision as shown on Figures 15.1-13 to 15.1-15.

Port Laredo - The operation of the merged systems anticipates handling additional intermodal traffic in the Port Laredo area (Figures 15.1-37a and 15.1-37b). Construction at UP's existing facility will involve the addition of a yard track, additional trailers and containers, parking stalls and an additional crane.

Harlingen - The operation of the merged systems anticipates consolidation of intermodal facilities at Brownsville into a new facility at Harlingen as shown on Figures 15.1-19.

San Antonio - The operation of the merged systems anticipates consolidation of intermodal traffic from SP's existing facility in San Antonio into UP's facility (Figures 15.1-40). This will require expansion of UP's facility by constructing additional trackage, paving and switch tracks into the yard.

# 15.2 DESCRIPTION OF EXISTING ENVIRONMENT AND POTENTIAL ENVIRONMENTAL IMPACTS OF PROPOSED ACTIONS

Existing land use information and potential impacts for proposed construction projects in Texas are included in Tables 15-1 and 15-2, and shown on Figures 15.1-1 to 15.1-55. Water resources and wetland information is summarized in Table 15-3 and shown on Figures 15.2-1 to 15.2-55. Existing biological resources information and potential impacts are presented in Tables 15-2 and 15-4. Information concerning historic

and cultural resources information at proposed construction project sites is included in Table 15-6 and on Figures 15.1-12b.

Suggested mitigation measures are described in Section 17. Such measures as are appropriate will be implemented before and during construction activities.

# 15.3 POTENTIAL ENVIRONMENTAL IMPACTS OF NO-ACTION ALTERNATIVES

Under the no-action alternative, it is assumed that the proposed projects would not be constructed and land use and environmental conditions that currently exist at the proposed sites would remain unchanged. However, if the merger is approved and implemented, elimination of the projects would result in less efficient rail service causing capacity constraints, delays, and slower operating speeds which would result in additional fuel consumption and air emissions.

# 15.4 SUMMARY OF COMMENTS

To assist in assessing the potential environmental impacts of the proposed UP/SP merger, Dames & Moore sent letters requesting information to various federal, state, and local agencies. In these letters, information was requested for the areas of: air quality, noise, land use, biological and water resources, historic and cultural resources, transportation systems, energy, and public health and safety. Copies of all correspondence received and a record of telephone conversation notes in response to the request for information are included in Part 6.

For the proposed construction projects in this state, the following agencies responded: Texas Historical Commission, Ward County, City of Montague, Office of the Attorney General, Palo Pinto County, Texas Office of State-Federal Relations, and Army Corps of Engineers, Fort Worth District. A summary of comments received prior to November 10, 1995 for Texas is listed below.

- The Texas Historical Commission requested more information regarding specific horizontal and vertical extent of the projects, and pre-1950 bridges or trusses, which are needed for the Commission to assess the amount of historical impact.
- The Ward County Judge expressed concerns regarding damage or loss of private property that may occur as a result of railroad construction projects.
- The Montague County Judge is unaware of any environmental situations which would be impacted by the railroad merger.
- The Office of the Attorney General provided contacts for agencies regarding parks, wildlife, and resource conservation.
- The Palo Pinto County Judge had no comment on the proposed construction project.

#### 15.5 REFERENCES

#### 15.5.1 Land Use

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#### 15.5.3 Biological Resources

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#### 15.5.4 Historic and Cultural Resources

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#### 15.5.5 Air Quality

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- 40. CFR Part 81 Designation of Areas for Air Quality Planning Purposes, Sub Part C Section 107, Attainment Status Designation.
- 40 CFR Part 1105 Procedures for Implementation of Environmental Laws.

## 15.5.6 Noise

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## **TABLE 15-1**

## EXISTING LAND USE INFORMATION AT PROPOSED CONSTRUCTION LOCATIONS IN TEXAS

				Structures Near Site		Occurrence Within	
Location/Station	Existing Land Uses	General Plan Designation	Zoning Designation	Within 500 Feet	Length in Urbanized Areas (feet)	Prime Farmland	Coastal Zone
Big Sandy - 1	Site: Transportation Surrounding: Residential, lakes, cropland and pasture	No formal land use policies/controls exist		20 <sup>1</sup>	0	No	No
Big Sandy - 2	Site: Transport ution Surrounding: St ip mines or quarries or gravel pits, mixed forest land, residential	No formal land use policies/controls exist		43 <sup>1</sup>	0	No	No
Boyd	Site: Transportation Surrounding: Mixed rangeland, deciduous forest land	No formal land use policies/controls exist		0	0	No	No
Brazos	Site: Transportation Surrounding: Mixed rangeland	No formal land use policies/controls exist		0	0	No	No
Bryan	Site: Transportation Surrounding: Residential, commercial, transportation	Medium Industrial	Industrial 2 (R-R development allowed)	0 <sup>1</sup>	3,000	No	No
Buford to Alfalfa-1	Site: Transportation Surrounding: Residential, transportation	Residential	Commercial, Residential, Historical (R-R development allowed)	. 0	2,500	No	No
Buford to Alfalfa-2	Site: Transportation Surrounding: Cropland and pasture, residential, commercial, transportation	Industrial, Residential, Agricultural	Residential, Agricultural 2, Manufacturing 2 (R-R development allowed)	21	3,800	No	No

