

Work Plan No.: B.06-02 - M87 Storage Track Extension

Scope:

2. SCOPE OF SERVICES

2.1. Drainage Investigation

Investigation of the condition of the existing storm drainage system within the Project limits:

- Pipe diameters
- Invert elevations and/or depth
- Pipe conditions
- Outfall location (where these systems drain to)

See **Figures 1 and 2** for the Project limits and additional stormwater drainage system investigation.

Figure 1 - Drainage System Investigation Limits - South

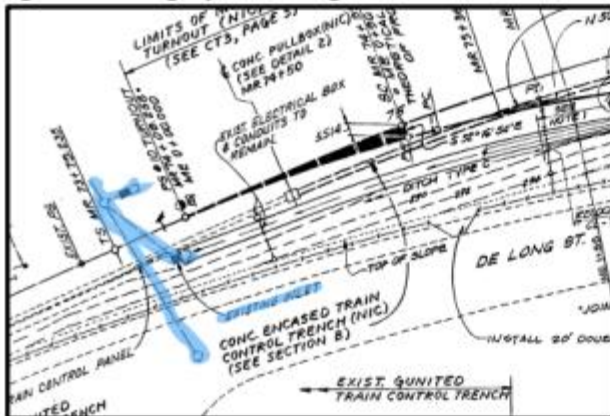
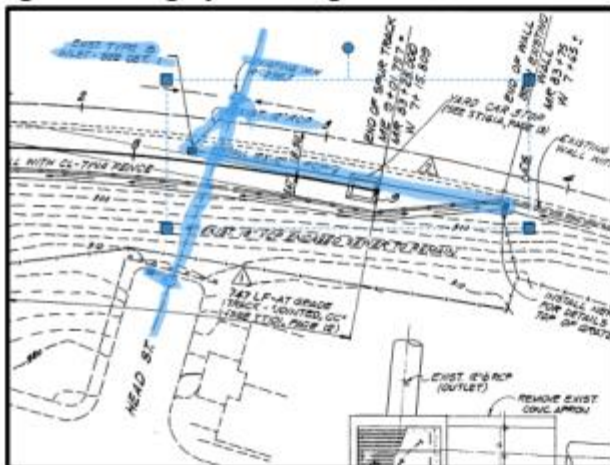
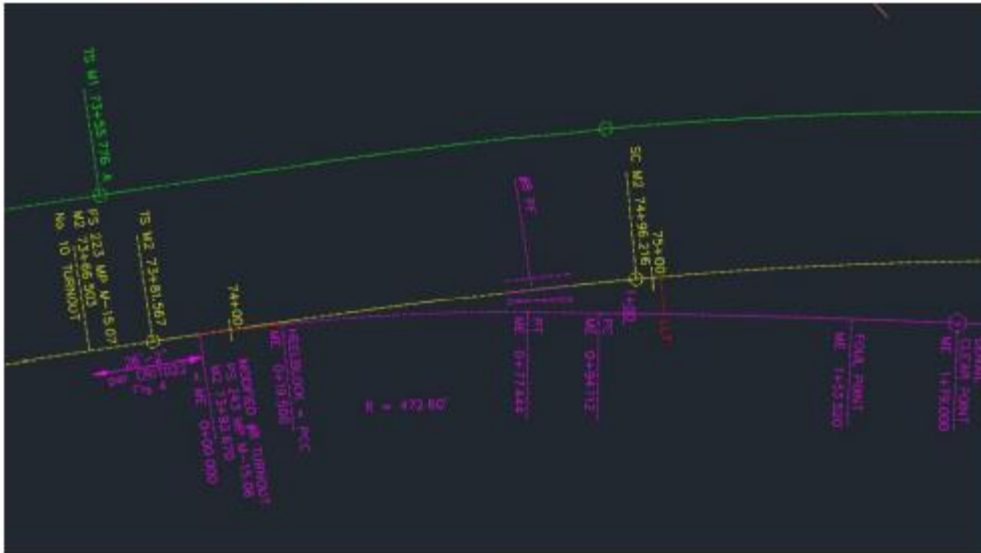


Figure 2 - Drainage System Investigation Limits - North



2.3. Improved Track Geometry at SW 243 Turnout

Development of 65% Design for an improved track geometry at SW 243 turnout that eliminates reverse curves in track alignment.



The scope of work for the design of the geometric improvements will include:

2.3.1 Track Design:

- Fully develop new 65% track alignment with relocated switch, turnout size, relocated derail
- Develop geometry of new turnout on superelevated spiral
- Prepare design exceptions

2.3.2 Train Control

- Relocation of existing Train Control equipment (switch machine, powered derail, cable vault, MUX box)
- Tracing circuit routes from trackside to MUX boxes or back to the Train Control Room
- Support for CBTC Enabling Works design changes

2.3.3 Traction Power

- Revise traction power drawings for new track alignment
- Relocation of existing Traction Power equipment

The scope of work for the additional drainage system investigation will include:

- 2.1.1 Review of available District information
 - As-built drawings for right-of-way, topography, drainage, and utility elements
 - Identify current BFS for applicable sections
- 2.1.2 Field reconnaissance to verify site conditions of the following elements:
 - Hydro-flushing mains and laterals of the drainage system prior to CCTV Video inspection of pipes.
 - CCTV investigation of storm drain system downstream of the Project limits.
 - Development of a CCTV Video and Report
- 2.1.3 Analysis of the findings of the CCTV investigation
 - Condition Assessment Report for inclusion in the Basis of Design Report update for 65%
 - Design drawings showing any modifications to existing drainage system as required
- 2.1.4 Design drawings estimated to include 4 sheets
- 2.1.5 Contract Specifications for work not performed by district forces

2.2. Hi-Rail Set-on Pad

Development of 65% Design for a Maintenance-of-Way hirail set-on pad on M2 track north of the relocated SW243 and associated roadway to connect to the existing hirail set-on pad for M1 track.

The scope of work for the design of the MoW Set-on Pad will include:

- 2.2.1 Review of available District information
 - As-built drawings for right-of-way, track, roadway, drainage, train control, and traction power elements
 - Identify current BFS for applicable sections
- 2.2.2 Coordinate design with Traction Power, Train Control and Drainage engineering
- 2.2.3 Develop 65% Design Drawings to include:
 - Track plan, sections, and details as required
 - Traction power plans and details as required
 - Train Control plans and details as required
 - Drainage plan, sections, and details as required
 - Roadway plan and profile
- 2.2.4 Design drawings estimated to include 15 sheets
- 2.2.5 Contract Specifications for work not performed by district forces

Prime: Parsons

| Subconsultant | Amount | DBE (Y/N) | SBE (Y/N) |
|----------------------|---------------|------------------|------------------|
| Bess Testlab, Inc | \$11,938 | Y | Y |
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Work Plan Value: \$ 141,917