Greenfield Bridge Replacement

**Project Overview:**

Dirty Suit Construction will be responsible for a comprehensive project management plan for the construction replacement of the new Greenfield Bridge that will rise over Interstate 376 East in Pittsburgh Pa. The Plan includes a micropile drilling sequence, foundation pouring sequence, design of temporary structures, steel erection sequence and a deck pour plan. A detailed schedule, estimate, risk management plan as well as a safety plan were then applied to the project once all design work was completed.

**Owner:**
City Of Pittsburgh
Pennsylvania Department of Transpo.
BMS No.: 02 7301 0000 3039

**Designer:**
HDR Engineering, INC.
11 Stanwix St., Suite 800
Pittsburgh, Pa 15222

**General Contractor:**
Dirty Suit Construction
115 Federal St
Pittsburgh Pa, 15213

**Bridge Facts:**
- 466’ total length
- 274’ main span
- Current A.D.T: 12,800
- Design Year A.D.T: 16,100
- Designer estimated completion: September 5th, 2017
- Designer estimated build cost: $15-$20 million

**Meet Our Team:**

Derrick Lubomski: Project Manager
Eric Danker: Construction Management
Page Lumley: Construction Management
Kevin Link: Construction Management
Jack Onoroff: Construction Management
Adrienne Sciarroti: Construction Management
Ryan Shaffer: Construction Management

**Foundation Overview:**

- **Micropile Foundation:**
  - Total: 166
  - Average Length: 57 ft.
  - Production Rate: 3-4 per day

- **Mass Pour Concrete:**
  - Classified by least dimension greater than 6 ft.
  - 4 Mass Pour Locations

- **Soil Nail Wall:**
  - Location: Above North Thrust Block
  - Total Nails: 52
  - 4 Rows of Nails: 38 On Center Spacing

**Steel Erection Overview:**

- **Steel Erection Duration:** 6 Weeks
- **Steel Manufacturer:** High Steel
- **Total Number of picks:** 171
- **Lightest Pick:** 342 lbs
- **Heaviest Pick:** 110,932 lbs
- **Crane Model:** Link Belt Hylab5 348
- **Crane Max Capacity:** 300 Ton
- **Crane Boom Length:** 190’

**Deck Overview:**

- **Main Deck Pour Sequence:**
  1. Pour End Diaphragms at Abutments below construction joints
  2. Pour Approaches
  3. Pour main portion over arch, placement must remain plastic
  4. Pour Block Outs over Abutments
- **Concrete:** PennDOT AAAP
- **Quantity:** 363 CY

**Risk Management:**

- **Top 5 Risks:**
  1. Additional Parkway Closures
  2. Weather
  3. Schedule Delay
  4. Defective Work/Quality
  5. Accuracy of Estimate
- **Total Contingency Budget:** $743,750.00
- **Contingency Percentage:** 5.17%

**Schedule:**

- **NTP:** Sept. 1-2015
- **Completion:** Sept. 5-2017
- **Developed using Primavera P6**

**Estimate:**

- **Direct Costs (Bid Items):**
  - **Bridge Structure:** $6,730,567.25
  - **Subcontracts:** $5,854,932.06
  - **Materials:** $1,788,766.00
  - **Total Direct Costs:** $14,374,265.31
- **Indirect Costs (General Conditions):**
  - **12% of Direct Cost:** $1,734,911.84
  - **8% of Direct Cost:** $1,149,941.22
  - **Total Indirect Costs:** $2,884,853.06
  - **Total Costs:** $17,259,118.37
- **Bond & Insurance:**
  - **12% of Direct Cost:** $1,734,911.84
  - **Total Bond & Insurance:** $1,149,941.22
  - **Total Bond & Insurance:** $2,884,853.06
- **Risk (Refer to Risk Management):**
  - **5.17% of Direct Cost:** $743,750.00
  - **Total Risk:** $743,750.00
- **Mark Up Profit:**
  - **5% of Direct Cost:** $718,713.27
  - **Total Mark Up Profit:** $718,713.27
- **Project Total:** $18,711,581.64