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				Structures Near Site		Occurrence Within	
Location/Station	Existing Land Uses	General Plan Designation	Zoning Designation	Within 500 Feet	Length in Urbanized Areas (feet)	Prinie Farmland	Coastal Zone
Carrollton	Site: Transportation Surrounding: Residential	Heavy Commercial, Residential	Heavy Commercial (R-R development allowed)	0 <sup>1</sup>	2,000	Yes	No
Chico	Site: Transportation Surrounding: Cropland and pasture, residential	No formal land use policies/controls exist	Mixed Industrial (R- R development allowed)	24	0	No	No
Dallas Jct.	Site: Transportation Surrounding: Mixed urban or other built- up land, commercial	No designations exist	Mixed Industrial (R-R development allowed)	20	0	No	No
Dayton	Site: Transportation Surrounding: Cropland and pasture, residential	No formal land use policies/controls exist		47	0	Yes	No
El Paso	Site: Transportation Surrounding: Residential, transportation, commercial	Residential Commercial	Commercial, Residential (R-R development allowed)	8 <sup>1</sup>	0	No	No
Flatonia to Victoria	Site: Transportation Surrounding: Streams and canals, cropland and pasture, evergreen forest land, other urban and built-up land, industrial	CI <sup>2</sup>	CI <sup>2</sup>	2	0	No	No
Ft. Worth-1	Site: Transportation Surrounding: Residential, industrial, mixed urban or other built-up land	CI <sup>2</sup>	CI <sup>2</sup>	0 <sup>1</sup>	800	No	No
Ft. Worth-2	Site: Transportation Surrounding: Residential, industrial, mixed urban or other built-up land	CI <sup>2</sup>	CI <sup>2</sup>	0 <sup>1</sup>	800	No	No

		Structures Near Site Occurrence V		Structures Near Site		nce Within	
Location/Station	Existing Land Uses	General Plan Designation	Zoning Designation	Within 500 Feet	Length in Urbanized Areas (feet)	Prime Farmland	Coastal Zone
Grand Prairie	Site: Transportation Surrounding: Commercial	Light Industria , Commercial	Industrial (R-R development allowed)	0	2,300	No	No
Grand Saline	Site: Transportation Surrounding: Cropland and pasture, lakes, commercial and industrial complexes, residential, mixed urban or other built-up land	No formal land use policies/controls exist		192 <sup>1</sup>	0	No	No
Harlingen	Site: Transportation Surrounding: Residential, industrial	Light Industrial	Light Industrial 1 (R- R development allowed)	84	0	No	No
Неате	Site: Transportation Surrounding: Mixed urban or other built- up land, residential, strip mines or quarries or gravel pits, industrial and commercial complexes	Industrial	Industrial (R-R development allowed)	28 <sup>1</sup>	0	No	No
Hicks	Site: Transportation Surrounding: Cropland and pasture, transportation	No formal land use policies/controls exist		12	0	Yes	No
Houston-1	Site: Transportation Surrounding: Residential, industrial and commercial complexes	No formal land use policies/controls exist		0 <sup>1</sup>	2,300	No	No
Houston-2	Site: Transportation Surrounding: Residential, transportation	No formal land use policies/controls exist		0 <sup>1</sup>	0	No	No
Houston-3	Site: Residential	No formal land use		31	0	No	No

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**TABLE 15-1** 

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				Structures Near Site		Site Occurrence Within	
Location/Station	Existing Land Uses	General Plan Designation	Zoning Designation	Within 500 Feac	Length in Urbanized Areas (feet)	Prime Farmland	Coastal Zone
latan	Site: Transportation Surrounding: Industrial, mixed	No formal land use policies/controls exist		1	0	Yes	No
Iona	Site: Transportation Surrounding: Cropland and pasture	No formal land use policies/controls exist		3	0	No	No
Jayell	Site: Transportation Surrounding: Strip mines or quarries or gravel pits, mixed rangeland, cropland and pasture	No formal land use policies/controls exist		0	0	Yes	No
Lawrence	Site: Transportation Surrounding: Cropland and pasture, lakes, residential	No formal land use policies/contro:s exist		43 <sup>1</sup>	0	Yes	No
Loraine	Site: Transportation Surrounding: Cropland and pasture, residential	No formal land use policies/controls exist		23	0	Yes	No
Merkel	Site: Transportation Surrounding: Cropland and pasture, mixed rangeland, transportation, shrub and brush rangeland	No designation exists	Agricultural (R-R development allowed)	9 <sup>1</sup>	1,300	Yes	No
Miller	Site: Transportation Surrounding: Residential	No designation exists	Residential, Residential Institutional (R-R development allowed)	0 <sup>1</sup>	5,000	Yes	No
Mineola	Site: Transportation Surrounding: Other urban or built-up land, mixed urban or built-up land, residential, commercial, deciduous forest, cropland and pasture, mixed forest	No formal land use policies/controls exist		38	500	No	No

				Structure	s Near Site	Occurre	nce Within
Location/Station	Existing Land Uses	General Plan Designation	Zoning Designation	Within 500 Feet	Length in Urbanized Areas (feet)	Prime Farmland	Coastal Zone
Monahans	Site: Transportation Surrounding: Other urban or built-up land, mixed rangeland, mixed urban or built-up land, residential	Commercial	Commercial 3 (R-R development allowed)	25	2,000	No	No
Morita	Site: Transportation Surrounding: Shrub and brush rangeland	No formal land use policies/controls exist		0	0	Yes	No
Pecos	Site: Transportation Surrounding: Croplane and pasture	No formal land use policies/controls exist		8	0	Yes	No
Pegasus	Site: Transportation Surrounding: Mixed range!and, herbaceous rangeland, transportation, transitional areas, commercial, industrial	No formal land use policies/controls exist		27	0	Yes	No
Port Laredo	Site: Transportation Surrounding: Mixed rangeland	Heavy Industrial	Manufacturing 2 (R- R development allowed)	0	0	No	No
Preble	Site: Transportation Surrounding: Cropland and pasture, other urban or built-up land, shrub and brush rangeland	No formal land use policies/controls exist		4	0	No	No
Saginaw-1	Site: Transportation Surrounding: Industrial	Heavy Industrial (R-R development allowed)		2	0	Yes	No
Saginaw-2	Site: Transportation Surrounding: Industrial and commercial complexes, residential, industrial	Heavy Industrial (R-R development allowed)		53 <sup>1</sup>	0	No	No

