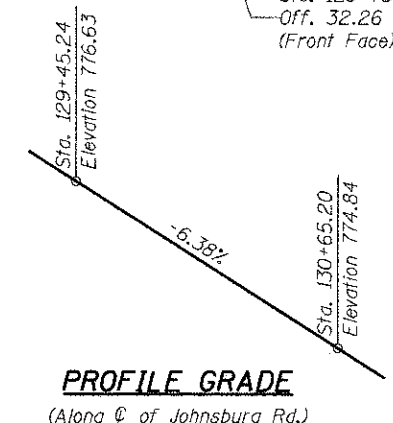
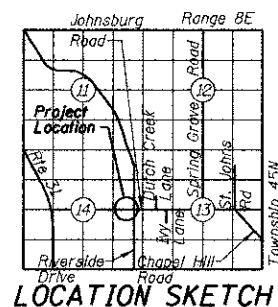
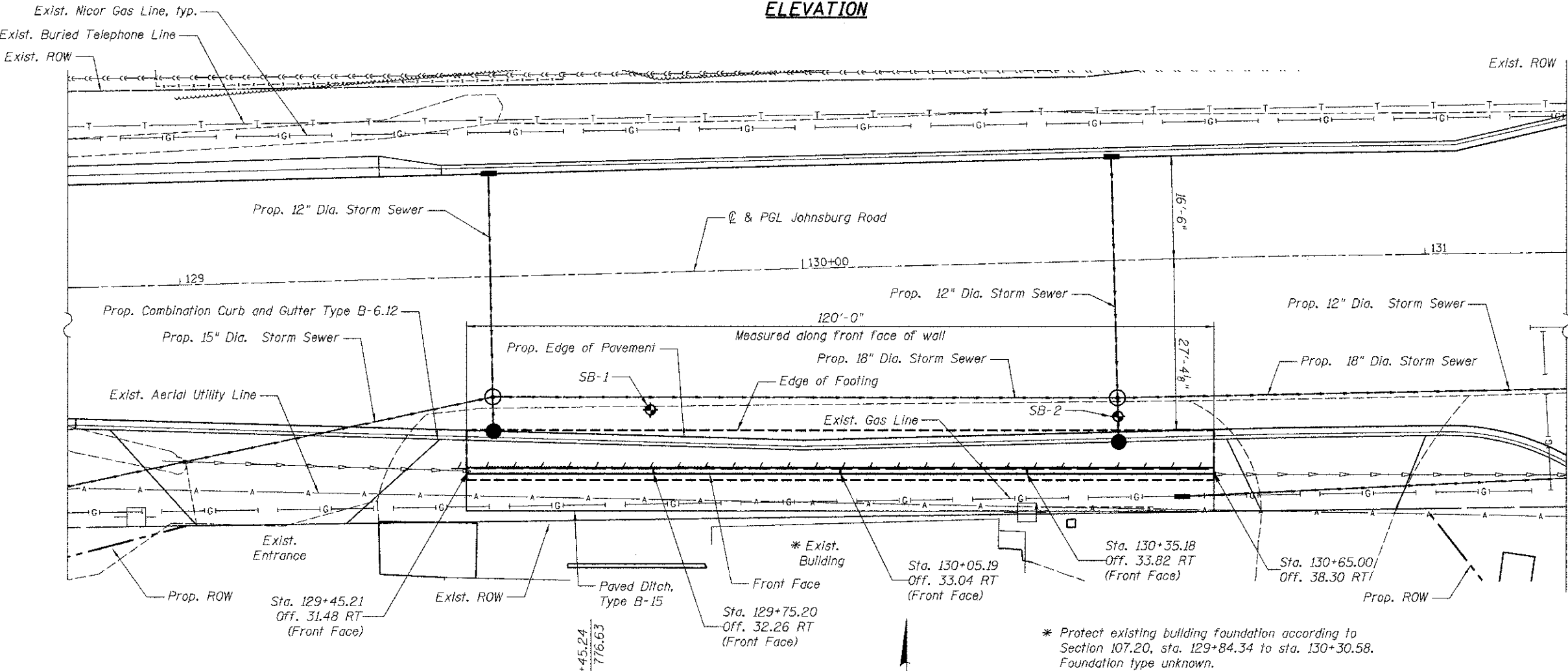
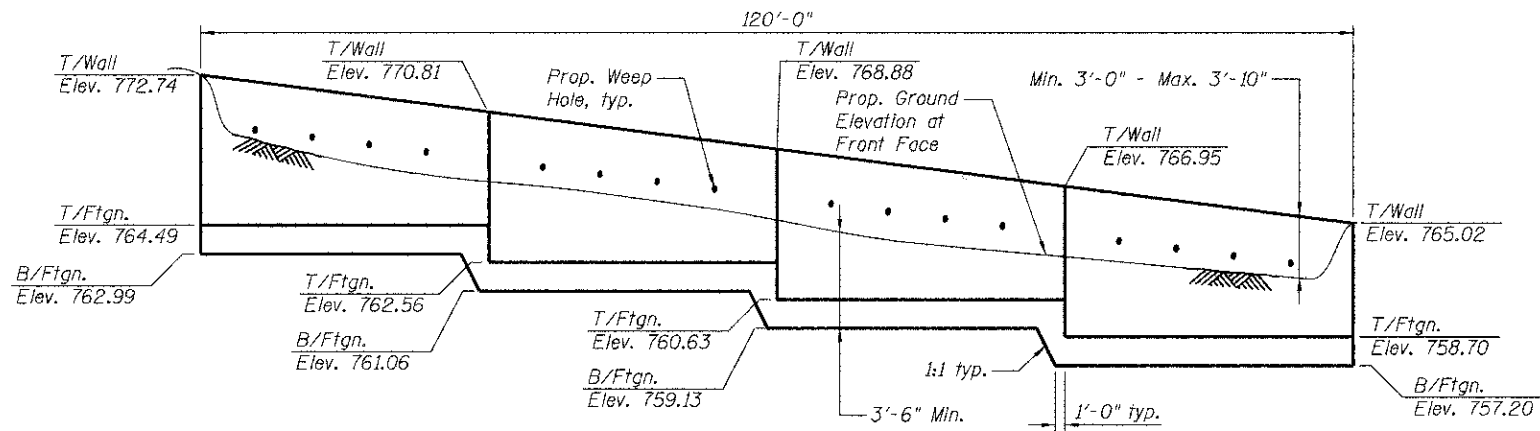


