Attachment 1

USDOT – FRA Dallas to Houston High Speed Rail
Corridor Refinement Process

Scoping Report, April 2015 (Table 1)

TCR Screening	BNSF 1	BNSF 2	BNSF 3	BNSF 4	1-45	1-45 /Hardy	Utility	Utility /1-45	UPRR
HSR Design Requirements	pass	unknown	unknown	unknown	unknown	unknown	pass	unknown	unknown
Engineering & Constructability	pass	unknown	unknown	unknown	unknown	unknown	pass	unknown	unknown
Potential Environmental Constraints	pass	unknown	unknown	unknown	unknown	unknown	pass	unknown	unknown
Carried Forward	Recommended by TCR						Recommended by TCR		

Conclusion: TCR recommends to FRA that the BNSF 1 and Utility Corridors move forward for further alternatives screening pursuant to the National Environmental Policy Act (NEPA).

Corridor Alternatives Analysis Technical Report, August 2015 (Table 2)

FRA begins independent review of potential reasonable alternatives and includes in the initial analysis other transportation options. None of these options were analyzed pursuant to NEPA.

Criteria	BNSF	UPRR	1-45	Utility	HSR &Conv. Rail	Direct Bus Service	1-45 Expansion
Previously Studied							
Texas Rail Plan (2010)	Yes	Yes	Yes	No	No	No	No
Studied Pursuant to NEPA	No	No	No	No	No	No	No
Coarse Screening Analysis							
Purpose and Need	Pass	Pass	Pass	Pass	Fail	Fail	Fail
					Not carried forward	*Not carried forward*	*Not carried forward*
Fine Screening Analysis							
Physical Characteristics	Fail	Fail	Fail	Pass			
Operational Feasibility	Fail	Fail	Fail	Pass			
Environmental Constraints							
Number of stream crossings	127	148	125	113			
Acres of wetlands	399	368	202	380			
Acres of floodplains	15	0	0	0			
Number of historic properties and archaeological sites	3	3	5	7			
Acres of parks and national Forest/national parks	35	1	433	1			
Acres of managed habitat areas	0	0	80	1			
Env. Constraints Conclusion	Pass	Pass	Fail	Pass			
Carried Forward				Pass			

FRA's Procedures for Considering Environmental Impacts as set forth in 64 FR 28545 (Table 3)

Environmental Impacts	BNSF	UPRR	I-45	Utility	Conv. Rail	Bus	I-45 Exp.
(1)Air Quality;	No	No	No	No	No	No	No
(2) Water quality;	No	No	No	No	No	No	No
(3) Noise and vibration;	No	No	No	No	No	No	No
(4) Solid waste disposal;	No	No	No	No	No	No	No
(5) Ecological systems;	No	No	No	No	No	No	No
(6) Impacts on wetlands areas;	Limited	Limited	Limited	Limited	No	No	No
(7) Impacts on endangered species or wildlife:	Limited	Limited	Limited	Limited	No	No	No
(8) Flood hazards and floodplain management;	Limited	Limited	Limited	Limited	No	No	No
(9) Coastal zone management;	No	No	No	No	No	No	No
(10) Use of energy resources;	No	No	No	No	No	No	No
(11) Use of other natural resources, such as water, minerals, or timber; The EIS shall assess in detail any irreversible or irretrievable commitments of these resources likely to be involved in each alternative.	No	Yes – National Forest	No	No	No	No	No
(12) Aesthetic and design quality impacts;	No	No	No	No	No	No	No
(13) Impacts on transportation: of both passengers and freight; by all modes, including the bicycle and pedestrian modes; in local, regional, national, and international perspectives; and including impacts on traffic congestion;	Regional not Local Impacts	Regional not Local Impacts	Regional not Local Impacts	Regional not Local Impacts	Regional not Local Impacts	Regional not Local Impacts	Regional not Local Impacts
(14) Possible barriers to the elderly and handicapped;	No	No	No	No	No	No	No
(15) Land use, existing and planned; The EIS should assess the impacts of each alternative on local land use controls and comprehensive regional planning as well as on development within the affected environment, including, where applicable, other proposed Federal actions in the area. Where inconsistencies or conflicts exist, this section should describe the extent of	No	No	No	No	No	No	No