**TABLE 15-1** 

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				Structures Near Site		ar Site Occurrence Within	
Location/Station	Existing Land Uses	General Plan Designation	Zoning Designation	Within 500 Feet	Length in Urbanized Areas (feet)	Prime Farmland	Coastal Zone
San Antonio-1	Site: Transportation Surrounding: Residential, shrub and brush rangeland, industrial, commercial, transportation, cropland and pasture, industrial and commercial complexes, strip mines or quarries or gravel pits, deciduous forest land, other urban or built- up land	No designation exists	Residential, Agricultural (R-R development alllowed)	36 <sup>1</sup>	0	No	Nə
San Antonio-2	Site: Transportation Surrounding: Shrub and brush rangeland, commercial, residential	No designation exists	Heavy Industrial, Residentia!, Agricultural (R-R development allowed)	6	0	No	No
San Antonio-3	Site: Transportation Surrounding: Commercial, residential, transportation, industrial, cropland and pasture, other urban or built-up land	No designation exists	Heavy Industrial, Light Industrial, Residential, Agricultural (R-R development allowed)	15	0	No	No
San Antonio-4	Site: Transportation Surrounding: Mixed urban or other built- up land, residential, other urban or built- up land, transportation, industrial	No designation exists	Manufacturing (R-R development allowed)	01	5,100	No	No
San Martine	Site: Transportation Surrounding: Shrub and brush rangeland	No formal land use policies/controls exist		0	0	No	No
Stoneburg	Site: Transportation Surrounding: Herbaceous rangeland, cropland and pasture, mixed urban or other built-up land, residential	No formal land use policies/controls exist		25	0	Yes	INO

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				Structure	s Near Site	Occurre	currence Within	
Location/Station	Existing Land Uses	General Plan Designation	Zoning Designation	Within 500 Feet	Length in Urbanized Areas (feet)	Prime Farmland	Coastal Zone	
Strang	Site: Transportation Surrounding: Residential, cropland and pasture	Industrial uses	Light industrial (R-R development allowed)	2	0	Yes	No	
Strawn	Site: Transportation Surrounding: Streams and canals, mixed urban or other built-up land, residential, mixed rangeland	No formal land use policies/controls exist		0 <sup>1</sup>	0	Yes	No	
Sweetwater	Site: Transportation Surrounding: Commercial, shrub and brush rangeland, industrial, transportation, other urban or built-up land, cropland and pasture	No designation exists	Industrial (R-R development allowed)	331	7,600	No	No	
Tatsie/Mumford	Site: Transportation Surrounding: Cropland and pasture, residential, confined feeding operations	Agricultural (R-R development allowed)	No zoning designations exist	10	0	No	No	
Texarkana		See Arkansa	s Table 4-1 for informati	ion.				
Texarkana - SE		See Arkansa	s Table 4-1 for informati	01.				
Tiffin	Site: Transportation Surrounding: Strip mines or quarries or gravel pits, cropland and pasture	No formal land use policies/controls exist		6	0	No	No	
Toyah	Site: Transportation Surrounding: Shrub and brush rangeland, strip mines or quarries or gravel pits	No formal land use policies/controls exist		1	0	Yes	No	
Valley Jct.	Site: Transportation Surrounding: Transportation, cropland and pasture	Agriculture (R-R development allowed)	No zoning designations exist	11	0	Yes	No	



(concluded)

				Structure	s Near Site	Occurre	nce Within
Location/Station	Existing Land Uses	General Plan Designation	Zoning Designation	Within 500 Feet	Length in Urbanized Areas (feet)	Prime Farmland	Coastal Zone
Waco-1	Site: Transportation Surrounding: Residential, commercial, transportation	Industrial (R-R development allowed)	No zoning designations exist	13	0	No	No
Waco-2	Site: Transportation Surrounding: Commenzial	Industrial and Commercial (R-R development allowed)	No zoning designations exist	16	0	Yes	No
Westpoint	Site: Cropland and pasture Surrounding: Cropland and pasture, transportation, residential	Agricultural (R-R development allowed)	No zoning designations exist	6	0	Yes	No
Wild Horse	Site: Transportation Surrounding: Strip mines or quarries or gravel pits, shrub and brush rangeland	No formal land use policies/controls exist		0	0	No	No
Wills Point	Site: Transportation Surrounding: Cropland and pasture, industrial, residential	cl <sup>2</sup>	CI <sup>2</sup>	17	0	No	No

Sensitive Receptors = Some structures occur within approximately 200 feet of construction activities. CI = Initial contact made with agencies but information not received by time of report submittal.

## POTENTIAL LAND USE IMPACTS AT PROPOSED CONSTRUCTION LOCATIONS IN TEXAS

Location/Station	Compatible with Surrounding Land Uses	Consistent with General Plan/Zoning Designation	Potential Loss of Prime Farmland
Big Sandy - 1	Yes - Not significant	Not applicable - Not significant	No - Not significant
Big Sandy - 2	Yes - Not significant	Not applicable - Not significant	No - Not significant
Boyd	Yes - Not significant	Not applicable - Not significant	No - Not significant
Brazos	Yes - Not significant	Not applicable - Not significant	No - Not significant
Bryan	Yes - Not significant	Yes - Not significant	No - Not significant
Buford to Alfalfa-1	Yes - Not significant	Yes - Not significant	No - Not significant
Buford to Alfalfa-2	Yes - Not significant	Yes - Not significant	No - Not significant
Carrollton	Yes - Not significant	Yes - Not significant	Not expected - Not significant
Chico	Yes - Not significant	Not applicable - Not significant	No - Not significant
Dallas Jct.	Yes - Not significant	Yes - Not significant	No - Not significant
Dayton	Yes - Not significant	Not applicable - Not significant	Not expected - Not significant
El Paso	Yes - Not significant	Yes - Not significant	No - Not significant
Flatonia to Victoria	Yes - Not significant	CI <sup>2</sup>	No - Not significant
Ft. Worth-1	Vas - Not significant	CI <sup>2</sup>	No - Not significant
Ft. Worth-2	Yes - Not significant	CI <sup>2</sup>	No - Not significant
Grand Prairie	Yes - Not significant	Yes - Not significant	No - Not significant
Grand Saline	Yes - Not significant	Not applicable - Not significant	No - Not significant

