

March 14, 2014

TO: Project File
FROM: Michael Minor, MM&A Inc. Environmental Noise and Vibration Task Lead
SUBJECT: Project Closeout Summary for Columbia River Bridges & Approaches Design Build Procurement – Environmental Noise and Noise Abatement Requirements, Construction Noise and Vibration Control

Executive Summary

This memorandum provides the status of the work for the development of the Columbia River Bridges & Approaches Design Build Procurement, specifically addressing the following technical focus areas:

- Proposed noise wall located in Vancouver, on the west side of I-5 at the East 7th Street for the Normandy Apartments
- Traffic Safety Barriers that were included in the noise analysis and provide some level of noise abatement, and therefore must be include in the project construction to meet the requirements of the FHWA, ODOT and WSDOT noise impacts and abatement analysis
- Information on DB 141 15: Vibration Control and Monitoring for the construction of the CRC Oregon Project.
- information on DB 141 51: Environmental Compliance
- General summary of attached files to include the noise modeling files for use in the FHWA Traffic Noise Model (TNM) version 2.5 or newer. These are the files that are used to predict future build noise levels for the CRC Oregon Project.

This memo overviews the status of the work, outstanding work and next steps, an overview of project history, key decisions, and information on key documents and references. This memorandum, assembled at the time of project closeout, is intended to provide adequate information to allow project start-up within a year's time-frame.

Status of Work

The work includes the final noise modeling and noise abatement for the CRC project. This includes the modeling of the noise wall that is located at the end of E 7th Ave at the Normandy Apartments and the locations and lengths of 42 inch high traffic solid concrete traffic safety barriers that were included in the noise modeling and are required for construction with the project. This information is provided in DB 141 51: Environmental Compliance and the Attachment A, Noise Wall #2 and Noise Reducing traffic Safety Barriers. In addition, work under this task also included the DB 141 15: Vibration Monitoring and Control, which provides the specification for vibration monitoring and control during project construction.

The following deliverables were completed at the approximate level of completeness as identified in Table 1, at the time of project closeout.

TABLE 1.
 CRBA DB Procurement Deliverables Status Summary
Status of Deliverables for the CRBA Design Build Procurement Development

TASK	DELIVERABLE	APPROX. PERCENT COMPLETE	STATUS OF WORK
4.3	Draft technical Performance Requirements - provision DB 141 15 – Vibration Control	75%	Work in progress. Waiting for client review. Continued clean-up of DB 141 for formatting, language, terminology, acronyms, interdisciplinary coordination, project interfaces, and other outstanding issues as follows: <ul style="list-style-type: none"> • Need site survey for structures that are vibration sensitive • Review specifications for qualified Vibration Specialist • Review equipment specifications • General review and editing
4.3	Draft technical Performance Requirements - provision DB 141 51 – Environmental Compliance	75%	Work in progress. Waiting for client review. Continued clean-up of DB 141 for formatting, language, terminology, acronyms, interdisciplinary coordination, project interfaces, and other outstanding issues as follows: <ul style="list-style-type: none"> • Clean up text and general organization • Review specifications for noise walls and traffic safety barriers • Should Attachment A with the specifications be moved to inside the document? • General review and editing

Table Notes:

1. Table status as of March 14, 2014.

Known Issues

The following is a summary of the known issues that were not resolved at the time of closeout:

- No major issues

Outstanding Work

The following is a summary of outstanding work and next steps at the time of closeout that was not started, but necessary for the development of the DB Procurement final RFP for the CRBA Package:

- Final formatting and review of DB 141 15 – Vibration Control
- Final formatting and review of DB 141 51 – Environmental Compliance

Milestones & Key Decisions Related to Disciplines

Key project milestones include:

- None

Key project decisions include:

- May need to reference the DB 141 15 – Vibration Control in other parts of the DB reports and requirements
- Permanent noise monitoring for construction noise is not included, and may be required by the City of Portland Noise Review Board

Project Records

Records of the work conducted under this task can be found at:

- Final Noise Analysis: ZIP File – Final Analysis.zip
 - a) CRC Noise Technical Report
 - b) Oregon CRC Design Build Memorandum
 - c) CRC exhibits and graphics of monitoring, modeling, noise level summary and noise walls
- Oregon CRC Revaluation CAD and Traffic Information – ReVal CAD and Traffic Information.zip
 - a) CRC Microstation files used for the noise analysis
 - b) PDF's of new traffic information for CRC Oregon
 - c) General support traffic information
- Final Traffic Noise Modeling (TNM) Analysis Files: ZIP File – TNM.zip
 - a) TNM models for the CRC and Oregon CRC
 - d) Noise modeling and analysis files for Build Alternatives

Standards & Versions

Standards used for the work are listed in the Design-Build General Provisions DB 141.

Michael Minor (MM) Michael Minor and Associates, Inc.

Attachments

- 1 DB141 15 - VibrationMonitoringControl_2014_2_28
 - 2 DB141 51 - Environmental Compliance_2014_2_28
 - 3 Attachment A-Noise Wall 2 and Noise Reducing TSB for CRC
 - 4 Final Analysis.zip
 - 5 ReVal CAD and Traffic Information.zip
 - 6 TNM.zip
- cc: Project Controls
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