reconciliation and the reason for proceeding notwithstanding the absence of full reconciliation.							
(16) Impacts on the socioeconomic environment, including the number and kinds of available jobs, the potential for community disruption and demographic shifts, the need for and availability of relocation housing, impacts on commerce, including existing business districts, metropolitan areas, and the immediate area of the alternative, and impacts on local government services and revenues; The need for and availability and adequacy of relocation housing should be assessed, using as a guide section 6 of Attachment 2 to DOT Order 5610.1C. The positive and negative consequences of each alternative on commerce in the community and its surrounding metropolitan area, specifically on existing business districts and the immediate project areas should be analyzed.	No	No	No	No	No	No	No
(17) Environmental Justice; The EIS should address environmental justice considerations as required by Executive Order 12898, ‘‘Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations’’ and the DOT Order on Environmental Justice.	No	No	No	No	No	No	No
(18) Public health;	No	No	No	No	No	No	No
(19) Public safety, including any impacts due to hazardous materials;	No	No	No	No	No	No	No
(20) Recreational opportunities;	No	No	No	No	No	No	No
(21) Locations of historic, archeological, architectural, or cultural significance, including, if applicable, consultation with the appropriate State Historic Preservation Officer(s);	Yes	Yes	Yes	Yes	Yes	Yes	Yes
(22) Use of 4(f)-protected properties; and	Yes	Yes	Yes	Yes	Yes	Yes	Yes
(23) Construction period impacts	No	No	No	No	No	No	No

Alignment Alternatives Analysis Report, November 6, 2015

The FRA considered 21 alternative alignments along the Utility Corridor. In the section that impacts Waller County (Hockley Geographic Group), there were five different alignments considered at this stage.

Level I Screening (Table 4)

Hockley Geographic Group – Waller County -Utility Corridor	HC- Base	HC-1	HC-2	HC-3	HC-4
Consideration of NEPA Impacts	No	No	No	No	No
Purpose and Need	Yes	Yes	Yes	Yes	Yes
Alignment Objectives	Yes	Yes	Yes	Yes	Yes
Design Guidelines	Yes	No	Yes	Yes	Yes
Carried Forward	Yes		Yes	Yes	Yes

Level II Screening (Table 5)

Hockley Geographic Group Alignments	HC-Base	HC-2	HC-3	Hc-4
Consideration of NEPA Impacts	No	No	No	No
Environmental Criterion (up to 1000 ft)[1]				
Urban Land Cover	4.000	1.669	2.737	1.000
Parcel Takes	3.250	1.000	4.000	1.750
Parks	1.000	1.000	1.000	1.000

[1] FRA originally considered 16 environmental criteria during this stage using "desktop level research and data collection." (AAAR Page 24). A "direct" impact was determined if it occurred within the Right of Way (ROW) of 125 feet, and an "indirect" impact was if it occurred outside the ROW, but within 1000 feet. There was no assessment beyond the 1000 foot area and no assessment of the significant impacts to the human environment. To further eliminate alignments, each impact was given a score which was to represent the degree of potential impact. They then further refined the alignments by incorporating cost and construction factors into the analysis. The lowest scores were carried forward.

Prime Farmland	1.000	1.549	2.920	4.000
Wetlands	1.370	4.000	1.906	1.000
Waterways	3.786	4.000	1.000	2.714
Floodplains	4.000	2.339	1.966	1.000
Road Crossings	4.000	1.000	1.750	1.000
Infrastructure Adjacency	1.000	2.811	3.109	4.000
Minority Population	4.000	1.000	2.500	2.500
Cemeteries	1.000	1.000	1.000	1.000
Ecology	4.000	3.943	2.671	1.000
Total Score[2]	32.41	25.31	26.56	21.96
Carried Forward		Yes		Yes
Cost and Construction Screening				
TCR Cost Factor		.83		.60
TCR Construction Factor		.81		.48
Cost and Construction Average Factor		.71		.65
Carried Forward				Yes

[2] Four of the original 16 environmental evaluation criteria considered – community facilities, historic properties, hazardous materials and U.S. Census block groups with over 50 percent poverty population – for which data was collected, were removed from the screening analysis. FRA's reasoning was, "they did not create any differentiation between the scoring of the potential route alternatives at this level of analysis. For example, this desktop level analysis did not identify any historic properties within the 125-foot buffer (62.5 feet from the alignment centerline), although they are expected to be present." (AAAR Page 29)