(continued)

Location/Station	Compatible with Surrounding Land Uses	Consistent with General Plan/Zoning Designation	Potential Loss of Prime Farmland
Harlingen	Yes - Not significant	Yes - Not significant	No - Not significant
Hearne	Yes - Not significant	Yes - Not significant	No - Not significant
Hicks	Yes - Not significant	Not applicable - Not significant	Not expected - Not significant <sup>1</sup>
Houston-1	Yes - Not significant	Not applicable - Not significant	No - Not significant
Houston-2	Yes - Not significant	Not applicable - Not significant	No - Not significant
Houston-3	Yes - Not significant	Not applicable - Not significant	No - Not significant
latan	Yes - Not cignificant	Not applicable - Not significant	Not expected - Not significant <sup>1</sup>
Iona	Yes - Not significant	Not applicable - Not significant	No - Not significant
Jayell	Yes - Not significant	Not applicable - Not significant	Not expected - Not significant <sup>1</sup>
Lawrence	Yes - Not significant	Not applicable - Not significant	Not expected - Not significant <sup>1</sup>
Loraine	Yes - Not significant	Not applicable - Not significant	Not expected - Not significant <sup>1</sup>
Merkel	Yes - Not significant	Yes - Not significant	Not expected - Not significant
Miller	Yes - Not significant	Yes - Not significant	Not expected - Not significant <sup>1</sup>
Mineola	Yes - Not significant	Not applicable - Not significant	No - Not significant
Monahans	Yes - Not significant	Yes - Not significant	No - Not significant
Morita	Yes - Not significant	Not applicable - Not significant	Not expected - Not significant <sup>1</sup>
Pecos	Yes - Not significant	Not applicable - Not significant	Not expected - Not significant <sup>1</sup>
Pegasus	Yes - Not significant	Not applicable - Not significant	Not expected - Not significant <sup>1</sup>
Port Laredo	Yes - Not significant	Yes - Not significant	No - Not significant
Preble	Yes - Not significant	Not applicable - Not significant	No - Not significant

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(continued)

Location/Station	Compatible with Surrounding Land Uses	Consistent with General Plan/Zoning Designation	Potential Loss of Prime Farmland
Saginaw-1	Yes - Not significant	Yes - Not significant	Not expected - Not significant <sup>1</sup>
Saginaw-2	Yes - Not significant	Yes - Not significant	No - Not significant
San Antonio-1	Yes - Not significant	Yes - Not significant	No - Not significant
San Antonio-2	Yes - Not significant	Yes - Not significant	No - Not significant
San Antonio-3	Yes - Not significant	Yes - Not significant	No - Not significant
San Antonio-4	Yes - Not significant	Yes - Not significant	No - Not significant
San Martine	Yes - Not significant	Not applicable - Not significant	No - Not significant
Stoneburg	Yes - Not significant	Not applicable - Not significant	Not expected - Not significant
Strang	Yes - Not significant	Yes - Not significant	Not expected - Not significant <sup>1</sup>
Strawn	Yes - Not significant	Not applicable - Not significant	Not expected - Not significant <sup>1</sup>
Sweetwater	Yes - Not significant	Yes - Not significant	No - Not significant
Tatsie/Mumford	Yes - Not significant	Yes - Not significant	No - Not significant
Texarkana		See Arkansas Table 4-2 for informa	ation
Texarkana - SE		See Arkansas Table 4-2 for informa	ation
Tiffin	Yes - Not significant	Not applicable - Not significant	No - Not significant
Toyah	Yes - Not significant	Not applicable - Not significant	Not expected - Not significant
Valley Jct.	Yes - Not significant	Yes - Not significant	Not expected - Not significant
Waco-1	Yes - Not significant	Yes - Not significant	No - Not significant
Waco-2	Yes - Not significant	Yes - Not significant	Not expected - Not significant
Westpoint	Yes - Not significant	Yes - Not significant	Not expected - Not significant

(concluded)

Location/Station	Compatible with Surrounding Land Uses	Consistent with General Plan/Zoning Designation	Potential Loss of Prime Farmiand
Wild Horse	Yes - Not significant	Not applicable - Not significant	No - Not significant
Wills Point	Yes - Not significant	c1 <sup>2</sup>	No - Not significant

Construction is anticipated to be largely within existing right-of-way and no prime farmland is expected to be affected.

CI = Initial contact made with agencies but information not received by time of report submittal.

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#### WATER RESOURCES AND WETLAND INFORMATION AT PROPOSED CONSTRUCTION LOCATIONS IN TEXAS

				Water Reso	urce Type <sup>1</sup>			
Location/Station	bls	wb	wl	cd	tc	mf	55	sp
Big Sandy-1	4	1	-	-	-	-	-	-
Big Sandy-2	3	2	-	-	-	-	-	-
Boyd	2	-	-	_	-	-	-	-
Brazos	4	4		-	_	-	-	-
Bryan	-	-	-	-	-	-	-	-
Buford to Alfalfa-1	-	-	-	_		-	-	-
Buford to Alfalfa-2		-	-	3	-	-	-	-
Carrollton	1	1	-	1	-	-		-
Chico	1	4	-	-	-	-	-	-
Dallas Jct.	1	-	-	-	_	-	-	
Dayton		-	-	1		-	-	-
El Paso		2	-	-	_	-	-	-
Flatonia to Victoria	3	2		-		-	1	-
Ft. Worth-1		-	-	-		-	-	-
Ft. Worth-2	-	-	-	-	-	-	-	-
Grand Prairie	-	-	-	-	-	-	-	-
Grand Saline	1	2	-	-	-	-	-	-
Harlingen		-	-	1	-	-	-	-
Heame	-	1	-	-	-	-	-	-

