NOTES FROM PREDESIGN CONFERENCE
9:00 A.M., May 16, 1985
CAMP LEJEUNE, NORTH CAROLINA

A/E Contract N62470-85-B-7922, FY87 MCON Project P-257
Field Maintenance Complex
Marine Corps Base
Camp Lejeune, North Carolina

A predesign meeting was held at 9:00 a.m. on May 16, 1985, at the Public Works Office, Building 1005, Marine Corps Base, Camp Lejeune, North Carolina, to discuss the design requirements of the subject project.

The following people attended the meeting:

Gene Jones	Planning Branch Manager Public Works Office Camp Lejeune
Fred Estes	Planner, Public Works Office Camp Lejeune
W. H. Sigmon	Olsen Associates, Inc.
W. M. Peery	Olsen Associates, Inc.
Dale N. Lee	Olsen Associates, Inc.
T. Barker Dameron	Olsen Associates, Inc.
Larry A. Tice	Olsen Associates, Inc.
Lieutenant Colonel Murphy	Commanding Officer Second Maintenance Battalion
First Lieutenant B. A. Nazaroff	Logistics Officer Second Maintenance Battalion

Several other military personnel from the Second Maintenance Battalion also attended the meeting. Their names are not recorded since the meeting signup sheet could not be located at the conclusion of the meeting.

A preliminary floor plan of the shop area had been made available by Olsen Associates to the user for review prior to the meeting. This preliminary plan had been derived from the project definitive drawing and

from earlier user requests made at the pre-negotiation conference. The floor plan contains three major areas: the engine rebuild shop area, the power train rebuild shop area, and the MMU area.

The meeting began with a discussion of the dynamometer test area of the engine rebuild shop. The requirements for the dynamometer test area were discussed at some length. Space will be required for four dynamometers. After some discussion, it was decided that design of the dynamometer area should be worked around the existing dynamometer equipment which the user has on hand. User agreed to make available information regarding specific technical design requirements for these dynamometers within one week. User further stated that a dynamometer area to accommodate this same equipment is presently under design. This area will be used in the interim until project P-257 is completed. User stated that the A/E for design of the interim facility is Von Oesen in Wilmington, North Carolina. Technical information regarding dynamometer design requirements has been given to Von Oesen but will be retrieved by the user and furnished to Olsen Associates. User also agreed to furnish to Olsen Associates the design drawings which have been prepared by Von Oesen for the interim facility. Capacity of the dynamometers was said to be one 1,200 horsepower, one 800 horsepower, and two 300 horsepower units. (Later in the day, these figures were revised to one 2,000 horsepower, one 900 horsepower, and two 500 horsepower units.) User stated that he has on hand portable battery equipment for starting engines to be tested with a fuel tank.

The next items discussed were the hoisting systems to be used in the engine rebuild shop area. The preliminary floor plan and the definitive drawing both indicate 10-ton overhead bridge cranes in this shop. User

expressed dissatisfaction with these cranes because they cannot be made to extend out over the loading dock. This inability to load and unload heavy motor units from trucks was described as a major drawback to bridge cranes. After some lengthy discussion, it was concluded that the most appropriate hoisting system consisted of a 10-ton monorail hoist. This hoist rail is configured so as to extend out over the loading dock, into the building, around two curves, and back out another overhead door. User stated that a monorail of this configuration was well suited to work flow in the shop. User will receive work in at the loading dock, unload engines from trucks with the monorail hoist, and transport these units through the various repair areas in the shop in sequential order. The final repair operation is dynamometer testing. After dynamometer testing, engines will be transported out the overhead door and loaded on to trucks with the same monorail hoist.

There followed some discussion of the hot-dip cleaning tank used in the engine rebuild shop. This tank is a heated tank of degreasing solvent into which engines and parts are dipped prior to repair. The user stated that the E.P.A. has been concerned with the emission from the unit and that they may be required to change the cleaning fluid. The possibility of using switches to divert the monorail hoist from its main track to allow it to serve the dip tank was discussed. It was decided, however, that a separate monorail hoist to serve only the dip tank would be the most desirable solution. A primary determining factor in this decision is the lack of reliability and high maintenance required for switching systems on monorail hoists.

User stated that more than one hoist should be provided to travel on the main monorail because of the large number of engines in repair at any one time.

The user stated that engines being repaired are mounted on wheeled engine rebuild stands after being degreased in the dip tank. User stated that these rebuild stands could be rolled up to the dynamometer and hooked up to the dynamometer for testing without using a hoist. Later in the meeting after viewing the existing dynamometer operation, it was determined that hoisting would be necessary for the dynamometers. It was determined that one hand-operated chain-fall type hoist on a separate monorail should be provided at each dynamometer test cell.

There was a discussion of the size and location of all rooms shown on the preliminary plan in the large engine rebuild shop. This discussion resulted in several changes with regard to room, door, and window locations. These changes were noted on a copy of the preliminary plan so that changes could be made to reflect user needs.

The use of each room was discussed. A paint room was added to the plan. An oil and lubricant dispensing room was added to the plan. The user stated that the lubricants required in this phase are 30 weight motor oil and two types of transmission fluid. One engine oil dispensing station is required, and that is to be located near the dynamometers. The oil and transmission fluid will be supplied in 55-gallon drums. Water dispensing is only necessary in the dynamometer rooms. There was some discussion as to whether a waterfall-type curtain would be required in the paint shop. Mr. Gene Jones stated that design criteria for the paint shop would be furnished by LANTDIV.

The user requested eyewash stations at the dip tank and in the F&E room. The user requested multiple mop sinks with hot water located throughout the rebuild areas. Floor drains were also requested in the rebuild areas.