Benchmark:  
Cut square in northwest corner of concrete headwall on north side of Johnsburg Road and east of Riverside Drive.  
Elevation = 752.56 (NAVD88)

Existing Structure: None

The Proposed Retaining Wall will be constructed during Staged Construction. The west bound lane will be open to traffic. The east bound lane will be defouled.



**TOTAL BILL OF MATERIAL**

| ITEM                                | UNIT    | TOTAL  |
|-------------------------------------|---------|--------|
| Reinforcement Bars Epoxy Coated     | Pound   | 19,940 |
| Concrete Structures                 | Cu. Yd. | 87     |
| Structure Excavation                | Cu. Yd. | 225    |
| Porous Granular Embankment, Special | Cu. Yd. | 195    |
| Geocomposite Wall Drain             | Sq. Yd. | 40     |

**DESIGN SPECIFICATIONS**  
2012 AASHTO LRFD Bridge Design Specifications

**DESIGN STRESSES**

**FIELD UNITS**  
f'<sub>c</sub> = 3,500 psi  
f<sub>y</sub> = 60,000 psi (Reinforcement)  
Max. Soil Pressure under footing = 1,650 psf

**LOADING HL-93**

**NOTES**

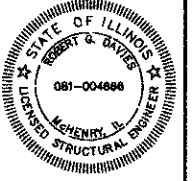
Reinforcement bars shall conform to the requirements of ASTM A 760 Gr. 60. See Special Provisions.  
Reinforcement bars designated (E) shall be epoxy coated.

**INDEX OF SHEETS**

- SA-01 General Plan and Elevation Retaining Wall 1
- SA-02 Footing Details
- SA-03 Retaining Wall Details
- SA-04 Soil Boring Logs

To the best of my knowledge, information and belief, this retaining wall design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current "AASHTO Standard Specifications for Highway Bridges".

*Adrian S. Green*  
Structural Engineer  
HR Green, Inc.  
12/18/12  
EXP. 11/30/14



Note: Chloride containing admixtures shall not be used for Class SI Concrete.

**GENERAL PLAN AND ELEVATION  
RETAINING WALL 1  
JOHNSBURG ROAD (FAU ROUTE 0168)  
SECTION NO. 05-00314-00-WR  
MCHENRY COUNTY  
STATION 129+45.21 TO STATION 130+65.17**

COMPANY NAME: HRGreen.com  
PROJECT CONTACT: jettana  
DATE PLOTTED: 12/18/2012 10:06:36 AM  
PLOT SCALE: 1/8" = 1'-0"  
PLOT PRINTER: HP DesignJet 500  
PEN TABLE: Standard (Vista)



|                        |                    |           |
|------------------------|--------------------|-----------|
| USER NAME = jettana    | DESIGNED = JPG     | REVISED = |
| PLOT SCALE =           | CHECKED = RGD      | REVISED = |
| PLOT DATE = 12/18/2012 | DRAWN = WJH        | REVISED = |
|                        | CHECKED = 12/18/12 | REVISED = |

**MCHENRY COUNTY  
DIVISION OF TRANSPORTATION**

SHEET NO. SA-01 OF SA-04 SHEETS

|                |                        |                    |                  |                                       |
|----------------|------------------------|--------------------|------------------|---------------------------------------|
| F.A. RTE. 0168 | SECTION 05-00314-00-WR | COUNTY MCHENRY     | TOTAL SHEETS 187 | SHEET NO. 122                         |
|                |                        | CONTRACT NO. 63515 |                  | ILLINOIS FED. AID PROJECT #FEDPROJNO# |