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(continued)

		Water Resource Type <sup>1</sup>									
Location/Station	bls	wb	wl	cd	te	mf	55	sp			
Hicks	-	-	-	-	-	-	-	-			
Houston-1	-	-	-	-	-	-	-	-			
Houston-2	1	2	-	-	-	-	-	-			
Houston-3	-	-	-	1	-	-	-	-			
latan	1	1	-	-	-	-	-	-			
Iona	2	1	-	-	-	-	-	-			
Jayell	1	5	-	-	-	-	-	-			
Lawrence	3	2		-	_	-	-	-			
Loraine	1	-	_	-	-	-	-	-			
Merkel	2	-	_	-	-	-	-	-			
Miller	-	1		-	-	-	-	-			
Mineola	5	8	-			-	-	-			
Monahans	-	-	-	-	-	-		-			
Morita	-	-	-	-	-	-	-	-			
Pecos	-	-		-	-	-	-	-			
Pegasus	-	1		-	-	-	-	-			
Port Laredo	10	3	-	-	-	-	-	-			
Preble	3	1	-	-	-	-	-	-			
Saginaw-1	- )	- 1	-	-	-	-	-	-			
Saginaw-2	1	-	-	-	-	-	-	-			
San Antonio-1	2	1	-	-	-	-	-	-			

<b>IABLE 13-3</b>	ABLE 1	5-3	
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(continued)

	Water Resource Type <sup>1</sup>								
Location/Station	bls	wb	wl	cd	tc	mf	55	sp	
San Antonio-2	-	-	-	-		-	-		
San Antonio-3	-	-	-	-	-	-			
San Antonio-4	1	3	-	-	-	-	-		
San Martine	1	-	-	-	-	-		1	
Stoneburg	4	2	-	-		-	-		
Strang	-	-	-	2	-	-0	1.		
Strawn	5	-	-	1	-	-	-		
Sweetwater	2	1	-	-	-	-	-		
Tatsie/Mumford	-	-	-	-	-	-	1		
Texarkana			See A	rkansas Table	4-3 for informat	tion		<u> </u>	
Texarkana - SE			See A	rkansas Table	4-3 for informat	ion			
Tiffin	6	3	-	-	-	-			
Toyah	1	-	-	2	-	-	_		
Valley Jct.	1	1		-	-	-			
Waco-1	- '	-	-	1	-	-			
Waco-2	-	-	-	-	-	-			
Westpoint	-	-	-	-	-	_			
Wild Horse	3	-	-	-	-			-	
Wills Point	3	8	-						

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# TABLE 15-3 (concluded)

blue-line streams (bls)	=	permanent and intermittent watercourses, including creeks, streams, rivers, washes, and slough
waterbodies (wb)	=	permanent and intermittent bodies of standing water including ponds, lakes, reservoirs, bayous, catchments, and beaver ponds
wetlands (wl) canals, culverts,	8	areas depicted with the USGS wetland symbol, primarily including marshes and wet meadows
ditches (cd)	=	human-made water conveyances
tidal channels (tc)	=	tidal channels including inlets, harbors, bays, and sloughs subject to tidal influences
mudflats (mf) sewage-creatment ponds, industrial waste ponds,	=	permanent to intermittently wet, non-vegetated, usually alkaline, mudflats
salt evaporators, etc. (ss)	=	areas used for public facilities or commercial purposes
springs (sp)	=	areas depicted with the USGS spring symbol

## BIOLOGICAL RESOURCES INFORMATION AT PROPOSED CONSTRUCTION LOCATIONS IN TEXAS

Location		egetation Type	Known and Potential	Parks, Forests,	
	At the Site Adjacent		Threatened, and Endangered Species in the Area	Refuges, or Sanctuaries within 5 Miles	
Big Sandy - 1	Ruderal Grasses	Pines Hackberry Elm	None	None	
Big Sandy - 2	Ruderal Grasses	Pines Hackberry Elm	None	None	
Boyd	Ruderal Elm and Ash	Agricultural Oaks and Pecans 2 Creeks and Wetlands	Whooping Crane	None	
Brazos	Grasses	Residential Agricultural Woodland Riparian	Whooping Crane	None	
Bryan	Grasses	Commercial Industrial Residential	Navasota Ladies'-Tresses	None	
Buford to Alfalfa-1	Ruderal	Industrial Residential	None	None	
Buford to Alfalfa-2	Ruderal	Commercial Residential	None	None	
Carrollton	Ruderal	Commercial Residential Elm, Cottonwood, Oak, Mulberry, Forbs and Grasses Channelized Creek	Whooping Crane	None	
Chico	Ruderal	Residential Agricultural Oaks, Forbs, and Grasses	Whooping Crane	None	
Dallas Jct.	Ruderal	Commercial Creek	Whooping Crane	Reverchon Park	
Dayton	Ruderal	Pine Drainages Woodland with Understory	Red-Cockaded Woodpecker American Alligator	None	
El Paso	Ruderal	Residential Military	None	Memorial Park	