The building mechanical room was discussed. It was decided to place the air compressor in the building mechanical room. The Public Works Department requested that the mechanical room have access from outside the building since maintenance activities in the mechanical room were the responsibility of Base Maintenance rather than the military user. It was also requested that a dryer be provided for all air. Gene Jones said that LANTDIV would supply proper air moisture content for overhead work.

The loading dock for the engine rebuild shop was discussed. User requested loading dock to be widened to 20 feet to allow maneuvering room for forklifts. User requested canopy over loading dock to extend 10 feet past the edge of the loading dock to shelter loading operations. User requested loading dock height to be set to accommodate a military-type five-ton truck. Level parking area for a five-ton truck should extend 30 feet from loading dock. It was pointed out that the loading dock area would be depressed approximately four feet below the surrounding paved hardstand. The monorail, as discussed above, will extend out over the loading dock to allow hoisting of engines from the truck bed. User stated that the hoisting point should be five feet in front of the face of the loading dock to allow hoisting of engines.

It was pointed out that an exhaust system will be required for solvent fumes released from the hot-dip tank.

The minimum hook height for the monorail hoist over the dip tank should be sufficient to clear the edge of the tank which is about 10 feet

high. A new dip tank is being purchased by the user and will be relocated into this facility when it is complete. User agreed to furnish details of this tank so that the hook height of the hoist could be determined. It was agreed that preliminary design will be based on a 15-foot hook height.

The power train rebuild shop area was discussed next. The discussion began with the injector repair area. Injector repair is for repair of diesel fuel injectors which are precision machine metal parts. User stated that air conditioning was required in this area because personnel repairing injectors could not have sweaty hands. Sweaty hands tend to cause corrosion and misfits of the precision machine injector parts.

The preliminary plan had indicated a paint shop adjacent to injector repair. User desired to change this room from a paint shop to an injector testing area. The injector testing area contains precision testing equipment for testing injectors after repair. Air conditioning is also required in this area. The air conditioning requirements are for 78° F and 50 percent relative humidity in the summer and normal heating in the winter. User stated that the accessory shop area within the power train rebuild shop should be renamed as F&E shop. This area also requires air conditioning since precision fuel and electrical equipment is repaired in this area. User requested that the administration area of the F&E shop be an enclosed office. The user asked that the fuel pump machine have an exhaust hood.

The layout of rooms within the power train rebuild shop was discussed and found to be generally satisfactory although certain changes were noted on the preliminary plan in door and window locations and in partition types.

The hoisting equipment in the power train rebuild shop was discussed. User requested a monorail hoist system as previously discussed for the engine rebuild shop also be provided in the power train rebuild shop in lieu of the overhead bridge cranes shown on the preliminary plan. User's reasoning was the same as the engine rebuild shop; i.e., that a monorail hoist would better suit the flow of work within this shop and allow loading and unloading of trucks.

The loading dock for the power train rebuild shop was discussed. It was determined that the loading dock for this shop should be the same as that described for the engine rebuild shop.

There was some discussion of the transmission test unit to be installed in the power train rebuild shop. A manufacturer's brochure for this piece of equipment was passed around. User agreed to furnish detailed technical requirements for this piece of equipment to Olsen Associates. The transmission test unit was described as being similar to a dynamometer unit except that a 150 horsepower motor is required to operate it. The nature of the test unit is such that the 150 horsepower motor can be located remotely from the unit. User requested that the power unit be located outside the building.

User stated that the hoist in the power train rebuild shop have a five-ton capacity rather than the 10-ton capacity indicated on the definitive drawing.

User requested a separate five-ton, hand-operated, chain-fall type monorail hoist be installed over the transmission test unit.

The MMU area of the facility was discussed. The MMU area needs access to a loading dock. It was decided to provide an overhead door into

the MMU area from the loading dock already furnished for the engine rebuild shop.

The MMU area was described as a storage and issue facility for repair parts. Approximately 50 personnel will work in this area. Much of the work is clerical in nature. The user furnished Olsen Associates with a sketch of the desired floor plan arrangement for this area.

It was agreed that Olsen Associates would make revisions to the preliminary plan to reflect changes arising from the predesign conference. Olsen Associates agreed to return the revised preliminary plan to the user for his use in determining equipment layout in the shop areas. User agreed to take this revised preliminary plan and draw on it all items of shop equipment required for this facility and to generate a revised collateral equipment list. User agreed to furnish a tabulation of all building service requirements (such as air, water, electrical voltage, power requirements, etc.) for each piece of equipment.

The next item of discussion was the site plan for the fully-developed field maintenance complex facility. Olsen Associates had previously prepared and transmitted for review three alternative site layouts designated A, B, and C. It was determined that Site Layout A which runs parallel to Main Service Road was the only feasible layout for this facility. This determination was made based on the constraints of the available site as well as the plans for future tank trails which will be developed in this vicinity.

The Public Works Department stated that a paved tank trail beginning on the far side of Cogdill's Creek and continuing along the length of the field maintenance complex will be required. It was pointed out that design of this paved tank trail and stream crossing were not presently in the

scope of the design contract and will be added to that contract after negotiation with LANTDIV personnel.

There was some discussion of the inspection station building. User was uncertain whether hydraulic lifts for vehicles being inspected should be installed in this facility. User agreed to furnish a decision in this regard at the earliest possible date. User agreed to furnish detailed dimension and weight data for all vehicles to be lifted by these lifts if they are required.

It was pointed out that the designer for this project is under severe time constraint. Therefore, the user must provide the various equipment and service requirements data as quickly as possible.

After this discussion, the meeting was adjourned, and Olsen Associates personnel were given a tour of the existing maintenance facilities in use by the user.