## TABLE 15-4 (continued)

Location	V	egetation Type	Known and Potential	Parks, Forests,	
	At the Site	Adjacent	Threatened, and Endangered Species in the Area	Refuges, or Sanctuaries within 5 Miles	
Flatonia to Victoria	Ruderal, Texas Coastal Plain	Texas Coastal Plain	None	None	
Ft. Worth-1	Ruderal Forbs and Grasses	None Commercial and Industrial	Whooping Crane	None	
Ft. Worth-2	Ruderal Forbs and Grasses	None Commercial and Industrial	Whooping Crane	None	
Grand Prairie	Ruderal	Forbs and Grasses	Whooping Crane	None	
Grand Saline	Ruderal Grasses	Commercial Residential Riparian Grasses, Oaks, Elm, Bois D'Arc	None	None	
Harlingen	Forbs and Grasses	Industrial	None	None	
Hearne	Forbs and Grasses	Forbs and Grasses Residential	Navasota Ladies'-Tresses Large-Fruited Sand Verbena	None	
Hicks	Forbs and Grasses	None Commercial	Whooping Crane	None	
Houston-1	Grasses Ruderal	Industrial Residential Commercial	American Alligator Least Tern Texas Prairie Dawn	None	
Houston-2	Ruderal	Sea Myrtle Forbs and Grasses Willow Cottonwood Saltgrass	American Alligator Least Tern Texas Prairie Dawn	None	
Houston-3	Ruderal	Residential	None	None	
Iatan	Mesquite and Huisache	Agricultural Grasses	None	None	
Iona	Ruderal	Agricultural Tallgrass	Whooping Crane	None	
Jayell	Ruderal	Riparian-Willow Upland-Mesquite and Grasses	Whooping Crane	None	

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Location	V	egetation Type	Known and Potential	Parks, Forests, Refuges or	
	At the Site	Adjacent	Threatened, and Endangered Species in the Area	Sanctuaries within 5 Miles	
Lawrence	Ruderal Grasses	Agricultural Residential Commercial Grasses, Oaks, Elm, Bois D'Arc	None	None	
Loraine	Ruderal	Riparian	None	None	
Merkel	Ruderal	Commercial Residential Agricultural	None	Athletic Fields	
Miller	Ruderal	Residential	None	None	
Mineola	Ruderal	Commercial and Residential Agricultural Hackberry, Oaks, Forbs and Grasses Wetland: Sweetgum, Willow, Cottonwood and Cat-Tail	None	Mineola Country Club	
Monahans	Ruderal	Residential Agricultural Commercial Grasses Sage Oaks	None	None	
Morita	Ruderal	Yucca Mesquite Cactus	None	None	
Pecos	Ruderal	Agricultural Creosote Yucca	Comanche Springs Pupfish Pecos Gambusia	None	
Pegasus	Kuderal	Industrial Playas Grasses	None	None	
Port Laredo	Ruderal	Agricultural Huisache and Cactus	None	None	
Preble	Grasses and Mesquite	Residential Agricultural Grasses Riparian Hackberry and Elm	Whooping Crane	None	

Location	v	egetation Type	Known and Potential	Parks, Forests,	
	At the Site	Adjacent	Threatened, and Endangered' Species in the Area	Sanctuaries within 5 Miles	
Saginaw-1	Ruderal	None Commercial Agricultural	Whooping Crane	None	
Saginaw-2	Ruderal	None Commercial Agricultural	Whooping Crane	None	
San Antonio- 1	Ruderal	Military Residential Forbs and Grasses	Golden-cheeked Warbler Black-capped Vireo Whooping Crane	None	
San Antonio- 2	Ruderal	Forbs and Grasses	Golden-cheeked Warbler Black-capped Vireo Whooping Crane	None	
San Antonio- 3	Ruderal	Industrial Residential Baccharis Scrub	Golden-cheeked Warbler Black-capped Vireo Whooping Crane	None	
San Antonio- 4	Ruderal	Residential	None	Ruth Woodard Park	
San Martine	Ruderal	Creosote Scrub	Comanche Springs Pupfish Pecos Gambusia		
Stoneburg	Ruderal	None Residential Agricultural	Whooping Crane	None	
Strang	Ruderal Sea Myrtle	Sea Myrtle and Shrubs Drainage	American Alligator Least Tern Texas Prairie Dawn	None	
Strawn	Ruderal Grasses	Grasses Oaks and Juniper	Whooping Crane	None	
Sweetwater	Ruderal	Industrial Commercial Agricultural Residential	None	None	
Tatsie/Mumfo rd	Forbs and Grasses	Agricultural	Navasota Ladies'-tresses Large-fruited Sand Verbena	None	
Texarkana		See Arkans	as Table 4-4 for information		
Texarkana - SE		See Arkans	as Table 4-4 for information		
Tiffin	Ruderal Mesquite	Agricultural Oak and Juniper	Whooping Crane	None	

## TABLE 15-4 (continued)

Location	v	egetation Type	Known and Potential	Parks, Forests,
	At the Site	Adjacent	Threatened, and Endangered Species in the Area	Sanctuaries within 5 Miles
Toyah	Ruderal	Huisache Creosote and Yucca Arroyos	Comanceh Springs Pupfish Pecos Gambusia	None
Valley Jct.	Ruderal Grasses	Agricultural Commercial Grasses and Elms	Navasota Ladies'-tresses Large-fruited Sand Verbena	None
Waco-1	Forbs and Grasses	Grasses, Oaks, Elm, Bois D'Arc	None	None
Waco-2	Ruderal Grasses	Residential Commercial Grasses, Oaks, Elm, Bois D'Arc	None	None
Westpoint	Ruderal	Agricultural Hackberry and Elms	None	None
Wild Horse	Ruderal	Creosote and Yucca Sage Agricultural	None	None
Wills Point	Ruderal	Agricultural Riparian Forbs and Grasses	None	None

## POTENTIAL IMPACTS TO SENSITIVE BIOLOGICAL RESOURCES AT PROPOSED CONSTRUCTION LOCATIONS IN TEXAS

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Location	Potential Impacts To							
L	Rare, Threatened, and Endangered Species	Critical Habitat	Parks, Forests, Refuges, Sanctuaries					
Big Sandy - 1	None - NS	None - NS	None - NS					
Big Sandy - 2	None - NS	None - NS	None - NS					
Boyd	Not Significant	None - NS	None - NS					
Brazos	Not Significant	None - NS	None - NS					
Bryan	Not Significan:	None - NS	None - NS					
Buford to Alfalfa-1	None - NS	None - NS	None - NS					
Buford to Alfalfa-2	None - NS	None - NS	None - NS					
Carrollton	Not Significant	None - NS	None - NS					
Chico	Not Significant	None - NS	None - NS					
Dallas Jct.	Not Significant	None - NS	None - NS					
Dayton	None - NS	None - NS	None - NS					
El Paso	None - NS	None - NS	Not significant					
Flatonia to Victoria	None - NS	None - NS	None - NS					
Ft. Worth-1	Not Significant	None - NS	None - NS					
Ft. Worth-2	Not Significant	None - NS	None - NS					
Grand Prairie	Not Significant	None - NS	None - NS					
Grand Saline	None - NS	None - NS	None - NS					
Harlingen	NG2 - NS	None - NS	None - NS					
Hearne	Not Significant	None - NS	None - NS					
Hicks	Not Significant	None - NS	None - NS					
Houston-1	Not Significant	None - NS	None - NS					
Houston-2	Not Significant	None - NS	None - NS					
Houston-3	Not Significant	None - NS	None - NS					
atan	None - NS	None - NS	None - NS					
ona	Not Significant	None - NS	None - NS					
ayell	Not Significant	None - NS	None - NS					
awrence	None - NS	None - NS	None - NS					

## TABLE 15-5 (continued)

Location	Potential Impacts To					
	Rare, Threatened, and Endangered Species	Critical Habitat	Parks, Forests, Refuges, Sanctuaries			
Loraine	None - NS	None - NS	None - NS			
Merkel	None - NS	None - NS	None - NS			
Miller	None - NS	None - NS	Not significant			
Mineola	None - NS	None - NS	Not significant			
Monahans	None - NS	None - NS	None - NS			
Morita	None - NS	None - NS	None - NS			
Pecos	Not Significant	None - NS	None - NS			
Pegasus	None - NS	None - NS	None - NS			
Port Laredo	None - NS	None - NS	None - NS			
Preble	Not Significant	None - NS	None - NS			
Saginaw-1	Not Significant	None - NS	None - NS			
Saginaw-2	Not Significant	None - NS	None - NS			
San Antonio-1	Not Significant	None - NS	None - NS			
San Antonio-2	Not Significant	None - NS	None - NS			
San Antonio-3	Not Significant	None - NS	None - NS			
San Antonio-4	Not Significant	None - NS	Not Significant			
San Martine	Not Significant	None - NS	None - NS			
Stoneburg	Not Significant	None - NS	None - NS			
Strang	Not Significant	None - NS	None - NS			
Strawn	Not Significant	None - NS	None - NS			
Sweetwater	None - NS	None - NS	None - NS			
Tatsie/Mumford	None - NS	None - NS	None - NS			
Texarkana	See Ar	kansas Table 4-5 for inform	nation			
Texarkana - SE	See Ar	kansas Table 4-5 for inform	nation			
Tiffin	Not Significant	None - NS	None - NS			
Toyah	Not Significant	None - NS	None - NS			
Valley Jct.	Not Significant	None - NS	None - NS			
Waco-1	None - NS	None - NS	None - NS			
Waco-2	None - NS	Ncne - NS	None - NS			

## TABLE 15-5 (concluded)

Location	n Potential Impacts To					
	Rare, Threatened, and Endangered Species	Critical Habitat	Parks, Forests, Refuges, Sanctuaries			
Westpoint	None - NS	None - NS	None - NS			
Wild Horse	None - NS	None - NS	None - NS			
Wills Point	None - NS	None - NS	None - NS			

NS = Not Significant

#### EXISTING CONDITIONS AND POTENTIAL IMPACTS FOR HISTORIC AND CULTURAL RESOURCES AT PROPOSED CONSTRUCTION LOCATIONS IN TEXAS

Location Histo		toric Resou	oric Resources		ological Re	Potential Impacts	
	L	E	U	L	E	U	
Big Sandy - 1	0	0	0	0	0	0	None - NS
Big Sandy - 2	0	0	0	0	0	0	None - NS
Boyd	0	0	0	0	0	0	None - NS
Brazos	0	0	0	0	0	0	None - NS
Bryan	11	0	0	0	0	0	None - NS
Buford to Alfalfa-1	0	0	0	0	0	0	None - NS
Buford to Alfalfa-2	0	0	0	0	0	0	None - NS
Carrollton	0	0	0	0	0	0	None - NS
Chico	0	0	0	0	0	0	None - NS
Dallas Jct.	0	0	0	0	0	0	None - NS
Dayton	0	0	0	0	0	0	None - NS
El Paso	12	0	0	0	0	0	PS
Flatonia to Victoria	CI	CI	CI	CI	CI	CI	ND
Ft. Worth-1	0	0	0	0	0	0	None - NS
Ft. Worth-2	0	0	0	0	0	0	None - NS
Grand Prairie	0	0	0	0	0	0	None - NS
Grand Saline	0	0	0	0	0	0	None - NS
Harlingen	0	0	0	0	0	0	None - NS
Hearne	0	0	0	0	0	0	None - NS
Hicks	0	0	0	0	0	0	None - NS
Houston-1	0	0	0	0	0	0	None - NS
Houston-2	0	0	0	0	0	0	None - NS
Houston-3	0	0	0	0	0	0	None - NS
latan	0	0	0	0	0	0	None - NS
Iona	0	0	0	0	0	0	None - NS
Jayell	0	0	0	0	0	0	None - NS
Lawrence	0	0	0	0	0	0	None - NS

Location	Historic Resources		Archaeological Resources			Potential Impacts	
	L	E	U	L	E	U	
Loraine	0	0	0	0	0	0	None - NS
Merkel	0	0	0	0	0	0	None - NS
Miller	0	0	0	0	0	0	None - NS
Mineola	0	0	0	0	0	0	None - NS
Monahans	0	0	0	0	0	0	None - NS
Morita	0	0	0	0	0	0	None - NS
Pecos	0	0	0	0	0	0	None - NS
Pegasus	0	0	0	0	0	0	None - NS
Port Laredo	0	0	0	0	0	0	None - NS
Preble	0	0	0	0	0	0	None - NS
Saginaw-1	0	0	0	0	0	0	None - NS
Saginaw-2	0	0	0	0	0	0	None - NS
San Antonio-1	0	0	0	0	0	0	None - NS
San Antonio-2	0	0	0	0	0	0	None - NS
San Antonio-3	0	0	0	0	0	0	None - NS
San Antonio-4	0	0	0	0	0	0	None - NS
San Martine	0	0	0	0	0	0	None - NS
Stoneburg	0	0	0	0	0	0	None - NS
Strang	0	0	0	0	0	0	None - NS
Strawn	0	0	0	0	0	0	None - NS
Sweetwater	0	0	0	0	0	0	None - NS
Tatsie/Mumford	0	0	0	0	0	0	None - NS
Texarkana	See Arkansas Table 4-6 for information						
Texarkana - SE	See Arkansas Table 4-6 for information						
Tiffin	0	0	0	0	0	0	None - NS
Toyah	0	0	0	0	0	0	None - NS
Valley Jct.	0	0	0	0	0	0	None - NS
Waco-1	0	0	0	0	0	0	None - NS
Waco-2	0	0	0	0	0	0	None - NS

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#### TABLE 15-6 (concluded)

Location	Historic Resources			Archaeological Resources			Potential Impacts
	L	E	U	L	E	U	
Westpoint	0	0	0	0	0	0	None - NS
Wild Horse	0	0	0	0	0	0	None - NS
Wills Point	0	0	0	0	0	0	None - NS

Note: L, listed on National Register of Historic Places (NRHP); E, determined or recommended eligible for NRHP; U, eligibility for NRHP is unknown; NS, not significant; PS, potentially significant; CI, consultation with SHPO and/or data repository has been initiated, but not completed at time of report submittal; ND, not determined. The numbers on table denote the number of known historic or archaeological resources within 100 feet of construction areas.

<sup>1</sup><sub>2</sub> Temple Freda

Passes through Manhattan National Register District

#### **KEY FOR LAND USE**

#### URBAN OR BUILT-UP LAND

## Residential

- Commercial and services L
- I Industrial

RE

- T Transportation, communications and utilities
- I/C Industrial and commercial complexes
- MU Mixed urban or build-up land
- OU Other urban or built-up land

#### AGRICULTURAL LAND

- CP Cropland and pasture
- CH Orchards, groves, vineyards, nurseries, and ornamental horticultural areas
- CF Confined feeding operations
- CO Other agricultural land

#### WATER

- WS Streams and canals
- WL Lakes
- WR Reservoirs
- WB Bays and estuaries

#### WETLAND

WE Forested wetland, and/or nonforested wetland

#### **KEY FOR CULTURAL RESOURCES SITES**

\* Location of known historic or or archaeological site

#### RANGELAND

- Rh Herbaceous rangeland
- Rsb Shrub and brush rangeland
- Rm Mixed rangeland

#### FOREST LAND

- FD Deciduous forest land
- FE Evergreen forest land
- FM Mixed forest land

#### BARREN LAND

- Bsf Dry salt flats
- Bb Beaches
- Sandy areas other than beaches Bs
- Br Bare exposed rocks
- Bm Strip mines, quarries, and gravel pits
- Transitional areas Bt
- Mixed barren land B



Figure 15.1-1a Proposed Corridor Upgrade: Big Sandy, Texas. Location and Land Use.



Figure 15.1-1b Proposed Corridor Upgrade: Big Sandy, Texas. Location and Land Use.



Figure 15.1-2 Proposed Corridor Upgrade: Big Sandy, Texas. Location and Land Use.



Figure 15.1-3 Proposed Corridor Upgrade: Boyd, Texas. Location and Land Use.









Figure 15.1-6 Proposed Corridor Upgrade: Buford to Alfalfa, Texas. Location and Land Use.

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Figure 15.1-7 Proposed Corridor Upgrade: Buford to Alfalfa, Texas. Location and Land Use.

Base Map: USGS 7.5' Topographic Quadrangle: Ysleta, Texas 1994



Figure 15.1-8 Proposed Common Point Connection: Carrollton Texas. Location and Land Use.



Figure 15.1-9 Proposed Corridor Upgrade: Chico. Texas. Location and Land Use.





Figure 15.1-11 Proposed Construction at Rail Yard: Dayton, Texas. Location and Lano Use.

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Figure 15.1-12a Proposed Corridor Upgrade: El Paso, Texas. Location and Land Use.

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Base Map: USGS 7.5' Topographic Quadrangle: El Paso, Texas 1994



Figure 15.1-12b Proposed Corridor Upgrade: El Paso, Texas. Location and Land Use.


Figure 15.1-13 Proposed Corridor Upgrade: Flatonia to Victoria, Texas. Location and Land Use.



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Figure 15.1-14 Proposed Corridor Upgrade: Flatonia to Victoria, Texas. Location and Land Use.



Figure 15.1-15 Proposed Corridor Upgrade: Flatonia to Victoria, Texas. Location and Land Use.



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Figure 15.1-16 Proposed Common Point Connections: Fort Worth, Texas. Location and Land Use.



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Figure 15.1-17 Proposed Corridor Upgrade: Grand Prairie, Texas. Location and Land Use.